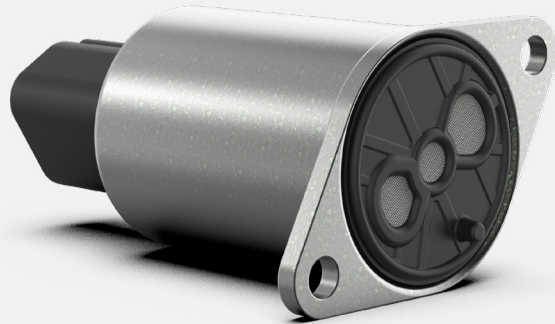


# Proportional Pressure Control Valve PPCD04 - IPH (Integrated Pilot Head)

(Aug 2022 - Patent granted)



## 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	$P_p = 35$ bar
Max pressure tank	$P_T = 10$ bar
Max pressure work	$P_A = 25$ bar
Hysteresis	< 4 % of the nominal pressure at 100 Hz PWM signal
Contamination level	Min Filtration: 19/18/15 According to ISO 4406
Fluid	Mineral Oil According to DIN 51524
Temperature range fluid	-30°C to +105°C
Leakage (internal)	< 0,06 l/min (de-energized) < 0,15 l/min (energized)
Filterscreen size	200 µm (all ports)

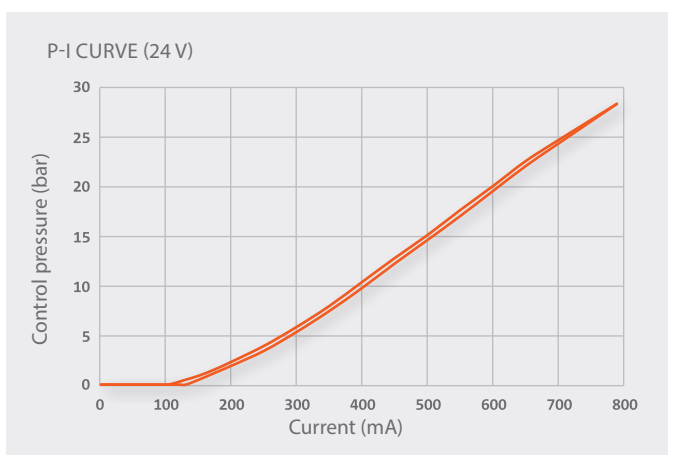
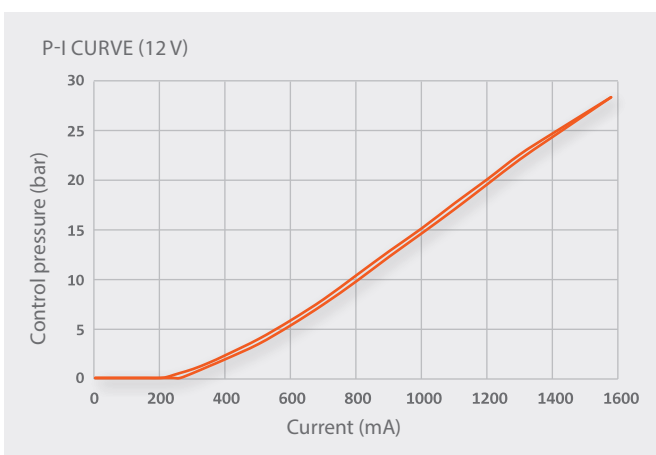
\* The reported data are measured @  $P_p=35$  bar and an oil viscosity of 32 cSt

## ELECTRICAL DATA

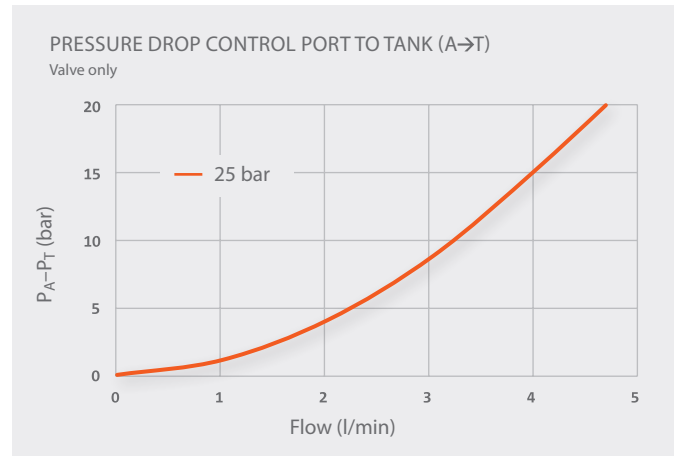
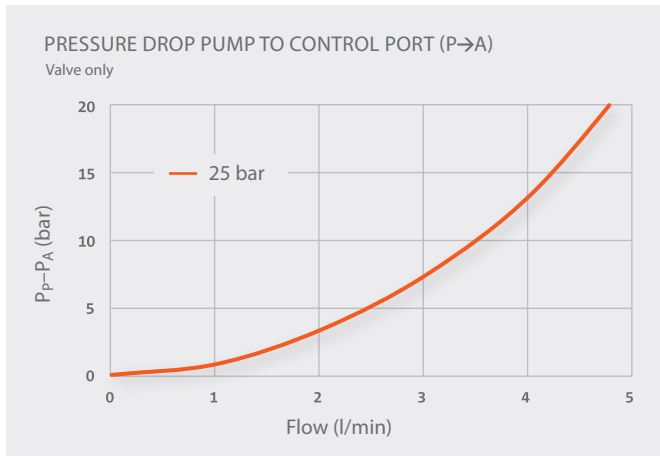
Voltage	12V	24V
Max current	1500 mA	750 mA
Resistance	4,72 Ω ± 5%	20,8 Ω ± 5%
Type of control** (Possibilities)	<ul style="list-style-type: none"> <li>PWM: 100 - 280 Hz</li> <li>Superimposed Dither: 100 - 250 Hz (100 mA - 200 mA amplitude p-to-p) (Ground PWM &gt; 1000 Hz)</li> <li><u>Recommended</u>: Dither 100 Hz (Amplitude: 200 mA @12V, 100 mA @24V)</li> </ul>	
Connector	AMP Junior timer Deutsch Connector DT04-2P	
Protection class	up to IP6K6 / IPX7	
Switching time	$t_{on} < 60$ ms (pA = 0% to 90%) $t_{off} < 60$ ms (pA = 100% to 10%)	

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

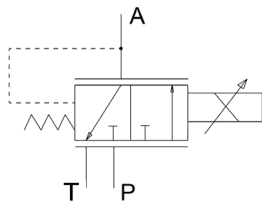
## CURRENT VS. PRESSURE (AVERAGE CHARACTERISTIC)



**FLOW CHARACTERISTICS** (AVERAGE CHARACTERISTIC)



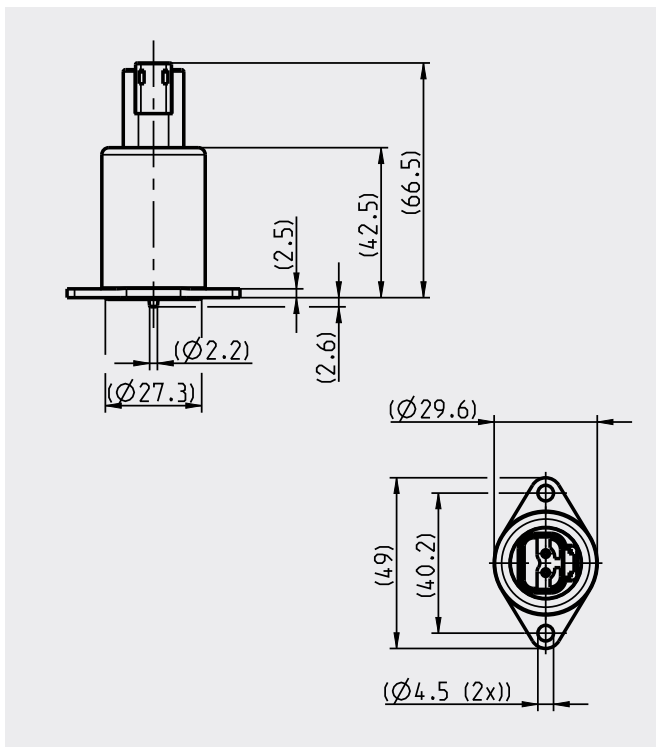
**HYDRAULIC SCHEMATIC**



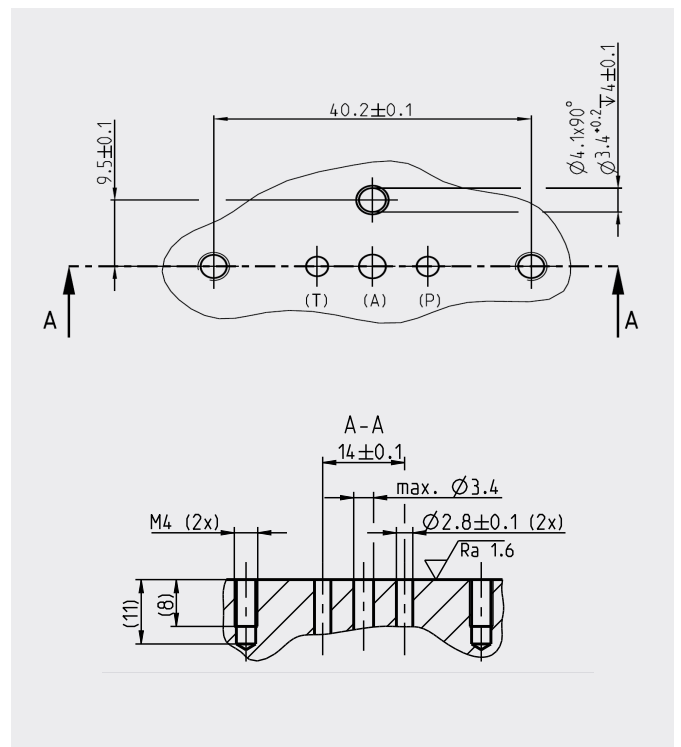
**ADDITIONAL DATA**

Weight	approx. 160 g
Mounting position (recommended)	any
Switching cycles (life time)	2 Mio cycles
MTTF <sub>d</sub> -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**

PPCD 04	-001	-a	-r	-25	-12	-J	-H	-W
					-24	-D		

Valve Style

Version

Solenoid type

Cavity type

Control pressure range:  
25 bar

Voltage: 12 V or 24 V

Connector:  
J AMP Jr Power Timer or  
D Deutsch DT04-2P

Sealing material: H HNBR

Manual override: W without

● Defined by Thomas  
 ● Customers choice

**CONTACT DETAILS**

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**DISCLAIMER**

The presented information is based on current knowledge and provides only non-binding information to the customer. Any liability in connection with this information is excluded. It is the responsibility of the customer to determine the suitability and appropriateness of the product for his intended purpose. We reserve the right to change the product with regard to technical progress and new developments.