

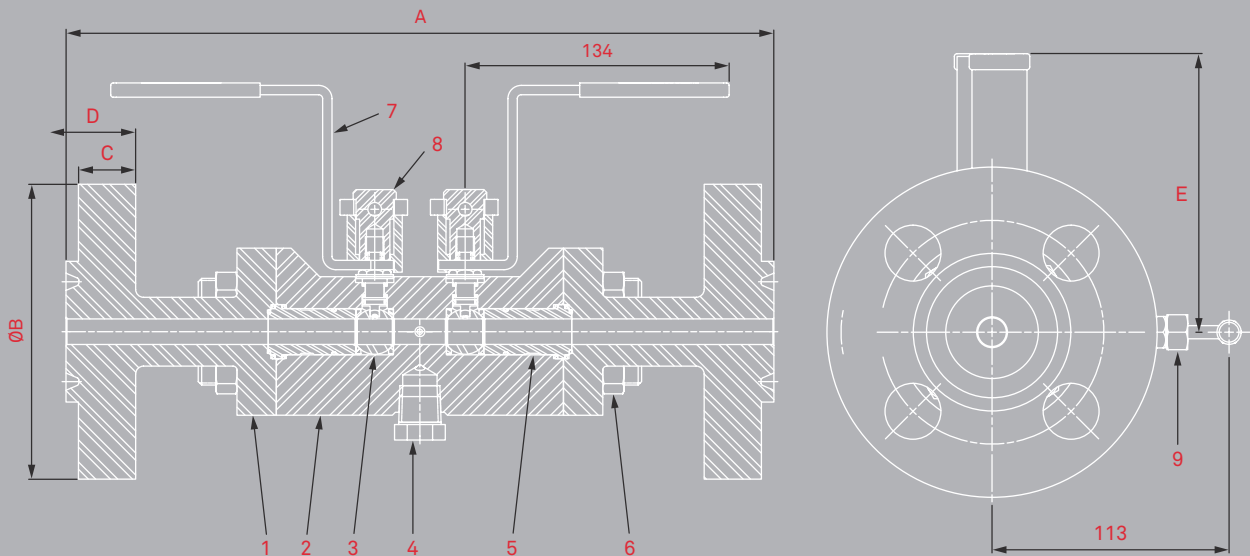
# OB Series Flange x Flange 3 Piece

Technical Spec

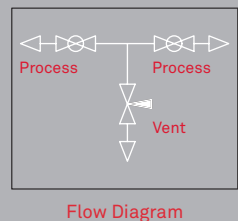
Double block and bleed 3 piece flange by flange valve utilising both soft seats and a metal to metal seat, with flange to body connection for superior, bubble tight sealing capabilities at both high pressures and temperatures.

The FVO type valve offers a Ball, Bolted Needle, Ball configuration. Interchangeable flange options make this valve highly customisable for applications that include changes in piping configurations. This series offers working pressures of up to ASME B16.5 class 2500 with a maximum working temperature of up to 200°C.

Valve Construction



- 1 Bolt on Flange Connection
- 2 Valve Body
- 3 Isolation Valve
- 4 Blank Plug
- 5 Body Insert
- 6 M12 Hex Nut
- 7 Valve Handle
- 8 Locking Device
- 9 Bolted Needle Valve



Options

Flange/Inlet †	Outlet †	Vented Port Thread †	Vent Port †	Needle Valve
Raised Face	Raised Face	NPT	Plugged	Standard Needle
Flat Face	Flat Face	BSPP	Unplugged	Anti Tamper Needle
Ring Type Joint	Ring Type Joint	BSPT	Safety Vent Plug	OS&Y Needle
				Lockable OS&Y Needle

† Other options can be supplied upon request.



**Temp. Range**  
-46°C > 200°C †



**Pressure Rating**  
ASME Class 150 - 2500



**Flange Sizes**  
ASME B16.5 1/2" - 3" †



**Compliance**  
NACE MR - 01 - 75



**Flow Direction**  
Bi-directional

† Actual maximum working temperature is dependent on valve service conditions; please contact for more information.

Design Features

- Standard configuration body with interchangeable process connections
- Bore sizes from 10mm up to 250mm
- Pressure rated up to ASME B16.5 class 2500 and API 6A 10,000 psi
- Double block and bleed configuration
- Lockable and Anti-tamper devices available
- Choice of venting valve design
- Materials available include: ASTM A182 F316 Stainless Steel, ASTM A182 F51/55 Duplex & Super Duplex, and ASTM B564 UNS N06625 Inconel
- Fire safe design

Pressure Testing

All our Valves are tested thoroughly. We offer a wide range of testing options due to our variety of in-house testing equipment. Standard Hydro-body, Hydro-seat and Gas seat testing is carried out to API 598 and API 6A, with permissible leakage to ISO 5208. However other standards can be adhered to should it be required, including but not limited to PR2, ISO 15848, MESC SPE 77/300 and MESC SPE 77/312. Please speak to our Sales team with regards to your testing requirements and we will be happy to advise.

**Non-Destructive Testing/Examination Options**

- DPI
- MPI
- Ultrasonic
- Hardness Testing
- Radiography

Data Table

For further information regarding this range, please see the OB Series Flange x Flange 3 Piece product data table at the back of this brochure.

# OB Series Flange x Flange Product Type

## 10MM OB SERIES THREE PIECE RF/RTJ FLANGE X RF/RTJ FLANGE

	Size	Rating	Valve Part No.	A RF (mm)	A RTJ (mm)	ØB (mm)	C (mm)	D RF (mm)	D RTJ (mm)	E (mm)	F (mm)	Nominal weight
Metric / mm	1/2"	150	DD10VB4N#-4AR (4ARJ)	279	N/A	90	10.1	12.1	N/A	92	120	7
	1/2"	300	DD10VB4N#-4BR (4BRJ)	285	292	95	13.2	15.2	19.6	92	120	8
	1/2"	600	DD10VB4N#-4CR (4CRJ)	298	298	95	14.8	21.8	21.2	92	120	8
	1/2"	900/1500	DD10VB4N#-4ER (4ERJ)	331	331	120	22.8	29.8	29.2	92	120	10
	1/2"	2500	DD10VB4N#-4FR (4FRJ)	348	348	135	30.7	37.7	37.1	92	120	13
	3/4"	150	DD10VB4N#-6AR (6ARJ)	282	N/A	100	11.7	13.7	N/A	92	120	8
	3/4"	300	DD10VB4N#-6BR (6BRJ)	296	305	115	14.8	16.8	21.2	92	120	9
	3/4"	600	DD10VB4N#-6CR (6CRJ)	309	309	115	16.4	23.4	22.8	92	120	9
	3/4"	900/1500	DD10VB4N#-6ER (6ERJ)	337	337	130	25.9	32.9	32.3	92	120	12
	3/4"	2500	DD10VB4N#-6FR (6FRJ)	350	350	140	32.3	39.3	38.7	92	120	14
	1"	150	DD10VB4N#-8AR (8ARJ)	285	294	110	13.2	15.2	19.6	92	120	9
	1"	300	DD10VB4N#-8BR (8BRJ)	299	308	125	16.4	18.4	22.8	92	120	10
	1"	600	DD10VB4N#-8CR (8CRJ)	312	312	125	18	25.0	24.4	92	120	10
	1"	900/1500	DD10VB4N#-8ER (8ERJ)	342	342	150	29.1	36.1	35.5	92	120	14
	1"	2500	DD10VB4N#-8FR (8FRJ)	366	366	160	35.5	42.5	41.9	92	120	17
	1 1/2"	150	DD10VB4N#-12AR (12ARJ)	291	300	125	16.4	18.4	22.8	120	148	10
	1 1/2"	300	DD10VB4N#-12BR (12BRJ)	314	323	155	19.6	21.6	26.0	120	148	13
	1 1/2"	600	DD10VB4N#-12CR (12CRJ)	331	331	155	22.8	29.8	29.2	120	148	14
	1 1/2"	900/1500	DD10VB4N#-12ER (12ERJ)	365	365	180	32.3	39.3	38.7	120	148	19
	1 1/2"	2500	DD10VB4N#-12FR (12FRJ)	342	342	205	45	52.0	52.9	120	148	28
2"	150	DD10VB4N#-16AR (16ARJ)	302	311	150	18	20.0	24.4	120	148	12	
2"	300	DD10VB4N#-16BR (16BRJ)	284	293	165	21.2	23.2	29.1	120	148	13	
2"	600	DD10VB4N#-16CR (16CRJ)	303	303	165	25.9	32.9	33.8	120	148	15	
2"	900/1500	DD10VB4N#-16ER (16ERJ)	329	329	215	38.6	45.6	46.5	148	178	27	
2"	2500	DD10VB4N#-16FR (16FRJ)	354	354	235	51.4	58.4	59.3	148	178	38	

# OB Series Flange x Flange Product Type (cont'd)

## 13MM OB SERIES THREE PIECE RF/RTJ FLANGE X RF/RTJ FLANGE

	Size	Rating	Valve Part No.	A RF (mm)	A RTJ (mm)	ØB (mm)	C (mm)	D RF (mm)	D RTJ (mm)	E (mm)	F (mm)	Nominal weight
Metric / mm	1/2"	150	13DD10VB4N#-4AR(4ARJ)	287	N/A	90	10.1	12.1	N/A	92	120	10
	1/2"	300	13DD10VB4N#-4BR(4BRJ)	293	302	95	13.2	15.2	19.6	92	120	10
	1/2"	600	13DD10VB4N#-4CR(4CRJ)	306	306	95	14.8	21.8	21.2	92	120	10
	1/2"	900/1500	13DD10VB4N#-4ER(4ERJ)	339	339	120	22.8	29.8	29.2	92	120	13
	1/2"	2500	13DD10VB4N#-4FR(4FRJ)	355	355	135	30.7	37.7	37.1	92	120	15
	3/4"	150	13DD10VB4N#-6AR(6ARJ)	290	N/A	100	11.7	13.7	N/A	92	120	10
	3/4"	300	13DD10VB4N#-6BR(6BRJ)	304	312	115	14.8	16.8	21.2	92	120	11
	3/4"	600	13DD10VB4N#-6CR(6CRJ)	317	317	115	16.4	23.4	22.8	92	120	12
	3/4"	900/1500	13DD10VB4N#-6ER(6ERJ)	345	345	130	25.9	32.9	32.3	92	120	14
	3/4"	2500	13DD10VB4N#-6FR(6FRJ)	358	358	140	32.3	39.3	38.7	92	120	16
	1"	150	13DD10VB4N#-8AR(8ARJ)	293	293	110	13.2	15.2	19.6	92	120	11
	1"	300	13DD10VB4N#-8BR(8BRJ)	306	314	125	16.4	18.4	22.8	92	120	12
	1"	600	13DD10VB4N#-8CR(8CRJ)	321	321	125	18	25	24.4	92	120	12
	1"	900/1500	13DD10VB4N#-8ER(8ERJ)	360	360	150	29.1	36.1	35.5	92	120	16
	1"	2500	13DD10VB4N#-8FR(8FRJ)	372	374	160	35.5	42.5	41.9	92	120	20
	1 1/2"	150	13DD10VB4N#-12AR(12ARJ)	300	300	125	16.4	18.4	22.8	120	148	12
	1 1/2"	300	13DD10VB4N#-12BR(12BRJ)	322	332	155	19.6	21.6	26.0	120	148	15
	1 1/2"	600	13DD10VB4N#-12CR(12CRJ)	338	338	155	22.8	29.8	29.2	120	148	16
	1 1/2"	900/1500	13DD10VB4N#-12ER(12ERJ)	374	374	180	32.3	39.3	38.7	120	148	22
	1 1/2"	2500	13DD10VB4N#-12FR(12FRJ)	397	397	205	45	52	52.9	120	148	31
2"	150	13DD10VB4N#-16AR(16ARJ)	301	301	150	18	20	24.4	120	148	14	
2"	300	13DD10VB4N#-16BR(16BRJ)	292	302	165	21.2	23.2	29.1	120	148	15	
2"	600	13DD10VB4N#-16CR(16CRJ)	311	311	165	25.9	32.9	33.8	120	148	17	
2"	900/1500	13DD10VB4N#-16ER(16ERJ)	337	337	215	38.6	45.6	46.5	148	178	29	
2"	2500	13DD10VB4N#-16FR(16FRJ)	362	362	235	51.4	58.4	59.3	148	178	40	

# OB Series Flange x Flange Product Type (cont'd)

## 19MM OB SERIES THREE PIECE RF/RTJ FLANGE X RF/RTJ FLANGE

	Size	Rating	Valve Part No.	A RF (mm)	A RTJ (mm)	ØB (mm)	C (mm)	D RF (mm)	D RTJ (mm)	E (mm)	F (mm)	Nominal weight
Metric / mm	3/4"	150	19DDOVB4N#-6AR (6ARJ)	304	N/A	100	11.7	13.7	18.1	92	120	11
	3/4"	300	19DDOVB4N#-6BR (6BRJ)	332	332	115	14.8	16.8	21.2	92	120	12
	3/4"	600	19DDOVB4N#-6CR (6CRJ)	334	334	115	16.4	23.4	22.8	92	120	12
	3/4"	900/1500	19DDOVB4N#-6ER (6ERJ)	366	366	130	25.9	32.9	32.3	92	120	15
	3/4"	2500	19DDOVB4N#-6FR (6FRJ)	366	359	140	32.3	39.3	38.7	92	120	17
	1"	150	19DDOVB4N#-8AR (8ARJ)	308	318	110	13.2	15.2	19.6	92	120	11
	1"	300	19DDOVB4N#-8BR (8BRJ)	324	332	125	16.4	18.4	22.8	92	120	13
	1"	600	19DDOVB4N#-8CR (8CRJ)	330	330	125	18.0	25.0	24.4	92	120	13
	1"	900/1500	19DDOVB4N#-8ER (8ERJ)	386	386	150	29.1	36.1	35.5	92	120	17
	1"	2500	19DDOVB4N#-8FR (8FRJ)	394	394	160	35.5	42.5	41.9	92	120	20
	1 1/2"	150	19DDOVB4N#-12AR (12ARJ)	334	334	125	16.4	18.4	22.8	120	148	13
	1 1/2"	300	19DDOVB4N#-12BR (12BRJ)	334	334	155	19.6	21.6	26.0	120	148	16
	1 1/2"	600	19DDOVB4N#-12CR (12CRJ)	338	338	155	22.8	29.8	29.2	120	148	16
	1 1/2"	900/1500	19DDOVB4N#-12ER (12ERJ)	386	398	180	32.3	39.3	38.7	120	148	22
	1 1/2"	2500	19DDOVB4N#-12FR (12FRJ)	352	362	205	45.0	52.0	52.9	120	148	30
	2"	150	19DDOVB4N#-16AR (16ARJ)	285	294	150	18.0	20.0	24.4	120	148	14
	2"	300	19DDOVB4N#-16BR (16BRJ)	292	304	165	21.2	23.2	29.1	120	148	16
	2"	600	19DDOVB4N#-16CR (16CRJ)	312	314	165	25.9	32.9	33.8	120	148	18
	2"	900/1500	19DDOVB4N#-16ER (16ERJ)	336	339	215	38.6	45.6	46.5	148	178	30
	2"	2500	19DDOVB4N#-16FR (16FRJ)	366	362	235	51.4	58.4	59.3	148	178	41

## 25MM OB SERIES THREE PIECE RF/RTJ FLANGE X RF/RTJ FLANGE

	Size	Rating	Valve Part No.	A (RF mm)	A (RTJ mm)	ØB (mm)	C (mm)	D RF (mm)	D RTJ (mm)	E (mm)	F (mm)	Nominal weight
Metric / mm	1"	150	25DDOVB4N#-8AR (8ARJ)	296	306	110	13.2	15.2	19.6	92	120	12
	1"	300	25DDOVB4N#-8BR (8BRJ)	316	316	125	16.4	18.4	22.8	92	120	13
	1"	600	25DDOVB4N#-8CR (8CRJ)	324	324	125	18	25.0	24.4	92	120	14
	1"	900/1500	25DDOVB4N#-8ER (8ERJ)	356	356	150	29.1	36.1	35.5	92	120	18
	1"	2500	25DDOVB4N#-8FR (8FRJ)	396	396	160	35.5	42.5	41.9	92	120	25
	1 1/2"	150	25DDOVB4N#-12AR (12ARJ)	300	310	125	16.4	18.4	22.8	120	148	14
	1 1/2"	300	25DDOVB4N#-12BR (12BRJ)	335	335	155	19.6	21.6	26.0	120	148	16
	1 1/2"	600	25DDOVB4N#-12CR (12CRJ)	351	351	155	22.8	29.8	29.2	120	148	17
	1 1/2"	900/1500	25DDOVB4N#-12ER (12ERJ)	386	386	180	32.3	39.3	38.7	120	148	22
	1 1/2"	2500	25DDOVB4N#-12FR (12FRJ)	452	440	205	45	52.0	52.9	120	148	36
	2"	150	25DDOVB4N#-16AR (16ARJ)	292	302	150	18	20.0	24.4	120	148	15
	2"	300	25DDOVB4N#-16BR (16BRJ)	284	296	165	21.2	23.2	29.1	120	148	17
	2"	600	25DDOVB4N#-16CR (16CRJ)	296	300	165	25.9	32.9	33.8	120	148	18
	2"	900/1500	25DDOVB4N#-16ER (16ERJ)	351	354	215	38.6	45.6	46.5	148	178	23
	2"	2500	25DDOVB4N#-16FR (16FRJ)	452	383	235	51.4	58.4	59.3	148	178	47

# OB Series Flange x Flange Product Type (cont'd)

## 38MM OB SERIES THREE PIECE RF/RTJ FLANGE X RF/RTJ FLANGE

	Size	Rating	Valve Part No.	A RF (mm)	A RTJ (mm)	ØB (mm)	C (mm)	D RF (mm)	D RTJ (mm)	E (mm)	F (mm)	Nominal weight
Metric / mm	1 1/2"	150	38DDOVB4N#-12AR (12ARJ)	347	357	125	16.4	18.4	22.8	120	148	36
	1 1/2"	300	38DDOVB4N#-12BR (12BRJ)	377	387	155	19.6	21.6	26.0	120	148	39
	1 1/2"	600	38DDOVB4N#-12CR (12CRJ)	397	398	155	22.8	29.8	29.2	120	148	40
	1 1/2"	900/1500	38DDOVB4N#-12ER (12ERJ)	415	415	180	32.3	39.3	38.7	120	148	46
	1 1/2"	2500	38DDOVB4N#-12FR (12FRJ)	501	504	205	45	52.0	52.9	120	148	92
	2"	150	38DDOVB4N#-16AR (16ARJ)	363	373	150	18	20.0	24.4	120	148	39
	2"	300	38DDOVB4N#-16BR (16BRJ)	381	395	165	21.2	23.2	29.1	120	148	41
	2"	600	38DDOVB4N#-16CR (16CRJ)	397	400	165	25.9	32.9	33.8	120	148	43
	2"	900/1500	38DDOVB4N#-16ER (16ERJ)	445	450	215	38.6	45.6	46.5	148	178	57
	2"	2500	38DDOVB4N#-16FR (16FRJ)	514	518	235	51.4	58.4	59.3	148	178	92

## 50MM OB SERIES THREE PIECE RF/RTJ FLANGE X RF/RTJ FLANGE

	Size	Rating	Valve Part No.	A RF (mm)	A RTJ (mm)	ØB (mm)	C (mm)	D RF (mm)	D RTJ (mm)	E (mm)	F (mm)	Nominal weight
Metric / mm	2"	150	50DDOVB4N#-16AR (16ARJ)	340	349	150	18.0	20.0	24.4	120	148	43
	2"	300	50DDOVB4N#-16BR (16BRJ)	350	356	165	21.2	23.2	29.1	120	148	44
	2"	600	50DDOVB4N#-16CR (16CRJ)	366	369	165	25.9	32.9	33.8	120	148	47
	2"	900/1500	50DDOVB4N#-16ER (16ERJ)	516	519	215	38.6	45.6	46.5	148	178	97
	2"	2500	50DDOVB4N#-16FR (16FRJ)	543	551	235	51.4	58.4	59.3	148	178	108