Strainer

ECOLINE FYF 800

Type Series Booklet

KSB

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Type Series Booklet ECOLINE FYF 800

Contents

Check Valves and Strainers

Strainers to ANSI/ASME

ECOLINE FYF 800

Main applications

- Boiler feed applications
- Fossil-fuelled power stations
- Petrochemical industry
- Pipelines and tank farms
- Refinery
- Process engineering

Fluids handled

- Steam
- Fluids containing gas
- Gas
- High-temperature hot water
- Fluids containing mineral oils
- Oil
- Boiler feed water

Operating data

Operating properties

Characteristic	Value
Nominal pressure	Class 800
Nominal size [inch]	NPS ½ - 2
Max. permissible pressure [bar]	141
Max. permissible pressure [psi]	2000
Min. permissible temperature [°C]	≥ 0
Min. permissible temperature [°F]	≥ 32
Max. permissible temperature [°C]	≤ +816
Max. permissible temperature [°F]	≤ +1500

Temperatures < 0 °C on request

Selection as per pressure/temperature ratings (⇨ Page 5)

Valve body materials

Overview of available materials

Material	Temperature limit
ASTM A 105	≤ 427 °C / 800 °F
ASTM A 182 F304	≤ 816 °C / 1500 °F
ASTM A 182 F316	≤ 816 °C / 1500 °F

Other materials on request.

Design details

Design

- Strainer to ASME B16.34
- Tested to API 598
- Y-pattern strainer
- Body made of forged steel
- Bolted cover
- Reduced bore
- Outside confined cover gasket
- Screen with mesh width No. 20 as standard
- Cylindrical screen made of stainless steel
- Cover equipped with screw plug

Variants

- PTFE gasket
- Other mesh widths on request
- Other screen materials on request
- NACE standard

Product benefits

- Foreign particles slide smoothly down to the bottom of the screen, as the screen's inside surfaces are fine-machined to a smooth finish. Longer cleaning intervals and reduced maintenance costs.
- Cost-efficient due to Y-pattern body with hydraulically optimised flow path. Higher flow rates and low pressure loss.
- Range of mesh widths and screen materials available, for versatile applications.

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Product information

Product information as per Regulation No. 1907/2006 (REACH)

For information as per chemicals Regulation (EC) No. 1907/2006 (REACH), see http://www.ksb.com/reach.

Product information as per Directive 2014/34/EU (ATEX)

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 2014/34/EU.

Product information as per Pressure Equipment Directive 2014/68/EU (PED)

The valves satisfy the safety requirements of Annex I of the European Pressure Equipment Directive 2014/68/EU (PED) for fluids in Groups 1 and 2.

Related documents

Information/documents

Document	Reference number
Operating manual	0570.86

Purchase order specifications

Please specify the following information in all enquiries or purchase orders:

1. Type
2. Class
3. Nominal size
4. Design pressure
5. Design temperature
6. Differential pressure
7. Fluid handled
8. Material
9. Trim material (API trim number)
10. Line connection
11. Variants
12. Reference number

Pressure/temperature ratings

Permissible operating pressure [bar] (to ASME B16.34)

Class	Material	[°C]																								
		0 to 38	93	149	204	260	316	343	371	399	427	454	482	510	538	566	593	621	649	677	704	732	760	788	816
800	A 105	136,0	124,8	120,5	116,4	110,9	104,5	101,1	97,4	93,2	75,7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
800	A 182 F304 [1]	132,4	110,3	98,9	91,4	85,5	81,2	79,4	77,6	76,0	74,5	72,9	71,5	70,2	65,3	59,8	47,2	37,7	30,3	24,5	20,8	17,1	13,8	10,7	7,7
800	A 182 F316 [1]	132,4	114,0	102,9	94,3	87,9	82,9	81,2	80,0	78,5	77,6	76,9	76,3	71,2	66,7	66,2	56,1	43,6	34,0	27,0	21,5	17,7	13,8	10,7	7,7

Permissible operating pressure [psi] (to ASME B16.34)

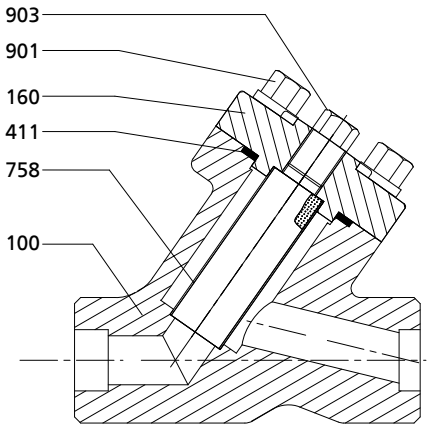
Class	Material	[°F]																							
		32 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
800	A 105	1973	1810	1747	1688	1608	1515	1467	1413	1352	1098	-	-	-	-	-	-	-	-	-	-	-	-	-	-
800	A 182 F304 [1]	1920	1600	1435	1325	1240	1178	1152	1125	1102	1080	1057	1037	1018	947	867	685	547	440	355	302	248	200	155	112
800	A 182 F316 [1]	1920	1653	1493	1368	1275	1203	1178	1160	1138	1125	1115	1107	1032	968	960	813	632	493	392	312	257	200	155	112

Test pressure

Test	Test medium	Class 800	
		[bar]	[psi]
Shell	Water	205,1	2975

1) At temperatures over 538 °C (1000 °F), use only when carbon content is 0.04 % or higher.

Materials



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Parts list

Part No.	Description	Material		
		A 105 Trim 2	A 182 F304 Trim 2	A 182 F316 Trim 10
903	Drain plug	A 105N	A 182 F304	A 182 F316
160	Cover	A 105N	A 182 F304	A 182 F316
411	Joint ring	SS 316 + graphite	SS 316 + graphite	SS 316 + graphite
758	Screen	AISI 304	AISI 304	AISI 316
100	Body	A 105N	A 182 F304	A 182 F316
901	Bolt	A 193-B7	A 193-B8	A 193-B8

Dimensions and weights

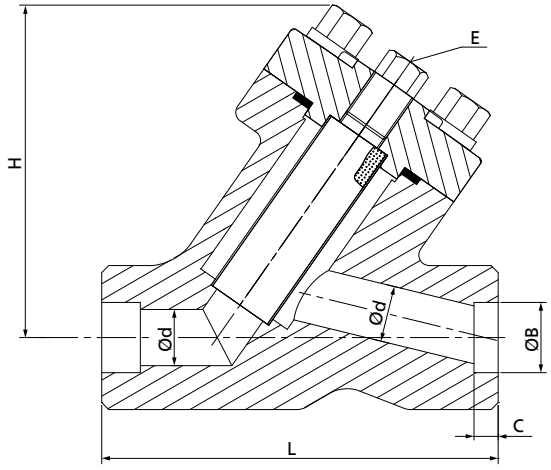

Fig. 1: Sectional drawing
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Dimensions and weights

Class	NPS	L	C	ØB	H	E	Ød	Mesh width	[kg]
	[inch]	[mm]	[mm]	[mm]	[mm]	[inch-NPT]	[mm]	[mm]	
800	½	94	10	21,8	92	¼-18	10,0	0,42	1,2
	¾	98	13	27,2	92	¼-18	13,0	0,42	1,4
	1	120	13	33,9	114	¼-18	17,5	0,42	2,5
	1 ¼	140	13	42,7	137	¼-18	23,0	0,42	3,7
	1 ½	140	13	48,8	137	¼-18	28,5	0,42	3,9
	2	170	16	61,2	143	1'-11,5	36,5	0,42	6,6

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Mating dimensions as per standard

Face-to-face lengths:	See table
Threaded ends:	ASME B1.20.1
Socket weld ends:	ASME B16.11

Installation information

The valve bodies are marked with an arrow indicating the flow direction.

Y-type strainers can be installed in horizontal or vertical pipes. The fluid must always enter through the screen inlet. Flow through Y-type strainers installed in vertical pipes must always be downwards.

7361.19/04-EN

15/10/2019

7361.19/04-EN

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