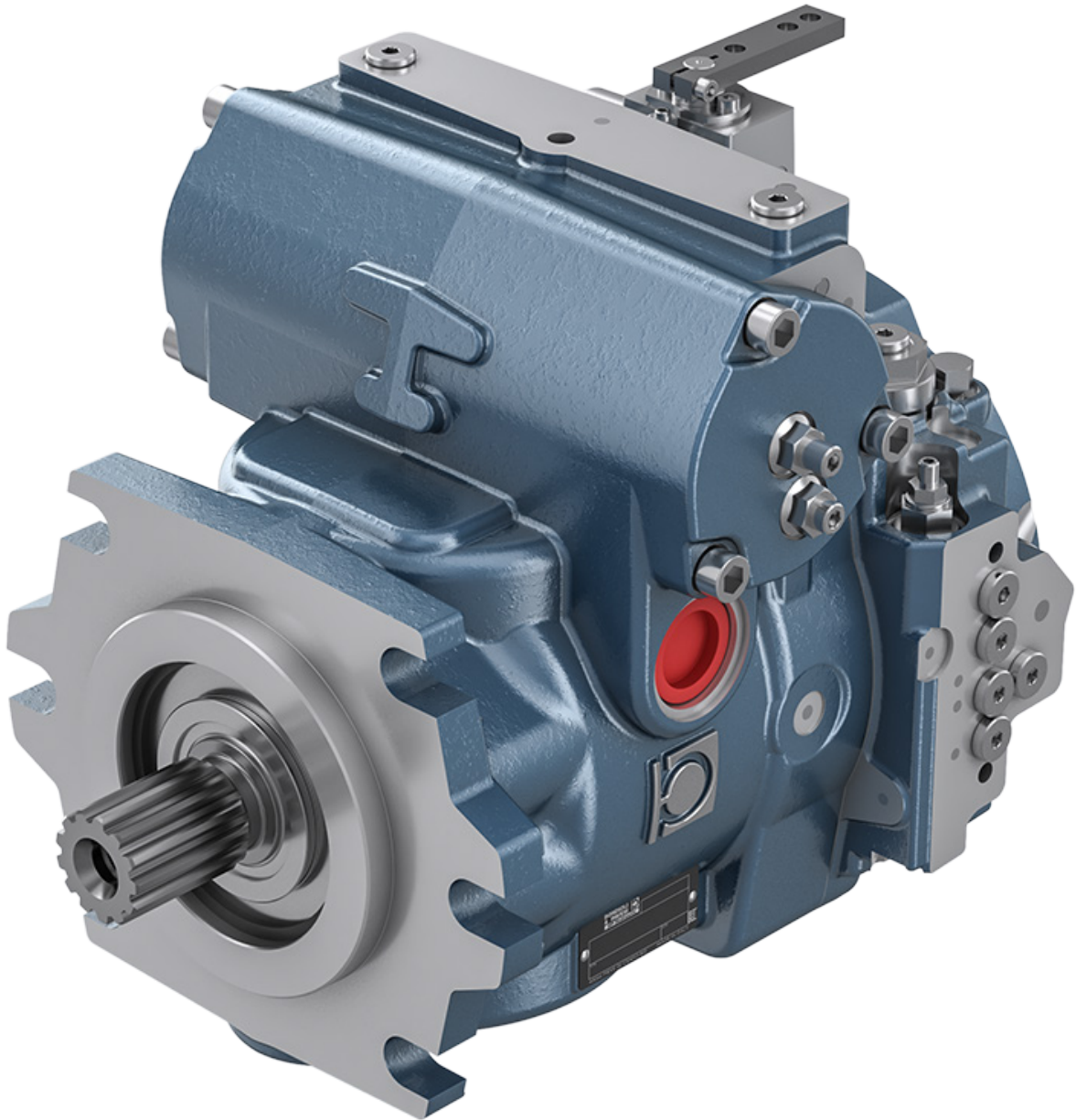
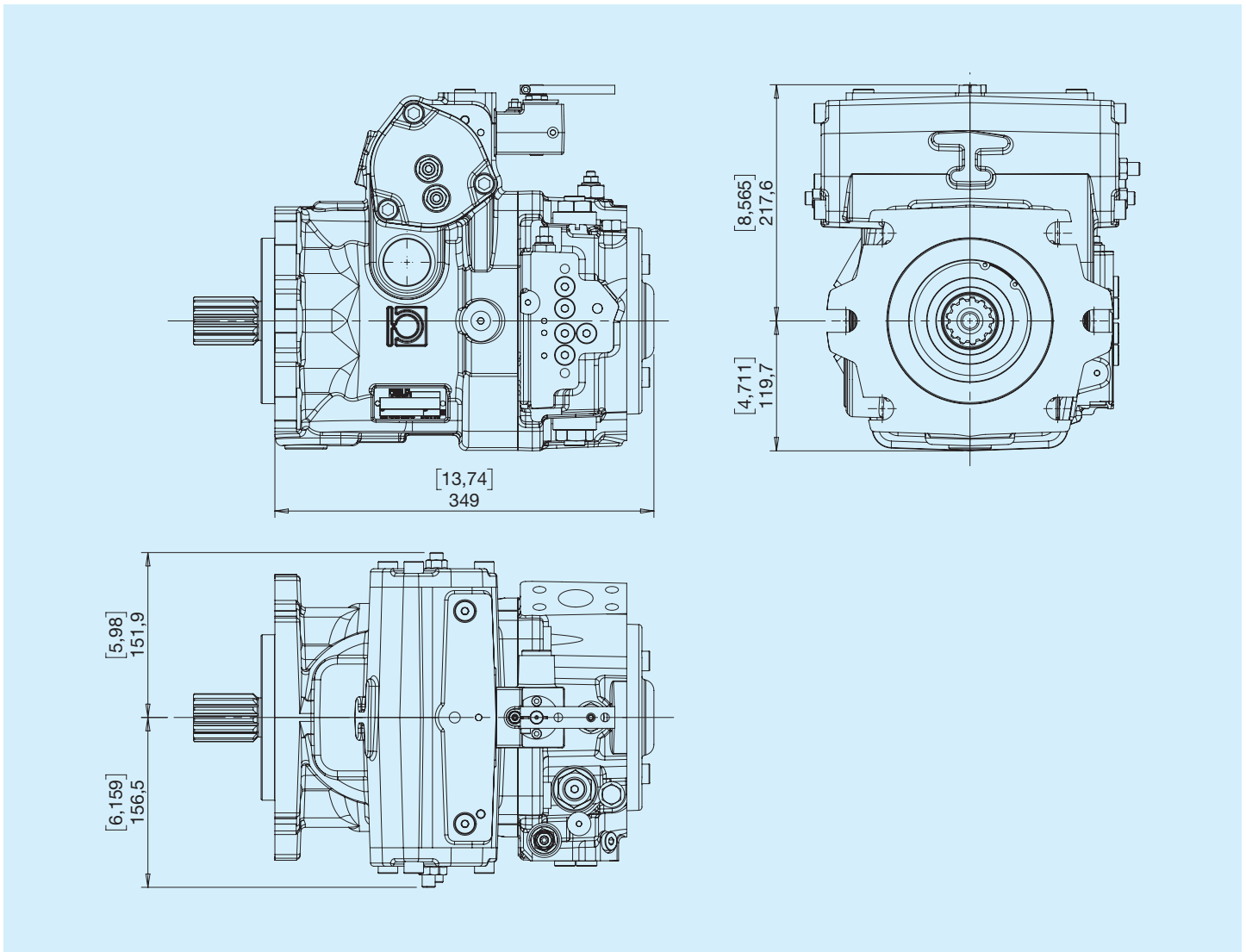


Variable-displacement pumps



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

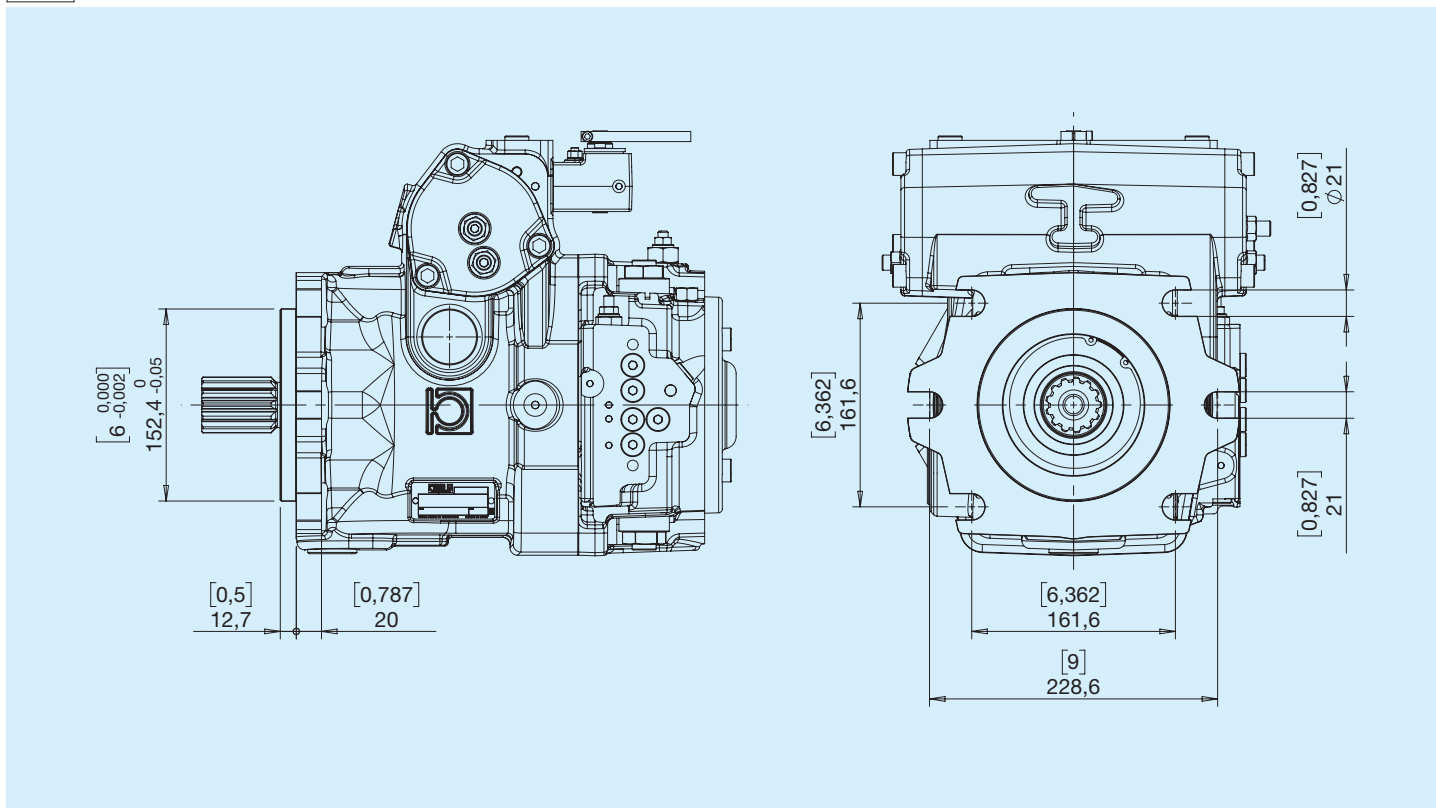


HPP9	Nominal displacement		Swash plate	Continuous pressure		Intermittent pressure		Peak pressure		Rotational speed		Weight	
	cm ³	in ³		bar	psi	bar	psi	bar	psi	MAX min ⁻¹	MIN min ⁻¹	kg	lbs
145	145	8.85	18	450	6525	480	6960	500	7250	2800	500	95	209.4
180	180	10,98	18	400	5800	420	6090	450	6525	2800	500	95	209,4

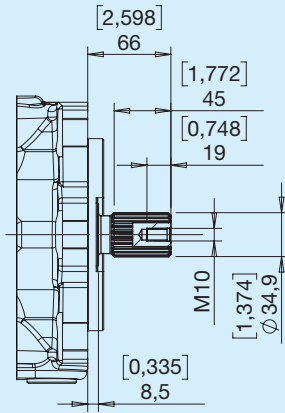
Feed pump

Type	Feed pump displacement		Pressure	
	cm ³	in ³	bar	psi
HPP9	34	2.07	25	363
HPP9 180	34	2,07	25	363

D SAE D

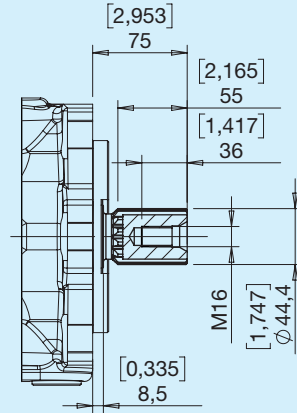


7 SAE 21T 16/32 DP

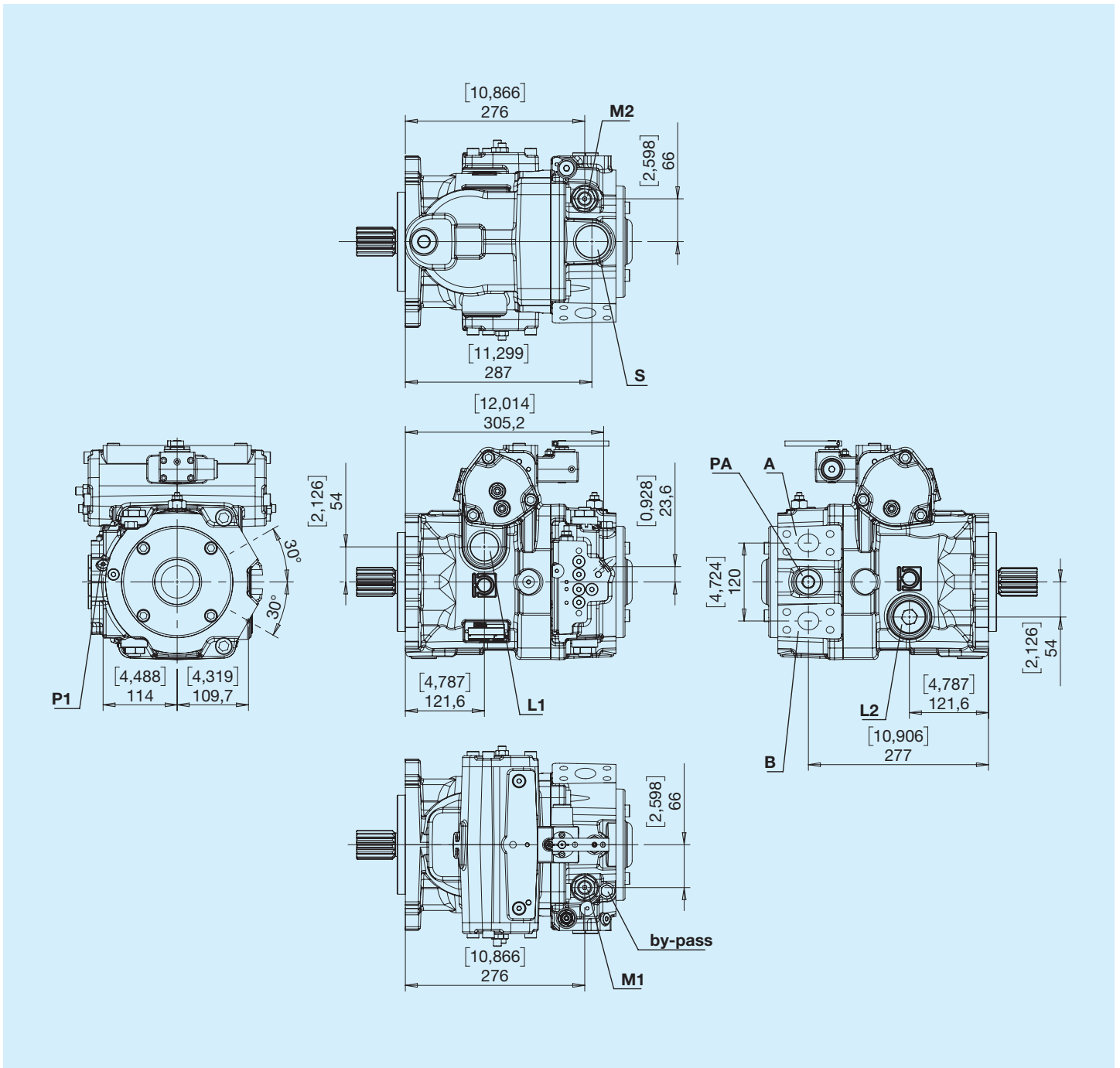


Max. torque 1200 Nm

9 SAE 13T 8/16 DP

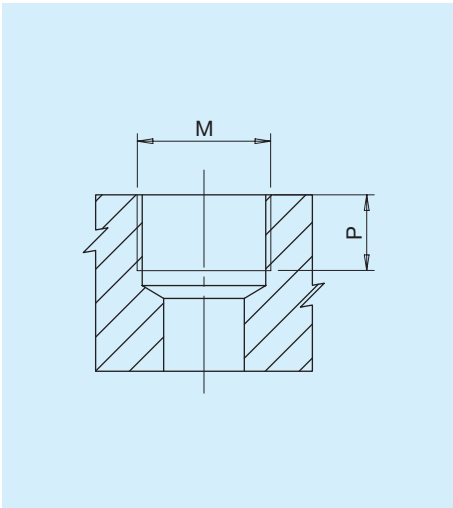


Max. torque 2600 Nm



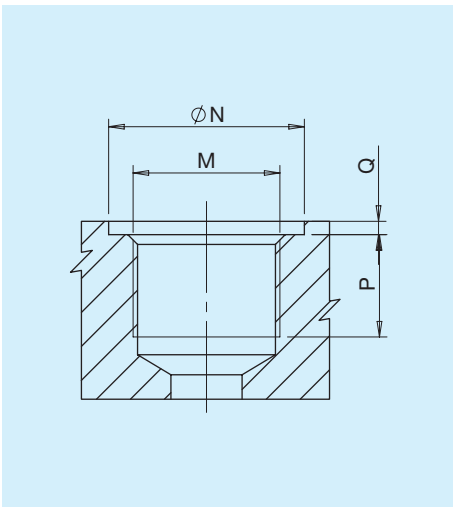
- A,B** - Use
- L1, L2** - Drain port
- S** - Inlet
- P** - Pressure intake
- M1, M2** - Manometer intake
- PA** - Mandata esterna PA

Type G



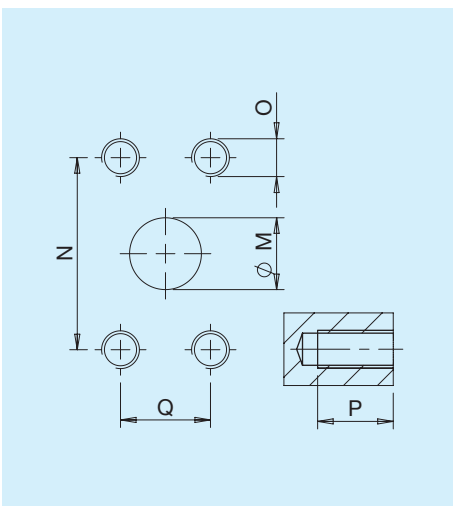
Type	M	Nm	P	
			mm	in
G2	Port ISO 1179-1 - G 1/4	17	12	0.47
G7	Port ISO 1179-1 - G 1	160	18	0.71
G8	Port ISO 1179-1 - G 1 1/4	200	21	0.83
G9	Port ISO 1179-1 - G 1 1/2	210	25	0.98

Type M



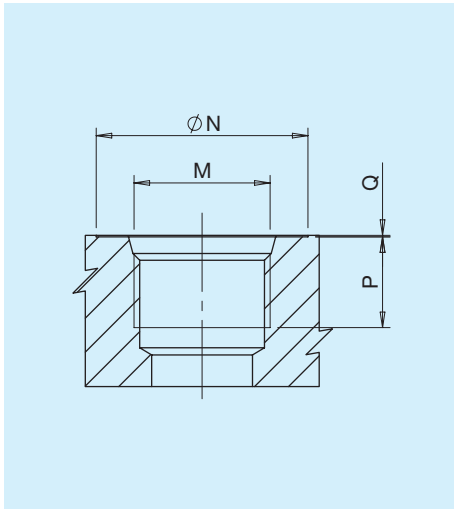
Type	M	Nm	N		P		Q	
			mm	in	mm	in	mm	in
M1	Port ISO 6149 - 1 - M12x1.5	17	22	0.87	12	0.47	0.3	0.01
mA	Port ISO 6149 - 1 - M33x2	160	44	1.73	23	0.91	0.3	0.01
MD	Port ISO 6149 - 1 - M42x2	200	55	2.17	20	0.79	0.3	0.01
ME	Port ISO 6149 - 1 - M48x2	210	57	2.24	23	0.91	0.3	0.01

Type N



Type	M		N		Q		P		O	
	mm	in	mm	in	mm	in	mm	in	mm	Nm
N8	32	1.26	66.7	2.63	31.8	1.25	22	0.87	M14	120

Type U

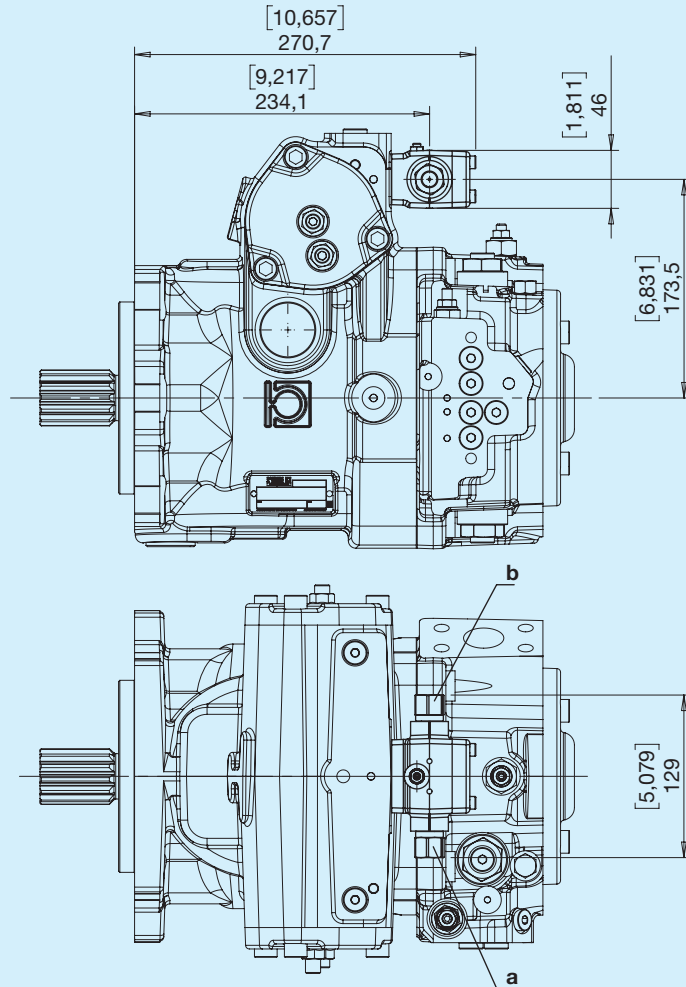


Type	Dim.	N		P		Q		M	Nm
		mm	in	mm	in	mm	in		
U2	1/4'	22	0.87	12	0.47	0.3	0.01	Port ISO 11926-1-7/16-20	17
U7	1'	49	1.93	20	0.79	0.3	0.01	Port ISO 11926-1-1 5/16-12	160
U8	1 1/4'	58	2.28	20	0.79	0.3	0.01	Port ISO 11926-1-1 5/8-12	200
U9	1 1/2'	68	2.68	20	0.79	0.3	0.01	Port ISO 11926-1-1 7/8-12	210

Combinations

Type	Inlet S	Outlet A-B	Drain port L1-L2	HP ext. outlet PA	Pressure intake P1	Pressure gauge sockets M1 - M2
G	G9	N8	G8	G2	G2	G2
U	U6	N8	U6	G2	U2	U2
M	ME	N8	MD	MA	M1	G2

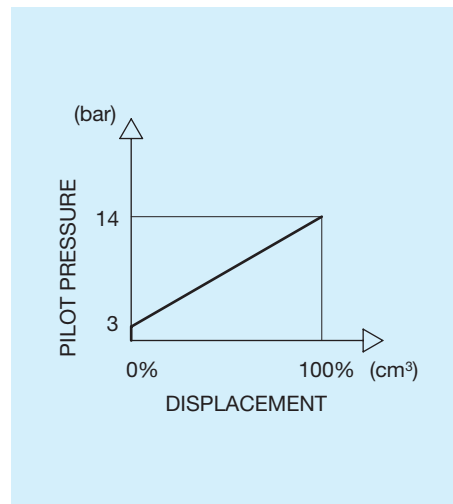
G Feedback hydraulic



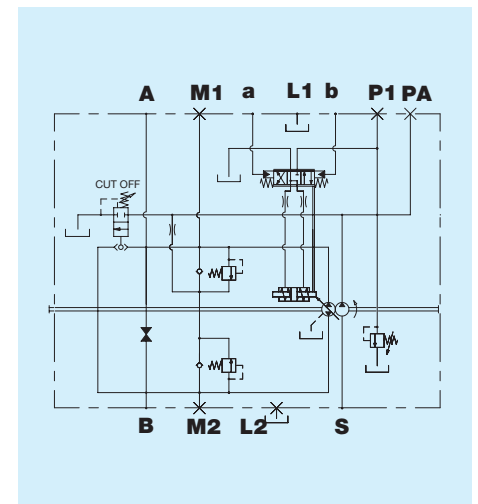
Outlet

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

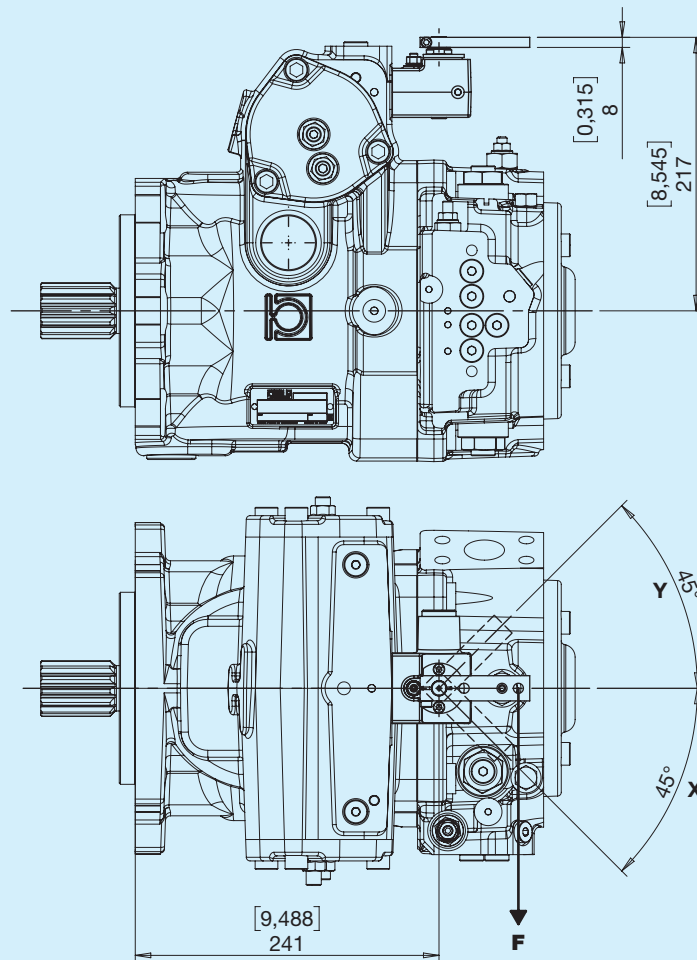
Pilot pressure



Hydraulic diagram



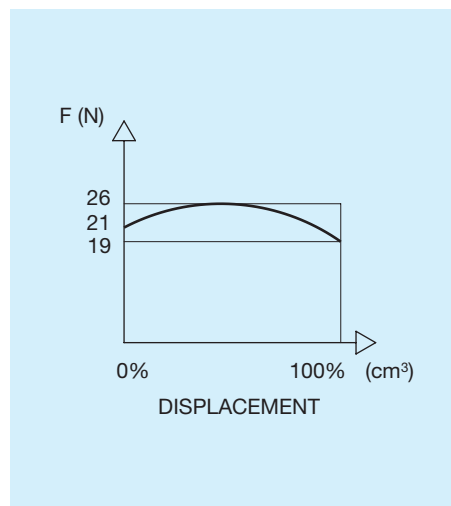
I Lever-operated hydraulic



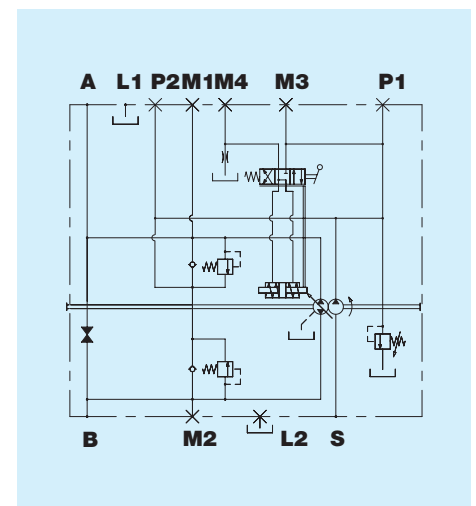
Outlet

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

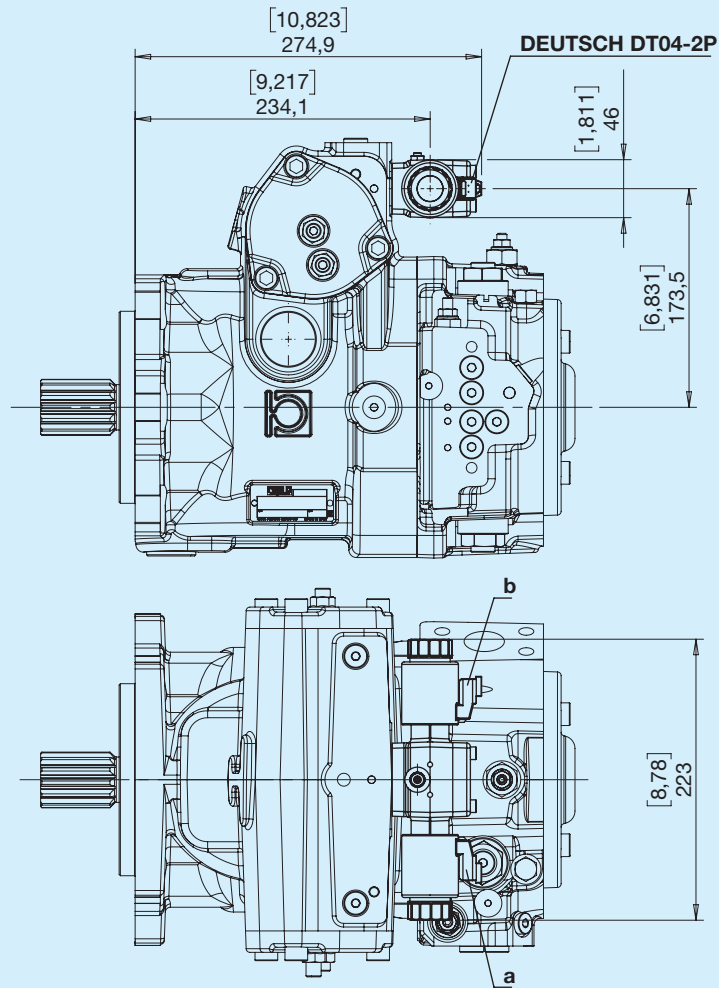
Pilot pressure



Hydraulic diagram



○ Electronic proportional feedback control 12V



Available on request with DIN 43650 connectors

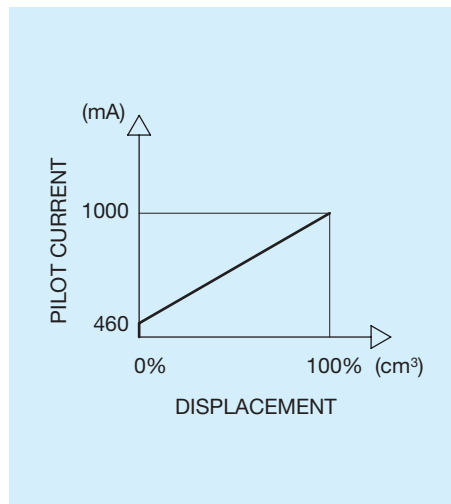
Outlet

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

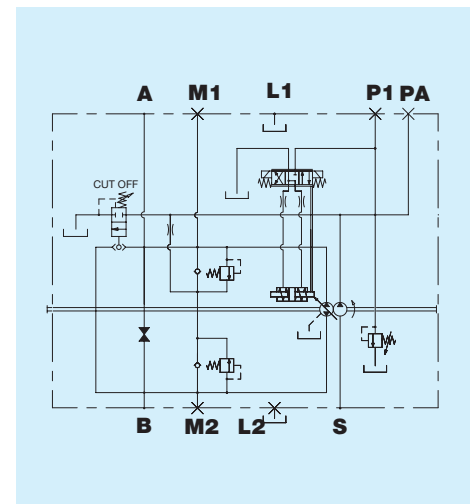
Control

Rated voltage	12	V
Min. current (I1)	700	mA
Max. current (I2)	2000	mA
PWM frequency	100	Hz

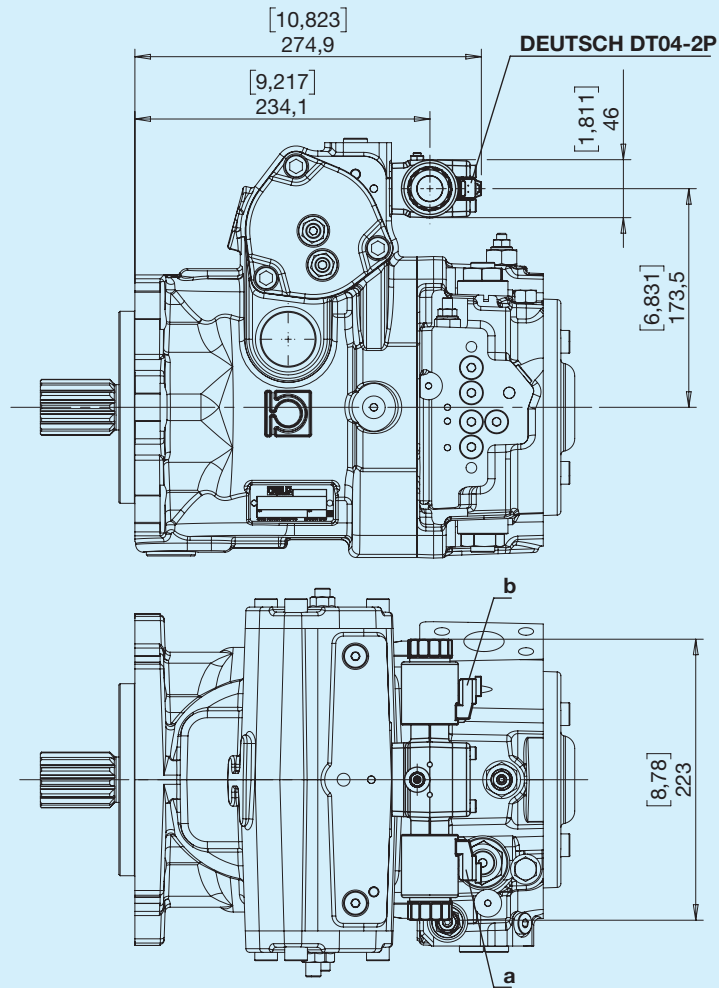
Pilot pressure



Hydraulic diagram



V Electronic proportional feedback control 24V



Available on request with DIN 43650 connectors

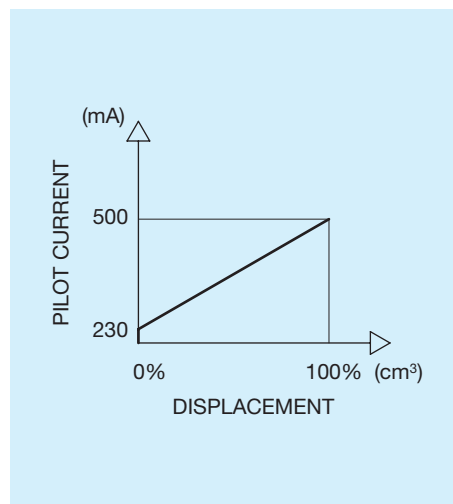
Outlet

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

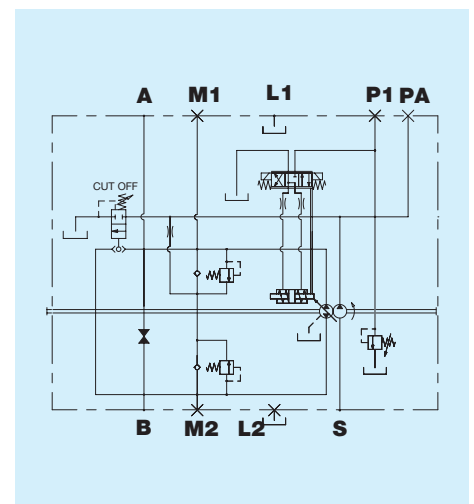
Control

Rated voltage	24	V
Min. current (I1)	350	mA
Max. current (I2)	1000	mA
PWM frequency	100	Hz

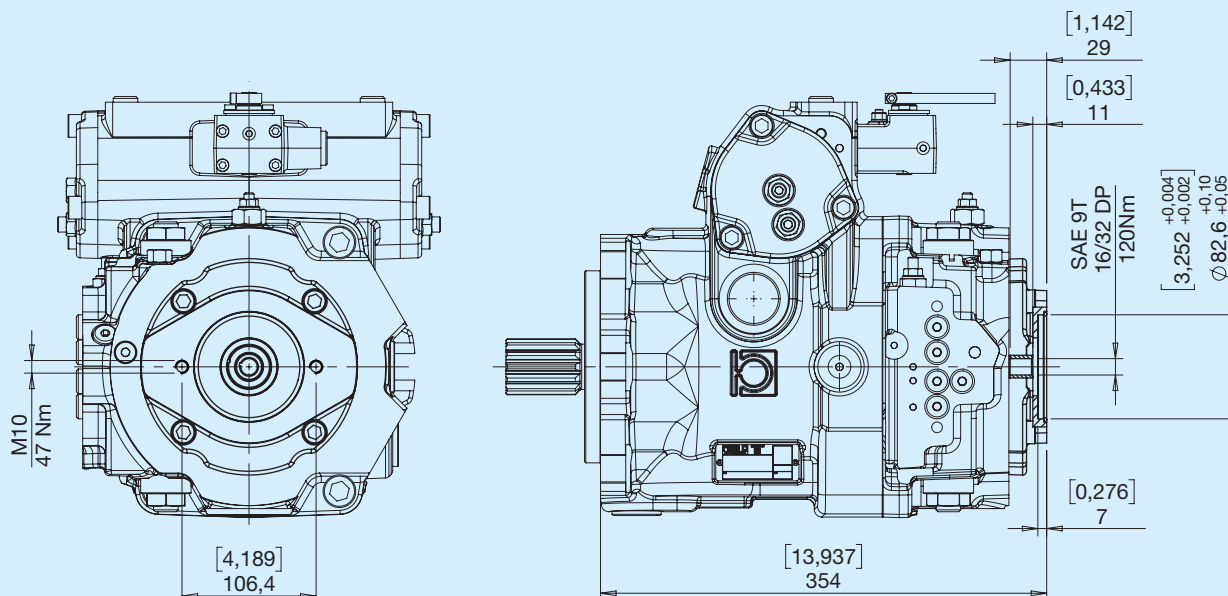
Pilot pressure



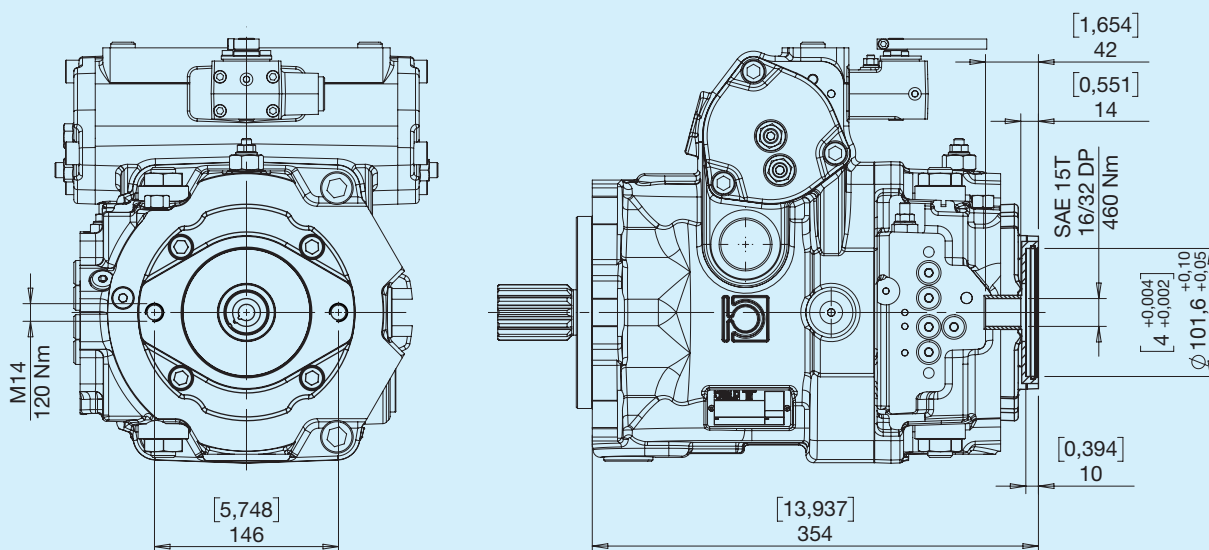
Hydraulic diagram



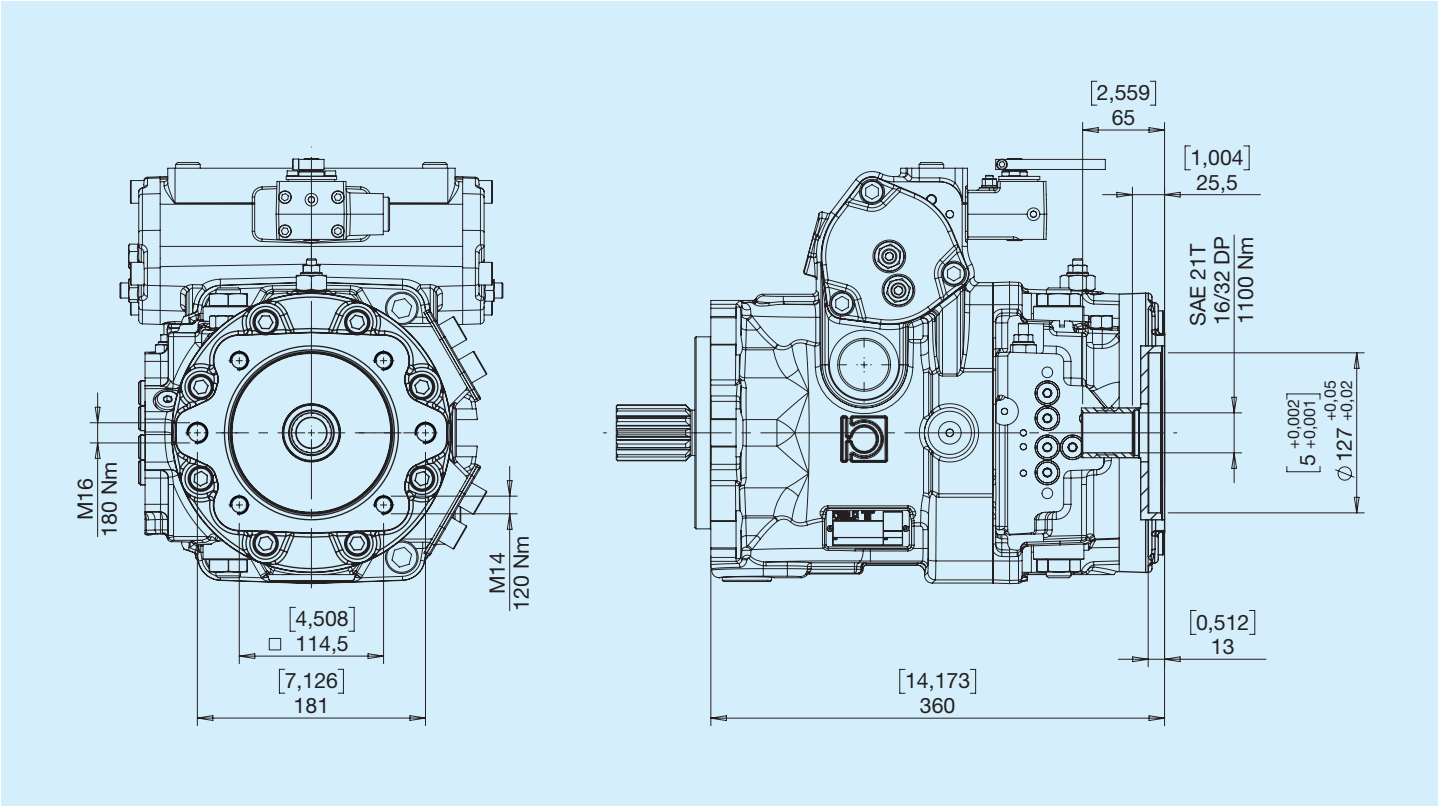
2 SAE A with boost pump



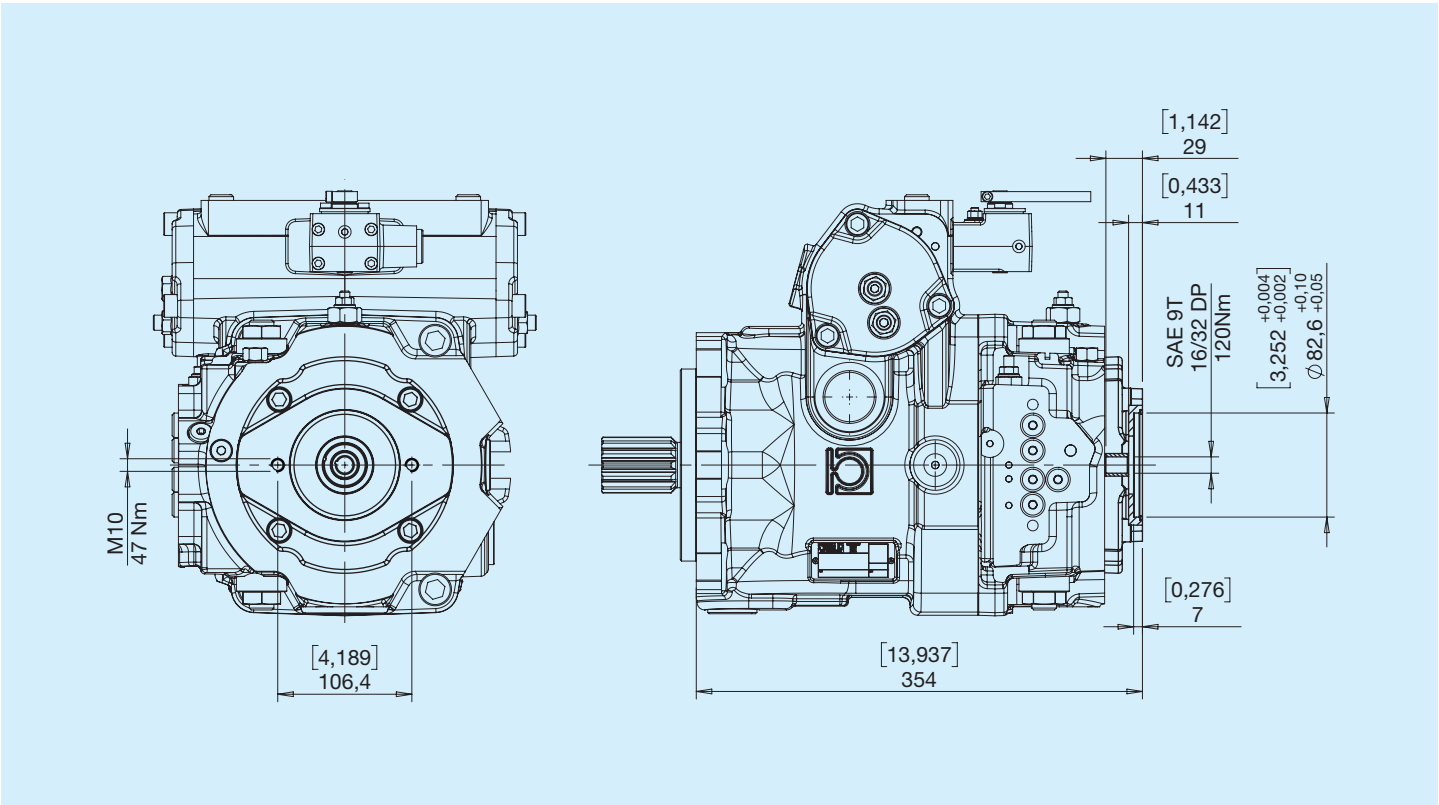
3 SAE B with boost pump



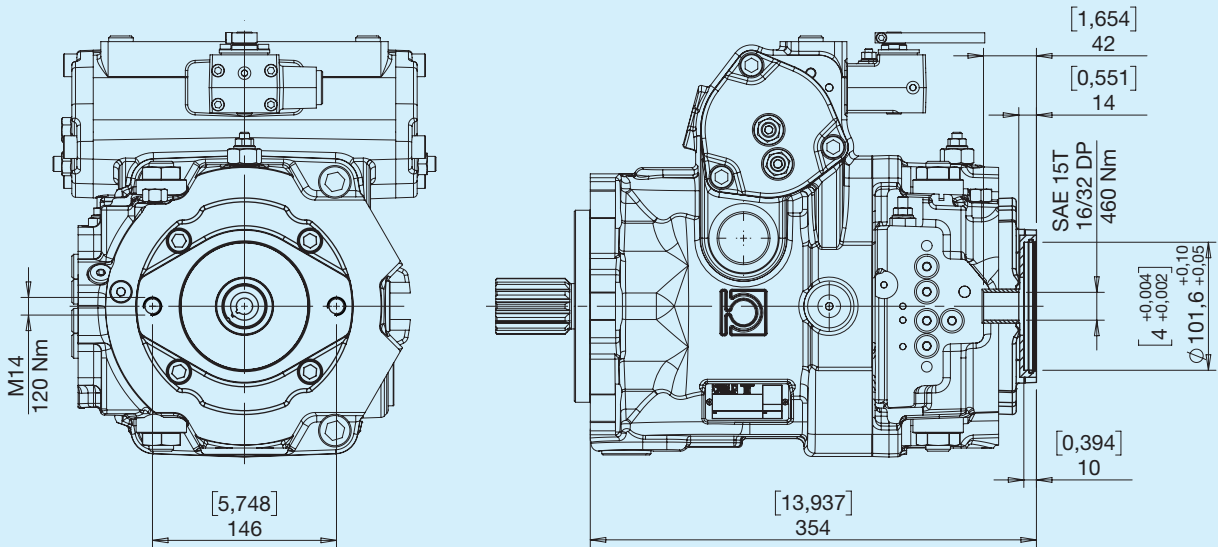
4 SAE C with boost pump



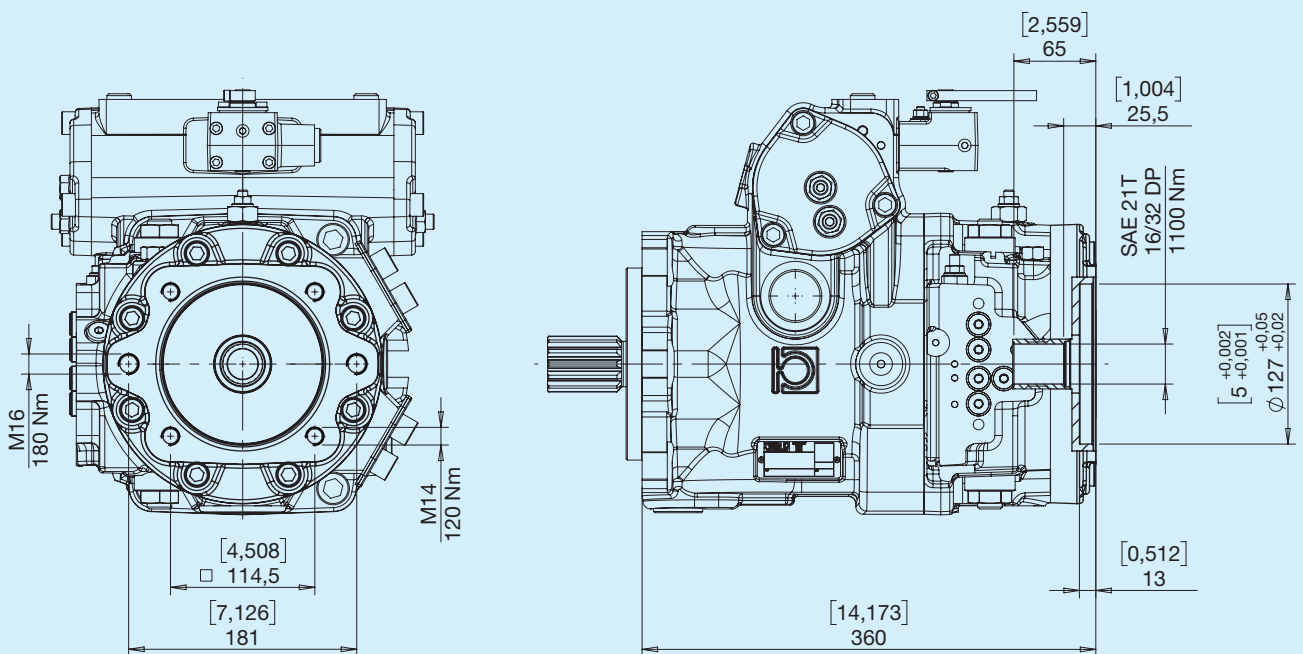
5 SAE A without boost pump



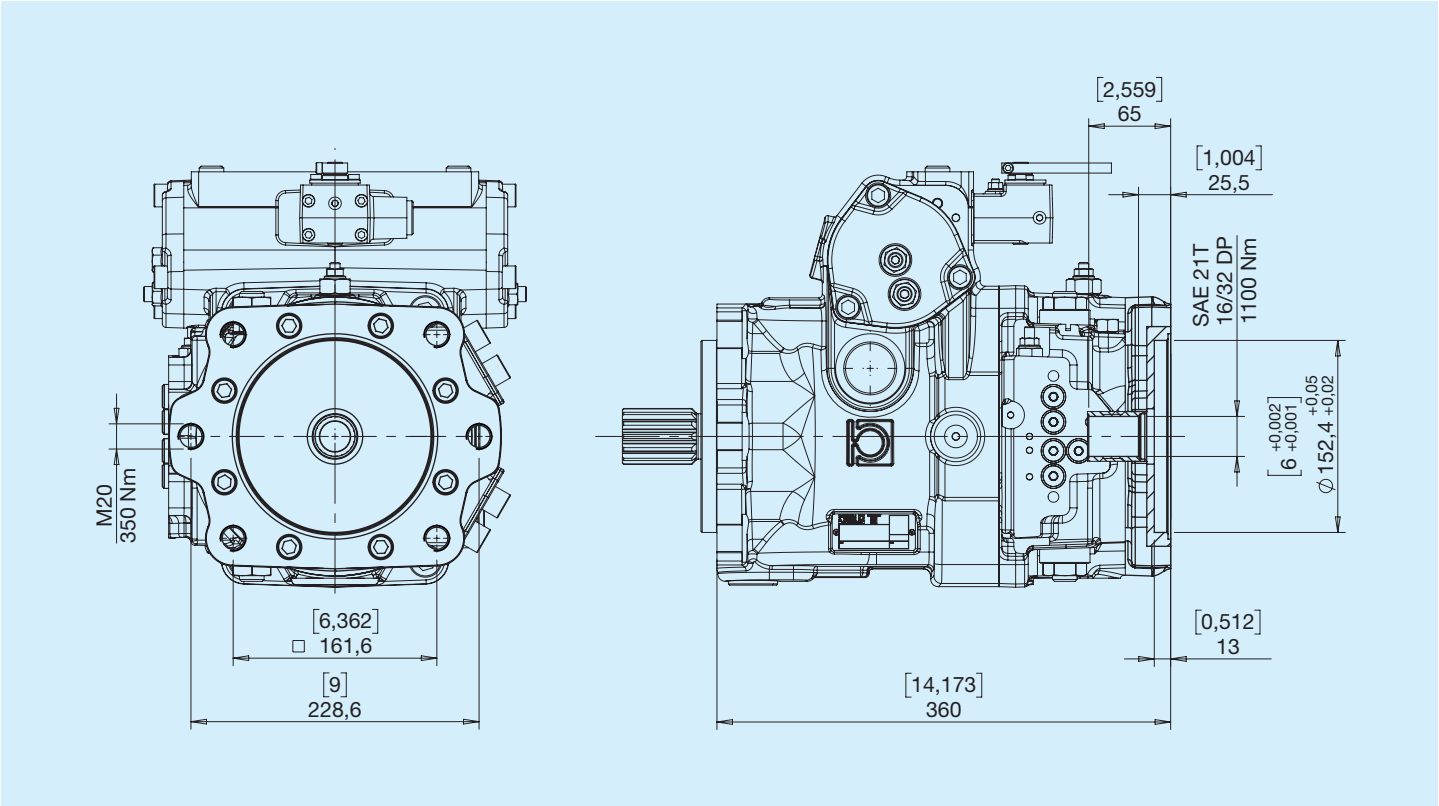
6 SAE B without boost pump



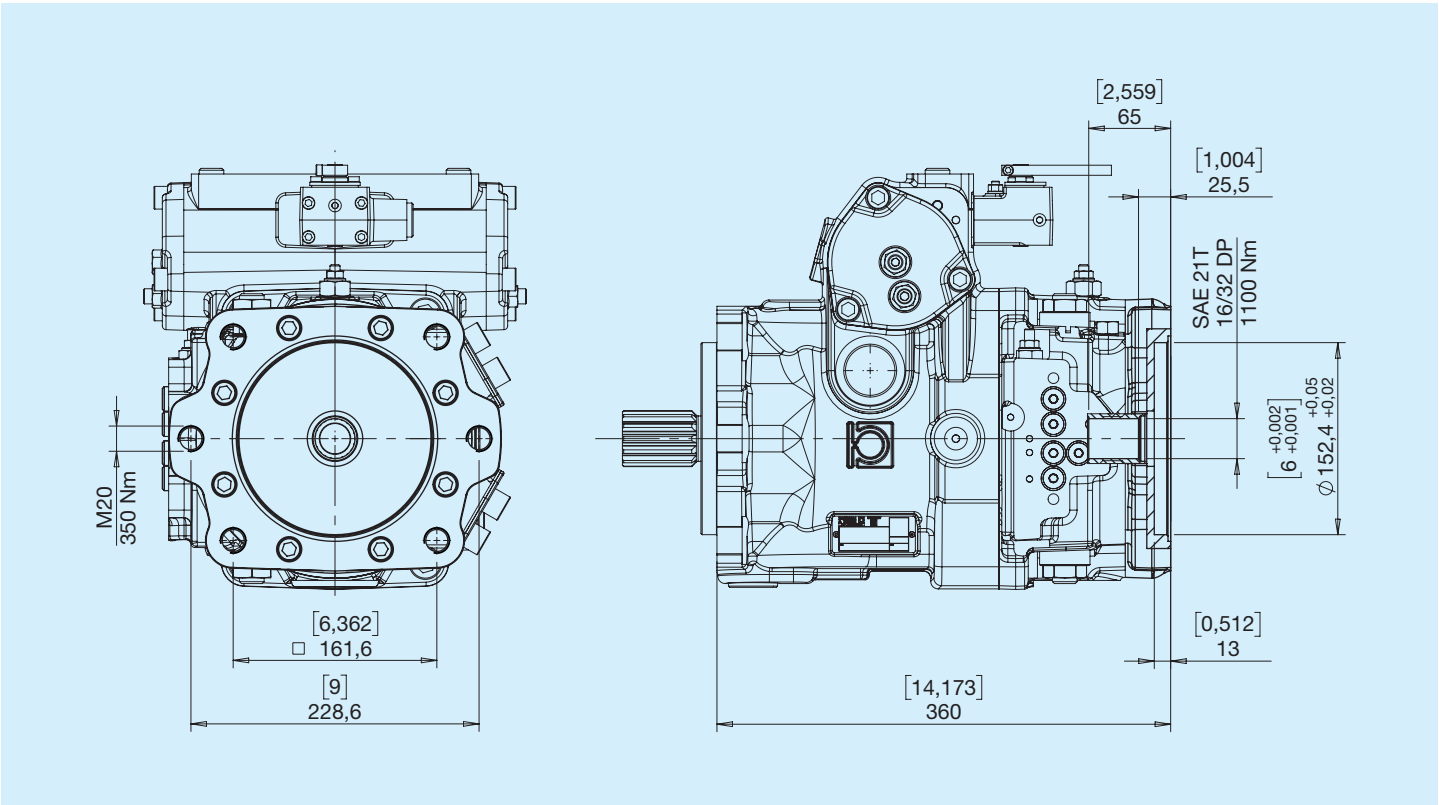
7 SAE C without boost pump



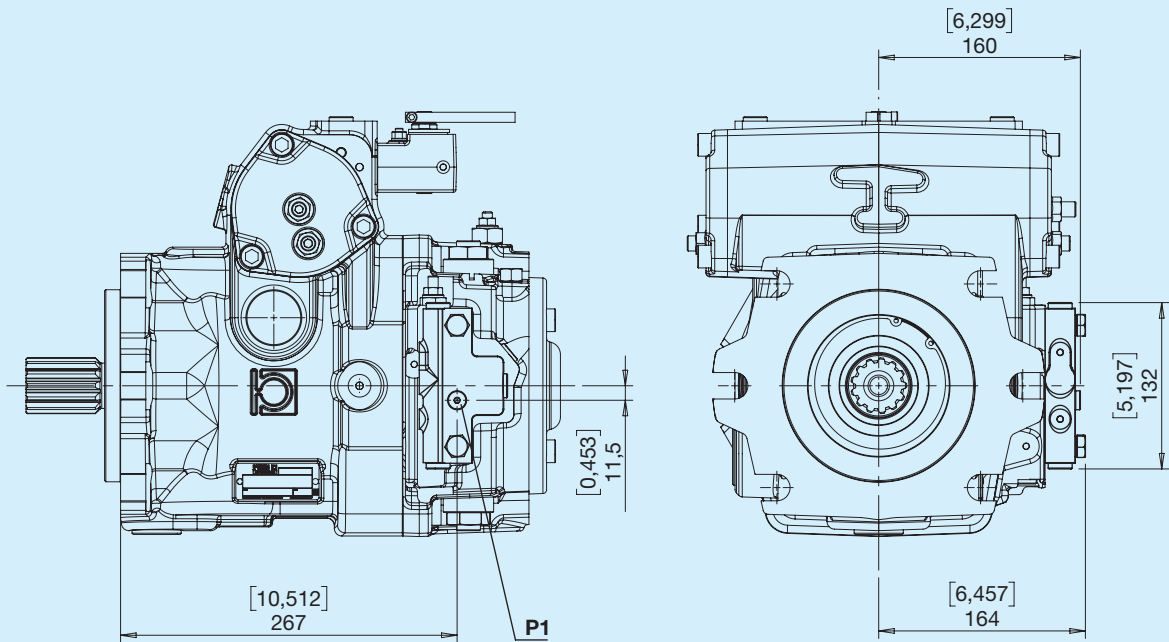
8 SAE D with boost pump



9 SAE D without boost pump

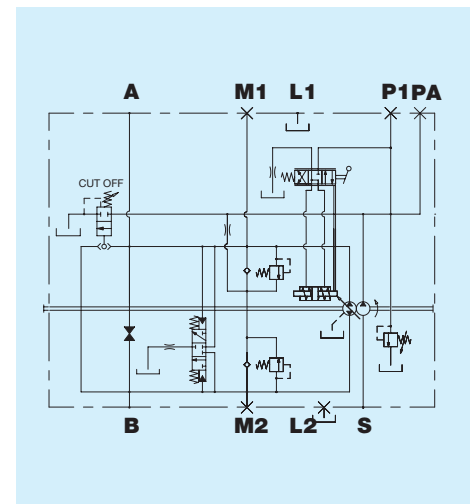


V Flushing valve (10-12 l/min)



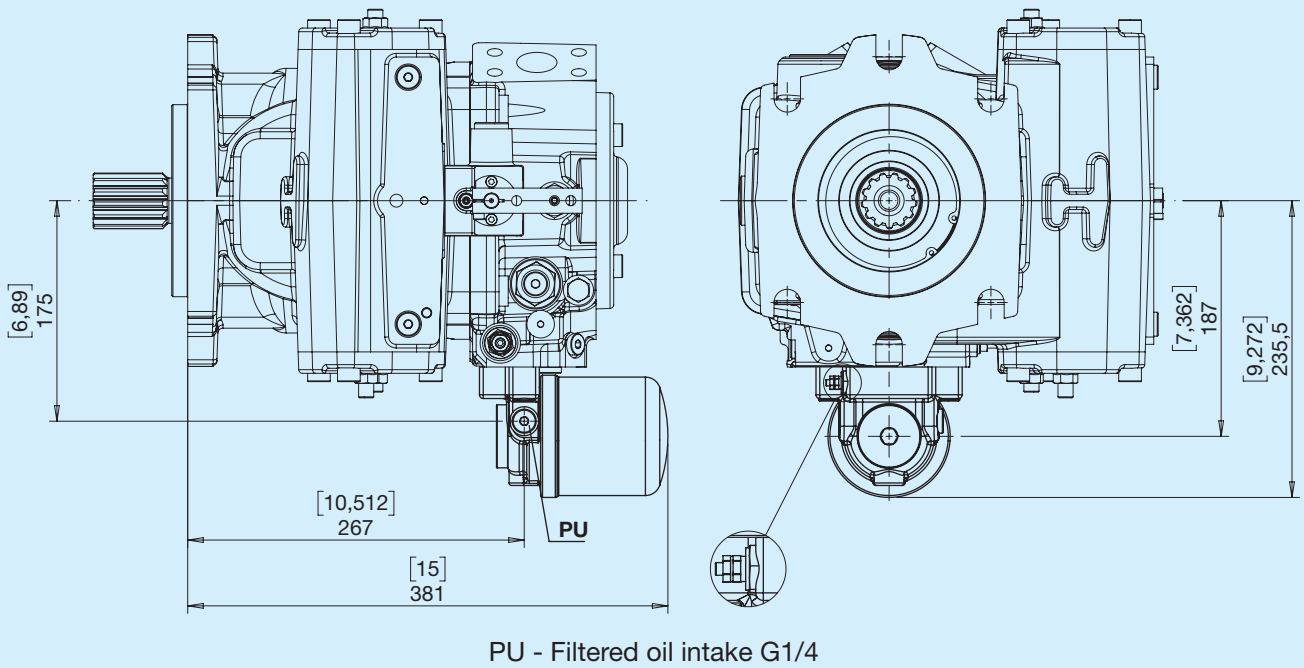
P1 - Pressure intake G1/8

Hydraulic diagram

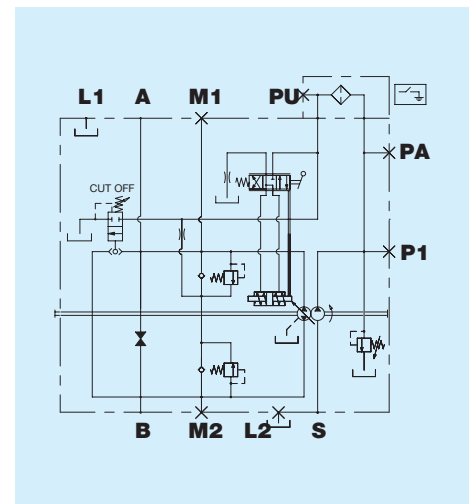


X Filter with clogging indicator

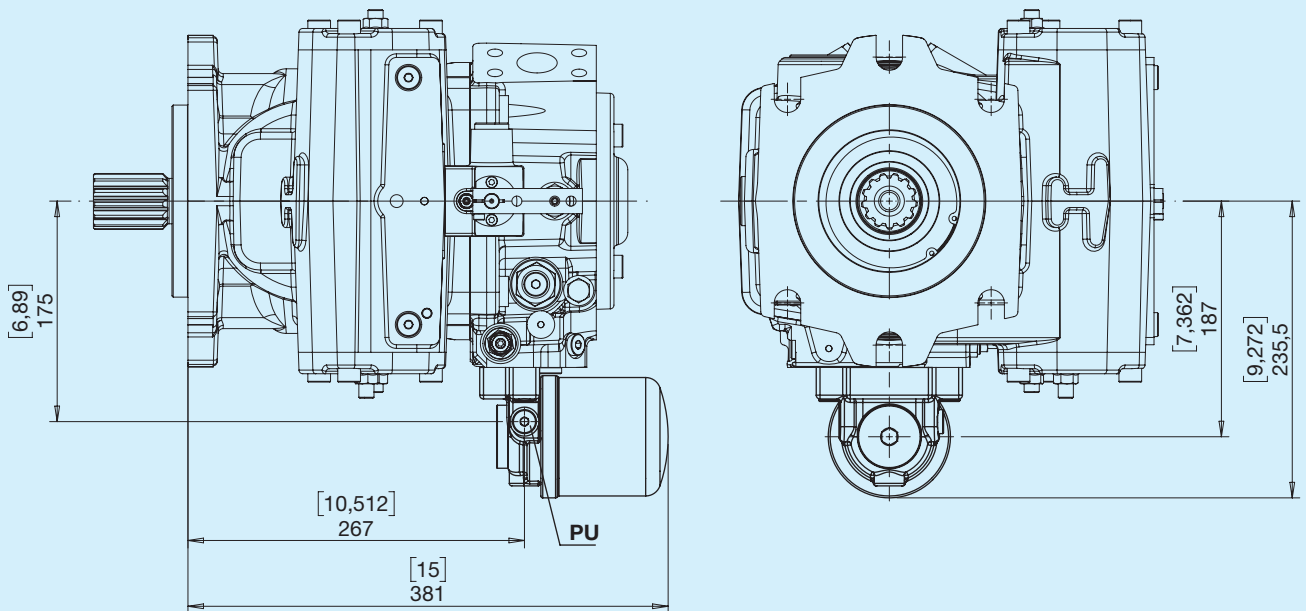
Electric differential indicator - 30 VDC - 0.2 A max



Hydraulic diagram

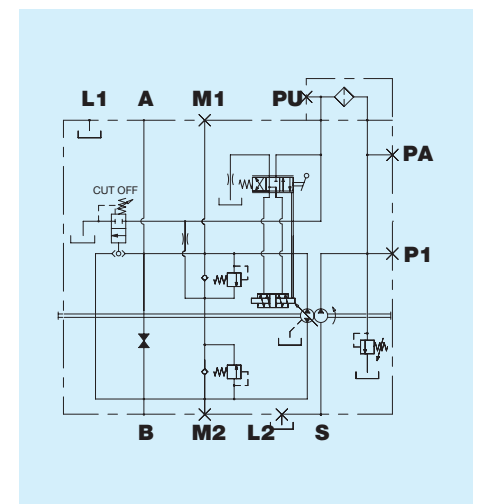


Y Filter without electric clogging indicator



PU - Filtered oil intake G1/4

Hydraulic diagram



HPP9	1	2	3	4	5	4	7	8	9	10	11	12	13	14								
	1	2	3	Displacement																		
				145					145													
	4	Direction of rotation																				
		R Right					L Left															
	5	Flanges																				
		D SAE D																				
	4	Shaft profile																				
		7 SAE 21T 16/32 DP					9 SAE 13T 8/16 DP															
	7	Type of ports																				
		G Gas				U Unf				M Metric												
	8	Controls																				
		G Feedback hydraulic				I Lever-operated hydraulic				O Electronic proportional feedback control 12V				V Electronic proportional feedback control 24V								
	9	Valve calibration																				
		I 280 bar		O 350 bar		Q 420 bar		Y 500 bar		L 300 bar		P 400 bar		R 450 bar								
	10	Versions																				
		0 No special fittings, without boost pump			3 SAE B with boost pump			6 SAE B without boost pump			9 SAE D without boost pump			1 No special fittings, with boost pump			4 SAE C with boost pump			7 SAE C without boost pump		
		2 SAE A with boost pump			5 SAE A without boost pump			8 SAE D with boost pump														
	11	Accessories																				
		0 No option				V Flushing valve				Y Filter without electric clogging indicator				X Filter with electric clogging indicator				Y Filter without electric clogging indicator				
		V Flushing valve																				
	12	13	14	Special versions																		
				...																		