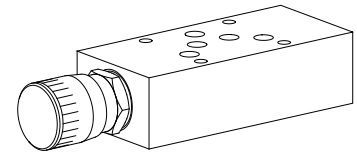


**Throttle valve
Sandwich construction**

- $Q_{max} = 100$ l/min
- $Q_N = 60$ l/min
- $p_{max} = 350$ bar

NG10
ISO 4401-05


DESCRIPTION

Throttle valve sandwich type NG10 with interface acc. to ISO 4401-05. The throttle valve is available in two different variants, namely the standard and the precision throttle (FD). Version FD only available for sandwiches with restriction in A, B, T, or AB. The turning knob is made from aluminium, all other parts made of steel, have been phosphated.

FUNCTION

Using the precision thread adjusting spindle, the restriction of the volume flow can be continuously adjusted. With the spindle fully screwed home, the volume flow is zero, and a metallic edge makes a leak-tight closure. The throttle effect is produced by an annular gap which can be varied in size, or by means of a triangular edge. Because of the nature of the design, there is only a small amount of leakage.

APPLICATION

Sandwich type throttle valves can be used anywhere where volume flows have to be infinitely controlled in both directions without taking pressure fluctuations into account. These sandwich valves are ideal for machine tools and also all types of handling operation.

Attention: The throttle spindle in case of ADRP is not secured against being unscrewed.

TYPE CODE

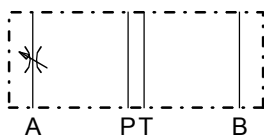
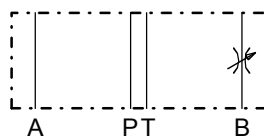
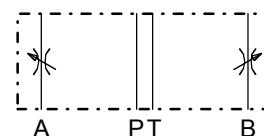
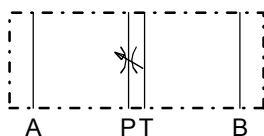
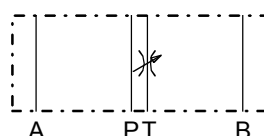
	A	DR	10	#
International standard interface ISO				
Throttle valve				
Type list / function				
in A <input type="checkbox"/> A	in B <input type="checkbox"/> B			
in A and B <input type="checkbox"/> AB				
in P <input type="checkbox"/> P	in T <input type="checkbox"/> T			
in P and T <input type="checkbox"/> PT				
Nominal size 10				
Standard				
Precision throttle		<input type="checkbox"/> - FD	(A, B, T or AB only)	
Design-Index (Subject to change)				

GENERAL SPECIFICATIONS

Description	Throttle valve
Nominal size	NG10 acc. to ISO 4401-05
Construction	Sandwich construction
Mounting	4 mounting holes for socket head cap screws M6 or studs screws M6
Connections	Threaded connection plates, Multi-flange subplates, Longitudinal stacking system
Ambient temperature	-20...+50 °C
Mounting position	any
Fastening torque	$M_D = 9,5$ Nm (Quality. 8.8)
Weight	$m = 2,1$ kg

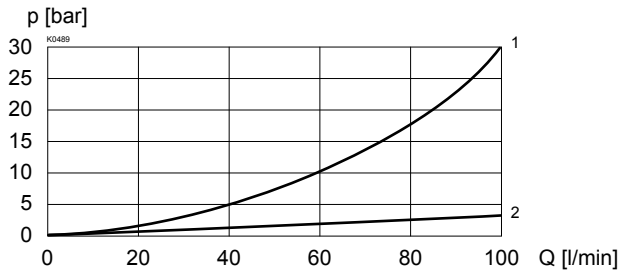
HYDRAULIC SPECIFICATIONS

Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, class 20/18/14...21/19/15 (Required filtration grade $\beta_{10...25} \geq 75$) refer to data sheet 1.0-50/2
Viscosity range	12 mm ² /s...320 mm ² /s
Fluid temperature	-20...+70 °C
Peak pressure	$p_{max} = 350$ bar
Nominal volume flow rate	$Q_N = 60$ l/min
	Q_N at 10 bar valve pressure loss
Max. Volume flow	$Q_{max} = 100$ l/min
Leakage volume flow	Almost leak free with closed restrictor

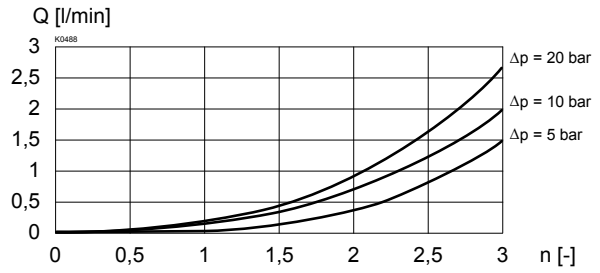
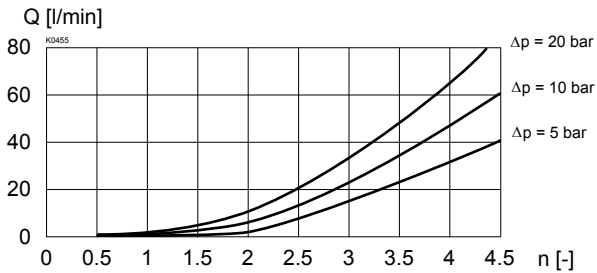
TYPE LIST / FUNCTION
ADRA10

ADRB10

ADRAB10

ADRP10

ADRT10


CHARACTERISTICS Oil viscosity $\nu = 30 \text{ mm}^2/\text{s}$
 $\Delta p = f(Q)$ Pressure loss/flow characteristics

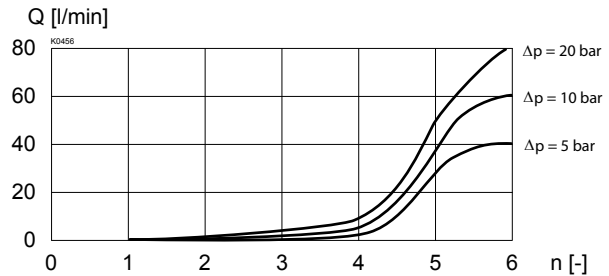
- 1 = Restriction in A, B or T
-
- 2 = Restriction in P


 $Q = f(n)$

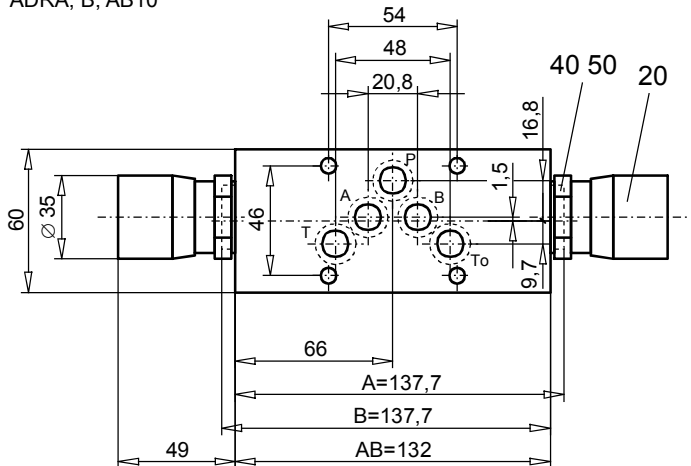
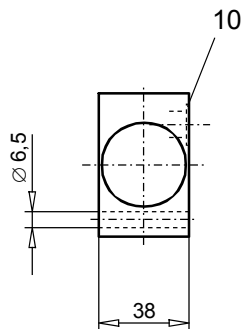
Volume flow adjustment characteristics (Precision throttle)


 $Q = f(n)$ Volume flow adjustment characteristics (Standard ADRA, B, AB, T10)

 $Q = f(n)$

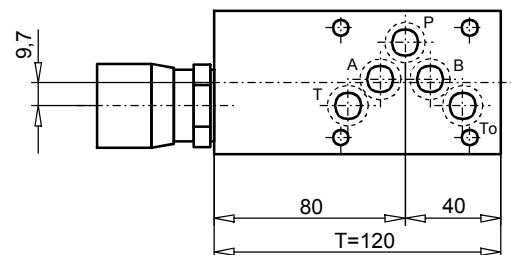
Volume flow adjustment characteristics (Precision throttle)


DIMENSIONS

ADRA, B, AB10



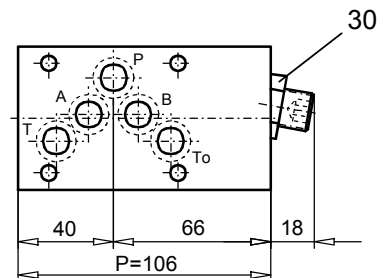
ADRT10


PARTS LIST

Position	Article	Description
10	160.2140	O-ring ID 14,00 x 1,78 (NBR)
20	114.1201	Turning knob
30	153.1702	Hexagonal nut 0,5D M16
40	049.2222	Bounded seal ID 22.7 x 30 x 2
50	238.5201	Plug DIN 908 M 22 x 1,5"

ADRP10

The throttle spindle is not secured against being unscrewed.



Technical explanation see data sheet 1.0-100