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**GEAR UNITS**

HYPOID / WORM

— 传动篇 —



## 高效型准双曲面齿轮减速机 蜗轮蜗杆减速机

**HIGH EFFICIENCY HYPOID GEAR UNITS**  
WORM GEAR UNITS

### 动力传动专业制造商

**PROFESSIONAL MANUFACTURER OF POWER TRANSMISSION**

**设计理念: 遵循规律, 总是超越**

**DESIGN PHILOSOPHY: To follow the law, but always beyond.**

**经营理念: 为客户需求而设计, 为客户满意而执着**

**BUSINESS PHILOSOPHY: Design for customer demand, dedication for customer satisfaction**



## 蜗轮蜗杆减速机 NMRV WORM GEAR UNITS

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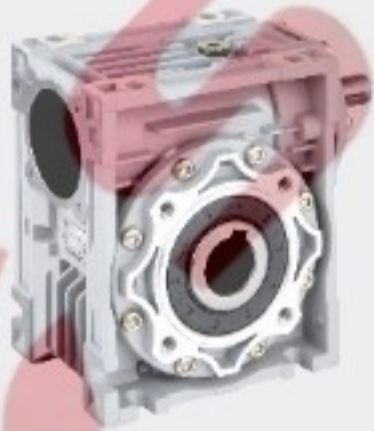
产品型式 / TYPE



NMRV(IEC)



NMRV(ST)

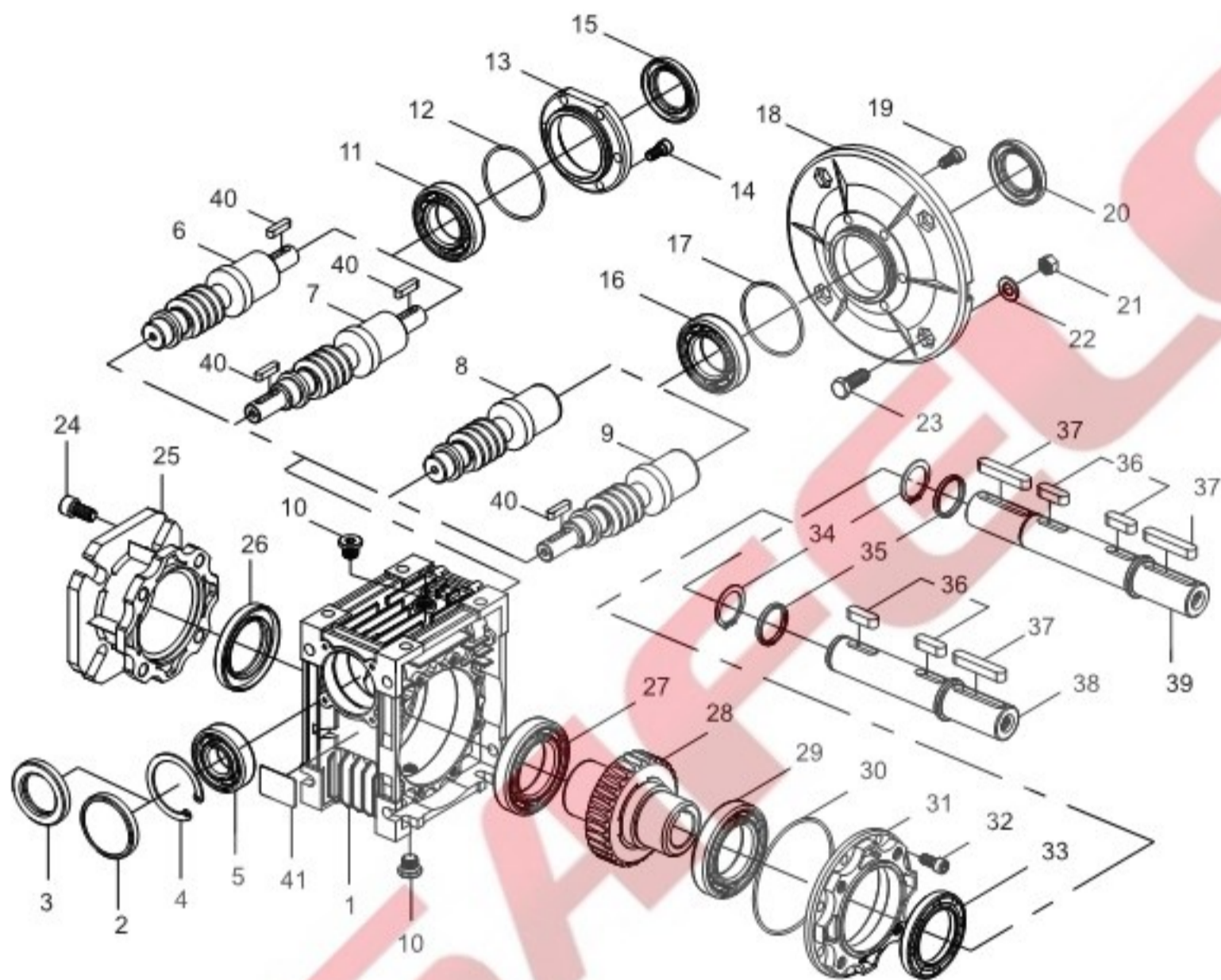


NRV



PCRV

## 结构分解图 / STRUCTURE DIAGRAM



1	箱体 / Cablint	22	垫圈 / Washer
2	油封盖 / Closing cap	23	外六角螺栓 / Six hexagon bolt
3	油封 / Oil seal	24	内六角螺钉 / Inner hex screw
4	孔用挡圈 / Hole-circlip	25	输出法兰 / Output flange
5	轴承 / Bearing	26	油封 / Oil seal
6	轴输入蜗杆 / Input shaft worm	27	轴承 / Bearing
7	双轴输入蜗杆 / Double input worm	28	蜗轮 / Worm gear
8	孔输入蜗杆 / Input hole worm	29	轴承 / Bearing
9	孔输入轴输入蜗杆 / Input shaft and hole worm	30	O型橡胶密封圈 / O-ring
10	油塞 / Oil plug	31	输出端盖 / Bearing support cover
11	轴承 / Bearing	32	内六角螺钉 / Inner hex screw
12	O型橡胶密封圈 / O-ring	33	油封 / Oil seal
13	轴承座 / Bearing block	34	轴用挡圈 / Shaft-circlip
14	内六角螺钉 / Inner hex screw	35	垫圈 / Washer
15	油封 / Oil seal	36	键 / Key
16	轴承 / Bearing	37	键 / Key
17	O型橡胶密封圈 / O-ring	38	单向输出轴 / Single output shaft
18	输入法兰 / Input flange	39	双向输出轴 / Double output shaft
19	内六角螺钉 / Inner hex screw	40	键 / Key
20	油封 / Oil seal	41	铭牌 / Nameplate
21	外六角螺母 / Six hexagon nut		

## 产品概述 / SUMMARIZE

### 结构特点 / Structure Features

1. 优质铝合金铸造箱体，适应全方位的万能安装配置；
2. 充分的冷却筋条，使机体具有优良的热传导性能；
3. 从025-150共10种机座规格；传递功率范围从60W-15kW；
4. 速比范围大，每个机座具有从5:1到100:1的12种减速比；
5. 精密磨削加工的硬齿面传动蜗杆，效率高、输出扭矩大；
6. 低噪声平稳运转，能适合在恶劣环境中长期连续工作；
7. 重量轻，机械强度高；
8. 模块化组合PCR及DRV将NMRV减速机的传动比拓展至：i=5--5000

1. high quality die casting aluminum alloy housing ,suitable for universal mounting .
2. Heat sink design for cooling provides great surface area and higher thermal capacity than the casting iron housings
3. 025 to 150,with power scope from 60W to 15kW.
4. Larger speed ratio range .each single frame size has 12 ratios from 5:1 to 100:1
5. Hardened worm with fine grinding has zhe features of higher efficiency and big output torque .
6. Low noise and stably running ,can adapt long term work condition in terrible environments
7. Light weight ,high mechanical strength .
8. Modularization combination PCR and DRV extend the ration of NMRV reducers from i=5:1 to 5000:1.

### 主要材料 / Main Materials

1. 外壳：铝合金（机座：025-090），铸铁（机座：110-150）；
2. 蜗杆：20Cr，渗碳淬火，齿面硬度58-62HRC，精磨后保持渗碳层厚度0.3-0.5mm；
3. 蜗轮：耐磨镍青铜。

1. Housing: die-cast aluminum alloy(frame size 025 to 090);cast iron(frame size:110 to 150);
2. Worm: 20Cr, carbonize&quencher heat treatment make the hardness of gear's surface up to 58-62HRC,retain carburized layer's thickness between 0.3 and 0.5mm after accurate grinding.
3. Worm wheel:wearable nickel bronze alloy.

### 表面涂装 / Surface Painting

铝合金外壳：

- 1.先抛丸处理，再经特种防腐处理，保持银白金属感，并耐汽油、二甲苯等有机溶剂的腐蚀；
- 2.磷化处理后，再喷RAL5010蓝色或RAL7035浅灰色涂料。

铸铁外壳：先涂红色防锈漆，后喷涂RAL5010蓝色或RAL7035浅灰色涂料。

Aluminum alloy housing:

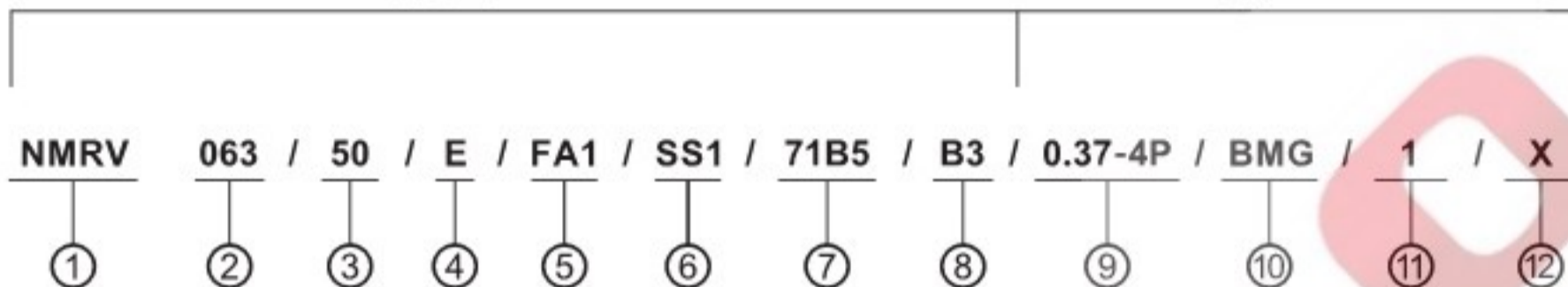
1. Shot blasting and special antiseptic treat-ment on the aluminum alloy surface.
2. After phosphating, paint with RAL5010 blue or RAL7035 grey paint.

Cast iron housing: First paint with red antirust paint, then paint white RAL5010 blue or RAL7035 grey paint.

## 型号说明 / MODEL ILLUMINATE

减速机 / Gear unit

电机 / Motors



NO.	说明	Description
1	减速机系列代号: 1.NMRV:孔输入带输入法兰 2.NRV: 轴输入不带输入法兰 3.DRV:双蜗轮蜗杆减速机 (NMRV+NMRV/NRV+NMRV) 4.PCRV:前置齿轮蜗轮蜗杆减速机	Code for gear units series: 1. NMRV:Hole input with flange 2. NRV: Shaft input without flange 3. DRV:Combination worm gear units ( NMRV+NMRV/NRV+NMRV) 4. PCRV:Worm geared motors with pre-stage helical unit
2	蜗轮蜗杆减速机中心距 (规格) 1.NMRV:025,030,040,050,063,075,090,110,130,150 2.DRV:030/063..... 3.PCRV:071/063...	Central distance of worm gear units(spec) 1.NMRV:025,030,040,050,063,075,090,110,130,150 2.DRV:030/063..... 3.PCRV:071/063
3	减速机速比 1.NMRV:i=5,7.5,10,15,20,25,30,40,50,60,80,100 2.DRV:i=100.....5000 3.PCRV:i=NMRV	Speed ratio of reducer 1.NMRV:i=5,7.5,10,15,20,25,30,40,50,60,80,100 2.DRV:i=100.....5000 3.PCRV:i=NMRV
4	无代号表示不带蜗杆同向尾出轴 E: 带蜗杆同向尾出轴	1.No mark means single extension worm shaft 2.E:Double extension worm shaft
5	1.无代号表示不带输出法兰 2.FA,FB,FC,FD,FE(1/2):输出法兰代号和位置	1.No mark means without output flange 2.FA, FB, FC, FD, FE(1/2):output Flange and position
6	1.无代号表示孔输出 2.SS(1/2):单向输出轴和位置 3.DS: 双向输出轴	1.No mark means hole output 2.SS(1/2):Single output shaft and position 3.DS:Double output shaft
7	输入法兰规格形式 (不带电机时) 1.71B5: IEC输入法兰及规格代号 2. 56C: NEMA输入法兰及规格代号 3. ST80: 伺服电机输入法兰规格代号	Normalized from of input flange (without motor) 1.71B5:IEC input flange code 2. 56C: NEMA input flange code 3. ST80 : Servo motor input flange code
8	安装方位代号	Installation position code
9	1.无代号表示不带电机 2.0.37-4P: 电机功率、级数 3.80ST-M01330:伺服电机型号	1. No mark means without motor 1.0.37-4P: Model motors(poles of power) 2.80ST-M01330: Servo motor type
10	1.无代号表示不带制动器 2.BMG:制动器	1.No mark means without brake 2.BMG:brake
11	电机接线盒位置, 默认位置1可以不写	Position of motor terminal box default position 1 not to write out is ok
12	电机进线位置, 默认位置X 可以不写	Coil position for motor , default position X not to write out is ok

注: 订单时请说明是否带电机, 一般按不带电机供应。

NOTE: When ordering, you should show whether the reducers are equipped with motors, otherwise reducers aren't supplied with motors.

示例Example: **NMRV063 / 60 / FA2 / 80B5**

## 选型相关参数 / RELEVANT PARAMETER

### 功率 P

$$P_1 = P_2 / \eta \text{ (kW)}$$

$$P_{1n} \geq P_1 \cdot fs \text{ (kW)}$$

$P_1$	输入功率	$P_2$	输出功率
$P_{1n}$	输入电机额定功率	$fs$	服务系数
$\eta$	传动效率		

在NMRV蜗轮蜗杆减速机选型表中，这个功率 $P_{1n}$ 是指在输入转速为 $n_1$ 并且对应的服务系数 $fs=1$ 时，减速机的安全输入功率，单位kW。

传动效率 $\eta$ 值是减速机经过足够长时间的跑合后计算得到的。跑合后在动转过程中，表面温度下降并最终稳定。需要特别强调的是样本中给定的额定转矩值 $M_{2n}$ 应该考虑到传动效率 $\eta$ 的关系。

### POWER P

$$P_1 = P_2 / \eta \text{ (kW)}$$

$$P_{1n} \geq P_1 \cdot fs \text{ (kW)}$$

$P_1$	Input power	$P_2$	Output power
$P_{1n}$	Rated input motor power	$fs$	Service factor
$\eta$	Transmission efficiency		

The parameter can be found in the NMRV gear-box rating charts and represents the kW that can be safely transmitted to the gearbox, based on input speed  $n_1$  and service factor  $fs=1$ .

Values of  $\eta$  are calculated for gearboxes after a sufficiently in operation reduces and finally stabilizes. It may be worth high lighting that values of rated torque  $M_{2n}$  given in the catalogue take the transmission efficiency  $\eta$  into consideration.

### 转速 n / Rotation speed n

$n_1$  减速机输入转速  
 $n_2$  减速机输出转速  
若是减速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。

$n_1$  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.

### 传动比 i / Transmission ratio i

$$i = n_1 / n_2$$

### 扭矩 M / Torque m

$$M_2 = 9550 \cdot P_1 \cdot \eta / n_2 \text{ (Nm)}$$

$$M_{2n} \geq M_2 \cdot fs \text{ (Nm)}$$

$M_2$	输出扭矩
$M_{2n}$	额定输出扭矩
$P_1$	输入功率
$\eta$	传动效率
$fs$	服务系数

$$M_2 = 9550 \cdot P_1 \cdot \eta / n_2 \text{ (Nm)}$$

$$M_{2n} \geq M_2 \cdot fs \text{ (Nm)}$$

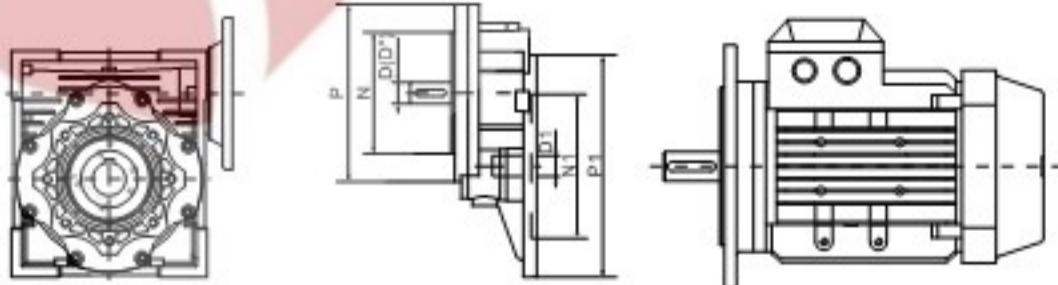
$M_2$	Output torque
$M_{2n}$	Rated output torque
$P_1$	Input power
$\eta$	Transmission efficiency
$fs$	Service factor



# PCRVR减速机选型表 / GEAR UNIT SELECTION TABLES

PCRVR减速机组合表/possible combinations

NMRV	IEC	PC063		PC071		PC080			PC090		
		105/11	105/14	120/14	120/19	160/19	160/24	160/28	160/19	160/24	160/28
	i	i=2.93	i=2.93	i=2.94	i=2.94	i=3	i=3	i=3	i=2.45	i=2.45	i=2.45
NMRV040	25										
	30										
	40										
	50										
	60										
	80										
NMRV050	100										
	25										
	30										
	40										
	50										
	60										
NMRV063	80										
	100										
	25										
	30										
	40										
	50										
NMRV075	60										
	80										
	100										
	25										
	30										
	40										
NMRV090	50										
	60										
	80										
	100										
	25										
	30										
NMRV110	40										
	50										
	60										
	80										
	100										
	25										
NMRV130	30										
	40										
	50										
	60										
	80										
	100										



PC	P	N	D	D*	P1	N1	D1
063	105(71B14)	70	11	14	140(63B5)	95	11
071	120(80B14)	80	14	19	160(71B5)	110	14
080	160(100B14)	110	19	24	200(80B5)	130	19
				28			
090	160(100B14)	110	24	19	200(90B5)	130	24
				28			

\*非标产品，订单时请说明  
\*Only on request.



## PCRVR性能参数/PERFORMANCE PARAMETER

PCRVR性能参数 / Performance parameter

$P_{1n}$ (kW)	$n_2$ (r/min)	$i$	$M_{2n}$ (Nm)	$F_{r2}$ (N)	$f_s$		
0.12	18.7	75	42	2833	1.2	PCRVR063/040	6314
	15.6	90	46	3011	1.2		
	11.7	120	57	3314	0.9		
	9.3	150	66	3490	0.7		
	7.8	180	74	3490	0.6		
	9.3	150	68	4840	1.3	PCRVR063/050	6314
	7.8	180	75	4840	1.1		
	5.8	240	88	4840	0.8		
	4.7	300	98	4840	0.7		
	5.8	240	92	6270	1.5	PCRVR063/063	6314
	4.7	300	103	6270	1.2		
	0.18	18.7	75	64	2833	0.8	PCRVR063/040
15.6		90	70	3011	0.8		
11.7		120	85	3314	0.6		
18.7		75	64	3889	1.4	PCRVR063/050	6324
15.6		90	71	4132	1.5		
11.7		120	87	4548	1.1		
9.3		150	101	4840	0.9		
7.8		180	133	4840	0.7		
5.8		240	133	4840	0.6		
9.3		150	103	6270	1.7	PCRVR063/063	6324
7.8		180	117	6270	1.4		
5.8		240	139	6270	1.0		
4.7		300	155	6270	0.8		
12.0		75	95	4506	1.2	PCRVR071/050	7116
10.0		90	105	4788	1.4		
7.5		120	126	4840	1.0		
12.0		75	97	5889	2.2	PCRVR071/063	7116
10.0		90	107	6259	2.4		
7.5		120	131	6270	1.8		
6.0		150	152	6270	1.4		
5.0		180	168	6270	1.2		
3.8		240	197	6270	0.9		
3.0		300	218	6270	0.7		
5.0		180	179	7380	1.7		
3.8	240	211	7380	1.2			
3.0	300	235	7380	1.0	PCRVR071/075	7116	
0.25	18.7	75	88	3889	1.0	PCRVR071/050	7114
	15.6	90	98	4132	1.1		
	11.7	120	121	4548	0.8		
	18.7	75	91	5083	1.8	PCRVR071/063	7114
	15.6	90	100	5401	2.0		
	11.7	120	125	5945	1.5		
	9.3	150	143	6270	1.2		
	7.8	180	163	6270	1.0	PCRVR071/063	7114
	5.8	240	192	6270	0.7		
	4.7	300	215	6270	0.6		


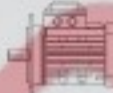
PCR V性能参数/PERFORMANCE PARAMETER

PCR V性能参数 / Performance parameter

$P_{1n}$ (kW)	$n_2$ (r/min)	$i$	$M_{2n}$ (Nm)	$F_{r2}$ (N)	$f_s$		
0.25	12.0	75	135	5889	1.6	PCR V071/063	7126
	10	90	148	6259	1.8		
	7.5	120	181	6270	1.3	PCR V071/063	7126
	6.0	150	211	6270	1.0		
	9.3	150	150	7380	1.7	PCR V071/075	7114
	7.8	180	180	7380	1.4		
	5.8	240	240	7380	1.1		
	4.7	300	300	7380	0.9		
	12.0	75	139	6952	2.4	PCR V071/075	7126
	10.0	90	155	7380	2.5		
	7.5	120	191	7380	1.9		
	6.0	150	219	7380	1.5		
	5.0	180	248	7380	1.2		
	5.0	180	263	8180	1.9	PCR V071/090	7126
3.8	240	318	8180	1.4			
3.0	300	358	8180	1.1			
0.37	18.7	75	134	5083	1.2	PCR V071/063	7124
	15.6	90	148	5401	1.4		
	11.7	120	185	5945	1.0		
	9.3	150	212	6270	0.8		
	18.7	75	138	6000	1.8	PCR V071/075	7124
	15.6	90	154	6375	1.9		
	11.7	120	191	7017	1.5		
	9.3	150	223	7380	1.1		
	7.8	180	254	7380	0.9		
	12.0	75	206	6952	1.6	PCR V080/075	8016
	10.0	90	230	7380	1.7		
	7.5	120	283	7380	1.3		
	6.0	150	324	7380	1.0		
	7.8	180	268	8180	1.5	PCR V071/090	7124
	5.8	240	321	8180	1.1		
	4.7	300	371	8180	0.9		
6.0	150	347	8180	1.6	PCR V080/090	8016	
5.0	180	389	8180	1.3			
3.8	240	471	8180	1.0			
3.8	3.8	509	10320	1.6			
3.0	3.0	577	10320	1.3	PCR V080/110	8016	
0.55	18.7	75	205	6000	1.2	PCR V080/075	8014
	15.6	90	230	6375	1.3		
	11.7	120	284	7017	1.0		
	9.3	150	332	7380	0.8		
	12.0	75	306	6952	1.1	PCR V080/075	8026
	10.0	90	341	7380	1.1		
	15.6	90	240	7054	2.3	PCR V080/090	8014
	11.7	120	297	7764	1.6		
	9.3	150	355	8180	1.3		
	7.8	180	398	8180	1.0		



## PCR性能参数/PERFORMANCE PARAMETER

PCR性能参数 / Performance parameter

P <sub>1n</sub> (kW)	n <sub>2</sub> (r/min)	i	M <sub>2n</sub> (Nm)	F <sub>r2</sub> (N)	fs			
0.55	10.0	90	357	8174	2.0	PCR080/090	8026	
	7.5	120	441	8180	1.4			
	6.0	150	516	8180	1.1			
	5.0	180	578	8180	0.9			
	7.8	180	425	10320	1.8	PCR080/110	8014	
	5.8	240	513	10320	1.3			
	4.7	300	597	10320	1.0			
	7.5	120	462	10320	2.6	PCR080/110	8026	
	6.0	150	552	10320	2.0			
	5.0	180	620	10320	1.6			
	3.8	240	756	10320	1.1			
	3.8	240	756	13500	1.6	PCR080/130	8026	
3.0	300	858	13500	1.3				
0.75	18.7	75	280	6000	0.9	PCR080/075	8024	
	15.6	90	313	6375	1.0			
	15.6	90	327	7054	1.7	PCR080/090	8024	
	11.7	120	405	7764	1.2			
	9.3	150	483	8180	0.9			
	7.8	180	543	8180	0.7			
	11.7	120	430	9811	2.2			
	9.3	150	506	10320	1.7	PCR080/110	8024	
	7.8	180	580	10320	1.3			
	5.8	240	700	10320	0.9			
	12.4	73	393	9614	3.2			
	9.3	96.8	508	10320	2.3	PCR090/110	9056	
	7.4	121	607	10320	1.8			
	6.2	145.2	682	10320	1.5			
	4.6	193.6	832	10320	1.0			
	5.8	240	712	13500	1.4			
	4.7	300	813	13500	1.1			
	12.4	73	399	12575	4.4	PCR090/130	9056	
9.3	96.8	508	13500	3.2				
7.4	121	607	13500	2.6				
6.2	145.2	682	13500	2.1				
4.6	193.6	832	13500	1.5				
3.7	242	944	13500	1.2				
12.4	73	576	9614	2.2	PCR090/110			90L6
9.3	96.8	746	10320	1.6				
7.4	121	890	10320	1.2				
6.2	145.2	1000	10320	1.0				
19.3	73	392	8298	2.5	PCR090/110	90S4		
14.5	96.8	508	9133	1.8				
11.6	121	599	9838	1.5	PCR090/110	90S4		
9.6	145.2	686	10320	1.1				
7.2	193.6	828	10320	0.8				
12.4	73	585	12575	3.0				
9.3	96.8	746	13500	2.2	PCR090/130	90L6		

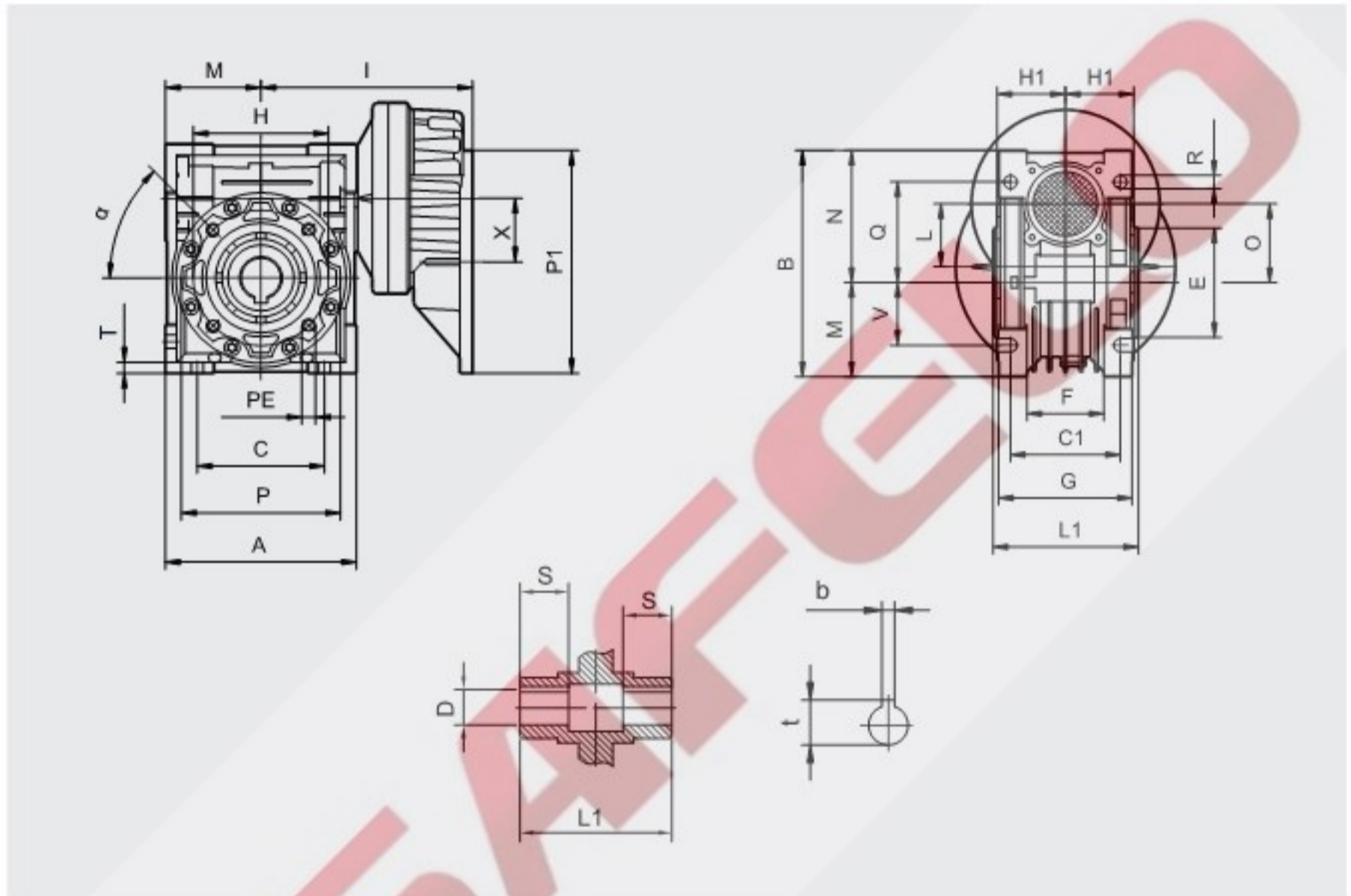
## PCR V性能参数/PERFORMANCE PARAMETER

PCR V性能参数 / Performance parameter

$P_{1n}$ (kW)	$n_2$ (r/min)	$i$	$M_{2n}$ (Nm)	$F_{r2}$ (N)	$f_s$				
1.1	7.4	121	890	13500	1.7	PCR V090/130	90L6		
	6.2	145.2	1000	13500	1.4				
	4.6	193.6	1220	13500	1.0				
	19.3	73	398	10853	3.5				
	14.5	96.8	508	11945	2.6				
	11.6	121	608	12868	2.0				
	9.6	145.2	686	13500	1.6				
	7.2	193.6	843	13500	1.2				
5.8	242	962	13500	0.9					
1.5	19.3	73	535	8298	1.9	PCR V090/110	90L4		
	14.5	96.8	693	9133	1.3				
	11.6	121	817	9838	1.1				
	9.6	145.2	936	10320	0.8				
	19.3	73	542	10853	2.6				
	14.5	96.8	693	11945	1.9				
	11.6	121	830	12868	1.5				
	9.6	145.2	936	13500	1.1				
7.2	194	1149	13500	0.8					
2.2	38.6	73	398	6586	2.1	PCR V090/110	90L2		
	28.9	96.8	516	7249	1.5				
	23.1	121	617	7809	1.2				
	38.6	73	409	8614	2.9				
	28.9	96.8	545	9481	2.0				
	23.1	121	654	10213	1.6				
	19.3	145.2	752	10853	1.3				
									PCR V090/130

PCRV外形尺寸图表 / OUTLINE DIMENSION SHEET

PCRV外形尺寸 / PCRV Outline Dimension



PCRV	A	B	C	C1	D(H7)	E(h8)	F	G	H	H1	I	L	L1	M	N	O	P	P1	X
063/040	100	121.5	70	60	18(19)	60	43	71	75	36.5	117	40	78	50	71.5	40	87	140	43
063/050	120	144	80	70	25(24)	70	49	85	85	43.5	127	40	92	60	84	50	100	140	43
063/063	144	174	100	85	25(28)	80	67	103	95	53	142	40	112	72	102	63	110	140	43
071/050	120	144	80	70	25(24)	70	49	85	85	43.5	137	50	92	60	84	50	100	160	54
071/063	144	174	100	85	25(28)	80	67	103	95	53	152	50	112	72	102	63	110	160	54
071/075	172	205	120	90	28(35)	95	72	112	115	57	169.5	50	120	86	119	75	140	160	54
071/090	206	238	140	100	35(38)	110	74	130	130	67	186.6	50	140	103	135	90	160	160	54
080/075	172	205	120	90	28(35)	95	72	112	115	57	186.5	63	120	86	119	75	140	200	66
080/090	206	238	140	100	35(38)	110	74	130	130	67	203.5	63	140	103	135	90	160	200	66
080(090)/110	255	295	170	115	42	130	-	144	165	74	234	63	155	127.5	167.5	110	200	200	66
080(090)/130	293	335	200	120	45	180	-	155	215	81	253	63	170	147.5	187.5	130	250	200	66

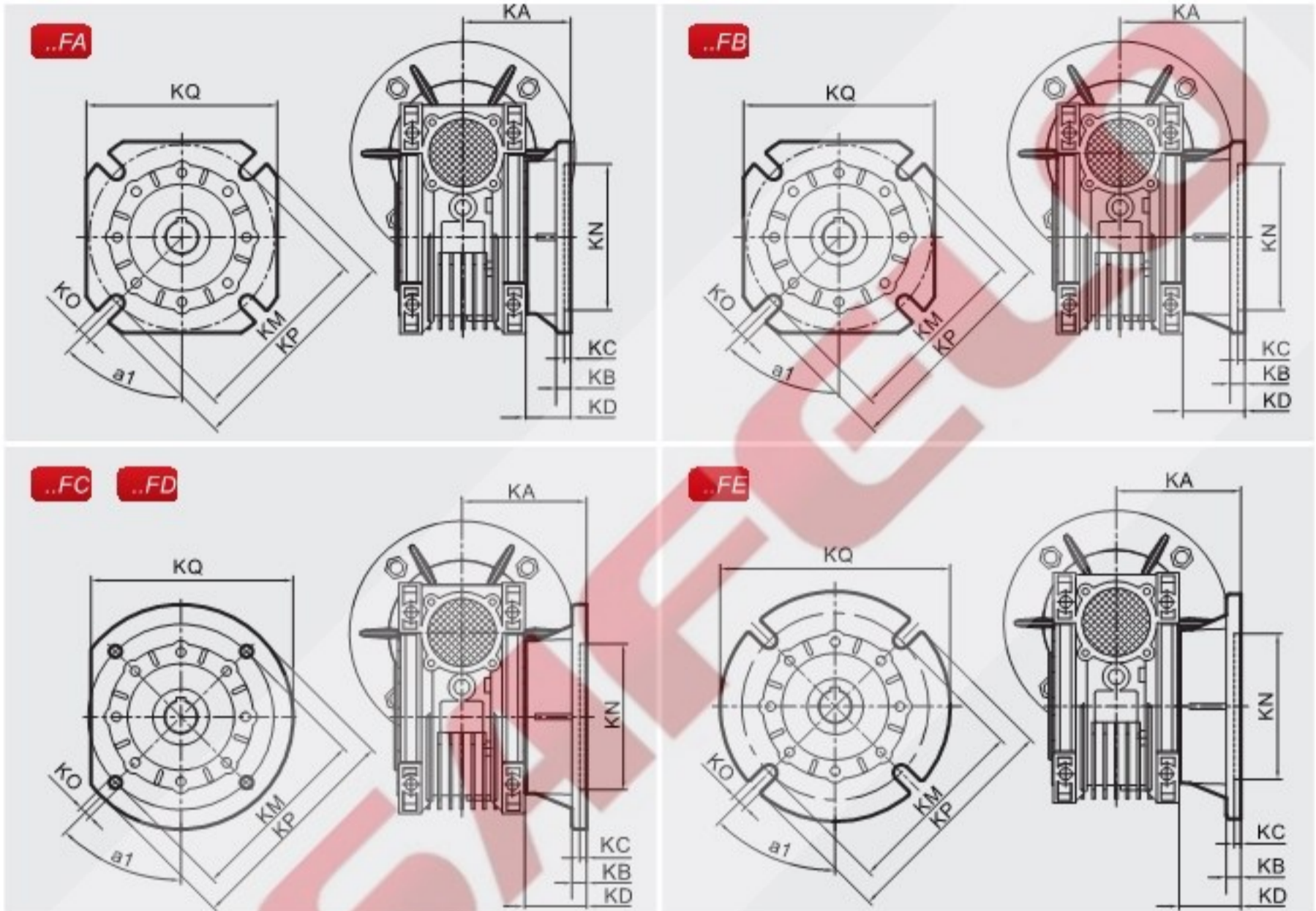
PCRV	Q	R	S	T	V	PE	b	t	$\alpha$	Kg
063/040	55	6.5	26	6.5	35	M6x8(n=4)	6	20.8(21.8)	45°	3.9
063/050	64	8.5	30	7	40	M8x10(n=4)	8	28.3(27.3)	45°	5.2
063/063	80	8.5	36	8	50	M8x14(n=8)	8	28.3(31.3)	45°	7.9
071/050	64	8.5	30	7	40	M8x10(n=4)	8	28.3(27.3)	45°	5.8
071/063	80	8.5	36	8	50	M8x14(n=8)	8	28.3(31.3)	45°	8.5
071/075	93	11	40	10	60	M8x14(n=8)	8	31.3(38.3)	45°	11.3
071/090	102	13	45	11	70	M10x18(n=8)	10	38.3(41.3)	45°	15.3
080/075	93	11	40	10	60	M8x14(n=8)	8(10)	31.3(38.3)	45°	13.1
080/090	102	13	45	11	70	M10x18(n=8)	10	38.3(41.3)	45°	17.2
080(090)/110	125	14	50	14	85	M10x18(n=8)	12	45.3	45°	44.5
080(090)/130	140	16	60	15	100	M12x21(n=8)	14	48.8	45°	57.8

注：重量 (Kg) 不包含电机的重量。

NOTE: Weight (Kg) without the weight of motor.

NMRV连接尺寸图表 / CONNECTING DIMENSION SHEET

NMRV输出法兰尺寸图 / NMRV Output Flange Dimension



NMRV	FA									
	a1	KA	KB	KC	KD	KM	KN <sub>is</sub>	KO	KP	KQ
030	45°	54.5	6	4	25.5	68	50	6.5(n=4)	80	70
040	45°	67	7	4	31.5	75	60	9(n=4)	110	95
050	45°	90	9	5	46.5	85	70	11(n=4)	125	110
063	45°	82	10	6	29	150	115	11(n=4)	180	142
075	45°	111	13	6	54	165	130	14(n=4)	200	170
090	45°	111	13	6	44	175	152	14(n=4)	210	200
110	45°	139	15	6	65	230	170	14(n=8)	280	260
130	45°	140	15	6	71	255	180	16(n=8)	320	290
150	22.5°	155	15	6	59	255	180	16(n=8)	320	290

NMRV	FB									
	a1	KA	KB	KC	KD	KM	KN <sub>is</sub>	KO	KP	KQ
030	-	-	-	-	-	-	-	-	-	-
040	45°	97	7	4	61.5	75	60	9(n=4)	110	95
050	45°	120	9	5	76.5	85	70	11(n=4)	125	110
063	45°	112	10	6	59	150	115	11(n=4)	180	142
075	45°	90	13	6	33	130	110	11(n=4)	160	-
090	45°	122	18	6	55	215	180	14(n=4)	250	-
110	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	-	-	-	-
150	-	-	-	-	-	-	-	-	-	-

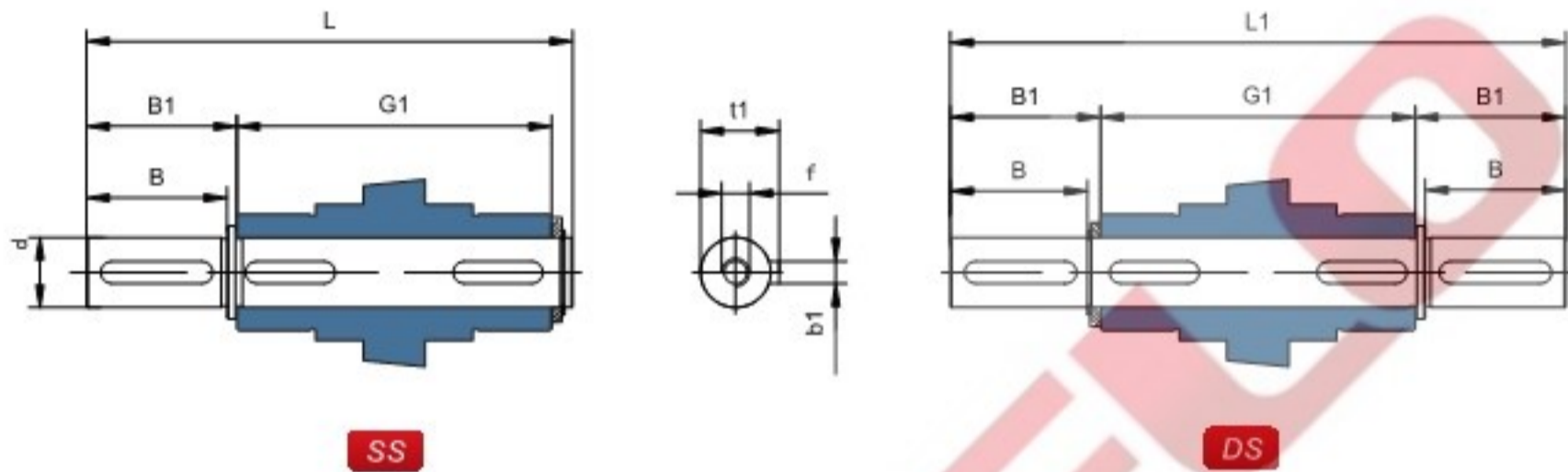
NMRV	FC									
	a1	KA	KB	KC	KD	KM	KN <sub>is</sub>	KO	KP	KQ
040	45°	80	9	5	43.5	115	95	9.5(n=4)	140	-
050	45°	89	10	5	45.5	130	110	9.5(n=4)	160	-
063	45°	98	10	5	45	165	130	11(n=4)	200	-
090	45°	110	17	6	43	165	130	11(n=4)	200	-

NMRV	FD									
	a1	KA	KB	KC	KD	KM	KN <sub>is</sub>	KO	KP	KQ
040	45°	58	12	5	21.5	100	80	9(n=4)	120	-
050	45°	72	14.5	5	28.5	115	95	11(n=4)	140	-
063	45°	107	10	5	51.5	165	130	11(n=4)	200	-
090	45°	151	13	6	84	175	152	14(n=4)	210	-

NMRV	FE									
	a1	KA	KB	KC	KD	KM	KN <sub>is</sub>	KO	KP	KQ
040	-	-	-	-	-	-	-	-	-	-
050	-	-	-	-	-	-	-	-	-	-
063	45°	80.5	16.5	5	27.5	130	110	11(n=4)	160	-
090	-	-	-	-	-	-	-	-	-	-

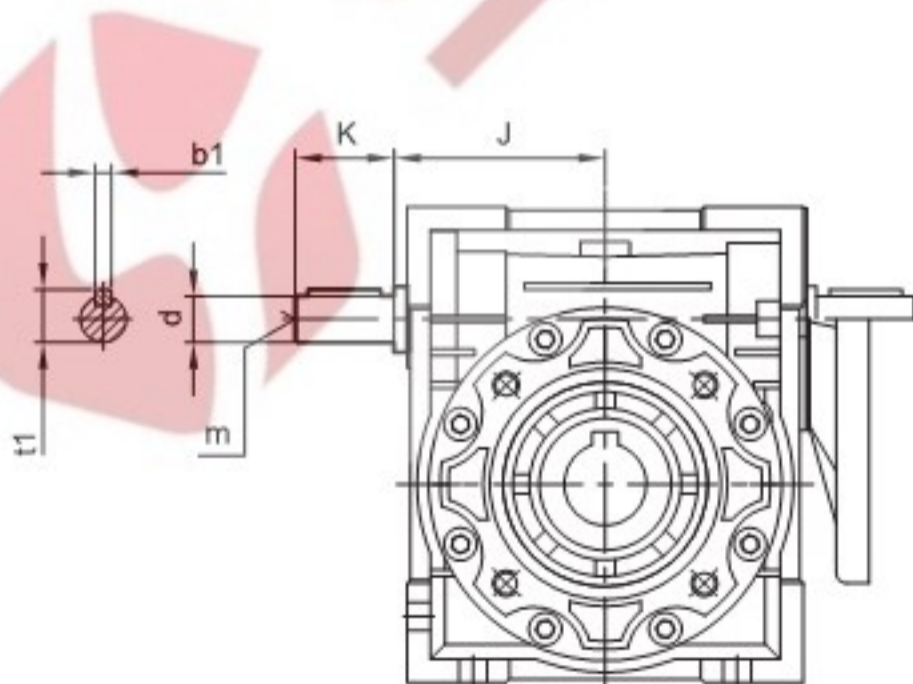
附件尺寸图表 / ACCESSORIES OUTLINE DIMENSION SHEET

输出轴 / Output Shafts



NMRV	$d_{h6}$	B	B1	G1	L	L1	f	b1	t1
025	11	23	25.5	50	81	101	-	4	12.5
030	14	30	32.5	63	102	128	M6*17	5	16
040	18	40	43	78	128	164	M6*17	6	20.5
050	25	50	53.5	92	153	199	M10*27	8	28
063	25	50	53.5	112	173	219	M10*27	8	28
075	28	60	63.5	120	192	247	M10*27	8	31
090	35	80	84.5	140	234	309	M12*34	10	38
110	42	80	84.5	155	249	324	M16*42	12	45
130	45	80	85	170	265	340	M16*42	14	48.5
150	50	82	87	200	297	374	M16*42	14	53.5

蜗杆尾出轴 (E) / Extension worm shaft(E)

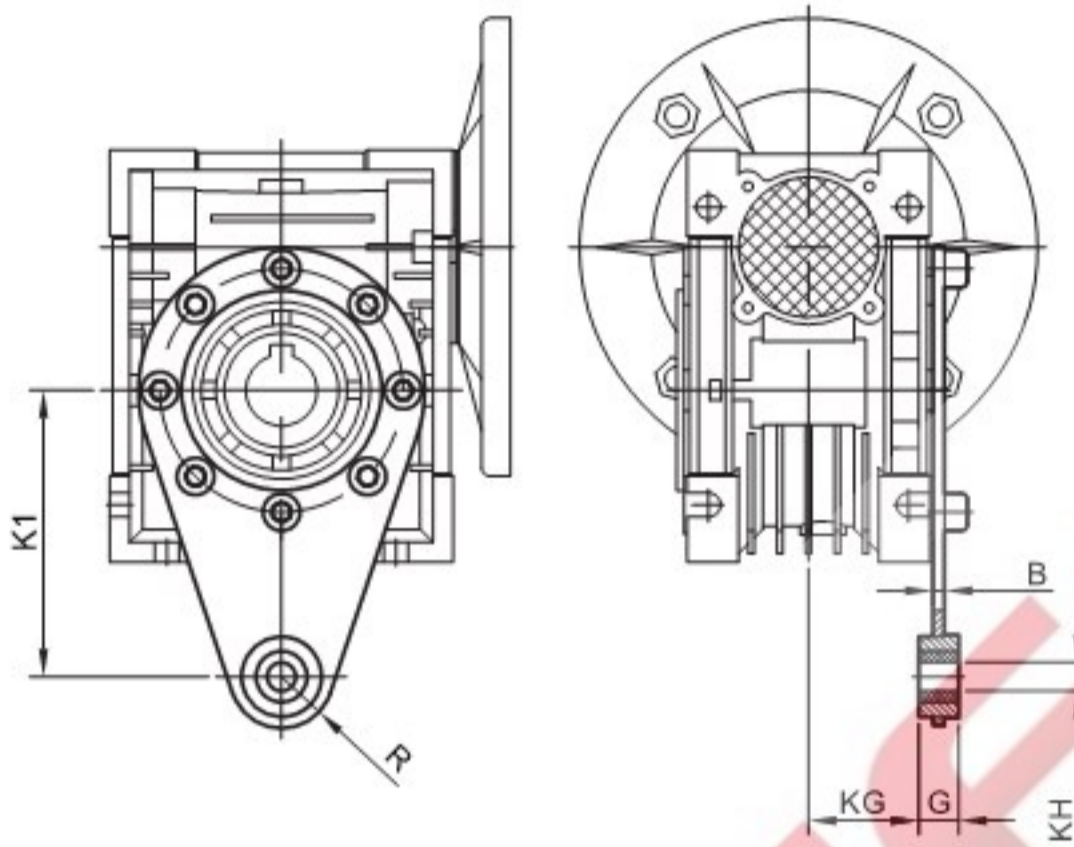


NMRV	J	$d(j6)$	K	m	b1	t1
025	37	9	20	-	3	10.2
030	45	9	20	-	3	10.2
040	53	11	23	-	4	12.5
050	64	14	30	M6	5	16
063	75	19	40	M6	6	21.5
075	90	24	50	M8	8	27
090	108	24	50	M8	8	27
110	135	28	60	M10	8	31
130	155	30	80	M10	8	33
150	175	35	80	M12	10	38



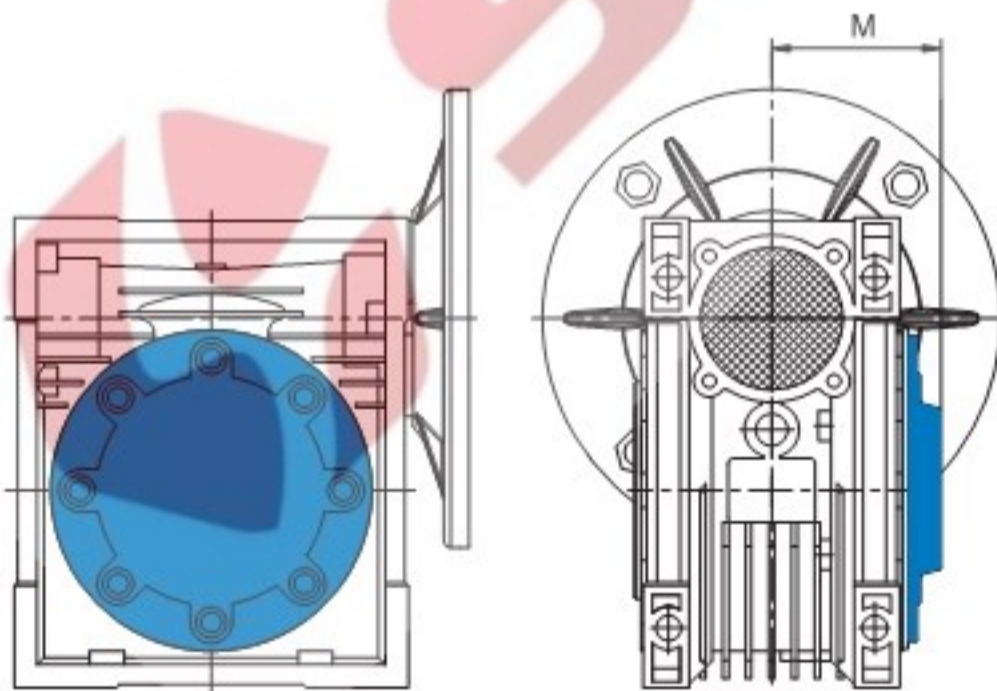
## 附件尺寸图表 / ACCESSORIES OUTLINE DIMENSION SHEET

### 扭力臂 / Torque Arm



NMRV	K1	G	KG	KH	R	B
025	70	14	17.5	8	15	4
030	85	14	24	8	15	4
040	100	14	31.5	10	18	4
050	100	14	38.5	10	18	4
063	150	14	49	10	18	6
075	200	25	47.5	20	30	6
090	200	25	57.5	20	30	6
110	250	30	62	25	35	6
130	250	30	69	25	35	6
150	250	30	84	25	35	8

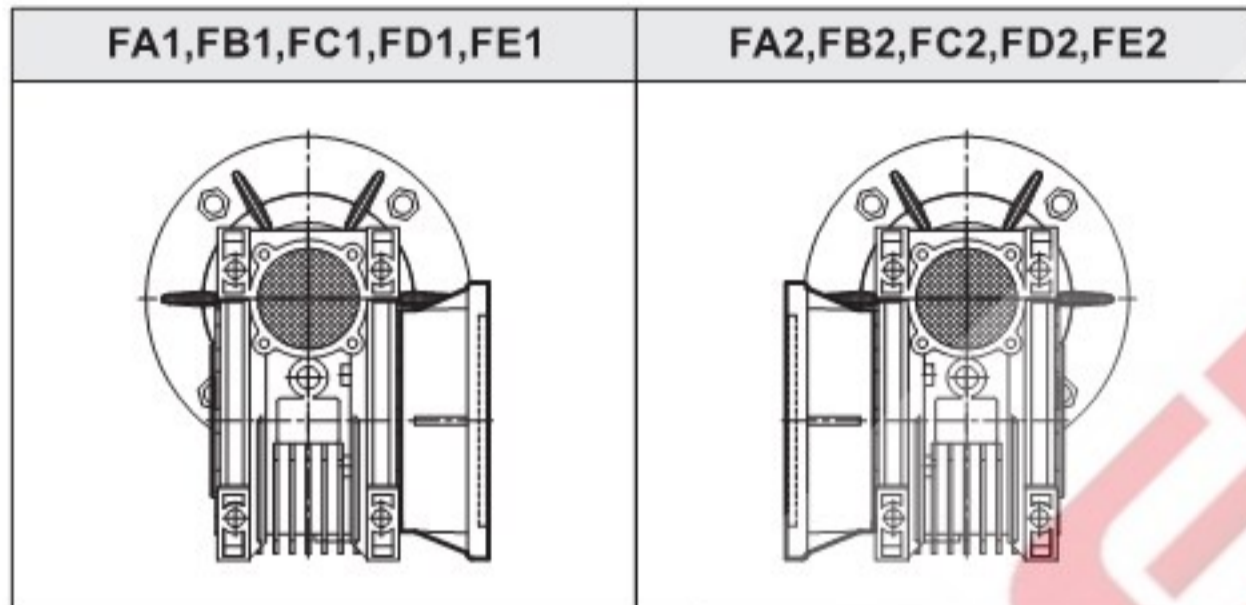
### 防尘盖 / Cover



NMRV	M
030	42
040	50
050	58
063	69
075	74
090	85
110	94
130	102
150	117

## 安装方位图 / INSTALLATION POSITIONS DIAGRAM

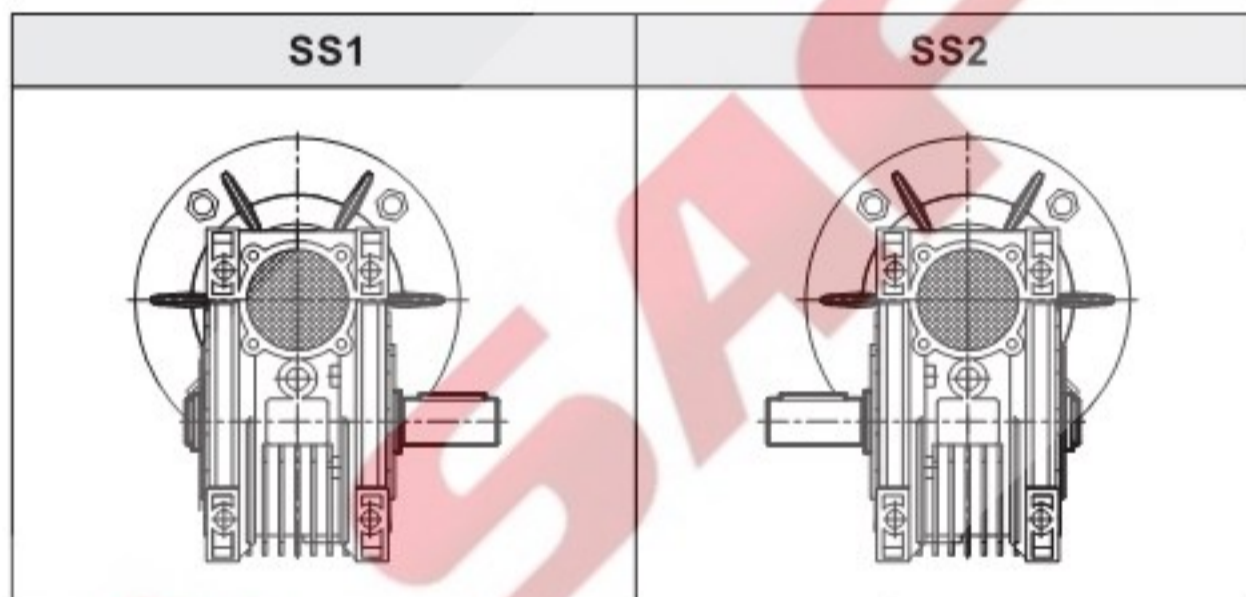
输出法兰位置 / Position diagram for output flange



如果没有特殊要求，一般按出厂标准位置如图F..1方式和B3位置提供。

Unless specified otherwise, the gear units is supplied with the flange in pos. F..1 referred to position B3.

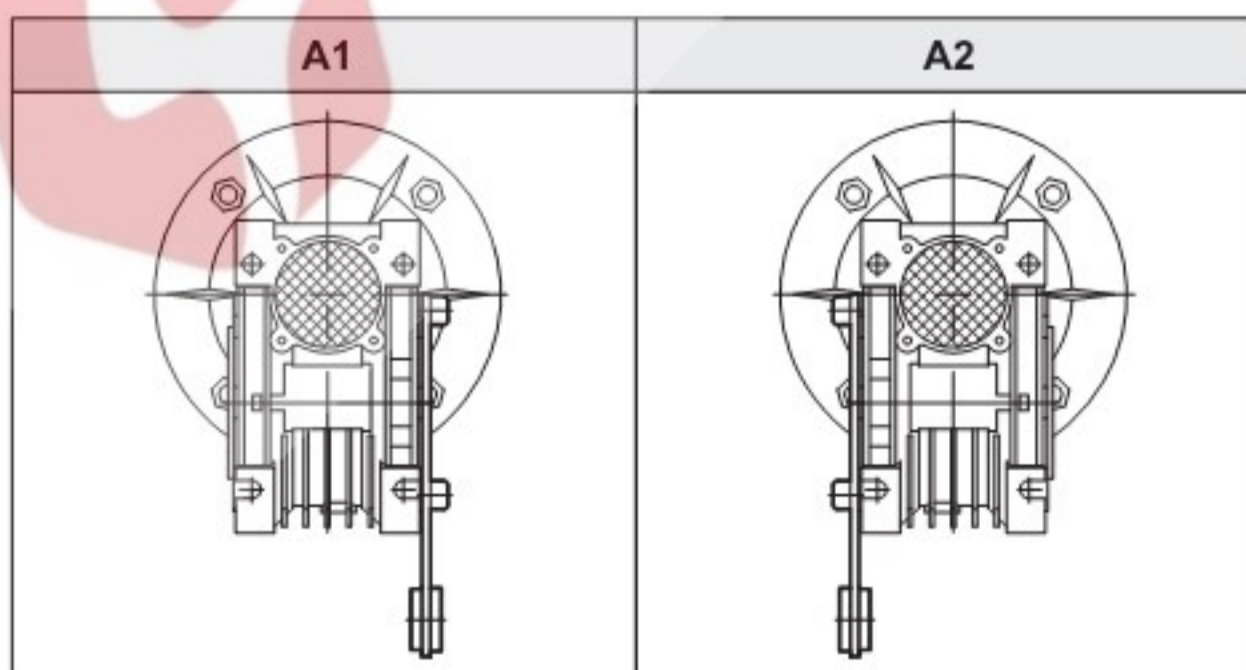
单向输出轴位置 / Position diagram for single output shaft



如果没有特殊要求，一般按出厂标准位置如图SS1方式和B3位置提供。

Unless specified otherwise, the gear units is supplied with the flange in pos. SS1 referred to position B3.

扭力臂 (A) 位置 / Torque arm (A) position



如果没有特殊要求，一般按出厂标准位置如图A1方式和B3位置提供。

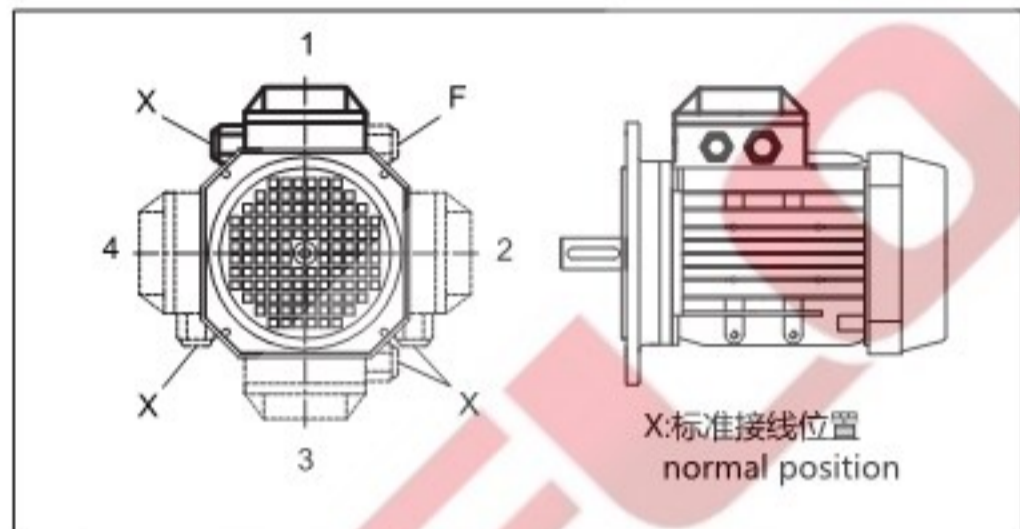
Unless specified otherwise, the gear units is supplied with the flange in pos. A1 referred to position B3.

## 安装方位图 / INSTALLATION POSITIONS DIAGRAM

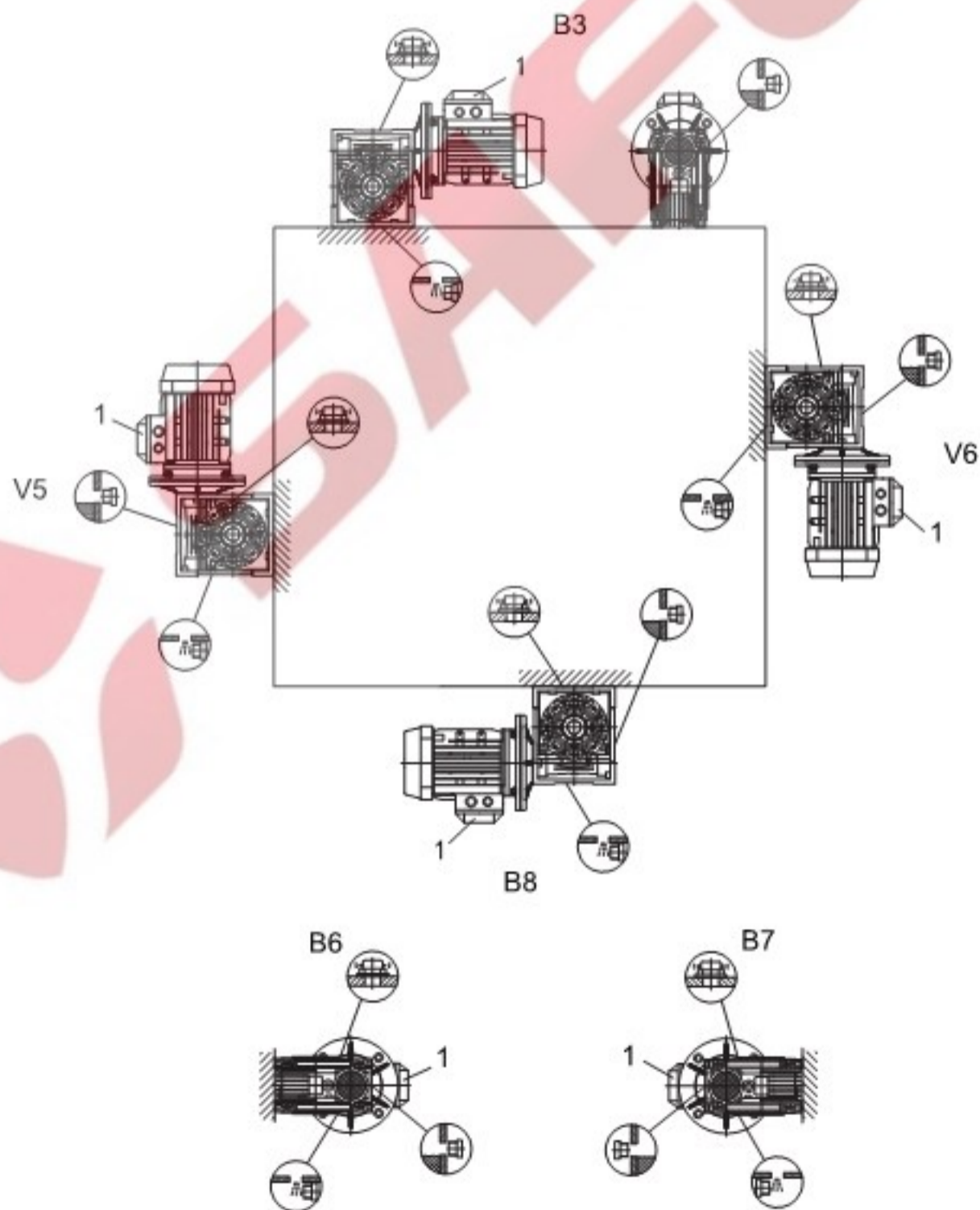
### 符号释意 / Symbols Used

符号/Symbol	含义/Meaning
	排气阀 Breather valve
	油位塞 Oil level plug
	放油塞 Oil drain plug

### 电机接线盒方位/Position of motor terminal box

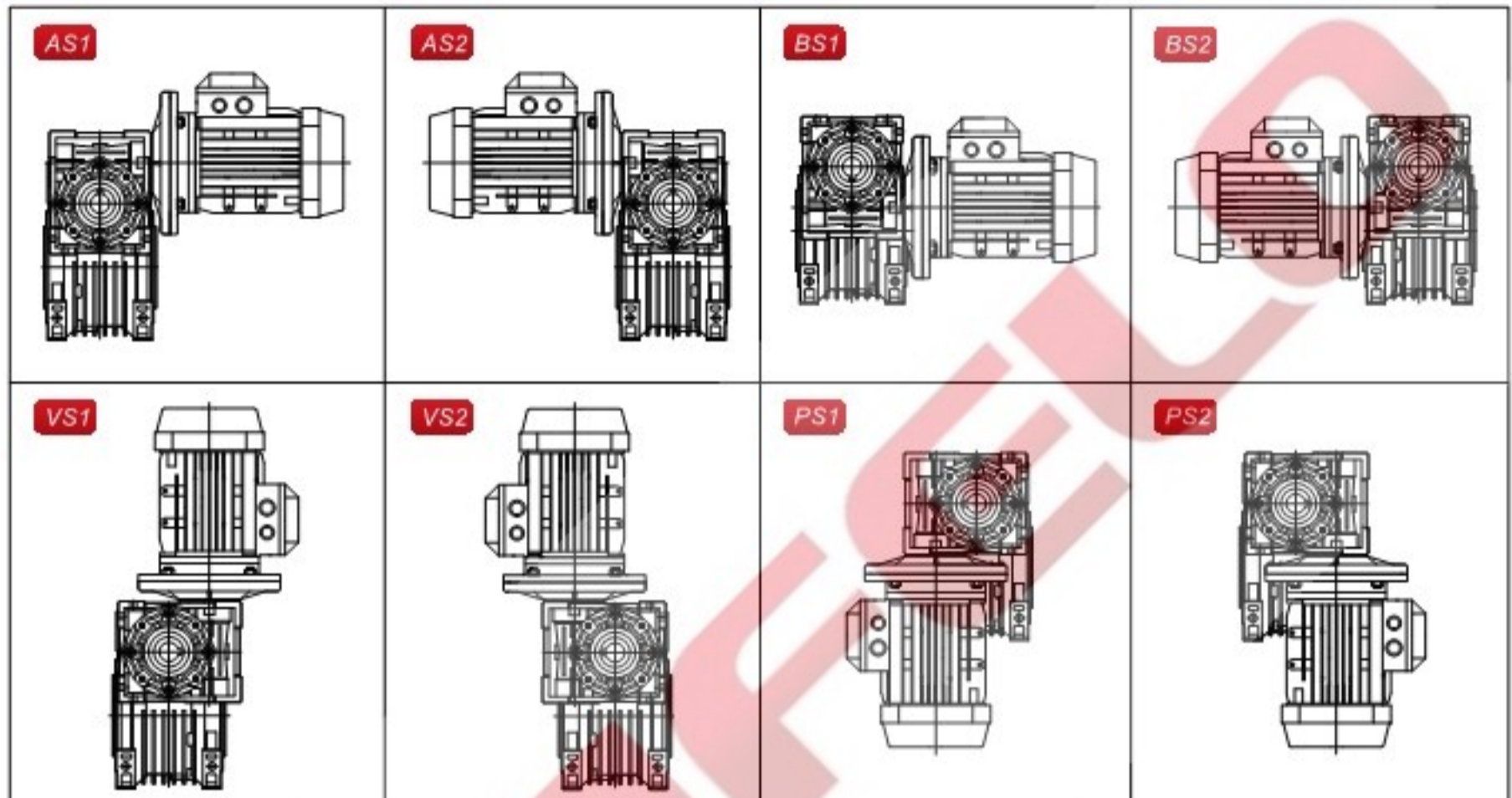


### NMRV..安装方位 / Mounting Positions

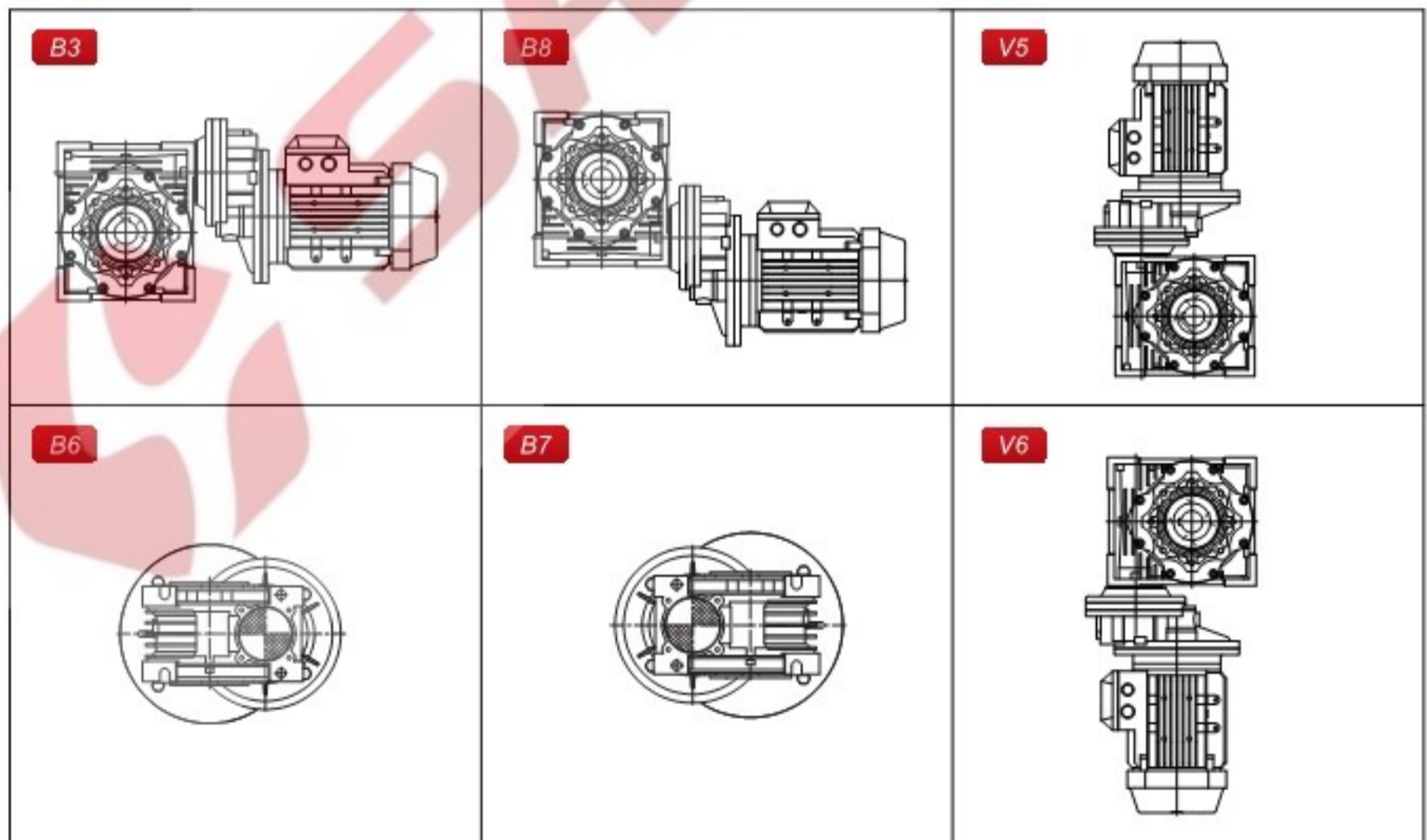


## 安装方位图 / INSTALLATION POSITIONS DIAGRAM

### DRV..安装方位 / Mounting Positions



### PCR..安装方位 / PCR.. Mounting Positions



如果没有特殊要求，一般按出厂标准位置如图B3位置提供。

Unless specified otherwise, the gear units is supplied with the flange referred to position B3.

## 上海塞弗勒减速机有限公司

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