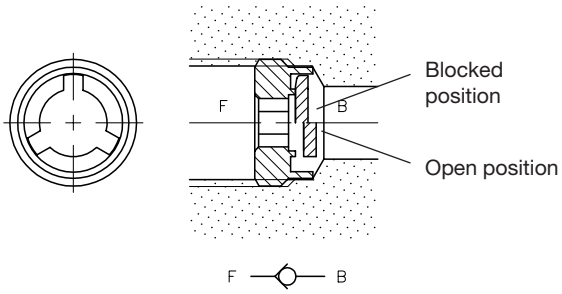
Check valves type RE
for screw in into simple tapped holes

Pressure p_{max} = 500 bar
Flow Q_{max} = 120 lpm

For restrictor check valves type BE D 7555 B
Check valves type RC D 6969 R

1. General information

Check valves type RE stand out due to their very simple and space-saving design. They consist only of the valve seat and a small disc (no spring, i.e. there is no trouble caused by rupture of the spring). The small disc and valve seat are hardened and ground.
These valves are to be screwed into shaped tapped holes. The sealing of the inlet to outlet is of metallic type and takes place at the contact area between the facial cutting edge and the stepped shoulder of the core diameter at the location thread. Any standard steel drill (point angle 118°) automatically forms this stepped shoulder when the core diameter is drilled.
Check valves type RE enable a free flow in direction F → B and block the flow in opposite direction B → F.



2. Available versions, main data

Order examples: **RE 2** Cartridge valve
RE 1 - G Version with housing

Table 2: Design

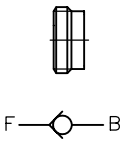
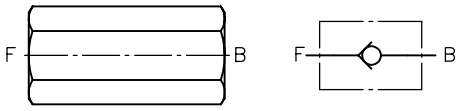
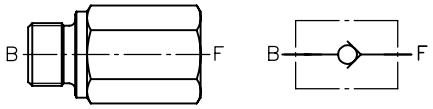
Cartridge valve	Body version for pipe connection	
no coding 	**G** 	Tapped ports for pipe connection on both sides
	F 	

Table 1: Basic type, design

Standard, with pipe thread ISO 228/1 (BSPP)		with metric fine thread DIN 13 T6		Pressure p_{max} (bar)	Flow Q_{max} (lpm)
RE 0	G 1/8 A			500	12
RE 1	G 1/4 A			500	25
RE 2	G 3/8 A			500	40
RE 3	G 1/2 A	**RE 30** **RE 32**	M 20x1.5 M 22x1.5	450	80
RE 4	G 3/4 A			400	120

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3. Further characteristic data

Nomenclature: Check valve without spring

Installation position: Any

Opening pressure F → B: A small pressure surge is required to ensure closing of the valve, if the valve is mounted in a position, where the disc doesn't automatically lie on the seat, due to its weight.

Pressure fluid: Hydraulic oil conforming DIN 51524 part 1 to 3; ISO VG 10 to 68 conforming DIN 51519.
Viscosity limits: min. approx. 4, max. approx. 1500 mm^2/s
opt. operation approx. 10... 500 mm^2/s
Also suitable are biologically degradable pressure fluids type HEPG (Polyalkylenglykol) and HEES (synth. Ester) at operation temperatures up to approx. +70°C.

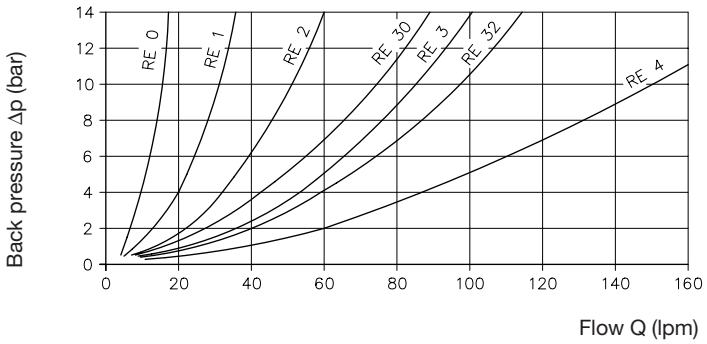
Temperature: Ambient: approx. -40 ... +80 °C
Fluid: -25 ... +80 °C, pay attention to the viscosity range!
Permissible temperature during start: -40°C (observe start-viscosity!), as long as the service temperature is at least 20 K higher for the following operation. Biological degradable pressure fluids: Observe manufacturer's specifications.

Surface: Versions with housing type G and F are zinc galvanized

Mass (weight) approx. g

		RE 0	RE 1	RE 2	RE 3 (30, 32)	RE 4
Cartridge valve		2	4	6	10	18
Version with housing	G	30	75	105	160	340
	E	30	60	85	140	300

Δp-Q-curves: Direction of free flow F → B



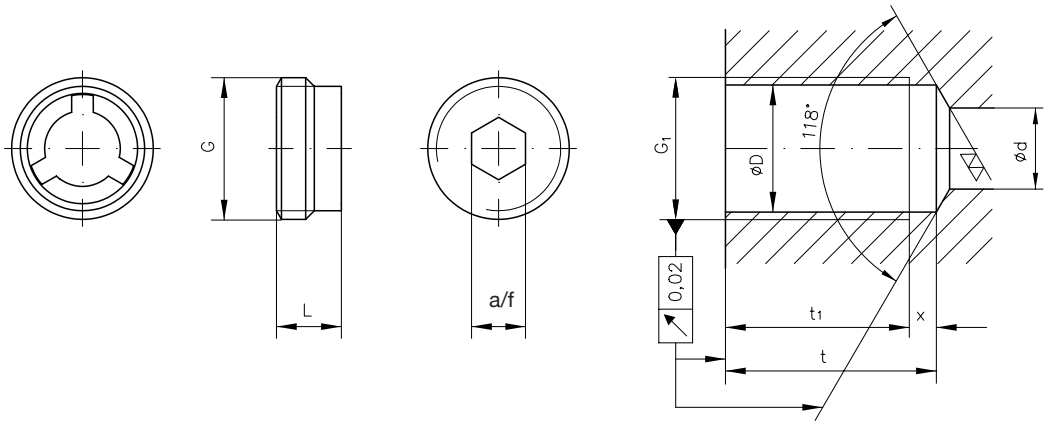
Oil viscosity during tests approx. 50 mm^2/s

4. Unit dimensions

All dimensions in mm and subject to change without notice!

Cartridge valve

Mounting hole



Type	Thread G *	Thread G_1 *	L	t	t_1 1)	x 2)	D	d	a/f	Torque ± 20% (Nm)
RE 0	G 1/8 A	G 1/8	5	15	13	2	8.7	5.5	4	10
RE 1	G 1/4 A	G 1/4	6	19.5	17	2.5	11.8	7.5	5	15
RE 2	G 3/8 A	G 3/8	7	21	18	3	15.3	11	8	20
RE 3	G 1/2 A	G 1/2	7.5	23	20	3	19	14	10	35
RE 30	M 20x1.5	M 20x1.5	7.5	23	20	3	18.5	14	10	35
RE 32	M 22x1.5	M 22x1.5	7.5	23	20	3	20.5	15	10	35
RE 4	G 3/4 A	G 3/4	9	26.5	23	3.5	24.5	18	12	40

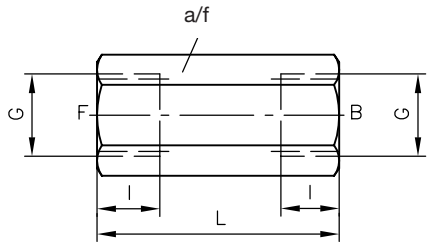
1) thread completely cut

2) The figures for thread run out x have to be observed accurately. It may be shorter but it mustn‘t be more. because this is fundamental for proper function and tightness of the sealing edge.

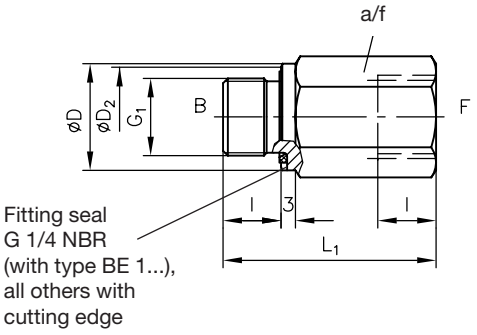
* BSPP

Version with housing

Type RE ... G



Type RE ... F



Type	G *	G_1 *	∅D	D_2	L	L_1	l	a/f	Torque (Nm)
RE 0	G 1/8	G 1/8 A	14	12.5	30	28	8	14	20
RE 1	G 1/4	G 1/4 A	19			43		19	40
RE 2	G 3/8	G 3/8 A	22	20.5	50	44	12	22	80
RE 3	G 1/2	G 1/2 A	26	24	56	52	14	27	150
RE 30	M 20x1.5		25	24	56	52	14	27	150
RE 32	M 22x1.5		27	26	56	52	14	30	150
RE 4	G 3/4	G 3/4 A	32	30	65	60	16	36	200