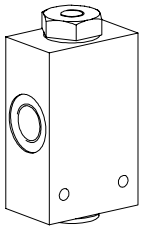
Non-return valve hydraulic pilot for installation in pipes

- Q_{max} = 40 l/min
- p_{max} = 315 bar



DESCRIPTION

Hydraulic piloted operated check valve with two tapped mounting holes for fixation. Valve body has a phosphated surface. The threaded bush and plug or oil blacking.

FUNCTION

In the free flow direction (1 → 2), the volume flow opens the seat cone against a spring. In the reverse direction (2 → 1), the spring holds the valve closed. If pressure builds up in connection x, this shifts the pilot control piston and opens the check valve. The required pilot control pressure is dependent on the pilot ratio.

APPLICATION

Pilot operated check valve are used to hold pressurised hydraulic cylinders, in for example lifting or tensioning devices, without any leakage. The hydraulic cylinder can only be moved into the closed direction if the valve has been opened via connection x. The directional valves required for cylinder control should have both service ports connected to the tank, to ensure operational safety when idle.

CONTENT

TYPE CODE

ERV [ ] # [ ]

Non-return valve piloted

Threaded connection G1/4" 414
G3/8" 738

Design-Index (Subject to change

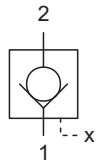
GENERAL SPECIFICATIONS

Description	Non-return valve hydraulic pilot	
Construction	Threaded body	
Mounting	Installation in pipes, mounting panels (see dimensions)	
Connection type	Connection x:	G1/4"
	Connections 1 and 2: ERV414 =	G1/4"
	ERV738 =	G3/8"
Ambient temerature	-20...+50°C	
Mounting position	any	
Weight	m = 0,8 kg (ERV414)	
	m = 1,2 kg (ERV738)	

HYDRAULIC SPECIFICATIONS

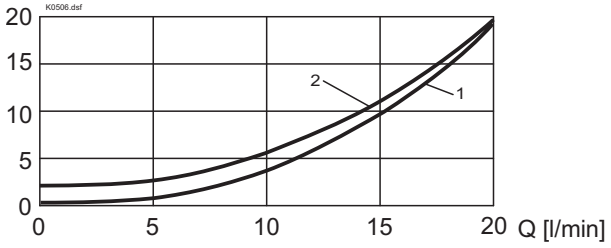
Fluid	Mineral oil, other fluid on request
Contamination efficiency	ISO 4406:1999, Class 20/18/14…21/19/15 (Required filtration grade ß 10...25≥75) refer to data sheet 1.0-50/2
Viscosity range	12mm²/s...320mm²/s
Fluid temperature	-20...+70°C
Peak pressure	p_{max} = 315 bar
Opening pressure	$p_ö$ = 1,8 bar (ERV414)
	$p_ö$ = 2,2 bar (ERV738)
Unblocking ratio	i = 1:7,84 (ERV414)
	i = 1:4,94 (ERV738)
Max. volume flow	Q_{max} = 20 l/min (ERV414)
	Q_{max} = 40 l/min (ERV738)

SYMBOLS

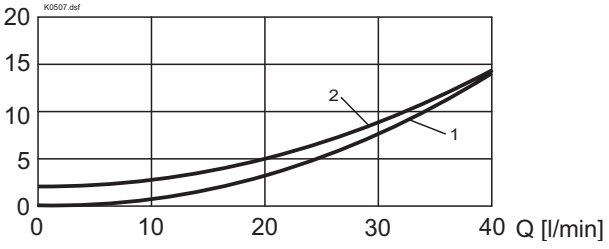


CHARACTERISTICS Oil viscosity υ = 30 mm²/s

$\Delta p = f(Q)$ Pressure loss - volume flow - curve
ERV414
1 Flow direction 1 → 2
2 Flow direction 2 → 1

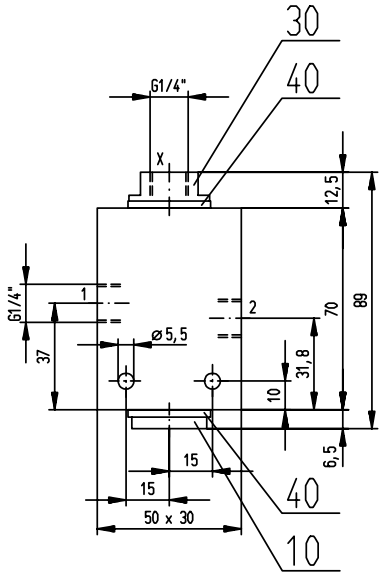


$\Delta p = f(Q)$ Pressure loss - volume flow - curve
ERV738
1 Flow direction 1 → 2
2 Flow direction 2 → 1

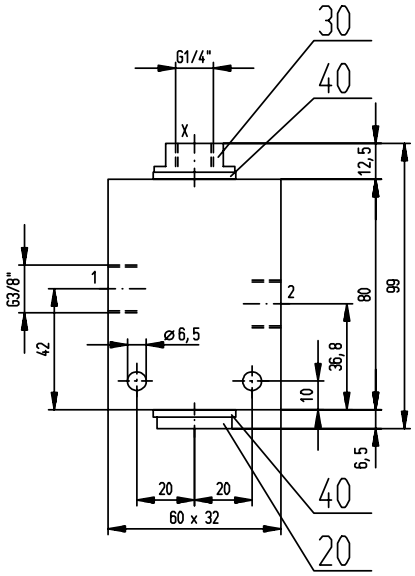


DIMENSIONS

ERV414



ERV738



PARTS LIST

Position	Article	Description
10	239.2003	Plug G1/2“
20	239.2100	Plug G1/2“
30	32.2608	Threaded bush
40	49.2212	Bonded seal ID 21,5x28,7x2,5

Technical explanation see data sheet 1.0-100E