

**RE 20 392/09.99**

Replaces: 12.95



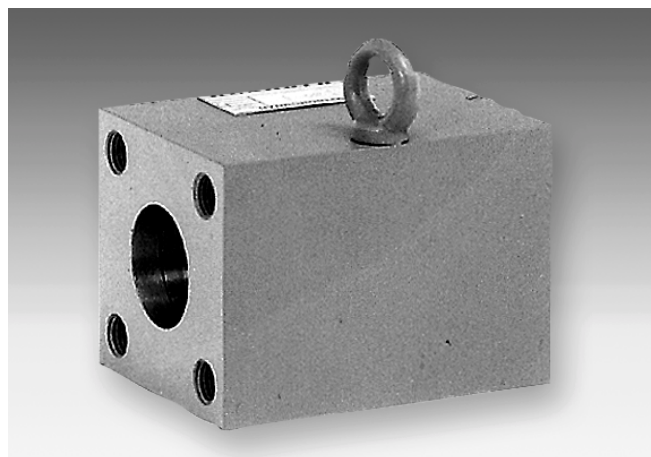
**Check valve  
Type S**

Nominal sizes 52 to 150

Series 1X

Maximum operating pressure 315 bar

Maximum flow 15000 L/min



Type S 52 F0-1X/...

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**Features**

- For subplate mounting (NS 52 to 82)
- For flange connections (NS 52 to 150)
- Leak-free closure in one direction
- Various cracking pressures, optional, (see ordering details).

**Ordering details**

S		-1X/		*
Check valve	= S			Further details in clear text
Nominal size 52	= 52			<b>No code =</b> NBR seals <b>V =</b> FKM seals (other seals on request) <b>⚠ Attention!</b> The compatibility of the seals and pressure fluid has to be taken into account!
Nominal size 62	= 62			
Nominal size 82	= 82			
Nominal size 102	= 102			
Nominal size 125	= 125			
Nominal size 150	= 150			
Flange connection	= F			<b>1X =</b> Series 10 to 19 (10 to 19: unchanged installation and connection dimensions)
Subplate mounting (NS 52 to 82)	= P			
		<b>0 =</b>		Without spring
		<b>1 =</b>		Cracking pressure 0.5 bar
		<b>2</b> <sup>1)</sup> =		Cracking pressure 1.5 bar
		<b>3</b> <sup>2)</sup> =		Cracking pressure 3.0 bar

1) Not for nominal sizes 125 and 150  
 2) Not for nominal sizes 102, 125 and 150

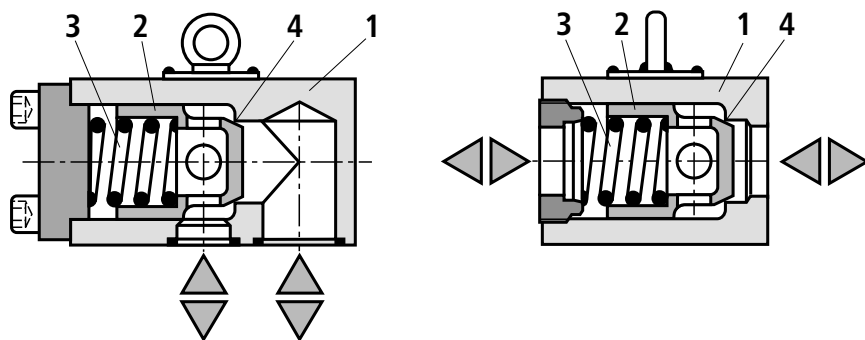
## Function, section, symbols

The check valve type S has the task of, preferably closing a flow leak free in one direction and to permit free flow in the opposite direction. It basically comprises of the housing (1), poppet (2) and the compression spring (3).

The stroke of the poppet (2), which is guided on its outside diameter, is limited by a mechanical stop. The built-in compression spring (3) supports the closing movement. Furthermore the compression spring (3) holds the poppet (2) in the closed position even when there is no flow through the valve.

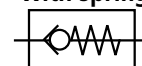
When there is flow through the valve in the opening direction, the poppet (2) lifts due to the fluid pressure from its seat (4) and thereby permits flow. In the opposite direction the compression spring (3) and the pressure fluid presses the poppet (2) onto its seat (4) and thus closes the connection.

For installing into a block the check valve can be supplied as a right angled check valve or as a straight-through cartridge (see catalogue sheet RE 20 395).

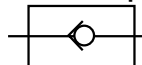


### Symbols

With spring



Without spring



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

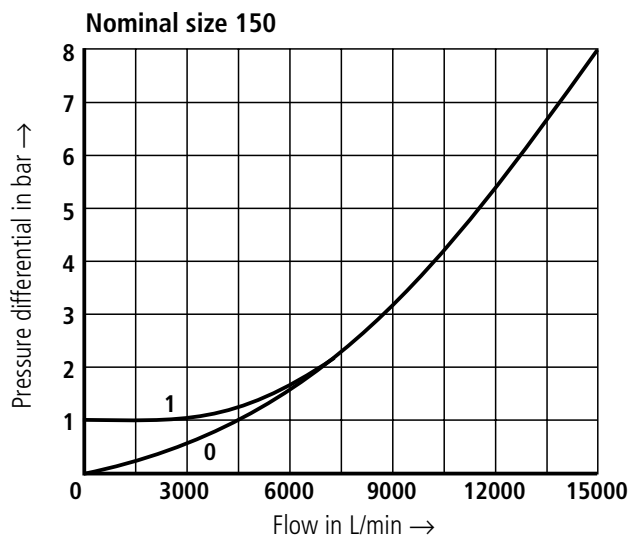
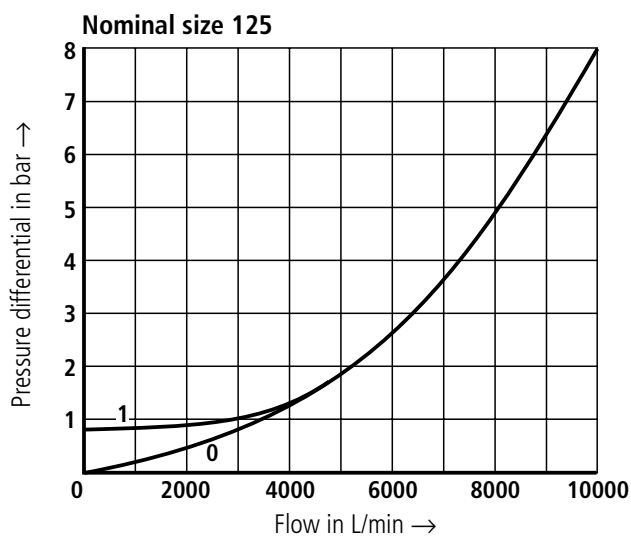
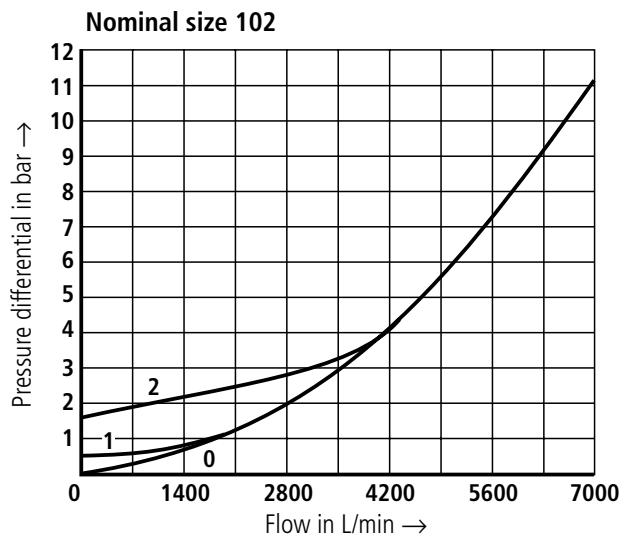
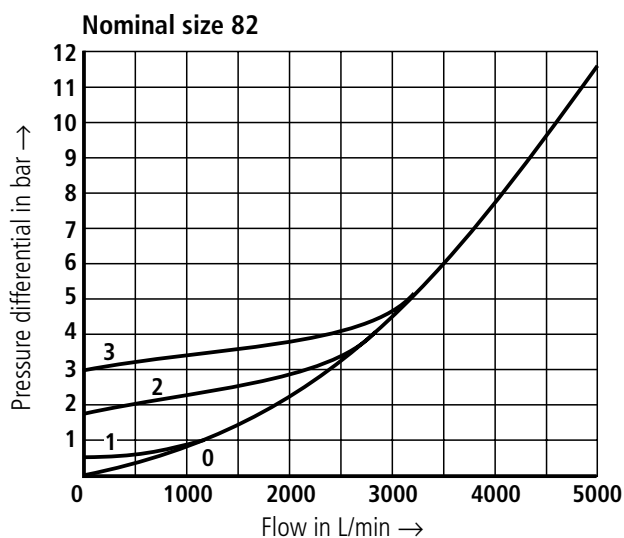
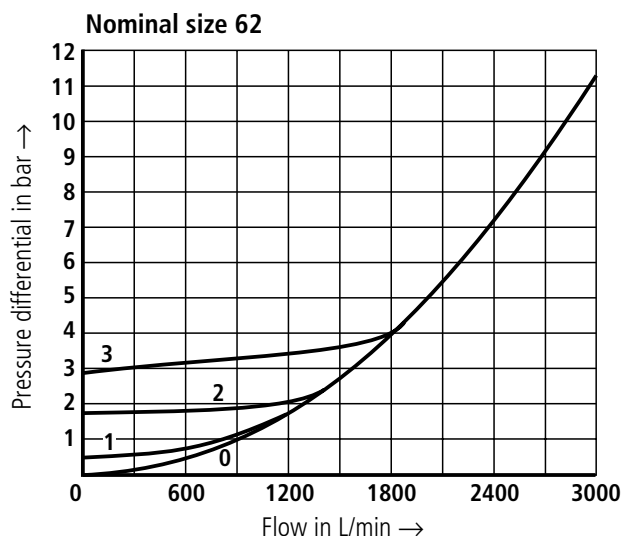
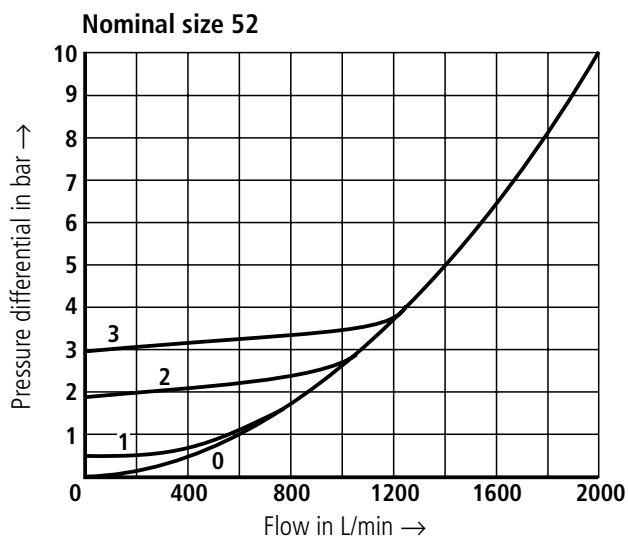
Pressure fluid temperature range	°C	- 30 to +80 (NBR seals)					
	°C	- 20 to +80 (FKM seals)					
Viscosity range	mm <sup>2</sup> /s	2.8 to 380					
Max. operating pressure	bar	315					
Max. cracking pressure	bar	see characteristic curves					
Max. flow	L/min	see characteristic curves					
Pressure fluid		mineral oil (HL, HLP) to DIN 51 524 <sup>1)</sup> ; fast bio-degradable pressure fluids to VDMA 24 568 (also see RE 90 221); HETG (rape seed oil) <sup>1)</sup> ; HEPG (Polyglycol) <sup>2)</sup> ; HEES (synthetic ester) <sup>2)</sup> ; other pressure fluids on request					
Degree of contamination		maximum permissible degree of contamination of the pressure fluid is to NAS 1638 class 9. We, therefore, recommend a filter with a minimum retention rate of $\beta_{10} \geq 75$ .					
Nominal size		52	62	82	102	125	150
For associated connection flange see catalogue sheet		RE 45 501			RE 45 502		

<sup>1)</sup> Suitable for NBR **and** FKM seals

<sup>2)</sup> **Only** suitable for FKM seals

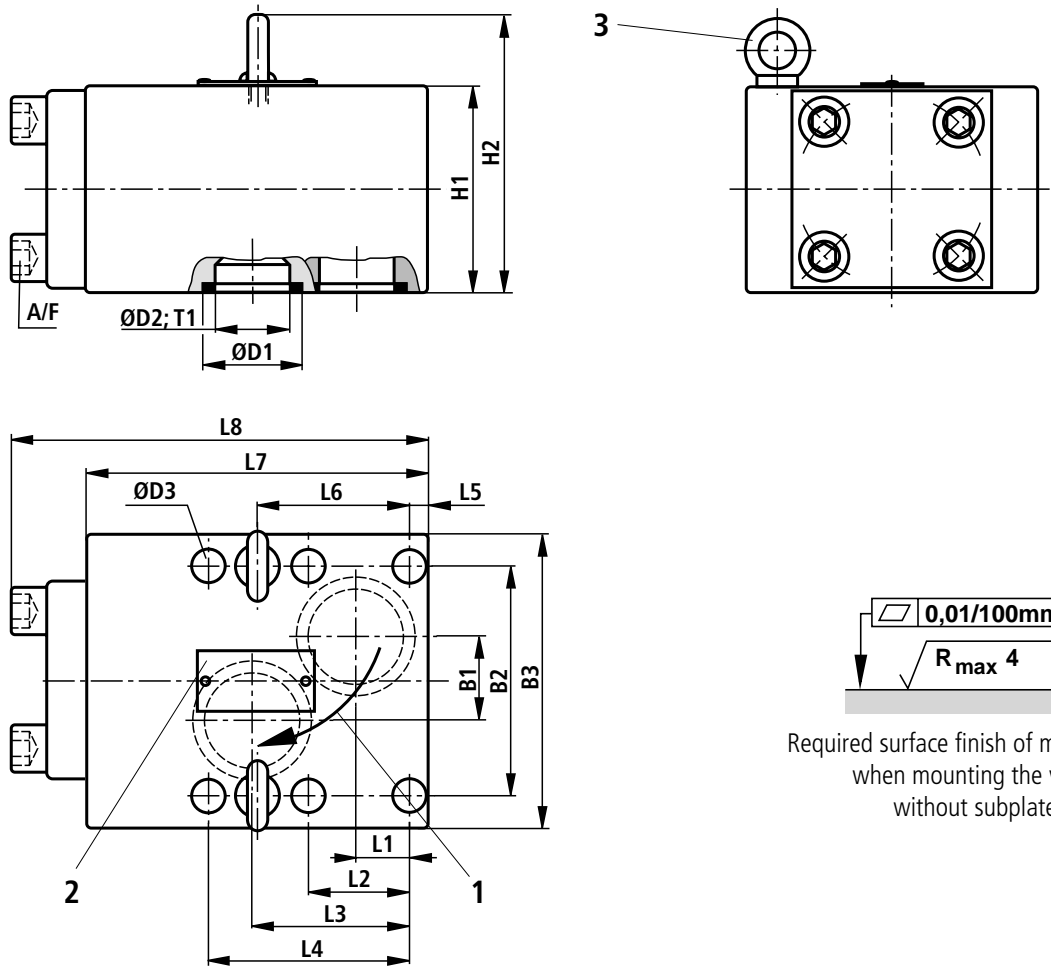
**Characteristic curves** (measured at  $\nu = 41 \text{ mm}^2/\text{s}$  and  $\vartheta = 50 \text{ }^\circ\text{C}$ )

Pressure differential  $\Delta p$  in relation to the flow  $q_v$  at the cracking pressure



**Unit dimensions:** subplate mounting

(Dimensions in mm)



- 1 Free flow in direction of arrow
- 2 Name plate
- 3 Eyebolt for transport
  - 1 off with NS 52 and 62
  - 2 off with NS 82

NS	Seal kit – Material no.	
	NBR seals	FKM seals
52	00311132	00311135
62	00311133	00311136
82	00311134	00311137

**Valve fixing screws**

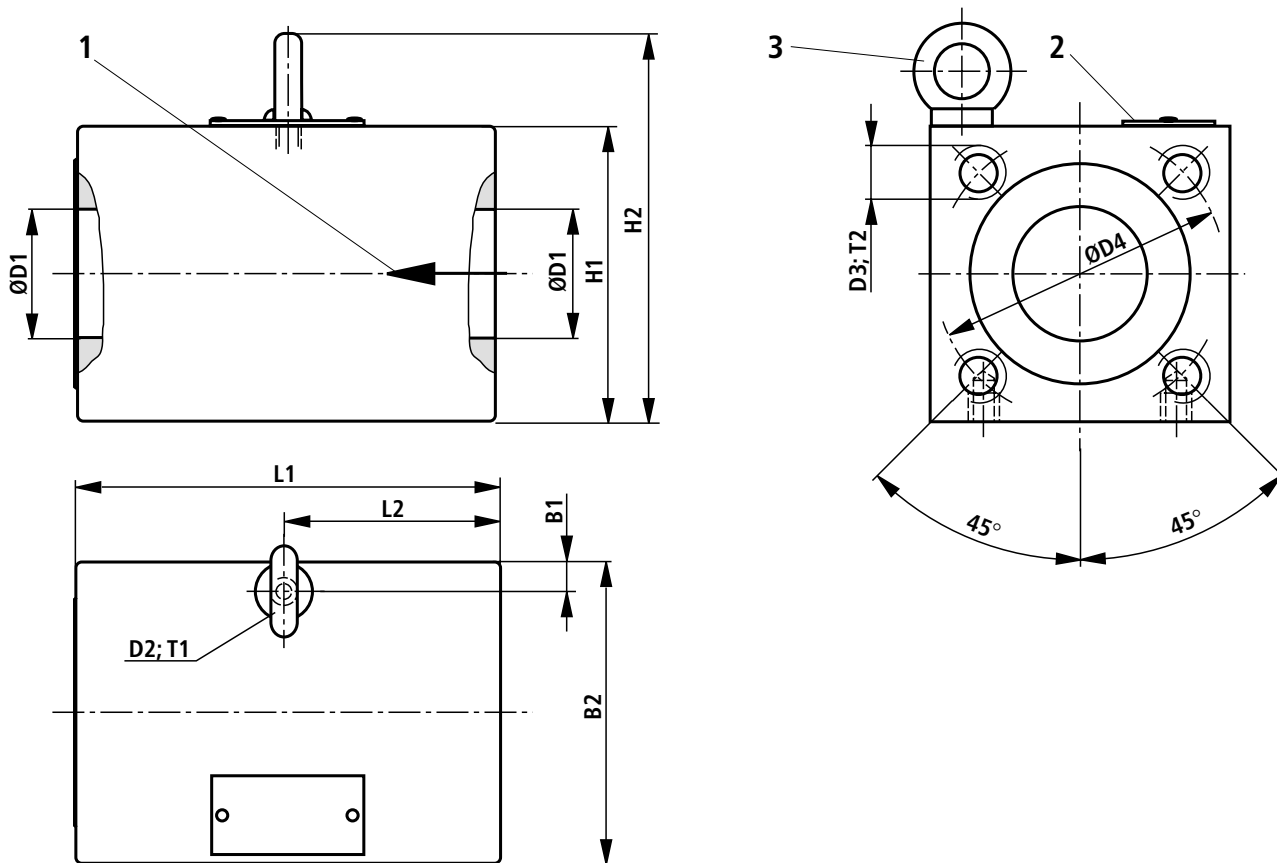
- **Nominal size 52**  
6 off M16 x 130, DIN 912-10.9,  $M_A = 310$  Nm
- **Nominal size 62**  
6 off M20 x 160, DIN 912-10.9,  $M_A = 620$  Nm
- **Nominal size 82**  
6 off M20 x 190, DIN 912-10.9,  $M_A = 620$  Nm

must be ordered separately.

NS	B1	B2	B3	ØD1	ØD2	ØD3	H1	H2	L1	L2	L3	L4	L5	L6	L7	L8	T1	A/F	Weight in kg
52	40	115	145	60	50	18	105	141	25	50	77	100	12	75	172	207	2.3	14	20
62	40	140	180	70	60	22	125	161	34	65	100	128	17.5	96	220	262.5	2.3	17	38
82	50	170	210	92	80	22	155	191	30	70	115	140	35	105	275	325	3	19	70

**Unit dimensions:** flange connection, NS 52 to 102

(Dimensions in mm)



1 Free flow in direction of arrow

2 Name plate

3 Eyebolt for transport

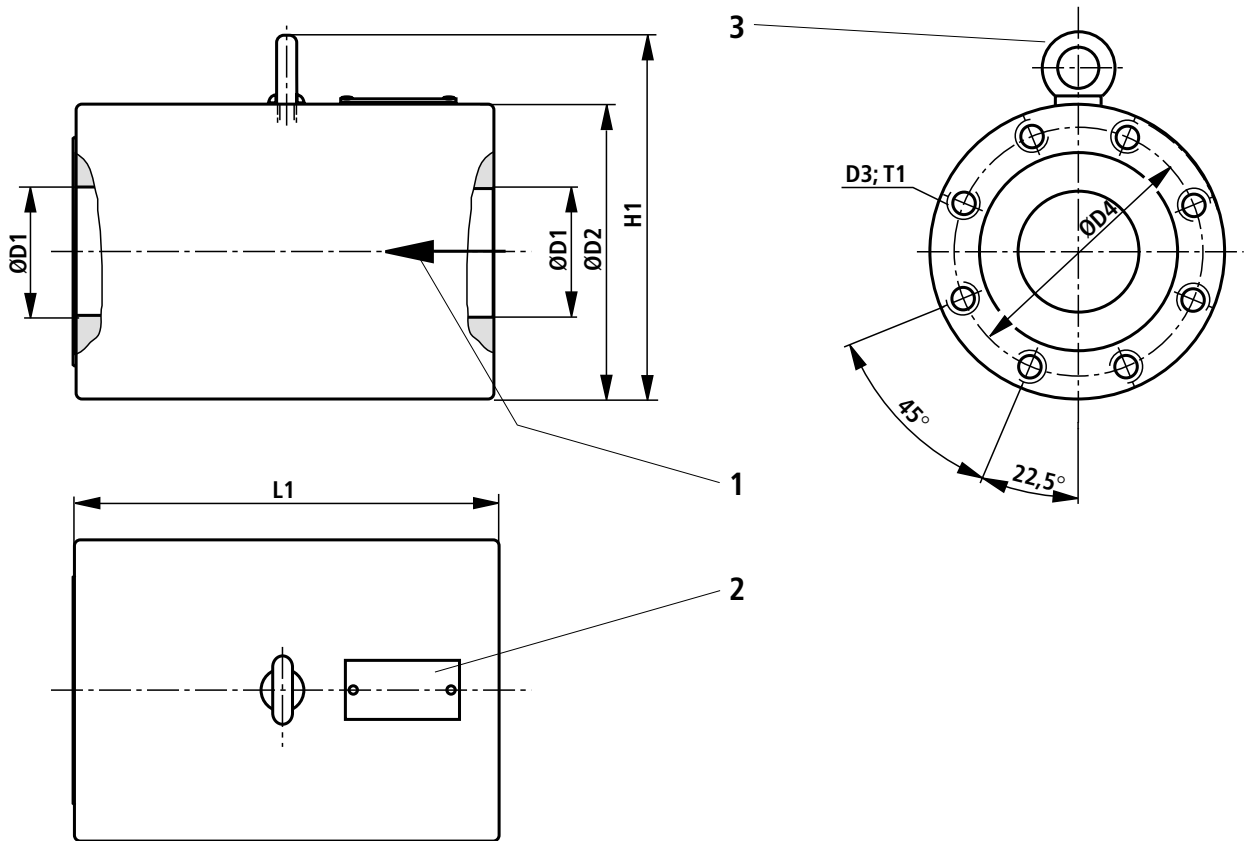
For suitable connection flanges see RE 45 501

NS	Seal kit – Material no.	
	NBR seals	FKM seals
52	00004337	00006418
62	00002193	00002194
82	00002172	00002173
102	00002174	00002175

NS	B1	B2	$\varnothing D1$	D2	D3	$\varnothing D4$	H1	H2	L1	L2	T1	T2	Weight in kg
52	10	100	45	M10	M16	98	98	134	135.5	67.5	15	26	10
62	10	120	55	M10	M20	118	118	154	165.5	82.5	15	32	18
82	15	150	72	M12	M24	145	148	184	195.5	97.5	20	36	34
102	15	180	90	M12	M30	175	178	214	245.5	122.5	20	40	62

**Unit dimensions:** flange connection, NS 125 to 150

(Dimensions in mm)



- 1 Free flow in direction of arrow
- 2 Name plate
- 3 Eyebolt for transport

NS	Seal kit – Material no.	
	NBR seals	FKM seals
125	00006070	00002176
150	00009638	00009637

For appropriate connection flange see RE 45 502

Ne	ØD1	ØD2	D3	ØD4	H1	L1	T1	Weight in kg
125	122	300	M30	245	353	350.5	50	190
150	150	360	M36	290	431	501	60	370

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