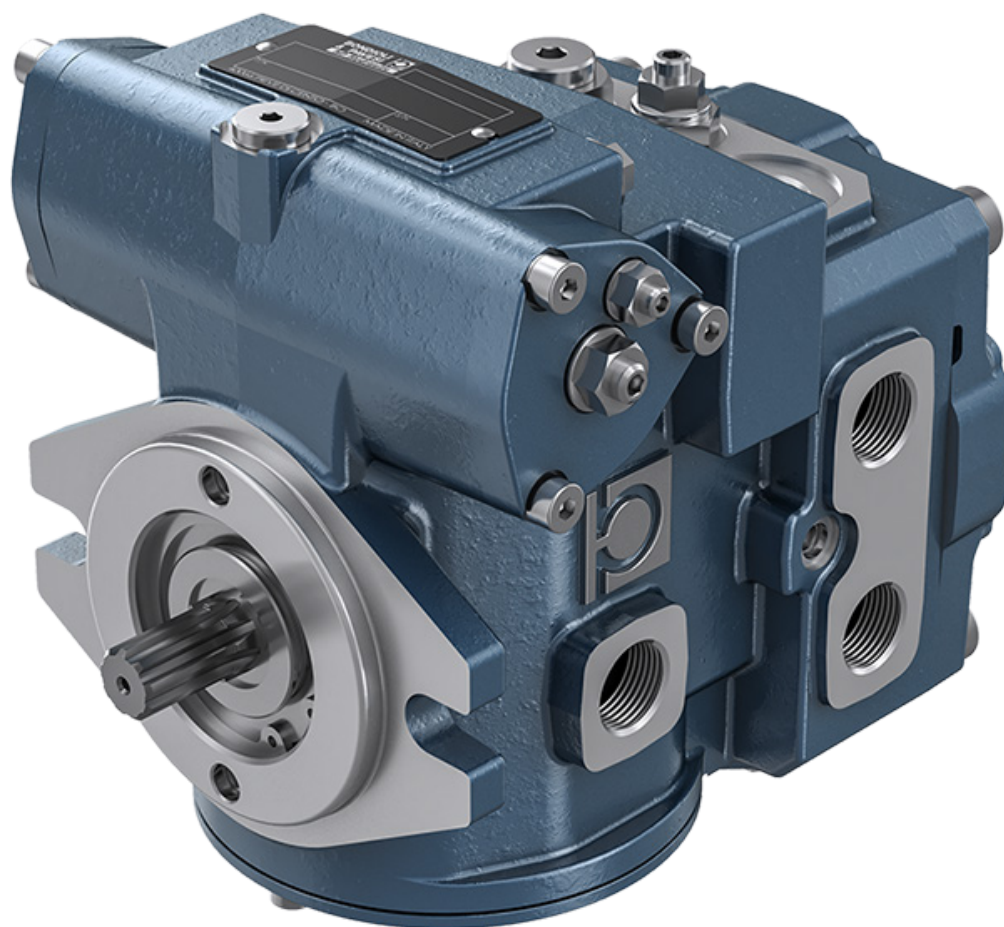
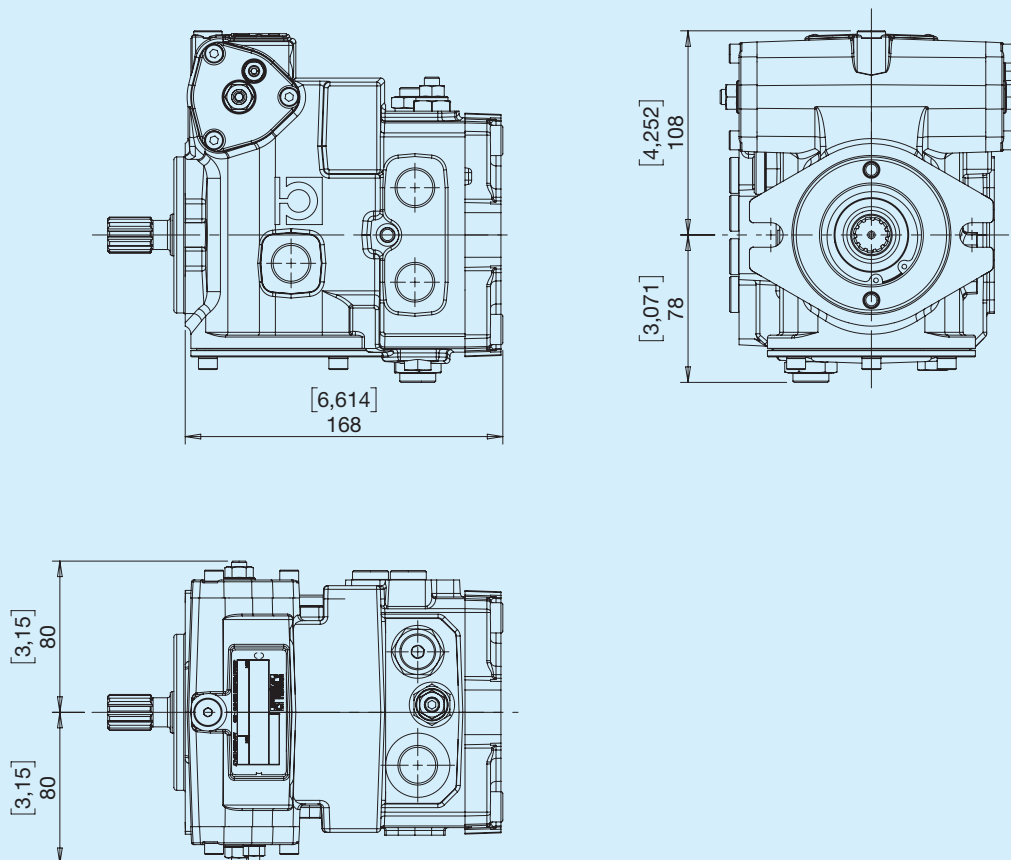


Variable-displacement pumps



Before use, carefully read the GENERAL INSTRUCTIONS FOR USE OF CLOSED CIRCUIT AXIAL PISTON PUMPS AND MOTORS.

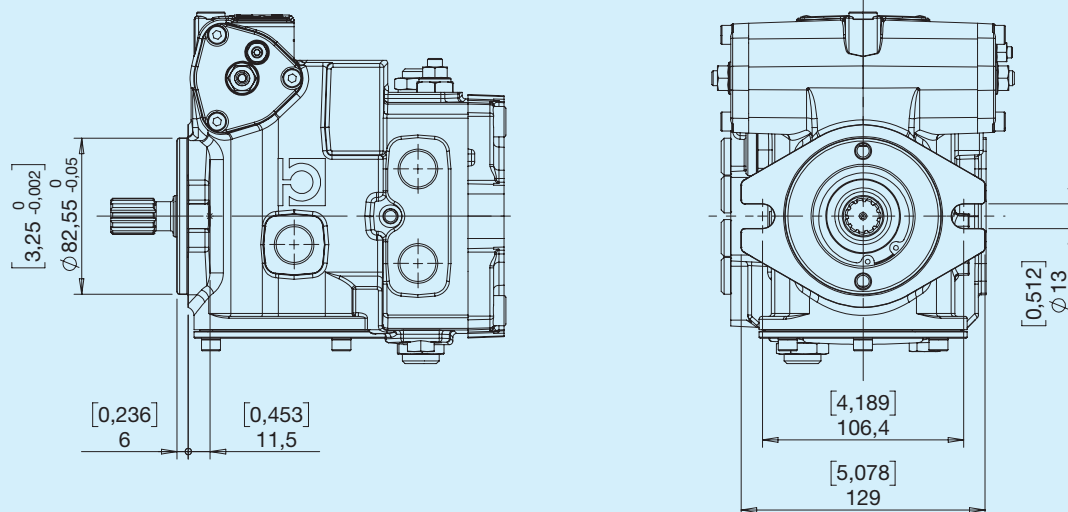


HPP2A	Nominal displacement		Swash plate	Continuous pressure		Intermittent pressure		Peak pressure		Rotational speed		Weight	
	cm ³	in ³		bar	psi	bar	psi	bar	psi	MAX min ⁻¹	MIN min ⁻¹	kg	lbs
14	14	0.85	14.5	250	3625	280	4060	350	5075	4000	500	15	33
19	19	1.16	19	250	3625	280	4060	350	5075	3600	500	16	35.3
23	23	1.40	18	250	3625	280	4060	350	5075	3200	500	16	35.3

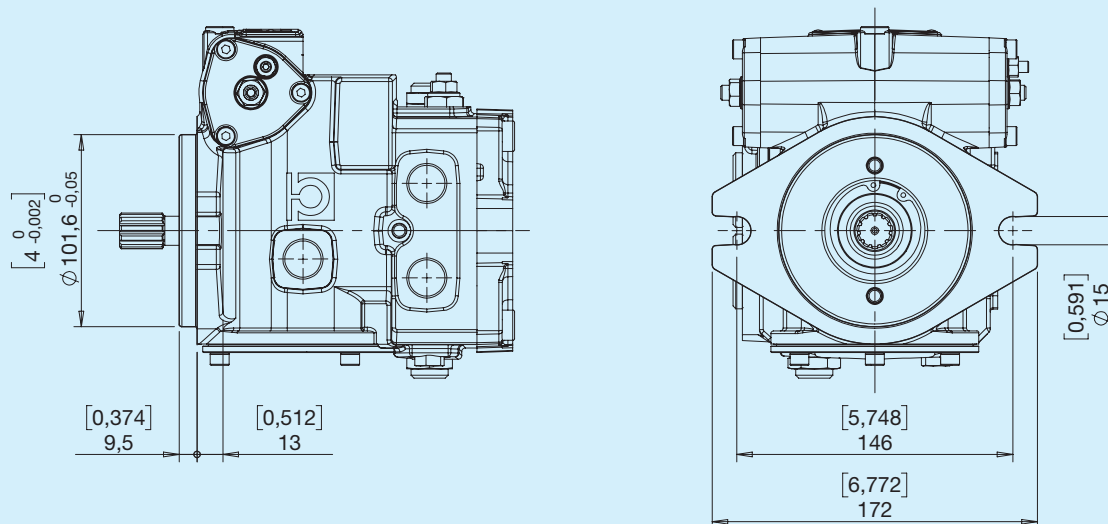
Feed pump

Type	Feed pump displacement		Pressure	
	cm ³	in ³	bar	psi
HPP2A	7	0.43	22	319

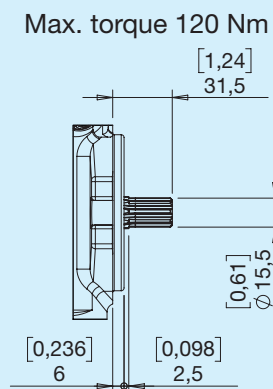
A SAE A



B SAE B

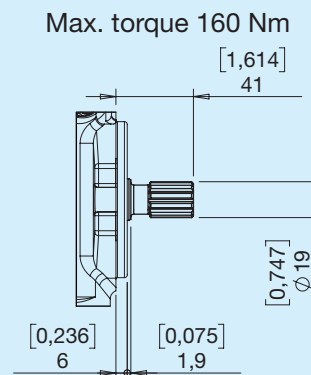


V SAE 9T 16/32 DP



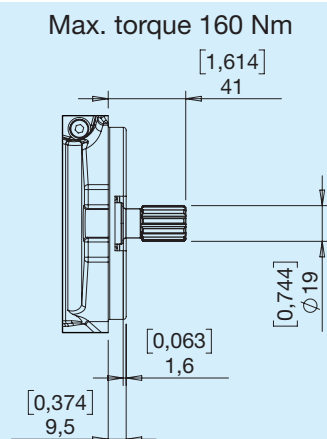
Overall dimensions
with SAE A flange

X SAE 11T 16/32 DP



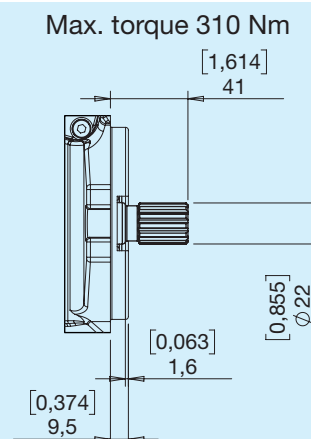
Overall dimensions with
SAE A flange

X SAE 11T 16/32 DP

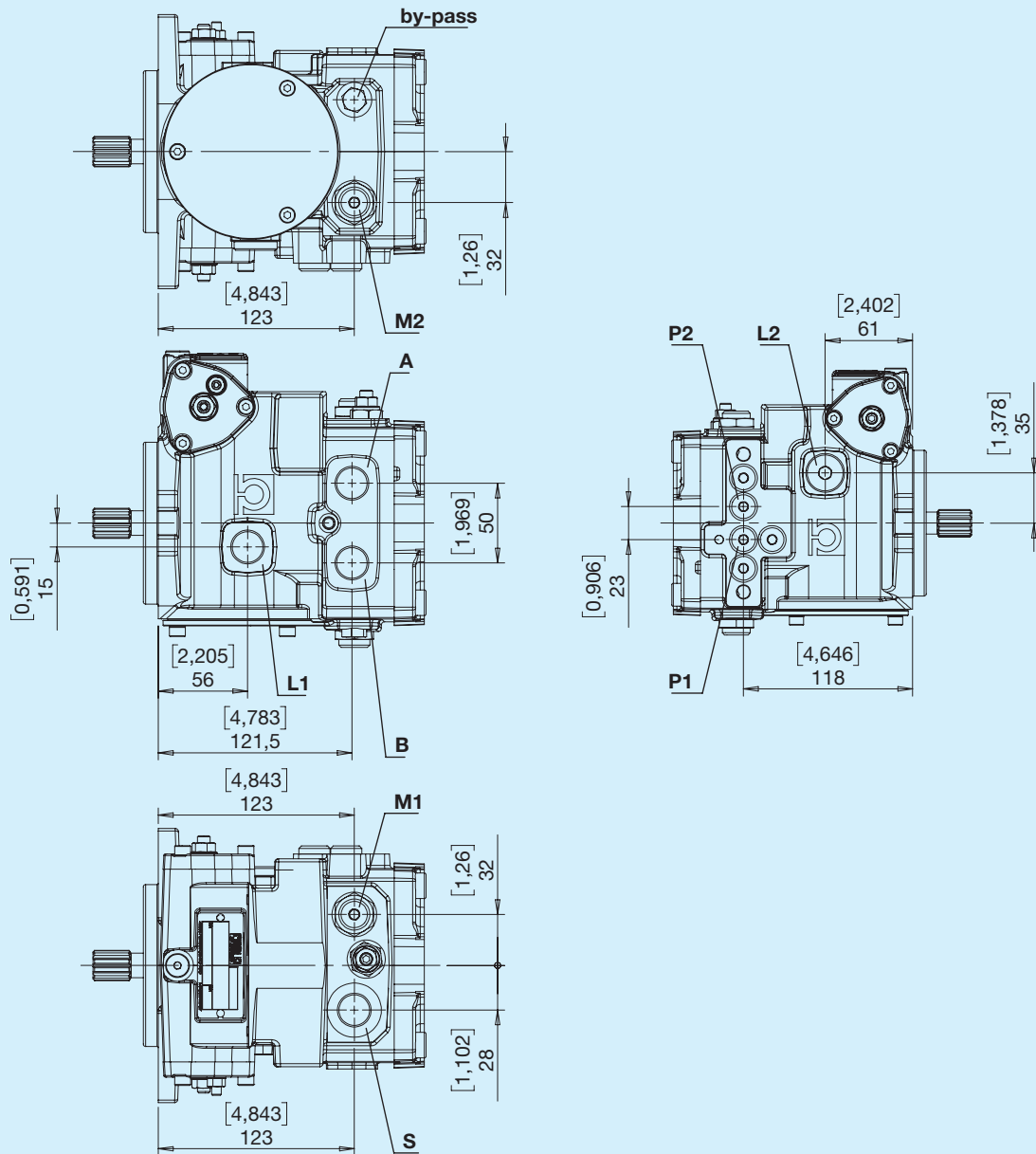


Overall dimensions with
SAE B flange

9 SAE 13T 16/32 DP

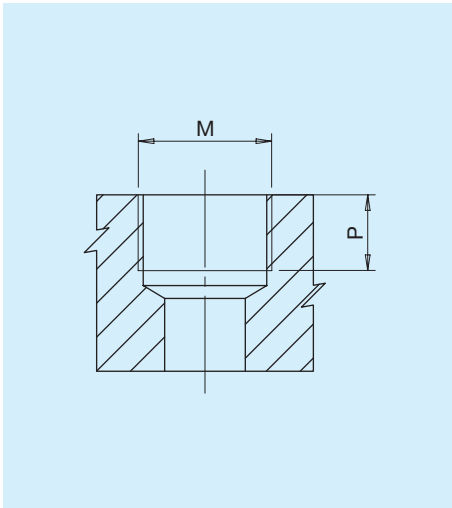


Overall dimensions with
SAE B flange



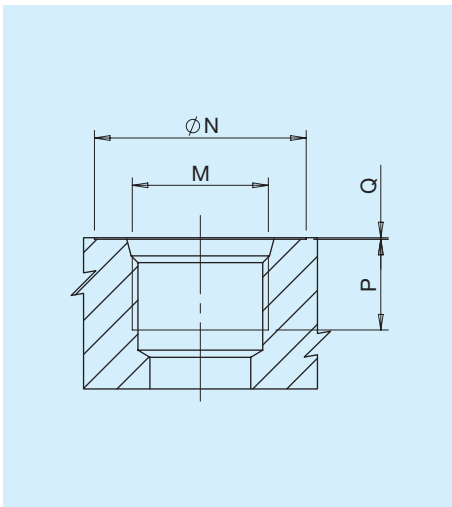
- A, B** - Use
- L1, L2** - Drain port
- S** - Inlet
- P** - Pressure intake
- M1, M2** - Manometer intake

Type G



Type	M	Nm	P	
			mm	in
G1	Port ISO 1179-1 - G 1/8	8	10	0.39
G2	Port ISO 1179-1 - G 1/4	17	12	0.47
G4	Port ISO 1179-1 - G 1/2	70	15	0.59

Type U

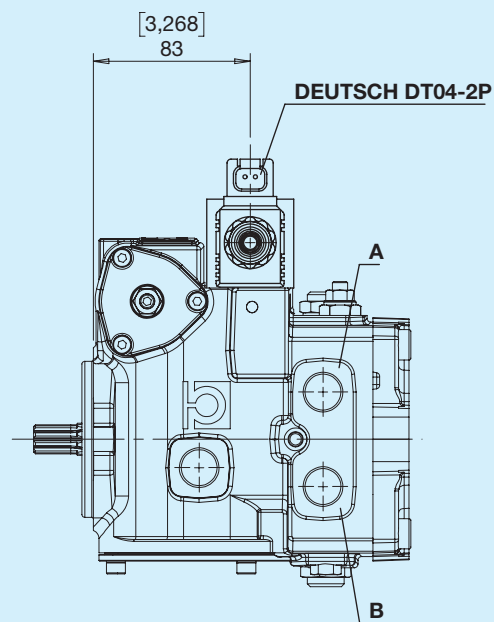
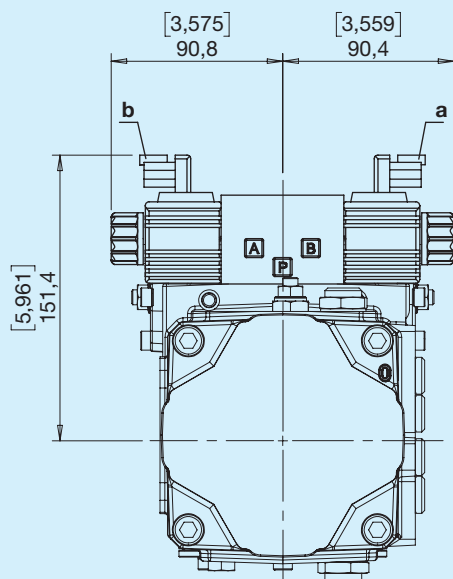


Type	Dim.	N		P		Q		M	Nm
		mm	in	mm	in	mm	in		
U2	1/4"	20	0.79	12	0.47	0.3	0.01	Port ISO 11926-1-7/16-20	17
U5	5/8"	34	1.34	17	0.67	0.3	0.01	Port ISO 11926-1-1 7/8-14	70

Combinations

Type	Inlet S	Outlet A-B	Drain L1-L2	Pilot pressure a - b	Pressure points P1 - P2	Pressure gauge sockets M1 - M2
G	G4	G4	G4	G1	G2	G2
U	U5	U5	U5	U2	G2	U2

E Electrical ON/OFF, closed centre 12V

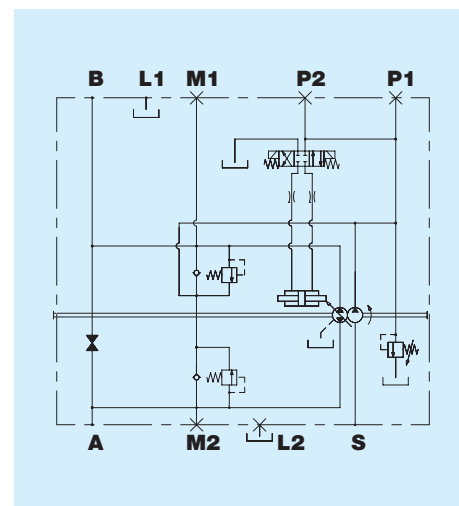


Available on request with DIN 43650 connectors

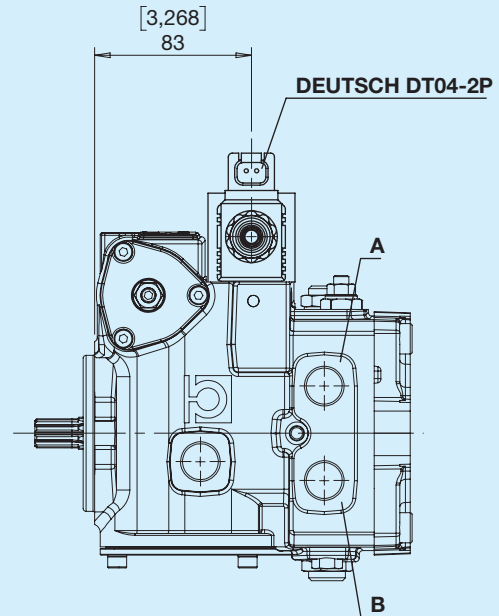
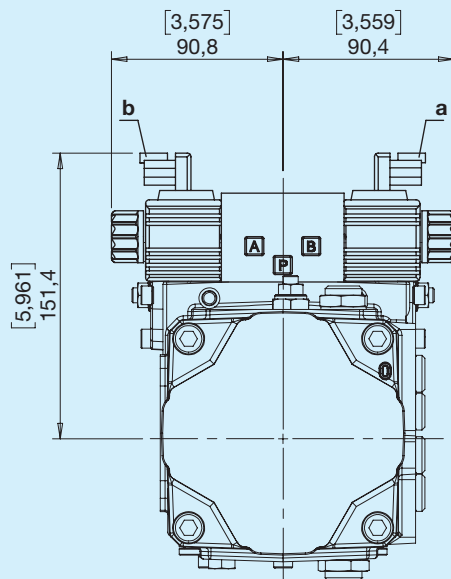
Outlet

Rotation	Excited solenoid	Outlet
Right	a	A
Right	b	B
Left	a	B
Left	b	A

Hydraulic diagram



F Electrical ON/OFF, closed centre 24V

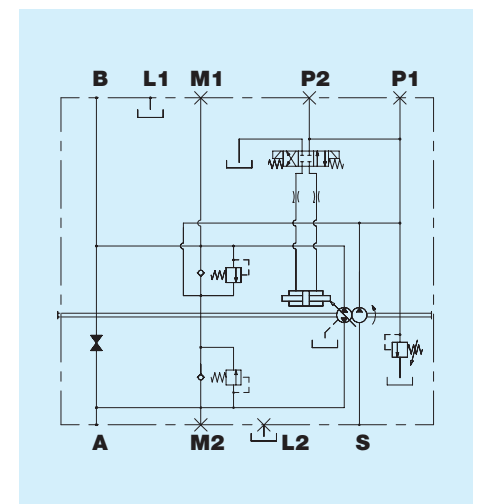


Available on request with DIN 43650 connectors

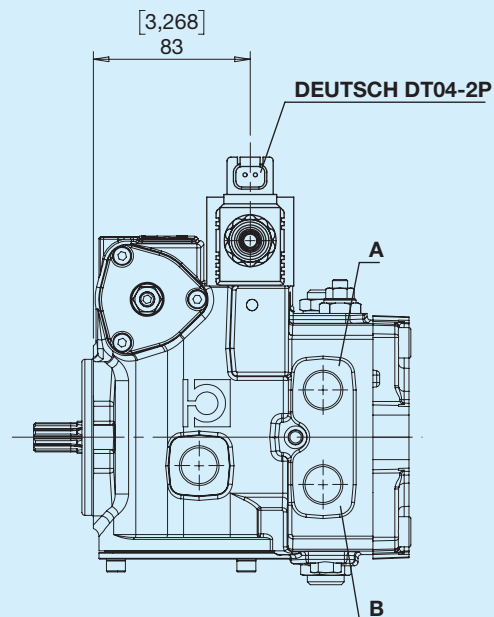
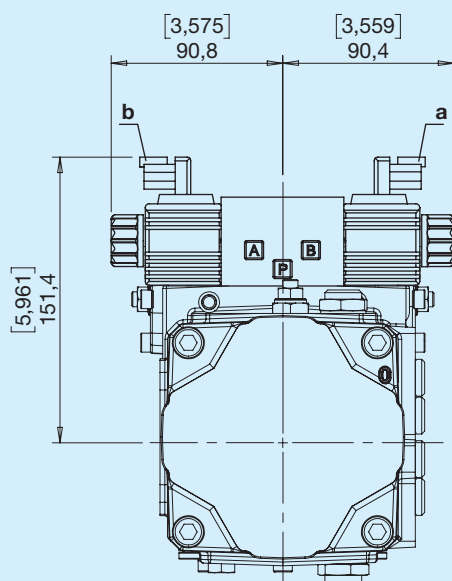
Outlet

Rotation	Excited solenoid	Outlet
Right	a	A
Right	b	B
Left	a	B
Left	b	A

Hydraulic diagram



N Electrical ON/OFF, open centre 12V

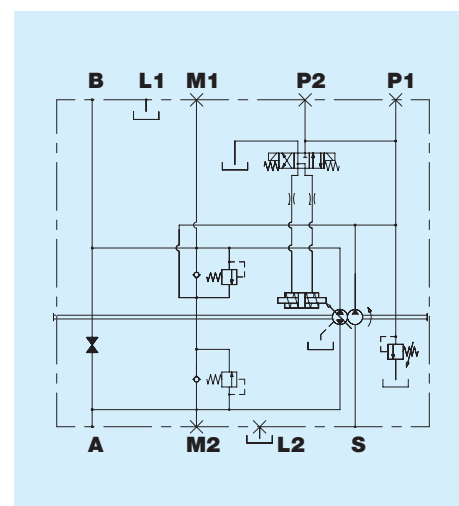


Available on request with DIN 43650 connectors

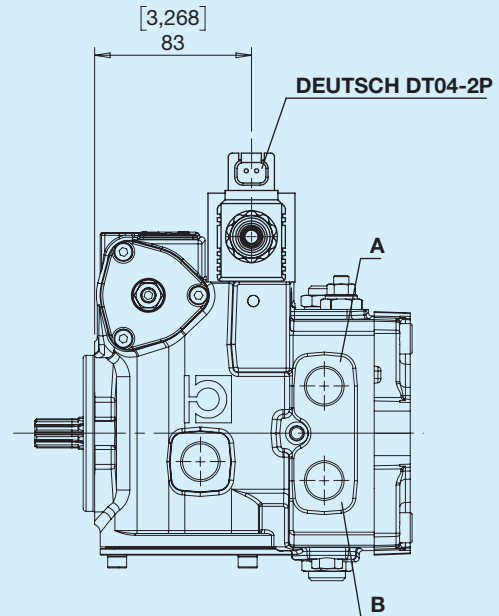
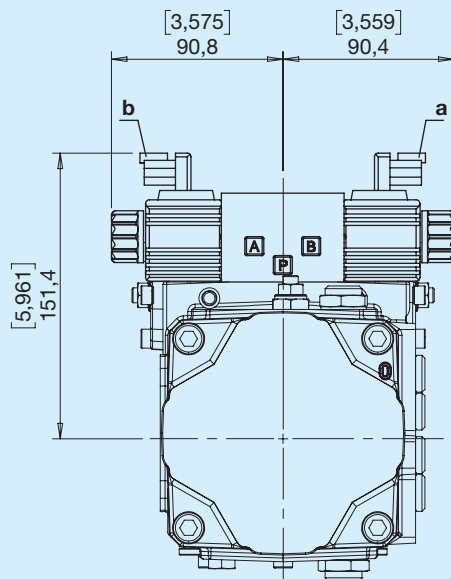
Outlet

Rotation	Excited solenoid	Outlet
Right	a	A
Right	b	B
Left	a	B
Left	b	A

Hydraulic diagram



Q Electrical ON/OFF, open centre 24V

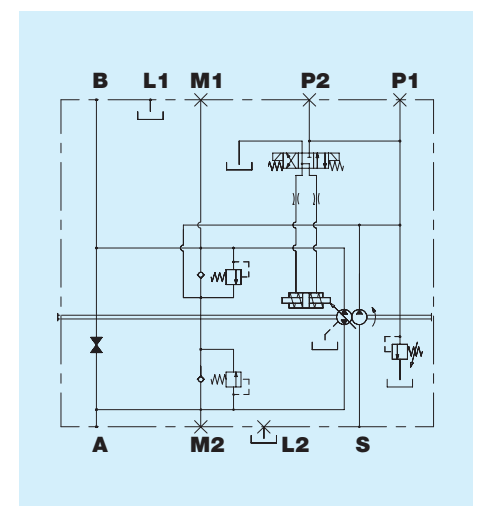


Available on request with DIN 43650 connectors

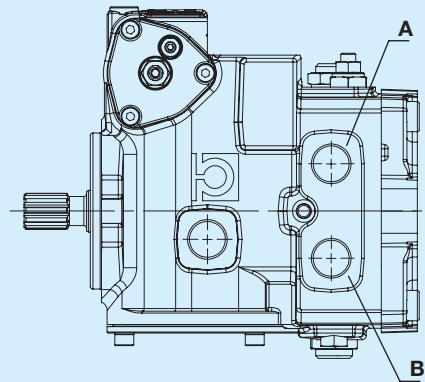
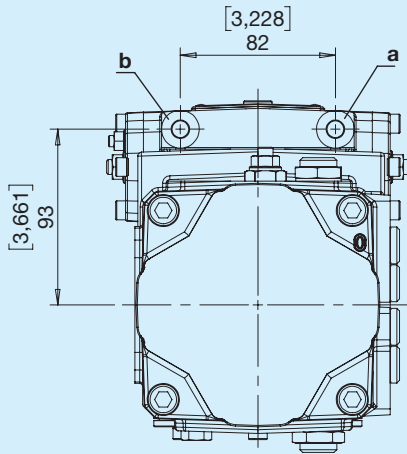
Outlet

Rotation	Excited solenoid	Outlet
Right	a	A
Right	b	B
Left	a	B
Left	b	A

Hydraulic diagram



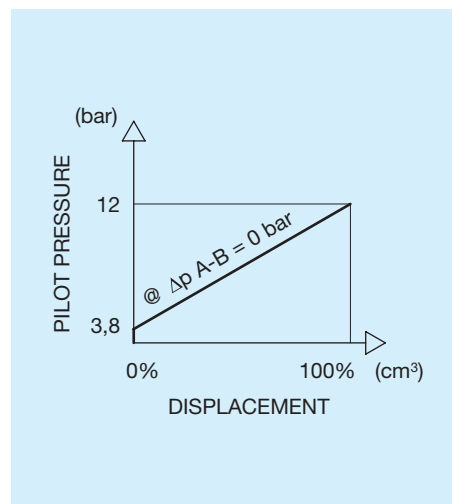
K Direct hydraulic



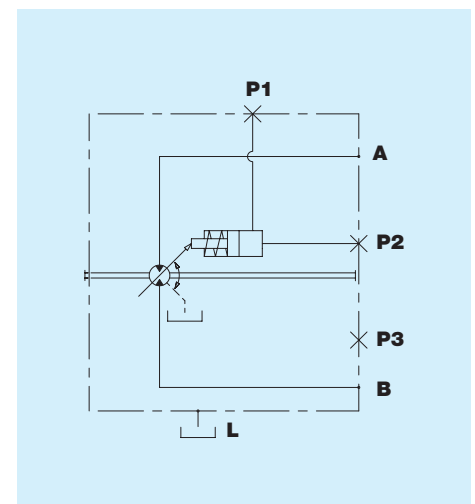
Outlet

Rotation	Pilot pressure	Outlet
Right	a	A
Right	b	B
Left	a	B
Left	b	A

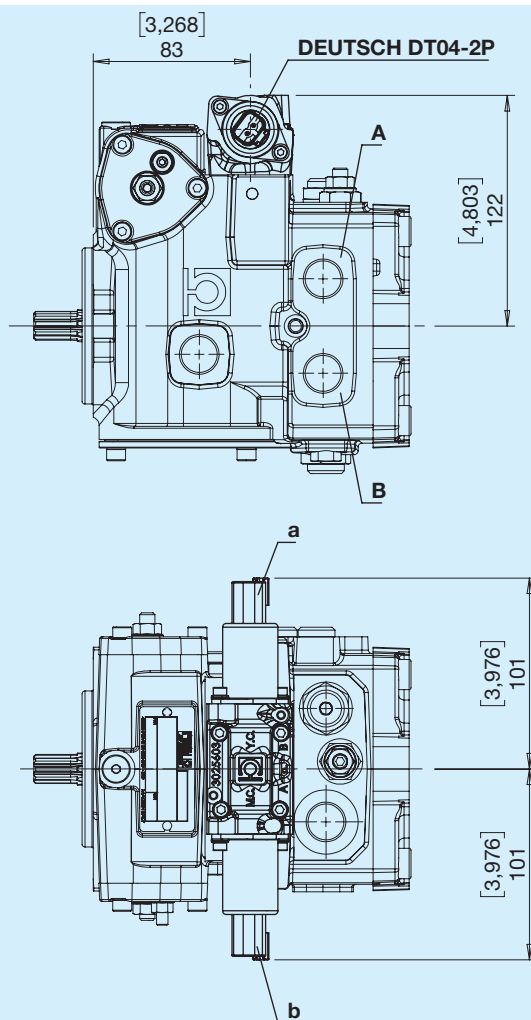
Pilot pressure



Hydraulic diagram



S Electronic proportional control 12V



Available on request with AMP JUNIOR connectors

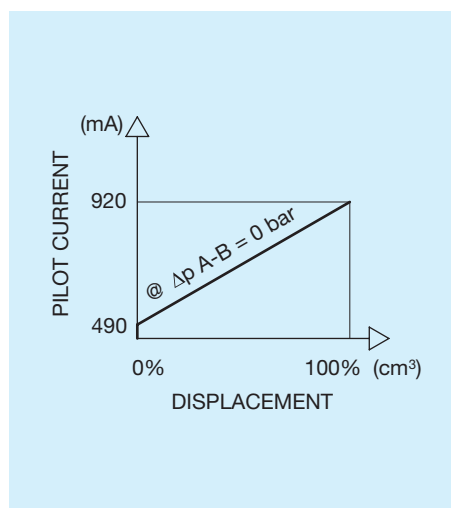
Outlet

Rotation	Excited solenoid	Outlet
Right	a	A
Right	b	B
Left	a	B
Left	b	A

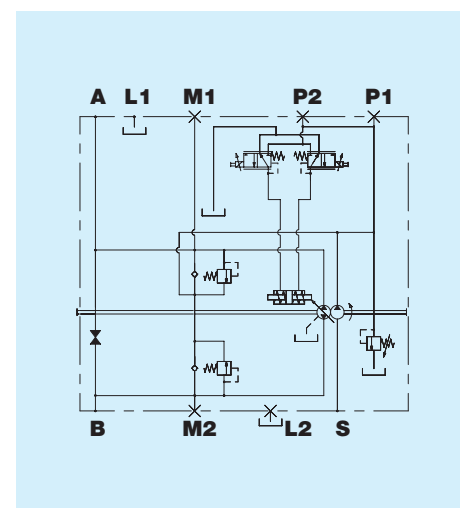
Control

Rated voltage	12	V
Min. current (I1)	300	mA
Max. current (I2)	1500	mA
PWM frequency	100	Hz

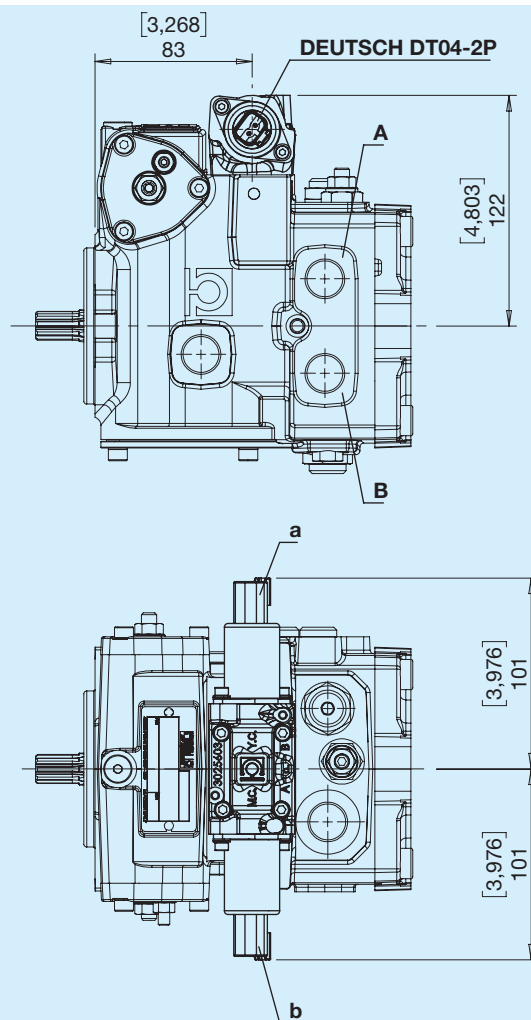
Pilot pressure



Hydraulic diagram



W Electronic proportional control 24 V



Available on request with AMP JUNIOR connectors

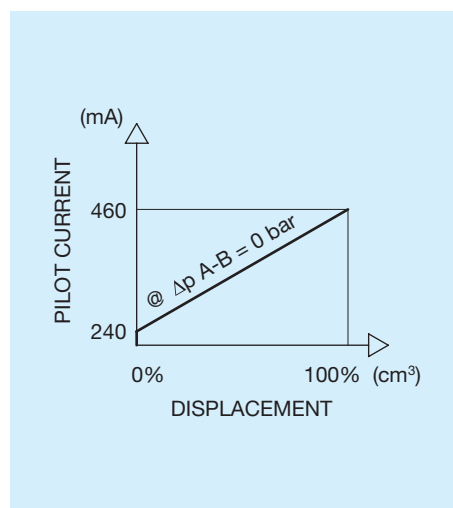
Outlet

Rotation	Excited solenoid	Outlet
Right	a	A
Right	b	B
Left	a	B
Left	b	A

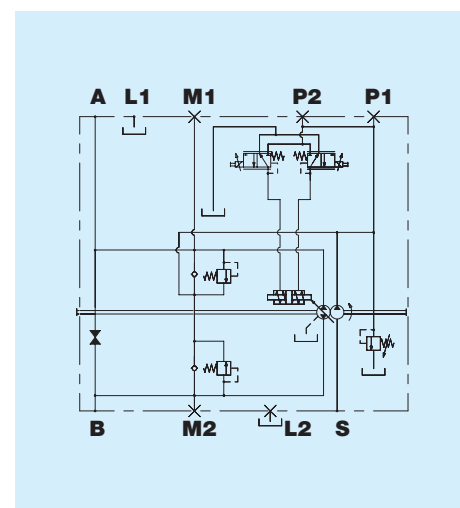
Control

Rated voltage	24	V
Min. current (I1)	180	mA
Max. current (I2)	850	mA
PWM frequency	100	Hz

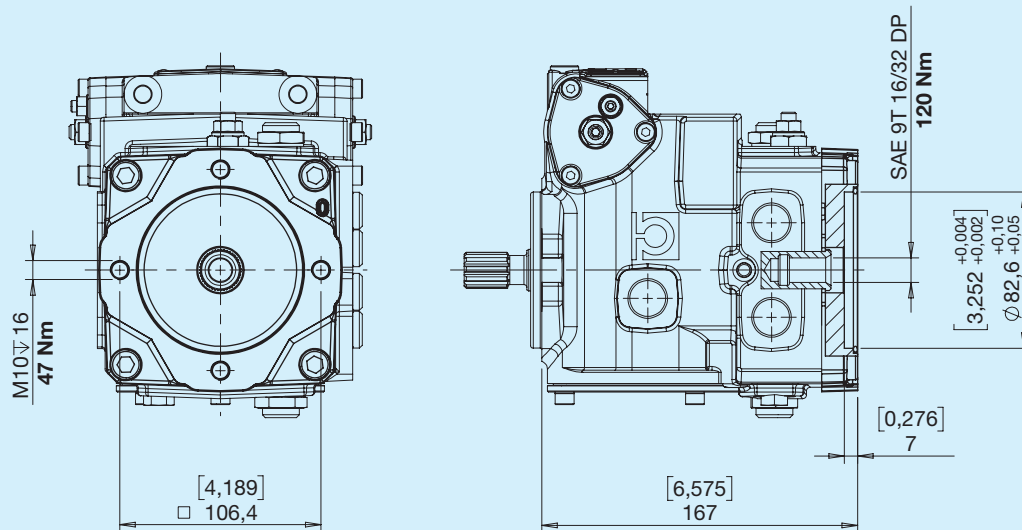
Pilot pressure



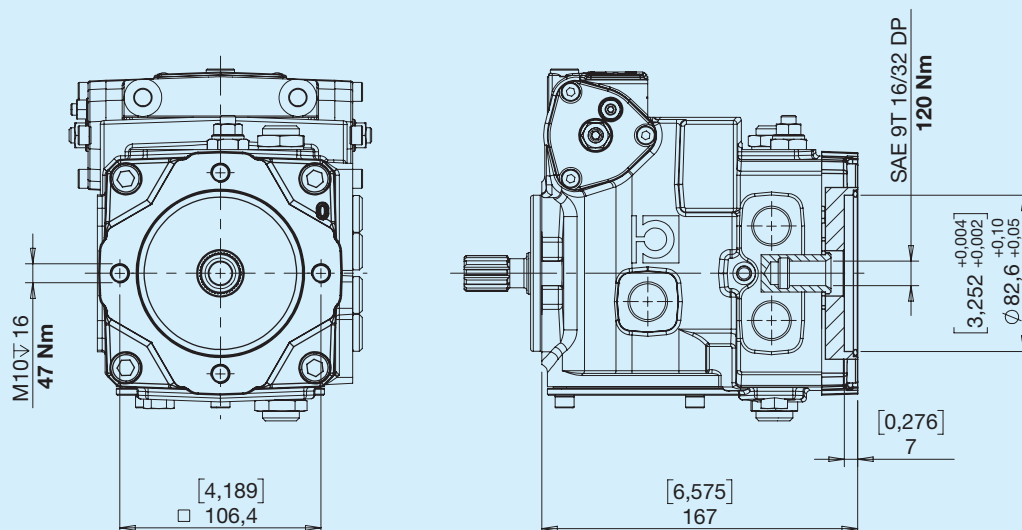
Hydraulic diagram



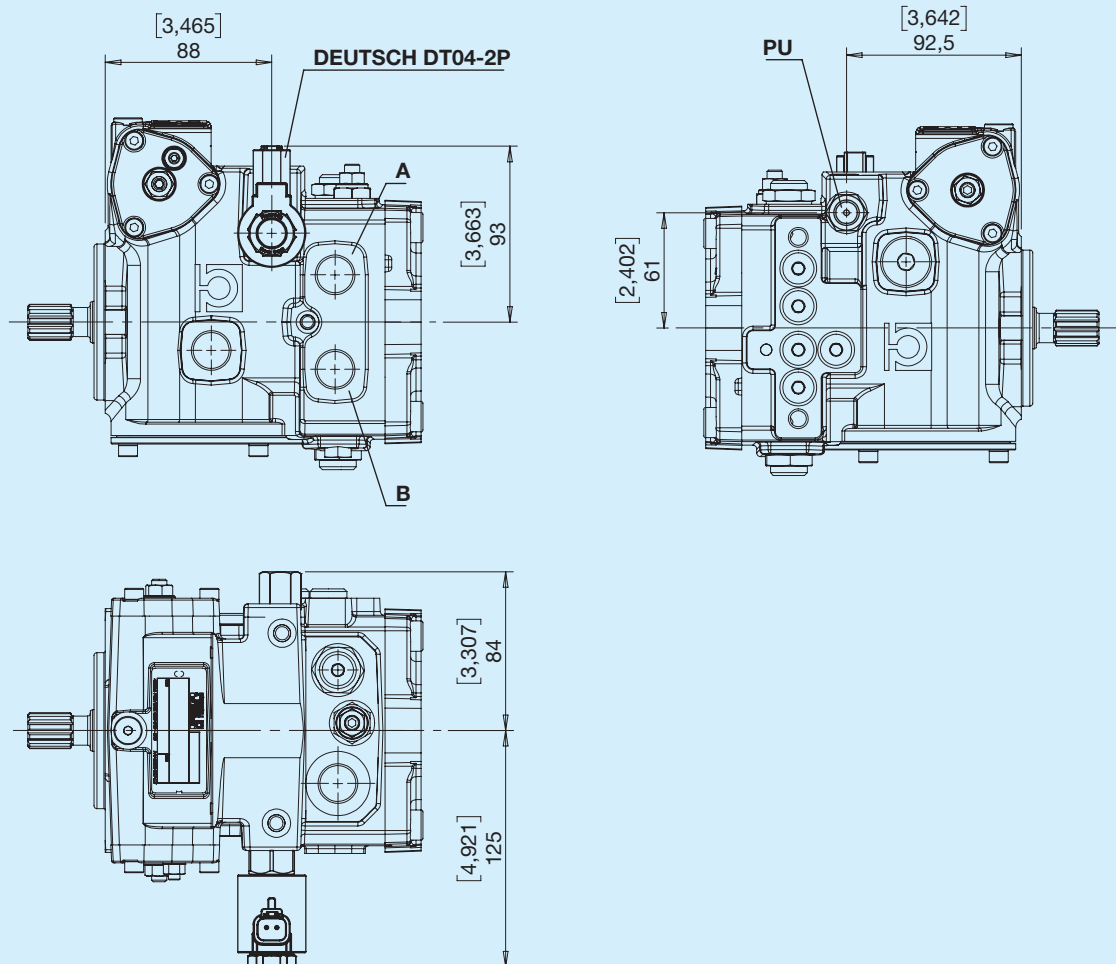
2 SAE A with boost pump



5 SAE A without boost pump

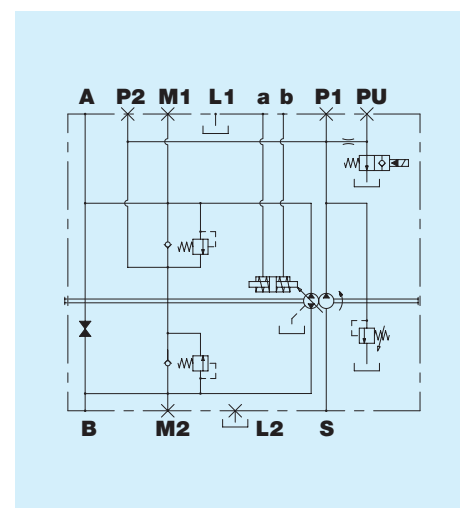


E 'no operator' safety

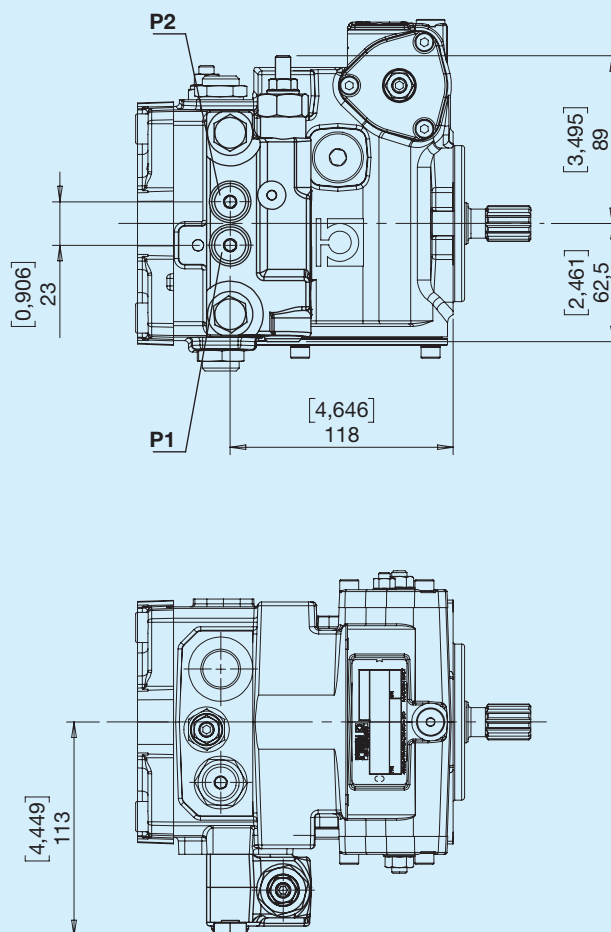


PU - Brake opening pressure G1/4

Hydraulic diagram

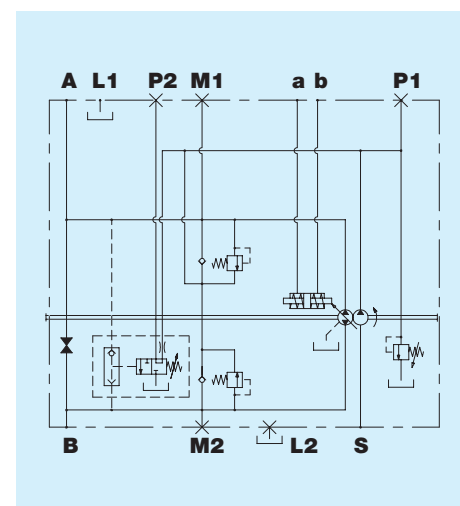


J Cut-off

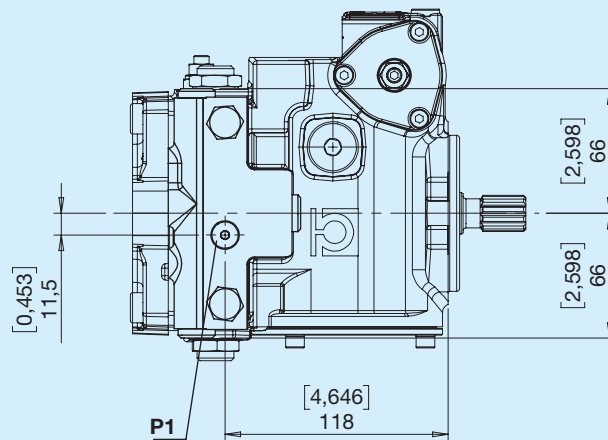


P1, P2 - Pressure intake G1/4

Hydraulic diagram

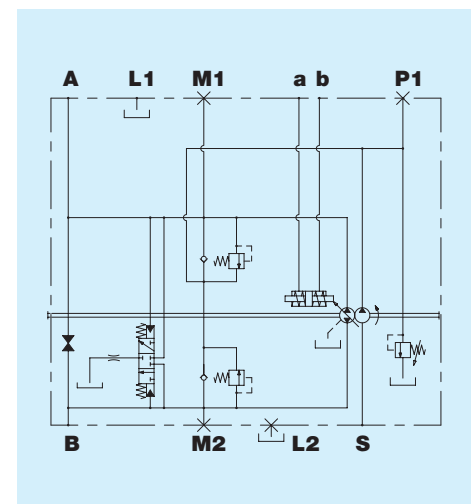


V Flushing valve (1.5±0.5 l/min)

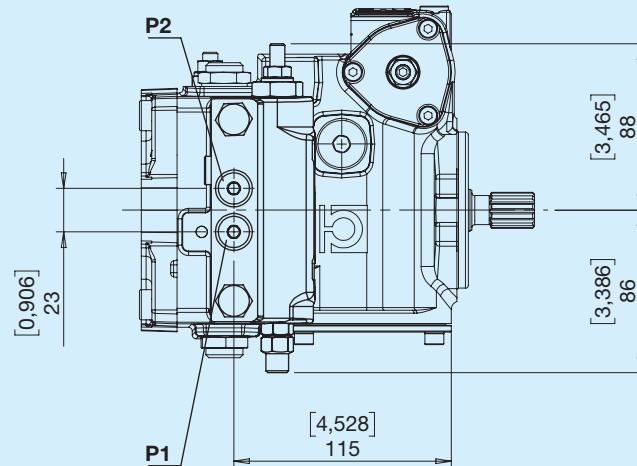


P1 - Pressure intake G1/8

Hydraulic diagram

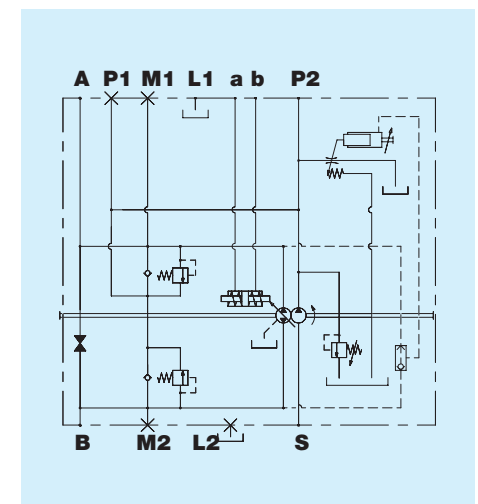


W Power limiter

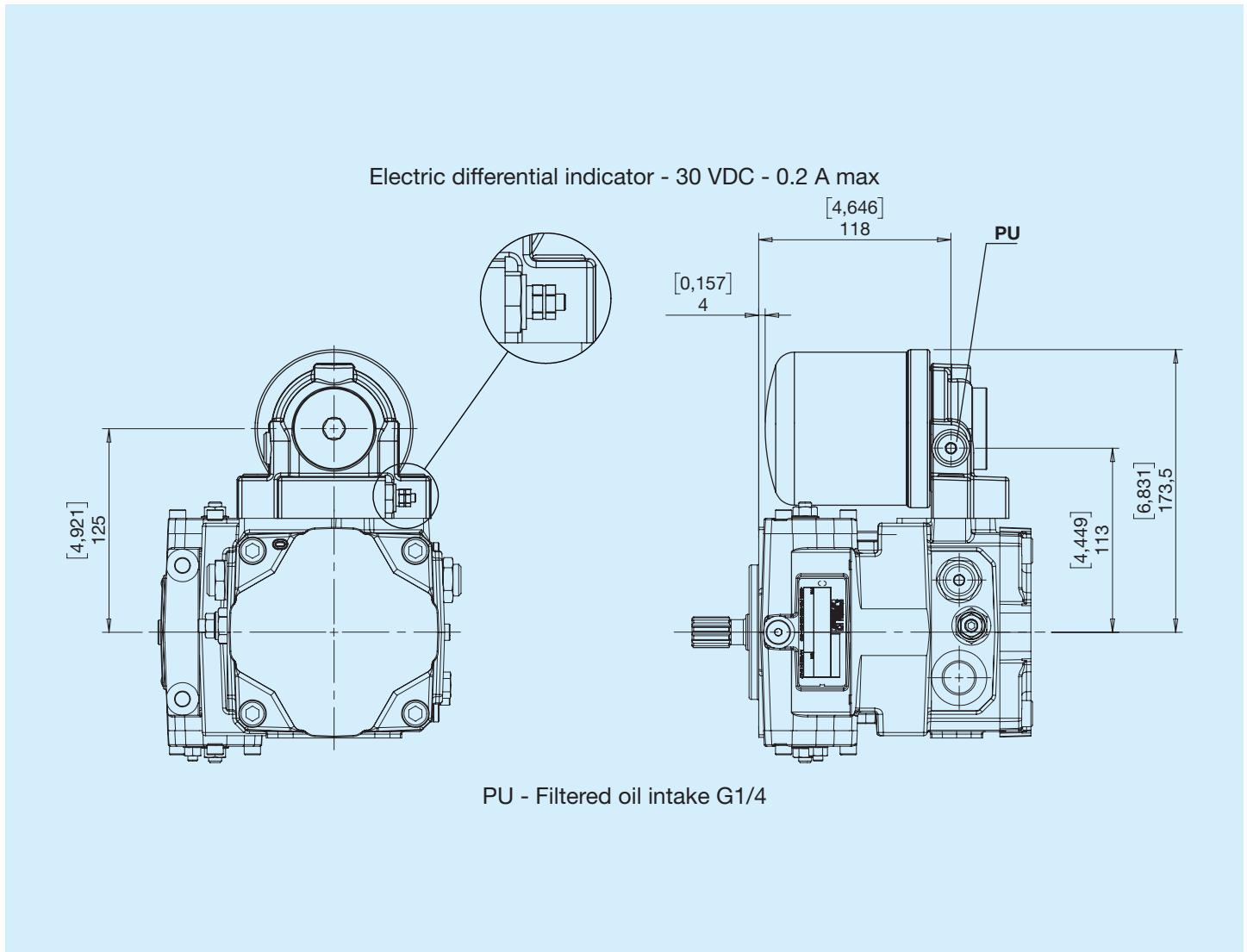


P1, P2 - Pressure intake G1/4

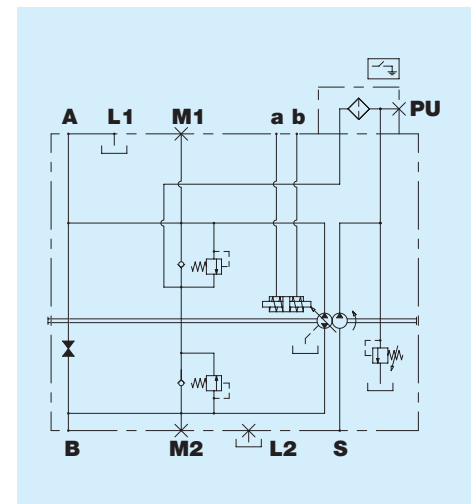
Hydraulic diagram



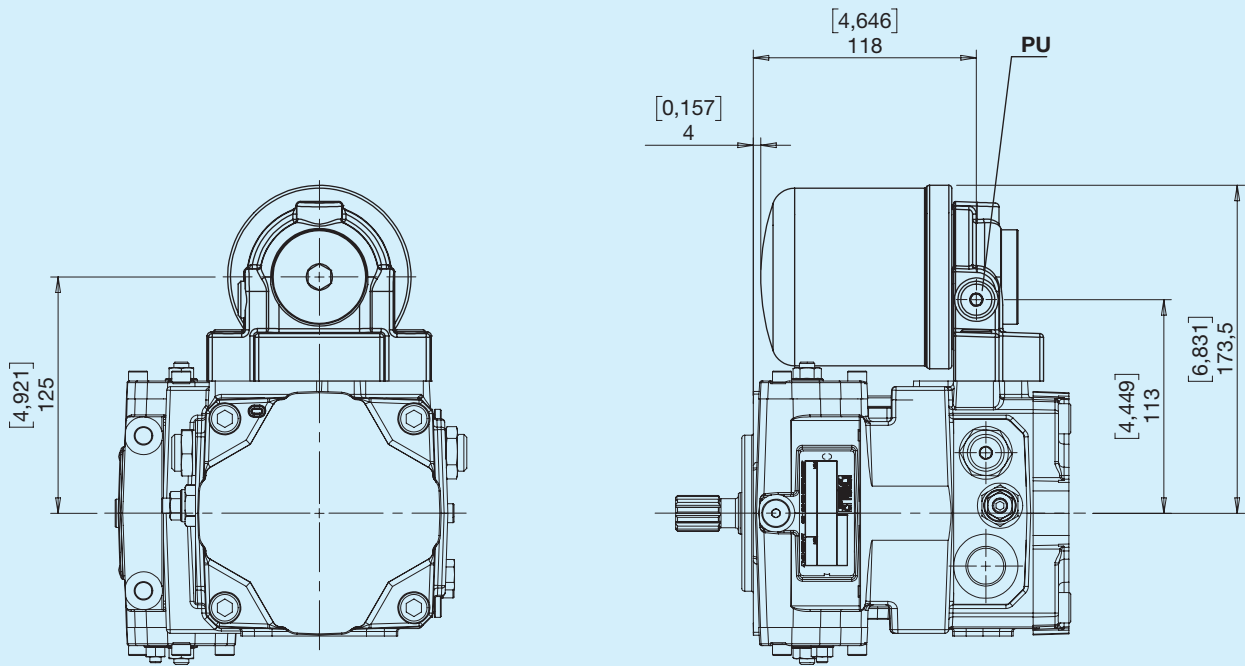
X Filter with clogging indicator



Hydraulic diagram

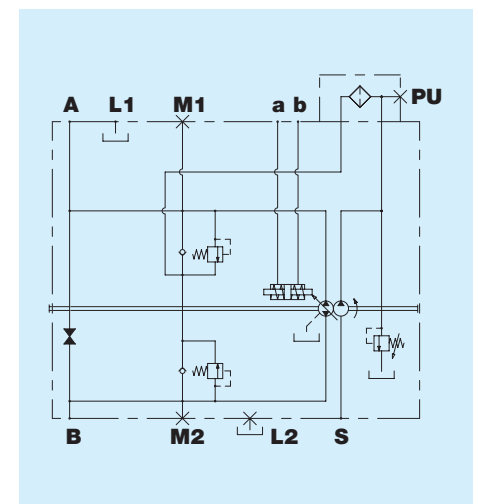


Y Filter without electric clogging indicator



PU - Filtered oil intake G1/4

Hydraulic diagram



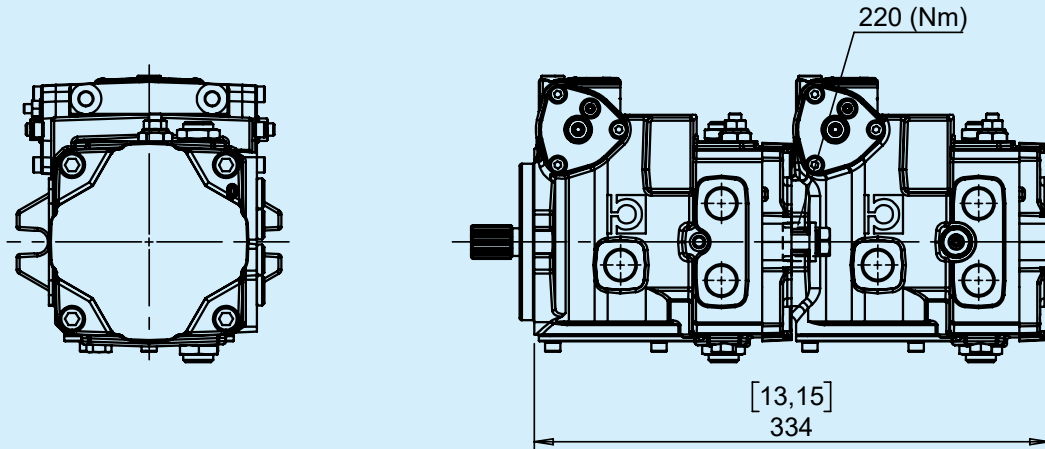
	1	2	3	4	5	6	7	8	9	10	12	13	14
HPP2A													
1 2	Displacement												
	14				19				23				
3	Direction of rotation												
	R Right				L Left								
4	Flanges												
	A SAE A				B SAE B								
5	Shafts												
	V SAE 9T 16/32 DP				X SAE 11T 16/32 DP				9 SAE 13T 16/32 DP			0 For HPP2A secondary pump	
6	Type of ports												
	G Gas				U Unf								
7	Controls												
	E Electrical ON/OFF, closed centre 12V F Electrical ON/OFF, closed centre 24V				N Electrical ON/OFF, open centre 12V Q Electrical ON/OFF, open centre 24V				K Remote hydraulic S Electronic proportional control 12V			W Electronic proportional control 24V	
8	Valve calibration												
	B 150 bar D 180 bar				E 210 bar F 230 bar				G 250 bar I 280 bar			L 300 bar O 350 bar	
9	Versions												
	0 No special fittings, without boost pump 1 No special fittings, with boost pump				2 SAE A with boost pump 5 SAE A without boost pump				T for pump P2 without boost pump V for pump P2 with boost pump				
10	Accessories												
	0 No option E 'no operator' safety				J Cut-off V Flushing valve				W Power limiter X Filter with electric clogging indicator			Y Filter without electric clogging indicator S Multiple accessories	
12 13 14	Special versions												
	...												

Double pump with two charge pumps

The order code of a multiple pump is obtained by summing, as shown in the examples, the codes of the individual pumps (stages) obtained by following the order instructions for the single pumps

Stage 1
Stage 2
HPP2A 14 R B V G K E V 0 000 + HPP2A 14 R A 0 G K E 1 0 000

tandem pump



Stage 1
Stage 2
HPP2A 14 R B V G K E V 0 000 + HPP2A 14 R A 0 G K E 1 0 000

tandem pump with SAE A fitting

