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SANLIAN TRANSMISSION



RV

蜗杆减速机

RV WORM REDUCER

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企业简介 Introduction

坐落于浙江温州平阳经济开发区昆鳌大道高新园区的温州三联集团有限公司，是一家集研究、设计开发、制造和经营于一体的减速电机、动力传输设备生产和销售的高新科技企业，公司占地面积近40000平方米，拥有员工400人，其中专业技术人员占20%。专业的设备、技术和先进的管理理念，铸就了三联今日的辉煌。

温州三联集团是中国通用机械减速变速机行业协会理事单位、浙江省工商企业信用A级“重合同守信用”单位、浙江省农业银行AAA级资信企业、高新技术企业、平阳县重点龙头企业、平阳县纳税大户。我公司二十多年不断努力、超越自我，“天狗”牌减速机陆续被评为“温州市知名商标”，“温州市名牌产品”和“浙江省新产品”等荣誉称号。

“工欲善其事，必先利其器”。三联集团拥有目前国内最先进的数控机床、精密蜗轮磨床、数控蜗杆砂轮磨齿机、滚齿机、齿轮检测仪器等精密仪器设备300多台/套，全面实现计算机化设计和操作。依托专业生产X、B系列摆线减速机，SLR、SLS、SLK、SLF系列硬齿面齿轮减速机，无级变速器，三环减速机，圆锥圆柱齿轮减速机的经验和技术，独具慧眼地推出了一系列可以替代进口减速电机产品的自有知识产权的产品，有效降低客户成本，也使三联集团发展成为同行中的佼佼者。

回顾过去，展望未来，温州三联集团始终奔走在前进的路上，不断用高品质的产品、全方位的服务来完善和超越自我，赢得市场和客户的青睐。

有朋自远方来，不亦乐乎。我们愿与社会各界有识之士携手，由相识、相知、到成为伙伴，共同创造出更加灿烂的明天。

Wenzhou Sanlian Group, which located in Hi-tech park in Kun'ao Road Pingyang Economic District in Wenzhou Zhejiang, engages in research, design, development, and manufacture. Sanlian Group is a hi-tech company which sales and produces reducer and driving force transmission equipment. The company covers more than 40,000 square meters, and has a staff of 400, 20% of whom are technicians. Professional equipment, technology and modernized management contribute the splendid of Sanlian Group.

Wenzhou Sanlian Group is the director member of China Reducer & Variator Association of CGM, is the enterprise with credit rated A of "abiding the contract and keeping good faith of Zhejiang industrial and commercial enterprises" the enterprise with credit rated AAA of Agricultural Bank of China Zhejiang Branch, the key leading enterprise of Pingyang County and the foremost tax payer. With about more than 20 years great efforts and exceeding, "Tian Gou" Brand was appraised as the Products of "Wenzhou Famous Trademark", "Wenzhou Top Brand" the reducers of "Tian Gou" brand are entitled as provincial new products.

A workman must sharpen his tools if he is to do his work well. Sanlian Group has the most advanced equipments in China, such as numerical control machine, gear hobbing machine, and gear testers etc., all of whom are more than 300 sets. We have carried out the computerized way for design and operation.

Relying on the specialize experience and technology of manufacturing X/B series cycloid reducer R/S/K/F series hard tooth flank gear reducer, step-less speed variator, triple-circle reducer, and cylindrical gear reducer, Sanlian Group finds out series products with own intellectual property rights which can replace the entranced speed reducer, reduces the customer cost effectively, It also makes Sanlian Group become the leader of the occupation.

It is a delight after all to have friends come from afar. We all wish hand in hand with the insight man in the world, to be acquainted, to know each other and become partners, hopes to work together for the more splendid tomorrow.

产品介绍 Products Guide

RV系列减速机 RV Series Reducer

单级RV系列 Single RV Series

减速比 Ratio: 7.5 ~ 100



NMRV



NRV



NMRV-F



NRV-F

双级DRV系列 Double DRV Series

减速比 Ratio: 100 ~ 3000



DRV



DRV



DRV-F



DRV-F

RV系列减速机 RV Series Reducer

双级DRV系列 Double DRV Series

减速比 Ratio: 100 ~ 3000



DRV □ - □ □



RV+MB □ - □ □



VF系列减速机 VF Series Reducer

蜗轮蜗杆减速机 Worm Reducer
传动比 Transmission Ratio:

i=5, 7.5, 10, 15, 20, 30, 40, 60, 100



RV系列减速机 RV Series Reducer

概述

RV系列减速机是我厂在引进国外技术的基础上开发的新一代产品。主要特点如下：

- 1、优质铝合金铸造，重量轻，不生锈；
- 2、输出扭矩大；
- 3、传动平稳，噪音小；
- 4、散热性能好；
- 5、美观耐用、体积小；
- 6、可适用全方位安装。

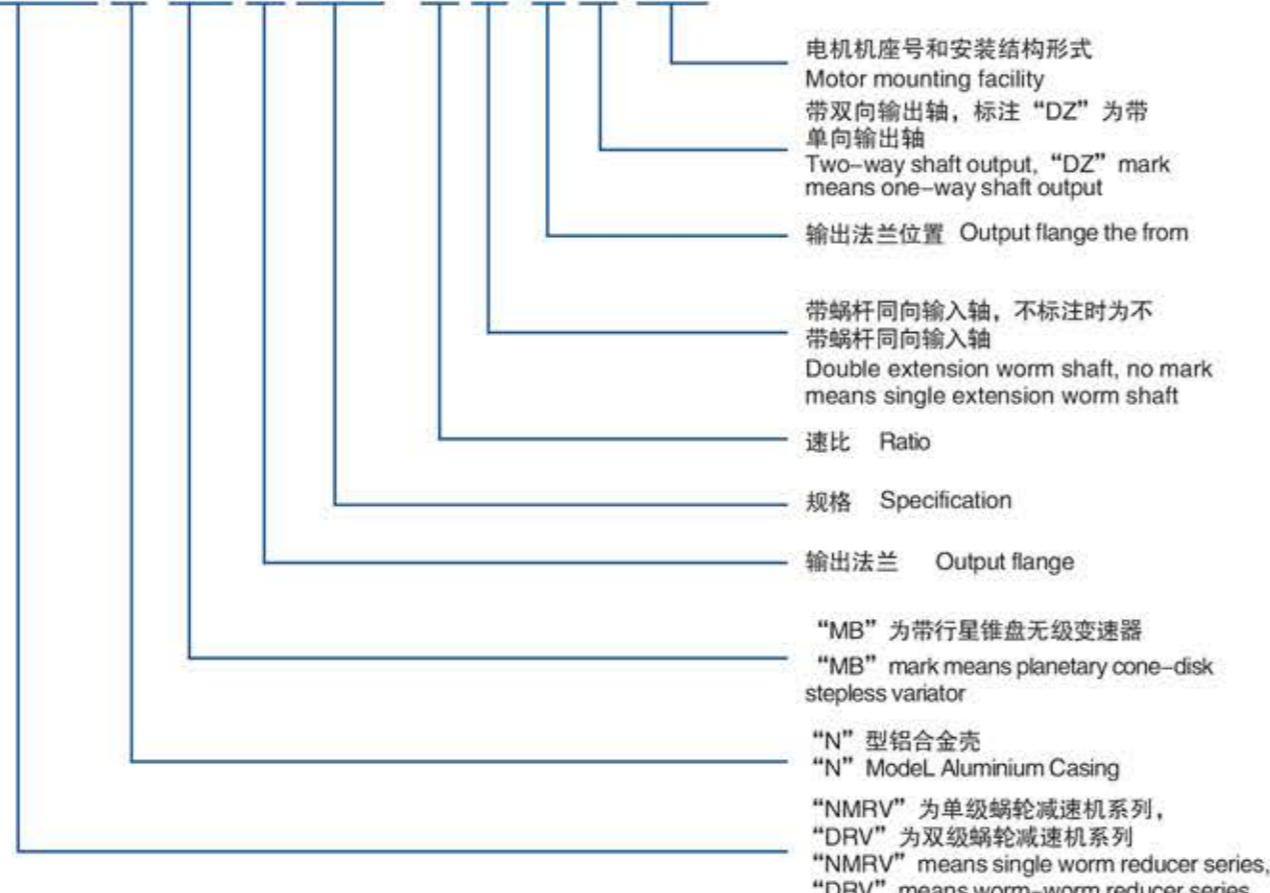
Summary

RV series reducer is new-generation of products developed by our factory on the basis of introducing foreign advanced technology, its main features are as follows:

1. Made of high-quality aluminium alloy, light weight and non-rusting.
2. Large output torque.
3. Smooth running and low noise.
4. High radiating efficiency.
5. Good-looking appearance, durable service life and Small volume.
6. Suitable for omnibearing installation.

型号及表示方法 Type & Expressions

NMRV(DRV) N (MB) F (30/63 - 40 E F1 SZ 71B5



注：关于规格之说明

单级用“中心距”表示

蜗轮/蜗轮组合用“中心距/中心距”表示

蜗轮/无级组合用“中心距/输入功率”表示

Note: For specification

Single type is teh “center distance”

Worm-worm is the “center distance/center distance”

Worm-variator is the “center distance/input power”

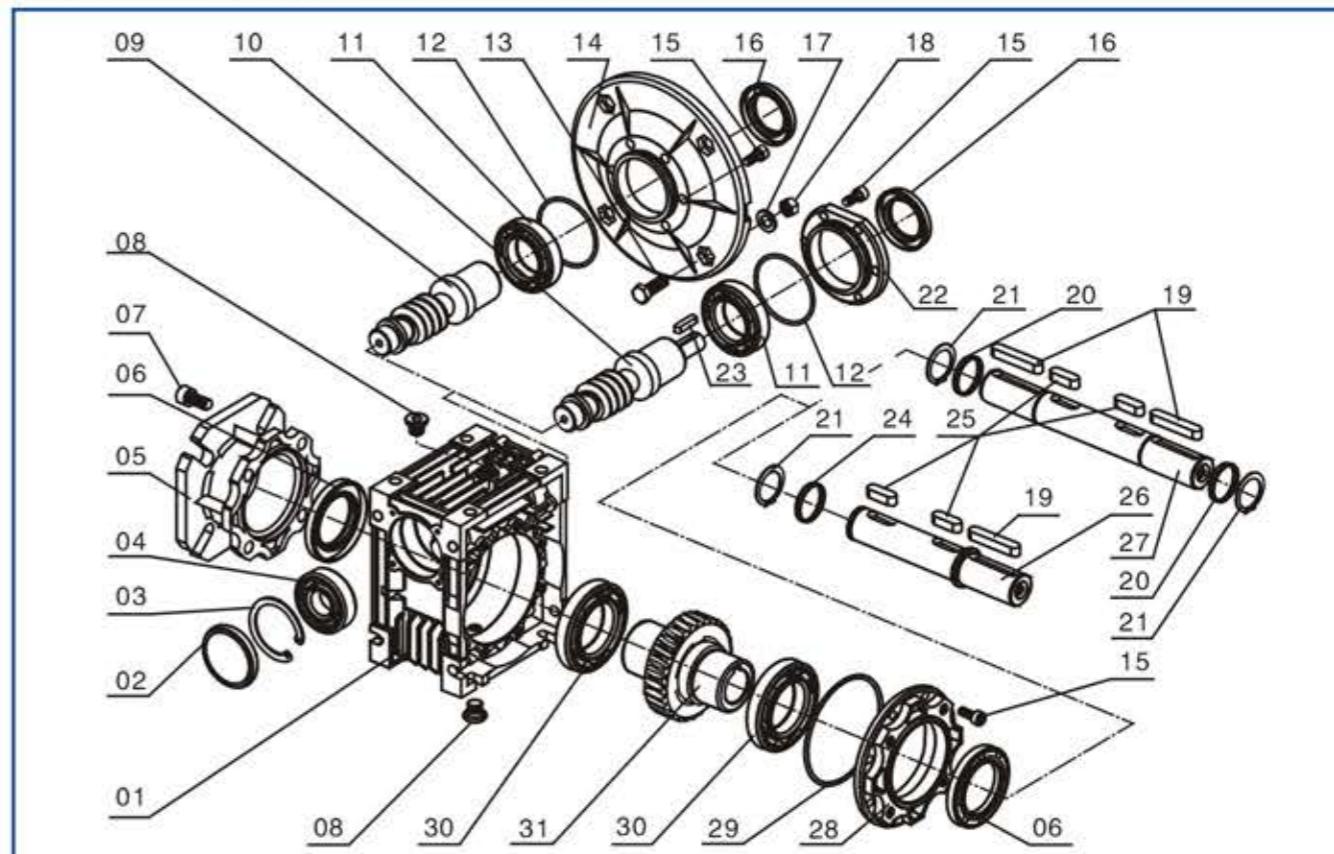


机型版本 Versions

型式 Type



部件分解图 Parts Exploded View



序号(No.)	名称	Parts	序号(No.)	名称	Parts
01	箱体	Frame	13	外六角螺钉	Outer hexagonal screws
02	密封端盖	Seal cover	14	输入法兰	Input flange
03, 21	孔用挡圈	snap ring	17	垫片	Gasket
04	输出法兰	Output flange	18	螺母	Nut
05	油封	Oil seal	19, 23, 25	平键	Key
06, 16, 20, 24	螺母	Nut	22	轴输入端盖	Input shaft cover
07, 15	内六角螺钉	Hexagon screw	26	单相输出轴	Single-phase output shaft
08	螺塞	Oil plug	27	双相输出轴	Biphasic output shaft
09, 10	蜗杆	Worm shaft	28	端盖	Output shaft cover
04, 11, 30	轴承	Bearing	31	蜗轮	Worm shaft
12, 29	O型密封圈	O-ring			



设计特征 Design Features

总体简介 General Introduction

● 结构特点

- 优质铝合金铸造箱体，适应全方位的万能安装配置；
- 充分的冷却筋条，使机体具有优良的热传导性能；
- 从030-130共8种机座规格；传递功率范围从60W-7.5kW；
- 速比范围大，每单个机座具有从5: 1至100: 1的12种减速比；
- 精密磨削加工的硬齿面传动蜗杆，效率高、输出扭矩大；
- 低噪声平稳运转，能适合在恶劣环境中长期连续工作；
- 重量轻，机械强度高；
- 模块化组合使PCRV及DRV将RV减速机的传动比拓展至：i=5-3200。

● STRUCTURE FEATURE

- The high quality aluminum alloy case is fit for every kind of installation type.
- The full cooled rod has high heat conductivity.
- There are 8 types with from 030 to 130 of the NMRV series and the power range is from 60 W to 7.5 kW.
- There are 12 kinds of ratio for every type which from 5:1 to 100:1.
- The hard finishing worm is efficient and the output torque is large.
- With low noise, is fit for continuous work in severe environment.
- Light weight, high mechanical strength
- Modular design makes the ratio to 5-3200.

● 主要材料

- 外壳：铝合金（机座：030-090），铸铁（机座：110-130）；
- 蜗杆：20Cr钢、碳、氮共渗处理（精磨后保持齿面硬度HRC60，硬层厚度>0.5mm）；
- 蜗轮：特殊配制的耐磨镍青铜。

● MAIN MATERIAL

- Case: aluminum alloy (type 030-090), cast iron (type 110-130).
- Worm: 20Cr steel, carbonitriding, (hardness: HRC60; hard layer thickness>0.5mm).
- Worm wheel:nickel bronze.

● 涂漆

- 铝合金：
 - ① 抛丸处理后，特种防腐处理（保持银白合金色感，并耐汽油、二甲苯等有机溶剂的腐蚀）；
 - ② 磷化处理后，喷涂RAL5010兰色烘烤漆；
- 铸铁：喷涂RAL5010兰色烘烤漆。

● PAINT

- Aluminum alloy:
 - ① Short blasting and embalment.
 - ② Phosphating and paint RAL5010 blue
- Cast iron:paint RAL 5010 blue



设计特征 Design Features

● 效率

效率是减速机的重要指标，取决于蜗杆蜗轮传动副的设计制造以及磨擦状况。由于减速机在运转状态下和在静止状态下具有不同的磨擦特性，因此减速机的效率相应有动态效率及静态效率；

① 动态效率 η_d : 减速机在运转工况（动磨擦）下的传递效率；

② 静态效率 η_s : 减速机在停止状态（静磨擦）下的传递效率；

由于磨擦副的静磨擦系数大于动磨擦系数，因此减速机的动态效率大于静态效率，即 $\eta_d > \eta_s$ 。

● EFFICIENCY

There are dynamic efficiency and static efficiency because the gear box has different friction property at rest and in working condition.

① Dynamic efficiency η_d : the efficiency when the gearbox is in working condition.

② Static efficiency η_s : the efficiency when the gearbox is at rest.

It is always $\eta_d > \eta_s$, because the static friction coefficient is always larger than dynamic friction coefficient.

● 传动可逆性

在减速机输出端（蜗轮）施加力矩带动输入端（蜗杆）的传递过程即为减速机的逆向传动。减速机在逆向传动时所表现的特性即为蜗杆减速机的传动可逆性。在使用过程中必须关注选定减速机的这种特性。

减速机的传动可逆性与减速机的效率有关，对应于静态效率 η_s 及动态效率 η_d 。将减速机的传动可逆特性描述如下：

$\eta_s < 0.5$: 静力不可逆。即减速机在静止状态时，不能通过向输出蜗轮施加力矩带动输入蜗杆，逆向传动自锁。

$\eta_s = 0.5-0.55$: 低静力可逆。即减速机在静止状态时，可以通过向输出蜗轮施加力矩带动输入蜗杆，自锁性不强。

$\eta_s > 0.5$: 静力可逆。即减速机在静止状态时，可以通过向输出蜗轮施加力矩带动输入蜗杆，不能自锁。

$\eta_d < 0.5$: 动力不可逆。即减速机在传动过程中，输入轴脱开动力时，输出轴即能立即停止。

$\eta_d = 0.5-0.6$: 低动力可逆。即减速机在传动过程中，输入轴脱开动力时，输出轴不能立即可靠停止。

$\eta_d > 0.6$: 动力可逆。即减速机在传动过程中，输入轴脱开动力时，输出轴不能自锁停止。

● REVERSIBILITY

The reversibility is the attribute in the transmission process which exerting torque in the output end (worm wheel) drives the input end (worm) working.. It is must be paid attention to chose the reversibility of gear box.

The reversibility relates to efficiency. The exposition of the reversibility and the corresponding static efficiency η_s and dynamic efficiency η_d is as follows:

$\eta_s < 0.5$: statical irreversibility. The gear box cannot reversal drive at rest.

$\eta_s = 0.5-0.55$: low statical irreversibility . The gear box can reversal drive weakly at rest.

$\eta_s > 0.5$: statical reversibility . The gear box can reversal drive at rest.

$\eta_d < 0.5$ dynamical irreversibility. The output shaft will stop as soon as the input shaft breaks away from the power

$\eta_d = 0.5-0.6$: low dynamical reversibility . The output shaft will stop after a while when the input shaft breaks away from the power.

$\eta_d > 0.6$: dynamical reversibility. The output shaft will not stop when the input shaft breaks away from the power.



设计特征 Design Features

● 齿模数配置 Modulus tooth configuration

RV	i	5	7.5	10	15	20	25	30	40	50	60	80	100
030	m	1.5	1.5	1.5	1.5	1	1.75	1.5	1	0.9	0.75	0.55	/
	Z_1	6	4	3	2	2	1	1	1	1	1	1	/
	γ	$29^\circ 3'$	$20^\circ 19'$	$15^\circ 31'$	$10^\circ 29'$	$5^\circ 42'$	$6^\circ 10'$	$5^\circ 17'$	$2^\circ 52'$	$3^\circ 26'$	$2^\circ 52'$	$1^\circ 58'$	/
	η^d	0.874	0.856	0.829	0.782	0.673	0.700	0.667	0.520	0.567	0.520	0.422	/
	η^s	0.723	0.675	0.637	0.559	0.461	0.442	0.400	0.308	0.319	0.275	0.221	/
040	m	2	2	2	2	1.6	1.25	2	1.6	1.25	1	0.8	0.65
	Z_1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	$30^\circ 58'$	$21^\circ 48'$	$16^\circ 42'$	$11^\circ 19'$	$11^\circ 19'$	$8^\circ 8'$	$5^\circ 43'$	$5^\circ 43'$	$4^\circ 5'$	$2^\circ 52'$	$2^\circ 52'$	$2^\circ 29'$
	η^d	0.886	0.862	0.839	0.805	0.792	0.738	0.675	0.668	0.604	0.541	0.513	0.477
	η^s	0.737	0.703	0.661	0.589	0.559	0.502	0.434	0.411	0.351	0.284	0.276	0.243
050	m	2.5	2.5	2.5	2.5	2	1.6	2.5	2	1.6	1.25	1	0.8
	Z_1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	$30^\circ 58'$	$21^\circ 48'$	$16^\circ 42'$	$11^\circ 19'$	$11^\circ 19'$	$9^\circ 5'$	$5^\circ 43'$	$5^\circ 43'$	$4^\circ 21'$	$2^\circ 52'$	$2^\circ 52'$	$2^\circ 17'$
	η^d	0.887	0.874	0.852	0.808	0.805	0.771	0.711	0.693	0.634	0.532	0.530	0.483
	η^s	0.737	0.695	0.654	0.581	0.561	0.517	0.434	0.403	0.352	0.289	0.270	0.227
063	m	/	3.25	3.25	3.25	2.5	2	3.25	2.5	2	1.6	1.25	1
	Z_1	/	4	3	2	2	2	1	1	1	1	1	1
	γ	/	$24^\circ 31'$	$18^\circ 53'$	$12^\circ 51'$	$11^\circ 19'$	$8^\circ 45'$	$6^\circ 30'$	$5^\circ 43'$	$4^\circ 24'$	$3^\circ 3'$	$2^\circ 52'$	$2^\circ 12'$
	η^d	/	0.880	0.870	0.830	0.820	0.780	0.740	0.716	0.660	0.571	0.562	0.486
	η^s	/	0.710	0.670	0.600	0.557	0.510	0.450	0.409	0.360	0.304	0.276	0.229
075	m	/	4	4	4	3	2.5	4	3	2.5	2	1.6	1.25
	Z_1	/	4	3	2	2	2	1	1	1	1	1	1
	γ	/	$28^\circ 4'$	$21^\circ 48'$	$14^\circ 56'$	$11^\circ 19'$	$11^\circ 19'$	$7^\circ 36'$	$5^\circ 43'$	$5^\circ 43'$	$3^\circ 49'$	$4^\circ 21'$	$2^\circ 52'$
	η^d	/	0.912	0.904	0.876	0.850	0.848	0.810	0.770	0.769	0.695	0.719	0.626
	η^s	/	0.712	0.683	0.614	0.570	0.542	0.466	0.420	0.395	0.342	0.316	0.267
090	m	/	5	5	5	3.75	3	5	3.75	3	2.5	1.9	1.5
	Z_1	/	4	3	2	2	2	1	1	1	1	1	1
	γ	/	$33^\circ 41'$	$26^\circ 34'$	$18^\circ 26'$	$14^\circ 02'$	$11^\circ 19'$	$9^\circ 28'$	$7^\circ 08'$	$5^\circ 43'$	$4^\circ 46'$	$3^\circ 53'$	$2^\circ 52'$
	η^d	/	0.905	0.898	0.873	0.849	0.824	0.804	0.765	0.727	0.690	0.638	0.572
	η^s	/	0.734	0.706	0.650	0.606	0.563	0.505	0.459	0.414	0.380	0.342	0.271
110	m	/	5.9	5.9	5.9	4.6	3.75	5.9	4.6	3.75	3.15	2.4	1.9
	Z_1	/	4	3	2	2	2	1	1	1	1	1	1
	γ	/	$28^\circ 46'$	$22^\circ 22'$	$15^\circ 21'$	$14^\circ 20'$	$14^\circ 02'$	$7^\circ 49'$	$7^\circ 17'$	$7^\circ 08'$	$5^\circ 48'$	$4^\circ 54'$	$3^\circ 37'$
	η^d	/	0.901	0.891	0.862	0.848	0.851	0.793	0.776	0.768	0.729	0.692	0.628
	η^s	/	0.721	0.691	0.631	0.618	0.598	0.482	0.478	0.451	0.415	0.372	0.319
130	m	/	7	7	7	5.4	4.4	7	5.4	4.4	3.75	2.75	2.25
	Z_1	/	4	3	2	2	2	1	1	1	1	1	1
	γ	/	$29^\circ 15'$	$22^\circ 47'$	$15^\circ 39'$	$13^\circ 47'$	$12^\circ 24'$	$7^\circ 58'$	$7^\circ 00'$	$6^\circ 17'$	$6^\circ 7'$	$3^\circ 56'$	$3^\circ 41'$
	η^d	/	0.911	0.891	0.872	0.860	0.845	0.803	0.779	0.758	0.749	0.671	0.657
	η^s	/	0.721	0.691	0.631	0.610	0.583	0.492	0.460	0.435	0.406	0.335	0.308



设计特征 Design Features

●DRV可能的联接 DRV possible connection

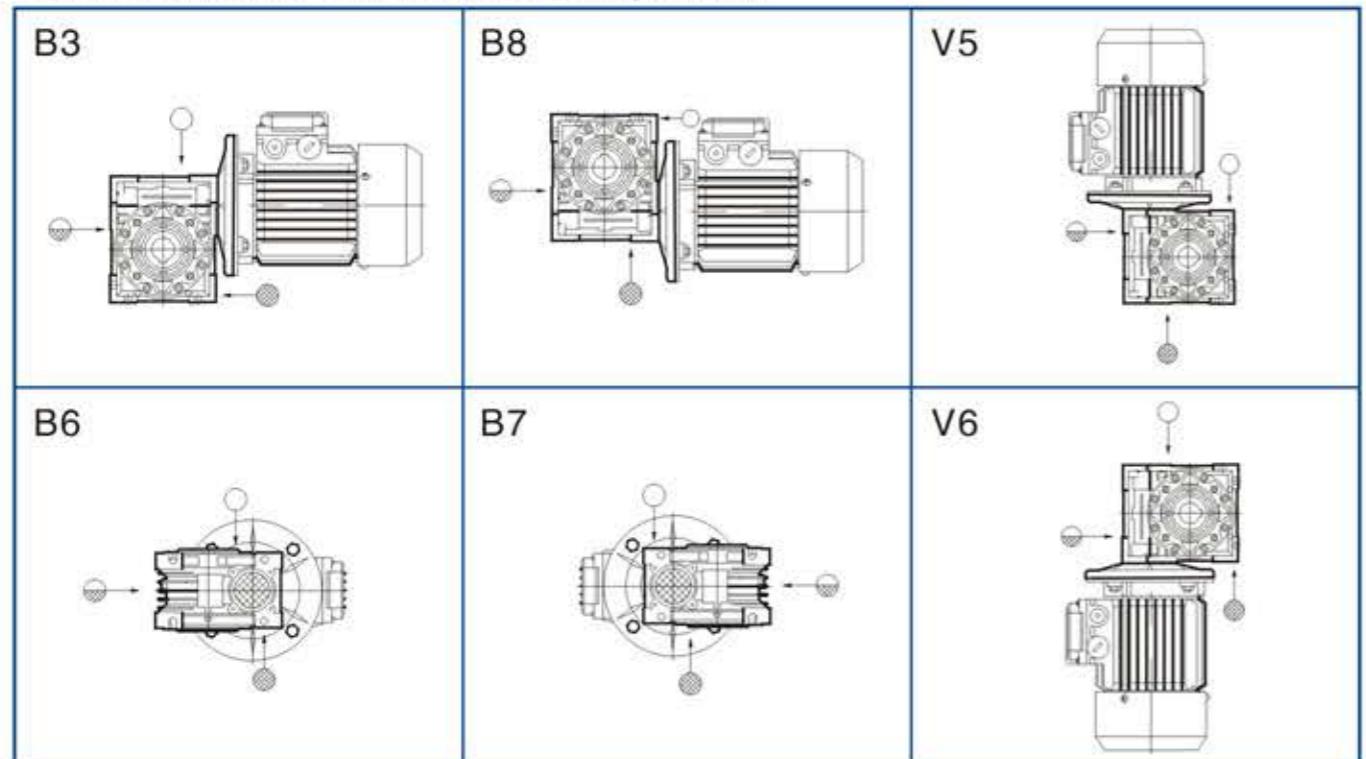
i2	040			050			063			075			090			110			130		
i1	25	30	40	30	40	50	40	50	60	30	40	50	40	50	60	30	40	50	30	40	50
030	7.5	/	/	/	/	/	/	●	/	/											
	10	/	●	●	●	●	●	●	●	/											
	15	/	/	/	/	/	/	●	●	●											
	20	●	●	/	●		/	/	/	/	/										
	25	/	●	/	●		/	/	/	/	/										
	30	/	●	●	●	●	/	●	●	●											
	50	/	●	/	●		/	/	/	/	/										
	60	/	●	●	●	●	●	●	●	/											
	80	/	/	●	/	/	/	/	/	/											
040	7.5									/	/	/	●	/	/						
	10									●	●	●	●	●	●	/					
	15									/	/	/	●	●	●						
	20									●	/	/	/	/	/	/					
	25									●	/	/	/	/	/	/					
	30									●	●	/	●	●	●						
	50									●	/	/	/	/	/	/					
	60									●	●	●	●	●	●	/					
	10												●	●	●						
050	15															/	●	/			
	25															●	/	/			
	30															●	●	/			
	50															●	/	/			
	60															●	●	●			
	10															●	●	●			
	15																/	●	/		
	25															●	/	/			
	30															●	●	/			
063	50															●	/	/			
	60															●	●	●			
	10															●	●	●			
	15																/	●	/		
	25															●	/	/			
	30															●	●	/			
	50															●	/	/			
	60															●	●	●			

注：●表示可能的组合；/表示不允许或不推荐的组合。

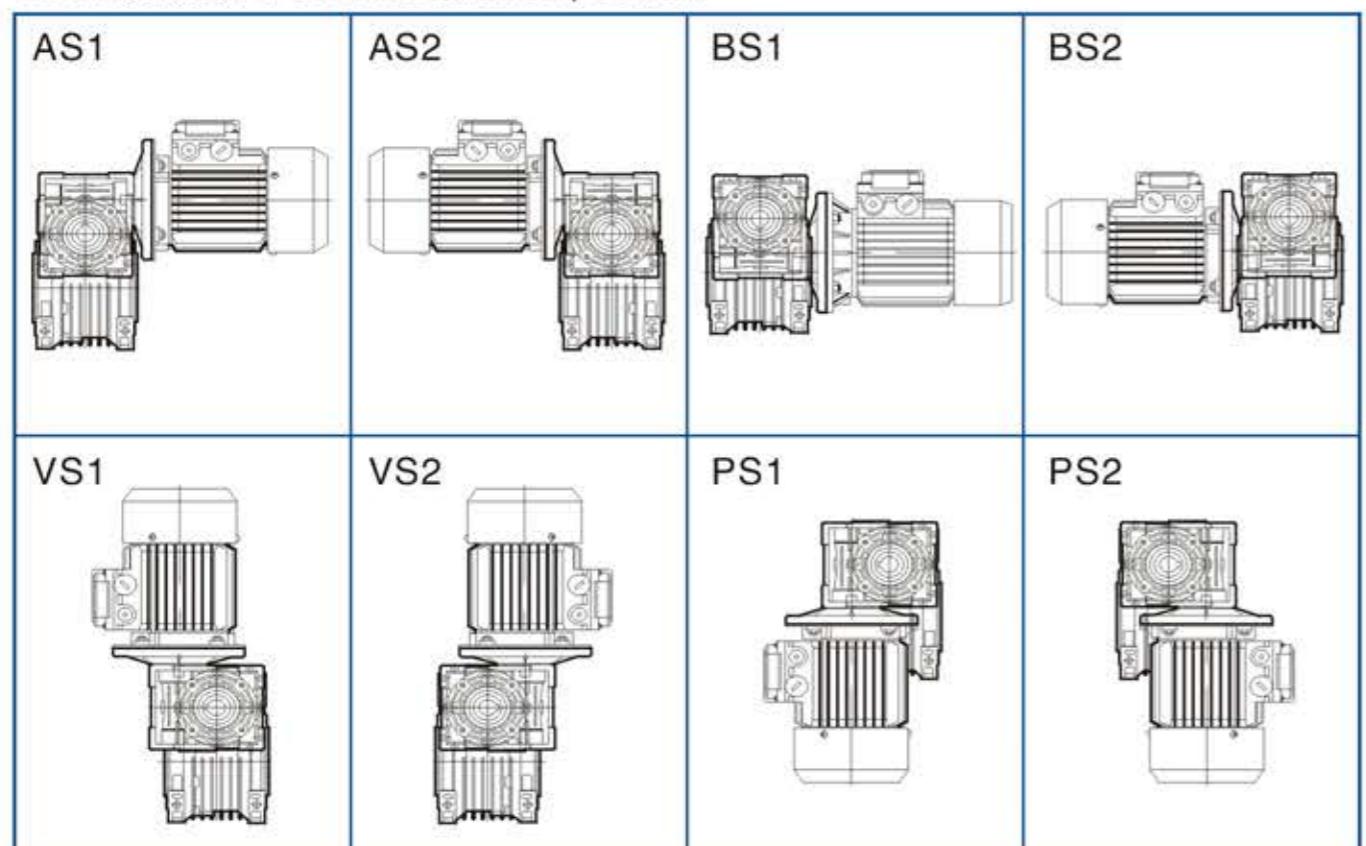
Note: • That the possible combinations; / That does not allow or not to recommend a combination of.

结构及安装型式 Structure And Mounting Positions

● NMRV 安装方位 NMRV Installation position

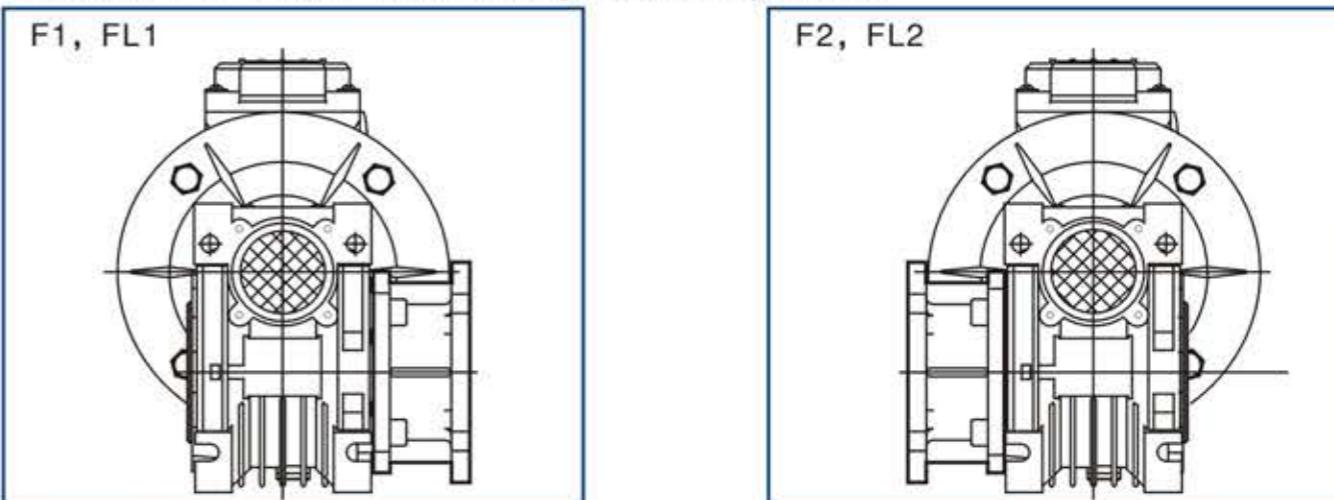


● DRV 安装方位 DRV Installation position

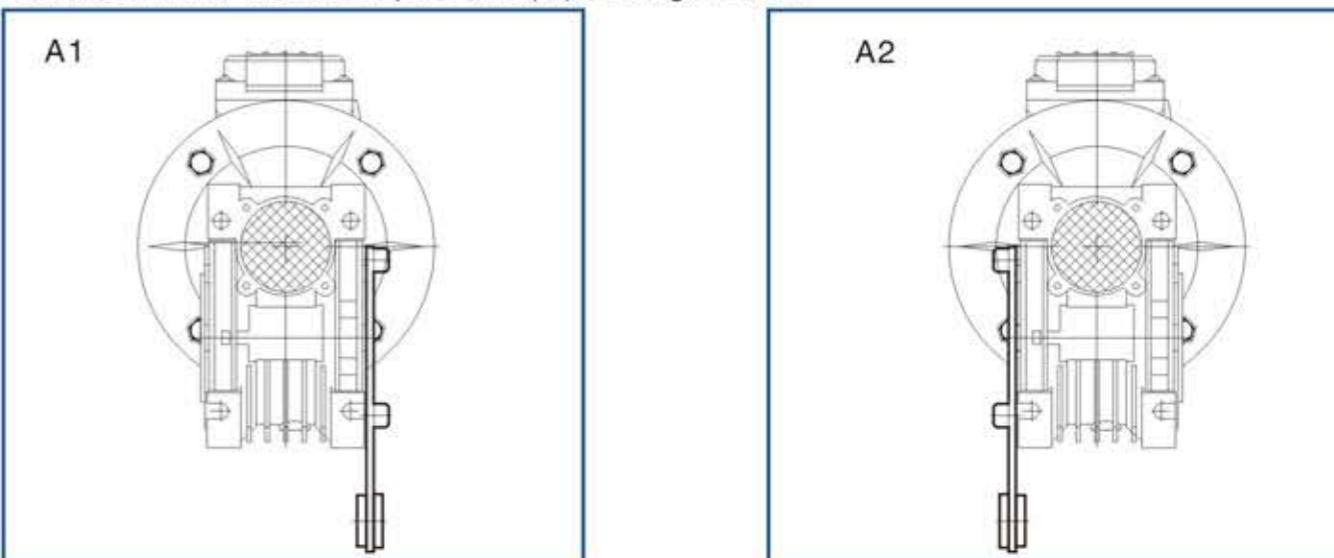


结构及安装型式 Structure And Mounting Positions

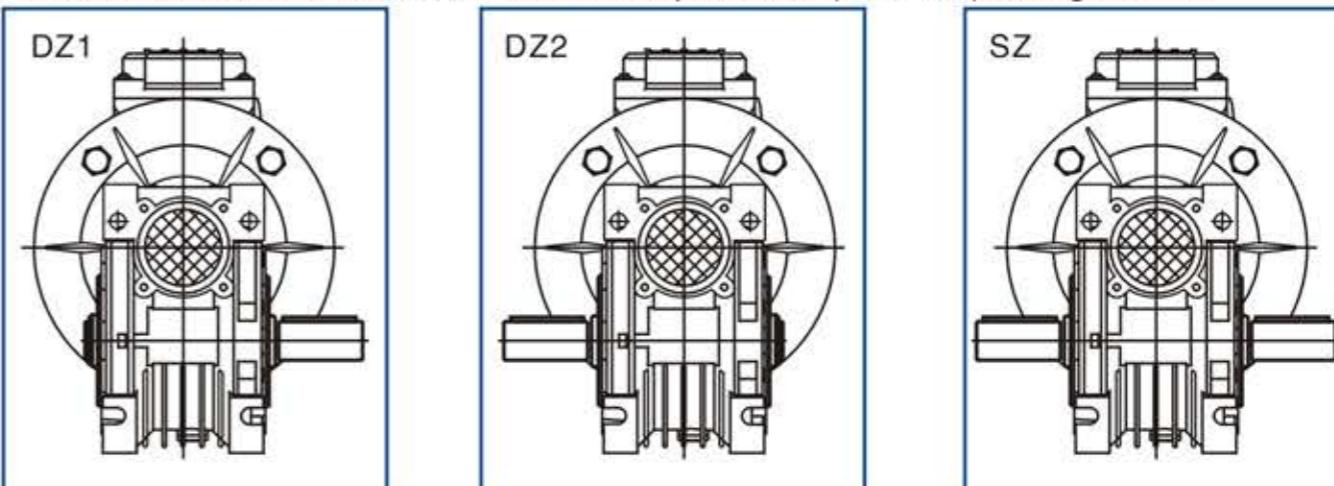
● 输出法兰 (F) 配置 Output flange (F) configuration



● 扭力臂 (A) 配置 Torque arm (A) configuration



● 蜗轮输出轴 (DZ, SZ) 配置 Worm output shaft (DZ, SZ) configuration





性能 Performance

NMRV功率配置(n₁=1400r/min) NMRV Power configuration (n₁ = 1400r/min)

NMRV	5	7.5	10	15	20	25	30	40	50	60	80	100
030	60W											
	90W											
	120W											
	180W											
040	60W	●	●	●	●	●	●	●	●			
	90W	●	●	●	●	●	●	●	●			
	120W											
	180W											
	250W											
	370W											
	550W											
050	120W	●	●	●	●	●	●	●				
	180W	●	●	●	●	●	●	●				
	250W											
	370W											
	550W											
	750W											
	250W	x	●	●	●	●	●	●	●	●	●	
063	370W	x	●	●	●	●	●	●				
	550W	x	●	●								
	750W	x										
	1100W	x										
	1500W	x										
	550W	x	●	●	●	●	●	●				
075	750W	x	●	●	●	●	●	●				
	1100W	x										
	1500W	x										
	2200W	x										
	3000W	x										
	4000W	x										
	750W	x	●	●	●	●	●	●				
090	1100W	x	●	●	●	●	●	●				
	1500W	x	●	●	●	●	●	●				
	2200W	x										
	3000W	x										
	4000W	x										
	750W	x										
	1100W	x										
110	1500W	x										
	2200W	x										
	3000W	x										
	4000W	x										
	5500W	x										
	7500W	x										
	1500W	x	●	●	●	●	●	●	●	●		
130	2200W	x	●	●	●	●	●	●	●			
	3000W	x	●	●	●	●	●	●				
	4000W	x										
	5500W	x										
	7500W	x										

注：●表示允许但不推荐的配置，空格部分为不允许的配置，“X”表示无此速比规格。

Note: The permitted but not recommended configuration, Space part is not allowed to configure, "X" that it was not speed-ratio specifications.



性能 Performance

NMRV性能参数(n₁=1400r/min) NMRV Performance data (n₁ = 1400r/min)

kW	TYPE	i	n ₂ (r/min)	M ₂ (N.m)	kW	TYPE	i	n ₂ (r/min)	M ₂ (N.m)																																																																																																																																																																																																																																																																									
0.06kW	NMRV030	5	280	1.8	0.18kW	NMRV030	7.5	186	7.9																																																																																																																																																																																																																																																																									
	NMRV030	7.5	186	2.6	NMRV030	10	140	3.4	NMRV030	15	94	4.8	NMRV030	20	70	5.5	NMRV030	25	56	7.2	NMRV030	30	47	8.2	NMRV030	40	35	8.5	NMRV030	50	28	11.6	NMRV040			12.4	NMRV030	60	24	12.8	NMRV040			12.6	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280	2.7	0.25kW	NMRV030	5	280	7.6	NMRV030	7.5	186	4.0	NMRV030	10	140	5.1	NMRV030	15	94	7.2	NMRV030	20	70	8.3	NMRV030	25	56	10.7	NMRV030	30	47	12.3	NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5	280	3.6	0.37kW	NMRV030	5	280	11.2	NMRV040			3.5	NMRV030	7.5	186	5.3	NMRV040			5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030			17.0	NMRV040	40	35	21.9	NMRV050			22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW	NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063								
	NMRV030	10	140	3.4	NMRV030	15	94	4.8	NMRV030	20	70	5.5	NMRV030	25	56	7.2	NMRV030	30	47	8.2	NMRV030	40	35	8.5	NMRV030	50	28	11.6	NMRV040			12.4	NMRV030	60	24	12.8	NMRV040			12.6	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030	5	280	7.6	NMRV030	7.5	186	4.0	NMRV030	10	140	5.1	NMRV030	15	94	7.2	NMRV030	20	70	8.3	NMRV030	25	56	10.7	NMRV030	30	47	12.3	NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6	0.37kW	NMRV030	5	280	11.2	NMRV040			3.5	NMRV030	7.5	186	5.3	NMRV040			5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030				17.0	NMRV040	40	35	21.9	NMRV050			22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW		NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063								
	NMRV030	15	94	4.8	NMRV030	20	70	5.5	NMRV030	25	56	7.2	NMRV030	30	47	8.2	NMRV030	40	35	8.5	NMRV030	50	28	11.6	NMRV040			12.4	NMRV030	60	24	12.8	NMRV040			12.6	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6	NMRV030	7.5	186	4.0	NMRV030	10	140	5.1	NMRV030	15	94	7.2	NMRV030	20	70	8.3	NMRV030	25	56	10.7	NMRV030	30	47	12.3	NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030	5	280	11.2	NMRV040			3.5	NMRV030	7.5	186	5.3	NMRV040			5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030					17.0	NMRV040	40	35	21.9	NMRV050			22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW			NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063								
	NMRV030	20	70	5.5	NMRV030	25	56	7.2	NMRV030	30	47	8.2	NMRV030	40	35	8.5	NMRV030	50	28	11.6	NMRV040			12.4	NMRV030	60	24	12.8	NMRV040			12.6	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6		NMRV030	7.5	186	4.0	NMRV030	10	140	5.1	NMRV030	15	94	7.2	NMRV030	20	70	8.3	NMRV030	25	56	10.7	NMRV030	30	47	12.3	NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030		5	280	11.2	NMRV040			3.5	NMRV030	7.5	186	5.3	NMRV040			5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030						17.0	NMRV040	40	35	21.9	NMRV050			22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW				NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063								
	NMRV030	25	56	7.2	NMRV030	30	47	8.2	NMRV030	40	35	8.5	NMRV030	50	28	11.6	NMRV040			12.4	NMRV030	60	24	12.8	NMRV040			12.6	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6		NMRV030	7.5	186		4.0	NMRV030	10	140	5.1	NMRV030	15	94	7.2	NMRV030	20	70	8.3	NMRV030	25	56	10.7	NMRV030	30	47	12.3	NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030		5	280		11.2	NMRV040			3.5	NMRV030	7.5	186	5.3	NMRV040			5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030						17.0		NMRV040	40	35	21.9	NMRV050			22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW				NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063									
	NMRV030	30	47	8.2	NMRV030	40	35	8.5	NMRV030	50	28	11.6	NMRV040			12.4	NMRV030	60	24	12.8	NMRV040			12.6	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6		NMRV030	7.5	186		4.0	NMRV030	10		140	5.1	NMRV030	15	94	7.2	NMRV030	20	70	8.3	NMRV030	25	56	10.7	NMRV030	30	47	12.3	NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030		5	280		11.2	NMRV040				3.5	NMRV030	7.5	186	5.3	NMRV040			5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030						17.0		NMRV040		40	35	21.9	NMRV050			22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW				NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063										
	NMRV030	40	35	8.5	NMRV030	50	28	11.6	NMRV040			12.4	NMRV030	60	24	12.8	NMRV040			12.6	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6		NMRV030	7.5	186		4.0	NMRV030	10		140	5.1	NMRV030		15	94	7.2	NMRV030	20	70	8.3	NMRV030	25	56	10.7	NMRV030	30	47	12.3	NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030		5	280		11.2	NMRV040					3.5	NMRV030	7.5	186	5.3	NMRV040			5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030						17.0		NMRV040		40		35	21.9	NMRV050			22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW				NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063											
	NMRV030	50	28	11.6	NMRV040			12.4	NMRV030	60	24	12.8	NMRV040			12.6	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6		NMRV030	7.5	186		4.0	NMRV030	10		140	5.1	NMRV030		15	94	7.2		NMRV030	20	70	8.3	NMRV030	25	56	10.7	NMRV030	30	47	12.3	NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030		5	280		11.2	NMRV040					3.5	NMRV030		7.5	186	5.3	NMRV040			5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030						17.0		NMRV040		40		35		21.9	NMRV050			22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW				NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063												
	NMRV040			12.4	NMRV030	60	24	12.8	NMRV040			12.6	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6		NMRV030	7.5	186		4.0	NMRV030	10		140	5.1	NMRV030		15	94	7.2		NMRV030	20	70		8.3	NMRV030	25	56	10.7	NMRV030	30	47	12.3	NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030		5	280		11.2	NMRV040					3.5	NMRV030		7.5	186		5.3	NMRV040			5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030						17.0		NMRV040		40		35		21.9		NMRV050			22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW				NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063													
	NMRV030	60	24	12.8	NMRV040			12.6	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6		NMRV030	7.5	186		4.0	NMRV030	10		140	5.1	NMRV030		15	94	7.2		NMRV030	20	70		8.3	NMRV030	25		56	10.7	NMRV030	30	47	12.3	NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030		5	280		11.2	NMRV040					3.5	NMRV030		7.5	186		5.3	NMRV040				5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030						17.0		NMRV040		40		35		21.9		NMRV050				22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW				NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063														
	NMRV040			12.6	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6		NMRV030	7.5	186		4.0	NMRV030	10		140	5.1	NMRV030		15	94	7.2		NMRV030	20	70		8.3	NMRV030	25		56	10.7	NMRV030		30	47	12.3	NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030		5	280		11.2	NMRV040					3.5	NMRV030		7.5	186		5.3	NMRV040					5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030						17.0		NMRV040		40		35		21.9		NMRV050					22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW				NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063															
	NMRV030	80	18	13.8	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6		NMRV030	7.5	186		4.0	NMRV030	10		140	5.1	NMRV030		15	94	7.2		NMRV030	20	70		8.3	NMRV030	25		56	10.7	NMRV030		30	47	12.3		NMRV030	40	35	12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030		5	280		11.2	NMRV040					3.5	NMRV030		7.5	186		5.3	NMRV040					5.3	NMRV030		10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030						17.0		NMRV040		40		35		21.9		NMRV050						22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW				NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063																
	NMRV040			16.8	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6		NMRV030	7.5	186		4.0	NMRV030	10		140	5.1	NMRV030		15	94	7.2		NMRV030	20	70		8.3	NMRV030	25		56	10.7	NMRV030		30	47	12.3		NMRV030	40	35		12.8	NMRV030	50	28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030		5	280		11.2	NMRV040					3.5	NMRV030		7.5	186		5.3	NMRV040					5.3	NMRV030		10	140		6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030						17.0		NMRV040		40		35		21.9		NMRV050						22.7		NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW				NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063																	
	NMRV040	100	14	19.5	0.09kW	NMRV030	5	280		2.7	0.25kW	NMRV030		5	280	7.6		NMRV030	7.5	186		4.0	NMRV030	10		140	5.1	NMRV030		15	94	7.2		NMRV030	20	70		8.3	NMRV030	25		56	10.7	NMRV030		30	47	12.3		NMRV030	40	35		12.8	NMRV030	50		28	17.4	NMRV040			18.6	NMRV030	60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5		280	3.6		0.37kW	NMRV030		5	280		11.2	NMRV040					3.5	NMRV030		7.5	186		5.3	NMRV040					5.3	NMRV030		10	140		6.8	NMRV040				8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030						17.0		NMRV040		40		35		21.9		NMRV050						22.7		NMRV030				23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW				NMRV030			80.1						NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063																		
0.09kW	NMRV030	5	280	2.7		0.25kW	NMRV030	5		280	7.6																																																																																																																																																																																																																																																																							
	NMRV030	7.5	186	4.0		NMRV030	10	140		5.1	NMRV030	15		94	7.2	NMRV030		20	70	8.3		NMRV030	25	56		10.7	NMRV030	30		47	12.3	NMRV030		40	35	12.8		NMRV030	50	28		17.4	NMRV040				18.6	NMRV030		60	24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5	280	3.6	0.37kW	NMRV030	5	280	11.2	NMRV040			3.5	NMRV030		7.5	186		5.3	NMRV040					5.3	NMRV030		10	140		6.8	NMRV040					8.9	NMRV030		15	94		9.6	NMRV040					9.9	NMRV030	20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030			17.0	NMRV040	40	35	21.9	NMRV050			22.7	NMRV030				23.2		NMRV040		50		28		24.7		NMRV050						26.0		NMRV040					25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW	NMRV030			80.1						NMRV050	50	28	83.3								NMRV050	60	24	80.6						NMRV063																																				
	NMRV030	10	140	5.1		NMRV030	15	94		7.2	NMRV030	20		70	8.3	NMRV030		25	56	10.7		NMRV030	30	47		12.3	NMRV030	40		35	12.8	NMRV030		50	28	17.4		NMRV040				18.6	NMRV030	60		24	19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5	280	3.6		0.37kW	NMRV030	5	280	11.2	NMRV040			3.5	NMRV030	7.5	186	5.3	NMRV040					5.3	NMRV030		10	140		6.8	NMRV040					8.9	NMRV030		15	94		9.6	NMRV040					9.9	NMRV030		20	70	11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030			17.0		NMRV040	40	35	21.9	NMRV050			22.7	NMRV030			23.2	NMRV040	50	28		24.7		NMRV050						26.0		NMRV040						25.3		NMRV050		60	24	26.2	NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW	NMRV030			80.1							NMRV050	50	28	83.3						NMRV050	60		24	80.6						NMRV063																																									
	NMRV030	15	94	7.2		NMRV030	20	70		8.3	NMRV030	25		56	10.7	NMRV030		30	47	12.3		NMRV030	40	35		12.8	NMRV030	50		28	17.4	NMRV040				18.6		NMRV030	60	24		19.2	NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5	280	3.6		0.37kW	NMRV030	5	280		11.2	NMRV040			3.5	NMRV030	7.5	186	5.3	NMRV040			5.3	NMRV030		10	140		6.8	NMRV040					8.9	NMRV030		15	94		9.6	NMRV040					9.9	NMRV030		20	70		11.0	NMRV040			13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030			17.0		NMRV040	40	35	21.9		NMRV050			22.7	NMRV030			23.2	NMRV040	50	28	24.7	NMRV050				26.0		NMRV040						25.3		NMRV050		60		24		26.2		NMRV040			33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28	83.3						NMRV050	60	24	80.6						NMRV063																																														
	NMRV030	20	70	8.3		NMRV030	25	56		10.7	NMRV030	30		47	12.3	NMRV030		40	35	12.8		NMRV030	50	28		17.4	NMRV040				18.6	NMRV030		60	24	19.2		NMRV040			19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5	280	3.6		0.37kW	NMRV030	5	280		11.2	NMRV040				3.5	NMRV030	7.5	186	5.3	NMRV040			5.3	NMRV030	10	140	6.8	NMRV040					8.9	NMRV030		15	94		9.6	NMRV040					9.9	NMRV030		20	70		11.0	NMRV040				13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030			17.0		NMRV040	40	35	21.9		NMRV050			22.7		NMRV030			23.2	NMRV040	50	28	24.7	NMRV050			26.0	NMRV040				25.3		NMRV050		60		24		26.2		NMRV040						33.6	NMRV050	80	18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																		
	NMRV030	25	56	10.7		NMRV030	30	47		12.3	NMRV030	40		35	12.8	NMRV030		50	28	17.4		NMRV040				18.6	NMRV030	60		24	19.2	NMRV040				19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5	280	3.6		0.37kW	NMRV030	5	280		11.2	NMRV040				3.5	NMRV030	7.5	186		5.3	NMRV040			5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030		15	94		9.6	NMRV040					9.9	NMRV030		20	70		11.0	NMRV040					13.0	NMRV030	25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030			17.0		NMRV040	40	35	21.9		NMRV050			22.7		NMRV030			23.2		NMRV040	50	28	24.7	NMRV050			26.0	NMRV040			25.3	NMRV050	60	24		26.2		NMRV040						33.6		NMRV050		80		18	34.7	NMRV040			39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																							
	NMRV030	30	47	12.3		NMRV030	40	35		12.8	NMRV030	50		28	17.4	NMRV040				18.6		NMRV030	60	24		19.2	NMRV040				19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5	280	3.6		0.37kW	NMRV030	5	280		11.2	NMRV040				3.5	NMRV030	7.5	186		5.3	NMRV040				5.3	NMRV030	10	140	6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040					9.9	NMRV030		20	70		11.0	NMRV040					13.0	NMRV030		25	56	14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030			17.0		NMRV040	40	35	21.9		NMRV050			22.7		NMRV030			23.2		NMRV040	50	28	24.7		NMRV050			26.0	NMRV040			25.3	NMRV050	60	24	26.2	NMRV040				33.6		NMRV050		80		18		34.7		NMRV040				39.0	NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																												
	NMRV030	40	35	12.8		NMRV030	50	28		17.4	NMRV040				18.6	NMRV030		60	24	19.2		NMRV040				19.0	NMRV040	80	18	25.2	NMRV040	100	14	29.3	0.12kW	NMRV030	5	280	3.6		0.37kW	NMRV030	5	280		11.2	NMRV040				3.5	NMRV030	7.5	186		5.3	NMRV040				5.3	NMRV030	10	140		6.8	NMRV040			8.9	NMRV030	15	94	9.6	NMRV040			9.9	NMRV030		20	70		11.0	NMRV040					13.0	NMRV030		25	56		14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030			17.0		NMRV040	40	35	21.9		NMRV050			22.7		NMRV030			23.2		NMRV040	50	28	24.7		NMRV050			26.0		NMRV040			25.3	NMRV050	60	24	26.2	NMRV040			33.6	NMRV050	80	18		34.7		NMRV040						39.0		NMRV050	100	14	39.6	NMRV030			5.4	NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																	
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	NMRV040	100	14	29.3	0.12kW	NMRV030	5	280	3.6		0.37kW	NMRV030	5	280		11.2	NMRV040				3.5	NMRV030	7.5	186		5.3	NMRV040				5.3	NMRV030	10	140		6.8	NMRV040				8.9	NMRV030	15	94		9.6	NMRV040				9.9	NMRV030	20	70		11.0	NMRV040				13.0	NMRV030	25	56		14.3	NMRV040			15.1	NMRV030	30	47	16.4	NMRV040			16.6	0.18kW	NMRV030			17.0		NMRV040	40	35	21.9		NMRV050			22.7		NMRV030			23.2		NMRV040	50	28	24.7		NMRV050			26.0		NMRV040			25.3		NMRV050	60	24	26.2		NMRV040			33.6		NMRV050	80	18	34.7		NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4	NMRV040			5.4	0.37kW	NMRV030				80.1							NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																															
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	NMRV030	7.5	186	5.3		NMRV040			5.3		NMRV030	10	140	6.8		NMRV040			8.9		NMRV030	15	94	9.6		NMRV040			9.9		NMRV030	20	70	11.0		NMRV040			13.0		NMRV030	25	56	14.3		NMRV040			15.1		NMRV030	30	47	16.4		NMRV040			16.6	0.18kW	NMRV030			17.0		NMRV040	40	35	21.9	NMRV050			22.7	NMRV030			23.2	NMRV040		50	28	24.7	NMRV050				26.0	NMRV040				25.3	NMRV050		60	24	26.2	NMRV040				33.6	NMRV050		80	18	34.7	NMRV040				39.0	NMRV050		100	14	39.6	NMRV030				5.4	NMRV040				5.4	0.37kW		NMRV030				80.1						NMRV050	50	28	83.3							NMRV050	60	24	80.6						NMRV063																																																																																																																			
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0.18kW	NMRV030			17.0		NMRV040	40	35	21.9		NMRV050			22.7		NMRV030			23.2		NMRV040	50	28	24.7		NMRV050			26.0		NMRV040			25.3		NMRV050	60	24	26.2		NMRV040			33.6		NMRV050	80	18	34.7		NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030				80.1							NMRV050		50	28	83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																													
	NMRV040	40	35	21.9		NMRV050			22.7		NMRV030			23.2		NMRV040	50	28	24.7		NMRV050			26.0		NMRV040			25.3		NMRV050	60	24	26.2		NMRV040			33.6		NMRV050	80	18	34.7		NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050		50	28	83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																		
	NMRV050			22.7		NMRV030			23.2		NMRV040	50	28	24.7		NMRV050			26.0		NMRV040			25.3		NMRV050	60	24	26.2		NMRV040			33.6		NMRV050	80	18	34.7		NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50		28	83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																							
	NMRV030			23.2		NMRV040	50	28	24.7		NMRV050			26.0		NMRV040			25.3		NMRV050	60	24	26.2		NMRV040			33.6		NMRV050	80	18	34.7		NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																												
	NMRV040	50	28	24.7		NMRV050			26.0		NMRV040			25.3		NMRV050	60	24	26.2		NMRV040			33.6		NMRV050	80	18	34.7		NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																																	
	NMRV050			26.0		NMRV040			25.3		NMRV050	60	24	26.2		NMRV040			33.6		NMRV050	80	18	34.7		NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																																						
	NMRV040			25.3		NMRV050	60	24	26.2		NMRV040			33.6		NMRV050	80	18	34.7		NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																																											
	NMRV050	60	24	26.2		NMRV040			33.6		NMRV050	80	18	34.7		NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																																																
	NMRV040			33.6		NMRV050	80	18	34.7		NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																																																					
	NMRV050	80	18	34.7		NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																																																										
	NMRV040			39.0		NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																																																															
	NMRV050	100	14	39.6		NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																																																																				
	NMRV030			5.4		NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																																																																									
	NMRV040			5.4	0.37kW	NMRV030			80.1								NMRV050	50	28		83.3						NMRV050	60	24	80.6						NMRV063																																																																																																																																																																																																																																														
0.37kW	NMRV030			80.1																																																																																																																																																																																																																																																																														
	NMRV050	50	28	83.3																																																																																																																																																																																																																																																																														
	NMRV050	60	24	80.6																																																																																																																																																																																																																																																																														
	NMRV063																																																																																																																																																																																																																																																																																	

**性能 Performance**NMRV性能参数($n_1=1400\text{r/min}$)—续 NMRV Performance data ($n_1 = 1400\text{r/min}$) –Continued

kW	TYPE	i	$n_2(\text{r/min})$	$M_2(\text{N.m})$
0.37kW	NMRV063	60	24	86.5
	NMRV063	80	18	113.5
	NMRV063	100	14	122.6
	NMRV040	5	280	16.6
	NMRV050			16.7
	NMRV040	7.5	186	24.3
	NMRV050			24.6
	NMRV040	10	140	31.5
	NMRV050			32.0
	NMRV040	15	94	45.3
0.55kW	NMRV050			45.5
	NMRV063	20	70	60.5
	NMRV063			61.6
	NMRV050	25	56	72.3
	NMRV063			73.2
	NMRV050	30	47	80.0
	NMRV063			83.3
	NMRV050	40	35	104.0
	NMRV063			107.5
	NMRV075	50	28	115.7
0.75kW	NMRV063			123.9
	NMRV075	60	24	144.3
	NMRV063			128.6
	NMRV075	80	18	156.5
	NMRV075			180.0
	NMRV063	100	14	215.8
	NMRV075			235.0
	NMRV050	5	280	22.7
	NMRV050	7.5	186	33.6
	NMRV063			33.8
1.1kW	NMRV050	10	140	43.6
	NMRV063			44.5
	NMRV050	15	94	62.0
	NMRV063			63.7
	NMRV050	20	70	82.4
	NMRV063			84.0
	NMRV063	25	56	99.8
	NMRV063			113.6
	NMRV075	30	47	124.4
	NMRV063			146.6
3.0kW	NMRV075	40	35	157.8
	NMRV075	50	28	196.8
	NMRV090			186.1
	NMRV075	60	24	213.4
	NMRV090			211.9
	NMRV090	80	18	261.1
	NMRV090			292.7
	NMRV063	100	14	49.6
	NMRV075			51.4
	NMRV063	7.5	186	65.3
2.2kW	NMRV075	10	140	67.8
	NMRV063			93.5
	NMRV075	15	94	98.6
	NMRV063			123.2
	NMRV075	20	70	127.7
	NMRV063			146.4
	NMRV075	25	56	159.2
	NMRV063			166.7
	NMRV075	30	47	182.5
	NMRV075	40	35	231.4

**性能 Performance**NMRV性能参数($n_1=1400\text{r/min}$)—续 NMRV Performance data ($n_1 = 1400\text{r/min}$) –Continued

kW	TYPE	i	$n_2(\text{r/min})$	$M_2(\text{N.m})$
3.0kW	NMRV110	25	56	435.3
	NMRV090	30	47	494.1
	NMRV110			483.3
	NMRV110	60	24	310.8
	NMRV110			319.1
	NMRV110	80	18	403.8
	NMRV110			471.2
	NMRV063	100	14	471.2
	NMRV075	7.5	186	67.6
	NMRV063			70.1
4.0kW	NMRV063	10	140	89.1
	NMRV075	10	140	92.5
	NMRV063	15	94	127.5
	NMRV075			134.5
	NMRV063	20	70	167.9
	NMRV075			174.1
	NMRV063	25	56	217.1
	NMRV090			211.0
	NMRV075	30	47	248.9
	NMRV090			247.1
5.5kW	NMRV090	40	35	313.3
	NMRV090	50	28	372.1
	NMRV110			392.9
	NMRV090	60	24	423.8
	NMRV110			435.1
	NMRV110	80	18	550.7
	NMRV130			534.0
	NMRV130	100	14	672.2
	NMRV075			102.8
	NMRV090	7.5	186	101.9
7.5kW	NMRV110			101.8
	NMRV075	10	140	135.7
	NMRV090			134.8
	NMRV110	15	94	197.3
	NMRV090			196.7
	NMRV110	20	70	254.9
	NMRV110			254.5
	NMRV090	25	56	309.5
	NMRV110			319.2
	NMRV090	30	47	362.4
2.2kW	NMRV110			354.5
	NMRV110	40	35	465.8
	NMRV110			465.8
	NMRV110	50	28	576.2
	NMRV130			568.7
	NMRV110	60	24	638.1
	NMRV130			655.6
	NMRV130	80	18	783.1
	NMRV130			985.9
	NMRV075	100	14	985.9
3.0kW	NMRV075			140.1
	NMRV090	7.5	186	139.0
	NMRV110			138.8
	NMRV075	10	140	185.0
	NMRV090			183.8
	NMRV110	15	94	182.3
	NMRV075			269.0
	NMRV090	20	70	268.2
	NMRV110			262.7
	NMRV090	30	47	347.7
4.0kW	NMRV110			347.0
	NMRV090	25	56	422.0
	NMRV075			422.0
	NMRV090	30	47	422.0
	NMRV110			422.0
	NMRV090	40	35	422.0
	NMRV075			422.0
	NMRV090	50	28	422.0
	NMRV110			422.0
	NMRV090	60	24	422.0

**性能 Performance**DRV功率配置(n₁=1400r/min) DRV Power configuration (n₁ = 1400r/min)

NMRV+NMRV	i=i ₁ × i ₂	300	400	500	600	750	900	1200	1500	1800	2400	3000	3200
DRV030/040	0.06kW												
	0.09kW												
DRV030/050	0.06kW												
	0.09kW												
	0.12kW												
	0.18kW												
DRV030/063	0.06kW												
	0.09kW												
	0.12kW												
	0.18kW												
DRV040/075	0.06kW												
	0.09kW												
	0.12kW												
	0.18kW												
	0.25kW												
	0.37kW												
	0.09kW												
DRV040/090	0.12kW												
	0.18kW												
	0.25kW												
	0.37kW												
	0.09kW												
DRV050/110	0.12kW												
	0.18kW												
	0.25kW												
	0.37kW												
	0.55kW												
	0.75kW												
	0.25kW												
DRV050/130	0.37kW												
	0.55kW												
	0.75kW												
	1.1kW												
	1.5kW												

注：空格为不允许的配置。

Note: Space part is not allowed to configure

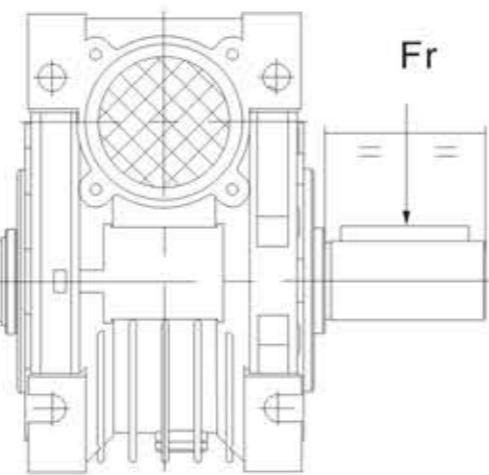
**性能 Performance**DRV性能参数(n₁=1400r/min) DRV Performance data (n₁=1400r/min)

kW	NMRV+NMRV	i	n ₂ (r/min)	M ₂ (N.m)	i ₁	i ₂	kW	NMRV+NMRV	i	n ₂ (r/min)	M ₂ (N.m)	i ₁	i ₂
0.06kW	DRV030/040	300	4.7	68.7	10	30	0.18kW	DRV040/075	750	1.9	550.4	25	30
	DRV030/040	400	3.5	90.7	10	40		DRV040/090	900	1.6	599.7	30	30
	DRV030/040	500	2.8	101.6	20	25		DRV040/090	1200	1.2	760.8	30	40
	DRV030/040	600	2.3	111.5	20	30		DRV040/090	1500	0.9	903.7	30	50
	DRV030/040	750	1.9	145.0	25	30		DRV050/110	1800	0.8	932.3	60	30
	DRV030/040	900	1.6	165.8	30	30		DRV050/110	2400	0.6	1216.4	60	40
	DRV030/050	1200	1.2	218.8	30	40		DRV040/075	300	4.7	347.6	10	30
	DRV030/050	1500	0.9	247.5	50	30		DRV040/075	400	3.5	440.6	10	40
	DRV030/063	1800	0.8	270.2	30	50		DRV040/075	500	2.8	550.1	10	50
	DRV030/063	2400	0.6	353.9	60	40		DRV040/090	750	1.9	790.7	15	50
0.25kW	DRV040/075	300	4.7	365.7	60	40		DRV040/090	900	1.6	900.6	15	60
	DRV040/075	400	3.5	388.7	60	40		DRV050/110	1200	1.2	1129.0	30	40
	DRV040/075	500	2.8	385.6	60	50		DRV050/110	1500	0.9	1285.9	50	30
	DRV040/075	600	2.3	404.8	60	50		DRV050/110	1800	0.8	1294.9	60	30
	DRV040/075	900	1.6	421.4	60	50		DRV063/130	2400	0.6	1820.3	60	40
	DRV040/075	1200	1.2	485.3	60	50		DRV063/130	3000	0.5	2214.1	60	50
	DRV040/075	1500	0.9	450.5	50	30		DRV040/075	300	4.7	514.5	10	30
	DRV040/075	1800	0.8	460.0	60	30		DRV040/090	400	3.5	499.3	7.5	40
	DRV040/090	2400	0.6	579.3	60	40		DRV040/090	500	2.8	647.9	10	40
	DRV040/090	3000	0.5	688.2	60	50		DRV040/090	600	2.3	769.7	10	50
0.09kW	DRV030/040	300	4.7	103.1	10	30	0.37kW	DRV040/090	750	1.9	932.5	15	40
	DRV030/050	400	3.5	141.1	10	40		DRV040/090	900	1.6	1157.2	25	30
	DRV030/050	500	2.8	161.3	10	50		DRV050/110	900	1.6	1280.6	30	30
	DRV030/050	600	2.3	176.2	20	30		DRV063/130	1200	1.2	1741.2	40	30
	DRV030/050	750	1.9	229.1	25	30		DRV063/130	1500	0.9	2006.2	50	30
	DRV030/063	900	1.6	272.7	30	30		DRV063/130	1800	0.8	2082.8	60	30
	DRV030/063	1200	1.2	351.8	30	40		DRV050/110	300	4.7	760.4	10	30
0.55kW	DRV040/075	1500	0.9	450.5	50	30		DRV050/110	400	3.5	992.1	10	40
	DRV040/075	1800	0.8	460.0	60	30		DRV050/110	500	2.8	1227.3	10	5

性能 Performance

减速机出力轴的许可径向加载力(N) Permission from reducer output shaft load force

i	n ₂	RV030	RV040	RV050	RV063	RV075	RV090	RV110	RV130
5	280	599	1149	1586	2062	2428	2687	3389	4433
7.5	186	691	1325	1829	2378	2799	3098	3908	5112
10	140	758	1454	2007	2609	3072	3400	4288	5610
15	94	868	1665	2298	2988	3518	3893	4910	6424
20	70	954	1829	2525	3283	3865	4277	5395	7057
25	56	1033	1981	2735	3556	4187	4633	5844	7645
30	47	1088	2087	2881	3745	4410	4880	6155	8052
40	35	1204	2309	3188	4145	4880	5401	6812	8912
50	28	1296	2485	3431	4461	5252	5812	7331	9590
60	24	1381	2649	3658	4756	5599	6196	7815	10224
80	18	1516	2907	4014	5218	6144	6799	8576	11219
100	14	1638	3142	4338	5639	6639	7348	9268	12124



-表中的数值为作用于出力轴中点的许可加载力。

-Figures in the table means the permitted load power acting on the mid-point of the output shaft.

-当减速机为双出轴时，折算到轴端的径向合力不能超过表中规定的数值。

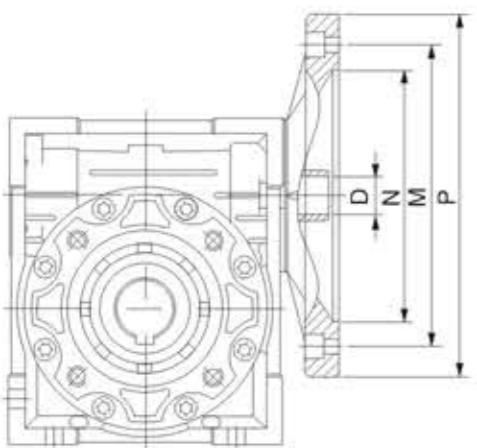
-The radial force can not exceed the figures in the table when the reducer has two output shafts.

-当径向力和轴向力同时施加时，最大许可的轴向推力为径向力的1/5。

-When the radial force and axial force applied at the same time, the maximum permissible axial thrust of the axial thrust of the 1/5.

NMRV减速机的电机配合接口

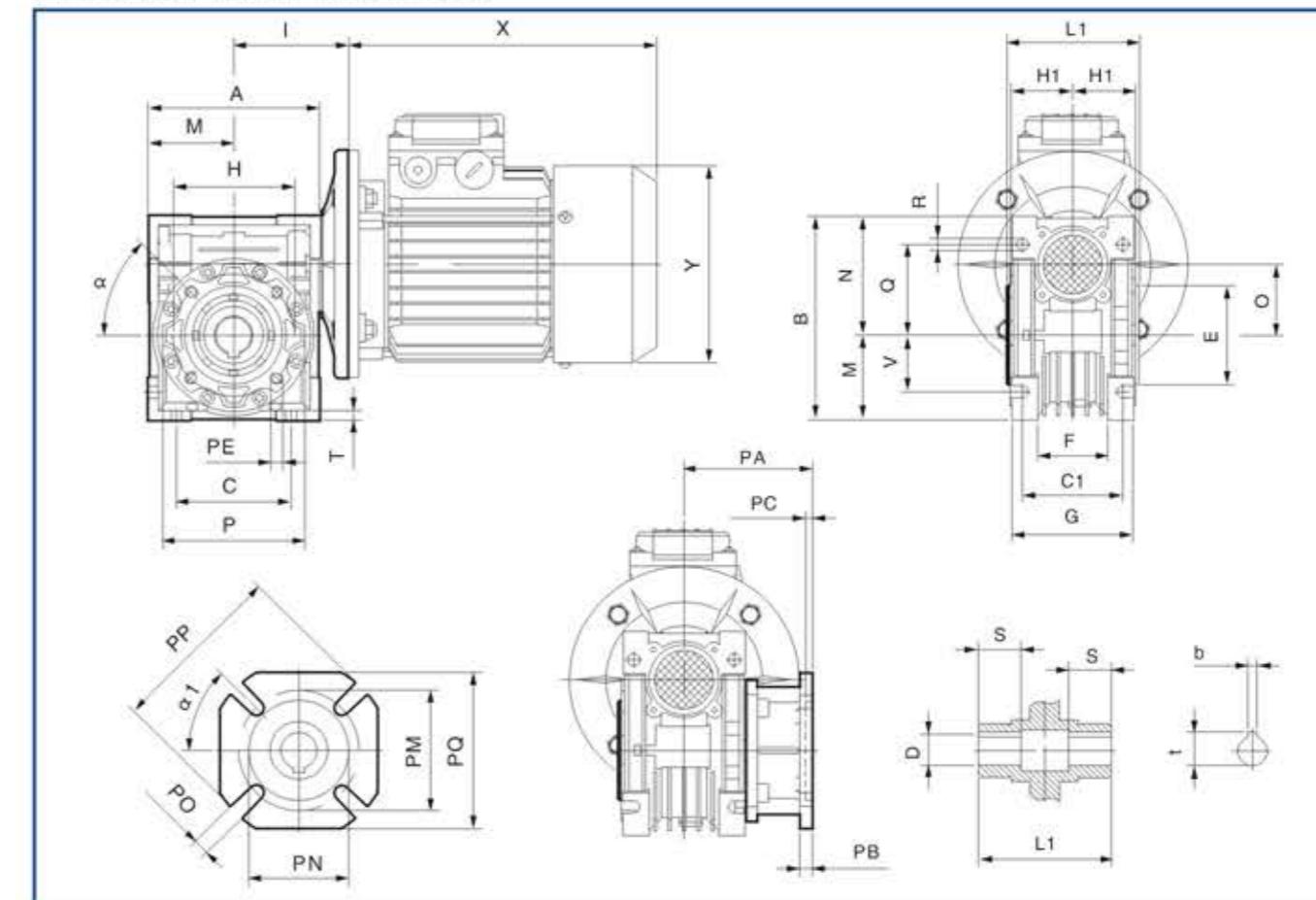
NMRV Motor reducer with the interface



	PAME IEC	D														
		N B5	M B14	P B5	5	7.5	10	15	20	25	30	40	50	60	80	100
NMRV 030	56B5/B14	80	50	100	65	120	80	9	9	9	9	9	9	9	9	-
	63B5/B14	95	60	115	75	140	90	11	11	11	11	11	11	11	-	-
NMRV 040	56B5	80	-	100	-	120	-	-	-	-	-	-	-	9	9	9
	63B5/B14	95	60	115	75	140	90	11	11	11	11	11	11	11	11	11
NMRV 050	71B5/B14	110	70	130	85	160	105	14	14	14	14	14	14	14	-	-
	80B5/B14	130	80	165	100	200	120	19	19	19	19	-	-	-	-	-
NMRV 063	63B5	95	-	115	-	140	-	-	-	-	-	11	11	11	11	11
	71B5/B14	110	70	130	85	160	105	14	14	14	14	14	14	14	14	-
NMRV 075	80B5/B14	130	80	165	100	200	120	19	19	19	19	19	19	19	-	-
	90B5/B14	130	95	165	115	200	140	-	24	24	24	24	24	-	-	-
NMRV 100	80B5/B14	130	80	165	100	200	120	-	-	-	19	19	19	19	19	-
	90B5/B14	130	95	165	115	200	140	-	24	24	24	24	24	-	-	-
NMRV 110	100B5/B14	180	110	215	130	250	160	-	28	28	28	-	-	-	-	-
	112B5/B14	180	110	215	130	250	160	-	28	-	-	-	-	-	-	-
NMRV 120	80B5/B14	130	80	165	100	200	120	-	-	-	-	19	19	19	19	-
	90B5/B14	130	95	165	115	200	140	-	-	-	24	24	24	24	-	-
NMRV 130	100B5/B14	180	110	215	130	250	160	-	28	28	28	-	-	-	-	-
	112B5/B14	180	110	215	130	250	160	-	28	28	28	-	-	-	-	-
NMRV 140	90B5	130	-	165	-	200	-	-	-	-	-	24	24	24	24	-
	100B5	180	-	215	-	250	-	-	28	28	28	28	28	28	-	-
NMRV 150	112B5	180	-	215	-	250	-	-	28	28	28	28	28	-	-	-
	132B5	230	-	265	-	300	-	-	38	38	38	38	-	-	-	-
NMRV 160	90B5	130	-	165	-	200	-	-	-	-	-	-	-	24	24	-
	100B5	180	-	215	-	250	-	-	-	-	-	28	28	28	28	-
NMRV 170	112B5	180	-	215	-	250	-	-	28	28	28	28	28	28	-	-
	132B5	230	-	265	-	300	-	-	38	38	38	38	38	38	38	-

尺寸 Dimensions

NMRV尺寸 NMRV Dimensions



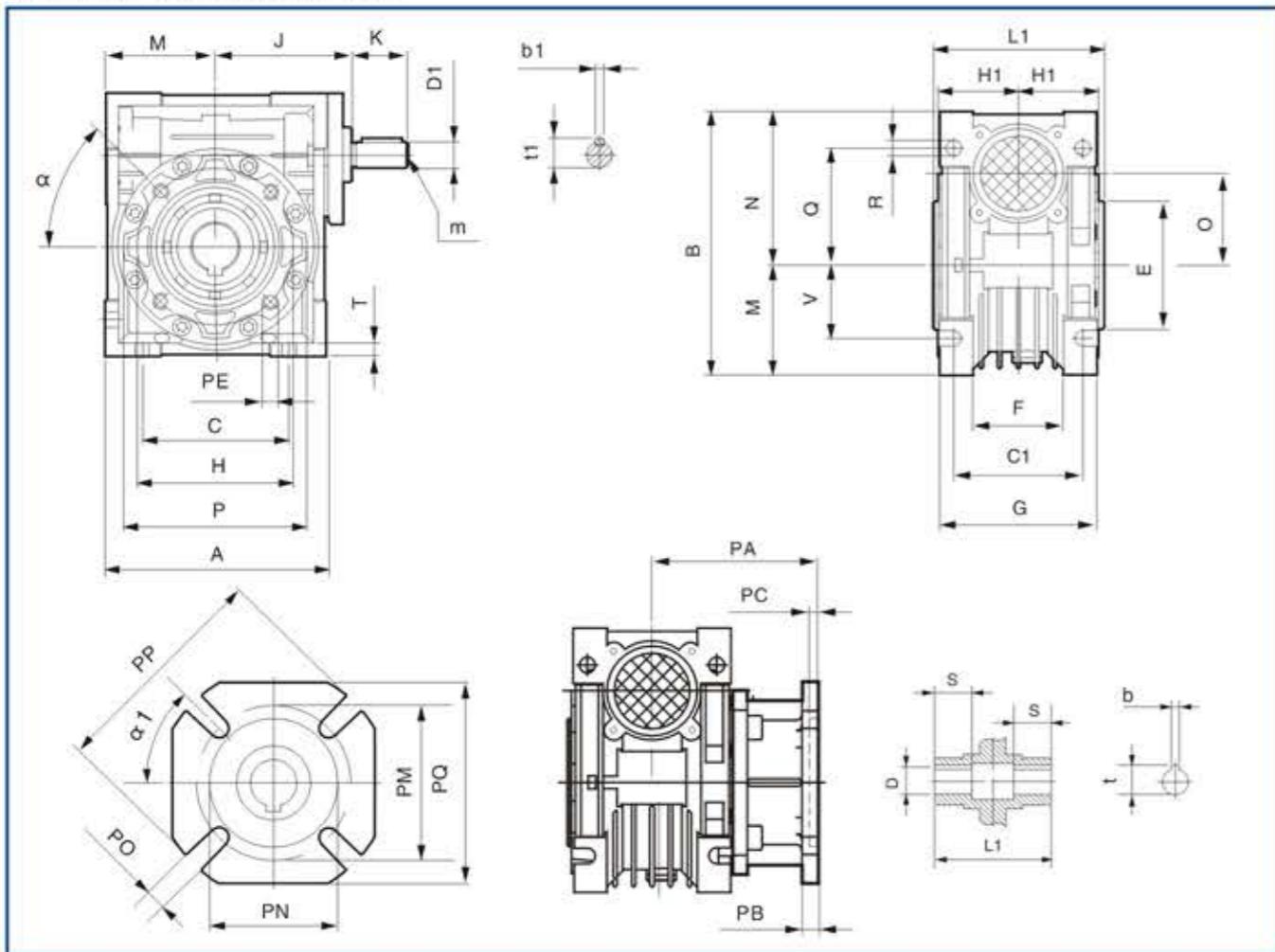
NMRV	A	B	C	C1	D(H7)	E(h8)	F	G	H	H1	I	L1	M	N	O	P	Q	R
030	80	97	54	44	14	55	32	56	65	29	55	63	40	57	30	75	44	6.5
040	100	121.5	70	60	18(19)	60	43	71	75	36.5	70	78	50	71.5	40	87	55	6.5
050	120	144	80	70	25(24)	70	49	85	85	43.5	80	92	60	84	50	100	64	8.5
063	144	174	100	85	25(28)	80	67	103	95	53	95	112	72	102	63	110	80	8.5
075	172	205	120	90	28(35)	95	72	112	115	57	112.5	120	86	119	75	140	93	11
090																		

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尺寸 Dimensions

NRV尺寸 NRV Dimensions



NRV	A	B	C	C1	D(H7)	D1(j6)	E(h8)	F	G	H	H1	J	K	L1	M	N	O	P	Q	R
030	80	97	54	44	14	9	55	32	56	65	29	51	20	63	40	57	30	75	44	6.5
040	100	121.5	70	60	18(19)	11	60	43	71	75	36.5	60	23	78	50	71.5	40	87	55	6.5
050	120	144	80	70	25(24)	14	70	49	85	85	43.5	74	30	92	60	84	50	100	64	8.5
063	144	174	100	85	25(28)	19	80	67	103	95	53	90	40	112	72	102	63	110	80	8.5
075	172	205	120	90	28(35)	24	95	72	112	115	57	105	50	120	86	119	75	140	93	11
090	206	238	140	100	35(38)	24	110	74	130	130	67	125	50	140	103	135	90	160	102	13
110	252.5	295	170	115	42	28	130	-	144	165	74	142	60	155	127.5	167.5	110	200	125	14
130	292.5	335	200	120	45	30	180	-	155	215	81	162	80	170	147.5	187.5	130	250	140	16

NRV	S	T	V	PA	PB	PC	PE	PM	PN(H8)	PO	PP	PQ	b	b1	t	t1	m	α	α_1	kg
030	21	5.5	27	54.5	6	4	M6×11(n=4)	68	50	6.5(n=4)	80	70	5	3	16.3	10.2	-	0°	45°	1.2
040	26	6.5	35	67	7	4	M6×8(n=4)	75	60	9(n=4)	110	95	6	4	20.8(21.8)	12.5	-	45°	45°	2.3
050	30	7	40	90	9	5	M8×10(n=4)	85	70	11(n=4)	125	110	8	5	28.3(27.3)	16.0	M6	45°	45°	3.5
063	36	8	50	82	10	6	M8×14(n=8)	150	115	11(n=4)	180	142	8	6	28.3(31.3)	21.5	M6	45°	45°	6.2
075	40	10	60	111	13	6	M8×14(n=8)	165	130	14(n=4)	200	170	8	8	31.3(38.3)	27.0	M8	45°	45°	9
090	45	11	70	111	13	6	M10×18(n=8)	175	152	14(n=4)	210	200	10	8	38.3(41.3)	27.0	M8	45°	45°	13
110	50	14	85	131	15	6	M10×18(n=8)	230	170	14(n=8)	280	260	12	8	45.3	31.0	M10	45°	45°	35
130	60	15	100	140	15	6	M12×21(n=8)	255	180	16(n=6)	320	290	14	8	48.8	33.0	M10	45°	22.5°	48

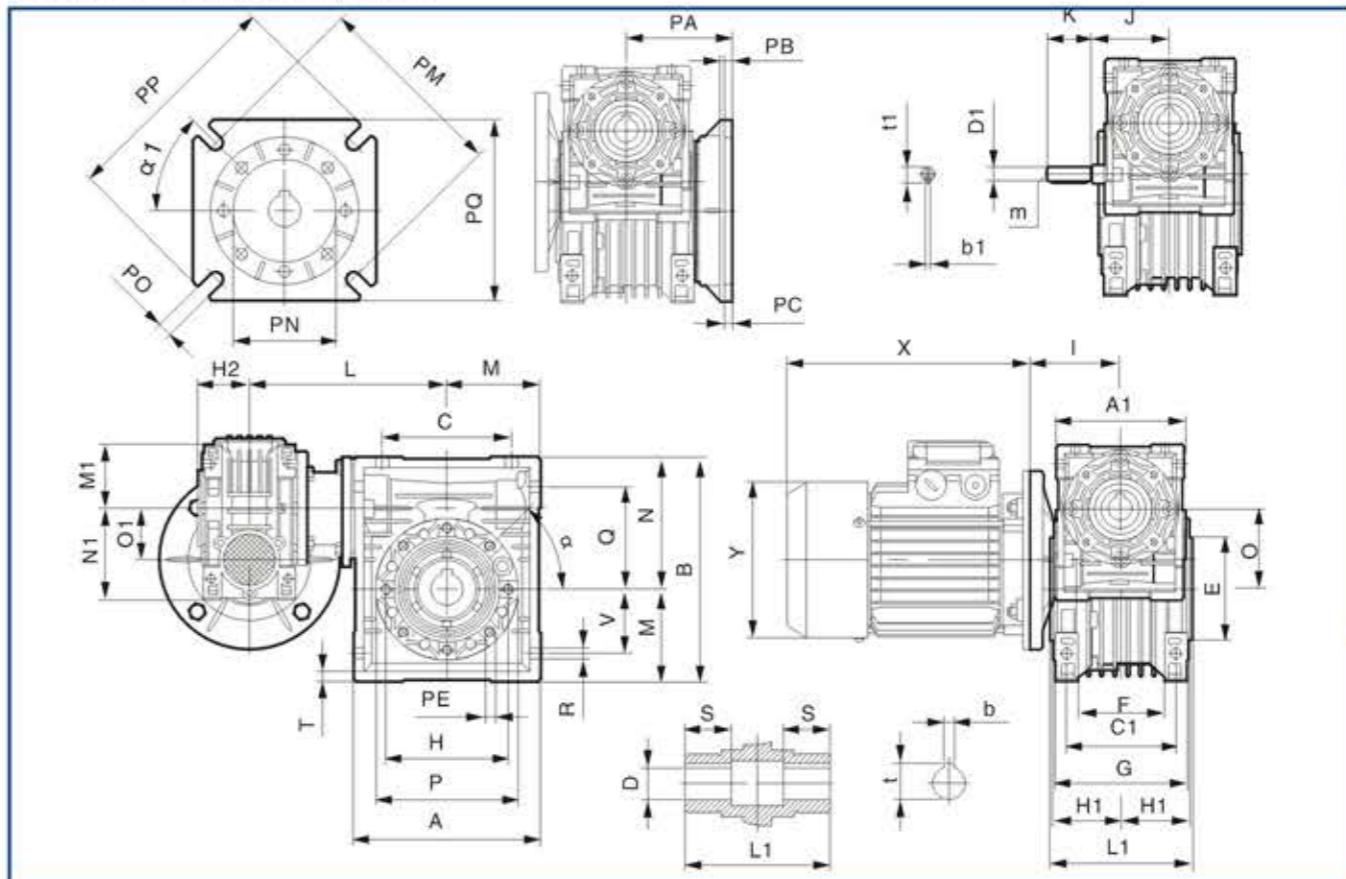
注：重量(kg.)不包含电机的重量。 Note: The weight without motor

SALITM



尺寸 Dimensions

DRV尺寸 DRV Dimensions

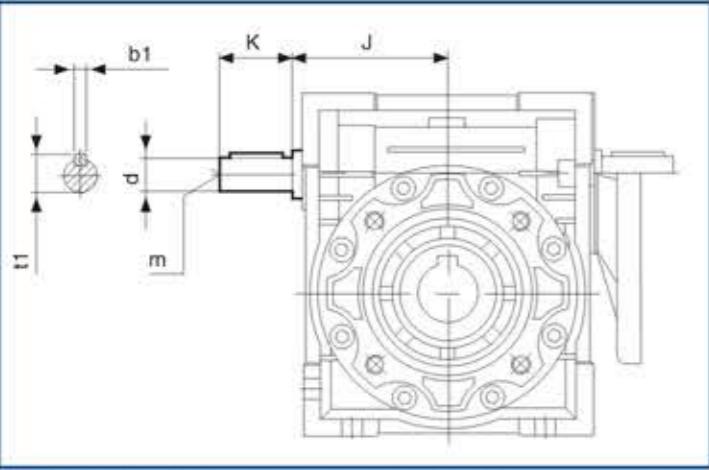


DRV	A	A1	B	C	C1	D(H7)	D1(j6)	E(h8)	F	G	H	H1	H2	I	J	K	L	L1	M	M1	N	N1	O	O1	P
030/040	100	80	121.5	70	60	18(19)	9	60	43	71	75	36.5	29	55	51	20	120	78	50	40	71.5	57	40	30	87
030/050	120	80	144	80	70	25(24)	9	70	49	85	85	43.5	29	55	51	20	130	92	60	40	84	57	50	30	100
030/063	144	80	174	100	85	25(28)	9	80	67	103	95	53	29	55	51	20	145	112	72	40	102	57	63	30	110
040/075	172	100	205	120	90	28(35)	11	95	72	112	115	57	36.5	70	60	23	165	120	86	50	119	71.5	75	40	140
040/090	206	100	238	140	100	35(38)	11	110	74	130	130	67	36.5	70	60	23	182	140	103	50	135	71.5	90	40	160
050/110	252.5	120	295	170	115	42	14	130	-	144	165	74	43.5	80	74	30	225	155	127.5	60	167.5	84	110	50	200
063/130	292.5	144	335	200	120	45	19	180	-	155	215	81	53	95	90	40	245	170	147.5	72	187.5	102	130	63	250

DRV	Q	R	S	T	V	PA	PB	PC	PE	PM	PN(H8)	PO	PP	PQ	α	α_1	b	b1	t	t1	m	kg
030/040	55	6.5	26	6.5	35	67	7	4	M6×8(n=4)	75	60	9(n=4)	110	110	45°	45°	6(6)	3	20.8(21.8)	10.2	-	3.9
030/050	64	8.5	30	7	40	90	9	5	M8×10(n=4)	85	70	11(n=4)	125	110	45°	45°	8(8)	3	28.3(27.3)	10.2	-	5.0
030/063	80	8.5	36	8	50	82	10	6	M8×14(n=8)	150	115	11(n=4)	180	142	45°	45°	8(8)	3	28.3(31.3)	10.2	-	7.8
040/075	93	11	40	10	60	111	13	6	M8×14(n=8)	165	130	14(n=4)	200	170	45°	45°	8(10)	4	31.3(38.3)	12.5	-	12.0
040/090	102	13	45	11	70	111	13	6	M10×18(n=8)	175	152	14(n=4)	210	200	45°	45°	10(10)	4	38.3(41.3)	12.5	-	16.0
050/110	125	14	50	14	85	131	15	6	M10×18(n=													

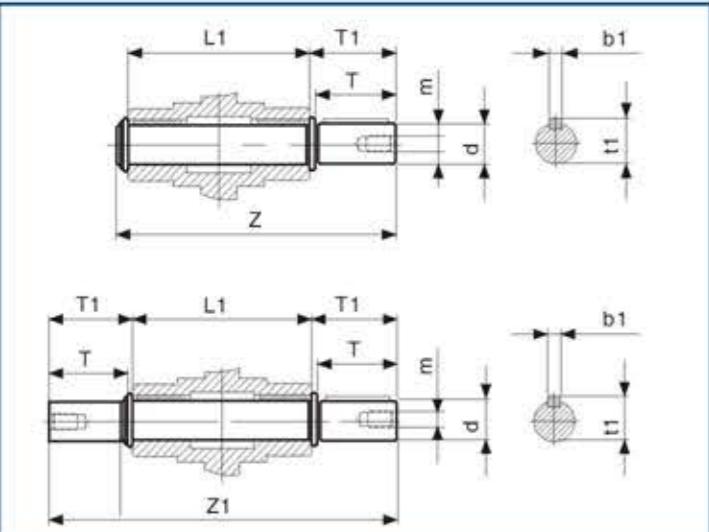
尺寸 Dimensions

蜗杆尾出轴 (E) 尺寸 The end of a worm shaft (E) size



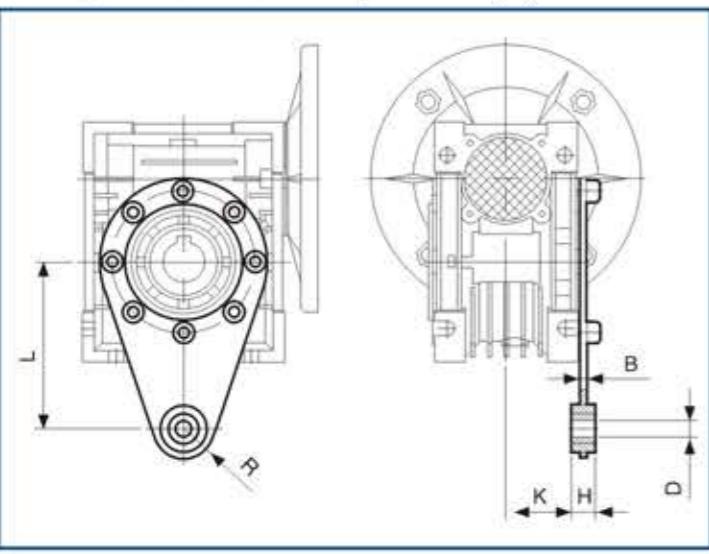
	J	d(j6)	K	m	b1	t1
030	45	9	20	-	3	10.2
040	53	11	23	-	4	12.5
050	64	14	30	M6	5	16
063	75	19	40	M6	6	21.5
075	90	24	50	M8	8	27
090	108	24	50	M8	8	27
110	135	28	60	M10	8	31
130	155	30	80	M10	8	33

蜗轮输出轴 (DZ, SZ) 尺寸 Worm shaft output (DZ, SZ) size



d(h6)	T	T1	L1	Z	Z1	m	b1	t1	
030	14	30	32.5	63	102	128	M6	5	16
040	18	40	43	78	128	164	M6	6	20.5
050	25	50	53.5	92	153	199	M10	8	28
063	25	50	53.5	112	173	219	M10	8	28
075	28	60	63.5	120	192	247	M10	8	31
090	35	80	84.5	140	234	309	M12	10	38
110	42	80	84.5	155	249	324	M16	12	45
130	45	80	85	170	265	340	M16	14	48.5

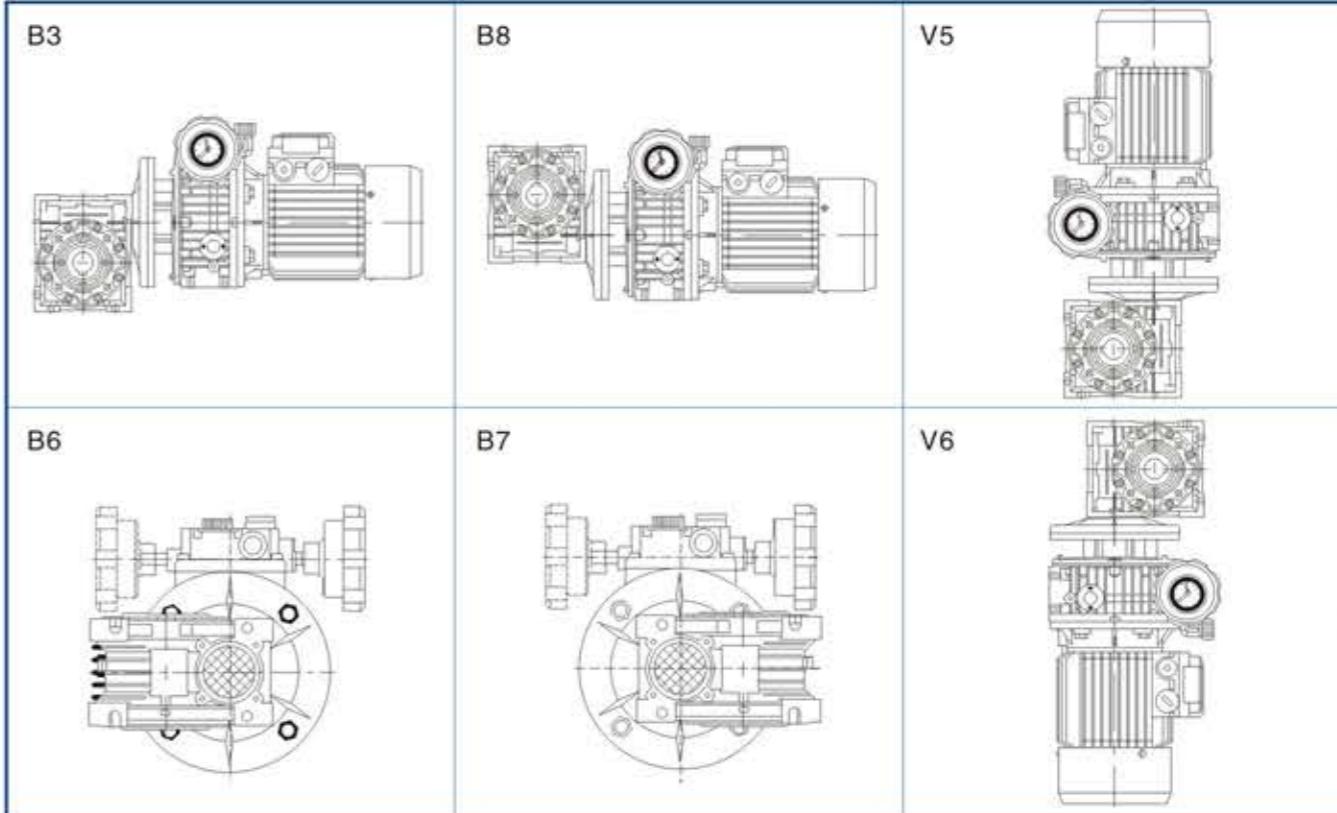
扭力臂 (A) 尺寸 Torque arm (A) size



	L	H	K	D	R	B
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

结构及安装型式 Structure And Mounting Positions

MB+NMRV安装方式 MB+NMRV Installation



结构配置

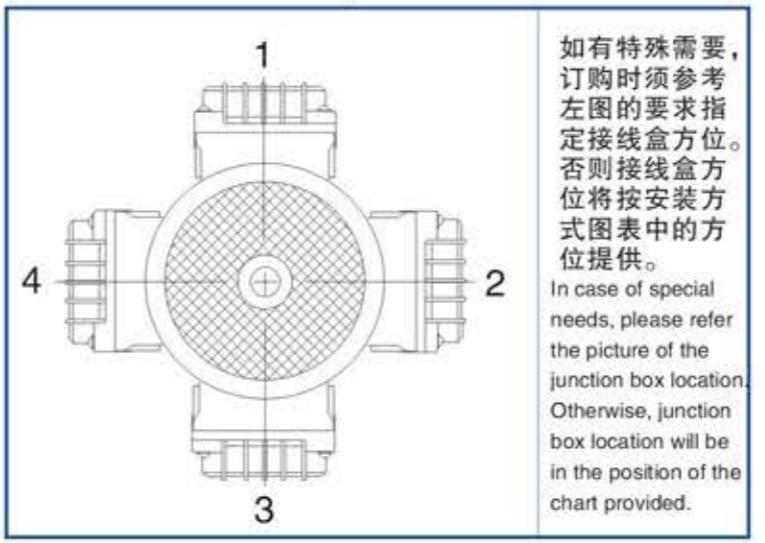
根据需要，在减速机上可以有如下配置：输出法兰 (F, FL)，扭力臂 (A)，蜗轮出力轴 (DZ, SZ)。结构件的配置方位及型式代号如下图示：

Fram

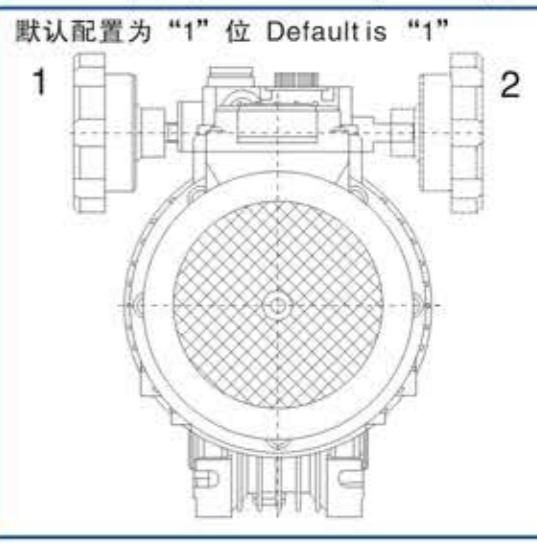
According to the needs, the reducer can have the following configuration: output flange ,(F,FL)torque arm, (A) regardless of output shaft (DZ,SZ)

Structural parts of the configuration location and form of code is shown below:

●电机接线盒方位 ●Motor junction box location



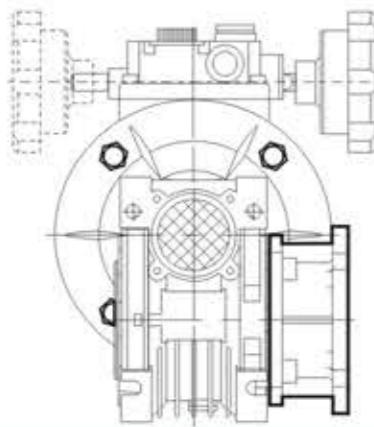
●手轮位置(1, 2) ●Handwheel position(1, 2)



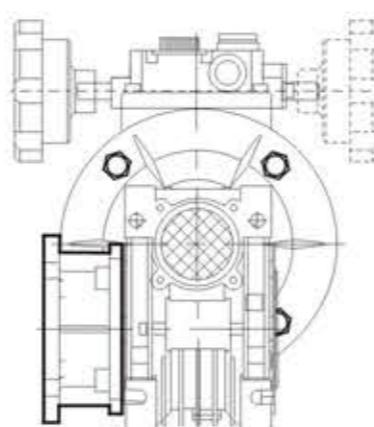
结构及安装型式 Structure And Mounting Positions

●输出法兰 (F, FL) 配置 ● Output flange (F, FL) configuration

F1, FL1

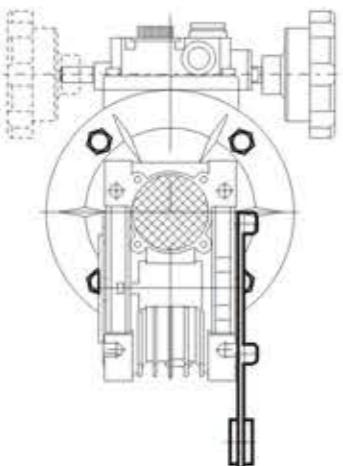


F2, FL2

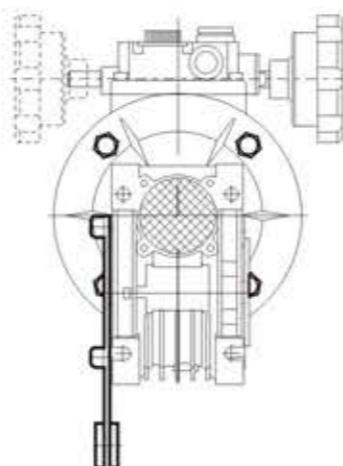


●扭力臂 (A) 配置 ● Torque arm (A) configuration

A1

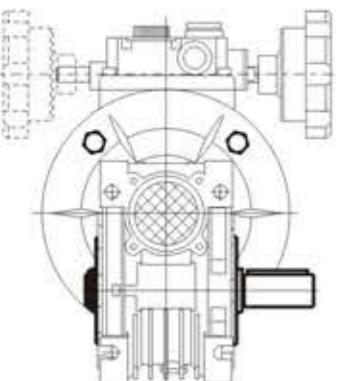


A2

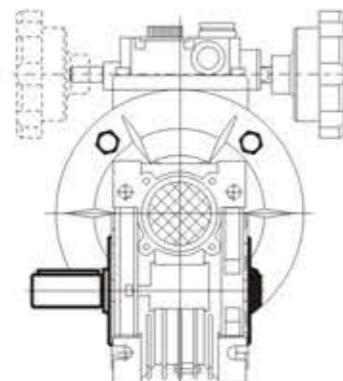


●蜗轮输出轴 (DZ, SZ) 配置 ● Worm output shaft (DZ, SZ) configuration

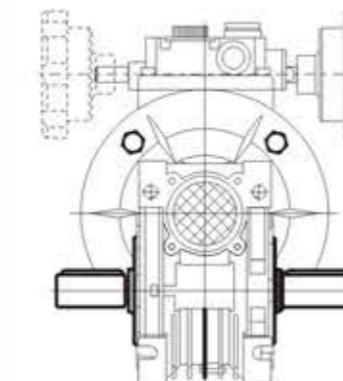
DZ1



DZ2



SZ



性能 Performance

MBN(MB)+NMRV功率配置 MBN (MB) + NMRV Power configuration

n_1	kW	MBN/MB+NMRV	iNMRV									
			5	7.5	10	15	20	25	30	40	50	60
1400r/min	0.12kW	MBN02	030									
			040									
			050									
	0.18kW	MBN02	030									
			040									
			050									
	0.25kW	MBN04	040									
			050									
			063									
			075									
	0.37kW	MBN04	040									
			050									
			063									
			075									
1400r/min	0.55kW	MBN07	063									
			075									
			090									
			063									
			075									
	0.75kW	MBN07	090									
			110									
			063									
			075									
			110									
1400r/min	1.1kW	MB15	075									
			090									
			110									
			130									
			075									
	1.5kW	MB15	090									
			110									
			130									
			075									
			090									
1400r/min	2.2kW	MB22	110									
			130									
	3kW	MB40	110									
			130									
	4kW	MB40	110									
			130									



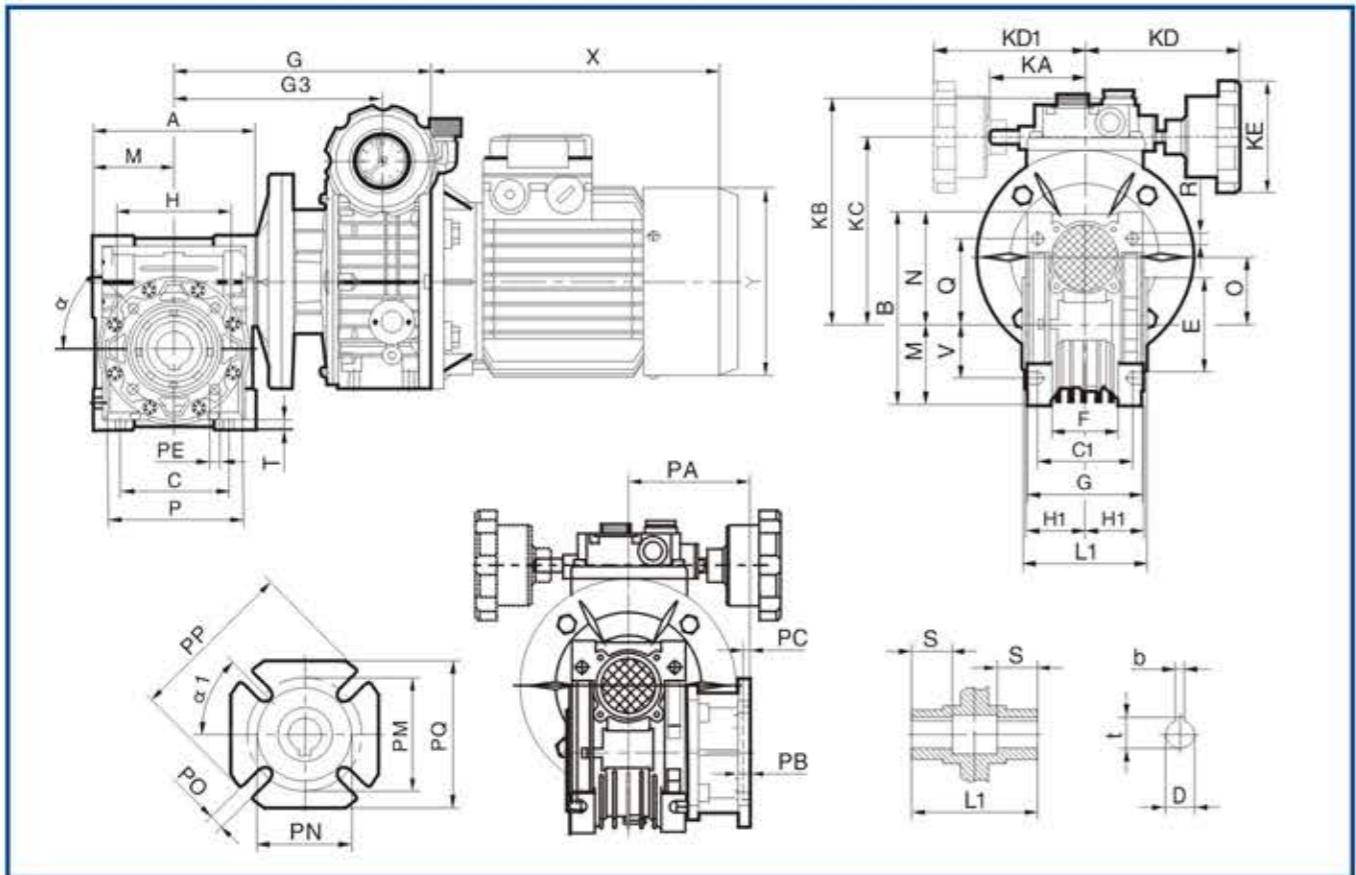
性能 Performance

MBN(MB)+NMRV($n_1=1400\text{r/min}$)性能 - MBN(MB)+NMRV($n_1=1400\text{r/min}$) Performance data.

		\bar{n}_{NMRV}	$n_{2\max}$	$n_{2\min}$	$M_{2\min}$	$M_{2\max}$	$M_{2\text{lim}}$
0.12kW n ₁ =1400 4P	MBN02+NMRV030	5	180.6	36.2	5	13	30
	MBN02+NMRV040	5	180.6	36.2	5	13	65
	MBN02+NMRV030	7.5	120.4	24.1	7	19	30
	MBN02+NMRV040	7.5	120.4	24.1	7	19	68
	MBN02+NMRV030	10	90.3	18.1	9	24	30
	MBN02+NMRV040	10	90.3	18.1	9	24	67
	MBN02+NMRV030	15	60.2	12.1	13	*	29
	MBN02+NMRV040	15	60.2	12.1	13	35	68
	MBN02+NMRV030	20	45.2	9.1	15	*	27
	MBN02+NMRV040	20	45.2	9.1	17	46	62
	MBN02+NMRV040	25	36.1	7.2	20	54	58
	MBN02+NMRV040	30	30.1	6.0	22	59	69
	MBN02+NMRV040	40	22.6	4.5	29	*	62
	MBN02+NMRV040	50	18.1	3.6	33	*	57
	MBN02+NMRV040	60	15.1	3.0	36	*	53
	MBN02+NMRV050	60	15.1	3.0	35	93	100
	MBN02+NMRV050	80	11.3	2.3	47	*	78
	MBN02+NMRV050	100	9.0	1.8	53	*	75
0.18kW n ₁ =1400 4P	MBN02+NMRV030	5	180.6	36.2	7	13	30
	MBN02+NMRV040	5	180.6	36.2	7	13	65
	MBN02+NMRV030	7.5	120.4	24.1	10	19	30
	MBN02+NMRV040	7.5	120.4	24.1	10	19	68
	MBN02+NMRV030	10	90.3	18.1	13	24	30
	MBN02+NMRV040	10	90.3	18.1	13	24	67
	MBN02+NMRV030	15	60.2	12.1	19	*	29
	MBN02+NMRV040	15	60.2	12.1	19	35	68
	MBN02+NMRV030	20	45.2	9.1	22	*	27
	MBN02+NMRV040	20	45.2	9.1	23	42	62
	MBN02+NMRV030	25	36.1	7.2	28	*	32
	MBN02+NMRV040	25	36.1	7.2	30	54	58
	MBN02+NMRV030	30	30.1	6.0	*	*	29
	MBN02+NMRV040	30	30.1	6.0	32	59	69
	MBN02+NMRV030	40	22.6	4.5	*	*	27
	MBN02+NMRV040	40	22.6	4.5	43	*	62
	MBN02+NMRV050	40	22.6	4.5	44	80	118
	MBN02+NMRV040	50	18.1	3.6	48	*	57
	MBN02+NMRV050	50	18.1	3.6	51	92	114
	MBN02+NMRV050	60	15.1	3.0	51	93	100
	MBN02+NMRV050	80	11.3	2.3	68	*	78
	MBN02+NMRV050	100	9.0	1.8	*	*	75
0.25kW n ₁ =1400 4P	MBN04+NMRV040	5	200.0	40.0	10	26	65
	MBN04+NMRV050	5	200.0	40.0	10	26	122
	MBN04+NMRV040	7.5	133.3	26.7	14	38	68
	MBN04+NMRV050	7.5	133.3	26.7	14	39	132
	MBN04+NMRV040	10	100.0	20.0	18	50	67
	MBN04+NMRV050	10	100.0	20.0	19	50	130
	MBN04+NMRV040	15	66.7	13.3	27	*	68
	MBN04+NMRV050	15	66.7	13.3	27	72	128
	MBN04+NMRV050	20	50.0	10.0	35	95	114
	MBN04+NMRV050	25	40.0	8.0	42	*	105
	MBN04+NMRV050	30	33.3	6.7	47	126	138
	MBN04+NMRV050	40	25.0	5.0	61	*	118
	MBN04+NMRV063	40	25.0	5.0	63	169	220
	MBN04+NMRV050	50	20.0	4.0	70	*	114
	MBN04+NMRV063	50	20.0	4.0	73	195	205
	MBN04+NMRV063	60	18.1	3.6	77	100	140
	MBN04+NMRV063	7.5	133.3	26.7	14	38	68
	MBN04+NMRV063	10	100.0	20.0	18	50	67
	MBN04+NMRV063	15	66.7	13.3	27	72	128
	MBN04+NMRV063	20	50.0	10.0	35	95	114
	MBN04+NMRV063	25	40.0	8.0	42	*	105
	MBN04+NMRV063	30	33.3	6.7	47	126	138
	MBN04+NMRV063	40	25.0	5.0	61	*	118
	MBN04+NMRV063	50	20.0	4.0	63	169	220
	MBN04+NMRV063	60	18.1	3.6	67	100	140
	MBN04+NMRV063	7.5	133.3	26.7	14	38	68
	MBN04+NMRV063	10	100.0	20.0	18	50	67
	MBN04+NMRV063	15	66.7	13.3	27	72	128
	MBN04+NMRV063	20	50.0	10.0	35	95	114
	MBN04+NMRV063	25	40.0	8.0	42	*	105
	MBN04+NMRV063	30	33.3	6.7	47	126	138
	MBN04+NMRV063	40	25.0	5.0	61	*	118
	MBN04+NMRV063	50	20.0	4.0	63	169	220
	MBN04+NMRV063	60	18.1	3.6	67	100	140
	MBN04+NMRV063	7.5	133.3	26.7	14	38	68
	MBN04+NMRV063	10	100.0	20.0	18	50	67
	MBN04+NMRV063	15	66.7	13.3	27	72	128
	MBN04+NMRV063	20	50.0	10.0	35	95	114
	MBN04+NMRV063	25	40.0	8.0	42	*	105
	MBN04+NMRV063	30	33.3	6.7	47	126	138
	MBN04+NMRV063	40	25.0	5.0	61	*	118
	MBN04+NMRV063	50	20.0	4.0	63	169	220
	MBN04+NMRV063	60	18.1	3.6	67	100	140
	MBN04+NMRV063	7.5	133.3	26.7	14	38	68
	MBN04+NMRV063	10	100.0	20.0	18	50	67
	MBN04+NMRV063	15	66.7	13.3	27	72	128
	MBN04+NMRV063	20	50.0	10.0	35	95	114
	MBN04+NMRV063	25	40.0	8.0	42	*	105
	MBN04+NMRV063	30	33.3	6.7	47	126	138
	MBN04+NMRV063	40	25.0	5.0	61	*	118
	MBN04+NMRV063	50	20.0	4.0	63	169	220
	MBN04+NMRV063	60	18.1	3.6	67	100	140
	MBN04+NMRV063	7.5	133.3	26.7	14	38	68
	MBN04+NMRV063	10	100.0	20.0	18	50	67
	MBN04+NMRV063	15	66.7	13.3	27	72	128
	MBN04+NMRV063	20	50.0	10.0	35	95	114
	MBN04+NMRV063	25	40.0	8.0	42	*	105
	MBN04						

尺寸 Dimensions

MBN(MB)+NMRV 尺寸 MBN(MB)+NMRV Dimensions



	A	B	C	C1	D(H7)	E(h8)	F	G	G2	G3	H	H1	L1	M	N	O	
MBN02+NMRV030	80	97	54	44	14	55	32	56	167.5	119.5	65	29	63	40	57	30	
MBN02+NMRV040		100	121.5	70	60	18(19)	60	43	71	182.5	134.5						
MBN04+NMRV040									180	144	75	36.5	78	50	71.5	40	
MBN02+NMRV050		120	144	80	70	25(24)	70	49	85	192.5	144.5						
MBN04+NMRV050									190	154	85	43.5	92	60	84	50	
MBN04+NMRV063		144	174	100	85	25(28)	80	67	103	205	169						
MBN07+NMRV063									234	180.5	95	53	112	72	102	63	
MBN04+NMRV075									222.5	186.5							
MBN07+NMRV075		172	205	120	90	28(35)	95	72	112	251.5	198	115	57	120	86	119	75
MB15+NMRV075									300.5	227.5							
MBN07+NMRV090		206	238	140	100	35(38)	110	74	130	268.2	215	130	67	140	103	135	90
MB15+NMRV090									317.5	244.5							
MBN07+NMRV110									299	245.5							
MB15+NMRV110		252.5	295	170	115	42	130	-	144	348	275	165	74	155	127.5	167.5	110
MB22+NMRV110									368	291							
MB40+NMRV110									368	291							
MB15+NMRV130									368	295							
MB22+NMRV130		292.5	335	200	120	45	180	-	155	388	311	215	81	170	147.5	187.5	130
MB40+NMRV130									388	311							

尺寸 Dimensions

MBN(MB)+NMRV 尺寸 MBN(MB)+NMRV Dimensions

	P	Q	R	S	T	V	PA	PB	PC	PE	PM	PN(H8)	PO	PP
MBN02+NMRV030	75	44	6.5	21	5.5	27	54.5	6	4	M6×11(n=4)	68	50	6.5(n=4)	80
MBN02+NMRV040	87	55	6.5	26	6.5	35	67	7	4	M6×8(n=4)	75	60	9(n=4)	110
MBN04+NMRV040														
MBN02+NMRV050	100	64	8.5	30	7	40	90	9	5	M8×10(n=4)	85	70	11(n=4)	125
MBN04+NMRV050														
MBN04+NMRV063	110	80	8.5	36	8	50	82	10	6	M8×14(n=8)	150	115	11(n=4)	180
MBN07+NMRV063														
MBN04+NMRV075														
MBN07+NMRV075	140	93	11	40	10	60	111	13	6	M8×14(n=8)	165	130	14(n=4)	200
MB15+NMRV075														
MBN07+NMRV090	160	102	13	45	11	70	111	13	6	M10×18(n=8)	175	152	14(n=4)	210
MB15+NMRV090														
MBN07+NMRV110														
MB15+NMRV110	200	125	14	50	14	85	131	15	6	M10×18(n=8)	230	170	14(n=8)	280
MB22+NMRV110														
MB40+NMRV110														
MB15+NMRV130	250	140	16	60	15	100	140	15	6	M12×21(n=8)	255	180	16(n=8)	320
MB22+NMRV130														
MB40+NMRV130														

	PQ	α	α1	b	t	kg	KA	KB	KC	KD	KD1	KE
MBN02+NMRV030	70	0°	45°	5	16.3	4.7	71	141	108	110	110	85
MBN02+NMRV040	95	45°	45°	6	20.8(21.8)	5.8	71	151	118	110	110	85
MBN04+NMRV040						7.3	71	163	130	110	110	85
MBN02+NMRV050	110	45°	45°	8	28.3(27.3)	7	71	161	128	110	110	85
MBN04+NMRV050						8.5	71	173	140	110	110	85
MBN04+NMRV063	142	45°	45°	8	28.3(31.3)	13.2	71	186	153	110	110	85
MBN07+NMRV063						16.2	79	203	170	120	120	110
MBN04+NMRV075						14	71	198	165	110	110	85
MBN07+NMRV075	170	45°	45°	8	31.3(38.3)	17	79	215	182	120	120	110
MB15+NMRV075						30	-	219	197	150	-	110
MBN07+NMRV090	200	45°	45°	10	38.3(41.3)	21	79	230	197	120	120	110
MB15+NMRV090						34	-	234	212	150	-	110
MBN07+NMRV110						49	79	250	217	120	120	110
MB15+NMRV110	260	45°	45°	12	45.3	56	-	254	232	150	-	110
MB22+NMRV110						85	-	298	260	160	-	110
MB40+NMRV110						86	-	298	260	160	-	110
MB15+NMRV130						69	-	274	252	150	-	110
MB22+NMRV130	290	45°	22.5°	14	48.8	98	-	318	280	160	-	110
MB40+NMRV130						99	-	318	280	160	-	110

注：1、X、Y尺寸参见本公司样本中的电机尺寸部分；2、重量（kg）不包含电机的重量。
Note: 1. X/Y dimensions refer to our sample size of



润滑 Lubrication

润滑油 lubricants

减速机类别 Reducer type	MB系列无级变速机 MB series stepless variator	NMRV系列蜗轮减速机 Series of NMRV reducer			
		25~90	110~130		
润滑油的种类 Type of lubricant	合成油 Synthetic oil	合成油 Synthetic oil	合成油 Synthetic oil	矿物油 Mineral lubrication oil	
环境温度 Ambient Temperature	-25℃ ~ +40℃	-25℃ ~ +50℃	-25℃ ~ +50℃	-5℃ ~ +40℃	-15℃ ~ +40℃
ISO VG	VG320	VG320	VG320	VG460	VG220
壳牌 Shell	A.T.F.Dexron	Tivela Oil WB	Tivela Oil WB	Omala Oil 460	Omala Oil 220
莫比尔 Mobil	A.T.F.220	Glygoyle 30		Mobil gear 634	Mobil gear 630
埃索 Esso	A.T.F.Dexron	S220	S220	SpartanEP 460	SpartanEP 220
英国石油 BP	Autran DX	Energol SGXP320		Energol GRXP 460	Energol GRXP 220

润滑油量表 Oil capacities

	NMRV								
型号 Size	25	30	40	50	63	75	90	110	130
油量(L)	0.02	0.04	0.08	0.15	0.3	0.55	1	3	4.5

型号Size	30	45	50	63	63A	85	110
油脂量(kg)	0.065	0.09	0.16	0.38	0.38		
油量(L)						1.2	2.8/1.8



使用说明 Usage Specifications

使用说明

- 1、减速机要放在平整或刚性支撑面的地方，且避免周围一切可预见的震动，最好用垫圈预紧地脚螺栓。
- 2、减速机在户外工作时，要做好防晒、防撞和防雨措施。
- 3、减速机的输出轴端安装小齿轮、联轴器或带轮时，要采用轴端螺孔压入方式，严禁锤击。
- 4、减速机首次运行150小时，应重新更换润滑油。以后换油周期约为4000小时。
- 5、箱体内应保留足够的润滑油，并定时检查。
- 6、避免合成油与矿物油混合使用。

Usage specifications

1. Make sure that the reducer is located onto a flat and non-flexible surface and subject to any vibration be foreseen, it is advisable to fix the screw heads by means of cut washers.
2. For outdoor applications provide suitable protections against the atmosphere and direct precipitation. For applications in humid environments ,provide appropriate protections onto the reducer machined surfaces.
3. During mounting of pinions ,couplings or pulleys onto the gearbox shafts, try to avoid any impact by using the appropriate pullers located in the threaded holes at the ends of the same shafts.
4. When reducer starts to work up to 150 hours, its lubrication oil should be replaced. After that ,the cycle of oil replacement is about 4000 hours.
5. Lubricating oil should be kept enough in the casing and checked at a fixed time.
6. Avoid mixing synthetic and mineral lubricants.