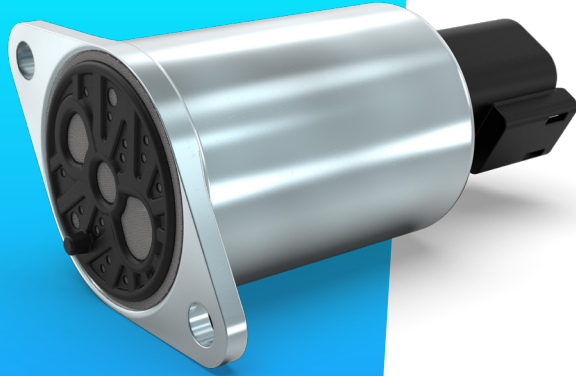


# Proportional Pressure Control Valve PPCD04 - IPH (Integrated Pilot Head)



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
<b>PPCD 04</b>	<b>2,5-5 l/min</b>	
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	$P_A = 25 \text{ bar}$ or $30 \text{ bar}$
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 $\mu\text{m}$ (all ports)

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

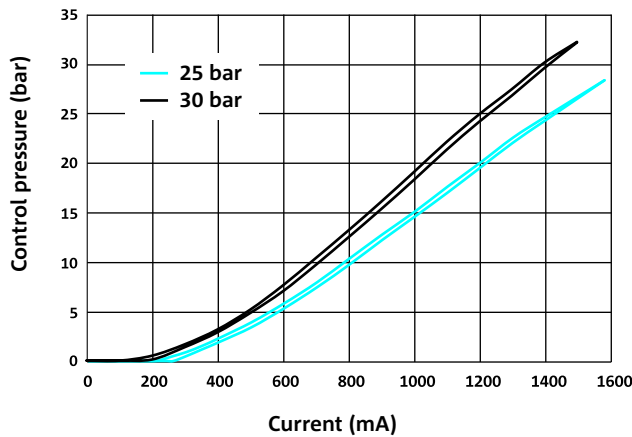
## Electrical Data

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"> <li>• PWM: 100 - 280Hz</li> <li>• Superimposed Dither: 100 - 250Hz (100 mA - 200mA amplitude p-to-p) (Ground PWM &gt; 1000Hz)</li> <li>• Recommended: Dither 100Hz (Amplitude: 200mA @12V, 100 mA @24V)</li> </ul>	
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%)	

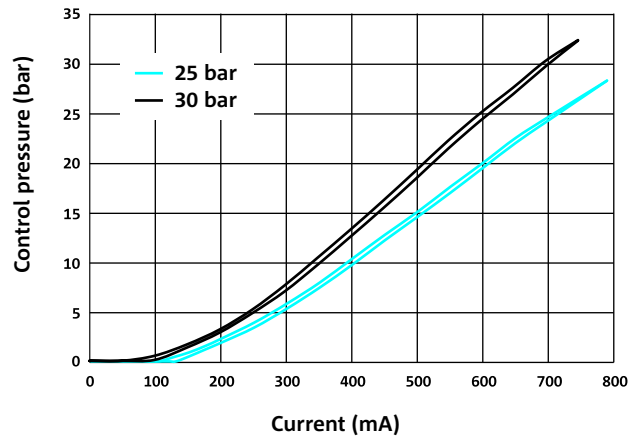
\*\* System performance can be optimized due to pilot valve control signal. Evaluation on system necessary.

## Current vs. Pressure (average characteristic)

P-I CURVE (12 V)



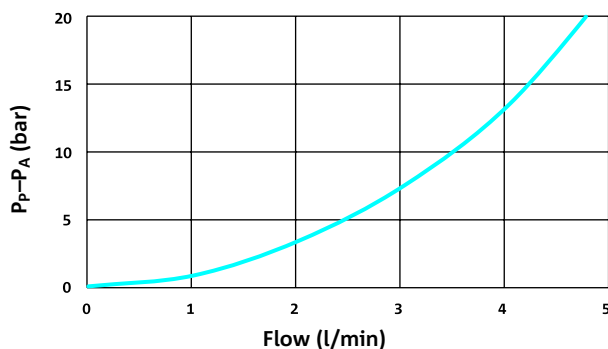
P-I CURVE (24 V)



## Flow characteristics (Average characteristic)

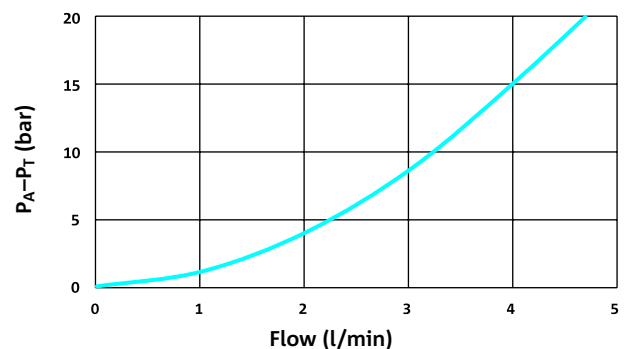
PRESSURE DROP PUMP TO CONTROL PORT (P→A)

Valve only



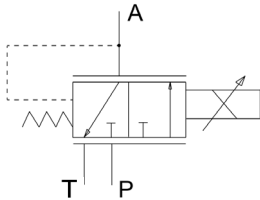
PRESSURE DROP CONTROL PORT TO TANK (A→T)

Valve only





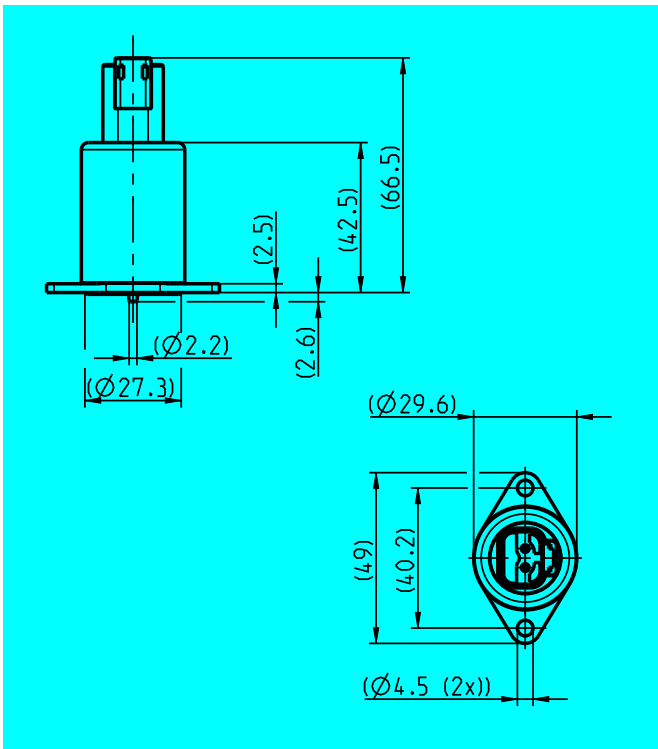
## Hydraulic schematic



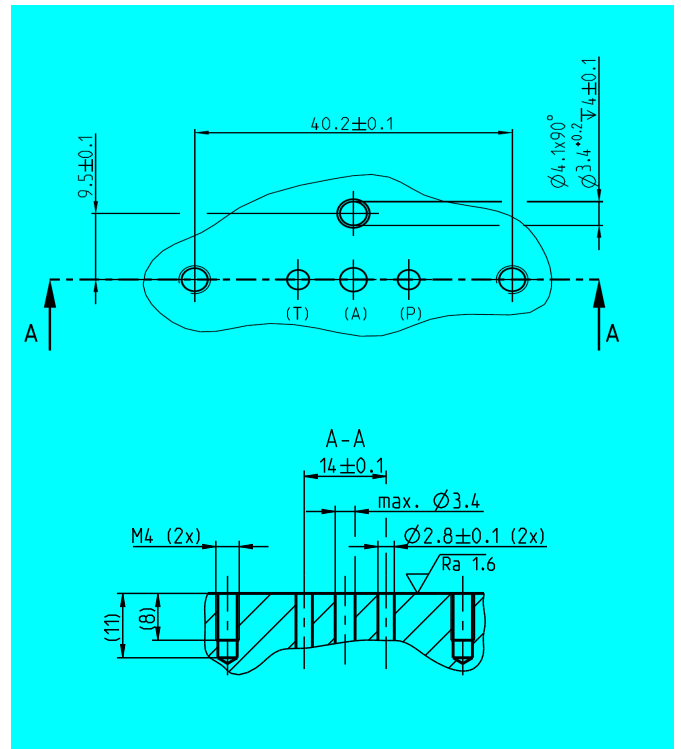
## Additional data

<b>Weight</b>	approx. 160 g
<b>Mounting position (recommended)</b>	any
<b>MTTF<sub>d</sub>-value</b>	150 years
<b>Reference</b>	Valve specifications according to Thomas LHP tbd.

## Dimensions with Deutsch Connector\* (All dimensions in mm)



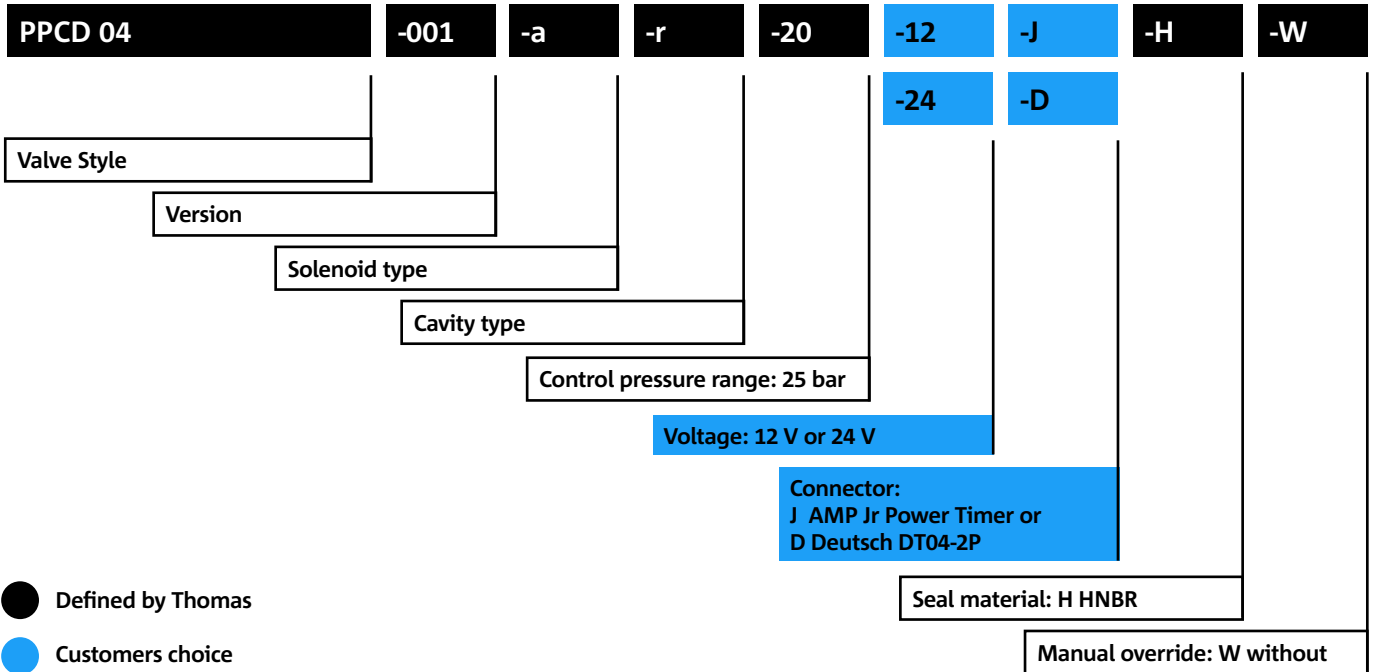
## Cavity Dimensions\* (All dimensions in mm)



\*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

**CONTACT DETAILS** 

**Michael Lutz**


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