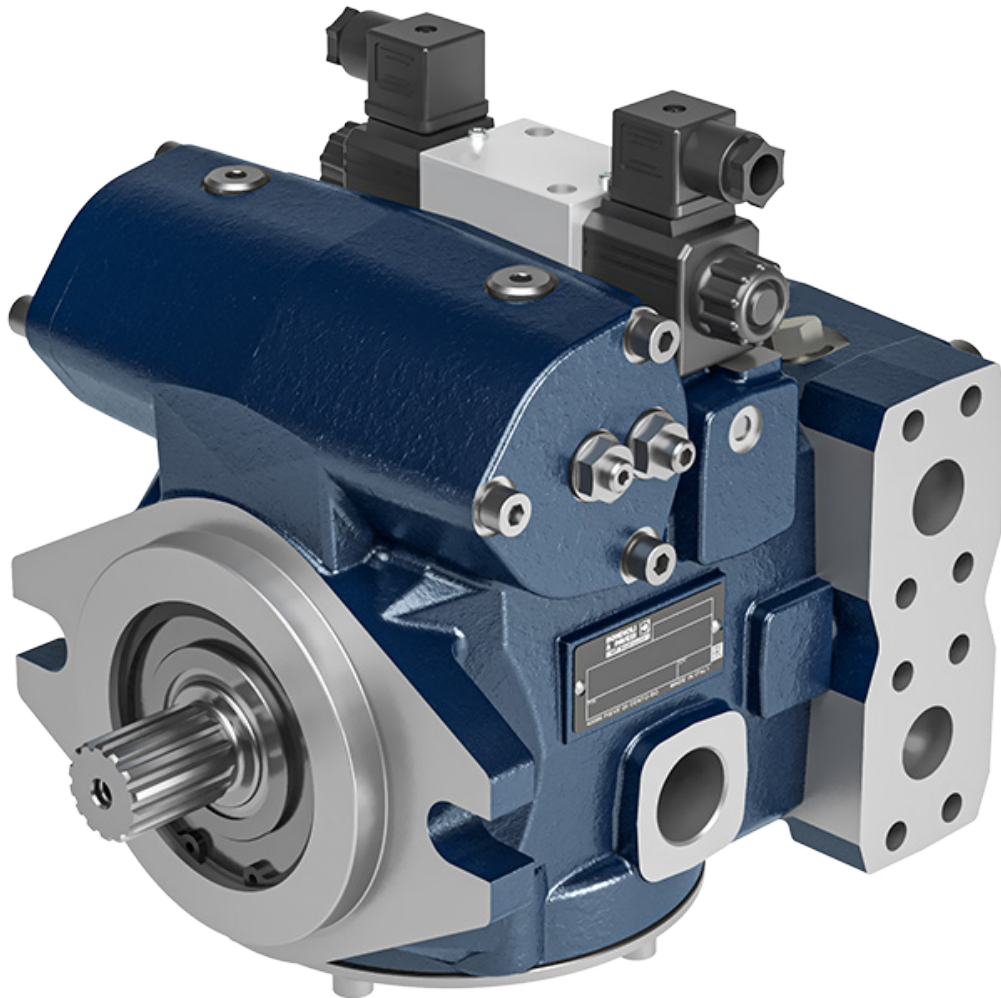
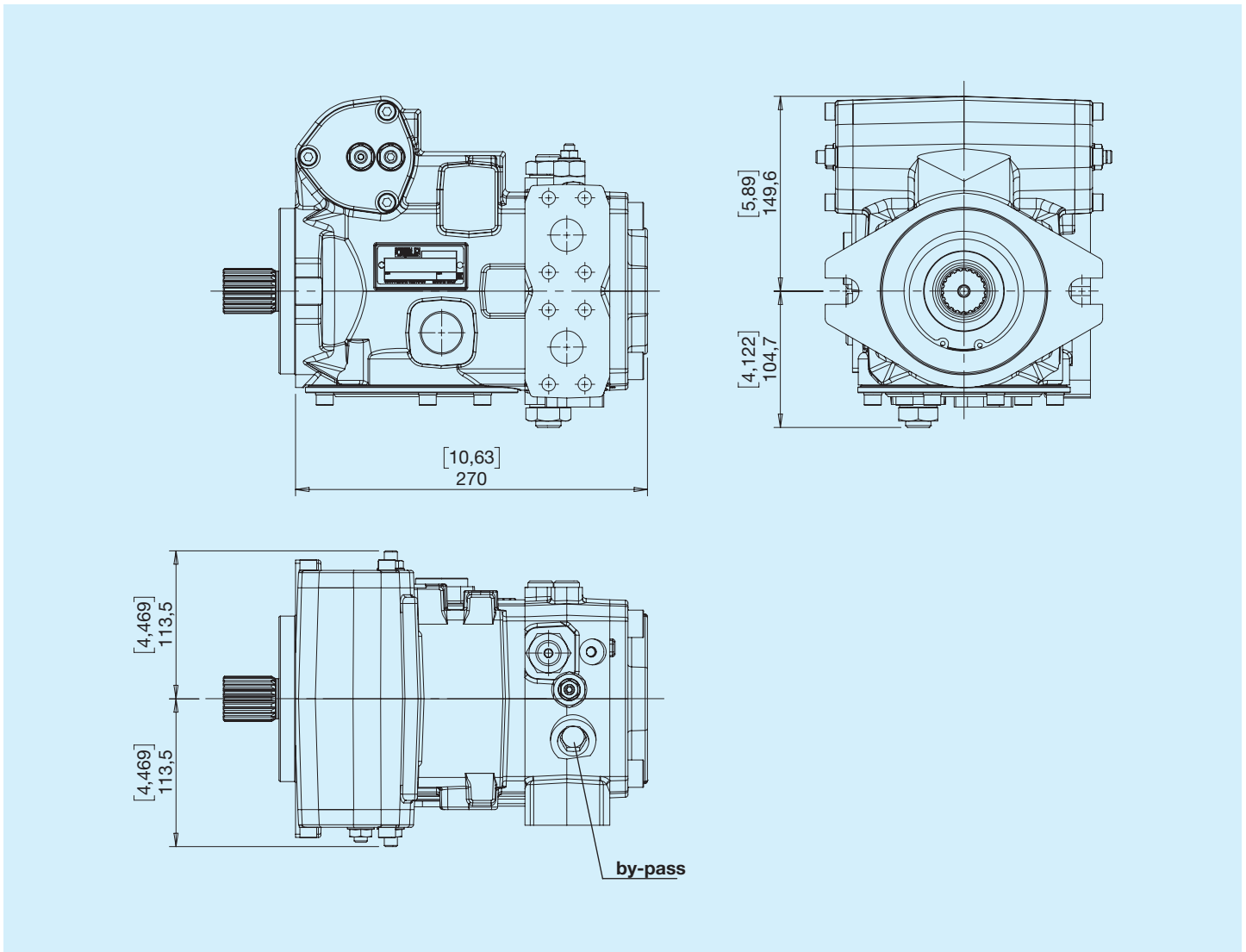


Variable-displacement pumps



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

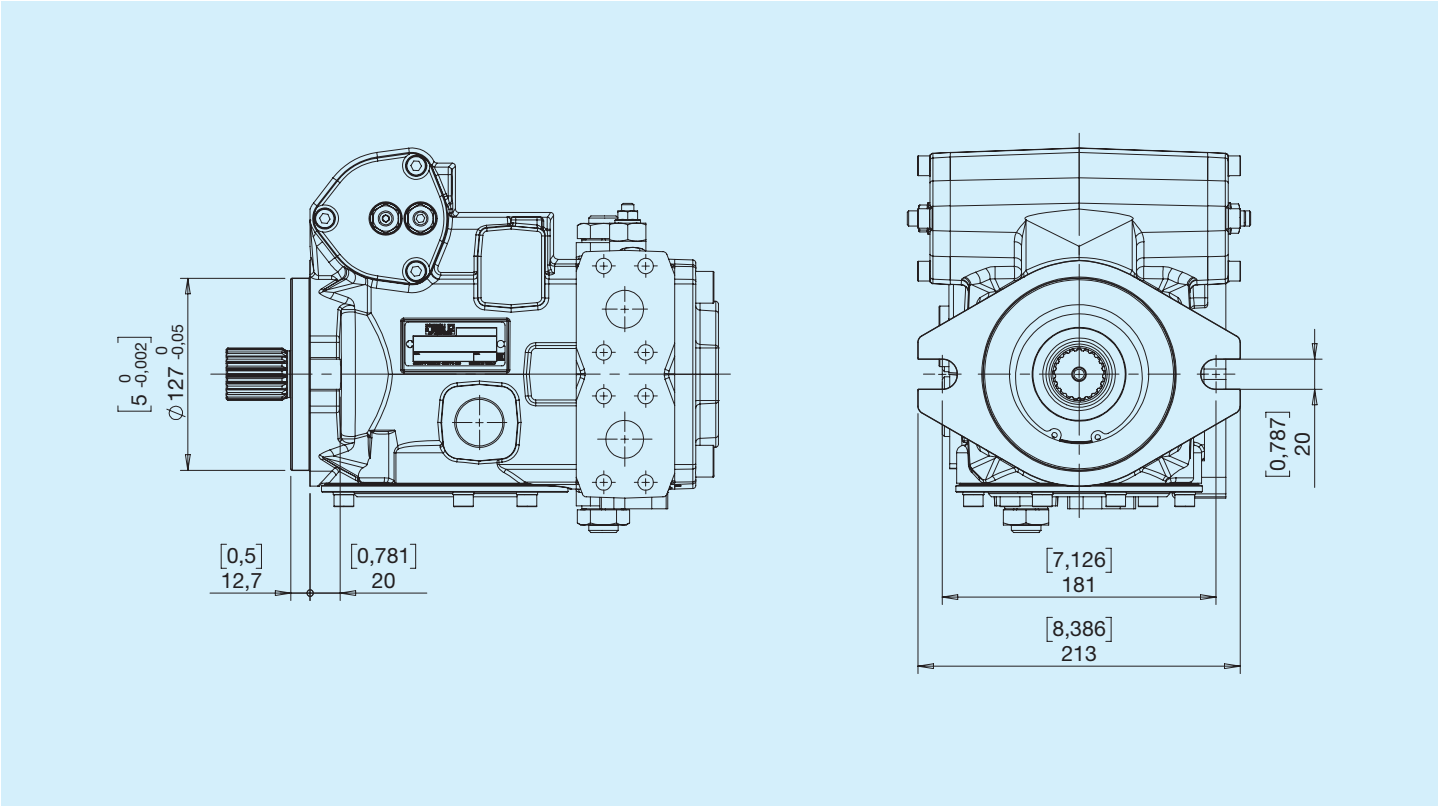


HPP6	Nominal displacement		Swash plate °	Continuous pressure		Intermittent pressure		Peak pressure		Rotational speed		Weight	
	cm ³	in ³		bar	psi	bar	psi	bar	psi	MAX min ⁻¹	MIN min ⁻¹	kg	lbs
055	55	3.35	16.3	420	6090	450	6525	500	7250	3000	500	44	97
065	65	3.97	17.3	420	6090	450	6525	500	7250	3000	500	44	97
078	78	4.76	17.7	400	5800	420	6090	450	6525	3000	500	45	99.2

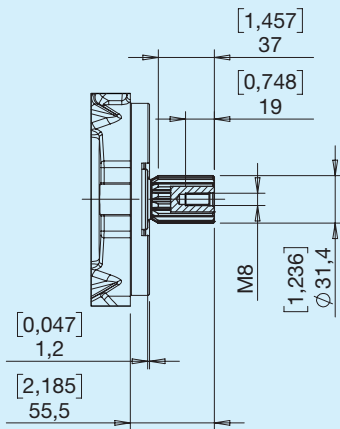
Feed pump

Type	Feed pump displacement		Pressure	
	cm ³	in ³	bar	psi
HPP6 055	17	1.04	22	319
HPP6 065	17	1.04	22	319
HPP6 078	21	1.28	22	319

C SAE C

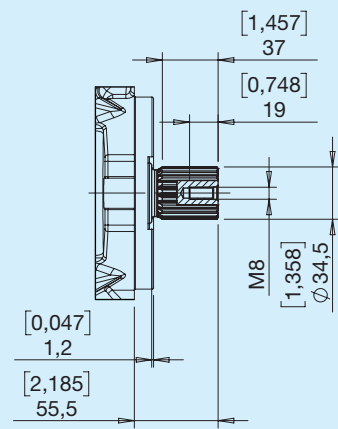


3 SAE 14T 12/24 DP

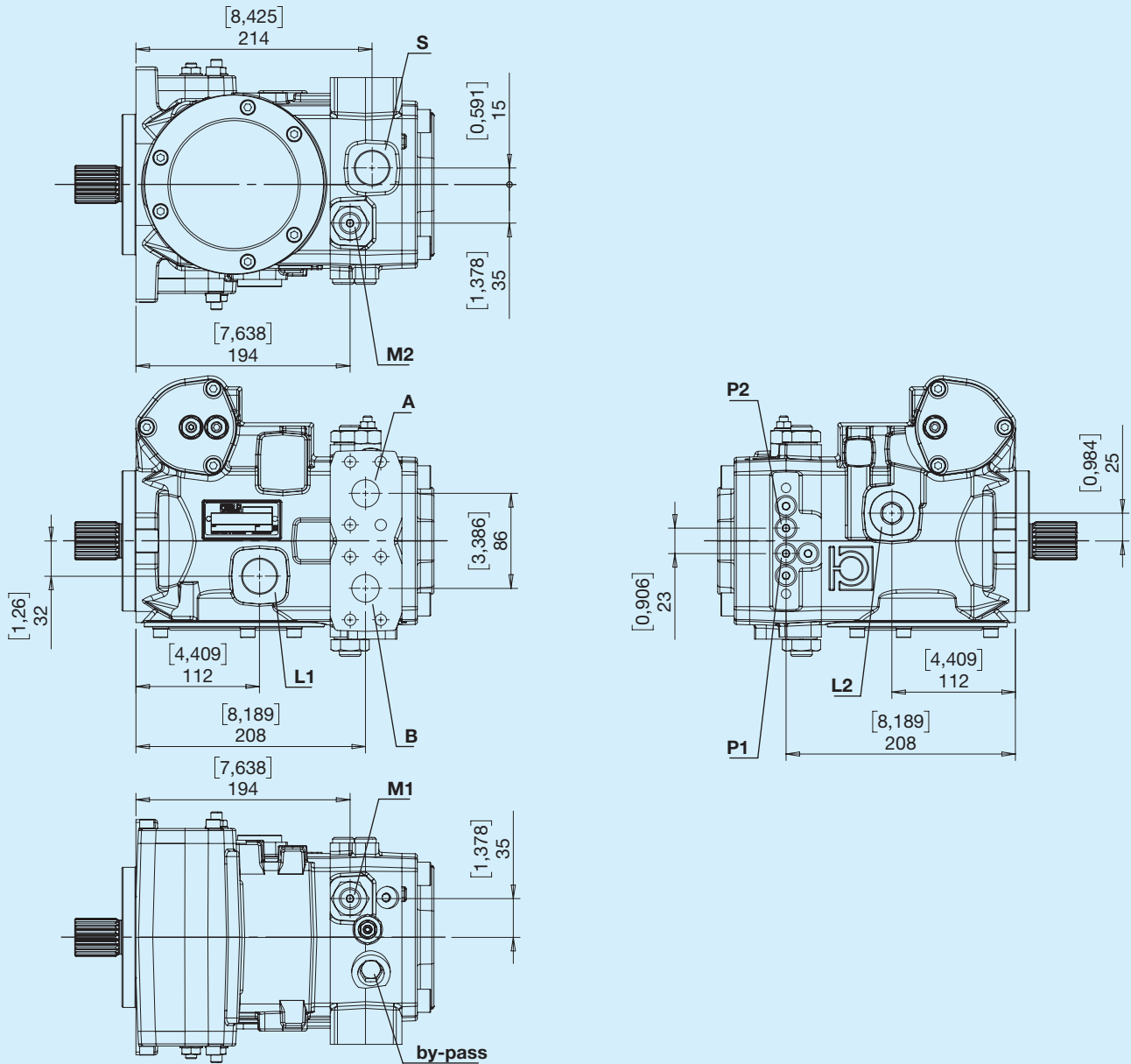


Max. torque 850 Nm

7 SAE 21T 16/32 DP

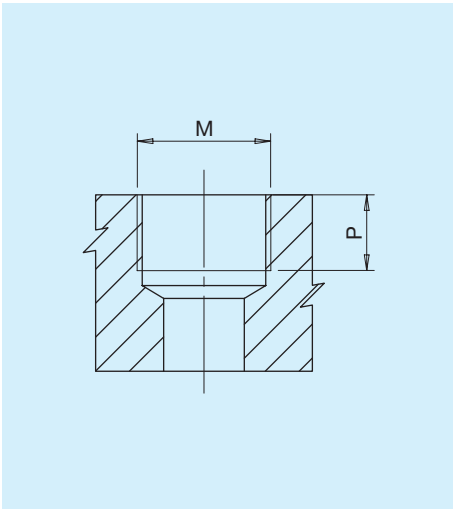


Max. torque 1100 Nm



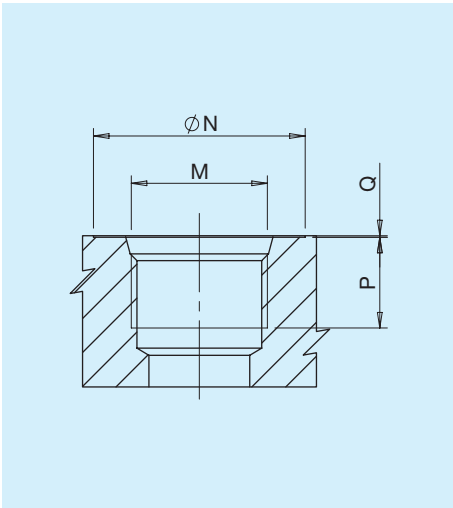
- A,B** - Use
- L1, L2** - Drain port
- S** - Inlet
- P** - Pressure intake
- M1, M2** - Manometer intake

Type G



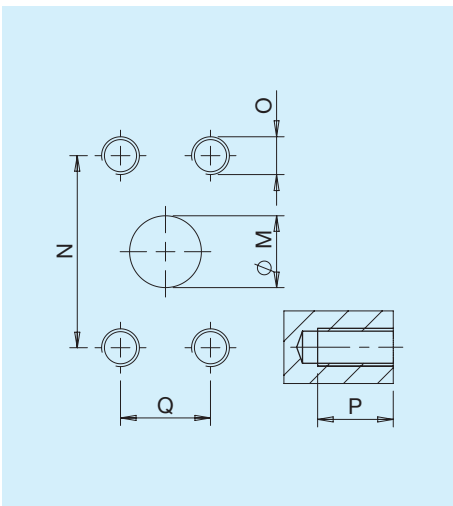
Type	M		P	
		Nm	mm	in
G2	Port ISO 1179-1 - G 1/4	17	12	0.47
G7	Port ISO 1179-1 - G 1	160	18	0.75

Type U



Type	Dim.	N		P		Q		M	Nm
		mm	in	mm	in	mm	in		
U2	1/4"	21	0,83	12	0,47	0,3	0,01	Port ISO 11926-1-7/16-20	17
U7	1"	49	1.93	18	0.70	0.3	0.01	Port ISO 11926-1-1 5/16-12	160

Type N

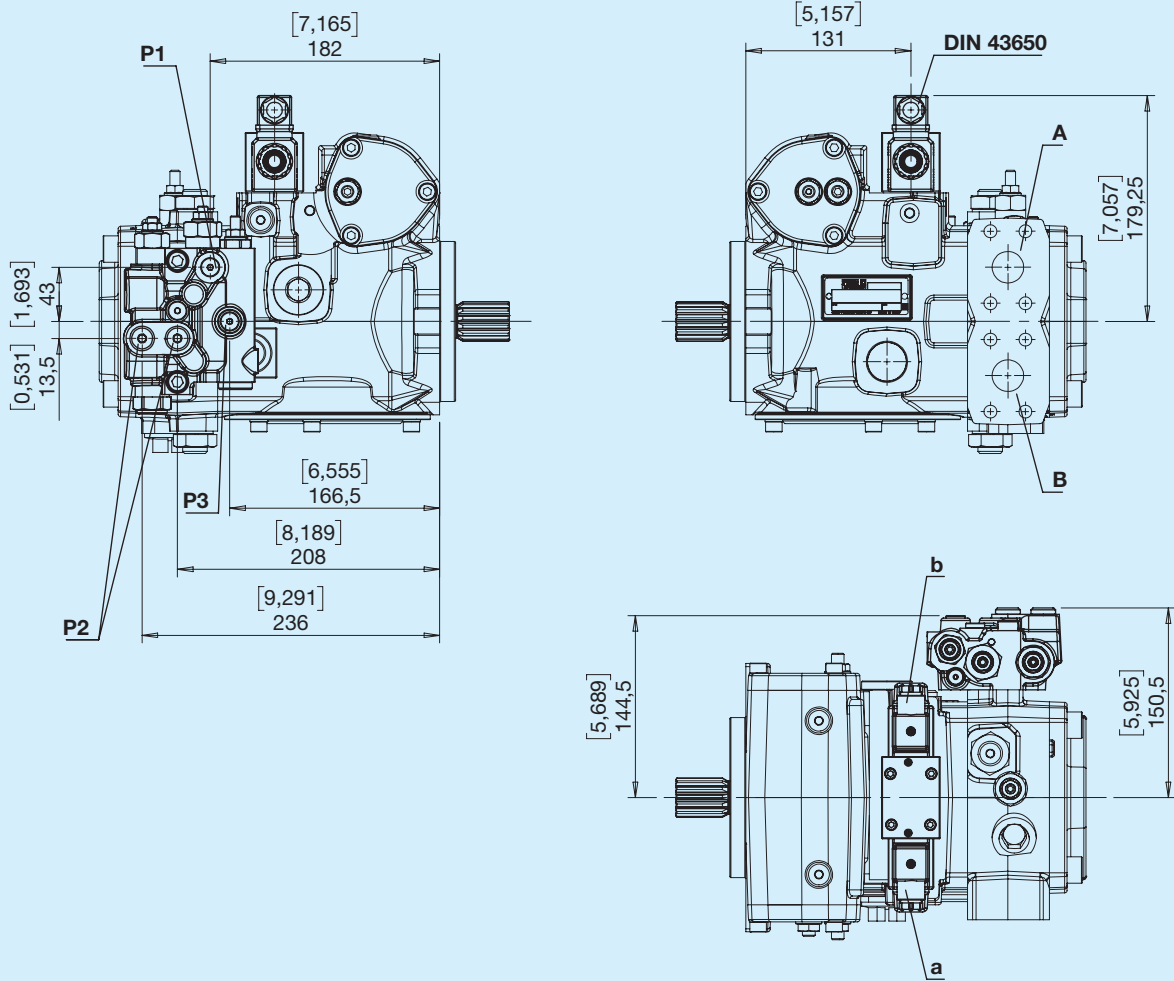


Type	M		N		Q		P		O	Nm
	mm	in	mm	in	mm	in	mm	in		
N7	25	1	57.14	2.25	27.76	1.09	20	0.79	M12	70

Combinations

Type	Inlet S	Outlet A-B	Drain port L1-L2	Pilot pressure a-b	Pressure intakes P1 - P2	Manometer intakes M1 - M2
G	G7	N7	G7	G2	G2	G2
U	U7	N7	U7	G2	G2	U2

A Automotive



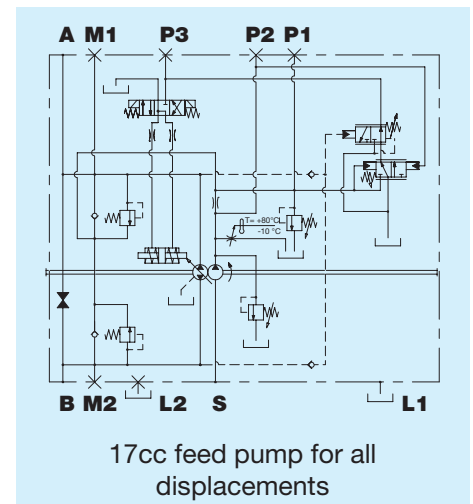
Available on request with DEUTSCH DT04-2P connectors

Outlet

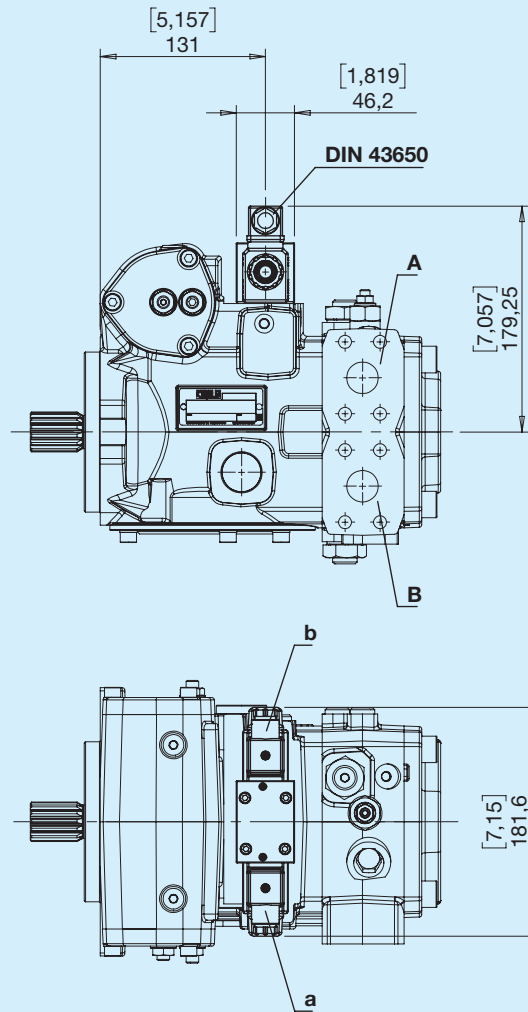
Rotation	Excited solenoid	Outlet
Right	a	A
Right	b	B
Left	a	B
Left	b	A

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

Hydraulic diagram



E Electrical ON/OFF, closed centre 12V

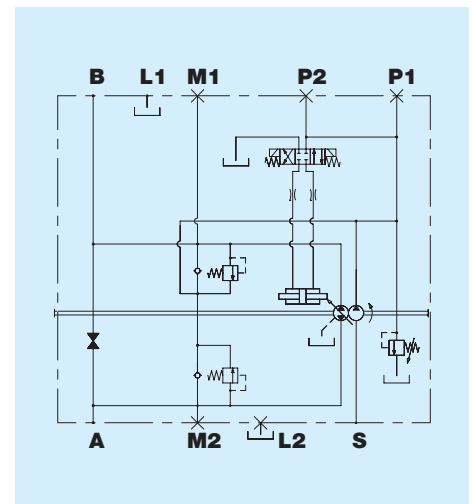


Available on request with DEUTSCH DT04-2P connectors

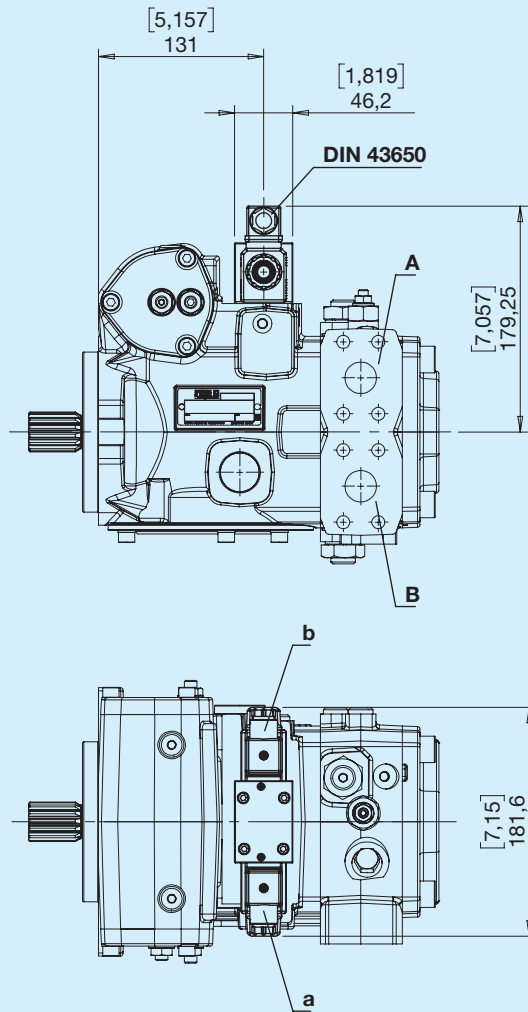
Outlet

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

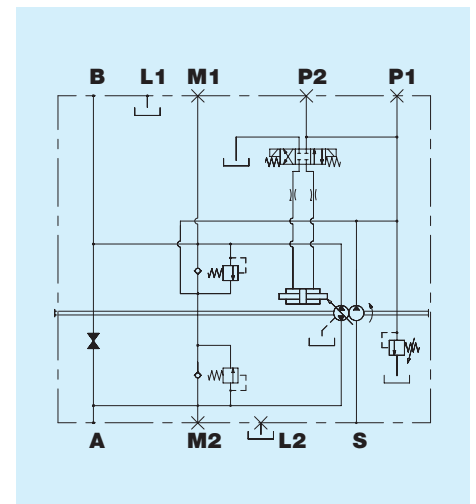


Available on request with DEUTSCH DT04-2P connectors

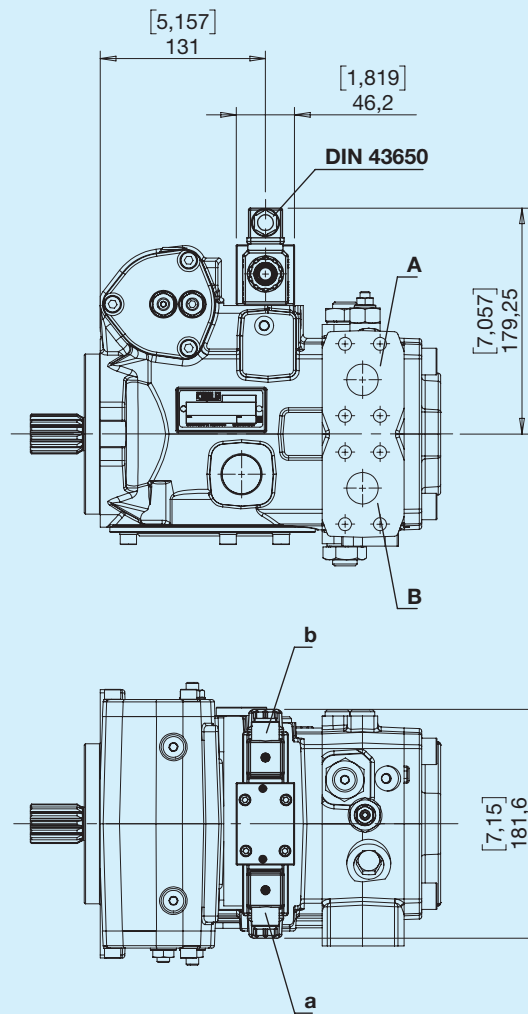
Outlet

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

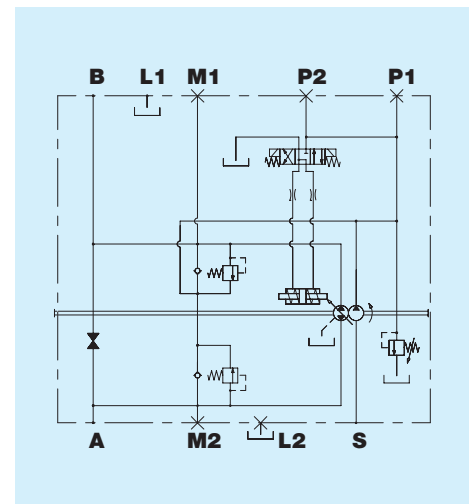


Available on request with DEUTSCH DT04-2P connectors

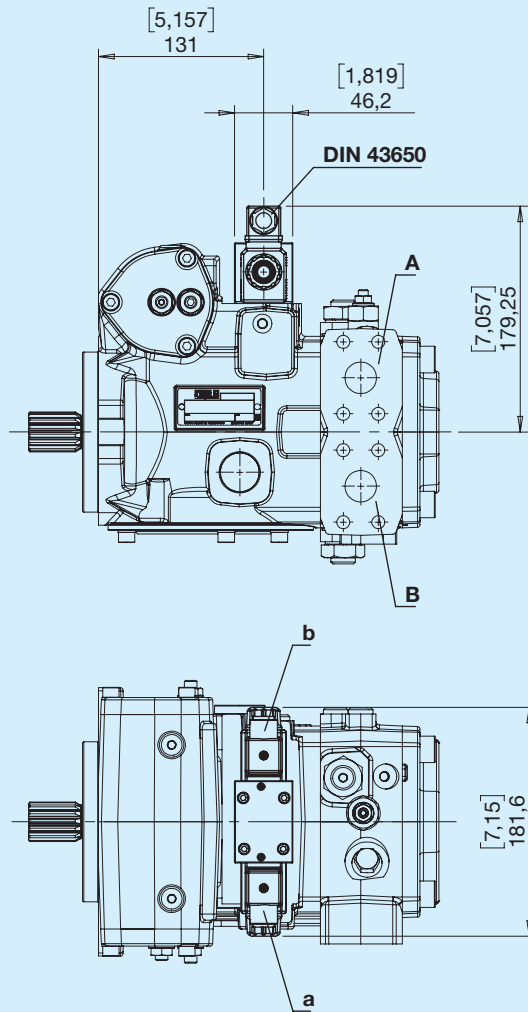
Outlet

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

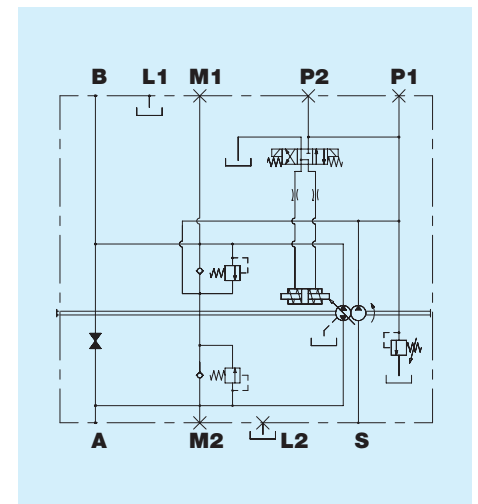


Available on request with DEUTSCH DT04-2P connectors

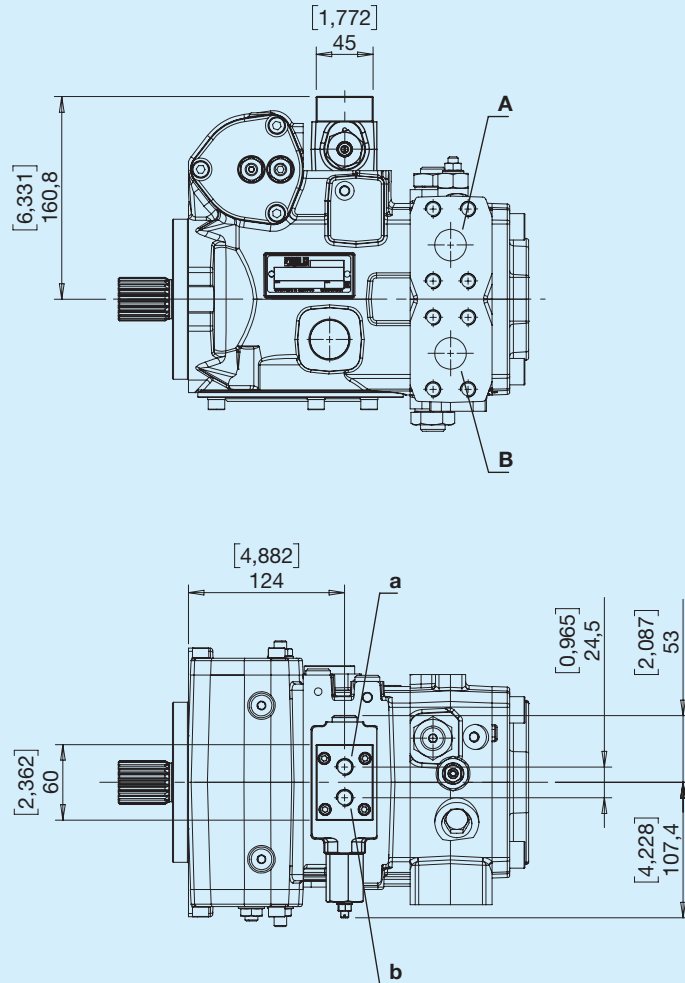
Outlet

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

Hydraulic diagram



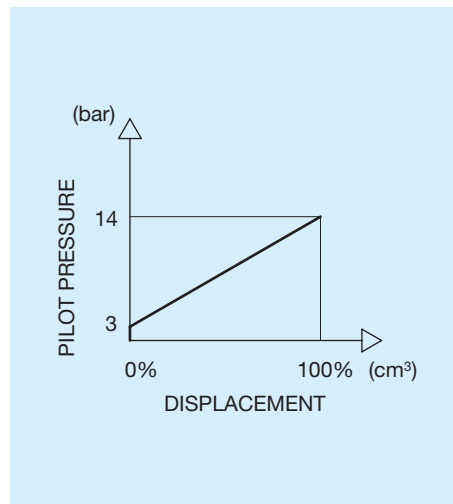
G Feedback hydraulic



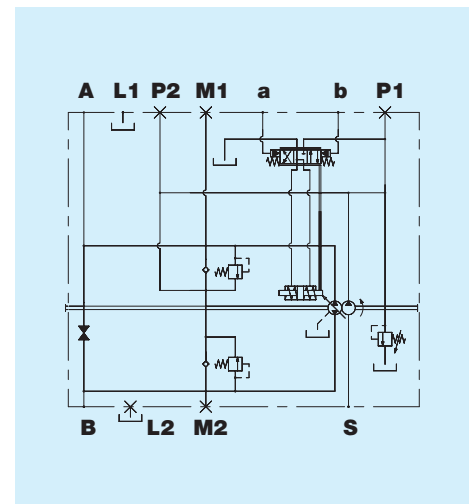
Outlet

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

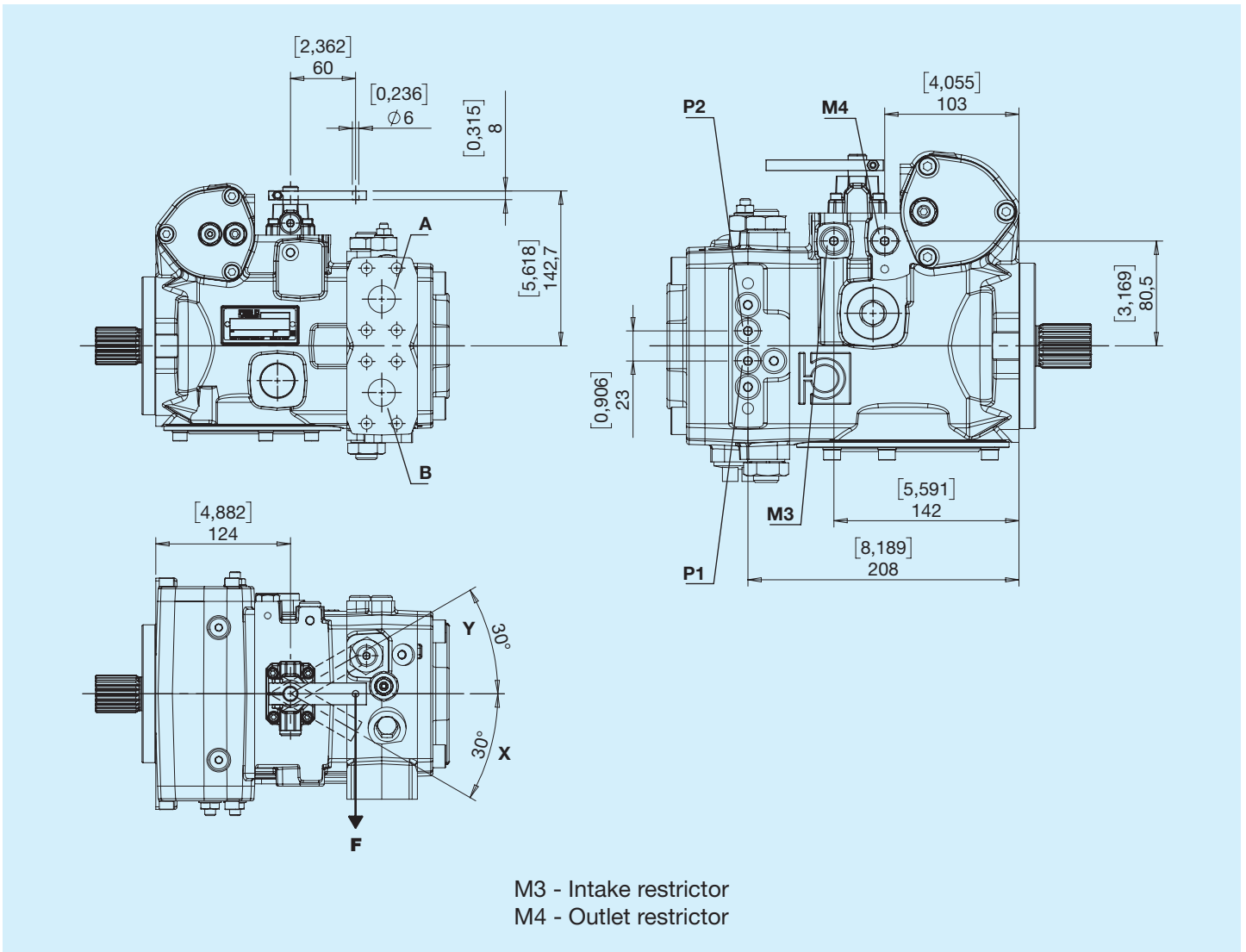
Pilot



Hydraulic diagram



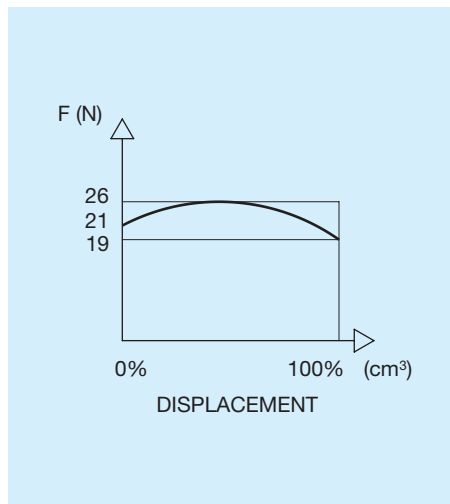
I Lever-operated hydraulic



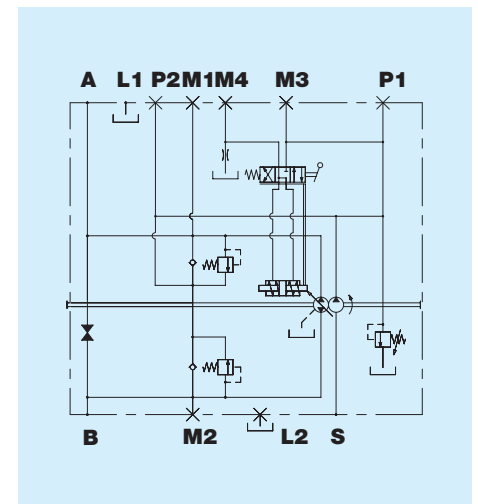
Outlet

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

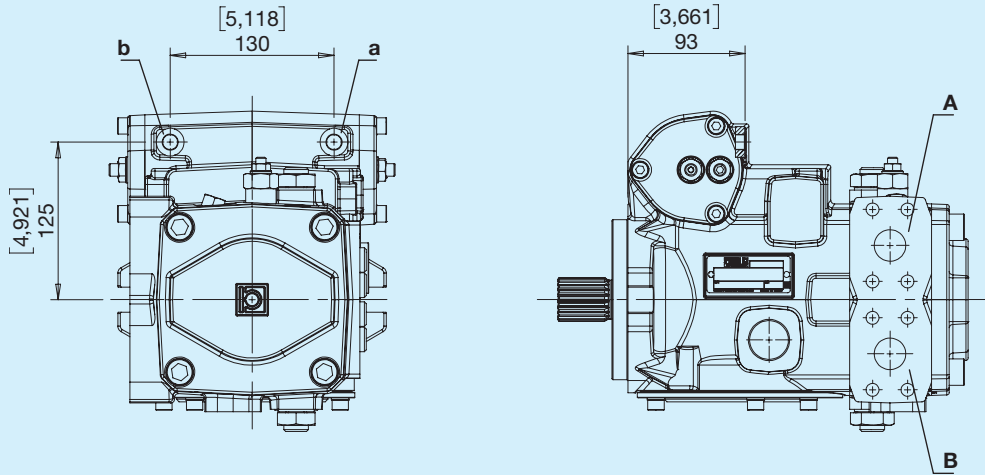
Pilot



Hydraulic diagram



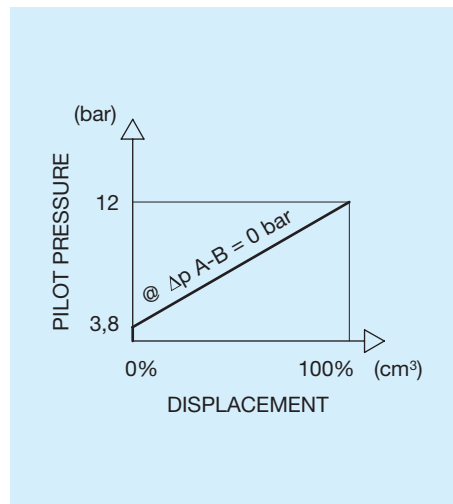
K Direct hydraulic



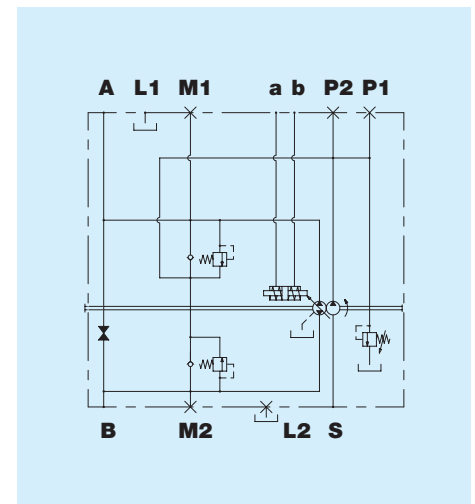
Outlet

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

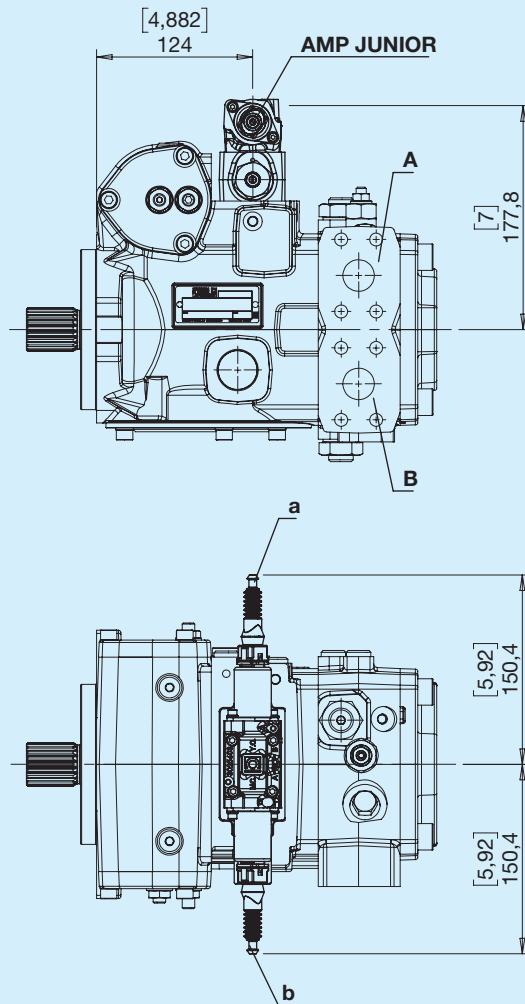
Pilot



Hydraulic diagram



○ Electronic proportional feedback control 12V



Available on request with DEUTSCH DT04-2P connectors

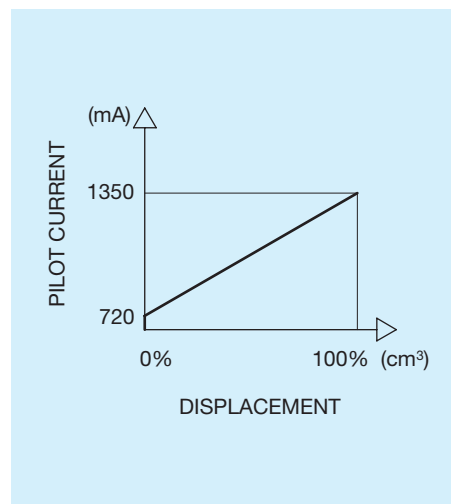
Outlet

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

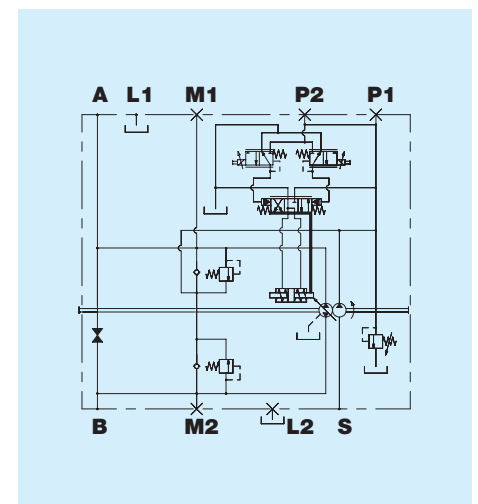
Control

Rated voltage	12	V
Min. current (I1)	400	mA
Max. current (I2)	1600	mA
PWM frequency	100	Hz

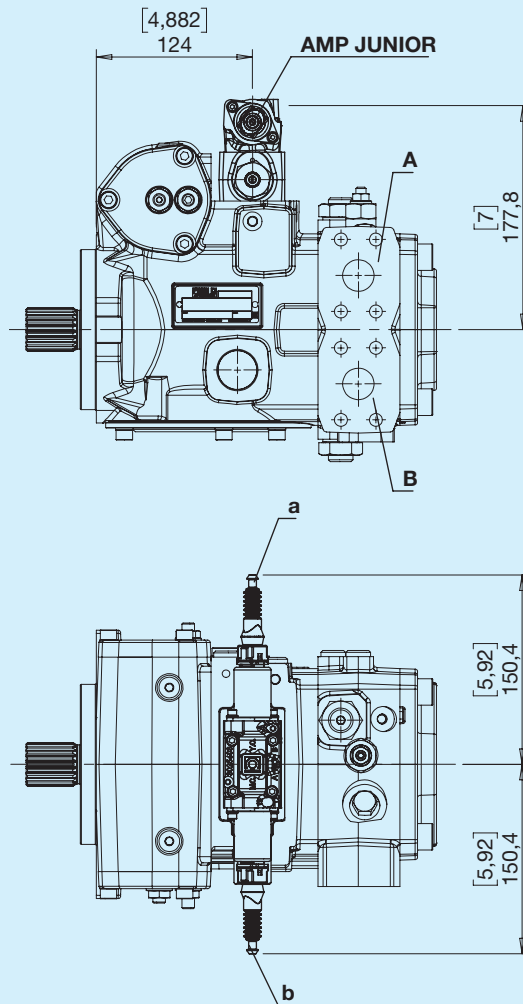
Pilot



Hydraulic diagram



V Electronic proportional feedback control 24V



Available on request with DEUTSCH DT04-2P connectors

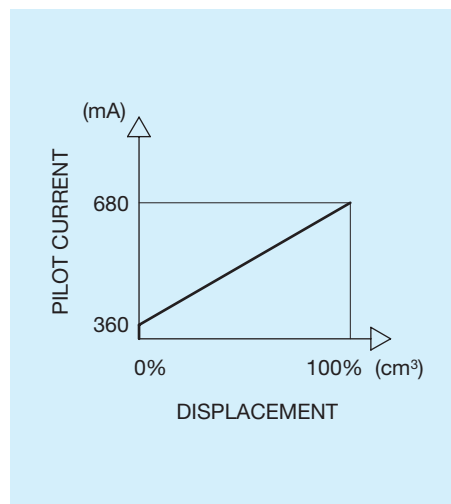
Outlet

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

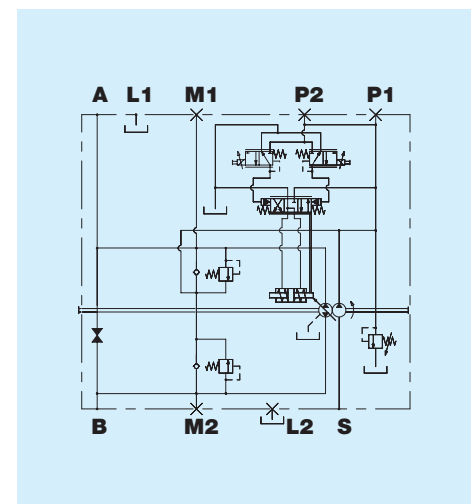
Control

Rated voltage	24	V
Min. current (I1)	200	mA
Max. current (I2)	850	mA
PWM frequency	100	Hz

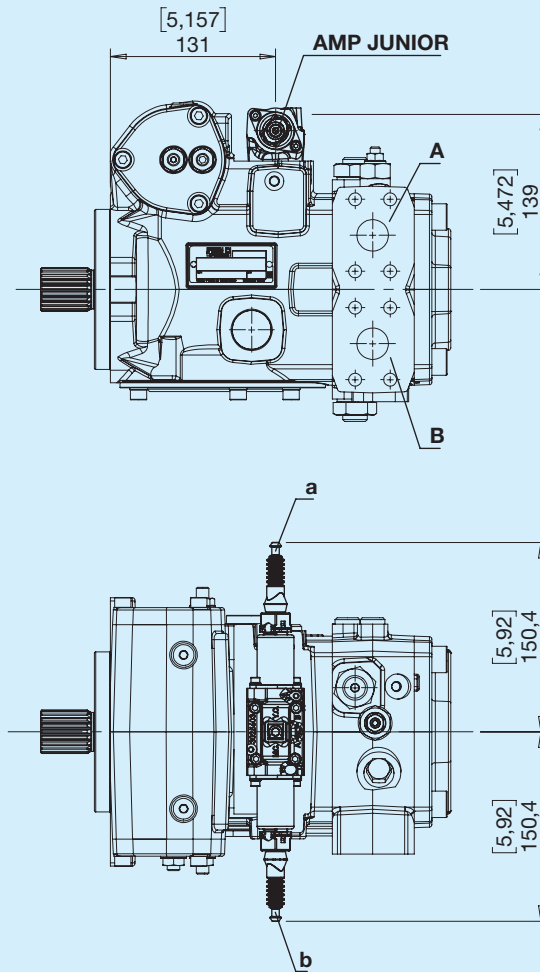
Pilot



Hydraulic diagram



S Electronic proportional control 12 V



Available on request with DEUTSCH DT04-2P connectors

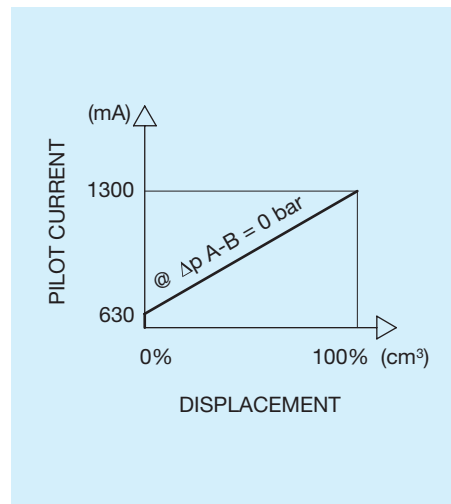
Outlet

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

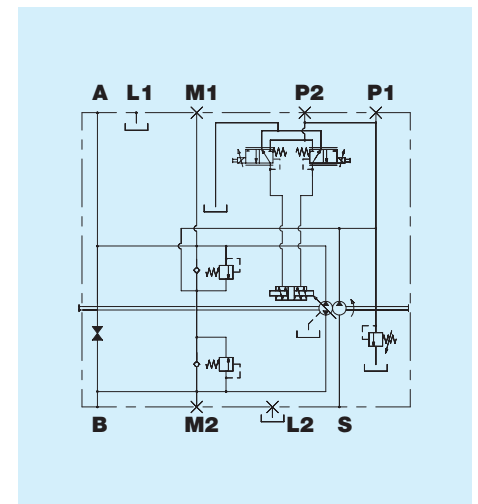
Control

Rated voltage	12	V
Min. current (I1)	400	mA
Max. current (I2)	1600	mA
PWM frequency	100	Hz

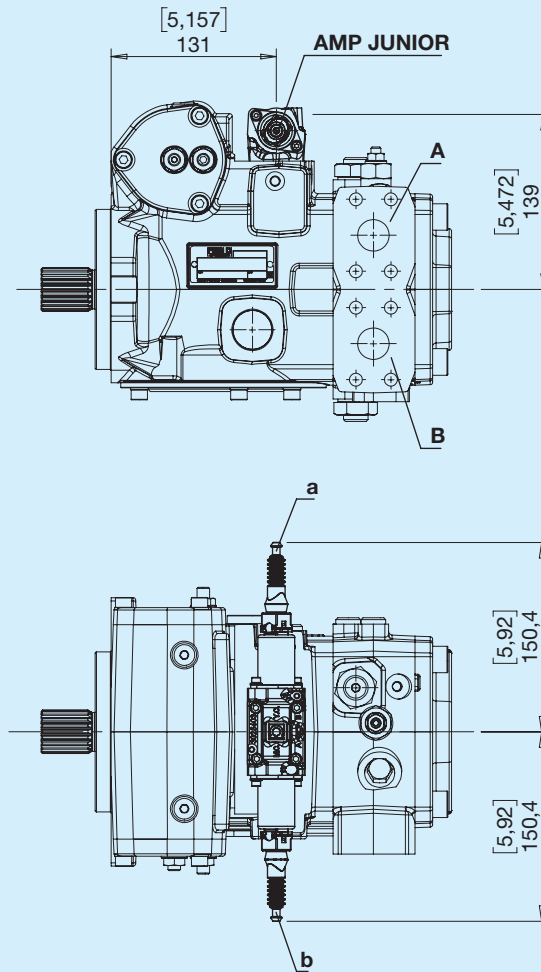
Pilot



Hydraulic diagram



W Electronic proportional control 24V



Available on request with DEUTSCH DT04-2P connectors

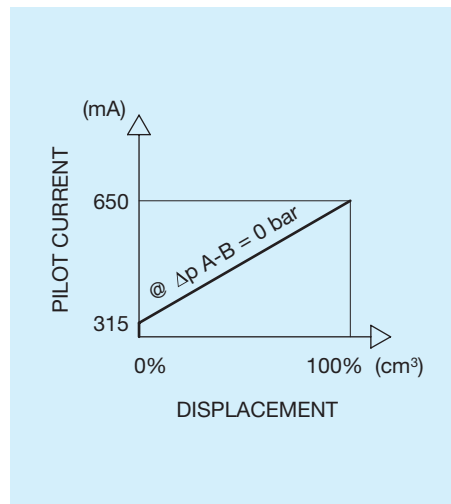
Outlet

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

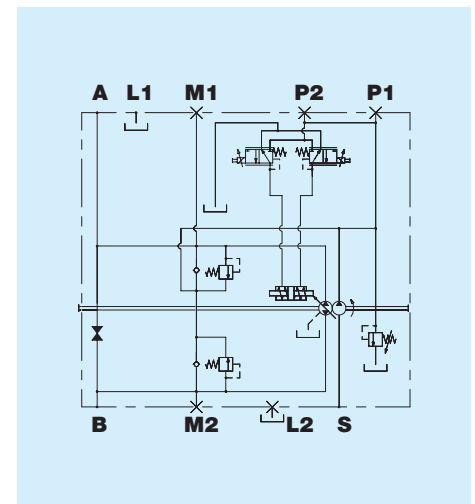
Control

Rated voltage	24	V
Min. current (I1)	200	mA
Max. current (I2)	850	mA
PWM frequency	100	Hz

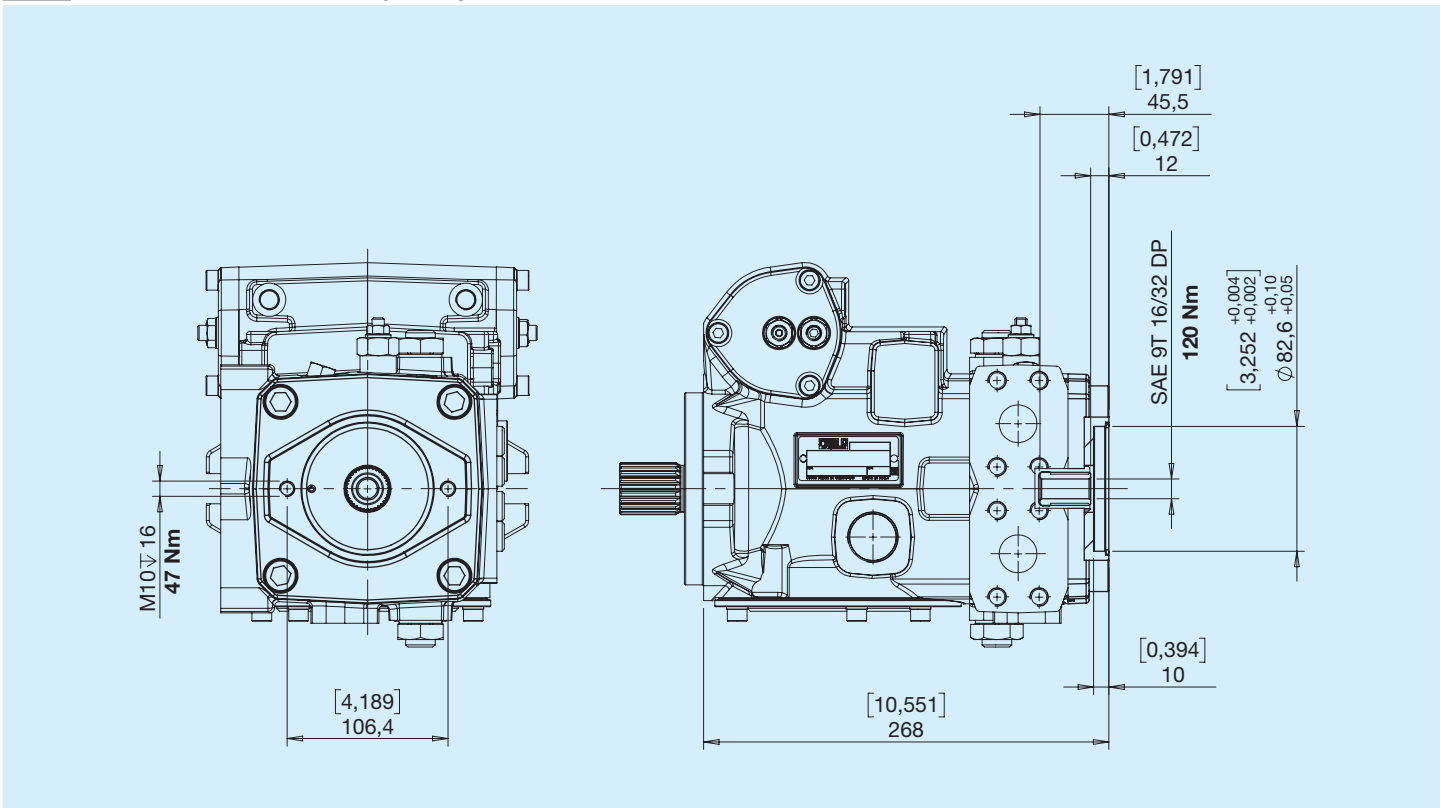
Pilot



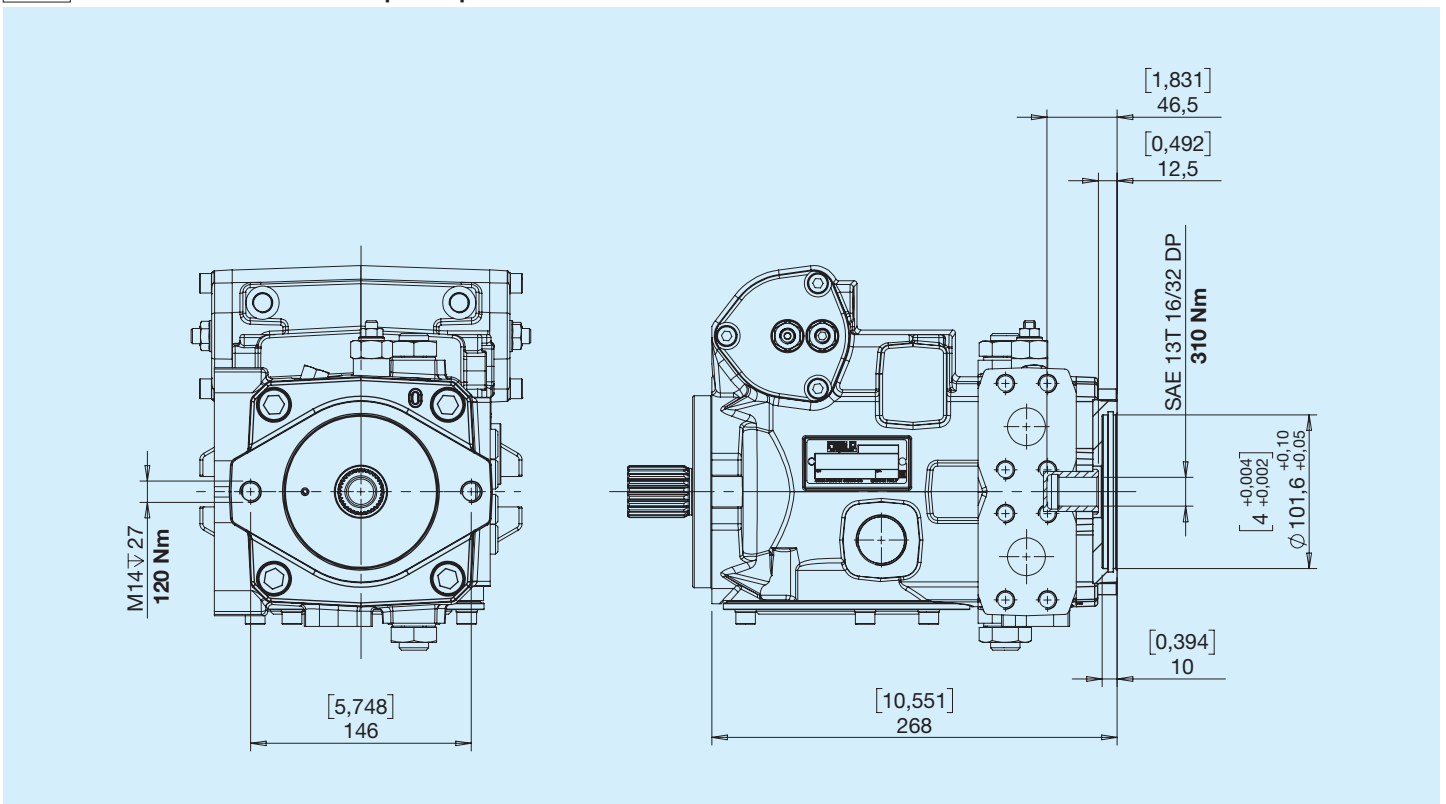
Hydraulic diagram



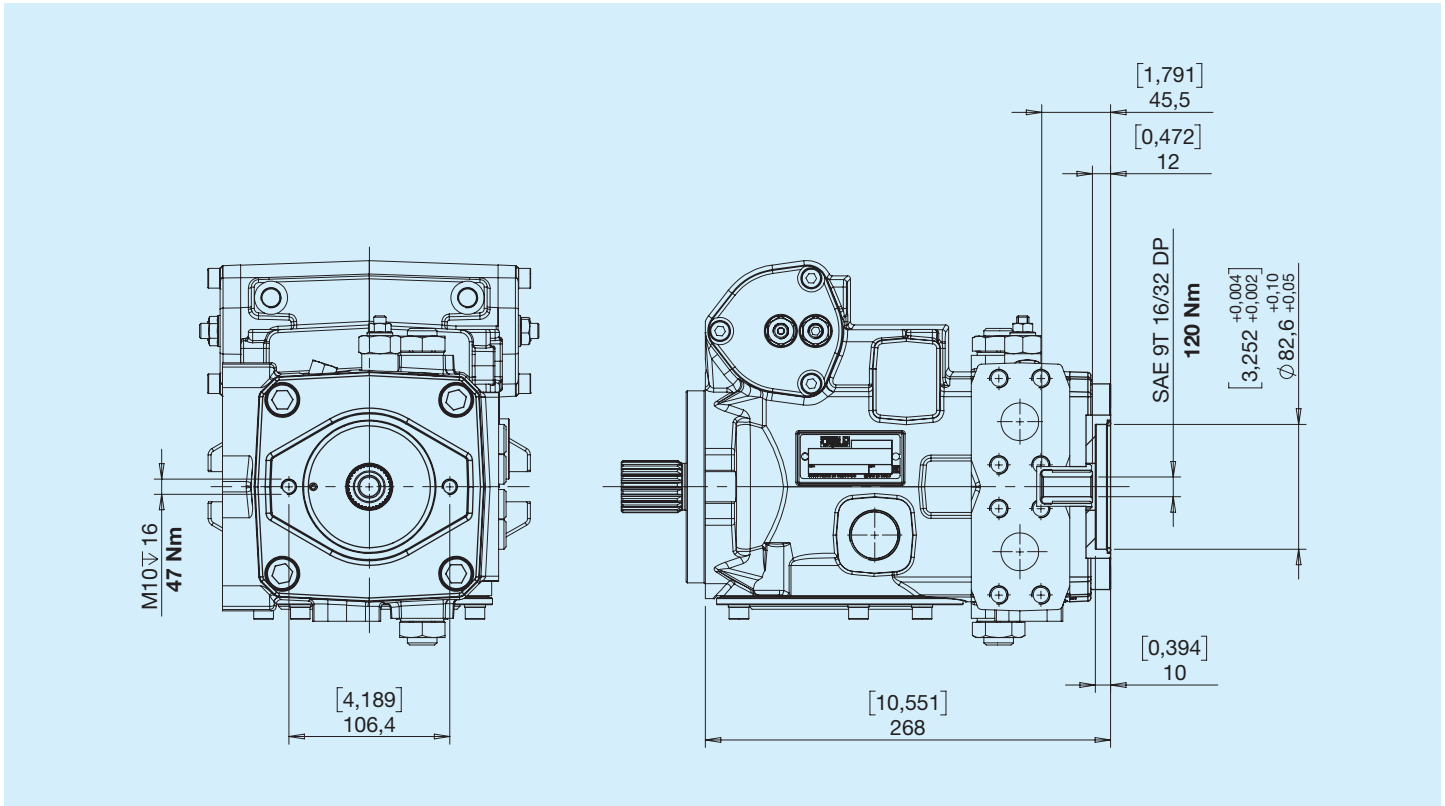
2 SAE A with boost pump



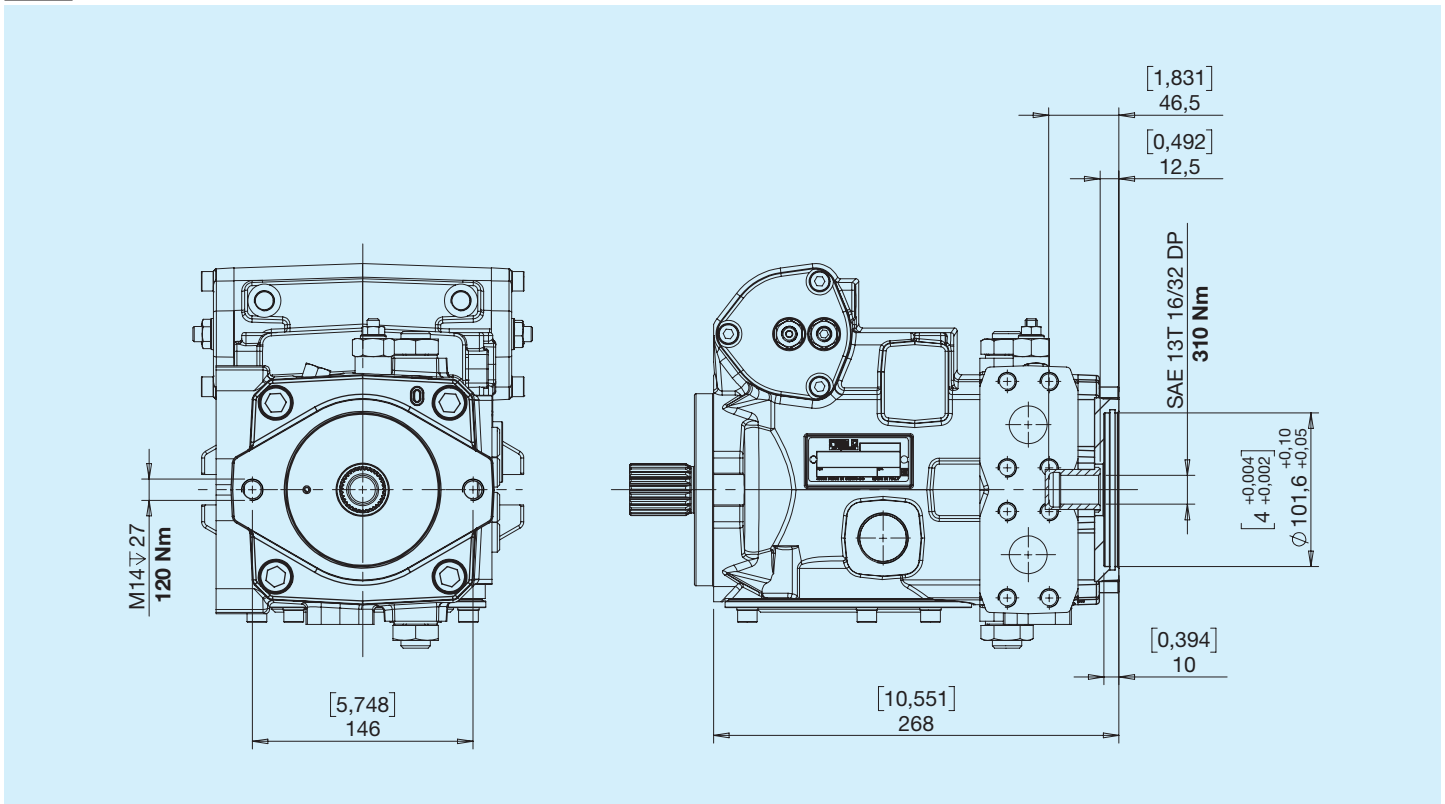
3 SAE B with boost pump



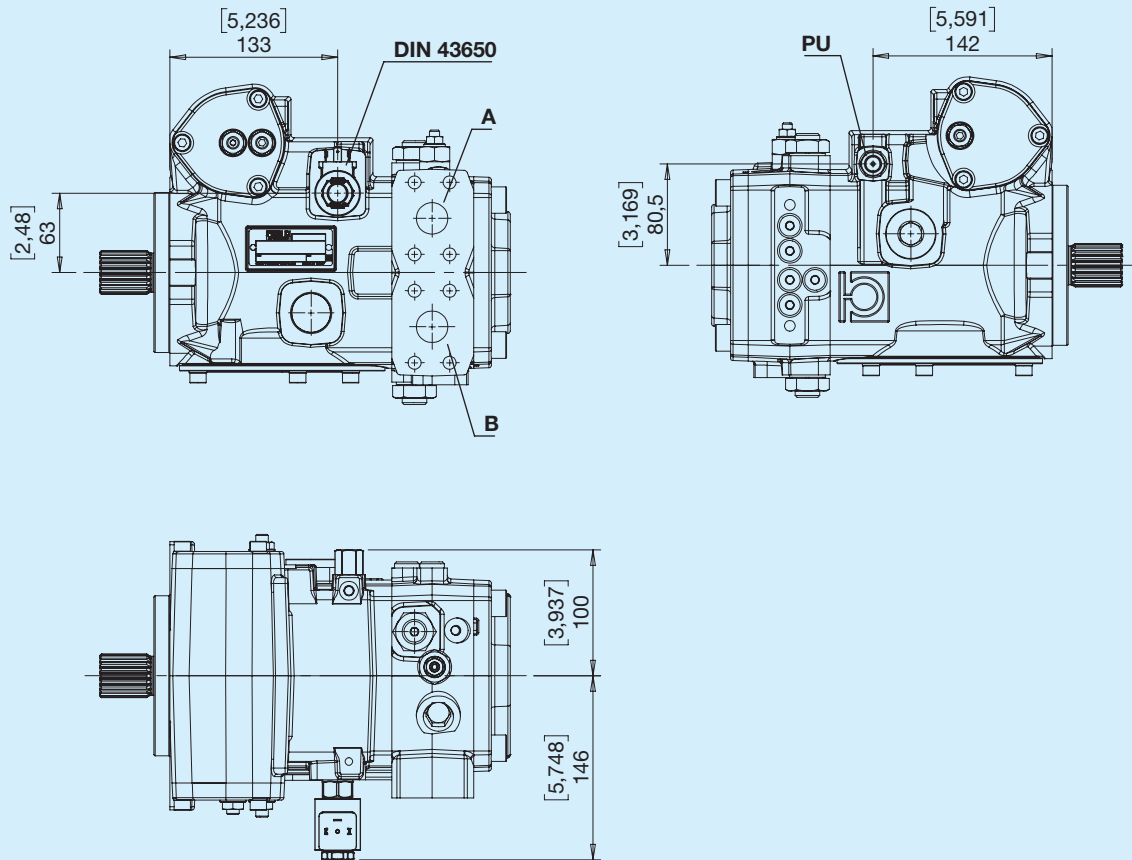
5 SAE A without boost pump



6 SAE B without boost pump

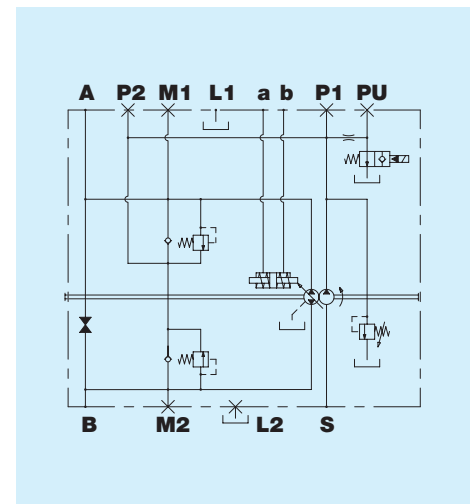


E 'no operator' safety

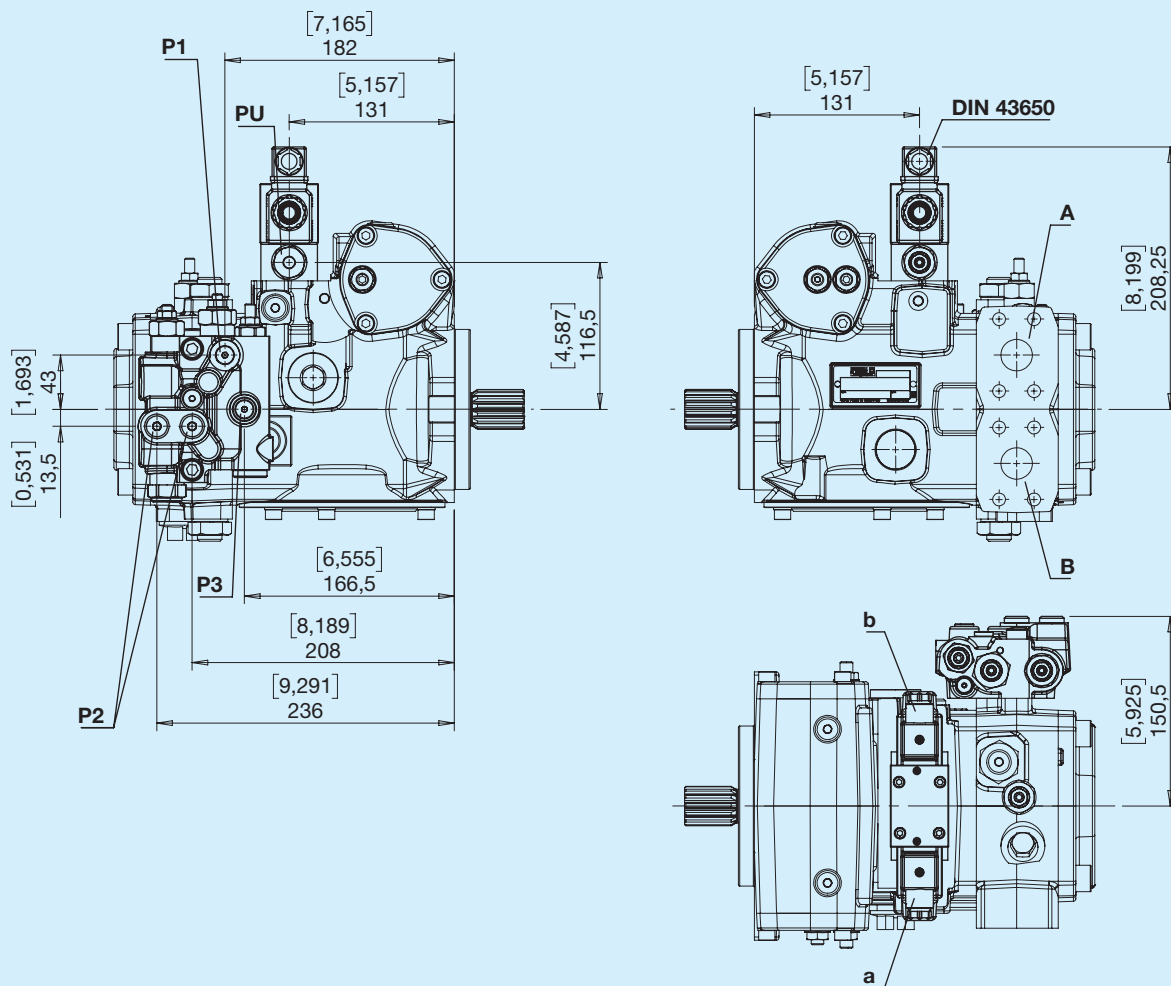


PU - Brake opening pressure G1/4

Hydraulic diagram



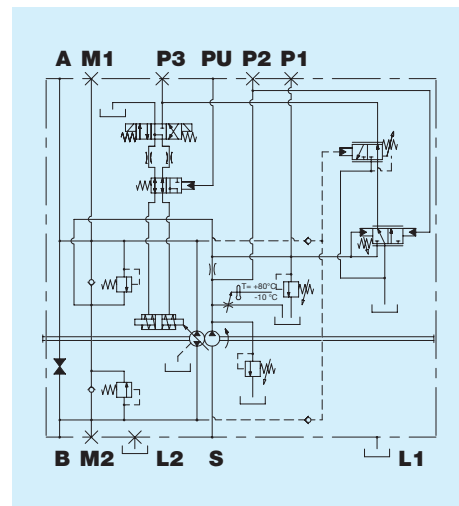
H Hydraulic inching (only A control)



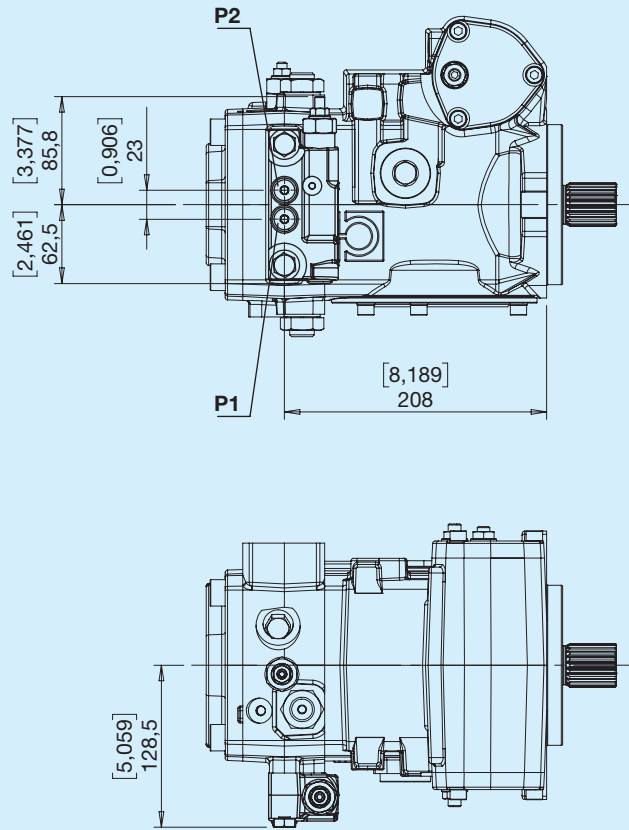
Available on request with DEUTSCH DT04-2P connectors

Right
Right
Left

Hydraulic diagram

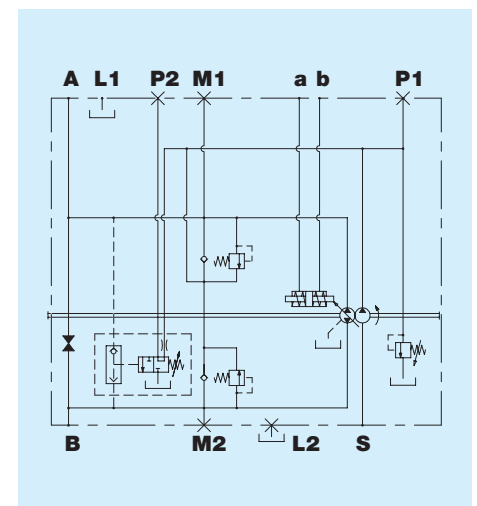


J Cut-off

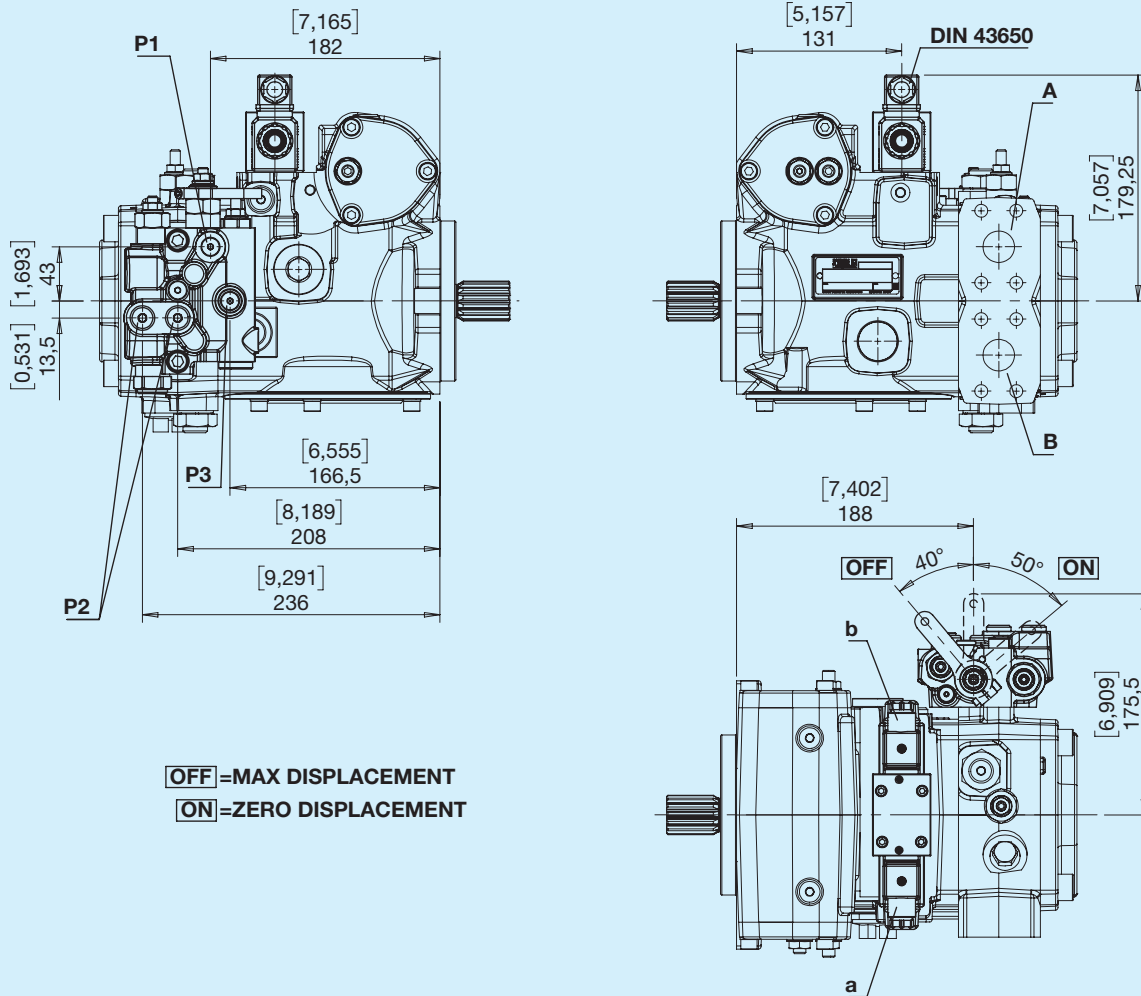


P1, P2 - Pressure intake G1/4

Hydraulic diagram



M Mechanical inching (only A control)

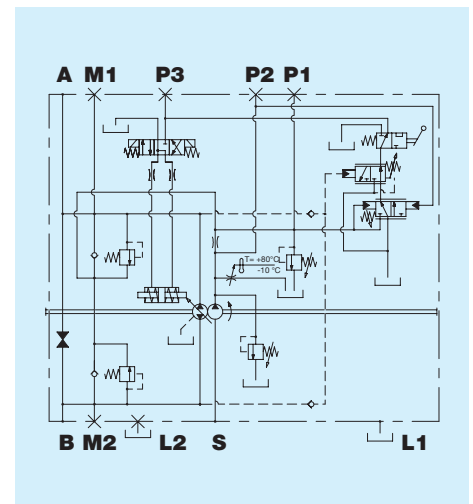


Available on request with DEUTSCH DT04-2P connectors

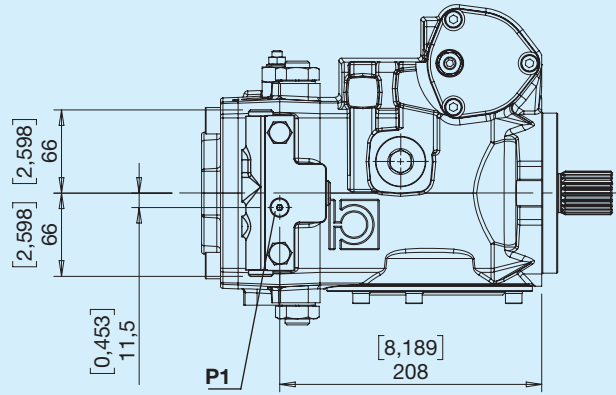
P1, P3 - Pressure intake G 1/8

P2 - Pressure intake G 1/4

Hydraulic diagram

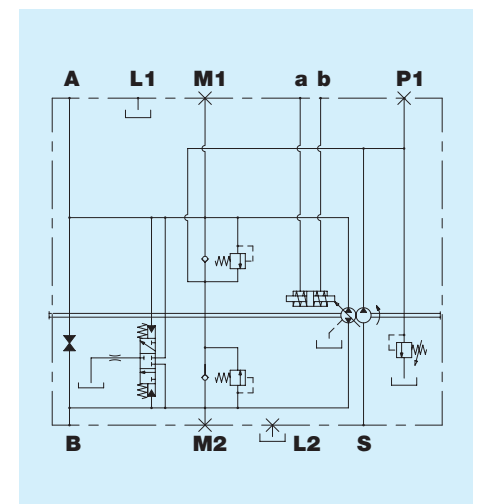


V Flushing valve (5-7 l/min)

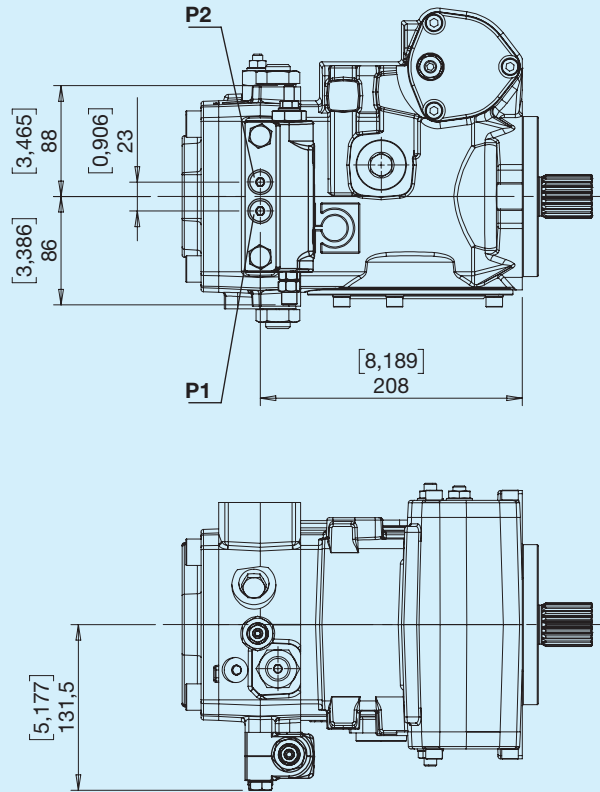


P1 - Pressure intake G1/8

Hydraulic diagram

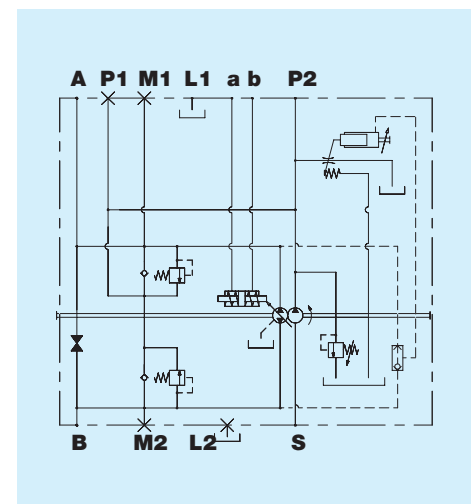


W Power limiter



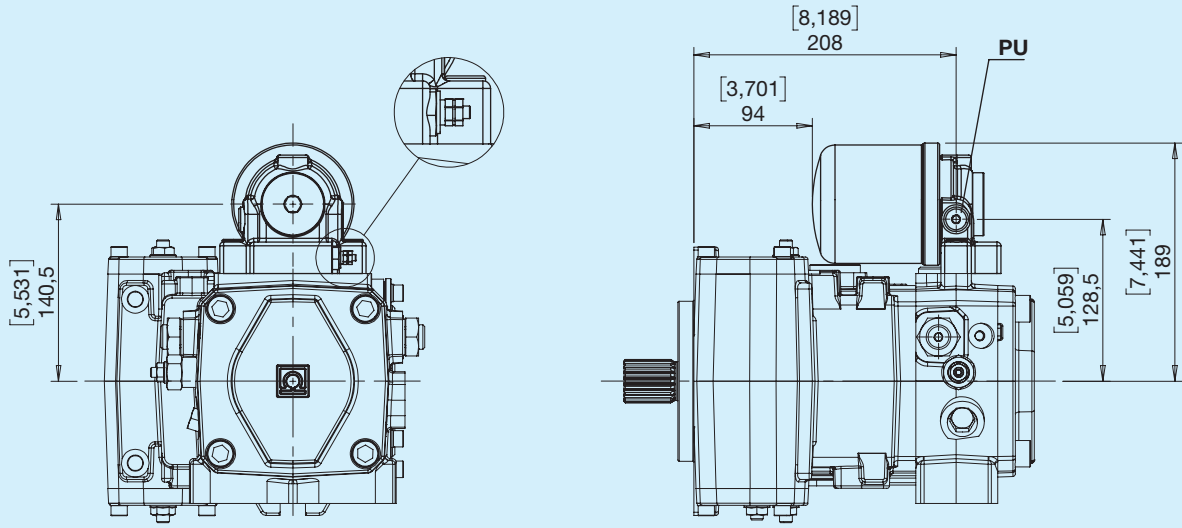
P1, P2 - Pressure intake G1/4

Hydraulic diagram



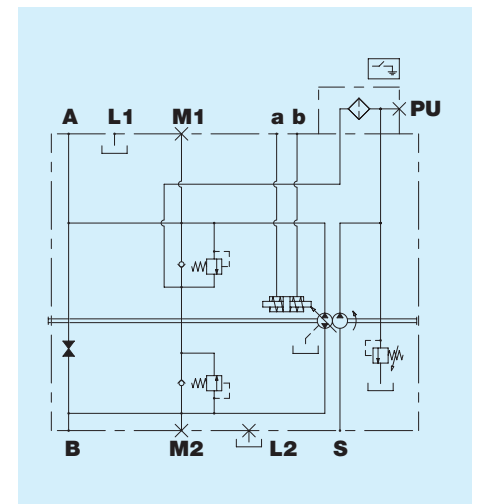
X Filter with clogging indicator

Electric differential indicator - 30 VDC - 0.2 A max

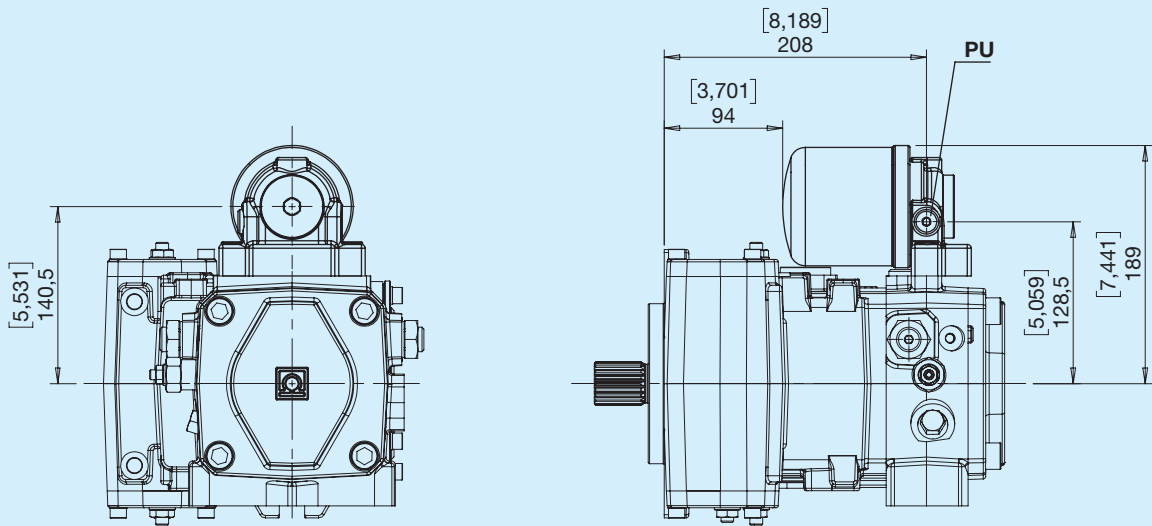


PU - Filtered oil intake G1/4

Hydraulic diagram

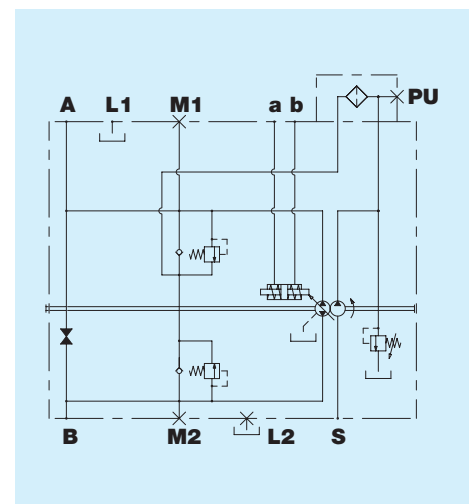


Y Filter without clogging indicator



PU - Filtered oil intake G1/4

Hydraulic diagram



HPP6	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 2 3	Displacement													
	055				065				078					
4	Direction of rotation													
	R Right					L Left								
5	Flanges													
	C SAE C													
6	Shaft profile													
	3 SAE 14T 12/24 DP				7 SAE 21T 16/32 DP				0 For secondary pump HPP6					
7	Type of ports													
	G Gas					U UNF								
8	Controls													
	A Automotive			N Electrical ON/OFF, open centre 12V			I Lever-operated hydraulic			V Electronic proportional feedback control 24V				
	E Electrical ON/OFF, closed centre 12V			Q Electrical ON/OFF, open centre 24V			K Remote hydraulic			S Electronic proportional control 12V				
	F Electrical ON/OFF, closed centre 24V			G Feedback hydraulic			O Electronic proportional feedback control 12V			W Electronic proportional control 24V				
9	Valve calibration													
	G 250 bar			L 300 bar			S 370 bar			Q 420 bar				
	I 280 bar			O 350 bar			P 400 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			T For pump HPP6 without boost pump				
	1 No special fittings, with boost pump			3 SAE B with boost pump			6 SAE B without boost pump			V For pump HPP6 with boost pump				
11	Accessories													
	0 No option			J Cut-off			V Flushing valve			Y Filter without electric clogging indicator				
	E 'no operator' safety			M Mechanical inching (only A control)			W Power limiter							
	H Hydraulic inching (only A control)			S Multiple accessories (special version)			X Filter with electric clogging indicator							
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 example, the codes of the individual pumps (stages) obtained by following the order instructions for the single pumps

Stage 1
Stage 2

HPP6 065 R C 3 G K Q V 0 000 + **HPP6 065 R C 0 G K Q 1 0 000**

tandem pump

Stage 1
Stage 2

HPP6 065 R C 3 G K Q V 0 000 + **HPP6 065 R C 0 G K Q 2 0 000**

tandem pump with SAE A fitting

Stage 1
Stage 2

HPP6 065 R C 3 G K Q V 0 000 + **HPP6 065 R C 0 G K Q 3 0 000**

tandem pump with SAE B fitting