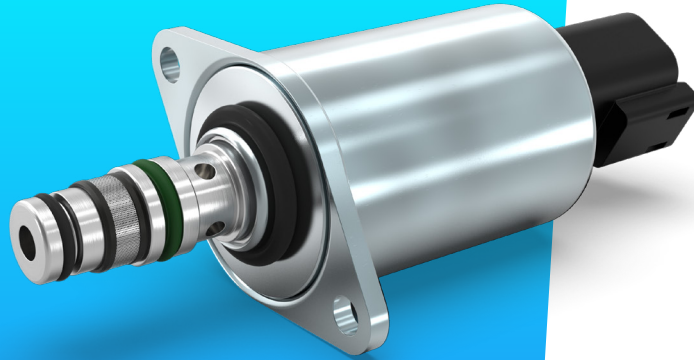


# Proportional Pressure Control Valve

## PPCD03 – NG PPRV

### Fail-Safe



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	
PPCP 09	35 l/min	Pilot operated
PPCP 13	72 l/min	



## Hydraulic Data

Max pressure pump	$P_p = 50 \text{ bar}$
Max pressure tank	$P_T = 30 \text{ bar}$
Max pressure work	$P_A = 25 \text{ bar}$
Hysteresis	< 3,5 % of the nominal pressure at 100 Hz PWM 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 +105°C
Leakage (internal)*	< 0,02 l/min (de-energized) < 0,15 l/min (energized)
Filterscreen size	125 $\mu\text{m}$ (P-Port)

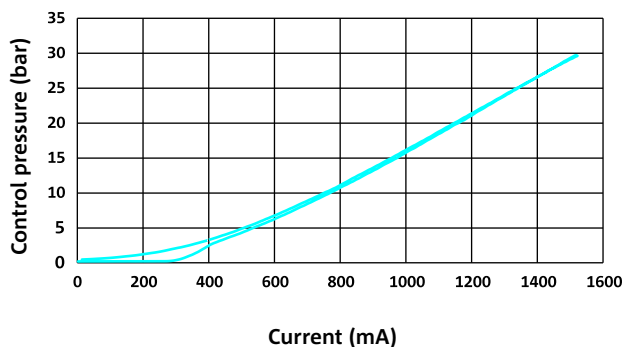
## Electrical Data

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	Current control PWM 100 Hz recommended	
Connector	AMP Junior timer Deutsch Connector DT04-2P	
Protection class	up to IP6K6 / IPX9K	
Switching time	$t_{on} < 50 \text{ ms}$ (pA = 0% to 90%) $t_{off} < 50 \text{ ms}$ (pA = 100% to 10%)	

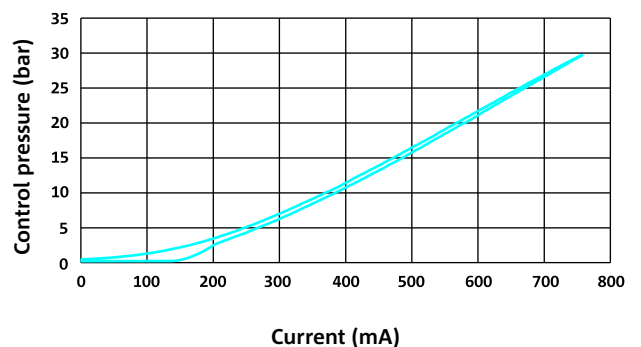
\* The reported data are measured @  $P_p=35 \text{ bar}$  and an oil viscosity of 32 cSt

## Current vs. Pressure (average characteristic)

P-I CURVE (12 V)



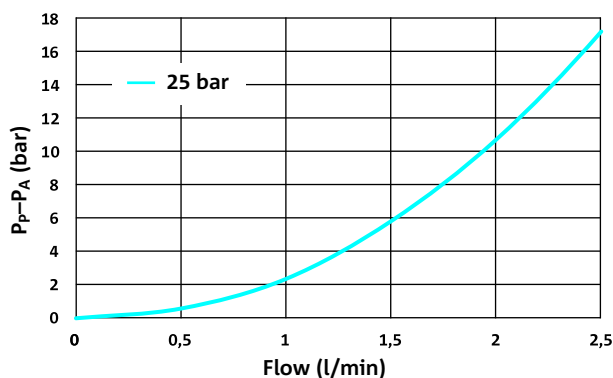
P-I CURVE (24 V)



## Flow characteristics (Average characteristic)

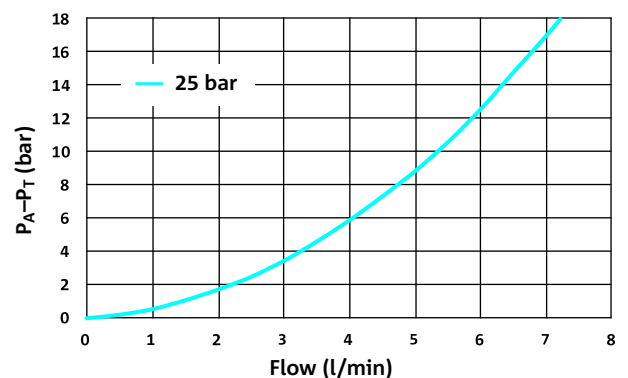
PRESSURE DROP PUMP TO CONTROL PORT (P→A)

Valve only



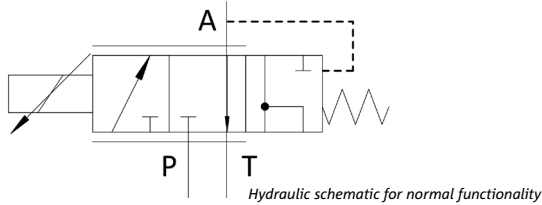
PRESSURE DROP CONTROL PORT TO TANK (A→T)

Valve only





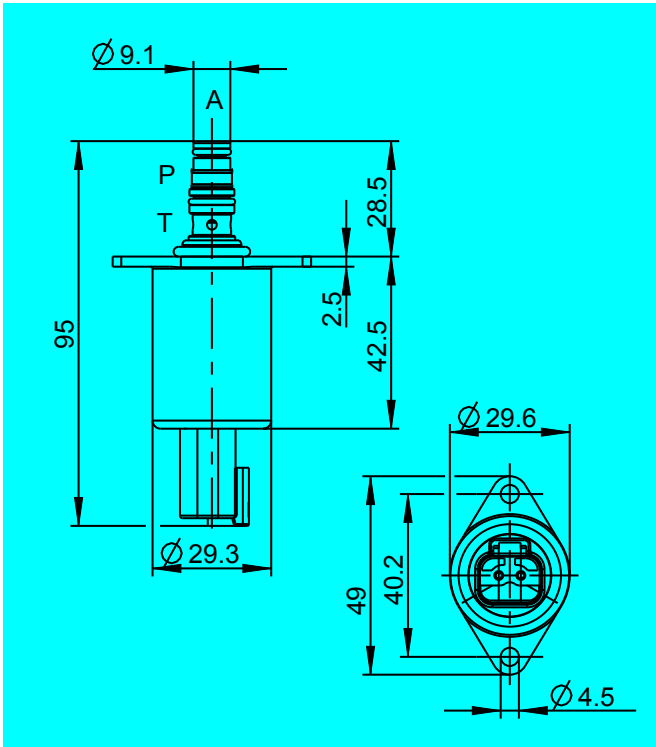
## Hydraulic schematic



## Additional data

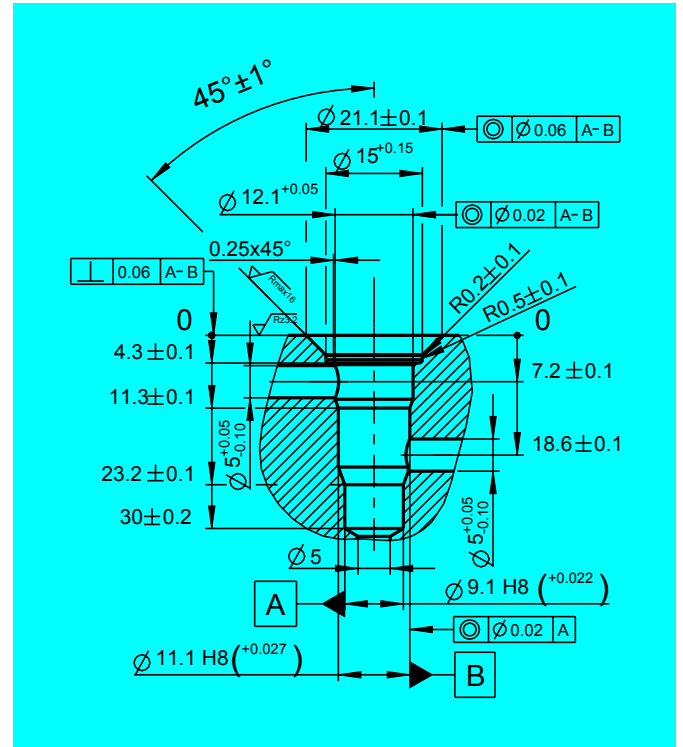
Weight	approx. 175 g
Mounting position (recommended)	any
MTTF <sub>d</sub> -value	150 years
Reference	Valve specifications according to Thomas LHP 89

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



\* Dimensions for AMP Jr. Connector available on request.

## Cavity Dimensions (All dimensions in mm)



## Functionality

Valves with fail safe function are providing a safety function if the valve spool gets stuck due to contamination which goes beyond the specified limits in our customers systems. In the case of a stuck spool the valve is able to limit the actual pressure at the working port.

For more information please do not hesitate to contact us.

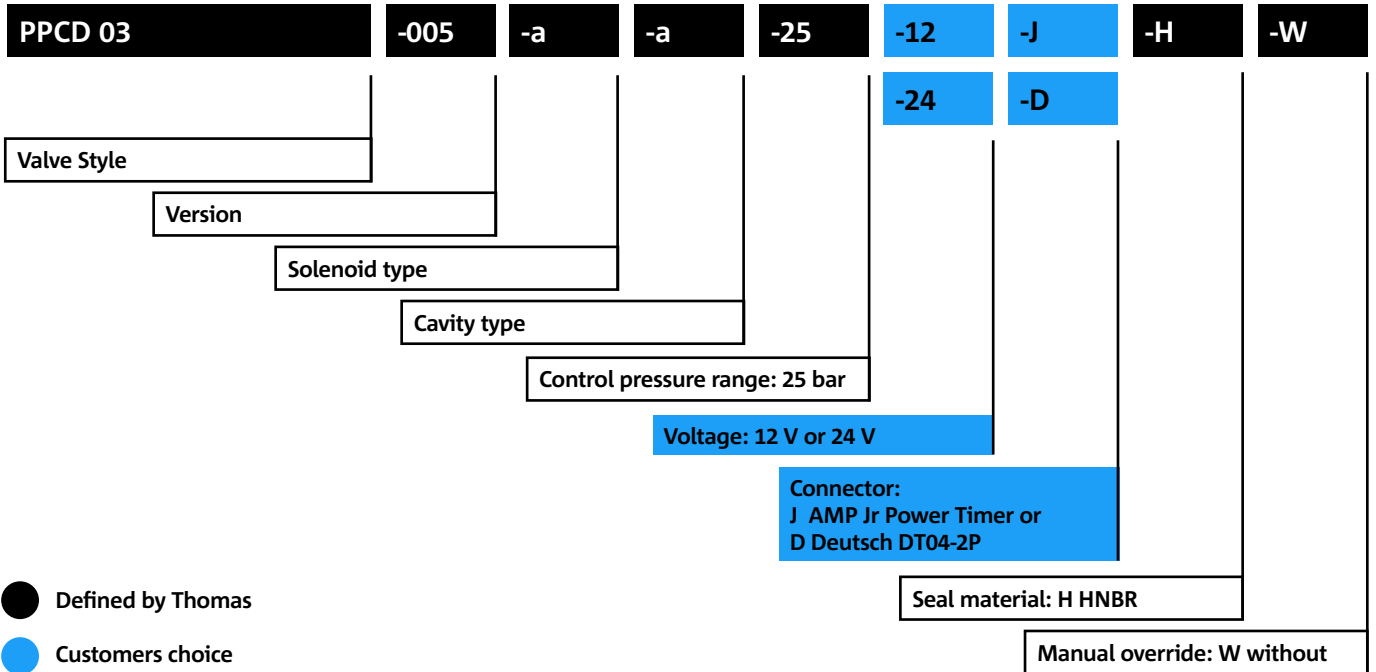
## Residual A-Port Pressure

at vary supply pressure (@valve completely open)

Max. supply pressure	Max. pressure in A	Spool position
50 bar	< 5 bar	0,125mm open
26 bar	8 bar	complete open
30 bar	9 bar	complete open
40 bar	10 bar	complete open
50 bar	12 bar	complete open



## Model code



- Defined by Thomas
- Customers choice

### CONTACT DETAILS

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