

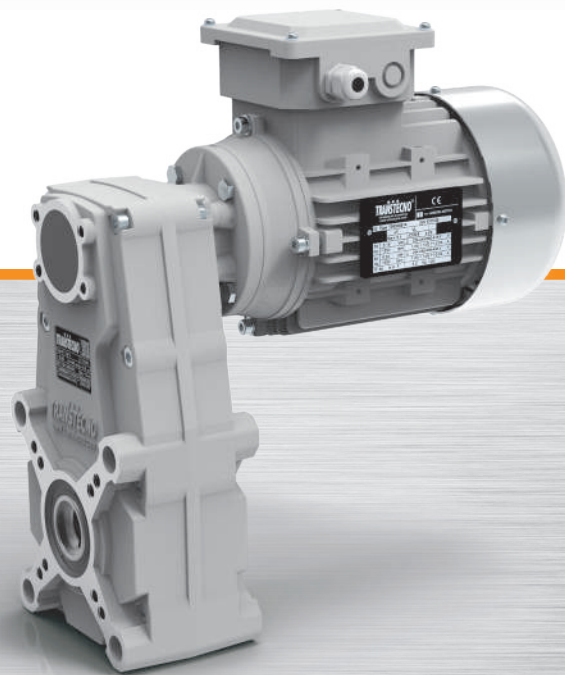
TRANSTECNO[®]
the modular gearmotor

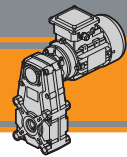
FT

FT



平行轴式减速机
Helical parallel gearmotors





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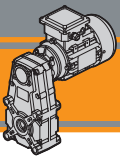
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FT

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FT 平行轴式减速机 Helical parallel gearmotors

技术特征

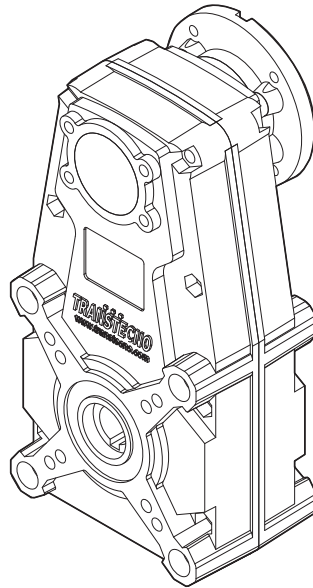
Technical features

FT系列具有如下主要特征:

FT helical parallel gearmotors range has the following main features:


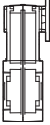
- 压铸铝合金箱体;
- 使用长寿命人工合成润滑油;
- 磨削硬齿面斜齿轮;

- Die-cast aluminium housings
- Permanent synthetic oil long-life lubrication.
- Ground-hardened helical gears.


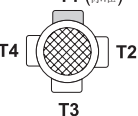


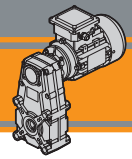
选型

减速机 / GEARBOX

FT	146	U	60.63	O20	56	B5
类型 Type	型号 Size	输出法兰型号 Version	速比 Ratio	空心输出轴 Hollow output shaft	IEC 	法兰型号 Version
FT 	105/3 105/4 146 176 196	U...	见表格 see tables	见表格 see tables	56 63 71 80 90	B5 B14

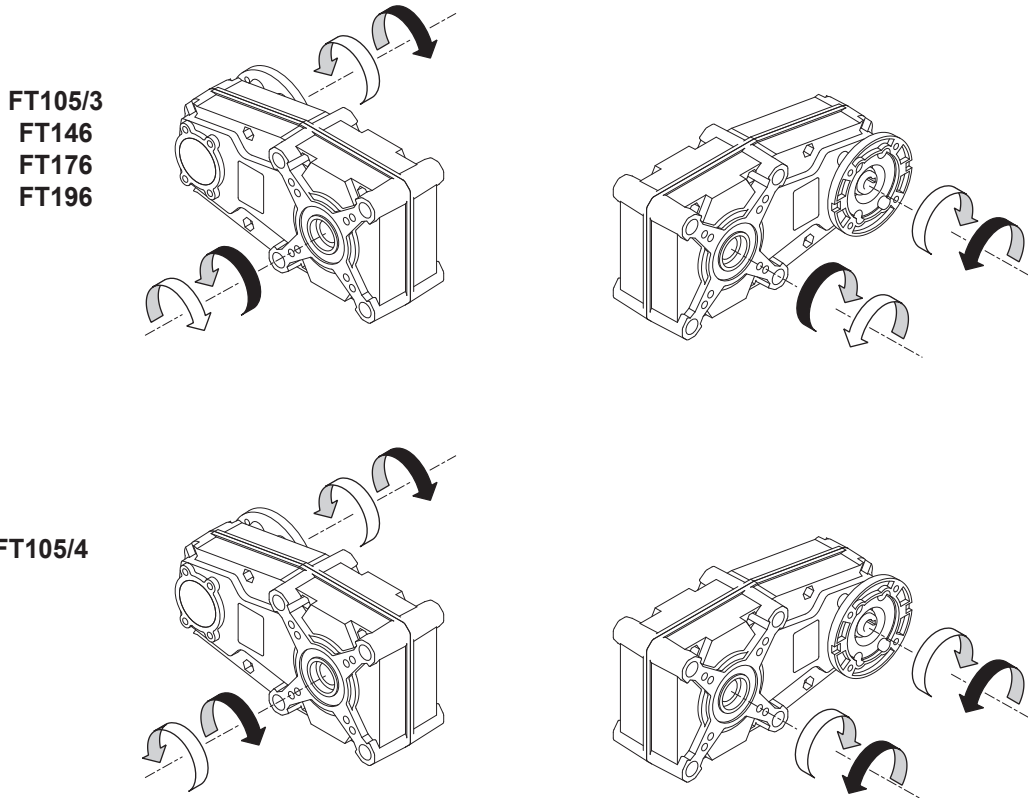
三相电机 / THREE PHASE MOTOR

TS	63	2	4	0.18 kW	B5	3 ph	230-400 V	50 Hz	T1
类型 Type	型号 Size	功率等级 Power coefficient	极 Poles	功率 Power	输出法兰型号 Version	相 Phases	电压 Voltage	频率 Frequency	接线盒位置 Terminal box pos.
TS	 K1 页	1-2-3-S L1-L2	4	0.09 kW ... 2.2 kW	B5 B14	3 ph	230-400 V 275-480 V	50Hz 60Hz	T1 (标准) 



运转方向


Direction of rotation



FT

代号说明

Symbols

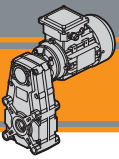
n_1	[min ⁻¹]	输入转速 / Input speed
n_2	[min ⁻¹]	输出转速 / Output speed
i		速比 / Ratio
P_1	[kW]	输入功率 / Input power
M_2	[Nm]	输出扭矩参照 P_1 / Output torque referred to P_1
P_{n1}	[kW]	额定输入功率 / Nominal input power
M_{n2}	[Nm]	额定输出扭矩参照 P_{n1} / Nominal output torque referred to P_{n1}
	[kg]	减速机重量 / Weight of the gearbox only
sf		服务系数 / Service factor
R_2	[N]	输出端许用径向负荷 / Permitted output radial load
A_2	[N]	输出端许用轴向负荷 / Permitted output axial load

润滑油

Lubrication

减速电机使用长寿命合成润滑油（粘度320），可以在任意安装位置安装，并免维护。

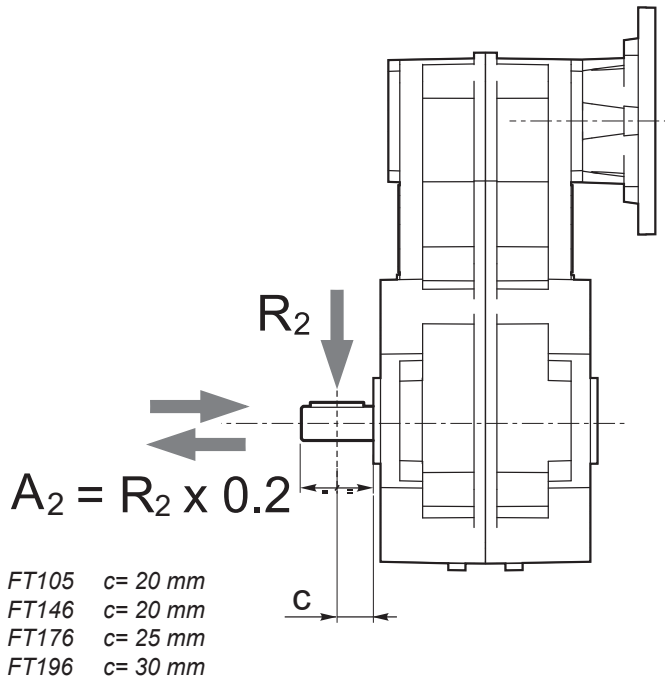
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.



FT 平行轴式减速机 Helical parallel gearmotors

径向负荷

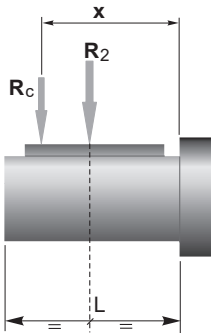
Radial loads



n ₂ [min ⁻¹]	R ₂ [N]			
	FT105	FT146	FT176	FT196
70	1500	2500	3000	3500
40	1700	2700	3500	4000
30	1850	2850	4000	4600
20	2000	3000	4500	5500
10	2000	3000	5000	7000
5	2000	3000	5000	7000

当产生的径向负荷不是作用在传动轴伸出长度的中间位置，必须用以下公式来计算有效负荷：

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:



	FT105	FT146	FT176	FT196
a	82	82,5	115	132
b	62	62,5	90	102
R _{2MAX}	2000	3000	5000	7000

$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

a, b = 图表中给出的值
 a, b = values given in the table

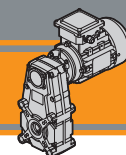
电机适配表

Motors adapters

FT	TS				
	5624	6314 6324 6334	7114 7124 7134 7144	8024 8034	90S4 90L14 90L24
105					
146					
176					
196					

备注：灰色部分指该型号有适合的电机输入。

N.B. Grey areas indicate motor inputs available on each size of unit.



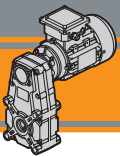
技术参数

Technical data

P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i	
0.06						0.12					
TS5014 (1400 min ⁻¹)	68	8	5.1	20.57	FT105/3	TS6314 (1400 min ⁻¹)	75	14	5.5	18.75	FT146
	42	13	3.9	33.32			61	18	4.5	22.89	
	32	17	3.8	44.36			53	20	4.0	26.17	
	26	21	3.1	54.87			50	22	3.7	28.26	
	19	28	2.4	71.84			40	27	3.7	35.07	
	18	30	2.2	77.07			35	30	3.3	39.44	
	16	34	1.9	88.87			30	36	2.8	46.44	
	11	48	1.4	124.81			26	41	2.5	52.86	
	7.7	70	0.9	181.35			23	47	2.4	60.63	
	6.2	86	0.8	224.32			20	54	2.0	70.00	
	26	20	4.9	52.86	19		57	1.9	74.02		
	23	23	4.7	60.63	17		65	1.7	84.63		
	20	27	4.1	70.00	15		74	1.5	95.61		
	19	28	3.9	74.02	12		87	1.3	113.40		
	17	33	3.4	84.63	10		103	1.1	133.45		
	15	37	3.0	95.61	9.3		116	1.0	150.18		
	12	44	2.5	113.40	8.7		123	1.0	160.43		
	10	51	2.1	133.45	7.8		138	0.9	178.83		
	9.3	58	1.9	150.18	7.1		151	0.8	195.85		
	8.7	62	1.9	160.43							
7.8	69	1.7	178.83								
7.1	75	1.6	195.85								
6.3	86	1.4	223.92								
5.9	91	1.3	236.83								
4.7	115	1.0	300.07								
3.5	153	0.8	397.38								
0.09						0.18					
TS5624 (1400 min ⁻¹)	68	12	3.4	20.57	FT105/3	TS6314 (1400 min ⁻¹)	22	49	4.7	63.55	FT176
	42	19	2.6	33.32			18	58	4.3	75.90	
	32	26	2.5	44.36			16.4	66	3.8	85.40	
	26	32	2.1	54.87			15.6	69	4.1	89.60	
	20	41	1.6	71.84			13	82	3.5	107.02	
	18	44	1.5	77.07			11	98	3.1	126.92	
	16	51	1.3	88.87			9.7	111	2.7	144.74	
	11	72	0.9	124.81			8.6	126	2.4	163.25	
	75	11	7.4	18.75			6.9	157	1.9	204.08	
	61	13	6.1	22.89			6.5	166	1.8	215.11	
	53	15	5.3	26.17	5.1		213	1.4	276.68		
	50	16	4.9	28.26	4.6		233	1.3	303.29		
	40	20	4.9	35.07	3.6		300	1.0	390.11		
	35	23	4.4	39.44							
	30	27	3.7	46.44							
	27	31	3.3	52.86							
	23	35	3.1	60.63							
	20	40	2.7	70.00							
	19	43	2.6	74.02							
	17	49	2.3	84.63							
15	55	2.0	95.61								
12	65	1.7	113.40								
10	77	1.4	133.45								
9.3	87	1.3	150.18								
8.7	93	1.3	160.43								
7.8	103	1.2	178.83								
7.1	113	1.1	195.85								
6.3	129	0.9	223.92								
5.9	137	0.9	236.83								




电机 Motors	TS	
	5614 5624	6314 6324
IEC	56 B5 / B14	63 B5 / B14




FT 平行轴式减速机 Helical parallel gearmotors

技术参数

Technical data

P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i	
0.18					
TS6324 (1400 min ⁻¹)	31	52	4.1	44.79	FT176
	28	58	3.8	50.10	
	26	63	3.7	54.26	
	22	73	3.1	63.55	
	18	88	2.9	75.90	
	16.4	99	2.5	85.40	
	15.6	103	2.7	89.60	
	13	124	2.3	107.02	
	11	146	2.0	126.92	
	9.7	167	1.8	144.74	
	8.6	188	1.6	163.25	
	6.9	236	1.3	204.08	
	6.5	248	1.2	215.11	
	5.1	319	0.9	276.68	
4.6	350	0.9	303.29		
8.9	182	3.0	158.02	FT196	
	6.9	233	2.4		201.80
	5.2	311	1.8		269.47

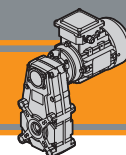
P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i	
0.25					
TS6334 (1400 min ⁻¹)	15.1	149	3.7	92.82	FT196
	11.3	199	2.8	123.95	
	8.9	253	2.2	158.02	
	6.9	323	1.7	201.80	
	5.2	432	1.3	269.47	

0.25							
TS6334 TS7114 (1400 min ⁻¹)	75	30	2.7	18.75	FT146		
	61	37	2.2	22.89			
	53	42	1.9	26.17			
	50	45	1.8	28.26			
	40	56	1.8	35.07			
	35	63	1.6	39.44			
	30	74	1.3	46.44			
	26	85	1.2	52.86			
	23	97	1.1	60.63			
	20	112	1.0	70.00			
	19	119	0.9	74.02			
	17	136	0.8	84.63			
	TS6334 TS7114 (1400 min ⁻¹)	57	39	4.6		24.56	FT176
		48	47	3.8		29.33	
40		56	3.4	34.62			
37		60	3.2	37.50			
34		66	3.0	41.35			
31		72	2.9	44.79			
28		80	2.7	50.10			
26		87	2.6	54.26			
22		102	2.3	63.55			
18		122	2.1	75.90			
16.4		137	1.8	85.40			
15.6		144	1.9	89.60			
13		172	1.7	107.02			
11		203	1.5	126.92			
9.7	232	1.3	144.74				
8.6	262	1.1	163.25				
6.9	327	0.9	204.08				
6.5	345	0.9	215.11				

0.37					
TS7124 (1400 min ⁻¹)	75	44	1.8	18.75	FT146
	61	54	1.5	22.89	
	53	62	1.3	26.17	
	50	67	1.2	28.26	
	40	83	1.2	35.07	
	35	94	1.1	39.44	
	30	110	0.9	46.44	
	26	125	0.8	52.86	
	23	144	0.8	60.63	
	TS7124 (1400 min ⁻¹)	97	34	4.1	
81		41	3.7	17.31	
67		50	3.2	20.97	
57		58	3.1	24.56	
48		70	2.6	29.33	
40		82	2.3	34.62	
37		89	2.1	37.50	
34		98	2.0	41.35	
31		106	2.0	44.79	
28		119	1.9	50.10	
26		129	1.8	54.26	
22		151	1.5	63.55	
18		180	1.4	75.90	
16.4		203	1.2	85.40	
15.6	213	1.3	89.60		
13	254	1.1	107.02		
11	301	1.0	126.92		
9.7	343	0.9	144.74		
TS7124 (1400 min ⁻¹)	24	141	3.6	59.36	FT196
	19	172	3.2	72.68	
	15	220	2.5	92.82	
	11	294	1.9	123.95	
	8.9	375	1.5	158.02	
	6.9	479	1.1	201.80	
	5.2	639	0.9	269.47	





电机 Motors	TS	
	6324 6334	7114 7124
IEC	63 B5 / B14	71 B5 / B14





技术参数


Technical data


P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i	
0.55					
TS7134 (1400 min ⁻¹)	75	66	1.2	18.75	FT146
	61	81	1.0	22.89	
	53	92	0.9	26.17	
	50	100	0.8	28.26	
	40	124	0.8	35.07	


P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i	
0.75					
TS7144 TS8024 (1400 min ⁻¹)	69	98	3.6	20.41	FT196
	40	167	2.4	34.81	
	33	205	2.2	42.61	
	24	285	1.8	59.36	
	19	350	1.6	72.68	
	15	446	1.2	92.82	
	11	596	0.9	123.95	


P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i	
0.55					
TS7134 TS8014 (1400 min ⁻¹)	97	51	2.7	14.49	FT176
	81	61	2.5	17.31	
	67	74	2.2	20.97	
	57	87	2.1	24.56	
	48	103	1.7	29.33	
	40	122	1.6	34.62	
	37	132	1.4	37.50	
	34	146	1.4	41.35	
	31	158	1.3	44.79	
	28	177	1.2	50.10	
	26	191	1.2	54.26	
	22	224	1.0	63.55	
	18	268	0.9	75.90	
	16.4	301	0.8	85.40	
	15.6	316	0.9	89.60	

P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i	
1.1					
TS8034 (1400 min ⁻¹)	97	102	1.4	14.49	FT176
	81	122	1.2	17.31	
	67	148	1.1	20.97	
	57	173	1.0	24.56	
	48	207	0.9	29.33	
1.5					
TS8034 TS90S4 (1400 min ⁻¹)	69	144	2.4	20.41	FT196
	40	246	1.6	34.81	
	33	301	1.5	42.61	
	24	419	1.2	59.36	
	19	513	1.1	72.68	
15	655	0.8	92.82		

P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i	
0.75					
TS7134 TS8014 (1400 min ⁻¹)	69	72	4.9	20.41	FT196
	40	123	3.2	34.81	
	33	150	3.0	42.61	
	24	209	2.4	59.36	
	19	255	2.1	72.68	
	15	327	1.7	92.82	
	11	437	1.3	123.95	
	8.9	557	1.0	158.02	
	6.9	712	0.8	201.80	

P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i	
1.5					
TS90L14 (1400 min ⁻¹)	69	196	1.8	20.41	FT196
	40	335	1.2	34.81	
	33	410	1.1	42.61	
	24	571	0.9	59.36	
	19	699	0.8	72.68	

P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i	
0.75					
TS7144 TS8024 (1400 min ⁻¹)	97	70	2.0	14.49	FT176
	81	83	1.8	17.31	
	67	101	1.6	20.97	
	57	118	1.5	24.56	
	48	141	1.3	29.33	
	40	167	1.1	34.62	
	37	180	1.1	37.50	
	34	199	1.0	41.35	
	31	215	1.0	44.79	
	28	241	0.9	50.10	
	26	261	0.9	54.26	

P ₁ [kW]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i	
2.2					
TS90L24 (1400 min ⁻¹)	69	288	1.2	20.41	FT196
	40	491	0.8	34.81	



电机 Motors	TS		
	7134 7144	8014 8024 8034	90S4 90L14 90L24
IEC	71 B5 / B14	80 B5 / B14	90 B5 / B14

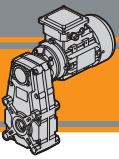
电机技术参数

Electrical technical data

请参见专用页:

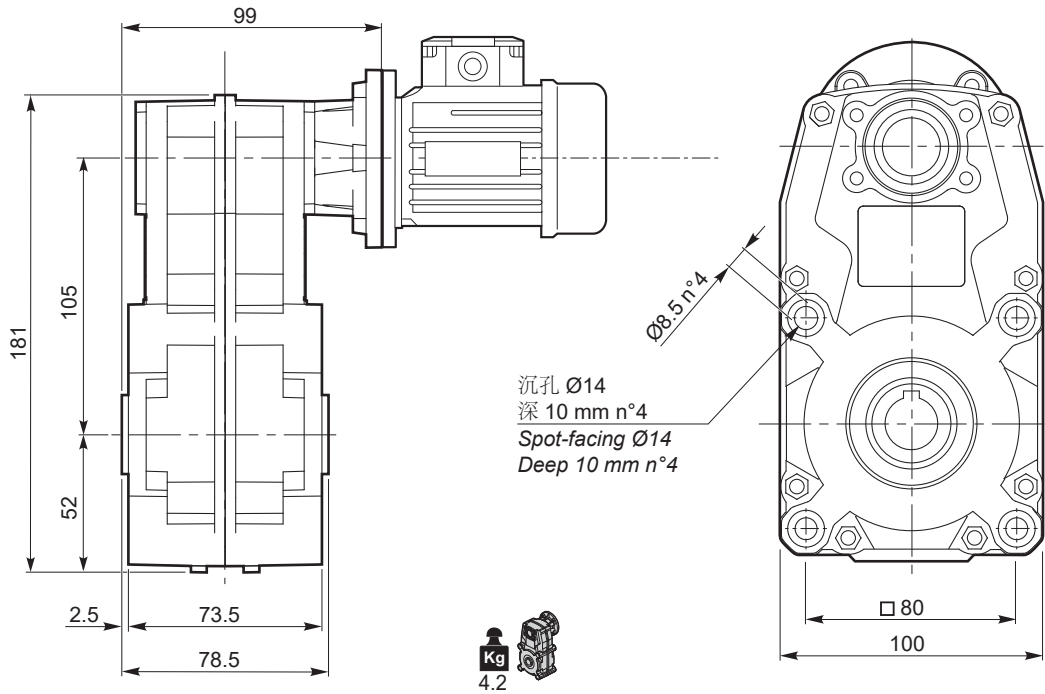
Please see the dedicated paragraph:





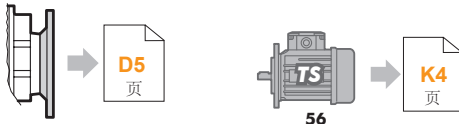
FT 105

FT 105...U



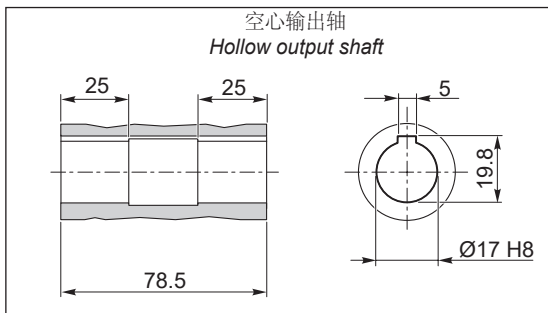
注释：两面安装尺寸相同
NOTE: Same fixing points in both sides

IEC 电机适配法兰
IEC Motor adapters



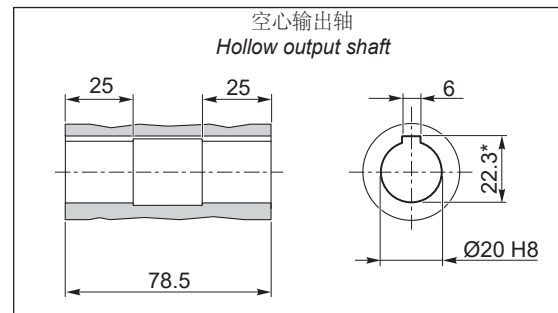
O17

空心输出轴
Hollow output shaft

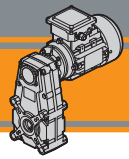


O20

空心输出轴
Hollow output shaft

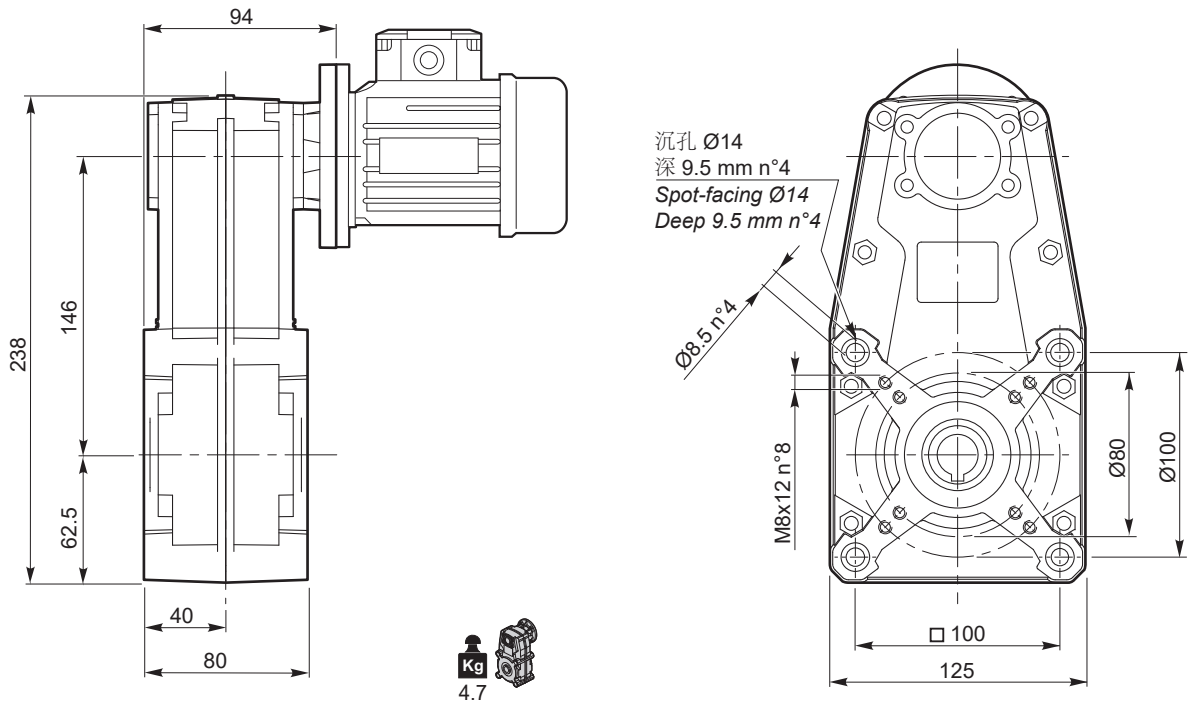


*: 特殊键槽 / Special keyway



FT 146

FT 146 U

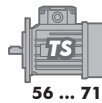


注释：两面安装尺寸相同
NOTE: Same fixing points in both sides

IEC 电机适配法兰
IEC Motor adapters



D5
页

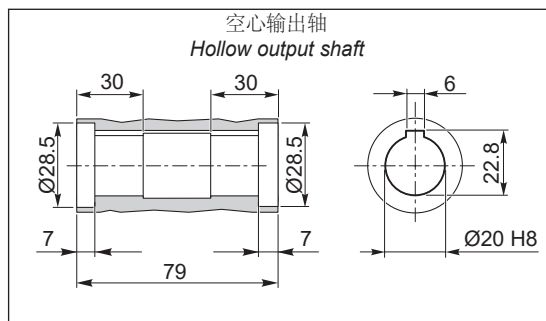


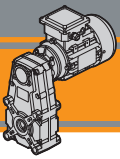
56 ... 71

K4
页

O20

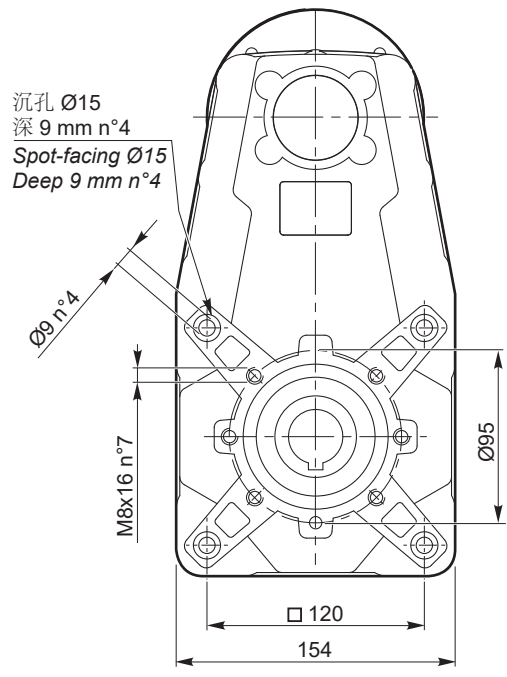
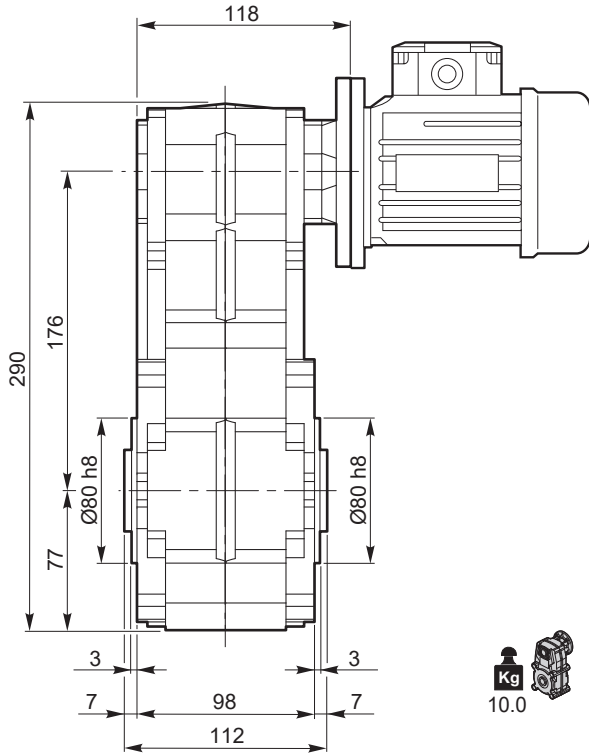
空心输出轴
Hollow output shaft





FT 176

FT 176 U



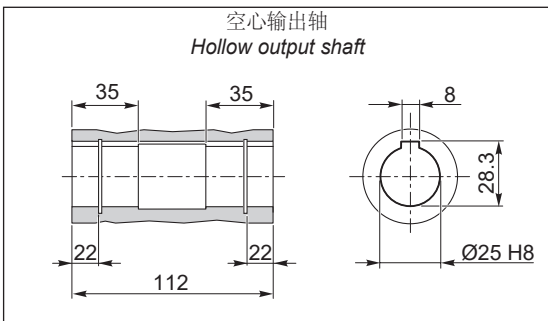
注释：两面安装尺寸相同
NOTE: Same fixing points in both sides

IEC 电机适配法兰
IEC Motor adapters



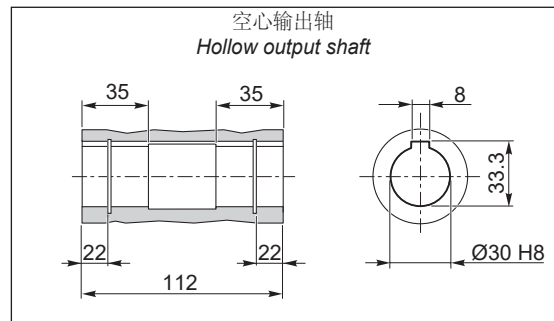
O25

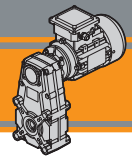
空心输出轴
Hollow output shaft



O30

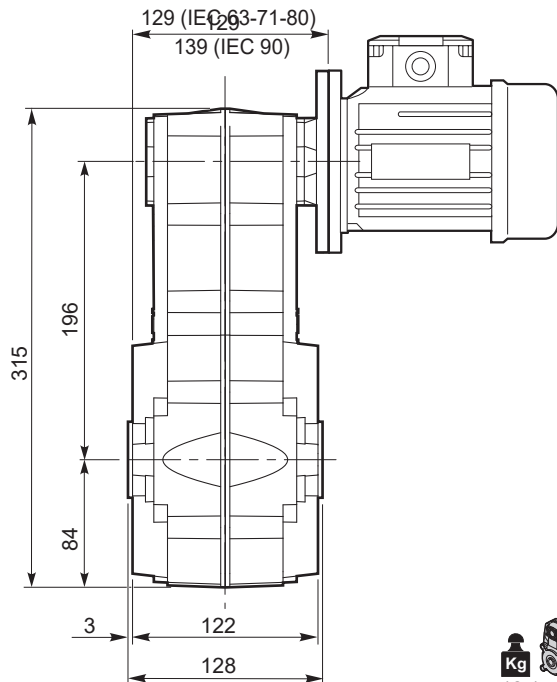
空心输出轴
Hollow output shaft



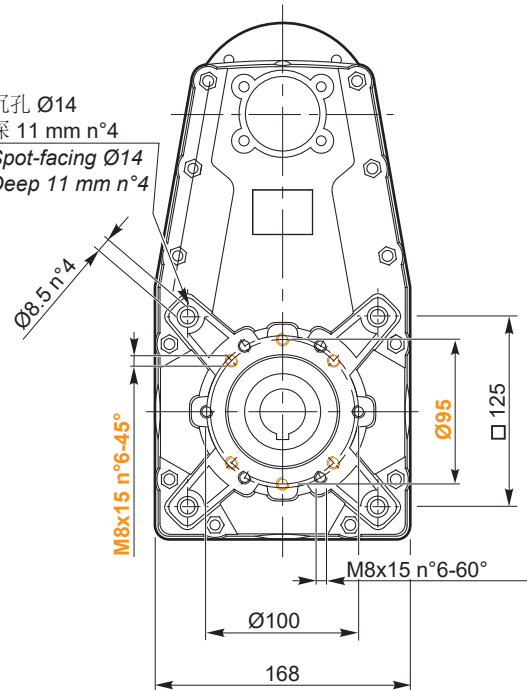


FT 196

FT 196 U

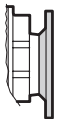


沉孔 Ø14
深 11 mm n°4
Spot-facing Ø14
Deep 11 mm n°4

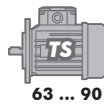


注释：两面安装尺寸相同
NOTE: Same fixing points in both sides

IEC 电机适配法兰
IEC Motor adapters



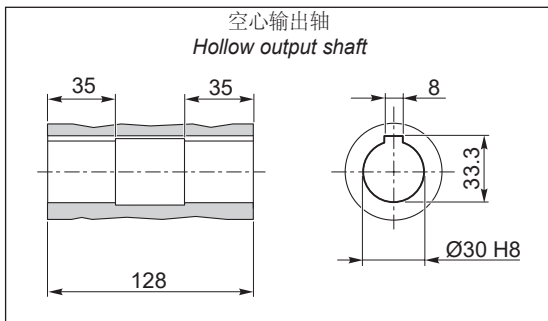
D6
页



K4
页

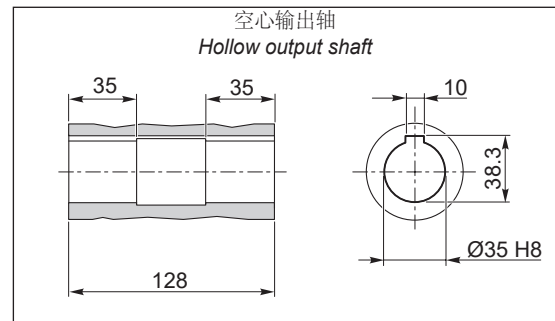
O30

空心输出轴
Hollow output shaft



O35

空心输出轴
Hollow output shaft



 **TRANSTECNO SRL**
HEADQUARTERS

Company subject to the management
and coordination of INTERPUMP GROUP SPA
Via Caduti di Sabbiano, 11/D-E
40011 Anzola dell'Emilia (BO)
ITALY
T+39 051 64 25 811
F +39 051 73 49 43
sales@transtecno.com
www.transtecno.com


TRANSTECNO®
the modular gearmotor
MEMBER OF INTERPUMP GROUP



 **HANGZHOU INTERPUMP
POWER TRANSMISSIONS CO LTD**
No.4 Xiuyan Road Fengdu Industry Zone
Pingyao Town Yuhang District
Hangzhou City, Zhejiang Province
311115 – CHINA
T +86 571 86 92 02 60
info-china@transtecno.cn
www.transtecno.cn

 **TRANSTECNO IBÉRICA
THE MODULAR GEARMOTOR, S.A.**
Carrer de la Ciència, 45
08840 Viladecans (Barcelona) - SPAIN
T +34 931 598 950
info@transtecno.es
www.transtecno.es

 **TRANSTECNO B.V.**
Siliciumweg 32
3812 SX Amersfoort - NETHERLANDS
T +31(0) 33 45 19 505
info@transtecno.nl
www.transtecno.nl

 **TRANSTECNO AANDRIJFTECHNIEK B.V.**
Siliciumweg 32
3812 SX Amersfoort - NETHERLANDS
T +31 (0) 33 20 47 006
info@transtecnoaandrijftechnik.nl
www.transtecnoaandrijftechnik.nl

 **MA TRANSTECNO S.A.P.I. DE C.V.**
Julián Sepúlveda Dávila #107,
Parque Industrial SG
Apodaca, Nuevo León, CP. 66640
MÉXICO
T +52 8113340920
info@transtecno.com.mx
www.transtecno.com.mx


 **TRANSTECNO USA**
8 Creek Parkway,
Boothwyn PA 19061-8136 - UNITED STATES
T + 1 (610) 4970154

TRANSTECNO USA – WEST COAST BRANCH
14561 Fryelands Blvd SE
Monroe, WA 98272 - UNITED STATES
T +1 360-863-1300
usaoffice@transtecno.com
www.transtecno.com

 **TRANSTECNO CANADA**
51 B Caldari Road Unit 10
Vaughan, ON L4K 4G3 - CANADA
T +1 905 761 0762
canadaoffice@transtecno.com
www.transtecno.com

 **TRANSTECNO INDIA**
#6A, Sipcot Industrial complex, Phase-1, Elasagiri Road
Hosur – 635126 Tamilnadu - INDIA
T +91 4344 274434
M +91 81443 88800

TRANSTECNO INDIA – NORTH BRANCH
Plot No: 3 A, Sector 2, IIE, Sidcul, Pantnagar
U.S. Nagar, Uttarakhand – 263153 - INDIA
indiaoffice@transtecno.com
www.transtecno.com

 **TRANSTECNO BRAZIL**
Rua Gilberto de Zorzi, 525 Forqueta - CEP. 95115-730
CX Postal 3544 Caxias do Sul RS – BRAZIL

TRANSTECNO BRAZIL – SÃO PAULO BRANCH
R. Mafalda Barnabe Soliane, 314 – CEP. 13347-610
Indaiatuba, São Paulo - BRAZIL
T +55 19 3437 2520

TRANSTECNO BRAZIL – PORTO ALEGRE BRANCH
Rua Dr. Freire Alemão 155 / 402 - CEP. 90450-060
Auxiliadora Porto Alegre RS - BRAZIL
T +55 51 4042 0916
M +55 51 811 45 962
braziloffice@transtecno.com
www.transtecno.com.br

 **INTERPUMP ANTRIEBSTECHNIK GMBH**
Büro Stuttgart - GERMANY
T +49 (0)171 4781909
germanoffice@transtecno.com
www.transtecno.com

 **SALES OFFICE OCEANIA**
Unit 5, 12 Nyholt Drive, Yatala 4207
Queensland - AUSTRALIA
T +61 07 3800 0103
M +61 04 38060997

UNIT 9, 94 Boundary Rd, Sunshine West 3020
Victoria - AUSTRALIA
T +61 9312 4722
oceaniaoffice@transtecno.com
www.transtecno.com.au