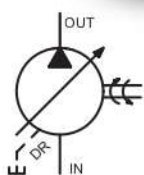




PV Axial piston pump

PV Series axial piston pump



nominal pressure:350 bar
max. pressure:420 bar

1. New type of swash plate and large servo piston with strong bias spring achieves fast response, reduce the noise due to active decompression of system at down stroke.
2. Nine pistons and new precompression technology (precompression filter volume) result in unbeaten low outlet flow pulsation.
3. Complete compensator program offers multiple controls.
4. Rigid and FEM-optimized body design for lowest noise level.
5. Thru drive for 100% nominal torque.
6. Pump combinations (multiple pumps) of same size and model and mounting interface for basically all metric or SAE mounting interfaces.
7. Wide application in automobile industrial, ships, forging machines, tire machines, injection molding machines, machine tools, special-purpose machine.

Quick Reference Data Chart

Size	Model	Pressure		Displacement		Pump Delivery (7 bar) 100 PSI				APPROX. Noise Levels			Speed		Weight KG (LB)
		nominal pressure	max. pressure	cm ³ /rev	in ³ /rev	1500 RPM		1800 RPM		dBA Full Flow and 1500 RPM			Max. RPM	Min. RPM	
						LPM	U.S. GPM	LPM	U.S. GPM	70 bar (1 KSI)	207 bar (3 KSI)	343 bar (5 KSI)			
1	PV016	350	420	16	0.98	24	6.3	28.8	7.6	56	60	68	2750	19 (42)	
	PV020			20	1.2	30	7.9	36	9.5						
	PV023			23	1.4	34.5	9.1	41.4	10.9						
	PV028	315	350	28	1.7	42	11	50.4	13.2						
2	PV032	350	420	32	1.9	48	12.7	57.6	15.2	59	62	69	2400	30 (66)	
	PV040			40	2.4	60	15.9	72	19						
	PV046			46	2.8	69	18.2	82.2	21.9						
	PV056	280	350	56	3.41	84	22.1	100.8	26.6						
	PV065	250	315	65	3.96	97.5	25.7	117	30.9						
3	PV063	350	420	63	3.8	94.5	25	113.4	30	66	70	74	2100	60 (132)	
	PV071			71	4.3	107	28.3	128.7	34				2100		
	PV080			80	4.8	120	31.7	144	38				2000		
	PV092			92	5.6	138	36.5	165.6	43.8				1900		
	PV110	250	280	110	6.7	165	43.6	198	52.3				1900		
4	PV125	350	420	125	7.6	187.5	49.5	225	59.4	70	74	76	2200	90 (198)	
	PV140			140	8.5	210	55.5	252.1	66.6						
	PV180			180	11	270	71.3	324	85.6						71
	PV210	250	280	210	12.8	315	83.1	378	99.8				73		77
5	PV270	350	420	270	16.5	405	107	486	128.4	77	79	89	1800	172 (379)	



Type code for standard program

PV	063	GA	3	R	M	1	A	0	N	
1	2	3	4	5	6	7	8	9	10	11
Series	Size and displacement	Control device	Pressure adjusting	Rotation	Mounting	Threads	Thru drive & 2nd pump	Voltage	Seals	Design No.

E	Horse power for horse power control ("P" prefix)
4	

Series

1	Axial piston pump variable displacement high pressure version	nominal pressure: 350 bar max. pressure : 420 bar	PV
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Size and displacement

2	Code	016	020	023	028	032	040	046	056	065	063	071	080	092	110	125	140	180	210	270	
	Size	Body 1				Body 2				Body 3				Body 4				Body 5			
	Displacement	cm ³ /rev	16	20	23	28	32	40	46	56	65	63	71	80	92	110	125	140	180	210	270
		In ³ /rev	0.98	1.2	1.4	1.7	1.9	2.4	2.8	3.41	3.96	3.8	7.3	4.8	5.6	6.6	7.6	8.5	11	12.6	16.5

Control device

3	Standard pressure compensator	A0	
	None pressure compensator (fixed displacement) (pressure protection required)	LN	
	Electrical 2-stage flow compensator (pressure protection required)	LS	
	Fixed displacement 2-stage flow compensator (pressure protection required)	LC	
	Remote type		
	Remote pressure compensator with NG6 interface	GM	
	Remote pressure compensator + Relief valve	GA	
	Remote pressure compensator + Proportional pressure valve	GJ	
	Electrical unloading type		
	Remote pressure compensator + Electrical unloading	GR	
	Remote pressure compensator + 2-stage pressure control	GB	
	Remote pressure compensator + Electrical unloading + 2-stage pressure control	GC	
	Load-sensing type		
	Load-sensing compensator with NG6 interface	HM	
	Load-sensing compensator + Relief valve	HA	
	Load-sensing compensator + Proportional pressure valve	HJ	
	Load-sensing + Electrical unloading type		
	Load-sensing compensator + Electrical unloading	HR	
	Load-sensing compensator + 2-stage pressure control	HB	
	Load-sensing compensator + Electrical unloading + 2-stage pressure control	HC	
	Proportional pressure, flow type		
	Load-sensing compensator + Proportional flow valve + Relief valve	HQ	
	Load-sensing compensator + Proportional pressure valve + Proportional flow valve	HK	
	Horse power type		
	Horse power compensator with NG6 interface	PM	
	Horse power compensator + Relief valve	PA	
	Horse power compensator + Proportional pressure valve	PJ	
	Horse power compensator + Electrical unloading	PR	
	Horse power compensator + Electrical unloading+2-stage pressure control	PC	
	Horse power load-sensing compensator + Relief valve	PH	
Horse power load-sensing compensator + Proportional flow valve + Relief valve	PQ		
Horse power load-sensing compensator + Proportional pressure valve	PS		



Type code for standard program

PV	063	GA	3	R	M	1	A	0	N	
1	2	3	4	5	6	7	8	9	10	11
Series	Size and displacement	Control device	Pressure adjusting	Rotation	Mounting	Threads	Thru drive & 2nd pump	Voltage	Seals	Design No.

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4	

Pressure adjustment

4	10~140 bar (145~2030 PSI)	2
	35~250bar (507~3625 PSI)	3
	40~280bar (580~4060 PSI)	4
	50~315bar (725~4567 PSI)	5
	70~350bar (1015~5075 PSI)	6

Pressure range for each displacement:

		2	3	4	5	6
4	PV016~PV023	■	■	■	■	■
	PV028	■	■	■	-	-
	PV032~PV046	■	■	■	■	■
	PV056	■	■	■	-	-
	PV065	■	■	-	-	-
	PV063~PV092	■	■	■	■	■
	PV110	■	■	-	-	-
	PV125~PV180	■	■	■	■	■
	PV210	■	■	■	-	-
	PV270	■	■	■	■	■

Pressure range for each control device:

		2	3	4	5	6	
4	A0 Standard pressure compensator	■	■	■	■	■	
	LN None pressure compensator (fixed displacement) (pressure protection required)	■	■	■	■	■	
	LS Electrical 2-stage flow compensator (pressure protection required)	■	■	■	■	■	
	LC Fixed displacement 2-stage flow compensator (pressure protection required)	■	■	■	■	■	
	Remote type						
	GM Remote pressure compensator with NG6 interface	■	■	■	■	■	
	GA Remote pressure compensator + Relief valve	■	■	■	■	■	
	GJ Remote pressure compensator + Proportional pressure valve	■	■	-	-	-	
	Electrical unloading type						
	GR Remote pressure compensator + Electrical unloading	■	■	■	■	■	
	GB Remote pressure compensator + 2-stage pressure control	■	■	■	■	■	
	GC Remote pressure compensator + Electrical unloading + 2-stage pressure control	■	■	■	■	■	
	Load-sensing Type						
	HM Load-sensing compensator with NG6 interface	■	■	■	■	■	
	HA Load-sensing compensator + Relief valve	■	■	■	■	■	
HJ Load-sensing compensator + Proportional pressure valve	■	■	-	-	-		



Type code for standard program

PV	063	GA	3	R	M	1	A	0	N	
1	2	3	4	5	6	7	8	9	10	11
Series	Size and displacement	Control device	Pressure adjusting	Rotation	Mounting	Threads	Thru drive & 2nd pump	Voltage	Seals	Design No.

E	Horse power for horse power control ("P" prefix)
4	

Pressure range for each control device:

2 3 4 5 6

4	Load-sensing + Electrical unloading type						
	HR	Load-sensing compensator + Electrical unloading	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	HB	Load-sensing compensator + 2-stage pressure control	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	HC	Load-sensing compensator + Electrical unloading + 2-stage pressure control	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Proportional pressure, flow type						
	HQ	Load-sensing compensator + Proportional flow valve + Relief valve	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	HK	Load-sensing compensator + Proportional pressure valve + Proportional flow valve	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-
	Horse power type						
	PM	Horse power compensator with NG6 interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	PA	Horse power compensator + Relief valve	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	PJ	Horse power compensator + Proportional pressure valve	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-
	PR	Horse power compensator + Relief valve + Electrical unloading	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	PC	Horse power compensator + Electrical unloading +2-stage pressure control	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	PH	Horse power load-sensing compensator + Relief valve	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	PQ	Horse power load-sensing compensator + Proportional flow valve + Relief valve	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	PS	Horse power load-sensing compensator + Proportional pressure valve	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	-	-

Pressure adjusting (Please following page A-34~36)

Displacement	Horse power
PV016~PV023,28	<input type="checkbox"/> A 3KW <input type="checkbox"/> B 4KW <input type="checkbox"/> C 5.5KW <input type="checkbox"/> D 7.5KW <input type="checkbox"/> E 11KW
PV032~PV046,56,65	<input type="checkbox"/> C 5.5KW <input type="checkbox"/> D 7.5KW <input type="checkbox"/> E 11KW <input type="checkbox"/> F 15KW <input type="checkbox"/> G 18.5KW <input type="checkbox"/> H 22KW
4 PV063~PV092,110	<input type="checkbox"/> E 11KW <input type="checkbox"/> F 15KW <input type="checkbox"/> G 18.5KW <input type="checkbox"/> H 22KW <input type="checkbox"/> I 30KW <input type="checkbox"/> J 37KW <input type="checkbox"/> K 45KW
PV125,140	<input type="checkbox"/> G 18.5KW <input type="checkbox"/> H 22KW <input type="checkbox"/> I 30KW <input type="checkbox"/> J 37KW <input type="checkbox"/> K 45KW <input type="checkbox"/> L 55KW
PV180,210	<input type="checkbox"/> H 22KW <input type="checkbox"/> I 30KW <input type="checkbox"/> J 37KW <input type="checkbox"/> K 45KW <input type="checkbox"/> L 55KW <input type="checkbox"/> M 75KW <input type="checkbox"/> N 90KW
PV270	<input type="checkbox"/> J 37KW <input type="checkbox"/> K 45KW <input type="checkbox"/> L 55KW <input type="checkbox"/> M 75KW <input type="checkbox"/> N 90KW <input type="checkbox"/> O 110KW <input type="checkbox"/> P 132KW

Rotation

5	Clockwise	R
	Counter clockwise	L

= available - = on request ✳ = standard type



Type code for standard program

PV	063	GA	3	R	M	1	A	0	N	
1	2	3	4	5	6	7	8	9	10	11
Series	Size and displacement	Control device	Pressure adjusting	Rotation	Mounting	Threads	Thru drive & 2nd pump	Voltage	Seals	Design No.

E	Horse power for horse power control ("P" prefix)
4	

Mounting

6	Metric	Parallel keyed	<input type="text" value="M"/> <input type="text" value="R"/> (A-44)	<input type="text" value="M"/> <input type="text" value="R"/> (A-52)	<input type="text" value="M"/> <input type="text" value="R"/> (A-60)	<input type="text" value="M"/> <input type="text" value="R"/> <input type="text" value="Q"/> (A-67)	<input type="text" value="M"/> <input type="text" value="R"/> (A-74)
		Splined	<input type="text" value="K"/> <input type="text" value="S"/> (A-44)	<input type="text" value="K"/> <input type="text" value="S"/> <input type="text" value="P"/> (A-52)	<input type="text" value="K"/> <input type="text" value="S"/> (A-60)	<input type="text" value="K"/> <input type="text" value="S"/> <input type="text" value="P"/> (A-67)	<input type="text" value="K"/> <input type="text" value="S"/> (A-74)
	Inch	Parallel keyed	<input type="text" value="N"/> <input type="text" value="J"/> (A-46)	<input type="text" value="N"/> <input type="text" value="J"/> (A-54)	<input type="text" value="N"/> <input type="text" value="J"/> (A-62)	<input type="text" value="N"/> <input type="text" value="J"/> <input type="text" value="F"/> (A-69)	<input type="text" value="N"/> <input type="text" value="J"/> (A-76)
		Splined	<input type="text" value="D"/> <input type="text" value="U"/> (A-46)	<input type="text" value="D"/> <input type="text" value="U"/> <input type="text" value="G"/> (A-54)	<input type="text" value="D"/> <input type="text" value="U"/> (A-62)	<input type="text" value="D"/> <input type="text" value="U"/> <input type="text" value="G"/> (A-69)	<input type="text" value="D"/> <input type="text" value="U"/> (A-76)

(Dimensions refer to dimension diagram)

Threads

7	BSPP (G)	<input type="text" value="1"/>
	PT (RC)	<input type="text" value="2"/>
	UNF (SAE)	<input type="text" value="3"/>
	ISO 6149 (M)	<input type="text" value="7"/>

Thru drive & 2nd pump

	Displacement	Code
8	PV016~PV270	<input type="text" value="A"/> Single pump <input type="text" value="B"/> Prepared for thru drive
	PV016~PV023,28	<input type="text" value="C"/> <input type="text" value="D"/> <input type="text" value="E"/> <input type="text" value="I"/> <input type="text" value="J"/> <input type="text" value="K"/>
	PV032~PV046,56,65	<input type="text" value="D"/> <input type="text" value="E"/> <input type="text" value="F"/> <input type="text" value="I"/> <input type="text" value="J"/> <input type="text" value="K"/> <input type="text" value="L"/>
	PV063~PV092,110	<input type="text" value="D"/> <input type="text" value="E"/> <input type="text" value="F"/> <input type="text" value="G"/> <input type="text" value="I"/> <input type="text" value="J"/> <input type="text" value="K"/> <input type="text" value="L"/> <input type="text" value="M"/>
	PV125~PV180,210	<input type="text" value="D"/> <input type="text" value="E"/> <input type="text" value="F"/> <input type="text" value="G"/> <input type="text" value="J"/> <input type="text" value="K"/> <input type="text" value="L"/> <input type="text" value="M"/>
	PV270	<input type="text" value="D"/> <input type="text" value="E"/> <input type="text" value="F"/> <input type="text" value="G"/> <input type="text" value="H"/> <input type="text" value="J"/> <input type="text" value="K"/> <input type="text" value="L"/> <input type="text" value="M"/> <input type="text" value="N"/>

Size

8	SAE AA, Ø50.8 mm	<input type="text" value="C"/>
	SAE A, Ø82.55 mm	<input type="text" value="D"/>
	SAE B, Ø101.6 mm	<input type="text" value="E"/>
	SAE C, Ø127 mm	<input type="text" value="F"/>
	SAE D, Ø152.4 mm	<input type="text" value="G"/>
	SAE E, Ø165.1 mm	<input type="text" value="H"/>
	Metric, Ø63 mm	<input type="text" value="I"/>
	Metric, Ø80 mm	<input type="text" value="J"/>
	Metric, Ø100 mm	<input type="text" value="K"/>
	Metric, Ø125 mm	<input type="text" value="L"/>
	Metric, Ø160 mm	<input type="text" value="M"/>
Metric, Ø200 mm	<input type="text" value="N"/>	

Other pumps are acceptable to order



Type code for standard program

PV	063	GA	3	R	M	1	A	0	N	
1	2	3	4	5	6	7	8	9	10	11
Series	Size and displacement	Control device	Pressure adjusting	Rotation	Mounting	Threads	Thru drive & 2nd pump	Voltage	Seals	Design No.

E
4 Horse power for horse power control ("P" prefix)

Voltage

9	None	0
	AC100V (50/60HZ)	A
	AC110V (60HZ)	B
	AC200V (50/60HZ)	C
	AC220V (60HZ)	D
	DC 12V	E
	DC 24V	F

Seals

10	NBR	N	※
	VITON, FKM	V	
	Ethylen-propylene	E	

■ = available - = on request ※ = standard type