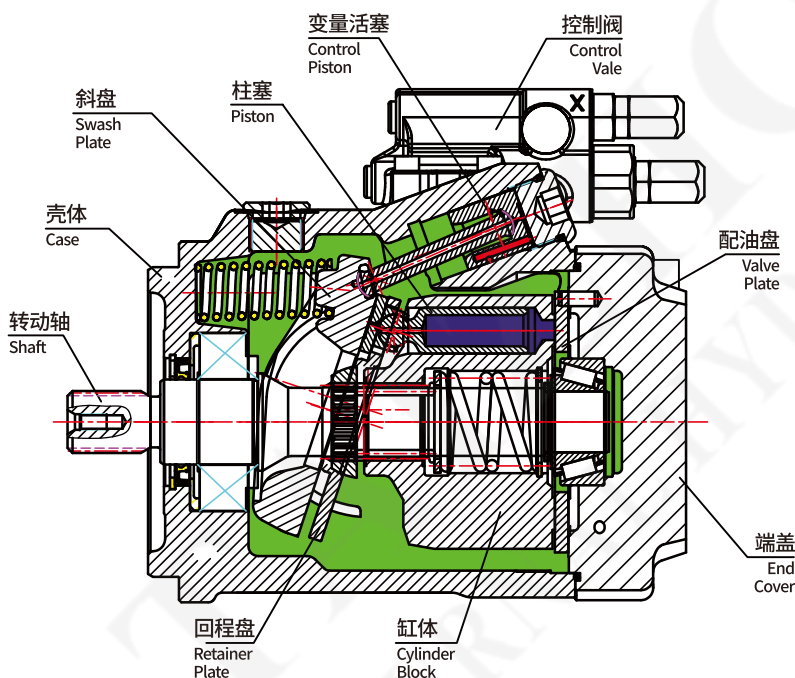


概述 Overview

A10VSO/5253系列变量柱塞泵均为斜盘式轴向柱塞变量泵，为行走机械用设计，都是专为开式回路液压驱动设计的，采用通轴结构，额定工作压力可达25MPa。

A10VO/5253 series variable displacement piston pump swash plate axial plunger variable pump, respectively for mobile machinery design, is designed for open loop hydraulic driven design, adopts a shaft structure, rated working pressure up to 25Mpa.



特点

- ※ 配有轴向柱塞转子组的斜盘式变量泵，用于开式回路中的静压驱动。
- ※ 流量与传动速度和排量成比例。
- ※ 通过调节旋转斜盘角度，可实现流量的无级调节。
- ※ 实现长久使用寿命的稳定存储
- ※ 高允许传动速度
- ※ 有利的功率/重量比—紧凑尺寸
- ※ 低噪音
- ※ 出色的吸油特性
- ※ 电动液压控制
- ※ 功率控制
- ※ 电比例摆动角控制
- ※ 较短的响应时间

Features

- ※ Variable pump with axial piston rotary group in swash-plate design for hydrostatic drives in open circuit.
- ※ The flow is proportional to the drive speed and the displacement.
- ※ The flow can be infinitely varied by adjusting the swash-plate angle.
- ※ Stable bearing for long service life
- ※ High permissible drive speed
- ※ Favorable power-to-weight ratio—compact dimensions
- ※ Low noise
- ※ Excellent suction characteristics
- ※ Electro-hydraulic pressure control
- ※ Power control
- ※ Electro-proportional swivel angle control
- ※ Short response times

型号标识 Type Code

	A10VS	O	45	DR	/	52	R	—	V	S	D	12	N00
	1	2	3	4		5	6		7	8	9	10	11

1-结构分类 Machinery Classification

轴向柱塞，直轴式，可变量，工程机械用 Axial piston, swash plate design, variable, used in industry	A10V
---	------

2-运行模式 Operational Mode

开式回路 Open circuit	O
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3-规格 Size

公称排量Nominal displacement mL/r	10	28	45	60	85	
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4-控制机构 Control Devices

压力控制 Pressure Control			●	●	●	●	●	DR
	带流量控制 with flow controller	X-T开启open	●	●	●	●	●	DFR
		X-T关闭plugged	●	●	●	●	●	DFR1
	带远程压力控制Remote pressure control		●	●	●	●	●	DRG
	电气Electric	负控制negative control	-	●	●	●	●	ED72

5-系列 Series

	52
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6-旋转方向（从轴端看）Rotating Direction(View on Shaft End)

顺时针 Clockwise	R
逆时针 Counterclockwise	L

7-密封 Seals

氟橡胶VitonFKM	V
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8-轴伸 Shaft End

平键轴伸Keyed shaft DIN6885	●	-	-	-	-	P
花键轴伸Splined shaft SAE	●	●	●	●	●	S
花键轴伸Splined shaft SAE(类似于S轴，较高的通轴驱动转矩)	-	●	●	●	●	R
花键轴伸Splined shaft SAE(直径较小)	●	●	●	●	●	U
花键轴伸Splined shaft SAE(类似于U轴，较高的通轴驱动转矩)	-	●	●	●	●	W

9-安装法兰 Mounting Flange

ISO3019-2(ISO)	●	-	-	-	-	A
ISO3019-1(ISO)	●	-	-	-	-	C
	-	-	-	●	-	D

图表说明Chart shows: ●=可以供货Available, ○=在准备中In preparation, -=无Not available

10-工作油口 Service Line Ports

			10	28	45	60	85	
SAE法兰油口 公制紧固螺纹	后部	不用于通轴驱动	-	●	●	●	●	11
	侧面	适用于通轴驱动	-	●	●	●	●	12
	侧面90° 偏置	不用于通轴驱动仅适用于逆时针旋转	-	-	●	-	-	13
公制螺纹油口	后部	不用于通轴驱动	●	-	-	-	-	14

11-通轴驱动 Through Drive

无通轴驱动 Without through drive		●	●	●	●	●	N00
带通轴驱动，从泵连接尺寸如下 With through drive, the second pump connection dimension as follows							
安装法兰 Mounting flange	轴伸 Spline shaft						
SAE82-2(A)	5/8 in 9 T 16/32DP	-	●	●	●	●	K01
	3/4 in 11T 16/32DP	-	●	●	●	●	K52
SAE101-2(B)	7/8 in 13T 16/32DP	-	●	●	●	●	K68
	1 in 15T 16/32DP	-	-	●	●	●	K04
SAE127-4	1 1/4 in 14T 12/24DP	-	-	-	●	●	K15
	1 1/2 in 17T 12/24DP	-	-	-	-	●	K16
SAE127-2	1 1/4 in 14T 12/24DP	-	-	-	-	●	K07
	1 1/2 in 17T 12/24DP	-	-	-	-	●	K24

型号标识 Type Code

	A10VS	O	63	LA8D	/	53	R	—	V	S	D	12	N00
	1	2	3	4		5	6		7	8	9	10	11

1-结构分类 Machinery Classification

轴向柱塞，直轴式，可变量，工程机械用 Axial piston, swash plate design, variable, used in industry	A10V
---	------

2-运行模式 Operational Mode

开式回路 Open circuit	O
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3-规格 Size

公称排量Nominal displacement mL/r	18	28	45	63	72	85	100	
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4-控制机构 Control Devices

			18	28	45	63	72	85	100	
压力控制 Pressure Control			●	●	●	●	●	●	●	DR
	带流量控制 with flow controller	X-T开启open	●	●	●	●	●	●	●	DFR
		X-T关闭plugged	●	●	●	●	●	●	●	DFR1
	带远程压力控制Remote pressure control		●	●	●	●	●	●	●	DRG
	电气Electric	负控制negative control	●	●	●	●	●	●	●	ED72
功率控制 Power control	带压力切断 With pressure cut-off 功率控制初始值为: beginning of control		至5MPa	●	●	●	●	●	●	LA5D
			自5.1至9MPa	●	●	●	●	●	●	LA6D
			自9.1至16MPa	●	●	●	●	●	●	LA7D
			自16.1至24MPa	●	●	●	●	●	●	LA8D
			超过24MPa	●	●	●	●	●	●	LA8D
功率控制, 带压力切断, 远程控制 Power controller with pressure cut-off , remotely operated		功率初始值同上	●	●	●	●	●	●	●	LA*DG
功率控制, 带压力切断, 流量控制, X-T关闭 Power controller with pressure cut-off flow control, X-T plugged		功率初始值同上	●	●	●	●	●	●	●	LA*DS
功率控制, 带单独流量控制, X-T关闭 Power controller flow control, X-T plugged, electrically over-ridable (negative control)		功率初始值同上	●	●	●	●	●	●	●	LA*S

5-系列 Series

	53
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6-旋转方向 (从轴端看) Rotating Direction(View on Shaft End)

顺时针 Clockwise	R
逆时针 Counterclockwise	L

7-密封 Seals

氟橡胶VitonFKM	V
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8-轴伸 Shaft End

花键轴伸Splined shaft SAE	●	●	●	●	●	●	●	S
花键轴伸Splined shaft SAE(类似于S轴, 较高的通轴驱动转矩)	●	●	●	●	●	●	●	R
花键轴伸Splined shaft SAE(直径较小)	●	●	●	●	●	●	●	U
花键轴伸Splined shaft SAE(类似于U轴, 较高的通轴驱动转矩)	-	●	●	●	●	●	●	W

9-安装法兰 Mounting Flange

ISO3019-1(ISO)	●	●	●	●	●	●	●	C
	-	-	-	●	●	●	●	D

10-工作油口 Service Line Ports

SAE法兰油口 公制紧固螺纹	后部	不用于通轴驱动	●	●	●	●	●	●	11
	侧面	适用于通轴驱动	●	●	●	●	●	●	12
	侧面90° 偏置	不用于通轴驱动 仅适用于逆时针旋转	-	-	●	-	-	-	13

11-通轴驱动Through Drive

		18	28	45	63	72	85	100	
无通轴驱动 Without through drive		●	●	●	●	●	●	●	N00
带通轴驱动, 从泵连接尺寸如下 With through drive, the second pump connection dimension as follows									
安装法兰 Mounting flange	轴伸 Spline shaft								
SAE82-2(A)	5/8in9T16/32DP	●	●	●	●	●	●	●	K01
	3/4in11T16/32DP	●	●	●	●	●	●	●	K52
SAE101-2(B)	7/8in13T16/32DP	-	●	●	●	●	●	●	K68
	1in15T16/32DP	-	-	●	●	●	●	●	K04
SAE127-4	11/4in14T12/24DP	-	-	-	●	●	●	●	K15
	11/2in 17T12/24DP	-	-	-	-	-	●	●	K16
SAE127-2	11/4in14T12/24DP	-	-	-	-	-	●	●	K07
	11/2in17T12/24DP	-	-	-	-	-	●	●	K24

技术参数 Technical Data

■参数表 Parameters Table

规格 Size				10	18	28	45	60	63	72	85	100
排量Displacement		$V_{g\max}$	mL/r	10.5	18	28	45	60	63	72	85	100
最大转速 ¹⁾ Max. speed $P_s = 1\text{bar}$	$V_g = V_{g\max}$ 时	$n_{o\max}$	r/min	3600	3300	3000	2600	2700	2600	2600	2500	2300
	$V_g < V_{g\max}$ 时		r/min	4320	3960	3600	3120	3140	3140	3140	3000	2500
最大流量 Max. flow	$n = n_{o\max}$ 时	$q_{vo\max}$	L/min	37	59	84	117	162	163	187	212	230
	$n = 1500\text{ r/min}$ 时		L/min	15	27	42	68	90	95	108	128	150
最大功率 Maximum power ($\Delta p = 280\text{ bar}$)	$n = n_{o\max}$ 时	$p_{o\max}$	kW	16	25	35	49	65	68	77	89	96
	$n = 1500\text{ r/min}$ 时		kW	7	11	18	28	37	39	45	53	62
扭矩 Torque ($V_g = V_{g\max}$)	$\Delta p = 280\text{ bar}$ 时	$T_{\max}$	Nm	42	71	111	179	238	250	286	338	398
	$\Delta p = 100\text{ bar}$ 时	T	Nm	17	29	45	72	95	100	114	135	159
旋转刚度 Torsional stiffness	轴伸 S Shaft extension S	C	Nm/rad	9200	11000	22300	37500	65500	65500	65500	143000	143000
	轴伸 R Shaft extension R	C	Nm/rad	-	14800	26300	41000	69400	69400	69400	152900	-
	轴伸 U Shaft extension U	C	Nm/rad	6800	8000	16700	30000	49200	49200	49200	102900	102900
	轴伸 W Shaft extension W	C	Nm/rad	-	-	19900	34400	54000	54000	54000	117900	117900
	轴伸 P Shaft extension P	C	Nm/rad	10700	-	-	-	-	-	-	-	-
旋转总成转动惯量 Moment of inertia of the rotating assembly		J	kgm ²	0.0006	0.0009	0.0017	0.003	0.0056	0.0056	0.0056	0.012	0.012
最大角加速度 Max. angular acceleration		a	rad/s ²	8000	6800	5500	4000	3300	3300	3300	2700	2700
壳体容积 Volume of case		V	L	0.2	0.25	0.3	0.5	0.8	0.8	0.8	1	1
重量 不含通轴驱动 Weight		m	kg	8	11.5	15	18	22	22	22	36	36
重量 含通轴驱动 Weight				-	13	18	24	28	28	28	45	45

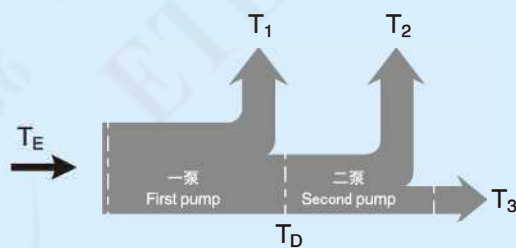
规格 Size				10	18	28	45	60	63	72	85	100	
扭矩Torque (Vgmax且△ p=280 bar时)			T _{max}	Nm	42	71	111	179	250	250	321	338	398
最大输入扭矩 ¹⁾ Max. input torque ¹⁾	轴伸 S Shaft extension S	T _{Emax}	Nm	126	124	198	319	630	630	630	1157	1104	
		φ	in	3/4	3/4	7/8	1	1 1/4	1 1/4	1 1/4	1 1/2	1 1/2	
	轴伸 R Shaft extension R	T _{Emax}	Nm	—	160	250	400	650	650	650	1215	—	
		φ	in	—	3/4	7/8	1	1 1/4	1 1/4	1 1/4	1 1/2	—	
	轴伸 U Shaft extension U	T _{Emax}	Nm	60	59	105	188	306	306	306	628	595	
		φ	in	5/8	5/8	3/4	7/8	1	1	1	1 1/4	1 1/4	
	轴伸 W Shaft extension W	T _{Emax}	Nm	—	—	140	220	396	396	383	650	636	
		φ	in	—	—	3/4	7/8	1	1	1	1 1/4	1 1/4	
	轴伸 P Shaft extension P	T _{Emax}	Nm	90	—	—	—	—	—	—	—	—	
		φ	mm	18	—	—	—	—	—	—	—	—	
	轴伸 S Shaft extension S	T _{Dmax}	Nm	—	108	160	319	484	484	484	698	778	
	轴伸 R Shaft extension R	T _{Dmax}	Nm	—	120	176	365	484	484	484	698	—	
	轴伸 U Shaft extension U	T _{Dmax}	Nm	—	59	105	188	306	306	306	628	595	
	轴伸 W Shaft extension W	T _{Dmax}	Nm	—	—	140	220	396	396	383	650	636	

1) $V_g = V_{g \text{ max}}$ 时的数值适用于吸油口 S 的进口压力为 $P_s = 1 \text{ bar}$ (绝对压力) 时的情况, 当进口压力 P_s 增加或排量减小, 则转速可增加, 当进口压力为 $P_{s \text{ min}} = 0.8 \text{ bar}$ 时, 转速应减小至 90%。 $V_g < V_{g \text{ max}}$ 时的数值为转速极限。

1) Once $V_g = V_{g \text{ max}}$, the value is applicable to the inlet pressure at suction port S is $P_s = 1 \text{ bar}$ (absolute pressure), when the inlet pressure P_s increase or decrease the displacement, the speed can be increased, when the inlet pressure $P_{s \text{ min}} = 0.8 \text{ bar}$, the speed should be reduced to 90%. $V_g < V_{g \text{ max}}$ value when the speed limit.

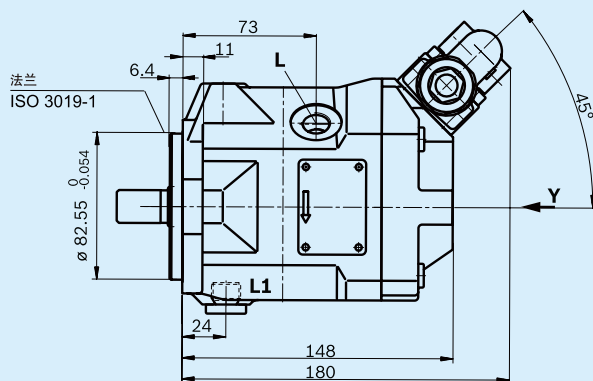
2) 适用于无径向力作用的传动轴 For drive shaft free of radial load

扭矩分布 Torque Distribution

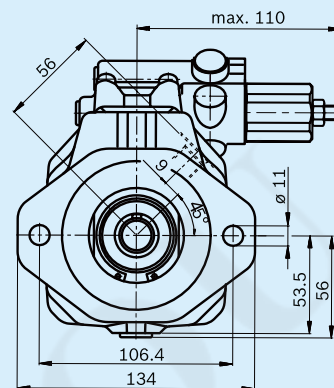
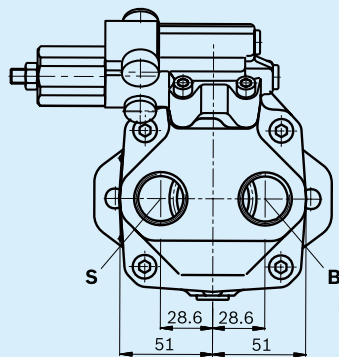


外形尺寸 规格10 (控制机构DR、DRG、DFR/DFR1) Dimensions size 10 (Control devices DR, DRG, DFR/DFR1)

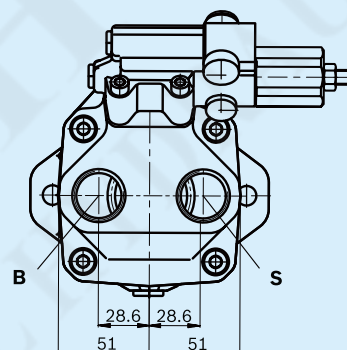
DR - 压力控制器; SAE C 型安装法兰; 系列 52



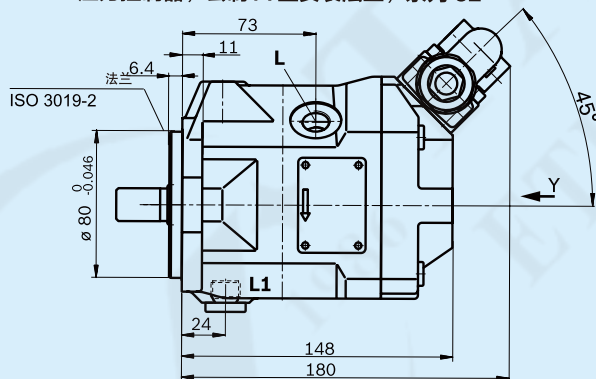
▼ Y视图
适合顺时针旋转的
阀安装



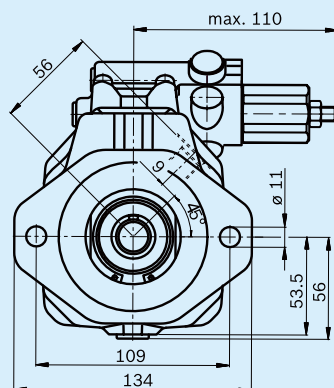
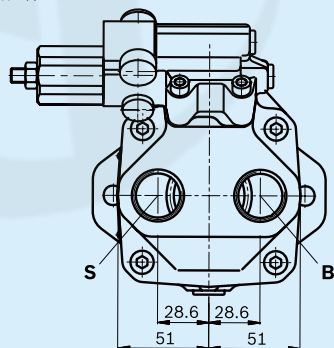
▼ Y视图
适合逆时针旋转的
阀安装



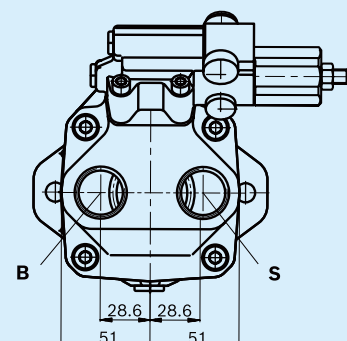
DR - 压力控制器; 公制 A 型安装法兰; 系列 52



▼ Y视图
适合顺时针旋转的
阀安装

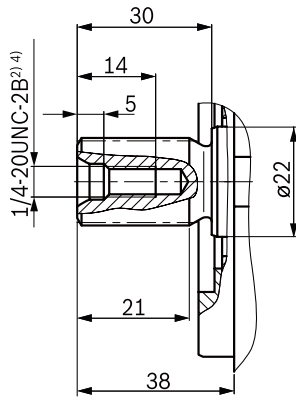


▼ Y视图
适合顺时针旋转的
阀安装

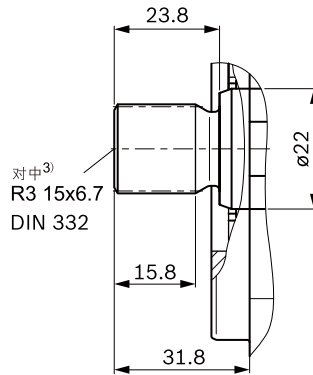


轴伸 Shaft

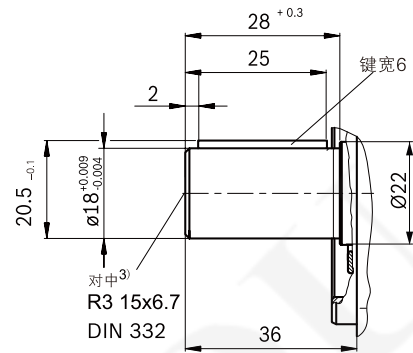
S 花键轴, 11T 16/32DP¹⁾
3/4 英寸 (SAE J744)



U 花键轴, 9T 16/32DP¹⁾
5/8 英寸 (SAE J744)



P 平键轴 DIN6885, A6x6x25

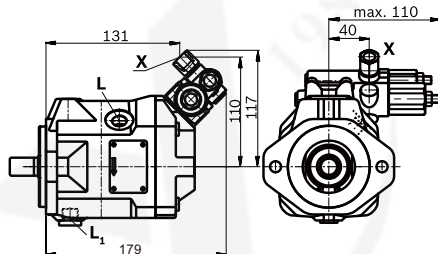


油口 Ports		标准	规格 ⁴⁾	P _{max} [bar] ⁵⁾	状态 ⁴⁾
B	出油口Outlet port	DIN 3852	M27x2;16深	315	O
S	进油口Suction port	DIN 3852	M27x2;16深	5	O
公制A型安装法兰处油口					
L	泄油口Drain port	DIN 3852 ⁶⁾	M16x1.5;12深	2	O ⁷⁾
L ₁	泄油口Drain port	DIN 3852 ⁶⁾	M16x1.5;12深	2	X ⁷⁾
X (带适配器)	控制压力Control pressure for DG control	DIN 3852	M14x1.5;11.5深	315	O
SAEC型安装法兰处油口					
L	泄油口Drain port	DIN 11926 ⁶⁾	9/16-18UNF-2B;10深	2	O ⁷⁾
L ₁	泄油口Drain port	DIN 11926 ⁶⁾	9/16-18UNF-2B;10深	2	X ⁷⁾
X (不带适配器)	控制压力Control pressure for DG control	DIN 11926	7/16-20UNF-2B;11.5深	315	O

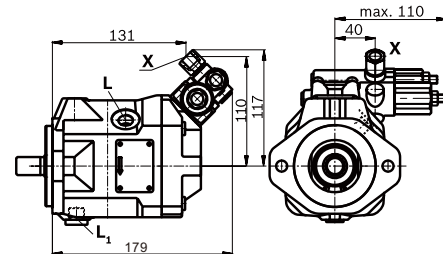
- 1)渐开线花键, 符合 ANSI B92.1a, 30° 压力角, 平齿根, 侧面配合, 公差等级 5
- 2)符合 ASME B1.1 标准的螺纹
- 3)轴向耦合固定, 例如使用夹紧耦合器或径向安装锁紧螺钉
- 4)请遵照操作说明中有关最大紧固扭矩的说明。
- 5)根据不同的应用情况, 可能会出现瞬时压力峰值。选择测量设备和接头时应考虑这一点。
- 6)孔口平面可以比标准规定的深。
- 7)根据安装位置, 必须连接 L 或 L₁。
- 8) O = 必须连接 (交付时堵上)
- X = 堵上 (正常运行条件下)

- 1) Involute spline according to ANSI B92.1a, 30° pressure angle, flat root, side fit, tolerance class 5
- 2) Thread according to ASME B1.1
- 3) Coupling axially secured, e.g. with a clamp coupling or radially mounted clamping screw
- 4) Observe the instructions in the operating instructions concerning the maximum tightening torques.
- 5) Momentary pressure spikes may occur depending on the application. Keep this in mind when selecting measuring devices and fittings.
- 6) The spot face can be deeper than as specified in the standard.
- 7) Depending on the installation position, L or L₁ must be connected.
- 8) O = Must be connected (plugged when delivered) X = Plugged (in normal operation)

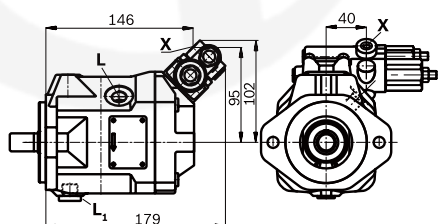
DRG - 远程压力控制 (公制)



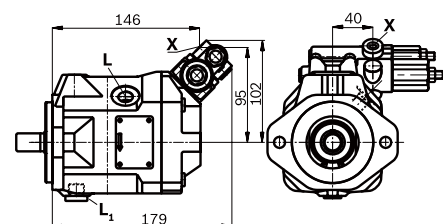
DFR/DFR1 - 压力、流量控制 (公制)



DRG - 远程压力控制 (SAE)



DFR/DFR1 - 压力、流量控制 (SAE)

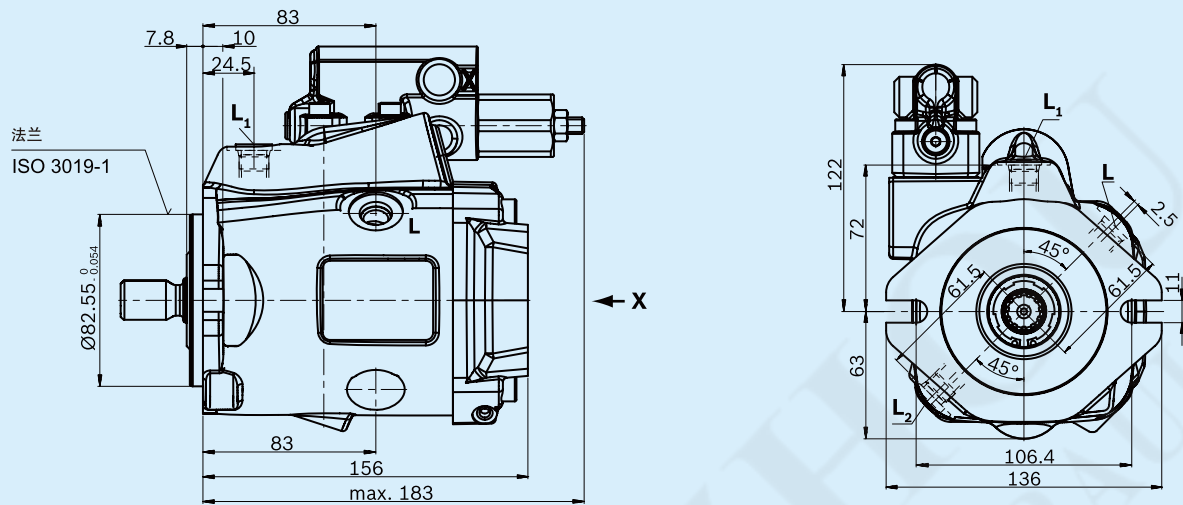


1) ER7.: 如果使用中间板压力控制器, 则为172mm。

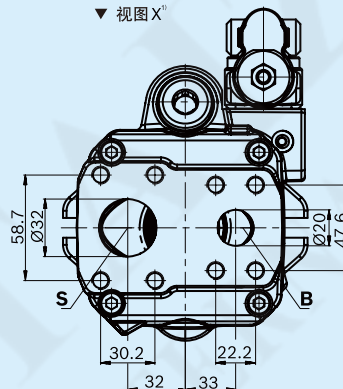
外形尺寸 规格18 (控制机构DR、DRG、DFR/DFR1) Dimensions size 18 (Control devices DR, DRG, DFR/DFR1)

DR - 液压控制器, 顺时针旋转, 系列 53

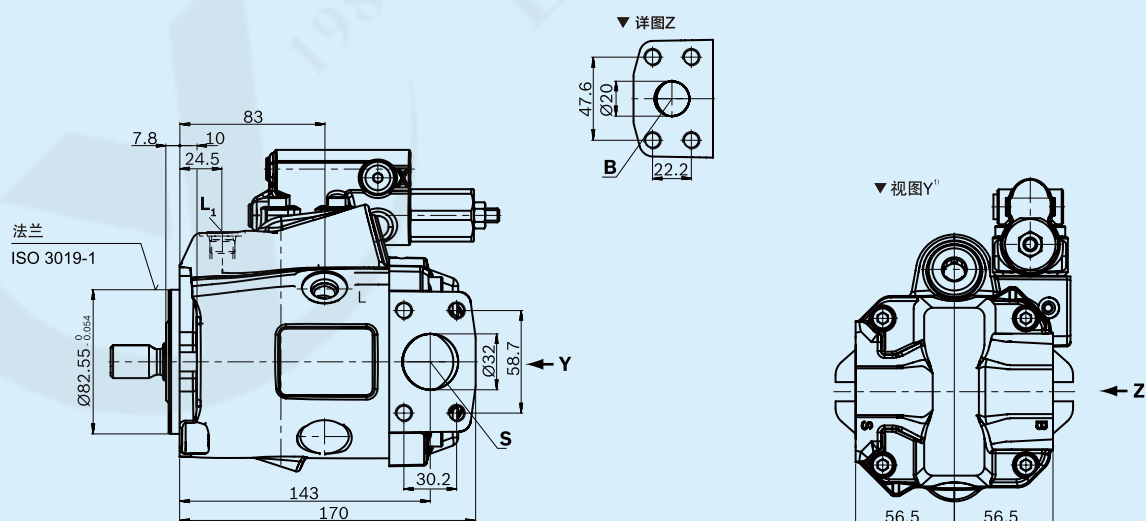
▼ 油口接板 11



▼ 视图X''

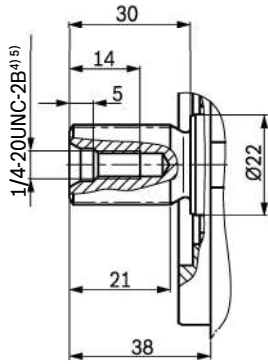


▼ 油口接板 12

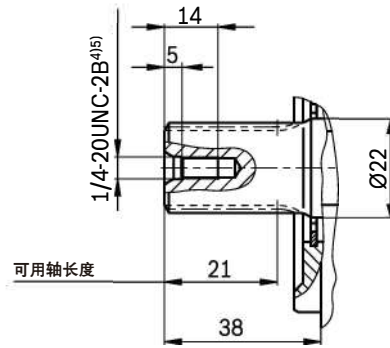


轴伸 Shaft

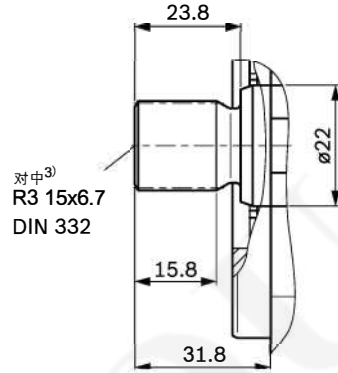
S 花键轴, 11T 16/32DP¹⁾
3/4 英寸 (SAE J744)



R 花键轴, 11T 16/32DP^{1) 2)}
3/4 英寸 (SAE J744)



U 花键轴 9T 16/32DP¹⁾
5/8 英寸 (SAE J744)



油口 Ports	标准	规格 ⁵⁾	P _{max} [bar] ⁶⁾	状态 ¹⁾
B 出口口Outlet port 紧固螺纹Fastening thread	SAE J518 ⁷⁾ DIN 13	3/4英寸 M10X1.5;17深	315	O
S 进口口Suction port 紧固螺纹Fastening thread	SAE J518 ⁷⁾ DIN 13	1 1/4英寸 M10X1.5;17深	5	O
L 泄油口Drain port	DIN 11926 ⁸⁾	3/4-16UNF-2B;12深	2	O ⁹⁾
L ₁ , L ₂ ¹⁰⁾ 泄油口Drain port	DIN 11926 ⁸⁾	3/4-16UNF-2B;12深	2	X ⁹⁾
X 控制油口Control pressure	DIN 11926	7/16-20UNF-2A;11.5深	315	O

1) 渐开线花键, 符合 ANSI B92.1a, 30° 压力角, 平齿根, 侧面配合, 公差等级 5

2) 花键 (符合 ANSI B92.1a), 花键的跳动量为与标准值的偏差。

3) 中心孔符合 DIN 332

4) 符合 ASME B11 标准的螺纹

5) 请遵照操作说明中有关最大紧固扭矩的说明。

6) 根据不同的应用情况, 可能会出现瞬时压力峰值。

7) 公制紧固螺纹与标准值之间存在偏差。

8) 孔口平面可以比标准规定的深。

9) 必须根据安装位置, 连接 L₁ 或 L₂。

10) 复系列 53

11) O = 必须连接 (交付时堵上)

X = 堵上 (正常运行条件下)

1) Involute spline according to ANSI B92.1a, 30° pressure angle, flat root, side fit, tolerance class 5

2) Splines according to ANSI B92.1a, run out of spline is a deviation from standard.

3) Center bore according to DIN 332

4) Thread according to ASME B1.1

5) Observe the instructions in the operating instructions concerning the maximum tightening torques.

6) Momentary pressure spikes may occur depending on the application. Keep this in mind when selecting measuring devices and fittings.

7) Metric fastening thread is a deviation from standard.

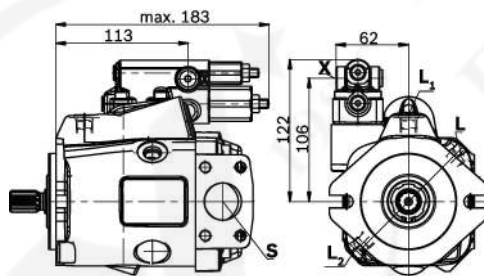
8) The spotface can be deeper than as specified in the standard.

9) Depending on the installation position, L₁ or L₂ must be connected

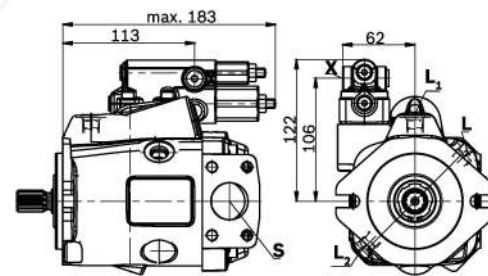
10) Only series 53

11) O = Must be connected (plugged when delivered) X = Plugged (in normal operation)

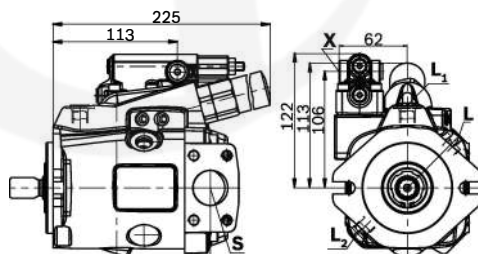
DRG - 远程压力控制器, 系列 53



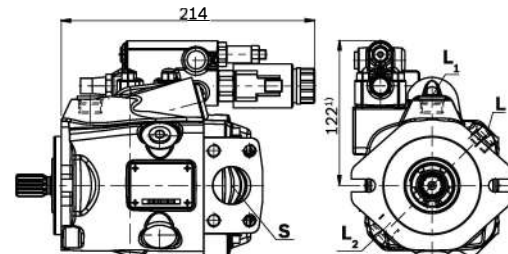
DRF/DRS/DRSC - 压力和流量控制, 系列 53



LA.D. - 压力、流量和功率控制, 系列 53



ED7./ER7. - 电比例压力控制, 系列 53

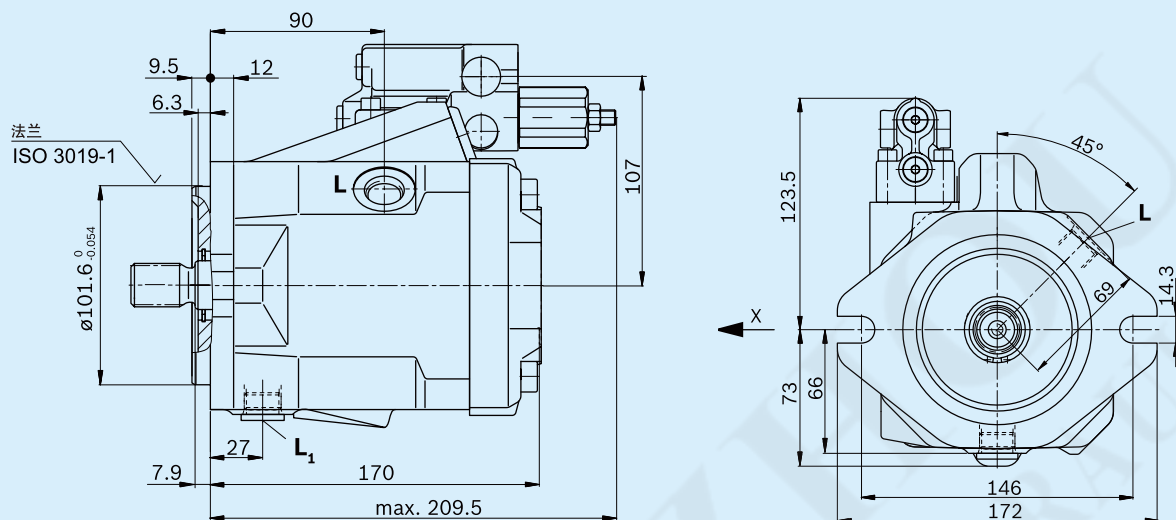


1) ER7.: 如果使用中间板压力控制器, 则为 172mm。

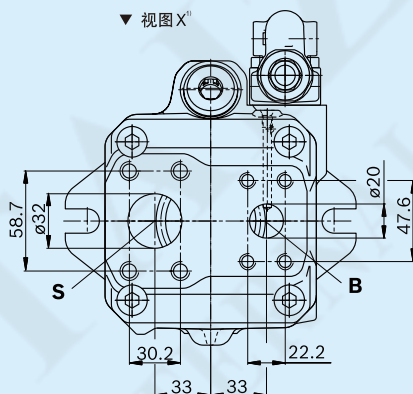
外形尺寸 规格28 (控制机构DR、DRG、DFR/DFR1) Dimensions size 28 (Control devices DR, DRG, DFR/DFR1)

DR - 液压控制器, 顺时针旋转, 系列 52

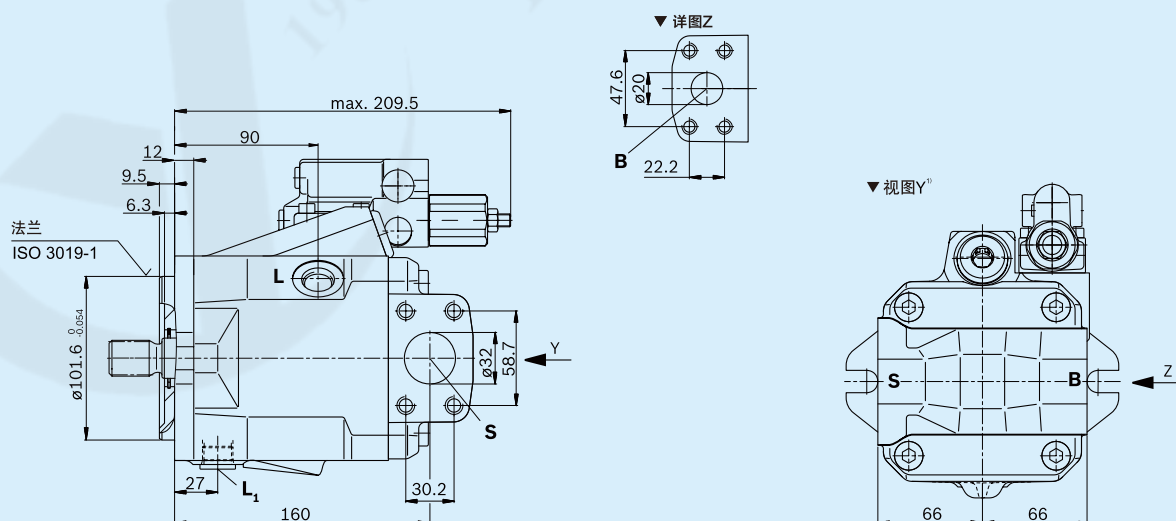
▼ 油口接板 11



▼ 视图X^{II}

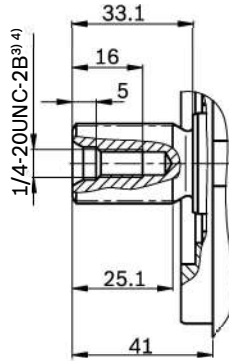


▼ 油口接板 12

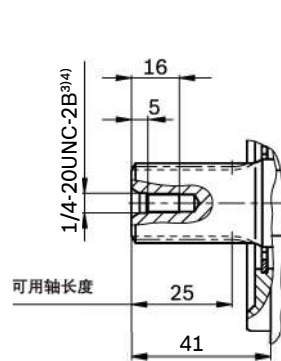


轴伸 Shaft

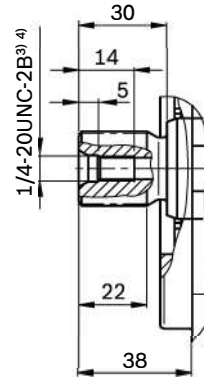
S 花键轴, 13T 16/32DP¹⁾
7/8 英寸 (SAE J744)



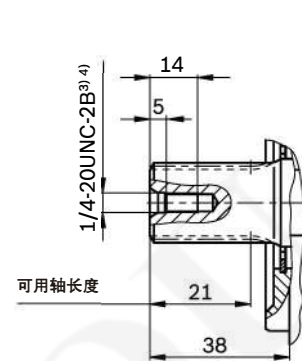
R 花键轴, 13T 16/32DP^{1) 2)}
7/8 英寸 (SAE J744)



U 花键轴, 11T 16/32DP¹⁾
3/4 英寸 (SAE J744)



W 花键轴, 11T 16/32DP^{1) 2)}
3/4 英寸 (SAE J744)



油口 Ports	标准	规格 ⁴⁾	P _{max} [bar] ⁵⁾	状态 ¹⁰⁾
B 出油口Outlet port 紧固螺纹Fastening thread	SAE J518 ⁶⁾ DIN 13	3/4英寸 M10X1.5;17深	315	O
S 进油口Suction port 紧固螺纹Fastening thread	SAE J518 ⁶⁾ DIN 13	1 1/4英寸 M10X1.5;17深	5	O
L 泄油口Drain port	DIN 11926 ⁷⁾	3/4-16UNF-2B;12深	2	O ⁸⁾
L ₁ 、L ₂ ⁹⁾ 泄油口Drain port	DIN 11926 ⁷⁾	3/4-16UNF-2B;12深	2	X ⁸⁾
X 控制油口Control pressure	DIN 11926	7/16-20UNF-2B;11.5深	315	O

1) 渐开线花键, 符合ANSI B92.1a, 30° 压力角, 平齿根, 侧面配合, 公差等级5

2) 花键(符合 ANSI B92.1a), 花键的跳动量为与标准值的偏差。

3) 符合ASME B11标准的螺纹

4) 请遵照操作说明中有关最大紧固扭矩的说明。

5) 根据不同的应用情况, 可能会出现瞬时压力峰值。选择测量设备和接头时应考虑这一点。

6) 公制紧固螺纹与标准值之间存在偏差。

7) 孔口平面可以比标准规定的深。

8) 必须根据安装位置, 连接L、L₁或L₂。

9) 仅系列53

10) O = 必须连接 (交付时堵上)

X = 堵上 (正常运行条件下)

1) Involute spline according to ANSI B92.1a, 30° pressure angle, flat root, side fit, tolerance class 5

2) Splines according to ANSI B92.1a, run out of spline is a deviation from standard.

3) Thread according to ASME B1.1

4) Observe the instructions in the operating instructions concerning the maximum tightening torques.

5) Momentary pressure spikes may occur depending on the application.Keep this in mind when selecting measuring devices and fittings.

6) Metric fastening thread is a deviation from standard.

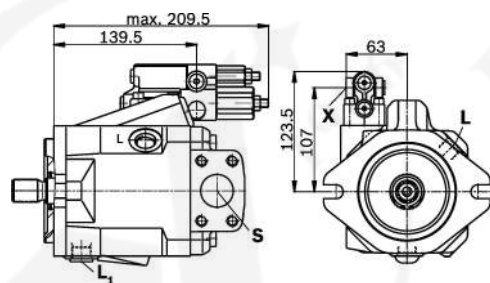
7) The spotface can be deeper than as specified in the standard.

8) Depending on the installation position, L, L₁ or L₂ must be connected

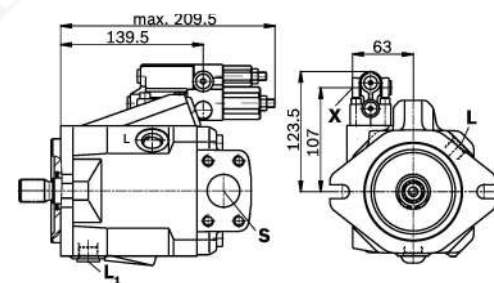
9) Only series 53

10) O = Must be connected (plugged when delivered) X = Plugged (in normal operation)

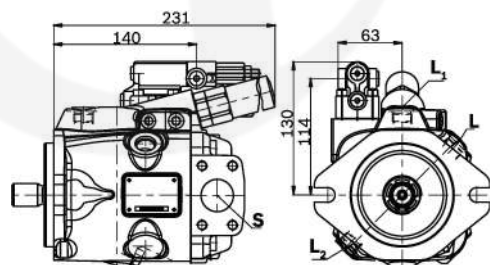
DRG - 远程压力控制器, 系列 52(53)



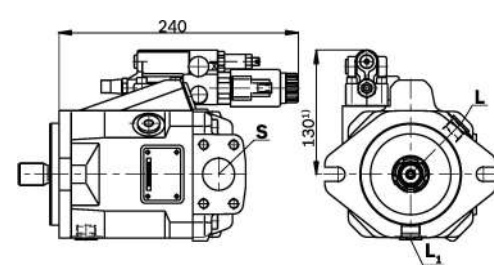
DRF/DRF1/DRSC - 压力和流量控制, 系列 52(53)



LA.D. - 压力、流量和功率控制, 系列 53



Ed7./ER7. - 电比例压力控制, 系列 52(53)

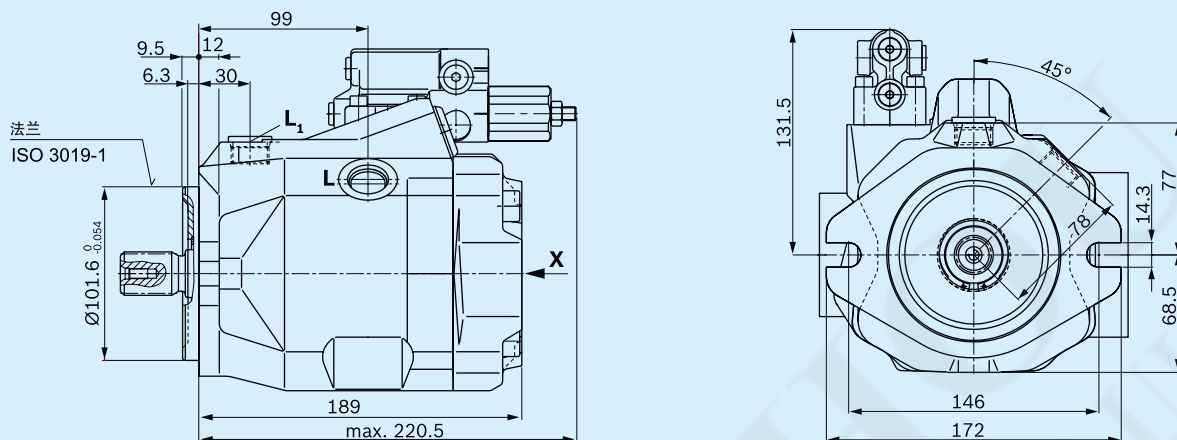


1) ER7.: 如果使用中间板压力控制器, 则为172mm。

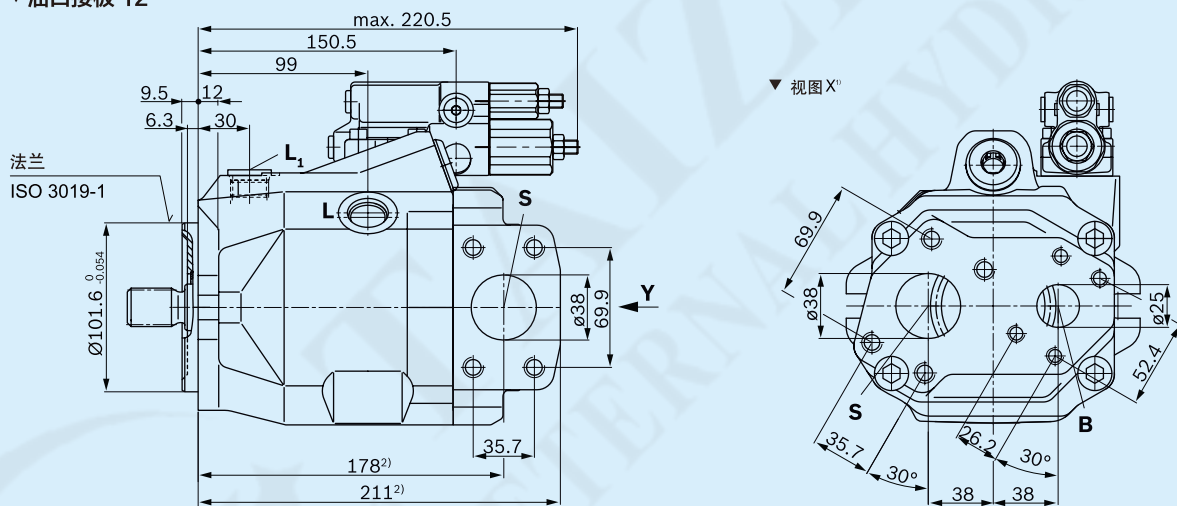
外形尺寸 规格45 (控制机构DR、DRG、DFR/DFR1) Dimensions size 45 (Control devices DR, DRG, DFR/DFR1)

DR - 液压控制器, 顺时针旋转, 系列 52

▼油口接板 11

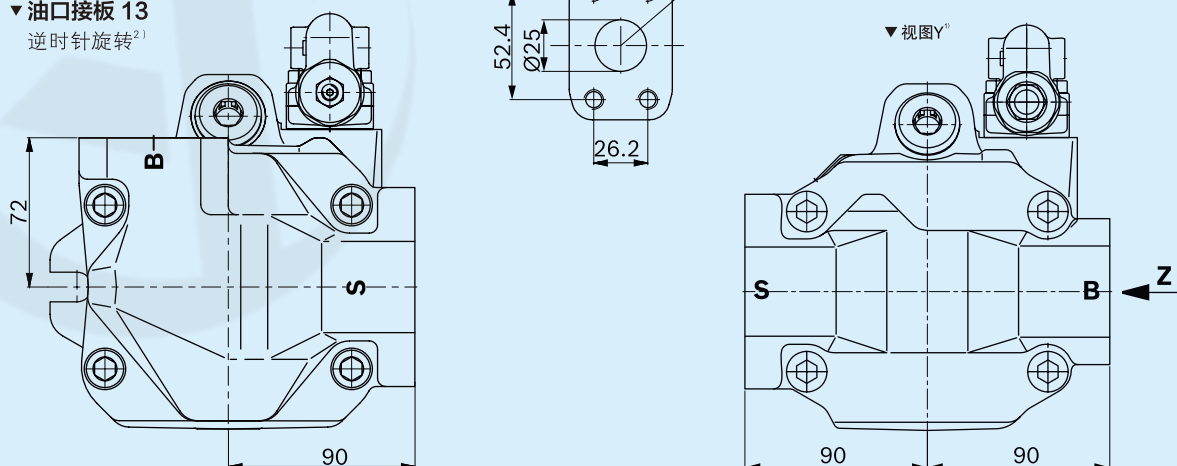


▼油口接板 12



▼油口接板 13

逆时针旋转⁽²⁾



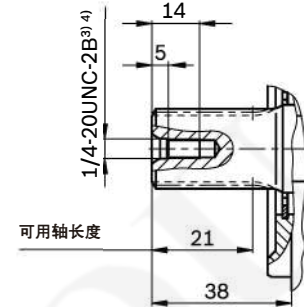
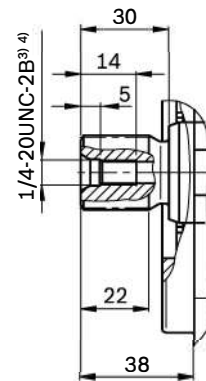
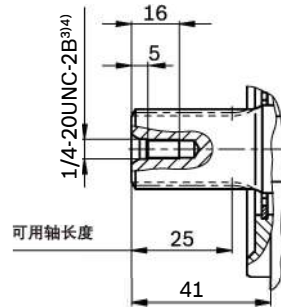
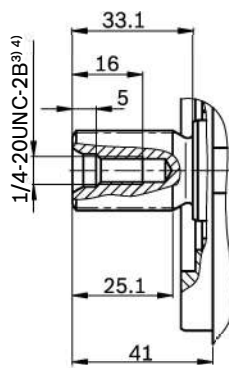
轴伸 Shaft

S 花键轴, 1in 15T 16/32DP¹⁾
(SAE J744)

R 花键轴, 1in 15T 16/32DP
(SAE J744-25-4 (B-B))

U 花键轴, 7/8in 13T 16/32DP
(SAE J744-22-4 (B))

W 花键轴, 7/8in 13T 16/32DP
(SAE J744-22-4 (B))



油口 Ports	标准	规格 ⁴⁾	P _{max} [bar] ⁵⁾	状态 ¹⁰⁾
B 出油口Outlet port 紧固螺纹Fastening thread	SAE J518 ⁸⁾ DIN 13	1英寸 M10X1.5; 17深	315	O
S 进油口Suction port 紧固螺纹Fastening thread	SAE J518 ⁸⁾ DIN 13	1英寸 M12X1.75; 20深	5	O
L 泄油口Drain port	DIN 11926 ⁷⁾	7/8-14UNF-2B; 13深	2	O ⁸⁾
L ₁ , L ₂ ⁹⁾ 泄油口Drain port	DIN 11926 ⁷⁾	7/8-14UNF-2B; 13深	2	X ⁸⁾
X 控制油口Control pressure	DIN 11926	7/16-20UNF-2A; 11.5深	315	O

1) 渐开线花键, 符合 ANSI B92.1a, 30° 压力角, 平齿根, 侧面配合, 公差等级 5

2) 花键 (符合 ANSI B92.1a), 花键的跳动量为与标准值的偏差。

3) 符合 ASME B11 标准的螺纹

4) 请遵照操作说明中有关最大紧固扭矩的说明。

5) 根据不同的应用情况, 可能会出现瞬时压力峰值。选择测量设备和接头时应考虑这一点。

6) 公制紧固螺纹与标准值之间存在偏差。

7) 孔口平面可以比标准规定的深。

8) 必须根据安装位置, 连接 L、L₁ 或 L₂。

9) 仅系列 53

10) O = 必须连接 (交付时堵上)

X = 堵上 (正常运行条件下)

1) Involute spline according to ANSI B92.1a, 30° pressure angle, flat root, side fit, tolerance class 5

2) Splines according to ANSI B92.1a, run out of spline is a deviation from standard.

3) Thread according to ASME B1.1

4) Observe the instructions in the operating instructions concerning the maximum tightening torques.

5) Momentary pressure spikes may occur depending on the application. Keep this in mind when selecting measuring devices and fittings.

6) Metric fastening thread is a deviation from standard.

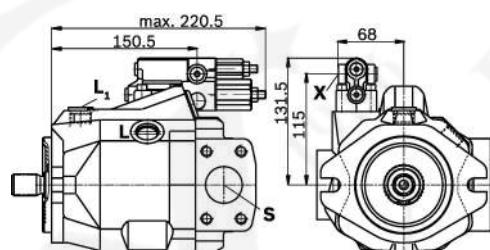
7) The spotface can be deeper than as specified in the standard.

8) Depending on the installation position, L, L₁ or L₂ must be connected

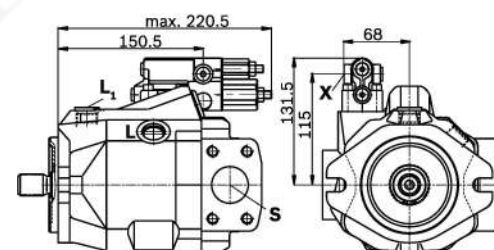
9) Only series 53

10) O = Must be connected (plugged when delivered) X = Plugged (in normal operation)

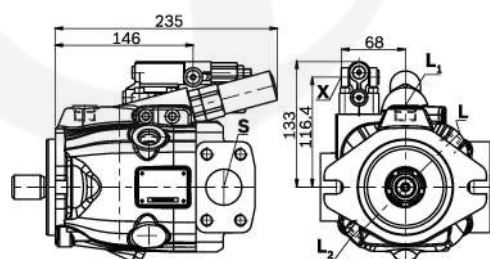
DRG - 远程压力控制器, 系列 52(53)



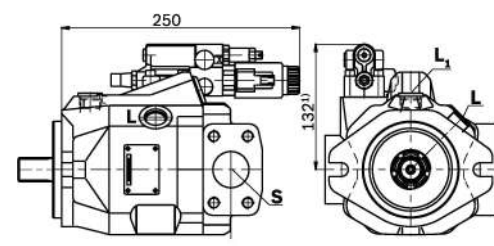
DRF/DFR1/DRSC - 压力和流量控制, 系列 52(53)



LA.D. - 压力、流量和功率控制, 系列 53



Ed7./ER7. - 电比例压力控制, 系列 52

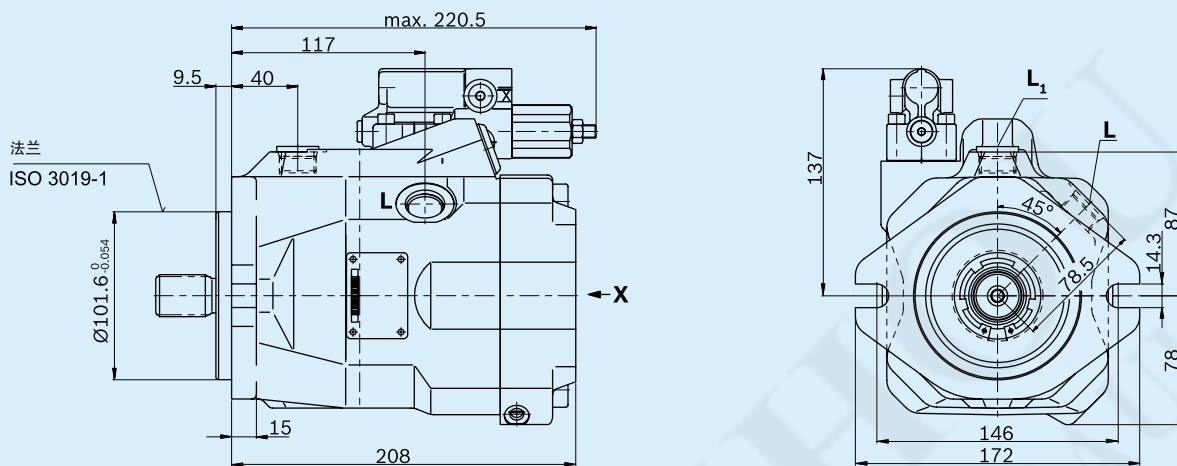


1) ER7.: 如果使用中间板压力控制器, 则为 167mm。

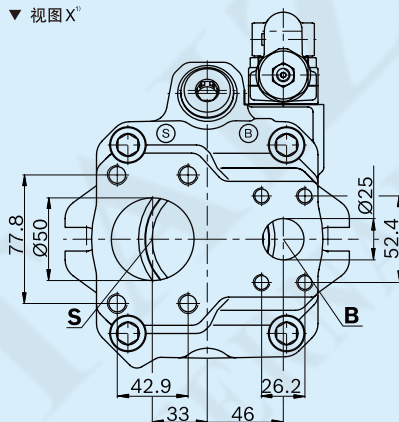
外形尺寸 规格 60 (控制机构DR、DRG、DFR/DFR1) Dimensions size 60 (Control devices DR, DRG, DFR/DFR1)

DR - 液压控制器，顺时针旋转，C型安装法兰，系列 52

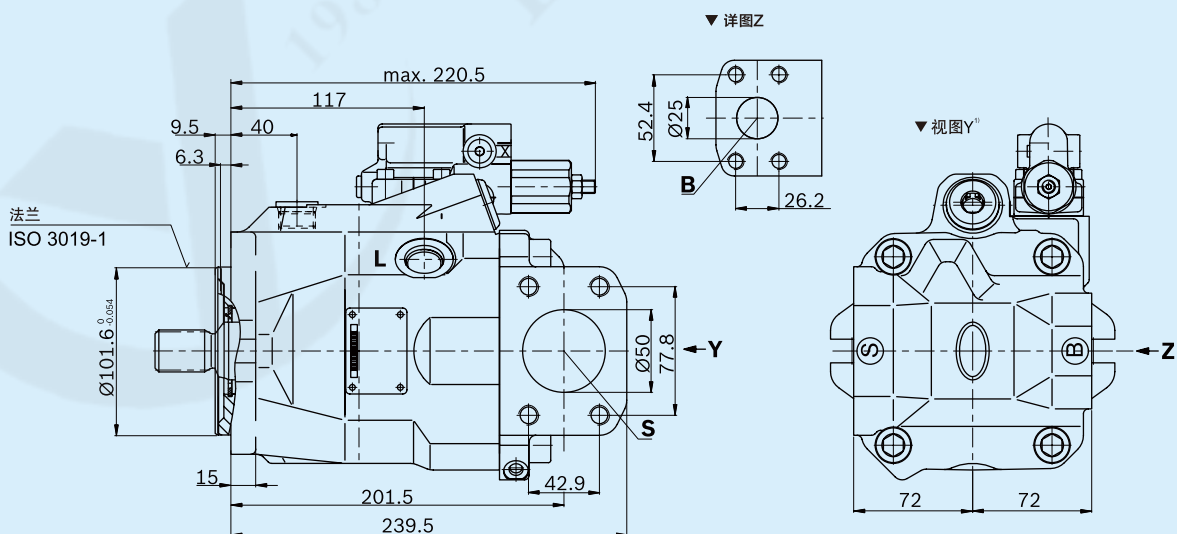
▼油口接板 11



▼ 视图X°

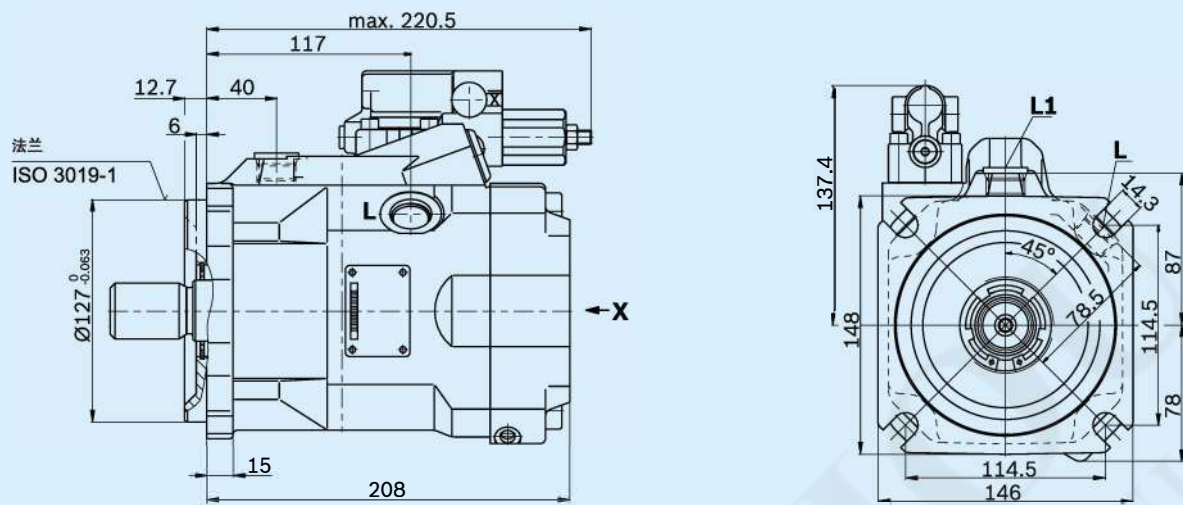


▼油口接板 12

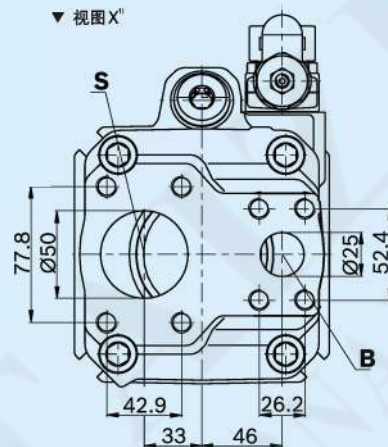


DR - 液压控制器, 顺时针旋转, D型安装法兰, 系列 52

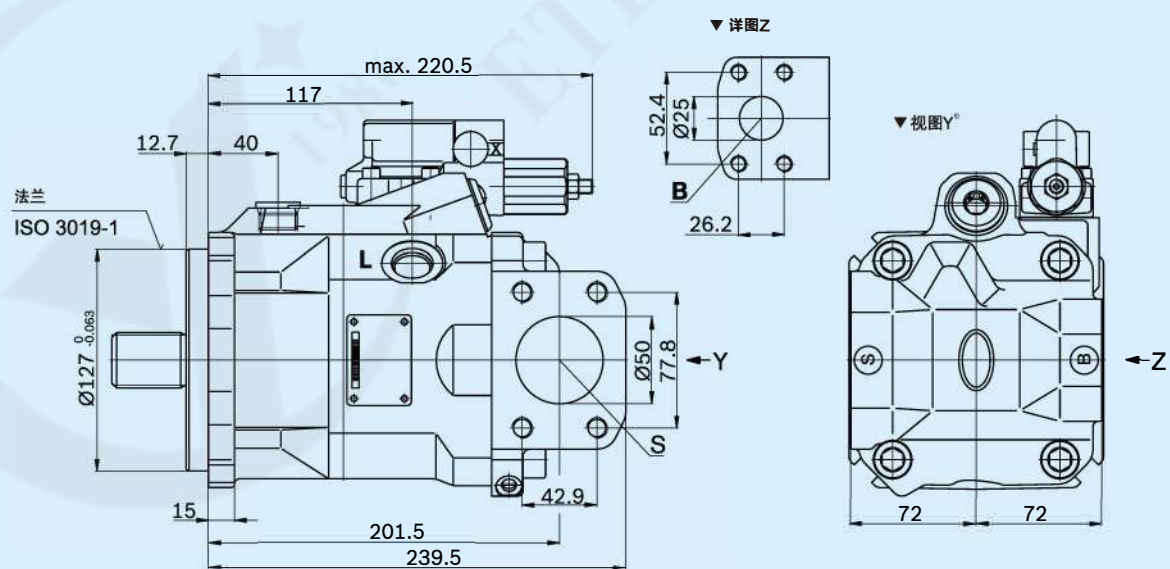
▼油口接板 11



▼视图X'

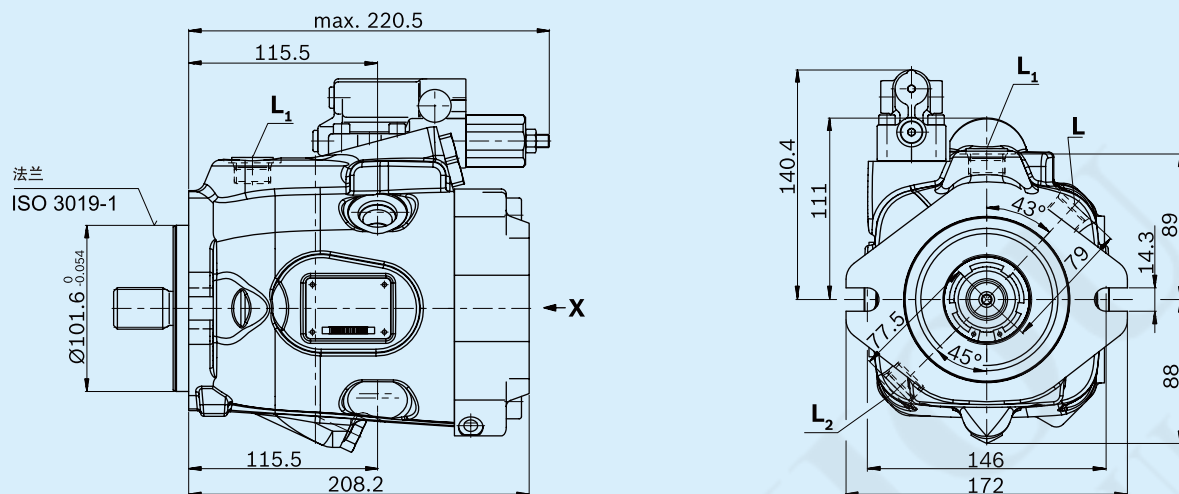


▼油口接板 12

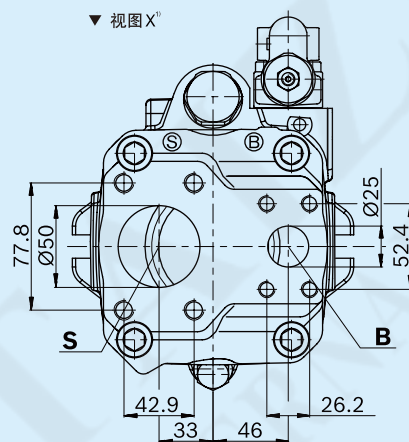


DR - 液压控制器, 顺时针旋转, C型安装法兰, 系列 53

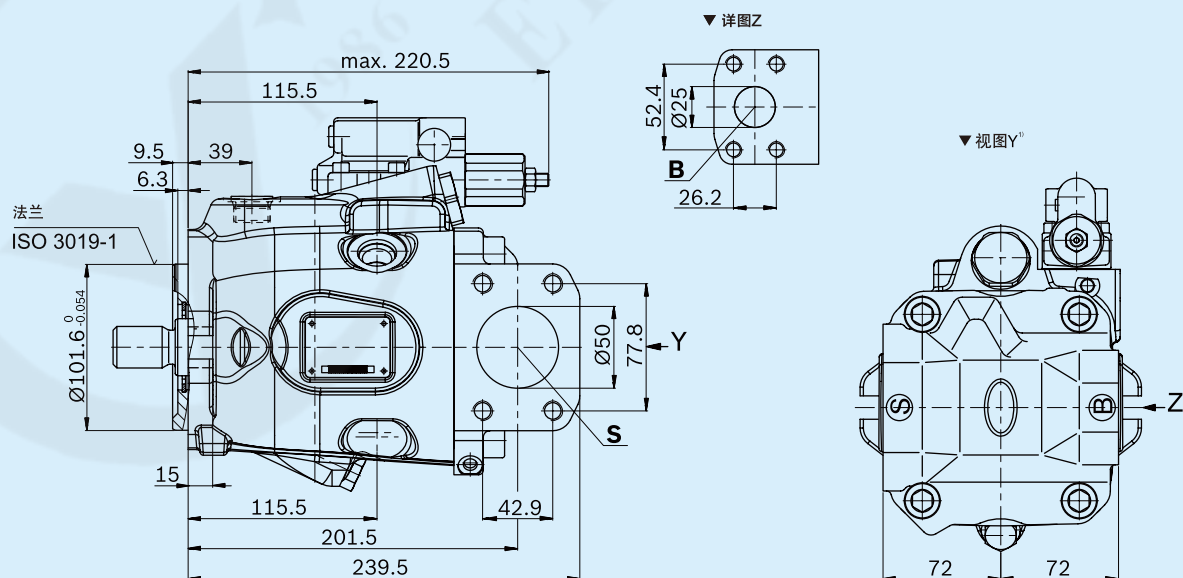
▼油口接板 11



▼ 视图X⁰



▼油口接板 12

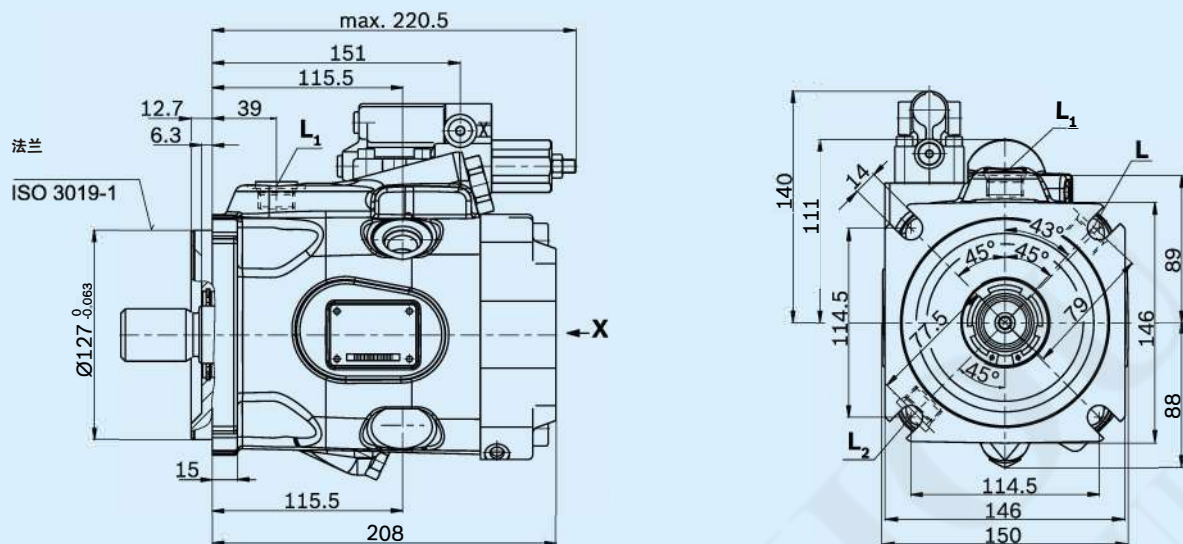


▼ 详图Z

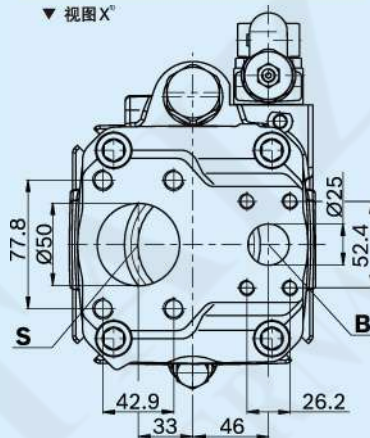
▼ 视图Y⁰

DR - 液压控制器, 顺时针旋转, D型安装法兰, 系列 53

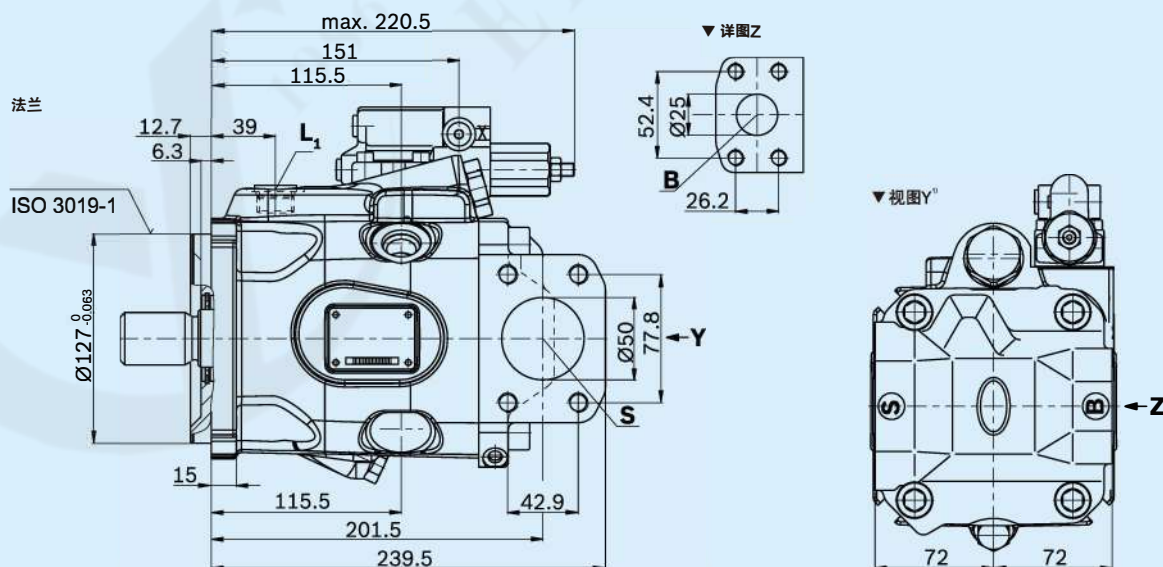
▼油口接板 11



▼视图X°

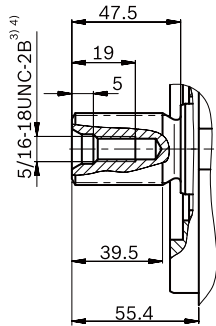


▼油口接板 12

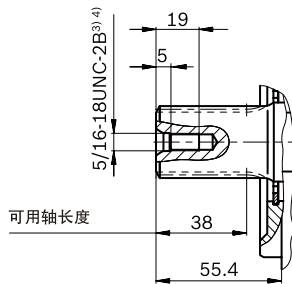


轴伸 Shaft

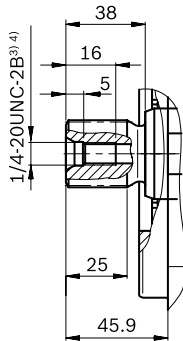
S 花键轴, 14T 12/24DP¹⁾
1 1/4 英寸 (SAE J744)



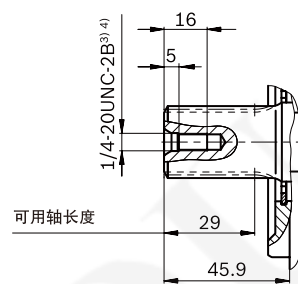
R 花键轴, 14T 12/24DP^{1) 2)}
1 1/4 英寸 (SAE J744)



U 花键轴, 15T 16/32DP¹⁾
1英寸 (SAE J744)



W 花键轴, 15T 16/32DP¹⁾²⁾
1英寸 (SAE J744)



油口 Ports	标准	规格 ⁴⁾	P _{max} [bar] ⁵⁾	状态 ¹⁰⁾
B 出油口Outlet port 紧固螺纹Fastening thread	SAE J518 ⁸⁾ DIN 13	1英寸 M10X1.5;17深	315	O
S 进油口Suction port 紧固螺纹Fastening thread	SAE J518 ⁸⁾ DIN 13	2英寸 M12X1.75;20深	5	O
L 泄油口Drain port	ISO 11926 ⁷⁾	7/8-14UNF-2B;13深	2	O ⁸⁾
L ₁ 、L ₂ ⁹⁾ 泄油口Drain port	ISO 11926 ⁷⁾	7/8-14UNF-2B;13深	2	X ⁸⁾
X 控制油口Control pressure	ISO 11926	7/16-20UNF-2A;11.5深	315	O

1) 渐开线花键, 符合 ANSI B92.1a, 30° 压力角, 平齿根, 侧面配合, 公差等级 5

2) 花键 (符合 ANSI B92.1a), 花键的跳动量为与标准值的偏差。

3) 符合 ASME B1.1 标准的螺纹

4) 请遵照操作说明中有关最大紧固扭矩的说明。

5) 根据不同的应用情况, 可能会出现瞬时压力峰值。选择测量设备和接头时应考虑这一点。

6) 公制紧固螺纹与标准值之间存在偏差。

7) 孔口平面可以比标准规定的深。

8) 必须根据安装位置, 连接 L、L₁ 或 L₂。

9) 仅用于系列 53

10) O = 必须连接 (交付时堵上)

X = 堵上 (正常运行条件下)

1) Involute spline according to ANSI B92.1a, 30° pressure angle, flat root, side fit, tolerance class 5

2) Splines according to ANSI B92.1a, run out of spline is a deviation from standard.

3) Thread according to ASME B1.1

4) Observe the instructions in the operating instructions concerning the maximum tightening torques.

5) Momentary pressure spikes may occur depending on the application. Keep this in mind when selecting measuring devices and fittings.

6) Metric fastening thread is a deviation from standard.

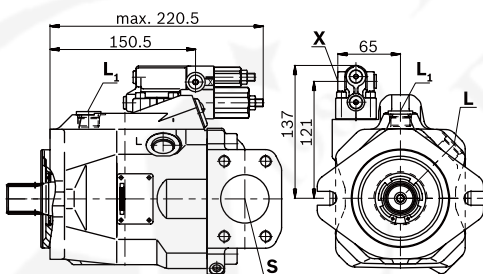
7) The spot face can be deeper than as specified in the standard.

8) Depending on the installation position, L, L₁ or L₂ must be connected

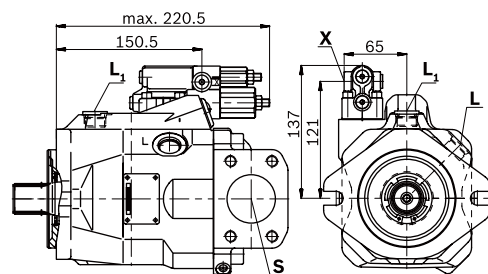
9) Only series 53

10) O = Must be connected (plugged when delivered) X = Plugged (in normal operation)

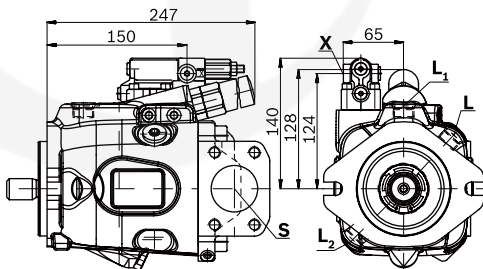
DRG - 远程压力控制器, 系列 52



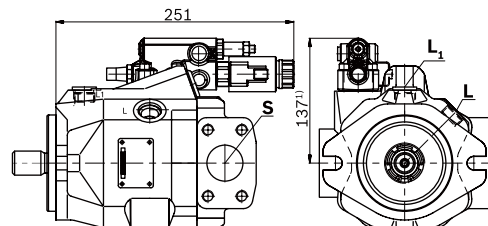
DRF/DFR1/DRSC - 压力和流量控制, 系列 52



LA.D. - 压力、流量和功率控制, 系列 53



Ed7./ER7. - 电比例压力控制, 系列 52(53)

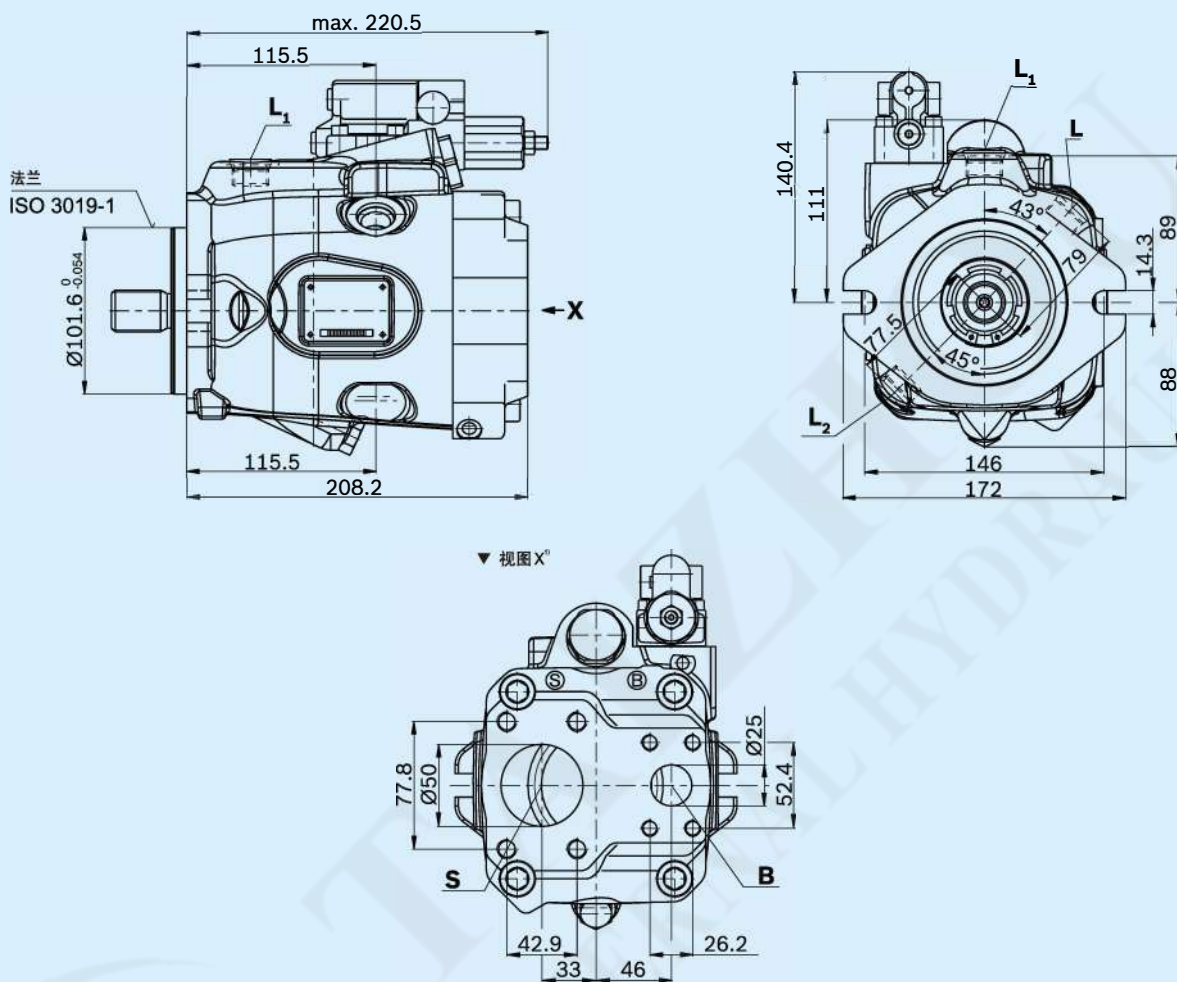


1) ER7.: 如果使用中间板压力控制器, 则为 172mm。

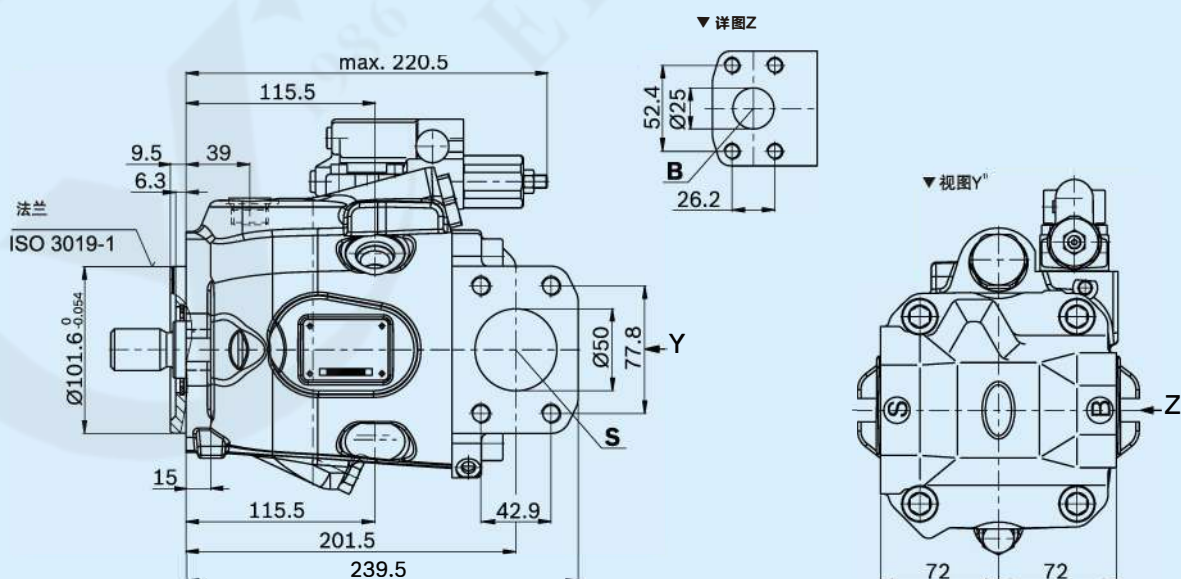
外形尺寸 规格 72 (控制机构DR、DRG、DFR/DFR1) Dimensions size 72 (Control devices DR, DRG, DFR/DFR1)

DR - 液压控制器, 顺时针旋转, C型安装法兰, 系列 53

▼油口接板 11

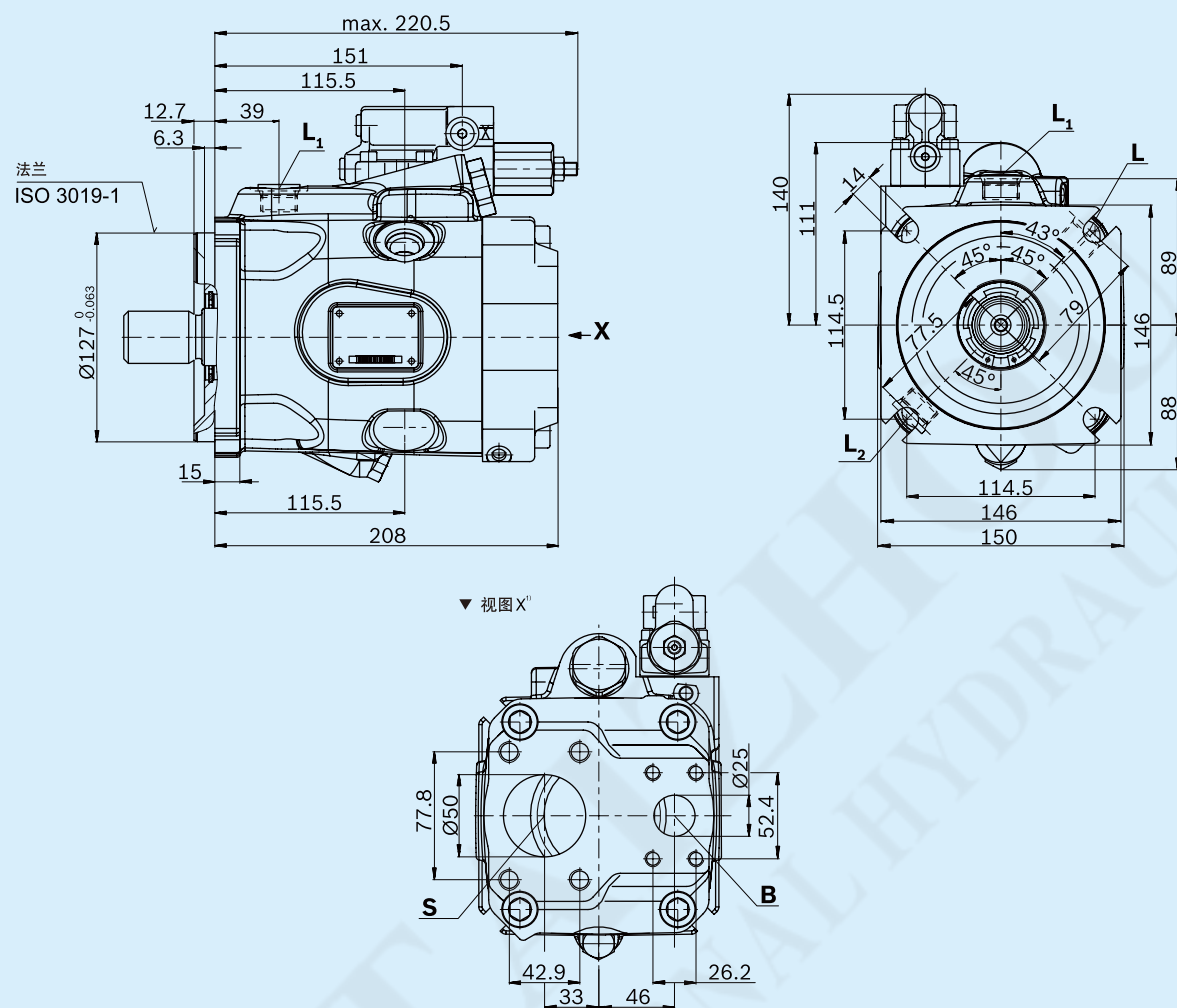


▼油口接板 12

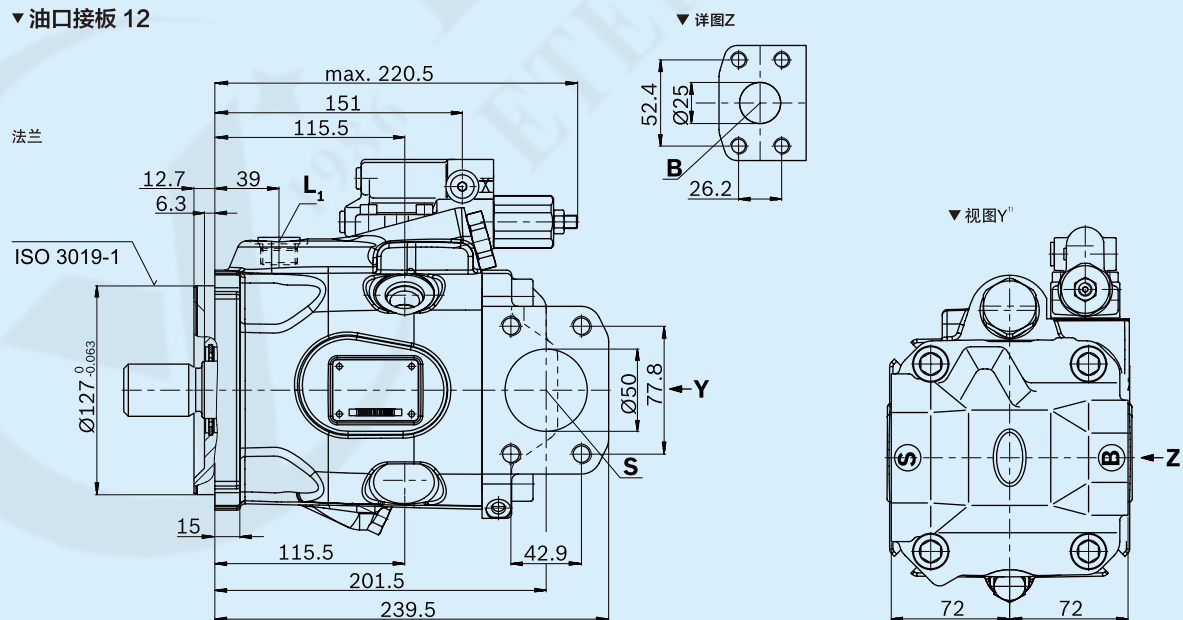


DR - 液压控制器, 顺时针旋转, D型安装法兰, 系列 53

▼ 油口接板 11



▼ 油口接板 12



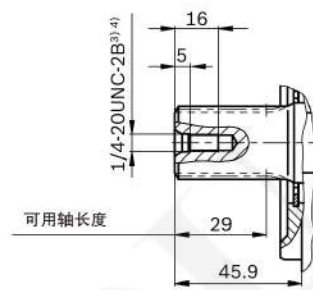
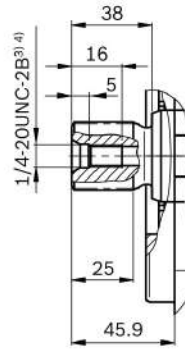
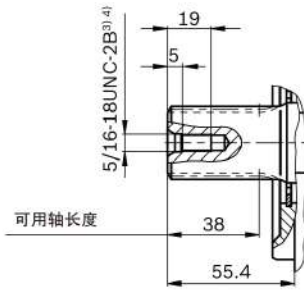
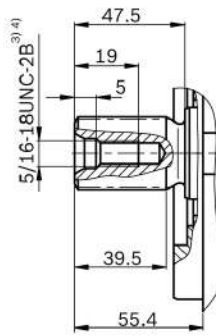
轴伸 Shaft

S 花键轴, 14T 12/24DP¹⁾
1 1/4 英寸 (SAE J744)

R 花键轴, 14T 12/24DP^{1) 2)}
1 1/4 英寸 (SAE J744)

U 花键轴, 15T 16/32DP¹⁾
1英寸 (SAE J744)

W 花键轴, 15T 16/32DP^{1) 2)}
1英寸 (SAE J744)



油口 Ports	标准	规格 ⁴⁾	P _{max} [bar] ⁵⁾	状态 ¹⁰⁾
B 出油口Outlet port 紧固螺纹Fastening thread	SAE J518 ⁶⁾ DIN 13	1英寸 M10X1.5;17深	315	O
S 进油口Suction port 紧固螺纹Fastening thread	SAE J518 ⁶⁾ DIN 13	2英寸 M12X1.75;20深	5	O
L 泄油口Drain port	ISO 11926 ⁷⁾	7/8-14UNF-2B;13深	2	O ⁸⁾
L ₁ 、L ₂ ⁹⁾ 泄油口Drain port	ISO 11926 ⁷⁾	7/8-14UNF-2B;13深	2	X ⁸⁾
X 控制油口Control pressure	ISO 11926	7/16-20UNF-2A;11.5深	315	O

1) 渐开线花键, 符合ANSI B92.1a, 30° 压力角, 平齿根, 侧面配合, 公差等级5

2) 花键 (符合 ANSI B92.1a), 花键的跳动量为与标准值的偏差。

3) 符合 ASME B1.1 标准的螺纹

4) 请遵照操作说明中有关最大紧固扭矩的说明。

5) 根据不同的应用情况, 可能会出现瞬时压力峰值。选择测量设备和接头时应考虑这一点。

6) 公制紧固螺纹与标准值之间存在偏差。

7) 孔口平面可以比标准规定的深。

8) 必须根据安装位置, 连接L、L₁或L₂。

9) 仅用于系列53

10) O = 必须连接 (交付时堵上)

X = 堵上 (正常运行条件下)

1) Involute spline according to ANSI B92.1a, 30° pressure angle, flat root, side fit, tolerance class 5

2) Splines according to ANSI B92.1a, run out of spline is a deviation from standard.

3) Thread according to ASME B1.1

4) Observe the instructions in the operating instructions concerning the maximum tightening torques.

5) Momentary pressure spikes may occur depending on the application. Keep this in mind when selecting measuring devices and fittings.

6) Metric fastening thread is a deviation from standard.

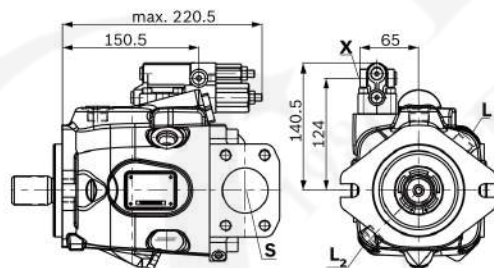
7) The spot face can be deeper than as specified in the standard.

8) Depending on the installation position, L, L₁ or L₂ must be connected

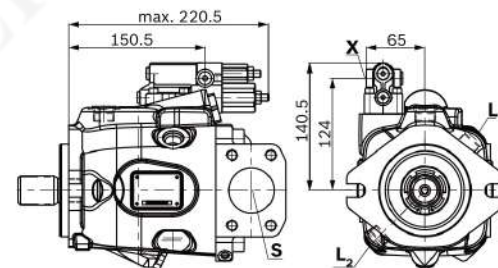
9) Only series 53

10) O = Must be connected (plugged when delivered) X = Plugged (in normal operation)

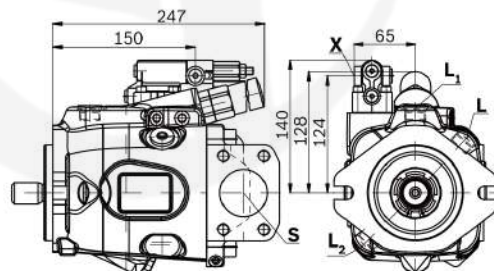
DRG - 远程压力控制器, 系列 53



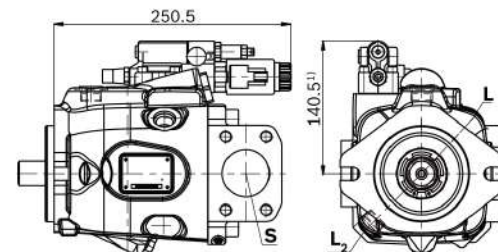
DRF/DFR1/DRSC - 压力和流量控制, 系列 53



LA.D. - 压力、流量和功率控制, 系列 53



ED7./ER7. - 电比例压力控制, 系列 53

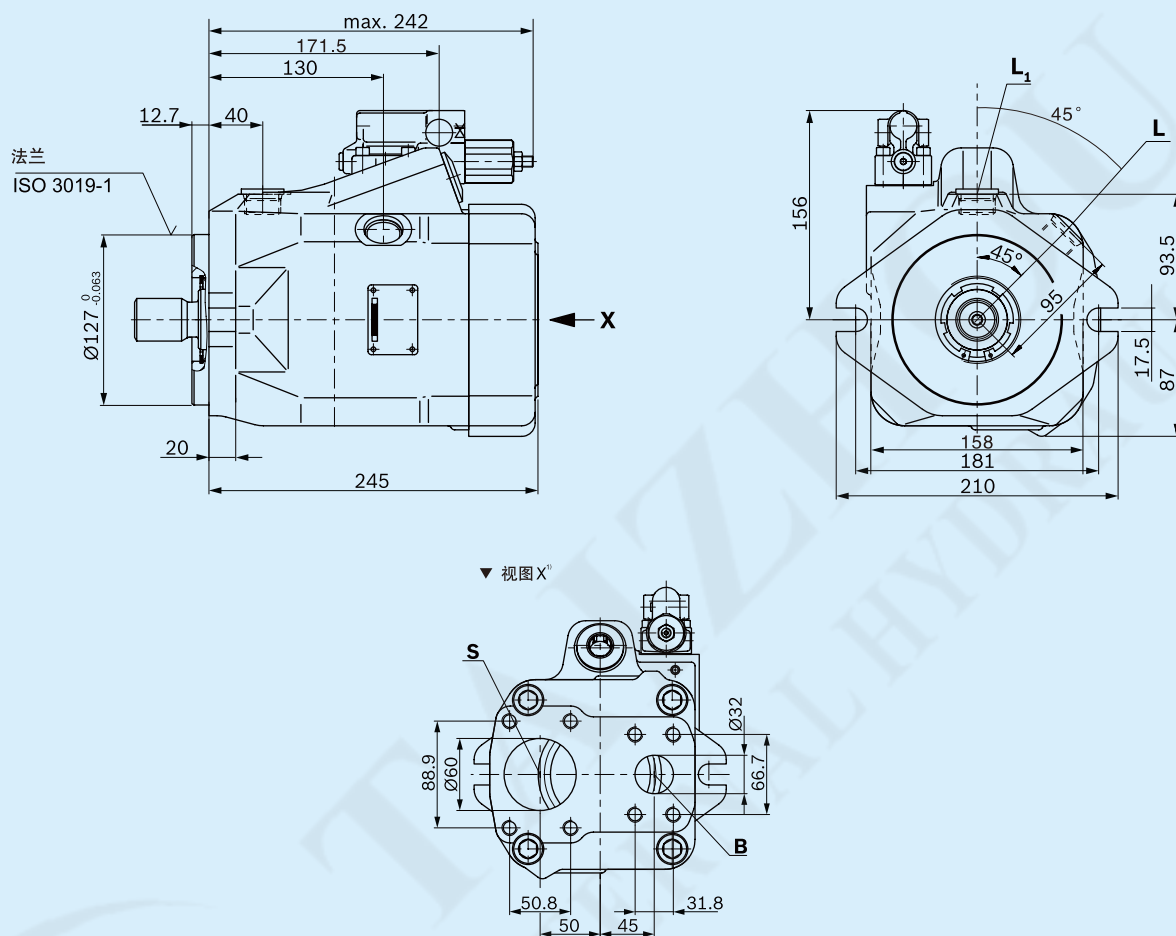


1) ER7.: 如果使用中间板压力控制器, 则为172mm。

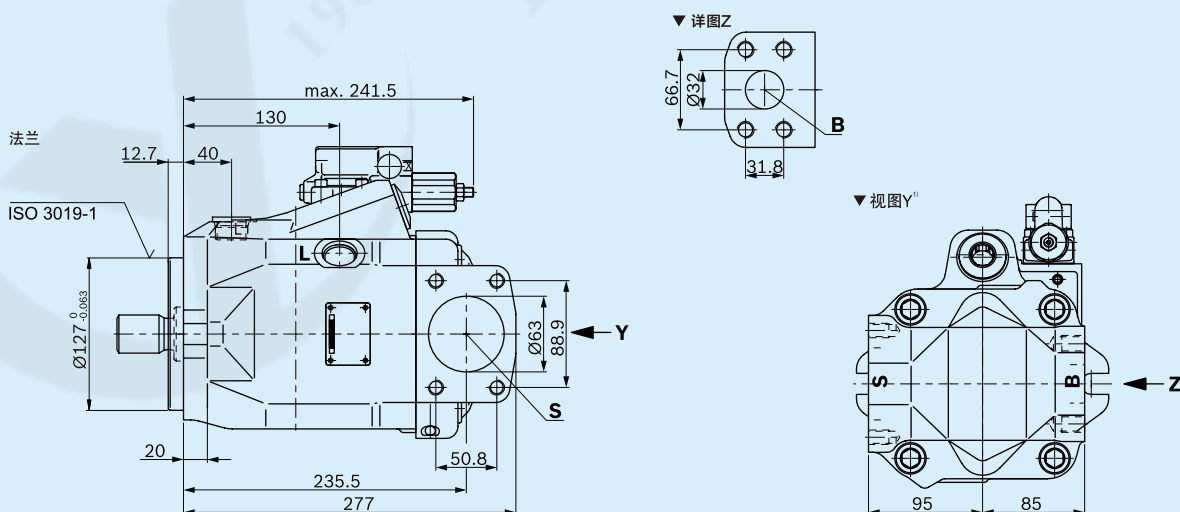
外形尺寸 规格 85 (控制机构DR、DRG、DFR/DFR1) Dimensions size 85 (Control devices DR, DRG, DFR/DFR1)

DR – 液压控制器，顺时针旋转，C型安装法兰，系列 52

▼ 油口接板 11

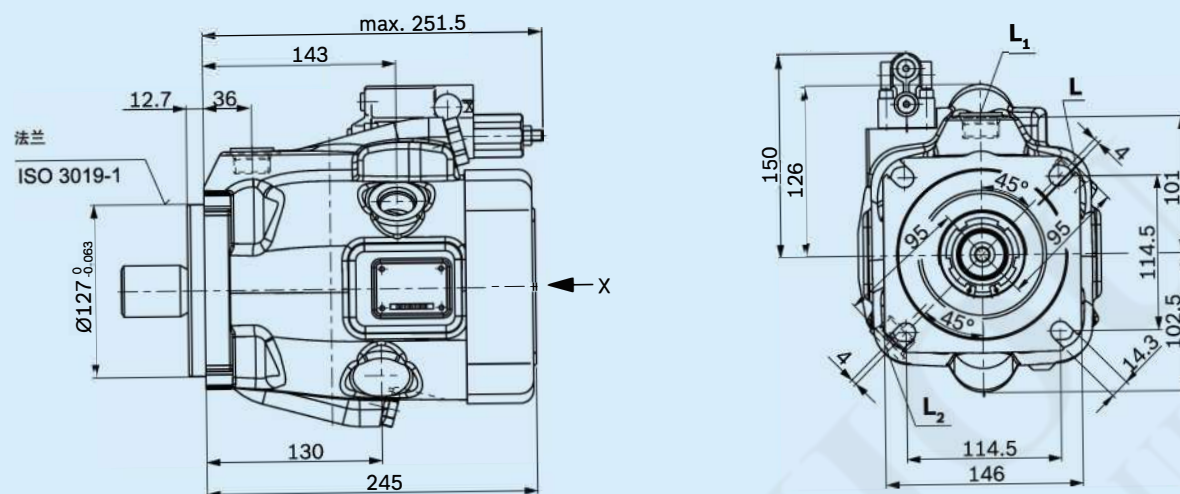


▼ 油口接板 12

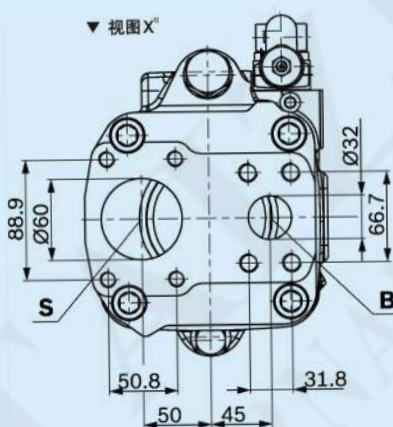


DR - 液压控制器, 顺时针旋转, D型安装法兰, 系列 53

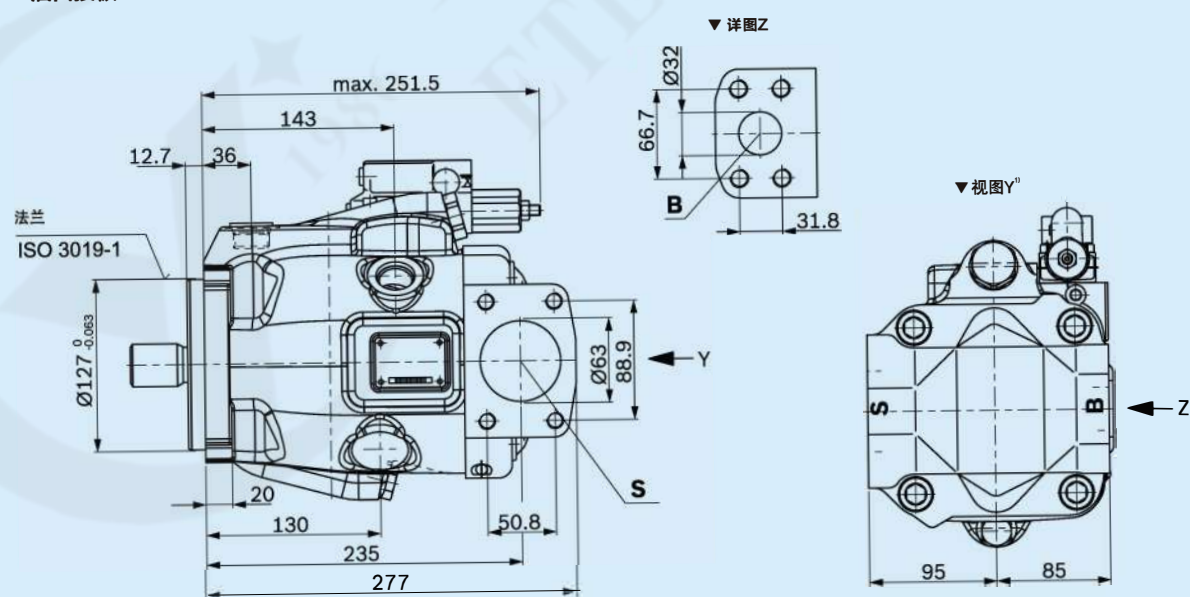
▼ 油口接板 11



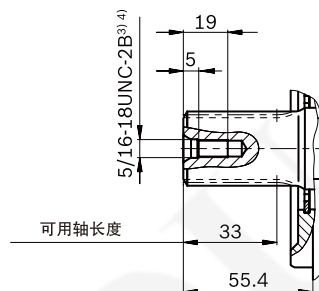
▼ 视图X"



▼ 油口接板 12

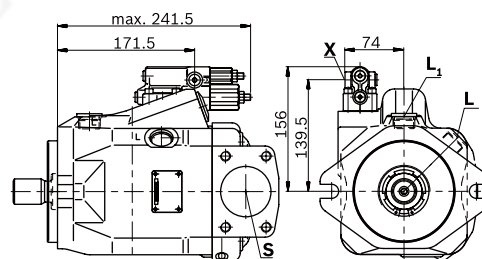


W花键轴, 14T 12/24DP¹⁾
1 1/4英寸 (SAE J744)

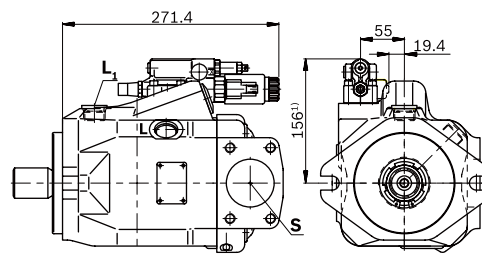


- 1) Involute spline according to ANSI B92.1a, 30° pressure angle, flat root, side fit, tolerance class 5
- 2) Splines according to ANSI B92.1a, run out of spline is a deviation from standard.
- 3) Thread according to ASME B1.1
- 4) Observe the instructions in the operating instructions concerning the maximum tightening torques.
- 5) Momentary pressure spikes may occur depending on the application. Keep this in mind when selecting measuring devices and fittings.
- 6) Metric fastening thread is a deviation from standard.
- 7) The spot face can be deeper than as specified in the standard.
- 8) Depending on the installation position, L, L1 or L2 must be connected
- 9) Only series 53
- 10) O = Must be connected (plugged when delivered) X = Plugged (in normal operation)

DFR/DFR1-压力和流量控制，系列52



ED../ER..-电动液压控制, 系列52

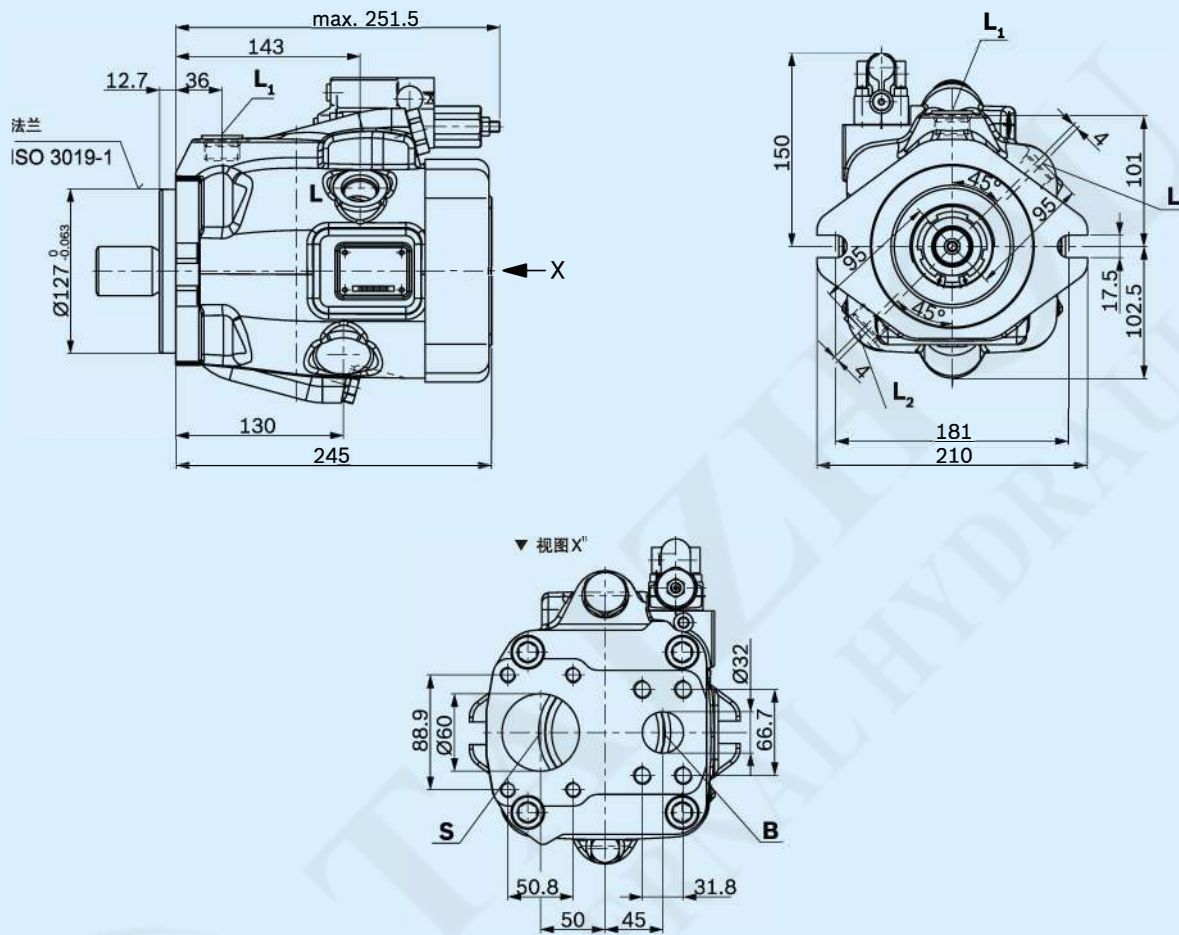


93

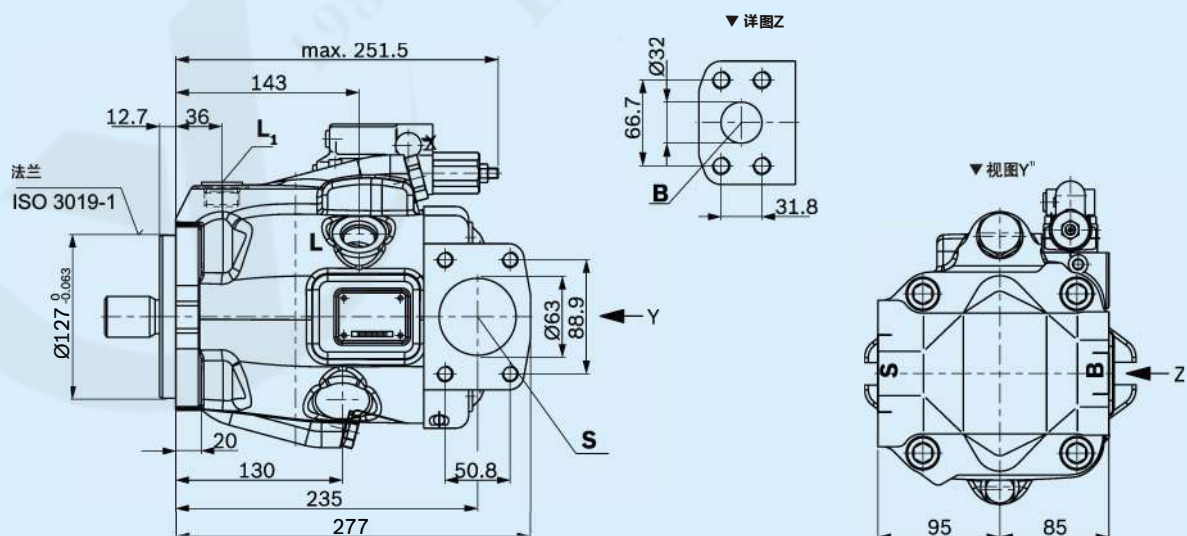
外形尺寸 规格100(控制机构DR、DRG、DFR/DFR1)
Dimensions size 100 (Control devices DR, DRG, DFR/DFR1)

DR - 液压控制器, 顺时针旋转, C型安装法兰, 系列 53

▼油口接板 11

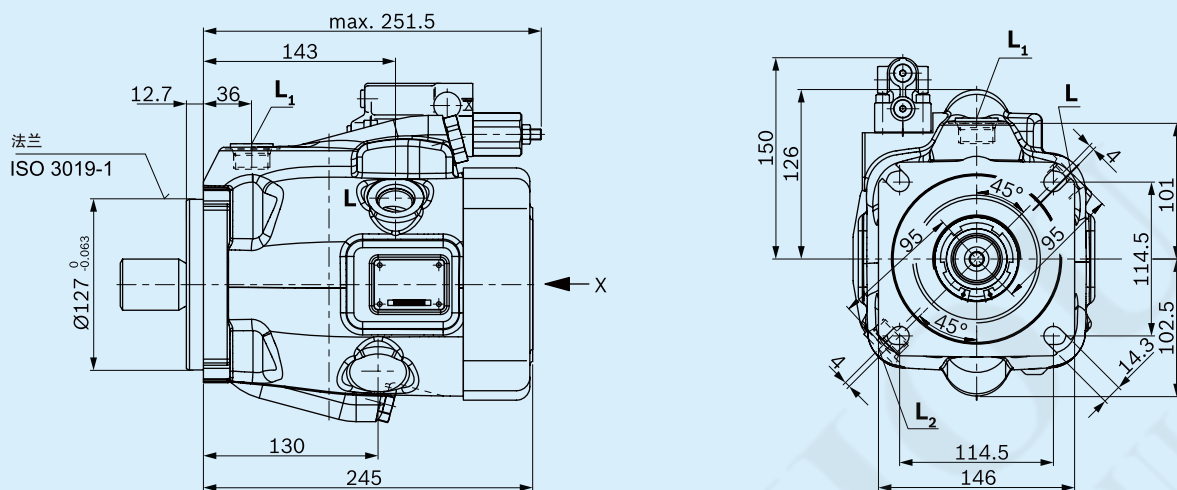


▼油口接板 12

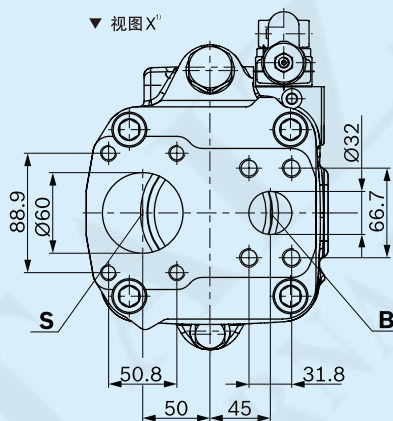


DR - 液压控制器, 顺时针旋转, D型安装法兰, 系列 53

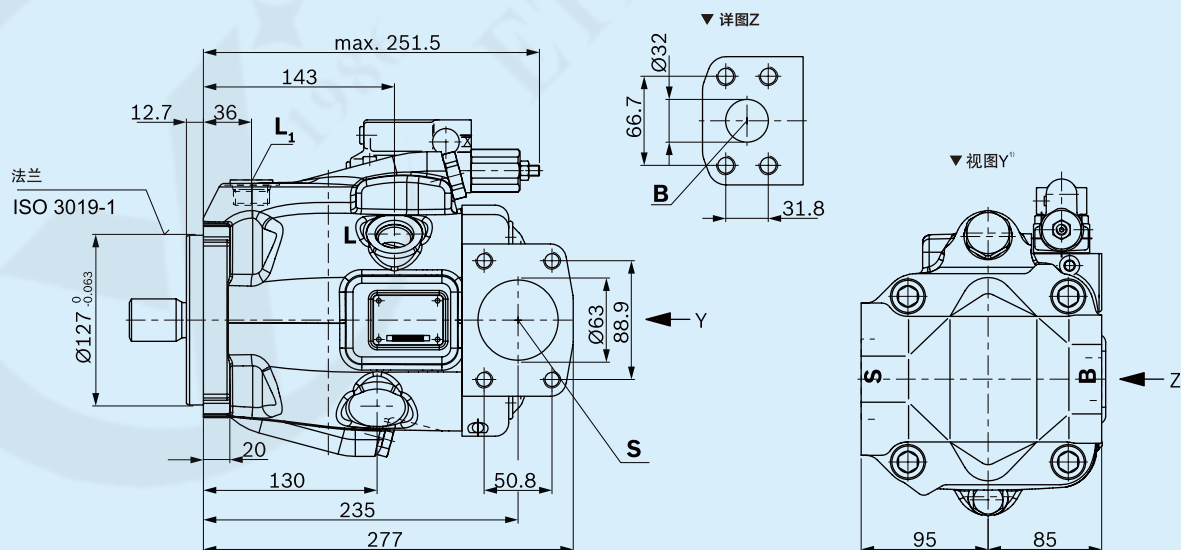
▼油口接板 11



▼视图X''

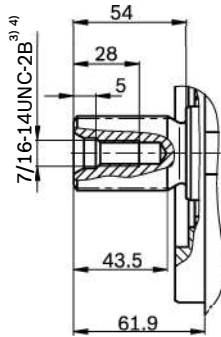


▼油口接板 12

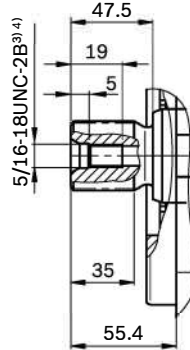


轴伸 Shaft

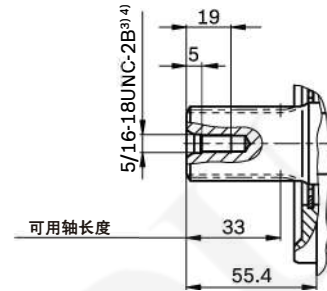
S 花键轴, 17T 12/24DP¹⁾
1 1/2 英寸 (SAE J744)



U 花键轴, 14T 12/24DP¹⁾
1 1/4 英寸 (SAE J744)



W 花键轴, 14T 12/24DP¹⁾
1 1/4 英寸 (SAE J744)



油口 Ports	标准	规格 ⁴⁾	P _{max} [bar] ⁵⁾	状态 ¹⁰⁾
B 出口口Outlet port 紧固螺纹Fastening thread	SAE J518 ⁶⁾ DIN 13	1/4英寸 M14X2;19深	315	O
S 进口口Suction port 紧固螺纹Fastening thread	SAE J518 ⁶⁾ DIN 13	2 1/2英寸 M12X1.75;17深	5	O
L 泄油口Drain port	ISO 11926 ⁷⁾	1 1/16-12UNF-2B;15深	2	O ⁸⁾
L、L ⁸⁾ 泄油口Drain port	ISO 11926 ⁷⁾	1 1/16-12UNF-2B;15深	2	X ⁸⁾
X 控制油口Control pressure	ISO 11926	7/16-20UNF-2A;11.5深	315	O

1) 渐开线花键, 符合 ANSI B92.1a, 30° 压力角, 平齿根, 侧面配合, 公差等级 5

2) 花键 (符合 ANSI B92.1a), 花键的跳动量为与标准值的偏差。

3) 符合 ASME B 1.1 标准的螺纹

4) 请遵照操作说明中有关最大紧固扭矩的说明。

5) 根据不同的应用情况, 可能会出现瞬时压力峰值。选择测量设备和接头时应考虑这一点。

6) 公制紧固螺纹与标准值之间存在偏差。

7) 孔口平面可以比标准规定的深。

8) 必须根据安装位置, 连接 L、L1 或 L2。

9) 仅用于系列 53

10) O = 必须连接 (交付时堵上)

X = 堵上 (正常运行条件下)

1) Involute spline according to ANSI B92.1a, 30° pressure angle, flat root, side fit, tolerance class 5

2) Splines according to ANSI B92.1a, run out of spline is a deviation from standard.

3) Thread according to ASME B1.1

4) Observe the instructions in the operating instructions concerning the maximum tightening torques.

5) Momentary pressure spikes may occur depending on the application. Keep this in mind when selecting measuring devices and fittings.

6) Metric fastening thread is a deviation from standard.

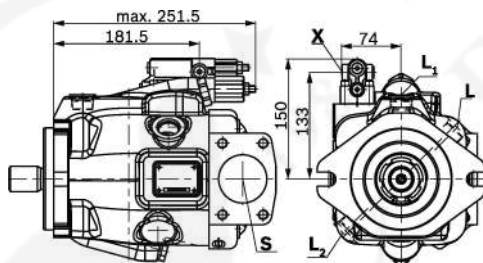
7) The spot face can be deeper than as specified in the standard.

8) Depending on the installation position, L, L1 or L2 must be connected

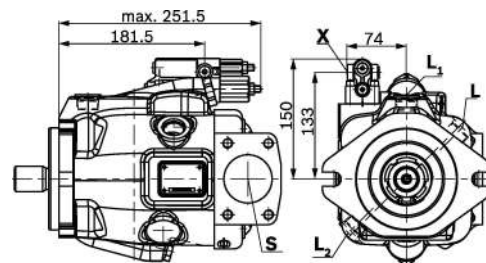
9) Only series 53

10) O = Must be connected (plugged when delivered) X = Plugged (in normal operation)

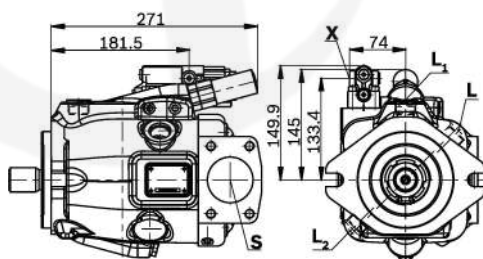
DRG - 远程压力控制器, 系列 53



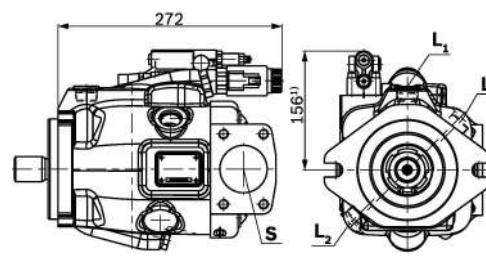
DRF/DRS/DRSC - 压力和流量控制, 系列 53



LA.D - 压力、流量和功率控制, 系列 53



ED7./ER7. - 电比例压力控制, 系列 53



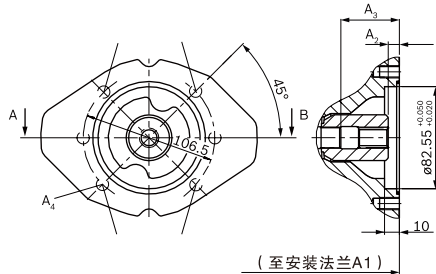
1) ER7.: 如果使用中间板压力控制器, 则为 191mm。

通轴尺寸 Dimensions,, throug drive

法兰Flange ISO 3019-1(SAE) 直径Diameter Symbol		花键Hub for splined shaft ¹⁾ 直径Diameter	适用型号 Availability over sixes							代号
			18	28	45	60/63	72	85	100	Code
82-2(A)	⌘, ∞	5/8 英寸 9T 16/32DP	●	●	●	●	●	●	●	K01
		3/4 英寸	●	●	●	●	●	●	●	K52

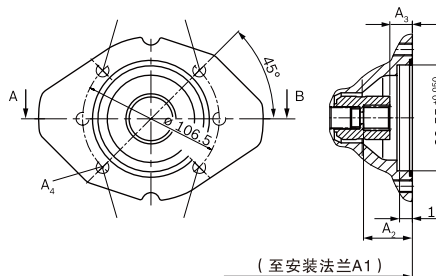
● = Available - = Not available

▼ 82/2



K01	NG	A1	A2	A3	A4 ³⁾
(SAE J744 16-4(A))	18	182	9.3	43.3	M10x1.5;14.5深
	28	204	9.9	47	M10x1.5;16深
	45	229	10.7	53	M10x1.5;16深
	60	255	9.5	59	M10x1.5;16深
	63	255	9.5	59	M10x1.5;16深
	72	255	9.5	59	M10x1.5;16深
	85	302	13.4	68	M10x1.5;20深
	100	302	13.4	68	M10x1.5;20深

▼ 82/2

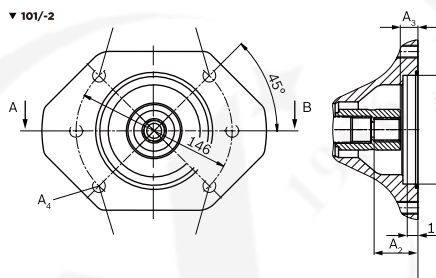


K52	NG	A1	A2	A3	A4 ³⁾
(SAE J744 19-4(A-B))	18	182	39	9.3	M10x1.5;14.5深
	28	204	39.3	18.8	M10x1.5;16深
	45	229	39.4	18.9	M10x1.5;16深
	60	255	39.4	18.9	M10x1.5;16深
	63	255	39.4	18.9	M10x1.5;16深
	72	255	39.4	18.9	M10x1.5;16深
	85	302	44.1	23.6	M10x1.5;20深
	100	302	44.1	23.6	M10x1.5;20深

法兰Flange ISO 3019-1(SAE) 直径Diameter Symbol		花键Hub for splined shaft ¹⁾ 直径Diameter	适用型号 Availability over sixes							代号
			18	28	45	60/63	72	85	100	Code
101-2(A)	⌀, ∞	7/8 in 13T 16/32DP	-	●	●	●	●	●	●	K68
		1in 15T 16/32DP	-	-	●	●	●	●	●	K04

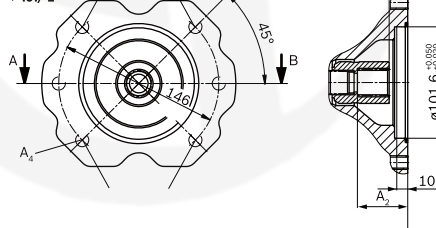
● = Available - = Not available

▼ 101/-2



K68	NG	A1	A2	A3	A4 ³⁾
(SAE J744 22-4(B))	28	204	42.3	17.8	M12x1.75;18深
	45	229	42.4	17.9	M12x1.75;18深
	60	255	42.4	17.9	M12x1.75;18深
	63	255	42.4	17.9	M12x1.75;18深
	72	255	42.4	17.9	M12x1.75;18深
	85	302	46.5	22	M12x1.75;20深
	100	302	46.5	22	M12x1.75;20深

▼ 101/-2



K04	NG	A1	A2	A3	A4 ³⁾
(SAE J744 25-4(B-B))	45	229	47.9	18.9	M12x1.75;18深
	60	255	47.4	18.4	M12x1.75;18深
	63	255	47.4	18.4	M12x1.75;18深
	72	255	47.4	18.4	M12x1.75;18深
	85	302	51.2	22.2	M12x1.75;20深
	100	302	51.2	22.2	M12x1.75;20深

1)30° 压力角, 平齿根, 侧面配合, 公差等级5

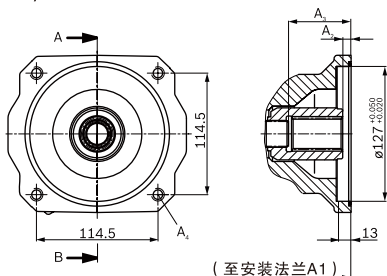
According to ANSIB92.1a,30° pressure angle, flat root, side fit, tolerance class 5

3)符合DIN 13 的螺纹Thread according to DIN 13

法兰Flange ISO 3019-1(SAE) 直径Diameter	Symbol	花键Hub for splined shaft ¹⁾ 直径Diameter	适用型号 Availability over sixes							代号
			18	28	45	60/63	72	85	100	Code
127-4 (C)		1 1/4 in 14T 12/24DP	-	-	-	●	●	●	●	K07
		1 1/2in 17T 12/24DP	●	●	●	●	●	●	●	K24

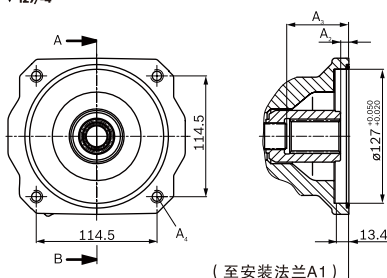
● = Available - = Not available

▼ 127/-4



K15	NG	A1	A2	A3	A4 ³⁾
(SAE J744 32-4(C))	60	255	8	59	M12x1.75;16深
	63	255	8	59	M12x1.75;16深
	72	255	8	59	M12x1.75;16深
	85	301.5	13	67.9	M12x1.75;通轴
	100	301.5	13	67.9	M12x1.75;通轴

▼ 127/-4

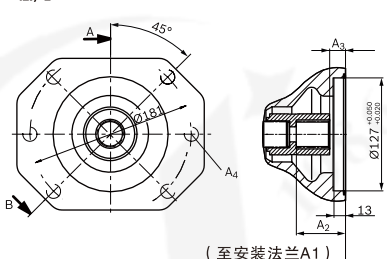


K16	NG	A1	A2	A3	A4 ³⁾
(SAE J744 32-4(C))	85	301.5	13	67.9	M12x1.75;通轴
	100	301.5	13	67.9	M12x1.75;通轴

法兰Flange ISO 3019-1(SAE) 直径Diameter	Symbol	花键Hub for splined shaft ¹⁾ 直径Diameter	适用型号 Availability over sixes							代号
			18	28	45	60/63	72	85	100	Code
127-2 (B)		1 1/4 in 14T 12/24DP	-	-	-	-	-	●	●	K07
		1 1/2in 17T 12/24DP	-	-	-	-	-	●	●	K24

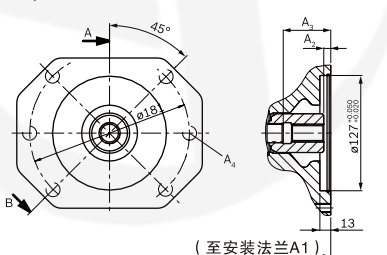
● = Available - = Not available

▼ 127/-2



K07	NG	A1	A2	A3	A4 ³⁾
(SAE J744 32-4(C))	85	301.5	13	67.9	M12x1.75通孔
	100	301.5	13	67.9	M12x1.75通孔

▼ 127/-2



K24	NG	A1	A2	A3	A4 ³⁾
(SAE J744 38-4(C-C))	85	302	8	68	M16x2;24深
	100	302	8	68	M16x2;24深

1)30° 压力角, 平齿根, 侧面配合, 公差等级5

According to ANSIB92.1a,30° pressure angle, flat root, side fit,tolerance class 5

3)符合DIN 13 的螺纹Thread according to DIN 13