

Monoflanges



Stewart-Buchanan Gauges Ltd

AN EMPLOYEE-OWNED COMPANY



About Us

At Stewart-Buchanan Gauges, we are a company that likes to stay one step ahead. Our commitment to innovation has led to an enviable reputation as a manufacturer of market-leading, technically advanced products. This reputation has enabled us to grow in highly competitive markets across Europe and around the world.

Founded in Glasgow in the 1870's, we have thrived over our long history because we put our customers at the heart of everything we do. As an employee-owned company, our workforce is dedicated to manufacturing products of the highest quality to meet or even exceed the needs of our customers.

We employ over 120 people at our 4,000 square metre production facility located near Glasgow, Scotland. The plant is home to state-of-the-art machinery, including the Manufacturing Resource Planning system (MRP II), 3D design and CNC machines, enabling us to use the very latest manufacturing techniques.

VISION STATEMENT

An employee owned company responding to customer demands while setting the standards for Safety, Quality and Reliability.

MISSION STATEMENT

To recognize and exceed customer expectations. To build a strong ownership culture to create sustainable employment and the opportunity for each employee to contribute and succeed.

WE DESIGN & MANUFACTURE:

- Pressure Gauges
- Temperature Gauges
- High Pressure Needle & Ball Valves
- Needle Valve & Ball Valve Manifolds
- Monoflanges & OS&Y Monoflanges
- Double Block & Bleed Valves
- Injection Valves
- Sampling Valves
- Distribution Manifolds & Instrumentation
- Panel & Instrument Assemblies/Enclosures

MAIN MARKETS

Our main markets include, but are not limited to:

- Oil and Petrochemical
- Gas and Compressed Air
- Power Generation
- Original Equipment Manufacturers (OEM)
- Food and Beverage
- Hydraulic
- Heating and Ventilation
- Test and Inspection
- Manufacturing Process

Stewarts

Range of monoflange valves are specially designed to be installed directly onto your process equipment. The monoflange can be used for the direct attachment of pressure instrumentation where there is an ASME/ANSI integral flange present. They can also be “sandwiched” between sets of equipment to satisfy various design requirements of the system. The “single piece” integral design, used in place of flange adapters and separate valves, will reduce the number of potential leak paths while making your system much more compact.

Further advantages will be achieved in significant weight and component cost savings when compared to other conventional installation solutions.

Monoflanges can be configured as either single block and bleed, or double block and bleed; with a plugged vent port for the bleed. The double block and bleed is also available with the Stewarts OS&Y needle valve in the primary isolation position.

Monoflanges, used in installations in accordance with ASME/ANSI standards, feature all metal sealing in the valve seat with metal to metal, bonnet to manifold interface seal.

We manufacture in a full range of materials, flange types and ratings as well as offering a choice of outlet types, including threaded, flanged, integral SWIVEMAS® connection or chemical seal

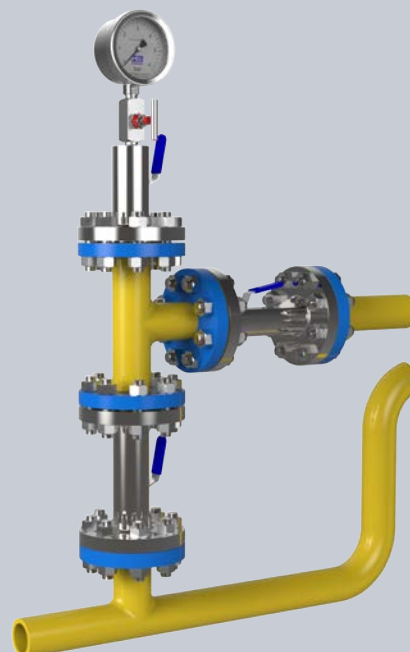
(specifically the Monoseal; for use and sold with Stewarts pressure gauges).

Continued on next page

Monoflanges



Traditional Hookup



Monoflanges

CONSTRUCTION

Manufactured from a single piece body; incorporating the valve heads and outlet connections.
Has trace code on body with material certificates available for all wetted parts on request.

Configurations

MONO - Single Block and bleed - Standard Isolate and Vent Valve (plugged port), Aux process connection.
DBBM - Double Block and Bleed - 2 x Standard Isolate and Vent Valve (plugged port).
OSYM - Double Block and Bleed - OS&Y Primary Isolate, Standard Secondary Isolate and Vent Valve (plugged port).
6033 - Single Block and bleed - Standard Isolate and Vent Valve (plugged port), Aux process connection, Integral Chemical Seal Output.

Inlet

The flanged process connection can be made to suit any International size or rating including, but not restricted to:
* ASME B16.5 & EN1092-1 Flanges from 1/2" to 2" in ratings from 150 to 2500 lbs in RF, and RTJ flange face styles.
* API 6A Flanges up to 2-1/16", 3000, 5000 & 10,000 lbs

Vent

1/4" NPT female vent as standard, others available upon request.

Outlet

Screwed female connections (1/2" NPT standard)
Auxiliary process (alternate instrument) plugged connection (1/2" NPT standard)
Alternatively in the Flange by Flange variants the outlet flange is identical to the inlet process flange.
Integral SWIVEMAS® connections to Stewarts Pressure Gauge or
Integrated connections to Stewarts Diaphragm Seal Gauge
(Monoseal - Model 6033, see SBG gauge catalogue for further details)

Pressure Rating

Pressure rating up to 10,000 psi (690 bar) - Standard needle valve manifold pressure as per flange / material rating

NACE (Optional)

All body & wetted parts materials (grades used) comply with the requirements of NACE MR 0175 / ISO15156.
It is the responsibility of the designer of the process system to ensure the correct material is selected.

NORSOK (Optional)

All NORSOK M-630 materials sourced from NORSOK M-650 approved mills on request

Fire safe (Optional)

On request, valves can be fire safe to BS 6755 Pt 2. (Max 6000 psi)

Note:- SWIVEMAS® connection conforms to ISO14000 / 14

*Close-Coupled Double Block and Bleed MONOFLANGES
Horizontal & Vertical Mount*



MONOFLANGES AT A GLANCE



Configuration Options

Other designs on request.



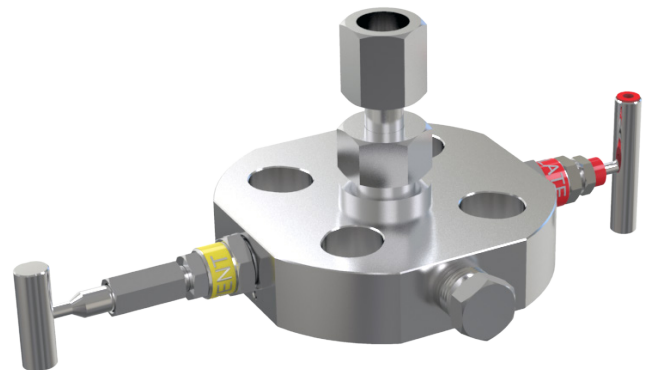
Close-Coupled Double Block and Bleed MONOFLANGE with IEC 61518 TYPE B Outlet connection (not differential) Horizontal Mount. Primary OSY isolate, standard needle valve in secondary isolate and vent, with 1/4" NPT plugged vent outlet.



Close-Coupled Double Block and Bleed MONOFLANGE with IEC 61518 TYPE B Outlet connection (not differential) Vertical Mount. Primary OSY isolate, standard needle valve in secondary isolate and vent, with 1/4" NPT plugged vent outlet.

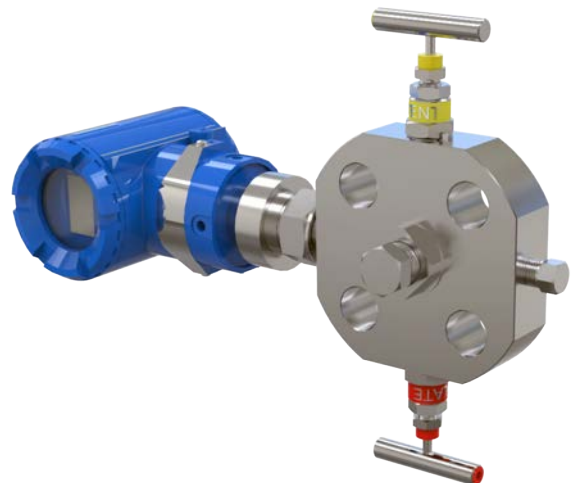


*Through bore, multi outlet, MONOFLANGE manifold.
Branch 1, double block – OS&Y Isolate-HP outlet-OS&Y Isolate-HP outlet.
Branch 2, single block – OS&Y Isolate-HP outlet*



*Block and bleed SWIVEMAS MONOFLANGE with anti-tamper vent valve.
Standard needle valve in primary isolate and vent; 1/4" NPT plugged. 1/2" NPT auxiliary port.*

Direct transmitter mounting – Mount any of the world leading transmitter makes, with compatible connections, to any Stewarts MONOFLANGE for ultimate protection and ease of maintenance. Contact SBG sales to discuss connection options.



The above represents only a small selection of specials supplied to our many customers. With our sales and engineering teams working closely with clients, we tailor our solutions to create superlative products for any application.

STEWART-BUCHANAN GAUGES LTD

Sales Office & Manufacturing Facility - 7 Garrell Road, Burnside Industrial Estate Kilsyth, Glasgow G65 9JX, SCOTLAND
Tel: +44 (0)1236 821533 | Fax: +44 (0)1236 824090 | E-mail: sales@stewarts-group.com | Web: stewarts-group.com

DATA SHEET REF: Mono specials-REV02-15

NOTES



STEWART-BUCHANAN GAUGES LTD

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DATA SHEET REF: NOTES SPACER-REV01-14



MODEL - MONO



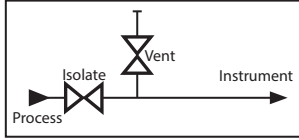
BLOCK AND BLEED MONOFLANGE (With vent plug)

TWO VALVE MANIFOLD

Rated as flange
Standard Isolate and Vent Valve (plugged port), Aux process connection.

ISOLATE	Red
VENT	Yellow
EQUALIZE	Blue

Valve Colour Coding



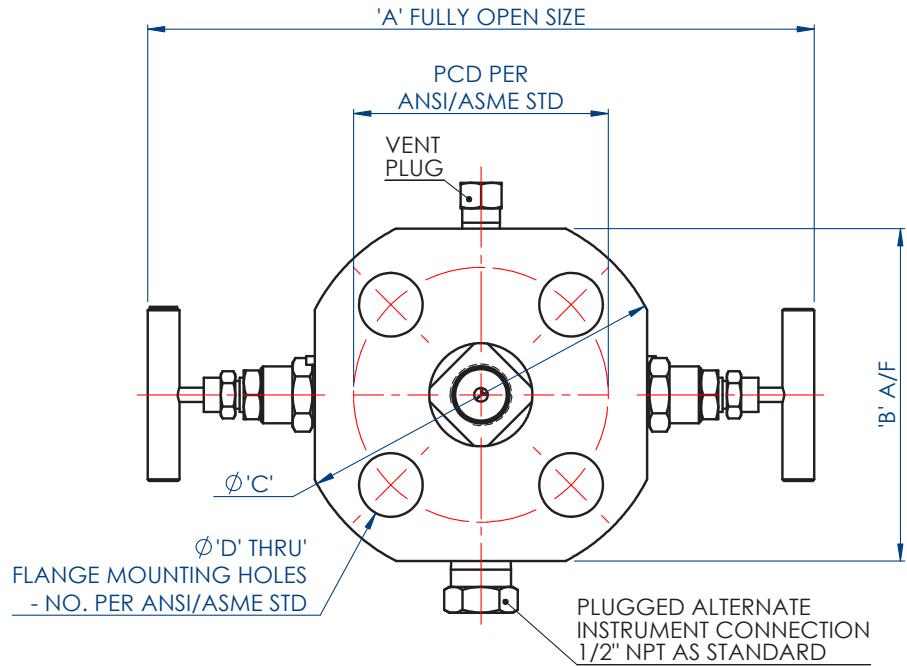
APPLICATION

Mono-flange manifolds are suitable for gauge or instrument mounting direct to a system via a standard flange take off point. Various flange ratings available to suit almost any pressure rating and size within piping systems. Standard applications include static instrumentation, pressure gauges, transmitters, and pressure switches.

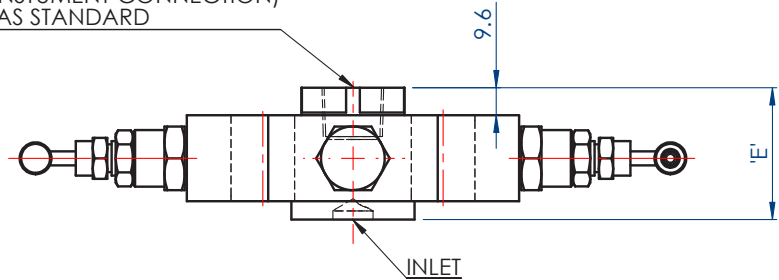
Due to the compact size of the weight savings are optimised, therefore offshore installations, F.P.S.O's can benefit greatly. Furthermore, this slimline format does not require supporting. All in all any installation requiring a safer, more compact, lightweight, cost saving pipeline instrument solution can take advantage of the Stewarts mono-flange manifold range.



TYPICAL APPLICATION



OUTLET (INSTRUMENT CONNECTION)
1/2" NPT AS STANDARD



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Tel: +44 (0)1236 821533 | Fax: +44 (0)1236 824090 | E-mail: sales@stewarts-group.com | Web: stewarts-group.com

DATA SHEET REF: MONO-REV01-14



MODEL - MONO



BLOCK AND BLEED MONOFLANGE (With vent plug)

TWO VALVE MANIFOLD Rated as flange

Standard Isolate and Vent Valve (plugged port), Aux process connection.

DIMENSION CHART

MONO flanges dimension table

Std.	Flange Size	Class	CODE	A (approx.)	B	C	D	E		Groove Number	No. Of Holes	Holes PCD	Weight (kg)
								RF	RTJ				
ASME	1/2"	150	1A	196	80	89	16	41	-	N/A	4	60.3	1.3
	3/4"		2A	204	86	98.4	15.9	41	-	N/A	4	69.8	1.4
	1"		3A	216	100	108	15.9	41	46	R15	4	79.4	2.0
	1-1/2"		4A	234	116	127	15	41	46	R19	4	98.4	2.8
	2"		5A	252	136	152.4	19	41	46	R22	4	120.6	4.0
	1/2"	300	1B	202	86	95.2	15.9	41	45	R11	4	66.7	1.5
	3/4"		2B	223	105	117	19	41	46	R13	4	82.5	2.3
	1"		3B	232	116	123.9	19	41	46	R16	4	88.9	2.6
	1-1/2"		4B	254	136	156.6	22.2	41	46	R20	4	114.3	3.9
	2"		5B	274	156	165.1	19	41	47	R23	8	127	4.6
	1/2"	600	1C	202	86	95.2	15.9	46	45	R11	4	66.7	1.6
	3/4"		2C	228	110	117	19	46	46	R13	4	82.5	2.5
	1"		3C	232	116	124	19	46	46	R16	4	88.9	2.7
	1-1/2"		4C	254	136	155.6	22.2	46	46	R20	4	114.3	4.2
	2"		5C	274	156	165.1	19	46	48	R23	8	127	4.9
	1/2"	900/ 1500	1D or 1E	228	110	120	22.2	46	46	R12	4	82.5	2.4
	3/4"		2D or 2E	231	116	130.2	22.2	46	46	R14	4	88.9	2.7
	1"		3D or 3E	254	136	149	25.4	46	46	R16	4	101.6	3.8
	1-1/2"		4D or 4E	272	156	177.8	28.6	48	48	R20	4	123.8	5.3
	2"		5D or 5E	321	205	215.9	25.4	54	56	R24	8	165.1	10.0
	1/2"	2500	1F	234	122	133.35	22.2	46.2	46.2	R13	4	88.9	3.2
	3/4"		2F	241	126	139.7	22.2	47.7	47.7	R16	4	95.2	3.6
	1"		3F	261	146	158.75	25.4	51	51	R18	4	107.95	5.0
	1-1/2"		4F	301	186	203.2	31.7	60.4	62	R23	4	146.05	10.3
2"	5F		340	225	234.95	28.6	66.7	68.3	R26	8	171.45	15.9	

HOW TO ORDER

MONO FLANGE Part No Creation				
SAMPLE PART NO				
MONO-1C-07F-RF-AI-AL (ADD AL WHEN ISO15156 / NACE MR0175 IS REQUIRED)				
1	A1	07F	RF	AI
INLET SIZE & RATING		OUTLET CODES	FLANGE TYPE	316 Stainless Steel (UNS S31600)
1 = 1/2" (DN15)	A = 150 CLASS	03F = 1/4" NPT	RF = RAISED FACE	AI = 316 Stainless Steel (UNS S31600)
2 = 3/4" (DN20)	B = 300 CLASS	05F = 3/8" NPT	RTJ = RING TYPE JOINT	MO = MONEL® 400 (UNS N04400)
3 = 1" (DN25)	C = 600 CLASS	07F = 1/2" NPT		HA = HASTELLOY® C-276 (UNS N10276)
4 = 1.5" (DN40)	D = 900 CLASS	04F = 1/4" BSPP		IL = INCONEL® 625 (UNS N06625)
5 = 2" (DN50)	E = 1500 CLASS	06F = 3/8" BSPP		IN = INCOLOY® 825 (UNS N08825)
6 = 2.5" (DN65)	F = 2500 CLASS	08F = 3/8" BSPP		TI = TITANIUM Gr.2 (UNS R50400)
7 = 3" (DN80)	G = PN2.5	13F = 1/4" BSPTaper		DU = DUPLEX UNS (UNS S31803)
8 = 4" (DN100)	H = PN6	14F = 3/8" BSPTaper		SD = SUPER DUPLEX (UNS S32760)
	J = PN10	15F = 1/2" BSPTaper		HC = HASTELLOY® C-22 (UNS N06022)
	K = PN16	Integral SWIVEMAS® Connection to Stewarts Pressure Gauge available	SA = SUPER AUSTENITIC ST.ST 6%Mo (UNS S31254)	
	L = PN25			
	M = PN40			
	N = PN63			
				Note: Other materials available on request.

See HOW TO ORDER NEEDLE VALVES & MANIFOLDS Data Sheet For Optional Extras

STEWART-BUCHANAN GAUGES LTD

Sales Office & Manufacturing Facility - 7 Garrell Road, Burnside Industrial Estate Kilsyth, Glasgow G65 9JX, SCOTLAND
Tel: +44 (0)1236 821533 | Fax: +44 (0)1236 824090 | E-mail: sales@stewarts-group.com | Web: stewarts-group.com

DATA SHEET REF: L3-REV01-14



MODEL - MONO Flange to Flange



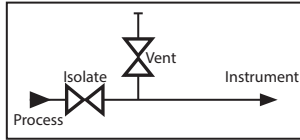
BLOCK AND BLEED FLANGE TO FLANGE MONOFLANGE

(With vent plug)

Rated as flange Standard Isolate and Vent Valve (plugged port), Aux process connection.

ISOLATE	Red
VENT	Yellow
EQUALIZE	Blue

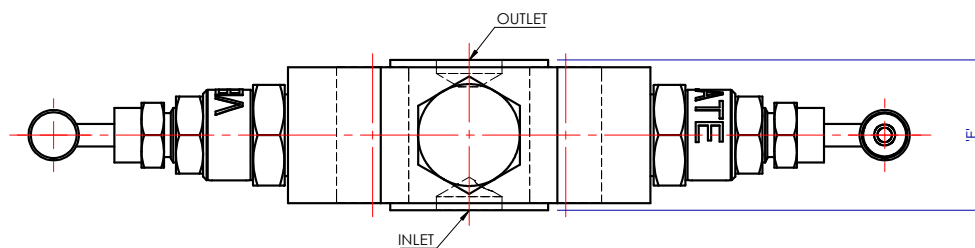
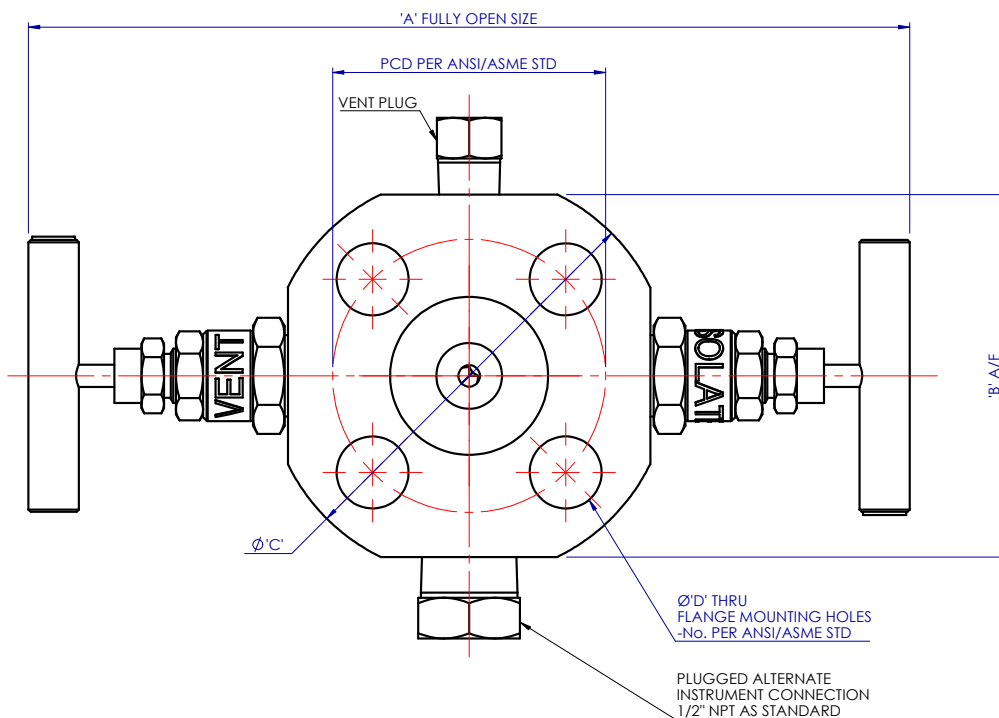
Valve Colour Coding



APPLICATION

Mono-flange manifolds are suitable for gauge or instrument mounting direct to a system via a standard flange take off point. Various flange ratings available to suit almost any pressure rating and size within piping systems. Standard applications include static instrumentation, pressure gauges, transmitters, and pressure switches.

Due to the compact size of the weight savings are optimised, therefore offshore installations, F.P.S.O's can benefit greatly. Furthermore, this slimline format does not require supporting. All in all any installation requiring a safer, more compact, lightweight, cost saving pipeline instrument solution can take advantage of the Stewarts mono-flange manifold range.



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 Tel: +44 (0)1236 821533 | Fax: +44 (0)1236 824090 | E-mail: sales@stewarts-group.com | Web: stewarts-group.com

DATA SHEET REF: MONO FF-REV01-16



MODEL - MONO Flange to Flange



DIMENSION CHART

Flange to Flange MONO flanges dimension table

Std.	Flange Size	Class	CODE	A (approx.)	B	C	D	E		Groove Number	No. Of Holes	Holes PCD	Weight (kg)
								RF	RTJ				
ASME	1/2"	150	1A	196	80	89	16	33	-	N/A	4	60.3	1.3
	3/4"		2A	204	86	98.4	15.9	33	-	N/A	4	69.8	1.4
	1"		3A	216	100	108	15.9	33	43	R15	4	79.4	2.0
	1-1/2"		4A	234	116	127	15	33	43	R19	4	98.4	2.8
	2"		5A	252	136	152.4	19	33	43	R22	4	120.6	4.0
	1/2"	300	1B	202	86	95.2	15.9	33	41	R11	4	66.7	1.5
	3/4"		2B	223	105	117	19	33	43	R13	4	82.5	2.3
	1"		3B	232	116	123.9	19	33	43	R16	4	88.9	2.6
	1-1/2"		4B	254	136	15.6	22.2	33	43	R20	4	114.3	3.9
	2"		5B	274	156	165.1	19	33	46	R23	8	127	4.6
	1/2"	600	1C	202	86	95.2	15.9	43	41	R11	4	66.7	1.6
	3/4"		2C	228	110	117	19	43	43	R13	4	82.5	2.5
	1"		3C	232	116	124	19	43	43	R16	4	88.9	2.7
	1-1/2"		4C	254	136	155.6	22.2	43	43	R20	4	114.3	4.2
	2"		5C	274	156	165.1	19	43	46	R23	8	127	4.9
	1/2"	900/ 1500	1D or 1E	228	110	120	22.2	43	43	R12	4	82.5	2.4
	3/4"		2D or 2E	231	116	130.2	22.2	43	43	R14	4	88.9	2.7
	1"		3D or 3E	254	136	149	25.4	43	43	R16	4	101.6	3.8
	1-1/2"		4D or 4E	272	156	177.8	28.6	44	44	R20	4	123.8	5.3
	2"		5D or 5E	321	205	215.9	25.4	51	51	R24	8	165.1	10.0
1/2"	2500	1F	234	122	133.35	22.2	43	43	R13	4	88.9	3.2	
3/4"		2F	241	126	139.7	22.2	44	44	R16	4	95.2	3.6	
1"		3F	261	146	158.75	25.4	48	48	R18	4	107.95	5.0	
1-1/2"		4F	301	186	203.2	31.7	57	60	R23	4	146.05	10.3	
2"		5F	340	225	234.95	28.6	64	67	R26	8	171.45	15.9	

HOW TO ORDER

Mono Flange to Flange Part No Creation				
SAMPLE PART NO				
MONO-1C-1C-RF-AI-AL (ADD AL WHEN ISO15156 / NACE MR0175 IS REQUIRED)				
1	C	C	RF	AI
INLET SIZE & RATING		OUTLET CODES		316 Stainless Steel (UNS S31600)
1 = 1/2" (DN15)	A = 150 CLASS	A = 150 CLASS	RF = RAISED FACE	AI = 316 Stainless Steel (UNS S31600)
2 = 3/4" (DN20)	B = 300 CLASS	B = 300 CLASS	RTJ = RING TYPE JOINT	MO = MONEL® 400 (UNS N04400)
3 = 1" (DN25)	C = 600 CLASS	C = 600 CLASS		HA = HASTELLOY® C-276 (UNS N10276)
4 = 1.5" (DN40)	D = 900 CLASS	D = 900 CLASS		IL = INCONEL® 625 (UNS N06625)
5 = 2" (DN50)	E = 1500 CLASS	E = 1500 CLASS		IN = INCOLOY® 825 (UNS N08825)
6 = 2.5" (DN65)	F = 2500 CLASS	F = 2500 CLASS		TI = TITANIUM Gr.2 (UNS R50400)
7 = 3" (DN80)	G = PN2.5	G = PN2.5		DU = DUPLEX UNS (UNS S31803)
8 = 4" (DN100)	H = PN6	H = PN6		SD = SUPER DUPLEX (UNS S32760)
	J = PN10	J = PN10		HC = HASTELLOY® C-22 (UNS N06022)
	K = PN16	K = PN16	SA = SUPER AUSTENITIC ST.ST 6%Mo (UNS S31254)	
	L = PN25	L = PN25		
	M=PN40	M=PN40		
	N=PN63	N=PN63		
Note: Other materials available on request.				

See HOW TO ORDER NEEDLE VALVES & MANIFOLDS Data Sheet For Optional Extras

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DATA SHEET REF: -MONO FF REV01-14



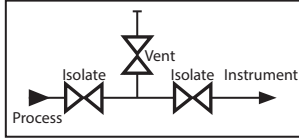
MODEL - DBBM



DOUBLE BLOCK AND BLEED MONOFLANGE (With vent plug) THREE VALVE MANIFOLD Rated as flange 2 x Standard Isolate and Vent Valve (plugged port)

ISOLATE	Red
VENT	Yellow
EQUALIZE	Blue

Valve Colour Coding



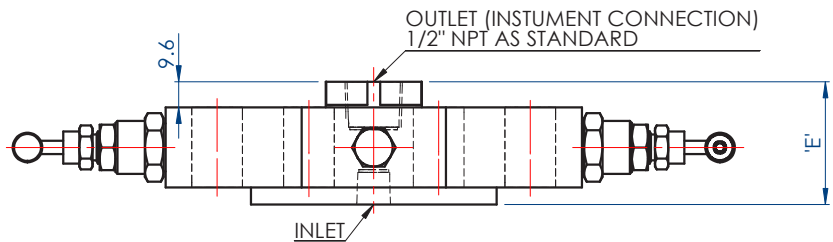
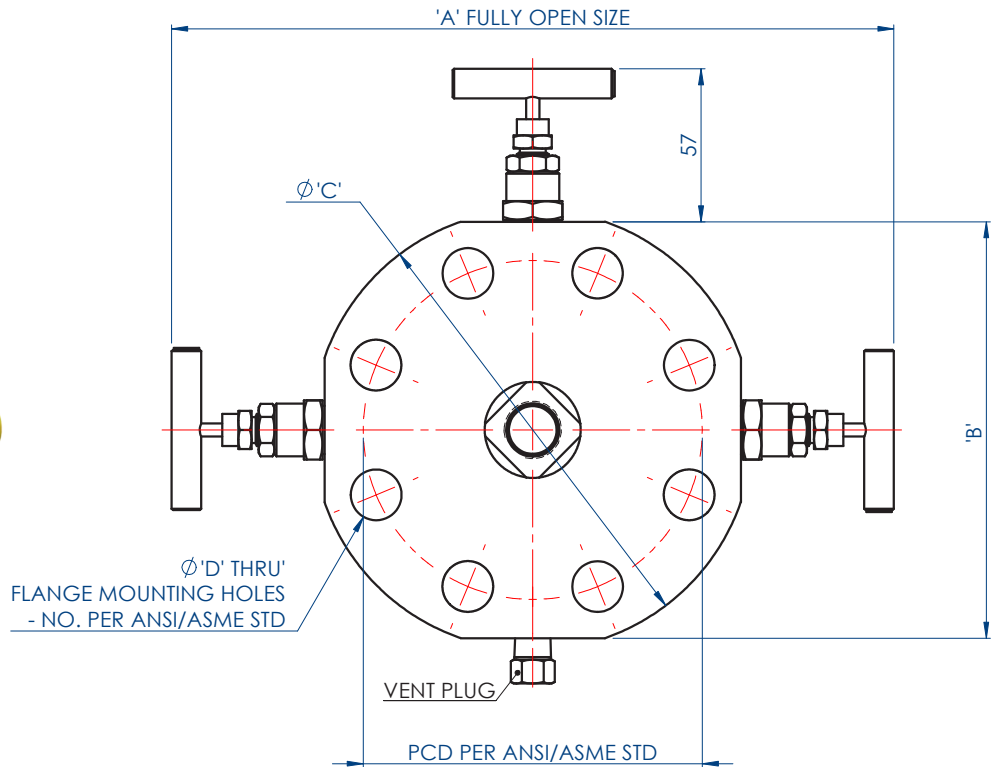
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TYPICAL APPLICATION



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DATA SHEET REF: MONO-REV01-14



MODEL - DBBM



DOUBLE BLOCK AND BLEED MONOFLANGE (With vent plug)
THREE VALVE MANIFOLD Rated as flange

DIMENSION CHART

DBBM flanges dimension table

Std.	Flange Size	Class	CODE	A (approx.)	B	C	D	E		Groove Number	No. Of Holes	Holes PCD
								RF	RTJ			
ASME	1/2"	150	1A	196	80	89	16	41	-	N/A	4	60.3
	3/4"		2A	204	86	98.4	15.9	41	-	N/A	4	69.8
	1"		3A	216	100	108	15.9	41	46	R15	4	79.4
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	2"		5A	252	136	152.4	19	41	46	R22	4	120.6
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	1"		3C	232	116	124	19	46	46	R16	4	88.9
	1-1/2"		4C	254	136	155.6	22.2	46	46	R20	4	114.3
	2"		5C	274	156	165.1	19	46	48	R23	8	127
	1/2"	900/ 1500	1D or 1E	228	110	120	22.2	46	46	R12	4	82.5
	3/4"		2D or 2E	231	116	130.2	22.2	46	46	R14	4	88.9
	1"		3D or 3E	254	136	149	25.4	46	46	R16	4	101.6
	1-1/2"		4D or 4E	272	156	177.8	28.6	48	48	R20	4	123.8
	2"		5D or 5E	321	205	215.9	25.4	54	56	R24	8	165.1
1/2"	2500	1F	234	122	133.35	22.2	46.2	46.2	R13	4	88.9	
3/4"		2F	241	126	139.7	22.2	47.7	47.7	R16	4	95.2	
1"		3F	261	146	158.75	25.4	51	51	R18	4	107.95	
1-1/2"		4F	301	186	203.2	31.7	60.4	62	R23	4	146.05	
2"		5F	340	225	234.95	28.6	66.7	68.3	R26	8	171.45	

HOW TO ORDER

DBBM Part No Creation				
SAMPLE PART NO				
DBBM-1C-07F-RF-AI-AL (ADD AL WHEN ISO15156 / NACE MR0175 IS REQUIRED)				
1	C	07F	RF	AI
INLET SIZE & RATING		OUTLET CODES	FLANGE TYPE	316 Stainless Steel (UNS S31600)
1 = 1/2" (DN15)	A = 150 CLASS	03F = 1/4" NPT	RF = RAISED FACE	AI = 316 Stainless Steel (UNS S31600)
2 = 3/4" (DN20)	B = 300 CLASS	05F = 3/8" NPT	RTJ = RING TYPE JOINT	MO = MONEL® 400 (UNS N04400)
3 = 1" (DN25)	C = 600 CLASS	07F = 1/2" NPT		HA = HASTELLOY® C-276® (UNS N10276)
4 = 1.5" (DN40)	D = 900 CLASS	04F = 1/4" BSPP		IL = INCONEL® 625 (UNS N06625)
5 = 2" (DN50)	E = 1500 CLASS	06F = 3/8" BSPP		IN = INCOLOY® 825 (UNS N08825)
6 = 2.5" (DN65)	F = 2500 CLASS	08F = 3/8" BSPP		TI = TITANIUM Gr.2 (UNS R50400)
7 = 3" (DN80)	G = PN2.5	13F = 1/4" BSPTaper		DU = DUPLEX UNS (UNS S31803)
8 = 4" (DN100)	H = PN6	14F = 3/8" BSPTaper		SD = SUPER DUPLEX (UNS S32760)
	J = PN10	15F = 1/2" BSPTaper		HC = HASTELLOY® C-22 (UNS N06022)
	K = PN16	Integral SWIVEMAS® Connection to Stewarts Pressure Gauge available	SA = SUPER AUSTENITIC ST.ST 6%Mo (UNS S31254)	
	L = PN25			
	M = PN40			
	N = PN63			
				Note: Other materials available on request.

See HOW TO ORDER NEEDLE VALVES & MANIFOLDS Data Sheet For Optional Extras

STEWART-BUCHANAN GAUGES LTD

Sales Office & Manufacturing Facility - 7 Garrell Road, Burnside Industrial Estate Kilsyth, Glasgow G65 9JX, SCOTLAND
 Tel: +44 (0)1236 821533 | Fax: +44 (0)1236 824090 | E-mail: sales@stewarts-group.com | Web: stewarts-group.com

DATA SHEET REF: L3-REV01-14



MODEL - DBBM Flange to Flange



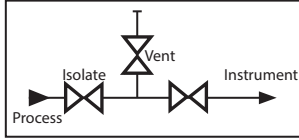
DOUBLE BLOCK AND BLEED FLANGE TO FLANGE MONOFLANGE

(With vent plug)

Rated as flange 2 x Standard Isolate and Vent Valve (plugged port)

ISOLATE	Red
VENT	Yellow
EQUALIZE	Blue

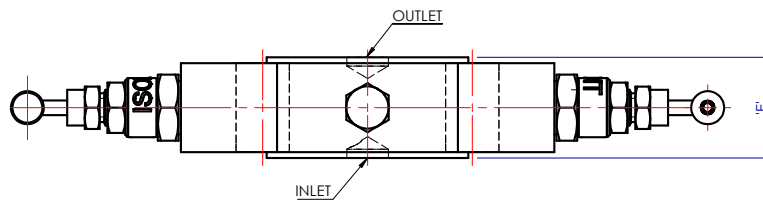
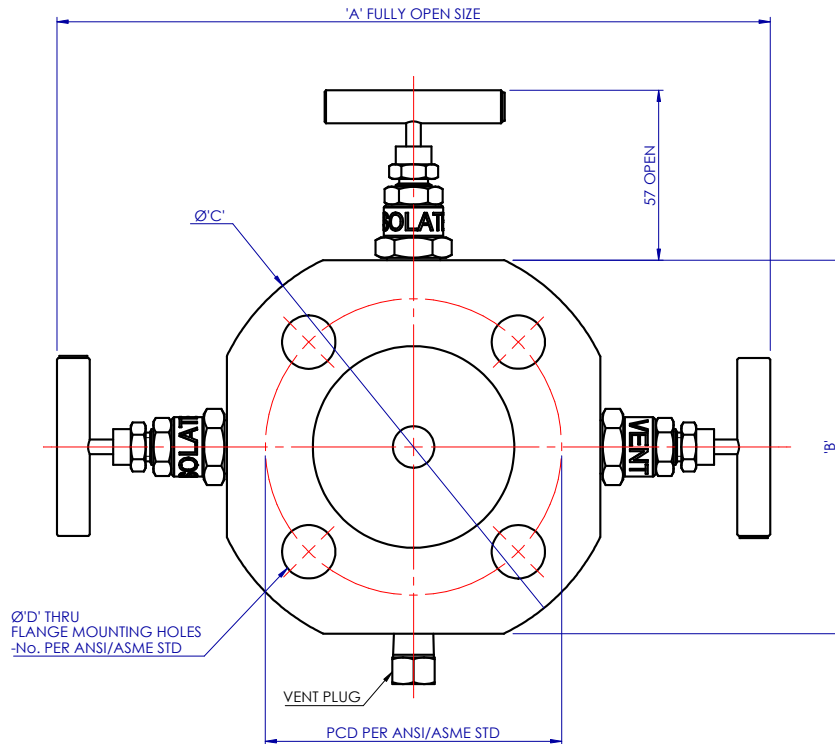
Valve Colour Coding



APPLICATION

Mono-flange manifolds are suitable for gauge or instrument mounting direct to a system via a standard flange take off point. Various flange ratings available to suit almost any pressure rating and size within piping systems. Standard applications include static instrumentation, pressure gauges, transmitters, and pressure switches.

Due to the compact size of the weight savings are optimised, therefore offshore installations, F.P.S.O's can benefit greatly. Furthermore, this slimline format does not require supporting. All in all any installation requiring a safer, more compact, lightweight, cost saving pipeline instrument solution can take advantage of the Stewarts mono-flange manifold range.



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Tel: +44 (0)1236 821533 | Fax: +44 (0)1236 824090 | E-mail: sales@stewarts-group.com | Web: stewarts-group.com

DATA SHEET REF: -DBBM FF REV01-14



MODEL - DBBM Flange to Flange



DIMENSION CHART

Flange to Flange DBBM flanges dimension table

Std.	Flange Size	Class	CODE	A (approx.)	B	C	D	E		Groove Number	No. Of Holes	Holes PCD	Weight (kg)
								RF	RTJ				
ASME	1/2"	150	1A	196	80	89	16	33	-	N/A	4	60.3	1.4
	3/4"		2A	204	86	98.4	15.9	33	-	N/A	4	69.8	1.5
	1"		3A	216	100	108	15.9	33	43	R15	4	79.4	2.1
	1-1/2"		4A	234	116	127	15	33	43	R19	4	98.4	2.9
	2"		5A	252	136	152.4	19	33	43	R22	4	120.6	4.1
	1/2"	300	1B	202	86	95.2	15.9	33	41	R11	4	66.7	1.6
	3/4"		2B	223	105	117	19	33	43	R13	4	82.5	2.4
	1"		3B	232	116	123.9	19	33	43	R16	4	88.9	2.7
	1-1/2"		4B	254	136	15.6	22.2	33	43	R20	4	114.3	4.0
	2"		5B	274	156	165.1	19	33	46	R23	8	127	4.7
	1/2"	600	1C	202	86	95.2	15.9	43	41	R11	4	66.7	1.7
	3/4"		2C	228	110	117	19	43	43	R13	4	82.5	2.6
	1"		3C	232	116	124	19	43	43	R16	4	88.9	2.8
	1-1/2"		4C	254	136	155.6	22.2	43	43	R20	4	114.3	4.3
	2"		5C	274	156	165.1	19	43	46	R23	8	127	5.0
	1/2"	900/ 1500	1D or 1E	228	110	120	22.2	43	43	R12	4	82.5	2.5
	3/4"		2D or 2E	231	116	130.2	22.2	43	43	R14	4	88.9	2.8
	1"		3D or 3E	254	136	149	25.4	43	43	R16	4	101.6	3.9
	1-1/2"		4D or 4E	272	156	177.8	28.6	44	44	R20	4	123.8	5.4
	2"		5D or 5E	321	205	215.9	25.4	51	51	R24	8	165.1	10.1
1/2"	2500	1F	234	122	133.35	22.2	43	43	R13	4	88.9	3.3	
3/4"		2F	241	126	139.7	22.2	44	44	R16	4	95.2	3.7	
1"		3F	261	146	158.75	25.4	48	48	R18	4	107.95	5.1	
1-1/2"		4F	301	186	203.2	31.7	57	60	R23	4	146.05	10.4	
2"		5F	340	225	234.95	28.6	64	67	R26	8	171.45	16.0	

HOW TO ORDER

DBBM Flange to Flange Part No Creation				
SAMPLE PART NO				
DBBM-1C-1C-RF-AI-AL (ADD AL WHEN ISO15156 / NACE MR0175 IS REQUIRED)				
1	C	C	RF	AI
INLET SIZE & RATING		OUTLET CODES	FLANGE TYPE	316 Stainless Steel (UNS S31600)
1 = 1/2" (DN15)	A = 150 CLASS	A = 150 CLASS	RF = RAISED FACE	AI = 316 Stainless Steel (UNS S31600)
2 = 3/4" (DN20)	B = 300 CLASS	B = 300 CLASS	RTJ = RING TYPE JOINT	MO = MONEL® 400 (UNS N04400)
3 = 1" (DN25)	C = 600 CLASS	C = 600 CLASS		HA = HASTELLOY® C-276 (UNS N10276)
4 = 1.5" (DN40)	D = 900 CLASS	D = 900 CLASS		IL = INCONEL® 625 (UNS N06625)
5 = 2" (DN50)	E = 1500 CLASS	E = 1500 CLASS		IN = INCOLOY® 825 (UNS N08825)
6 = 2.5" (DN65)	F = 2500 CLASS	F = 2500 CLASS		TI = TITANIUM Gr.2 (UNS R50400)
7 = 3" (DN80)	G = PN2.5	G = PN2.5		DU = DUPLEX UNS (UNS S31803)
8 = 4" (DN100)	H = PN6	H = PN6		SD = SUPER DUPLEX (UNS S32760)
	J = PN10	J = PN10		HC = HASTELLOY® C-22 (UNS N06022)
	K = PN16	K = PN16	SA = SUPER AUSTENITIC ST.ST 6%Mo (UNS S31254)	
	L = PN25	L = PN25		
	M=PN40	M=PN40		
	N=PN63	N=PN63		
				Note: Other materials available on request.

See HOW TO ORDER NEEDLE VALVES & MANIFOLDS Data Sheet For Optional Extras

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Sales Office & Manufacturing Facility - 7 Garrell Road, Burnside Industrial Estate Kilsyth, Glasgow G65 9JX, SCOTLAND
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DATA SHEET REF: -DBBM FF REV01-14



MODEL - OSYM

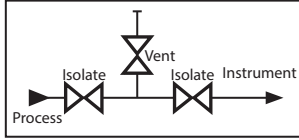


DOUBLE BLOCK AND BLEED OS&Y MONOFLANGE (With vent plug) THREE VALVE MANIFOLD

Rated as flange 413 bar (6000 psi) max
OS&Y Primary Isolate, Standard Secondary Isolate and Vent Valve (plugged)

ISOLATE	Red
VENT	Yellow
EQUALIZE	Blue

Valve Colour Coding

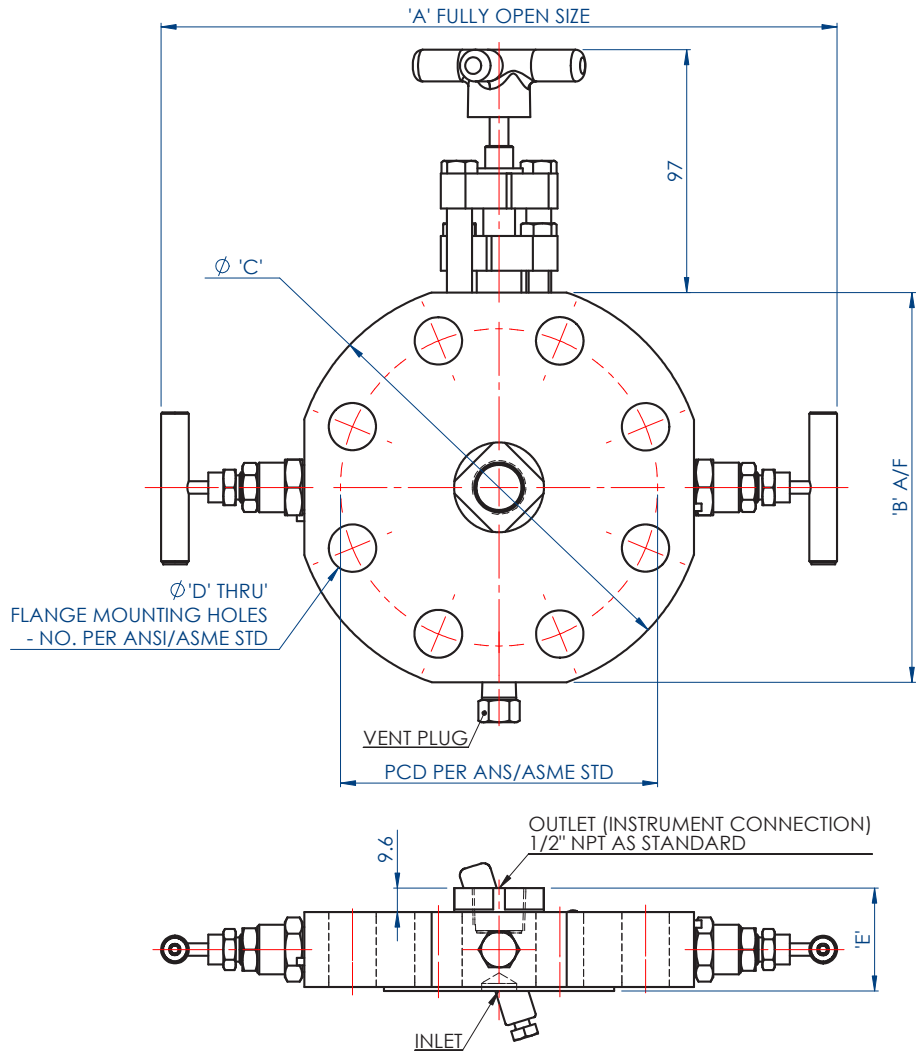


APPLICATION

Mono-flange manifolds are suitable for gauge or instrument mounting direct to a system via a standard flange take off point. Various flange ratings available to suit almost any pressure rating and size within piping systems. Standard applications include static instrumentation, pressure gauges, transmitters, and pressure switches.

Due to the compact size of the weight savings are optimised, therefore offshore installations, F.P.S.O's can benefit greatly. Furthermore, this slimline format does not require supporting. All in all any installation requiring a safer, more compact, lightweight, cost saving pipeline instrument solution can take advantage of the Stewarts mono-flange manifold range.

TYPICAL APPLICATION



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DATA SHEET REF: DBBOS&Y-REV01-14



MODEL - OSYM



DOUBLE BLOCK AND BLEED OS&Y MONOFLANGE (With vent plug)
THREE VALVE MANIFOLD Rated as flange 413 bar (6000 psi) max
 OS&Y Primary Isolate, Standard Secondary Isolate and Vent Valve (plugged)

DIMENSION CHART

OSYM flanges dimension table

Std.	Flange Size	Class	CODE	A (approx.)	B	C	D	E		Groove Number	No. Of Holes	Holes PCD	Weight (kg)
								RF	RTJ				
ASME	1/2"	150	1A	196	80	89	16	41	-	N/A	4	60.3	1.8
	3/4"		2A	204	86	98.4	15.9	41	-	N/A	4	69.8	1.9
	1"		3A	216	100	108	15.9	41	46	R15	4	79.4	2.5
	1-1/2"		4A	234	116	127	15	41	46	R19	4	98.4	3.3
	2"		5A	252	136	152.4	19	41	46	R22	4	120.6	4.5
	1/2"	300	1B	202	86	95.2	15.9	41	45	R11	4	66.7	2.0
	3/4"		2B	223	105	117	19	41	46	R13	4	82.5	2.8
	1"		3B	232	116	123.9	19	41	46	R16	4	88.9	3.1
	1-1/2"		4B	254	136	15.6	22.2	41	46	R20	4	114.3	4.4
	2"		5B	274	156	165.1	19	41	47	R23	8	127	5.1
	1/2"	600	1C	202	86	95.2	15.9	46	45	R11	4	66.7	2.1
	3/4"		2C	228	110	117	19	46	46	R13	4	82.5	3.0
	1"		3C	232	116	124	19	46	46	R16	4	88.9	3.2
	1-1/2"		4C	254	136	155.6	22.2	46	46	R20	4	114.3	4.7
	2"		5C	274	156	165.1	19	46	48	R23	8	127	5.4
	1/2"	900/ 1500	1D or 1E	228	110	120	22.2	46	46	R12	4	82.5	2.9
	3/4"		2D or 2E	231	116	130.2	22.2	46	46	R14	4	88.9	3.2
	1"		3D or 3E	254	136	149	25.4	46	46	R16	4	101.6	4.3
	1-1/2"		4D or 4E	272	156	177.8	28.6	48	48	R20	4	123.8	5.8
	2"		5D or 5E	321	205	215.9	25.4	54	56	R24	8	165.1	10.5
1/2"	2500	1F	234	122	133.35	22.2	46.2	46.2	R13	4	88.9	3.7	
3/4"		2F	241	126	139.7	22.2	47.7	47.7	R16	4	95.2	4.1	
1"		3F	261	146	158.75	25.4	51	51	R18	4	107.95	5.5	
1-1/2"		4F	301	186	203.2	31.7	60.4	62	R23	4	146.05	10.8	
2"		5F	340	225	234.95	28.6	66.7	68.3	R26	8	171.45	16.4	

HOW TO ORDER

OS&Y MONOFLANGE Part No Creation				
SAMPLE PART NO				
OSYM-1C-07F-RF-AI-AL (ADD AL WHEN ISO15156 / NACE MR0175 IS REQUIRED)				
1	A1	07F	RF	AI
INLET SIZE & RATING		OUTLET CODES		316 Stainless Steel (UNS S31600)
1 = 1/2" (DN15)	A = 150 CLASS	03F = 1/4" NPT	RF = RAISED FACE	AI = 316 Stainless Steel (UNS S31600)
2 = 3/4" (DN20)	B = 300 CLASS	05F = 3/8" NPT	RTJ = RING TYPE JOINT	MO = MONEL® 400 (UNS N04400)
3 = 1" (DN25)	C = 600 CLASS	07F = 1/2" NPT		HA = HASTELLOY® C-276® (UNS N10276)
4 = 1.5" (DN40)	D = 900 CLASS	04F = 1/4" BSPP		IL = INCONEL® 625 (UNS N06625)
5 = 2" (DN50)	E = 1500 CLASS	06F = 3/8" BSPP		IN = INCOLOY® 825 (UNS N08825)
6 = 2.5" (DN65)	F = 2500 CLASS	08F = 3/8" BSPP		TI = TITANIUM Gr.2 (UNS R50400)
7 = 3" (DN80)	G = PN2.5	13F = 1/4" BSPTaper		DU = DUPLEX UNS (UNS S31803)
8 = 4" (DN100)	H = PN6	14F = 3/8" BSPTaper		SD = SUPER DUPLEX (UNS S32760)
	J = PN10	15F = 1/2" BSPTaper		HC = HASTELLOY® C-22 (UNS N06022)
	K = PN16	Integral SWIVEMAS® Connection to Stewarts Pressure Gauge available	SA = SUPER AUSTENITIC ST.ST 6%Mo (UNS S31254)	
	L = PN25			
	M = PN40			
	N = PN63			
				Note: Other materials available on request.

See HOW TO ORDER NEEDLE VALVES & MANIFOLDS Data Sheet For Optional Extras

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DATA SHEET REF: DDBOS&Y-REV01-14



MODEL - OSYM Flange to Flange



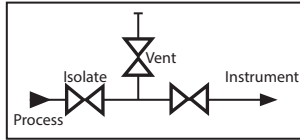
DOUBLE BLOCK AND BLEED OS&Y FLANGE TO FLANGE MONOFLANGE

(With vent plug)

Rated as flange 413 bar (6000 psi) max, OS&Y Primary Isolate, Secondary Isolate and Vent Valve (plugged port)

ISOLATE	Red
VENT	Yellow
EQUALIZE	Blue

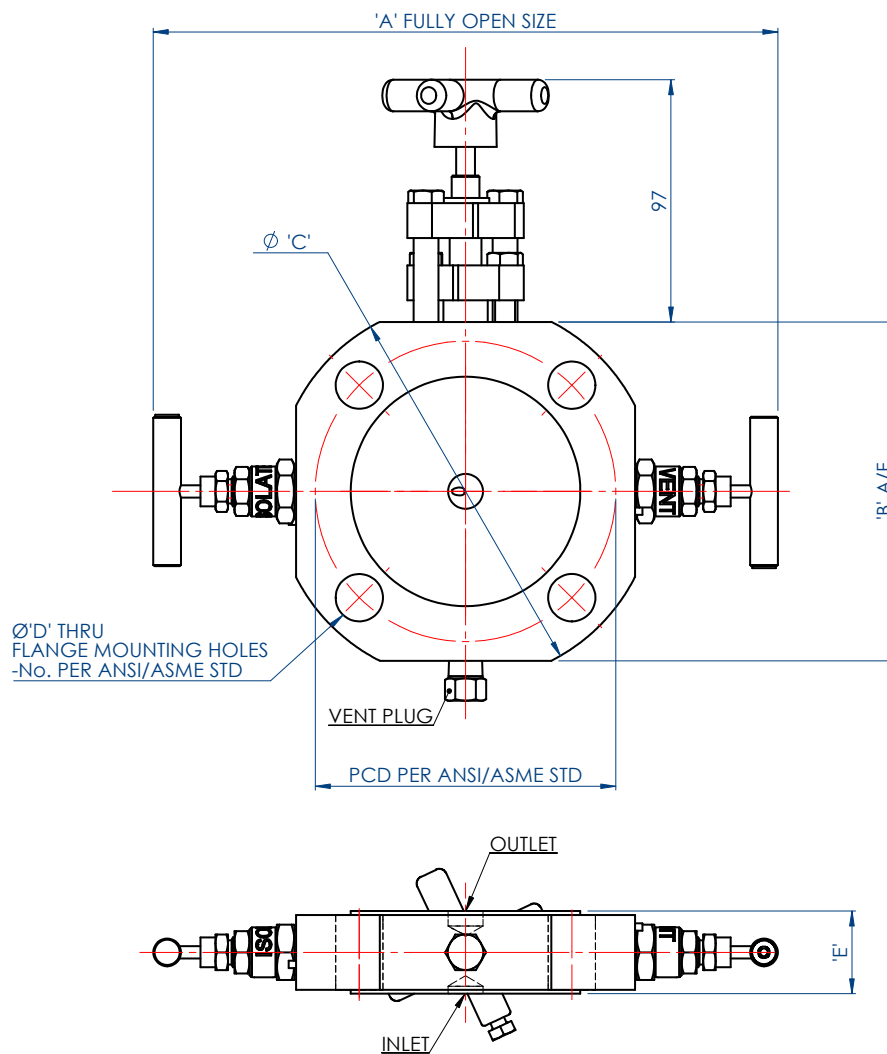
Valve Colour Coding



APPLICATION

Mono-flange manifolds are suitable for gauge or instrument mounting direct to a system via a standard flange take off point. Various flange ratings available to suit almost any pressure rating and size within piping systems. Standard applications include static instrumentation, pressure gauges, transmitters, and pressure switches.

Due to the compact size of the weight savings are optimised, therefore offshore installations, F.P.S.O's can benefit greatly. Furthermore, this slimline format does not require supporting. All in all any installation requiring a safer, more compact, lightweight, cost saving pipeline instrument solution can take advantage of the Stewarts mono-flange manifold range.



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DATA SHEET REF: -OS&Y FF REV01-14



MODEL - OSYM Flange to Flange



DIMENSION CHART

Flange to Flange OSYM flanges dimension table

Std.	Flange Size	Class	CODE	A (approx.)	B	C	D	E		Groove Number	No. Of Holes	Holes PCD	Weight (kg)
								RF	RTJ				
ASME	1/2"	150	1A	196	80	89	16	33	-	N/A	4	60.3	1.8
	3/4"		2A	204	86	98.4	15.9	33	-	N/A	4	69.8	1.9
	1"		3A	216	100	108	15.9	33	43	R15	4	79.4	2.5
	1-1/2"		4A	234	116	127	15	33	43	R19	4	98.4	3.3
	2"		5A	252	136	152.4	19	33	43	R22	4	120.6	4.5
	1/2"	300	1B	202	86	95.2	15.9	33	41	R11	4	66.7	2.0
	3/4"		2B	223	105	117	19	33	43	R13	4	82.5	2.8
	1"		3B	232	116	123.9	19	33	43	R16	4	88.9	3.1
	1-1/2"		4B	254	136	15.6	22.2	33	43	R20	4	114.3	4.4
	2"		5B	274	156	165.1	19	33	46	R23	8	127	5.1
	1/2"	600	1C	202	86	95.2	15.9	43	41	R11	4	66.7	2.1
	3/4"		2C	228	110	117	19	43	43	R13	4	82.5	3.0
	1"		3C	232	116	124	19	43	43	R16	4	88.9	3.2
	1-1/2"		4C	254	136	155.6	22.2	43	43	R20	4	114.3	4.7
	2"		5C	274	156	165.1	19	43	46	R23	8	127	5.4
	1/2"	900/ 1500	1D or 1E	228	110	120	22.2	43	43	R12	4	82.5	2.9
	3/4"		2D or 2E	231	116	130.2	22.2	43	43	R14	4	88.9	3.2
	1"		3D or 3E	254	136	149	25.4	43	43	R16	4	101.6	4.3
	1-1/2"		4D or 4E	272	156	177.8	28.6	44	44	R20	4	123.8	5.8
	2"		5D or 5E	321	205	215.9	25.4	51	51	R24	8	165.1	10.5
1/2"	2500	1F	234	122	133.35	22.2	43	43	R13	4	88.9	3.7	
3/4"		2F	241	126	139.7	22.2	44	44	R16	4	95.2	4.1	
1"		3F	261	146	158.75	25.4	48	48	R18	4	107.95	5.5	
1-1/2"		4F	301	186	203.2	31.7	57	60	R23	4	146.05	10.8	
2"		5F	340	225	234.95	28.6	64	67	R26	8	171.45	16.4	

HOW TO ORDER

OS&Y Flange to Flange Part No Creation				
SAMPLE PART NO				
OS&Y-1C-1C-RF-AI-AL (ADD AL WHEN ISO15156 / NACE MR0175 IS REQUIRED)				
1	C	C	RF	AI
INLET SIZE & RATING		OUTLET CODES		316 Stainless Steel (UNS S31600)
1 = 1/2" (DN15)	A = 150 CLASS	A = 150 CLASS	RF = RAISED FACE	AI = 316 Stainless Steel (UNS S31600)
2 = 3/4" (DN20)	B = 300 CLASS	B = 300 CLASS	RTJ = RING TYPE JOINT	MO = MONEL® 400 (UNS N04400)
3 = 1" (DN25)	C = 600 CLASS	C = 600 CLASS		HA = HASTELLOY® C-276 (UNS N10276)
4 = 1.5" (DN40)	D = 900 CLASS	D = 900 CLASS		IL = INCONEL® 625 (UNS N06625)
5 = 2" (DN50)	E = 1500 CLASS	E = 1500 CLASS		IN = INCOLOY® 825 (UNS N08825)
6 = 2.5" (DN65)	F = 2500 CLASS	F = 2500 CLASS		TI = TITANIUM Gr.2 (UNS R50400)
7 = 3" (DN80)	G = PN2.5	G = PN2.5		DU = DUPLEX UNS (UNS S31803)
8 = 4" (DN100)	H = PN6	H = PN6		SD = SUPER DUPLEX (UNS S32760)
	J = PN10	J = PN10		HC = HASTELLOY® C-22 (UNS N06022)
	K = PN16	K = PN16	SA = SUPER AUSTENITIC ST.ST 6%Mo (UNS S31254)	
	L = PN25	L = PN25		
	M=PN40	M=PN40		
	N=PN63	N=PN63		
Note: Other materials available on request.				

See HOW TO ORDER NEEDLE VALVES & MANIFOLDS Data Sheet For Optional Extras

STEWART-BUCHANAN GAUGES LTD

Sales Office & Manufacturing Facility - 7 Garrell Road, Burnside Industrial Estate Kilsyth, Glasgow G65 9JX, SCOTLAND
Tel: +44 (0)1236 821533 | Fax: +44 (0)1236 824090 | E-mail: sales@stewarts-group.com | Web: stewarts-group.com

DATA SHEET REF: -OS&Y FF REV01-14

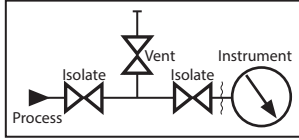


MODEL - 6033



BLOCK AND BLEED MONOSEAL (With vent plug & auxiliary connection) TWO VALVE MANIFOLD Rated as flange

ISOLATE	Red
VENT	Yellow
EQUALIZE	Blue



Valve Colour Coding

APPLICATION

Mono-flange manifolds are suitable for gauge or instrument mounting direct to a system via a standard flange take off point. Various flange ratings available to suit almost any pressure rating and size within piping systems. Standard applications include static instrumentation, pressure gauges, transmitters, and pressure switches.

Due to the compact size of the weight savings are optimised, therefore offshore installations, F.P.S.O's can benefit greatly. Furthermore, this slimline format does not require supporting. All in all any installation requiring a safer, more compact, lightweight, cost saving pipeline instrument solution can take advantage of the Stewarts mono-flange manifold range.



TYPICAL APPLICATION



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DATA SHEET REF: 6033-REV02-15

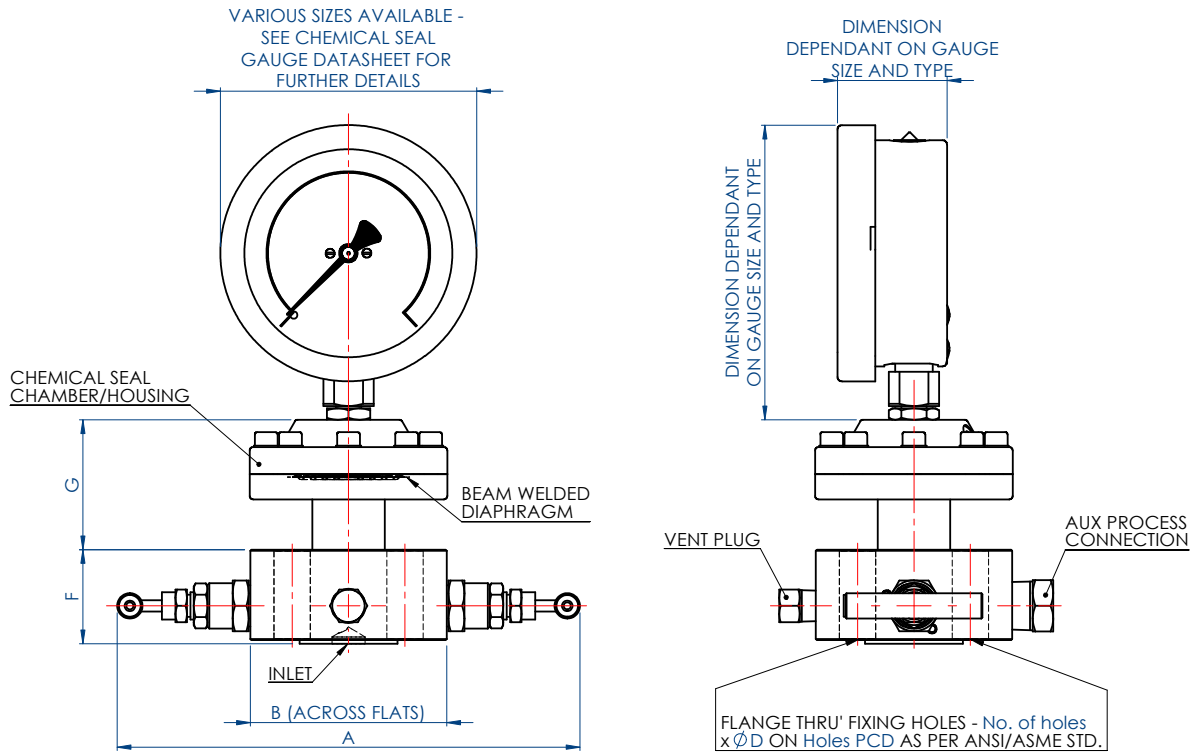


MODEL - 6033

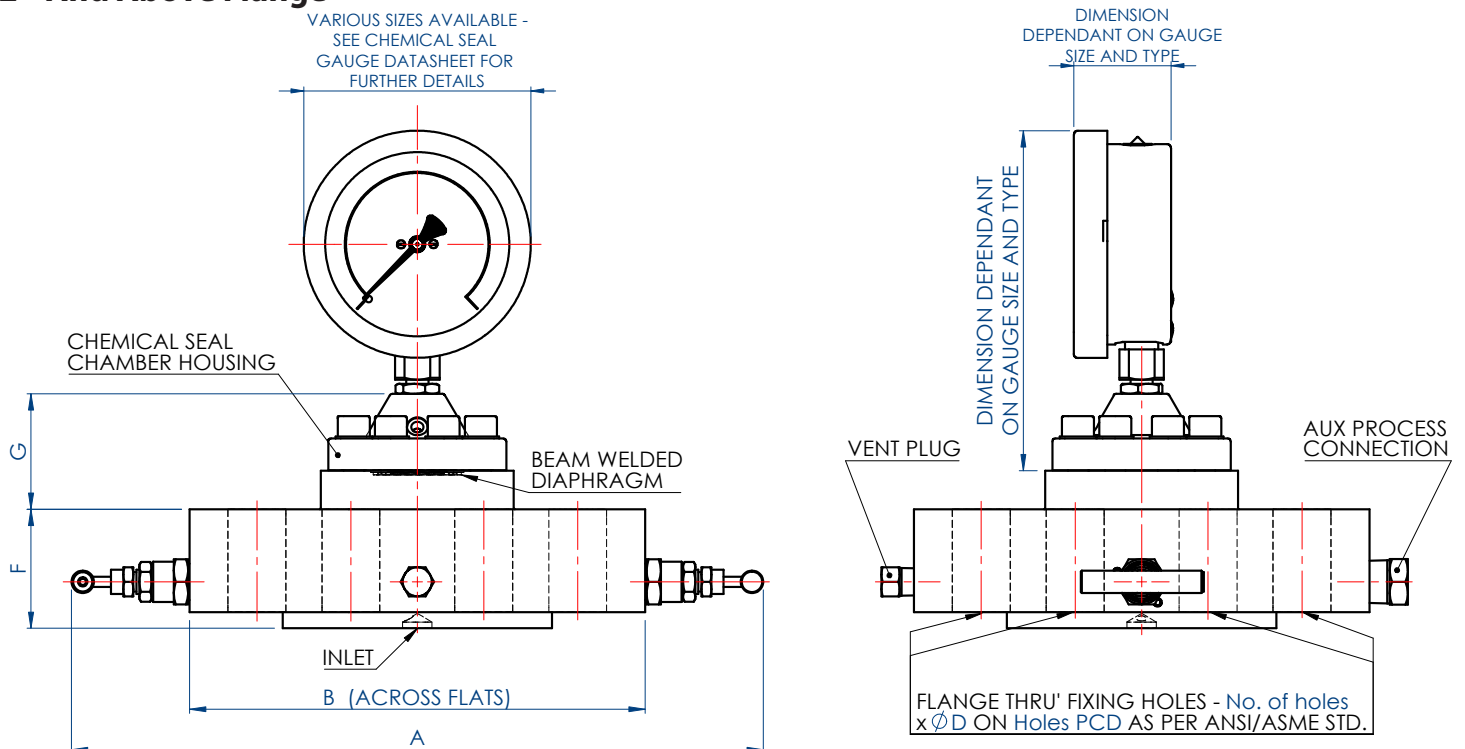


BLOCK AND BLEED MONOSEAL (With vent plug) TWO VALVE MANIFOLD Rated as flange

0.5" To 1.5" Flange



2" And Above Flange



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MODEL - 6033



BLOCK AND BLEED MONOSEAL (With vent plug) TWO VALVE MANIFOLD Rated as flange

DIMENSION CHART 6033 dimension table

Std.	Flange Size	Class	CODE	A (approx.)	B	C	D	F		G		Groove Number	No. Of Holes	Holes PCD
								RF	RTJ	RF	RTJ			
ASME	1/2"	150	1A	196	80	89	16	31.6	-	58	-	N/A	4	60.3
	3/4"		2A	204	86	98.4	15.9	41.2	-	57	-	N/A	4	69.8
	1"		3A	216	100	108	15.9	41.2	45.6	57	57	R15	4	79.4
	1-1/2"		4A	234	116	127	15	31.6	36.4	57	57	R19	4	98.4
	2"		5A	252	136	152.4	19	39.6	44.4	24	24	R22	4	120.6
	1/2"	300	1B	202	86	95.2	15.9	31.6	35.5	58	58	R11	4	66.7
	3/4"		2B	223	105	117	19	41.2	46	57	57	R13	4	82.5
	1"		3B	232	116	123.9	19	41.2	46	61	61	R16	4	88.9
	1-1/2"		4B	254	136	15.6	22.2	31.6	36.4	57	57	R20	4	114.3
	2"		5B	274	156	165.1	19	41.2	47.5	24	24	R23	8	127
	1/2"	600	1C	202	86	95.2	15.9	36.4	36.4	58	58	R11	4	66.7
	3/4"		2C	228	110	117	19	45.9	45.9	57	57	R13	4	82.5
	1"		3C	232	116	124	19	45.9	45.9	61	61	R16	4	88.9
	1-1/2"		4C	254	136	155.6	22.2	36.3	36.3	57	57	R20	4	114.3
	2"		5C	274	156	165.1	19	46	47.6	24	24	R23	8	127
	1/2"	900/ 1500	1D or 1E	228	110	120	22.2	36.4	36.4	99	99	R12	4	82.5
	3/4"		2D or 2E	231	116	130.2	22.2	36.4	36.4	99	99	R14	4	88.9
	1"		3D or 3E	254	136	149	25.4	36.4	36.4	99	99	R16	4	101.6
	1-1/2"		4D or 4E	272	156	177.8	28.6	38.2	38.2	99	99	R20	4	123.8
	2"		5D or 5E	321	205	215.9	25.4	44.5	46.1	54	54	R24	8	165.1
1/2"	2500	1F	234	122	133.35	22.2	36.6	36.6	99	99	R13	4	88.9	
3/4"		2F	241	126	139.7	22.2	38.1	38.1	99	99	R16	4	95.2	
1"		3F	261	146	158.75	25.4	41.3	41.3	99	99	R18	4	107.95	
1-1/2"		4F	301	186	203.2	31.7	50.8	52.4	99	99	R23	4	146.05	
2"		5F	340	225	234.95	28.6	57.2	58.8	57	57	R26	8	171.45	

HOW TO ORDER

MONOSEAL Part No Creation				
SAMPLE PART NO				
6033-1C-07F-RF-AI-AL (ADD AL WHEN ISO15156 / NACE MR0175 IS REQUIRED)				
1	C	07F	RF	AI
INLET SIZE & RATING		OUTLET CODES		316 Stainless Steel (UNS S31600)
1 = 1/2" (DN15)	A = 150 CLASS	03F = 1/4" NPT	RF = RAISED FACE	AI = 316 Stainless Steel (UNS S31600)
2 = 3/4" (DN20)	B = 300 CLASS	05F = 3/8" NPT	RTJ = RING TYPE JOINT	MO = MONEL® 400 (UNS N04400)
3 = 1" (DN25)	C = 600 CLASS	07F = 1/2" NPT		HA = HASTELLOY® C-276® (UNS N10276)
4 = 1.5" (DN40)	D = 900 CLASS	04F = 1/4" BSPP		IL = INCONEL® 625 (UNS N06625)
5 = 2" (DN50)	E = 1500 CLASS	06F = 3/8" BSPP		IN = INCOLOY® 825 (UNS N08825)
6 = 2.5" (DN65)	F = 2500 CLASS	08F = 3/8" BSPP		TI = TITANIUM Gr.2 (UNS R50400)
7 = 3" (DN80)	G = PN2.5	13F = 1/4" BSPTaper		DU = DUPLEX UNS (UNS S31803)
8 = 4" (DN100)	H = PN6	14F = 3/8" BSPTaper		SD = SUPER DUPLEX (UNS S32760)
	J = PN10	15F = 1/2" BSPTaper		HC = HASTELLOY® C-22 (UNS N06022)
	K = PN16	Integral SWIVEMAS® Connection to Stewarts Pressure Gauge available	SA = SUPER AUSTENITIC ST.ST 6%Mo (UNS S31254)	
	L = PN25			
	M = PN40			
	N = PN63			
				Note: Other materials available on request.

See HOW TO ORDER NEEDLE VALVES & MANIFOLDS Data Sheet For Optional Extras

Please consult our sales team for recommended Pressure Gauges

STEWART-BUCHANAN GAUGES LTD

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DATA SHEET REF: 6033-REV02-15



PRESSURE/TEMPERATURE RATINGS FOR FLANGES ASME/ANSI B16.5-2013
For Ref Only

FLANGE	°C	-29	38	50	100	150	200	250	300	350	400	450
MATERIAL	°F	-20	100	122	212	302	392	482	572	662	752	842
& CLASS		Metric Units - Working Pressures are in bar										
CLASS 150												
Gr 1.1		19.6	19.6	19.2	17.7	15.8	13.8	12.1	10.2	8.4	6.5	4.6
Gr 2.2		19	19	18.4	16.2	14.8	13.7	12.1	10.2	8.4	6.5	4.6
Gr 2.3		15.9	15.9	15.3	13.3	12	11.2	10.5	10	8.4	6.5	4.6
Gr 2.8		20	20	19.5	17.7	15.8	13.8	12.1	10.2	8.4	6.5	4.6
Gr 3.4		15.9	15.9	15.4	13.8	12.9	12.5	12.1	10.2	8.4	6.5	4.6
Gr 3.8		20	20	19.5	17.7	15.8	13.8	12.1	10.2	8.4	6.5	4.6
CLASS 300												
Gr 1.1		51.1	51.1	50.1	46.6	45.1	43.8	41.9	39.8	37.6	34.7	23
Gr 2.2		49.6	49.6	48.1	42.2	38.5	35.7	33.4	31.6	30.3	29.4	28.8
Gr 2.3		41.4	41.4	40	34.8	31.4	29.2	27.5	26.1	25.1	24.3	23.4
Gr 2.8		51.7	51.7	51.7	50.7	45.9	42.7	40.5	38.9	37.6	36.5	33.7
Gr 3.4		41.4	41.4	40.2	35.9	33.7	32.7	32.6	32.6	32.6	32.1	26.9
Gr 3.8		51.7	51.7	51.7	51.5	50.3	48.3	46.3	42.9	40.3	36.5	33.7
CLASS 600												
Gr 1.1		102.1	102.1	100.2	93.2	90.2	87.6	83.9	79.6	75.1	69.4	46
Gr 2.2		99.3	99.3	96.2	84.4	77	71.3	66.8	63.2	60.7	58.9	57.7
Gr 2.3		82.7	82.7	80	69.6	62.8	58.3	54.9	52.1	50.1	48.6	46.8
Gr 2.8		103.4	103.4	103.4	101.3	91.9	85.3	80.9	77.7	75.3	73.3	67.7
Gr 3.4		82.7	82.7	80.5	71.9	67.5	65.4	65.2	65.2	65.1	64.2	53.8
Gr 3.8		103.4	103.4	103.4	103	100.3	96.7	92.7	85.7	80.4	73.3	67.7
CLASS 900												
Gr 1.1		153.2	153.2	150.4	139.8	135.2	131.4	125.8	119.5	112.7	104.2	69
Gr 2.2		148.9	148.9	144.3	126.6	115.5	107	100.1	94.9	91	88.3	86.5
Gr 2.3		124.1	124.1	120.1	104.4	94.2	87.5	82.4	78.2	75.2	72.9	70.2
Gr 2.8		155.1	155.1	155.1	152	137.8	128	121.4	116.6	112.9	109.8	80.7
Gr 3.4		124.1	124.1	120.7	107.8	101.2	98.1	97.8	97.8	97.7	96.2	80.7
Gr 3.8		155.1	155.1	155.1	154.6	150.6	145	139	128.6	120.7	109.8	101.4
CLASS 1500												
Gr 1.1		255.3	255.3	250.6	233	225.4	219	209.7	199.1	187.8	173.6	115
Gr 2.2		248.2	248.2	240.6	211	192.5	178.3	166.9	158.1	151.6	147.2	144.2
Gr 2.3		206.8	206.8	200.1	173.9	157	145.8	137.3	130.3	125.4	121.5	117.1
Gr 2.8		258.6	258.6	258.6	253.3	229.6	213.3	202.3	194.3	188.2	183.1	134.5
Gr 3.4		206.8	206.8	201.2	179.7	168.7	163.5	163	163	162.8	160.4	134.5
Gr 3.8		258.6	258.6	258.6	257.6	250.8	241.7	231.8	214.4	201.1	183.1	169
CLASS 2500												
Gr 1.1		425.5	425.5	417.7	388.3	375.6	365	349.5	331.8	313	289.3	191.7
Gr 2.2		413.7	413.7	400.9	351.6	320.8	297.2	278.1	263.5	252.7	245.3	240.4
Gr 2.3		344.7	344.7	333.5	289.9	261.6	243	228.9	217.2	208.9	202.5	195.1
Gr 2.8		430.9	430.9	430.9	422.2	382.7	355.4	337.2	323.8	313.7	304.9	224.2
Gr 3.4		344.7	344.7	335.3	299.5	281.1	272.4	271.7	271.7	271.3	267.4	224.2
Gr 3.8		430.9	430.9	430.9	429.4	418.2	402.8	386.2	357.1	335.3	304.9	281.8
MATERIAL	MATERIAL DESCRIPTION										NOTES	
Gr 1.1	CARBON STEEL (ASTM A105N & A350 LF2)											LIMITATIONS > 425°C
Gr 2.2	316 STAINLESS STEEL											LIMITATIONS > 538°C
Gr 2.3	316L STAINLESS STEEL											316L - LIMIT = 454°C
Gr 2.8	DUPLEX (S31803), SUPER DUPLEX (S32760), 6%Mo (S31254)											DU/SD - LIMIT = 315°C
Gr 3.4	MONEL 400											MUST BE ANNEALED
Gr 3.8	HASTELLOY C276 & C22											SOLUTION ANNEALED
	INCONEL 625, INCOLOY 825											MUST BE ANNEALED



STEWARTS

Valves & Gauges

Quality Standards

- ISO 9001
- P.E.R 1999 (S2001)
- P.E.D 97/23/EC
- MOD/DEF STAN - 66-2/4

Note: Our pressure & temperature gauges are manufactured to meet the CE marking requirements of P.E.R 1999 and P.E.D (S2001) 97/23/EC together with ISO 9001 approval.



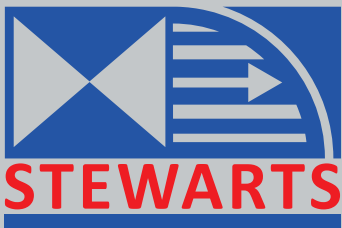
98% of all components used in the manufacture of our products are designed, manufactured and assembled in-house





Stewart-Buchanan Gauges Ltd

AN EMPLOYEE-OWNED COMPANY



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