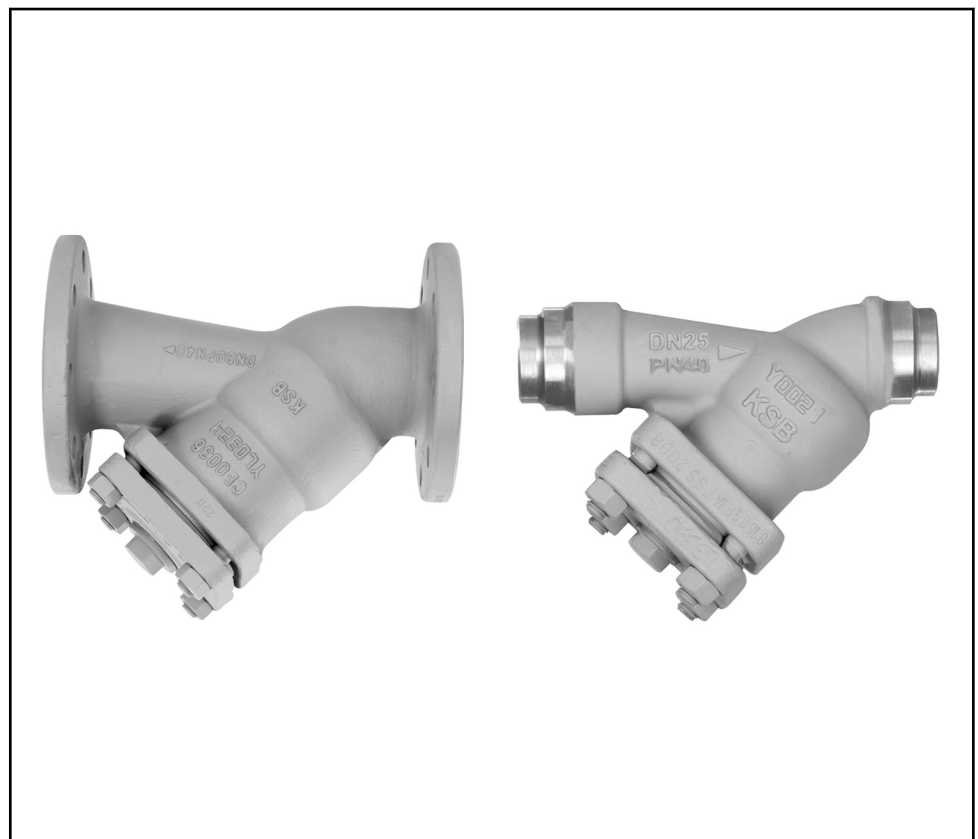


Strainer

NORI 40 FSL/FSS

PN 25/40
DN 15-300
Drain Plug
Flanged/Butt Weld Ends

Type Series Booklet



Legal information/Copyright

Type Series Booklet NORI 40 FSL/FSS

KSB Aktiengesellschaft Pegnitz

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Check Valves and Strainers

Strainers

NORI 40 FSL/FSS



Main applications

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

Fluids handled

- Thermal oil
- Water
- Steam
- Gas
- Other non-aggressive fluids
- Other fluids on request.

Operating data

Operating properties

Characteristic	Value
Nominal pressure	PN 25/40
Nominal size	DN 15-300
Max. permissible pressure	40 bar
Max. permissible temperature	450 °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

Design details

Design

- Y-pattern strainer
- Strainer insert made of stainless steel
- Additional supporting cage for size DN 125 and above
- Strainer insert accurately guided in cover and body
- Fully confined cover gasket
- Drain plug
- Materials free from non-ferrous metals
- Exterior coating: high-temperature resistant paint (grey aluminium)
- 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.

Variants

- Fine-mesh insert
- Coarse strainer insert, mesh size 2.0 mm (DN 15-100)
- Magnetic inserts (max. 300 °C)
- Studs and nuts of A4-70 (low-temperature steel)
- Other flange designs
- Certification to customer specification

Product benefits

- Reliable sealing: cover gasket fully confined to prevent creep.
- Long service life due to strainer insert made of stainless steel.
- Time and cost saving replacement of strainer insert without removing the body insulation by using the studs as centering aids.
- Standard drain plug for easy inspection and drainage of strainer, particularly of large-diameter strainers.

Related documents

- NORI 40 globe valves with gland packing and rotating stem, type ZXL/ZXS, see type series booklet 7621.1.
- NORI 40 globe valves with gland packing and non-rotating stem, type ZXLf/ZXSf, see type series booklet 7622.1.

- NORI 40 non-return valves, type RXL/RXS, see type series booklet 7673.1.
- NORI 40 bellows-type globe valves, type ZXLB/ZXSB, ZXLBV/ZXSBV, ZYLB/ZYSB, see type series booklet 7165.1, 7168.1 and 7160.1.
- Operating manual 0570.82

3. Nominal size
4. Operating pressure
5. Differential pressure
6. Operating temperature
7. Fluid handled
8. Pipe connection
9. Variants
10. Number of type series booklet

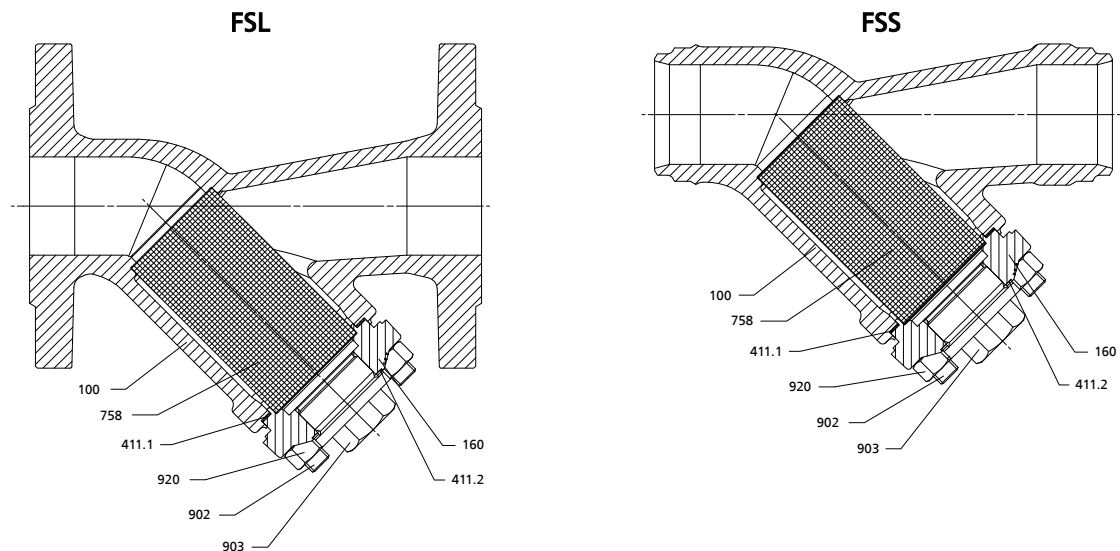
On all enquiries/orders please specify

1. Type
2. Nominal pressure

Pressure/temperature ratings

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

Nominal pressure	Material	RT ²⁾	100	150	200	250	300	350	400	450
25	GP 240 GH+N	25,0	23,2	22,0	20,8	19,0	17,2	16,0	14,8	8,2
40		40,0	37,1	35,2	33,3	30,4	27,6	25,7	23,8	13,1

Materials

Overview of available materials

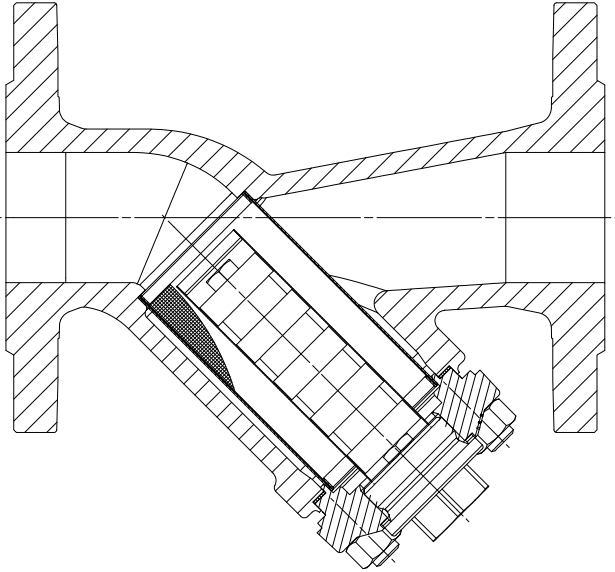
Part No.	Description	Material	Material number	Note
100	Body	GP 240 GH+N	1.0619+N	
160	Cover	GP 240 GH	1.0619	
411.1 ³⁾	Joint ring	CrNi steel/graphite		
758 ³⁾	Strainer insert	Stainless steel		
191 ³⁾	Strainer basket	Stainless steel		From DN 125
902	Stud	21 CrMoV 5-7	1.7709	Olive-chromated
903 ³⁾	Drain plug	A4		
411.2 ³⁾	Joint ring	A4		
920	Hexagon nut	25CrMo4	1.7218	Olive-chromated

1) Operating pressures to DIN 2401 are also permissible.

2) RT: room temperature (-10 °C to +50 °C)

3) Recommended spare parts

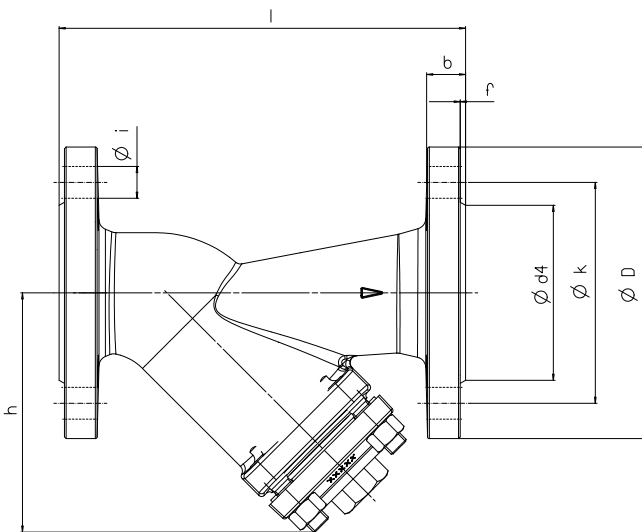
Variants



Magnetic insert

Dimensions

Dimensions of NORI 40 FSL



Dimensions in mm

PN	DN	l	Ø D	Ø k	No. of bolt holes z	Ø i	Ø d ₄ x f	b	h1	[kg]
40	15	130	95	65	4	14	45 x 2	16	88	3,0
	20	150	105	75	4	14	58 x 2	18	87	3,5
	25	160	115	85	4	14	68 x 2	18	100	4,4
	32	180	140	100	4	18	78 x 2	18	101	5,8
	40	200	150	110	4	18	88 x 2	18	134	8,4
	50	230	165	125	4	18	102 x 2	20	135	11,2
	65	290	185	145	8	18	122 x 2	22	191	19,4
	80	310	200	160	8	18	138 x 2	24	195	21,6
	100	350	235	190	8	22	162 x 2	24	224	32,4

PN	DN	l	Ø D	Ø k	No. of bolt holes z	Ø i	Ø d ₄ x f	b	h1	[kg]
25	125	400	270	220	8	26	188 x 2	26	268	48,2
	150	480	300	250	8	26	218 x 2	28	309	70,0
	200	600	360	310	12	26	278 x 2	30	380	120,6
	250	730	425	370	12	30	335 x 2	32	445	184,9
	300	850	485	430	16	30	395 x 2	34	511	269,0

Dimensions in mm

PN	DN	Standard mesh				Fine mesh			
		KV [m³/h]	Zeta value	Mesh width	Wire diameter	KV [m³/h]	Zeta value	Mesh width	Wire diameter
40	15	6,6	1,8	1,25	0,63	5,4	2,7	0,28	0,22
	20	12,0	1,7	1,25	0,63	10,3	2,4	0,28	0,22
	25	18,7	1,8	1,25	0,63	15,0	2,7	0,28	0,22
	32	28,7	2,0	1,25	0,63	20,0	4,1	0,28	0,22
	40	43,1	2,2	1,25	0,63	33,4	3,6	0,28	0,22
	50	75,2	1,7	1,25	0,63	57,3	3,0	0,28	0,22
	65	121,4	1,9	1,25	0,63	82,3	4,1	0,28	0,22
	80	186,6	1,8	1,25	0,63	145,4	3,0	0,28	0,22
	100	291,0	1,9	1,25	0,63	213,4	3,4	0,28	0,22
	125	371,4	2,8	2,0	1,0	311,1	4,0	0,28	0,22
	150	545,8	2,7	2,0	1,0	475,2	3,5	0,28	0,22
25	200	834,8	3,6	2,0	1,0	590,3	7,2	0,28	0,22
	250	1304,4	3,6	2,0	1,0	903,7	7,5	0,28	0,22
	300	1878,3	3,6	2,0	1,0	1301,3	7,5	0,28	0,22

Mating dimensions - Standards

Face-to-face EN 558-1/1, ISO 5752/1

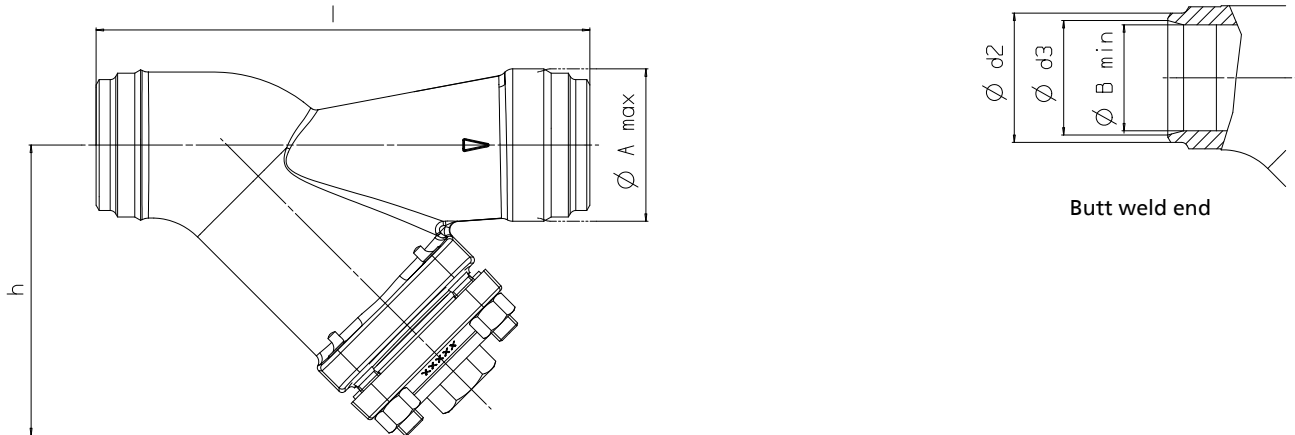
lengths:

Flanges: Mating dimensions to DIN EN 1092-1, ISO 7005

Flange facing: Type B

Other flange designs

- E.g. groove (type D), tongue (type C), recess (type F), spigot (type E) to EN 1092-1 at both ends
- Other flange designs on request

Dimensions of NORI 40 FSS


Dimensions in mm

PN	DN	l	Butt weld ends, unmachined		Butt weld ends to DIN EN 12627			h ₁	[kg]
			Ø A _{max.}	Ø B _{min.}	Ø d ₂	Ø d ₃	Associated pipe dimensions		
40	15	130	31,0	15,0	22,0	17,0	21,3 x 2,0	88	1,6
	20	130	38,0	20,0	28,0	22,0	26,9 x 2,3	87	1,8
	25	130	44,0	25,0	34,0	28,5	33,7 x 2,6	100	2,2
	32	160	51,0	32,0	43,0	37,0	42,4 x 2,6	101	2,5
	40	180	61,0	40,0	49,0	43,0	48,3 x 2,6	134	4,7
	50	210	71,0	50,0	61,0	54,0	60,3 x 3,2	135	5,6
	65	290	88,0	65,0	77,0	69,0	76,1 x 3,6	191	12,2
	80	310	104,0	80,0	90,0	82,0	88,9 x 4,0	195	13,6
	100	350	131,0	100,0	115,0	104,0	114,3 x 5,0	224	21,8
	125	400	155,0	125,0	142,0	130,5	139,7 x 4,5	268	33,4
25	150	480	184,0	150,0	170,0	156,5	168,3 x 5,6	309	50,4
	200	600	249,0	200,0	222,0	204,5	219,1 x 7,1	380	94,5
	250	730	305,0	250,0	276,0	256,5	273,0 x 8,0	445	148,9
	300	850	356,0	300,0	325,0	306,5	323,9 x 8,8	511	221,6

Dimensions in mm

PN	DN	Standard mesh				Fine mesh			
		KV [m³/h]	Zeta value	Mesh width	Wire diameter	KV [m³/h]	Zeta value	Mesh width	Wire diameter
40	15	6,6	1,8	1,25	0,63	5,4	2,7	0,28	0,22
	20	12,0	1,7	1,25	0,63	10,3	2,4	0,28	0,22
	25	18,7	1,8	1,25	0,63	15,0	2,7	0,28	0,22
	32	28,7	2,0	1,25	0,63	20,0	4,1	0,28	0,22
	40	43,1	2,2	1,25	0,63	33,4	3,6	0,28	0,22
	50	75,2	1,7	1,25	0,63	57,3	3,0	0,28	0,22
	65	121,4	1,9	1,25	0,63	82,3	4,1	0,28	0,22
	80	186,6	1,8	1,25	0,63	145,4	3,0	0,28	0,22
	100	291,0	1,9	1,25	0,63	213,4	3,4	0,28	0,22
	125	371,4	2,8	2,0	1,0	311,1	4,0	0,28	0,22
25	150	545,8	2,7	2,0	1,0	475,2	3,5	0,28	0,22
	200	834,8	3,6	2,0	1,0	590,3	7,2	0,28	0,22
	250	1304,4	3,6	2,0	1,0	903,7	7,5	0,28	0,22
	300	1878,3	3,6	2,0	1,0	1301,3	7,5	0,28	0,22

Mating dimensions - Standards

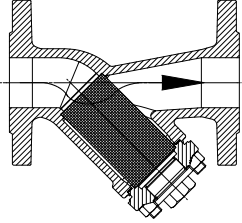
Face-to-face lengths: EN 12982/1

Butt weld ends: DIN EN 12627 Fig. 2

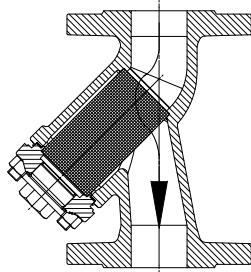
Installation instructions

i The flow direction must correspond to the arrow indicated on the valve body.

i In both horizontal and vertical pipes, we recommend to install the strainer with the strainer insert hanging downwards to facilitate cleaning.



Horizontal installation



Vertical installation



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