

Technical Manual

Register 11 CONTENTS - ASF

Contents

Technical Data ASF (DIN) 2

Technical Data ASF (ANSI) 3

Material specification ASF 4

Dimensions ASF (DIN) 5

Dimensions ASF (ANSI) 6

Spare Parts (item n°) - ASF 7

Assembly Instructions ASF 8

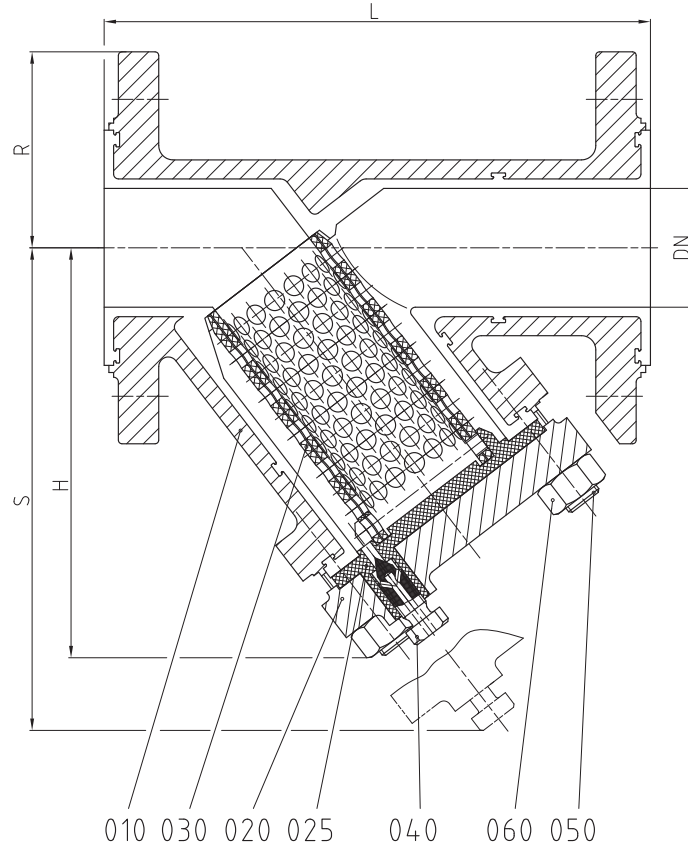
Disassembly Instructions ASF 8

ASF - recommended tightening torques 9*

ASF - Kv and Cv - Data (DIN EN 60534-2-3) 9

General Operating and Maintenance Instructions for atomac strainer ASF 10

Technical Data ASF (DIN)

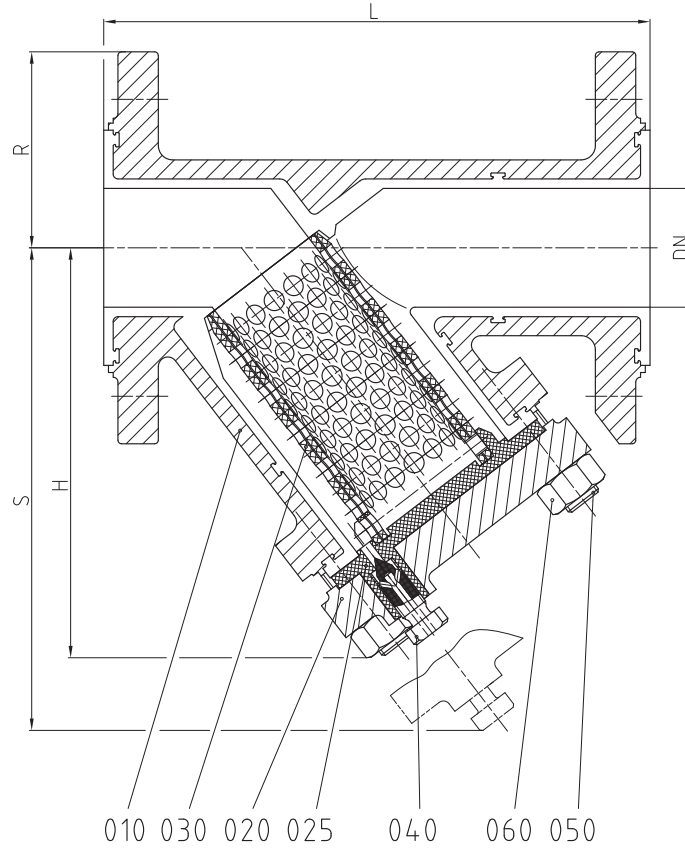


Face-to-Face Dimensions DIN EN 558 (Basic series 1)
 Flange Connections DIN EN 1092-2 PN 16

DN / DIN		L	H	S	R	weight	
025	mm	160	125	190	57,5	kg	4,8
	inch	6,3	4,92	7,48	2,26	lbs	10,6
040	mm	200	160	255	75	kg	9,1
	inch	7,87	6,3	10,04	2,95	lbs	20,1
050	mm	230	165	290	82,5	kg	12,2
	inch	9,06	6,5	11,42	3,25	lbs	26,8
080	mm	310	280	460	100	kg	27,0
	inch	12,2	11,02	18,11	3,94	lbs	59,5
100	mm	350	305	490	110	kg	34,2
	inch	13,78	12,01	19,29	4,33	lbs	75,3
150*	mm	470	410	550	139,7	kg	92,0
	inch	18,5	16,14	21,65	5,5	lbs	202,6
200*	mm	597	595	1030	171,5	kg	200,0
	inch	23,5	23,43	40,55	6,75	lbs	440,8

* Face-to-Face dimensions acc. to ASME B 16.10

Technical Data ASF (ANSI)



Face-to-Face Dimensions
 Flange Connections

ASME B 16.10
 ASME B 16.5 Cass 150,
 Min. Flange thickness acc.
 to ASME B 16.5 Cass 150,
 Table 9 (Flanged Fittings)

DN / ANSI		L	H	S	R	weight	
1"	mm	165	125	190	54	kg	4,9
	inch	6,5	4,92	7,48	2,13	lbs	10,8
1½"	mm	203	160	255	63,5	kg	8,7
	inch	8	6,3	10,04	2,5	lbs	19,2
2"	mm	228,6	165	290	76,2	kg	12,4
	inch	9	6,5	11,42	3	lbs	27,4
3"	mm	317,5	280	460	95,3	kg	28,0
	inch	12,5	11,02	18,11	3,75	lbs	61,7
4"	mm	368	305	490	114,3	kg	37,6
	inch	14,5	12,01	19,29	4,5	lbs	82,8
6"	mm	470	410	550	139,7	kg	92,0
	inch	18,5	16,14	21,65	5,5	lbs	202,6
8"	mm	597	595	1030	171,5	kg	200,0
	inch	23,5	23,43	40,55	6,75	lbs	440,8

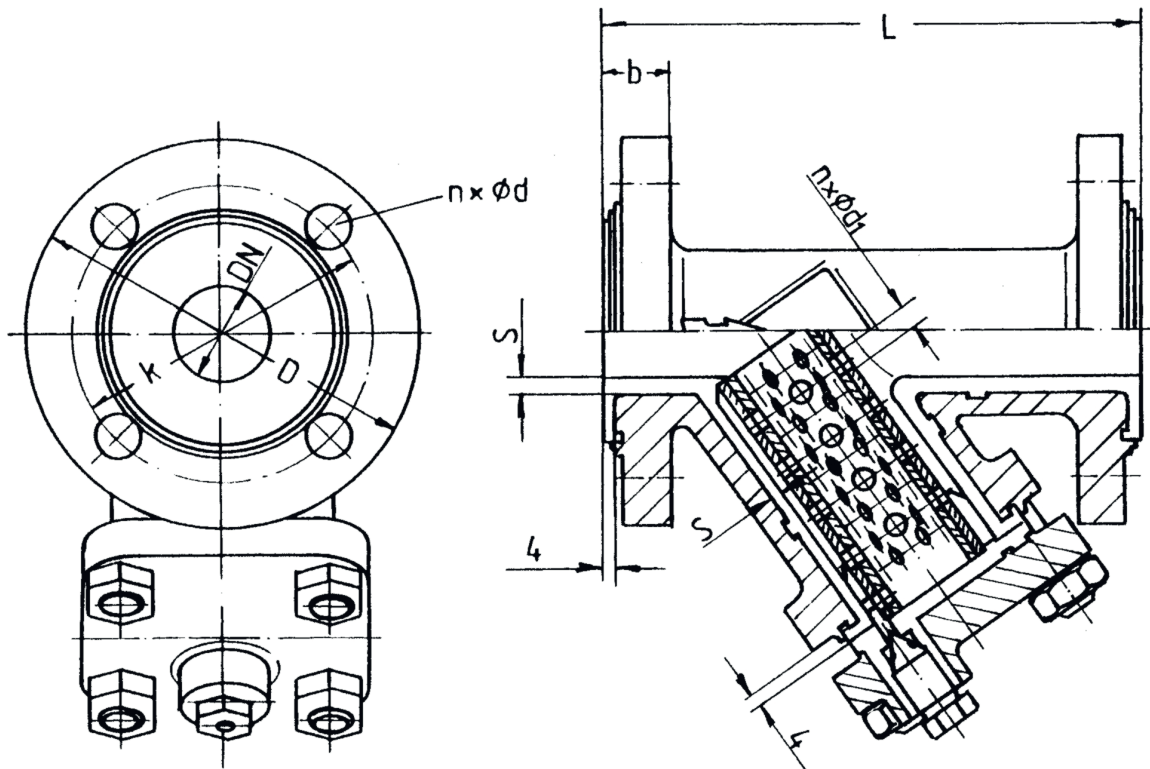
Technical Manual

Material specification ASF

No.	Designation	Pieces	Material	Material-No. / DIN	ASTM / AISI
010	body	1	ductile iron / PFA	EN-JS1049 (GGG-40.3) / DIN EN 1563	A 395
020	flange				
	DN025 - DN150, DN1"- DN6"	1	ductile iron	EN-JS1049 (GGG-40.3) / DIN EN 1563	A 395
	DN200, DN8"	1	ductile iron / PFA	EN-JS1049 (GGG-40.3) / DIN EN 1563	A 395
025	drain cover				
	DN025 - DN150, DN1"- DN6"	1	PTFE		
030	filter	2	PTFE / ETFE-monofilamented filter screen*		
040	drain bolt	1	PTFE		
050	stud bolt	1 set	Stainless steel	1.4301 / DIN EN 10088-3	A 193 B8
060	hexagon nut	1 set	Stainless steel	1.4301 / DIN EN 10088-3	A 194 8

* The ETFE filter screen used in the ASF as standard is suitable for max. operating conditions of 150°C. For higher operating temperatures consult Flowserve Ahaus GmbH to select alternative material.

Dimensions ASF (DIN)

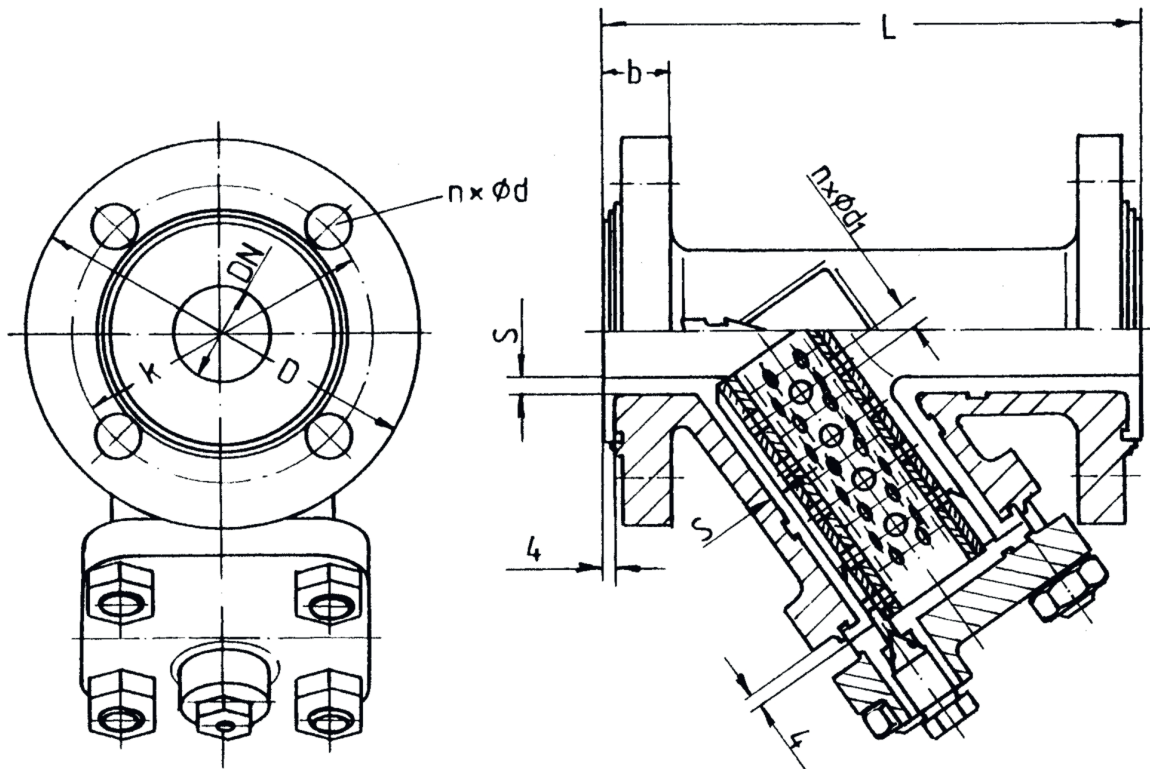


DN / DIN		L	b	D	k	nxØd	nxØd1	S
025	mm	160	19	115	85	4x14	73x6	3,5
	inch	6,3	0,75	4,53	3,35	4x0,55	73x0,24	0,14
040	mm	200	20	150	110	4x18	145x7	4
	inch	7,87	0,77	5,91	4,33	4x0,71	145x0,28	0,16
050	mm	230	23	165	125	4x18	151x8,5	4
	inch	9,06	0,91	6,5	4,92	4x0,71	151x0,33	0,16
080	mm	310	25	200	160	8x18	361x9	5
	inch	12,2	0,98	7,87	6,3	8x0,71	361x0,35	0,2
100	mm	350	25	220	180	8x18	381x11	5,5
	inch	13,78	0,98	8,66	7,09	8x0,71	381x0,43	0,22
150*	mm	470	29	279,4	240	8x22	811x11	6
	inch	18,5	1,14	11	9,45	8x0,87	811x0,43	0,24
200	mm	600	36,5	343	295	8x22	1441x11	6
	inch	23,62	1,44	13,50	11,61	8x0,87	1441x0,43	0,24

* Face-to-Face dimensions acc. to ANSI B 16.10

Filter mesh aperture (µm): **300** 500 1000
 Filter mesh aperture (µin): **12000** 20000 40000

Dimensions ASF (ANSI)



DN / ANSI	L	b	D	k	n x Ød	n x Ød1	S
1"	mm	165	19	107,9	79,2	4x16	73x6
	inch	6,5	0,75	4,25	3,12	4x0,63	73x0,24
1½"	mm	203	21,5	127	98,6	4x16	145x7
	inch	8	0,85	5	4,74	4x0,63	145x0,28
2"	mm	228,6	23	152,4	120,5	4x19	151x8,5
	inch	9	0,91	6	4,74	4x0,75	151x0,33
3"	mm	317,5	25	190,5	152,5	4x19	361x9
	inch	12,5	0,98	7,5	6	4x0,75	361x0,35
4"	mm	368	27	228,5	190,5	8x19	381x11
	inch	14,5	1,06	9	7,5	8x0,75	381x0,43
6"	mm	470	29	279,4	241,5	8x22	811x11
	inch	18,5	1,14	11	9,5	8x0,87	811x0,43
8"	mm	600	37	343	270	8x22	1441x11
	inch	23,5	1,44	13,5	10,62	8x087	1441x0,43

* Face-to-Face Dimensions acc. to DIN EN 558 (Basic series1)

Filter mesh aperture (µm): **300** 500 1000
 Filter mesh aperture (µin): **12000** 20000 40000

Technical Manual

Spare Parts (item n°) - ASF

DIN	ANSI	flange + Drain Cover	plug
025	1"	0014341 + 0014332	0001736
040	1½"	0013852 + 0013985	0001736
050	2"	0014342 + 0014333	0001736
080	3"	0014343 + 0014338	0001736
100	4"	0014344 + 0014340	0001736
150	6"	0016520 + 0016522	0001736
200	8"	0010899	0001736

DIN	ANSI	filter		
		300 µm* 12000 µin*	500 µm 20000 µin	1000 µm 40000 µin
025	1"	0001686	0001691	0001701
040	1½"	0014253	0016264	0016265
050	2"	0001687	0001692	0001702
080	3"	0001688	0001693	0001703
100	4"	0001689	0001694	0001704
150	6"	0001690	0001695	0001710
200	8"	0013859	0016600	0017278

* standard

Assembly Instructions ASF

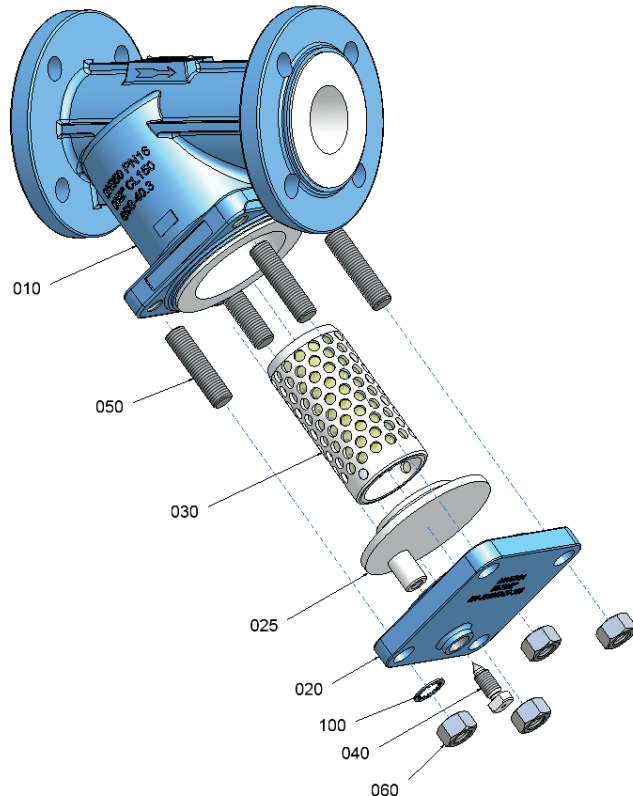
The general installation and maintenance instructions must be observed.

1. Screw in stud bolts **(050)**.
2. Position the drain cover **(025)** into flange **(020)**. Insert filter **(030)** on to drain cover **(025)**. Care must be taken that conical end of filter shows towards the body.
3. Insert unit into body with plug **(040)** and draining hole in filter at lowest point.
4. Screw hexagon nuts **(060)** on to stud bolts **(050)** and tighten by criss-cross method acc. to recommended torques.
5. Insert plug **(040)**.

Disassembly Instructions ASF

For all jobs which are to be carried out on an installed valve, the works safety requirements and the general installation and maintenance instructions for fluorocarbon resin lined atomac valves must be observed.

1. Prior to disassembling, the valve must be drained of all line media, acc. to the above-mentioned instructions. For draining of the strainer remove plug **(040)**.
2. Before removing the filter **(030)**, first remove hexagon nuts **(060)**. Then filter **(030)**, drain cover **(025)** and flange **(020)** can be removed.
3. After having removed the flange connection, put valve on a workbench with a soft cover.



Technical Manual

ASF - recommended tightening torques*

DN	tie rods (050/060)		connection flange	
	Nm	in.lbs	Nm	in.lbs
025	16	142	25	221
1"	17,5	155	15	133
040	36	319	66	584
1½"	36	319	26	230
050	58	513	65	575
2"	62	549	60	531
080	55	487	55	487
3"	59,5	527	100	885
100	62	549	65	575
4"	66,5	589	76	673
150	145	1283	130	1151
6"	153	1354	129	1142
200	160	1416	190	1682
8"	160	1416	195	1726

* max. values

ASF - Kv and Cv - Data (DIN EN 60534-2-3)

300 µm / 12000 µin

DIN	ANSI	K _v m³/h	C _v gal/min
025	1"	7,1	8,3
040	1½"	21,3	24,8
050	2"	31,1	36,1
080	3"	83,8	97,4
100	4"	140,2	163,0
150	6"	306,3	356,0
200	8"	479,0	556,7

1000 µm / 40000 µin

DIN	ANSI	K _v m³/h	C _v gal/min
025	1"	7,9	9,2
040	1½"	24,1	28,0
050	2"	35,4	41,1
080	3"	94,1	109,4
100	4"	153,3	178,2
150	6"	348,9	405,5
200	8"	513,0	596,3



General Operating and Maintenance Instructions for atomac strainer ASF

1. General

- 1.1. **atomac** strainers are used as filters in piping systems in order to filter solid particles out of the process medium.

2. Installation into the Piping System

- 2.1. The piping needs to be carefully cleaned prior to the installation.
2.2. If necessary, the strainer also needs to be cleaned.
2.3. Make sure that the arrow on the valve body points into the flow direction and that the lateral filter neck points downwards when the strainer is installed. The flanges must be parallel to the pipe flanges to avoid any stress in the assembly. Due to the lined raised face no additional sealing is required.
2.4. The flange connection screws are tightened with a torque wrench according to the criss-cross method. Please note the *recommended tightening torques*.

3. First use of new Piping

- 3.1. The first use of a new piping system always presents a special situation. The maximum permissible operating conditions must never be exceeded. For strainers these are: operating pressure, operating temperature, velocity of flow (max. 1.8 m/s) and differential pressure behind the filter insert (max. 1.5 bar). Before the first use the piping system must be cleared of particles that are inside the piping system and result from the construction of the system (welding, sawing, grinding, etc.). In most cases this is done by flushing the piping system with increased pressure. It is advisable to remove the filter inserts during the flushing process (see - *disassembly instructions*). Otherwise one has to make sure that the above mentioned maximum values are not exceeded to make sure that the filter insert is not deformed.
3.2. The filter insert must then be inserted again into the strainer in line with the *assembly instructions*. The valve must be tested for leaks.

4. Maintenance

- 4.1. The filter must be cleaned if it gets dirty.
4.2. Remove the filter in line with the *disassembly instructions*.
4.3. Clean the filter or replace it by a new one if necessary. The cleaning intervals depend on the pollution level of the medium.
4.4. Install the filter in line with the *assembly instructions*.