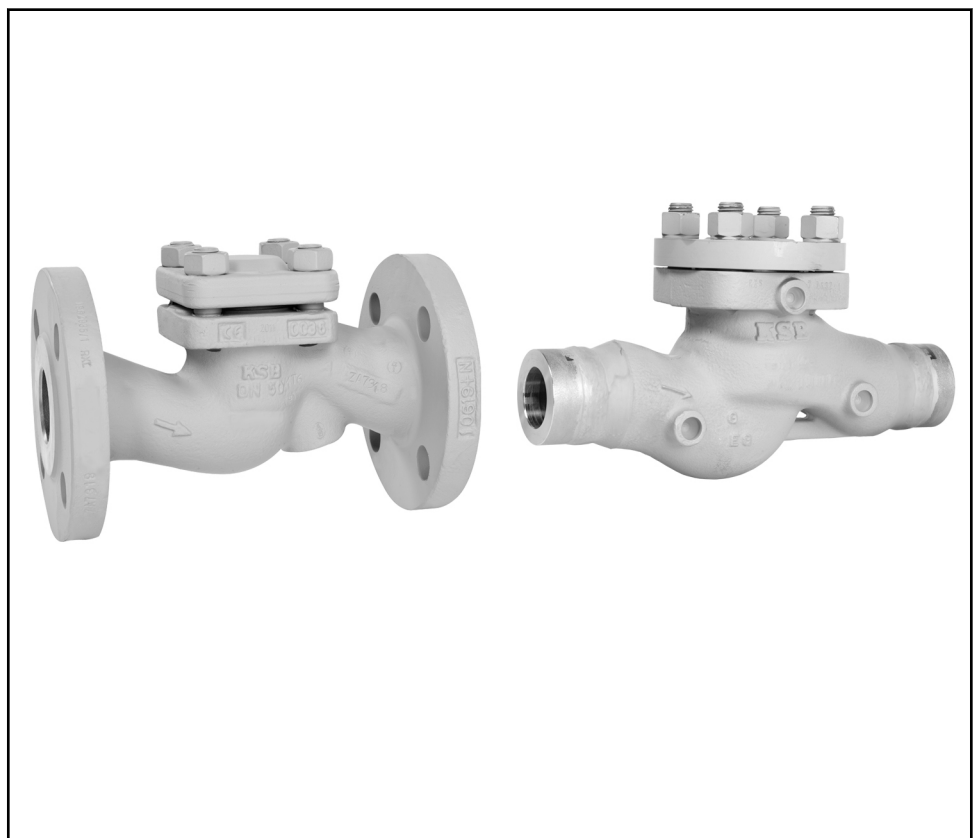


Non-return Valve

NORI 320 RXL/RXS

PN 250-320
DN 65-200
Flanged/Butt Weld Ends

Type Series Booklet



Legal information/Copyright

Type Series Booklet NORI 320 RXL/RXS

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Check Valves and Strainers

Non-return Valves

NORI 320 RXL/RXS



Main applications

- Fossil-fuelled power stations
- Boiler feed applications
- Boiler recirculation
- Process engineering
- Petrochemical industry
- Chemical industry
- Shipbuilding
- Paper and cellulose industry
- Sugar industry
- Condensate transport
- Descaling units
- Snow-making systems
- Mining
- Nuclear power stations

Fluids handled

- Water
- Steam
- Gas
- Oil
- Other non-aggressive fluids
- Other fluids on request.

Operating data

Operating properties

Characteristic	Value
Nominal pressure	PN 250-320
Nominal size	DN 65-200
Max. permissible pressure	320 bar
Max. permissible temperature	550 °C

Selection as per pressure/temperature ratings (⇒ Page 4)

Body materials

Overview of available materials

Material	Material number	Temperature limit
GP 240 GH+N	1.0619+N	Up to 450 °C
G 17 CrMo 5-5	1.7357	Up to 550 °C

Design details

- Straight-way pattern
- Spring-loaded check disc
- Fully confined bonnet gasket
- Seat/disc interface made of wear and corrosion-resistant chrome steel (Cr) or Stellite
- The valves satisfy the safety requirements of Annex I of the European Pressure Equipment Directive 97/23/EC (PED) for fluids in Groups 1 and 2.
- The valves do not have a potential internal source of ignition and can be used in potentially explosive atmospheres, Group II, category 2 (zones 1+21) and category 3 (zones 2+22) to ATEX 94/9/EC.

Variants

- Stellite seat/disc interface (standard for 1.7357)
- Oil and grease-free (wetted parts)
- Connection branches made of 16 Mo 3
- Other flange designs
- Other butt weld end versions
- Inspections to technical codes such as TRD/TRB/AD2000 – German Steam Boiler / Pressure Vessel Regulations – or to customer specification

Product benefits

- Fully confined serrated cover gasket ensures safe sealing to atmosphere.
- Hard-faced valve seat made of wear-resistant and corrosion-proof 17 % chrome steel or Stellite for long service life and high functional reliability.

Related documents

- Non-return valves, type NORI 500 RXLR/RXSR, see type series booklet 7693.1.
- High-pressure non-return valves, type RGS, see type series booklet 7692.1.
- NORI 320 globe valves with gland packing and non-rotating stem, type ZXLF/ZXSf, see type series booklet 7653.1.
- Operating manual 0570.82

On all enquiries/orders please specify

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Type 2. Nominal pressure 3. Nominal size 4. Operating pressure 5. Differential pressure 6. Operating temperature | <ol style="list-style-type: none"> 7. Material 8. Fluid handled 9. Flow rate 10. Pipe connection 11. Variants 12. Number of type series booklet |
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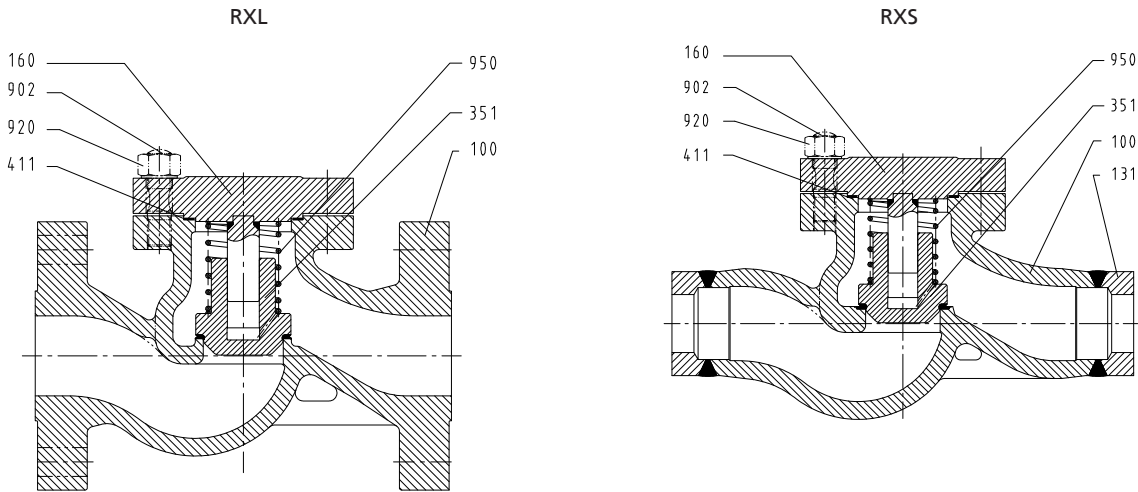
Pressure/temperature ratings

Permissible operating pressures in bar at a temperature of °C (to EN 1092-1)¹⁾²⁾

PN	Material	Material number	Up to 100	150	200	250	300	350	400	450	460	470	480	490	500	510	520	530	540	550
250	GP 240 GH+N	1.0619+N	232	220	208	190	173	161	149	82										
	G 17 CrMo 5-5	1.7357	250	250	250	250	250	238	225	211	201	190	180	170	163	138	112	93	73	58
320	GP 240 GH+N	1.0619+N	297	282	267	244	221	206	190	105										
	G 17 CrMo 5-5	1.7357	320	320	320	320	320	305	288	270	257	244	231	218	209	177	143	119	93	75

1) The valves are suitable for temperatures down to -10 °C.
 2) Operating pressures to DIN 2401 are also permissible.

Materials



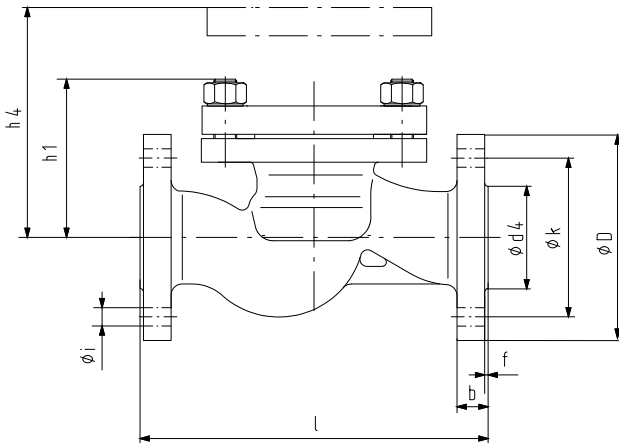
Overview of available materials

Part No.	Description	Material	Material number	Temperature °C	Note
100	Body	GP 240 GH+N	1.0619+N	Up to 450	Seat/disc interface: 17% Cr steel
		G-17 CrMo 5-5	1.7357	Up to 550	Seat/disc interface: Stellite
131	Connection branch	16 Mo 3	1.5415	Up to 450	
		13 CrMo 4-5	1.7335	Up to 550	
160	Cover	P 250 GH	1.0460	Up to 450	
		13 CrMo 4-5	1.7335	Up to 550	
351 ³⁾	Check disc	P 250 GH	1.0460	Up to 450	Seat/disc interface: 17% Cr steel
		13 CrMo 4-5	1.7335	Up to 550	Seat/disc interface: Stellite
411 ³⁾	Joint ring	CrNi steel/graphite	1.4571/graphite	Up to 550	Serrated
902	Stud	21 CrMoV 5-7	1.7709		
920	Hexagon nut	25 CrMo 4	1.7218		
950 ³⁾	Spring	X 7 CrNiAl 17 7	1.4568		

³⁾ Recommended spare parts

Dimensions

Dimensions of NORI 320 RXL



Dimensions in mm

PN	DN	l	ø D	ø k	No. of bolt holes z	Bolt hole dia. i	ø d ₄ x f	b	h ₁	h ₄ ⁴⁾	[kg]
250	65	400	230	180	8	26	122 x 3	42	200	320	65
	80	450	255	200	8	30	138 x 3	46	230	370	100
	100	520	300	235	8	33	162 x 3	54	260	410	150
	125	600	340	275	12	33	188 x 3	60	310	490	225
	125	700	390	320	12	36	218 x 3	68	340	550	305
320	200	800	485	400	12	42	285 x 3	82	400	650	585
	65	400	255	200	8	30	122 x 3	51	200	320	80
	80	450	275	220	8	30	138 x 3	55	230	370	110
	100	520	335	265	8	36	162 x 3	65	260	410	180
	125	600	380	310	12	36	188 x 3	75	310	490	240
	150	700	425	350	12	39	218 x 3	84	340	550	355
200	800	525	440	12	42	285 x 3	103	400	650	665	

Mating dimensions - Standards

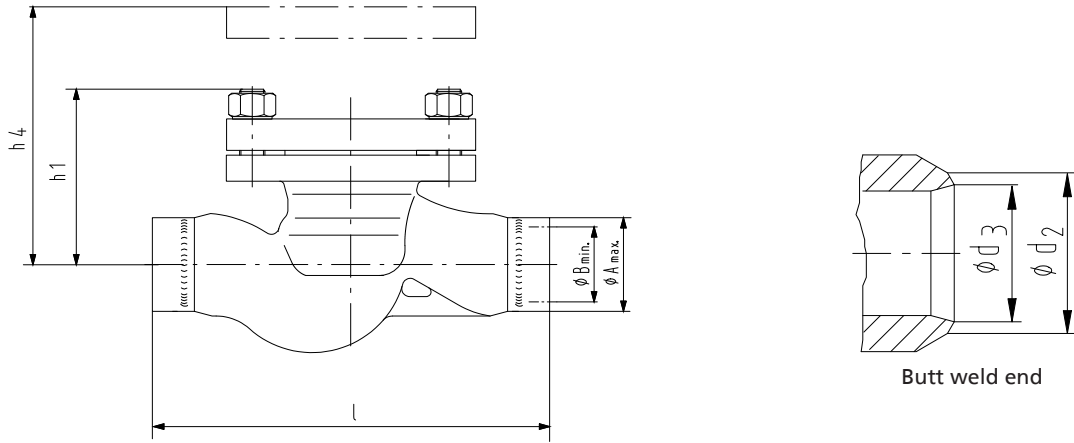
Face-to-face lengths: See table
Flanges: Mating dimensions to DIN EN 1092-1
Flange facing: Type B1

Other flange designs

- E.g. groove (type D), recess (type F) to EN 1092-1, lens gasket (type L) to DIN 2696, at both ends
- Other flange designs on request

4) Vertical clearance for removal

Dimensions of NORI 320 RXS



Dimensions in mm

PN	DN	l	Butt weld ends, unmachined		Butt weld ends to DIN EN 12627						h ₁	h ₄ ⁵⁾	[kg]
			ø A _{max.}	ø B _{min.}	ø d ₂		ø d ₃		Associated pipe dimensions				
					PN 250	PN 320	PN 250	PN 320	PN 250	PN320			
250-320	65	480	93	48	77	90	59,5	68,0	76,1 x 8,8	88,9 x 4,0	200	320	45
	80	530	116	62	115	115	93,0	87,5	114,3 x 5,0	114,3 x 14,2	230	370	75
	100	620	138	84	To customer's specification within dimensions A _{max.} and B _{min.}						260	410	125
	125	720	170	106							310	490	180
	150	820	198	133							340	550	250
	200	950	267	175							400	650	475

Mating dimensions - Standards

Face-to-face lengths: See table
Butt weld ends: DIN EN 12627 Fig. 2

Butt weld ends to EN 10627 are possible.

Other flange designs

Different designs of butt weld ends, socket weld ends and welding groove types are possible, but only within the dimensions A_{max.} and B_{min.}.

Installation instructions

i Non-return valves must always be installed in the line so as to ensure that the fluid enters the valve beneath the valve disc and flows out above the valve disc.

5) Vertical clearance for removal



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