YEOSHE

Hydraulic Piston Pump

PV Series

www.yeoshehydraulic.com

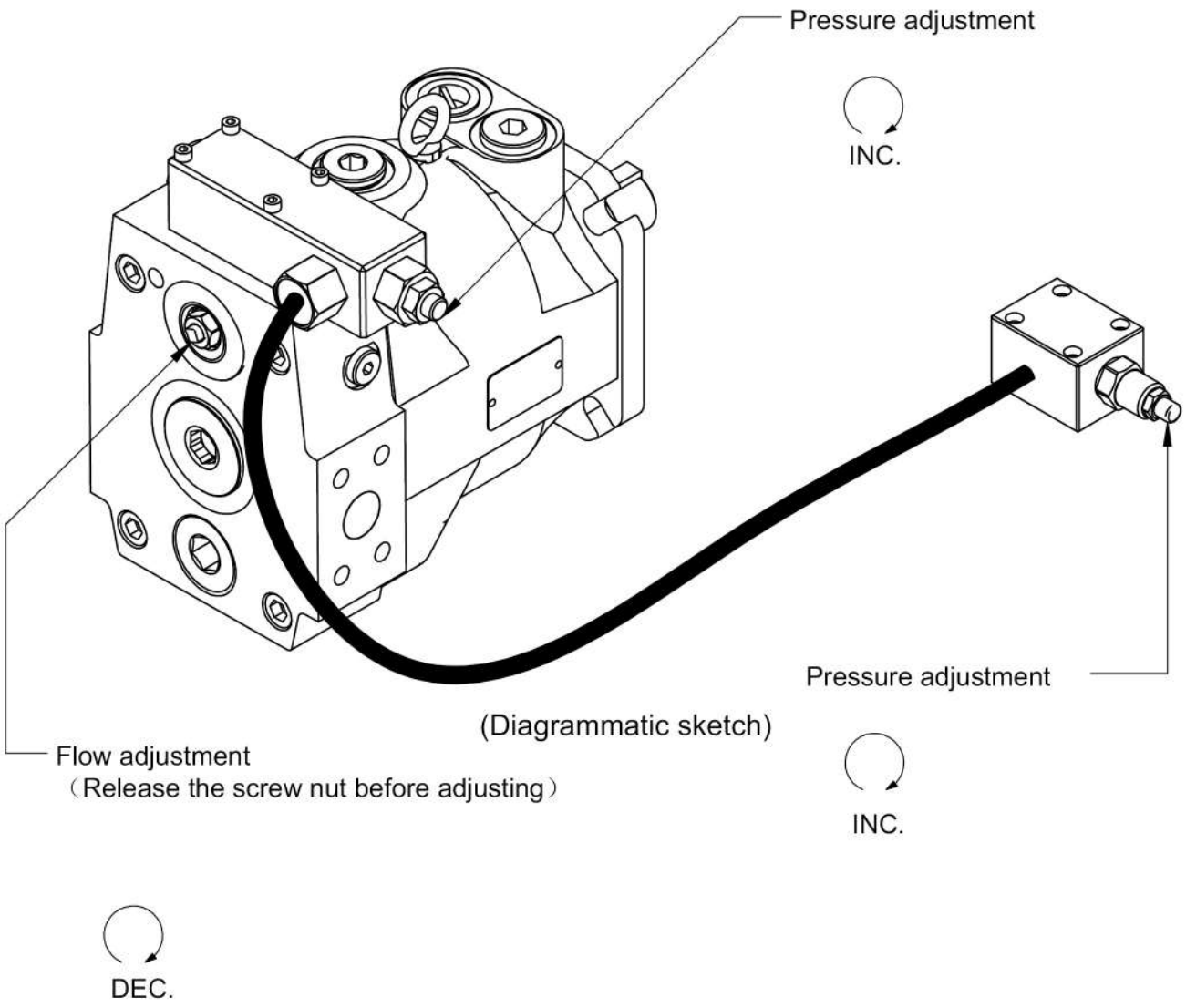
Efficient Performance

Innovative Technology

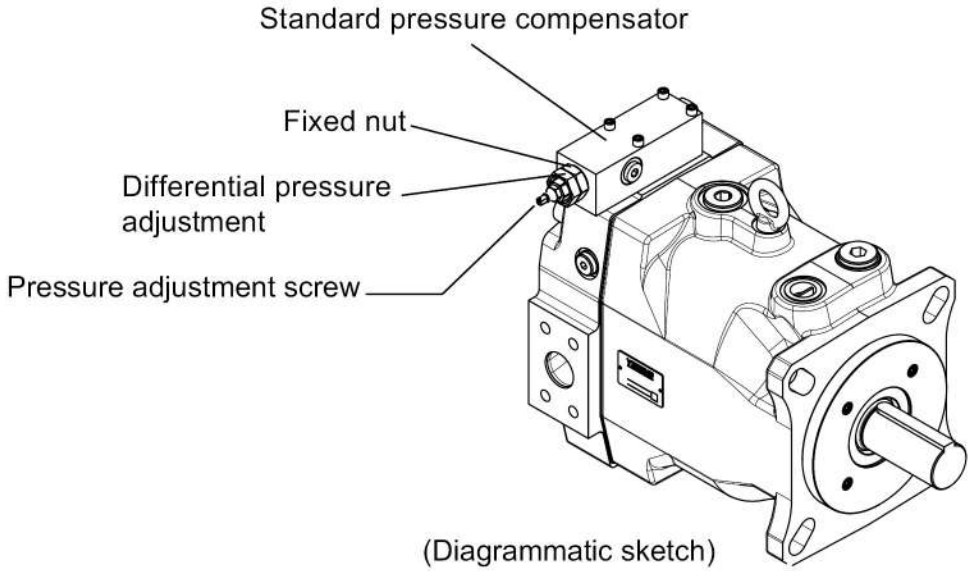
Reliable Quality and Service

YEOSHE HYDRAULICS CO.,LTD.

Pressure & Flow Adjustment



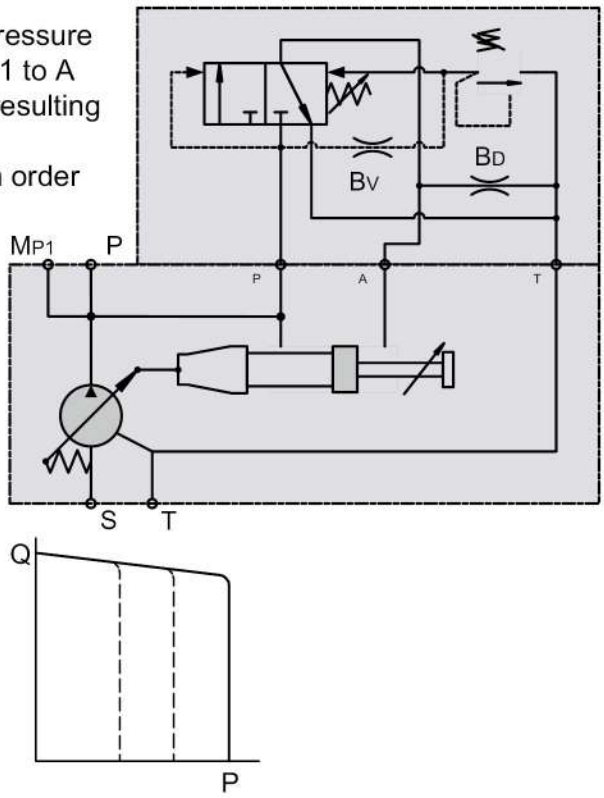
A0 Standard pressure compensator



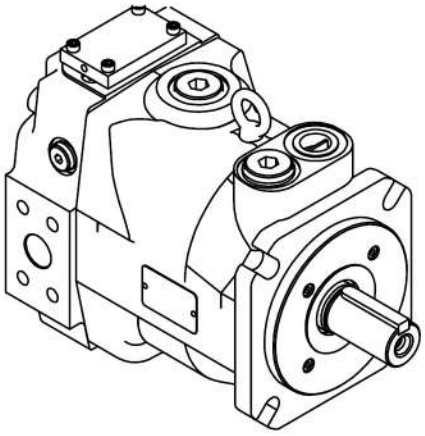
(Diagrammatic sketch)

A0 Standard pressure compensator

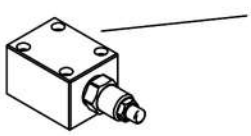
The standard pressure compensator adjusts the pump displacement according to the actual need of the system in order to keep the pressure constant.
As long as the system pressure at outlet port P is lower than the set pressure (set as spring preload of the compensator spring) the working port A of the compensator valve is connected to the case drain and the piston area is unloaded. Bias spring and system pressure on the annulus area keep the pump at full displacement.
When the system pressure reaches the set pressure the compensator valve spool connects port P1 to A and builds up a pressure at the servo piston resulting in a downstroking of the pump.
The displacement of the pump is controlled in order to match the flow requirement of the system.



LN None pressure compensator (fixed displacement) (pressure protection required)



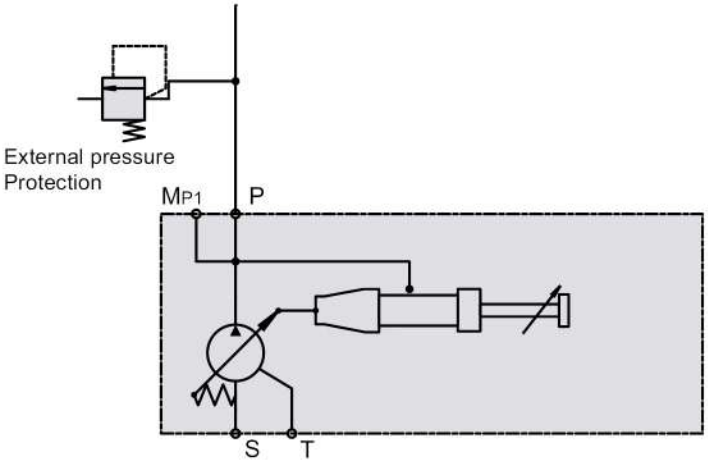
(Diagrammatic sketch)

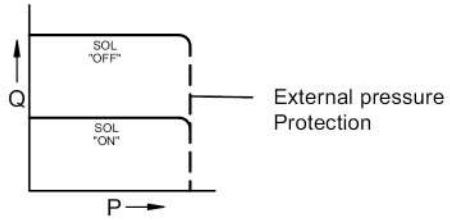


LN None pressure compensator
(fixed displacement) (pressure protection required)

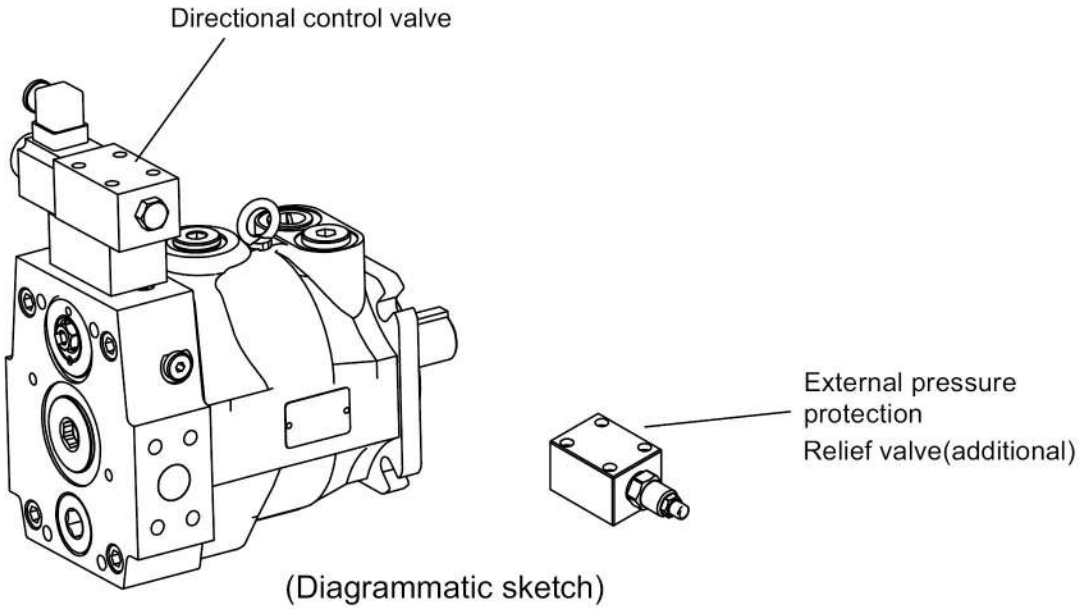
By using the system under stable displacement and pressure situation, standard pressure compensator can be omitted which helps cost down.

Notice:
External pressure protection is necessarily added at port PM to limit the pressure;otherwise the system pressure will be over high .





LS Electrical 2-stage flow compensator (pressure protection required)

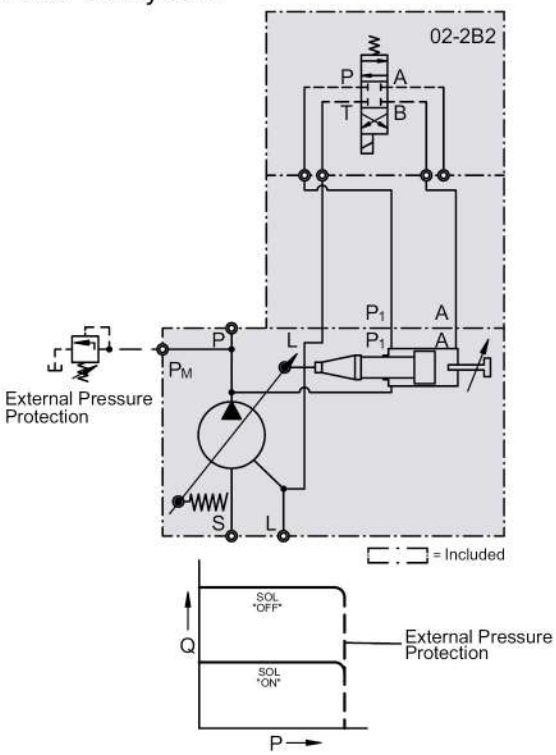


(Diagrammatic sketch)

LS Electrical 2-stage flow compensator
(pressure protection required)

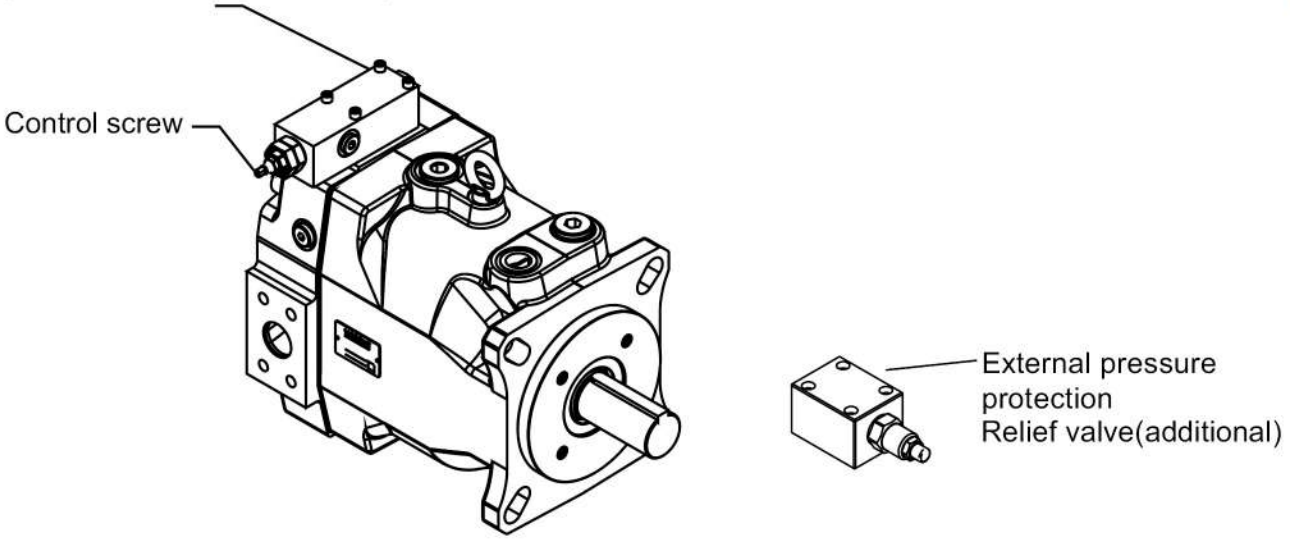
Control the hydraulic circuit change by suing directional control valve.
LS control is applied to two-stage stroke and different speed system.

Notice:
External pressure protection is necessarily added at port PM to limit the pressure; otherwise the system pressure will be over high.



LC Fixed displacement 2-stage flow compensator (pressure protection required)

Fixed displacement 2-stage flow compensator
(pressure protection required)

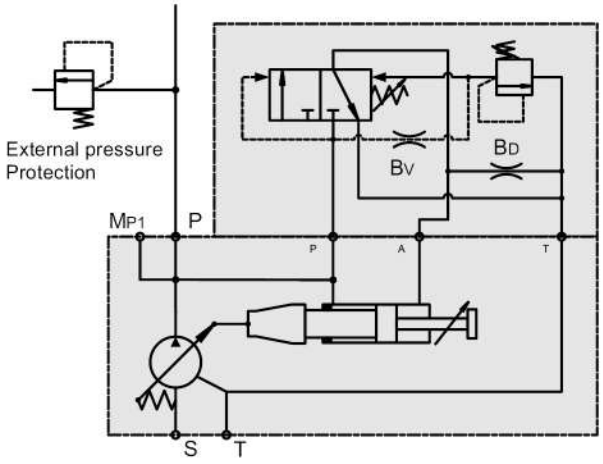


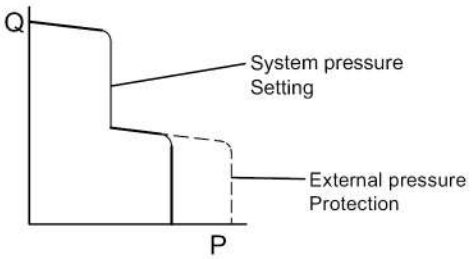
(Diagrammatic sketch)

LC Fixed displacement 2-stage flow compensator
(pressure protection required)

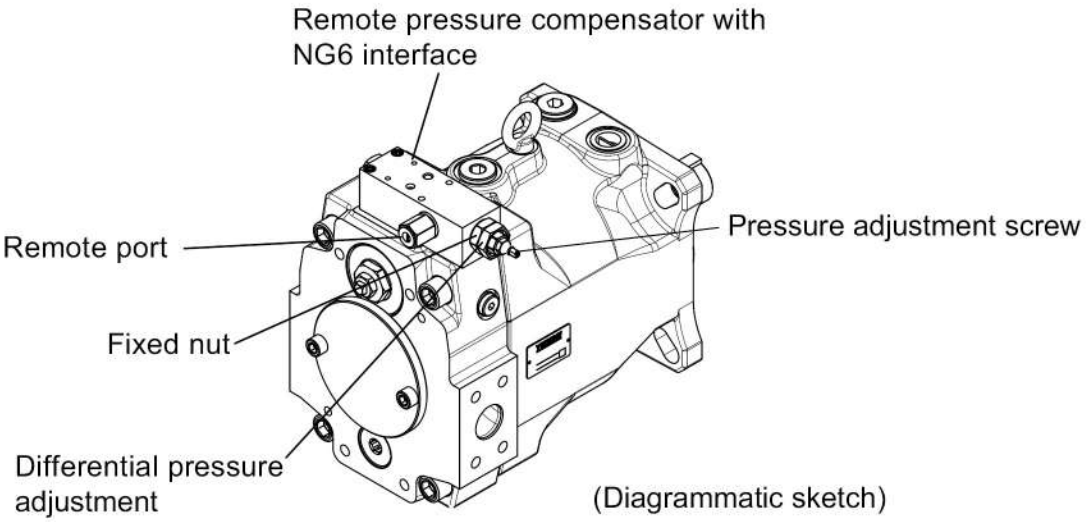
Control the hydraulic circuit change by using the system pressure setting to achieve the switch of big and small flow.
LS control is applied to two-stage stroke and different speed system.

Notice:
External pressure protection is necessarily added at port PM to limit the pressure;otherwise the system pressure will be over high.



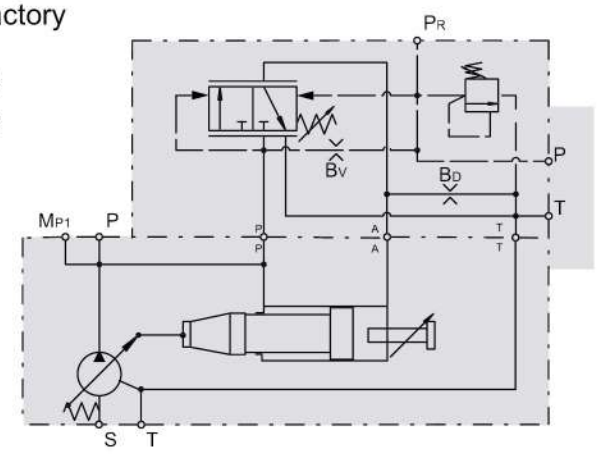


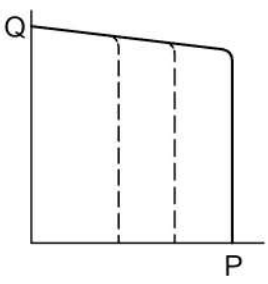
GM Remote pressure compensator with NG6 interface



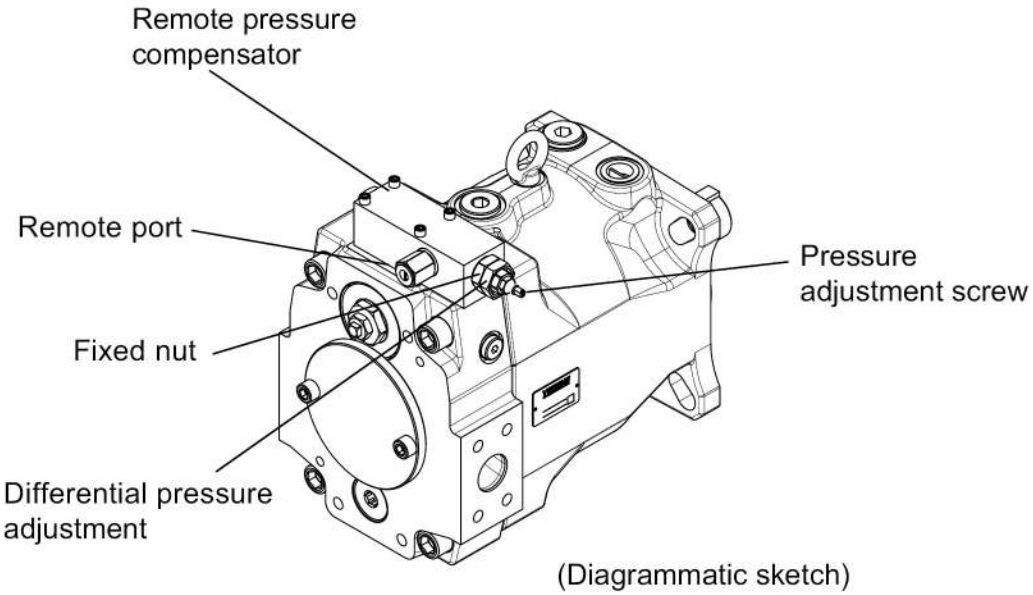
GM Remote pressure compensator with NG6 interface

Version GM of the remote pressure compensator provides on its top side an interface NG6,DIN24340(CETOP 03 at RP35H, NFPA D03) .
This interface allows a direct mounting of a pilot valve. Beside manual or electrohydraulic operated valves, it is also possible to mount complete multiple pressure circuits directly on the compensator body.
YEOSHE offers a variety of these compensator accessories ready to install.
All remote pressure compensator have a factory setting of 15 bar differential pressure.
With this setting, the controlled pressure at the pump outlet is higher than the pressure controlled by the pilot valve.





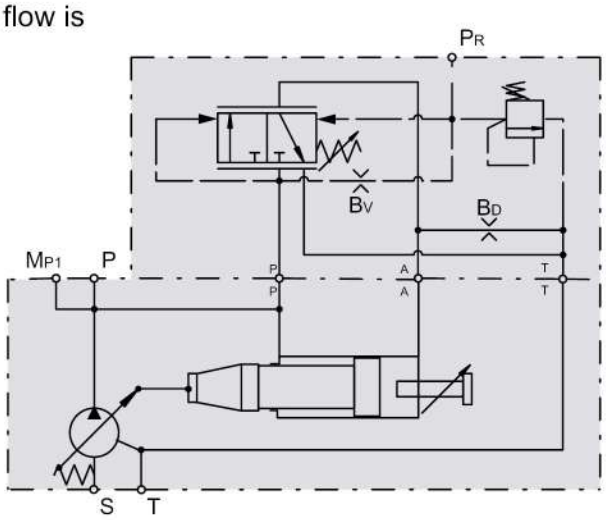
GA Remote pressure compensator + Relief valve

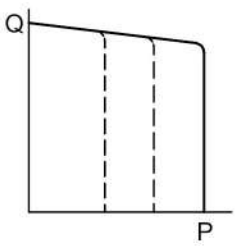


(Diagrammatic sketch)

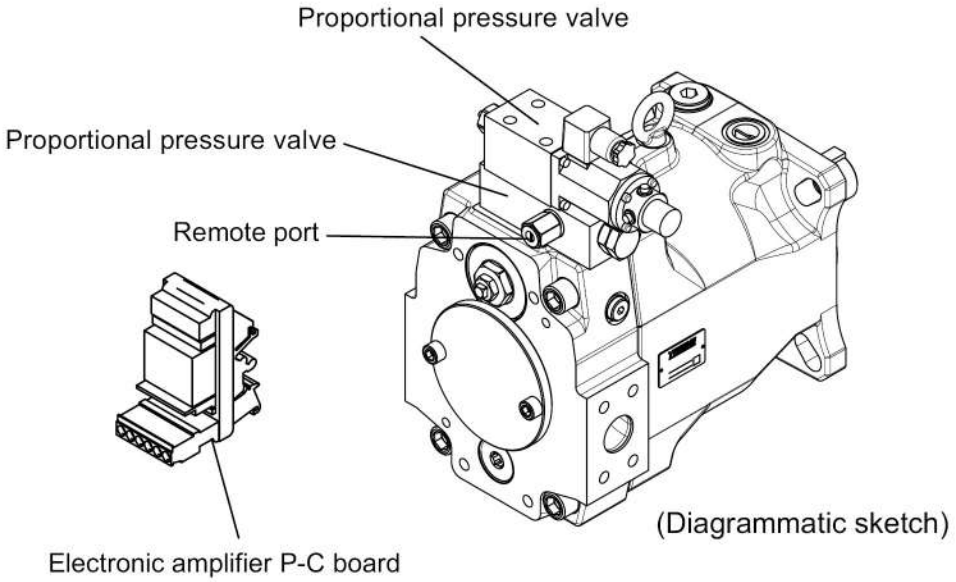
GA Remote pressure compensator + Relief valve

The pressure is set directly at the compensator spring, and the setting of remote pressure compensator can be achieved by any suitable pilot pressure valve connected to pilot port PP.
The pilot valve can be installed remote from the pump in some distance.
That allows pressure setting, e.g. from the control panel of the machine. The pilot flow supply is internal through the valve spool, and the pilot flow is 1~1.5 L/min.





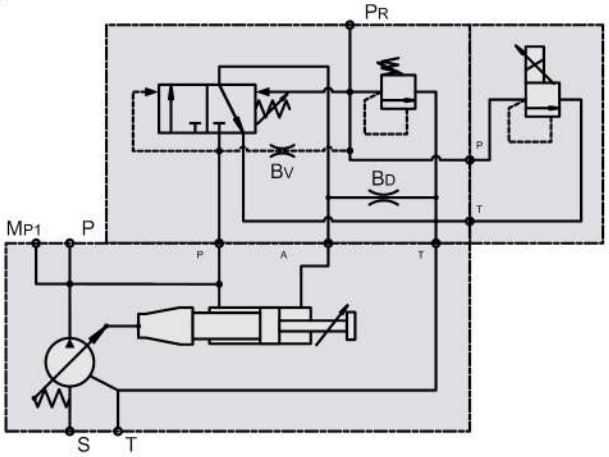
GJ Remote pressure compensator + Proportional pressure valve

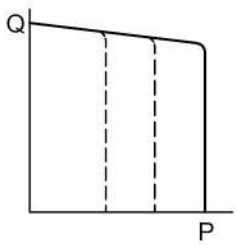


GJ Remote pressure compensator
+ Proportional pressure valve

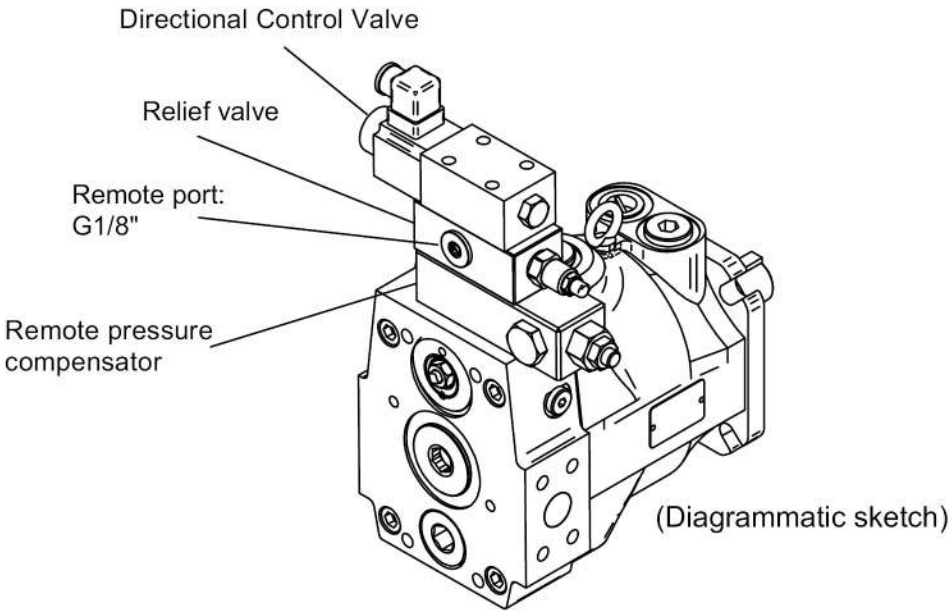
Fulfill the actual displacement and maintain the preset system pressure.
By adding YEOSHE proportional pressure valve, electrical proportional pressure control is available.

※Proportional pressure max.250 bar.
If needing any other pressure range, please contact YEOSHE.



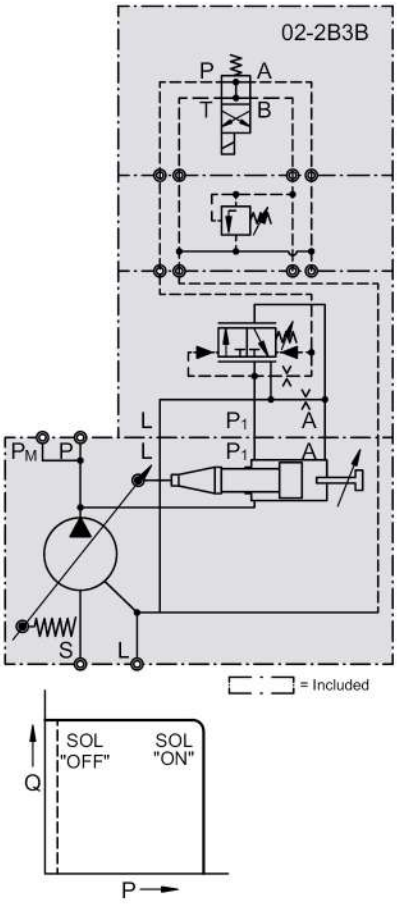


GR Remote pressure compensator + Electrical unloading

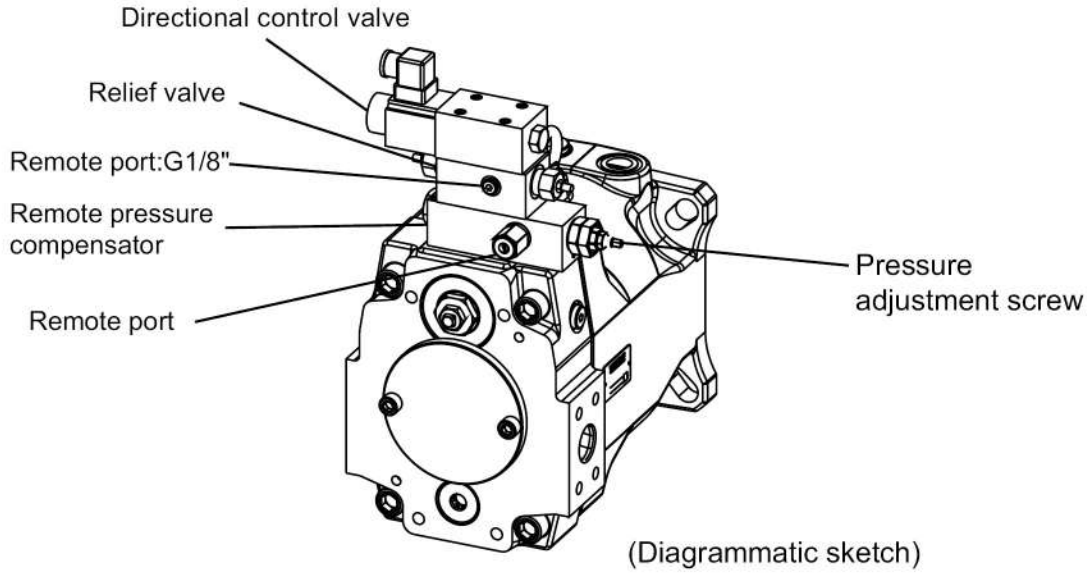


GR Remote pressure compensator + Electrical unloading

By adding a relief valve and a directional control valve on the compensator makes the pump have both function.
GR control is for long unloading situation.
When the system stops, oil temperature and noise maintain low level while being through the unloading.



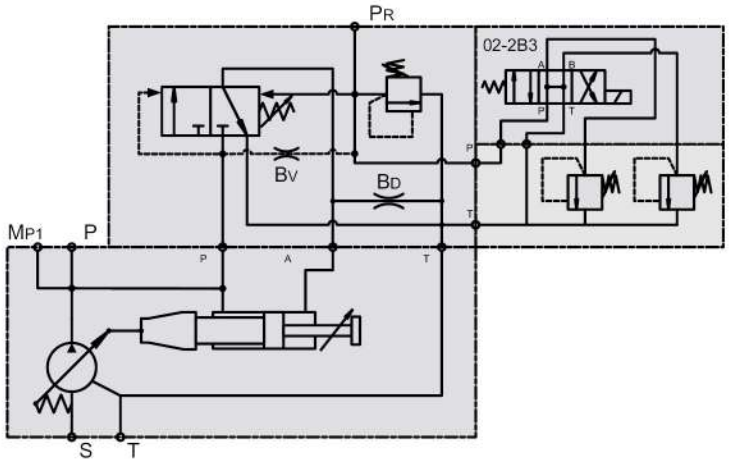
GB Remote pressure compensator + 2-stage pressure control

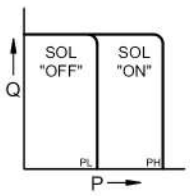


(Diagrammatic sketch)

GB Remote pressure compensator
+ 2-stage pressure control

By adding a relief valve and directional control valve on the compensator makes it adjust two different stage limited pressure.
GB control is for two-stage working pressure under the constant cylinder speed.

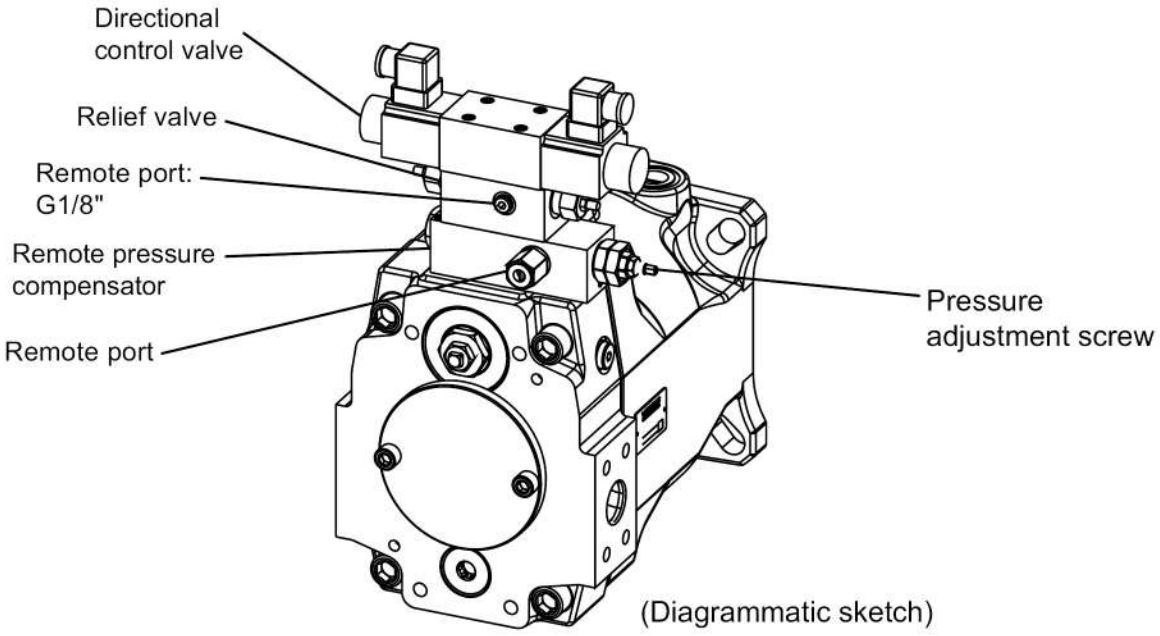




Either PL or PH valve can be high pressure side.

GC Remote pressure compensator + Electrical unloading + 2-stage pressure control

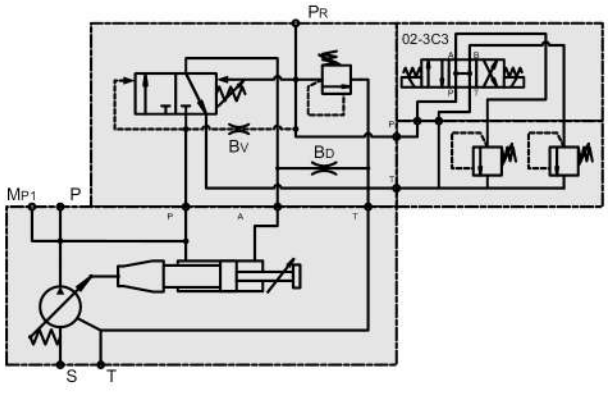
YEOSHE

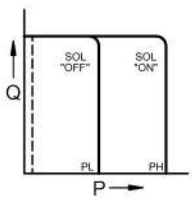


(Diagrammatic sketch)

GC Remote pressure compensator + Electrical unloading + 2-stage pressure control

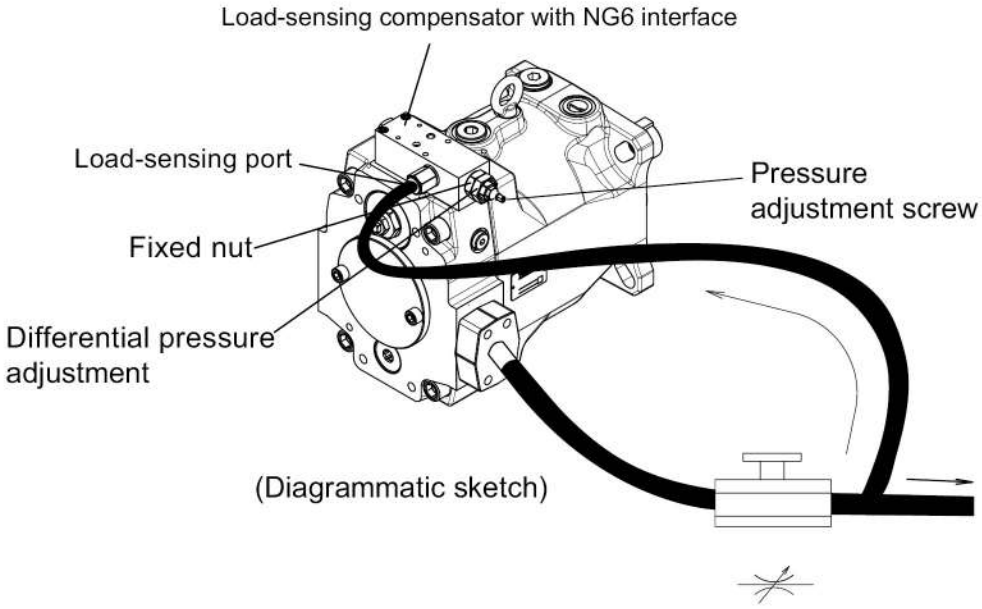
Control two different-stage limited pressure by adding directional control valve, and unloading function.
When the system stops, oil temperature and noise maintain low level by unloading function.
Usable for stable cylinder speed, two-stage pressure, and long unloading situation.





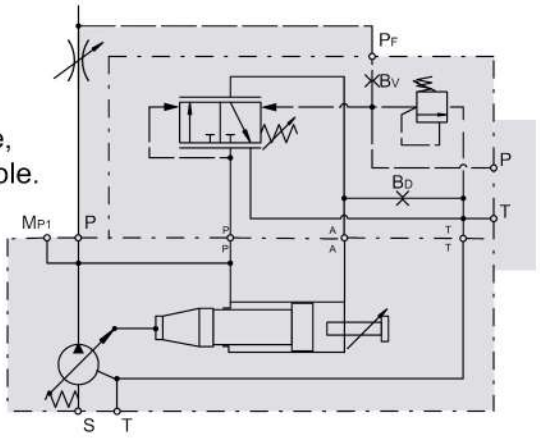
Either PL or PH valve can be high pressure side.

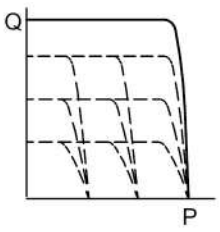
HM Load-sensing compensator with NG6 interface



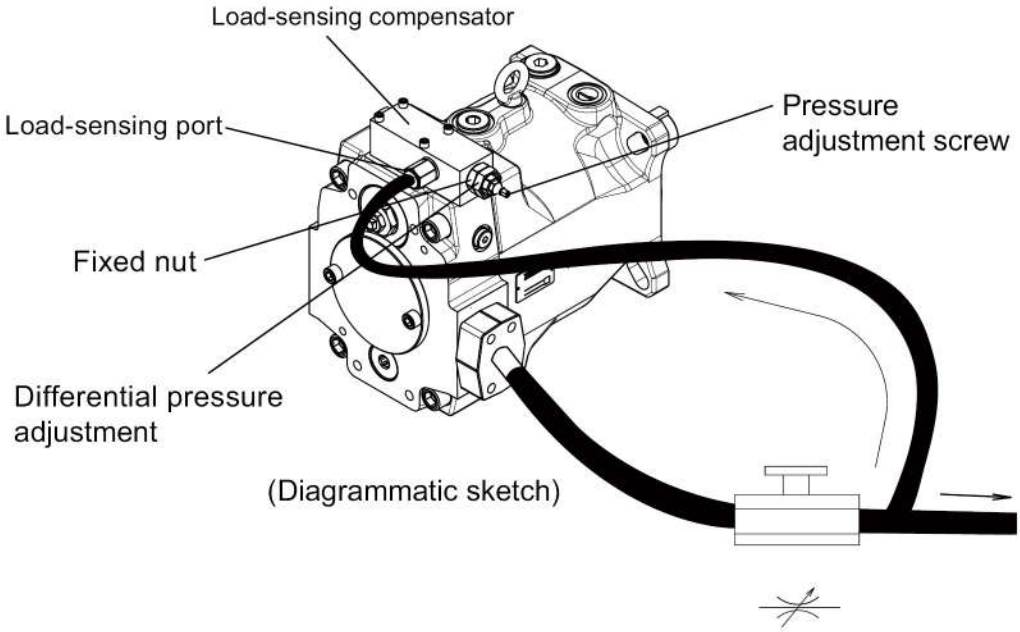
HM Load-sensing compensator with NG6 interface

Version HM of remote pressure compensator provides an interface NG6 on its top side.
The load-sensing compensator has an external pilot pressure supply.
Factory setting for the differential pressure is 10 bar.
The input signal to the compensator is the differential pressure at the main stream resistor.
A load-sensing compensator represents mainly a flow control for the pump output flow, because the compensator keeps the pressure drop at the main stream resistor constant.
A variable input speed or a varying load (-pressure)has consequently no influence on the output flow of the pump and the speed of the actuator.
By adding YEOSHE proportional pressure valve, electrical proportional pressure control is available.



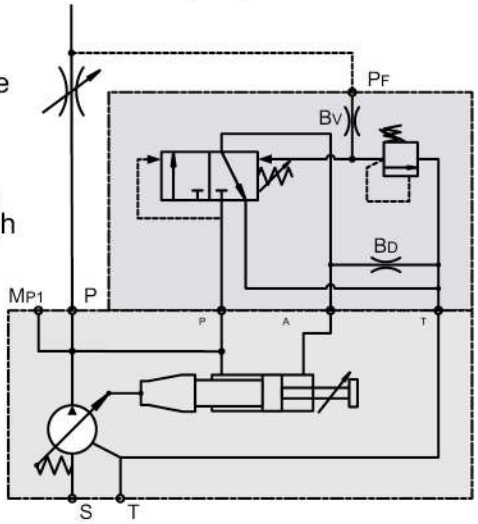


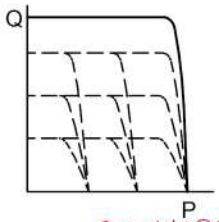
HA Load-sensing compensator + Relief valve



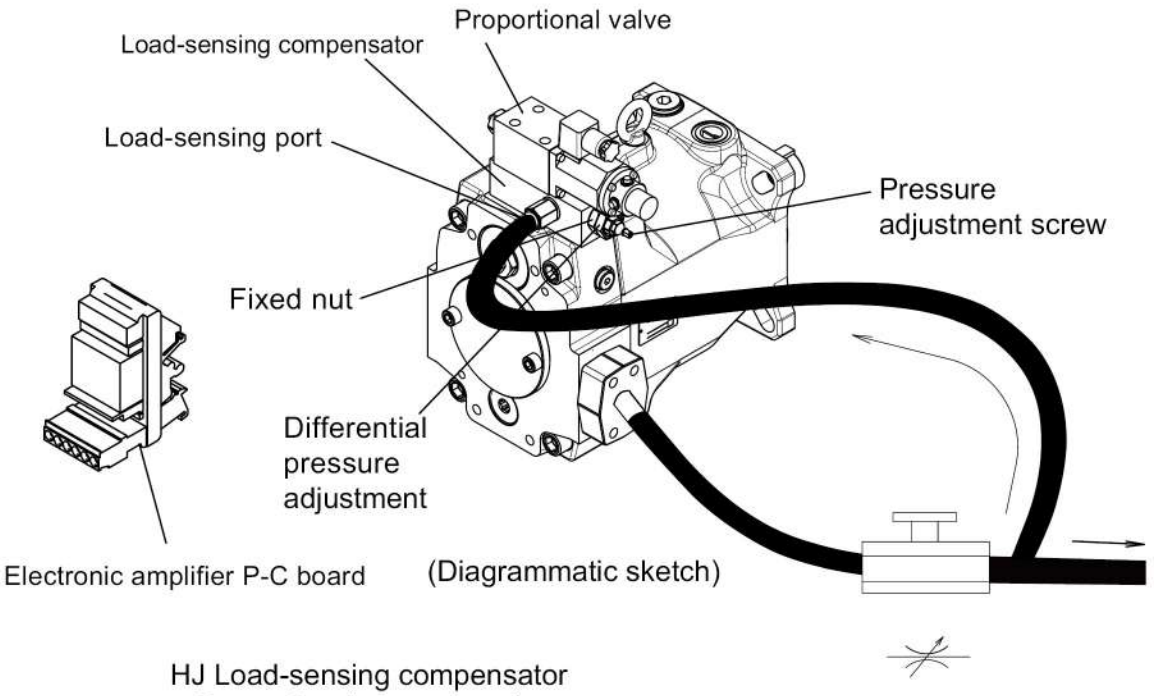
HA Load-sensing compensator + Relief valve

The load-sensing compensator has an external pilot pressure supply.
Factory setting for the differential pressure is 10bar.
The input signal to the compensator is the differential pressure at the main stream resistor.
A load-sensing compensator represents mainly a flow control for the pump output flow, because the compensator keeps the pressure drop at the main stream resistor constant.
A variable input speed or a varying load(-pressure) has consequent no influence on the output flow of the pump and the speed of the actuator.
Relief valve has adjustment function.
The pilot valve can be installed remote form the pump in some distance.
That allows pressure setting, e.g. form the control panel of the machine.
The pilot flow supply is internal through the valve spool, and the pilot flow is 1-1.5 L/min.





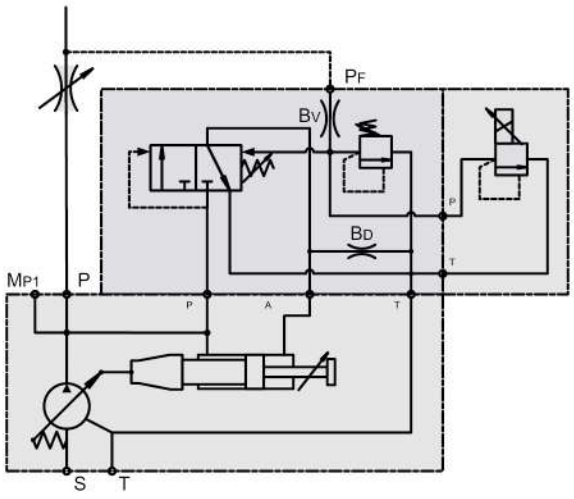
HJ Load-sensing compensator + Proportional pressure valve

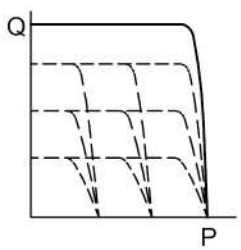


HJ Load-sensing compensator
+ Proportional pressure valve

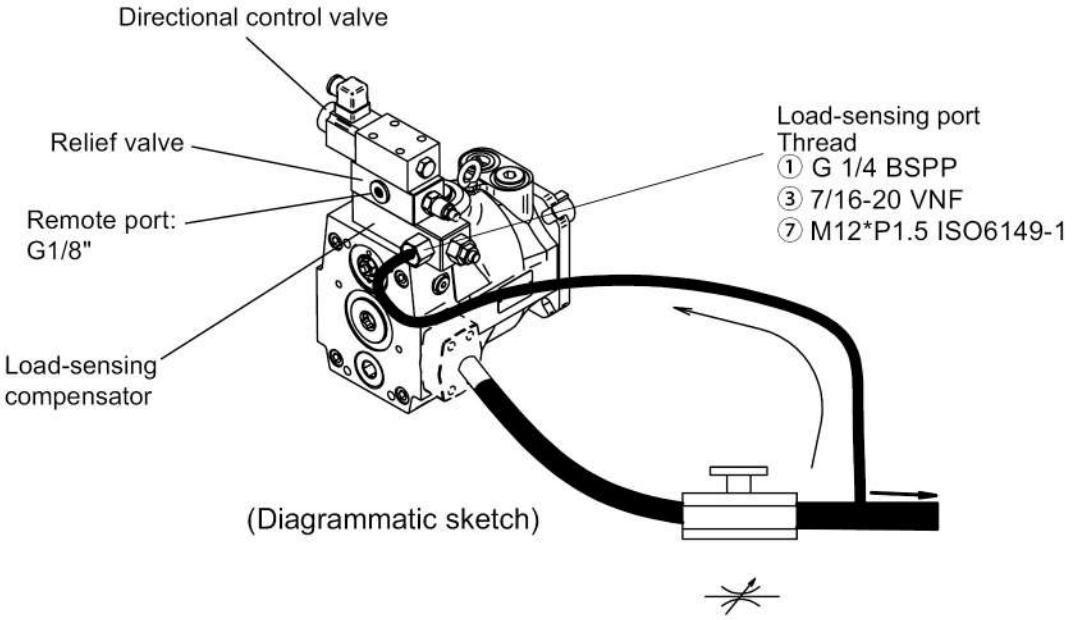
The load-sensing compensator has an external pilot pressure supply.
Factory setting for the differential pressure is 10bar.
The input signal to the compensator is the differential pressure at the main stream resistor.
A load-sensing compensator represents mainly a flow control for the pump output flow and the speed of the actuator.
Proportional pressure valve is for electrical proportional pressure control.

※Proportional pressure max.250 bar.
If needing any other pressure range, please contact YEOSHE.



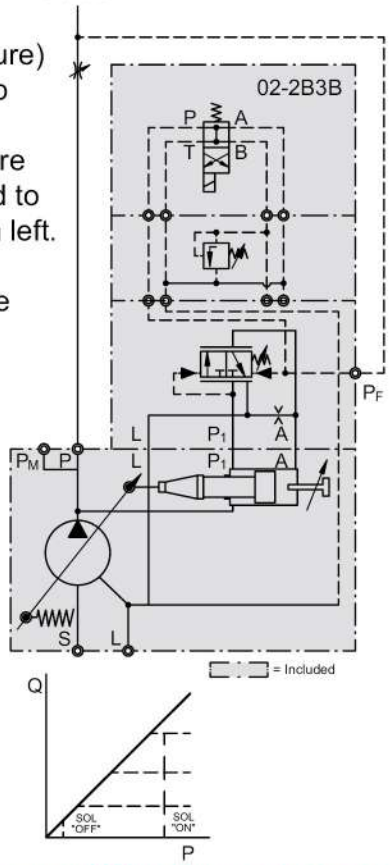


HR Load-sensing compensator + Electrical unloading

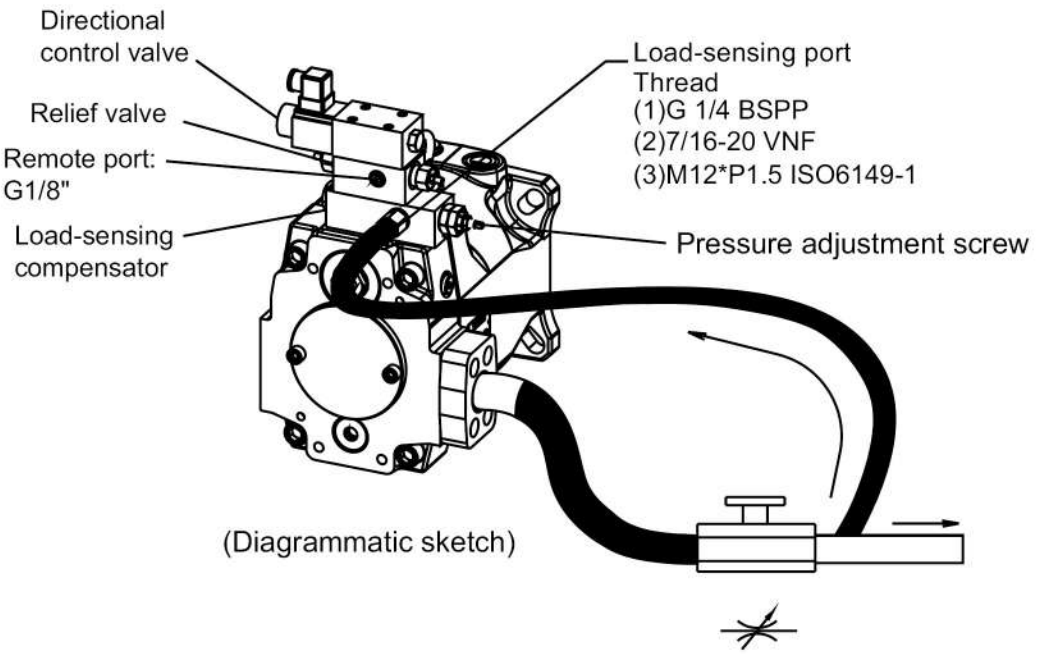


HR Load-sensing compensator + Electrical unloading

The load-sensing compensator has all external pilot pressure supply.
Factory setting for the differential pressure is 10bar.
The input signal to the compensator is the differential pressure at the main stream resistor.
A load-sensing compensator represents mainly a flow control for the pump output flow, because the compensator keeps the pressure drop at the main stream resistor constant.
A variable input speed or a varying (load -pressure) has consequently on the output flow of the pump and speed of the actuator.
By adding a pilot orifice (Φ0.8mm) and a pressure pilot valve pressure compensation can be added to the flow control function. See the circuit diagram left.
By adding a relief valve and a directional control valve on the compensator makes the pump have both function.
HR control is for long unloading situation.
When the system stops, oil temperature and noise maintain low level while being through the unloading.

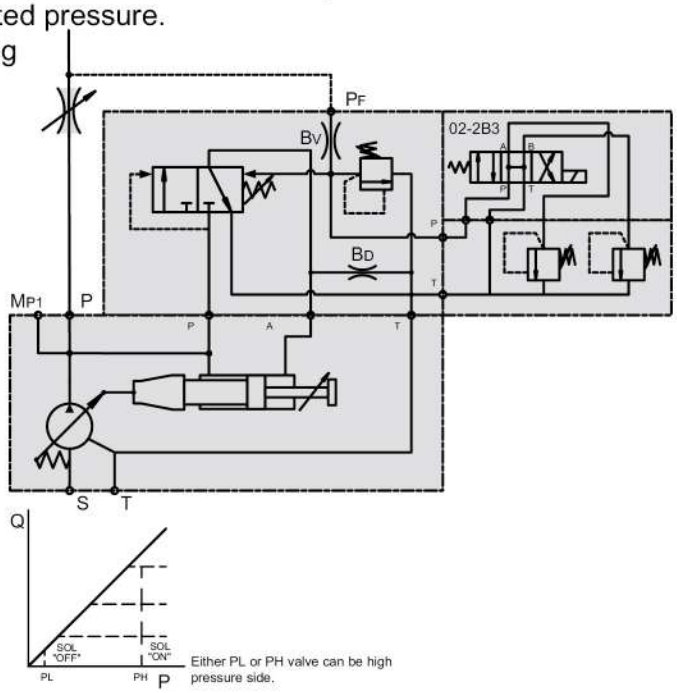


HB Load-sensing compensator + 2-stage pressure control

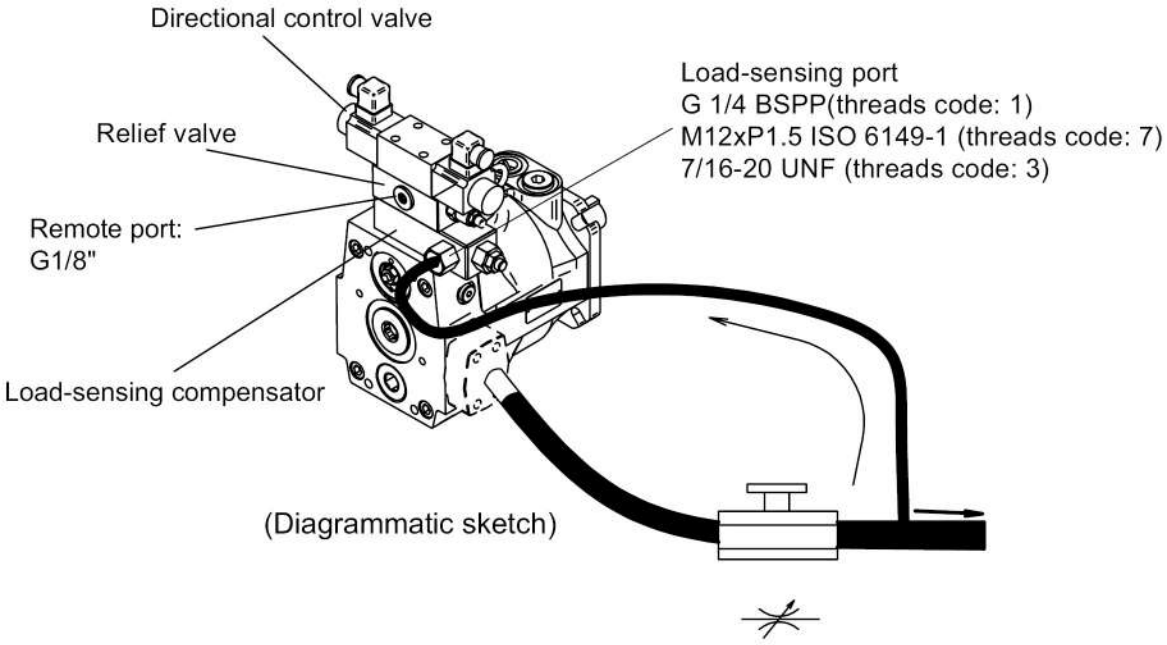


HB Load-sensing compensator
+ 2-stage pressure control

The load-sensing compensator has an external pilot pressure supply.
Factory setting for the differential pressure is 10bar.
The input signal to the compensator is the differential pressure at the main stream resistor.
A load-sensing compensator represents mainly a flow control for the pump output flow, because the compensator keeps the pressure drop at the main stream resistor constant.
A variable input speed or a varying (load -pressure) has consequently on the output flow of the pump and speed of the actuator.
By adding a pilot orifice (Φ0.8mm) and a pressure pilot valve pressure compensation can be added to the flow control function.
See the circuit diagram left.
By adding a relief valve and directional control valve on the compensator makes it adjust two different stage limited pressure.
HB control is for two-stage working pressure under the constant cylinder.

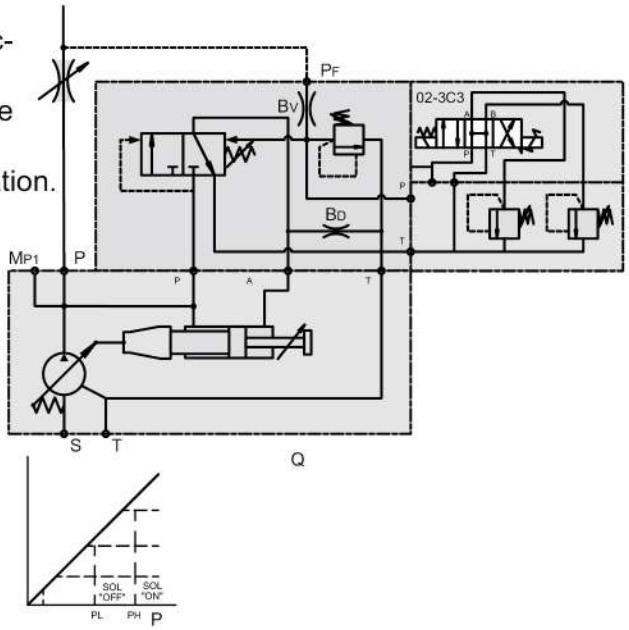


HC Load-sensing compensator + Electrical unloading + 2-stage pressure control



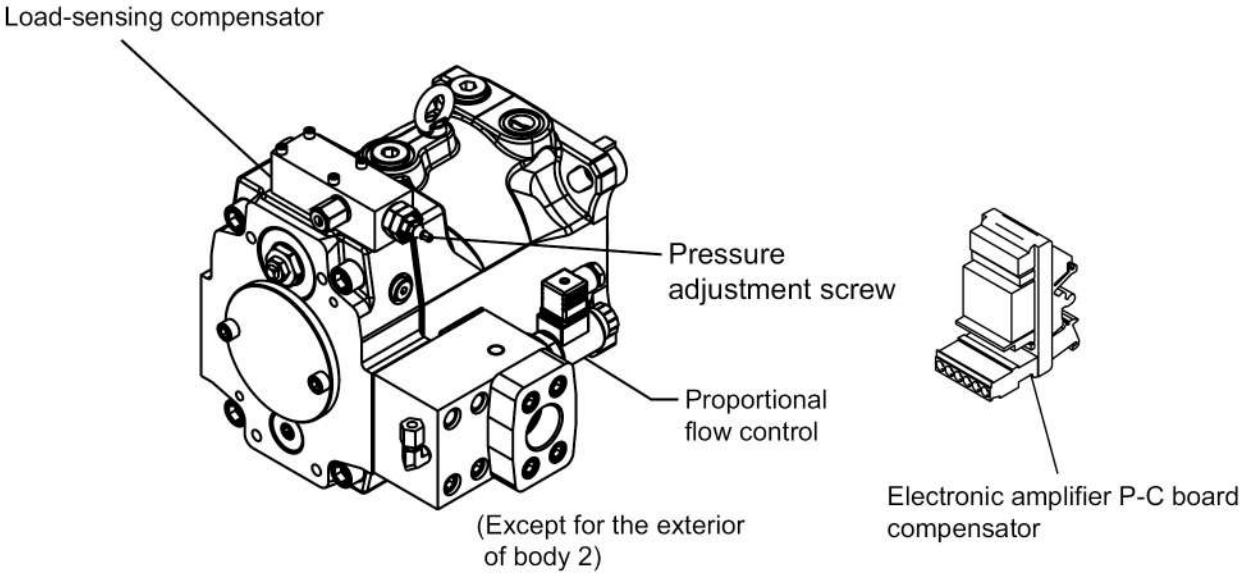
HC Load-sensing compensator
+ Electrical unloading + 2-stage pressure control

The load-sensing compensator has an external pilot pressure supply. Factory setting for the differential pressure is 10bar.
The input signal to the compensator is the differential pressure at the main stream resistor.
A load-sensing compensator represents mainly a flow control for the pump output flow, because the compensator keeps the pressure drop at the main stream
resistor constant.
A variable input speed or a varying (load -pressure) has consequently on the output flow of the pump and speed of the actuator.
By adding a pilot orifice (Φ0.8mm) and a pressure pilot valve pressure compensation can be added to the flow control function.
See the circuit diagram left.
By adding a relief valve and a directional control
valve on the compensator makes the pump have both function.
HC control is for long unloading situation.
When the system stops, oil temperature and noise maintain low level while being through the unloading.



Either PL or PH valve can be high pressure side.

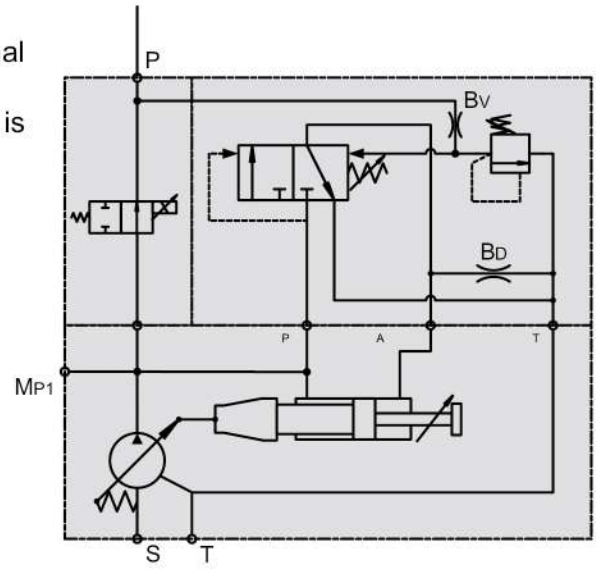
HQ Load-sensing compensator + Proportional flow valve + Relief valve

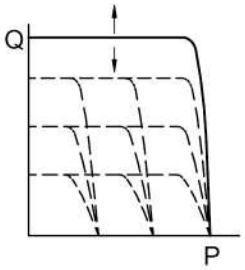


(Diagrammatic sketch)

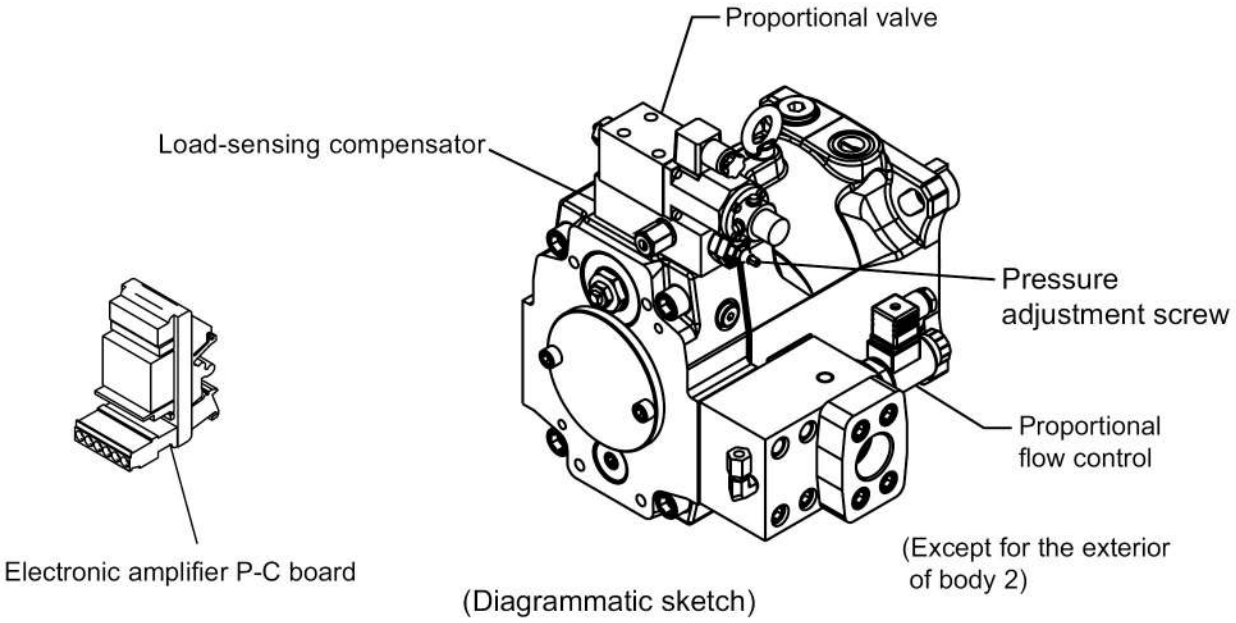
HQ Load-sensing compensator + Proportional flow valve + Relief valve

The load-sensing compensator has an external pilot pressure supply.
Factory setting for the differential pressure is 10bar.
The input signal to the compensator is the differential pressure at the main stream resistor.
A load-sensing compensator represents mainly a flow control for the pump output flow, because the compensator keeps the pressure drop at the main stream resistor constant.
By adding YEOSHE proportional flow valve,
electrical proportional flow control is available.





HK Load-sensing compensator + Proportional presure valve + Proportional flow valve

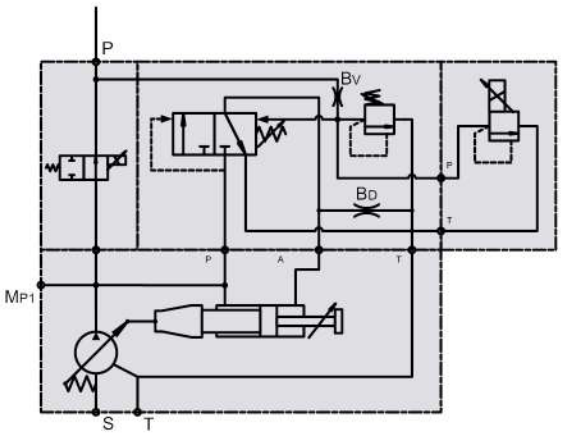


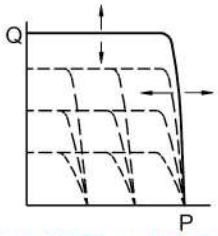
(Diagrammatic sketch)

HK Load-sensing compensator + Proportional pressure valve + Proportional flow valve

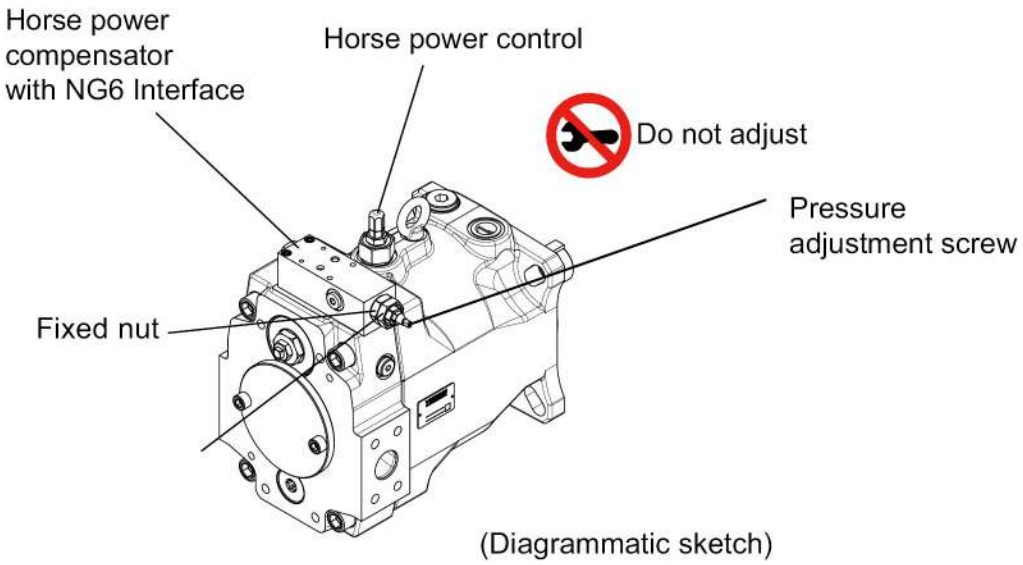
HK is for saving energy.
It offers the smallest pressure and flow according to the different requirement.
The displacement is nearly zero when the system stands by, and the motor output is also nearly zero.
When the system reaches setting pressure, the pump displacement will reduce by itself.
It only needs to add the system required flow, and the pressure remains the same which control the oil temperature.
Compared with vane pump, gear pump + PQ valve can save 30%-50% energy.
The load-sensing compensator + proportional flow valve has all external pilot pressure supply.
Factory setting for the differential pressure is 10 bar.
The input signal to the compensator is the differential pressure at the main stream resistor.
A load-sensing compensator represents mainly a flow control for the pump output flow of the pump and the speed of the actuator.
Proportional pressure valve is for electrical proportional pressure control.

※Proportional pressure max.250 bar.
If needing any other pressure range, please contact YEOSHE.





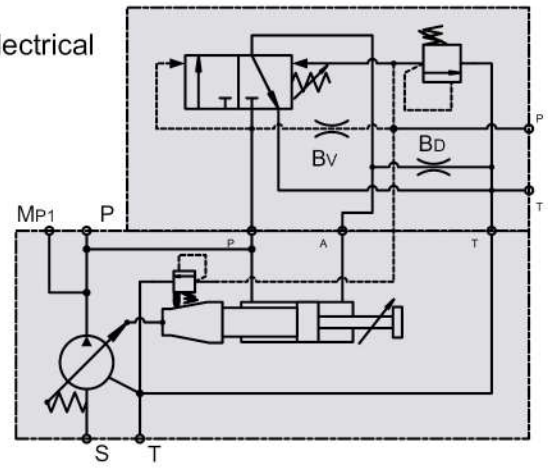
PM Horse power compensator with NG6 interface

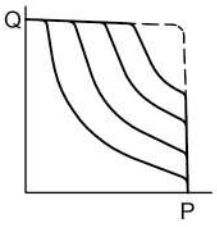


PM Horse power compensator with NG6 interface

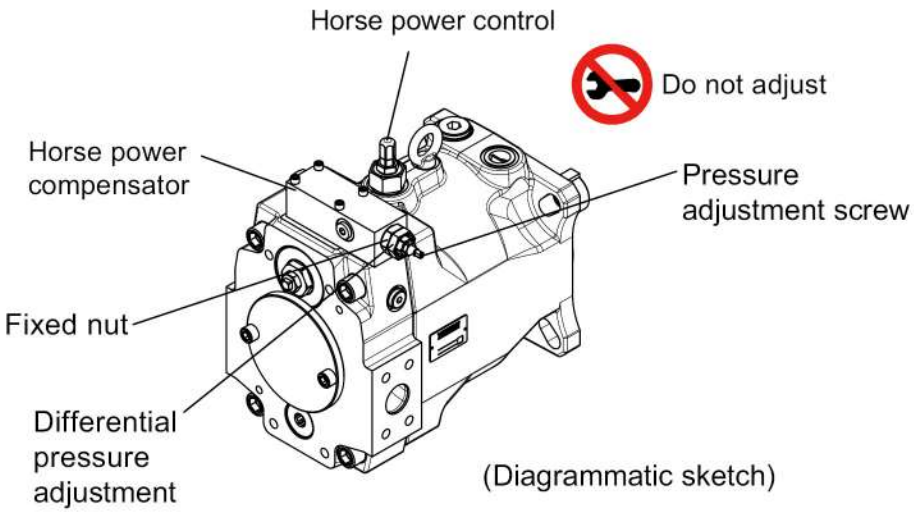
The hydraulic-mechanical horse power compensator consists of a modified remote pressure compensator or of a modified load-sensing compensator and a pilot valve.
This pilot valve is integrated into the pump and is adjusted by a cam sleeve.
The cam sleeve has a contour that is designed and machined for the individual displacment and the nominal horse power setting.
At a large displacement the opening pressure (given by the cam sleeve diameter) is lower than at small displacements.
This makes the pump compensate along a constant horse power (torque) curve.
Horse power is optional when order.
Working pressure can be adjusted by adding YEOSHE pressure leading valve.
Adding the proportional pressure valve achieves the electrical proportional pressure control.

※Horse power setting,please following type code.





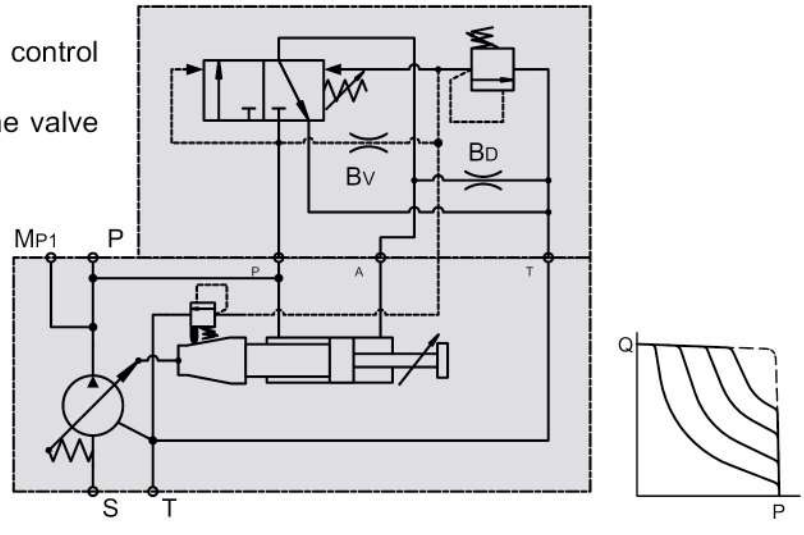
PA Horse power compensator + Relief valve



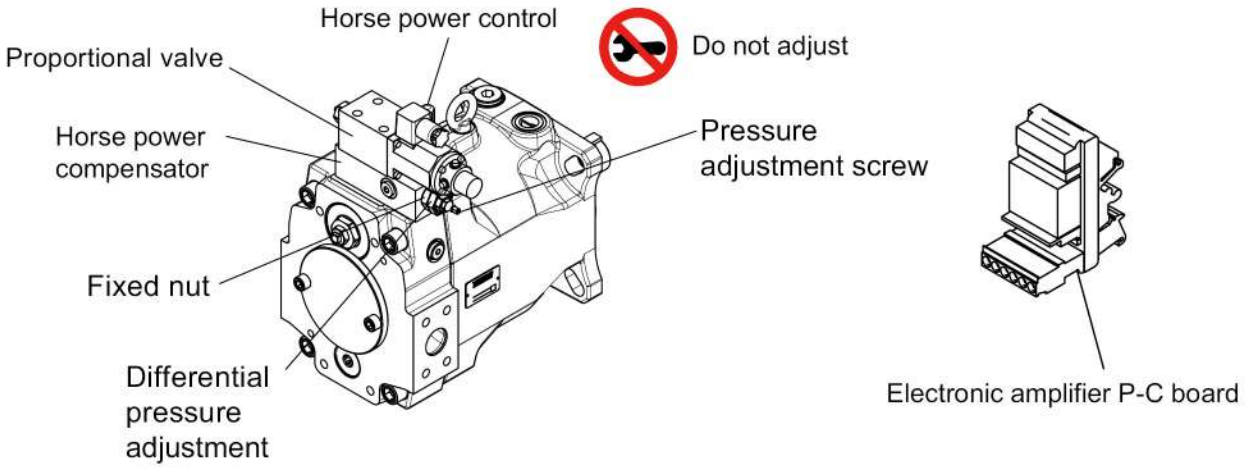
PA Horse power compensator + Relief valve

The hydraulic-mechanical horse power compensator consists of a modified remote pressure compensator or of a modified load-sensing compensator and a pilot valve.
This pilot valve is integrated into the pump and is adjusted by a cam sleeve.
The cam sleeve has a contour that is designed and machined for the individual displacement and the nominal horse power setting.
At a large displacement the opening pressure (given by the cam sleeve diameter) is lower than at small displacements.
This makes the pump compensate along a constant horse power (torque) curve.
Horse power is optional when order.
Working pressure can be adjusted by adding YEOSHE pressure leading valve.
Adding the proportional pressure valve achieves the electrical proportional pressure control.
The pilot valve can be installed remote from the pump in some distance.
That allows pressure setting e.g. from the control panel of the machine.
The pilot flow supply is internal through the valve spool and the pilot flow is 1-1.5 L/min.

※Horse power setting,please following type code.



PJ Horse power compensator + Proportional pressure valve



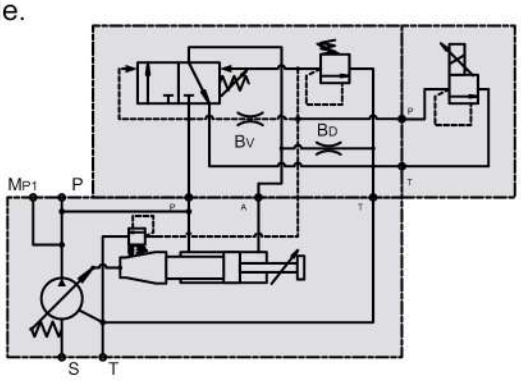
(Diagrammatic sketch)

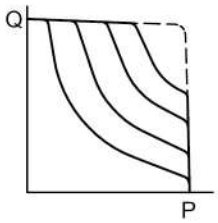
PJ Horse power compensator + Proportional pressure valve

The hydraulic- mechanical horse power compensator consists of a modified remote pressure compensator or of a modified load-sensing compensator and a pilot valve.
This pilot valve is integrated into the pump and is adjusted by a cam sleeve.
The cam sleeve has a contour that is designed and machined for the individual displacement and the nominal horse power setting.
At a large displacement the opening pressure (given by the cam sleeve diameter) is lower than at small displacements.
This makes the pump compensate along a constant horse power (torque) curve.
Pressure-adjusted function is optional by adding a leading proportional pressure valve.

※Horse power setting,please following type code.

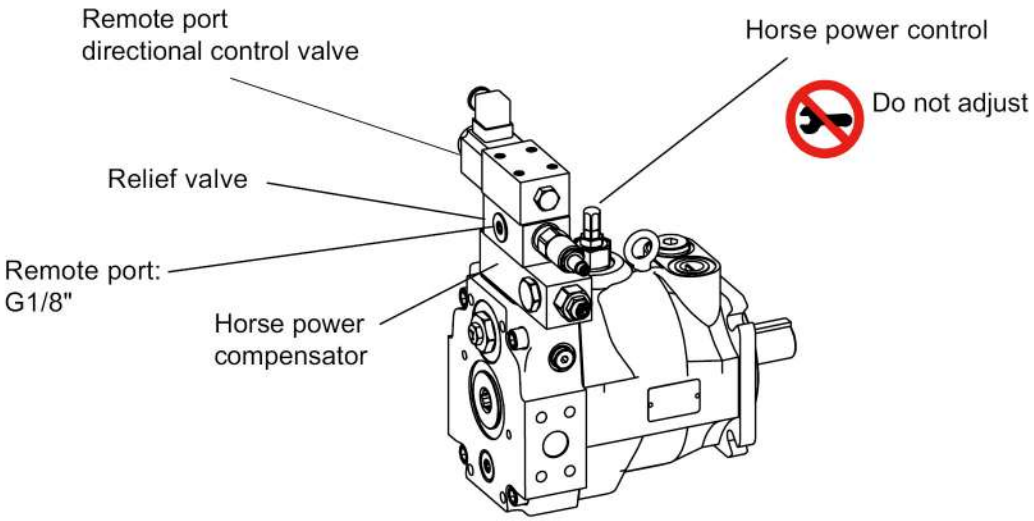
※Proportional pressure max.250 bar.
If needing any other pressure range,
please contact YEOSHE.





YEOSHE

PR Horse power compensator + Electrical unloading

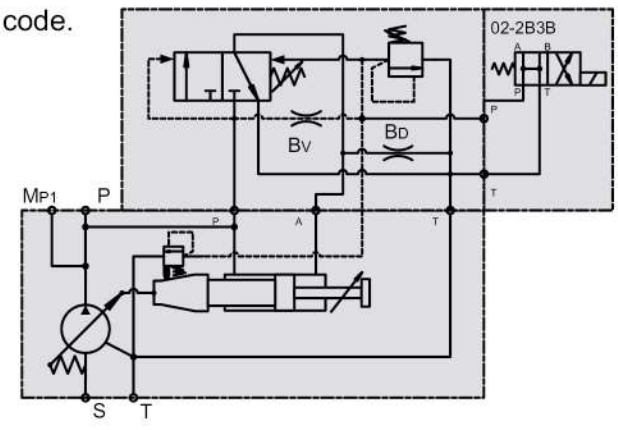


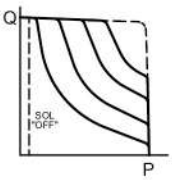
(Diagrammatic sketch)

PR Horse power compensator + Electrical unloading

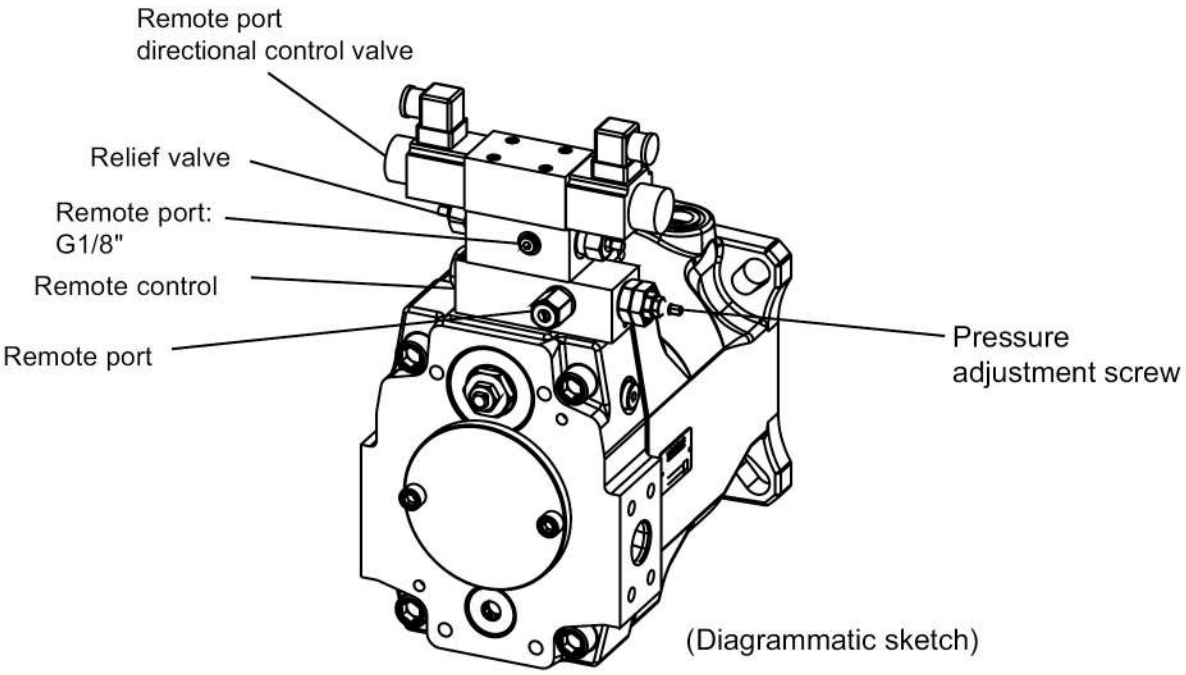
The hydraulic-mechanical horse power compensator consists of a modified remote pressure compensator or of a modified load-sensing compensator and a pilot valve.
This pilot valve is integrated into the pump and is adjusted by a cam sleeve.
The cam sleeve has a contour that is designed and machined for the individual displacement and the nominal horse power setting.
At a large displacement the opening pressure (given by the cam sleeve diameter) is lower than at small displacements.
This makes the pump compensate along a constant horse power (torque) curve.
Electrical unloading function is optional by adding an electric directional control valve.
This control is suitable for long period of unloading.
Oil temperature and noise remain low level through out the electrical unloading function when the system stops working.

※Horse power setting,please following type code.





PC Horse power compensator + Electrical unloading +2-stage pressure control

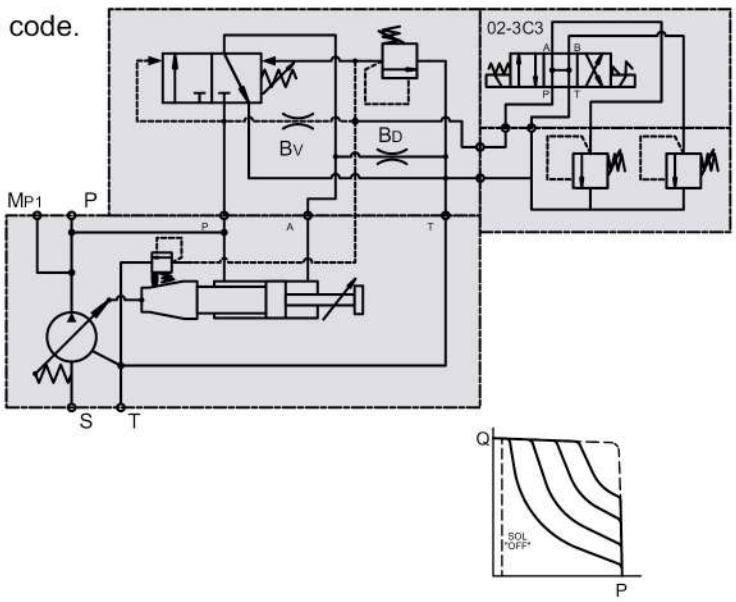


(Diagrammatic sketch)

PC Horse power compensator + Electrical unloading+2-stage pressure control

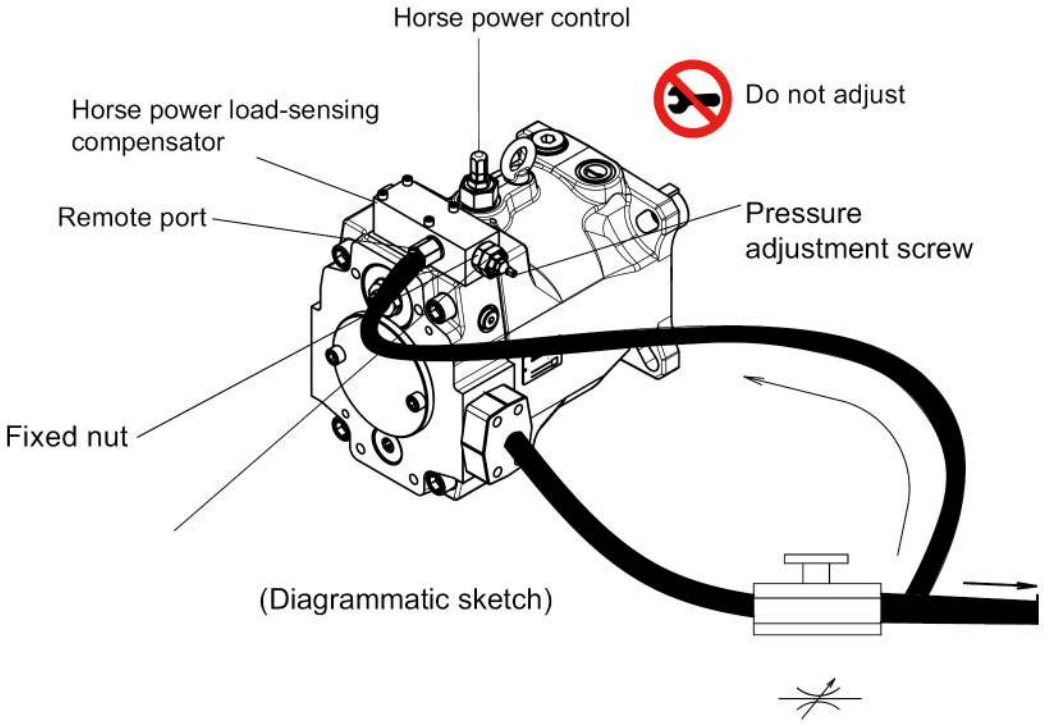
The hydraulic-mechanical horse power compensator consists of a modified remote pressure compensator or of a modified load-sensing compensator and a pilot valve.
This pilot valve is integrated into the pump and is adjusted by a cam sleeve.
The cam sleeve has a contour that is designed and machined for the individual displacement and the nominal horse power setting.
At a large displacement the opening pressure (given by the cam sleeve diameter) is lower than at small displacements.
Control two different-stage limited pressure by adding directional control valve, and unloading function.
When the system stops, oil temperature and noise maintain low level by unloading function.
Usable for stable cylinder speed, two-stage pressure, and long unloading situation.

※Horse power setting,please following type code.



PH Horse power load-sensing compensator + Relief valve

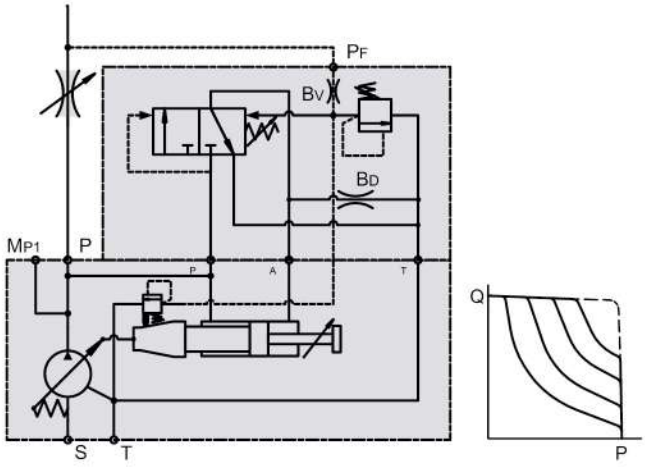
YEOSHE



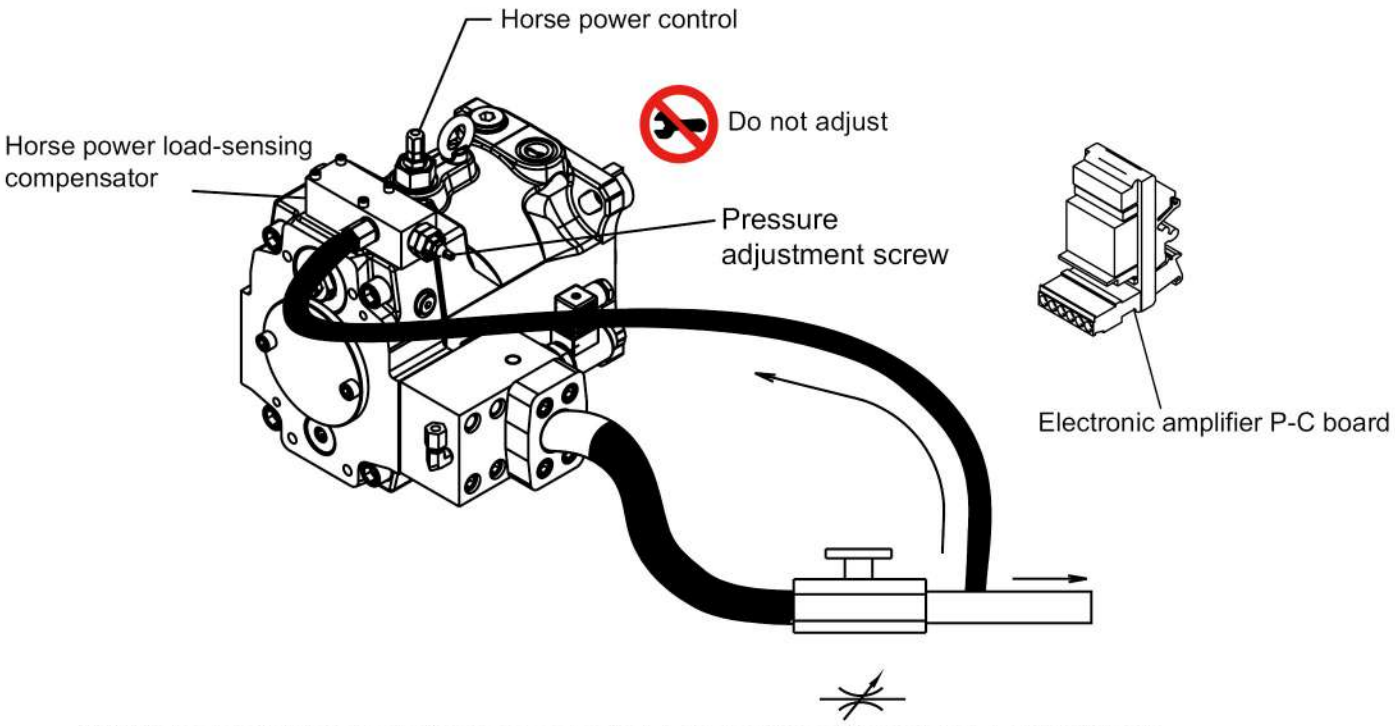
PH Horse power load-sensing compensator + Relief valve

The hydraulic-mechanical horse power compensator consists of a modified remote pressure compensator or of a modified load-sensing compensator and a pilot valve.
This pilot valve is integrated into the pump and is adjusted by a cam sleeve.
The cam sleeve has a contour that is designed and machined for the individual displacement and the nominal horse power setting.
At a large displacement the opening pressure (given by the cam sleeve diameter) is lower than at small displacements.
This makes the pump compensate along a constant horse power (torque) curve.
Horse power is optional when order.
Working pressure can be adjusted by adding a leading valve on the compensator, and pump flow can also be adjusted on the first pipe by adding an external feedback on the PF port as a control signal on the main stream.
The pilot valve can be installed remote from the pump in some distance.
That allows pressure setting, e.g. from the contral panel of the machine.
The pilot flow supply is internal through the valve spool,
and the pilot flow is 1~1.5 L/min.

※Horse power setting,please following type code.



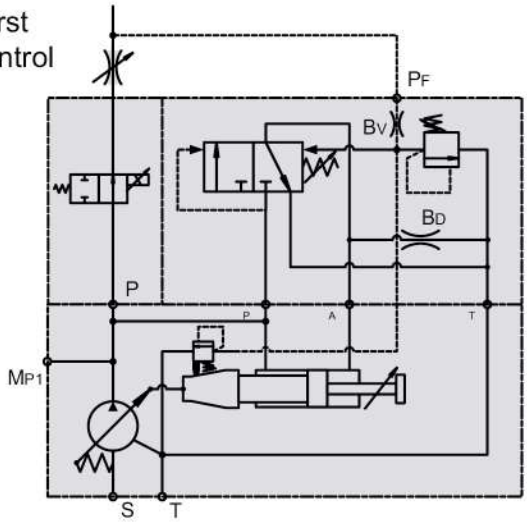
PQ Horse power load-sensing compensator + Proportional flow valve + Relief valve

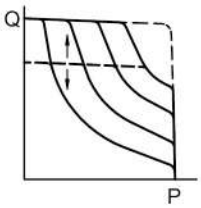


PQ Horse power load-sensing compensator + Proportional flow valve + Relief valve

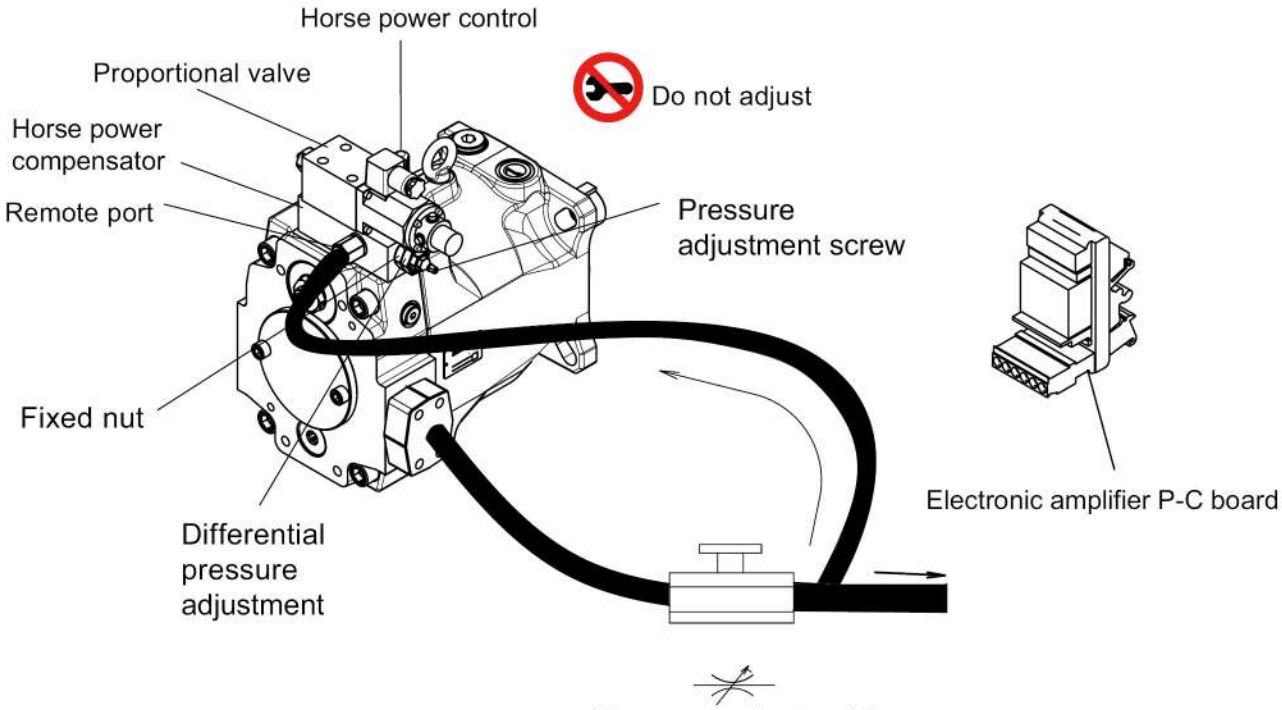
The hydraulic-mechanical horse power compensator consists of a modified remote pressure compensator or of a modified load-sensing compensator and a pilot valve.
This pilot valve is integrated into the pump and is adjusted by a cam sleeve.
The cam sleeve has a contour that is designed and machined for the individual displacement and the nominal horse power setting.
At a large displacement the opening pressure (given by the cam sleeve diameter) is lower than at small displacements.
This makes the pump compensate along a constant horse power (torque) curve.
Pressure can be adjusted by adding a leading valve in the compensator, and pump flow can also be adjusted on the first pipe by adding an external feedback on the PF port as a control signal on the main stream.
Adding a proportional flow control valve on the P port achieves electrical proportional flow control.

※Horse power setting,please following type code.





PS Horse power load-sensing compensator + Proportional pressure valve



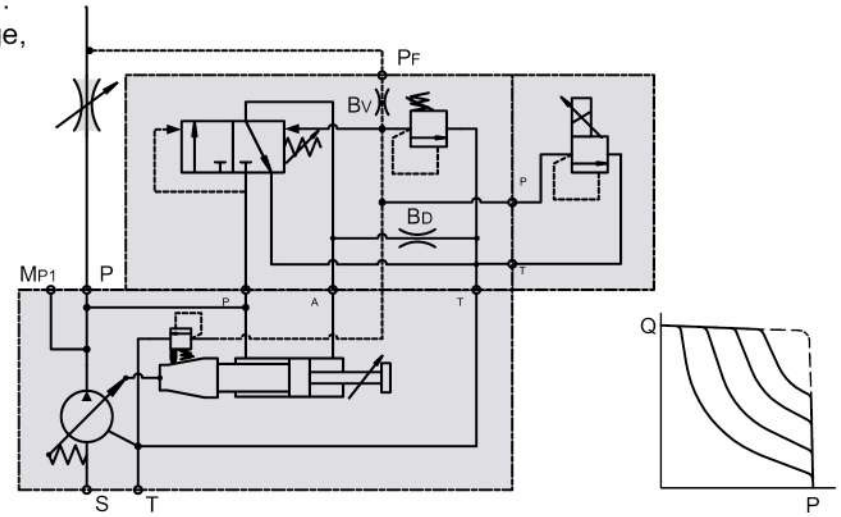
(Diagrammatic sketch)

PS Horse power load-sensing compensator + Proportional pressure valve

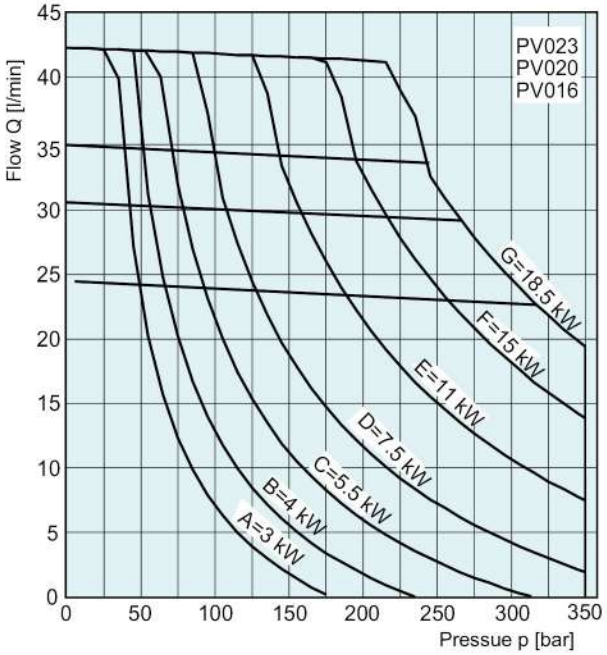
The hydraulic-mechanical horse power compensator consists of a modified remote pressure compensator or of a modified load-sensing compensator and a pilot valve.
This pilot valve is integrated into the pump and is adjusted by a cam sleeve.
The cam sleeve has a contour that is designed and machined for the individual displacement and the nominal horse power setting.
At a large displacement the opening pressure (given by the cam sleeve diameter) is lower than at small displacements.
This makes the pump compensate along a constant horse power (torque) curve.
Electrical pressure-adjusted function is optional by adding a leading proportional pressure valve, and pump flow can also be adjusted on the first pipe by adding an external feedback on the PF port as a control signal on the main stream.

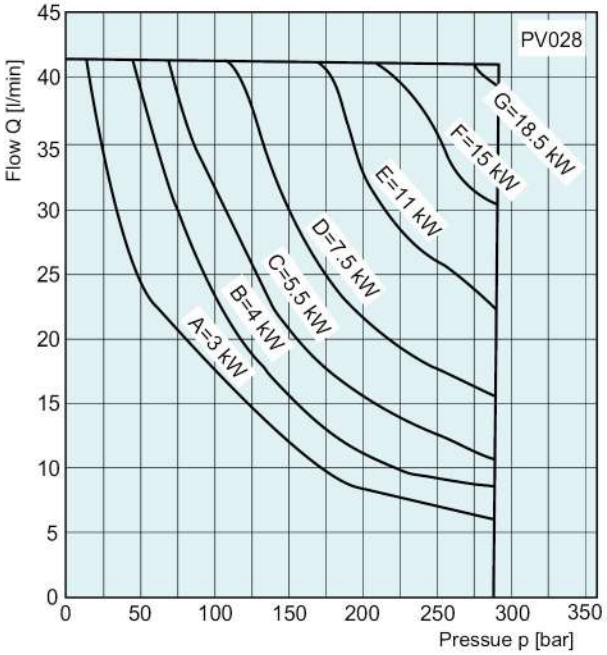
※Horse power setting,please following type code.

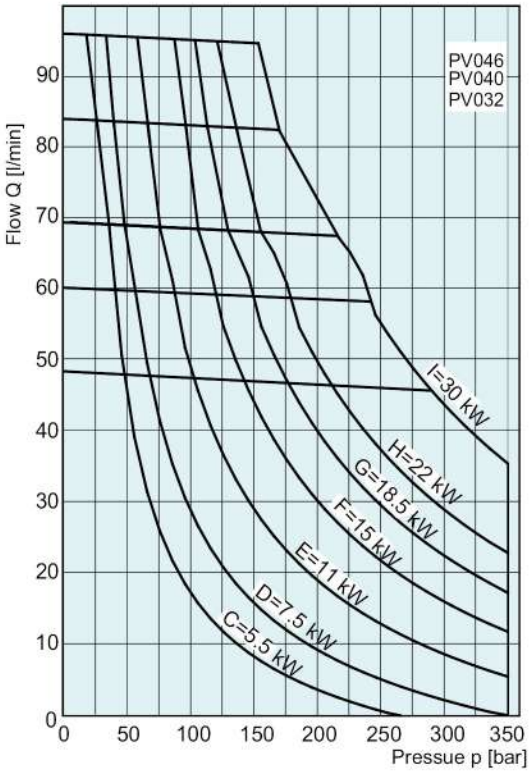
※Proportional pressure max.250 bar.
If needing any other pressure range, please contact YEOSHE.

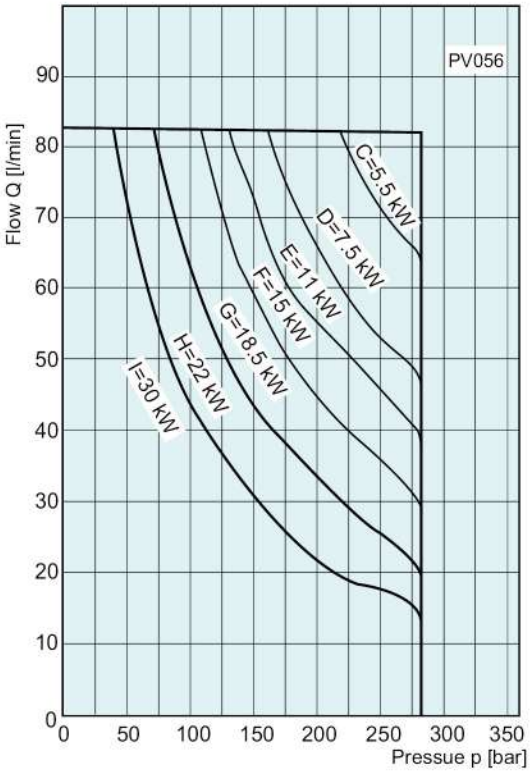


Horse power compensator, diagrams





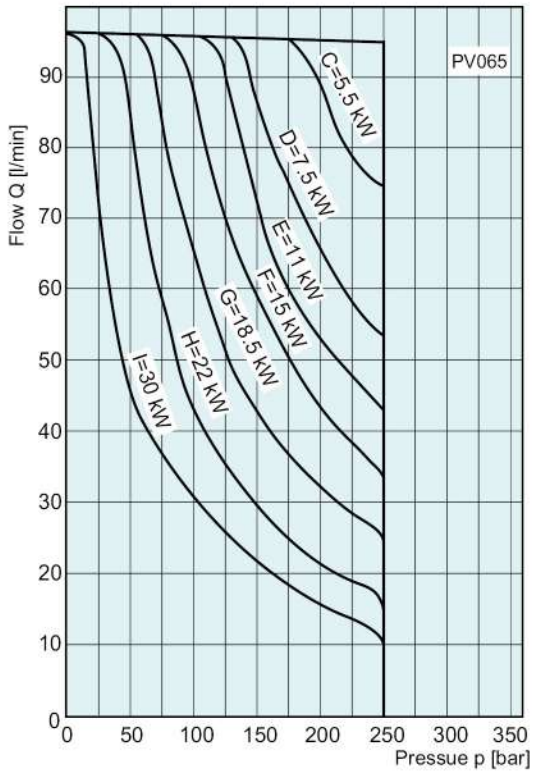


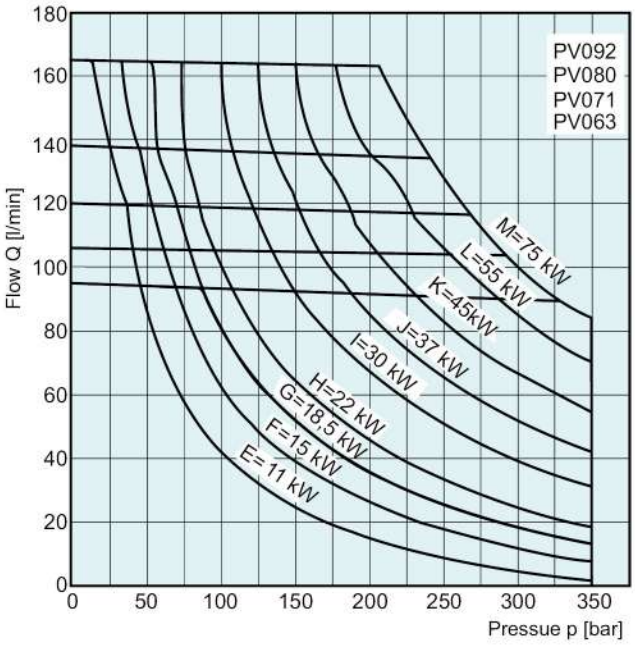


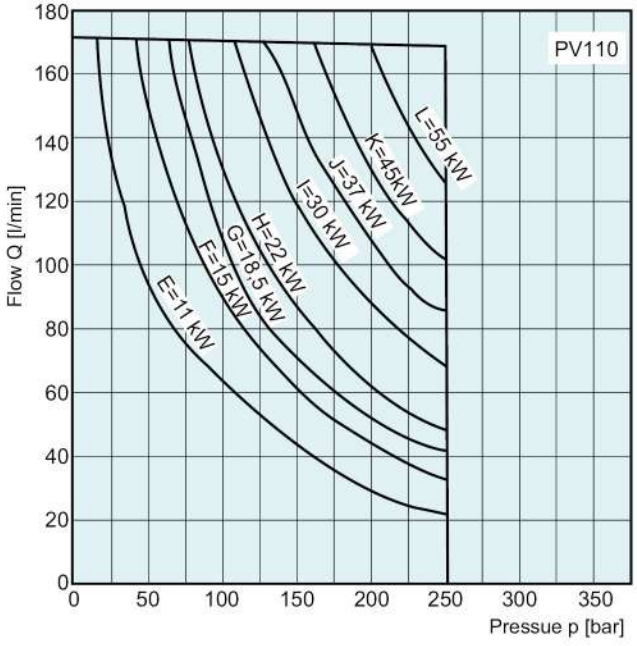
The diagrams are only valid for the following working conditions:
speed: n=1500 (- - -) and 1800 (- - -) rev/min
temperature: t=50°C
fluid: mineral oil HLP, ISO VG46
viscosity: v=46 mm2/s at 40°C

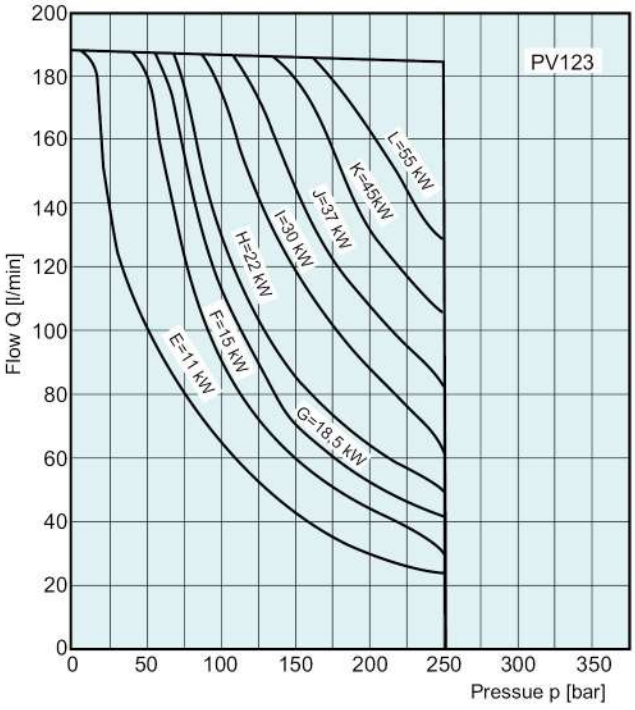
Horse power compensator, diagrams

YEOSHE



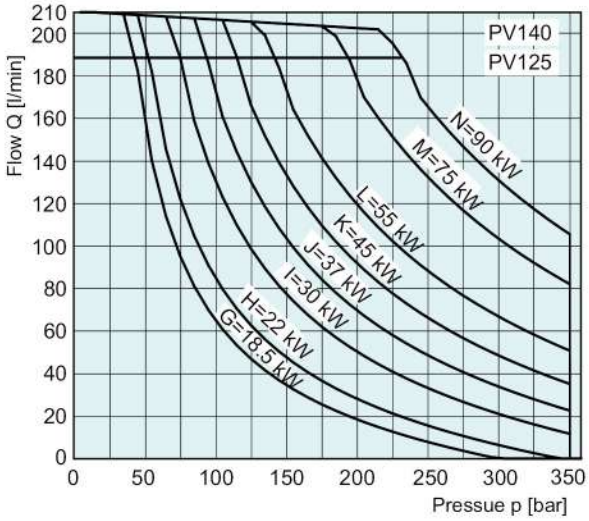


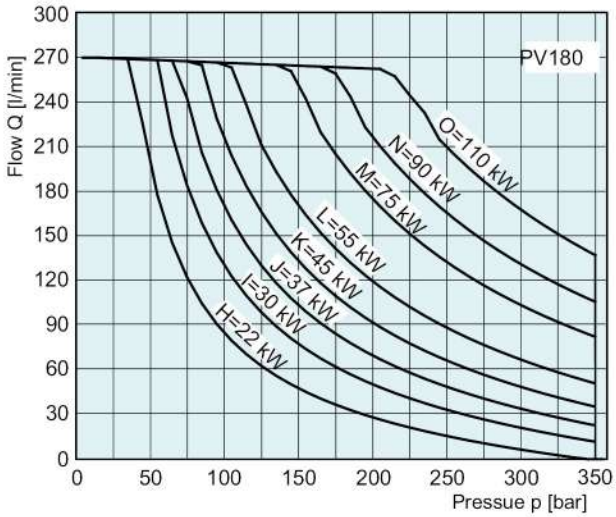


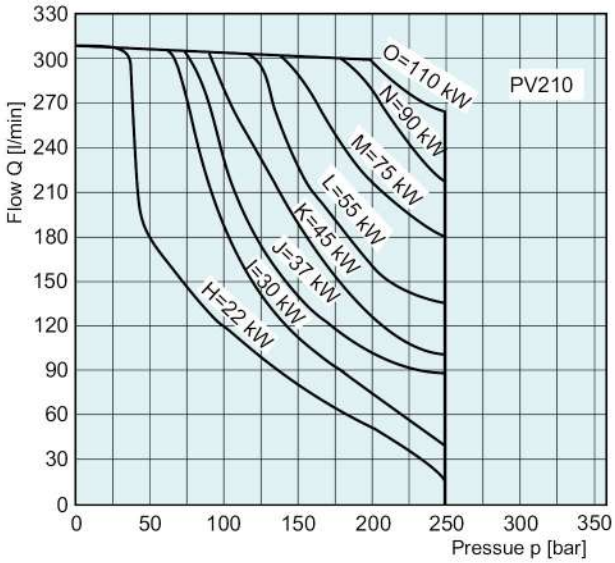


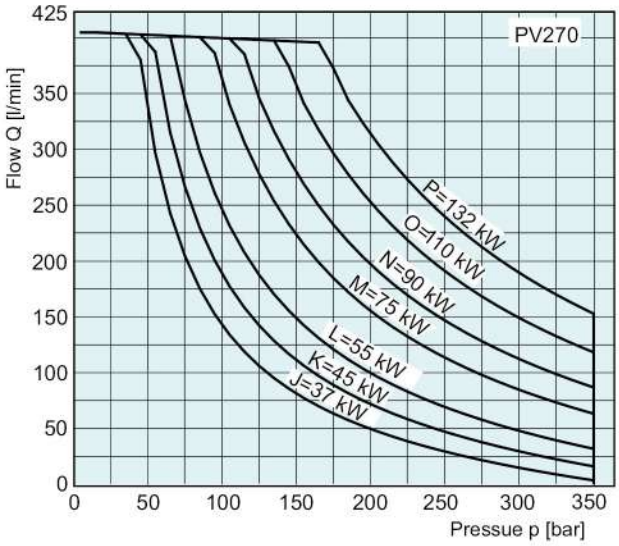
The diagrams are only valid for the following working conditions:
speed: n=1500 (- - -) and 1800 (- - -) rev/min
temperature: t=50°C
fluid: mineral oil HLP, ISO VG46
viscosity: v=46 mm2/s at 40°C

Horse power compensator, diagrams







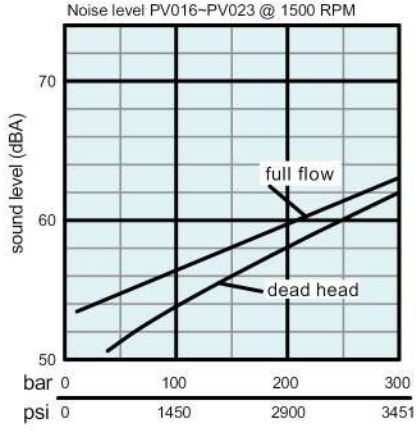


The diagrams are only valid for the following working conditions:
speed: n=1500 (- - -) and 1800 (- - -) rev/min
temperature: t=50°C
fluid: mineral oil HLP, ISO VG46
viscosity: v=46 mm2/s at 40°C

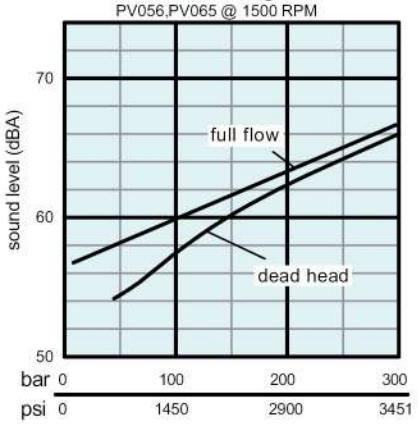
Noise diagrams

YEOSHE

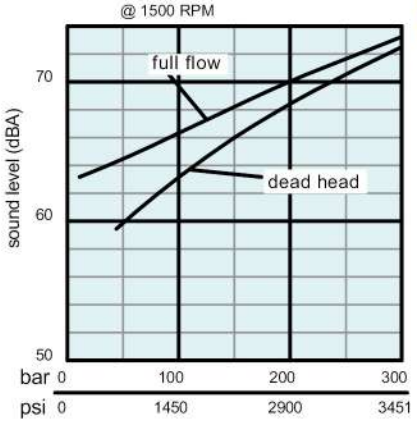
Noise level PV016~PV023 @ 1500 RPM



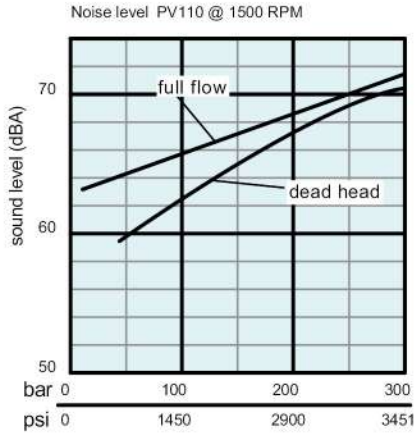
Noise level PV032~PV046 @ 1500 RPM
PV056,PV065 @ 1500 RPM



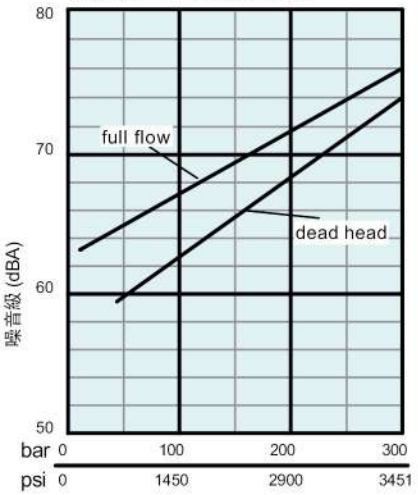
Noise level PV063~PV092, PV110, PV125
@ 1500 RPM



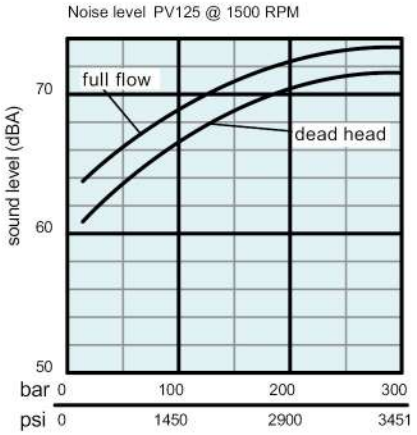
Noise level PV110 @ 1500 RPM



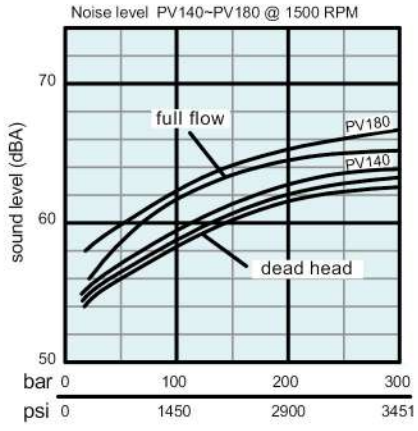
Noise level PV123 @ 1500 RPM



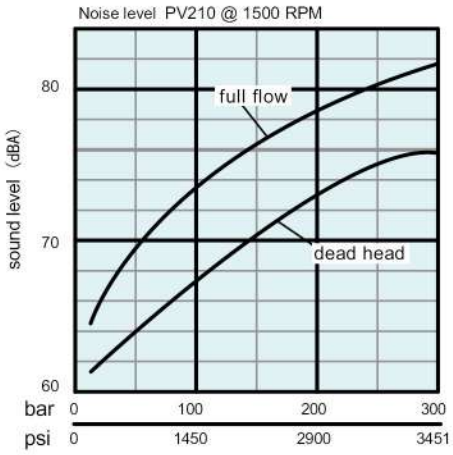
Noise level PV125 @ 1500 RPM



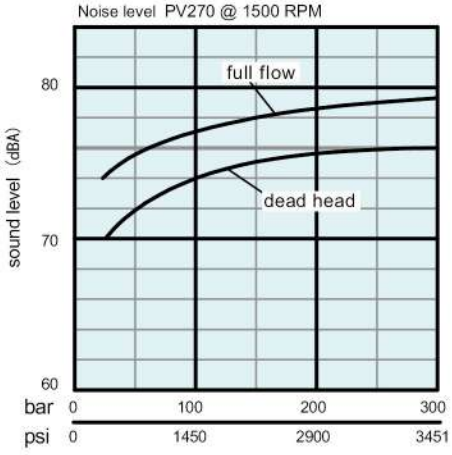
Noise level PV140~PV180 @ 1500 RPM



Noise level PV210 @ 1500 RPM



Noise level PV270 @ 1500 RPM

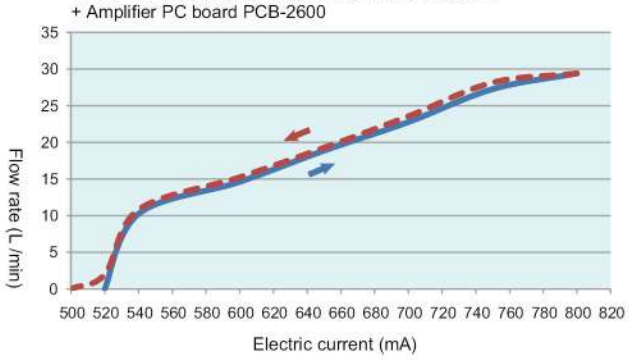


Test condition:
The noise of the single pump is according to the standard of DIN 45635, the rule of 1and26, at low echo measurement laboratory, measuring that the distance of microphone is 1m and 1500rpm.

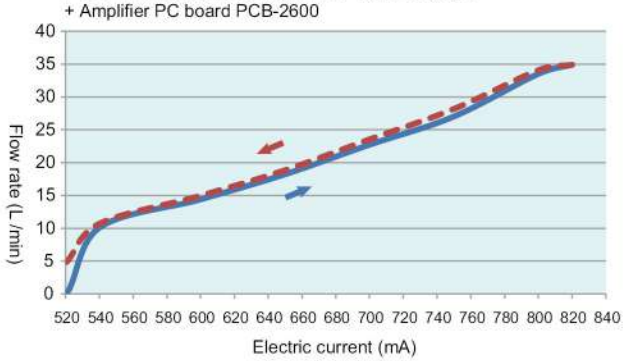
Notice:
At the best time to install, the volume noise of hydraulic equipment is always 6 ~ 10 dBA higher than measuring at low echo measurement laboratory.

Proportional flow performance curves

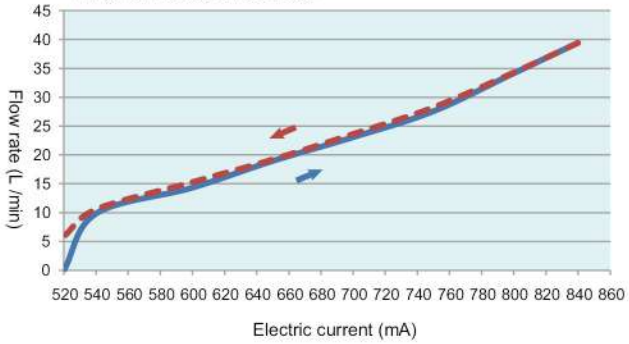
PV16 + Proportional flow valve PFC-17E-2G-0350-N
+ Amplifier PC board PCB-2600



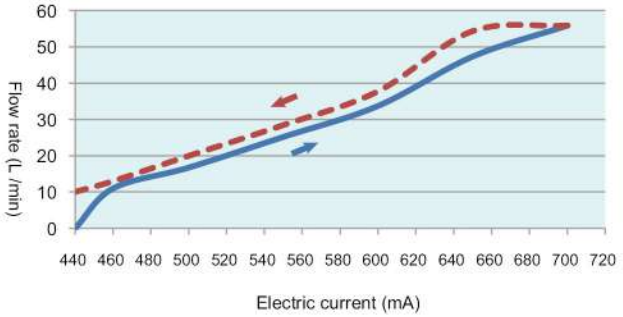
PV20+ Proportional flow valve PFC-17E-2G-0350-N
+ Amplifier PC board PCB-2600



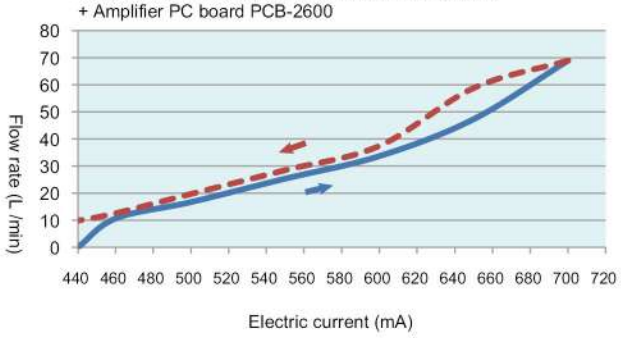
PV23+ Proportional flow valve PFC-17E-2G-0350-N
+ Amplifier PC board PCB-2600



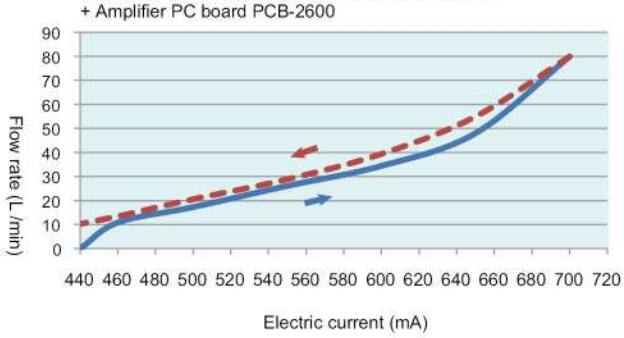
PV32+ Proportional flow valve PFC-17E-2G-0700-N
+ Amplifier PC board PCB-2600



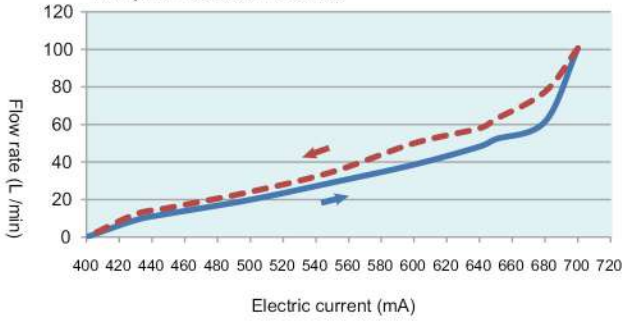
PV40 + Proportional flow valve PFC-17E-2G-0700-N
+ Amplifier PC board PCB-2600



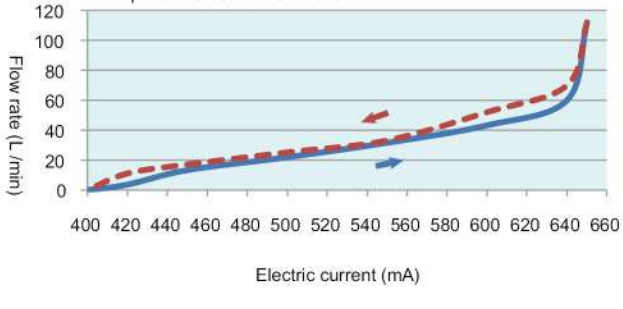
PV46 + Proportional flow valve PFC-17E-2G-0700-N
+ Amplifier PC board PCB-2600



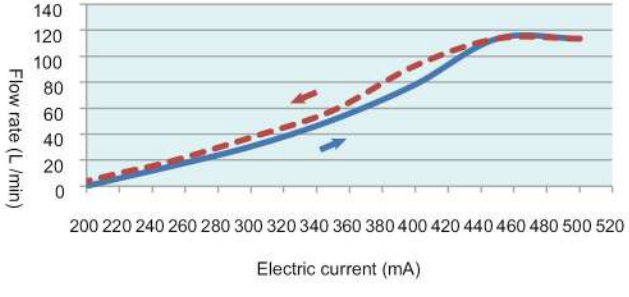
PV56+Proportional flow valve PFC-17E-2G-0700-N
+ Amplifier PC board PCB-2600



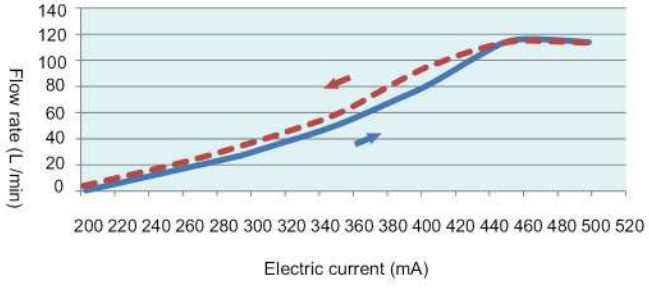
PV65 +Proportional flow valve PFC-17E-2G-0700-N
+ Amplifier PC board PCB-2600



PV63 +Proportional flow valve PFC-17E-2G-0700-N
+ Amplifier PC board PCB-2600



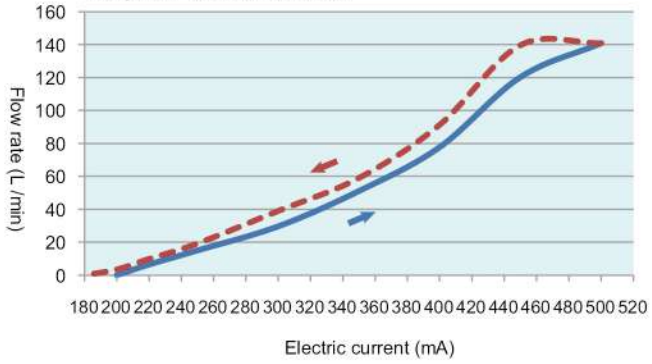
PV71 +Proportional flow valve PFC-17E-2G-0700-N
+ Amplifier PC board PCB-2600



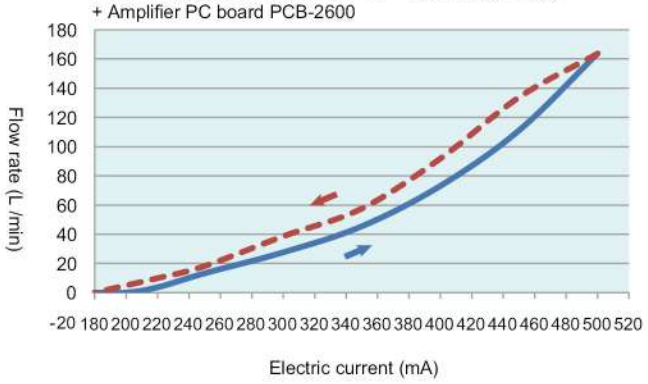
Proportional flow performance curves

YEOSHE

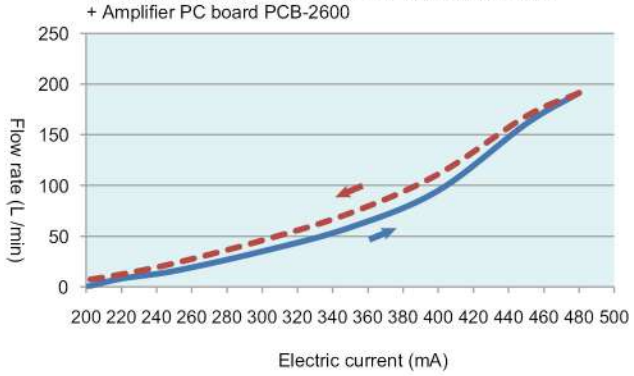
PV80 + Proportional flow valve PEV-16A-2D-09-N-1600
+ Amplifier PC board PCB-2600



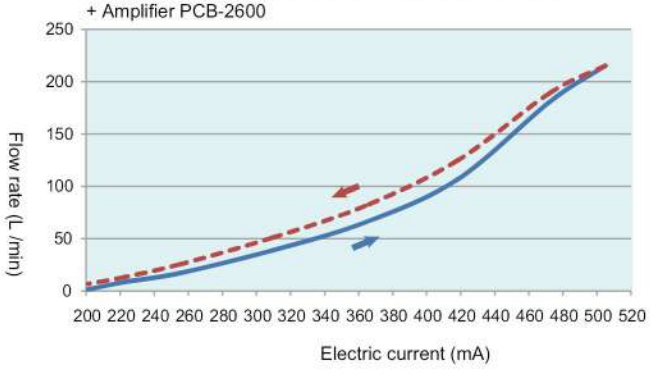
PV92 + Proportional flow valve PEV - 16A-2D-09-N-1600
+ Amplifier PC board PCB-2600



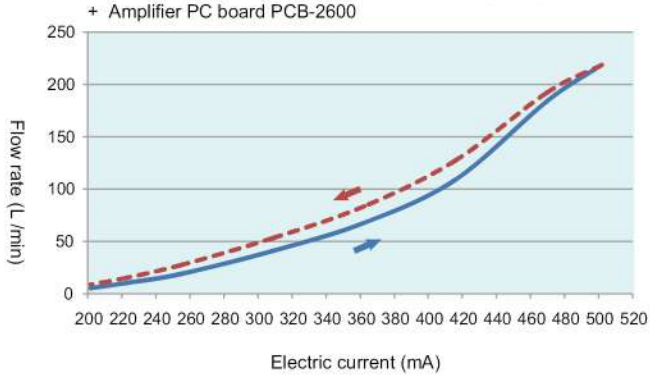
PV110 + Proportional flow valve PEV-16A-2D-09-N-1600
+ Amplifier PC board PCB-2600



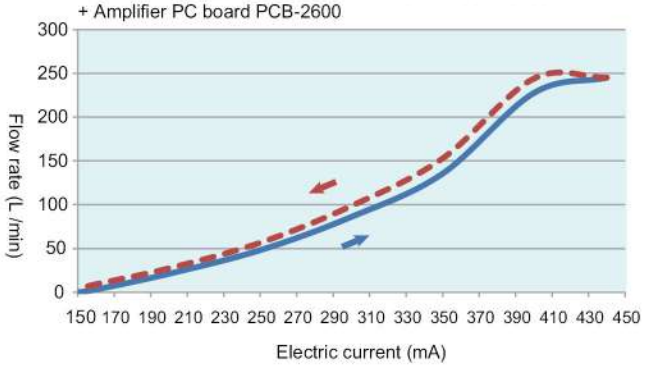
PV123 + Proportional flow valve PEV-16A-2D-09-N-1600
+ Amplifier PCB-2600



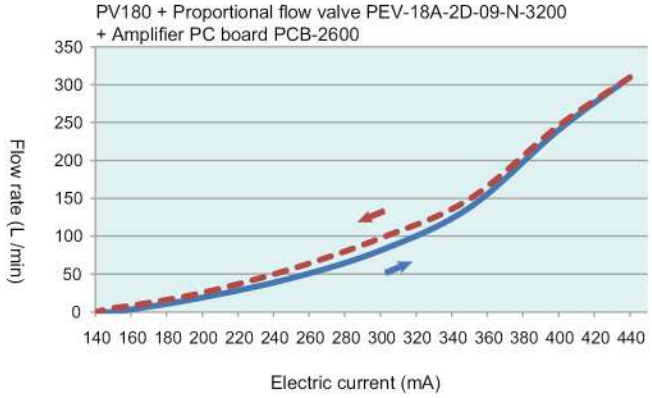
PV125 + Proportional flow valve PEV-16A-2D-09-N-1600
+ Amplifier PC board PCB-2600



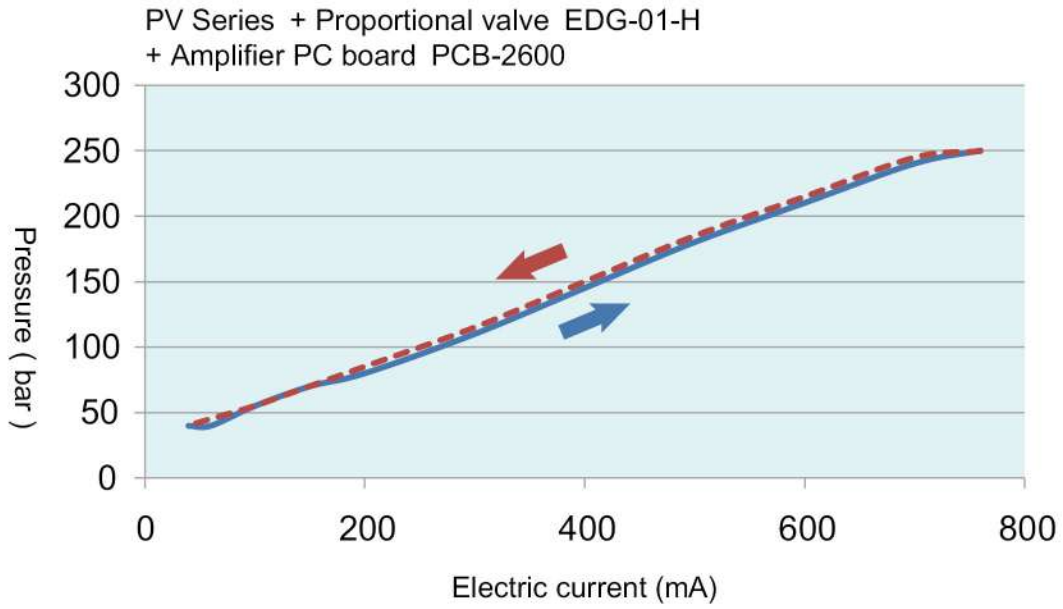
PV140 + Proportional flow valve PEV-18A-2D-09-N-3200
+ Amplifier PC board PCB-2600



PV180 + Proportional flow valve PEV-18A-2D-09-N-3200
+ Amplifier PC board PCB-2600



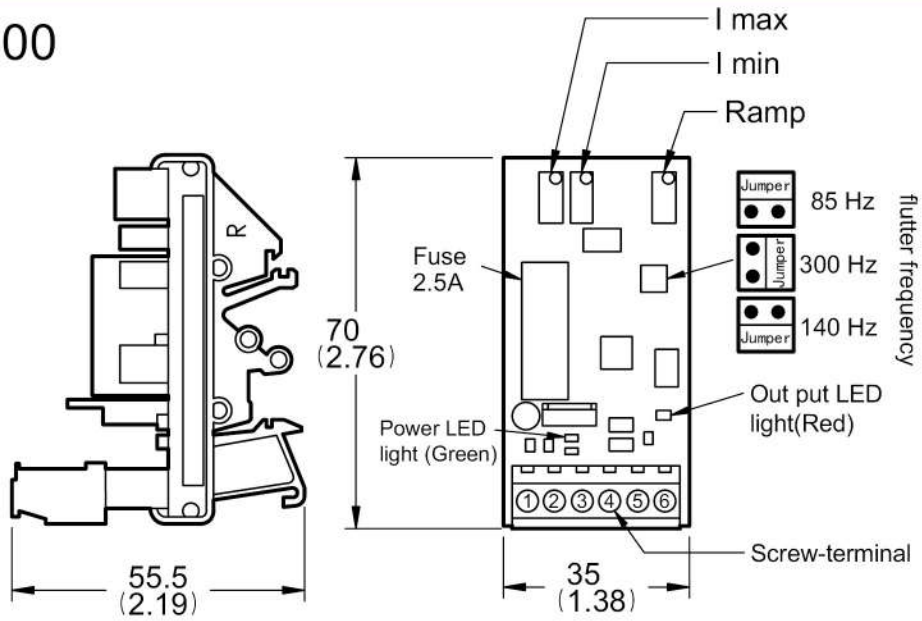
Proportional pressure performance curves



Proportional amplifier

YEOSHE

PCB-2600



UNIT：mm
(inch)

Instructions for setting

Supply：green LED

RAMP：ramping up/down time adjustment.
For long ramping times, turn potentiometers clockwise, for short ramping times, turn potentiometers counter-clockwise.

MAX/MIN:

I max / I min
There are multi-course potentiometers for adjustment of min-max and also ramp time.

Frequency ADJ.:

The dither frequency can be set with a jumper to 85, 140, or 300 Hz.

Techincal data

Supply voltage：10-35 VDC

Max. current：0-2600 mA adjustable for 12 and 24 VDC
(Output is a PWM-DC)

Min. current：0-600 mA adjustable

Ramp adjustment：0~5 Sec.

Dither frequency：85, 140, 300 Hz to be set by jumper(Standard 140 Hz)

Ambient operating temperature：-15~140℉
-10~60℃

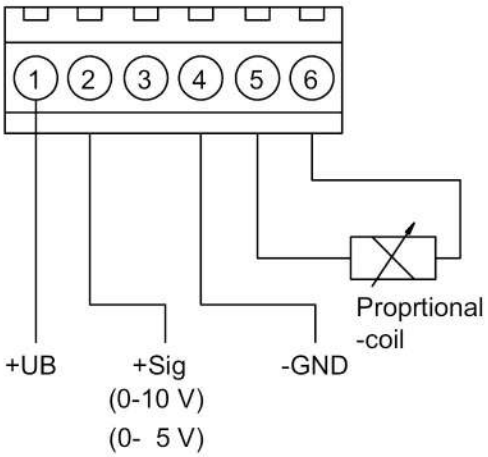
Weight：0.05kg

NOTICE

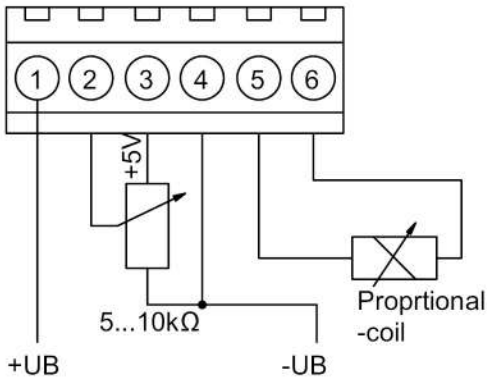
Do not remove the amplifier from the coil while the power is on.
This will cause a failure in the internal circuits of the amplifier, resulting in loss of output to the coil.

Proportional amplifier

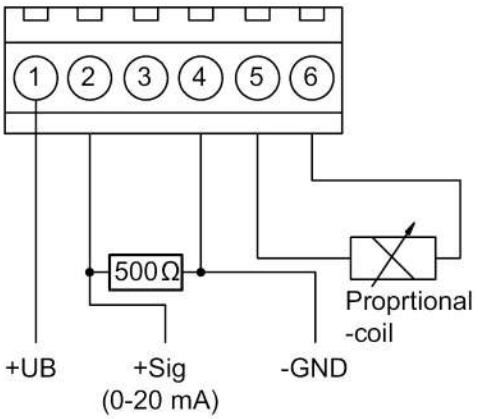
External voltage control



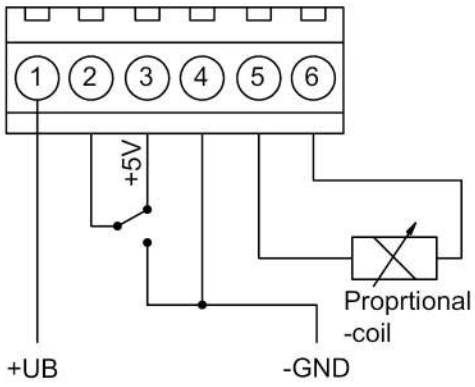
Potentiometer control



External current control



Two point control



. Clamp connections plug in connector
Pin 1 =+ UB; supply voltage (10-35 VDC)
Pin 2 = Control voltage (+ Sig)
Pin 3 = Auxiliary voltage (+ 5 VDC)
Pin 4 = Ground (GND)
Pin 5 = Solenoid (-)
Pin 6 = Solenoid (+)

. Potentiometer
Turn clockwise means increasing current or Extension of ramp time
App. 10 turns for complete range

.Fuse
Standard 20 mm Glass fuse 2.5 A T

.LED's
LED +VS (green) = lights, when voltage supply and fuse are in order
LED1 (red) = lights, if there is an output to the solenoid

General installation information

A. Fluid recommendations

Premium quality hydraulic mineral oil fluids are recommended, like H-LP oils to DIN 51524, part2.
The viscosity range should be 25 to 50 mm²/s (cSt) at 50° C. Operating temperatures –10 to +70°C.
For other fluids such as phosphoric acid esters or for other operating conditions, please consult with YEOSHE for assistance.

B. Seals

NBR (Nitrile) seals are used for operation with hydraulic fluids based on mineral oil.
For synthetic fluid, as perhaps phosphoric acid esters, Fluorocarbon seals are required.
Please consult with YEOSHE for assistance.

C. Filtration

For maximum pump and system component functionability and life, the system should be protected from contamination by effective filtration.
Fluid cleanliness should be in accordance with ISO classification ISO 4406.
The quality of filter elements should be in accordance with ISO standards.
(1) Minimum requirement for filtration rate ×(mm):
General hydraulic systems for satisfactory operation:
Class 19/15, to ISO 4406 X=25μm (β25≧75) to ISO 4572
(2) Hydraulic systems with maximum component life and functionability:
Class 16/13, to ISO 4406 X=10μm (β10≧75) to ISO 4572
It is recommended to use return line or pressure filters.
YEOSHE Filter Division offers a wide range of these filters for all common applications and mounting styles.
The use of suction filters should be avoided, especially with fast response pumps.
Bypass filtration is a good choice for best filter efficiency.

D. Installation and mounting

Horizontal mounting:
Outlet port-side or top. Inlet port-side or bottom, drain port always uppermost.
Vertical mounting: Shaft pointing upwards.
Install pump and suction line in such way that the maximum inlet vacuum never exceeds 0.8 bar absolute.
The inlet line should be as short and as straight as possible.
A short suction line cut to 45° is recommended when the pump is mounted inside the reservoir, to improve the inlet conditions. All connections should be leak-free,otherwise the air in the suction line will cause cavitations, noise, and damage to the pump.

E. Shaft rotation and alignment

Pump and motor shafts must be aligned within 0.25mm T.I.R. maximum. A floating coupling must be used.
Bellhousings and couplings can be ordered at manufacturers listed in this catalog.
Please follow the coupling manufacturer's installation instructions.
Please consult with YEOSHE for assistance on radial load type drives.

F. Start up

Prior to start up, the pump case must be filled with hydraulic fluid (use case drain port).
Initial start up should be at zero pressure with an open circuit to enable the pump to prime.
Pressure should only be increased once the pump has been fully primed.
Attention: Check motor rotation direction.

G. Operating noise of pumps

The normal operating noise of a pump and constantly-operation noise of the entire hydraulic system is largely determined by where and how the pump is mounted and how it is connected to the down stream hydraulic system. Besides, size, style, and installation of hydraulic tube are the major influence on the overall noise emitted by a hydraulic system.

General installation information

H. Noise reduction measures

Flexible elements help to prevent pump body vibration from being transmitted to other construction elements, where amplification may occur. Such elements can be:

Bell housing with elastic dampening flange with vulcanized labyrinth

(1) Floating and flexible coupling
(2) Damping rails
(3) Or silent blocks for mounting the electric motor or the foot mounting flange
(4) Flexible tube connections (compensators) or hoses on inlet, outlet, and drain port of the pump.
(5) Exclusive use of gas tight tube fittings for inlet connections to avoid ingression of air causing cavitations and excessive noise.

I. Drain line

The drain line must lead directly to the reservoir without restriction. The drain line must not be connected to any other return line.

The end of the drain line must be below the lowest fluid level in the reservoir and as far away as possible from the pump inlet line. This ensures that the pump is not empty itself when it's not in operation and the hot aireated oil will not be recirculated.

For the same reason, when the pump is mounted inside the reservoir, the drain line should be arranged in such a way that a siphon is created. This ensures that the pump is always filled with fluid.

The drain pressure must not exceed 1 bar.

Drain line length should not exceed 2 meters.

Minimum diameter should be selected according to the port size and a straight low pressure fitting with maximized bore should be used.

	PV016~PV023 PV028	PV032~PV046 PV056/PV065	PV063~092 PV110~PV123	PV125~180 PV210	PV270
Size of pipe joints	3/8"	1/2"	3/4"	1"	1-1/4"
I.D. of pipes	Ø12 more	Ø15 more	Ø19 more	Ø25 more	Ø32 more
Length of drain	Under 1m	Under 1m	Under 1m	Under 1m	Under 1m

YEOSHE HYDRAULICS CO., LTD.

YEOSHE BEST CHOICE

Innovative Technology
Efficient Performance
Reliable Quality and Service

油 聖 液 壓 科 技 有 限 公 司
YEOSHE HYDRAULICS TECHNOLOGY CO.,LTD.

413 台灣台中市霧峰區霧工一路68號
No.68, Wugong 1st Rd., Wufong Dist., Taichung City, Taiwan, 413
TEL：+886-4-23332339 FAX：+886-4-23333817 E-mail：yeoshe@yeoshe.com.tw

東莞辦事處 Dongguan TEL：+86-769-85965158 FAX：+86-769-81635359 E-mail：yeoshe@yeoshe.com.tw
上海辦事處 Shanghai TEL：+86-21-69785786 FAX：+86-21-69785787 E-mail：yeoshe@yeoshe.com.tw

經銷商 Distributor

www.yeoshehydraulic.com