

## Double Block & Bleed Plug Valve

FlowBiz Double Block Bleed Plug Valves are designed following essential international standards. They also meet the requirements of significant hydrocarbon industry standards and customer specifications.

FlowBiz expanding plug valves are ideal for applications that require positive shutoff, verifiable zero leakage and double block and bleed (DB&B), or double isolation and bleed (DIB) capability.

### Range :

**Size :** 2 inch to 30 inch (50mm to 750mm) - 150 Class

**Size :** 2 inch to 24 inch (50mm to 600mm) - 300 Class

**Size :** 2 inch to 12 inch (50mm to 300mm) - 600 Class



### Applications :

#### Blending Units :

The FlowBiz Double Block & Bleed Valves are designed for the perfect blending of ethanol. Other geographical fuel grades need valves with exceptionally high seal probity to guarantee precise measurement of additives and blending stocks.

#### Product Isolation:

The FlowBiz Double Block & Bleed Valves are designed for reliable isolation of biofuels or other process-sensitive fluids critical for environmental and process safety. The FlowBiz DB&B's provable zero leakage and positive shutoff abilities make it an ideal solution for process-sensitive applications and isolation.

#### Multi-Product Manifolds :

The FlowBiz Double Block & Bleed Valves are designed for refinery, pipeline, and transfer manifolds to flow multiple products (e.g. blending stocks, diesel, gasoline, jet fuel etc. reliably and without contamination. FlowBiz DB&B is a valuable tool for preventing cross-contamination of product.

#### Prover Loops :

For every valve in the prover loop system to have a zero leak rate, flow meters must have proper calibration — any error in calibration results in a leak. FlowBiz DB&B valves are used to ensure accurate calibration & leak-tight closure.

#### Custody Transfer Units :

Accurate measurement of product transfer quantity depends on the transfer of valuable media. The FlowBiz DB & B provides zero leak rate and positive shutoff, guaranteeing the accuracy of the transfer quantity calculation.

#### Offshore Platform :

Any leakage on an offshore platform results in loss to facilities and the environment. The FlowBiz DB & B has excellent low-pressure positive shutoff characteristics and is a perfect selection for platforms offshore.

#### Terminals :

Terminals used for unloading and loading tankers require valves with positive sealing to prevent environment damage due to spillage. The FlowBiz DB & B provides zero leak rate and positive sealing in a secure and one go valve solution.

#### Tank Farms (Oil Depots) :

Frequently operated Tank isolation valves, a high degree of reliability and requires zero leak rate. The FlowBiz DB & B valve provides a high integrity seal designed and reliable for instant, long-term and frequent use.

#### Aviation Fueling Systems :

Airport fueling systems require valves that close instantly and have provable seal integrity, allows for quick maintenance, repair, leak location and testing -- the FlowBiz DB & B valve's sustainable zero leak rate. DB & B valves ensure that repair, leak location, maintenance, and hydrant testing can be done safely and quickly.



## Standards & Materials

### Compliance Standards

FlowBiz Double Block Bleed Plug Valves are designed following essential international standards. They also meet the requirements of significant hydrocarbon industry standards and customer specifications.

Parameter	Standard
Design	API 6D/ ISO 14313
Pressure-Temperature Rating	ASME B16.34
Face-to-Face	ASME B16.10 from 2" to 18" Manufacturer standard for 20" and above
End Flanges	ASME B16.5, ASME B16.47-Series A
Actuator/ Gear Mounting Flange	ISO 5210
Pressure Testing	API 6D
Fire Test	API 607/ ISO 10497
Fugitive Emission	ISO 15848, Part 1

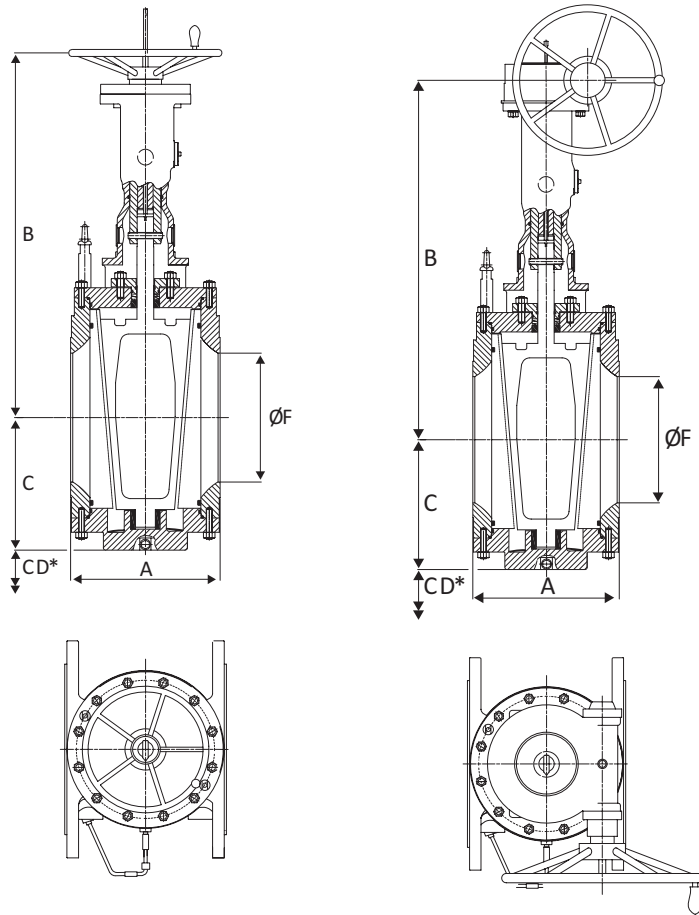
### Materials of Construction

Components	Materials
Body	ASTM A216 Gr WCC + ENP
Plug	ASTM A216 Gr WCC + ENP
Segment	ASTM A395 Gr 60-40-18
Seal	Viton
Bonnet	ASTM A216 Gr WCC
Radial Bearing	Stainless Steel backed PTFE
Packing	Flexible graphite
O-Ring	Viton B
Drain Plug	SS 410
Bottom Plate	ASTM A216 Gr WCC
Gasket	Flexible graphite
Gland Flange	ASTM A216 Gr WCB
Outer Stem	ASTM A479 Type 410
Inner Stem	ASTM A479 Type 410 Condition 3
Stud	ASTM A193 Gr B7
Hex Nut	ASTM A194 Gr 2H
Cavity Pressure Relief System	SS 316

\*Valves in other materials available on demand



## Double Block & Bleed Plug Valves - ASME Class 150 (Reduced Bore)



### Dimensions & Weights :

All dimensions are in mm and weights in kg.

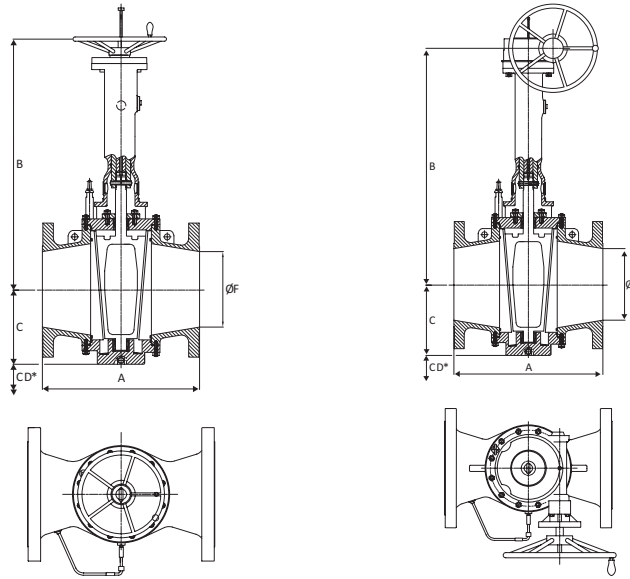
ASME Class	Size (MM)		A	B	C	CD**	ØF	Tapped Holes in Each Flange		Weight (Kgs)
	NPS*	DN*						NO.	Size	
150	2	50	178	455	150	85	49			40
	3	80	203	470	175	100	74			50
	4	100	229	490	190	140	100	4	5/8" - 11 UNC - 2B	65
	6	150	267	640	225	200	150	4	3/4" - 10 UNC - 2B	130
	8	200	292	670	260	255	201	4	3/4" - 10 UNC - 2B	150
	10	250	330	710	290	340	252	4	7/8" - 9 UNC - 2B	210
	12	300	256	785	330	425	303	4	7/8" - 9 UNC - 2B	320
	14	350	381	800	380	465	334	4	1" - 8 UNC - 2B	450
	16	400	406	1075	410	535	385	8	1" - 8 UNC - 2B	645
	18	450	432	1100	440	590	436	8	1 1/8" - 8 UN - 2B	680
	20	500	813	1140	495	670	487	8	1 1/8" - 8 UN - 2B	1000
	24	600	914	1215	570	820	589	12	1 1/4" - 8 UN - 2B	1455
30	750	1524	1840	705	1035	735	16	1 1/4" - 8 UN - 2B	2965	

\*Reduced Port

\*\*Minimum Clearance for Segment Removal



## Double Block & Bleed Plug Valves - ASME Class 300 & 600 (Reduced Bore)



### Dimensions & Weights

All dimensions are in mm and weights in kg.

ASME Class	Size (MM)		A	B	C	CD*	ØF	Tapped Holes in Each Flange		Weight (Kgs)
	NPS*	DN*						NO.	Size	
300	2	50	216	455	150	85	49			45
	3	80	283	470	175	100	74			55
	4	100	305	490	190	140	100			75
	6	150	403	640	225	200	150			175
	8	200	419	670	260	255	201			235
	10	250	457	710	270	330	252	4	1" - 8 UNC - 2B	315
	12	300	502	775	345	415	303	4	1 1/8" - 8 UN - 2B	450
	14	350	762	825	395	465	334	4	1 1/8" - 8 UN - 2B	880
	16	400	838	875	445	515	385	4	1 1/4" - 8 UN - 2B	1150
	18	450	914	925	495	565	436	4	1 1/4" - 8 UN - 2B	1500
	20	500	991	975	545	615	487	4	1 1/4" - 8 UN - 2B	1800
24	600	1321	1025	600	665	589	4	1 1/2" - 8 UN - 2B	2250	
600	2	50	292	395	130	80	49			55
	3	80	356	395	130	80	74			65
	4	100	432	495	185	105	100			120
	6	150	559	660	230	180	150			320
	8	200	660	690	280	250	201			500
	10	250	787	930	405	280	252			895
	12	300	838	970	435	350	303			1150

\*Reduced Port

\*\*Minimum Clearance for Segment Removal

