CONTENTS

FEATURES

Across years of experience in instrumentation sector and increasing its know-how, today I.T.E. is able to offer a wide range of monoflanges and accessories for several application and sector. All products shown on this catalogue are available with integral compression ends (performance system improved, safety factors, reduction size and weight). Monoflanges are designed to replace conventional multiple-valve installation currently in use for interface with pressure measuring system. R&D dept. is constantly committed to refining and improving the quality of the products.

STANDARD FEATURES

PTFE and GRAPHOIL packing avaible for all types.

Bore size 5 mm.

ASME B16.5 flange connection.

OUT 1/2" NPT-F / DRAIN 1/4" NPT-F

Wetted parts according to **NACE MR.0175/MR.0103** as standard.

Shell test and seat leakage test are performed according to **API 598** and **ASME B16.34** (1.5 of max rating pressure).

Certificate 3.1 certificate according to EN 10 204 on valve body material.

Monoflanges are not supplied with plugs.

SPECIAL FEATURES

API Flange connections (up to 10.000 PSI)

EN 1092-1 Flange connections

Integral swivel gauge connections

NOTE

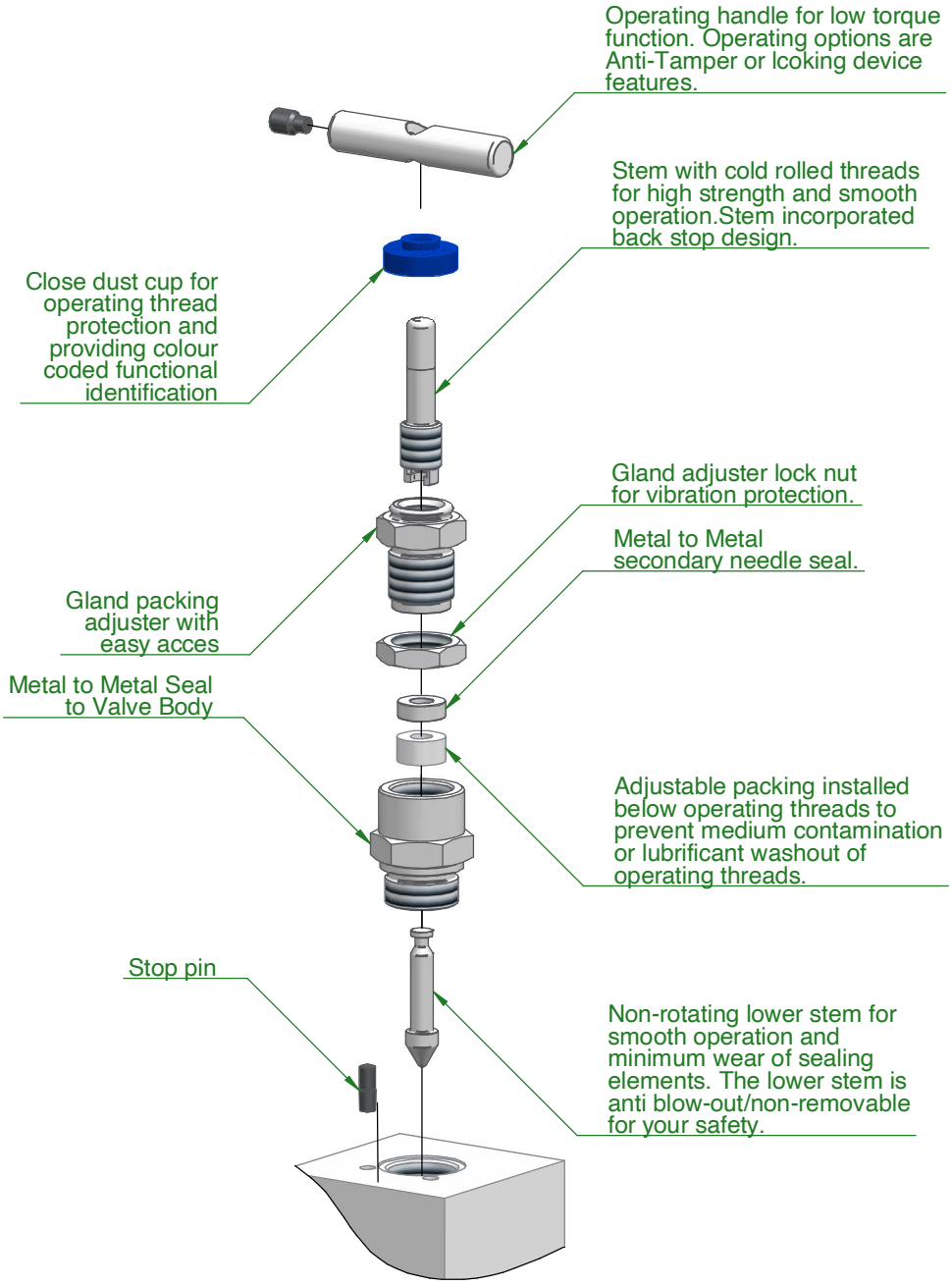
Due to internal bore size and internal volumes up to and including 1"-inch/25mm, products offered in this catalog comply with S.E.P. (Sound Engineering Practicle) article 3, paragraph 3 of the Pressure Equipment Directive P.E.D. 97/23/EC and therefore CE marking is not applicable.

MATERIAL

MATERIAL GROUP	I.T.E. DESIGNATION	ASTM	UNS	AVAILABILITY ON STOCK
Stailess Steel	316/316L	316/316L	S31600	YES
	6Mo		N08367	ON REQUEST
Ferritic Stainless Steel	Duplex	F51	S31803	YES
	Superduplex	F55	S32750	YES
Carbon Steel	LF2	LF2		ON REQUEST
	A105	A105		ON REQUEST
Alloy	Alloy 400		N04400	YES
	Alloy C276		N10276	ON REQUEST
	Alloy 625		N06625	ON REQUEST
	Alloy 825		N08825	ON REQUEST
Titanium	Ti Gr.2		R50400	ON REQUEST

BONNET FEATURES

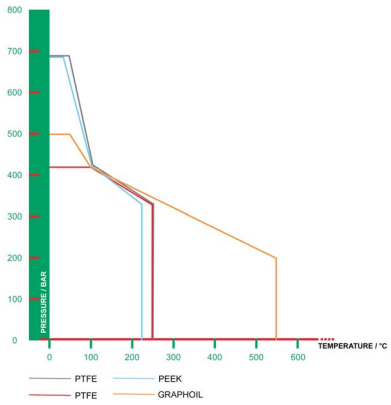
Screwed Bonnet is specifically designed for operation with any fluid up to 10.000 PSI rating. Complete with self centering non rotational tip, it guarantees total sealing efficiency during service operations. In addition to standard version, I.T.E. provides variants with locking system or anti-tamper configuration.



SPECIFICATION

- Maximum standard pressure up to 6.000 psig (414 barg).
- Maximum optional pressure up to 10.000 psig (689barg).
- Temperature range -54°C to +530°C.
- PTFE standard gland packing (Graphoil optional).
- Max. temperature PTFE 260°C.
- Max. temperature Graphoil 530°C.
- Low operating torque.
- Packing below threads to prevent lubricant washout.

PRESSURE - TEMPERATURE



OPTIONAL CONFIGURATION

Locking Plate | Anti-Tamper Head | Anti-Tamper Head with padlock

COLOR CODED DUST CAP

Isolate | Vent | Equalise

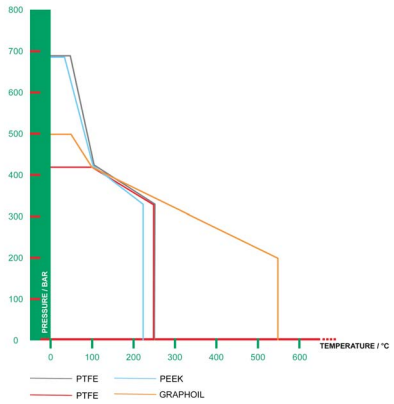
BONNET FEATURES

Outside Screw & Yoke bolted Bonnet (O.S.&Y.) is specifically designed for operation with any fluid up to 10.000 PSI rating.Complete with standard self centering non rotational tip, it guarantees total sealing efficiency during service operations. In addition to standard version, I.T.E. provides variants with locking system or anti-tamper configuration.

SPECIFICATION

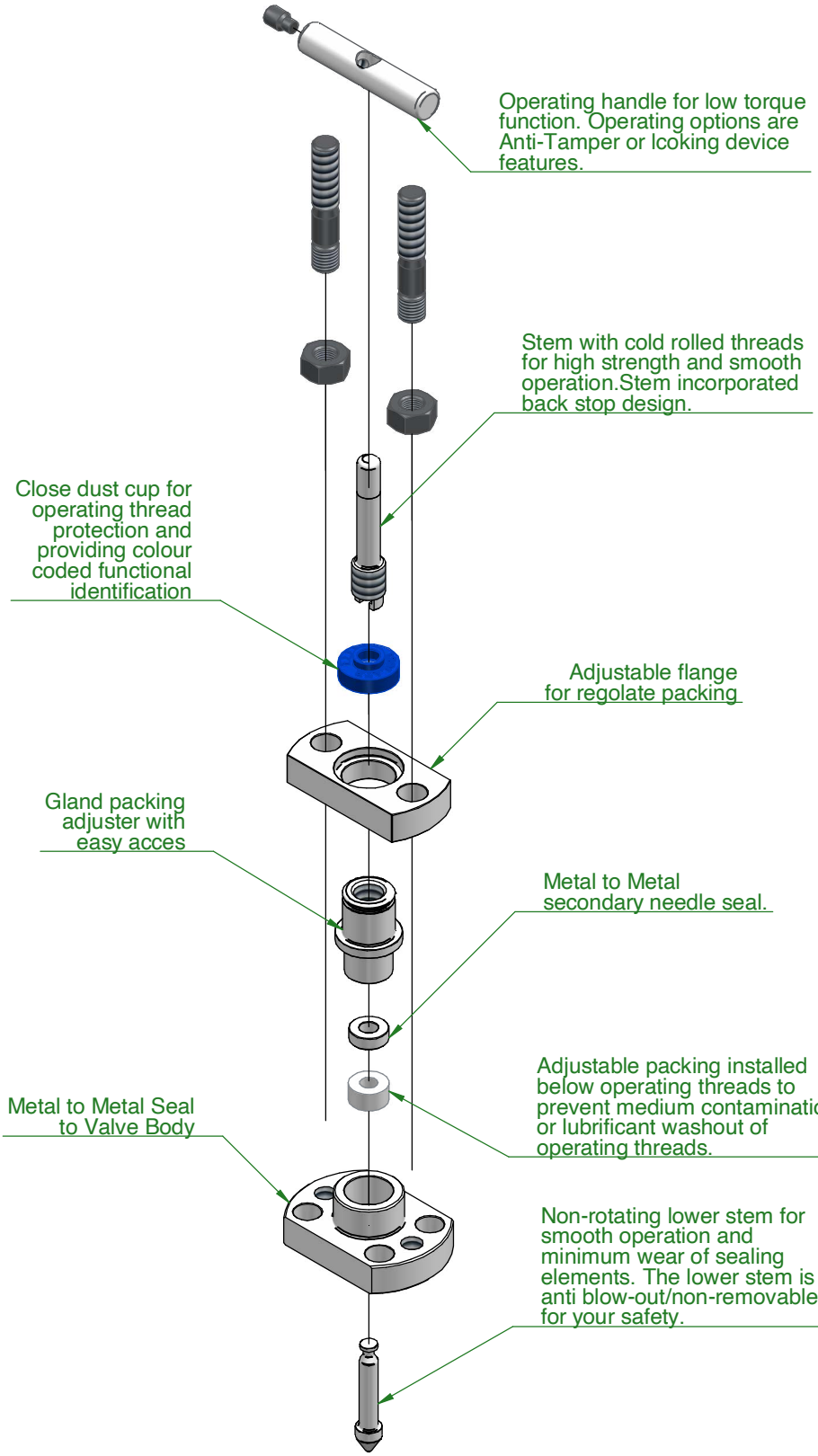
- Maximum standard pressure up to 6.000 psig (414 barg).
- Maximum optional pressure up to 10.000 psig (689barg).
- Temperature range -54°C to +530°C.
- PTFE standard gland packing (Graphoil optional).
- Max. temperature PTFE 260°C.
- Max. temperature Graphoil 530°C.
- Low operating torque.
- Packing below threads to prevent lubricant washout.

PRESSURE - TEMPERATURE



COLOR CODED DUST CAP

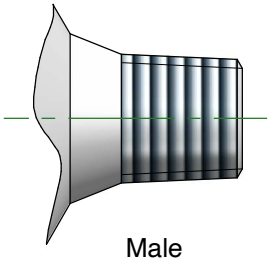
Isolate Vent Equalise



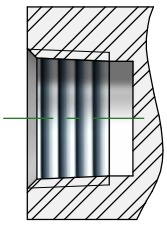
CONNECTIONS

I.T.E. manifactures a lot of different connections and combinations. Below are some of the most used. If you don't find your option please contact us.

TAPERED PIPE THREADS



Male

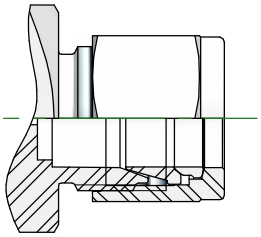


Female

NPT threads acc. to.
ASME B 1.20.1

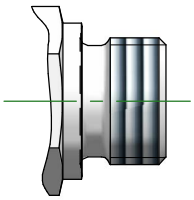
BSPT threads acc. to.
ISO 7/1

TWIN FERRULE TUBE FITTINGS

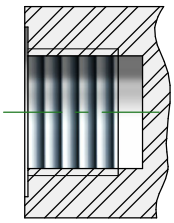


The direct pipe connection is available in both metric and inch sizes.
All components are made by I.T.E. s.r.l.

PARALLEL PIPE THREADS (1) (2)



Male

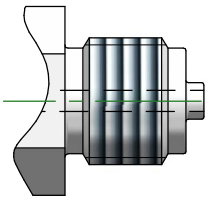


Female

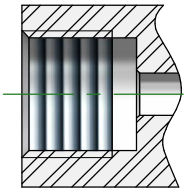
BSPP threads acc. to.
ISO 228-1
ISO 1179-1

Metric threads acc. to.
ISO 261

PARALLEL PIPE THREADS - GAUGE CONN. (1)



Male

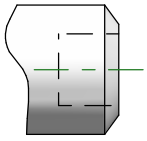


Female

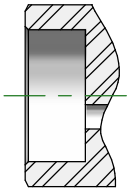
G Threads acc. to.
ISO 228-1
EN 837-1

Metric threads acc. to.
ISO 261

WELD ENDS



Male



Female

Butt weld (male)
acc. to.
ASME B16.9

Socket Weld
(female)
acc. to. ASME
B16.11

NOTE

(1) Cylindrical connection for fittings hydraulic or gas applications. The seal between male and female is made by metal to metal contact between two parallel surfaces.

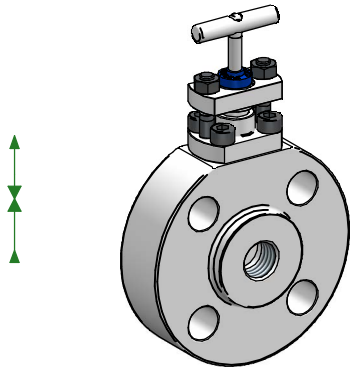
(2) Pressure connection for use with pressure gauges. The end can be fixed or rotatable according to the needs of use. The seal is carried out by means of a flat gasket placed at the bottom of the female thread.

Size from 1/8” to 1”
Metric size: M20 x 1.5

MONOFLANGE CONFIGURATION

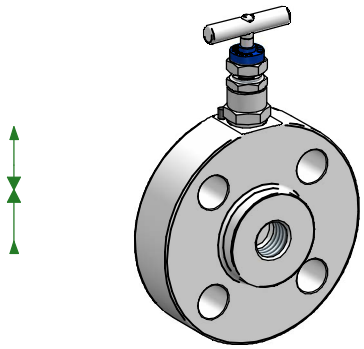
Monoflange is designed to replace conventional multiple-valve installations currently in use for interface with pressure measuring systems, combining customer's specified valves into a single manifold. Above solution provides reduced leakage path numbers together with a lowered system mass reduction of stress and vibration. Various flow and valve configurations available as well as a variety of flange sizes and outlet connections.

M81 - SINGLE BLOCK - PRIMARY ISOLATE O.S.&Y.



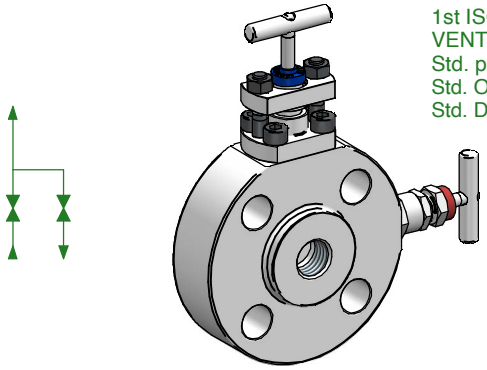
1st ISOLATE: O.S.&Y.
Std. packing: GRAPHOIL
Std. OUT: 1/2" NPT-F

M81 - SINGLE BLOCK - PRIMARY ISOLATE NEEDLE



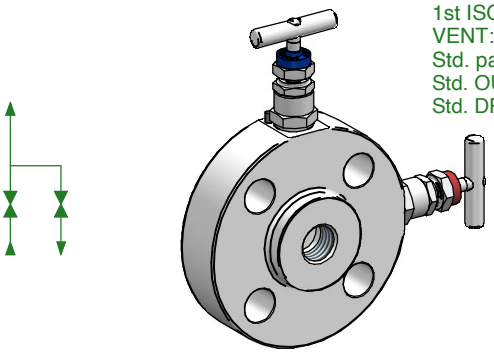
1st ISOLATE: NEEDLE
Std. packing: GRAPHOIL
Std. OUT: 1/2" NPT-F

M82 - BLOCK/BLEED - PRIMARY ISOLATE O.S.&Y.



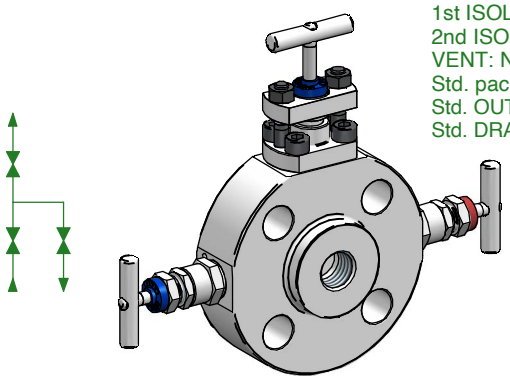
1st ISOLATE: O.S.&Y.
VENT: NEEDLE
Std. packing: GRAPHOIL
Std. OUT: 1/2" NPT-F
Std. DRAIN: 1/4" NPT-F

M82 - BLOCK/BLEED - PRIMARY ISOLATE NEEDLE



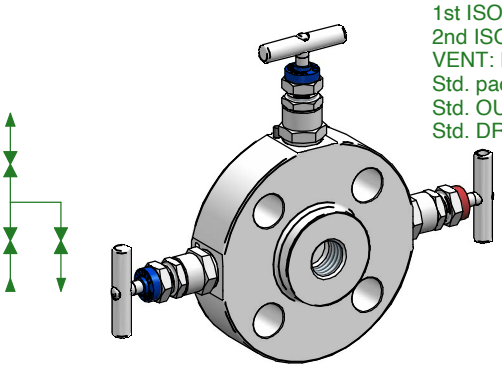
1st ISOLATE: NEEDLE
VENT: NEEDLE
Std. packing: GRAPHOIL
Std. OUT: 1/2" NPT-F
Std. DRAIN: 1/4" NPT-F

M83 - DOUBLE BLOCK & BLEED - PR. ISOLATE O.S.&Y.



1st ISOLATE: O.S.&Y.
2nd ISOLATE: NEEDLE
VENT: NEEDLE
Std. packing: GRAPHOIL
Std. OUT: 1/2" NPT-F
Std. DRAIN: 1/4" NPT-F

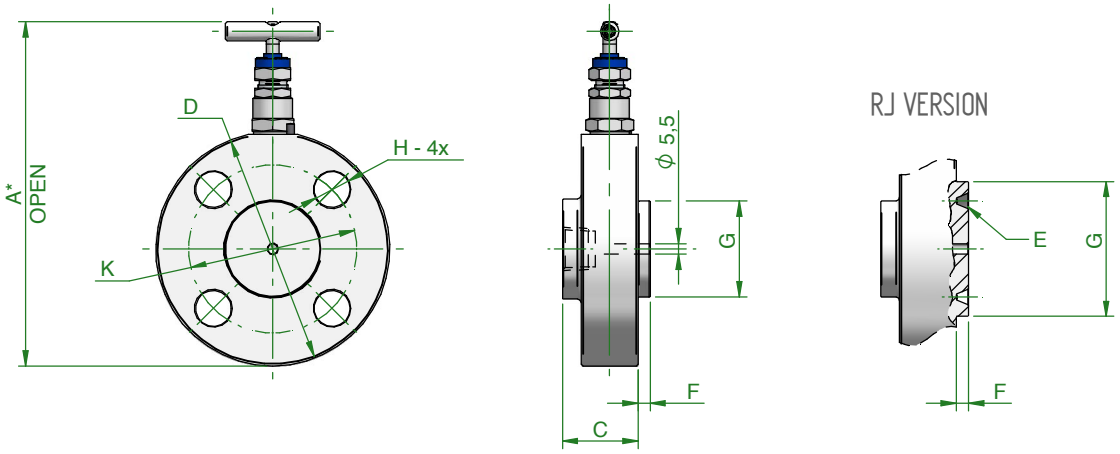
M83 - DOUBLE BLOCK & BLEED - PR. ISOLATE NEEDLE



1st ISOLATE: NEEDLE
2nd ISOLATE: NEEDLE
VENT: NEEDLE
Std. packing: GRAPHOIL
Std. OUT: 1/2" NPT-F
Std. DRAIN: 1/4" NPT-F

M81
MODEL

Block monoflange valve manifold with flanged inlet and threaded outlet connection. Complete with standard GRAPHOIL gland packing and self centering non rotational tip, it guarantees total sealing efficiency during service operations. *We are showing on this page just the standard types.*



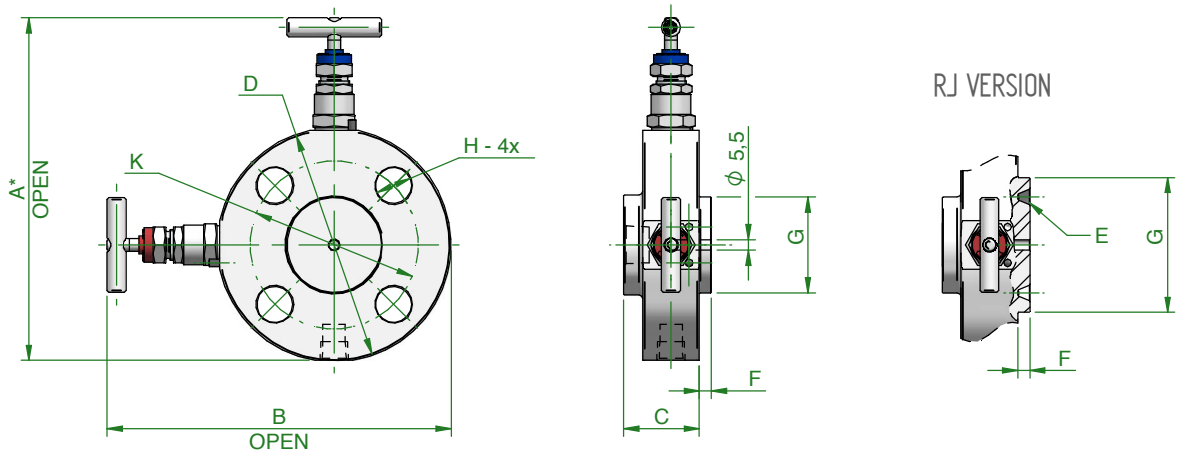
STANDARD MODEL: TYPES, DIMENSIONS, WEIGHTS

1st ISOLATE	DN FLG	IN	RATING	OUT	DRAIN	WEIGHT***	A	B	C	D	K	H	F	G	E
TEE BAR	1/2" (DN 15)	RF	150	1/2" NPT-F	-	1,5 Kg	147	-	40	88,9	60,3	15,9	1,6	35	-
			300			1,6 Kg	154			95,2	66,7				
			600			1,7 Kg							6,4		
		RJ	900			2,3 Kg	181			120,6	82,5	22,2		60,3	R12
			1500												
			2500			3,3 Kg	193			133,3	88,9			65,1	R13
	3/4" (DN 20)	RF	150			1,9 Kg	156			96,4	69,8	15,9	1,6	42,9	-
			300			2,7 Kg	176			117,5	82,5	19			
			600										6,4		
		RJ	900			3,4 Kg	189			130,2	88,9	22,2		66,7	R14
			1500												
			2500			3,9 Kg	199		41,7	139,7	95,2			73	R16
	1" (DN 25)	RF	150			2,4 Kg	166		40	107,9	79,4	15,9	1,6	50,8	-
			300			3 Kg	183			123,8	88,9	19			
			600			3,1 Kg							6,4		
		RJ	900			4,2 Kg	208			149,2	101,6	25,4		71,4	R16
			1500												
			2500			5,5 Kg	218		44	158,7	107,9			82,5	R18
	1"-1/2 (DN 40)	RF	150			3,3 Kg	186		40	127	98,4	15,9	1,6	73	-
			300			4,7 Kg	215			155,6	114,3	22,4			
			600			4,8 Kg							6,4		
		RJ	900			6,4 Kg	238		41,7	177,8	123,8	28,6		92,1	R20
			1500												
			2500			11,2 Kg	263		49,4	203,2	146	31,7	7,9	114,3	R23
	2" (DN 50)	RF	150			4,7 Kg	212		40	152,4	120,6	19	1,6	92	
			300**			5,3 Kg	200			165,1	127				
			600**										6,4		
		RJ	900**			11,4 Kg	244		48,1	215,9	165,1	25,4	7,9	123,8	R24
			1500**												
			2500**			16,7 Kg	261		55,8	234,9	171,4	28,6		133,3	R26

*In models with primary isolate O.S. & Y. dimension "A" increases by approximately 14mm
**In the models marked the number of holes "H" is 8x
***Weights are theoretical and based on AISI 316 material

M82
MODEL

Block & Bleed monoflange valve manifold with flanged inlet and threaded outlet connection. Complete with standard GRAPHOIL gland packing and self centering non rotational tip, it guarantees total sealing efficiency during service operations. *We are showing on this page just the standard types.*



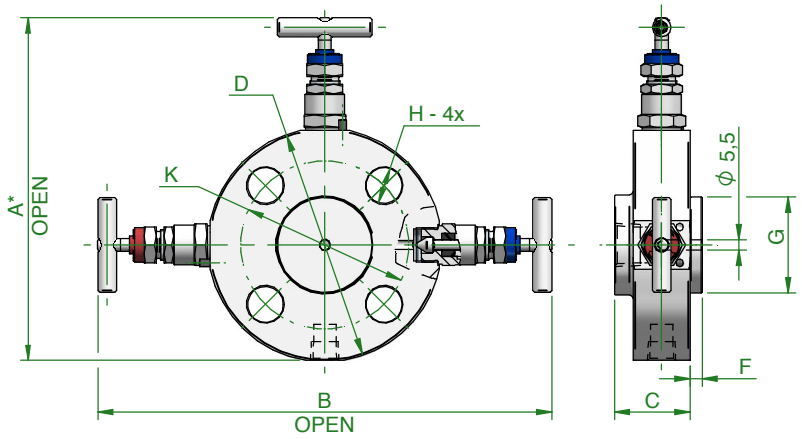
STANDARD MODEL: TYPES, DIMENSIONS, WEIGHTS

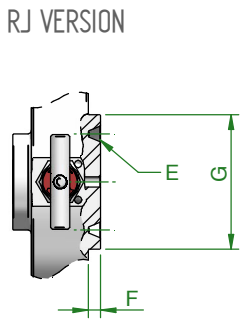
1st ISOLATE	DN FLG	IN	RATING	OUT	DRAIN	WEIGHT***	A	B	C	D	K	H	F	G	E
TEE BAR	1/2" (DN 15)	RF	150	1/2" NPT-F	1/4" NPT-F	1,6 Kg	146	147		88,9	60,3	15,9	1,6	35	-
			300			1,7 Kg	153	154		95,2	66,7				
			600			1,8 Kg							6,4		
		RJ	900			2,4 Kg	180	181		120,6	82,5	22,2		60,3	R12
			1500												
			2500			3,4 Kg	192	193	40	133,3	88,9			65,1	R13
	3/4" (DN 20)	RF	150			2 Kg	155	156		96,4	69,8	15,9	1,6	42,9	-
			300			2,8 Kg	175	176		117,5	82,5	19			
			600										6,4		
		RJ	900			3,3 Kg	188	189		130,2	88,9	22,2		66,7	R14
			1500												
			2500			4 Kg	198	199	41,7	139,7	95,2			73	R16
	1" (DN 25)	RF	150			2,5 Kg	165	166		107,9	79,4	15,9	1,6	50,8	-
			300			3,1 Kg	182	183		123,8	88,9	19			
			600			3,2 Kg			40				6,4		
		RJ	900			4,3 Kg	207	208		149,2	101,6	25,4		71,4	R16
			1500												
			2500			5,6 Kg	217	218	44	158,7	107,9			82,5	R18
	1"-1/2 (DN 40)	RF	150			3,4 Kg	185	186		127	98,4	15,9	1,6	73	-
			300			4,8 Kg	214	215	40	155,6	114,3	22,4			
			600			4,9 Kg							6,4		
		RJ	900			6,5 Kg	237	238	41,7	177,8	123,8	28,6		92,1	R20
			1500												
			2500			11,3 Kg	262	263	49,4	203,2	146	31,7	7,9	114,3	R23
	2" (DN 50)	RF	150			4,8 Kg	211	212		152,4	120,6		1,6	92	
			300**			5,4 Kg	224	200	40	165,1	127	19			
			600**										6,4		
		RJ	900**			11,5 Kg	275	244	48,1	215,9	165,1	25,4	7,9	123,8	R24
			1500**												
			2500**			16,8 Kg	295	261	55,8	234,9	171,4	28,6		133,3	R26

*In models with primary isolate O.S. & Y. dimension "A" increases by approximately 14mm
**In the models marked the number of holes "H" is 8x
***Weights are theoretical and based on AISI 316 material

M83 MODEL

Double Block & Bleed monoflange valve manifold with flanged inlet and threaded outlet connection. Complete with standard GRAPHOIL gland packing and self centering non rotational tip, it guarantees total sealing efficiency during service operations. *We are showing on this page just the standard types.*



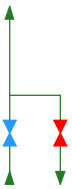
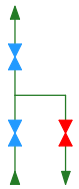
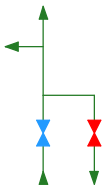
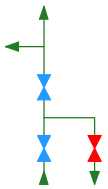


STANDARD MODEL: TYPES, DIMENSIONS, WEIGHTS

1st ISOLATE	DN FLG	IN	RATING	OUT	DRAIN	WEIGHT***	A	B	C	D	K	H	F	G	E
TEE BAR	1/2" (DN 15)	RF	150	1/2" NPT-F	1/4" NPT-F	1,7 Kg	146	205	40	88,9	60,3	15,9	1,6	35	-
			300			1,8 Kg	153	212		95,2	66,7				
			600			1,9 Kg							6,4		
		RJ	900			2,5 Kg	180	238		120,6	82,5	22,2		60,3	R12
			1500												
			2500			3,5 Kg	192	251		133,3	88,9			65,1	R13
	3/4" (DN 20)	RF	150			2 Kg	155	215		96,4	69,8	15,9	1,6	42,9	-
			300			2,8 Kg	175	235		117,5	82,5	19			
			600										6,4		
		RJ	900			3,3 Kg	188	248		130,2	88,9	22,2		66,7	R14
			1500												
			2500			4 Kg	198	258	41,7	139,7	95,2			73	R16
	1" (DN 25)	RF	150			2,5 Kg	165	225	40	107,9	79,4	15,9	1,6	50,8	-
			300			3,1 Kg	182	241		123,8	88,9	19			
			600			3,2 Kg							6,4		
		RJ	900			4,3 Kg	207	268		149,2	101,6	25,4		71,4	R16
			1500												
			2500			5,6 Kg	217	276	44	158,7	107,9			82,5	R18
	1"-1/2 (DN 40)	RF	150			3,4 Kg	185	245	40	127	98,4	15,9	1,6	73	-
			300			4,8 Kg	214	274		155,6	114,3	22,4			
			600			4,9 Kg							6,4		
		RJ	900			6,5 Kg	237	297	41,7	177,8	123,8	28,6		92,1	R20
			1500												
			2500			11,3 Kg	262	322	49,4	203,2	146	31,7	7,9	114,3	R23
	2" (DN 50)	RF	150			4,8 Kg	211	270	40	152,4	120,6	19	1,6	92	
			300**			5,4 Kg	224	235		165,1	127				
			600**										6,4		
		RJ	900**			11,5 Kg	275	271	48,1	215,9	165,1	25,4	7,9	123,8	R24
			1500**												
			2500**			16,8 Kg	295	284	55,8	234,9	171,4	28,6		133,3	R26

*In models with primary isolate O.S. & Y. dimension "A" increases by approximately 14mm
**In the models marked the number of holes "H" is 8x
***Weights are theoretical and based on AISI 316 material

MONOFLANGE (ASME SERIES) - HOW TO ORDER

MODEL TYPE					
M81	M82	M83	M71	M72	M73
					

M	8	2	R	F	-	1	6	0	6	8	K	4	S

MODEL

M81	Needle single block
M82	Needle block/bleed
M83	Needle block/bleed/blocK
…	

FACE FINISH

RF	Raised face (Smooth finish)
RJ	Ring Joint

PRIMARY ISOLATE

	Screw ed bonnet
Y	Outside Screw & Yoke bolted bonnet

DN FLANGE

8	1/2"	(DN 15)	24	1-1/2"	(DN 40)
12	3/4"	(DN 20)	32	2"	(DN 50)
16	1"	(DN 25)			

CLASS

01	Ansi 150	09	Ansi 900
03	Ansi 300	15	Ansi 1500
06	Ansi 600	25	Ansi 2500

OUT

8	1/2"
12	3/4"
X	Wafer style (I/O same flange)

THREAD

N	NPT	R	BSPP GAS (EN 837-1) - Gauge connection
K	BSPT R/RC (ISO 7)	M	Metric (similar EN 837-)
O	Tube connection	F	Flanged (only "X" selection)

DRAIN

	/
4	1/4" NPT
8	1/2" NPT

MATERIAL

S	Aisi 316L	F	Alloy 400
A	A105	G	Alloy C276
D	Duplex F51	H	6 Mo/F44
E	Super Duplex F55	I	Alloy 625

OPTIONS

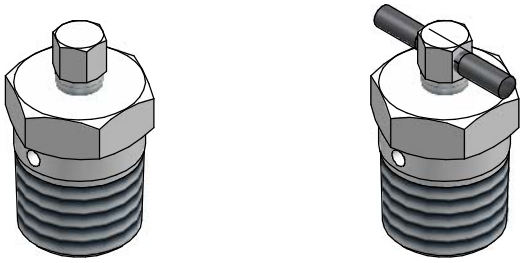
B	All component 316L	TI	Isolate Anti-tamper
C	Special testing	K	Padlock for all anti tamper bonnet
L	Lox cleaning	T	Mounted plug drain
TD	Vent Anti-tamper	TT	All bonnet Anti-tamper

Attention - Above guideline show s all possible product configuration. Tailor-made solutions must be evaluated and approved by ITE technical dept before accepting and processing your order

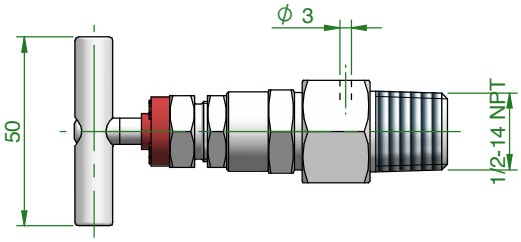
FOR API OR EN FLANGE MODEL, PLEASE CONTACT ITE SALES OFFICE

ACCESSORIES

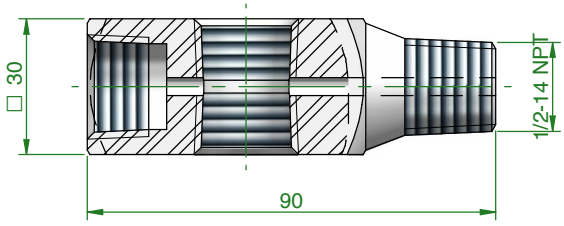
VBP / VBPT - VENT VALVE



VBV - ADJUSTABLE VENT VALVE



VBT - BAR STOCK BLEED TEE



HOW TO ORDER

	V	B	V	-	0	6	S	T	4	

MODEL

VBT	Bar stock bleed TEE
VBV	Adjustable VENT valve
VBPT	Vent valve
VBV	Vent valve

RATING

06	Series 6.000 PSI
10	Series 10.000 PSI

MATERIAL

S	Aisi 316L	F	Alloy 400
A	A105	G	Alloy C276
D	Duplex F51	H	6 Mo/F44
E	Superduplex F55	I	Alloy 625

PACKING (VBV ONLY)

T	PTFE
G	Graphoil

CONNECTIONS

4	1/4"
6	3/8"
8	1/2"

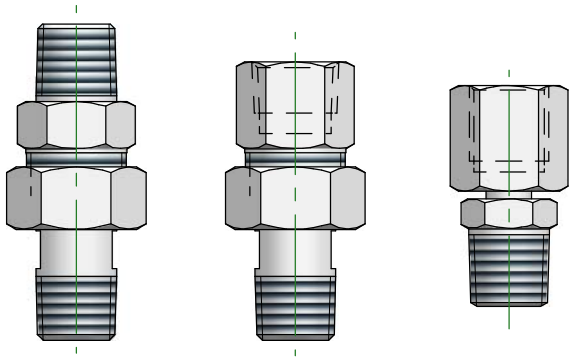
THREAD

/	NPT
K	BSPT R/RC (ISO 7)
I	BSPP GAS (ISO 1179)
R	BSPP GAS (EN 837-1) - Gauge connection

Attention - Above guideline shows all possible product configuration. Tailor-made solutions must be evaluated and approved by ITE technical dept before accepting and processing your

ACCESSORIES

SGA/SGC - SWIVEL ADAPTER



HOW TO ORDER

	S	G	A	-	2	0	M	F	8	G	M	-	0	6	S

MODEL

SGA	SWIVEL GAUGE ADAPTER - SCREWED
SGC	SWIVEL GAUGE ADAPTER - WELDED

INLET DIMENSION

4	1/4" NPT	4G	1/4" BSPP (G)*
8	1/2" NPT	8G	1/2" BSPP (G)*
12	3/4" NPT	4K	1/4" BSPT***
16	1" NPT	8K	1/2" BSPT***
20M	M20x1,5 *		
4I	1/4" BSPP (G)**		
6I	3/8" BSPP (G)**		
8I	1/2" BSPP (G)**		

CONNECTION

F	FEMALE
M	MALE

OUTLET DIMENSION

4	1/4" NPT	4G	1/4" BSPP (G)*
8	1/2" NPT	8G	1/2" BSPP (G)*
12	3/4" NPT	4K	1/4" BSPT***
16	1" NPT	8K	1/2" BSPT***
20M	M20x1,5 *		
4I	1/4" BSPP (G)**		
6I	3/8" BSPP (G)**		
8I	1/2" BSPP (G)**		

CONNECTION

F	FEMALE
M	MALE

RATING (SGA ONLY)

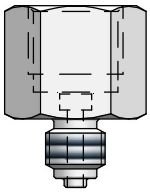
06	6,000 PSI
10	10,000 PSI

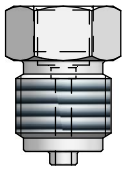
MATERIAL

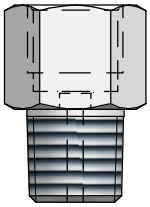
S	Aisi 316L	F	Alloy 400
A	A105	G	Alloy C276
D	Duplex F51	H	6 Mo/F44
E	Super Duplex F55	I	Alloy 625

* EN 837-1 DESIGN
** ISO 1179 DESIGN ("MA" ONLY)
*** ISO 7/1

Attention - Above guideline shows all possible product configuration. Tailor-made solutions must be evaluated and approved by ITE technical dept before accepting and processing your order







HOW TO ORDER

	G	A	-	8	G	M	8	G	F	-	0	6	S

MODEL

GA	GAUGE ADAPTER

INLET DIMENSION

4	1/4" NPT	4G	1/4" BSPP (G)*
8	1/2" NPT	8G	1/2" BSPP (G)*
12	3/4" NPT	4K	1/4" BSPT***
16	1" NPT	8K	1/2" BSPT***
20M	M20x1,5 *		
4I	1/4" BSPP (G)**		
6I	3/8" BSPP (G)**		
8I	1/2" BSPP (G)**		

CONNECTION

F	FEMALE
M	MALE

OUTLET DIMENSION

4	1/4" NPT	4G	1/4" BSPP (G)*
8	1/2" NPT	8G	1/2" BSPP (G)*
12	3/4" NPT	4K	1/4" BSPT***
16	1" NPT	8K	1/2" BSPT***
20M	M20x1,5 *		
4I	1/4" BSPP (G)**		
6I	3/8" BSPP (G)**		
8I	1/2" BSPP (G)**		

CONNECTION

F	FEMALE
M	MALE

RATING (SGA ONLY)

06	6,000 PSI
10	10,000 PSI

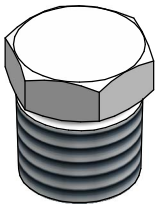
MATERIAL

S	Aisi 316L	F	Alloy 400
A	A105	G	Alloy C276
D	Duplex F51	H	6 Mo/F44
E	Super Duplex F55	I	Alloy 625

* EN 837-1 DESIGN
** ISO 1179 DESIGN ("MA" ONLY)
*** ISO 7/1

Attention - Above guideline shows all possible product configuration. Tailor-made solutions must be evaluated and approved by ITE technical dept before accepting and processing your order

PH - PIPE PLUG



HOW TO ORDER

	8	P	H	-	0	6	S

CONNECTIONS

2	1/8"	8	1/2"
4	1/4"	12	3/4"
6	3/8"	16	1"

MODEL

PH	HEX MALE PLUG

RATING

06	Series 6.000 PSI
10	Series 10.000 PSI

MATERIAL

S	Aisi 316L	F	Alloy 400
A	A105	G	Alloy C276
D	Duplex F51	H	6 Mo/F44
E	Super Duplex F55	I	Alloy 625

THREAD

/	NPT
K	BSPT R/RC (ISO 7)
I	BSPP GAS (ISO 1179)
R	BSPP GAS (EN 837-1) - Gauge connection

Attention - Above guideline shows all possible product configuration. Tailor-made solutions must be evaluated and approved by ITE technical dept before accepting and processing your order