

机械无级变速机

UD MECHANICAL STEPLESS VARIATORS

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

产品型式 / TYPE



UDL(B3)



UDL(B5)

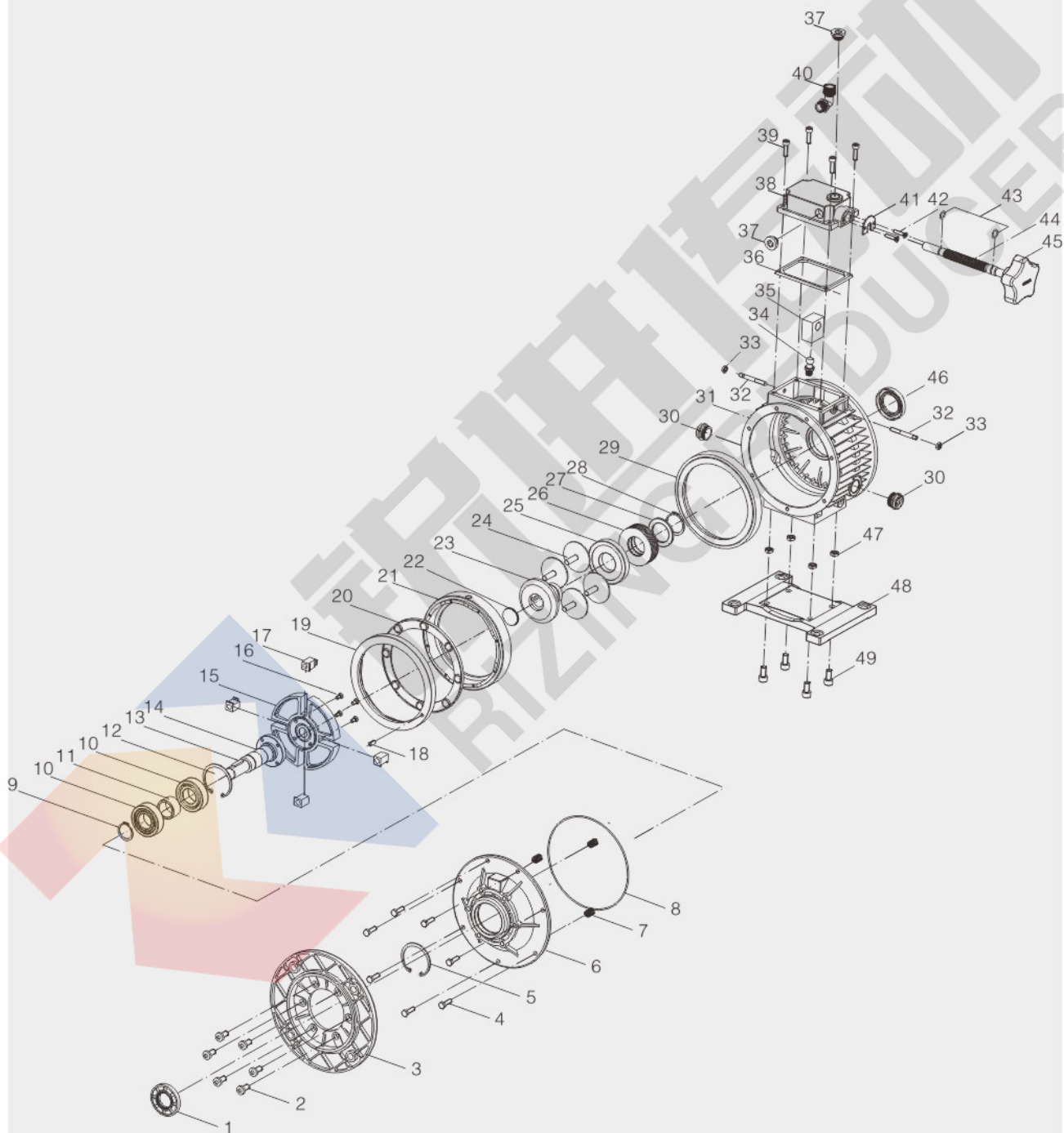


UDT(B3)



UDT(B5)

结构分解图 / STRUCTURE DIAGRAM



结构分解图 / STRUCTURE DIAGRAM

1	油封 / Oil seal	26	蝶形弹簧 / Will spring
2	内六角圆柱头螺栓 / Hexagonal cylindrical head bolts	27	挡圈 / Block circle
3	输出法兰 / Output flanges	28	轴用挡圈 / Shaft block
4	外六角圆柱头螺栓 / Hexagonal cylindrical head bolts	29	定环 / Set ring
5	孔用挡圈 / Hole block circle in	30	视油镜 / Depending on oil mirror
6	输出端盖 / Output cover	31	箱体 / Cabinet
7	弹簧 / Spring	32	螺栓 / Bolt
8	O型橡胶密封圈 / O-ring	33	螺母 / Nut
9	轴用挡圈 / Shaft block	34	球头调速柄 / Ball head speed control handle
10	轴承 / Bearing	35	调速螺母 / Speed nuts
11	轴承隔套 / Bearing every set of	36	橡胶垫片 / Rubber gaskets
12	孔用挡圈 / Hole block circle in	37	油塞 / Oil plug
13	平键 / Parallel key	38	操作盖 / Operating cover
14	输出轴 / Output shaft	39	内六角圆柱头螺栓 / Inside hexagonal cylindrical head bolts
15	转臂 / Turn arm	40	弯管 / Bent pipe
16	螺钉 / Screws	41	挡板 / Baffle
17	滑块 / Slider	42	螺钉 / Screws
18	弹性圆柱销 / Elastic cylindrical pin	43	O型橡胶密封圈 / O-ring
19	固定凸轮 / Fixed CAM	44	丝杆 / Screw
20	滚珠环 / Ball ring	45	调速柄 / Speed control handle
21	调速凸轮 / Speed CAM	46	油封 / Oil seal
22	平面油封 / Plane oil seal	47	螺母 / Nut
23	主动轮 / Active wheel	48	底脚 / Foot bottom
24	行星锥盘 / Planet cone-disk	49	内六角圆柱头螺栓 / Inside hexagonal cylindrical head bolts
25	压盘 / Pressure plate		

产品概述 / SUMMARIZE

结构特点 / STRUCTURE FEATURES

1. 调速精度高，速度重复精度达0.5-1转。
2. 可双向连续运转。
3. 输出传动比在1: 1.4至1: 7之间（UDL002除外）连续可调，变速比达5。
4. 运行效率高，平稳静噪。
5. 密封性好，对使用环境适应性强。
6. 能与各种减速机灵活组合，解决各种传动变速方案。

1. High precision for the speed adjustment, the iterative precision of the speed is between 0.5-1cycle.
2. Can run bi-directional continuously.
3. The output transmission ratio is between 1:1.4and 1:7(except UDL002) and is adjustable.
4. High operating efficiency,stable and no noise.
5. Good sealing, and good adaptability in the operating environment.
6. Good sealing, and good adaptability in the operating environment.
7. Can combine with all kinds of reducers agilely to handle various kinds of transmission projects.

主要材料 / MAIN MATERIALS

1. 外壳：UDL为铝合金，UDT为铸铁；
2. 内部零件：为热处理淬硬的GCr15钢；
3. 轴：热处理淬硬并经低温回火的20Cr钢。

1. Outside shell:Aluminum alloy for UDL and casting iron for UDT.
2. Inner parts: Gcr15 steel heat hardening.
3. Shaft: 20Cr with heat treatment and tempered with low temperature.

涂漆 / PAINTING

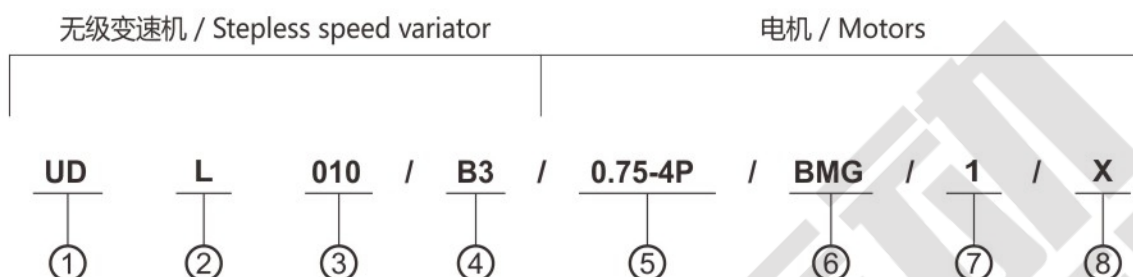
RAL7035	浅灰色 / grey
RAL5010	蓝色 / blue

配套电机 / MATCHED MOTORS

宙义铝壳电机，IP54/55，B5安装法兰。

BMEMB motors in Aluminum case, mounting position B5 and IP54/55.

型号说明 / MODEL ILLUMINATE



NO	说明	Comments
1	无级变速机代号	Code of stepless speed variator
2	L: 铝合金机壳 T: 铸铁机壳	L:Aluminium alloy casing T:cast iron casing
3	无级变速机机座号	Steat NO. of stepless speed variato
4	B3: 底脚安装机型 B5: 法兰安装机型	B3:Foot-mounted model B5:Flange-mounted positon
5	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
6	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
7	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
8	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

订单时请说明是否带电机, 一般按不带电机供应。

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

示例 / Example: **UDL005/B5/0.37-4P**

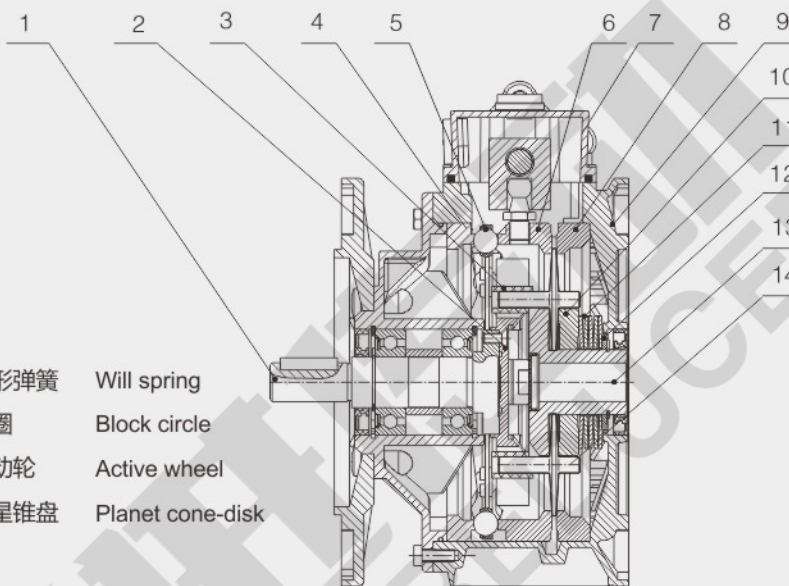
型号说明 / MODEL ILLUMINATE

结构

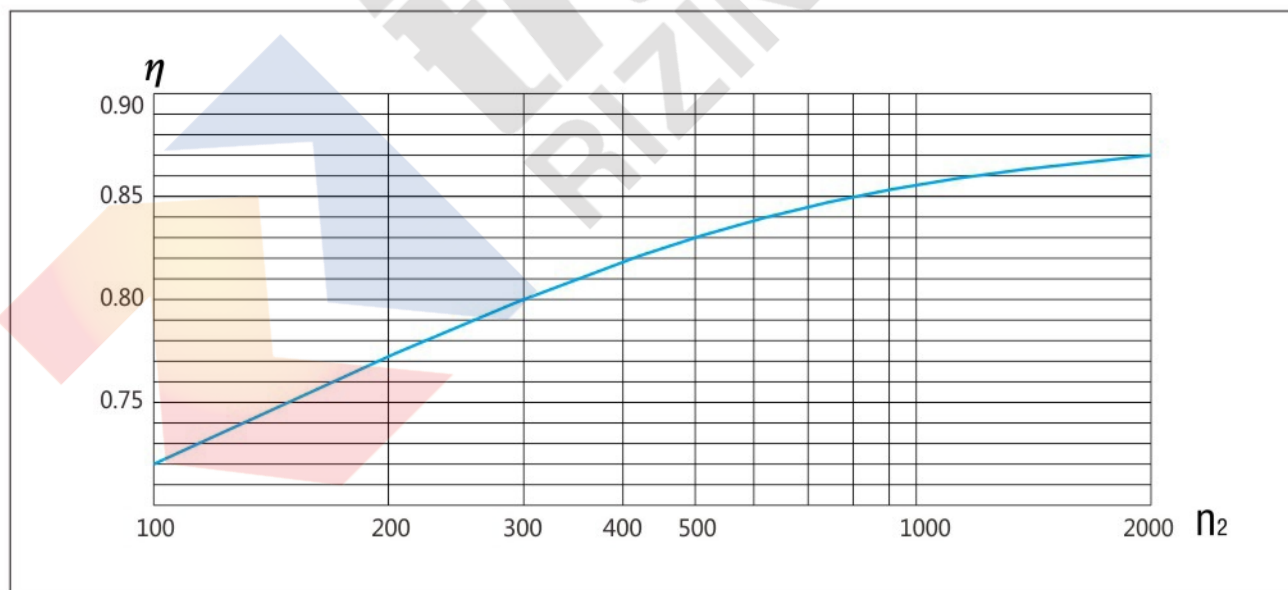
STRUSTURE

- | | |
|--------|----------------|
| 1.输出轴 | Output shaft |
| 2.转臂 | Turn arm |
| 3.滑块 | Slider |
| 4.固定凸轮 | Fixed CAM |
| 5.滚珠环 | Ball ring |
| 6.调速凸轮 | Speed CAM |
| 7.操作盖 | Oprating cover |
| 8.定环 | Sfet ring |
| 9.箱体 | Cabinet |
| 10.压盘 | Pressure plate |

- | | |
|---------|------------------|
| 11.碟形弹簧 | Will spring |
| 12.挡圈 | Block circle |
| 13.主动轮 | Active wheel |
| 14.行星锥盘 | Planet cone-disk |



变速机的效率 / Efficiency

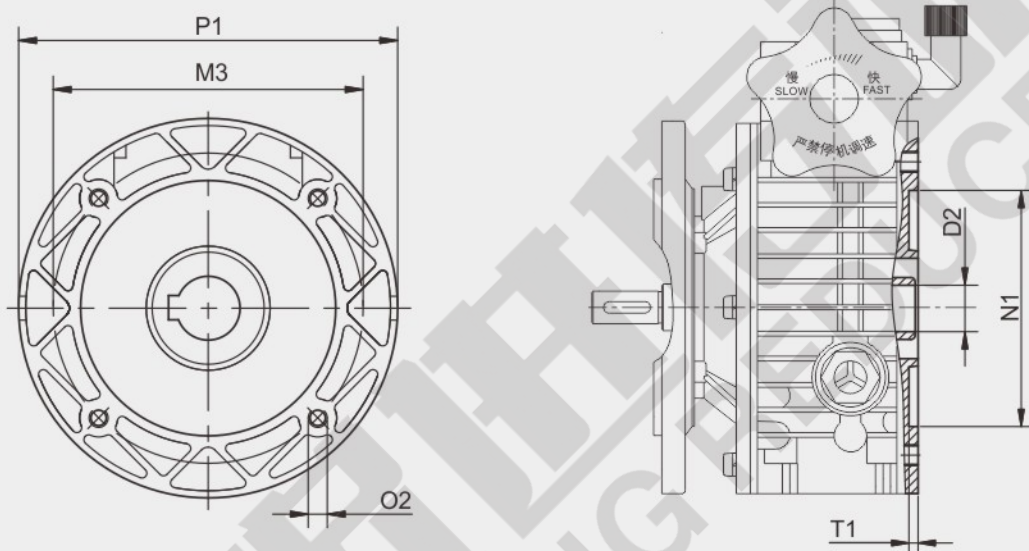


注：每型变速机的效率曲线并不尽相同，但大致趋势规律是相同的。

Note : the efficiency curve for different variator is not the same. But its trend rules are same.

UD外形尺寸图表 / OUTLINE DIMENSION SHEET

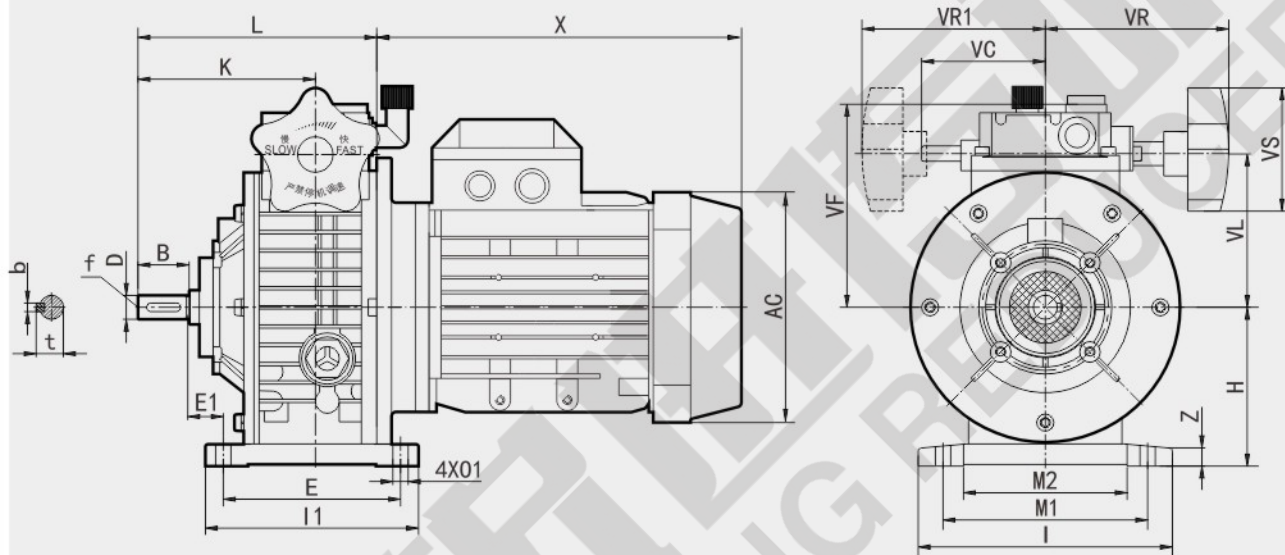
变速机的电机配合接口 / Adaptation Interface



TYPE	PAM-IEC	P1	N1 (H8)	M3	O2	D2 (F7)	T1
UDL002	63B5	140	95	115	M8	11	5
UDL005	71B5	160	110	130	M8	14	5
UDL010	80B5	200	130	165	M10	19	6
	90B5	200	130	165	M10	24	6
UDT020	90B5	200	130	165	M10	24	6
UDT030	100/112B5	250	180	215	M12	28	6
UDT050	132B5	300	230	265	M12	28	6

UD外形尺寸图表 / OUTLINE DIMENSION SHEET

B3型外形尺寸 / B3 Size



B3型机座安装形式 / B3 type frame installation form

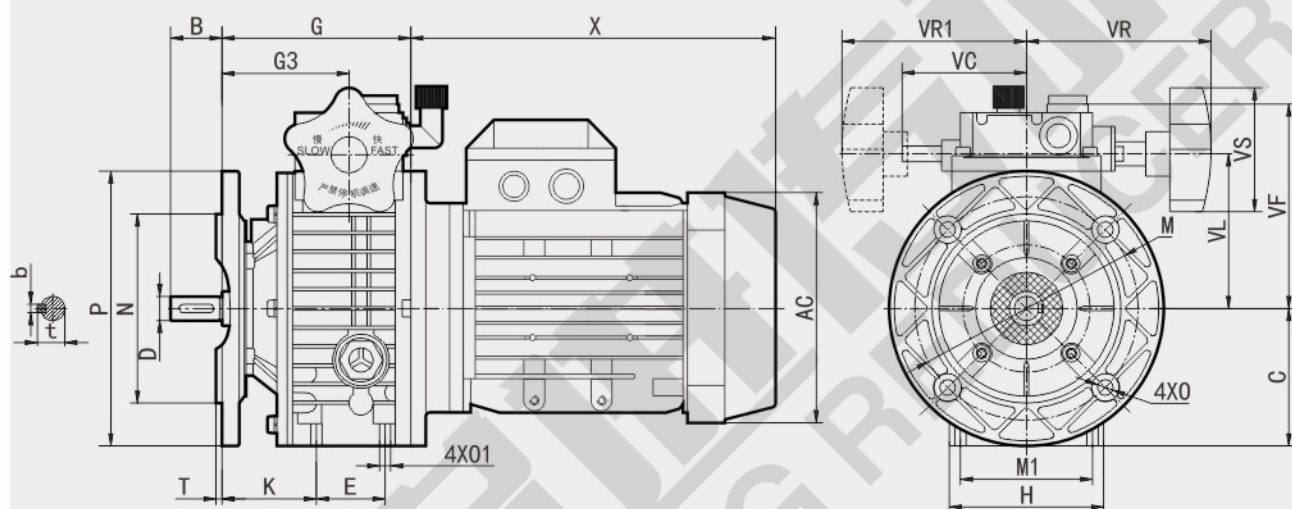
TYPE	B	D(j6)	E	E1	H	I	I1	K	L	M1	M2	01	VC	VF	VL	VR	VR1	VS	b	t	z
UDL002	23	11	105	17.5	80	145	120	87.5	135.5	110	71	9	71	111	78	110	110	85	4	12.5	10
UDL005	30	14	104	20	93	149	125	104	140	120	96	9	71	123	90	110	110	85	5	16	10
UDL010	40	19	125	26	113	190	150	125.5	179	160	135	11	79	140	107	120	120	110	6	21.5	15
UDT020	50	24	140	49	123	241	150	165	238	180	143	12	-	144	122	150	-	110	8	27	18
UDT030	60	28	230	25	150	300	270	191	268	245	190	14	-	188	150	160	-	110	8	31	25
UDT050	70	38	250	33	200	365	290	201	319	315	245	18	-	-	192	194	-	110	10	41	30

注：1. X、AC尺寸参见本公司样本《通用电机》篇中的尺寸部分。

NOTE: 1. Pls refer to our catalogue Electric Motor for the size of X&AC.

UD外形尺寸图表 / OUTLINE DIMENSION SHEET

B5型外形尺寸 / B5 Size



B5型机座安装形式 / B5 TYPE FRAME INSTALLATION FORM

TYPE	B	C	D(j6)	E	G	G3	H	M	M1	O	O1	P	T	K	VC	VF	VL	VR	VR1	b	t
UDL002	23	70	11	50	112.5	64.5	72	115	60	9	M6	140	3.5	46	71	111	78	110	110	4	12.5
UDL005	30	80	14	40	110	74	90	130	77	9	M8	160	3.5	53	71	123	90	110	110	5	16
UDL010	40	100	19	58	139	85.5	98	165	84	11	M8	200	3.5	60	79	140	107	120	120	6	21.5
UDT020	50	109	24	-	188	115	241	165	-	11	-	200	3.5	-	-	144	122	150	-	8	27
UDT030	60	130	28	-	208	131	270	215	-	15	-	250	4	-	-	188	150	160	-	8	31
UDT050	70	200	38	-	244	131	-	265	-	19	-	300	4	-	-	-	192	194	-	10	41

注：1. X、AC尺寸参见本公司样本《通用电机》篇中的尺寸部分。

NOTE: 1. Pls refer to our catalogue Electric Motor for the size of X&AC.

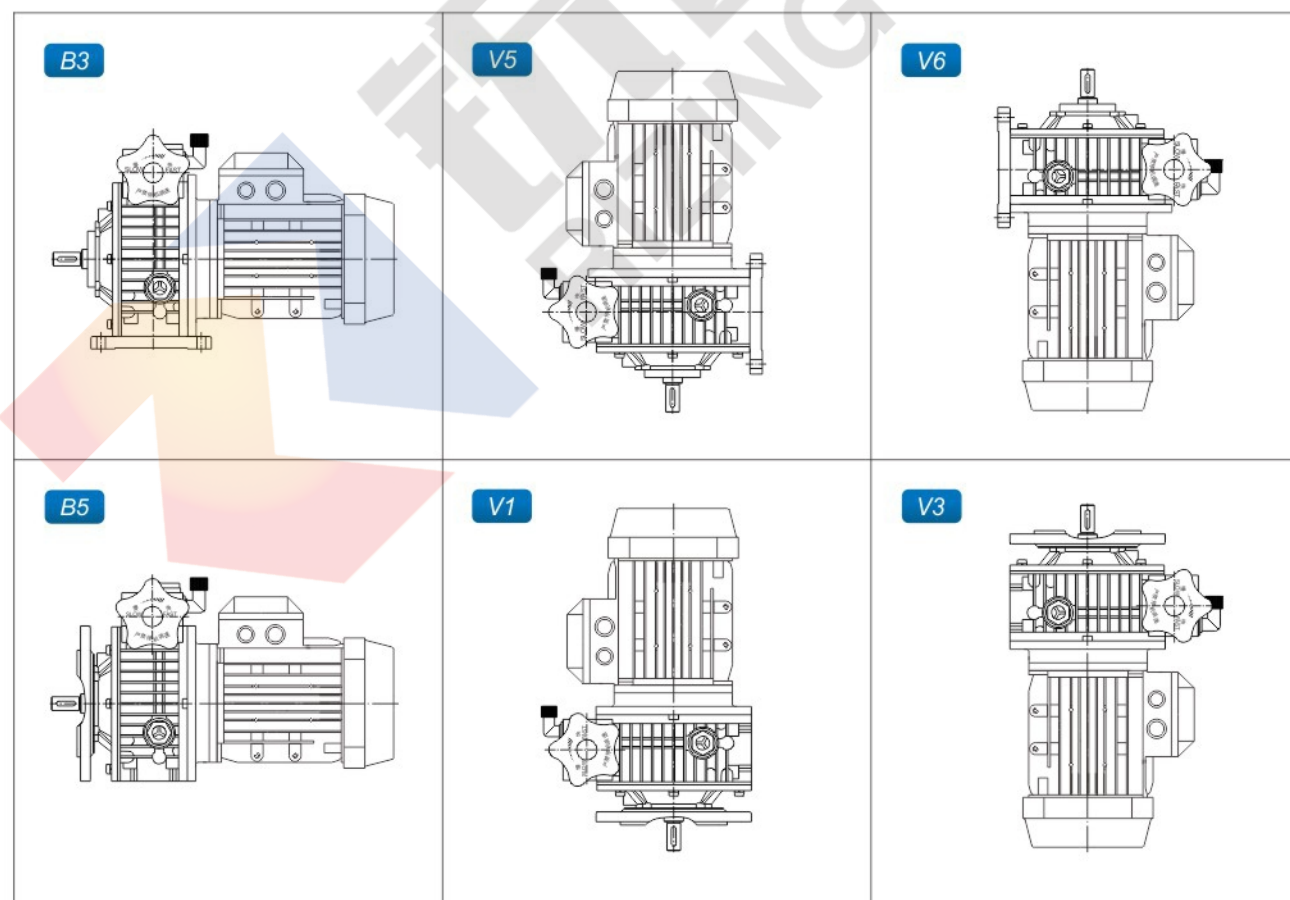
安装方位图 / INSTALLATION POSITIONS DIAGRAM

UD系列无级变速机性能参数

Performance table for UD series speed variator ($n_1=1400\text{r/min}$)

电机功率 / MOTOR POWER	型号/model	I	n_2 (r/min)	M2 (Nm)
0.18kW	UDL002	1.6-8.2	880-170	1.5-3
0.25kW	UDL005	1.4-7	1000-200	2.2-6
0.37kW	UDL005	1.4-7	1000-200	3-6
0.55kW	UDL010	1.4-7	1000-200	4-8
0.75kW	UDL010	1.4-7	1000-200	6-12
1.1kW	UDT020	1.4-7	1000-200	9-18
1.5kW	UDT020	1.4-7	1000-200	12-24
2.2kW	UDT030	1.4-7	1000-200	18-36
3.0kW	UDT030	1.4-7	1000-200	24-48
4.0kW	UDT030	1.4-7	1000-200	32-64
5.5kW	UDT050	1.4-7	1000-200	45-90
7.5kW	UDT050	1.4-7	1000-200	59-118

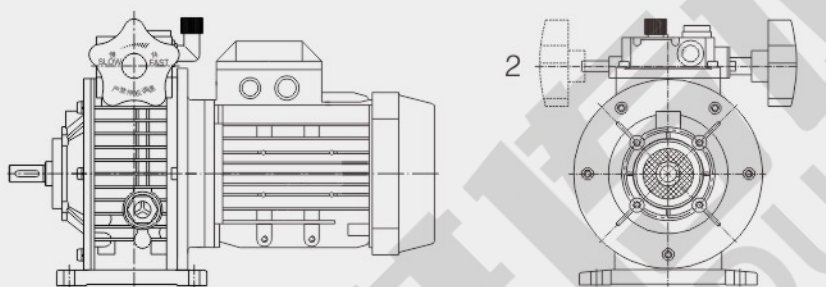
UD与NMRV安装方位 / UD AND NMRV INSTALLATION POSITION



安装方位图 / INSTALLATION POSITIONS DIAGRAM

附件位置 / THE ATTACHMENT POSITION

手轮位置 / THE POSITION OF THE HAND WHEEL



注：如没有特别说明，手轮将按照如图1位和B3安装方位的组合方式提供。

Note: if no special note, the handwheel will be in accordance with the figure 1 and B3 installation azimuth combination is provided.

电机接线盒位置 / MOTOR TERMINAL BOX POSITION

