

FEATURES

With the PV48, a range of features and product options is available. These include left and right hand variants, different spring options to suit loading requirements, a dust proof inner boot to maximise airborne contamination tolerance, and a variety of handle mounted electrical switching options.

BENEFITS

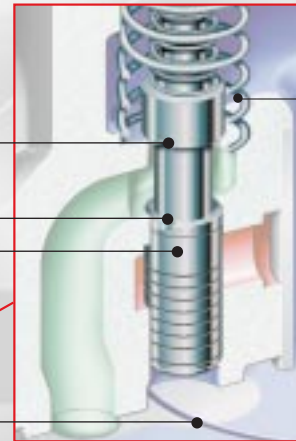
- > Valve enables independent installation.
- > Small lever, no operating rods.
- > Increase in fine control range.
- > Secondary pressure closely follows the movement of the operating lever.
- > Lightweight aluminium construction.
- > High durability.
- > Maintenance free.
- > Electrical safety circuit options.
- > All connections on the bottom of the unit.
- > Handle can be fitted with various electrical contacts.



PV48K illustrated

Unique Differential Area Design

The unique and patented differential area design significantly reduces the control area under pressure and thereby the operator force whilst minimising hysteresis effects. Precise and repeatable operation is consistently achieved.



Variety of Control Characteristics

A variety of spring options are available which, with the addition of stroke limiters, ensures that all necessary control characteristics can be satisfied.

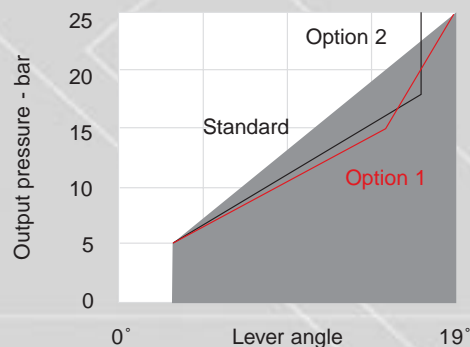
Optimum Damping Characteristics

The incorporation of both spool and body dampening features optimises stable performance under all transient conditions.

PILOT VALVE TECHNICAL DATA*

Input pressure	70 bar
Back pressure at port T	3 bar
Working fluid	Mineral oil, phosphate ester, fatty acid ester and water glycol.
Fluid temperature range	-20°C to +90°C
Viscosity range	10 to 2000 cSt
Maximum flow	20 l/min
Weight	1.93 kg

CONTROL RANGE



*Please refer to full technical specifications prior to application

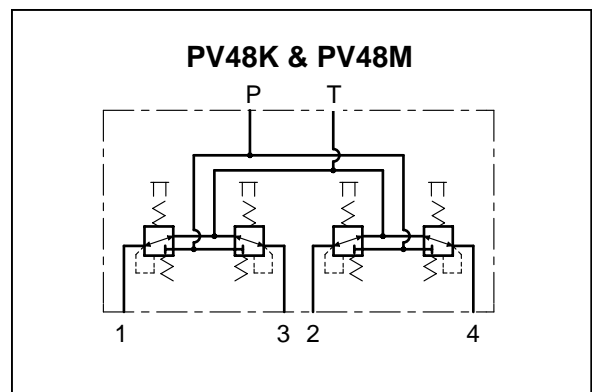
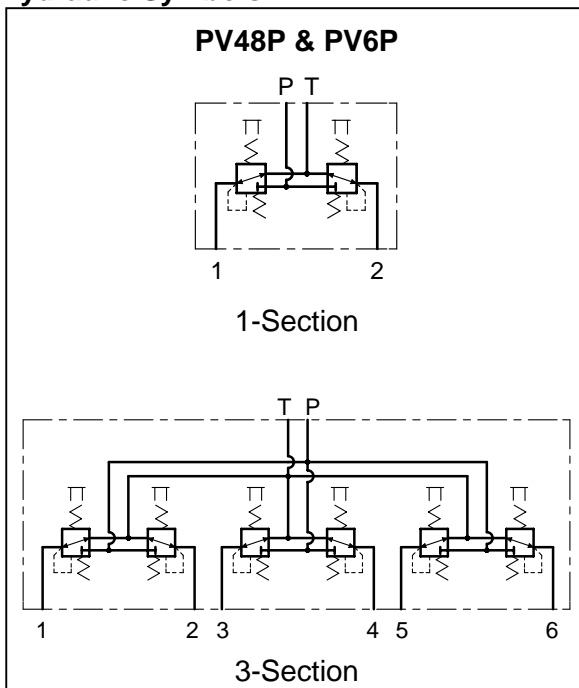
Peak Pressure 70 bar Flow 20 L/min	Pilot Valve Direct Acting For the remote control of valves, pumps & motors	Data Sheet Pilot valve GB
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Features

- ◇ Sensitive control allows low operating forces resulting in ease of operation.
- ◇ Valve enables independent installation.
- ◇ Small lever, no operating rods.
- ◇ Increase in fine control range.
- ◇ Secondary pressure closely follows the movement of the operating lever.
- ◇ Lightweight aluminium construction.
- ◇ High durability.
- ◇ Maintenance free.
- ◇ Electrical safety circuit options.
- ◇ All connections on the bottom of the unit.
- ◇ Handle can be fitted with various electrical contacts.

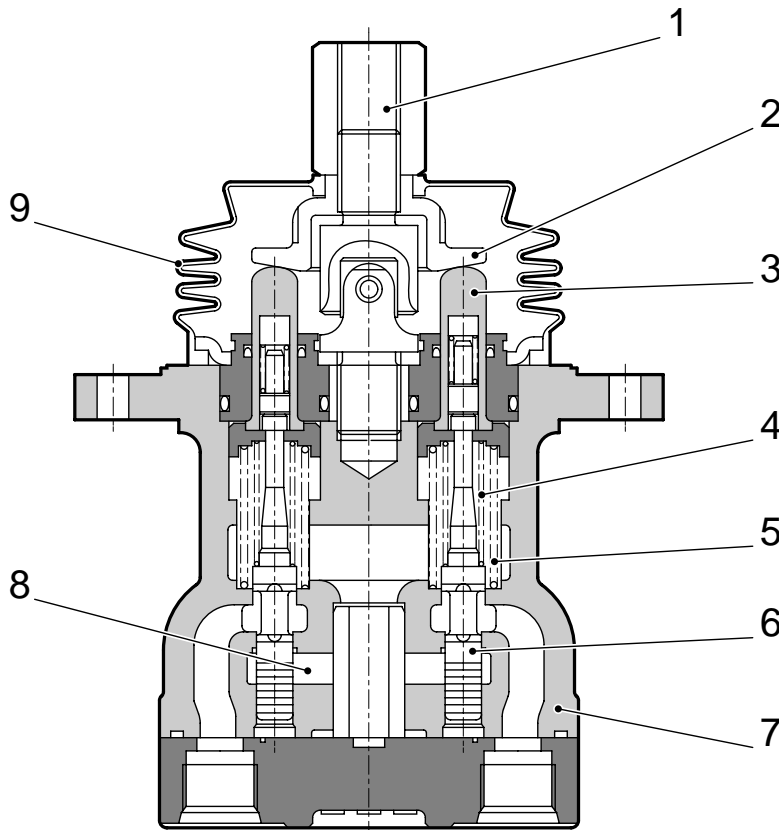


Hydraulic Symbols



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Functional Description



Hydraulic pilot unit type PV48K operates on the basis of direct operating pressure reducing valves. The main components are:

The handle (1).

Switching plate (2).

The plunger (3).

Regulating spring (4).

Return spring (5).

Valve cartridge and regulating spool (6).

The housing (7).

Pressure supply bore (8).

Synthetic rubber gaiter (9).

In the neutral position, the operating element is held in the zero position by the return spring (4).

When the handle (1) is operated, the plunger (3) is pushed against the return spring (5) via the switching plate (2). At the same time the regulating spool (6) is pushed through the regulating spring (4). When the regulating stroke begins, there is a connection from the pressure port via bore (8) and ports 1, 2, 3 or 4 to the unit to be adjusted (valve, pump or motor). The adjustments are related to the lever position and the regulating spring characteristic.

Only a small amount of effort is required on the handle to control the valve.

The mechanical components are protected from contamination by a synthetic rubber gaiter (9) making the pilot unit suitable for the most difficult application conditions.



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Ordering Code – Direct Acting Pilot Valve

PV48K (C) 1 001 NN

Direct Acting Pilot Valve

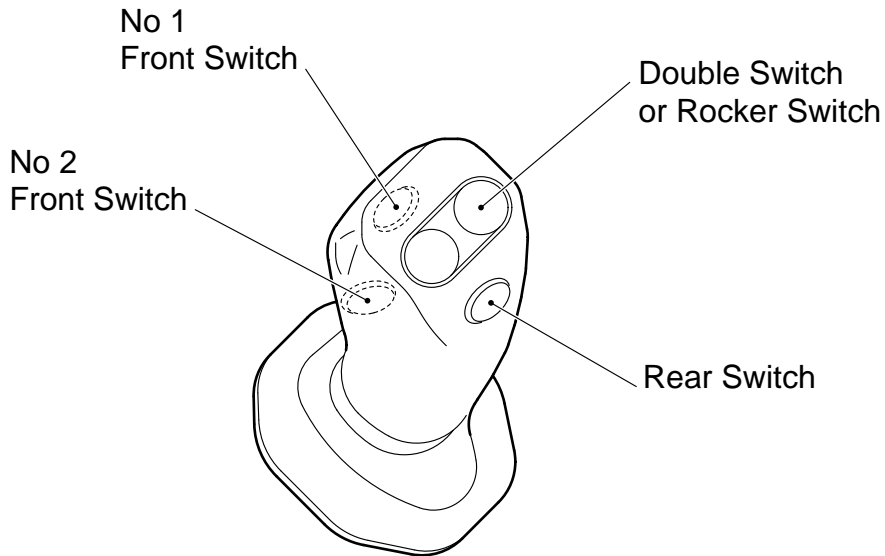
Shuttle
 (C) - With Shuttle
 Blank - Without Shuttle

For handle types and associated electrical symbols refer to pages 4 and 5

Series
 001

Type
 1 - Joystick

Integrated Switching Options (see [Pages 4 and 5](#))



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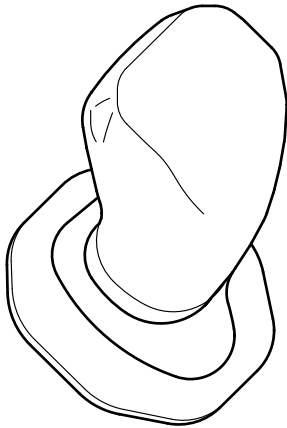
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Handle types available

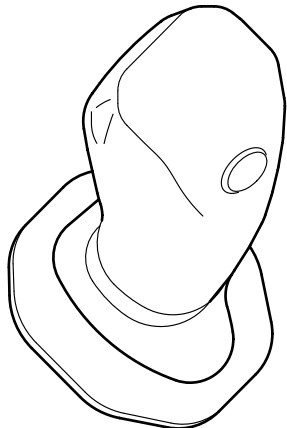
Type NN



Description

Standard ergonomic handle with no switching options

Type SN



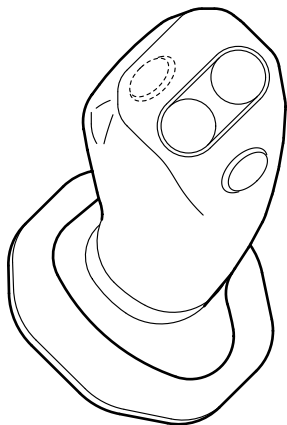
Description

Ergonomic handle with single rear switch

Circuit



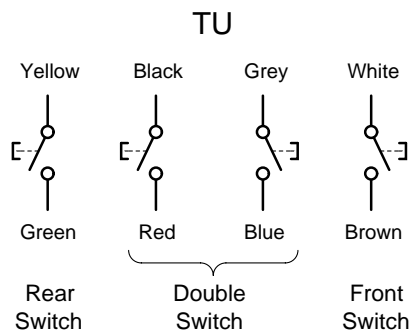
Type TU



Description

Ergonomic handle with single front switch, double switch and single rear switch

Circuit



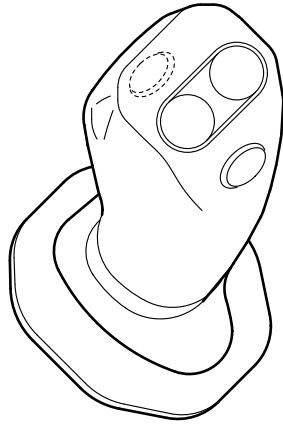
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Handle types available (continued)

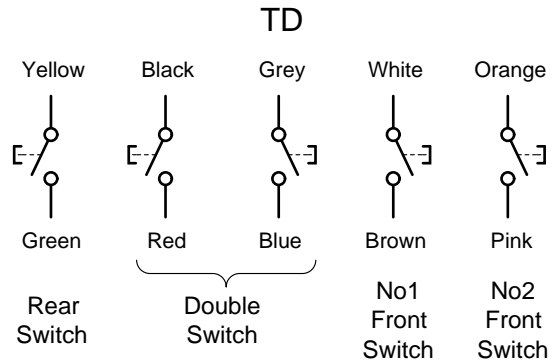
Type TD



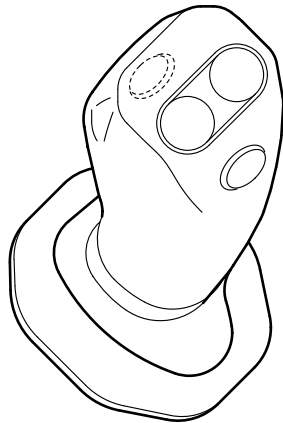
Description

Ergonomic handle with 2 front switches (No.1 and No.2), double switch and single rear switch

Circuit



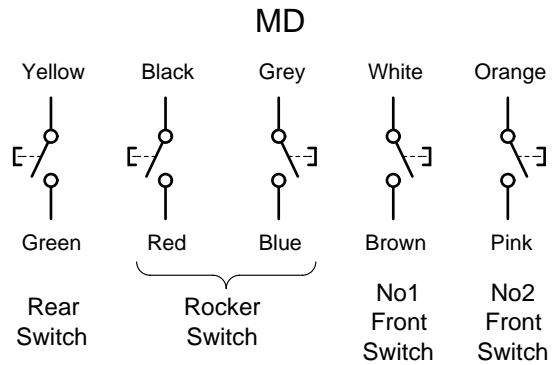
Type MD



Description

Ergonomic handle with 2 front switches (No.1 and No.2), rocker switch and single rear switch

Circuit



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Technical Data

For applications outside the following parameters, please consult Kawasaki Precision Machinery (UK) Ltd.

Input Pressure	70 bar
Backpressure at port T	3 bar
Pressure Fluid	Mineral oil, phosphate ester, fatty acid ester and water glycol. Phosphate ester is only suitable for use with FPM seals.
Pressure Fluid Temperature Range	-20°C to +90°C
Viscosity Range	10 to 2000 cSt
Maximum Flow	See characteristic curve
Degree of Contamination	Maximum permissible degree of contamination of the fluid is to NAS 1638 class 9. Kawasaki recommend that a filter with a minimum retention rate of $\beta_{10\geq 75}$ is used.
Weight	1.93kg



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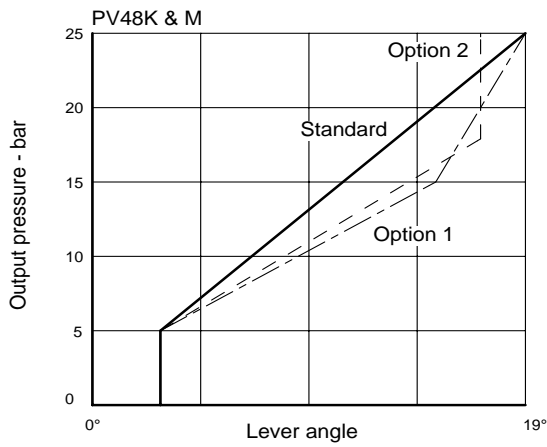
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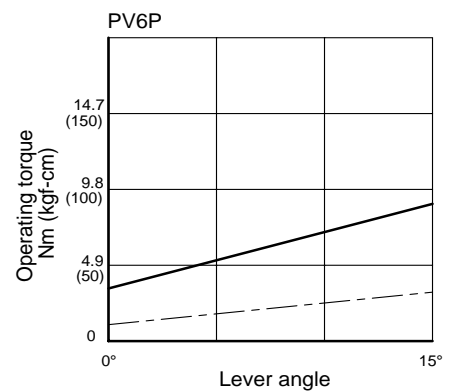
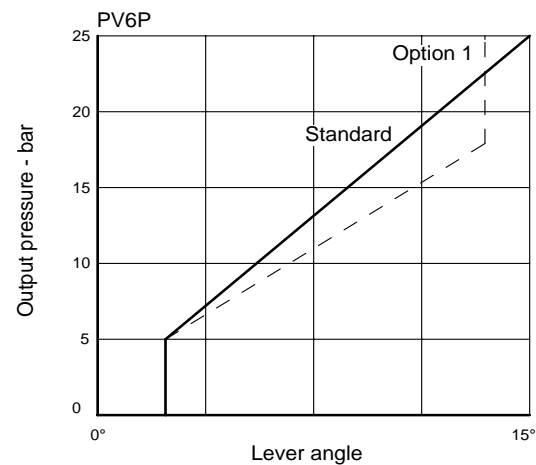
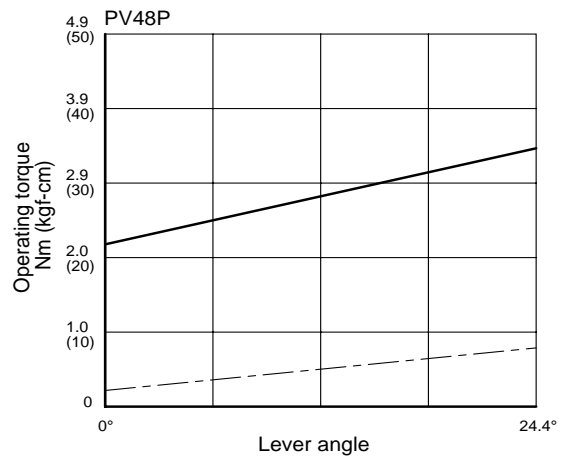
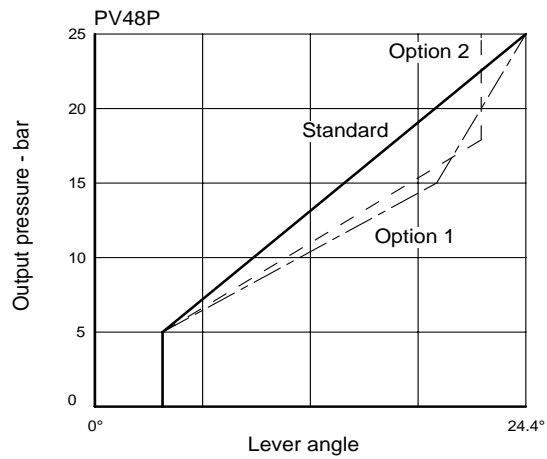
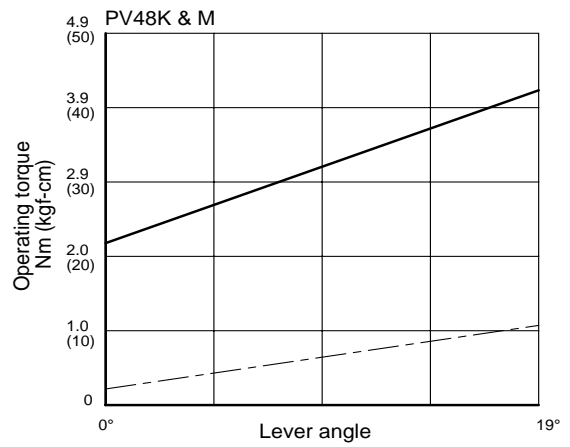
Characteristic Curves

Measured at $\leq 36\text{cSt}$ and $t = 50^\circ\text{C}$

Control Range



Operating Torque Range



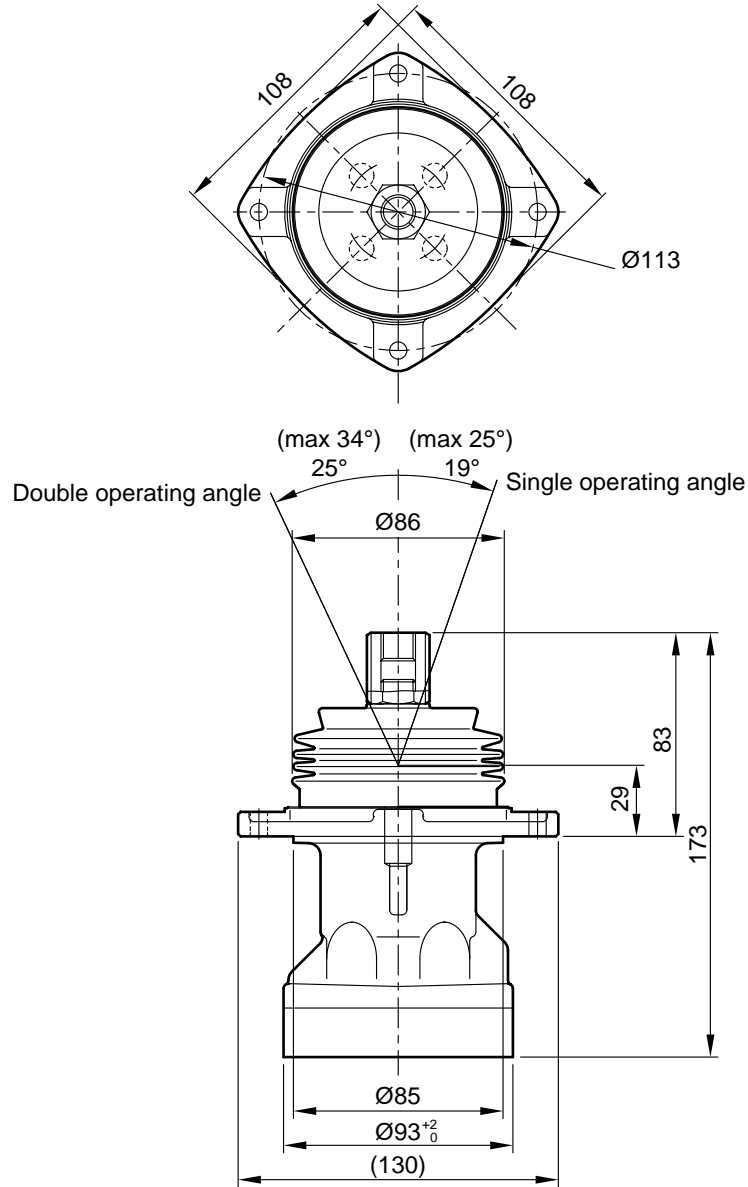
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Unit Dimensions PV48K (dimensions in mm)

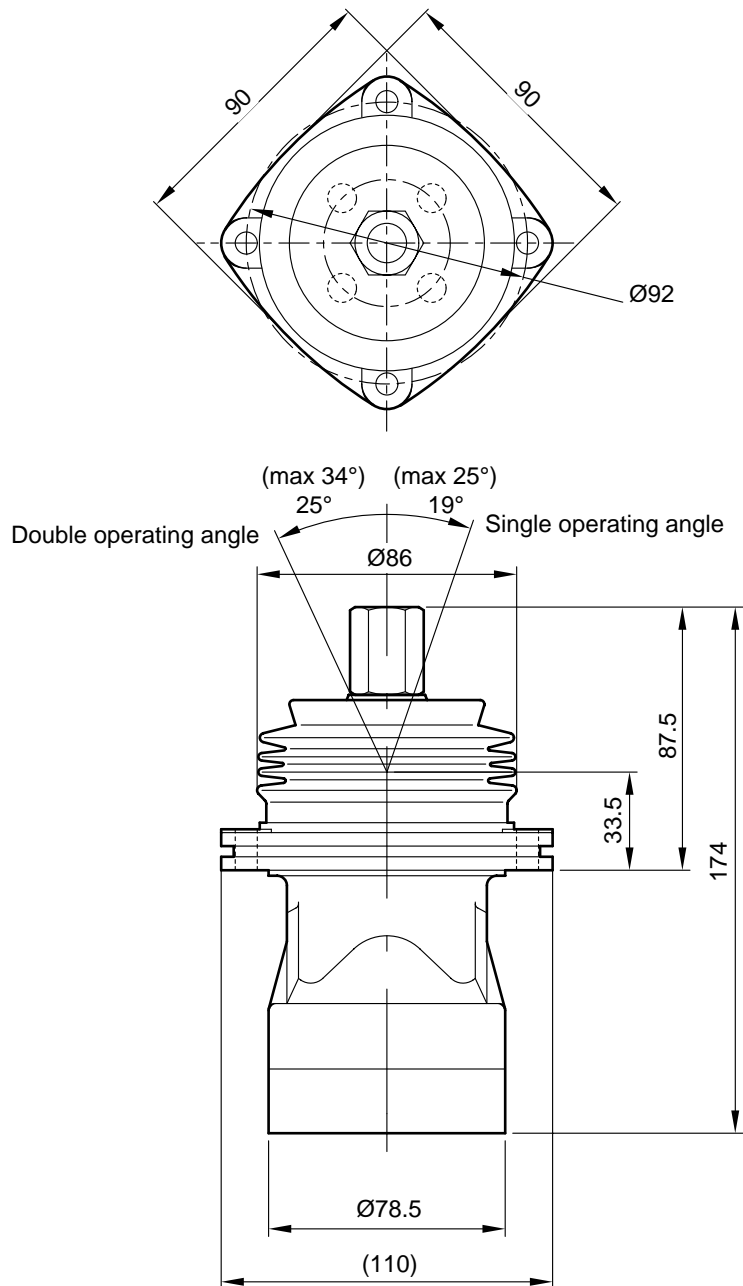


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Unit Dimensions PV48M (dimensions in mm)

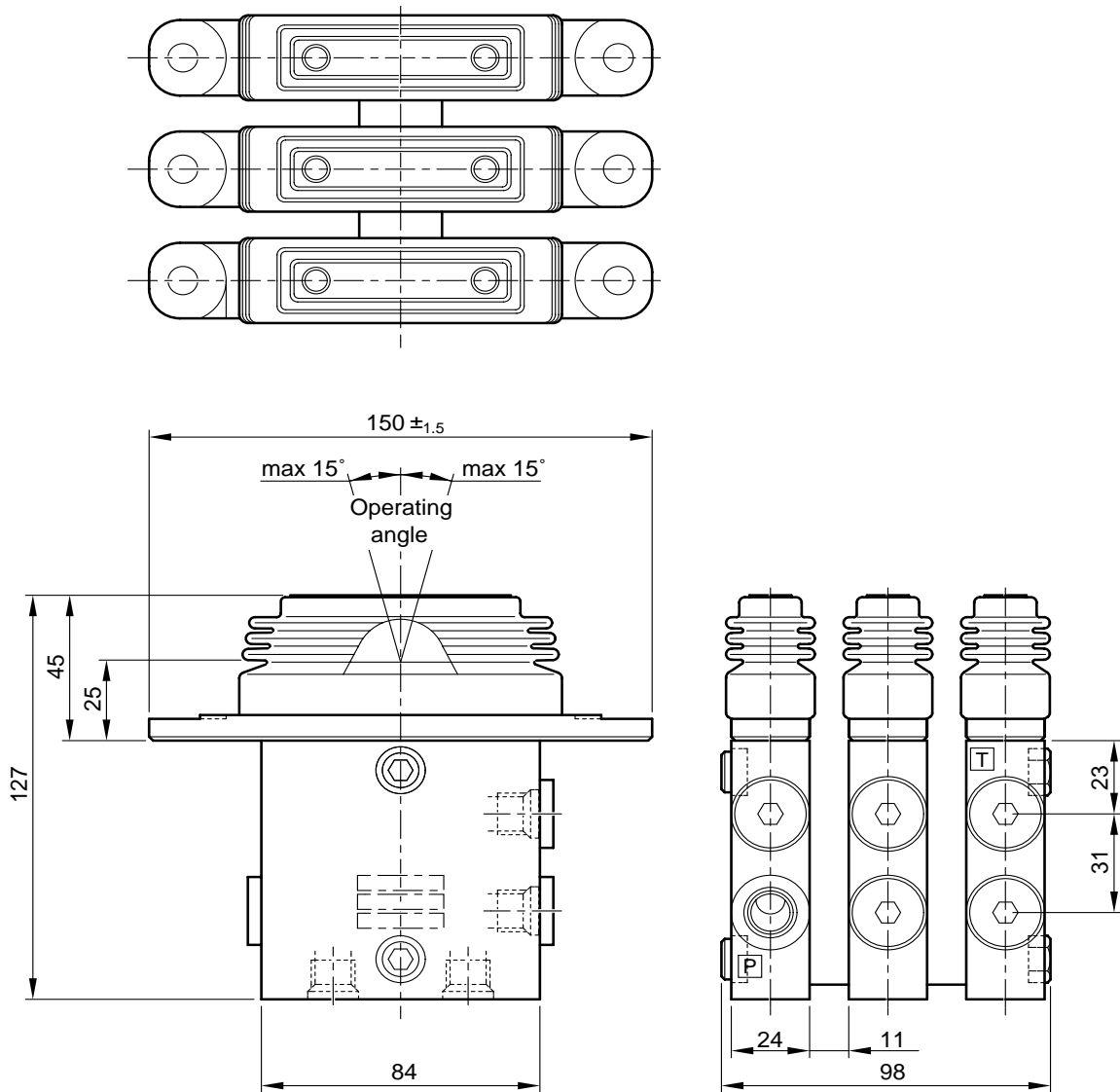


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Unit Dimensions PV6P (dimensions in mm)



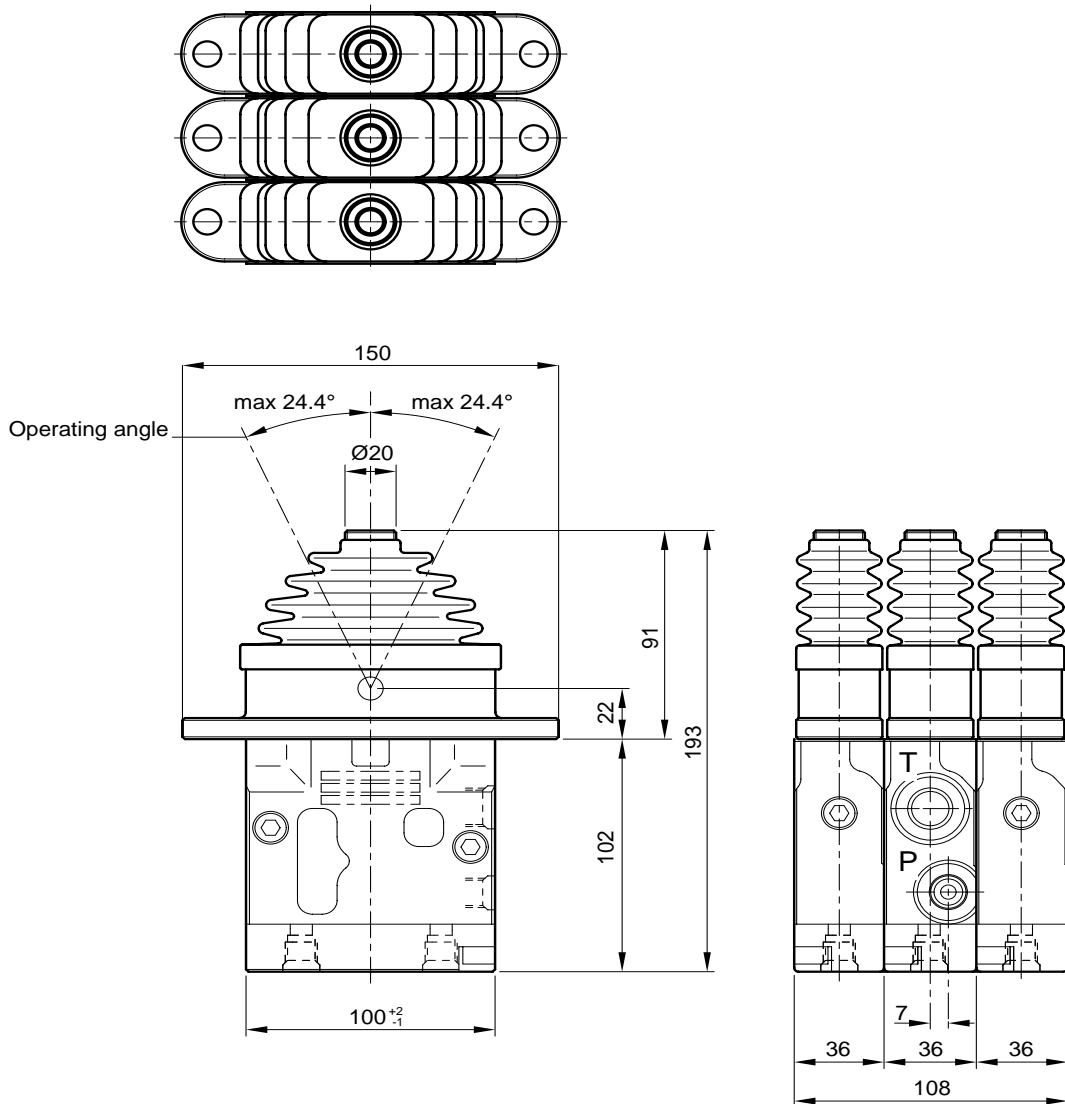
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Unit Dimensions PV48P (dimensions in mm)



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