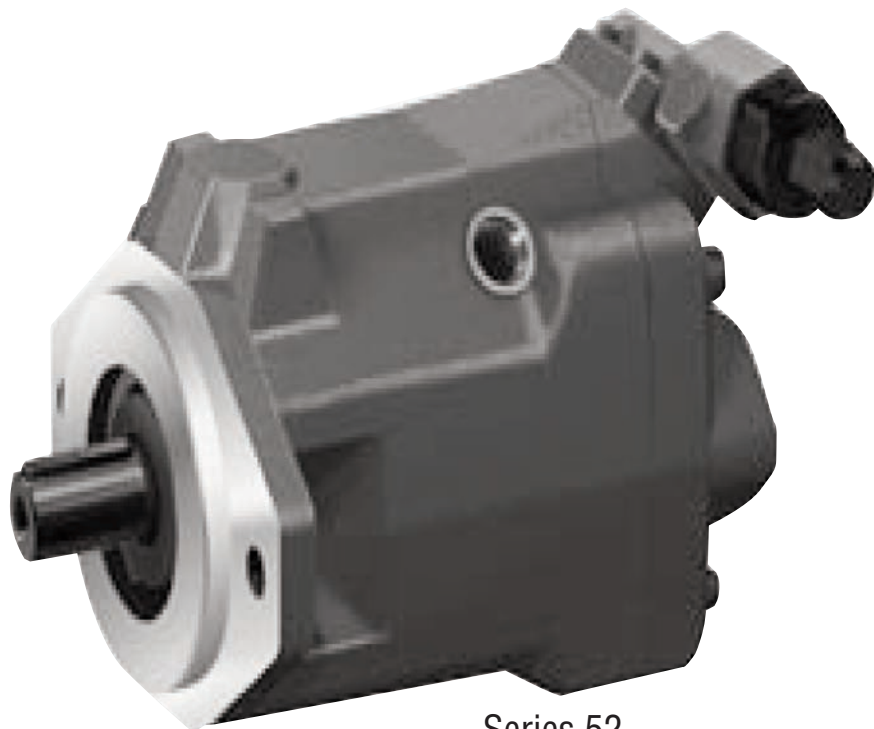


Axial Piston Variable Pump

A10VS010



Series 52

Axial Piston Variable Pump A10VS010

Series 52

Size 10

Open circuit

Nominal pressure:

250 bar (3600 psi)

Nominal speed 3600 rpm

Maximum pressure:

315 bar (4600 psi)

Maximum speed 4320 rpm

Model Code

A10V(S)	0	10	DR	/	52	R	P	S	A	64	N00
01	02	03	04		05	06	07	08	09	10	11

Axial piston unit

01	Swashplate design, variable, nominal pressure 250 bar, maximum pressure 315 bar	A10VS
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Operation mode

02	Pump, open circuit	0
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Size

03	Geometric displacement	10
		cm ³ /rev 10
		in ³ /rev 0.61

Control device

04	Pressure control	DR	
	Pressure control, remotely operated	DRG	
	Pressure control with flow control	X-T open	DFR
		X-T plugged	DFR1

Series

05	Series 5, index 2	52
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Direction of rotation

06	With view on drive shaft	clockwise	R
		counter clockwise	L

Seals

07	NBR (nitril-rubber, shaft seal FKM)	P
	FKM (fluor-rubber)	V

Drive shaft

08	Splined shaft	standard shaft	3/4 in 11T -16/32 DP	S
		ANSI B92.1a SAE reduced diameter	5/8 in 9T -16/32 DP	U
	Parallel shaft key to DIN 6885		18 mm Keyed	P
	Parallel shaft keyed SAE version		3/4 in Keyed	K

Mounting flange

09	SAE 2-bolt J744 82-2	ø 3.25 in	C
	ISO 2-bolt ISO 3019-1	ø 80 mm	A

Service ports

10	Pressure port B	UNF-straight thread O-ring ports rear	64
	Inlet port S		
11	Pressure port B	Metric thread rear	14
	Inlet port S		

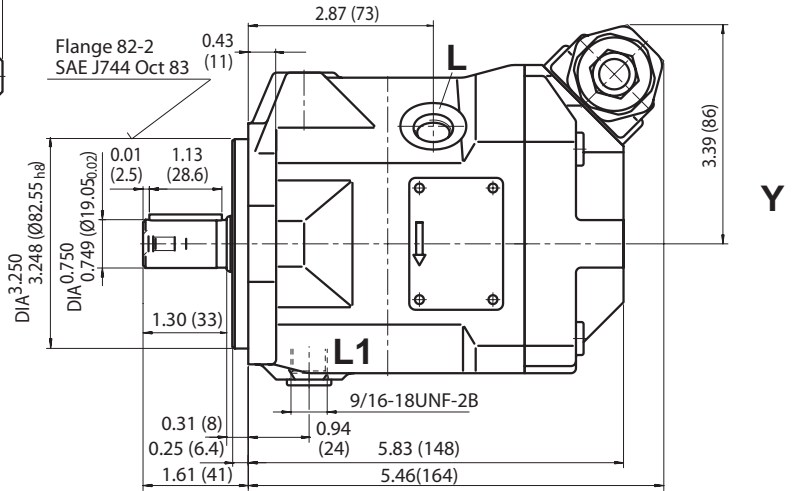
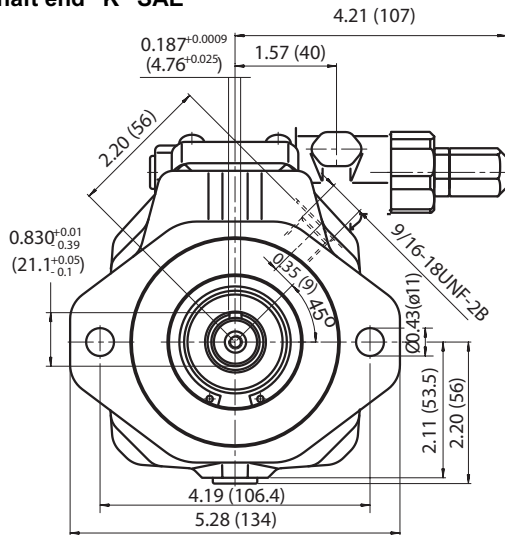
Through drive

11	Without through drive	N00
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Dimensions size 10 SAE version

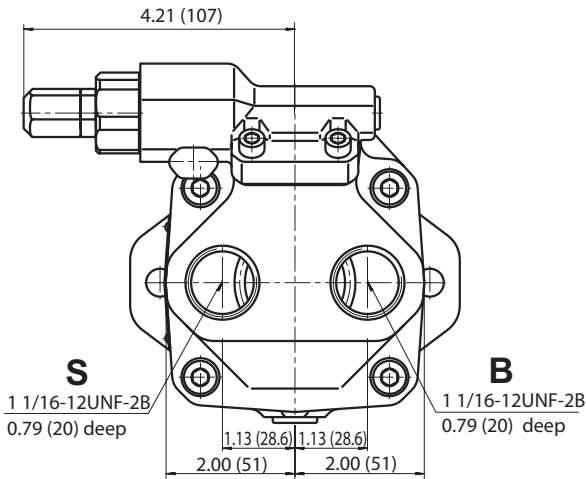
A10VSO 10 DR /52 R- XKC64N00

Shaft end "K" SAE



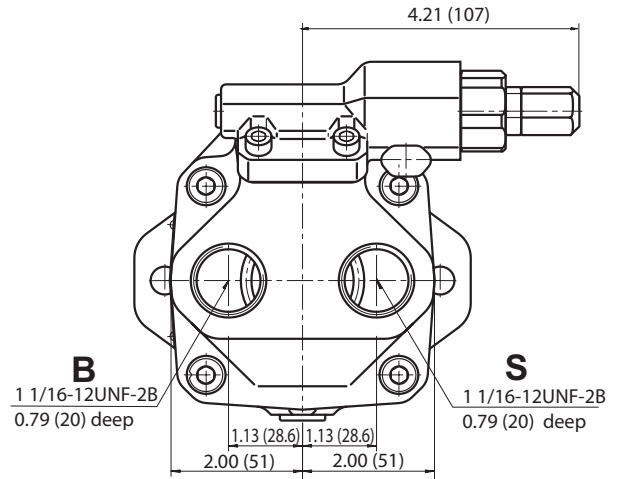
View Y

shown is clockwise rotation (R)

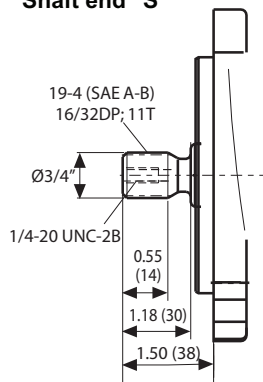


View Y

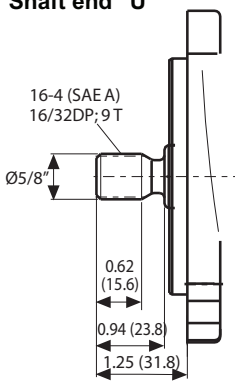
shown is counter-clockwise rotation (L)



Shaft end "S"



Shaft end "U"



Ports

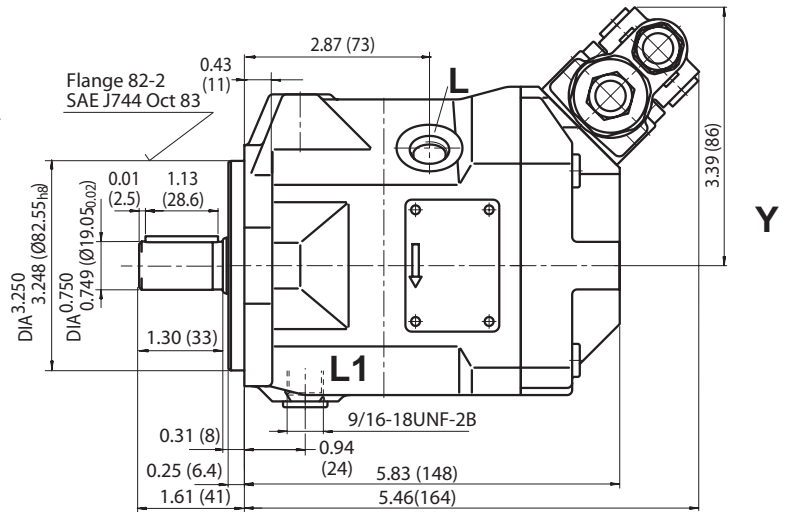
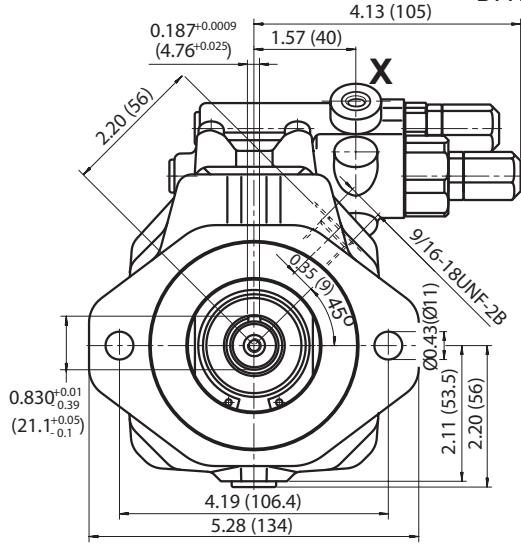
B	Pressure port	1 1/16-12UNF-2B
S	Inlet port	1 1/16-12UNF-2B
L/L ₁	Case drain	9/16-18UNF-2B

Dimensions size 10 SAE version

A10VSO 10 DR /52 R- PKC64N00

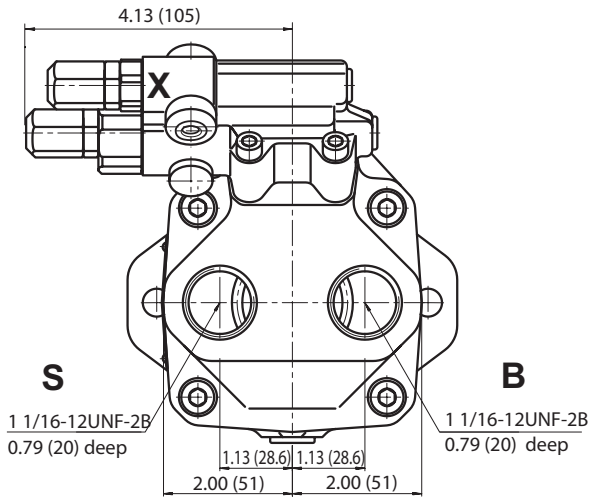
Shaft end "K" SAE

DRG
DFR(1)



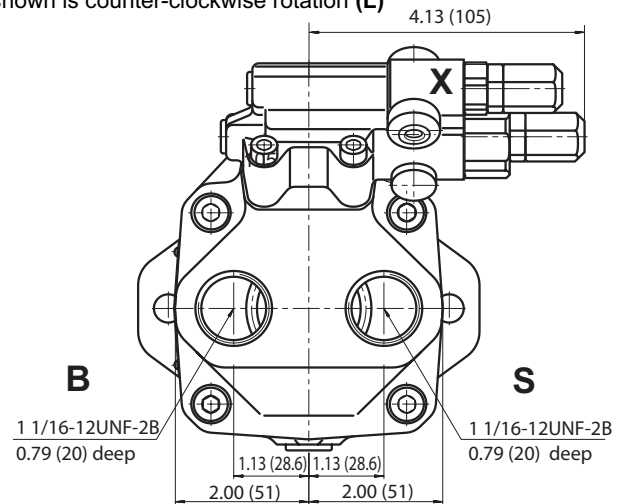
View Y

shown is clockwise rotation (R)

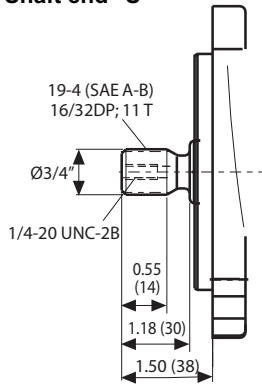


View Y

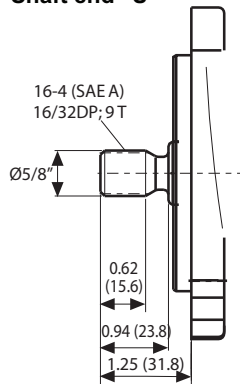
shown is counter-clockwise rotation (L)



Shaft end "S"



Shaft end "U"



Note: Alternate X-port may be used. (One side plugged)
X-port omitted with DR control.

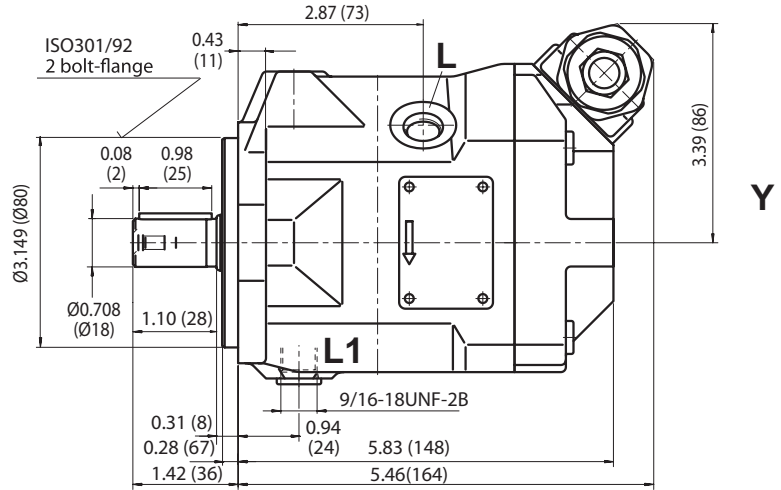
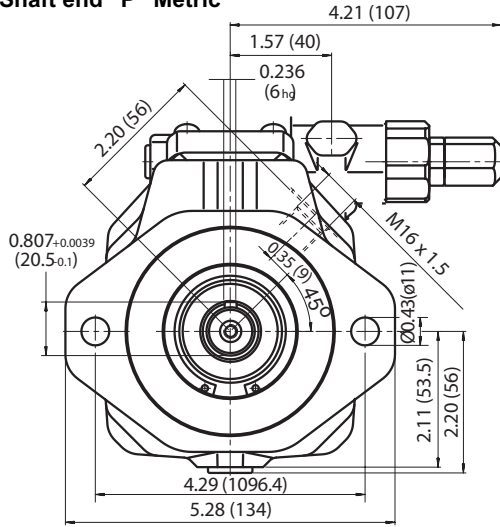
Ports

B	Pressure port	1 1/16-12UNF-2B
S	Inlet port	1 1/16-12UNF-2B
L/L ₁	Case drain	9/16-18UNF-2B
X	Pilot port	7/16-20UNF-2B

Dimensions size 10 Metric version

A10VSO 10 DR /52 R- PKA14N00

Shaft end "P" Metric

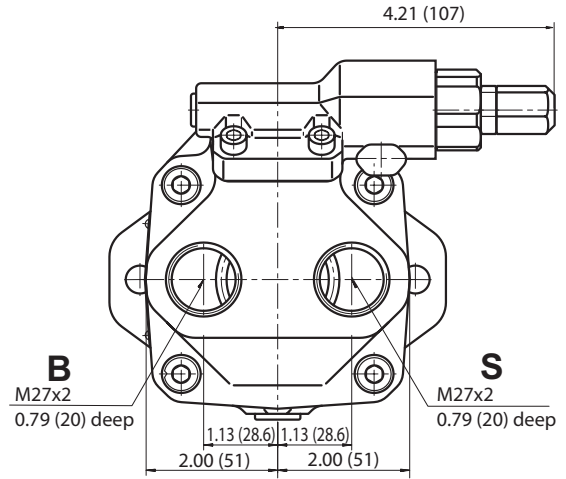
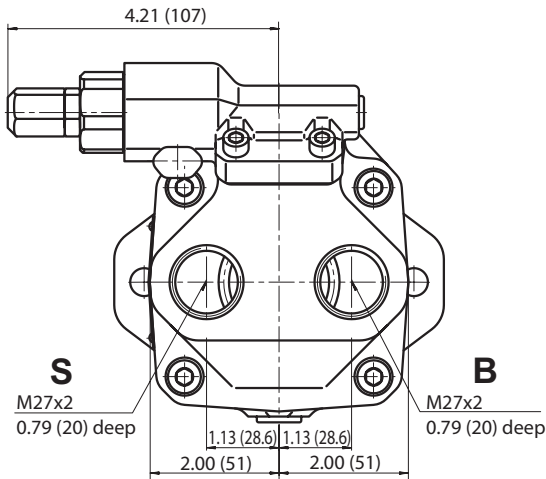


View Y

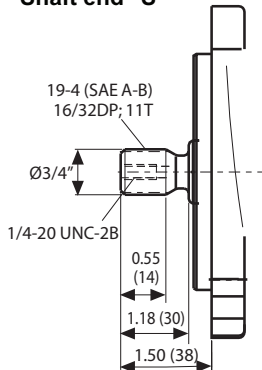
shown is clockwise rotation (R)

View Y

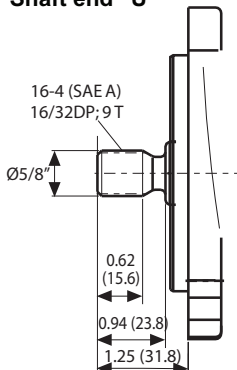
shown is counter-clockwise rotation (L)



Shaft end "S"



Shaft end "U"



Ports

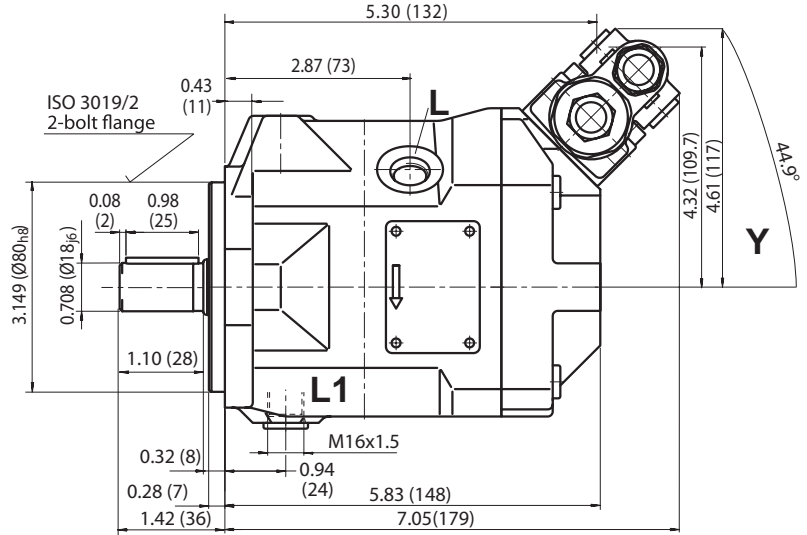
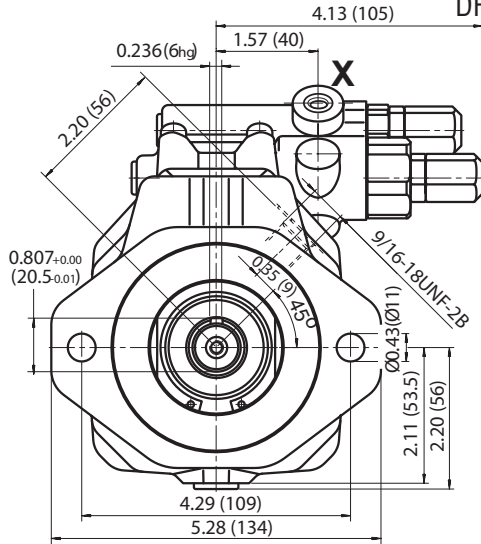
- B Pressure port M27x2
- S Inlet port M27x2
- L/L₁ Case drain M16x1.5

Dimensions size 10 Metric version

A10VSO 10 DR /52 R- PKA14N00

Shaft end "P" Metric

DRG
DFR(1)

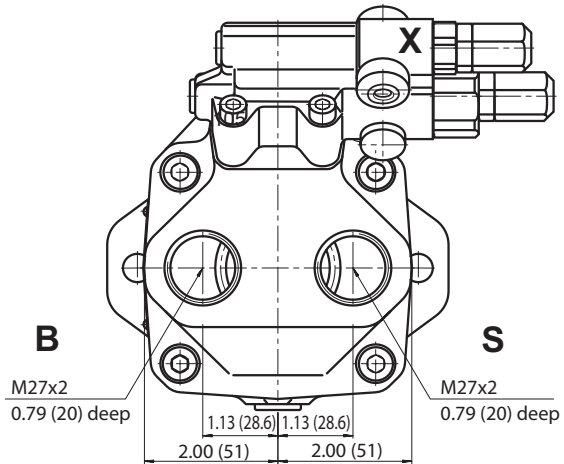
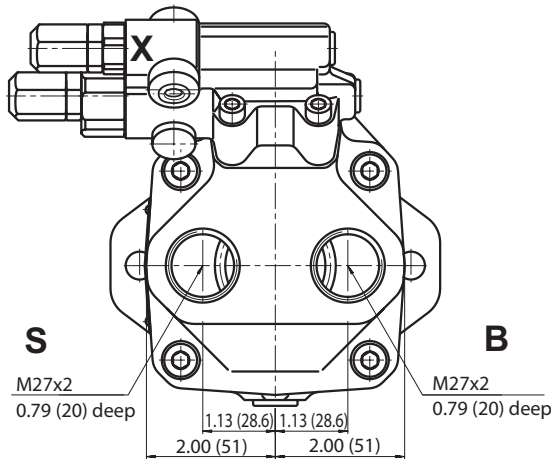


View Y

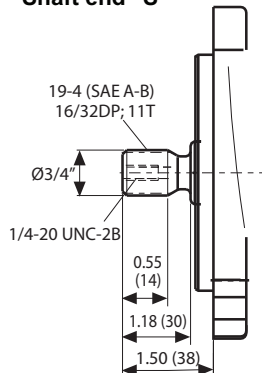
shown is clockwise rotation

View Y

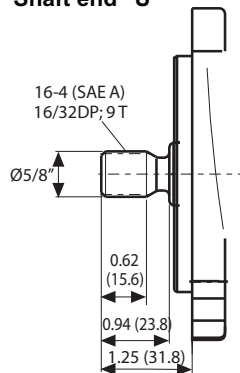
shown is counter-clockwise rotation



Shaft end "S"



Shaft end "U"



Note: Alternate X-port may be used, (one side plugged).
X-port omitted on DR control.

Ports

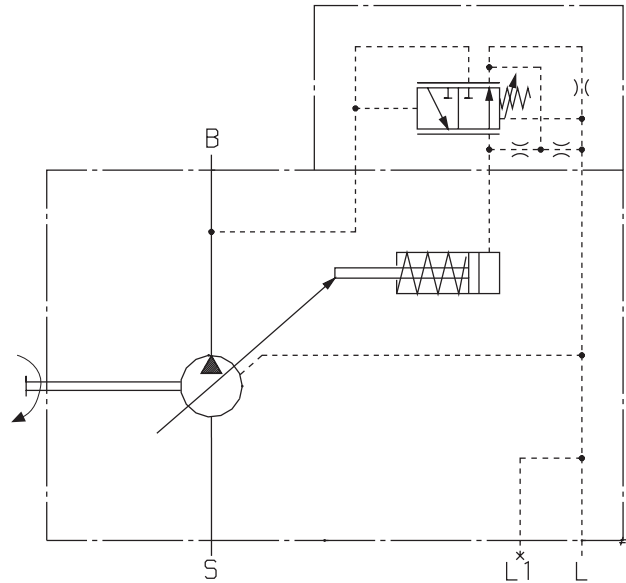
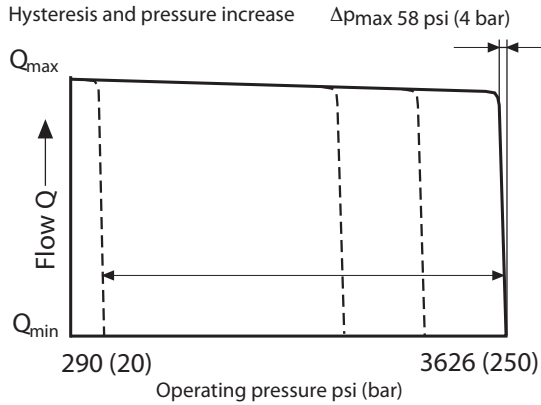
B	Pressure port	M27x2
S	Inlet port	M27x2
L/L ₁	Case drain	M16x1.5
X	Pilot port w/ adapter	M14x1.5
X	Pilot port w/o adapter	7/16-20 UNF-2B

DR Pressure control

The pressure control serves to maintain a constant pressure in the hydraulic system, within the control range of the pump. The pump therefore supplies only the amount of hydraulic fluid required by the actuators. Pressure may be steppedly set at the pilot valve.

Static characteristic

(at $n_1 = 1500$ rpm; $t_{oil} = 122$ °F (50 °C))



DRG Remote pressure control

Function and design as for DR.

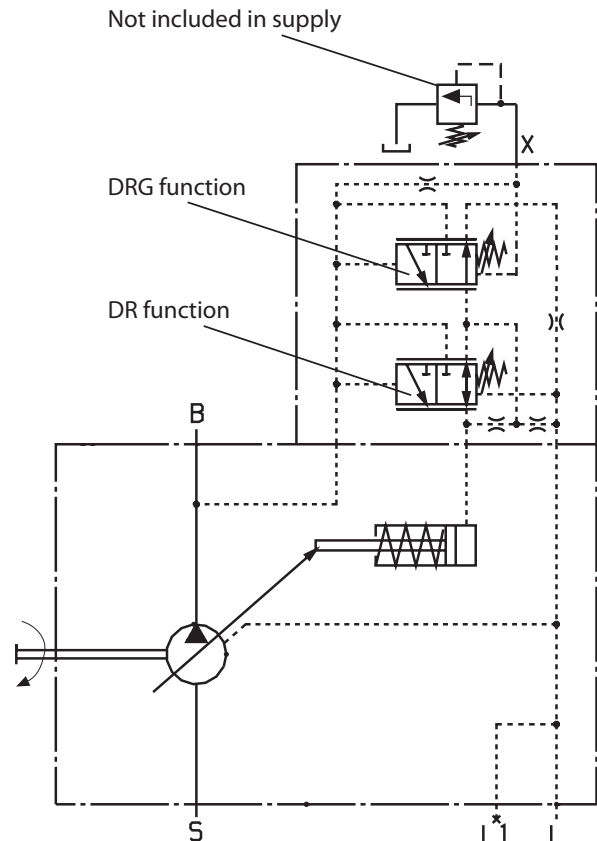
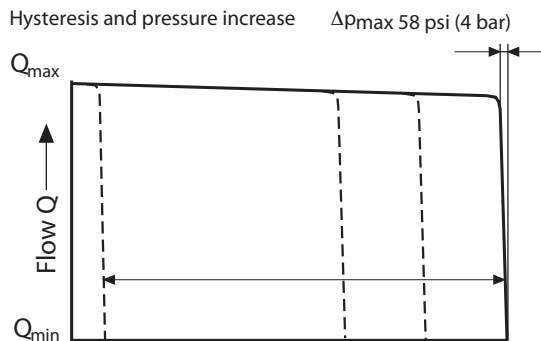
The remote pressure control can be adjusted up to the pre set pressure level of the DR control.

A pressure relief valve may be externally piped to port X for remote control purposes. It is not, however, included with the DRG control.

The differential pressure at the pilot valve is set as standard to 290 psi (20 bar) and this results in a pilot flow of 0.5 GPM (1.5 L/min). If another setting is required (in the range 145—320 (10–20 bar), please state this in clear text.

Static characteristic

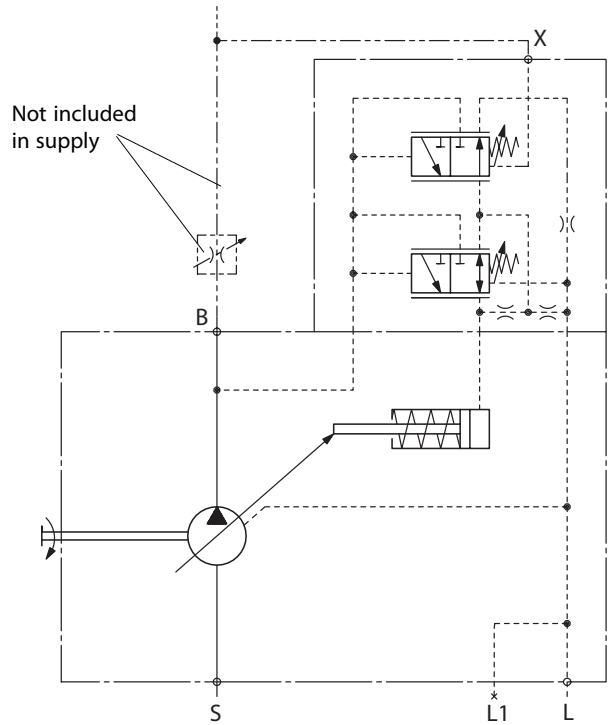
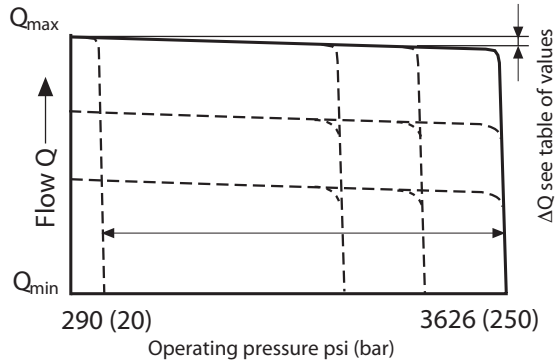
(at $n_1 = 1500$ rpm; $t_{oil} = 122$ °F (50 °C))



DFR1/DFR Pressure/flow control

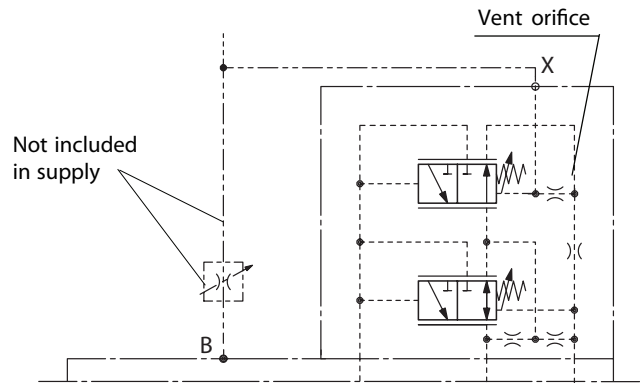
In addition to the pressure control function, the pump flow may be varied by means of a differential pressure at the actuator (e.g. an orifice, not included in supply). The pump flow is equal to the actual required flow by the actuator. The DFR1-valve has no connection between X and tank.

Static characteristic
(at $n_1 = 1500 \text{ rpm}$; $t_{oil} = 50 \text{ }^\circ\text{C}$)



DFR

The function is the same as the DFR1 control, however, in addition a bleed down orifice is provided to vent trapped pressure in the loadsense line.



DFR1 Remote pressure/flow control

The DFR control can be used for combination of remote pressure and flow control. A pressure relief valve may be externally piped to the X-point, together with the load sense line. An orifice (0.8-1.2 mm) need to be installed in the loadsense line.

