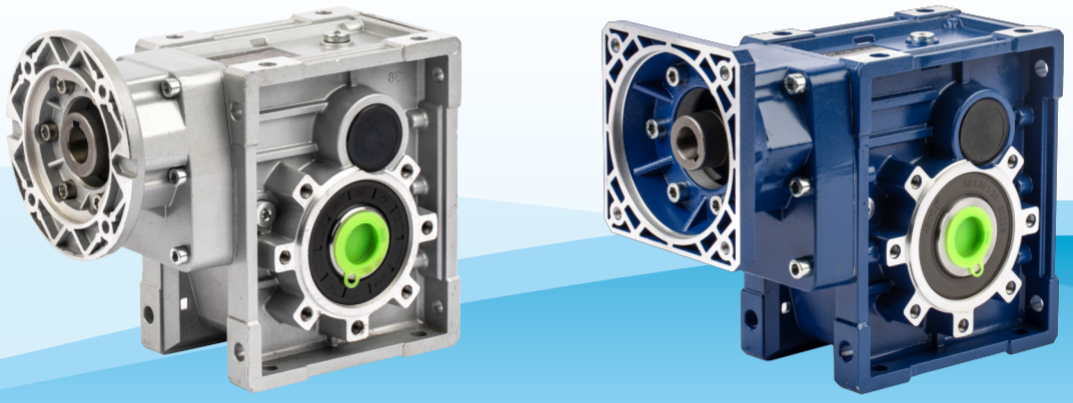
OUYUE 欧悦

▶ 斜齿一准双曲面齿轮减速器

HELICAL—HYPOID GEAR UNITS



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温州欧悦机械有限公司,是一家专业制造与销售传动机械的公司。公司自成立以来,不断引进新设备、新技术，并有最优秀的技术人才投入公司的开发与研究，对产品质量进行严格的监控，主要产品为NMRV系列蜗轮蜗杆减速机、MBL系列行星锥盘无极变速器、PC 系列前置齿轮箱、G3 系列斜齿轮减速机及 NRC系列齿轮箱，NKM 系列双曲面齿轮箱，NAF/NAE/NAD/NAL 系列行星齿轮减速机，产品广泛应用于食品、医药、包装、化工、印染、塑料、数控机床等各种机械设备传动领域。

公司自成立以来，产品出口西班牙、英国、波兰、土耳其、美国等欧美国家及中东、亚洲国家，在国际市场上享有较好的声誉。

公司秉承着“质量第一，客户至上，一切以服务客户为核心!”为宗旨，将不断融合久益的先进技术与管理经验，提供高品质的产品和诚信服务，与广大客户真挚合作，共创美好未来。

Company introduction

Wenzhou Ouyue Machinery Co., Ltd. is a company specializing in manufacturing and selling transmission machinery. Since its establishment, the company has continuously introduced new equipment and new technologies, and has the best technical talents invested in the company's development and research, and strictly monitors product quality. The main products are NMRV series worm gear reducers, MBL series planetary cone disc stepless transmissions, PC series front gear boxes, G3 series helical gear reducers and NRC series gear boxes, NKM series hyperboloid gear boxes,NAF/NAE/NAD/NAL series planetary gear reducer.The products are widely used in various mechanical equipment transmission fields such as food, medicine,packaging, chemicals, printing and dyeing, plastics, CNC machine tools, etc.

Since its establishment, the company has exported its products to Spain, the United Kingdom, Poland, Turkey, the United States and other European and American countries as well as the Middle East and Asian countries, and enjoys a good reputation in the international market.

The company adheres to the principle of "quality first, customer first, everything is centered on serving customers!" and will continue to integrate Jiuyi's advanced technology and management experience, provide high-quality products and honest services, and sincerely cooperate with our customers to create a better future.

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1. 技术特征

NKM、NKB 系列斜齿一准双曲面齿轮减速器具有高度模块化的设计特点。可分别与普通IEC、制动、防爆、变频、伺服等电机组合。本产品广泛用于纺织、食品、陶瓷、包装、物流、塑料等传动领域。

1.TECHNICAL FEATURES

The high degree of modularity is a design feature of NKM、NKB series helical-hypoid gear units.It can be connected respectively with motors such as normal motor,brake motor,explosion-proof motor,frequency conversion motor,servo motor,IEC motor and so on.This kind of product is widely used in drive fields such as textile,foodstuff, ceramice packing,logistics,plastics and so on.

1.1 产品特点

NKM、NKB 系列齿轮减速器共有4种机型号，功率 0.12~4KW,速比 7.73~302.5, 最大扭矩 100~500Nm , 模块化组合，可多种形式组合，满足各种传动条件的需求。

- 使用磨削硬齿面斜齿轮；
- 模块化，可组合多种结构形式；
- 优质铝合金铸造，重量轻，不生锈；
- 输出扭矩大，传动效率高，节能环保；
- NKM 系列减速器安装尺寸与 NMRV 系列轮蜗杆减速器完全兼容（NKM28 与 NMRV050部分尺寸不同）；
- NKB系列减速器安装尺寸与W系列蜗轮蜗杆减速器完全兼容；

1.1 Products characteristics

NKM、NKB Series helical gear units has more than 4 types. Power 0.12~4 KW; Ratio 7.73 ~302.5; Torque max 100~500Nm. Modulaw and multistructure can meet the demands of various conditions.

- Ground-hardened helical gears;
- Modularity,Can be combined in many forms;
- Made of high-quqlity aluminum alloy,light in weight and nonrusting;
- Large in output torque,high efficiency,ene-rgy saving and environmental protection;
- The mounting dimension of NKM series are compatible with NMRV series worm gear unit (A part of NMRV050 dimensions are different from NKM28);
- The mounting dimension of NKB series are compatible with W series worm gear unit;

3. 型号说明/ MODEL ILLUMINATE

NKM 38 B - 48.71 - FA1 GZ1 - 80B5 B3 - 8024或/Or 0.75 - 4/1

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

No	说 明	Comments
1	减速器系列代号：NKM、NKB	Code for gear units series:NKM、NKB
2	减速器规格代号：28、38、48、58	Specification code of gear units:28、38、48、58
3	1). B: 表示2级传动 2). C: 表示3级传动	1).B:Means 2 stages 2).C:Means 3 stages
4	减速器速比i Speed ratio of reducer i	
5	1). 无代号表示不带输出法兰 2). FA、FB、FC (1/2): 输出法兰代号和位置	1).No mark means without output flange 2).FA、FB、FC(1/2):output Flange and position
6	1). 无代号表示孔输出 2). GZ (1/2): 单向输出轴和位置 3). AZ: 双向输出轴	1).No mark means hole output 2).GZ(1/2):Single output shaft and position 3).AZ:Double output shaft
7	输入法兰规格代号(63B5、71B5、...)	Lnput flange code (63B5、71B5、.....)
8	安装方位代号	Lnstallation position code
9	1). 无代号表示不带电机 2). 电机型号或功率、极数	1).No mark means without motor 2).Model motos(poles of power)
10	电机接线盒位置、默认位置1可以不写	Position diagram for motor terminal box default position 1 not to write out is ok

订单时请说明是否带电机，一般按不带电机供应。
When ordering,you should show whether the reducers are equipped with motors,otherwise reducers aren't supplied with motors.
示例 Example:NKM28B-48.86-FA1-63B5-6324

4. 选型相关参数

4.1 功率 P

$$P_1 = \frac{P_2}{\eta} \text{ [KW]}$$

$$P_{1n} \geqslant P_1 \cdot f_s \text{ [KW]}$$

P_1 输入功率
P_2 输出功率
P_{1n} 输入电机额定功率
f_s 使用系数
η 传动效率

4.2 转速n

n_1 减速器输入转速
n_2 减速器输出转速

若是齿轮箱外部传动装置驱动，为了优化工作条件和提高使用寿命，建议使用1400r/min或更低转速。允许输入较高的输入转速，但在这种情况下，额定扭矩M2会下降。

4.3 传动比i

$$i = \frac{n_1}{n_2}$$

传动比通常为小数，在选型表中保留两位小数。

4.4 扭矩M

$$M_2 = \frac{9550 \cdot P_1 \cdot \eta}{n_2} \text{ [Nm]}$$

$$M_{2n} \geqslant M_2 \cdot f_s \text{ [Nm]}$$

M_2 输出扭矩
M_{2n} 额定输出扭矩
P_1 输入功率
η 传动效率
f_s 使用系数

4.RELEVANT PARAMETER

4.1 Power P

$$P_1 = \frac{P_2}{\eta} \text{ [KW]}$$

$$P_{1n} \geqslant P_1 \cdot f_s \text{ [KW]}$$

P_1 Input power
P_2 Output power
P_{1n} Rated input motor power
f_s Service factor
η Transmission efficiency

4.2 Rotation speed n

n_1 Gear units input speed
n_2 Gear units output speed

If driven by the external gearing,1400r/min or lower rotation speed is suggested so as to optimize the working conditions and prolong the service life. Higher input rotation speed is permitted,but in this situation,the rated torque M_2will be reduced.

4.3 Transmission ratio i

$$i = \frac{n_1}{n_2}$$

Usually transmission ratio is decimal fraction with 2 radix point tagged in selection tables.

4.4 Torque M

$$M_2 = \frac{9550 \cdot P_1 \cdot \eta}{n_2} \text{ [Nm]}$$

$$M_{2n} \geqslant M_2 \cdot f_s \text{ [Nm]}$$

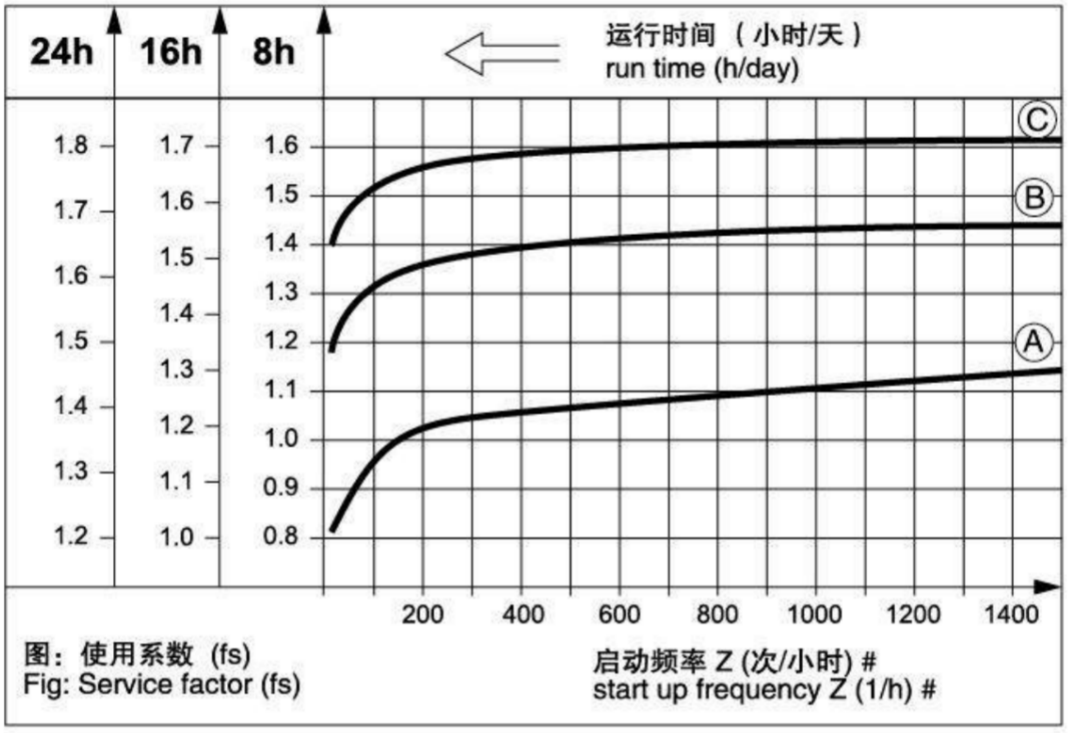
M_2 Output torque
M_{2n} Rated output torque
P_1 Input power
η Transmission efficiency
f_s Service factor

4.5使用系数fs

使用减速器时，应考虑一定的使用系数fs，它是根据每天的运转时间和启动频率Z确定的。根据惯性 加速系数确定三种负载类型， 在下图中可以读取实际应用的使用系数,按下图选取的使用系数必须小于或等于从性能参数表中提供的使用系数。

4.5 Service factor fs

The effect of the driven machine on the gear unit is taken into account to a sufficient level of accuracy using the service factor fs.The service factor is determined according to the daily operating time and the starting frequency Z.Three load classifications are considered depending on the mass acceleration factor.You can read off the service factor applicable to your application in following Figure. The service factorselected using this diagram must be less than or equal to the service factor as given in the performance parameter table.



启动频率Z: 周期包括所有启动、制动的次数以及变速电机高低速变化时的次数。

Starting frequency Z:The cycles include all starting and braking procedures as well as change overs from low to high speed.

4.5.1 负载类型

Ⓐ 均匀冲击负载，允许惯性加速系数≤0.2
Ⓑ 中等冲击负载，允许惯性加速系数≤3
Ⓒ 重冲击负载，允许惯性加速系数≤10

负载类型见附录

4.5.1 Load classifications

Ⓐ Uniformshock load,permitted mass acceleration factor ≤0.2
Ⓑ Moderate shock load,permitted mass acceleration factor ≤3
Ⓒ Heavy shock load,permitted mass acceleration factor≤10

Load classifications see the addendum.

4.5.2 负载类型

惯性加速系数计算如下：

$$fa=\frac{Jc}{Jm}$$

4.5.2 Mass acceleration factor

The mass acceleration factor is calculated as follows:

$$fa=\frac{Jc}{Jm}$$

Fa 惯性加速系数
Jc 所有外部传动惯量[kgm²]
Jm 驱动电机的传动惯量 [kgm²]

如果惯性加速系数fa>10,请与我们技术部联系。

为了保持减速器的使用寿命，从产品样本中的性能参数表所选择的使用系数 fs 应等于或略高于计算出的使用系数fs。

4.6径向载荷Fr

在确定影响径向载荷时，安装在轴端上的传动件类型必须考虑在内，不同类型的传动件对应不同传动附加系数fz,列表如下：

Fa Mass acceleration factor
Jc All external mass moments of inertia [kgm²]
Jm Mass moment of inertia on the motor end [kgm²]

If mass acceleration factors fa > 10 , please call our Technical Service.

To keep the service-life of gear units, the use factor fs selected from the catalogue must lbe equal or slightly higher than the calculated use factor fs.

4.6 Radial loads Fr

When determining.the resulting radial loads, the type of transmission elements, mounted on the shaft end must be considered. Various transmission elements are corresponding with following transmis-sion element factors fz:

传动件 Transmission element	传动附加系数 Fz Transmission element factor Fz	注释 Comments
齿轮 Gears	1.00	≥17齿teech
	1.15	<17齿teech
链轮 Chain sprockets	1.00	≥20齿teech
	1.25	<20齿teech
	1.40	<13齿teech
V带轮 Narrow V-belt pulleys	1.75	有预紧力作用Influence of the tensile force
平带轮 Flat belt pulleys	2.50	有预紧力作用Influence of the tensile force
齿带轮 Toothed beld pulleys	2.50	有预紧力作用Influence of the tensile force

作用在轴上的径向载荷按如下公式计算：

$$F_r = \frac{M \cdot 2000 \cdot F_z}{d_o} \ [N]$$

F_r 作用在轴上的载荷 [N]
M 作用在轴上的扭矩 [Nm]
d_o 安装在轴上传动件的平均直径 [mm]
f_z 传动附加系数

当径向负荷不作用在轴中点时，按以下公式计算有效负荷：

$$F_{XL} \leqslant \frac{F_{r2} \cdot a}{(b+x)} \ [N]$$

F_{r2} 依据下面表格给出中底脚安装式齿轮减速器 的许可径向载荷(x=L/12)[N]
a,b 减速器径向转化换算常量[mm]

The radial loads exerted on the motor or gear shaft is then calculated as follows:

$$F_r = \frac{M \cdot 2000 \cdot F_z}{d_o} \ [N]$$

F_r Resulting radial load [N]
M Torque on the shaft [Nm]
d_o Mean diameter of the mounted transmis sion element in [mm]
f_z Transmission element factor

The allowed radial load force on the shaft is calculated with the following formula:

$$F_{XL} \leqslant \frac{F_{r2} \cdot a}{(b+x)} \ [N]$$

F_{r2} Permitted overhung load (x=L/2) for foot-mounted gear units according to the selection tables in [N]
a,b Gear unit constant for overhung load conversion [mm]

6.速比与IEC接口/RATIO AND IEC MOTOR ADAPTERS

NKM28..

	i	63B5	71B5 71B14	80B5 80B14	90B5 90B14
3级/Stage					
NKM28C	291.79				
NKM28C	244.29				
NKM28C	200.44				
NKM28C	146.67				
NKM28C	120.34				
NKM28C	101.04				
NKM28C	74.62				
NKM28C	62.36				
NKM28C	52.36				
2级/Stage					
NKM28B	58.36				
NKM28B	48.86				
NKM28B	40.09				
NKM28B	29.33				
NKM28B	24.07				
NKM28B	20.21				
NKM28B	14.92				
NKM28B	12.47				
NKM28B	10.47				
NKM28B	7.73				

NKM38..,NKB38.

	i	63B5	71B5 71B14	80B5 80B14	90B5 90B14
3级/Stage					
NKM38C	302.5				
NKM38C	243.57				
NKM38C	196.43				
NKM38C	151.56				
NKM38C	122.22				
NKM38C	101.27				
NKM38C	73.33				
NKM38C	63.33				
NKM38C	52.48				
2级/Stage					
NKM38B	60.5				
NKM38B	48.71				
NKM38B	39.29				
NKM38B	30.31				
NKM38B	24.44				
NKM38B	20.25				
NKM38B	14.67				
NKM38B	12.67				
NKM38B	10.5				
NKM38B	7.6				

NKM48..,NKB48..

	i	63B5	71B5	80B5 80B14	90B5 90B14	100B5 100B14	112B5 112B14
3级/Stage							
NKM48C	297.21						
NKM48C	240.89						
NKM48C	200.66						
NKM48C	151.2						
NKM48C	125.95						
NKM48C	99.22						
NKM48C	75.45						
NKM48C	62.43						
NKM48C	49.18						
2级/Stage							
NKM48B	59.44						
NKM48B	48.18						
NKM48B	40.13						
NKM48B	30.24						
NKM48B	25.19						
NKM48B	19.84						
NKM48B	15.09						
NKM48B	12.49						
NKM48B	9.84						
NKM48B	7.48						

NKM58..,NKB58.

	i	63B5	71B5	80B5 80B14	90B5 90B14	100B5 100B14	112B5 112B14
3级/Stage							
NKM58C	295.18						
NKM58C	240.89						
NKM58C	200.66						
NKM58C	151.2						
NKM58C	125.95						
NKM58C	99.22						
NKM58C	75.45						
NKM58C	62.43						
NKM58C	49.18						
2级/Stage							
NKM58B	59.04						
NKM58B	48.18						
NKM58B	40.13						
NKM58B	30.24						
NKM58B	25.19						
NKM58B	19.84						
NKM58B	15.09						
NKM58B	12.49						
NKM58B	9.84						
NKM58B	7.48						

7.减速器选型表/GEAR UNIT SELECTION TABLES

7.1 NKM.../NKB...(IEC)..性能参数/Performance parameter

P_{1n} [KW]	n_2 [r/min]	M_{2n} [N/m]	i	fs				page
0.12	5.7	184	244.29	0.7	NKM28C	63B5	6314	23
	7	151	200.44	0.9				
	9.5	110	146.67	1.2				
	11.6	91	120.34	1.4				
	13.9	76	101.04	1.7				
	18.8	56	74.62	2.3				
	22.5	47	62.36	2.6				
	26.7	39	52.36	2.8				
	24	45	58.36	2.4	NKM28B	63B5	6314	22
	28.7	38	48.86	3.5				
	35	31	40.09	4.2				
	48	23	29.33	5.8				
	58	18.5	24.07	7				
	69	15.6	20.21	8.4				
	94	11.5	14.92	11.3				
	112	9.6	12.47	13.5				
	134	8.1	10.47	16.1				
	181	5.9	7.73	16.8				
	5.7	183	243.57	1.1	NKM38C	63B5	6314	25
	7.1	148	196.43	1.4	NKB38C	63B5	6314	31
	9.2	114	151.56	1.8				
	11.5	92	122.22	2.2				
	13.8	76	101.27	2.6				
	19.1	55	73.33	2.9				
	22.1	48	63.33	2.9				
	26.7	40	52.48	3				
	23.1	47	60.5	3.7	NKM38B	63B5	6314	24
	28.7	37	48.71	5.3	NKB38B	63B5	6314	30
	36	30	39.29	6.6				
	46	23	30.31	8.6				
	4.7	224	297.21	1.6	NKM48C	63B5	6314	27
	5.8	181	240.89	1.9	NKB48C	63B5	6314	33
	7	151	200.66	2.3				
	9.3	114	151.2	3.1				
	11.1	95	125.95	3.7				
	4.7	222	295.18	2.1	NKM58C	63B5	6314	29
	5.8	181	240.89	2.8	NKB58C	63B5	6314	35
	7	151	200.66	3.3				
	9	114	151.2	4.4				
0.18	9.6	165	291.79	0.7	NKM28C	63B5	6314	23
	11.5	138	244.29	0.9				
	14	113	200.44	1.1				
	19.1	83	146.67	1.6				
	23.3	68	120.34	1.9				
	27.7	57	101.04	2.3				
	38	42	74.62	3.1				
	45	35	62.36	3.4				
	53	30	52.36	3.7				
	48	34	58.36	3.3	NKM28B	63B5	6314	22
	57	28	48.86	4.6				
	70	23	40.09	5.6				
	95	16.9	29.33	7.7				
	116	13.9	24.07	9.4				

P_{1n} [KW]	n_2 [r/min]	M_{2n} [N/m]	i	fs				page
0.18	11.6	136	120.34	1	NKM28C	63B5	6324	23
	13.9	114	101.04	1.1				
	18.8	84	74.62	1.5				
	22.5	70	62.36	1.7				
	26.7	59	52.36	1.9				
	24	67	58.36	1.6	NKM28B	63B5	6324	22
	28.7	56	48.86	2.3				
	35	46	40.09	2.8				
	48	34	29.33	3.8				
	58	28	24.07	4.7				
	69	23	20.21	5.6				
	94	17.2	14.92	7.5				
	112	14.4	12.47	9				
	134	12.1	10.47	10.8				
	181	8.9	7.73	11.2				
	12.1	131	74.62	1	NKM28C	71B5/B14	7116	23
	14.4	110	62.36	1.1				
	17.2	92	52.36	1.2				
	15.4	105	58.36	1	NKM28B	71B5/B14	7116	22
	18.4	88	48.86	1.5				
	22.4	72	40.09	1.8				
	31	53	29.33	2.5				
	37	43	24.07	3				
	45	36	20.21	3.6				
	60	27	14.92	4.9				
	72	22	12.47	5.8				
	9.3	171	302.5	1				
	11.5	138	243.57	1.5	NKM38C	63B5	6312	25
	14.3	111	196.43	1.8	NKB38C	63B5	6312	31
	18.5	86	151.56	2.3				
	22.9	69	122.22	2.9				
	27.6	57	101.27	3.5				
	38	41	73.33	3.9				
	44	36	63.33	3.9				
	53	30	52.48	4				
	7.1	222	196.43	0.9				
	9.2	171	151.56	1.2	NKM38C	63B5	6324	25
	11.5	138	122.22	1.4	NKB38C	63B5	6324	31
	13.8	114	101.27	1.7				
	19.1	83	73.33	1.9				
	22.1	72	63.33	2				
	26.7	59	52.48	2				
	23.1	70	60.5	2.4	NKM38B	63B5	6324	24
	28.7	56	48.71	3.6	NKB38B	63B5	6324	30
	36	45	39.29	4.4				
	7.4	215	122.22	0.9	NKM38C	71B5/B14	7166	25
	8.9	178	101.27	1.1	NKB38C	71B5/B14	7166	31
	12.3	129	73.33	1.2				
	14.2	111	63.33	1.3				
	17.1	92	52.48	1.3				
	14.9	109	60.5	1.6	NKM38B	71B5/B14	7166	24
	18.5	87	48.71	2.3	NKB38B	71B5/B14	7166	30
	22.9	71	39.29	2.8				
	29.7	54	30.31	3.7				
	9.4	168	297.21	2.1	NKM48B	63B5	6312	26
	11.6	136	240.89	2.6	NKB48C	63B5	6312	33
	14	113	200.66	3.1				
	18.5	85	151.2	4.1				

P_{1n} [KW]	n_2 [r/min]	M_{2n} [N/m]	i	fs				page
0.18	4.7	336	297.21	1	**NKM48C**	**63B5**	**6324**	**27**
	5.8	272	240.89	1.3				
	7	227	200.66	1.5	**NKB48C**	**63B5**	**6324**	**33**
	9.3	171	151.2	2				
	11.1	142	125.95	2.5				
	14.1	112	99.22	3.1				
	18.6	85	75.45	4.1				
	4.7	353	200.66	1	**NKM48C**	**71B5**	**7166**	**27**
	5.8	266	151.2	1.3				
	7	221	125.95	1.6	**NKB48C**	**71B5**	**7166**	**33**
	9.3	174	99.22	2				
	11.1	133	75.45	2.6				
	14.1	110	62.43	3.2				
	18.6	86	49.18	4.1				
	15.1	107	59.44	3.3	**NKM48B**	**71B5**	**7166**	**26**
	18.7	87	48.16	4	**NKB48B**	**71B5**	**7166**	**32**
	9.5	167	295.18	2.8	**NKM58C**	**63B5**	**6312**	**29**
	11.6	136	240.89	3.7	**NKB58C**	**63B5**	**6312**	**35**
	4.7	333	295.18	1.4	**NKM58C**	**63B5**	**6324**	**29**
	5.8	272	240.89	1.8	**NKB58C**	**63B5**	**6324**	**35**
	7	227	200.66	2.2				
	9.3	171	151.2	2.9				
	11.1	142	125.95	3.5				
	3.7	423	240.89	1.2	**NKM58C**	**71B5**	**7116**	**29**
	4.5	353	200.66	1.4	**NKB58C**	**71B5**	**7116**	**35**
	6	266	151.2	1.9				
	7.1	221	125.95	2.3				
	9.1	174	99.22	2.9				
	11.9	133	75.45	3.8				
	14.4	110	62.43	4.1				
0.25	19.1	115	146.67	1.1	**NKM28C**	**63B5**	**6322**	**23**
	23.3	94	120.34	1.4				
	27.7	79	101.04	1.6				
	38	59	74.62	2.2				
	45	49	62.36	2.5				
	53	41	52.36	2.7				
	48	47	58.36	2.4	**NKM28C**	**63B5**	**6322**	**22**
	57	39	48.86	3.3				
	70	32	40.09	4				
	18.8	117	74.62	1.1	**NKM28C**	**71B5/B14**	**7144**	**23**
	22.5	98	62.36	1.2				
	26.7	82	52.36	1.3				
	24	94	58.36	1.2	**NKM28B**	**71B5/B14**	**7144**	**22**
	28.7	78	48.86	1.7				
	35	64	40.09	2				
	48	47	29.33	2.8				
	58	39	24.07	3.4				
	69	32	20.21	4				
	94	24	14.92	5.4				
	18.4	122	48.86	1.1	**NKM28B**	**71B5/B14**	**7126**	**22**
	22.4	100	40.09	1.3				
	31	73	29.33	1.8				
	37	60	24.07	2.2				
	45	50	20.21	2.6				
	60	37	14.92	3.5				
	72	31	12.47	4.2				
	86	26	10.47	5				
	116	19	7.73	5.2				

P_{1n} [KW]	n_2 [r/min]	M_{2n} [N/m]	i	fs				page
0.25	11.5	191	243.57	1	NKM38C	63B5	6322	25
	14.3	154	196.43	1.3				
	18.5	119	151.56	1.7	NKB38C	63B5	6322	31
	22.9	96	122.22	2.1				
	27.6	79	101.27	2.5				
	38	58	73.33	2.8				
	44	50	63.33	2.8				
	53	41	52.48	2.9				
	11.5	192	122.22	1	NKM38C	71B5/B14	7144	25
	13.8	159	101.27	1.3				
	19.1	115	73.33	1.4	NKB38C	71B5/B14	7144	31
	22.1	99	63.33	1.4				
	26.7	82	52.48	1.5				
	23.1	97	60.5	1.8	NKM38C	71B5/B14	7126	25
	28.7	78	48.71	2.6				
	36	63	39.29	3.2	NKB38C	71B5/B14	7126	31
	46	49	30.31	4.1				
	12.3	179	73.33	0.9	NKM38C	71B5/B14	7126	25
	14.2	155	63.33	0.9				
	17.1	128	52.48	0.9	NKB38C	71B5/B14	7126	31
	14.9	151	60.5	1.1	NKM38B	71B5/B14	7126	24
	18.5	121	48.71	1.6				
	22.9	98	39.29	2	NKB38B	71B5/B14	7126	30
	29.7	76	30.31	2.6				
	37	61	24.44	3.3				
	44	50	20.25	4				
	9.4	233	29721	1.5	NKM48C	63B5	6322	27
	11.6	189	240.89	1.9				
	14	157	200.66	2.2	NKB48C	63B5	6322	33
	18.5	119	151.2	3				
	22.2	99	125.95	3.5				
	5.8	378	240.89	0.9	NKM48C	71B5	7144	27
	7	315	200.66	1.1				
	9.3	237	151.2	1.5	NKB48C	71B5	7144	33
	11.1	198	125.95	1.8				
	14.1	156	99.22	2.2				
	18.6	118	75.45	3				
	22.4	98	62.43	3.6				
	6	369	151.2	0.9	NKM48C	71B5	7126	27
	7.1	307	125.95	1.1				
	9.1	242	99.22	1.4	NKB48C	71B5	7126	33
	11.9	184	75.45	1.9				
	14.4	152	62.43	2.3				
	18.3	120	49.18	2.9				
	15.1	148	59.44	2.4	NKM48B	71B5	7126	26
	18.7	120	48.18	2.9				
	22.4	100	40.13	3.5	NKB48B	71B5	7126	32
	9.5	232	295.18	2	NKM58C	63B5	6322	29
	11.6	189	240.89	2.6				
	14	157	200.66	3.2	NKB58C	63B5	6322	35
	18.5	119	151.2	4.2				
	4.7	463	295.18	1	NKM58C	71B5	7144	29
	5.8	378	240.89	1.3				
	7	315	200.66	1.6	NKB58C	71B5	7144	35
	9.3	237	151.2	2.1				
	11.1	198	125.95	2.5				
	14.1	156	99.22	3.2				
	18.6	118	75.45	4.2				

P_{1n} [KW]	n_2 [r/min]	M_{2n} [N/m]	i	fs				page
0.25	4.5	490	200.66	1	NKM58C	71B5	7126	29
	6	369	151.2	1.4	NKB58C	71B5	7126	35
	7.1	307	125.95	1.6				
	9.1	242	99.22	2.1				
	11.9	184	75.45	2.7				
	14.4	152	62.43	3				
	18.3	120	49.18	2.9				
	15.2	147	59.04	3.1	NKM58B	71B5	7126	28
	18.7	120	48.18	4.2	NKB58B	71B5	7126	34
0.37	23.3	140	120.34	0.9	NKM28C	71B5/B14	7112	23
	27.7	117	101.04	1.1				
	38	87	74.62	1.5				
	45	72	62.36	1.7				
	53	61	52.36	1.8				
	48	69	58.36	1.6	NKM28B	71B5/B14	7112	22
	57	58	48.86	2.2				
	70	48	40.09	2.7				
	95	35	29.33	3.7				
	28.7	116	48.86	1.1	NKM28B	71B5/B14	7124	22
	35	95	40.09	1.4				
	48	70	29.33	1.9				
	58	57	24.07	2.3				
	69	48	20.21	2.7				
	94	35	14.92	3.7				
	112	30	12.47	4.4				
	134	25	10.47	5.2				
	181	18	7.73	5.5				
	31	108	29.33	1.2	NKM28B	80B5/B14	8016	22
	37	89	24.07	1.5				
	45	75	20.21	1.7				
	60	55	14.92	2.4				
	72	46	12.47	2.8				
	86	39	10.47	3.4				
	116	29	7.73	3.5				
	14.3	228	196.43	0.9	NKM38C	71B5/B14	7122	25
	18.5	176	151.56	1.1	NKB38C	71B5/B14	7122	31
	22.9	142	122.22	1.4				
	27.6	118	101.27	1.7				
	38	85	73.33	1.9				
	44	74	63.33	1.9				
	53	61	52.48	2				
	46	72	60.5	2.4	NKM38B	71B5/B14	7122	24
	57	58	48.71	3.5	NKB38B	71B5/B14	7122	30
	71	47	39.29	4.3				
	13.8	235	101.27	0.9	NKM38C	71B5/B14	7124	25
	19.1	170	73.33	0.9	NKB38C	71B5/B14	7124	31
	22.1	147	63.33	1				
	26.7	122	52.48	1				
	23.1	144	60.5	1.2	NKM38B	71B5/B14	7124	24
	28.7	116	48.71	1.7	NKB38B	71B5/B14	7124	30
	36	93	39.29	2.1				
	46	72	30.31	2.8				
	57	58	24.44	3.4				
	69	48	20.25	4.2				
	18.5	72	60.5	2.4	NKM38B	80B5/B14	8016	24
	22.9	58	48.71	3.5	NKB38B	80B5/B14	8016	30
	29.7	47	39.29	4.3				

P_{1n} [KW]	n_2 [r/min]	M_{2n} [N/m]	i	fs				page
0.37	37	90	24.44	2.2	NKM58B	80B5/B14	8016	28
	44	75	20.25	2.7	NKB58B	80B5/B14	8016	34
	61	54	14.67	3.5				
	71	47	12.67	3.5				
	86	39	10.5	3.5				
	118	28	7.6	3.6				
	9.4	345	297.21	1	NKM48C	71B5	7112	27
	11.6	280	240.89	1.3	NKB48C	71B5	7112	33
	14	233	200.66	1.5				
	18.5	176	151.2	2				
	22.2	146	125.95	2.4				
	28.2	115	99.22	3				
	37	88	75.45	4				
	9.3	351	151.2	1	NKM48C	71B5	7124	27
	11.1	292	125.95	1.2	NKB48C	71B5	7124	33
	14.1	230	99.22	1.5				
	18.6	175	75.45	2				
	22.4	145	62.43	2.4				
	28.5	114	49.18	3.1				
	23.6	23.6	59.44	2.5	NKM48B	71B5	7124	26
	29.1	29.1	48.18	3.1	NKB48B	71B5	7124	32
	35	35	40.13	3.7				
	9.1	358	99.22	1	NKM48C	80B5/B14	8016	27
	11.9	273	75.45	1.3	NKB48C	80B5/B14	8016	33
	14.4	225	62.43	1.6				
	18.3	178	49.18	2				
	15.1	219	59.44	1.6	NKM48B	80B5/B14	8016	26
	18.7	178	48.18	2	NKB48B	80B5/B14	8016	32
	22.4	148	40.13	2.4				
	29.8	112	30.24	3.1				
	36	93	25.19	3.8				
	9.5	343	295.18	1.3	NKM58C	71B5	7112	29
	11.6	280	240.89	1.8	NKB58C	71B5	7112	35
	14	233	200.66	2.1				
	18.5	176	151.2	2.8				
	22.2	146	125.95	3.4				
	5.8	559	240.89	0.9	NKM58C	71B5	7124	29
	7	466	200.66	1.1	NKB58C	71B5	7124	35
	9.3	351	151.2	1.4				
	11.1	292	125.95	1.7				
	14.1	230	99.22	2.2				
	18.6	175	75.45	2.9				
	22.4	145	62.43	3.1				
	28.5	114	49.18	3.1				
	23.7	140	59.04	3.3	NKM58B	71B5	7124	28
	29.1	114	48.18	4.4	NKB58B	71B5	7124	34
	6	546	151.2	0.9	NKM58C	80B5/B14	8016	29
	7.1	455	125.95	1.1	NKB58C	80B5/B14	8016	35
	9.1	358	99.22	1.4				
	11.9	273	75.45	1.8				
	14.4	225	62.43	2				
	18.3	178	49.18	2				
0.55	15.2	218	59.04	2.1	NKM58C	80B5/B14	8016	29
	18.7	178	48.18	2.8	NKB58C	80B5/B14	8016	35
	22.4	148	40.13	3.4				
	38	129	74.62	1	NKM28C	71B5/B14	7122	23
	45	108	62.36	1.1				
	53	90	52.36	1.2				

P_{1n} [KW]	n_2 [r/min]	M_{2n} [N/m]	i	fs			page
0.55	48	103	58.36	1.1	NKM28B	71B5/B14	7122	22
	57	86	48.86	1.5				
	70	71	40.09	1.8				
	95	52	29.33	2.5				
	116	42	24.07	3.1				
	139	36	20.21	3.6				
	35	141	40.09	0.9	NKM28B	80B5/B14	8014	22
	48	103	29.33	1.3				
	58	85	24.07	1.5				
	69	71	20.21	1.8				
	94	53	14.92	2.5				
	112	44	12.47	3				
	134	37	10.47	3.5				
	181	27	7.73	3.7				
	37	132	24.07	1	NKM28B	80B5/B14	8026	22
	45	111	20.21	1.2				
	60	82	14.92	1.6				
	72	68	12.47	1.9				
	86	57	10.47	2.3				
	116	42	7.73	2.4				
	22.9	211	122.22	0.9	NKM38C	71B5/B14	7122	25
	27.6	175	101.27	1.1	NKB38C	71B5/B14	7122	31
	38	127	73.33	1.3				
	44	109	63.33	1.3				
	53	91	52.48	1.3				
	46	107	60.5	1.6	NKM38B	71B5/B14	7122	24
	57	86	48.71	2.3	NKB38B	71B5/B14	7122	30
	71	69	39.29	2.9				
	92	53	30.31	3.7				
	28.7	172	48.71	1.2	NKM38B	80B5/B14	8014	24
	36	139	39.29	1.4	NKB38B	80B5/B14	8014	30
	46	107	30.31	1.9				
	57	86	24.44	2.3				
	69	71	20.25	2.8				
	95	52	14.67	3.7				
	110	45	12.67	3.7				
	133	37	10.5	3.6				
	184	27	7.6	3.7				
	22.9	216	39.29	0.9	NKM38B	80B5/B14	8026	24
	29.7	166	30.31	1.2	NKB38B	80B5/B14	8026	30
	37	134	24.44	1.5				
	44	111	20.25	1.8				
	61	80	14.67	2.4				
	71	70	12.67	2.4				
	86	58	10.5	2.3				
	118	42	7.6	2.4				
	14	346	200.66	1	NKM48C	71B5	7122	27
	18.5	261	151.2	1.3	NKB48C	71B5	7122	33
	22.2	217	125.95	1.6				
	28.2	171	99.22	2				
	37	130	75.45	2.7				
	45	108	62.43	3.2				
	57	85	49.18	4.1				
	47	105	59.44	3.3	NKM48B	71B5	7122	26
	58	85	48.18	4.1	NKB48B	71B5	7122	32
	14.1	342	99.22	1	NKM48C	80B5/B14	8014	27
	18.6	260	75.45	1.3	NKB48C	80B5/B14	8014	33

P_{1n} [KW]	n_2 [r/min]	M_{2n} [N/m]	i	fs				page
0.55	22.4	215	62.43	1.6	NKM48C	80B5/B14	8014	27
	28.5	170	49.18	2.1	NKB48C	80B5/B14	8014	33
	23.6	210	59.44 4	1.7	NKM48B	80B5/B14	8014	26
	29.1	170	8.18	2.1	NKB48B	80B5/B14	8014	32
	35	142	40.13	2.5				
	46	107	30.24	3.3				
	56	89	25.19	3.9				
	14.4	335	62.43	1	NKM48C	80B5/B14	8026	27
	18.3	264	49.18	1.3	NKB48C	80B5/B14	8026	33
	15.1	326	59.44	1.1	NKM48B	80B5/B14	8026	26
	18.7	264	48.18	1.3	NKB48B	80B5/B14	8026	32
	22.4	220	40.13	1.6				
	29.8	166	30.24	2.1				
	36	138	25.19	2.5				
	45	109	19.84	3.2				
	60	83	15.09	4.2				
	9.5	509	295.18	0.9	NKM58C	71B5	7122	29
	11.6	416	240.89	1.2	NKB58C	71B5	7122	35
	14	346	200.66	1.4				
	18.5	261	151.2	1.9				
	22.2	217	125.95	2.3				
	28.2	171	99.22	2.9				
	37	130	75.45	3.8				
	45	108	62.43	4.2				
	57	85	49.18	4.1				
	9.3	522	151.2	1	NKM58C	80B5/B14	8014	29
	11.1	435	125.95	1.2	NKB58C	80B5/B14	8014	35
	14.1	342	99.22	1.5				
	18.6	260	75.45	1.9				
	22.4	215	62.43	2.1				
	28.5	170	49.18	2.1				
	23.7	208	59.04	2.2	NKM58B	80B5/B14	8014	28
	29.1	170	48.18	2.9	NKB58B	80B5/B14	8014	34
	35	142	40.13	3.5				
	9.1	533	99.22	0.9	NKM58C	80B5/B14	8026	29
	11.9	405	75.45	1.2	NKB58C	80B5/B14	8026	35
	14.4	335	62.43	1.3				
	18.3	264	49.18	1.3				
	15.2	324	59.04	1.4	NKM58B	80B5/B14	8026	28
	18.7	264	48.18	1.9	NKB58B	80B5/B14	8026	34
	22.4	220	40.13	2.3				
	29.8	166	30.24	3				
	36	138	25.19	3.6				
0.75	57	117	48.86	1.1	NKM28B	80B5/B14	8012	22
	70	96	40.09	1.3				
	95	71	29.33	1.8				
	116	58	24.07	2.2				
	139	49	20.21	2.7				
	188	36	14.92	3.6				
	48	141	29.33	0.9	NKM28B	80B5/B14	8024	22
	58	116	24.07	1.1				
	69	97	20.21	1.3				
	94	72	14.92	1.8				
	112	60	12.47	2.2				
	134	50	10.47	2.6				
	181	37	7.73	2.7				

P_{1n} [KW]	n_2 [r/min]	M_{2n} [N/m]	i	fs				page
0.75	60	112	14.92	1.2	NKM28B	90B5/B14	90S6	22
	72	93	12.47	1.4				
	86	78	10.47	1.7				
	116	58	7.73	1.7				
	38	173	73.33	0.9	NKM38C	80B5/B14	8012	25
	44	149	63.33	0.9	NKB38C	80B5/B14	8012	31
	53	124	52.48	1				
	46	145	60.5	1.2	NKM38B	80B5/B14	8012	24
	57	117	48.71	1.7	NKB38B	80B5/B14	8012	30
	71	94	39.29	2.1				
	92	73	30.31	2.7				
	115	59	24.44	3.4				
	138	49	20.25	4.1				
	28.7	234	48.71	0.9	NKM38B	80B5/B14	8024	24
	36	189	39.29	1.1	NKB38B	80B5/B14	8024	30
	46	146	30.31	1.4				
	57	118	24.44	1.7				
	69	97	20.25	2.1				
	95	71	14.67	2.7				
	110	61	12.67	2.7				
	133	50	10.5	2.7				
	184	37	7.6	2.7				
	37	183	24.44	1.1	NKM48C	90B5/B14	90S6	27
	44	151	20.25	1.3	NKB48C	90B5/B14	90S6	33
	61	110	14.67	1.7				
	71	95	12.67	1.7				
	86	79	10.5	1.7				
	118	57	7.6	1.8				
	18.5	356	151.2	1	NKM48C	80B5/B14	8012	27
	22.2	296	125.95	1.2	NKB48C	80B5/B14	8012	33
	28.2	234	99.22	1.5				
	37	178	75.45	2				
	45	147	62.43	2.4				
	57	116	49.18	3				
	47	143	59.44	2.4	NKM48B	80B5/B14	8012	26
	58	116	48.18	3	NKB48B	80B5/B14	8012	32
	70	96	40.13	3.6				
	18.6	355	75.45	1	NKM48C	80B5/B14	8024	27
	22.4	294	62.43	1.2	NKB48C	80B5/B14	8024	33
	28.5	231	49.18	1.5				
	23.6	286	59.44	1.2	NKM48B	80B5/B14	8024	26
	29.1	232	48.18	1.5	NKB48B	80B5/B14	8024	32
	35	193	40.13	1.8				
	46	145	30.24	2.4				
	56	121	25.19	2.9				
	71	95	19.84	3.7				
	18.7	360	48.18	1	NKM48B	90B5/B14	90S6	26
	22.4	300	40.13	1.2	NKB48B	90B5/B14	90S6	32
	29.8	226	30.24	1.5				
	36	188	25.19	1.9				
	45	148	19.84	2.4				
	60	113	15.09	3.1				
	72	93	12.49	3.7				
	11.6	567	240.89	0.9	NKM58C	80B5/B14	8012	29
	14	472	200.66	1.1	NKB58C	80B5/B14	8012	35
	18.5	356	151.2	1.4				
	22.2	296	125.95	1.7				

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	37	178	75.45	2.8	NKB58C	80B5/B14	8012	35
	45	147	62.43	3.1				
	57	116	49.18	3				
	14.1	467	99.22	1.1	NKM58C	80B5/B14	8024	29
	18.6	355	75.45	1.4	NKB58C	80B5/B14	8024	35
	22.4	294	62.43	1.5				
	28.5	231	49.18	1.5				
	23.7	284	59.04	1.6	NKM58B	80B5/B14	8022	28
	29.1	232	48.18	2.2	NKB58B	80B5/B14	8022	34
	35	193	40.13	2.6				
	46	145	30.24	3.4				
	56	121	25.19	4.1				
	11.9	552	75.45	0.9	NKM58C	90B5/B14	90S6	29
	14.4	457	62.43	1	NKB58C	90B5/B14	90S6	35
	18.3	360	49.18	1				
	15.2	442	59.04	1	NKM58B	90B5/B14	90S6	28
	18.7	360	48.18	1.4	NKB58B	90B5/B14	90S6	34
	22.4	300	40.13	1.7				
	29.8	226	30.24	2.2				
	36	188	25.19	2.7				
	45	148	19.84	3.4				
	60	113	15.09	4.4				
1.1	70	141	40.09	0.9	NKM28B	80B5/B14	8022	22
	95	103	29.33	1.3				
	116	85	24.07	1.5				
	139	71	20.21	1.8				
	188	53	14.92	2.5				
	225	44	12.47	3				
	267	37	10.47	3.5				
	362	27	7.73	3.7				
	69	143	20.21	0.9	NKM28B	90B5/B14	90S4	22
	94	105	14.92	1.2				
	112	88	12.47	1.5				
	134	74	10.47	1.8				
	181	55	7.73	1.8				
	72	137	12.47	1	NKM28B	90B5/B14	90L6	22
	86	115	10.47	1.1				
	116	85	7.73	1.2				
	57	172	48.71	1.2	NKM38B	80B5/B14	8022	24
	71	139	39.29	1.4	NKB38B	80B5/B14	8022	30
	92	107	30.31	1.9				
	115	86	24.44	2.3				
	138	71	20.25	2.8				
	191	52	14.67	3.7				
	221	45	12.67	3.7				
	267	37	10.5	3.6				
	368	27	7.6	3.7				
	46	214	30.31	0.9	NKM38B	90B5/B14	90S4	24
	57	172	24.44	1.2	NKB38B	90B5/B14	90S4	30
	69	143	20.25	1.4				
	95	103	14.67	1.8				
	110	89	12.67	1.8				
	133	74	10.5	1.8				
	184	54	7.6	1.9				
	44	222	20.25	0.9	NKM38B	90B5/B14	90L6	24
	61	161	14.67	1.2	NKB38B	90B5/B14	90L6	30

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	86	115	10.5	1.2	NKB38B	90B5/B14	90LS	30
	118	83	7.6	1.2				
	28.2	342	99.22	1	NKM48C	80B5/B14	8022	27
	37	260	75.45	1.3	NKB48C	80B5/B14	8022	33
	45	215	62.43	1.6				
	57	170	49.18	2.1				
	47	210	59.44	1.7	NKM48B	80B5/B14	8024	26
	58	170	48.18	2.1	NKB48B	80B5/B14	8024	32
	70	142	40.13	2.5				
	93	107	30.24	3.3				
	111	89	25.19	3.9				
	29.1	340	48.18	1	NKM48B	90B5/B14	90L6	26
	35	283	40.13	1.2	NKB48B	90B5/B14	90L6	32
	46	213	30.24	1.6				
	56	178	25.19	2				
	71	140	19.84	2.5				
	93	106	15.09	3.3				
	112	88	12.49	4				
	29.8	332	30.24	1.1	NKM48B	90B5/B14	90L6	26
	36	276	25.19	1.3	NKB48B	90B5/B14	90L6	32
	45	218	19.84	1.6				
	60	166	15.09	2.1				
	72	137	12.49	2.6				
	91	108	9.84	3.2				
	120	82	7.48	3.4				
	18.5	522	151.2	1	NKM58C	80B5/B14	8022	29
	22.2	435	125.95	1.2	NKB58C	80B5/B14	8022	35
	28.2	342	99.22	1.5				
	37	260	75.45	1.9				
	45	215	62.43	2.1				
	57	170	49.18	2.1				
	47	208	59.04	2.2	NKM58B	80B5/B14	8022	28
	58	170	48.18	2.9	NKB58B	80B5/B14	8022	34
	70	142	40.13	3.5				
	18.6	521	75.45	1	NKM58C	90B5/B14	90S4	29
	22.4	431	62.43	1	NKB58C	90B5/B14	90S4	35
	28.5	340	49.18	1				
	23.7	416	59.04	1.1	NKM58B	90B5/B14	90S4	28
	29.1	340	48.18	1.5	NKB58B	90B5/B14	90S4	34
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	46	213	30.24	2.3				
	56	178	25.19	2.8				
	71	140	19.84	3.6				
	18.7	529	48.18	0.9	NKM58B	90B5/B14	90L6	28
	22.4	440	40.13	1.1	NKB58B	90B5/B14	90L6	34
	29.8	332	30.24	1.5				
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	45	218	19.84	2.3				
	60	166	15.09	3				
	72	137	12.49	3.4				
	91	108	9.84	3.3				
	120	82	7.48	3.4				
1.5	116	116	24.07	1.1	NKM28B	90B5/B14	90S2	22
	139	97	20.21	1.3				
	188	72	14.92	1.8				
	225	60	12.47	2.2				

P_{1n} [KW]	n_2 [r/min]	M_{2n} [N/m]	I	fs			page
1.5	267 362	50 37	10.47 7.73	2.6 2.7	***NKM28B***	***90B5/B14***	***90S2***	***22***
	94 112 134 181	144 120 101 74	14.92 12.47 10.47 7.73	0.9 1.1 1.3 1.3	***NKM28B***	***90B5/B14***	***90L4***	***22***
	57 71 92 115 138 191 221 267 368	234 189 146 118 97 71 61 50 37	48.71 39.29 30.31 24.44 20.25 14.67 12.67 10.5 7.6	0.9 1.1 1.4 1.7 2.1 2.7 2.7 2.7 2.7	***NKM38B*** ***NKB38B***	***90B5/B14*** ***90B5/B14***	***90S2*** ***90S2***	***24*** ***30***
	57 69 95 110 133 184	235 195 141 122 101 73	24.44 20.25 14.67 12.67 10.5 7.6	0.9 1 1.3 1.4 1.3 1.4	***NKM38B*** ***NKB38B***	***90B5/B14*** ***90B5/B14***	***90L4*** ***90L4***	***24*** ***30***
	37 45 57	355 294 231	75.45 62.43 49.18	1 1.2 1.5	***NKM48C*** ***NKB48C***	***90B5/B14*** ***90B5/B14***	***90S2*** ***90S2***	***27*** ***33***
	47 58 70 93 111 141	286 232 193 145 121 95	59.44 48.18 40.13 30.24 25.19 19.84	1.2 1.5 1.8 2.4 2.9 3.7	***NKM48B*** ***NKB48B***	***90B5/B14*** ***90B5/B14***	***90S2*** ***90S2***	***26*** ***32***
	35 46 56 71 93 112 142 187	386 291 242 191 145 120 95 72	40.13 30.24 25.19 19.84 15.09 12.49 9.84 7.48	0.9 1.2 1.4 1.8 2.4 2.9 3.7 3.9	***NKM48B*** ***NKB48B***	***90B5/B14*** ***90B5/B14***	***90L4*** ***90L4***	***26*** ***32***
	28.2 37 45 57	467 355 294 231	99.22 75.45 62.43 49.18	1.1 1.4 1.5 1.5	***NKM58C*** ***NKB58C***	***90B5/B14*** ***90B5/B14***	***90S2*** ***90S2***	***29*** ***35***
	47 58 70 93 111	284 232 193 145 121	59.04 48.18 40.13 30.24 25.19	1.6 2.2 2.6 3.4 4.1	***NKM58B*** ***NKB58B***	***90B5/B14*** ***90B5/B14***	***90S2*** ***90S2***	***28*** ***34***
	29.1 35 46 56 71 93 112 142 187	463 386 291 242 191 145 120 95 72	48.18 40.13 30.24 25.19 19.84 15.09 12.49 9.84 7.48	1.1 1.3 1.7 2.1 2.6 3.4 3.8 3.8 3.9	***NKM58B*** ***NKB58B***	***90B5/B14*** ***90B5/B14***	***90L4*** ***90L4***	***28*** ***34***

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	225	88	12.47	1.5				
	267	74	10.47	1.8				
	362	55	7.73	1.8				
	92	214	30.31	0.9	NKM38B	90B5/B14	90L2	24
	115	172	24.44	1.2	NKB38B	90B5/B14	90L2	30
	138	143	20.25	1.4				
	191	103	14.67	1.8				
	221	89	12.67	1.8				
	267	74	10.5	1.8				
	368	54	7.6	1.9				
	58	340	48.18	1	NKM48B	90B5/B14	90L2	26
	70	283	40.13	1.2	NKB48B	90B5/B14	90L2	32
	93	213	30.24	1.6				
	111	178	25.19	2				
	141	140	19.84	2.5				
	186	106	15.09	3.3				
	224	88	12.49	4				
	56	355	25.19	1	NKM48B	100B5/B14	100LA4	26
	71	280	19.84	1.3	NKB48B	100B5/B14	100LA4	32
	93	213	15.09	1.6				
	112	176	12.49	2				
	142	139	9.84	2.5				
	187	106	7.48	2.7				
	60	331	15.09	1.1	NKM48B	112B5/B14	112M6	26
	72	274	12.49	1.3	NKB48B	112B5/B14	112M6	32
	91	216	9.84	1.6				
	120	164	7.48	1.7				
	37	521	75.45	1	NKM58C	90B5/B14	90L2	29
	45	431	62.43	1	NKB58C	90B5/B14	90L2	35
	57	340	49.18	1				
	47	416	59.04	1.1	NKM58B	90B5/B14	90L2	28
	58	340	48.18	1.5	NKB58B	90B5/B14	90L2	34
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	93	213	30.24	2.3				
	111	178	25.19	2.8				
	141	140	19.84	3.6				
	35	566	40.13	0.9	NKM58B	100B5/B14	100L2	28
	46	427	30.24	1.2	NKB58B	100B5/B14	100L2	34
	56	355	25.19	1.4				
	71	280	19.84	1.8				
	93	213	15.09	2.3				
	112	176	12.49	2.6				
	142	139	9.84	2.6				
	187	106	7.48	2.7				
	36	553	25.19	0.9	NKM58B	100B5/B14	100LA4	28
	45	435	19.84	1.1	NKB58B	100B5/B14	100LA4	34
	60	331	15.09	1.5				
	72	274	12.49	1.7				
	91	216	9.84	1.7				
	120	164	7.48	1.7				
3	70	386	40.13	0.9	NKM48B	100B5/B14	100L2	26
	93	291	30.24	1.2	NKB48B	100B5/B14	100L2	32
	111	242	25.19	1.4				
	141	191	19.84	1.8				

P_{1n} [KW]	n_2 [r/min]	M_{2n} [N/m]	i	fs			page
3	186 224 285 374	145 120 95 72	15.09 12.49 9.84 7.48	2.4 2.9 3.7 3.9	NKM48B 100B5/B14 NKB48B 100B5/B14	100L2 100L2	26 32
	93 112 142 187	290 240 189 144	15.09 12.49 9.84 7.48	1.2 1.5 1.8 1.9	NKM48B 100B5/B14 NKB48B 100B5/B14	100LB4 100LB4	26 32
	47 58 70 93 111 141 186 224 285 374	568 463 386 291 242 191 145 120 95 72	59.04 48.18 40.13 30.24 25.19 19.84 15.09 12.49 9.84 7.48	0.8 1.1 1.3 1.7 2.1 2.6 3.4 3.8 3.8 3.9	NKM58B 100B5/B14 NKB58B 100B5/B14	100L2 100L2	28 34
	56 71 93 112 142 187	485 382 290 240 189 144	25.19 19.84 15.09 12.49 9.84 7.48	1 1.3 1.7 1.9 1.9 1.9	NKM58B 100B5/B14 NKB58B 100B5/B14	100LB4 100LB4	28 34
4	111 141 186 224 285 374	323 254 194 160 126 96	25.19 19.84 15.09 12.49 9.84 7.48	1.1 1.4 1.8 2.2 2.8 2.9	NKM48B 112B5/B14 NKB48B 112B5/B14	112LB4 112LB4	26 32
	112 142 187	320 252 192	12.49 9.84 7.48	1.1 1.4 1.5	NKM48B 112B5/B14 NKB48B 112B5/B14	112M4 112M4	26 32
	70 93 111 141 186 224 285 374	515 388 323 254 194 160 126 96	40.13 30.24 25.19 19.84 15.09 12.49 9.84 7.48	1 1.3 1.5 2 2.6 2.9 2.9 2.9	NKM58B 112B5/B14 NKB58B 112B5/B14	112M2 112M2	28 34
	71 93 112 142 187	509 387 320 252 192	19.84 15.09 12.49 9.84 7.48	1 1.3 1.4 1.4 1.5	NKM58B 112B5/B14 NKB58B 112B5/B14	112M4 112M4	28 34

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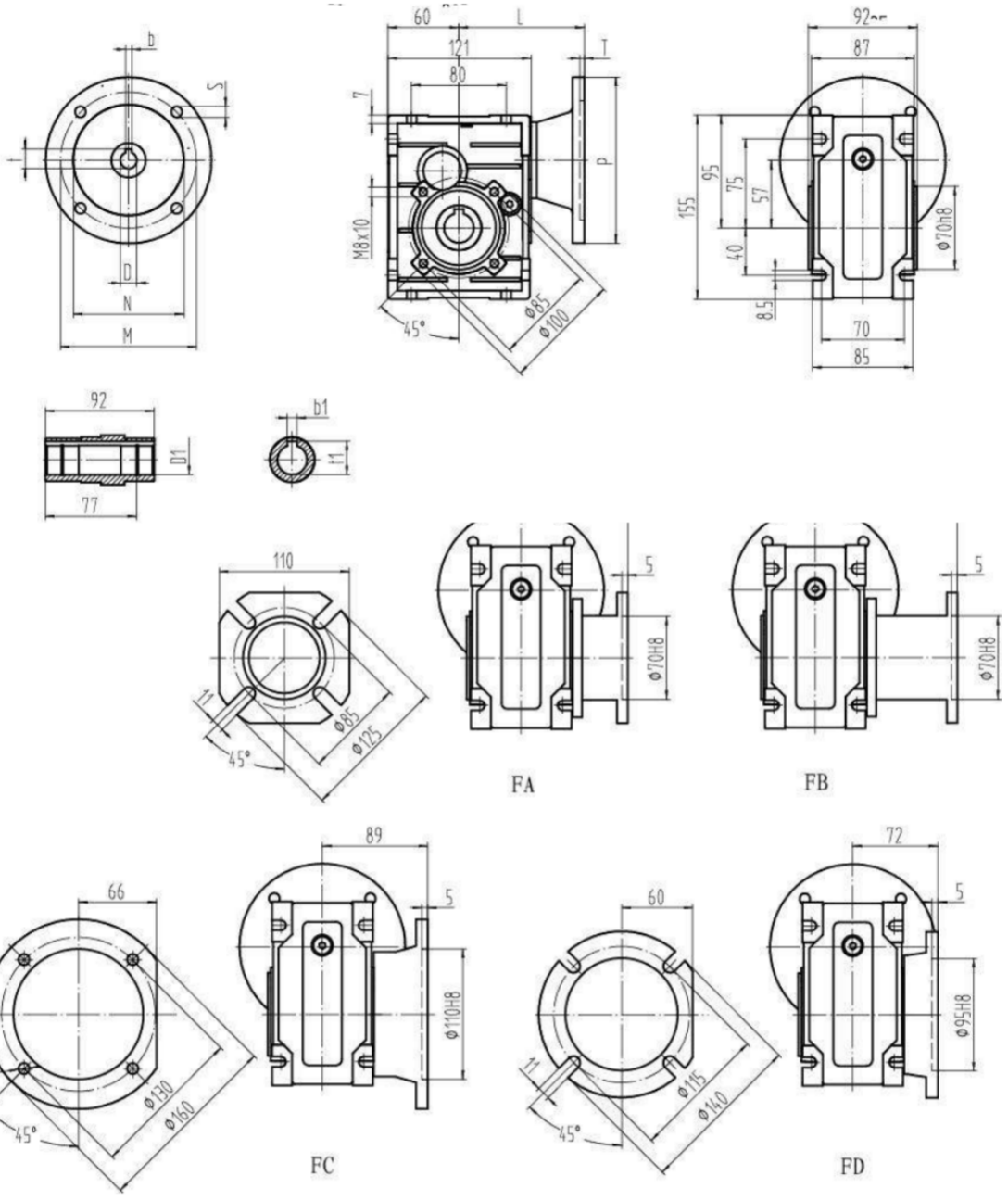

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71B14	14	5	16.3	105	85	70	7	4	113
80B5	19	6	21.8	200	165	130	11	4	133
80B14	19	6	21.8	120	100	80	7	4	133
90B14	24	8	27.3	140	115	95	9	4	133

$D1_{H8}$	b1	t1
20*	6*	22.8*
24*	8*	27.3*
25	8	28.3

*非标产品，订单时请说明
*Only on request

NKM28C..(IEC)

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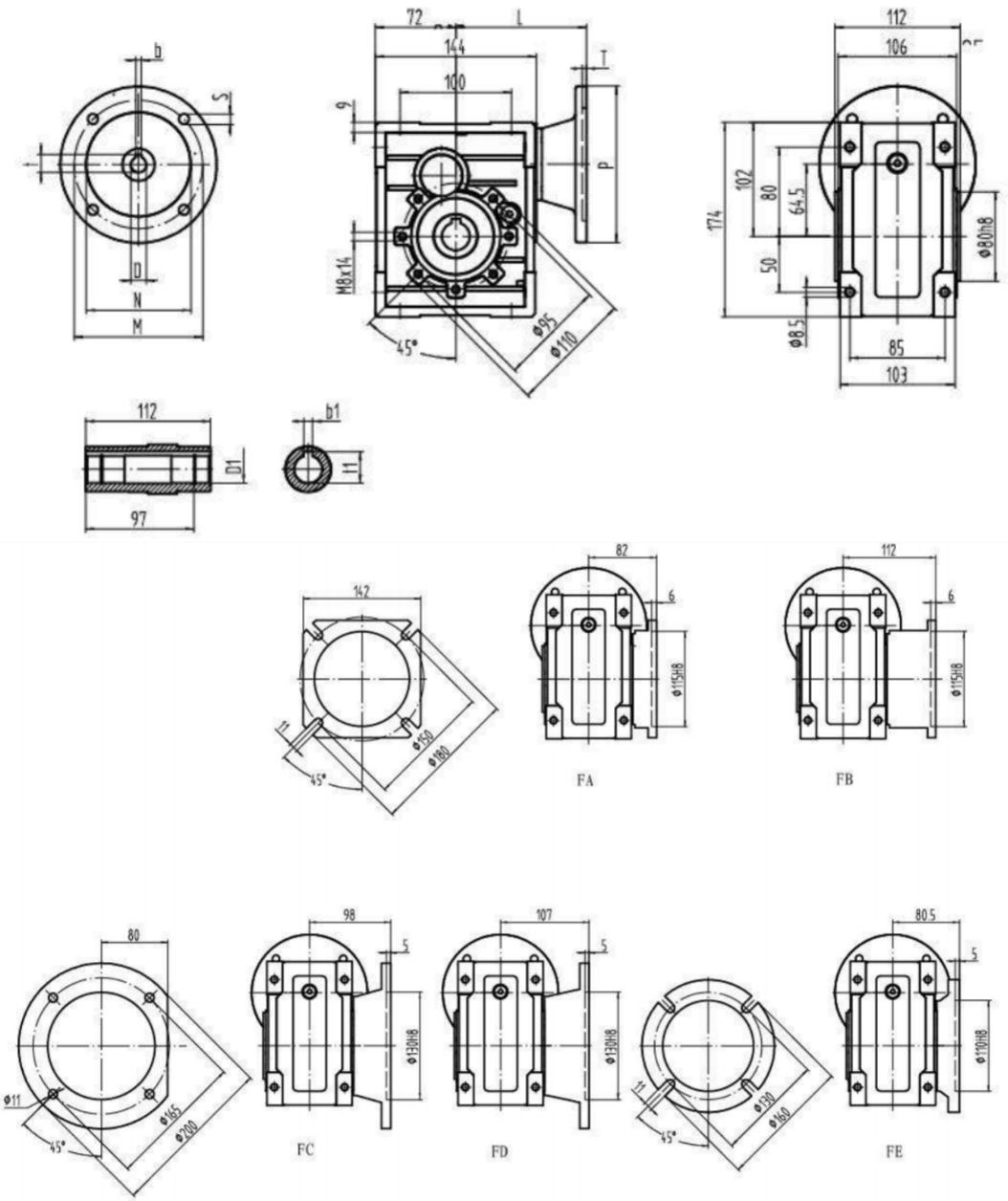

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71B5	14	5	16.3	160	130	110	9	4	147
80B5	19	6	21.8	200	165	130	11	4	167
80B14	19	6	21.8	120	100	80	7	4	167
90B14	24	8	27.3	140	115	95	9	4	167

$D1_{H8}$	b1	t1
20*	6*	22.8*
24*	8*	27.3*
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*非标产品，订单时请说明 *Only on request		

NKM38B..(IEC)

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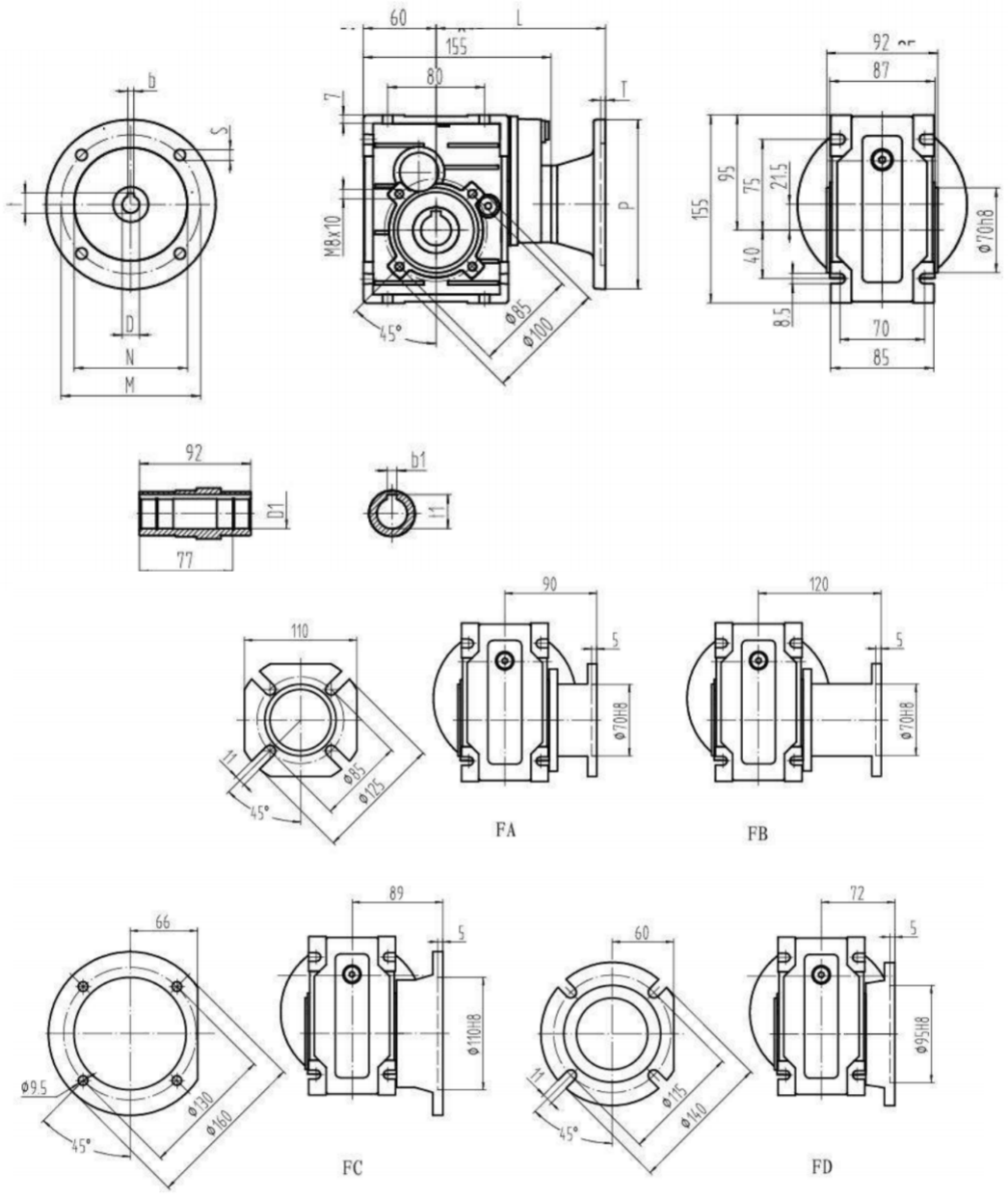

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71B14	14	5	16.3	105	85	70	7	4	124
80B5	19	6	21.8	200	165	130	11	4	144
80B14	19	6	21.8	120	100	80	7	4	144
90B5	24	8	27.3	200	165	130	11	4	144
90B14	24	8	27.3	140	115	95	9	4	144

$D1_{H8}$	b1	t1
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28*	8*	31.3*
30*	8*	33.3*

*非标产品，订单时请说明
*Only on request

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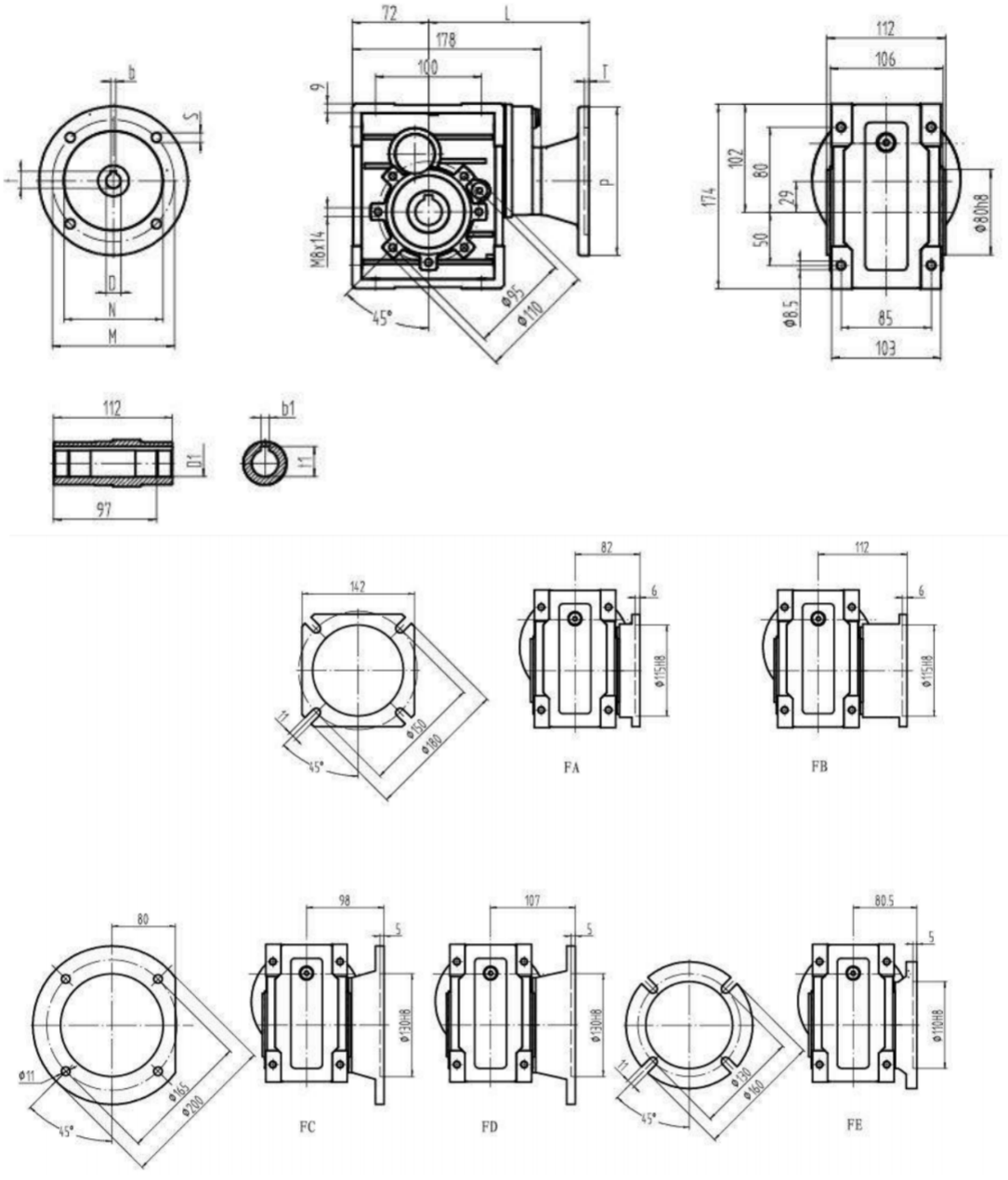

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71B5	14	5	16.3	160	130	110	9	4	158
71B14	14	5	16.3	105	85	70	7	4	158
80B5	19	6	21.8	200	165	130	11	4	178
80B14	19	6	21.8	120	100	80	7	4	178
90B5	24	8	27.3	200	165	130	11	4	178
90B14	24	8	27.3	140	115	95	9	4	178

$D1_{H8}$	b1	t1
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28*	8*	31.3*
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*非标产品，订单时请说明
*Only on request

NKM48B..(IEC)

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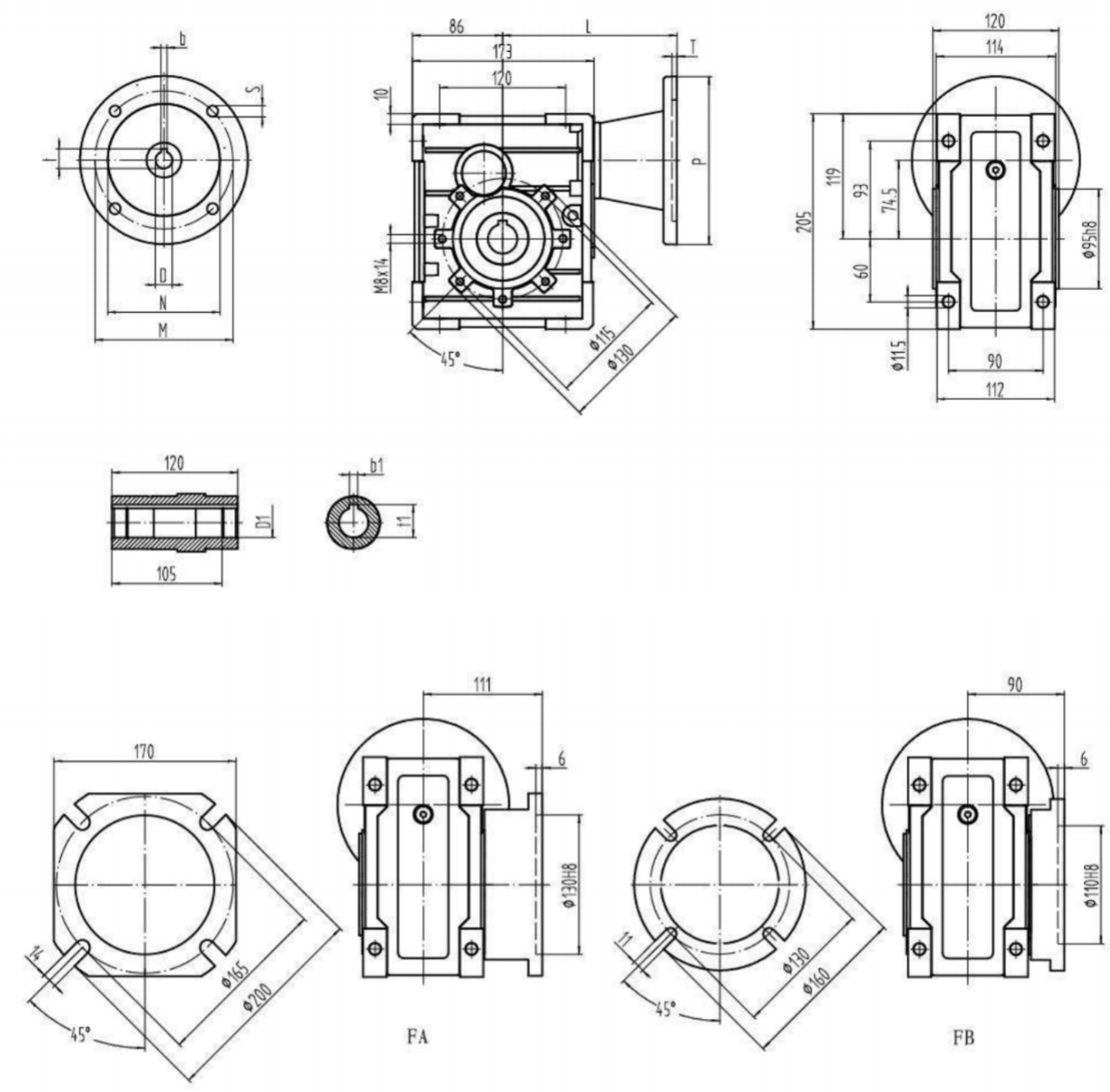

IEC	D	F	G	P	M	N	S	T	L
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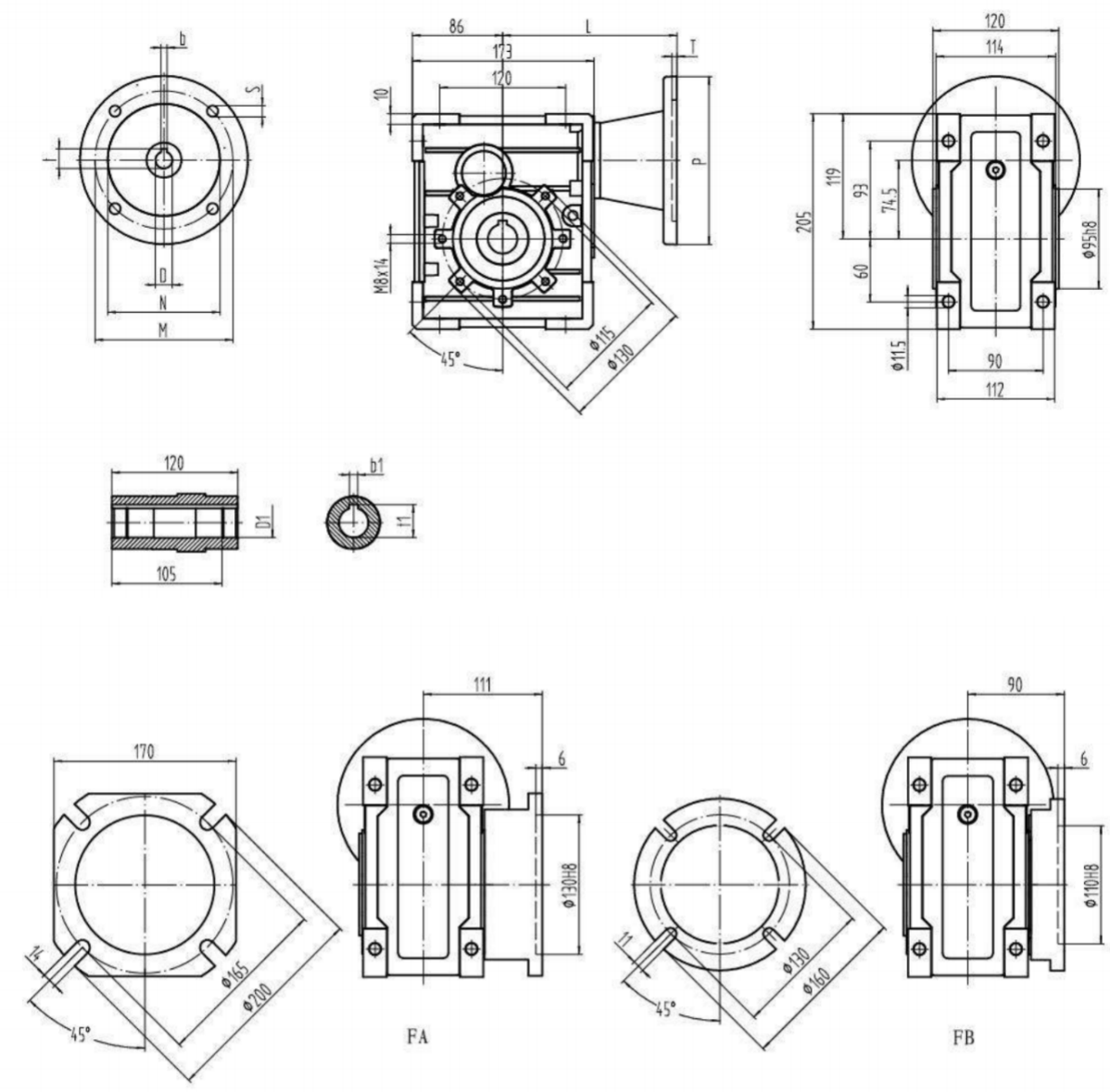
71B5	14	5	16.3	160	130	110	9	4	146
80B5	19	6	21.8	200	165	130	11	4	166
80B14	19	6	21.8	120	100	80	7	4	166
90B5	24	8	27.3	200	165	130	11	4	166
90B14	24	8	27.3	140	115	95	9	4	166
100/112B5	28	8	31.3	250	215	180	13.5	4.5	176
100/112B14	28	8	31.3	160	130	110	9	4.5	176

$D1_{H8}$	b1	t1
28	8	31.3
30*	8*	33.3*
35*	10*	38.3*

*非标产品，订单时请说明
*Only on request

NKM48C..(IEC)

输入/INPUT



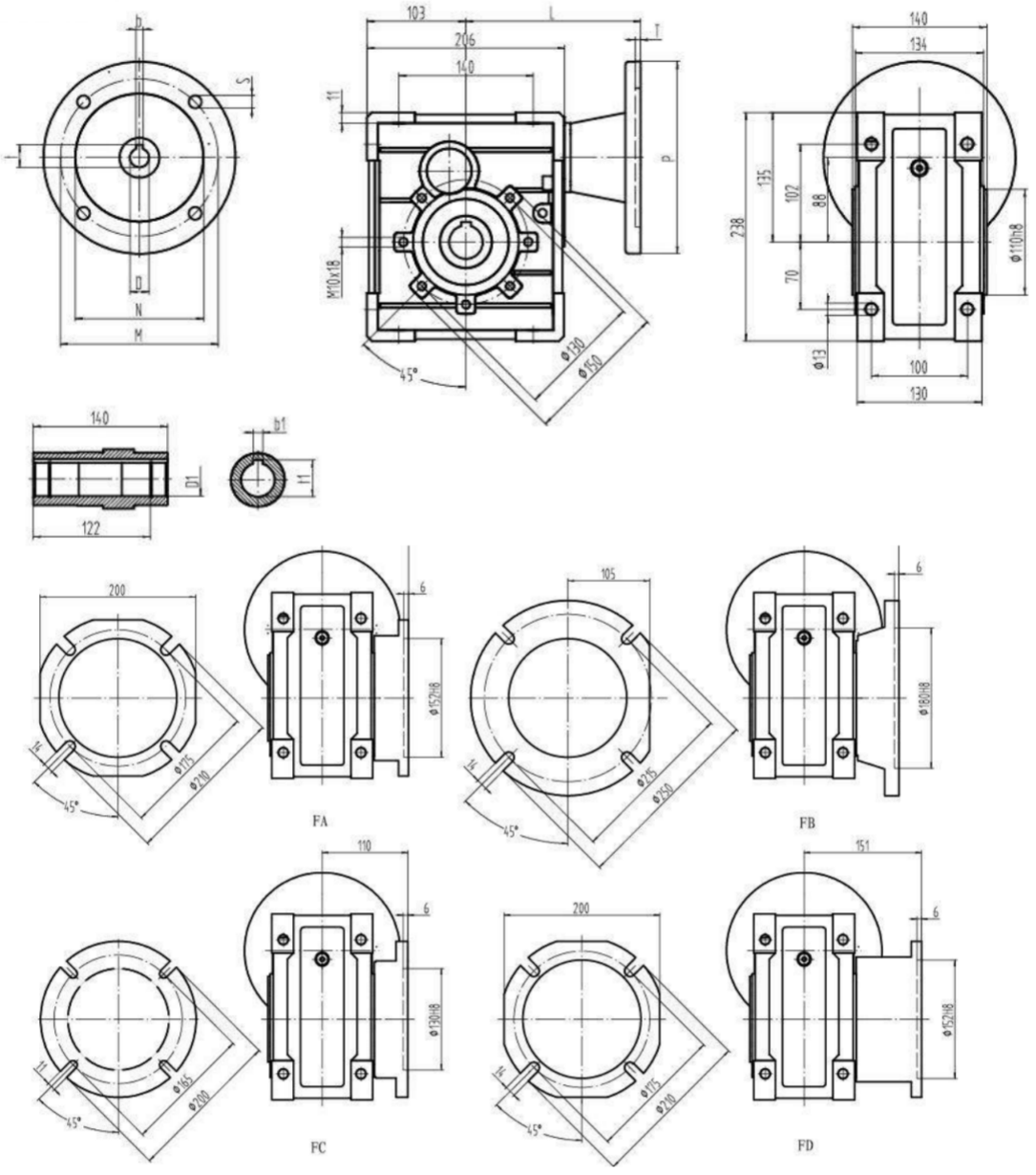
IEC	D	F	G	P	M	N	S	T	L
63B5	11	4	12.8	140	115	95	9	4	179
71B5	14	5	16.3	160	130	110	9	4	186
80B5	19	6	21.8	200	165	130	11	4	206
80B14	19	6	21.8	120	100	80	7	4	206
90B5	24	8	27.3	200	165	130	11	4	206
90B14	24	8	27.3	140	115	95	9	4	206
100/112B5	28	8	31.3	250	215	180	13.5	4.5	216
100/112B14	28	8	31.3	160	130	110	9	4.5	216

$D1_{H8}$	b1	t1
28	8	31.3
30*	8*	33.3*
35*	10*	38.3*

*非标产品，订单时请说明
*Only on request

NKM58B..(IEC)

输入/INPUT



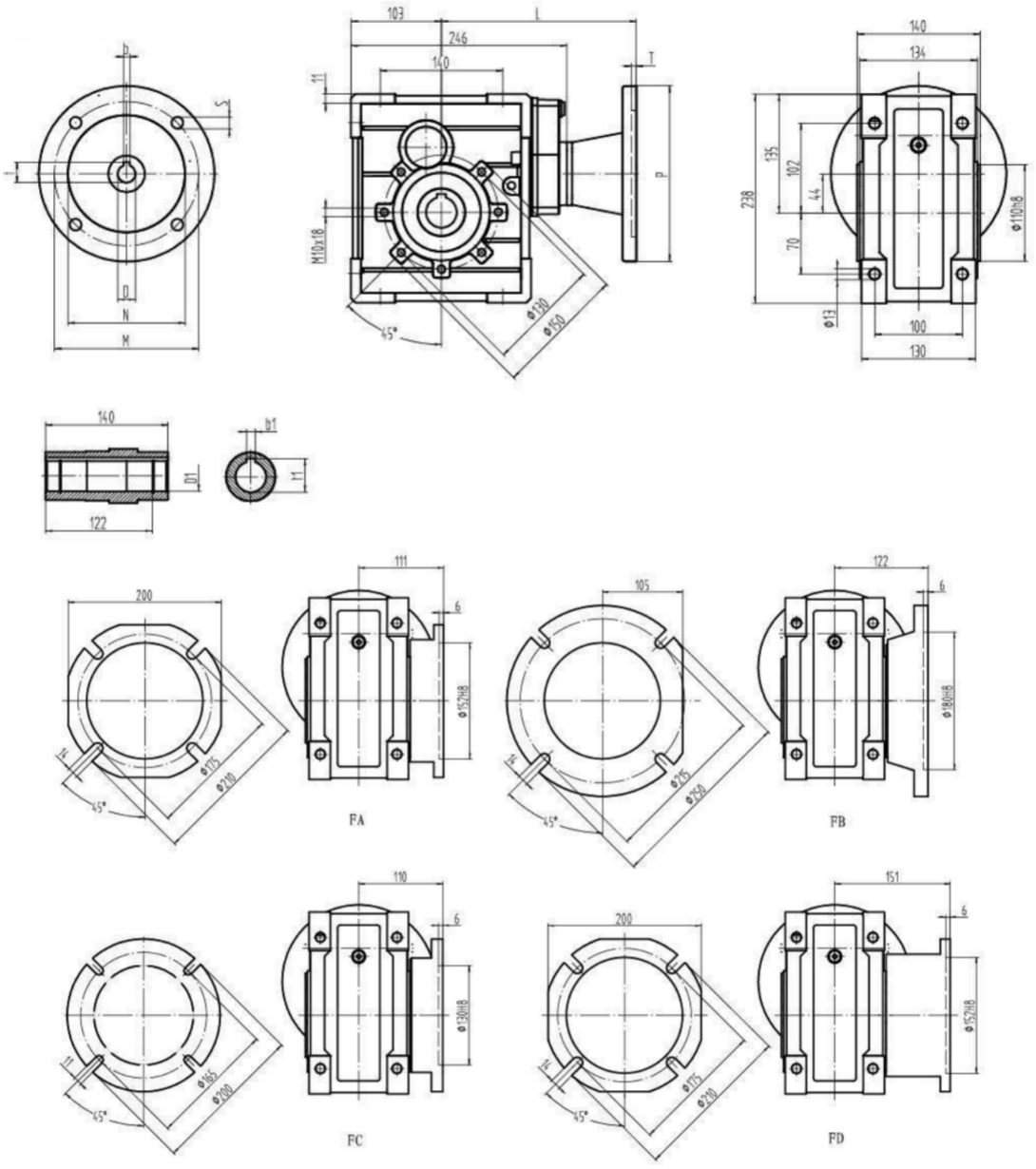
IEC	D	F	G	P	M	N	S	T	L
63B5	11	4	12.8	140	115	95	9	4	155
71B5	14	5	16.3	160	130	110	9	4	162
80B5	19	6	21.8	200	165	130	11	4	182
80B14	19	6	21.8	120	100	80	7	4	182
90B5	24	8	27.3	200	165	130	11	4	182
90B14	24	8	27.3	140	115	95	9	4	182
100/112B5	28	8	31.3	250	215	180	13.5	4.5	192
100/112B14	28	8	31.3	160	130	110	9	4.5	192

$D1_{H8}$	b1	t1
35	10	38.3
38*	10*	41.3*
40*	10*	43.3*

*非标产品，订单时请说明
*Only on request

NKM58C..(IEC)

输入/INPUT



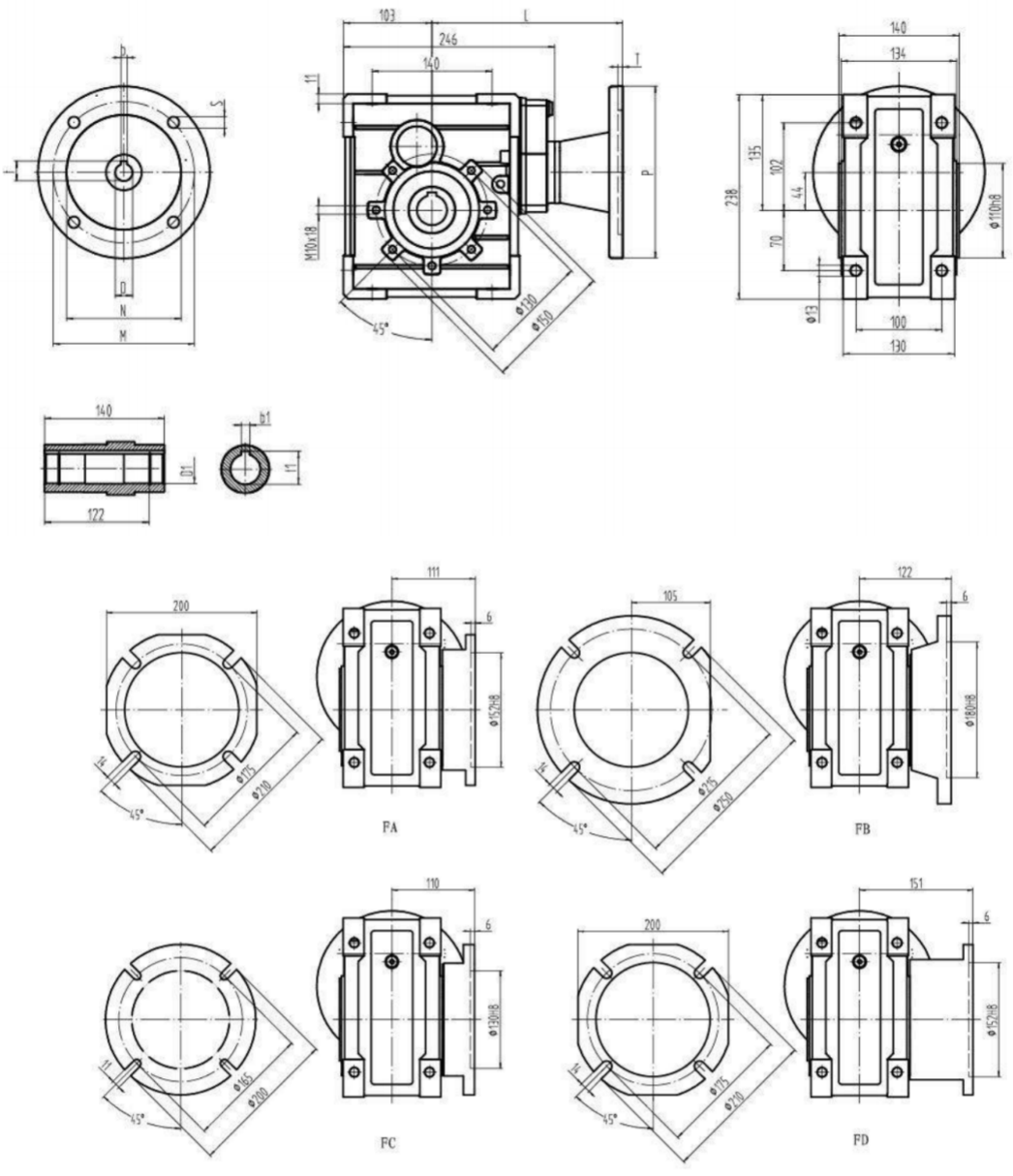
IEC	D	F	G	P	M	N	S	T	L
63B5	11	4	12.8	140	115	95	9	4	195
71B5	14	5	16.3	160	130	110	9	4	202
80B5	19	6	21.8	200	165	130	11	4	222
80B14	19	6	21.8	120	100	80	7	4	222
90B5	24	8	27.3	200	165	130	11	4	222
90B14	24	8	27.3	140	115	95	9	4	222
100/112B5	28	8	31.3	250	215	180	13.5	4.5	232
100/112B14	28	8	31.3	160	130	110	9	4.5	232

$D1_{H8}$	b1	t1
35	10	38.3
38*	10*	41.3*
40*	10*	43.3*

*非标产品，订单时请说明
*Only on request

NKB38B..(IEC)

输入/INPUT



IEC	D	F	G	P	M	N	S	T	L
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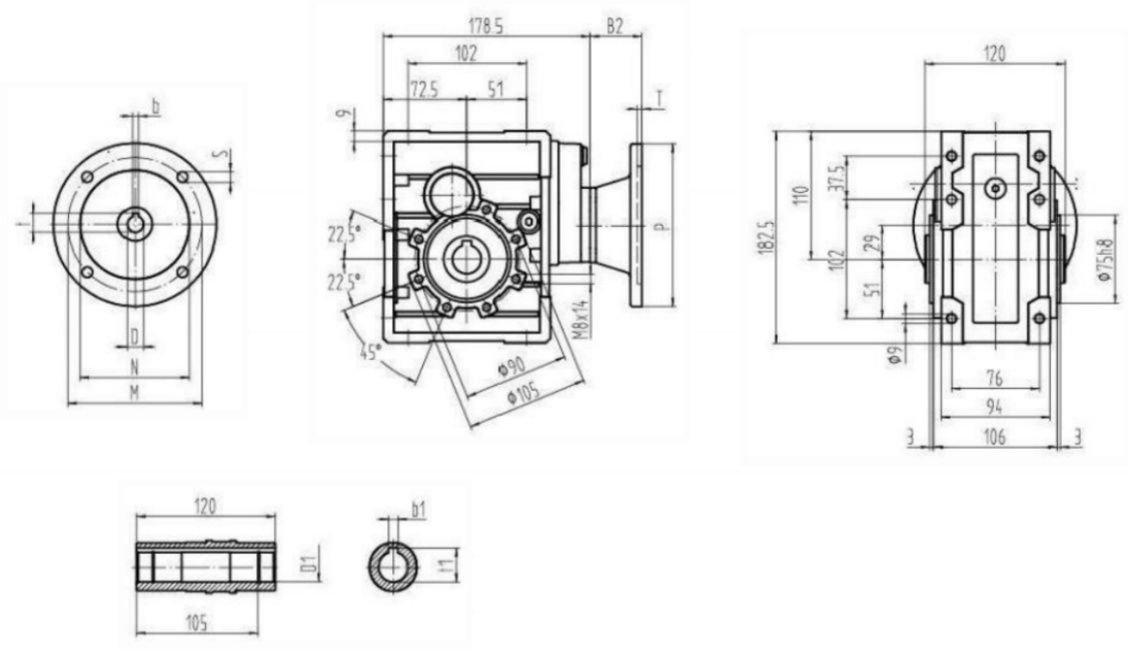
71B5	14	5	16.3	160	130	110	9	4	124
71B14	14	5	16.3	105	85	70	7	4	124
80B5	19	6	21.8	200	165	130	11	4	144
80B14	19	6	21.8	120	100	80	7	4	144
90B5	24	8	27.3	200	165	130	11	4	144
90B14	24	8	27.3	140	115	95	9	4	144

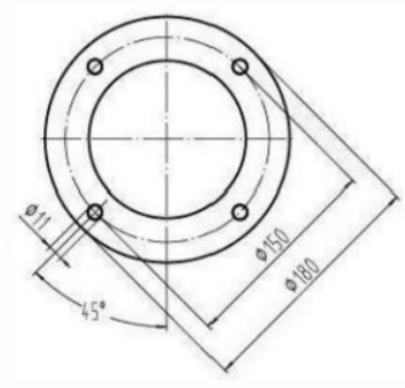
$D1_{H8}$	b1	t1
25	8	28.3
28*	8*	31.3*
30*	8*	33.3*

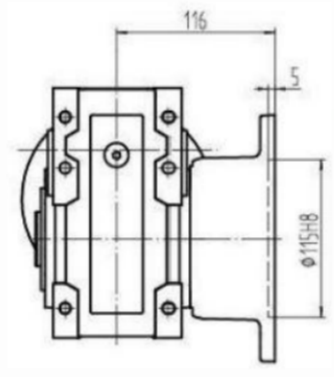
*非标产品，订单时请说明
*Only on request

NKB38C..(IEC)

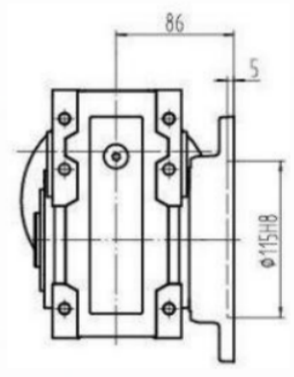
输入/INPUT







FA



FB

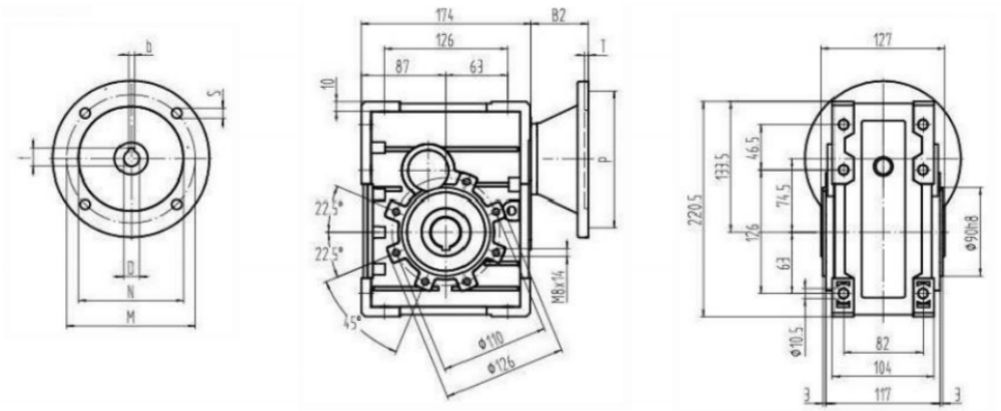
IEC	D	F	G	P	M	N	S	T	L
63B5	11	4	12.8	140	115	95	9	4	151
71B5	14	5	16.3	160	130	110	9	4	158
71B14	14	5	16.3	105	85	70	7	4	158
80B5	19	6	21.8	200	165	130	11	4	178
80B14	19	6	21.8	120	100	80	7	4	178
90B5	24	8	27.3	200	165	130	11	4	178
90B14	24	8	27.3	140	115	95	9	4	178

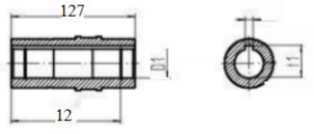
$D1_{H8}$	b1	t1
25	8	28.3
28*	8*	31.3*
30*	8*	33.3*

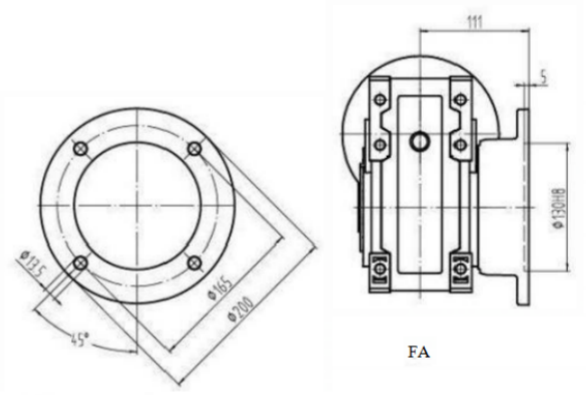
*非标产品，订单时请说明
*Only on request

NKB48B..(IEC)

输入/INPUT







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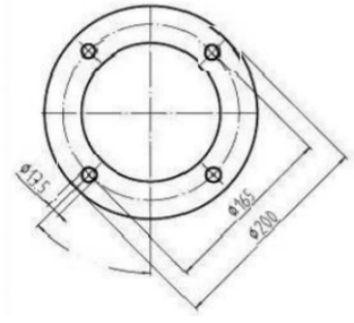
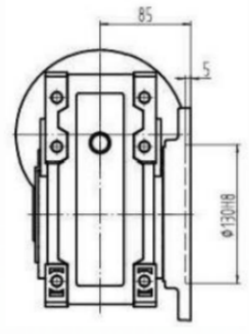
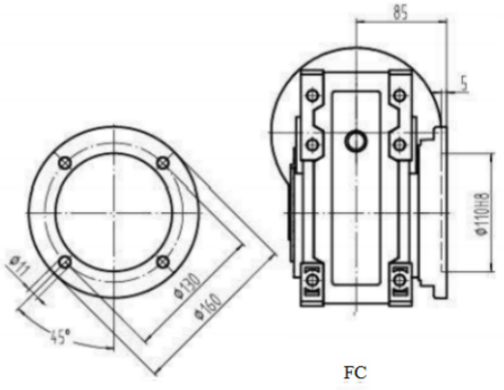




FB



FC

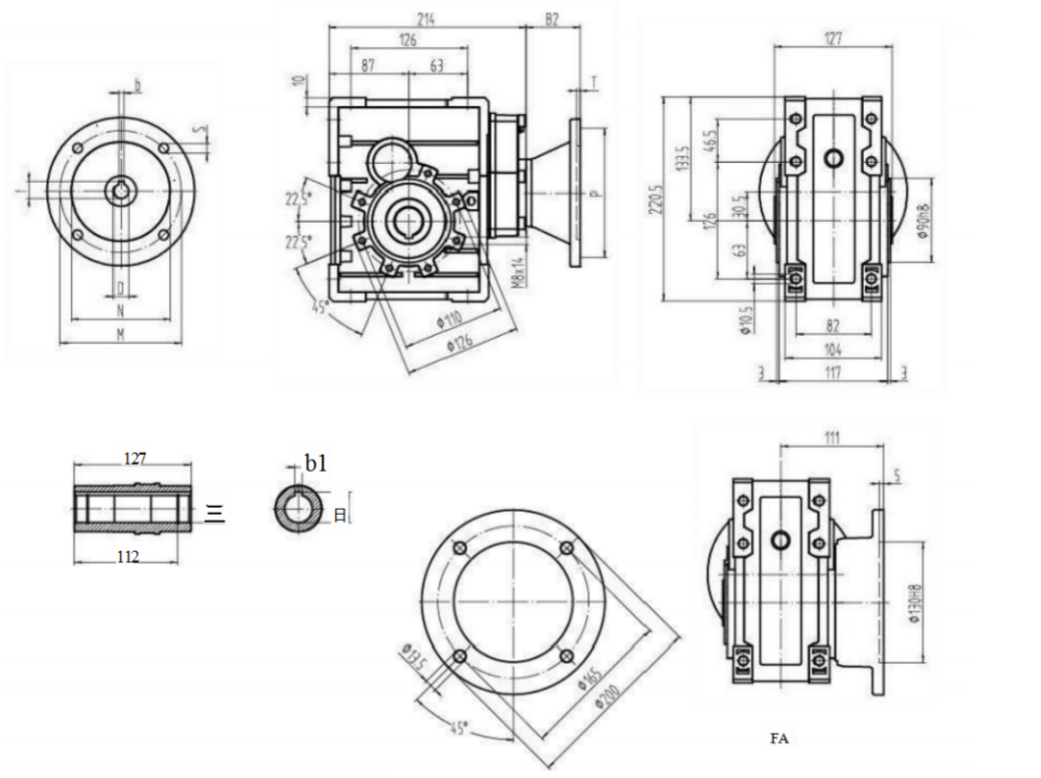
IEC	D	F	G	P	M	N	S	T	L
63B5	11	4	12.8	140	115	95	9	4	139
71B5	14	5	16.3	160	130	110	9	4	146
80B5	19	6	21.8	200	165	130	11	4	166
80B14	19	6	21.8	120	100	80	7	4	166
90B5	24	8	27.3	200	165	130	11	4	166
90B14	24	8	27.3	140	115	95	9	4	166
100/112B5	28	8	31.3	250	215	180	13.5	4.5	176
100/112B14	28	8	31.3	160	130	110	9	4.5	176

$D1_{H8}$	b1	t1
28	8	31.3
30*	8*	33.3*
35*	10*	38.3*

*非标产品，订单时请说明
*Only on request

NKB48C..(IEC)

输入/INPUT



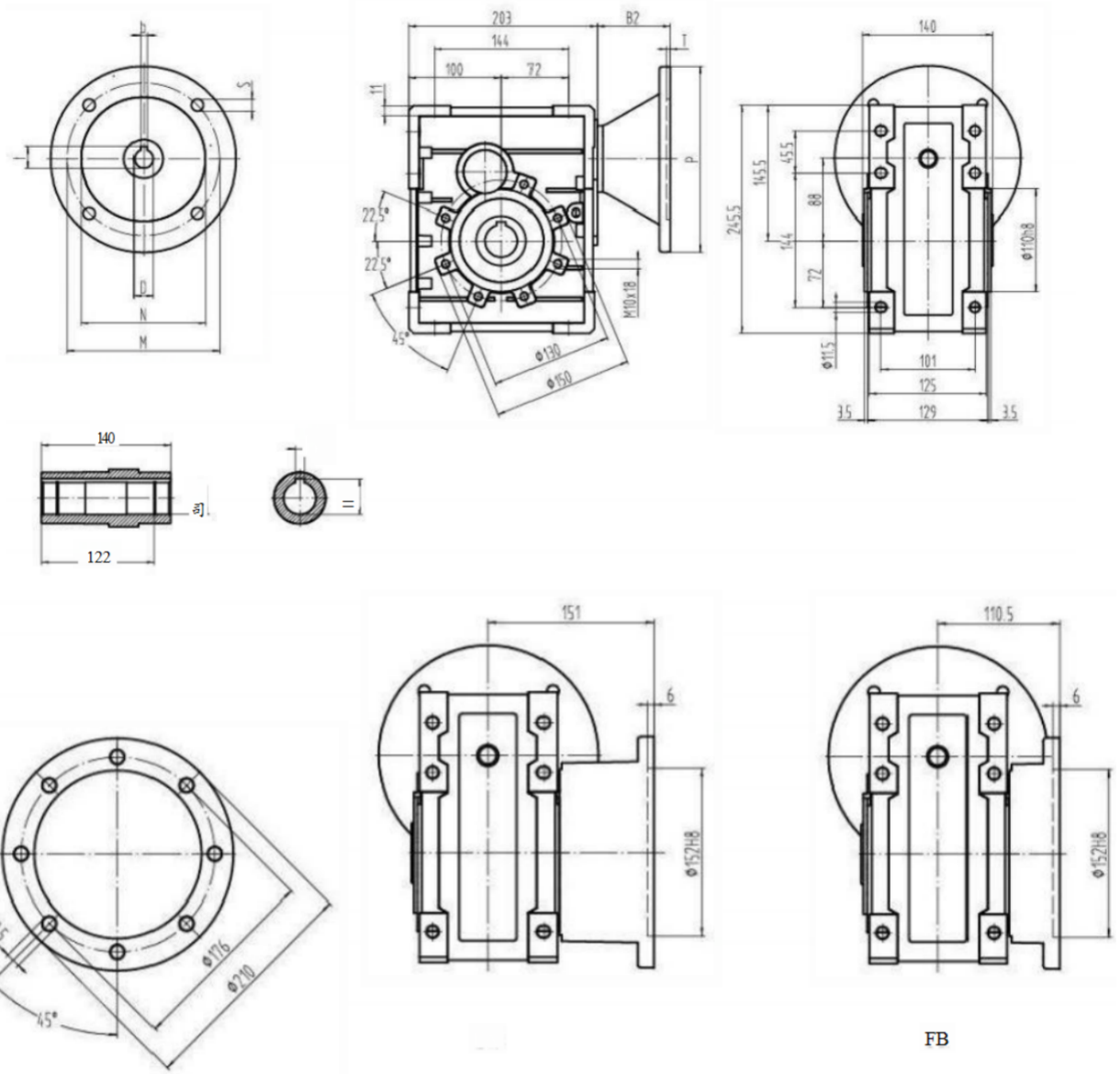
IEC	D	F	G	P	M	N	S	T	L
63B5	11	4	12.8	140	115	95	9	4	179
71B5	14	5	16.3	160	130	110	9	4	186
80B5	19	6	21.8	200	165	130	11	4	206
80B14	19	6	21.8	120	100	80	7	4	206
90B5	24	8	27.3	200	165	130	11	4	206
90B14	24	8	27.3	140	115	95	9	4	206
100/112B5	28	8	31.3	250	215	180	13.5	4.5	216
100/112B14	28	8	31.3	160	130	110	9	4.5	216

$D1_{H8}$	b1	t1
28	8	31.3
30*	8*	33.3*
35*	10*	38.3*

*非标产品，订单时请说明
*Only on request

NKB58B..(IEC)

输入/INPUT



FB

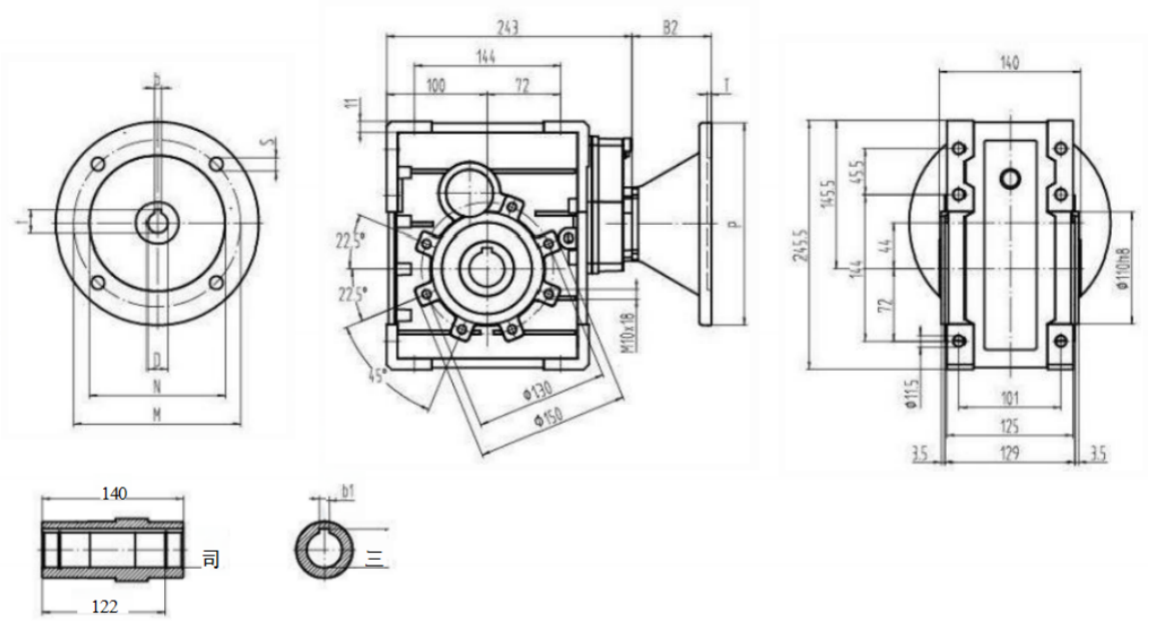
IEC	D	F	G	P	M	N	S	T	L
63B5	11	4	12.8	140	115	95	9	4	155
71B5	14	5	16.3	160	130	110	9	4	162
80B5	19	6	21.8	200	165	130	11	4	182
80B14	19	6	21.8	120	100	80	7	4	182
90B5	24	8	27.3	200	165	130	11	4	182
90B14	24	8	27.3	140	115	95	9	4	182
100/112B5	28	8	31.3	250	215	180	13.5	4.5	192
100/112B14	28	8	31.3	160	130	110	9	4.5	192

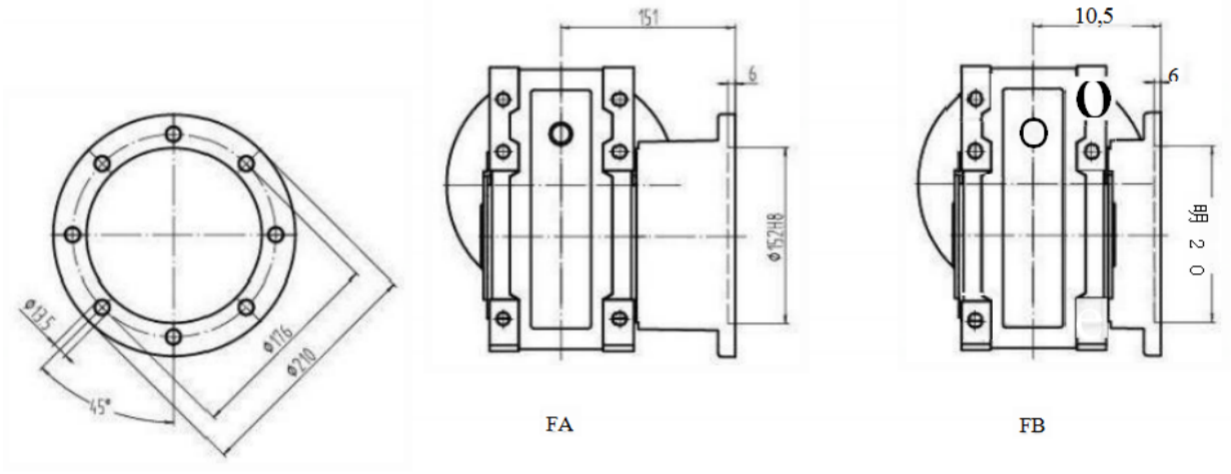
$D1_{H8}$	b1	t1
34	10	38.3
38*	10*	41.3*
40*	10*	43.3*

*非标产品，订单时请说明
*Only on request

NKB58C..(IEC)

输入/INPUT





FA FB

IEC	D	F	G	P	M	N	S	T	L
63B5	11	4	12.8	140	115	95	9	4	195
71B5	14	5	16.3	160	130	110	9	4	202
80B5	19	6	21.8	200	165	130	11	4	222
80B14	19	6	21.8	120	100	80	7	4	222
90B5	24	8	27.3	200	165	130	11	4	222
90B14	24	8	27.3	140	115	95	9	4	222
100/112B5	28	8	31.3	250	215	180	13.5	4.5	232
100/112B14	28	8	31.3	160	130	110	9	4.5	232

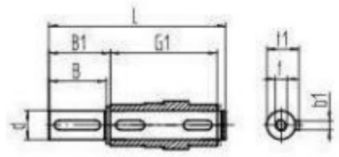
$D1_{H8}$	b1	t1
35	10	38.3
38*	10*	41.3*
40*	10*	43.3*

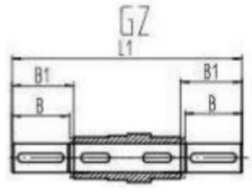
*非标产品，订单时请说明
*Only on request

8. 附件尺寸图表/ACCESSORIES OUTLINE DIMENSION SHEET

8.1 输出轴/output Shafts

IEC	dh6	B	B1	C1	L	L_1	f	b_1	t_1
NKM28	25	50	53.5	92	153	199	M10	8	28
NKM38	25	50	53.5	112	173	219	M10	8	28
NKM48	28	60	63.5	120	192	247	M10	8	31
NKM58	35	80	84.5	140	234	309	M12	10	38
NKB38	25	60	65	120	192	246.4	M8	8	28
NKB48-d28	28	60	65	127	199	255	M8	8	31
NKB48-d30	30	60	65	127	199	255	M10	8	33
NKB58	35	60	65	140	214	268	M12	10	38



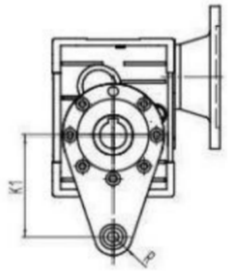


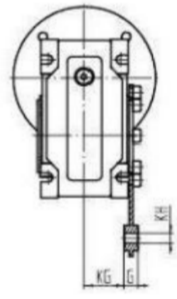
AZ

8.2 扭力臂/Torque Arm

8.2.1 NKM..扭力臂/Torque Arm

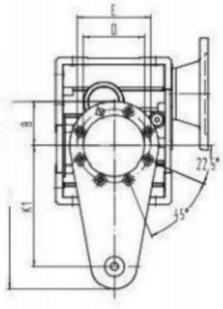
	K_1	G	KG	KH	R
NKM28	100	14	38.5	10	18
NKM38	150	14	49	10	18
NKM48	200	25	47.5	20	30
NKM58	200	25	57.5	20	30

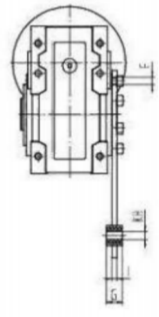




8.2.2 NKB...扭力臂/Torque Arm

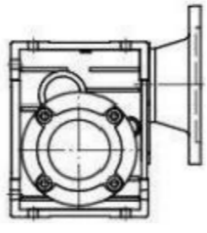
	K_1	B	C	D	E	F	G	KH	1
NKB38	150	55	233	75	90	9	20	10	6
NKB48	200	63	300	90	110	9	25	20	6
NKB58	200	80	318	110	130	11	25	20	6

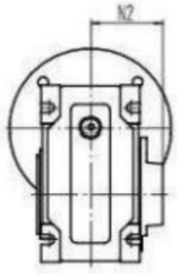




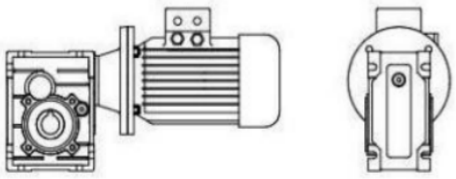
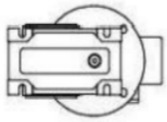
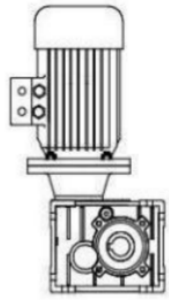
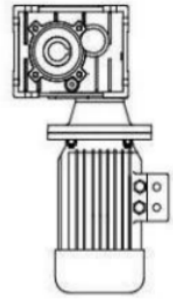
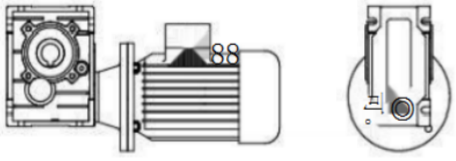
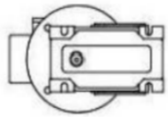
8.3 防力盖/Covev

	N2
NKM28	63
NKM38	73
NKM48	79
NKM58	94





9. 安装方位和接线盒位置/MOUNTING POSITION AND TERMINAL BOX ORIENTATION

B3	B6	V5	V6
			
B8	**B7**		
			

10. 润滑油添加量/Lubricantfill quantity

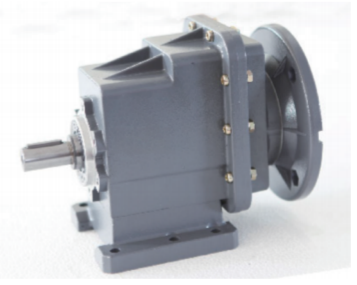
减速器型号 Gear units	加注量Fill quantity in liters 单位unit:升(L)					
	B3	B6	B7	B8	V5	V6
NKM28B	0.22	0.2	0.2	0.13	0.15	0.14
NKM28C	0.07	0.04	0.04	0.04	0.05	0.09
NKM38B	0.42	0.35	0.35	0.24	0.22	0.25
NKM38C	0.07	0.04	0.04	0.04	0.05	0.09
NKM48B	0.7	0.58	0.58	0.42	0.42	0.45
NKM48C	0.13	0.09	0.09	0.09	0.09	0.17
NKM58B	1.21	0.95	0.95	0.72	0.67	0.74
NKM58C	0.13	0.09	0.09	0.09	0.09	0.17
NKB38B	0.38	0.35	0.35	0.25	0.26	0.25
NKB38C	0.07	0.04	0.04	0.04	0.05	0.09
NKB48B	0.66	0.6	0.6	0.45	0.48	0.47
NKB48C	0.13	0.09	0.09	0.09	0.09	0.17
NKB58B	1.15	0.93	0.93	0.7	0.74	0.75
NKB58C	0.13	0.09	0.09	0.09	0.09	0.17

表格规定的加注量为参考值,准确值的变化与 传动比有关。NKM、NKB 系列减速器在出厂前已加注了长寿命的润滑油，可长期使用，一般不需要换油。

The fill quantity in the table is referenced, the exact valuevelating to the ratio.All NKM、NKB Series helical gear units are filled with life lubrication before delivery,do not need to change it in general.

NRC系列斜齿轮减速器
NRC Series helical geared units

NRC系列斜齿轮减速器
NRC Series helical geared units

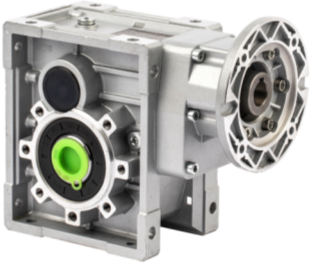


NMRV涡轮减速器
NMRV turbine reducer

PC/NMRV涡轮减速器
PC/NMRV turbine reduce

G3齿轮箱
G3 gearbox

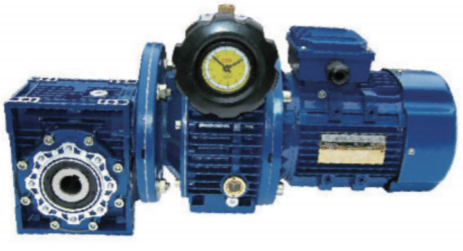
NKM系列双曲面齿轮箱
NKM series hyperbolic gearbox



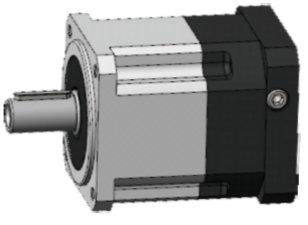
NBL无级变速器
NBL continuously variable transmission

NBL无级变速器
NBL continuously variable transmission

NBL配NMRV涡轮箱
NBL with NMRV turbine box



SAF/SAFR系列行星减速器
SAF/SAFR Series Planetary Gearboxes



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