

## 柱塞泵 Piston Pump

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A2F 柱塞泵 A2F Piston Pump	05
A2FO(M) 柱塞泵 A2FO(M) Piston Pump	09
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## 液压马达 Hydraulic Motor

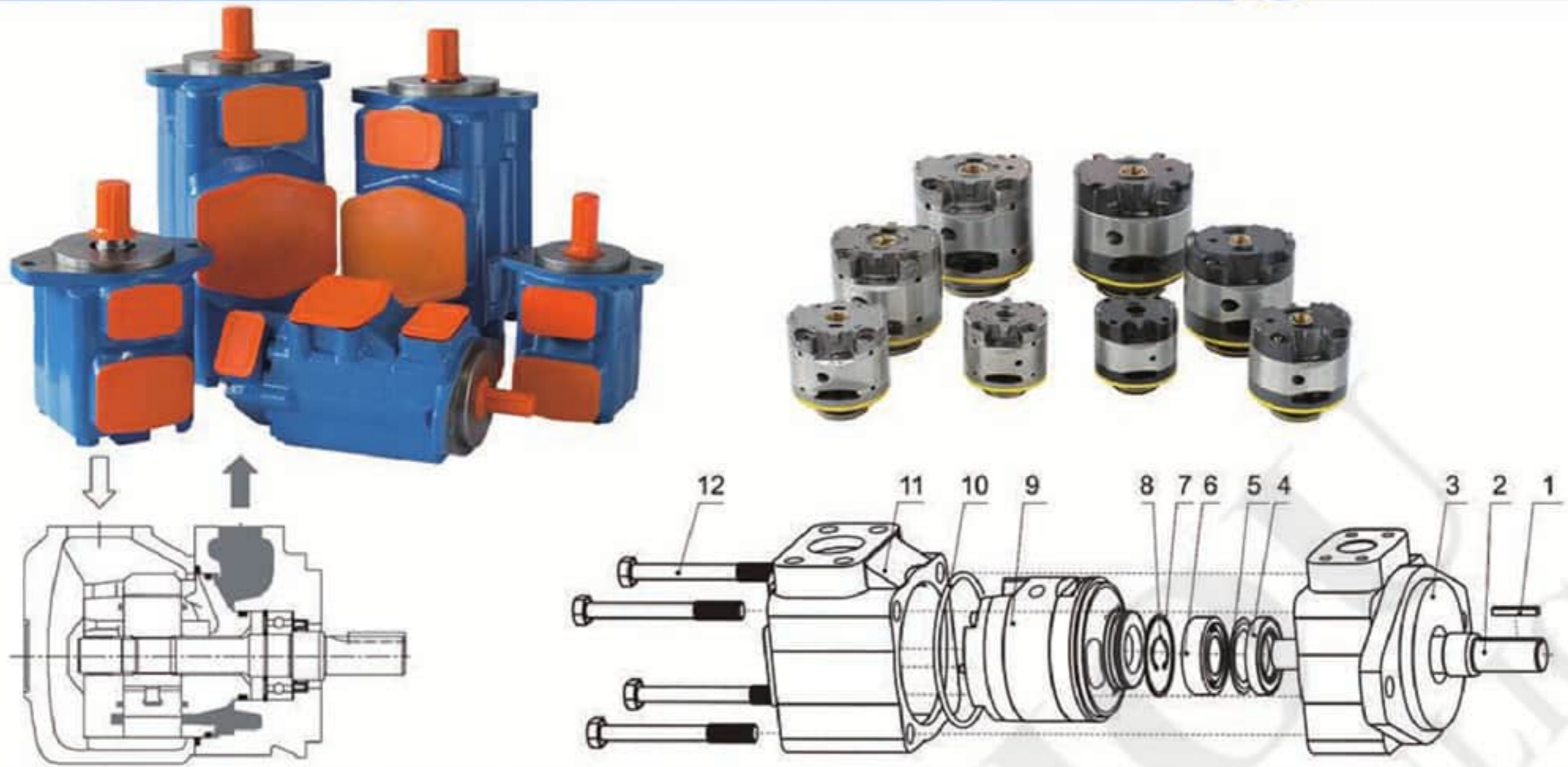
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序号	名称	数量	序号	名称	数量	序号	名称	数量
1	平键 Flat key	1	5	垫片 Shim	1	9	泵芯 Cartridge kit	1
2	轴 Shaft	1	6	滚动轴承 Rolling bearing	1	10	O型圈 O-ring	1
3	前盖 Front cover	1	7	叠形挡圈 Laminated retaining ring	1	11	后盖 End cover	1
4	油封 Oil seal	1	8	轴用弹性挡圈 External circlips	1	12	六角头螺栓 Hexagon headed bolt	1

■ VVQ系列单泵 VVQ Series Single Pump

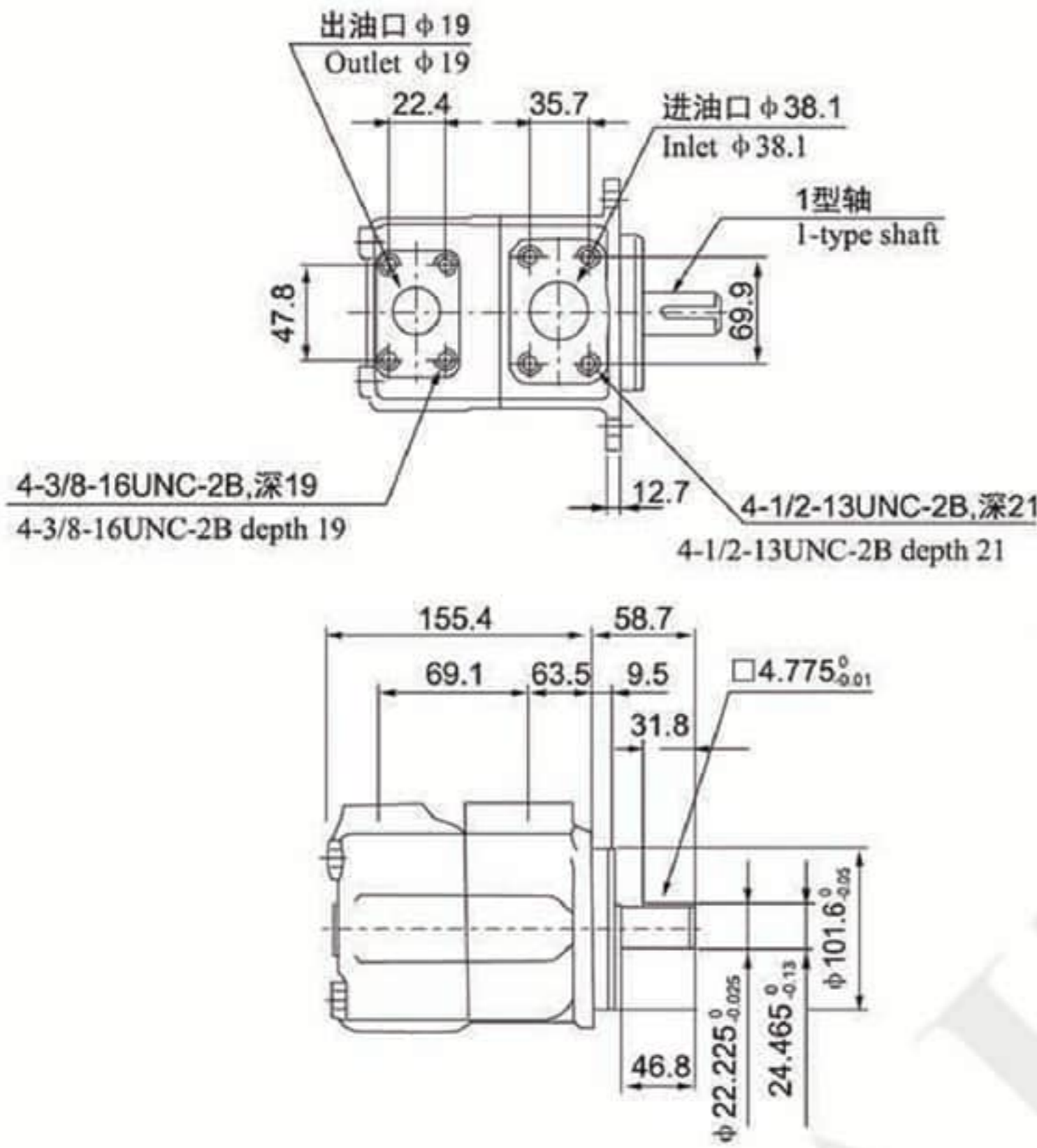
(F3-)	25V	17	A	(F)	-1	A	22	L
前注 Front marks	系列号 Code of series	▲排量代号 Displacement codes	油口连接 Pump port connection	安装型式 Mounting type	轴伸形式 Shaft extension	出油口位置 Outlet port position	设计号 Designing No.	旋转方向 Direction of rotation
无标记: 丁腈橡胶 No mark: Nitrile rubber	20V 20VQ	2,3,4,5,6,7,8,9, 10,11,12,14	A-SAE 4螺栓法兰 4-bolted Flange	无标记: 法兰安装型 Flange mounting F- 脚座安装型 F-Foot mounting	1-带键直轴 1- straight shaft with key 151-花键轴 151-spline shaft	(从泵的盖端看) (from cover end pump) A-进口油对侧 A- Opposition of inlet B-从进口油逆时针90° B- counterclockwise 90° from inlet C-进口油同侧 C- the same side of inlet D-从进口油顺时针90° D- Clockwise 90° from inlet	22	(从泵的轴端看) (from shaft end pump) L-逆时针旋转 L-counterclockwise rotation 无标记: 顺时针旋转 Clockwise rotation
F3: 氟橡胶 F3: Fluoro rubber	25V 25VQ	10,14,15,17, 19,21			1-带键直轴 1- straight shaft with key 86-重型带键直轴 86-heavy-duty straight shaft with key 11-花键轴 11-spline shaft			
	35V 35VQ	21,25,30,32,35, 38,45						
	45V 45VQ	42,45,50,57,60, 66,75						

■ VVQ系列双泵 VVQ Series Double Pump

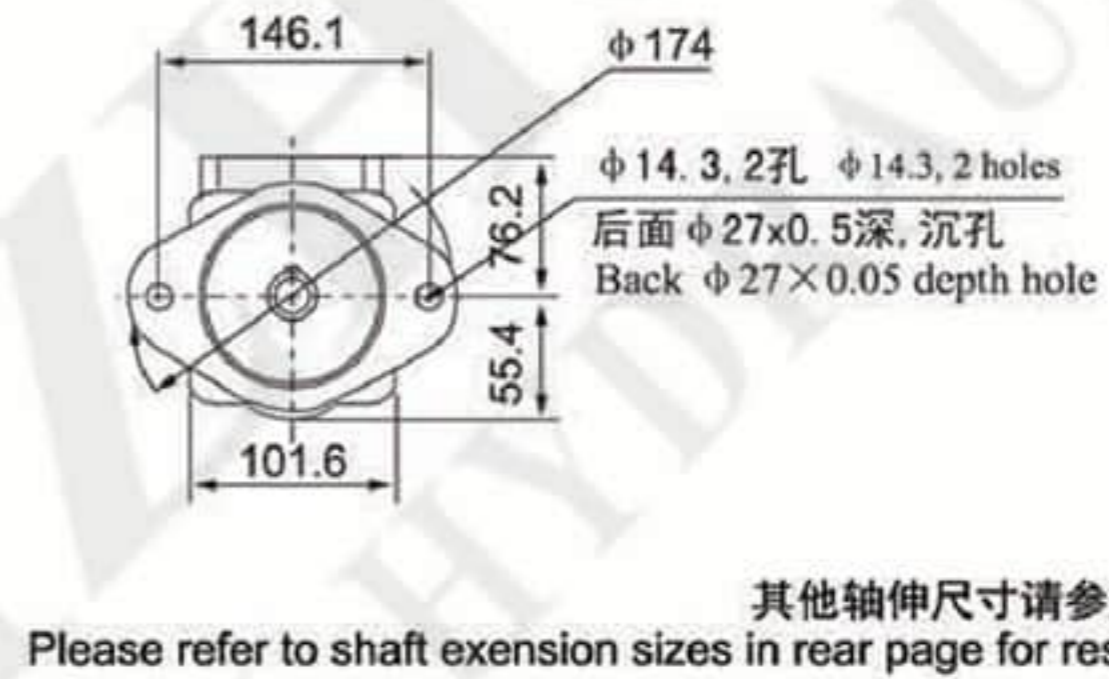
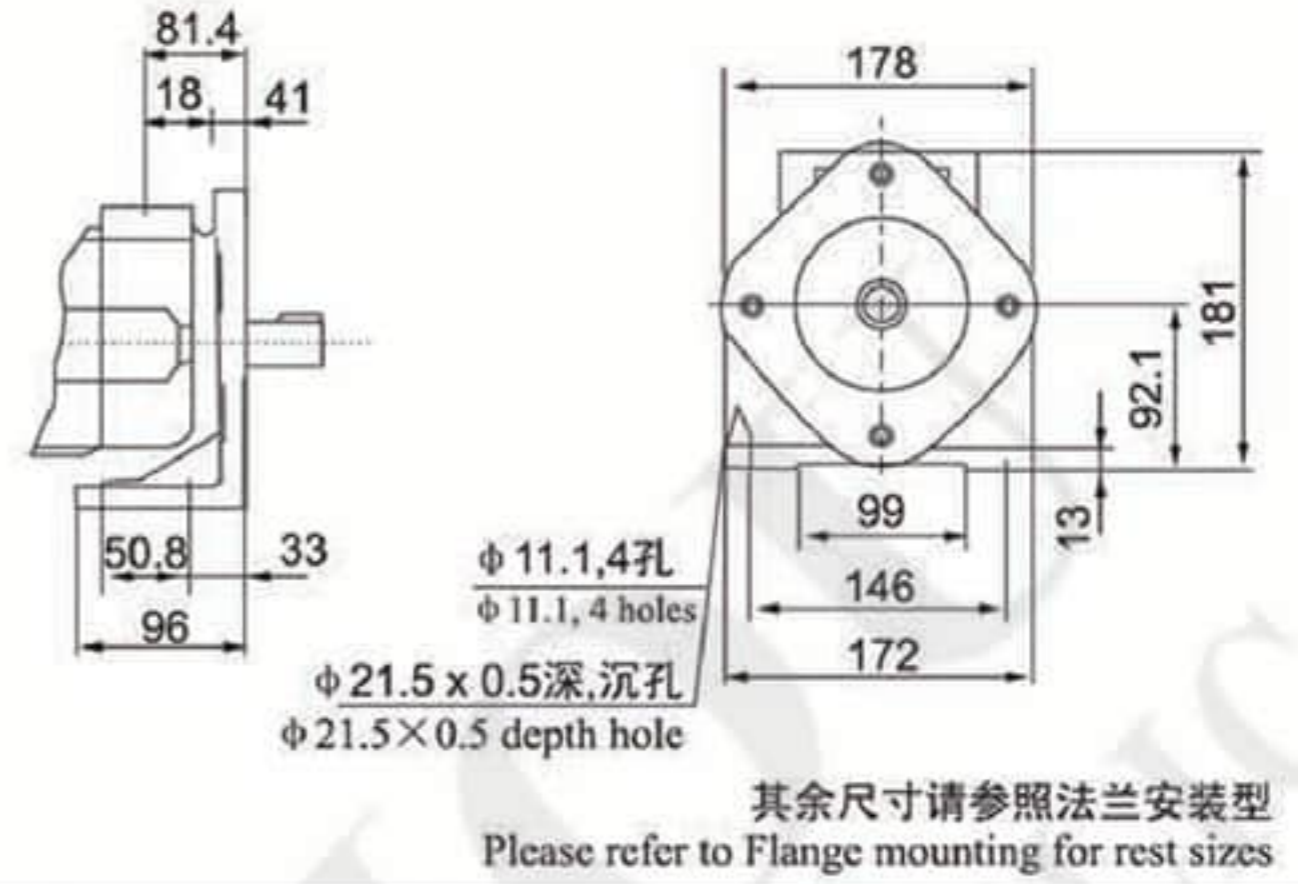
(F3-)	2520V	14	A	8	(F)	-1	*	20	*
前注 Front marks	系列号 Code of series	前泵排量代号 Displacement code of front pump	油口连接 Pump port mounting	后泵排量代号 Displacement code of rear pump	安装型式 Mounting type	轴伸形式 Shaft extension	油口位置 Pump position	设计号 Designing No.	旋转方向 Direction of rotation
无标记: 丁腈橡胶 No mark: Nitrile rubber  F3: 氟橡胶 F3: Fluoro rubber	2520V 2520VQ	10,12,14,15,17, 19,21	A-SAE 4螺栓法兰 4-bolted Flange	2,3,4,5,6,7,8,9, 10,11,12,14	无标记: 法兰安装型 Flange mounting F- 脚座安装型 F-Foot mounting	1-带键直轴 1- straight shaft with key	见下表 See as the following table	20	(从泵的轴端看) (from shaft end pump)  无标记: 顺时针旋转 Clockwise rotation  L-逆时针旋转 L-counterclockwise rotation
	3520V 3520VQ	21,25,30,32,35, 38,45		2,3,4,5,6,7,8,9, 10,11,12,14		86-重型带键直轴 86-heavy-duty straight shaft with key			
	3525V 3525VQ	21,25,30,32,35, 38,45		10,12,14,15,17, 19,21		11-花键轴 11-spline shaft			
	4525V 4520VQ	42,45,50,57,60, 66,75		2,3,4,5,6,7,8,9, 10,11,12,14					
	4525V 4525VQ	42,45,50,57,60, 66,75		10,12,14,15,17, 19,21					
	4535V 4535VQ	42,45,50,57,60, 66,75		21,25,30,32,35, 38,45					

■ 安装连接尺寸 Installation Size

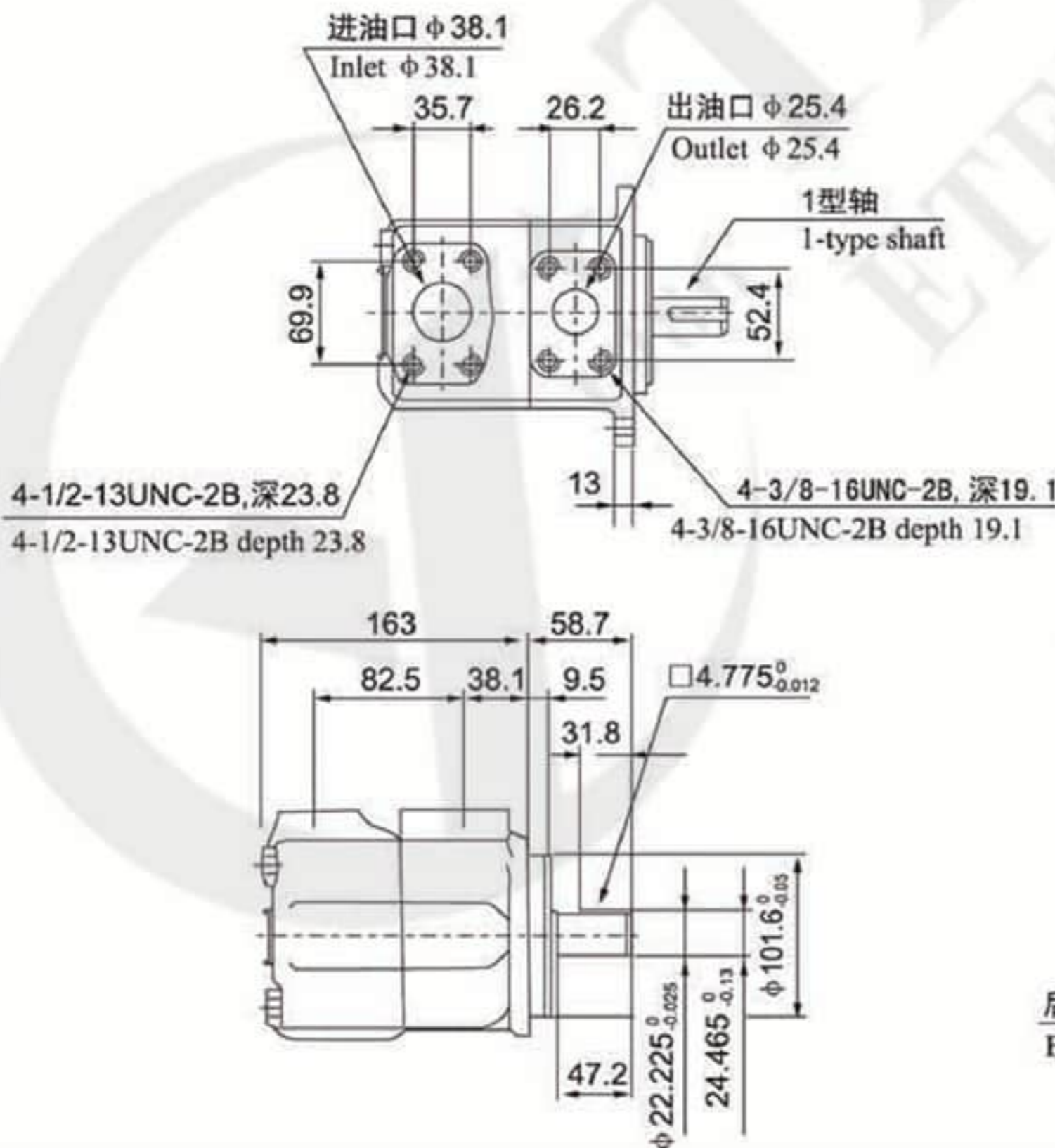
20V/VQ法兰安装 20V/VQ Flange Mounting



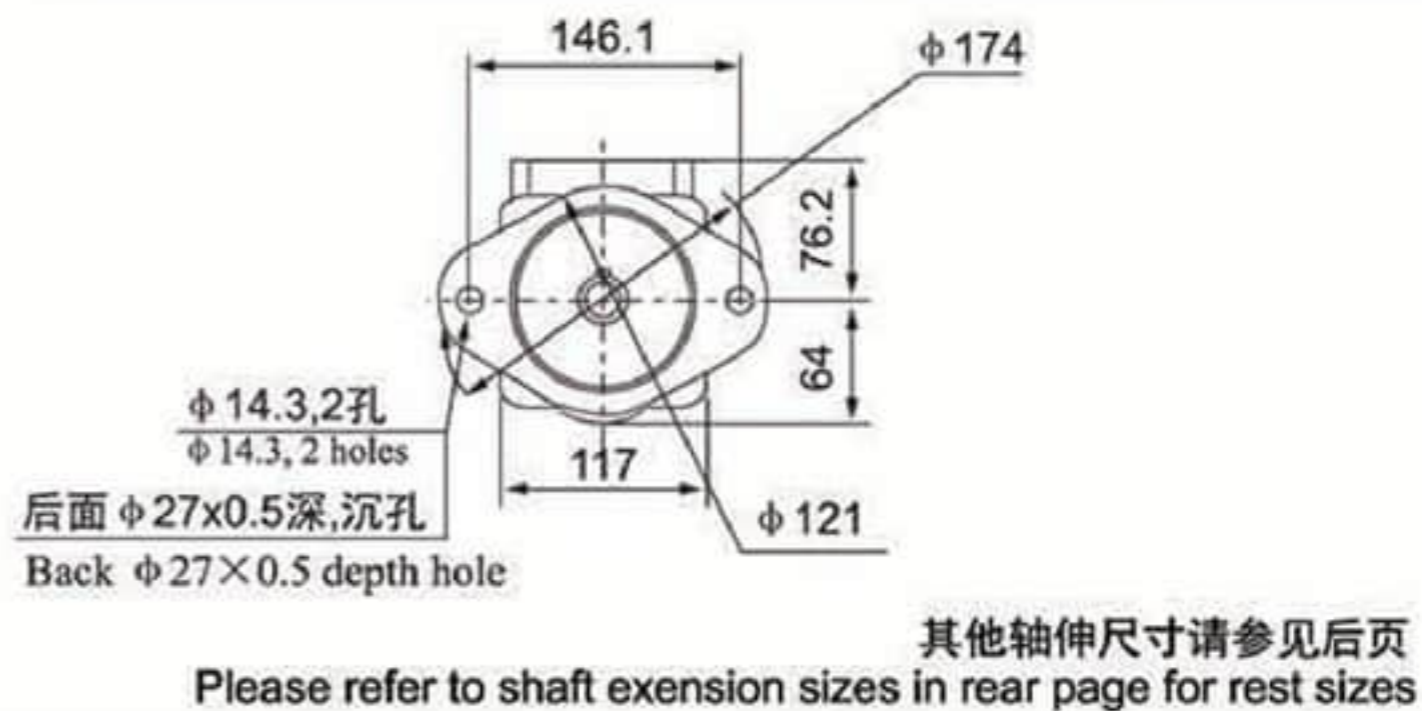
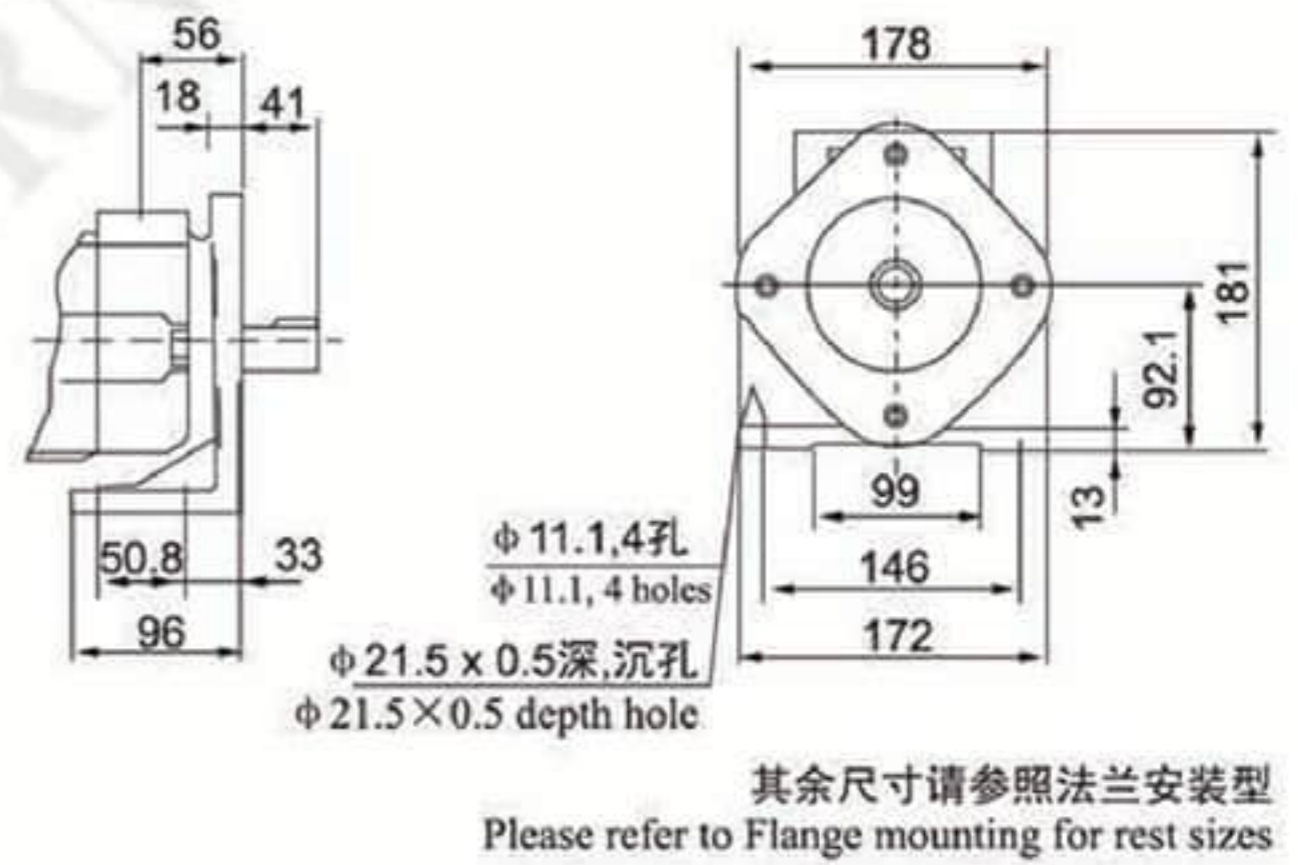
20V/VQ脚座安装 20V/VQ Foot Mounting



25V/VQ法兰安装 25V/VQ Flange Mounting

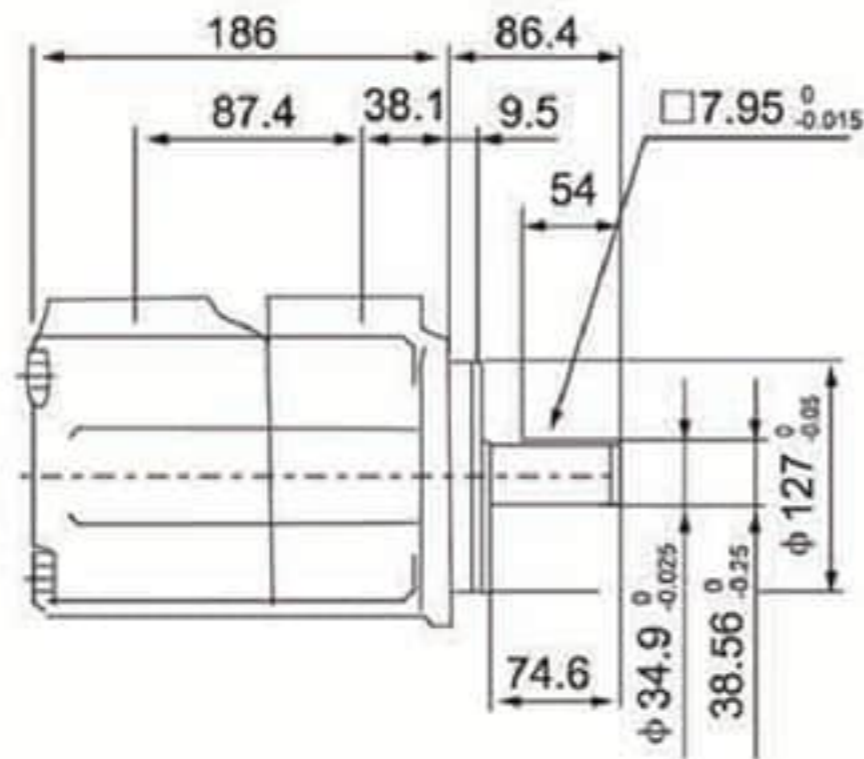
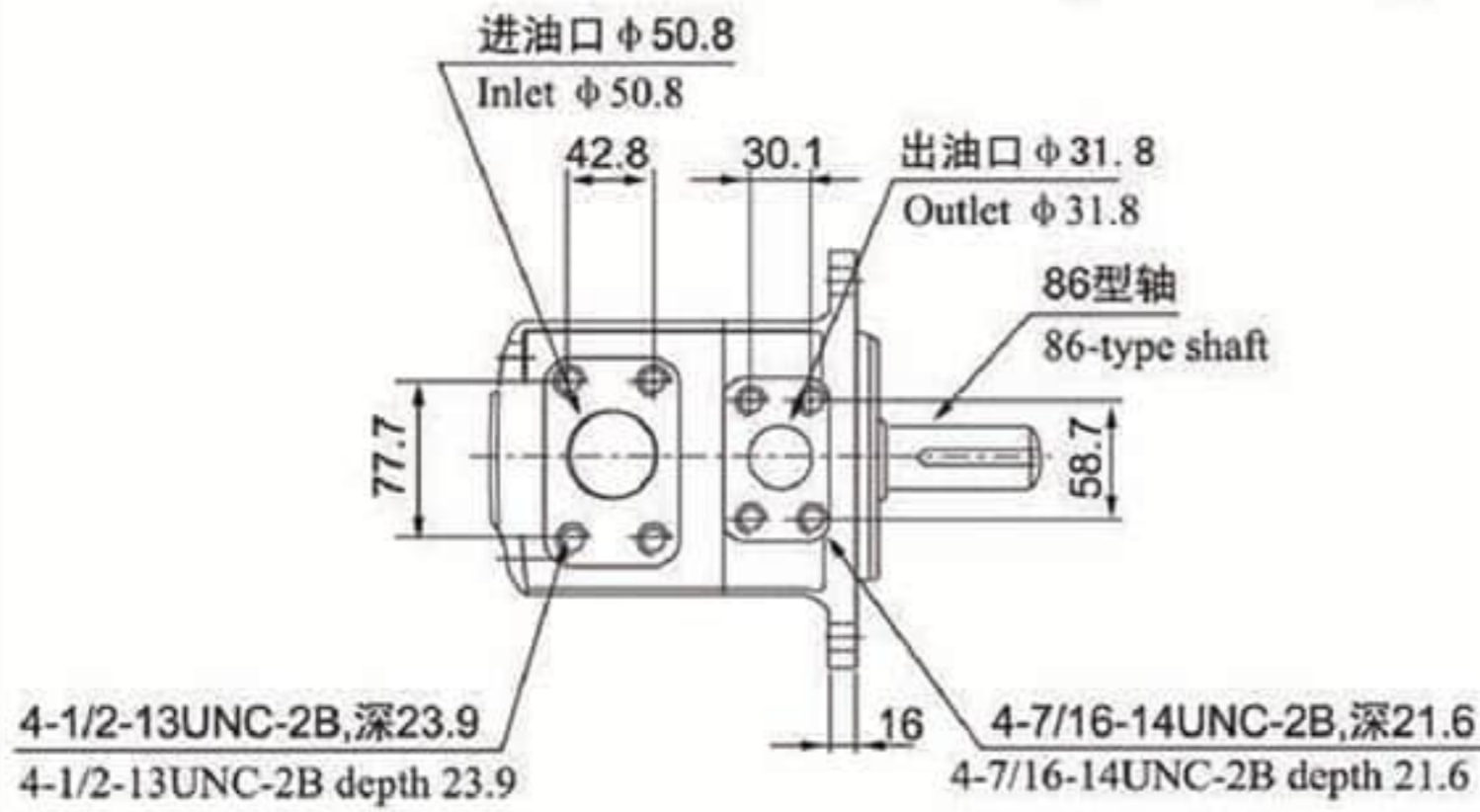


25V/VQ脚座安装 20V/VQ Foot Mounting

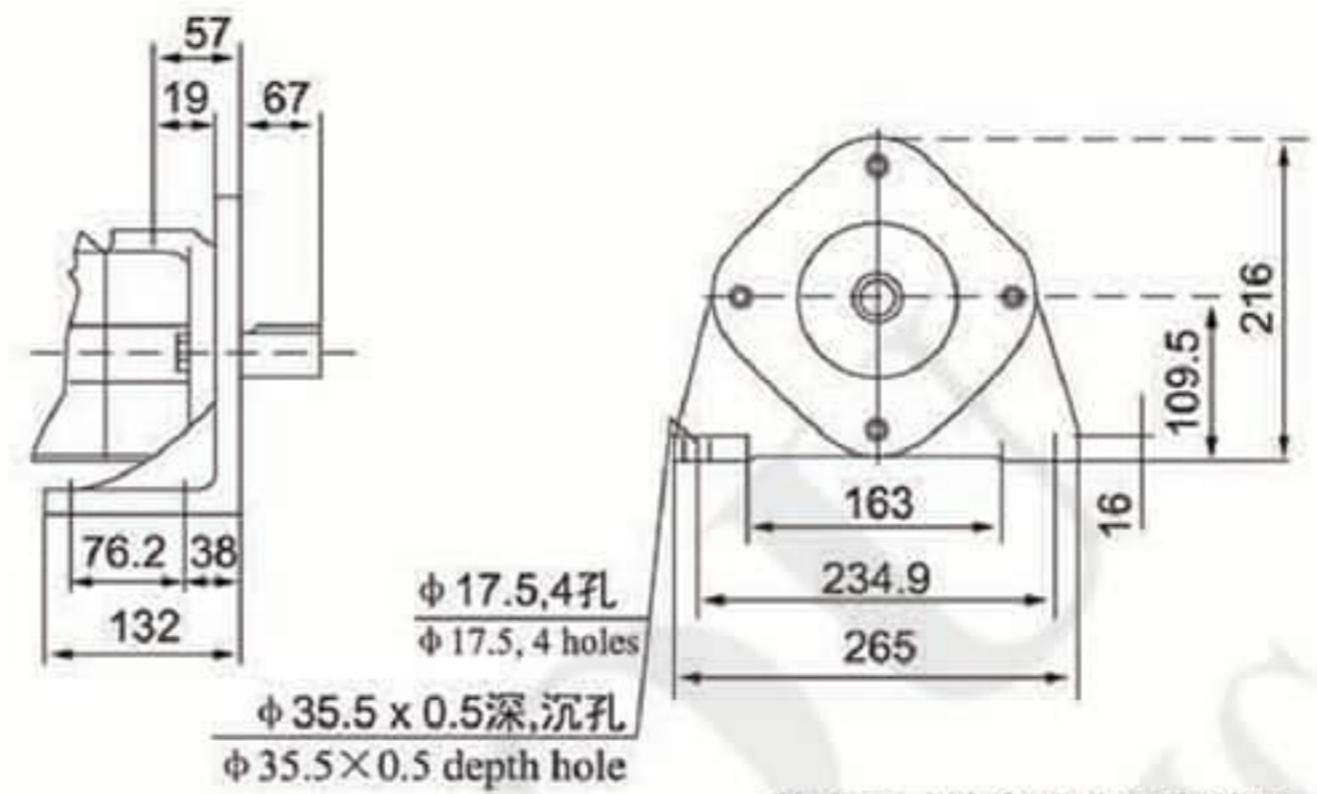


■ 安装连接尺寸 Installation Size

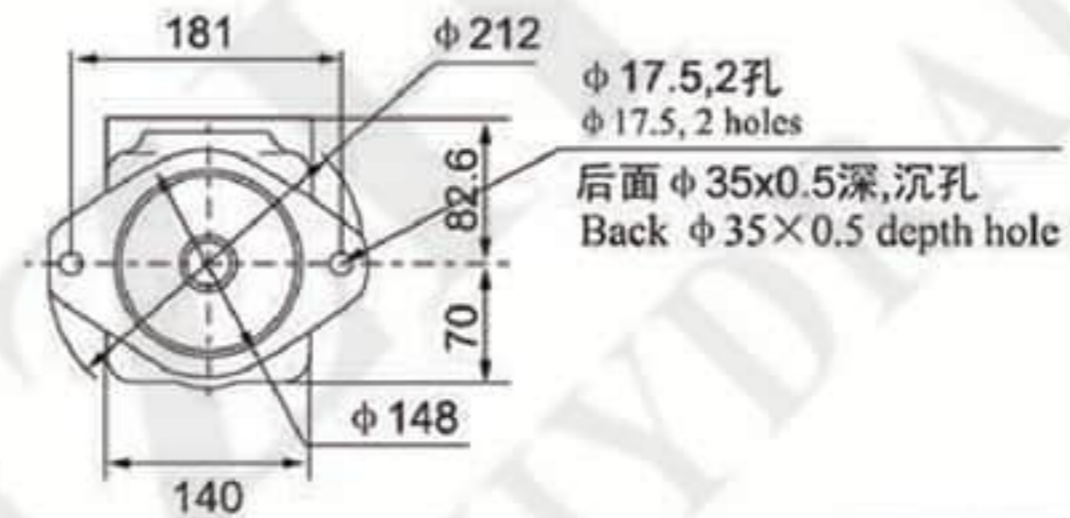
35VVQ法兰安装 35VVQ Flange Mounting



35VVQ脚座安装 35VVQ Foot Mounting

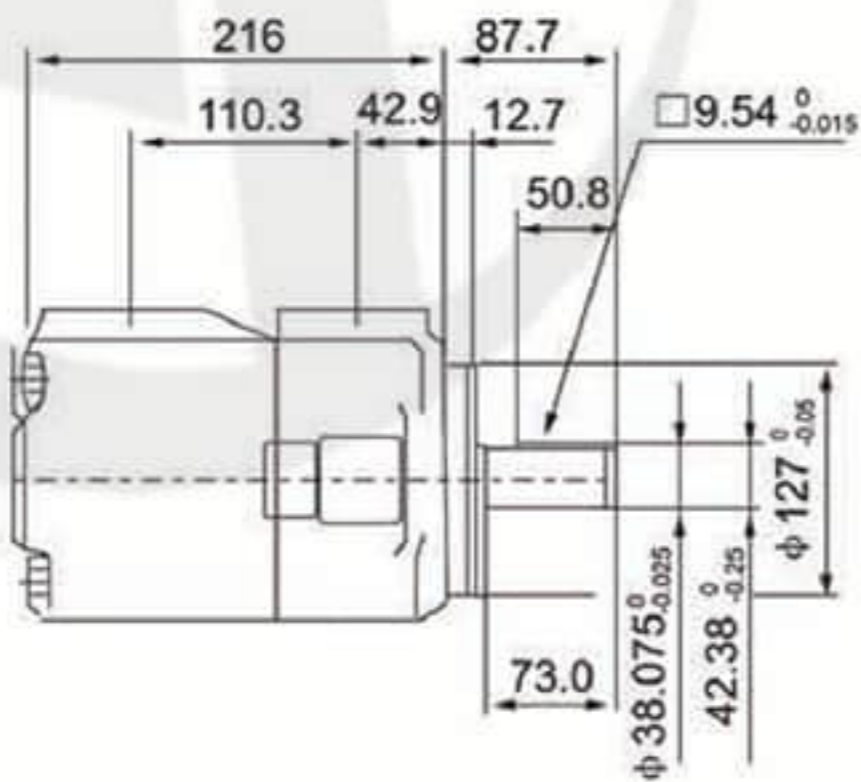
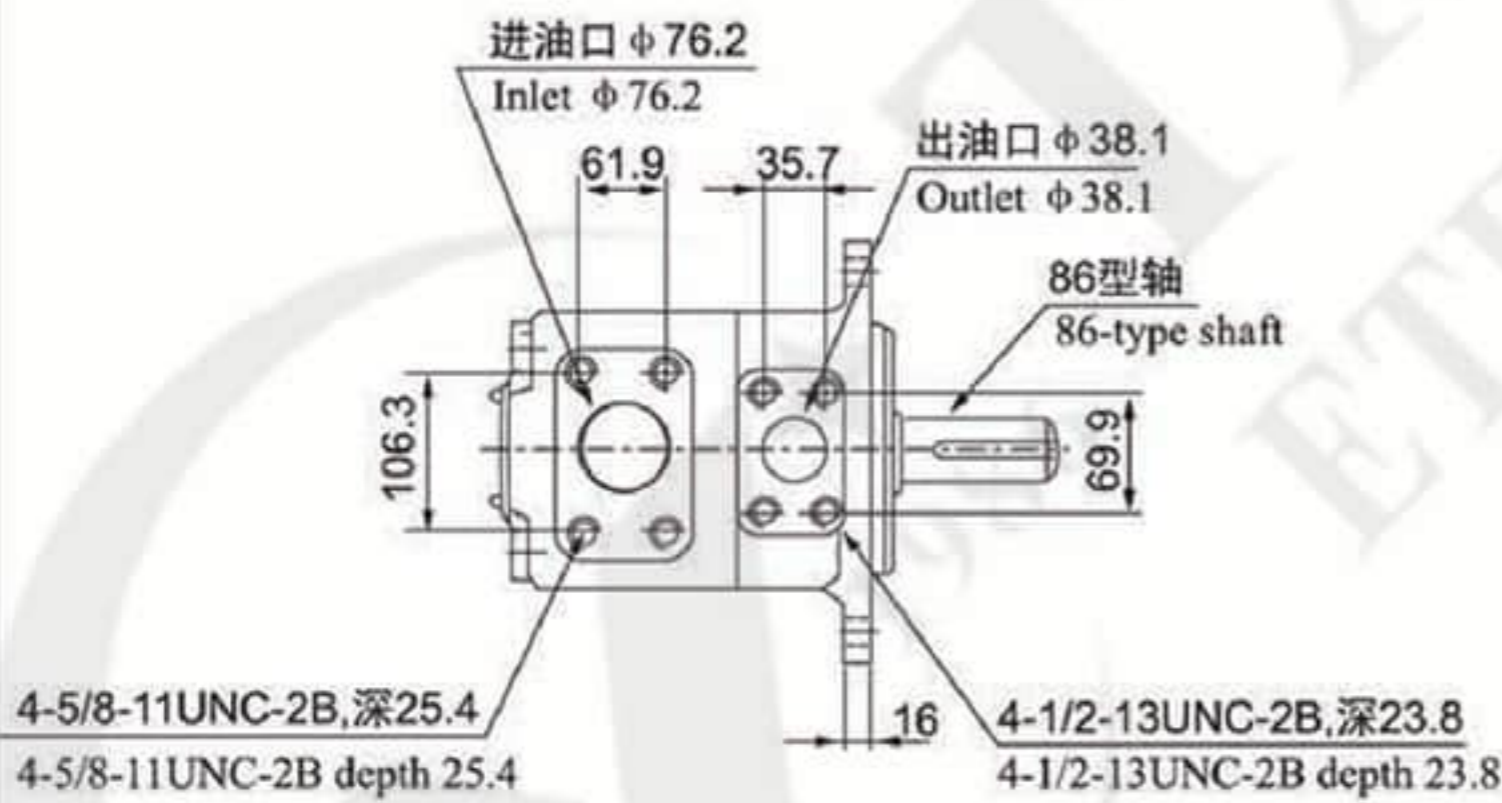


其余尺寸请参照法兰安装型  
Please refer to Flange mounting for rest sizes

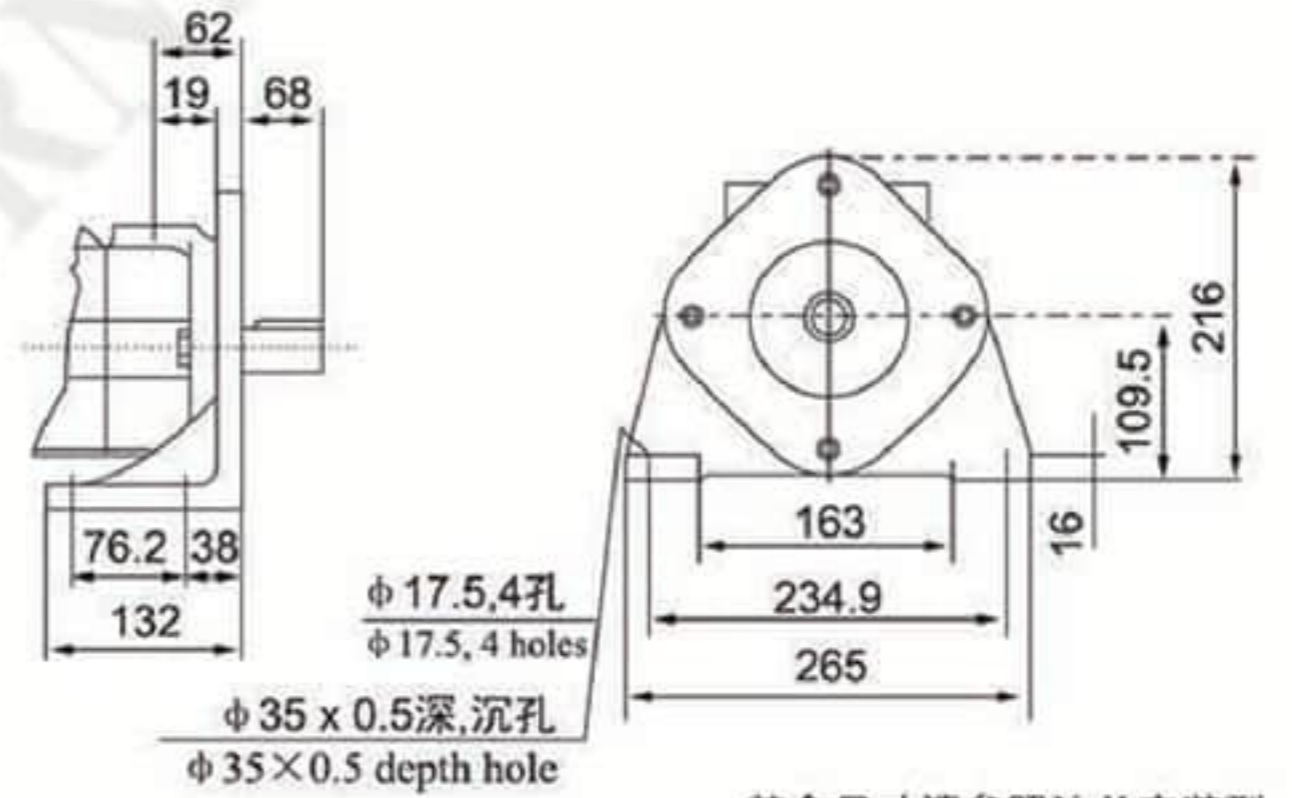


其他轴伸尺寸请参见后页  
Please refer to shaft extension sizes in rear page for rest sizes

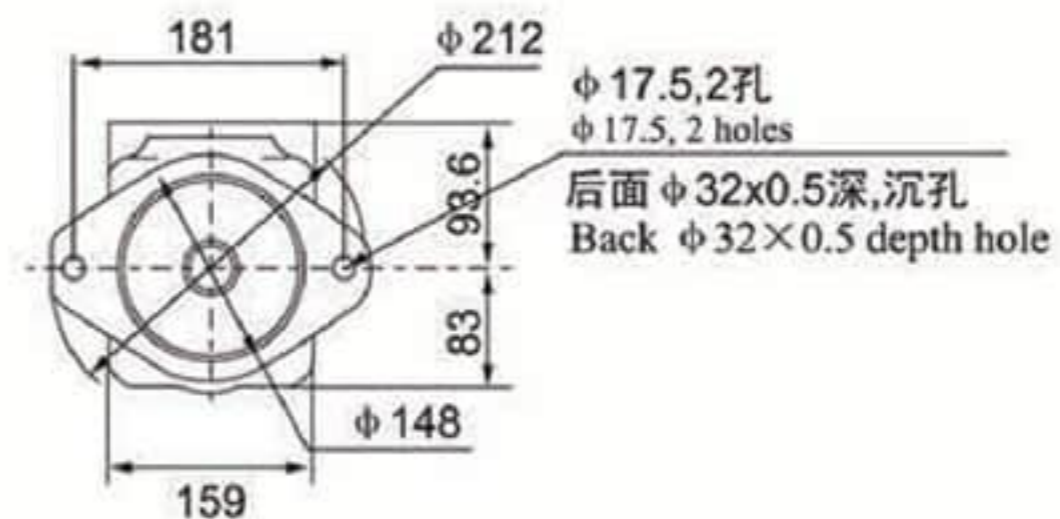
45VVQ法兰安装 45VVQ Flange Mounting



45VVQ脚座安装 45VVQ Foot Mounting



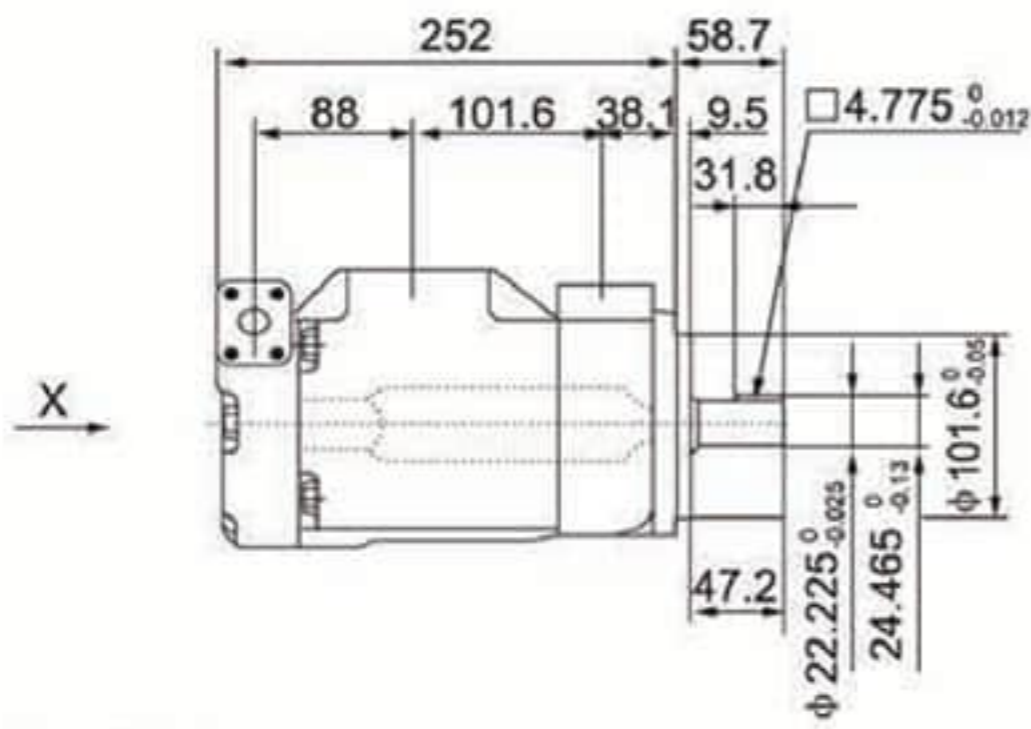
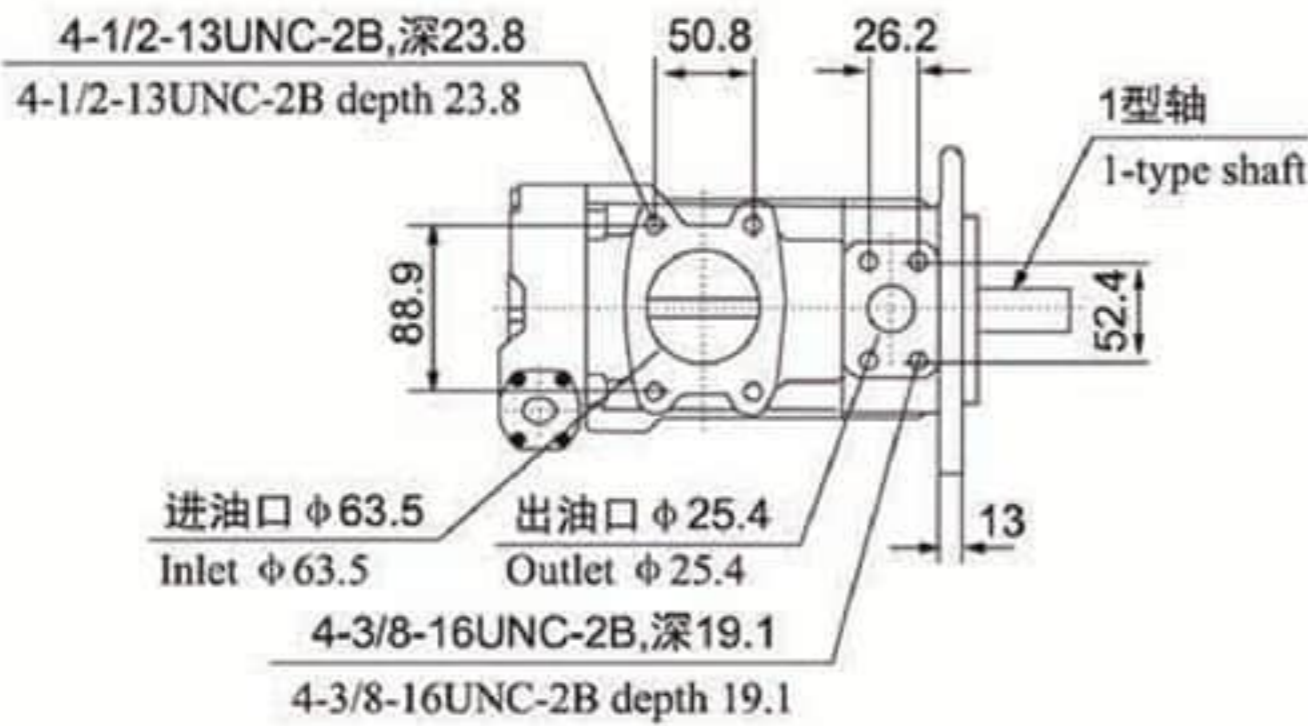
其余尺寸请参照法兰安装型  
Please refer to Flange mounting for rest sizes



其他轴伸尺寸请参见后页  
Please refer to shaft extension sizes in rear page for rest sizes

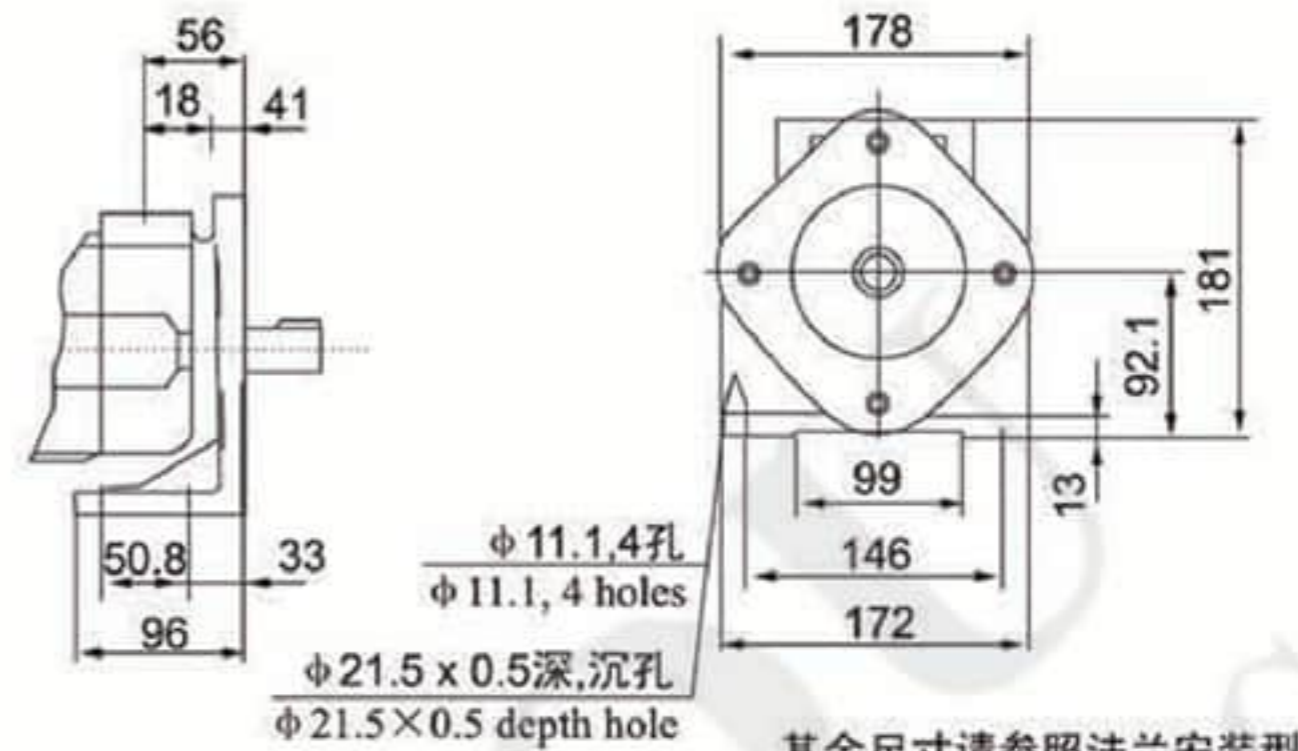
■ 安装连接尺寸 Installation Size

2520VVQ法兰安装 2520VVQ Flange Mounting

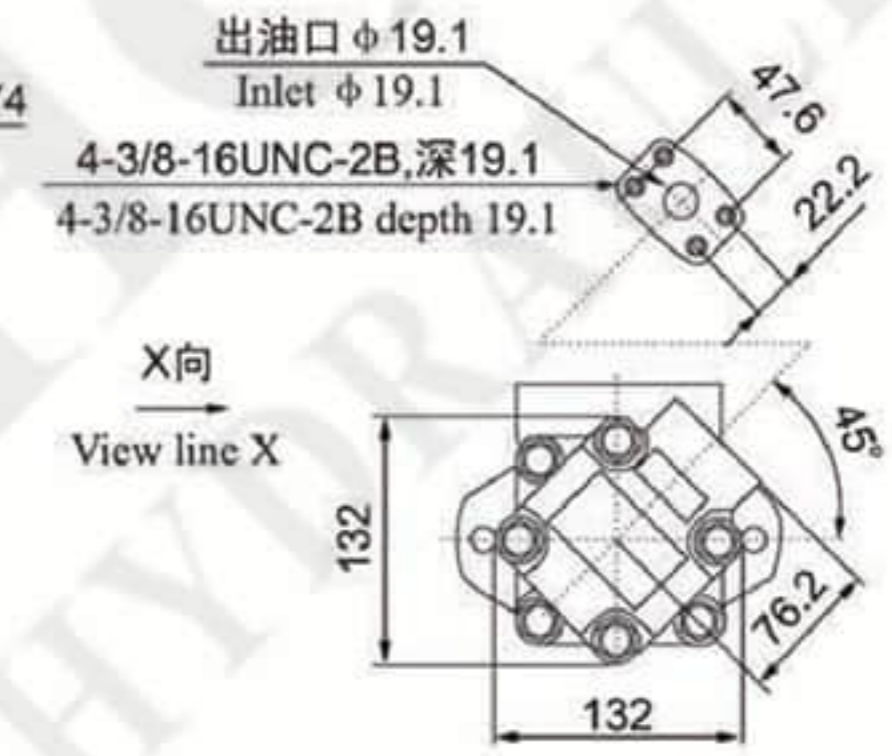
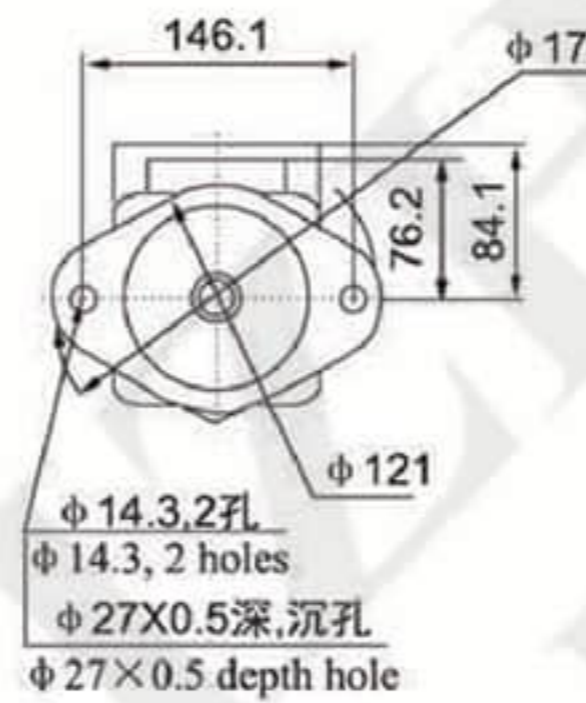


其他轴伸尺寸请参见后页  
Please refer to shaft extension sizes in rear page for rest sizes

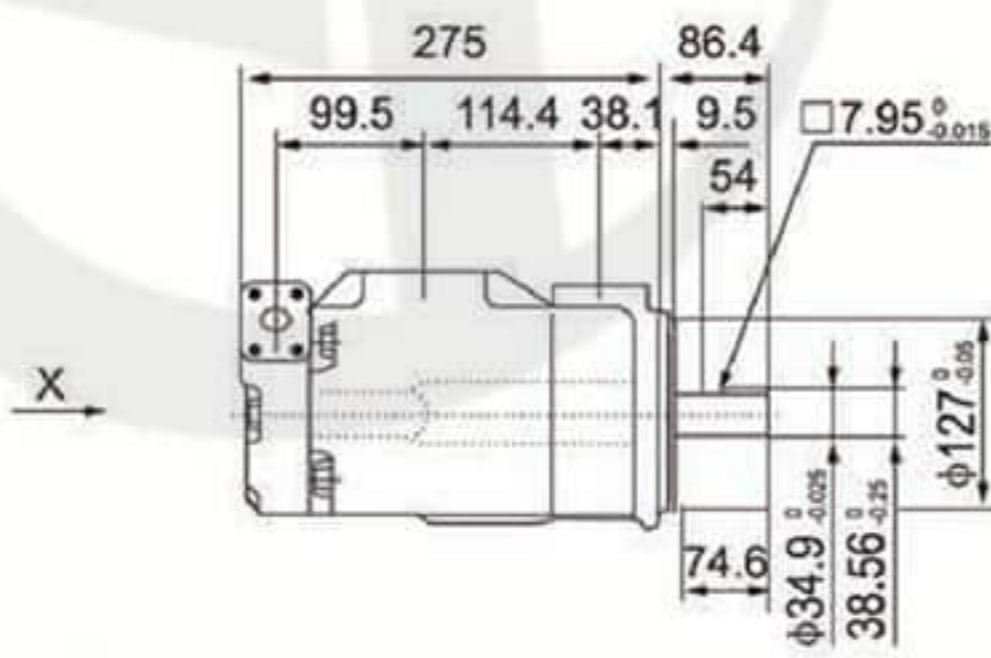
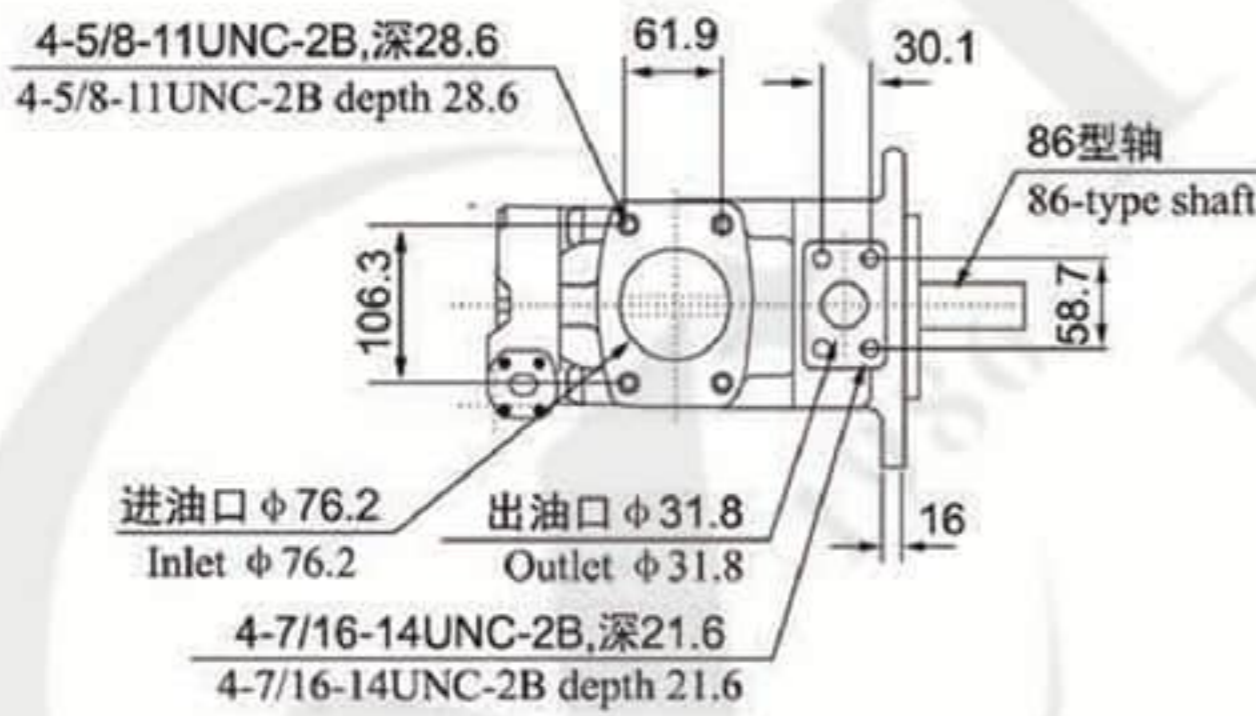
2520VVQ脚座安装 2520VVQ Foot Mounting



其余尺寸请参照法兰安装型  
Please refer to Flange mounting for rest sizes

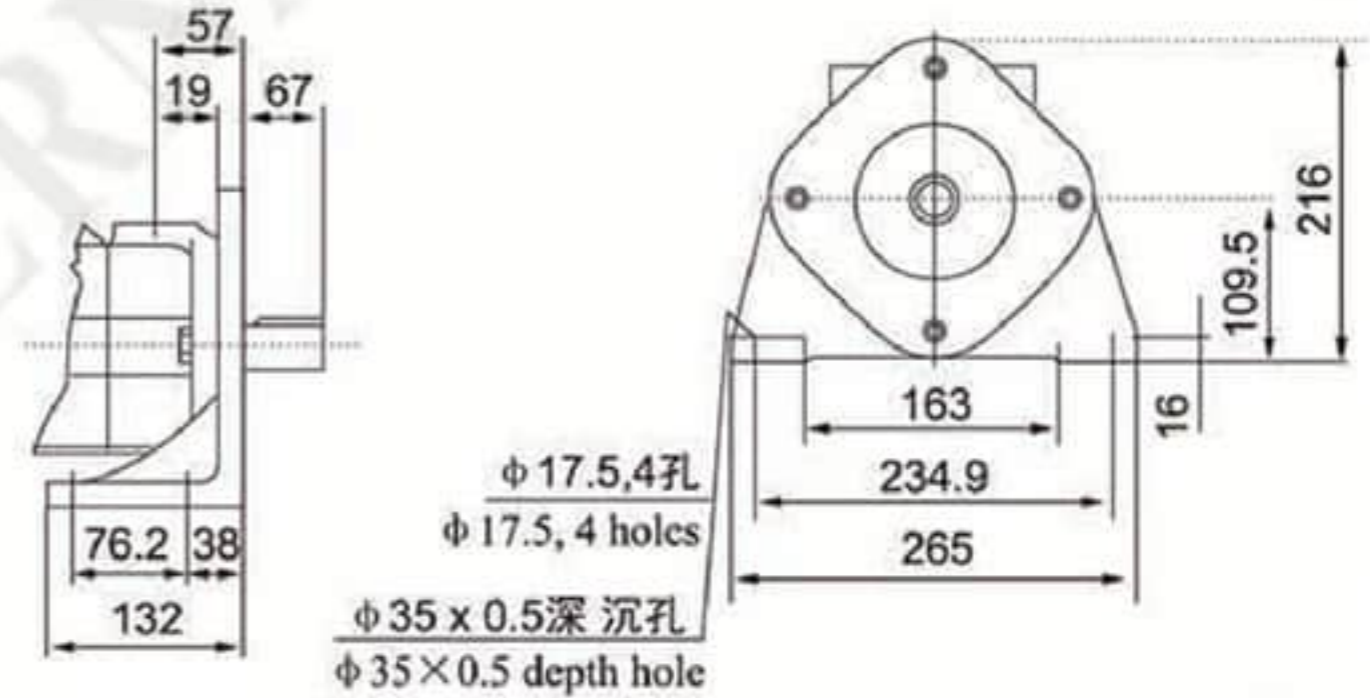


3520VVQ法兰安装 3520VVQ Flange Mounting

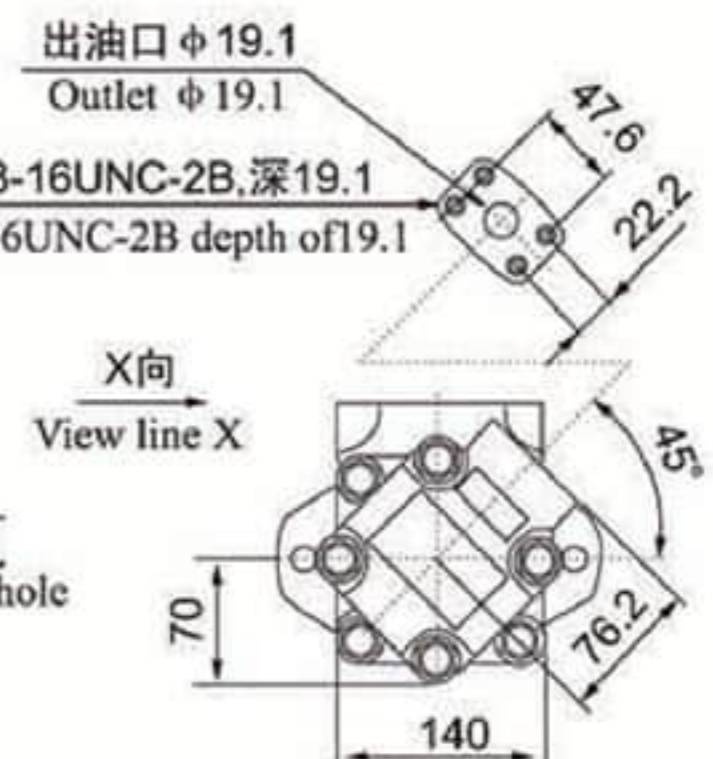
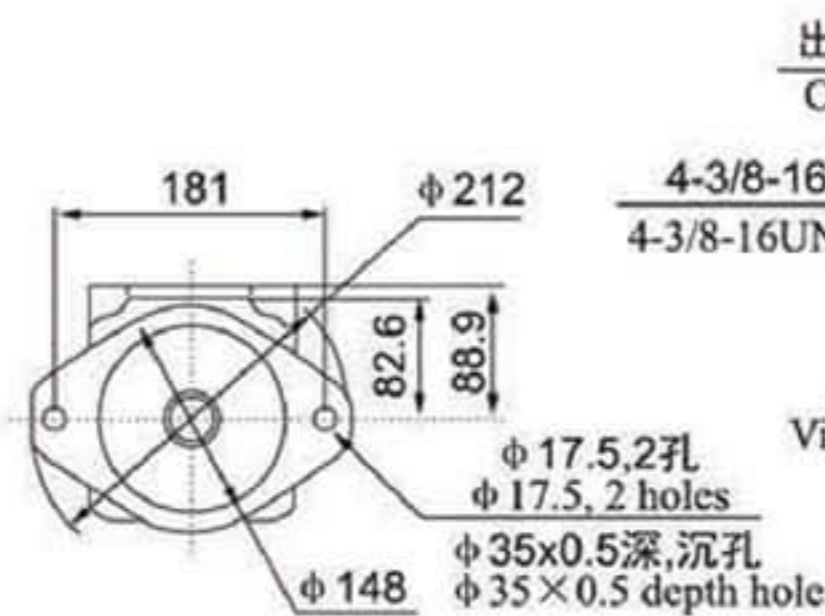


其他轴伸尺寸请参见后页  
Please refer to shaft extension sizes in rear page for rest sizes

3520VVQ脚座安装 3520VVQ Foot Mounting

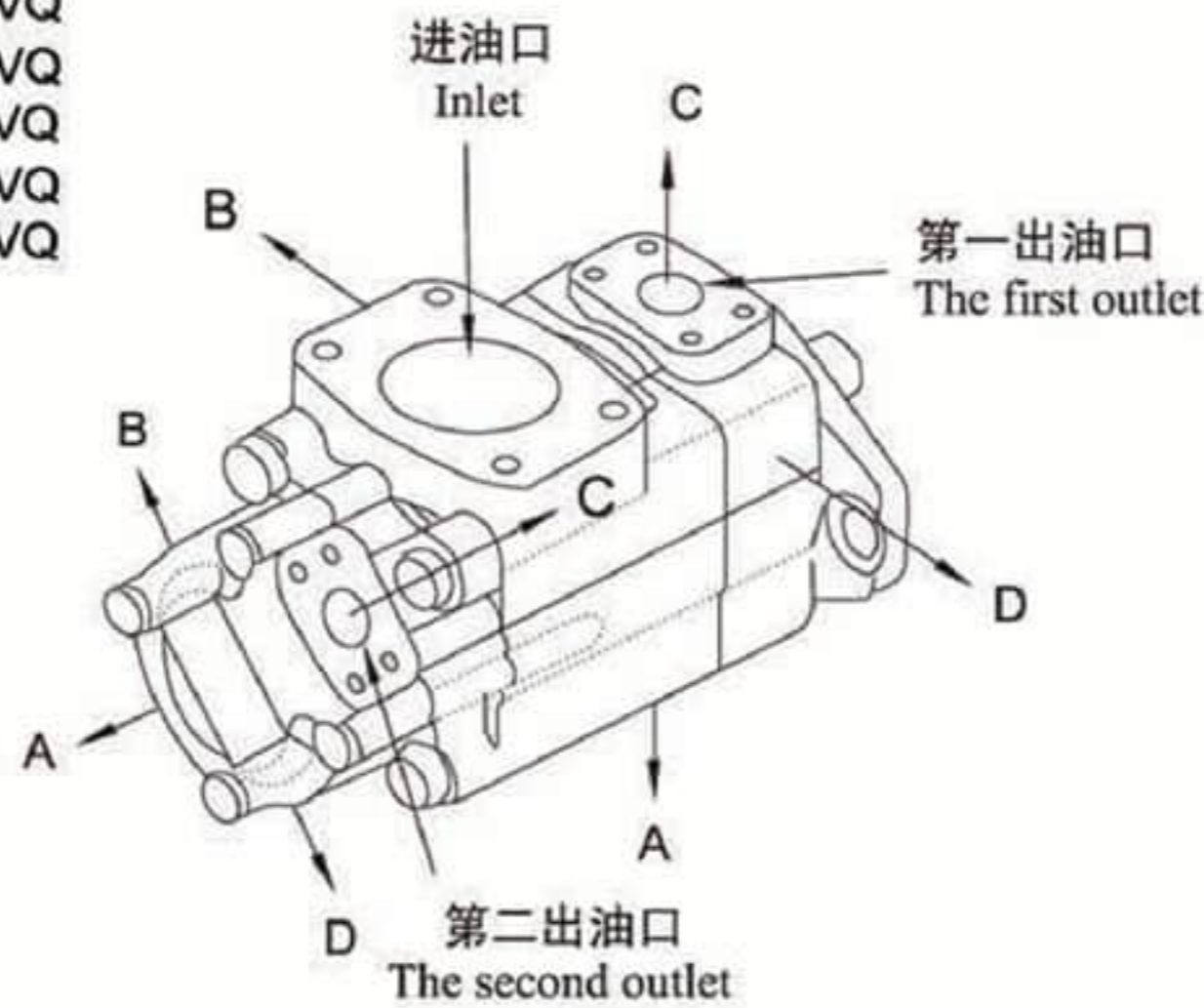


其余尺寸请参照法兰安装型  
Please refer to Flange mounting for rest sizes

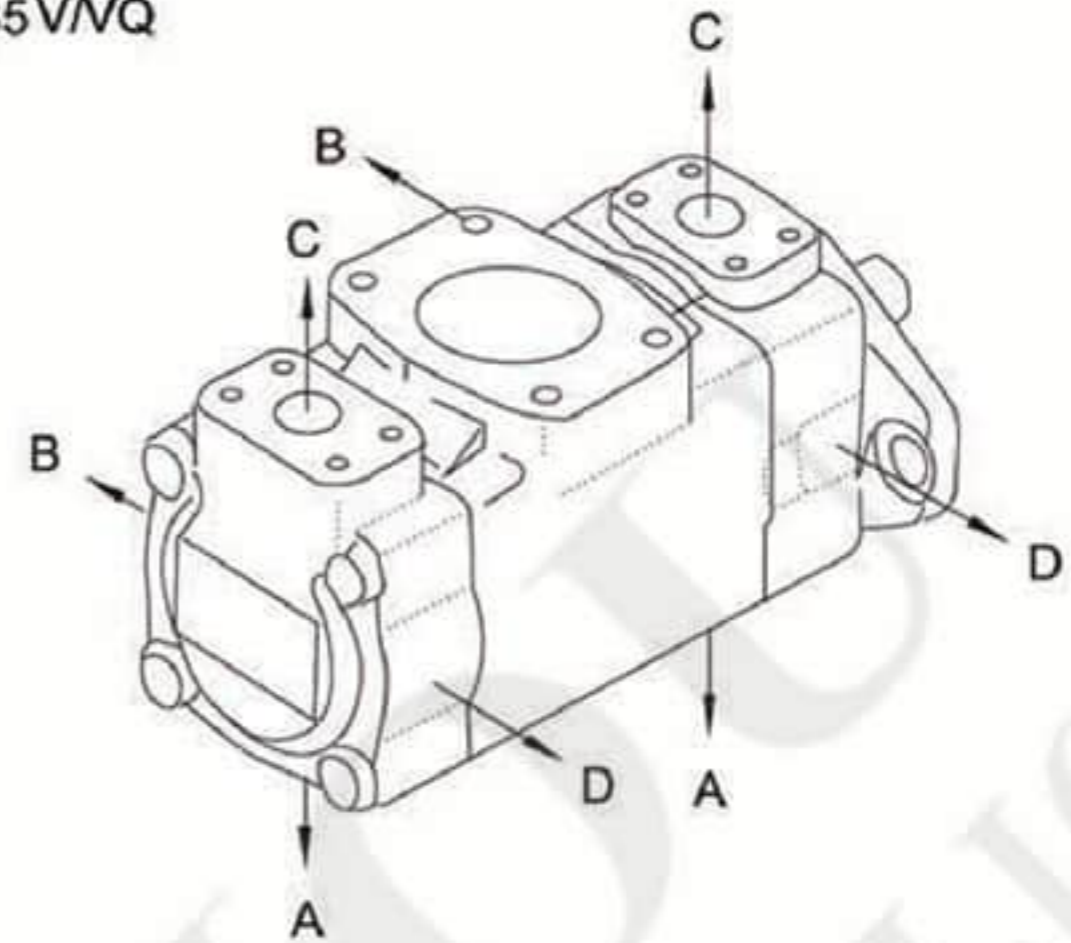


■ 油口位置表（从泵的盖端看） Pump Oil Port Position (Viewed From Cover End Pump)

- 2520 V/VQ
- 3520 V/VQ
- 3525 V/VQ
- 4520 V/VQ
- 4525 V/VQ



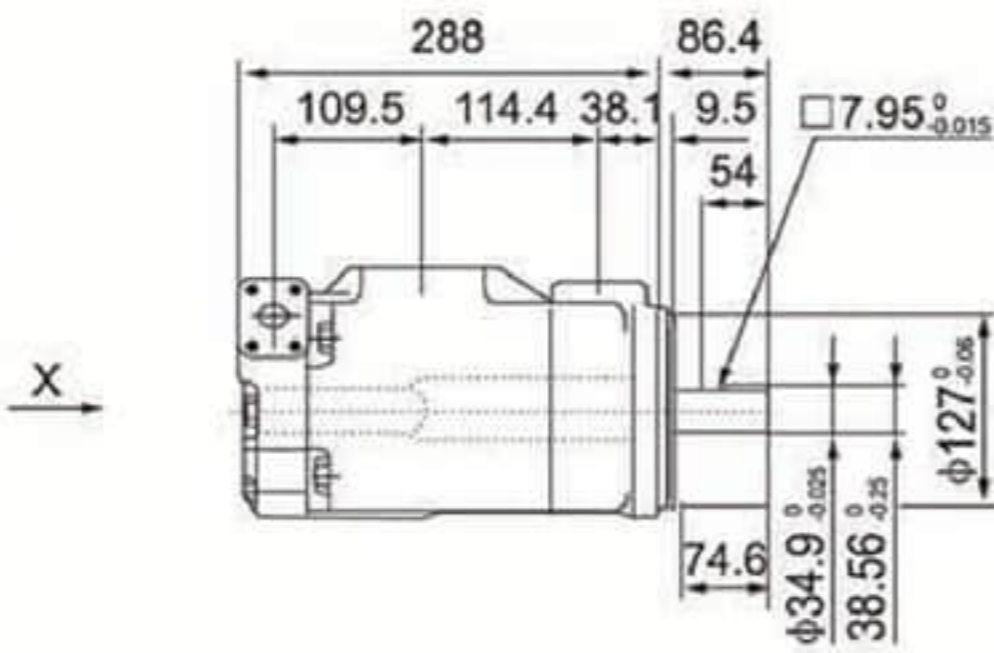
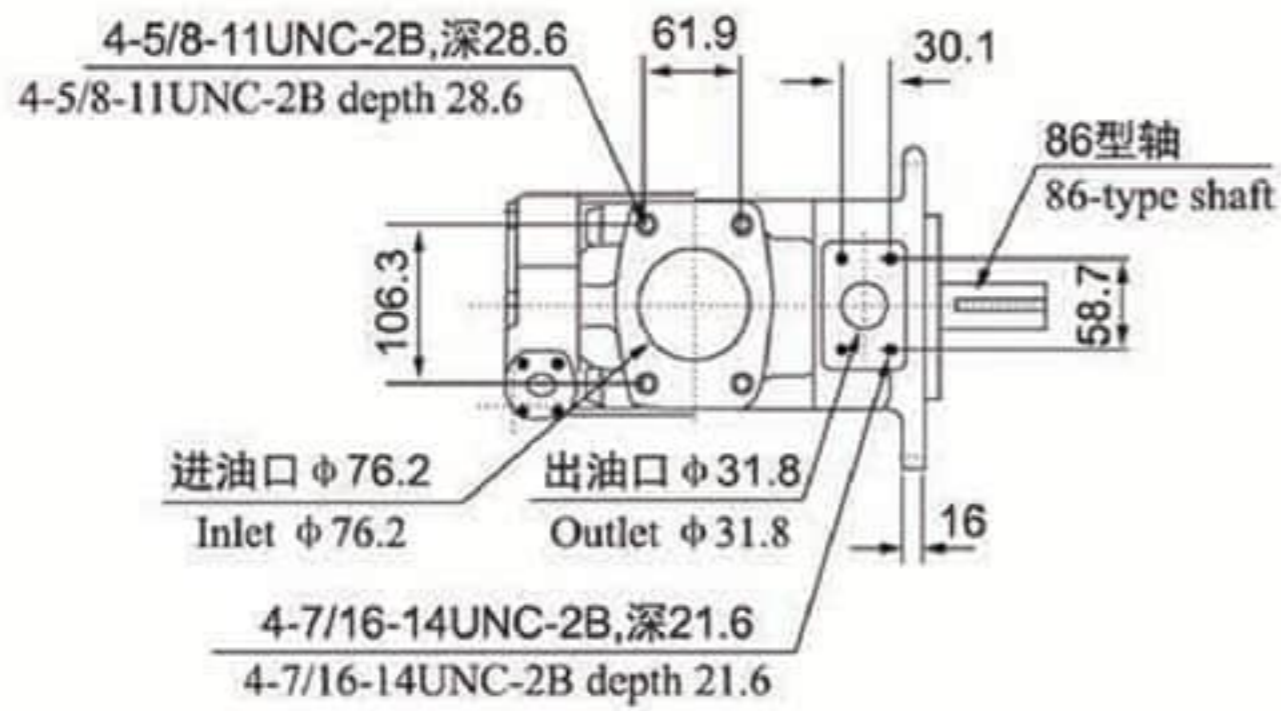
- 4535 V/VQ



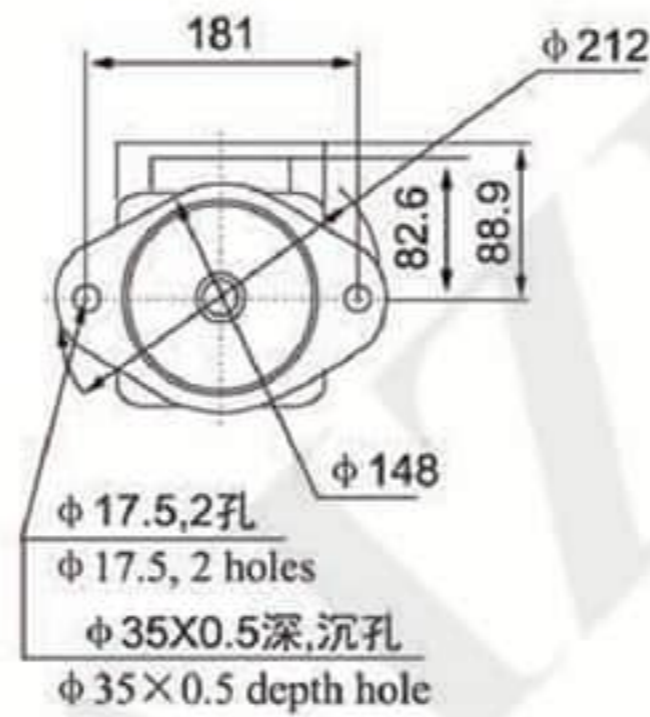
油口位置 Pump position		所有系列（除4535V/VQ外） All series (except for 4535V/VQ)	4535V/VQ
第一出油口 在进油口对侧 The first outlet is the opposition side of inlet.	AA	第二出油口在进油口逆时针转135° The second outlet is to counterclockwise rotation of 135° from inlet	第二出油口在进油口对侧 The second outlet is the opposition side of inlet.
	AB	第二出油口在进油口逆时针转45° The second outlet is to counterclockwise rotation of 45° from inlet	第二出油口在进油口逆时针转90° The second outlet is to counterclockwise rotation of 90° from inlet
	AC	第二出油口在进油口顺时针转45° The second outlet is to clockwise rotation of 45° from inlet	第二出油口在进油口同侧 The second outlet is the same side of inlet.
	AD	第二出油口在进油口顺时针转135° The second outlet is to clockwise rotation of 135° from inlet	第二出油口在进油口顺时针转90° The second outlet is to clockwise rotation of 90° from inlet
第一出油口 从进油口逆 时针转90° The first outlet is to counterclockwise rotation of 90° from inlet	BA	第二出油口在进油口逆时针转135° The second outlet is to counterclockwise rotation of 135° from inlet	第二出油口在进油口对侧 The second outlet is the opposition side of inlet.
	BB	第二出油口在进油口逆时针转45° The second outlet is to counterclockwise rotation of 45° from inlet	第二出油口在进油口逆时针转90° The second outlet is to counterclockwise rotation of 90° from inlet
	BC	第二出油口在进油口顺时针转45° The second outlet is to clockwise rotation of 45° from inlet	第二出油口在进油口同侧 The second outlet is the same side of inlet.
	BD	第二出油口在进油口顺时针转135° The second outlet is to clockwise rotation of 135° from inlet	第二出油口在进油口顺时针转90° The second outlet is to clockwise rotation of 90° from inlet
第一出油口 在进油口同侧 The first outlet is the same side of inlet.	CA	第二出油口在进油口逆时针转135° The second outlet is to counterclockwise rotation of 135° from inlet	第二出油口在进油口对侧 The second outlet is the opposition side of inlet.
	CB	第二出油口在进油口逆时针转45° The second outlet is to counterclockwise rotation of 45° from inlet	第二出油口在进油口逆时针转90° The second outlet is to counterclockwise rotation of 90° from inlet
	CC	第二出油口在进油口顺时针转45° The second outlet is to clockwise rotation of 45° from inlet	第二出油口在进油口同侧 The second outlet is the same side of inlet.
	CD	第二出油口在进油口顺时针转135° The second outlet is to clockwise rotation of 135° from inlet	第二出油口在进油口顺时针转90° The second outlet is to clockwise rotation of 90° from inlet
第一出油口 从进油口顺 时针转90° The first outlet is to clockwise rotation of 90° from inlet	DA	第二出油口在进油口逆时针转135° The second outlet is to counterclockwise rotation of 135° from inlet	第二出油口在进油口对侧 The second outlet is the opposition side of inlet.
	DB	第二出油口在进油口逆时针转45° The second outlet is to counterclockwise rotation of 45° from inlet	第二出油口在进油口逆时针转90° The second outlet is to counterclockwise rotation of 90° from inlet
	DC	第二出油口在进油口顺时针转45° The second outlet is to clockwise rotation of 45° from inlet	第二出油口在进油口同侧 The second outlet is the same side of inlet.
	DD	第二出油口在进油口顺时针转135° The second outlet is to clockwise rotation of 135° from inlet	第二出油口在进油口顺时针转90° The second outlet is to clockwise rotation of 90° from inlet

■ 安装连接尺寸 Installation Size

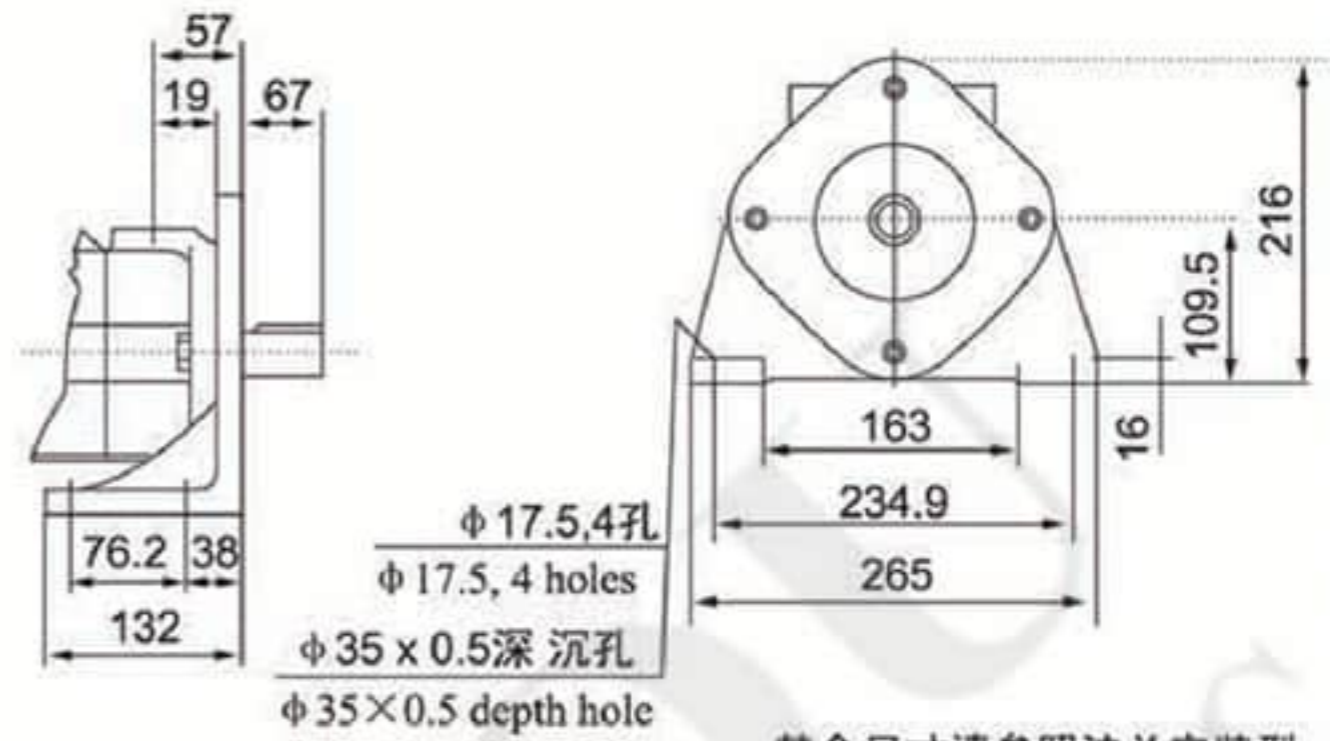
3525V/VQ法兰安装 3525V/VQ Flange Mounting



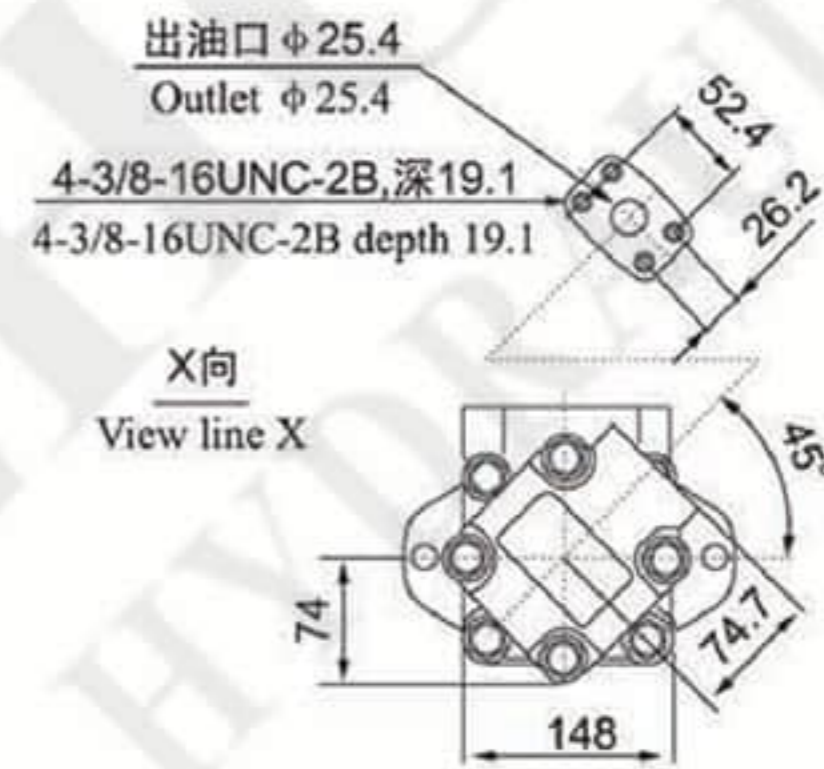
其它轴伸尺寸请参见53页  
Please refer to shaft extension sizes in page 53 for rest sizes



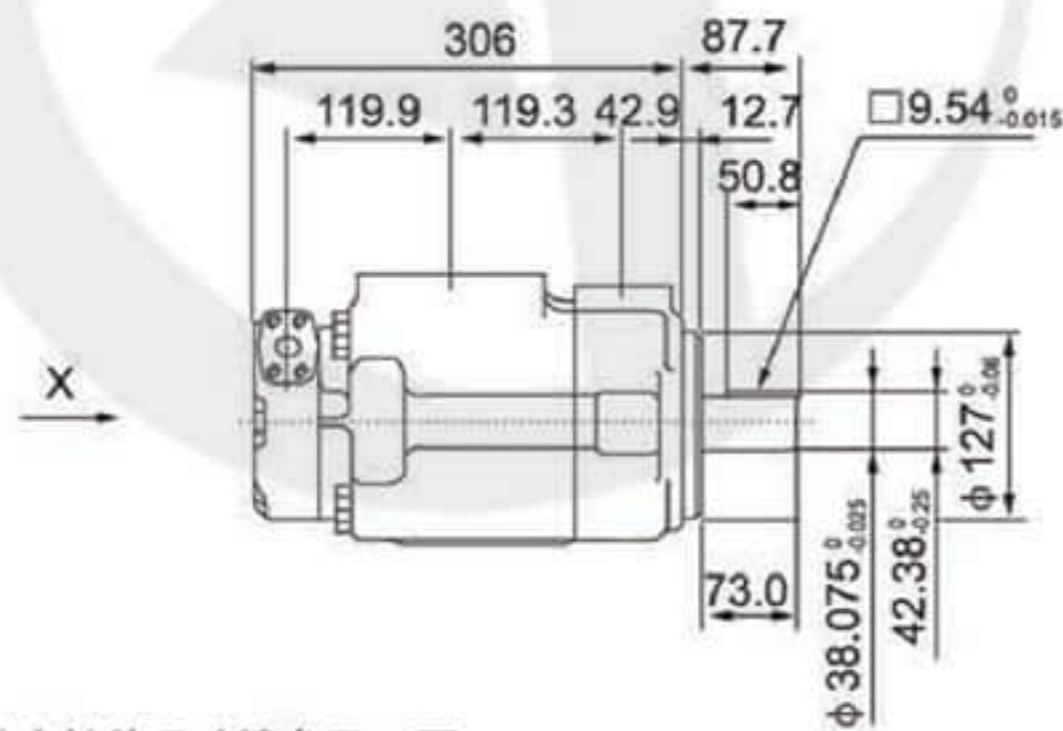
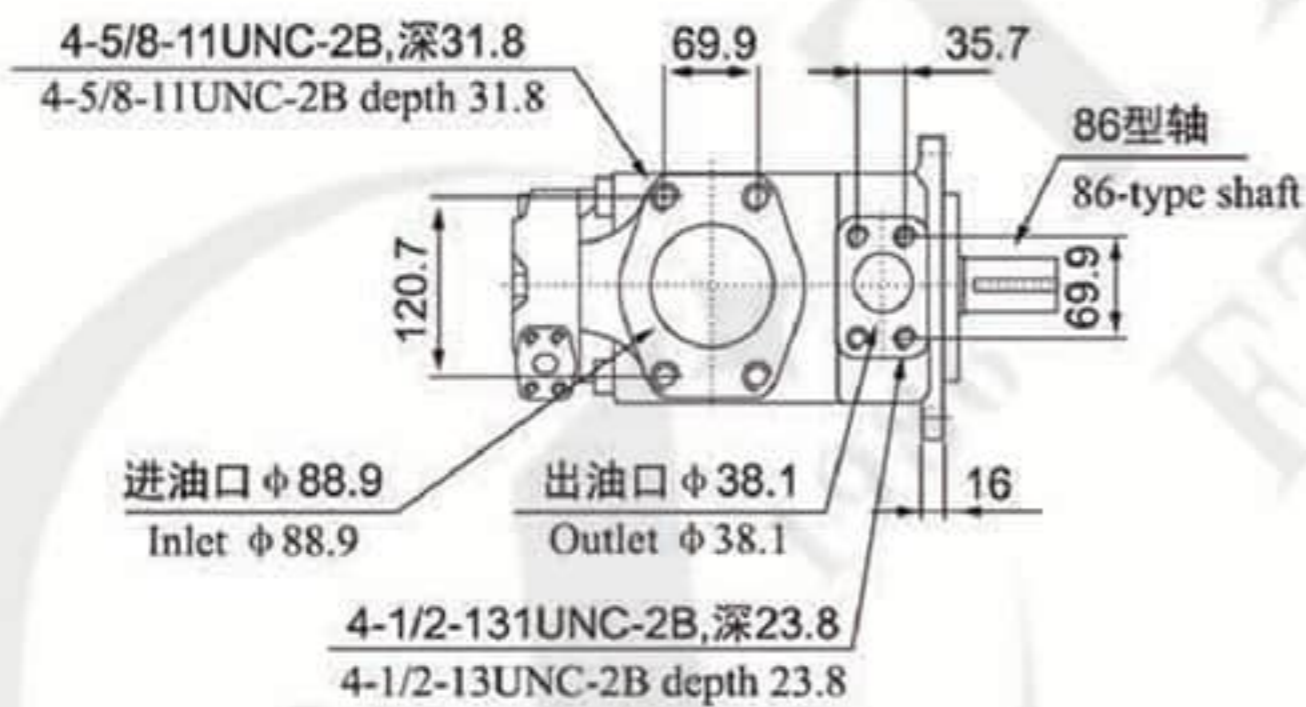
3525V/VQ脚座安装 3525V/VQ Foot Mounting



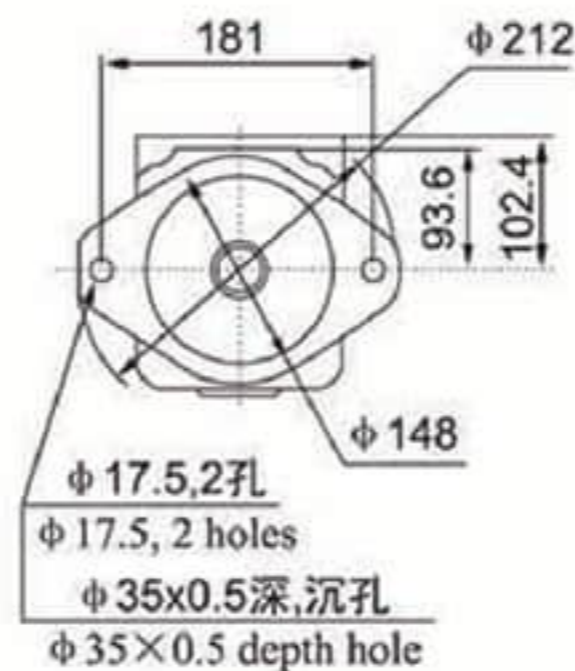
其余尺寸请参照法兰安装型  
Please refer to Flange mounting for rest sizes



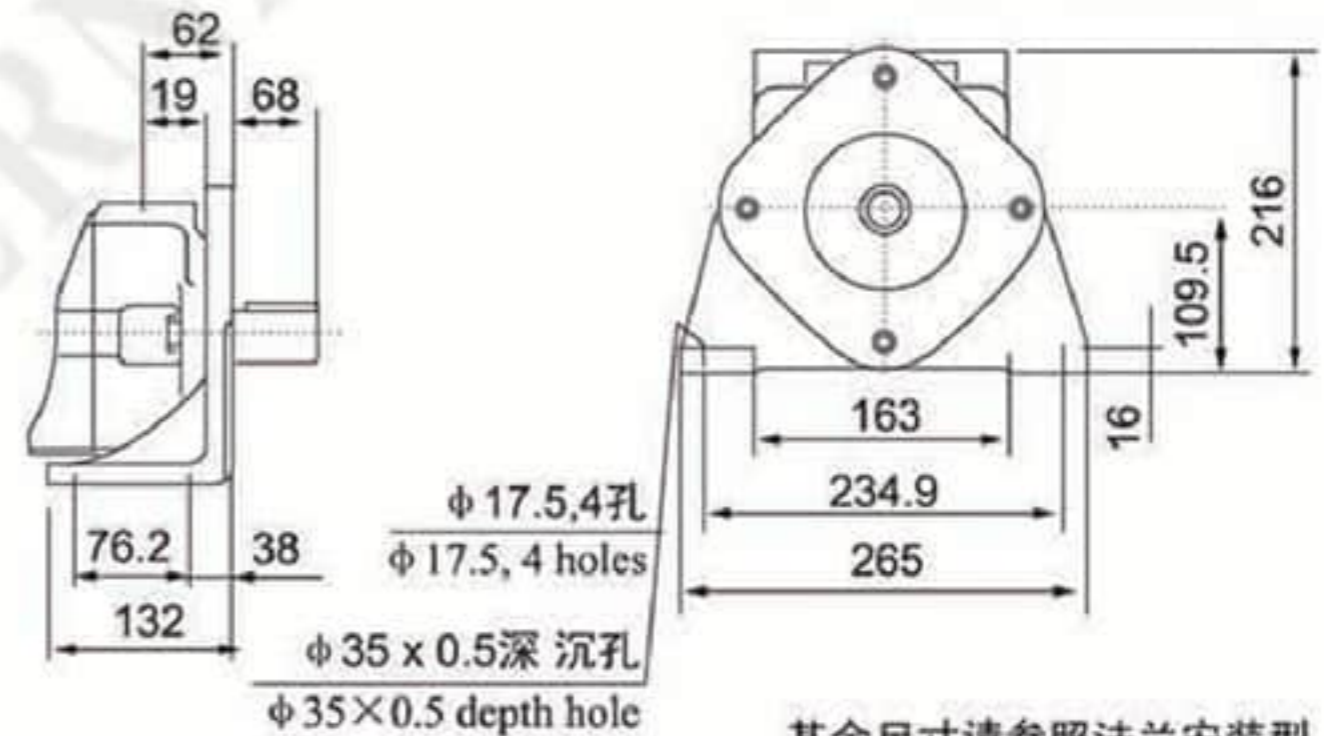
4520V/VQ法兰安装 4520V/VQ Flange Mounting



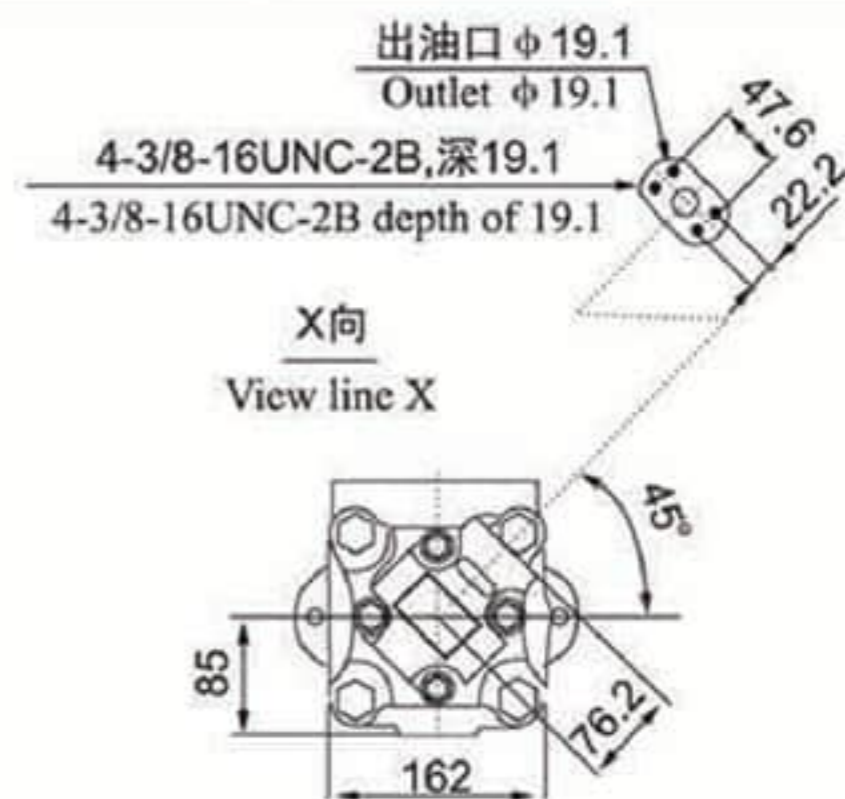
其它轴伸尺寸请参见53页  
Please refer to shaft extension sizes in page 53 for rest sizes



3525V/VQ脚座安装 3525V/VQ Foot Mounting

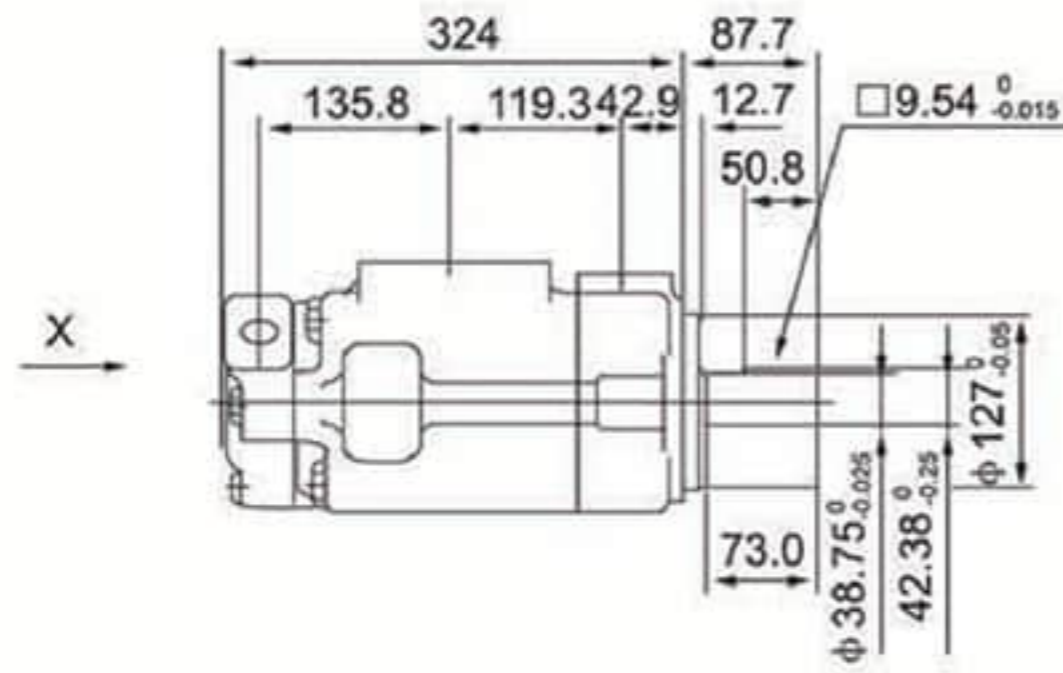
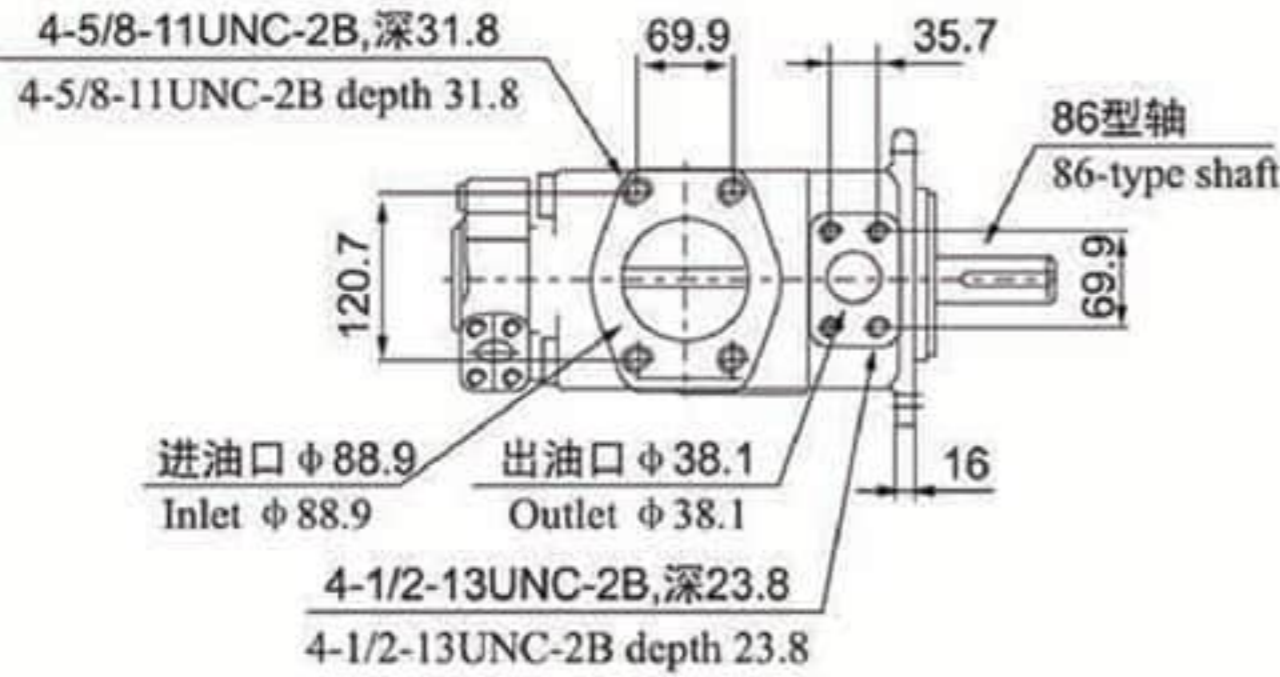


其余尺寸请参照法兰安装型  
Please refer to Flange mounting for rest sizes



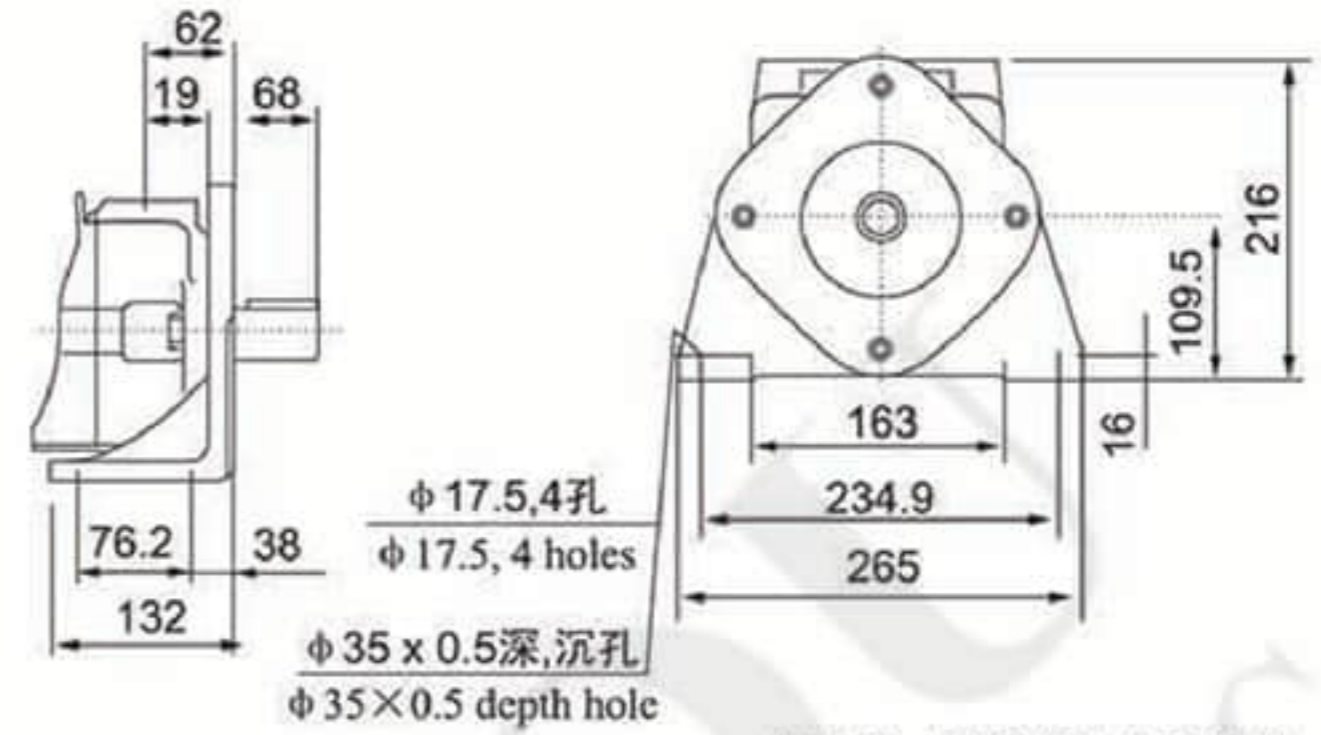
■ 安装连接尺寸 Installation Size

4525V/VQ法兰安装 4525V/VQ Flange Mounting

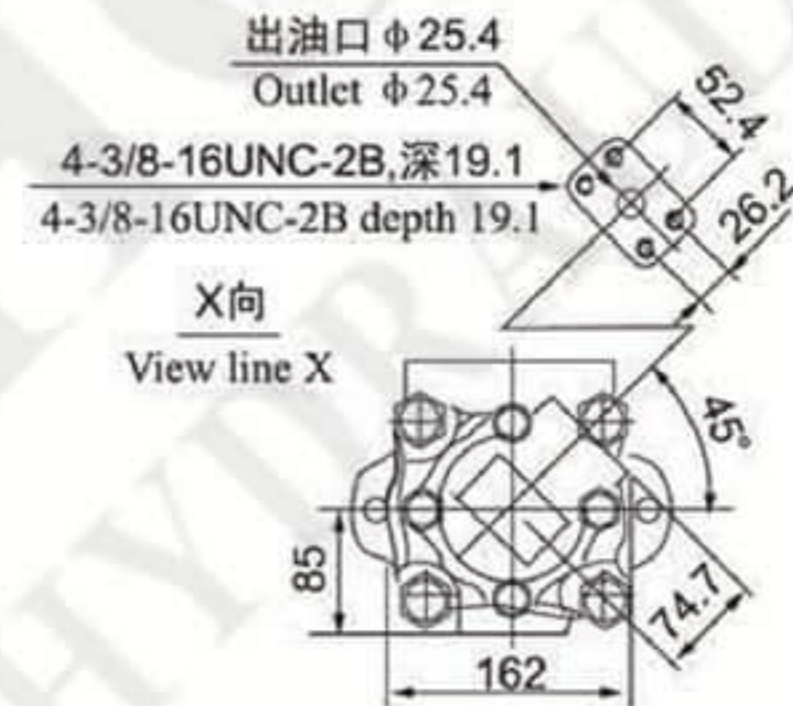
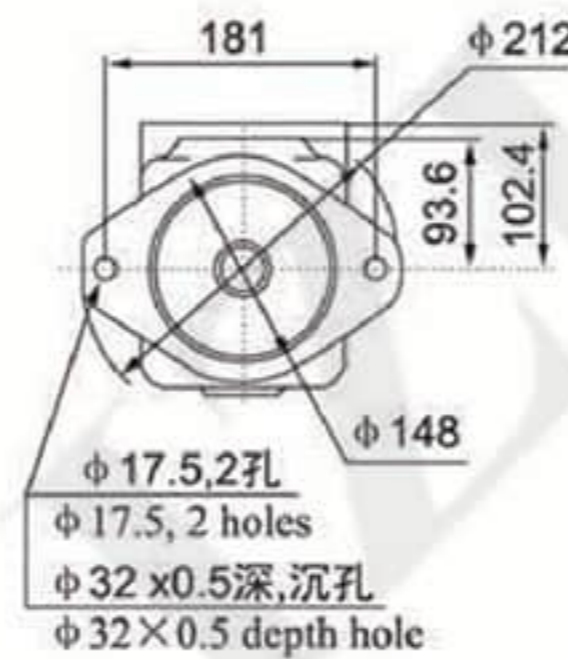


其他轴伸尺寸请参见后页  
Please refer to shaft extension sizes in rear page for rest sizes

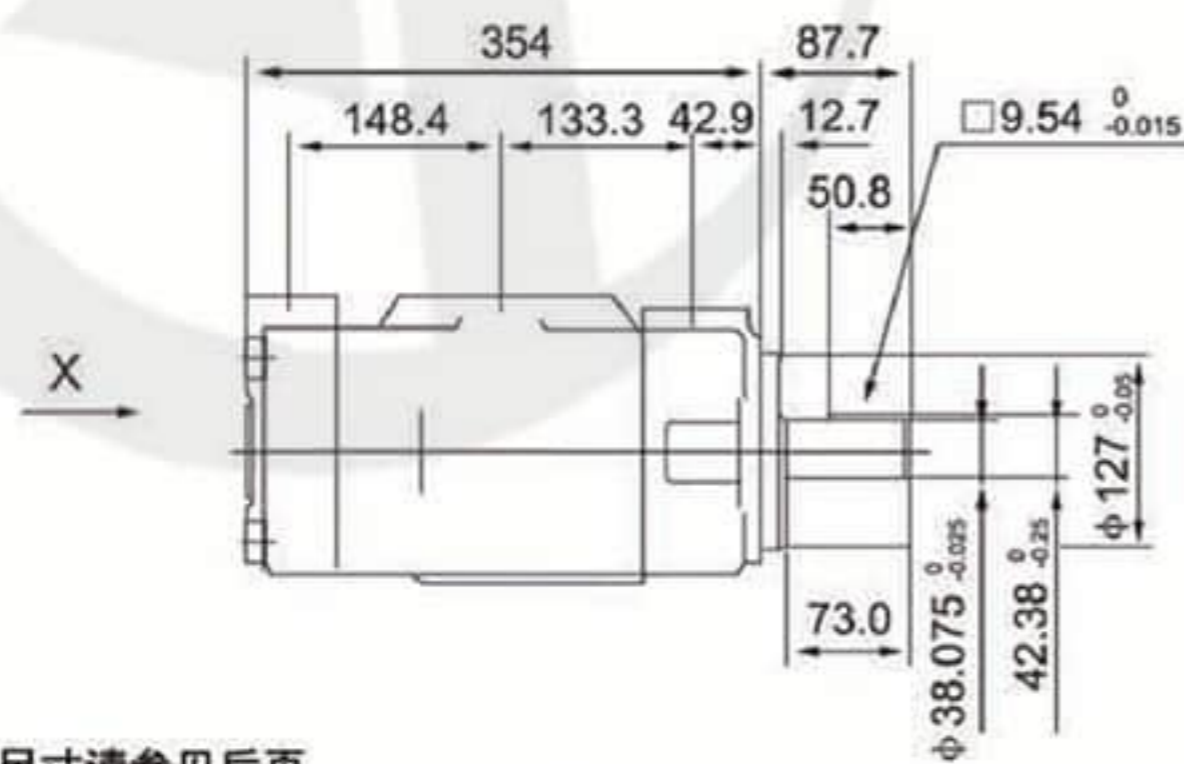
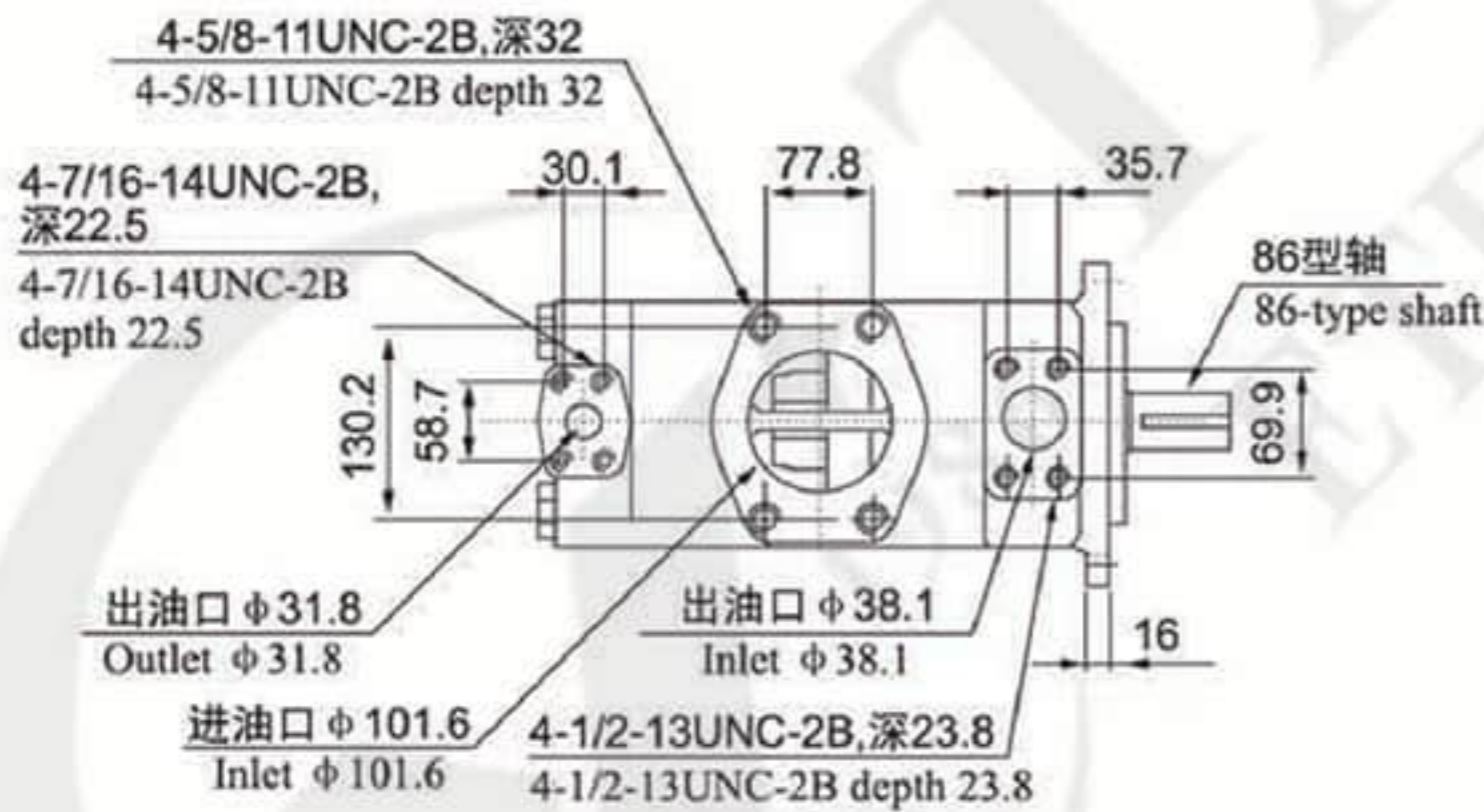
4525V/VQ脚座安装 4525V/VQ Foot Mounting



其余尺寸请参照法兰安装型  
Please refer to Flange mounting for rest sizes

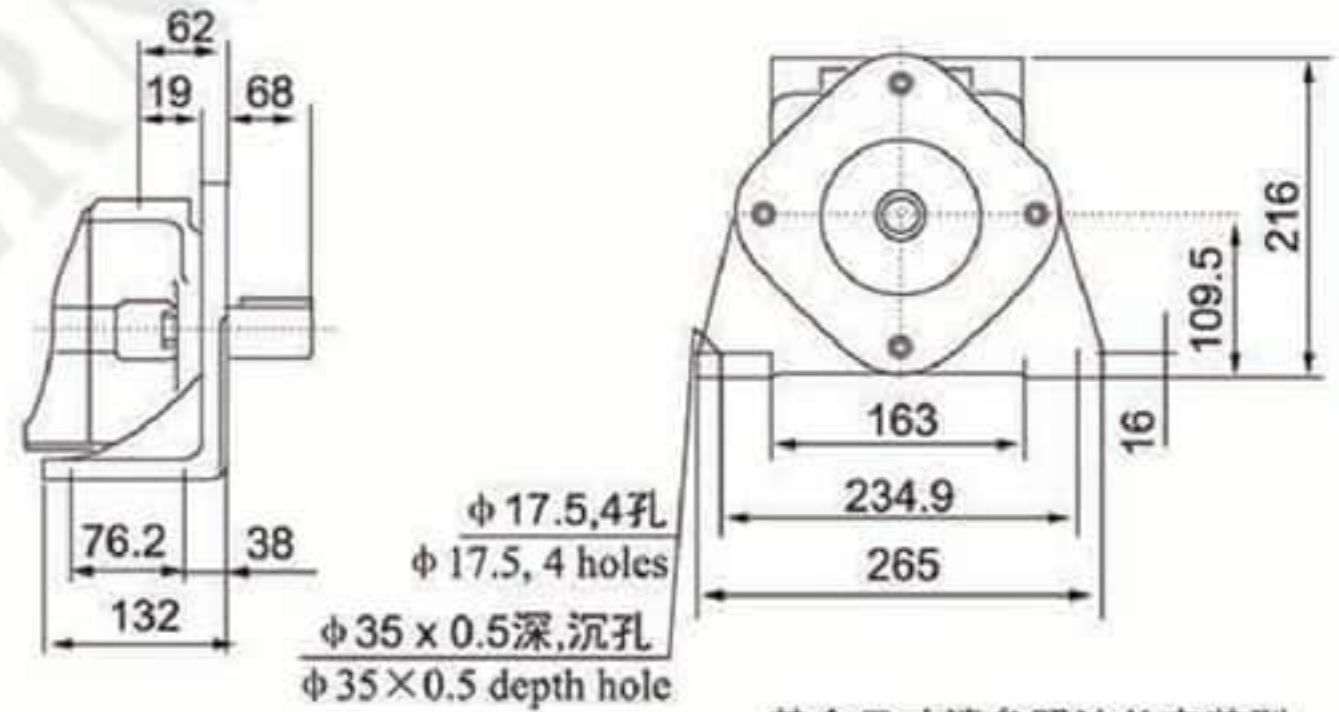


4535V/VQ法兰安装 4535V/VQ Flange Mounting

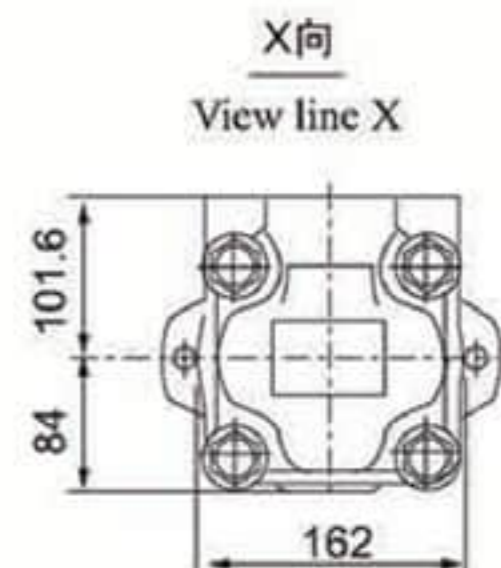
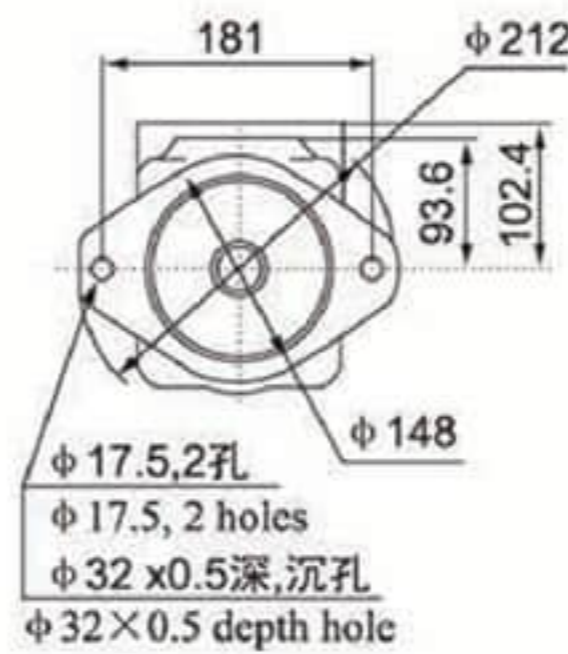


其他轴伸尺寸请参见后页  
Please refer to shaft extension sizes in rear page for rest sizes

4535V/VQ脚座安装 4535V/VQ Foot Mounting



其余尺寸请参照法兰安装型  
Please refer to Flange mounting for rest sizes



■ VVQ/SQP系列泵芯 VVQ/SQP Series Cartridge kit

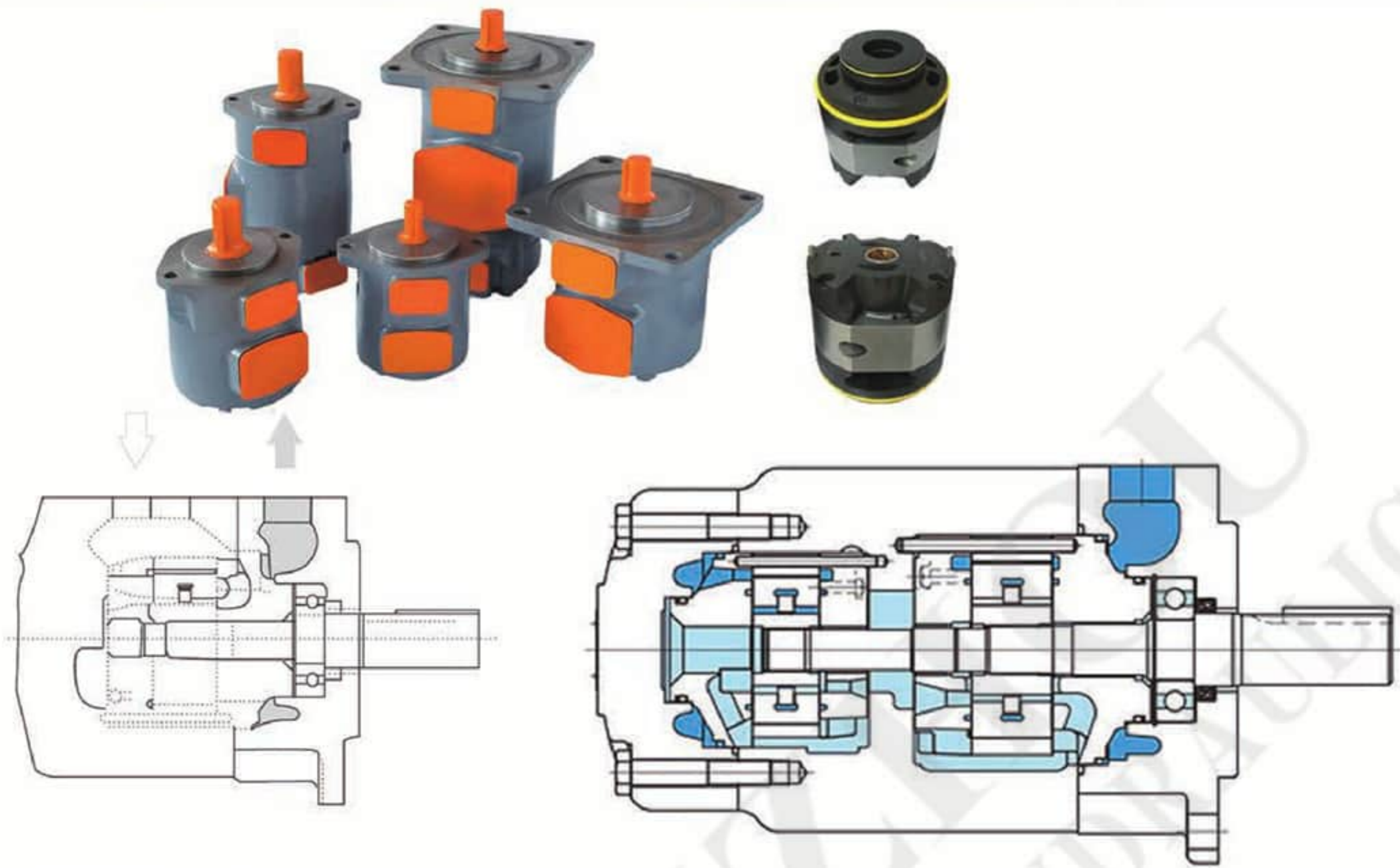
(F3-)	PC-	20VQ	-5	-R	-10
前注 Front marks	泵芯标记 Pump core marks	系列号 Models	▲排量代号 Displacement code	旋转方向 Direction of rotation	设计号 Designing No.
无标记: 丁腈橡胶 No mark: Nitrile rubber	PC-单泵泵芯 & 双联泵前泵芯 PC-Single Pump kit & Double Vane pump front kit	20V 20VQ SQP1	2,3,4,5,6,7,8,9,10,11,12,14	(从泵的轴端看) (from shaft end pump) L-逆时针旋转 L-counterclockwise rotation R-顺时针旋转 R-clockwise rotation	10
F3: 氟橡胶 F3: Fluoro rubber	PCT-双联泵后泵芯 PCT-Double vane pump rear kit	25V 25VQ SQP2	10,12,14,15,17,19,21		
		35V 35VQ SQP3	21,25,30,32,35,38,45		
		45V 45VQ SQP4	42,45,50,57,60,66,75		

■ 安装连接尺寸 Installation Size



系列号 Models	A	B	C	D	E	F	G	H	K	M (挡圈) M (ring)	N(O型圈) (内径×线径) N (O type ring) (Inner diameter×lead wire diameter)
20V/VQ SQP1	82.5	81.5	70.1	47	61.5	4.8	76.2	6	73.6	82.76×76.26×3.5	40×3.5
25V/VQ SQP2	96.8	98.8	87	52.2	71.2	4.8	90.5	5	88.19	97×91×3.5	44×3.53
35V/VQ SQP3	114.3	117.7	105	72.2	90.3	6.4	108	6	103.94	114.5×108.5×3.5	63.09×3.53
45V/VQ SQP4	133.35	141.1	129.6	80.2	105.5	6.4	127	10	133.35	133.6×127.6×3.5	71×3.55

系列号 Models	转子内花键齿廓参数 Spline teeth No. in rotor				
	模数 Modulus	齿数 No. of teeth	标准压力角 Standard angle	大径 Major diameter	小径 Minor diameter
20V/VQ SQP1	48/96	30	45°	16.617	15.56
25V/VQ SQP2	48/96	40	45°	21.9	20.86
35V/VQ SQP3	40/80	37	45°	24.38	23.1
45V/VQ SQP4	12/24	14	30°	32.59	27.60



■ SQP系列单泵 SQP Series Single Pump

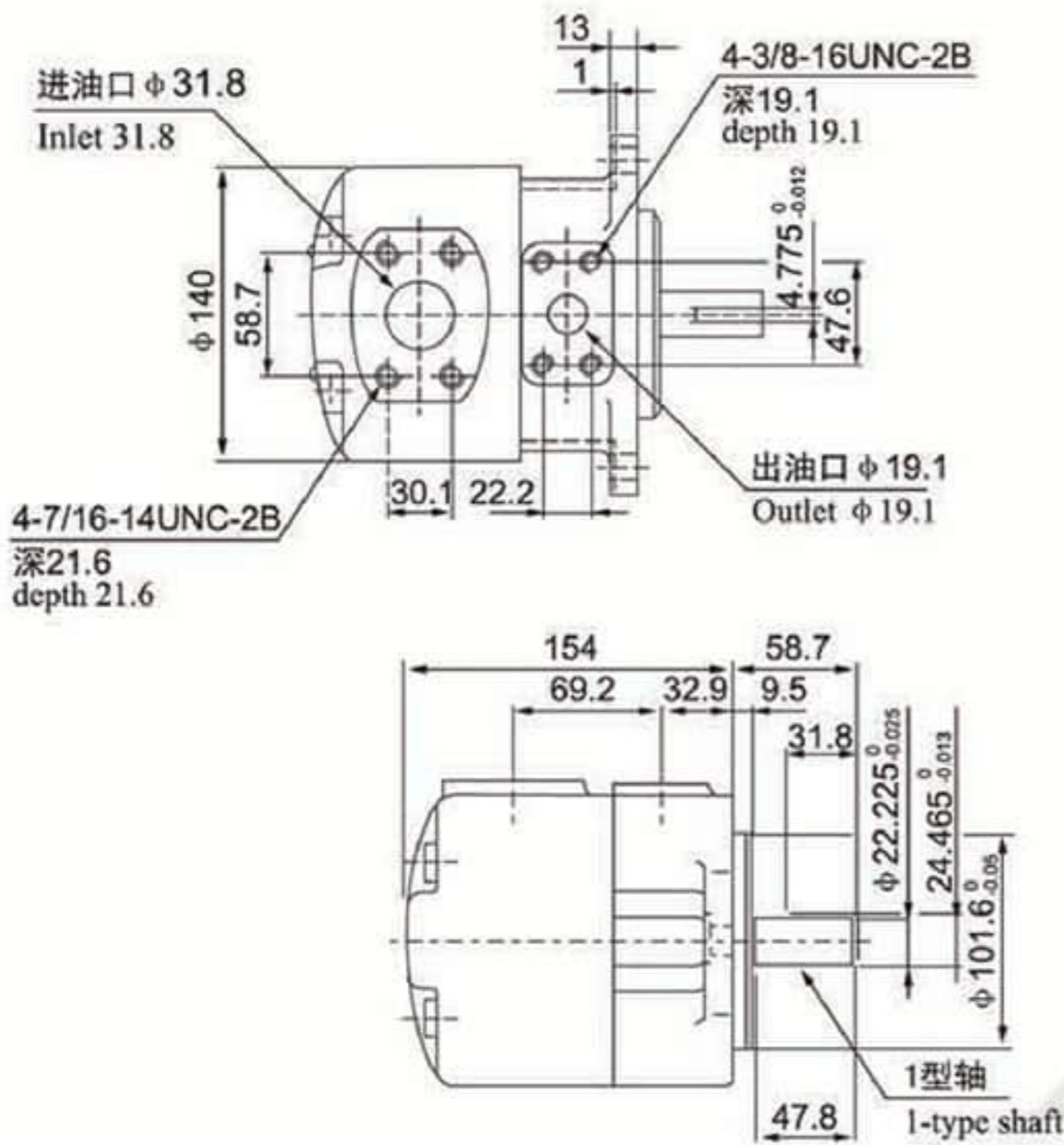
(F3-)	SQP2	-21	-86	C	(F)	(LH)	-18
前注 Front marks	泵壳号 Pump shell No	▲排量代号 Displacement codes	轴伸形式 Shaft extension	出油口位置 Outlet port position	安装型式 Mounting type	旋转方向 Direction of rotation	设计号 Designing No.
无标记: 丁腈橡胶 No mark: Nitrile rubber	SQP1	2,3,4,5,6,7,8,9 10,11,12,14	1-带键直轴 1-straight shaft with key	(从泵的盖端看) (from cover end pump) A-进口油对侧 A- Opposition of inlet B-从进口油逆时针90° B- counterclockwise 90° from inlet	无标记- 法兰安装 No mark- Flange mounting	(从泵的盖端看) (from cover end pump) LH-逆时针旋转 LH- counterclockwise rotation	15
F3: 氟橡胶 F3: Fluoro rubber	SQP2	10,11,12,14,15,17, 19,21	86-重型带 键直轴 86- heavy-duty straight shaft with key	C-进口油同侧 C- the same side of inlet D-从进口油顺时针90° D- Clockwise 90° from inlet	F: 脚座安装型 Foot mounting	无标记 No mark 顺时针旋转 Clockwise rotation	18
	SQP3	21,25,30,32,35, 38,45					
	SQP4	42,45,50,57,60 66,75					

■ SQP系列双泵 SQP Series Double Pump

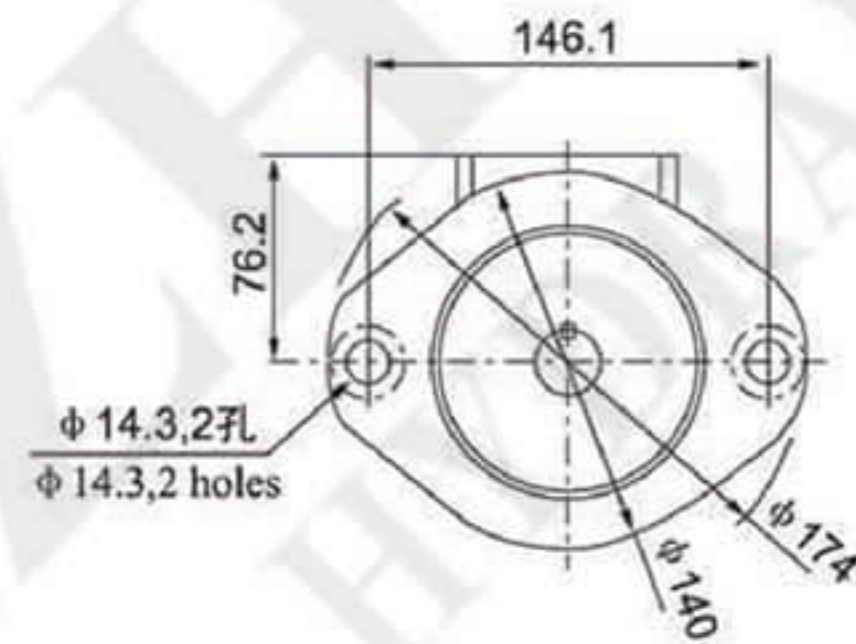
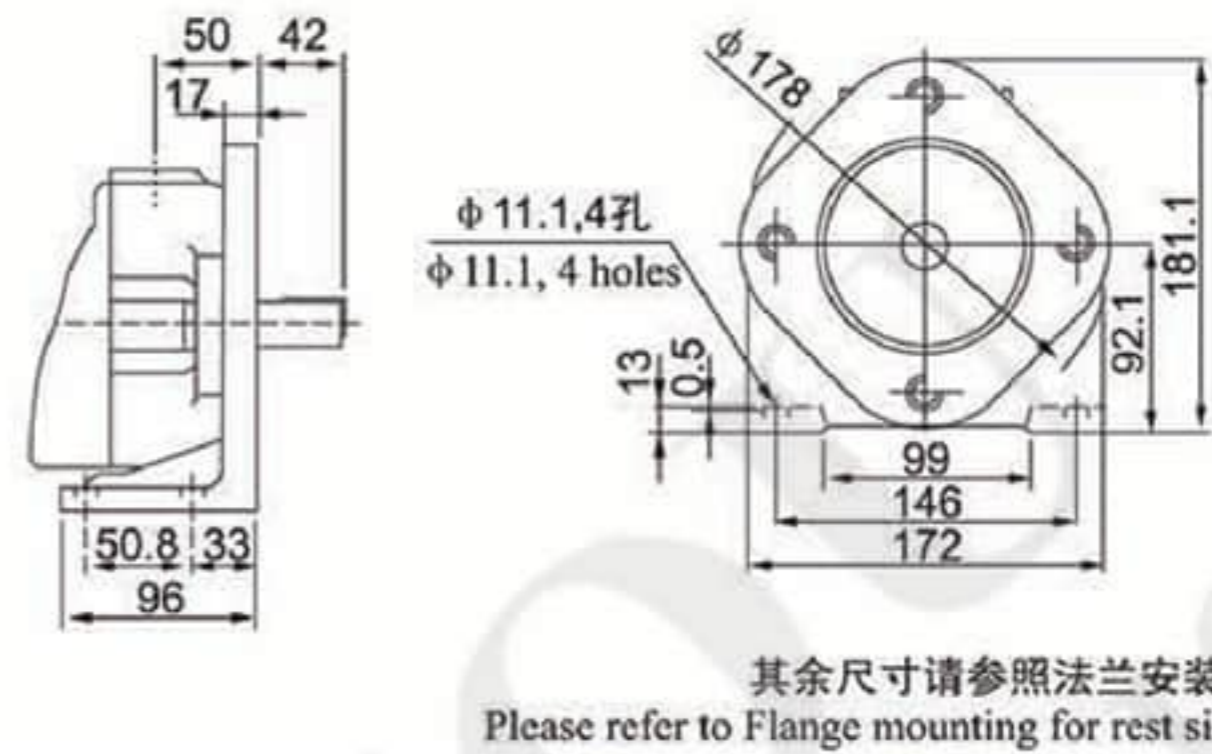
(F3)	SQP32	35	17	86	CD	(F)	-(LH)	18
前注 Front marks	系列号 Code of series	前泵排量代号 Displacement code of front pump	后泵排量代号 Displacement code of rear pump	轴伸形式 Shaft extension	油口位置 Pump position	安装型式 Mounting type	旋转方向 Direction of rotation	设计号 Designing No.
无标记: 丁腈橡胶 No mark: Nitrile rubber	SQP21	10,12,14,15,17, 19,21	2,3,4,5,6,7,8,9, 10,11,12,14	1-带键直轴 1- straight shaft with key	见下表 See as the following table	无标记- 法兰安装型 No marks- Flange mounting	(从泵的轴端看) (from shaft end pump) LH-逆时针旋转 LH-counterclockwise rotation	18
F3: 氟橡胶 F3: Fluoro rubber	SQP31	21,25,30,32,35, 38,45	2,3,4,5,6,7,8,9, 10,11,12,14	86-重型带键直轴 86-heavy-duty straight shaft with key		F- 脚座安装型 Foot mounting	无标记- 顺时针旋转 No marks - clockwise	
	SQP32	21,25,30,32,35, 38,45	10,12,14,15,17, 19,21					
	SQP41	42,45,50,57,60, 66,75	2,3,4,5,6,7,8,9, 10,11,12,14					
	SQP42	42,45,50,57,60, 66,75	10,12,14,15,17, 19,21					
	SQP43	42,45,50,57,60, 66,75	21,25,30,32,35, 38,45					

■ 安装连接尺寸 Installation Size

SQP1法兰安装型 SQP1 Flange mounting



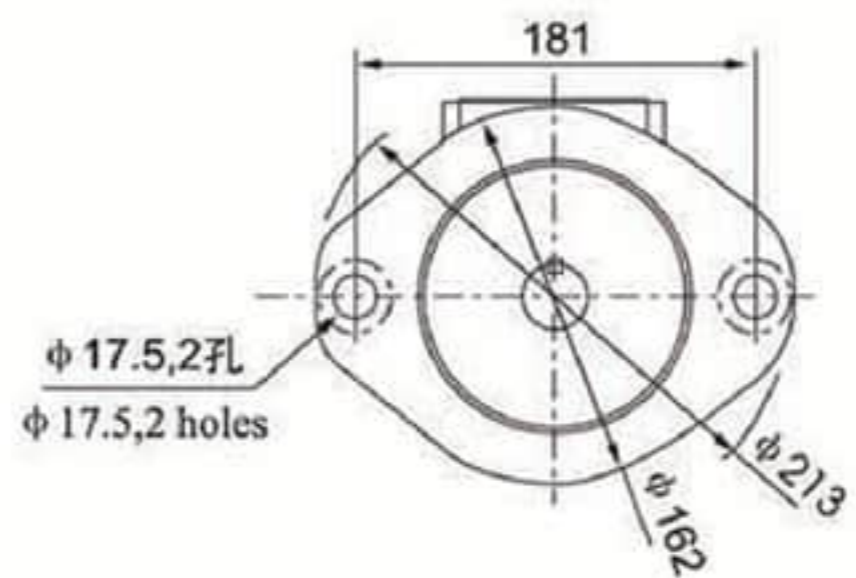
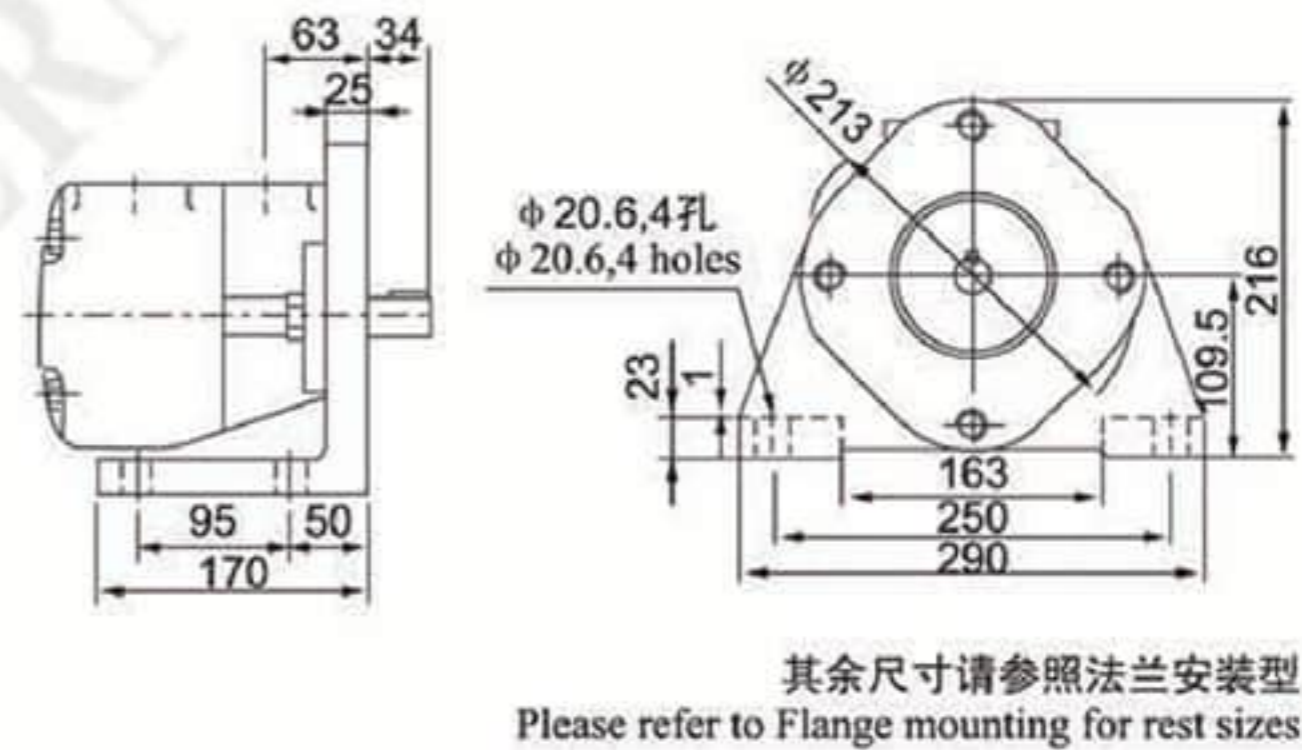
SQP1脚座安装型 SQP1 foot mounting



SQP2法兰安装型 SQP2 Flange mounting

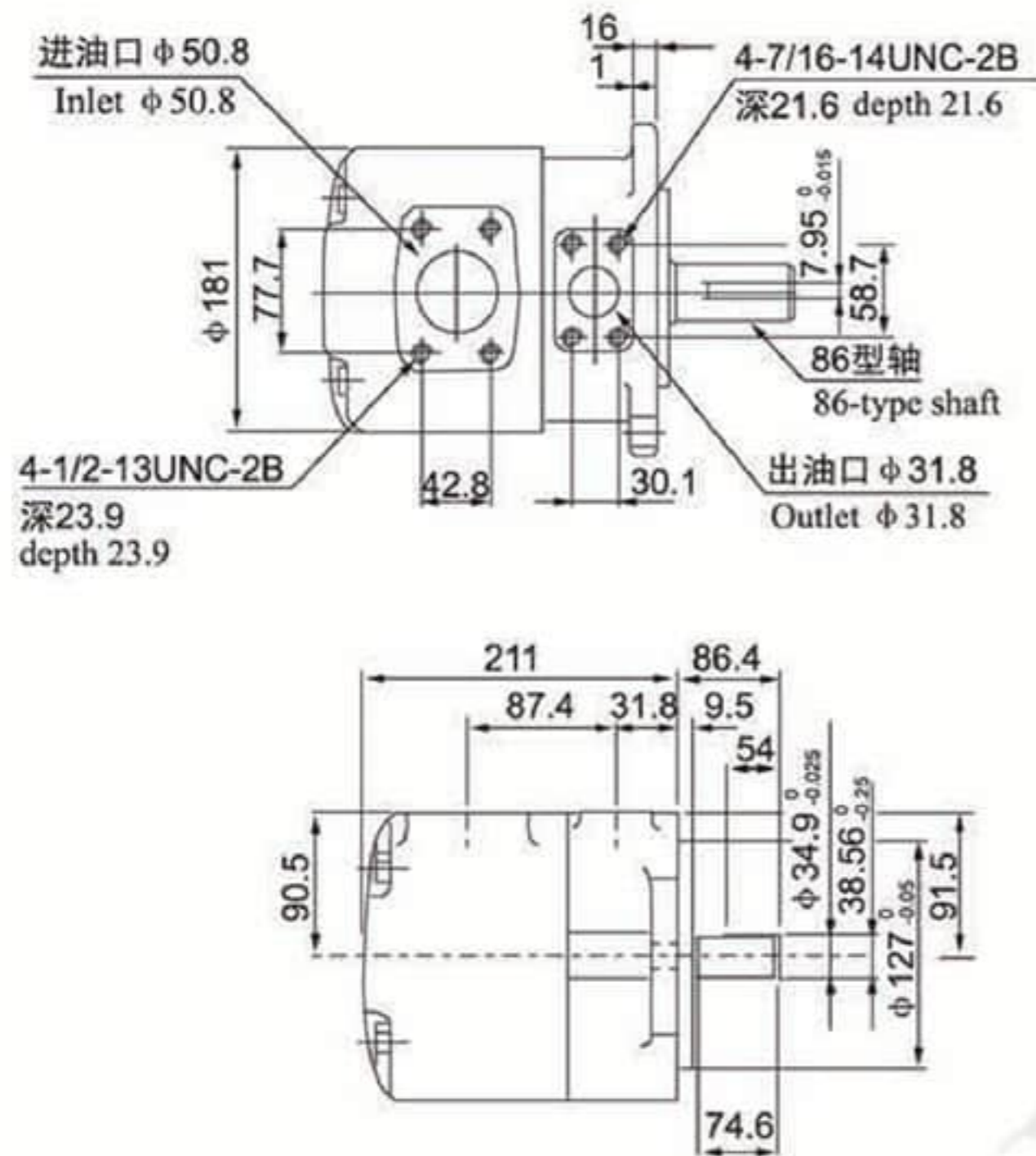


SQP2脚座安装型 SQP2 foot mounting



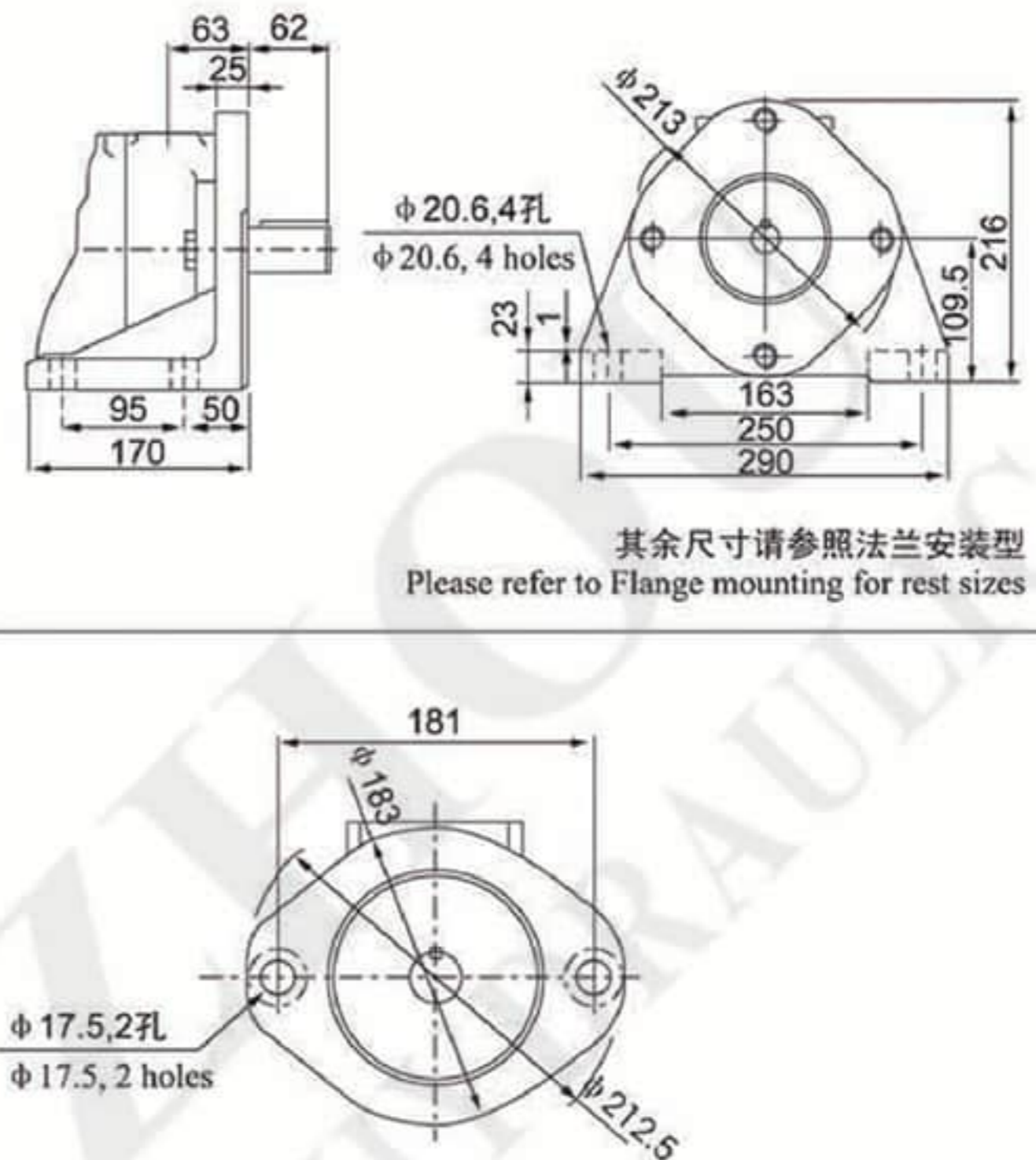
■ 安装连接尺寸 Installation Size

SQP3法兰安装型 SQP3 Flange mounting



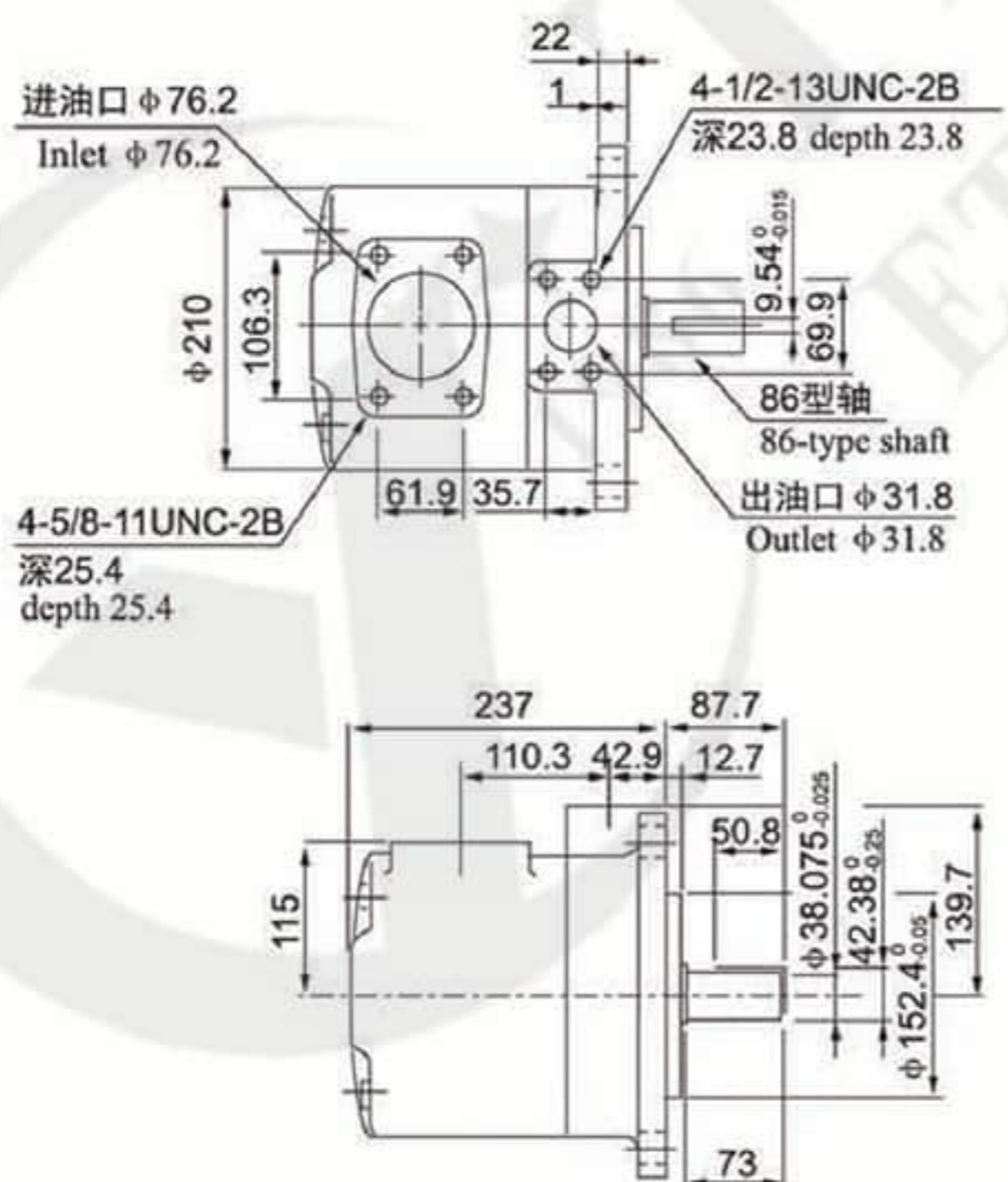
其它轴伸尺寸请参见53页  
Please refer to shaft extension sizes in page 53 for rest sizes

SQP3脚座安装型 SQP3 foot mounting



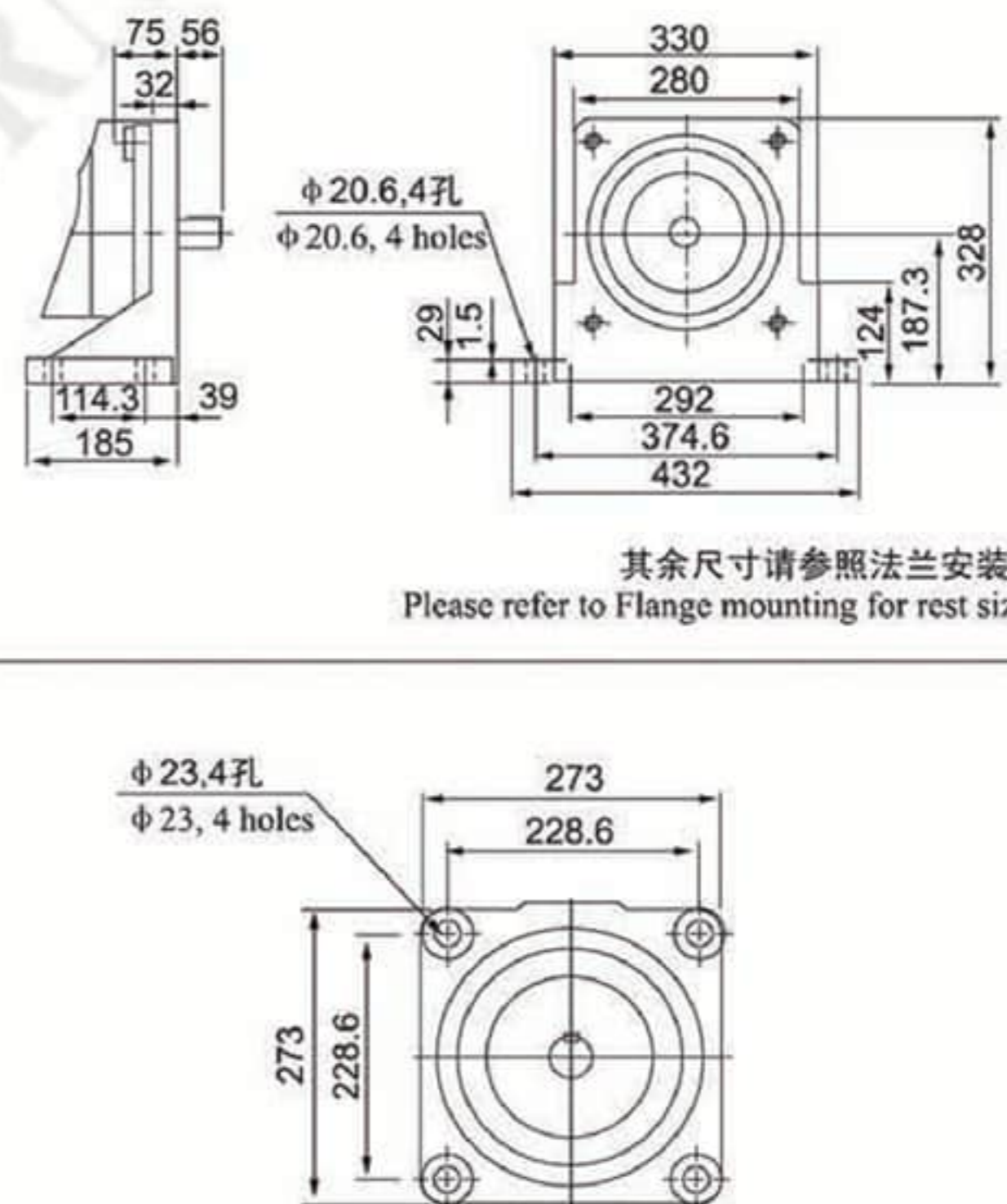
其余尺寸请参照法兰安装型  
Please refer to Flange mounting for rest sizes

SQP4 法兰安装型 SQP4 Flange mounting



其它轴伸尺寸请参见53页  
Please refer to shaft extension sizes in page 53 for rest sizes

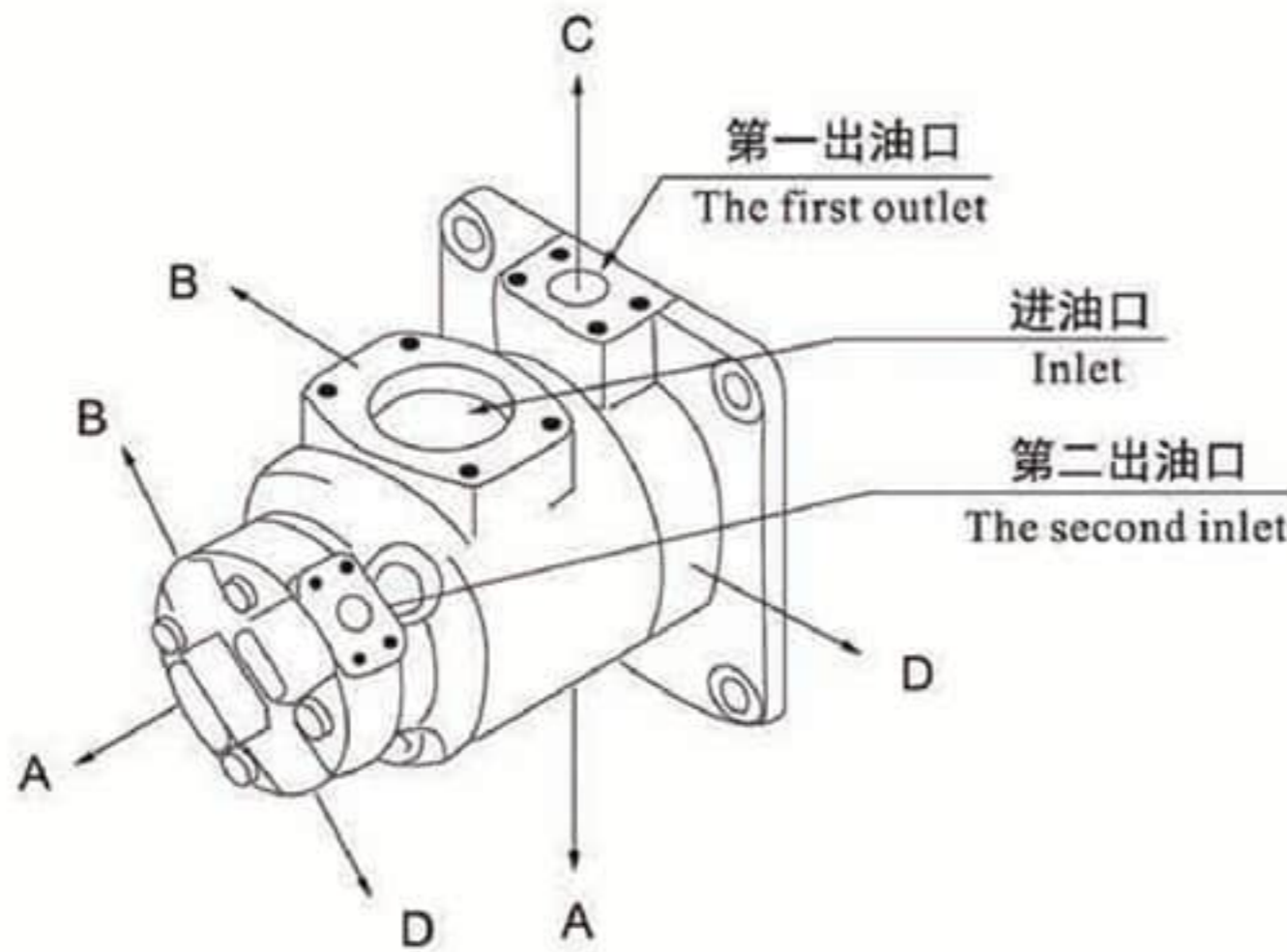
SQP4 脚座安装型 SQP4 foot mounting



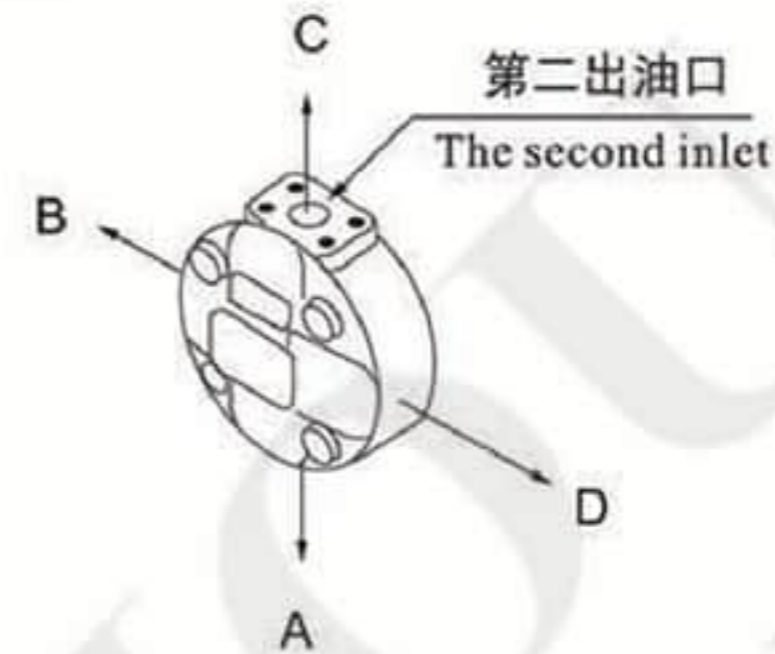
其余尺寸请参照法兰安装型  
Please refer to Flange mounting for rest sizes

■ 油口位置表（从泵的盖端看） Pump Oil Port Position (Viewed From Cover End Pump)

油口位置 Pump position



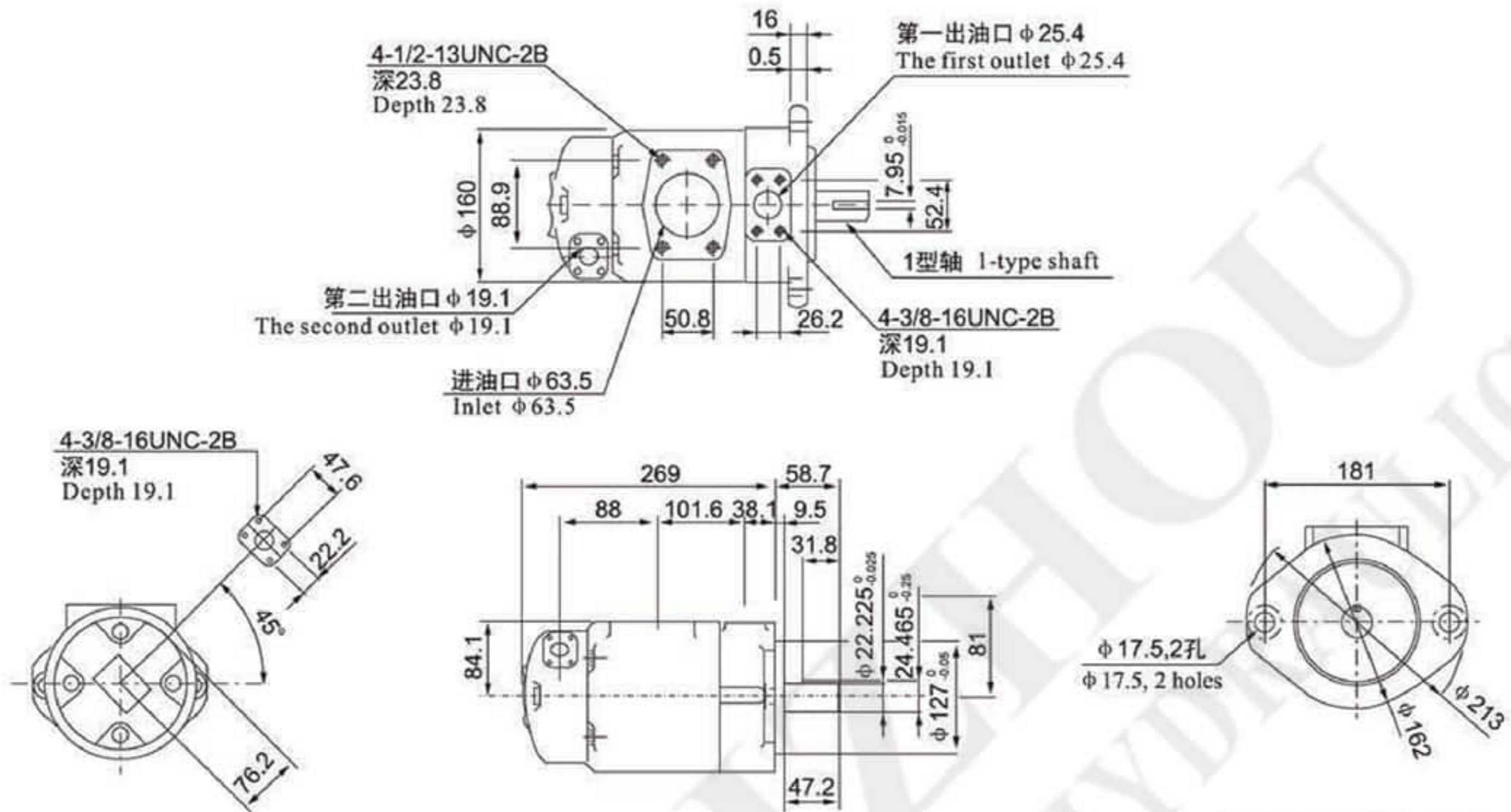
SQP43



油口位置 Pump position	所有系列（除SQP43外） All series (except for SQP43)	SQP43
第一出油口 在进油口对侧 The first outlet is the opposition side of inlet.	AA 第二出油口在进油口逆时针转135° The second outlet is to counterclockwise rotation of 135° from inlet	第二出油口在进油口对侧 The second outlet is the opposition side of inlet.
	AB 第二出油口在进油口逆时针转45° The second outlet is to counterclockwise rotation of 45° from inlet	第二出油口在进油口逆时针转90° The second outlet is to counterclockwise rotation of 90° from inlet
	AC 第二出油口在进油口顺时针转45° The second outlet is to clockwise rotation of 45° from inlet	第二出油口在进油口同侧 The second outlet is the same side of inlet.
	AD 第二出油口在进油口顺时针转135° The second outlet is to clockwise rotation of 135° from inlet	第二出油口在进油口顺时针转90° The second outlet is to clockwise rotation of 90° from inlet
第一出油口 从进油口逆 时针转90° The first outlet is to counterclockwise rotation of 90° from inlet	BA 第二出油口在进油口逆时针转135° The second outlet is to counterclockwise rotation of 135° from inlet	第二出油口在进油口对侧 The second outlet is the opposition side of inlet.
	BB 第二出油口在进油口逆时针转45° The second outlet is to counterclockwise rotation of 45° from inlet	第二出油口在进油口逆时针转90° The second outlet is to counterclockwise rotation of 90° from inlet
	BC 第二出油口在进油口顺时针转45° The second outlet is to clockwise rotation of 45° from inlet	第二出油口在进油口同侧 The second outlet is the same side of inlet.
	BD 第二出油口在进油口顺时针转135° The second outlet is to clockwise rotation of 135° from inlet	第二出油口在进油口顺时针转90° The second outlet is to clockwise rotation of 90° from inlet
第一出油口 在进油口同侧 The first outlet is the same side of inlet.	CA 第二出油口在进油口逆时针转135° The second outlet is to counterclockwise rotation of 135° from inlet	第二出油口在进油口对侧 The second outlet is the opposition side of inlet.
	CB 第二出油口在进油口逆时针转45° The second outlet is to counterclockwise rotation of 45° from inlet	第二出油口在进油口逆时针转90° The second outlet is to counterclockwise rotation of 90° from inlet
	CC 第二出油口在进油口顺时针转45° The second outlet is to clockwise rotation of 45° from inlet	第二出油口在进油口同侧 The second outlet is the same side of inlet.
	CD 第二出油口在进油口顺时针转135° The second outlet is to clockwise rotation of 135° from inlet	第二出油口在进油口顺时针转90° The second outlet is to clockwise rotation of 90° from inlet
第一出油口 从进油口顺 时针转90° The first outlet is to clockwise rotation of 90° from inlet	DA 第二出油口在进油口逆时针转135° The second outlet is to counterclockwise rotation of 135° from inlet	第二出油口在进油口对侧 The second outlet is the opposition side of inlet.
	DB 第二出油口在进油口逆时针转45° The second outlet is to counterclockwise rotation of 45° from inlet	第二出油口在进油口逆时针转90° The second outlet is to counterclockwise rotation of 90° from inlet
	DC 第二出油口在进油口顺时针转45° The second outlet is to clockwise rotation of 45° from inlet	第二出油口在进油口同侧 The second outlet is the same side of inlet.
	DD 第二出油口在进油口顺时针转135° The second outlet is to clockwise rotation of 135° from inlet	第二出油口在进油口顺时针转90° The second outlet is to clockwise rotation of 90° from inlet

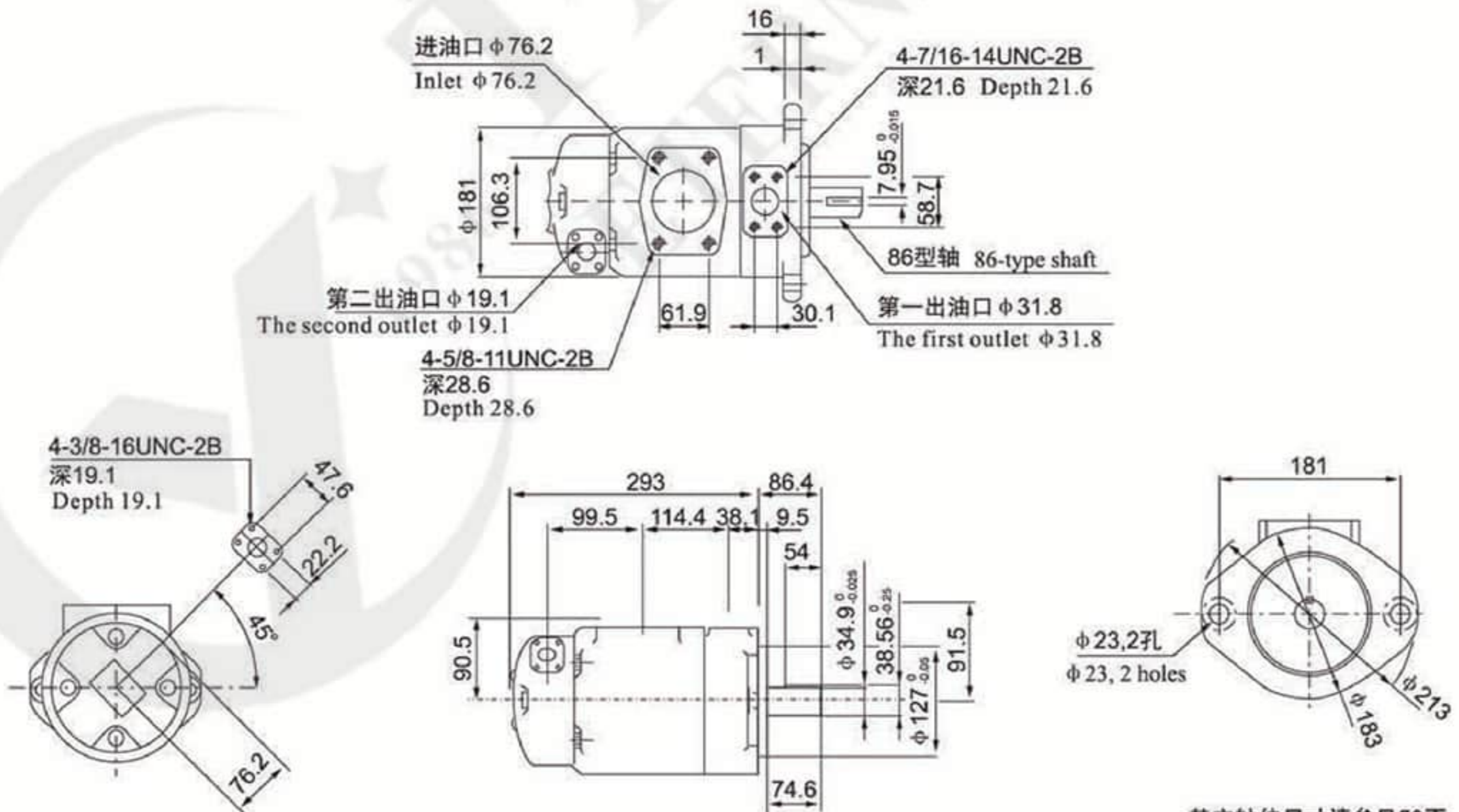
■ 安装连接尺寸 Installation Size

SQP21法兰安装型 SQP21 Flange mounting



其它轴伸尺寸请参见53页  
Please refer to shaft extension sizes in page 53 for rest sizes

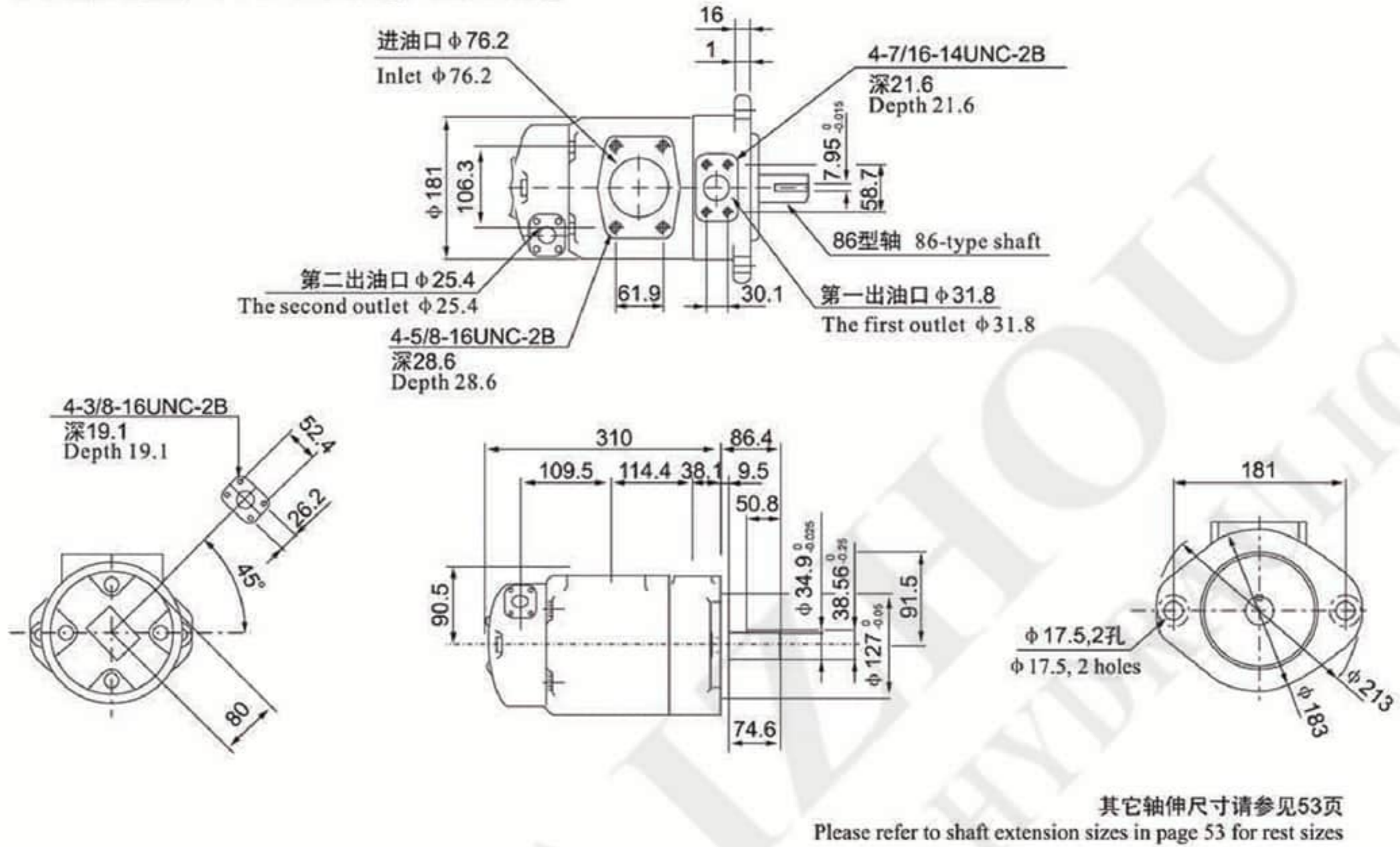
SQP31法兰安装型 SQP31 Flange mounting



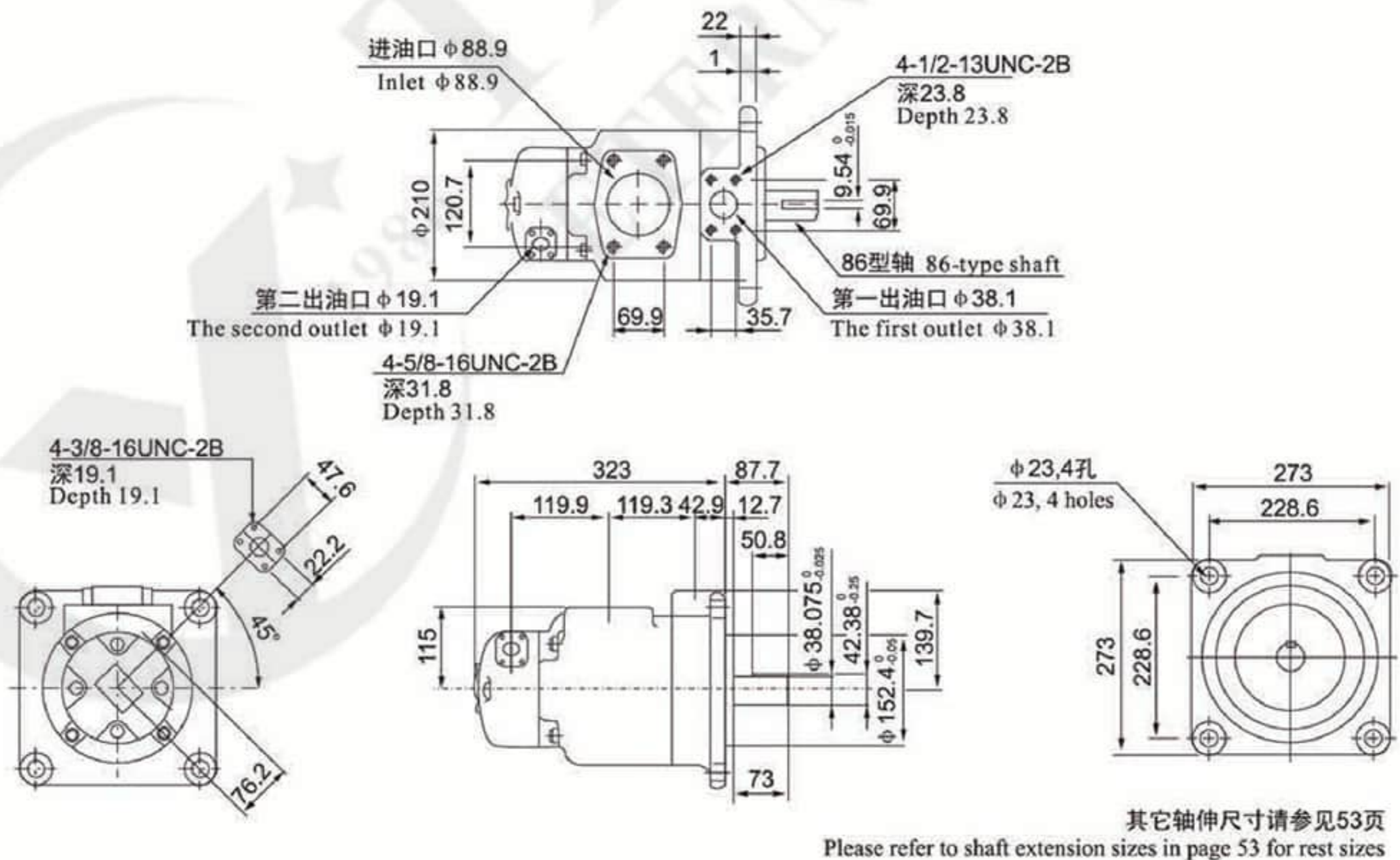
其它轴伸尺寸请参见53页  
Please refer to shaft extension sizes in page 53 for rest sizes

■ 安装连接尺寸 Installation Size

SQP32法兰安装型 SQP32 Flange mounting

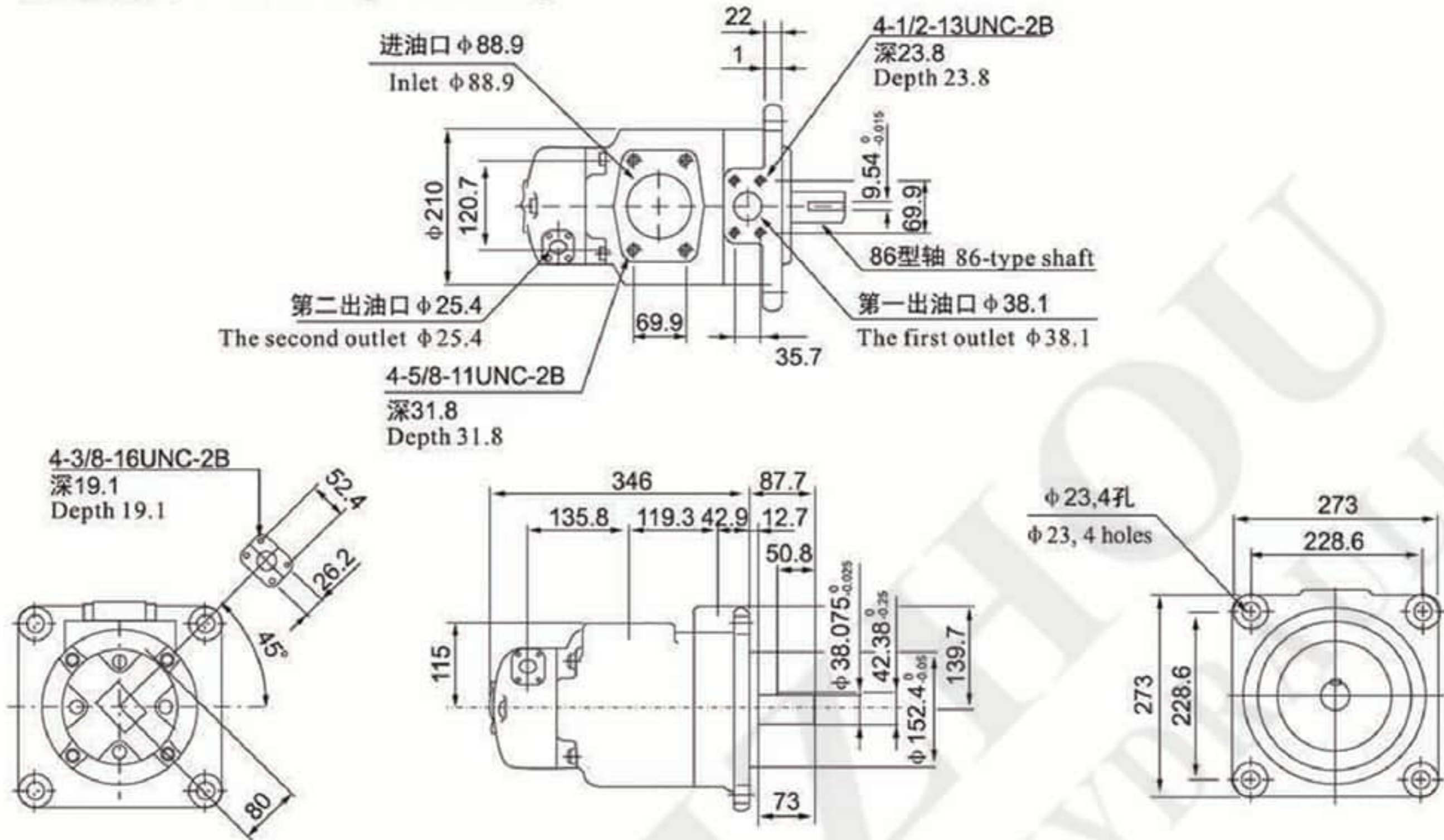


SQP41 法兰安装型 SQP41 Flange mounting

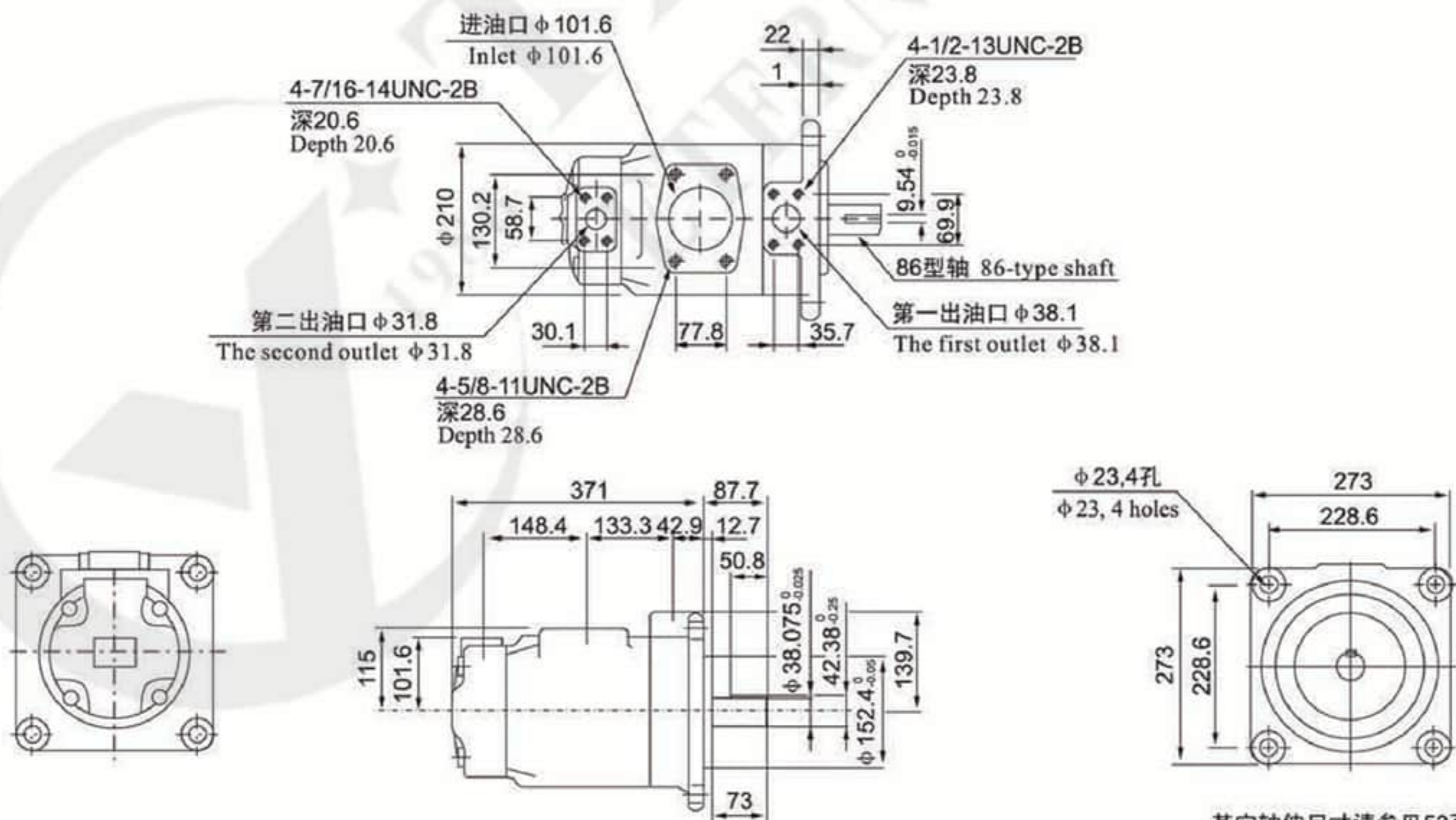


■ 安装连接尺寸 Installation Size

SQP42法兰安装型 SQP42 Flange mounting

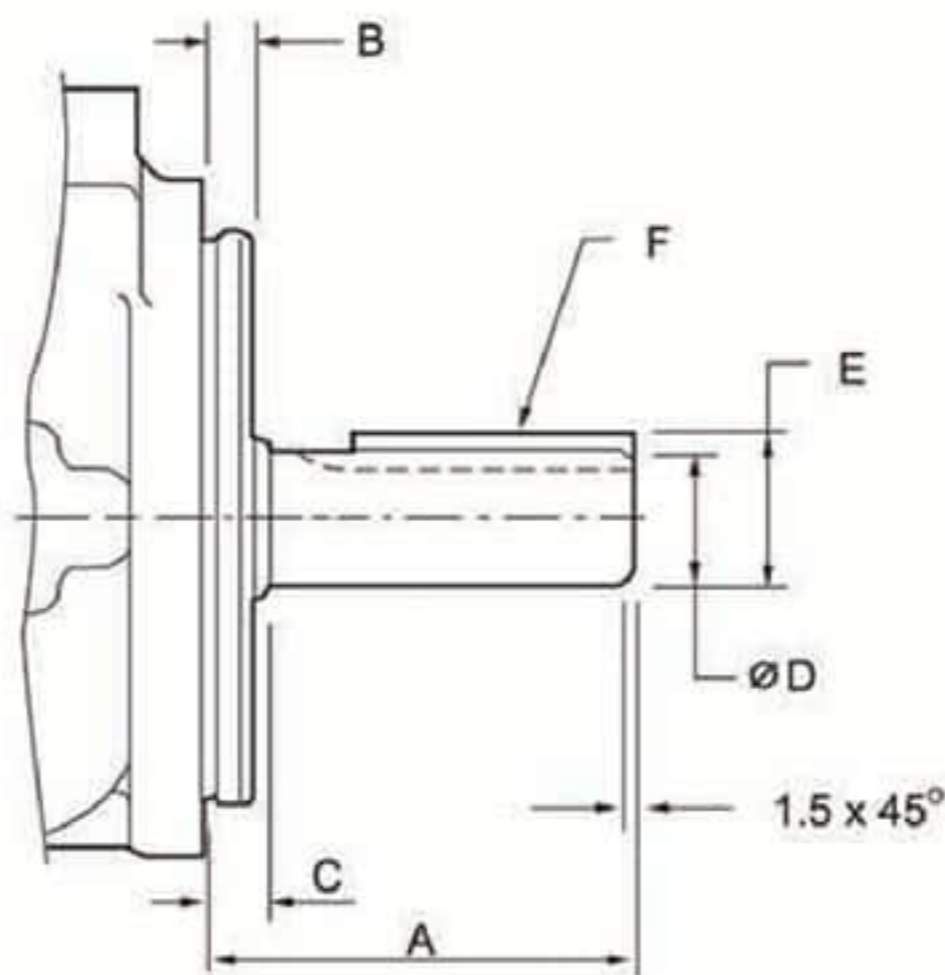


SQP43法兰安装型 SQP43 Flange mounting

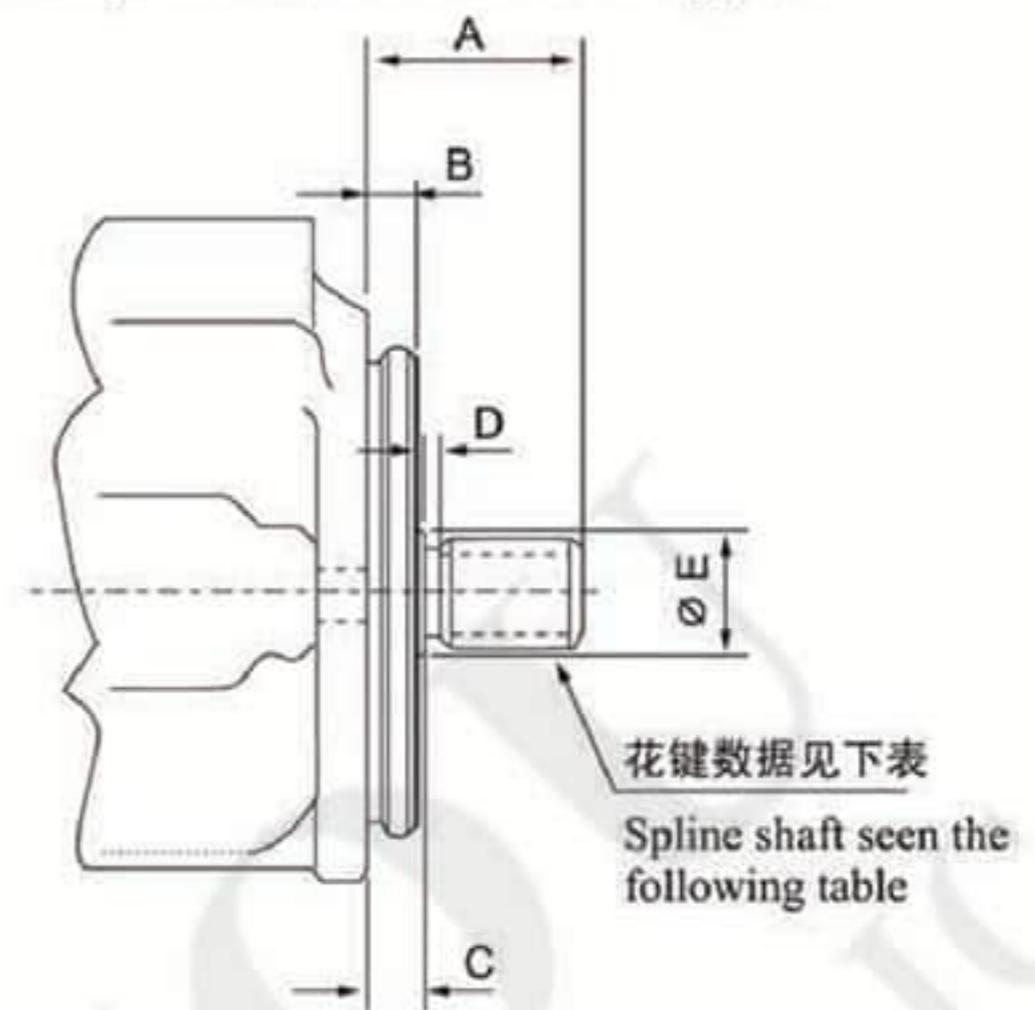


■ V/VQ/SQP系列叶片泵可选轴伸形式 V/VQ/SQP Series Vane Pump Shaft Extension Type

平键直轴  
Straight shaft



花键轴  
Spline shaft



平键直轴 Straight shaft with key

型号 Models			轴伸代号 Shaft code	A	B	C	D	E	F键宽×长 F key width × length
V	VQ	SQP							
20V	20VQ	SQP1	1	59	9.53	12.1	22.23/22.20	24.5/24.4	4.76×32
25V	25VQ	SQP2	1	59	9.53	11.1	22.23/22.20	24.5/24.4	4.76×32
2520V	2520VQ	SQP21	86	78	9.53	11.1	25.37/25.35	28.3/28.1	6.36×50.8
35V	35VQ	SQP3	1	73.2	9.53	11.1	31.75/31.70	35.36/34.10	7.94×38.1
352*V	352*VQ	SQP3*	86	86	9.53	11.1	34.90/34.67	38.6/38.3	7.94×54
45V	45VQ	SQP4	1	62	12.7	14.22	31.75/31.70	35.36/34.10	7.94×28.5
45**V	45**VQ	SQP4*	86	87.4	12.7	14.22	38.07/38.05	42.4/42.1	9.54×50.8

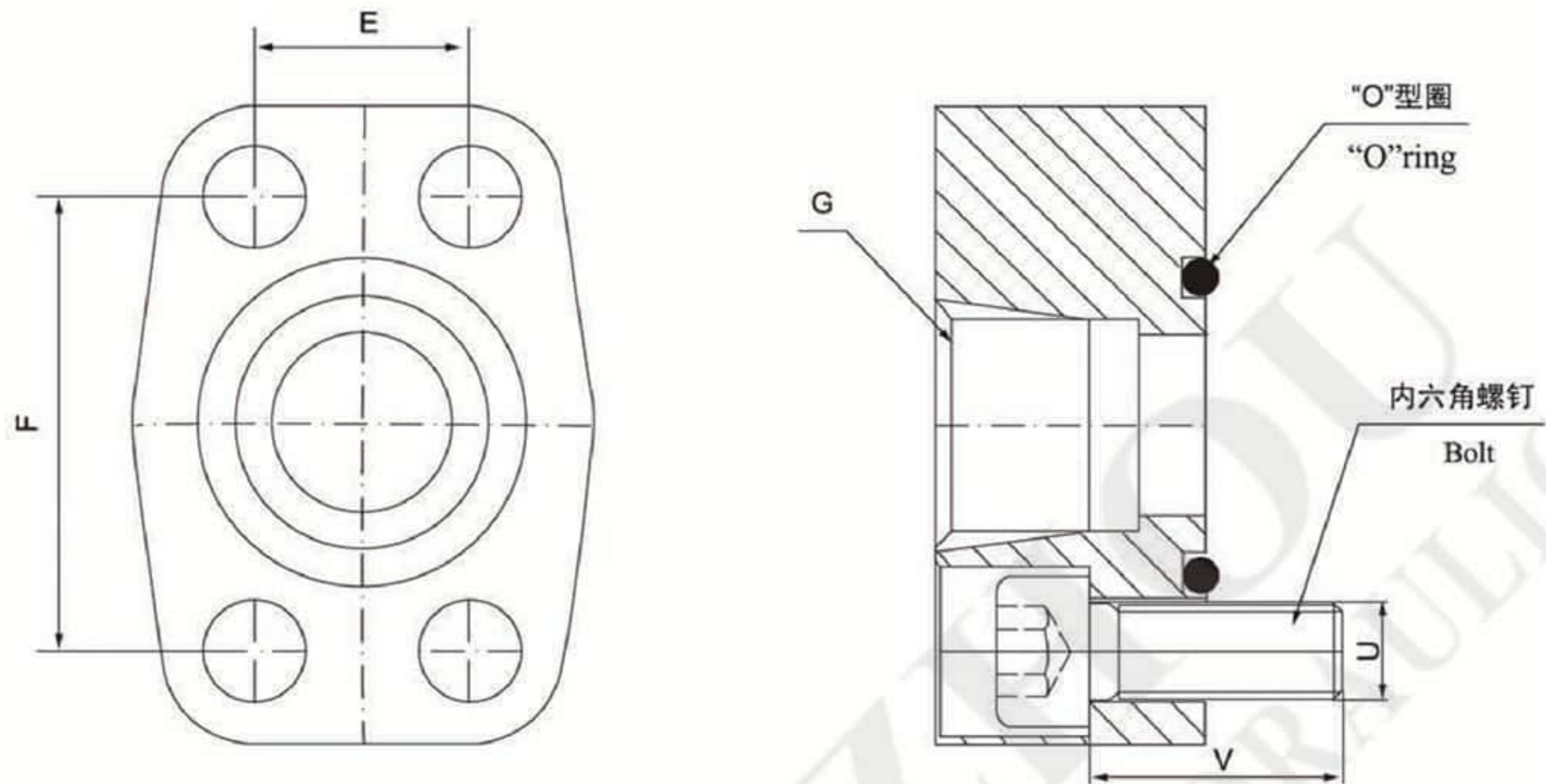
花键轴 Spline shaft

型号 Models		轴伸代号 Shaft code	A	B	C	D	E	花键数据 (见下表) Spline data (see the following table)
V	VQ							
20V	20VQ	151	41.1	9.53	11.1	3.9	27.8	A
25V	25VQ	11	44.5	9.53	11.1	3.9	27.8	A
2520V	2520VQ							
35V	35VQ	11	58.7	9.53	11.1	6.35	35.1	C
352*V	352*VQ							
45V	45VQ	11	61.9	12.7	14.3	9.7	39.6	C
45**V	45**VQ							

花键数据表 (渐开线花键) Spline data (Involute spline)

花键数据标记 Spline data tags	齿数 Teeth No	径节 Diametral pitches	大径 Major diameters	成形直径 Forming diameters	小径 Minor diameters	平齿根配合 Match with flat teeth
A	13	16/32	22.17 22.15	19.03	18.63 18.35	大径配合 Match with major diameter
C	14	12/24	31.7 31.67	27.2	26.99 26.64	大径配合 Match with major diameter

■ V/VQ 泵配用法兰连接尺寸 V/VQ Flange Installation Size



配泵的型号 Models	尺寸 Dimension (mm)			内六角螺钉 Bolt		“O”型圈 (内径×线径) “O”ring
	E	F	G	U	V (mm)	
20V (VQ) 出油口Outlet	22.22	47.6	3/4	3/8-16UNC	30	28×3.55
25V (VQ) 出油口Outlet	26.2	52.4	1	3/8-16UNC	30	34.5×3.55
35V (VQ) 出油口Outlet	30.2	58.7	1 1/4	7/16-14UNC	35	40×3.55
45V (VQ) 出油口Outlet 20V (VQ), 25V (VQ) 出油口Outlet	35.7	69.9	1 1/2	1/2-13UNC	40	50×3.55
35V (VQ) 进油口inlet	42.9	77.8	2	1/2-13UNC	40	63.09×3.55
45V (VQ) 3520V (VQ), 3525V (VQ) 出油口Outlet	62	106.4	3	5/8-11UNC	45	82.5×3.55
2520V (VQ) 进油口inlet	50.8	88.9	2 1/2	1/2-13UNC	45	71×3.55
4520 (4525) V (VQ) 进油口inlet	69.9	120.6	3 1/2	5/8-11UNC	50	100×3.55
4535V (VQ) 进油口inlet	77.8	130.2	4	5/8-11UNC	50	115×3.55



○ 产品简介/Production Introduction

本系列泵是专为低噪声工况而开发的高压高性能叶片泵，产品所有连接尺寸和内部配件均可与原装油研互换，具有结构合理、性能先进、效率高、噪声低、脉动小、可靠性好等特点，广泛应用于工程机械、矿山机械、橡塑机械、鞋革机械、压铸机械、金属切割机床及各类液压系统中。

PV2R Yuken type vane pump are developed basic on the original Yuken vane pump, the all connecting dimension and spare parts can be interchanged with original Yuken, with advanced structure and performance, higher efficiency, lower noise and ripple, longer life etc, are widely used in Construction Machinery, Mining Machinery, Rubber&Plastic machinery, Shoe Machinery, Die Casting Machinery, Metallurgical Machinery, Metal Cutting Machinery and all types hydraulic systems.

■ PV2R系列单泵 PV2R Series Single Pump

PV2R1	31	- F	-1	-R	A
系列号 Series No	公称排量 Displacement (ml/r)	安装形式 Mounting Type	轴伸形式 Shaft Extention	旋转方向 Rotation	出油口位置 Outlet Position
PV2R1	6,8,10,12,14,17 19,23,25,28,31	F:法兰安装 F:Flange Mounting	1: 大轴标准 1: Standard  2: 小轴 2: Minor Shaft  3: 特殊轴 3: Special Shaft	从轴端看(Viewed from Shaft end) 进油口朝上(Inlet port A is set as upper.)	
PV2R2	26,33,41,47,53,59 65,75			R: 正转(标准) L: 反转  R: Right(Standard) L: Left	A-上方(标准) B-下方 R-右方 L-左方  A: Upper(Standard) B: Bottom R: Right L: Left
PV2R3	52,60,66,76,85,94 116,125,136,153				
PV2R4	136,153,184,200,237				

■ PV2R系列双泵 PV2R Series Double Pump

PV2R23	-59	-125	-F	-1	-R	E	A
系列号 Series No	公称排量 Displacement (ml/r)		安装形式 Mounting Type	轴伸形式 Shaft Extention	旋转方向 Rotation	出油口位置 Outlet Position	
	盖端泵 Cover end pump	轴端泵 Shaft end pump				从轴端看(Viewed from Shaft end) 进油口朝上(Inlet port A is set as upper.)	
PV2R12	6,8,10,12,14,17, 19,23,25,28,31	26,33,41,47,53, 59,65,75	F: 法兰 安装	1: 大轴标准 1: Standard	R:正转 (标准) R: Right (Standard)	盖端泵 Cover end pump	轴端泵 Shaft end pump
PV2R13	6,8,10,12,14,17, 19,23,25,28,31	52,60,66,76,85, 94,116,125,136, 153	F: Flange Mounting	2: 小轴 2: Minor Shaft	L: Left L: 反转		
PV2R23	26,33,41,47,53, 59,65,75	52,60,66,76,85, 94,116,125,136, 153					

■ 技术参数 Technical Data

产品型号 Model	理论排量 Displacement (mL/r)	最高压力Max.Pressure(MPa)			允许转速Speed ( r/min)		质量 Weight (kg)
		高压用特定油 Special Oil	抗磨液压油 Antiwear Oil	普通液压油 Common Oil	最低Min.	最高Max.	
PV2R1-6	5.8	21	17.5	16	750	1800 (1200)	9
PV2R1-8	8.0						
PV2R1-10	9.4						
PV2R1-12	12.2						
PV2R1-14	13.7						
PV2R1-17	16.6						
PV2R1-19	18.6						
PV2R1-23	22.7						
PV2R1-25	25.3						
PV2R1-28	28.1						
PV2R1-31	31.0						
PV2R2-26	26.6	21	17.5	14	600	1800 (1200)	18.5
PV2R2-33	33.3						
PV2R2-41	41.3						
PV2R2-47	47.2						
PV2R2-53	52.5						
PV2R2-59	58.2						
PV2R2-65	64.7						
PV2R2-75*	74.6						20
PV2R3-52	52.2	21	17.5	14	600	1800 (1200)	31
PV2R3-60	59.6						
PV2R3-66	66.3						
PV2R3-76	76.4						
PV2R3-85	85						
PV2R3-94	93.6						
PV2R3-116	115.6	17.5	16			1200	32
PV2R3-125	122.2						#34
PV2R3-136	136						
PV2R4-136	136.0	17.5	17.5	14	600	1800	75
PV2R4-153	153.0						
PV2R4-184	184.0						
PV2R4-200	201.0						
PV2R4-237	237.0						

注：

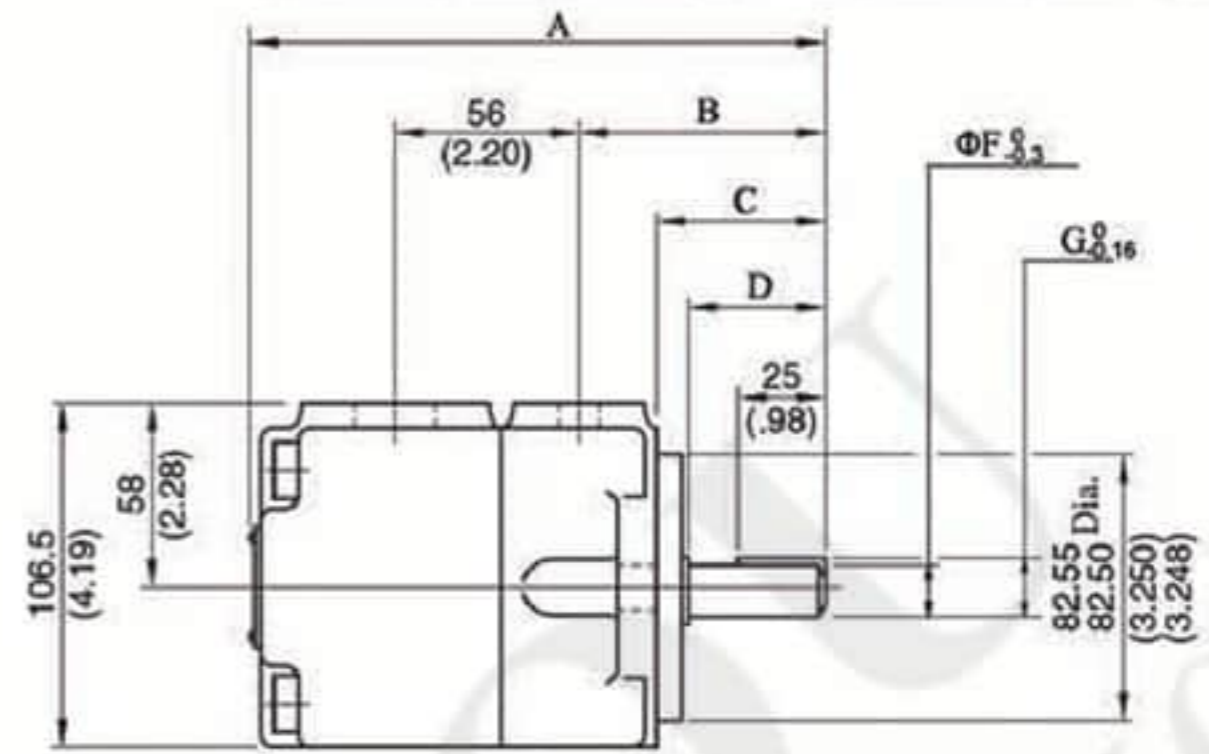
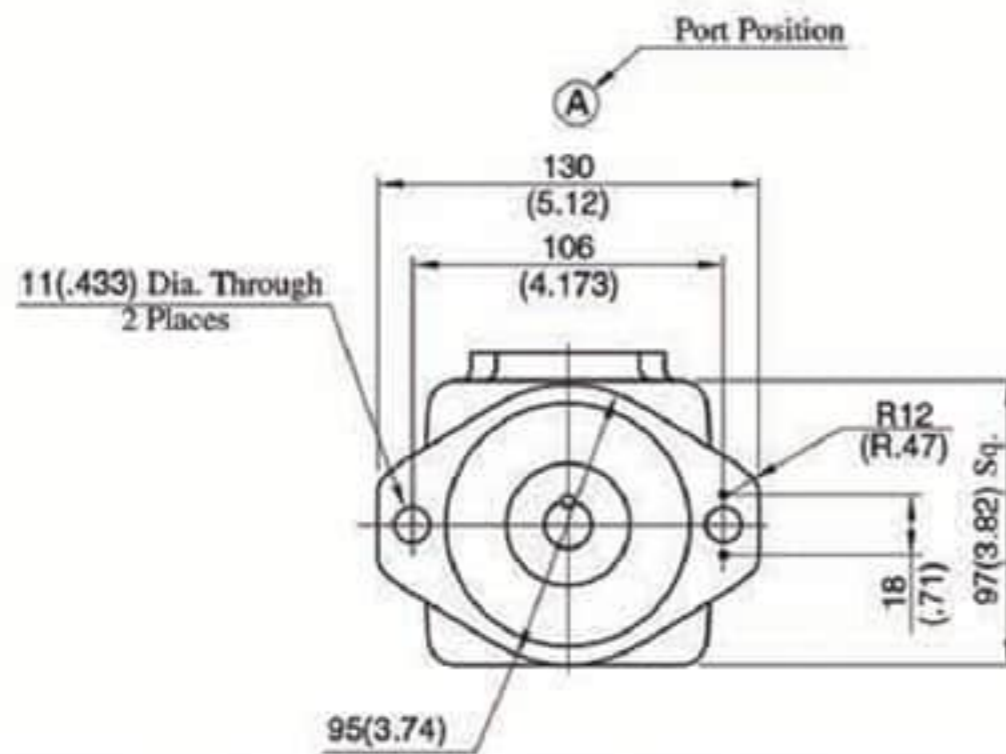
- 1.公称排量“6”、“8”泵，压力超过16Mpa使用时，转速不低于1450r/min.
- 2.对于严格要求低噪声的场合，建议工作转速在100r/min，最高工作压力在12-14Mpa.
- 3.有\*处为PV2R2/3-W组拓展规格，有#处为PV2R3-W组泵体加长10mm，安装尺寸相同，接受特殊订货.
- 4.驱动功率近似计算：泵的排量(ml/r)X电机转速(r/min)X工作压力(Mpa)/49000，计算结果单位为KW.

Notes:

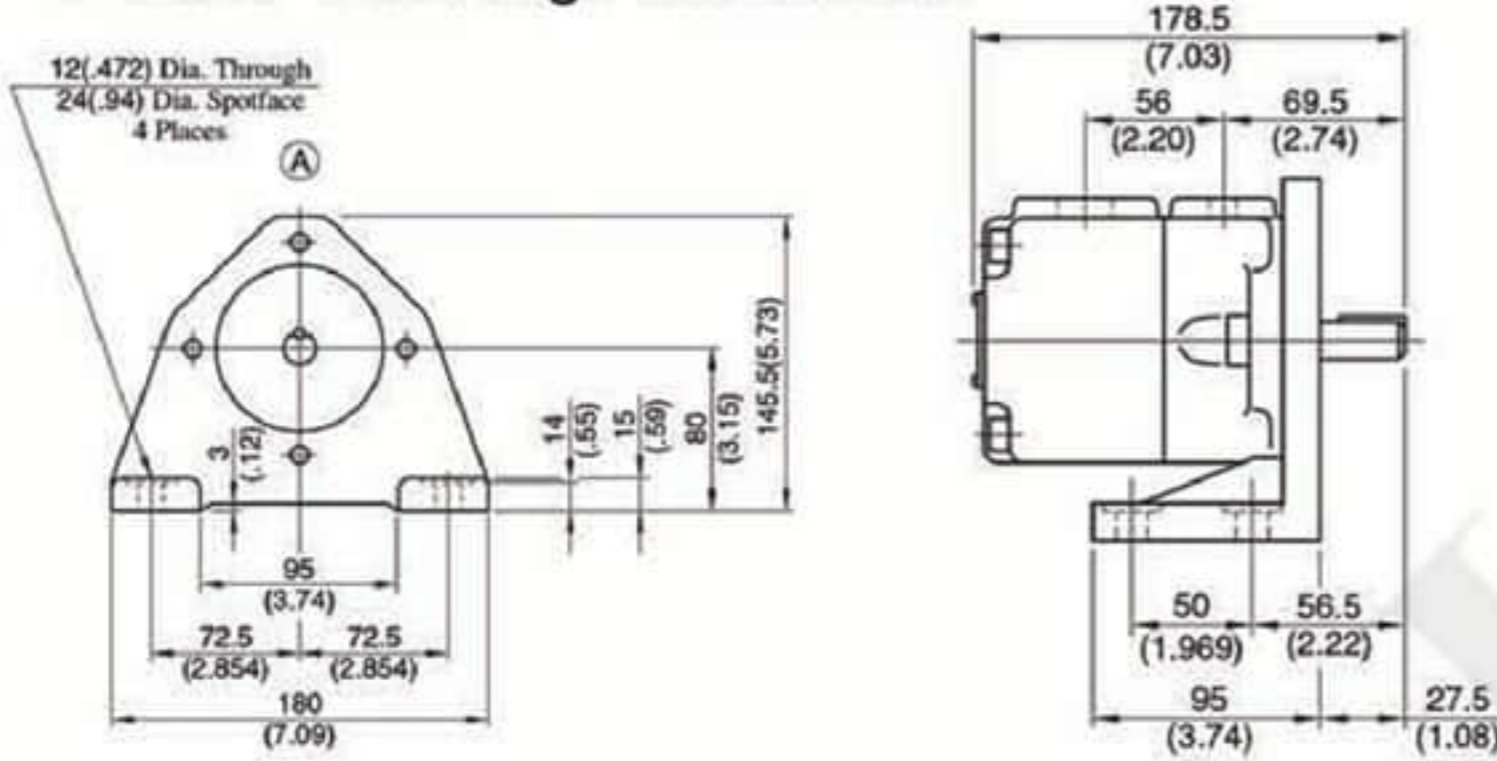
1. Regarding the pumps with 6ml/r and 8ml/r displacement, the speed should be less than 1450r/min if the working pressure is over 16 Mpa.
2. The pumps are recommended to work with 1000r/min if the condition requires lower noise.
3. The pump with the mark \* belong to the extension specification of PV2R2-W group, the mark # belong to the extension specification of PV2R3-W group, with 10mm longer body, same connecting dimension for special order.
4. The formula of driving power pump: Displacement(ml/r) X Electric motor' s speed (r/min) X Working Pressure (Mpa) / 49000, Unit is KW.

**PV2R1- Flange Mtg. (法兰安装)**

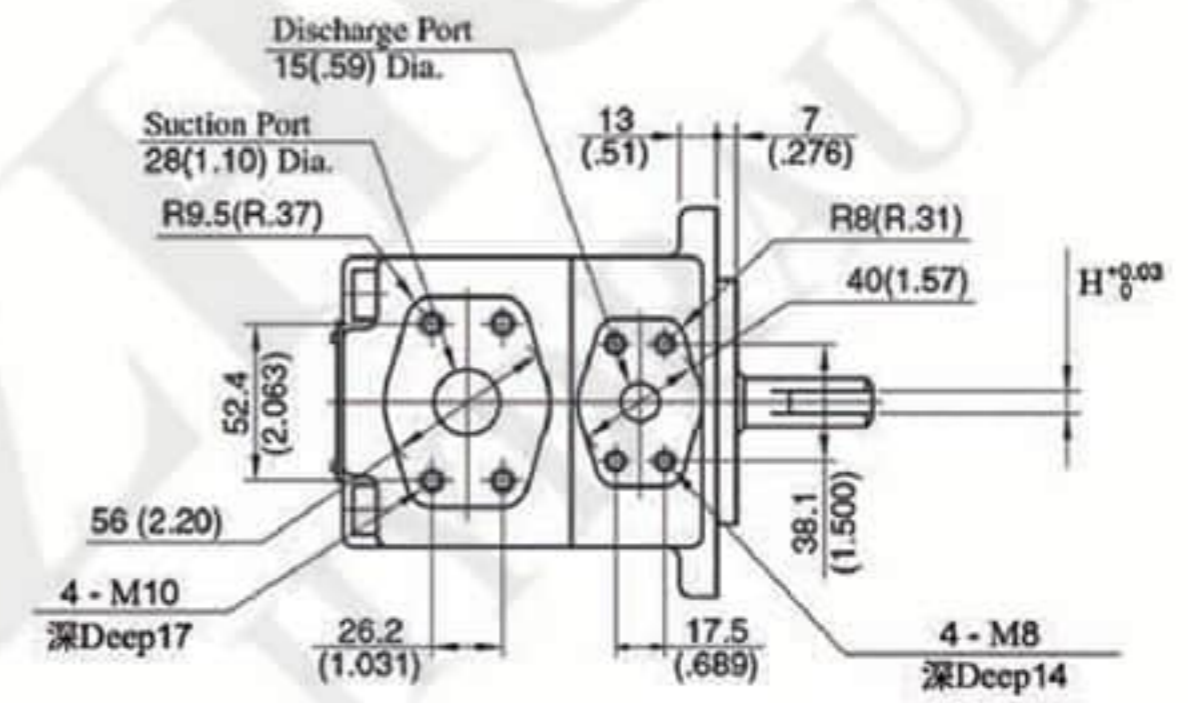
轴伸形式 Shaft extension form	A	B	C	D	F	G	H
1	178.5	69.5	44.5	36	19.05	21.24	4.76
2	184	75	50	41	15.88	17.68	3.97



**PV2R1- Foot Mtg. (脚座安装)**



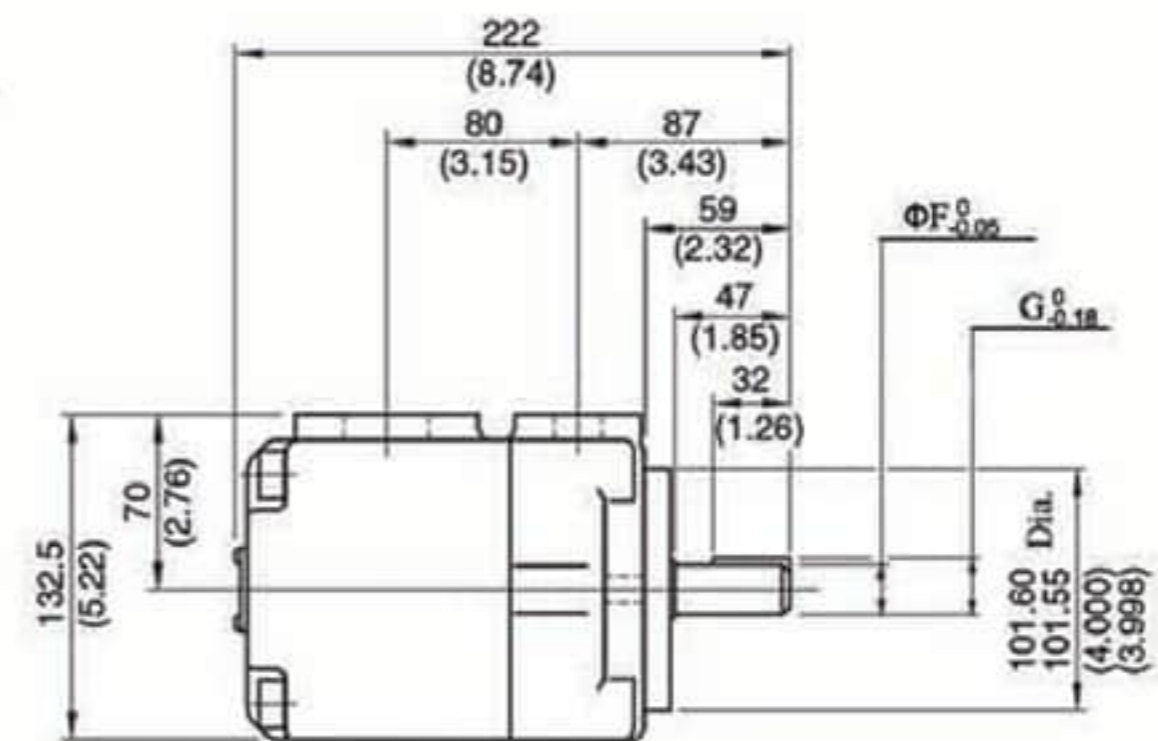
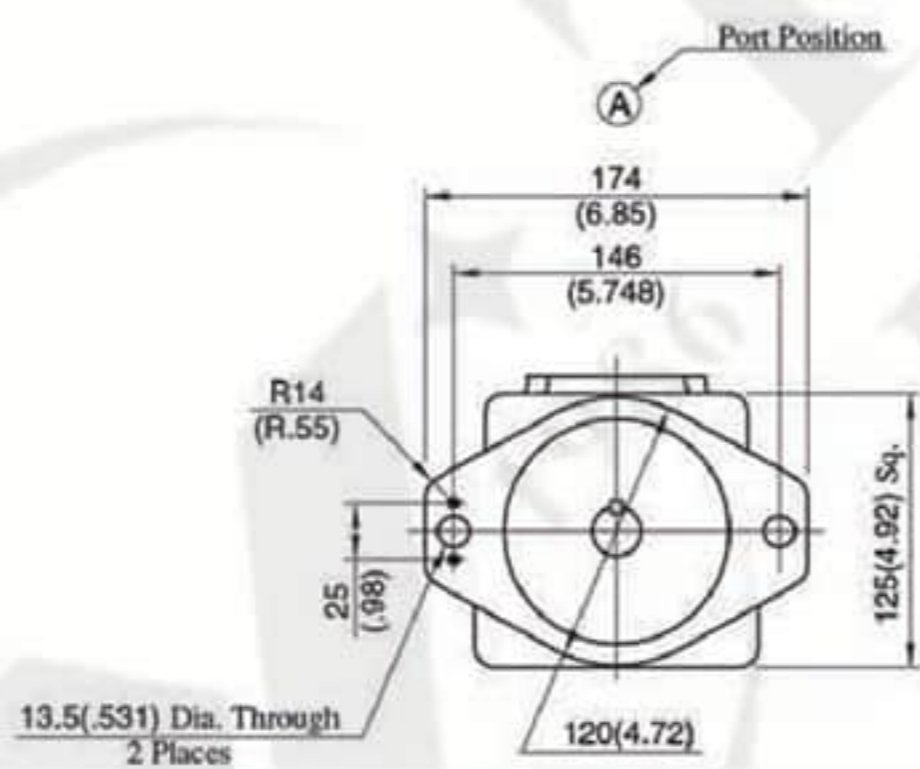
For other dimensions, refer to "Flange Mtg.".



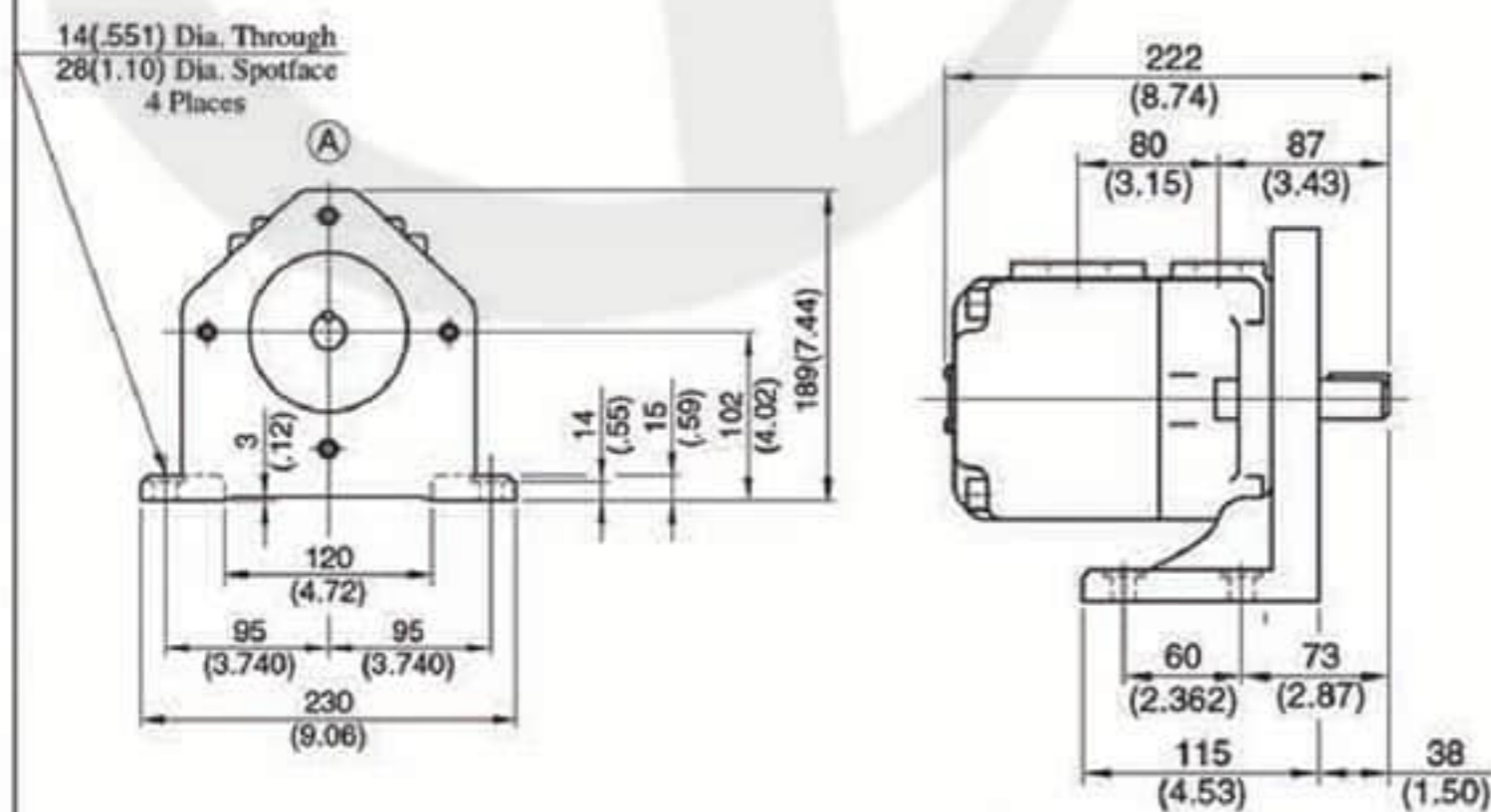
DIMENSIONS IN MILLIMETRES (INCHES)

**PV2R2- Flange Mtg. (法兰安装)**

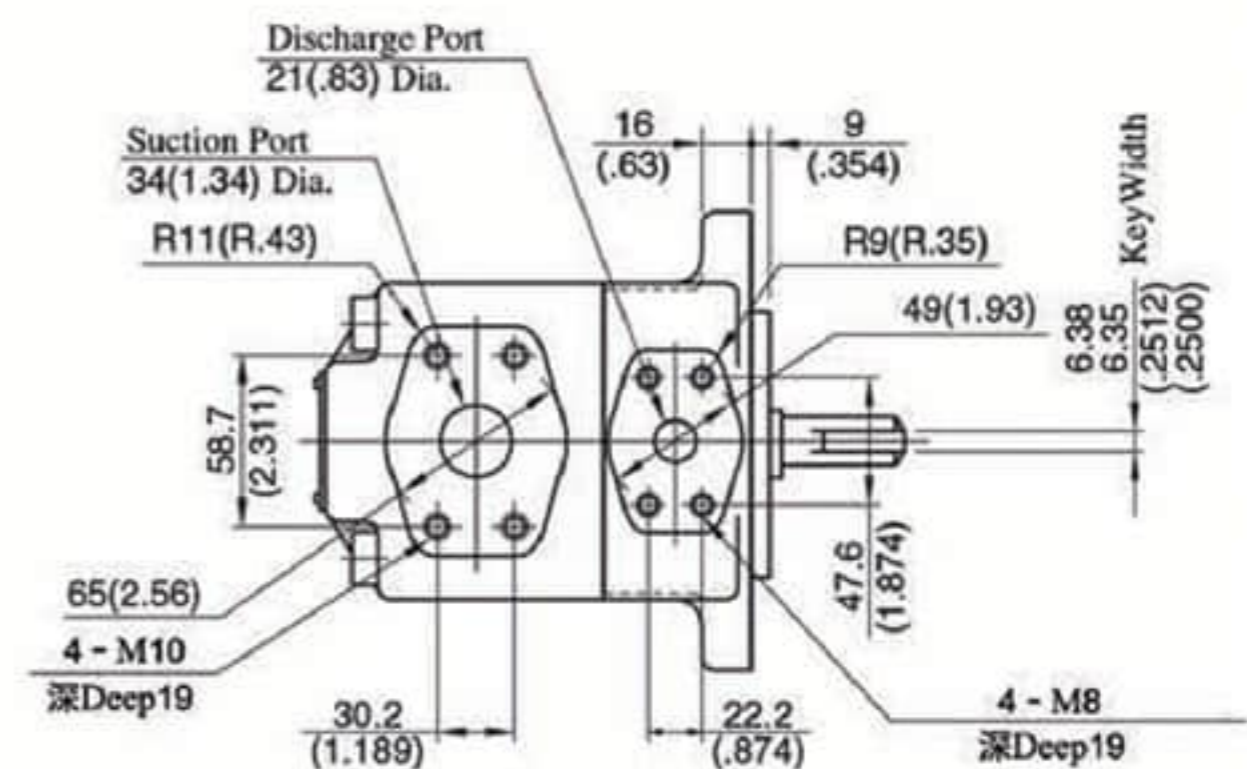
轴伸形式 Shaft extension form	F	G
1	25.4	28.18
2	22.23	25.01



**PV2R2- Foot Mtg. (脚座安装)**

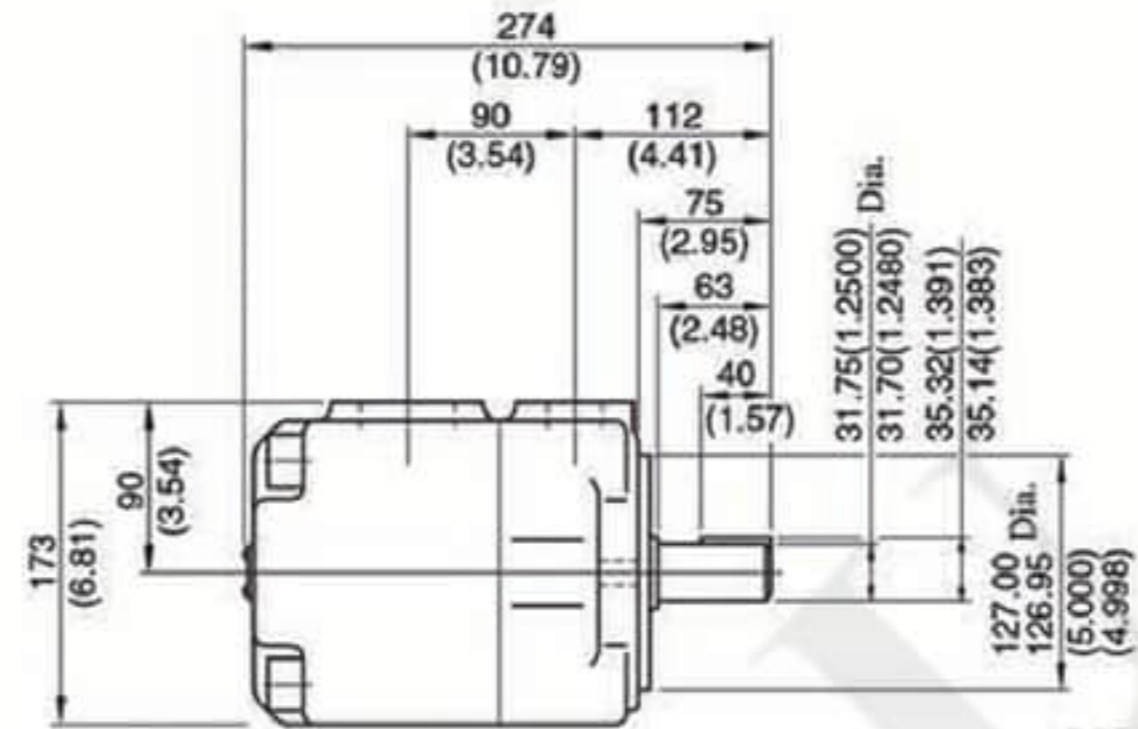
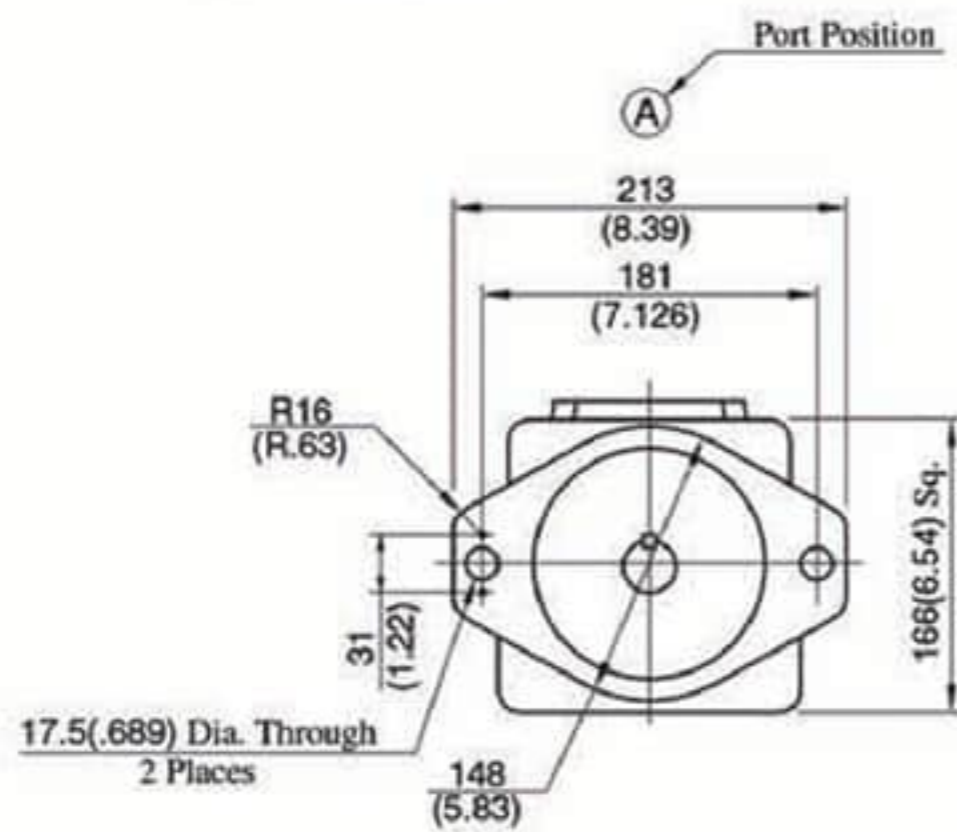


For other dimensions, refer to "Flange Mtg.".

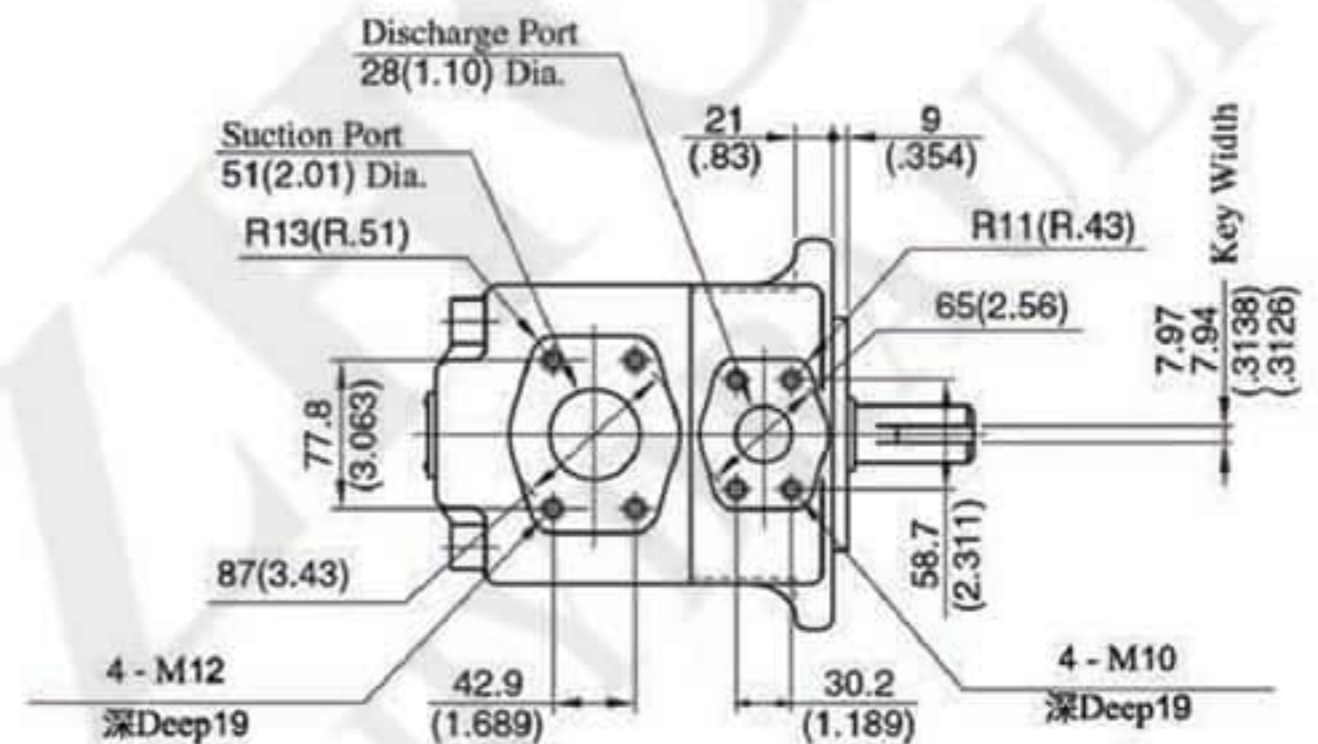
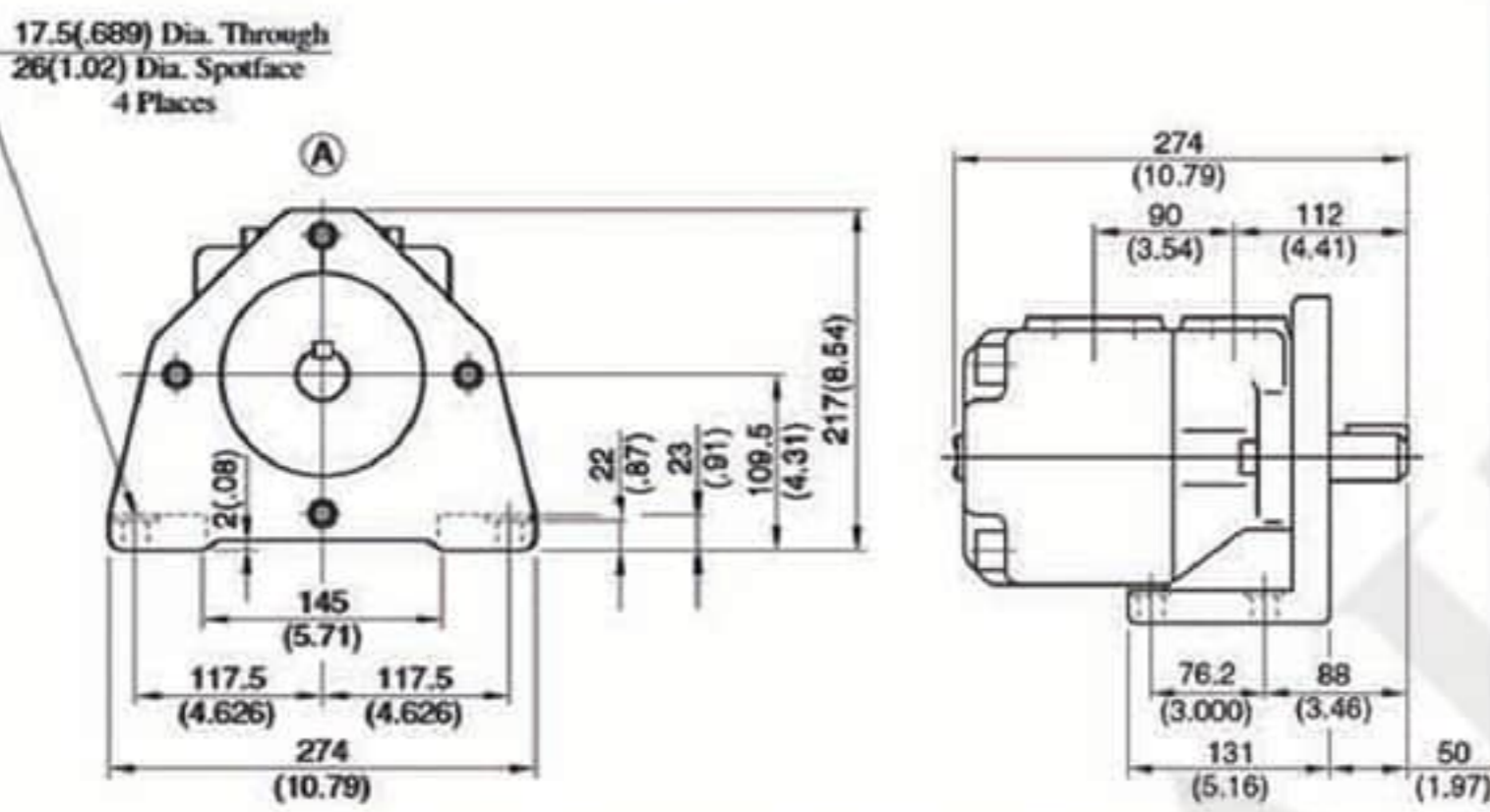


DIMENSIONS IN MILLIMETRES (INCHES)

PV2R3- Flange Mtg. (法兰安装)



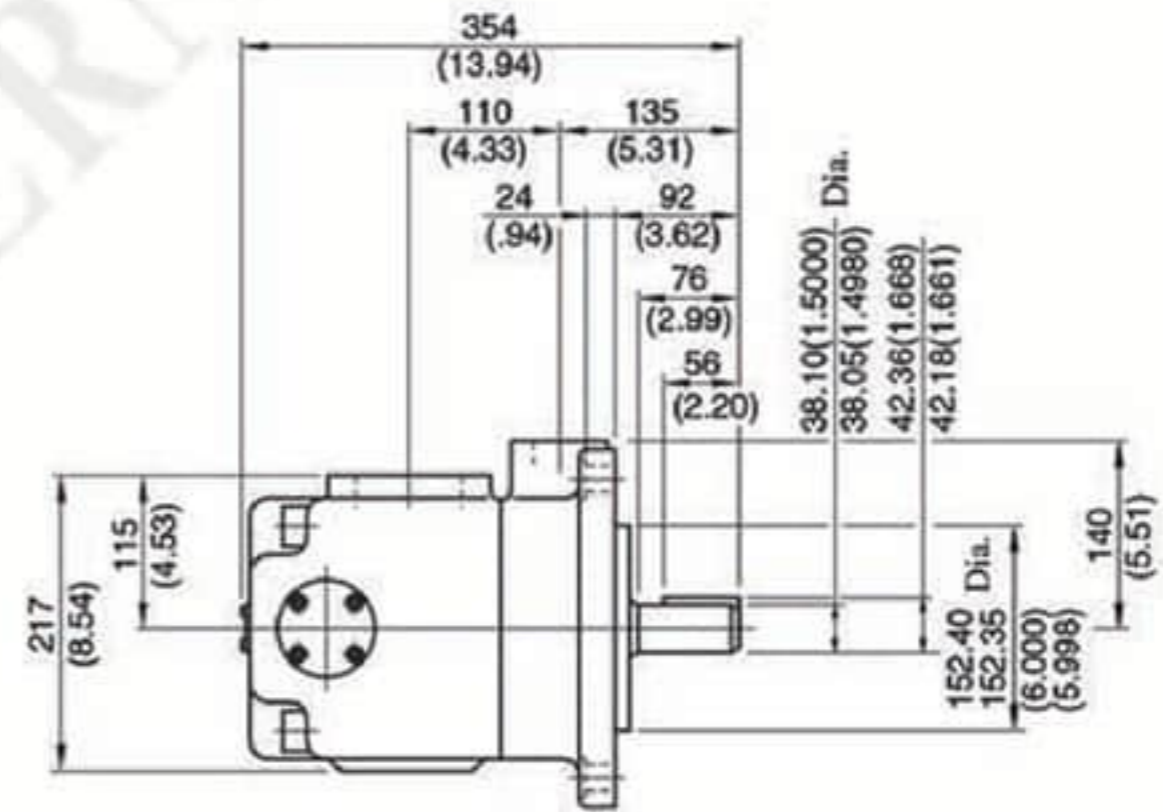
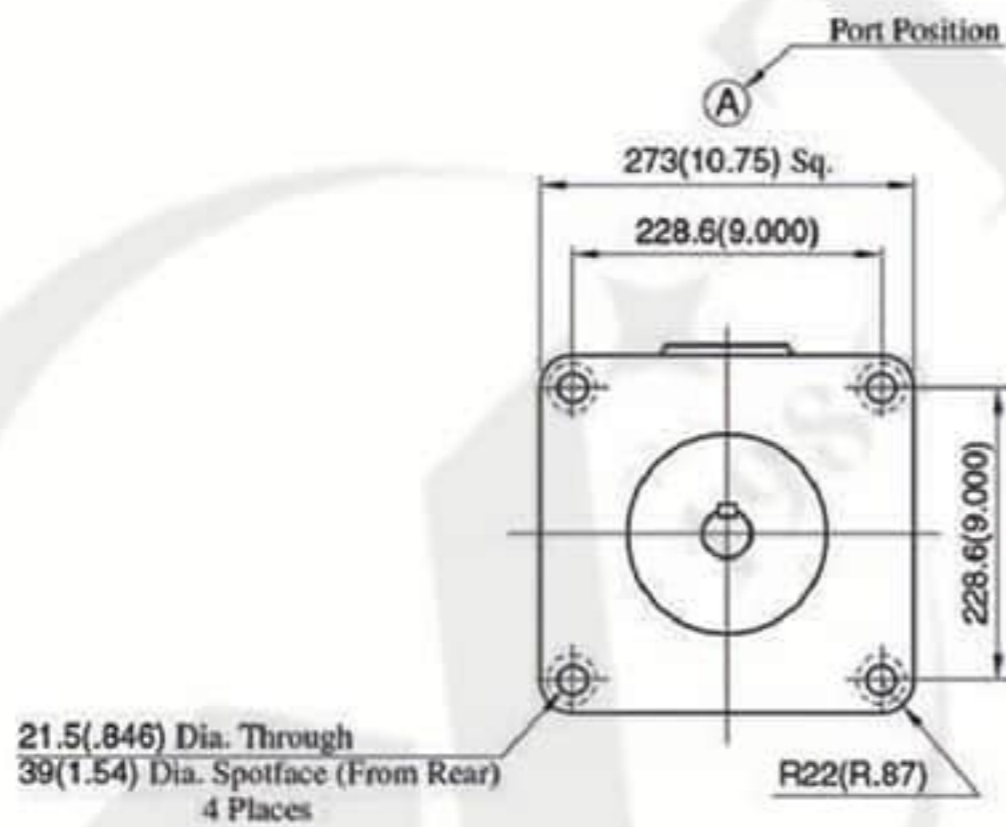
PV2R3- Foot Mtg. (脚座安装)



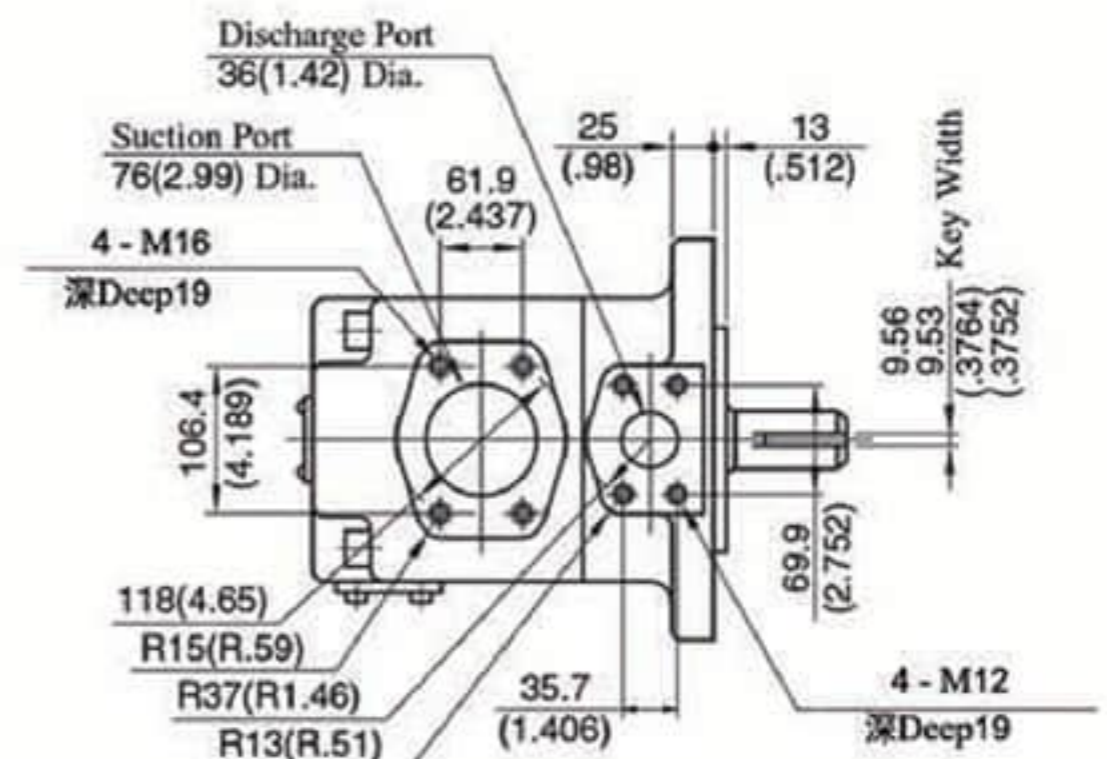
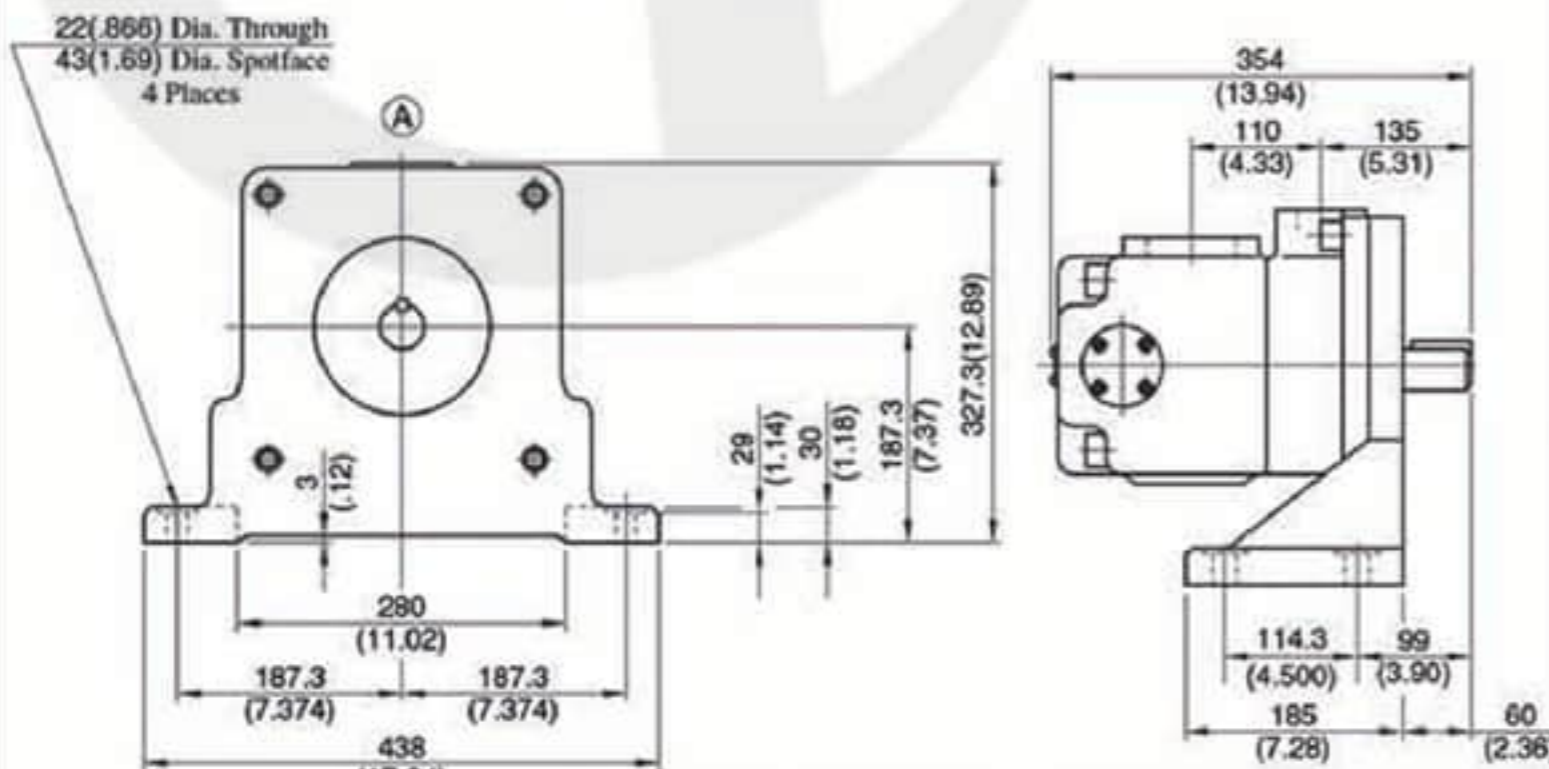
For other dimensions, refer to "Flange Mtg."

DIMENSIONS IN MILLIMETRES (INCHES)

PV2R4- Flange Mtg. (法兰安装)



PV2R4- Foot Mtg. (脚座安装)

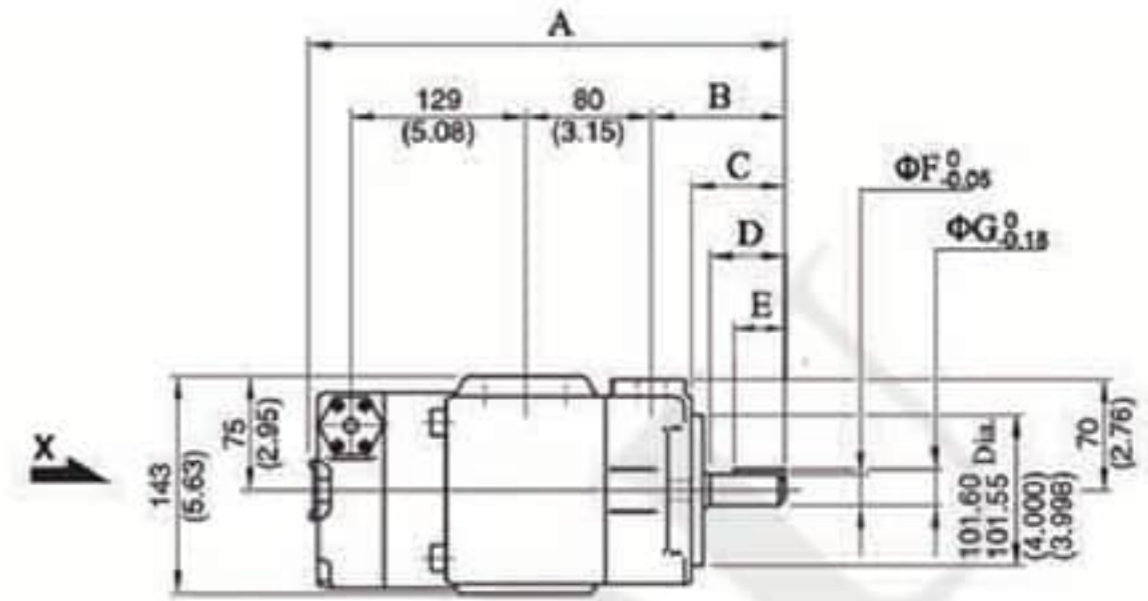
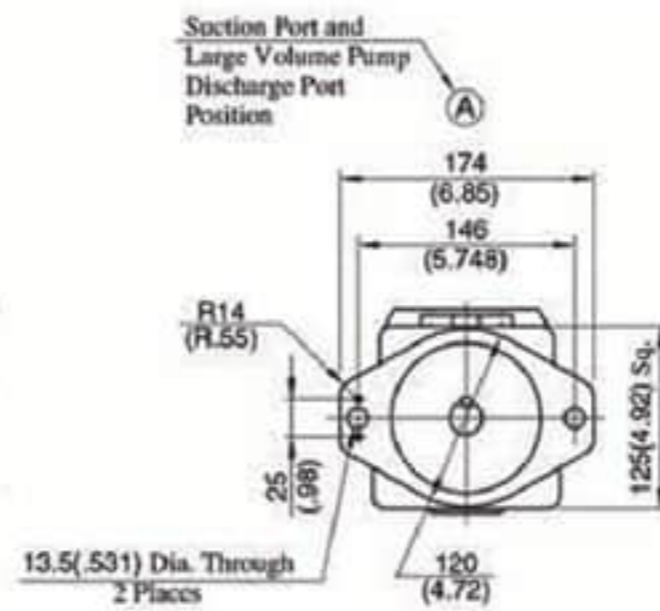
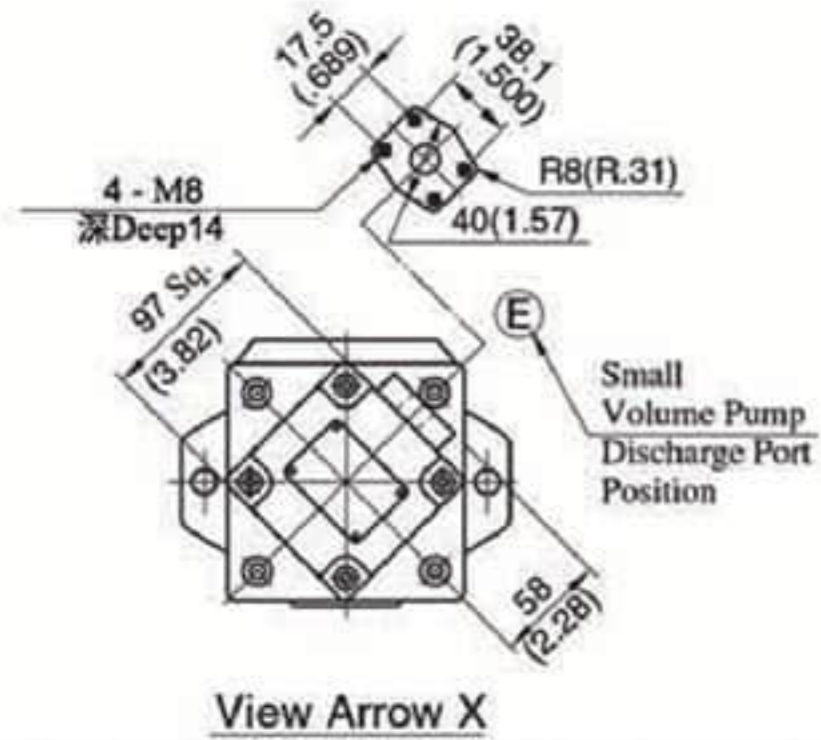


For other dimensions, refer to "Flange Mtg."

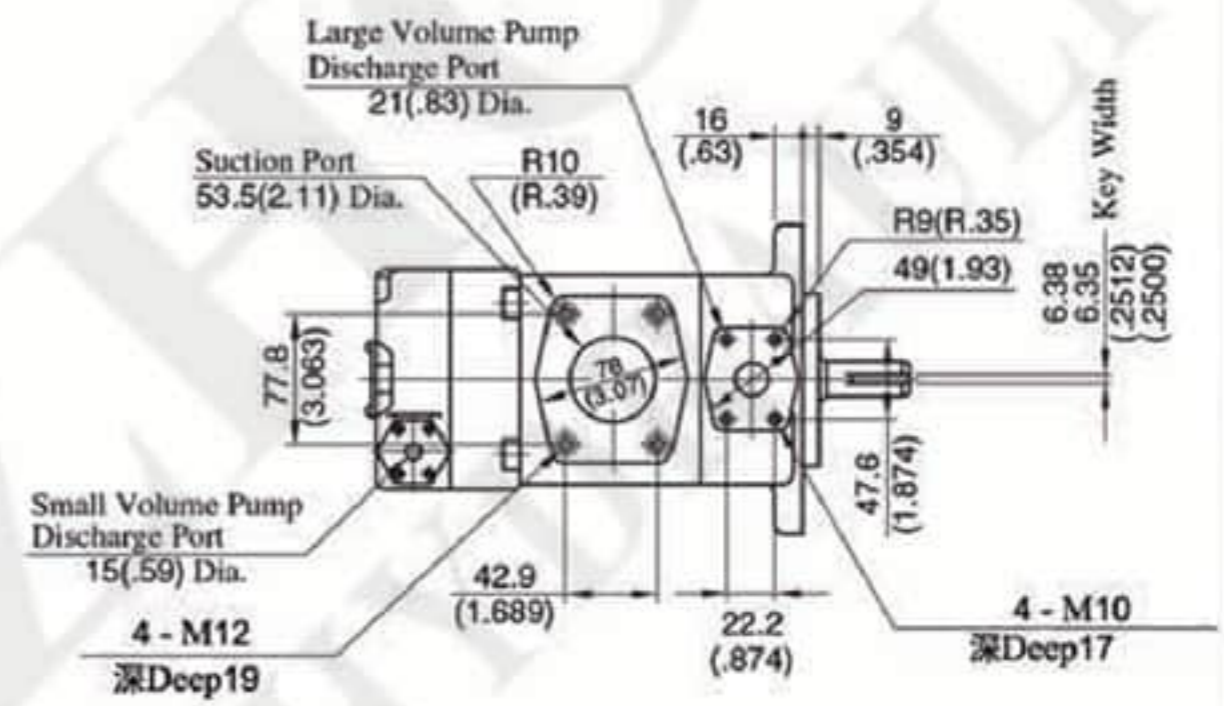
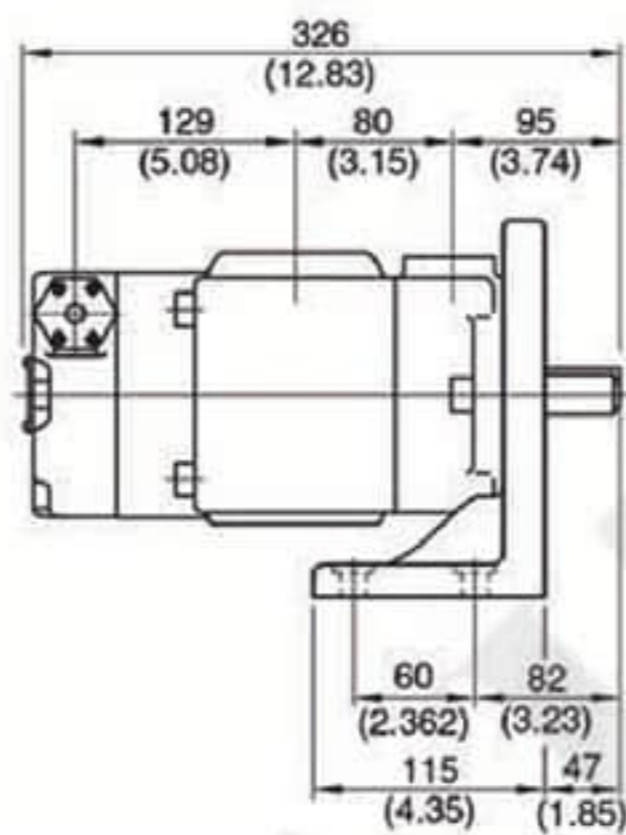
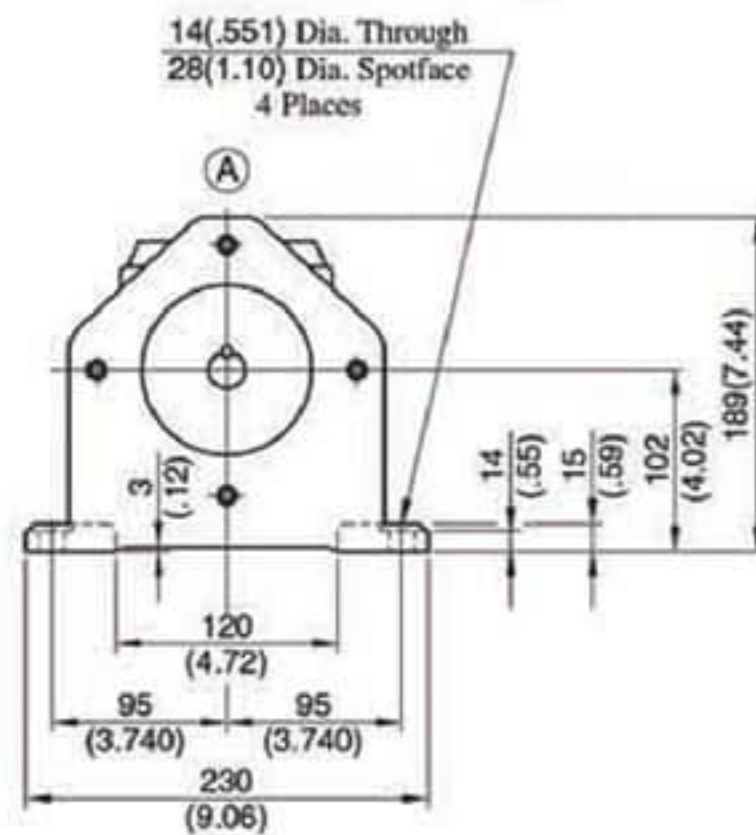
DIMENSIONS IN MILLIMETRES (INCHES)

PV2R12- Flange Mtg. (法兰安装)

轴伸形式 Shaft extension form	A	B	C	D	F	G	H
1	326	95	67	55	40	25.4	28.18
2	348	87	59	47	32	22.23	25.01



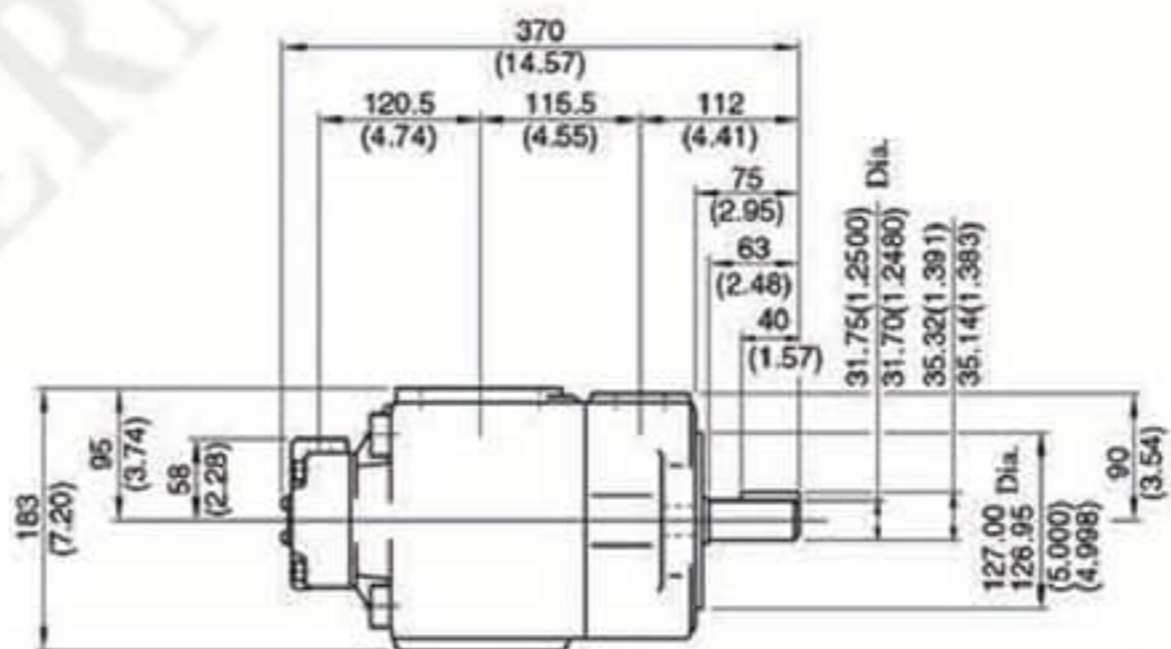
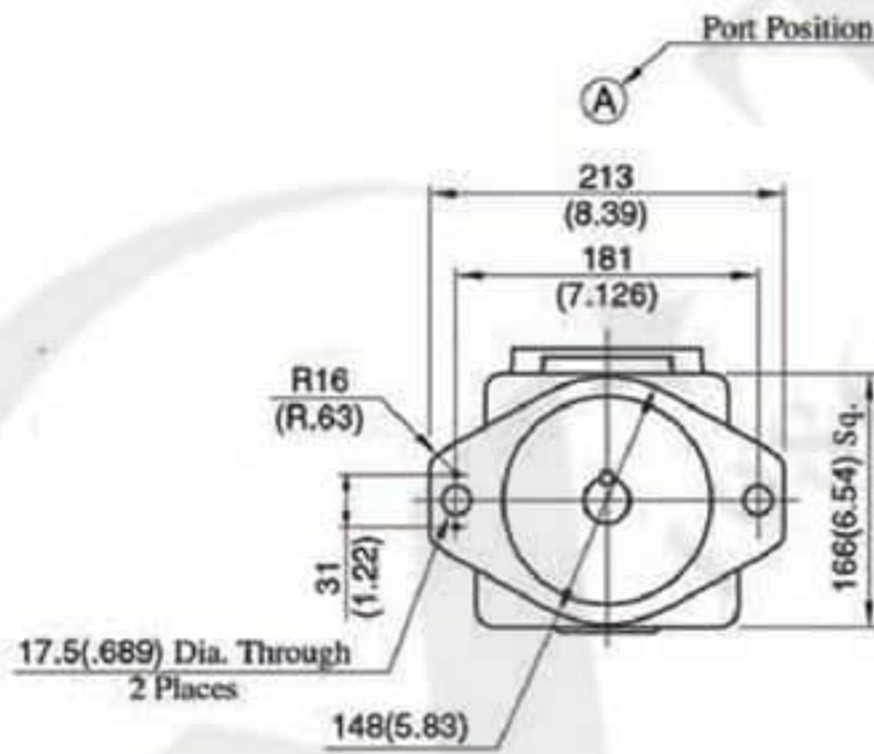
PV2R12- Foot Mtg. (脚座安装)



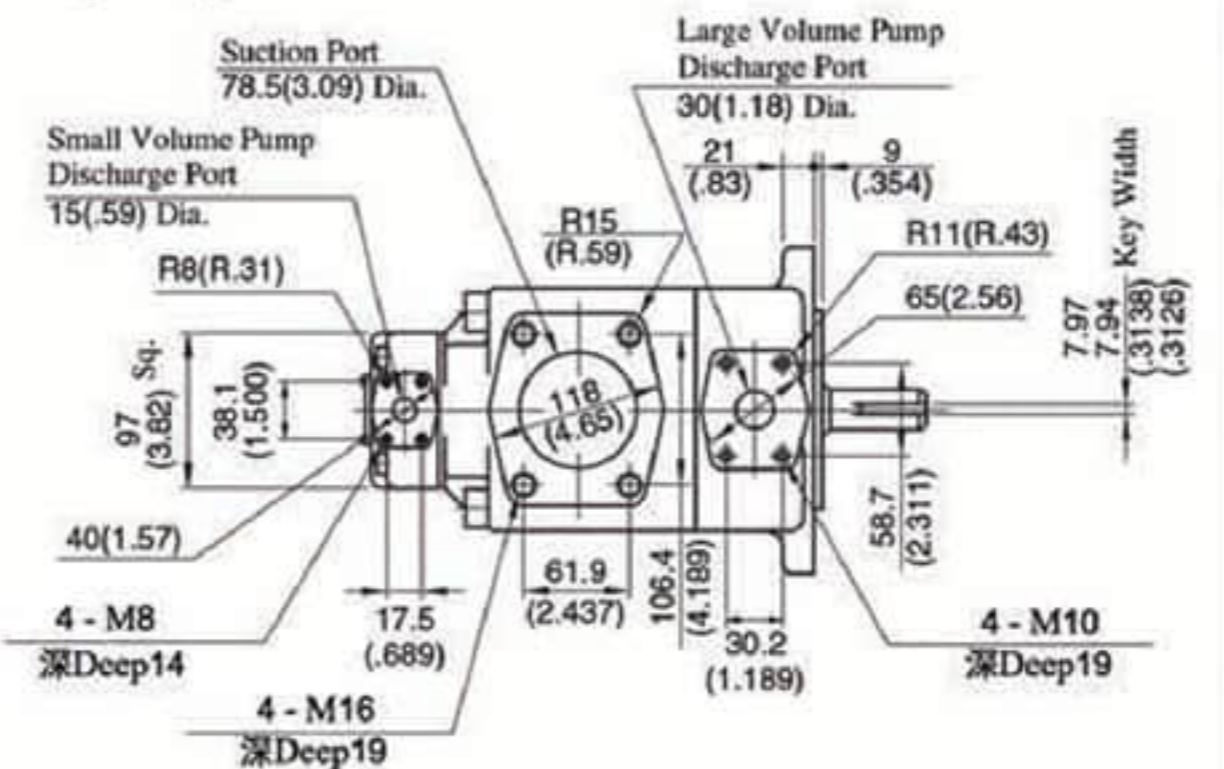
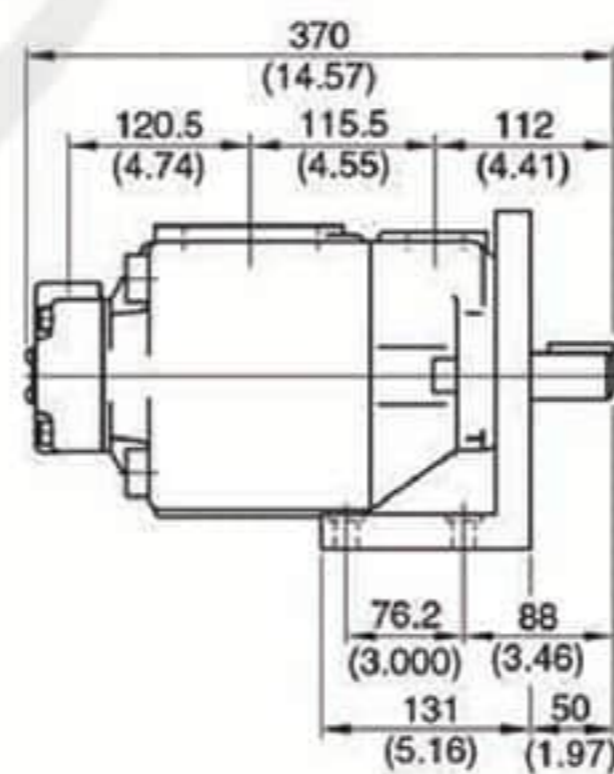
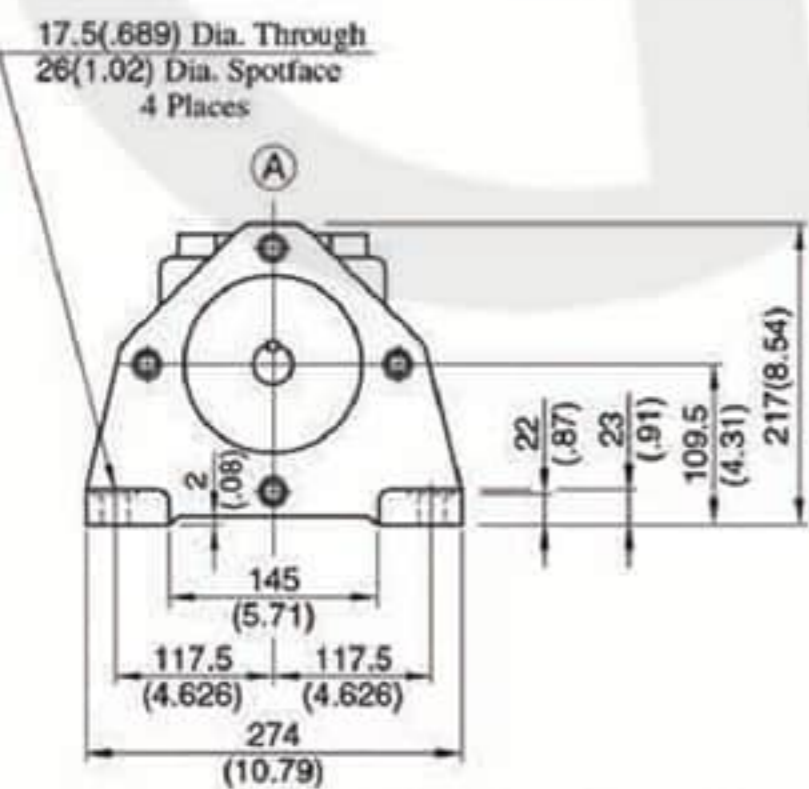
For other dimensions, refer to "Flange Mtg."

DIMENSIONS IN MILLIMETRES (INCHES)

PV2R13- Flange Mtg. (法兰安装)



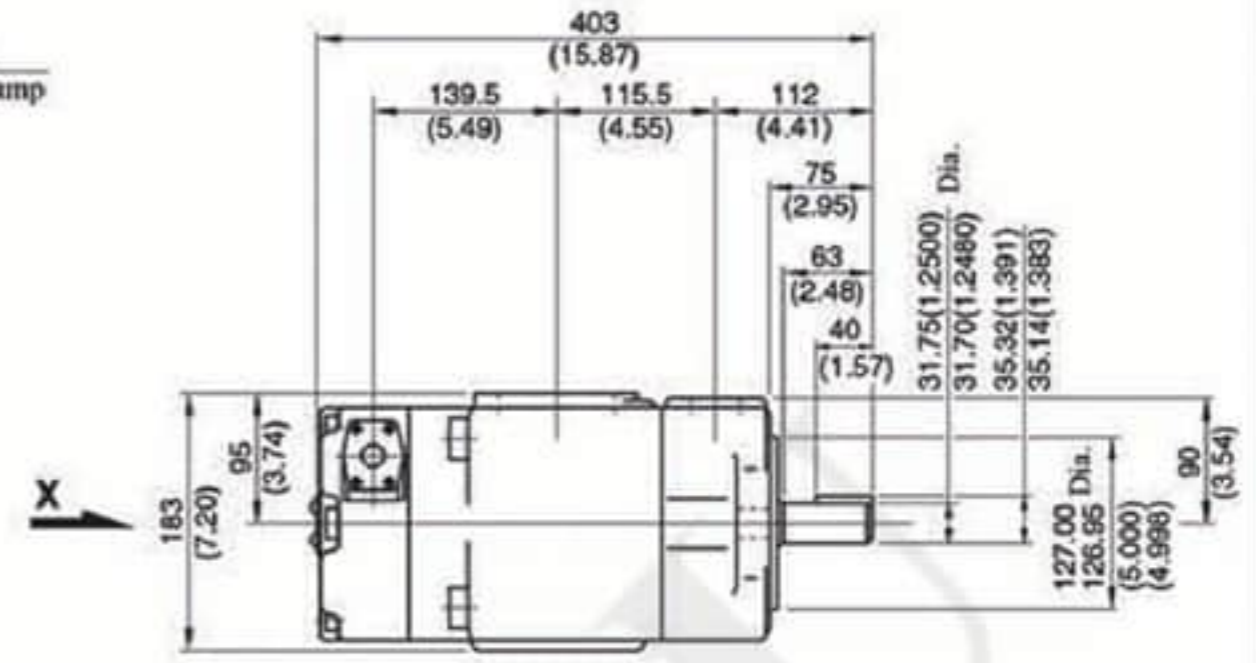
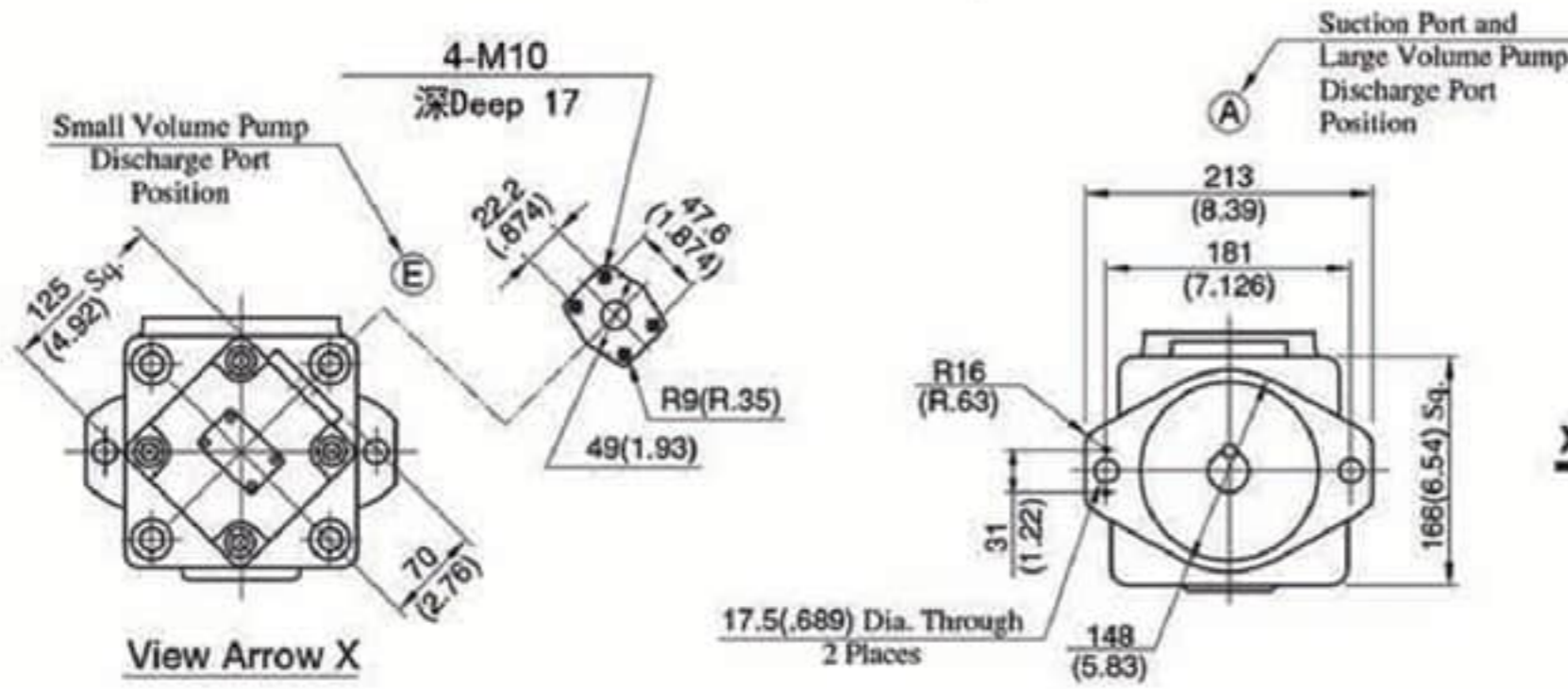
PV2R13- Foot Mtg. (脚座安装)



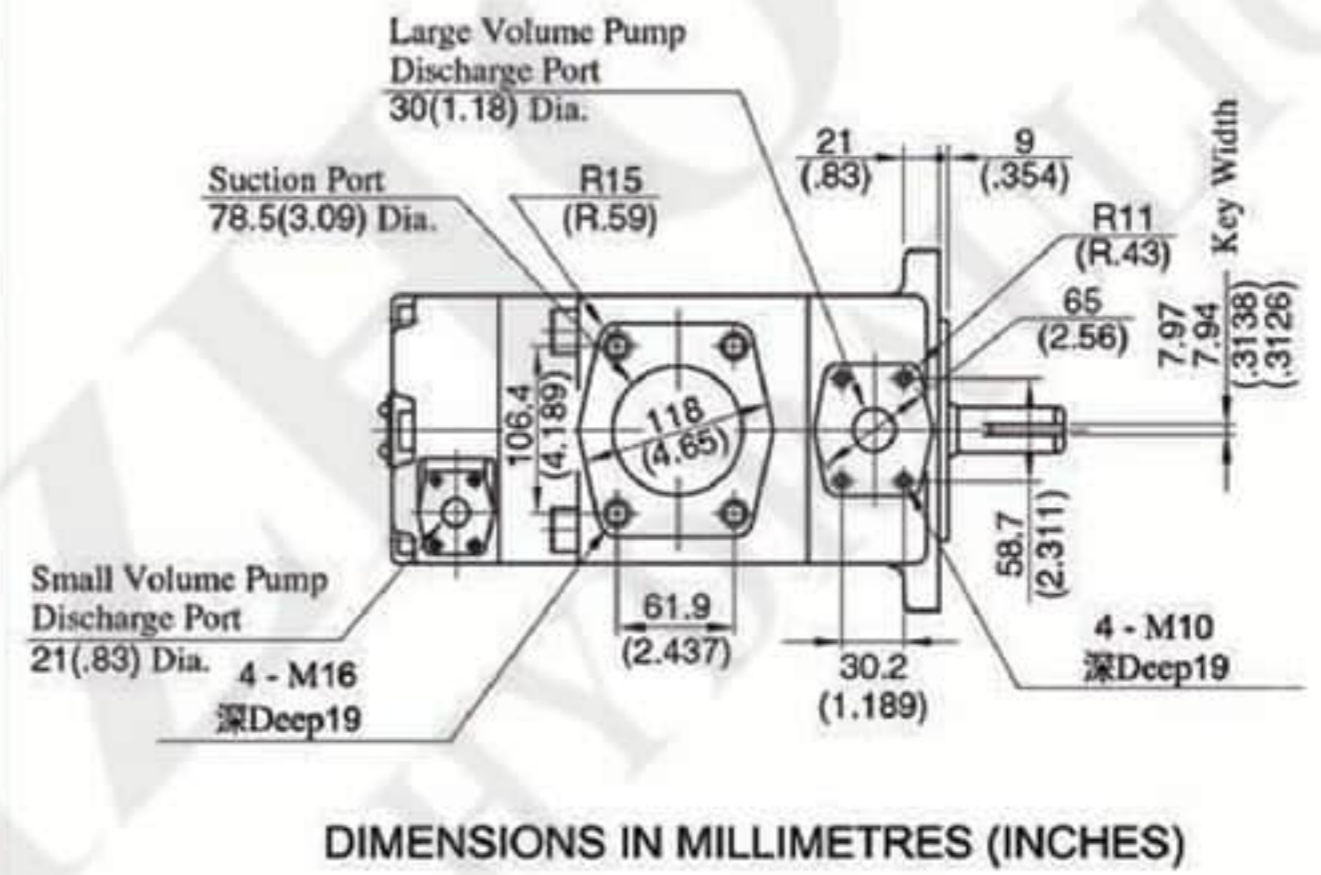
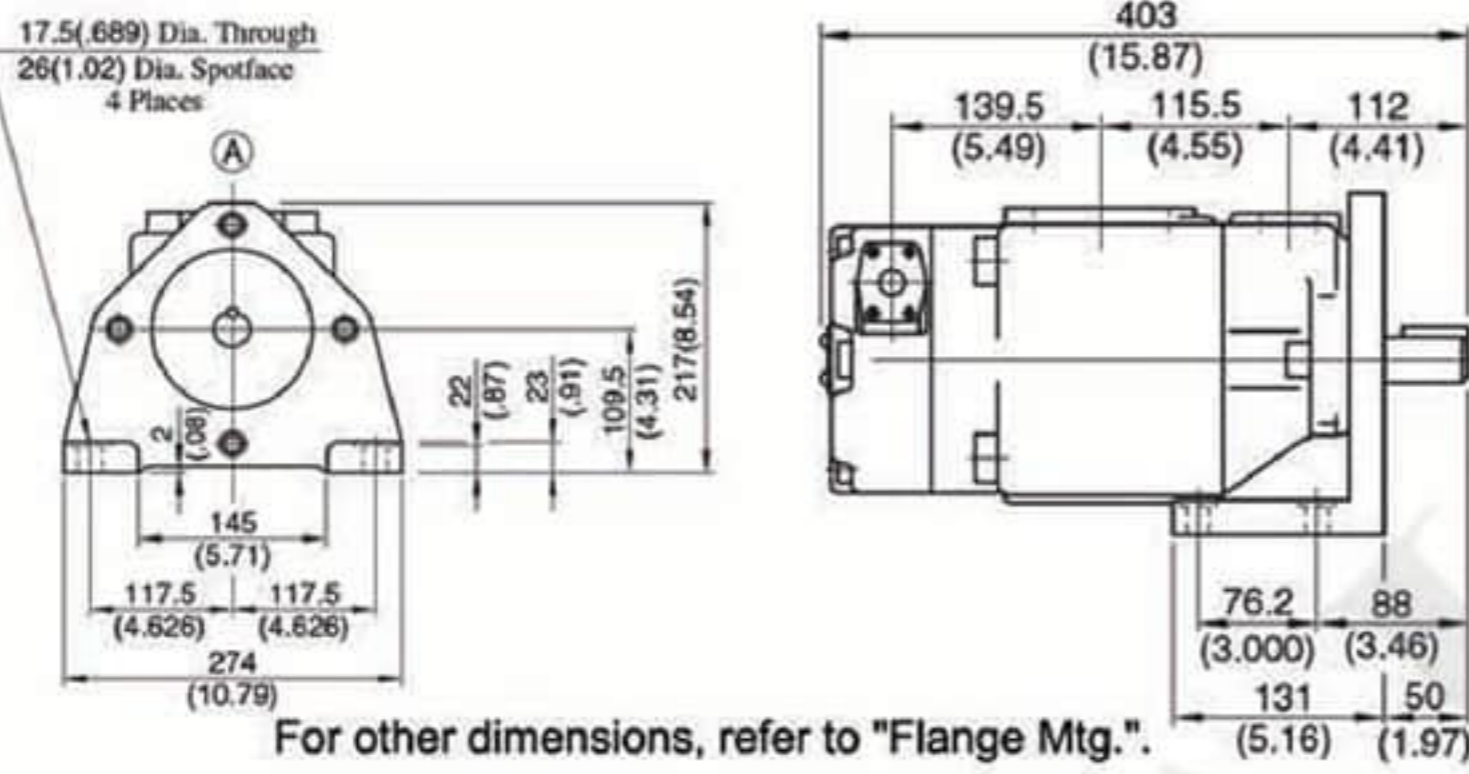
For other dimensions, refer to "Flange Mtg."

DIMENSIONS IN MILLIMETRES (INCHES)

**PV2R23- Flange Mtg. (法兰安装)**

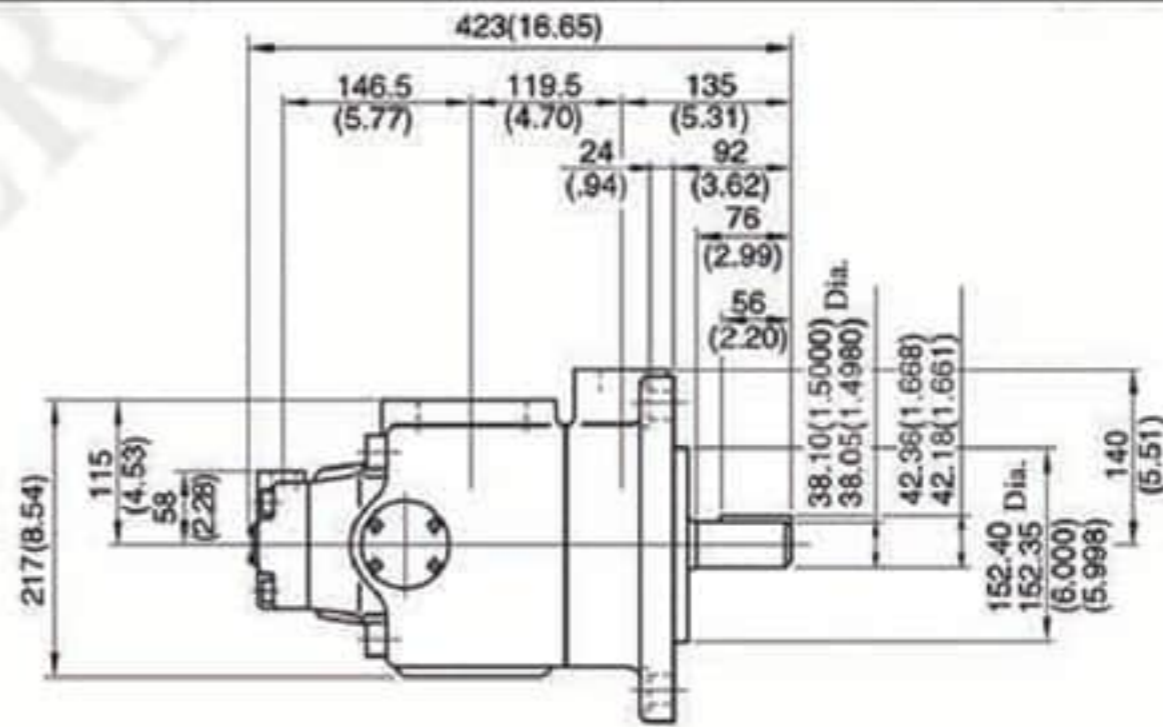


**PV2R23- Foot Mtg. (脚座安装)**

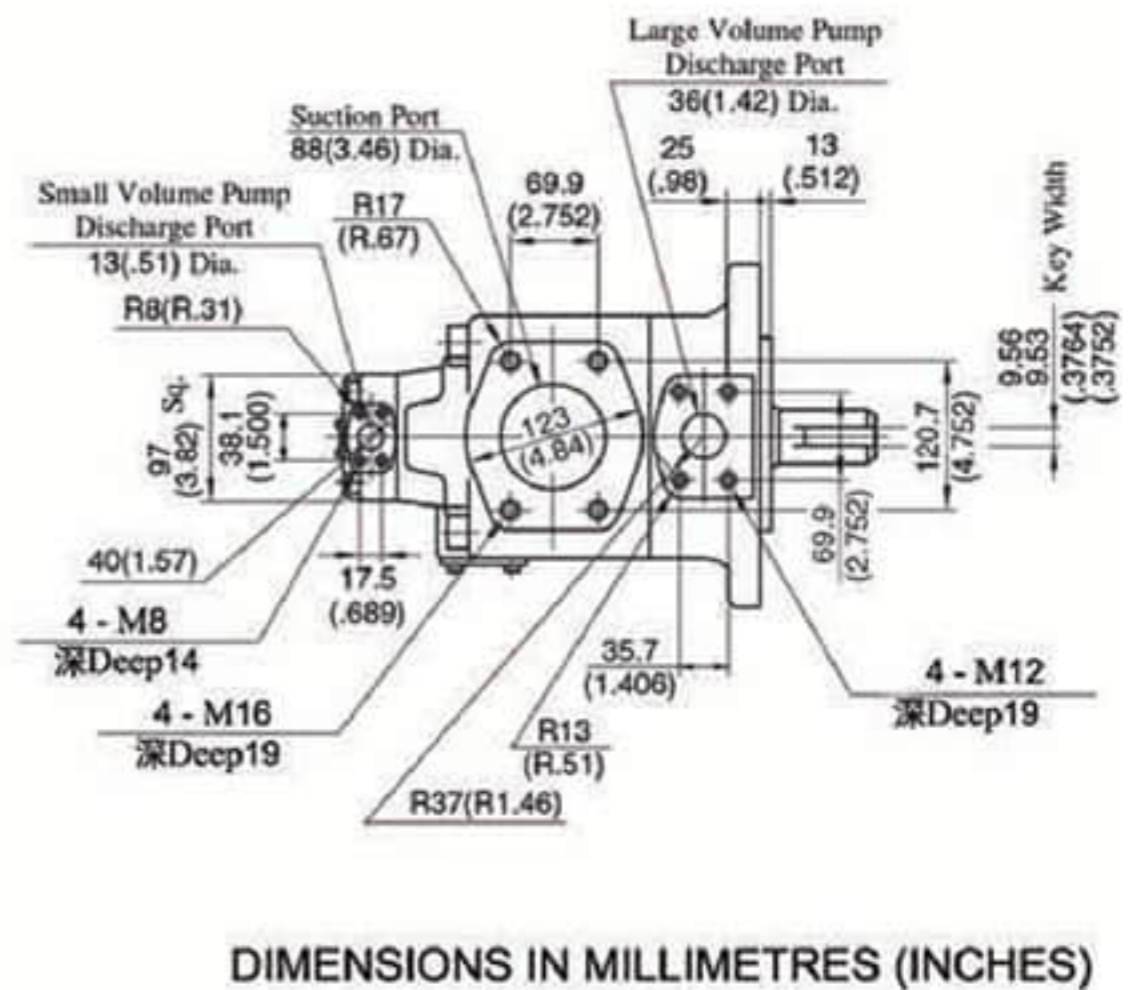
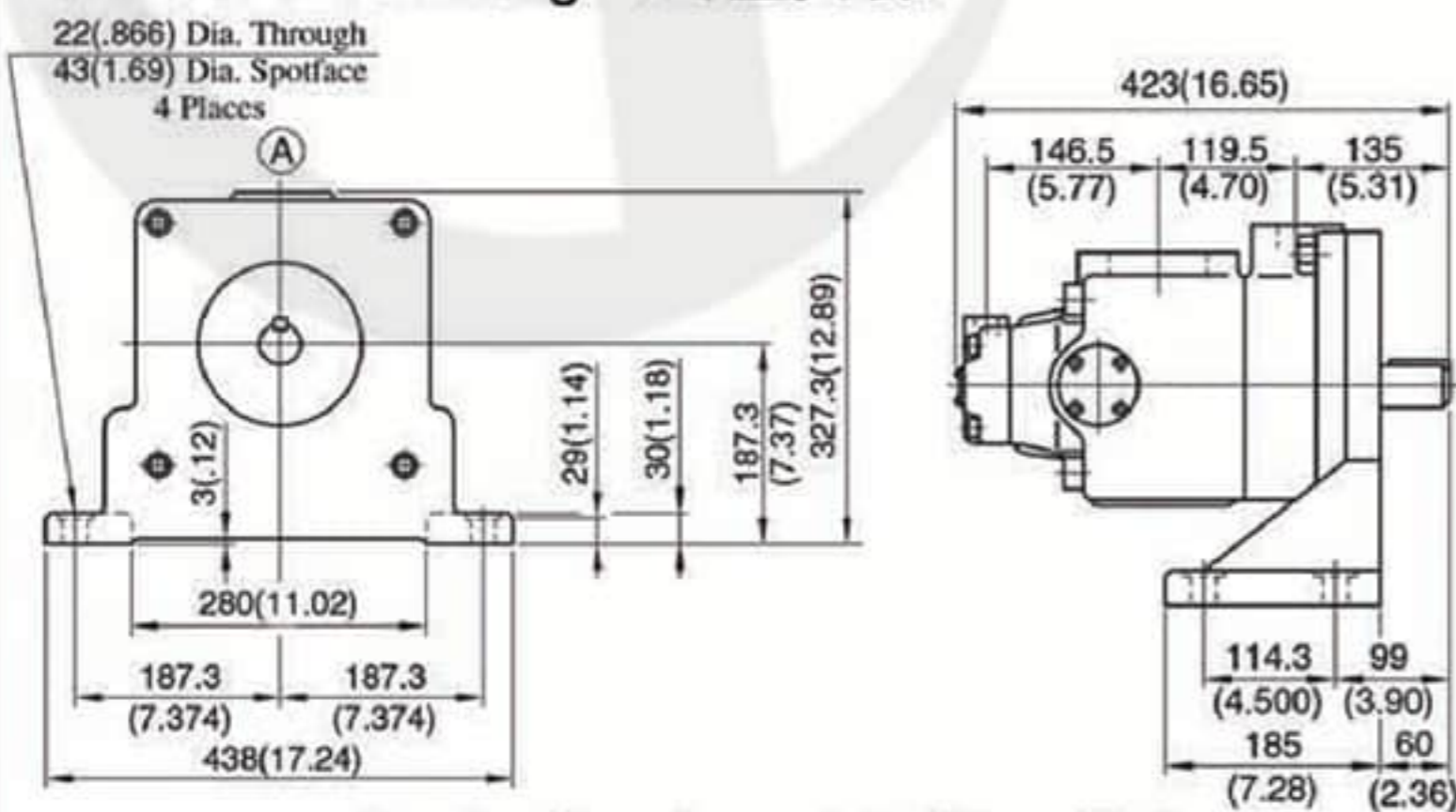


**PV2R14- Flange Mtg. (法兰安装)**

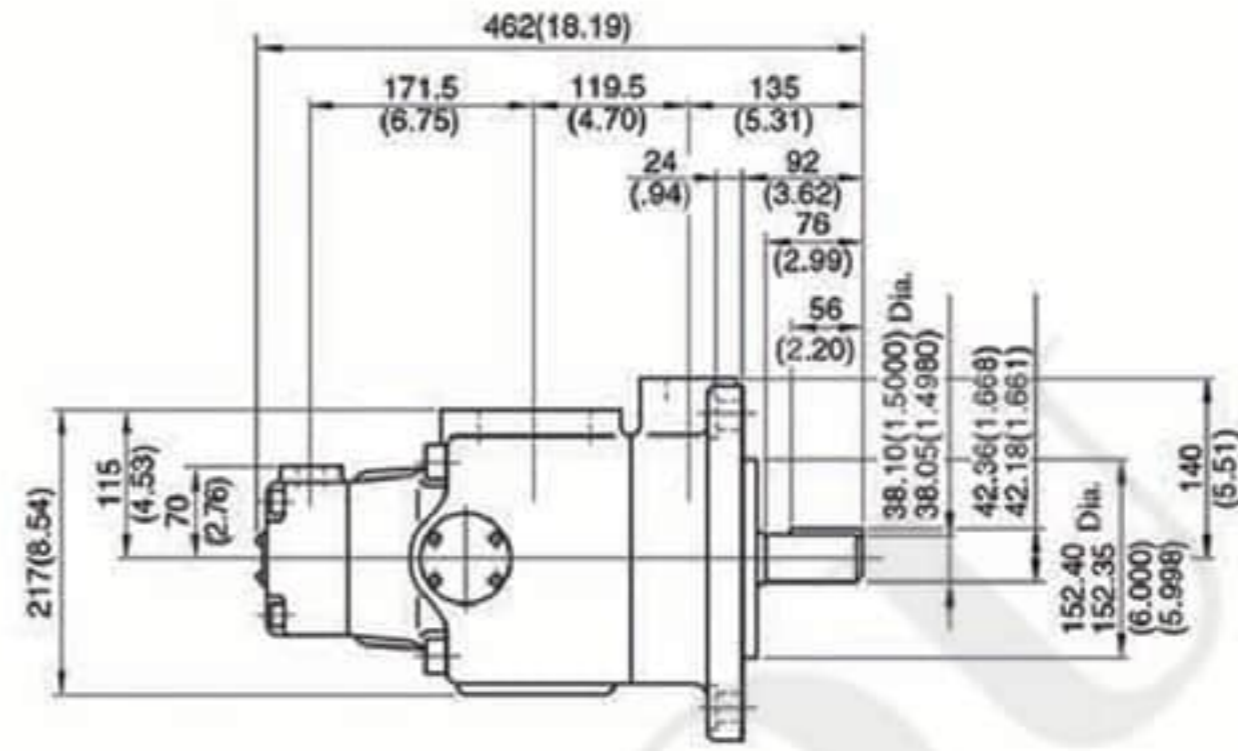
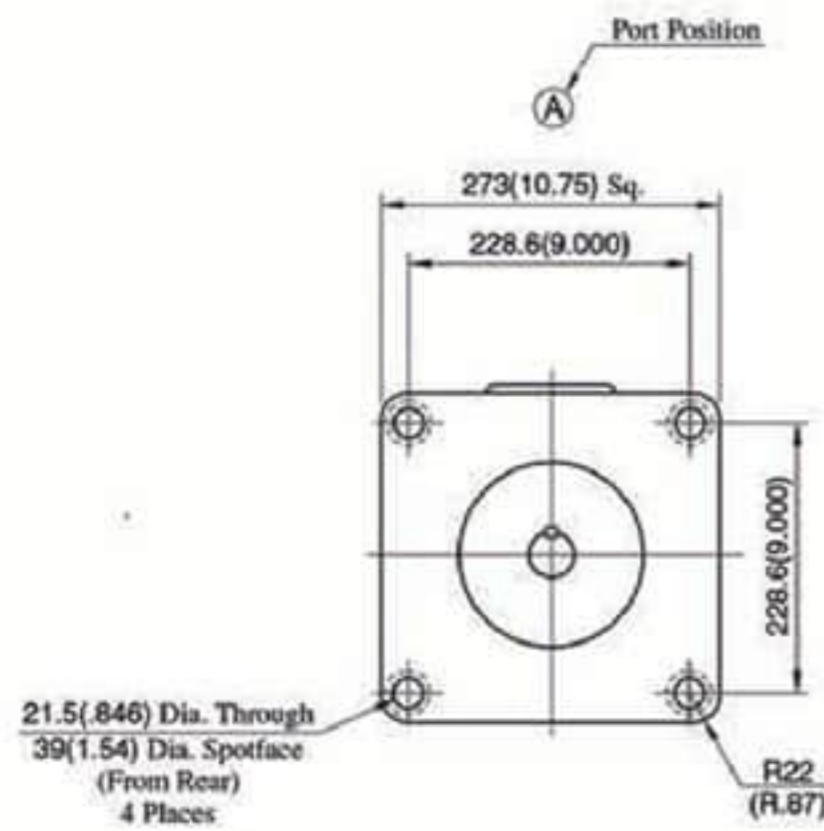
Model Numbers	" C " Thd.	" D " Thd.	" E " Thd.	Dimensions mm(Inches)		
				F	H	J
PV2R14- * - F-RAAA-32	M16	M12	M8	19 (.75)	19 (.75)	14 (.55)
PV2R14- * - F-RAAA-3290	5/8-11 UNC	1/2-13 UNC	5/16-18 UNC	21 (.83)	21 (.83)	16 (.63)



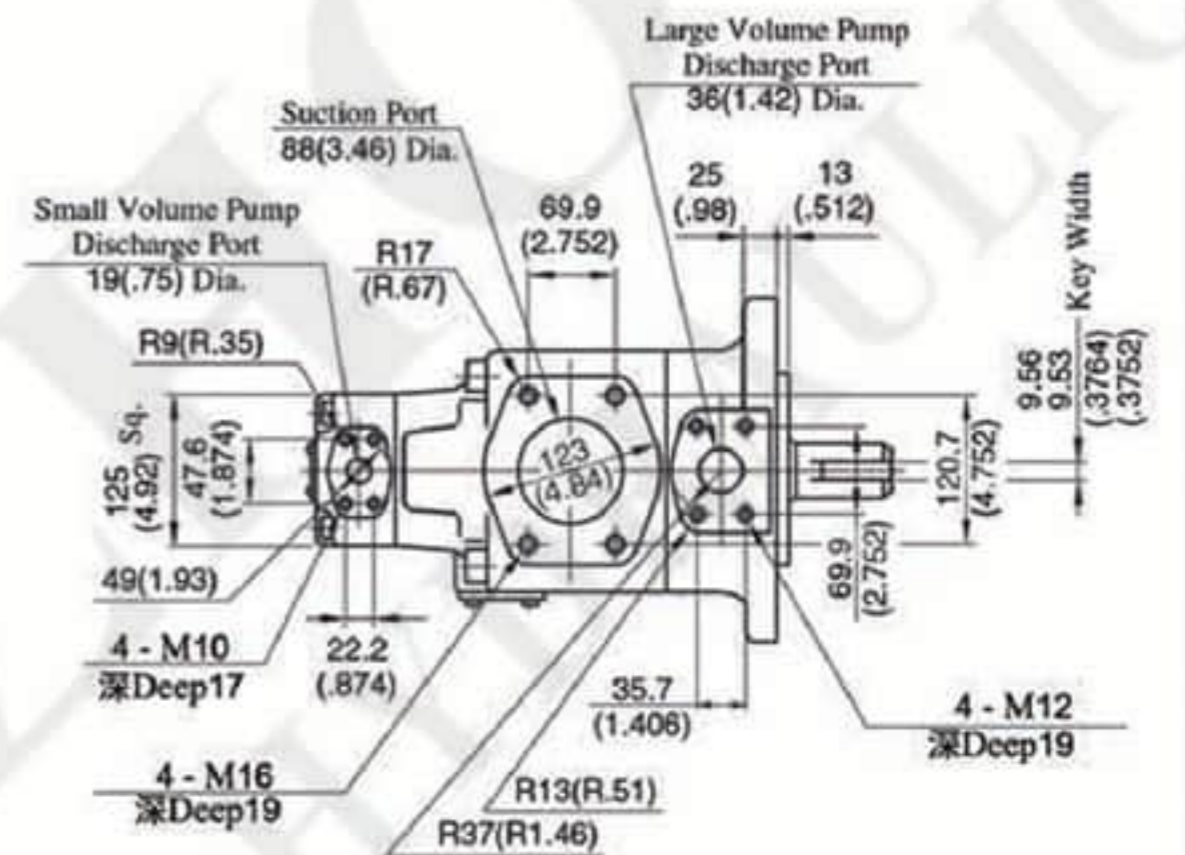
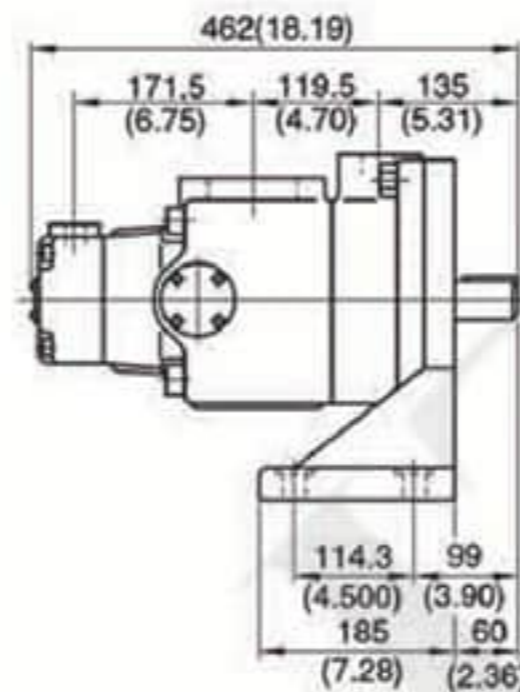
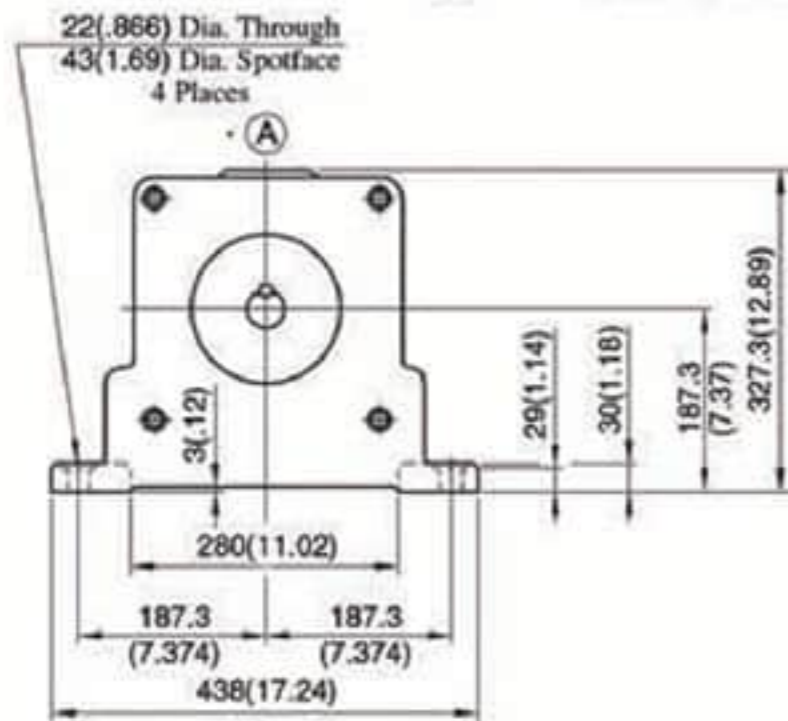
**PV2R14- Foot Mtg. (脚座安装)**



PV2R24- Flange Mtg. (法兰安装)



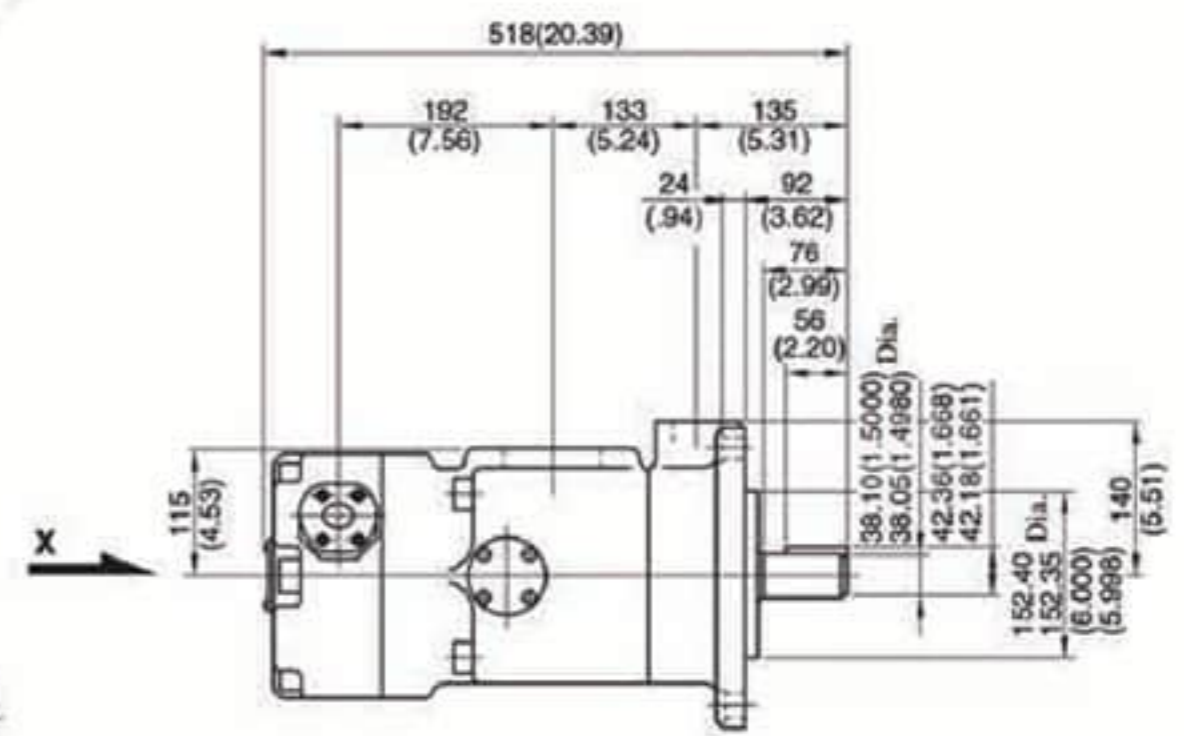
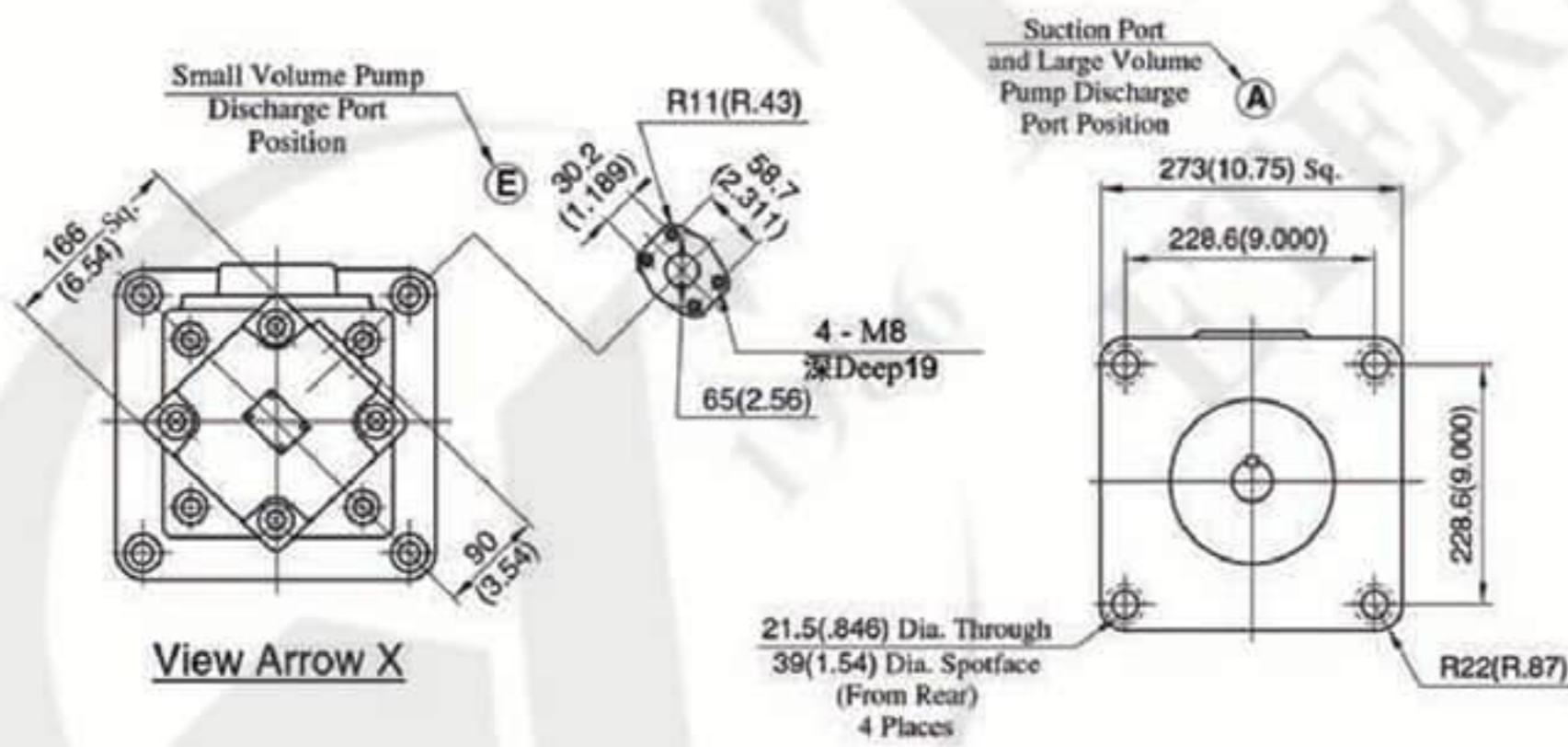
PV2R24- Foot Mtg. (脚座安装)



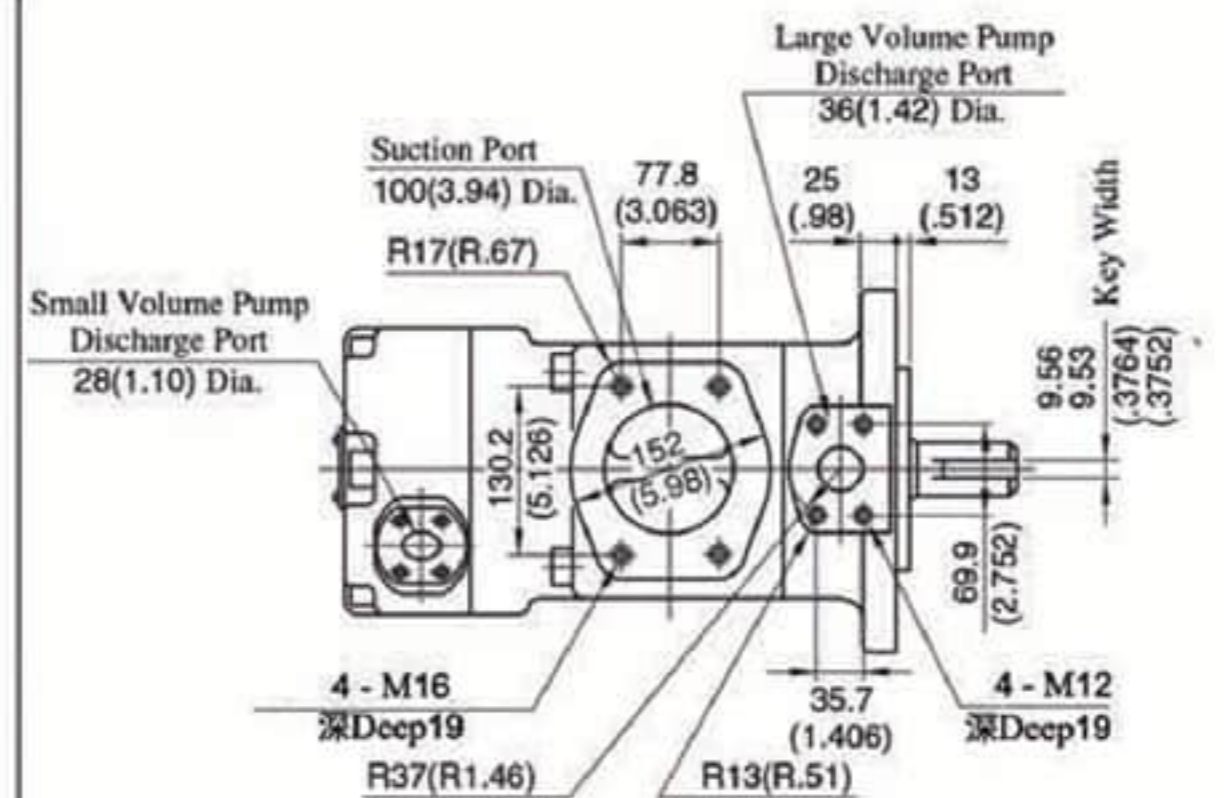
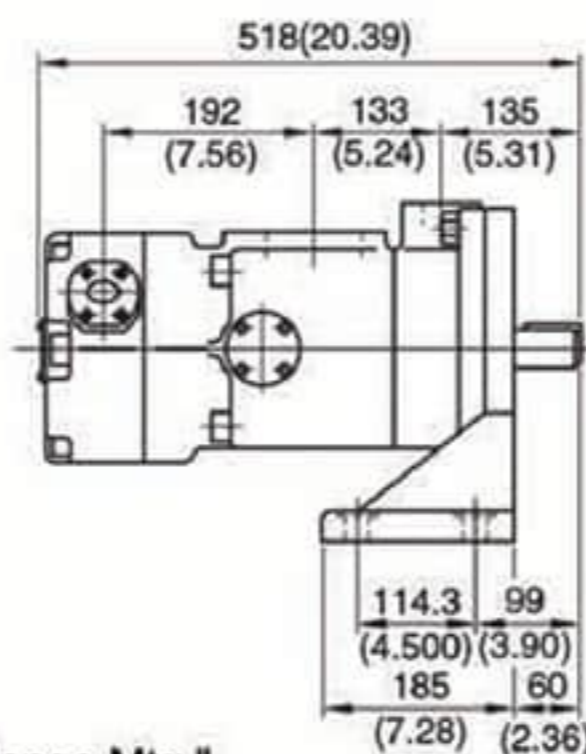
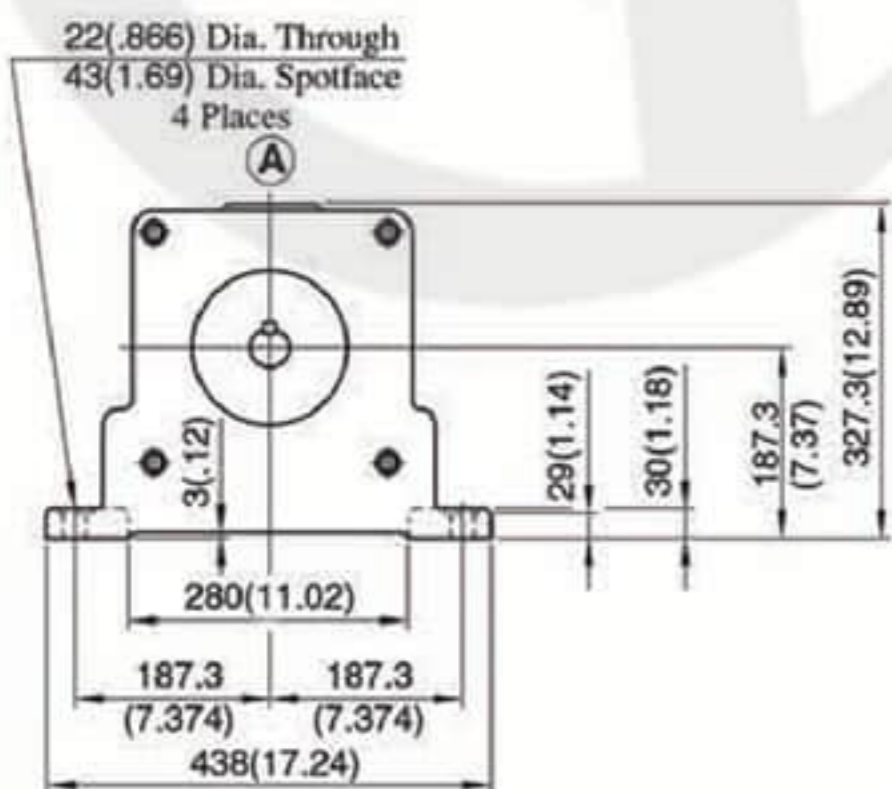
For other dimensions, refer to "Flange Mtg.".

DIMENSIONS IN MILLIMETRES (INCHES)

PV2R34- Flange Mtg. (法兰安装)



PV2R34- Foot Mtg. (脚座安装)



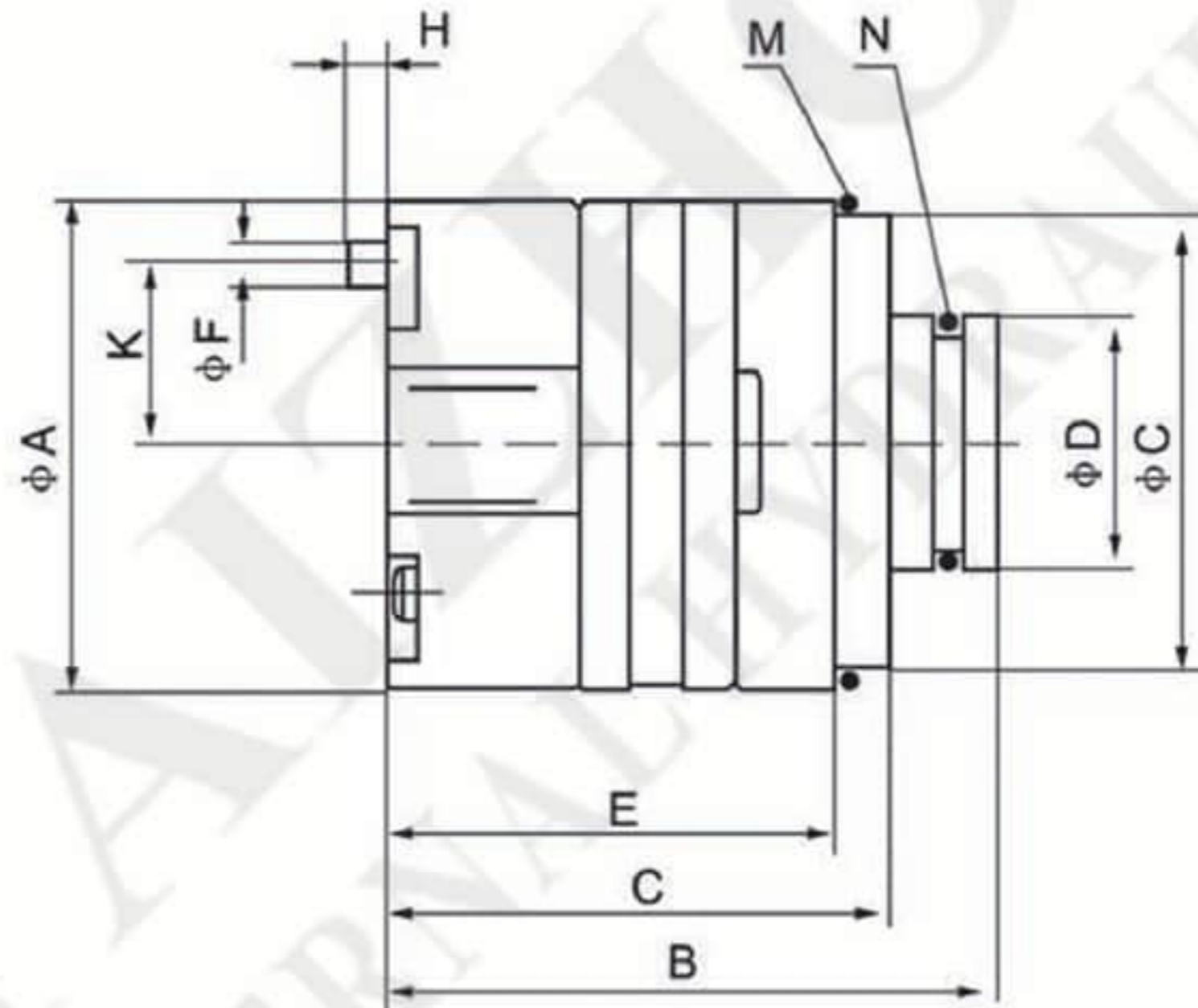
For other dimensions, refer to "Flange Mtg.".

DIMENSIONS IN MILLIMETRES (INCHES)

■ PV2R系列泵芯 PV2R Series Cartridge Kit

PC-	PV2R	-23	-R
泵芯标记 Cartridge kit mark	系列号 Model	公称排量 Displacement code(ml/r)	油泵旋向 Rotation
PC:单泵泵芯 & 双联泵前泵芯 PC: Single pump kit & Double pump Front kit  PCT: 双联泵后泵芯 Double pump Rear kit	PV2R1	6, 8, 10, 12, 14, 17, 19, 23, 25, 28, 31	(从轴端看) (Viewed from the shaft end)  R-顺时针 R-Right rotation  L-逆时针 L-Left rotation
	PV2R2	26, 33, 41, 47, 53, 59, 65, 75	
	PV2R3	52, 60, 66, 76, 85, 94, 116, 125, 136, 153	
	PV2R4	136, 153, 184, 200, 237	

■ 安装连接尺寸 Installation Size

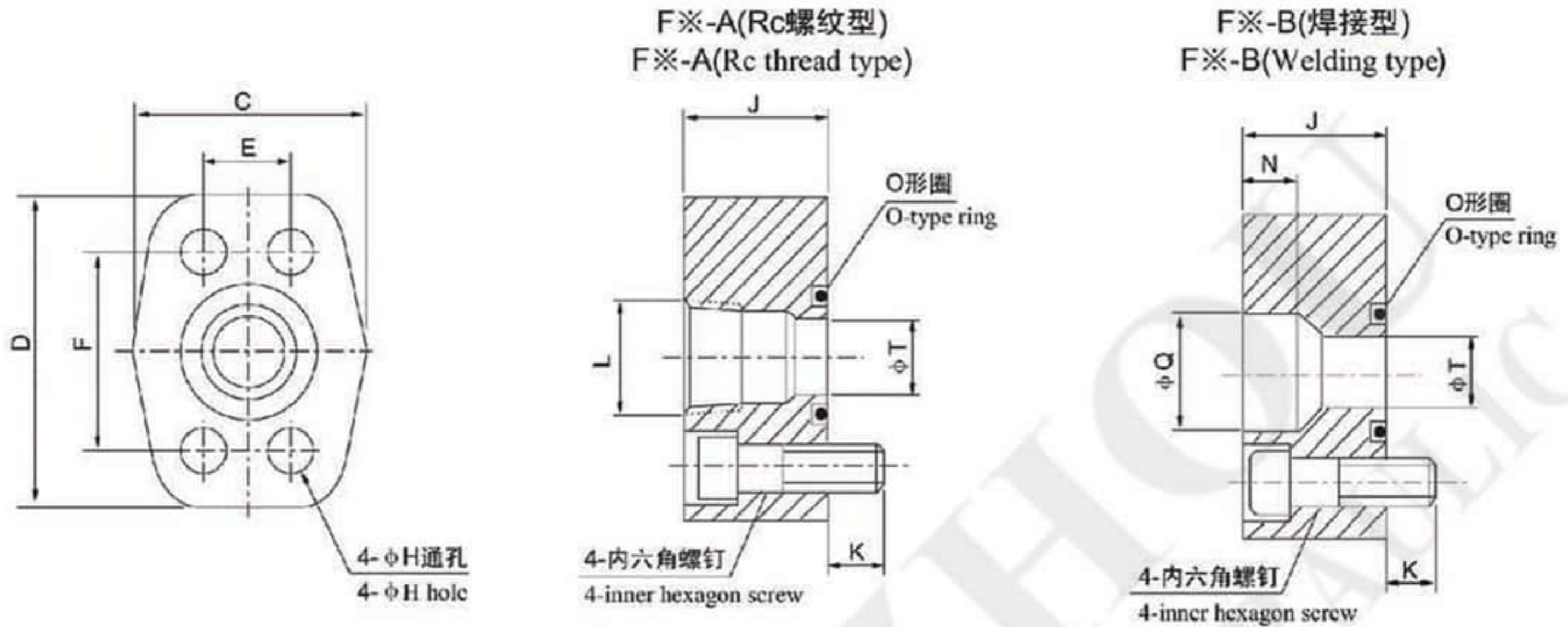


系列号 Models	A	B	C	D	E	F	G	H	K	M	N
PV2R1	68	84	70	35	62	6	62.7	5	R25	59.4X3.1	29.4X3.1
PV2R2	90	109	93	52	82	6	84.7	5	R36	84.4X3.1	45.7X3.5
PV2R3	120.5	127.5	106	72	94	8	115	8	R48	114.4X3.1	65.0X3.5

系列号 Models	转子内花键齿廓参数 Spline teeth No. in rotor					
	模数 Modulus	齿数 No. of teeth	标准压力角 Standard angle	大径 Major diameter	小径 Minor diameter	(节径圆)弧齿槽宽 Space width
PV2R1	0.75	24	45°	19.050	17.550	1.328
PV2R2	1.0	24	45°	25.400	23.400	1.771
PV2R3	1.0	28	45°	29.400	27.400	1.771

■ 法兰连接组件 Flange Part

安装连接尺寸 Installation sizes



法兰型号 Flange models	对应管子规格 Corresponding pipes' specifications	尺寸 mm Sizes mm											O型圈 O-type ring GB34521-82	内六角螺钉 inner hexagon screw	螺钉拧紧力矩 Tightening torque of screw N·m	对应油泵接口 Corresponding pumps connector
		C	D	E	F	H	J	K	L	N	Q	T				
F04-A	1/2"	43	59.0	17.5	38.1	9.0	28.0	11	1/2"	—	—	13	21.2x2.65	M8x30	35	PV 2R1出口 PV 2R12、PV 2R13 盖端泵出口 PV2R1 port PV. 2R12. PV2R13 cover end pump port
F04-B									—	11	22.5					
F06-A	3/4"	53.2	71.6	22.2	47.6	11.2	30.0	11	3/4"	—	—	19	30x3.55	M10x30	68.5	PV 2R2、PV 2R12 轴端泵出口 PV 2R23盖端泵出口 PV2R2. PV2R12 shaft end pump port PV2R23 cover end pump port
F06-B									—	12	28.5					
F08-A	1"	58.0	76.4	26.2	52.4	11.2	30.0	16	1"	—	—	26	34.5x3.55	M10x35	68.5	PV 2R1吸入口 PV2R1 inlet
F08-B									—	14	34.5					
F10-A	1-1/4"	57.7	84.7	30.2	58.7	12.0	40.0	16	1-1/4"	—	—	32	40x3.55	M10x45	68.5	PV 2R2吸入口 PV 2R3出口、PV 2R13 PV 2R23轴端泵出口 PV2R2 inlet PV2R3 port, PV2R13, PV2R23 shaft end pump port
F10-B									—	16	43.0					
F12-A	1-1/2"	70.0	96.0	35.7	69.9	13.8	40.0	18	1-1/2"	—	—	38	50x3.55	—	118	—
F12-B									—	18	49.1					
F16-A	2"	87.0	105.0	42.9	77.8	13.8	40.0	18	2"	—	—	51	65x3.55	M12x45	118	PV 2R3、PV 2R12 吸入口 PV2R3. PV2R12 inlet
F16-B									—	20	61.0					
F20-A	2-1/2"	96.0	116.0	50.8	88.9	13.8	45.0	18	2-1/2"	—	—	63	75x3.55	—	118	—
F20-B									—	22	77.1					
F24-A	3"	121.0	141.4	61.9	106.4	17.0	45.0	17	3"	—	—	76	85x3.55	M16x45	287	PV 2R13、PV 2R23 吸入口 PV2R13. PV2R23 inlet
F24-B									—	25	90.0					
F28-A	3-1/2"	136.0	155.0	69.9	120.7	17.0	50.0	17	3-1/2"	—	—	89	100x3.5	M16x40 M16x50	287	—
F28-B									—	28	102.8					
F32-A	4"	145.0	162.0	77.8	130.2	17.0	50.0	17	4"	—	—	102	115x3.5	M16x40 M16x50	287	—
F32-B									—	28	115.5					

# T6系列叶片泵 T6 Series Vane Pump



## ■ T6系列单泵 T6 Series Single Pump

T6C	-17	-1	R	00	-A	1
系列号 Code of series	排量代号 Displacement code	轴伸形式 Shaft type	旋转方向 Direction of rotation	出油口位置 Outlet port position	设计号 Design No.	密封等级 Sealing level
T6C	03, 05, 06, 08, 10, 12, 14, 17, 20, 22, 25, 28, 31	见轴伸尺寸 See of Shaft	(从泵的轴端看) (Viewed from the shaft end of pump)		A	1-S1, 丁腈橡胶 NBR Nitrile rubber  5-S5, 氟橡胶 Fluoro rubber
T6D	14, 17, 20, 24, 28, 31, 35, 38, 42, 45, 50, 61		R-顺时针旋转 R-Clockwise rotation L-逆时针旋转 L-Counterclockwise rotation	00-进油口对面 00-Opposite inlet port 01-进油口同侧 01-Inline with inlet 02-从进油口逆时针90° 02-90° CCW from inlet 03-从进油口顺时针90° 03-90° CW from inlet		
T6E	42, 45, 50, 52, 57, 62, 66, 72, 85					

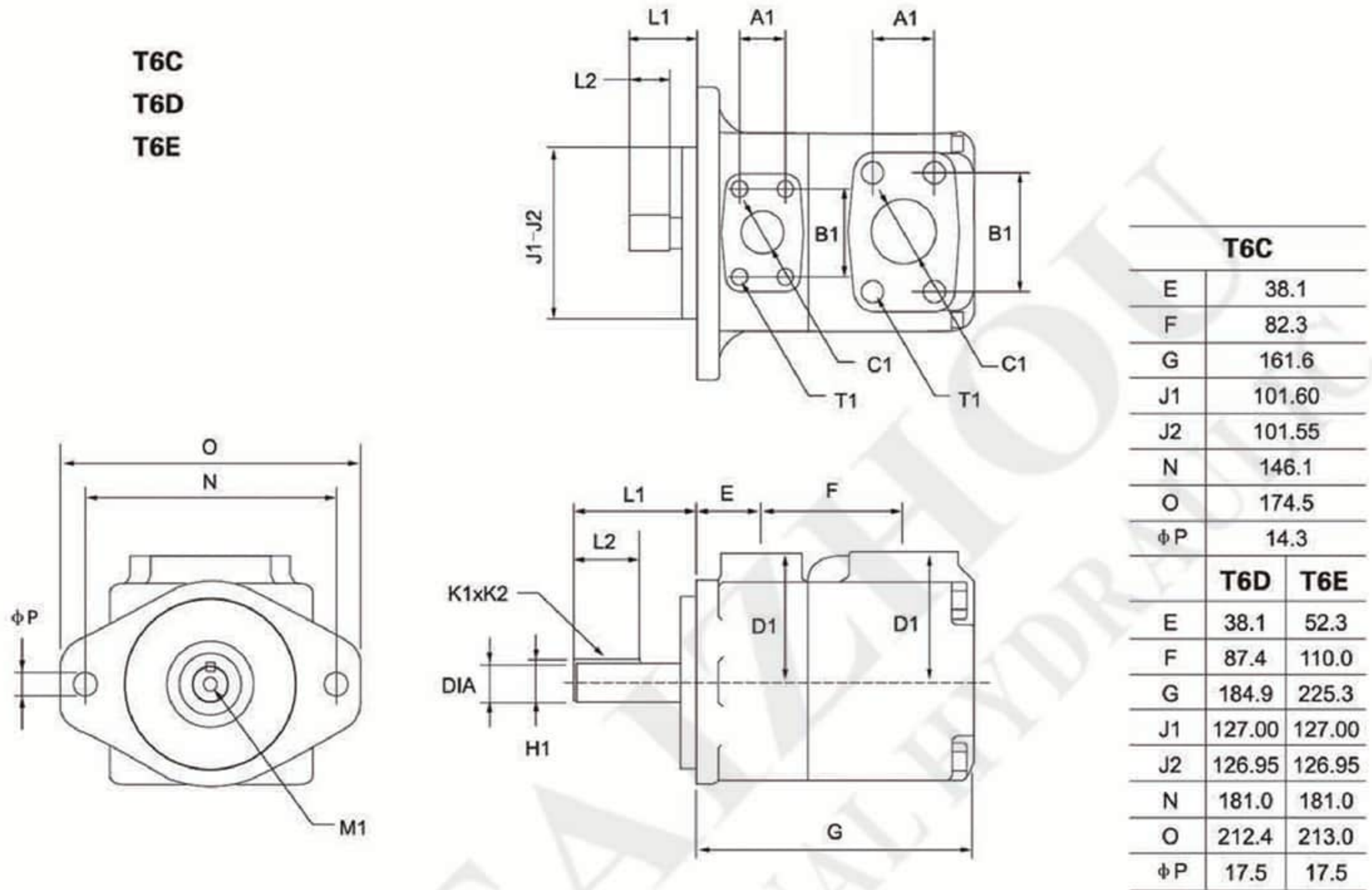
## ■ T6系列双泵 T6 Series Double Pump

T6CC	-25	-17	-1	R	02	-C	1	10
系列号 Code of series	前泵排量代号 Displacement of front pump	后泵排量代号 Displacement of rear pump	轴伸形式 Shaft type	旋转方向 Rotation	油口位置 Port positions	设计号 Design number	密封等级 Sealing level	油口尺寸 Port dimensions
T6CC	03, 05, 06, 08, 10, 12, 14, 17, 20, 22, 25, 28, 31	03, 05, 06, 08, 10, 12, 14, 17, 20, 22, 25, 28, 31	见轴伸尺寸 See of shaft	(从泵的轴端看) (viewed from shaft end of pump) R-顺时针旋转 R-Clockwise rotation L-逆时针旋转 L-Counter clockwise rotation	见下图 See pictures below	C	1-S1, 丁腈橡胶 NBR Nitrile rubber  5-S5, 氟橡胶 Fluoro rubber	00, 01, 10, 11 见安装尺寸 See installation dimension
T6DC	14, 17, 20, 24, 28, 31, 35, 38, 42, 45, 50, 61	03, 05, 06, 08, 10, 12, 14, 17, 20, 22, 25, 28, 31						无此选项 No options
T6EC	42, 45, 50, 52, 57, 62, 66, 72, 85	03, 05, 06, 08, 10, 12, 14, 17, 20, 22, 25, 28, 31						
T6ED	42, 45, 50, 52, 57, 62, 66, 72, 85	14, 17, 20, 24, 28, 31, 35, 38, 42, 45, 50, 61						

## ■ T6系列三联泵 T6 Series Triple Pump

T6DCC	-42	-17	-10	-1	-R	02	-A	1	01
系列号 Code of series	前泵排量代号 Displacement of front pump	中间泵排量代号 Displacement of middle pump	后泵排量代号 Displacement of rear pump	轴伸形式 Shaft type	旋转方向 Rotation	油口位置 Port positions	设计号 Design NO.	密封等级 Sealing level	油口尺寸 Port dimensions
T6CCC	14, 17, 20, 24, 28, 31, 35, 38, 42, 45, 50, 61	03, 05, 06, 08, 10, 12, 14, 17, 20, 22, 25, 28, 31	03, 05, 06, 08, 10, 12, 14, 17, 20, 22, 25, 28, 31	见轴伸尺寸 See of shaft	(从泵的轴端看) (Viewed from shaft end of pump) R-顺时针旋转 R-Clockwise Rotation L-逆时针旋转 L-Counter clockwise rotation	见下图 See pictures below	A	1-S1, 丁腈橡胶 NBR Nitrile rubber  5-S5, 氟橡胶 Fluoro rubber	00, 01 见安装连接尺寸 See installation dimensions
T6DCCS	14, 17, 20, 24, 28, 31, 35, 38, 42, 45, 50, 61	14, 17, 20, 24, 28, 31, 35, 38, 42, 45, 50, 61	03, 05, 06, 08, 10, 12, 14, 17, 20, 22, 25, 28, 31						See installation dimensions
T6EDC T6EDCS	42, 45, 50, 52, 57, 62, 66, 72, 85	14, 17, 20, 24, 28, 31, 35, 38, 42, 45, 50, 61	03, 05, 06, 08, 10, 12, 14, 17, 20, 22, 25, 28, 31						

■ 安装连接尺寸 Installation Size



型号 Model	轴伸代号 Shaft code	最大扭矩 Max torque (N. m)	L1	L2	DIA	K1xK2	H1	M1
T6C	1	275	71.4	38.1	22.225/22.200	6.35x6.30	24.95	M8x16
	2	238	58.2	31.7	22.225/22.200	4.76x4.71	24.53	-
	3	343	40.7	24.5	SAE J498b 1级, 径节 16/32, 13牙		-	-
	4	●	45.5	24.5	SAE J498b 1级, 径节 16/32, 15牙		-	-
T6D	1	●	83.6	49.3	31.750-31.700	7.94x7.89	35.27	M10x20
	2	577	73.2	38.1	31.750-31.700	7.94x7.89	35.27	-
	3	●	55.2	38.0	SAE J498b 1级, 径节 12/24, 14牙		-	-
	4	●	77.7	48.0	SAE J498b 1级, 径节 12/24, 14牙		-	-
T6E	1	●	90.9	50.8	38.100-38.050	9.52x9.47	42.36	M10x20
	2	577	61.9	38.1	31.750-31.700	7.94x7.89	35.27	-
	3	●	55.2	38.0	SAE J498b 1级, 径节 12/24, 14牙		-	-
	4	●	62.2	31.5	SAE J498b 1级, 径节 12/24, 17牙		-	-

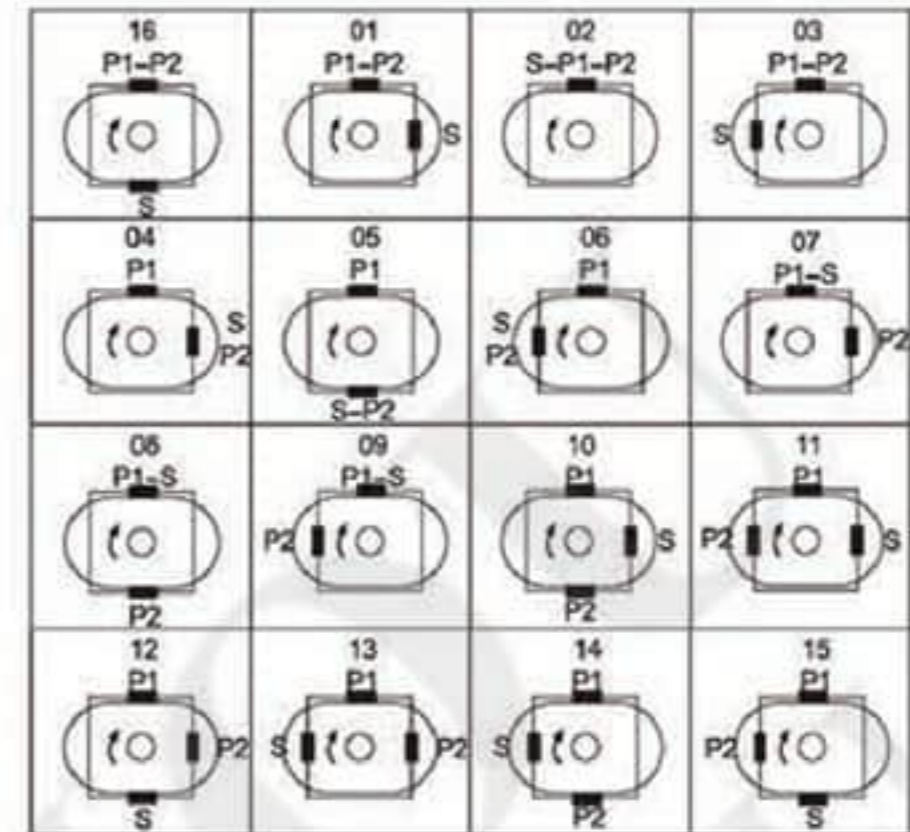
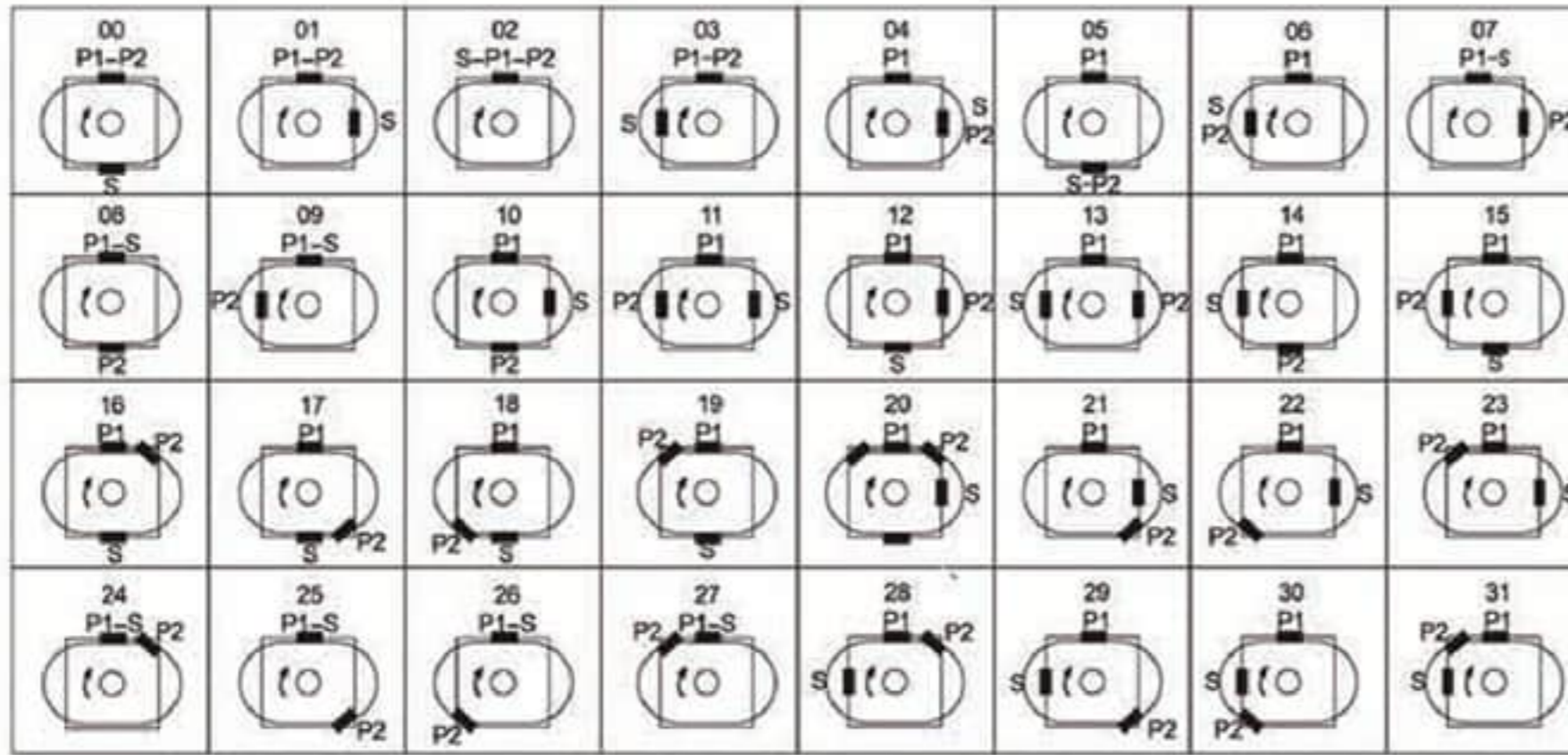
●能在最大流量, 最高压力下工作。 ●work at maximum flow and pressure.

油口/oil port	法兰 Flange	安装尺寸/Install Dimensions (mm)					
		A1	B1	φC1	D1	T1口螺纹 Thread	
T6C	P 1"	F08	26.2	52.4	25.4	76.2	3/8"-16UNCx19.0
	S 1-1/2"	F12	35.8	70.0	38.1	76.2	1/2"-13UNCx22.4
T6D	P 1-1/4"	F10	30.2	58.7	31.8	82.6	7/16"-14UNCx22.3
	S 2"	F16	42.9	77.8	50.8	82.6	1/2"-13UNCx23.9
T6E	P 1-1/2"	F12	35.7	69.8	37.1	98.6	1/2"-13UNCx23.4
	S 3"	F24	61.9	103.4	75.0	98.6	5/8"-11UNCx24.0

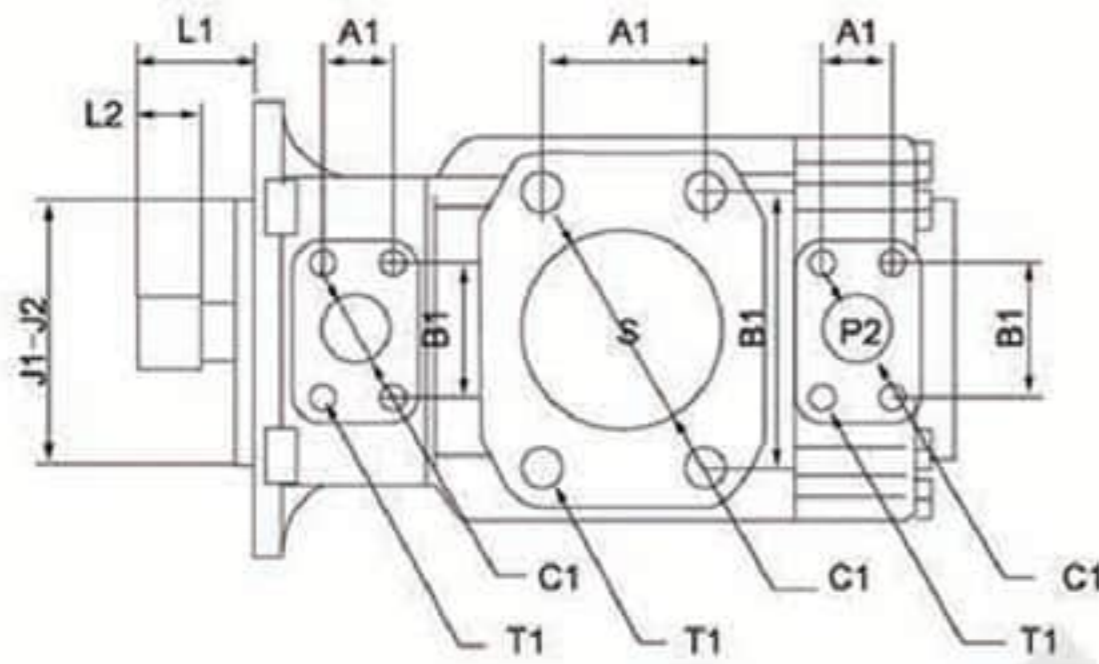
■ 油口位置(从泵的轴端看) Port Position (View from Shaft End of Pump)

T6CC T6DC T6EC

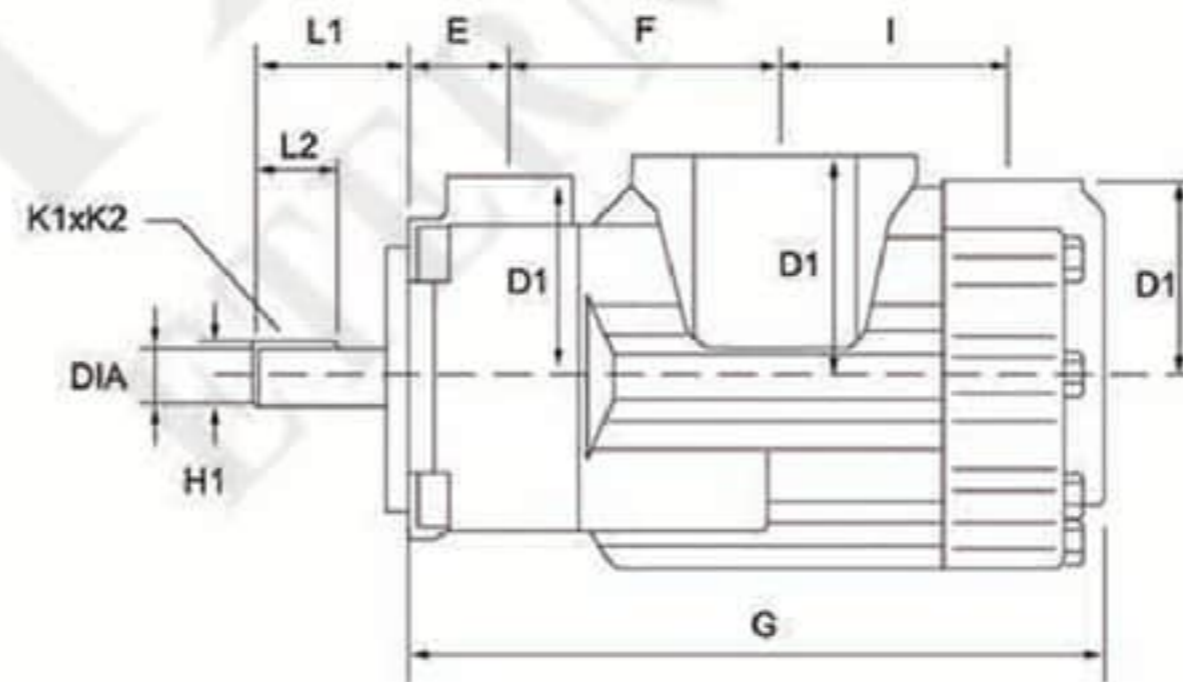
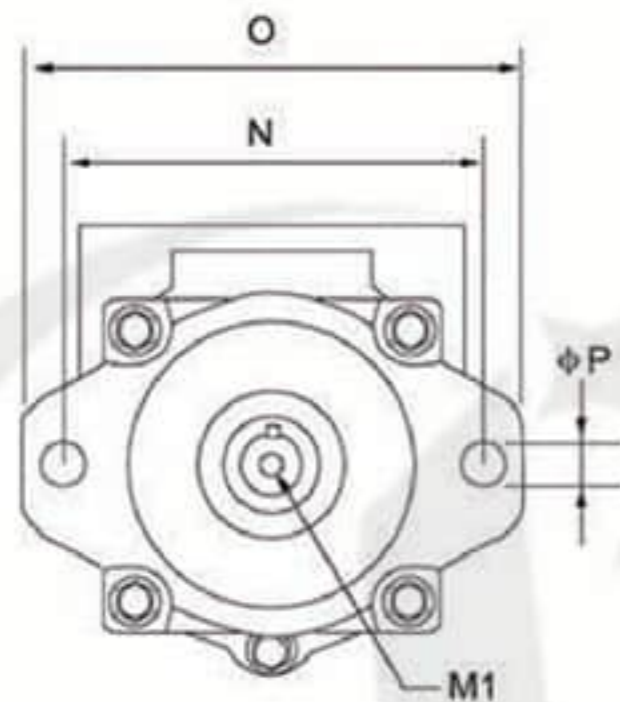
T6ED



■ 安装连接尺寸 Installation Dimension



	T6CC	T6DC	T6EC	T6ED
E	38.1	38.1	52.3	52.3
F	101.6	114.3	118.5	133.5
G	265.6	286.0	331.6	361.0
1	88.2	109.5	136.7	148.0
J1	101.60	127.00	127.00	127.00
J2	101.55	126.95	126.95	126.95
N	148.0	181.0	161.0	181.0
O	174.5	215.4	213.0	213.0
ΦP	14.3	17.5	17.5	17.5

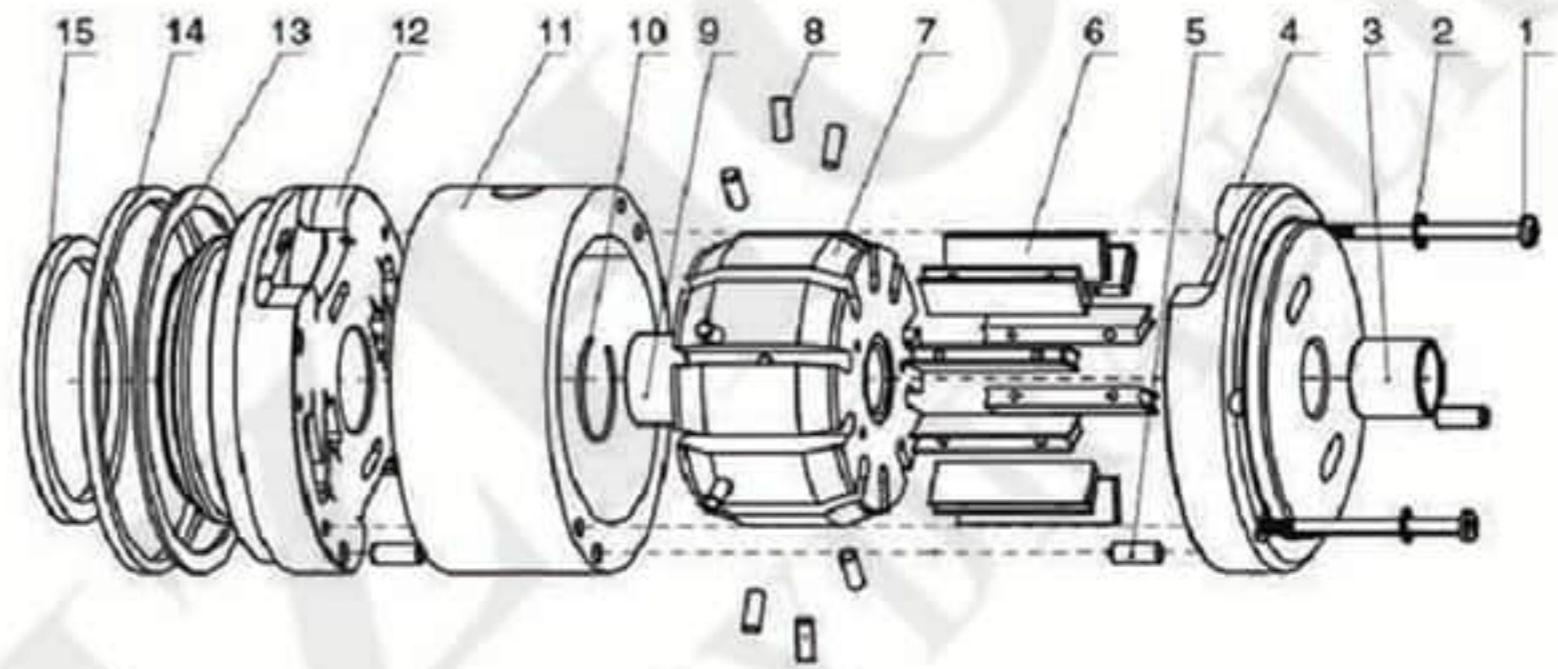
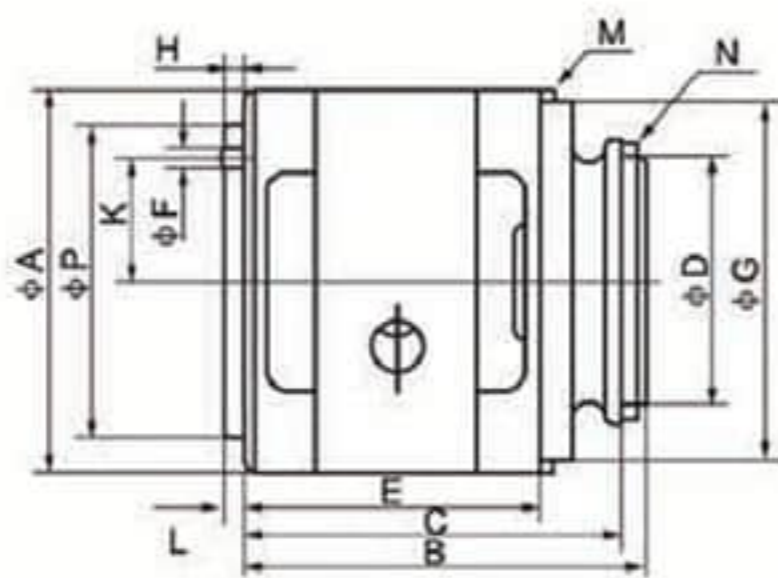


油口/oil port	法兰 Flange	尺寸/Dimensions (mm)						
		A1	B1	φC1	D1	T1 口螺纹 Thread UNC		
T6CC	P1	1"	F08	26.2	52.4	25.4	76.2	3/8"-16UNCx19.0
	P2	01-11:3/4"	F06	22.2	47.7	19.0	76.2	3/8"-16UNCx19.0
		00-10:1"	F08	26.2	52.4	25.4	74.7	
	S	10-11:2-1/2"	F20	50.8	88.9	63.5	84.1	1/2"-13UNCx23.9
T6DC	P1	00-01:3"	F24	61.9	106.4	76.2		5/8"-11UNCx28.4
		1-1/4"	F10	30.2	58.7	31.8	82.6	7/16"-14UNCx22.3
	P2	1"	F08	26.2	52.4	25.0	74.7	3/8"-16UNCx19.0
T6EC	S	3"	F24	62.0	106.4	76.0	88.9	5/8"-11UNCx28.4
	P1	1-1/2"	F12	35.7	69.8	37.1	98.4	1/2"-13UNCx23.4
	P2	1"	F08	26.2	52.4	25.0	74.7	3/8"-16UNCx19.0
T6ED	S	3-1/2"	F28	69.9	120.6	88.9	102.4	5/8"-11UNCx28.4
	P1	1-1/2"	F12	35.7	69.8	37.1	98.4	1/2"-13UNCx23.4
	P2	1-1/4"	F10	30.2	58.7	29.5	101.6	7/16"-14UNCx24.0
S	4"	F32	77.8	130.2	101.6	102.4	5/8"-11UNCx30.0	

## ■ T6 系列泵芯 T6 Series Cartridge Kit

PC	-T6DC	-45	R	-1
泵芯标记 Cartridge kit mark	系列号 Models	排量代号 Displacement code	旋转方向 Rotation	密封等级 Sealing level
PC-单泵泵芯 & 双联或三联泵前泵芯 PC-Single pump kit & double or triple pump front kit	T6C, T6CC, T6DC, T6EC, T6DCC, T6DDCS, T6EDC(S),	03, 05, 06, 08, 10, 12, 14, 17, 20, 22, 25, 28, 31	(从泵的轴端看) (Viewed from shaft end of pump) R-顺时针旋转 R-Clockwise rotation L-逆时针旋转 L-Counterclockwise rotation	1-S1, 丁腈橡胶 NBR Nitrile rubber  5-S5, 氟橡胶 Fluoro rubber
PCT2-三联泵中泵芯 PCT2-Triple pump middle kit	T6D, T6DC, T6ED, T6DCC, T6DDCS, T6EDC,	14, 17, 20, 24, 28, 31, 35, 38, 42, 45, 50, 61		
PCT-双联泵或三联泵后泵芯 PCT-Double or triple pump rear kit	T6E, T6EC, T6ED, T6EDC(S),	42, 45, 50, 52, 57, 62, 66, 72, 85		

与相应系列、规格的单泵性能参数一致。详见T6单泵的性能参数。  
The data of relevant series, model are unanimous, please refer to Page T6 single pump specification.



泵芯名称 Cartridge name	滑动轴承内径 Sliding bearing diameter	φA	B	C	φD	E	φF	φG	H	K	M(橡胶平垫圈 Rubber washer)	N(橡胶平垫圈 Rubber washer)	φP	L
单泵芯T6C	φ 15.9	95.25	99.4	93.9	61.9	72.1	4.8	89.1	4.8	43.7	88.5x3.53	60x3.53	77.7	5.5
前泵芯T6CC	无滑动轴承 No sliding bearing													
后泵芯T6CC、T6DCC、T6DDCS、T6EDC(S)	φ 19.05													
后泵芯T6DC、T6EC	φ 22.225	95.25	83.4	77.3	52.6	\	4.8	\	4.8	43.7	89x2.4	52x2.4	77.7	5.5
中泵芯T6DCC	无滑动轴承 No sliding bearing													
单泵芯T6D、前泵芯T6DCC	φ 22.225	123.0	132.4	125.8	71.9	102.2	6.4	108.1	8.0	41.2	107.5x3.53	69.5x3.53	无此台阶 No step	
前泵芯T6DC、T6DDCS	无滑动轴承 No sliding bearing													
后泵芯T6ED、中泵芯T6EDC(S)	φ 28.6													
中泵芯T6DDCS	φ 22.225	143.08	150.3	142.5	88.0	113.0	8.0	137.0	8.0	49.2	136.1x3.53	85.3x3.53		
单泵芯T6E	φ 28.6													
前泵芯T6EC、T6ED、T6EDC(S)	无滑动轴承 No sliding bearing													

泵芯名称 Cartridge name	转子内花键齿廓参数 Inside spline tooth outline parameter of rotor				
	齿数 No. of teeth	径节 Pitch	压力角 Standard angle	大径 Major diameter	小径 Minor diameter
前泵芯T6CC、中泵芯T6DCC	32	40/80	45°	21.41	19.9
单泵芯T6C、后泵芯T6CC、T6DC、T6EC、T6DCC、T6DDCS、T6EDC(S)	28	40/80	45°	18.87	17.4
单泵芯T6D、前泵芯T6DC、T6DCC、T6DDCS、中泵芯T6EDC(S)、后泵芯T6ED	25	24/48	45°	28.19	25.8
中泵芯T6DDCS	20	24/48	45°	22.89	20.5
单泵芯T6E、前泵芯T6EC、T6ED、T6EDC(S)	34	24/48	45°	37.72	35.4



■ VP系列单泵 VP Series Single Pump

VP1	-20	-A3	-S1	-R
系列号 Series No	流量 Flow L/min	调压范围 Pressure Adj. Range (bar)	Shaft 轴径	旋向Rotation (从轴端看-Viewed from Shaft end)
VP1	8,12,15,20	A1: 08~25 A2: 20~45 A3: 40~70	S1: $\Phi$ 12.7(Standard) S2: $\Phi$ 15.875 S3: Spline Shaft	R: 顺时针 (标准) R: Right (Standard)
VP2	25,30,40,45		S1: $\Phi$ 19.05 S3: Spline Shaft	
HVP	30,40	A2: 20~110 A3: 70~140	S1: Straight平键 S3: Spline花键	

■ 性能参数 Specifications

型号 Model	最高压力(bar) Max Pressure	排量(ml/r) Displacement	转速 Speed (r/min)		油口尺寸 Port Size (PT)			重量 Weight (Kg) 法兰型 Flange	
			最低 Min	最高 Max	出油口 Outlet	进油口 Inlet	泄油口 DR		
VP1-08	70	4.4	800	1800	3/8"	1/2"	1/4"	5	
VP1-12		6.7							
VP1-15		8.3							
VP1-20		11.1			1/2"	3/4"	1/4"		9.5
VP2-25		13.9							
VP2-30		16.7							
VP2-40		22.2							
VP2-45	25	1/2"	3/4"	3/8"	10				
HVP-30	16.7								
HVP-40	22.2	140							

■ VUP法兰式叶片泵 VUP Flange Type Vane Pump

VUP	-08	-A3	-02
系列号码 Series number	排量 Displacement(ml/r)	调压范围 Pressure adj.range(bar)	轴设计代号 Shaft design number
法兰式变量叶片泵 Flange Type variable vane pump	08,12,16,23	A1: 08~20 A2: 15~35 A3: 30~55 A4: 50~70	02:平键 02: Straight shaft 03:花键 03: Spline shaft



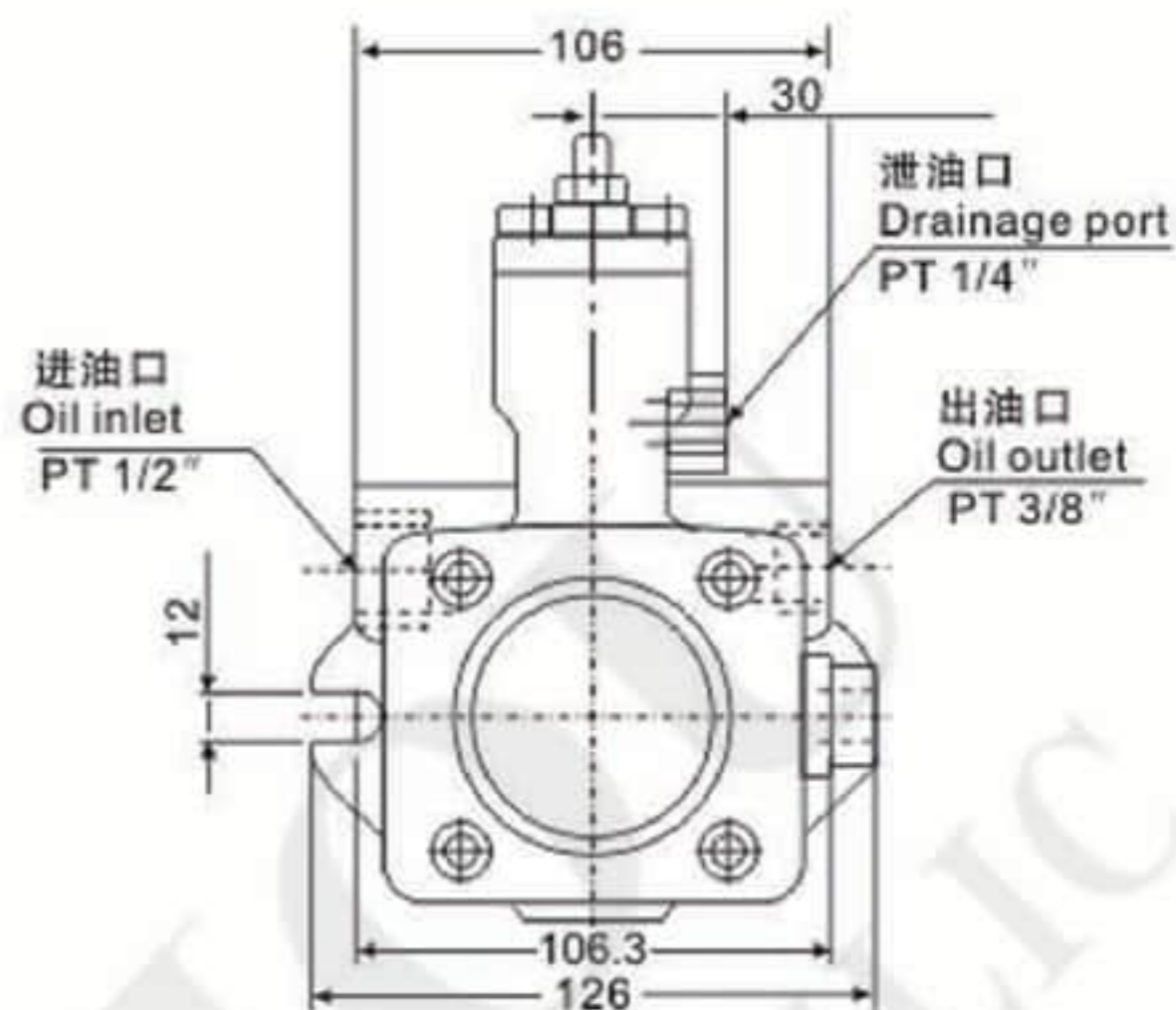
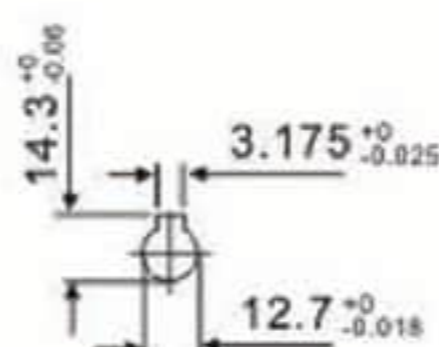
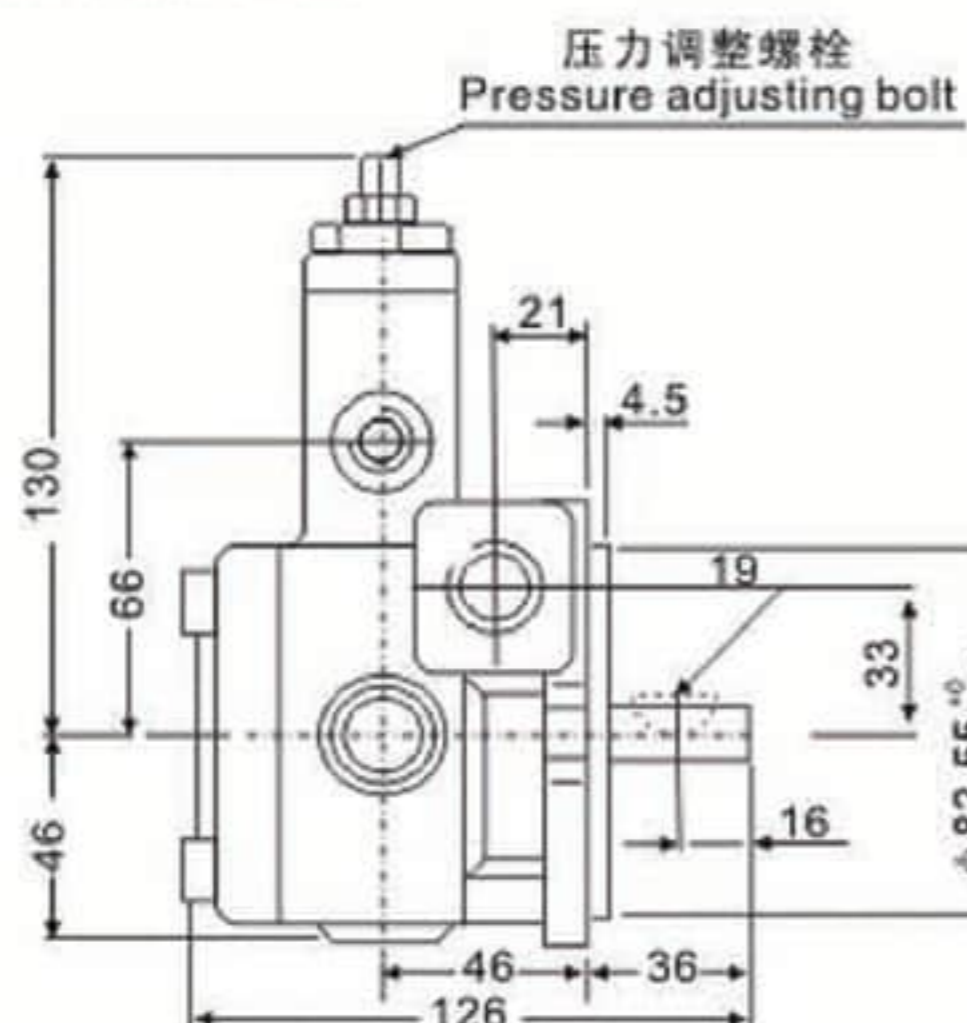
■ 性能参数 Specifications

型号 Model	几何排量 Geometric displ. (ml/rev)	最大压力 Max.pressure (bar)	调压范围 Pressure adj.range (bar)	转速 Speed of rotation (rpm)	
				最大 Max.	最小 Min.
VUP-08-A*-**	8	70	A1:8-20(8) A2:15-35(15) A3: 30-55(30) A4: 50-70(50)	1800	800
VUP-12-A*-**	12				
VUP-16-A*-**	16				
VUP-23-A*-**	23				

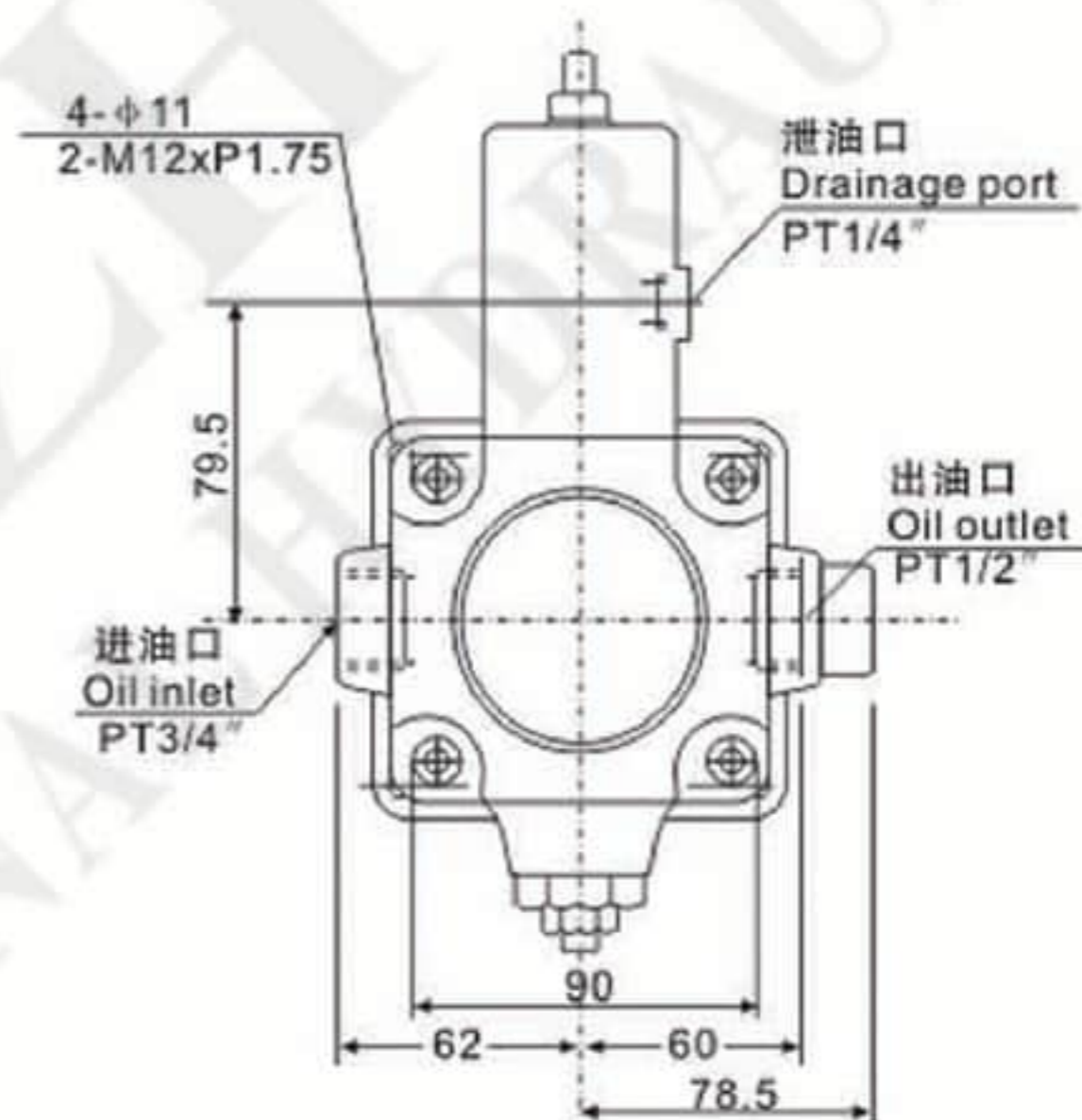
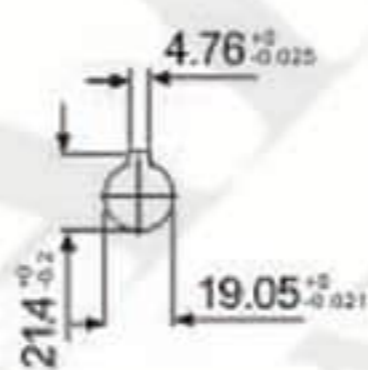
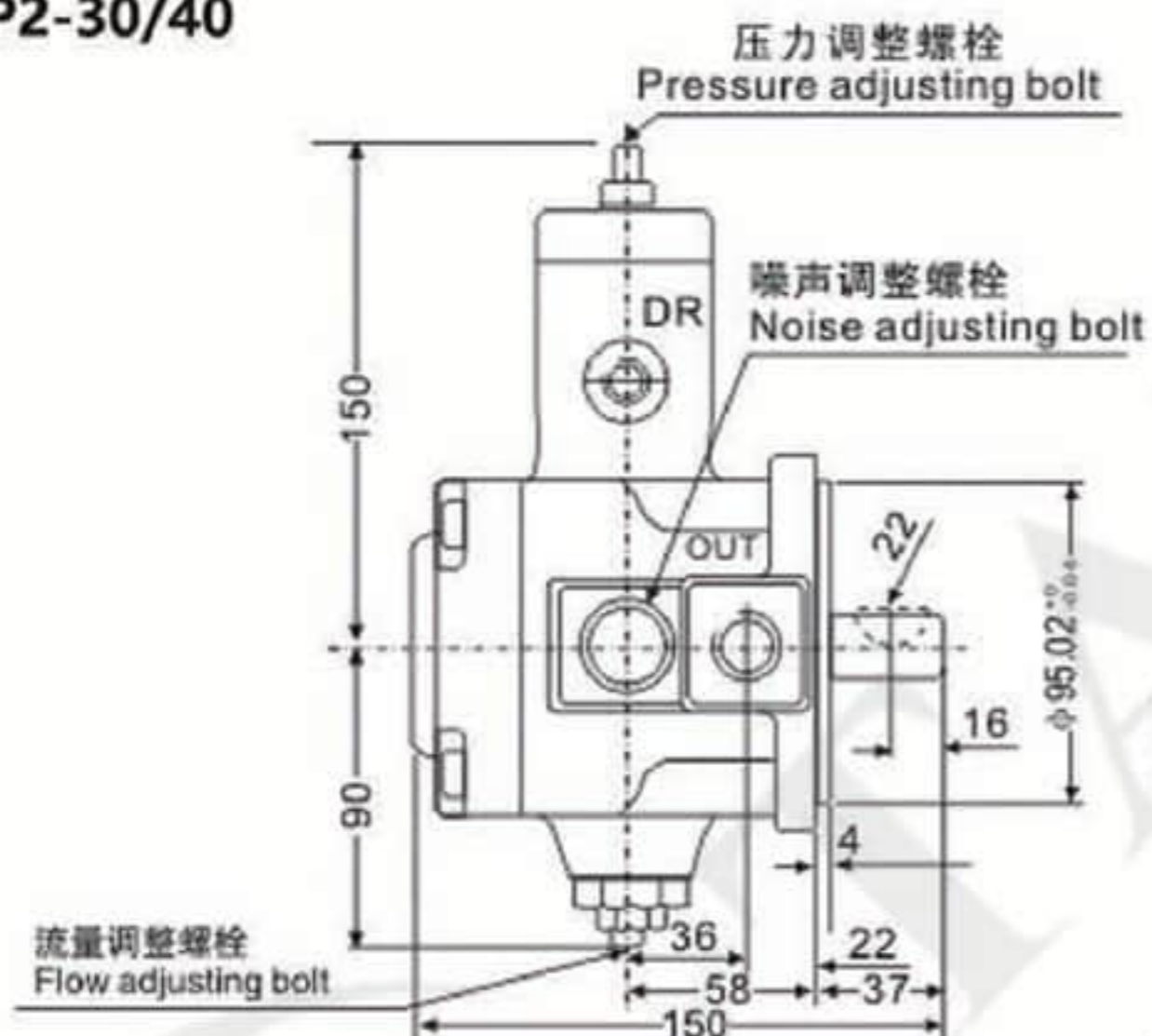
备注: 括号内的压力值为出厂时设定的压力值。  
Note: The value in the brackets are the preset value in the factory.

■ VP尺寸图 VP Dimension

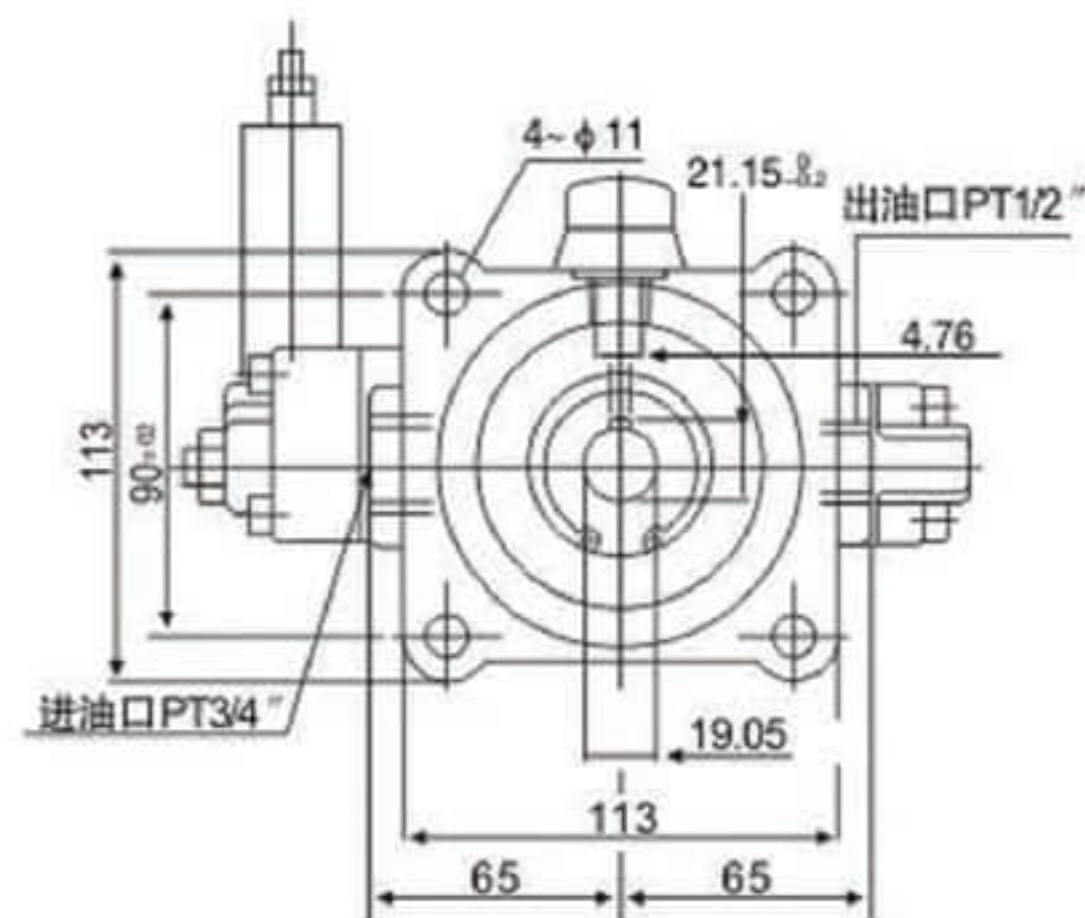
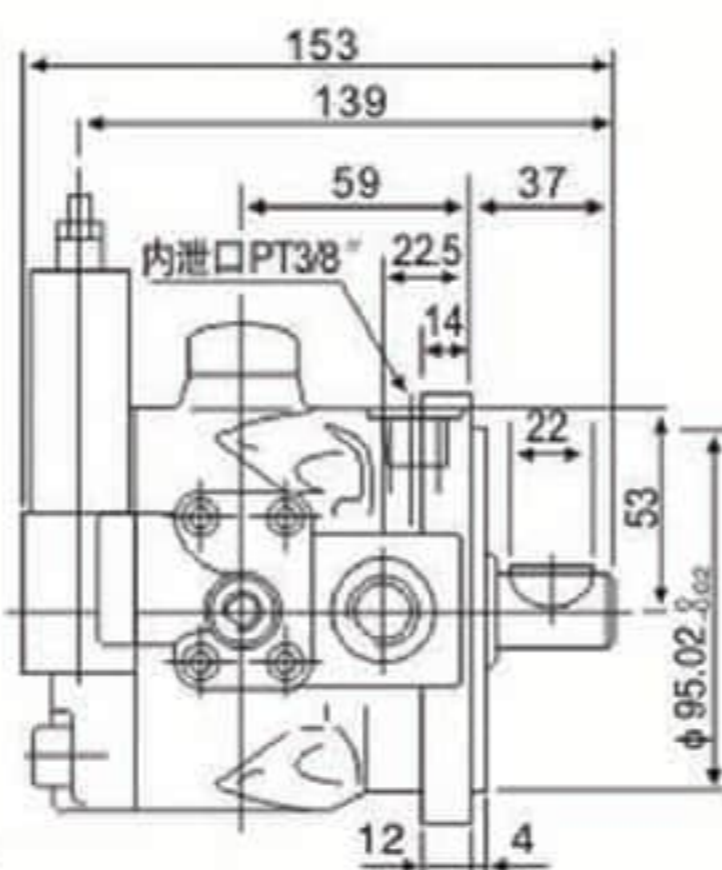
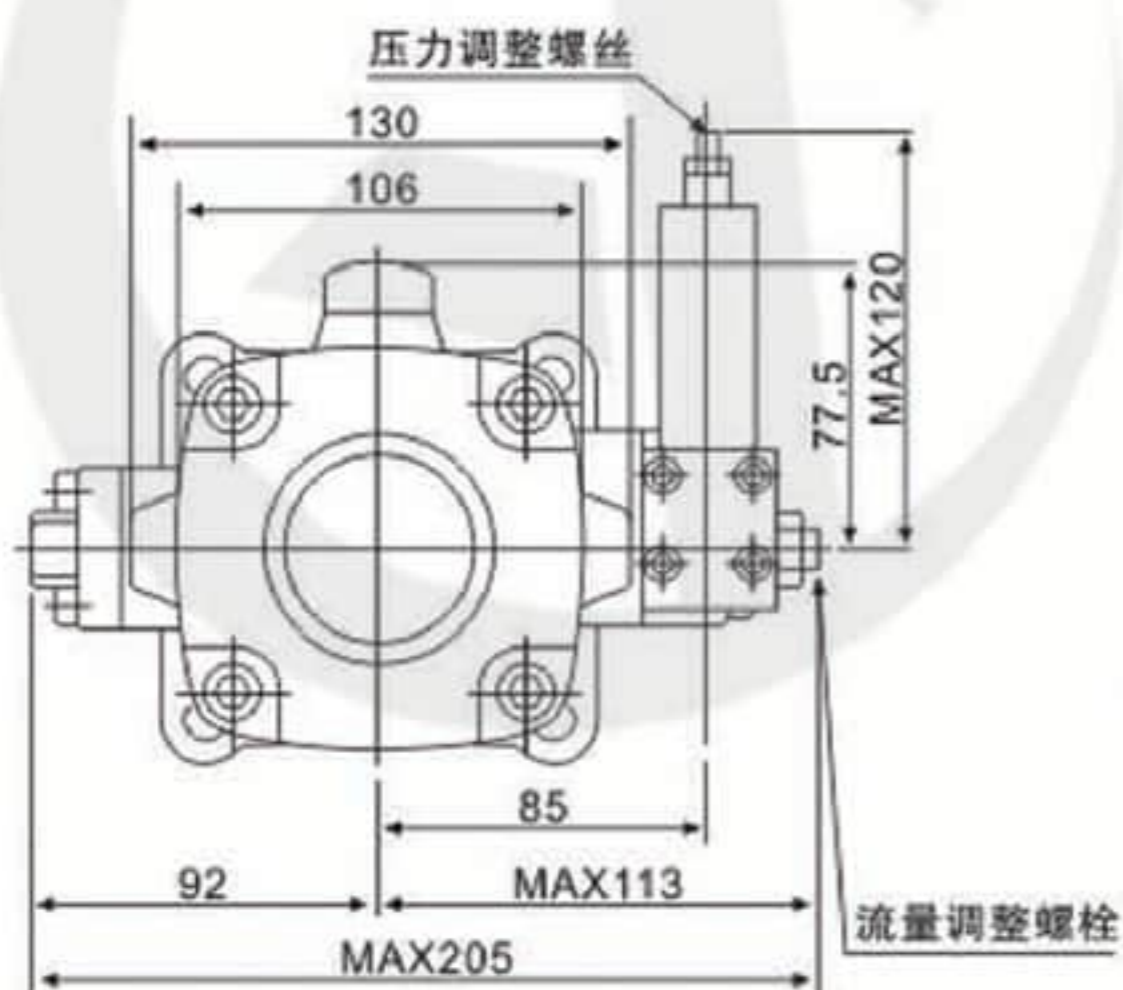
VP1-08/12/15/20



VP2-30/40



■ HVP尺寸图 HVP Dimensions



■ VP双联变量叶片泵（低压型）VP Double-Variable Vane Pump(Low Pressure)  
VP20-20/VP30-30系列Series

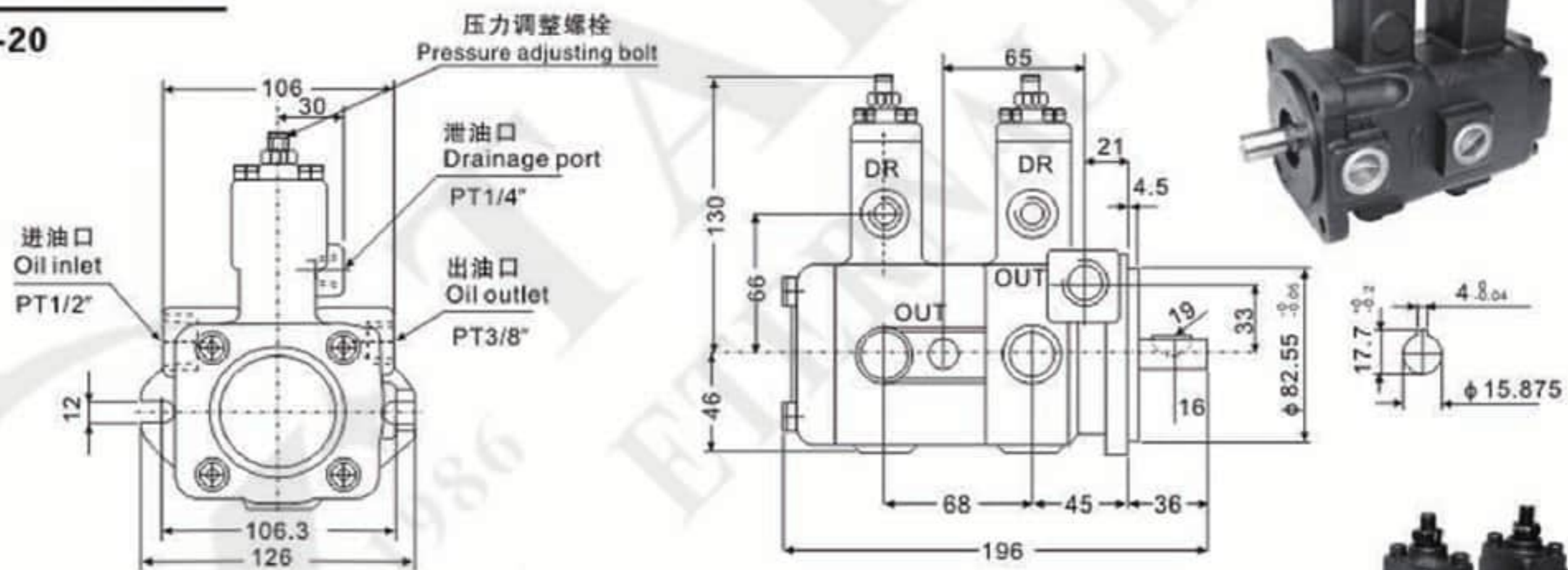
VP	-3030	F	-A3	-A3
系列号码 Series number	流量 Flow(L/min)	安装型式 Installation type	前泵压力调整范围 Front pump pressure adj. range(Bar)	后泵压力调整范围 Rear pump pressure adj. range(Bar)
变量叶片双联泵 Variable double vane pump	-0808,-1212,-1515 -2020,-2525,-3030 -4040	F: 法兰式 F: Flange mounting	A1: 08~25 A2: 20~45 A3: 40~70	A1: 08~25 A2: 20~45 A3: 40~70

■ 性能参数 Specification

型号 Model	最高使用压力 The Max(Mpa) Working Pressure	排量 Ml/Rev Displacement	无负荷时之流量L/min No-load flow L/min		压力调整范围 Pressure (Mpa) adjusting range	转速r/min Speed r/min		重量KG Weight 法兰式 Flange
			1500rpm	1800rpm		最低 The minimum	最高 The highest	
VP-08-08	7.0	4.4+4.4	6.7+6.7	8+8	A1:0.8-2.5 A2:2.0-4.5 A3:4.0-7.0	800	1800	9.0
VP-12-12		6.7+6.7	10+10	12+12				
VP-15-15		8.3+8.3	12.5+12.5	15+15				
VP-20-20		11.1+11.1	16.7+16.7	20+20				9.5
VP-25-25		13.9+13.9	21+21	25+25				
VP-30-30		16.7+16.7	25+25	30+30				
VP-40-40		22.2+22.2	33.3+33.3	40+40				

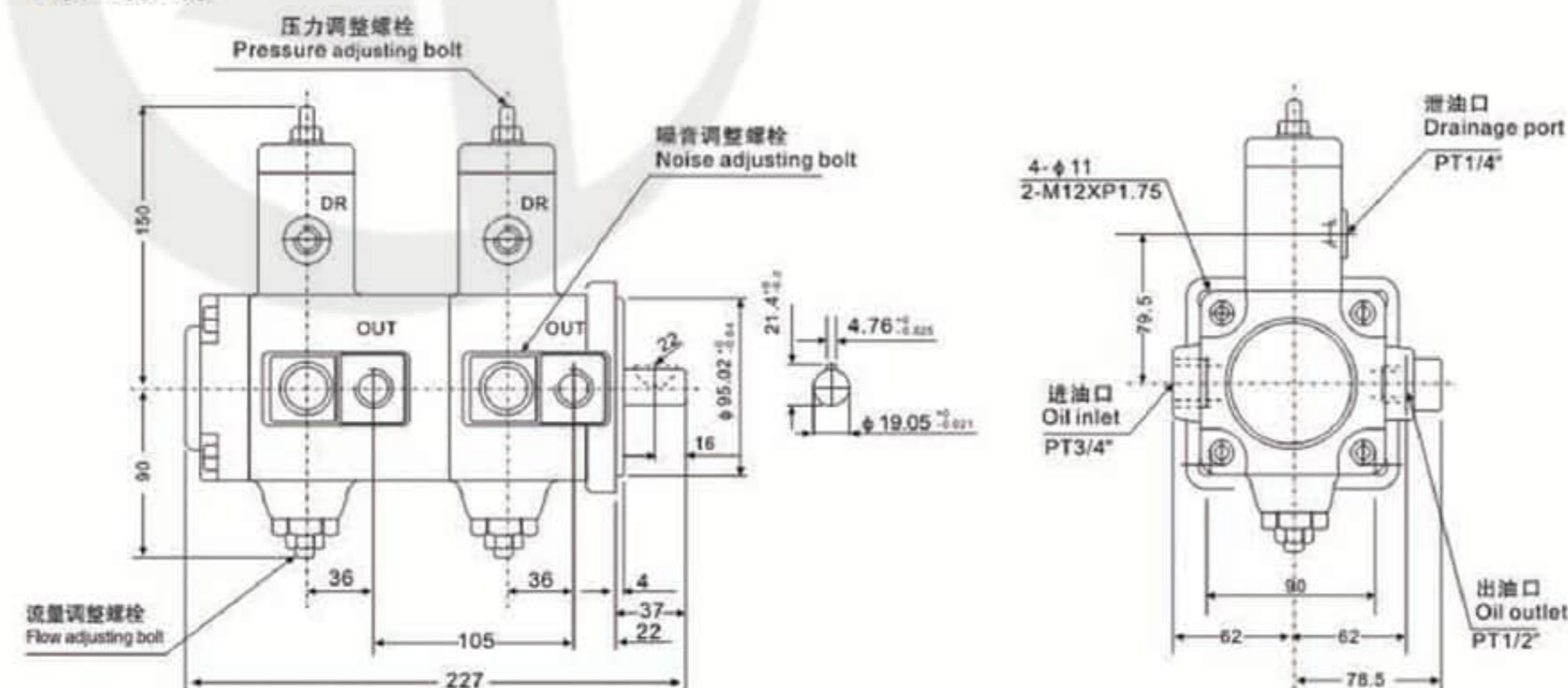
■ 尺寸图 Dimension

◆ VP-20-20



■ 尺寸图 Dimension

◆ VP-40-40



■ VP高低压变量叶片泵 High and Low Pressure Variable Vane Pump  
VP30/40+S系列 Series



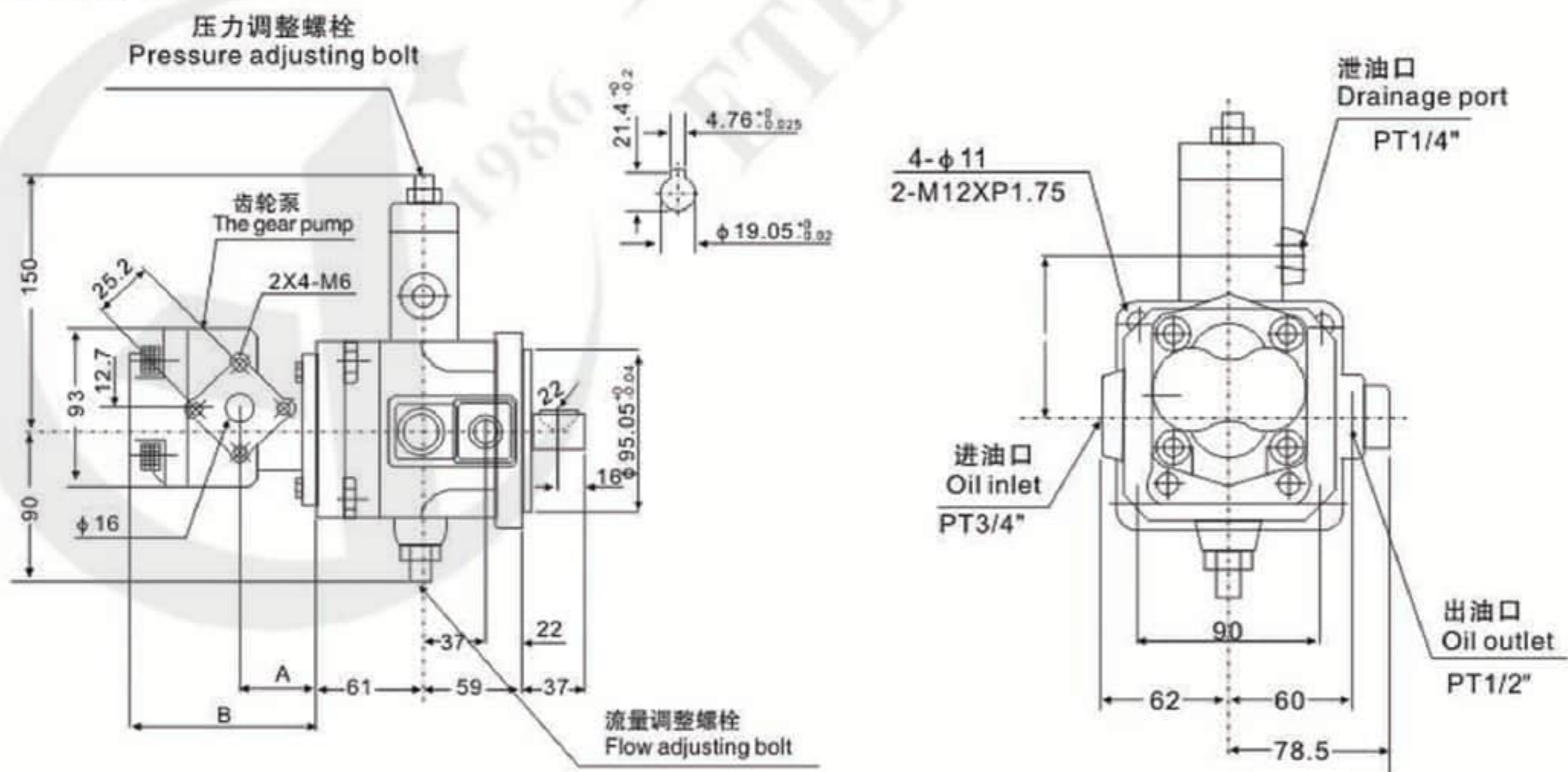
VP	-30	-F	-A3	+S
系列号码 Series number	流量 Flow(L/min)	安装型式 Installation type	压力调整范围 Pressure adjusting range(Bar)	结合泵的型号 (高压) Combined pump model (high pressure)
VP-30FA+S VP-40FA+S	-30 -40	F:法兰式 F:Flange mounting	A1: 08~25 A2: 20~45 A3: 40~70	结合泵的型号 (高压) Combined pump model (high pressure)

■ 性能参数 Specification

型号 Model	最高使用压力 (Mpa) The highest working pressure	排量 (ml/rev) Displacement	无负荷时之流量 (L/min) No-load flow (L/min)		压力调整范围 pressure adjustment range (Mpa)	转速r/min Speed r/min		重量kg weight
			1500rpm	1800rpm		最低The minimum	最高The highest	
VP-30FA+S	高压: 21.0 低压: 7.0	16.7+S	25+S	30+S	A1: 0.8-2.5 A2: 2.0-4.5 A3: 4.0-7.0	800	1800	9.5
VP-40FA+S		22.2+S	33.3+S	40+S				

■ 尺寸图 Dimension

◆ VP30/40+S



注意: 图形之齿轮泵尺寸仅供参考

Note: gear pump size of the chart above are for your reference only



■ 50T/150T系列单泵 50T/150T Series Single Pump

50T	-36	-L	-R	X	油口尺寸 Port Size		重量 Weight	
系列号 Series No.	排量 Displacement (ml/r)	安装型式 Installation Type	旋向 Rotation 从轴端看 (Viewed From the Shaft End)	轴径 Shaft	进油口 Inlet Port	出油口 Outlet	脚座式 Foot	法兰式 Flange
50T	07,12,14,17,20, 23,26,30,36,39	F: 法兰型 Flange Mounting L: 脚座型 Foot Mounting	R: 顺时针 Clockwise L: 逆时针 Counter- Clockwise	X: $\phi 22 \times 5$ (Standard) X1: $\phi 19.05 \times 4.76$	3/4"	1"	10.5kg	9kg
150T	48,61,75,94,116			X: $\phi 30 \times 7$	1 1/4"	1 1/2"	26kg	25kg

■ 50T/150T系列双泵 50T/150T Series Double Pump

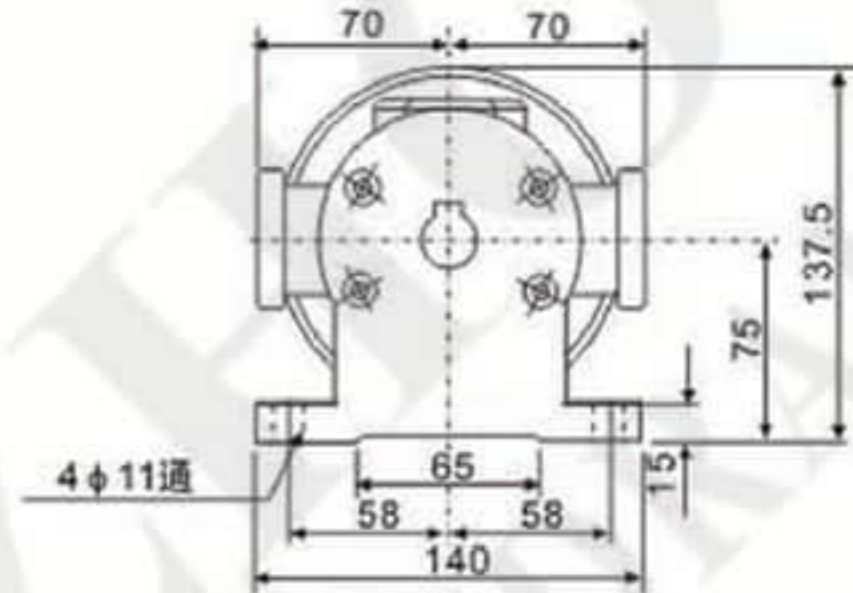
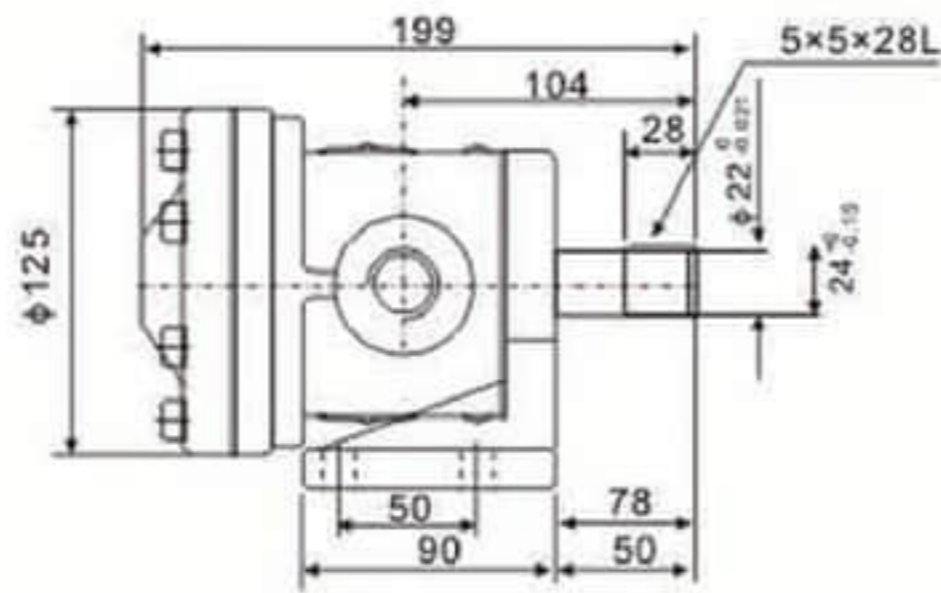
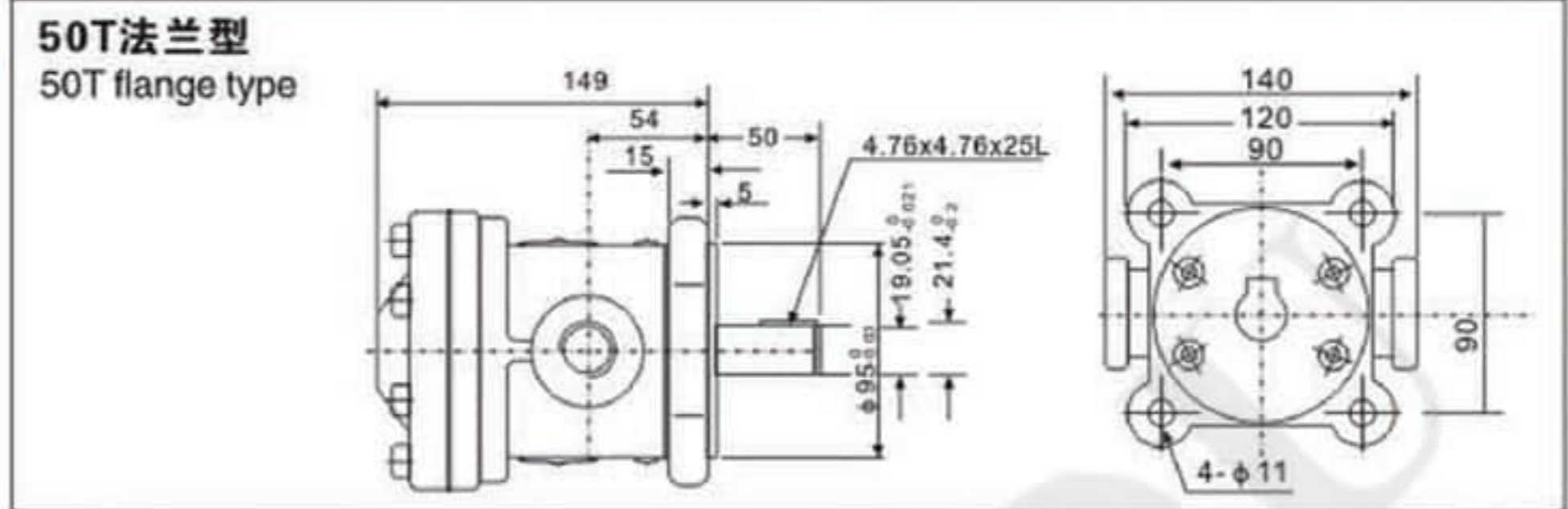
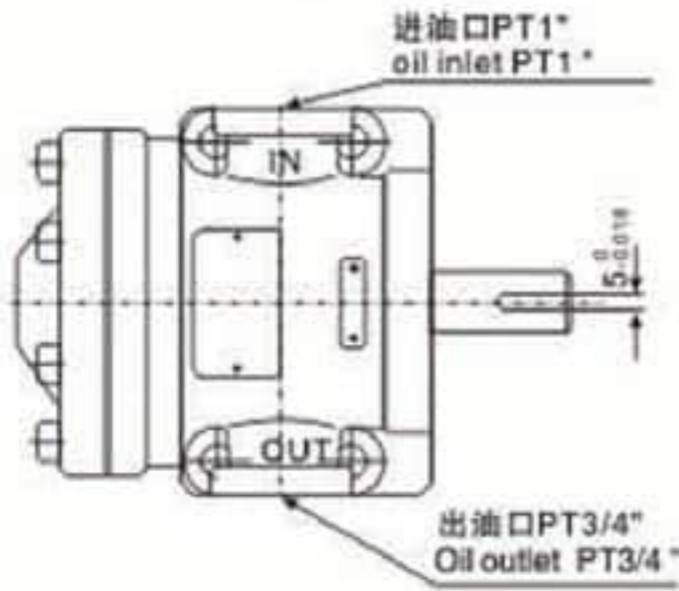
150T+50T	-116	-20	-L	-R	重量 Weight	
系列号 Series No.	前泵排量 Front Pump Displacement (ml/r)	后泵排量 Rear Pump Displacement (ml/r)	安装型式 Installation Type	旋向 Rotation (从轴端看 Viewed from Shaft End)	脚座式 Foot	法兰式 Flange
50T+50T	07,12,14,17,20, 23,26,30,36,39	07,12,14,17,20, 23,26,30,36,39	F: 法兰型 Flange Mounting	R: 顺时针 Clockwise	18kg	21kg
150T+50T	48,61,75,94,116	07,12,14,17,20, 23,26,30,36,39	L: 脚座型 Foot Mounting	L: 逆时针 Counter- Clockwise	34kg	35.5kg
150T+150T	48,61,75,94,116	48,61,75,94,116			47kg	48.5kg

■ 50T+SL /150T + SL系列串泵 50T+SL /150T + SL Series Combined Pump

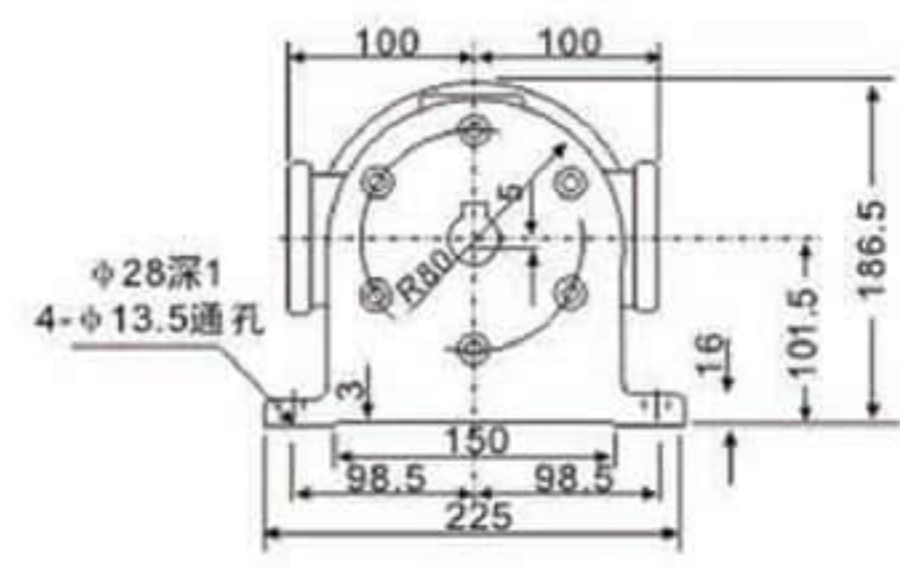
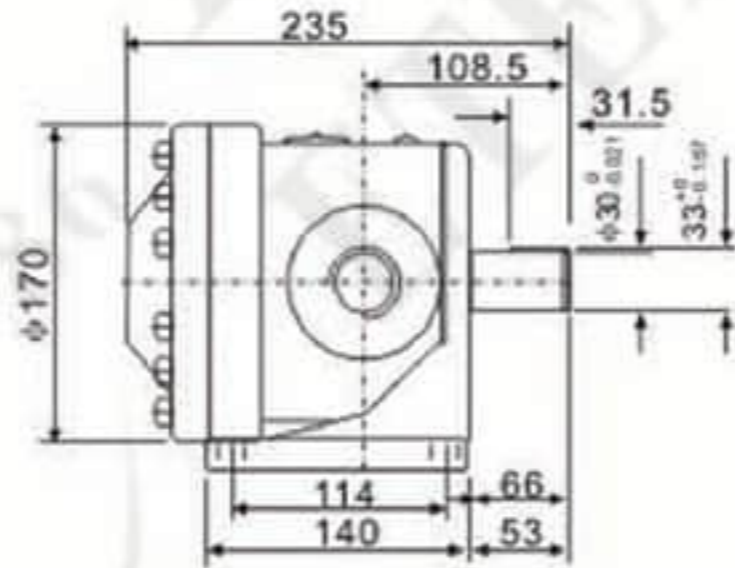
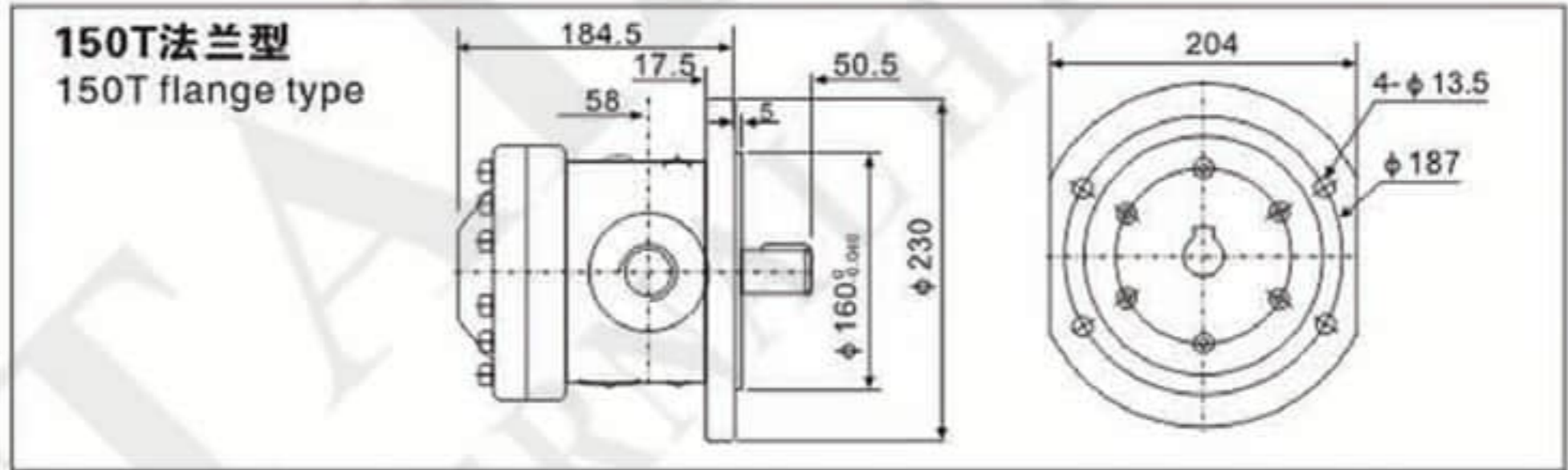
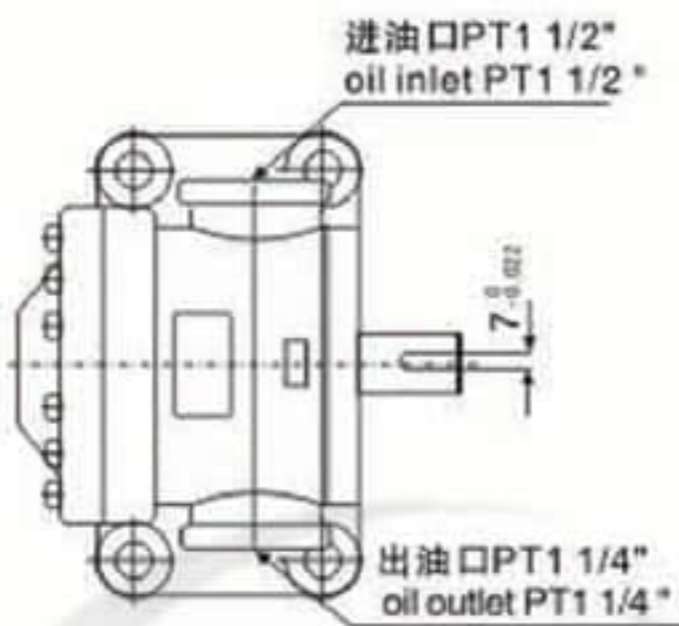
50T	-36	-L	-R	+SL	重量 Weight	
系列号 Series No.	排量 Displacement (ml/r)	安装型式 Installation Type	旋向 Rotation (从轴端看 Viewed from Shaft End)	结合泵型号 (高压) Combined Pump Model (High Pressure)	脚座式 Foot	法兰式 Flange
50T	07,12,14,17,20, 23,26,30,36,39	F: 法兰型 Flange Mounting L: 脚座型 Foot Mounting	R: 顺时针 Clockwise L: 逆时针 Counter- Clockwise		10.5kg	9kg
150T	48,61,75,94,116				26kg	25kg

■ 尺寸图 Size Chart

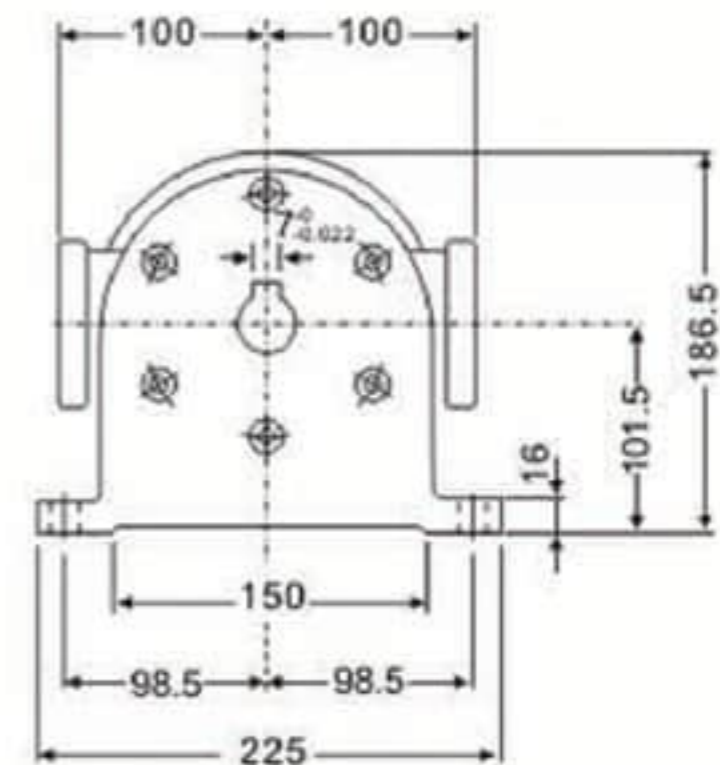
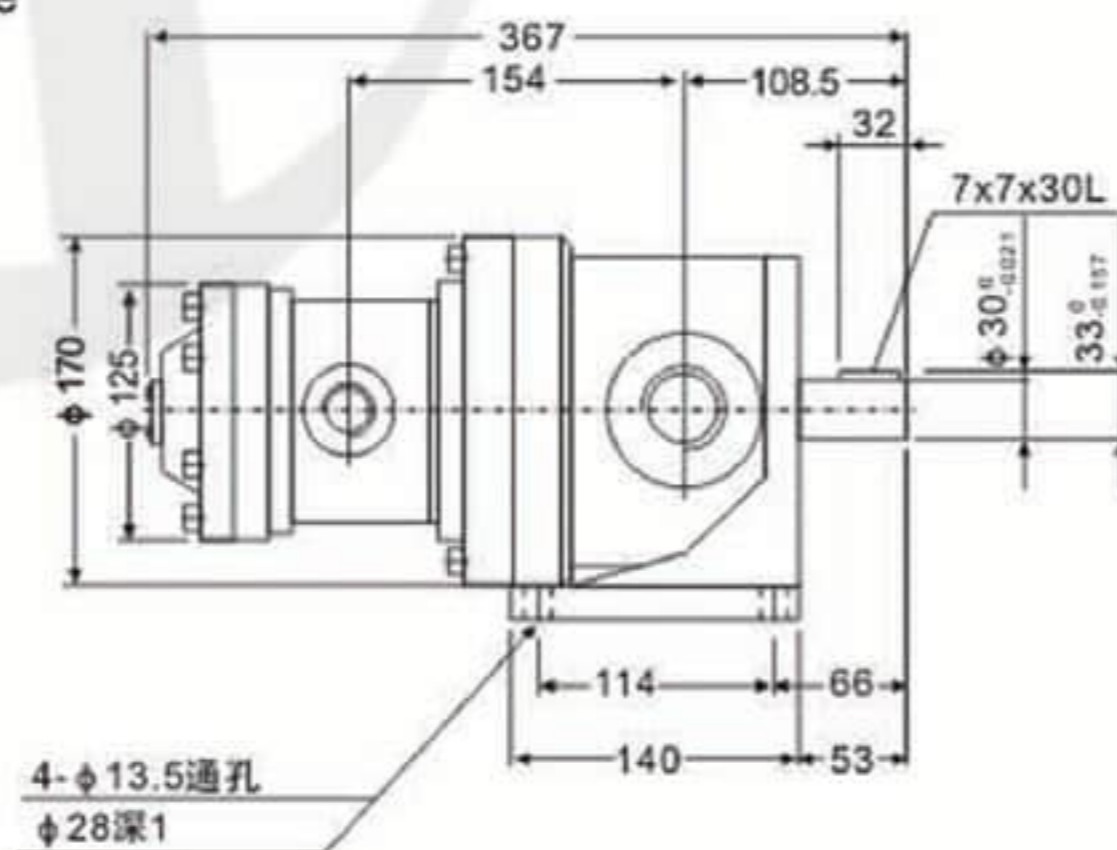
◆ 50T脚座型  
50T foot type



◆ 150T脚座型  
150T foot type

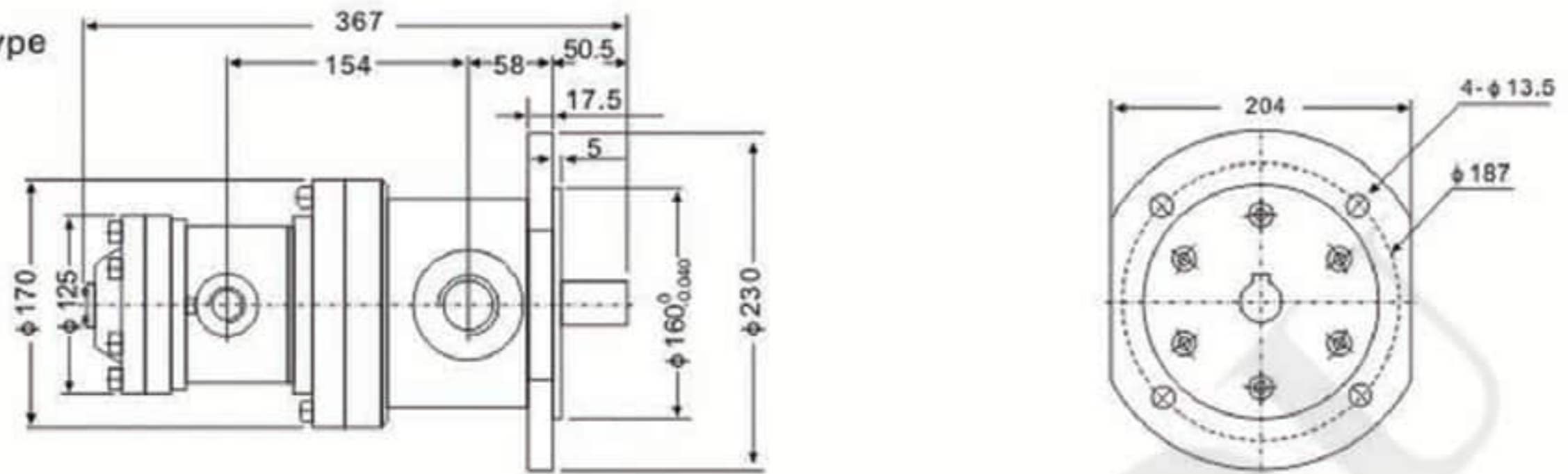


◆ 150T+50T脚座型  
150T+50T foot type

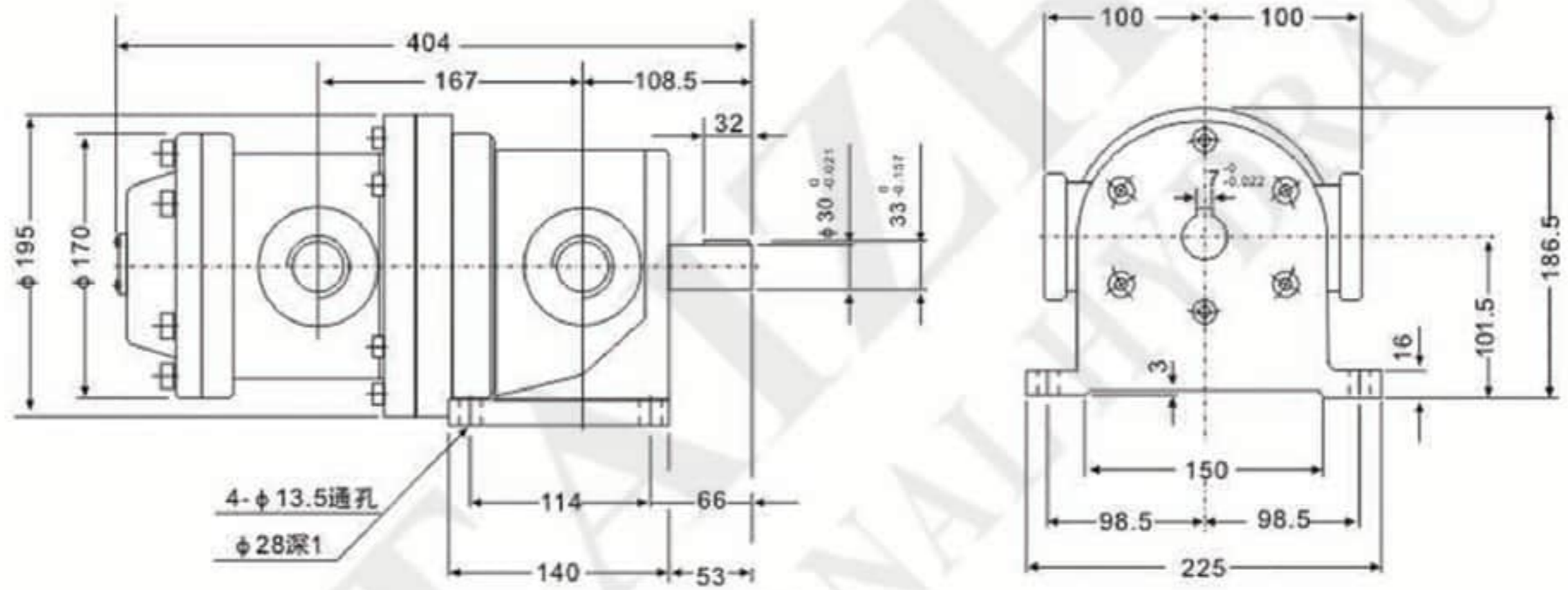


■ 尺寸图 Dimension

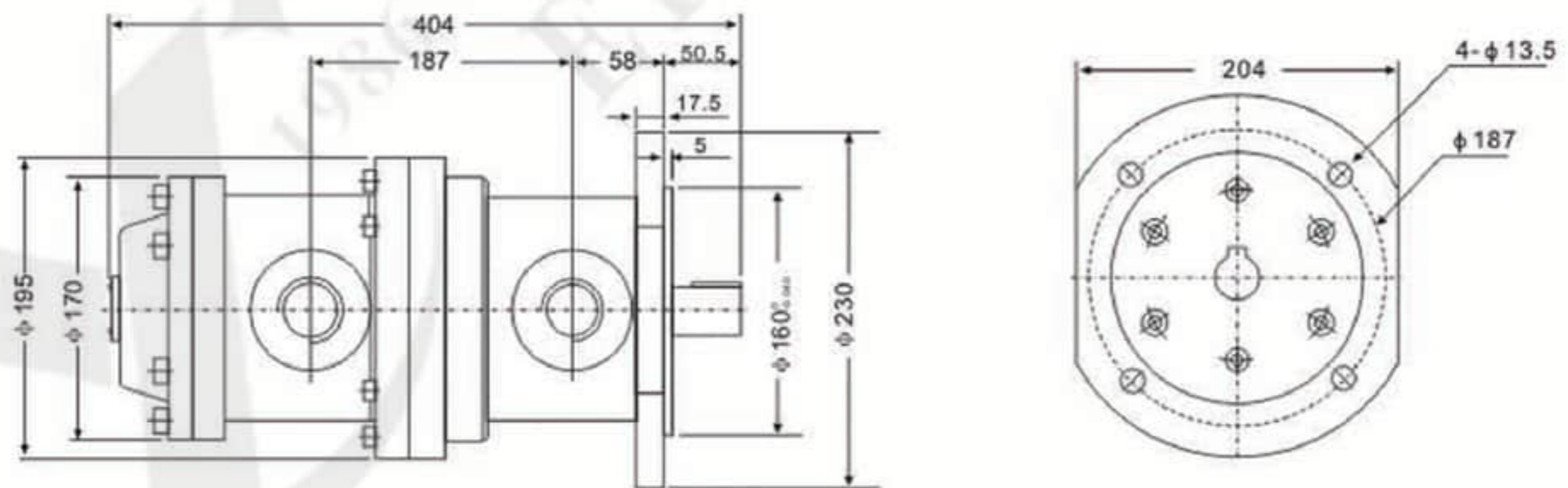
**150T+50T 法兰型**  
150T+50T Flange Type



**150T+150T 脚座型**  
150T+150T Foot Type

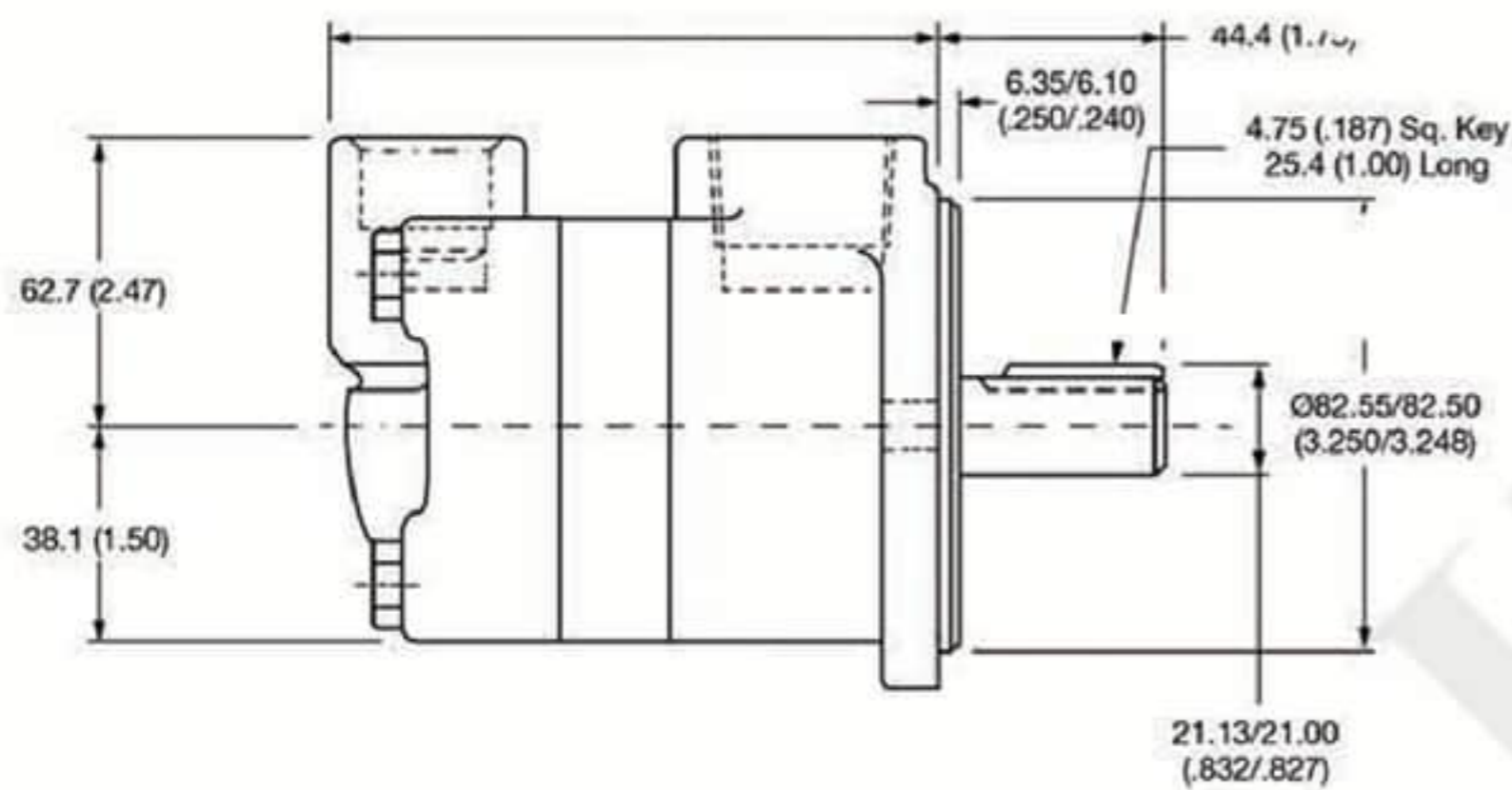
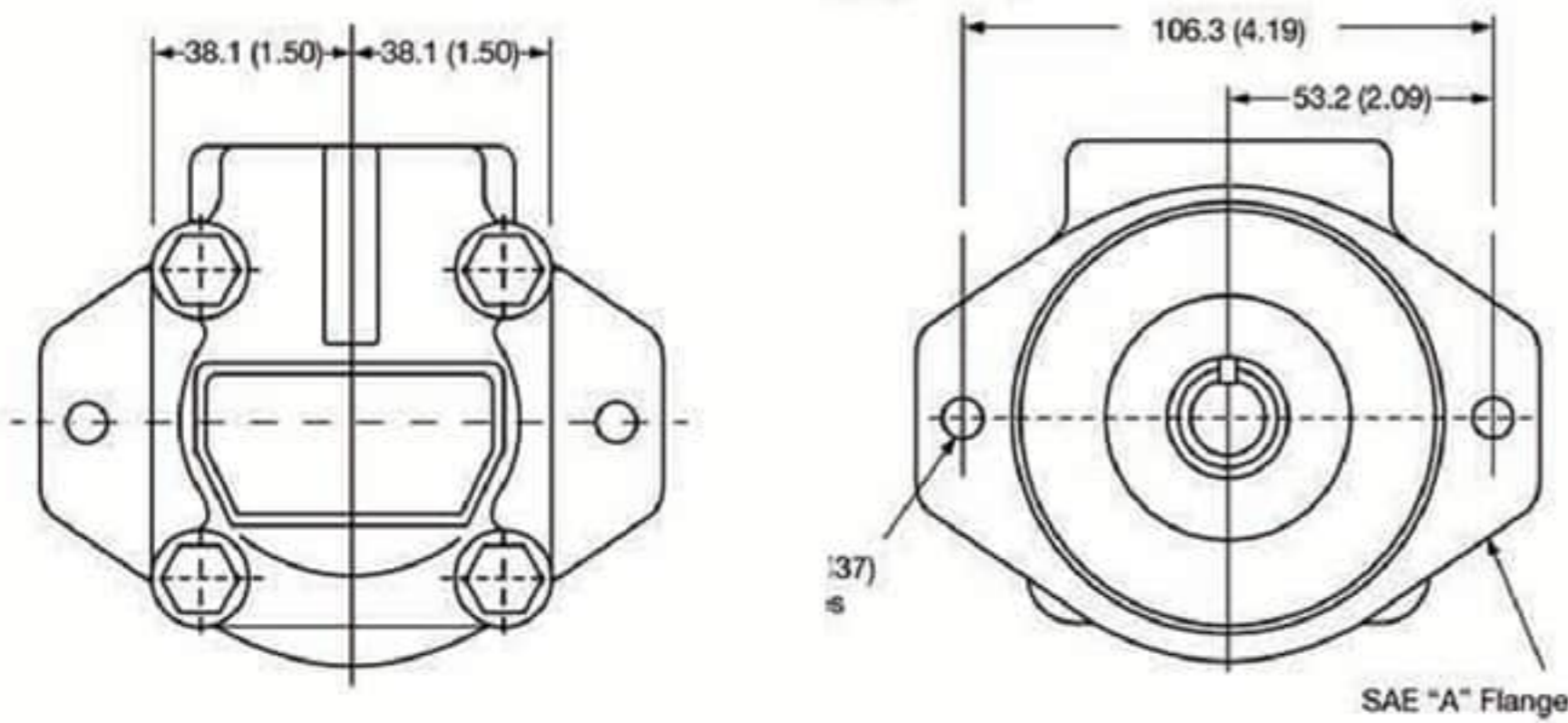


**150T+150T 法兰型**  
150T+150T Flange Type



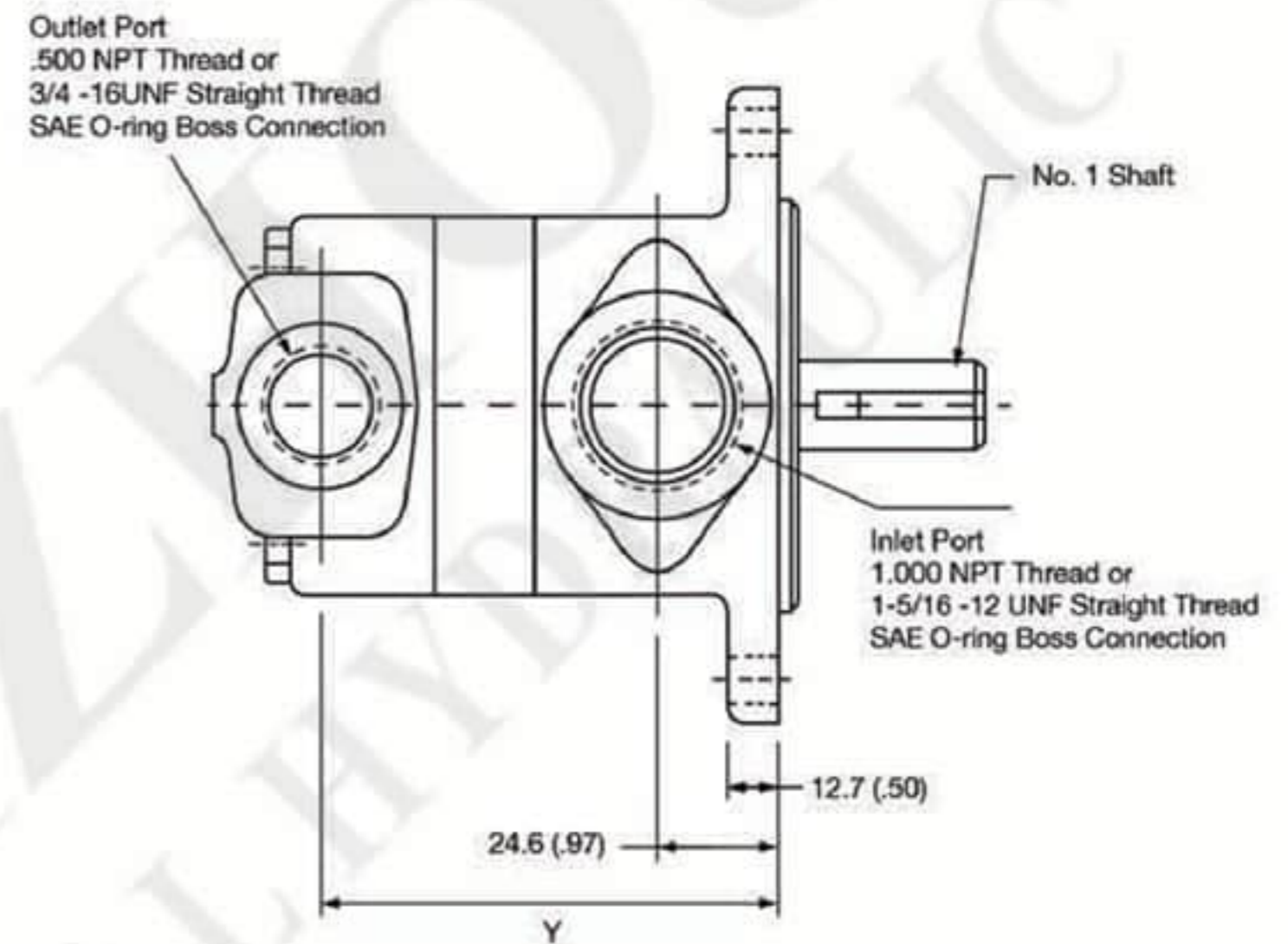


■ V10 Series-Power Steering pump

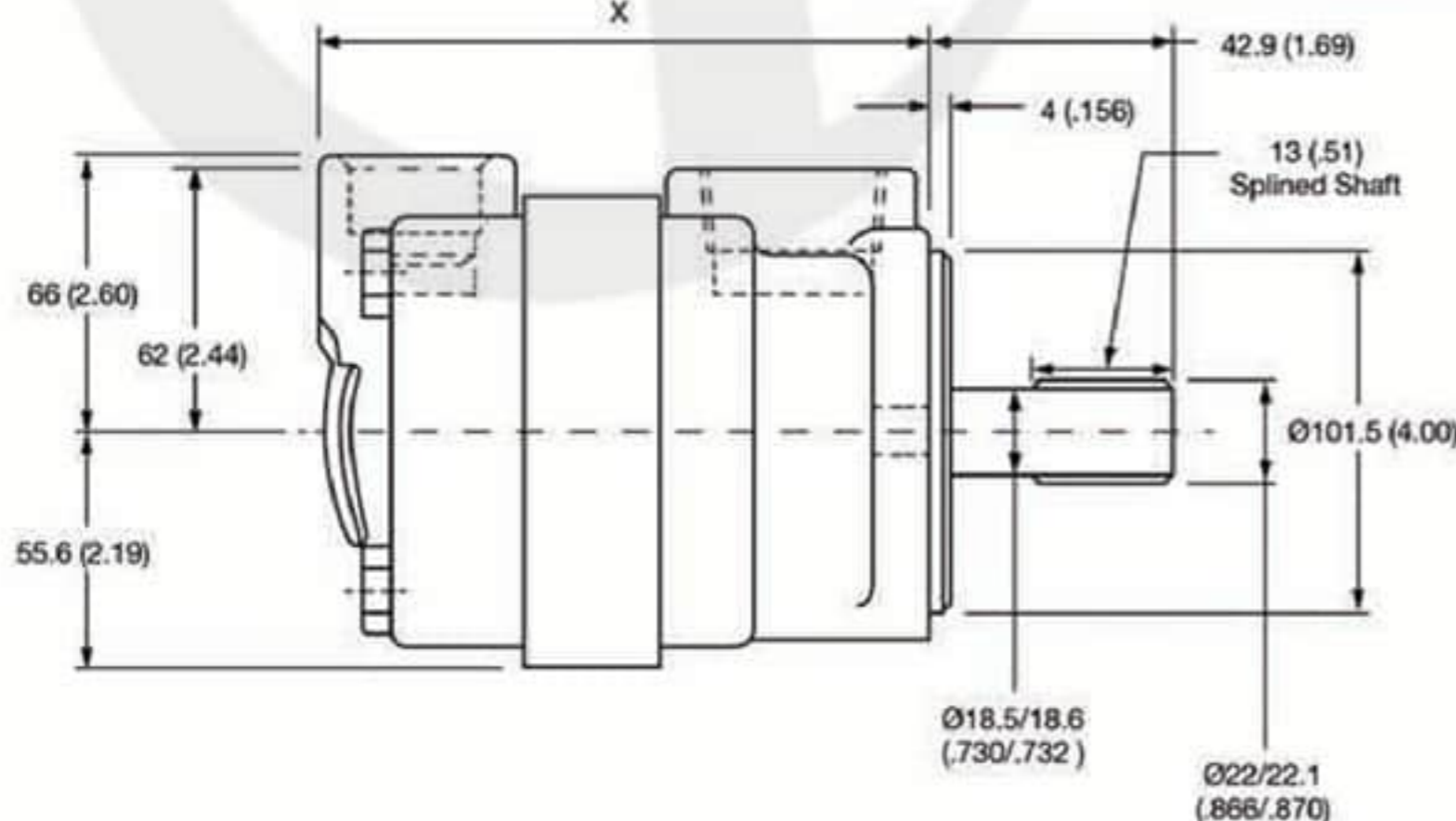
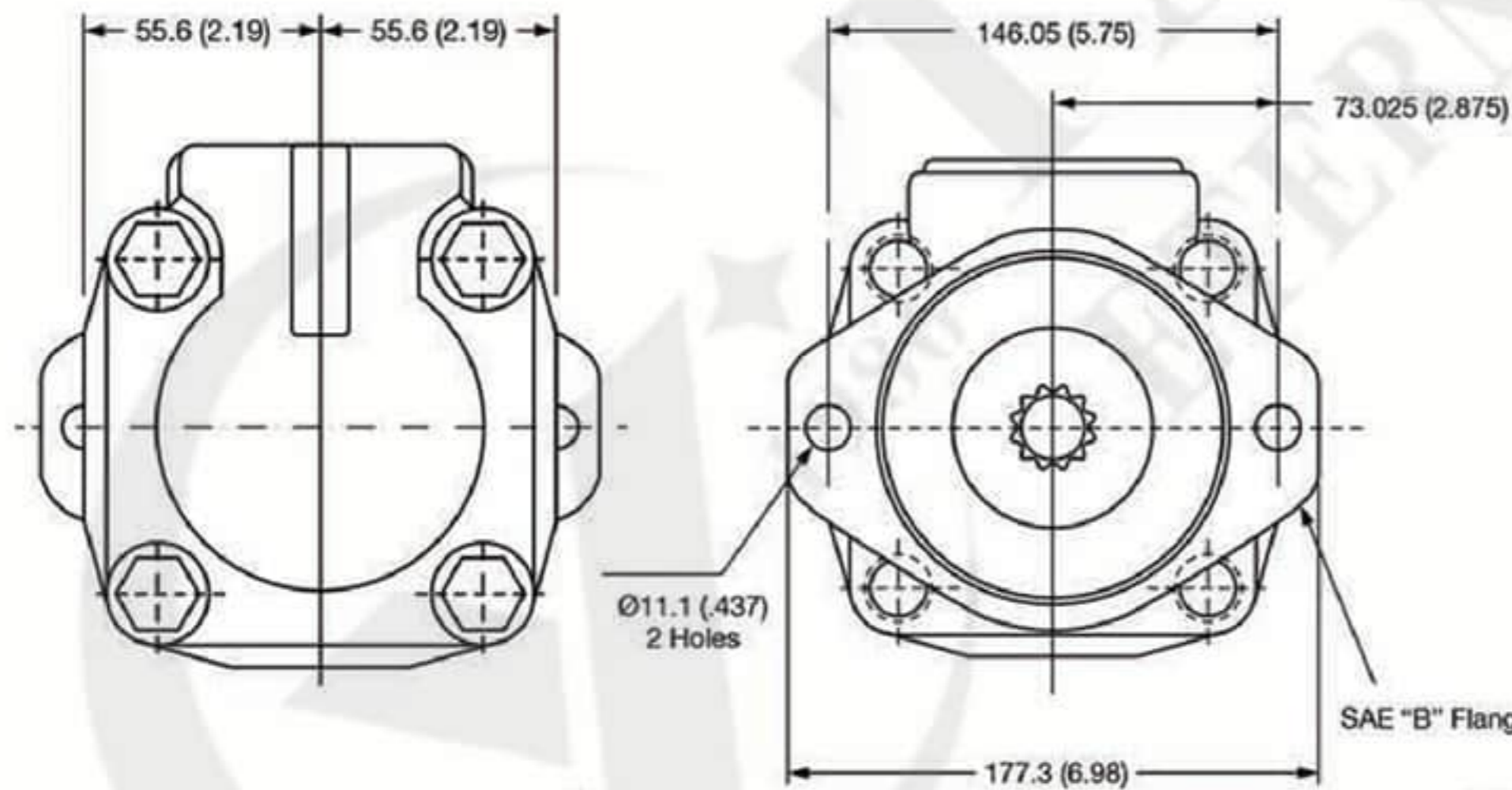


V10 Dimensions

DELIVERY AT 1200 RPM & 100 PSI	DIMENSIONS	
	X	Y
1 gpm (3.8 lpm)	115.6 (4.55)	91.9 (3.62)
2 gpm (7.6 lpm)	115.6 (4.55)	91.9 (3.62)
3 gpm (11.4 lpm)	115.6 (4.55)	91.9 (3.62)
4 gpm (15.1 lpm)	121.9 (4.80)	98.3 (3.87)
5 gpm (18.9 lpm)	121.9 (4.80)	98.3 (3.87)
6 gpm (22.7 lpm)	127.0 (5.00)	103.4 (4.07)
7 gpm (26.5 lpm)	127.0 (5.00)	103.4 (4.07)

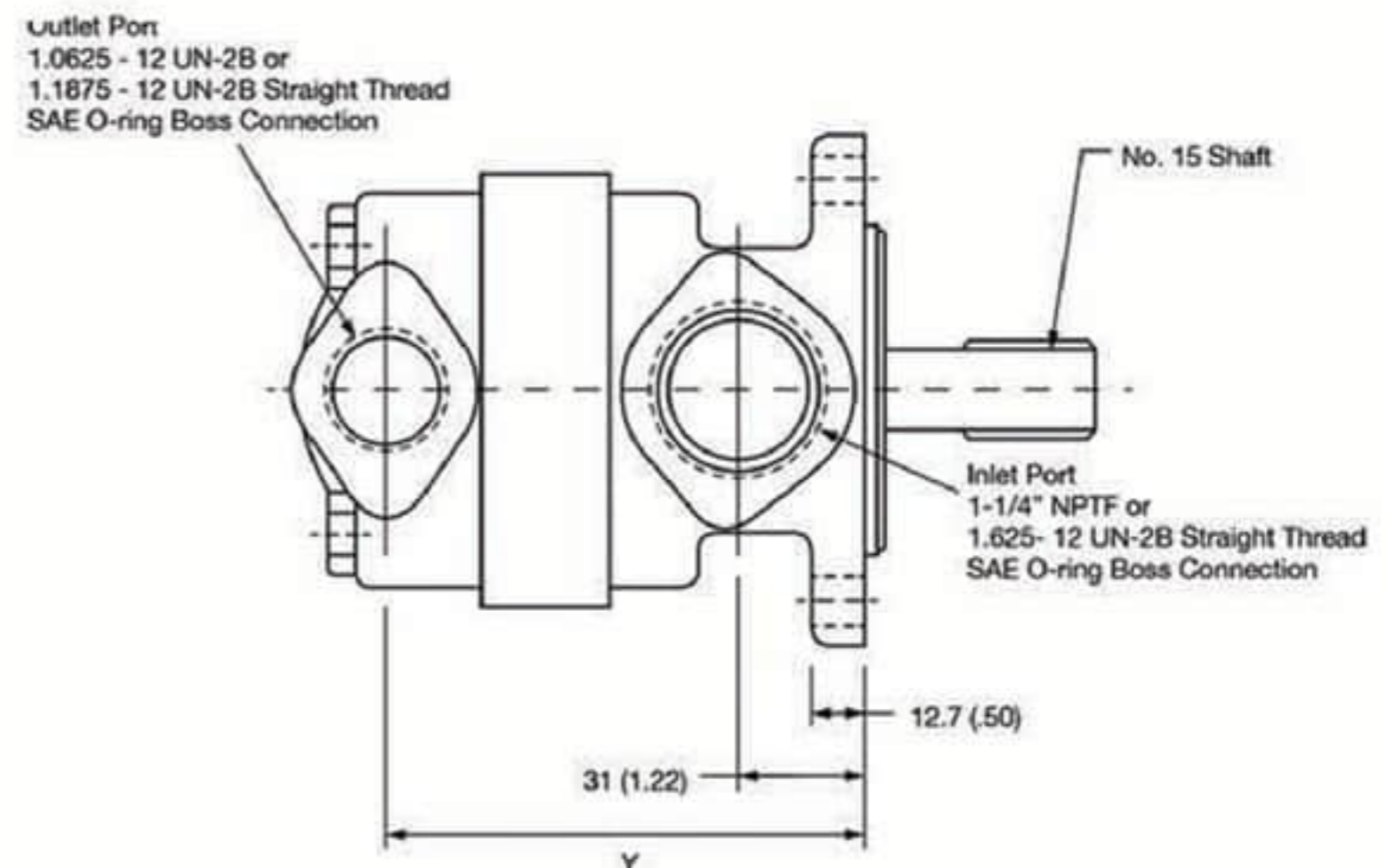


■ V20 Series-Power Steering Pump



V20 Dimensions

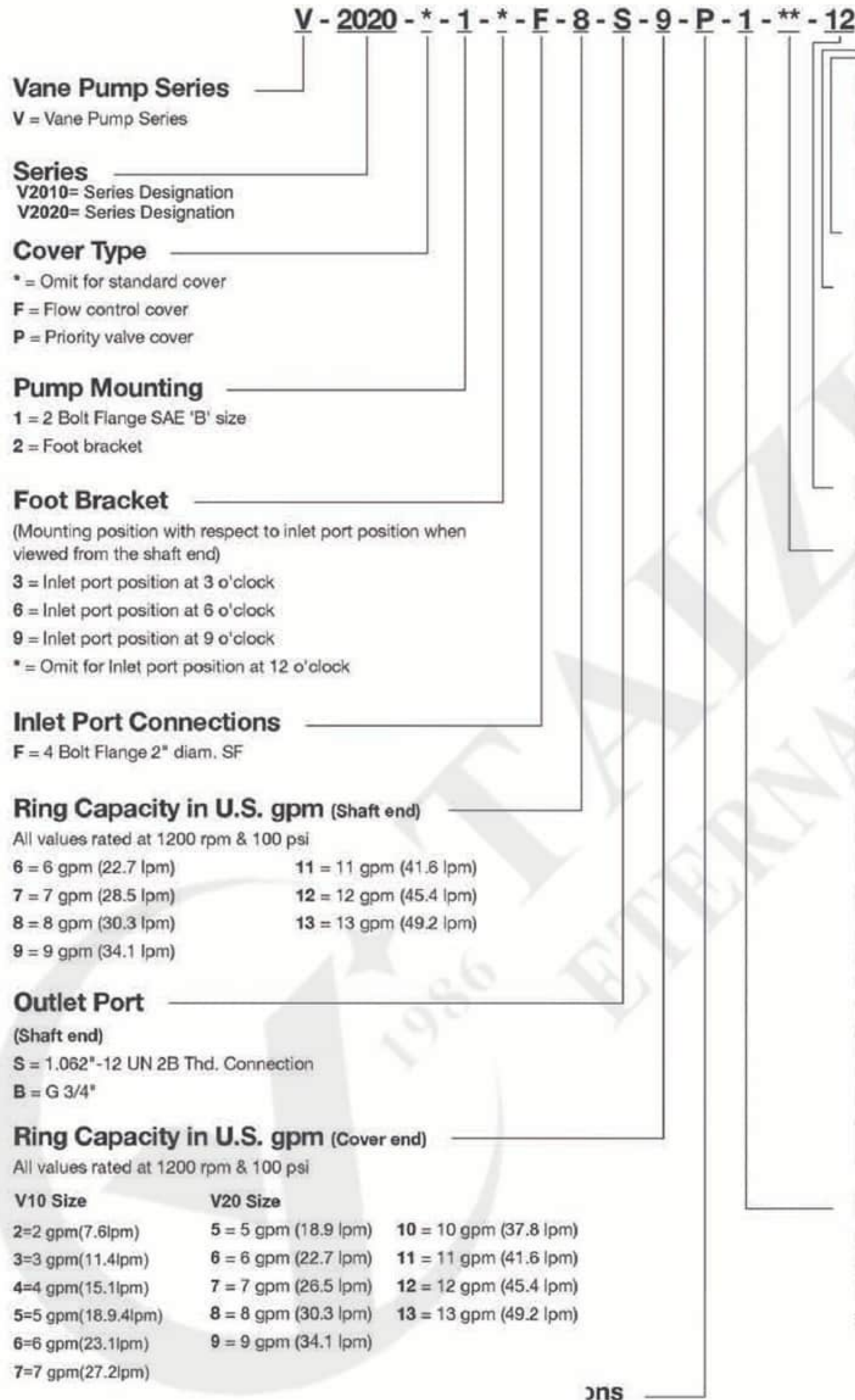
DELIVERY AT 1200 RPM & 100 PSI	DIMENSIONS	
	X	Y
6 gpm (22.7 lpm)	125.2 (4.93)	102.1 (4.02)
7 gpm (26.5 lpm)	131.6 (5.18)	108.4 (4.27)
8 gpm (30.3 lpm)	131.6 (5.18)	108.4 (4.27)
9 gpm (34.1 lpm)	131.6 (5.18)	108.4 (4.27)
11 gpm (41.6 lpm)	136.6 (5.38)	113.5 (4.47)
12 gpm (45.4 lpm)	140.2 (5.52)	117.1 (4.61)
13 gpm (49.2 lpm)	140.2 (5.52)	117.1 (4.61)



## V2010/V2020 Series-Power Steering pump

### Special Note

Place an **F3** in front of the model code for **Special Seals**.  
Example: F3-V-2020-\* -1-\* -F-8-S-9-P-1-\*\*-12-A-30-L



### Shaft Rotation

(Viewed from shaft end)

- \* = Omit for Right-hand (Clockwise) Rotation
- L = Left-hand (Counter-Clockwise) Rotation

### Design

### Pressure Setting

- A = 250 psi (17.2 bar)      F = 1500 psi (103.4 bar)
- B = 500 psi (34.5 bar)      G = 1750 psi (120.7 bar)
- C = 750 psi (51.7 bar)      H = 2000 psi (137.9 bar)
- D = 1000 psi (68.9 bar)      J = 2250 psi (155.1 bar)
- E = 1250 psi (86.2 bar)      K = 2500 psi (172.4 bar)

### Flow Rate through Orifice in Cover (US gpm)

### Outlet Port Position

(Viewed from rear cover end of pump)

With No. 1 Outlet (shaft end) opposite inlet port

	V2020	V2010	
AA	180°from inlet	135°CCWfrom inlet	(No.2 Outlet)
AB	90°CCW from inlet	45°CCW from inlet	
AC	0°from inlet	45°CW from inlet	
AD	90°CW from inlet	135°CCW from inlet	

With No. 1 Outlet (shaft end) 90° CCW from inlet port

	V2020	V2010	
BA	180°from inlet	135°CCWfrom inlet	(No.2 Outlet)
BB	90°CCW from inlet	45°CCW from inlet	
BC	0°from inlet	45°CW from inlet	
BD	90°CW from inlet	135°CCW from inlet	

With No. 1 Outlet (shaft end) inline with inlet port

	V2020	V2010	
CA	180°from inlet	135°CCWfrom inlet	(No.2 Outlet)
CB	90°CCW from inlet	45°CCW from inlet	
CC	0°from inlet	45°CW from inlet	
CD	90°CW from inlet	135°CCW from inlet	

With No. 1 Outlet (shaft end) 90° CW from inlet port

	V2020	V2010	
DA	180°from inlet	135°CCWfrom inlet	(No.2 Outlet)
DB	90°CCW from inlet	45°CCW from inlet	
DC	0°from inlet	45°CW from inlet	
DD	90°CW from inlet	135°CCW from inlet	

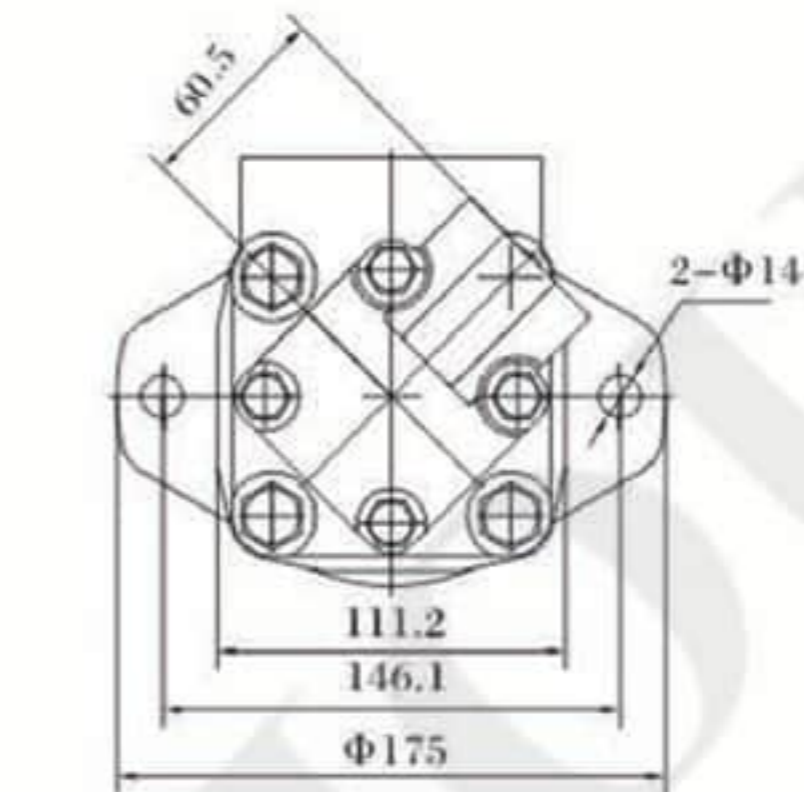
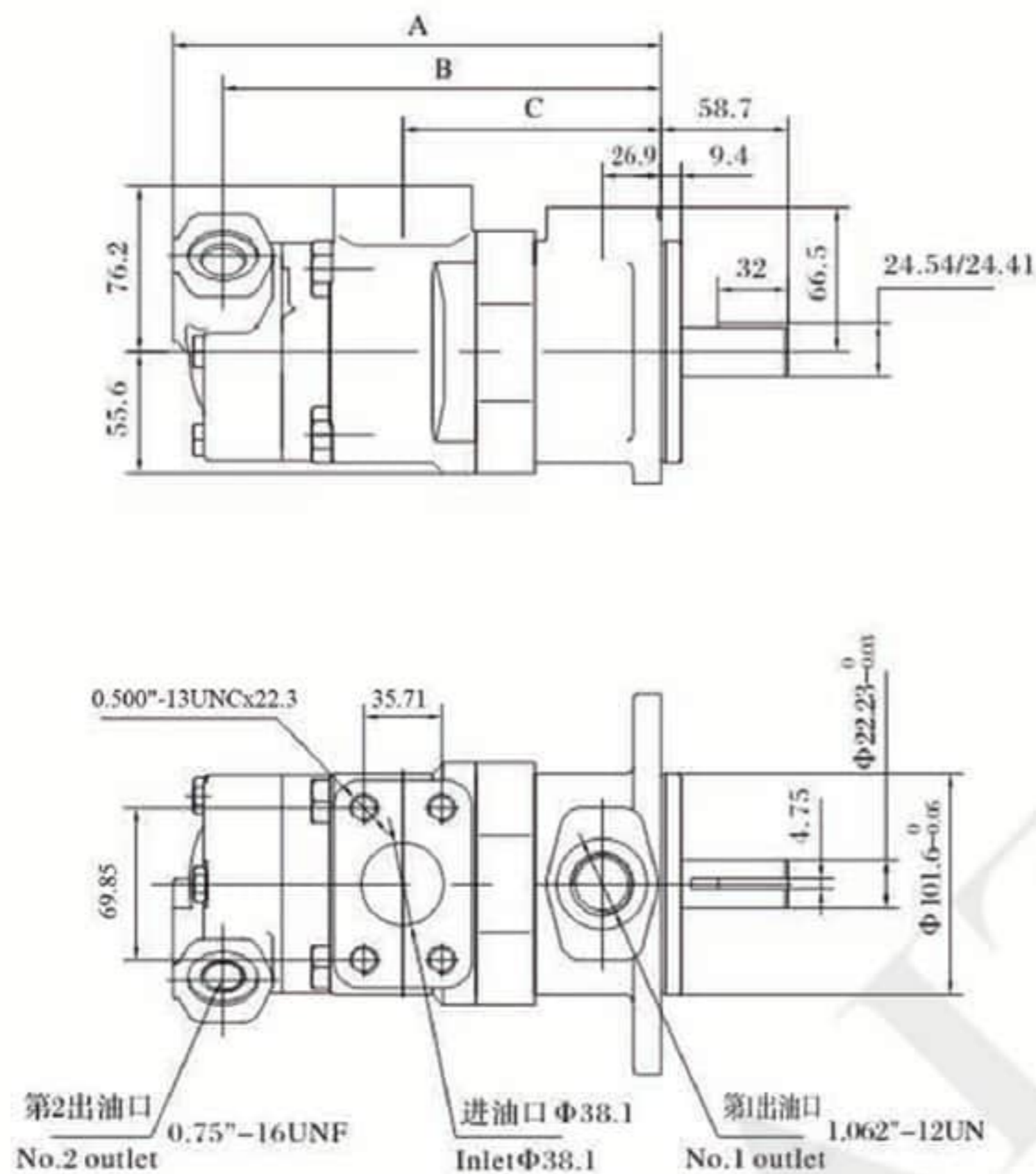
### Shafts

- 1 = Straight keyed
- 3 = Threaded w/ woodruff key
- 11 = Splined 13 tooth
- 38 = Splined (V2020 only)

Code	Std.Cover		Flow Control Cover			
	V2010	V2020	Pressure		Tank	
			V2010	V2020	V2010	V2020
B	G1/2"	G3/4"	-	-	-	-
P	1/2"NPT	-	3/4" St.Thd.	3/4" St.Thd.	1/2"NPT	1/2"NPT
S	3/4" St.Thd.	1.602-12 St.Thd.	-	3/4" St.Thd.	-	1.602-12 St.Thd.
T	-	-	3/4" St.Thd.	3/4" St.Thd.	3/4" St.Thd.	3/4" St.Thd.

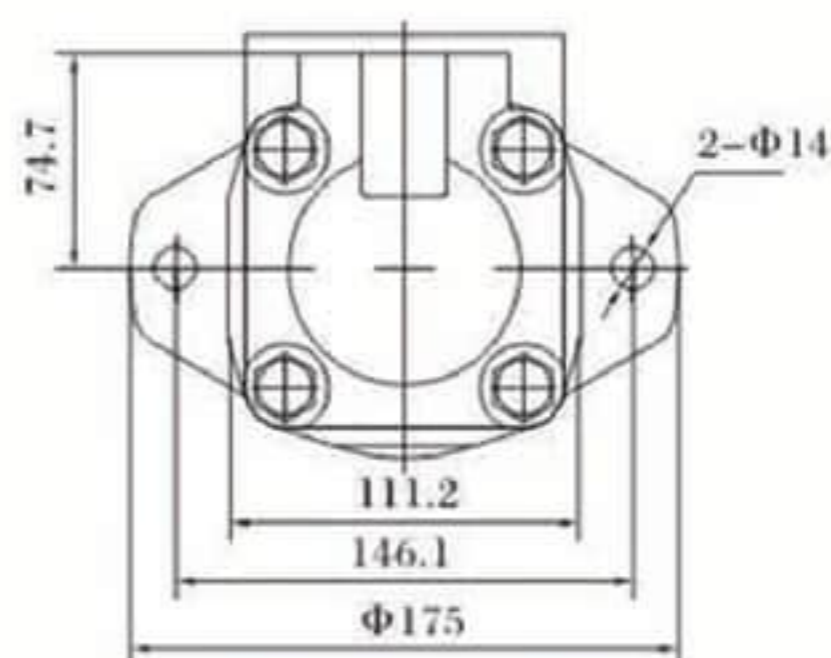
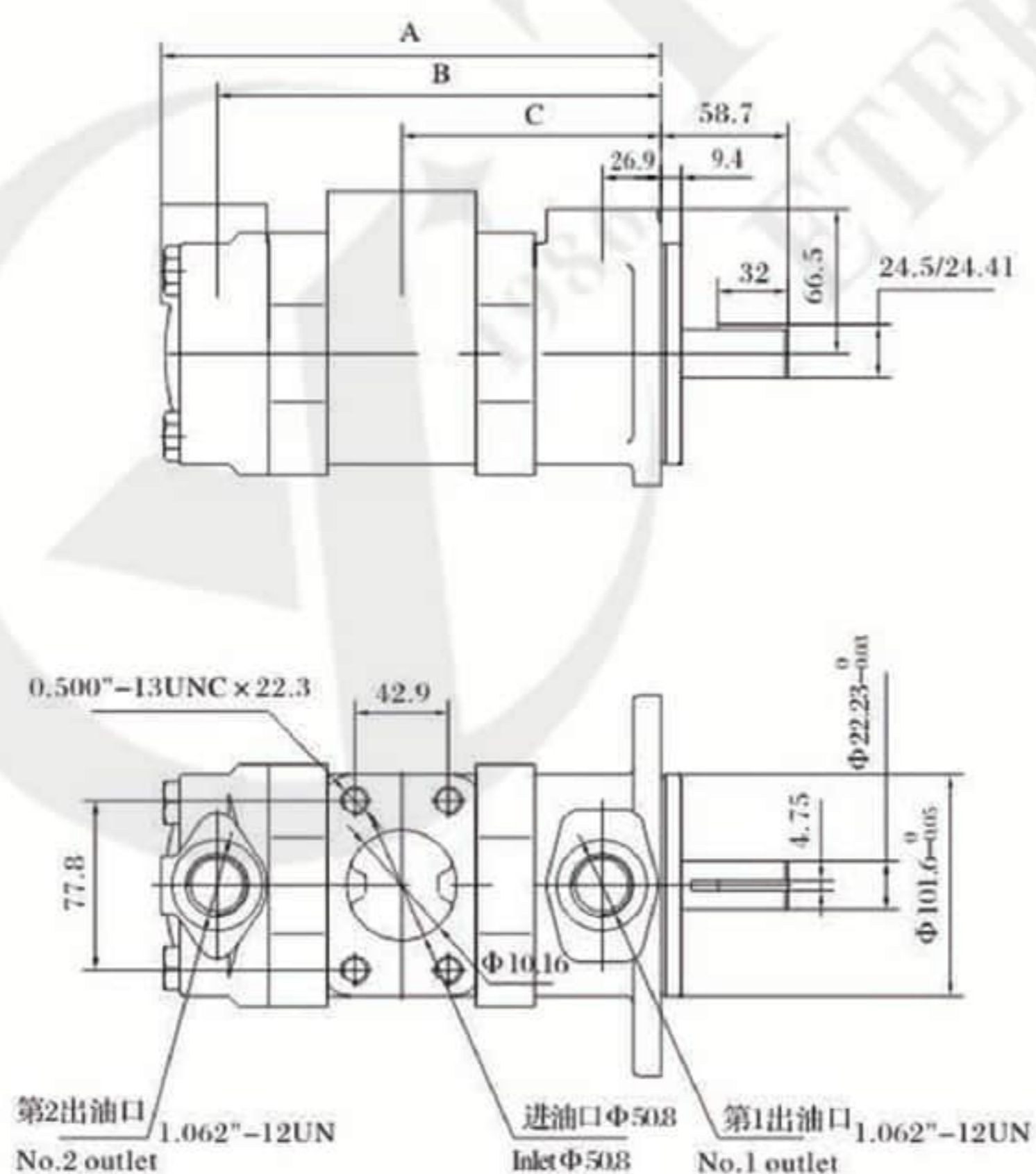
■ 外形及连接尺寸 Configuration and Instalation Dimension(mm)

V2010



代号 USgpm		A(mm)	B(mm)	C(mm)
轴端 Shaft end	盖端 Cover end			
7, 8, 9	1, 2, 3	213.0	190.0	113.5
7, 8, 9	4, 5,	219.1	196.1	113.5
7, 8, 9	6, 7	224.1	201.1	113.5
10, 11	1, 2, 3	218.2	195.0	118.5
10, 11	4, 5,	224.1	201.1	118.5
10, 11	6, 7	229.1	206.1	118.5
12, 13	1, 2, 3	222.0	119.0	121.5
12, 13	4, 5	228.1	205.1	121.5
12, 13	6, 7	233.1	210.1	121.5

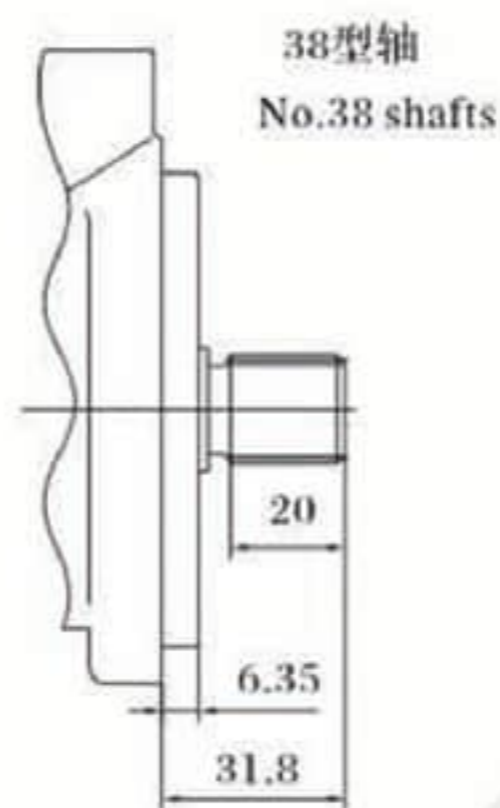
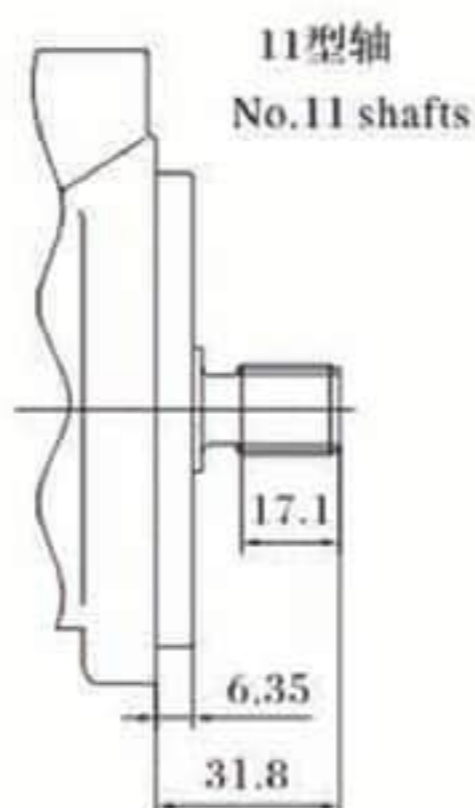
V2020



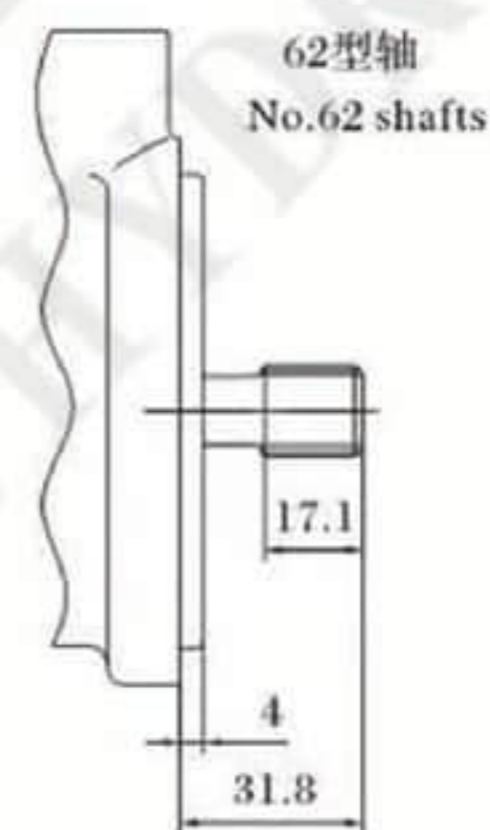
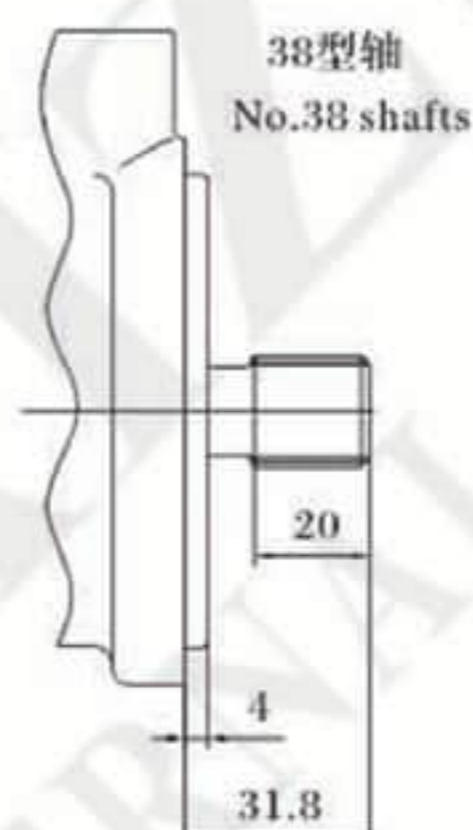
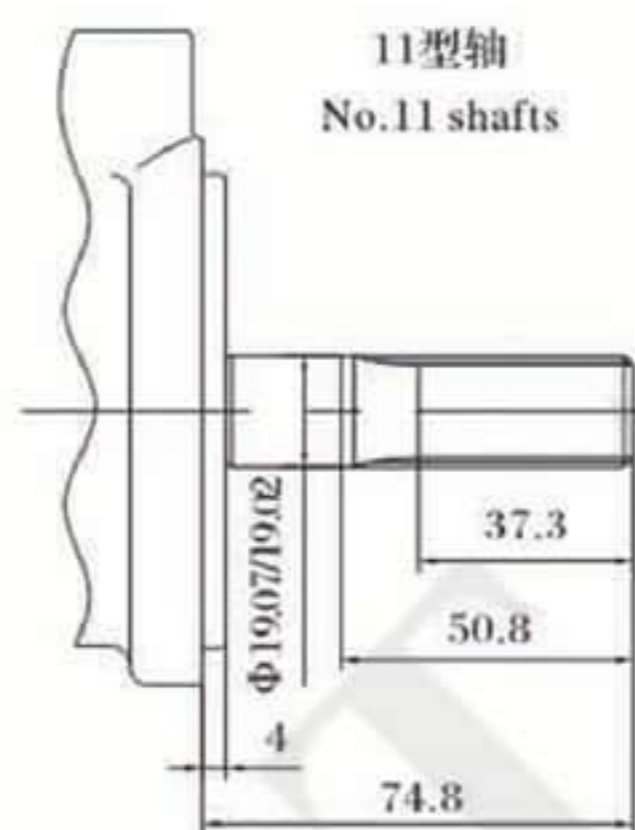
代号 USgpm		A(mm)	B(mm)	C(mm)
轴端 Shaft end	盖端 Cover end			
7, 8, 9	6	213.4	187.7	114.0
7, 8, 9	7, 8, 9	219.5	193.8	114.0
10, 11	6	218.4	192.7	119.0
10, 11	7, 8, 9	224.5	198.8	119.0
10, 11	10, 11	229.5	203.8	119.0
10, 11	6	222.4	196.7	122.5
12, 13	7, 8, 9	228.5	202.8	122.5
12, 13	10, 11	233.5	207.8	122.5

□轴伸选择 Optional Shafts  
花键轴伸 Splined shaft type

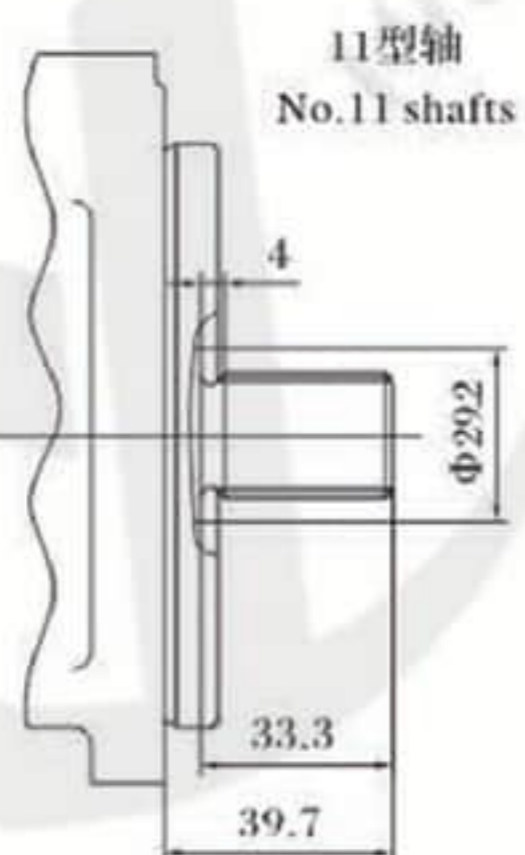
V10



V20



V2010  
V2020



渐开线花键参数表 Involute splines date table

型号 Model	轴伸代号 Shaft code	齿数 Number of teeth	径节 Pitch	齿顶圆直径 Major diameter	节圆直径 Pitch diameter	齿根圆直径 Minor Diameter	配合形式 Suitable for
SV10	11	9	16/32	15.82/15.80	14.29	12.28/12.00	齿顶Tooth tip
	38	11	16/32	18.63/18.50	17.46	15.24/14.99	齿侧Side tip
SV20	11	11	16/32	19.01/18.93	17.46	15.90/15.62	齿侧Side tip
	38	11	16/32	18.63/18.50	17.46	15.24/14.99	齿侧Side tip
	62	9	16/32	15.82/15.80	14.29	12.28/12.00	齿顶Tooth tip
SV2010 SV2020	11	13	16/32	22.17/22.15	19.03	18.63/18.35	齿顶Tooth tip

### ■ V10NF/V20NF Series-Power Steering pump



**V20 - NF - 1 - S - 8 - T - 138 - A - 4 - D - \* - L**

#### Vane Pump Series

V10= Model Series  
V20= Model Series

#### Series

NF = Series (Flow control valve cover & internal drain)

#### Pump Mounting

	V10NF	V20NF
1=2Bolt Flange 3.25 Pilot	√	√
2=Footmount-body inlet port at 12 o'clock (Viewed from shaft end)	x	√
3=Power take-off	x	√
4=Face	x	√
23=Body inlet port at 3 o'clock	x	√
26=Body inlet port at 6 o'clock	x	√
29=Body inlet port at 9 o'clock	x	√

#### Inlet Port Connections

	V10NF	V20NF
P=1.25"NPT Pipe Thd.Connection	√	√
S=1.625"-12 Straight Thd.Connection	√	√
D=1.312"-12 Straight Thd.Connection	x	√
F=2Bolt Flange Connection	x	√

#### Ring Capacity in U.S. gpm

All values rated at 1200 rpm

V10 Size	V20 Size	V20 Size
2=2 gpm(7.6lpm)	5 = 5 gpm (18.9 lpm)	10 = 10 gpm (37.8 lpm)
3=3 gpm(11.4lpm)	6 = 6 gpm (22.7 lpm)	11 = 11 gpm (41.6 lpm)
4=4 gpm(15.1lpm)	7 = 7 gpm (26.5 lpm)	12 = 12 gpm (45.4 lpm)
5=5 gpm(18.9.4lpm)	8 = 8 gpm (30.3 lpm)	13 = 13 gpm (49.2 lpm)
6=6 gpm(23.1lpm)	9 = 9 gpm (34.1 lpm)	
7=7 gpm(27.2lpm)		

#### Flow Control Cover

T = Pressure port .75" -16 Str. Thd.

#### Shaft Rotation

\* = Omit for Right-hand (Clockwise) Rotation  
L = Left-hand (Counter-Clockwise) Rotation

#### Design

#### Pressure Setting

C = 750 psi (51.7 bar)	H = 2000 psi (137.9 bar)
D = 1000 psi (68.9 bar)	J = 2250 psi (155.1 bar)
E = 1250 psi (86.2 bar)	K = 2500 psi (172.4 bar)
F = 1500 psi (103.4 bar)	L = 2750 psi (189.6 bar)
G = 1750 psi (120.6 bar)	

#### Flow Rate Through Orifice in Cover

	V10NF	V20NF
2=2gpm(7.6lpm)	√	√
3=3gpm(11.4gpm)	√	√
4=4gpm(15.1gpm)	√	√
5=5gpm(18.9gpm)	√	√
6=6gpm(23.1lpm)	x	√
7=7gpm(27.2lpm)	x	√
8=8gpm(31 lpm)	x	√
9=9gpm(34.8lpm)	x	√
10=10gpm(37.8lpm)	x	√

#### Position of Primary Outlet Port

A = Opposite Inlet Port (Viewed from Cover End of Pump)  
B = 90° CCW from Inlet (Viewed from Cover End of Pump)  
C = Inline with Inlet Port (Viewed from Cover End of Pump)  
D = 90° CW from Inlet (Viewed from Cover End of Pump)

#### Shafts

##### V10NF

1 = Standard Straight Keyed  
3 = Threaded  
6 = Straight Stub  
10 = Threaded Stub  
11 = Splined  
38 = Splined

##### V20NF

**For 10-13 gpm units**  
1 = Standard Straight Keyed  
3 = Threaded  
6 = Straight Stub  
10 = Threaded Stub  
11 = Splined  
38 = Splined  
**For 7-9 gpm units**  
101 = Standard Straight Keyed  
103 = Threaded  
138 = Splined  
**For 5-6 gpm units**  
203 = Threaded  
238 = Splined

■ VTM42 Series-Power Steering Pump



**VTM - 42 - 10 - 07 - 02 - \*\* - F - 7 - R - \* - 14 - S\*\***

**Vane Pump Series**

VTM = Model Series

**Mobile Application**

**Capacity**

- 10 = 1.0 gpm (3.8 lpm)
- 15 = 1.5 gpm (5.7 lpm)
- 20 = 2.0 gpm (7.6 lpm)
- 40 = 4.0 gpm (15.1 lpm)
- 50 = 5.0 gpm (18.9 lpm)
- 60 = 6.0 gpm (22.7 lpm)

**Controlled Flow in U.S. gpm**

All values rated at 1500 rpm & 100 psi

- |                         |                         |
|-------------------------|-------------------------|
| 07 = 0.7 gpm (2.6 lpm)  | 45 = 4.5 gpm (17.0 lpm) |
| 15 = 1.5 gpm (5.7 lpm)  | 50 = 5.0 gpm (18.9 lpm) |
| 20 = 2.0 gpm (7.6 lpm)  | 55 = 5.5 gpm (20.8 lpm) |
| 25 = 2.5 gpm (9.5 lpm)  | 60 = 6.0 gpm (22.7 lpm) |
| 30 = 3.0 gpm (11.4 lpm) | 65 = 6.5 gpm (24.6 lpm) |
| 35 = 3.5 gpm (13.2 lpm) | 75 = 7.5 gpm (28.4 lpm) |
| 40 = 4.0 gpm (15.1 lpm) |                         |

**Relief Valve Setting**

- |                          |                           |
|--------------------------|---------------------------|
| 02 = 250 psi (17.2 bar)  | 12 = 1250 psi (86.2 bar)  |
| 03 = 300 psi (20.7 bar)  | 15 = 1500 psi (103.4 bar) |
| 05 = 500 psi (34.5 bar)  | 17 = 1750 psi (120.7 bar) |
| 07 = 750 psi (51.7 bar)  | 20 = 2000 psi (137.9 bar) |
| 08 = 850 psi (58.6 bar)  | 35 = 3500 psi (241.3 bar) |
| 10 = 1000 psi (68.9 bar) |                           |

**Special Features**

**Design**

**Shaft No. 1**

Threaded Keyed Shaft

**Shaft Rotation**

(Viewed from shaft end)

R = Right-hand (Clockwise) Rotation

L = Left-hand (Counter-Clockwise) Rotation

**Reservoir or Manifold**

7 = 70 cu. in Reservoir

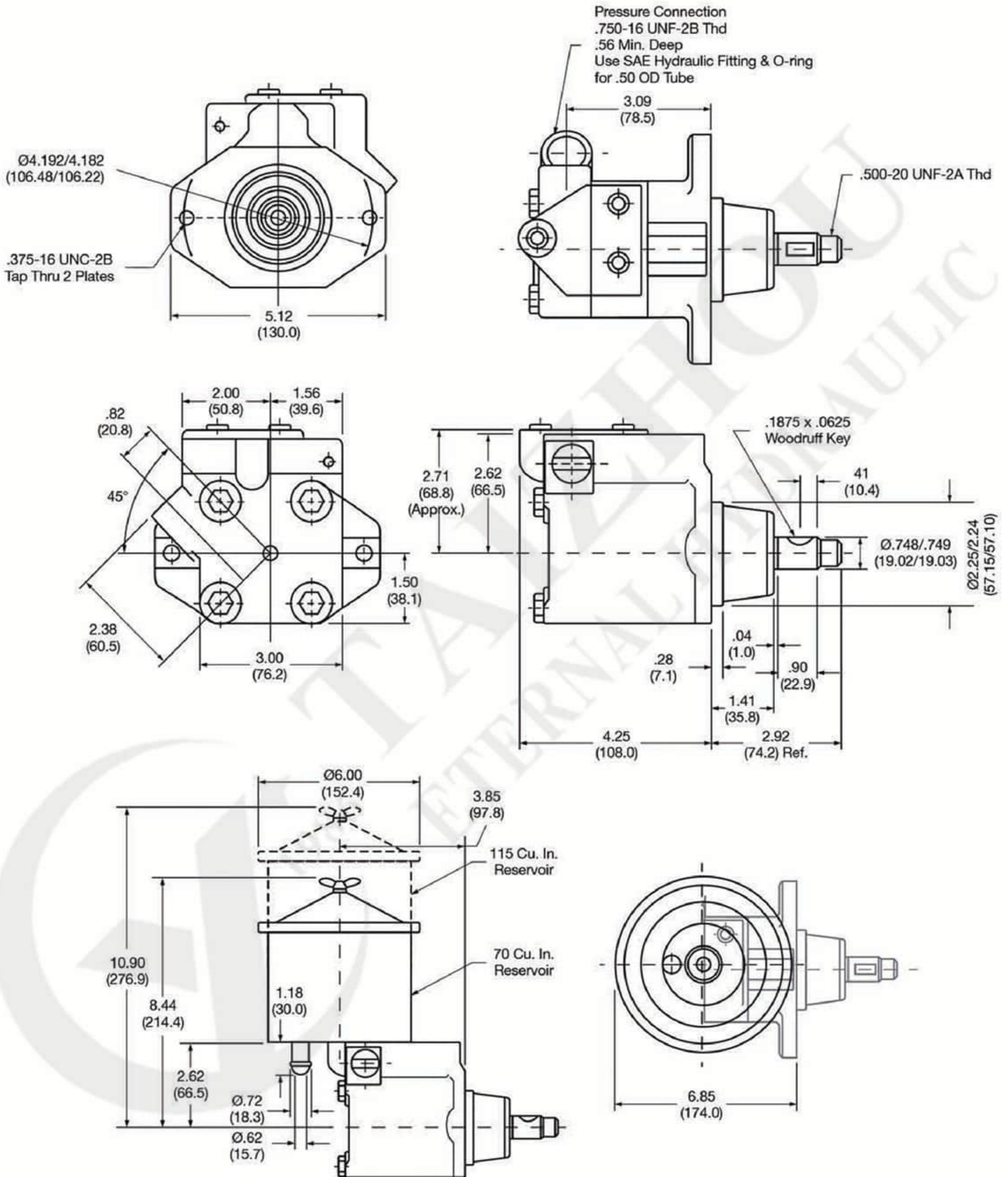
11 = 115 cu. in Reservoir

\* = Shipping Closure

**Inlet Screen**

**Filter Parts**

■ VTM42 Series-Power Steering Pump Dimension



SGP1 系列齿轮泵 SGP1 gear oil pumps



型号说明 Model Code

SGP1 — 32 D 2 H 1 — L XXX  
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

- ①SGP1 Series
- ②法兰止口尺寸 Mounting spigot diameter  
—:  $\Phi 82_{-0.086}^{+0.051}$  A:  $\Phi 82.55_{0.05}^0$   
C:  $\Phi 80_{-0.046}^0$  B:  $\Phi 85_{-0.09}^{+0.036}$
- ③公称排量 (毫升/转)  
Nominal displacement (ml/r)  
19、23、25、27、30、32、34、36
- ④油口位置 Position of ports  
D. 后面油口 Rear port  
F. 侧面油口 (在后盖上) Side port (on cover rear)  
A. 侧面油口 (在泵体上) Side port (on body)
- ⑤油口形式 Port type  
1.SAE 法兰油口 (只用于侧面)  
SAE flange port (side only)  
进油口 Inlet:  $\Phi 25$ ; 52.4\*26.2; 4-M10\*1.25  
出油口 Outlet:  $\Phi 20$ ; 47.6\*22.2; 4-M10\*1.25  
2.G 螺纹 (JISB2351) 同 PF 螺纹  
G screw thread (JISB2351) same as PF

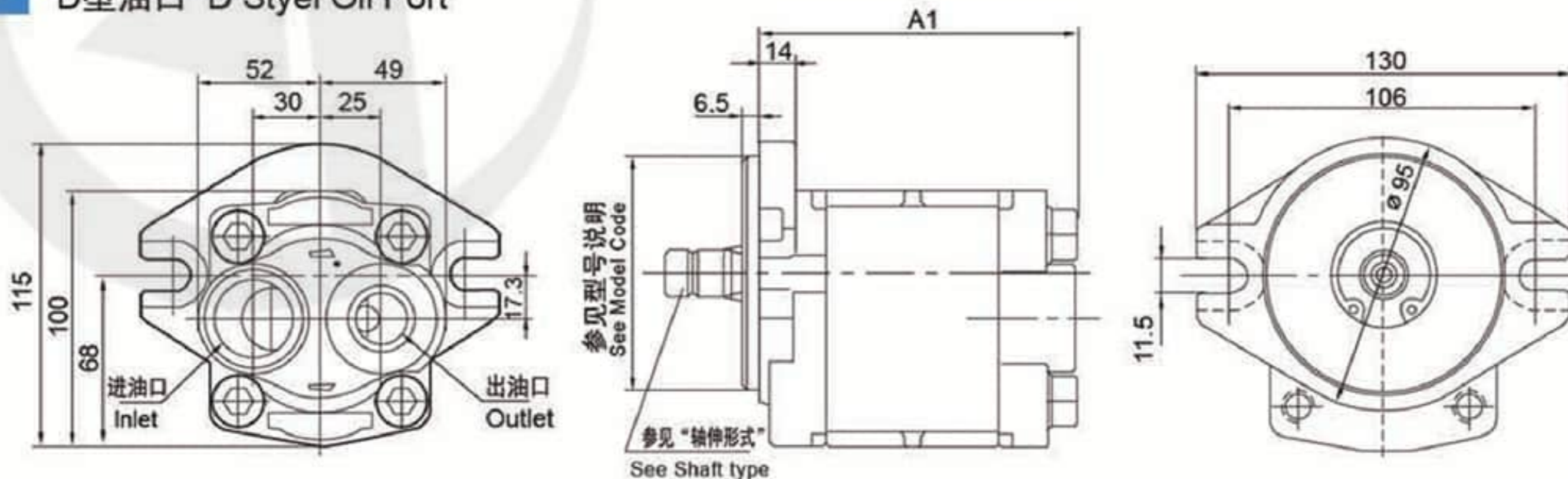
Mark	G	G1	G2	G3
进油口 Inlet	G1	G1	G1½	G1½
出油口 Outlet	G½	G¾	G¾	G¾

- 3.UNF 螺纹 UNF screw thread
- 4.公制螺纹 Metric screw thread
- 9.特殊 Special
- ⑥安装方式 Mounting  
H: 水平方向2个螺栓中心距 Horizontal 2 bolts:106  
H1: 水平方向2个螺栓中心距 Horizontal 2 bolts:130
- ⑦轴伸方式 Shaft type  
1. SAE 花键 SAE spline: 16/32DP, 齿数 Teeth No.: 13, 长 Length: 42  
2. 平键圆柱 (轴伸直径  $\Phi 20$ ) Straight spline (dia.  $\Phi 20$ )  
5. SAE 花键 SAE spline: 16/32DP, 齿数 Teeth No.: 10, 长 Length: 33  
H. 矩形花键 Rectangle spline: 6-20\*16\*4, 长 Length: 70  
H1. 矩形花键 Rectangle spline: 6-20\*16\*4, 长 Length: 41.5
- 9.特殊 Special
- ⑧旋转方向 (轴端看) Direction of rotation (from shaft end)  
L: 左旋 (逆时针) Left rotation (counterclockwise)  
R: 右旋 (顺时针) Right rotation (clockwise)
- ⑨设计序号 Code number

性能参数 Specification

型号 Model	公称排量 Nominal displacement (ml/r)	压力 Pressure (Mpa)		转速 Rotation speed (r/min)			容积效率 Volumetric Efficiency ( $\geq\%$ )	L	重量 Weight (kg)
		额定 Rated	最高 Max	最低 Min	额定 Rated	最高 Max			
SGP1-19	19	20	25	600	2500	3000	92	115.5	3.5
SGP1-23	23							118.5	3.7
SGP1-25	25							122.5	4.0
SGP1-27	27							124.5	4.0
SGP1-30	30							126.5	4.1
SGP1-32	32							131.5	4.3
SGP1-34	34							136.5	4.5
SGP1-36	36							136.5	4.5

D型油口 D Style Oil Port



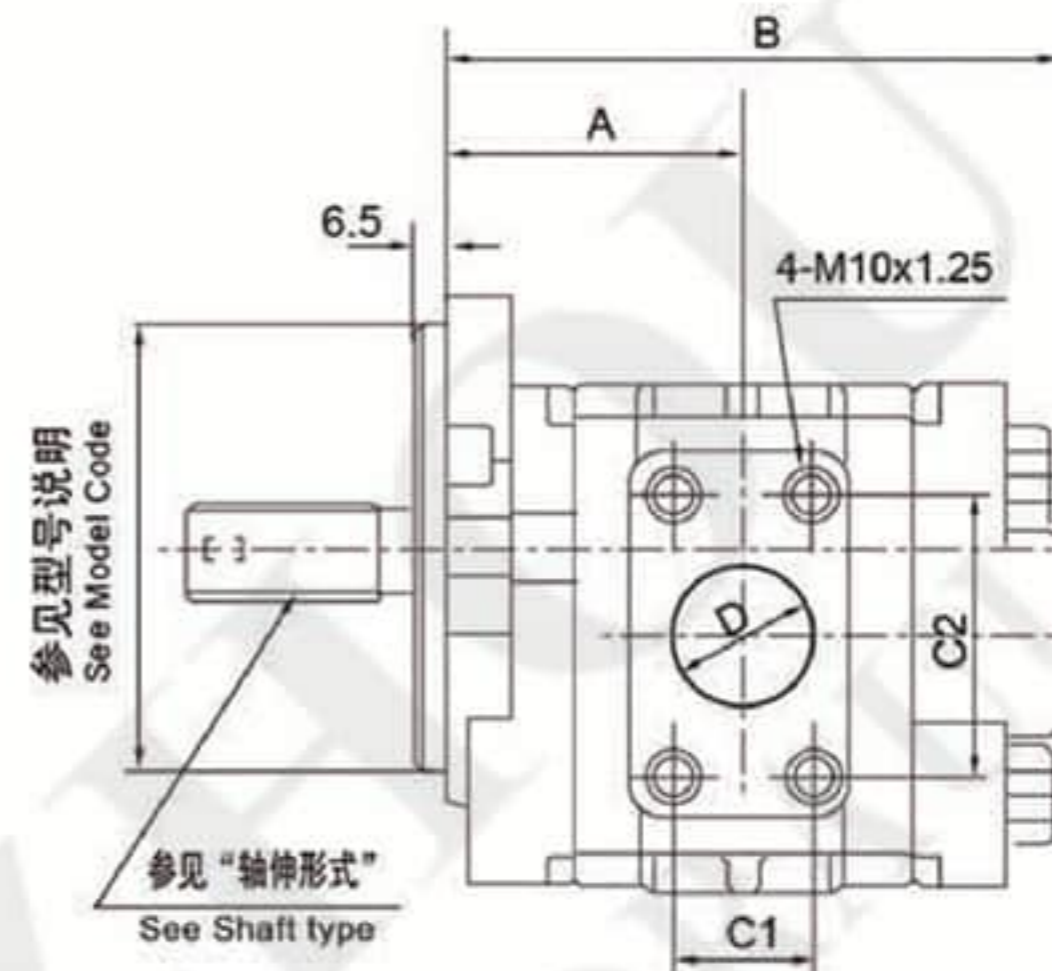
后进后出 (Rear Port)

排量 Displacement	23	25	27	30	32	36
A1	117	118	122	124	128	132

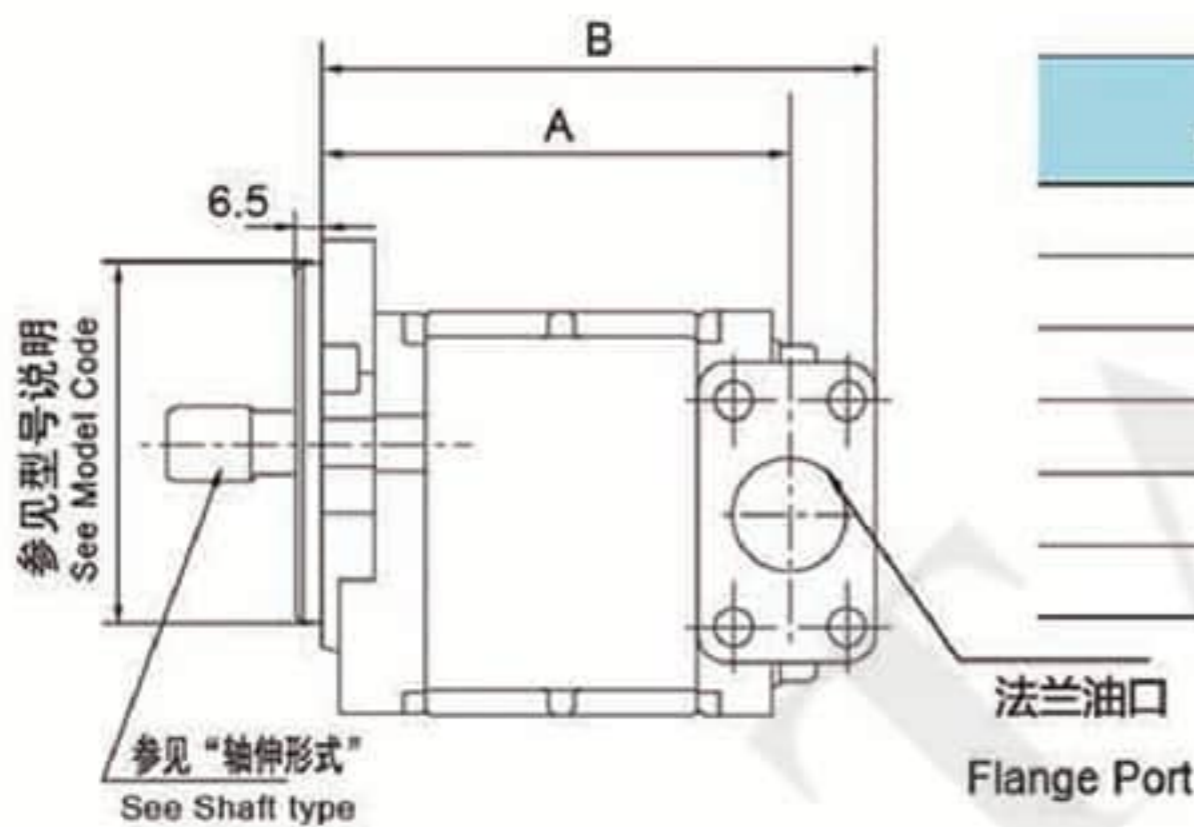
A型油口 A Style Oil Port

侧面油口 (Side Port)

排量 Displacement	A	B	进油口 Inlet port			出油口 outlet port		
			C1	C2	D	C1	C2	D
30	64.3	124						
32	66.3	128	26.2	52.4	25	22.2	47.6	20
36	68.3	132						



F型油口 F Style Oil Port

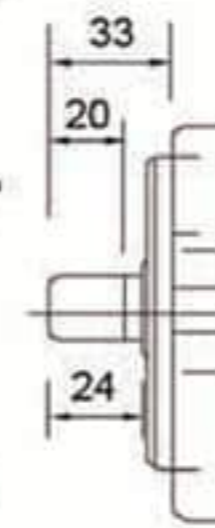


排量 Displacement	A	B
23	107.0	130.5
25	108.5	132
27	112.0	135.5
30	114.5	138
32	118.5	142.0
36	122.5	146.0

- 1: SAE 标准  
齿数 Tooth No. 13  
D. P. 16/32  
压力角 Pressure angle 30°  
C. P. O. 1963”  
外径 Outer dia.  
ø 21.80  
ø 21.68  
齿底径 Inner dia. ø 18.63

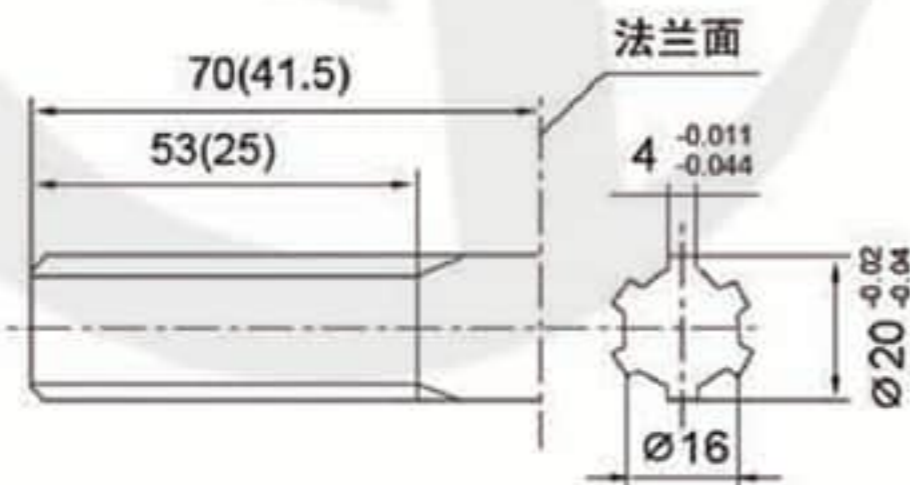


- 5: SAE 标准  
齿数 Tooth No.10  
D. P. 16/32  
压力角 Pressure angle 30°  
C. P. O. 1963”  
外径 Outer dia.  
ø 17.043  
ø 16.916  
齿底径 Inner dia. ø 13.86

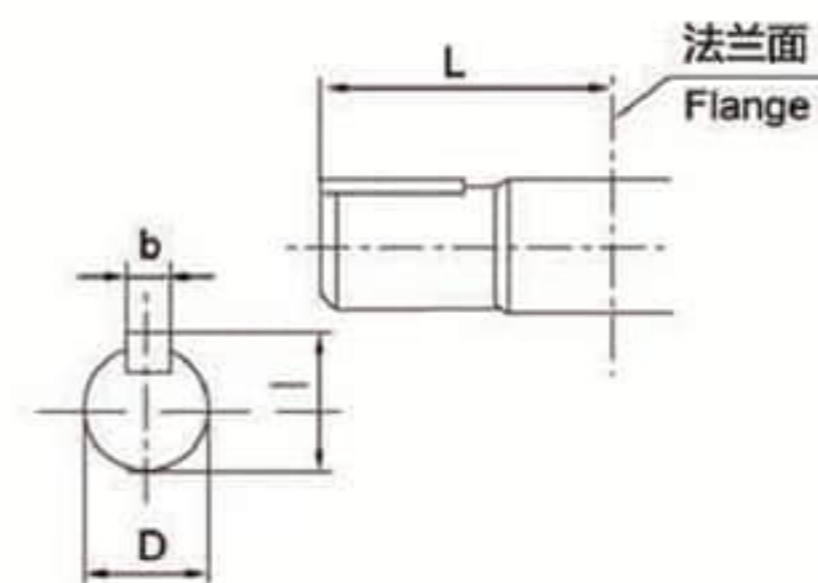


H, H1: 矩形花键

9: 特殊定货 Special ord



2: 平键 Straight Spline



轴伸形式 Shaft end	D	b	l	L
2号平键 Straight spline NO.2	20	6	22.5	42

( )内尺寸为H1号轴伸尺寸