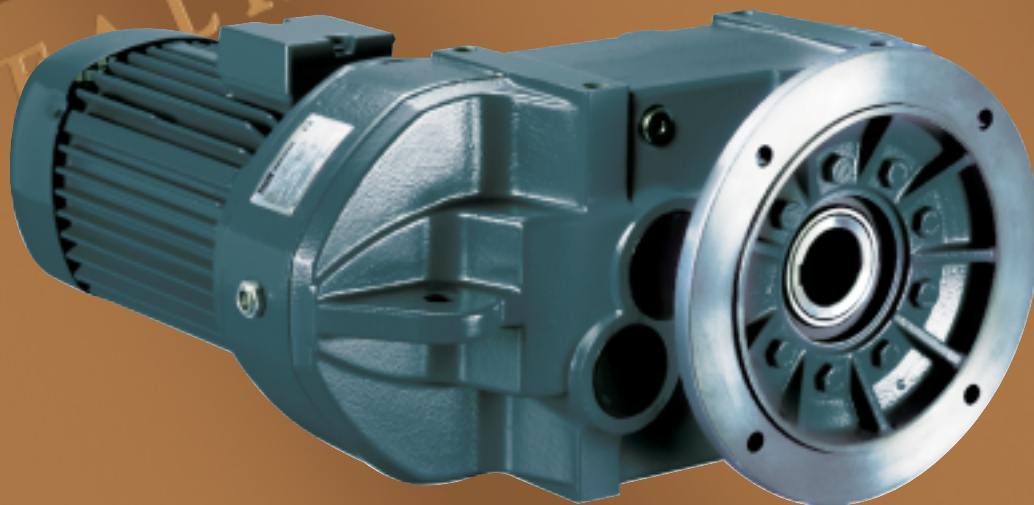
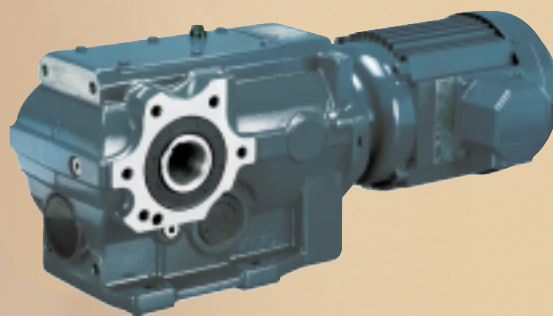
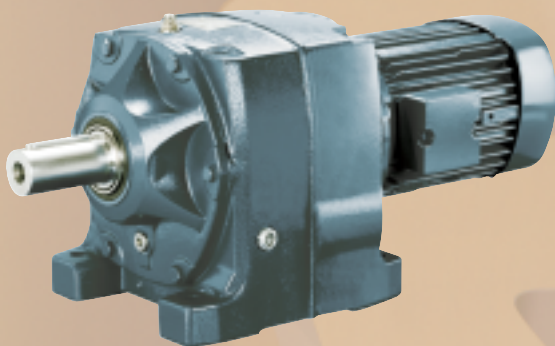


福克 SP4 型平行轴式齿轮马达

SP4 Parallel Shaft Gear Motor

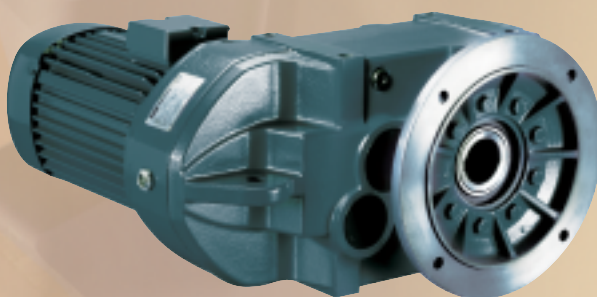


FALK®
a good name in industry



The S4 Product Family

S4 产品系列



The four **S**-**S**trong, **S**ilent, **S**tandard, **S**mart-identify the S4

“**S**trong” because of the high rated torques that are above the market standard. They are the most powerful drives on the geared motor market.

“**S**ilent” because of the optimized gearing geometry and precision-finished face flanks that allow for an extremely smooth, low-noise running, and

“**S**tandard” because of market-oriented dimensions that facilitate the conversion to S4 and allow for a simple assembly for a worldwide geared motor application.

“**S**mart” The unique EasyFit system allows in minutes to assembly a customize geared motor at dealers place (assembly house).

The modular S4 series was built using a minimum of components, thereby ensuring high reliability and simple maintenance.

S4 代表 – 强劲、低噪声、标准化、易选配。

“强劲” 是因为具备较大的扭矩额定值，高于市场标准。在齿轮马达市场上，驱动力最大。

“低噪声” 是因为优化设计的齿轮几何结构和精确表面处理的齿面，使运行高度平滑，低噪音。

“标准化” 是因为其面向市场的尺寸，使 S4 产品通过简易组装就能适用于全世界的齿轮马达应用。

“易选配” 是由于其独特的 EasyFit 系统，可以在出售点（组装处）花上几分钟就能组装出适合客户要求的齿轮马达。

模块化 S4 系列使用最少的零件，从而确保其高可靠性和简单的维护保养。

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1. Instructions for Drive Selection

齿轮马达选型说明

1.1 Service factors / Applications / Operating conditions

1.1 工况系数 / 应用 / 工作条件

1.1.1 Required application factor (SF_{min})

1.1.1 实际工况系数 (SF_{min})

Determine the required application factor according to the following formula:

根据以下公式确定实际工况系数:

$$SF_{min} = F \times C$$

whereby the following applies:

下列条件适用:

F = application factor dependent upon the load characteristic values of the application and the operating time.

F = 工况系数取决于负载的特性和操作时间。

The values listed below can be used as guide values for applications that are not listed.

对于没有列入的应用种类，下面给出的可作参考

Both criteria - the "Load characteristics related to the application" as well as the "inertia factor M" - must be taken into account. The criterion resulting in the highest F-value is decisive.

必须考虑两个因素 - "载荷特性" 和 "惯性系数 M"。导致最高 F 值的判断规范的应用:

Load characteristics of the application	载荷特性	M	F		
			8h/24h	16h/24h	24h/24h
Uniform loads	均匀的负载	<0,2	0.8 - 1*	1	1.2
Moderate shock load	中等冲击载荷	<3	1.1	1.25	1.5
Heavy shock load	重型冲击载荷	<10	1.4	1.6	1.7

$$M = \text{inertia factor 惯性系数}$$

Moment of inertia of driven machine related to the motor shaft 联接电机轴的被驱动机械的转动惯量。

Mass moments of inertia of the motor (+ brake) 电机 (+ 制动) 的转动惯量

C = correction factor dependent upon the number of start-ups per hour.

C = 取决于每小时启动次数的修正系数。

		C		
Start-ups / hour 启动次数 / 小时		8h/24h	16h/24h	24h/24h
	<10	1	1	1
	<100	1.15	1.1	1.1
	<500	1.1	1.15	1.25

1.1.2 Selecting the frame size

A geared motor must be selected for the required motor output (P_m) and the output speed (n_2) whose listed application factor (SF) is greater than or equal to the required application factor (SF_{min}). The selection can also be made based on the available output torque (T_{2m}) of the geared motor.

1.1.2 选择机座尺寸

齿轮马达必须按要求的电动机输出功率 (P_m) 和输出速度 (n_2) 进行选型, 所涉及的工况系数 (SF) 大于或等于实际的工况系数 (SF_{min})。也可以根据齿轮马达输出端有效扭矩选择 (T_{2m})。

1.1.3 Required application factors

1.1.3 工况系数选择

APPLICATION		Runtime hours/day 运行时间小时 / 天		
		8h/24h	16h/24h	24h/24h
Construction and building materials machinery	建筑和建材机械			
Mixer	搅拌机	1.25	1.5	1,75
Cement mills	水泥厂	1.5	1.75	2
Mortar guns	砂浆喷枪	0.8 - 1*	1	1,25
Breweries, distilleries	酿造、蒸馏机械			
Mills	碾磨机	0.8 - 1*	1	1,25
Bottling machinery	装瓶机	0.8 - 1*	1	1,25
Elevators	电梯			
Bucket elevators	提升机	1	1.25	1,5
Load elevators	货运电梯	1	1.25	1,5
Escalators	自动扶梯	0.8 - 1*	1	1,25
Filters	过滤器	1	1.25	1,5
Generators	发电机	0.8 - 1*	1	1,25
Wood and plastics processing	木材和塑料加工			
Main drive for saws	电锯的主动力	1.5	1.75	2
Feed drives for saws	电锯的进给动力	1	1.25	1,5
Crushers	轧碎机	1.5	1.75	2
Machines for gluing, veneering	胶合板胶机	0.8 - 1*	1	1,25
Drills	钻孔机	0.8 - 1*	1	1,25
Extruders	挤压机	1.25	1.5	1,75
Machine tools	机床设备			
Roller straightening, punching device, bending machines	辊子矫直、冲床、折弯机	1.25	1.5	1,75
Main and feed drives	主动力、进给动力	1	1.25	1,5
Supply and servo drives	供给驱动和伺服系统驱动	0.8 - 1*	1	1,25
Presses	压力机	1.75	2	2
Edging machines	折边机	1.5	1.75	2
Plate shears	剪板机	1.75	2	2

* = 0.8 if operating time < 3h/24h and no external loads occur

** = drives must be dimensioned by the manufacturer

+ = it is recommended consulting the manufacturer for selecting the reverse lock

*=0.8, 如果运行时间 < 3h/24h, 并且无外界负荷。

** = 驱动装置必须由厂家测量。

+ = 建议咨询厂家, 以选择止逆装置。

1. Instructions for Drive Selection

齿轮马达选型说明

APPLICATION	应用	Runtime hours/day 运行时间小时 / 天		
		8h/24h	16h/24h	24h/24h
Cranes and hoisting machines	吊车和起重机			
Hoisting gears, traveling drives	提升装置、行进运动	**	**	**
Packaging machines	包装机械			
Packing machines	包装机	1.25	1.5	1,75
Wrapping machines	包扎机	0.8 - 1*	1	1,25
Compressors	压缩机			
Centrifugal compressors	离心式压缩机	1	1.25	1,5
Rotating screw compressors	旋转螺杆式压缩机	1	1.25	1,5
Mixers	混合机			
Constant density	均匀密度	0.8 - 1*	1	1,25
Variable density	不均匀密度	1	1.25	1,5
Iron and steel industry	钢铁工业			
Wire-drawing benches	拉丝机	1.25	1.5	1,75
Winding drums	绕线机	1	1.25	1,5
Roller-table drives	滚筒-工作台驱动	**	**	**
Non-reversible rolling mills - multi-operation - single operation	轧辊辊道: 无回转-组合动力	1.25	1.5	1,75
	- 独立动力	1.5	1.75	2
Mills	磨机			
Ball mills, rod mills	球磨机, 棒磨机	1.75	1.75	1,75
Hammer mills, centrifugal mills	锤磨机, 离心式磨机	1.5	1.75	2
Winding drives	卷线机	**	**	**
Pumps	泵			
Rotary pumps	旋转泵	1	1.25	1,5
Circulation, gear, vane pumps	循环泵、齿轮泵、叶轮泵	0.8 - 1*	1	1,25
Piston pumps: 1 cylinder	活塞泵: 单缸	**	**	**
2 cylinders or more	多缸	1	1.25	1,5
Screw pumps	螺旋泵	1 +	1.25 +	1,5
Agitators	搅拌机			
Pure liquid (constant density)	纯液体 (均匀密度)	0.8 - 1*	1	1,25
Liquid with variable density	非均匀密度液体	1	1.25	1,5
Liquid mixed with solid bodies	固体中含液体	1.25	1.5	1,75
Conveyor systems	输送机系统			
Even load	均匀载荷	0.8 - 1*	1	1,25
Heavy operation, chain, screw conveyor	重载、链和螺旋式输送机	1	1.25	1.5
Shaker conveyor	振动输送机	1.5	1.75	2
Fans	风扇			
Radial	离心式风扇	0.8 - 1*	1	1,25
Industrial fans	工业风扇	1	1.25	1.5
Fan drives in cooling towers	冷却塔风机传动装置	2.0	2.0	2,0
Food-processing industry	食品加工工业			
Crusher	粉碎机	1.75	2	2.25
Root cutting, kneading machines	切块机、揉面机	1.25	1.5	1,75
Meat grinders	绞肉机	1.25	1.5	1,5
Filling machines	填充机	0.8 - 1*	1	1,25
Dough kneading machine	和面机	1	1.25	1,5
Extruders	挤压机	1.25	1.5	1,75
Sugar-cane cutter	甘蔗切碎机	1.75	1,75	1,75

1. Instructions for Drive Selection

齿轮马达选型说明

APPLICATION 应用		Runtime hours/day 运行时间小时 / 天		
		8h/24h	8h/24h	8h/24h
Food-processing industry	食品加工工业			
Toaster	烤面包机	1.25	1.75	1,25
Waste water facilities	废水处理设备			
Surface aerator	表面通风装置	1.5	1.5	1,5
Revolving systems	循环系统	1.75	1.75	1,75
Rakes and channels	耙机和引导机	0.8 - 1*	1	1,25
Screw pumps	螺旋泵	1	1.25	1,5
Screens	滤网			
Revolving screens (stones, grit)	旋转筛 (石、砂砾)	1	1.25	1,5
Screens with water circulation	水循环筛网	0.8 - 1*	1	1.25
Servo drives for systems	伺服驱动系统			
Service operation	伺服运行	0.8 - 1*	-	-
Setting-up mode, operation without load	设定模式、空载运作	1.25	1.25	1,25
Normal operation	正常运行	Same as main drive 和主传动装置一样		
Agricultural machines	农业机械			
Mechanical gutter cleaners	排水沟清理机	0.8 - 1*	1	-
Harvesting machines	收割机	0.8 - 1*	1	-
Textile machinery	纺织机械			
Looms	织机	1.25	1.5	1,75
Spinning machines	纺纱机	0.8 - 1*	1	1,25
Laundry machines	洗涤机	1	1.25	1,5
Print and paper technology	印刷和造纸技术			
Sheeting cutter	平板切纸机	1	1.25	1,5
Winding drives	卷绕机	0.8 - 1*	1	1,25
Bale feeder	打包进料机	1	1.25	1,25

* = 0.8 if operating time < 3h/24h and no external loads occur

** = drives must be dimensioned by the manufacturer

+ = it is recommended consulting the manufacturer for selecting the reverse lock

*=0.8, 如果运行时间< 3h/24h, 并且无外界负荷.

** = 驱动装置必须由厂家测量.

+ = 建议咨询厂家,以选择止逆装置.

These application factors (SF) are empirical values that are based on AGMA and ISO information and experience. They apply to driven machines corresponding to today's state of the art for normal operating conditions and for actuating with electric motors. A consultation is required for special applications, passenger elevators or special operating conditions, e.g. high mass acceleration factors.

工况系数 (SF) 是根据 AGMA (美国齿轮制造商协会) 和 ISO (国际标准组织) 的资料和经验得到的经验值。它们适用于当今最先进的被驱动的机械, 并且在正常使用状态和电动机起动的机器。对于专用的设备, 载客电梯或特别的工作条件, 例如: 大吨位过载系数, 需要和我们进一步讨论研究。

1. Instructions for Drive Selection

齿轮马达选型说明

1.2 Notes about the dimensional drawings

The dimensional drawings featured in this catalog are nonbinding. In particular, slightly deviating dimensions may occur for motor dimensions dependent upon the technical requirements. Binding dimensional drawings can be created upon request.

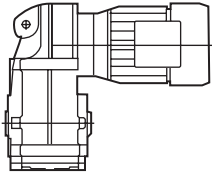
1.2 尺寸图注释

本目录中的尺寸图仅供参考。特别是取决于技术要求的电动机尺寸，会存有偏离。精确尺寸图可根据要求提供。

2. SP4

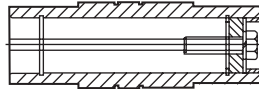
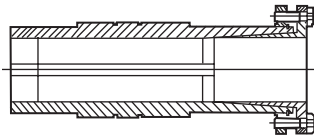
2.1 Version variants for SP4 parallel shaft helical geared motors

2.1 SP4 平行轴式齿轮马达安装形式



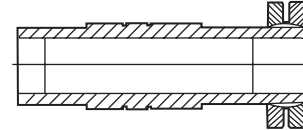
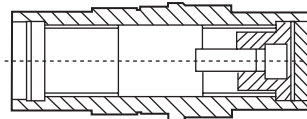
SPZH

Shaft-mounted version
Basic version with hollow shaft
轴安装型式
空心轴基本型式



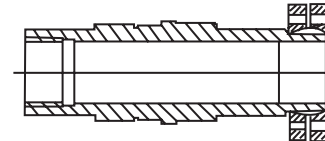
SP.H

Hollow shaft with keyway
空心轴带键槽



SP.S

Hollow shaft with shrink disc
空心轴带收缩盘



SP.B

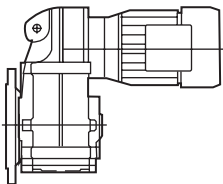
Hollow shaft with taper
bush
空心轴带锥套

SP.T

Hollow spline shaft
空心轴带花键

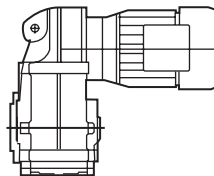
SP.C

Hollow shaft with shrink disc and
bronze bushing
空心轴带收缩盘和钢套



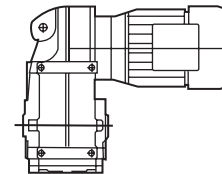
SPFH

B5 flange version with hollow shaft
B5 法兰安装机体带空心轴



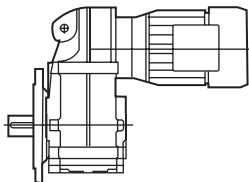
SPTH

B14 flange version with hollow shaft
B14 法兰安装机体带空心轴



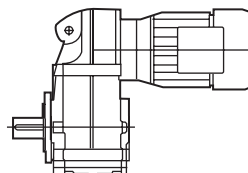
SPZH..F

Foot mounting with hollow shaft
底脚安装机体带空心轴



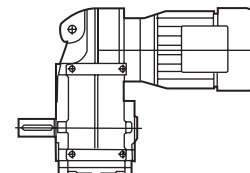
SPFN

B5 flange version with solid shaft
B5 法兰安装机体带实心轴



SPTN

B14 flange version with solid shaft
B14 法兰安装机体带实心轴



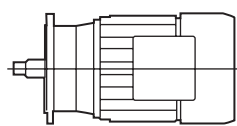
SPZN..F

Foot mounting with solid shaft
底脚安装机体带实心轴

SP4

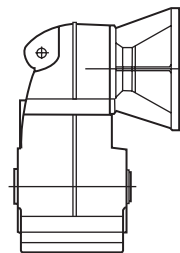
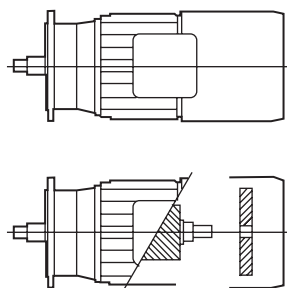
Versions on the drive end

驱动端型式



Integral motor

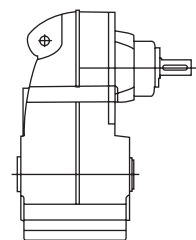
一体化电机



- U

Lantern for IEC standard motors

IEC 标准电动机的联接接头



- I

Gear unit with free input shaft

带自由输入轴的齿轮马达

Integrated brake motor or brake kit

一体化制动电机或制动器

Overview 概述

	8 sizes							
	1	2	3	4	5	6	7	8
T2m(Nm)	200	420	850	1700	3000	5400	9000	15000
Pm(kW)	0.12 to 90							
i	3.15 ... 100			35.5 ... 100			100 ... 30000 combined 串联齿轮马达	
	 B			 C				

2.2 Ordering information

2.2 订购须知

Gear units with two and three stages

2 级和 3 级齿轮马达

S	P	3	4	5	6	7	8	9	10	-	11	-	12	13
---	---	---	---	---	---	---	---	---	----	---	----	---	----	----

Gear units with more than 3 stages

3 级以上齿轮马达

S	P	3	4	5	6	7	25	26	27	8	9	10	11	12	13
---	---	---	---	---	---	---	----	----	----	---	---	----	----	----	----

3	Output flange		法兰输出
	Z No flange		Z 无法兰
	F B5 flange		F B5 法兰
	T B14 flange		T B14 法兰
	R agitator version		R 搅拌器型式

4	Output shaft		输出轴
	H Hollow shaft with keyway	H	带键槽的空心轴
	N Solid shaft with keyway	N	带键槽的实心轴
	S Hollow shaft with shrink-fit ring	S	带缩紧盘的空心轴
	B Hollow shaft with conical clamping sleeve	B	带锥套的空心轴
	T Hollow shaft with splining	T	带花键的空心轴
	C Hollow shaft with shrink-fit ring and bronze bush	C	带缩紧盘和青铜轴套的空心轴

5	Size	规格
	1 - 2 - 3 - 4 - 5 - 6 - 7 - 8	

6	Design index:	设计标准
	6 Metric version	6 公制
	7 Inch version	7 英制

7	Number of stages	级数
	B 2-stage	B 2- 级
	C 3-stage	C 3- 级

8	Total gear ratio	总传动比
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9	Lantern	接头
	U IEC flange motor	U IEC 法兰电动机
	I I-latern	I I- 接头
	M Motor chair	M 电机托架

SP4

10	Accessories for gear units R Reversal lock on drive shaft (not for sizes 2 to 6 in U-constr. Type) Specify free direction of rotation	齿轮减速机附件 驱动轴反向锁定 (不用于 U 结构类型 2 到 6 尺寸)指定自由旋转方向
----	--	--

11	Motor D Integrated motor EJ Brake motor VP Frequency variable motor HF Handrelease WK Thermostats protection	电机 D 一体化电机 EJ 制动电机 VP 变频电机 HF 手动释放 WK 热保护
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12	Shaft arrangement L Output shaft left R Output shaft right T Output shaft left and right	轴排列 左侧输出轴 右侧输出轴 左、右侧输出轴
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13	Mounting positions	安装位置
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Only for gear units with more than 3 stages

只用于 3 级以上的齿轮马达

25	Size preliminary stage gear unit	初级齿轮减速机规格
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26	Design index prelim.-stage gear unit	设计标准, 初级齿轮减速机第几代产品
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27	Number of stages prel.-stage gear unit	初级齿轮减速机的传动级数
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Example:

例子:

S	P	³ Z	⁴ N	⁵ 3	⁶ 6	⁷ B	⁸ 25	⁹	¹⁰	¹¹ DVPEJ112M-4G/HF/WK	¹² L	¹³ 1
---	---	----------------	----------------	----------------	----------------	----------------	-----------------	--------------	---------------	----------------------------------	-----------------	-----------------

SP casing, no flange, solid shaft, size 3, design index 6,
2-stage, gear ratio $i = 1/25$,
Rexnord integral motor size 112, frequency variable motor with brake, handrelease
thermostats protection shaft arrangement left, mounting position 1

SP 系列、没有法兰、实心轴、3 号机、
第 6 代产品、2 级传动、齿轮比 $i=1/25$ 、
电动机机座 112、变频制动电机带手动释
放和热保护、轴排列: 左侧、安装位置 1

S	P	³ F	⁴ H	⁵ 5	⁶ 6	⁷ C	²⁵ 1	²⁶ 6	²⁷ B	⁸ 350	⁹	¹⁰	¹¹ 90	¹² L	¹³ 1
---	---	----------------	----------------	----------------	----------------	----------------	-----------------	-----------------	-----------------	------------------	--------------	---------------	------------------	-----------------	-----------------

SP casing, B5 flange, hollow shaft with keyway, size 5,
design index 6, 3-stage, size primary-stage gear unit 1,
design index primary-stage gear unit 6, 2-stage primary
-stage gear unit, total gear ratio $i = 1/350$, moto size 90,
shaft arrangement left, mounting position 1 position 1

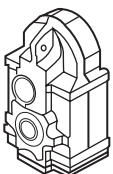
SP 系列、B5 法兰、带键槽的空心轴、5
号机、第 6 代产品、3 级传动、初级齿轮
减速机为 1 号机、初级齿轮减速机为第 6
代产品、初级齿轮减速机 2 级传动、总传
动比 $i=1/350$ 、电机尺寸 90、轴排列左
侧、安装位置 1

GEARED MOTOR CODING

齿轮马达代码

3

Z



F(B5)



T(b14)

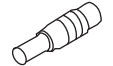


4

H



N



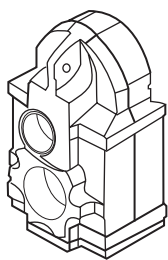
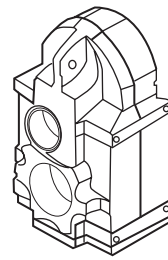
S



B



10

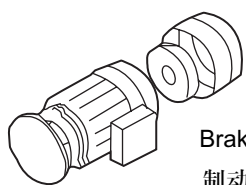



-F-

Foot mounted housing; fixation on both sides possible

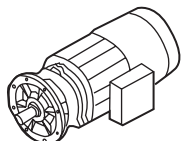
底脚安装机体:可以在两边固定安装

9

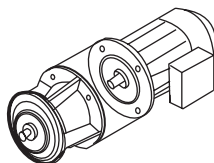


Brake kit
制动器

Integral motor
一体化电机



Intefral brak motor
一体化制动电机



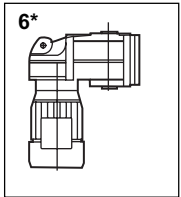
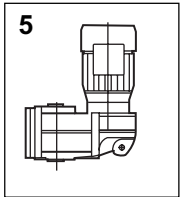
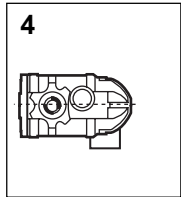
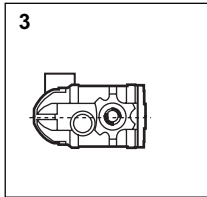
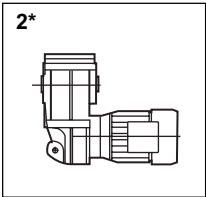
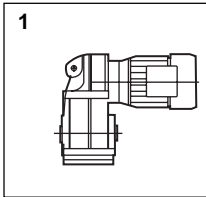
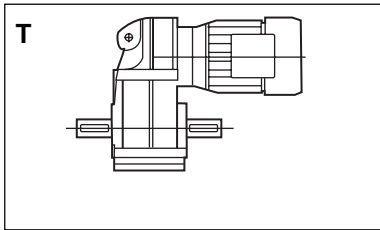
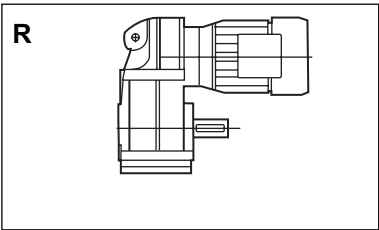
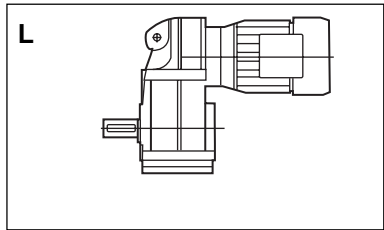
IEC-CEI

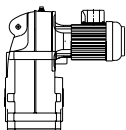
U+(R)



I(+R)

Mounting positions 安装位置





F

A

L

K

SP4

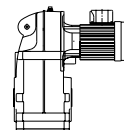
2.3 Selection tables for SP4 geared motors

Example: Geared motor selection table

2.3 SP4 齿轮马达选型表

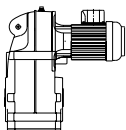
例子：齿轮马达选型表

Motor output 电动机输出功率 Motor speed(just for your reference) 电动机转速(仅供参考) Exact gear ratio 实际传动比 Permissible radial force 允许径向力 Permissible radial force for reinforced bearing 重载轴承的允许径向力 Dimensional drawings (All motor dimensions by Euro spec.just for your reference) 尺寸图(所有电机尺寸为欧洲标准, 仅供参考)									
P 0.12kW n₁ 1360 min⁻¹									
n _{2 ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
392.4	56.00	3	SPZH16B3.55 - 63A-4G	3.47		4 100	21	M246	
342.3	49.00	3	SPZH16B4 - 63A-4G	3.97		4 300	21	M246	
319.4	46.00	4	SPZH16B4.5 - 63A-4G	4.26		4 400	21	M246	
277.6	40.00	4	SPZH16B5 - 63A-4G	4.90		4 600	21	M246	
240.1	34.00	5	SPZH16B5.6 - 63A-4G	5.66		4 900	21	M246	
222.8	32.00	5	SPZH16B6.3 - 63A-4G	6.10		5 000	21	M246	
Preferred series 推荐系列 Basic version 基本型式 Torque of output shaft 输出轴扭矩 Available application factor 有效应用系数 Exact speed of output shaft (rated load) 输出轴精确速度(额定负载)									



P 0.12 kW
n₁ 1360 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
392.4	56.00	3	SPZH16B3.55 - D63A-4G	3.47		4 100	21	M246	
342.3	49.00	3	SPZH16B4 - D63A-4G	3.97		4 300	21	M246	
319.4	46.00	4	SPZH16B4.5 - D63A-4G	4.26		4 400	21	M246	
277.6	40.00	4	SPZH16B5 - D63A-4G	4.90		4 600	21	M246	
240.1	34.00	5	SPZH16B5.6 - D63A-4G	5.66		4 900	21	M246	
222.8	32.00	5	SPZH16B6.3 - D63A-4G	6.10		5 000	21	M246	
206.4	30.00	6	SPZH16B7.1 - D63A-4G	6.59		5 000	21	M246	
175.8	25.00	7	SPZH16B8 - D63A-4G	7.73		5 000	21	M246	
160.9	32.00	7	SPZH16B9 - D63A-4G	8.45		5 000	21	M246	
140.3	28.00	8	SPZH16B10 - D63A-4G	9.69		5 000	21	M246	
131.0	26.00	9	SPZH16B11.2 - D63A-4G	10.39		5 000	21	M246	
113.8	23.00	10	SPZH16B12.5 - D63A-4G	11.95		5 000	21	M246	
98.4	20.00	12	SPZH16B14 - D63A-4G	13.82		5 000	21	M246	
84.6	17.00	14	SPZH16B16 - D63A-4G	16.08		5 000	21	M246	
72.1	14.00	16	SPZH16B18 - D63A-4G	18.87		5 000	21	M246	
66.3	13.00	17	SPZH16B20 - D63A-4G	20.52		5 000	21	M246	
55.4	11.00	21	SPZH16B25 - D63A-4G	24.55		5 000	21	M246	
50.3	10.00	23	SPZH16B28 - D63A-4G	27.02		5 000	21	M246	
45.5	9.10	25	SPZH16B31.5 - D63A-4G	29.91		5 000	21	M246	
36.3	7.30	32	SPZH16B35.5 - D63A-4G	37.42		5 000	21	M246	
32.7	6.60	35	SPZH16B40 - D63A-4G	41.65		5 000	21	M246	
29.2	5.90	39	SPZH16B45 - D63A-4G	46.58		5 000	21	M246	
25.1	5.00	46	SPZH16B56 - D63A-4G	54.15		5 000	21	M246	
22.5	4.50	51	SPZH16B63 - D63A-4G	60.33		5 000	21	M246	
18.1	3.60	63	SPZH16B71 - D63A-4G	74.98		5 000	21	M246	
16.3	3.30	70	SPZH16B80 - D63A-4G	83.24		5 000	21	M246	
14.6	2.90	79	SPZH16B90 - D63A-4G	93.33		5 000	21	M246	
14.0	2.80	82	SPZH16B16B100 - D63A-4G	97.10		5 000	31	M246	
12.0	2.40	95	SPZH16B16B112 - D63A-4G	112.96		5 000	31	M246	
10.5	2.10	109	SPZH16B16B125 - D63A-4G	129.19		5 000	31	M246	
9.0	1.80	127	SPZH16B16B140 - D63A-4G	150.30		5 000	31	M246	
7.8	1.60	147	SPZH16B16B160 - D63A-4G	174.87		5 000	31	M246	
7.8	1.60	147	SPZH16B16B180 - D63A-4G	174.87		5 000	31	M246	
7.6	2.90	151	SPZH26B16B180 - D63A-4G	179.33	6 900	6 900	38	M254	
6.6	1.30	173	SPZH16B16B200 - D63A-4G	205.21		5 000	31	M246	
7.0	2.70	165	SPZH26B16B200 - D63A-4G	195.28	6 900	6 900	38	M254	
6.1	1.20	188	SPZH16B16B224 - D63A-4G	223.23		5 000	31	M246	
6.0	2.30	191	SPZH26B16B224 - D63A-4G	227.20	6 900	6 900	38	M254	
5.4	1.10	213	SPZH16B16B250 - D63A-4G	252.62		5 000	31	M246	
5.5	2.10	208	SPZH26B16B250 - D63A-4G	247.15	6 900	6 900	38	M254	
4.9	0.98	236	SPZH16B16B280 - D63A-4G	279.63		5 000	31	M246	
5.0	1.90	231	SPZH26B16B280 - D63A-4G	273.79	6 900	6 900	38	M254	
4.2	0.84	274	SPZH16B16B315 - D63A-4G	325.33		5 000	31	M246	
4.4	1.70	261	SPZH26B16B315 - D63A-4G	309.59	6 900	6 900	38	M254	
3.8	1.40	303	SPZH26B16B355 - D63A-4G	360.18	6 900	6 900	38	M254	
4.0	2.90	289	SPZH36B16B355 - D63A-4G	343.25	13 500	13 500	45	M262	
3.4	1.30	338	SPZH26B16B400 - D63A-4G	401.29	6 900	6 900	38	M254	
3.5	2.60	325	SPZH36B16B400 - D63A-4G	385.45	13 500	13 500	45	M262	
3.0	1.20	380	SPZH26B16B450 - D63A-4G	450.61	6 900	6 900	38	M254	
3.1	2.30	371	SPZH36B16B450 - D63A-4G	440.16	13 500	13 500	45	M262	
2.7	1.00	423	SPZH26B16B500 - D63A-4G	501.61	6 900	6 900	38	M254	
2.8	2.10	407	SPZH36B16B500 - D63A-4G	482.93	13 500	13 500	45	M262	



F

A

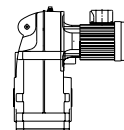
L

K

SP4

P 0.12 kW
n₁ 1360 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
2.4	0.93	473	SPZH26B16B560 - D63A-4G	560.97	6 900	6 900	38	M254	
2.4	1.80	470	SPZH36B16B560 - D63A-4G	557.79	13 500	13 500	45	M262	
2.2	0.84	526	SPZH26B16B630 - D63A-4G	624.44	6 900	6 900	38	M254	
2.2	1.60	524	SPZH36B16B630 - D63A-4G	621.43	13 500	13 500	45	M262	
1.9	1.40	618	SPZH36B16B710 - D63A-4G	733.09	13 500	13 500	45	M262	
1.9	2.80	598	SPZH46B16B710 - D63A-4G	709.88	18 000	18 000	71	M270	
1.7	1.20	688	SPZH36B16B800 - D63A-4G	816.74	13 500	13 500	45	M262	
1.6	2.40	695	SPZH46B16B800 - D63A-4G	825.19	18 000	18 000	71	M270	
1.4	1.10	799	SPZH36B16B900 - D63A-4G	947.72	13 500	13 500	45	M262	
1.5	2.20	775	SPZH46B16B900 - D63A-4G	919.35	18 000	18 000	71	M270	
1.3	0.99	855	SPZH36B16B1000 - D63A-4G	1015.05	13 500	13 500	45	M262	
1.4	2.10	800	SPZH46B16B1000 - D63A-4G	948.89	18 000	18 000	71	M270	
1.2	0.92	928	SPZH36B16C1120 - D63A-4G	1101.91	13 500	13 500	45	M262	
1.2	1.80	963	SPZH46B16B1120 - D63A-4G	1142.57	18 000	18 000	71	M270	
1.2	3.00	968	SPZH56B16B1120 - D63A-4G	1148.99	27 000	27 000	108	M278	
1.1	0.83	1028	SPZH36B16C1250 - D63A-4G	1219.69	13 500	13 500	45	M262	
1.1	1.60	1045	SPZH46B16C1250 - D63A-4G	1240.35	18 000	18 000	71	M270	
1.1	2.80	1051	SPZH56B16C1250 - D63A-4G	1247.31	27 000	27 000	108	M278	
1.0	1.50	1157	SPZH46B16C1400 - D63A-4G	1372.92	18 000	18 000	71	M270	
1.0	2.50	1163	SPZH56B16C1400 - D63A-4G	1380.63	27 000	27 000	108	M278	
0.9	1.30	1305	SPZH46B16C1600 - D63A-4G	1548.45	18 000	18 000	71	M270	
0.9	2.20	1296	SPZH56B16C1600 - D63A-4G	1538.19	27 000	27 000	108	M278	
0.8	1.20	1452	SPZH46B16C1800 - D63A-4G	1723.69	18 000	18 000	71	M270	
0.8	2.00	1455	SPZH56B16C1800 - D63A-4G	1727.26	27 000	27 000	108	M278	
0.7	1.10	1611	SPZH46B16C2000 - D63A-4G	1912.00	18 000	18 000	71	M270	
0.7	1.80	1620	SPZH56B16C2000 - D63A-4G	1922.74	27 000	27 000	108	M278	
0.6	0.90	1888	SPZH46B16C2240 - D63A-4G	2240.80	18 000	18 000	71	M270	
0.6	1.60	1830	SPZH56B16C2240 - D63A-4G	2171.77	27 000	27 000	108	M278	
0.6	3.00	1857	SPZH66C36B2240 - D63A-4G	2203.92		30 000	197	M286	
0.5	0.81	2094	SPZH46B16C2500 - D63A-4G	2485.59	18 000	18 000	71	M270	
0.5	1.20	2346	SPZH56B16C2800 - D63A-4G	2784.76	27 000	27 000	108	M278	
0.5	2.20	2474	SPZH66C36B2800 - D63A-4G	2935.85		30 000	197	M286	
0.5	1.10	2534	SPZH56B16C3150 - D63A-4G	3007.06	27 000	27 000	108	M278	
0.4	2.00	2737	SPZH66C36B3150 - D63A-4G	3247.76		30 000	197	M286	
0.4	2.90	2741	SPZH76C36B3150 - D63A-4G	3253.53		50 000	288	M294	
0.4	0.99	2916	SPZH56B16C3550 - D63A-4G	3460.93	27 000	27 000	108	M278	
0.4	1.80	3040	SPZH66C36B3550 - D63A-4G	3607.91		30 000	197	M286	
0.4	2.80	2830	SPZH76C36B3550 - D63A-4G	3358.36		50 000	288	M294	
0.4	0.90	3237	SPZH56B16C4000 - D63A-4G	3842.27	27 000	27 000	108	M278	
0.3	1.60	3381	SPZH66C36C4000 - D63A-4G	4012.75		30 000	197	M286	
0.4	2.50	3176	SPZH76C36B4000 - D63A-4G	3769.68		50 000	288	M294	
0.3	0.80	3630	SPZH56B16C4500 - D63A-4G	4308.36	27 000	27 000	108	M278	
0.3	1.40	3829	SPZH66C36C4500 - D63A-4G	4544.63		30 000	197	M286	
0.3	2.10	3765	SPZH76C36C4500 - D63A-4G	4468.98		50 000	288	M294	
0.3	1.30	4176	SPZH66C36C5000 - D63A-4G	4955.74		30 000	197	M286	
0.3	1.80	4359	SPZH76C36C5000 - D63A-4G	5172.88		50 000	288	M294	
0.2	1.10	4833	SPZH66C36C5600 - D63A-4G	5736.32		30 000	197	M286	
0.2	1.70	4813	SPZH76C36C5600 - D63A-4G	5711.83		50 000	288	M294	
0.2	1.00	5337	SPZH66C36C6300 - D63A-4G	6333.97		30 000	197	M286	
0.2	1.40	5758	SPZH76C36C6300 - D63A-4G	6833.68		50 000	288	M294	
0.2	2.80	5386	SPZH86C36C6300 - D63A-4G	6391.69		82 500	443	M302	
0.2	0.89	6200	SPZH66C36C7100 - D63A-4G	7358.15		30 000	197	M286	

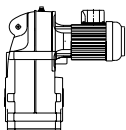


P 0.12 kW
n₁ 1360 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
0.2	1.20	6411	SPZH76C36C7100 - D63A-4G	7608.72		50 000	288	M294	
0.2	2.50	5983	SPZH86C36C7100 - D63A-4G	7100.47		82 500	443	M302	
0.2	1.10	7092	SPZH76C36C8000 - D63A-4G	8417.09		50 000	288	M294	
0.2	2.20	6932	SPZH86C36C8000 - D63A-4G	8226.92		82 500	443	M302	
0.1	1.00	7879	SPZH76C36C9000 - D63A-4G	9350.48		50 000	288	M294	
0.1	0.88	9128	SPZH76C36C10000 - D63A-4G	10833.88		50 000	288	M294	

P 0.18 kW
n₁ 1370 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
395.3	38.00	4	SPZH16B3.55 - D63B-4G	3.47		4 100	21	M246	
344.8	33.00	5	SPZH16B4 - D63B-4G	3.97		4 300	21	M246	
321.8	31.00	5	SPZH16B4.5 - D63B-4G	4.26		4 400	21	M246	
279.6	27.00	6	SPZH16B5 - D63B-4G	4.90		4 600	21	M246	
241.9	23.00	7	SPZH16B5.6 - D63B-4G	5.66		4 800	21	M246	
224.4	21.00	8	SPZH16B6.3 - D63B-4G	6.10		4 900	21	M246	
207.9	20.00	8	SPZH16B7.1 - D63B-4G	6.59		5 000	21	M246	
177.1	17.00	10	SPZH16B8 - D63B-4G	7.73		5 000	21	M246	
162.0	22.00	11	SPZH16B9 - D63B-4G	8.45		5 000	21	M246	X
141.3	19.00	12	SPZH16B10 - D63B-4G	9.69		5 000	21	M246	
131.9	18.00	13	SPZH16B11.2 - D63B-4G	10.39		5 000	21	M246	X
114.6	15.00	15	SPZH16B12.5 - D63B-4G	11.95		5 000	21	M246	
99.1	13.00	17	SPZH16B14 - D63B-4G	13.82		5 000	21	M246	X
85.2	11.00	20	SPZH16B16 - D63B-4G	16.08		5 000	21	M246	X
72.6	9.70	24	SPZH16B18 - D63B-4G	18.87		5 000	21	M246	
66.8	8.90	26	SPZH16B20 - D63B-4G	20.52		5 000	21	M246	X
55.8	7.50	31	SPZH16B25 - D63B-4G	24.55		5 000	21	M246	
50.7	6.80	34	SPZH16B28 - D63B-4G	27.02		5 000	21	M246	
45.8	6.10	38	SPZH16B31.5 - D63B-4G	29.91		5 000	21	M246	X
36.6	4.90	47	SPZH16B35.5 - D63B-4G	37.42		5 000	21	M246	X
32.9	4.40	52	SPZH16B40 - D63B-4G	41.65		5 000	21	M246	
29.4	3.90	58	SPZH16B45 - D63B-4G	46.58		5 000	21	M246	X
25.3	3.40	68	SPZH16B56 - D63B-4G	54.15		5 000	21	M246	
22.7	3.00	76	SPZH16B63 - D63B-4G	60.33		5 000	21	M246	X
18.3	2.40	94	SPZH16B71 - D63B-4G	74.98		5 000	21	M246	X
16.5	2.20	104	SPZH16B80 - D63B-4G	83.24		5 000	21	M246	
14.7	2.00	117	SPZH16B90 - D63B-4G	93.33		5 000	21	M246	X
14.9	2.90	116	SPZH26B90 - D63B-4G	92.15	6 900	6 900	28	M254	
14.1	1.90	122	SPZH16B16B100 - D63B-4G	97.10		5 000	31	M246	X
13.3	2.40	130	SPZH26B100 - D63B-4G	103.33	6 900	6 900	28	M254	X
12.1	1.60	142	SPZH16B16B112 - D63B-4G	112.96		5 000	31	M246	X
10.6	1.40	162	SPZH16B16B125 - D63B-4G	129.19		5 000	31	M246	X
11.0	2.80	157	SPZH26B16B125 - D63B-4G	125.07	6 900	6 900	38	M254	X
9.1	1.20	189	SPZH16B16B140 - D63B-4G	150.30		5 000	31	M246	X
9.5	2.40	181	SPZH26B16B140 - D63B-4G	143.94	6 900	6 900	38	M254	
7.8	1.00	219	SPZH16B16B160 - D63B-4G	174.87		5 000	31	M246	X
8.9	2.30	193	SPZH26B16B160 - D63B-4G	154.13	6 900	6 900	38	M254	



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A

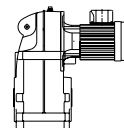
L

K

SP4

P 0.18 kW
n₁ 1370 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
7.8	1.00	219	SPZH16B16B180 - D63B-4G	174.87		5 000	31	M246	X
7.6	2.00	225	SPZH26B16B180 - D63B-4G	179.33	6 900	6 900	38	M254	
6.7	0.89	257	SPZH16B16B200 - D63B-4G	205.21		5 000	31	M246	
7.0	1.80	245	SPZH26B16B200 - D63B-4G	195.28	6 900	6 900	38	M254	
6.1	0.82	280	SPZH16B16B224 - D63B-4G	223.23		5 000	31	M246	X
6.0	1.50	285	SPZH26B16B224 - D63B-4G	227.20	6 900	6 900	38	M254	
5.5	1.40	310	SPZH26B16B250 - D63B-4G	247.15	6 900	6 900	38	M254	X
5.4	2.70	317	SPZH36B16B250 - D63B-4G	252.84	13 500	13 500	45	M262	
5.0	1.30	344	SPZH26B16B280 - D63B-4G	273.79	6 900	6 900	38	M254	
4.9	2.40	349	SPZH36B16B280 - D63B-4G	278.34	13 500	13 500	45	M262	
4.4	1.10	388	SPZH26B16B315 - D63B-4G	309.59	6 900	6 900	38	M254	X
4.4	2.20	387	SPZH36B16B315 - D63B-4G	308.09	13 500	13 500	45	M262	X
3.8	0.97	452	SPZH26B16B355 - D63B-4G	360.18	6 900	6 900	38	M254	X
4.0	2.00	431	SPZH36B16B355 - D63B-4G	343.25	13 500	13 500	45	M262	X
3.4	0.87	503	SPZH26B16B400 - D63B-4G	401.29	6 900	6 900	38	M254	X
3.6	1.80	484	SPZH36B16B400 - D63B-4G	385.45	13 500	13 500	45	M262	X
3.1	1.50	552	SPZH36B16B450 - D63B-4G	440.16	13 500	13 500	45	M262	
3.0	3.00	572	SPZH46B16B450 - D63B-4G	455.79	18 000	18 000	71	M270	X
2.8	1.40	606	SPZH36B16B500 - D63B-4G	482.93	13 500	13 500	45	M262	
2.7	2.70	637	SPZH46B16B500 - D63B-4G	507.81	18 000	18 000	71	M270	X
2.5	1.20	700	SPZH36B16B560 - D63B-4G	557.79	13 500	13 500	45	M262	
2.4	2.40	715	SPZH46B16B560 - D63B-4G	570.23	18 000	18 000	71	M270	X
2.2	1.10	780	SPZH36B16B630 - D63B-4G	621.43	13 500	13 500	45	M262	X
2.2	2.10	796	SPZH46B16B630 - D63B-4G	634.76	18 000	18 000	71	M270	
1.9	0.92	920	SPZH36B16B710 - D63B-4G	733.09	13 500	13 500	45	M262	
1.9	1.90	891	SPZH46B16B710 - D63B-4G	709.88	18 000	18 000	71	M270	X
1.7	0.83	1025	SPZH36B16B800 - D63B-4G	816.74	13 500	13 500	45	M262	X
1.7	1.60	1035	SPZH46B16B800 - D63B-4G	825.19	18 000	18 000	71	M270	
1.7	2.80	1041	SPZH56B16B800 - D63B-4G	829.83	27 000	27 000	108	M278	
1.5	1.50	1153	SPZH46B16B900 - D63B-4G	919.35	18 000	18 000	71	M270	X
1.5	2.50	1160	SPZH56B16B900 - D63B-4G	924.51	27 000	27 000	108	M278	X
1.4	1.40	1191	SPZH46B16B1000 - D63B-4G	948.89	18 000	18 000	71	M270	
1.4	2.40	1197	SPZH56B16B1000 - D63B-4G	954.22	27 000	27 000	108	M278	
1.2	1.20	1434	SPZH46B16B1120 - D63B-4G	1142.57	18 000	18 000	71	M270	X
1.2	2.00	1442	SPZH56B16B1120 - D63B-4G	1148.99	27 000	27 000	108	M278	X
1.1	1.10	1556	SPZH46B16C1250 - D63B-4G	1240.35	18 000	18 000	71	M270	
1.1	1.90	1565	SPZH56B16C1250 - D63B-4G	1247.31	27 000	27 000	108	M278	
1.0	0.99	1723	SPZH46B16C1400 - D63B-4G	1372.92	18 000	18 000	71	M270	X
1.0	1.70	1732	SPZH56B16C1400 - D63B-4G	1380.63	27 000	27 000	108	M278	X
0.9	0.88	1943	SPZH46B16C1600 - D63B-4G	1548.45	18 000	18 000	71	M270	X
0.9	1.50	1930	SPZH56B16C1600 - D63B-4G	1538.19	27 000	27 000	108	M278	X
0.9	2.80	1984	SPZH66C36B1600 - D63B-4G	1581.32		30 000	197	M286	
0.8	1.30	2167	SPZH56B16C1800 - D63B-4G	1727.26	27 000	27 000	108	M278	X
0.8	2.50	2163	SPZH66C36B1800 - D63B-4G	1724.37		30 000	197	M286	
0.7	1.20	2412	SPZH56B16C2000 - D63B-4G	1922.74	27 000	27 000	108	M278	
0.7	2.20	2504	SPZH66C36B2000 - D63B-4G	1995.97		30 000	197	M286	
0.6	1.10	2725	SPZH56B16C2240 - D63B-4G	2171.77	27 000	27 000	108	M278	
0.6	2.00	2765	SPZH66C36B2240 - D63B-4G	2203.92		30 000	197	M286	
0.6	2.70	2983	SPZH76C36B2240 - D63B-4G	2377.80		50 000	288	M294	
0.5	0.83	3494	SPZH56B16C2800 - D63B-4G	2784.76	27 000	27 000	108	M278	X
0.5	1.50	3683	SPZH66C36B2800 - D63B-4G	2935.85		30 000	197	M286	
0.5	2.20	3675	SPZH76C36B2800 - D63B-4G	2928.76		50 000	288	M294	

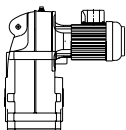


P 0.18 kW
n₁ 1370 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
0.4	1.30	4075	SPZH66C36B3150 - D63B-4G	3247.76		30 000	197	M286	
0.4	2.00	4082	SPZH76C36B3150 - D63B-4G	3253.53		50 000	288	M294	
0.4	1.20	4527	SPZH66C36B3550 - D63B-4G	3607.91		30 000	197	M286	
0.4	1.90	4214	SPZH76C36B3550 - D63B-4G	3358.36		50 000	288	M294	
0.3	1.10	5035	SPZH66C36C4000 - D63B-4G	4012.75		30 000	197	M286	
0.4	1.70	4730	SPZH76C36B4000 - D63B-4G	3769.68		50 000	288	M294	
0.3	3.00	4928	SPZH86C36C4000 - D63B-4G	3928.13		82 500	443	M302	
0.3	0.96	5702	SPZH66C36C4500 - D63B-4G	4544.63		30 000	197	M286	
0.3	1.40	5607	SPZH76C36C4500 - D63B-4G	4468.98		50 000	288	M294	
0.3	2.80	5442	SPZH86C36C4500 - D63B-4G	4337.39		82 500	443	M302	
0.3	0.88	6218	SPZH66C36C5000 - D63B-4G	4955.74		30 000	197	M286	
0.3	1.20	6490	SPZH76C36C5000 - D63B-4G	5172.88		50 000	288	M294	
0.3	2.30	6511	SPZH86C36C5000 - D63B-4G	5189.29		82 500	443	M302	
0.2	1.10	7166	SPZH76C36C5600 - D63B-4G	5711.83		50 000	288	M294	
0.2	2.10	7249	SPZH86C36C5600 - D63B-4G	5777.83		82 500	443	M302	
0.2	0.93	8574	SPZH76C36C6300 - D63B-4G	6833.68		50 000	288	M294	
0.2	1.90	8019	SPZH86C36C6300 - D63B-4G	6391.69		82 500	443	M302	
0.2	0.84	9546	SPZH76C36C7100 - D63B-4G	7608.72		50 000	288	M294	
0.2	1.70	8909	SPZH86C36C7100 - D63B-4G	7100.47		82 500	443	M302	
0.2	1.50	10322	SPZH86C36C8000 - D63B-4G	8226.92		82 500	443	M302	

P 0.25 kW
n₁ 1400 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
403.9	28.00	6	SPZH16B3.55 - D71A-4G	3.47		4 100	22	M246	
352.4	24.00	7	SPZH16B4 - D71A-4G	3.97		4 300	22	M246	
328.8	23.00	7	SPZH16B4.5 - D71A-4G	4.26		4 400	22	M246	
285.7	20.00	8	SPZH16B5 - D71A-4G	4.90		4 600	22	M246	
247.1	17.00	10	SPZH16B5.6 - D71A-4G	5.66		4 800	22	M246	
229.3	16.00	10	SPZH16B6.3 - D71A-4G	6.10		4 900	22	M246	
212.4	15.00	11	SPZH16B7.1 - D71A-4G	6.59		5 000	22	M246	
181.0	12.00	13	SPZH16B8 - D71A-4G	7.73		5 000	22	M246	
165.6	16.00	14	SPZH16B9 - D71A-4G	8.45		5 000	22	M246	X
144.4	14.00	17	SPZH16B10 - D71A-4G	9.69		5 000	22	M246	
134.8	13.00	18	SPZH16B11.2 - D71A-4G	10.39		5 000	22	M246	X
117.1	11.00	20	SPZH16B12.5 - D71A-4G	11.95		5 000	22	M246	
101.3	9.80	24	SPZH16B14 - D71A-4G	13.82		5 000	22	M246	X
87.1	8.40	27	SPZH16B16 - D71A-4G	16.08		5 000	22	M246	X
74.2	7.10	32	SPZH16B18 - D71A-4G	18.87		5 000	22	M246	
68.2	6.60	35	SPZH16B20 - D71A-4G	20.52		5 000	22	M246	X
57.0	5.50	42	SPZH16B25 - D71A-4G	24.55		5 000	22	M246	
51.8	5.00	46	SPZH16B28 - D71A-4G	27.02		5 000	22	M246	
46.8	4.50	51	SPZH16B31.5 - D71A-4G	29.91		5 000	22	M246	X
37.4	3.60	64	SPZH16B35.5 - D71A-4G	37.42		5 000	22	M246	X
33.6	3.20	71	SPZH16B40 - D71A-4G	41.65		5 000	22	M246	
30.1	2.90	79	SPZH16B45 - D71A-4G	46.58		5 000	22	M246	X
25.9	2.50	92	SPZH16B56 - D71A-4G	54.15		5 000	22	M246	



F

A

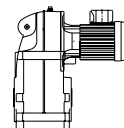
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SP4

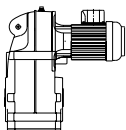
P 0.25 kW
n₁ 1400 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
23.2	2.20	103	SPZH16B63 - D71A-4G	60.33		5 000	22	M246	X
18.7	1.80	128	SPZH16B71 - D71A-4G	74.98		5 000	22	M246	X
16.8	1.60	142	SPZH16B80 - D71A-4G	83.24		5 000	22	M246	
16.9	2.50	142	SPZH26B80 - D71A-4G	83.01	6 900	6 900	29	M254	X
15.0	1.40	159	SPZH16B90 - D71A-4G	93.33		5 000	22	M246	X
15.2	2.10	157	SPZH26B90 - D71A-4G	92.15	6 900	6 900	29	M254	
16.0	2.90	149	SPZH26B16B90 - D71A-4G	87.51	6 900	6 900	39	M254	X
14.4	1.40	166	SPZH16B16B100 - D71A-4G	97.10		5 000	32	M246	X
13.5	1.80	176	SPZH26B100 - D71A-4G	103.33	6 900	6 900	29	M254	X
13.8	2.50	174	SPZH26B16B100 - D71A-4G	101.81	6 900	6 900	39	M254	X
12.4	1.20	193	SPZH16B16B112 - D71A-4G	112.96		5 000	32	M246	X
12.9	2.40	184	SPZH26B16B112 - D71A-4G	108.11	6 900	6 900	39	M254	
10.8	1.00	220	SPZH16B16B125 - D71A-4G	129.19		5 000	32	M246	X
11.2	2.10	213	SPZH26B16B125 - D71A-4G	125.07	6 900	6 900	39	M254	X
9.3	0.90	256	SPZH16B16B140 - D71A-4G	150.30		5 000	32	M246	X
9.7	1.80	245	SPZH26B16B140 - D71A-4G	143.94	6 900	6 900	39	M254	
9.1	1.70	263	SPZH26B16B160 - D71A-4G	154.13	6 900	6 900	39	M254	
7.8	1.40	306	SPZH26B16B180 - D71A-4G	179.33	6 900	6 900	39	M254	
7.6	2.70	312	SPZH36B16B180 - D71A-4G	183.04	12 600	13 500	46	M262	
7.2	1.30	333	SPZH26B16B200 - D71A-4G	195.28	6 900	6 900	39	M254	
7.2	2.60	331	SPZH36B16B200 - D71A-4G	194.34	12 800	13 500	46	M262	
6.2	1.10	387	SPZH26B16B224 - D71A-4G	227.20	6 900	6 900	39	M254	
6.4	2.30	373	SPZH36B16B224 - D71A-4G	218.91	13 200	13 500	46	M262	
5.7	1.00	421	SPZH26B16B250 - D71A-4G	247.15	6 900	6 900	39	M254	X
5.5	2.00	431	SPZH36B16B250 - D71A-4G	252.84	13 500	13 500	46	M262	
5.1	0.94	467	SPZH26B16B280 - D71A-4G	273.79	6 900	6 900	39	M254	
5.0	1.80	475	SPZH36B16B280 - D71A-4G	278.34	13 500	13 500	46	M262	
4.5	0.83	528	SPZH26B16B315 - D71A-4G	309.59	6 900	6 900	39	M254	X
4.5	1.60	525	SPZH36B16B315 - D71A-4G	308.09	13 500	13 500	46	M262	X
4.1	1.50	585	SPZH36B16B355 - D71A-4G	343.25	13 500	13 500	46	M262	X
3.7	2.70	638	SPZH46B16B355 - D71A-4G	374.06	18 000	18 000	72	M270	
3.6	1.30	657	SPZH36B16B400 - D71A-4G	385.45	13 500	13 500	46	M262	X
3.4	2.40	702	SPZH46B16B400 - D71A-4G	411.78	18 000	18 000	72	M270	
3.2	1.10	751	SPZH36B16B450 - D71A-4G	440.16	13 500	13 500	46	M262	
3.1	2.20	777	SPZH46B16B450 - D71A-4G	455.79	18 000	18 000	72	M270	X
2.9	1.00	824	SPZH36B16B500 - D71A-4G	482.93	13 500	13 500	46	M262	
2.8	2.00	866	SPZH46B16B500 - D71A-4G	507.81	18 000	18 000	72	M270	X
2.5	0.89	951	SPZH36B16B560 - D71A-4G	557.79	13 500	13 500	46	M262	
2.5	1.70	972	SPZH46B16B560 - D71A-4G	570.23	18 000	18 000	72	M270	X
2.4	3.00	978	SPZH56B16B560 - D71A-4G	573.43	27 000	27 000	109	M278	X
2.3	0.80	1060	SPZH36B16B630 - D71A-4G	621.43	13 500	13 500	46	M262	X
2.2	1.60	1082	SPZH46B16B630 - D71A-4G	634.76	18 000	18 000	72	M270	
2.2	2.70	1088	SPZH56B16B630 - D71A-4G	638.33	27 000	27 000	109	M278	
2.0	1.40	1211	SPZH46B16B710 - D71A-4G	709.88	18 000	18 000	72	M270	X
2.0	2.40	1217	SPZH56B16B710 - D71A-4G	713.86	27 000	27 000	109	M278	X
1.7	1.20	1407	SPZH46B16B800 - D71A-4G	825.19	18 000	18 000	72	M270	
1.7	2.00	1415	SPZH56B16B800 - D71A-4G	829.83	27 000	27 000	109	M278	
1.5	1.10	1568	SPZH46B16B900 - D71A-4G	919.35	18 000	18 000	72	M270	X
1.5	1.80	1577	SPZH56B16B900 - D71A-4G	924.51	27 000	27 000	109	M278	X
1.5	1.10	1618	SPZH46B16B1000 - D71A-4G	948.89	18 000	18 000	72	M270	
1.5	1.80	1627	SPZH56B16B1000 - D71A-4G	954.22	27 000	27 000	109	M278	
1.2	0.87	1948	SPZH46B16B1120 - D71A-4G	1142.57	18 000	18 000	72	M270	X



P 0.25 kW
n₁ 1400 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
1.2	1.50	1959	SPZH56B16B1120 - D71A-4G	1148.99	27 000	27 000	109	M278	X
1.2	2.80	1947	SPZH66C36B1120 - D71A-4G	1141.54		30 000	198	M286	
1.1	0.80	2115	SPZH46B16C1250 - D71A-4G	1240.35	18 000	18 000	72	M270	
1.1	1.40	2127	SPZH56B16C1250 - D71A-4G	1247.31	27 000	27 000	109	M278	
1.1	2.60	2097	SPZH66C36B1250 - D71A-4G	1229.59		30 000	198	M286	
1.0	1.20	2354	SPZH56B16C1400 - D71A-4G	1380.63	27 000	27 000	109	M278	X
1.0	2.30	2381	SPZH66C36B1400 - D71A-4G	1396.25		30 000	198	M286	
0.9	1.10	2623	SPZH56B16C1600 - D71A-4G	1538.19	27 000	27 000	109	M278	X
0.9	2.00	2697	SPZH66C36B1600 - D71A-4G	1581.32		30 000	198	M286	
0.9	3.00	2652	SPZH76C36B1600 - D71A-4G	1554.99		50 000	289	M294	
0.8	0.98	2945	SPZH56B16C1800 - D71A-4G	1727.26	27 000	27 000	109	M278	X
0.8	1.90	2940	SPZH66C36B1800 - D71A-4G	1724.37		30 000	198	M286	
0.8	2.60	3069	SPZH76C36B1800 - D71A-4G	1799.92		50 000	289	M294	
0.7	0.88	3279	SPZH56B16C2000 - D71A-4G	1922.74	27 000	27 000	109	M278	
0.7	1.60	3404	SPZH66C36B2000 - D71A-4G	1995.97		30 000	198	M286	
0.7	2.40	3389	SPZH76C36B2000 - D71A-4G	1987.45		50 000	289	M294	
0.6	1.50	3758	SPZH66C36B2240 - D71A-4G	2203.92		30 000	198	M286	
0.6	2.00	4055	SPZH76C36B2240 - D71A-4G	2377.80		50 000	289	M294	
0.5	1.10	5006	SPZH66C36B2800 - D71A-4G	2935.85		30 000	198	M286	
0.5	1.60	4994	SPZH76C36B2800 - D71A-4G	2928.76		50 000	289	M294	
0.4	0.99	5538	SPZH66C36B3150 - D71A-4G	3247.76		30 000	198	M286	
0.4	1.40	5548	SPZH76C36B3150 - D71A-4G	3253.53		50 000	289	M294	
0.4	2.80	5307	SPZH86C36C3150 - D71A-4G	3112.09		82 500	444	M302	
0.4	0.89	6152	SPZH66C36B3550 - D71A-4G	3607.91		30 000	198	M286	
0.4	1.40	5727	SPZH76C36B3550 - D71A-4G	3358.36		50 000	289	M294	
0.4	2.60	5787	SPZH86C36C3550 - D71A-4G	3393.61		82 500	444	M302	
0.3	0.80	6843	SPZH66C36C4000 - D71A-4G	4012.75		30 000	198	M286	
0.4	1.20	6428	SPZH76C36B4000 - D71A-4G	3769.68		50 000	289	M294	
0.4	2.20	6698	SPZH86C36C4000 - D71A-4G	3928.13		82 500	444	M302	
0.3	1.00	7621	SPZH76C36C4500 - D71A-4G	4468.98		50 000	289	M294	
0.3	2.00	7396	SPZH86C36C4500 - D71A-4G	4337.39		82 500	444	M302	
0.3	0.91	8821	SPZH76C36C5000 - D71A-4G	5172.88		50 000	289	M294	
0.3	1.70	8849	SPZH86C36C5000 - D71A-4G	5189.29		82 500	444	M302	
0.2	0.82	9740	SPZH76C36C5600 - D71A-4G	5711.83		50 000	289	M294	
0.2	1.50	9853	SPZH86C36C5600 - D71A-4G	5777.83		82 500	444	M302	
0.2	1.40	10899	SPZH86C36C6300 - D71A-4G	6391.69		82 500	444	M302	
0.2	1.20	12108	SPZH86C36C7100 - D71A-4G	7100.47		82 500	444	M302	
0.2	1.10	14029	SPZH86C36C8000 - D71A-4G	8226.92		82 500	444	M302	



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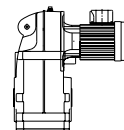
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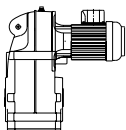
P 0.37 kW
n₁ 1400 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
403.9	19.00	9	SPZH16B3.55 - D71B-4G	3.47		4 100	23	M246	
352.4	16.00	10	SPZH16B4 - D71B-4G	3.97		4 200	23	M246	
328.8	15.00	11	SPZH16B4.5 - D71B-4G	4.26		4 300	23	M246	
285.7	13.00	12	SPZH16B5 - D71B-4G	4.90		4 500	23	M246	
247.1	11.00	14	SPZH16B5.6 - D71B-4G	5.66		4 700	23	M246	
229.3	11.00	15	SPZH16B6.3 - D71B-4G	6.10		4 800	23	M246	
212.4	9.90	17	SPZH16B7.1 - D71B-4G	6.59		5 000	23	M246	
181.0	8.40	20	SPZH16B8 - D71B-4G	7.73		5 000	23	M246	
165.6	11.00	21	SPZH16B9 - D71B-4G	8.45		5 000	23	M246	X
144.4	9.40	24	SPZH16B10 - D71B-4G	9.69		5 000	23	M246	
134.8	8.80	26	SPZH16B11.2 - D71B-4G	10.39		5 000	23	M246	X
117.1	7.60	30	SPZH16B12.5 - D71B-4G	11.95		5 000	23	M246	
101.3	6.60	35	SPZH16B14 - D71B-4G	13.82		5 000	23	M246	X
87.1	5.70	41	SPZH16B16 - D71B-4G	16.08		5 000	23	M246	X
74.2	4.80	48	SPZH16B18 - D71B-4G	18.87		5 000	23	M246	
68.2	4.40	52	SPZH16B20 - D71B-4G	20.52		5 000	23	M246	X
57.0	3.70	62	SPZH16B25 - D71B-4G	24.55		5 000	23	M246	
51.8	3.40	68	SPZH16B28 - D71B-4G	27.02		5 000	23	M246	
46.8	3.00	75	SPZH16B31.5 - D71B-4G	29.91		5 000	23	M246	X
37.4	2.40	94	SPZH16B35.5 - D71B-4G	37.42		5 000	23	M246	X
33.6	2.20	105	SPZH16B40 - D71B-4G	41.65		5 000	23	M246	
30.1	2.00	118	SPZH16B45 - D71B-4G	46.58		5 000	23	M246	X
25.9	1.70	137	SPZH16B56 - D71B-4G	54.15		5 000	23	M246	
23.4	2.90	151	SPZH26B56 - D71B-4G	59.95	6 900	6 900	30	M254	
23.2	1.50	152	SPZH16B63 - D71B-4G	60.33		5 000	23	M246	X
21.0	2.60	169	SPZH26B63 - D71B-4G	66.79	6 900	6 900	30	M254	X
18.7	1.20	189	SPZH16B71 - D71B-4G	74.98		5 000	23	M246	X
20.3	2.10	174	SPZH26B71 - D71B-4G	68.94	6 900	6 900	30	M254	
16.8	1.10	210	SPZH16B80 - D71B-4G	83.24		5 000	23	M246	
16.9	1.70	209	SPZH26B80 - D71B-4G	83.01	6 900	6 900	30	M254	X
15.0	0.98	236	SPZH16B90 - D71B-4G	93.33		5 000	23	M246	X
15.2	1.40	233	SPZH26B90 - D71B-4G	92.15	6 900	6 900	30	M254	
16.0	2.00	221	SPZH26B16B90 - D71B-4G	87.51	6 900	6 900	40	M254	X
14.4	0.94	245	SPZH16B16B100 - D71B-4G	97.10		5 000	33	M246	X
13.5	1.20	261	SPZH26B100 - D71B-4G	103.33	6 900	6 900	30	M254	X
13.8	1.70	257	SPZH26B16B100 - D71B-4G	101.81	6 900	6 900	40	M254	X
13.2	3.00	268	SPZH36B100 - D71B-4G	106.33	10 500	13 500	37	M262	
12.4	0.81	285	SPZH16B16B112 - D71B-4G	112.96		5 000	33	M246	X
12.9	1.60	273	SPZH26B16B112 - D71B-4G	108.11	6 900	6 900	40	M254	
11.2	1.40	316	SPZH26B16B125 - D71B-4G	125.07	6 900	6 900	40	M254	X
11.4	2.70	311	SPZH36B16B125 - D71B-4G	123.12	10 900	13 500	47	M262	
9.7	1.20	363	SPZH26B16B140 - D71B-4G	143.94	6 900	6 900	40	M254	
9.8	2.40	359	SPZH36B16B140 - D71B-4G	142.34	11 200	13 500	47	M262	X
9.1	1.10	389	SPZH26B16B160 - D71B-4G	154.13	6 900	6 900	40	M254	
9.1	2.20	387	SPZH36B16B160 - D71B-4G	153.39	11 400	13 500	47	M262	
7.8	0.97	453	SPZH26B16B180 - D71B-4G	179.33	6 900	6 900	40	M254	
7.6	1.80	462	SPZH36B16B180 - D71B-4G	183.04	11 700	13 500	47	M262	
7.2	0.89	493	SPZH26B16B200 - D71B-4G	195.28	6 900	6 900	40	M254	
7.2	1.70	490	SPZH36B16B200 - D71B-4G	194.34	11 900	13 500	47	M262	
6.4	1.50	552	SPZH36B16B224 - D71B-4G	218.91	12 100	13 500	47	M262	
6.2	3.00	573	SPZH46B16B224 - D71B-4G	226.93	17 100	18 000	73	M270	
5.5	1.30	638	SPZH36B16B250 - D71B-4G	252.84	12 300	13 500	47	M262	



P 0.37 kW
n₁ 1400 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rIN} N	F _{rIN-G} N	m kg		
5.7	2.70	618	SPZH46B16B250 - D71B-4G	245.00	17 400	18 000	73	M270	X
5.0	1.20	702	SPZH36B16B280 - D71B-4G	278.34	12 500	13 500	47	M262	
4.9	2.30	726	SPZH46B16B280 - D71B-4G	287.51	18 000	18 000	73	M270	
4.5	1.10	778	SPZH36B16B315 - D71B-4G	308.09	12 600	13 500	47	M262	X
4.5	2.20	789	SPZH46B16B315 - D71B-4G	312.75	18 000	18 000	73	M270	X
4.1	0.98	866	SPZH36B16B355 - D71B-4G	343.25	12 700	13 500	47	M262	X
3.7	1.80	944	SPZH46B16B355 - D71B-4G	374.06	18 000	18 000	73	M270	
3.6	0.87	973	SPZH36B16B400 - D71B-4G	385.45	12 800	13 500	47	M262	X
3.4	1.60	1039	SPZH46B16B400 - D71B-4G	411.78	18 000	18 000	73	M270	
3.4	2.80	1045	SPZH56B16B400 - D71B-4G	414.09	24 900	27 000	110	M278	
3.1	1.50	1150	SPZH46B16B450 - D71B-4G	455.79	18 000	18 000	73	M270	X
3.1	2.50	1157	SPZH56B16B450 - D71B-4G	458.35	25 400	27 000	110	M278	X
2.8	1.30	1282	SPZH46B16B500 - D71B-4G	507.81	18 000	18 000	73	M270	X
2.7	2.30	1289	SPZH56B16B500 - D71B-4G	510.66	26 000	27 000	110	M278	X
2.5	1.20	1439	SPZH46B16B560 - D71B-4G	570.23	18 000	18 000	73	M270	X
2.4	2.00	1447	SPZH56B16B560 - D71B-4G	573.43	26 600	27 000	110	M278	X
2.2	1.10	1602	SPZH46B16B630 - D71B-4G	634.76	18 000	18 000	73	M270	
2.2	1.80	1611	SPZH56B16B630 - D71B-4G	638.33	27 000	27 000	110	M278	
2.0	0.95	1792	SPZH46B16B710 - D71B-4G	709.88	18 000	18 000	73	M270	X
2.0	1.60	1802	SPZH56B16B710 - D71B-4G	713.86	27 000	27 000	110	M278	X
1.9	3.00	1857	SPZH66B36B710 - D71B-4G	735.85		30 000	199	M286	
1.7	0.82	2083	SPZH46B16B800 - D71B-4G	825.19	18 000	18 000	73	M270	
1.7	1.40	2094	SPZH56B16B800 - D71B-4G	829.83	27 000	27 000	110	M278	
1.7	2.70	2068	SPZH66B36B800 - D71B-4G	819.31		30 000	199	M286	
1.5	1.20	2333	SPZH56B16B900 - D71B-4G	924.51	27 000	27 000	110	M278	X
1.5	2.40	2287	SPZH66B36B900 - D71B-4G	906.35		30 000	199	M286	
1.5	1.20	2408	SPZH56B16B1000 - D71B-4G	954.22	27 000	27 000	110	M278	
1.4	2.20	2541	SPZH66B36B1000 - D71B-4G	1006.86		30 000	199	M286	
1.2	1.00	2900	SPZH56B16B1120 - D71B-4G	1148.99	27 000	27 000	110	M278	X
1.2	1.90	2881	SPZH66C36B1120 - D71B-4G	1141.54		30 000	199	M286	
1.3	2.90	2792	SPZH76B36B1120 - D71B-4G	1106.11		50 000	290	M294	
1.1	0.92	3148	SPZH56B16C1250 - D71B-4G	1247.31	27 000	27 000	110	M278	
1.1	1.80	3103	SPZH66C36B1250 - D71B-4G	1229.59		30 000	199	M286	
1.1	2.50	3178	SPZH76C36B1250 - D71B-4G	1259.11		50 000	290	M294	
1.0	0.83	3484	SPZH56B16C1400 - D71B-4G	1380.63	27 000	27 000	110	M278	X
1.0	1.60	3524	SPZH66C36B1400 - D71B-4G	1396.25		30 000	199	M286	
1.0	2.20	3599	SPZH76C36B1400 - D71B-4G	1426.00		50 000	290	M294	
0.9	1.40	3991	SPZH66C36B1600 - D71B-4G	1581.32		30 000	199	M286	
0.9	2.00	3924	SPZH76C36B1600 - D71B-4G	1554.99		50 000	290	M294	
0.8	1.30	4352	SPZH66C36B1800 - D71B-4G	1724.37		30 000	199	M286	
0.8	1.80	4543	SPZH76C36B1800 - D71B-4G	1799.92		50 000	290	M294	
0.7	1.10	5037	SPZH66C36B2000 - D71B-4G	1995.97		30 000	199	M286	
0.7	1.60	5016	SPZH76C36B2000 - D71B-4G	1987.45		50 000	290	M294	
0.7	3.00	5074	SPZH86C36B2000 - D71B-4G	2010.42		82 500	445	M302	
0.6	0.99	5562	SPZH66C36B2240 - D71B-4G	2203.92		30 000	199	M286	
0.6	1.30	6001	SPZH76C36B2240 - D71B-4G	2377.80		50 000	290	M294	
0.6	2.70	5613	SPZH86C36B2240 - D71B-4G	2224.01		82 500	445	M302	
0.6	2.40	6235	SPZH86C36B2500 - D71B-4G	2470.63		82 500	445	M302	
0.5	1.10	7391	SPZH76C36B2800 - D71B-4G	2928.76		50 000	290	M294	
0.5	2.10	7224	SPZH86C36B2800 - D71B-4G	2862.58		82 500	445	M302	
0.4	0.97	8211	SPZH76C36B3150 - D71B-4G	3253.53		50 000	290	M294	
0.4	1.90	7854	SPZH86C36C3150 - D71B-4G	3112.09		82 500	445	M302	



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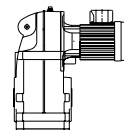
SP4

P 0.37 kW
n₁ 1400 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
0.4	0.94	8476	SPZH76C36B3550 - D71B-4G	3358.36		50 000	290	M294	
0.4	1.80	8565	SPZH86C36C3550 - D71B-4G	3393.61		82 500	445	M302	
0.4	0.84	9514	SPZH76C36B4000 - D71B-4G	3769.68		50 000	290	M294	
0.4	1.50	9914	SPZH86C36C4000 - D71B-4G	3928.13		82 500	445	M302	
0.3	1.40	10946	SPZH86C36C4500 - D71B-4G	4337.39		82 500	445	M302	
0.3	1.10	13096	SPZH86C36C5000 - D71B-4G	5189.29		82 500	445	M302	
0.2	1.00	14582	SPZH86C36C5600 - D71B-4G	5777.83		82 500	445	M302	
0.2	0.93	16131	SPZH86C36C6300 - D71B-4G	6391.69		82 500	445	M302	
0.2	0.84	17920	SPZH86C36C7100 - D71B-4G	7100.47		82 500	445	M302	

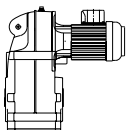
P 0.55 kW
n₁ 1420 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
409.7	13.00	13	SPZH16B3.55 - D80A-4G	3.47		4 000	25	M246	
357.4	11.00	15	SPZH16B4 - D80A-4G	3.97		4 200	25	M246	
333.5	10.00	16	SPZH16B4.5 - D80A-4G	4.26		4 300	25	M246	
289.8	9.00	18	SPZH16B5 - D80A-4G	4.90		4 500	25	M246	
250.7	7.80	21	SPZH16B5.6 - D80A-4G	5.66		4 600	25	M246	
232.6	7.30	23	SPZH16B6.3 - D80A-4G	6.10		4 800	25	M246	
215.5	6.70	24	SPZH16B7.1 - D80A-4G	6.59		4 900	25	M246	
183.6	5.70	29	SPZH16B8 - D80A-4G	7.73		5 000	25	M246	
168.0	7.40	31	SPZH16B9 - D80A-4G	8.45		5 000	25	M246	X
146.5	6.40	36	SPZH16B10 - D80A-4G	9.69		5 000	25	M246	
136.7	6.00	38	SPZH16B11.2 - D80A-4G	10.39		5 000	25	M246	X
118.8	5.20	44	SPZH16B12.5 - D80A-4G	11.95		5 000	25	M246	
102.8	4.50	51	SPZH16B14 - D80A-4G	13.82		5 000	25	M246	X
88.3	3.90	59	SPZH16B16 - D80A-4G	16.08		5 000	25	M246	X
75.3	3.30	70	SPZH16B18 - D80A-4G	18.87		5 000	25	M246	
69.2	3.00	76	SPZH16B20 - D80A-4G	20.52		5 000	25	M246	X
57.9	2.50	91	SPZH16B25 - D80A-4G	24.55		5 000	25	M246	
52.6	2.30	100	SPZH16B28 - D80A-4G	27.02		5 000	25	M246	
47.5	2.10	111	SPZH16B31.5 - D80A-4G	29.91		5 000	25	M246	X
37.9	1.70	138	SPZH16B35.5 - D80A-4G	37.42		5 000	25	M246	X
34.1	1.50	154	SPZH16B40 - D80A-4G	41.65		5 000	25	M246	
34.3	2.90	153	SPZH26B40 - D80A-4G	41.43	6 100	6 900	32	M254	X
30.5	1.30	172	SPZH16B45 - D80A-4G	46.58		5 000	25	M246	X
30.8	2.60	171	SPZH26B45 - D80A-4G	46.12	6 200	6 900	32	M254	
27.5	2.30	191	SPZH26B50 - D80A-4G	51.57	6 400	6 900	32	M254	X
26.2	1.10	200	SPZH16B56 - D80A-4G	54.15		5 000	25	M246	
23.7	2.00	222	SPZH26B56 - D80A-4G	59.95	6 500	6 900	32	M254	
23.5	1.00	223	SPZH16B63 - D80A-4G	60.33		5 000	25	M246	X
21.3	1.80	247	SPZH26B63 - D80A-4G	66.79	6 700	6 900	32	M254	X
18.9	0.83	277	SPZH16B71 - D80A-4G	74.98		5 000	25	M246	X
20.6	1.40	255	SPZH26B71 - D80A-4G	68.94	6 700	6 900	32	M254	
17.1	1.20	307	SPZH26B80 - D80A-4G	83.01	6 800	6 900	32	M254	X
18.2	2.90	288	SPZH36B80 - D80A-4G	77.94	9 100	13 500	39	M262	
15.4	0.98	341	SPZH26B90 - D80A-4G	92.15	6 900	6 900	32	M254	



P 0.55 kW
n₁ 1420 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
16.2	1.40	324	SPZH26B16B90 - D80A-4G	87.51	6 900	6 900	42	M254	X
16.6	2.70	317	SPZH36B90 - D80A-4G	85.68	9 300	13 500	39	M262	
13.7	0.81	382	SPZH26B100 - D80A-4G	103.33	6 900	6 900	32	M254	X
13.9	1.20	377	SPZH26B16B100 - D80A-4G	101.81	6 900	6 900	42	M254	X
13.4	2.00	393	SPZH36B100 - D80A-4G	106.33	9 700	13 500	39	M262	
14.2	2.30	369	SPZH36B16B100 - D80A-4G	99.84	9 700	13 500	49	M262	
13.1	1.10	400	SPZH26B16B112 - D80A-4G	108.11	6 900	6 900	42	M254	
13.3	2.10	396	SPZH36B16B112 - D80A-4G	106.98	9 700	13 500	49	M262	X
11.4	0.95	463	SPZH26B16B125 - D80A-4G	125.07	6 900	6 900	42	M254	X
11.5	1.90	455	SPZH36B16B125 - D80A-4G	123.12	9 900	13 500	49	M262	
9.9	0.83	532	SPZH26B16B140 - D80A-4G	143.94	6 900	6 900	42	M254	
10.0	1.60	526	SPZH36B16B140 - D80A-4G	142.34	10 100	13 500	49	M262	X
9.3	1.50	567	SPZH36B16B160 - D80A-4G	153.39	10 200	13 500	49	M262	
8.7	2.80	605	SPZH46C160 - D80A-4G	163.58	14 800	18 000	65	M270	
7.8	1.30	677	SPZH36B16B180 - D80A-4G	183.04	10 400	13 500	49	M262	
7.8	2.50	669	SPZH46C180 - D80A-4G	180.96	15 100	18 000	65	M270	
7.3	1.20	719	SPZH36B16B200 - D80A-4G	194.34	10 400	13 500	49	M262	
7.1	2.30	744	SPZH46C200 - D80A-4G	201.03	15 400	18 000	65	M270	
6.5	1.00	810	SPZH36B16B224 - D80A-4G	218.91	10 500	13 500	49	M262	
6.1	2.00	861	SPZH46C224 - D80A-4G	232.92	15 700	18 000	65	M270	
5.6	0.91	935	SPZH36B16B250 - D80A-4G	252.84	10 500	13 500	49	M262	
5.8	1.90	906	SPZH46B16B250 - D80A-4G	245.00	15 900	18 000	75	M270	X
5.1	0.83	1030	SPZH36B16B280 - D80A-4G	278.34	10 400	13 500	49	M262	
4.9	1.60	1069	SPZH46C280 - D80A-4G	289.06	16 200	18 000	65	M270	
4.9	2.70	1073	SPZH56C280 - D80A-4G	290.23	21 400	27 000	102	M278	
4.5	1.50	1157	SPZH46B16B315 - D80A-4G	312.75	16 400	18 000	75	M270	X
4.4	2.40	1204	SPZH56C315 - D80A-4G	325.39	21 800	27 000	102	M278	
3.8	1.20	1384	SPZH46B16B355 - D80A-4G	374.06	16 600	18 000	75	M270	
3.8	2.10	1391	SPZH56B16B355 - D80A-4G	376.16	22 400	27 000	112	M278	
3.4	1.10	1523	SPZH46B16B400 - D80A-4G	411.78	16 700	18 000	75	M270	
3.4	1.90	1532	SPZH56B16B400 - D80A-4G	414.09	22 700	27 000	112	M278	
3.1	1.00	1686	SPZH46B16B450 - D80A-4G	455.79	16 700	18 000	75	M270	X
3.1	1.70	1695	SPZH56B16B450 - D80A-4G	458.35	23 100	27 000	112	M278	X
2.8	0.91	1878	SPZH46B16B500 - D80A-4G	507.81	16 700	18 000	75	M270	X
2.8	1.50	1889	SPZH56B16B500 - D80A-4G	510.66	23 400	27 000	112	M278	X
2.5	0.81	2109	SPZH46B16B560 - D80A-4G	570.23	16 600	18 000	75	M270	X
2.5	1.40	2121	SPZH56B16B560 - D80A-4G	573.43	23 600	27 000	112	M278	X
2.5	2.70	2060	SPZH66B36B560 - D80A-4G	557.02		30 000	201	M286	
2.2	1.20	2361	SPZH56B16B630 - D80A-4G	638.33	23 800	27 000	112	M278	
2.3	2.40	2275	SPZH66B36B630 - D80A-4G	615.05		30 000	201	M286	
2.0	1.10	2640	SPZH56B16B710 - D80A-4G	713.86	23 900	27 000	112	M278	X
1.9	2.00	2722	SPZH66B36B710 - D80A-4G	735.85		30 000	201	M286	
1.7	0.94	3069	SPZH56B16B800 - D80A-4G	829.83	23 900	27 000	112	M278	
1.7	1.80	3030	SPZH66B36B800 - D80A-4G	819.31		30 000	201	M286	
1.8	2.70	2990	SPZH76B36B800 - D80A-4G	808.38		50 000	292	M294	
1.5	0.85	3419	SPZH56B16B900 - D80A-4G	924.51	23 800	27 000	112	M278	X
1.6	1.60	3352	SPZH66B36B900 - D80A-4G	906.35		30 000	201	M286	
1.6	2.40	3329	SPZH76B36B900 - D80A-4G	900.07		50 000	292	M294	
1.5	0.82	3529	SPZH56B16B1000 - D80A-4G	954.22	23 800	27 000	112	M278	
1.4	1.50	3724	SPZH66B36B1000 - D80A-4G	1006.86		30 000	201	M286	
1.4	2.20	3683	SPZH76B36B1000 - D80A-4G	995.69		50 000	292	M294	
1.2	1.30	4222	SPZH66C36B1120 - D80A-4G	1141.54		30 000	201	M286	



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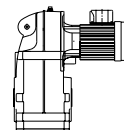
L

K

SP4

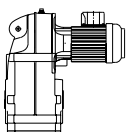
P 0.55 kW
n₁ 1420 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
1.3	2.00	4091	SPZH76B36B1120 - D80A-4G	1106.11		50 000	292	M294	
1.2	1.20	4548	SPZH66C36B1250 - D80A-4G	1229.59		30 000	201	M286	
1.1	1.70	4657	SPZH76C36B1250 - D80A-4G	1259.11		50 000	292	M294	
1.0	1.10	5164	SPZH66C36B1400 - D80A-4G	1396.25		30 000	201	M286	
1.0	1.50	5274	SPZH76C36B1400 - D80A-4G	1426.00		50 000	292	M294	
1.0	3.00	5055	SPZH86C36B1400 - D80A-4G	1366.81		82 500	447	M302	
0.9	0.94	5849	SPZH66C36B1600 - D80A-4G	1581.32		30 000	201	M286	
0.9	1.40	5751	SPZH76C36B1600 - D80A-4G	1554.99		50 000	292	M294	
0.9	2.70	5582	SPZH86C36B1600 - D80A-4G	1509.21		82 500	447	M302	
0.8	0.86	6378	SPZH66C36B1800 - D80A-4G	1724.37		30 000	201	M286	
0.8	1.20	6657	SPZH76C36B1800 - D80A-4G	1799.92		50 000	292	M294	
0.8	2.20	6678	SPZH86C36B1800 - D80A-4G	1805.63		82 500	447	M302	
0.7	1.10	7351	SPZH76C36B2000 - D80A-4G	1987.45		50 000	292	M294	
0.7	2.00	7436	SPZH86C36B2000 - D80A-4G	2010.42		82 500	447	M302	
0.6	0.91	8795	SPZH76C36B2240 - D80A-4G	2377.80		50 000	292	M294	
0.6	1.80	8226	SPZH86C36B2240 - D80A-4G	2224.01		82 500	447	M302	
0.6	1.60	9138	SPZH86C36B2500 - D80A-4G	2470.63		82 500	447	M302	
0.5	1.40	10588	SPZH86C36B2800 - D80A-4G	2862.58		82 500	447	M302	
0.5	1.30	11511	SPZH86C36C3150 - D80A-4G	3112.09		82 500	447	M302	
0.4	1.20	12552	SPZH86C36C3550 - D80A-4G	3393.61		82 500	447	M302	
0.4	1.00	14529	SPZH86C36C4000 - D80A-4G	3928.13		82 500	447	M302	
0.3	0.94	16043	SPZH86C36C4500 - D80A-4G	4337.39		82 500	447	M302	



P 0.75 kW
n₁ 1415 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{IN} N	F _{IN+G} N	m kg		
408.3	9.30	18	SPZH16B3.55 - D80B-4G	3.47		3 900	26	M246	
356.1	8.20	20	SPZH16B4 - D80B-4G	3.97		4 100	26	M246	
332.4	7.60	22	SPZH16B4.5 - D80B-4G	4.26		4 200	26	M246	
288.8	6.60	25	SPZH16B5 - D80B-4G	4.90		4 400	26	M246	
249.8	5.70	29	SPZH16B5.6 - D80B-4G	5.66		4 600	26	M246	
231.8	5.30	31	SPZH16B6.3 - D80B-4G	6.10		4 700	26	M246	
214.7	4.90	33	SPZH16B7.1 - D80B-4G	6.59		4 800	26	M246	
183.0	4.20	39	SPZH16B8 - D80B-4G	7.73		5 000	26	M246	
167.4	5.40	43	SPZH16B9 - D80B-4G	8.45		5 000	26	M246	X
146.0	4.70	49	SPZH16B10 - D80B-4G	9.69		5 000	26	M246	
136.2	4.40	53	SPZH16B11.2 - D80B-4G	10.39		5 000	26	M246	X
118.4	3.80	60	SPZH16B12.5 - D80B-4G	11.95		5 000	26	M246	
102.4	3.30	70	SPZH16B14 - D80B-4G	13.82		5 000	26	M246	X
88.0	2.80	81	SPZH16B16 - D80B-4G	16.08		5 000	26	M246	X
75.0	2.40	95	SPZH16B18 - D80B-4G	18.87		5 000	26	M246	
68.9	2.20	104	SPZH16B20 - D80B-4G	20.52		5 000	26	M246	X
57.6	1.90	124	SPZH16B25 - D80B-4G	24.55		5 000	26	M246	
52.4	1.70	137	SPZH16B28 - D80B-4G	27.02		5 000	26	M246	
47.3	2.90	151	SPZH26B28 - D80B-4G	29.92	5 400	6 900	33	M254	
47.3	1.50	151	SPZH16B31.5 - D80B-4G	29.91		5 000	26	M246	X
42.7	2.60	168	SPZH26B31.5 - D80B-4G	33.11	5 500	6 900	33	M254	X
37.8	1.20	189	SPZH16B35.5 - D80B-4G	37.42		5 000	26	M246	X
38.4	2.40	187	SPZH26B35.5 - D80B-4G	36.89	5 600	6 900	33	M254	X
34.0	1.10	211	SPZH16B40 - D80B-4G	41.65		5 000	26	M246	
34.2	2.10	210	SPZH26B40 - D80B-4G	41.43	5 700	6 900	33	M254	X
30.4	0.98	236	SPZH16B45 - D80B-4G	46.58		5 000	26	M246	X
30.7	1.90	233	SPZH26B45 - D80B-4G	46.12	5 800	6 900	33	M254	
27.4	1.70	261	SPZH26B50 - D80B-4G	51.57	5 900	6 900	33	M254	X
26.1	0.84	274	SPZH16B56 - D80B-4G	54.15		5 000	26	M246	
23.6	1.50	303	SPZH26B56 - D80B-4G	59.95	5 900	6 900	33	M254	
23.5	2.80	305	SPZH36B56 - D80B-4G	60.18	8 100	13 500	40	M262	
21.2	1.30	338	SPZH26B63 - D80B-4G	66.79	6 000	6 900	33	M254	X
21.3	2.50	337	SPZH36B63 - D80B-4G	66.57	8 300	13 500	40	M262	
20.5	1.00	349	SPZH26B71 - D80B-4G	68.94	6 000	6 900	33	M254	
19.1	2.30	374	SPZH36B71 - D80B-4G	73.95	8 400	13 500	40	M262	X
17.0	0.86	420	SPZH26B80 - D80B-4G	83.01	6 000	6 900	33	M254	X
18.2	2.20	394	SPZH36B80 - D80B-4G	77.94	8 500	13 500	40	M262	
16.2	0.99	443	SPZH26B16B90 - D80B-4G	87.51	6 000	6 900	43	M254	X
16.5	2.00	434	SPZH36B90 - D80B-4G	85.68	8 600	13 500	40	M262	X
13.9	0.85	515	SPZH26B16B100 - D80B-4G	101.81	6 000	6 900	43	M254	X
13.3	1.50	538	SPZH36B100 - D80B-4G	106.33	8 800	13 500	40	M262	
14.2	1.70	505	SPZH36B16B100 - D80B-4G	99.84	8 800	13 500	50	M262	
13.1	0.80	547	SPZH26B16B112 - D80B-4G	108.11	6 000	6 900	43	M254	
13.2	1.60	541	SPZH36B16B112 - D80B-4G	106.98	8 800	13 500	50	M262	X
12.7	3.00	563	SPZH46C112 - D80B-4G	111.21	12 900	18 000	66	M270	
11.5	1.40	623	SPZH36B16B125 - D80B-4G	123.12	8 900	13 500	50	M262	
11.5	2.70	622	SPZH46C125 - D80B-4G	122.80	13 100	18 000	66	M270	
9.9	1.20	720	SPZH36B16B140 - D80B-4G	142.34	9 000	13 500	50	M262	X
9.6	2.30	744	SPZH46C140 - D80B-4G	146.92	13 500	18 000	66	M270	
9.2	1.10	776	SPZH36B16B160 - D80B-4G	153.39	9 000	13 500	50	M262	
8.7	2.10	828	SPZH46C160 - D80B-4G	163.58	13 700	18 000	66	M270	
7.7	0.92	926	SPZH36B16B180 - D80B-4G	183.04	8 900	13 500	50	M262	



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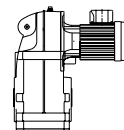
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K

SP4

P 0.75 kW
n₁ 1415 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
7.8	1.90	916	SPZH46C180 - D80B-4G	180.96	13 900	18 000	66	M270	
7.3	0.86	984	SPZH36B16B200 - D80B-4G	194.34	8 800	13 500	50	M262	
7.0	1.70	1017	SPZH46C200 - D80B-4G	201.03	14 100	18 000	66	M270	
6.7	2.70	1072	SPZH56B16B200 - D80B-4G	211.76	18 800	27 000	113	M278	X
7.4	3.00	971	SPZH56C200 - D80B-4G	191.86	18 500	27 000	103	M278	
6.1	1.40	1179	SPZH46C224 - D80B-4G	232.92	14 200	18 000	66	M270	
6.4	2.60	1121	SPZH56C224 - D80B-4G	221.46	19 000	27 000	103	M278	
5.8	1.40	1240	SPZH46B16B250 - D80B-4G	245.00	14 300	18 000	76	M270	X
5.8	2.40	1231	SPZH56C250 - D80B-4G	243.22	19 300	27 000	103	M278	
4.9	1.20	1463	SPZH46C280 - D80B-4G	289.06	14 400	18 000	66	M270	
4.9	2.00	1469	SPZH56C280 - D80B-4G	290.23	19 800	27 000	103	M278	
4.5	1.10	1583	SPZH46B16B315 - D80B-4G	312.75	14 300	18 000	76	M270	X
4.3	1.80	1647	SPZH56C315 - D80B-4G	325.39	20 000	27 000	103	M278	
3.8	0.90	1893	SPZH46B16B355 - D80B-4G	374.06	14 200	18 000	76	M270	
3.8	1.50	1904	SPZH56B16B355 - D80B-4G	376.16	20 300	27 000	113	M278	
3.4	0.82	2084	SPZH46B16B400 - D80B-4G	411.78	14 000	18 000	76	M270	
3.4	1.40	2096	SPZH56B16B400 - D80B-4G	414.09	20 400	27 000	113	M278	
3.6	2.80	1972	SPZH66B36B400 - D80B-4G	389.65		30 000	202	M286	
3.1	1.30	2320	SPZH56B16B450 - D80B-4G	458.35	20 500	27 000	113	M278	X
3.2	2.50	2234	SPZH66B36B450 - D80B-4G	441.30		30 000	202	M286	
2.8	1.10	2585	SPZH56B16B500 - D80B-4G	510.66	20 500	27 000	113	M278	X
2.9	2.30	2436	SPZH66B36B500 - D80B-4G	481.22		30 000	202	M286	
2.5	1.00	2902	SPZH56B16B560 - D80B-4G	573.43	20 400	27 000	113	M278	X
2.5	2.00	2819	SPZH66B36B560 - D80B-4G	557.02		30 000	202	M286	
2.7	3.00	2676	SPZH76B36B560 - D80B-4G	528.65		50 000	293	M294	
2.2	0.90	3231	SPZH56B16B630 - D80B-4G	638.33	20 200	27 000	113	M278	
2.3	1.80	3113	SPZH66B36B630 - D80B-4G	615.05		30 000	202	M286	
2.3	2.60	3097	SPZH76B36B630 - D80B-4G	611.92		50 000	293	M294	
2.0	0.80	3613	SPZH56B16B710 - D80B-4G	713.86	19 900	27 000	113	M278	X
1.9	1.50	3724	SPZH66B36B710 - D80B-4G	735.85		30 000	202	M286	
2.1	2.30	3420	SPZH76B36B710 - D80B-4G	675.68		50 000	293	M294	
1.7	1.30	4147	SPZH66B36B800 - D80B-4G	819.31		30 000	202	M286	
1.8	2.00	4092	SPZH76B36B800 - D80B-4G	808.38		50 000	293	M294	
1.6	1.20	4587	SPZH66B36B900 - D80B-4G	906.35		30 000	202	M286	
1.6	1.80	4556	SPZH76B36B900 - D80B-4G	900.07		50 000	293	M294	
1.4	1.10	5096	SPZH66B36B1000 - D80B-4G	1006.86		30 000	202	M286	
1.4	1.60	5040	SPZH76B36B1000 - D80B-4G	995.69		50 000	293	M294	
1.2	0.95	5778	SPZH66C36B1120 - D80B-4G	1141.54		30 000	202	M286	
1.3	1.40	5599	SPZH76B36B1120 - D80B-4G	1106.11		50 000	293	M294	
1.3	2.70	5481	SPZH86C36B1120 - D80B-4G	1082.86		82 500	448	M302	
1.2	2.50	5977	SPZH86C36B1200 - D80B-4G	1180.82		82 500	448	M302	
1.2	0.88	6224	SPZH66C36B1250 - D80B-4G	1229.59		30 000	202	M286	
1.1	1.30	6373	SPZH76C36B1250 - D80B-4G	1259.11		50 000	293	M294	
1.0	1.10	7218	SPZH76C36B1400 - D80B-4G	1426.00		50 000	293	M294	
1.0	2.20	6918	SPZH86C36B1400 - D80B-4G	1366.81		82 500	448	M302	
0.9	1.00	7871	SPZH76C36B1600 - D80B-4G	1554.99		50 000	293	M294	
0.9	2.00	7639	SPZH86C36B1600 - D80B-4G	1509.21		82 500	448	M302	
0.8	0.88	9110	SPZH76C36B1800 - D80B-4G	1799.92		50 000	293	M294	
0.8	1.60	9139	SPZH86C36B1800 - D80B-4G	1805.63		82 500	448	M302	
0.7	0.80	10059	SPZH76C36B2000 - D80B-4G	1987.45		50 000	293	M294	
0.7	1.50	10176	SPZH86C36B2000 - D80B-4G	2010.42		82 500	448	M302	
0.6	1.30	11257	SPZH86C36B2240 - D80B-4G	2224.01		82 500	448	M302	

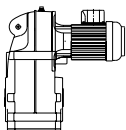


P 0.75 kW
n₁ 1415 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
0.6	1.20	12505	SPZH86C36B2500 - D80B-4G	2470.63		82 500	448	M302	
0.5	1.00	14489	SPZH86C36B2800 - D80B-4G	2862.58		82 500	448	M302	
0.5	0.95	15752	SPZH86C36C3150 - D80B-4G	3112.09		82 500	448	M302	
0.4	0.87	17177	SPZH86C36C3550 - D80B-4G	3393.61		82 500	448	M302	

P 1.1 kW
n₁ 1410 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
406.8	6.40	26	SPZH16B3.55 - D90S-4G	3.47		3 900	31	M246	
354.9	5.50	30	SPZH16B4 - D90S-4G	3.97		4 000	31	M246	
331.2	5.20	32	SPZH16B4.5 - D90S-4G	4.26		4 100	31	M246	
287.8	4.50	37	SPZH16B5 - D90S-4G	4.90		4 300	31	M246	
248.9	3.90	42	SPZH16B5.6 - D90S-4G	5.66		4 400	31	M246	
231.0	3.60	45	SPZH16B6.3 - D90S-4G	6.10		4 500	31	M246	
213.9	3.30	49	SPZH16B7.1 - D90S-4G	6.59		4 600	31	M246	
182.3	2.80	58	SPZH16B8 - D90S-4G	7.73		4 800	31	M246	
166.8	3.70	63	SPZH16B9 - D90S-4G	8.45		5 000	31	M246	X
145.5	3.20	72	SPZH16B10 - D90S-4G	9.69		5 000	31	M246	
135.8	3.00	77	SPZH16B11.2 - D90S-4G	10.39		5 000	31	M246	X
118.0	2.60	89	SPZH16B12.5 - D90S-4G	11.95		5 000	31	M246	
102.0	2.20	103	SPZH16B14 - D90S-4G	13.82		5 000	31	M246	X
87.7	1.90	120	SPZH16B16 - D90S-4G	16.08		5 000	31	M246	X
74.7	1.60	141	SPZH16B18 - D90S-4G	18.87		5 000	31	M246	
68.7	1.50	153	SPZH16B20 - D90S-4G	20.52		5 000	31	M246	X
67.5	2.80	156	SPZH26B20 - D90S-4G	20.89	4 600	6 900	38	M254	
62.1	2.60	169	SPZH26B22.4 - D90S-4G	22.72	4 700	6 900	38	M254	X
57.4	1.30	183	SPZH16B25 - D90S-4G	24.55		5 000	31	M246	
51.9	2.20	202	SPZH26B25 - D90S-4G	27.18	4 800	6 900	38	M254	
52.2	1.10	201	SPZH16B28 - D90S-4G	27.02		5 000	31	M246	
47.1	2.00	223	SPZH26B28 - D90S-4G	29.92	4 800	6 900	38	M254	
47.1	1.00	223	SPZH16B31.5 - D90S-4G	29.91		5 000	31	M246	X
42.6	1.80	247	SPZH26B31.5 - D90S-4G	33.11	4 900	6 900	38	M254	X
37.7	0.83	279	SPZH16B35.5 - D90S-4G	37.42		5 000	31	M246	X
38.2	1.60	275	SPZH26B35.5 - D90S-4G	36.89	4 900	6 900	38	M254	X
34.0	1.40	309	SPZH26B40 - D90S-4G	41.43	5 000	6 900	38	M254	X
34.5	2.80	305	SPZH36B40 - D90S-4G	40.91	6 900	13 500	45	M262	X
30.6	1.30	344	SPZH26B45 - D90S-4G	46.12	5 000	6 900	38	M254	
31.2	2.50	337	SPZH36B45 - D90S-4G	45.17	7 100	13 500	45	M262	X
27.3	1.10	384	SPZH26B50 - D90S-4G	51.57	5 000	6 900	38	M254	X
26.1	2.10	403	SPZH36B50 - D90S-4G	54.05	7 200	13 500	45	M262	
23.5	0.99	447	SPZH26B56 - D90S-4G	59.95	4 900	6 900	38	M254	
23.4	1.90	448	SPZH36B56 - D90S-4G	60.18	7 300	13 500	45	M262	
21.1	0.88	498	SPZH26B63 - D90S-4G	66.79	4 900	6 900	38	M254	X
21.2	1.70	496	SPZH36B63 - D90S-4G	66.57	7 400	13 500	45	M262	
19.1	1.50	551	SPZH36B71 - D90S-4G	73.95	7 400	13 500	45	M262	X
18.6	2.90	566	SPZH46B71 - D90S-4G	75.97	11 000	18 000	71	M270	
18.1	1.50	581	SPZH36B80 - D90S-4G	77.94	7 400	13 500	45	M262	



F

A

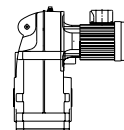
L

K

SP4

P 1.10 kW
n₁ 1410 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
18.1	2.90	580	SPZH46C80 - D90S-4G	77.80	11 000	18 000	71	M270	
16.5	1.30	638	SPZH36B90 - D90S-4G	85.68	7 400	13 500	45	M262	X
16.0	2.60	656	SPZH46C90 - D90S-4G	88.11	11 200	18 000	71	M270	
13.3	1.00	792	SPZH36B100 - D90S-4G	106.33	7 400	13 500	45	M262	
14.7	2.40	716	SPZH46C100 - D90S-4G	96.08	11 400	18 000	71	M270	
13.2	1.10	797	SPZH36B16B112 - D90S-4G	106.98	7 300	13 500	55	M262	X
12.7	2.10	829	SPZH46C112 - D90S-4G	111.21	11 600	18 000	71	M270	
11.5	0.93	917	SPZH36B16B125 - D90S-4G	123.12	7 200	13 500	55	M262	
11.5	1.90	915	SPZH46C125 - D90S-4G	122.80	11 700	18 000	71	M270	
10.9	3.00	967	SPZH56C125 - D90S-4G	129.77	15 800	27 000	108	M278	
9.9	0.80	1060	SPZH36B16B140 - D90S-4G	142.34	7 000	13 500	55	M262	X
9.6	1.60	1095	SPZH46C140 - D90S-4G	146.92	11 800	18 000	71	M270	
10.2	2.80	1035	SPZH56C140 - D90S-4G	138.87	15 900	27 000	108	M278	
8.6	1.40	1219	SPZH46C160 - D90S-4G	163.58	11 800	18 000	71	M270	
9.1	2.50	1155	SPZH56C160 - D90S-4G	155.10	16 200	27 000	108	M278	
7.8	1.30	1348	SPZH46C180 - D90S-4G	180.96	11 800	18 000	71	M270	
8.0	2.20	1318	SPZH56C180 - D90S-4G	176.96	16 500	27 000	108	M278	
7.0	1.10	1498	SPZH46C200 - D90S-4G	201.03	11 800	18 000	71	M270	
6.7	1.80	1578	SPZH56B16B200 - D90S-4G	211.76	16 700	27 000	118	M278	X
7.3	2.00	1429	SPZH56C200 - D90S-4G	191.86	16 600	27 000	108	M278	
6.1	0.98	1735	SPZH46C224 - D90S-4G	232.92	11 600	18 000	71	M270	
6.4	1.80	1650	SPZH56C224 - D90S-4G	221.46	16 800	27 000	108	M278	
5.8	0.93	1825	SPZH46B16B250 - D90S-4G	245.00	11 500	18 000	81	M270	X
5.8	1.60	1812	SPZH56C250 - D90S-4G	243.22	16 900	27 000	108	M278	
5.5	2.90	1895	SPZH66B36B250 - D90S-4G	254.37		30 000	207	M286	
4.9	1.30	2162	SPZH56C280 - D90S-4G	290.23	16 900	27 000	108	M278	
5.2	2.70	2030	SPZH66B36B280 - D90S-4G	272.44		30 000	207	M286	
4.3	1.20	2424	SPZH56C315 - D90S-4G	325.39	16 900	27 000	108	M278	
4.4	2.30	2373	SPZH66B36B315 - D90S-4G	318.57		30 000	207	M286	
3.7	1.00	2802	SPZH56B16B355 - D90S-4G	376.16	16 600	27 000	118	M278	
4.1	2.20	2556	SPZH66B36B355 - D90S-4G	343.14		30 000	207	M286	
3.4	0.94	3085	SPZH56B16B400 - D90S-4G	414.09	16 400	27 000	118	M278	
3.6	1.90	2903	SPZH66B36B400 - D90S-4G	389.65		30 000	207	M286	
3.7	2.80	2808	SPZH76B36B400 - D90S-4G	376.96		50 000	298	M294	
3.1	0.85	3415	SPZH56B16B450 - D90S-4G	458.35	16 000	27 000	118	M278	X
3.2	1.70	3288	SPZH66B36B450 - D90S-4G	441.30		30 000	207	M286	
3.3	2.50	3189	SPZH76B36B450 - D90S-4G	428.06		50 000	298	M294	
2.9	1.50	3585	SPZH66B36B500 - D90S-4G	481.22		30 000	207	M286	
2.9	2.20	3612	SPZH76B36B500 - D90S-4G	484.80		50 000	298	M294	
2.5	1.30	4150	SPZH66B36B560 - D90S-4G	557.02		30 000	207	M286	
2.7	2.00	3938	SPZH76B36B560 - D90S-4G	528.65		50 000	298	M294	
2.3	1.20	4582	SPZH66B36B630 - D90S-4G	615.05		30 000	207	M286	
2.3	1.80	4559	SPZH76B36B630 - D90S-4G	611.92		50 000	298	M294	
1.9	1.00	5482	SPZH66B36B710 - D90S-4G	735.85		30 000	207	M286	
2.1	1.60	5034	SPZH76B36B710 - D90S-4G	675.68		50 000	298	M294	
2.0	2.90	5215	SPZH86C36B710 - D90S-4G	700.06		82 500	453	M302	
1.7	0.90	6104	SPZH66B36B800 - D90S-4G	819.31		30 000	207	M286	
1.7	1.30	6022	SPZH76B36B800 - D90S-4G	808.38		50 000	298	M294	
1.8	2.60	5687	SPZH86C36B800 - D90S-4G	763.39		82 500	453	M302	
1.6	0.81	6752	SPZH66B36B900 - D90S-4G	906.35		30 000	207	M286	
1.6	1.20	6705	SPZH76B36B900 - D90S-4G	900.07		50 000	298	M294	
1.6	2.30	6583	SPZH86C36B900 - D90S-4G	883.63		82 500	453	M302	

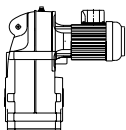


P 1.10 kW
n₁ 1410 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
1.4	1.10	7418	SPZH76B36B1000 - D90S-4G	995.69		50 000	298	M294	
1.5	2.10	7123	SPZH86C36B1000 - D90S-4G	956.13		82 500	453	M302	
1.3	0.97	8240	SPZH76B36B1120 - D90S-4G	1106.11		50 000	298	M294	
1.3	1.90	8067	SPZH86C36B1120 - D90S-4G	1082.86		82 500	453	M302	
1.2	1.70	8797	SPZH86C36B1200 - D90S-4G	1180.82		82 500	453	M302	
1.1	0.85	9380	SPZH76C36B1250 - D90S-4G	1259.11		50 000	298	M294	
1.0	1.50	10182	SPZH86C36B1400 - D90S-4G	1366.81		82 500	453	M302	
0.9	1.30	11243	SPZH86C36B1600 - D90S-4G	1509.21		82 500	453	M302	
0.8	1.10	13452	SPZH86C36B1800 - D90S-4G	1805.63		82 500	453	M302	
0.7	1.00	14977	SPZH86C36B2000 - D90S-4G	2010.42		82 500	453	M302	
0.6	0.91	16568	SPZH86C36B2240 - D90S-4G	2224.01		82 500	453	M302	
0.6	0.81	18406	SPZH86C36B2500 - D90S-4G	2470.63		82 500	453	M302	

P 1.5 kW
n₁ 1410 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
406.8	4.70	35	SPZH16B3.55 - D90L-4G	3.47		3 800	32	M246	
354.9	4.10	40	SPZH16B4 - D90L-4G	3.97		3 900	32	M246	
331.2	3.80	43	SPZH16B4.5 - D90L-4G	4.26		4 000	32	M246	
287.8	3.30	50	SPZH16B5 - D90L-4G	4.90		4 100	32	M246	
248.9	2.80	58	SPZH16B5.6 - D90L-4G	5.66		4 300	32	M246	
231.0	2.60	62	SPZH16B6.3 - D90L-4G	6.10		4 300	32	M246	
213.9	2.40	67	SPZH16B7.1 - D90L-4G	6.59		4 400	32	M246	
185.5	2.80	77	SPZH26B7.1 - D90L-4G	7.60	3 500	6 900	39	M254	
182.3	2.10	79	SPZH16B8 - D90L-4G	7.73		4 600	32	M246	
172.2	2.60	83	SPZH26B8 - D90L-4G	8.19	3 500	6 900	39	M254	
166.8	2.70	86	SPZH16B9 - D90L-4G	8.45		4 800	32	M246	X
145.5	2.30	98	SPZH16B10 - D90L-4G	9.69		4 900	32	M246	
135.8	2.20	106	SPZH16B11.2 - D90L-4G	10.39		5 000	32	M246	X
118.0	1.90	121	SPZH16B12.5 - D90L-4G	11.95		5 000	32	M246	
102.0	1.60	140	SPZH16B14 - D90L-4G	13.82		5 000	32	M246	X
92.2	2.80	155	SPZH26B14 - D90L-4G	15.30	4 000	6 900	39	M254	X
87.7	1.40	163	SPZH16B16 - D90L-4G	16.08		5 000	32	M246	X
85.5	2.60	167	SPZH26B16 - D90L-4G	16.49	4 100	6 900	39	M254	
74.7	1.20	192	SPZH16B18 - D90L-4G	18.87		5 000	32	M246	
79.2	2.40	181	SPZH26B18 - D90L-4G	17.80	4 100	6 900	39	M254	X
68.7	1.10	208	SPZH16B20 - D90L-4G	20.52		5 000	32	M246	X
67.5	2.10	212	SPZH26B20 - D90L-4G	20.89	4 200	6 900	39	M254	
62.1	1.90	231	SPZH26B22.4 - D90L-4G	22.72	4 200	6 900	39	M254	X
57.4	0.92	249	SPZH16B25 - D90L-4G	24.55		5 000	32	M246	
51.9	1.60	276	SPZH26B25 - D90L-4G	27.18	4 300	6 900	39	M254	
52.2	0.84	275	SPZH16B28 - D90L-4G	27.02		5 000	32	M246	
47.1	1.40	304	SPZH26B28 - D90L-4G	29.92	4 300	6 900	39	M254	
49.3	2.90	291	SPZH36B28 - D90L-4G	28.62	6 000	13 500	46	M262	X
42.6	1.30	336	SPZH26B31.5 - D90L-4G	33.11	4 300	6 900	39	M254	X
43.5	2.60	329	SPZH36B31.5 - D90L-4G	32.41	6 100	13 500	46	M262	X
38.2	1.20	375	SPZH26B35.5 - D90L-4G	36.89	4 200	6 900	39	M254	X



F

A

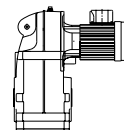
L

K

SP4

P 1.5 kW
n₁ 1410 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
39.9	2.40	359	SPZH36B35.5 - D90L-4G	35.34	6 200	13 500	46	M262	X
34.0	1.00	421	SPZH26B40 - D90L-4G	41.43	4 200	6 900	39	M254	X
34.5	2.00	416	SPZH36B40 - D90L-4G	40.91	6 300	13 500	46	M262	X
30.6	0.94	468	SPZH26B45 - D90L-4G	46.12	4 100	6 900	39	M254	
31.2	1.90	459	SPZH36B45 - D90L-4G	45.17	6 300	13 500	46	M262	X
27.3	0.84	524	SPZH26B50 - D90L-4G	51.57	4 000	6 900	39	M254	X
26.1	1.50	549	SPZH36B50 - D90L-4G	54.05	6 300	13 500	46	M262	
27.8	2.90	516	SPZH46C50 - D90L-4G	50.79	9 500	18 000	72	M270	
23.4	1.40	611	SPZH36B56 - D90L-4G	60.18	6 300	13 500	46	M262	
24.8	2.90	577	SPZH46B56 - D90L-4G	56.78	9 600	18 000	72	M270	X
21.2	1.30	676	SPZH36B63 - D90L-4G	66.57	6 300	13 500	46	M262	
20.8	2.50	688	SPZH46B63 - D90L-4G	67.76	9 900	18 000	72	M270	X
19.1	1.10	751	SPZH36B71 - D90L-4G	73.95	6 200	13 500	46	M262	X
18.6	2.10	772	SPZH46B71 - D90L-4G	75.97	10 000	18 000	72	M270	
20.6	2.40	696	SPZH46C71 - D90L-4G	68.51	9 900	18 000	72	M270	X
18.1	1.10	792	SPZH36B80 - D90L-4G	77.94	6 200	13 500	46	M262	
18.1	2.20	790	SPZH46C80 - D90L-4G	77.80	10 000	18 000	72	M270	X
16.5	0.98	870	SPZH36B90 - D90L-4G	85.68	6 000	13 500	46	M262	X
16.0	1.90	895	SPZH46C90 - D90L-4G	88.11	10 100	18 000	72	M270	X
14.1	0.84	1014	SPZH36B16B100 - D90L-4G	99.84	5 800	13 500	56	M262	
14.7	1.70	976	SPZH46C100 - D90L-4G	96.08	10 100	18 000	72	M270	X
14.6	3.00	980	SPZH56C100 - D90L-4G	96.48	13 800	27 000	109	M278	X
12.7	1.50	1130	SPZH46C112 - D90L-4G	111.21	10 100	18 000	72	M270	X
12.8	2.60	1123	SPZH56C112 - D90L-4G	110.51	14 100	27 000	109	M278	X
11.5	1.40	1247	SPZH46C125 - D90L-4G	122.80	10 100	18 000	72	M270	X
10.9	2.20	1318	SPZH56C125 - D90L-4G	129.77	14 300	27 000	109	M278	X
9.6	1.10	1493	SPZH46C140 - D90L-4G	146.92	9 900	18 000	72	M270	
10.2	2.10	1411	SPZH56C140 - D90L-4G	138.87	14 400	27 000	109	M278	X
8.6	1.00	1662	SPZH46C160 - D90L-4G	163.58	9 700	18 000	72	M270	
9.1	1.80	1576	SPZH56C160 - D90L-4G	155.10	14 500	27 000	109	M278	
7.8	0.92	1838	SPZH46C180 - D90L-4G	180.96	9 500	18 000	72	M270	
8.0	1.60	1798	SPZH56C180 - D90L-4G	176.96	14 500	27 000	109	M278	X
7.9	3.00	1823	SPZH66B36B180 - D90L-4G	179.48		30 000	208	M286	
7.0	0.83	2042	SPZH46C200 - D90L-4G	201.03	9 200	18 000	72	M270	X
6.7	1.30	2151	SPZH56B16B200 - D90L-4G	211.76	14 400	27 000	119	M278	X
7.3	1.50	1949	SPZH56C200 - D90L-4G	191.86	14 500	27 000	109	M278	X
6.8	2.60	2106	SPZH66B36B200 - D90L-4G	207.29		30 000	208	M286	
6.4	1.30	2250	SPZH56C224 - D90L-4G	221.46	14 400	27 000	109	M278	X
6.2	2.40	2328	SPZH66B36B224 - D90L-4G	229.15		30 000	208	M286	
5.8	1.20	2471	SPZH56C250 - D90L-4G	243.22	14 200	27 000	109	M278	X
5.5	2.10	2584	SPZH66B36B250 - D90L-4G	254.37		30 000	208	M286	
4.9	0.98	2948	SPZH56C280 - D90L-4G	290.23	13 700	27 000	109	M278	X
5.2	2.00	2768	SPZH66B36B280 - D90L-4G	272.44		30 000	208	M286	
5.0	2.80	2839	SPZH76B36B280 - D90L-4G	279.45		50 000	299	M294	
4.3	0.88	3306	SPZH56C315 - D90L-4G	325.39	13 300	27 000	109	M278	
4.4	1.70	3236	SPZH66B36B315 - D90L-4G	318.57		30 000	208	M286	
4.7	2.60	3041	SPZH76B36B315 - D90L-4G	299.30		50 000	299	M294	
4.1	1.60	3486	SPZH66B36B355 - D90L-4G	343.14		30 000	208	M286	
4.0	2.30	3555	SPZH76B36B355 - D90L-4G	349.97		50 000	299	M294	
3.6	1.40	3958	SPZH66B36B400 - D90L-4G	389.65		30 000	208	M286	
3.7	2.10	3830	SPZH76B36B400 - D90L-4G	376.96		50 000	299	M294	
3.2	1.20	4483	SPZH66B36B450 - D90L-4G	441.30		30 000	208	M286	

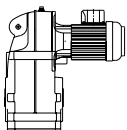


P 1.5 kW
n₁ 1410 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
3.3	1.80	4349	SPZH76B36B450 - D90L-4G	428.06		50 000	299	M294	
2.9	1.10	4889	SPZH66B36B500 - D90L-4G	481.22		30 000	208	M286	
2.9	1.60	4925	SPZH76B36B500 - D90L-4G	484.80		50 000	299	M294	
2.8	2.90	5134	SPZH86C36B500 - D90L-4G	505.37		82 500	454	M302	
2.5	0.97	5659	SPZH66B36B560 - D90L-4G	557.02		30 000	208	M286	
2.7	1.50	5371	SPZH76B36B560 - D90L-4G	528.65		50 000	299	M294	
2.6	2.70	5530	SPZH86C36B560 - D90L-4G	544.34		82 500	454	M302	
2.3	0.88	6248	SPZH66B36B630 - D90L-4G	615.05		30 000	208	M286	
2.3	1.30	6216	SPZH76B36B630 - D90L-4G	611.92		50 000	299	M294	
2.3	2.40	6279	SPZH86C36B630 - D90L-4G	618.13		82 500	454	M302	
2.1	1.20	6864	SPZH76B36B710 - D90L-4G	675.68		50 000	299	M294	
2.0	2.10	7112	SPZH86C36B710 - D90L-4G	700.06		82 500	454	M302	
1.7	0.97	8212	SPZH76B36B800 - D90L-4G	808.38		50 000	299	M294	
1.8	1.90	7755	SPZH86C36B800 - D90L-4G	763.39		82 500	454	M302	
1.6	0.87	9144	SPZH76B36B900 - D90L-4G	900.07		50 000	299	M294	
1.6	1.70	8977	SPZH86C36B900 - D90L-4G	883.63		82 500	454	M302	
1.5	1.50	9713	SPZH86C36B1000 - D90L-4G	956.13		82 500	454	M302	
1.3	1.40	11001	SPZH86C36B1120 - D90L-4G	1082.86		82 500	454	M302	
1.2	1.30	11996	SPZH86C36B1200 - D90L-4G	1180.82		82 500	454	M302	
1.0	1.10	13885	SPZH86C36B1400 - D90L-4G	1366.81		82 500	454	M302	
0.9	0.98	15332	SPZH86C36B1600 - D90L-4G	1509.21		82 500	454	M302	
0.8	0.82	18343	SPZH86C36B1800 - D90L-4G	1805.63		82 500	454	M302	

P 2.2 kW
n₁ 1420 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
409.7	3.20	51	SPZH16B3.55 - D100A-4G	3.47		3 600	35	M246	
357.4	2.80	59	SPZH16B4 - D100A-4G	3.97		3 700	35	M246	
333.5	2.60	63	SPZH16B4.5 - D100A-4G	4.26		3 800	35	M246	
289.8	2.30	72	SPZH16B5 - D100A-4G	4.90		3 900	35	M246	
266.4	2.80	79	SPZH26B5 - D100A-4G	5.33	3 000	6 900	42	M254	
250.7	2.00	84	SPZH16B5.6 - D100A-4G	5.66		4 000	35	M246	
248.6	2.60	85	SPZH26B5.6 - D100A-4G	5.71	3 000	6 900	42	M254	
232.6	1.80	90	SPZH16B6.3 - D100A-4G	6.10		4 100	35	M246	
216.0	2.30	97	SPZH26B6.3 - D100A-4G	6.57	3 100	6 900	42	M254	
215.5	1.70	98	SPZH16B7.1 - D100A-4G	6.59		4 100	35	M246	
186.8	2.00	112	SPZH26B7.1 - D100A-4G	7.60	3 200	6 900	42	M254	
183.6	1.40	114	SPZH16B8 - D100A-4G	7.73		4 200	35	M246	
173.4	1.80	121	SPZH26B8 - D100A-4G	8.19	3 200	6 900	42	M254	
168.0	1.80	125	SPZH16B9 - D100A-4G	8.45		4 400	35	M246	
146.5	1.60	143	SPZH16B10 - D100A-4G	9.69		4 500	35	M246	
132.3	2.70	159	SPZH26B10 - D100A-4G	10.73	3 400	6 900	42	M254	
136.7	1.50	154	SPZH16B11.2 - D100A-4G	10.39		4 600	35	M246	
123.5	2.60	170	SPZH26B11.2 - D100A-4G	11.50	3 500	6 900	42	M254	
118.8	1.30	177	SPZH16B12.5 - D100A-4G	11.95		4 700	35	M246	
107.3	2.20	196	SPZH26B12.5 - D100A-4G	13.23	3 500	6 900	42	M254	
102.8	1.10	204	SPZH16B14 - D100A-4G	13.82		4 700	35	M246	



F

A

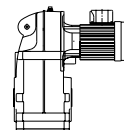
L

K

SP4

P 2.2 kW
n₁ 1420 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{IN} N	F _{IN+G} N	m kg		
92.8	1.90	226	SPZH26B14 - D100A-4G	15.30	3 500	6 900	42	M254	
88.3	0.97	238	SPZH16B16 - D100A-4G	16.08		4 800	35	M246	
86.1	1.80	244	SPZH26B16 - D100A-4G	16.49	3 500	6 900	42	M254	
75.3	0.82	279	SPZH16B18 - D100A-4G	18.87		4 800	35	M246	
79.8	1.70	263	SPZH26B18 - D100A-4G	17.80	3 500	6 900	42	M254	
68.0	1.40	309	SPZH26B20 - D100A-4G	20.89	3 500	6 900	42	M254	
71.0	2.90	296	SPZH36B20 - D100A-4G	20.01	5 100	13 500	49	M262	X
62.5	1.30	336	SPZH26B22.4 - D100A-4G	22.72	3 500	6 900	42	M254	
60.7	2.50	346	SPZH36B22.4 - D100A-4G	23.40	5 200	13 500	49	M262	X
52.3	1.10	402	SPZH26B25 - D100A-4G	27.18	3 300	6 900	42	M254	
56.3	2.30	373	SPZH36B25 - D100A-4G	25.20	5 200	13 500	49	M262	X
47.5	0.99	443	SPZH26B28 - D100A-4G	29.92	3 300	6 900	42	M254	
49.6	2.00	423	SPZH36B28 - D100A-4G	28.62	5 200	13 500	49	M262	X
49.8	3.00	422	SPZH46C28 - D100A-4G	28.53	7 800	18 000	75	M270	
42.9	0.90	490	SPZH26B31.5 - D100A-4G	33.11	3 100	6 900	42	M254	
43.8	1.80	480	SPZH36B31.5 - D100A-4G	32.41	5 200	13 500	49	M262	X
43.5	2.70	483	SPZH46C31.5 - D100A-4G	32.66	8 000	18 000	75	M270	
43.8	3.00	480	SPZH46B31.5 - D100A-4G	32.42	8 000	18 000	75	M270	X
38.5	0.81	546	SPZH26B35.5 - D100A-4G	36.89	3 000	6 900	42	M254	
40.2	1.60	523	SPZH36B35.5 - D100A-4G	35.34	5 200	13 500	49	M262	X
39.6	2.50	530	SPZH46C35.5 - D100A-4G	35.83	8 100	18 000	75	M270	
39.2	2.80	536	SPZH46B35.5 - D100A-4G	36.21	8 100	18 000	75	M270	
34.7	1.40	605	SPZH36B40 - D100A-4G	40.91	5 100	13 500	49	M262	X
34.3	2.30	612	SPZH46C40 - D100A-4G	41.39	8 200	18 000	75	M270	
34.4	2.60	611	SPZH46B40 - D100A-4G	41.31	8 200	18 000	75	M270	X
31.4	1.30	668	SPZH36B45 - D100A-4G	45.17	5 100	13 500	49	M262	X
31.0	2.20	677	SPZH46C45 - D100A-4G	45.75	8 300	18 000	75	M270	
31.7	2.40	663	SPZH46B45 - D100A-4G	44.79	8 300	18 000	75	M270	X
26.3	1.10	800	SPZH36B50 - D100A-4G	54.05	4 800	13 500	49	M262	
28.0	2.00	751	SPZH46C50 - D100A-4G	50.79	8 300	18 000	75	M270	
27.5	2.20	765	SPZH46B50 - D100A-4G	51.70	8 400	18 000	75	M270	X
23.6	0.95	890	SPZH36B56 - D100A-4G	60.18	4 600	13 500	49	M262	
25.0	2.00	840	SPZH46B56 - D100A-4G	56.78	8 400	18 000	75	M270	X
21.3	0.86	985	SPZH36B63 - D100A-4G	66.57	4 400	13 500	49	M262	
21.0	1.70	1002	SPZH46B63 - D100A-4G	67.76	8 300	18 000	75	M270	X
22.3	2.90	941	SPZH56C63 - D100A-4G	63.59	11 700	27 000	112	M278	
18.7	1.50	1124	SPZH46B71 - D100A-4G	75.97	8 300	18 000	75	M270	
20.2	2.70	1038	SPZH56C71 - D100A-4G	70.17	11 800	27 000	112	M278	
18.3	1.50	1151	SPZH46C80 - D100A-4G	77.80	8 300	18 000	75	M270	X
18.4	2.50	1142	SPZH56C80 - D100A-4G	77.21	11 900	27 000	112	M278	
16.1	1.30	1304	SPZH46C90 - D100A-4G	88.11	8 100	18 000	75	M270	X
16.3	2.30	1287	SPZH56C90 - D100A-4G	86.98	11 900	27 000	112	M278	
14.8	1.20	1421	SPZH46C100 - D100A-4G	96.08	8 000	18 000	75	M270	X
14.7	2.00	1427	SPZH56C100 - D100A-4G	96.48	12 000	27 000	112	M278	X
12.8	1.00	1645	SPZH46C112 - D100A-4G	111.21	7 600	18 000	75	M270	X
12.8	1.80	1635	SPZH56C112 - D100A-4G	110.51	12 000	27 000	112	M278	X
11.6	0.94	1817	SPZH46C125 - D100A-4G	122.80	7 300	18 000	75	M270	X
10.9	1.50	1920	SPZH56C125 - D100A-4G	129.77	11 800	27 000	112	M278	X
11.4	3.00	1850	SPZH66C125 - D100A-4G	125.03		30 000	173	M286	
10.2	1.40	2055	SPZH56C140 - D100A-4G	138.87	11 700	27 000	112	M278	X
9.7	2.50	2172	SPZH66C140 - D100A-4G	146.82		30 000	173	M286	
9.2	1.30	2295	SPZH56C160 - D100A-4G	155.10	11 500	27 000	112	M278	

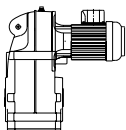


P 2.2 kW
n₁ 1420 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
9.0	2.40	2324	SPZH66C160 - D100A-4G	157.12	11 100	30 000	173	M286	X
8.0	1.10	2618	SPZH56C180 - D100A-4G	176.96		27 000	112	M278	
8.1	2.10	2596	SPZH66C180 - D100A-4G	175.48		30 000	173	M286	
7.8	3.00	2685	SPZH76C180 - D100A-4G	181.46	10 800	50 000	264	M294	X
7.4	1.00	2838	SPZH56C200 - D100A-4G	191.86		27 000	112	M278	
7.1	1.90	2962	SPZH66C200 - D100A-4G	200.21		30 000	173	M286	
6.9	2.60	3063	SPZH76C200 - D100A-4G	207.03	10 100	50 000	264	M294	X
6.4	0.89	3276	SPZH56C224 - D100A-4G	221.46		27 000	112	M278	
6.5	1.70	3211	SPZH66C224 - D100A-4G	217.07		30 000	173	M286	
6.3	2.40	3321	SPZH76C224 - D100A-4G	224.46	9 500	50 000	264	M294	X
5.8	0.81	3598	SPZH56C250 - D100A-4G	243.22		27 000	112	M278	
5.7	1.50	3707	SPZH66C250 - D100A-4G	250.56		30 000	173	M286	
5.5	2.10	3833	SPZH76C250 - D100A-4G	259.09		50 000	264	M294	
5.2	1.40	4071	SPZH66C280 - D100A-4G	275.17		30 000	173	M286	
5.0	1.90	4210	SPZH76C280 - D100A-4G	284.55		50 000	264	M294	
4.3	1.10	4858	SPZH66C315 - D100A-4G	328.36		30 000	173	M286	
4.7	1.80	4428	SPZH76B36B315 - D100A-4G	299.30		50 000	302	M294	
3.9	2.80	5378	SPZH86C36B350 - D100A-4G	363.52		82 500	457	M302	
3.9	1.00	5447	SPZH66C355 - D100A-4G	368.15		30 000	173	M286	
4.2	1.60	5023	SPZH76C355 - D100A-4G	339.55		50 000	264	M294	
3.6	0.95	5765	SPZH66B36B400 - D100A-4G	389.65		30 000	211	M286	
3.7	1.40	5632	SPZH76C400 - D100A-4G	380.68		50 000	264	M294	
3.5	2.50	5970	SPZH86C36B400 - D100A-4G	403.53		82 500	457	M302	
3.2	0.84	6529	SPZH66B36B450 - D100A-4G	441.30		30 000	211	M286	
3.3	1.30	6333	SPZH76B36B450 - D100A-4G	428.06		50 000	302	M294	
3.3	2.30	6394	SPZH86C36B450 - D100A-4G	432.19		82 500	457	M302	
2.9	1.10	7172	SPZH76B36B500 - D100A-4G	484.80		50 000	302	M294	
2.8	2.00	7477	SPZH86C36B500 - D100A-4G	505.37		82 500	457	M302	
2.7	1.00	7821	SPZH76B36B560 - D100A-4G	528.65		50 000	302	M294	
2.6	1.90	8053	SPZH86C36B560 - D100A-4G	544.34		82 500	457	M302	
2.3	0.88	9053	SPZH76B36B630 - D100A-4G	611.92		50 000	302	M294	
2.3	1.60	9145	SPZH86C36B630 - D100A-4G	618.13		82 500	457	M302	
2.1	0.80	9996	SPZH76B36B710 - D100A-4G	675.68		50 000	302	M294	
2.0	1.40	10357	SPZH86C36B710 - D100A-4G	700.06		82 500	457	M302	
1.9	1.30	11294	SPZH86C36B800 - D100A-4G	763.39		82 500	457	M302	
1.6	1.10	13073	SPZH86C36B900 - D100A-4G	883.63		82 500	457	M302	
1.5	1.10	14146	SPZH86C36B1000 - D100A-4G	956.13		82 500	457	M302	
1.3	0.94	16021	SPZH86C36B1120 - D100A-4G	1082.86		82 500	457	M302	
1.2	0.86	17470	SPZH86C36B1200 - D100A-4G	1180.82		82 500	457	M302	

P 3.0 kW
n₁ 1425 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
411.2	2.40	70	SPZH16B3.55 - D100B-4G	3.47	2 700	3 400	37	M246	
358.6	2.10	80	SPZH16B4 - D100B-4G	3.97		3 500	37	M246	
334.7	1.90	86	SPZH16B4.5 - D100B-4G	4.26		3 500	37	M246	
306.5	2.40	93	SPZH26B4.5 - D100B-4G	4.65		6 900	44	M254	



F

A

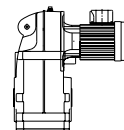
L

K

SP4

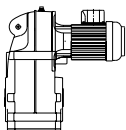
P 3.0 kW
n₁ 1425 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
290.8	1.70	99	SPZH16B5 - D100B-4G	4.90		3 600	37	M246	
267.3	2.10	107	SPZH26B5 - D100B-4G	5.33	2 800	6 900	44	M254	
251.6	1.40	114	SPZH16B5.6 - D100B-4G	5.66		3 700	37	M246	
249.5	1.90	115	SPZH26B5.6 - D100B-4G	5.71	2 800	6 900	44	M254	
233.4	1.30	123	SPZH16B6.3 - D100B-4G	6.10		3 700	37	M246	
216.8	1.70	132	SPZH26B6.3 - D100B-4G	6.57	2 800	6 900	44	M254	
216.2	1.20	132	SPZH16B7.1 - D100B-4G	6.59		3 800	37	M246	
187.5	1.40	153	SPZH26B7.1 - D100B-4G	7.60	2 900	6 900	44	M254	
207.4	3.00	138	SPZH36B7.1 - D100B-4G	6.87	3 800	13 500	51	M262	
184.3	1.10	155	SPZH16B8 - D100B-4G	7.73		3 800	37	M246	
174.0	1.30	165	SPZH26B8 - D100B-4G	8.19	2 900	6 900	44	M254	
168.5	1.40	170	SPZH16B9 - D100B-4G	8.45		4 000	37	M246	
152.2	2.30	188	SPZH26B9 - D100B-4G	9.36	3 000	6 900	44	M254	
147.0	1.20	195	SPZH16B10 - D100B-4G	9.69		4 100	37	M246	
132.8	2.00	216	SPZH26B10 - D100B-4G	10.73	3 000	6 900	44	M254	
137.2	1.10	209	SPZH16B11.2 - D100B-4G	10.39		4 100	37	M246	
123.9	1.90	231	SPZH26B11.2 - D100B-4G	11.50	3 000	6 900	44	M254	
119.2	0.96	240	SPZH16B12.5 - D100B-4G	11.95		4 100	37	M246	
107.7	1.70	266	SPZH26B12.5 - D100B-4G	13.23	3 000	6 900	44	M254	
103.1	0.83	278	SPZH16B14 - D100B-4G	13.82		4 100	37	M246	
93.1	1.40	308	SPZH26B14 - D100B-4G	15.30	2 900	6 900	44	M254	
93.6	2.80	306	SPZH36B14 - D100B-4G	15.23	4 500	13 500	51	M262	
86.4	1.30	331	SPZH26B16 - D100B-4G	16.49	2 900	6 900	44	M254	
84.7	2.50	338	SPZH36B16 - D100B-4G	16.83	4 500	13 500	51	M262	
80.1	1.20	358	SPZH26B18 - D100B-4G	17.80	2 800	6 900	44	M254	
76.3	2.30	376	SPZH36B18 - D100B-4G	18.68	4 500	13 500	51	M262	
68.2	1.00	420	SPZH26B20 - D100B-4G	20.89	2 700	6 900	44	M254	
71.2	2.10	402	SPZH36B20 - D100B-4G	20.01	4 500	13 500	51	M262	X
62.7	0.96	457	SPZH26B22.4 - D100B-4G	22.72	2 600	6 900	44	M254	
60.9	1.80	470	SPZH36B22.4 - D100B-4G	23.40	4 400	13 500	51	M262	X
64.9	2.60	441	SPZH46C22.4 - D100B-4G	21.95	6 900	18 000	77	M270	
63.3	2.90	453	SPZH46B22.4 - D100B-4G	22.52	6 900	18 000	77	M270	X
52.4	0.81	546	SPZH26B25 - D100B-4G	27.18	2 300	6 900	44	M254	
56.5	1.70	507	SPZH36B25 - D100B-4G	25.20	4 400	13 500	51	M262	X
55.9	2.30	512	SPZH46C25 - D100B-4G	25.48	7 000	18 000	77	M270	
55.2	2.60	519	SPZH46B25 - D100B-4G	25.80	7 000	18 000	77	M270	X
49.8	1.50	575	SPZH36B28 - D100B-4G	28.62	4 300	13 500	51	M262	X
47.0	2.30	609	SPZH46B28 - D100B-4G	30.30	7 100	18 000	77	M270	X
44.0	1.30	652	SPZH36B31.5 - D100B-4G	32.41	4 200	13 500	51	M262	X
43.6	2.00	657	SPZH46C31.5 - D100B-4G	32.66	7 100	18 000	77	M270	
44.0	2.20	652	SPZH46B31.5 - D100B-4G	32.42	7 200	18 000	77	M270	X
40.3	1.20	711	SPZH36B35.5 - D100B-4G	35.34	4 100	13 500	51	M262	X
39.8	1.90	720	SPZH46C35.5 - D100B-4G	35.83	7 200	18 000	77	M270	
39.4	2.10	728	SPZH46B35.5 - D100B-4G	36.21	7 200	18 000	77	M270	
34.8	1.00	822	SPZH36B40 - D100B-4G	40.91	3 800	13 500	51	M262	X
34.4	1.70	832	SPZH46C40 - D100B-4G	41.39	7 200	18 000	77	M270	
34.5	1.90	831	SPZH46B40 - D100B-4G	41.31	7 200	18 000	77	M270	X
37.7	3.00	760	SPZH56C40 - D100B-4G	37.78	9 900	27 000	114	M278	
31.5	0.94	908	SPZH36B45 - D100B-4G	45.17	3 600	13 500	51	M262	X
31.1	1.60	920	SPZH46C45 - D100B-4G	45.75	7 100	18 000	77	M270	
31.8	1.80	900	SPZH46B45 - D100B-4G	44.79	7 100	18 000	77	M270	X
32.8	2.70	874	SPZH56C45 - D100B-4G	43.49	10 100	27 000	114	M278	



P 3.0 kW
n₁ 1425 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{IN} N	F _{IN+G} N	m kg		
27.6	1.60	1039	SPZH46B50 - D100B-4G	51.70	7 000	18 000	77	M270	X
28.9	2.50	991	SPZH56C50 - D100B-4G	49.30	10 200	27 000	114	M278	
27.3	2.80	1049	SPZH56B50 - D100B-4G	52.18	10 200	27 000	114	M278	X
25.1	1.50	1142	SPZH46B56 - D100B-4G	56.78	6 900	18 000	77	M270	X
24.6	2.30	1167	SPZH56B56 - D100B-4G	58.03	10 200	27 000	114	M278	
21.0	1.20	1362	SPZH46B63 - D100B-4G	67.76	6 600	18 000	77	M270	X
22.4	2.10	1278	SPZH56C63 - D100B-4G	63.59	10 300	27 000	114	M278	
18.8	1.10	1527	SPZH46B71 - D100B-4G	75.97	6 300	18 000	77	M270	
20.3	2.00	1411	SPZH56C71 - D100B-4G	70.17	10 200	27 000	114	M278	
18.3	1.10	1564	SPZH46C80 - D100B-4G	77.80	6 300	18 000	77	M270	X
18.5	1.90	1552	SPZH56C80 - D100B-4G	77.21	10 200	27 000	114	M278	
16.2	0.96	1771	SPZH46C90 - D100B-4G	88.11	5 800	18 000	77	M270	X
16.4	1.70	1749	SPZH56C90 - D100B-4G	86.98	10 000	27 000	114	M278	
14.8	0.88	1932	SPZH46C100 - D100B-4G	96.08	5 500	18 000	77	M270	X
14.8	1.50	1940	SPZH56C100 - D100B-4G	96.48	9 900	27 000	114	M278	X
14.5	2.80	1978	SPZH66C100 - D100B-4G	98.40		30 000	175	M286	
12.9	1.30	2222	SPZH56C112 - D100B-4G	110.51	9 500	27 000	114	M278	X
13.1	2.50	2194	SPZH66C112 - D100B-4G	109.15		30 000	175	M286	X
11.0	1.10	2609	SPZH56C125 - D100B-4G	129.77	8 900	27 000	114	M278	X
11.4	2.20	2514	SPZH66C125 - D100B-4G	125.03		30 000	175	M286	X
10.3	1.00	2792	SPZH56C140 - D100B-4G	138.87	8 700	27 000	114	M278	X
9.7	1.90	2952	SPZH66C140 - D100B-4G	146.82		30 000	175	M286	X
9.4	2.60	3052	SPZH76C140 - D100B-4G	151.82		50 000	266	M294	X
10.2	2.80	2818	SPZH76B36B140 - D100B-4G	140.18		50 000	304	M294	
9.2	0.93	3118	SPZH56C160 - D100B-4G	155.10	8 100	27 000	114	M278	
9.1	1.70	3159	SPZH66C160 - D100B-4G	157.12		30 000	175	M286	X
8.8	2.40	3266	SPZH76C160 - D100B-4G	162.47		50 000	266	M294	X
8.1	0.82	3558	SPZH56C180 - D100B-4G	176.96	7 200	27 000	114	M278	X
8.1	1.60	3528	SPZH66C180 - D100B-4G	175.48		30 000	175	M286	
7.9	2.20	3648	SPZH76C180 - D100B-4G	181.46		50 000	266	M294	
7.1	1.40	4025	SPZH66C200 - D100B-4G	200.21		30 000	175	M286	X
6.9	1.90	4162	SPZH76C200 - D100B-4G	207.03		50 000	266	M294	X
6.6	1.30	4364	SPZH66C224 - D100B-4G	217.07		30 000	175	M286	X
6.3	1.80	4512	SPZH76C224 - D100B-4G	224.46		50 000	266	M294	X
5.7	1.10	5037	SPZH66C250 - D100B-4G	250.56		30 000	175	M286	X
5.5	1.50	5209	SPZH76C250 - D100B-4G	259.09		50 000	266	M294	X
5.5	2.90	5217	SPZH86C36B250 - D100B-4G	259.50		82 500	459	M302	
5.2	0.99	5532	SPZH66C280 - D100B-4G	275.17		30 000	175	M286	X
5.0	1.40	5720	SPZH76C280 - D100B-4G	284.55		50 000	266	M294	X
5.0	2.60	5724	SPZH86C36B280 - D100B-4G	284.71		82 500	459	M302	
4.3	0.83	6601	SPZH66C315 - D100B-4G	328.36		30 000	175	M286	X
4.8	1.30	6017	SPZH76B36B315 - D100B-4G	299.30		50 000	304	M294	
4.3	2.30	6611	SPZH86C36B315 - D100B-4G	328.84		82 500	459	M302	
3.9	2.10	7308	SPZH86C36B355 - D100B-4G	363.52		82 500	459	M302	
4.2	0.80	6898	SPZH66B36B355 - D100B-4G	343.14		30 000	213	M286	
4.2	1.20	6826	SPZH76C355 - D100B-4G	339.55		50 000	266	M294	X
3.7	1.00	7653	SPZH76C400 - D100B-4G	380.68		50 000	266	M294	
3.5	1.80	8112	SPZH86C36B400 - D100B-4G	403.53		82 500	459	M302	
3.3	0.93	8606	SPZH76B36B450 - D100B-4G	428.06		50 000	304	M294	
3.3	1.70	8689	SPZH86C36B450 - D100B-4G	432.19		82 500	459	M302	
2.9	0.82	9746	SPZH76B36B500 - D100B-4G	484.80		50 000	304	M294	
2.8	1.50	10160	SPZH86C36B500 - D100B-4G	505.37		82 500	459	M302	



F

A

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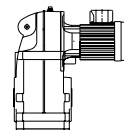
SP4

P 3.0 kW
n₁ 1425 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
2.6	1.40	10943	SPZH86C36B560 - D100B-4G	544.34		82 500	459	M302	
2.3	1.20	12427	SPZH86C36B630 - D100B-4G	618.13		82 500	459	M302	
2.0	1.10	14074	SPZH86C36B710 - D100B-4G	700.06		82 500	459	M302	
1.9	0.98	15347	SPZH86C36B800 - D100B-4G	763.39		82 500	459	M302	
1.6	0.84	17764	SPZH86C36B900 - D100B-4G	883.63		82 500	459	M302	

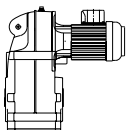
P 4.0 kW
n₁ 1420 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
409.7	1.80	93	SPZH16B3.55 - D112M-4G	3.47		3 200	43	M246	
357.4	1.50	107	SPZH16B4 - D112M-4G	3.97		3 200	43	M246	
333.5	1.40	115	SPZH16B4.5 - D112M-4G	4.26		3 300	43	M246	
305.4	1.80	125	SPZH26B4.5 - D112M-4G	4.65	2 500	6 900	50	M254	
289.8	1.20	132	SPZH16B5 - D112M-4G	4.90		3 300	43	M246	
266.4	1.50	143	SPZH26B5 - D112M-4G	5.33	2 500	6 900	50	M254	
250.7	1.10	152	SPZH16B5.6 - D112M-4G	5.66		3 300	43	M246	
248.6	1.40	154	SPZH26B5.6 - D112M-4G	5.71	2 500	6 900	50	M254	
253.6	2.80	151	SPZH36B5.6 - D112M-4G	5.60	3 400	12 900	57	M262	
232.6	1.00	164	SPZH16B6.3 - D112M-4G	6.10		3 300	43	M246	
216.0	1.20	177	SPZH26B6.3 - D112M-4G	6.57	2 500	6 900	50	M254	
229.4	2.50	167	SPZH36B6.3 - D112M-4G	6.19	3 500	13 300	57	M262	
215.5	0.93	177	SPZH16B7.1 - D112M-4G	6.59		3 300	43	M246	
186.8	1.10	204	SPZH26B7.1 - D112M-4G	7.60	2 500	6 900	50	M254	
206.6	2.20	185	SPZH36B7.1 - D112M-4G	6.87	3 500	13 500	57	M262	
173.4	1.00	220	SPZH26B8 - D112M-4G	8.19	2 400	6 900	50	M254	
168.0	1.00	227	SPZH16B9 - D112M-4G	8.45		3 500	43	M246	
151.7	1.70	252	SPZH26B9 - D112M-4G	9.36	2 600	6 900	50	M254	
146.5	0.88	261	SPZH16B10 - D112M-4G	9.69		3 500	43	M246	
132.3	1.50	289	SPZH26B10 - D112M-4G	10.73	2 500	6 900	50	M254	
135.3	3.00	282	SPZH36B10 - D112M-4G	10.49	3 900	13 500	57	M262	
136.7	0.82	279	SPZH16B11.2 - D112M-4G	10.39		3 500	43	M246	
123.5	1.40	309	SPZH26B11.2 - D112M-4G	11.50	2 500	6 900	50	M254	
118.2	2.60	323	SPZH36B11.2 - D112M-4G	12.01	3 900	13 500	57	M262	
107.3	1.20	356	SPZH26B12.5 - D112M-4G	13.23	2 300	6 900	50	M254	
107.7	2.40	355	SPZH36B12.5 - D112M-4G	13.18	3 900	13 500	57	M262	
92.8	1.10	412	SPZH26B14 - D112M-4G	15.30	2 200	6 900	50	M254	
93.3	2.10	410	SPZH36B14 - D112M-4G	15.23	3 800	13 500	57	M262	
95.7	2.90	399	SPZH46B14 - D112M-4G	14.85	6 000	18 000	83	M270	
86.1	0.99	443	SPZH26B16 - D112M-4G	16.49	2 100	6 900	50	M254	
84.4	1.90	453	SPZH36B16 - D112M-4G	16.83	3 800	13 500	57	M262	
86.7	2.70	441	SPZH46B16 - D112M-4G	16.38	6 100	18 000	83	M270	X
79.8	0.92	479	SPZH26B18 - D112M-4G	17.80	2 000	6 900	50	M254	
76.0	1.70	503	SPZH36B18 - D112M-4G	18.68	3 700	13 500	57	M262	
78.8	2.50	485	SPZH46B18 - D112M-4G	18.03	6 100	18 000	83	M270	
71.0	1.60	538	SPZH36B20 - D112M-4G	20.01	3 700	13 500	57	M262	
69.9	2.30	546	SPZH46B20 - D112M-4G	20.31	6 200	18 000	83	M270	X
60.7	1.40	629	SPZH36B22.4 - D112M-4G	23.40	3 500	13 500	57	M262	
64.7	1.90	590	SPZH46C22.4 - D112M-4G	21.95	6 200	18 000	83	M270	X



P 4.0 kW
n₁ 1420 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
63.0	2.10	606	SPZH46B22.4 - D112M-4G	22.52	6 200	18 000	83	M270	X
56.3	1.30	678	SPZH36B25 - D112M-4G	25.20	3 400	13 500	57	M262	
55.0	1.90	694	SPZH46B25 - D112M-4G	25.80	6 200	18 000	83	M270	X
49.6	1.10	770	SPZH36B28 - D112M-4G	28.62	3 200	13 500	57	M262	
46.9	1.70	815	SPZH46B28 - D112M-4G	30.30	6 200	18 000	83	M270	X
43.8	0.97	872	SPZH36B31.5 - D112M-4G	32.41	2 900	13 500	57	M262	
43.5	1.50	879	SPZH46C31.5 - D112M-4G	32.66	6 100	18 000	83	M270	
43.8	1.70	872	SPZH46B31.5 - D112M-4G	32.42	6 100	18 000	83	M270	X
45.2	2.50	845	SPZH56C31.5 - D112M-4G	31.43	8 800	27 000	120	M278	
44.5	2.90	858	SPZH56B31.5 - D112M-4G	31.91	8 800	27 000	120	M278	
40.2	0.89	951	SPZH36B35.5 - D112M-4G	35.34	2 700	13 500	57	M262	
39.6	1.40	964	SPZH46C35.5 - D112M-4G	35.83	6 000	18 000	83	M270	
39.2	1.60	974	SPZH46B35.5 - D112M-4G	36.21	6 000	18 000	83	M270	
42.1	2.40	906	SPZH56C35.5 - D112M-4G	33.69	8 800	27 000	120	M278	X
38.8	2.70	984	SPZH56B35.5 - D112M-4G	36.58	8 900	27 000	120	M278	
34.4	1.40	1111	SPZH46B40 - D112M-4G	41.31	5 800	18 000	83	M270	X
37.6	2.30	1016	SPZH56C40 - D112M-4G	37.78	8 900	27 000	120	M278	X
35.8	2.60	1067	SPZH56B40 - D112M-4G	39.65	8 900	27 000	120	M278	
31.7	1.30	1205	SPZH46B45 - D112M-4G	44.79	5 700	18 000	83	M270	X
32.7	2.10	1170	SPZH56C45 - D112M-4G	43.49	8 900	27 000	120	M278	
30.4	2.30	1258	SPZH56B45 - D112M-4G	46.78	8 800	27 000	120	M278	X
27.5	1.20	1391	SPZH46B50 - D112M-4G	51.70	5 400	18 000	83	M270	X
28.8	1.90	1326	SPZH56C50 - D112M-4G	49.30	8 800	27 000	120	M278	X
27.2	2.10	1404	SPZH56B50 - D112M-4G	52.18	8 800	27 000	120	M278	X
25.0	1.10	1527	SPZH46B56 - D112M-4G	56.78	5 100	18 000	83	M270	X
24.5	1.70	1561	SPZH56B56 - D112M-4G	58.03	8 700	27 000	120	M278	
21.0	0.93	1823	SPZH46B63 - D112M-4G	67.76	4 400	18 000	83	M270	X
22.3	1.60	1710	SPZH56C63 - D112M-4G	63.59	8 500	27 000	120	M278	
23.0	2.90	1659	SPZH66B63 - D112M-4G	61.68		30 000	181	M286	
18.7	0.81	2043	SPZH46B71 - D112M-4G	75.97	3 900	18 000	83	M270	
20.2	1.50	1887	SPZH56C71 - D112M-4G	70.17	8 300	27 000	120	M278	X
20.7	2.40	1842	SPZH66B71 - D112M-4G	68.49		30 000	181	M286	
19.7	2.80	1935	SPZH66C71 - D112M-4G	71.94		30 000	181	M286	
18.3	0.81	2093	SPZH46C80 - D112M-4G	77.80	3 800	18 000	83	M270	X
18.4	1.40	2077	SPZH56C80 - D112M-4G	77.21	8 000	27 000	120	M278	
17.9	2.60	2135	SPZH66C80 - D112M-4G	79.38		30 000	181	M286	
16.3	1.20	2340	SPZH56C90 - D112M-4G	86.98	7 600	27 000	120	M278	X
16.3	2.30	2350	SPZH66C90 - D112M-4G	87.35		30 000	181	M286	
14.7	1.10	2595	SPZH56C100 - D112M-4G	96.48	7 200	27 000	120	M278	X
14.4	2.10	2647	SPZH66C100 - D112M-4G	98.40		30 000	181	M286	
14.0	2.90	2737	SPZH76C100 - D112M-4G	101.75		50 000	272	M294	
12.8	0.98	2973	SPZH56C112 - D112M-4G	110.51	6 500	27 000	120	M278	X
13.0	1.90	2936	SPZH66C112 - D112M-4G	109.15		30 000	181	M286	
12.6	2.60	3036	SPZH76C112 - D112M-4G	112.87		50 000	272	M294	
10.9	0.83	3491	SPZH56C125 - D112M-4G	129.77	5 400	27 000	120	M278	X
11.4	1.60	3363	SPZH66C125 - D112M-4G	125.03		30 000	181	M286	
11.0	2.30	3478	SPZH76C125 - D112M-4G	129.29		50 000	272	M294	
11.8	2.50	3249	SPZH76B36B125 - D112M-4G	120.76		50 000	310	M294	
9.7	1.40	3949	SPZH66C140 - D112M-4G	146.82		30 000	181	M286	
9.4	2.00	4084	SPZH76C140 - D112M-4G	151.82		50 000	272	M294	
9.0	1.30	4226	SPZH66C160 - D112M-4G	157.12		30 000	181	M286	
8.7	1.80	4370	SPZH76C160 - D112M-4G	162.47		50 000	272	M294	



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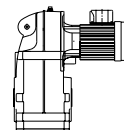
SP4

P 4.0 kW
n₁ 1420 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
8.1	1.20	4720	SPZH66C180 - D112M-4G	175.48		30 000	181	M286	
7.8	1.60	4881	SPZH76C180 - D112M-4G	181.46		50 000	272	M294	
7.1	1.00	5386	SPZH66C200 - D112M-4G	200.21		30 000	181	M286	
6.9	1.40	5569	SPZH76C200 - D112M-4G	207.03		50 000	272	M294	
7.0	2.80	5445	SPZH86C36B200 - D112M-4G	202.42		82 500	465	M302	
6.5	0.94	5839	SPZH66C224 - D112M-4G	217.07		30 000	181	M286	
6.3	1.30	6038	SPZH76C224 - D112M-4G	224.46		50 000	272	M294	
6.3	2.50	6097	SPZH86C36B224 - D112M-4G	226.65		82 500	465	M302	
5.7	0.82	6740	SPZH66C250 - D112M-4G	250.56		30 000	181	M286	
5.5	1.10	6969	SPZH76C250 - D112M-4G	259.09		50 000	272	M294	
5.5	2.10	6980	SPZH86C36B250 - D112M-4G	259.50		82 500	465	M302	
5.0	1.00	7654	SPZH76C280 - D112M-4G	284.55		50 000	272	M294	
5.0	2.00	7659	SPZH86C36B280 - D112M-4G	284.71		82 500	465	M302	
4.7	0.99	8051	SPZH76B36B315 - D112M-4G	299.30		50 000	310	M294	
4.3	1.70	8846	SPZH86C36B315 - D112M-4G	328.84		82 500	465	M302	
3.9	1.50	9778	SPZH86C36B350 - D112M-4G	363.52		82 500	465	M302	
4.2	0.88	9134	SPZH76C355 - D112M-4G	339.55		50 000	272	M294	
3.5	1.40	10855	SPZH86C36B400 - D112M-4G	403.53		82 500	465	M302	
3.3	1.30	11626	SPZH86C36B450 - D112M-4G	432.19		82 500	465	M302	
2.8	1.10	13594	SPZH86C36B500 - D112M-4G	505.37		82 500	465	M302	
2.6	1.00	14643	SPZH86C36B560 - D112M-4G	544.34		82 500	465	M302	
2.3	0.90	16627	SPZH86C36B630 - D112M-4G	618.13		82 500	465	M302	
2.0	0.80	18831	SPZH86C36B710 - D112M-4G	700.06		82 500	465	M302	

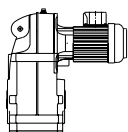
P 5.5 kW
n₁ 1440 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
417.7	2.90	126	SPZH36B3.55 - D132S-4G	3.45	2 900	11 200	68	M262	
373.1	2.90	141	SPZH36B4 - D132S-4G	3.86	3 000	11 500	68	M262	
325.9	2.60	161	SPZH36B4.5 - D132S-4G	4.42	3 000	11 900	68	M262	
297.0	2.30	177	SPZH36B5 - D132S-4G	4.85	3 000	12 100	68	M262	
257.1	2.00	204	SPZH36B5.6 - D132S-4G	5.60	3 000	12 500	68	M262	
232.6	1.80	226	SPZH36B6.3 - D132S-4G	6.19	3 000	12 800	68	M262	
212.8	3.00	247	SPZH46B6.3 - D132S-4G	6.77	4 700	15 400	94	M270	
209.6	1.70	251	SPZH36B7.1 - D132S-4G	6.87	3 000	13 100	68	M262	
178.4	2.50	294	SPZH36B8 - D132S-4G	8.07	3 300	13 500	68	M262	X
153.6	2.30	342	SPZH36B9 - D132S-4G	9.37	3 300	13 500	68	M262	
163.3	3.00	322	SPZH46B9 - D132S-4G	8.82	5 100	16 600	94	M270	
137.2	2.20	383	SPZH36B10 - D132S-4G	10.49	3 200	13 500	68	M262	X
141.8	2.70	370	SPZH46B10 - D132S-4G	10.15	5 200	17 200	94	M270	
119.9	1.90	438	SPZH36B11.2 - D132S-4G	12.01	3 200	13 500	68	M262	
125.1	2.50	420	SPZH46B11.2 - D132S-4G	11.51	5 200	17 700	94	M270	
109.2	1.80	481	SPZH36B12.5 - D132S-4G	13.18	3 100	13 500	68	M262	
111.2	2.30	472	SPZH46B12.5 - D132S-4G	12.95	5 300	18 000	94	M270	
94.6	1.50	555	SPZH36B14 - D132S-4G	15.23	3 000	13 500	68	M262	X
97.0	2.10	541	SPZH46B14 - D132S-4G	14.85	5 300	18 000	94	M270	
85.6	1.40	614	SPZH36B16 - D132S-4G	16.83	2 800	13 500	68	M262	



P 5.5 kW
n₁ 1440 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
87.9	2.00	597	SPZH46B16 - D132S-4G	16.38	5 300	18 000	94	M270	
77.1	1.20	681	SPZH36B18 - D132S-4G	18.68	2 700	13 500	68	M262	
79.9	1.80	657	SPZH46B18 - D132S-4G	18.03	5 300	18 000	94	M270	
72.0	1.20	730	SPZH36B20 - D132S-4G	20.01	2 500	13 500	68	M262	
70.9	1.70	741	SPZH46B20 - D132S-4G	20.31	5 200	18 000	94	M270	
73.2	3.00	718	SPZH56B20 - D132S-4G	19.68	7 500	26 700	131	M278	
61.5	1.00	853	SPZH36B22.4 - D132S-4G	23.40	2 200	13 500	68	M262	
65.6	1.40	801	SPZH46C22.4 - D132S-4G	21.95	5 200	18 000	94	M270	
63.9	1.60	822	SPZH46B22.4 - D132S-4G	22.52	5 100	18 000	94	M270	X
63.6	2.70	826	SPZH56B22.4 - D132S-4G	22.65	7 600	27 000	131	M278	X
57.1	0.92	919	SPZH36B25 - D132S-4G	25.20	2 000	13 500	68	M262	
55.8	1.40	941	SPZH46B25 - D132S-4G	25.80	5 000	18 000	94	M270	X
56.4	2.50	932	SPZH56B25 - D132S-4G	25.55	7 600	27 000	131	M278	X
50.3	0.81	1044	SPZH36B28 - D132S-4G	28.62	1 500	13 500	68	M262	
47.5	1.30	1105	SPZH46B28 - D132S-4G	30.30	4 700	18 000	94	M270	X
49.5	2.30	1061	SPZH56B28 - D132S-4G	29.09	7 600	27 000	131	M278	
44.4	1.20	1182	SPZH46B31.5 - D132S-4G	32.42	4 600	18 000	94	M270	X
45.8	1.80	1146	SPZH56C31.5 - D132S-4G	31.43	7 500	27 000	131	M278	
45.1	2.20	1164	SPZH56B31.5 - D132S-4G	31.91	7 500	27 000	131	M278	
39.8	1.10	1321	SPZH46B35.5 - D132S-4G	36.21	4 300	18 000	94	M270	
42.7	1.80	1229	SPZH56C35.5 - D132S-4G	33.69	7 500	27 000	131	M278	
39.4	2.00	1334	SPZH56B35.5 - D132S-4G	36.58	7 400	27 000	131	M278	
34.9	1.00	1507	SPZH46B40 - D132S-4G	41.31	3 900	18 000	94	M270	X
38.1	1.70	1378	SPZH56C40 - D132S-4G	37.78	7 300	27 000	131	M278	
36.3	1.90	1446	SPZH56B40 - D132S-4G	39.65	7 300	27 000	131	M278	
31.5	0.87	1669	SPZH46C45 - D132S-4G	45.75	3 500	18 000	94	M270	
32.1	0.99	1634	SPZH46B45 - D132S-4G	44.79	3 600	18 000	94	M270	X
33.1	1.50	1586	SPZH56C45 - D132S-4G	43.49	7 100	27 000	131	M278	
30.8	1.70	1706	SPZH56B45 - D132S-4G	46.78	7 000	27 000	131	M278	X
33.7	3.00	1559	SPZH66C45 - D132S-4G	42.75		30 000	192	M286	
27.9	0.90	1886	SPZH46B50 - D132S-4G	51.70	3 000	18 000	94	M270	X
27.6	1.50	1903	SPZH56B50 - D132S-4G	52.18	6 700	27 000	131	M278	X
30.3	2.80	1734	SPZH66B50 - D132S-4G	47.54		30 000	192	M286	
25.4	0.82	2071	SPZH46B56 - D132S-4G	56.78	2 400	18 000	94	M270	X
24.8	1.30	2117	SPZH56B56 - D132S-4G	58.03	6 300	27 000	131	M278	
25.7	2.40	2042	SPZH66B56 - D132S-4G	56.00		30 000	192	M286	
22.6	1.20	2319	SPZH56C63 - D132S-4G	63.59	6 000	27 000	131	M278	
23.3	2.20	2250	SPZH66B63 - D132S-4G	61.68		30 000	192	M286	
20.5	1.10	2559	SPZH56C71 - D132S-4G	70.17	5 500	27 000	131	M278	
21.0	1.80	2498	SPZH66B71 - D132S-4G	68.49		30 000	192	M286	
20.0	2.10	2624	SPZH66C71 - D132S-4G	71.94		30 000	192	M286	
19.4	2.90	2713	SPZH76C71 - D132S-4G	74.39		50 000	283	M294	
18.7	1.00	2816	SPZH56C80 - D132S-4G	77.21	5 000	27 000	131	M278	
18.1	1.90	2895	SPZH66C80 - D132S-4G	79.38		30 000	192	M286	
17.5	2.70	2994	SPZH76C80 - D132S-4G	82.09		50 000	283	M294	
16.6	0.91	3172	SPZH56C90 - D132S-4G	86.98	4 200	27 000	131	M278	
16.5	1.70	3186	SPZH66C90 - D132S-4G	87.35		30 000	192	M286	
15.9	2.40	3295	SPZH76C90 - D132S-4G	90.33		50 000	283	M294	
14.9	0.82	3519	SPZH56C100 - D132S-4G	96.48	3 400	27 000	131	M278	X
14.6	1.50	3589	SPZH66C100 - D132S-4G	98.40		30 000	192	M286	
14.2	2.20	3711	SPZH76C100 - D132S-4G	101.75		50 000	283	M294	
13.2	1.40	3981	SPZH66C112 - D132S-4G	109.15		30 000	192	M286	



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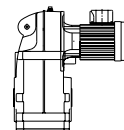
SP4

P 5.5 kW
n₁ 1440 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
12.8	1.90	4117	SPZH76C112 - D132S-4G	112.87		50 000	283	M294	
11.5	1.20	4560	SPZH66C125 - D132S-4G	125.03		30 000	192	M286	
11.1	1.70	4716	SPZH76C125 - D132S-4G	129.29		50 000	283	M294	
9.8	1.00	5355	SPZH66C140 - D132S-4G	146.82		30 000	192	M286	
9.5	1.40	5537	SPZH76C140 - D132S-4G	151.82		50 000	283	M294	
10.3	1.60	5113	SPZH76B36B140 - D132S-4G	140.18		50 000	321	M294	
9.2	0.96	5730	SPZH66C160 - D132S-4G	157.12		30 000	192	M286	
8.9	1.40	5926	SPZH76C160 - D132S-4G	162.47		50 000	283	M294	
8.2	0.86	6400	SPZH66C180 - D132S-4G	175.48		30 000	192	M286	
7.9	1.20	6618	SPZH76C180 - D132S-4G	181.46		50 000	283	M294	
8.3	2.40	6360	SPZH86C36B180 - D132S-4G	174.39		82 500	476	M302	
7.0	1.10	7551	SPZH76C200 - D132S-4G	207.03		50 000	283	M294	
7.1	2.00	7383	SPZH86C36B200 - D132S-4G	202.42		82 500	476	M302	
6.4	0.98	8187	SPZH76C224 - D132S-4G	224.46		50 000	283	M294	
6.4	1.80	8266	SPZH86C36B224 - D132S-4G	226.65		82 500	476	M302	
5.6	0.85	9450	SPZH76C250 - D132S-4G	259.09		50 000	283	M294	
5.5	1.60	9465	SPZH86C36B250 - D132S-4G	259.50		82 500	476	M302	
5.1	1.40	10384	SPZH86C36B280 - D132S-4G	284.71		82 500	476	M302	
4.4	1.30	11994	SPZH86C36B315 - D132S-4G	328.84		82 500	476	M302	
4.0	1.10	13259	SPZH86C36B350 - D132S-4G	363.52		82 500	476	M302	
3.6	1.00	14718	SPZH86C36B400 - D132S-4G	403.53		82 500	476	M302	
3.3	0.95	15763	SPZH86C36B450 - D132S-4G	432.19		82 500	476	M302	
2.8	0.81	18432	SPZH86C36B500 - D132S-4G	505.37		82 500	476	M302	

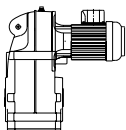
P 7.5 kW
n₁ 1445 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
486.6	2.50	147	SPZH36B3.15 - D132MA-4G	2.97	2 600	10 500	69	M262	
444.8	3.00	161	SPZH46B3.15 - D132MA-4G	3.25	3 900	12 600	95	M270	
419.2	2.10	171	SPZH36B3.55 - D132MA-4G	3.45	2 600	10 800	69	M262	
396.6	2.90	181	SPZH46B3.55 - D132MA-4G	3.64	4 000	12 900	95	M270	
374.4	2.10	191	SPZH36B4 - D132MA-4G	3.86	2 600	11 100	69	M262	
344.6	2.70	208	SPZH46B4 - D132MA-4G	4.19	4 000	13 400	95	M270	
327.0	1.90	219	SPZH36B4.5 - D132MA-4G	4.42	2 600	11 400	69	M262	
304.0	2.60	236	SPZH46B4.5 - D132MA-4G	4.75	4 100	13 800	95	M270	
298.0	1.70	240	SPZH36B5 - D132MA-4G	4.85	2 600	11 700	69	M262	
270.2	2.50	265	SPZH46B5 - D132MA-4G	5.35	4 200	14 200	95	M270	
258.0	1.50	278	SPZH36B5.6 - D132MA-4G	5.60	2 500	12 000	69	M262	
235.7	2.30	304	SPZH46B5.6 - D132MA-4G	6.13	4 200	14 700	95	M270	
233.4	1.40	307	SPZH36B6.3 - D132MA-4G	6.19	2 500	12 200	69	M262	
213.6	2.20	335	SPZH46B6.3 - D132MA-4G	6.77	4 200	15 000	95	M270	
210.3	1.20	341	SPZH36B7.1 - D132MA-4G	6.87	2 400	12 400	69	M262	
194.1	2.30	369	SPZH46B7.1 - D132MA-4G	7.44	4 300	15 300	95	M270	
179.0	1.80	400	SPZH36B8 - D132MA-4G	8.07	2 700	13 200	69	M262	X
183.7	2.30	390	SPZH46B8 - D132MA-4G	7.87	4 500	15 700	95	M270	X
154.2	1.70	465	SPZH36B9 - D132MA-4G	9.37	2 600	13 500	69	M262	
163.8	2.20	437	SPZH46B9 - D132MA-4G	8.82	4 500	16 100	95	M270	X



P 7.5 kW
n₁ 1445 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
137.7	1.60	520	SPZH36B10 - D132MA-4G	10.49	2 400	13 500	69	M262	X
142.3	2.00	503	SPZH46B10 - D132MA-4G	10.15	4 500	16 600	95	M270	
120.3	1.40	595	SPZH36B11.2 - D132MA-4G	12.01	2 200	13 500	69	M262	
125.5	1.90	570	SPZH46B11.2 - D132MA-4G	11.51	4 500	17 000	95	M270	X
109.6	1.30	653	SPZH36B12.5 - D132MA-4G	13.18	2 100	13 500	69	M262	
111.6	1.70	642	SPZH46B12.5 - D132MA-4G	12.95	4 500	17 400	95	M270	
111.2	3.00	644	SPZH56B12.5 - D132MA-4G	13.00	6 400	23 500	132	M278	X
94.9	1.10	755	SPZH36B14 - D132MA-4G	15.23	1 800	13 500	69	M262	X
97.3	1.50	736	SPZH46B14 - D132MA-4G	14.85	4 400	17 800	95	M270	
100.0	2.80	716	SPZH56B14 - D132MA-4G	14.45	6 500	24 000	132	M278	X
85.9	1.00	834	SPZH36B16 - D132MA-4G	16.83	1 500	13 500	69	M262	
88.2	1.40	812	SPZH46B16 - D132MA-4G	16.38	4 300	18 000	95	M270	X
87.9	2.50	815	SPZH56B16 - D132MA-4G	16.45	6 500	24 700	132	M278	
77.3	0.92	926	SPZH36B18 - D132MA-4G	18.68	1 200	13 500	69	M262	
80.2	1.40	893	SPZH46B18 - D132MA-4G	18.03	4 100	18 000	95	M270	
81.4	2.40	880	SPZH56B18 - D132MA-4G	17.75	6 500	25 100	132	M278	X
72.2	0.86	992	SPZH36B20 - D132MA-4G	20.01	1 000	13 500	69	M262	
71.2	1.20	1006	SPZH46B20 - D132MA-4G	20.31	3 900	18 000	95	M270	X
73.4	2.20	975	SPZH56B20 - D132MA-4G	19.68	6 400	25 600	132	M278	
64.2	1.20	1116	SPZH46B22.4 - D132MA-4G	22.52	3 700	18 000	95	M270	X
63.8	2.00	1123	SPZH56B22.4 - D132MA-4G	22.65	6 300	26 300	132	M278	X
56.7	0.95	1263	SPZH46C25 - D132MA-4G	25.48	3 400	18 000	95	M270	
56.0	1.10	1279	SPZH46B25 - D132MA-4G	25.80	3 400	18 000	95	M270	
56.6	1.90	1266	SPZH56B25 - D132MA-4G	25.55	6 200	26 900	132	M278	
47.7	0.93	1502	SPZH46B28 - D132MA-4G	30.30	2 800	18 000	95	M270	
49.7	1.70	1442	SPZH56B28 - D132MA-4G	29.09	6 000	27 000	132	M278	
44.6	0.90	1607	SPZH46B31.5 - D132MA-4G	32.42	2 500	18 000	95	M270	
46.0	1.30	1558	SPZH56C31.5 - D132MA-4G	31.43	5 800	27 000	132	M278	
45.3	1.60	1582	SPZH56B31.5 - D132MA-4G	31.91	5 800	27 000	132	M278	
39.9	0.84	1795	SPZH46B35.5 - D132MA-4G	36.21	2 000	18 000	95	M270	
42.9	1.30	1670	SPZH56C35.5 - D132MA-4G	33.69	5 600	27 000	132	M278	X
39.5	1.50	1813	SPZH56B35.5 - D132MA-4G	36.58	5 400	27 000	132	M278	
41.5	2.80	1726	SPZH66B35.5 - D132MA-4G	34.82		30 000	193	M286	
38.2	1.20	1873	SPZH56C40 - D132MA-4G	37.78	5 300	27 000	132	M278	X
36.4	1.40	1965	SPZH56B40 - D132MA-4G	39.65	5 100	27 000	132	M278	
37.9	2.30	1889	SPZH66C40 - D132MA-4G	38.12		30 000	193	M286	
38.0	2.70	1884	SPZH66B40 - D132MA-4G	38.01		30 000	193	M286	
30.9	1.20	2319	SPZH56B45 - D132MA-4G	46.78	4 400	27 000	132	M278	
33.8	2.20	2119	SPZH66C45 - D132MA-4G	42.75		30 000	193	M286	
33.2	2.40	2156	SPZH66B45 - D132MA-4G	43.51		30 000	193	M286	
27.7	1.10	2586	SPZH56B50 - D132MA-4G	52.18	3 900	27 000	132	M278	
30.4	2.10	2356	SPZH66B50 - D132MA-4G	47.54		30 000	193	M286	
28.4	3.00	2522	SPZH76C50 - D132MA-4G	50.88		50 000	284	M294	
24.9	0.94	2876	SPZH56B56 - D132MA-4G	58.03	3 200	27 000	132	M278	
25.8	1.70	2776	SPZH66B56 - D132MA-4G	56.00		30 000	193	M286	
26.0	2.90	2753	SPZH76B56 - D132MA-4G	55.55		50 000	284	M294	
22.7	0.86	3152	SPZH56C63 - D132MA-4G	63.59	2 600	27 000	132	M278	
23.4	1.60	3057	SPZH66B63 - D132MA-4G	61.68		30 000	193	M286	
22.3	2.50	3216	SPZH76C63 - D132MA-4G	64.88		50 000	284	M294	
20.6	0.81	3478	SPZH56C71 - D132MA-4G	70.17	1 700	27 000	132	M278	X
21.1	1.30	3395	SPZH66B71 - D132MA-4G	68.49		30 000	193	M286	
20.1	1.50	3566	SPZH66C71 - D132MA-4G	71.94		30 000	193	M286	



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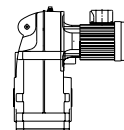
SP4

P 7.5 kW
n₁ 1445 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
19.4	2.20	3687	SPZH76C71 - D132MA-4G	74.39		50 000	284	M294	
18.2	1.40	3935	SPZH66C80 - D132MA-4G	79.38		30 000	193	M286	
17.6	2.00	4069	SPZH76C80 - D132MA-4G	82.09		50 000	284	M294	
16.5	1.30	4330	SPZH66C90 - D132MA-4G	87.35		30 000	193	M286	
16.0	1.80	4477	SPZH76C90 - D132MA-4G	90.33		50 000	284	M294	
14.7	1.10	4877	SPZH66C100 - D132MA-4G	98.40		30 000	193	M286	
14.2	1.60	5043	SPZH76C100 - D132MA-4G	101.75		50 000	284	M294	
14.3	3.00	5007	SPZH86C100 - D132MA-4G	101.01		81 900	439	M302	
13.2	1.00	5410	SPZH66C112 - D132MA-4G	109.15		30 000	193	M286	
12.8	1.40	5594	SPZH76C112 - D132MA-4G	112.87		50 000	284	M294	
13.0	2.70	5526	SPZH86C112 - D132MA-4G	111.49		82 500	439	M302	
11.6	0.89	6197	SPZH66C125 - D132MA-4G	125.03		30 000	193	M286	
11.2	1.20	6408	SPZH76C125 - D132MA-4G	129.29		50 000	284	M294	
11.6	2.40	6149	SPZH86C125 - D132MA-4G	124.07		82 500	439	M302	
9.5	1.10	7525	SPZH76C140 - D132MA-4G	151.82		50 000	284	M294	
8.9	0.99	8052	SPZH76C160 - D132MA-4G	162.47		50 000	284	M294	
8.0	0.89	8994	SPZH76C180 - D132MA-4G	181.46		50 000	284	M294	
8.3	1.70	8643	SPZH86C36B180 - D132MA-4G	174.39		82 500	477	M302	
7.3	0.82	9772	SPZH76B36B200 - D132MA-4G	197.17		50 000	322	M294	
7.1	1.50	10033	SPZH86C36B200 - D132MA-4G	202.42		82 500	477	M302	
6.4	1.30	11233	SPZH86C36B224 - D132MA-4G	226.65		82 500	477	M302	
5.6	1.20	12862	SPZH86C36B250 - D132MA-4G	259.50		82 500	477	M302	
5.1	1.10	14111	SPZH86C36B280 - D132MA-4G	284.71		82 500	477	M302	
4.4	0.92	16299	SPZH86C36B315 - D132MA-4G	328.84		82 500	477	M302	
4.0	0.83	18017	SPZH86C36B350 - D132MA-4G	363.52		82 500	477	M302	

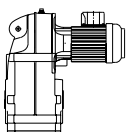
P 9.0 kW
n₁ 1435 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
483.2	2.10	178	SPZH36B3.15 - D132MB-4G	2.97	2 400	10 300	71	M262	
441.7	2.50	195	SPZH46B3.15 - D132MB-4G	3.25	3 700	12 400	97	M270	
416.3	1.80	206	SPZH36B3.55 - D132MB-4G	3.45	2 400	10 600	71	M262	
393.9	2.40	218	SPZH46B3.55 - D132MB-4G	3.64	3 800	12 800	97	M270	
371.8	1.80	231	SPZH36B4 - D132MB-4G	3.86	2 300	10 900	71	M262	
342.2	2.30	251	SPZH46B4 - D132MB-4G	4.19	3 800	13 200	97	M270	
324.7	1.60	265	SPZH36B4.5 - D132MB-4G	4.42	2 300	11 200	71	M262	
301.9	2.10	285	SPZH46B4.5 - D132MB-4G	4.75	3 900	13 600	97	M270	
296.0	1.40	290	SPZH36B5 - D132MB-4G	4.85	2 200	11 300	71	M262	
268.4	2.00	320	SPZH46B5 - D132MB-4G	5.35	3 900	13 900	97	M270	
256.3	1.20	335	SPZH36B5.6 - D132MB-4G	5.60	2 100	11 600	71	M262	
234.0	1.90	367	SPZH46B5.6 - D132MB-4G	6.13	3 900	14 400	97	M270	
231.8	1.10	371	SPZH36B6.3 - D132MB-4G	6.19	2 000	11 800	71	M262	
212.1	1.80	405	SPZH46B6.3 - D132MB-4G	6.77	3 900	14 600	97	M270	
208.8	1.00	412	SPZH36B7.1 - D132MB-4G	6.87	1 900	12 000	71	M262	
192.8	1.90	446	SPZH46B7.1 - D132MB-4G	7.44	3 900	14 900	97	M270	
177.7	1.50	484	SPZH36B8 - D132MB-4G	8.07	2 200	12 800	71	M262	
182.4	1.90	471	SPZH46B8 - D132MB-4G	7.87	4 100	15 300	97	M270	



P 9.0 kW
n₁ 1435 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rIN} N	F _{rIN-G} N	m kg		
153.1	1.40	561	SPZH36B9 - D132MB-4G	9.37	2 000	13 000	71	M262	
162.7	1.80	528	SPZH46B9 - D132MB-4G	8.82	4 100	15 700	97	M270	
136.8	1.40	628	SPZH36B10 - D132MB-4G	10.49	1 800	13 200	71	M262	
141.3	1.60	608	SPZH46B10 - D132MB-4G	10.15	4 000	16 100	97	M270	
140.8	2.90	610	SPZH56B10 - D132MB-4G	10.19	5 900	21 800	134	M278	
119.4	1.20	720	SPZH36B11.2 - D132MB-4G	12.01	1 500	13 300	71	M262	
124.7	1.50	689	SPZH46B11.2 - D132MB-4G	11.51	4 000	16 500	97	M270	
124.1	2.70	693	SPZH56B11.2 - D132MB-4G	11.56	5 900	22 400	134	M278	
108.9	1.10	789	SPZH36B12.5 - D132MB-4G	13.18	1 300	13 400	71	M262	
110.8	1.40	775	SPZH46B12.5 - D132MB-4G	12.95	3 800	16 800	97	M270	
110.4	2.50	778	SPZH56B12.5 - D132MB-4G	13.00	5 900	23 000	134	M278	
94.3	0.93	912	SPZH36B14 - D132MB-4G	15.23	900	13 500	71	M262	
96.7	1.30	889	SPZH46B14 - D132MB-4G	14.85	3 600	17 100	97	M270	
99.3	2.30	865	SPZH56B14 - D132MB-4G	14.45	5 900	23 500	134	M278	
85.3	0.84	1008	SPZH36B16 - D132MB-4G	16.83	500	13 500	71	M262	
87.6	1.20	981	SPZH46B16 - D132MB-4G	16.38	3 500	17 300	97	M270	
87.3	2.10	985	SPZH56B16 - D132MB-4G	16.45	5 800	24 100	134	M278	
79.6	1.10	1080	SPZH46B18 - D132MB-4G	18.03	3 300	17 500	97	M270	
80.8	2.00	1063	SPZH56B18 - D132MB-4G	17.75	5 800	24 400	134	M278	
70.7	1.00	1216	SPZH46B20 - D132MB-4G	20.31	3 000	17 700	97	M270	
72.9	1.80	1179	SPZH56B20 - D132MB-4G	19.68	5 600	24 900	134	M278	
63.7	0.96	1349	SPZH46B22.4 - D132MB-4G	22.52	2 600	17 800	97	M270	
63.4	1.70	1357	SPZH56B22.4 - D132MB-4G	22.65	5 400	25 500	134	M278	
61.7	3.00	1393	SPZH66B22.4 - D132MB-4G	23.26		30 000	195	M286	
55.6	0.87	1545	SPZH46B25 - D132MB-4G	25.80	2 100	17 900	97	M270	
56.2	1.50	1530	SPZH56B25 - D132MB-4G	25.55	5 200	25 900	134	M278	
55.5	2.80	1548	SPZH66B25 - D132MB-4G	25.85		30 000	195	M286	
49.3	1.40	1742	SPZH56B28 - D132MB-4G	29.09	4 800	26 400	134	M278	
52.0	2.70	1653	SPZH66B28 - D132MB-4G	27.61		30 000	195	M286	
45.7	1.10	1882	SPZH56C31.5 - D132MB-4G	31.43	4 500	26 600	134	M278	
45.0	1.30	1911	SPZH56B31.5 - D132MB-4G	31.91	4 500	26 600	134	M278	
46.8	2.50	1838	SPZH66B31.5 - D132MB-4G	30.69		30 000	195	M286	
39.2	1.20	2191	SPZH56B35.5 - D132MB-4G	36.58	3 900	26 900	134	M278	
41.2	2.30	2085	SPZH66B35.5 - D132MB-4G	34.82		30 000	195	M286	
38.0	1.00	2263	SPZH56C40 - D132MB-4G	37.78	3 700	27 000	134	M278	
36.2	1.20	2375	SPZH56B40 - D132MB-4G	39.65	3 500	27 000	134	M278	
37.6	1.90	2283	SPZH66C40 - D132MB-4G	38.12		30 000	195	M286	
37.8	2.20	2276	SPZH66B40 - D132MB-4G	38.01		30 000	195	M286	
36.4	3.00	2361	SPZH76C40 - D132MB-4G	39.42		50 000	286	M294	
30.7	1.00	2802	SPZH56B45 - D132MB-4G	46.78	2 500	27 000	134	M278	
33.6	1.80	2560	SPZH66C45 - D132MB-4G	42.75		30 000	195	M286	
33.0	2.00	2606	SPZH66B45 - D132MB-4G	43.51		30 000	195	M286	
31.7	2.80	2709	SPZH76B45 - D132MB-4G	45.22		50 000	286	M294	
27.5	0.93	3125	SPZH56B50 - D132MB-4G	52.18	1 700	27 000	134	M278	
30.2	1.70	2847	SPZH66B50 - D132MB-4G	47.54		30 000	195	M286	
28.2	2.50	3047	SPZH76C50 - D132MB-4G	50.88		50 000	286	M294	
28.7	2.70	2990	SPZH76B50 - D132MB-4G	49.92		50 000	286	M294	
25.6	1.40	3354	SPZH66B56 - D132MB-4G	56.00		30 000	195	M286	
25.8	2.40	3327	SPZH76B56 - D132MB-4G	55.55		50 000	286	M294	
23.3	1.30	3694	SPZH66B63 - D132MB-4G	61.68		30 000	195	M286	
22.1	2.10	3885	SPZH76C63 - D132MB-4G	64.88		50 000	286	M294	
21.0	1.10	4102	SPZH66B71 - D132MB-4G	68.49		30 000	195	M286	



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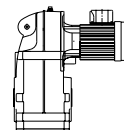
SP4

P 9.0 kW
n₁ 1435 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
19.9	1.30	4309	SPZH66C71 - D132MB-4G	71.94		30 000	195	M286	
19.3	1.80	4455	SPZH76C71 - D132MB-4G	74.39		50 000	286	M294	
18.1	1.20	4754	SPZH66C80 - D132MB-4G	79.38		30 000	195	M286	
17.5	1.60	4916	SPZH76C80 - D132MB-4G	82.09		50 000	286	M294	
16.4	1.10	5232	SPZH66C90 - D132MB-4G	87.35		30 000	195	M286	
15.9	1.50	5410	SPZH76C90 - D132MB-4G	90.33		50 000	286	M294	
16.8	2.90	5125	SPZH86C90 - D132MB-4G	85.57		77 300	441	M302	
14.6	0.93	5894	SPZH66C100 - D132MB-4G	98.40		30 000	195	M286	
14.1	1.30	6094	SPZH76C100 - D132MB-4G	101.75		50 000	286	M294	
14.2	2.50	6050	SPZH86C100 - D132MB-4G	101.01		79 800	441	M302	
13.1	0.84	6537	SPZH66C112 - D132MB-4G	109.15		30 000	195	M286	
12.7	1.20	6760	SPZH76C112 - D132MB-4G	112.87		50 000	286	M294	
12.9	2.20	6678	SPZH86C112 - D132MB-4G	111.49		81 200	441	M302	
11.1	1.00	7743	SPZH76C125 - D132MB-4G	129.29		50 000	286	M294	
11.6	2.00	7431	SPZH86C125 - D132MB-4G	124.07		82 500	441	M302	
9.5	0.88	9092	SPZH76C140 - D132MB-4G	151.82		50 000	286	M294	
8.8	0.82	9730	SPZH76C160 - D132MB-4G	162.47		50 000	286	M294	
8.2	1.40	10444	SPZH86C36B180 - D132MB-4G	174.39		82 500	479	M302	
7.1	1.20	12123	SPZH86C36B200 - D132MB-4G	202.42		82 500	479	M302	
6.3	1.10	13574	SPZH86C36B224 - D132MB-4G	226.65		82 500	479	M302	
5.5	0.97	15541	SPZH86C36B250 - D132MB-4G	259.50		82 500	479	M302	
5.0	0.88	17052	SPZH86C36B280 - D132MB-4G	284.71		82 500	479	M302	

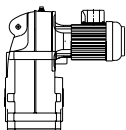
P 11.0 kW
n₁ 1465 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
493.3	1.70	213	SPZH36B3.15 - D160M-4G	2.97	2 100	10 000	140	M262	
450.9	2.10	233	SPZH46B3.15 - D160M-4G	3.25	3 500	12 200	166	M270	
425.0	1.50	247	SPZH36B3.55 - D160M-4G	3.45	2 000	10 300	140	M262	
402.1	2.00	261	SPZH46B3.55 - D160M-4G	3.64	3 500	12 500	166	M270	
379.6	1.50	277	SPZH36B4 - D160M-4G	3.86	2 000	10 500	140	M262	
349.4	1.90	301	SPZH46B4 - D160M-4G	4.19	3 500	12 900	166	M270	
331.5	1.30	317	SPZH36B4.5 - D160M-4G	4.42	1 900	10 700	140	M262	
308.2	1.80	341	SPZH46B4.5 - D160M-4G	4.75	3 500	13 200	166	M270	
302.2	1.20	348	SPZH36B5 - D160M-4G	4.85	1 800	10 900	140	M262	
274.0	1.70	383	SPZH46B5 - D160M-4G	5.35	3 500	13 500	166	M270	
261.6	1.00	402	SPZH36B5.6 - D160M-4G	5.60	1 600	11 100	140	M262	
238.9	1.60	440	SPZH46B5.6 - D160M-4G	6.13	3 500	13 900	166	M270	
255.3	3.00	412	SPZH56B5.6 - D160M-4G	5.74	5 000	18 500	203	M278	
236.7	0.93	444	SPZH36B6.3 - D160M-4G	6.19	1 500	11 200	140	M262	
216.5	1.50	485	SPZH46B6.3 - D160M-4G	6.77	3 400	14 100	166	M270	
213.2	0.84	493	SPZH36B7.1 - D160M-4G	6.87	1 300	11 300	140	M262	
196.8	1.60	534	SPZH46B7.1 - D160M-4G	7.44	3 300	14 400	166	M270	
206.4	2.90	509	SPZH56B7.1 - D160M-4G	7.10	5 300	19 600	203	M278	
181.4	1.30	579	SPZH36B8 - D160M-4G	8.07	1 600	12 100	140	M262	
186.2	1.60	564	SPZH46B8 - D160M-4G	7.87	3 600	14 800	166	M270	
179.3	2.70	586	SPZH56B8 - D160M-4G	8.17	5 300	20 300	203	M278	X



P 11.0 kW
n₁ 1465 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rIN} N	F _{rIN+G} N	m kg		
156.3	1.20	672	SPZH36B9 - D160M-4G	9.37	1 300	12 300	140	M262	
166.1	1.50	632	SPZH46B9 - D160M-4G	8.82	3 600	15 100	166	M270	X
158.7	2.60	662	SPZH56B9 - D160M-4G	9.23	5 400	20 800	203	M278	X
139.6	1.10	752	SPZH36B10 - D160M-4G	10.49	1 000	12 300	140	M262	
144.3	1.40	728	SPZH46B10 - D160M-4G	10.15	3 400	15 500	166	M270	
143.8	2.50	731	SPZH56B10 - D160M-4G	10.19	5 300	21 200	203	M278	
121.9	0.99	861	SPZH36B11.2 - D160M-4G	12.01	600	12 400	140	M262	
127.3	1.30	825	SPZH46B11.2 - D160M-4G	11.51	3 200	15 700	166	M270	X
126.7	2.20	829	SPZH56B11.2 - D160M-4G	11.56	5 300	21 800	203	M278	X
111.1	0.90	945	SPZH36B12.5 - D160M-4G	13.18	300	12 400	140	M262	
113.2	1.20	928	SPZH46B12.5 - D160M-4G	12.95	3 000	16 000	166	M270	
112.7	2.10	932	SPZH56B12.5 - D160M-4G	13.00	5 200	22 300	203	M278	X
98.7	1.10	1064	SPZH46B14 - D160M-4G	14.85	2 700	16 200	166	M270	
101.4	1.90	1036	SPZH56B14 - D160M-4G	14.45	5 100	22 700	203	M278	X
89.4	1.00	1175	SPZH46B16 - D160M-4G	16.38	2 500	16 300	166	M270	X
89.1	1.70	1179	SPZH56B16 - D160M-4G	16.45	4 900	23 200	203	M278	
81.3	0.94	1292	SPZH46B18 - D160M-4G	18.03	2 200	16 400	166	M270	
82.5	1.70	1273	SPZH56B18 - D160M-4G	17.75	4 800	23 500	203	M278	X
83.7	3.00	1255	SPZH66B18 - D160M-4G	17.51		30 000	264	M286	
72.1	0.86	1456	SPZH46B20 - D160M-4G	20.31	1 700	16 400	166	M270	X
74.4	1.50	1411	SPZH56B20 - D160M-4G	19.68	4 600	23 800	203	M278	
73.0	2.70	1440	SPZH66B20 - D160M-4G	20.08		30 000	264	M286	
65.0	0.80	1615	SPZH46B22.4 - D160M-4G	22.52	1 300	16 400	166	M270	X
64.7	1.40	1624	SPZH56B22.4 - D160M-4G	22.65	4 200	24 200	203	M278	X
63.0	2.50	1668	SPZH66B22.4 - D160M-4G	23.26		30 000	264	M286	
57.3	1.30	1832	SPZH56B25 - D160M-4G	25.55	3 800	24 600	203	M278	
56.7	2.40	1853	SPZH66B25 - D160M-4G	25.85		30 000	264	M286	
50.4	1.20	2085	SPZH56B28 - D160M-4G	29.09	3 300	24 800	203	M278	
53.1	2.30	1980	SPZH66B28 - D160M-4G	27.61		30 000	264	M286	X
46.6	0.93	2253	SPZH56C31.5 - D160M-4G	31.43	2 900	24 900	203	M278	
45.9	1.10	2288	SPZH56B31.5 - D160M-4G	31.91	2 800	24 900	203	M278	
47.7	2.10	2201	SPZH66B31.5 - D160M-4G	30.69		30 000	264	M286	X
45.3	3.00	2318	SPZH76B31.5 - D160M-4G	32.32		50 000	355	M294	X
40.0	1.00	2623	SPZH56B35.5 - D160M-4G	36.58	2 000	25 000	203	M278	
42.1	1.90	2497	SPZH66B35.5 - D160M-4G	34.82		30 000	264	M286	X
41.5	2.90	2533	SPZH76B35.5 - D160M-4G	35.33		50 000	355	M294	
38.8	0.85	2709	SPZH56C40 - D160M-4G	37.78	1 800	25 100	203	M278	X
36.9	0.97	2843	SPZH56B40 - D160M-4G	39.65	1 500	25 100	203	M278	
38.4	1.60	2733	SPZH66C40 - D160M-4G	38.12		30 000	264	M286	
38.5	1.80	2725	SPZH66B40 - D160M-4G	38.01		30 000	264	M286	
37.2	2.50	2826	SPZH76C40 - D160M-4G	39.42		50 000	355	M294	
38.2	2.70	2747	SPZH76B40 - D160M-4G	38.31		50 000	355	M294	X
31.3	0.86	3354	SPZH56B45 - D160M-4G	46.78	100	24 900	203	M278	
34.3	1.50	3065	SPZH66C45 - D160M-4G	42.75		30 000	264	M286	
33.7	1.70	3120	SPZH66B45 - D160M-4G	43.51		30 000	264	M286	X
32.4	2.40	3243	SPZH76B45 - D160M-4G	45.22		50 000	355	M294	
30.8	1.40	3409	SPZH66B50 - D160M-4G	47.54		30 000	264	M286	
29.3	2.20	3579	SPZH76B50 - D160M-4G	49.92		50 000	355	M294	
26.2	1.20	4015	SPZH66B56 - D160M-4G	56.00		30 000	264	M286	
26.4	2.00	3983	SPZH76B56 - D160M-4G	55.55		50 000	355	M294	
23.8	1.10	4422	SPZH66B63 - D160M-4G	61.68		30 000	264	M286	
22.6	1.70	4652	SPZH76C63 - D160M-4G	64.88		50 000	355	M294	



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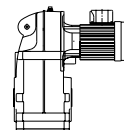
SP4

P 11.0 kW
n₁ 1465 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
21.4	0.92	4911	SPZH66B71 - D160M-4G	68.49		30 000	264	M286	
19.7	1.50	5334	SPZH76C71 - D160M-4G	74.39		50 000	355	M294	
20.3	2.90	5177	SPZH86C71 - D160M-4G	72.20		72 400	510	M302	
18.5	0.97	5692	SPZH66C80 - D160M-4G	79.38		30 000	264	M286	
17.8	1.40	5886	SPZH76C80 - D160M-4G	82.09		50 000	355	M294	
18.6	2.70	5658	SPZH86C80 - D160M-4G	78.91		73 500	510	M302	
16.8	0.88	6263	SPZH66C90 - D160M-4G	87.35		30 000	264	M286	
16.2	1.20	6477	SPZH76C90 - D160M-4G	90.33		50 000	355	M294	
17.1	2.40	6135	SPZH86C90 - D160M-4G	85.57		74 600	510	M302	
14.4	1.10	7296	SPZH76C100 - D160M-4G	101.75		50 000	355	M294	
14.5	2.10	7243	SPZH86C100 - D160M-4G	101.01		76 600	510	M302	
13.0	0.99	8093	SPZH76C112 - D160M-4G	112.87		50 000	355	M294	X
13.1	1.90	7994	SPZH86C112 - D160M-4G	111.49		77 800	510	M302	
11.3	0.86	9270	SPZH76C125 - D160M-4G	129.29		50 000	355	M294	X
11.8	1.70	8896	SPZH86C125 - D160M-4G	124.07		78 900	510	M302	
10.5	0.80	10051	SPZH76B36B140 - D160M-4G	140.18		50 000	393	M294	
8.4	1.20	12504	SPZH86C36B180 - D160M-4G	174.39		81 500	548	M302	
7.2	1.00	14514	SPZH86C36B200 - D160M-4G	202.42		82 000	548	M302	
6.5	0.92	16251	SPZH86C36B224 - D160M-4G	226.65		82 000	548	M302	
5.6	0.81	18606	SPZH86C36B250 - D160M-4G	259.50		81 700	548	M302	

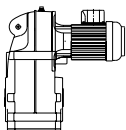
P 15.0 kW
n₁ 1460 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
491.6	1.30	291	SPZH36B3.15 - D160L-4G	2.97	1 600	9 400	160	M262	
449.4	1.50	319	SPZH46B3.15 - D160L-4G	3.25	3 000	11 700	186	M270	
457.2	2.90	313	SPZH56B3.15 - D160L-4G	3.19	4 200	15 600	223	M278	
423.5	1.10	338	SPZH36B3.55 - D160L-4G	3.45	1 400	9 600	160	M262	
400.8	1.50	357	SPZH46B3.55 - D160L-4G	3.64	3 000	12 000	186	M270	
414.6	2.70	346	SPZH56B3.55 - D160L-4G	3.52	4 300	16 000	223	M278	
378.3	1.10	379	SPZH36B4 - D160L-4G	3.86	1 300	9 800	160	M262	
348.2	1.40	411	SPZH46B4 - D160L-4G	4.19	2 900	12 300	186	M270	
360.0	2.60	398	SPZH56B4 - D160L-4G	4.06	4 300	16 500	223	M278	
330.4	0.96	434	SPZH36B4.5 - D160L-4G	4.42	1 100	9 900	160	M262	
307.1	1.30	466	SPZH46B4.5 - D160L-4G	4.75	2 900	12 600	186	M270	
318.7	2.40	449	SPZH56B4.5 - D160L-4G	4.58	4 300	17 000	223	M278	
301.1	0.87	476	SPZH36B5 - D160L-4G	4.85	900	10 000	160	M262	
273.0	1.20	525	SPZH46B5 - D160L-4G	5.35	2 800	12 800	186	M270	
288.7	2.30	496	SPZH56B5 - D160L-4G	5.06	4 300	17 300	223	M278	
238.1	1.10	602	SPZH46B5.6 - D160L-4G	6.13	2 600	13 000	186	M270	
254.4	2.20	563	SPZH56B5.6 - D160L-4G	5.74	4 300	17 800	223	M278	
215.8	1.10	664	SPZH46B6.3 - D160L-4G	6.77	2 500	13 200	186	M270	
226.9	2.20	631	SPZH56B6.3 - D160L-4G	6.43	4 600	18 500	223	M278	
196.1	1.20	730	SPZH46B7.1 - D160L-4G	7.44	2 300	13 400	186	M270	
205.7	2.20	696	SPZH56B7.1 - D160L-4G	7.10	4 500	18 900	223	M278	
180.8	0.93	792	SPZH36B8 - D160L-4G	8.07	400	10 900	160	M262	
185.6	1.20	772	SPZH46B8 - D160L-4G	7.87	2 700	13 900	186	M270	



P 15.0 kW
n₁ 1460 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
178.7	2.00	802	SPZH56B8 - D160L-4G	8.17	4 500	19 400	223	M278	
155.8	0.87	919	SPZH36B9 - D160L-4G	9.37		10 800	160	M262	
165.5	1.10	865	SPZH46B9 - D160L-4G	8.82	2 500	14 100	186	M270	
158.2	1.90	906	SPZH56B9 - D160L-4G	9.23	4 400	19 800	223	M278	
139.1	0.83	1030	SPZH36B10 - D160L-4G	10.49		10 800	160	M262	
143.8	1.00	996	SPZH46B10 - D160L-4G	10.15	2 200	14 200	186	M270	
143.3	1.80	1000	SPZH56B10 - D160L-4G	10.19	4 300	20 200	223	M278	
140.0	2.90	1023	SPZH66B10 - D160L-4G	10.43		26 900	284	M286	
126.8	0.94	1129	SPZH46B11.2 - D160L-4G	11.51	1 800	14 300	186	M270	
126.3	1.60	1135	SPZH56B11.2 - D160L-4G	11.56	4 100	20 600	223	M278	
125.2	2.70	1144	SPZH66B11.2 - D160L-4G	11.66		27 500	284	M286	
112.8	0.87	1270	SPZH46B12.5 - D160L-4G	12.95	1 400	14 400	186	M270	
112.3	1.50	1275	SPZH56B12.5 - D160L-4G	13.00	3 800	20 900	223	M278	
115.9	2.60	1235	SPZH66B12.5 - D160L-4G	12.59		27 900	284	M286	
101.1	1.40	1417	SPZH56B14 - D160L-4G	14.45	3 600	21 200	223	M278	
103.0	2.40	1391	SPZH66B14 - D160L-4G	14.18		28 600	284	M286	
88.8	1.30	1613	SPZH56B16 - D160L-4G	16.45	3 200	21 500	223	M278	
90.9	2.30	1575	SPZH66B16 - D160L-4G	16.06		29 100	284	M286	
82.2	1.20	1742	SPZH56B18 - D160L-4G	17.75	2 900	21 600	223	M278	
83.4	2.20	1718	SPZH66B18 - D160L-4G	17.51		29 500	284	M286	
74.2	1.10	1931	SPZH56B20 - D160L-4G	19.68	2 500	21 800	223	M278	
72.7	2.00	1970	SPZH66B20 - D160L-4G	20.08		30 000	284	M286	
64.5	1.00	2222	SPZH56B22.4 - D160L-4G	22.65	1 800	21 900	223	M278	
62.8	1.80	2282	SPZH66B22.4 - D160L-4G	23.26		30 000	284	M286	
66.2	2.90	2164	SPZH76B22.4 - D160L-4G	22.06		46 700	375	M294	
57.2	0.94	2506	SPZH56B25 - D160L-4G	25.55	1 100	21 900	223	M278	
56.5	1.70	2536	SPZH66B25 - D160L-4G	25.85		30 000	284	M286	
58.6	2.70	2443	SPZH76B25 - D160L-4G	24.90		47 800	375	M294	
50.2	0.86	2854	SPZH56B28 - D160L-4G	29.09	200	21 800	223	M278	
52.9	1.70	2709	SPZH66B28 - D160L-4G	27.61		30 000	284	M286	
52.1	2.50	2749	SPZH76B28 - D160L-4G	28.02		48 900	375	M294	
45.8	0.80	3131	SPZH56B31.5 - D160L-4G	31.91		21 700	223	M278	
47.6	1.50	3011	SPZH66B31.5 - D160L-4G	30.69		30 000	284	M286	
45.2	2.20	3171	SPZH76B31.5 - D160L-4G	32.32		50 000	375	M294	
41.9	1.40	3416	SPZH66B35.5 - D160L-4G	34.82		30 000	284	M286	
41.3	2.10	3466	SPZH76B35.5 - D160L-4G	35.33		50 000	375	M294	
38.4	1.30	3729	SPZH66B40 - D160L-4G	38.01		30 000	284	M286	
37.0	1.80	3867	SPZH76C40 - D160L-4G	39.42		50 000	375	M294	
38.1	2.00	3758	SPZH76B40 - D160L-4G	38.31		50 000	375	M294	
33.6	1.20	4269	SPZH66B45 - D160L-4G	43.51		30 000	284	M286	
32.3	1.70	4437	SPZH76B45 - D160L-4G	45.22		50 000	375	M294	
30.7	1.00	4664	SPZH66B50 - D160L-4G	47.54		30 000	284	M286	
29.2	1.60	4897	SPZH76B50 - D160L-4G	49.92		50 000	375	M294	
26.1	0.88	5494	SPZH66B56 - D160L-4G	56.00		30 000	284	M286	
26.3	1.50	5450	SPZH76B56 - D160L-4G	55.55		50 000	375	M294	
26.3	2.70	5457	SPZH86C56 - D160L-4G	55.62		65 400	530	M302	
23.7	0.80	6051	SPZH66B63 - D160L-4G	61.68		30 000	284	M286	
22.5	1.30	6365	SPZH76C63 - D160L-4G	64.88		50 000	375	M294	
23.3	2.40	6141	SPZH86C63 - D160L-4G	62.59		66 700	530	M302	
19.6	1.10	7299	SPZH76C71 - D160L-4G	74.39		50 000	375	M294	
20.2	2.10	7083	SPZH86C71 - D160L-4G	72.20		68 100	530	M302	
17.8	0.99	8054	SPZH76C80 - D160L-4G	82.09		50 000	375	M294	



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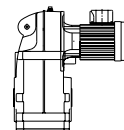
SP4

P 15.0 kW
n₁ 1460 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
18.5	1.90	7742	SPZH86C80 - D160L-4G	78.91		68 900	530	M302	
16.2	0.90	8862	SPZH76C90 - D160L-4G	90.33		50 000	375	M294	
17.1	1.80	8395	SPZH86C90 - D160L-4G	85.57		69 600	530	M302	
14.3	0.80	9983	SPZH76C100 - D160L-4G	101.75		50 000	375	M294	
14.5	1.50	9910	SPZH86C100 - D160L-4G	101.01		70 700	530	M302	
13.1	1.40	10939	SPZH86C112 - D160L-4G	111.49		71 200	530	M302	
11.8	1.20	12172	SPZH86C125 - D160L-4G	124.07		71 600	530	M302	
8.4	0.88	17109	SPZH86C36B180 - D160L-4G	174.39		71 400	568	M302	

P 18.5 kW
n₁ 1455 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
447.9	1.20	394	SPZH46B3.15 - D180M-4G	3.25	2 600	11 300	216	M270	
455.7	2.30	388	SPZH56B3.15 - D180M-4G	3.19	3 900	15 300	253	M278	
399.4	1.20	442	SPZH46B3.55 - D180M-4G	3.64	2 500	11 500	216	M270	
413.1	2.20	428	SPZH56B3.55 - D180M-4G	3.52	3 900	15 700	253	M278	
347.0	1.10	509	SPZH46B4 - D180M-4G	4.19	2 400	11 800	216	M270	
358.8	2.10	492	SPZH56B4 - D180M-4G	4.06	3 900	16 100	253	M278	
306.1	1.10	577	SPZH46B4.5 - D180M-4G	4.75	2 300	12 000	216	M270	
317.6	2.00	556	SPZH56B4.5 - D180M-4G	4.58	3 800	16 500	253	M278	
272.1	1.00	649	SPZH46B5 - D180M-4G	5.35	2 100	12 200	216	M270	
287.7	1.90	614	SPZH56B5 - D180M-4G	5.06	3 800	16 800	253	M278	
284.1	2.90	622	SPZH66B5 - D180M-4G	5.12		22 300	314	M286	
237.3	0.93	744	SPZH46B5.6 - D180M-4G	6.13	1 800	12 300	216	M270	
253.5	1.80	697	SPZH56B5.6 - D180M-4G	5.74	3 700	17 200	253	M278	
254.0	2.70	696	SPZH66B5.6 - D180M-4G	5.73		22 900	314	M286	
215.1	0.89	821	SPZH46B6.3 - D180M-4G	6.77	1 600	12 400	216	M270	
226.1	1.80	781	SPZH56B6.3 - D180M-4G	6.43	4 000	17 900	253	M278	
229.1	2.90	771	SPZH66B6.3 - D180M-4G	6.35		23 600	314	M286	
205.0	1.70	862	SPZH56B7.1 - D180M-4G	7.10	3 900	18 300	253	M278	
206.4	2.80	856	SPZH66B7.1 - D180M-4G	7.05		24 200	314	M286	
185.0	0.94	955	SPZH46B8 - D180M-4G	7.87	1 800	13 100	216	M270	
178.1	1.60	992	SPZH56B8 - D180M-4G	8.17	3 700	18 700	253	M278	
173.2	2.60	1020	SPZH66B8 - D180M-4G	8.40		25 000	314	M286	X
165.0	0.89	1071	SPZH46B9 - D180M-4G	8.82	1 500	13 100	216	M270	
157.6	1.50	1121	SPZH56B9 - D180M-4G	9.23	3 500	19 000	253	M278	
161.3	2.50	1095	SPZH66B9 - D180M-4G	9.02		25 400	314	M286	X
143.3	0.81	1233	SPZH46B10 - D180M-4G	10.15	1 000	13 200	216	M270	
142.8	1.50	1237	SPZH56B10 - D180M-4G	10.19	3 300	19 300	253	M278	
139.5	2.30	1266	SPZH66B10 - D180M-4G	10.43		26 100	314	M286	X
125.8	1.30	1404	SPZH56B11.2 - D180M-4G	11.56	3 000	19 500	253	M278	
124.8	2.20	1416	SPZH66B11.2 - D180M-4G	11.66		26 600	314	M286	
111.9	1.20	1578	SPZH56B12.5 - D180M-4G	13.00	2 600	19 800	253	M278	
115.6	2.10	1529	SPZH66B12.5 - D180M-4G	12.59		26 900	314	M286	
100.7	1.10	1754	SPZH56B14 - D180M-4G	14.45	2 200	19 900	253	M278	
102.6	2.00	1722	SPZH66B14 - D180M-4G	14.18		27 400	314	M286	X
88.5	1.00	1997	SPZH56B16 - D180M-4G	16.45	1 700	20 000	253	M278	



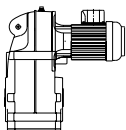
SP4

P 18.5 kW
n₁ 1455 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
90.6	1.80	1949	SPZH66B16 - D180M-4G	16.06		27 800	314	M286	
92.5	3.00	1910	SPZH76B16 - D180M-4G	15.73		42 400	405	M294	X
81.9	0.98	2156	SPZH56B18 - D180M-4G	17.75	1 300	20 000	253	M278	
83.1	1.80	2126	SPZH66B18 - D180M-4G	17.51		28 100	314	M286	X
82.3	2.70	2147	SPZH76B18 - D180M-4G	17.68		43 400	405	M294	X
73.9	0.91	2389	SPZH56B20 - D180M-4G	19.68	700	20 000	253	M278	
72.5	1.60	2438	SPZH66B20 - D180M-4G	20.08		28 400	314	M286	X
73.9	2.60	2390	SPZH76B20 - D180M-4G	19.69		44 300	405	M294	X
64.2	0.83	2750	SPZH56B22.4 - D180M-4G	22.65		19 900	253	M278	
62.5	1.50	2824	SPZH66B22.4 - D180M-4G	23.26		28 700	314	M286	
66.0	2.40	2678	SPZH76B22.4 - D180M-4G	22.06		45 100	405	M294	X
56.3	1.40	3138	SPZH66B25 - D180M-4G	25.85		28 800	314	M286	
58.4	2.20	3023	SPZH76B25 - D180M-4G	24.90		46 000	405	M294	
52.7	1.30	3352	SPZH66B28 - D180M-4G	27.61		28 800	314	M286	
51.9	2.00	3402	SPZH76B28 - D180M-4G	28.02		46 800	405	M294	
47.4	1.20	3727	SPZH66B31.5 - D180M-4G	30.69		28 800	314	M286	
45.0	1.80	3924	SPZH76B31.5 - D180M-4G	32.32		47 600	405	M294	
41.8	1.10	4228	SPZH66B35.5 - D180M-4G	34.82		28 600	314	M286	
41.2	1.70	4289	SPZH76B35.5 - D180M-4G	35.33		48 100	405	M294	
38.2	0.95	4628	SPZH66C40 - D180M-4G	38.12		28 300	314	M286	X
38.3	1.10	4615	SPZH66B40 - D180M-4G	38.01		28 300	314	M286	
38.0	1.60	4651	SPZH76B40 - D180M-4G	38.31		48 400	405	M294	
33.4	0.97	5283	SPZH66B45 - D180M-4G	43.51		27 700	314	M286	
32.2	1.40	5491	SPZH76B45 - D180M-4G	45.22		49 000	405	M294	
33.1	2.80	5339	SPZH86C45 - D180M-4G	43.97		60 400	560	M302	
30.6	0.84	5772	SPZH66B50 - D180M-4G	47.54		27 200	314	M286	
29.1	1.30	6061	SPZH76B50 - D180M-4G	49.92		49 100	405	M294	
29.5	2.50	5982	SPZH86C50 - D180M-4G	49.26		61 500	560	M302	
26.2	1.20	6744	SPZH76B56 - D180M-4G	55.55		49 100	405	M294	
26.2	2.20	6753	SPZH86C56 - D180M-4G	55.62		62 600	560	M302	
22.4	1.00	7877	SPZH76C63 - D180M-4G	64.88		48 900	405	M294	
23.2	2.00	7599	SPZH86C63 - D180M-4G	62.59		63 500	560	M302	
19.6	0.89	9032	SPZH76C71 - D180M-4G	74.39		48 200	405	M294	
20.2	1.70	8766	SPZH86C71 - D180M-4G	72.20		64 500	560	M302	
17.7	0.80	9967	SPZH76C80 - D180M-4G	82.09		47 500	405	M294	
18.4	1.60	9581	SPZH86C80 - D180M-4G	78.91		64 900	560	M302	
17.0	1.40	10389	SPZH86C90 - D180M-4G	85.57		65 300	560	M302	
14.4	1.20	12265	SPZH86C100 - D180M-4G	101.01		65 600	560	M302	
13.1	1.10	13537	SPZH86C112 - D180M-4G	111.49		65 600	560	M302	
11.7	1.00	15064	SPZH86C125 - D180M-4G	124.07		65 300	560	M302	

P 22.0 kW
n₁ 1460 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
449.4	1.00	467	SPZH46B3.15 - D180L-4G	3.25	2 200	10 900	246	M270	
457.2	2.00	459	SPZH56B3.15 - D180L-4G	3.19	3 600	15 000	283	M278	
468.1	3.00	449	SPZH66B3.15 - D180L-4G	3.12		19 600	344	M286	



F

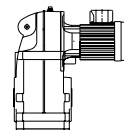
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L

K

SP4**P 22.0 kW**
n₁ 1460 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
400.8	1.00	524	SPZH46B3.55 - D180L-4G	3.64	2 100	11 100	246	M270	
414.6	1.90	507	SPZH56B3.55 - D180L-4G	3.52	3 500	15 300	283	M278	
421.7	2.90	498	SPZH66B3.55 - D180L-4G	3.46		20 100	344	M286	
348.2	0.94	603	SPZH46B4 - D180L-4G	4.19	1 900	11 300	246	M270	
360.0	1.80	584	SPZH56B4 - D180L-4G	4.06	3 500	15 700	283	M278	
353.8	2.70	594	SPZH66B4 - D180L-4G	4.13		20 900	344	M286	
307.1	0.89	684	SPZH46B4.5 - D180L-4G	4.75	1 700	11 400	246	M270	
318.7	1.70	659	SPZH56B4.5 - D180L-4G	4.58	3 400	16 100	283	M278	
329.6	2.70	637	SPZH66B4.5 - D180L-4G	4.43		21 200	344	M286	
273.0	0.84	769	SPZH46B5 - D180L-4G	5.35	1 400	11 500	246	M270	
288.7	1.60	728	SPZH56B5 - D180L-4G	5.06	3 300	16 300	283	M278	
285.1	2.40	737	SPZH66B5 - D180L-4G	5.12		21 800	344	M286	
254.4	1.50	826	SPZH56B5.6 - D180L-4G	5.74	3 100	16 700	283	M278	
254.9	2.30	824	SPZH66B5.6 - D180L-4G	5.73		22 300	344	M286	
226.9	1.50	926	SPZH56B6.3 - D180L-4G	6.43	3 400	17 400	283	M278	
229.9	2.50	914	SPZH66B6.3 - D180L-4G	6.35		23 100	344	M286	
205.7	1.50	1021	SPZH56B7.1 - D180L-4G	7.10	3 200	17 600	283	M278	
207.1	2.40	1014	SPZH66B7.1 - D180L-4G	7.05		23 600	344	M286	
185.6	0.80	1132	SPZH46B8 - D180L-4G	7.87	900	12 200	246	M270	
178.7	1.40	1176	SPZH56B8 - D180L-4G	8.17	3 000	17 900	283	M278	
173.8	2.20	1209	SPZH66B8 - D180L-4G	8.40		24 300	344	M286	
158.2	1.30	1328	SPZH56B9 - D180L-4G	9.23	2 700	18 200	283	M278	
161.9	2.10	1298	SPZH66B9 - D180L-4G	9.02		24 600	344	M286	
143.3	1.20	1466	SPZH56B10 - D180L-4G	10.19	2 400	18 400	283	M278	
140.0	2.00	1500	SPZH66B10 - D180L-4G	10.43		25 200	344	M286	
126.3	1.10	1664	SPZH56B11.2 - D180L-4G	11.56	1 900	18 500	283	M278	
125.2	1.80	1678	SPZH66B11.2 - D180L-4G	11.66		25 600	344	M286	
112.3	1.00	1870	SPZH56B12.5 - D180L-4G	13.00	1 400	18 600	283	M278	
115.9	1.80	1812	SPZH66B12.5 - D180L-4G	12.59		25 800	344	M286	
117.9	3.00	1782	SPZH76B12.5 - D180L-4G	12.38		39 500	435	M294	
101.1	0.95	2079	SPZH56B14 - D180L-4G	14.45	900	18 600	283	M278	
103.0	1.70	2040	SPZH66B14 - D180L-4G	14.18		26 200	344	M286	
102.4	2.70	2052	SPZH76B14 - D180L-4G	14.26		40 500	435	M294	
88.8	0.87	2366	SPZH56B16 - D180L-4G	16.45	100	18 600	283	M278	
90.9	1.60	2310	SPZH66B16 - D180L-4G	16.06		26 400	344	M286	
92.8	2.50	2264	SPZH76B16 - D180L-4G	15.73		41 300	435	M294	
82.2	0.83	2555	SPZH56B18 - D180L-4G	17.75		18 500	283	M278	
83.4	1.50	2519	SPZH66B18 - D180L-4G	17.51		26 600	344	M286	
82.6	2.30	2544	SPZH76B18 - D180L-4G	17.68		42 100	435	M294	
72.7	1.40	2889	SPZH66B20 - D180L-4G	20.08		26 700	344	M286	
74.2	2.20	2833	SPZH76B20 - D180L-4G	19.69		42 800	435	M294	
62.8	1.30	3347	SPZH66B22.4 - D180L-4G	23.26		26 700	344	M286	X
66.2	2.00	3174	SPZH76B22.4 - D180L-4G	22.06		43 500	435	M294	
56.5	1.20	3719	SPZH66B25 - D180L-4G	25.85		26 600	344	M286	X
58.6	1.80	3583	SPZH76B25 - D180L-4G	24.90		44 100	435	M294	X
52.9	1.10	3973	SPZH66B28 - D180L-4G	27.61		26 500	344	M286	X
52.1	1.70	4032	SPZH76B28 - D180L-4G	28.02		44 700	435	M294	
47.6	1.10	4416	SPZH66B31.5 - D180L-4G	30.69		26 200	344	M286	X
45.2	1.50	4651	SPZH76B31.5 - D180L-4G	32.32		45 200	435	M294	X
41.9	0.97	5010	SPZH66B35.5 - D180L-4G	34.82		25 600	344	M286	X
41.3	1.40	5084	SPZH76B35.5 - D180L-4G	35.33		45 400	435	M294	
41.5	3.00	5057	SPZH86C35.5 - D180L-4G	35.14		56 300	590	M302	

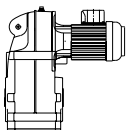


P 22.0 kW
n₁ 1460 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
38.3	0.80	5485	SPZH66C40 - D180L-4G	38.12		25 100	344	M286	
38.4	0.91	5469	SPZH66B40 - D180L-4G	38.01		25 100	344	M286	
38.1	1.30	5512	SPZH76B40 - D180L-4G	38.31		45 600	435	M294	X
37.0	2.60	5683	SPZH86C40 - D180L-4G	39.49		57 400	590	M302	
33.6	0.82	6260	SPZH66B45 - D180L-4G	43.51		24 000	344	M286	X
32.3	1.20	6507	SPZH76B45 - D180L-4G	45.22		45 600	435	M294	
33.2	2.40	6327	SPZH86C45 - D180L-4G	43.97		58 200	590	M302	
29.2	1.10	7183	SPZH76B50 - D180L-4G	49.92		45 400	435	M294	
29.6	2.10	7089	SPZH86C50 - D180L-4G	49.26		59 000	590	M302	
26.3	1.00	7993	SPZH76B56 - D180L-4G	55.55		45 000	435	M294	
26.3	1.90	8003	SPZH86C56 - D180L-4G	55.62		59 800	590	M302	
22.5	0.86	9335	SPZH76C63 - D180L-4G	64.88		44 000	435	M294	
23.3	1.70	9006	SPZH86C63 - D180L-4G	62.59		60 400	590	M302	
20.2	1.40	10388	SPZH86C71 - D180L-4G	72.20		60 800	590	M302	
18.5	1.30	11355	SPZH86C80 - D180L-4G	78.91		60 900	590	M302	
17.1	1.20	12312	SPZH86C90 - D180L-4G	85.57		60 900	590	M302	
14.5	1.00	14535	SPZH86C100 - D180L-4G	101.01		60 500	590	M302	
13.1	0.93	16043	SPZH86C112 - D180L-4G	111.49		60 000	590	M302	
11.8	0.84	17853	SPZH86C125 - D180L-4G	124.07		59 100	590	M302	

P 30.0 kW
n₁ 1465 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
458.8	1.40	624	SPZH56B3.15 - D200L-4G	3.19	2 800	14 300	293	M278	
469.7	2.20	610	SPZH66B3.15 - D200L-4G	3.12		18 900	354	M286	
416.0	1.40	689	SPZH56B3.55 - D200L-4G	3.52	2 700	14 500	293	M278	
423.1	2.10	677	SPZH66B3.55 - D200L-4G	3.46		19 300	354	M286	
361.3	1.30	793	SPZH56B4 - D200L-4G	4.06	2 500	14 800	293	M278	
355.1	2.00	807	SPZH66B4 - D200L-4G	4.13		20 000	354	M286	
367.6	2.90	779	SPZH76B4 - D200L-4G	3.99		29 400	445	M294	
319.8	1.20	896	SPZH56B4.5 - D200L-4G	4.58	2 300	15 000	293	M278	
330.7	2.00	866	SPZH66B4.5 - D200L-4G	4.43		20 200	354	M286	
323.9	2.70	884	SPZH76B4.5 - D200L-4G	4.52		30 200	445	M294	
289.7	1.20	989	SPZH56B5 - D200L-4G	5.06	2 100	15 200	293	M278	
286.0	1.80	1002	SPZH66B5 - D200L-4G	5.12		20 700	354	M286	
297.3	2.60	964	SPZH76B5 - D200L-4G	4.93		30 800	445	M294	
255.3	1.10	1122	SPZH56B5.6 - D200L-4G	5.74	1 700	15 300	293	M278	
255.7	1.70	1120	SPZH66B5.6 - D200L-4G	5.73		21 100	354	M286	
260.6	2.40	1099	SPZH76B5.6 - D200L-4G	5.62		31 700	445	M294	
227.7	1.10	1258	SPZH56B6.3 - D200L-4G	6.43	2 000	16 000	293	M278	
230.7	1.80	1242	SPZH66B6.3 - D200L-4G	6.35		21 900	354	M286	
206.4	1.10	1388	SPZH56B7.1 - D200L-4G	7.10	1 700	16 200	293	M278	
207.8	1.70	1378	SPZH66B7.1 - D200L-4G	7.05		22 200	354	M286	
207.0	3.00	1384	SPZH76B7.1 - D200L-4G	7.08		33 700	445	M294	
179.3	1.00	1598	SPZH56B8 - D200L-4G	8.17	1 200	16 300	293	M278	
174.4	1.60	1643	SPZH66B8 - D200L-4G	8.40		22 700	354	M286	
182.7	2.90	1568	SPZH76B8 - D200L-4G	8.02		34 600	445	M294	



F

A

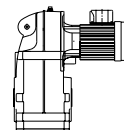
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SP4

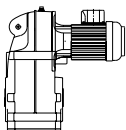
P 30.0 kW
n₁ 1465 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{in} N	F _{in+G} N	m kg		
193.5	2.90	1480	SPZH86C8 - D200L-4G	7.57	700	38 900	600	M302	
158.7	0.94	1805	SPZH56B9 - D200L-4G	9.23		16 300	293	M278	
162.4	1.60	1764	SPZH66B9 - D200L-4G	9.02		22 900	354	M286	
161.0	2.70	1779	SPZH76B9 - D200L-4G	9.10	200	35 500	445	M294	
171.0	2.90	1675	SPZH86C9 - D200L-4G	8.57		40 000	600	M302	
143.8	0.90	1993	SPZH56B10 - D200L-4G	10.19		16 300	293	M278	
140.5	1.40	2039	SPZH66B10 - D200L-4G	10.43		23 200	354	M286	
147.8	2.60	1938	SPZH76B10 - D200L-4G	9.91		36 000	445	M294	
151.0	2.90	1898	SPZH86C10 - D200L-4G	9.70		41 200	600	M302	
126.7	0.82	2261	SPZH56B11.2 - D200L-4G	11.56		16 100	293	M278	
125.6	1.40	2281	SPZH66B11.2 - D200L-4G	11.66		23 300	354	M286	
129.5	2.30	2212	SPZH76B11.2 - D200L-4G	11.31		36 800	445	M294	
133.0	2.90	2153	SPZH86C11.2 - D200L-4G	11.01		42 300	600	M302	
116.3	1.30	2462	SPZH66B12.5 - D200L-4G	12.59		23 400	354	M286	
118.3	2.20	2421	SPZH76B12.5 - D200L-4G	12.38		37 300	445	M294	
122.1	2.90	2346	SPZH86C12.5 - D200L-4G	12.00		43 100	600	M302	
103.3	1.20	2773	SPZH66B14 - D200L-4G	14.18		23 400	354	M286	
102.7	2.00	2788	SPZH76B14 - D200L-4G	14.26		38 100	445	M294	
91.2	1.10	3140	SPZH66B16 - D200L-4G	16.06		23 300	354	M286	
93.1	1.90	3077	SPZH76B16 - D200L-4G	15.73		38 600	445	M294	
83.7	1.10	3424	SPZH66B18 - D200L-4G	17.51		23 200	354	M286	
82.9	1.70	3457	SPZH76B18 - D200L-4G	17.68		39 100	445	M294	
73.0	1.00	3926	SPZH66B20 - D200L-4G	20.08		22 800	354	M286	
74.4	1.60	3850	SPZH76B20 - D200L-4G	19.69		39 400	445	M294	
63.0	0.92	4549	SPZH66B22.4 - D200L-4G	23.26		22 200	354	M286	
66.4	1.50	4313	SPZH76B22.4 - D200L-4G	22.06		39 700	445	M294	
56.7	0.87	5054	SPZH66B25 - D200L-4G	25.85		21 600	354	M286	
58.8	1.30	4869	SPZH76B25 - D200L-4G	24.90		39 900	445	M294	
58.0	3.00	4940	SPZH86C25 - D200L-4G	25.26		50 200	600	M302	
53.1	0.83	5399	SPZH66B28 - D200L-4G	27.61		21 100	354	M286	
52.3	1.20	5480	SPZH76B28 - D200L-4G	28.02		40 000	445	M294	
53.0	2.80	5408	SPZH86C28 - D200L-4G	27.66		50 800	600	M302	
45.3	1.10	6321	SPZH76B31.5 - D200L-4G	32.32		39 700	445	M294	
46.0	2.40	6228	SPZH86C31.5 - D200L-4G	31.85		51 700	600	M302	
41.5	1.00	6908	SPZH76B35.5 - D200L-4G	35.33		39 400	445	M294	
41.7	2.20	6872	SPZH86C35.5 - D200L-4G	35.14		52 300	600	M302	
38.2	0.99	7491	SPZH76B40 - D200L-4G	38.31		39 000	445	M294	
37.1	1.90	7723	SPZH86C40 - D200L-4G	39.49		52 800	600	M302	
32.4	0.87	8844	SPZH76B45 - D200L-4G	45.22		37 900	445	M294	
33.3	1.70	8598	SPZH86C45 - D200L-4G	43.97		53 100	600	M302	
29.3	0.82	9761	SPZH76B50 - D200L-4G	49.92		36 900	445	M294	
29.7	1.60	9634	SPZH86C50 - D200L-4G	49.26		53 300	600	M302	
26.3	1.40	10876	SPZH86C56 - D200L-4G	55.62		53 300	600	M302	
23.4	1.20	12239	SPZH86C63 - D200L-4G	62.59		53 100	600	M302	
20.3	1.10	14118	SPZH86C71 - D200L-4G	72.20		52 500	600	M302	
18.6	0.97	15431	SPZH86C80 - D200L-4G	78.91		51 800	600	M302	
17.1	0.90	16732	SPZH86C90 - D200L-4G	85.57		51 000	600	M302	



P 37.0 kW
n₁ 1470 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN-G} N	m kg		
471.3	1.80	750	SPZH66B3.15 - D225S-4G	3.12		18 300	424	M286	
472.8	2.60	747	SPZH76B3.15 - D225S-4G	3.11		27 100	515	M294	
424.6	1.70	832	SPZH66B3.55 - D225S-4G	3.46		18 600	424	M286	
417.7	2.50	846	SPZH76B3.55 - D225S-4G	3.52		27 900	515	M294	
356.3	1.60	992	SPZH66B4 - D225S-4G	4.13		19 100	424	M286	
368.8	2.30	958	SPZH76B4 - D225S-4G	3.99		28 700	515	M294	
331.8	1.60	1065	SPZH66B4.5 - D225S-4G	4.43		19 300	424	M286	
325.0	2.20	1087	SPZH76B4.5 - D225S-4G	4.52		29 400	515	M294	
287.0	1.50	1231	SPZH66B5 - D225S-4G	5.12		19 700	424	M286	
298.3	2.10	1184	SPZH76B5 - D225S-4G	4.93		30 000	515	M294	
256.6	1.40	1377	SPZH66B5.6 - D225S-4G	5.73		19 900	424	M286	
261.5	1.90	1351	SPZH76B5.6 - D225S-4G	5.62		30 700	515	M294	
231.5	1.50	1526	SPZH66B6.3 - D225S-4G	6.35		20 800	424	M286	
235.0	2.60	1503	SPZH76B6.3 - D225S-4G	6.25		31 900	515	M294	
208.5	1.40	1694	SPZH66B7.1 - D225S-4G	7.05		21 000	424	M286	
207.7	2.50	1701	SPZH76B7.1 - D225S-4G	7.08		32 700	515	M294	
175.0	1.30	2019	SPZH66B8 - D225S-4G	8.40		21 300	424	M286	
183.3	2.30	1927	SPZH76B8 - D225S-4G	8.02		33 400	515	M294	
194.2	2.40	1820	SPZH86C8 - D225S-4G	7.57		38 000	670	M302	
163.0	1.30	2168	SPZH66B9 - D225S-4G	9.02		21 400	424	M286	
161.6	2.20	2187	SPZH76B9 - D225S-4G	9.10		34 100	515	M294	
171.6	2.40	2059	SPZH86C9 - D225S-4G	8.57		39 000	670	M302	
141.0	1.20	2506	SPZH66B10 - D225S-4G	10.43		21 400	424	M286	
148.3	2.10	2383	SPZH76B10 - D225S-4G	9.91		34 500	515	M294	
151.5	2.40	2333	SPZH86C10 - D225S-4G	9.70		40 000	670	M302	
126.0	1.10	2803	SPZH66B11.2 - D225S-4G	11.66		21 400	424	M286	
130.0	1.90	2718	SPZH76B11.2 - D225S-4G	11.31		35 100	515	M294	
133.5	2.40	2647	SPZH86C11.2 - D225S-4G	11.01		41 000	670	M302	
116.7	1.10	3027	SPZH66B12.5 - D225S-4G	12.59		21 300	424	M286	
118.7	1.80	2976	SPZH76B12.5 - D225S-4G	12.38		35 500	515	M294	
122.5	2.40	2884	SPZH86C12.5 - D225S-4G	12.00		41 700	670	M302	
103.7	1.00	3408	SPZH66B14 - D225S-4G	14.18		21 000	424	M286	
103.1	1.60	3427	SPZH76B14 - D225S-4G	14.26		36 000	515	M294	
91.6	0.93	3859	SPZH66B16 - D225S-4G	16.06		20 600	424	M286	
93.4	1.50	3782	SPZH76B16 - D225S-4G	15.73		36 200	515	M294	
83.1	1.40	4250	SPZH76B18 - D225S-4G	17.68		36 400	515	M294	
82.1	3.00	4305	SPZH86C18 - D225S-4G	17.91		45 500	670	M302	
72.3	2.80	4884	SPZH86C20 - D225S-4G	20.32		46 400	670	M302	
66.4	2.70	5322	SPZH86C22.4 - D225S-4G	22.14		46 900	670	M302	
59.0	1.10	5985	SPZH76B25 - D225S-4G	24.90		36 200	515	M294	
58.2	2.50	6072	SPZH86C25 - D225S-4G	25.26		47 600	670	M302	
52.5	1.00	6735	SPZH76B28 - D225S-4G	28.02		35 800	515	M294	
53.2	2.30	6648	SPZH86C28 - D225S-4G	27.66		48 000	670	M302	
45.5	0.91	7769	SPZH76B31.5 - D225S-4G	32.32		35 000	515	M294	
46.2	2.00	7655	SPZH86C31.5 - D225S-4G	31.85		48 500	670	M302	
41.6	0.85	8491	SPZH76B35.5 - D225S-4G	35.33		34 200	515	M294	
41.8	1.80	8447	SPZH86C35.5 - D225S-4G	35.14		48 700	670	M302	
38.4	0.80	9208	SPZH76B40 - D225S-4G	38.31		33 400	515	M294	
37.2	1.60	9492	SPZH86C40 - D225S-4G	39.49		48 800	670	M302	
26.4	1.10	13368	SPZH86C56 - D225S-4G	55.62		47 700	670	M302	
23.5	1.00	15044	SPZH86C63 - D225S-4G	62.59		46 800	670	M302	
20.4	0.86	17353	SPZH86C71 - D225S-4G	72.20		45 200	670	M302	



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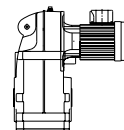
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SP4

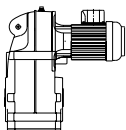
P 45.0 kW
n₁ 1470 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
471.3	1.50	912	SPZH66B3.15 - D225M-4G	3.12		17 600	454	M286	
472.8	2.10	909	SPZH76B3.15 - D225M-4G	3.11		26 500	545	M294	
424.6	1.40	1012	SPZH66B3.55 - D225M-4G	3.46		17 900	454	M286	
417.7	2.00	1029	SPZH76B3.55 - D225M-4G	3.52		27 200	545	M294	
356.3	1.30	1206	SPZH66B4 - D225M-4G	4.13		18 200	454	M286	
368.8	1.90	1165	SPZH76B4 - D225M-4G	3.99		27 900	545	M294	
331.8	1.30	1295	SPZH66B4.5 - D225M-4G	4.43		18 400	454	M286	
325.0	1.80	1322	SPZH76B4.5 - D225M-4G	4.52		28 600	545	M294	
287.0	1.20	1497	SPZH66B5 - D225M-4G	5.12		18 600	454	M286	
298.3	1.70	1441	SPZH76B5 - D225M-4G	4.93		29 000	545	M294	
256.6	1.10	1675	SPZH66B5.6 - D225M-4G	5.73		18 700	454	M286	
261.5	1.60	1644	SPZH76B5.6 - D225M-4G	5.62		29 700	545	M294	
231.5	1.20	1856	SPZH66B6.3 - D225M-4G	6.35		19 600	454	M286	
235.0	2.10	1828	SPZH76B6.3 - D225M-4G	6.25		30 900	545	M294	
208.5	1.20	2061	SPZH66B7.1 - D225M-4G	7.05		19 700	454	M286	
207.7	2.00	2069	SPZH76B7.1 - D225M-4G	7.08		31 500	545	M294	
175.0	1.10	2456	SPZH66B8 - D225M-4G	8.40		19 700	454	M286	
183.3	1.90	2344	SPZH76B8 - D225M-4G	8.02		32 000	545	M294	
194.2	2.00	2213	SPZH86C8 - D225M-4G	7.57		37 000	700	M302	
163.0	1.00	2637	SPZH66B9 - D225M-4G	9.02		19 600	454	M286	
161.6	1.80	2660	SPZH76B9 - D225M-4G	9.10		32 500	545	M294	
171.6	2.00	2505	SPZH86C9 - D225M-4G	8.57		37 900	700	M302	
141.0	0.97	3048	SPZH66B10 - D225M-4G	10.43		19 400	454	M286	
148.3	1.70	2898	SPZH76B10 - D225M-4G	9.91		32 800	545	M294	
151.5	2.00	2837	SPZH86C10 - D225M-4G	9.70		38 800	700	M302	
126.0	0.91	3409	SPZH66B11.2 - D225M-4G	11.66		19 100	454	M286	
130.0	1.60	3306	SPZH76B11.2 - D225M-4G	11.31		33 200	545	M294	
133.5	2.00	3219	SPZH86C11.2 - D225M-4G	11.01		39 600	700	M302	
116.7	0.88	3681	SPZH66B12.5 - D225M-4G	12.59		18 800	454	M286	
118.7	1.50	3620	SPZH76B12.5 - D225M-4G	12.38		33 400	545	M294	
122.5	2.00	3507	SPZH86C12.5 - D225M-4G	12.00		40 100	700	M302	
103.7	0.82	4145	SPZH66B14 - D225M-4G	14.18		18 300	454	M286	
103.1	1.30	4168	SPZH76B14 - D225M-4G	14.26		33 600	545	M294	
105.2	2.90	4084	SPZH86C14 - D225M-4G	13.97		42 100	700	M302	
93.4	1.30	4599	SPZH76B16 - D225M-4G	15.73		33 600	545	M294	
93.0	2.70	4622	SPZH86C16 - D225M-4G	15.81		42 800	700	M302	
83.1	1.10	5168	SPZH76B18 - D225M-4G	17.68		33 400	545	M294	
82.1	2.50	5235	SPZH86C18 - D225M-4G	17.91		43 500	700	M302	
72.3	2.30	5941	SPZH86C20 - D225M-4G	20.32		44 000	700	M302	
66.4	2.20	6473	SPZH86C22.4 - D225M-4G	22.14		44 300	700	M302	
59.0	0.90	7279	SPZH76B25 - D225M-4G	24.90		32 000	545	M294	
58.2	2.00	7385	SPZH86C25 - D225M-4G	25.26		44 700	700	M302	
52.5	0.83	8191	SPZH76B28 - D225M-4G	28.02		31 000	545	M294	
53.2	1.90	8085	SPZH86C28 - D225M-4G	27.66		44 800	700	M302	
46.2	1.60	9310	SPZH86C31.5 - D225M-4G	31.85		44 800	700	M302	
41.8	1.50	10273	SPZH86C35.5 - D225M-4G	35.14		44 600	700	M302	
37.2	1.30	11544	SPZH86C40 - D225M-4G	39.49		44 200	700	M302	
26.4	0.92	16258	SPZH86C56 - D225M-4G	55.62		41 300	700	M302	
23.5	0.82	18296	SPZH86C63 - D225M-4G	62.59		39 600	700	M302	



P 55.0 kW
n₁ 1475 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
472.9	1.20	1111	SPZH66B3.15U - 250M4	3.12		16 700	544.4	M350	
474.4	1.80	1107	SPZH76B3.15U - 250M4	3.11		25 800	644.5	M358	
426.0	1.20	1233	SPZH66B3.55U - 250M4	3.46		16 900	544.4	M350	
419.2	1.70	1253	SPZH76B3.55U - 250M4	3.52		26 400	644.5	M358	
357.5	1.10	1469	SPZH66B4U - 250M4	4.13		17 100	544.4	M350	
370.1	1.60	1419	SPZH76B4U - 250M4	3.99		27 000	644.5	M358	
332.9	1.10	1578	SPZH66B4.5U - 250M4	4.43		17 100	544.4	M350	
326.1	1.50	1610	SPZH76B4.5U - 250M4	4.52		27 500	644.5	M358	
288.0	0.99	1824	SPZH66B5U - 250M4	5.12		17 200	544.4	M350	
299.3	1.40	1755	SPZH76B5U - 250M4	4.93		27 900	644.5	M358	
257.5	0.93	2040	SPZH66B5.6U - 250M4	5.73		17 100	544.4	M350	
262.3	1.30	2002	SPZH76B5.6U - 250M4	5.62		28 300	644.5	M358	
232.3	1.00	2261	SPZH66B6.3U - 250M4	6.35		18 000	544.4	M350	
235.8	1.80	2227	SPZH76B6.3U - 250M4	6.25		29 500	644.5	M358	
209.3	0.96	2510	SPZH66B7.1U - 250M4	7.05		18 000	544.4	M350	
208.4	1.70	2521	SPZH76B7.1U - 250M4	7.08		30 000	644.5	M358	
175.6	0.89	2991	SPZH66B8U - 250M4	8.40		17 600	544.4	M350	
184.0	1.60	2855	SPZH76B8U - 250M4	8.02		30 300	644.5	M358	
194.8	1.60	2696	SPZH86C8U - 250M4	7.57		35 800	815	M366	
163.5	0.86	3212	SPZH66B9U - 250M4	9.02		17 400	544.4	M350	
162.1	1.50	3240	SPZH76B9U - 250M4	9.10		30 600	644.5	M358	
172.2	1.60	3051	SPZH86C9U - 250M4	8.57		36 500	815	M366	
148.8	1.40	3530	SPZH76B10U - 250M4	9.91		30 700	644.5	M358	
152.0	1.60	3456	SPZH86C10U - 250M4	9.70		37 200	815	M366	
130.4	1.30	4027	SPZH76B11.2U - 250M4	11.31		30 800	644.5	M358	
133.9	1.60	3921	SPZH86C11.2U - 250M4	11.01		37 800	815	M366	
119.1	1.20	4409	SPZH76B12.5U - 250M4	12.38		30 800	644.5	M358	
122.9	1.60	4272	SPZH86C12.5U - 250M4	12.00		38 200	815	M366	
103.4	1.10	5077	SPZH76B14U - 250M4	14.26		30 500	644.5	M358	
105.6	2.40	4974	SPZH86C14U - 250M4	13.97		40 100	815	M366	
93.7	1.00	5602	SPZH76B16U - 250M4	15.73		30 200	644.5	M358	
93.3	2.20	5630	SPZH86C16U - 250M4	15.81		40 500	815	M366	
91.2	2.40	5760	SPZH86B16U - 250M4	16.18		40 600	815	M366	
83.4	0.94	6296	SPZH76B18U - 250M4	17.68		29 700	644.5	M358	
79.7	2.10	6586	SPZH86B18U - 250M4	18.50		41 000	815	M366	
74.9	0.87	7010	SPZH76B20U - 250M4	19.69		29 000	644.5	M358	
74.3	2.00	7068	SPZH86B20U - 250M4	19.85		41 100	815	M366	
66.9	0.80	7854	SPZH76B22.4U - 250M4	22.06		28 100	644.5	M358	
66.6	1.80	7884	SPZH86C22.4U - 250M4	22.14		41 200	815	M366	
58.4	1.70	8995	SPZH86C25U - 250M4	25.26		41 000	815	M366	
53.3	1.50	9848	SPZH86C28U - 250M4	27.66		40 800	815	M366	
46.3	1.30	11341	SPZH86C31.5U - 250M4	31.85		40 200	815	M366	
42.0	1.20	12514	SPZH86C35.5U - 250M4	35.14		39 600	815	M366	
37.3	1.10	14062	SPZH86C40U - 250M4	39.49		38 500	815	M366	
33.5	0.96	15657	SPZH86C45U - 250M4	43.97		37 300	815	M366	
29.9	0.86	17542	SPZH86C50U - 250M4	49.26		35 600	815	M366	



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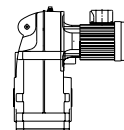
SP4

P 75.0 kW
n₁ 1480 min⁻¹

n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
474.5	0.89	1509	SPZH66B3.15U - 280S4	3.12		15 000	689.4	M350	
476.0	1.30	1505	SPZH76B3.15U - 280S4	3.11		24 300	789.5	M358	
427.4	0.87	1676	SPZH66B3.55U - 280S4	3.46		15 000	689.4	M350	
420.6	1.20	1703	SPZH76B3.55U - 280S4	3.52		24 700	789.5	M358	
358.7	0.80	1997	SPZH66B4U - 280S4	4.13		14 800	689.4	M350	
371.3	1.20	1929	SPZH76B4U - 280S4	3.99		25 100	789.5	M358	
327.2	1.10	2189	SPZH76B4.5U - 280S4	4.52		25 400	789.5	M358	
300.3	1.00	2385	SPZH76B5U - 280S4	4.93		25 500	789.5	M358	
263.2	0.96	2721	SPZH76B5.6U - 280S4	5.62		25 700	789.5	M358	
236.6	1.30	3027	SPZH76B6.3U - 280S4	6.25		26 900	789.5	M358	
209.1	1.20	3425	SPZH76B7.1U - 280S4	7.08		27 000	789.5	M358	
184.6	1.20	3880	SPZH76B8U - 280S4	8.02		26 900	789.5	M358	
195.5	1.20	3663	SPZH86C8U - 280S4	7.57		33 400	960	M366	
162.7	1.10	4403	SPZH76B9U - 280S4	9.10		26 800	789.5	M358	
172.7	1.20	4146	SPZH86C9U - 280S4	8.57		33 800	960	M366	
149.3	1.00	4797	SPZH76B10U - 280S4	9.91		26 500	789.5	M358	
152.5	1.20	4696	SPZH86C10U - 280S4	9.70		34 100	960	M366	
130.9	0.94	5473	SPZH76B11.2U - 280S4	11.31		26 000	789.5	M358	
134.4	1.20	5329	SPZH86C11.2U - 280S4	11.01		34 200	960	M366	
119.5	0.89	5992	SPZH76B12.5U - 280S4	12.38		25 600	789.5	M358	
123.3	1.20	5806	SPZH86C12.5U - 280S4	12.00		34 300	960	M366	
103.8	0.80	6900	SPZH76B14U - 280S4	14.26		24 500	789.5	M358	
105.9	1.70	6760	SPZH86C14U - 280S4	13.97		36 000	960	M366	
93.6	1.60	7651	SPZH86C16U - 280S4	15.81		36 000	960	M366	
91.5	1.80	7828	SPZH86B16U - 280S4	16.18		36 000	960	M366	
80.0	1.60	8951	SPZH86B18U - 280S4	18.50		35 600	960	M366	
74.6	1.50	9605	SPZH86B20U - 280S4	19.85		35 400	960	M366	
66.8	1.30	10715	SPZH86C22.4U - 280S4	22.14		34 800	960	M366	
58.6	1.20	12225	SPZH86C25U - 280S4	25.26		33 800	960	M366	
53.5	1.10	13384	SPZH86C28U - 280S4	27.66		32 900	960	M366	
46.5	0.97	15412	SPZH86C31.5U - 280S4	31.85		31 100	960	M366	
42.1	0.88	17006	SPZH86C35.5U - 280S4	35.14		29 500	960	M366	

P 90.0 kW
n₁ 1480 min⁻¹

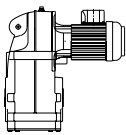
n ₂ ex min ⁻¹	SF	T ₂ m Nm	Type	i _{ex}	F _{rN} N	F _{rN+G} N	m kg		
476.0	1.10	1805	SPZH76B3.15U - 280M4	3.11		23 200	849.5	M358	
420.6	1.00	2043	SPZH76B3.55U - 280M4	3.52		23 500	849.5	M358	
371.3	0.97	2315	SPZH76B4U - 280M4	3.99		23 700	849.5	M358	
327.2	0.91	2626	SPZH76B4.5U - 280M4	4.52		23 700	849.5	M358	
300.3	0.87	2862	SPZH76B5U - 280M4	4.93		23 700	849.5	M358	
263.2	0.80	3265	SPZH76B5.6U - 280M4	5.62		23 700	849.5	M358	
236.6	1.10	3632	SPZH76B6.3U - 280M4	6.25		24 900	849.5	M358	
209.1	1.00	4111	SPZH76B7.1U - 280M4	7.08		24 700	849.5	M358	
184.6	0.97	4656	SPZH76B8U - 280M4	8.02		24 400	849.5	M358	
195.5	0.99	4396	SPZH86C8U - 280M4	7.57		31 500	1020	M366	
162.7	0.90	5283	SPZH76B9U - 280M4	9.10		23 900	849.5	M358	



P 90.0 kW
n₁ 1480 min⁻¹

n _{2ex} min ⁻¹	SF	T _{2m} Nm	Type	i _{ex}	F _{in} N	F _{in+g} N	m kg		
172.7	0.99	4975	SPZH86C9U - 280M4	8.57		31 700	1020	M366	
149.3	0.87	5756	SPZH76B10U - 280M4	9.91		23 400	849.5	M358	
152.5	0.99	5636	SPZH86C10U - 280M4	9.70		31 700	1020	M366	
134.4	0.99	6395	SPZH86C11.2U - 280M4	11.01		31 600	1020	M366	
123.3	0.99	6967	SPZH86C12.5U - 280M4	12.00		31 400	1020	M366	
105.9	1.40	8112	SPZH86C14U - 280M4	13.97		33 000	1020	M366	
91.5	1.50	9394	SPZH86B16U - 280M4	16.18		32 500	1020	M366	
80.0	1.30	10741	SPZH86B18U - 280M4	18.50		31 700	1020	M366	
74.6	1.20	11526	SPZH86B20U - 280M4	19.85		31 100	1020	M366	
66.8	1.10	12858	SPZH86C22.4U - 280M4	22.14		30 000	1020	M366	
58.6	1.00	14670	SPZH86C25U - 280M4	25.26		28 300	1020	M366	
53.5	0.93	16061	SPZH86C28U - 280M4	27.66		26 900	1020	M366	
46.5	0.81	18495	SPZH86C31.5U - 280M4	31.85		24 200	1020	M366	

Notice:



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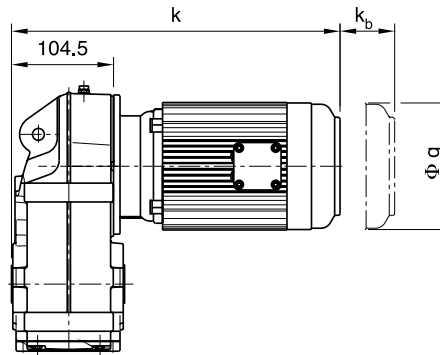
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K

SP4

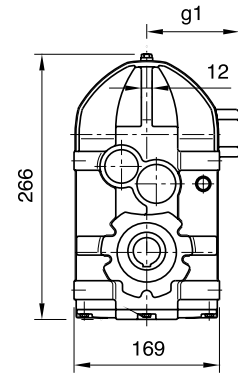
2.4 Dimensional drawings of SP4 geared motors

SPZ..16B
63 - 112

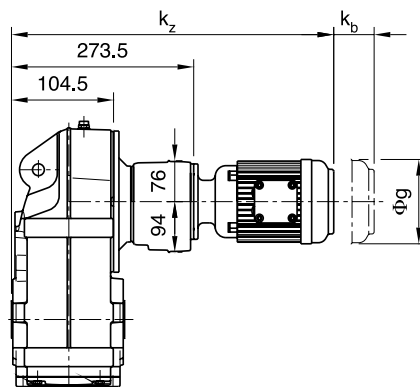


2.4 SP4 齿轮马达外形尺寸

SPZ..16..



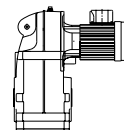
SPZ..16B16B/C
63 - 112



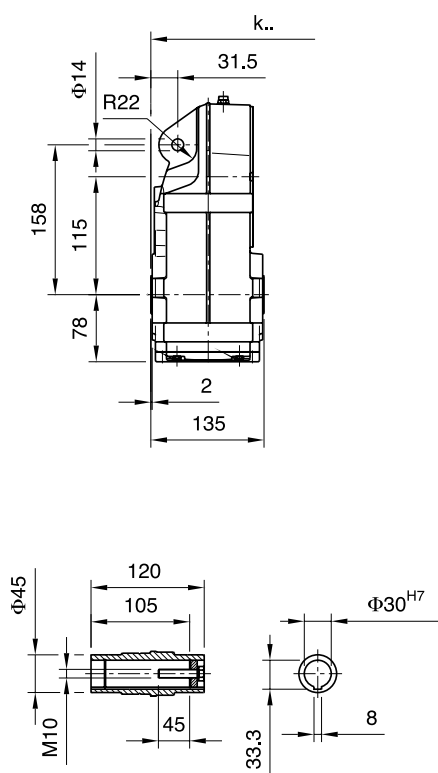
K, Kz, Ku is for reference only. Consult Rexnord for exact dimensions.

K, Kz, Ku 仅供参考，精确尺寸请咨询 Rexnord。

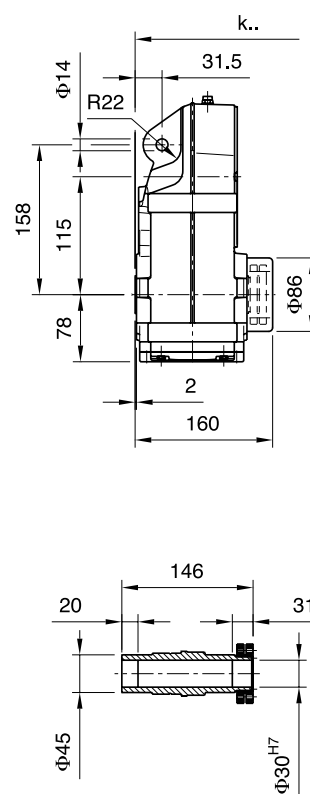
	63	71	80	90S	90L	100	112												
k	338	342	365	407	407	445	458												
ku																			
kz	507	511	534	576	576	614	627												
kb	48	60	71	77	77	80	89												
Φg	121	138	157	177	177	215	240												
g1	96	102	125	133	133	144	165												
Øam																			



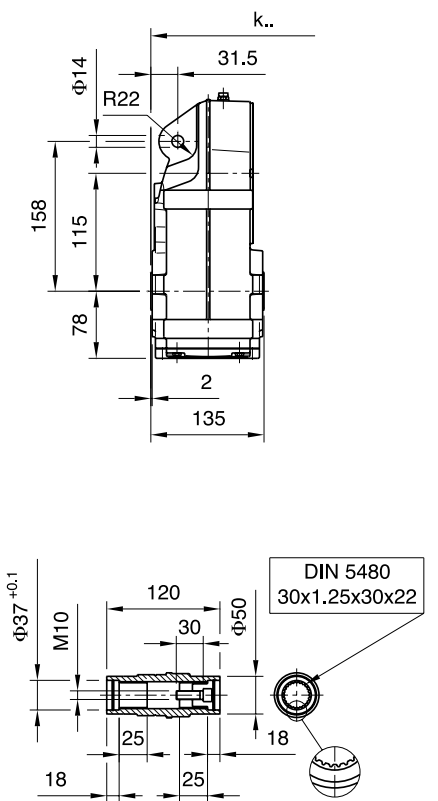
SPZH16..



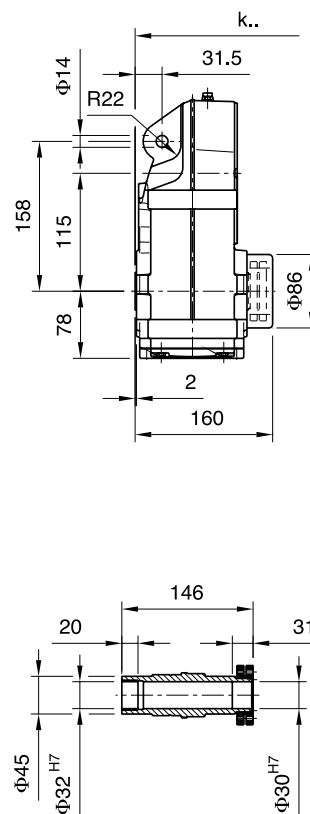
SPZS16..

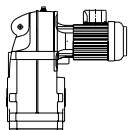


SPZT16..



SPZC16..





F

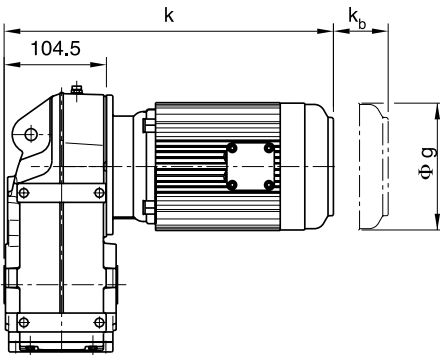
A

L

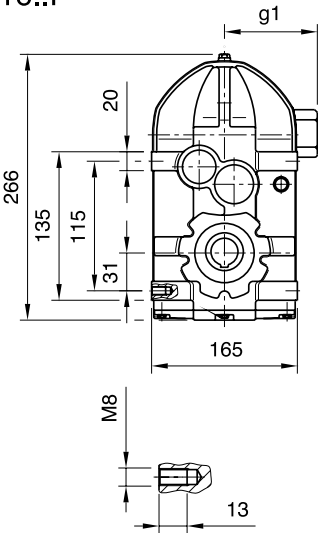
K

SP4

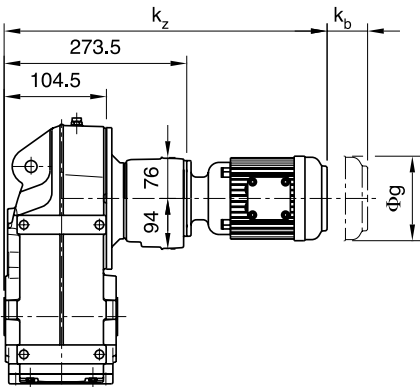
SPZ..16BF
63 - 112



SPZ..16..F

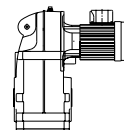


SPZ..16B16B/CF
63 - 112



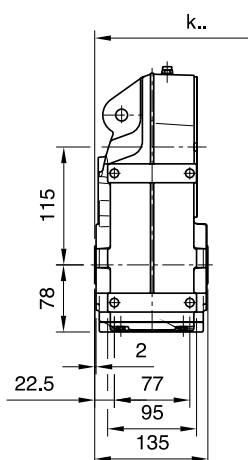
K,Kz,Ku is for reference only. Consult Rexnord for exact dimensions. K,Kz,Ku 仅供参考，精确尺寸请咨询 Rexnord。

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k	338	342	365	407	407	445	458												
ku																			
kz	507	511	534	576	576	614	627												
kb	48	60	71	77	77	80	89												
øg	121	138	157	177	177	215	240												
g1	96	102	125	133	133	144	165												
øam																			

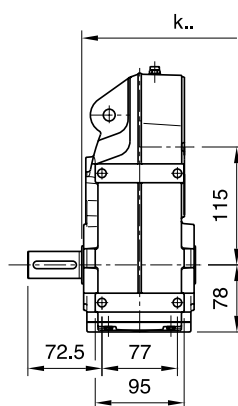


SP4

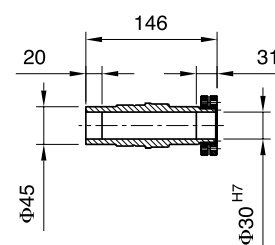
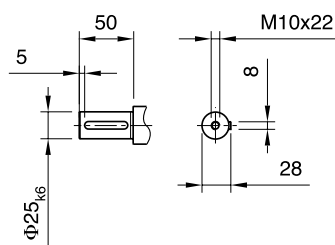
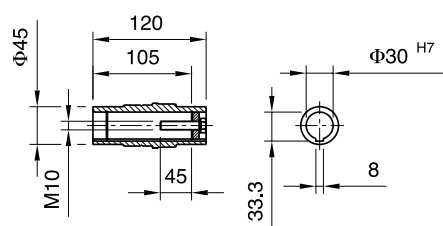
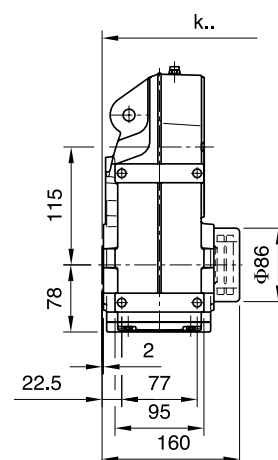
SPZH16..F..



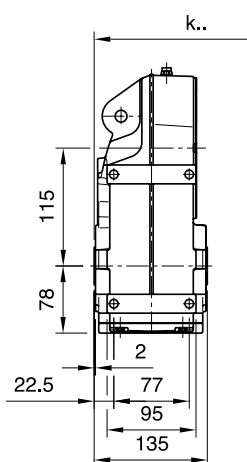
SPZN16..F..



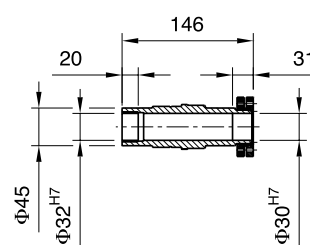
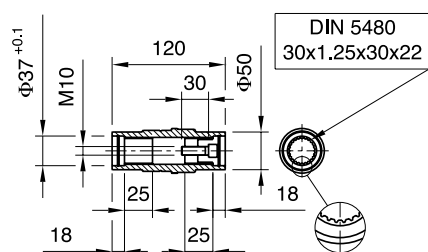
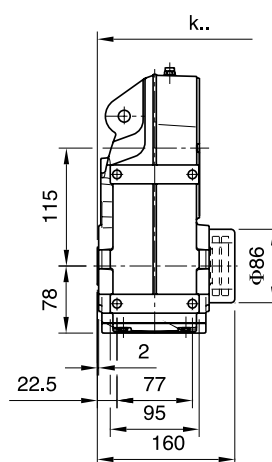
SPZS16..F..

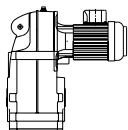


SPZT16..F..



SPZC16..F..





F

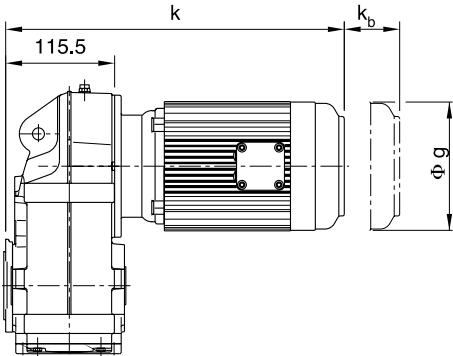
A

L

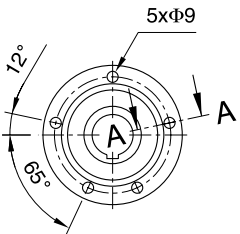
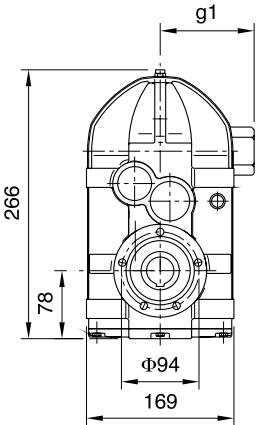
K

SP4

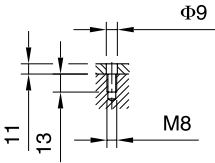
SPT..16B
63 - 112



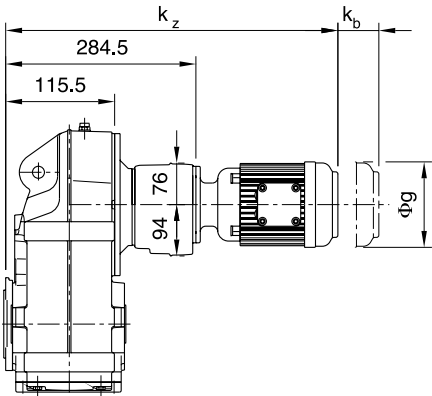
SPT..16..



A - A

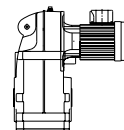


SPT..16B16B/C
63 - 112

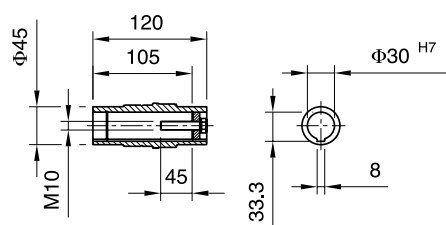
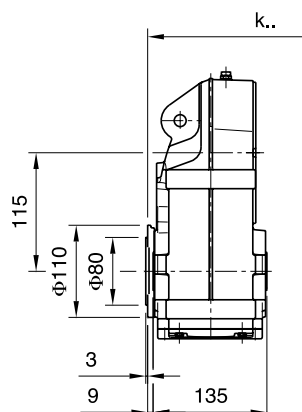


K,Kz,Ku is for reference only. Consult Rexnord for exact dimensions. K,Kz,Ku 仅供参考，精确尺寸请咨询 Rexnord。

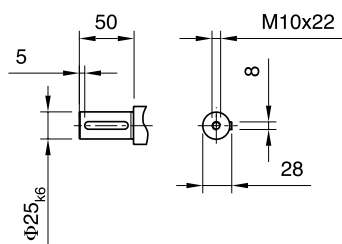
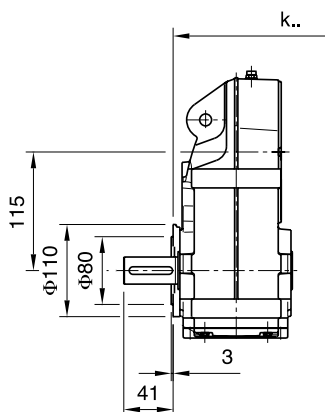
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k	349	353	376	418	418	456	469												
ku																			
kz	518	522	545	587	587	625	638												
kb	48	60	71	77	77	80	89												
Φg	121	138	157	177	177	215	240												
g1	96	102	125	133	133	144	165												
Øam																			



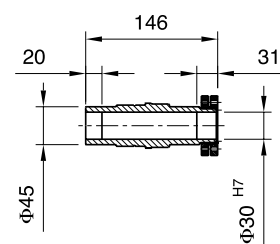
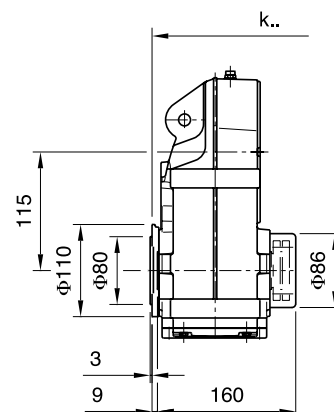
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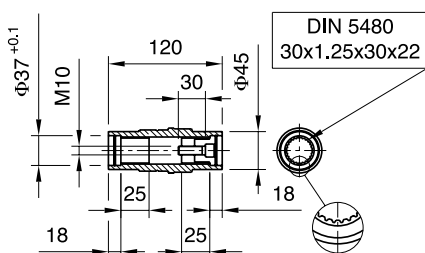
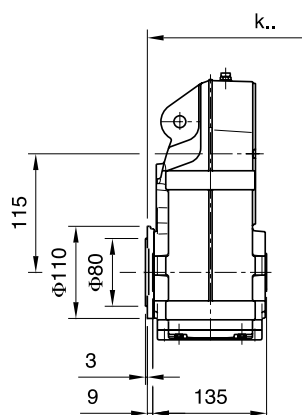
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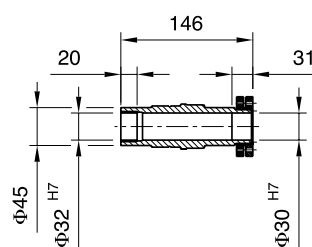
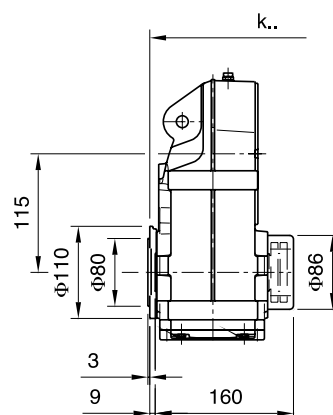
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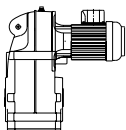


SPTT16..



SPTC16..





F

A

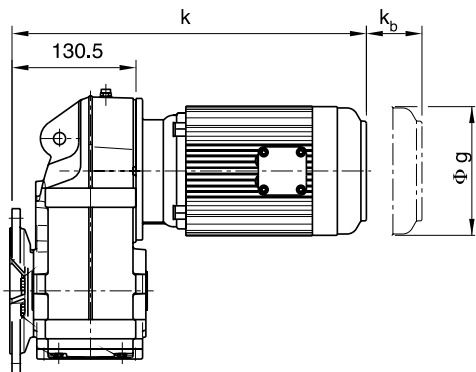
L

K

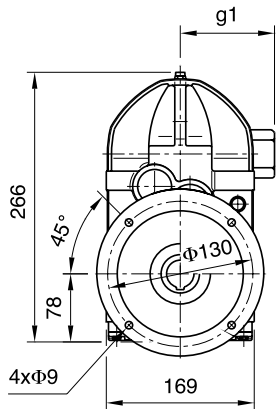
SP4

SPF..16B

63 - 112

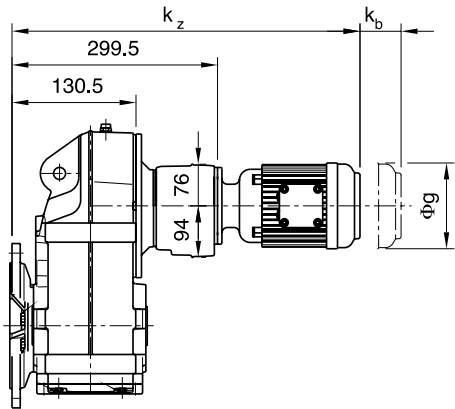


SPF..16..



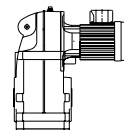
SPF..16B16B/C

63 - 112

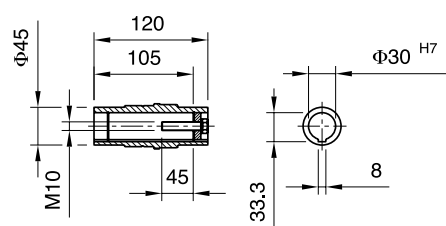
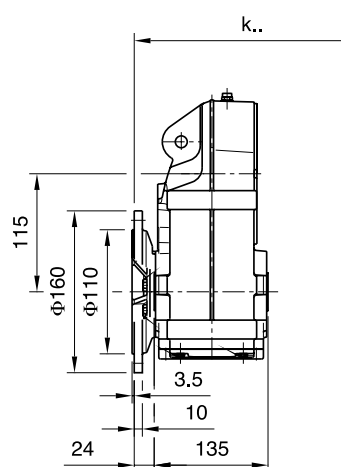


K,Kz,Ku is for reference only. Consult Rexnord for exact dimensions. K,Kz,Ku 仅供参考，精确尺寸请咨询 Rexnord。

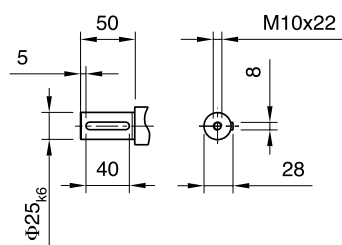
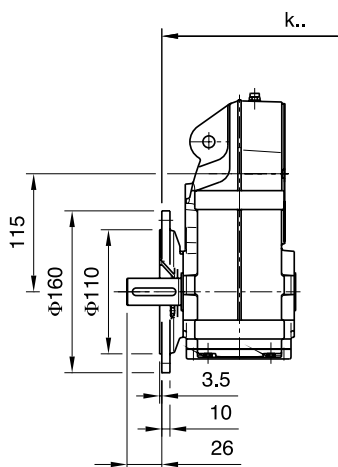
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k	364	368	391	433	433	471	484												
ku																			
kz	533	537	560	602	602	640	653												
kb	48	60	71	77	77	80	89												
øg	121	138	157	177	177	215	240												
g1	96	102	125	133	133	144	165												
øam																			



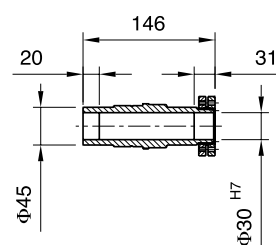
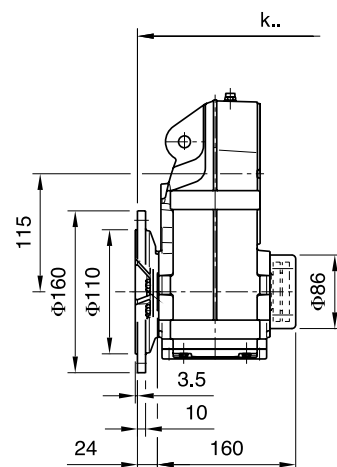
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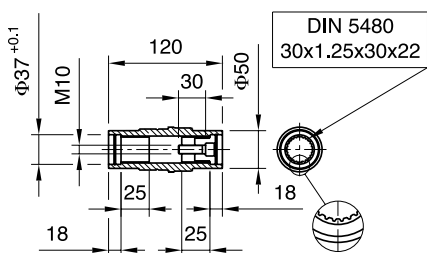
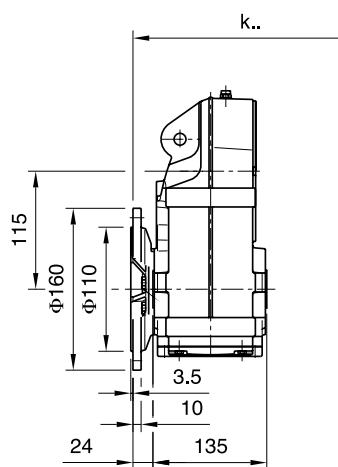
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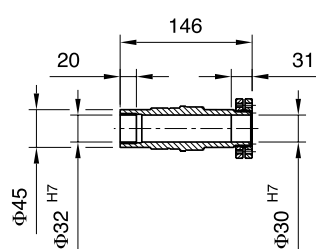
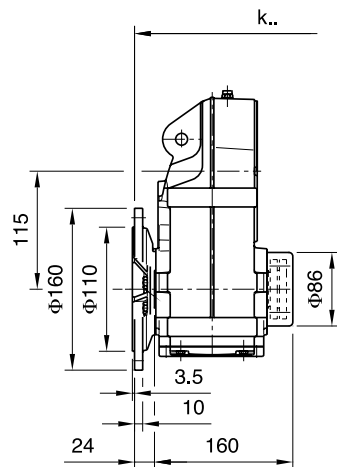
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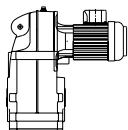


SPFT16..



SPFC16..





F

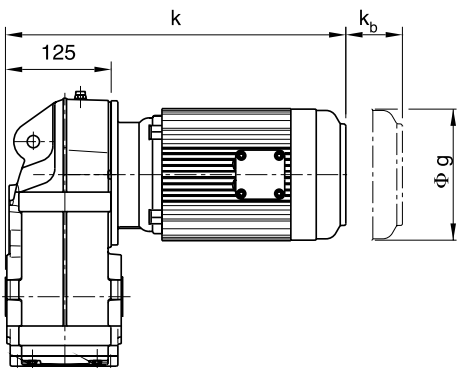
A

L

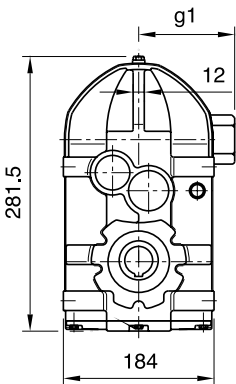
K

SP4

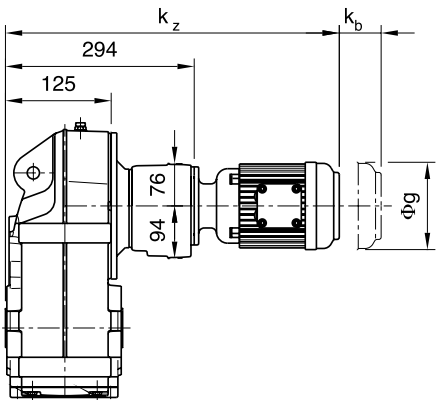
SPZ..26B
63 - 112



SPZ..26..

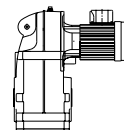


SPZ..26B16B/C
63 - 112

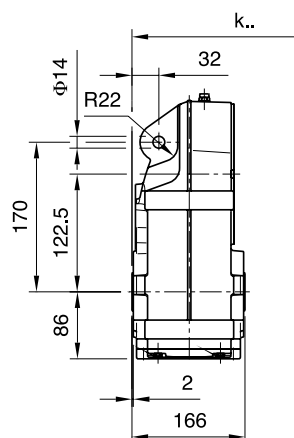


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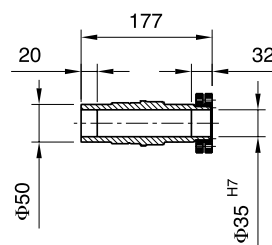
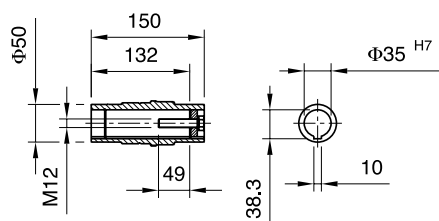
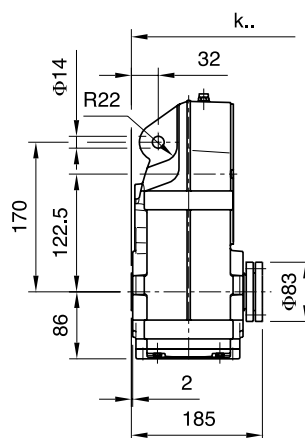
	63	71	80	90S	90L	100	112												
k	358	362	385	427	427	465	478												
ku																			
kz	527	531	554	596	596	634	647												
kb	48	60	71	77	77	80	89												
Φg	121	138	157	177	177	215	240												
g1	96	102	125	133	133	144	165												
Øam																			



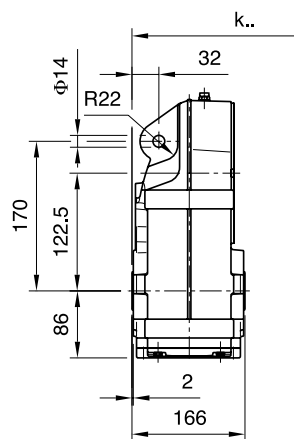
SPZH26..



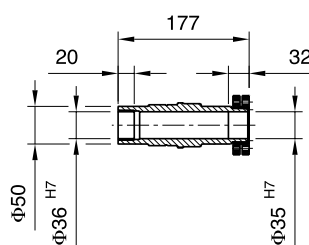
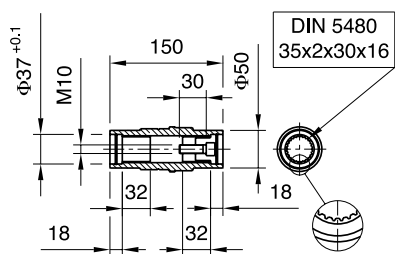
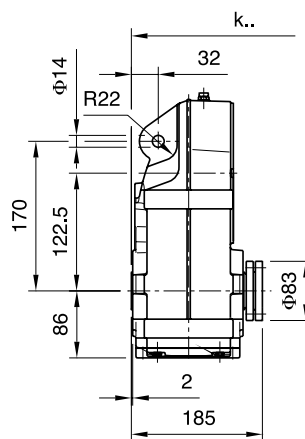
SPZS26..

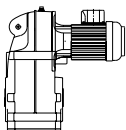


SPZT26..



SPZC26..





F

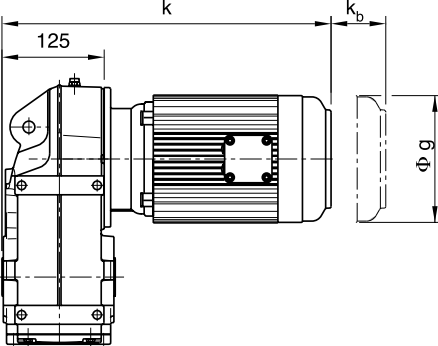
A

L

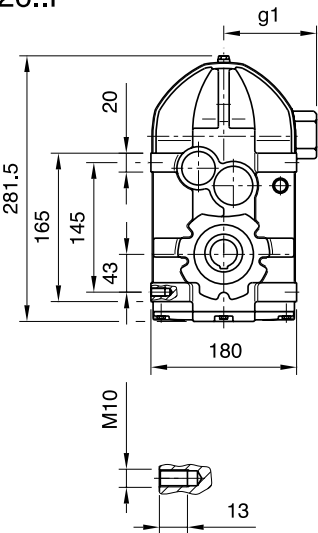
K

SP4

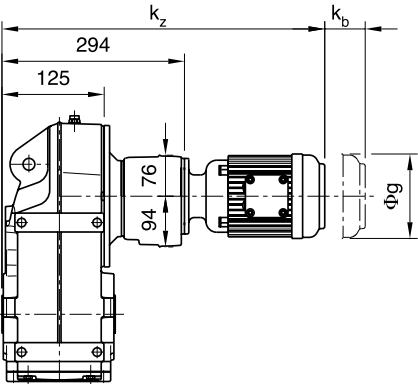
SPZ..26BF
63 - 112



SPZ..26..F

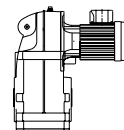


SPZ..26B16B/CF
63 - 112



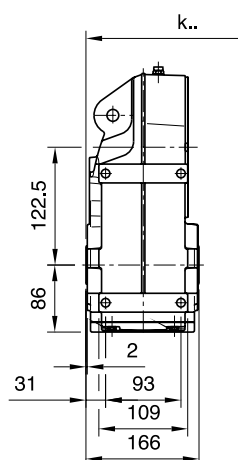
K,Kz,Ku is for reference only. Consult Rexnord for exact dimensions. K,Kz,Ku 仅供参考，精确尺寸请咨询 Rexnord。

	63	71	80	90S	90L	100	112												
k	358	362	385	427	427	465	478												
ku																			
kz	527	531	554	596	596	634	647												
kb	48	60	71	77	77	80	89												
Φg	121	138	157	177	177	215	240												
g1	96	102	125	133	133	144	165												
Øam																			

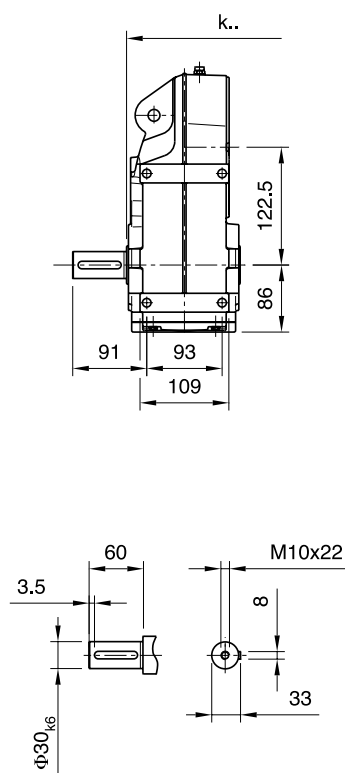


SP4

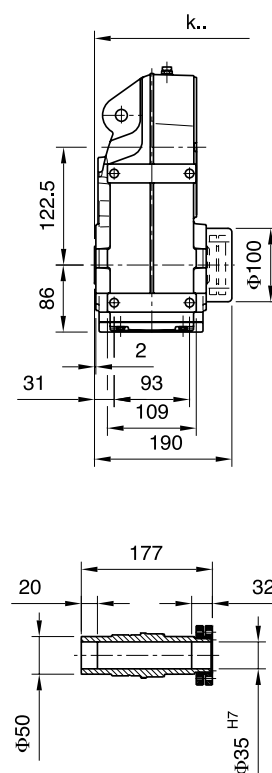
SPZH26..F..



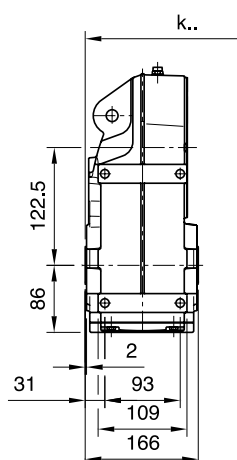
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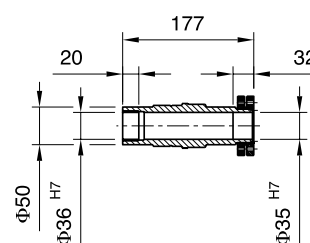
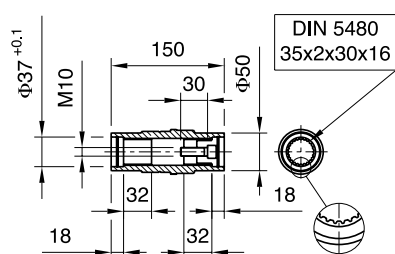
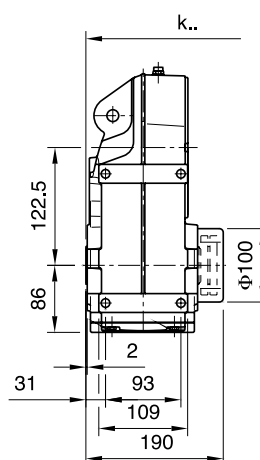
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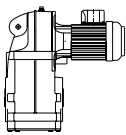


SPZT26..F..



SPZC26..F..





F

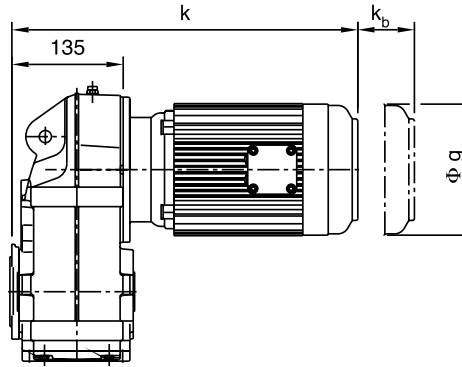
A

L

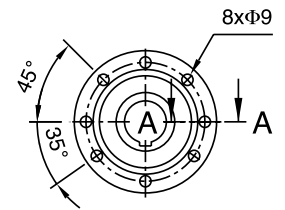
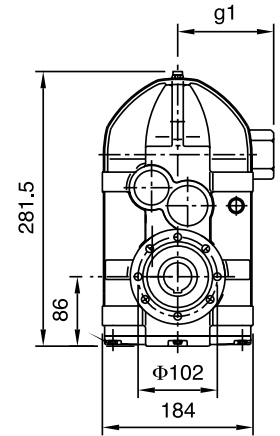
K

SP4

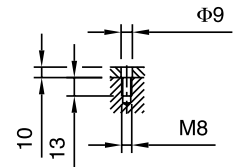
SPT..26B
63 - 112



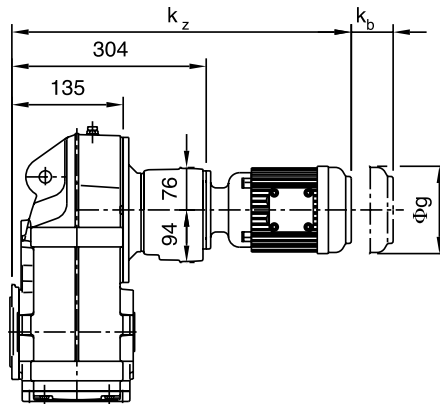
SPT..26..



A - A



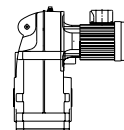
SPT..26B16B/C
63 - 112



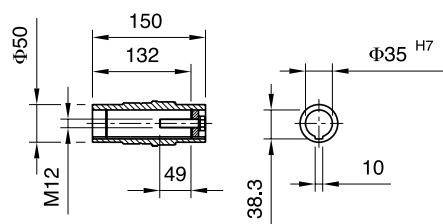
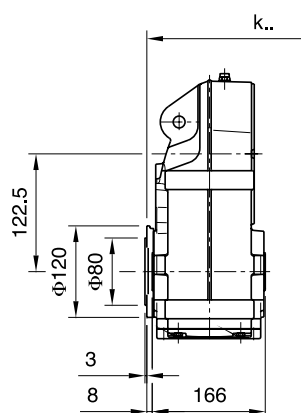
K, K_z, K_u is for reference only. Consult Rexnord for exact dimensions.

K, K_z, K_u 仅供参考，精确尺寸请咨询 Rexnord。

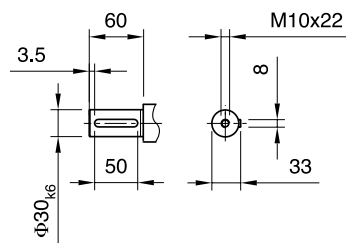
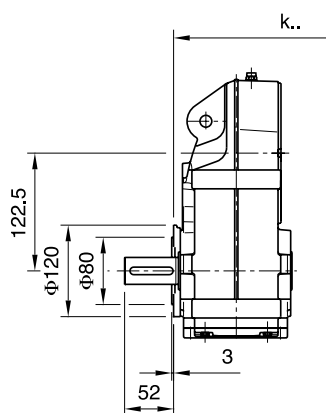
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k	368	372	395	437	437	475	488												
ku																			
kz	537	541	564	606	606	644	657												
kb	48	60	71	77	77	80	89												
Φg	121	138	157	177	177	215	240												
g1	96	102	125	133	133	144	165												
Øam																			



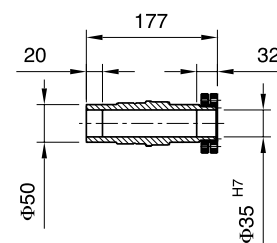
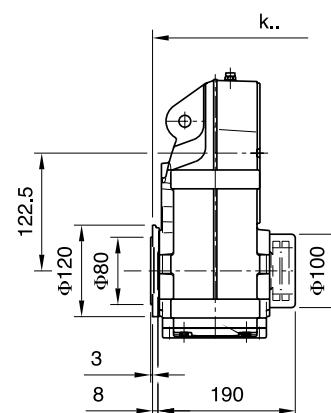
SPTH26..



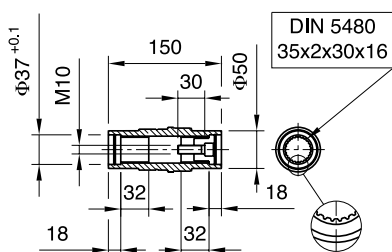
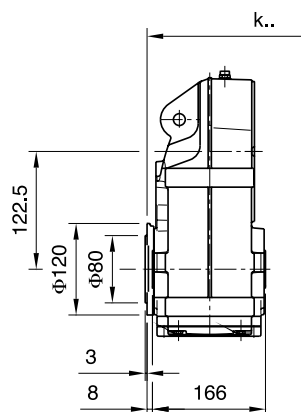
SPTN26..



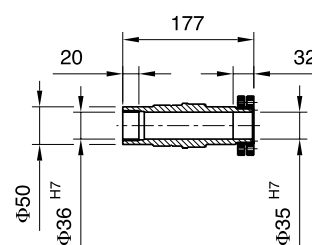
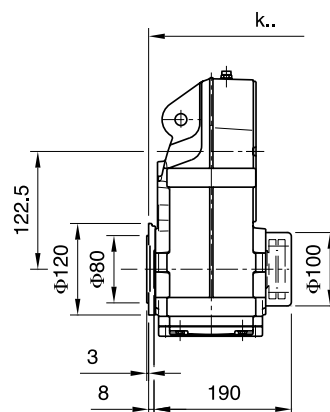
SPTS26..

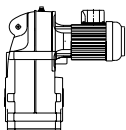


SPTT26..



SPTC26..





F

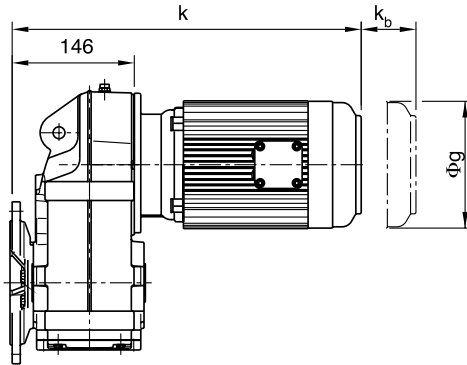
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L

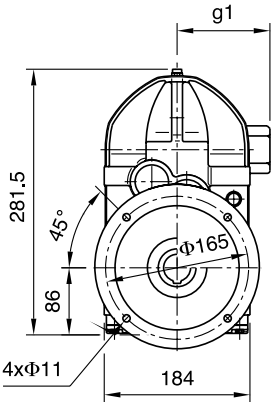
K

SP4

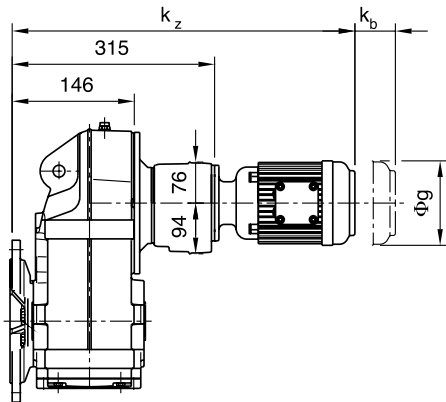
SPF..26B
63 - 112



SPF..26..



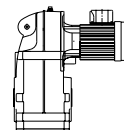
SPF..26B16B/C
63 - 112



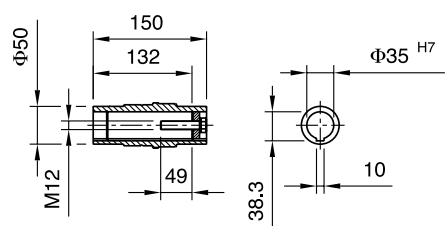
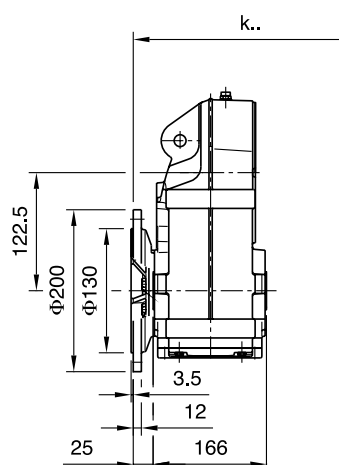
K,Kz,Ku is for reference only. Consult Rexnord for exact dimensions.

K,Kz,Ku 仅供参考，精确尺寸请咨询 Rexnord。

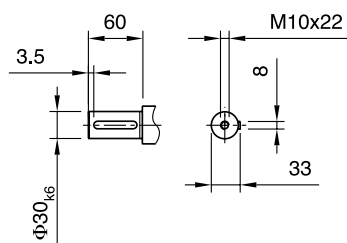
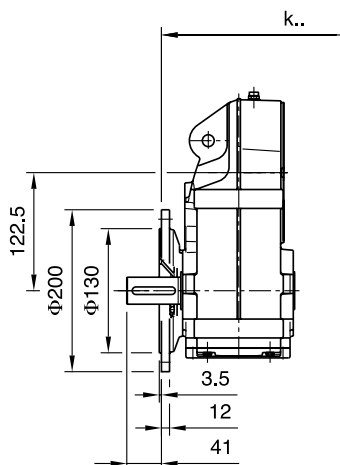
	63	71	80	90S	90L	100	112												
k	379	383	406	448	448	486	499												
ku																			
kz	548	552	575	617	617	655	668												
kb	48	60	71	77	77	80	89												
Φg	121	138	157	177	177	215	240												
g1	96	102	125	133	133	144	165												
Øam																			



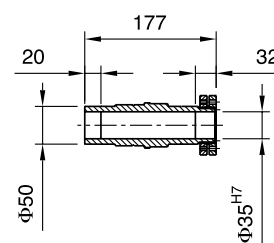
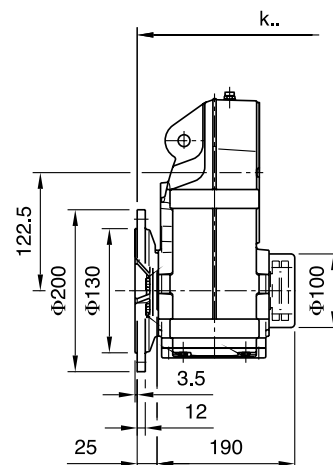
SPFH26..



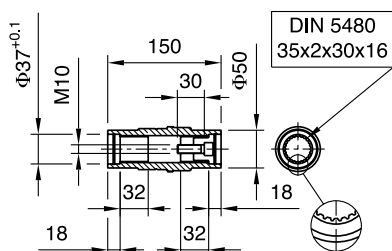
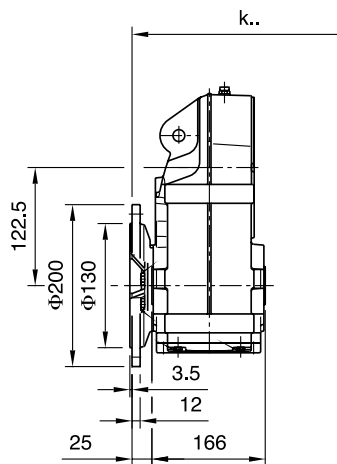
SPFN26..



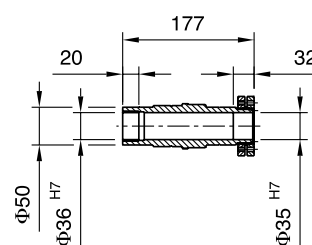
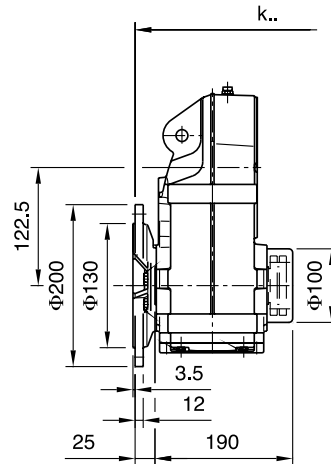
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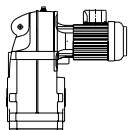


SPFT26..



SPFC26..





F

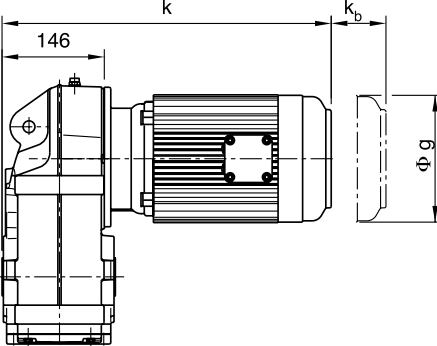
A

L

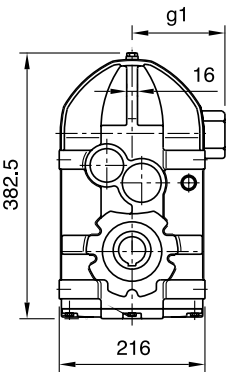
K

SP4

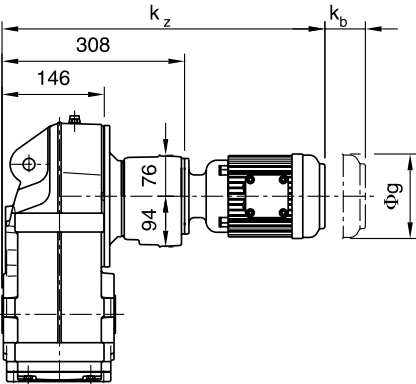
SPZ..36B
63 - 160



SPZ..36..

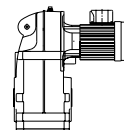


SPZ..36B16B/C
63 - 112

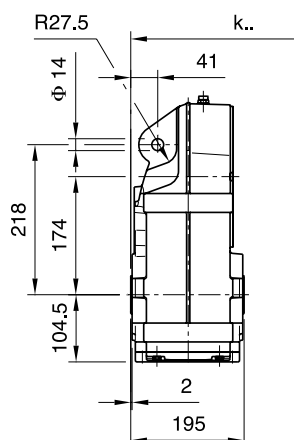


K,Kz,Ku is for reference only. Consult Rexnord for exact dimensions. K,Kz,Ku 仅供参考，精确尺寸请咨询 Rexnord。

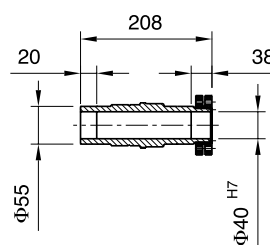
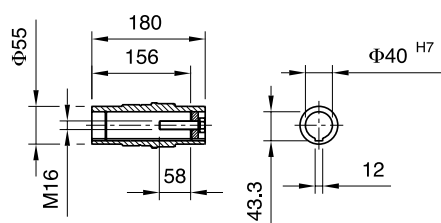
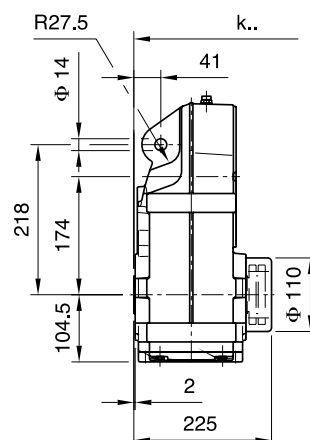
	63	71	80	90S	90L	100	112	132S	132M	132MG	160M	160L							
k	370	374	397	439	439	477	490	559	594	594	707	751							
ku																			
kz	541	545	568	610	610	648	661												
kb	48	60	71	77	77	80	89	98	98	98	105	105							
øg	121	138	157	177	177	215	240	275	275	275	330	330							
g1	96	102	125	133	133	144	165	182	182	182	287	287							
øam																			



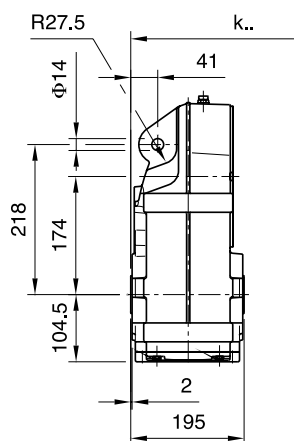
SPZH36..



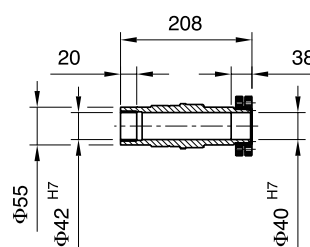
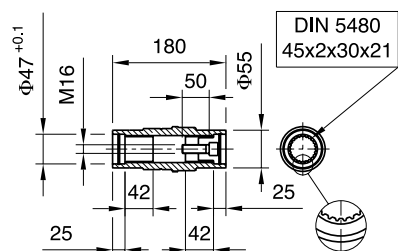
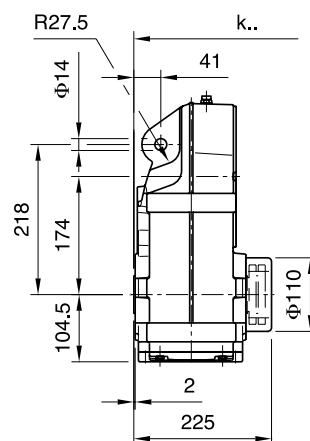
SPZS36..

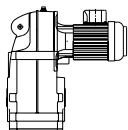


SPZT36..



SPZC36..





F

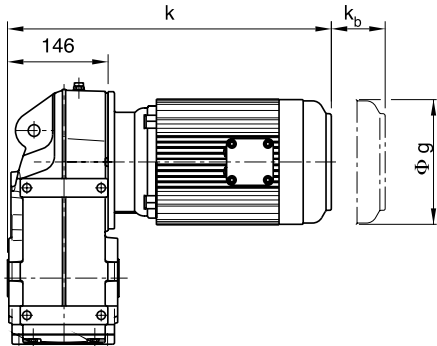
A

L

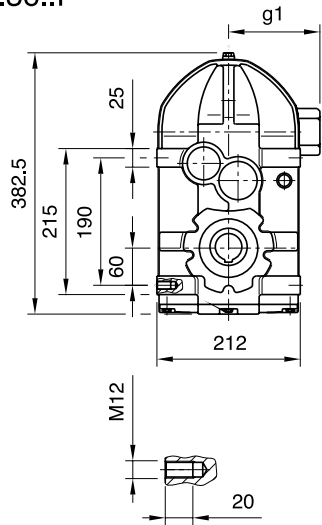
K

SP4

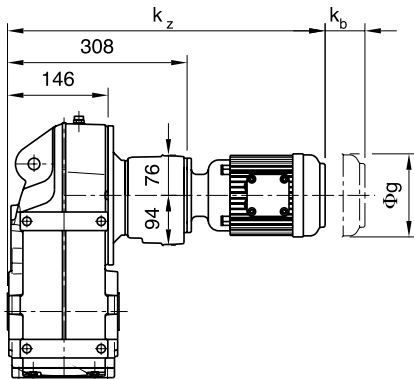
SPZ..36BF
63 - 160



SPZ..36..F



SPZ..36B16B/CF
63 - 112



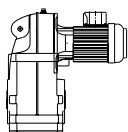
K,Kz,Ku is for reference only. Consult Rexnord for exact dimensions. K,Kz,Ku 仅供参考，精确尺寸请咨询 Rexnord。

	63	71	80	90S	90L	100	112	132S	132M	132MG	160M	160L							
k	370	374	397	439	439	477	490	559	594	594	707	751							
ku																			
kz	541	545	568	610	610	648	661												
kb	48	60	71	77	77	80	89	98	98	98	105	105							
Øg	121	138	157	177	177	215	240	275	275	275	330	330							
g1	96	102	125	133	133	144	165	182	182	182	287	287							
Øam																			



SPZS36..F..





F

A

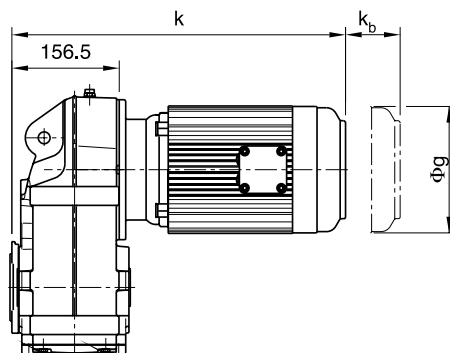
L

K

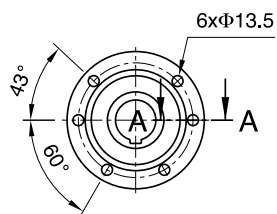
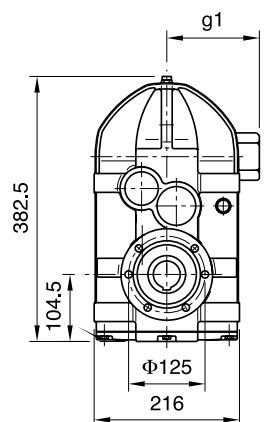
SP4

SPT..36B

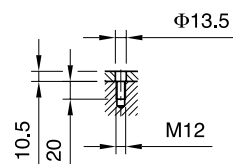
63 - 160



SPT..36..

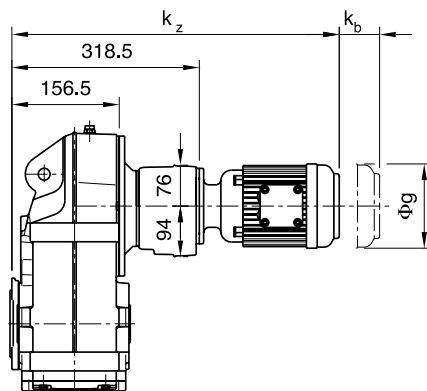


A - A



SPT..36B16B/C

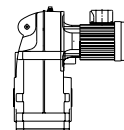
63 - 112



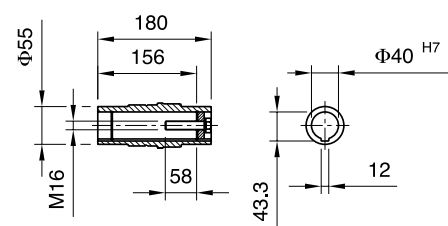
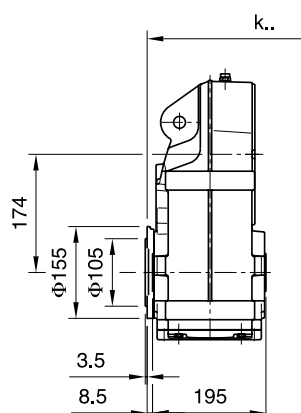
K, K_z, K_u is for reference only. Consult Rexnord for exact dimensions.

K, K_z, K_u 仅供参考，精确尺寸请咨询 Rexnord。

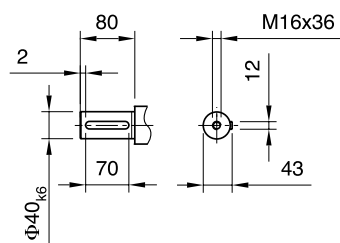
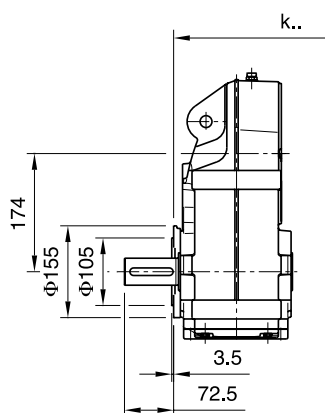
	63	71	80	90S	90L	100	112	132S	132M	132MG	160M	160L							
k	381	385	408	450	450	488	501	570	605	605	718	762							
ku																			
kz	552	556	579	621	621	659	672												
kb	48	60	71	77	77	80	89	98	98	98	105	105							
Φg	121	138	157	177	177	215	240	275	275	275	330	330							
g1	96	102	125	133	133	144	165	182	182	182	287	287							
Øam																			



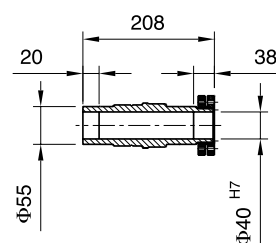
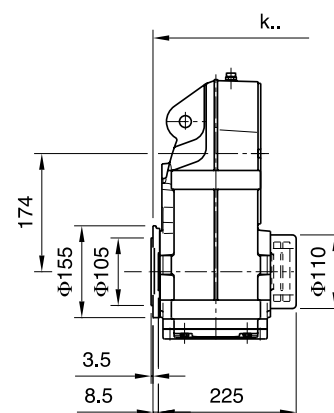
SPTH36..



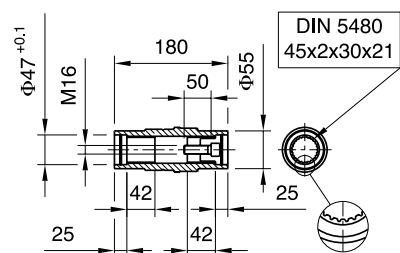
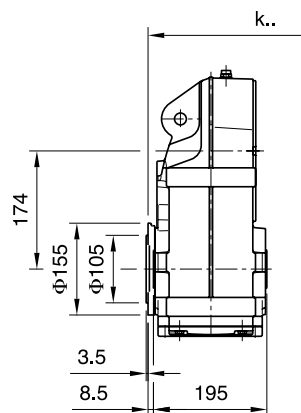
SPTN36..



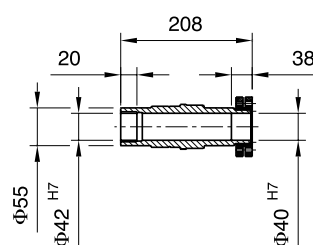
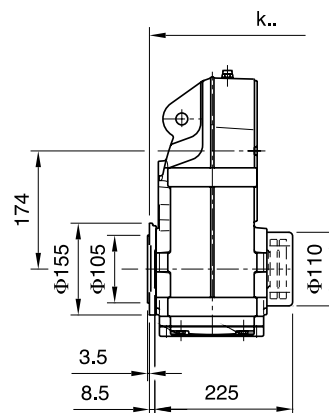
SPTS36..

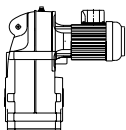


SPTT36..



SPTC36..





F

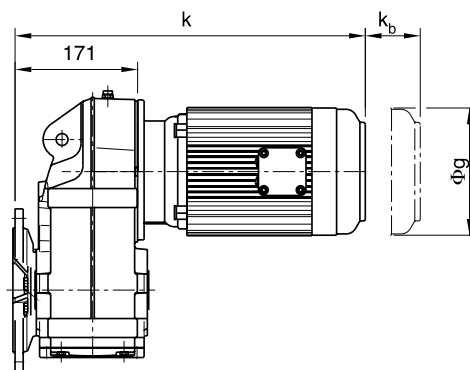
A

L

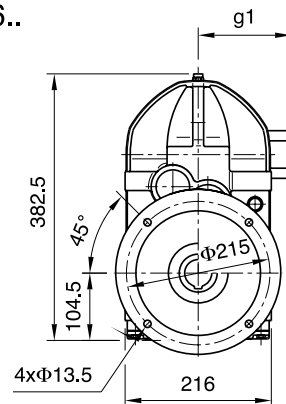
K

SP4

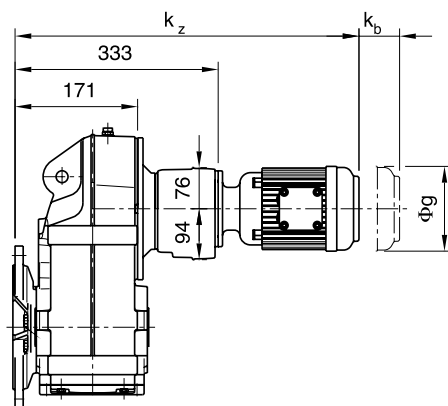
SPF..36B
63 - 160



SPF..36..



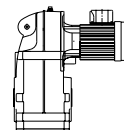
SPF..36B16B/C
63 - 112



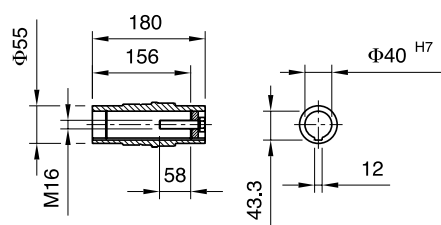
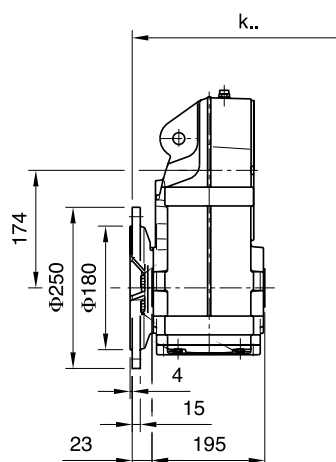
K, Kz, Ku is for reference only. Consult Rexnord for exact dimensions.

K, Kz, Ku 仅供参考，精确尺寸请咨询 Rexnord。

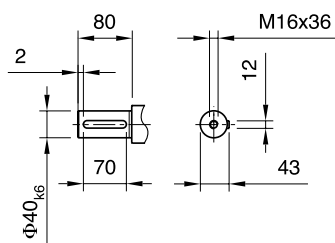
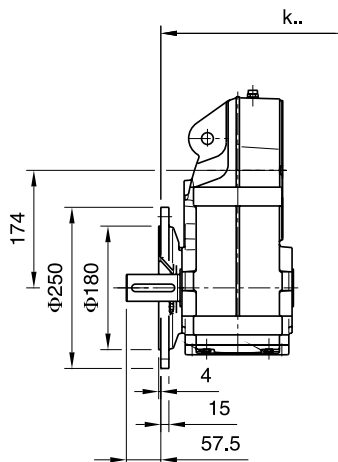
	63	71	80	90S	90L	100	112	132S	132M	132MG	160M	160L							
k	395	399	422	464	464	502	515	584	619	619	732	776							
ku																			
kz	566	570	593	635	635	673	686												
kb	48	60	71	77	77	80	89	98	98	98	105	105							
Φg	121	138	157	177	177	215	240	275	275	275	330	330							
g1	96	102	125	133	133	144	165	182	182	182	287	287							
Øam																			



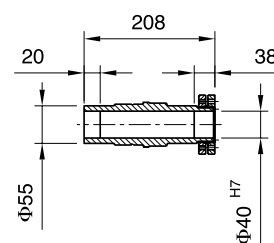
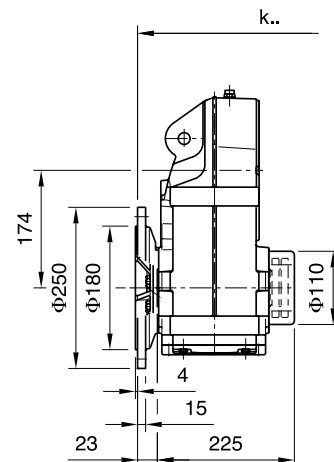
SPFH36..



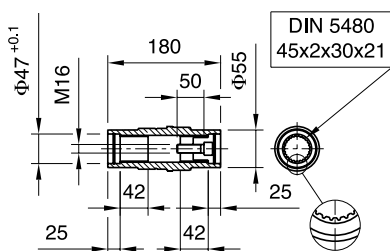
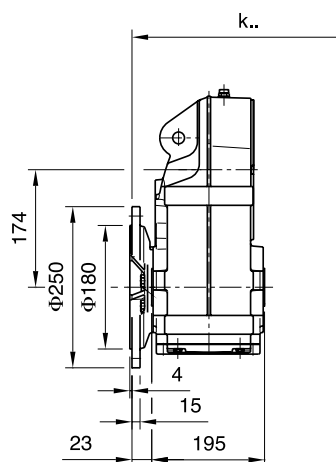
SPFN36..



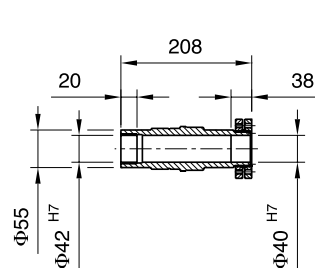
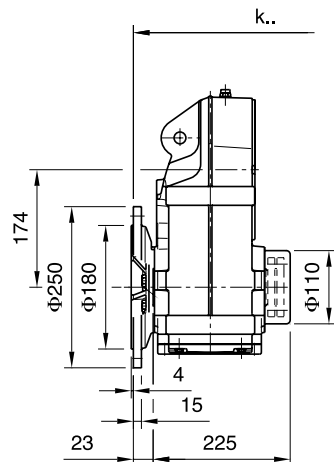
SPFS36..

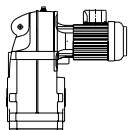


SPFT36..



SPFC36..





F

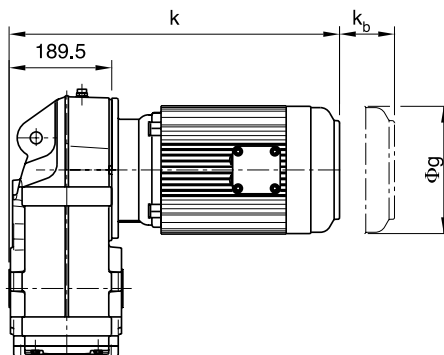
A

L

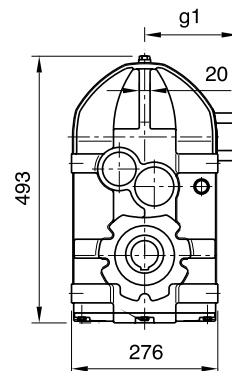
K

SP4

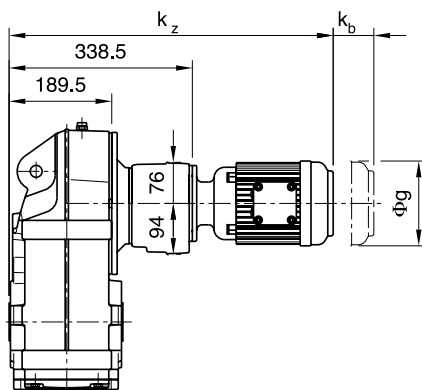
SPZ..46B/C
80 - 180



SPZ..46..



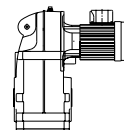
SPZ..46B/C16B/C
63 - 112



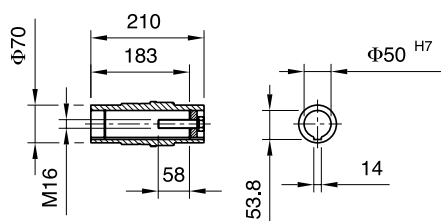
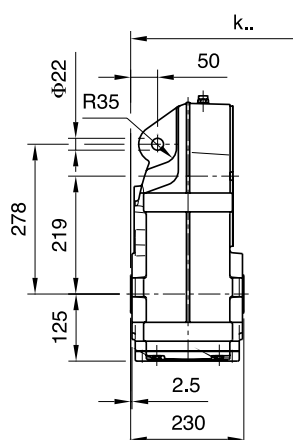
K, K_z, K_u is for reference only. Consult Rexnord for exact dimensions.

K, K_z, K_u 仅供参考，精确尺寸请咨询 Rexnord。

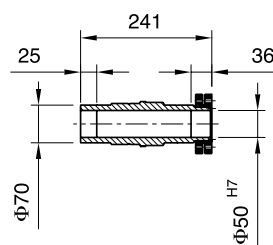
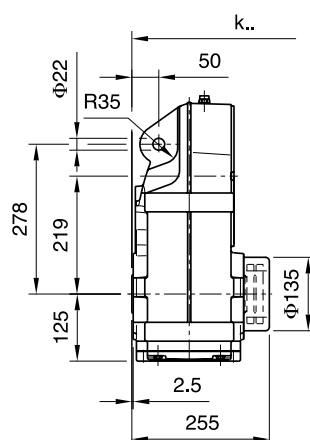
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k			429	471	471	509	522	591	626	626	739	783	768	806	864					
ku																				
kz	572	576	599	641	641	679	692													
kb	48	60	71	77	77	80	89	97	97	97	105	105	112	112	175					
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420					
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350					
Øam																				



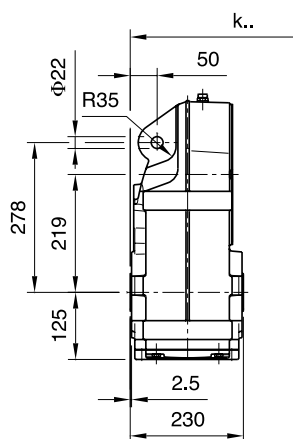
SPZH46..



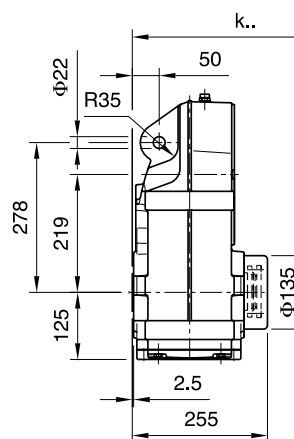
SPZS46..



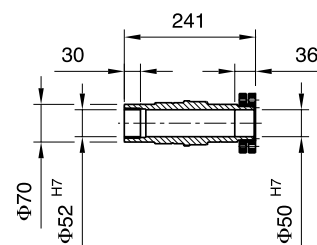
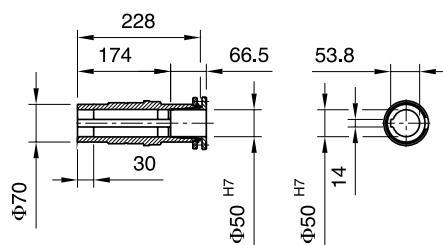
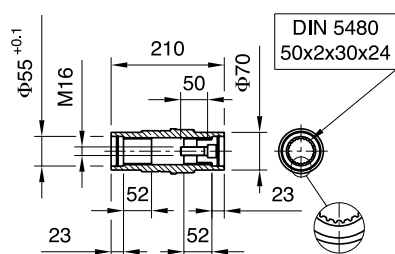
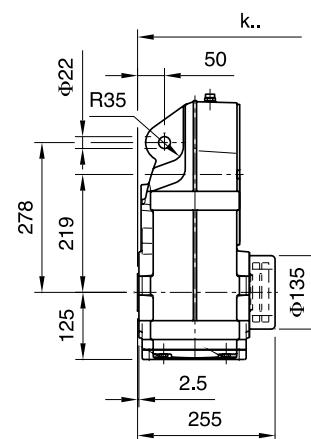
SPZT46..

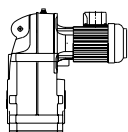


SPZB46..



SPZC46..





F

A

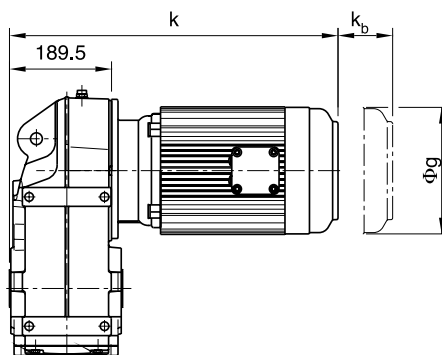
L

K

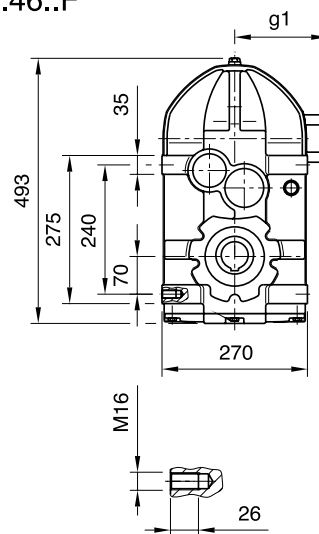
SP4

SPZ..46B/CF

80 - 180

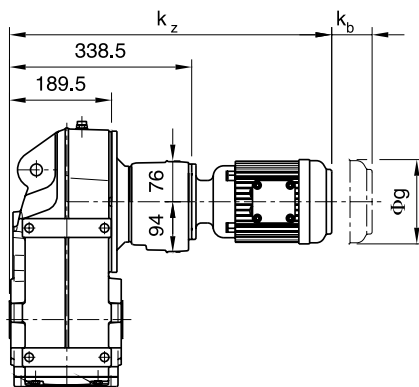


SPZ..46..F



SPZ..46B/C16B/CF

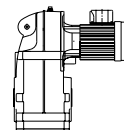
63 - 112



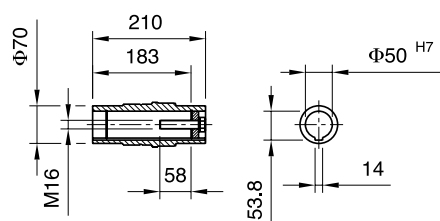
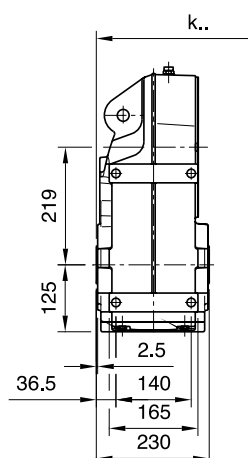
K, K_z, K_u is for reference only. Consult Rexnord for exact dimensions.

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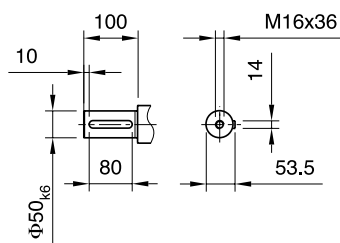
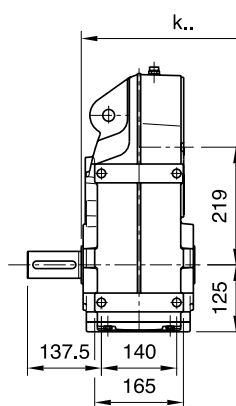
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k			429	471	471	509	522	591	626	626	739	783	768	806	864					
ku																				
kz	572	576	599	641	641	679	692													
kb	48	60	71	77	77	80	89	97	97	97	105	105	112	112	175					
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420					
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350					
Øam																				



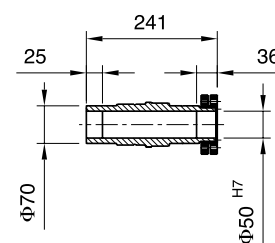
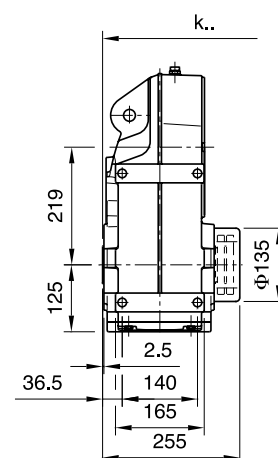
SPZH46..F..



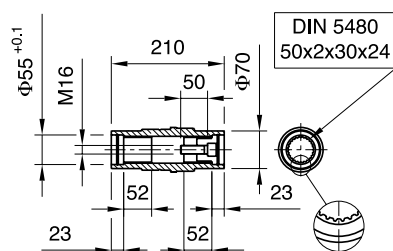
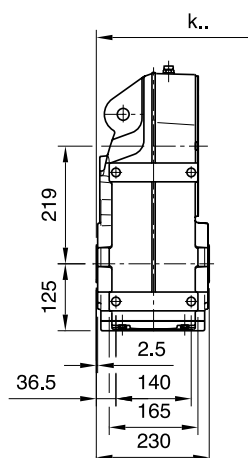
SPZN46..F..



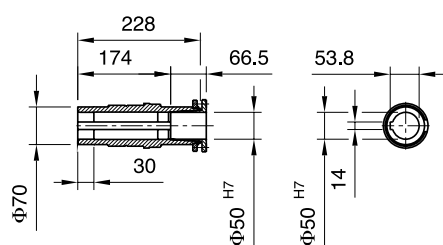
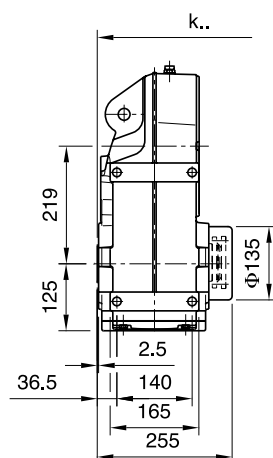
SPZS46..F..



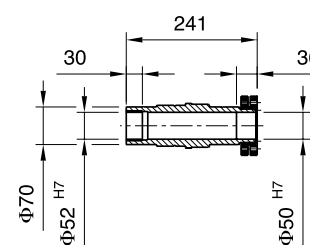
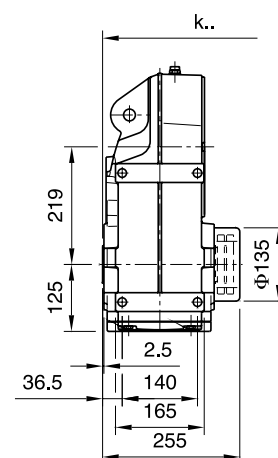
SPZT46..F..

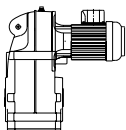


SPZB46..F..



SPZC46..F..





F

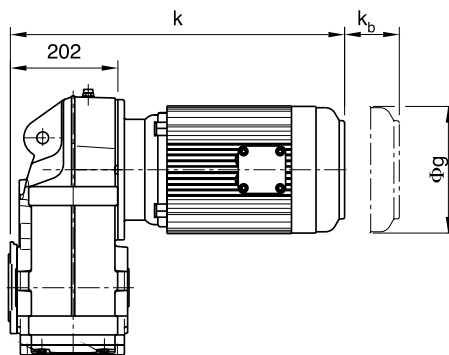
A

L

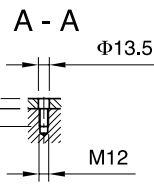
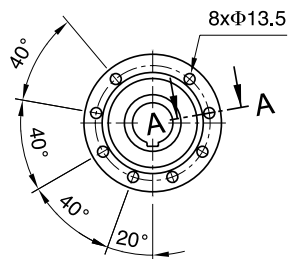
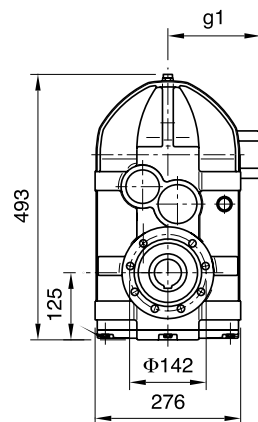
K

SP4

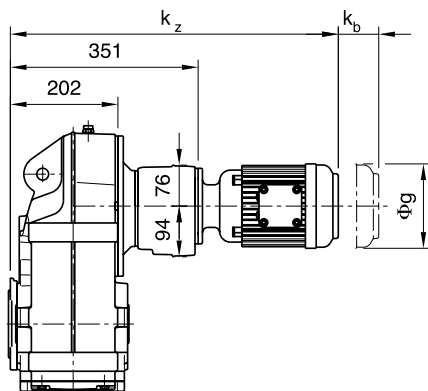
SPT..46B/C
80 - 180



SPT..46..



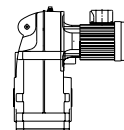
SPT..46B/C16B/C
63 - 112



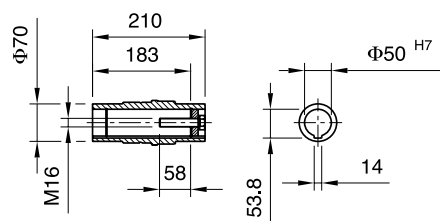
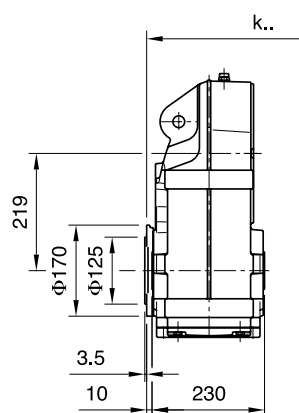
K, Kz, Ku is for reference only. Consult Rexnord for exact dimensions.

K, Kz, Ku 仅供参考，精确尺寸请咨询 Rexnord。

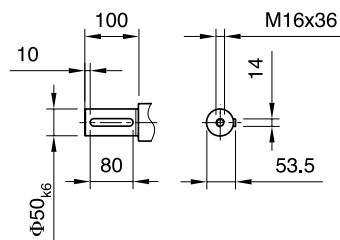
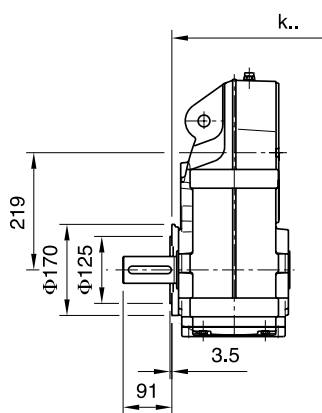
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k			411	483	483	521	534	603	638	638	751	795	780	818	876					
ku																				
kz	584	588	611	653	653	691	704													
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175					
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420					
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350					
Øam																				



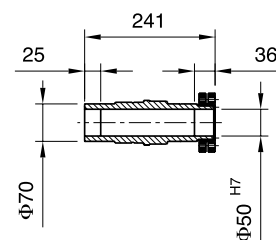
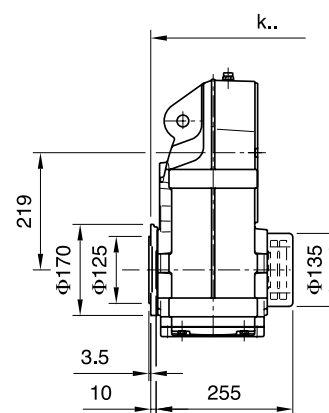
SPTH46..



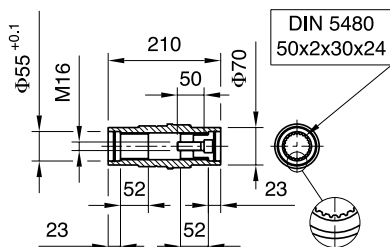
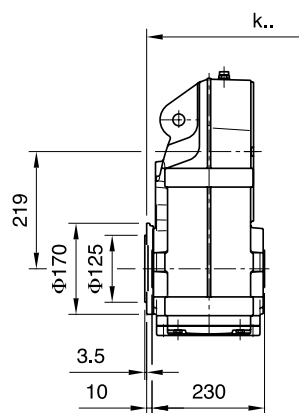
SPTN46..



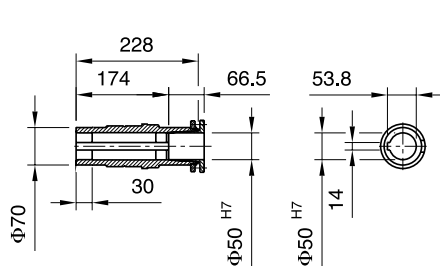
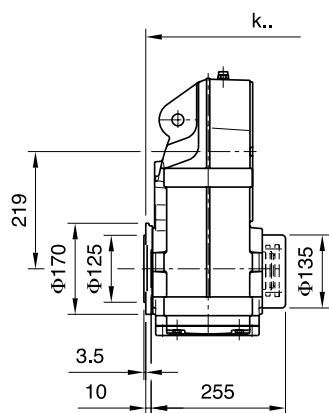
SPTS46..



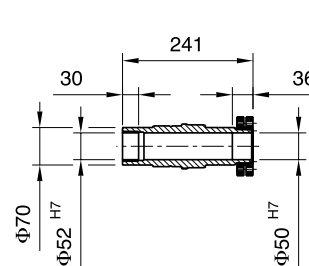
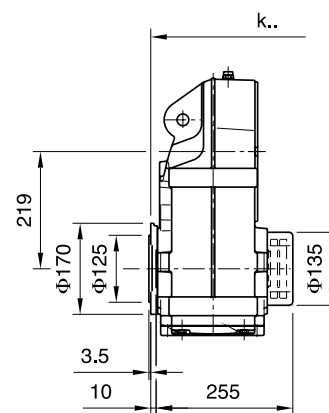
SPTT46..

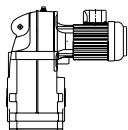


SPTB46..



SPTC46..





F

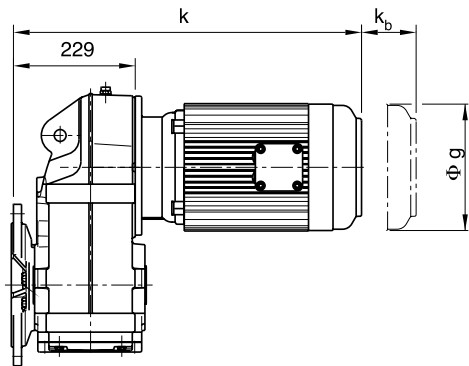
A

L

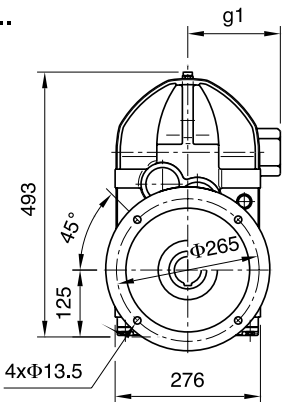
K

SP4

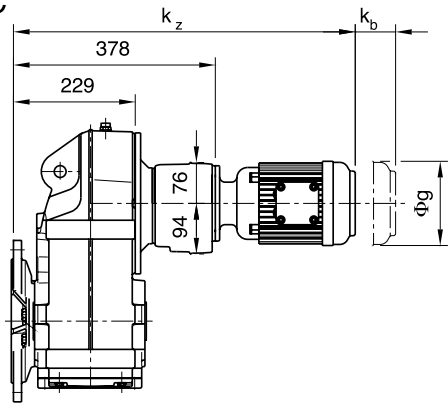
SPF..46B/C
80 - 180



SPF..46..

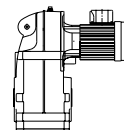


SPF..46B/C16B/C
63 - 112

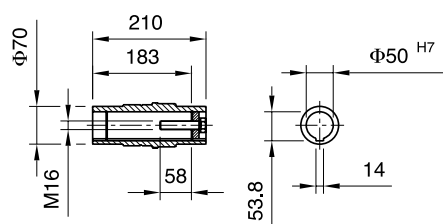
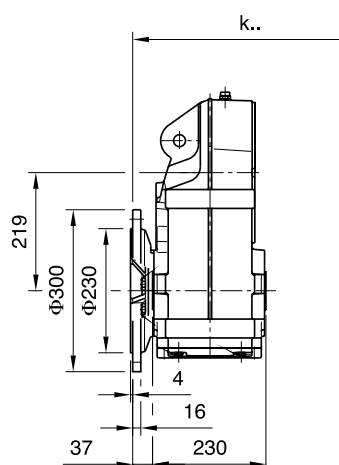


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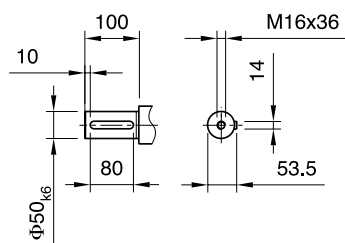
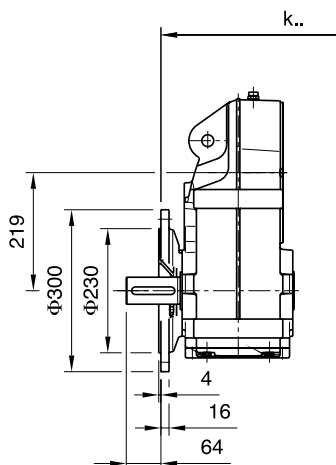
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k			468	510	510	548	561	630	665	665	778	822	807	845	903					
ku																				
kz	611	615	638	680	680	718	731													
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175					
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420					
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350					
Øam																				



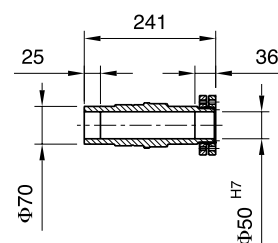
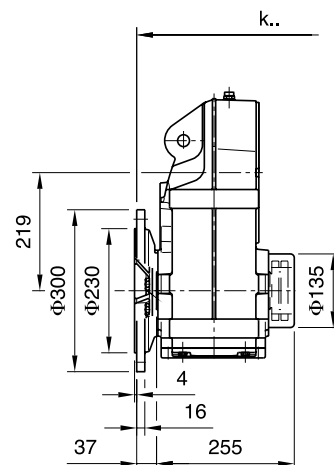
SPFH46..



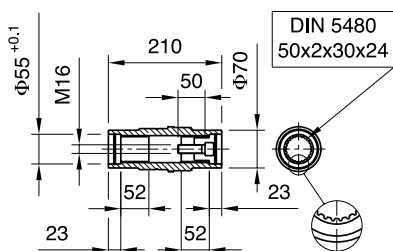
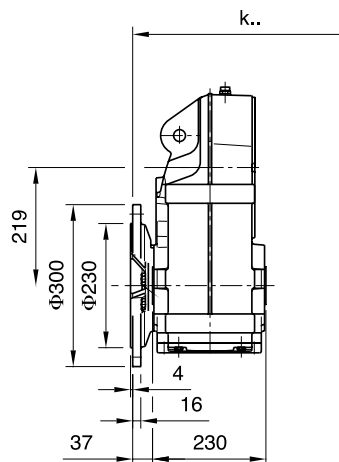
SPFN46..



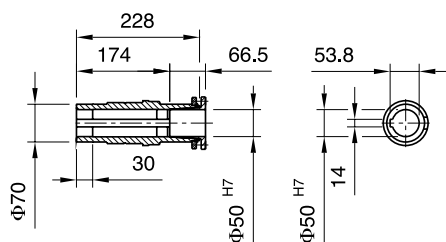
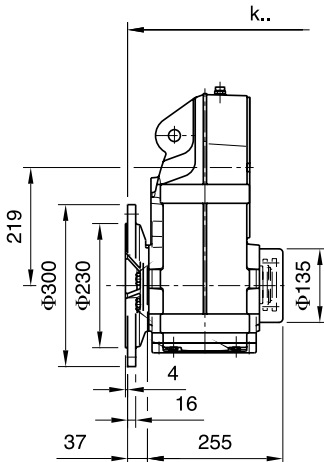
SPFS46..



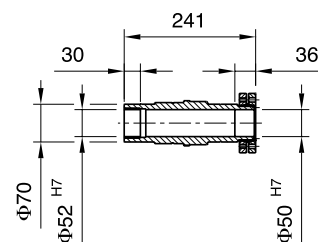
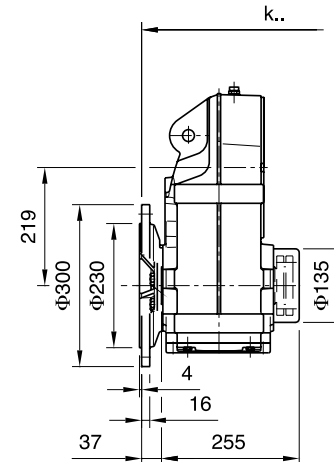
SPFT46..

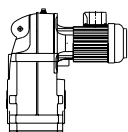


SPFB46..



SPFC46..





F

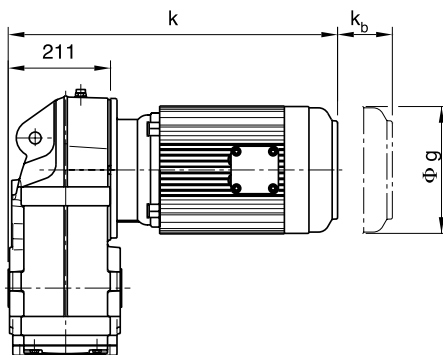
A

L

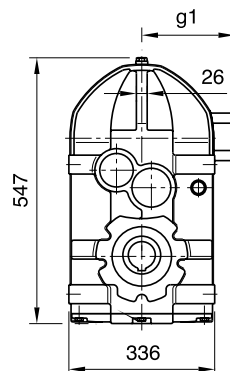
K

SP4

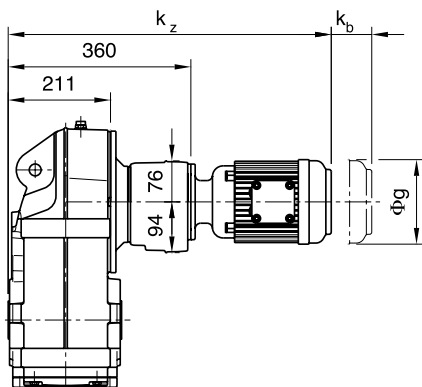
SPZ..56B/C
80 - 180



SPZ..56..



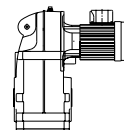
SPZ..56B/C16B/C
63 - 112



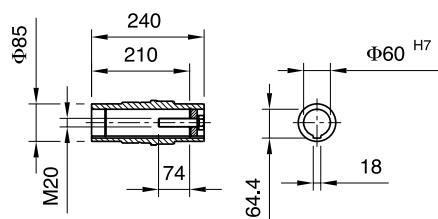
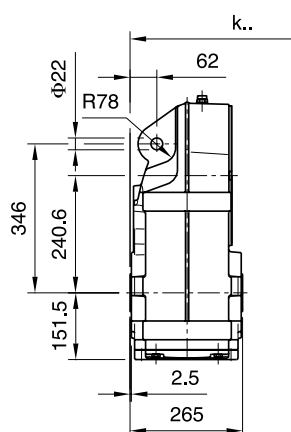
K, K_z, K_u is for reference only. Consult Rexnord for exact dimensions.

K, K_z, K_u 仅供参考，精确尺寸请咨询 Rexnord。

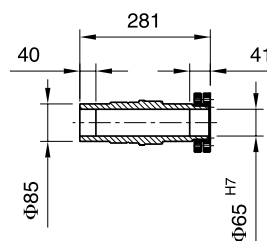
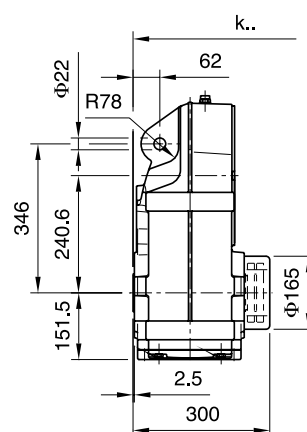
	63	71	80	90S	90L	100	112	132S	132M	132MG	160M	160L	180M	180L	200L					
k			450	492	492	530	543	612	647	647	760	804	789	827	885					
ku																				
kz	593	597	620	662	662	700	713													
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175					
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420					
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350					
Øam																				



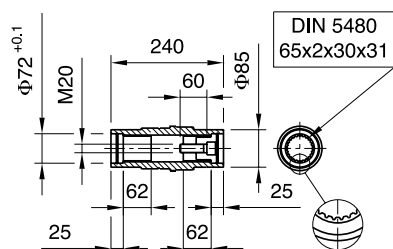
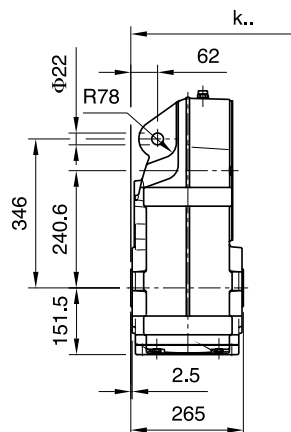
SPZH56..



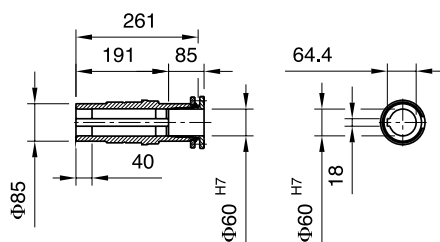
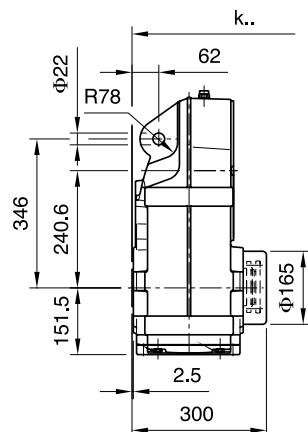
SPZS56..



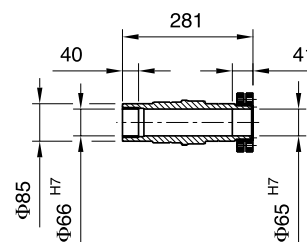
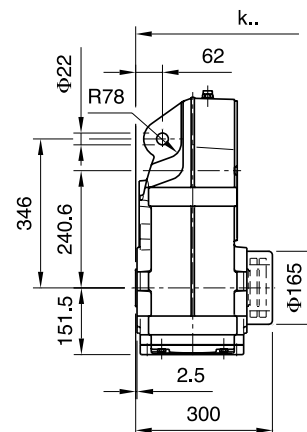
SPZT56..

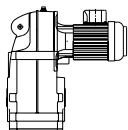


SPZB56..



SPZC56..





F

A

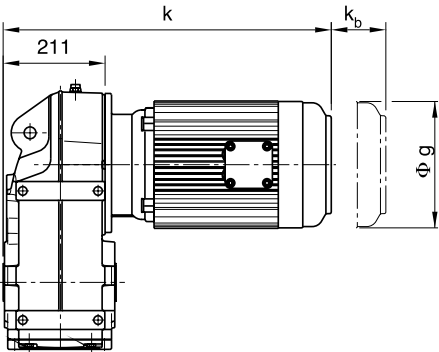
L

K

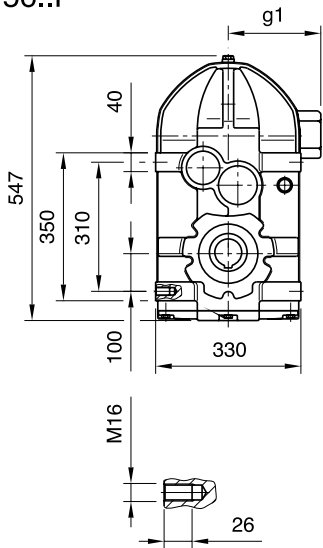
SP4

SPZ..56B/CF

80 - 180

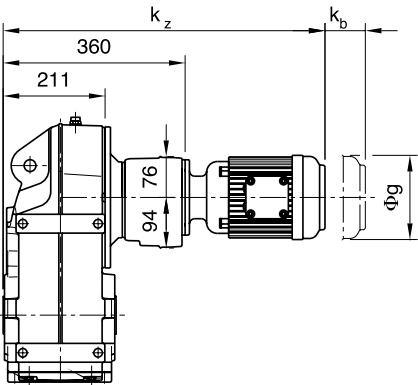


SPZ..56..F



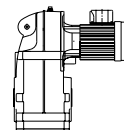
SPZ..56B/C16B/CF

63 - 112

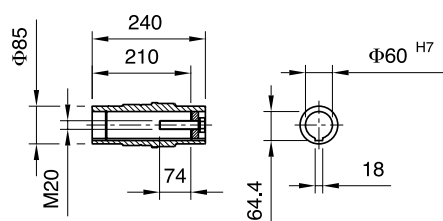
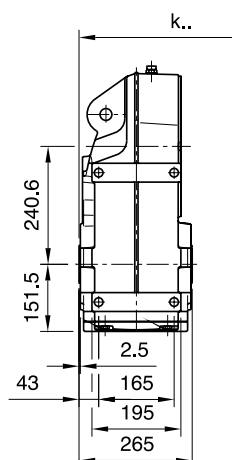


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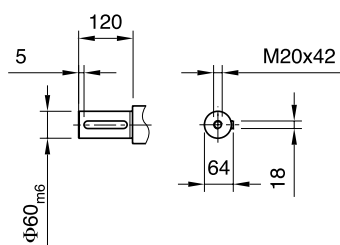
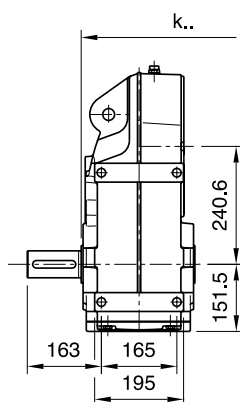
	63	71	80	90S	90L	100	112	132S	132M	132MG	160M	160L	180M	180L	200L					
k			450	492	492	530	543	612	647	647	760	804	789	827	885					
ku																				
kz	593	597	620	662	662	700	713													
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175					
Øg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420					
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350					
Øam																				



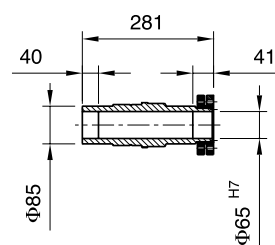
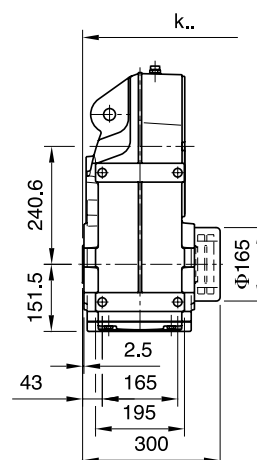
SPZH56..F..



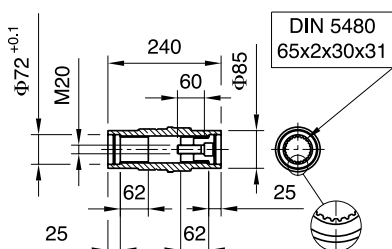
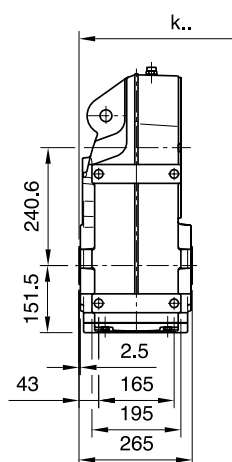
SPZN56..F..



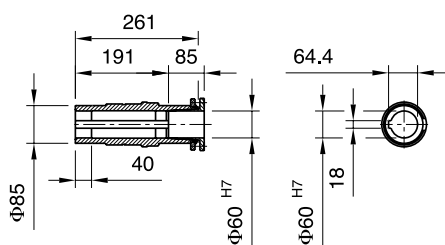
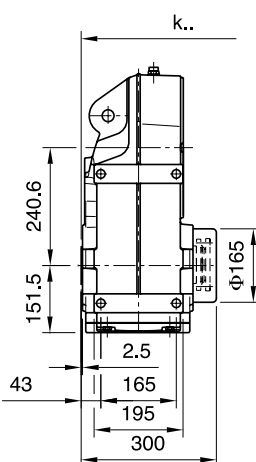
SPZS56..F..



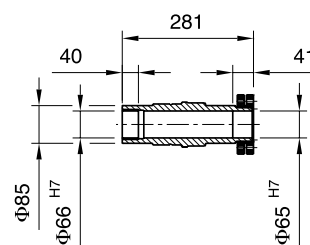
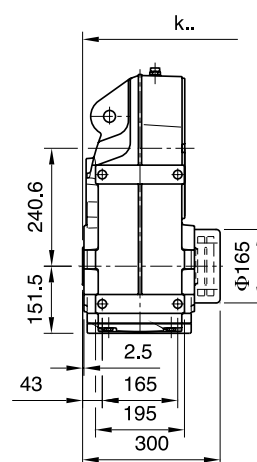
SPZT56..F..

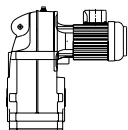


SPZB56..F..



SPZC56..F..





F

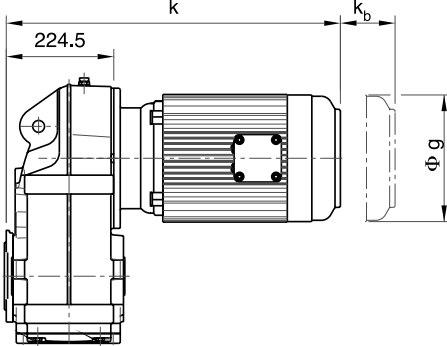
A

L

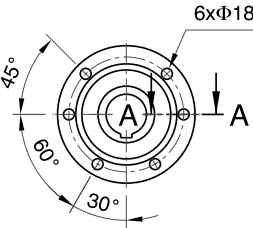
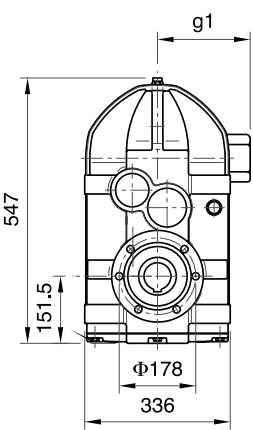
K

SP4

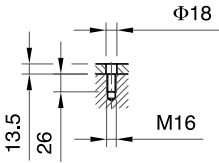
SPT..56B/C
80 - 180



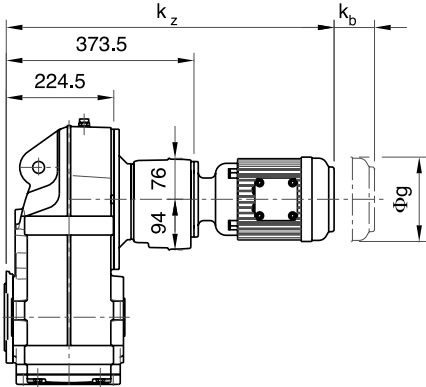
SPT..56..



A - A

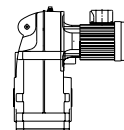


SPT..56B/C16B/C
63 - 112

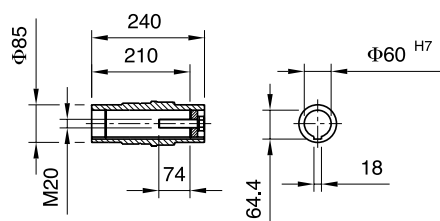
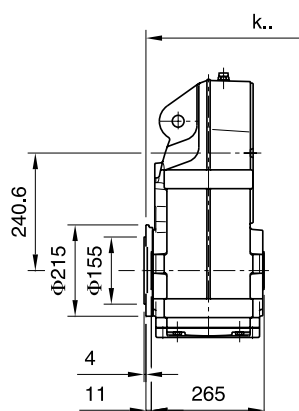


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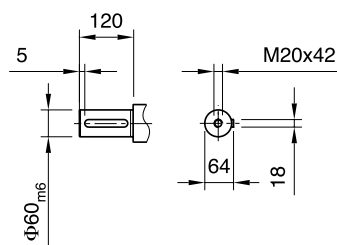
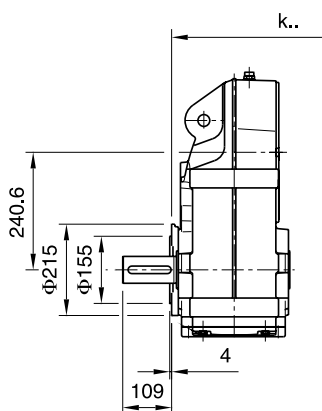
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k			464	506	506	544	557	626	661	661	774	818	803	841	899					
ku																				
kz	607	611	634	676	676	714	727													
kb	48	60	71	77	77	80	89	97	97	97	105	105	112	112	175					
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420					
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350					
Øam																				



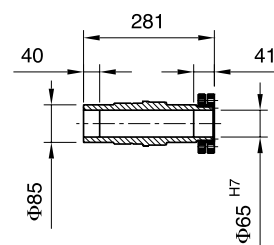
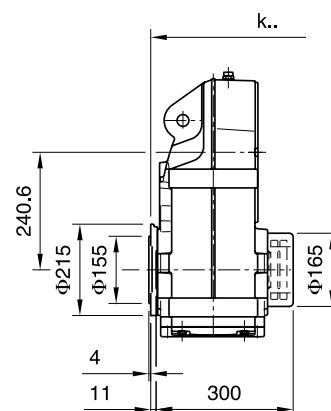
SPTH56..



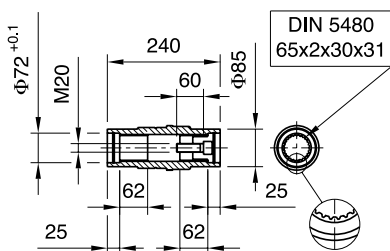
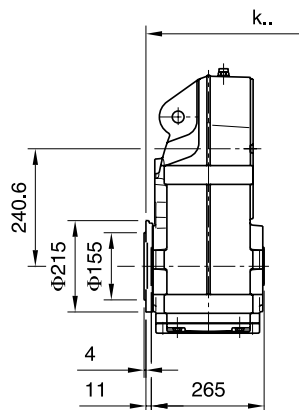
SPTN56..



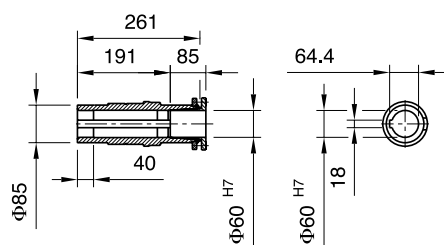
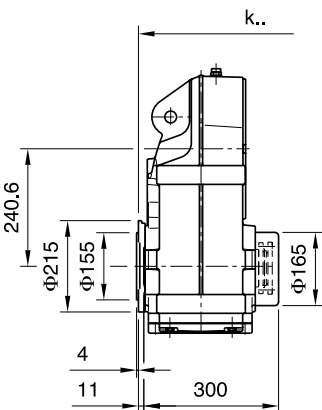
SPTS56..



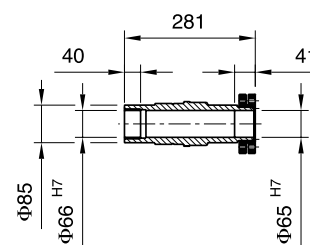
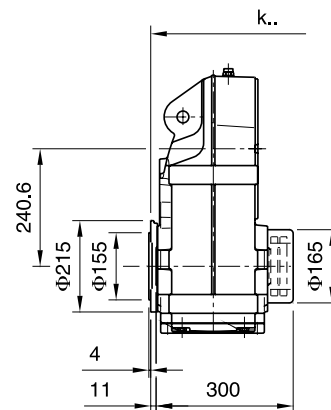
SPTT56..

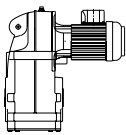


SPTB56..



SPTC56..





F

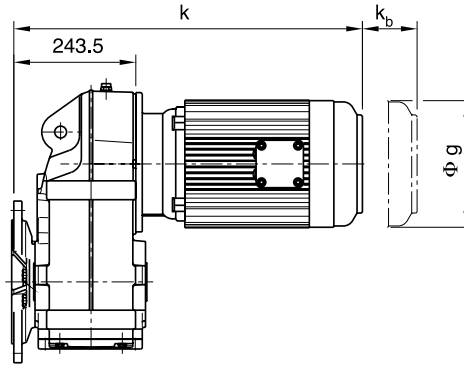
A

L

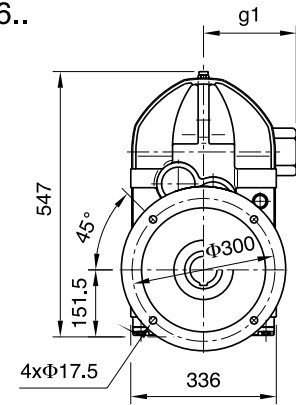
K

SP4

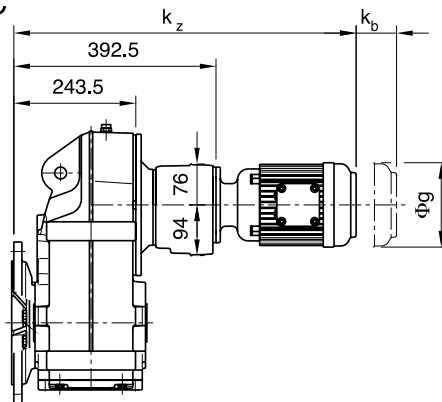
SPF..56B/C
80 - 180



SPF..56..



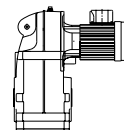
SPF..56B/C16B/C
63 - 112



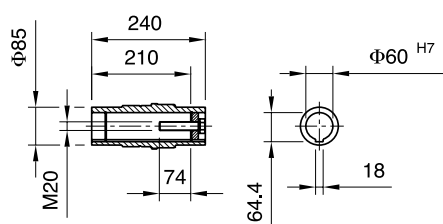
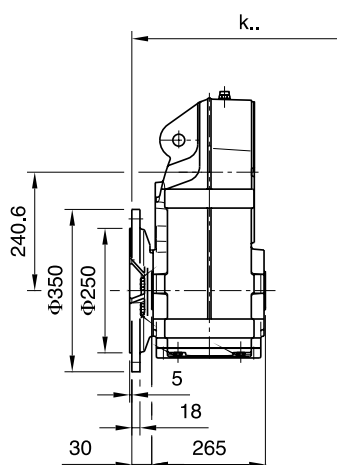
K, K_z, K_u is for reference only. Consult Rexnord for exact dimensions.

K, K_z, K_u 仅供参考，精确尺寸请咨询 Rexnord。

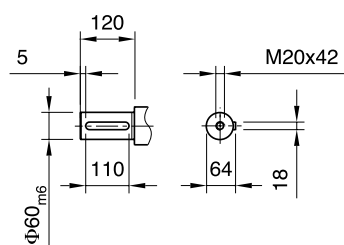
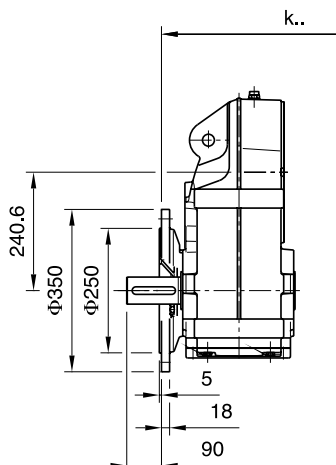
	63	71	80	90S	90L	100	112	132S	132M	132MG	160M	160L	180M	180L	200L					
k			483	525	525	563	576	645	680	680	793	837	822	860	918					
ku																				
kz	626	623	653	695	695	733	746													
kb	48	60	71	77	77	80	89	97	97	97	105	105	112	112	175					
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420					
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350					
Øam																				



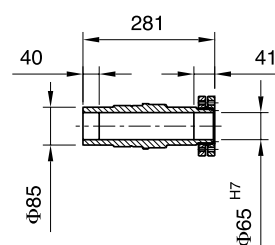
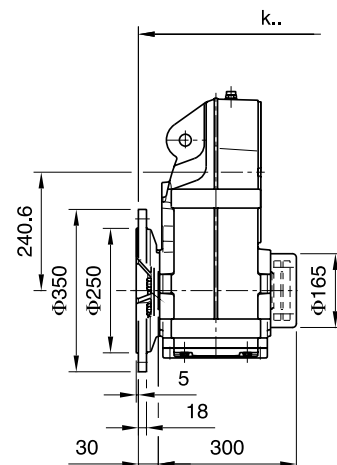
SPFH56..



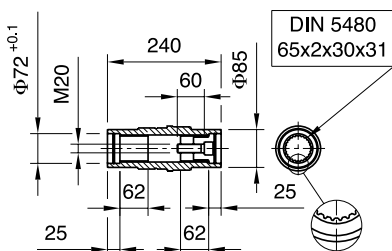
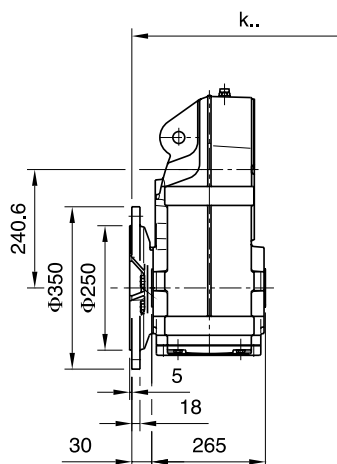
SPFN56..



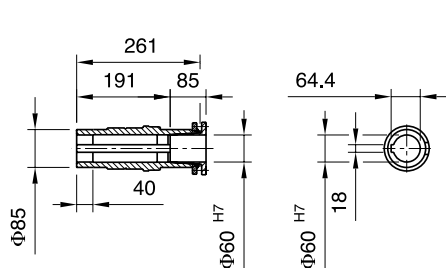
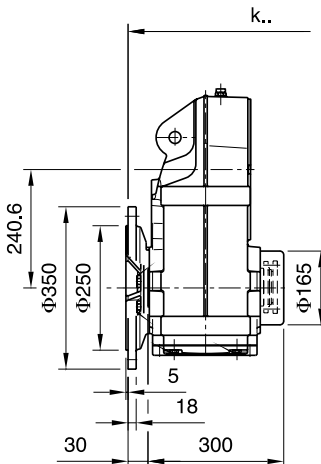
SPFS56..



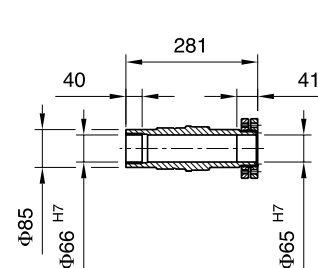
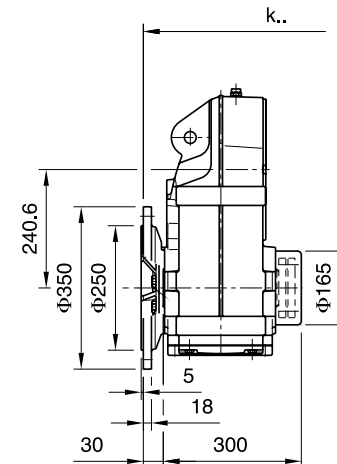
SPFT56..

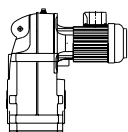


SPFB56..



SPFC56..





F

A

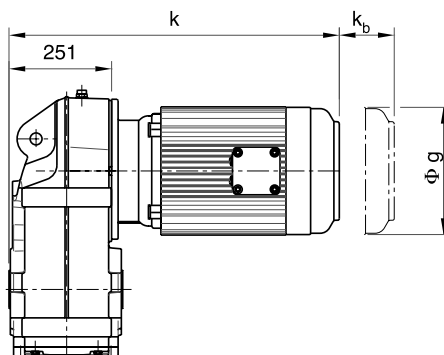
L

K

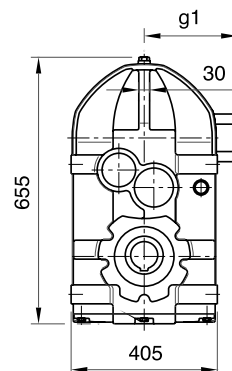
SP4

SPZ..66B/C

100 - 180

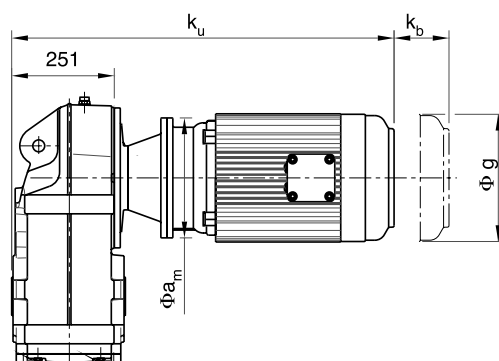


SPZ..66..



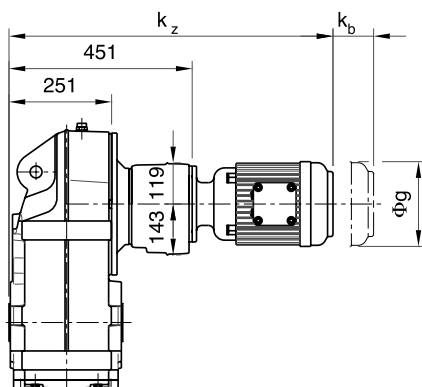
SPZ..66B/C-U

100 - 280



SPZ..66B/C36B/C

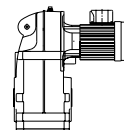
63 - 160



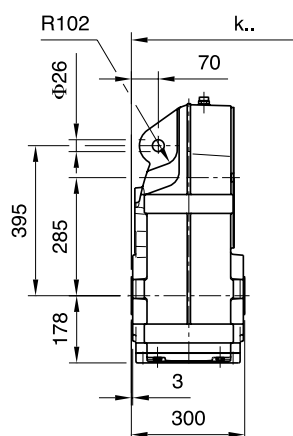
K, K_z, K_u is for reference only. Consult Rexnord for exact dimensions.

K, K_z, K_u 仅供参考，精确尺寸请咨询 Rexnord。

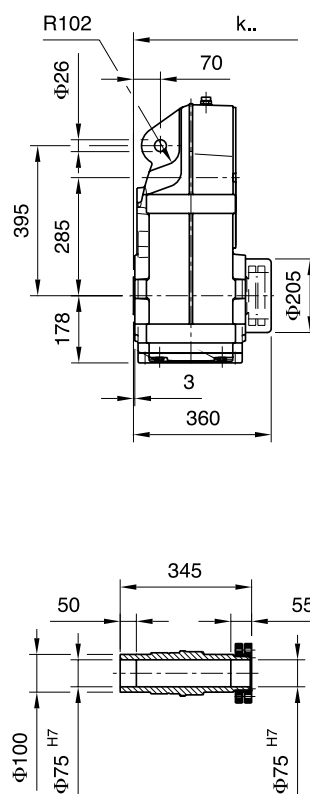
	63	71	80	90S	90L	100	112	132S	132M	132M/C	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k						562	575	644	679	679	792	836	821	859	933	1002	1042			
ku						693	708	775	810		953	1008	1190	1230	1295	1360	1390	1481	1576	1616
kz	675	679	702	744	744	782	795	864	899	899	1012	1056								
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
Φam						250	250	300	300		350	350	350	350	400	450	450	550	550	550



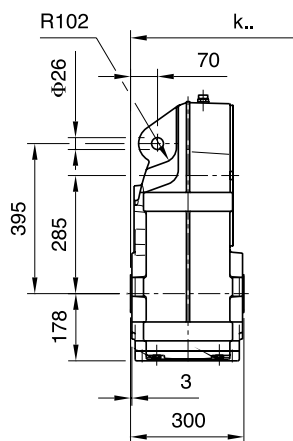
SPZH66..



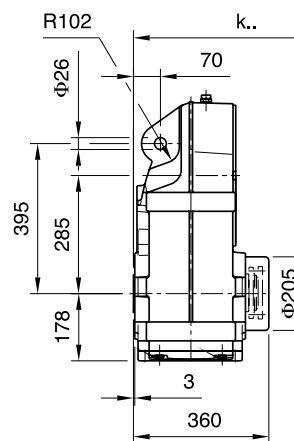
SPZS66..



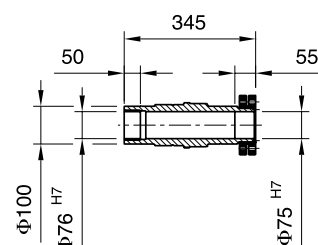
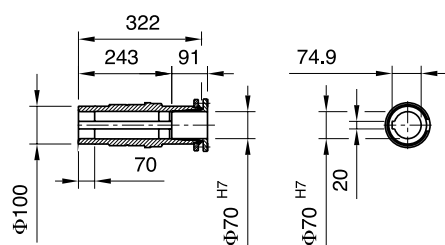
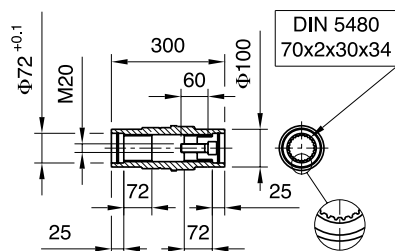
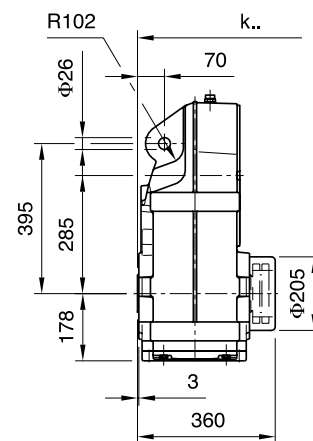
SPZT66..

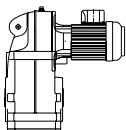


SPZB66..



SPZC66..





F

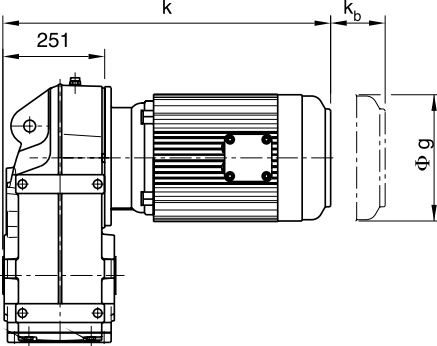
A

L

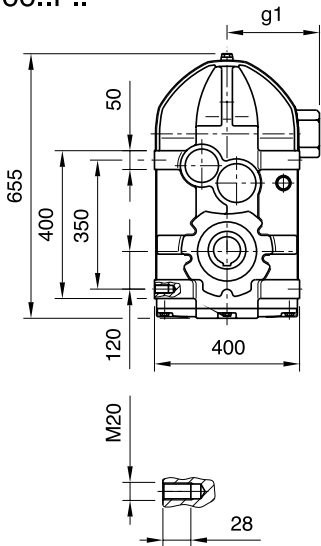
K

SP4

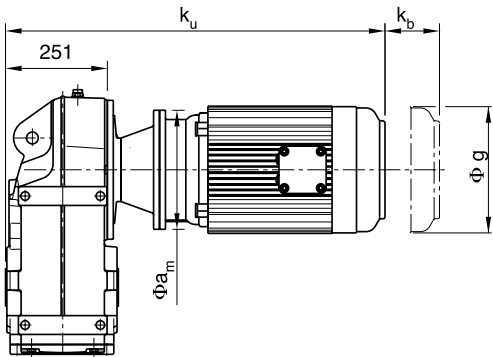
SPZ..66B/CF 100 - 180



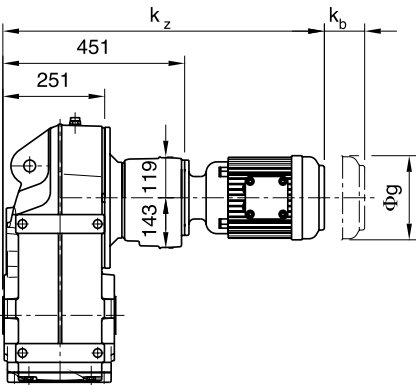
SPZ..66..F..



SPZ..66B/CF-U 100 - 280

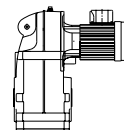


SPZ..66B/C36B/CF 63 - 160



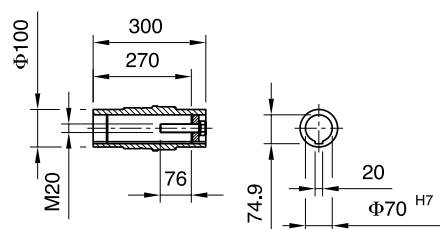
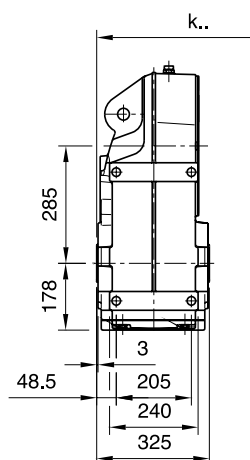
K,Kz,Ku is for reference only. Consult Rexnord for exact dimensions. K,Kz,Ku 仅供参考，精确尺寸请咨询 Rexnord。

	63	71	80	90S	90L	100	112	132S	132M	132M/C	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k						562	575	644	679	679	792	836	821	859	933	1002	1042			
ku						693	708	775	810		953	1008	1190	1230	1295	1360	1390	1481	1576	1616
kz	675	679	702	744	744	782	795	864	899	899	1012	1056								
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
Øam						250	250	300	300		350	350	350	350	400	450	450	550	550	550

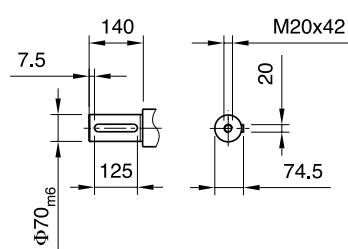
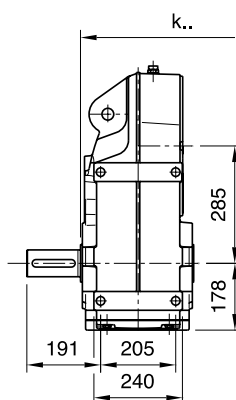


SP4

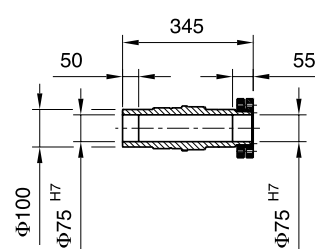
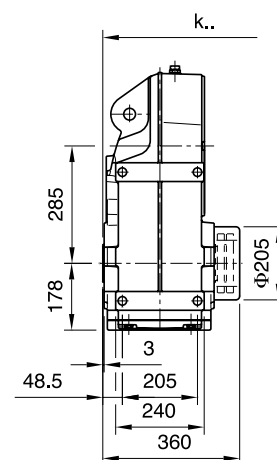
SPZH66..F..



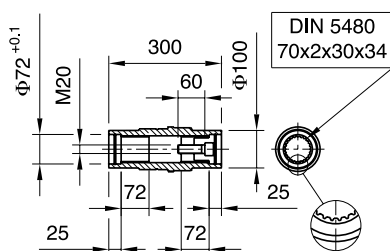
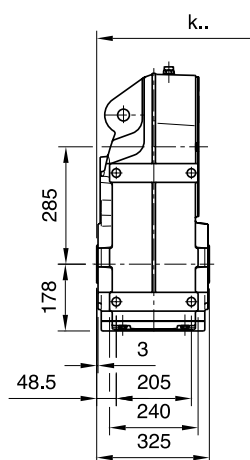
SPZN66..F..



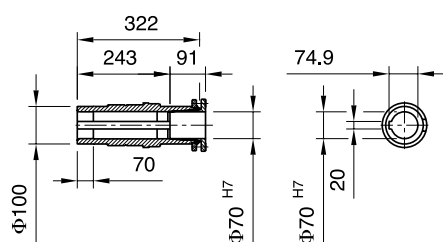
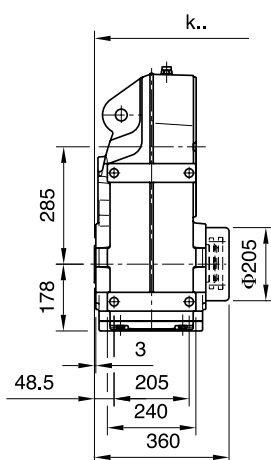
SPZS66..F..



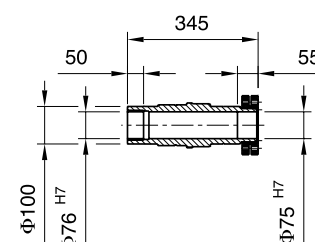
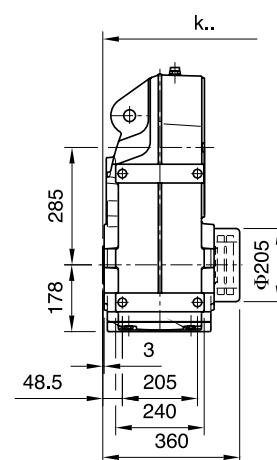
SPZT66..F..

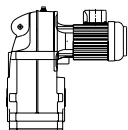


SPZB66..F..



SPZC66..F..





F

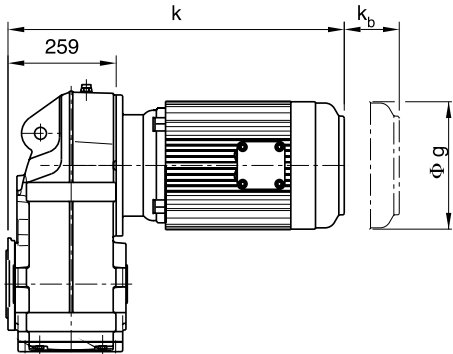
A

L

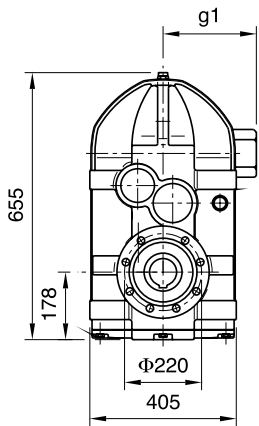
K

SP4

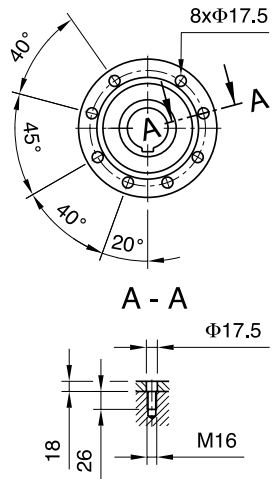
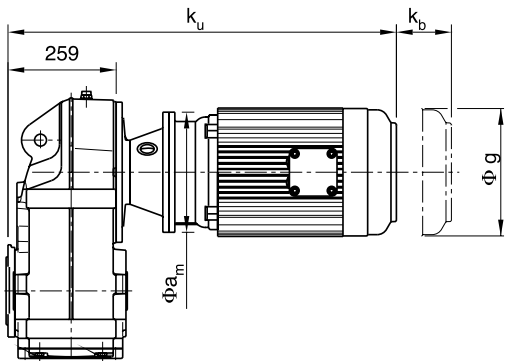
SPT..66B/C
100 - 180



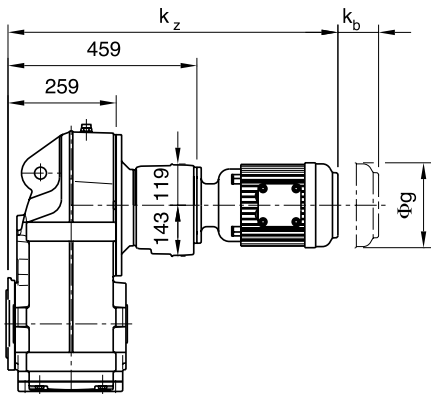
SPT..66..



SPT..66B/C-U
100 - 280

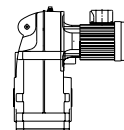


SPT..66B/C36B/C
63 - 160

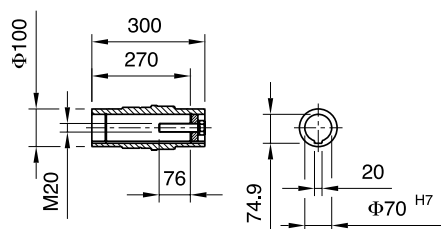
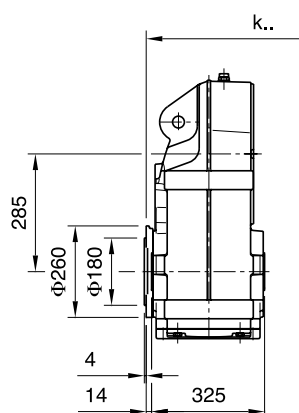


K,Kz,Ku is for reference only. Consult Rexnord for exact dimensions. K,Kz,Ku 仅供参考，精确尺寸请咨询 Rexnord。

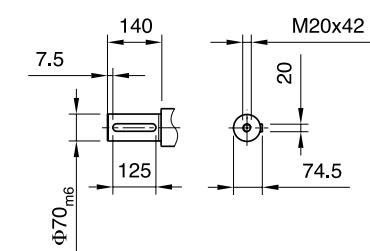
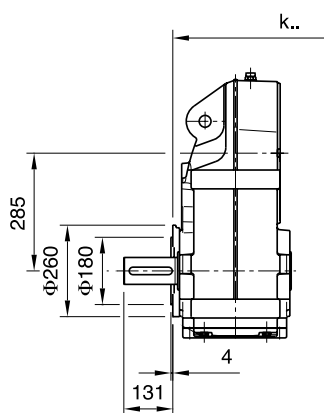
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k						570	583	652	687	687	800	844	829	867	941	1010	1050			
ku						701	716	783	818		961	1016	1198	1238	1303	1368	1398	1489	1584	1624
kz	683	687	710	752	752	790	803	872	907	907	1020	1064								
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
Øam						250	250	300	300		350	350	350	350	400	450	450	550	550	550



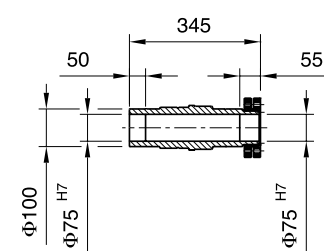
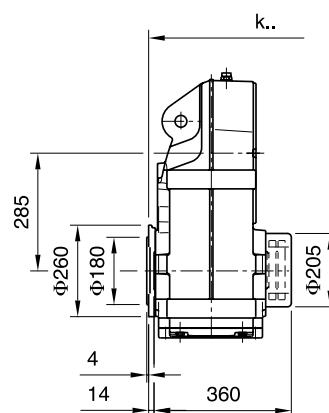
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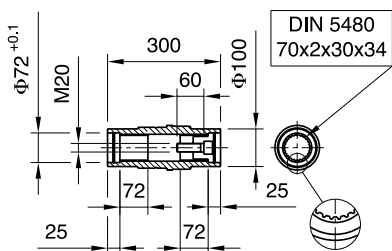
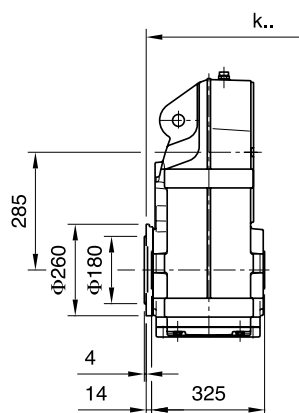
SPTN66..



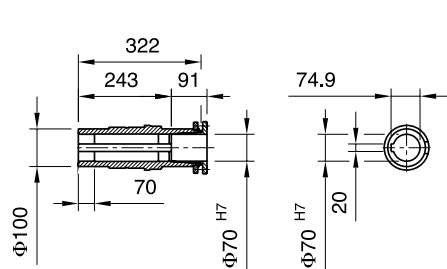
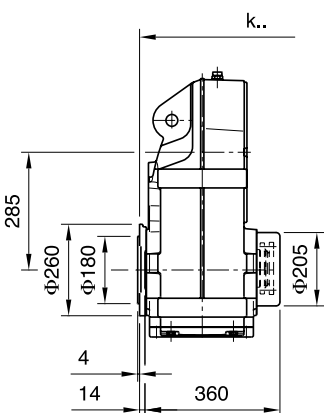
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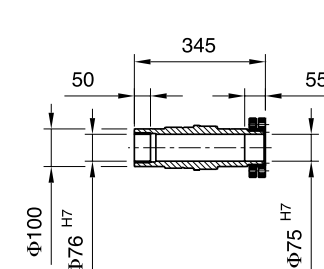
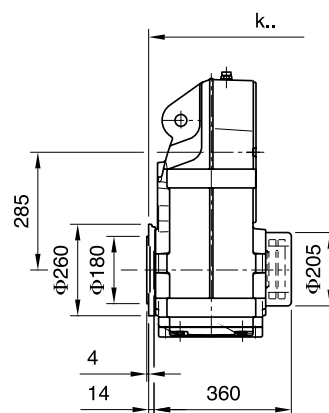
SPTT66..

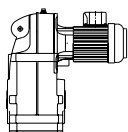


SPTB66..



SPTC66..





F

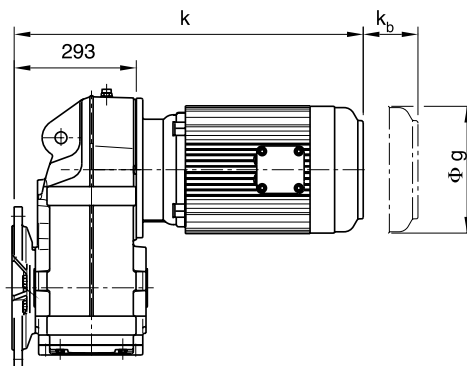
A

L

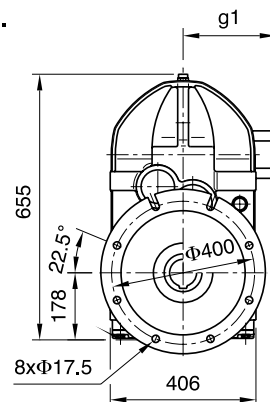
K

SP4

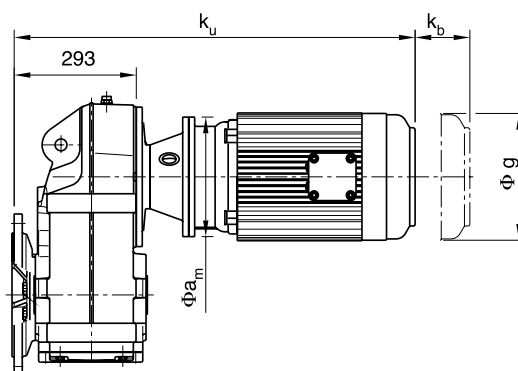
SPF..66B/C
100 - 180



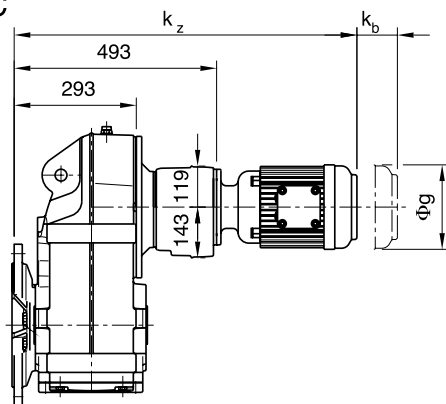
SPF..66..



SPF..66B/C-U
100 - 280



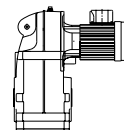
SPF..66B/C36B/C
63 - 160



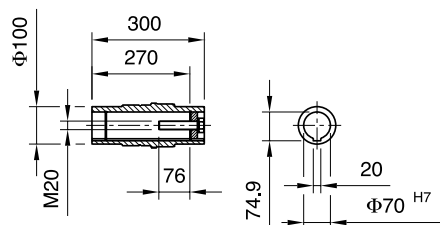
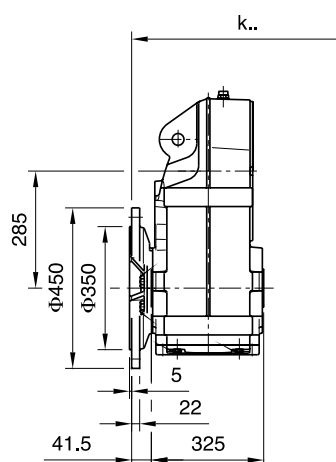
K, Kz, Ku is for reference only. Consult Rexnord for exact dimensions.

K, Kz, Ku 仅供参考，精确尺寸请咨询 Rexnord。

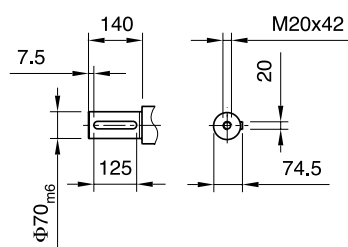
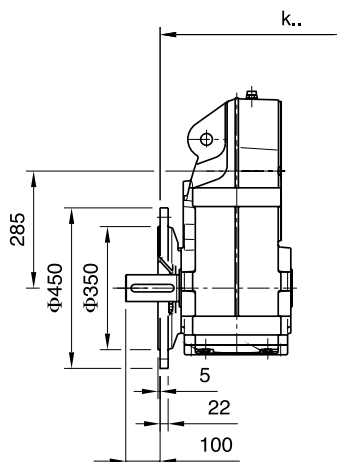
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k						604	617	686	721	721	834	878	863	901	975	1044	1084			
ku						735	750	817	852		995	1050	1232	1272	1337	1402	1432	1523	1618	1658
kz	717	721	744	786	786	824	837	906	941	941	1054	1098								
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
φam						250	250	300	300		350	350	350	350	400	450	450	550	550	550



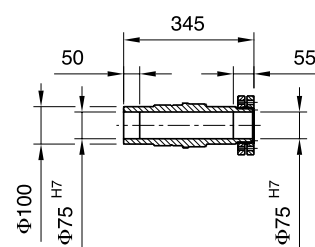
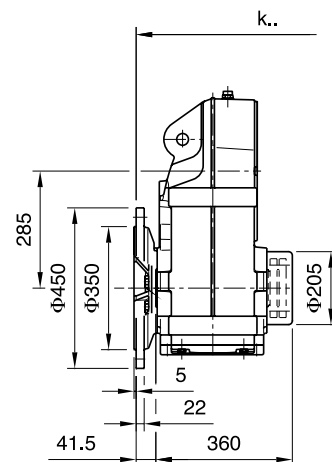
SPFH66..



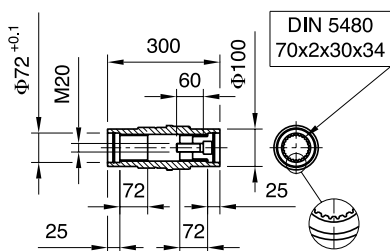
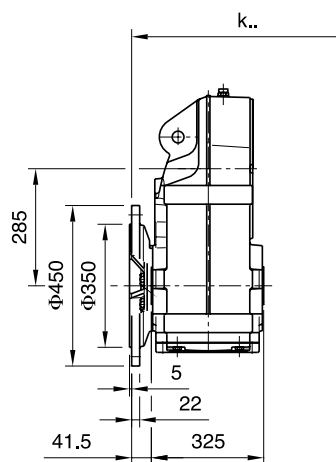
SPFN66..



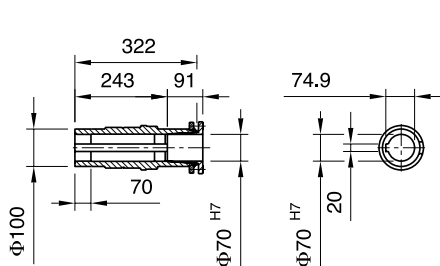
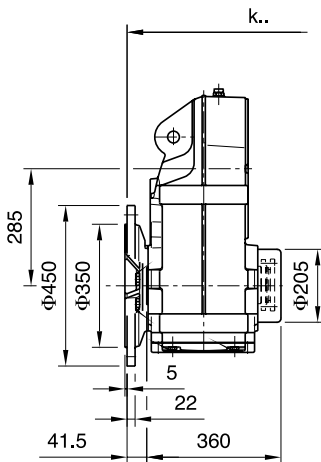
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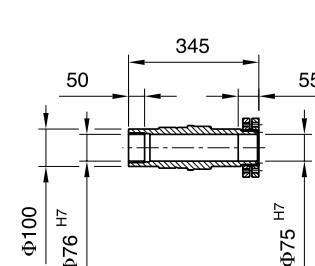
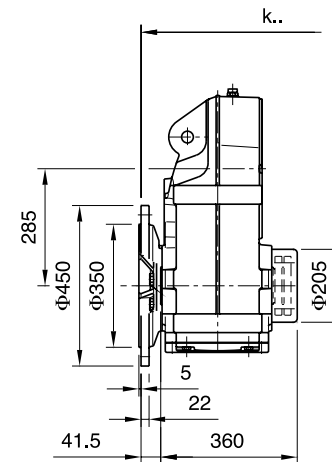
SPFT66..

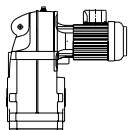


SPFB66..



SPFC66..





F

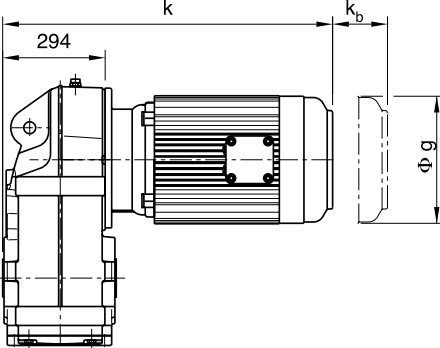
A

L

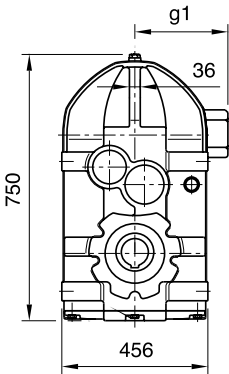
K

SP4

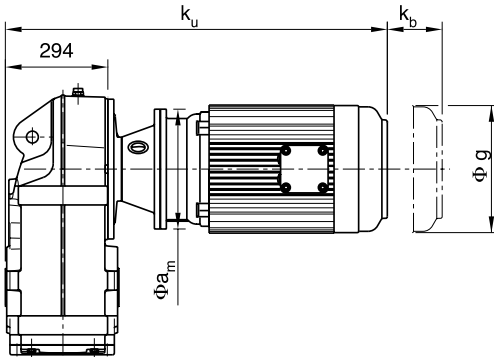
SPZ..76B/C
100 - 180



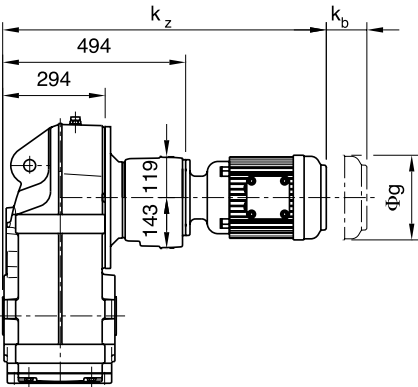
SPZ..76..



SPZ..76B/C-U
100 - 280

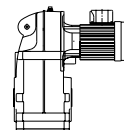


SPZ..76B/C36B/C
63 - 160

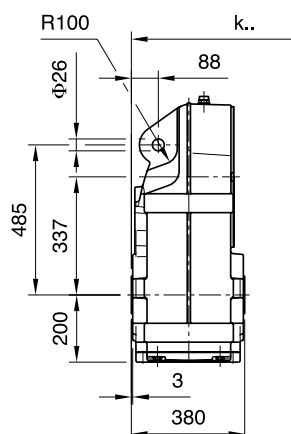


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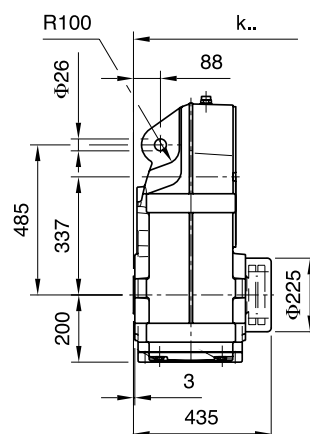
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k						605	618	687	722	722	835	879	864	902	976	1045	1085			
ku						736	751	818	853		996	1051	1233	1273	1338	1403	1433	1524	1619	1659
kz	718	722	745	787	787	825	838	907	942	942	1055	1099								
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
Øam						250	250	300	300		350	350	350	350	400	450	450	550	550	550



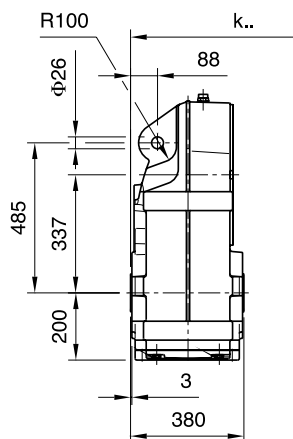
SPZH76..



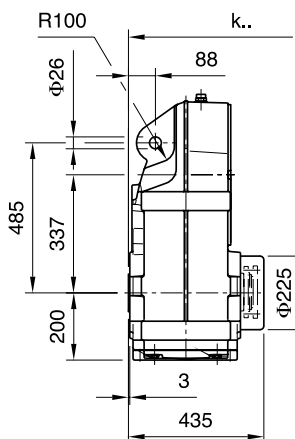
SPZS76..



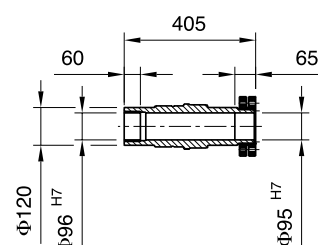
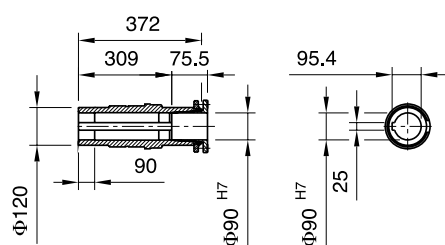
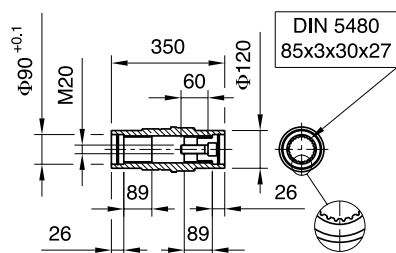
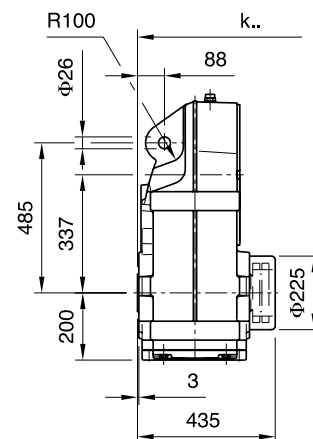
SPZT76..

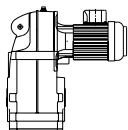


SPZB76..



SPZC76..





F

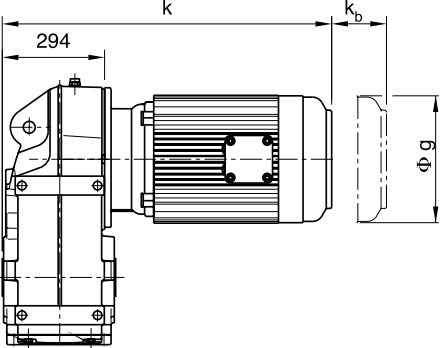
A

L

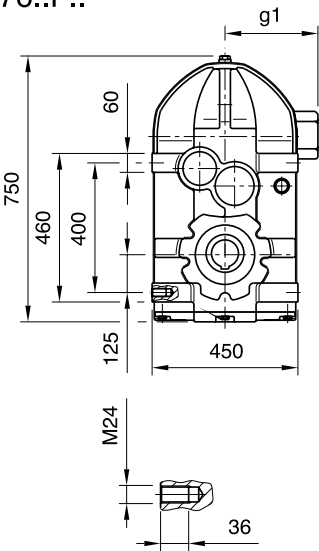
K

SP4

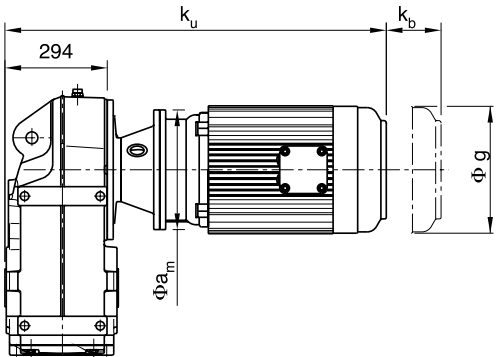
SPZ..76B/CF
100 - 180



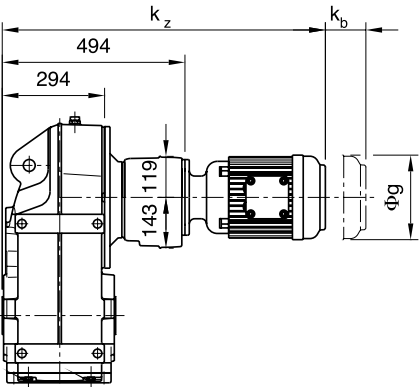
SPZ..76..F..



SPZ..76B/CF-U
100 - 280

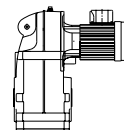


SPZ..76B/C36B/CF
63 - 160

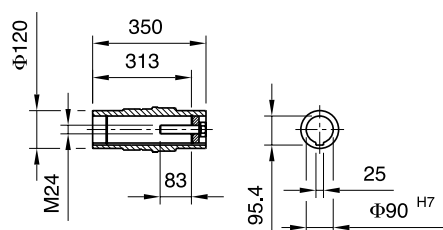
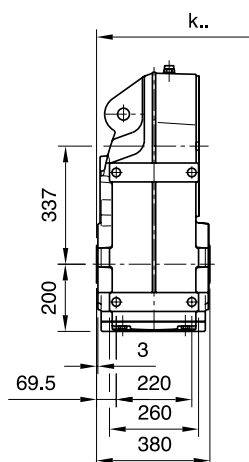


K,Kz,Ku is for reference only. Consult Rexnord for exact dimensions. K,Kz,Ku 仅供参考，精确尺寸请咨询 Rexnord。

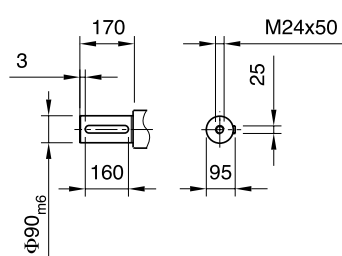
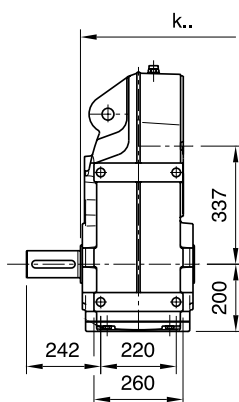
	63	71	80	90S	90L	100	112	132S	132M	132M/C	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k						605	618	687	722	722	835	879	864	902	976	1045	1085			
ku						736	751	818	853		996	1051	1233	1273	1338	1403	1433	1524	1619	1659
kz	718	722	745	787	787	825	838	907	942	942	1055	1099								
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
Øam						250	250	300	300		350	350	350	350	400	450	450	550	550	550



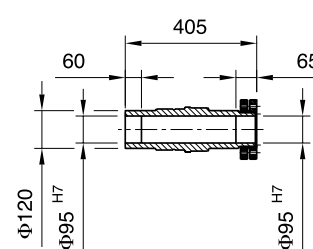
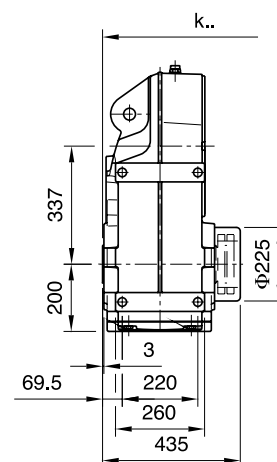
SPZH76..F..



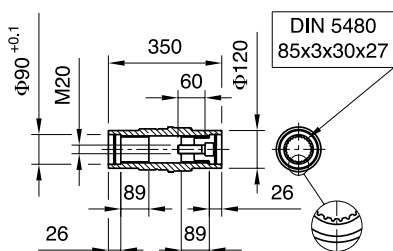
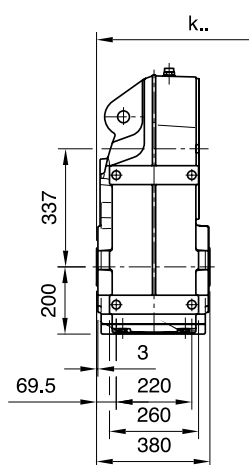
SPZN76..F..



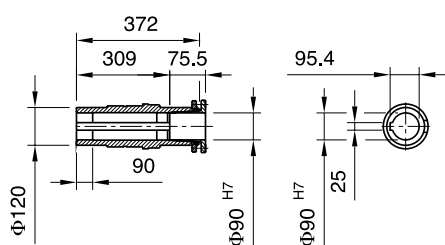
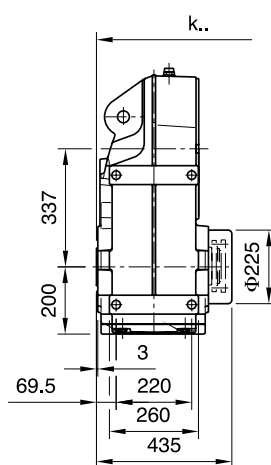
SPZS76..F..



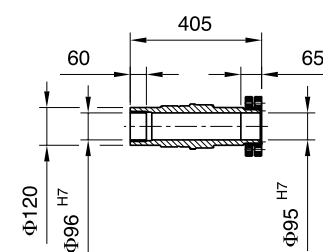
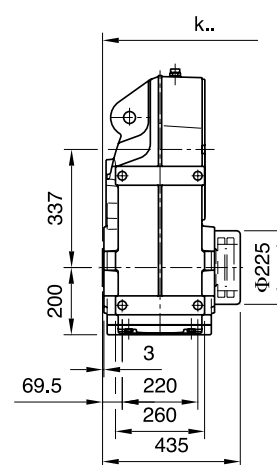
SPZT76..F..

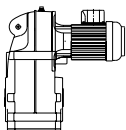


SPZB76..F..



SPZC76..F..





F

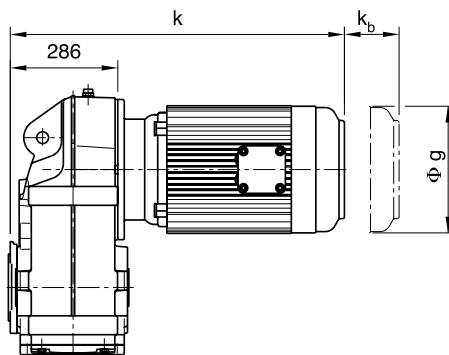
A

L

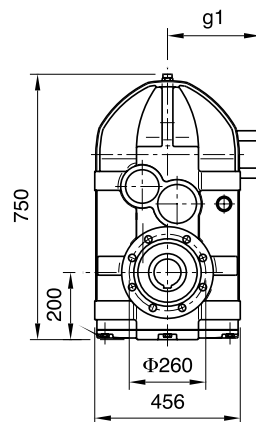
K

SP4

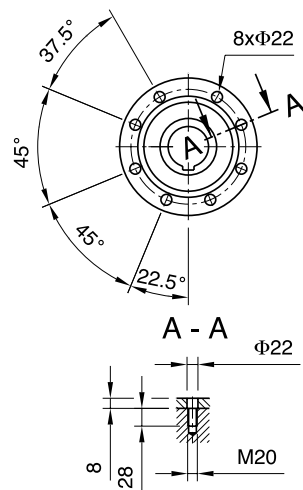
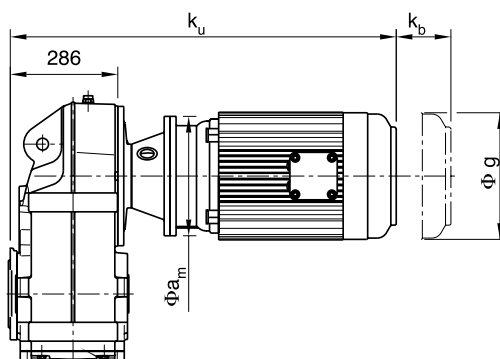
SPT..76B/C 100 - 180



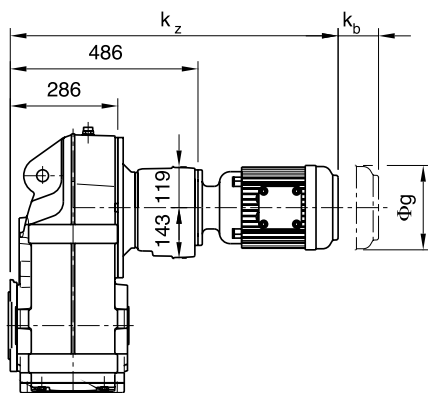
SPT..76..



SPT..76B/C-U 100 - 280



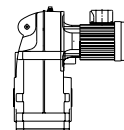
SPT..76B/C36B/C 63 - 160



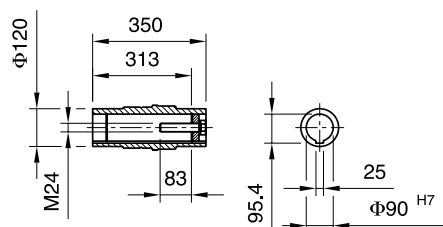
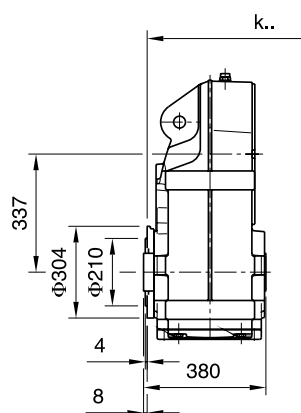
K, Kz, Ku is for reference only. Consult Rexnord for exact dimensions.

K, Kz, Ku 仅供参考，精确尺寸请咨询 Rexnord。

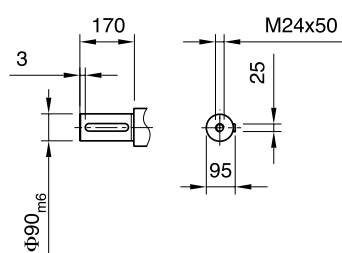
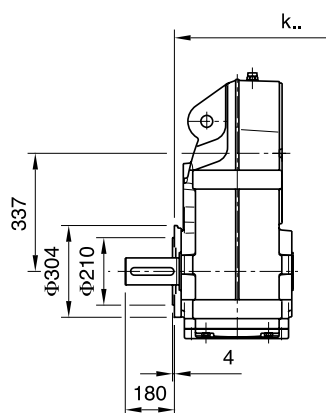
	63	71	80	90S	90L	100	112	132S	132M	132M/C	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k						597	610	679	714	714	827	871	856	894	968	1037	1077			
ku						728	743	810	845		988	1043	1225	1265	1330	1395	1425	1516	1611	1651
kz	710	714	737	779	779	817	830	899	934	934	1047	1091								
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
Φam						250	250	300	300		350	350	350	350	400	450	450	550	550	550



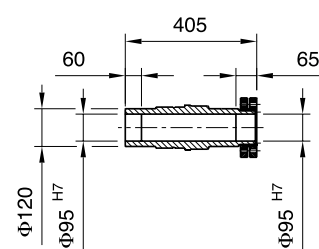
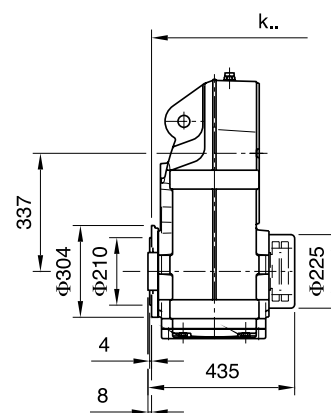
SPTH76..



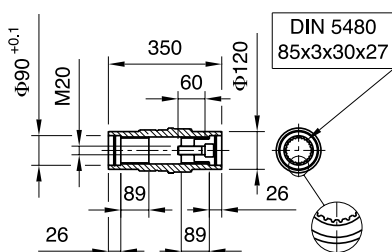
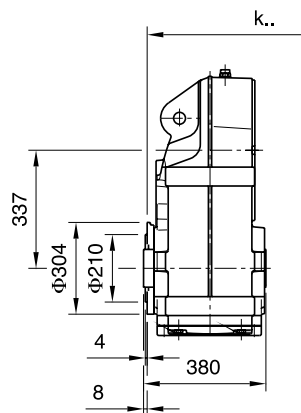
SPTN76..



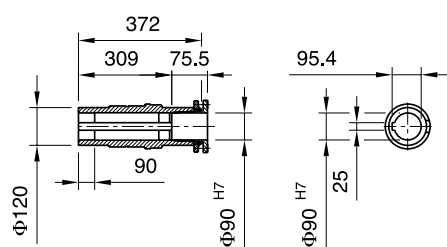
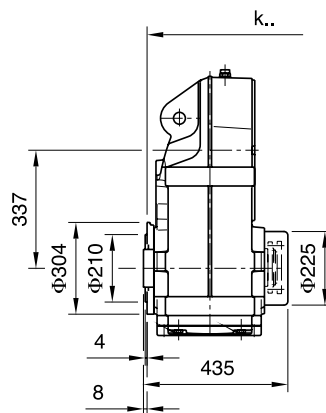
SPTS76..



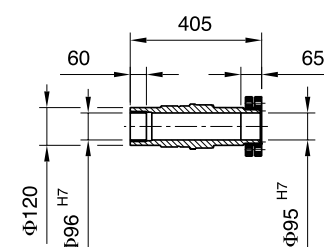
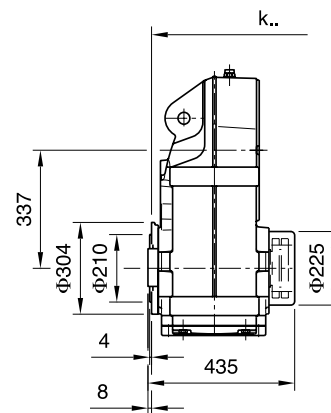
SPTT76..

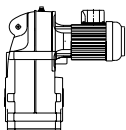


SPTB76..



SPTC76..





F

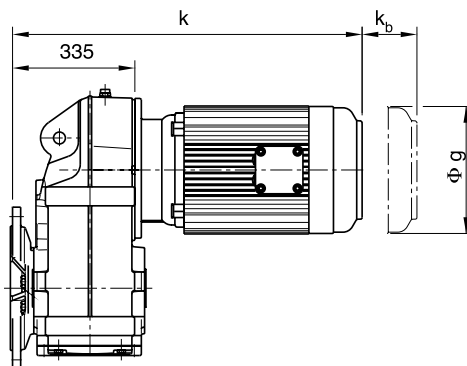
A

L

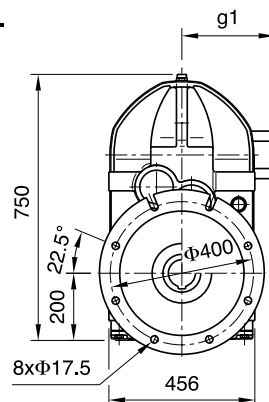
K

SP4

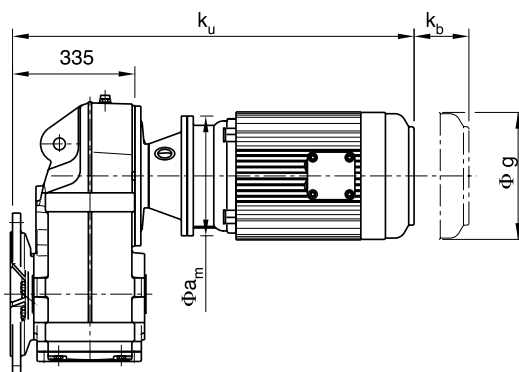
SPF..76B/C
100 - 180



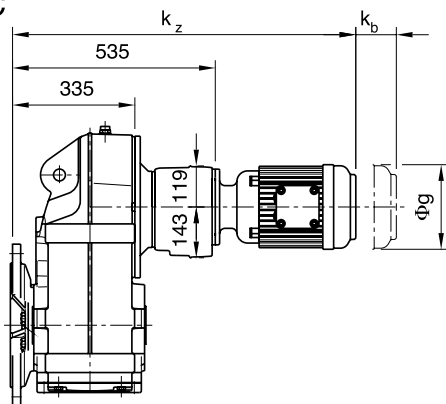
SPF..76..



SPF..76B/C-U
100 - 280



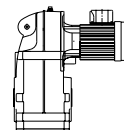
SPF..76B/C36B/C
63 - 160



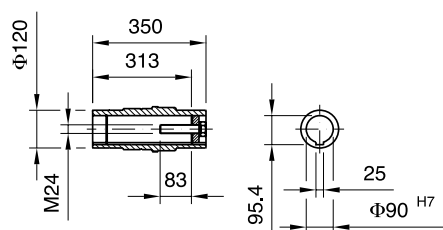
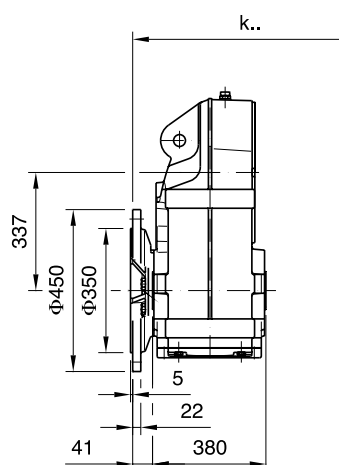
K, K_z, K_u is for reference only. Consult Rexnord for exact dimensions.

K, K_z, K_u 仅供参考，精确尺寸请咨询 Rexnord。

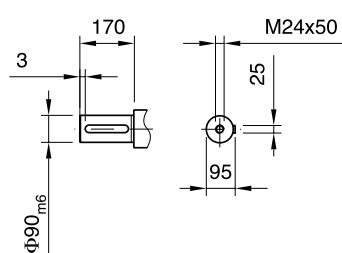
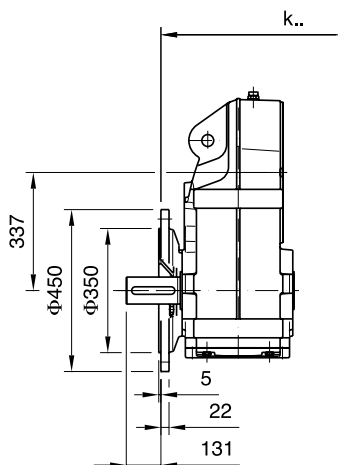
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k						646	659	728	763	763	876	920	905	943	1017	1086	1126			
k _u						777	792	859	894		1037	1092	1274	1314	1379	1444	1474	1565	1660	1700
k _z	759	763	786	828	828	866	879	948	983	983	1096	1140								
k _b	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
Φ g	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
Φ a _m						250	250	300	300		350	350	350	350	400	450	450	550	550	550



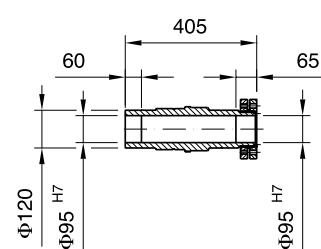
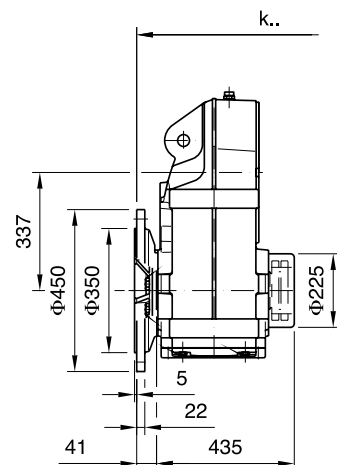
SPFH76..



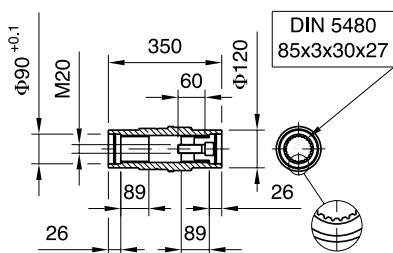
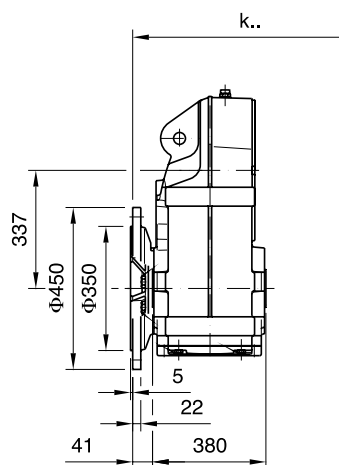
SPFN76..



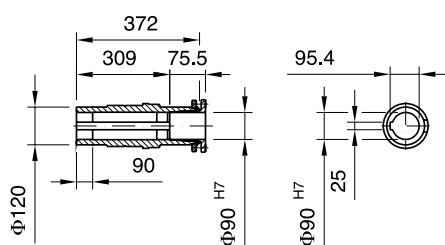
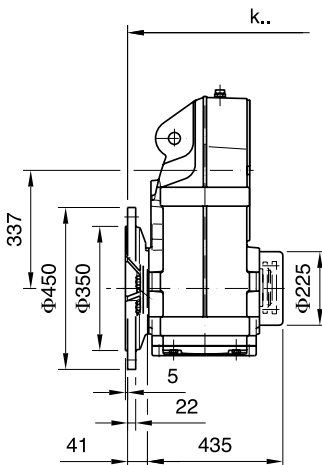
SPFS76..



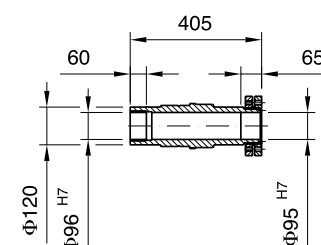
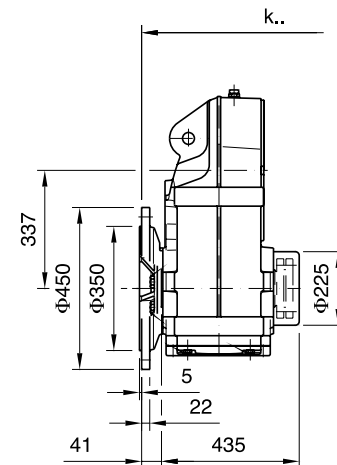
SPFT76..

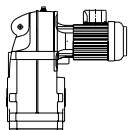


SPFB76..



SPFC76..





F

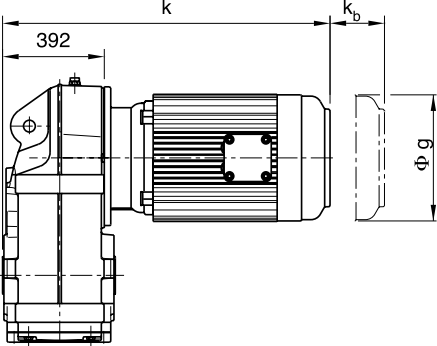
A

L

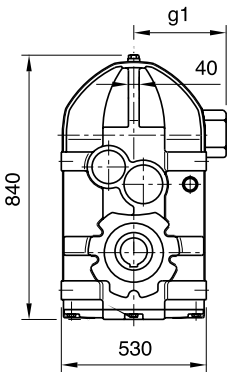
K

SP4

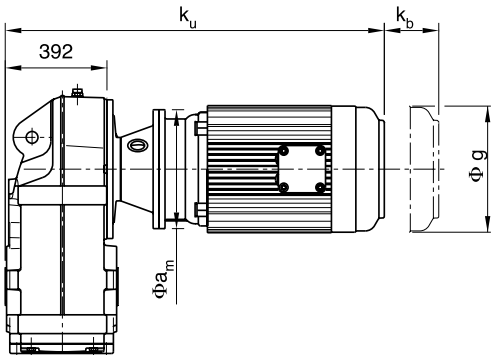
SPZ..86B/C
100 - 180



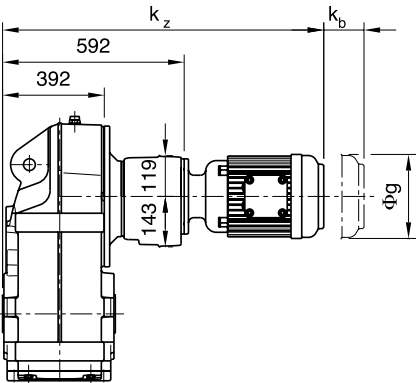
SPZ..86..



SPZ..86B/C-U
100 - 280



SPZ..86B/C36B/C
63 - 160

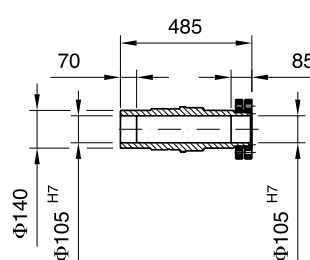
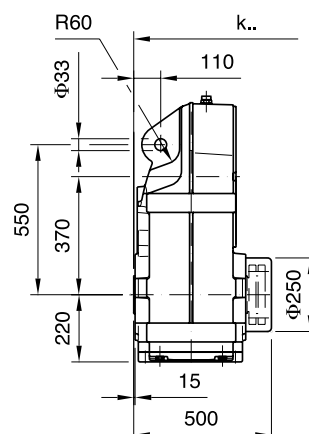


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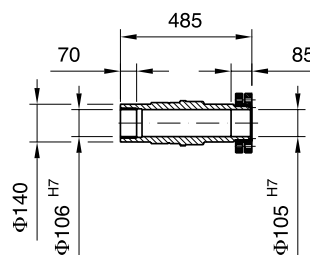
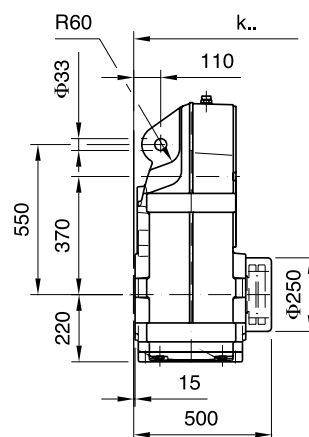
	63	71	80	90S	90L	100	112	132S	132M	132MG	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k						703	716	785	820	820	933	977	962	1000	1074	1143	1183			
ku						834	849	916	951		1094	1149	1331	1371	1436	1501	1531	1622	1717	1757
kz	816	820	843	885	885	923	936	1005	1040	1040	1153	1197								
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
Φam						250	250	300	300		350	350	350	350	400	450	450	550	550	550

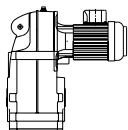


SPZS86..



SPZC86..





F

A

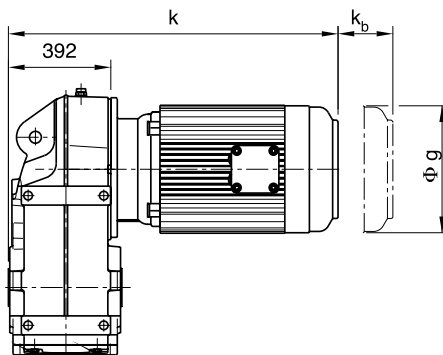
L

K

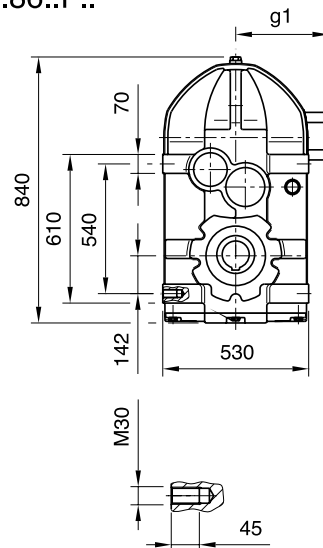
SP4

SPZ..86B/CF

100 - 180

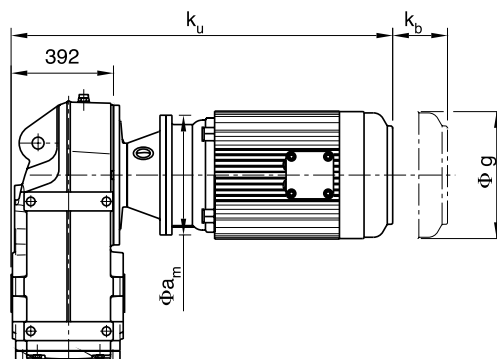


SPZ..86..F..



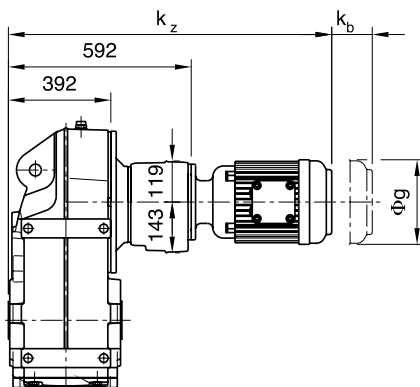
SPZ..86B/CF-U

100 - 280



SPZ..86B/C36B/CF

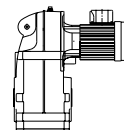
63 - 160



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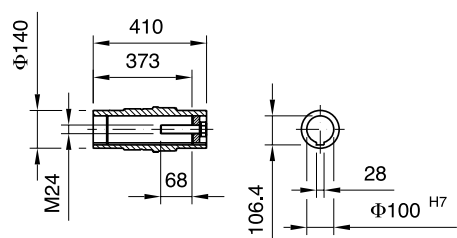
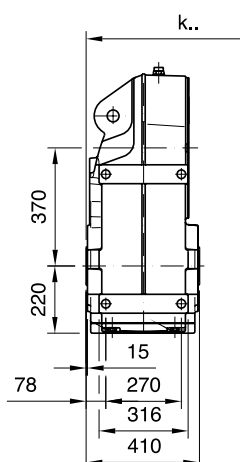
K, K_z, K_u 仅供参考，精确尺寸请咨询 Rexnord。

	63	71	80	90S	90L	100	112	132S	132M	132M/G	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k						703	716	785	820	820	933	977	962	1000	1074	1143	1183			
ku						834	849	916	951		1094	1149	1331	1371	1436	1501	1531	1622	1717	1757
kz	816	820	843	885	885	923	936	1005	1040	1040	1153	1197								
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
Øam						250	250	300	300		350	350	350	350	400	450	450	550	550	550

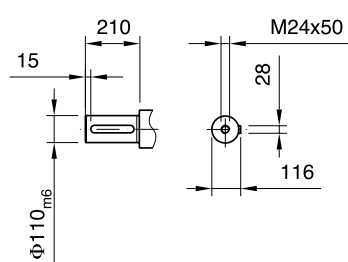
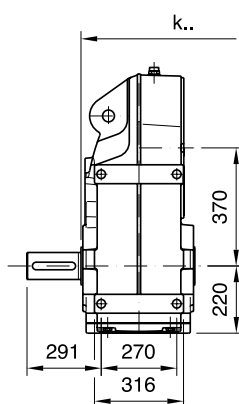


SP4

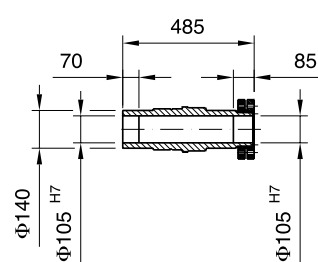
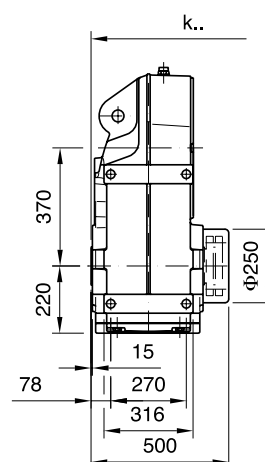
SPZH86..F..



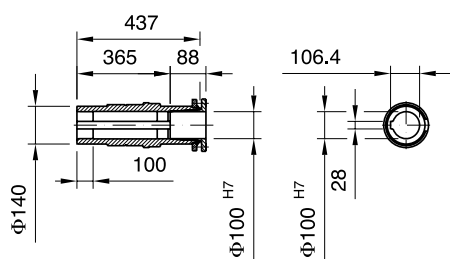
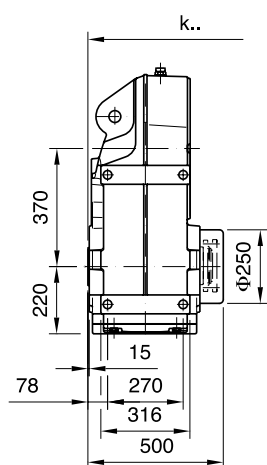
SPZN86..F..



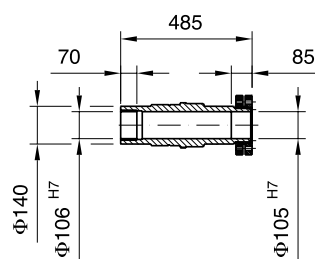
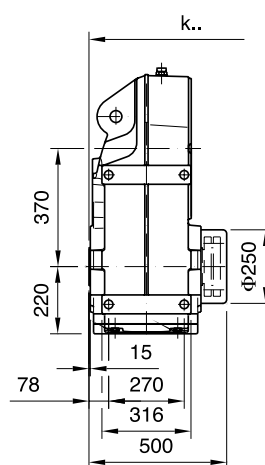
SPZS86..F..

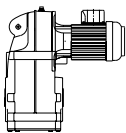


SPZB86..F..



SPZC86..F..





F

A

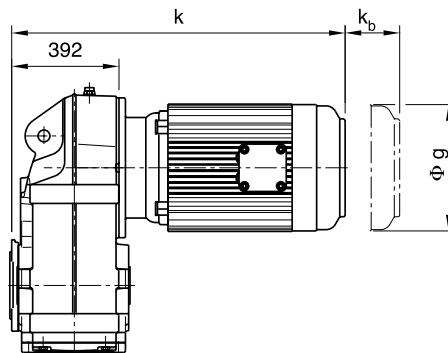
L

K

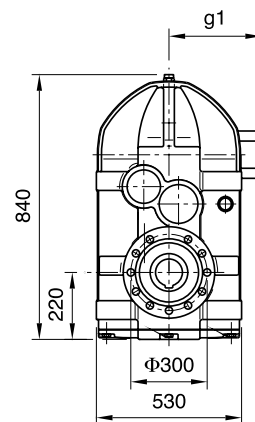
SP4

SPT..86B/C

100 - 180

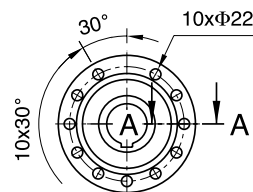
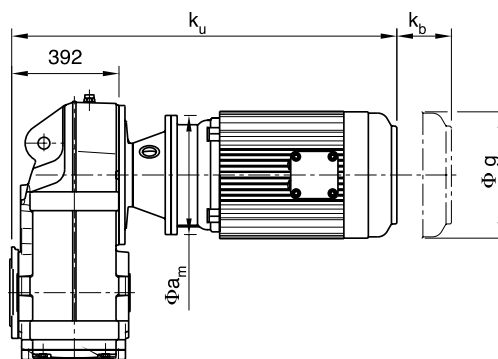


SPT..86..

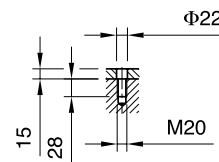


SPT..86B/C-U

100 - 280

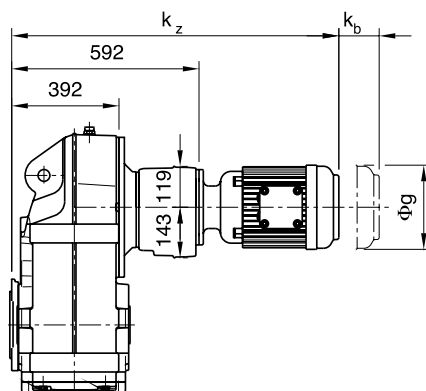


A - A



SPT..86B/C36B/C

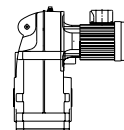
63 - 160



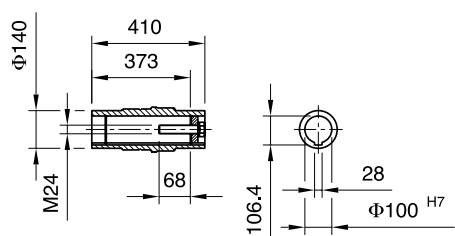
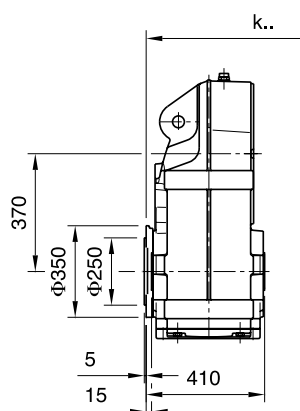
K, Kz, Ku is for reference only. Consult Rexnord for exact dimensions.

K, Kz, Ku 仅供参考, 精确尺寸请咨询 Rexnord。

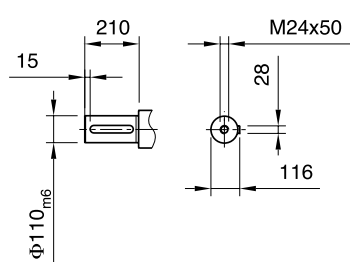
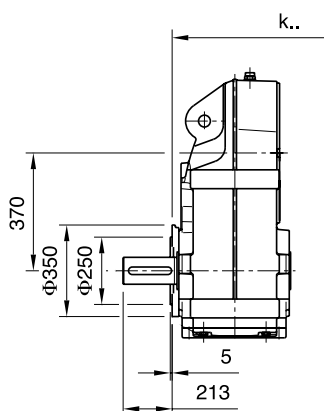
	63	71	80	90S	90L	100	112	132S	132M	132M/C	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k						703	716	785	820	820	933	977	962	1000	1074	1143	1183			
ku						834	849	916	951		1094	1149	1331	1371	1436	1501	1531	1622	1717	1757
kz	816	820	843	885	885	923	936	1005	1040	1040	1153	1197								
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
Φg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
Φam						250	250	300	300		350	350	350	350	400	450	450	550	550	550



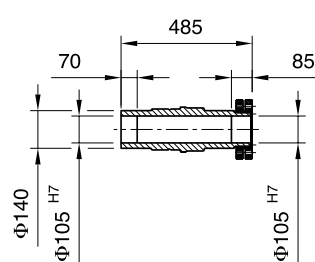
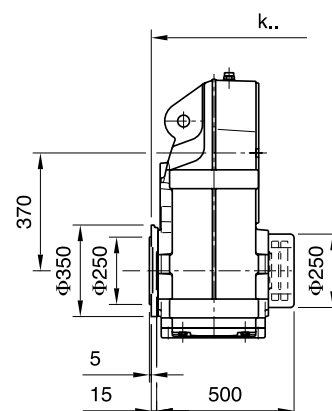
SPTH86..



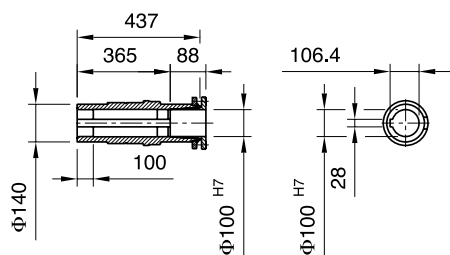
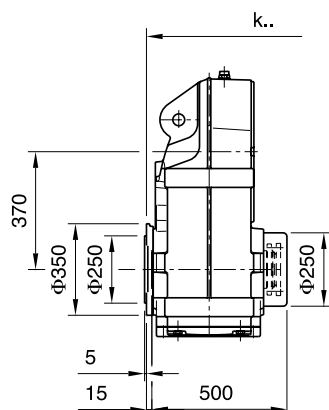
SPTN86..



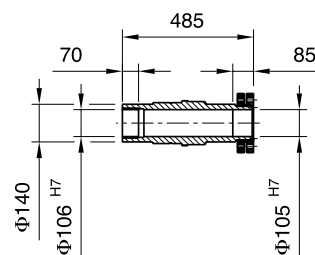
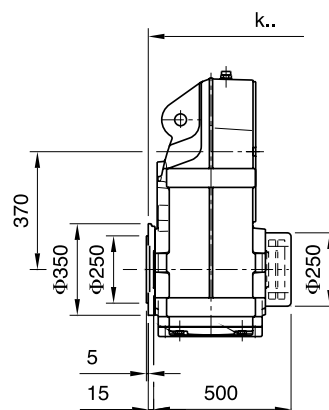
SPTS86..

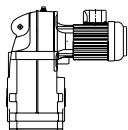


SPTB86..



SPTC86..





F

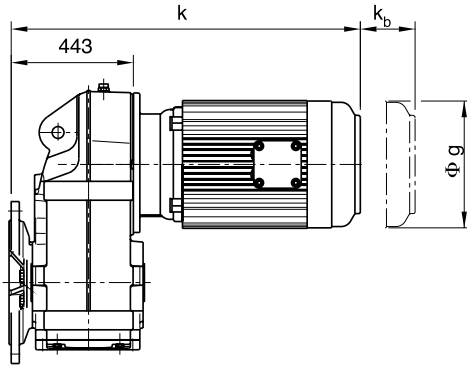
A

L

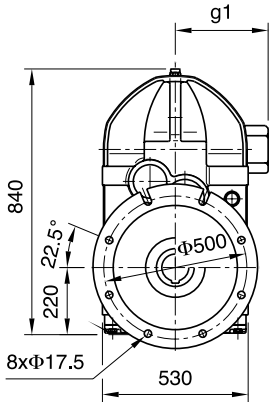
K

SP4

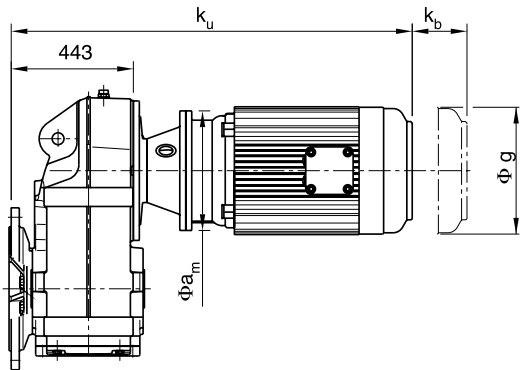
SPF..86B/C
100 - 180



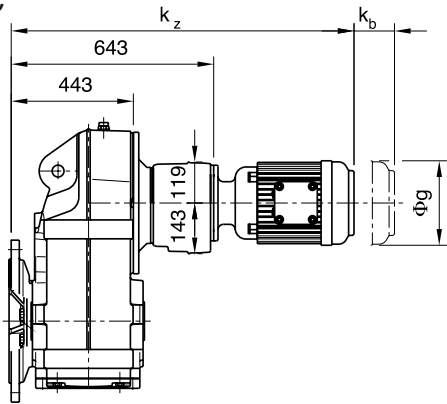
SPF..86..



SPF..86B/C-U
100 - 280



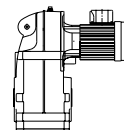
SPF..86B/C36B/C
63 - 160



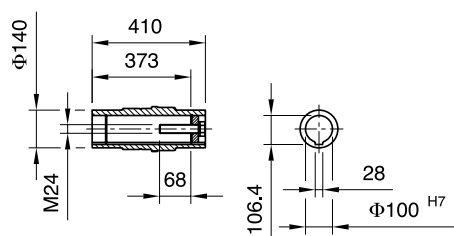
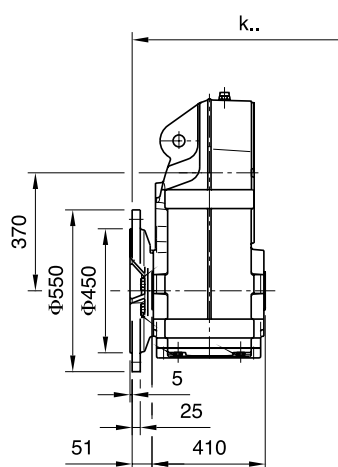
K,Kz,Ku is for reference only. Consult Rexnord for exact dimensions.

K,Kz,Ku 仅供参考，精确尺寸请咨询 Rexnord。

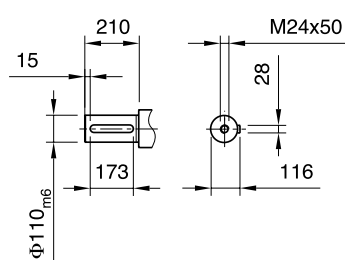
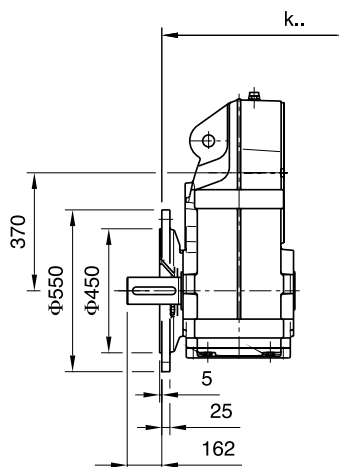
	63	71	80	90S	90L	100	112	132S	132M	132M/C	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M
k						754	767	836	871	871	984	1028	1013	1051	1125	1194	1234			
ku						885	900	967	1002		1145	1200	1382	1422	1487	1552	1582	1673	1768	1808
kz	867	871	894	936	936	974	987	1056	1091	1091	1204	1248								
kb	48	60	71	77	77	80	89	98	98	98	105	105	112	112	175	195	195			
øg	121	138	157	177	177	215	240	275	275	275	330	330	380	380	420	470	470	510	580	580
g1	96	102	125	133	133	144	165	182	182	182	287	287	312	312	350	385	385	375	445	445
øam						250	250	300	300		350	350	350	350	400	450	450	550	550	550



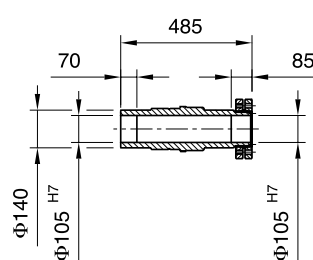
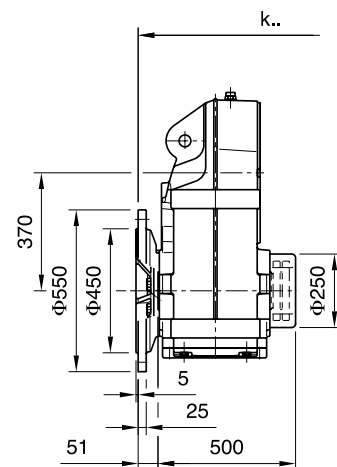
SPFH86..



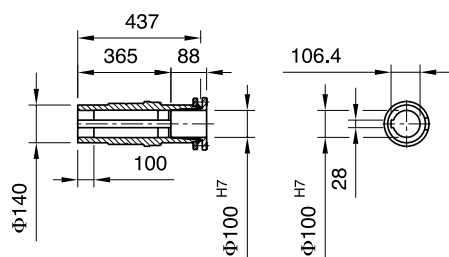
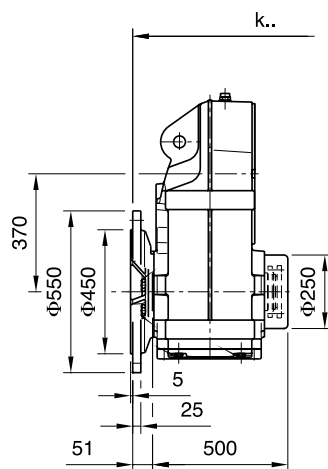
SPFN86..



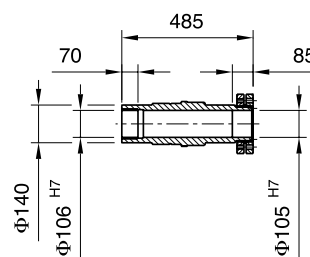
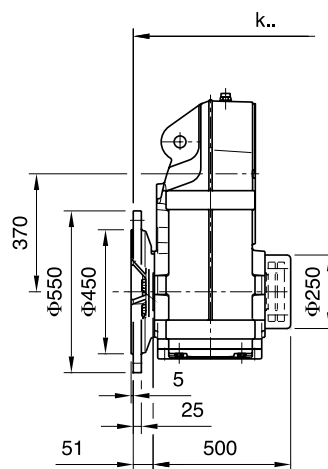
SPFS86..

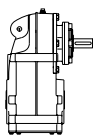


SPFB86..



SPFC86..





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SP4

2.5 Selection of gear unit SP4

2.5 SP4 齿轮减速机选型

Gear unit type and size

齿轮减速机型号和尺寸

Synchronous speed of motor
电动机同步转速

Weights

重量

Dimensional drawings

(All motor dimensions by Euro
spec, just for your reference)

尺寸图 (所有电机尺寸为欧洲
标准, 仅供参考)

SP..16		Type SP..16...-I SP..16...-U	m[kg] 25 27					 M310		200 Nm							
Type	...	n _{syn} = i _{ex}	1500min ⁻¹					1000 1/min					750 1/min				
		n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	
	2.8																
	3.15																
	3.55	3,47	433	4,0	88	2610	289	4,0	132	2690		216	3,7	165	2770		
	4	3,97	378	4,0	101	2630	252	4,0	152	2640		189	3,3	165	2910		
	4.5	4,26	352	4,1	112	2650	235	4,1	165	2700		176	3,0	165	3080		
	5	4,90	306	4,0	125	2670	204	3,5	165	2840		153	2,6	165	3280		
	5.6	5,67	265	4,0	144	2620	177	3,0	165	3000		132	2,3	165	3460		

Max. rated torque

最大额定转矩

Permissible radial force for reinforced bearings
重载轴承允许径向力

Permissible radial force
允许径向力

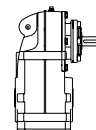
Torque at output shaft
输出轴扭矩

Mechanical rated power of gear unit
齿轮减速机机械额定功率

Selection speed of output shaft
输出轴速度选择

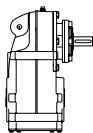
Exact gear ratio
实际传动比

Rated gear ratio
额定传动比



SP4

SP..16			Type SP..16...-I SP..16...-U		m[kg] 18 20		 M310		230 Nm									
Type	...	n _{syn} =	1500min ⁻¹					1000 1/min					750 1/min					
		i _{ex}	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	
SP...16B...	2.8																	
	3.15																	
	3.55	3.47	433	4.0	88	2610		289	4.0	132	2690		216	3.7	165	2770		
	4	3.97	378	4.0	101	2630		252	4.0	152	2640		189	3.3	165	2910		
	4.5	4.26	352	4.1	112	2650		235	4.1	165	2700		176	3.0	165	3080		
	5	4.90	306	4.0	125	2670		204	3.5	165	2840		153	2.6	165	3280		
	5.6	5.67	265	4.0	144	2620		177	3.0	165	3000		132	2.3	165	3460		
	6.3	6.10	246	4.0	155	2670		164	2.8	165	3180		123	2.1	165	3660		
	7.1	6.59	228	3.9	165	2770		152	2.6	165	3400		114	2.0	165	3900		
	8	7.73	194	3.4	165	2910		129	2.2	165	3590		97	1.7	165	4090		
	9	8.46	177	4.0	215	2910		118	2.8	230	3460		89	2.1	230	4000		
	10	9.69	155	3.7	230	2930		103	2.5	230	3640		77	1.9	230	4210		
	11.2	10.39	144	3.5	230	3100		96	2.3	230	3860		72	1.7	230	4440		
	12.5	11.95	126	3.0	230	3310		84	2.0	230	4080		63	1.5	230	4680		
	14	13.82	109	2.6	230	3550		72	1.7	230	4310		54	1.3	230	4920		
	16	16.08	93	2.2	230	3760		62	1.5	230	4570		47	1.1	230	5000		
	18	18.87	79	1.9	230	4000		53	1.3	230	4840		40	0.96	230	5000		
	20	20.52	73	1.8	230	4210		49	1.2	230	5000		37	0.88	230	5000		
	22.4	22.40	67	1.6	230	4440		45	1.1	230	5000		33	0.81	230	5000		
	25	24.55	61	1.5	230	4680		41	0.98	230	5000		31	0.74	230	5000		
	28	27.02	56	1.3	230	5000		37	0.89	230	5000		28	0.67	230	5000		
	31.5	29.91	50	1.2	230	5000		33	0.81	230	5000		25	0.60	230	5000		
	35.5	37.42	40	1.0	230	5000		27	0.64	230	5000		20	0.48	230	5000		
	40	41.65	36	0.87	230	5000		24	0.58	230	5000		18	0.43	230	5000		
	45	46.58	32	0.78	230	5000		21	0.52	230	5000		16	0.39	230	5000		
	50	49.00	31	0.74	230	5000		20	0.49	230	5000		15	0.37	230	5000		
	56	54.15	28	0.67	230	5000		18	0.44	230	5000		14	0.33	230	5000		
	63	60.33	25	0.60	230	5000		17	0.40	230	5000		12	0.30	230	5000		
71	74.98	20	0.48	230	5000		13	0.32	230	5000		10	0.24	230	5000			
80	83.24	18	0.43	230	5000		12	0.29	230	5000		9.0	0.22	230	5000			
90	93.33	16	0.39	230	5000		11	0.26	230	5000		8.0	0.19	230	5000			
100																		
SP...16C...	35.5																	
	40																	
	45																	
	50																	
	56																	
	63																	
	71																	
	80																	
	90																	
	100																	
	112																	
	125																	
	140																	
	160																	
	180																	
	200																	
SP...16B16B...	224																	
	250																	
	280																	
	315																	
	100	97.10	15	0.37	230	5000		10	0.25	230	5000		7.7	0.19	230	5000		
	112	113.0	13	0.32	230	5000		8.8	0.21	230	5000		6.6	0.16	230	5000		
	125	129.2	12	0.28	230	5000		7.7	0.19	230	5000		5.8	0.14	230	5000		
	140	139.3	11	0.26	230	5000		7.2	0.17	230	5000		5.4	0.13	230	5000		
	160	162.1	9.3	0.22	230	5000		6.2	0.15	230	5000		4.6	0.11	230	5000		
	180	174.9	8.6	0.21	230	5000		5.7	0.14	230	5000		4.3	0.10	230	5000		
	200	205.1	7.3	0.18	230	5000		4.9	0.12	230	5000		3.7	0.09	230	5000		
	224	223.3	6.7	0.16	230	5000		4.5	0.11	230	5000		3.4	0.08	230	5000		
	250	252.6	5.9	0.14	230	5000		4.0	0.10	230	5000		3.0	0.07	230	5000		
	280	279.7	5.4	0.13	230	5000		3.6	0.09	230	5000		2.7	0.06	230	5000		
	315	325.4	4.6	0.11	230	5000		3.1	0.07	230	5000		2.3	0.06	230	5000		
	355	362.5	4.1	0.10	230	5000		2.8	0.07	230	5000		2.1	0.05	230	5000		
	400	407.1	3.7	0.09	230	5000		2.5	0.06	230	5000		1.8	0.04	230	5000		
	450	453.0	3.3	0.08	230	5000		2.2	0.05	230	5000		1.7	0.04	230	5000		
	500	506.7	3.0	0.07	230	5000		2.0	0.05	230	5000		1.5	0.04	230	5000		
	560	564.1	2.7	0.06	230	5000		1.8	0.04	230	5000		1.3	0.03	230	5000		
	630	606.3	2.5	0.06	230	5000		1.6	0.04	230	5000		1.2	0.03	230	5000		
	710	677.3	2.2	0.05	230	5000		1.5	0.04	230	5000		1.1	0.03	230	5000		
	800	815.5	1.8	0.04	230	5000		1.2	0.03	230	5000		0.9	0.02	230	5000		
	900																	
	1000																	
	1120																	



F

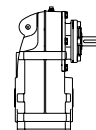
A

L

K

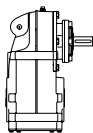
SP4

SP..26			Type SP..26...-I SP..26...-U		m[kg] 25 27		 M310		440 Nm									
Type	...	n _{syn} =	1500min ⁻¹					1000 1/min					750 1/min					
		i _{ex}	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	
SP...26B...	2.8																	
	3.15																	
	3.55																	
	4																	
	4.5	4.65	323	7.4	220	1500	6900	215	5.0	220	2000	6900	161	3.7	220	2500	6900	6900
	5	5.33	281	6.5	220	2000	6900	188	4.3	220	2500	6900	141	3.2	220	2500	6900	6900
	5.6	5.71	263	6.0	220	2000	6900	175	4.0	220	2500	6900	131	3.0	220	3000	6900	6900
	6.3	6.57	228	5.3	220	2000	6900	152	3.5	220	2500	6900	114	2.6	220	3000	6900	6900
	7.1	7.60	197	4.5	220	2500	6900	132	3.0	220	3000	6900	99	2.3	220	3500	6900	6900
	8	8.19	183	4.2	220	2500	6900	122	2.8	220	3000	6900	92	2.1	220	3500	6900	6900
	9	9.36	160	7.2	430	1000	6900	107	4.8	430	2000	6900	80	3.6	430	2000	6900	6900
	10	10.73	140	6.4	435	1500	6900	93	4.2	435	2000	6900	70	3.2	435	2500	6900	6900
	11.2	11.50	130	6.0	440	1500	6900	87	4.0	440	2000	6900	65	3.0	440	2500	6900	6900
	12.5	13.23	113	5.2	440	1500	6900	76	3.5	440	2000	6900	57	2.6	440	3000	6900	6900
	14	15.30	98	4.5	440	2000	6900	65	3.0	440	2500	6900	49	2.3	440	3000	6900	6900
	16	16.49	91	4.2	440	2000	6900	61	2.8	440	2500	6900	45	2.1	440	3500	6900	6900
	18	17.80	84	3.9	440	2000	6900	56	2.6	440	3000	6900	42	1.9	440	3500	6900	6900
	20	20.89	72	3.3	440	2500	6900	48	2.2	440	3000	6900	36	1.7	440	4000	6900	6900
	22.4	22.72	66	3.0	440	2500	6900	44	2.0	440	3500	6900	33	1.5	440	4000	6900	6900
	25	27.18	55	2.5	440	3000	6900	37	1.7	440	3500	6900	28	1.3	440	4500	6900	6900
	28	29.92	50	2.3	440	3000	6900	33	1.5	440	4000	6900	25	1.2	440	4500	6900	6900
	31.5	33.11	45	2.1	440	3500	6900	30	1.4	440	4500	6900	23	1.0	440	4500	6900	6900
	35.5	36.89	41	1.9	440	3500	6900	27	1.2	440	4500	6900	20	0.94	440	4500	6900	6900
	40	41.43	36	1.7	440	4000	6900	24	1.1	440	4500	6900	18	0.83	440	4500	6900	6900
	45	46.12	33	1.5	440	4000	6900	22	1.0	440	4500	6900	16	0.75	440	4500	6900	6900
	50	51.57	29	1.3	440	4500	6900	19	0.89	440	4500	6900	15	0.67	440	4500	6900	6900
56	59.95	25	1.2	440	4500	6900	17	0.77	440	4500	6900	13	0.58	440	4500	6900	6900	
63	66.79	22	1.0	440	4500	6900	15	0.69	440	4500	6900	11	0.52	440	4500	6900	6900	
71	68.94	22	0.83	365	4500	6900	15	0.55	365	4500	6900	11	0.42	365	4500	6900	6900	
80	83.01	18	0.68	360	4500	6900	12	0.45	360	4500	6900	9.0	0.34	360	4500	6900	6900	
90	92.15	16	0.57	335	4500	6900	11	0.38	335	4500	6900	8.1	0.29	335	4500	6900	6900	
100	103.33	15	0.47	310	4500	6900	10	0.31	310	4500	6900	7.3	0.24	310	4500	6900	6900	
SP...26C...	35.5																	
	40																	
	45																	
	50																	
	56																	
	63																	
	71																	
	80																	
	90																	
	100																	
	112																	
	125																	
	140																	
	160																	
	180																	
	200																	
SP...26B16B...	224																	
	250																	
	280																	
	315																	
	100	101.80	15	0.68	440	4500	6900	10	0.45	440	4500	6900	7.4	0.34	440	4500	6900	6900
	112	108.1	14	0.64	440	4500	6900	9.3	0.43	440	4500	6900	6.9	0.32	440	4500	6900	6900
	125	125.1	12	0.55	440	4500	6900	8.0	0.37	440	4500	6900	6.0	0.28	440	4500	6900	6900
	140	143.9	10	0.48	440	4500	6900	6.9	0.32	440	4500	6900	5.2	0.24	440	4500	6900	6900
	160	154.2	9.7	0.45	440	4500	6900	6.5	0.30	440	4500	6900	4.9	0.22	440	4500	6900	6900
	180	179.4	8.4	0.39	440	4500	6900	5.6	0.26	440	4500	6900	4.2	0.19	440	4500	6900	6900
	200	195.2	7.7	0.35	440	4500	6900	5.1	0.24	440	4500	6900	3.8	0.18	440	4500	6900	6900
	224	227.1	6.6	0.30	440	4500	6900	4.4	0.20	440	4500	6900	3.3	0.15	440	4500	6900	6900
	250	247.2	6.1	0.28	440	4500	6900	4.0	0.19	440	4500	6900	3.0	0.14	440	4500	6900	6900
	280	273.8	5.5	0.25	440	4500	6900	3.7	0.17	440	4500	6900	2.7	0.13	440	4500	6900	6900
	315	309.6	4.8	0.22	440	4500	6900	3.2	0.15	440	4500	6900	2.4	0.11	440	4500	6900	6900
	355	360.3	4.2	0.19	440	4500	6900	2.8	0.13	440	4500	6900	2.1	0.10	440	4500	6900	6900
	400	401.4	3.7	0.17	440	4500	6900	2.5	0.11	440	4500	6900	1.9	0.09	440	4500	6900	6900
	450	450.7	3.3	0.15	440	4500	6900	2.2	0.10	440	4500	6900	1.7	0.08	440	4500	6900	6900
	500	501.6	3.0	0.14	440	4500	6900	2.0	0.09	440	4500	6900	1.5	0.07	440	4500	6900	6900
	560	561.0	2.7	0.12	440	4500	6900	1.8	0.08	440	4500	6900	1.3	0.06	440	4500	6900	6900
630	624.5	2.4	0.11	440	4500	6900	1.6	0.07	440	4500	6900	1.2	0.06	440	4500	6900	6900	
710	726.6	2.1	0.10	440	4500	6900	1.4	0.06	440	4500	6900	1.0	0.05	440	4500	6900	6900	
800	749.8	2.0	0.09	440	4500	6900	1.3	0.06	440	4500	6900	1.0	0.05	440	4500	6900	6900	
900	902.9	1.7	0.08	440	4500	6900	1.1	0.05	440	4500	6900	0.83	0.04	440	4500	6900	6900	
1000																		
1120																		



SP4

SP..16			Type SP..36....-I SP..36....-U		m[kg] 34 38		 M326		850 Nm									
Type	...	n _{syn} =	1500min ⁻¹					1000 1/min					750 1/min					
		i _{ex}	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	
SP...36B...	2.8																	
	3.15	2.97	505	15	284	1500	9450	337	13	365	1500	10330	253	9.7	365	2000	11480	
	3.55	3.45	435	15	329	1500	6580	290	11	365	2000	10840	218	8.3	365	2000	12060	
	4	3.86	389	15	369	1500	9710	259	11	410	1500	11020	194	8.3	410	2000	12180	
	4.5	4.42	339	15	415	1000	9830	226	9.8	415	2000	11540	170	7.4	415	2000	12660	
	5	4.85	309	13	415	1500	10230	206	9.0	415	2000	11940	155	6.7	415	2500	13250	
	5.6	5.60	268	12	415	1500	10670	179	7.8	415	2000	12420	134	5.8	415	2500	13500	
	6.3	6.19	242	11	415	1500	11140	162	7.0	415	2500	13500	121	5.3	415	3000	13500	
	7.1	6.87	218	9	415	2000	11300	146	6.3	415	2500	13390	109	4.7	415	3000	13500	
	8	8.07	186	14	740	500	11620	124	9.6	740	1500	13500	93	7.2	740	2000	13500	
	9	9.37	160	13	800	500	11830	107	8.9	800	1000	13500	80	6.7	800	2000	13500	
	10	10.49	143	13	850	500	12360	95	8.5	850	1000	13500	71	6.4	850	1500	13500	
	11.2	12.01	125	11	850	500	12950	83	7.4	850	1500	13500	62	5.6	850	2000	13500	
	12.5	13.18	114	10	850	500	13500	76	6.8	850	1500	13500	57	5.1	850	2000	13500	
	14	15.23	98	8.8	850	1000	13500	66	5.8	850	2000	13500	49	4.4	850	2500	13500	
	16	16.83	89	7.9	850	1000	13500	59	5.3	850	2000	13500	45	4.0	850	3000	13500	
	18	18.68	80	7.1	850	1500	13500	54	4.8	850	2500	13500	40	3.6	850	3000	13500	
	20	20.01	75	6.7	850	1500	13500	50	4.4	850	2500	13500	37	3.3	850	3500	13500	
	22.4	23.40	64	5.7	850	2000	13500	43	3.8	850	3000	13500	32	2.9	850	4000	13500	
	25	25.20	60	5.3	850	2000	13500	40	3.5	850	3500	13500	30	2.6	850	4000	13500	
28	28.62	52	4.7	850	2500	13500	35	3.1	850	3500	13500	26	2.3	850	4500	13500		
31.5	32.41	46	4.1	850	3000	13500	31	2.7	850	4000	13500	23	2.1	850	4500	13500		
35.5	35.34	42	3.8	850	3000	13500	28	2.5	850	4500	13500	21	1.9	850	4500	13500		
40	40.91	37	3.3	850	3500	13500	24	2.2	850	4500	13500	18	1.6	850	4500	13500		
45	45.17	33	3.0	850	4000	13500	22	2.0	850	4500	13500	17	1.5	850	4500	13500		
50	54.05	28	2.5	850	4000	13500	19	1.6	850	4500	13500	14	1.2	850	4500	13500		
56	60.18	25	2.2	850	4500	13500	17	1.5	850	4500	13500	12	1.1	850	4500	13500		
63	66.57	23	2.0	850	4500	13500	15	1.3	850	4500	13500	11	1.0	850	4500	13500		
71	73.95	20	1.8	850	4500	13500	14	1.2	850	4500	13500	10	0.90	850	4500	13500		
80	77.94	19	1.7	850	4500	13500	13	1.1	850	4500	13500	9.6	0.86	850	4500	13500		
90	85.68	18	1.6	850	4500	13500	12	1.0	850	4500	13500	8.8	0.78	850	4500	13500		
100	106.33	14	1.2	800	4500	13500	9.4	0.79	800	4500	13500	7.1	0.59	800	4500	13500		
SP...36C...	35.5																	
	40																	
	45																	
	50																	
	56																	
	63																	
	71																	
	80																	
	90																	
	100																	
	112																	
	125																	
140																		
160																		
180																		
200																		
224																		
250																		
280																		
315																		
SP...36B16B...	100	99.85	15	1.3	850	4500	13500	10.0	0.89	850	4500	13500	7.5	0.67	850	4500	13500	
	112	107.0	14	1.2	850	4500	13500	9.3	0.83	850	4500	13500	7.0	0.62	850	4500	13500	
	125	123.1	12	1.1	850	4500	13500	8.1	0.72	850	4500	13500	6.1	0.54	850	4500	13500	
	140	142.3	11	0.94	850	4500	13500	7.0	0.63	850	4500	13500	5.3	0.47	850	4500	13500	
	160	153.5	9.8	0.87	850	4500	13500	6.5	0.58	850	4500	13500	4.9	0.43	850	4500	13500	
	180	183.1	8.2	0.73	850	4500	13500	5.5	0.49	850	4500	13500	4.1	0.36	850	4500	13500	
	200	194.3	7.7	0.69	850	4500	13500	5.1	0.46	850	4500	13500	3.9	0.34	850	4500	13500	
	224	219.0	6.9	0.61	850	4500	13500	4.6	0.41	850	4500	13500	3.4	0.30	850	4500	13500	
	250	252.9	5.9	0.53	850	4500	13500	4.0	0.35	850	4500	13500	3.0	0.26	850	4500	13500	
	280	278.3	5.4	0.48	850	4500	13500	3.6	0.32	850	4500	13500	2.7	0.24	850	4500	13500	
	315	308.2	4.9	0.43	850	4500	13500	3.2	0.29	850	4500	13500	2.4	0.22	850	4500	13500	
	355	343.3	4.4	0.39	850	4500	13500	2.9	0.26	850	4500	13500	2.2	0.19	850	4500	13500	
	400	385.5	3.9	0.35	850	4500	13500	2.6	0.23	850	4500	13500	1.9	0.17	850	4500	13500	
	450	440.2	3.4	0.30	850	4500	13500	2.3	0.20	850	4500	13500	1.7	0.15	850	4500	13500	
	500	483.0	3.1	0.28	850	4500	13500	2.1	0.18	850	4500	13500	1.6	0.14	850	4500	13500	
	560	557.8	2.7	0.24	850	4500	13500	1.8	0.16	850	4500	13500	1.3	0.12	850	4500	13500	
	630	621.5	2.4	0.21	850	4500	13500	1.6	0.14	850	4500	13500	1.2	0.11	850	4500	13500	
	710	733.2	2.0	0.18	850	4500	13500	1.4	0.12	850	4500	13500	1.0	0.09	850	4500	13500	
	800	816.8	1.8	0.16	850	4500	13500	1.2	0.11	850	4500	13500	0.92	0.08	850	4500	13500	
	900	947.8	1.6	0.14	850	4500	13500	1.1	0.09	850	4500	13500	0.79	0.07	850	4500	13500	
1000	1015	1	0.13	850	4500	13500	1.0	0.09	850	4500	13500	0.74	0.07	850	4500	13500		
1120																		



F

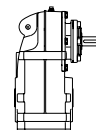
A

L

K

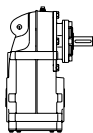
SP4

SP..46			Type SP..46....I SP..46....U		m[kg] 70 84		 M334		1700 Nm									
Type	...	n _{syn} =	1500min ⁻¹					1000 1/min					750 1/min					
		i _{ex}	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	
SP...46B...	2.8																	
	3.15	3.29	456	22	461	2000	10780	304	17525	33404	2000	12090	228	14	580	2500	13140	
	3.55	3.64	412	22	510	2000	10930	274	17	585	2000	12310	206	14	645	2000	13360	
	4	4.19	358	21	570	1500	11090	238	16	650	2000	12470	179	13	720	2000	13500	
	4.5	4.75	316	20	610	1500	11370	210	15	695	2000	12880	158	13	770	2000	13790	
	5	5.35	281	19	650	1500	11660	187	14	740	2000	13100	140	12	820	2000	14270	
	5.6	6.13	245	18	690	1500	11930	163	13	790	2000	13440	122	11	870	2000	14560	
	6.3	6.77	222	17	730	1500	12280	148	13	835	2000	13800	111	11	920	2000	14390	
	7.1	7.45	201	16	760	1500	12760	134	12	870	2000	14360	101	9	860	2500	16120	
	8	7.87	191	18	900	1500	12580	127	14	1030	2000	14220	95	11	1135	2000	15350	
	9	8.82	170	17	950	1500	13060	113	13	1085	2000	14710	85	11	1200	2000	15910	
	10	10.15	148	15	1000	1500	13240	99	12	1140	2000	15000	74	9.7	1260	2000	16270	
	11.2	11.51	130	14	1060	1500	13620	87	11	1210	2000	15410	65	9.1	1340	2000	16690	
	12.5	12.95	116	13	1100	2000	14100	77	10	1260	2000	15840	58	8.4	1390	2000	17200	
	14	14.85	101	12	1140	2000	14720	67	9.2	1300	2000	16410	51	7.6	1440	2000	17630	
	16	16.38	92	11	1170	2000	15200	61	8.5	1335	2000	17050	46	7.1	1480	2500	18000	
	18	18.03	83	11	1210	2000	15770	55	8.0	1380	2500	17710	42	6.6	1525	2500	18000	
	20	20.31	74	9.7	1250	2000	16270	49	7.3	1425	2500	18000	37	6.1	1575	2500	18000	
	22.4	22.52	67	9.1	1300	2000	16770	44	6.9	1480	2500	18000	33	5.7	1640	2500	18000	
	25	25.80	58	8.2	1350	2500	17340	39	6.3	1540	2500	18000	29	5.2	1700	3000	18000	
28	30.30	50	7.3	1400	2500	17850	33	5.5	1600	3000	18000	25	4.4	1700	3500	18000		
31.5	32.42	46	7.0	1450	2500	18000	31	5.3	1650	3000	18000	23	4.1	1700	3500	18000		
35.5	36.21	41	6.5	1510	2500	18000	28	4.9	1700	3000	18000	21	3.7	1700	4000	18000		
40	41.31	36	6.0	1570	2500	18000	24	4.3	1700	3500	18000	18	3.2	1700	4500	18000		
45	44.79	33	5.7	1620	3000	18000	22	4.0	1700	4000	18000	17	3.0	1700	5000	18000		
50	51.70	29	5.2	1700	3000	18000	19	3.4	1700	4500	18000	15	2.6	1700	5500	18000		
56	56.78	26	4.7	1700	3500	18000	18	3.1	1700	5000	18000	13	2.4	1700	5500	18000		
63	67.76	22	3.9	1700	4000	18000	15	2.6	1700	5500	18000	11	2.0	1700	5500	18000		
71	75.97	20	3.4	1650	4500	18000	13	2.3	1650	5500	18000	10	1.7	1650	5500	18000		
80																		
90																		
100																		
SP...46C...	35.5	35.83	42	5.9	1350	3500	18000	28	5.0	1700	3000	18000	21	3.7	1700	4000	18000	
	40	41.39	36	5.3	1400	3500	18000	24	4.3	1700	3500	18000	18	3.2	1700	4500	18000	
	45	45.75	33	5.0	1460	3500	18000	22	3.9	1700	4000	18000	16	2.9	1700	5500	18000	
	50	50.79	30	4.6	1500	4000	18000	20	3.5	1700	4500	18000	15	2.6	1700	5500	18000	
	56	54.40	28	4.4	1540	4000	18000	18	3.3	1700	5000	18000	14	2.5	1700	5500	18000	
	63	63.60	24	4.0	1620	4000	18000	16	2.8	1700	5500	18000	12	2.1	1700	5500	18000	
	71	68.51	22	3.8	1660	4500	18000	15	2.6	1700	5500	18000	11	1.9	1700	5500	18000	
	80	77.80	19	3.4	1700	4500	18000	13	2.3	1700	5500	18000	9.6	1.7	1700	5500	18000	
	90	88.11	17	3.0	1700	5500	18000	11	2.0	1700	5500	18000	8.5	1.5	1700	5500	18000	
	100	96.08	16	2.8	1700	5500	18000	10	1.9	1700	5500	18000	7.8	1.4	1700	5500	18000	
	112	111.20	13	2.4	1700	5500	18000	9.0	1.6	1700	5500	18000	6.7	1.2	1700	5500	18000	
	125	122.80	12	2.2	1700	5500	18000	8.1	1.4	1700	5500	18000	6.1	1.1	1700	5500	18000	
	140	146.90	10	1.8	1700	5500	18000	6.8	1.2	1700	5500	18000	5.1	0.91	1700	5500	18000	
	160	163.60	9.2	1.6	1700	5500	18000	6.1	1.1	1700	5500	18000	4.6	0.82	1700	5500	18000	
	180	181.00	8.3	1.5	1700	5500	18000	5.5	0.98	1700	5500	18000	4.1	0.74	1700	5500	18000	
	200	201.00	7.5	1.3	1700	5500	18000	5.0	0.89	1700	5500	18000	3.7	0.66	1700	5500	18000	
224																		
250																		
280																		
315																		
SP...46B16C...	100																	
	112																	
	125																	
	140																	
	160																	
	180	182.2	8.2	1.5	1700	5500	18000	5.5	0.98	1700	5500	18000	4.1	0.73	1700	5500	18000	
	200	210.6	7.1	1.3	1700	5500	18000	4.7	0.85	1700	5500	18000	3.6	0.63	1700	5500	18000	
	224	227.0	6.6	1.2	1700	5500	18000	4.4	0.78	1700	5500	18000	3.3	0.59	1700	5500	18000	
	250	245.1	6.1	1.1	1700	5500	18000	4.1	0.73	1700	5500	18000	3.1	0.54	1700	5500	18000	
	280	287.4	5.2	0.93	1700	5500	18000	3.5	0.62	1700	5500	18000	2.6	0.46	1700	5500	18000	
	315	312.9	4.8	0.85	1700	5500	18000	3.2	0.57	1700	5500	18000	2.4	0.43	1700	5500	18000	
	355	374.1	4.0	0.71	1700	5500	18000	2.7	0.48	1700	5500	18000	2.0	0.36	1700	5500	18000	
	400	411.7	3.6	0.65	1700	5500	18000	2.4	0.43	1700	5500	18000	1.8	0.32	1700	5500	18000	
	450	455.9	3.3	0.59	1700	5500	18000	2.2	0.39	1700	5500	18000	1.6	0.29	1700	5500	18000	
	500	507.9	3.0	0.53	1700	5500	18000	2.0	0.35	1700	5500	18000	1.5	0.26	1700	5500	18000	
	560	570.3	2.6	0.47	1700	5500	18000	1.8	0.31	1700	5500	18000	1.3	0.23	1700	5500	18000	
630	634.7	2.4	0.42	1700	5500	18000	1.6	0.28	1700	5500	18000	1.2	0.21	1700	5500	18000		
710	710.0	2.1	0.38	1700	5500	18000	1.4	0.25	1700	5500	18000	1.1	0.19	1700	5500	18000		
800	825.3	1.8	0.32	1700	5500	18000	1.2	0.22	1700	5500	18000	0.91	0.16	1700	5500	18000		
900	919.4	1.6	0.29	1700	5500	18000	1.1	0.19	1700	5500	18000	0.82	0.15	1700	5500	18000		
1000	949	1.6	0.28	1700	5500	18000	1.1	0.19	1700	5500	18000	0.79	0.14	1700	5500	18000		
1120	1143	1.3	0.23	1700	5500	18000	0.88	0.16	1700	5500	18000	0.7	0.12	1700	5500	18000		



SP4

SP..56			Type SP..56....-I SP..56....-U		m[kg] 107 121		 M342		2900 Nm									
Type	...	n _{syn} =	1500min ⁻¹					1000 1/min					750 1/min					
		i _{ex}	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	
SP...56B...	2.8																	
	3.15	3.19	470	39	793	2000	13450	313	30	905	2500	15120	235	25	1000	2500	16440	
	3.55	3.52	426	39	875	2000	13760	284	30	1000	2000	15470	213	25	1100	2500	16860	
	4	4.06	370	39	1007	1500	13770	247	30	1150	1500	15530	185	25	1270	2000	16740	
	4.5	4.58	327	38	1095	1500	14070	218	29	1250	1500	15930	164	24	1380	1500	17050	
	5	5.06	297	36	1160	1500	14400	198	27	1325	1500	16180	148	23	1465	1500	17560	
	5.6	5.74	261	34	1250	1000	14630	174	26	1425	1500	16480	131	22	1575	1500	17880	
	6.3	6.43	233	35	1420	1500	14610	155	26	1620	1500	16450	117	22	1790	2000	17830	
	7.1	7.10	211	33	1500	1500	15800	141	25	1710	1500	17780	106	21	1890	1500	19290	
	8	8.17	184	31	1610	1000	16020	122	24	1835	1500	18180	92	20	2030	1500	19600	
	9	9.23	162	29	1700	1000	16990	108	22	1940	1500	18780	81	18	2145	1500	20310	
	10	10.19	147	28	1800	1000	16930	98	21	2050	1000	19100	74	17	2270	1000	20400	
	11.2	11.56	130	25	1860	1000	17500	87	19	2120	1000	19810	65	16	2345	1500	21360	
	12.5	13.00	115	23	1920	1000	18110	77	18	2190	1500	20420	58	15	2420	1500	22180	
	14	14.45	104	22	1980	1500	18990	69	16	2260	1500	21240	52	14	2495	1500	22620	
	16	16.45	91	20	2050	1500	19600	61	15	2340	1500	21970	46	12	2585	1500	23870	
	18	17.75	85	19	2110	1500	20420	56	14	2405	2000	22810	42	12	2660	2000	24720	
	20	19.68	76	17	2175	1500	21040	51	13	2480	2000	23650	38	11	2740	2000	25480	
	22.4	22.65	66	16	2270	1500	21660	44	12	2590	2000	24290	33	9.9	2860	2000	26560	
	25	25.55	59	12	2000	3000	23750	39	11	2700	2000	25150	29	8.9	2900	2500	27000	
	28	29.09	52	12	2250	2500	23760	34	10	2800	2000	25910	26	7.8	2900	3000	27000	
	31.5	31.91	47	12	2520	2000	23970	31	9.4	2875	2000	26890	24	7.1	2900	3500	27000	
	35.5	36.58	41	11	2650	2000	24830	27	8.3	2900	2500	27000	21	6.2	2900	4000	27000	
	40	39.65	38	11	2750	2000	25470	25	7.7	2900	3500	27000	19	5.7	2900	5000	27000	
	45	46.78	32	10	2870	2000	26560	21	6.5	2900	4000	27000	16	4.9	2900	5500	27000	
	50	52.18	29	9	2900	2500	27000	19	5.8	2900	4500	27000	14	4.4	2900	6000	27000	
	56	58.03	26	7	2700	3500	27000	17	4.9	2700	6000	27000	13	3.7	2700	7500	27000	
63																		
71																		
80																		
90																		
100																		
SP...56C...	35.5	33.69	45	10	2200	3500	27000	30	7.8	2500	4500	27000	22	6.5	2780	4500	27000	
	40	37.78	40	9.6	2300	3500	27000	26	7.3	2620	4500	27000	20	6.0	2900	5000	27000	
	45	43.49	34	8.7	2400	4000	27000	23	6.6	2740	4500	27000	17	5.2	2900	5500	27000	
	50	49.30	30	8.0	2500	4000	27000	20	6.1	2850	4500	27000	15	4.6	2900	6000	27000	
	56	55.45	27	7.4	2600	4000	27000	18	5.5	2900	5000	27000	14	4.1	2900	6500	27000	
	63	63.59	24	6.7	2700	4500	27000	16	4.8	2900	5500	27000	12	3.6	2900	7500	27000	
	71	70.17	21	6.3	2800	4500	27000	14	4.3	2900	6500	27000	11	3.2	2900	7500	27000	
	80	77.21	19	5.9	2900	4500	27000	13	3.9	2900	7500	27000	9.7	2.9	2900	7500	27000	
	90	86.98	17	5.2	2900	5500	27000	11	3.5	2900	7500	27000	8.6	2.6	2900	7500	27000	
	100	96.48	16	4.7	2900	6000	27000	10	3.1	2900	7500	27000	7.8	2.4	2900	7500	27000	
	112	110.50	14	4.1	2900	6500	27000	9.0	2.7	2900	7500	27000	6.8	2.1	2900	7500	27000	
	125	129.80	12	3.5	2900	7500	27000	7.7	2.3	2900	7500	27000	5.8	1.8	2900	7500	27000	
	140	138.90	11	3.3	2900	7500	27000	7.2	2.2	2900	7500	27000	5.4	1.6	2900	7500	27000	
	160	155.10	9.7	2.9	2900	7500	27000	6.4	2.0	2900	7500	27000	4.8	1.5	2900	7500	27000	
	180	177.00	8.5	2.6	2900	7500	27000	5.6	1.7	2900	7500	27000	4.2	1.3	2900	7500	27000	
	200	191.90	7.8	2.4	2900	7500	27000	5.2	1.6	2900	7500	27000	3.9	1.2	2900	7500	27000	
	224	221.50	6.8	2.1	2900	7500	27000	4.5	1.4	2900	7500	27000	3.4	1.0	2900	7500	27000	
250	243.20	6.2	1.9	2900	7500	27000	4.1	1.2	2900	7500	27000	3.1	0.94	2900	7500	27000		
280	290.20	5.2	1.6	2900	7500	27000	3.4	1.0	2900	7500	27000	2.6	0.78	2900	7500	27000		
315	325.40	4.6	1.4	2900	7500	27000	3.1	0.93	2900	7500	27000	2.3	0.70	2900	7500	27000		
SP...56B16B...	100																	
	112																	
	125																	
	140																	
	160																	
	180																	
	200																	
	224																	
	250																	
	280	289.0	5.2	1.6	2900	7500	27000	3.5	1.1	2900	7500	27000	2.6	0.79	2900	7500	27000	
	315	314.6	4.8	1.4	2900	7500	27000	3.2	0.97	2900	7500	27000	2.4	0.72	2900	7500	27000	
	355	376.2	4.0	1.2	2900	7500	27000	2.7	0.81	2900	7500	27000	2.0	0.61	2900	7500	27000	
	400	414.1	3.6	1.1	2900	7500	27000	2.4	0.73	2900	7500	27000	1.8	0.55	2900	7500	27000	
	450	458.4	3.3	0.99	2900	7500	27000	2.2	0.66	2900	7500	27000	1.6	0.50	2900	7500	27000	
	500	510.8	2.9	0.89	2900	7500	27000	2.0	0.59	2900	7500	27000	1.5	0.45	2900	7500	27000	
	560	573.5	2.6	0.79	2900	7500	27000	1.7	0.53	2900	7500	27000	1.3	0.40	2900	7500	27000	
	630	638.3	2.4	0.71	2900	7500	27000	1.6	0.48	2900	7500	27000	1.2	0.36	2900	7500	27000	
710	713.9	2.1	0.64	2900	7500	27000	1.4	0.43	2900	7500	27000	1.1	0.32	2900	7500	27000		
800	829.9	1.8	0.55	2900	7500	27000	1.2	0.37	2900	7500	27000	0.90	0.27	2900	7500	27000		
900	924.6	1.6	0.49	2900	7500	27000	1.1	0.33	2900	7500	27000	0.81	0.25	2900	7500	27000		
1000	954	1.6	0.48	2900	7500	27000	1.0	0.32	2900	7500	27000	0.79	0.24	2900	7500	27000		
1120	1149	1.3	0.40	2900	7500	27000	0.87	0.26	2900	7500	27000	0.65	0.20	2900	7500	27000		



F

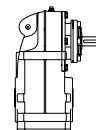
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L

K

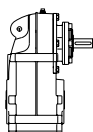
SP4

SP..66			Type SP..66...-I SP..66...-U		m[kg] 201 286		 M350		5500 Nm									
Type	...	n _{syn} =	1500min ⁻¹					1000 1/min					750 1/min					
		i _{ex}	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	
SP...66B...	2.8																	
	3.15	3.12	481	55	1100		19000	321	52	1540		20000	240	43	1700		22000	
	3.55	3.46	433	55	1210		20000	289	50	1650		21000	217	42	1830		22500	
	4	4.13	364	55	1450		19500	242	46	1820		21000	182	38	2020		23000	
	4.5	4.43	339	55	1550		20000	226	46	1940		22000	169	38	2150		23500	
	5	5.12	293	55	1800		20000	195	42	2050		22000	146	35	2270		24000	
	5.6	5.73	262	52	1900		20000	175	40	2170		23000	131	33	2400		24500	
	6.3	6.35	236	56	2250		20000	157	42	2570		22500	118	35	2840		24500	
	7.1	7.05	213	53	2400		20500	142	41	2740		23000	106	34	3020		25000	
	8	8.40	179	50	2650		20500	119	38	3020		23000	89	31	3340		25000	
	9	9.02	166	48	2750		21500	111	36	3140		24000	83	30	3470		26000	
	10	10.43	144	44	2950		21500	96	34	3370		24000	72	28	3720		26500	
	11.2	11.66	129	42	3100		22000	86	32	3540		25000	64	26	3910		27000	
	12.5	12.59	119	41	3250		23000	79	31	3700		26000	60	26	4100		27500	
	14	14.18	106	38	3400		30000	71	29	3880		26500	53	24	4290		28500	
	16	16.06	93	35	3600		24000	62	27	4100		27000	47	22	4540		29500	
	18	17.51	86	34	3750		25000	57	26	4280		28000	43	21	4730		30000	
	20	20.08	75	31	3950		25500	50	23	4500		28500	37	19	4980		30000	
	22.4	23.26	64	28	4200		26000	43	22	4790		29000	32	18	5290		30000	
	25	25.85	58	27	4400		26500	39	20	5020		30000	29	17	5500		30000	
	28	27.61	54	26	4500		21500	36	19	5130		25000	27	16	5500		27500	
	31.5	30.69	49	24	4650		22500	33	18	5300		25500	24	14	5500		28500	
	35.5	34.82	43	22	4850		24000	29	17	5500		27500	22	12	5500		30000	
	40	38.01	39	21	5000		26500	26	15	5500		30000	20	11	5500		30000	
	45	43.51	34	19	5150		27000	23	13	5500		30000	17	10	5500		30000	
	50	47.54	32	16	4850		28000	21	12	5500		30000	16	9	5500		30000	
	66	56.00	27	14	4850		30000	18	10	5500		30000	13	8	5500		30000	
	63	61.68	24	12	4850		30000	16	9	5500		30000	12	7	5500		30000	
	71	68.49	22	10	4500		30000	15	8	5130		30000	11	6	5500		30000	
	80																	
	90																	
	100																	
SP...66C...	35.5																	
	40	38.12	39	18.1	4400		30000	26	14	5016		30000	20	11	5500		30000	
	45	42.75	35	17.1	4650		30000	23	13	5301		30000	18	10	5500		30000	
	50	49.20	30	15.6	4900		30000	20	12	5500		30000	15	8.8	5500		30000	
	66	55.78	27	14.9	5300		30000	18	10	5500		30000	13	7.7	5500		30000	
	63	62.74	24	13.5	5400		30000	16	9.2	5500		30000	12	6.9	5500		30000	
	71	71.94	21	12.0	5500		30000	14	8.0	5500		30000	10	6.0	5500		30000	
	80	79.38	19	10.9	5500		30000	13	7.3	5500		30000	9.4	5.4	5500		30000	
	90	87.35	17	9.9	5500		30000	11	6.6	5500		30000	8.6	4.9	5500		30000	
	100	98.40	15	8.8	5500		30000	10	5.9	5500		30000	7.6	4.4	5500		30000	
	112	109.20	14	7.9	5500		30000	9.2	5.3	5500		30000	6.9	4.0	5500		30000	
	125	125.00	12	6.9	5500		30000	8.0	4.6	5500		30000	6.0	3.5	5500		30000	
	140	146.80	10	5.9	5500		30000	6.8	3.9	5500		30000	5.1	2.9	5500		30000	
	160	157.10	9.5	5.5	5500		30000	6.4	3.7	5500		30000	4.8	2.7	5500		30000	
	180	175.50	8.5	4.9	5500		30000	5.7	3.3	5500		30000	4.3	2.5	5500		30000	
	200	200.20	7.5	4.3	5500		30000	5.0	2.9	5500		30000	3.7	2.2	5500		30000	
	224	217.10	6.9	4.0	5500		30000	4.6	2.7	5500		30000	3.5	2.0	5500		30000	
	250	250.60	6.0	3.4	5500		30000	4.0	2.3	5500		30000	3.0	1.7	5500		30000	
	280	275.20	5.5	3.1	5500		30000	3.6	2.1	5500		30000	2.7	1.6	5500		30000	
	315																	
100																		
SP...66B16B...	112																	
	125																	
	140																	
	160																	
	180																	
	200																	
	224																	
	250																	
	280	272.4	5.5	3.2	5500		30000	3.7	2.1	5500		30000	2.8	1.6	5500		30000	
	315	318.6	4.7	2.7	5500		30000	3.1	1.8	5500		30000	2.4	1.4	5500		30000	
	355	343.1	4.4	2.5	5500		30000	2.9	1.7	5500		30000	2.2	1.3	5500		30000	
	400	389.7	3.8	2.2	5500		30000	2.6	1.5	5500		30000	1.9	1.1	5500		30000	
	450	441.3	3.4	2.0	5500		30000	2.3	1.3	5500		30000	1.7	0.98	5500		30000	
	500	481.2	3.1	1.8	5500		30000	2.1	1.2	5500		30000	1.6	0.90	5500		30000	
	660	556.9	2.7	1.6	5500		30000	1.8	1.0	5500		30000	1.3	0.78	5500		30000	
	630	615.0	2.4	1.4	5500		30000	1.6	0.94	5500		30000	1.2	0.70	5500		30000	
710	735.8	2.0	1.2	5500		30000	1.4	0.78	5500		30000	1.0	0.59	5500		30000		
800	819.3	1.8	1.1	5500		30000	1.2	0.70	5500		30000	0.92	0.53	5500		30000		
900	906.3	1.7	0.95	5500		30000	1.1	0.64	5500		30000	0.83	0.48	5500		30000		
1000	1007	1.5	0.86	5500		30000	1.0	0.57	5500		30000	0.74	0.43	5500		30000		
1120																		



SP4

SP..76			Type SP..76...-I SP..76...-U		m[kg] 292 359		 M358		8000 Nm									
Type	...	n _{syn} =	1500min ⁻¹					1000 1/min					750 1/min					
		i _{ex}	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	
SP...76B...	2.8																	
	3.15	3.11	482	75	1480		26000	322	75	2220		27500	241	62	2460		29500	
	3.55	3.52	426	75	1680		26500	284	71	2400		28000	213	59	2650		30500	
	4	3.99	376	75	1900		27000	251	68	2570		29000	188	56	2840		31000	
	4.5	4.52	332	75	2160		27000	221	63	2740		30000	166	52	3020		32000	
	5	4.93	304	75	2350		27500	203	57	2679		31000	152	47	2961		34000	
	5.6	5.62	267	73	2600		28000	178	55	2960		31500	133	46	3280		34000	
	6.3	6.25	240	98	3900		28000	160	75	4450		28500	120	62	4920		31000	
	7.1	7.08	212	93	4200		26000	141	71	4790		29000	106	59	5290		31500	
	8	8.02	187	88	4500		26000	125	67	5130		29500	94	56	5670		32000	
	9	9.10	165	82	4750		27000	110	62	5415		30000	82	52	5985		32500	
	10	9.91	151	79	5000		27500	101	60	5700		31000	76	50	6300		33000	
	11.2	11.31	133	72	5150		29000	88	54	5870		32000	66	45	6490		34500	
	12.5	12.38	121	68	5350		29500	81	52	6100		33000	61	43	6740		35500	
	14	14.26	105	61	5550		30500	70	46	6330		34000	53	38	6990		36500	
	16	15.73	95	57	5750		31500	64	44	6555		35000	48	36	7245		38000	
	18	17.68	85	52	5900		33000	57	40	6730		37000	42	33	7430		40000	
	20	19.69	76	49	6100		34000	51	37	6950		38000	38	31	7690		41000	
	22.4	22.06	68	45	6300		35000	45	34	7180		39000	34	28	7940		43000	
	25	24.90	60	41	6550		36000	40	31	7470		40500	30	25	8000		45000	
	28	28.02	54	38	6800		37000	36	28	7520		42500	27	22	8000		47000	
	31.5	32.32	46	34	7050		38000	31	26	8000		43500	23	19	8000		49500	
	35.5	35.33	42	32	7250		40500	28	24	8000		46500	21	18	8000		50000	
	40	38.31	39	30	7400		42000	26	22	8000		48500	20	16	8000		50000	
	45	45.22	33	27	7700		43500	22	19	8000		50000	17	14	8000		50000	
	50	49.92	30	25	8000		45000	20	17	8000		50000	15	13	8000		50000	
	76	55.55	27	23	8000		47000	18	15	8000		50000	14	11	8000		50000	
	63																	
	71																	
	80																	
	90																	
	100																	
SP...76C...	35.5																	
	40	39.42	38	28	7050		43000	25	21	8000		50000	19	16	8000		50000	
	45	44.20	34	26	7300		45000	23	19	8000		50000	17	14	8000		50000	
	50	50.88	29	23	7600		46000	20	16	8000		50000	15	12	8000		50000	
	76	57.68	26	22	7900		47500	17	15	8000		50000	13	11	8000		50000	
	63	64.88	23	19	8000		49500	15	13	8000		50000	12	9.7	8000		50000	
	71	74.39	20	17	8000		50000	13	11	8000		50000	10	8.4	8000		50000	
	80	82.09	18	15	8000		50000	12	10	8000		50000	9.1	7.7	8000		50000	
	90	90.33	17	14	8000		50000	11	9.3	8000		50000	8.3	7.0	8000		50000	
	100	101.75	15	12	8000		50000	10	8.2	8000		50000	7.4	6.2	8000		50000	
	112	112.90	13	11	8000		50000	8.9	7.4	8000		50000	6.6	5.6	8000		50000	
	125	129.30	12	9.7	8000		50000	7.7	6.5	8000		50000	5.8	4.9	8000		50000	
	140	151.80	10	8.3	8000		50000	6.6	5.5	8000		50000	4.9	4.1	8000		50000	
	160	162.50	9.2	7.7	8000		50000	6.2	5.2	8000		50000	4.6	3.9	8000		50000	
	180	181.50	8.3	6.9	8000		50000	5.5	4.6	8000		50000	4.1	3.5	8000		50000	
	200	207.00	7.2	6.1	8000		50000	4.8	4.0	8000		50000	3.6	3.0	8000		50000	
	224	224.50	6.7	5.6	8000		50000	4.5	3.7	8000		50000	3.3	2.8	8000		50000	
	250	259.10	5.8	4.8	8000		50000	3.9	3.2	8000		50000	2.9	2.4	8000		50000	
	280	284.50	5.3	4.4	8000		50000	3.5	2.9	8000		50000	2.6	2.2	8000		50000	
SP...76B16B...	315																	
	100																	
	112																	
	125																	
	140																	
	160																	
	180																	
	200																	
	224																	
	250																	
	280	279.4	5.4	4.5	8000		50000	3.6	3.0	8000		50000	2.7	2.2	8000		50000	
	315	299.3	5.0	4.2	8000		50000	3.3	2.8	8000		50000	2.5	2.1	8000		50000	
	355	350.0	4.3	3.6	8000		50000	2.9	2.4	8000		50000	2.1	1.8	8000		50000	
	400	376.9	4.0	3.3	8000		50000	2.7	2.2	8000		50000	2.0	1.7	8000		50000	
	450	428.1	3.5	2.9	8000		50000	2.3	2.0	8000		50000	1.8	1.5	8000		50000	
	500	484.8	3.1	2.6	8000		50000	2.1	1.7	8000		50000	1.5	1.3	8000		50000	
	760	528.7	2.8	2.4	8000		50000	1.9	1.6	8000		50000	1.4	1.2	8000		50000	
	630	611.8	2.5	2.1	8000		50000	1.6	1.4	8000		50000	1.2	1.0	8000		50000	
	710	675.6	2.2	1.9	8000		50000	1.5	1.2	8000		50000	1.1	0.93	8000		50000	
800	808.4	1.9	1.6	8000		50000	1.2	1.0	8000		50000	0.93	0.78	8000		50000		
900	900.1	1.7	1.4	8000		50000	1.1	0.93	8000		50000	0.83	0.70	8000		50000		
1000	996	1.5	1.3	8000		50000	1.0	0.84	8000		50000	0.75	0.63	8000		50000		
1120	1106	1.4	1.1	8000		50000	0.90	0.76	8000		50000	0.68	0.57	8000		50000		



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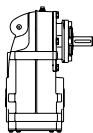
L

K

SP4

SP..86			Type SP..86...-I SP..86...-U		m[kg] 650 710		 M366		15000 Nm										
Type	...	n _{syn} =	1500min ⁻¹					1000 1/min					750 1/min						
		i _{ex}	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N	n ₂ min ⁻¹	P kW	T ₂ Nm	F _{rN} N	F _{rN-G} N		
SP...86B...	2.8																		
	3.15																		
	3.55																		
	4	3.99	376	268	6800		31000												
	4.5	4.42	339	252	7100		32000												
	5	4.91	305	237	7400		33000												
	5.6	5.47	274	221	7700		35000												
	6.3	6.11	245	206	8000		35000												
	7.1	7.36	204	237	11100		36000												
	8	8.17	184	221	11500		37000												
	9	9.07	165	206	11900		39000												
	10	10.10	149	191	12300		39000												
	11.2	11.28	133	177	12700		40000												
	12.5	12.65	119	164	13200		40000												
	14	14.26	105	149	13500		40000												
	16																		
	18																		
	20																		
	22.4																		
	25																		
	28																		
	31.5																		
	35.5																		
	40																		
45	13.97	107	132	11700		41000													
50	15.81	95	123	12400		42000													
86	17.91	84	115	13100		44000													
63	20.32	74	107	13800		46000													
71	22.14	68	102	14400		46000													
80	25.26	59	93	15000		50000													
90	27.66	54	85	15000		53000													
100	31.85	47	74	15000		56000													
SP...86C...	35.5	35.14	43	67	15000		57000												
	40	39.49	38	60	15000		61000												
	45	43.97	34	54	15000		64000												
	50	49.26	30	48	15000		68000												
	86	55.62	27	42	15000		72000												
	63	62.59	24	38	15000		76000												
	71	72.20	21	33	15000		79000												
	80	78.91	19	30	15000		82000												
	90	85.57	18	28	15000		87000												
	100	101.01	15	23	15000		91000												
	112	111.49	13	21	15000		97000												
	125	124.07	12	19	15000		99000												
	140	138.28	11	17	15000		99000												
	160	149.94	10	16	15000		99000												
	180	177.02	8.5	13	15000		99000												
	200	195.38	7.7	12	15000		99000												
	224	217.42	6.9	11	15000		99000												
	250																		
	280																		
	315																		
	SP...86B16C...	100																	
		112																	
		125																	
		140																	
160																			
180		174.4	8.6	14	15000		99000												
200		202.4	7.4	12	15000		99000												
224		226.6	6.6	10	15000		99000												
250		259.5	5.8	9.1	15000		99000												
280		284.7	5.3	8.3	15000		99000												
315		328.8	4.6	7.2	15000		99000												
355		363.5	4.1	6.5	15000		99000												
400		403.5	3.7	5.8	15000		99000												
450		432.2	3.5	5.5	15000		99000												
500		505.4	3.0	4.7	15000		99000												
860		544.3	2.8	4.3	15000		99000												
630		618.1	2.4	3.8	15000		99000												
710		700.1	2.1	3.4	15000		99000												
800		763.4	2.0	3.1	15000		99000												
900		883.6	1.7	2.7	15000		99000												
1000		956	1.6	2.5	15000		99000												
1120		1083	1.4	2.2	15000		99000												





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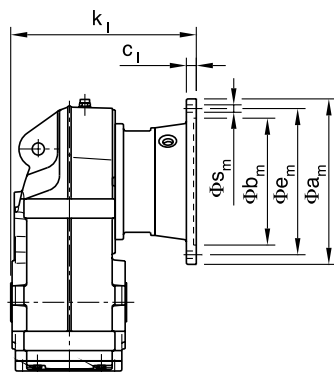
K

SP4

2.6 Dimensional drawings of gear units SP4

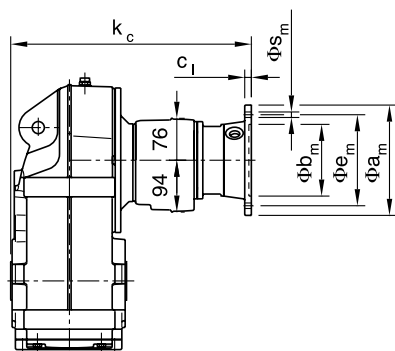
SPZ..16B-U

63 - 112

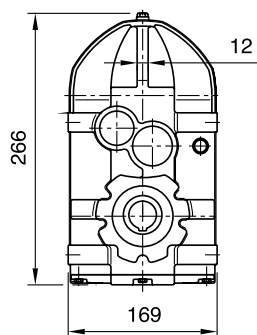


SPZ..16B16B/C-U

63 - 112

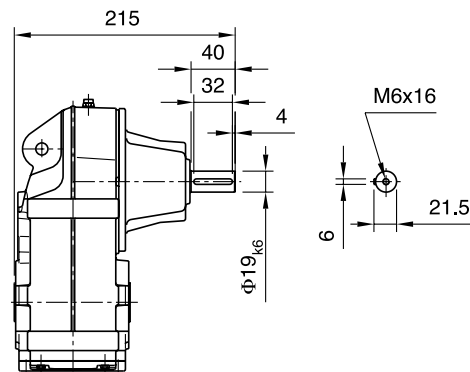


SPZ..16..

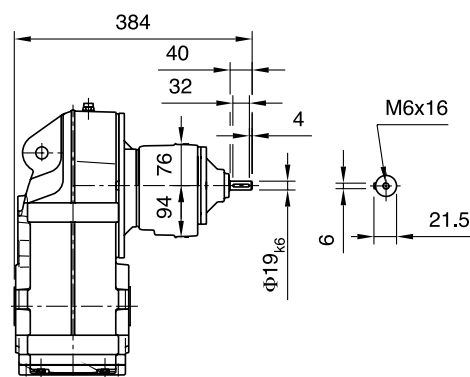


2.6 SP4 齿轮减速机外形尺寸图

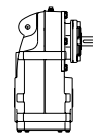
SPZ..16B-I



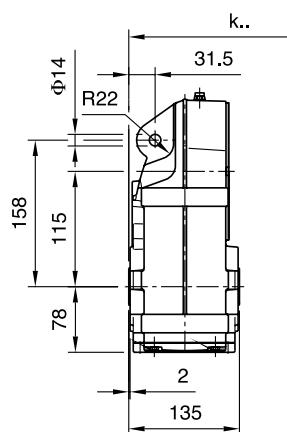
SPZ..16B16B/C-I



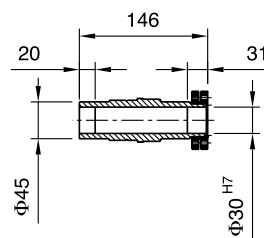
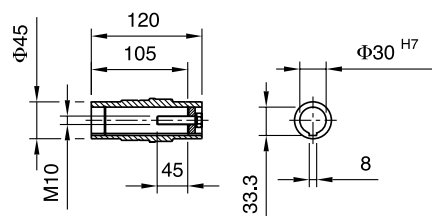
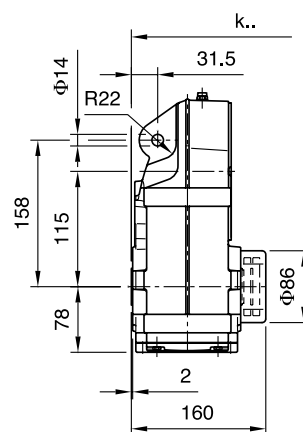
	63	71	80	90S	90L	100	112												
kl	203	203	203	203	203	203	203												
cl	8	8	10	10	10	12	12												
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7												
øem	115	130	165	165	165	215	215												
øam	140	160	200	200	200	250	250												
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 13.5	4 x Ø 13.5												
kc	372	372	372	372	372	372	372												



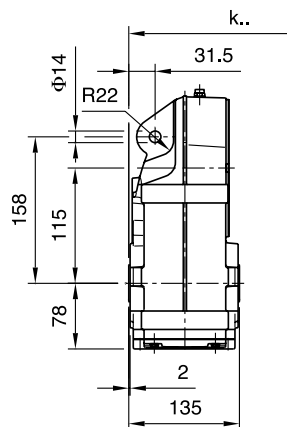
SPZH16..



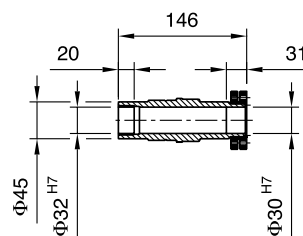
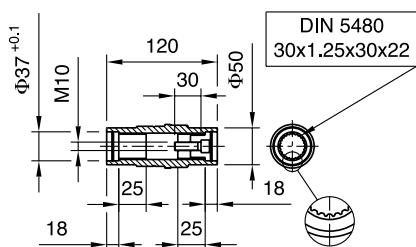
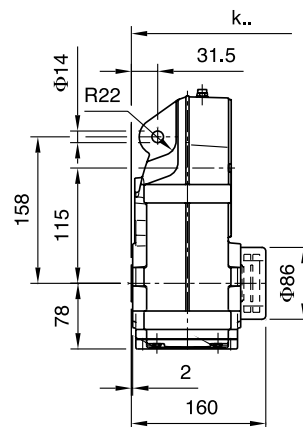
SPZS16..

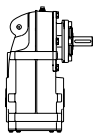


SPZT16..



SPZC16..





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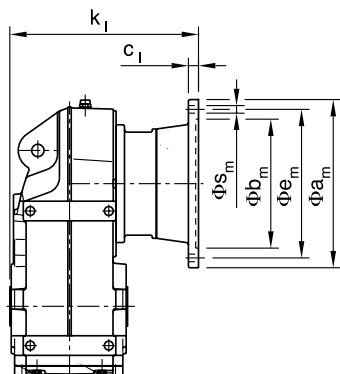
L

K

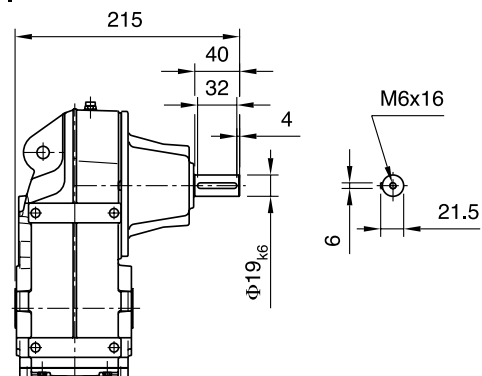
SP4

SPZ..16BF-U

63 - 112

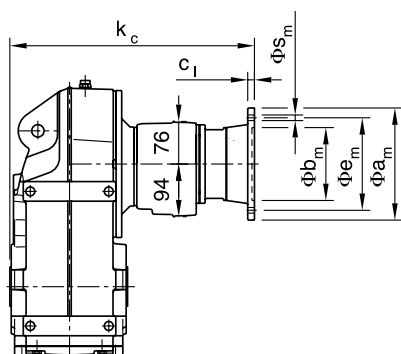


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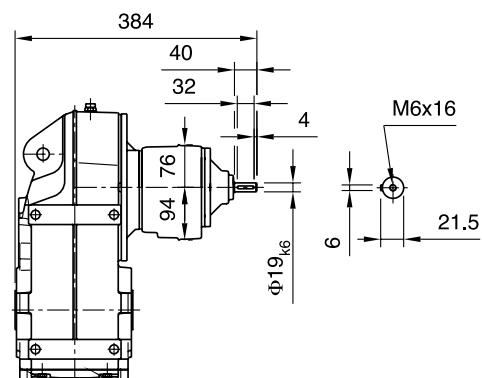


SPZ..16B16B/CF-U

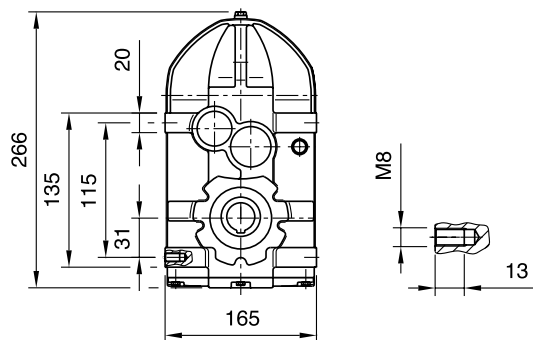
63 - 112



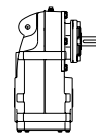
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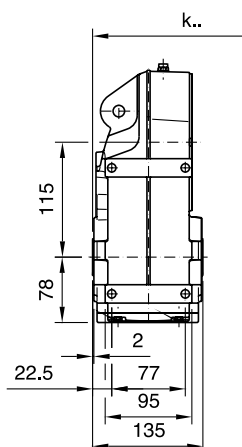
SPZ..16..F..



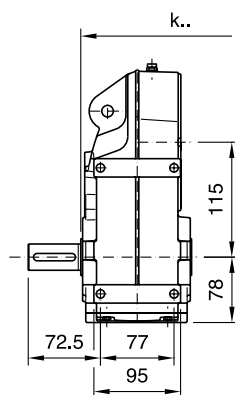
	63	71	80	90S	90L	100	112												
kl	203	203	203	203	203	203	203												
cl	8	8	10	10	10	12	12												
\phi bm	95H7	110H7	130H7	130H7	130H7	180H7	180H7												
\phi em	115	130	165	165	165	215	215												
\phi am	140	160	200	200	200	250	250												
\phi sm	4 x M8 x 16	4 x M8 x 16	4 x \phi 11	4 x \phi 11	4 x \phi 11	4 x \phi 13	4 x \phi 13												
kc	372	372	372	372	372	372	372												



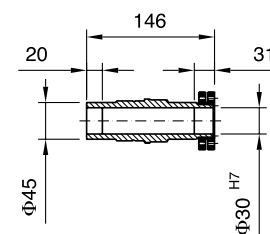
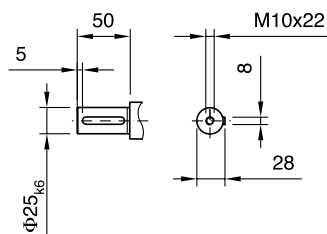
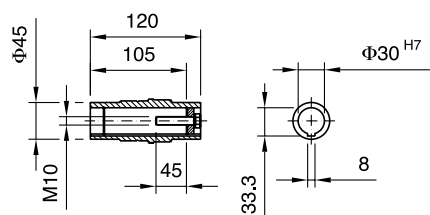
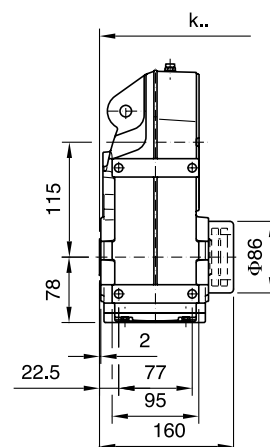
SPZH16..F..



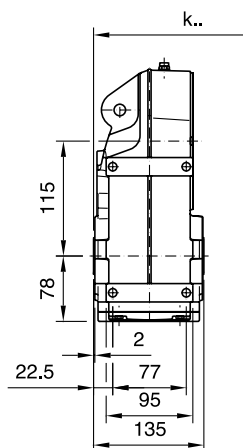
SPZN16..F..



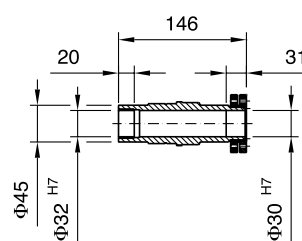
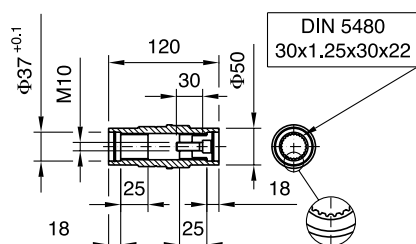
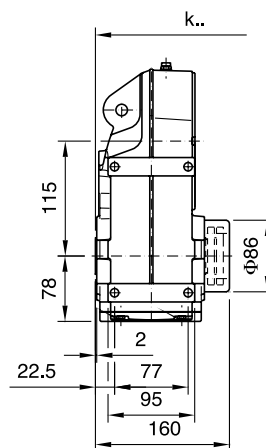
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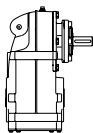


SPZT16..F..



SPZC16..F..





F

A

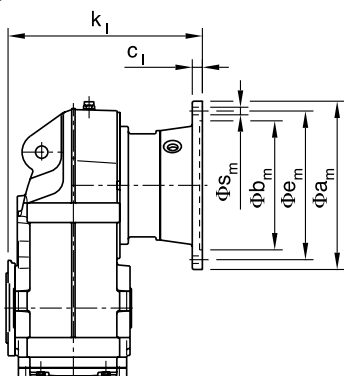
L

K

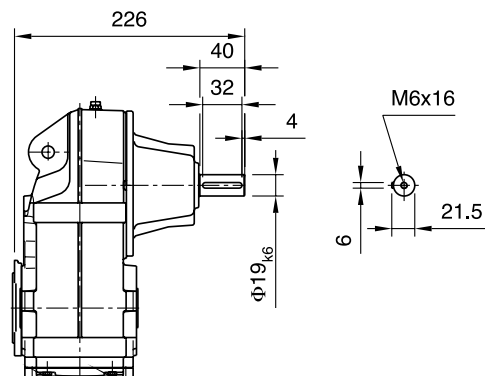
SP4

SPT..16B-U

63 - 112

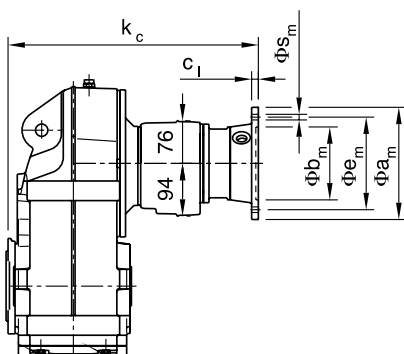


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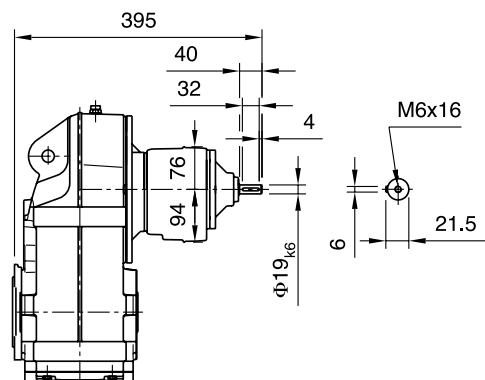


SPT..16B16B/C-U

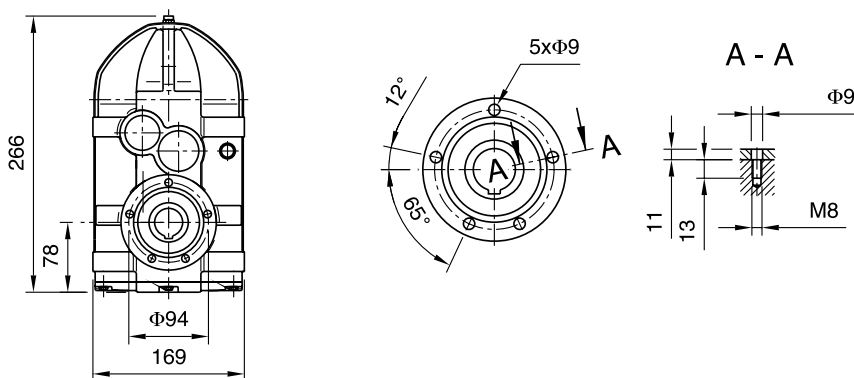
63 - 112



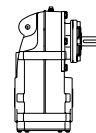
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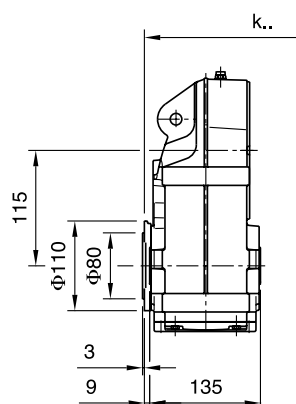
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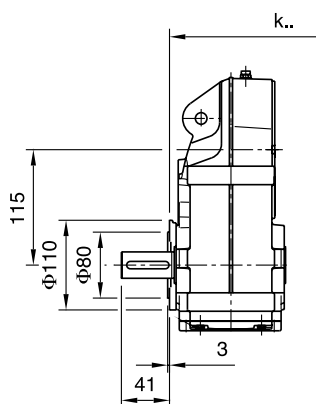
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kl	214	214	214	214	214	214	214												
cl	8	8	10	10	10	12	12												
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7												
øem	115	130	165	165	165	215	215												
øam	140	160	200	200	200	250	250												
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135												
kc	383	383	383	383	383	383	383												



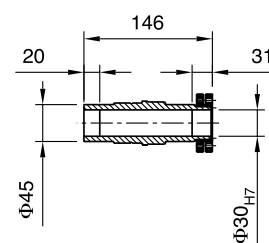
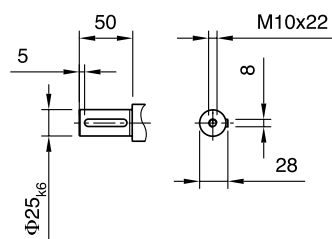
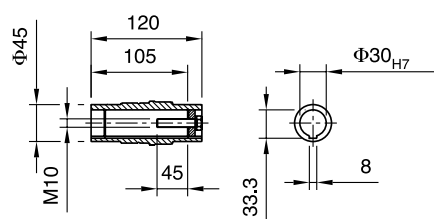
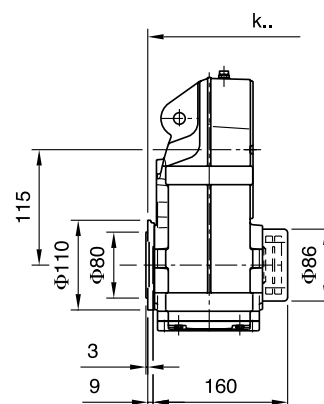
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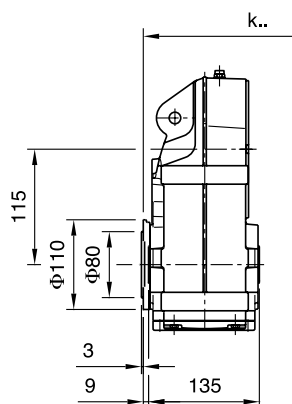
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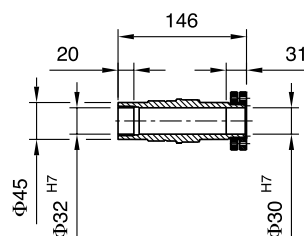
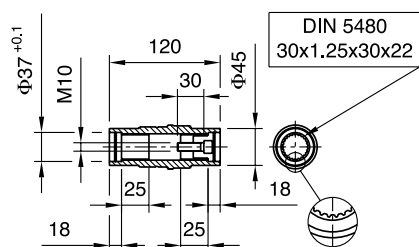
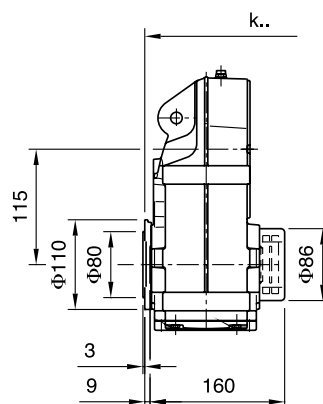
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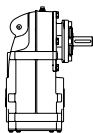


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SPTC16..





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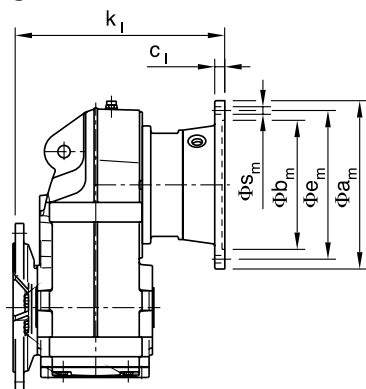
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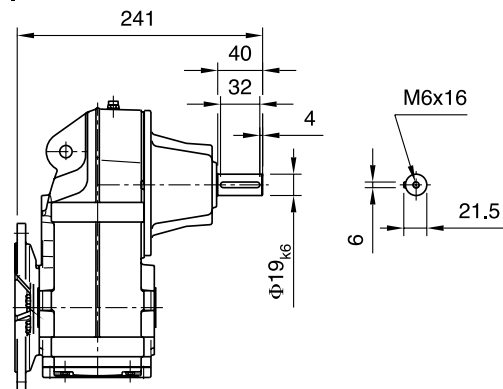
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SPF..16B-U

63 - 112

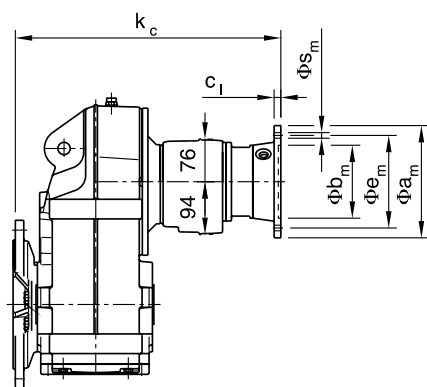


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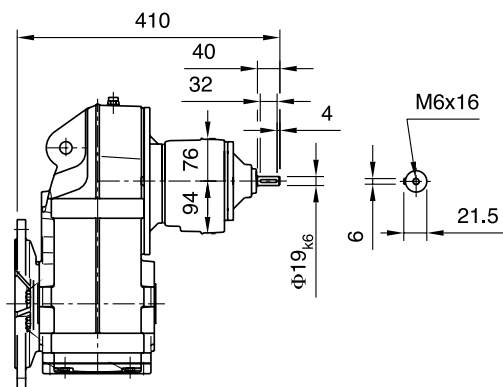


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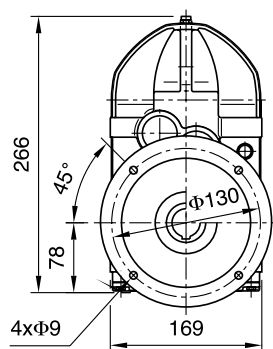
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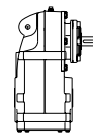
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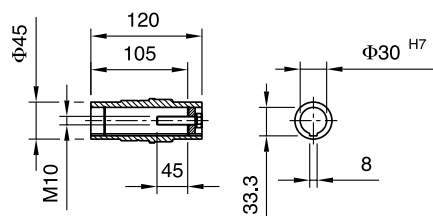
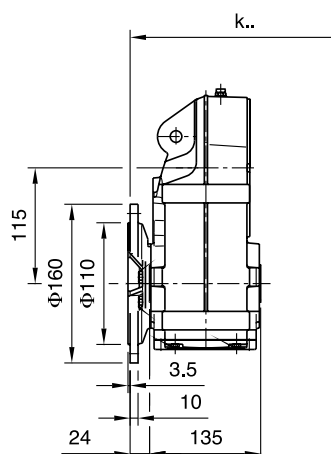
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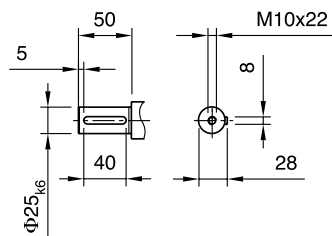
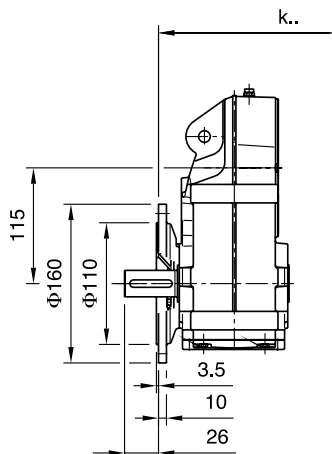
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kl	229	229	229	229	229	229	229												
cl	8	8	10	10	10	12	12												
\phi bm	95H7	110H7	130H7	130H7	130H7	180H7	180H7												
\phi em	115	130	165	165	165	215	215												
\phi am	140	160	200	200	200	250	250												
\phi sm	4 x M8 x 16	4 x M8 x 16	4 x \phi 11	4 x \phi 11	4 x \phi 11	4 x \phi 13.5	4 x \phi 13.5												
kc	398	398	398	398	398	398	398												



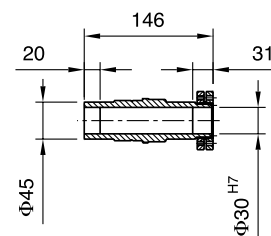
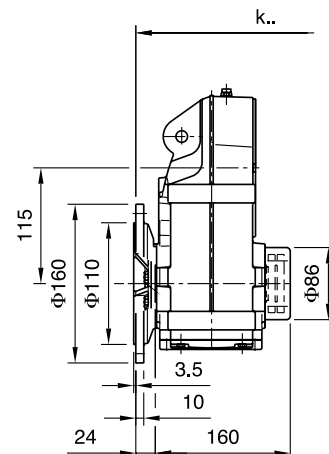
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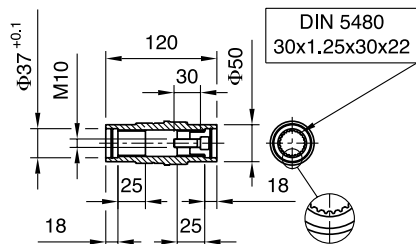
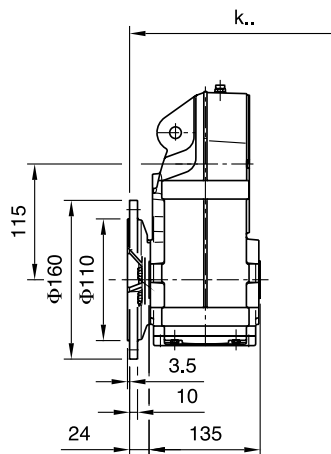
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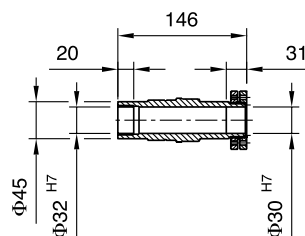
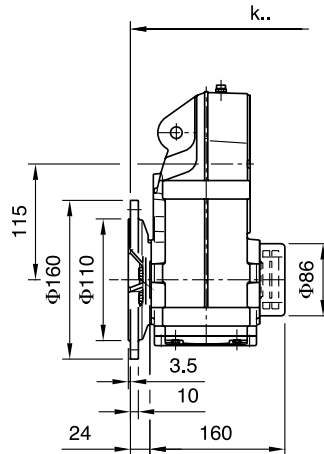
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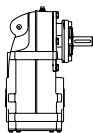


SPFT16..



SPFC16..





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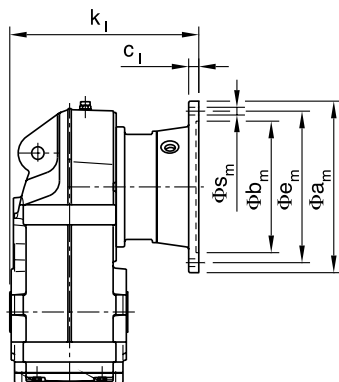
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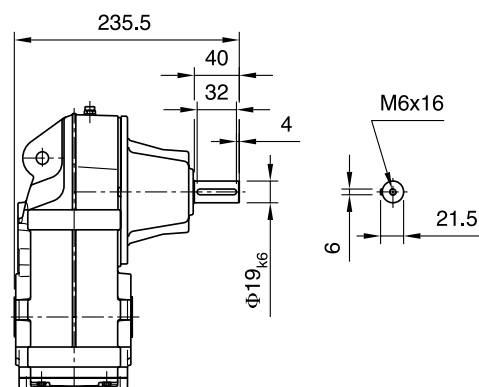
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SPZ..26B-U

63 - 112

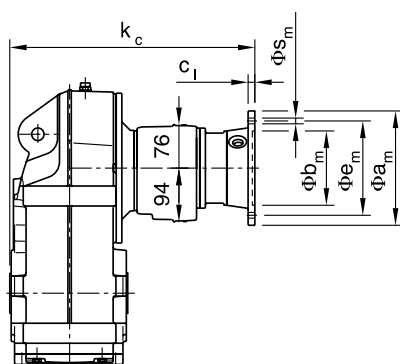


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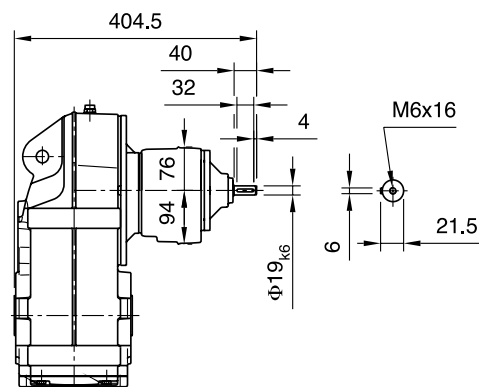


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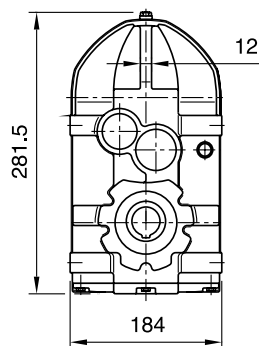
63 - 112



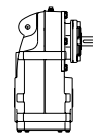
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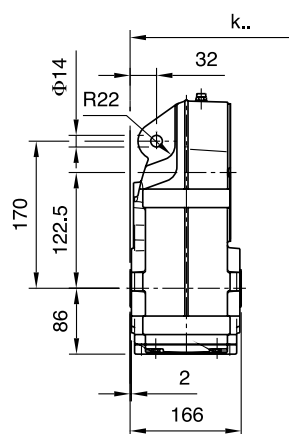
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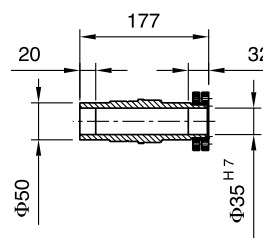
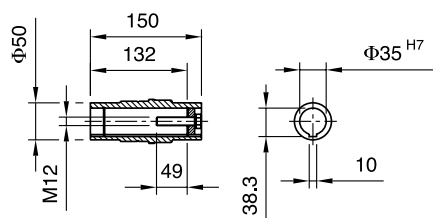
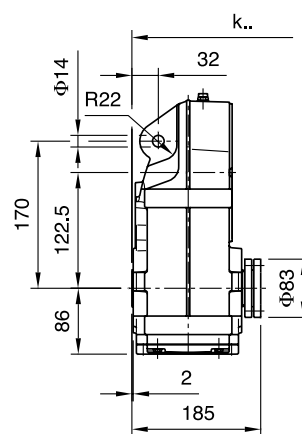
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kl	223	223	223	223	223	223	223												
cl	8	8	10	10	10	12	12												
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7												
øem	115	130	165	165	165	215	215												
øam	140	160	200	200	200	250	250												
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135												
kc	392	392	392	392	392	392	392												



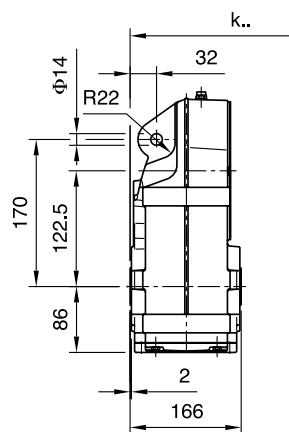
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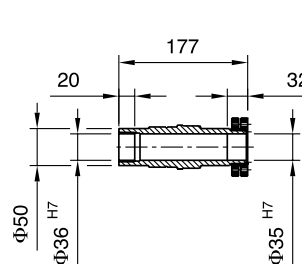
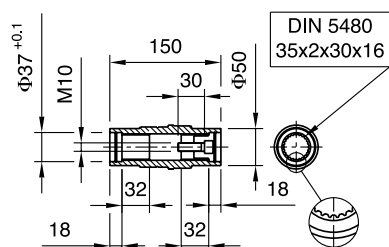
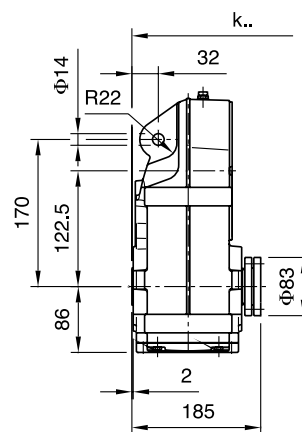
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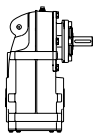


SPZT26..



SPZC26..





F

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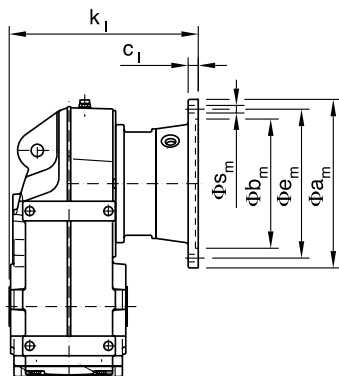
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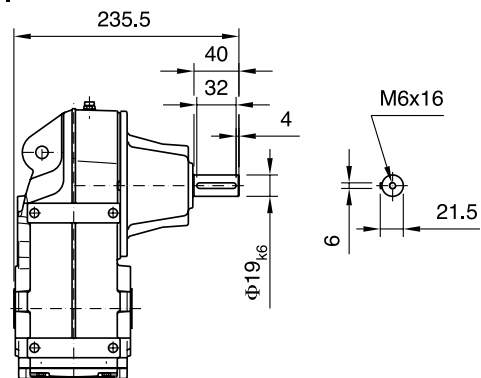
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SPZ..26BF-U

63 - 112

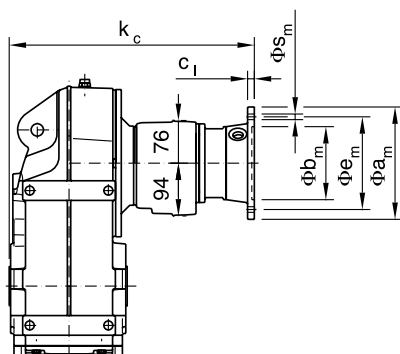


SPZ..26BF-I

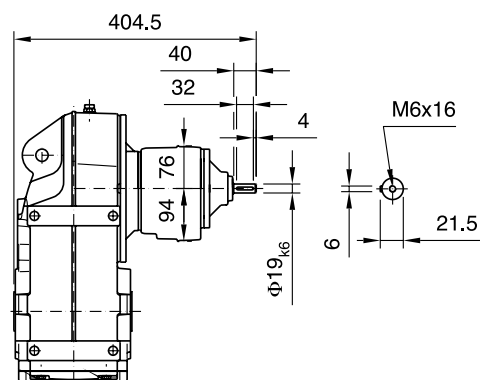


SPZ..26B16B/CF-U

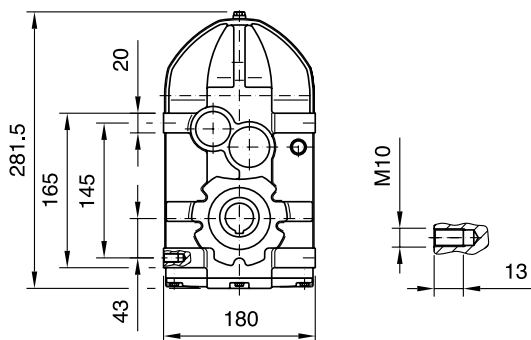
63 - 112



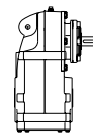
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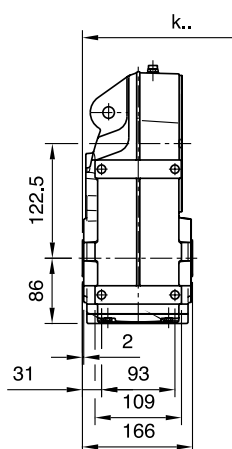
SPZ..26..F..



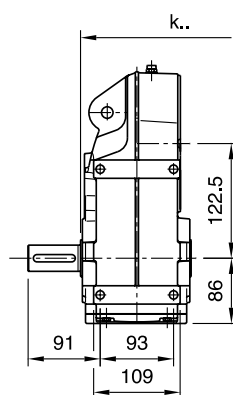
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kl	223	223	223	223	223	223	223												
cl	8	8	10	10	10	12	12												
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7												
øem	115	130	165	165	165	215	215												
øam	140	160	200	200	200	250	250												
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135												
kc	392	392	392	392	392	392	392												



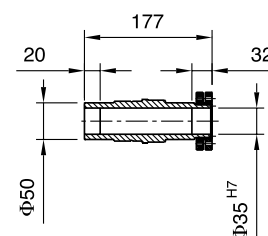
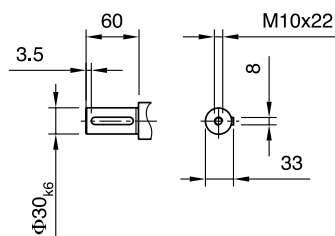
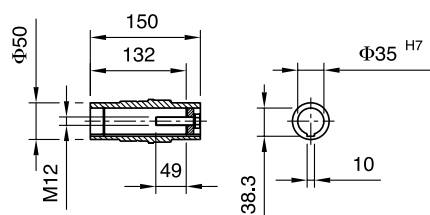
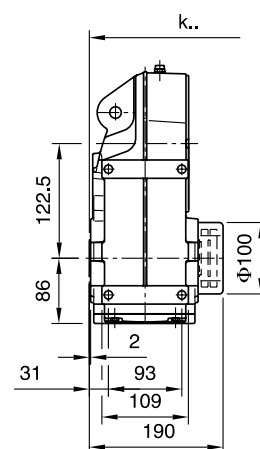
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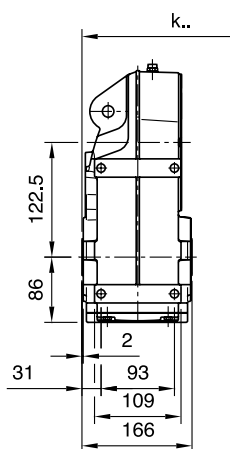
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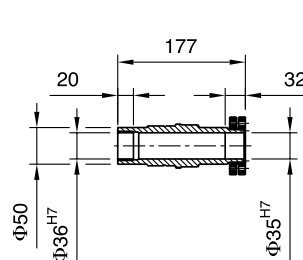
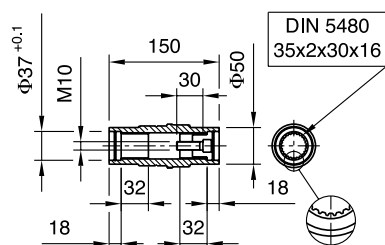
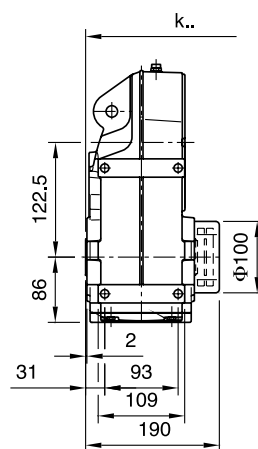
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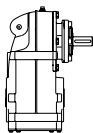


SPZT26..F..



SPZC26..F..





F

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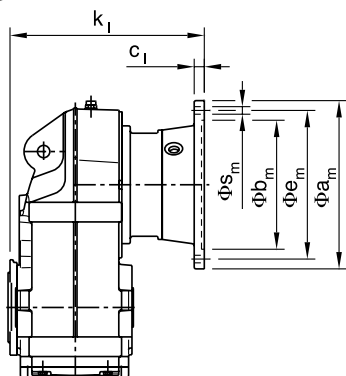
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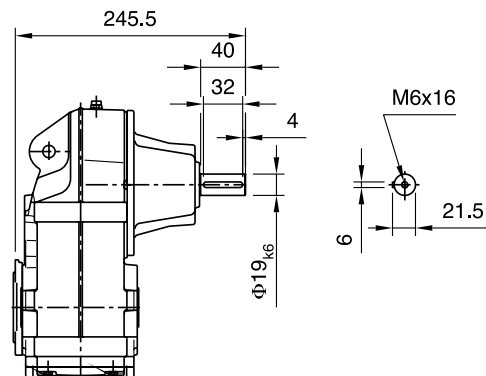
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SPT..26B-U

63 - 112

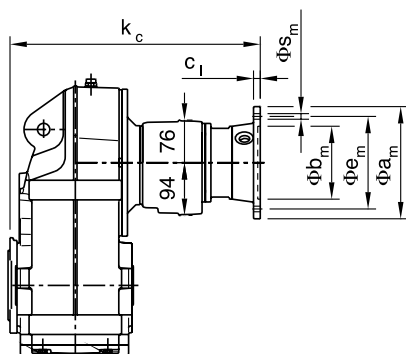


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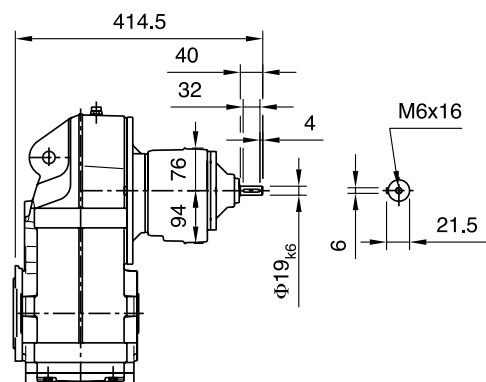


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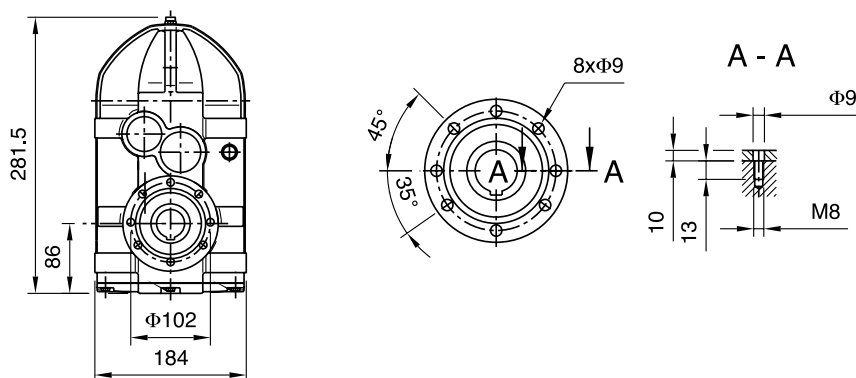
63 - 112



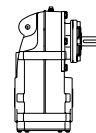
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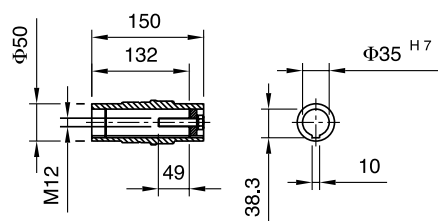
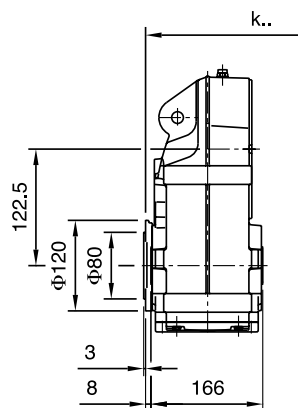
SPT..26..



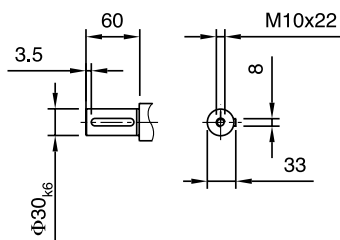
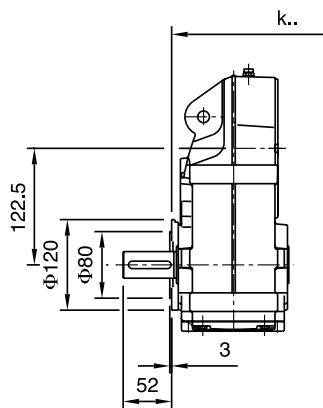
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kl	223	223	223	223	223	223	223												
cl	8	8	10	10	10	12	12												
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7												
øem	115	130	165	165	165	215	215												
øam	140	160	200	200	200	250	250												
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135												
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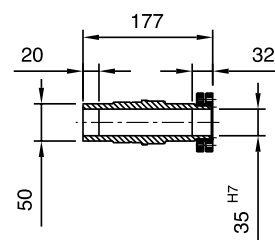
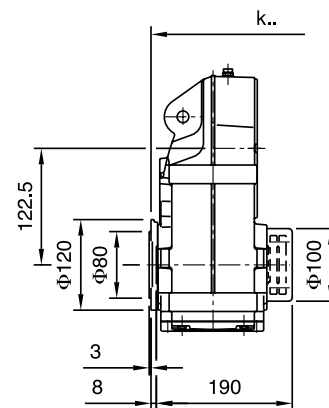
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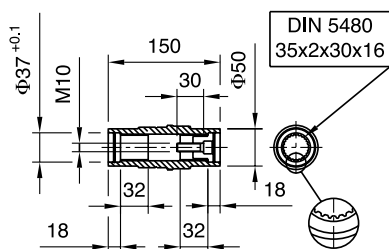
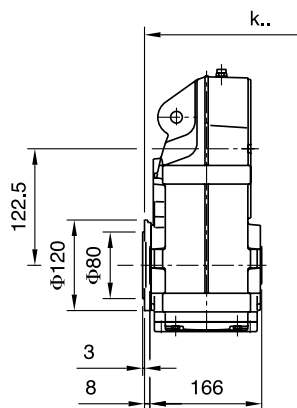
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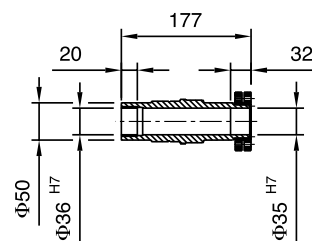
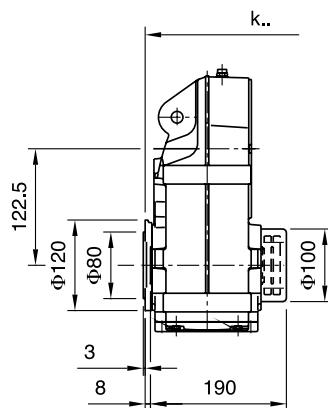
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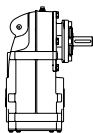


SPTT26..



SPTC26..





F

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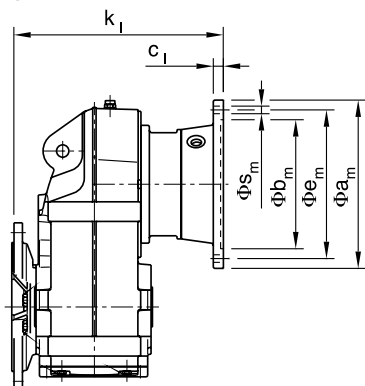
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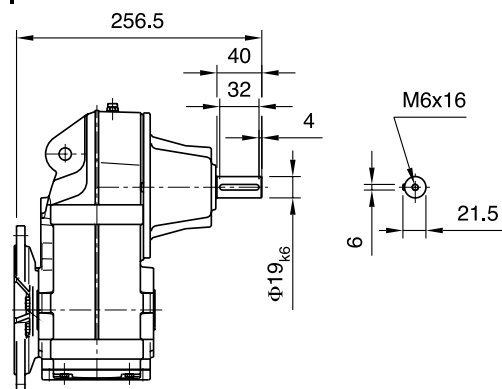
SP4

SPF..26B-U

63 - 112

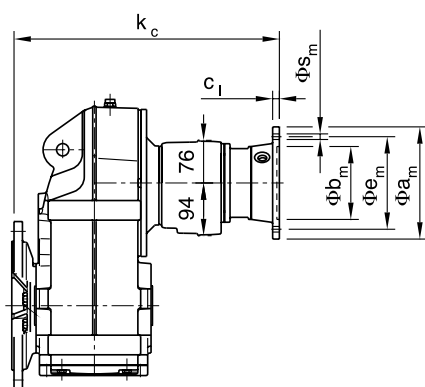


SPF..26B-I

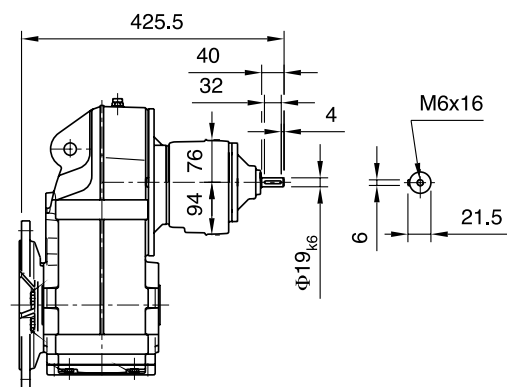


SPF..26B16B/C-U

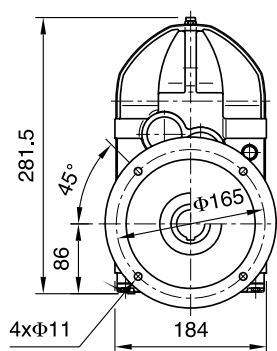
63 - 112



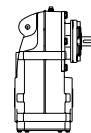
SPF..26B16B/C-I



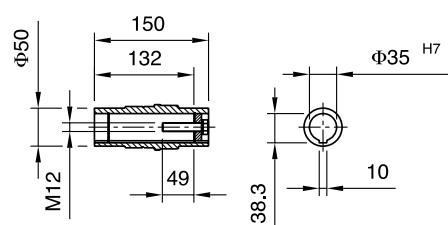
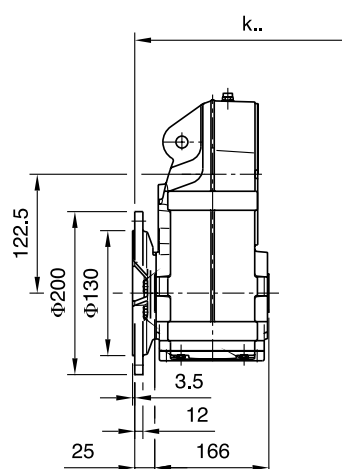
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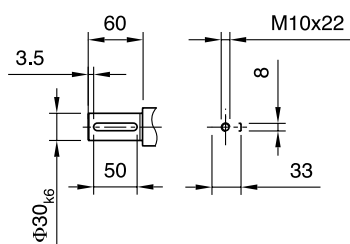
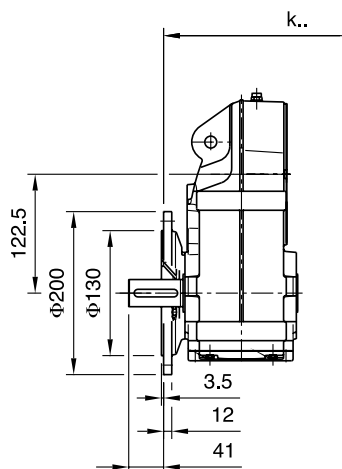
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kl	244	244	244	244	244	244	244												
cl	8	8	10	10	10	12	12												
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7												
øem	115	130	165	165	165	215	215												
øam	140	160	200	200	200	250	250												
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135												
kc	413	413	413	413	413	413	413												



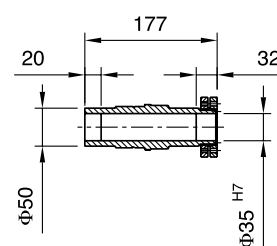
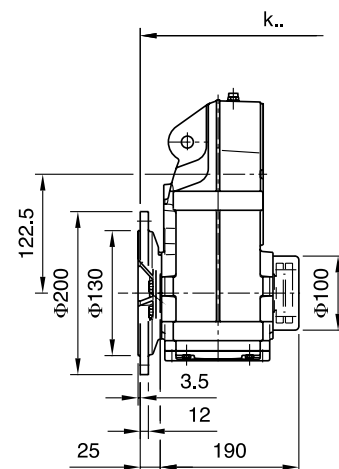
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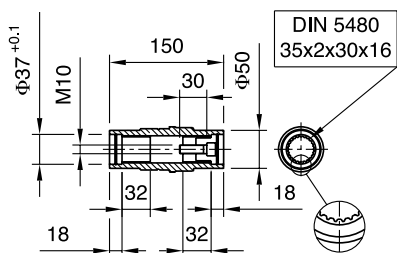
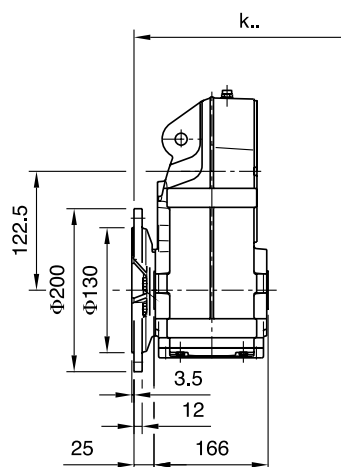
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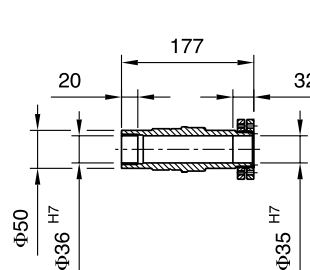
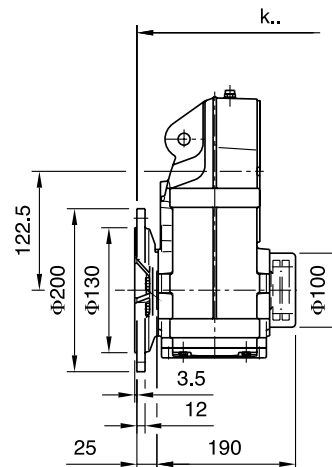
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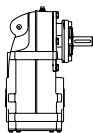


SPFT26..



SPFC26..





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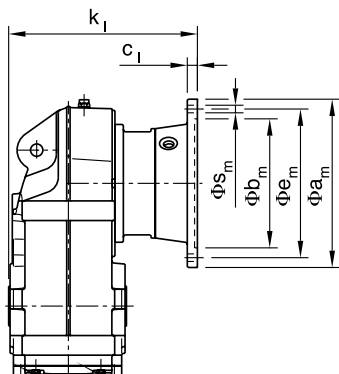
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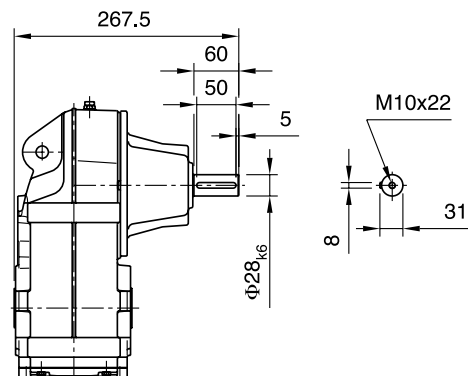
SP4

SPZ..36B-U

71 - 132

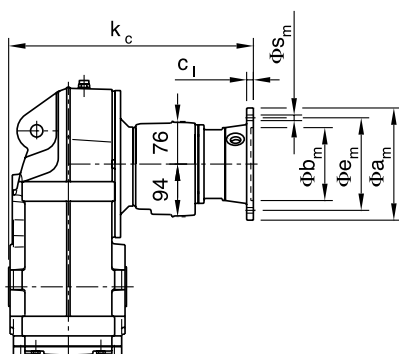


SPZ..36B-I

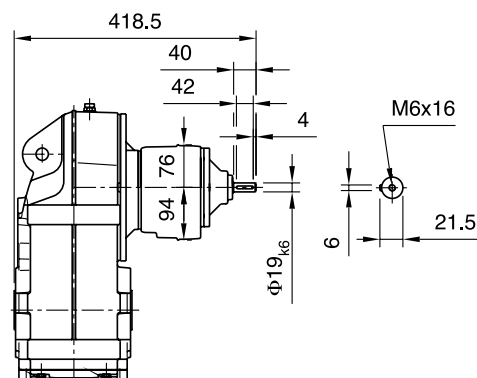


SPZ..36B16B/C-U

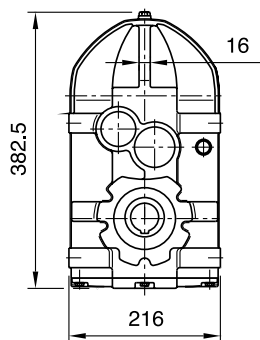
63 - 112



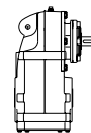
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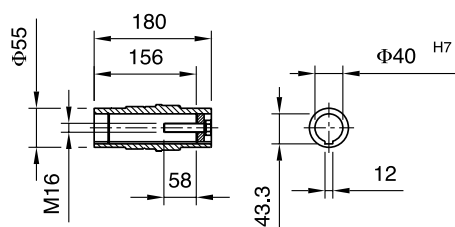
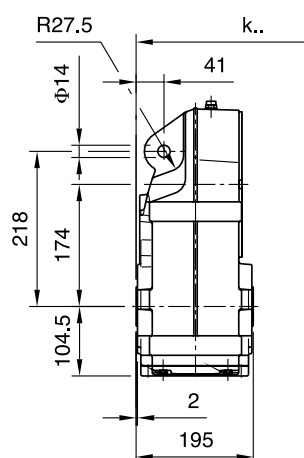
SPZ..36..



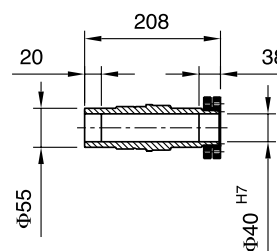
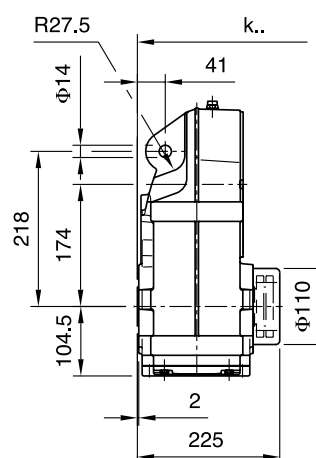
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kl		235	235	235	235	235	235	298	298										
cl	8	8	10	10	10	12	12	13	13										
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7										
øem	115	130	165	165	165	215	215	265	265										
øam	140	160	200	200	200	250	250	300	300										
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 13.5	4 x Ø 13.5	4 x Ø 13.5	4 x Ø 13.5										
kc	406	406	406	406	406	406	406												



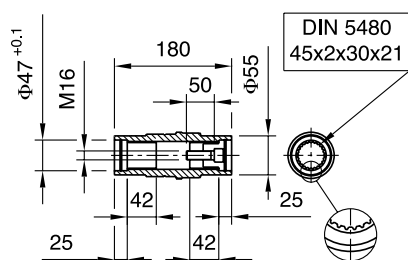
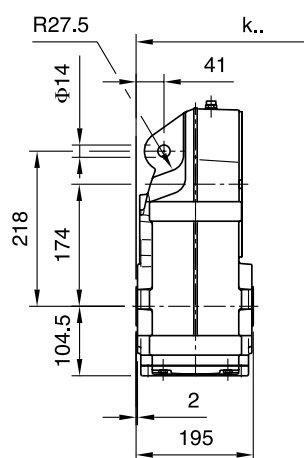
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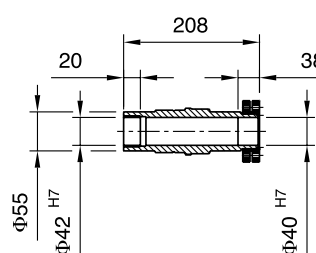
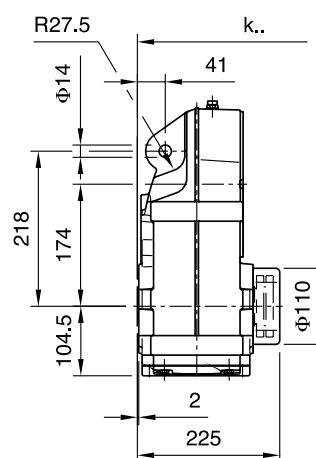
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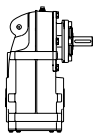


SPZT36..



SPZC36..





F

A

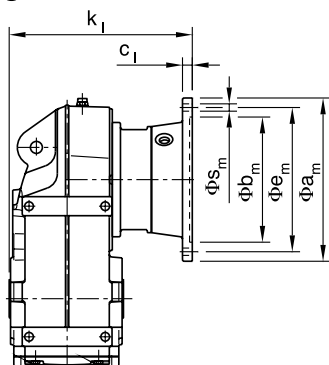
L

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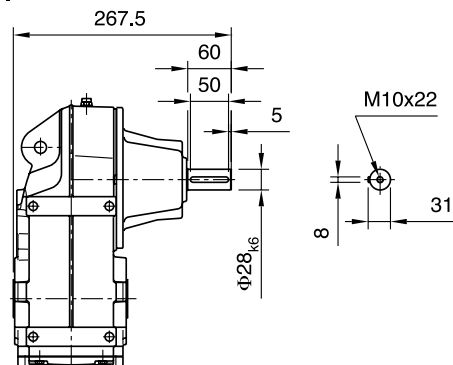
SP4

SPZ..36BF-U

71 - 132

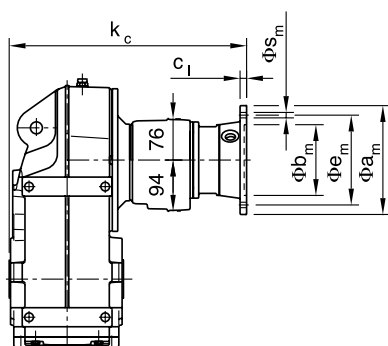


SPZ..36BF-I

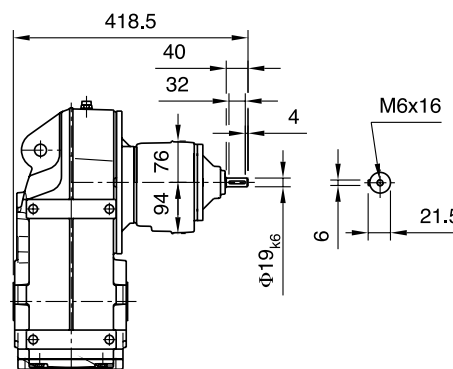


SPZ..36B16B/CF-U

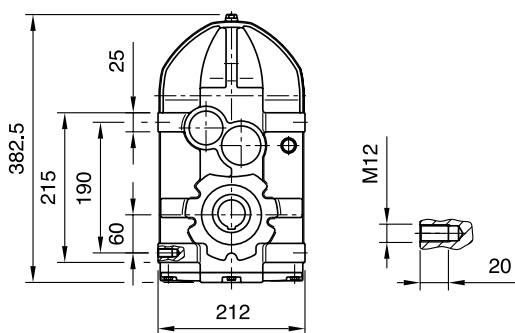
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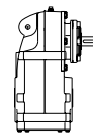
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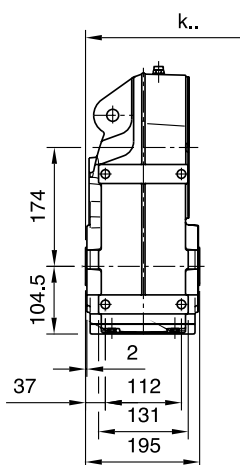
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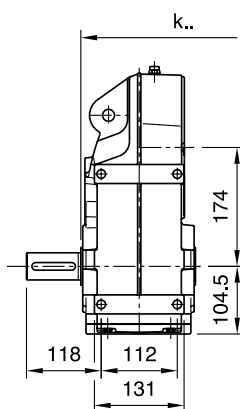
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kl		235	235	235	235	235	235	298	298										
cl	8	8	10	10	10	12	12	13	13										
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7										
øem	115	130	165	165	165	215	215	265	265										
øam	140	160	200	200	200	250	250	300	300										
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135										
kc	406	406	406	406	406	406	406												



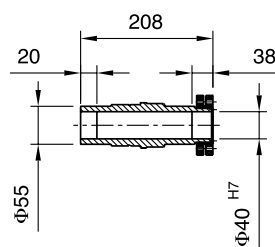
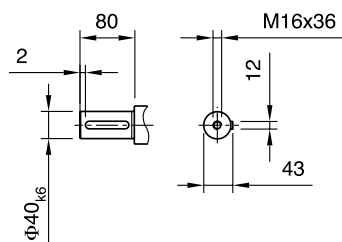
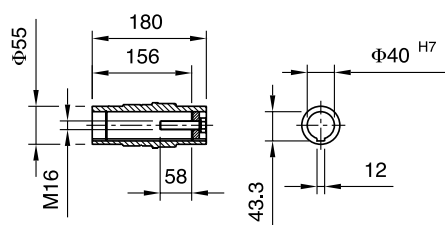
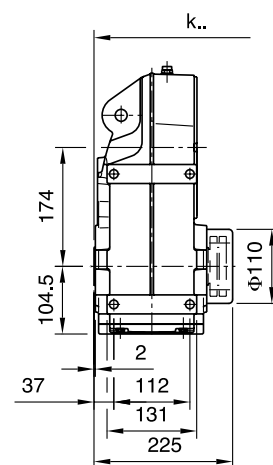
SPZH36..F..



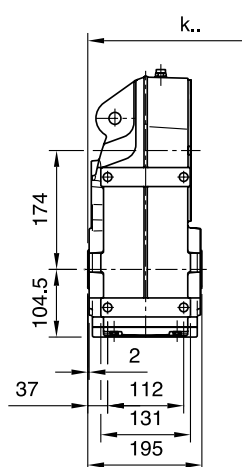
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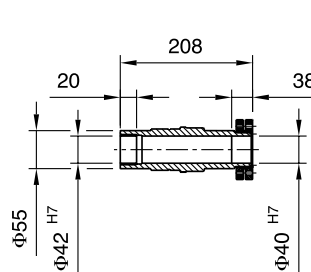
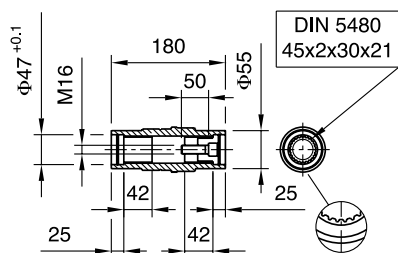
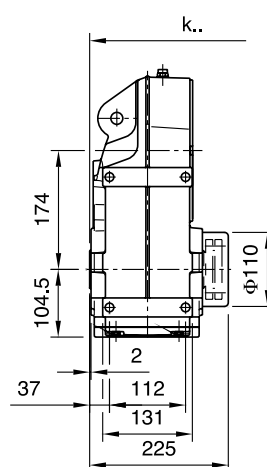
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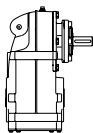


SPZT36..F..



SPZC36..F..





F

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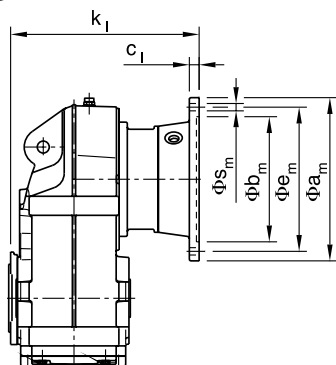
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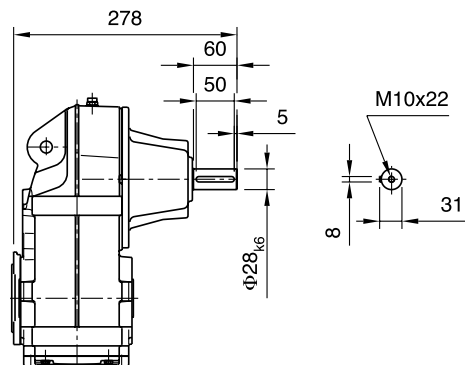
SP4

SPT..36B-U

71 - 132

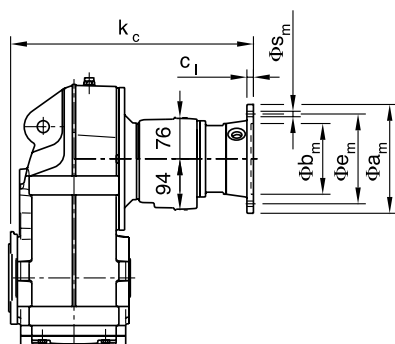


SPT..36B-I

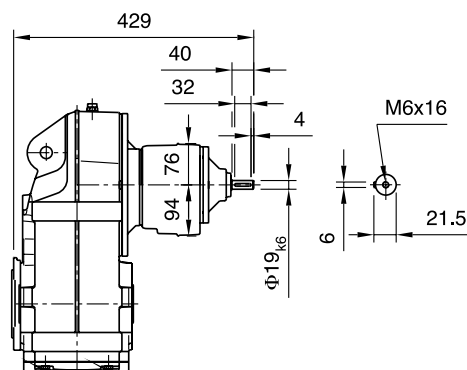


SPT..36B16B/C-U

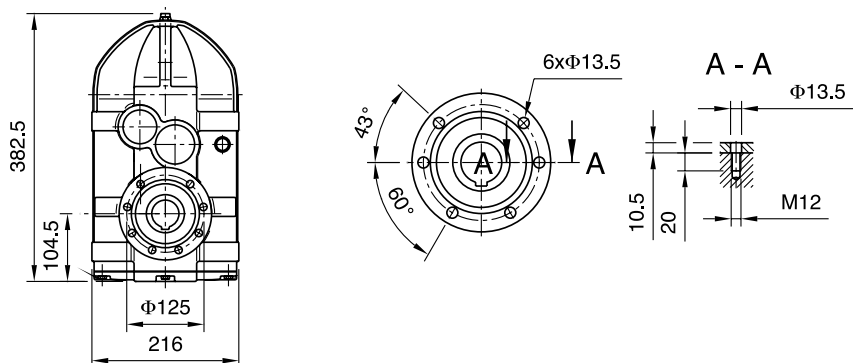
63 - 112



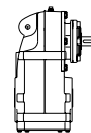
SPT..36B16B/C-I



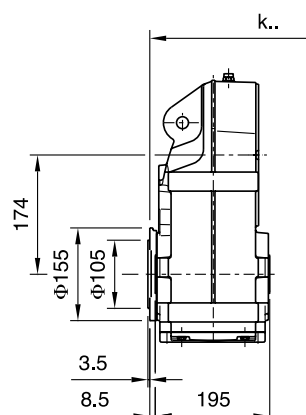
SPT..36..



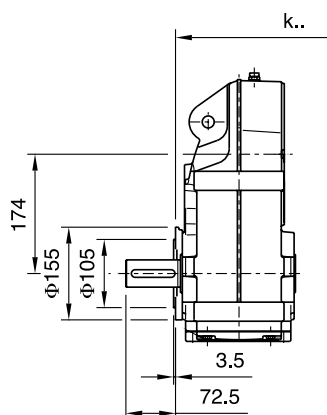
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kl		246	246	246	246	246	246	308	308										
cl	8	8	10	10	10	12	12	13	13										
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7										
øem	115	130	165	165	165	215	215	265	265										
øam	140	160	200	200	200	250	250	300	300										
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 13.5	4 x Ø 13.5	4 x Ø 13.5	4 x Ø 13.5										
kc	417	417	417	417	417	417	417												



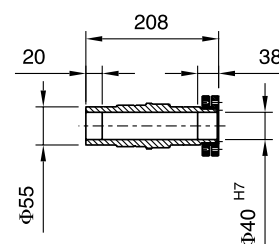
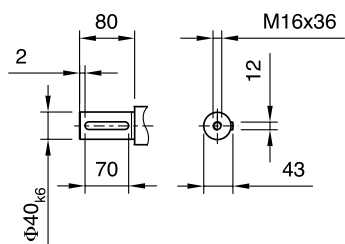
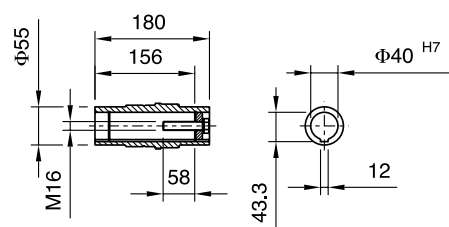
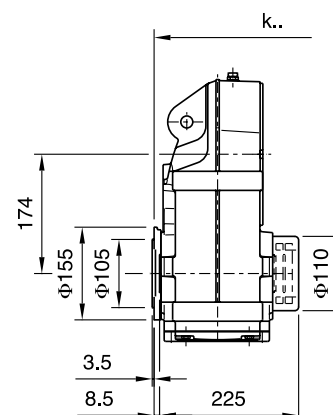
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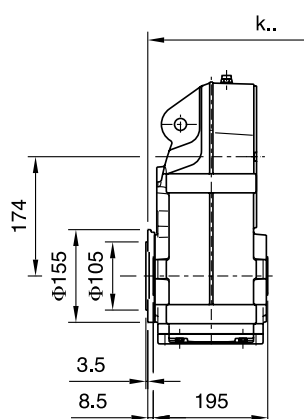
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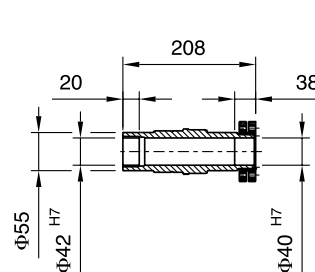
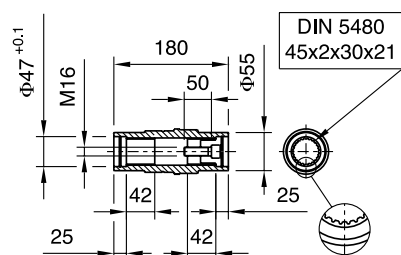
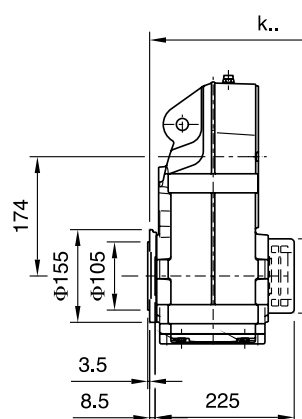
SPTS36..

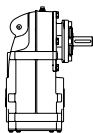


SPTT36..



SPTC36..





F

A

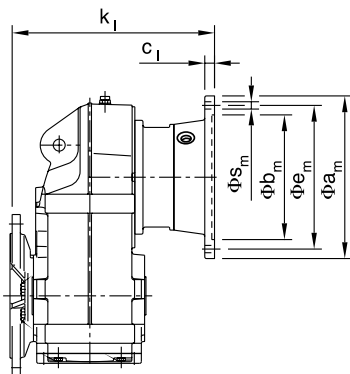
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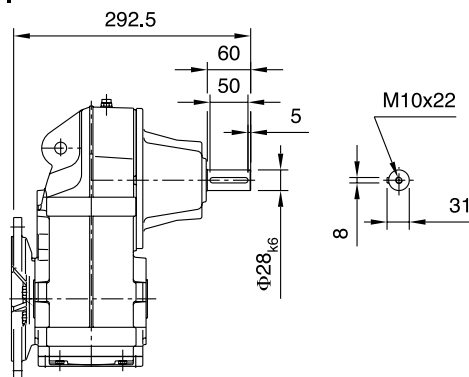
SP4

SPF..36B-U

71 - 132

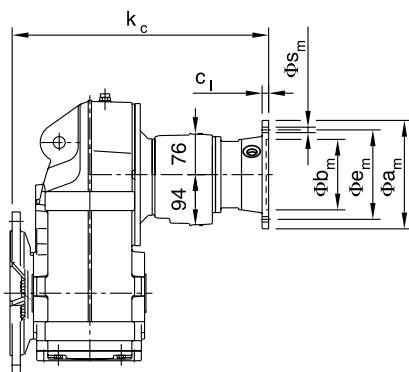


SPF..36B-I

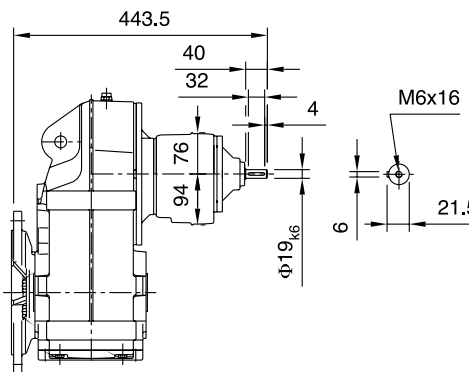


SPF..36B16B/C-U

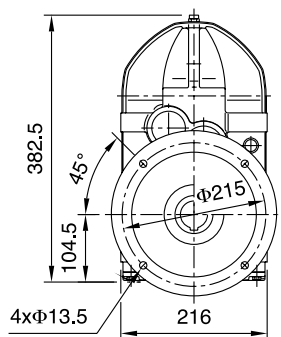
63 - 112



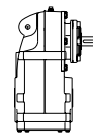
SPF..36B16B/C-I



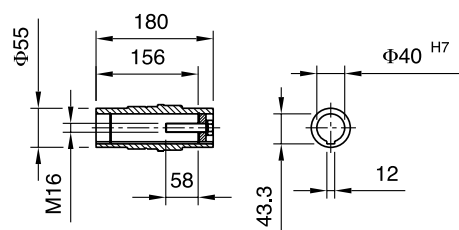
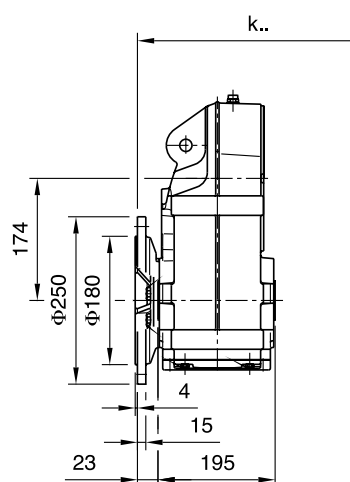
SPF..36..



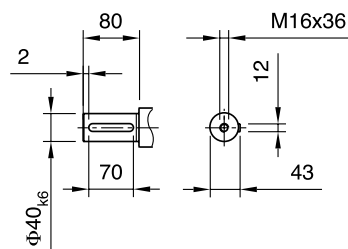
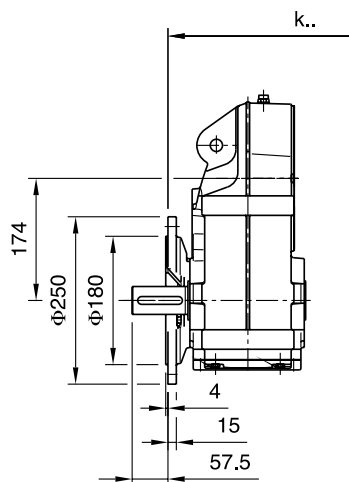
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kl		260	260	260	260	260	260	323	323										
cl	8	8	10	10	10	12	12	13	13										
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7										
øem	115	130	165	165	165	215	215	265	265										
øam	140	160	200	200	200	250	250	300	300										
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 13.5	4 x Ø 13.5	4 x Ø 13.5	4 x Ø 13.5										
kc	431	431	431	431	431	431	431												



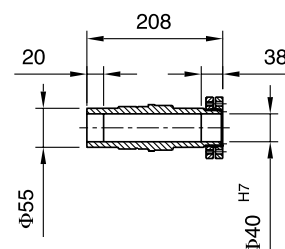
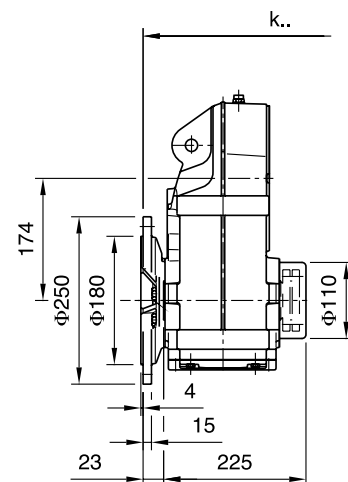
SPFH36..



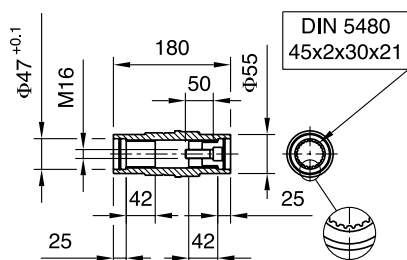
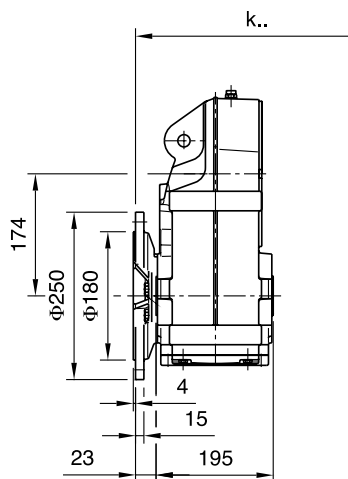
SPFN36..



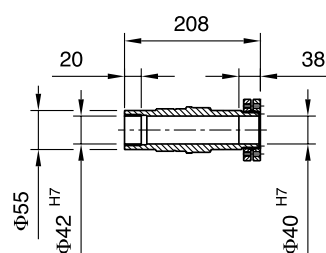
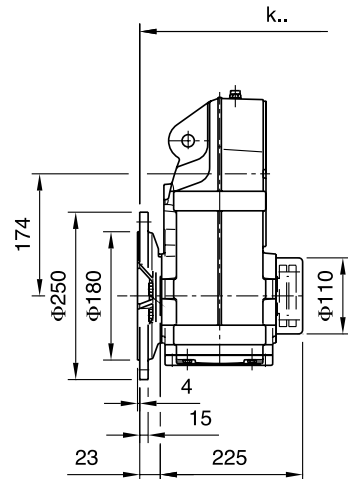
SPFS36..

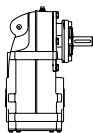


SPFT36..



SPFC36..





F

A

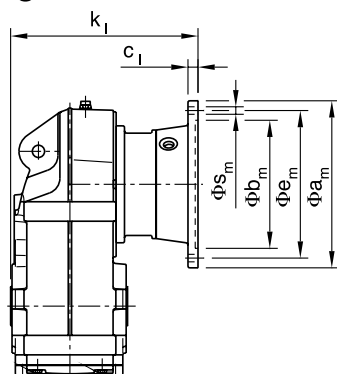
L

K

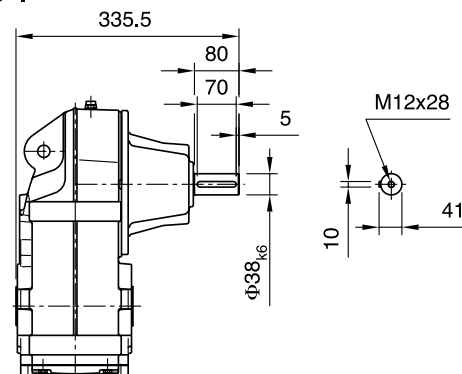
SP4

SPZ..46B/C-U

80 - 180

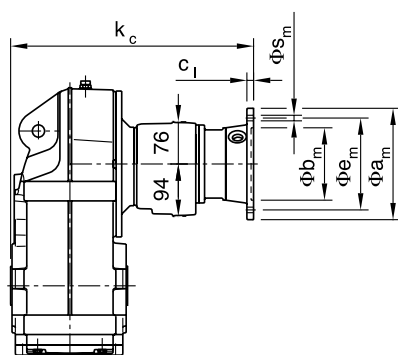


SPZ..46B/C-I

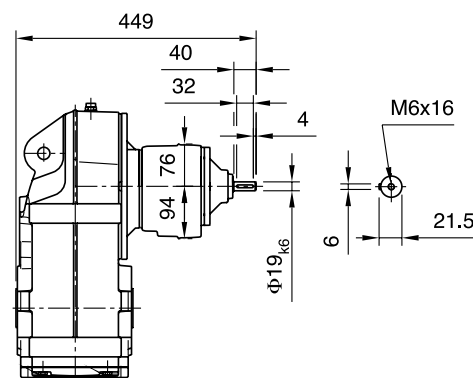


SPZ..46B/C16B/C-U

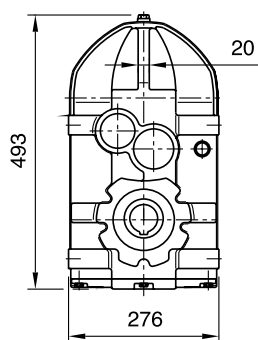
63 - 112



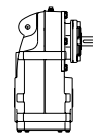
SPZ..46B/C16B/C-I



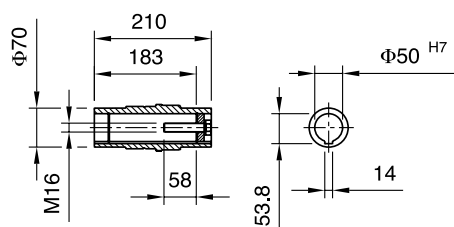
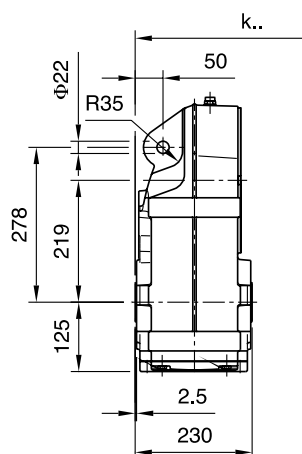
SPZ..46..



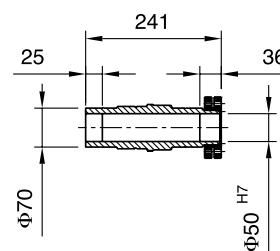
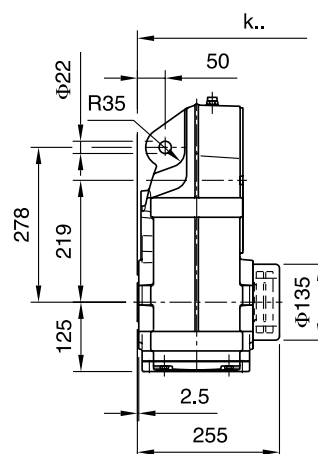
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kl			267	267	267	267	267	329	329	394	394	394	394						
cl	8	8	10	10	10	12	12	13	13	15	15	15	15						
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7						
øem	115	130	165	165	165	215	215	265	265	300	300	300	300						
øam	140	160	200	200	200	250	250	300	300	350	350	350	350						
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175						
kc	437	437	437	437	437	437	437												



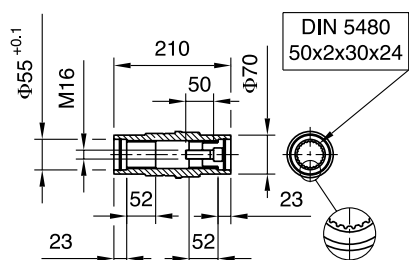
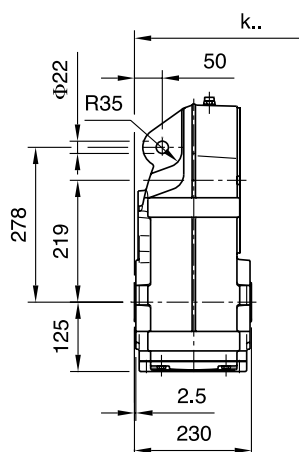
SPZH46..



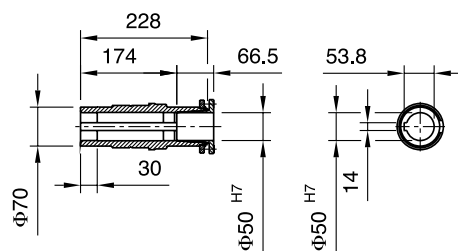
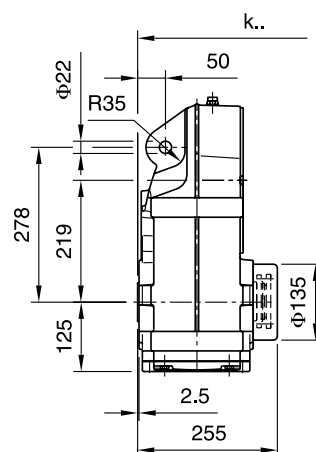
SPZS46..



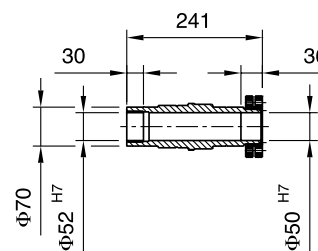
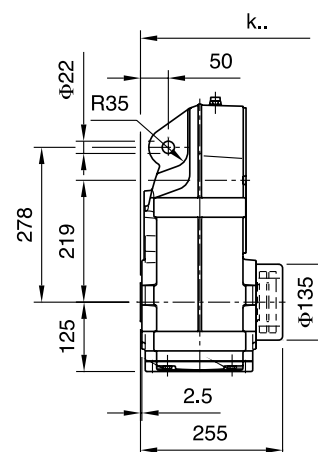
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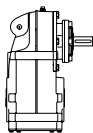


SPZB46..



SPZC46..





F

A

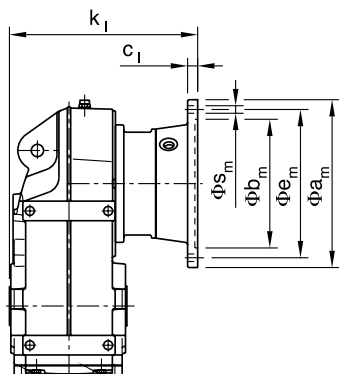
L

K

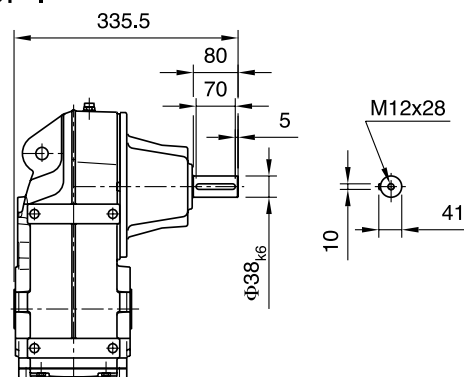
SP4

SPZ..46B/CF-U

80 - 180

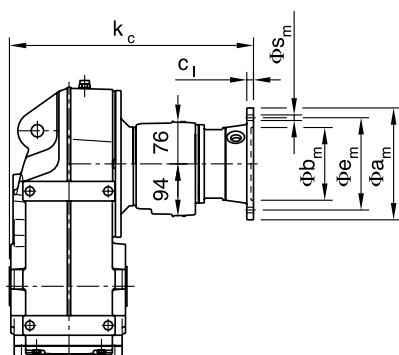


SPZ..46B/CF-I

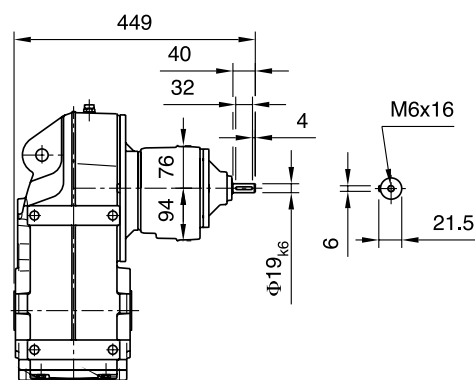


SPZ..46B/C16B/CF-U

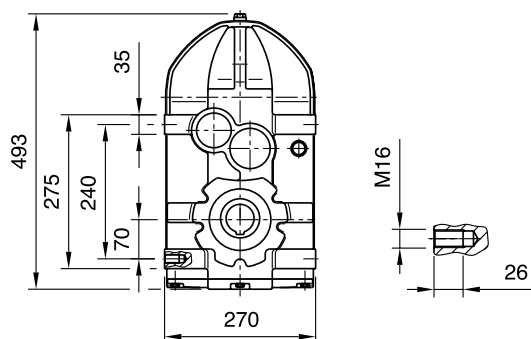
63 - 112



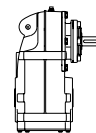
SPZ..46B/C16B/CF-I



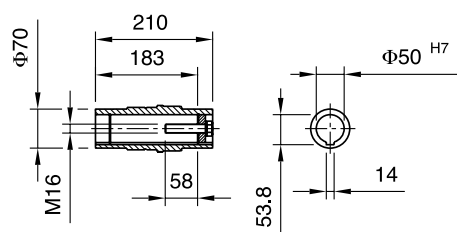
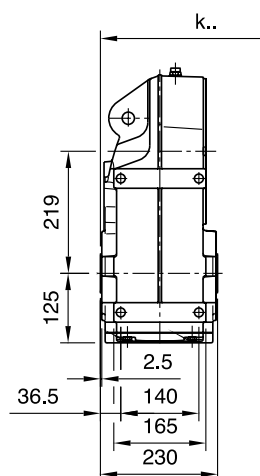
SPZ..46..F..



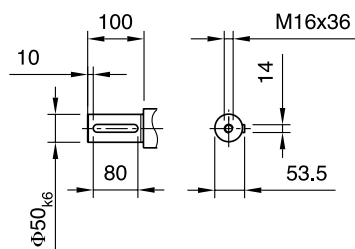
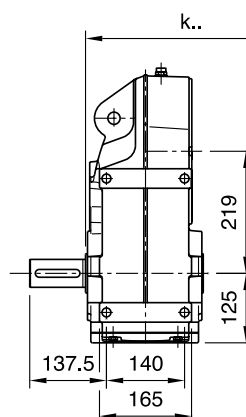
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kl			267	267	267	267	267	329	329	394	394	394	394							
cl	8	8	10	10	10	12	12	13	13	15	15	15	15							
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7							
øem	115	130	165	165	165	215	215	265	265	300	300	300	300							
øam	140	160	200	200	200	250	250	300	300	350	350	350	350							
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175							
kc	437	437	437	437	437	437	437													



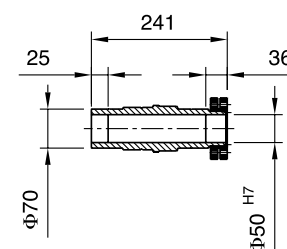
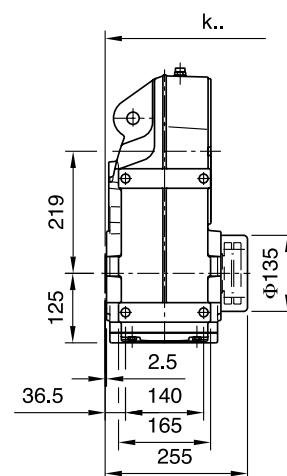
SPZH46..F..



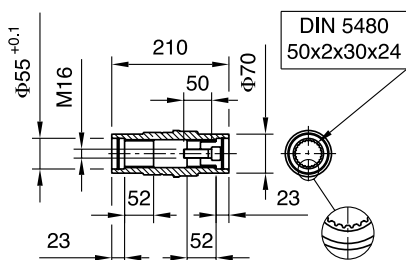
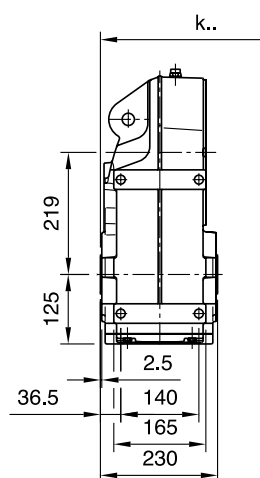
SPZN46..F..



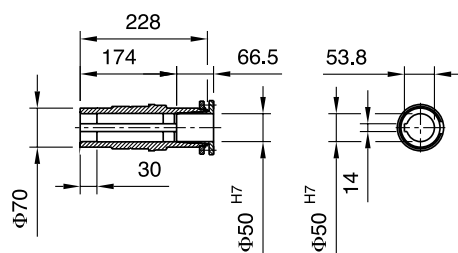
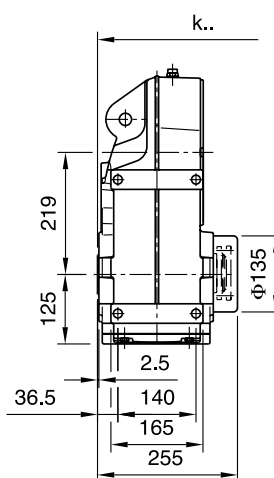
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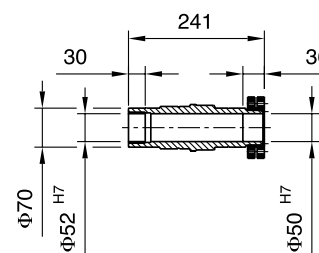
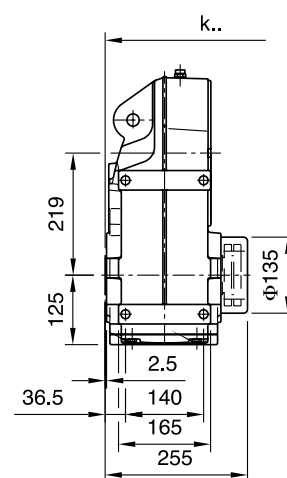
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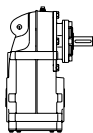


SPZB46..F..



SPZC46..F..





F

A

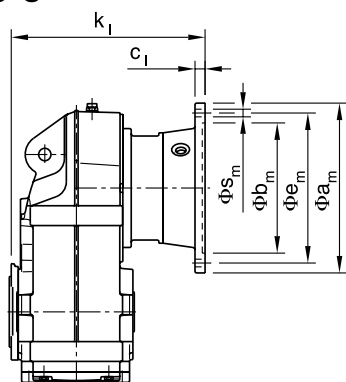
L

K

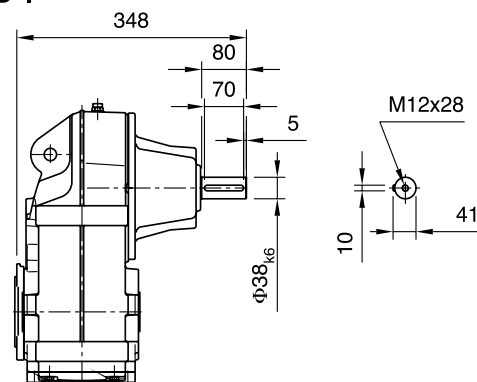
SP4

SPT..46B/C-U

80 - 180

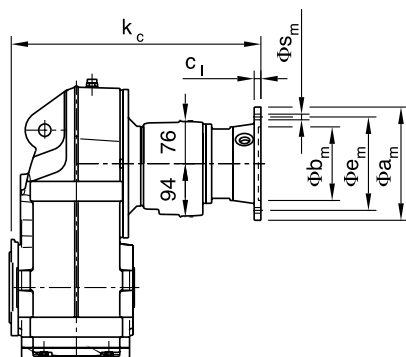


SPT..46B/C-I

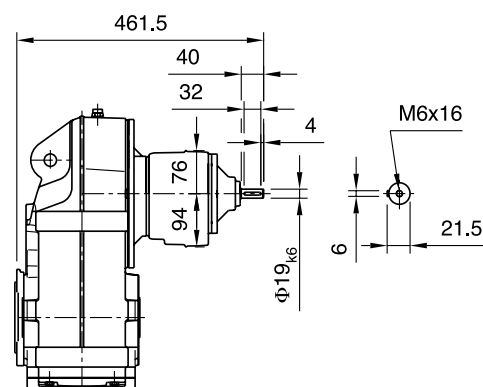


SPT..46B/C16B/C-U

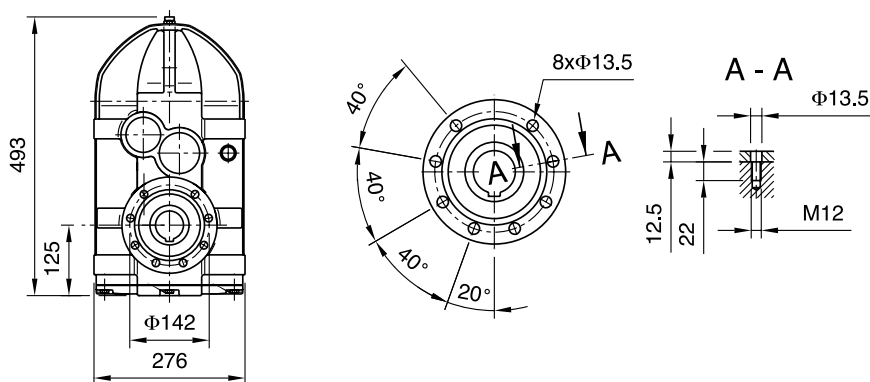
63 - 112



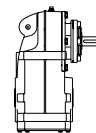
SPT..46B/C16B/C-I



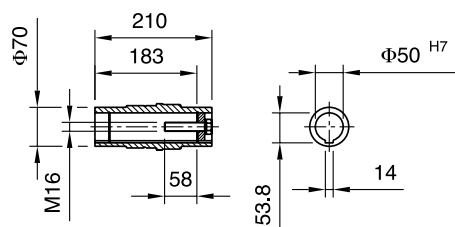
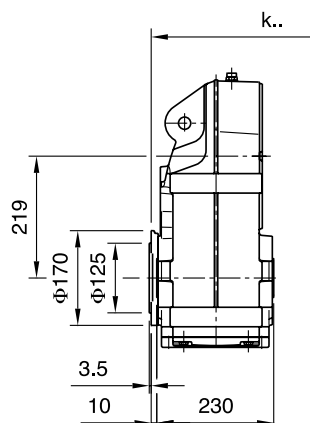
SPT..46..



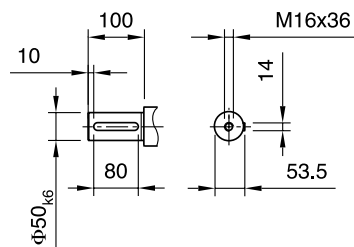
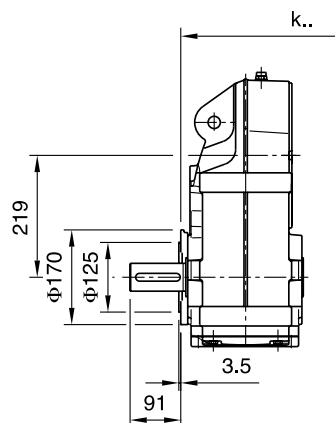
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kl			279	279	279	279	279	342	342	407	407	407	407						
cl	8	8	10	10	10	12	12	13	13	15	15	15	15						
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7						
øem	115	130	165	165	165	215	215	265	265	300	300	300	300						
øam	140	160	200	200	200	250	250	300	300	350	350	350	350						
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175						
kc	449	449	449	449	449	449	449												



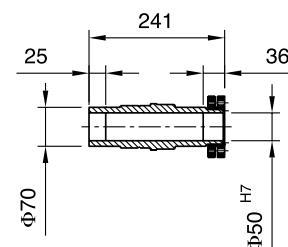
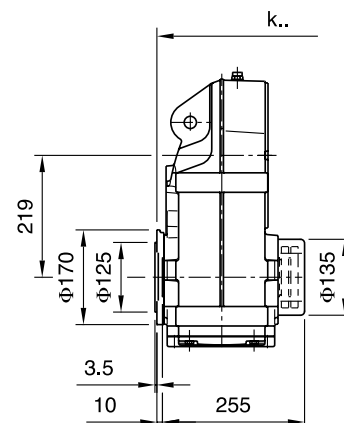
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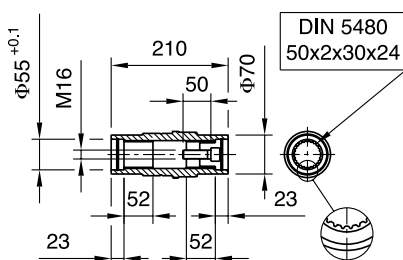
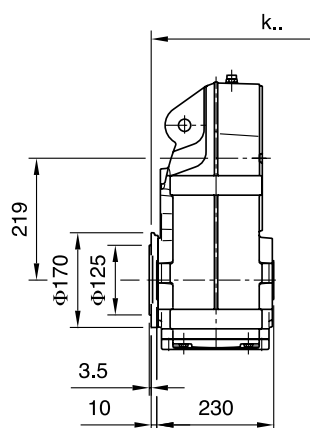
SPTN46..



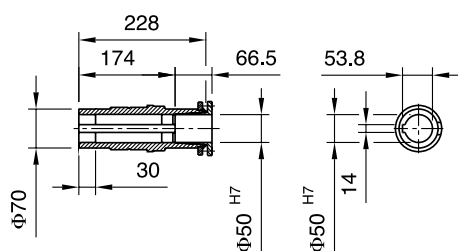
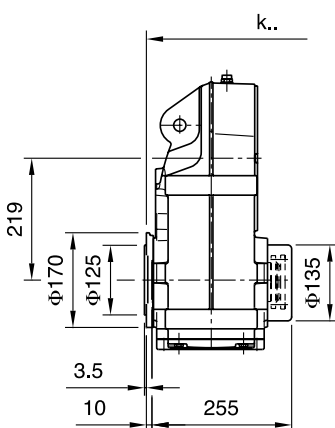
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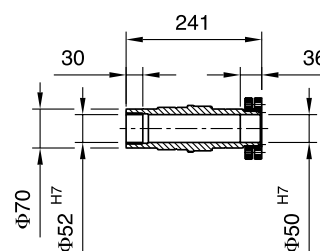
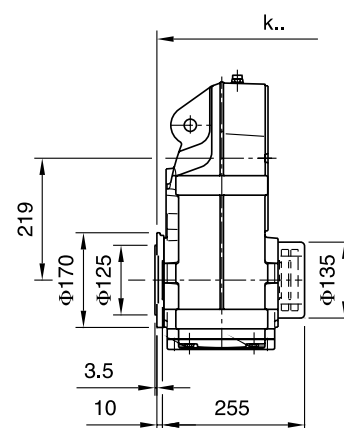
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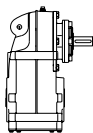


SPTB46..



SPTC46..





F

A

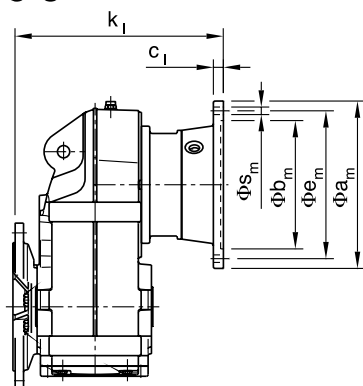
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K

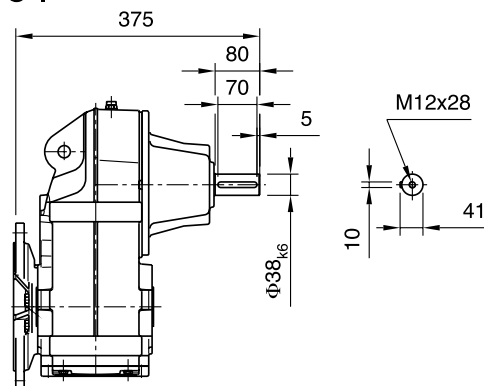
SP4

SPF..46B/C-U

80 - 180

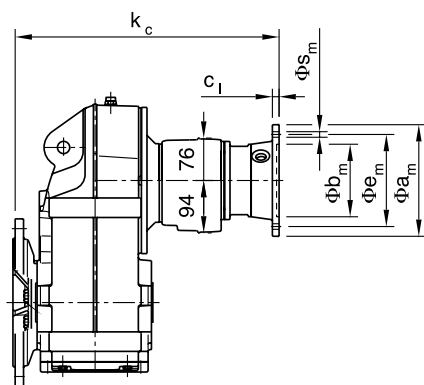


SPF..46B/C-I

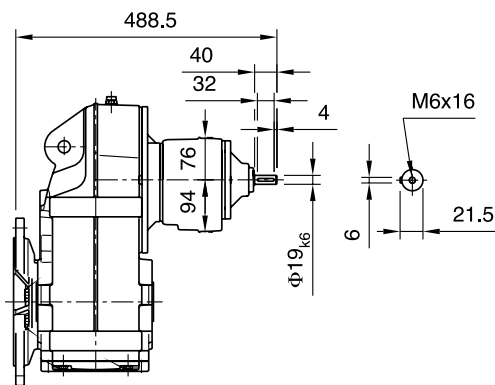


SPF..46B/C16B/C-U

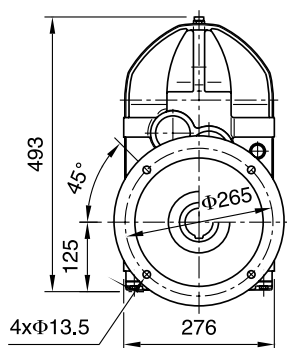
63 - 112



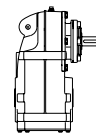
SPF..46B/C16B/C-I



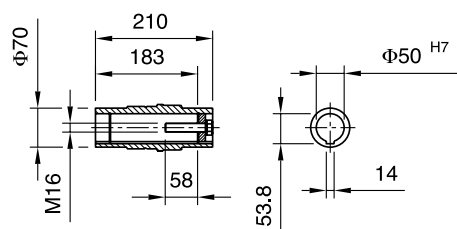
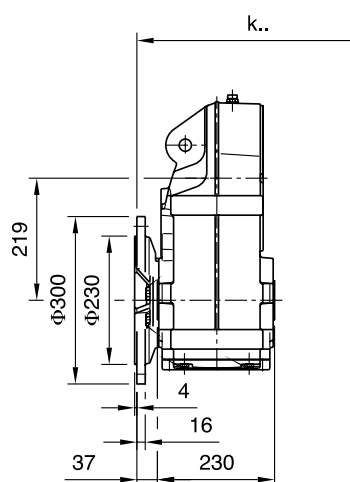
SPF..46..



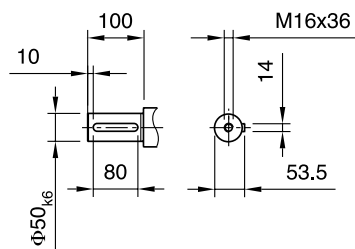
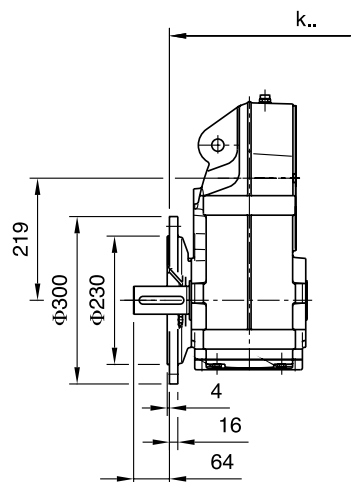
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kl			306	306	306	306	306	369	369	434	434	434	434						
cl	8	8	10	10	10	12	12	13	13	15	15	15	15						
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7						
øem	115	130	165	165	165	215	215	265	265	300	300	300	300						
øam	140	160	200	200	200	250	250	300	300	350	350	350	350						
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175						
kc	476	476	476	476	476	476	476												



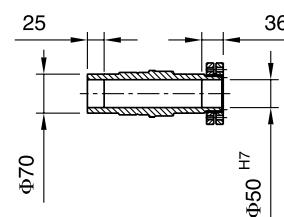
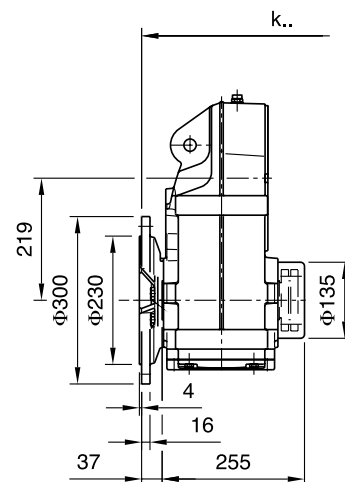
SPFH46..



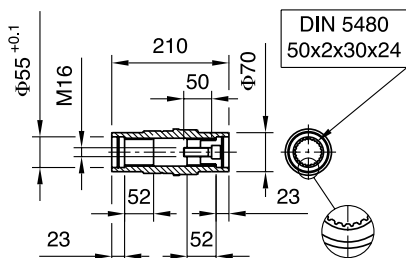
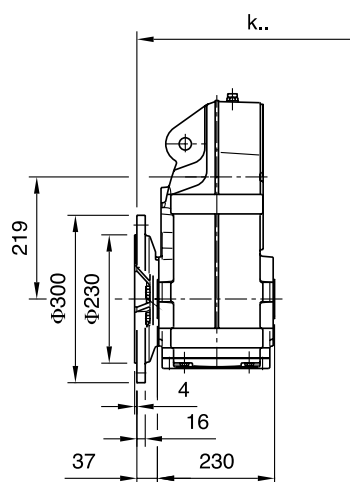
SPFN46..



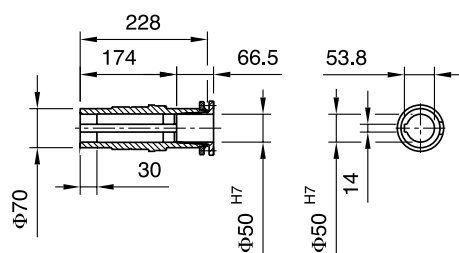
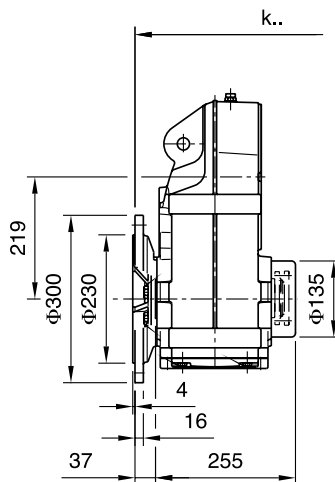
SPFS46..



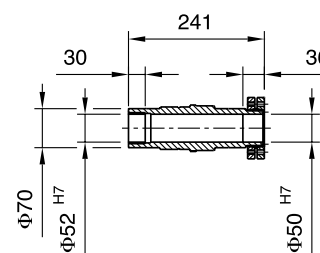
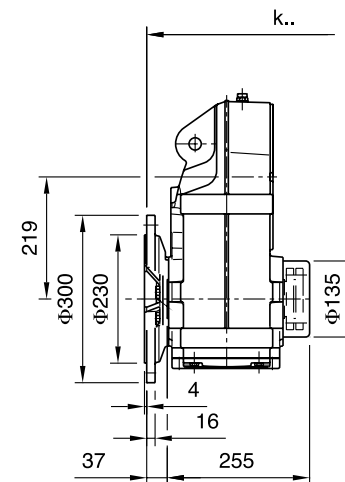
SPFT46..

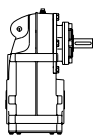


SPFB46..



SPFC46..





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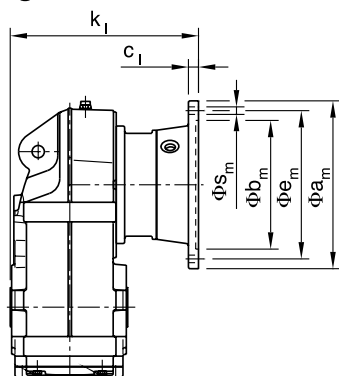
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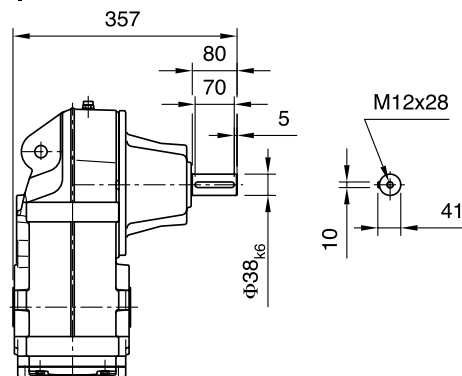
SP4

SPZ..56B/C-U

80 - 180

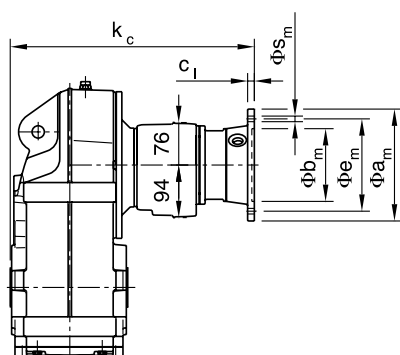


SPZ..56B/C-I

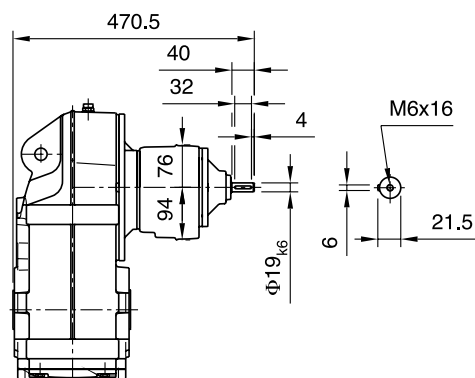


SPZ..56B/C16B/C-U

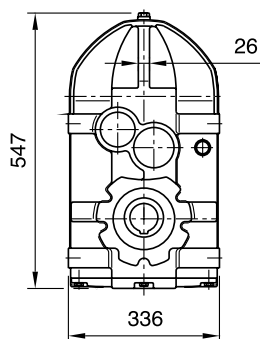
63 - 112



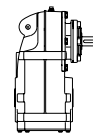
SPZ..56B/C16B/C-I



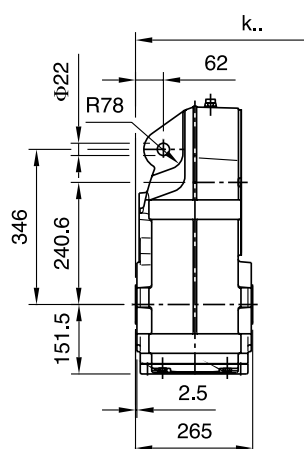
SPZ..56..



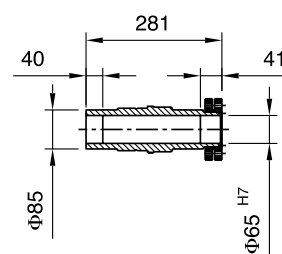
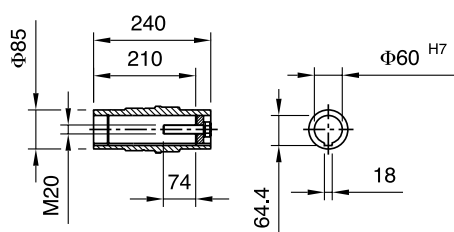
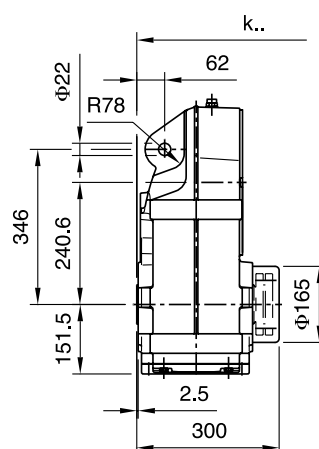
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kl			288	288	288	288	288	351	351	416	416	416	416						
cl	8	8	10	10	10	12	12	13	13	15	15	15	15						
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7						
øem	115	130	165	165	165	215	215	265	265	300	300	300	300						
øam	140	160	200	200	200	250	250	300	300	350	350	350	350						
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175						
kc	458	458	458	458	458	458	458												



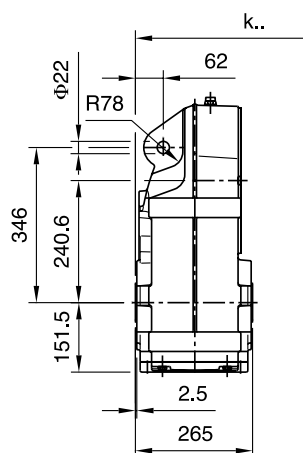
SPZH56..



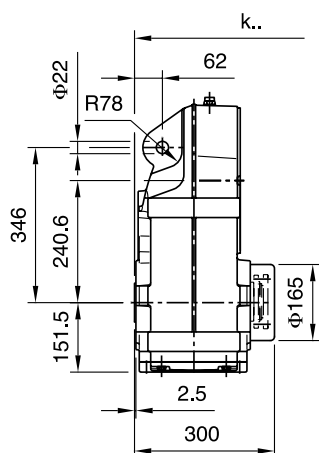
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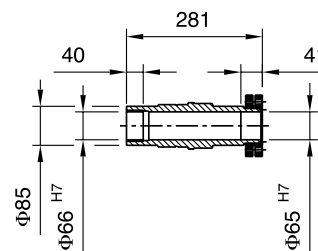
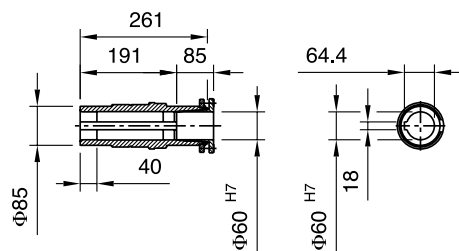
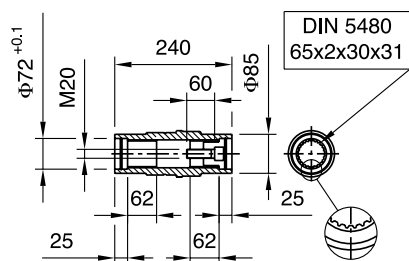
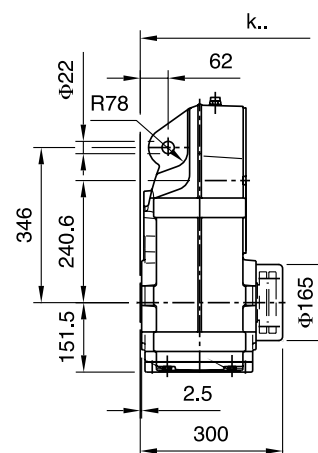
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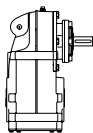


SPZB56..



SPZC56..





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A

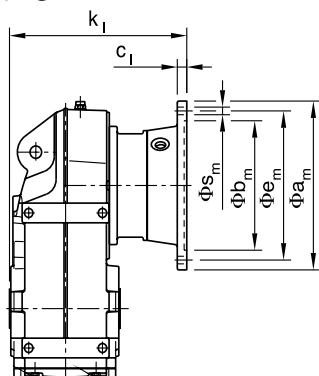
L

K

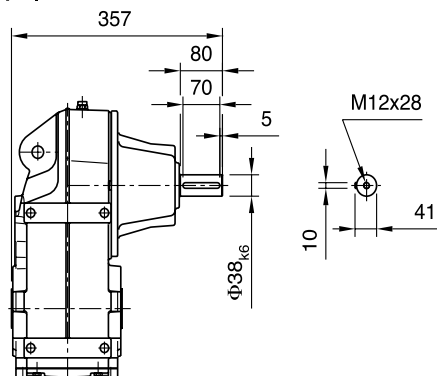
SP4

SPZ..56B/CF-U

80 - 180

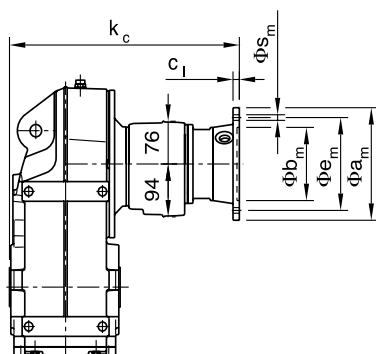


SPZ..56B/CF-I

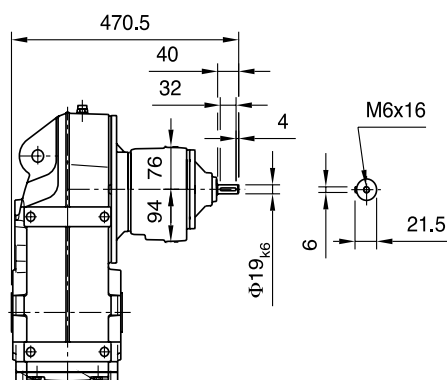


SPZ..56B/C16B/CF-U

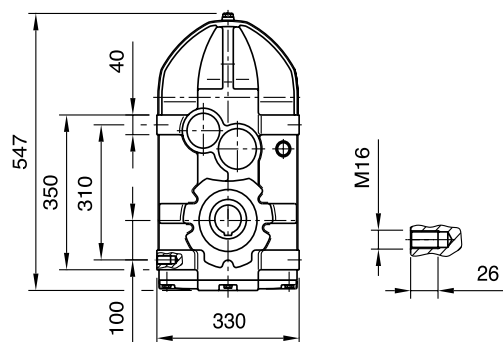
63 - 112



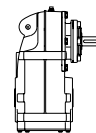
SPZ..56B/C16B/CF-I



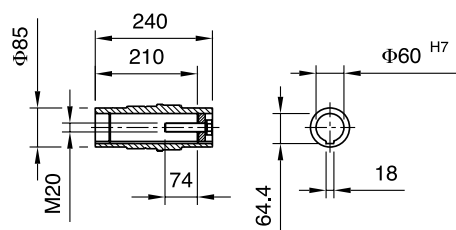
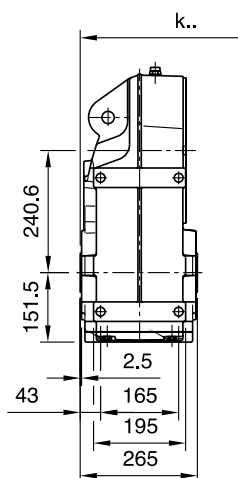
SPZ..56..F..



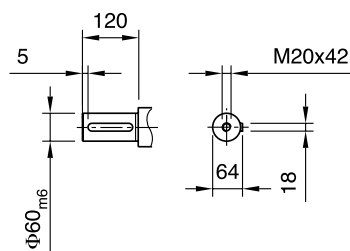
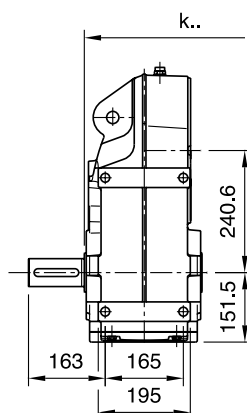
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kl			288	288	288	288	288	351	351	416	416	416	416						
cl	8	8	10	10	10	12	12	13	13	15	15	15	15						
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7						
øem	115	130	165	165	165	215	215	265	265	300	300	300	300						
øam	140	160	200	200	200	250	250	300	300	350	350	350	350						
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175						
kc	458	458	458	458	458	458	458												



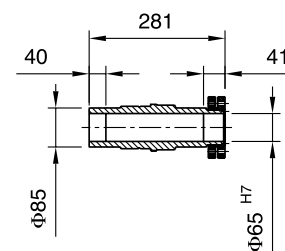
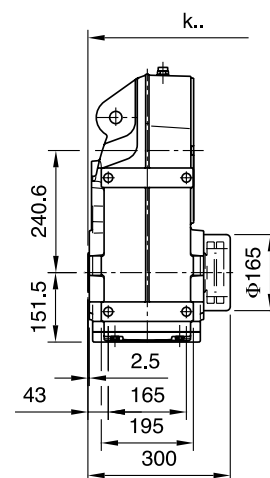
SPZH56..F..



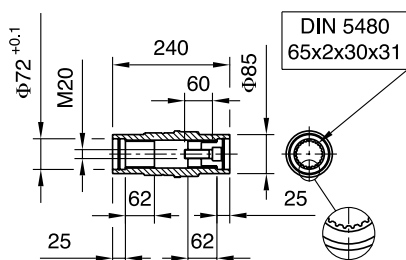
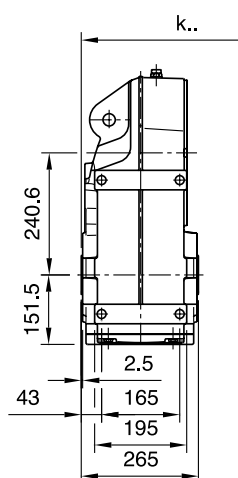
SPZN56..F..



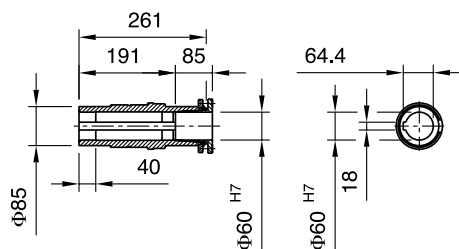
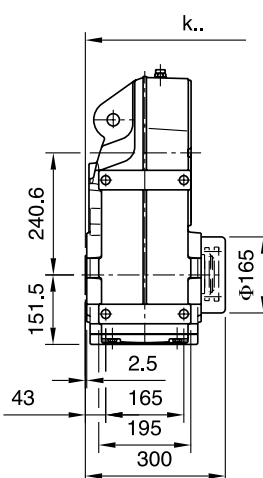
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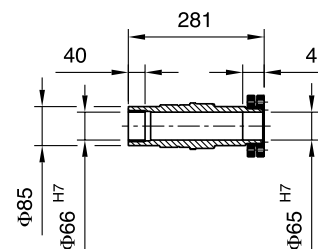
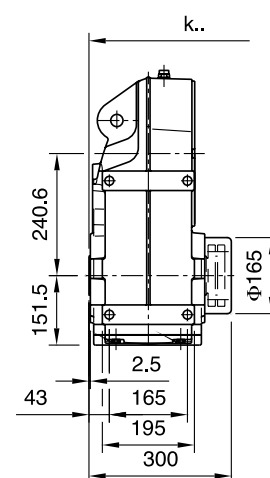
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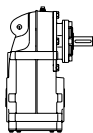


SPZB56..F..



SPZC56..F..





F

A

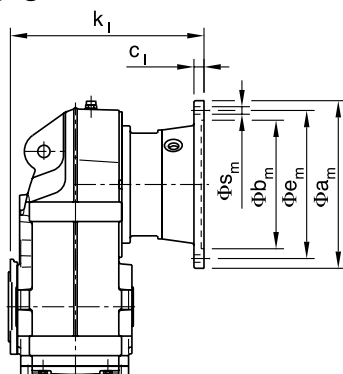
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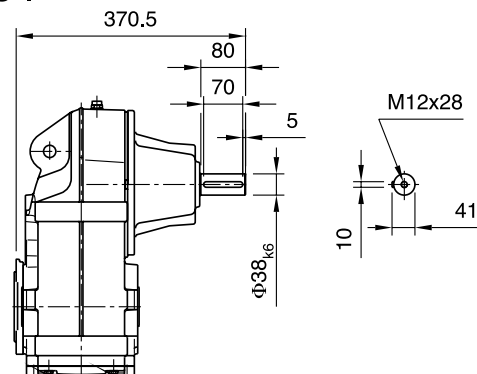
SP4

SPT..56B/C-U

80 - 180

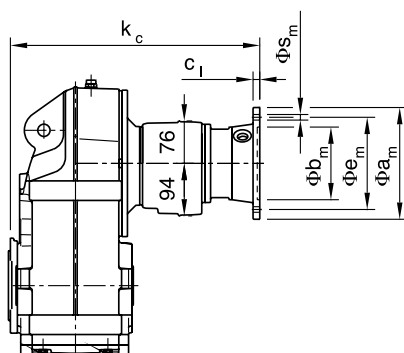


SPT..56B/C-I

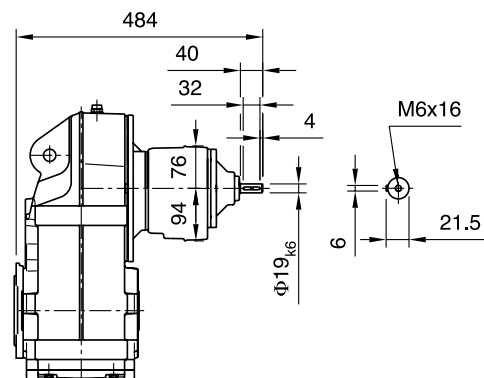


SPT..56B/C16B/C-U

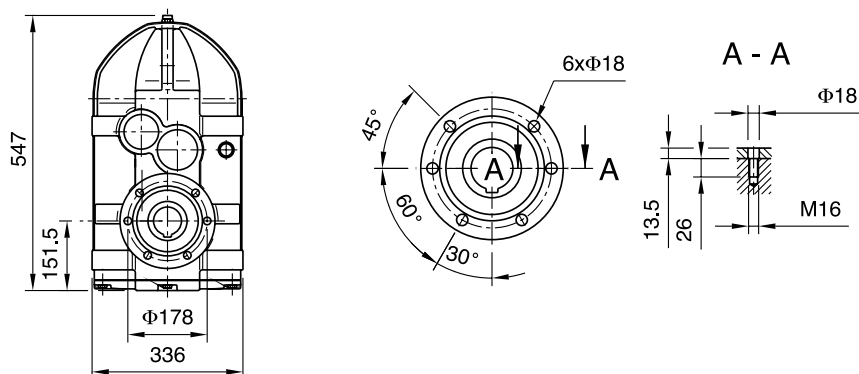
63 - 112



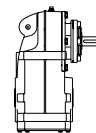
SPT..56B/C16B/C-I



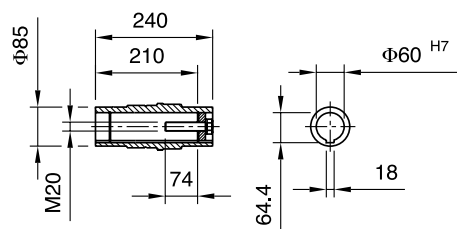
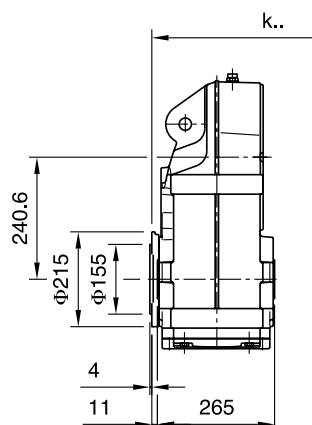
SPT..56..



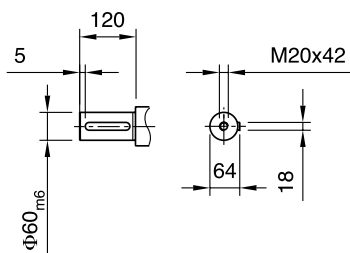
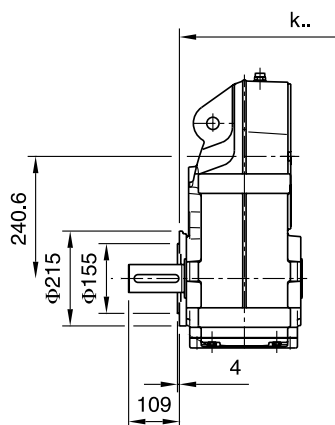
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kl			302	302	302	302	302	364	364	429	429	429	429						
cl	8	8	10	10	10	12	12	13	13	15	15	15	15						
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7						
øem	115	130	165	165	165	215	215	265	265	300	300	300	300						
øam	140	160	200	200	200	250	250	300	300	350	350	350	350						
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175						
kc	472	472	472	472	472	472	472												



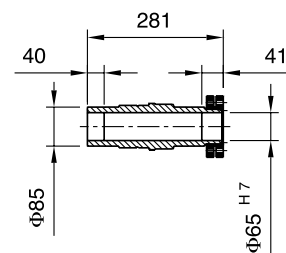
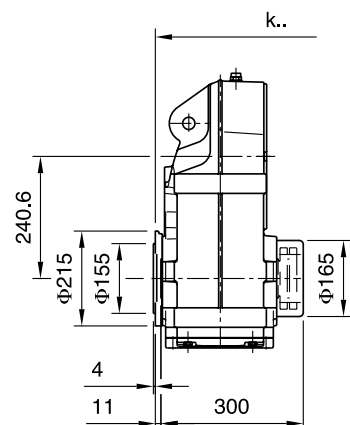
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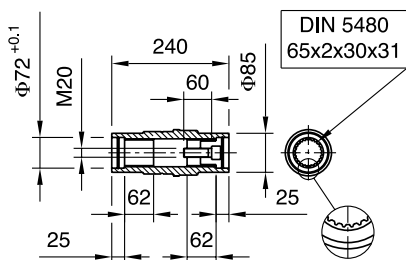
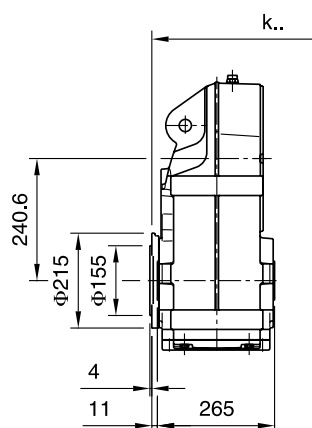
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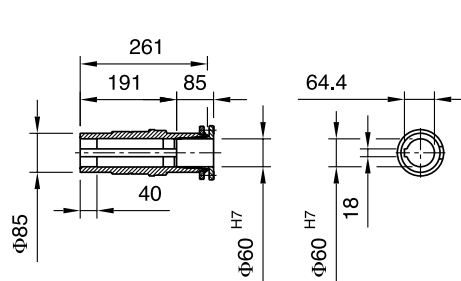
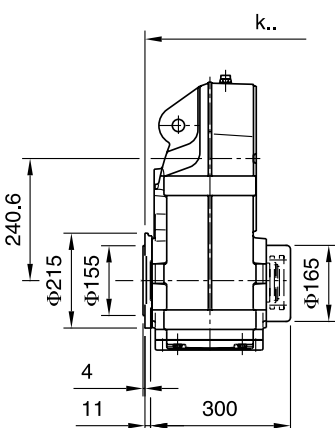
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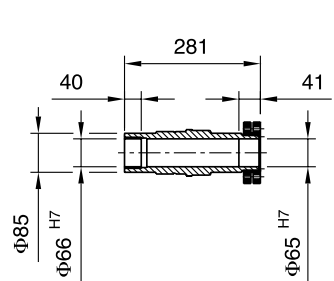
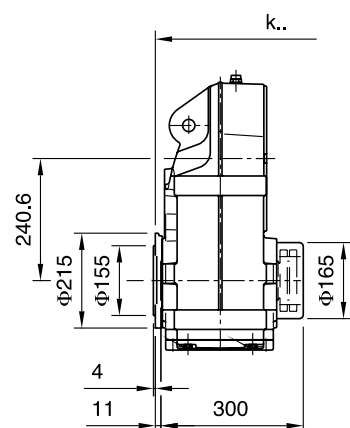
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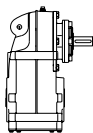


SPTB56..



SPTC56..





F

A

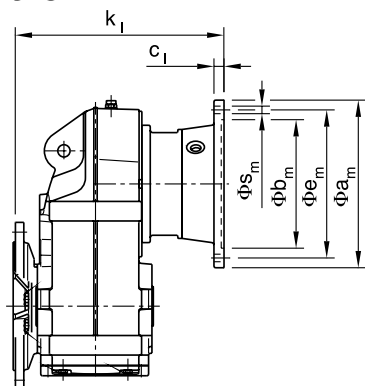
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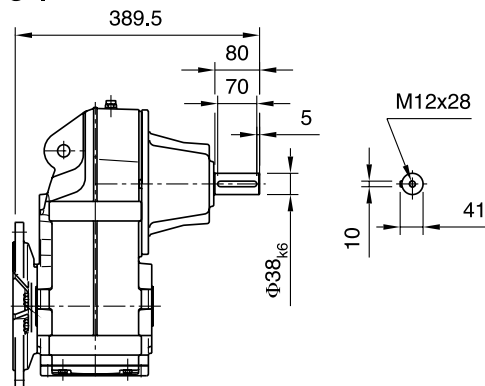
SP4

SPF..56B/C-U

80 - 180

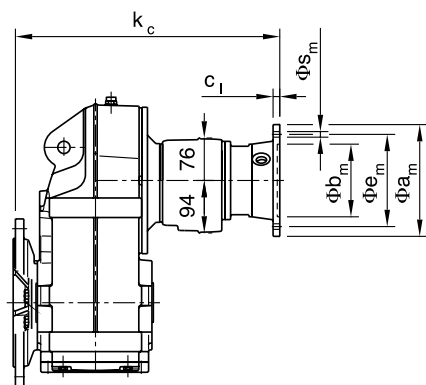


SPF..56B/C-I

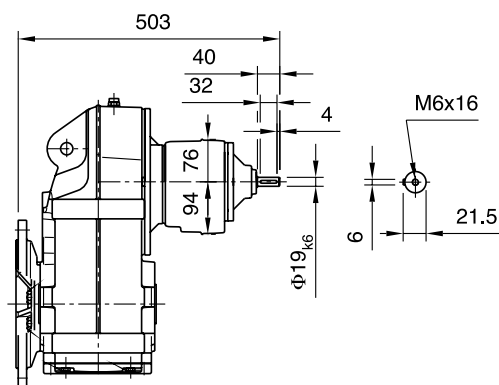


SPF..56B/C16B/C-U

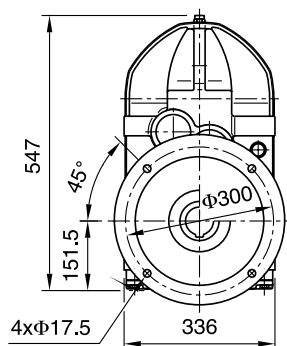
63 - 112



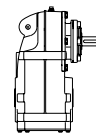
SPF..56B/C16B/C-I



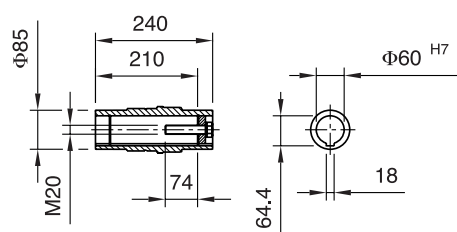
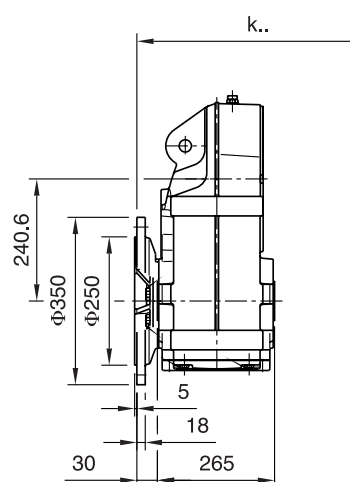
SPF..56..



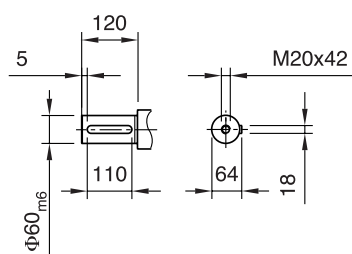
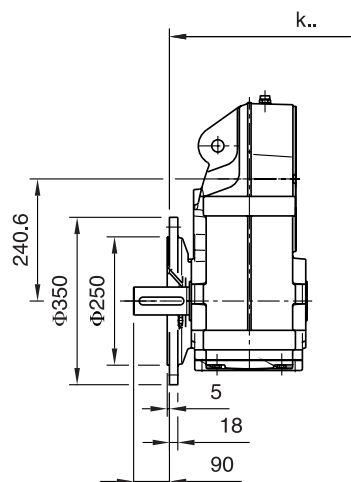
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kl			321	321	321	321	321	383	383	448	448	448	448						
cl	8	8	10	10	10	12	12	13	13	15	15	15	15						
øbm	95H7	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7						
øem	115	130	165	165	165	215	215	265	265	300	300	300	300						
øam	140	160	200	200	200	250	250	300	300	350	350	350	350						
øsm	4 x M8 x 16	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175						
kc	491	491	491	491	491	491	491												



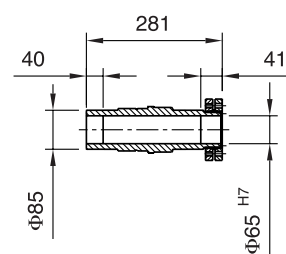
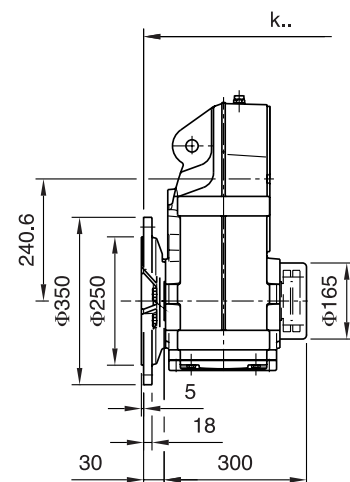
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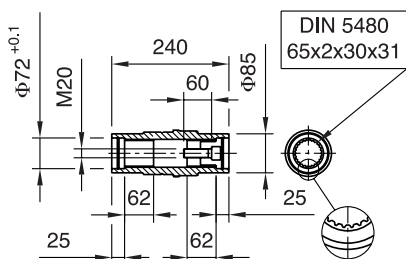
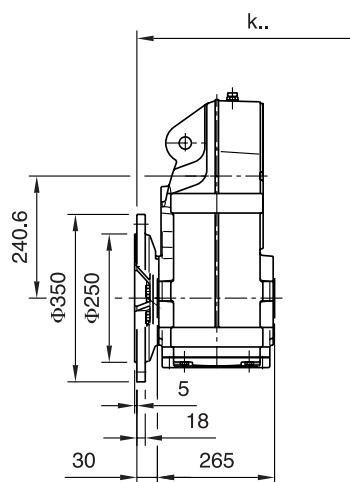
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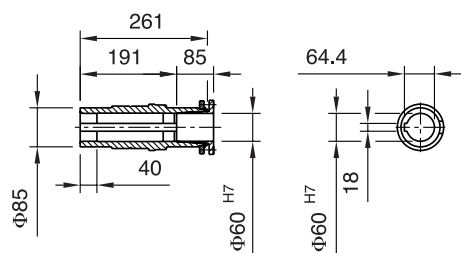
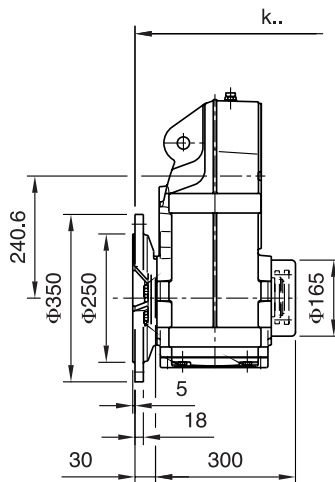
SPFS56..



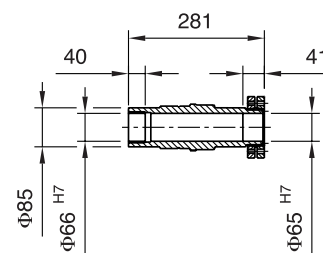
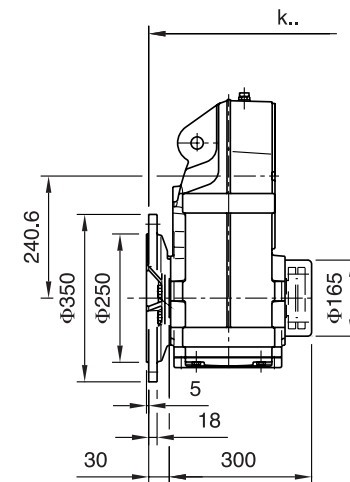
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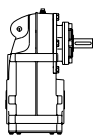


SPFB56..



SPFC56..





F

A

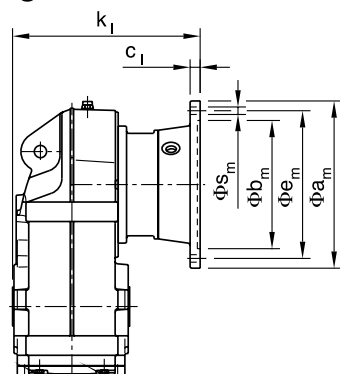
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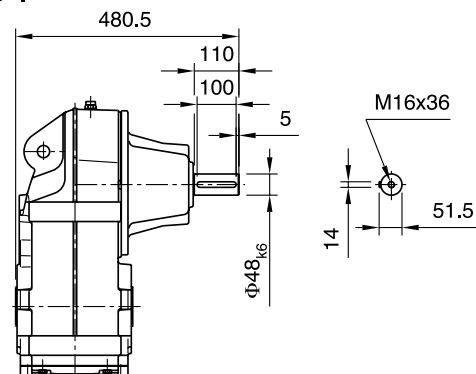
SP4

SPZ..66B/C-U

100 - 280

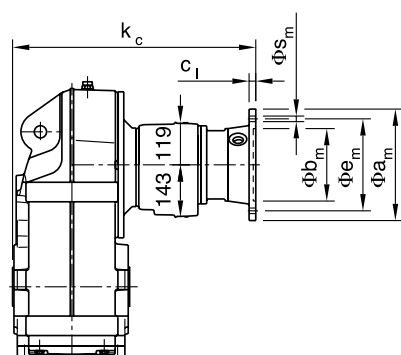


SPZ..66B/C-I

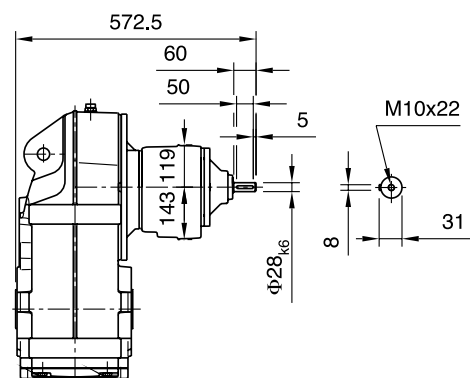


SPZ..66B/C36B/C-U

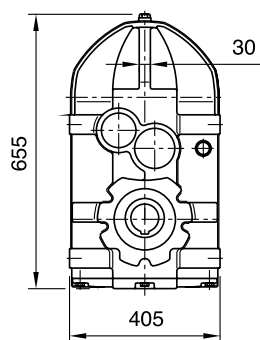
71 - 132



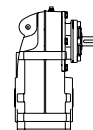
SPZ..66B/C36B/C-I



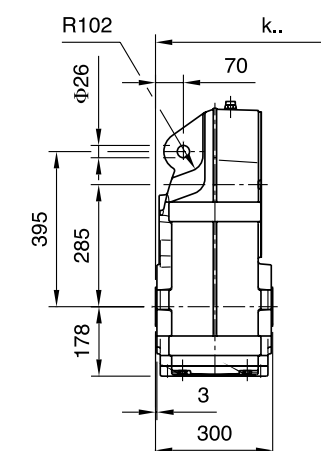
SPZ..66..



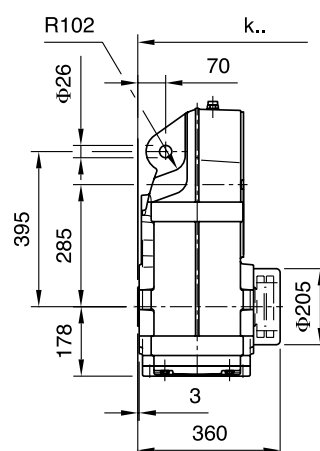
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kl					383	383	383	383	448	448	540	540	565	595	595	606	606	606		
cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	540	540	540	540	540	540	603	603												



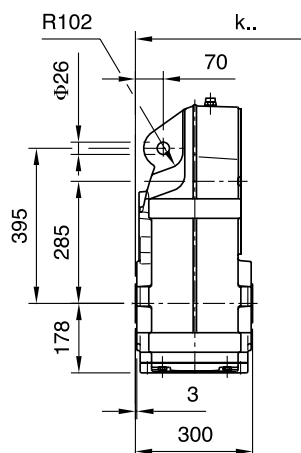
SPZH66..



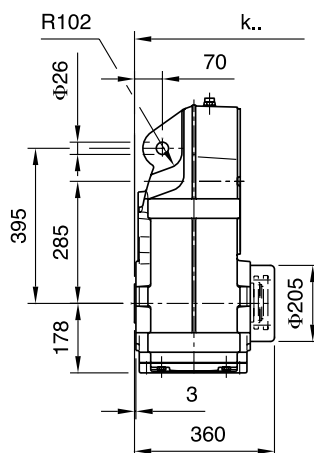
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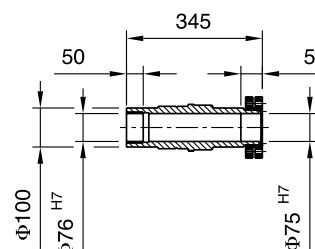
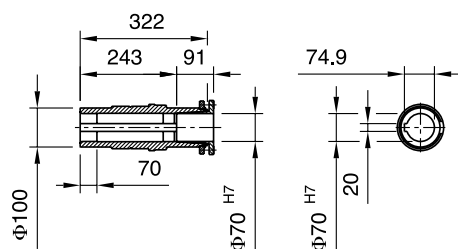
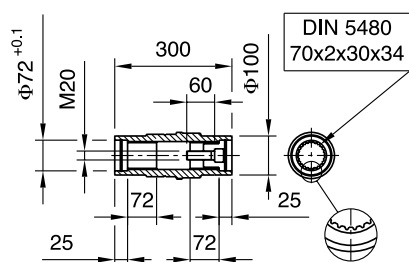
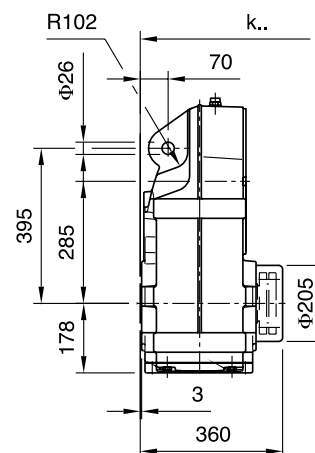
SPZT66..

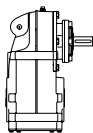


SPZB66..



SPZC66..





F

A

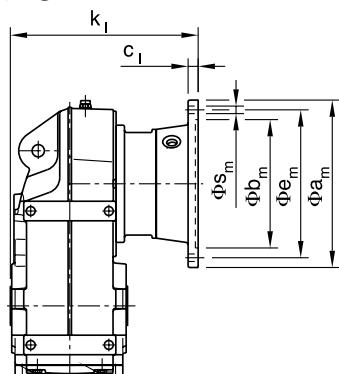
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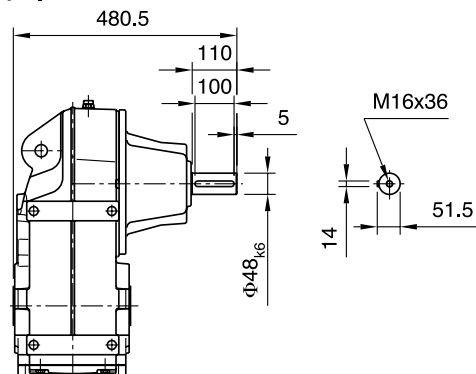
SP4

SPZ..66B/CF-U

100 - 280

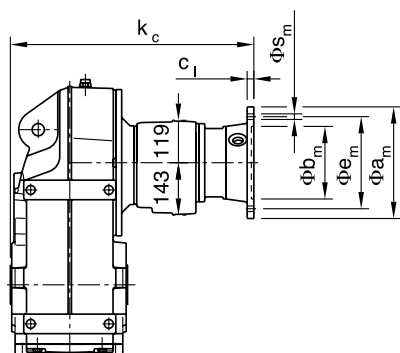


SPZ..66B/CF-I

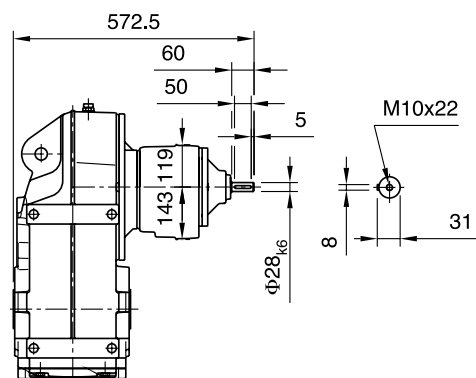


SPZ..66B/C36B/CF-U

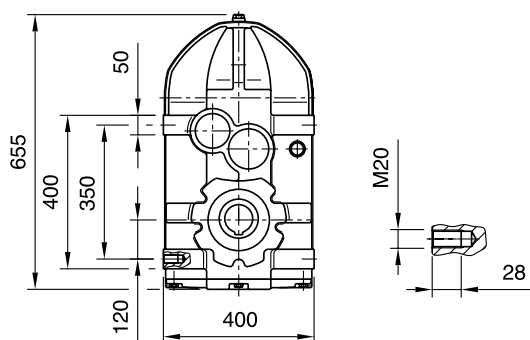
71 - 132



SPZ..66B/C36B/CF-I



SPZ..66..F..

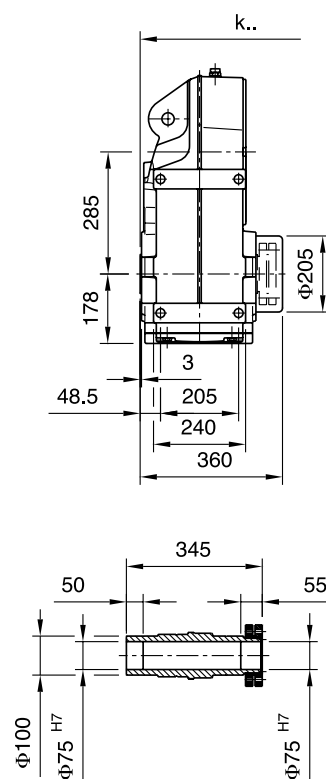
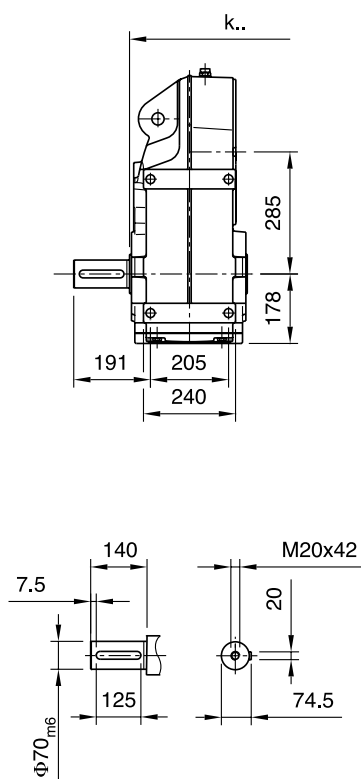


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kl					383	383	383	383	448	448	540	540	565	595	595	606	606	606		
cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	540	540	540	540	540	540	603	603												



SPZN66..F..

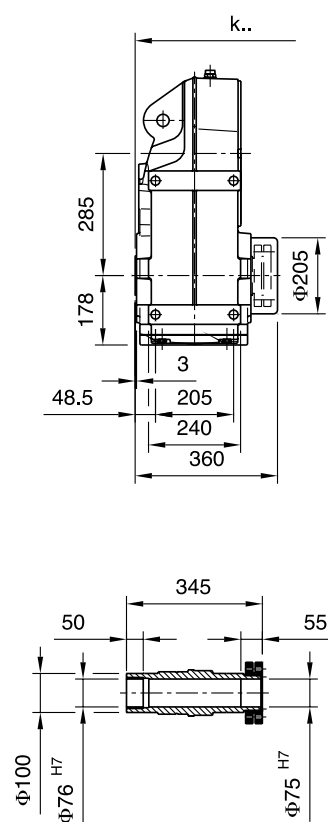
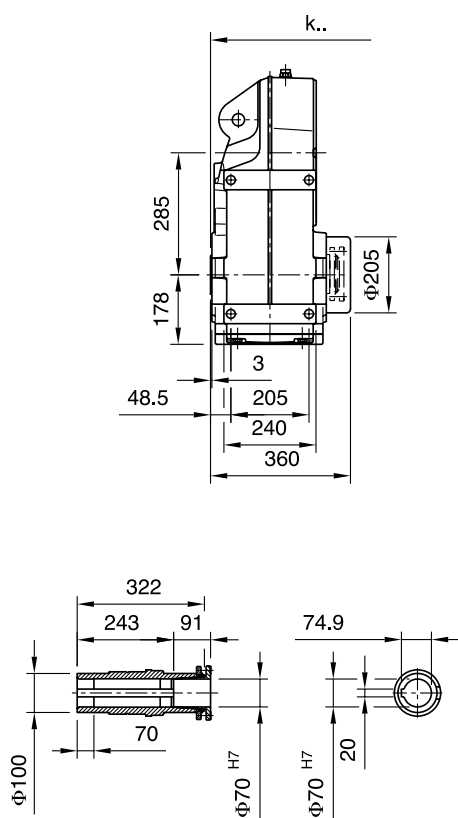
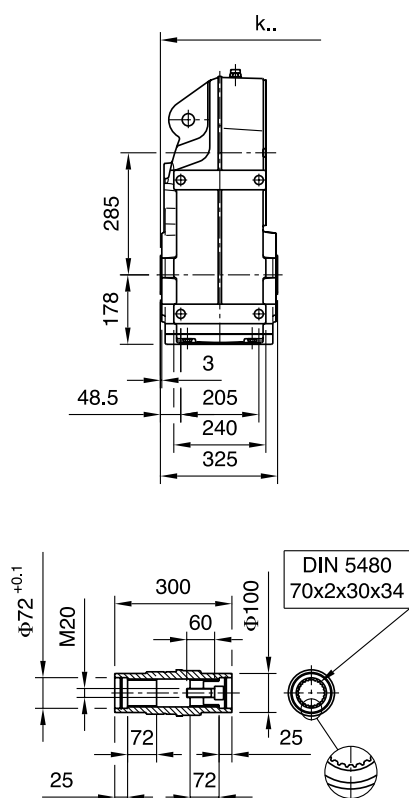
SPZS66..F..

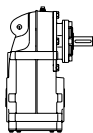


SPZT66..F..

SPZB66..F..

SPZC66..F..





F

A

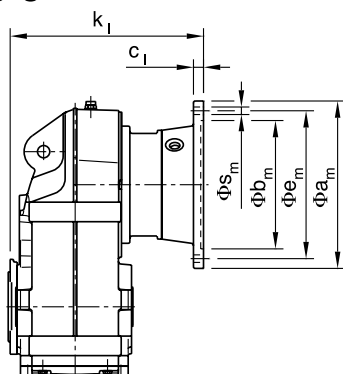
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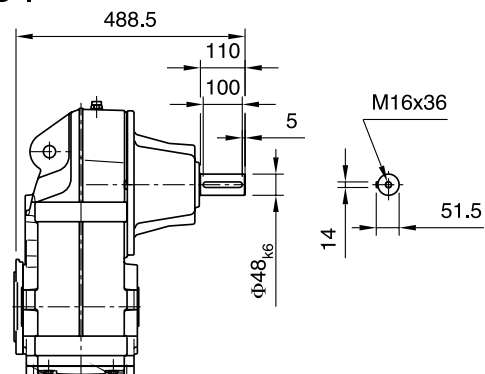
SP4

SPT..66B/C-U

100 - 280

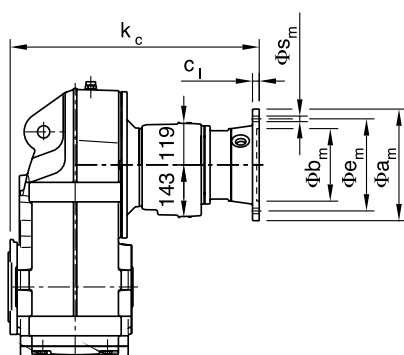


SPT..66B/C-I

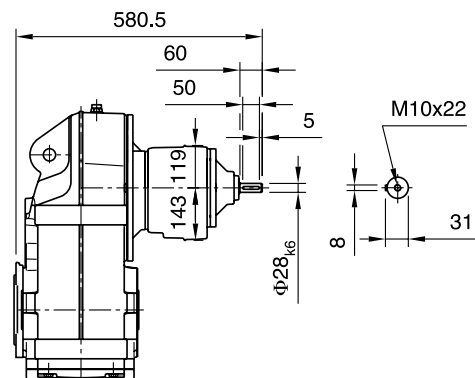


SPT..66B/C36B/C-U

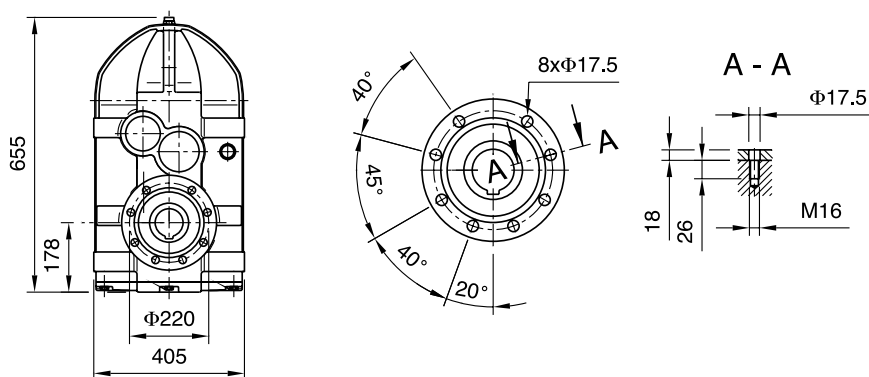
71 - 132



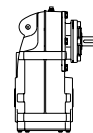
SPT..66B/C36B/C-I



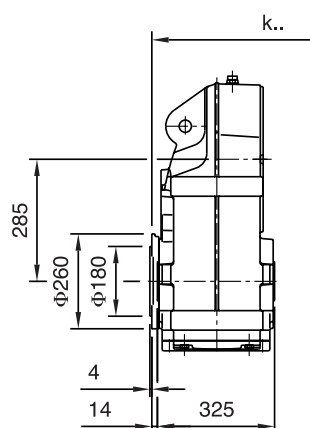
SPT..66..



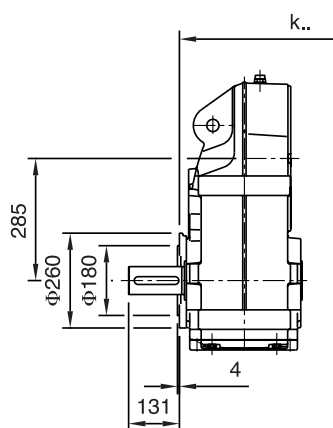
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kl					391	391	391	391	456	456	548	548	573	603	603	614	614	614		
cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	548	548	548	548	548	548	611	611												



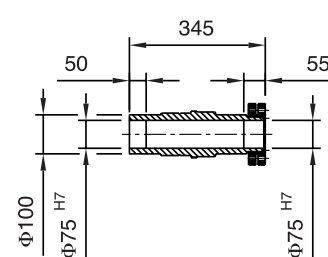
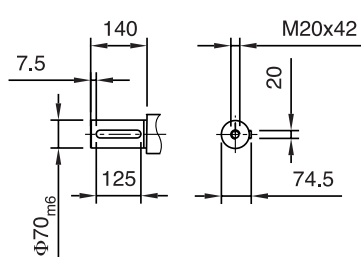
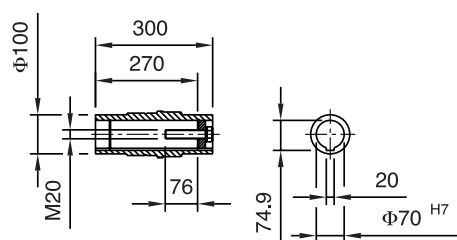
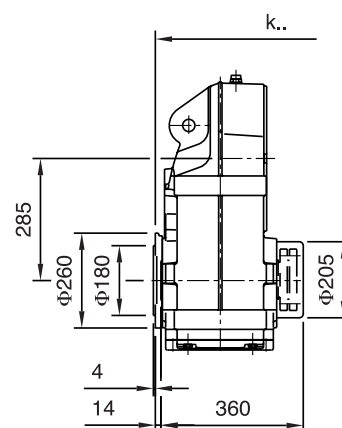
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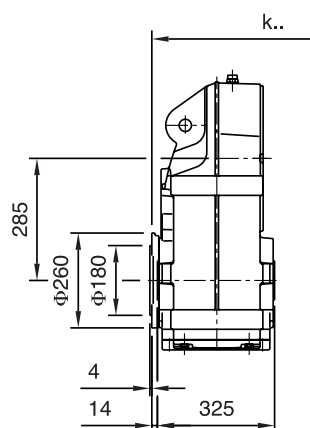
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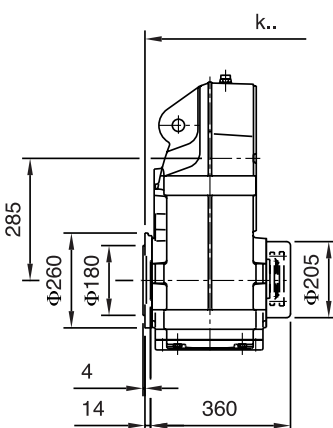
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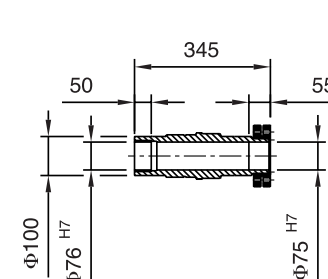
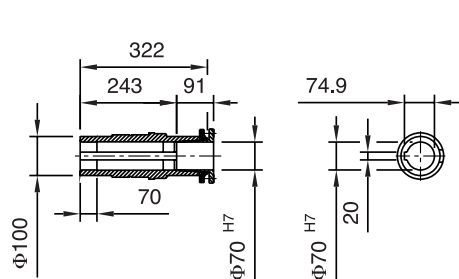
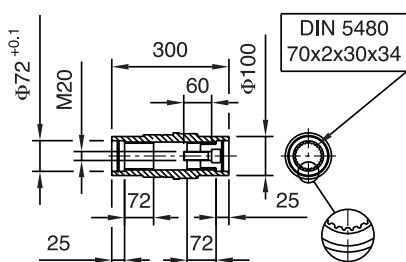
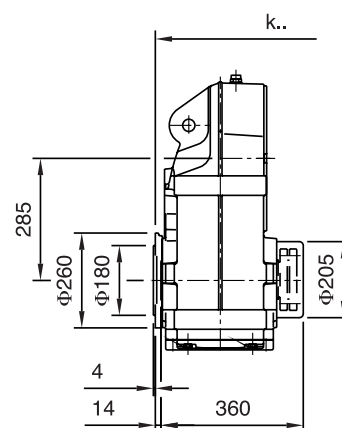
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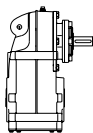


SPTB66..



SPTC66..





F

A

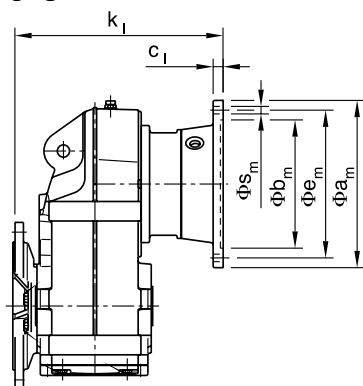
L

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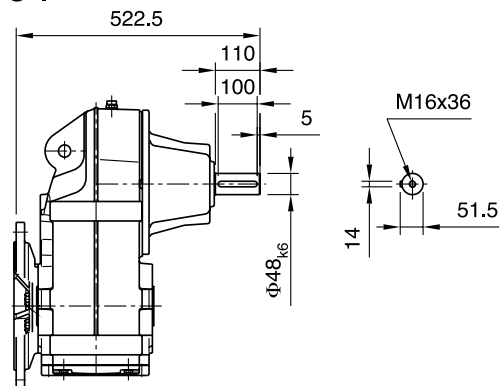
SP4

SPF..66B/C-U

100 - 280

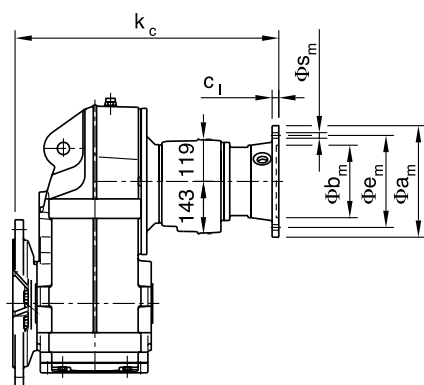


SPF..66B/C-I

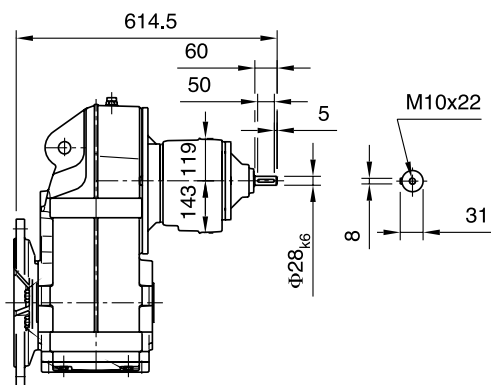


SPF..66B/C36B/C-U

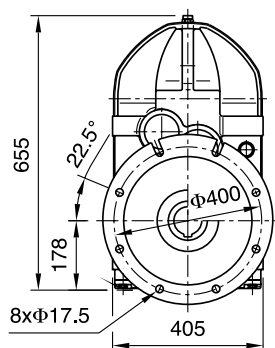
71 - 132



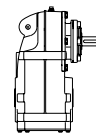
SPF..66B/C36B/C-I



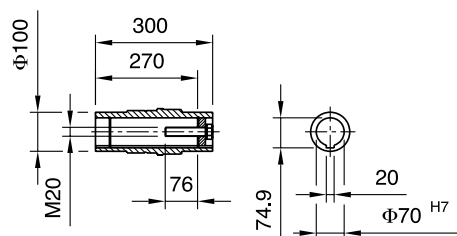
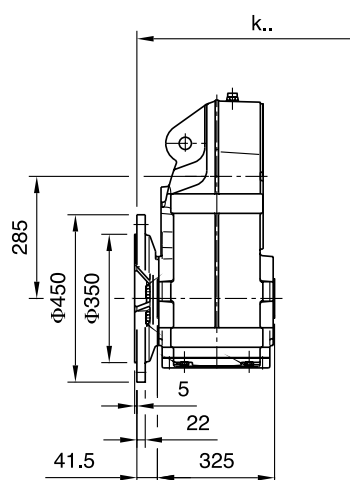
SPF..66..



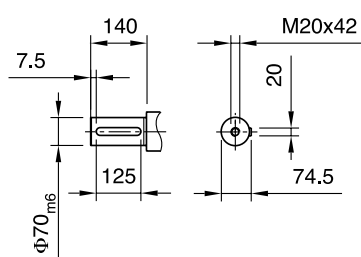
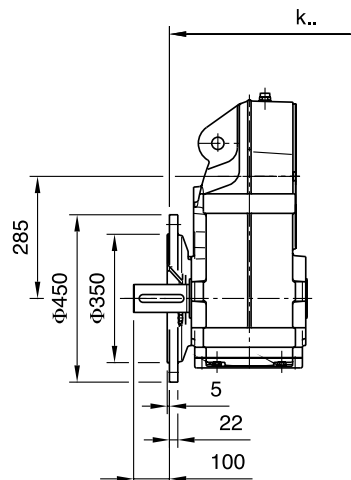
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kl					425	425	425	425	490	490	582	582	607	637	637	648	648	648		
cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	582	582	582	582	582	582	645	645												



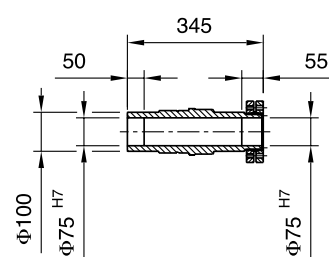
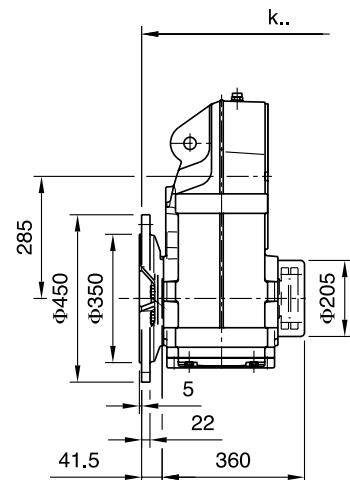
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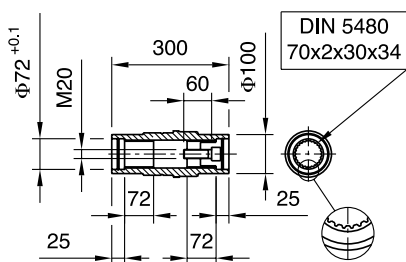
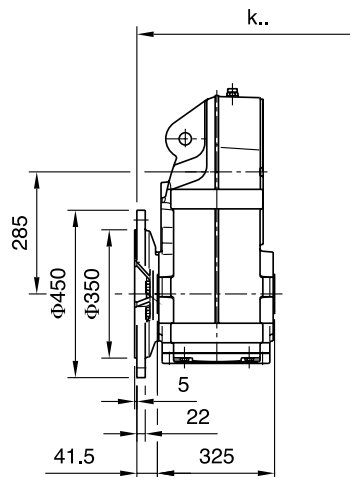
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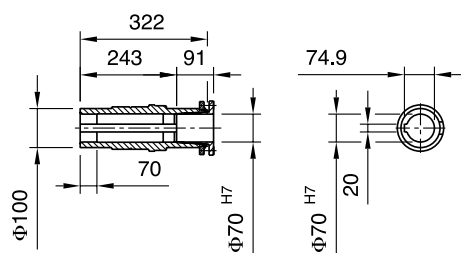
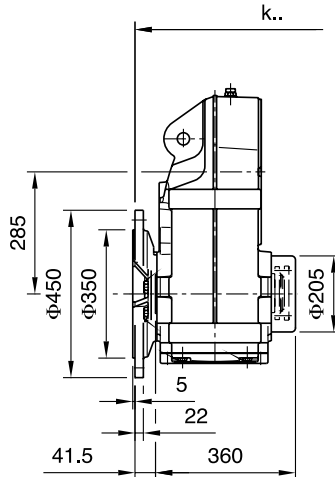
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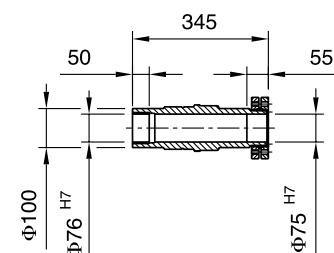
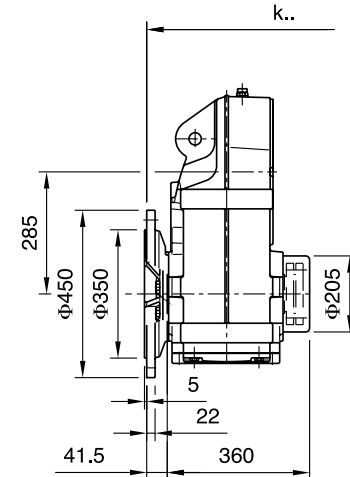
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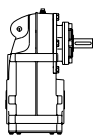


SPFB66..



SPFC66..





F

A

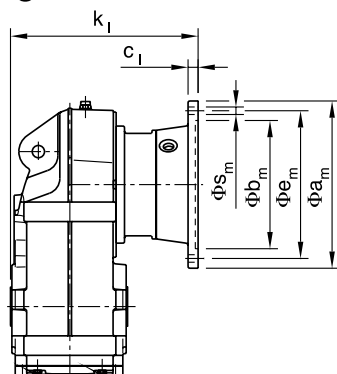
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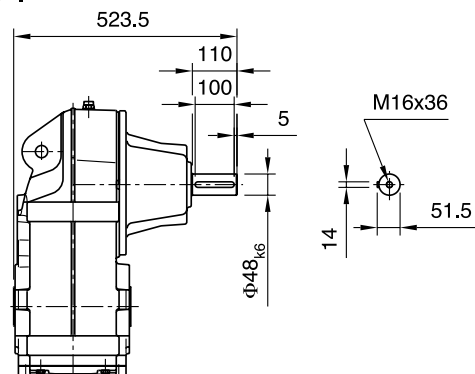
SP4

SPZ..76B/C-U

100 - 280

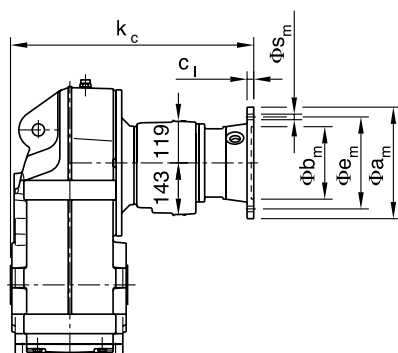


SPZ..76B/C-I

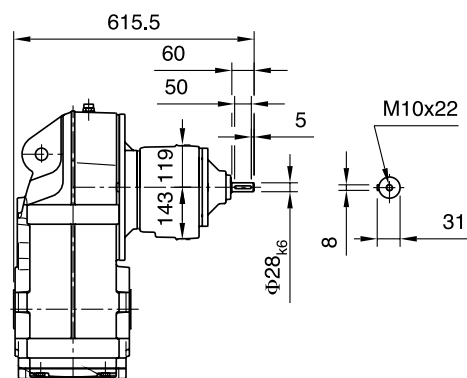


SPZ..76B/C36B/C-U

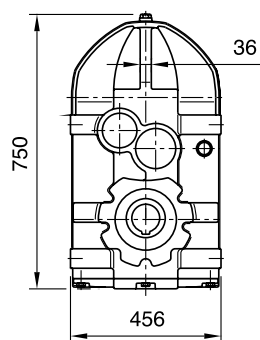
71 - 132



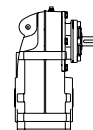
SPZ..76B/C36B/C-I



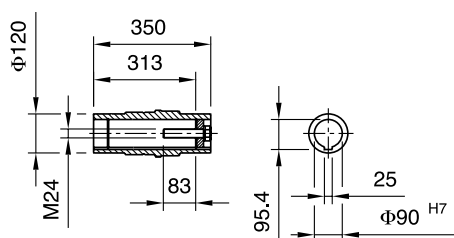
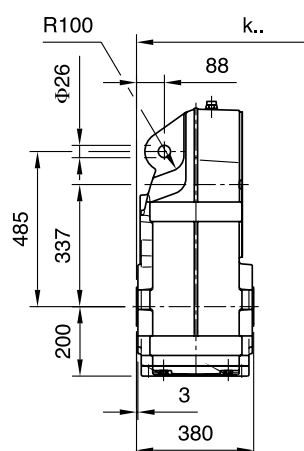
SPZ..76..



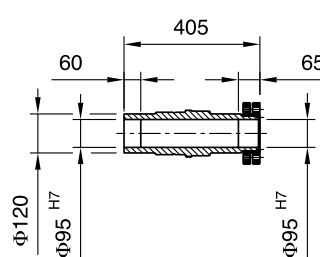
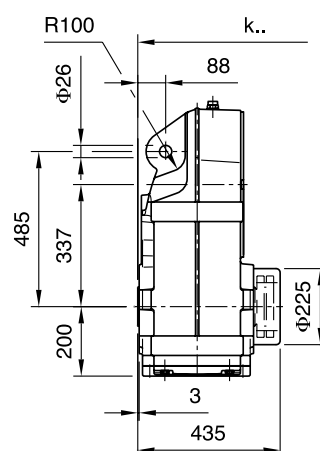
	71	80	90S	90L	100	112	132S	132M	160M	160L	180M	180L	200L	225M	225S	250M	280S	280M		
kl					426	426	426	426	491	491	583	583	608	638	638	649	649	649		
cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	583	583	583	583	583	583	646	646												



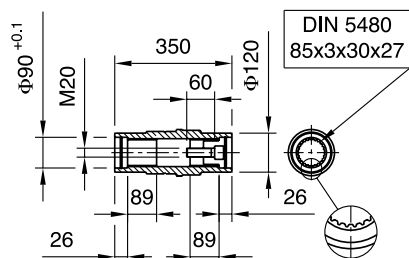
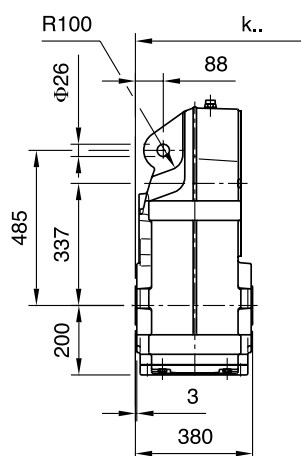
SPZH76..



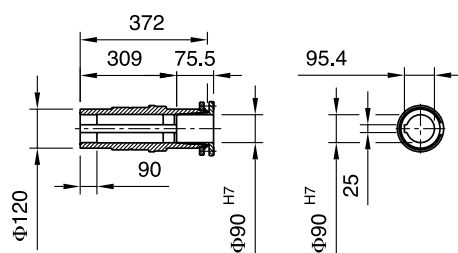
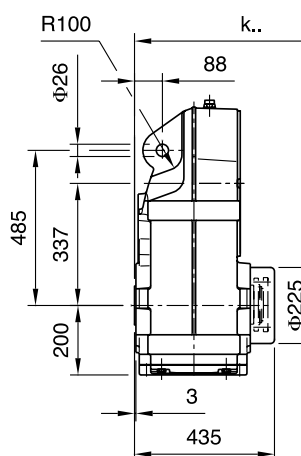
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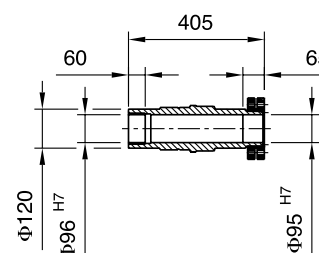
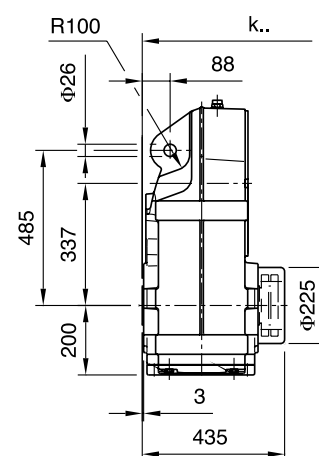
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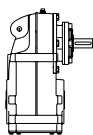


SPZB76..



SPZC76..





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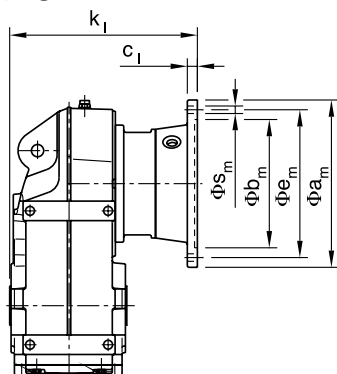
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K

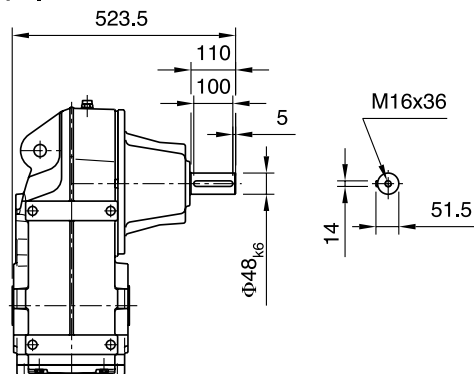
SP4

SPZ..76B/CF-U

100 - 280

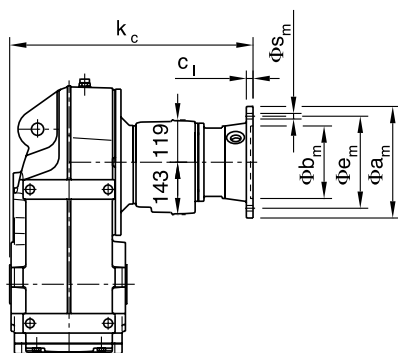


SPZ..76B/CF-I

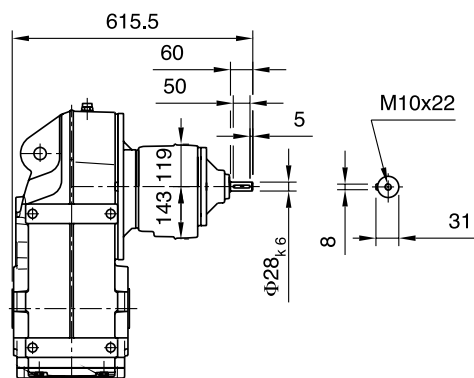


SPZ..76B/C36B/CF-U

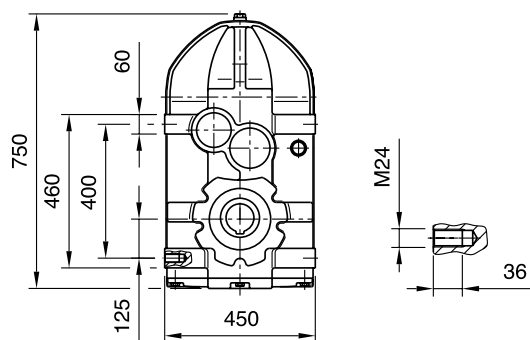
71 - 132



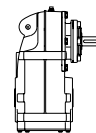
SPZ..76B/C36B/CF-I



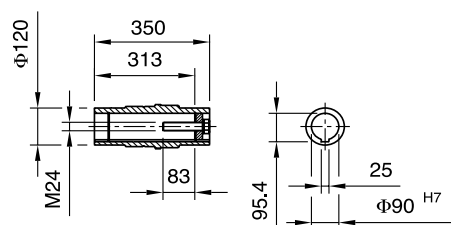
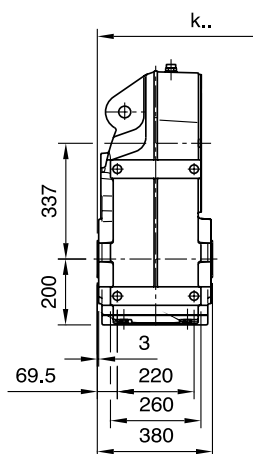
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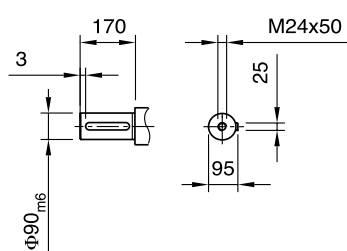
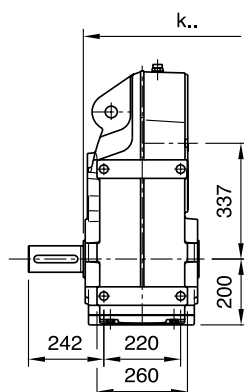
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kl					426	426	426	426	491	491	583	583	608	638	638	649	649	649		
cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	583	583	583	583	583	583	646	646												



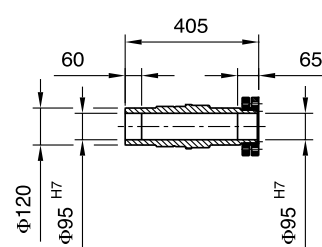
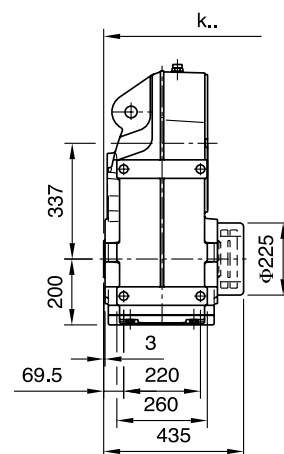
SPZH76..F..



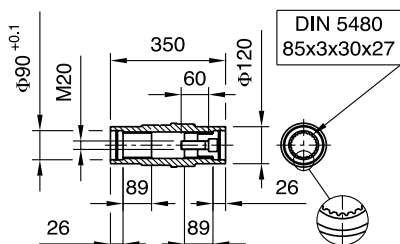
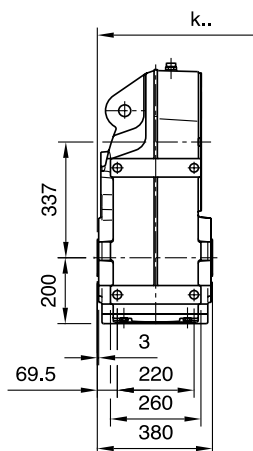
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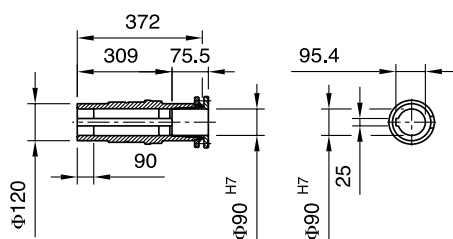
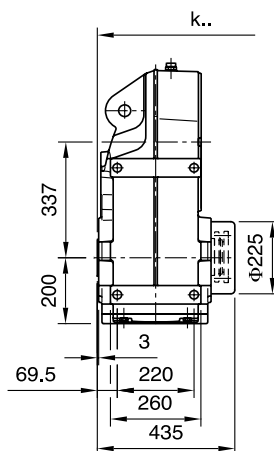
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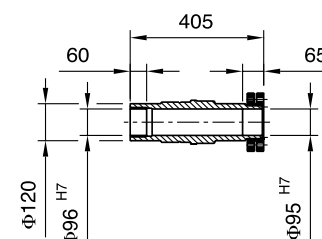
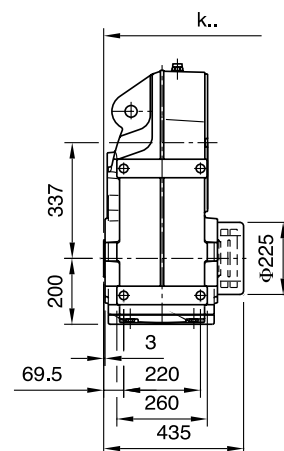
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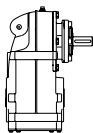


SPZB76..F..



SPZC76..F..





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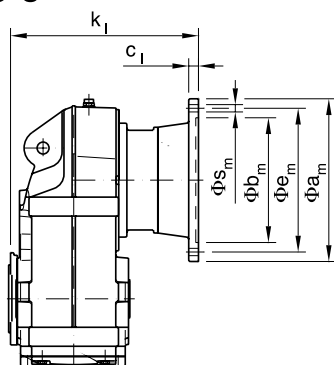
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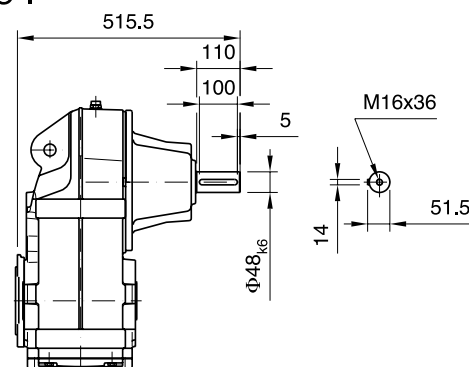
SP4

SPT..76B/C-U

100 - 280

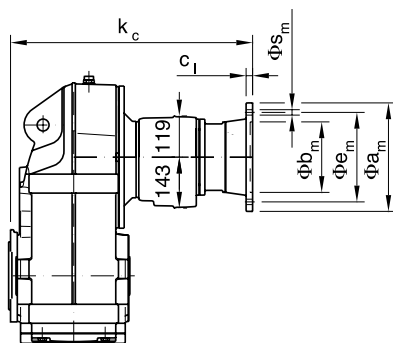


SPT..76B/C-I

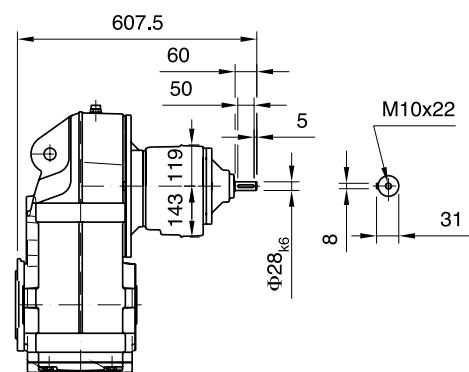


SPT..76C36B-U

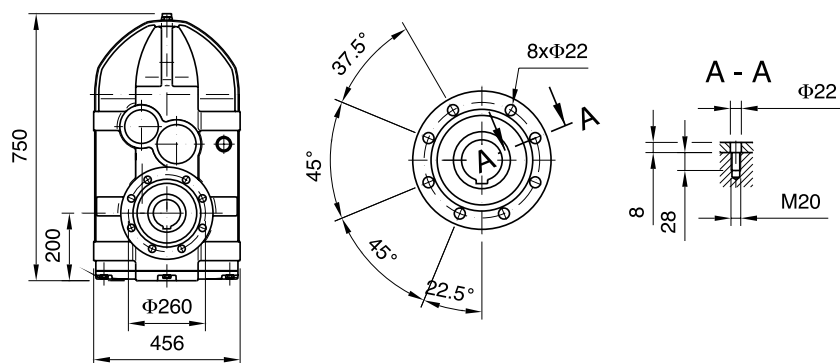
71 - 132



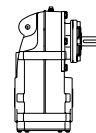
SPT..76C36B-I



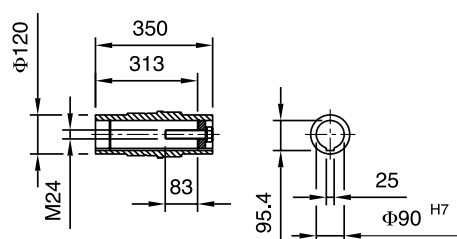
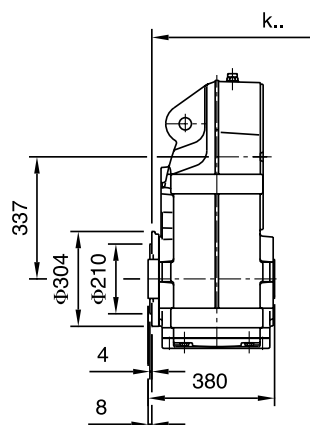
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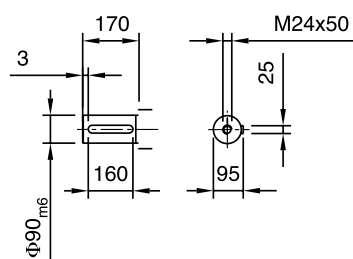
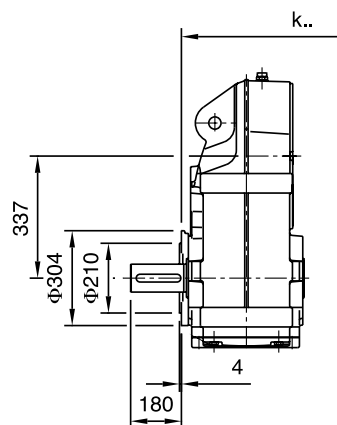
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kl					418	418	418	418	483	483	575	575	600	630	630	641	641	641		
cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	575	575	575	575	575	575	638	638												



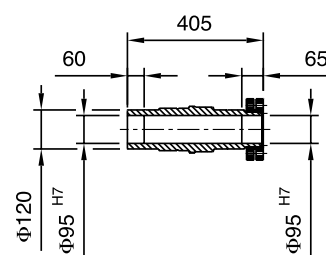
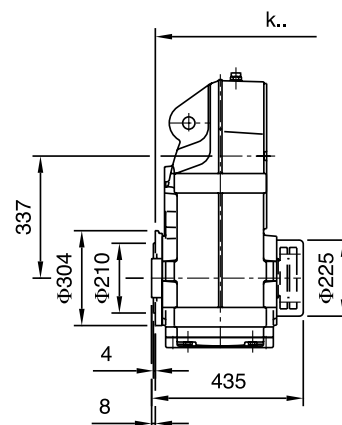
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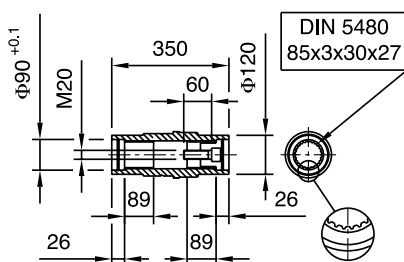
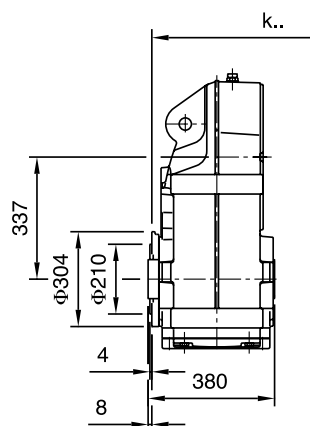
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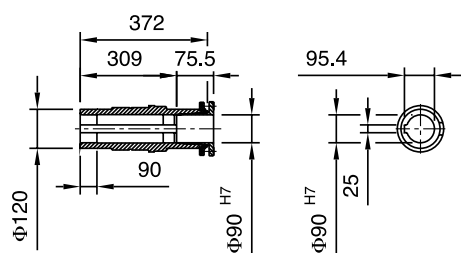
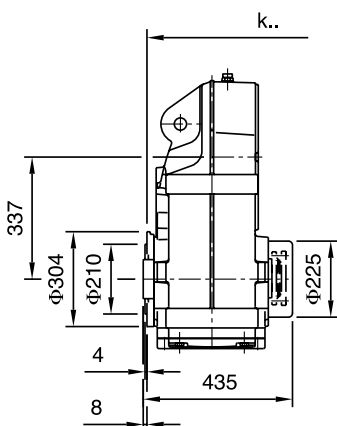
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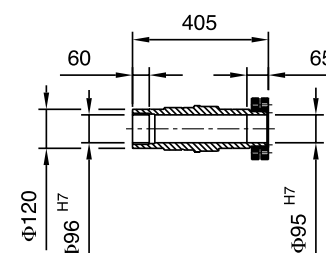
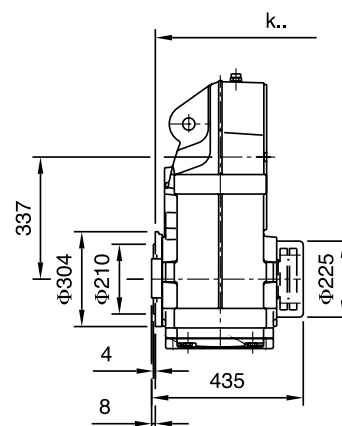
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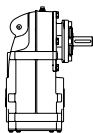


SPTB76..



SPTC76..





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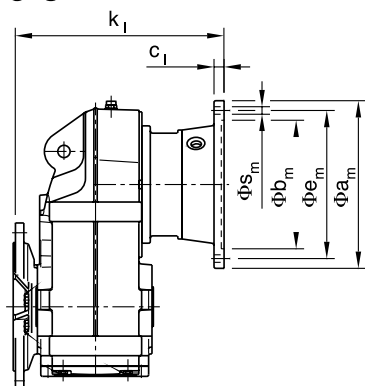
L

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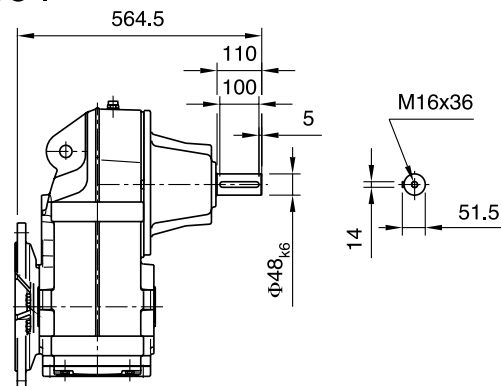
SP4

SPF..76B/C-U

100 - 280

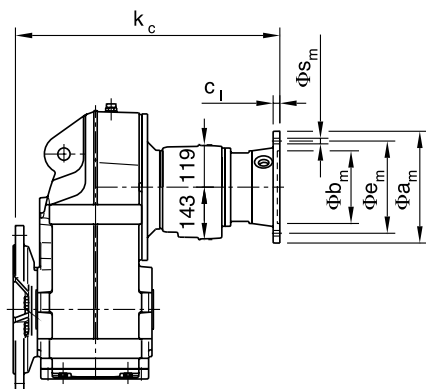


SPF..76B/C-I

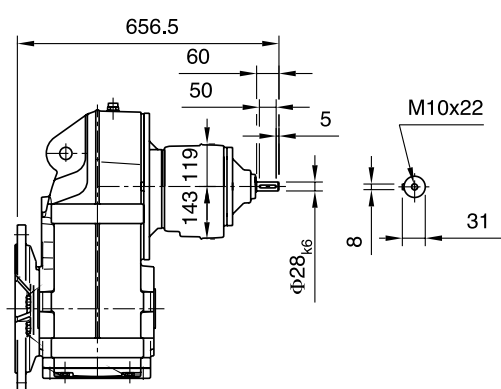


SPF..76B/C36B/C-U

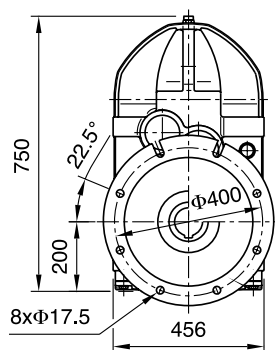
71 - 132



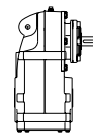
SPF..76B/C36B/C-I



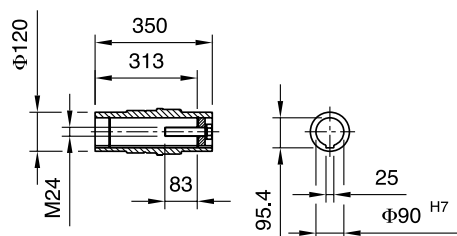
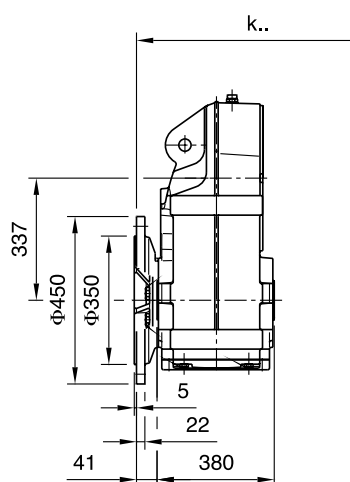
SPF..76..



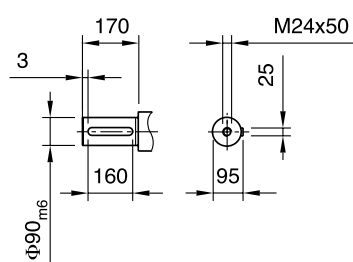
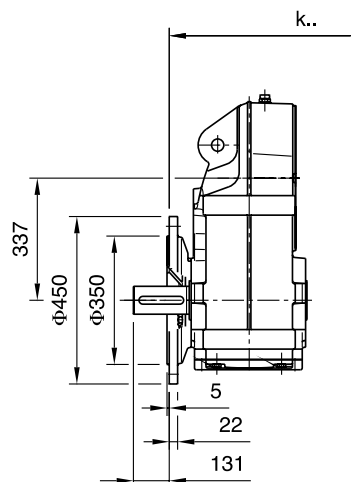
	71	80	90S	90L	100	112	132S	132M	160M	160L	180M	180L	200L	225M	225S	250M	280S	280M		
kl					467	467	467	467	532	532	624	624	649	679	679	690	690	690		
cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	624	624	624	624	624	624	687	687												



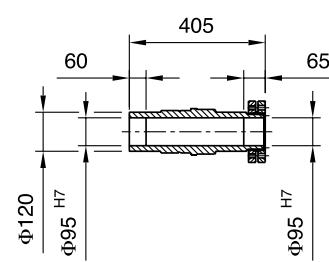
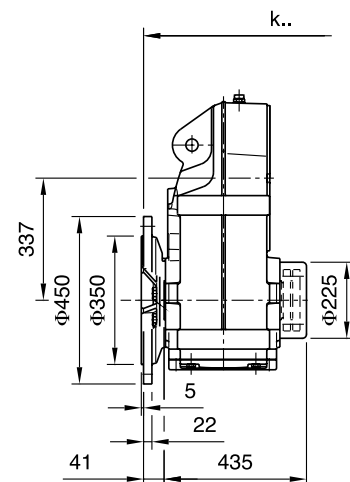
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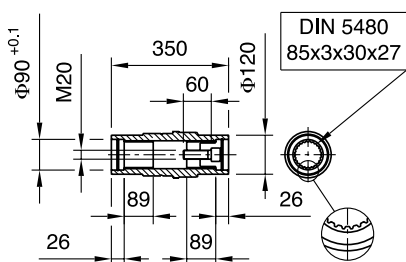
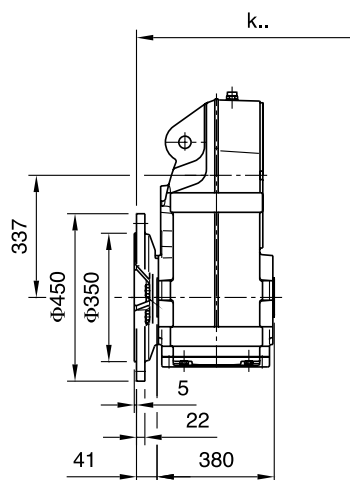
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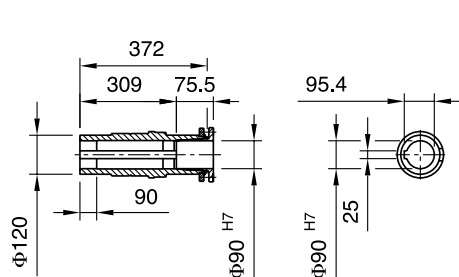
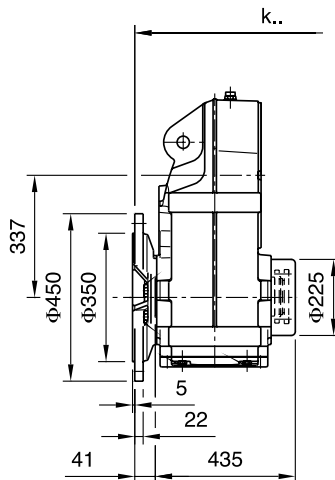
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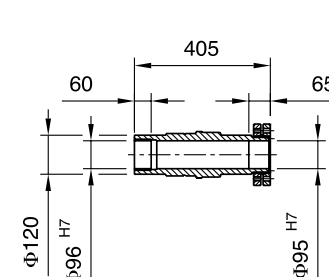
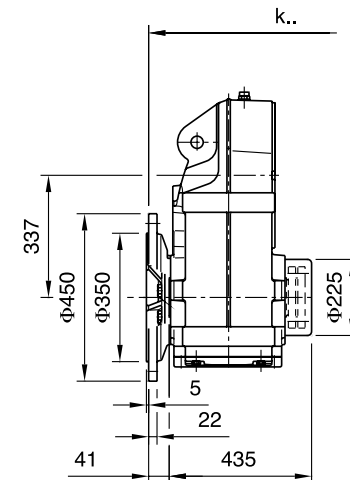
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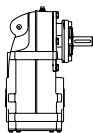


SPFB76..



SPFC76..





F

A

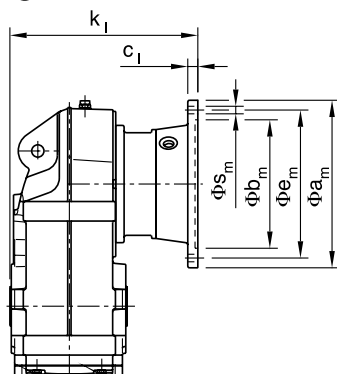
L

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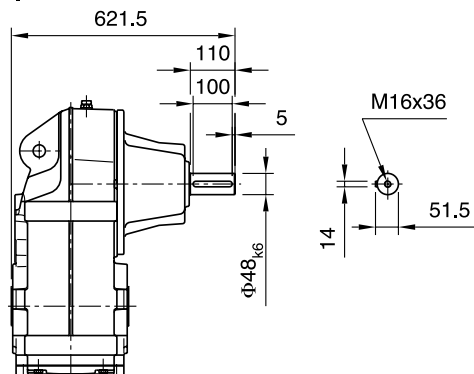
SP4

SPZ..86B/C-U

100 - 280

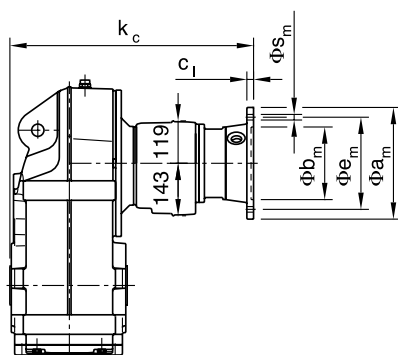


SPZ..86B/C-I

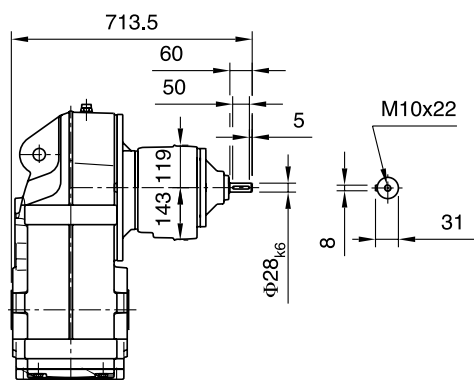


SPZ..86C36B-U

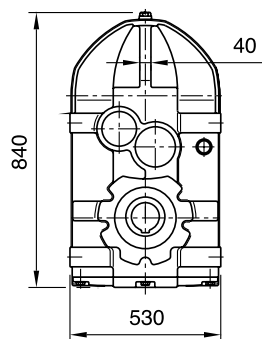
71 - 132



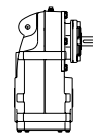
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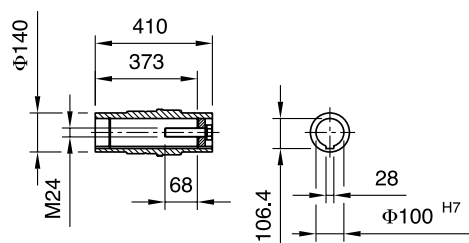
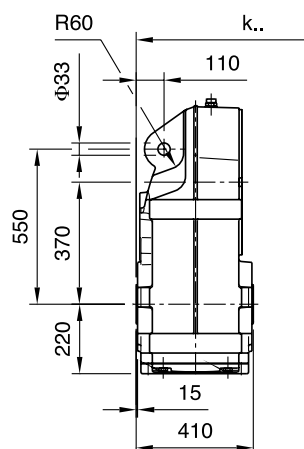
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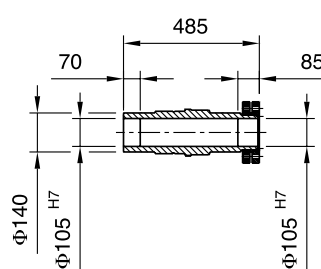
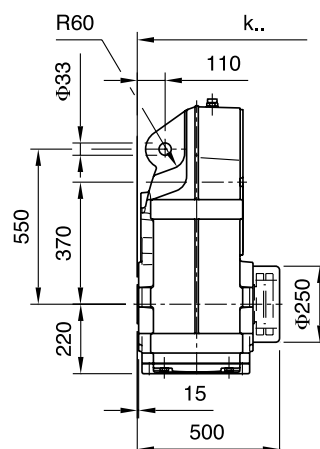
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kl					524	524	524	524	589	589	681	681	706	736	736	747	747	747		
cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	681	681	681	681	681	681	744	744												



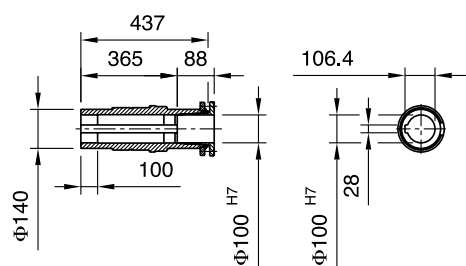
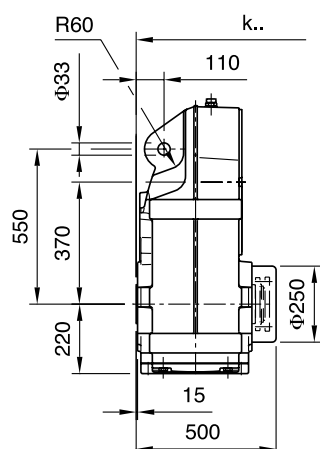
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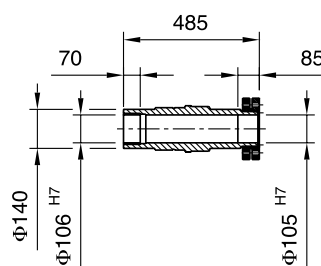
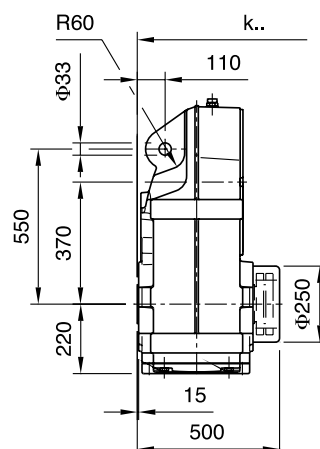
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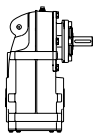


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SPZC86..





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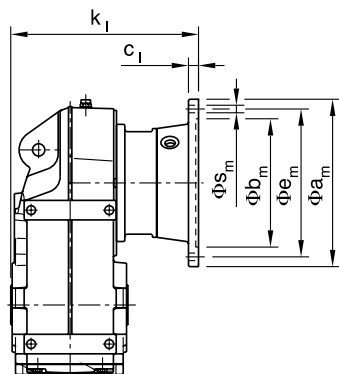
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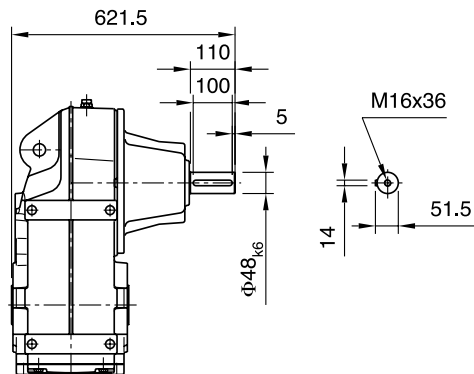
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100 - 280

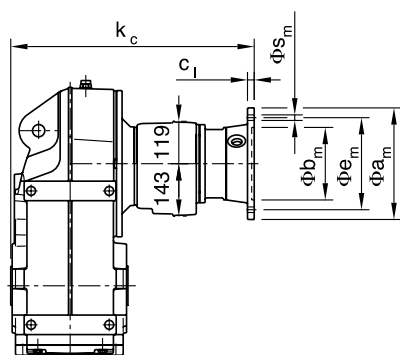


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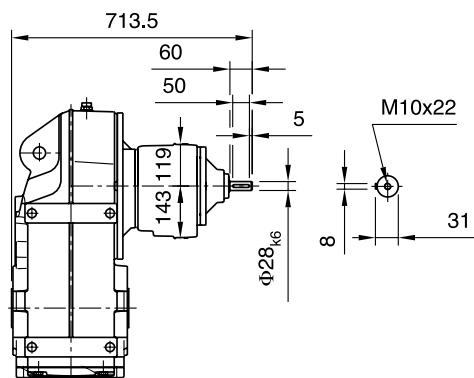


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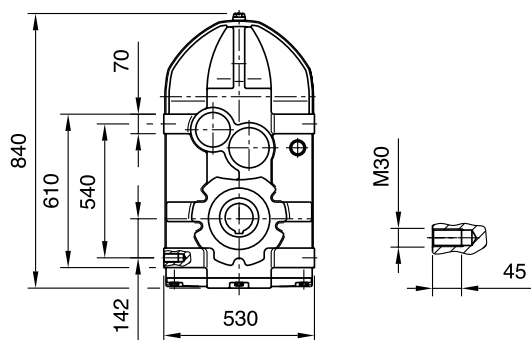
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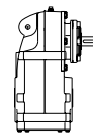
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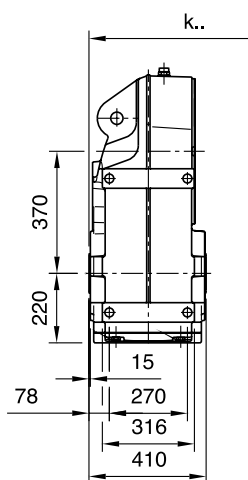
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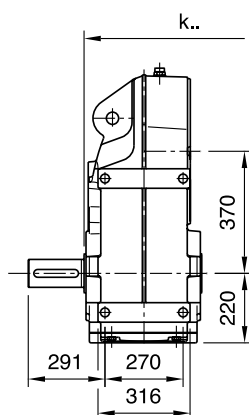
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kl					524	524	524	524	589	589	681	681	706	736	736	747	747	747		
cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	681	681	681	681	681	681	744	744												



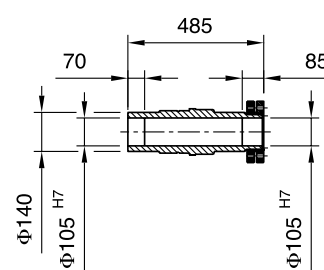
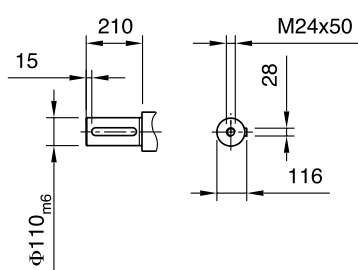
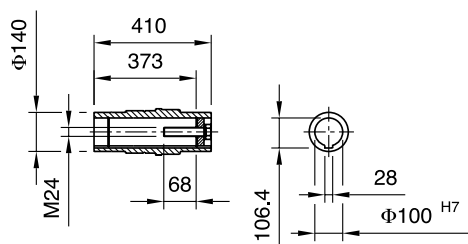
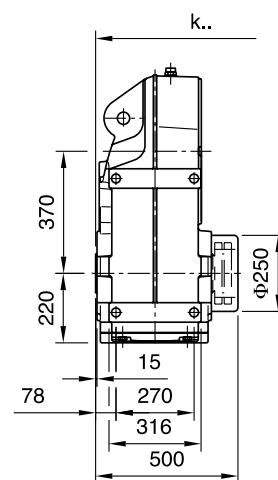
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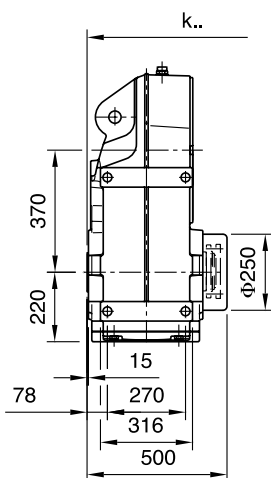
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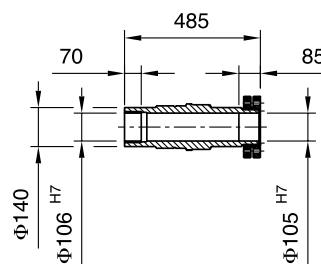
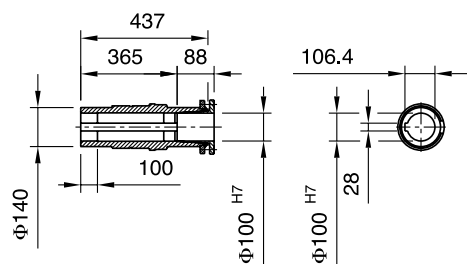
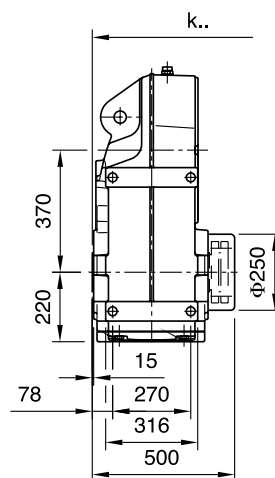
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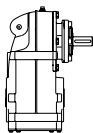


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SPZC86..F..





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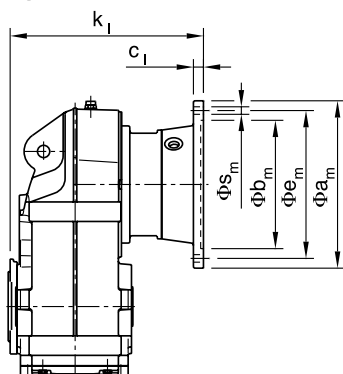
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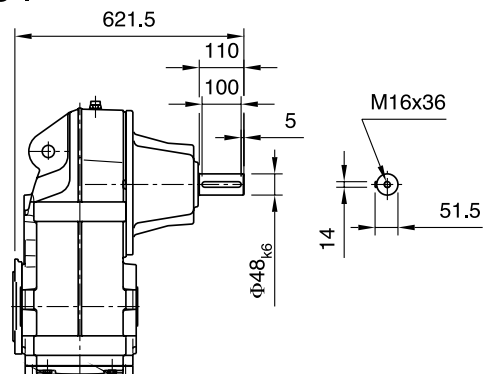
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100 - 280

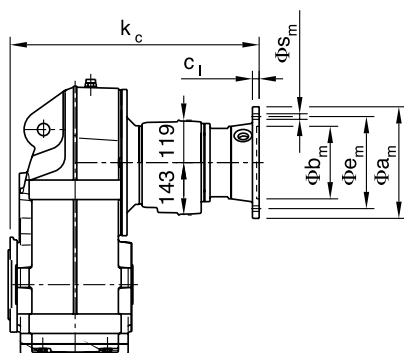


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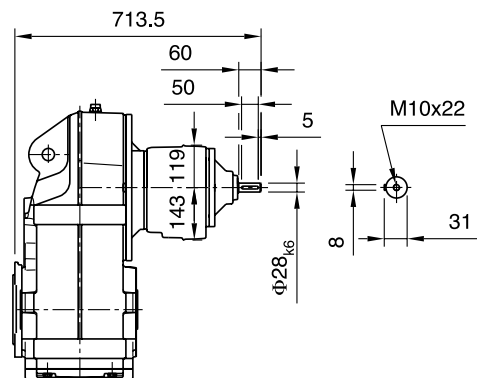


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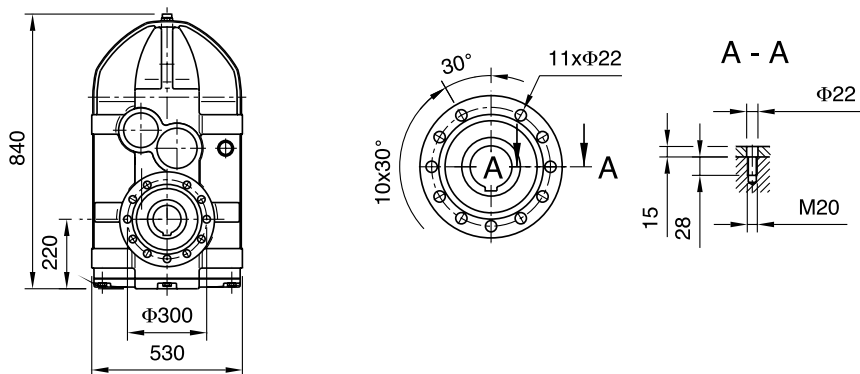
71 - 132



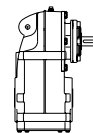
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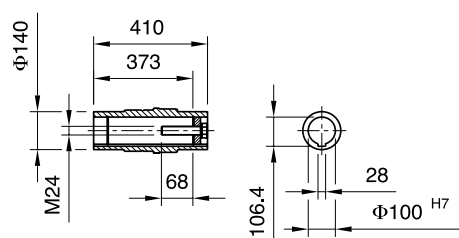
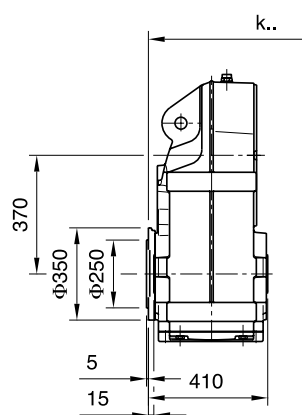
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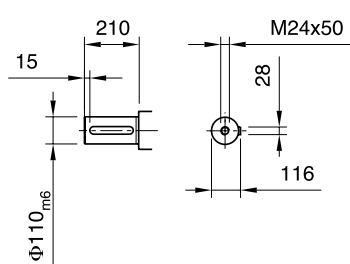
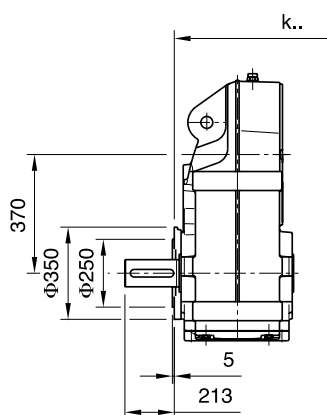
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cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	681	681	681	681	681	681	744	744												



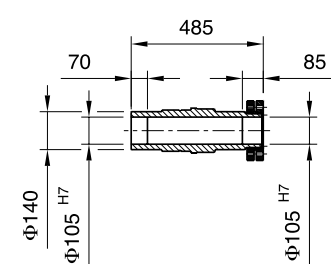
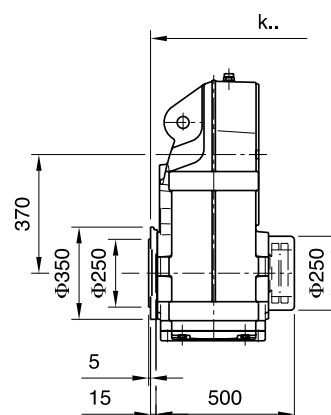
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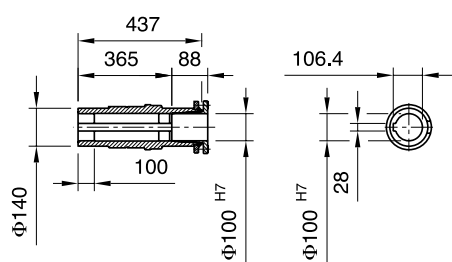
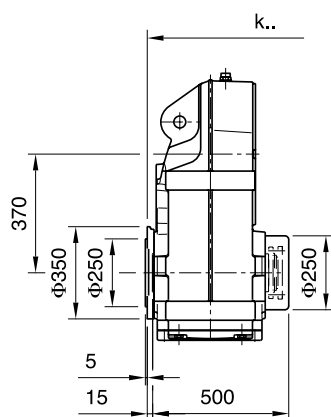
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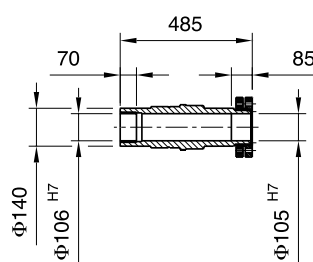
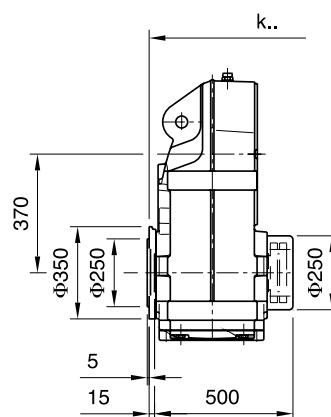
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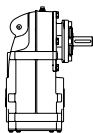


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SPTC86..





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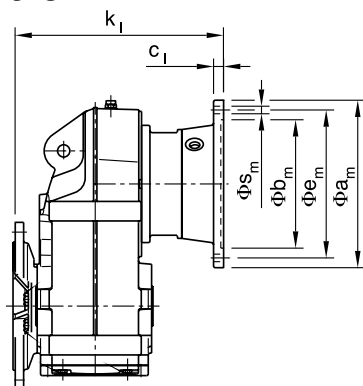
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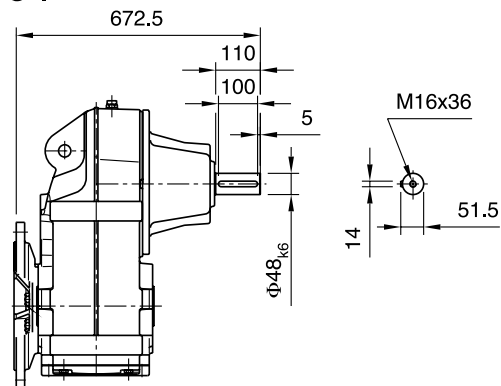
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SPF..86B/C-U

100 - 280

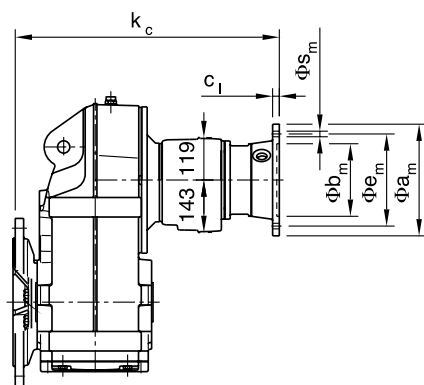


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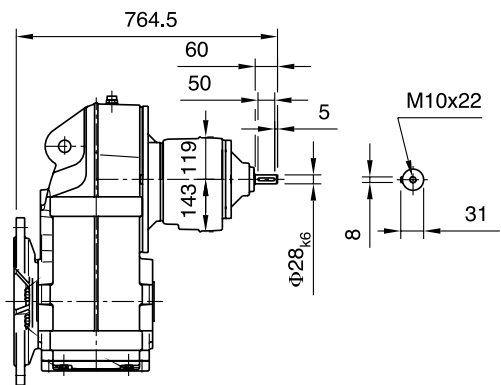


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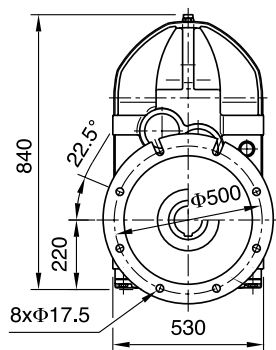
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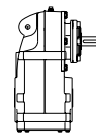
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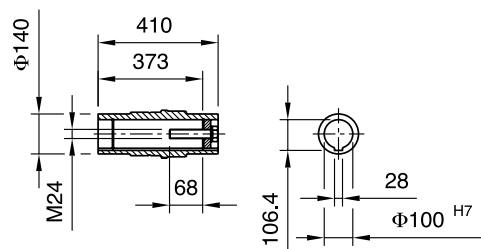
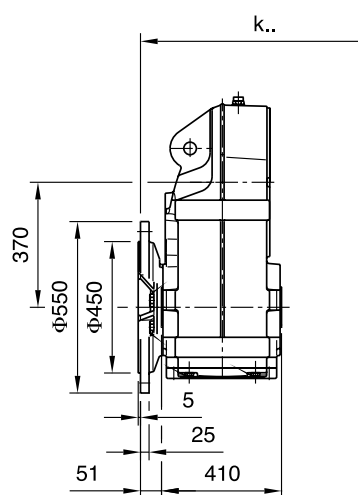
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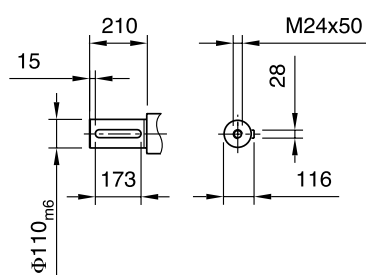
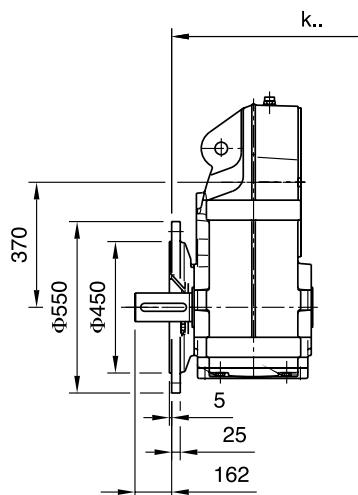
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kl					575	575	575	575	640	640	732	732	757	787	787	798	798	798		
cl	8	10	10	10	12	12	13	13	15	15	15	15	19	19	19	25	25	25		
øbm	110H7	130H7	130H7	130H7	180H7	180H7	230H7	230H7	250H7	250H7	250H7	250H7	300H7	350G7	350G7	450G7	450G7	450G7		
øem	130	165	165	165	215	215	265	265	300	300	300	300	350	400	400	500	500	500		
øam	160	200	200	200	250	250	300	300	350	350	350	350	400	450	450	550	550	550		
øsm	4 x M8 x 16	4 x Ø 11	4 x Ø 11	4 x Ø 11	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 135	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	4 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175	8 x Ø 175		
kc	732	732	732	732	732	732	795	795												



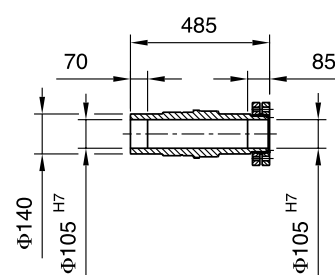
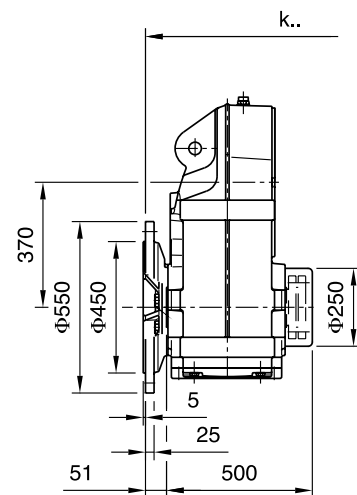
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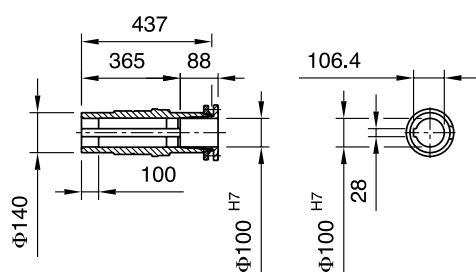
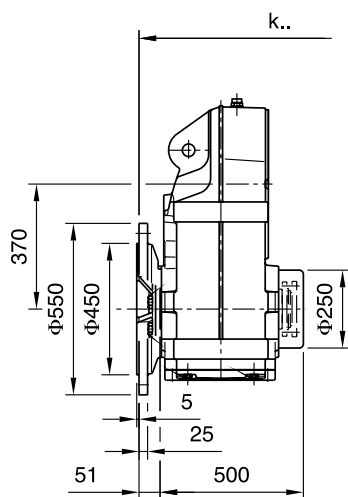
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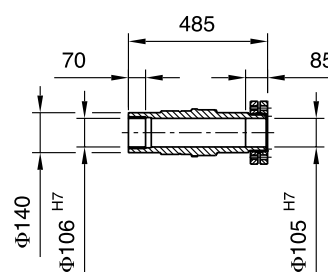
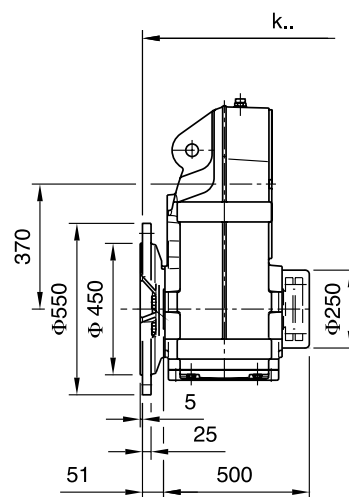
SPFS86..



SPFB86..



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Notice:

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3.1 Project planning checklist

3.1 项目订货清单

Data	数据								
1. Load 负荷									
Motor output	电动机输出功率	Pm =	kW						
Motor speed	电动机转速		min ⁻¹						
Output power	输出功率	Pa = k	W						
Output torque	输出扭矩	Ta =	Nm						
Operating time in hours/day	运行时间小时 / 天	<table border="1"> <tr> <td>≤ 8 h</td><td>≤ 16 h</td><td>≤ 24 h</td></tr> <tr> <td></td><td></td><td></td></tr> </table>	≤ 8 h	≤ 16 h	≤ 24 h				
≤ 8 h	≤ 16 h	≤ 24 h							
Torque peaks Ta	转矩峰值 Ta	Ta =	Nm						
Frequency	频率		/h						
Duration	持续时间		S						
Operating frequency	工作频率		c/h						
Inertia of driven machine	从动机惯量		kgm ²						
Acceleration time	加速时间		s						
Reversing operation	可逆运行								
Backstop required	逆止器要求								
2. Speed 速度									
Constant speed	均速								
Variable speed	变速								
Direction of rotation: CW = clockwise	旋转方向: CW = 顺时针								
CCW = counter clockwise	CCW = 反时针								
3. Connection of motor/gear unit 电动机 / 齿轮减速机的连接									
Gear motor (integrated assembly)	齿轮马达 (一体化电机)								
Gear unit for IEC motors	配 IEC 电机齿轮减速机								
Free drive shaft	配 I 接头输入轴								
Coupling	联轴器								
V-belt drive:	三角皮带传动:								
Diameter of belt pulley:	皮带轮直径:								
Motor	电机	Φ	mm						
Gear unit	齿轮减速机	Φ	mm						
Belt profile	皮带外形								
Number of belts	皮带数量								
Other: please specify	其它: 请指定								
4. Connection of gear unit/driven machine 齿轮减速机 / 从动机连接									
Coupling	联轴器								
Sprocket, diameter	链轮直径	Φ	mm						
Pinion, diameter	小链轮直径	Φ	mm						
Other: please specify	其他: 请指定:								

3. Technical Appendix 技术附录

5. External load on output shaft 作用在输出轴上载荷					
Radial load	径向载荷		F_r	=	N
Distance between point of action and shaft shoulder	载荷作用点离轴肩距离		L_r	=	mm
Direction of load (see page X4)	负载方向		Q_r	=	°
Axial load	轴向载荷				
Pointing to the gear unit	朝向齿轮减速机		F_x	= +	N
Pointing away from the gear unit	背向齿轮减速机		F_x	= -	N

作用在输入轴上的载荷					
Radial load	径向载荷		F_{rHSS}	=	N
Distance between point of action and shaft shoulder	载荷作用点离轴肩距离		L_{rHSS}	=	mm
Direction of load	负载方向		Q_{rHSS}	=	°
Axial load	轴向载荷				
Pointing to the gear unit	朝向齿轮减速机		F_x	= +	N
Pointing away from the gear unit	背向齿轮减速机		F_x	= -	N

定义:					
SI4					
SP4					
SK4					

7. Brake 制动器	
Braking torque TB	制动扭矩 TB = Nm
Braking time	制动时间 Tb = s
8. Mounting parameters 安装参数	
Mounting position	安装位置
Ambient temperature (°C)	环境温度 (°C) min/max = / °C
Exposure to solar radiation	是否太阳直晒 ☐
Max. noise emission	最大噪声 dB(A)
Measuring distance	测量距离 M
Environmental conditions	环境条件 %
Air humidity in %	空气湿度 %
Dust	灰尘 ☐
Aggressive atmosphere, please specify	腐蚀性环境、请指定
Electrical details	电气明细
Voltage and frequency	电压和频率 IP
Operating mode	工作制
Type of enclosure IP	防护等级
Insulation class	绝缘等级
Drive: Type	齿轮马达: 类型
Order no.:	订单号:

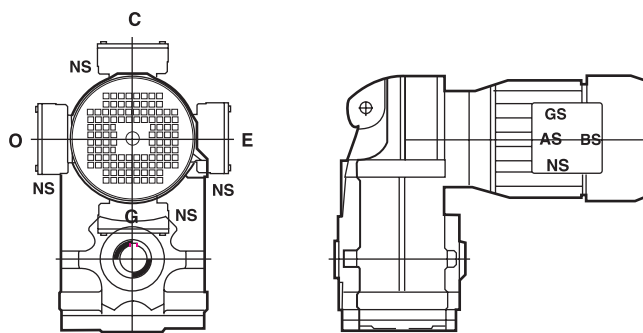
Sketch: 示意图

3. Technical Appendix 技术附录

3.2 Terminal box position

3.2 接线盒位置

SP4



The terminal box position is independent of the mounting position. The normal position is "O". The cable entry is arranged in position "NS" as standard.

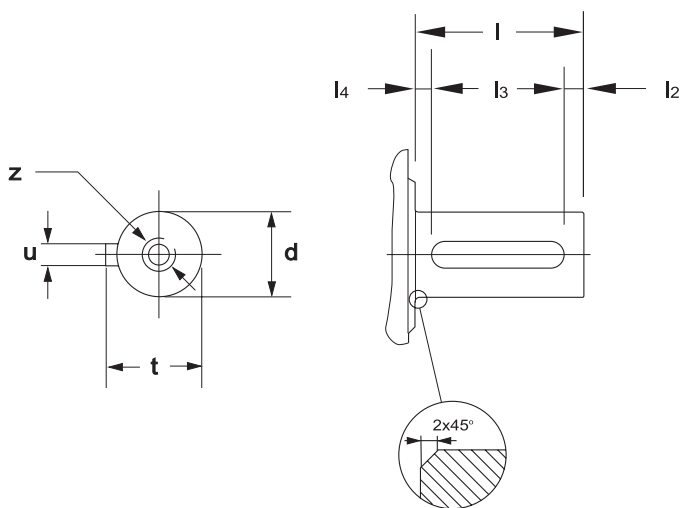
接线盒位置与齿轮马达安装形式无关
正常接线盒位置是“O”。电缆入口 NS 方向为标准

3.3 Mounting gear motors with solid shaft

Shaft dimensions

3.3 带实心轴的齿轮马达安装

实心轴的安装尺寸



Size 减速机规格	d	L	l_2	l_3	l_4	t	u	z
16	25k6	50	5	40	5	28	8	M10x22
26	30k6	60	3,5	50	6,5	33	8	M10x22
36	40k6	80	2	70	8	43	12	M16x36
46	50k6	100	10	80	10	53,5	14	M16x36
56	60m6	120	5	110	5	64	18	M20x42
66	70m6	140	4	125	11	74,5	20	M20x42
76	90m6	170	5	153	12	95	25	M24x50
86	110m6	210	5	193	12	116	28	M24x50
96	120m6	210	5	193	12	127	32	M24x50

Feather key to DIN 6885-T1-"Form A"

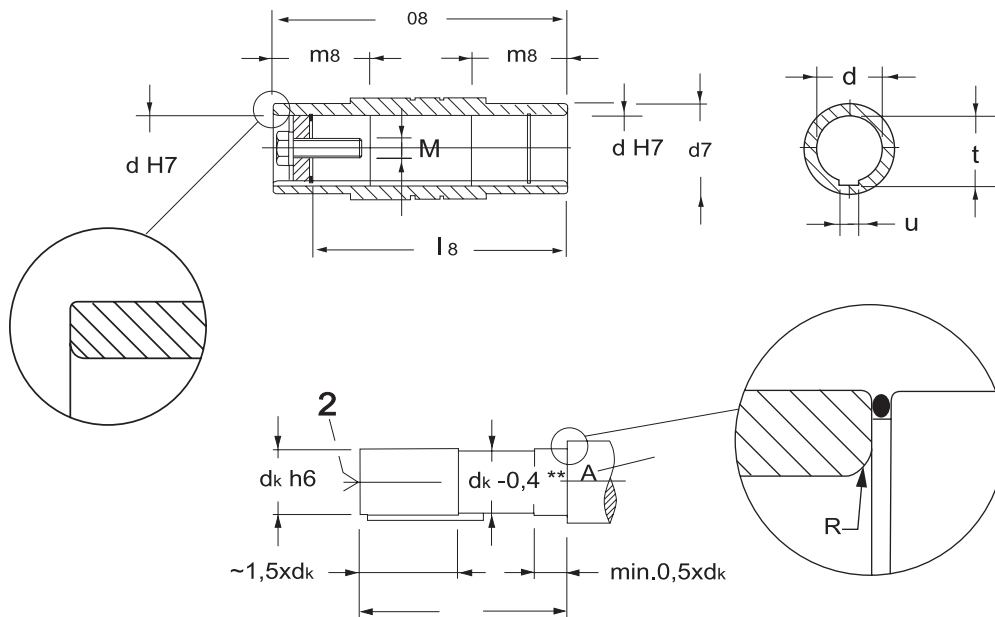
平键按 DIN 6885-T1 标准中的“A”类型

3.4 Mounting shaft-mounted geared motors with hollow shaft with keyway

3.4 带键槽的空心轴齿轮马达安装

Shaft dimensions

空心轴的安装尺寸



Size 齿轮马达规格	d	d ₇	l ₈	M	m ₈	o ₈	R	t	u	d _k	L _k
16	30	45	105	M10	45	120	3	33.3	8	30	82
26	35	50	132	M12	50	150	3	38.3	10	35	109
36	40	55	156	M16	60	180	3	43.3	12	40	127
46	50	70	183	M16	65	210	4	53.8	14	50	154
56	60	85	210	M20	75	240	4	64.4	18	60	174
66	70	100	270	M20	80	300	4	74.9	20	70	234
76	90	120	313	M24	90	350	4	95.4	25	90	279
86	100	140	373	M24	100	410	4	106.4	28	100	330
96	120	160	460	M24	120	500	4	127.4	32	120	416

1: Driven machine drive shaft

2: Centering to DIN 332 "Form D"

1: 驱动设备驱动轴

2: 中心孔按 DIN 332 标准中“D”类型

(*) An O-ring is recommended to provide increased protection against moisture.

The dimensions apply to the hollow shaft.

** Recommended for simple mounting.

(*) 建议在图示位置安装 O 型圈达到防潮作用。只适用于空芯轴。

** 推荐值便于安装。

Keyways to DIN 6885-T1-"Form A"

Feather key to DIN 6885-T1-"Form A"

键槽接 DIN 6885-T1-“A”类型

平键接 DIN 6885-T1-“A”类型

Occurring loads must be considered for the selection of the material of the machine shaft.

在选择驱动轴材料时，要考虑所承受的负载。

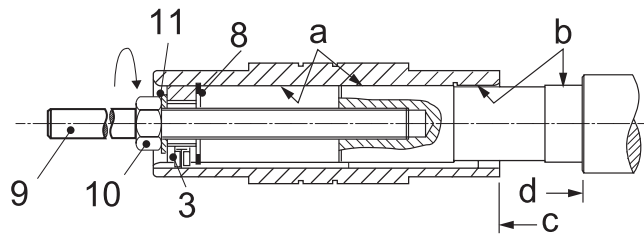
3. Technical Appendix 技术附录

Assembly

- Clean and degrease contact surfaces (a) and (b).
- Grease contact surfaces (a) and (b) with "Molykote D321R" or an equivalent lubricant.
- Slide the geared motor onto the driven shaft until the faces (c) and (d) are positioned opposite each other. Fit a threaded rod (9), nut (10), puller ring (11), thrust washer (3) and a retaining ring (8) as required.
- Remove tools (3, 9, 10, 11).

装配

- 将接触表面(a)和(b)清洗和去油污。
- 将接触表面(a)和(b)涂一层 “Molykote D321/R” 润滑剂或同类润滑剂。
- 将驱动轴装入到空芯轴时，一定要安装到位，即端面c与轴肩d接触定位安装工具安装螺杆(9)、螺母(10)、垫片(11)、止推套(3)和孔用挡圈(8)。
- 拆卸工具(3, 9, 10, 11)。



Mounting

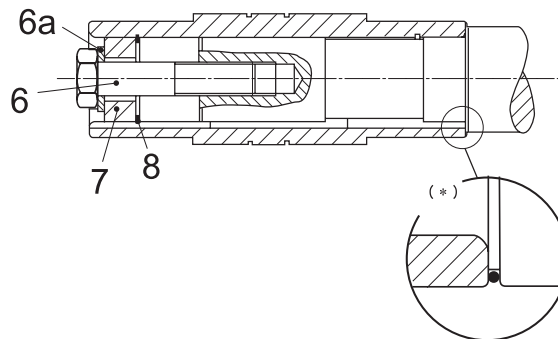
- Fit the mounting ring (7) against the retaining ring (8). Secure the machine shaft by means of mounting screw (6) and washer (6a).
- Fit protective cover.
- If the shaft is subject to external axial loads, follow the special guidelines provided on the dimensioned drawing.

(*) An O-ring is recommended to provide increased protection against moisture.

安装

- 安装安装环(7)孔用挡圈(8)。垫片(6a)，螺栓(6)以确保驱动轴的安全。
- 安装防护罩。
- 如果轴要承受外界轴向负载，则要符合相关的设计图纸。

(*) 建议使用O型圈增加防潮作用。



Disassembly

- Remove mounting screw (6), washer (6a), mounting ring (7) and retaining ring (8).
- Fit pulling washer (4) and thrust washer (3) and reinstall retaining ring (8).
- Fit pulling screw (5) in threaded center of thrust

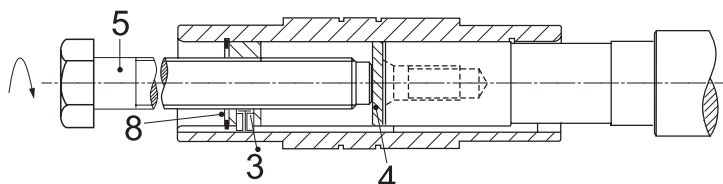
拆卸

- 拆卸安装螺栓(6)、垫片(6a)、安装环(7)和孔用挡圈(8)。
- 装上垫圈(4)，和止推套(3)，重新装上孔用挡圈(8)。
- 在止推套(3)的螺纹孔拧入螺栓(5)。

washer (3).

- Remove the geared motor from the drive shaft by tightening the screw (5).

- 按图示方向转动螺栓(5)将驱动轴从齿轮马达空芯轴上卸下。



Note:

Items 3, 4, 5, 9, 10 and 11 do not belong to the standard scope of delivery, however, they are optionally available in the form of an assembly kit.

说明:

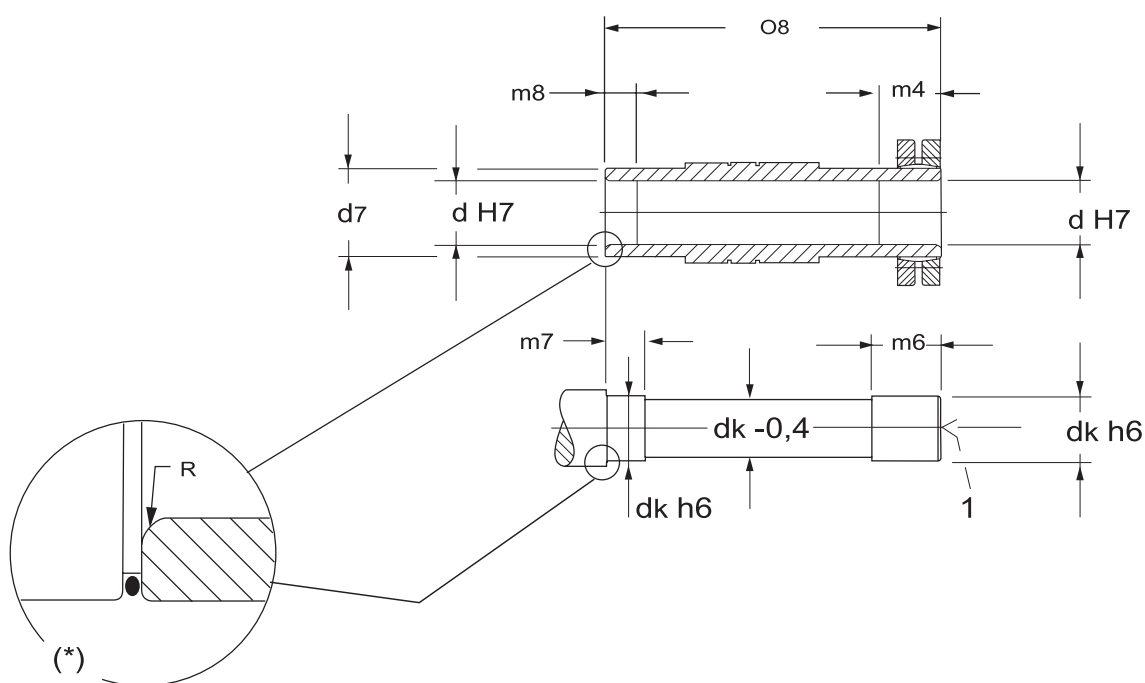
零件3、4、5、9、10和11不属于标准供货范围,可以提出要求以附件形成供货。

3.5 Mounting shaft-mounted geared motors with hollow shaft with shrink-fit ring

3.5 带收缩盘的空心轴齿轮马达安装

Shaft dimensions

安装尺寸



Size 齿轮马达规格	d	dk	d7	m4	m5	m6	m7	o8	R
16	30	30	45	31	20	36	25	146	3
26	35	35	50	32	20	37	25	177	3
36	40	40	55	38	20	43	25	208	3
46	50	50	70	36	25	41	30	241	4
56	65	65	85	41	40	46	30	281	4
66	75	75	100	55	50	60	55	345	4
76	95	95	120	65	60	75	70	405	4
86	105	105	140	85	70	95	80	485	4
96	125	125	160	90	80	100	90	580	4

3. Technical Appendix 技术附录

1) Centering to DIN 332 "Form D" recommended for simple assembly/disassembly

(*) An O-ring is recommended to provide increased protection against moisture.

The dimensions apply to the hollow shaft.

** Recommended for simple mounting.

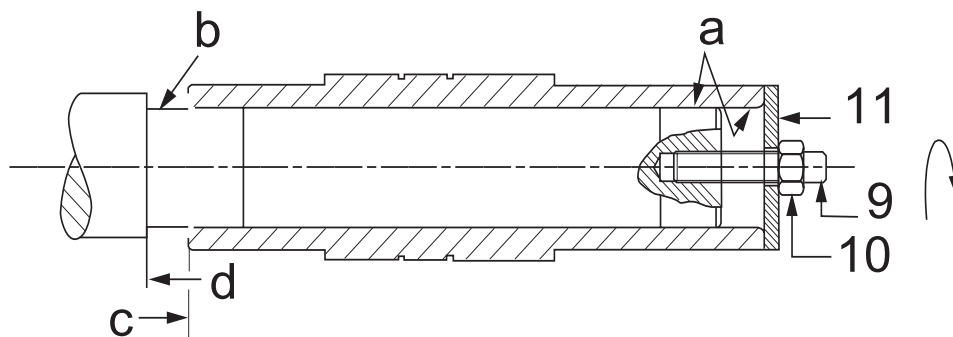
Occurring loads must be considered for the selection of the material of the machine shaft.

The shrink-fit ring supplied by Rexnord is ready for installation.

Do not pull apart before initial assembly.

Assembly

- Clean and degrease contact surfaces (a) and (b).
- Grease contact surface (b) - BUT ON NO AC COUNT contact surface (a) - with "Molykote D321R" or an equivalent lubricant.
- Slide the geared motor onto the driven shaft until the faces (c) and (d) are positioned opposite each other. If necessary, fit a threaded rod (9), nut (10) and a thrust washer (11).
- Remove tools (9, 10, 11).



To prevent the shaft slipping, the screws must be tightened to the torque specified in the table below in order to be able to transmit the output torque specified on the type identification plate.

Mounting

- Install shrink-fit ring. Remove the spacer rings fitted between the outer rings (o) for transportation purposes.

1) 中心孔按 DIN 332 标准 "D" 类型, 便于装配 / 拆卸。

(*) 建议使用 O 型圈增加防潮作用。
只适用于空芯轴。

** 该推荐值便于安装。

在选择驱动轴的材料时, 要考虑所承受的负载。

Rexnord 提供的收缩盘可直接安装。
在装配以前不要打开包装。

装配

- 将接触表面 (a) 和 (b) 清洗和去油污。
- 将接触表面 (b) 用 "Molykote D321/R" 或同类润滑剂轻涂一层非表面 (a)。
- 将驱动轴装入到空芯轴时, 一定要使端面 c 与轴肩 d 接触定位。
- 拆卸工具如果需安装方便可利用螺杆 (9), 螺母 (10), 和止推垫圈 (11)。

为了能传递铭牌上规定的输出扭矩, 螺栓必须按下表所规定的力矩拧紧。

安装

- 安装收缩盘之前必须拆卸两外环 (o) 之间的保护套。

IMPORTANT : The two outer rings (o) must be arranged plane-parallel during the assembly procedure and while tightening the screws.

- Use a torque wrench to tighten the screws (8) in stages one after the other until the specified tightening torque T_A (see table) is reached. Do not tighten the screws crosswise.
- Fit protective cover.

Size 尺寸	T_A (Nm)
1	12
2	12
3	12
4	12
5	30
6	30
7	60
8	100
9	250

CAUTION!

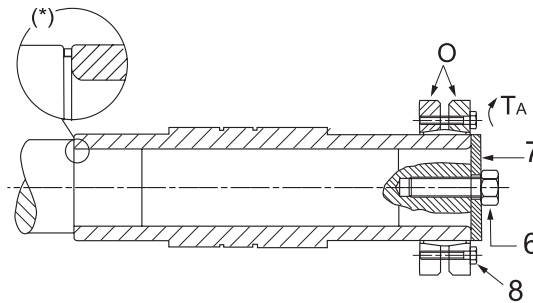
The screws for the shrink-fit ring must never be tightened if the shrink-fit ring is not fitted.

关键点：在装配和拧紧螺栓（8）过程中，2 个外环（o）必须保持平行状态。

- 使用扭力扳手拧螺栓（8）时，要对称地逐步拧紧，几圈后达到下表所规定的收紧扭矩。
- 安装保护罩。

警告!

在收缩盘未安装前，请勿拧紧螺栓。



Securing in connection with axial load

A securing ring (7) and screw (6) must be fitted if the axial load is not taken up by the shoulder of the machine shaft.

Disassembly

- Release all screws (8) evenly by turning a quarter turn one after the other.
- Remove the shrink-fit ring from the hollow shaft.
- Remove the gear unit from the drive shaft.

Note: Items 6, 7, 9, 10 and 11 do not belong to the standard scope of delivery, however, they are optionally available in the form of an assembly kit.

固定轴向载荷

如果驱动轴轴肩未承受轴向载荷，必须装上止推垫圈（7）和螺栓（6）。

拆卸

- 松开所有螺栓（8）每次约拧 4/1 圈，一步步连续松开。
- 将收缩盘从空芯轴上卸下。
- 将驱动轴从空芯轴上卸下。

说明：零件 6、7、9、10 和 11 不属于标准供货范围，然而，可以作为装配工装的附件形式供货。

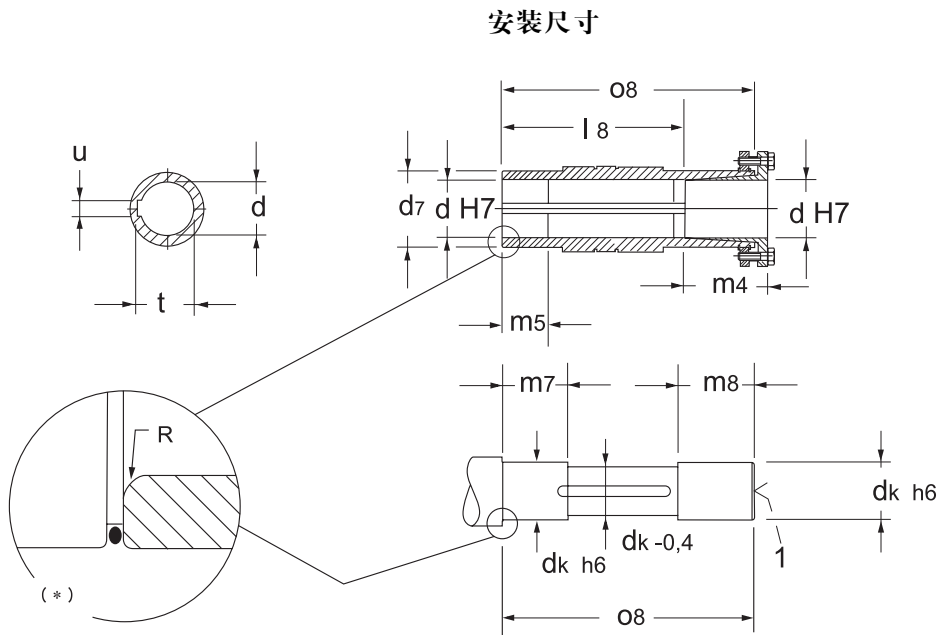
3. Technical Appendix 技术附录

Cleaning and lubricating

If reused, the removed shrink-fit rings need not be disassembled into individual parts for cleaning and lubricating purposes unless they are heavily soiled. After cleaning, grease the conical surfaces with "Molykote D321R" (or an equivalent, solid lubricant with a coefficient of friction of $\mu=0.04$).

3.6 Mounting shaft-mounted geared motors with hollow shaft with conical taper bush

Shaft dimensions



Size 尺寸	d	d _k	d ₇	l ₈	m ₄	m ₅	m ₇	m ₈	o ₈	R	T	u
46	50	50	70	174	66.5	30	40	70	228	4	53.8	14
56	60	60	85	191	85	40	50	90	261	4	64.4	18
66	70	70	100	243	91	70	80	80	322	4	74.9	20
76	90	90	120	309	75.5	90	100	65	372	4	95.4	25
86	100	100	140	365	88	100	110	95	437	4	106.4	28
96	120	120	160	444	102	120	130	105	530	4	127.4	32

1) Centering to DIN 332 "Form D"

(*) An O-ring is recommended to provide increased protection against moisture.
The dimensions apply to the hollow shaft.

** Recommended for simple mounting.

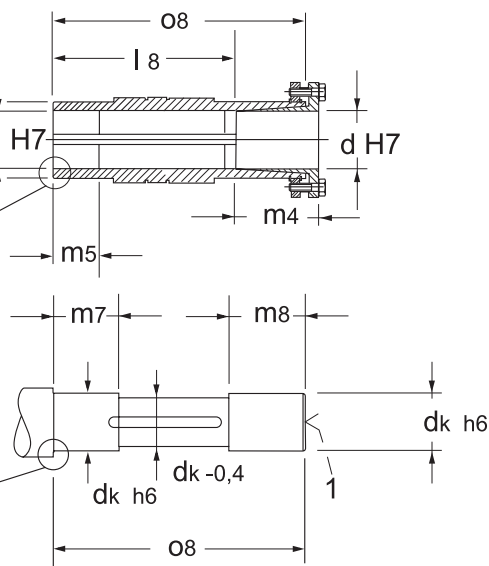
Occurring loads must be considered for the selection of the material of the machine shaft.

清洗和润滑

如果再次使用时，拆下的收缩盘不必为了清洗和润滑而拆成单个零件，除非它们非常脏。清洗后，在圆锥面上涂上“Molykote D321R”（或同类产品，摩擦系数为 $\mu = 0.04$ 的固体润滑剂）。

3.6 带锥套收缩盘的空心轴齿轮马达安装

安装尺寸



1) 中心孔按 DIN 332 标准 "D" 类型。

(*) 建议 O 型圈达到防潮作用。
只适用于空心轴。

** 该推荐值便于安装。

在选择驱动轴的材料时，要考虑所承受的负载。

The taper bush system is supplied separately.

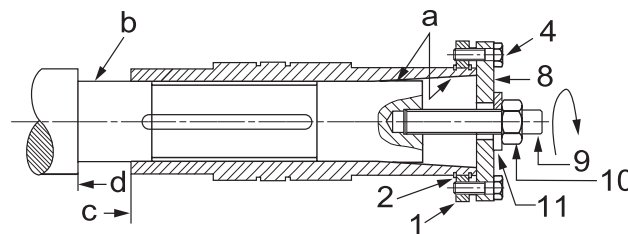
带锥套收缩盘单独供货

Assembly

- Clean and degrease contact surfaces (a) and (b).
- Grease contact surface (b) - BUT ON NO AC COUNT contact surface (a) - with "Molykote D321R" or an equivalent lubricant.
- Fit support ring (1) either between the two shaft retaining rings (2) or between the shaft retaining ring (2) and the shoulder of the hollow shaft.
- Align the hollow shaft of the geared motor and the machine shaft. The feather key and keyway must be aligned opposite each other.
- Slide the geared motor onto the driven shaft until the faces (c) and (d) are positioned opposite each other. If necessary, fit a threaded rod (9), nut (10), washer (11) and a thrust washer (8). Secure the thrust washer with screws (4).
- Remove tools (8, 9, 10, 11).

装配

- 清洗干净后，将表面(a)和(b)的油清除。
- 将接触面(b)涂上“Molykote D321R”或同类润滑剂。而非表面(a)
- 将反作用盘(1)安装在两个卡环(2)之间或空芯轴轴肩与卡环(2)之间。
- 齿轮马达空芯轴与驱动轴对齐，确保键和键槽对应位置正确。
- 将齿轮马达装入驱动轴上，并使端面(c)和(d)接触。如有必要安装螺杆(9)，螺母(10)，垫片(11)和止推垫圈(8)。用螺栓(4)固定止推垫圈。
- 拆卸零件(8, 9, 10, 11)。



To prevent the shaft slipping, the screws must be tightened to the torque specified in the table below in order to be able to transmit the output torque specified on the type identification plate.

为了能传递铭牌上规定的输出扭矩，螺栓必须按下表所规定的力矩拧紧。

Mounting

- Fit conical clamping sleeve in hollow shaft without using force
- Align through-holes in clamping sleeve with threaded holes in support ring (1), fit screws (4) and secure hand-tight
- Use a torque wrench to tighten screws (4) in stages one after the other until the necessary tightening torque T_A (see table) is reached
- Retighten screws after 24 hours of operation
- Fit protective cover.

安装

- 将锥套插入空芯轴中，勿用强力。
- 将锥套上的通孔与反作用盘(1)上的螺纹孔对齐，插入螺栓(4)，用手拧紧。
- 用扭力扳手拧螺栓(4)时，要对称地逐步拧紧，几圈后达到表中所规定的收紧扭矩。
- 运行 24 小时后次拧紧螺栓。
- 安装防护罩。

3. Technical Appendix 技术附录

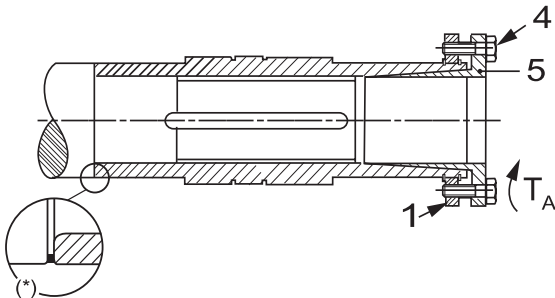
Size	TA (Nm)
4	15
5	30
6	30
7	30
8	60
9	60

Disassembly

- Release all screws (4) evenly by turning a quarter turn one after the other.
- Remove taper bushing (5). If the taper bushing (5) does not release of its own accord, fit two bolts in the tapped holes and tighten them against the support ring (1).
- Secure thrust washer (8) with pin (4).

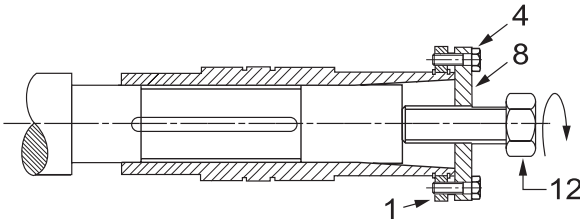
拆卸

- 松开所有螺栓(4)，每次均拧 1/4 圈，一步步连续松开。
- 拆下锥套(5)。如果锥套(5) 太紧无法拧松，可在螺纹孔上插入两只螺栓向反作用盘上拧紧螺栓。
- 用螺栓(4)固定止推垫圈(8)



- Fit pulling screw (12) in threaded center of thrust washer (8).
- Tighten pulling screw (12) in order to remove the geared motor from the machine shaft.

- 在止推垫圈(8)的螺纹孔上安装拆卸螺栓(12)
- 拧紧螺栓(m)以从驱动轴上拆下齿轮马达。

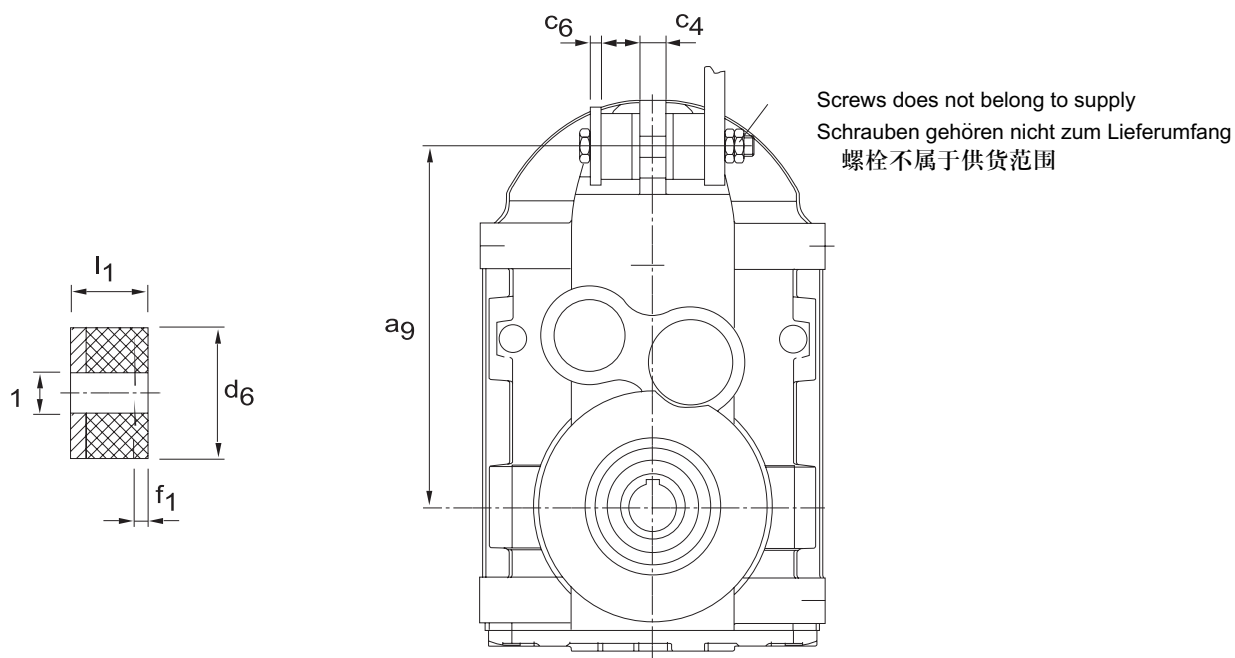


3.7 Torque support SP4

The reaction forces in connection with parallel shaft helical bevel geared motors that are used as slip-on gear units must be taken up by a torque support (optionally available) or by a flexible element (no rigid connection).

3.7 SP4 扭矩臂

为了防止带空心轴平行式齿轮马达摆动，必须安装扭矩臂或用一个弹性元件固定。



Size 齿轮马达规格	a_g	c_4	c_6 min	d_1 + 0,5	d_6	f_7^*	l_1
SP16	158	12	5	12.5	40	1.6	20
SP26	170	12	5	12.5	40	1.6	20
SP36	218	16	5	12.5	40	2.5	20
SP46	278	20	10	21	60	3.3	30
SP56	346	26	10	21	60	4.3	30
SP66	395	30	12	25	80	4	40
SP76	485	36	12	25	80	6.3	40
SP86	550	40	15	32	100	10.5	60

Dimensions in mm / *approx. spring excursion at Mamax

尺寸以 mm 为单位 / * 大约弹性变形量

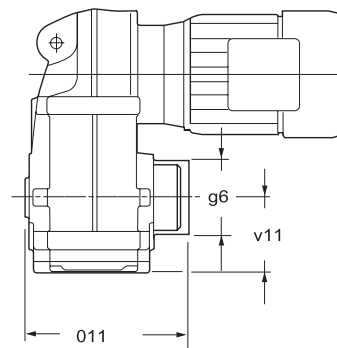
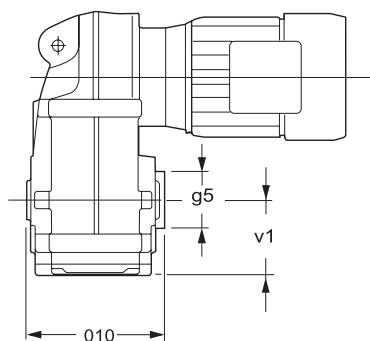
The torque arm does not belong to our standard supply

扭矩臂不在标准供货范围之内

3. Technical Appendix 技术附录

3.8 Protection covers for SP4 output shafts

3.8 SP4 输出轴防护罩



Size	SP.H			SP.S / SP.B / SP.C		
尺寸	g_5	o_{10}	v_1	g_6	o_{11}	v_1
16	86	135	78	86	160	78
26	100	166	86	100	190	86
36	110	195	104.5	110	225	104.5
46	135	230	125	135	255	125
56	165	265	151.5	165	300	151.5
66	205	325	178	205	360	178
76	225	380	200	225	435	200
86						

The protection cover is not a part of the standard scope of delivery. 保护罩不属于标准供货范围。



WORLDWIDE GEARS AND COUPLINGS

MANUFACTURING LOCATIONS

全球齿轮传动及联轴器产品生产基地

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常州莱克斯诺传动设备有限公司

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