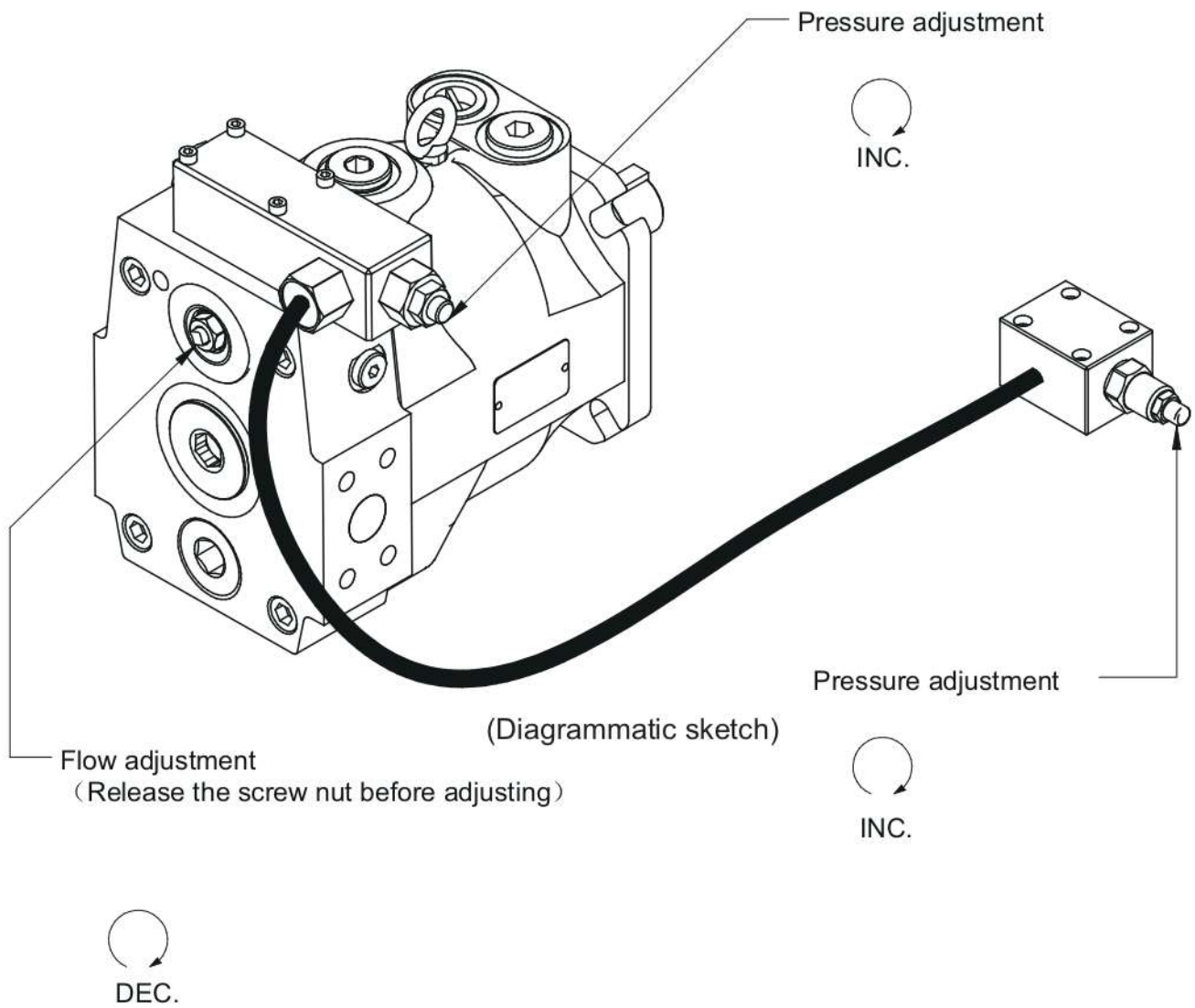
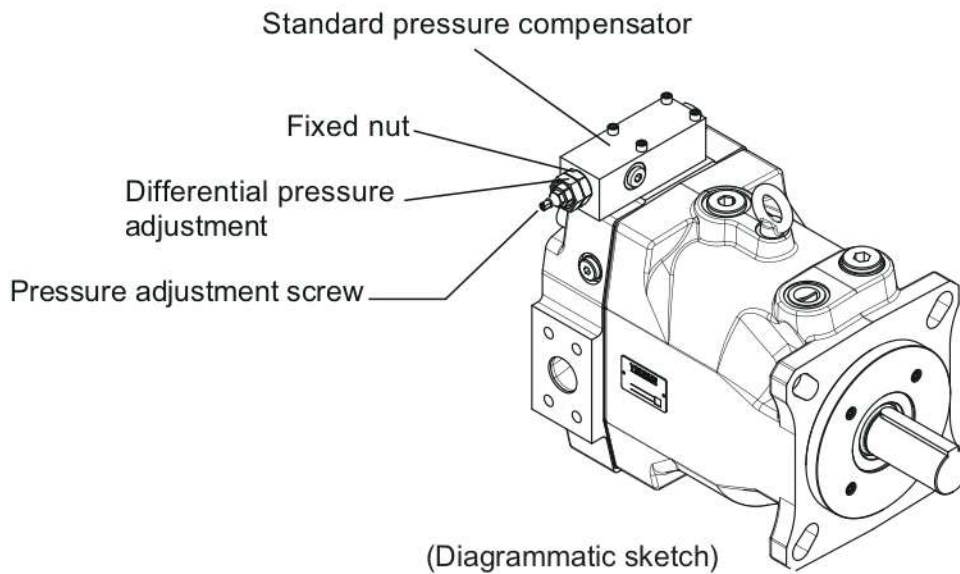


## Pressure &amp; Flow Adjustment



# A0 Standard pressure compensator



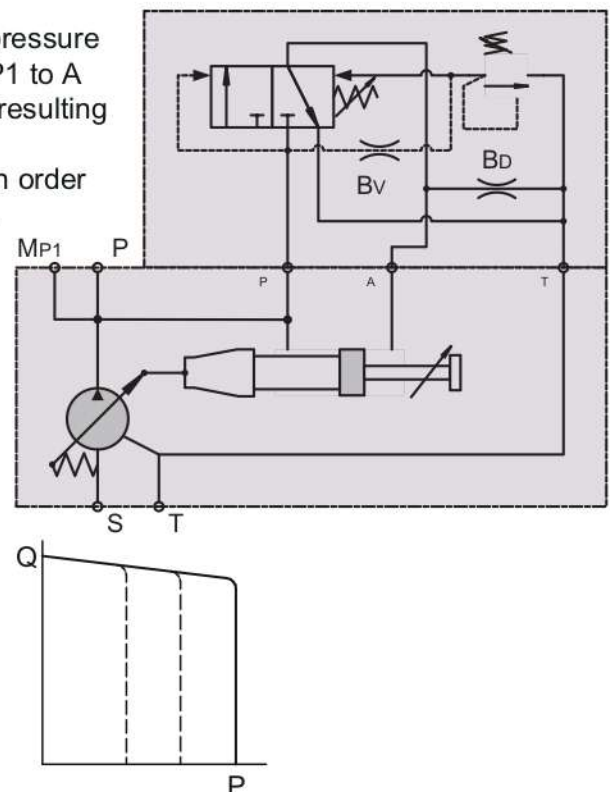
## A0 Standard pressure compensator

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.



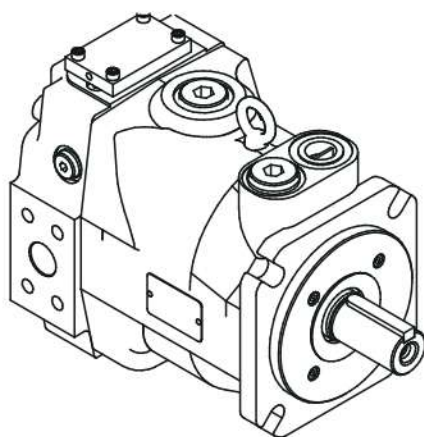
# LN None pressure compensator (fixed displacement) (pressure protection required)

**YEOSHE**

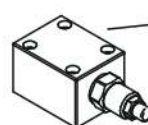
A

9

PV Axial piston pump



(Diagrammatic sketch)

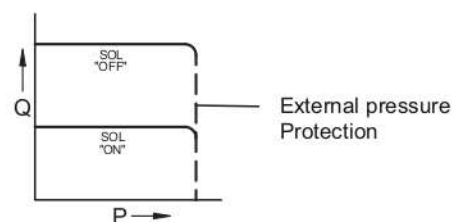
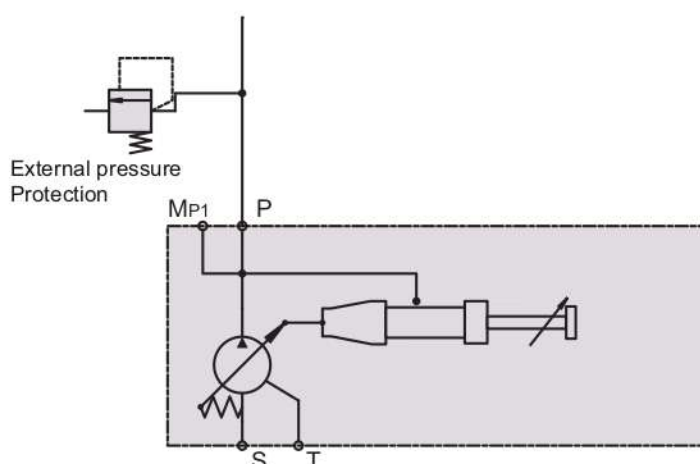
External pressure  
protection  
Relief valve(additional)

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

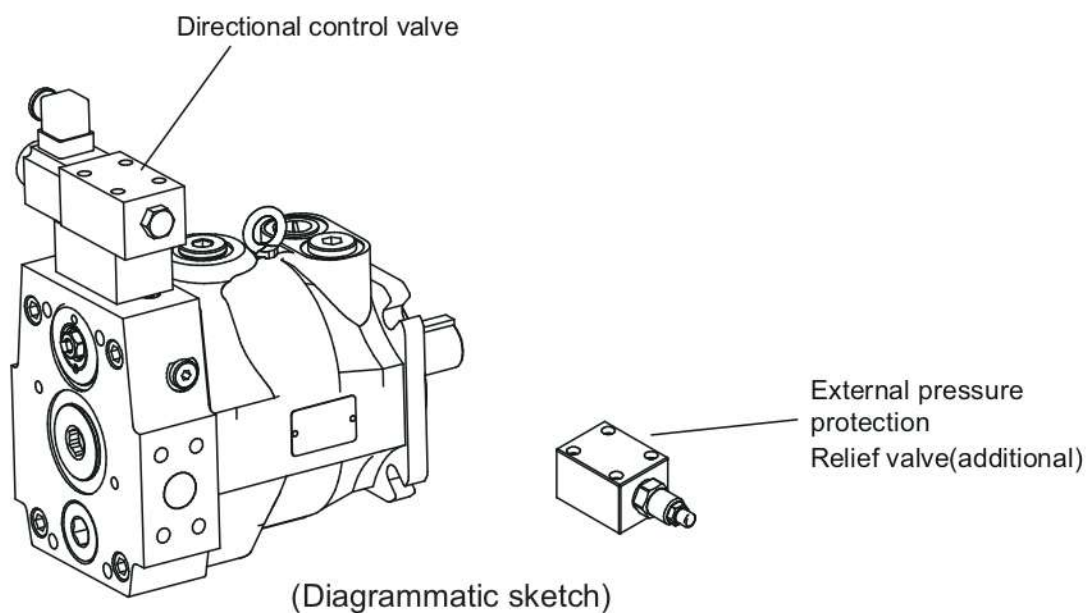
By using the system under stable displacement and pressure situation, standard pressure compensator can be omitted which helps cost down.

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)



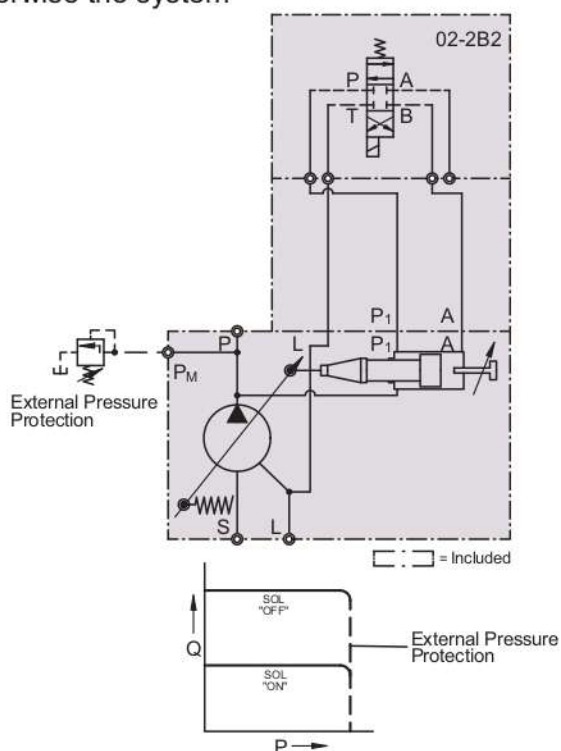
## LS Electrical 2-stage flow compensator (pressure protection required)

Control the hydraulic circuit change by using directional control valve.

LS control is applied to two-stage stroke and different speed system.

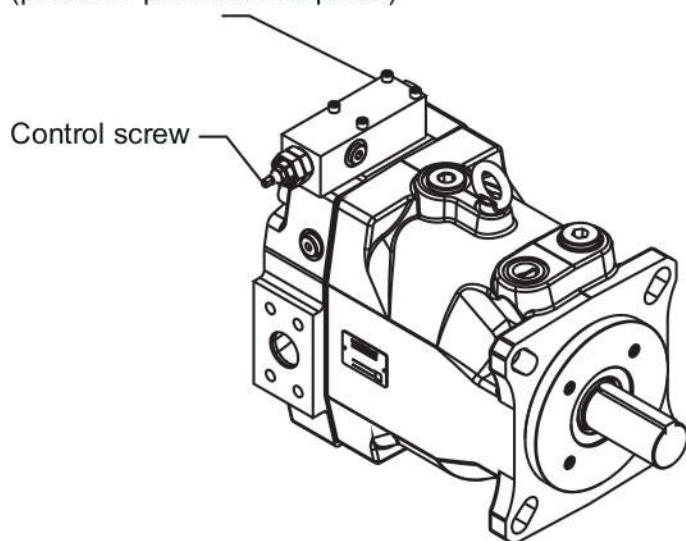
### Notice:

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

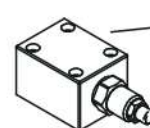


# LC Fixed displacement 2-stage flow compensator **YEOSHE** (pressure protection required)

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



(Diagrammatic sketch)



External pressure  
protection  
Relief valve(additional)

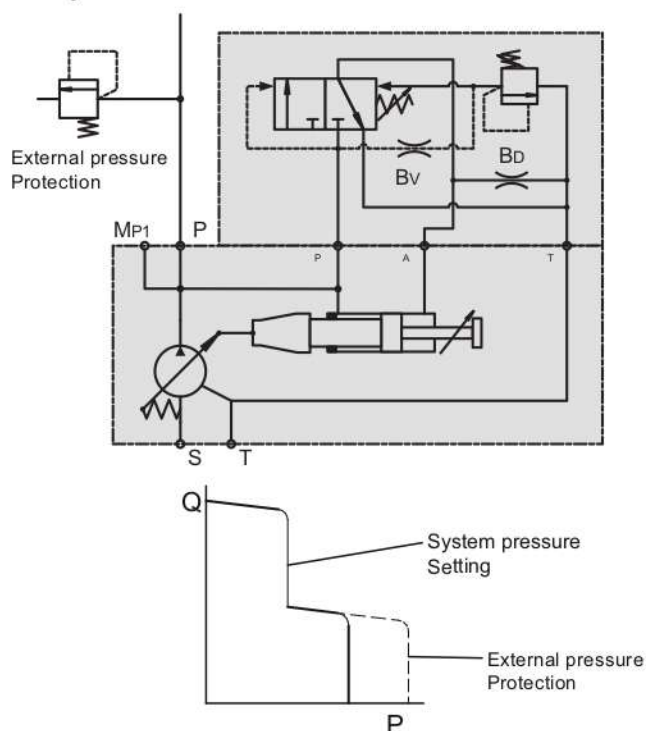
LC Fixed displacement 2-stage flow compensator  
(pressure protection required)

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.

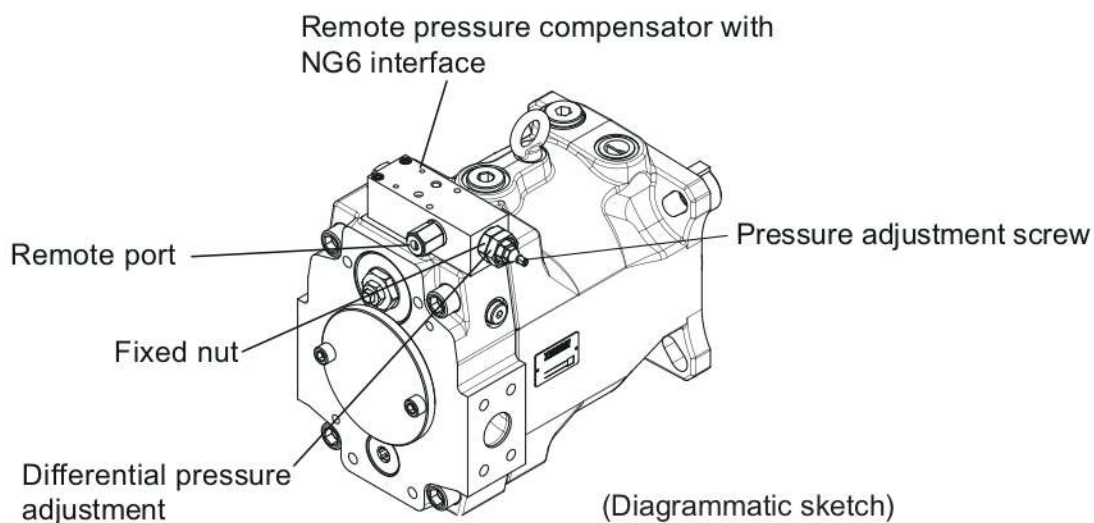


## GM Remote pressure compensator with NG6 interface

A

12

PV Axial piston pump



### GM Remote pressure compensator with NG6 interface

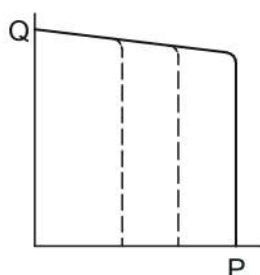
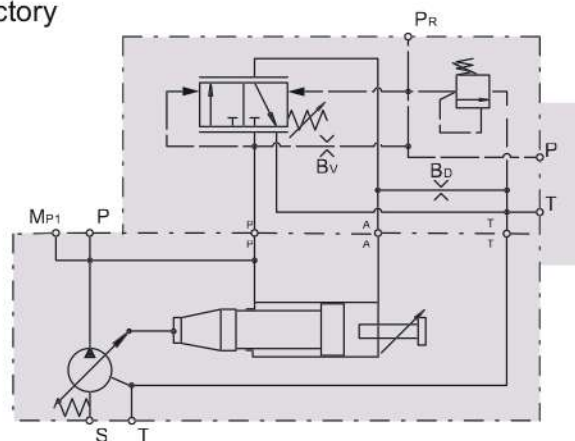
Version GM of the remote pressure compensator provides on its top side an interface NG6, DIN24340 (CETOP 03 at RP35H, NFPA D03).

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.

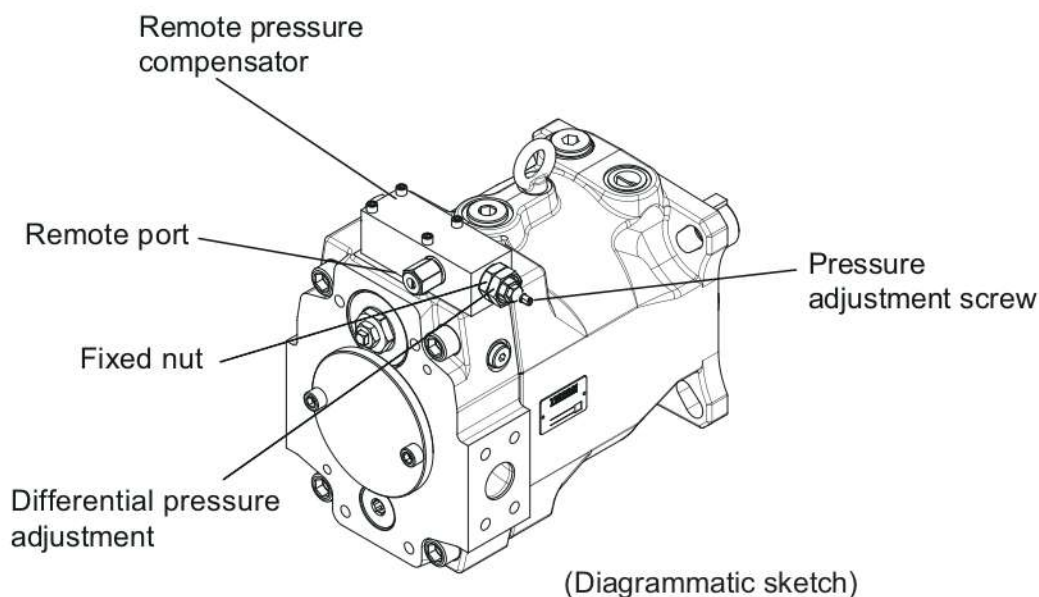


GA Remote pressure compensator + Relief valve **YEOSHE**

A

13

PV Axial piston pump

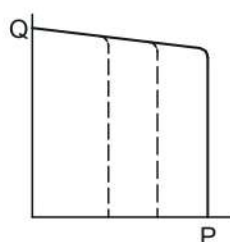
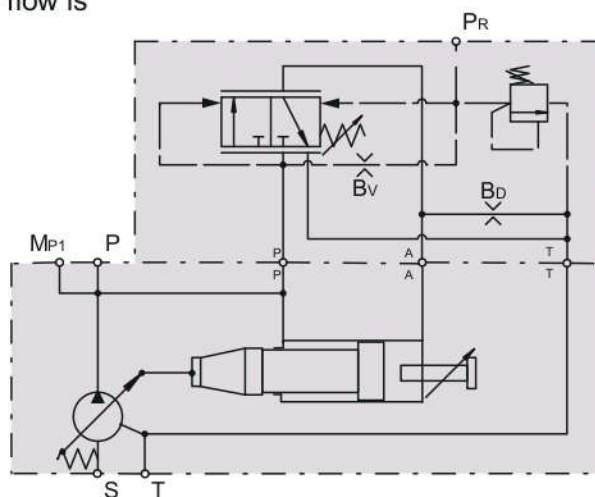


## GA Remote pressure compensator + Relief valve

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.

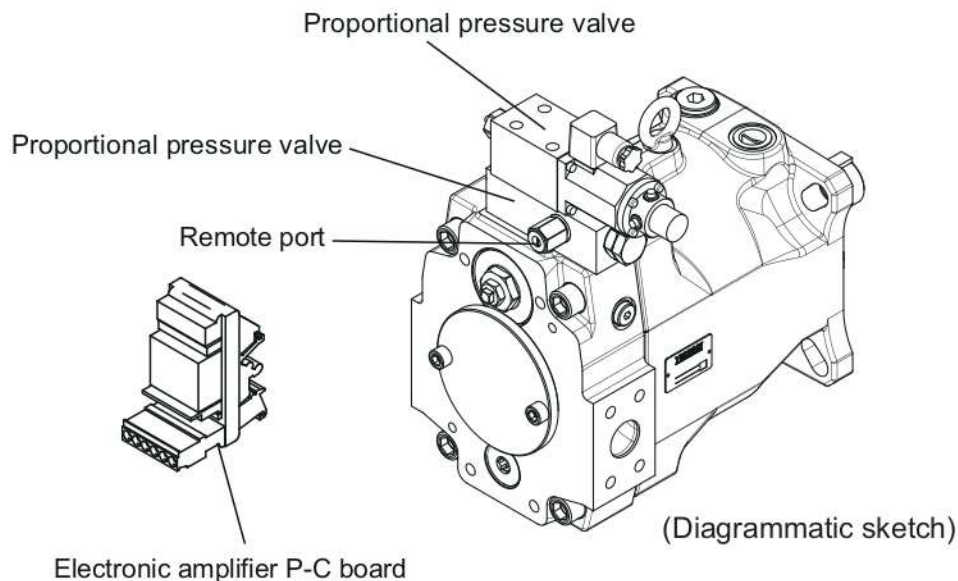


# GJ Remote pressure compensator + Proportional pressure valve

A

14

PV Axial piston pump

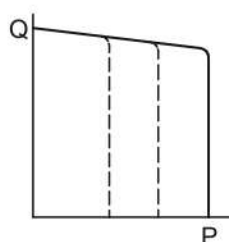
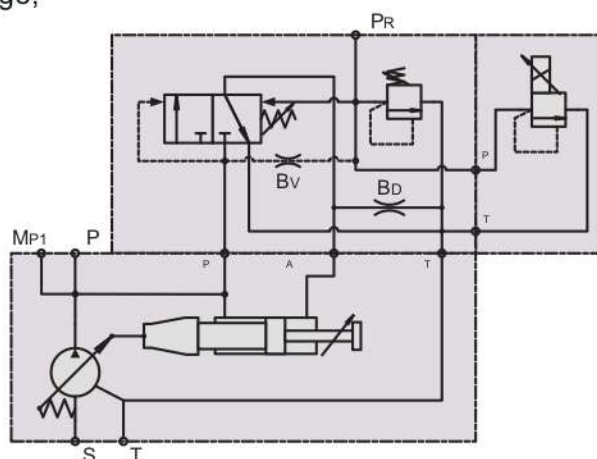


## GJ Remote pressure compensator + Proportional pressure valve

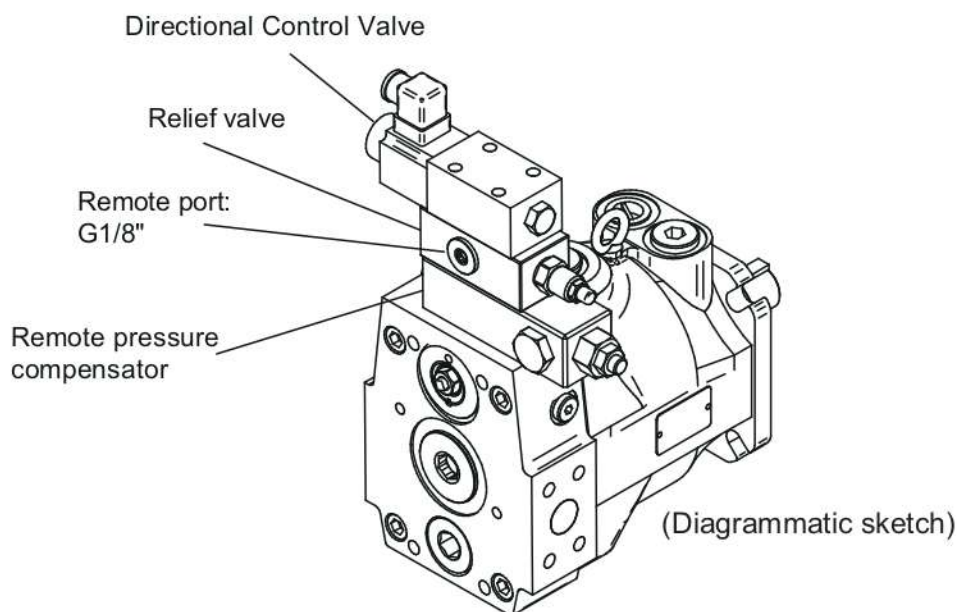
Fulfill the actual displacement and maintain the preset system pressure.

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

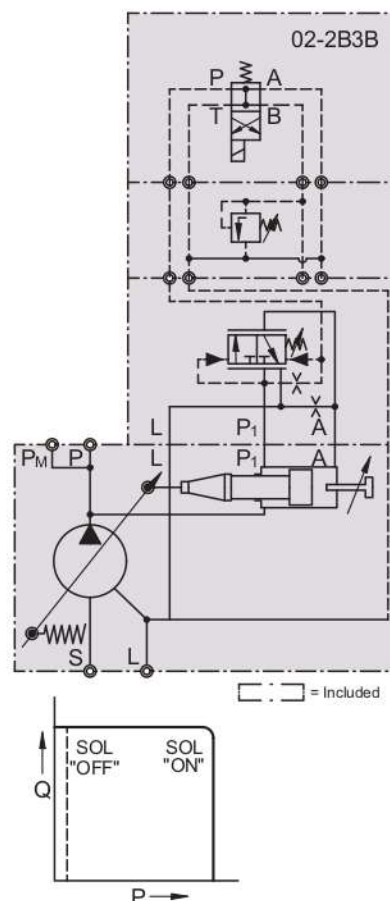


## GR Remote pressure compensator + Electrical unloading

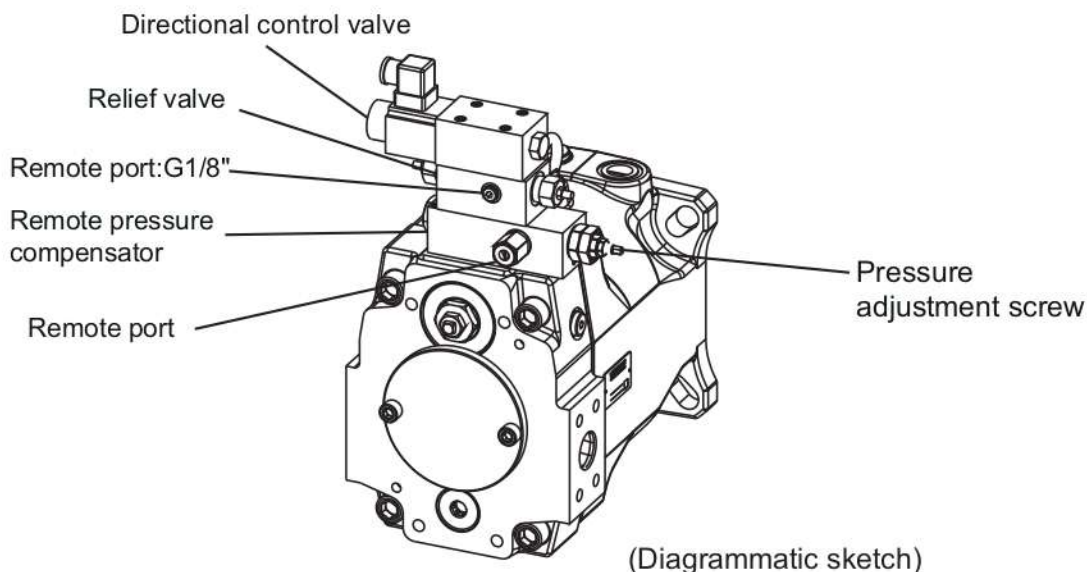
By adding a relief valve and a directional control valve on the compensator makes the pump have both function.

GR control is for long unloading situation.

When the system stops, oil temperature and noise maintain low level while being through the unloading.



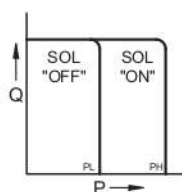
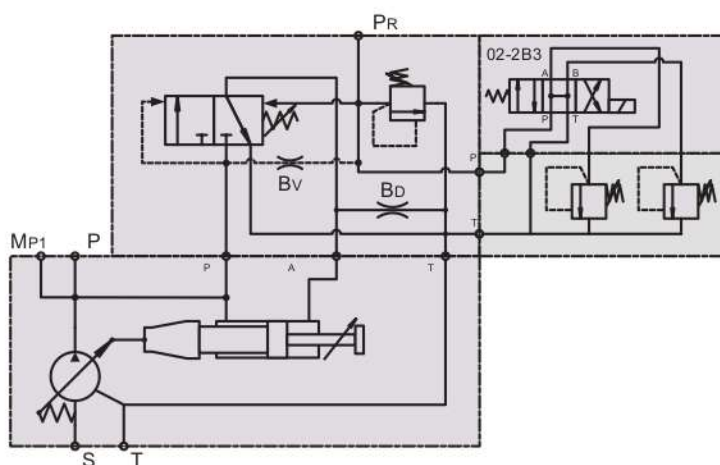
# GB Remote pressure compensator + 2-stage pressure control



## GB Remote pressure compensator + 2-stage pressure control

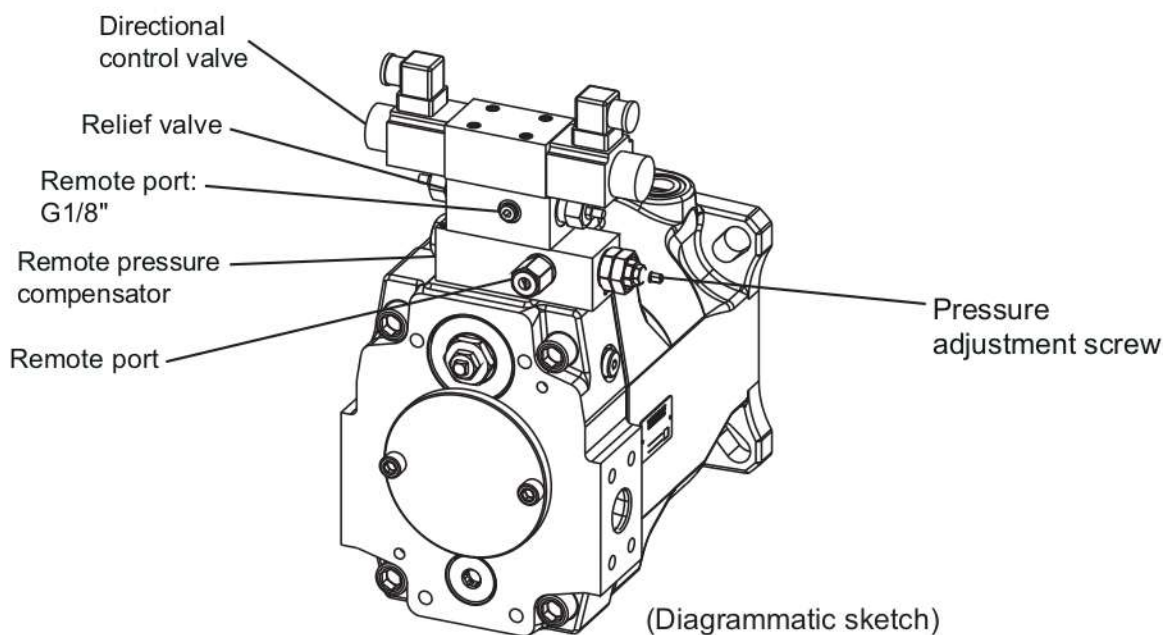
By adding a relief valve and directional control valve on the compensator makes it adjust two different stage limited pressure.

GB control is for two-stage working pressure under the constant cylinder speed.



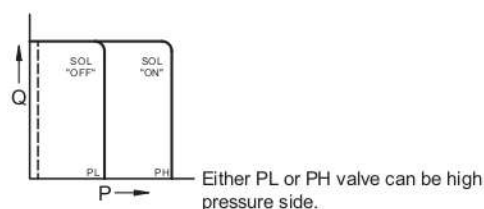
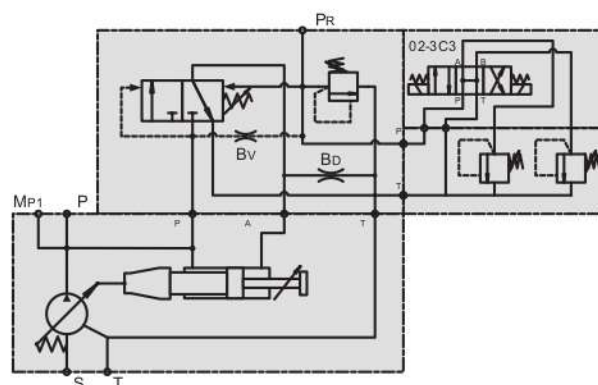
Either PL or PH valve can be high pressure side.

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



## 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.

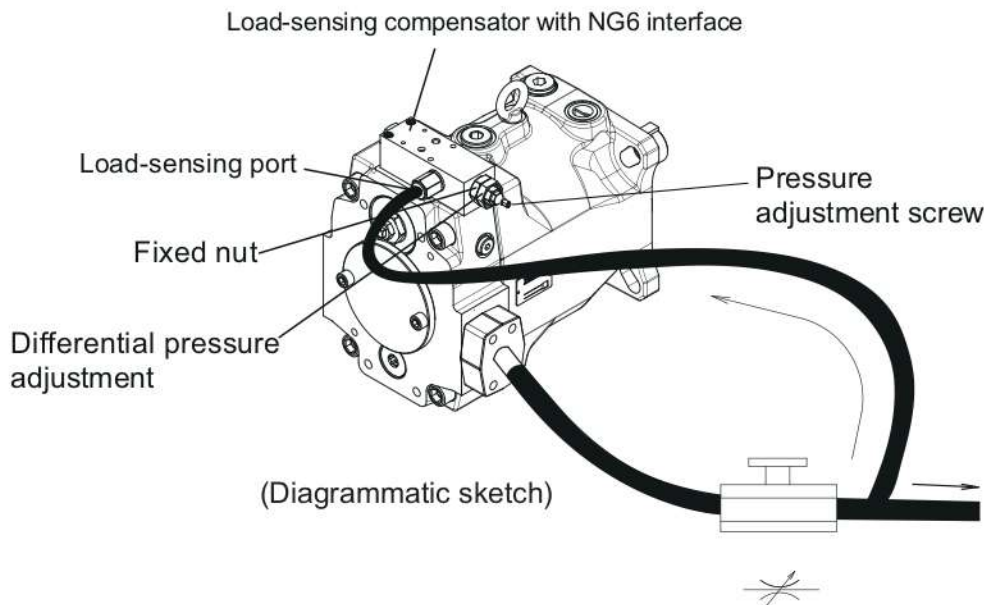


# HM Load-sensing compensator with NG6 interface

A

18

PV Axial piston pump



## 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.

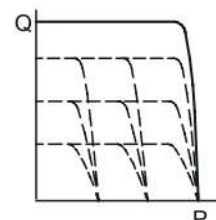
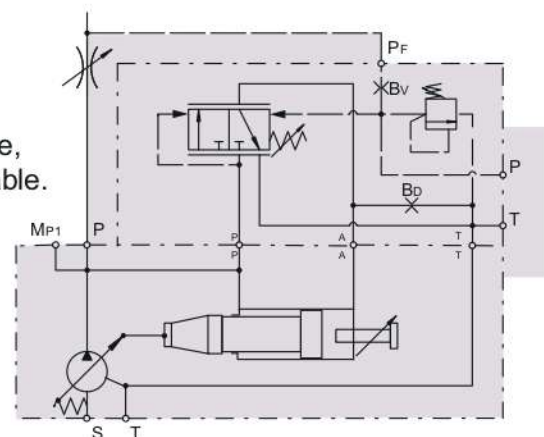
Factory setting for the differential pressure is 10 bar.

The input signal to the compensator is the differential pressure at the main stream resistor.

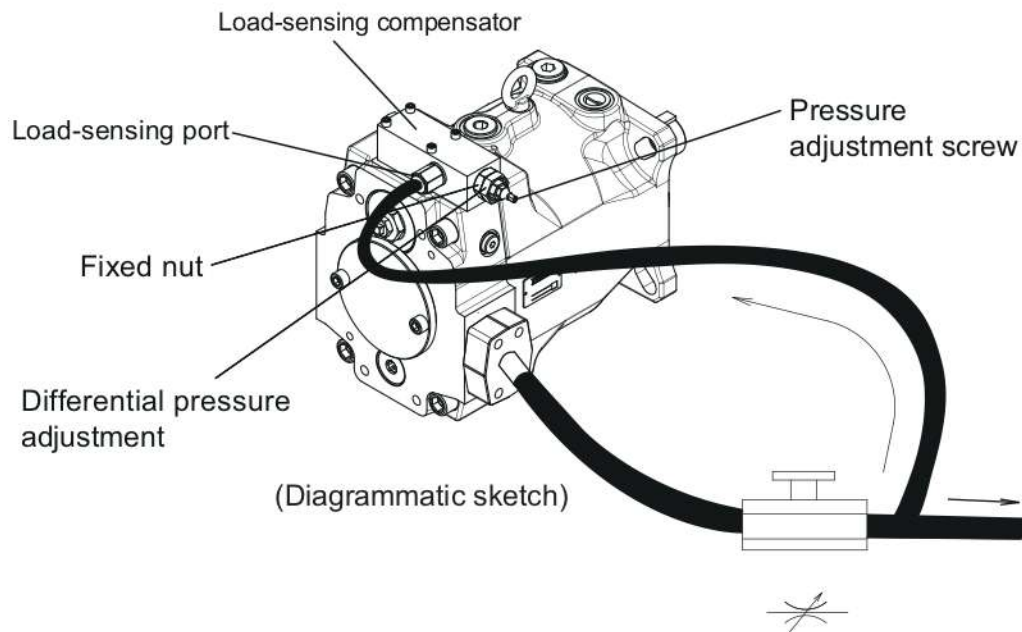
A load-sensing compensator represents mainly a flow control for the pump output flow, because the compensator keeps the pressure drop at the main stream resistor constant.

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.

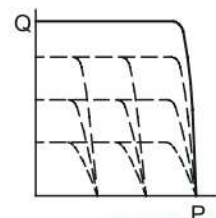
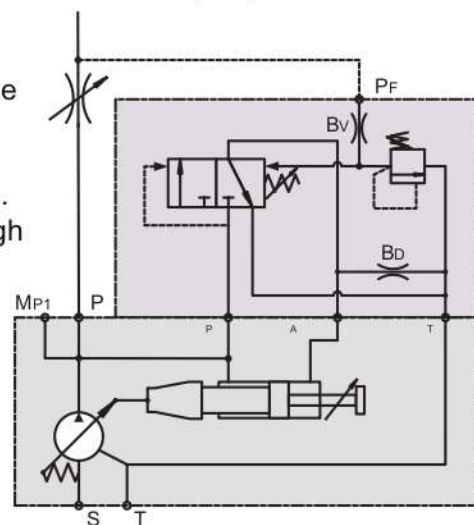
A variable input speed or a varying load(-pressure) has consequent no influence on the output flow of the pump and the speed of the actuator.

Relief valve has adjustment function.

The pilot valve can be installed remote 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.

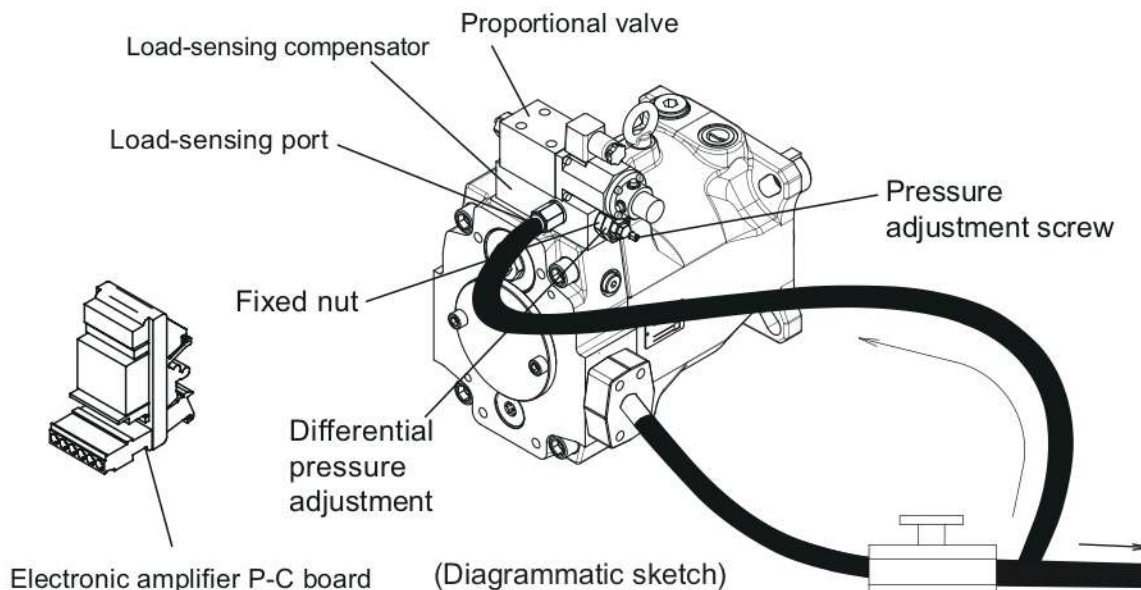


# HJ Load-sensing compensator + Proportional pressure valve

A

20

PV Axial piston pump



## HJ Load-sensing compensator + Proportional pressure valve

The load-sensing compensator has an external pilot pressure supply.

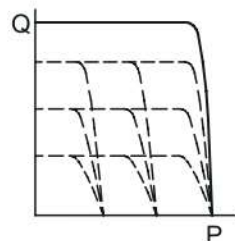
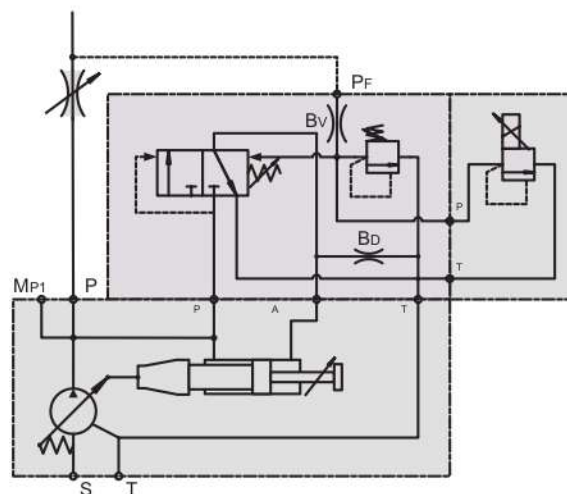
Factory setting for the differential pressure is 10bar.

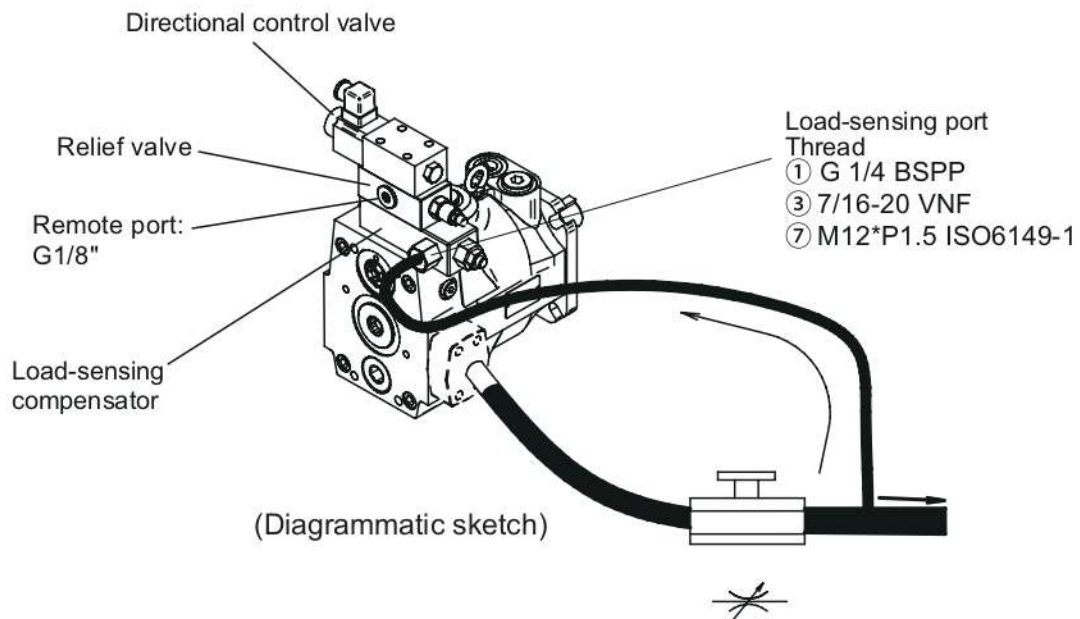
The input signal to the compensator is the differential pressure at the main stream resistor.

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

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.

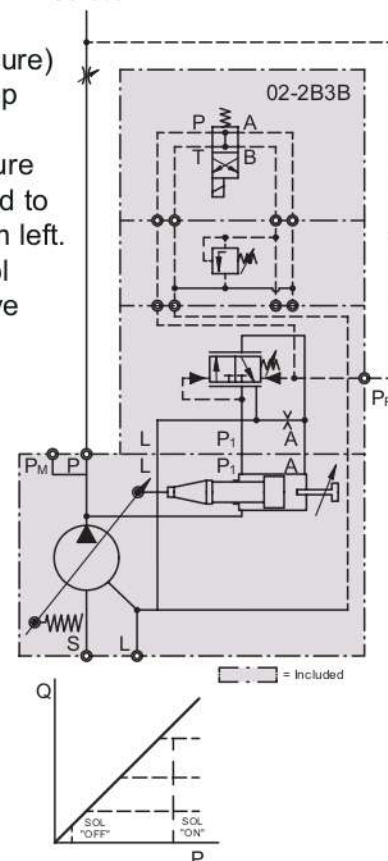
A variable input speed or a varying (load -pressure) has consequently on the output flow of the pump and speed of the actuator.

By adding a pilot orifice ( $\Phi 0.8\text{mm}$ ) and a pressure pilot valve pressure compensation can be added to the flow control function. See the circuit diagram left.

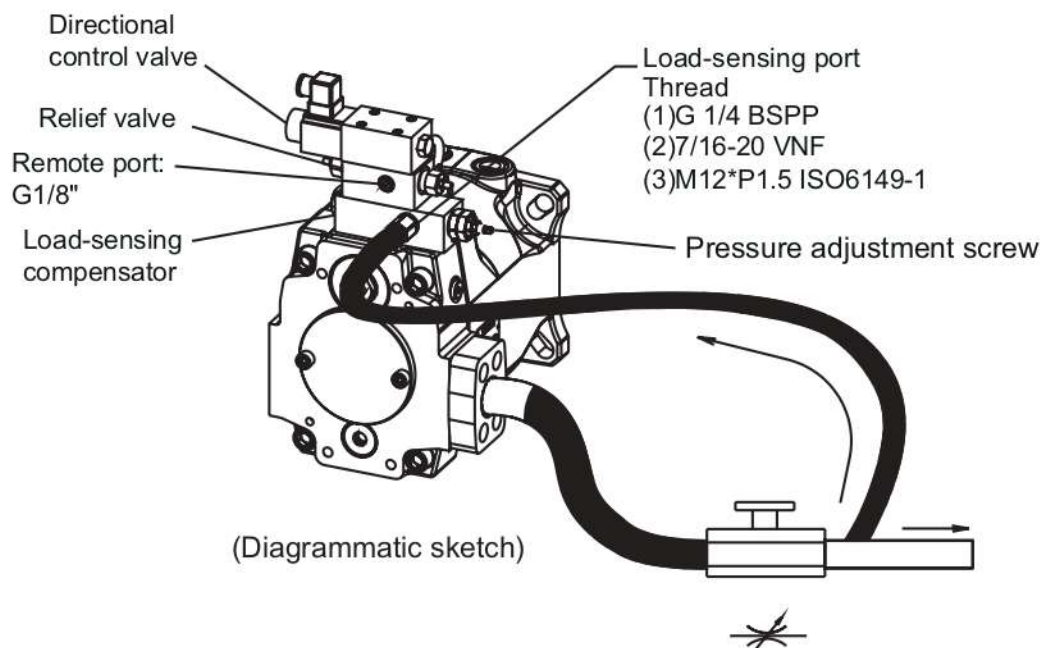
By adding a relief valve and a directional control valve on the compensator makes the pump have both function.

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.

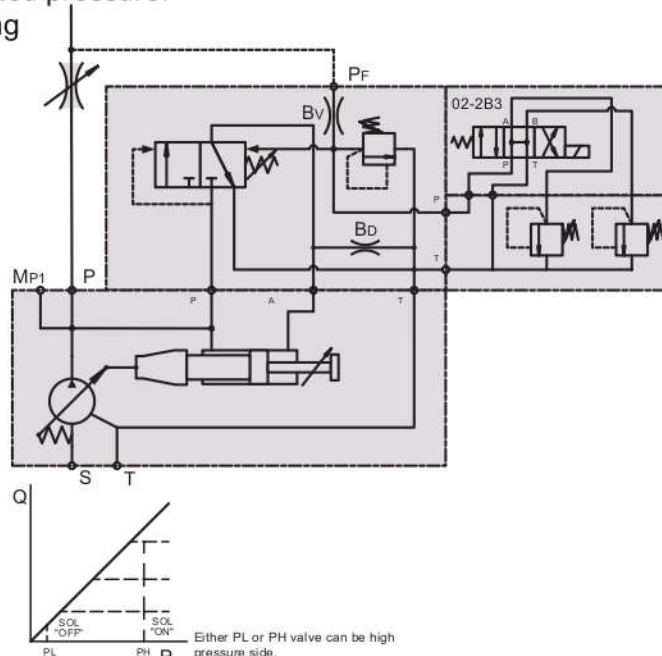
A variable input speed or a varying (load -pressure) has consequently on the output flow of the pump and speed of the actuator.

By adding a pilot orifice ( $\Phi 0.8\text{mm}$ ) and a pressure pilot valve pressure compensation can be added to the flow control function.

See the circuit diagram left.

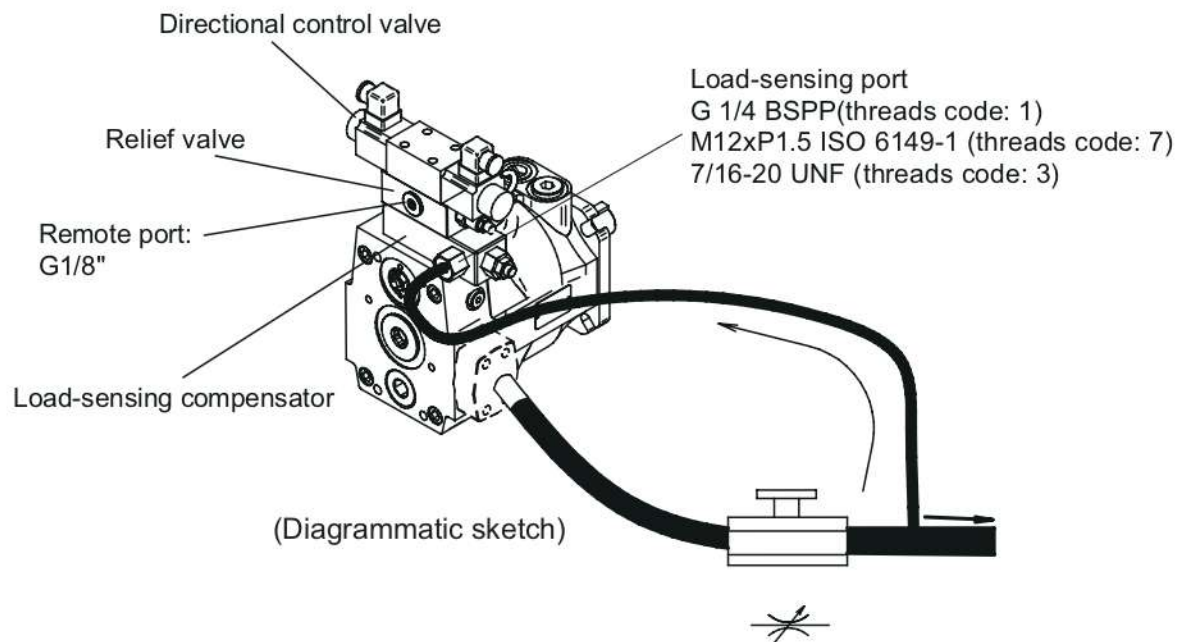
By adding a relief valve and directional control valve on the compensator makes it adjust two different stage limited pressure.

HB control is for two-stage working pressure under the constant cylinder.



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

**YEOSHE**



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 ( $\Phi 0.8\text{mm}$ ) and a pressure pilot valve pressure compensation can be added to the flow control function.

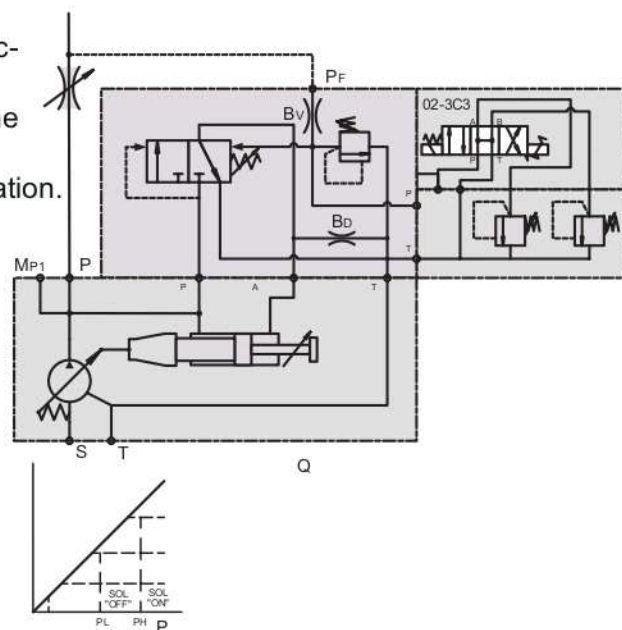
See the circuit diagram left.

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.

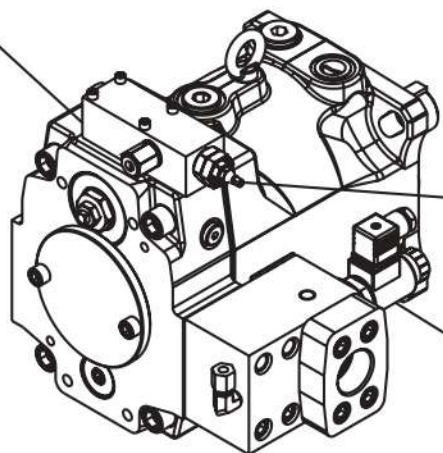
# HQ Load-sensing compensator + Proportional flow valve + Relief valve

A

24

PV Axial piston pump

Load-sensing compensator

Pressure  
adjustment screwProportional  
flow controlElectronic amplifier P-C board  
compensator(Except for the exterior  
of body 2)

(Diagrammatic sketch)

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

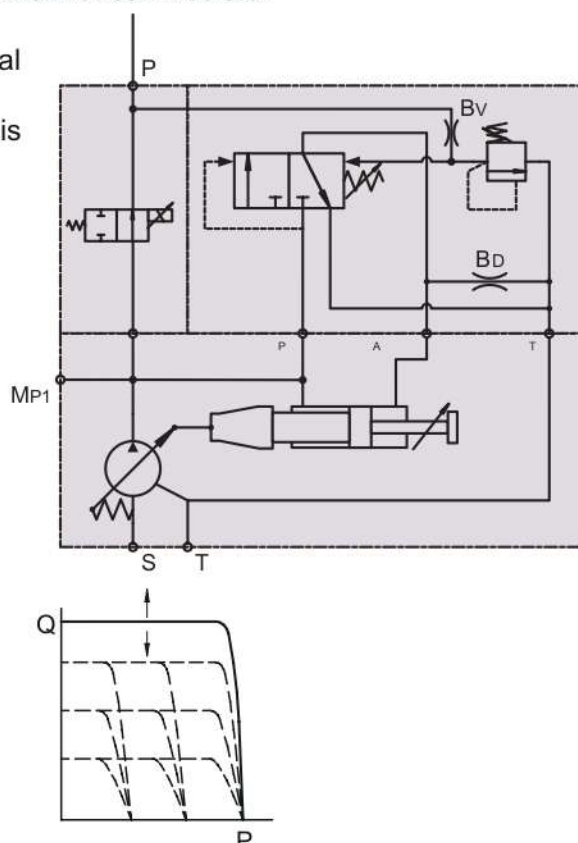
The load-sensing compensator has an external pilot pressure supply.

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.

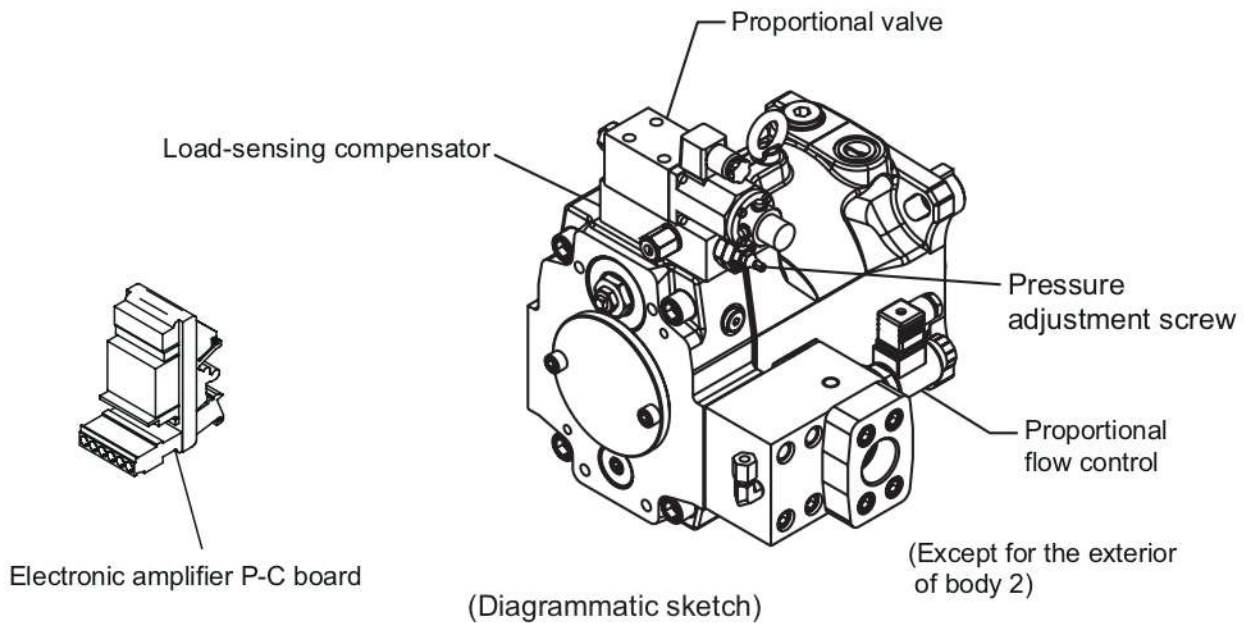


# HK Load-sensing compensator + Proportional pressure valve + Proportional flow valve **YEOSHE**

A

25

PV Axial piston pump



## 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.

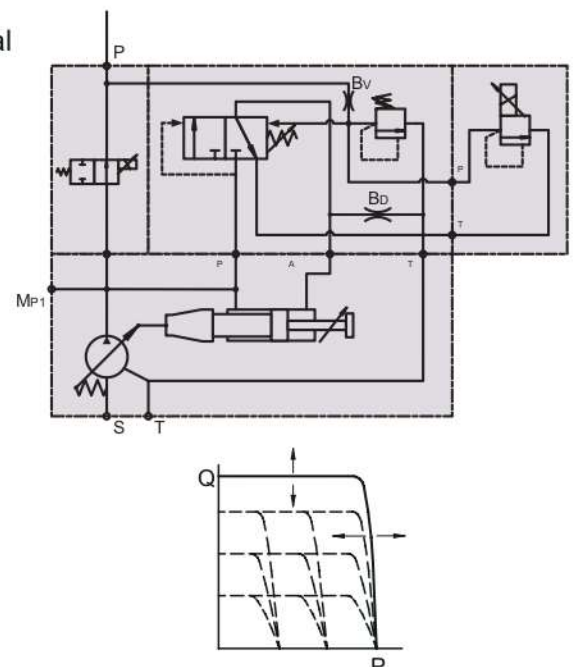
Factory setting for the differential pressure is 10 bar.

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.

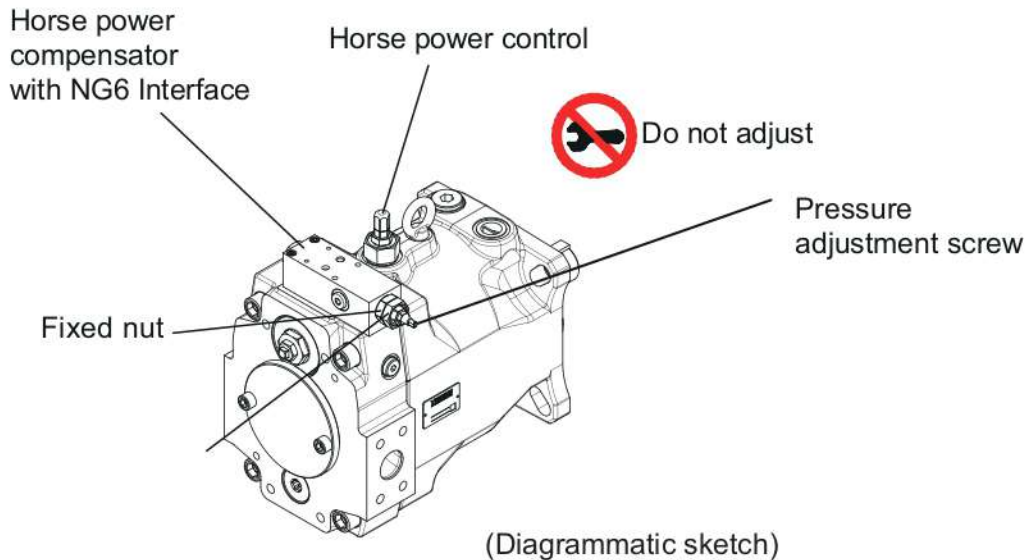


# PM Horse power compensator with NG6 interface

A

26

PV Axial piston pump



## 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 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.

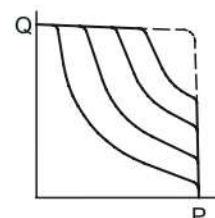
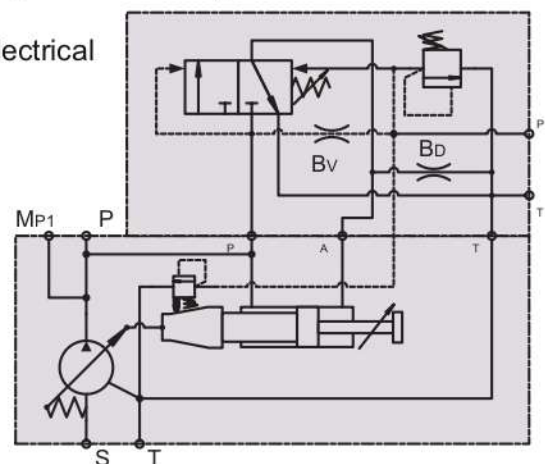
This makes the pump compensate along a constant horse power (torque) curve.

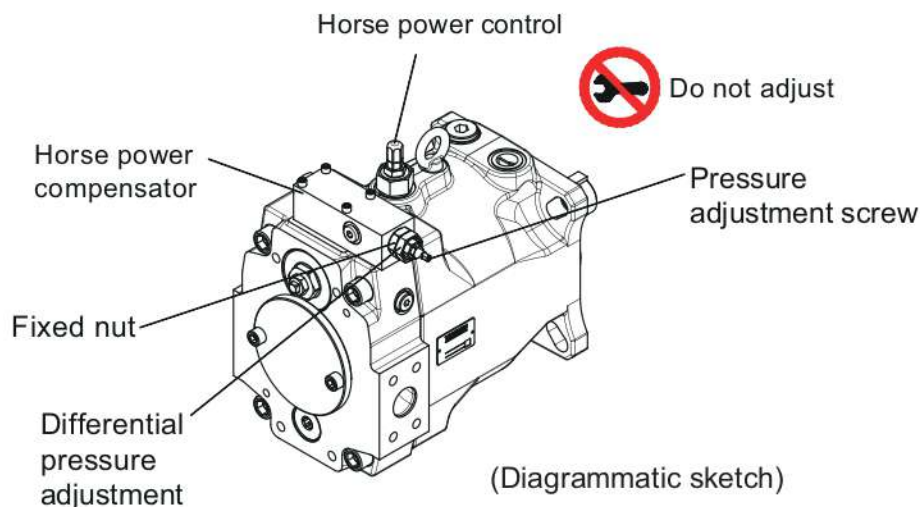
Horse power is optional when order.

Working pressure can be adjusted by adding YEOSHE pressure leading valve.

Adding the proportional pressure valve achieves the electrical proportional pressure control.

※ Horse power setting, please following type code.





### 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.

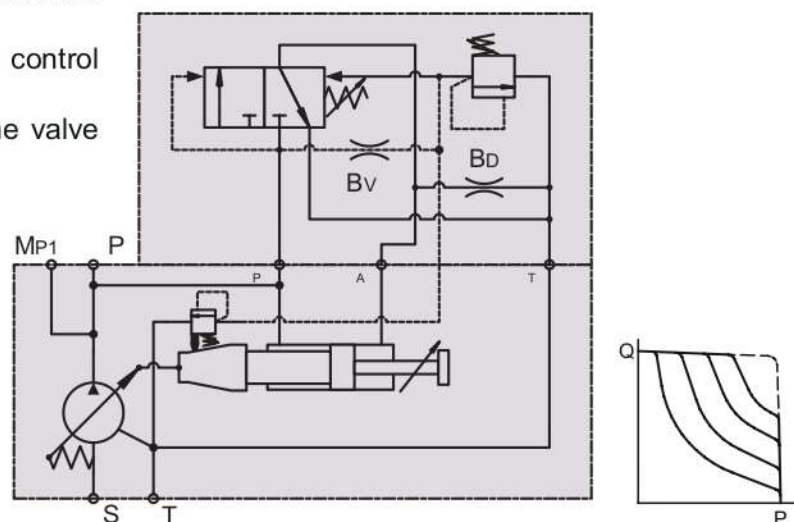
Adding the proportional pressure valve achieves the electrical proportional pressure control.

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.



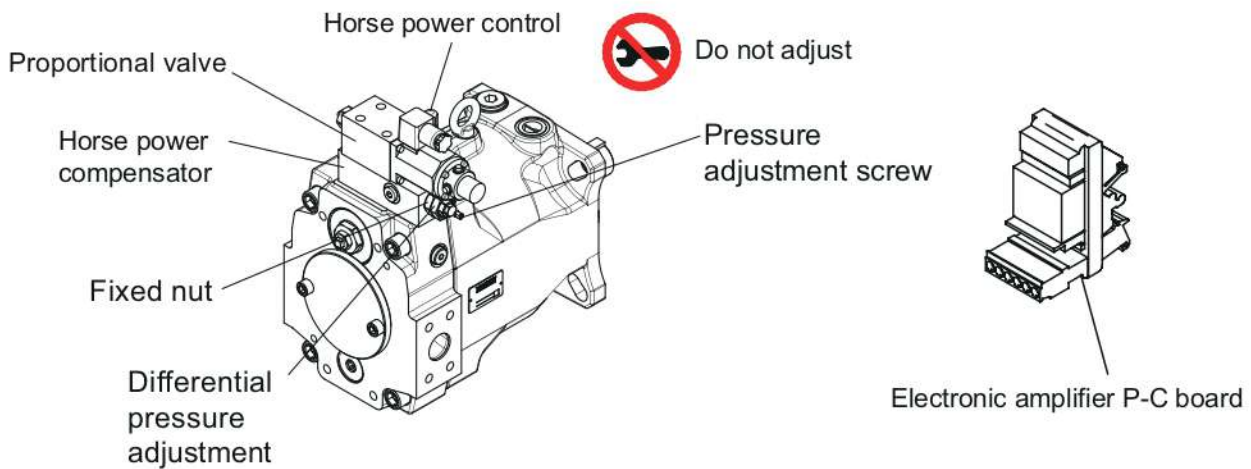
# PJ Horse power compensator + Proportional pressure valve



A

28

PV Axial piston pump



(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.

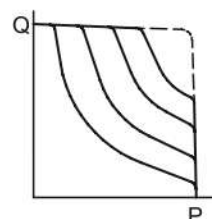
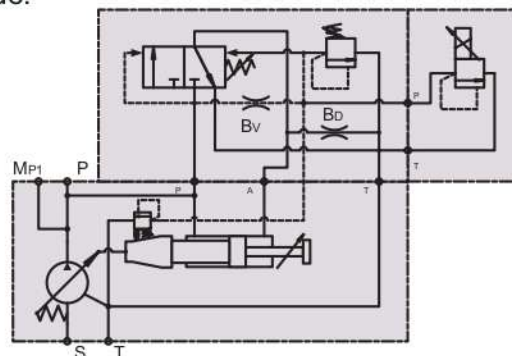
This makes the pump compensate along a constant horse power (torque) curve.

Pressure-adjusted function is optional by adding a leading proportional pressure valve.

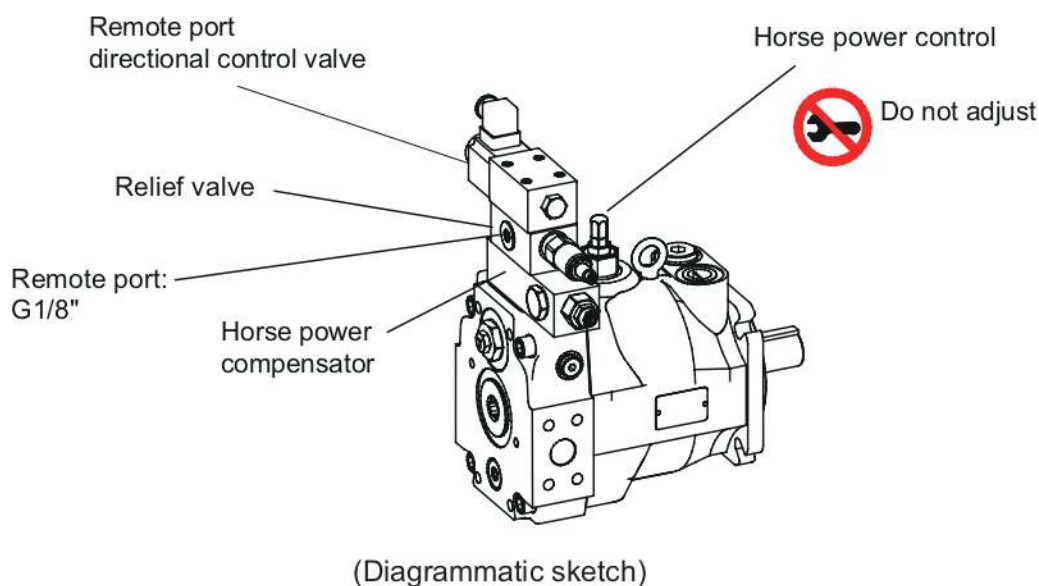
※ Horse power setting, please following type code.

※ Proportional pressure max. 250 bar.

If needing any other pressure range, please contact YEOSHE.



## PR Horse power compensator + Electrical unloading



## 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.

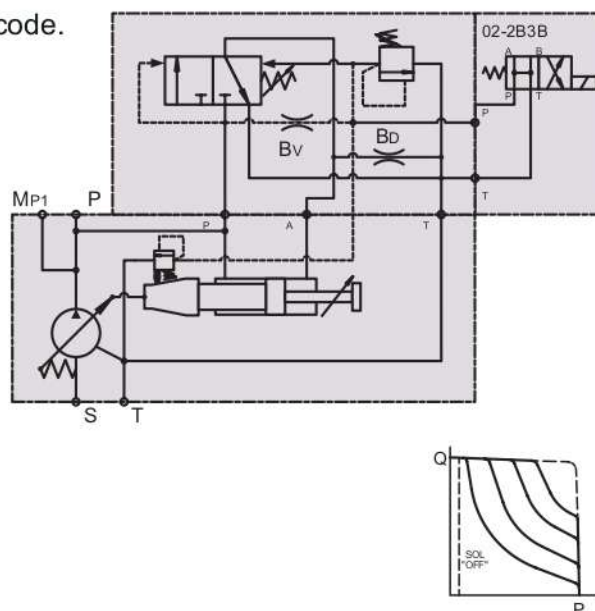
This makes the pump compensate along a constant horse power (torque) curve.

Electrical unloading function is optional by adding an electric directional control valve.

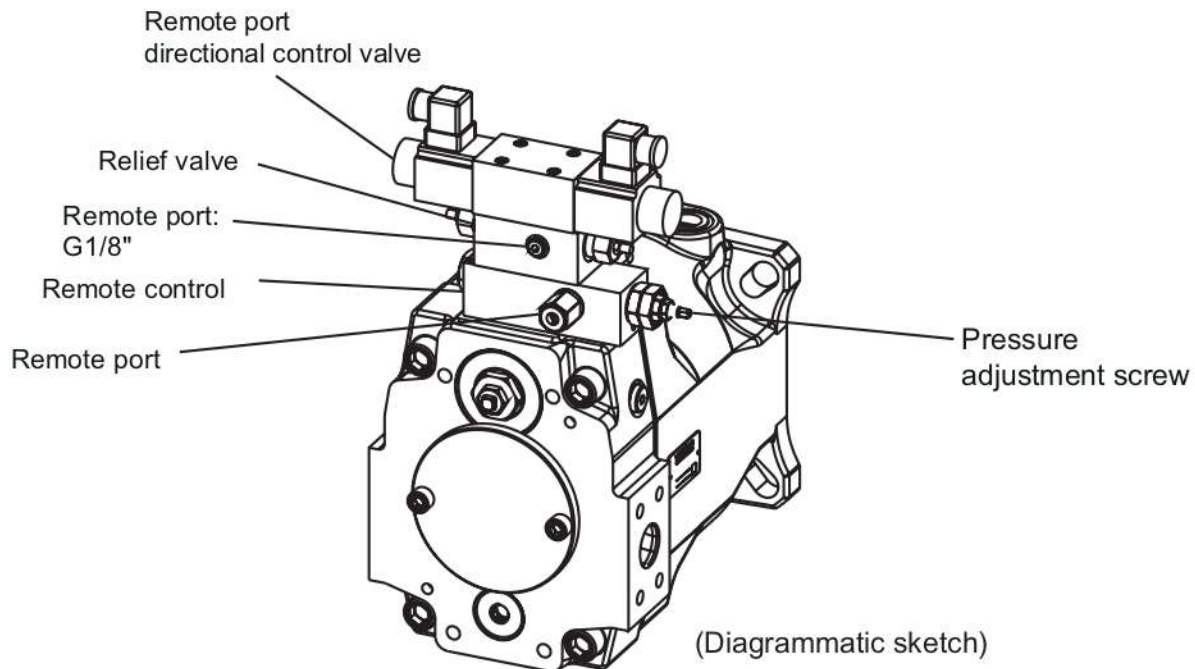
This control is suitable for long period of unloading.

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



## 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.

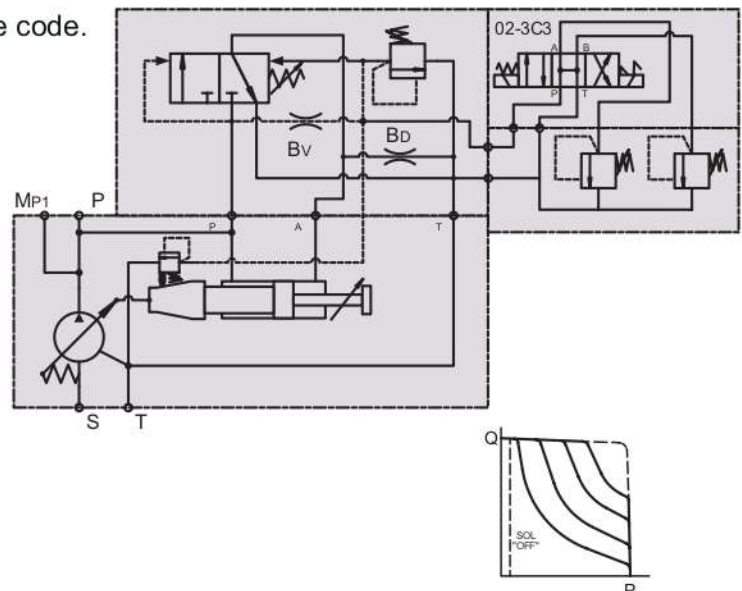
The cam sleeve has a contour that is designed and machined for the individual displacement and the nominal horse power setting.

At a large displacement the opening pressure (given by the cam sleeve diameter) is lower than at small displacements.

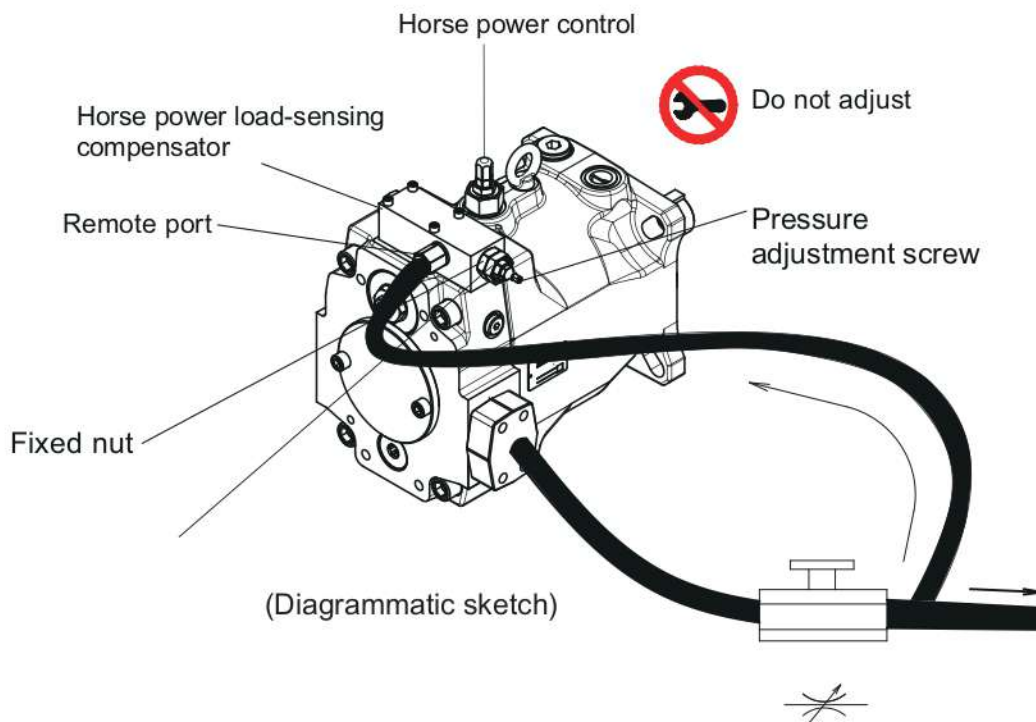
Control two different-stage limited pressure by adding directional control valve, and unloading function.

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



## 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.

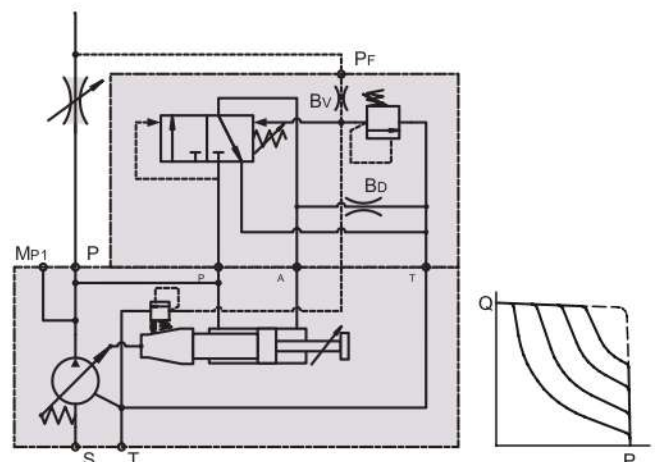
Working pressure can be adjusted by adding a leading valve on the compensator, and pump flow can also be adjusted on the first pipe by adding an external feedback on the PF port as a control signal on the main stream.

The pilot valve can be installed remote from the pump in some distance.

That allows pressure setting, e.g. from the 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.

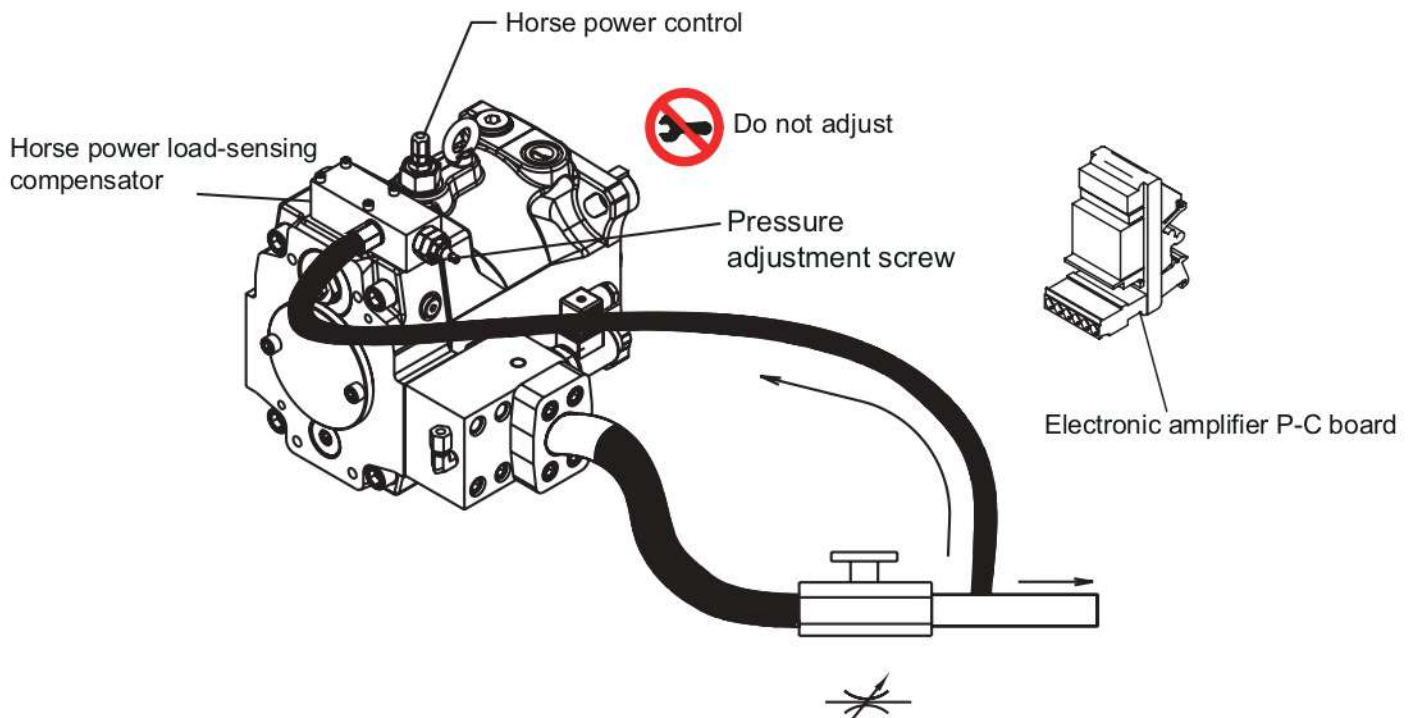
※Horse power setting, please following type code.



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

A

## PV Axial piston pump



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.

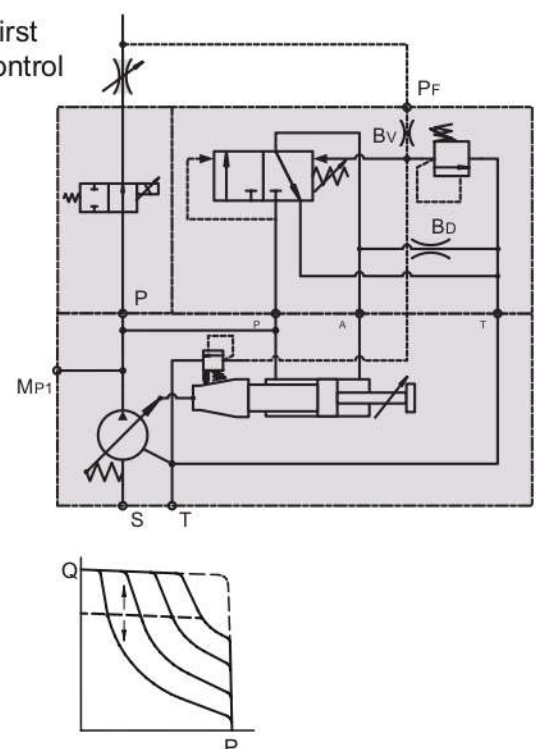
At a large displacement the opening pressure (given by the cam sleeve diameter) is lower than at small displacements.

This makes the pump compensate along a constant horse power (torque) curve.

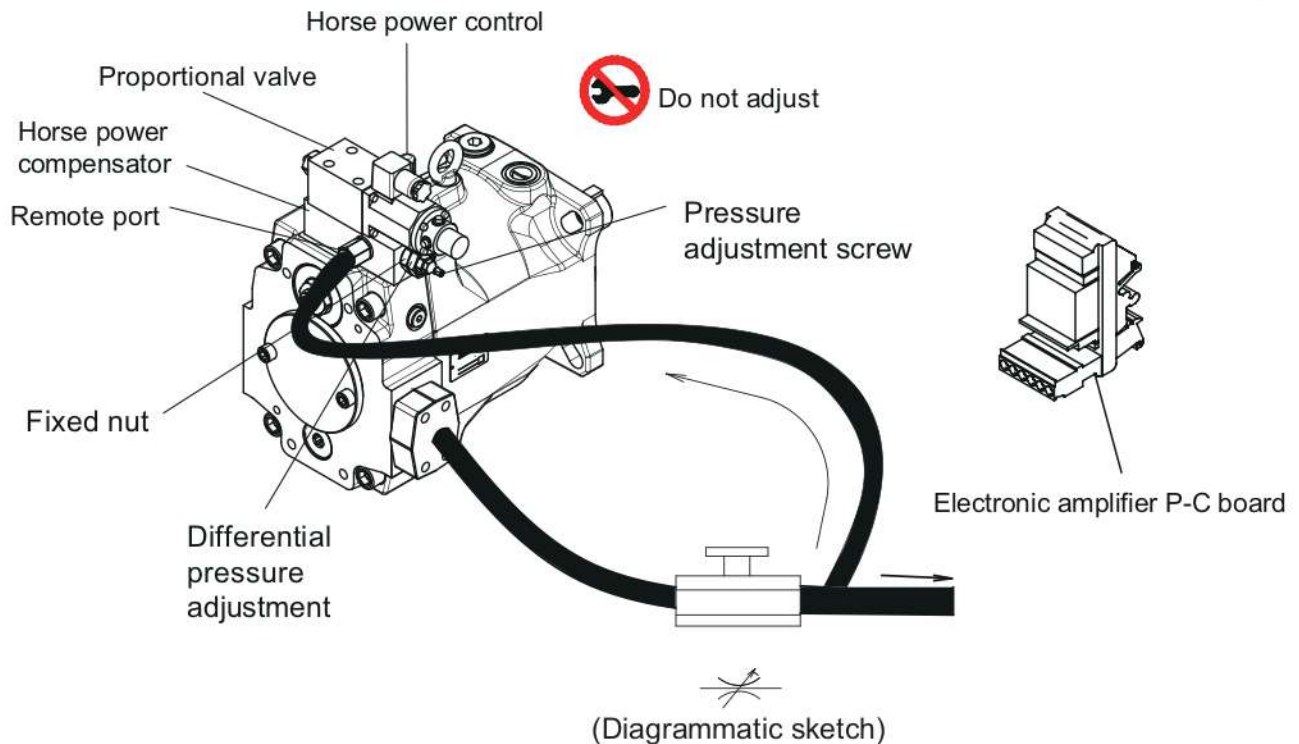
Pressure can be adjusted by adding a leading valve in the compensator, and pump flow can also be adjusted on the first pipe by adding an external feedback on the PF port as a control signal on the main stream.

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



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.

