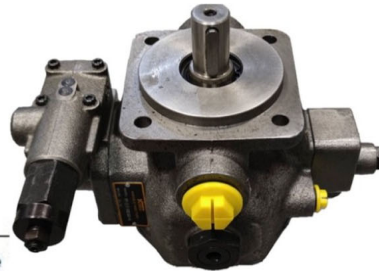


**Variable vane pumps,
pilot operated, Type PV7**

Nominal sizes 14 to 150
Series 1X
Maximum operating pressure 160 bar
Maximum flow 270 L/min



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Features

PV7

- Variable displacement
- Low operating noise
- Long bearing life due to hydro-dynamically lubricated plain bearings
- Control facility for pressure and flow
- Low hysteresis
- Very short control times for on and off stroke
- Installation and connection dimensions to • VDMA 24 560 part 1

- Suitable for use with HETG and HEES fluids
- The standard PV7 pumps can be combined into numerous variations of combination pumps
- The PV7 pumps can also be combined with internal and external gear pumps, axial piston and radial piston pumps

MPU

- Is supplied as a completely assembled unit
- Drive coupling and pump mounting bracket are not required
- Low operating noise due to the compact design

Build and nominal sizes	Pipe connections	Zero stroke pressure range
BS 10-NS 14 cm ³ = 10-14	= 01	16 = up to 160 bar
BS 10-NS 20 cm ³ = 10-20	= 01	10 = up to 100 bar
BS 16-NS 20 cm ³ = 16-20	= 01	16 = up to 160 bar
BS 16-NS 30 cm ³ = 16-30	= 01	08 = up to 80 bar
BS 25-NS 30 cm ³ = 25-30	= 01	16 = up to 160 bar
BS 25-NS 45 cm ³ = 25-45	= 01	08 = up to 80 bar
BS 40-NS 45 cm ³ = 40-45	= 37	16 = up to 160 bar
BS 40-NS 71 cm ³ = 40-71	= 37	08 = up to 80 bar
BS 63-NS 71 cm ³ = 63-71	= 07	16 = up to 160 bar
BS 63-NS 94 cm ³ = 63-94	= 07	08 = up to 80 bar
BS 100-NS 118 cm ³ = 100-118	= 07	16 = up to 160 bar
BS 100-NS 150 cm ³ = 100-150	= 07	08 = up to 80 bar

Ordering example: PV7-1X / R E - - - - -

Series
Series 10 to 19
(10 to 19: unchanged
Installation and connection dimensions) = 1X

Direction of rotation
Clockwise = R

Shaft end
Cylindrical drive shaft with through drive = E

Pipe connections
Standard version
BS 10, 16, 25:
Suction, pressure connection: pipe thread = 01
BS 40:
Suction connection: SAE flange connection,
Pressure connection: pipe thread = 37
BS 63, 100:
Suction, pressure connection: SAE flange connection = 07

Directional valve¹⁾
WG = Normally closed
WH = Normally open

Controller option
0 = Standard
3 = Lockable
5 = With K plate
6 = With Q plate
7 = Lockable with K plate
8 = Lockable with Q plate

Controller type
C = Pressure controller
D = Pressure controller for hydraulic remote pressure control
E = Pressure controller with electrical remote pressure control (on request)
N = Flow controller
W = Pressure controller with electrical 2-stage pressure adjustment

Seals
M = NBR seals
K = FKM shaft seal ring (other seals NBR)

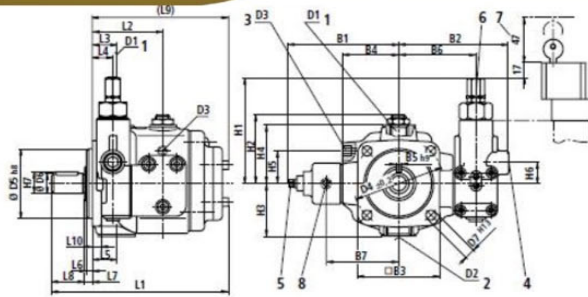
For pumps with settings to the customer's requirements:
On the order please state the required setting data in clear text (e.g. $Q_{max} = 20$ L/min; $p_{pump\ stroke} = 70$ bar). The pump will be set to the required values and the operating noise optimised respectively.

Without any clear text information the flow and the zero stroke pressure will be set to the relevant maximum values and the operating noise will be adjusted accordingly.

¹⁾ Only for CS, DS and W controllers

Preferred types (readily available)

Type	Material No.	Type	Material No.
PV7-1X/10-14RE01MCO-16	00580381	PV7-1X/10-14RE01MDO-16	00504653
PV7-1X/10-20RE01MCO-16	00534143	PV7-1X/10-20RE01MDO-16	00906584
PV7-1X/16-20RE01MCO-16	00580382	PV7-1X/16-20RE01MDO-16	00509274
PV7-1X/16-30RE01MCO-08	00533582	PV7-1X/16-30RE01MDO-08	00560658
PV7-1X/25-30RE01MCO-16	00580383	PV7-1X/25-30RE01MDO-16	00509506
PV7-1X/25-45RE01MCO-08	00534508	PV7-1X/25-45RE01MDO-08	00568833
PV7-1X/40-45RE01MCO-16	00580384	PV7-1X/40-45RE01MDO-16	00593330
PV7-1X/40-71RE01MCO-08	00535588	PV7-1X/40-71RE01MDO-08	00539886
PV7-1X/63-71RE01MCO-16	00506808	PV7-1X/63-71RE01MDO-16	00519094
PV7-1X/63-94RE01MCO-08	00506659	PV7-1X/63-94RE01MDO-08	00574560
PV7-1X/100-118RE01MCO-16	00506809	PV7-1X/100-118RE01MDO-16	00532770
PV7-1X/100-150RE01MCO-08	00561846	PV7-1X/100-150RE01MDO-08	00915470



- 1 Pressure port ¹⁾
- 2 Suction port ²⁾
- 3 Leak-oil port
- 4 For controller for hydraulic remote control
Ordering code ...D... and flow controller
Ordering code ...N..., plug G 1/4, 12 deep
- 5 Flow adjustment
Adjustment guidelines:
- Flow decreases when turned in a clockwise direction
- and increases when turned in an anti-clockwise direction
(see page 5)
- The set flow should not be less than 50 % of the maximum value
- 6 Pressure controller
Adjustment guidelines:
- The operating pressure increases when turned in a clockwise direction
- and decreases when turned in an anti-clockwise direction
Note: The zero stroke pressure changes by approx. 19 bar for 1 turn of the adjustment screw.
- 7 The space required to remove the lock cover (the pressure can only be adjusted when the lock cover is removed)
- 8 Test point G 1/4, 12 deep

BS	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	B1	B2	□B3	B4	BS ₁₀	B6	B7
10	193	78.5	26	22	26	7	8	36	149	9	130	125	96	65	6	90	88
16	217	86	37	20	37	9	10	42	165	10	134.5	131	120	69	8	93	92
25	229	86	34	20	38	9	10	42	177	10	140.7	137	120	75	8	99	98
40	254.6	86	26.5	21.5	43	9	10	58	186.6	12	157.8	161	141.2	94	10	125	115.5
63	279	99	39	34.5	51	9	10	58	211	13	163.7	165	141.2	100	10	130	121
100	334	111	45.5	28.5	60.5	9	10	82	242	16	191.7	184.5	200	121	12	149.5	150

BS	H1	H2	H3	H4	H5	H6	H7	D1 ¹⁾	D2 ²⁾	D3	D4 _{38.2}	ØD5 _M	ØD6	D7 ¹⁾
10	117	74	58	64	37	25	22.5	G 1/2	G 1	G 1/4	103	80	20 _H	9
16	118.5	81.5	68	72	40	26.5	28	G 3/4	G 1 1/4	G 3/8	125	100	25 _H	11
25	118.5	91.5	92	80	40	26.5	28	G 1	G 1 1/2	G 3/8	125	100	25 _H	11
40	118	105.5	89	94	45	26	35	G 1	SAE 1 1/2"	G 1/2	160	125	32 _H	14
63	118	111.5	105	100	47	26	35	SAE 1 1/4"	SAE 2"	G 1/2	160	125	32 _H	14
100	118	123.5	126	111	52	26	43	SAE 1 1/2"	SAE 2 1/2"	G 3/4	200	160	40 _H	18

¹⁾ Build sizes 10, 16, 25 and 40
Pipe thread „G...“ to ISO 228/1
Build sizes 63 and 100 flange connection to SAE

²⁾ Build sizes 10, 16 and 25
Pipe thread „G...“ to ISO 228/1
Build sizes 40, 63 and 100 flange connection to SAE