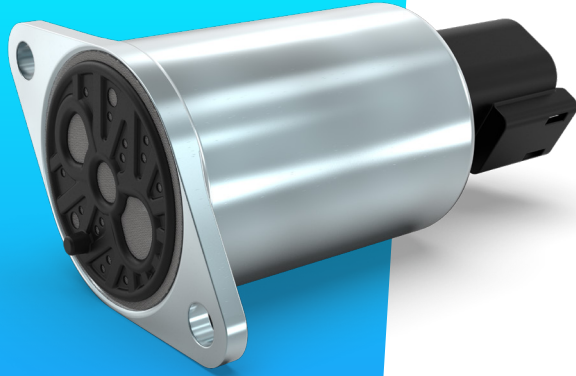


Proportional Pressure Control Valve PPCD04 - IPH (Integrated Pilot Head)



Proportional
valves

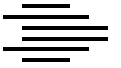
Directional
valves

Smart
products

Special
designs

Product classification

| Name | Max volume flow @ 6 bar dp | |
|----------------|----------------------------|-------------------|
| PPCD 03 | 1,25 l/min | Direct controlled |
| PPCD 04 | 2,5-5 l/min | |
| PPCD 05 | 10 l/min | |
| PPCD 06 | 15 l/min | |
| PPCD 08 | 20 l/min | |
| PPCD 09 | 30 l/min | Pilot operated |
| PPCP 09 | 35 l/min | |
| PPCP 13 | 72 l/min | |



Hydraulic Data

| | |
|-------------------------|---|
| Max pressure pump | $P_p = 35 \text{ bar}$ |
| Max pressure tank | $P_T = 10 \text{ bar}$ |
| Max pressure work | $P_A = 25 \text{ bar}$ |
| Hysteresis | Typical 0,5 - 1,2 bar depending on control signal |
| Contamination level | Min Filtration: 20/18/15 According to ISO 4406 |
| Fluid | Mineral Oil According to DIN 51524 |
| Temperature range fluid | -30°C to +90°C |
| Leakage (internal)* | < 0,06 l/min (de-energized) < 0,15 l/min (energized) |
| Filterscreen size | 200 μm (all ports) |

* The reported data are measured @ $P_p=35 \text{ bar}$ and an oil viscosity of 32 cSt

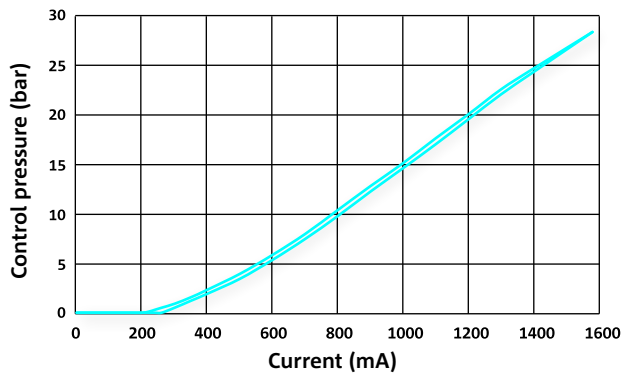
Electrical Data

| | | |
|-----------------------------------|--|-----------------------|
| Voltage | 12 V | 24 V |
| Max current | 1500 mA | 750 mA |
| Resistance | 4,72 $\Omega \pm 5\%$ | 20,8 $\Omega \pm 5\%$ |
| Type of control** (Possibilities) | <ul style="list-style-type: none"> • PWM: 100 - 280Hz • Superimposed Dither: 100 - 250Hz (100 mA - 200mA amplitude p-to-p) (Ground PWM > 1000Hz) • Recommended: Dither 100Hz (Amplitude: 200mA @12V, 100mA @24V) | |
| Connector | AMP Junior timer Deutsch Connector DT04-2P | |
| Protection class | up to IP6K6 / IPX7 / IPX9K | |
| Switching time | $t_{on} < 40 \text{ ms}$ (pA = 0% to 90%) $t_{off} < 40 \text{ ms}$ (pA = 100% to 10%) | |

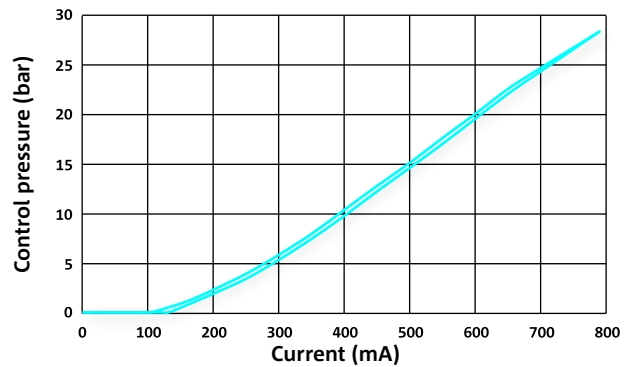
** System performance can be optimized due to pilot valve control signal. Evaluation on system necessary.

Current vs. Pressure (average characteristic)

P-I CURVE (12 V)



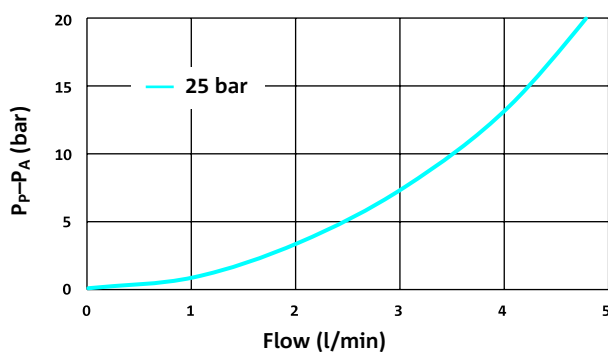
P-I CURVE (24 V)



Flow characteristics (Average characteristic)

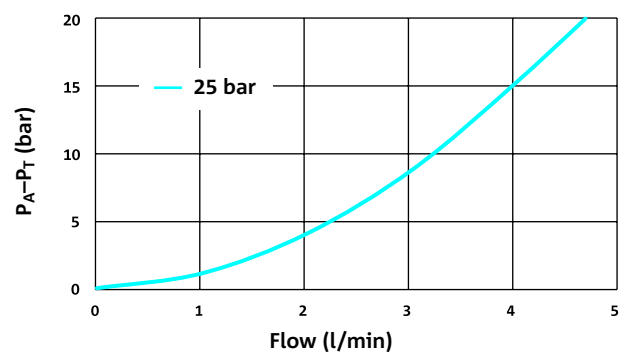
PRESSURE DROP PUMP TO CONTROL PORT (P→A)

Valve only



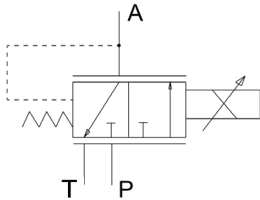
PRESSURE DROP CONTROL PORT TO TANK (A→T)

Valve only





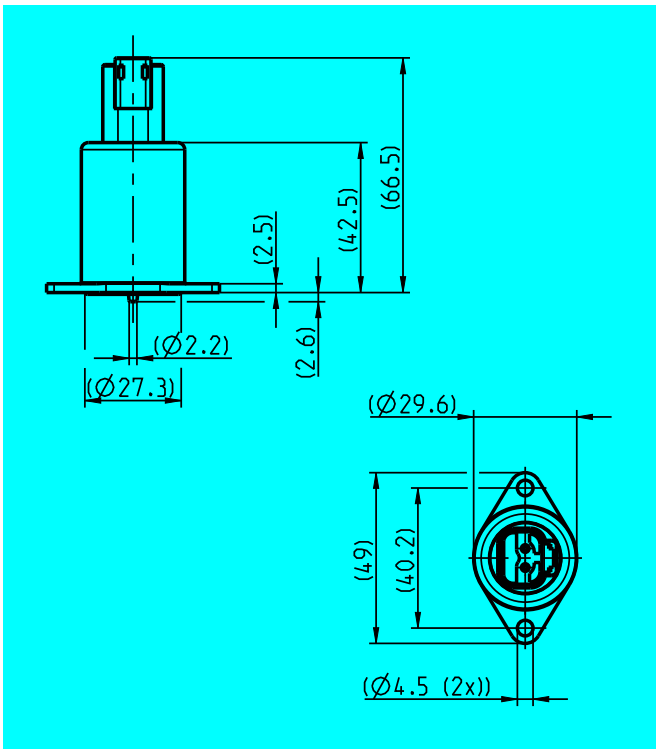
Hydraulic schematic



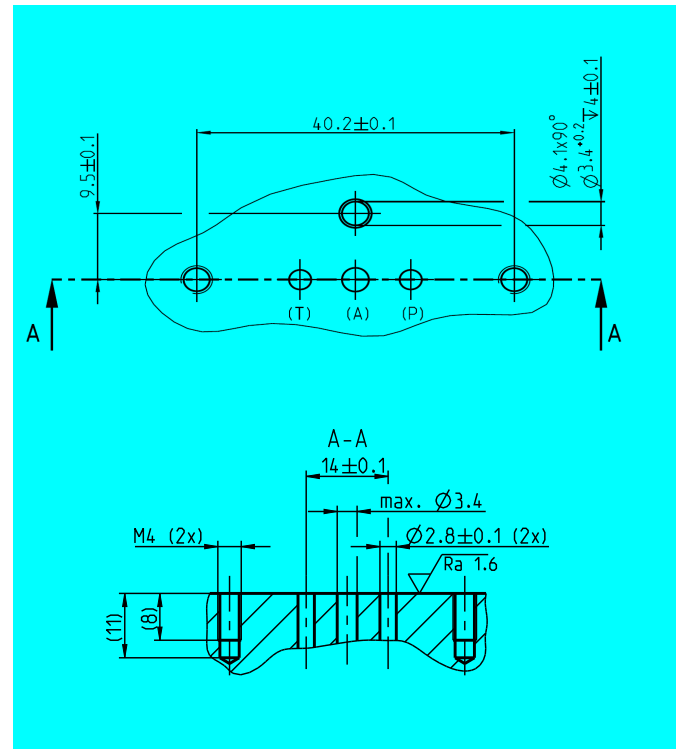
Additional data

| | |
|--|---|
| Weight | approx. 160 g |
| Mounting position (recommended) | any |
| MTTF_d-value | 150 years |
| Reference | Valve specifications according to Thomas LHP tbd. |

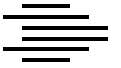
Dimensions with Deutsch Connector* (All dimensions in mm)



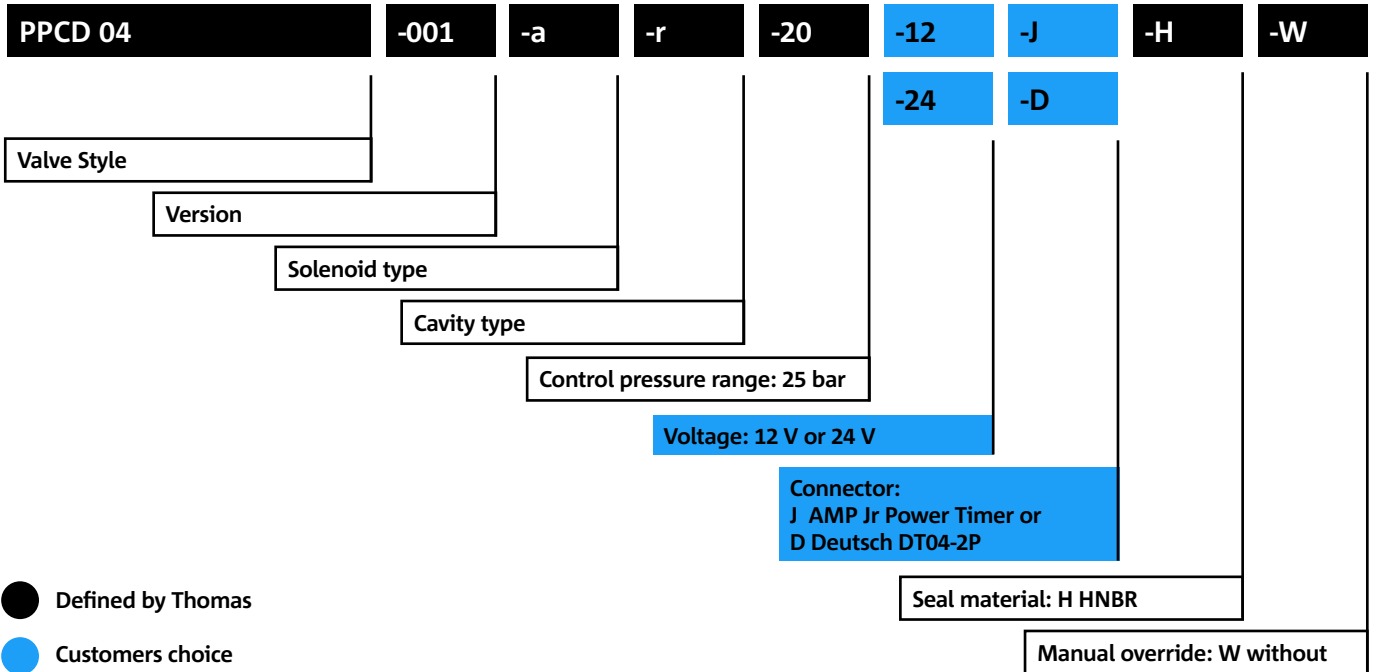
Cavity Dimensions* (All dimensions in mm)



*The dimensions shown are explicitly to be regarded as preliminary. Thomas reserves itself the right to modify the valve dimensions and the interface to the customers system to the present development status.



Model code



- Defined by Thomas
- Customers choice

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