

# Thermal pressure valve

**RE 64309/06.06**  
Replaces: 06.02

1/4

## Type MHDBDT 06

Nominal size 6  
 Component series 2X  
 Maximum operating pressure 280 bar  
 Maximum flow 3 l/min



H/A4624/95

## Overview of contents

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## Features

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1	– Pressure adjustment, proportional to the temperature via a thermostat
2	– Low hysteresis
2	– Very good repeatability accuracy
2	– Choice of several temperature ranges
2	– Optional installation orientation
3	– Low weight
4	– Saves energy

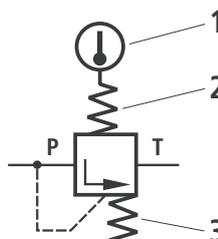
## Ordering details

MHDB	DT	06	G	0	2X	M	*
Pressure relief valve Direkt operated via thermostat = DT		Nominal size 6 = 06		Valve version Housing = G		Adjustment Not adjustable = 0	
Component series 20 to 29 (20 to 29: unchanged installation and connection dimensions) = 2X		Maximum DB pressure 210 bar = 210 280 bar (for AA10VO control pump) = 280		Seal material M = NBR seals, suitable for mineral oil (HL, HLP) to DIN 51524		Nominal temperature at which control starts T050 = 50 °C (control range 8 °C) T060 = 60 °C (control range 8 °C) T075 = 75 °C (control range 10 °C) T082 = 82 °C (control range 10 °C) T087 = 87 °C (control range 10 °C)	
				Port threads P and T 06 = Metric 19 = UNF		Further details in clear text	

## Function, symbol

The thermal pressure valve is a direct operated pressure relief valve of poppet seat design, where the nominal pressure is proportional to temperature within given limits.

The valve basically comprises of a housing, thermoelement (1), valve seat and valve cone. The maximum pressure is dependent on the selected version. The thermal element expands in relation to the temperature and thereby compresses the springs (2) and (3) via a spring plate. If the temperature at the thermoelement (1) is lower than the control range, then the spring decompresses (2) and the re-set spring (3) unloads the pressure chamber P to tank.



## Technical data (for applications outside these parameters, please consult us!)

### General

Weight	kg	0,8
Installation		Optional

### Hydraulic

Max. operating pressure at port P	bar	315
Control pressure at port P	bar	210 or 280 (for AA10VO control pump)
Pressure at port T	bar	Zero pressure, separate line to tank
Max. flow	l/min	3
Pressure fluid		Mineral oil (HL, HLP) to DIN 51524; fast bio-degradable pressure fluids to VDMA 24568 (also see RE 90221); HETG (rape seed oil); HEPG (polyglycols); HEES (synthetic ester); Other pressure fluids on request
Pressure fluid temperature range	°C	-20 to +80
Viscosity range	mm <sup>2</sup> /s	2,8 to 300
Degree of contamination		class 20/18/15. We therefore recommend a filter with a minimum retention rate of $\beta_{10} \geq 75$ .
Max. hysteresis	°C	4
Repeatability accuracy	%	< $\pm 2$ % of $p_{nom}$

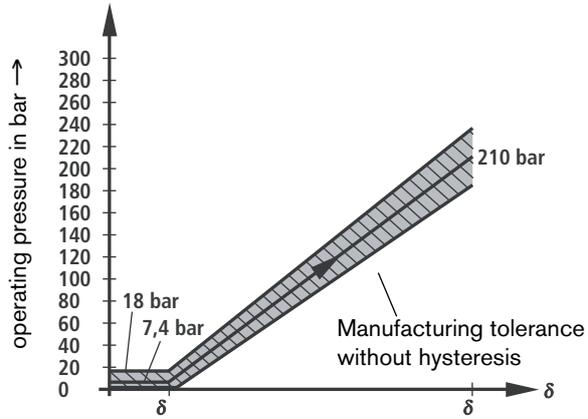
### Installation notes:

MHDBDT 06 thermal pressure valves are **only** suitable for fluid circuits. The fluid to be measured should continually flow through the device once it is installed.

**Characteristic curves** (measured at  $q_V = 2 \text{ l/min}$  and  $\Delta\delta = 1 \text{ }^\circ\text{C/min}$ )

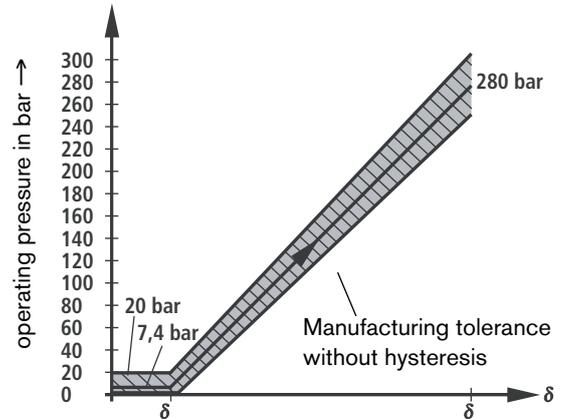
**Pressure/temperature characteristic curves**

$p_{nom} = 210 \text{ bar}$

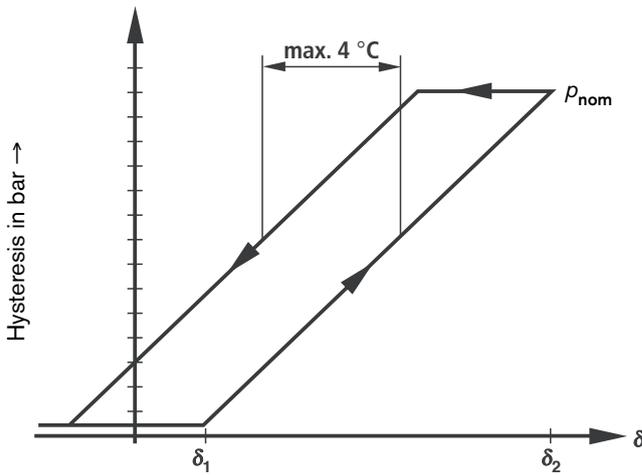


$\delta_1, \delta_2$  see table →

$p_{nom} = 280 \text{ bar}$



$\delta_1, \delta_2$  see table →

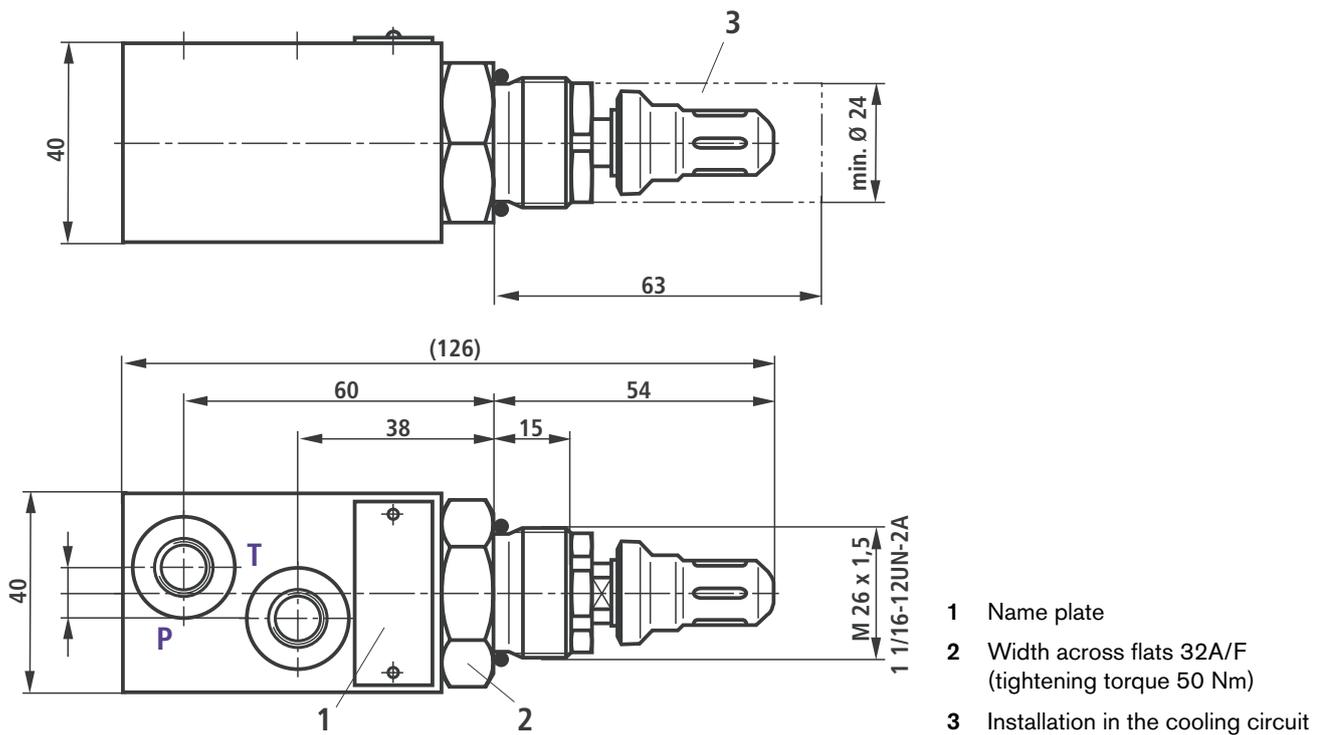


$\delta_1, \delta_2$  see table →

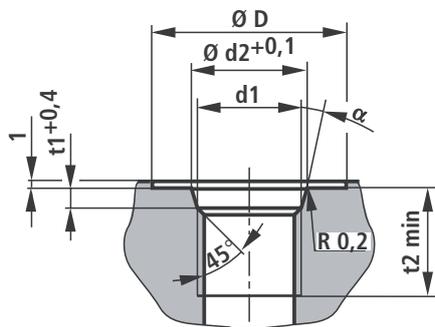
Temperature range thermostat:

$\delta_1$		$\delta_2$
50 °C	-	58 °C
60 °C	-	68 °C
75 °C	-	85 °C
82 °C	-	92 °C
87 °C	-	97 °C

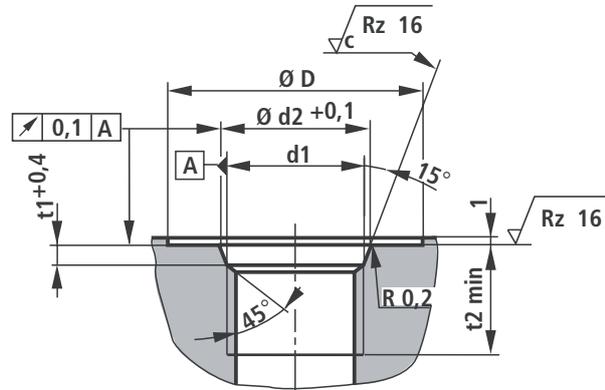
**Unit dimensions (dimensions in mm)**



**Ports P and T**



**Installation cavity**



Ports P and T						
Port thread	d1	$\varnothing d2$	$\varnothing D$	t1	t2	a
06	M12 x 1,5	13,8	22	2,4	11,5	15°
19	7/16-20 UNF-2B	12,4	21	2,4	11,5	12°

Installation cavity for valve					
Port thread	d1	$\varnothing d2$	$\varnothing D$	t1	t2
06	M26 x 1,5	29,05	40	3,1	15
19	1 1/16-12 UNF-2B	29,2	41	3,3	15

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