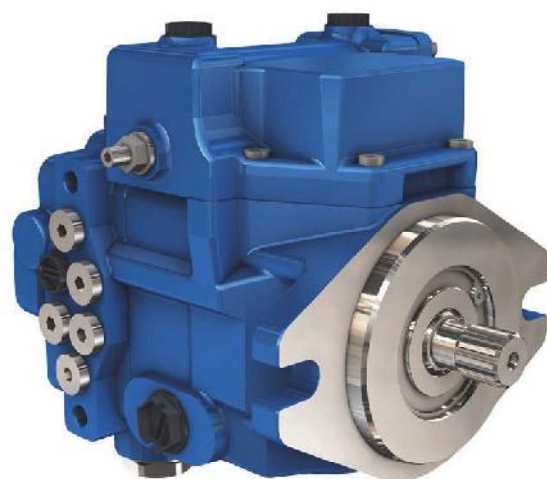
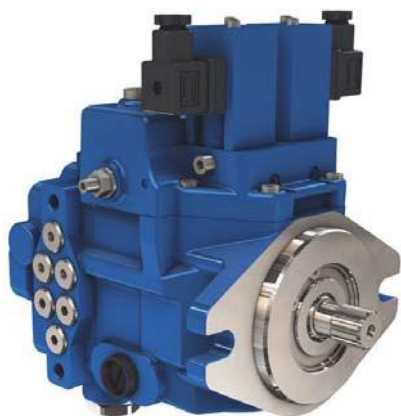
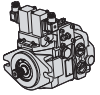


PM25

VARIABLE DISPLACEMENT PUMP
CLOSED LOOP CIRCUIT



T E C H N I C A L C A T A L O G



OVERVIEW

PM25 is a variable displacement, axial piston pump, with swashplate system, for closed loop hydrostatic transmissions.

It provides a continuously variable flow rate between zero and maximum in forward and reverse direction. Flow rate is proportional to rotation speed and swashplate angle.

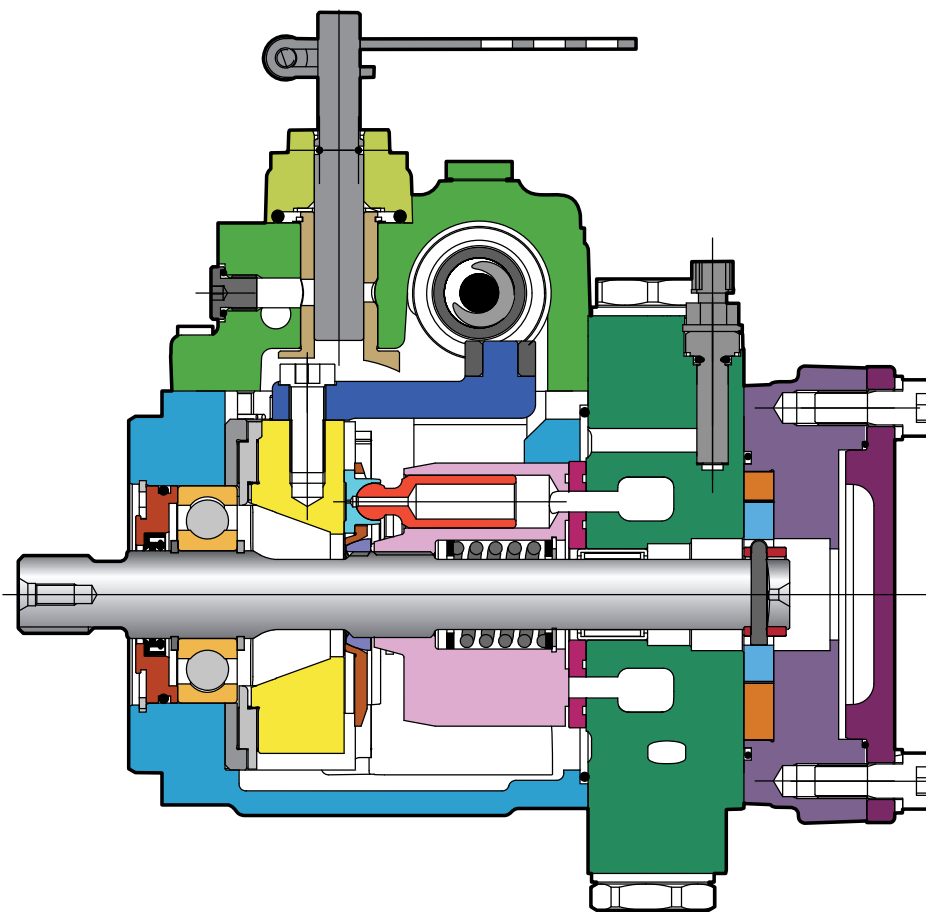
It can feature a charge pump to keep the circuit pressurised. This avoids risk of cavitations and ensures a good performance of the transmission.

It offers several types of control: servo hydraulic, hydraulic automotive, direct or servo mechanical, electrical and electro-proportional.

It is equipped with high pressure relief valves and can be delivered with auxiliary gear pumps.

It is available in single or tandem versions.

As options, PM25 can be featured with flushing valve, filter on charge pressure line and safety devices to ensure safe operation of the machine.



		PM25-20	PM25-25	PM25-28
Displacement	cm ³ /rev [in ³ /rev.]	20,5 [1.25]	25,7 [1.57]	28 [1.71]
Theoretical Flow at rated speed	L/min [GPM]	73,8 [19.50]	92,5 [24.44]	100,8 [26.63]
Rated speed	rpm		3 600	
Rated pressure	bar [PSI]		250 [3 625]	
Max. Pressure	bar [PSI]		350 [5 076]	
Mounting flange			SAE B	
Controls		Hydraulic, hydraulic automotive, direct or servo mechanical, electrical, electro-proportional		
Mass	kg [lb]	from 13 [28.7] to 18 [39.7]		
Rotation		Clockwise or Counterclockwise		



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Anti-stall valve	45





MODEL



1

Displacement cm ³ /rev [in ³ /rev]	
20,5 [1.25]	20
25,7 [1.57]	25
28 [1.71]	28

2

Mounting flange and shaft	
SAE B; z=13; 16/32 D.P.	S3
SAE B; z=15; 16/32 D.P.	S4
SAE B; Key shaft Ø 22,22 mm [dia. 0.87 in]	C3
Shaft for secondary tandem pump	T1

3

Control	
Direct mechanical control	M
Mechanical servo control with feed back	A
Hydraulic servo control	S
Hydraulic automotive control 12V	D12
Hydraulic automotive control 24V	D24
Electrical on-off servo control with return spring without electrovalve	B00
Electrical on-off servo control with return spring and electrovalve 12V	B12
Electrical on-off servo control with return spring and electrovalve 24V	B24
Electrical on-off servo control without electrovalve	C00
Electrical on-off servo control with electrovalve 12V	C12
Electrical on-off servo control with electrovalve 24V	C24
Electro-proportional servo control 12V	P12
Electro-proportional servo control 24V	P24

5

High pressure relief valve setting Max. system pressure bar [PSI]	
Without valve (only check valve)	00
150 [2 175]	15
200 [2 900]	20
250 [3 625]	25
300 [4 351]	30
350 [5 076]	35

4

Restrictor mm [in]	
Without restrictor	00
Ø 0,6 [dia. 0.023]	06
Ø 0,7 [dia. 0.027]	07
Ø 0,8 [dia. 0.031]	08
Ø 0,9 [dia. 0.035]	09
Ø 1,0 [dia. 0.039]	10
Ø 1,2 [dia. 0.047]	12

6

Rotation	
Clockwise	R
Counter clockwise	L



Restrictors can be assembled for controls type A, B, C, P, S, D.



CODE



7

Charge relief valve setting bar [PSI]	
Without charge relief valve	00
10 [145] (Only for control M)	10
22 [319] (For all controls)	22

8

Charge pump displacement cm³/rev [in³/rev]	
Without charge pump	00
9,1 [0.55] (For all auxiliary mounting pads)	08
12 [0.73] (For auxiliary mounting pad A or S)	12

9

Auxiliary mounting pad	
Without auxiliary mounting pad	S
German group 2 flange	G
SAE A flange; z = 9	A
Tandem (without charge pump)	T

10

Gear pump cm³/rev [cu.in/rev]	
Without gear pump	00
4,0 [0.24]	04
6,0 [0.37]	06
8,5 [0.52]	08
German group 2 flange (if digit 9 = G)	
11,0 [0.67]	11
14,0 [0.85]	14
16,5 [1.00]	17
19,5 [1.19]	20
SAE A flange (if digit 9 = A)	
4,0 [0.24]	04
6,0 [0.37]	06
8,5 [0.52]	08
11,0 [0.67]	11
14,0 [0.85]	14
16,5 [1.00]	17
19,5 [1.19]	20
22,5 [1.37]	22
26,0 [1.59]	26

11

Options	
Without option	00
Roller bearing	CR
Fluorinated elastomer seals	EV
Filter on pressure line without clogging indicator	F0
Filter on pressure line with clogging indicator	F2
External connections for filter	F3
UNF Threads ports	FU
Mechanical inching for control D	IC
Hydraulic inching for control D	HI
Pressure cut-off valve	LP
Neutral position switch for control A	MI
Flushing valve	VS
Finishing coat	PA
Customized identification plate	DP
Anti-stall valve	SD



In case of request for a combination of several options, please contact your Poclain Hydraulics application engineer for further information.

Model Code

Technical specifications

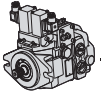
Operating Parameters

System design Parameters

Features

Controls

Options



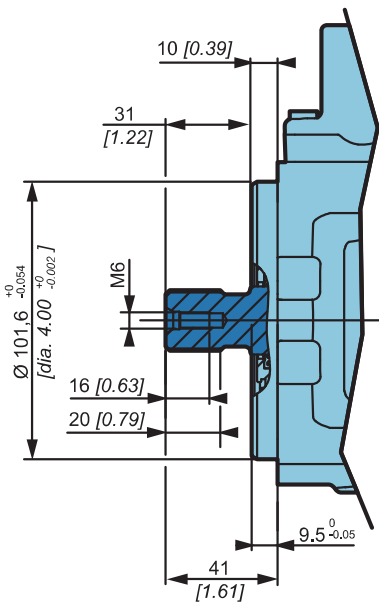
Mounting flange and shafts

SAE B - Splined shaft



S3 13 teeth

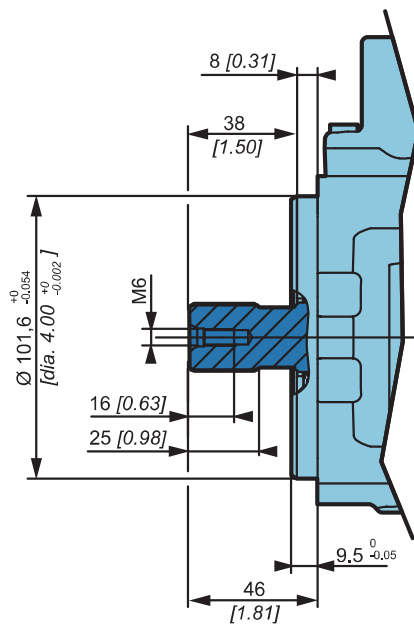
Max. torque: 220 Nm [1947 in.lbf]



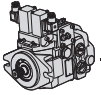
Splined ANSI B92.1a-1996
Pitch 16/32" DP
Pressure angle 30°
Tolerance class: 5

S4 15 teeth

Max. torque: 360 Nm [3186 in.lbf]



Splined ANSI B92.1a-1996
Pitch 16/32" DP
Pressure angle 30°
Tolerance class: 5



Auxiliary mounting pad

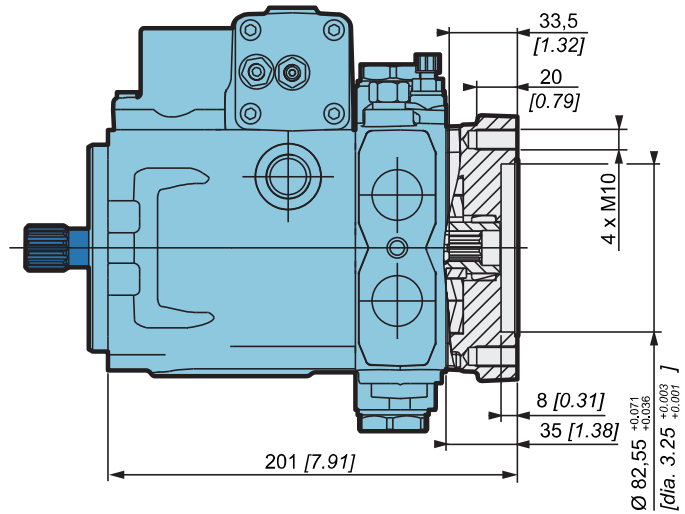
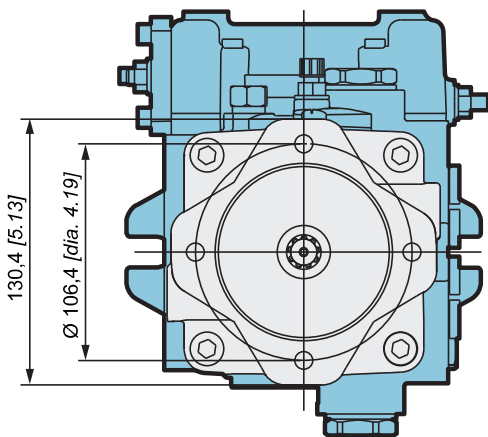
SAE A flange



00	Without charge pump
8	With charge pump: 9,1 cm ³ /rev [0.55 in ³ /rev]
12	With charge pump: 12,0 cm ³ /rev [0.73 in ³ /rev]

Max. Torque: 80 N.m [708 in.lbf]

Splined ANSI B92.1a-1996
 Pitch 16/32" DP
 Pressure angle 30°
 9 teeth
 Tolerance class: 5



Do not rotate the auxiliary mounting pad cover.



CONTROLS

Direct mechanical control



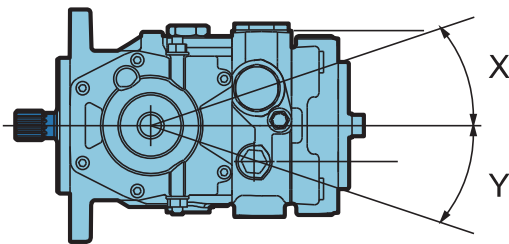
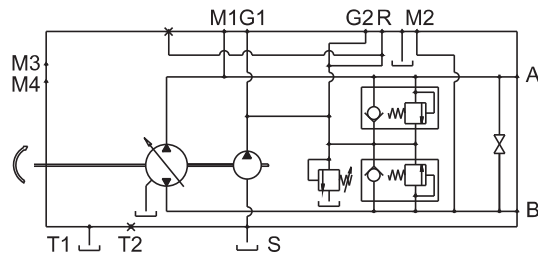
The variation in pump displacement is obtained by rotating the lever shaft in a clockwise or counter-clockwise direction.

The lever shaft is directly linked to the pump swashplate.

The angle is at 15° for 20,5 cm³/rev [1.25 in³/rev] displacement and at 18° for 25,7 cm³/rev [1.57 in³/rev].

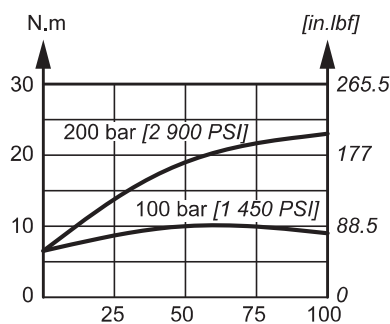
Flow rate determination

Rotation	Control	Output	Input
Clockwise (R)	X	A	B
	Y	B	A
Counter clockwise (L)	X	B	A
	Y	A	B

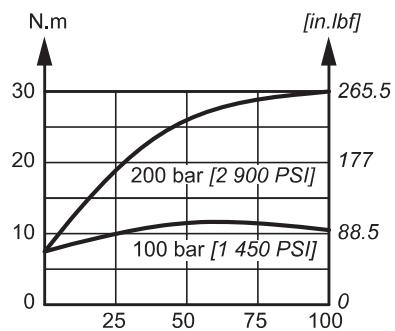


100% displacement cm ³ /rev [in ³ /rev]	X/Y angle
20,5 [1.25]	13,5°
25,7 [1.57]	17°
28 [1.71]	18,5°

Control shaft torque at 3000 rpm



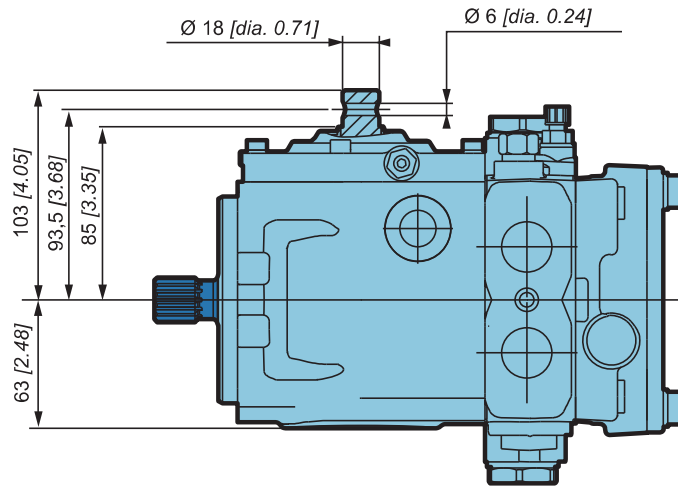
Control shaft torque at 1500 rpm



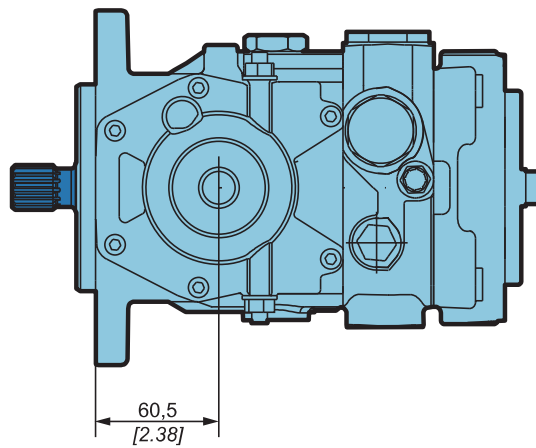
The spring return feature in the control unit is not a safety device.



Dimensions



See page 7 for other dimensions and port characteristics.



Model Code

Technical specifications

Operating Parameters

System design Parameters

Features

Controls

Options