

# Proportional Pressure Control Valve

## PPCD09 – NG PPRV HF (preliminary April 2022)



### PRODUCT CLASSIFICATION

Proportional valves

Directional valves

Smart products

Special designs

Name Max volume flow @ 6 bar dp

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	$P_p = 50$ bar
Max pressure tank	$P_T = 30$ bar
Max pressure work	$P_A = 22$ bar
Hysteresis	< 3 % of the nominal pressure at recommended type of control
Contamination level	Min Filtration: 20/18/13 According to ISO 4406
Fluid	Mineral Oil According to DIN 51524
Temperature range fluid	-30°C to +105°C
Leakage (internal)	< 0,05l/min (de-energized) < 0,4 l/min (energized)
Filterscreen size	140 $\mu$ m (P-Port) - tbd.

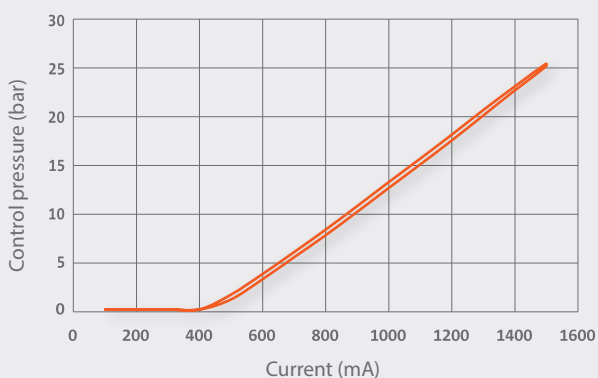
### ELECTRICAL DATA

Voltage	12 V	24 V	
Max current	1500 mA	1400 mA	750 mA
Resistance	4,72 $\Omega \pm 5\%$	8,15 $\Omega \pm 5\%$	20,8 $\Omega \pm 5\%$
Type of control	PWM signal > 1000 Hz + superimposed dither 100 Hz (100 <sub>24V</sub> /200 <sub>12V</sub> mA peak to peak)		
Connector	AMP Junior timer (except 8,15 $\Omega$ -coil) Deutsch Connector DT04-2P		
Protection class	up to IP6K6 / IPX9K		
Switching time	$t_{on} < 40$ ms ( $p_A = 0\%$ to 90%) $t_{off} < 40$ ms ( $p_A = 100\%$ to 10%)		

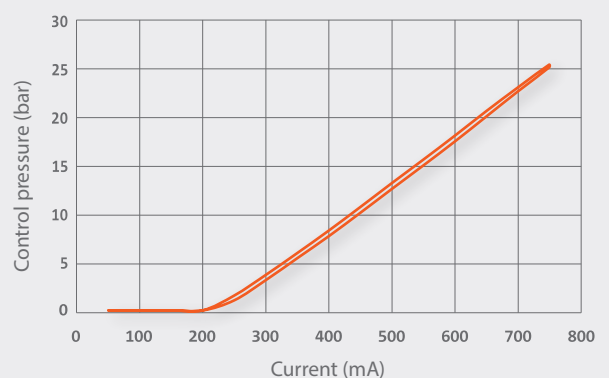
\* The reported data are measured @  $P_p = 35$  bar and an oil viscosity of 32 cSt

### CURRENT VS. PRESSURE

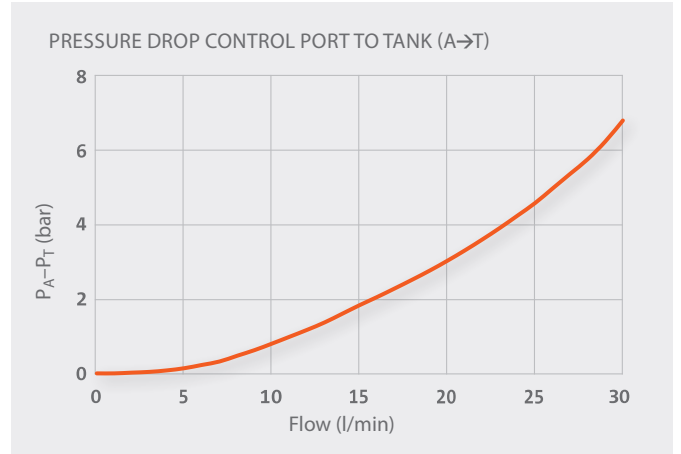
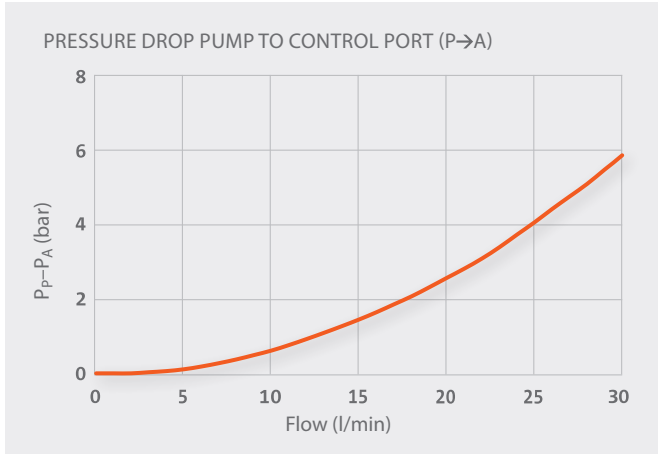
P-I CURVE (12 V)



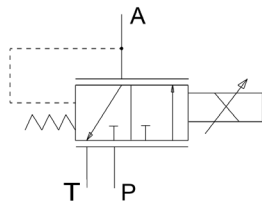
P-I CURVE (24 V)



### FLOW CHARACTERISTICS



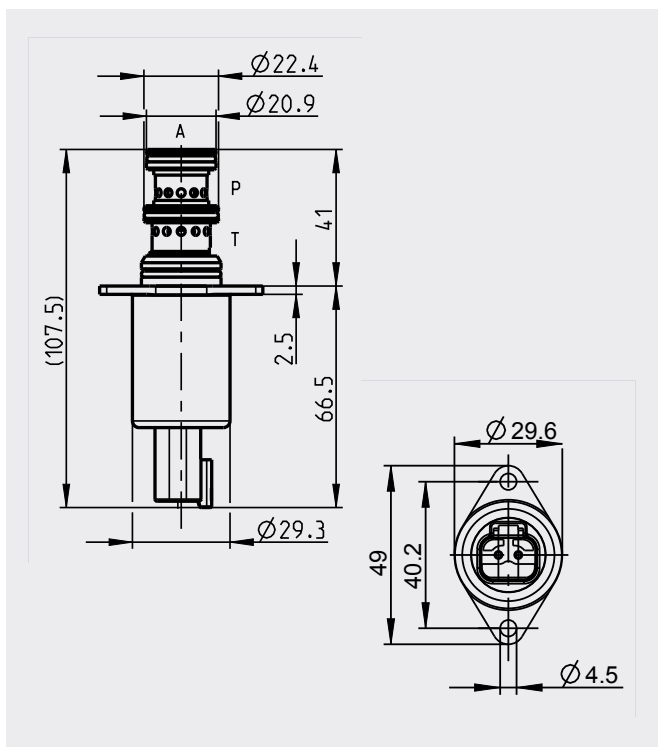
### HYDRAULIC SCHEMATIC



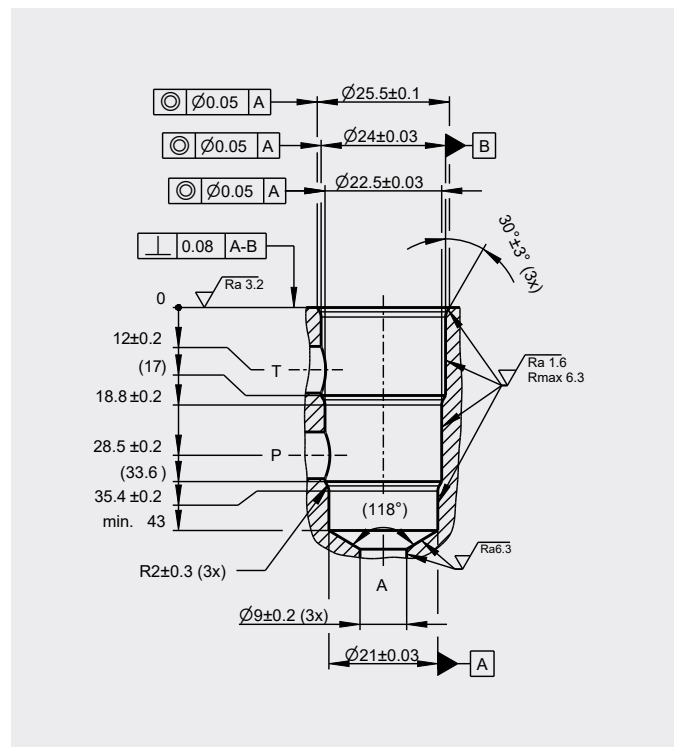
### ADDITIONAL DATA

Weight	approx. 230 g
Mounting position (recommended)	any
MTTF <sub>d</sub> -value	150 years
Reference	Valve specifications according to Thomas LHP 95

### DIMENSIONS WITH DEUTSCH CONNECTOR\* (All dimensions in mm)



### CAVITY DIMENSIONS (All dimensions in mm)



### MODEL CODE

PPCD 09	-001	-a	-v	-20	-12	-J	-F	-W
					-24	-D		

Valve Style

Version

Solenoid type

Cavity type

Control pressure range: 20 bar

Voltage: 12 V or 24 V

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

Seal material: F FKM

Manual override: W without

- Defined by Thomas
- Customers choice

### CONTACT DETAILS

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