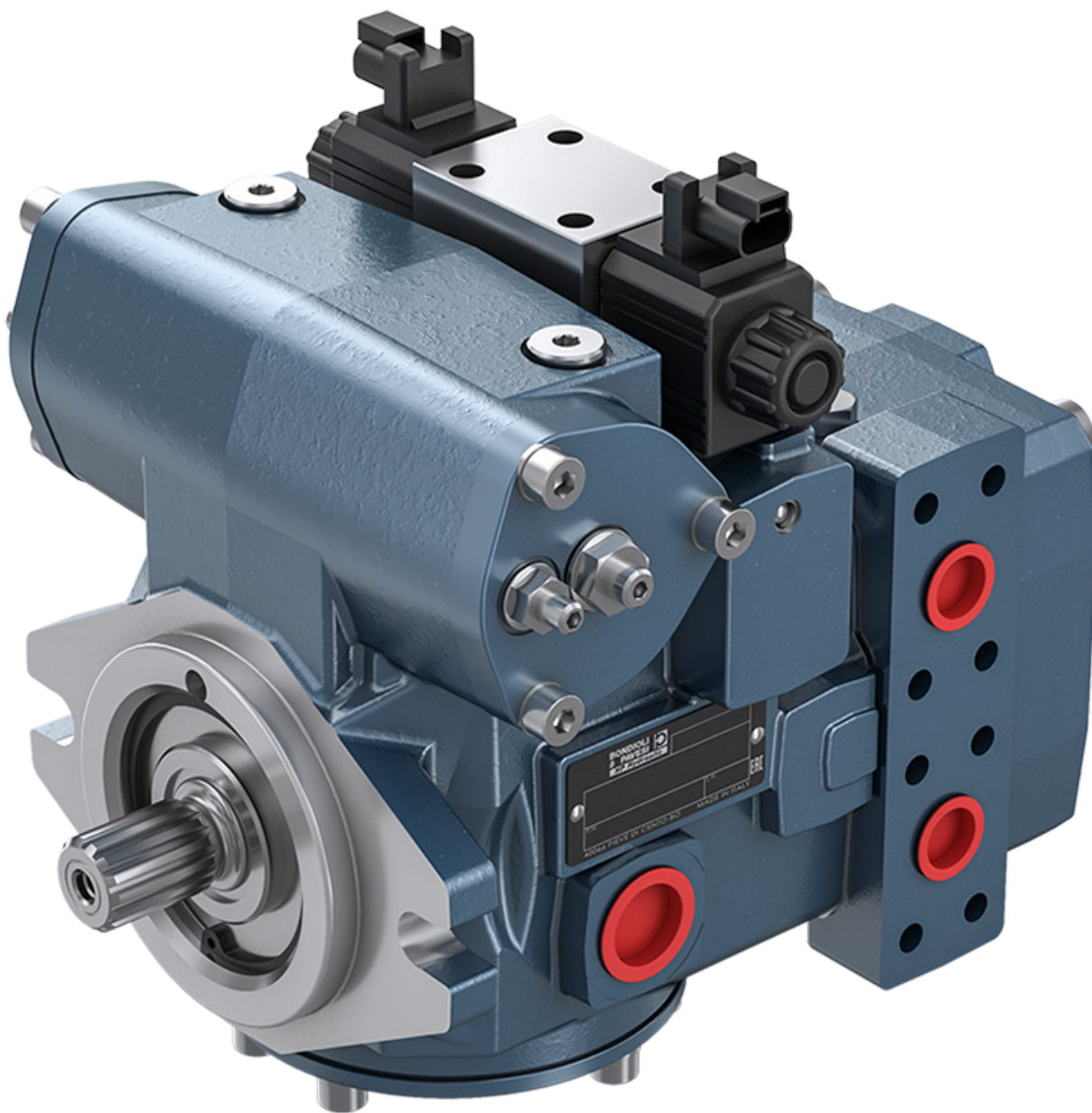
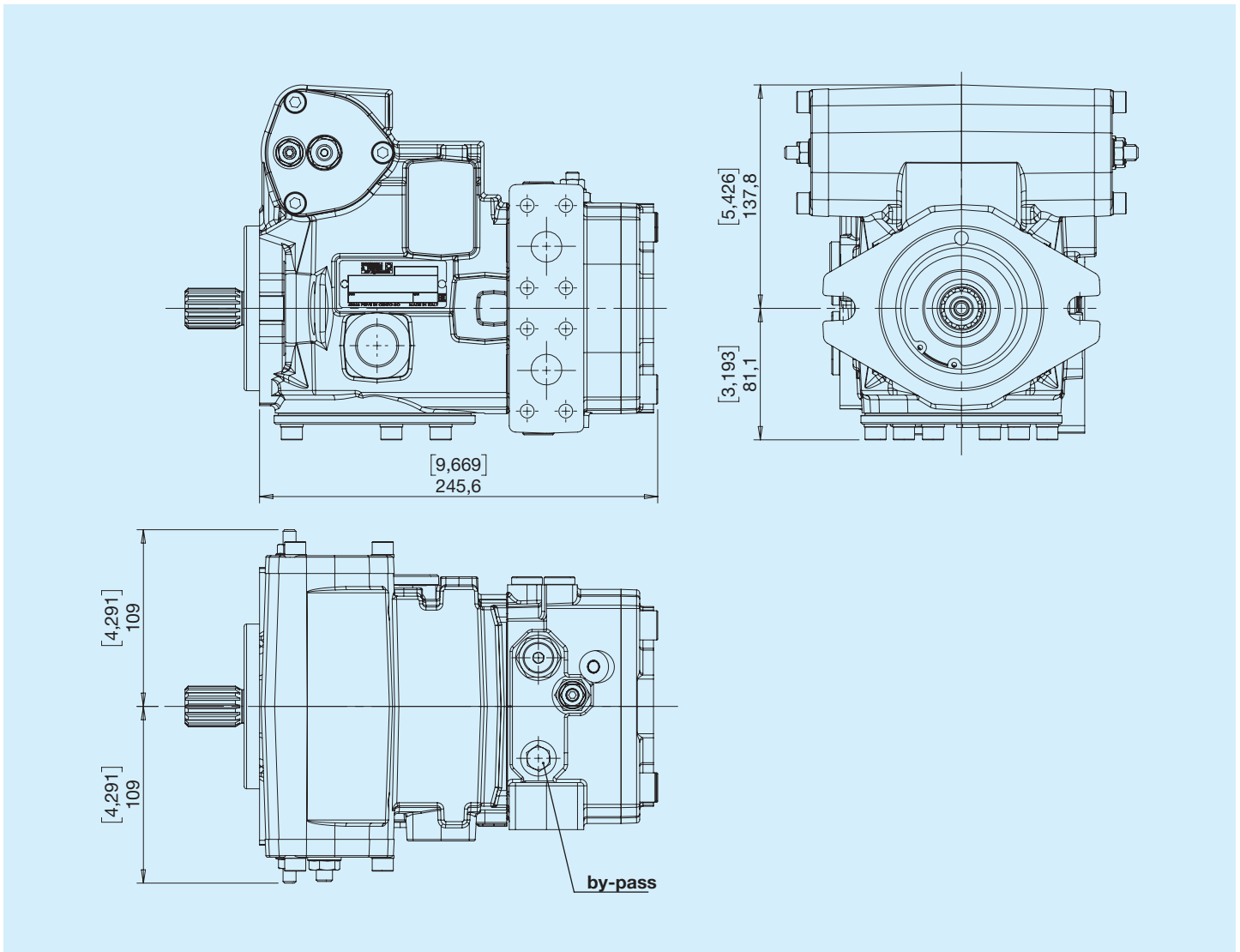


Variable-displacement pumps



Before using the axial piston pumps and motors, carefully read the GENERAL INSTRUCTIONS FOR USE OF CLOSED CIRCUIT AXIAL PISTON PUMPS AND MOTORS.

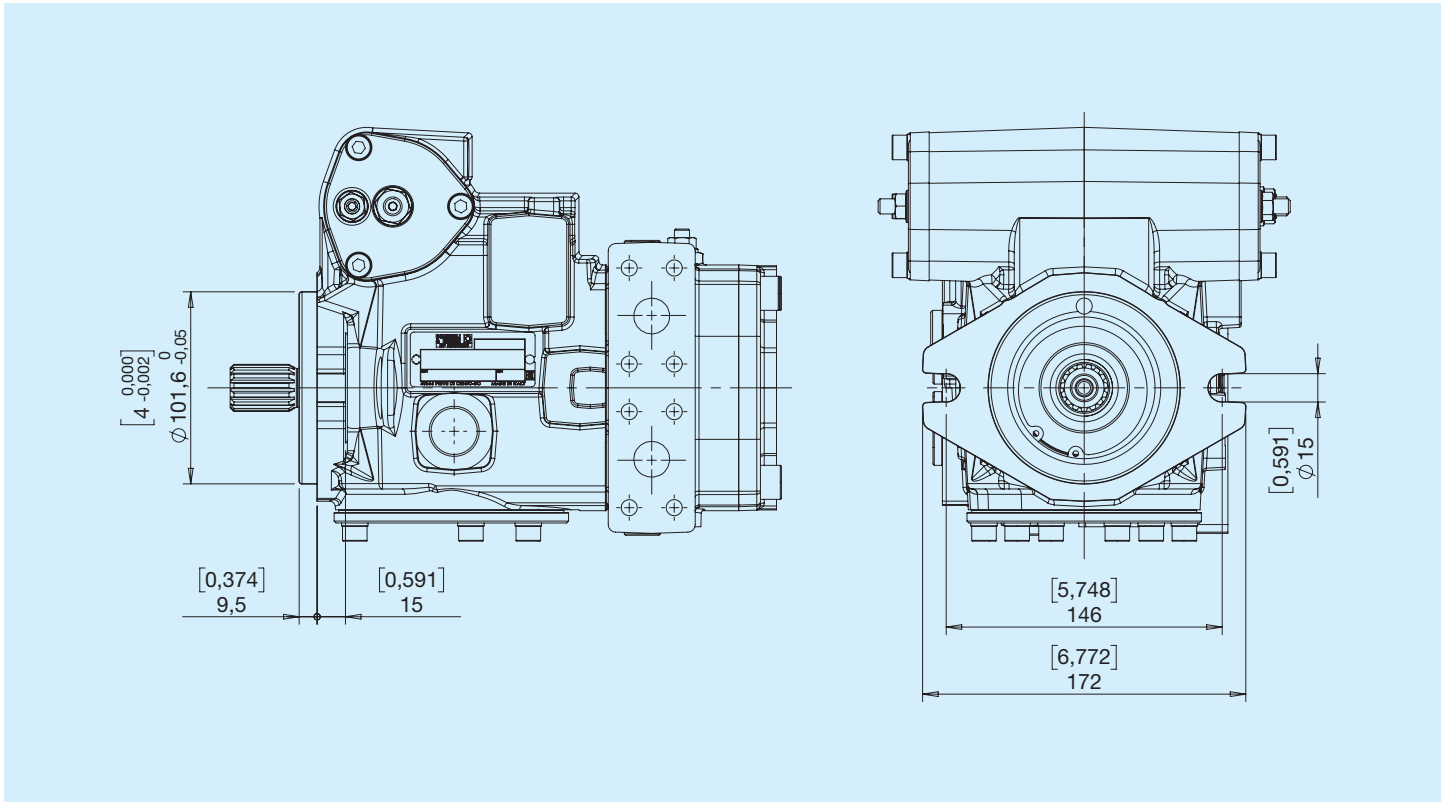


HPP5	Nominal displacement		Swash plate °	Continuous pressure		Intermittent pressure		Peak pressure		Rotational speed		Weight	
	cm ³	in ³		bar	psi	bar	psi	bar	psi	min ⁻¹	min ⁻¹	kg	lbs
040	46	2.81	18	420	6091	450	6525	480	6960	3800	500	25.5	56.2

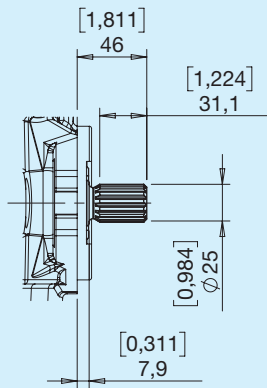
Feed pump

Type	Feed pump displacement		Pressure	
	cm ³	in ³	bar	psi
HPP5	16	0.98	22	319

B SAE B

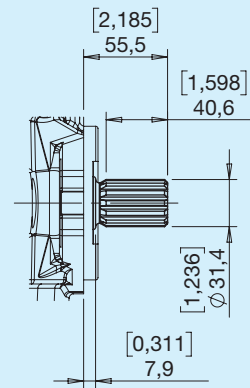


1 SAE 15T 16/32 DP



Max. torque 460 Nm

3 SAE 14T 12/24 DP



Max. torque 850 Nm

A,B - Use

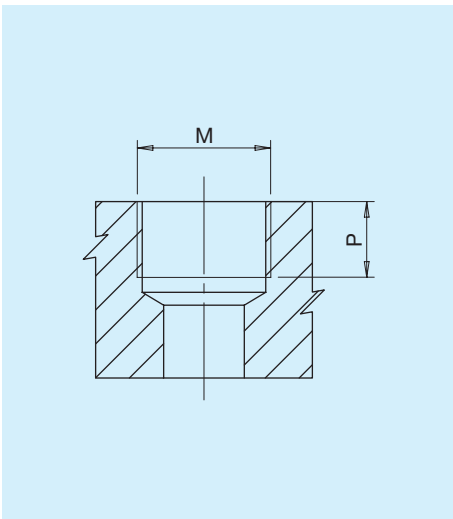
L1, L2 - Drain port

S - Inlet

P - Pressure intake

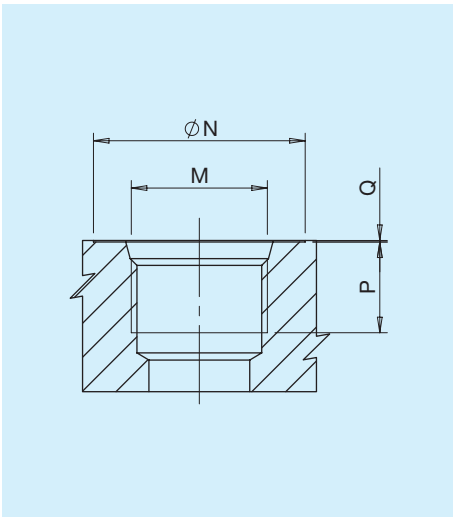
M1, M2 - Manometer intake

Type G



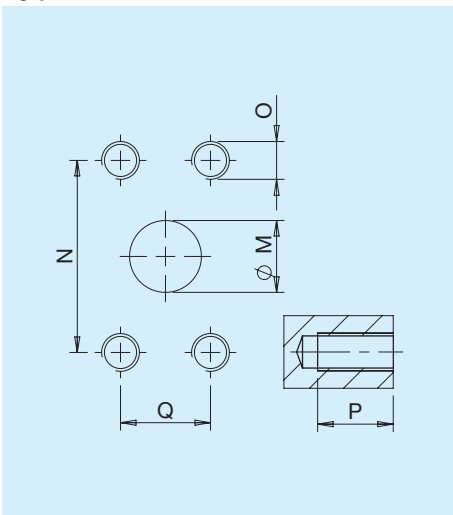
Type	M		P	
	mm	in	mm	in
G2	Port ISO 1179-1 - G 1/4	17	12	0.47
G6	Port ISO 1179-1 - G 3/4	90	15	0.59

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
U6	3/4"	42	1.65	18	0.70	0.3	0.01	Port ISO 11926-1-1 1/16-12	90

Type N

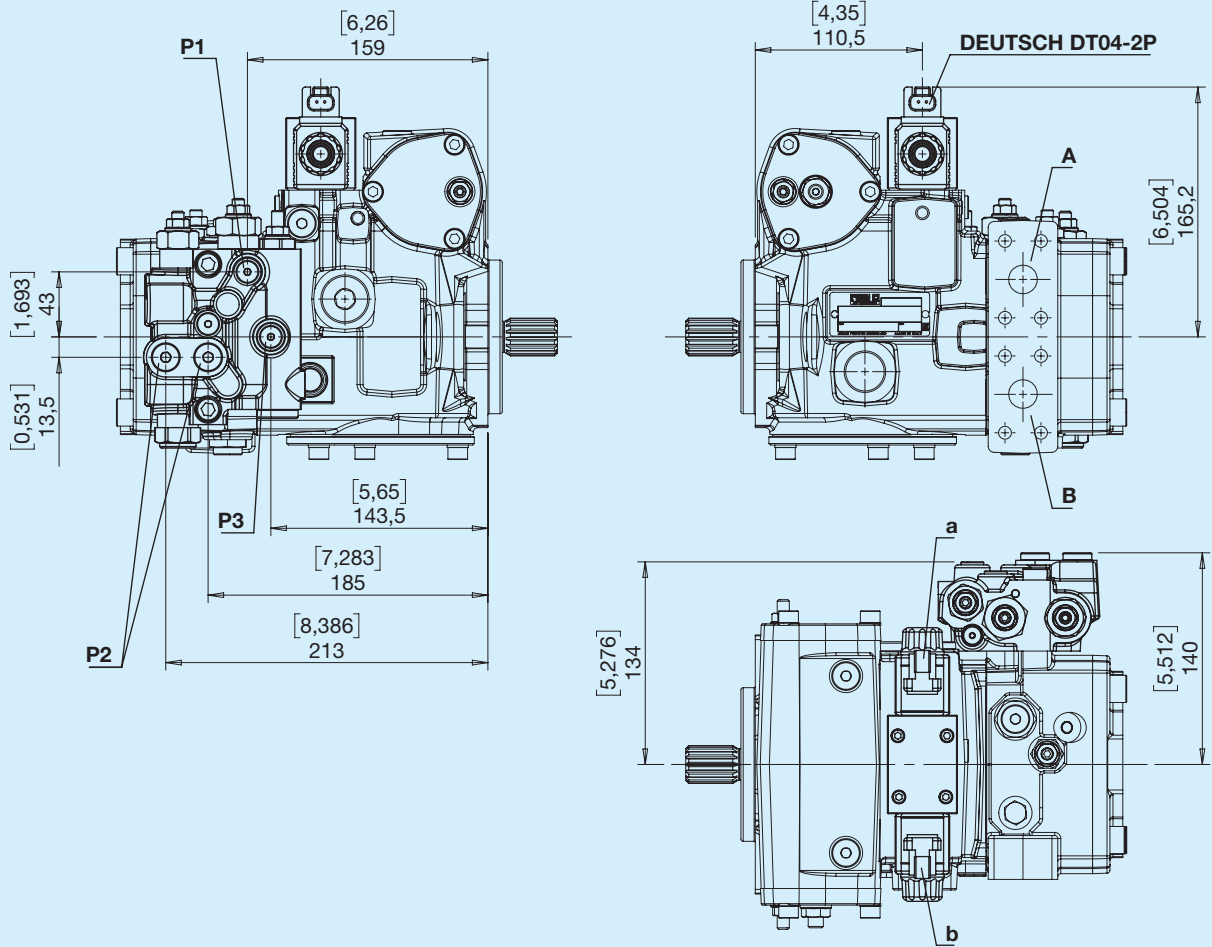


Type	M		N		Q		P		O	Nm
	mm	in	mm	in	mm	in	mm	in		
N6	19	0.75	50.8	2	23.8	0.94	20	0.79	M10	38

Combinations

Type	Inlet S	Outlet A-B	Drain port L1-L2	Pilot pressure a-b	Pressure intakes P1 - P2	Manometer intakes M1 - M2
G	G6	N6	G6	G2	G2	G2
U	U6	N6	U6	G2	G2	U2

A Automotive



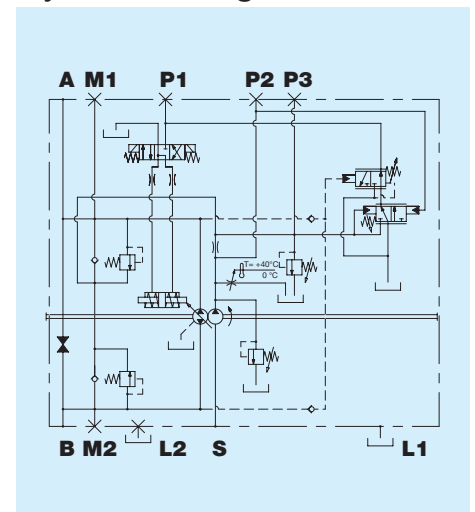
Available on request with DIN 43650 connectors

Outlet

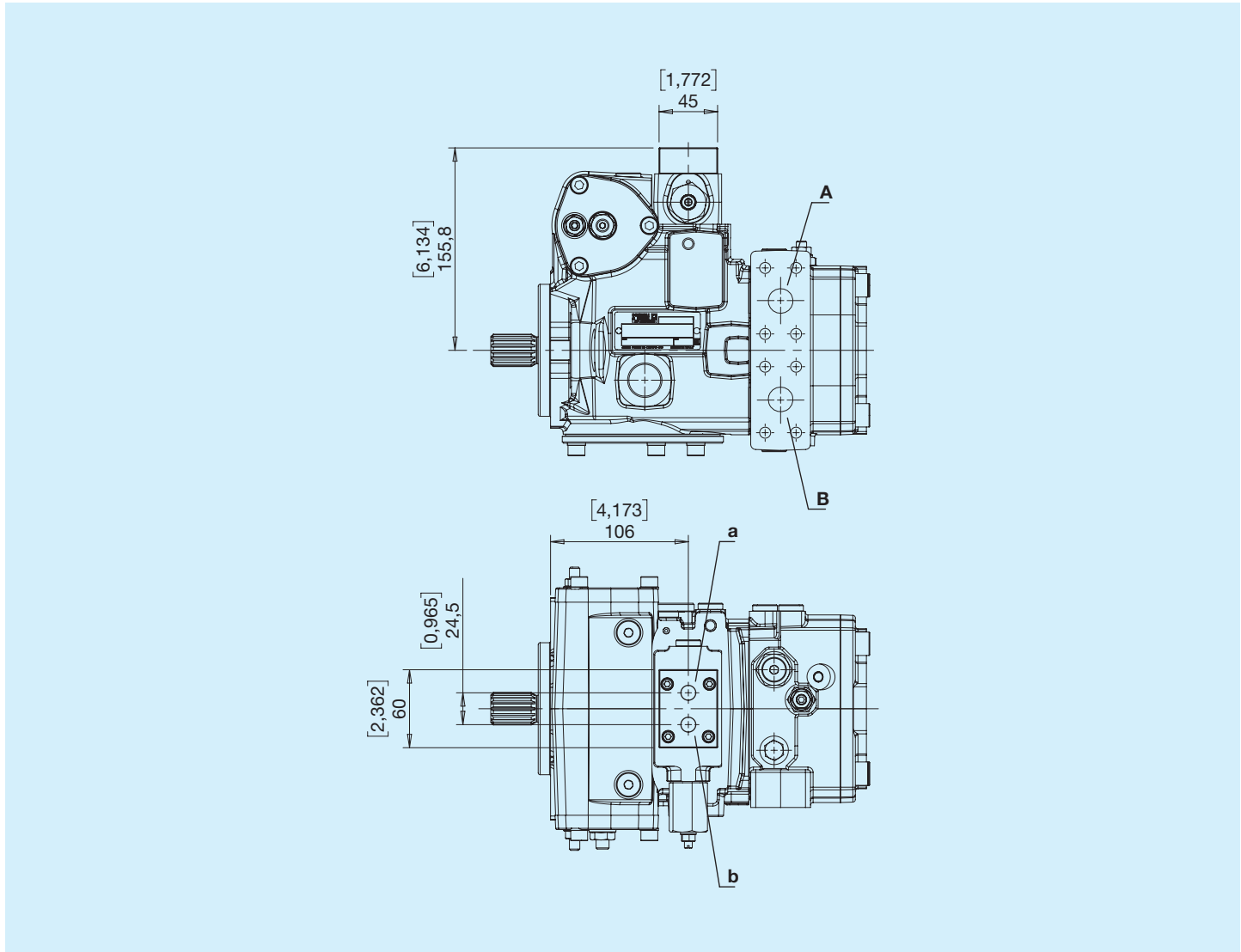
Rotation	Excited solenoid	Outlet
Right	a	A
Right	b	B
Left	a	B
Left	b	A

P1, P3 - Pressure intake G 1/8
P2 - Pressure intake G 1/4

Hydraulic diagram



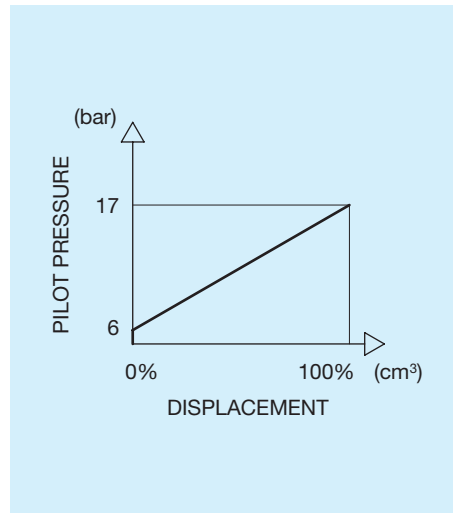
G Feedback hydraulic



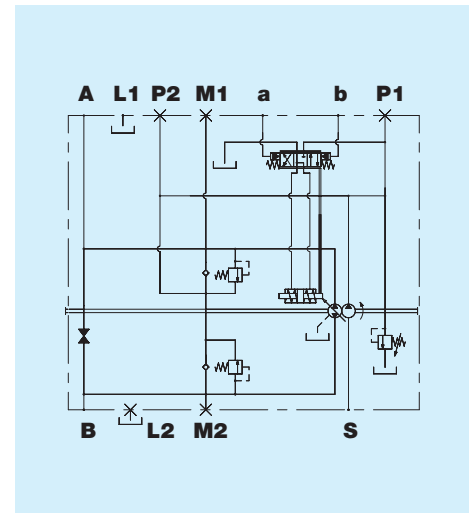
Outlet

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

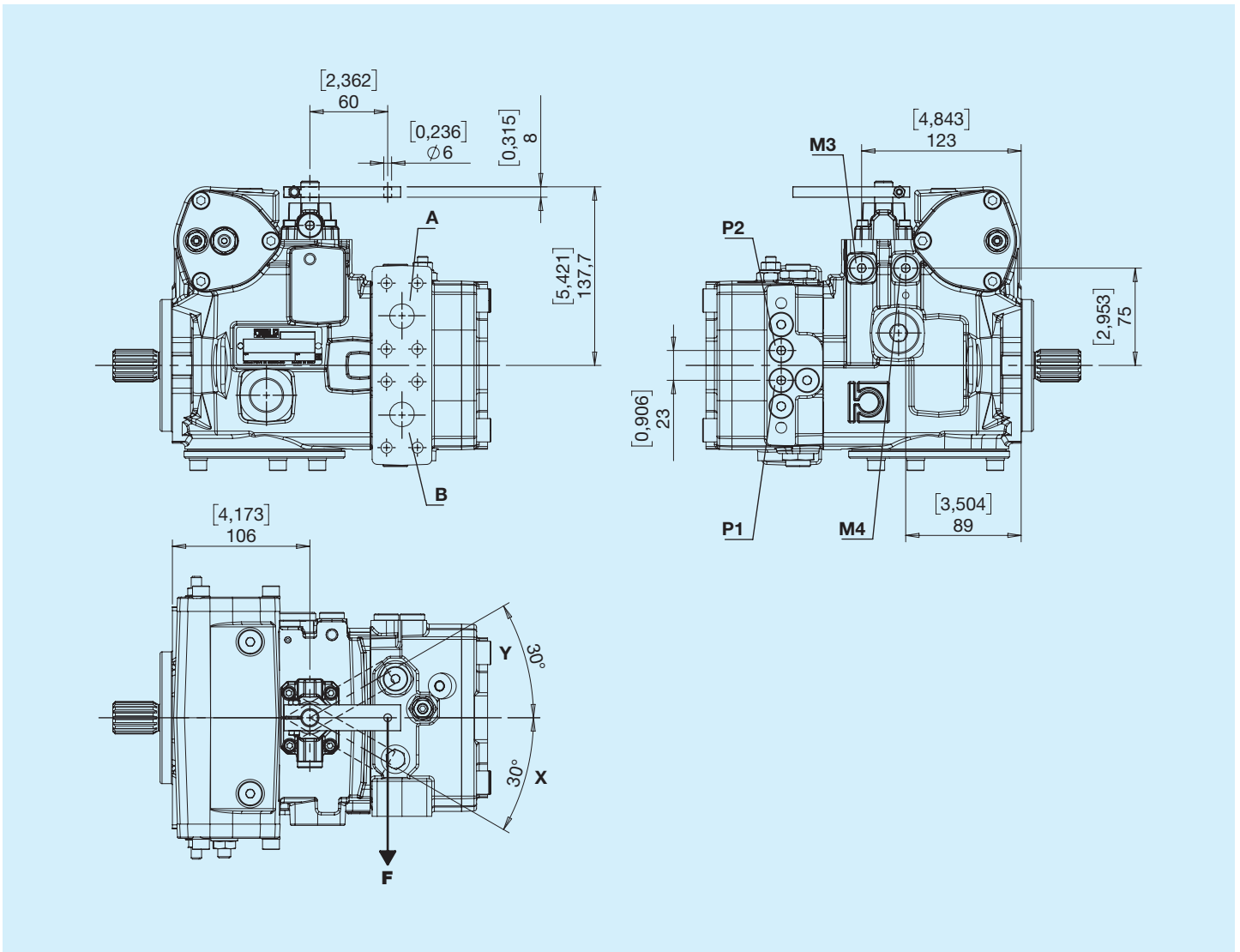
Pilot pressure



Hydraulic diagram



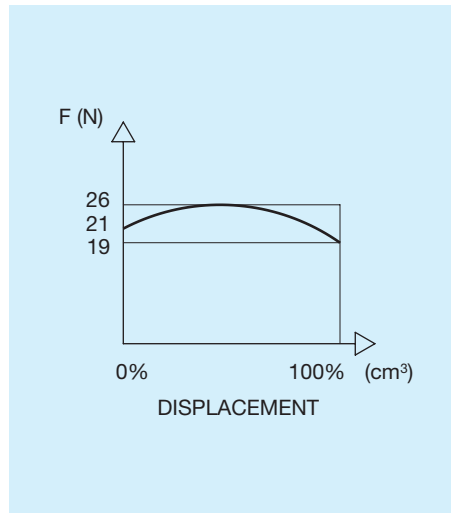
I Lever-operated hydraulic



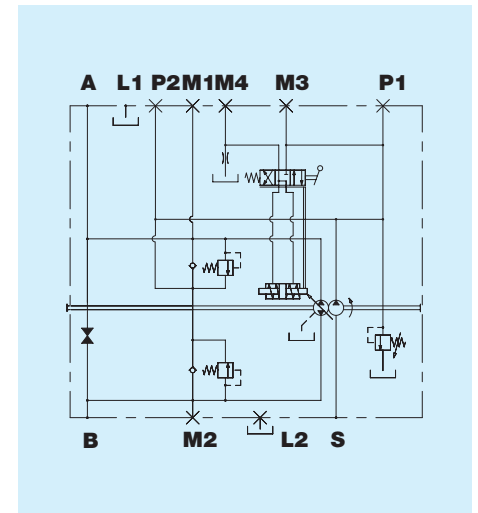
Outlet

Rotation	Control lever	Outlet
Right	Y	B
Right	X	A
Left	Y	A
Left	X	B

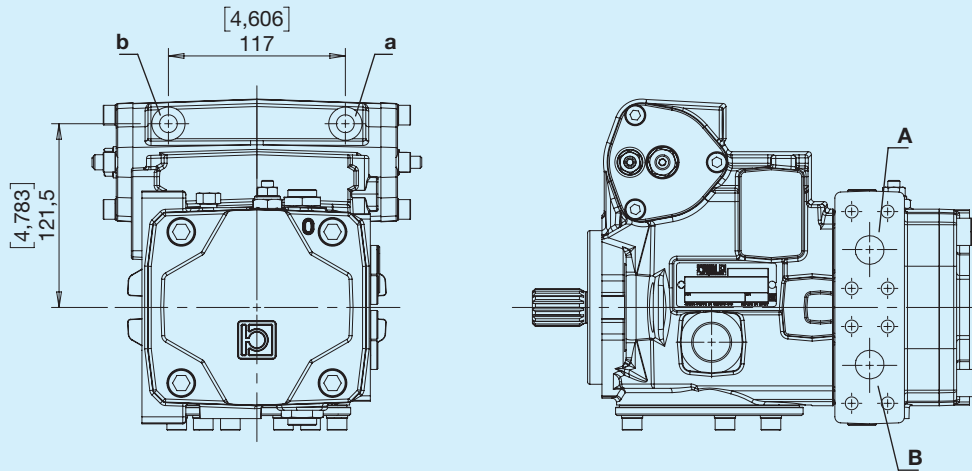
Pilot pressure



Hydraulic diagram



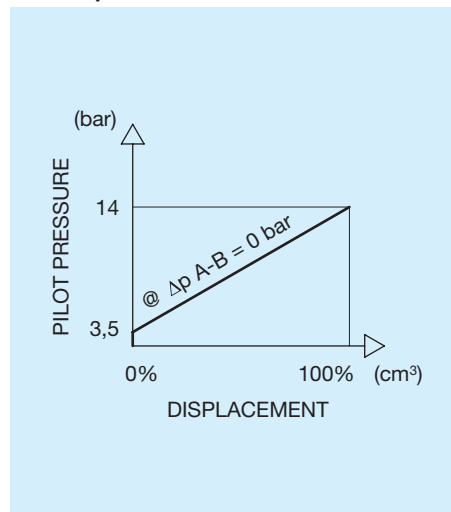
K Direct hydraulic



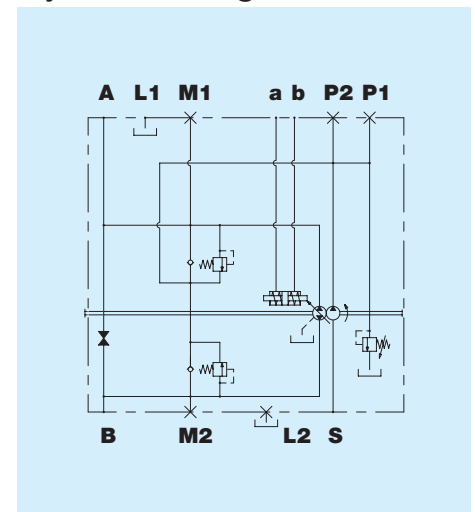
Outlet

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

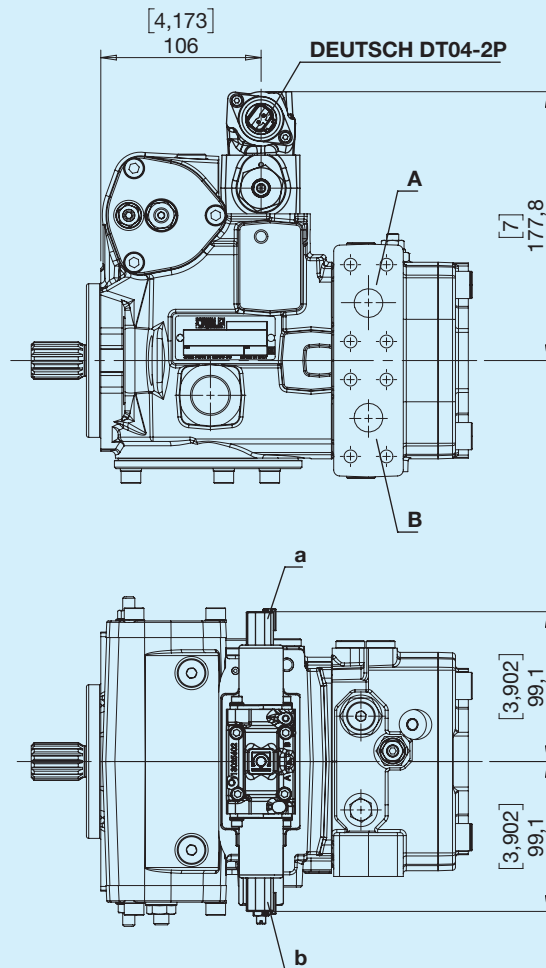
Pilot pressure



Hydraulic diagram



Electronic proportional feedback control 12V



Available on request with DIN 43650 connectors

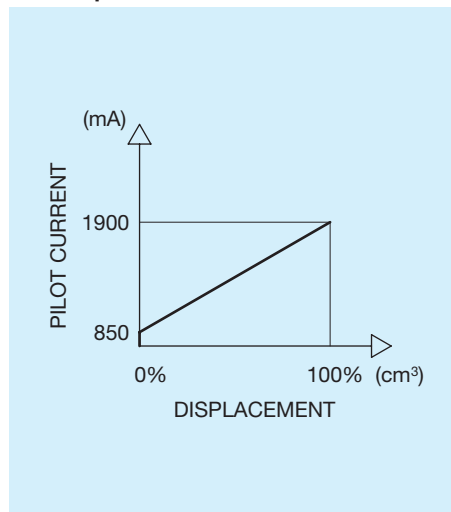
Outlet

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

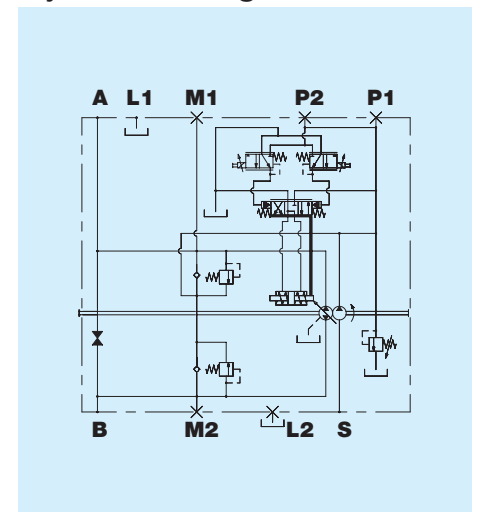
Control

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

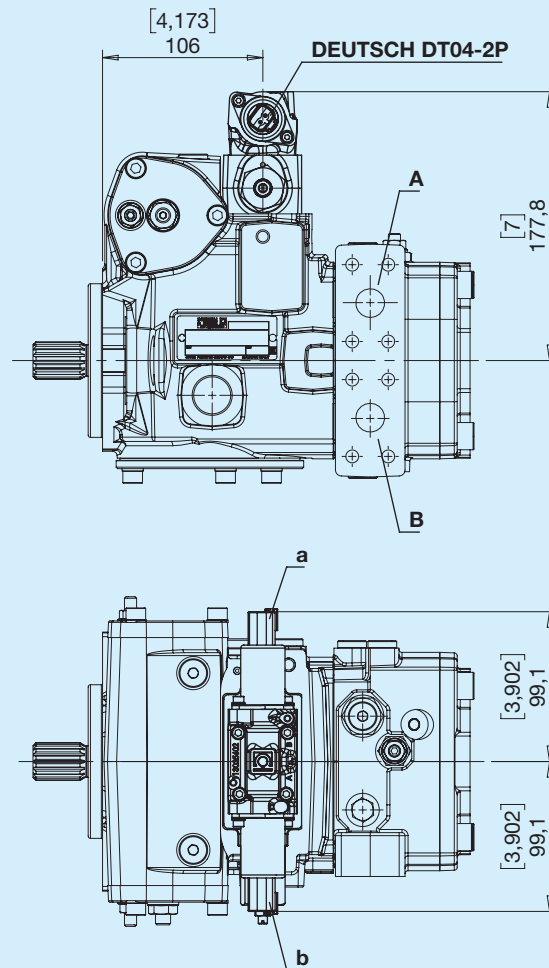
Pilot pressure



Hydraulic diagram



V Electronic proportional feedback control 24V



Available on request with DIN 43650 connectors

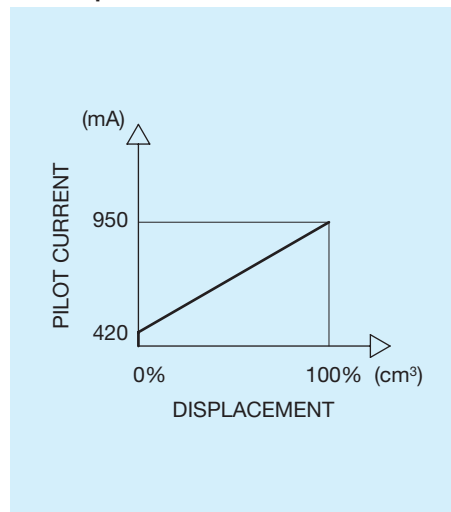
Outlet

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

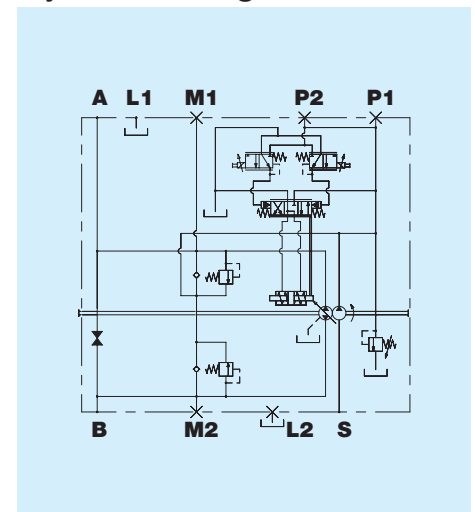
Control

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

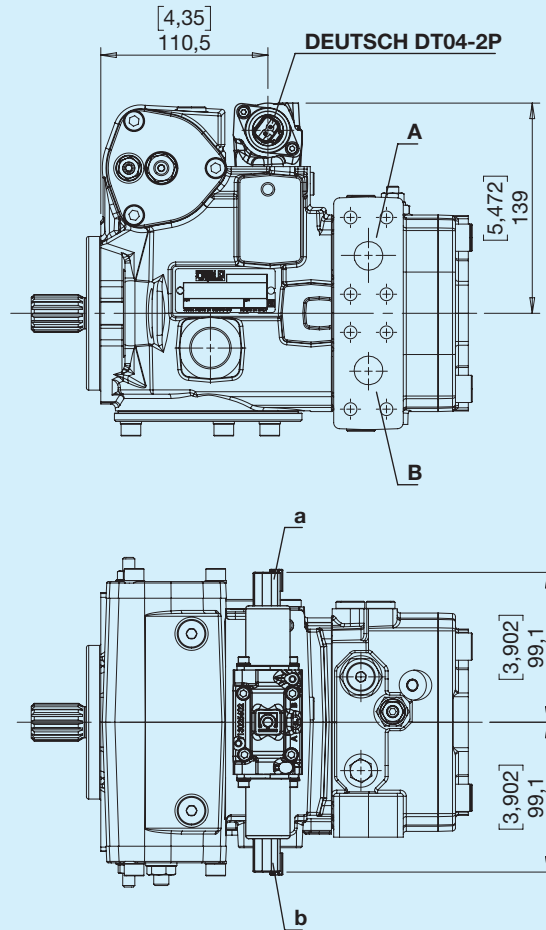
Pilot pressure



Hydraulic diagram



S Electronic proportional control 12V



Available on request with AMP JUNIOR connectors

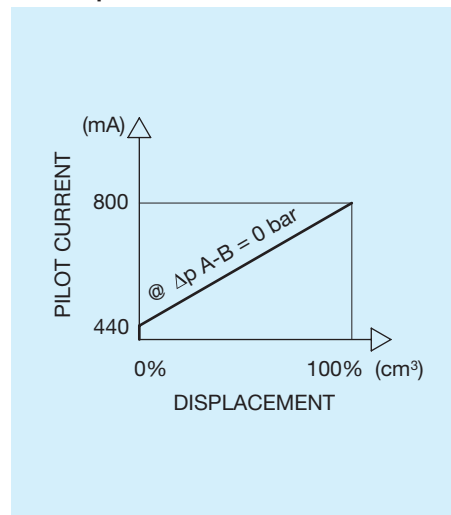
Outlet

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

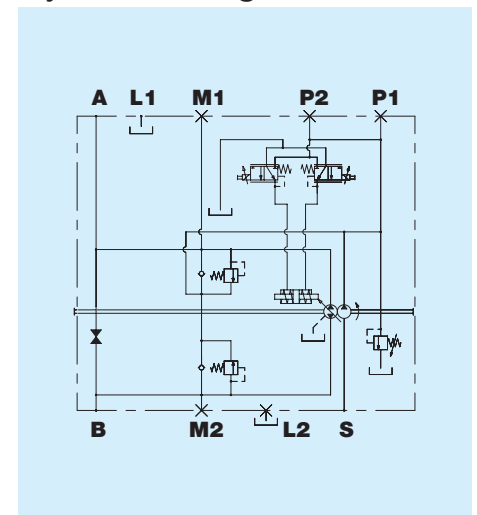
Control

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

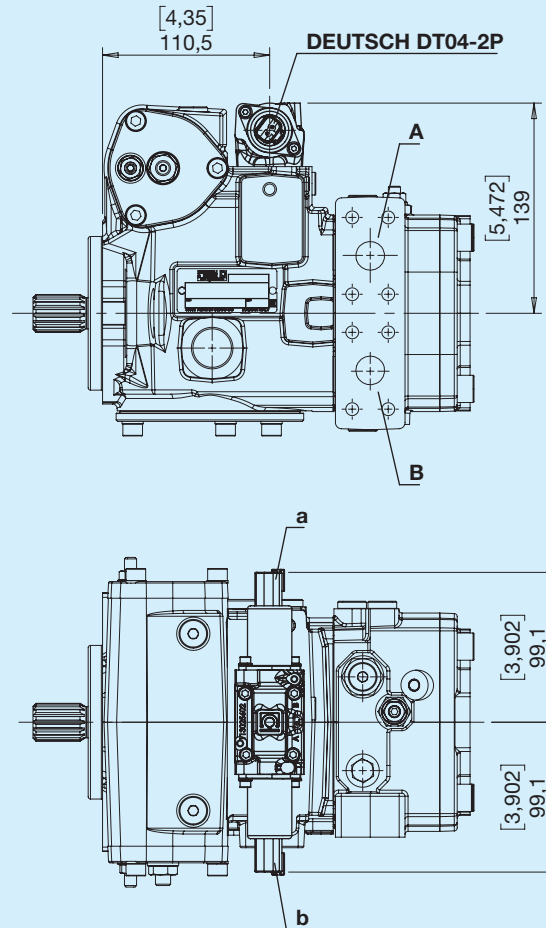
Pilot pressure



Hydraulic diagram



W Electronic proportional control 24V



Available on request with AMP JUNIOR connectors

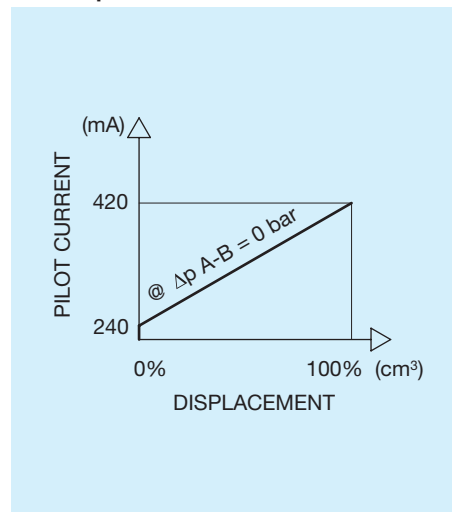
Outlet

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

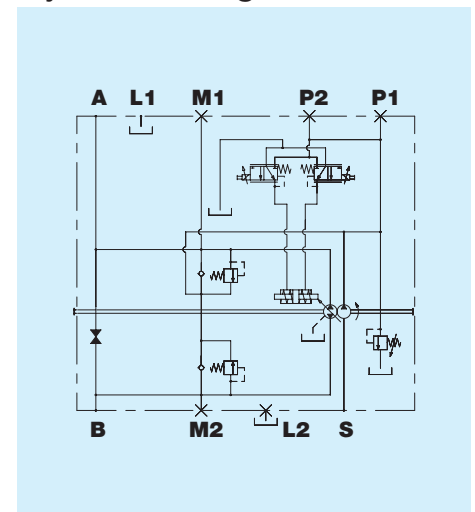
Control

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

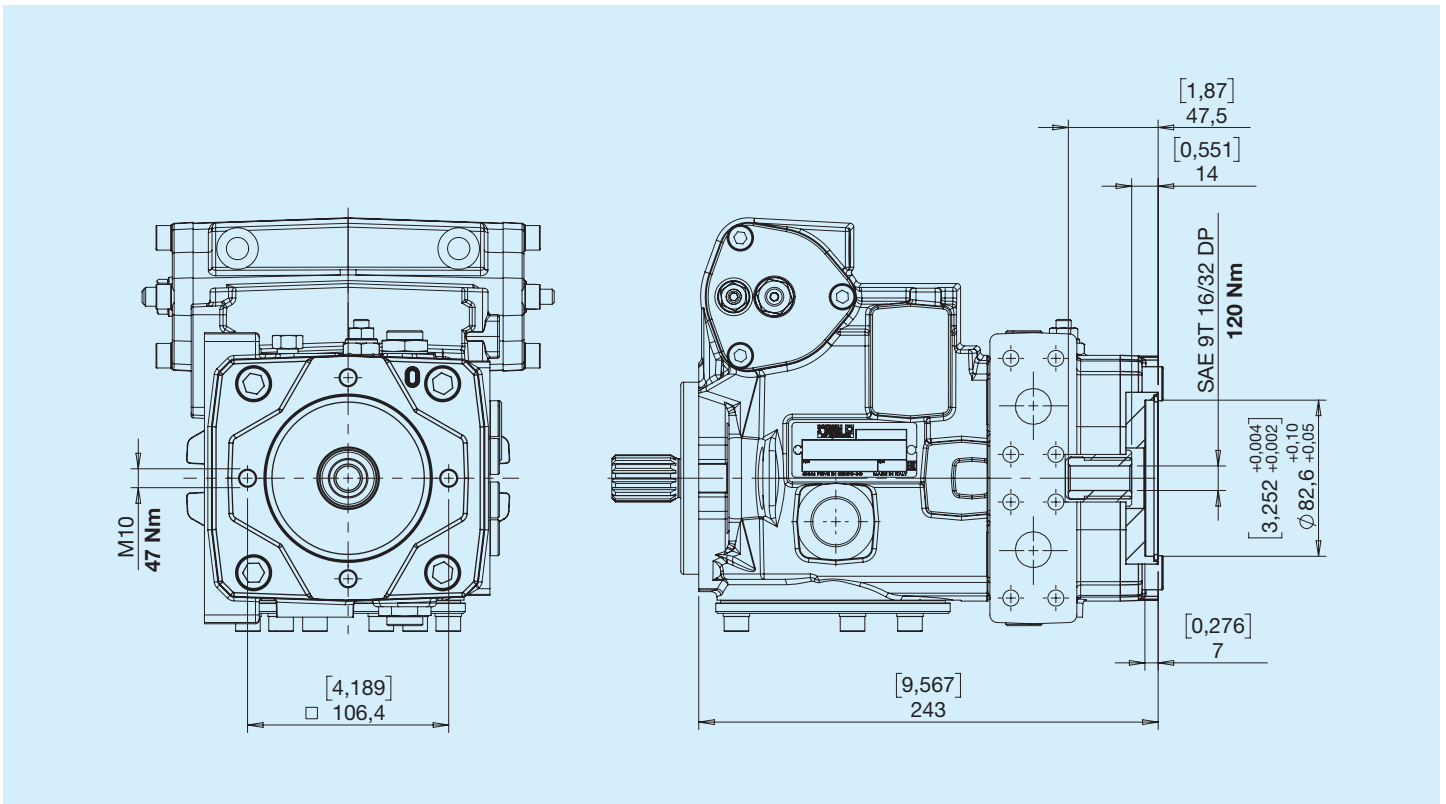
Pilot pressure



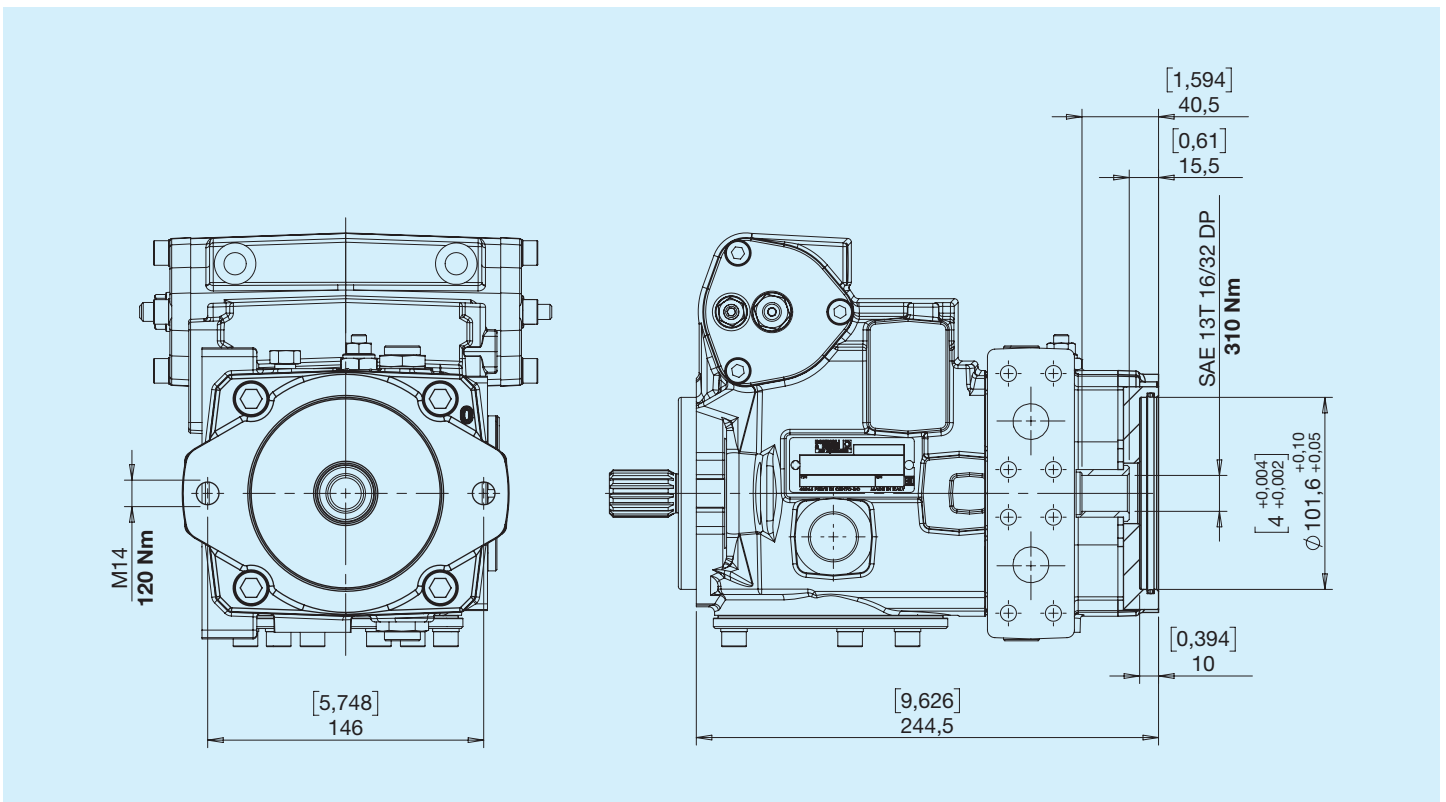
Hydraulic diagram



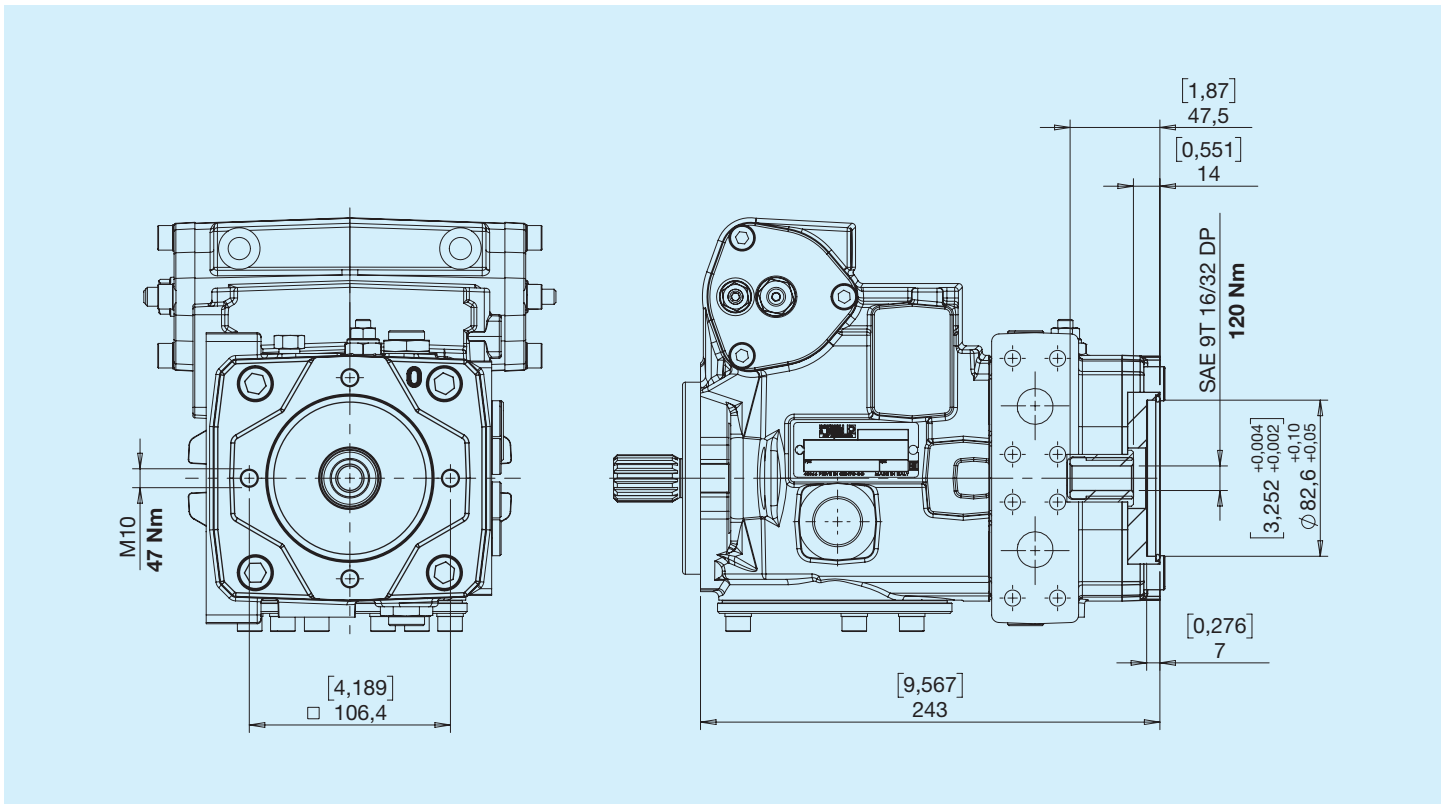
2 SAE A with boost pump



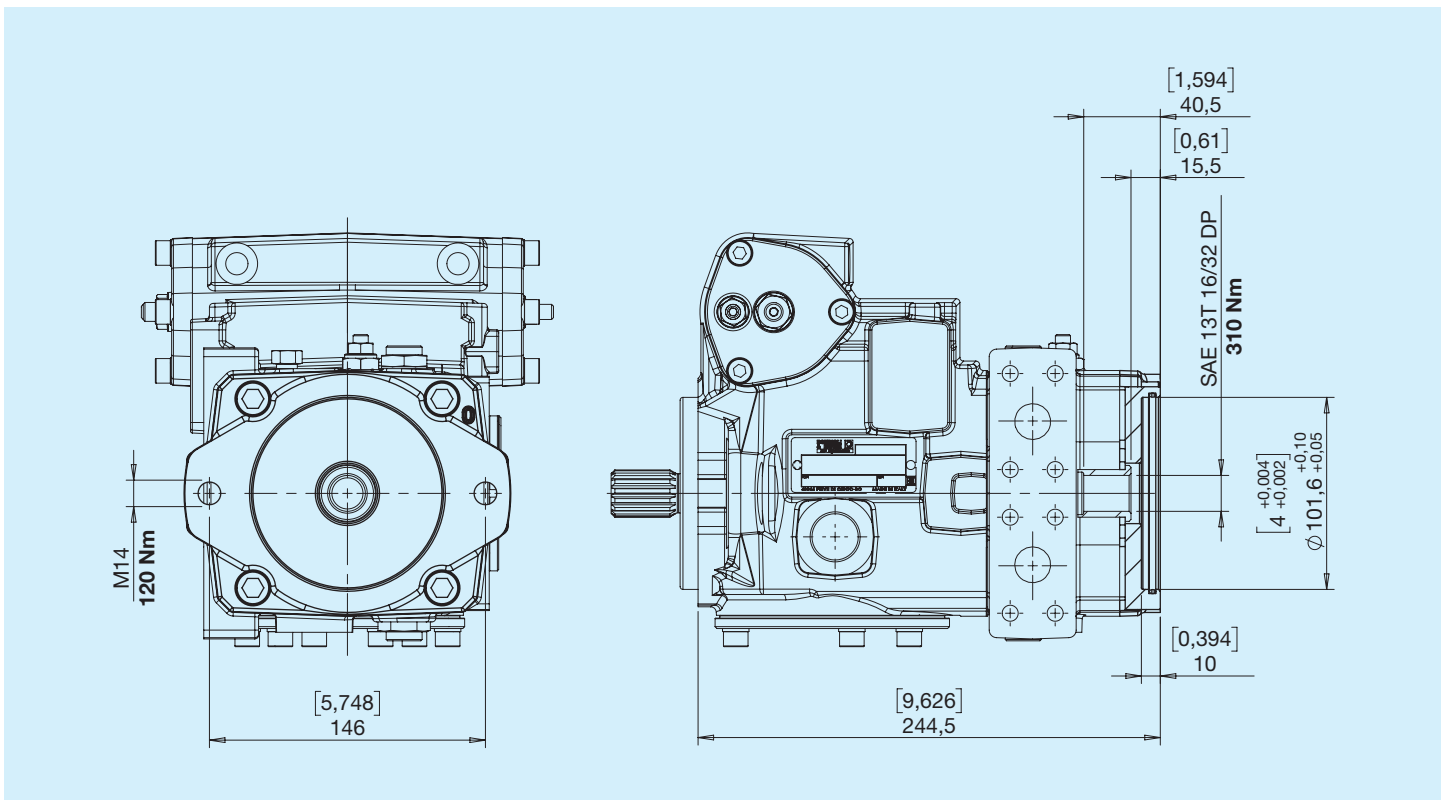
3 SAE B with boost pump

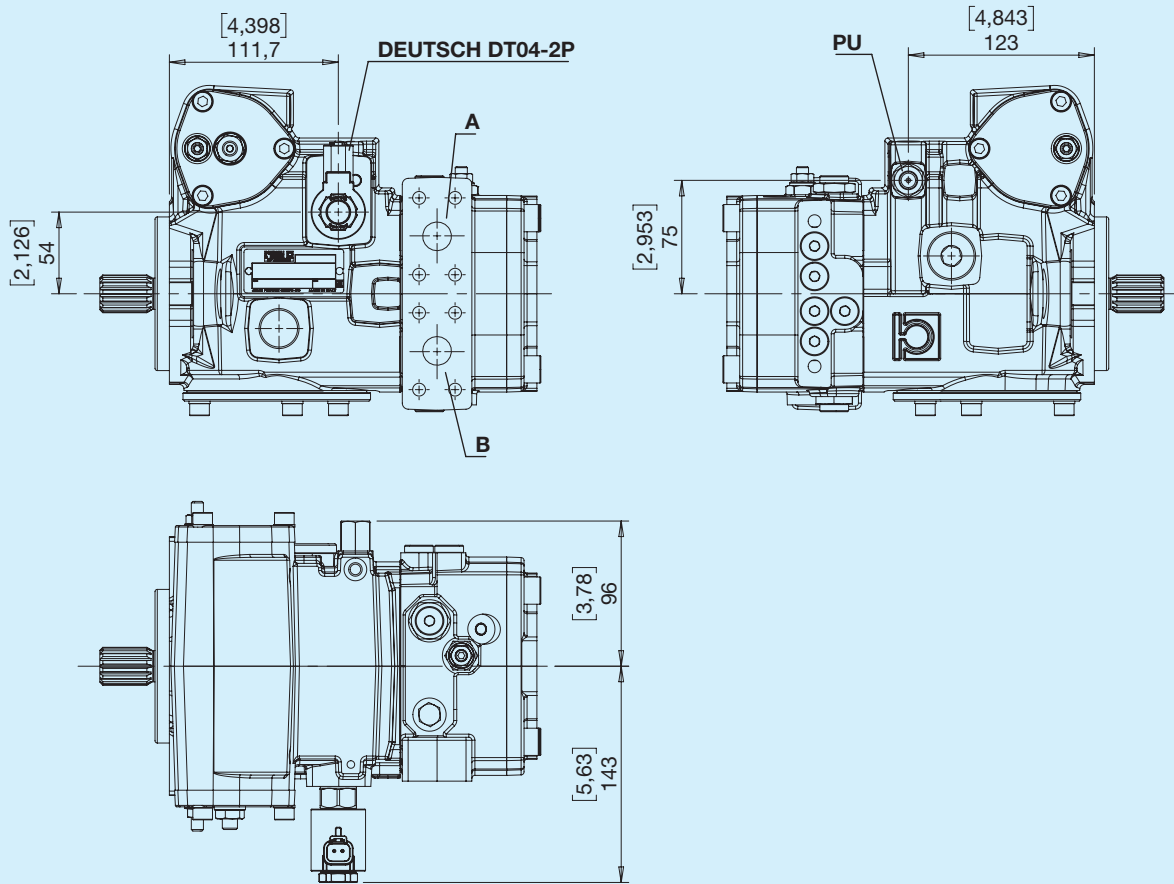


5 SAE A without boost pump



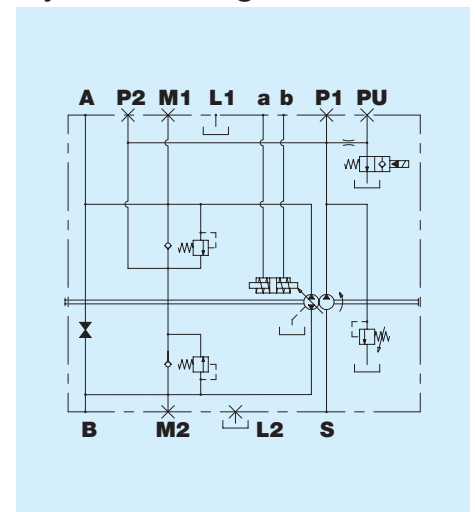
6 SAE B without boost pump



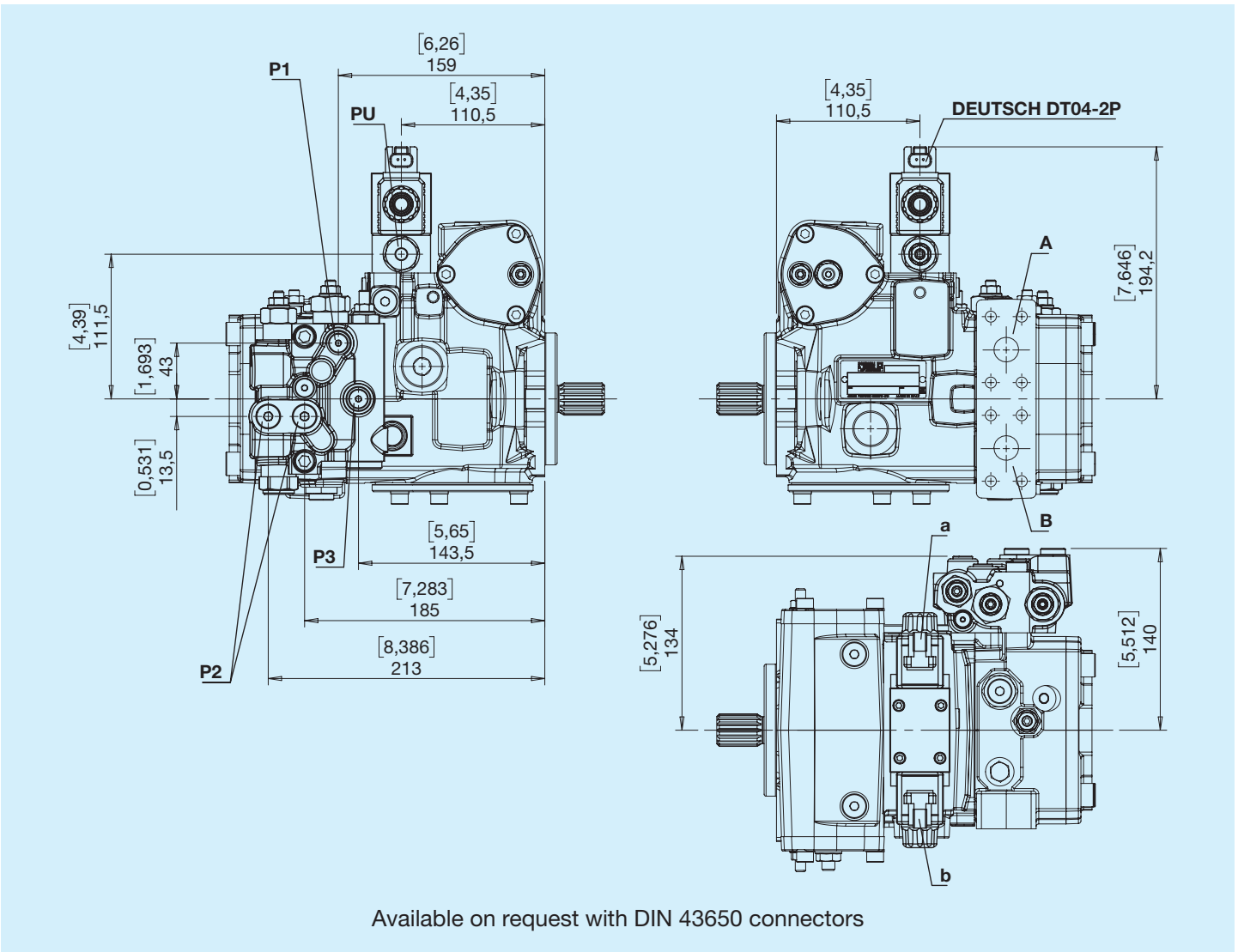


PU - Brake opening pressure G1/4

Hydraulic diagram

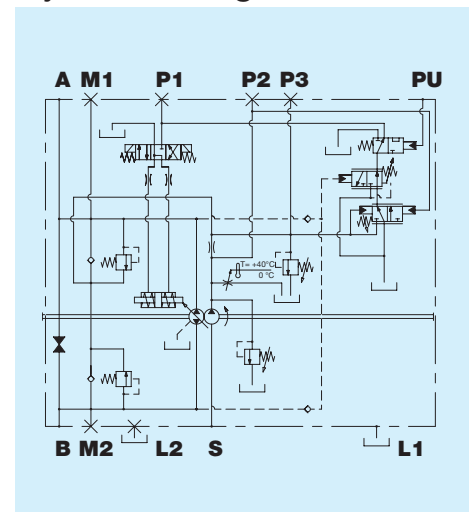


H Hydraulic inching (A control)

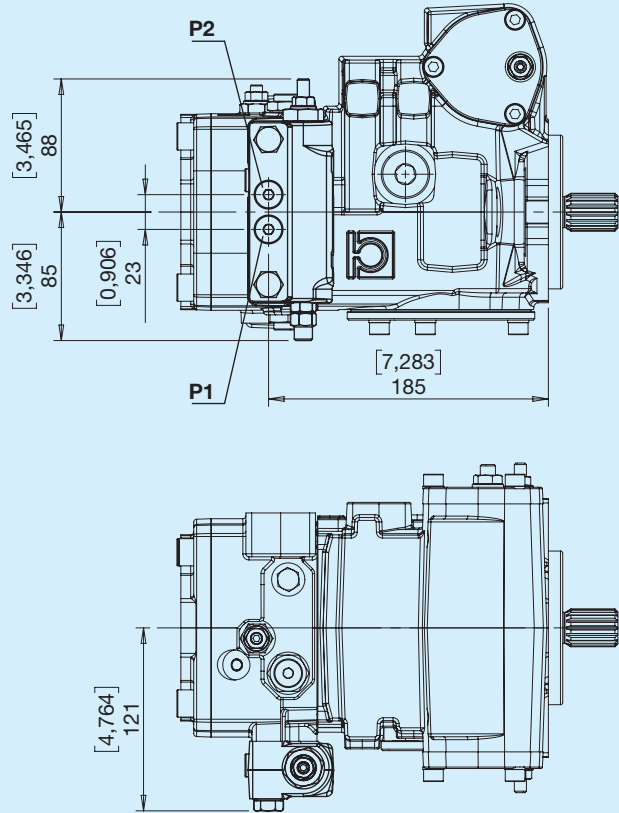


Right
Right
Left

Hydraulic diagram

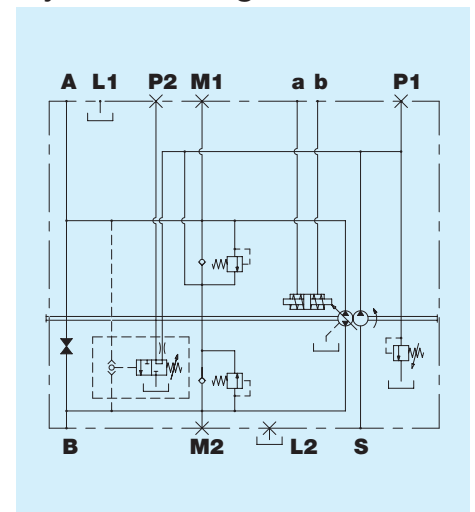


J Cut-off

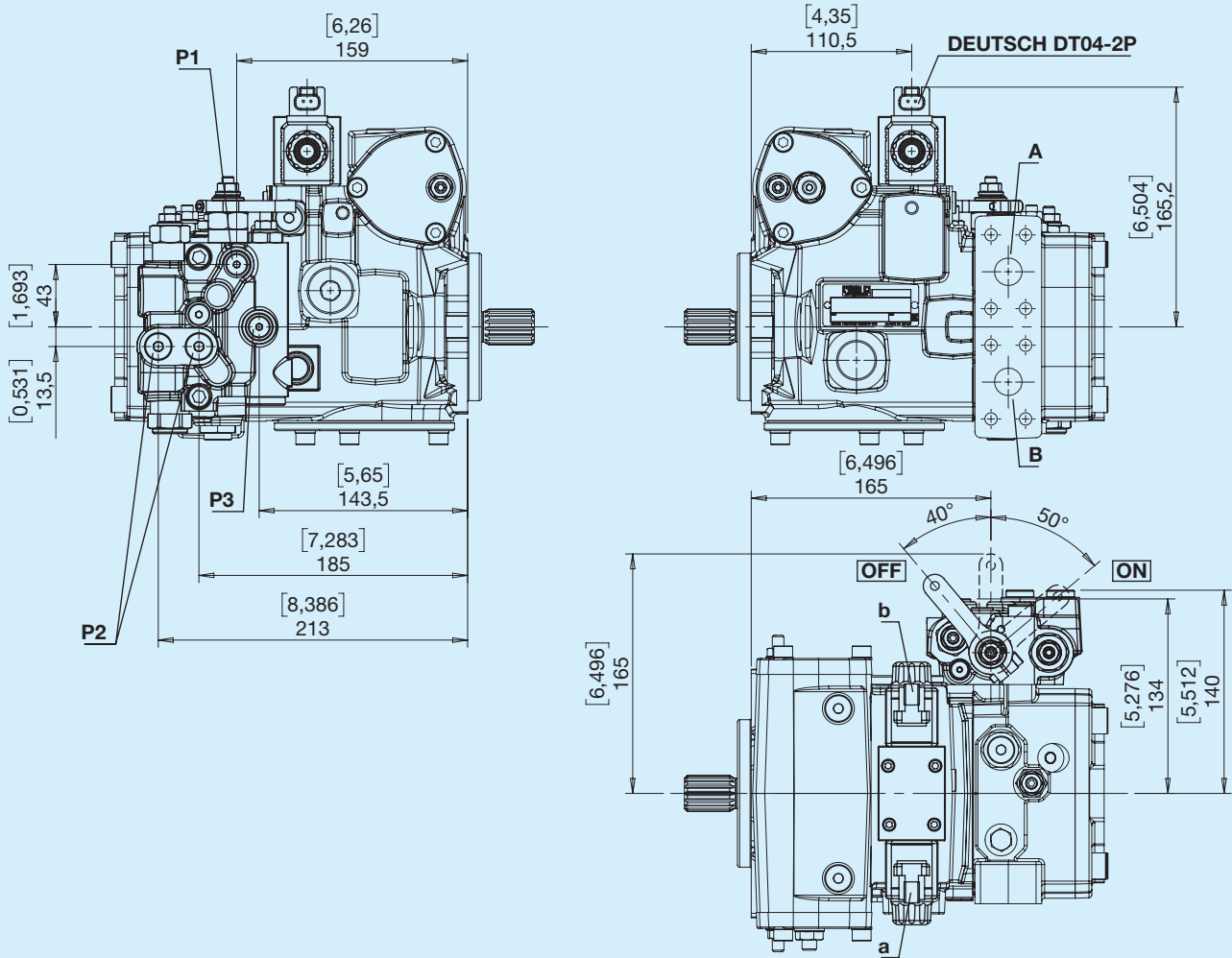


P1, P2 - Pressure intake G1/4

Hydraulic diagram



M Mechanical inching (A control)

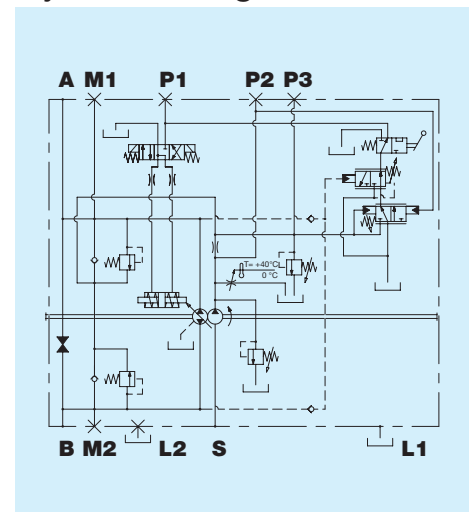


Available on request with DIN 43650 connectors

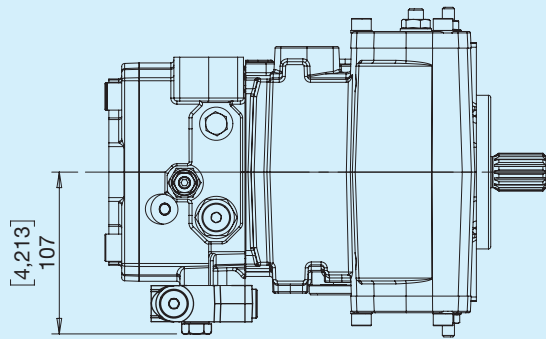
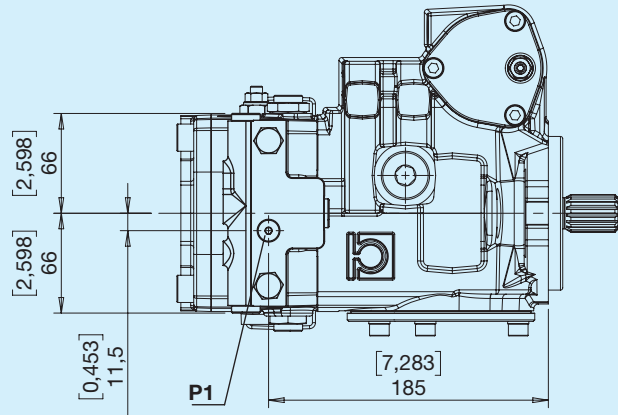
P1, P3 - Pressure intake G 1/8

P2 - Pressure intake G 1/4

Hydraulic diagram

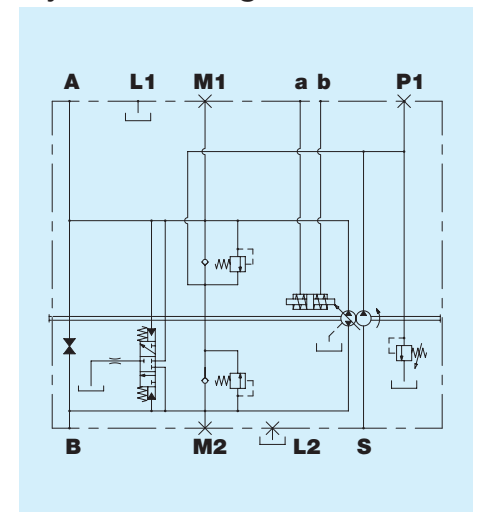


V Flushing valve (5-7 l/min)

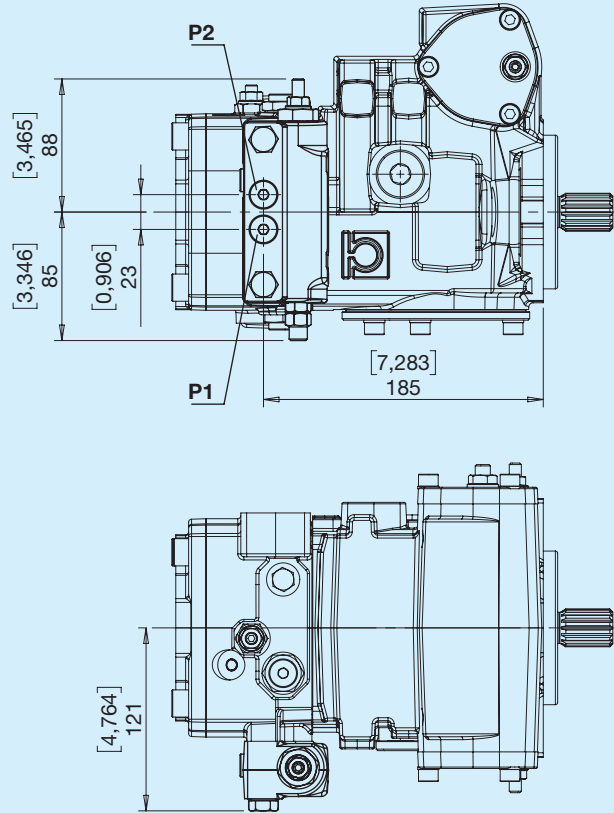


P1 - Pressure intake G1/8

Hydraulic diagram

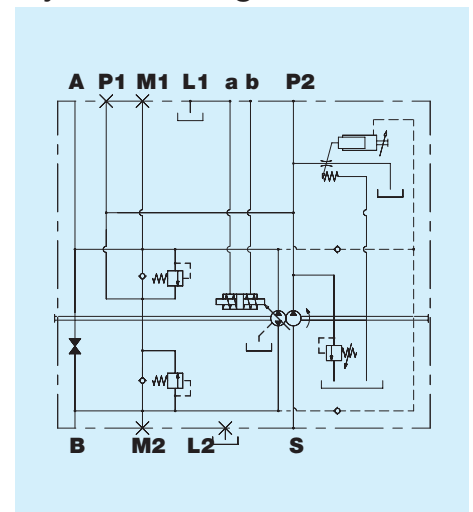


W Power limiter



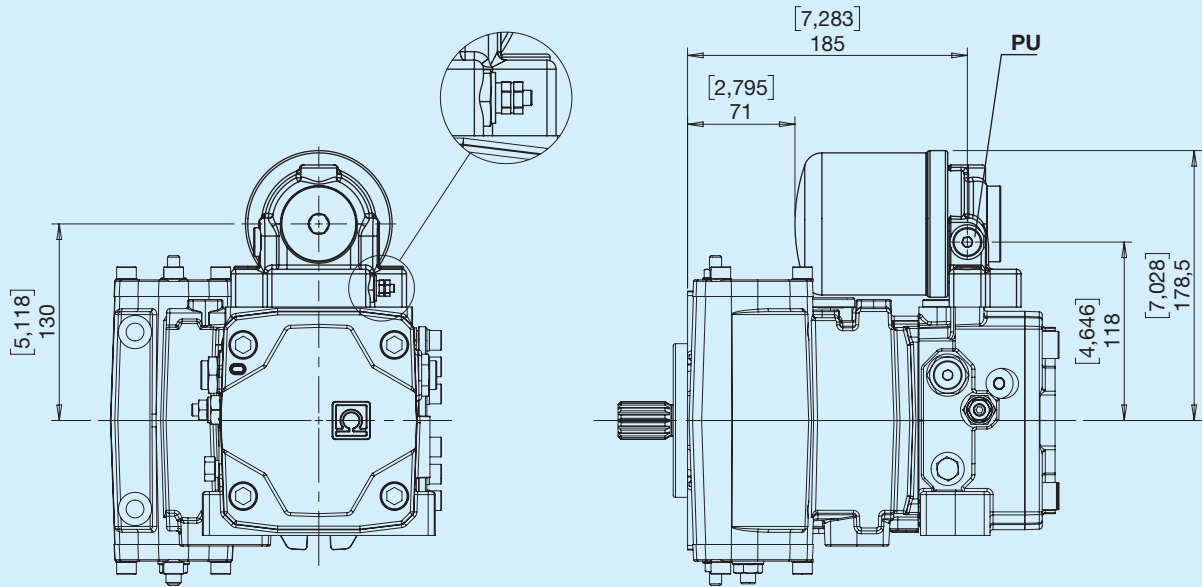
P1, P2 - Pressure intake G1/4

Hydraulic diagram



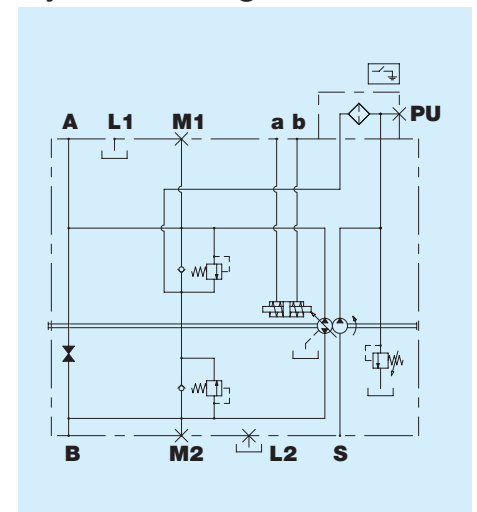
X Filter with clogging indicator

Electric differential indicator - 30 VDC - 0.2 A max

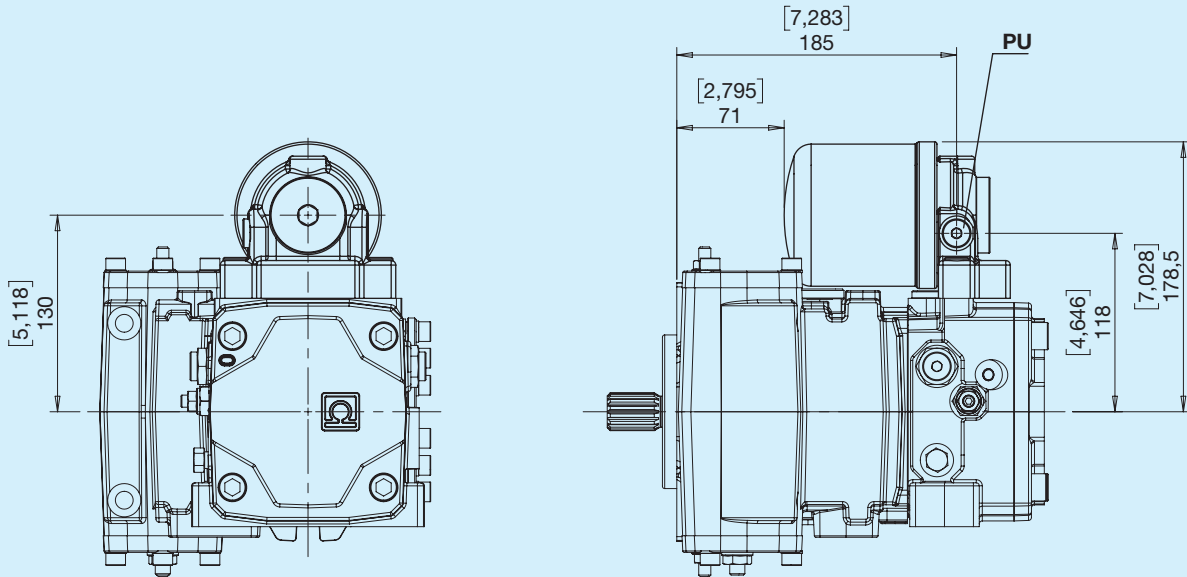


PU - Filtered oil intake G1/4

Hydraulic diagram

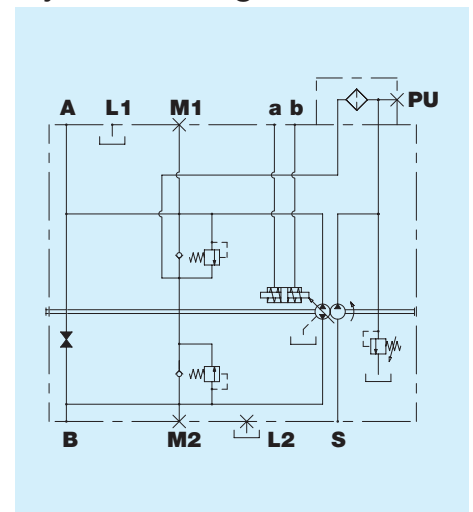


Y Filter without electric clogging indicator



PU - Filtered oil intake G1/4

Hydraulic diagram



	1	2	3	4	5	6	7	8	9	10	11	12	13	14
HPP5														
1 2 3	Displacement													
	046													
4	Direction of rotation													
	R Right					L Left								
5	Flanges													
	B SAE B													
6	Shaft profile													
	1 SAE 15T 16/32 DP					3 SAE 14T 12/24 DP								
7	Type of ports													
	G Gas					U Unf								
8	Controls													
	A Automotive			I Lever-operated hydraulic			O Electronic proportional feedback control 12V			S Electronic proportional control 12V				
	G Feedback hydraulic			K Remote hydraulic			V Electronic proportional feedback control 24V			W Electronic proportional control 24V				
9	Valve calibration													
	G 250 bar			L 300 bar			P 400 bar			Y 500 bar				
	I 280 bar			O 350 bar			R 450 bar							
10	Versions													
	0 No special fittings, without boost pump			2 SAE A with boost pump			5 SAE A without boost pump							
	1 No special fittings, with boost pump			3 SAE B with boost pump			6 SAE B without boost pump							
11	Accessories													
	0 No option			J Cut-off			V Flushing valve			X Filter with electric clogging indicator				
	H Hydraulic inching (A control)			M Mechanical inching (A control)			W Power limiter			Y Filter without electric clogging indicator				
12 13 14	Special versions													
	...													