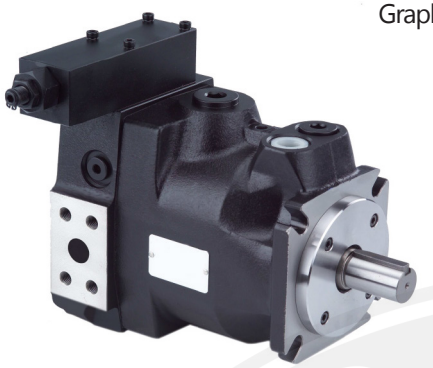
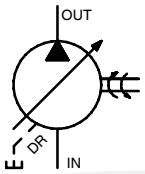
PV series Variable Displacement Piston Pump



Graphic Symbol



Feature :

1. New swash plate and enlarged servo pistons design achieves rapid responsibility, low noise and low pulsation.
2. 9 pistons and prefilled swash plate design.
3. Sturdy heavy duty Casting body, high working pressure.
4. Complete lines of compensators, and meet different demand of hydraulic systems.
5. Double or Multiple pumps connections are available.
6. Standard ISO and SAE flange mountings and pipe threading.
7. Available for both Industrial and mobile hydraulic systems.
8. Maximum working pressure: 350 bar. Peak pressure: 420 bar.

Technical Data

MODEL No.	Displacement c.c.(in^3)/rev	Delivery @7 bar, 1500 rpm l/min(gal/min)	Delivery @7 bar, 1800 rpm l/min(gal/min)	Shaft Speed rpm		Weight	Noise level at full flow 1500 rpm, dB-A		
				Max	Min	kg(lb)	70 bar	207 bar	343 bar
PV016	16(0.98)	24(6.3)	28.8(7.6)	2750	300	19(41.8)	56.0	60.0	68.0
PV020	20(1.2)	30(7.9)	36(9.5)						
PV023	23(1.4)	34.5(9.1)	41.4(10.9)						
PV032	32(1.9)	48(12.7)	57.6(15.2)	2400	300	30(66.0)	59.0	62.0	69.0
PV040	40(2.4)	60(15.9)	72(19.0)						
PV046	46(2.8)	69(18.2)	82.8(21.9)						
PV063	63(3.8)	94.5(25.0)	113.4(30.0)	2100	300	60(132)	66.0	70.0	74.0
PV071	71(4.3)	107(28.3)	128.7(34.0)						
PV080	80(4.8)	120(31.7)	144(38.0)	2000	300				
PV092	92(5.6)	138(36.5)	165.6(43.8)	1900					
PV140	140(8.5)	210(55.5)	252.1(66.6)	2200	300	90(198)	70	74	76
PV180	180(11.0)	270(71.3)	324(85.6)				71	75	77
PV270	270(16.5)	405(107)	486(128.4)	1800	300	172(378)	77	79	81

How To Order

PV063	- GT	2	-R	-M	-1	-A	-0	-N	-10
Series Number	Control Type	Pressure Range	Rotation Direction	Mounting Type: Shaft and Flange	In/Out Port Threading Type	2nd & Multi-pump Interface & coupling	Voltage	Material of Seal	Design Number
PV016 PV020 PV023 PV032 PV040 PV046 PV063 PV071 PV080 PV092 PV140 PV180 PV270	Refer to page 2	2: 10-140 bar 3: 40-210 bar 4: 70-350 bar	R: Clockwise Rotation L: Counter Clockwise Rotation (View from shaft end)	M: Metric Cylindrical Key Shaft (ISO3019/2) K: Metric Spline Shaft (ISO3019/2) N: SAE Cylindrical Key Shaft (ISO3019/1) D: SAE Spline Shaft (ISO3019/1)	1: BSPP(G) (Standard) 2: PT(Rc) *3: UNF 4: NPT *7: ISO6149 (*: 3 & 7 are not in stock)	A: Single pump (standard) B: with thru drive and end cover. C, D, E, F, G, H, I, J, K, L, M, N: with Interface & coupling for 2nd pump: for detail please refer to page 18.	0: None A: AC100 50/60Hz B: AC110/60Hz C: AC200 50/60Hz D: AC220/60Hz E: DC12V F: DC24V	N: NBR (Standard) V: FPM E: Ethylen-Propylen	10: Standard

Handling :

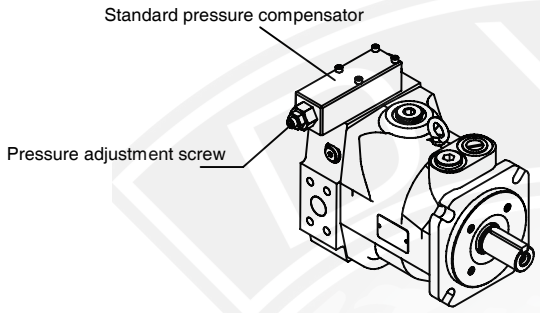
1. Always keep the outlet port in the top, and the maximum back pressure of suction pipe less then 2 bar.
2. Pump works at maximum pressure (350 bar) not exceed 6 sec./cycle.
3. Please always miantain the oil contamination within NAS 10 degree. Strongly suggest to have suction line filer of at least 100 µm.

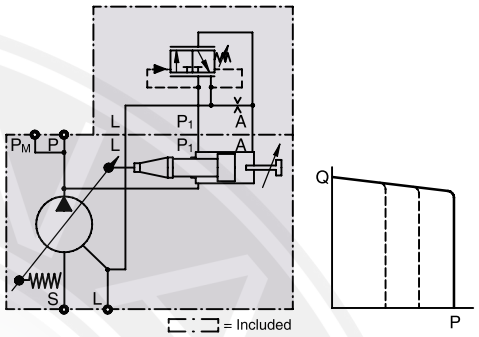
PV series Variable Displacement Piston Pump

Compensators Instruction :

AO : Standard pressure compensator

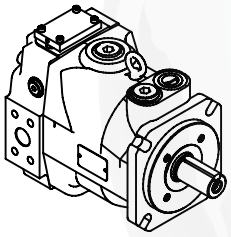
The basic function of variable displacement pump is maintains the constant working pressure of pump and adjusting the flow automatically to meet the demand of system. When the Outlet pressure P is lower than the setting pressure, the compensator starts working, port A connects to pump case and reset the spring to keep the pump at full flow. When the pump pressure reaches the setting pressure, the compensator port P1 connects to A, it force the spool of compensator to push swash plate decrease angle and reduce the flow of pump and to meet the system pressure.

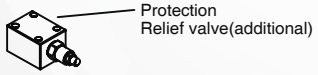


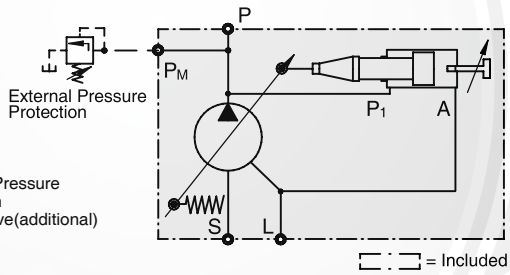


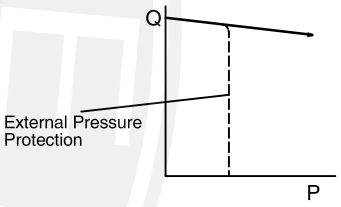
LN : None Pressure Compensator

In very few situation, for cost reason, the standard compensator can be omitted when system needs only fixed displacement under a setting pressure. However, an additional relief valve will be needed in the PM port for maintaining and limiting the main pressure. The relief valve is an option, and need to be ordered separately.



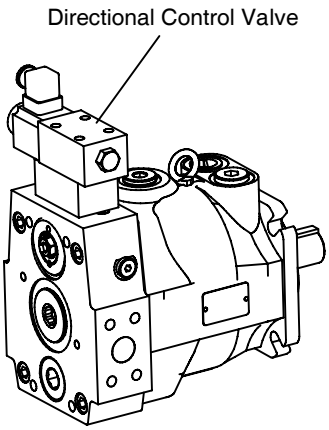


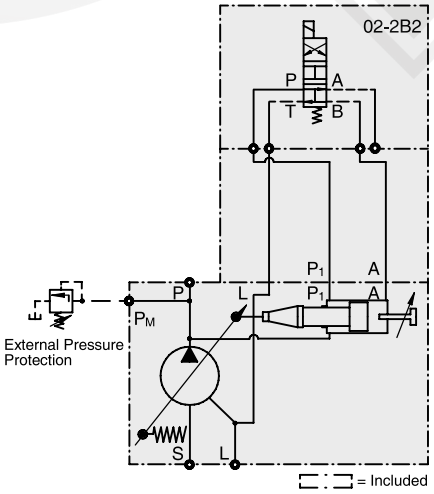


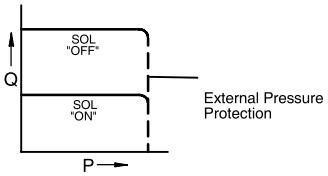


LS : Solenoid controlled two speeds compensator

When system needs two speeds in a actuator, LS can be a simple solution by only adding a solenoid directional control valve and an additional relief valve. Ps. Relief valve is needed in the PM port for maintaining and limiting the main pressure. It needs to be ordered separately.



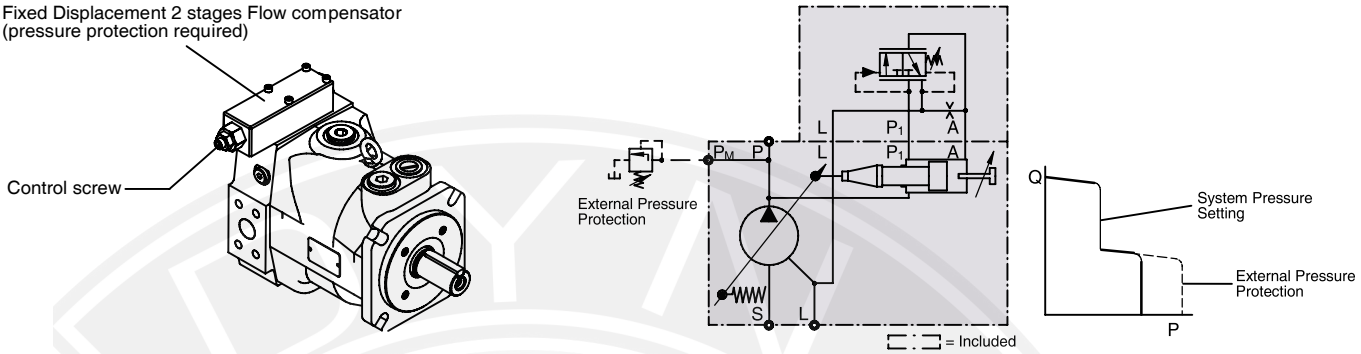




PV series Variable Displacement Piston Pump

LC : Pressure controlled two speeds compensator

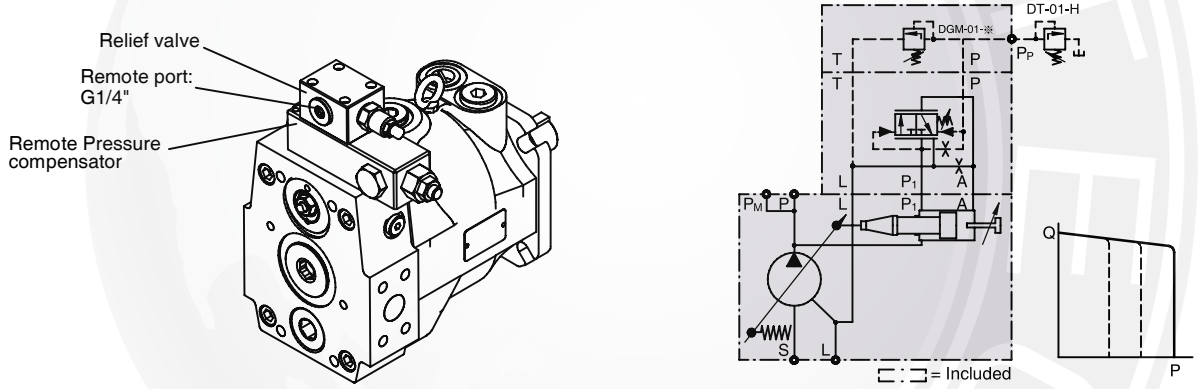
Another way of two speeds control in an actuator is LC compensator. An additional relief valve is needed in the PM port for maintaining and limiting the main pressure. It needs to be ordered separately.



Remote controlled pressure compensator :

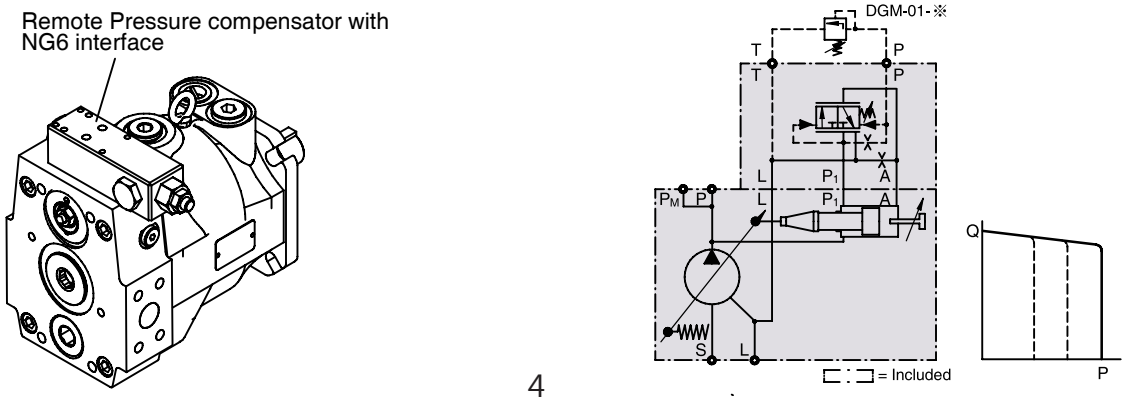
GA : Remote controlled Pressure Compensator - with Relief valve

The main difference between Standard and Remote control type compensator is that GA type remote compensator can be controlled by a pilot relief valve trough the Port Pp . The pilot flow is about 1-1.5 l/min and supply by internal flow of pump . The pilot valve can be installed in some area where can have easier control of system, such as the panel of machine. Besides GA compensator is more precision and is higher reaction than standard compensator.



GM : Remote controlled pressure compensator - Modular type, Relief valve is not included

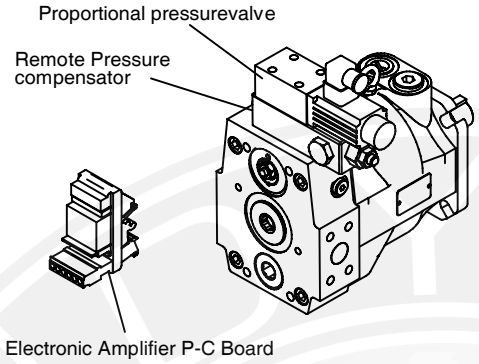
GM type remote pressure compensator has same function as GA type controller, the difference is that GM type provides a standard mounting interface which meets the standard of NG6, DIN24340, Cetop 3, and D03. This interface allows direct mounting of pilot valve, manually or electrically controlled are available. It also allows completed multiple pressure circuit mount on the compensator directly. We have prepare variety of these components , please contact with our dealer or send us inquiry when necessary. Remark: All remote pressure compensator have factory pressure difference setting of 15 bar. At this setting, the outlet pressure pump is also nearly 15 bar and higher than the setting pressure of pilot control valve.

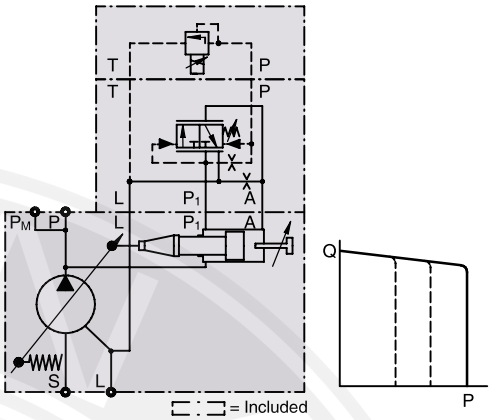


PV series Variable Displacement Piston Pump

GJ : Remote controlled pressure compensator - with Proportional pressure control

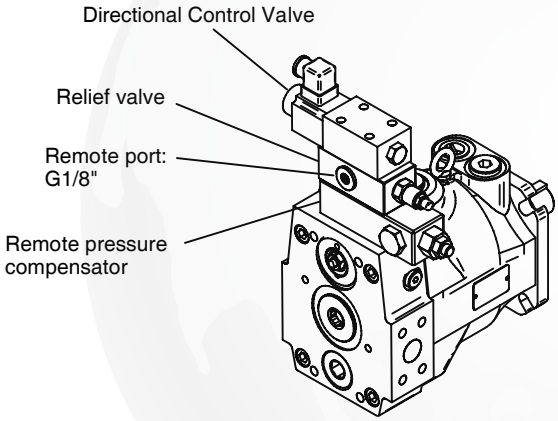
GJ type compensator equipped with an electronic controlled proportional pressure valve, it maintains system works with sufficient flow at preset pressure.

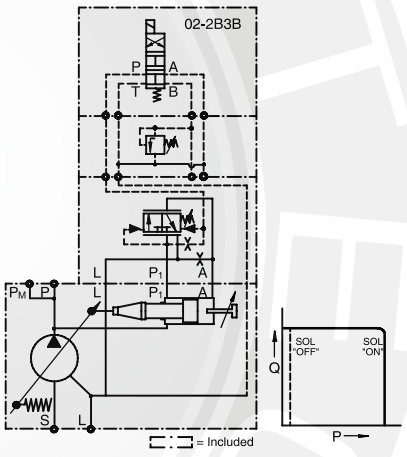




GR : Remote controlled pressure compensator - with electronic unloading control

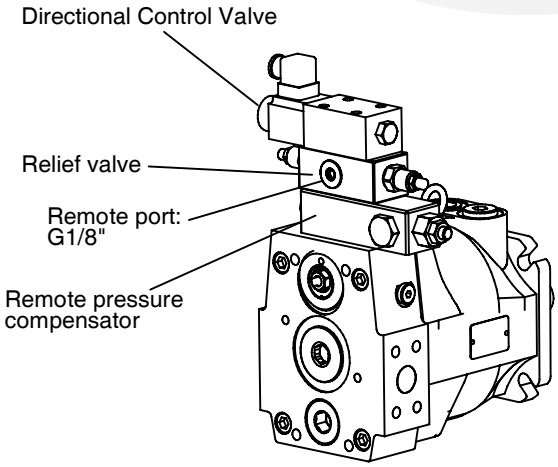
GR type compensator equipped with a solenoid directional control valve and a relief valve, it's unloading function allows the system saves energy during idling.

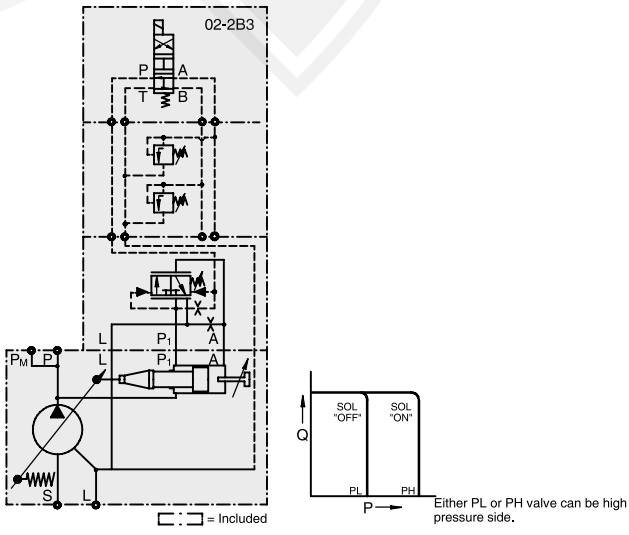




GB : Remote controlled pressure compensator - with electronic 2 stage pressure control

GB type compensator equipped with a 3 position solenoid directional control valve and a A&B port relief valve, it makes the system works at same speed under 2 different pressure.

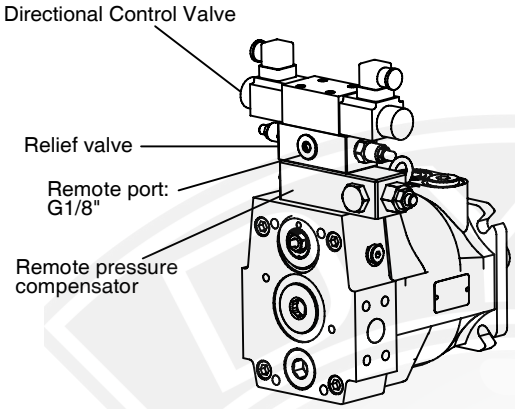


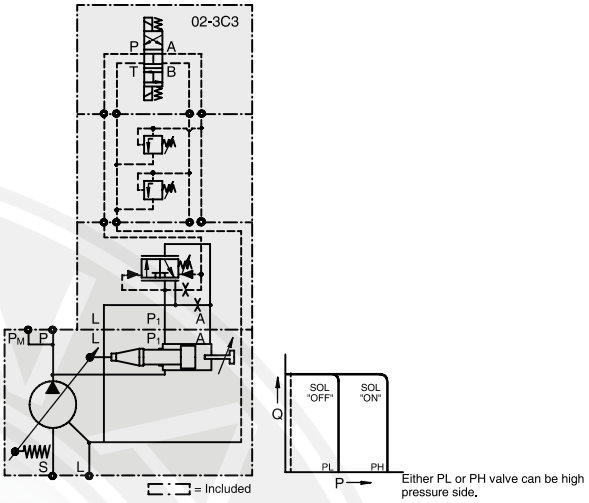


PV series Variable Displacement Piston Pump

GC : Remote controlled pressure compensator - with electronic unloading plus 2 stage pressure control

GC type compensator equipped with a 3 position solenoid directional control valve and a A&B port relief valve, it makes the system has both functions of 2 stage pressure and unloading controls.

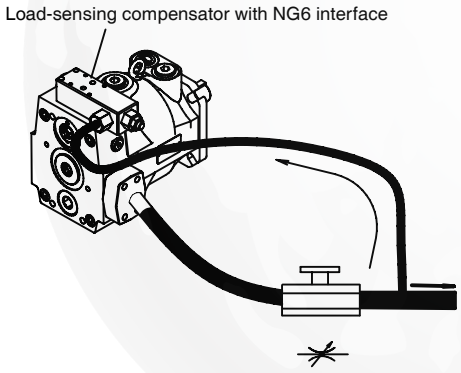


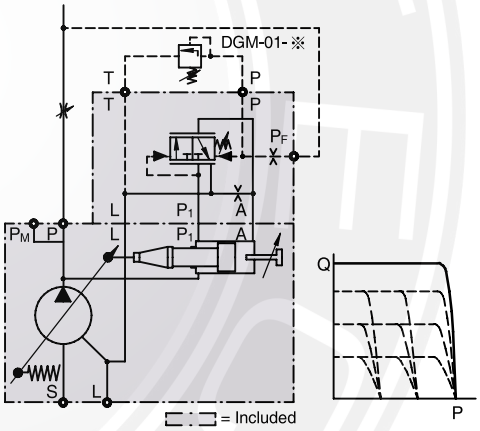


Load-Sensing type:

HM : Load-sensing compensator - with NG6 Interface

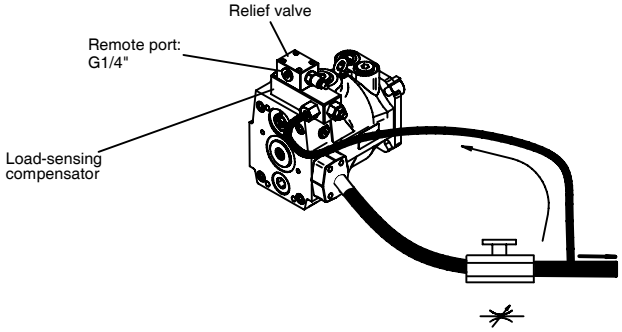
HM load-sensing compensator has a NG6 mounting interface, it allows direct mounting of a modular type pilot relieve valve or a proportional pressure control valve. HM compensator has preset 10 bar pressure difference in factory, that will absorb the resistance pressure of main flow and keep actuator in constant speed moving.

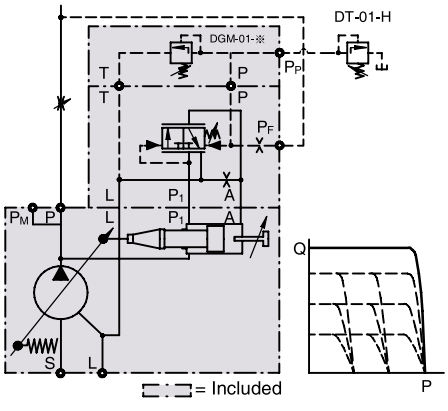




HA : Load-sensing compensator - with Relief valve

HA load-sensing compensator integrated with a DGM-01 relief valve on the NG6 mounting interface. The compensator has preset 10 bar pressure difference in factory, and it maintains the resistance pressure of main flow and keeping actuator in constant speed moving. A remote control relief valve (DT-01-H) is a option for long distance pressure control. It's control oil come from compensator and it's flow is about 1-1.5 l/min.

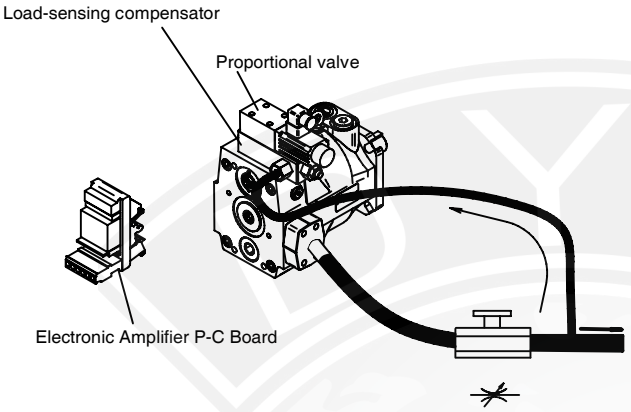


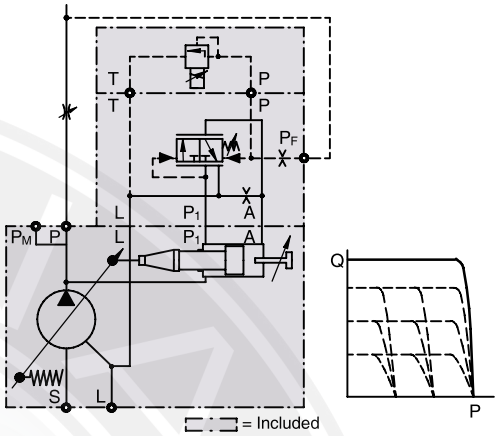


PV series Variable Displacement Piston Pump

HJ : Load-sensing compensator - with Proportional Pressure valve

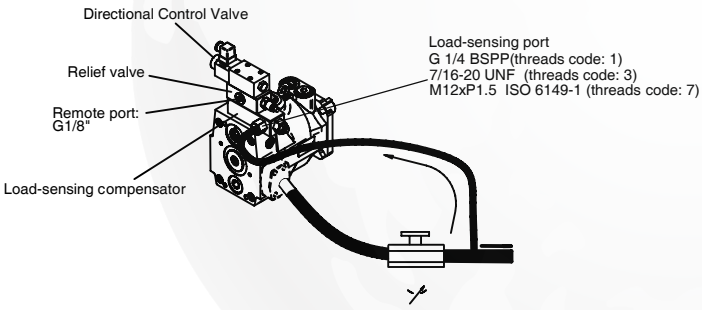
HJ load-sensing compensator integrate with a proportional pressure control valve on the NG6 mounting interface. The compensator has preset 10 bar pressure difference in factory, and it maintains the resistance pressure of main flow and keeping actuator in constant speed moving. The proportional pressure control valve makes the system has a smooth pressure control by electronic amplifier (option).

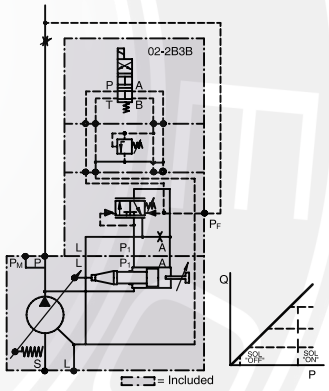




HR : Load-sensing compensator - with Electronic unloading control

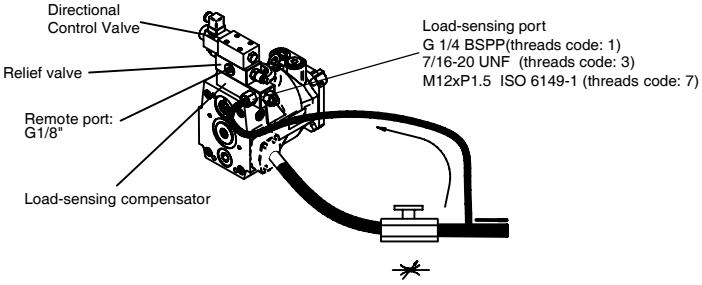
HR load-sensing compensator combined with a 2 position solenoid directional control valve and a relief valve on the NG6 mounting interface. The compensator has preset 10 bar pressure difference in factory, and it maintains the resistance pressure of main flow and keeping actuator in constant speed moving. Due to the functions of solenoid directional control valve and relief valve, it makes the system has the electronic unloading control. It save energy and decrease oil temperature and lower noise when system is idling.

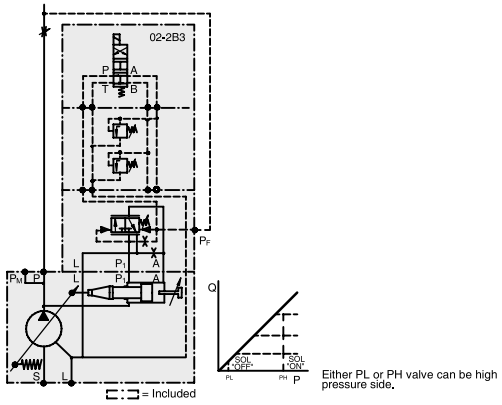




HB : Load-sensing compensator - with electronic 2 stage pressure control

HB load-sensing compensator combined with a 2 position solenoid directional control valve and a A&B port relief valve on the NG6 mounting interface. The compensator has preset 10 bar pressure difference in factory, and it maintains the resistance pressure of main flow and keeping actuator in constant speed moving. HB compensator makes simple load-sensing function by add a 0.8mm orifice and a pilot pressure valve. And a constant speed, electronic controlled high-low pressure system achieves by the solenoid valve and A&B port relief valve.



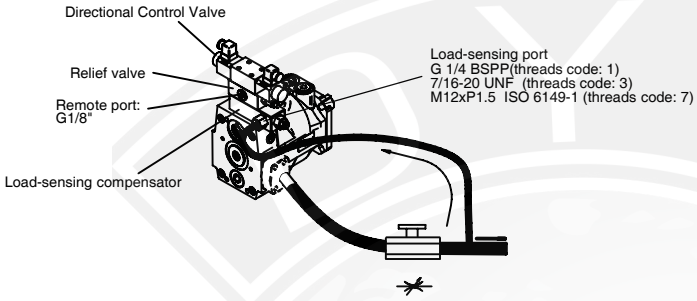


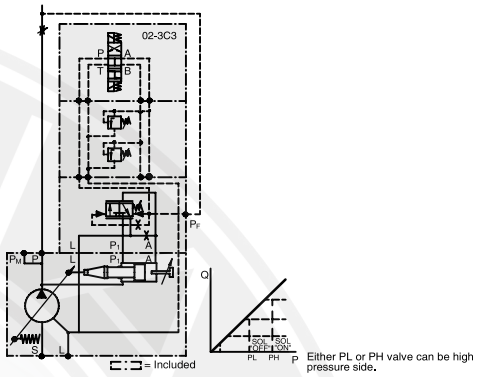
Either PL or PH valve can be high pressure side.

PV series Variable Displacement Piston Pump

HC : Load-sensing compensator - with electronic unloading plus 2 stage pressure control

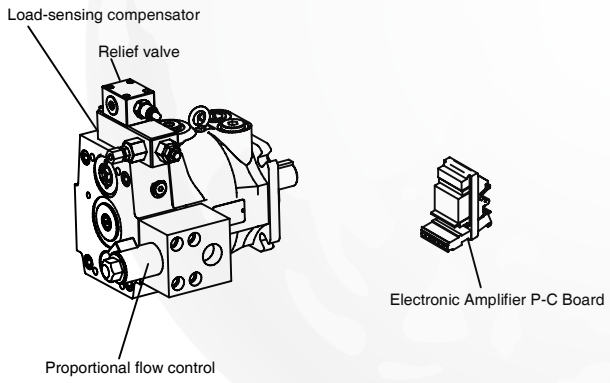
HC load-sensing compensator combined with a 3 position solenoid directional control valve and a A&B port relief valve on the NG6 mounting interface. The compensator has preset 10 bar pressure difference in factory, and it maintains the resistance pressure of main flow and keeping actuator in constant speed moving. HC compensator make a simple load-sensing function by add a 0.8mm orifice and a pilot pressure valve. And a constant speed, electronic controlled high-low pressure system with unloading functions achieves by the 3 position solenoid valve and A&B port relief valve. It also save energy and decrease oil temperature and lower noise when system is idling.

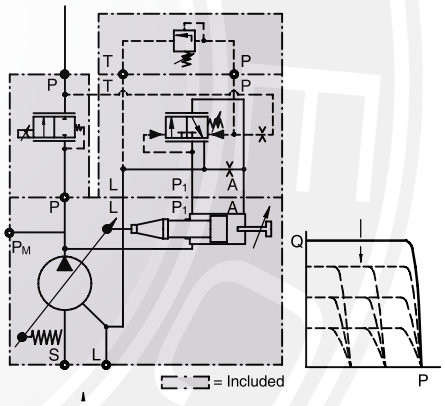




HQ : Load-sensing compensator - with Relief valve and proportional flow control

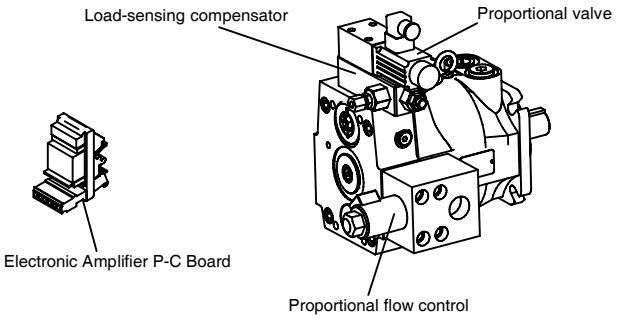
HQ load-sensing compensator equipped with a relief valve on the NG6 interface and a proportional flow control valve on the pump out port. The compensator has preset 10 bar pressure difference in factory, and it maintains the resistance pressure of main flow. The actuator speed moves smooth constantly and also can be easily proportional controlled by PLC.

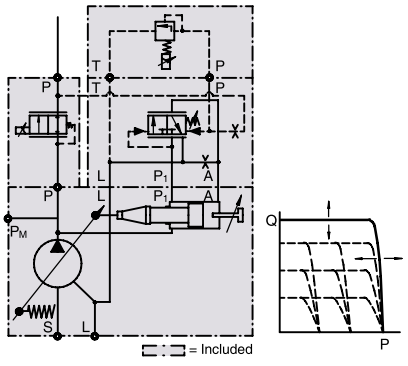




HK : Load-sensing compensator - with Proportional pressure and proportional flow control

HK load-sensing compensator equipped with a proportional pressure control valve on the NG6 interface and a proportional flow control valve on the pump out port. Energy saving is the main benefit of this combination. It restrict the flow and pressure at merely sufficient for system demand. The out flow is near to zero when system reaches working pressure and electric motor saves most power. The oil temperature will be low because high efficiency and the oil tank can be shrink at meanwhile. The compensator has preset 10 bar pressure difference in factory, and it maintains the resistance pressure of main flow.

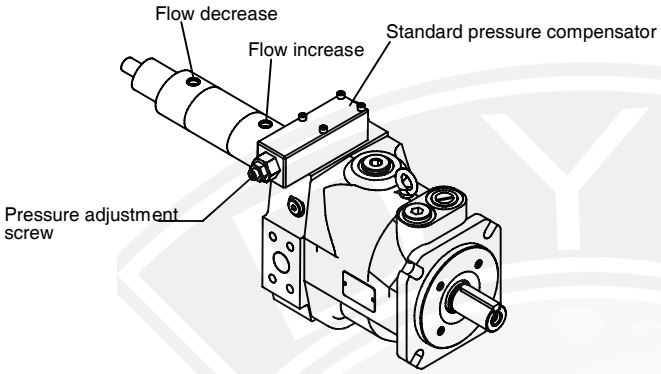


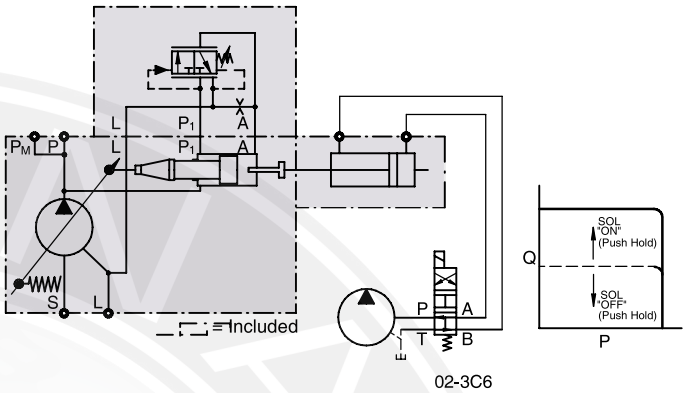


PV series Variable Displacement Piston Pump

BQ : Standard pressure compensator - with continuous variable flow control

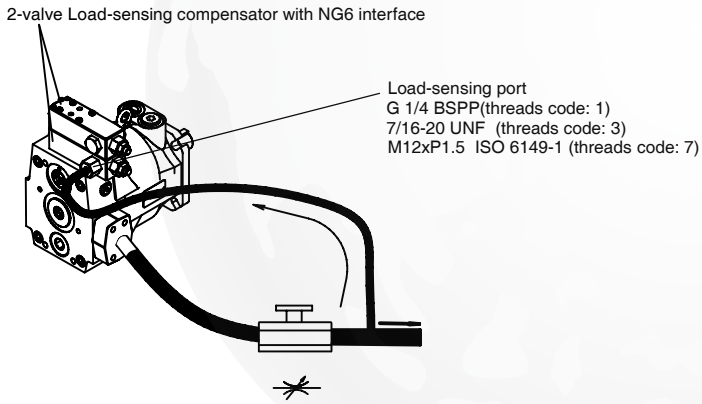
BQ compensator equipped a standard pressure compensator and a flow control cylinder in the end of pump cover. The pilot oil of flow control cylinder controls by a 2 position solenoid valve. It makes output flow of the pump can be adjusted smoothly from 0 to maximum. It saves much cost than a proportional flow control system.

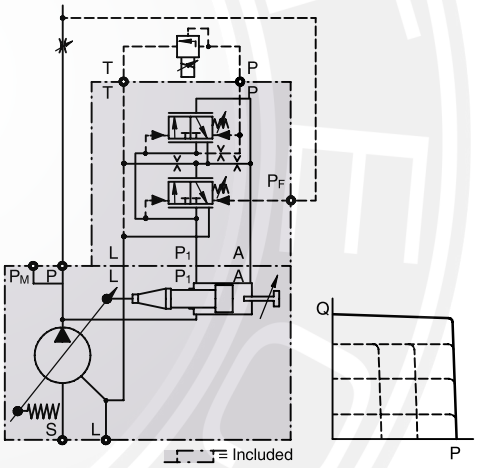




VM : Twin Load-Sensing Compensator - with NG6 interface

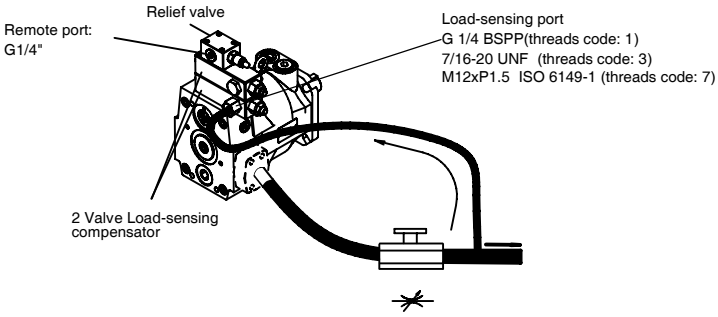
Twin Load-sensing compensator provides precisely control of pressure. By twin load-sensing compensator, it controls the flow and pressure separately and eliminate the interaction. The VM compensator reserve a NG6 interface on the top for more combination possibility.

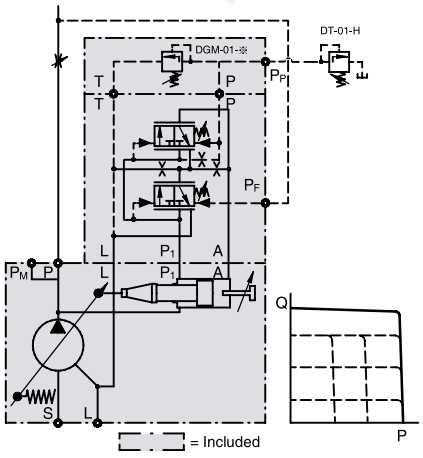




VA : Twin Load-Sensing Compensator - Remote controlled by Relief valve

By added a relief valve on the top Twin Load-sensing compensator, VA has the remote control function. The pilot flow comes from internal of pump and it's flow is about 1-1.5l/min. VA precisely control of pressure and controls the flow and pressure separately and eliminate the interaction.

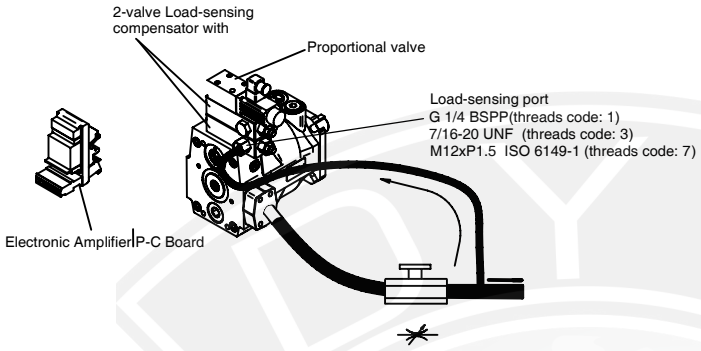


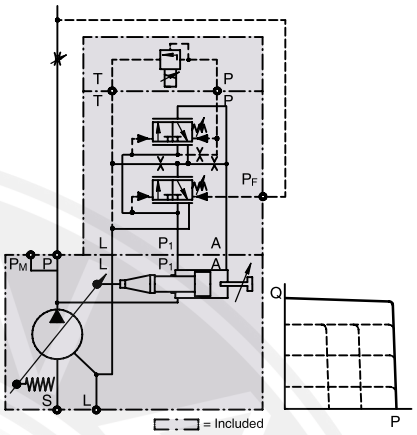


PV series Variable Displacement Piston Pump

VJ : Twin Load-Sensing Compensator - with Proportional Pressure control valve

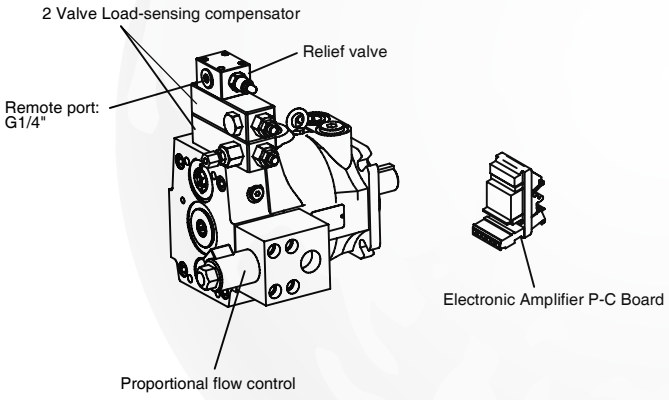
Twin load-sensing compensator plus a Proportional pressure control valve, VJ compensator has proportional pressure control function. VJ precisely control of pressure and controls the flow and pressure separately and eliminate the interaction.

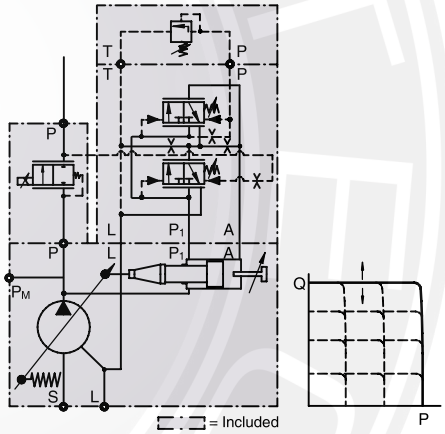




VQ : Twin Load-Sensing Compensator - with Proportional Flow control & Relief valve

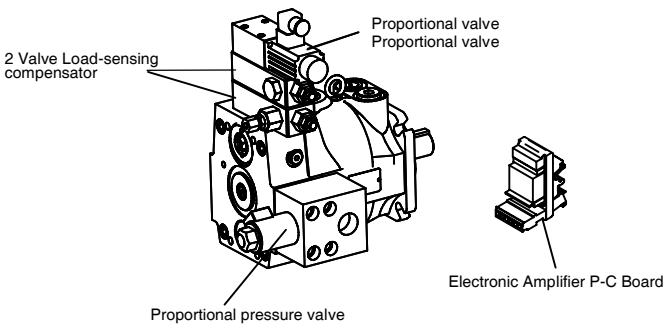
VQ twin load-sensing compensator equipped with a relief valve on the NG6 interface and a proportional flow control valve on the pump out port. The compensator has preset 10 bar pressure difference in factory, and it maintains the resistance pressure of main flow. The actuator speed moves smooth constantly and also can be easily proportional controlled by PLC.

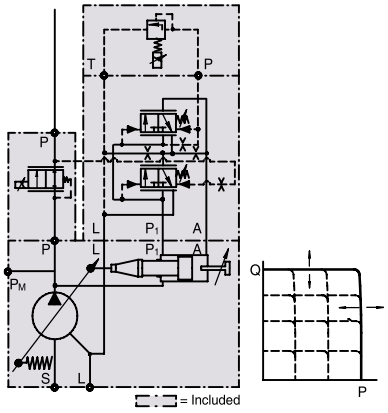




VK : Twin Load-Sensing Compensator - with Proportional Flow & Proportional Pressure control

VK twin load-sensing compensator equipped with a proportional pressure control valve on the NG6 interface and a proportional flow control valve on the pump out port. Energy saving is the main benefit of this combination. It restrict the flow and pressure at merely sufficient for system demand. The out flow is near to zero when system reaches working pressure and electric motor saves most power. The oil temperature will be low because high efficiency and the oil tank can be shrink at meanwhile.

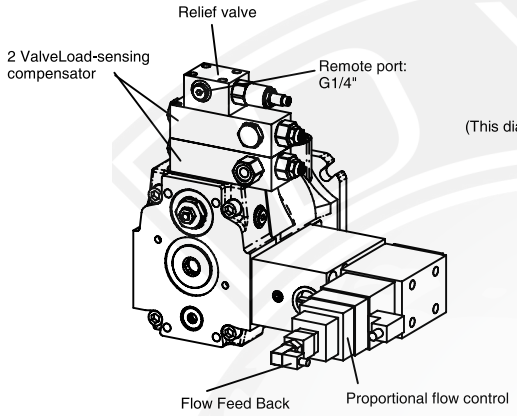


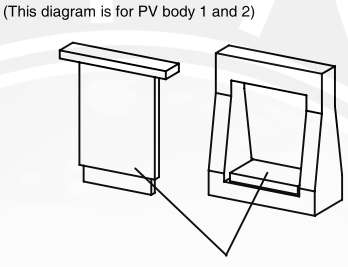


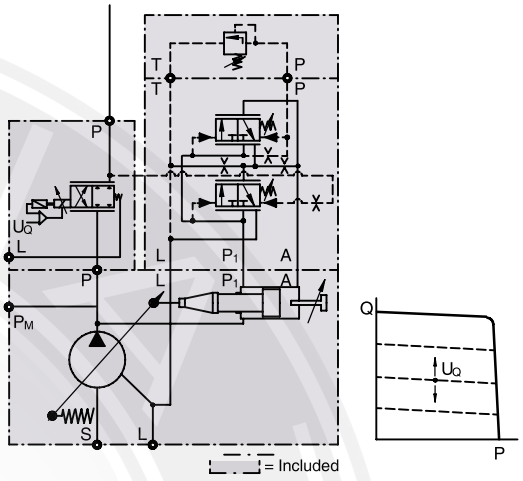
PV series Variable Displacement Piston Pump

VF : Twin Load-Sensing Compensator - with High-Reacting Proportional Flow control & Relief valve

VF twin load-sensing compensator equipped with a relief valve on the NG6 interface and a high-reacting proportional flow control valve on the pump out port. The high-reacting proportional control valve has a flow feed back, and according to the signal, PLC will analysis and adjust flow precisely.

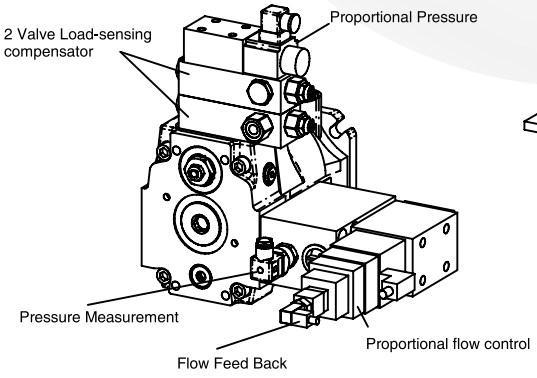


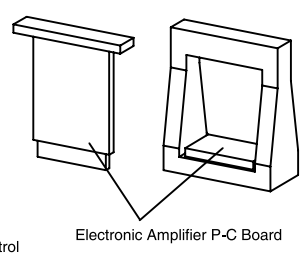


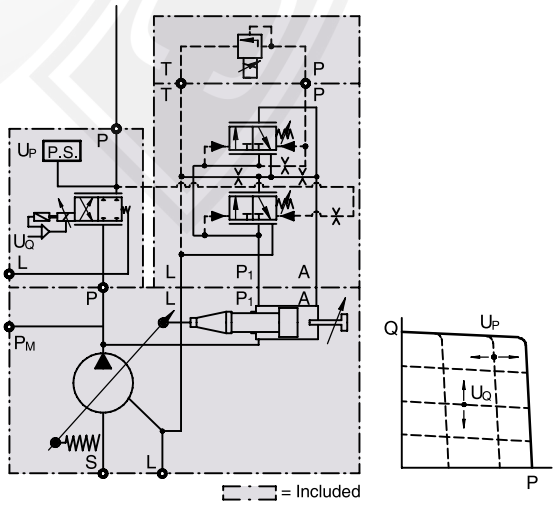


VG: Twin Load-Sensing Compensator - with High-Reacting Proportional Flow control & Proportional Pressure control

VG twin load-sensing compensator equipped with a Proportional Pressure control valve on the NG6 interface and a high-reacting proportional flow control valve on the pump out port. The high-reacting proportional control valve has a flow feed back, and according to the signal, PLC will analysis and adjust flow precisely. At the same time, there is a pressure sensor in the pump out port, it will provide the pressure signal for precision control of pressure. VG type compensator provides highest energy saving and most precisely pressure and flow control.





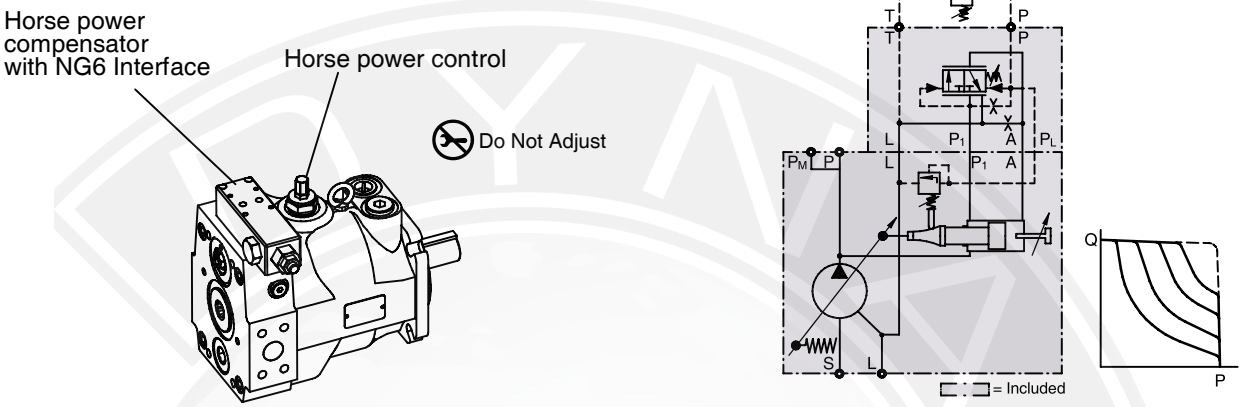


PV series Variable Displacement Piston Pump

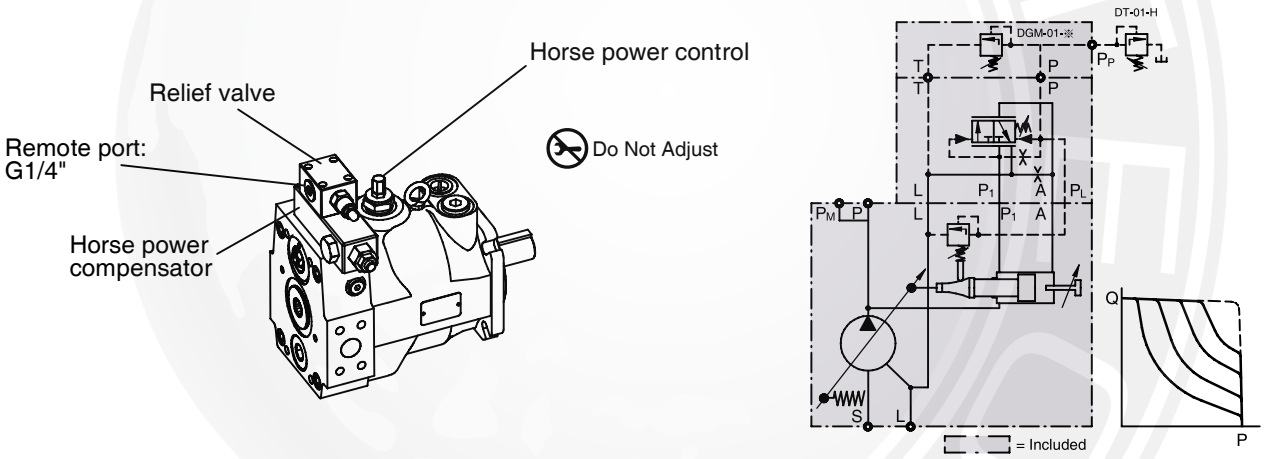
Horsepower control type:

PM□: Horsepower control compensator - with NG6 interface

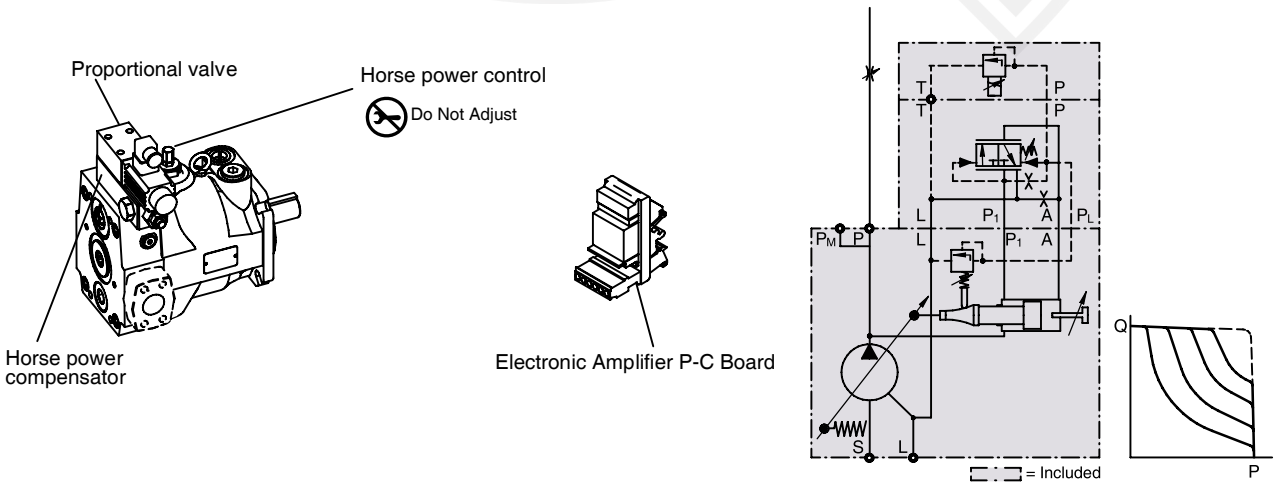
PM horsepower control compensator consists a modified remote pressure compensator and a pilot cartridge valve. The pilot valve is integrated with the pump and it controlled by contour sleeve. There are varies of contour sleeves designed and made for different horsepower and displacement. Please refer to page 14 for proper code □ for your system.



PA□: Horsepower control compensator - with Relief valve

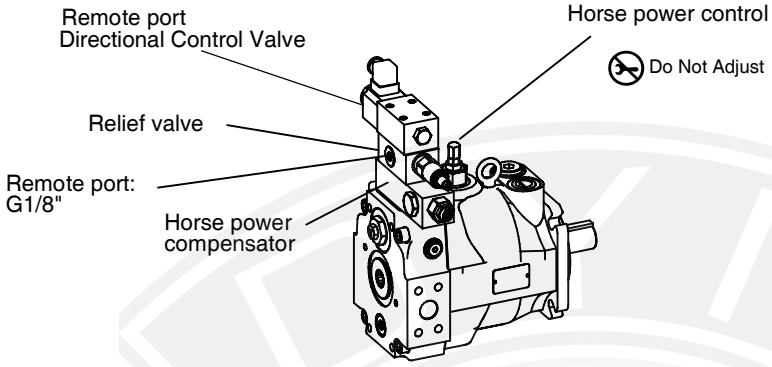


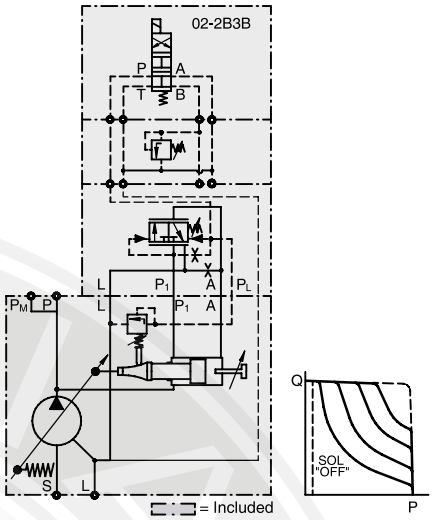
PJ□: Horsepower control compensator - with Proportional pressure control valve



PV series Variable Displacement Piston Pump

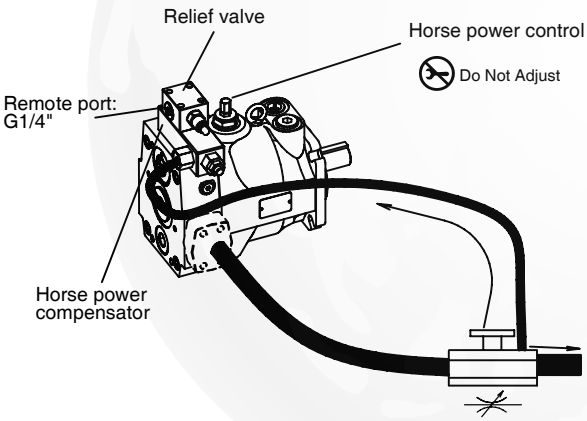
PR□: Horsepower control compensator - with Electric unloading control

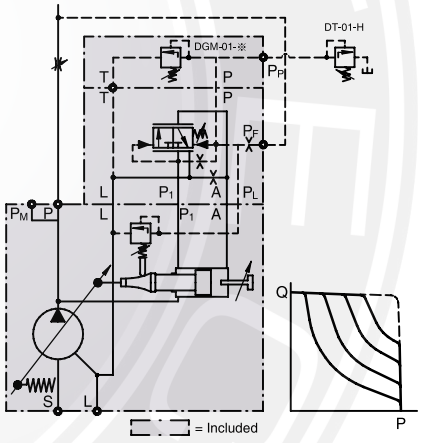




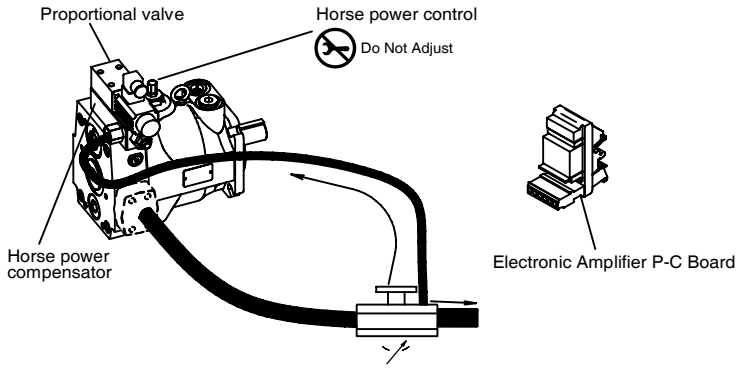
PH□: Horsepower Load-sensing compensator - with Relief valve

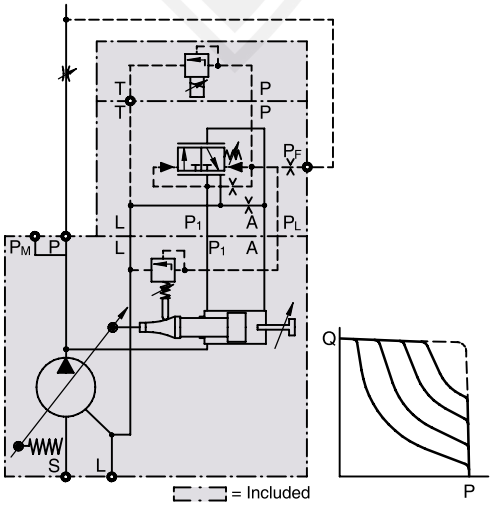
PH horsepower control compensator consists a modified Load-sensing compensator and a pilot cartridge valve. The pilot valve is integrated with the pump and it controlled by contour sleeve. There are varies of contour sleeves designed and made for different horsepower and displacement. Please refer to page 14 for proper code □ for your system.





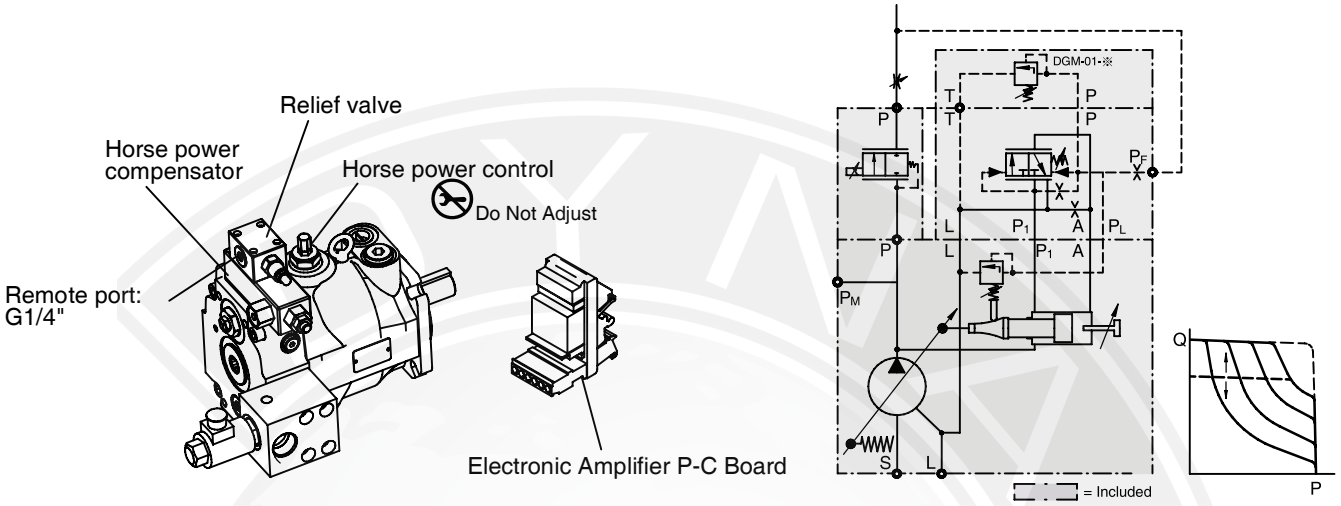
PS□: Horsepower Load-sensing compensator - with Proportional Pressure control valve





PV series Variable Displacement Piston Pump

PQ□: Horsepower Load-sensing compensator - with Proportional Flow control valve



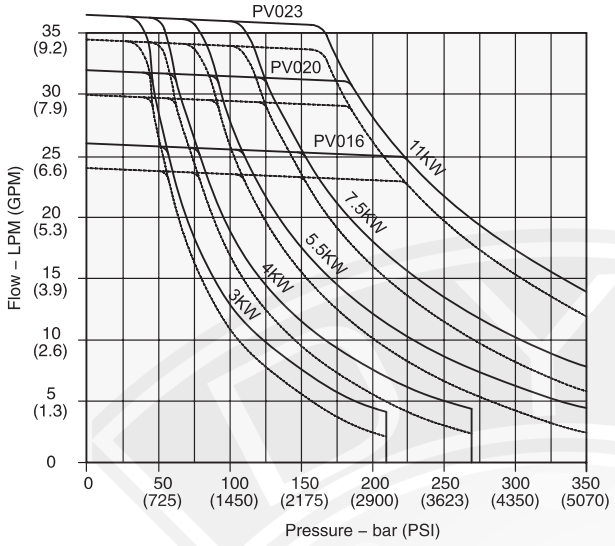
Available Horsepower control list:

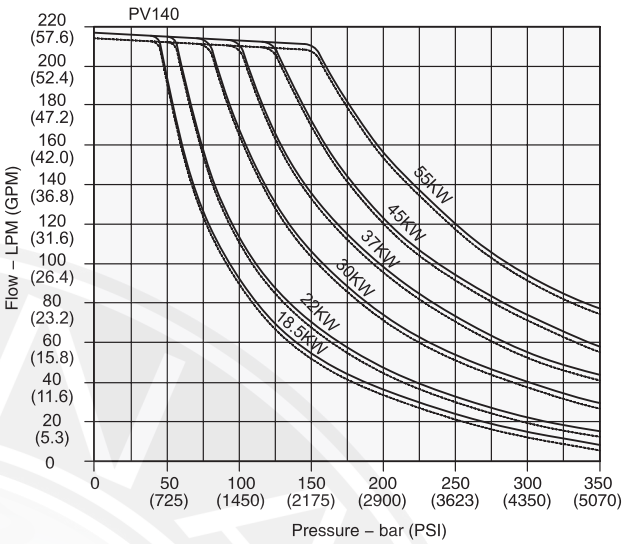
Ordering Code □: Horsepower control compensator only

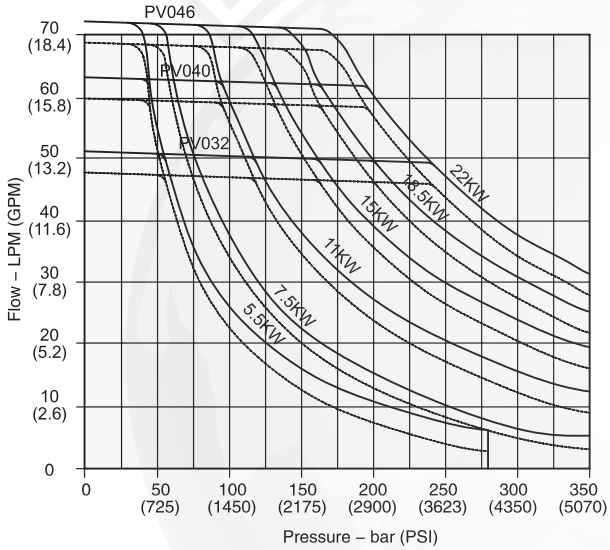
代號 code	馬力 Horse power	PV016～PV023	PV032～PV046	PV063～PV092	PV140	PV180	PV270
A	3KW	●					
B	4KW	●					
C	5. 5KW	●	●				
D	7. 5KW	●	●				
E	11KW	●	●	●			
F	15KW		●	●			
G	18. 5KW		●	●	●		
H	22KW		●	●	●	●	
I	30KW			●	●	●	
J	37KW			●	●	●	●
K	45KW			●	●	●	●
L	55KW				●	●	●
M	75KW					●	●
N	90KW					●	●
O	110KW						●
P	132KW						●

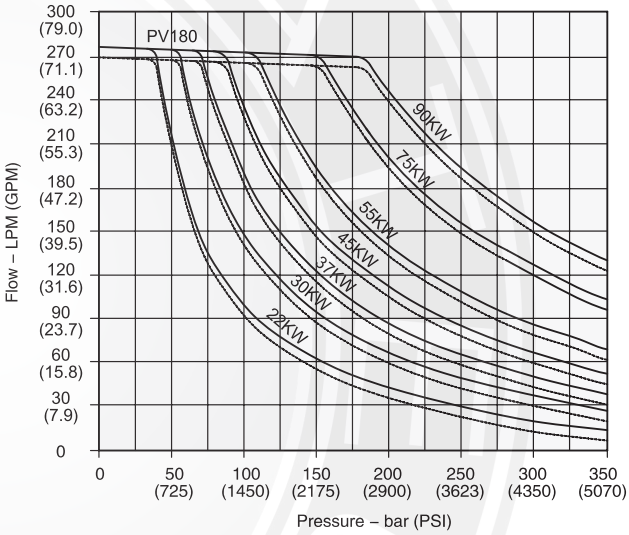
PV series Variable Displacement Piston Pump

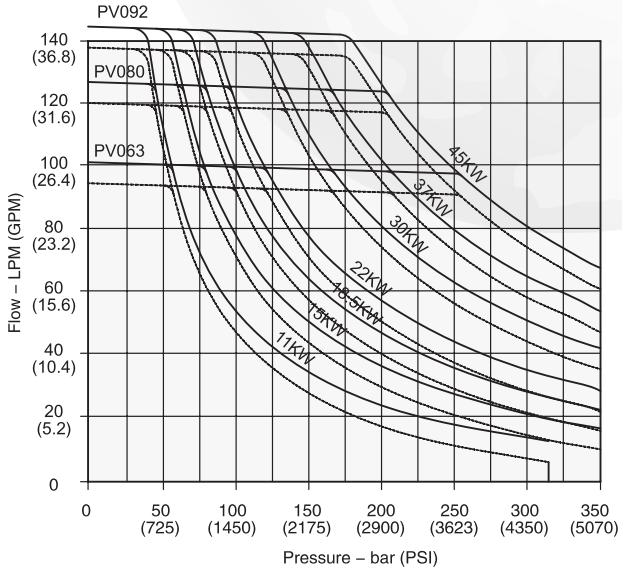
Horsepower Compensator Diagrams:

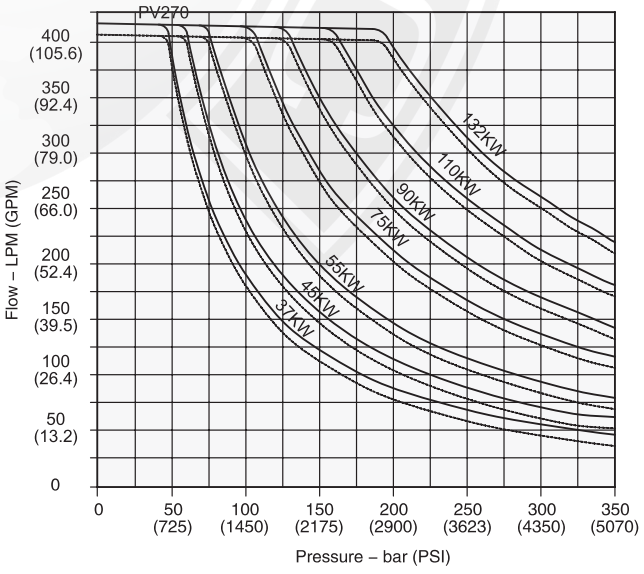






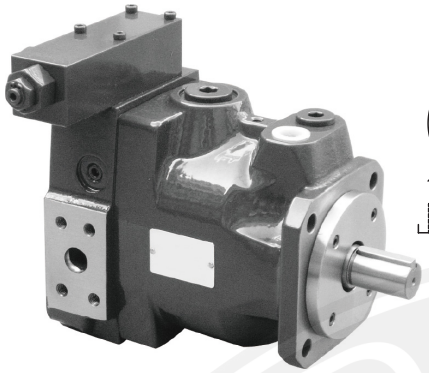


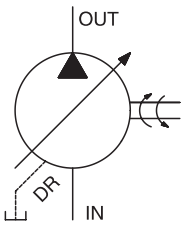


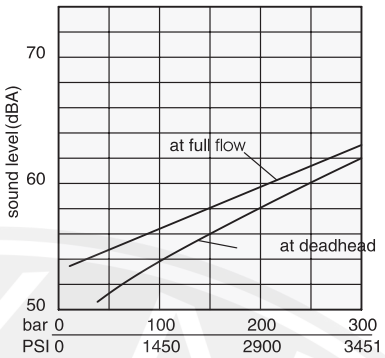


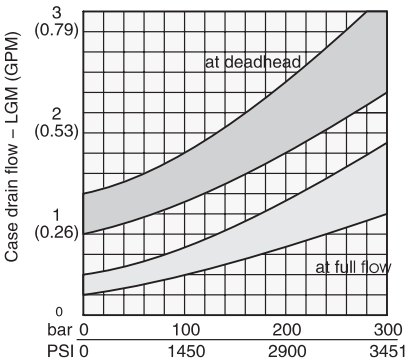
Test Conditions:
Rotation Speed: "---" n=1500 rpm, "___" n=1800 rpm.
Oil temperature: 50℃
Fluid: mineral oil, ISO VG46

PV 016 - PV 023 Variable Displacement Piston Pump

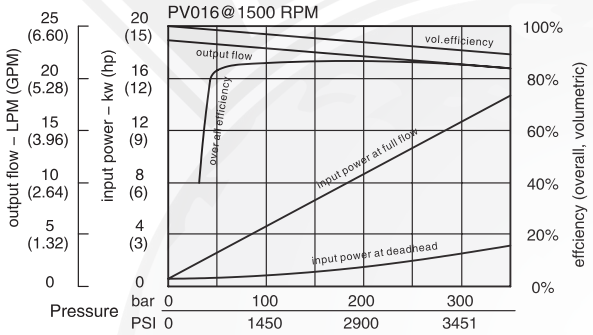


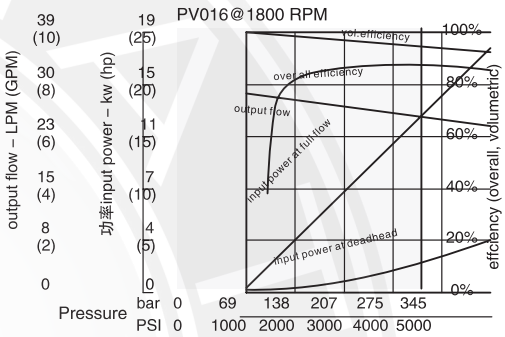


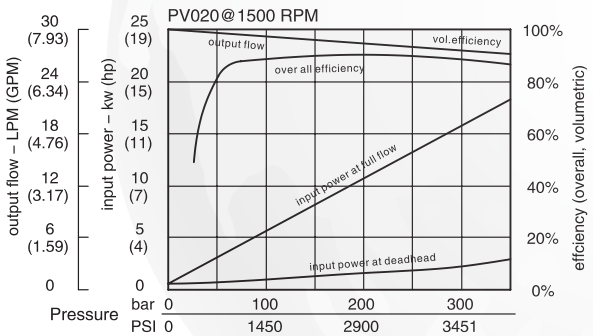


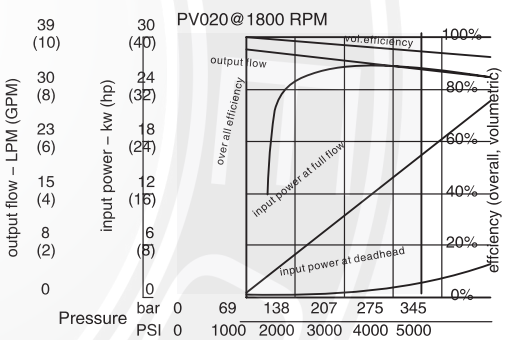


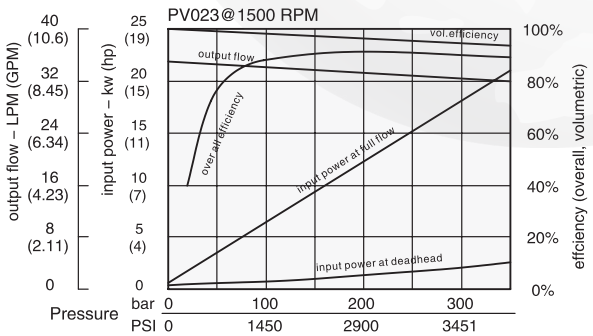
TYPICAL PERFORMANCE CHARACTERISTICS

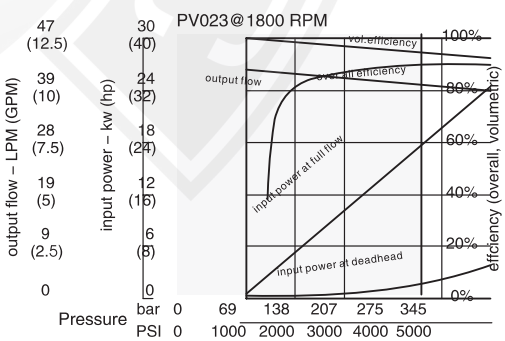












Remark:

1. Darin oil of pump will flow back to tank through drain port.
2. For those pilot controlled compensator, if the control flow also pass through pump, then drain oil will increase for 1.0 to 1.2 l/min.
3. The values show below were got from static testing. Under dynamic conditions, drain oil come from rapid acting compensator will also pass drain port and back to tank. The volume of drain oil could be 40 l/min.

Test Conditions:

Rotation Speed: "---" n=1500 rpm, "___" n=1800 rpm.
Oil temperature: 50℃
Fluid: mineral oil, ISO VG46

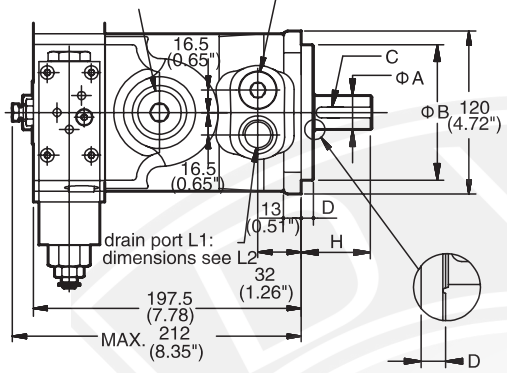
PV 016 - PV 023 Variable Displacement Piston Pump

DIMENSIONS:

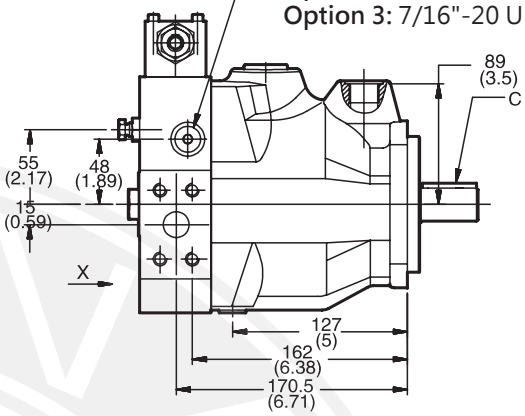
Mounting type: M, N

Port for constant power compensator or displacement feedback compensator

Drain port L2: G1/2"- standard
Option 7: M22xP1.5
Option 3: 7/8-14UNF

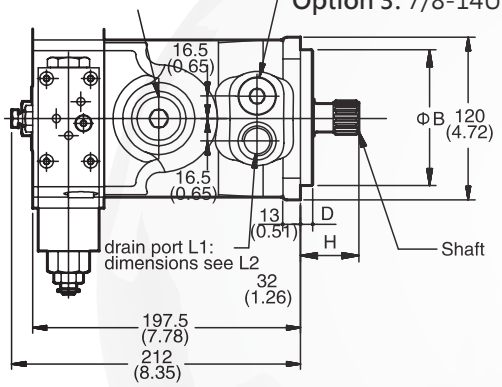


Gauge port : G1/4"-standard
Option 7: M12xP1.5
Option 3: 7/16"-20 UNF

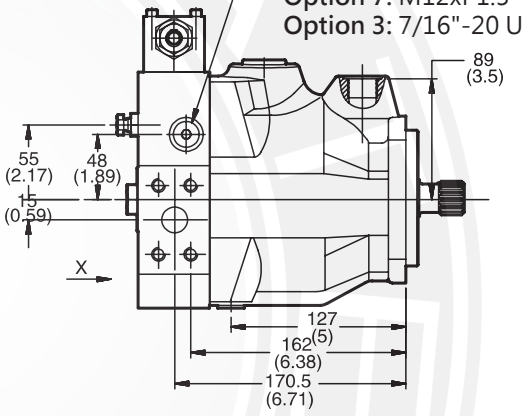


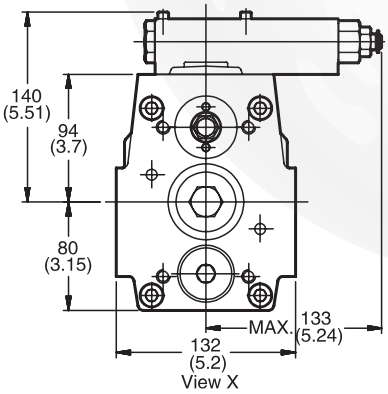
Port for constant power compensator or displacement feedback compensator

Drain port L2: G1/2"- standard
Option 7: M22xP1.5
Option 3: 7/8-14UNF



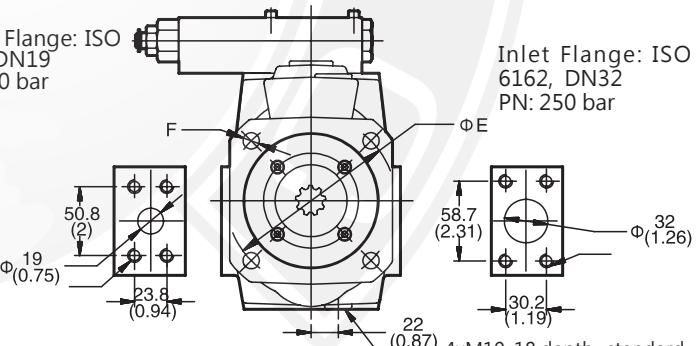
Gauge port : G1/4"-standard
Option 7: M12xP1.5
Option 3: 7/16"-20 UNF





Outlet Flange: ISO 6162, DN19
PN: 400 bar

Inlet Flange: ISO 6162, DN32
PN: 250 bar

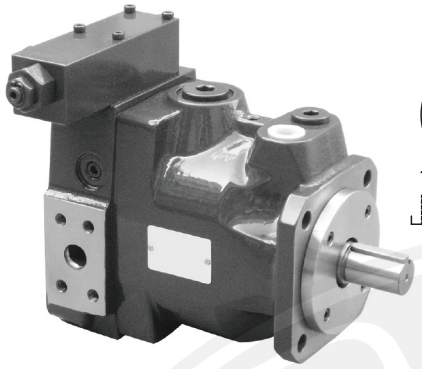


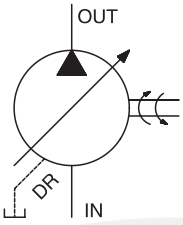
Flushing port L3: G3/8" standard
Option 7: M18 1.5, ISO6149-1
Option 3: 3/4"-16 UNF

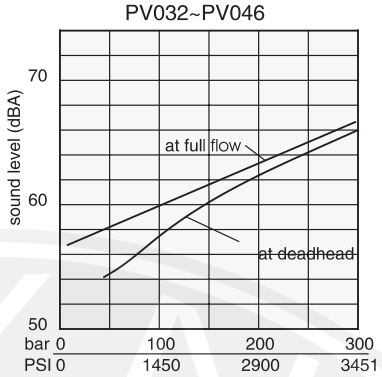
PV016～PV023 Dimensions									
Mounting			ΦA	ΦB	C	D	ΦE	F	H
M(standard)	Metric	ISO3019/2 Splined,DIN5480	Φ25	Φ100 h8	8x7x40	9	125	12	52
N	Inch	ISO3019/2 Cylindric,key	Φ25.4(1″)	Φ101.6(4″)	6.35x6.35x40 (1/4″)	9.4(0.37″)	127(5″)	12(0.47″)	50(1.97″)
Mounting			Shaft		ΦB	D	ΦE	F	H
K(standard)	Metric	ISO3019/2 Cylindric,key	Splined W25x1.5x15x8f DIN 5480		Φ100 h8	9	125	12	43
D	Inch	ISO3019/1 Splined,SAE	Splined 15T 16/32 DP,flat root,side fit ANSI B92.1		Φ101.6(4″)	9.4(0.37″)	127(5″)	12(0.47″)	46(1.81″)

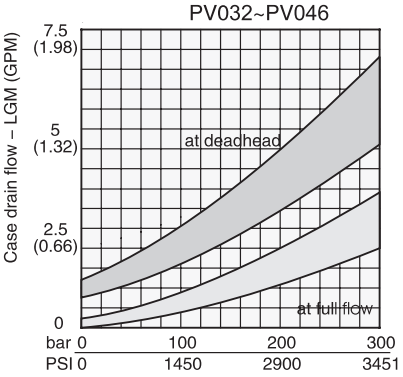
Remark: Threading option 3 and 7 are not in stock, manufacture by order only.

PV 032 - PV 046 Variable Displacement Piston Pump

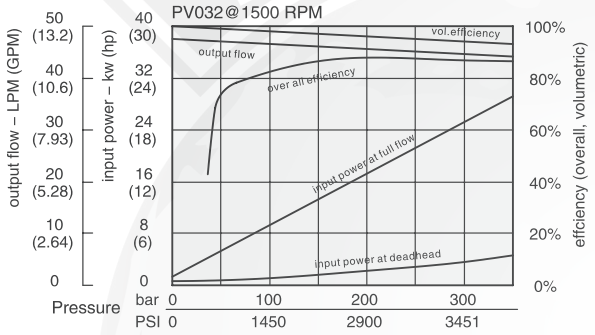


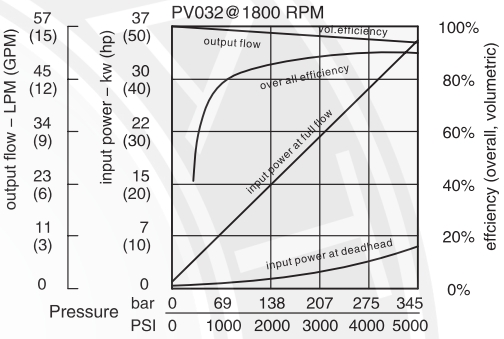


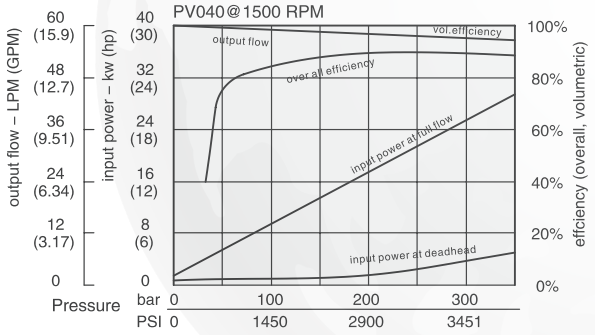


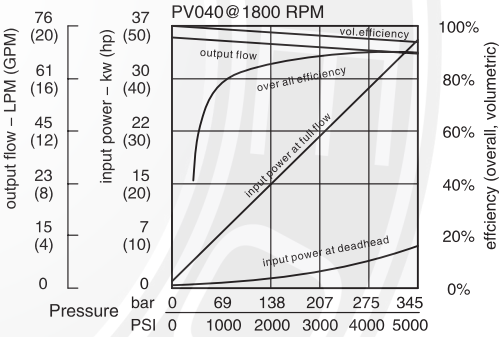


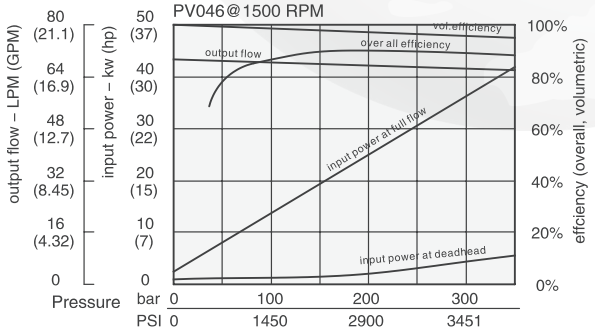
TYPICAL PERFORMANCE CHARACTERISTICS

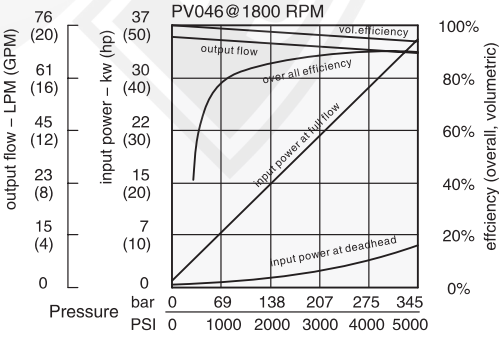












Remark:

1. Darin oil of pump will flow back to tank through drain port.
2. For those pilot controlled compensator, if the control flow also pass through pump, then drain oil will increase for 1.0 to 1.2 l/min.
3. The values show below were got from static testing. Under dynamic conditions, drain oil come from rapid acting compensator will also pass drain port and back to tank. The volume of drain oil could be 60 l/min.

Test Conditions:

Rotation Speed: "---" n=1500 rpm, "___" n=1800 rpm.
Oil temperature: 50℃
Fluid: mineral oil, ISO VG46

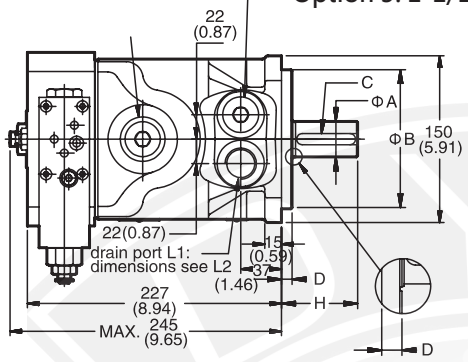
PV 032 - PV 046 Variable Displacement Piston Pump

DIMENSIONS:

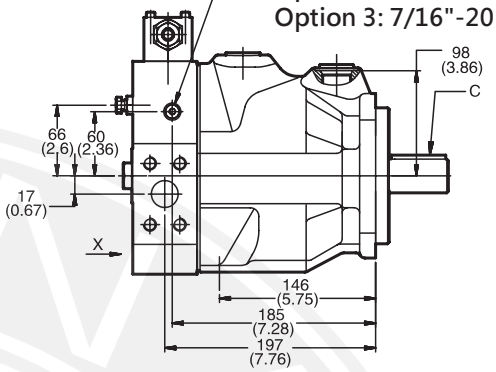
Mounting type: M, N

Port for constant power compensator or displacement feedback compensator

Drain port L2: G3/4"- standard
Option 7: M27xP2.0
Option 3: 1-1/16-12UNF

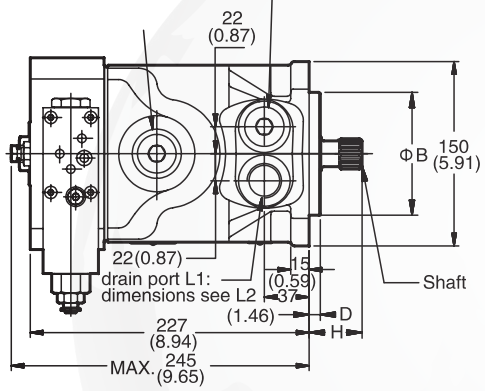


Gauge port: G1/4"-standard
Option 7: M12xP1.5
Option 3: 7/16"-20 UNF

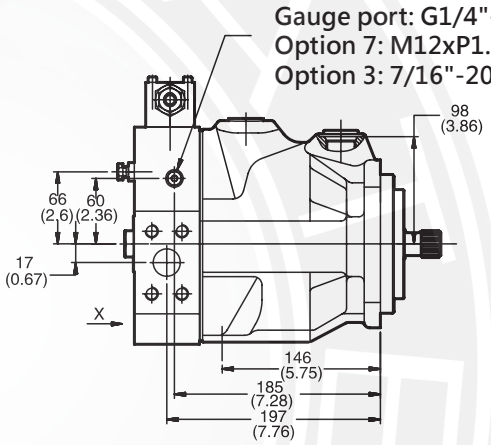


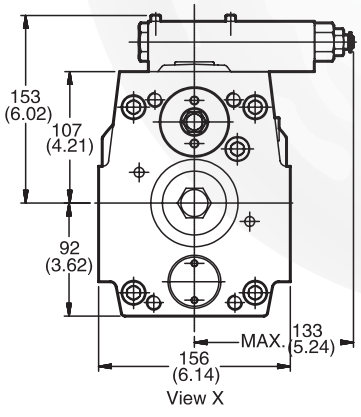
Port for constant power compensator or displacement feedback compensator

Drain port L2: G3/4"- standard
Option 7: M27xP2.0
Option 3: 1-1/16-12UNF



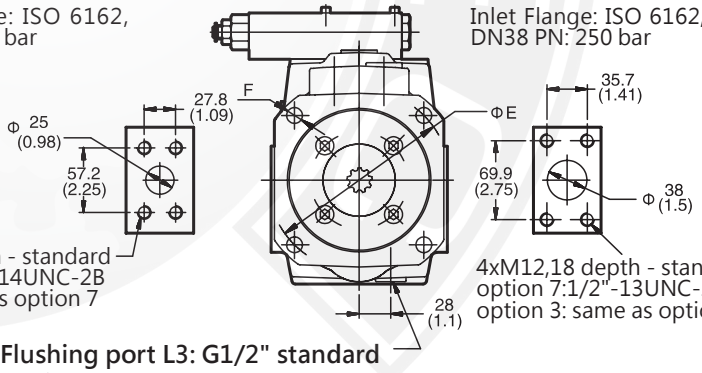
Gauge port: G1/4"-standard
Option 7: M12xP1.5
Option 3: 7/16"-20 UNF





Outlet Flange: ISO 6162, DN25 PN: 400 bar

Inlet Flange: ISO 6162, DN38 PN: 250 bar



4xM12, 18 depth - standard
option 7: 7/16"-14UNC-2B
option 3: same as option 7

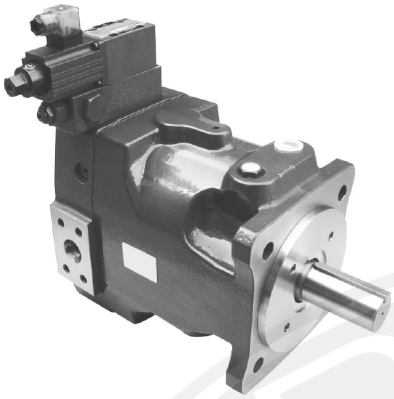
4xM12,18 depth - standard
option 7:1/2"-13UNC-2B
option 3: same as option7

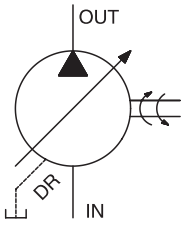
Flushing port L3: G1/2" standard
Option 7: M22xP1.5, ISO6149-1
Option 3: 7/8"-14 UNF

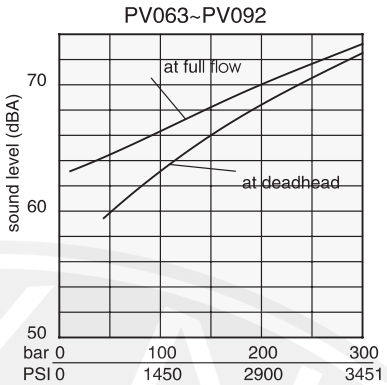
PV032 ~ PV046 Dimensions									
Mounting			ΦA	ΦB	C	D	ΦE	F	H
M(standard)	Metric	ISO3019/2 Splined,DIN5480	Φ32	Φ125 h8	10x8x56	9	160	14	68
N	Inch	ISO3019/2 Cylindric,key	Φ31.75(1.25″)	Φ127(5″)	7.94x7.94x56 (5/16″)	12.7(0.5″)	161.93(6.38″)	14(0.55″)	68(2.68″)
Mounting			Shaft		ΦB	D	ΦE	F	H
K(standard)	Metric	ISO3019/2 Cylindric,key	Splined W32x1.5x20x8f DIN 5480		Φ125 h8	9	160	14	47
D	Inch	ISO3019/1 Splined,SAE	Splined 14T 12/24 DP,flat root,side fit ANSI B92.1		Φ127(5″)	12.7(0.5″)	161.93(6.38″)	14(0.55″)	56(2.31″)
D1	Inch	ISO3019/1 Splined,SAE	Splined 15T 16/32 DP,flat root,side fit ANSI B92.1		Φ127(5″)	12.7(0.5″)	161.93(6.38″)	14(0.55″)	56(2.31″)

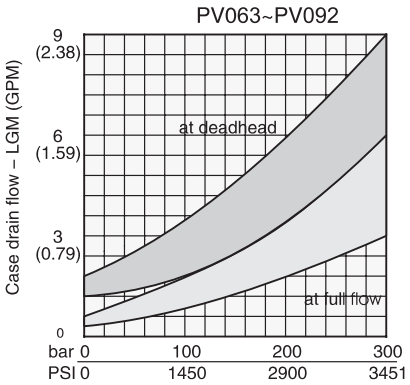
Remark: Threading option 3 and 7 are not in stock, manufacture by order only.

PV 063 - PV 092 Variable Displacement Piston Pump

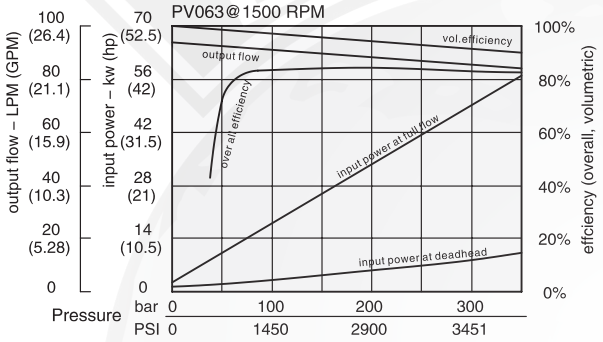


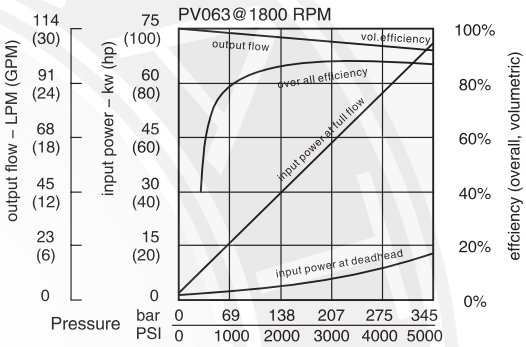


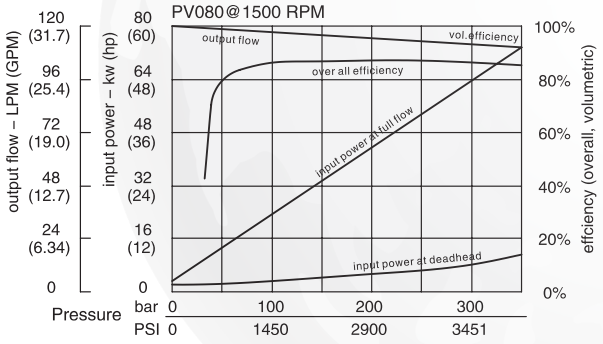


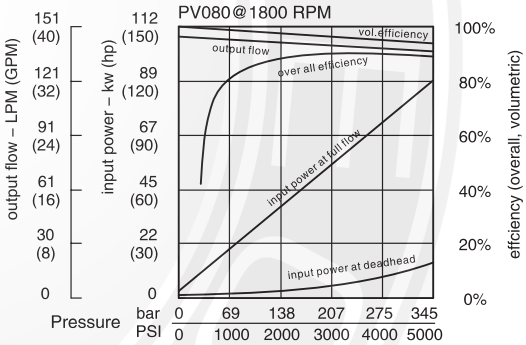


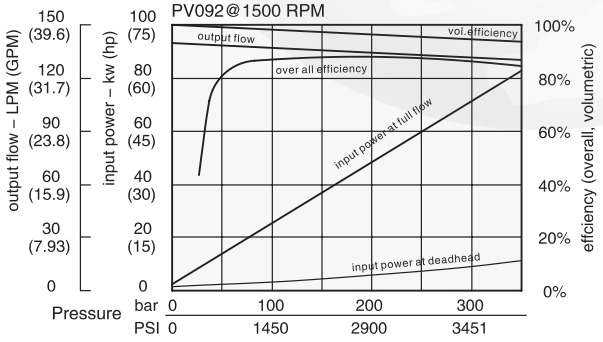
TYPICAL PERFORMANCE CHARACTERISTICS

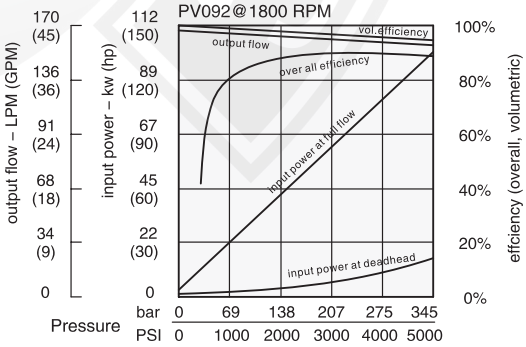












Remark:

1. Darin oil of pump will flow back to tank through drain port.
2. For those pilot controlled compensator, if the control flow also pass through pump, then drain oil will increase for 1.0 to 1.2 l/min.
3. The values show below were got from static testing. Under dynamic conditions, drain oil come from rapid acting compensator will also pass drain port and back to tank. The volume of drain oil could be 80 l/min.

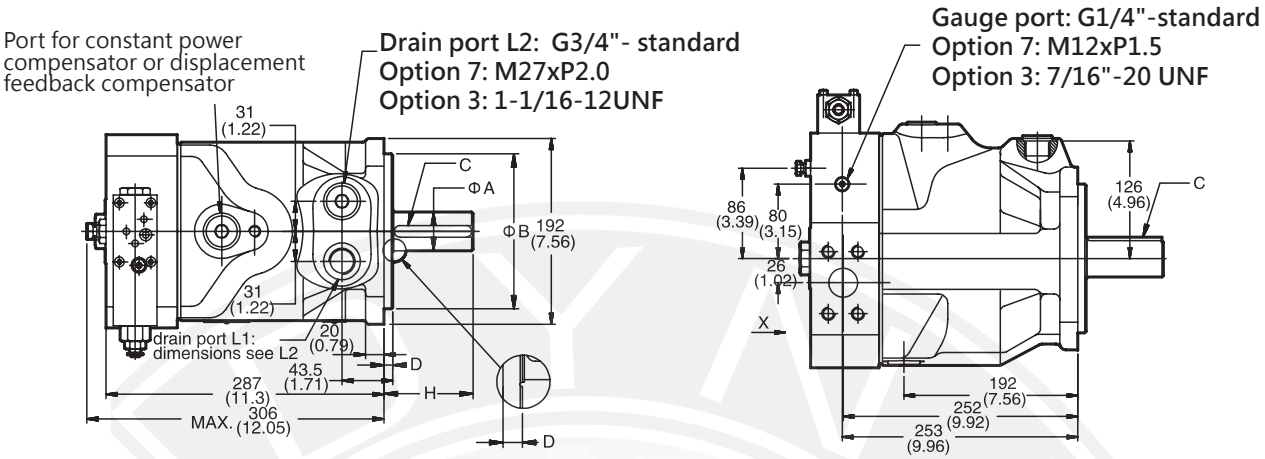
Test Conditions:

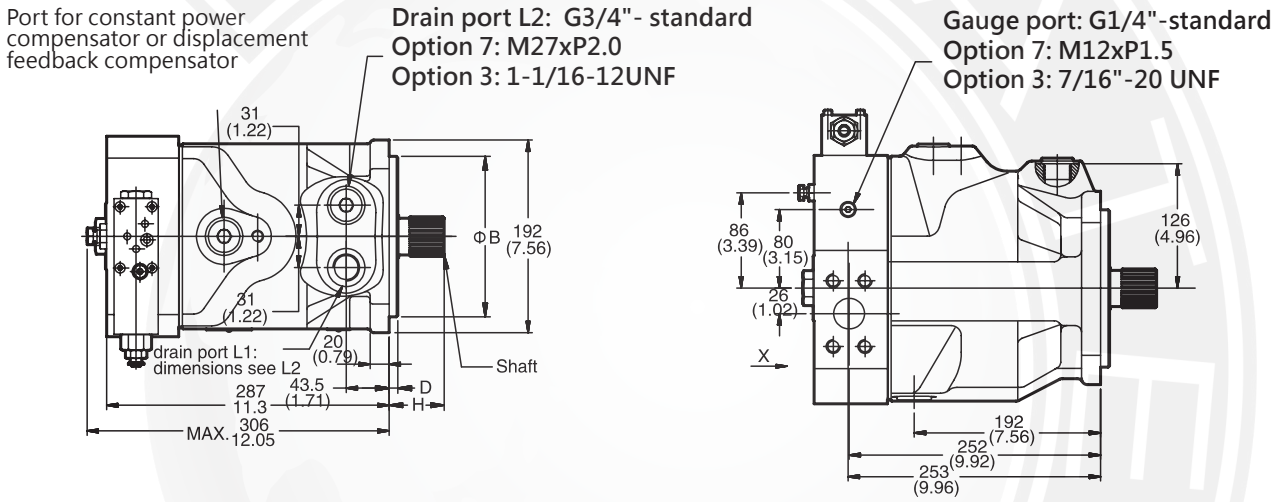
Rotation Speed: "---" n=1500 rpm, "——" n=1800 rpm.
Oil temperature: 50℃
Fluid: mineral oil, ISO VG46

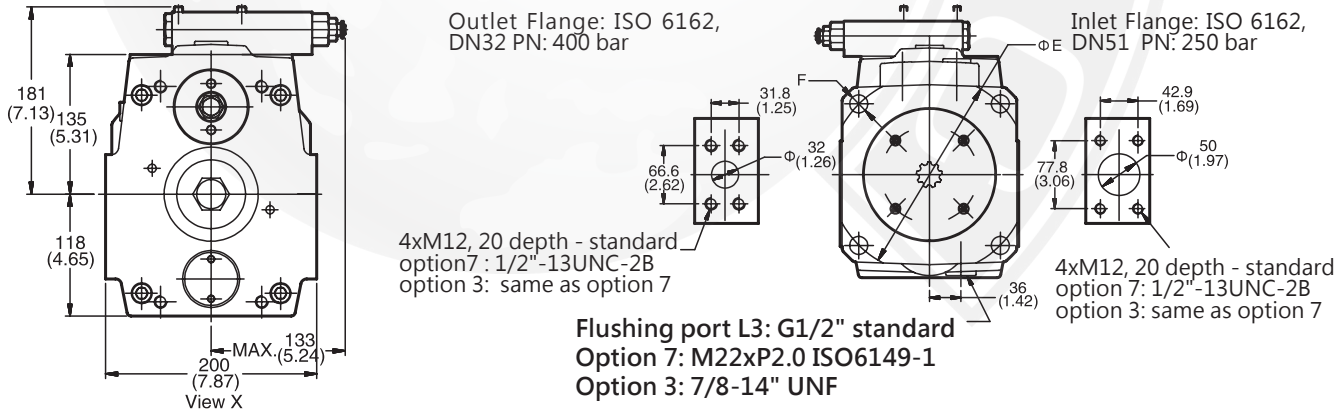
PV 063 - PV 092 Variable Displacement Piston Pump

DIMENSIONS:

Mounting type: M, N



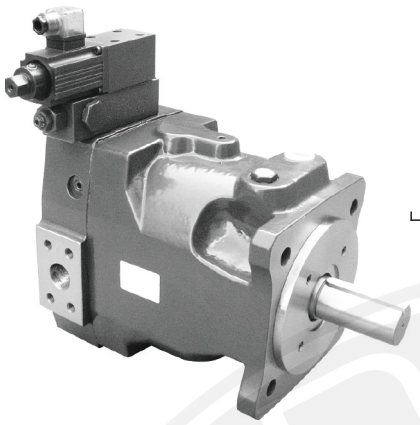


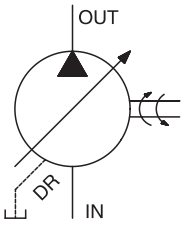


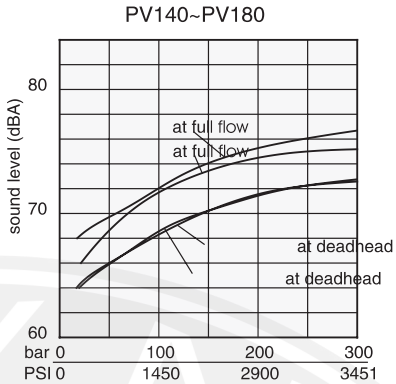
PV063～PV092 Dimensions									
Mounting			ΦA	ΦB	C	D	ΦE	F	H
M(standard)	Metric	ISO3019/2 Splined,DIN5480	Φ40	Φ160 h8	12x8x80	9	200	18	92
N	Inch	ISO3019/2 Cylindric,key	Φ44.45(1.75″)	Φ152.4(6″)	11.11x11.11x80 (7/16″)	12.7(0.5″)	228.6(9″)	20.6(0.81″)	90(3.54″)
Mounting			Shaft		ΦB	D	ΦE	F	H
K(standard)	Metric	ISO3019/2 Cylindric,key	Splined W40x1.5x25x8f DIN 5480		Φ160 h8	9	200	18	56
D	Inch	ISO3019/1 Splined,SAE	Splined 15T16/32DP,flat root,side fit ANSI B92.1		Φ152.4(6″)	12.7(0.5″)	228.6(9″)	20.6(0.81″)	75(2.95″)

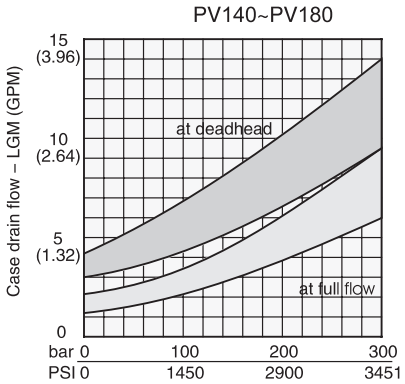
Remark: Threading option 3 and 7 are not in stock, manufacture by order only.

PV 140 - PV 180 Variable Displacement Piston Pump

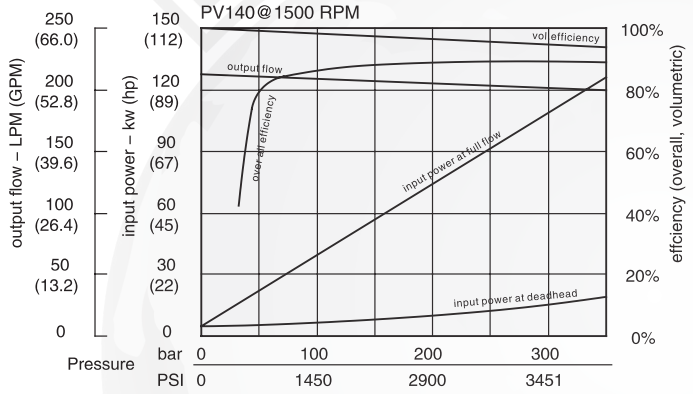


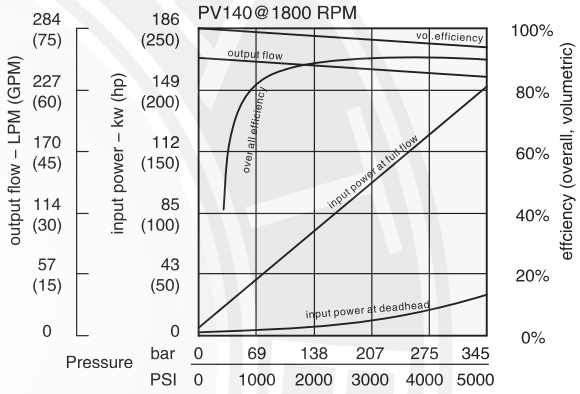


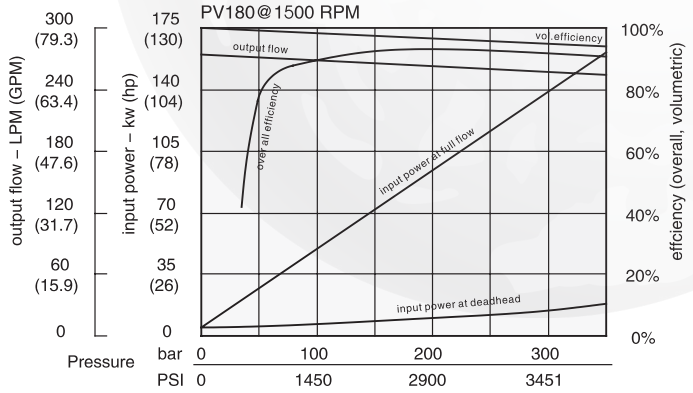


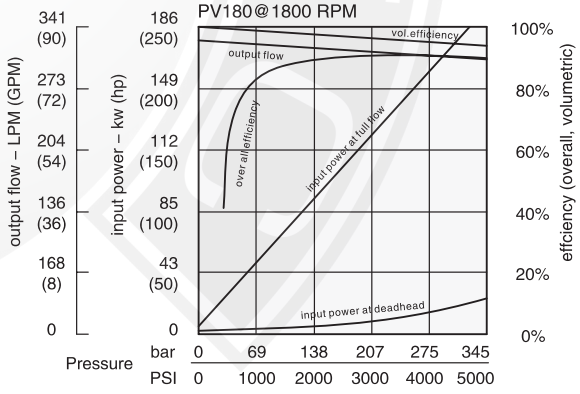


TYPICAL PERFORMANCE CHARACTERISTICS









Remark:

1. Darin oil of pump will flow back to tank through drain port.
2. For those pilot controlled compensator, if the control flow also pass through pump, then drain oil will increase for 1.0 to 1.2 l/min.
3. The values show below were got from static testing. Under dynamic conditions, drain oil come from rapid acting compensator will also pass drain port and back to tank. The volume of drain oil could be 120 l/min.

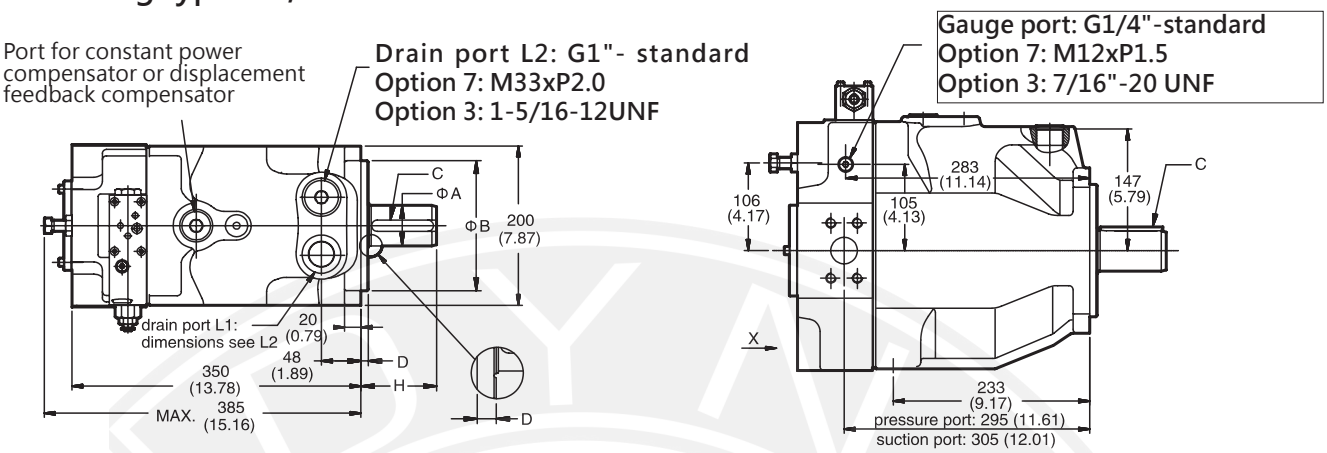
Test Conditions:

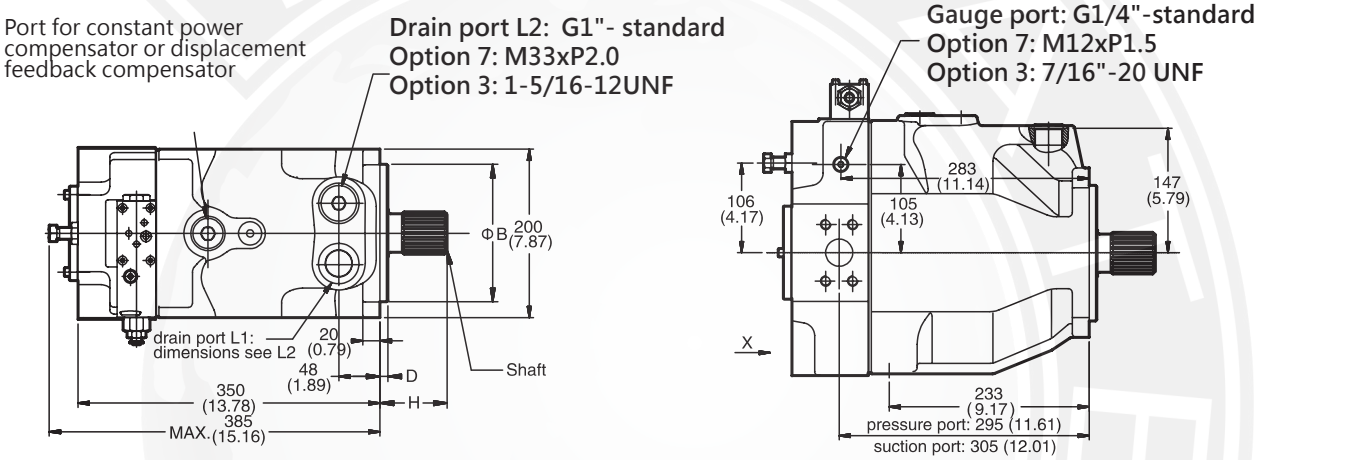
Rotation Speed: "---" n=1500 rpm, "___ " n=1800 rpm.
Oil temperature: 50℃
Fluid: mineral oil, ISO VG46

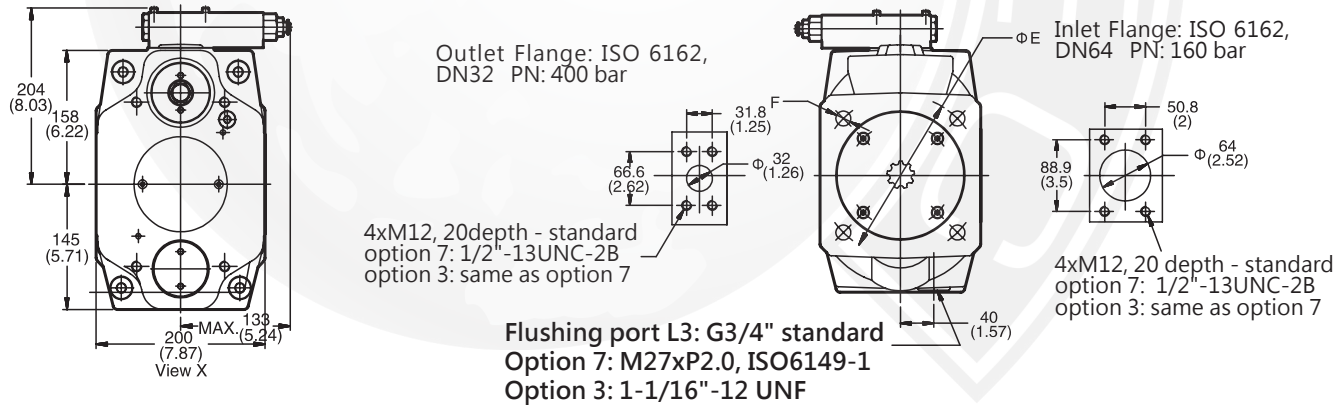
PV 140 - PV 180 Variable Displacement Piston Pump

■ DIMENSIONS:

Mounting type: M, N



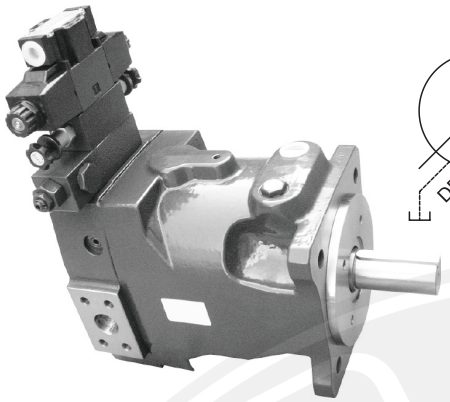


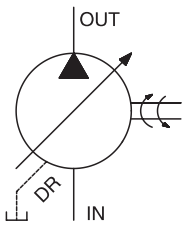


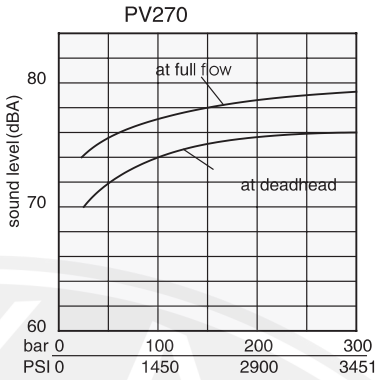
PV140～PV180 Dimensions									
Mounting			ΦA	ΦB	C	D	ΦE	F	H
M(standard)	Metric	ISO3019/2 Splined,DIN5480	Φ50	Φ160 h8	14x9x75	9	200	18	92
N	Inch	ISO3019/2 Cylindric,key	Φ50.8(2″)	Φ152.4(6″)	12.7x12.7x75 (1/2″)	12.7(0.5″)	228.6(9″)	20.6(0.81″)	99.4(3.91″)
F	Inch	ISO3019/2 Splined,DIN5480	Φ44.45	Φ152.4(6″)	11.11x11.11	12.7(0.5″)	228.6(9″)	20.6(0.81″)	75(2.95″)
Mounting			Shaft		ΦB	D	ΦE	F	H
K(standard)	Metric	ISO3019/2 Cylindric,key	Splined W50x2x24x8f DIN 5480		Φ160 h8	9	200	18	78
D	Inch	ISO3019/1 Splined,SAE	Splined 15T 8/16 DP,flat root,side fit ANSI B92.1		Φ152.4(6″)	12.7(0.5″)	228.6(9″)	20.6(0.81″)	88(3.46″)
G	Inch	ISO3019/1 Splined,SAE	Splined 13T 8/16 DP,flat root,side fit ANSI B92.1		Φ152.4(6″)	12.7(0.5″)	228.6(9″)	20.6(0.81″)	75(2.95″)

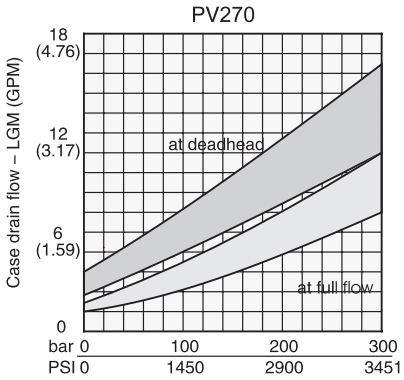
Remark: Threading option 3 and 7 are not in stock, manufacture by order only.

PV 270 Variable Displacement Piston Pump

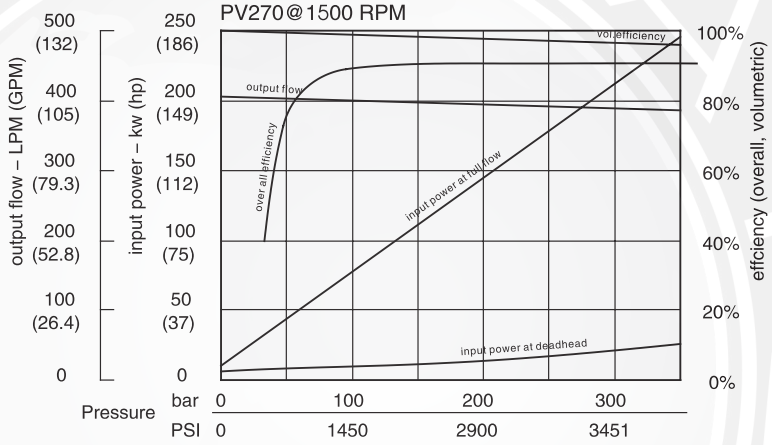


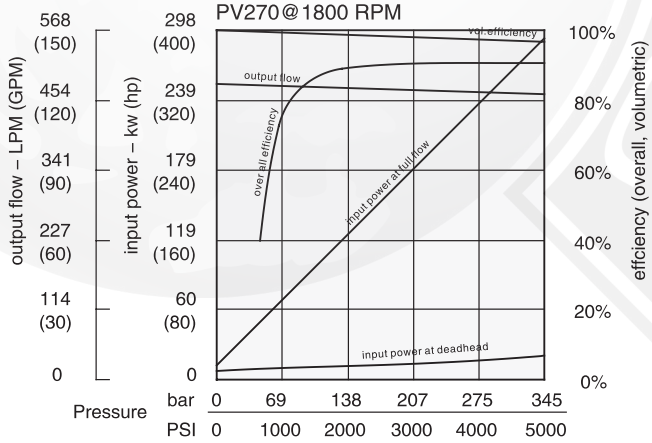






TYPICAL PERFORMANCE CHARACTERISTICS





Remark:

1. Darin oil of pump will flow back to tank through drain port.
2. For those pilot controlled compensator, if the control flow also pass through pump, then drain oil will increase for 1.0 to 1.2 l/min.
3. The values show below were got from static testing. Under dynamic conditions, drain oil come from rapid acting compensator will also pass drain port and back to tank. The volume of drain oil could be 120 l/min.

Test Conditions:

Rotation Speed: "---" n=1500 rpm, " ___ " n=1800 rpm.
Oil temperature: 50℃
Fluid: mineral oil, ISO VG46

PV 270 Variable Displacement Piston Pump

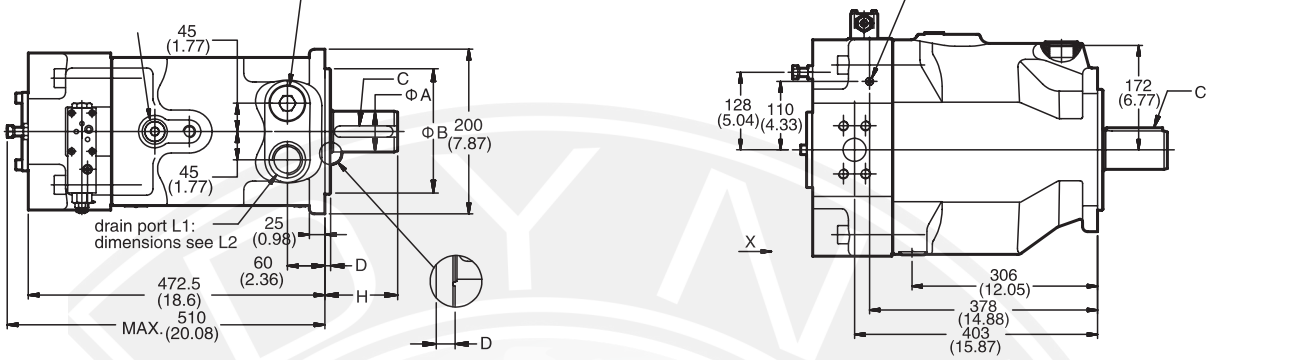
DIMENSIONS:

Mounting type: M, N

Port for constant power compensator or displacement feedback compensator

Drain port L2:G1-1/4" - standard
Option 7: M42xP2.0
Option 3: 1-5/8-12UNF

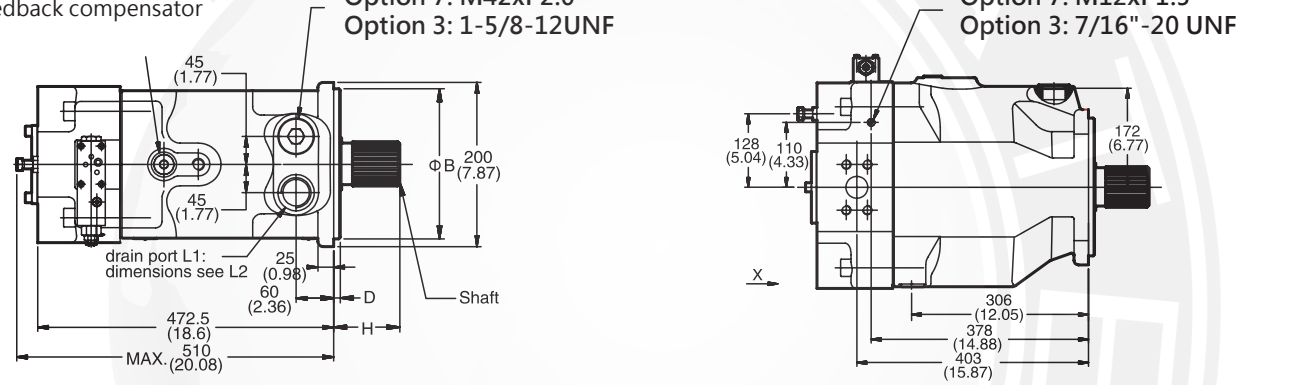
Gauge port: G1/4" -standard
Option 7: M12xP1.5
Option 3: 7/16"-20 UNF

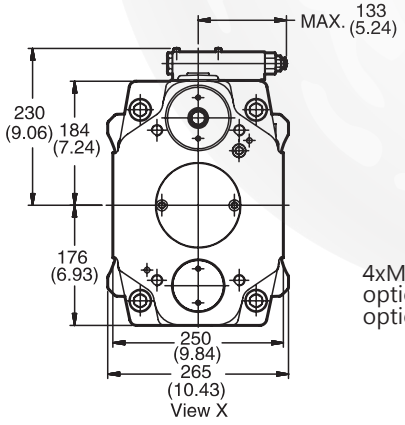


Port for constant power compensator or displacement feedback compensator

Drain port L2: G1-1/4"- standard
Option 7: M42xP2.0
Option 3: 1-5/8-12UNF

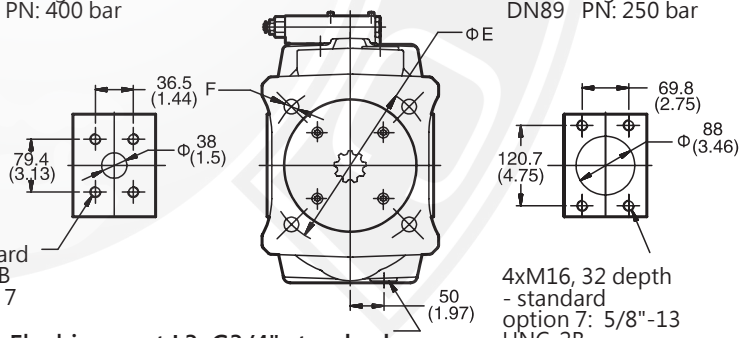
Gauge port: G1/4"-standard
Option 7: M12xP1.5
Option 3: 7/16"-20 UNF





Outlet Flange: ISO 6162,
DN38 PN: 400 bar

Inlet Flange: ISO 6162,
DN89 PN: 250 bar



4xM16, 32 depth - standard
option 7: 5/8"-11UNC-2B
option 3: same as option 7

Flushing port L3: G3/4" standard
Option 7: M27xP2.0, ISO6149-1
Option 3: 1-1/16"-12 UNF

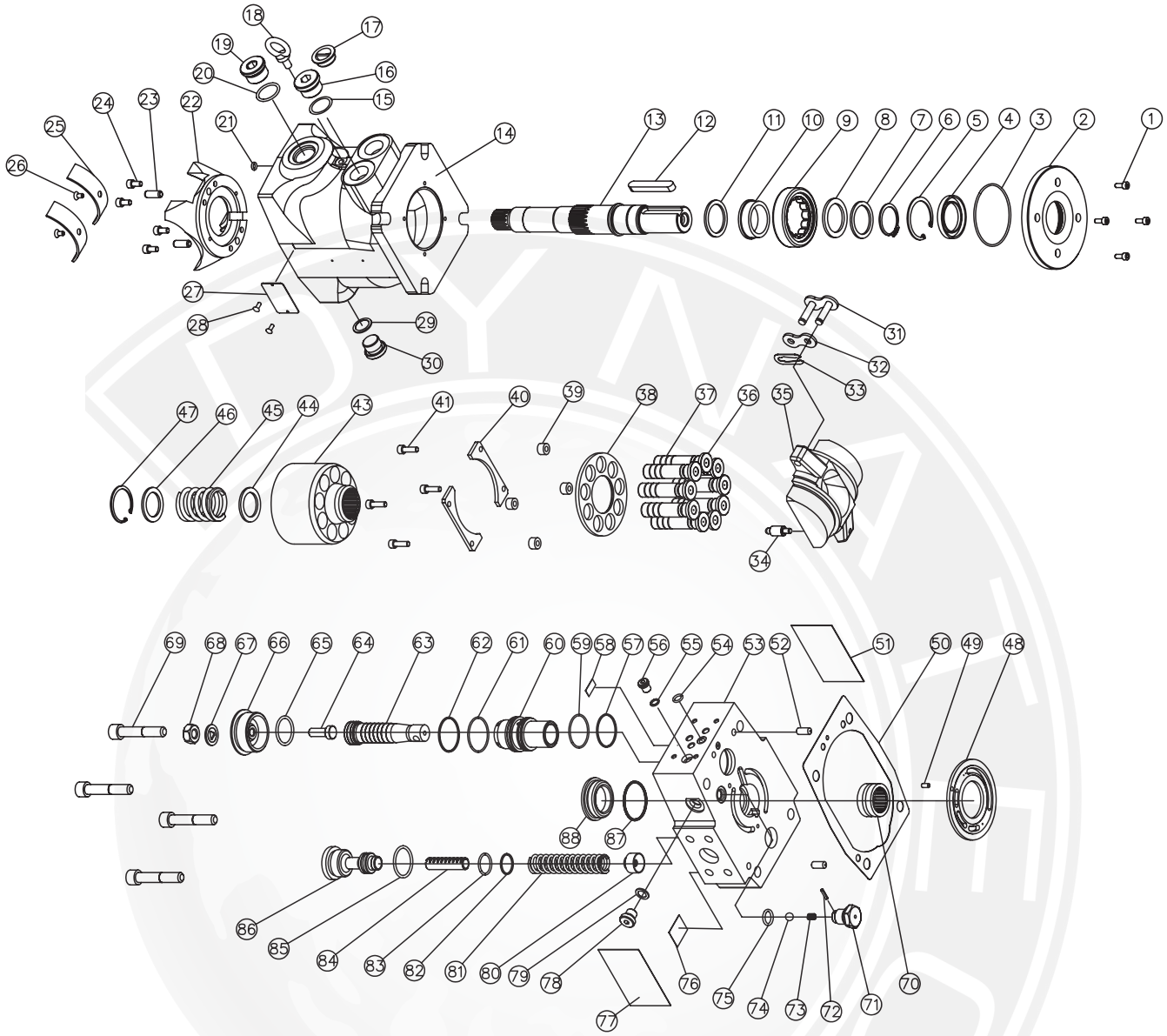
4xM16, 32 depth
- standard
option 7: 5/8"-13
UNC-2B
option 3: same as
option 7

PV270 Dimensions								
Mounting			ΦA	ΦB	C	D	ΦE	F	H
M(standard)	Metric	ISO3019/2 Splined,DIN5480	Φ65	Φ200 h8	18x11x98	9	250	22	115
N	Inch	ISO3019/2 Cylindric,key	Φ50.8(2″)	Φ165.1(6.5″)	12.7x12.7x75 (1/2″)	15.9(0.37″)	317.5(12.5″)	20.6(0.81″)	97.5(3.84″)
Mounting			Shaft		ΦB	D	ΦE	F	H
K(standard)	Metric	ISO3019/2 Cylindric,key	Splined W60x2x28x8f DIN 5480		Φ200 h8	9	250	22	80
D	Inch	ISO3019/1 Splined,SAE	Splined 15T 8/16 DP,flat root,side fit ANSI B92.1		Φ165.1(6.5″)	15.9(0.37″)	317.5(12.5″)	20.6(0.81″)	88(3.46″)

Remark: Threading option 3 and 7 are not in stock, manufacture by order only.

PV Axial Piston Pump

Assembly & Parts List :



No.	DescriptionIm	Quantity	No.	DescriptionIm	Quantity	No.	DescriptionIm	Quantity	No.	DescriptionIm	Quantity
1	Head cap screw	4	23	Pin	2	46	Washer	1	68	Piston nut	1
2	Pilot cover	1	24	Screw	4	47	Snap ring	1	69	Screw	1
3	O–ring	1	25	Trunnion bearing	2	48	Valve plate	1	70	Trunnion bearing	1
4	Shaft seal	1	26	Screw	2	49	Pin	1	71	Plug	1
5	Snap ring	1	27	Rotation indicator	1	50	Seal	1	72	Pin	1
6	Snap ring	1	28	Rivet	2	51	Seal	1	73	Spring	1
7	Washer	1	29	O–ring	1	52	Pin	1	74	Ball	1
8	Washer	1	30	Plug	1	53	Pump body	2	75	O–ring	2
9	Roller bearing	1	31	Chain link	1	54	O–ring	1	76	Label	1
10	Roller bearing	1	32	Chain link	1	55	O–ring	1	77	Seal	1
11	Roller bearing	1	33	Chain link	1	56	Plug	1	78	Plug	1
12	Key	1	34	Connector servo spring	1	57	O–ring	1	79	O–ring	1
13	Shaft	1	35	Swash plate	1	58	Label	1	80	Washer	1
14	Pump body	1	36	Piston	9	59	O–ring	1	81	Spring	1
15	O–ring	1	37	Piston	9	60	Servo piston sleeve	1	82	O–ring	1
16	Plug	1	38	Slipper segment	1	61	O–ring	1	83	O–ring	1
17	Plug	1	39	Washer	4	62	O–ring	1	84	Pin	1
18	Ring	1	40	Retainer segment	2	63	Serve piston	1	85	O–ring	1
19	Plug	1	41	Screw	4	64	Set screw	1	86	Screw	1
20	O–ring	1	43	Cylinder block	1	65	O–ring	1	87	O–ring	1
21	O–ring	1	44	Washer	1	66	Piston cover	1	88	Spring cover	1
22	Cradle	1	45	Spring	1	67	Washer	1			