



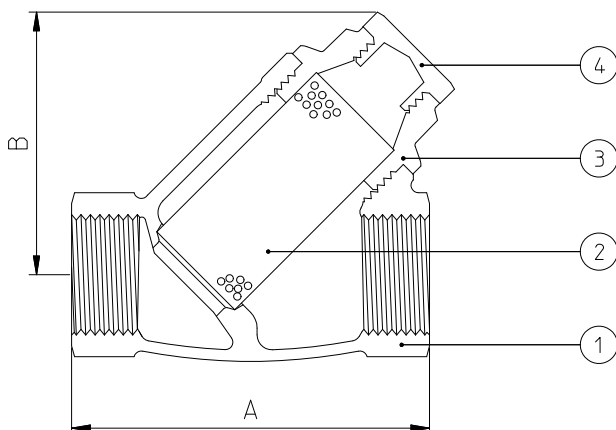
Pipeline Ancillaries

STY085

Y strainer.

Suitable for steam, water, air, gas and most non corrosive chemicals

- **Body & cap: Bronze B-62**
- **Strainer: 304 stainless steel, 0.5mm holes**
- **End Connections: Screwed BSP**
- **Maximum pressure rating 2,100 kpa cold**
- **Sizes: 15mm to 80mm**



HYDROSTATIC TEST	
BODY	450 PSI (31 BAR)

WORKING CONDITIONS		
SATURATED STEAM	150 PSI (10 BAR)	NON SHOCK
WATER, OIL	300 PSI (21 BAR)	

	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
A	50	50	75	80	96	110	130	150	195	230
B	40	40	53	62	73	83	91	108	122	147

4	01	CAP	BRONZE	NBR6314/C83600	B62/C83600
3	01	BONNET	BRONZE	NBR6314/C83600	B62/C83600
2	01	STRAINER	ST. STEEL	NBR5601/304	A276/304
1	01	BODY	BRONZE	NBR6314/C83600	B62/C83600
POS.	QUANT.	DENOMINATION	MATERIAL	ABNT SPECIFICATION	ASTM SPECIFICATION

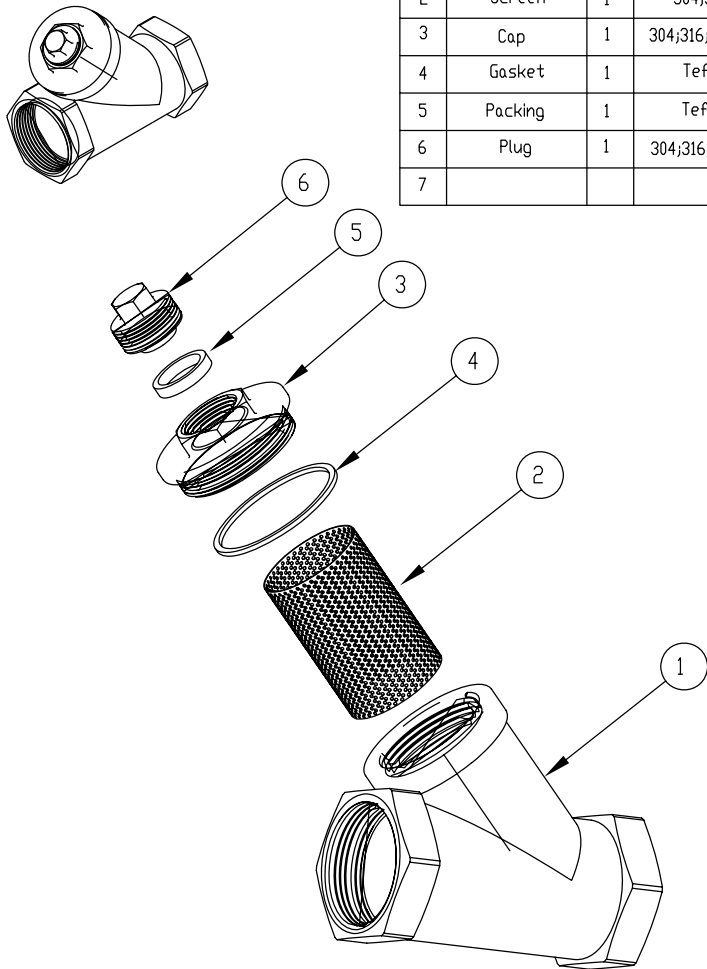
NOTE: THE DIMENSIONS ARE EXPRESSED IN MILLIMETERS.

STYSD60B

Y strainer.

Suitable for steam, water, air, gas and most chemicals

- **Body & cap: 316 stainless steel**
- **Strainer: 316 stainless steel**
- **End Connections: Screwed BSP**
- **Maximum pressure rating 4,135 kpa cold**
- **Sizes: 15mm to 80mm**



No	Part	Q'ty	Material	Note
1	Body	1	304;316;CF8M	
2	Screen	1	304;316;	
3	Cap	1	304;316;CF8M	
4	Gasket	1	Teflon	
5	Packing	1	Teflon	
6	Plug	1	304;316;CF8M	
7				

600 PSI Y-STRAINER DIMENSION

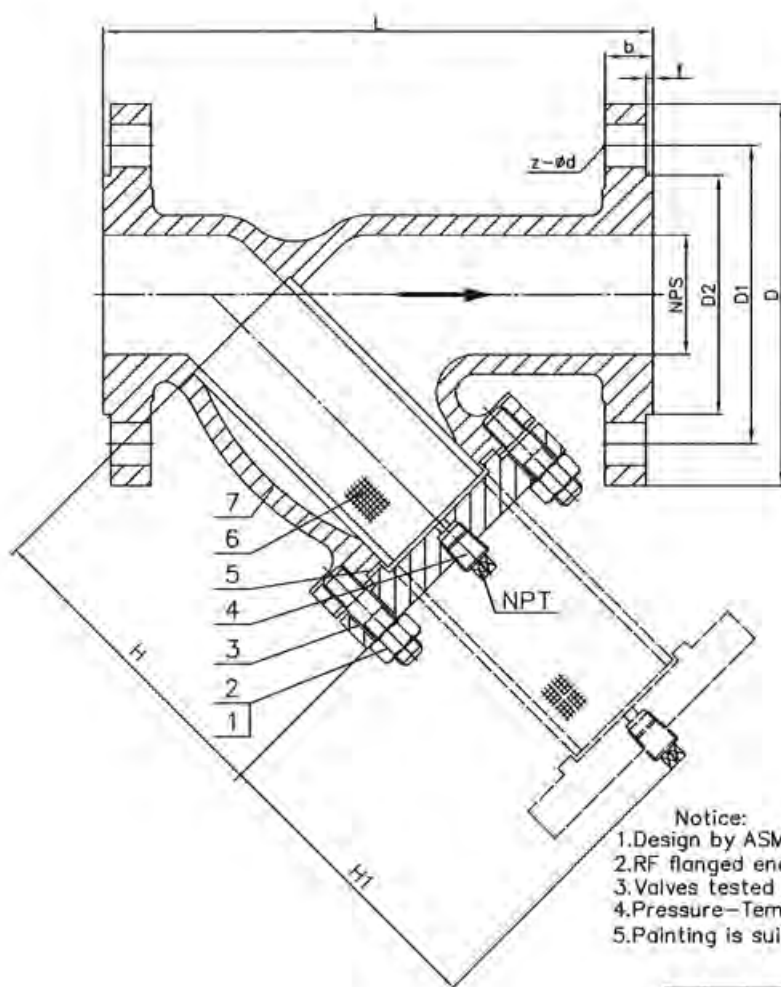
Valve Size	1/4	3/8	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3
L m/m	57.0		61.0	70.0	86.0	100.0	111.0	138.0	170.0	195.0
H m/m	32.0		37.0	41.0	47.0	54.0	62.0	76.0	110.0	130.0
D m/m	10.0		15.0	20.0	25.0	32.0	38.0	51.0	65.0	80.0
Weight/kgs	0.25		0.28	0.4	0.6	0.9	1.15	1.65	3.60	5.00

STYCS15R

Y strainer.

Suitable for steam, water, air, gas and most non corrosive chemicals

- Body & cap: ASTM A216 Gr WCB
- Strainer: 304 stainless steel, 40 mesh
- Gasket: Flexible graphite
- End Connections: Flanged ANSI 150 RF
- Maximum pressure rating 1,964 kpa cold
- Sizes: 15mm to 300mm



Performance Specification			
Class		150	
Test Pressure	Shell test	2.94	MPa
	Seal test	—	
	Back seal Test	—	
	Air Seal Test	—	

Notice:

- 1.Design by ASME B16.34
- 2.RF flanged ends by ASME B16.5
- 3.Valves tested by API 598
- 4.Pressure-Temperature Rating as per ASME B16.34
- 5.Painting is suitable for maximum temperature 200℃

7	Body	ASTM A216-WCB	
6	Filter Screen	SS304(40mesh)	
5	Gasket	FLEXIBLE GRAPHITE/304	
4	Plug Fitting	Carbon Steel	
3	Bonnet	ASTM A216-WCB	
2	Bonnet Bolt	ASTM A193 Gr.B7	
1	Bonnet Bolt Nut	ASTM A194 Gr.2H	
NO	PART NAME	MATERIAL	REMARKS

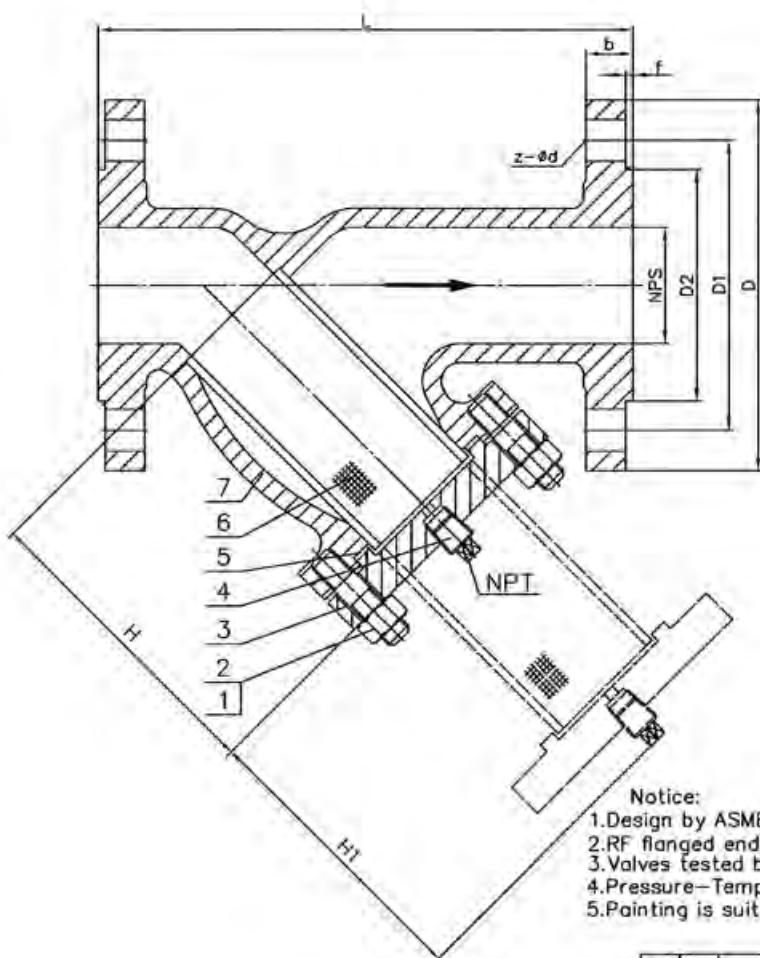
NPS	DN	Typical Dimensions				150Lb Flange Dimensions						
		L	NPT	H	H1	D	D1	D2	b	f	z-ød	
1 1/4	—	190	1/2	93	85	115	88.9	63.5	13.2	2	4-16	
1 1/2	—	200		122	110	125	98.4	73	14.7	2	4-16	
2	—	203	3/4	128	115	150	120.7	92.1	16.3	2	4-19	
2 1/2	—	216		145	130	180	139.7	104.8	17.9	2	4-19	
3	—	241		165	150	190	152.4	127	19.5	2	4-19	
4	—	292		205	190	230	190.5	157.2	24.3	2	8-19	
5	—	355		250	235	255	215.9	185.7	24.3	2	8-22	
6	—	406		280	165	280	241.3	215.9	25.9	2	8-22	
8	—	495		330	310	345	298.5	269.9	29	2	8-22	
10	—	622		390	365	405	362	323.8	30.6	2	12-26	
12	—	699		415	390	485	431.8	381	32.2	2	12-26	

STYCS30R

Y strainer.

Suitable for steam, water, air, gas and most non corrosive chemicals

- Body & cap: ASTM A216 Gr WCB
- Strainer: 304 stainless steel, 40 mesh
- Gasket: Flexible graphite
- End Connections: Flanged ANSI 300 RF
- Maximum pressure rating 5,100 kpa cold
- Sizes: 15mm to 300mm



Performance Specification			
Class		300	
Test Pressure	Shell test	7.67	MPa
	Seal test	—	
	Back seal Test	—	
	Air Seal Test	—	

Notice:

- 1.Design by ASME B16.34
- 2.RF flanged ends by ASME B16.5
- 3.Valves tested by API 598
- 4.Pressure-Temperature Rating as per ASME B16.34
- 5.Painting is suitable for maximum temperature 200 °C

NO	PART NAME	MATERIAL	REMARKS
7	Body	ASTM A216-WCB	
6	Filter Screen	SS304(40mesh)	
5	Gasket	FLEXIBLE GRAPHITE/304	
4	Plug Fitting	Carbon Steel	
3	Bonnet	ASTM A216-WCB	
2	Bonnet Bolt	ASTM A193 Gr.B7	
1	Bonnet Bolt Nut	ASTM A194 Gr.2H	

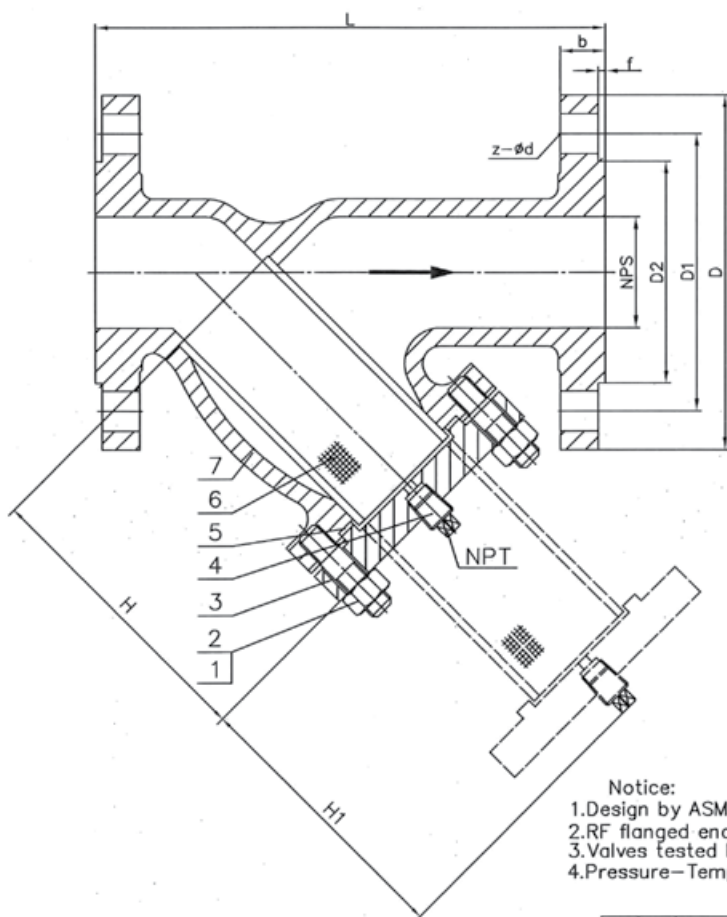
NPS	DN	Typical Dimensions				300Lb Flange Dimensions						
		L	H	H1	D	D1	D2	b	f	z-ød		
1/4	—	180	93	85	135	98.4	63.5	19.5	2	4-19		
1/2	—	200	122	110	155	114.3	73	21.1	2	4-22		
2	—	267	145	130	165	127	92.1	22.7	2	8-19		
2 1/2	—	292	160	150	190	149.2	104.8	25.9	2	8-22		
3	—	318	185	170	210	168.3	127	29	2	8-22		
4	—	356	210	190	255	200	157.2	32.2	2	8-22		
5	—	400	250	235	280	235	185.7	35.4	2	8-22		
6	—	444	285	165	320	269.9	215.9	37	2	12-22		
8	—	559	330	310	380	330.2	289.9	41.7	2	12-26		
10	—	622	395	365	445	387.4	323.8	48.1	2	16-29		
12	—	711	425	380	520	450.8	381	51.3	2	16-32		

STYSS15R

Y strainer.

Suitable for steam, water, air, gas and most chemicals

- Body & cap: ASTM A351 Gr CF8M (316 stainless steel)
- Strainer: 316 stainless steel, 40 mesh
- Gasket: Flexible graphite
- End Connections: Flanged ANSI 150 RF
- Maximum pressure rating 1,964 kpa cold
- Sizes: 15mm to 300mm



Performance Specification			
Class		150	
Test Pressure	Shell test	2.85	MPa
	Seal test	—	
	Back seal Test	—	
	Air Seal Test	—	

Notice:
 1.Design by ASME B16.34
 2.RF flanged ends by ASME B16.5
 3.Valves tested by API 598
 4.Pressure—Temperature Rating as per ASME B16.34

NO	PART NAME	MATERIAL	REMARKS
7	Body	ASTM A351—CF8M	
6	Filter Screen	SS316(40mesh)	
5	Gasket	FLEXIBLE GRAPHITE/316	
4	Plug Fitting	SS316	
3	Bonnet	ASTM A351—CF8M	
2	Bonnet Bolt	ASTM A193 Gr.B8	
1	Bonnet Bolt Nut	ASTM A194 Gr.8	

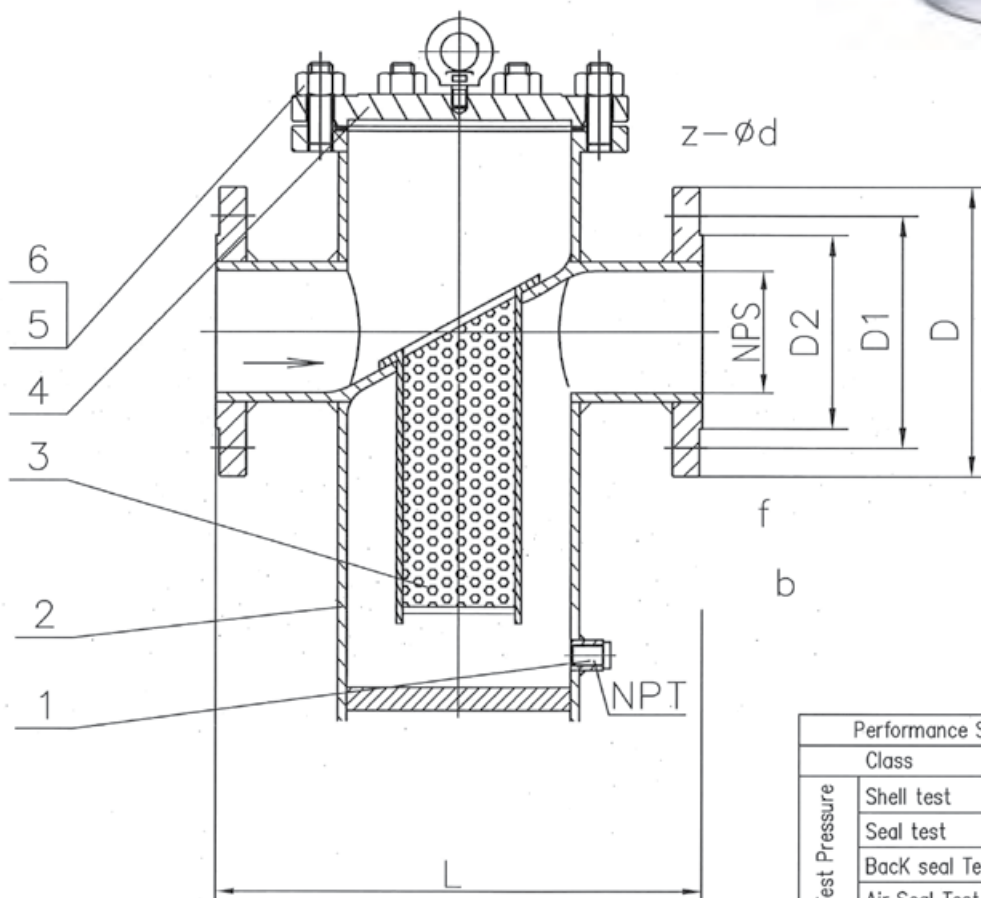
NPS	DN	Typical Dimensions				150Lb Flange Dimensions						
		L	NPT	H	H1	D	D1	D2	b	f	z-φd	
1 1/4	—	180	1/2	93	85	115	88.9	63.5	13.2	2	4-16	
1 1/2	—	200		122	110	125	98.4	73	14.7	2	4-16	
2	—	203	3/4	128	115	150	120.7	92.1	16.3	2	4-19	
2 1/2	—	216		145	130	180	139.7	104.8	17.9	2	4-19	
3	—	241		165	150	190	152.4	127	19.5	2	4-19	
4	—	292		205	190	230	190.5	157.2	24.3	2	8-19	
5	—	355		250	235	255	215.9	185.7	24.3	2	8-22	
6	—	406		280	165	280	241.3	215.9	25.9	2	8-22	
8	—	495		330	310	345	298.5	269.9	29	2	8-22	
10	—	622		390	365	405	362	323.8	30.6	2	12-26	
12	—	699		415	390	485	431.8	381	32.2	2	12-26	

STBCDS15R

Basket strainer.

Suitable for steam, water, air, gas and most non corrosive chemicals

- Body & cap: ASTM A216 Gr WCB
- Strainer: 304 stainless steel, 40 mesh
- Gasket: Flexible graphite
- End Connections: Flanged ANSI 150 RF
- Maximum pressure rating 1,964 kpa cold
- Sizes: 15mm to 300mm



Performance Specification			
Class		150	
Test Pressure	Shell test	3.0	MPa
	Seal test	—	
	Back seal Test	—	
	Air Seal Test	—	

Notice:

- 1.RF flanged ends by ASME B16.5
- 2.Valves tested by API 598
- 3.Pressure–Temperature Rating as per ASME B16.34
- 4.Painting is suitable for maximum temperature 200°C

NO	PART NAME	MATERIAL	REMARKS
6	Bonnet Bolt	ASTM A193 Gr.B7	
5	Bonnet Bolt Nut	ASTM A194 Gr.2H	
4	Bonnet	Carbon Steel	
3	Filter Screen	SS304	
2	Body	ASTM A234-WPB	
1	Plug Fitting	Carbon Steel	

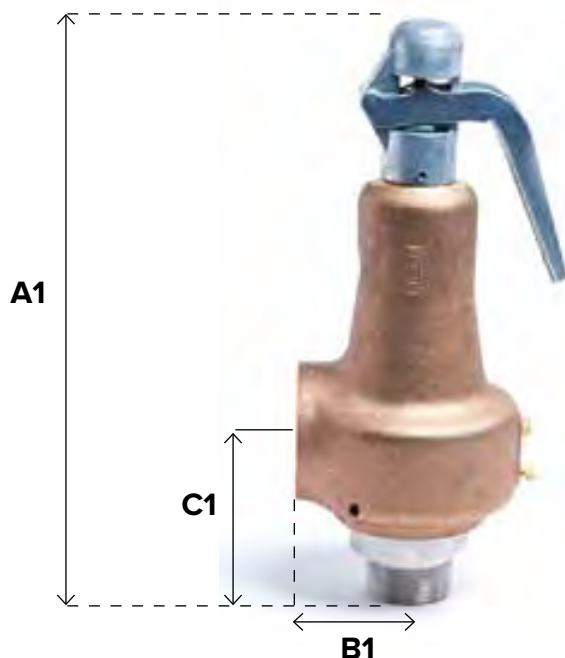
NPS	DN	Typical Dimensions			150Lb Flange Dimensions					
		L	NPT	—	D	D1	D2	b	f	z-ød
2	—	270	1/2	—	150	120.7	92.1	16.3	2	4-19
2 1/2	—	330	1/2	—	180	139.7	104.8	17.9	2	4-19
3	—	340	1/2	—	190	152.4	127	19.5	2	4-19
4	—	430	1/2	—	230	190.5	157.2	24.3	2	8-19
5	—	480	3/4	—	255	215.9	185.7	24.3	2	8-22
6	—	500	3/4	—	280	241.3	215.9	25.9	2	8-22
8	—	560	3/4	—	345	298.5	269.9	29	2	8-22
10	—	660	1	—	405	362	323.8	30.6	2	12-26

SPSS32

Safety Relief Valve.

Suitable for steam, air and gas applications such as down stream of pressure reducing valves to protect plant integrity. ASME Section 1 certified, in-house setting available.

- Body & cap: Bronze B62
- Seat & disc: 316 stainless steel
- Lever: Steel (plated)
- Soft seat available on request
- End Connections: Screwed BSP
- Maximum pressure rating 2,100 kpa cold
- Sizes: 15mm to 50mm



SPSS32 Dimensions (mm)

Inlet	Orifice	Outlet	A1	B1	C1	D	Weight (kg)
15	D	20	166.7	34.9	57.2	34.9	0.91
20	E	25	181	41.3	58.7	34.9	1.13
25	F	32	228.6	47.6	71.4	42.9	1.81
32	G	40	246.1	54	76.2	42.9	3.18
40	H	50	308	65.1	88.9	69.9	6.12
50	J	65	338.1	79.4	95.3	69.9	7.94

SPSS32 Capacity Chart

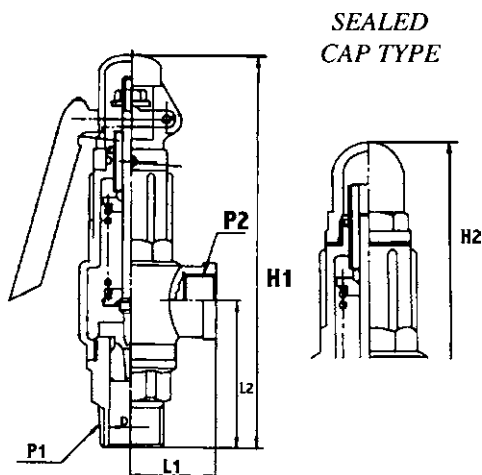
SPSS32 90% of Actual Capacity @ 3% Over Pressure						
Orifice	D	E	F	G	H	J
Valve Size	15 x 20	20 x 25	25 x 32	32 x 40	40 x 50	50 x 65
Set kpa	Flow in kg/hr Saturated Steam					
103	77	137	215	352	550	903
138	89	159	249	408	637	1045
172	102	180	283	463	724	1188
207	113	202	317	519	811	1330
241	126	224	351	574	898	1473
276	138	246	385	629	985	1615
310	150	267	419	685	1071	1757
345	162	289	453	741	1158	1900
379	175	311	487	796	1245	2042
414	186	332	521	852	1332	2185
448	199	354	555	907	1419	2327
483	211	376	590	964	1507	2472
517	224	398	624	1021	1596	2619
552	236	421	660	1078	1686	2766
586	249	443	695	1136	1775	2912
620	261	465	730	1193	1864	3059
655	274	488	765	1250	1954	3205
689	286	510	800	1307	2044	3352
724	299	532	834	1364	2133	3499
758	312	555	869	1421	2222	3654
793	324	577	905	1479	2312	3792
827	337	599	940	1536	2401	3939
862	349	621	975	1593	2490	4086
896	361	644	1010	1650	2580	4232
931	374	666	1044	1707	2669	4379
965	386	688	1079	1765	2759	4526
1000	399	711	1114	1822	2848	4672
1034	412	733	1150	1879	2937	4819
1069	424	756	1185	1936	3027	4966
1103	437	778	1220	1994	3116	5112
1138	449	800	1254	2051	3205	5259
1172	462	822	1289	2108	3295	5405
1206	474	844	1324	2165	3385	5552
1241	487	867	1359	2222	3474	5699
1275	499	889	1395	2279	3563	5846
1310	512	912	1429	2337	3653	5992
1344	524	934	1464	2394	3742	6139
1379	537	956	1499	2451	3831	6286
1413	549	979	1534	2508	3921	6432
1448	562	1001	1569	2566	4010	6579
1482	575	1023	1605	2623	4100	6726
1517	587	1045	1639	2680	4189	6873
1551	600	1068	1674	2737	4278	7019
1586	612	1090	1709	2794	4368	7166
1620	624	1112	1744	2851	4458	7312
1655	637	1135	1779	2908	4547	7459
1689	649	1157	1814	2966	4636	7606
1724	662	1179	1849	3023	4726	7752
1758	675	1202	1884	3080	4815	7899
1792	687	1224	1919	3137	4904	8046
1827	700	1246	1954	3195	4994	8192
1861	712	1268	1989	3252	5083	8339
1896	725	1291	2024	3309	5173	8486
1930	737	1313	2059	3366	5262	8633
1965	750	1336	2094	3423	5351	8779
1999	762	1358	2129	3481	5441	8926
2034	775	1380	2164	3538	5530	9073
2068	787	1402	2199	3595	5620	9218

FGX

Relief Valve.

All stainless steel construction, enclosed cap design, suitable for air and gas and liquid applications, in-house setting available.

- Body & cap: 316 stainless steel
- Seat: 316 stainless steel
- Disc seal: PTFE
- End Connections: Screwed BSP
- Maximum pressure rating 2,000 kpa cold
- Maximum temperature 185 deg C
- Sizes: 15mm to 50mm



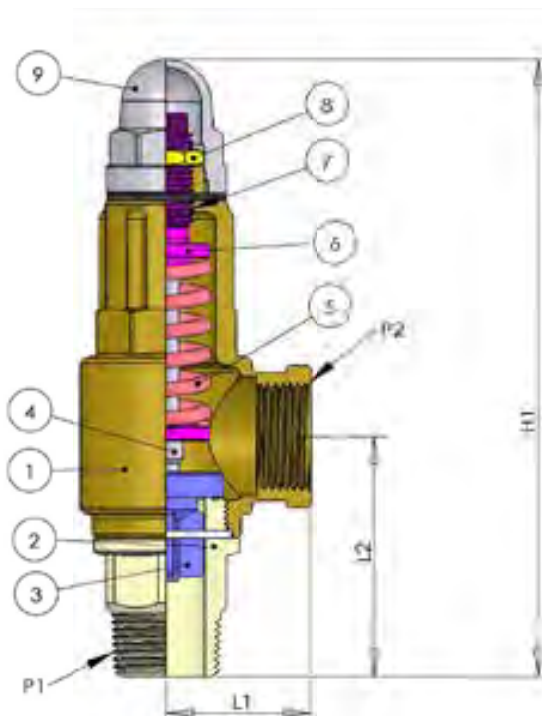
SIZE	P1	D	P2	LIFT	L1	L2	H1	H2	KG	PART NAME	MATERIAL
	BSP		BSP							BODY	A351-CF8M
15	1/2"	21	1"	2.5	40	66	201	180	1.3	SEAT	A351-CF8M
20	3/4"	21	1"	3.2	40	66	201	180	1.3	SPINDLE	A351-F16M
25	1"	21	1"	4.0	40	66	201	183	1.3	RETAINER	A351-CF8M
32	1-1/4"	32	2"	6.5	66	102	286	264	4.9	DISC	A351-CF8M
40	1-1/2"	38	2"	7.3	66	102	286	264	5.0	DISC SEAL	PTFE
50	2"	50	2"	8.0	66	105	289	267	5.3	CAP	A351-CF8M
										SPRING	A351-CF8

FGX Liquid Capacity							
Set Pressure		Litres / Min - Water @ 20 Deg C. 25% Pverpressure					
Kpa	Psi	15mm	20mm	25mm	32mm	40mm	50mm
100	15	21	33	60	97	141	234
200	29	29	46	85	138	199	331
300	44	36	57	104	169	244	405
400	59	42	66	120	195	282	468
500	73	47	74	134	218	315	523
600	87	51	81	147	239	345	573
700	100	55	87	159	258	373	619
800	116	59	93	170	276	398	662
900	130	63	99	180	293	423	702
1000	145	66	105	190	308	445	740
1100	160	70	111	200	323	463	778
1200	175	76	120	215	340	485	815
1300	190	82	129	230	365	512	835

JUR1068

Relief Valve.

- Suitable for water, air and gas, in-house setting available.
- Body & cap: Bronze
- Seat & disc: Bronze
- End Connections: Screwed BSP
- Maximum pressure rating 1,000 kpa cold
- Sizes: 15mm to 50mm



General Material

NO	NAME	MATERIAL	OFF	FLUID SYMBOL
1	VALVE BODY	BRONZE	1	NONCORROSIVE GAS NG
2	VALVE SEAT	BRASS	1	CORROSIVE GAS CG
3	DISC	BRASS	1	STEAM S
4	STEM	BRASS	1	SUPER STEAM SS
5	SPRING	STEEL	1	HOT WATER HW
6	SPRING SEAT	BRASS	1	NONCORROSIVE LIQUID NL
7	ADJUST THREAD	BRASS	1	CORROSIVE LIQUID CL
8	ADJUST NUT	BRASS	1	
9	CAP	BRONZE	1	
WORK PRESSURE (K _a cm ²)		0.1 ~ 200 g		
WORKING TEMP (°C)		-45°C ~ 185°C		
WORKING FLUID		NG CG SS S HW NL CL		

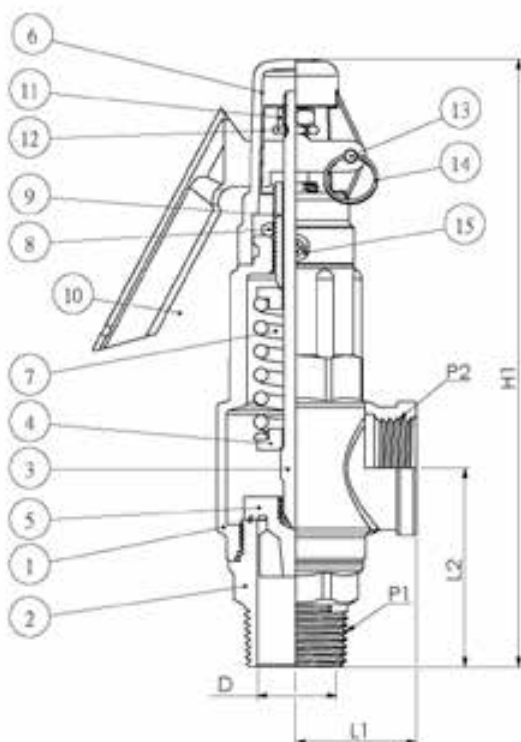
Lift Type Dimensions UNIT : mm

NOMINAL								WEIGHT (KG)
P1	×	DN	×	P2	LIFT	L1	L2	
1/2	×	15	×	1/2	0.52	21.5	49	0.51
3/4	×	20	×	3/4	0.76	35	59	0.65
1	×	25	×	1	1	40	69.5	1.14
1 1/4	×	32	×	1 1/4	1.28	54	84	2.03
1 1/2	×	40	×	1 1/2	1.52	60	94	2.6
2	×	50	×	2	2	65	100	3.64

JUR1069

Safety Relief Valve.

- Suitable for low pressure steam, air and gas, in-house setting available.
- Body & cap: Bronze
- Seat & disc: Bronze
- End Connections: Screwed BSP
- Maximum pressure rating 1,000 kpa cold, 350 kpa steam
- Sizes: 15mm to 50mm



LIFT TYPE SAFETY VALVE

NO	NAME	MATERIAL	QTY	REMARK
1	VALVE BODY	CASTING-BRONZE	1	
2	VALVE SEAT	FORGING-BRASS	1	
3	SPINDEL	BRASS	1	
4	SPRING SEAT	BRASS	2	
5	DISC	FORGING-BRASS	1	
6	CAP	CASTING-BRONZE	1	
7	SPRING	STEEL	1	
8	ADJUST NUT	BRASS	1	
9	ADJUST THREAD-ROD	BRASS	1	
10	HANDLE	STEEL	1	
11	HEXAGON NUT	STEEL	1	
12	STOPPER PIECE	BRASS	1	
13	INSERT PIN	STEEL	1	
14	CLIP	STEEL	1	
15	FIXTURE SCREW	STEEL	1	

LIFT TYPE SERIES DIMENSIONS

UNIT:mm

NOMINAL SIZE	P1	P2	D	L1	L2	H1
P1 X D X P2						
1/2 X 13 X 1/2	1/2	1/2	13	32	52	162
3/4 X 19 X 3/4	3/4	3/4	19	36	58	172
1 X 25 X 1	1	1	25	40	71	204
1-1/4 X 32 X 1-1/4	1-1/4	1-1/4	32	52	83	223
1-1/2 X 38 X 1-1/2	1-1/2	1-1/2	38	58	86	243
2 X 50 X 2	2	2	50	65	103	287

1069					Unit : Kg/h	Steam
Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
D	13	19	25	32	38	50
Area	21.2	45.3	78.5	128.6	181.4	314.0
Pressure	Capacity (Kg/H)					
Kg/cm2	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
10	96	205	355	581	813	1420
2	26	56	96	157	233	384
3	35	74	128	210	305	514
4	43	93	161	263	378	643
5	52	112	193	316	450	773
6	61	130	225	369	523	902
7	70	149	258	422	595	1031
8	78	168	290	475	668	1161
9	87	186	323	528	741	1290
10	96	205	355	581	813	1420
11	105	224	387	634	886	1549
12	113	242	420	687	958	1678
13	122	261	452	740	1031	1808
14	131	280	484	793	1103	1937
15	140	298	517	846	1176	2067
16	148	317	549	899	1248	2196
17	157	336	581	952	1321	2325
18	166	354	614	1005	1394	2455
19	175	373	646	1058	1466	2584
20	183	392	678	1111	1539	2713
21	192	411	711	1164	1611	2843
22	201	429	743	1217	1684	2972
23	210	448	775	1270	1756	3102
24	218	467	808	1323	1829	3231
25	227	485	840	1376	1902	3360
26	236	504	872	1429	1974	3490
27	245	523	905	1482	2047	3619
28	253	541	937	1535	2119	3749
29	262	560	970	1588	2192	3878
30	271	579	1002	1641	2264	4007

1069					Unit : Kg/h	Air
Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
D	13	19	25	32	38	50
Area	21.2	45.3	78.5	128.6	181.4	314.0
Pressure	Capacity (Kg/H)					
Kg/cm2	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
17.6	466	1282	2220	3637	5129	8880
10.6	290	37094	64221	105220	148377	256885
3	5988	12791	22145	36283	51164	88581
4	7485	15989	27682	45354	63956	110726
5	8982	19187	33218	54424	76747	132872
6	10479	22384	38754	63495	89538	155017
7	11976	25582	44291	72566	102329	177162
8	13473	28780	49827	81636	115120	199308
9	14970	31978	55363	90707	127911	221453
10	16467	35176	60900	99778	140702	243598
11	17964	38373	66436	108849	153493	265744
12	19461	41571	71972	117919	166285	287889
13	20958	44769	77509	126990	179076	310034
14	22455	47967	83045	136061	191867	332179
15	23952	51164	88581	145131	204658	354325
16	25449	54362	94117	154202	217449	376470
17	26946	57560	99654	163273	230240	398615
18	28443	60758	105190	172344	243031	420761
19	29940	63956	110726	181414	255822	442906
20	31437	67153	116263	190485	268614	465051
21	32934	70351	121799	199556	281405	487196
22	34431	73549	127335	208626	294196	509342
23	35929	76747	132872	217697	306987	531487
24	37426	79945	138408	226768	319778	553632
25	38923	83142	143944	235838	332569	575778
26	40420	86340	149481	244909	345360	597923
27	41917	89538	155017	253980	358151	620068
28	43414	92736	160553	263051	370942	642213
29	44911	95933	166090	272121	383734	664359
30	46408	99131	171626	281192	396525	686504

1069					Unit : Kg/h	Water
Size	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
D	13	19	25	32	38	50
Area	21.2	45.3	78.5	128.6	181.4	314.0
Pressure	Capacity (Kg/H)					
Kg/cm2	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
44.88	4326	9240	15998	26210	36961	63990
2	913	1951	3377	5533	7802	13508
3	1118	2389	4136	6777	9556	16544
4	1291	2759	4776	7825	11034	19104
5	1444	3084	5340	8749	12337	21359
6	1582	3379	5849	9584	13514	23397
7	1708	3649	6318	10351	14597	25272
8	1826	3901	6754	11066	15605	27017
9	1937	4138	7164	11737	16551	28656
10	2042	4362	7551	12372	17447	30206
11	2142	4575	7920	12976	18298	31680
12	2237	4778	8272	13553	19112	33089
13	2328	4973	8610	14107	19892	34440
14	2416	5161	8935	14639	20643	35740
15	2501	5342	9249	15153	21368	36994
16	2583	5517	9552	15650	22069	38208
17	2662	5687	9846	16131	22748	39383
18	2740	5852	10131	16599	23407	40525
19	2815	6012	10409	17054	24049	41636
20	2888	6168	10679	17497	24674	42717
21	2959	6321	10943	17929	25283	43772
22	3029	6469	11201	18351	25878	44802
23	3097	6615	11452	18763	26459	45809
24	3163	6757	11699	19167	27028	46794
25	3229	6896	11940	19562	27586	47759
26	3292	7033	12176	19950	28132	48705
27	3355	7167	12408	20330	28668	49633
28	3417	7299	12636	20703	29194	50544
29	3477	7428	12860	21069	29711	51438
30	3537	7555	13079	21429	30219	52318

DOUBLE WINDOW SIGHT GLASS

DW16SS (Stainless Steel)

DESCRIPTION

For monitoring the right operation of a steam trap to avoid leakage of live steam and consequently big energy losses, a sight glass is recommended to be installed downstream the steam trap.

Double window DW sight glass, has been designed for this particular application.

Connections are female screwed or flanged.



OPTIONS: Different glasses and design on request.

USE: Condensate pipes downstream steam traps.

AVAILABLE MODELS:

DW16SS - double window borosilicate glass.

SIZES:

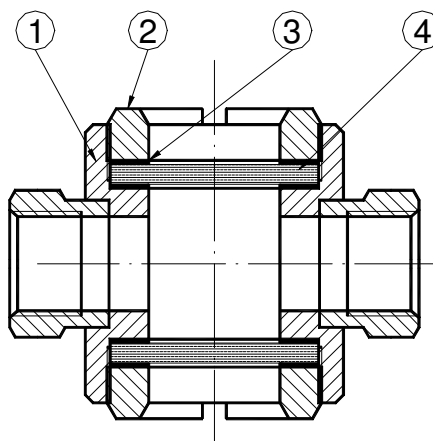
1/2" to DN 1" - DN15 to DN25.
1 1/2" and 2" on request.

CONNECTIONS:

Female screwed ISO 7/1Rp(BS21).
NPT (ANSI B1.20.1).
Flanged EN 1092-1 or ANSI (welded flanges).
Special flanges upon request.

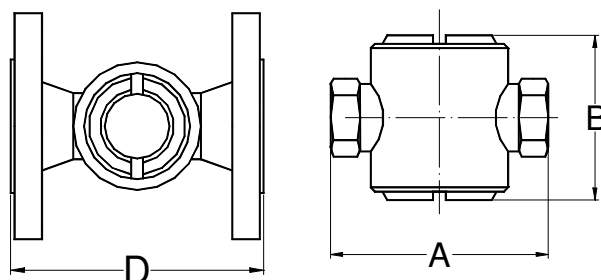
INSTALLATION:

Horizontal or vertical installation.
See IMI installation and maintenance instructions.



PMO – Max. operating pressure
TMO –Max. operating temperature
How to order: i.e. DW16SS DN 1/2" BSP

12 bar
280 °C

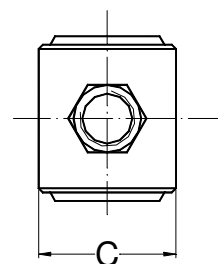


MATERIALS		
POS. Nr.	DESIGNATION	MATERIAL
1	Body	AISI316 / 1.4401
2	Cover	Brass (NickelPl.)
3	* Gasket	St.St./Graphite
4	* Glass	Borosilicate

* Available spare parts

DIMENSIONS (mm)-Screwed					EN 1092-1 Flg.	
SIZE DN	A	B	C	WGT. Kgs	D	WGT. Kgs
1/2"	103	80	65	1,3	130	2,4
3/4"	103	80	65	1,3	130	3,4
1"	100	90	65	1,9	130	4,5

Different face-to-face dimensions on the flanged version, under request.



DOUBLE WINDOW SIGHT GLASS

DW12G – DW12SS

DESCRIPTION

For monitoring the right operation of a steam trap to avoid leakage of live steam and consequently big energy losses, a sight glass is recommended to be installed downstream the steam trap. Double window DW sight glass, has been designed for this particular application. Connections are flanged.

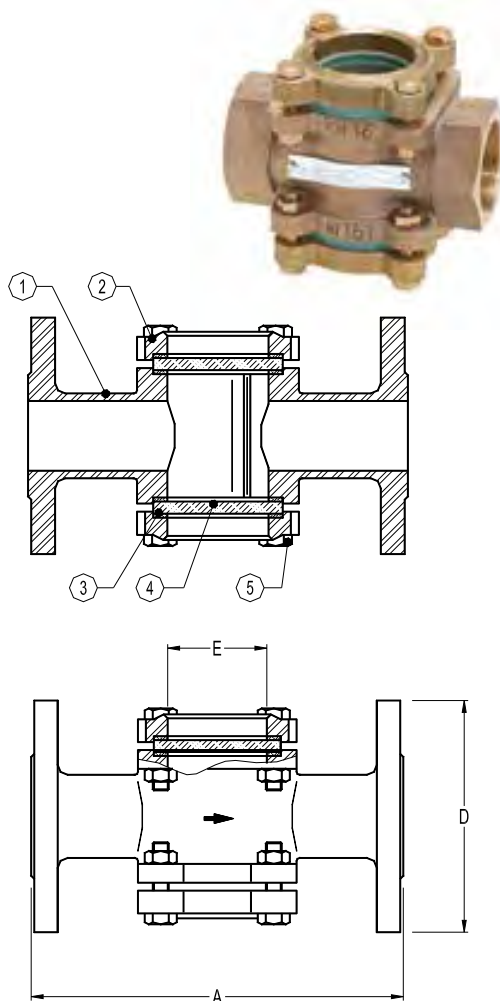
OPTIONS: Tempered glass.
USE: Condensate pipes downstream steam traps.

AVAILABLE MODELS: DW12G – PN16 Cast iron
DW12SS – PN25 Stainless steel

SIZES: DN15 to DN150

CONNECTIONS: Flanged EN 1092-1/-2 PN16-PN25

INSTALLATION: Horizontal or vertical installation.
See IMI installation and maintenance instructions.



LIMITING CONDITIONS DW12G (Tempered glass)		LIMITING CONDITIONS DW12SS (Temp. glass)		LIMITING CONDITIONS DW12G (Borosilicate)		LIMITING CONDITIONS DW12SS (Borosilicate)	
ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.	ALLOWABLE PRESSURES	RELATED TEMP.
16 bar	-10 /120° C	25 bar	-10 /37° C	16 bar	-10 /120° C	25 bar	-10 /37° C
/	/	18 bar	93 °C	14,4 bar	150 °C	18 bar	93 °C
/	/	17 bar	120 °C	12,8	200 °C	16 bar	148 °C
/	/	/	/	11,8	230 °C	14 bar	204 °C
/	/	/	/	10,5	280 °C	11 bar	280 °C

DIMENSIONS (mm)					
SIZE DN	A	B	C	Weight (kgs)	
				DW12G	DW12SS
15	130	95	44	3	3
20	150	105	44	3,5	4
25	160	115	44	4	5
32	180	140	50	6	6,5
40	200	150	50	6,5	7,3
50	230	165	60	9	10,5
65	290	185	90	17	17
80	310	200	90	18	20
100	350	220	110	23	26,5
125	400	250	142	50	52
150	480	285	160	63	68

CE MARKING (PED-European Directive 97/23/EC)			
PN 16	Category	PN 25	Category
DN15 to DN50	SEP - art. 3, paragraph3	DN15 to DN40	SEP - art. 3, paragraph3
DN65 to DN150	1 (CE Marked)	DN50 to DN125	1 (CE Marked)
-	-	DN150	2 (CE Marked)

MATERIALS			
POS.	DESIGNATION	MATERIAL DW12G	MATERIAL DW12SS
1	Body	GJL-250 / 0.6025	CF8M / 1.4408
2	Cover	GJL-250 / 0.6025	CF8M / 1.4408
3	* Gasket	Graphite	Graphite
4	* Window	Borosilicate glass	Borosilicate glass
		Tempered glass **	Tempered glass **
5	Bolts	Steel 8.8	A2-70

* Available spare parts.** Option

DOUBLE WINDOW SIGHT GLASS

DW40S (DN15 – DN25)

DESCRIPTION

For monitoring the right operation of a steam trap to avoid leakage of live steam and consequently big energy losses, a sight glass is recommended to be installed downstream of the steam trap.

Double window DW sight glass, has been designed for this particular application.

Connections are female screwed or flanged.

USE: Condensate pipes downstream steam traps.

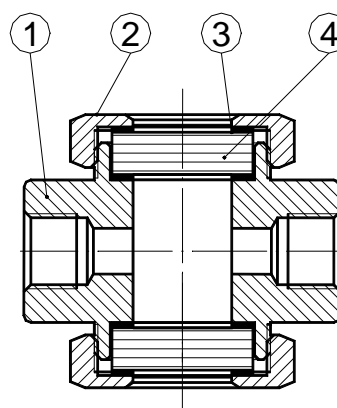
AVAILABLE MODELS: DW 40 S

SIZES: DN ½" to DN 1"; DN 15 to DN 25

CONNECTIONS: Female screwed ISO 7/1Rp(BS21).
NPT (ANSI B1.20.1)
Flanged EN 1092-1 or ANSI

INSTALLATION: Horizontal or vertical installation.
See IMI, installation and maintenance instructions.

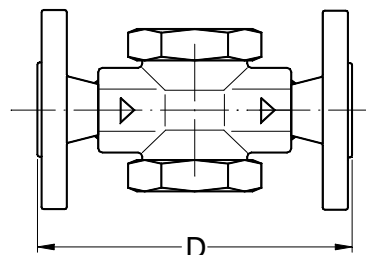
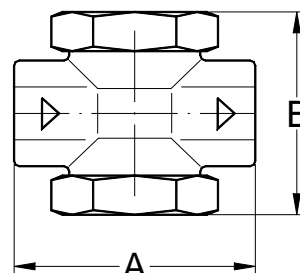
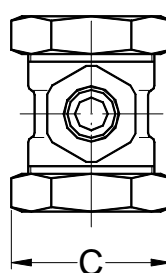
PMO – Max. operating pressure 40 bar
TMO – Max. operating temperature 280 °C
How to order: i.e. DW40 DN ½" BSP.



DIMENSIONS (mm)-Screwed					EN 1092-1 Flanges	
SIZE DN	A	B	C	WGT. Kgs	D	WGT. Kgs
15	90	80	60	1,25	150	2,8
20	90	80	60	1,25	150	3,4
25	100	87	65	2,1	160	4,7

MATERIALS		
POS.Nr.	DESIGNATION	MATERIAL
1	Body	P250GH / 1.0460
2	Glass nut	P250GH / 1.0460
3	* Gasket	St.Steel / Graphite
4	* Window glass	Borosilicate

*Available spare parts.



Armstrong MS-6 Noiseless Heater

The use of hot water is indispensable in food processing, cleaning, and plating operations. Although the simplest and most efficient way to provide the water is by direct steam sparging, such a format often results in vibration and noise caused by steam blowing into the water tank. These problems can be greatly reduced by mounting an MS-6 noiseless heater at the end of the pipe.

Features

- Stainless steel construction for greater durability
- Mounting is simple and economical
- Maintenance free

Formula for Calculating Steam Load to Heat Water in Tank

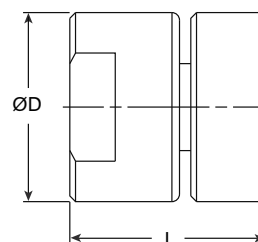
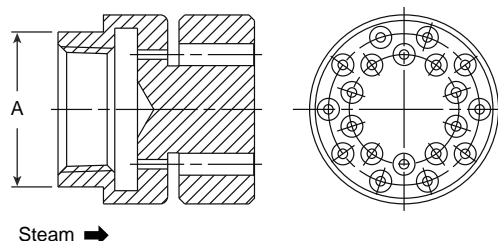
$$\text{lbs/hr} = \frac{\text{Gal} \times \Delta T \times 8.3}{\text{Lat} \times T}$$

Gal = Gallons of water to be heated

ΔT = Temperature rise °F

Lat = Latent heat of steam (Btu/lb)

T = Time in hours



Specifications	
Fluid	Steam
Pressure Range	7 - 100 psi (0.5 - 7 bar)
Silencing Limit Temperature	190°F (90°C)
Material	304 Stainless Steel
Connection	NPT

Dimensions and Weights												
Connection Size	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
	1/2	15	3/4	20	1	25	1-1/4	32	1-1/2	40	2	50
"L"	1-15/16	49	1-15/16	49	2-1/16	52	2-3/16	55	2-5/16	59	2-9/16	65
"D"	1-3/8	35	1-1/4	45	2	50	2-3/8	60	2-3/4	70	4-1/8	105
"A"	1-3/16	30	1-7/16	36	1-5/8	41	2	50	2-3/8	60	3-9/16	90
Weight, lb (kg)	0.55 (0.25)		0.88 (0.40)		1.15 (0.52)		1.70 (0.77)		2.54 (1.15)		6.59 (2.99)	

Capacities - Steam, lb/hr (kg/hr)												
Inlet, psi (bar)	Connection Size											
	1/2"		3/4"		1"		1-1/4"		1-1/2"		2"	
	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr
7 (0.50)	54	25	129	58	157	71	190	86	291	132	362	164
10 (0.70)	65	30	147	67	179	81	222	101	323	147	413	187
15 (1.00)	84	38	177	80	214	97	276	125	376	171	498	226
20 (1.38)	103	46	208	94	250	113	330	150	430	195	582	264
30 (2.00)	140	63	269	122	321	146	439	199	536	243	751	341
40 (2.76)	177	80	330	149	392	178	547	248	643	292	921	418
50 (3.45)	214	97	390	177	463	210	655	297	749	340	1,090	494
60 (4.14)	251	114	451	205	534	242	764	346	856	388	1,259	571
70 (4.83)	289	131	512	232	605	275	872	395	963	437	1,428	648
80 (5.52)	326	148	573	260	676	307	980	445	1,069	485	1,597	725
90 (6.20)	363	165	634	288	748	339	1,088	494	1,176	533	1,767	801
100 (6.90)	400	181	695	315	819	371	1,197	543	1,282	582	1,936	878

EXHAUST HEADS - EH

DESCRIPTION

The EH Exhaust Head is designed to protect the personnel from injury and exterior of buildings from the harmful effects of steam ejection to atmosphere. The head is fitted to the end of a vertical exhaust pipe and thus breaks the beat and muffles the noise of escaping steam whilst effectively retaining the moisture for draining.

Connections are female screwed or flanged.

MAIN FEATURES

Stainless steel separating element.

Quite operation.

Reduces discharge velocity.

OPTIONS:

Corrosion protection (metal abrasive blasted, metalized and painted).
Complete stainless steel construction.

USE:

Opened vertical steam vent pipes in blowdown vessels, boiler feedtanks, etc.

CAUTION:

Not recommended for safety valves outlets.

AVAILABLE MODELS:

EH/S - carbon steel body.
EH/SZ - metalized and painted.
EH/SS - stainless steel body.

SIZES:

Screwed: DN1" to DN4".
Flanged: DN25 to DN150.

CONNECTIONS:

Female screwed ISO 7/1Rp(BS21)
Flanged EN 1092-1 PN16 or ANSI Class 150.

INSTALLATION:

Vertical installation. The drain should be piped to a safe position. The exhaust head should be selected so that it is the same nominal size as the vent pipe.

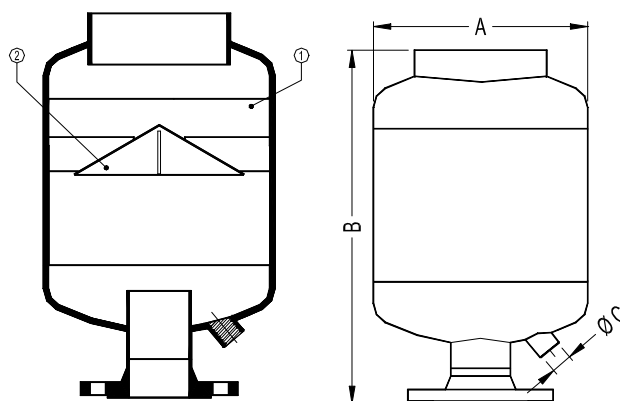
How to order: i.e.EH/S PN16 DN 65

Note:

Dimensions are subject to change without notice.

Consult factory for certified dimensions.

Other sizes and designs can be supplied under request.



DIMENSIONS (mm)				
FLANGED EN 1092-1				
SIZE DN	A	B	C	WGT Kg
25	168	345	1/2"	15
32	168	345	1/2"	16
40	168	400	1/2"	18
50	273	450	3/4"	26
65	273	450	3/4"	28
80	273	495	3/4"	29
100	273	495	1"	33
125	356	525	1"	42
150	356	525	1"	48
200	508	650	1 1/2"	95
250	508	650	1 1/2"	110

LIMITING CONDITIONS	
PS - Maximum Allow able Pressure	0,5 bar
Minimum operating temp.: -10°C. Design code: AD-Merkblatt	
Other conditions and CE marking on request.	

MATERIALS	
DESIGNATION	MATERIAL
Body	Carbon steel P235GH / 1.0305
Separating element	Stainless steel AISI304 / 1.4301

HUMIDITY SEPARATORS - S16/S PN 16

DESCRIPTION

S-16 series centrifugal separators remove moisture from steam and compressed air pipelines. Steam and compressed air passing through the separator and as a result of centrifugal forces, impact and swirling effects, separate the particles with a heavier specific gravity, such as water and oil droplets, moisture in suspension, dirt and scale.

The condensate collected at the bottom of the separator, must be automatically drained by a suitable steam or compressed air trap.

Connections are threaded.

MAIN FEATURES

Several possibilities of installation.

No moving parts.

OPTIONS:

Zinc plated (compressed air)
Condensate flanged connection.

USE:

Steam, compressed air and other gases (Group 2).

AVAILABLE MODELS:

S16/S - carbon steel body.

SIZES:

DN ½" to DN 2".

PIPE CONNECTIONS:

Screwed BSP or NPT

INSTALLATION:

Always with the condensate discharge pointing downwards.

See IMI, installation and maintenance instructions.

HOW TO SELECT:

Generally, in an existing plant it is advisable to fit a separator of the same size of the pipe line. Pressure drop is normally negligible. For approximate pressure drop calculation please consult.



LIMITING CONDITIONS **		
Rating	Press. bar	Temp. °C
PN16	16	50
	14	100
	13 *	195
	12	250

*PMO-Max.operating pressure for saturated steam. Minimum operating temp.: -10°C. Design code: AD-Merkblatt

** Rating according to EN1092:2007.

CE MARKING - GROUP 2 GASES CAT.		
RATING	SIZE	CAT.
PN16	DN 1/2" to DN 1"	SEP
	DN 1 1/4" to DN 2"	1

CE Marking: This product have been designed for use on water steam, air and other gases which are in Group 2 of the PED-European Pressure Equipment Directive 97/23/EC and it comply with those requirements.

The product carries the CE mark when falling in category 1 and above.

HUMIDITY SEPARATORS - S16/S PN 16

APPROXIMATE DIMENSIONS (mm)								
DN	A	B	C	D	E	F **	VOL. dm ³	WGT Kg
1/2"	218	114	260	185	70	1/2"	2	5
3/4"	218	114	260	185	75	1/2"	2,5	6
1"	230	114	300	200	100	1/2"	3	7
1 1/4"	263	140	395	285	110	1/2"	5	12
1 1/2"	263	140	435	325	110	1/2"	5,7	13,8
2"	322	168	505	385	120	1/2"	10,5	19,5

Weight and dimensions to be confirmed in case of order.

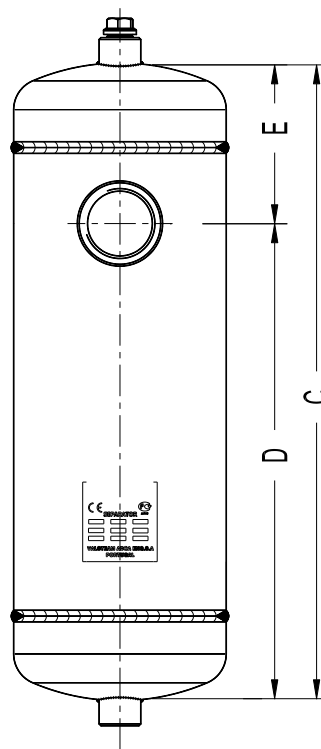
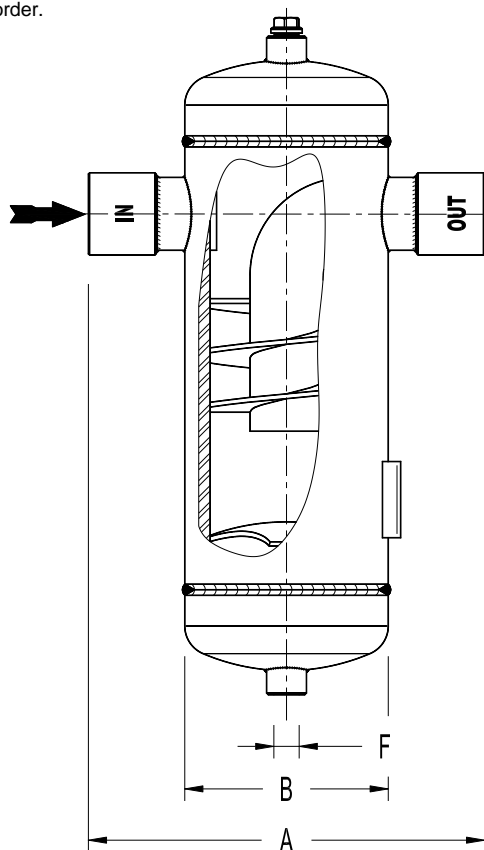
** F-screwed drain connection as standard. Alternatively can be supplied flanged EN1092-1 or ANSI on the same class of main dimensions.

Consult factory for certified dimensions. Dimensions subject to change without notice.

Note: the top of separator is supplied with a threaded connection with size not exceeding the size of drain one. This connection is always supplied closed with a threaded socket. It can be used for air vent or balancing pipe connection.

MATERIALS	
DESIGNATION	MATERIAL
Body	EN10216-2 / P235GH / 1.0325
Heads	EN10028-2 / P265GH / 1.0425
Inlet / Outlet pipes	EN10216-2 / P235GH / 1.0325
Sockets Inlet / Outlet	ASTM A105 / 1.0432
Sockets	ASTM A105 / 1.0432
Internals	EN10025-2 / S235JR / 1.0038

EN10204 3.1 certificate available if requested with the order.



HUMIDITY SEPARATORS - S25/S

PN16 – PN40

DESCRIPTION

S-25 series centrifugal separators remove moisture from steam and compressed air pipelines. Steam and compressed air passing through the separator and as a result of centrifugal forces, impact and swirling effects, separate the particles with a heavier specific gravity, such as water and oil droplets, moisture in suspension, dirt and scale.

The condensate collected at the bottom of the separator, must be automatically drained by a suitable steam or compressed air trap.

Connections are flanged.

MAIN FEATURES

Several possibilities of installation.

No moving parts.



OPTIONS: Zinc plated (compressed air)
Condensate flanged connection.

USE: Steam, compressed air and other gases (Group 2).

AVAILABLE MODELS: S25/S - carbon steel body.
S25/SZ - zinc plated body

SIZES: DN15 to DN300.

PIPE CONNECTIONS: Flanged EN1092-1 PN16 and PN40
ANSI Class 150 lbs and Class 300 lbs
Female screwed BSP or NPT on request.

INSTALLATION: Always with the condensate discharge pointing downwards.
See IMI, installation and maintenance instructions.

HOW TO SELECT: Generally, in an existing plant it is advisable to fit a separator of the same size of the pipe line. Pressure drop is normally negligible. For approximate pressure drop calculation please consult.

HUMIDITY SEPARATORS - S25/S

PN16 – PN40

LIMITING CONDITIONS **											
Rating	Press. bar	Temp. °C	Rating	Press. bar	Temp. °C	Rating	Press. bar	Temp. °C	Rating	Press. bar	Temp. °C
PN16	16	50	ANSI Cl.150 lbs	16	50	PN25 ANSI CL.300lbs	25	50	PN40 ANSI CL.300lbs	40	50
	14	100		14	100		23	100		37	100
	13 *	195		13 *	195		20 *	216		31 *	239
	12	250		-	-		17	300		27	300

*PMO-Max.operating pressure for saturated steam. Minimum operating temp.: -10°C. Design code: AD-Merkblatt

** Rating according to EN1092:2007.

CE MARKING - GROUP 2 GASES CATEGORIES								
RATING	SIZE	CAT.	RATING	SIZE	CAT.	RATING	SIZE	CAT.
PN16	DN15 to DN25	SEP	PN25	DN15	SEP	PN40	DN15 to DN32	1
	DN32 to DN50	1		DN20 to DN40	1		DN40 to DN80	2
	DN65 to DN125	2		DN50 to DN100	2		DN100 to DN150	3
	DN150 to DN200	3		DN125 to DN150	3		DN200 to DN300	4
	DN250 to DN300	4		DN200 to DN300	4		-	

CE Marking

This product have been designed for use on water steam, air and other gases which are in Group 2 of the PED-European Pressure Equipment Directive 97/23/EC and it comply with those requirements.

The product carries the CE mark when falling in category 1 and above.

APPROXIMATE DIMENSIONS (mm)																		
FLANGED EN1092-1 - ANSI																		
SIZE DN	A PN16	A PN25	A PN40	A 150 lbs	A 300 lbs	B	C	D	E	J	L PN16	A PN25	L PN40	L 150 lbs	L 300 lbs	F	VOL * dm3	WGT ** Kg
15	230	230	230	250	259	114	260	185	75	115	144	144	144	135	130	1/2"	2	5
20	230	230	230	255	264	114	260	180	80	115	136	136	136	123	119	1/2"	2,5	6
25	230	230	230	262	274	114	300	215	85	135	142	142	142	126	120	1/2"	3	7
32	260	260	260	290	303	140	395	285	110	155	194	194	194	200	215	1/2"	5	12
40	260	260	260	294	307	140	435	325	110	165	243	243	243	226	220	1/2"	5,7	13,8
50	310	310	310	341	354	168	505	380	125	190	281	281	281	265	259	1/2"	10,5	19,5
65	380	394	394	430	442	219	550	410	140	240	275	268	268	250	244	3/4"	18,5	32
80	400	416	416	440	459	219	610	462	148	260	306	298	298	286	277	3/4"	25	38
100	470	490	490	520	530	273	715	528	187	330	326	313	313	302	293	3/4"	35,4	57
125	535	561	561	605	622	324	845	630	215	403	380	367	367	346	337	1"	50	81,5
150	565	605	605	633	652	356	960	690	270	457	428	408	408	394	385	1"	75	153
200	605	641	650	685	700	406	1170	880	290	545	485	467	459	446	436	1"	140	195
250	720	756	790	784	815	508	1540	1140	400	671	714	696	679	682	666	1 1/2"	280	321
300	840	868	914	913	944	610	1700	1172	528	800	662	648	625	626	597	1 1/2"	400	465

* Volume correspond to the class PN16 design.Classes PN25 and above may have slightly lower volumes.

** Weight correspond to the class PN16 design.

F-screwed drain connection as standard.Alternatively can be supplied flanged EN1092-1 or ANSI on the same class of main dimensions.

Consult factory for certified dimensions. Dimensions subject to change without notice.

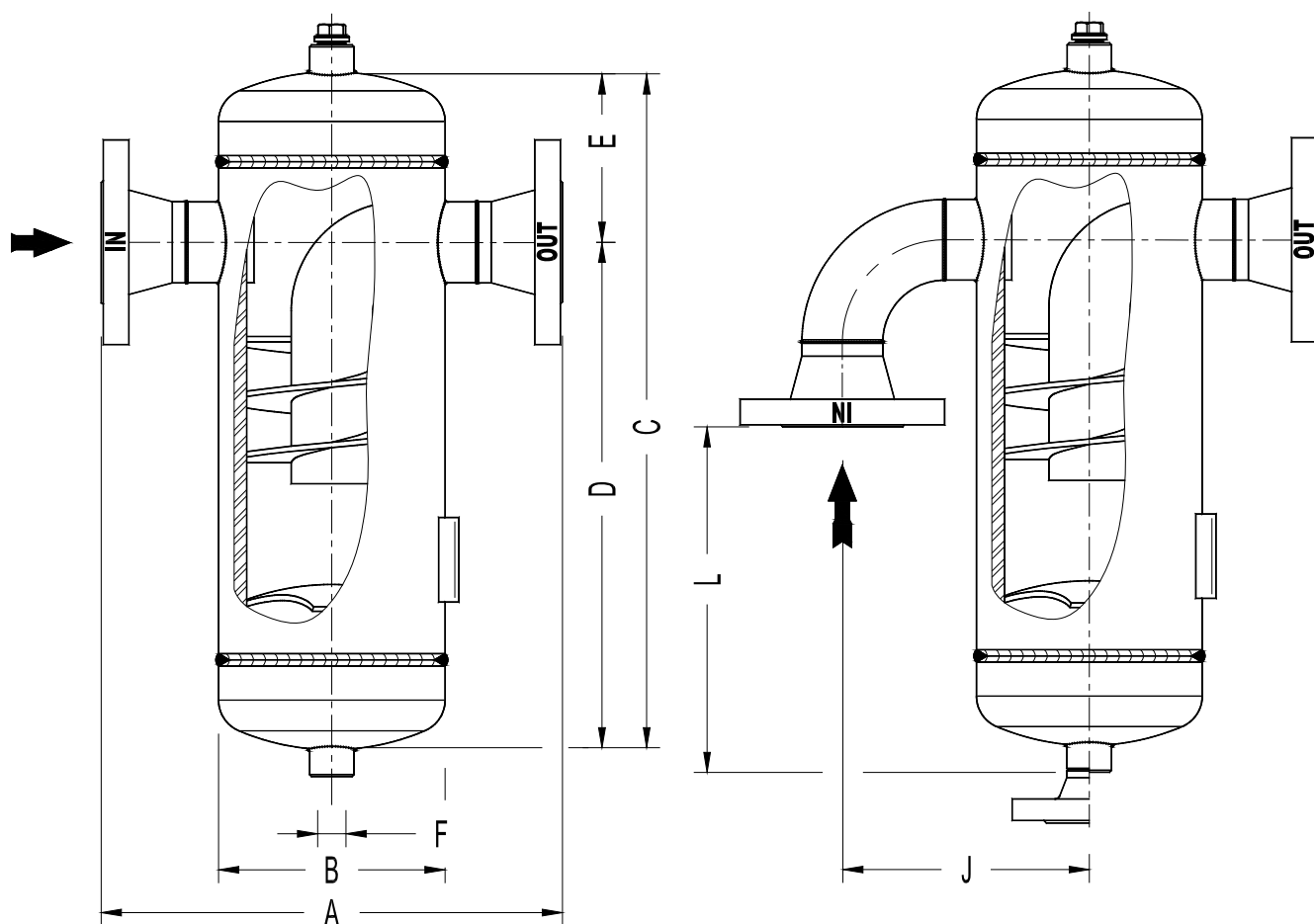
Note: the top of separator is supplied with a threaded connection with size not exceding the size of drain one. This connection is always supplied closed with a threaded socket. It can be used for air vent or balancing pipe connection.

HUMIDITY SEPARATORS - S25/S

PN16 – PN40

MATERIALS		FLANGE CONNECTIONS			
DESIGNATION	MATERIAL	Rating	Sep. SIZE	EN STD.	ANSI STD.
Body	EN10216-2 / P235GH / 1.0325	PN16	* DN15 to DN50	EN1092-1 PN40	ANSI B16.5 Cl.150 lbs
Heads	EN10028-2 / P265GH / 1.0425	PN16	DN65 to DN300	EN1092-1 PN16	ANSI B16.5 Cl.150 lbs
Inlet / Outlet pipes	EN10216-2 / P235GH / 1.0325	PN25	DN15 to DN150	EN1092-1 PN40	ANSI B16.5 Cl.300 lbs
EN flanges	EN10222-2 / P250GH / 1.0460	PN25	DN200 to DN300	EN1092-1 PN25	ANSI B16.5 Cl.300 lbs
ANSI flanges	ASTM A105 / 1.0432	PN40	DN15 to DN300	EN1092-1 PN40	ANSI B16.5 Cl.300 lbs
Sockets	ASTM A105 / 1.0432	* Flanges EN 1092-1 PN16 and PN40 from DN15 to DN50 has the same number and size of holes.			
Internals	EN10025-2 / S235JR / 1.0038				

EN10204 3.1 certificate available if requested with the order.



EVH-Elbow vertical inlet / horizontal outlet

HUMIDITY SEPARATORS - S25/SS (Stainless steel)

PN16 – PN40

DESCRIPTION

S-25SS series centrifugal separators remove moisture from steam and compressed air pipelines. Steam and compressed air passing through the separator and as a result of centrifugal forces, impact and swirling effects, separate the particles with a heavier specific gravity, such as water and oil droplets, moisture in suspension, dirt and scale.

The condensate collected at the bottom of the separator, must be automatically drained by a suitable steam or compressed air trap.

Connections are flanged.

MAIN FEATURES

Several possibilities of installation.

No moving parts.



OPTIONS: Condensate flanged connection.

USE: Steam, compressed air and other gases (Group 2).

AVAILABLE MODELS: S25/SS - Stainless steel body.

SIZES: DN15 to DN300.

PIPE CONNECTIONS: Flanged EN1092-1 PN16 and PN40
ANSI Class 150 lbs and Class 300 lbs
Female screwed BSP or NPT on request.

INSTALLATION: Always with the condensate discharge pointing downwards.
See IMI, installation and maintenance instructions.

HOW TO SELECT: Generally, in an existing plant it is advisable to fit a separator of the same size of the pipe line. Pressure drop is normally negligible. For approximate pressure drop calculation please consult.

HUMIDITY SEPARATORS - S25/SS (Stainless steel)

PN16 – PN40

LIMITING CONDITIONS **											
Rating	Press. bar	Temp. °C	Rating	Press. bar	Temp. °C	Rating	Press. bar	Temp. °C	Rating	Press. bar	Temp. °C
PN16	16	50	ANSI CL.150 lbs	16	50	PN25 ANSI CL.300lbs	25	50	PN40 ANSI CL.300lbs	40	50
	16	100		16	100		25	100		40	100
	13 *	195		13 *	195		21 *	217		32 *	240
	12	250		-	-		18	300		30	300

*PMO-Max.operating pressure for saturated steam. Minimum operating temp.: -10°C. Design code: AD-Merkblatt

** Rating according to EN1092:2007.

CE MARKING - GROUP 2 GASES CATEGORIES								
RATING	SIZE	CAT.	RATING	SIZE	CAT.	RATING	SIZE	CAT.
PN16	DN15 to DN25	SEP	PN25	DN15	SEP	PN40	DN15 to DN32	1
	DN32 to DN50	1		DN20 to DN40	1		DN40 to DN80	2
	DN65 to DN125	2		DN50 to DN100	2		DN100 to DN150	3
	DN150 to DN200	3		DN125 to DN150	3		DN200 to DN300	4
	DN250 to DN300	4		DN200 to DN300	4		-	

CE Marking

This product have been designed for use on water steam, air and other gases which are in Group 2 of the PED-European Pressure Equipment Directive 97/23/EC and it comply with those requirements.
The product carries the CE mark when falling in category 1 and above.

APPROXIMATE DIMENSIONS (mm)												
FLANGED EN1092-1 - ANSI												
SIZE DN	A PN16	A PN25	A PN40	A 150lbs	A 300lbs	B	C	D	E	F	VOL. * dm3	WGT ** Kg
15	230	230	230	250	259	114	260	185	75	1/2"	2	5
20	230	230	230	255	264	114	260	185	75	1/2"	2,5	6
25	230	230	230	262	274	114	300	200	100	1/2"	3	7
32	260	260	260	290	306	140	395	285	110	1/2"	5	12
40	260	260	260	294	307	140	435	320	115	1/2"	5,7	13,8
50	310	310	310	341	354	168	505	385	120	1/2"	10,5	19,5
65	380	394	394	430	442	219	550	410	140	3/4"	18,5	32
80	400	416	416	440	459	219	610	462	148	3/4"	25	38
100	485	511	511	533	553	273	715	528	187	3/4"	35,4	57
125	535	561	561	605	622	324	845	630	215	1"	50	81,5
150	585	605	605	635	652	356	962	692	270	1"	75	153
200	605	641	657	685	703	406	1170	880	290	1"	140	195
250	720	756	790	784	815	508	1540	1140	400	1 1/2"	280	321
300	840	868	914	913	944	610	1700	1172	528	1 1/2"	400	465

* Volume correspond to the class PN16 design. Classes PN25 and above may have slightly lower volumes.

** Weight correspond to the class PN16 design.

F-screwed drain connection as standard.Alternatively can be supplied flanged EN1092-1 or ANSI on the same class of main dimensions.

Consult factory for certified dimensions. Dimensions subject to change without notice.

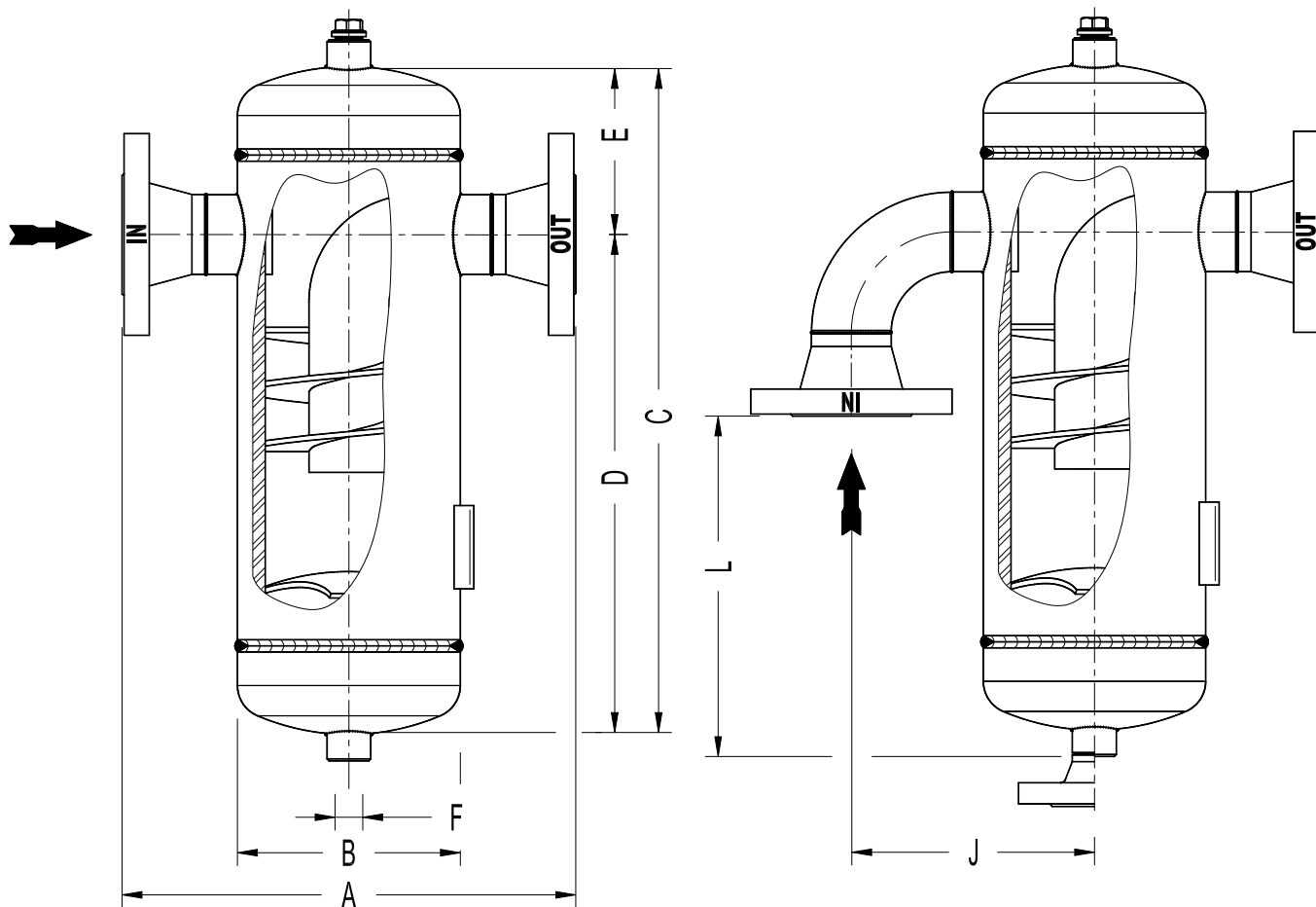
Note: the top of separator is supplied with a threaded connection with size not exceeding the size of drain one. This connection is always supplied closed with a threaded socket. It can be used for air vent or balancing pipe connection.

HUMIDITY SEPARATORS - S25/SS (Stainless steel)

PN16 – PN40

MATERIALS		FLANGE CONNECTIONS			
DESIGNATION	MATERIAL	Rating	Sep. SIZE	EN STD.	ANSI STD.
Body	EN10216-5 / ASTM A312TP316L	PN16	* DN15 to DN50	EN1092-1 PN40	ANSI B16.5 Cl.150 lbs
Heads	EN10028-7 / ASTM A403 WP316L	PN16	DN65 to DN300	EN1092-1 PN16	ANSI B16.5 Cl.150 lbs
Inlet / Outlet pipes	EN10216-5 / ASTM A312TP316L	PN25	DN15 to DN150	EN1092-1 PN40	ANSI B16.5 Cl.300 lbs
EN flanges	EN10222-5 / ASTM A182 F316/316L	PN25	DN200 to DN300	EN1092-1 PN25	ANSI B16.5 Cl.300 lbs
ANSI flanges	ASTM A182 F316/316L	PN40	DN15 to DN300	EN1092-1 PN40	ANSI B16.5 Cl.300 lbs
Sockets	AISI 304 (1.4301) / AISI316 (1.4401)	* Flanges EN 1092-1 PN16 and PN40 from DN15 to DN50 has the same number and size of holes.			
Internals	EN10272 / ASTM A479/A276-316/316L				

EN10204 3.1 certificate available if requested with the order.



EVH-Elbow vertical inlet / horizontal outlet

SAMPLE COOLERS

SC32 – SC132

DESCRIPTION

ADCA sample coolers are specially designed to cool samples of boiler water or steam for analysis. Sample coolers prevent steam flashing-off from hot pressurised liquid samples, which can be dangerous and will result in an incorrect water sample.

This device may be used for boiler water analysis and other sampling or cooling applications compatible with construction materials.

MAIN FEATURES

Corrosion-resistant body and internals.
Self draining sample (inlet top, outlet bottom).

OPTIONS:

- Sample inlet valve.
- Cooling water inlet valve.
- Temperature indicator
- Bolted top plate.
- Different connection sizes and materials under request against extra price.
- Double coil high pressure design for larger capacities

USE: Steam boilers and hot water systems.

AVAILABLE

MODELS: SC32/SS - SC132/SS - stainless steel body and coil.

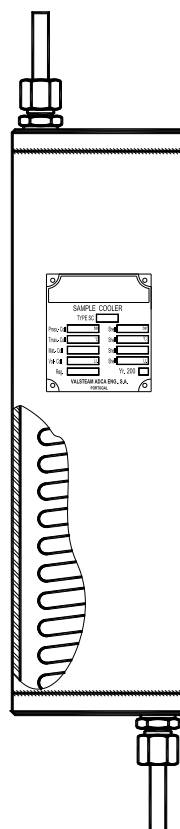
SIZES AND

CONNECTIONS : SC32 – SC132
Cooling water inlet/outlet : 1/2" on body (BSP or NPT)
Sample tube inlet/outlet : 8 mm O/D

INSTALLATION: Vertical installation.

OPERATION: Cooling water must be in its maximum flow before open or close the sample inlet valve, in order to avoid the risk of scalding.
The sample valve must also be closed before the cooling water valve.

PERFORMANCE: 30 to 60 kg/hr of sample water at $\approx 30^{\circ}\text{C}$ with 1m³/h -15°C inlet cooling water (boilers up to 20 bar-220°C), for other pressures, temperatures and /or certified figures please consult.



LIMITING CONDITIONS				
BODY			COIL	
Model	Pressure bar	Related Temp. °C	Pressure bar	Related Temp. °C
SC32 - SC132	20	120	110	400
			90	450

Minimum operating temperature : -10°C

Design code : AD - Merkblatt

SAMPLE COOLERS

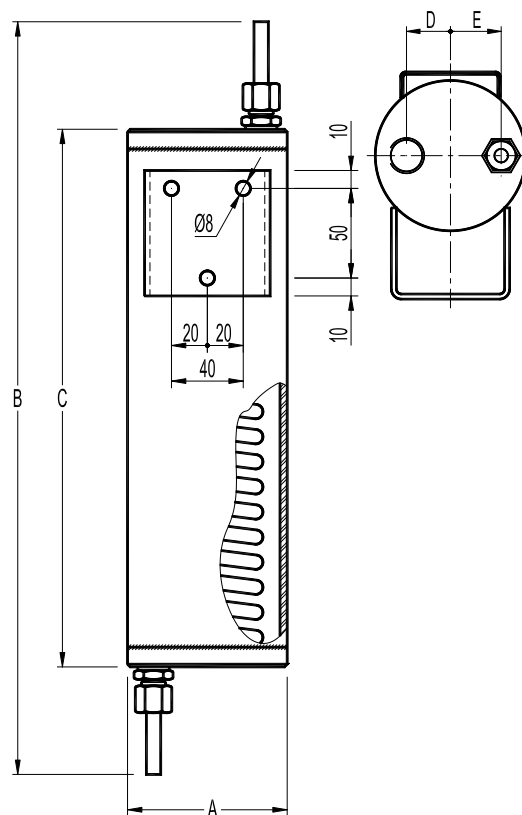
SC32 – SC132

DIMENSIONS (mm)						
MODEL	A	B	C	D	E	WGT Kg
SC 32	90	420	300	26	30	3,9
SC 132	90	520	400	26	30	4,8

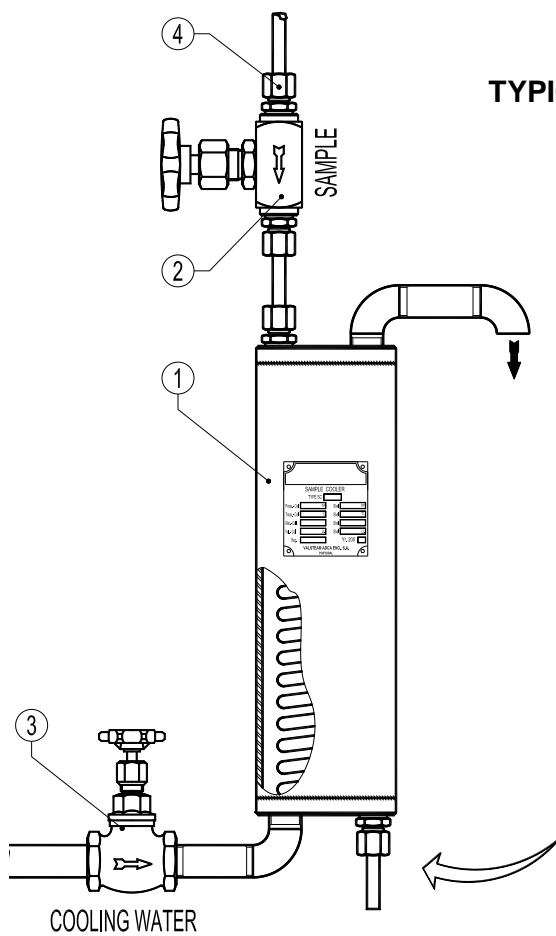
MATERIALS	
DESIGNATION	MATERIAL
	SC32 - SC132
Body	AISI 304 / 1.4301
Covers	AISI 304 / 1.4301
Coil	AISI 316L / 1.4404
Compression fittings *	Fe / Zn 12 - ISO 2081 - Cl. L
Discharge tube	ASI 316L / 1.4404
Thermometer connector	AISI 316 / 1.4401

EN10204 3.1 certificate available if requested with the order.

* Stainless steel available against extra price



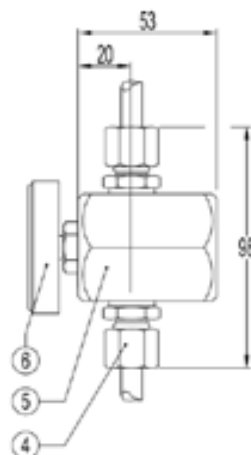
TYPICAL INSTALLATION



Pos.	Designation
1	Sample Cooler
2	* Sample inlet valve NV-400
3	Cooling water inlet valve ADCA GV32B
4	**Comp. fitting DN1/4"x 8 (2) Fe/Zn - ISO 2081 - Cl.L
4 ***	**Comp. fitting DN1/4"x 8 (2) Cl. S (316Ti / 1.4571)
5	Thermometer connector
6	Bimetal thermometer

*Check operating conditions, see catalogue

Limited to max. 400 °C ; * Option, against extra price.



SAMPLE COOLERS

SC332 – SC432 – SC532

DESCRIPTION

ADCA sample coolers are specially designed to cool samples of boiler water or steam for analysis.

Sample coolers prevent steam flashing-off from hot pressurised liquid samples, which can be dangerous and will result in an incorrect water sample.

This device may be used for boiler water analysis and other sampling or cooling applications compatible with construction materials.

MAIN FEATURES

Corrosion-resistant body and internals.

Counter-current flow for better performance

OPTIONS:

Sample inlet valve.

Cooling water inlet valve.

Temperature indicator

Bolted top plate.

Different connection sizes and materials under request against extra price.

USE:

Steam boilers and hot water systems.

AVAILABLE MODELS:

SC332/SS – SC432/SS – SC532/SS - stainless steel body and coil.

SIZES AND

CONNECTIONS :

SC332 and SC332H

Cooling water inlet/outlet : 1/2" (BSP or NPT)

Sample tube inlet/outlet : 10 mm O/D

SC432 and SC532 ; SC432H and SC532H

Cooling water inlet/outlet : 3/4" (BSP or NPT)

Sample tube inlet/outlet : 10 mm O/D

INSTALLATION:

Vertical installation.

OPERATION:

Cooling water must be in its maximum flow before open or close the sample inlet valve, in order to avoid the risk of scalding.

The sample valve must also be closed before the cooling water valve.

PERFORMANCE:

30 to 60 kg/hr of sample water at $\approx 30^{\circ}\text{C}$ with 15°C inlet cooling water, for certified figures please consult.



LIMITING CONDITIONS							
SC332 - SC432 - SC532				SC332H - SC432H - SC532H			
BODY		COIL		BODY		COIL	
Pressure bar	Related Temp. $^{\circ}\text{C}$	Pressure bar	Related Temp. $^{\circ}\text{C}$	Pressure bar	Related Temp. $^{\circ}\text{C}$	Pressure bar	Related Temp. $^{\circ}\text{C}$
20	120	130	300	20	120	280	300
		120	400			268	400
		110	450			260	450
		100	500			245	550

Minimum operating temperature : -10°C

SAMPLE COOLERS

SC332 – SC432 – SC532

DIMENSIONS (mm)							
MODEL	A	B	C	D	E	F	WGT Kg
SC332	90	610	15	18	35	35	9
SC432	140	585	20	30	55	55	18,3
SC532	140	685	20	30	55	55	22,3

Note: same dimensions for the version "H" (higher temperature)

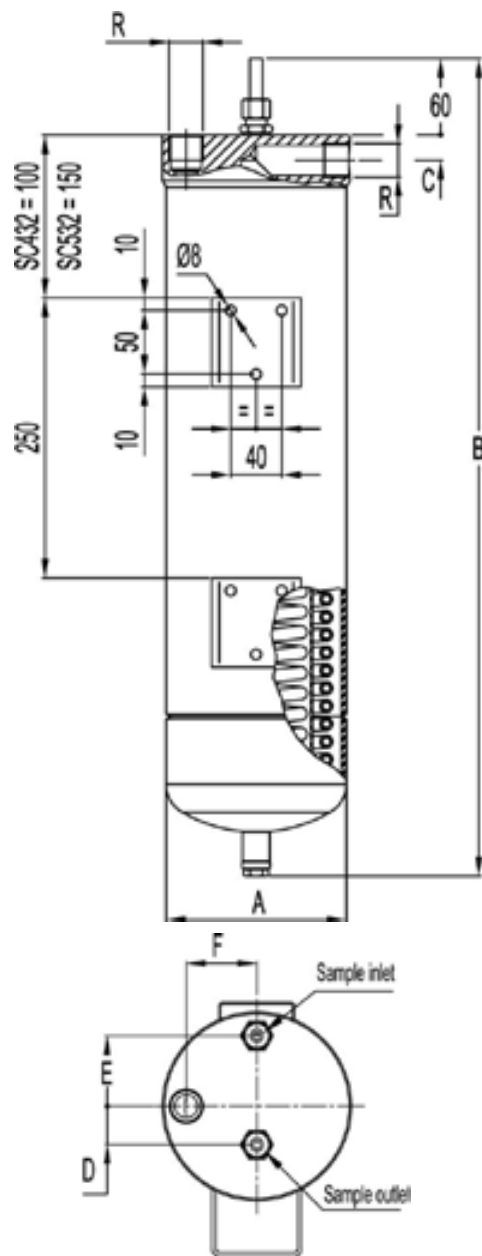
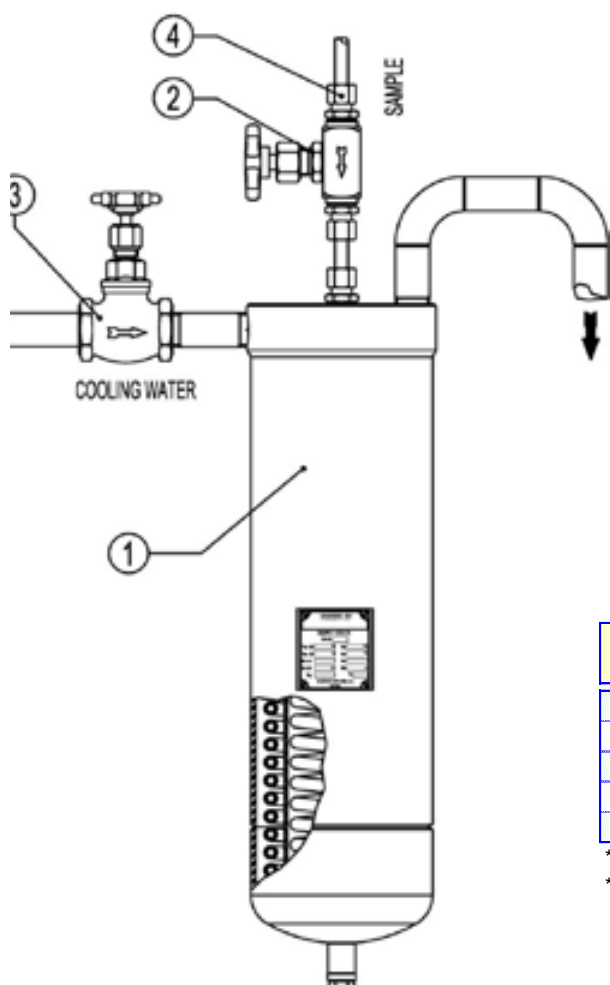
MATERIALS	
DESIGNATION	MATERIAL
	SC332 - SC432 - SC532
Body	AISI 304 / 1.4301 or AISI 316 / 1.401
Cover	AISI 304 / 1.4301 or AISI 316 / 1.401
Coil	AISI 316Ti / 1.4571
Compression fittings *	Fe / Zn 12 - ISO 2081 - Cl. L
Discharge tube	AISI 316Ti / 1.4571

EN10204 3.1 certificate available if requested with the order.

Same materials for the version "H", except the coil thickness.

* Stainless steel available against extra price

TYPICAL INSTALLATION



Pos.	Designation
1	Sample Cooler
2	* Sample inlet valve NV-400
3	Cooling water inlet valve ADCA GV32B
4	**Comp. fitting DN1/4"x 10 (2) Fe/Zn - ISO 2081 - Cl.L
4 ***	**Comp. fitting DN1/4"x 10 (2) Cl. S (316Ti / 1.4571)

*Check operating conditions, see catalogue

Limited to max. 400 °C ; * Option, against extra price.

VACUUM BREAKER - VB 21

DESCRIPTION

The VB21 vacuum breakers are simple and reliable devices that automatically relieve or "break" an unwanted vacuum condition, restoring the atmospheric pressure.

This device is particularly suitable for steam heated units of small and medium volume as heat exchangers, heating coils, calorifiers, jacketed kettles, steam boilers, etc.

Connections are female screwed.

USE: Saturated and superheated steam

AVAILABLE

MODELS: VB21; VB21M

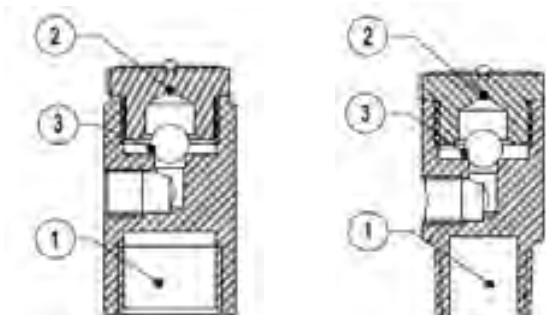
SIZES: $\frac{1}{2}$ " x $\frac{1}{8}$ "

CONNECTIONS: Inlet $\frac{1}{2}$ " vertical
Outlet $\frac{1}{8}$ " horizontal
VB21-Female screwed ISO 7-1 Rp (BS21)
VB21M-Male screwed ISO 7-1 R (BS21)

INSTALLATION: Vertical installation angled connection.
See IMI, installation and maintenance instructions.

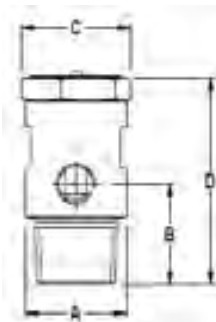
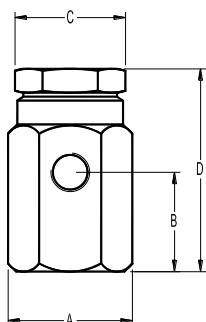
LIMITING

CONDITIONS: 13 bar at 400 °C
21 bar at 220 °C

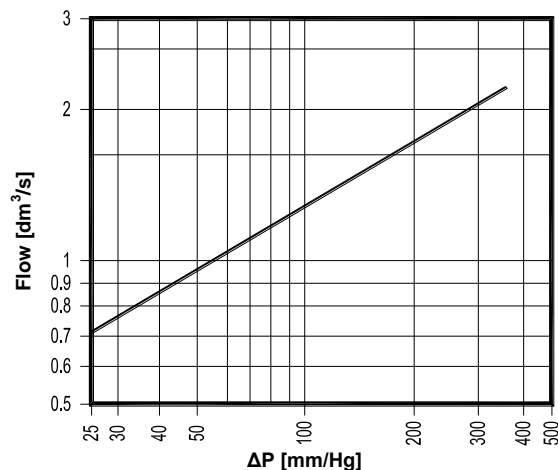


MATERIALS		
POS.Nr.	DESIGNATION	MATERIAL
1	Body	AISI304 / 1.4301
2	Cover	AISI304 / 1.4301
3	* Ball valve	Stainless steel

*Available spare parts.



CAPACITY CHART



ΔP required to open vacuum breaker: 4,6mm/Hg.

DIMENSIONS (mm)					
MODEL	A	B	C	D	WGT. Kgs
VB21	32	25	27	50	0,17
VB21M	25	25	27	50	0,13

LIFTING POTS - LIPO

DESCRIPTION AND OPERATION

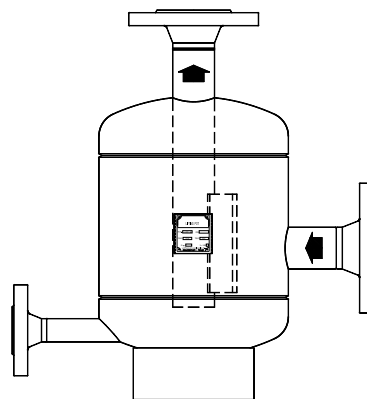
LIPO condensate lifting pots are used for rising condensate pipes eliminating steam and water hammering.

When the condensate is elevated to the condensate main in a higher level, the flash steam formed at a steam trap's outlet condenses in contact with colder condensate and steam bubbles implode, reducing its volume while passing to the liquid state. Vacuum is then suddenly formed and when filled again with the incoming condensate, it causes water hammer.

The air and flash steam cushion formed in the upper part of the lifting pot absorbs any shock while, in the bottom the condensate operates as a sealing liquid.



- OPTIONS:** Stainless steel construction.
- USE:** Condensate lines where condensate has to be lifted.
- SIZES:** DN 15 to DN100
- CONNECTIONS:** Flanged EN1092-1 or ANSI.
Different connections on request.
- CONSTRUCTION:** Carbon steel or stainless steel under request.
- INSTALLATION:** Vertical installation (inlet/outlet angle connections)
The differential pressure must be enough to overcome the pressure head and pipe friction.



LIMITING CONDITIONS		
	Flanged PN16	Flanged PN40
PS - Maximum Allow able Pressure	12 bar	18 bar
TS - Maximum Allow able Temperature	250°C	250°C

Minimum operating temp.: -10°C. Design code: AD-Merkblatt

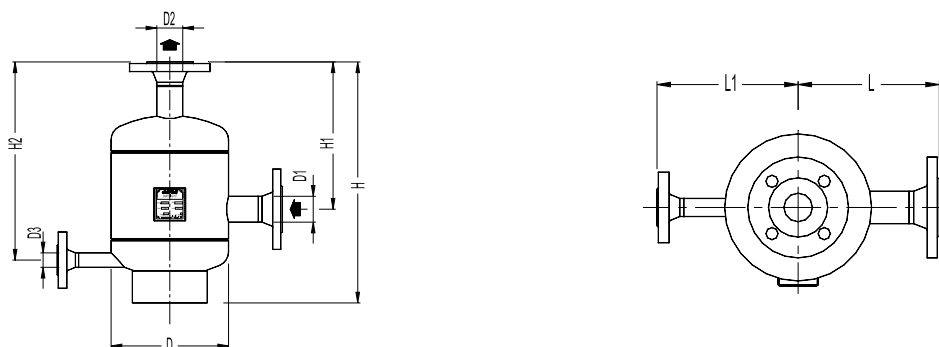
Other conditions on request.

CE MARKING (PED - European Directive 97/23/EC)		
12 bar	18 bar	Category
DN 15 to 50	DN 15 to 50	1 (CE Marked)
DN 65 to 100	DN 65 to 100	2 (CE Marked)

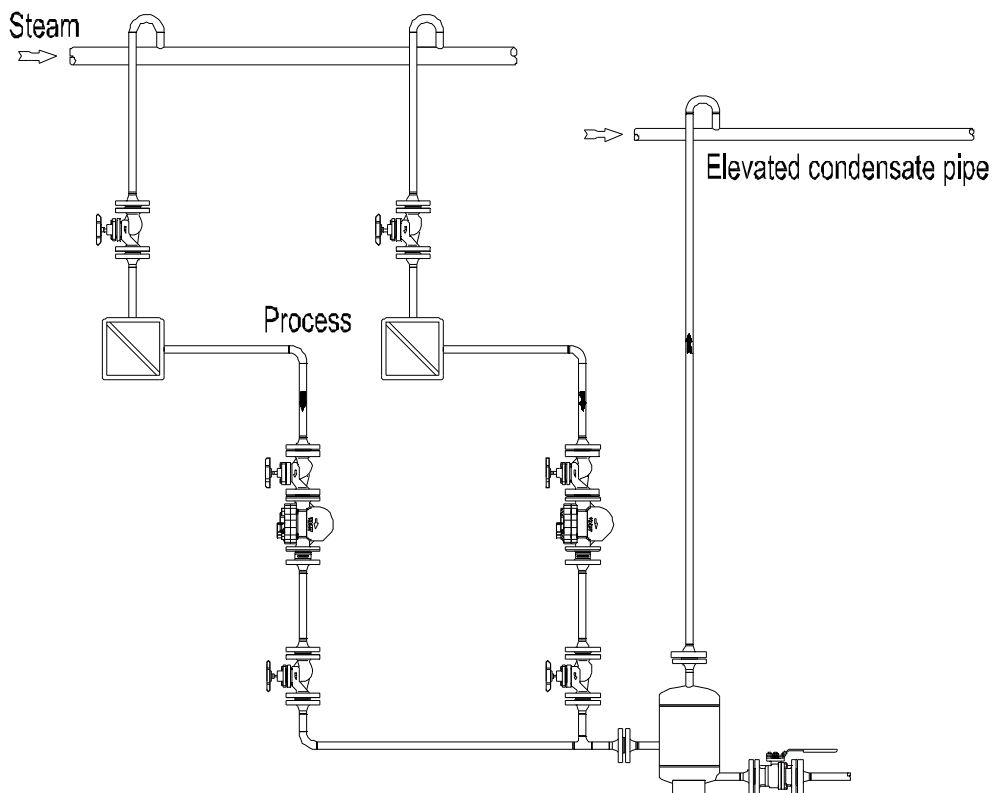
LIFTING POTS - LIPO

DIMENSIONS (mm)										
DN	H	H1	H2	L	L1	D	D1	D2	D3	WEIGHT *
15	384	240	325	180	180	170	DN15	DN15	DN15	9
20	384	240	325	180	180	170	DN20	DN20	DN15	10
25	384	240	325	180	180	170	DN25	DN25	DN15	11
32	450	275	370	210	210	220	DN32	DN32	DN20	18,5
40	450	275	370	210	210	220	DN40	DN40	DN20	19
50	450	275	370	210	210	220	DN50	DN50	DN20	21
65	630	425	540	240	240	275	DN65	DN65	DN20	35
80	630	400	540	240	240	275	DN80	DN80	DN20	38
100	660	400	545	350	350	400	DN100	DN100	DN20	72

* Weight in kgs to be confirmed .



TYPICAL INSTALLATION



Armstrong Simplifies Your Tracing Line Systems

Designed to simplify and supply all the components (steam traps, manifolds, valves, etc.) necessary for your drip and tracer line applications, Armstrong's new Steam Distribution and Condensate Collection Manifolds bring all components together to reduce installation costs and provide a compact, easily accessible, centrally located assembly.

Armstrong's manifold series includes four different configurations, a Steam Distribution (MSD/SMSD), and a Condensate Collection Assembly (CCA/CCAF). As an option, the condensate manifolds can offer freeze protection.

In either case, you will save the expensive headaches of trying to fabricate in-house. What's more, your manifold will be backed by the famous Armstrong quality—and a standard three-year limited warranty.

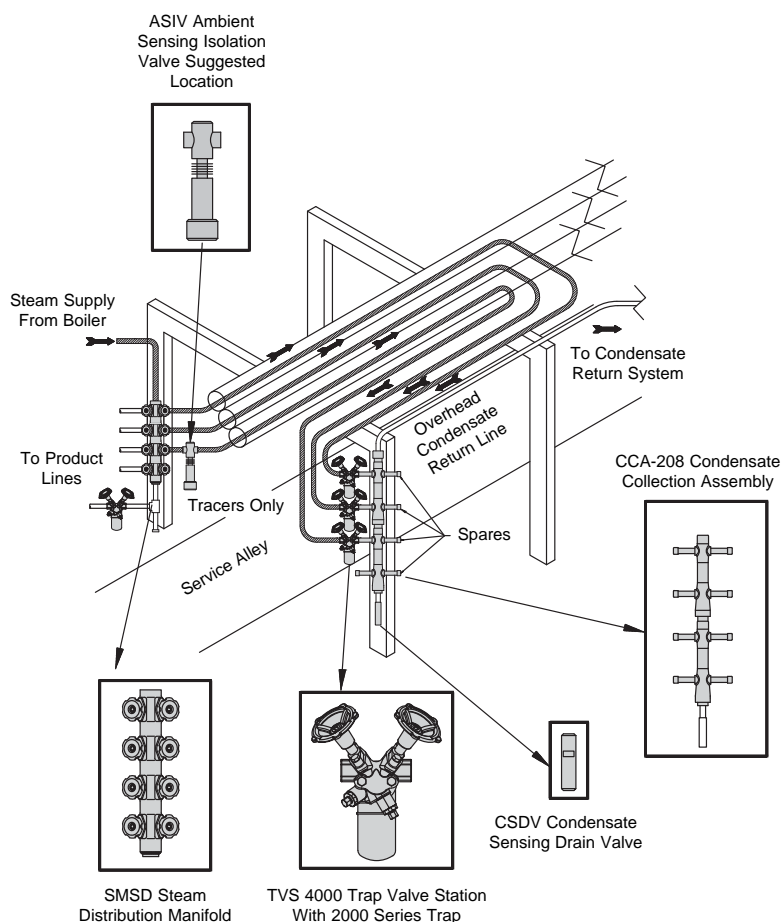
Steam Distribution Manifolds

As a Steam Distribution Assembly (MSD/SMSD), the manifold places all steam supply valves in one location. Standardizing components and centralizing their location simplifies installation, cutting costs from the beginning. You also save because routine maintenance is faster.

Condensate Collection Manifolds

To make industry's trapping and valving more efficient, Armstrong combines its stainless steel steam trap valve stations with manifolds into a package called the Condensate Collection Assembly (CCA). This prepackaged assembly offers many great benefits—cost savings in installation, design flexibility, and reduced purchasing time. CCAF would also include syphon tube freeze protection.

Whatever your condensate collection or steam distribution needs, Armstrong has the manifold for savings over the long term.



Shown are typical locations for Armstrong manifolds. The many manifolds in chemical/petrochemical plants consume valuable floor space and often block movement among the units. Operating costs are high, and installation requires expensive custom fabrication on site. Clearly, a prefabricated manifold permitting standardization of components offers substantial savings over conventional units. Shaded products are available from Armstrong. Call or consult your Armstrong Representative if additional product details are required.

The Proof Is in the Piston

Many of Armstrong's manifolds utilize the piston valve because of its years of excellent performance in steam systems all over the world. The proof of Armstrong's long service life for manifolds...is in the piston.

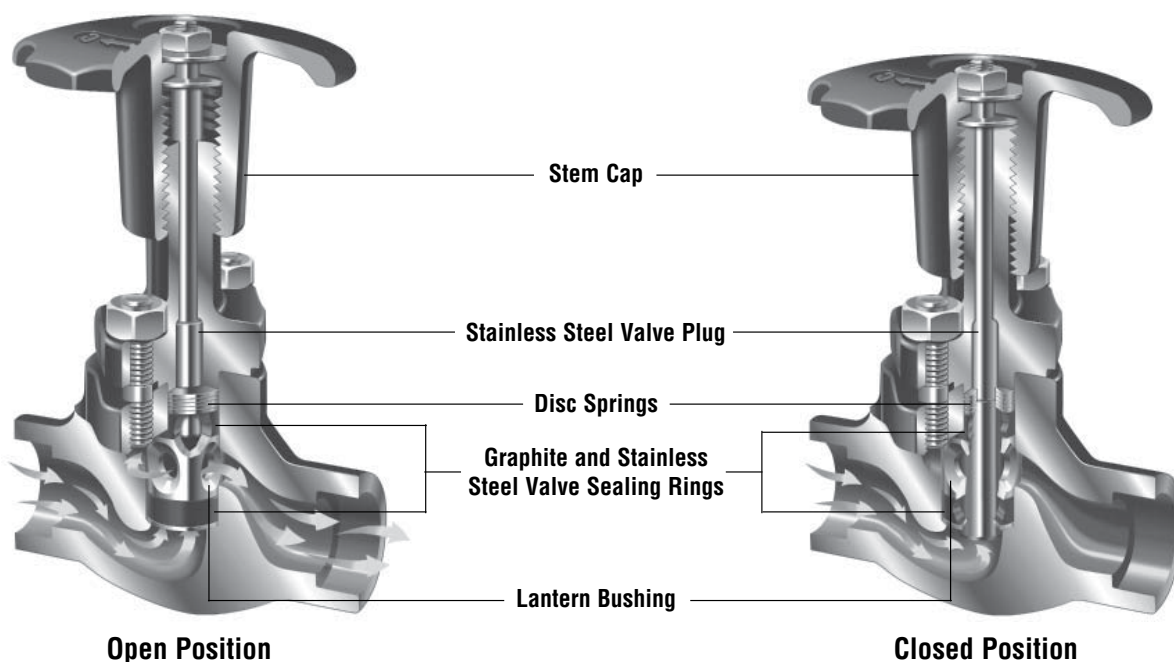
All types of valves—plug valves, gate valves, piston valves and even ball valves—have been summoned for duty in steam service. Due to its excellent sealing characteristics in steam service, and because it has no gland packing, the piston valve is frequently selected for steam systems.

People who have used it over the past 90 years can testify that leakage to atmosphere is extremely rare, even without any maintenance. The elastic contact between piston and valve sealing rings provides a perfect tightness, both in-line and to atmosphere.

Steam system valves, whatever their design, are used to isolate steam and condensate lines or when a faulty steam trap needs to be removed from the line. This means the valves stay in the open position for long periods and are nearly always in contact with the atmosphere. It is not surprising, therefore, that when the valves need to be closed, they can often prove difficult to operate. Our experience and the demands from end users for energy efficiency have led us to a sealing system designed especially for steam service.

The Piston Valve

Armstrong Steam Distribution Manifolds (MSD/SMSD) and TVS 4000 Trap Valve Stations incorporate advanced piston sealing technology for safer, longer lasting steam isolation service.



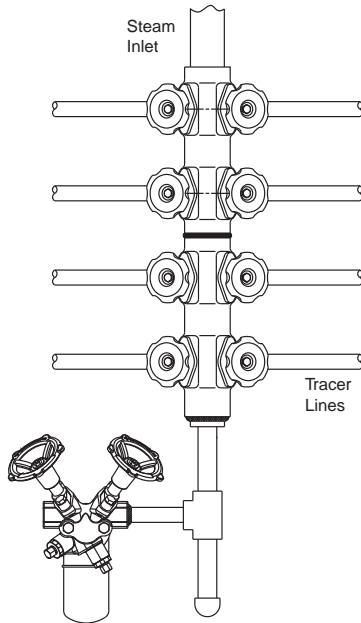
- **Dual sealing action.** The piston valve is a seatless valve that includes two graphite and stainless steel valve sealing rings that seal the stem and function as a seat. This combination provides long-term protection against leaks to the atmosphere and downstream piping.
- **Self-cleaning action.** Stainless steel piston slides without rotating between the two valve sealing rings, preventing dirt from damaging the surfaces.
- **Sealing integrity.** Flexible disc springs automatically provide leak tightness by exerting pressure, which keeps the upper and lower valve sealing rings compressed at all times. Sealing tightness is ensured by the compression of the sealing rings against the

piston and valve body. This combination of disc springs and dual valve seal rings protects against expansion and contraction due to heating and cooling. This ensures dependable operation, even after years of service.

- **Protected valve stem.** The valve stem and sealing surfaces are completely protected from dirt and corrosion by the stem cap, whether in an open or closed position.
- **In-line reparability.** All sealing valve components may be easily replaced in-line.
- **Long-term operation.** Piston valve design ensures actuation even after many years without operation.

Steam Distribution Manifold (MSD/SMSD)

As Steam Distribution Assemblies (MSD/SMSD), the manifolds place all steam supply valves in one location. Standardizing components and centralizing their location simplifies installation while providing cost savings. You also save because routine maintenance is faster. Insulation can also be provided...and can be a major savings in most installations.



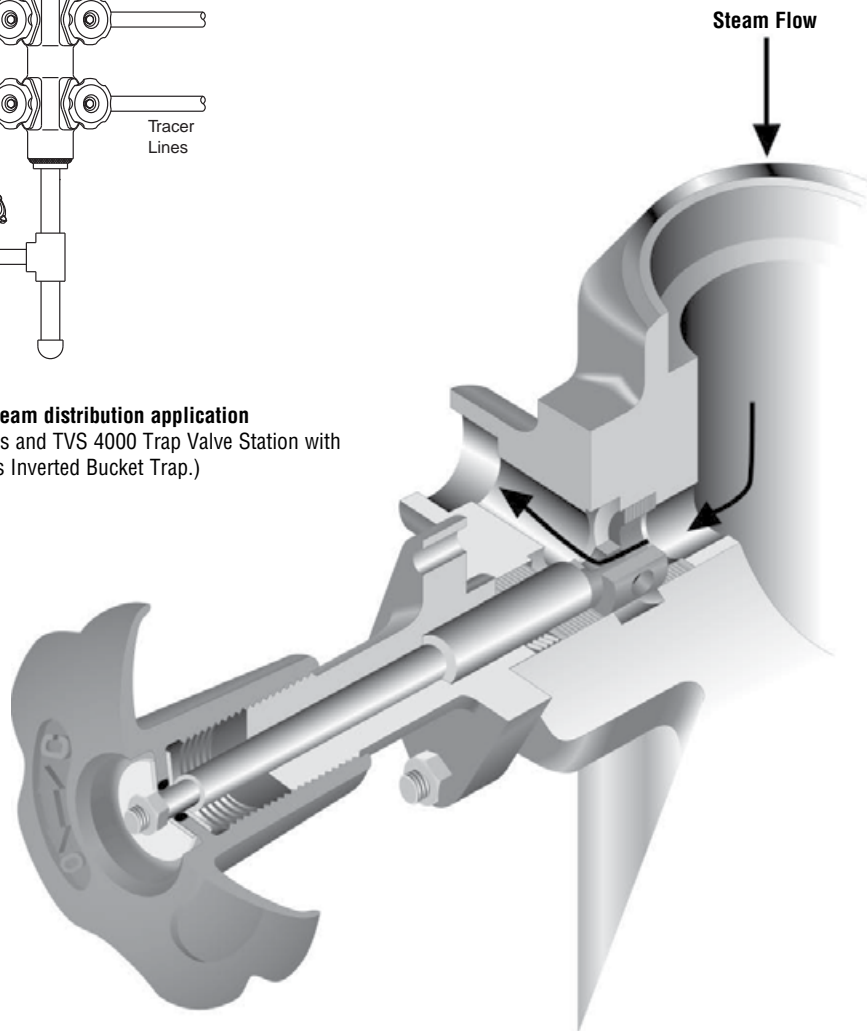
Typical SMSD steam distribution application
(shown with optional nipples and TVS 4000 Trap Valve Station with 2000 Series Inverted Bucket Trap.)

Cost Savings

- Reduced design specification costs
- Prefabrication vs. field assembly for easy installation
- Reduced shipping and field handling costs
- Lower long-term maintenance and operating costs
- 3-year guarantee

Design Flexibility

- Dimensional consistency
 - Space savings
 - Insulation package available
- SMSD may also be used on systems utilizing glycol, Dowtherm and other heat transfer liquids.



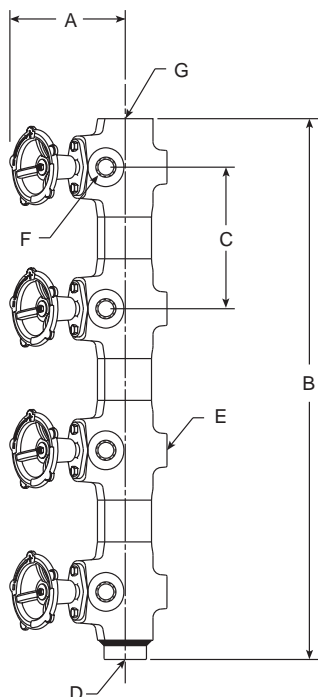
Steam Distribution Manifold (MSD/SMSD)

Physical Data												
Model	MSD Series						SMSD Series					
	MSD-04		MSD-08		MSD-12		SMSD-04		SMSD-08		SMSD-12	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
"A" n (Optional)	8	203	8	203	8	203	8	203	8	203	8	203
"B" Height	11-1/2	292	24-1/4	615	37-1/8	243	10-1/4	260	19-3/4	501	29-1/4	743
"C" C to C	6-3/8	162	6-3/8	162	6-3/8	162	4-3/4	120	4-3/4	120	4-3/4	120
"D" Blowdown Connection	3/4 SW	20	3/4 SW	20	3/4 SW	20	3/4 SW	20	3/4 SW	20	3/4 SW	20
"E" Number of Holes for Mounting (M14)	2	2	4	4	6	6	2	2	4	4	6	6
"G" Inlet	1-1/2 SW	40	1-1/2 SW	40	1-1/2 SW	40	1-1/2 SW	40	1-1/2 SW	40	1-1/2 SW	40
"F" Outlet	1/2	15	1/2	15	1/2	15	1/2	15	1/2	15	1/2	15
Weight, lb (kg)	21 (10)		46 (21)		67 (30)		20 (9)		40 (18)		59 (27)	
Maximum Operating Pressure	464 psi (32 bar) @ 752°F (400°C)											

*3/4" (20 mm) available – contact factory.

List of Materials	
Name	Material
Manifold Body	ASTM A105 forged steel
Handwheel	Ductile iron
Bonnet	ASTM A351 Gr. CF8M
Spring Washer	Stainless steel
Bonnet, Bolts	DIN 933, Gr. 8.8 per DIN 267
Piston & Stem	17% Chrome stainless steel
Valve Sealing Rings	Expanded graphite & stainless steel

For a fully detailed certified drawing, refer to CD #1097.



Steam Distribution Manifold



Steam Distribution Manifold
With TVS 4000, Inverted Bucket Drip Trap and Optional Stand

Pre-Assembled...Condensate Collection Assembly (CCA)

Armstrong combines its Trap Valve Stations (TVS) with manifolds into a package called the Condensate Collection Assembly (CCA). This prepackaged assembly offers many great benefits—cost savings in assembly, design flexibility and reduced purchasing and design time. The CCA with TVS 4000 Trap Valve Station and 2000 Series Inverted Bucket Traps is guaranteed for 3 years.

Cost Savings

This preassembled concept offers tremendous savings by reducing multiple component purchases that cause additional purchase order monitoring and shipping costs. Other savings include far less labor time required for field assembly.

This modular forged steel body design provides quick assembly/delivery, reducing overall project costs.

- Minimal welding vs complete manifold fabrication
- Eliminates multiple component purchases
- Reduced design specification costs
- Prefabrication vs. field assembly for easy installation
- Reduced shipping and field handling costs
- Lower long-term maintenance and operating costs
- 3-year guarantee

Design Flexibility

Armstrong can meet virtually any design parameter, including dimensional consistency, with your choice of socketweld or threaded connections. Armstrong inverted bucket, thermostatic, thermostatic wafer, bimetallic or disc steam traps can be provided or any other manufacturer's two-bolt steam trap can be used. If you require a specific piping arrangement, Armstrong can offer the flexibility to meet your specifications.

Materials

Manifold body: ASTM A105 forged steel

Removable Insulation Package

A removable insulation package is available for all steam and condensate manifolds.

- Inexpensive
- Quick to install
- Removable for maintenance
- Reusable after maintenance
- Weatherproof
- Formed to cover all manifold elements
- Strong, durable cover
- Available to fit all manifold sizes

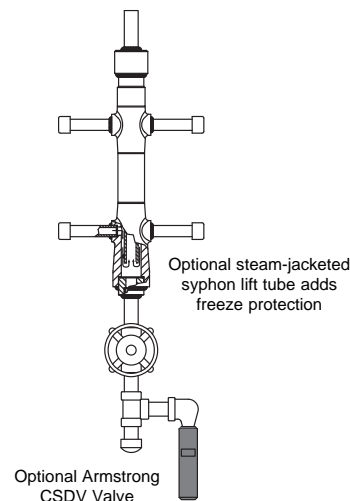
Freeze Protection Package (CCAF)—Optional

A manifold assembly for more efficient condensate return has another benefit—freeze protection. Armstrong's innovative manifold design actually serves as a heat station, heating one or more traps if the steam supply is interrupted or shut off to the traps. The protection is accomplished as long as one trap continues to discharge into the manifold. The manifold's internal syphon tube creates a water seal, which contains the flash steam from the discharge of the live trap. This allows radiant heat to protect shut-off traps from freezing.

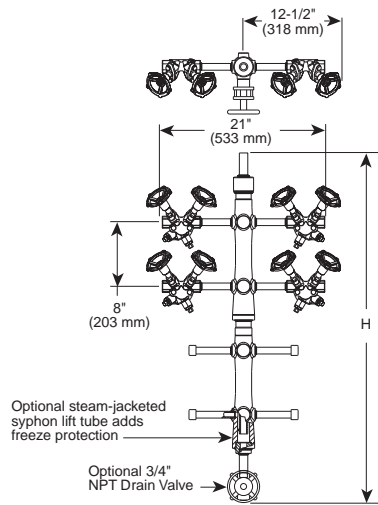
An optional freeze protection valve package senses condensate temperature. When this device opens, it drains condensate from the manifold assembly, thus providing further freeze protection.



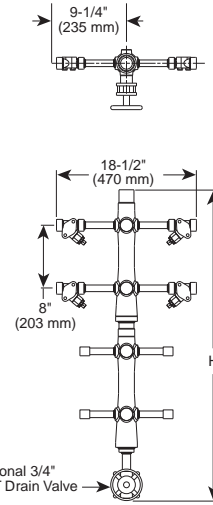
CCAF 212 Condensate Collection Assembly
(Shown with TVS 4000 Trap Valve Station with 2000 Series Inverted Bucket all stainless steel steam traps with optional removable insulation package including nipples, drain valve and stand.)



Pre-Assembled...Condensate Collection Assembly (CCA)



CCAF Condensate Collection Assembly with TVS 4000 Trap Valve Station, Optional Freeze Protection and Drain Valve.
Available with Armstrong's inverted bucket, disc, thermostatic, thermostatic wafer or bimetallic steam traps. Any manufacturer's 2-bolt steam trap can also be applied to Armstrong's trap connectors.



CCA Condensate Collection Assembly With IS-2 Connectors with Strainer, Blowdown Valve and Optional Drain Valve
Available with Armstrong's inverted bucket, disc, thermostatic, thermostatic wafer or bimetallic steam traps. Any manufacturer's 2-bolt steam trap can also be applied to Armstrong's trap connectors.

Physical Data										
Model	CCA-204		CCA-206		CCA-208		CCA-210		CCA-212	
"H"	in	mm	in	mm	in	mm	in	mm	in	mm
	23-1/8	587	31-1/8	790	39-1/8	994	47-1/8	1,197	55-1/8	1,400
Maximum Allowable Pressure	604 psi @ 800°F (42 bar @ 427°C)									

Physical Data										
Model	CCAF-204		CCAF-206		CCAF-208		CCAF-210		CCAF-212	
"H"	in	mm	in	mm	in	mm	in	mm	in	mm
	27-5/16	694	35-5/16	897	43-5/16	1,100	51-5/16	1,303	59-5/16	1,506
Maximum Allowable Pressure	604 psi @ 800°F (42 bar @ 427°C)									

How to Order Manifold Packages

Manifold Model	Number of Take-offs Per Manifold	Connection Size Take-offs, NPS in (mm)	Connection Size Top, NPS in (mm)	Connection Bottom, NPS in (mm)	Trap Valve Station
MSD Steam Distribution Manifold	04 08 12	2NPT = 1/2 (15) NPTF ¹ 2SW = 1/2 (15) SW ¹ 3NPT = 3/4 (20) NPTF 3SW = 3/4 (20) Socketweld	6SW = 1-1/2 (40) SW ¹ 6FW150 = 1-1/2 (40) 150# RF Flange 6FW300 = 1-1/2 (40) 300# RF Flange 8FW150 = 2 (50) 150# RF Flange 8FW300 = 2 (50) 300# RF Flange	3SW = 3/4 (20) SW ¹ 3NPT = 3/4 (20) NPTF 3WD = 3/4 (20) Welded Dripleg ² 3TD = 3/4 (20) Threaded Dripleg ²	TVS 4000 IS2 with BD IS2 Standard None
CCAF Condensate Collection Assembly	204 206 208 210 212		6PE = 1-1/2 (40) Plain End ¹ 6FW150 = 1-1/2 (40) 150# RF Flange	3NPT = 3/4 (20) NPTM ¹ 3DVN = 3/4 (20) Drain Valve NPTM/NPTM 3DVS = 3/4 (20) Drain Valve SW/NPTM	
CCAF Condensate Collection Assembly Freeze Protection			3PE = 3/4 (20) Plain end ¹ 3NPT = 3/4 (20) NPTM 3FW150 = 3/4 (20) 150# Flange		

- Armstrong stocks manifold cores (less nipples, drain valves and trap stations) in these connections.
- Must pick this bottom connection to use trap station (TVS 4000 only choice) and trap on MSD and SMSD.
- Nipples connecting manifold to trap station can be Schedule 80 (standard) or schedule 160 (optional).

ALL STAINLESS STEEL FILLED PRESSURE GAUGES



APPLICATIONS

For corrosive atmospheres and fluids, resistant to high dynamic pressure loads and vibrations.
Well suited for the process industry applications including: Petrochemical, Chemical plants, and energy etc.

SPECIFICATIONS

CONTENTS

DIMENSIONS	100mm
ACCURACY	Class $\pm 1.0\%$
PRESSURE RANGES	-1/0 to -1/+20 kg/cm ² (bar) 0/1 to 0/1500 kg/cm ² (bar)
TEMPERATURE	Working temperature 100°C max. Ambient temperature around: -20°C~60°C AISI 316, LM or LBM/CBM
CONNECTIONS	Size : 22mm 3/8", PT, NPT, PF, BSP 1/2", PT, NPT, PF, BSP
SENSING ELEMENT	Bourdon Tube, AISI 316 DIN 50049 (AISI 316 Ti) < 70 kg/cm ² (bar) Coil ≥ 70 kg/cm ² (bar) Helicoil
MOVEMENT	AISI 316
DIAL	White aluminium, black lettering
POINTER	Black aluminium
CASE	AISI 304
UPPER RING	AISI 304
FILLING	Glycerine (99.5%)
WINDOW	Normal glass, Laminated safety glass Acrylic
ORDER OPTIONS	Filling fluids optional Flange Red mark pointer U-shape clamp

BI-METAL THERMOMETERS



APPLICATIONS

Transformer dyeing, drier, food processing, boiler, air conditioning equipment, and other industrial machines

SPECIFICATIONS

CONTENTS

DIMENSION	26.5mm, 35mm, 50.6mm, 65mm, 80.5mm, 118mm, 130mm, 160mm
CASE	AISI 304
SENSOR STEM MATERIAL	AISI 304 or AISI 316
DIAL	White aluminium, black lettering
TEMPERATURE	-50~+600℃
O.D. OF SENSOR STEM	Standard: ø6.5mm, range 4~12mm
LENGTH OF SENSOR STEM	2"~25"
ACCURACY	± 1.0%

PRESSURE GAUGE ACCESSORIES

PIPE SEPARATOR



FEATURES

Connective thread includes four parts-cap nut, front ring, rear metal ring, divert connector. Applications include chemical fluid industry, manufacturing control, petroleum, equipment testing etc. Except for highly corrosive fluid, most of other fluids are safe to use this divert connector without leakage.

SPECIFICATIONS

SPECIFICATIONS

MATERIAL

DIMENSION

CONTENTS

Direct connector, L-shape connector, three-way connector

AISI 316

Female thread inner diameter:

6mm~25mm

Male thread length: 1/8"~1"

*Customised designs available

SIPHON



APPLICATIONS

Widely used in vapourised high temperature equipments or the vaporisation from percolated & saturated fluid.

SPECIFICATIONS

CONNECTION

PRESSURE RANGE

CONTENTS

1/4" ~ 3/8" ~ 1/2" PT, NPT, PF, BSP F/M

Carbon steel (150 bar 430°C max.)

AISI 316 stainless steel (135 bar 450°C max.)

*Customised designs available

