

PVplus High Pressure Industrial Piston Pumps



PVplus piston pumps are ideal for heavy duty industrial applications with operating pressure up to 5000 PSI (350 BAR). These pumps respond quickly to system demands and, with the use of “ripple chamber” technology, are some of the quietest piston pumps available.

- High strength cast-iron housing
- Modular controls
- Large control piston for fast response
- Thru-shaft option with 100% thru torque capability
- Multiple pressure control
- Pre-Compression chamber

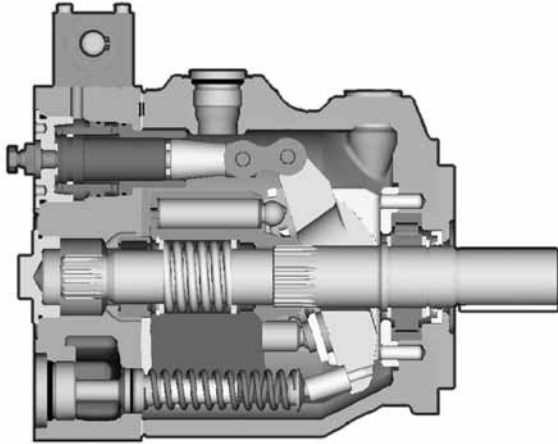
Pump Performance Data

Model Series	Displacement in ³ /rev (cc/rev)	Max. Outlet Pressure PSI (BAR)	Max Rated Drive Speed RPM	Pump Flow 1800 RPM & 100 PSI GPM (LPM)	Input Horsepower 1800 RPM & 5000 PSI HP (KW)
PV016	0.98 (16)	5000 (350)	3000 RPM	8 (30.3)	25 (18.6)
PV020	1.22 (20)	5000 (350)	3000 RPM	9.5 (36.0)	31 (23.1)
PV023	1.40 (23)	5000 (350)	3000 RPM	11 (41.6)	34 (25.4)
PV028	1.71 (28)	5000 (350)	3000 RPM	13 (49.2)	40 (29.8)
PV032	1.95 (32)	5000 (350)	2800 RPM	15 (56.8)	47 (35.0)
PV040	2.44 (40)	5000 (350)	2800 RPM	19 (71.9)	62 (46.2)
PV046	2.81 (46)	5000 (350)	2800 RPM	22 (83.3)	67 (50.0)
PV063	3.84 (63)	5000 (350)	2800 RPM	30 (113.6)	94 (70.1)
PV080	4.88 (80)	5000 (350)	2500 RPM	38 (143.9)	120 (89.5)
PV092	5.61 (92)	5000 (350)	2300 RPM	44 (166.6)	184 (137.2)
PV140	8.54 (140)	5000 (350)	2400 RPM	67 (253.6)	200 (149.1)
PV180	10.98 (180)	5000 (350)	2200 RPM	86 (235.5)	282 (210.3)
PV270	16.48 (270)	5000 (350)	1800 RPM	128 (484.5)	400 (298.3)
PV360	21.97 (360)	5000 (350)	1750 RPM	160 (605.7)	500 (372.8)

Markets

Markets	Applications
Industrial	Presses, Shears, Injection Molding, Aircraft Test Stands, Test Equipment, Simulators
Oil & Gas	Nitrogen Pumpers, Cementers, Coil Tubing, Oil Lift Pumps
Construction	Wheel Loader
Mining	Drill Rigs, Tunneling Equipment
Material Handling	Conveyor Drives, Apron Feeders, Rail Car Tippers, Mixers
Recycling	Shredders, Balers, Compactors

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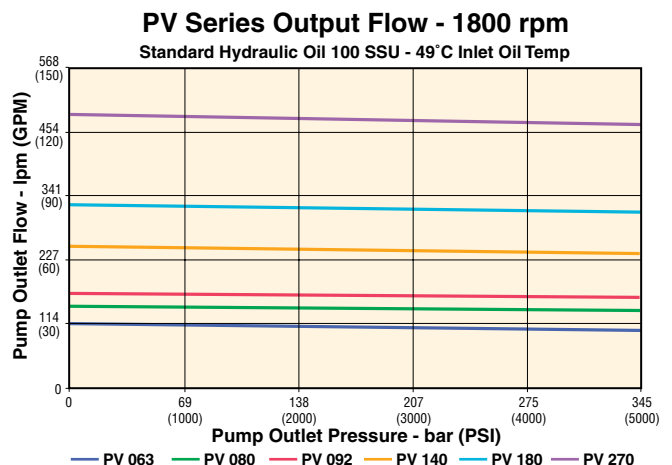
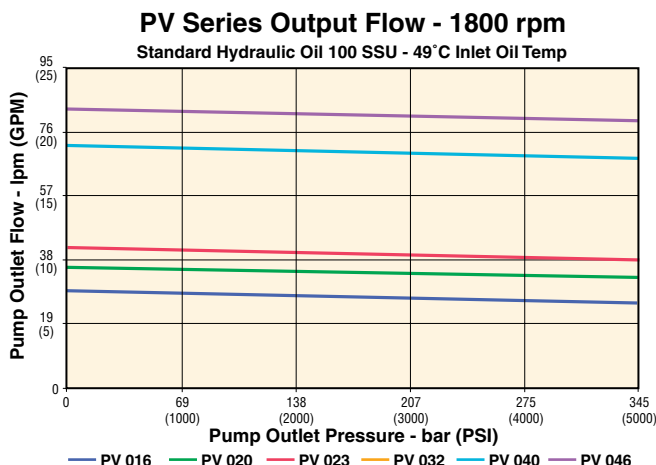
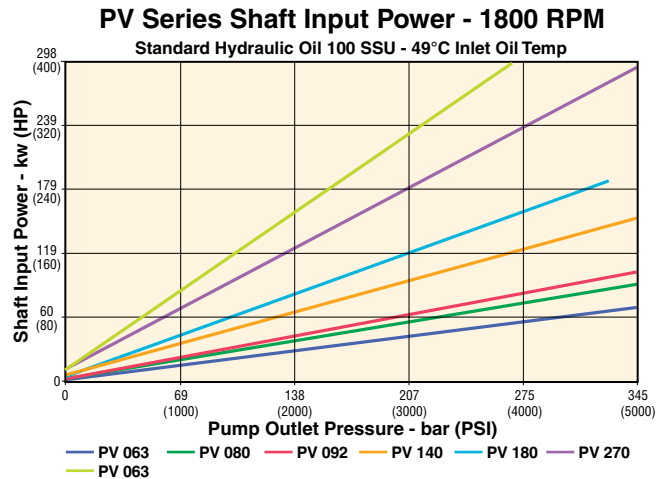
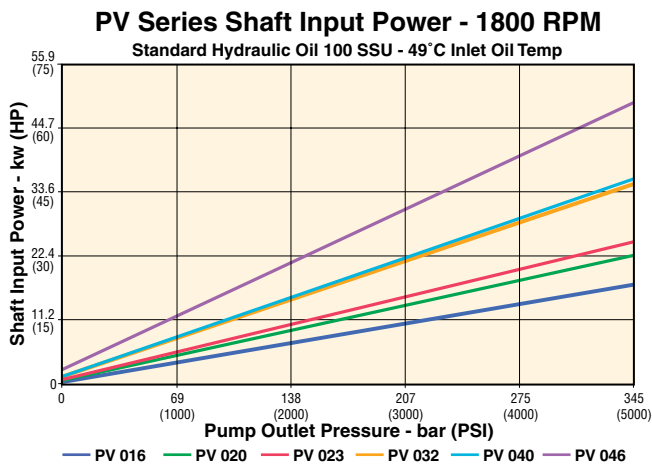
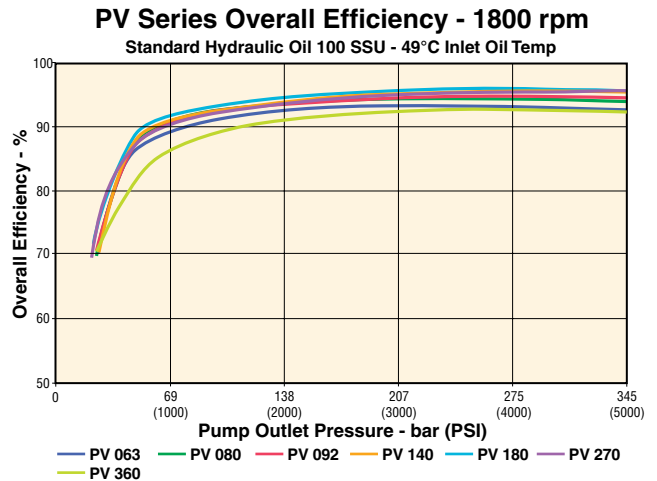
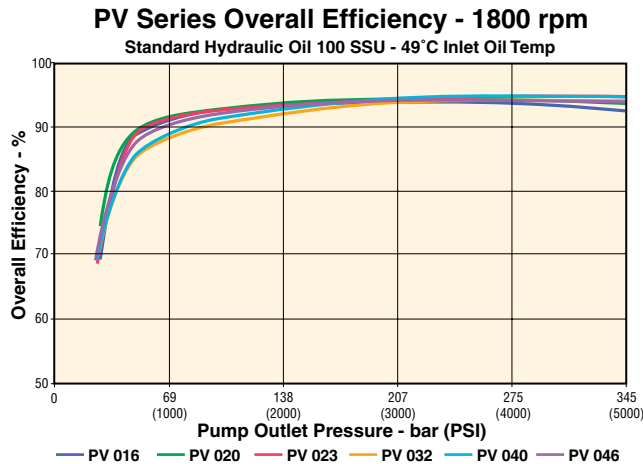


Benefits/Features

- High strength cast-iron housing for high reliability and quiet operation
- Modular controls for field convertibility
- Large control piston for fast response
- Thru-shaft option with 100% thru torque capability
- Multiple pressure control with valves mounted directly on pump
- Pre-compression chamber to minimize over-all system noise
- High self-priming speed and cold start capability

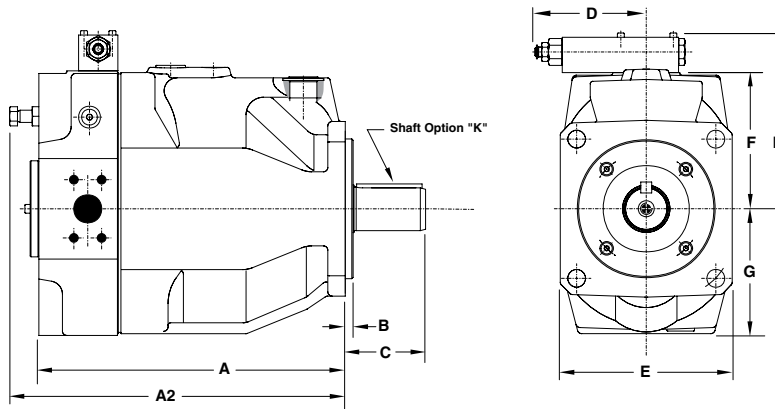
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Performance Characteristics



For 360 Consult Factory

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Dimensions, inch (mm)

Model	A	A2 Max.	B	C	D Max.	E	F	G	H
PV016/020/023	77.8 (195)	83.5 (212)	0.37 (9)	2.0 (52)	0.49 (12.44)	5.2 (132)	3.7 (94)	3.1 (80)	5.5 (140)
PV032/040/046	89 (227)	96 (245)	0.50 (9)	2.7 (68)	2.19 (55.62)	6.1 (156)	4.2 (107)	3.6 (92)	6.0 (153)
PV063/080/092	112.9 (287)	120.5 (306)	0.50 (9)	3.6 (92)	4.25 (107.95)	8.0 (204)	5.3 (135)	4.6 (118)	7.1 (181)
PV140/180	138 (350)	152 (385)	0.50 (9)	3.6 (92)	4.25 (107.95)	7.8 (200)	6.2 (158)	5.7 (145)	8.0 (204)
PV270	186 (472.5)	201 (510)	0.50 (9)	4.5 (115)	—	10.4 (265)	7.2 (184)	6.9 (176)	9.1 (230)
PV360	187.7 (477)	201 (510)	0.50 (9)	4.5 (115)	—	98.4 (250)	7.2 (184)	6.9 (176)	9.1 (230)

Filtration and auxiliary function pump suggestions



Pump

Model Code	Flow @1800 RPM GPM (LPM)	Pressure PSI (BAR)
T67B-B02-3R00-A100	3 (11.4)	4000 (275.8)
T67B-B04-3R00-A100	6 (22.7)	4000 (275.8)
T67B-B07-3R00-A100	10 (37.9)	4000 (275.8)

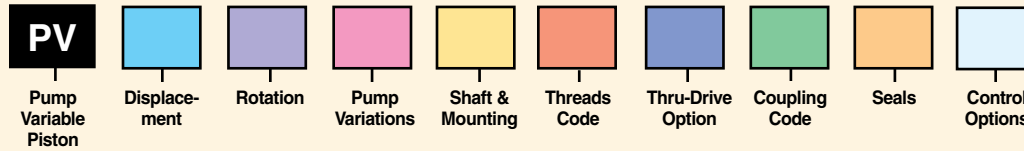
Thru-Drive Kits

Pump Series	Kit #	Mount
PV016/020/023	MK-PVBG1BSN45 plus MK-PVBG1K1342	SAE B
PV032/040/046	MK-PVBG2BSN40 plus MK-PVBG2K1340	SAE B
PV063/080/092	MK-PVBG3BSN41 plus MK-PVBG3K1341	SAE B
PV140/180	MK-PVBG4BSN40 plus MK-PVBG4K1340	SAE B
PV270	MK-PVBG5BSN40 plus MK-PVBG5K1340	SAE B
PV270	MK-PVBG5BSN40 plus MK-PVBG5K1340	SAE B

* Verify correct design series

Piston Pumps

PVplus 016-046cc Model Ordering Code



Code	Displacement in ³ /rev (cc/rev)
016	.98 (16)
020	1.2 (20)
023	1.4 (23)
028	1.7 (28)
032	1.9 (32)
040	2.4 (40)
046	2.8 (46)

Code	Rotation*
R	CW
L	CCW

*As viewed from shaft end.

Code	Pump Variations
1	Standard
9*	Customized Displacement and/or Pressure Setting

*Specify in cc/rev and/or bar.

Code	Shaft & Mounting			
	PV016/020/023		PV032/040/046	
	Shaft	Pilot	Shaft	Pilot
D	1" Keyed (SAE BB)	4 Bolt SAE B	1 1/4" Keyed (SAE C)	4 Bolt SAE C
E	15T Spline (SAE BB)	4 Bolt SAE B	14T Spline (SAE C)	4 Bolt SAE C
K	25mm Keyed	4 Bolt 100mm	32mm Keyed	4 Bolt 125mm
L	W25 x 1.5 x 15 x 8f Spline DIN 5480	4-Bolt 100mm	W32 x 1.5 x 20 x 8f Spline DIN 5480	4 Bolt 125mm

Code	Threads Code	
	Port*	Threads**
1	BSPP	Metric
3	UNF	UNC
7	ISO 6149	UNC
8	ISO 6149	Metric

*Drain, gage, and flushing ports.
** Mounting and connecting threads

Code	Thru-Drive Option (1st Digit)	Code	Second Pump (2nd Digit)
T	Single Pump Prepared for Thru-Drive	1	Single Pump, No Coupling
	With Adapter for Second Pump	H	w/Coupling, 25 x 1.5 x 15, DIN 5480
Y ¹	SAE AA, Ø2.00in (Ø50.8mm)	J	w/Coupling, 32 x 1.5 x 20, DIN 5480
A	SAE A, Ø3.25in (Ø82.55mm)	Y	w/SAE Coupling, 9T-16/32 DP
B	SAE B, Ø4.00in (Ø101.6mm)	A	w/SAE Coupling, 11T-16/32 DP
C ²	SAE C, Ø5.00in (Ø127mm)	B	w/SAE Coupling, 13T-16/32 DP
G	Metric, Ø2.48in (Ø63mm)	C*	w/SAE Coupling, 15T-16/32 DP
H	Metric, Ø3.15in (Ø80mm)	D	w/SAE Coupling, 14T-12/24 DP
J	Metric, Ø3.94in (Ø100mm)	E	w/SAE Coupling, 17T-12/24 DP
K ²	Metric, Ø4.92in (Ø125mm)		

¹ Only for PV016 thru PV023
² Only for PV032 and larger
* Only for PV032 and larger

Code	Coupling Code
1	Single pump, no coupling
H	with coupling 25 x 1.5 x 15, DIN 5480
J	with coupling 32 x 1.5 x 20, DIN 5480
Y	with coupling SAE A 9T-16/32 DP
A	with coupling SAE - 11T-16/32 DP
B	with coupling SAE B 13T-16/32 DP
C	with coupling SAE B-B 15T-16/32 DP
D	with coupling SAE C 14T-12/24 DP

Code	Seals
N	Nitrile
V	Fluorocarbon
W	Nitrile w/PTFE Shaft Seal
P	FPM w/PTFE Shaft Seal

Code	Control Options
Standard Pressure Compensator	
0 0 1	No Compensator
1 0 0	With Cover Plate, No Control Function
M M	Standard pressure control, integrated pilot valve
M R	Remote pressure control, integrated pilot valve
M F	Load Sensing (flow) control, integrated pilot valve
M T	Two spool LS control
Remote/Load Sense Compensator	
C	Standard version ¹
1	NG6 interface top side for pilot valves
W	With unloading function, 24VDC solenoid ¹
K	Prop.-pilot valve type PVACRE..35 mounted
Z	Without integrated pilot valve, NG6 interface, for mounting of accessory code PVAC
P	MT1 with mounted pilot valve PVAC1P ²
Horsepower Compensator Control	
Nominal Horsepower at 1500 RPM	
B	3 HP (19.5 Nm Torque)
C	4 HP (26 Nm Torque)
D	5.5 HP (36 Nm Torque)
E	7.5 HP (49 Nm Torque)
G	11 HP (71 Nm Torque)
H	15 HP (97 Nm Torque)
K	18.5 HP (120 Nm Torque)
M	22 HP (142 Nm Torque)
S	30 HP (195 Nm Torque)
Function	
L	Horsepower Compensator
C	Horsepower Compensator & Load Sensing
Variation	
A	NG6 Interface Top Side
B	No Pressure Compensation
C	Adjustable Pressure Compensation
D	Proportion Pilot Valve PVACPP* Mounted
Z	Accessories Mounted
Electro Hydraulic Control Options	
F P V	Proportional displacement control, no pressure compensation
U P	Proportional displacement control, with pressure compensation

1 Not for MT
2 Only for MT

NOTES:
Compensator differential Δp is to be adjusted:
Remote pressure comp., horsepower comp. 15 ± 1 bar
Load-sensing comp. (not horsepower comp.) 10 ± 1 bar
(Codes MF* and LS part of MT*)
Consult catalog on CD for electrohydraulic control options.



Piston Pumps

PVplus 063-360cc Model Ordering Code

PV									
Pump Variable Piston	Displacement	Rotation	Variations	Shaft & Mounting	Threads Code	Thru-Drive Option	Coupling Code	Seals	Control Options

Code	Displacement in ³ /rev (cc/rev)
063	3.8 (63)
080	4.8 (80)
092	5.6 (92)
140	8.5 (140)
180	10.9 (180)
270	16.5 (270)
360	22.0 (360)

Code	Rotation*
R	CW
L	CCW

*As viewed from shaft end.

Code	Pump Variations
1	Standard
g*	Customized Displacement and/or Pressure Setting

*Specify in cc/rev and/or bar.

Code	Shaft & Mounting					
	PV063/080/092		PV140/180		PV270	
	Shaft	Pilot	Shaft	Pilot	Shaft	Pilot
D	1 3/4" Keyed (SAE D)	4 Bolt SAE D	2" Keyed SAE F	4 Bolt SAE D	2" SAE Keyed	4 Bolt SAE E
E	13T Spline (SAE D)	4 Bolt SAE D	15T Spline SAE F	4 Bolt SAE D	15T Spline SAE F	4 Bolt SAE E
F			1 3/4" Keyed SAE D	4 Bolt SAE D		
G			13T Spline SAE D	4 Bolt SAE D		
K	40mm Keyed	4 Bolt 160 mm	50mm Keyed	4 Bolt 160 mm	65mm Keyed	4 Bolt 200 mm
L	W40 x 1.5 x 25 x8f Spline DIN 5480	4 Bolt 160 mm	W50 x 2 x 24 x 9g Spline DIN 5480	4 Bolt 160 mm	W60 x 2 x 28 x 9g Spline DIN 5480	4 Bolt 200 mm

Code	Threads Code	
	Port*	Threads**
1	BSPP	Metric
3	UNF	UNC
4***	BSPP-M14	Metric
7	ISO 6149	UNC
8	ISO 6149	Metric

* Drain, gage, and flushing ports.

** Mounting and connecting threads

*** Only for PV063-PV180; pressure port 1 1/4" with 4xM14 instead of 4xM12

Code	Thru-Drive Option (1st Digit)
T	Single Pump Prepared for Thru-Drive
With Adapter for Second Pump	
A	SAE A, Ø3.25in (Ø82.55mm)
B	SAE B, Ø4.00in (Ø101.6mm)
C	SAE C, Ø5.00in (Ø127mm)
D ¹	SAE D, Ø6.00in (Ø152.4) mm
E ²	SAE E, Ø6.50in (Ø165.1mm)
G ³	Metric, Ø2.48in (Ø63mm)
H	Metric, Ø3.15in (Ø80mm)
J	Metric, Ø3.94in (Ø100mm)
K	Metric, Ø4.92in (Ø125mm)
L ¹	Metric, Ø6.30in (Ø160mm)
M ²	Metric, Ø7.87in (Ø200mm)

1 Only for PV063 and larger

2 Only for PV270

3 Only up to PV092

Code	Coupling Code
1	Single pump, no coupling
H	with coupling 25 x 1.5 x 15, DIN 5480
J	with coupling 32 x 1.5 x 20, DIN 5480
K	with coupling 40 x 1.5 x 25, DIN 5480
L	with coupling 50 x 2 x 24, DIN 5480
Y	with coupling SAE A 9T-16/32 DP
A	with coupling SAE - 11T-16/32 DP
B	with coupling SAE B 13T-16/32 DP
C	with coupling SAE B-B 15T-16/32 DP
D	with coupling SAE C 14T-12/24 DP
E	with coupling SAE C - C
F	with coupling SAE D, E
G	with coupling SAE F

Code	Seals
N	Nitrile
V	Fluorocarbon
W	Nitrile w/PTFE Shaft Seal
P	FPM w/PTFE Shaft Seal

Code	Second Pump* (2nd Digit)
1	No Second Pump and Coupling
2	PV140 or PV180 Mounted
3	PV Pump Mounted
4	Gear Pump Series PGP Mounted

* Specify 2nd pump with full model code.

COMPENSATOR NOTES:

Compensator differential Δp is to be adjusted:

Remote pressure comp., power comp. 15 ± 1 bar.

(Codes FR*, FT*, *L*, *C*, FPR, FPZ, FPG)

Load-sensing comp. (not power comp.) 10 ± 1 bar (Codes FF*)

Consult catalog on CD for electrohydraulic control options.

Code	Control Options
Standard Pressure Compensator	
0 0 1	No Compensator
1 0 0	With Coverplate, No Control Function
M M	Standard pressure control, integrated pilot valve
M R	Remote pressure control, integrated pilot valve
M F	Load Sensing (flow) control, integrated pilot valve
M T	Two spool LS control
Remote/Load Sense Compensator	
Standard version ¹	
1	NG6 interface top side for pilot valves
W	With unloading function, 24VDC solenoid ¹
K	Prop.-pilot valve type PVACRE..35 mounted
Z	Without integrated pilot valve, NG6 interface, for mounting of accessory code PVAC
P	MT1 with mounted pilot valve PVAC1P ²
Horsepower Compensator Control	
Input Horsepower at 1500 RPM	
G	11 HP (71 Nm Torque)
H	15 HP (97 Nm Torque)
K	18.5 HP (120 Nm Torque)
M	22 HP (142 Nm Torque)
S	30 HP (195 Nm Torque)
T	37 HP (240 Nm Torque)
U	45 HP (290 Nm Torque)
W	55 HP (355 Nm Torque)
Y	75 HP (485 Nm Torque)
Z	90 HP (585 Nm Torque)
2	110 HP (715 Nm Torque)
3	132 HP (850 Nm Torque)
4	160 HP (850 Nm Torque)
5	180 HP (850 Nm Torque)
6	200 HP (850 Nm Torque)
Function	
L	Horsepower Compensator
C	Horsepower Compensator & Load Sensing
Variation	
A	NG6 Interface Top Side
B	No Pressure Compensation
C	Adjustable Pressure Compensation
D	Proportional Pilot Valve PVACPP* Mounted
Z	Accessories Mounted ³
Electro Hydraulic Control Options	
F P V	Proportional displacement control, no pressure compensation
U P	Proportional displacement control, with pressurecompensation

1 Not for MT

2 Only for MT

3 Accessories not included. Please specify on order with full model code.