



 **HAM-LET**  **ASTAVA**

Monoflange Valves

OVERVIEW

The HAM-LET ASTAVA monoflange range is designed to seamlessly connect process piping to instrumentation. By offering a primary isolate bonnet, our line of monoflanges are able to replace bulky conventional assemblies with a single efficient product.

Features

- Certified for ISO 15848-1:2006(E), (With PEEK or Polyimide seals)
- Working pressure range up to 10,000 psi
- Working Temperature range up to 550°C (1022°F)
- Blowout-proof stem
- Integrated back seat on stem for a secondary seal in the fully opened position
- Safety stop pin – prevents the bonnet from detaching the body due to vibration
- Stem seals below stem threads
- A choice of O-ring materials
- Oxygen clean per ASTM G-93 as an option
- 100% Factory Tested Compliant with MSS-SP-99
- Direct mount flange design per IEC61518 / DIN19213
- Available in single block, block and bleed and double block and bleed configurations as well as tailor made solutions
- Option for primary isolate bolted bonnet, OS&Y, Fire Safe BS 6755 part 2, Supagraf premier packing in accordance with API 607
- Flange connections from 1/2" to 2" in accordance with ASME B16.5, API or EN 1092-1
- Anti-tamper handles for vent bonnet

Benefits

- Space saving in relation to traditional block and bleed valves
- Less leakage points
- Lighter than equivalent traditional assembly
- Reduced maintenance
- Simpler installation
- Option to use as primary isolate

Industries

- Oil & gas
- Chemical
- Petrochemical
- Power generation
- FPSO



MONOFLANGE FEATURES

The following unique features of the HAM-LET ASTAVA Line of Instrument Monoflanges enable tailoring our high-quality products to the exact requirement of the customer and application:

SOUR GAS APPLICATIONS

All Monoflanges comply to NACE MR-01-75 / MR-01-03 as standard.

FULL TRACEABILITY

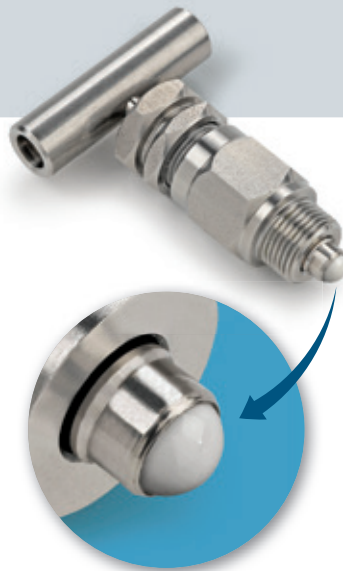
All products are fully traceable to its components.

STANDARDS

Pressure ratings and flange dimensions comply with ASME B16.5.
Option to comply with API 6A & EN1092-1 standards

CERAMIC STEM BALL TIP Al_2O_3

Superior hardness prevents deformation of the sealing tip and wear, significantly increasing the lifetime of the product for isolation purposes.



BONNET SELECTIONS

O-ring stem-seal bonnet

1. No packing adjustment
2. Extremely low operating torque
3. Compact design
4. Long life cycle
5. Sealing below stem thread
6. Metal-to-Metal bonnet option

Packing stem-seal bonnet

1. Wide chemical compatibility range
2. High temperature option (Grafoil®)
3. Low operating torque
4. Sealing below stem thread

Outside bolts & yolk (OS&Y)

1. Fire-safe (API 607)
2. Supagraf Premier packing
3. Primary isolate
4. Allows for close coupling

STEM MATERIAL

ST. ST. 316 Ti with chromium carbide diffusion coating

1. Long life cycle
2. Prevent galling

Grafoil — TM GrafTech International Holdings, Inc.

BONNET AND STEM CONCEPT

The special sealing design applied in all HAM-LET ASTAVA Instrument Monoflanges features a non-rotating ceramic ball tip.

The chemical composition of a ceramic ball tip is superior in hardness and functionality to a metal ball tip, eliminating sealing tip deformation and significantly increasing the life time of the product.

The stem threads are rolled and an integrated back seat design is applied to the packing type of bonnet. Applying a Stainless Steel 316 Ti stem with a chromium carbide diffusion coating results in maximum operation cycles and minimal risk of stem galling. Both packing and O-ring bonnets are designed with sealing below stem threads for maximum protection of the stem threads.

For maximum safety, the bonnet design prevents stem blowout, and a locking pin prevents unintentional disassembling of the bonnet.



HANDLE OPTIONS

The standard handle of the HAM-LET ASTAVA Line of Instrument Monoflanges is a Stainless Steel T-bar. For high pressure applications of 10,000 psi (690 bar) an extended T-bar or hand wheel can be applied. Anti-tamper bonnet and key* lock options assure that the monoflange is operated by qualified personnel only.

*Not included in order of Anti-Tampered bonnet monoflange. This key should be separately ordered.

CLEANING

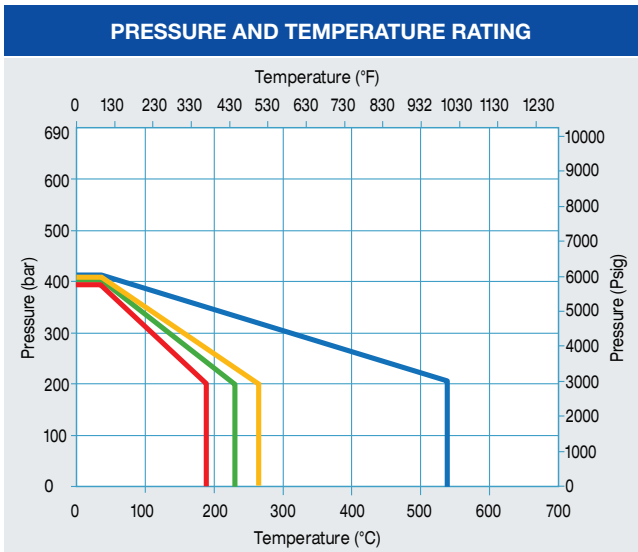
All HAM-LET instrument monoflanges are cleaned in accordance with ASTAVA cleaning procedure WIQ-016. Oxygen clean is available in accordance with ASTM G-93.

TESTING

All HAM-LET instrument monoflanges are factory tested with Nitrogen at 800 psig (55 bar) based on MSS-SP-99. The Hydrostatic and Helium leak test is available upon request.

SLIMLINE LEAKAGE RATES:

In accordance with Fugitive Emissions rate B of 77/3312 rev. 30-12-2004

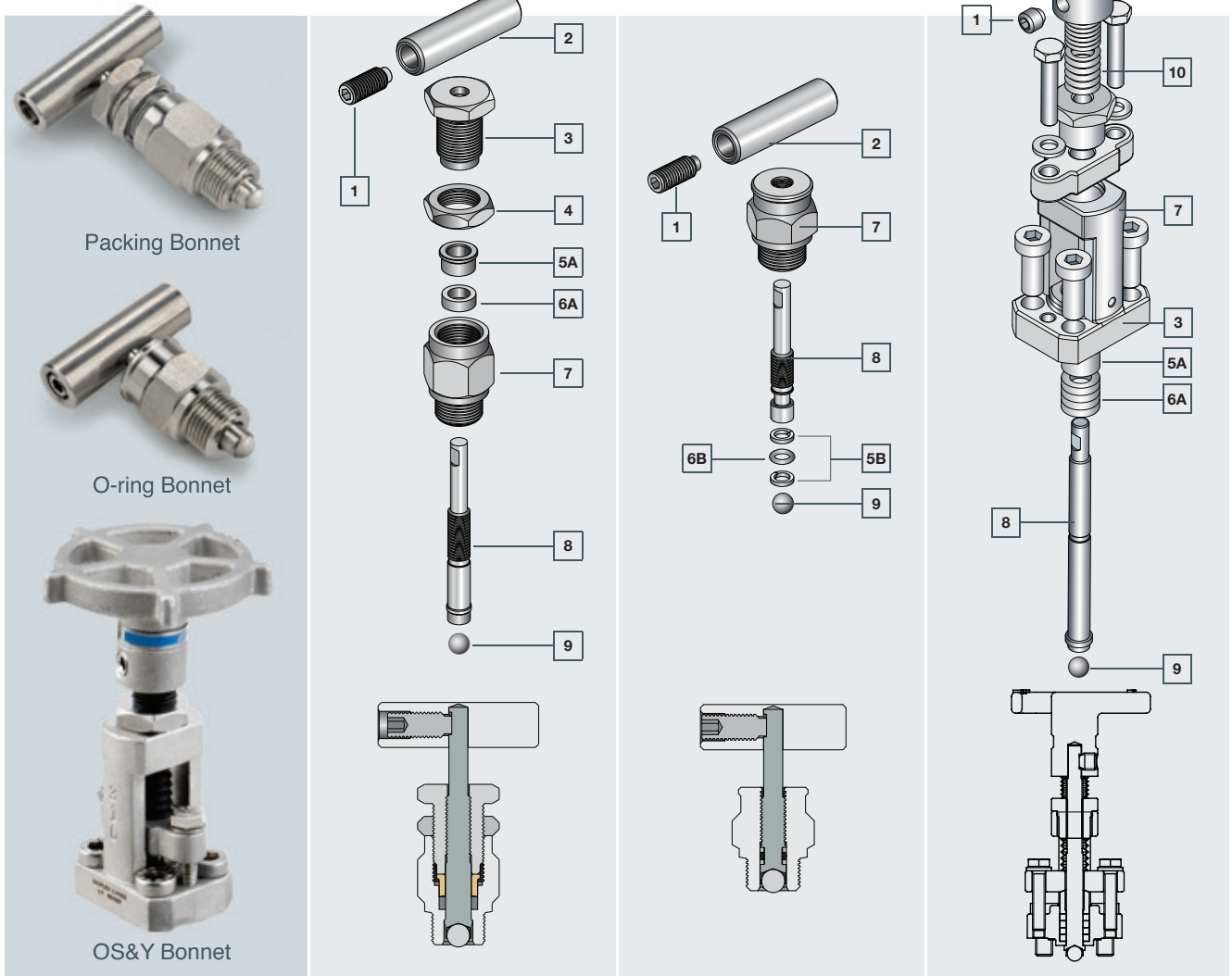


Packing Material	Grafoil®	Down to -60°C (-76°F)
	PTFE	Down to -60°C (-76°F)
	PEEK	Down to -60°C (-76°F)
	Polyimide	Down to -10°C (14°F)
O-Ring Material	Fluorocarbon FKM	Down to -20°C (-4°F)
	NBR	Down to -34°C (-29°F)
	Perfluor	Down to -40°C (-40°F)
	EPDM	Down to -45°C (-49°F)

Temperature	-50°C	200°C
Tightness class	B	B
FE primary	3 x 10 ⁻⁶	8 x 10 ⁻⁶
FE secondary	1 x 10 ⁻⁶	3 x 10 ⁻⁶

Grafoil —TM GrafTech International Holdings, Inc.

MATERIAL OF CONSTRUCTION



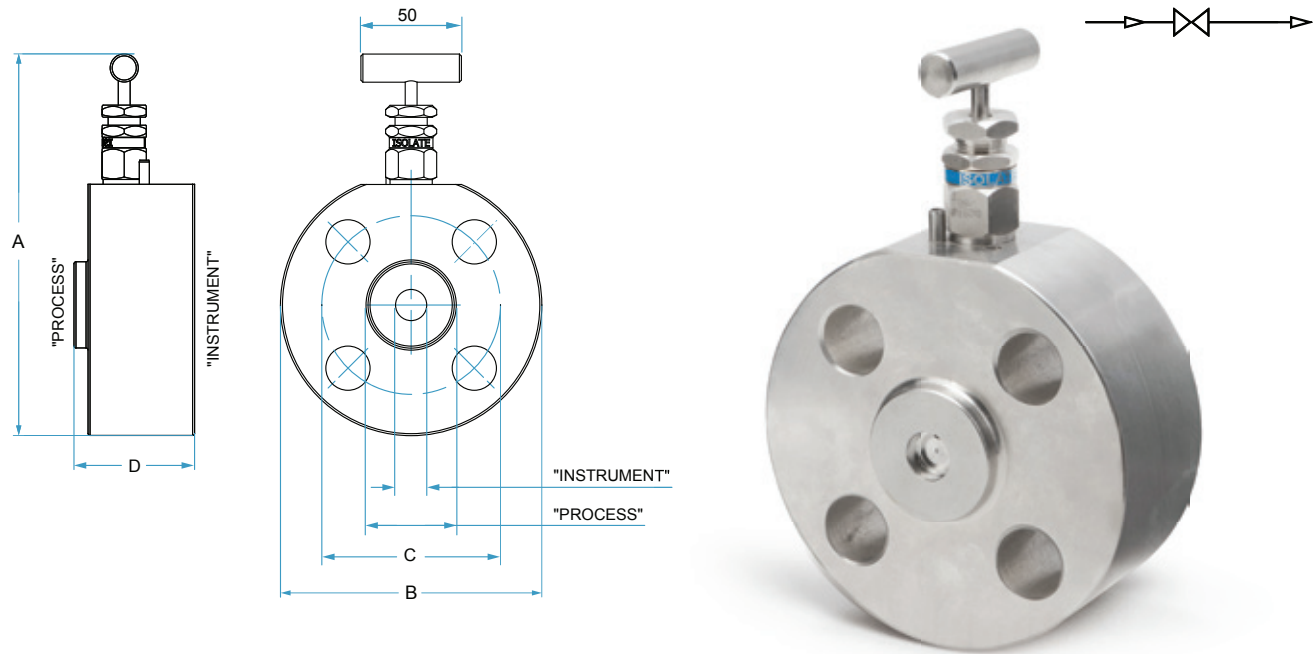
				Packing Bonnet		O-ring Bonnet		OS&Y Bonnet	
No	Part	Qty.	Material	Qty.	Material	Qty.	Material	Qty.	Material
1	Set Screw	1	St.St. 304	1	St.St. 304	1	St.St. 304	1	St.St. 304
2	Handle	1	St.St. 316L	1	St.St. 316L	1	St.St. 316L	1	St.St. 316L
3	Gland	1	St.St. 316L	-	-	1	W.Nr. 1.4480	-	-
4	Locking Nut	1	St.St. 316L	-	-	-	-	-	-
5A	Pressure ring	1	St.St. 316L	-	-	1	St.St. 316L	-	-
5B	Back-up ring	-	-	2	Virgin PTFE	-	-	-	-
6A	Stem Packing	1	Virgin PTFE	-	-	4	Supagraf Premier	-	-
6B	Stem O-ring	-	-	1	Fluorocarbon FKM	-	-	-	-
7	Bonnet	1	St.St. 316L	1	St.St. 316L	1	St.St. 329	-	-
8	Stem	1	St.St. 316Ti Chrome-Carbide diffusion coated	1	St.St. 316Ti Chrome-Carbide diffusion coated	1	Monel K500	-	-
9	Ball	1	Ceramic (Al ₂ O ₃)	1	Ceramic (Al ₂ O ₃)	1	Ceramic (Al ₂ O ₃)	-	-
10	Bellow	-	-	-	-	1	EPDM	-	-

STANDARD CONFIGURATION DIMENSIONS

SINGLE BLOCK MONOFLANGE VALVES

Process Flange Size	Instrument	Vent/Bleed	HAM-LET ordering description	Dimensions							
				A		B		C		D	
				mm	in	mm	in	mm	in	mm	in
1/2" (DN15)	1/2" FNPT	-	MF-121202-SS-T-T	157	6.18	95	3.74	66.7	2.62	60	2.36
3/4" (DN20)	1/2" FNPT	-	MF-221202-SS-T-T	177	6.97	115	4.53	82.6	3.25	60	2.36
1" (DN25)	1/2" FNPT	-	MF-321202-SS-T-T	187	7.36	125	4.92	88.9	3.5	60	2.36
1 1/2" (DN40)	1/2" FNPT	-	MF-421202-SS-T-T	217	8.54	155	6.1	114.3	4.5	60	2.36
2" (DN50)	1/2" FNPT	-	MF-521202-SS-T-T	227	8.94	165	6.5	127	5	60	2.36

Dimensions are according to ASME B16.5 at rating 300 lbs with the packing bonnet.
These dimensions are subject to change without notice.

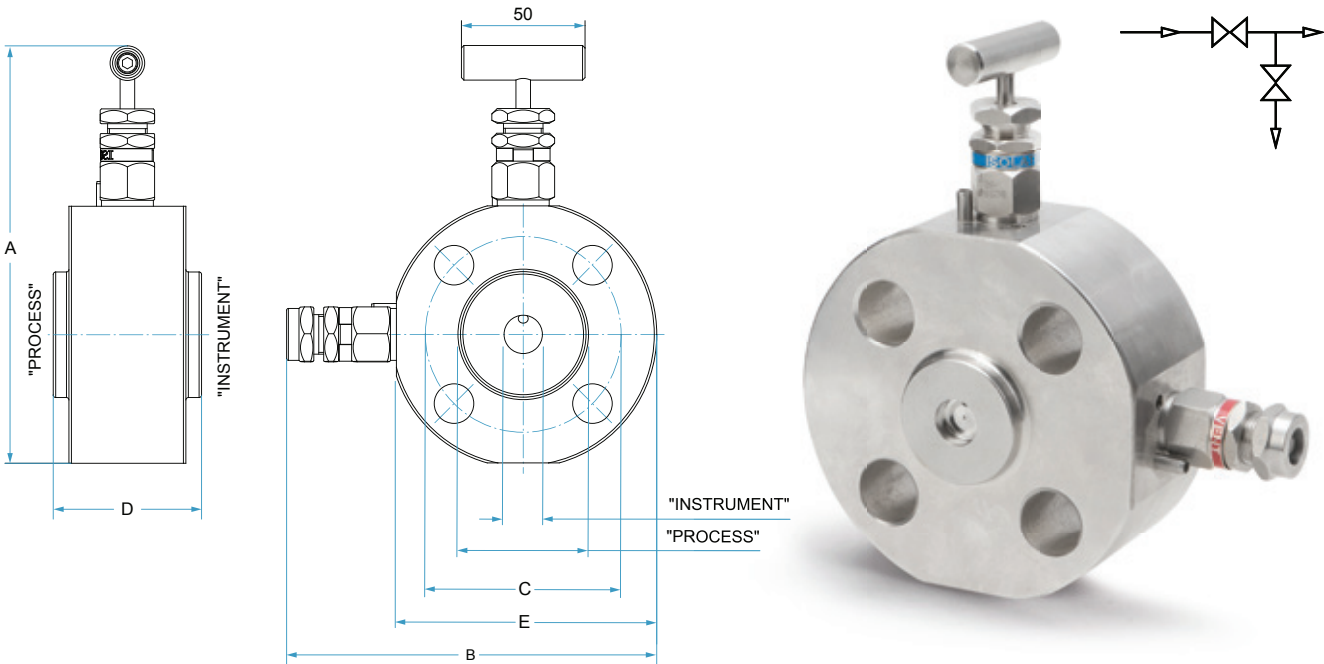


STANDARD CONFIGURATION DIMENSIONS

SINGLE BLOCK & BLEED MONOFLANGE VALVES

Process Flange Size	Instrument	Vent/Bleed	HAM-LET ordering description	Dimensions									
				A		B		C		D		E	
				mm	in	mm	in	mm	in	mm	in	mm	in
1/2" (DN15)	1/2" FNPT	1/4" FNPT	MF-121213-SS-T-T	157	6.18	137	5.39	66.7	2.62	60	2.36	95	3.74
3/4" (DN20)	1/2" FNPT	1/4" FNPT	MF-221213-SS-T-T	177	6.97	157	6.18	82.6	3.25	60	2.36	115	4.53
1" (DN25)	1/2" FNPT	1/4" FNPT	MF-321213-SS-T-T	187	7.36	167	6.57	88.9	3.5	60	2.36	125	4.92
1 1/2" (DN40)	1/2" FNPT	1/4" FNPT	MF-421213-SS-T-T	217	8.54	197	7.76	114.3	4.5	60	2.36	155	6.1
2" (DN50)	1/2" FNPT	1/4" FNPT	MF-521213-SS-T-T	227	8.94	207	8.15	127	5	60	2.36	165	6.5

Dimensions are according to ASME B16.5 at rating 300 lbs, the primary isolate is a packing bonnet and the vent bonnet is standard. These dimensions are subject to change without notice.

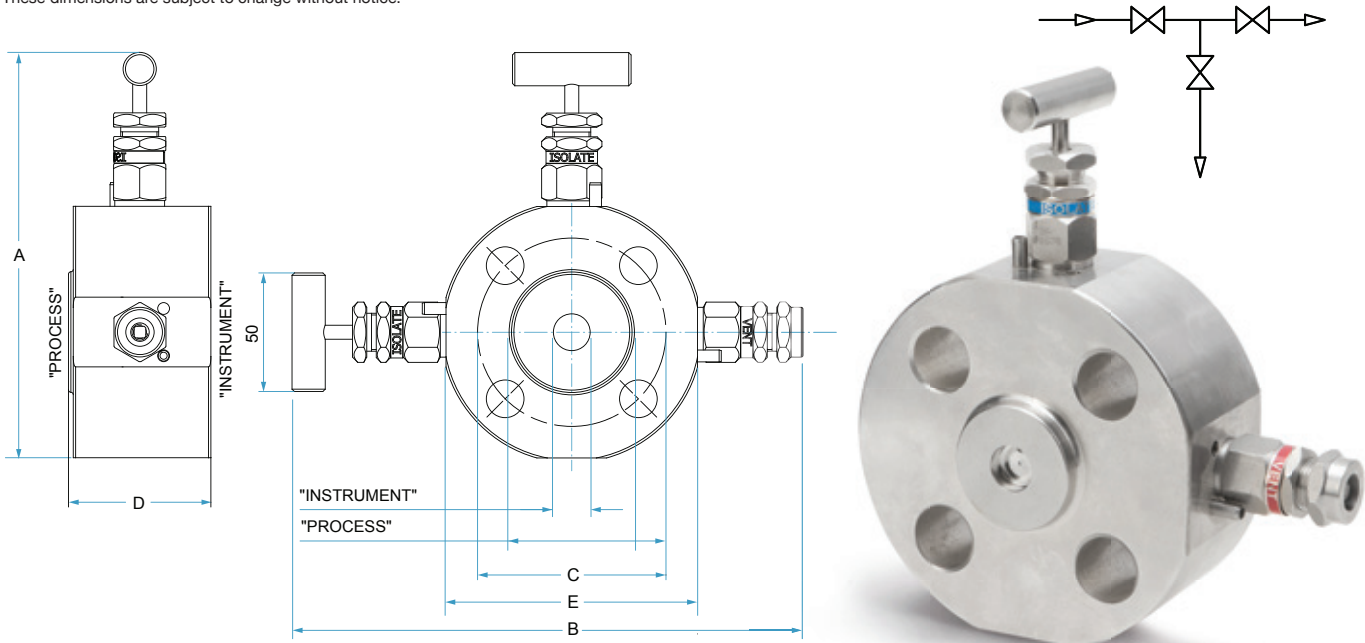


STANDARD CONFIGURATION DIMENSIONS

DOUBLE BLOCK & BLEED MONOFLANGE VALVES

Process Flange Size	Instrument	Vent/Bleed	HAM-LET ordering description	Dimensions									
				A		B		C		D		E	
				mm	in	mm	in	mm	in	mm	in	mm	in
1/2" (DN15)	1/2" FNPT	1/4" FNPT	MF-125214-SS-T-T	157	6.18	202	7.92	66.7	2.62	60	2.36	95	3.74
3/4" (DN20)	1/2" FNPT	1/4" FNPT	MF-225214-SS-T-T	177	6.97	222	8.74	82.6	3.25	60	2.36	115	4.53
1" (DN25)	1/2" FNPT	1/4" FNPT	MF-325214-SS-T-T	187	7.36	232	9.13	88.9	3.5	60	2.36	125	4.92
1 1/2" (DN40)	1/2" FNPT	1/4" FNPT	MF-425214-SS-T-T	217	8.54	262	10.31	114.3	4.5	60	2.36	155	6.1
2" (DN50)	1/2" FNPT	1/4" FNPT	MF-525214-SS-T-T	227	8.94	272	10.71	127	5	60	2.36	165	6.5

Dimensions are according to ASME B16.5 at rating 300 lbs, the primary and secondary isolate is a packing bonnet and the vent bonnet is standard. These dimensions are subject to change without notice.



ORDERING INFORMATION FOR FLANGE ASME B16.5

MF-1		2		3		4		1		3		/BB - SS - T - LD - PL		Optional	
Flange size		Rating		Instrument connection		Flowscheme		Body Material		Handle		Option			
MF-1	1/2" (DN15)*	1	150 LBS	1	1/4"-18 NPT (F)	0	(Adapter flange)	SS	SS 316	T	T bar	* Key should be separately ordered	PL	Locking device for primary isolate	
MF-2	3/4" (DN20)*	2	300/600 LBS*	2	1/2"-14 NPT (F)	1	Single vent	M	Alloy 400	AT	Anti Tamper*				
MF-3	1" (DN25)*	3	900,(1500) LBS	3	DIN 3852-X-G1/4 - 19	2	Single block	D	Duplex 1.4462	LD	Locking device*				
MF-4	1 1/2"(DN40)*	4	(2500) LBS	4	DIN 3852-X-G1/2 - 14	3	Block-bleed	HC	Alloy C-276						
MF-5	2"(DN50)*	5	150/(600) LBS**	5	Ring type joint or raised face*	4	Block-bleed -block	A6	Alloy 625			P	Blind plug		
		6	900/(2500) LBS**					A8	Alloy 825			B	Bleed valve		
								T	Titanium						
								SD	Super Duplex						
				</											

ORDERING INFORMATION FOR FLANGE API SPEC 6A

MF-A1		2		3		4		1		3		-	SS		-	T		-	LD		-	Optional PL	
Flange size		Rating		Instrument connection		Flowscheme		Body Material		Handle		Option											
MF-A1	1 13/16"	3	3000 PSI	1	1/4"-18 NPT (F)	0	(Adapter flange)	SS	SS 316	T	T bar	PL	Locking device for primary isolate										
MF-A2	2 1/16"	5	5000 PSI	2	1/2"-14 NPT (F)	1	Single vent	M	Alloy 400	AT	Anti Tamper*	P	Blind plug										
* In accordance with API SPEC 6A		1	10,000 PSI	3	DIN 3852-X-G1/4 - 19	2	Single block	D	Duplex 1.4462	LD	Locking device*	B	Bleed valve										
		4	DIN 3852-X-G1/2 - 14	3	Block-bleed	HC	Alloy C-276	* Key should be separately ordered															
		5	Same as process connection	4	Block-bleed-block	A6	Alloy 625																
								A8	Alloy 825														
								T	Titanium														
								SD	Super Duplex														

ORDERING INFORMATION FOR FLANGE EN 1092-1

MF-E1		2	3	4	1	3	/BB - SS - T - LD - ^{Optional} PL																																								
Flange size		Rating		Instrument connection		Flowscheme		Body Material		Handle																																					
MF-E1	20 (3/4")	A	PN 2,5	1	1/4"-18 NPT (F)	0	(Adapter flange)	SS	SS 316	T	T bar																																				
MF-E2	25 (1")	B	PN 6	2	1/2"-14 NPT (F)	1	Single vent	M	Alloy 400	AT	Anti Tamper*																																				
MF-E3	32 (1 1/4")	C	PN 10	3	DIN 3852-X-G1/4 - 19	2	Single block	D	Duplex 1.4462	LD	Locking device*																																				
MF-E4	40 (1 1/2")	D	PN 16	4	DIN 3852-X-G1/2 - 14	3	Block-bleed	HC	Alloy C-276	* Key should be separately ordered																																					
MF-E5	50 (2")	E	PN 25	5	Same as process connection	4	Block-bleed -block	A6	Alloy 625	<div>Option</div> <table><tr><td>PL</td><td>Locking device for primary isolate</td></tr><tr><td>P</td><td>Blind plug</td></tr><tr><td>B</td><td>Bleed valve</td></tr></table>		PL	Locking device for primary isolate	P	Blind plug	B	Bleed valve																														
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* In accordance with EN 1092-1		F	PN 40	<div>Process connection</div> <table><tr><td>1</td><td>Raised face B1</td></tr><tr><td>2</td><td>Ring type joint</td></tr><tr><td>3</td><td>Captive bolting raised face</td></tr><tr><td>4</td><td>Captive bolting ring type joint</td></tr></table>		1	Raised face B1	2	Ring type joint	3	Captive bolting raised face	4	Captive bolting ring type joint	<div>Vent connection</div> <table><tr><td>1</td><td>1/4"-18 NPT (F)</td></tr><tr><td>2</td><td>1/2"-14 NPT (F)</td></tr><tr><td>3</td><td>DIN 3852 - X - G1/4 - 19</td></tr><tr><td>4</td><td>DIN 3852 - X - G1/2-14</td></tr></table>		1	1/4"-18 NPT (F)	2	1/2"-14 NPT (F)	3	DIN 3852 - X - G1/4 - 19	4	DIN 3852 - X - G1/2-14	<div>Slimline configuration</div> <table><tr><td>Blank</td><td>Standard</td></tr><tr><td>/BB</td><td>Slimline*</td></tr></table> <p>* Primary isolate bolted bonnet, OS&Y, Fire Safe BS 6755 part 2, Supagrat premier packing, API 607</p>		Blank	Standard	/BB	Slimline*	<div>Packing</div> <table><tr><td>T</td><td>PTFE</td></tr><tr><td>G</td><td>Grafoil®</td></tr><tr><td>PK</td><td>PEEK</td></tr><tr><td>PI</td><td>Polyimide</td></tr><tr><td>V</td><td>Fluorocarbon FKM</td></tr><tr><td>EP</td><td>EPDM</td></tr><tr><td>BU</td><td>NBR</td></tr><tr><td>KZ</td><td>Perfluorelastomer</td></tr></table>		T	PTFE	G	Grafoil®	PK	PEEK	PI	Polyimide	V	Fluorocarbon FKM	EP	EPDM	BU	NBR	KZ	Perfluorelastomer
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