



合肥赛特液压有限公司
Hefei Saite Hydraulic Co.,Ltd

地址：安徽省合肥市双凤开发区双凤大道004号
电话：0551-5654706、5654707
传真：0551-5651883
手机：13855178866、13865979728
网址：<http://www.hftaige.com>
邮箱：13855178866@139.com;13865979728@139.com

Add:Shuangfeng road number 004,
shuangfeng Industry District,Hefei Anhui
Tel: 0551-5654706、5654707
Fax: 0551-5651883
Mobile: 13855178866、13865979728
<http://www.hftaige.com>
E-mail:13855178866@139.com;13865979728@139.com

合肥赛特液压有限公司
Hefei Saite Hydraulic Co.,Ltd





公司简介 COMPANY PROFILE

合肥赛特液压有限公司坐落于包公的故乡----合肥。公司是集研发、生产、试验、销售为一体的柱塞泵专业生产厂家。拥有自主知识产权，拥有一批专业化的产品设计、生产管理、质量检控、市场开发人员及售后服务队伍。拥有先进的加工中心、数控机床、高精度磨床、高精度检测设备、数字化试验台。从而确保产品上乘的品质。公司专业生产泰铭牌A2F、A6V、A7V、A8V、HPV等系列轴向柱塞泵、柱塞马达。系列产品广泛应用于锻压、工程机械、建筑机械、混凝土机械、挤压、冶金、船舶等行业的液压系统中。与多家主机厂达成配套协议。产品以“高品质,性能稳定可靠和全面及时,超值的售后服务”在用户中享有盛誉。

以质量为生命，视客户为上帝是赛特液压永远的宗旨！期待与您真诚合作共谋发展！

Taige hydraulic Co. Ltd is situated in the hometown of BaoGong---Hefei. Our company is a professional manufacturer of plunger pumps. It focuses on not only experiment and production, but also testing and distribution of plunger pumps. Our company owns intellectual property rights with staffs specializing in design, management, quality control, market development and customer service. We ensure the quality of our products with the support of advanced machining center, CNC machine tools, high-precision grinding machines, high-precision detecting equipment and digital test bed. Our company produces series of axial pistons and piston motors like A2F, A6V, A7V, A8V and HPV. Taige brand. Our products are widely used in hydraulic pressure systems for forging, engineering machinery, construction machinery, concrete machinery, extrusion, metallurgy and shipping. Having reached agreements with many Engine Factorys, our products enjoy prestige in customs with the fame of “ high-quality, reliable performance and overvalued customer service ”.

“ Quality-oriented, customers first ” is always the tenet of SaiTe hydraulic! We are expecting sincere cooperation and mutual development with you in near future.



样本目录 Catalogue

TG-A2F定量柱塞泵/马达 Fixed Displacement pump/motor TG-A2F	01-08
TG-A6V变量柱塞马达 Variable displacement motor TG-A6V	09-19
TG-A7V 变量柱塞泵 Variable displacement pump TG-A7V	20-39
TG-A8V 变量柱塞泵 Variable displacement pump TG-A8V	40-50
TG-HPV 变量柱塞泵 Variable displacement pump TG-HPV	51-55
TG-HPVMF-28-L-02 液压无极变速装置 The hydraulic static transmission	56-59



TG-A2F定量柱塞泵/马达 (1~5系列) TG-A2F Fixed Displacement pump/motor (1~5Series)

TG-A2F 系列5 (规格200~500) 剖视图

TG-A2F Series 5 (Size 200~500) Section



● 说明:

具有固定的排量, 在开式或闭式系统中作静压传动的泵或马达。当作为泵使用时, 流量与转速和排量成正比。当作为马达使用时, 输出转数和流量成正比而与排量成反比。输出扭矩随高压侧与低压侧之压差的增大而增大

● 特点:

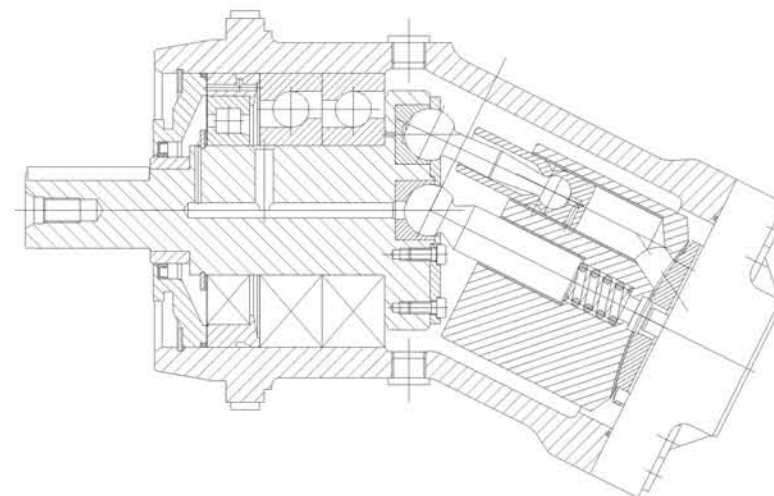
配有久经考验的球面配油盘的高性能旋转组件有自动对中, 圆周速度底, 效率高的优点
驱动轴能承受径向负荷
噪音小

● Description:

Axial tapered piston unit of bent axis design with fixed displacement, for use as either pump or motor in hydrostatic drives, in open or closed circuit system. When operated as a pump, the flow is proportional to the drive speed and the displacement. When operated as motor, the output speed is proportional to the flow and inversely proportional to the displacement. The output torque increases with the pressure drop between the high and low pressure sides.

● Character:

High performance rotary group with well-proven spherical control area with the advantages, self-centering low peripheral speed, high efficiency
Drive shaft capable of accepting radial loading
Low noise level



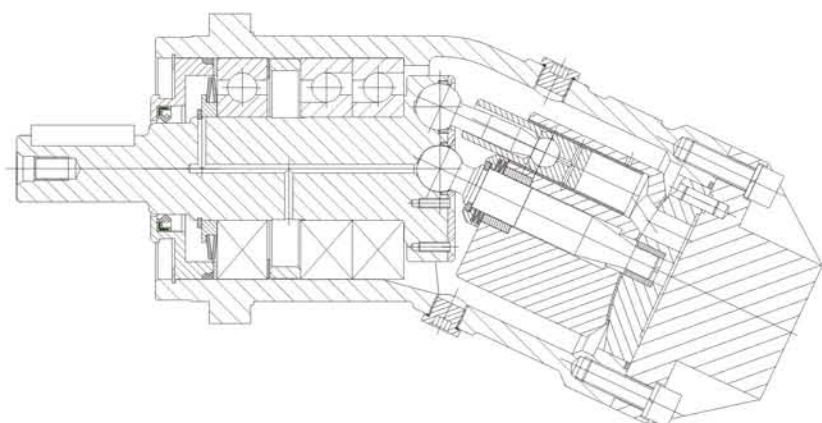
● 敬告用户:

为了延长使用寿命, 请用户做到
1. 保持液压油的清洁度
2. 定期更换液压油 (工作1000~3000 小时或6个月)

● NOTE:

To help ensure its longevity, please be careful to
1. Keep the operating fluid clean
2. Change the hydraulic fluid periodically (Operation 1000~3000 hours or six months)

TG-A2F系列1~4 (规格10~160) 剖视图 TG-A2F Series 1~4 (Size 10~160) Section





型号说明 Type Code

TG- A2F 250 R 5 P 2

泰格品牌 Taige brand

型号 Type

定量泵/马达 Fixed displacement Pump/motor A2F

规格Size 排量Displacement(Vgmin-Vgmax)

(9.6ml/r)	10
(11.6ml/r)	12
(22.7ml/r)	23
(28.1ml/r)	28
(44.3ml/r)	45
(54.8ml/r)	55
(63.0ml/r)	63
(80.0ml/r)	80
(107ml/r)	107
(125ml/r)	125
(160ml/r)	160
(200ml/r)	200
(225ml/r)	225
(250ml/r)	250
(355ml/r)	355
(500ml/r)	500

旋转方向 Direction of Rotation

从轴端看 viewed on drive shaft		
顺时针	Clockwise	R
逆时针	Anti-clockwise	L
双向	Alternation	W
(不适用于开式回路中的泵) (not for pumps in open circuit)		

后盖形式 Rear cover

后盖	Port plate	1
后盖	Port plate	2
后盖	Port plate	3
后盖	Port plate	4

轴伸 Shaft End

平键	Keyed shaft	GB1096-79	P
花键	splined shaft	DIN5480	Z
花键	splined shaft	GB3478.1-83	S

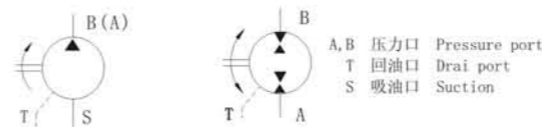
系列 Series

系列	Series 1	1
系列	Series 2	2
系列	Series 3	3
系列	Series 4	4
系列	Series 5	5



技术参数:

- 进口工作压力:
 - 泵
 - 进油口S、A或B最低压力: Pabs-----0.08Mpa
 - 在闭式回路中, 补油压力必须在0.2至0.6Mpa之间, 视泵的转速和液压油的粘度而定
 - 马达
 - A或B的压力
 - 额定压力-----Pmin=35Mpa
 - 最高压力-----Pmax=40Mpa
 - A口或B口压力之和不能超过70Mpa (每侧压力最高40Mpa)
- 出口工作压力
 - 泵
 - 额定压力-----Pn=35Mpa
 - 最高压力-----Pmax=40Mpa
 - 油温范围: -25~80℃
 - 粘度范围
 - Tmin-----10 mm²/s
 - Tmax----- (短时) 1000 mm²/s
 - 最佳工作粘度-----16~25 mm²/s
 - 油液选择: 46号抗磨液压油
 - 液压油过滤
 - 推荐过滤精度为10μm, 也可使用25~40μm的, 但使用10μm的可延长使用寿命
 - 转速范围
 - 最低转速没限制, 若要求旋转高度均匀则最低转速不低于50r/min, 关于最高转速, 见下表格
 - 安装位置
 - 任选, 泵内必须充满液压油
 - 流动方向
 - 顺时针: A到B S到B (开式回路)
 - 逆时针: B到A S到A (开式回路)



规格计算 Calculation of size

泵 pump

输出流量 Output Flow $Q = \frac{v_g \times n \times \eta_v}{1000}$ [l/min]

输入扭矩 Input Torque $M = 0.159 \times v_g \times \Delta p / \eta_m$ [N·M]

输入功率 Input Power $P = \frac{Q \times \Delta p}{60 \times \eta_i}$ [Kw]

马达 Motor

输入流量 Input Flow $Q = \frac{v_g \times n}{1000 \eta_v}$ [l/min]

输入扭矩 Input Torque $M = 0.159 \times v_g \times \Delta p / \eta_m$ [N·M]

输入功率 Input Power $P = \frac{Q \times \Delta p \times \eta_i}{60}$ [Kw]

Technical Data:

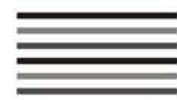
- Inlet operating pressure
 - pump
 - Minimum pressure at ports S, A or B: Pabs-----0.08Mpa In close circuits, the pressure must be between 0.2Mpa and 0.6Mpa, depending on pump speed and viscosity of hydraulic fluid
 - Motor
 - Pressure at ports A or B
 - Nominal pressure----- Pmin=35Mpa
 - Peak pressure----- Pmax=40Mpa
 - The sum of the pressure at ports A and B must not exceed 70 Mpa (individual pressure on either side max. 40Mpa)
- Outlet operating pressure
 - pump
 - Nominal pressure----- Pmin=35Mpa
 - Peak pressure----- Pmax=40Mpa
 - Maximum permissible case pressure (at port T) Pabs-----0.2Mpa
 - Fluid temperature range: -25~80℃
 - Viscosity range
 - Tmin-----10 mm²/s
 - Tmax----- (for short periods) 1000 mm²/s
 - Optimum operating viscosity-----16~25 mm²/s
 - Fluid recommendation: 46Anti-wear hydraulic oil
 - Filtrating of hydraulic fluid
 - Recommended filtration 10μm, coarser filtration of 25 to 40μm is acceptable, but with filtration 10μm longer service life is achieved
 - Speed range
 - No limitation on minimum speed, if high uniformity of rotation is required, nmin should not be less than 50r/min. see the table below for maximum speed
 - Mounting position
 - Optional, pump' s housing must be filled with oil
 - Flow direction
 - Clockwise: A to B S to B (Open Circuit)
 - Anticlockwise: B to A S to A (Open Circuit)

Symbols:

v _g =最大排量	Max geometric displacement
m=扭矩	torque
Δp=压差	Differential pressure
n=转速	Speed
η _v =容积效率	Volumetric efficiency
η _m =机械效率	Mechanical-hydraulic efficiency
η _i =总效率	Overall efficiency

- 定货示例: A2F、250、R、5、P、2 A2F定量泵, 规格250, 顺时针旋转5系列, 平键, 2型后盖

- Ordering Example: A2F、250、R、5、P、2 Fixed displacement pump A2F, Size250, clockwise rotation, series5, keyed shaft, port plate 2



技术参数表理论值，未考虑 η_m 和 η_v ，数据经过圆整

Technical data theoretical values, without considering η_m and η_v , values rounded off

规格Size		10	12	23	28	45	55	63	80	107	125	160	200	250	355	500	
排量Displacement Vg(ml/r)		9.4	11.6	22.7	28.1	44.1	54.3	63	80	107	125	160	200	250	355	500	
最高转速 Max. Speed n max (r/min)	闭式回路Close Circuit	7500	6000	5600	4750	4500	3750	4000	3350	3000	3150	2650	2500	2500	2240	2000	
	开式回路Open Circuit 进口压力Inlet Pressure (Pabs=MPa)	0.09	4700	3750	3570	2800	2850	2360	2550	2120	1900	2120	1650	1700	1400	1250	1120
		0.15	6000	4900	4900	3600	3550	3000	3300	2750	2450	2750	2100	2180	1850	1650	1500
最大流量 Max. Flow Q max (l/min)	闭式回路Close Circuit	71	70	127	133	199	206	352	268	321	394	424	500	625	795	1000	
	开式回路Open Circuit 进口压力Inlet Pressure (Pabs=MPa)	0.09	43	42	83	76	122	125	156	169.6	203	257	264	330	350	430	543
		0.15	55	55	108	98	157	159	202	220	262	333	336	423	426.5	568	728
最大功率 Max. Power Pmax (Kw) $\Delta P=35MPa$	闭式回路Close Circuit	41	41	74	78	116	120	147	156.3	187.3	230	247.3	292	364.6	454	583	
	开式回路Open Circuit 进口压力Inlet Pressure (Pabs=MPa)	0.09	25	25	48	44	71	73	91	98.9	118.4	150	154	192	204.2	251	317
		0.15	32	32	63	57	92	93	118	128.3	152.8	194	196	247	248.8	331	424
电机转速 Electric Motor Speed n=1450r/min	流量Flow闭式Close Circuit 开式Open Circuit	13.6	16.8	32.9	40.7	64.2	79.5	91.3	116	155.2	181.2	232	232	362.5	515	725	
	功率P (Kw) 闭式Close Circuit $\Delta P=35MPa$ 开式Open Circuit	0.09	7.9	9.8	19.2	23.7	37.4	46	53	67.7	90.5	106	135	169	211.5	300	423
		0.15	7.7	9.5	18.6	23	36.3	45	51.7	66	87.6	103	131.3	169	205.3	300	423
扭矩 Torque (N.m)	$\Delta P=10MPa$	15	18	36	44.7	70	87	1000	121	162	199	242	318	378	564	795	
	$\Delta P=35MPa$	52	65	126	156	247	305	351	401	536	696	802	1113	1253	1976	2783	
近似重量 Approx. Weight (kg)		5	5	12	12	23	23	33	33	44	63	63	88	88	138	185	

●注：
上表数据适用于吸油口S有绝对压力
并用矿物油工作时

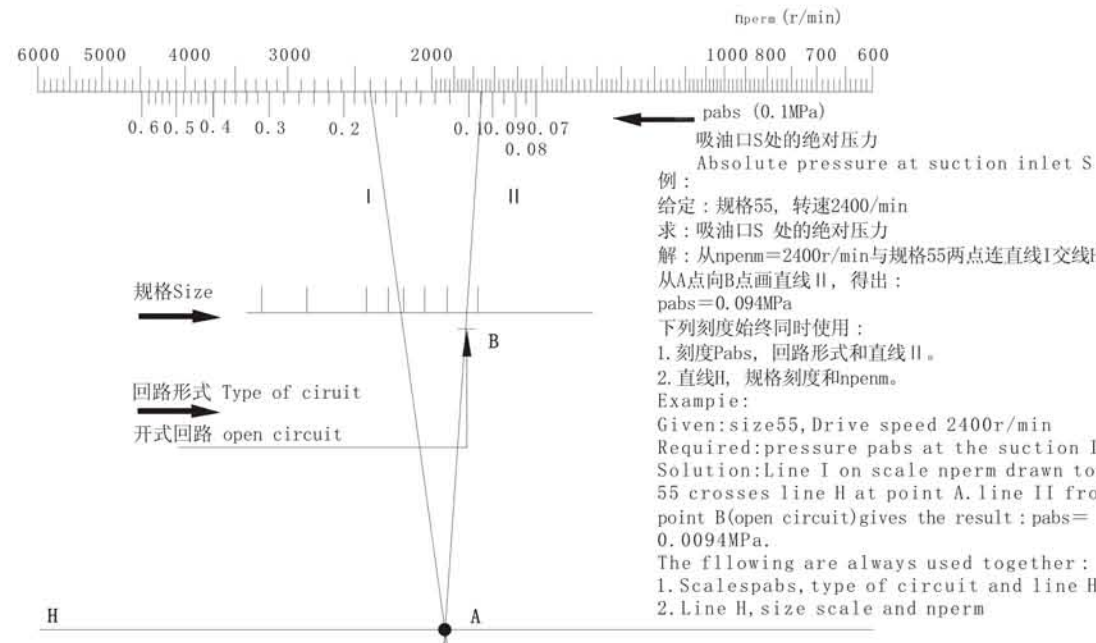
●Notes:
These values are valid provided there is a absolute pressure at suction
inlet S and when operated on mineral oil

诺模图

允许转速 n_{perm} 可由诺模图确定。在马达工
况，闭式回路或补油工况的允许转速也适合
于开式回路。当进口压力 $p_{abs}>0.1mpa$ 时开
式回路（自吸工况）的允许转速可以提高，
但当 $p_{abs}<0.1mpa$ 时必须降低

Nomograph

Permissible speed n_{perm} can be determined from the nomograph. In motor
operation the permissible speed for closed circuit system and boosted
operation are also valid for open circuit system. When suction pressure $p_{abs}>$
0.1mpa, the permissible speed can be increased in open circuits (self-suction
operation). But when suction pressure $p_{abs}<0.1mpa$, the permissible speed
must be reduced.

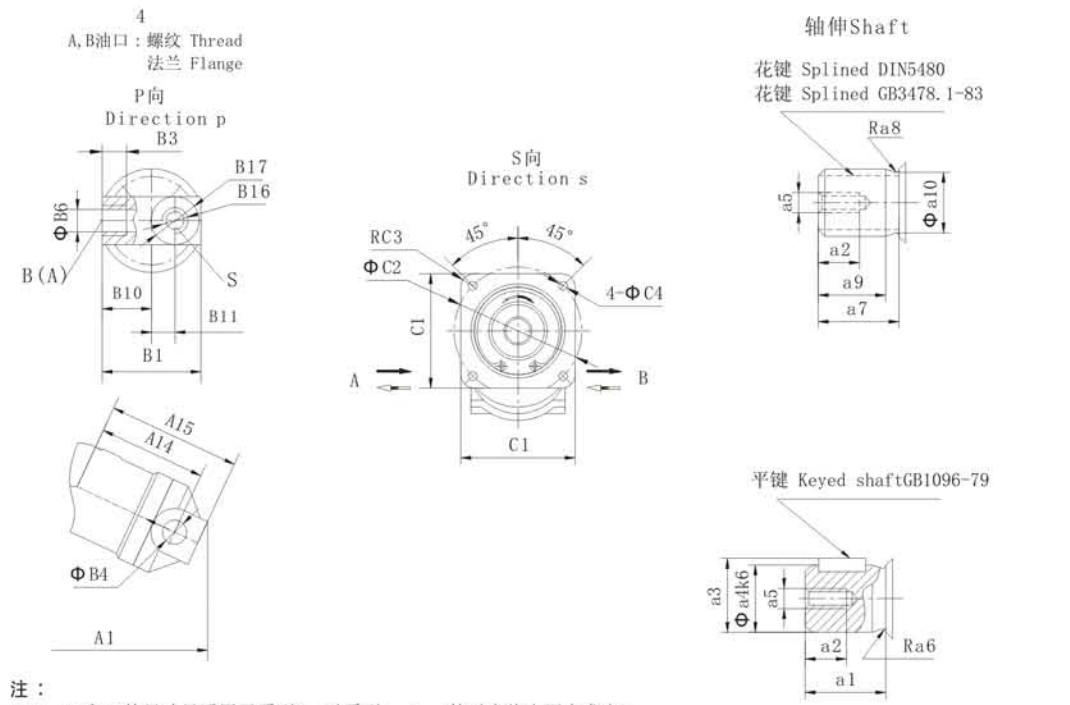
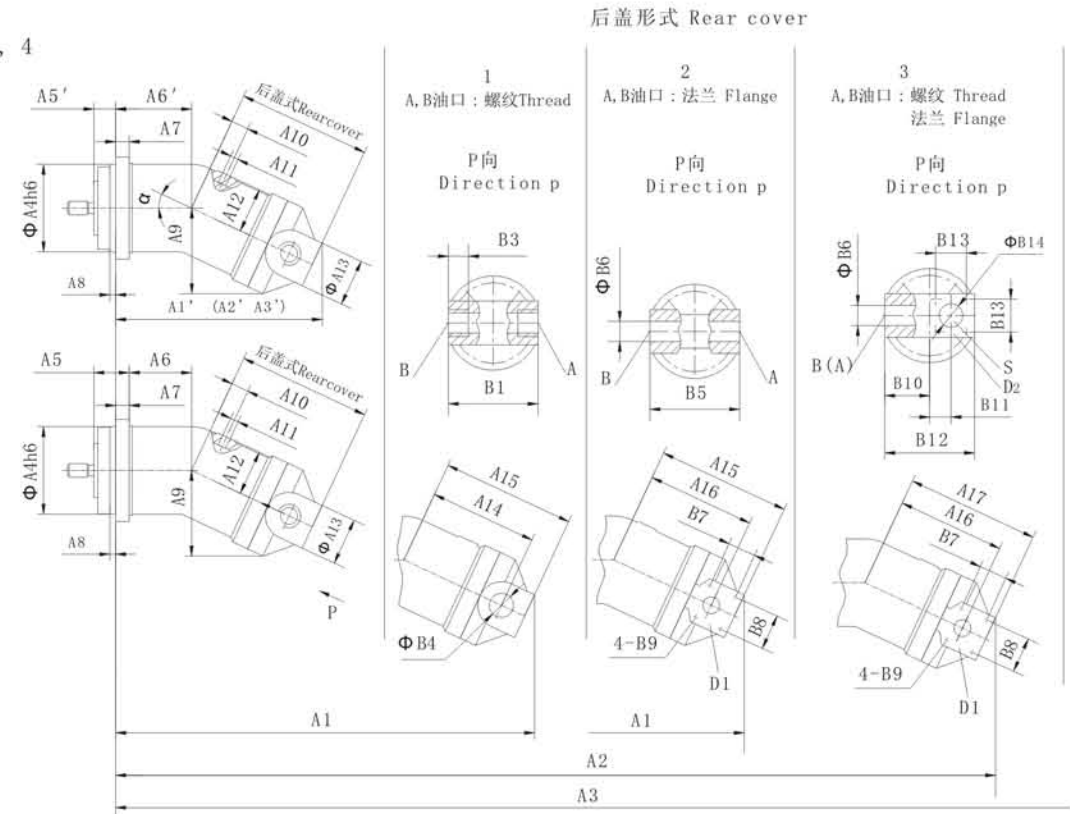


元件外型尺寸系列1~4规格10~160

Unit dimensions series 1 ~ 4 size 10 ~ 160

系列 Series 1, 3, 4

系列 Series 2



注：
1. A1, A2和A3的尺寸只适用于系列2，对系列1, 3, 4的对应值由下式求出：
 $A1' = A1 - (A6 - A6')$; $A2' = A2 - (A6 - A6')$; $A3' = A3 - (A6 - A6')$
2. 除上述结构形式外，还可以根据用户需要对现有产品进行改制
Note:
1. The dimensions of A1, A2, A3 are only valid for series 2. The parallel
dimensions of the three above mentioned positions for series 1, 3 and 4 can be
calculated according to the follows formulas: $A1' = A1 - (A6 - A6')$; $A2' = A2 - (A6 - A6')$; $A3' = A3 - (A6 - A6')$
2. Besides above mentioned constructsures, we can adjust the design of the present
product according to the customers' special needs

TG-A2F定量柱塞泵/马达

TG-A2F定量柱塞泵/马达



系列1~4规格10~160元件外型尺寸表 Series 1~4 size 10~160 table of unit dimensions

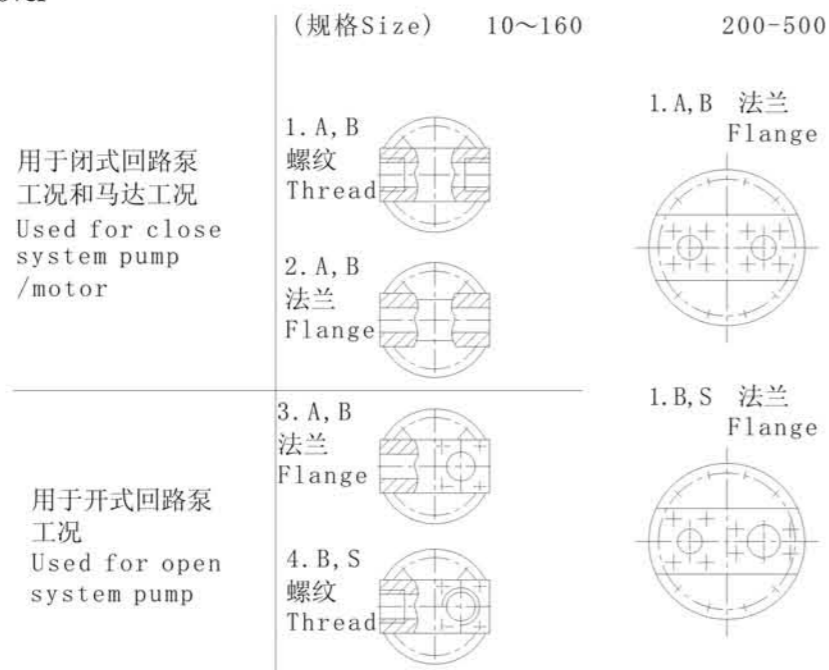
规格 Size		系列 Series	后盖开式 Rear cover	A1		A2		A3		A4	A5	A6	A5'	A6'	A7	A8	A9		A10
α 20°	α 25°			α 20°	α 25°	α 20°	α 25°	α 20°	α 25°								α 20°	α 25°	
10	12	2, 4	1, 4	174	172	-	-	-	-	80	20	62	40	42	12.5	8	69	75	14
23	28	2, 3	1, 2, 4	223	218	-	-	-	-	100	25	75	50	50	16	8	88	95	25
45	55	1, 2	1, 2, 3	292	289	286	284	-	-	125	32	108	63	77	20	10	110	118	31.5
63	80	1, 2	1, 2, 3	350	348	345	342	-	-	140	32	137	83	86	23	10	126	140	36
-	107	-	1, 2, 3	-	356	-	348	-	-	353	160	40	130	80	90	25	12	-	149
125	160	2	1, 2, 3	422	416	417	415.3	408	416	180	40	156	-	-	28	12	159	173.5	45

规格 Size		A11	A12	A13	A14	A15	A16	A17	B1	B2	B3	B4	B5	B6	B7	B8	B9	深 Deep	B10
α 20°	α 25°																		
10	12	M12×1.5	40	48	90	112	-	-	89	M22×1.5	14	34	-	-	-	-	-	-	44.5
23	28	M16×1.5	50	56	118	145	118	-	106	M27×2	16	48	120	13	18.2	40.5	M8	15	53
45	55	M18×1.5	63	70	151	183	151	178	132	M33×2	15	53	126	19	23.8	50.8	M10	15	63
63	80	M18×1.5	77	81	174	213	174	208	156	M42×2	20	72	150	25	27.8	57.2	M12	15	75
-	107	M18×1.5	80	87	230	230	190	225	160	M42×2	20	50	160	25	27.8	57.2	M12	17	80
125	160	M22×1.5	93	100	162	262	212	257	190	M48×2	22	70	190	32	31.8	66.7	M14	23	95

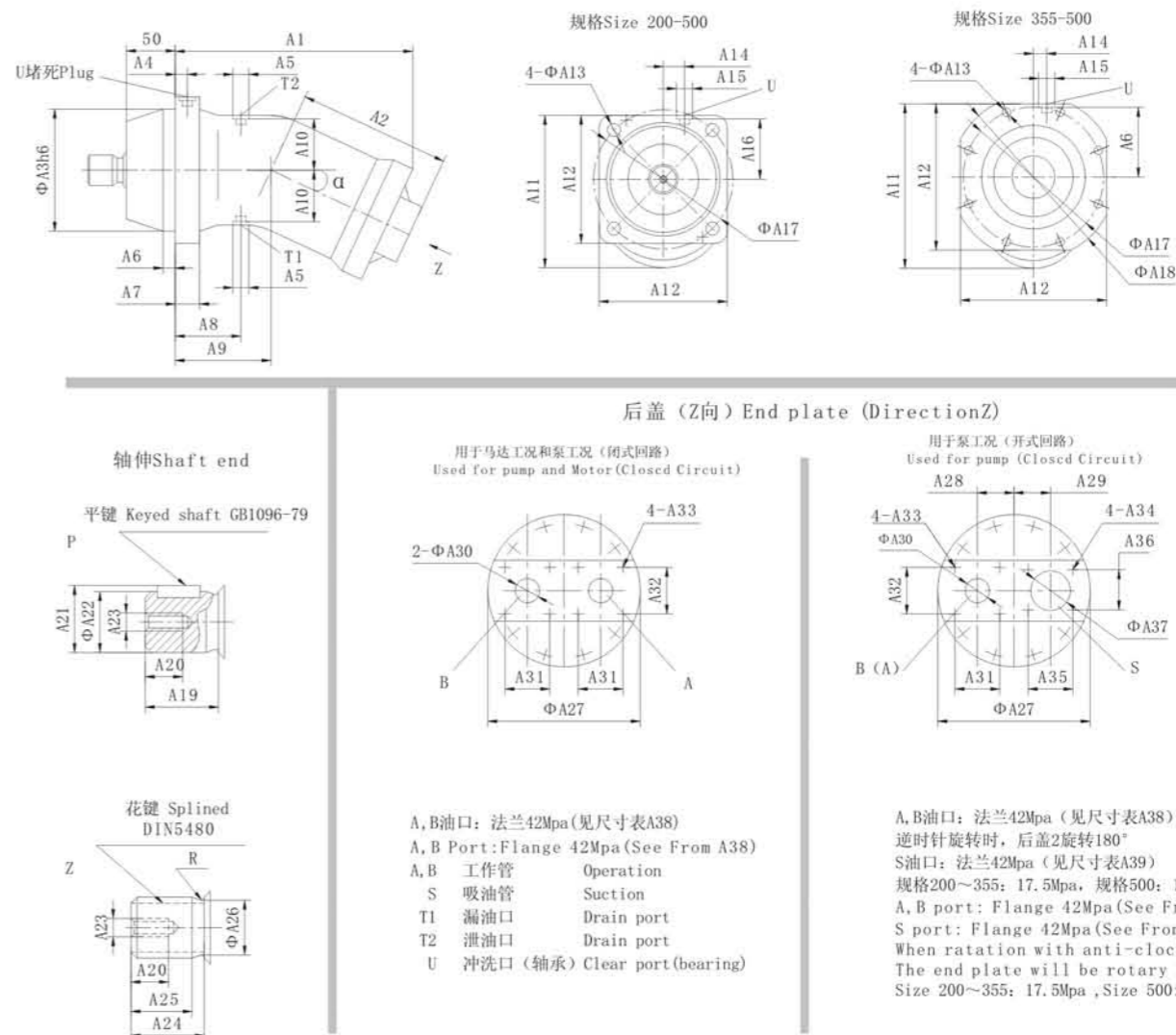
规格 Size		B11	B12	B13	B14	B15	深 Deep	A16	深 Deep	B17	C1	C2	C3	C4	a1	a2	a3	a4	a5
α 20°	α 25°																		
10	12	18	-	-	-	-	-	M33×2	18	42	95	100	10	9	40	16	22.5	20	M6
23	28	25	-	-	-	-	-	M42×2	20	48	118	125	12	11	50	19	27.9	25	M8
45	55	29	129	48	42	M10	13	-	-	-	150	160	16	13.5	60	28	33	30	M12
63	80	35.5	153	60	53	M12	15	-	-	-	165	180	16	13.5	70	28	38	35	M12
-	107	35.5	162.5	60	53	M12	18	-	-	-	190	200	20	17.5	80	28	43	40	M12
125	160	42.2	190	75	68	M16	23	-	-	-	210	224	20	17.5	90	35	48.5	45	M16

规格 Size		a6	a7	a8	a9	a10	SAE法兰 SAE Flang		平键 Parallel GB1096-79	花键 Splined Shaft DIN5480	花键 Splined Shaft GB3478-83	重量 Weight (kg)
α 20°	α 25°						D1	D2				
10	12	0.8	34	2	22	16.7	-	-	键 Key 6×32	W20×1.25×14×9g	-	5
23	28	0.8	43	1.2	28	21.5	1/2"	1/2"	键 Key 8×40	W25×1.25×18×9g	-	12
45	55	1.5	35	1.5	28	25	3/4"	13/4"	键 Key 8×50	W30×2×14×9g	-	23
63	80	1.6	40	1.5	33	30	1"	2"	键 Key 10×56	W35×2×16×9g	EXT16Z×2m×30R×5f	33
-	107	1.6	45	2	37.5	35	-	2"	键 Key 12×63	W40×2×18×9g	EXT18Z×2m×30R×5f	44
125	160	2.5	50	2.5	43	40	1 1/4"	2 3/4"	键 Key 14×70	W45×2×21×9g	-	210

后盖形式 Rear cover



元件外型尺寸系列5规格200~500 Unit dimensions series 5 size 200~500



系列5规格200~500元件外型尺寸表 Series 5 size 200~500 table of unit dimensions

规格 Size	α	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14	A15
200	21°	368	232	224	13	M22×1.5	9	25	120	134	107	300	252	22	70	M14×1.5
250	26.5°	370	232	224	13	M22×1.5	9	25	120	134	107	314	252	22	70	M14×1.5
355	26.5°	422	260	280	14	M33×2	15	28	142	160	128	380	335	18	35	M14×1.5
500	26.5°	462	283	315	15	M33×2	15	30	155	175	142	420	375	22	35	M18×1.5

规格 Size	A16	A17	A18	A19	A20	α	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A31	A32	A33
200	122	280	/	82	36	21°	53.5	50	M16	58	47	45	216	55	45	32	31.8	66.7	M14
250	122	280	/	82	36	26.5°	53.5	50	M16	58	47	45	216	55	45	32	31.8	66.7	M14
355	166	320	360	105	42	26.5°	64	60	M20	82	69	55	245	50	50	40	36.6	79.4	M16
500	180	360	400	105	42	26.5°	74.5	70	M20	82	67	62.5	270	55	55	40	36.5	79.4	M16

规格 Size	深 Deep	A34	深 Deep	R	A35	A36	A37	α	A38	A39	平键 Parallel GB1096-79	花键 Splined Shaft DIN5480	重量 Weight (kg)
200	22	M12	18	1.2	88.9	50.8	63	21°	11/4"	21/2"	键 Key 14×80	W50×2×24×9g	88
250	22	M12	18	1.2	88.9	50.8	63	26.5°	11/4"	21/2"	键 Key 14×80	W50×2×24×9g	88
355	24	M12	18	1.6	88.9	50.8	63	26.5°	11/2"	21/2"	键 Key 14×100	W60×2×28×9g	138
500	24	M16	24	1.6	106.4	62	75	26.5°	11/2"	3	键 Key 14×100	W70×2×22×9g	185