



*Triple Offset Butterfly Valves
Bi-directional Seal Butterfly Valves
Metal-to-Metal Seated Valves
Zero leakage*

*Nace Compliant Zero Leakage Bi-directional
Firesafe to API 607*



MVC FACTORY

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K&W MTM SERIES

**TRIPLE ECCENTRIC ALL METAL
HARD SEALING DISC VALVE**

MVC Industrial Valves

In order to efficiently serve our customers, we have opened MVC in USA. All this infrastructure enables us to serve the market of North America, Central America, South America, Europe and Africa...

It is fully committed to promoting technological development in the fields of low temperature, high temperature, high pressure air sealing, low torque and minimal leakage.

In 2012, we established factory in China. With extensive application experience and comprehensive capabilities, we provide tailor-made solutions for your valve automation needs.



Quality System

MVC's management team adheres to strict policies ensuring that no defects occur in the valves used for industrial services. To maintain this discipline, we enforce internal regulations and a robust working process system. Third parties and customers are regularly invited to audit and approve our system.

MVC holds ISO9001, API6D, CE, TS, and other key certifications. All raw materials undergo re-testing for properties and mechanical performance upon arrival at our factory to ensure they meet machining standards. Non-destructive testing (NDE), including UT, MT, PT, and RT, is conducted by our quality control department during or before machining.

Every valve undergoes shell and sealing hydraulic tests, as well as air sealing tests. For valves used in special applications, additional tests such as fugitive emission, high/low temperature cycling, life, fire safety, cryogenic, and cleanliness tests after degreasing are available upon client request.



MTM SERIES TOP VALVE

Design a fully metal to metal sealed triple eccentric butterfly valve with the highest standards of reliability and performance.

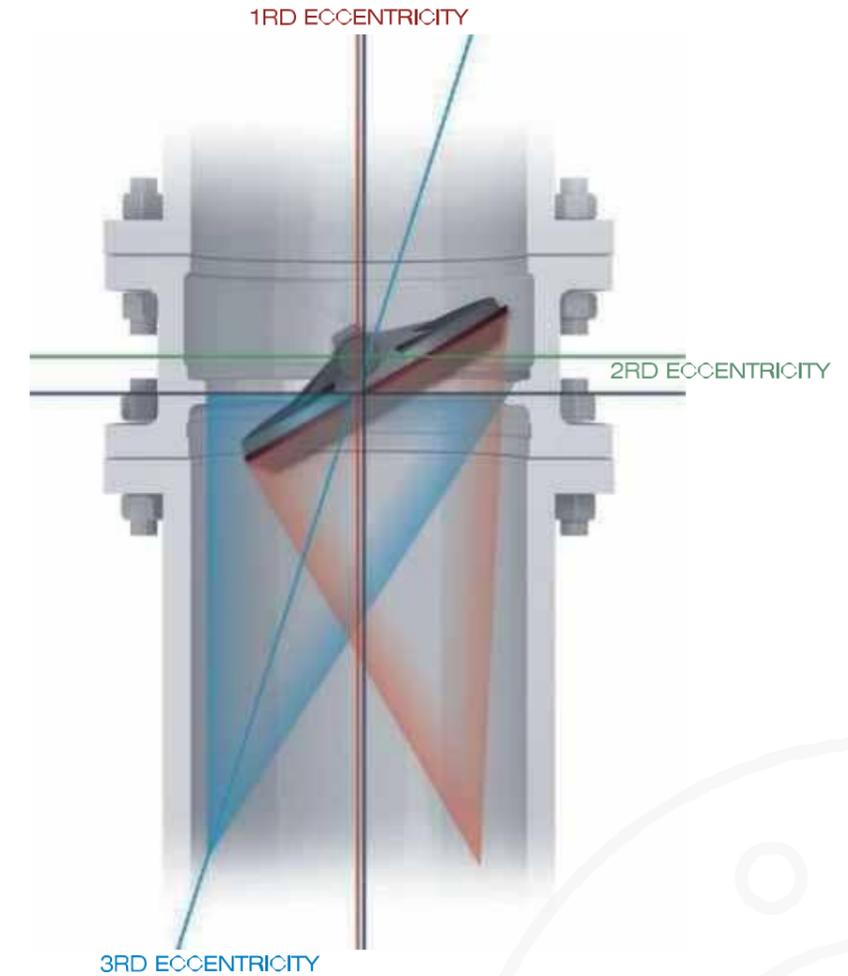
Our fully metal to metal sealed triple eccentric butterfly valve design thoroughly eliminates the frictional movement between sealing components during 90-degree rotation, placing the MTM series among the top-tier process valves. Based on these revolutionary concepts, we have achieved global success in industries such as oil and gas, process engineering, and power.

If you were to ask any of our customers why they choose us, you would likely get a unanimous answer: "reliability." Our engineering design expertise, advanced technology, and manufacturing capabilities ensure that we continuously provide the most reliable triple eccentric valves for a wide range of applications worldwide.

MVC is a pioneer in using 3D computer-aided design, finite element analysis, and dynamic fluid calculation to provide better performing butterfly valve products in the most efficient way possible. The complex geometry of the MTM series butterfly valve requires precise engineering design and the use of advanced tooling and testing equipment. The use of 3D measurement instruments to inspect the valve body and disc allows for tolerances far less than millimeter-scale, and inspection confirmation is required at each stage of manufacturing. These advanced tools allow us to continuously improve product design, increase durability, ensure long-term durability, and provide customers with customized valve solutions.

Material:

Carbon steel, high-temperature alloy steel, austenitic stainless steel, duplex and super duplex stainless steel, etc.
Size Range: DN 80 to DN 3000 (NPS 3 to NPS 120)
Connection: Double flange, wafer, lug, butt weld.
Pressure Rating: ASME 150-2500; EN PN 6-420
Temperature Range: -254°C to 815°C (-425°F to 1500°F)



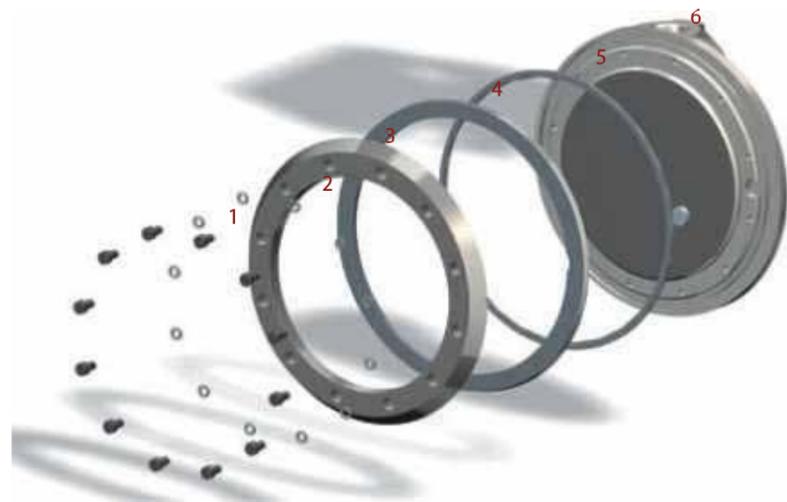
Triple eccentric concept:

MVC triple eccentric butterfly valve: metal-to-metal torque sealing, no friction angle during rotation.

Eccentric 1: The valve stem is arranged behind the sealing surface plane to provide an uninterrupted sealing path.

Eccentric 2: The valve stem is arranged on one side of the pipeline/valve center line, allowing the sealing element to move laterally with the sealing seat at 90 degrees opening.

Eccentric 3: The center line of the sealing seat and the sealing cone is tilted relative to the pipeline/valve center line. This third eccentric completely eliminates the friction generated during valve movement.



Important components

- 1. Bolt
- 2. Spacer
- 3. Valve plate holder
- 4. Sealing ring
- 5. Spiral wound gasket
- 6. Valve plate and positioning pin

Basic Configuration - Sealing

Due to the elasticity and radial compression of the sealing ring, the contact pressure is evenly distributed on the surface of the valve seat, ensuring zero leakage.

Like all MVC triple-eccentric valves, thanks to its self-centering ability, all sealing rings can be easily interchanged, and the presence of locating pins also simplifies assembly.

The use of graphite ensures the tightness between each layer of sealing rings and ideal elasticity, so that each metal layer can independently find the optimal sealing position. For some specific and demanding applications, a one-piece metal solid sealing ring is used instead.



MTM Series: The high-quality valve that minimizes your operating and maintenance costs.

Having both top quality and cost-saving products is rare. However, MVC MTM series valves are completely different.

In fact, our customers regularly replace existing gate, ball, and globe valves with our valves, which significantly reduce installation costs and weight while directly lowering space usage.

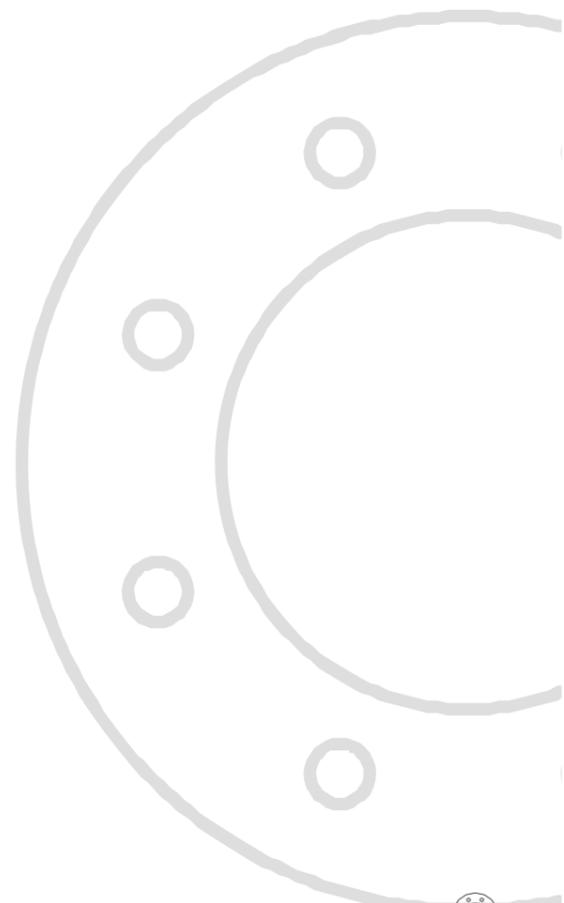
Triple eccentric valves are widely used in applications that require active shut-off. The quarter-turn design and ultra-low operating torque also enable precise flow and pressure control. Our valve's true shut-off and regulation capabilities can be used in places that typically require two different valves with a single product. Additionally, low torque also means low actuator costs.

What happens when you install and start operating the valve? MVC MTM series designs are almost maintenance-free and do not require planned maintenance in most applications, providing additional cost savings over the entire life cycle of the valve. Replacing existing valves is not only necessary but also a strategic choice. The bidirectional zero-leakage and inherent fire safety design of MVC MTM series valves allow our customers to conveniently replace various gate, ball, and globe valves with our long-structured valves.



Features:

- 1. When the valve is installed on the pipeline, the open/close indicator facilitates quick installation of the actuator.
- 2. The MTM series does not have dowel pins that could compromise the strength of the valve stem.
- 3. Maximum integrity of the valve stem is ensured under torque sealing.
- 4. The MTM series design can handle the risk of blowout inside and outside the valve stem in a manner that fully complies with API 609 standards.
- 5. Minimization of external emissions is achieved through the two-piece disc pack and gland packing cover. Our proprietary disc pack design meets ISO 15848-1, EPA Method 21, TUV TA Luft/VDI 2440 certification requirements.
- 6. Robust bearing and thrust bearing design can withstand high-pressure loads and reduce the occurrence of seizing.
- 7. Flange holes enable maximum integration with the pipeline connection, thereby limiting the possibility of future leaks.



MTM Series Continuous Improvement Designed for Long-Term Durability and Reliability

Our MTM series has become a market leader thanks to its zero leakage performance across a wide range of pressure conditions, which is designed to ensure long-term durability and reliability of our products.

Years of proven use and continuous on-site feedback have helped improve our product design, optimize processing, select suitable materials, and make other improvements in multiple areas. All of these have made the MTM series a successful and innovative solution for various applications and different functional conditions. Today, our triple eccentric all-metal hard seal butterfly valve has taken an important step forward compared to traditional process valve. Although they adopt the same cone-in-cone sealing mechanism as globe valves, butterfly valves, and plug valves, sealing is also replaced by angular rotation. The high quality, ruggedness, durability, and reliability of our MTM series, including its key contributions to automatic emergency shutdown, are the result of precise risk analysis applications based on our four fundamental product design features:

Torque sealing :

The MVC sealing force is generated by externally applied torque, not by mechanical interference as in position-sealing ball valves, butterfly valves, and plug valves. This means that the cone-in-cone sealing is generated by contact pressure rather than frictional force generated by the elastic deformation of the valve seat. This feature allows our valves to handle high-pressure ratings and provide reliable and highly controlled operating torque.

Metal-to-metal sealing :

MVC's cone-in-cone concept requires metal-to-metal sealing to handle more severe applications. We use StelliteR21 as the seat material and duplex stainless steel with high mechanical performance as the elastic sealing ring's minimum configuration. StelliteR21 cobalt alloy is hardfaced on the seat to ensure high corrosion resistance and sufficient hardness and resistance to fluid erosion. Due to its unique design, the metal sealing ring has elastic properties and is uniformly compressed around the sealing surface in the radial direction.

Angular rotation :

Thanks to the sealing element that remains in place and the rotation around its own axis, compared to other rising stem valves, MVC valves can save valuable space for customers and significantly improve their operability due to lower and more consistent continuous operating torque. In addition, angular rotation eliminates the negative effects of rising stem valves on gland packing, such as extrusion and wear, improving valve performance and reducing fugitive emissions.

Frictionless rotation:

The elimination of contact between the valve seat and sealing ring during opening and closing means the extension of the life of the sealing components and the valve. MVC valves also have the main features of an angular rotation valve, such as low and consistent continuous operation torque, which makes the valve always fast and convenient to operate, even at very low angles. This feature makes our triple-eccentric valve the ideal solution for any application that requires emergency shutdown, emissions, or frequent cycling operations (such as molecular sieves).

MTM Series One product hundreds of applications.

MVC valves have been successfully installed and operated in various applications around the world, including oil and gas, power generation, process industries, and other industries that require them.

From ultra-low to extremely high temperatures, we provide a variety of solutions for critical and non-critical applications to ensure maximum reliability and, more importantly, comprehensive safety for your production site.

Adaptable to full vacuum to 250 kg high pressure (over 3600psi), the MVC MTM Series can provide a full range of sizes from DN80 to DN3000 (NPS 3 to NPS 120), and covers configurations of various materials, including clamp, lug, double flange, butt-weld, and top-weld connections. Our valves can be used for various fluids, from hydrogen to high viscosity liquids, and from food-grade to toxic and corrosive fluids. The most common application conditions include:

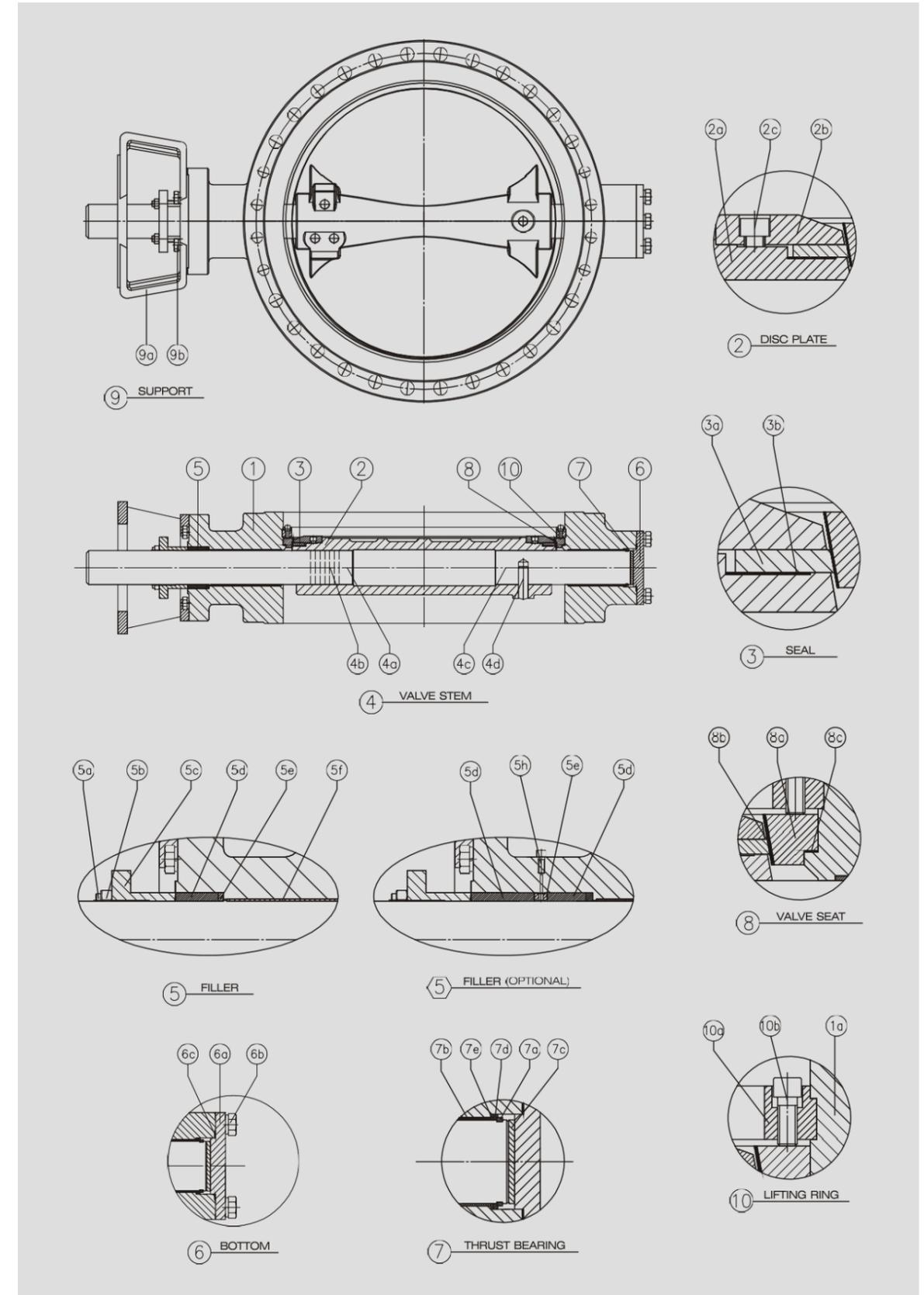
- Shut-off
- Flow and pressure control
- On/off switching
- Changeover
- Emergency shut-off/safety operation
- HIIPPS
- Main equipment protection functions, including:
 - Turbine back flow
 - Turbine supply and bypass



PLEASE REFER TO THE BASIC CONFIGURATION CROSS-SECTION ON PAGE 10 FOR TYPICAL MATERIAL SELECTION

SERIAL NUMBER	NAME	BODY MATERIAL	VALVE BODY MADE OF STAINLESS STEEL MATERIAL
1a	Body	ASTM A216 WCB/EN10213 1.0619	ASTM A351 CF8M/EN10213 1.4408
2a	Disc	ASTM A216 WCB/EN10213 1.0619	ASTM A351 CF8M/EN10213 1.4408
2b	Disc Retainer	ASTM A276 420	ASTM A182 Type F316/EN10222-5 1.4401
2c	Screw	UNS S31600	UNS S31600
3a	Sealing Ring	ASTM A182 Type F304/EN10222-T5	ASTM A182 Type F316/EN10222-5 1.4401
3b	Graphite Gasket	UNS S31600+RAPHITE	UNS S31600+RAPHITE
4a	Upper Stem	UNS S17400(17-4PH)	UNS S17400(17-4PH)
4b	Pin	UNS S17400(17-4PH)	UNS S17400(17-4PH)
4c	Lower Ste	UNS S17400(17-4PH)	UNS S17400(17-4PH)
4d	Pin	UNS S17400(17-4PH)	UNS S17400(17-4PH)
5a	Double-End Stud	ISO3506 A4(AISI 316)	ISO3506 A4(AISI 316)
5b	Nut	UNS S31600	UNS S31600
5c	Packing Gland	ASTM A216 WCB/EN10213 1.0619	ASTM A351 CF8M/EN10213 1.4408
5d	Packing	Graphite	Graphite
5e	Packing Retainer	UNS S31600	UNS S31600
5f	Upper Bushing	UNS S31600+H60	UNS S31600+H60
5h	Plug	UNS S31600	UNS S31600
6a	Bottom Face Flange	A105	ASTM A182 Type F316/EN10222-5 1.4401
6b	Stud	UNS S31600	UNS S31600
6c	Spiral Wound Graphite Gasket	UNS S31600+RAPHITE	UNS S31600+RAPHITE
7a	Locking Ring	UNS S31600	UNS S31600
7b	Lower Bushing	UNS S31600+H60	UNS S31600+H60
7c	Pad	A105	UNS S31600
7d	Thrust Bearing	A105	UNS S31600
7e	Thrust Bearing Gasket	A105	UNS S31600
8a	Seat Ring	ASTM A182 Type F304/EN10222-T5	ASTM A182 Type F316/EN10222-5 1.4401
8b	Seat Surface Harden Treatment	Stellite* gr.21	Stellite* gr.21
8c	Graphite Gasket	UNS S31600+RAPHITE	UNS S31600+RAPHITE
9a	Yoke	ASTM A216 WCB/EN10213 1.0619	ASTM A216 WCB/EN10213 1.0619
9b	Screw	UNS S31600	UNS S31600
10a	Lifting Hign	ASTM A276 420	ASTM A182 Type F316/EN10222-5 1.4401
10b	Screw	UNS S31600	UNS S31600

Note: The MTM series triple eccentric valves are made of various valve body materials, including carbon steel and low temperature carbon steel, such as WCB, 1.0619, LCB, LCC; high temperature alloy steel, such as WC6, wC9, C5, C12; austenitic stainless steel, such as CF8M, 1.4408, CF8, CF3M, CF3, CF8C; duplex and super duplex stainless steel, such as CD3MN, CD3MWCuN; high alloy austenitic stainless steel, such as 6Mo (CN3MN) and 20 alloy (CN7M), various nickel alloys, including Monel alloy, Hastelloy alloy, Inconel alloy; nickel aluminum bronze alloy and titanium material. The valve seat and sealing ring are polished to a smoothness of 0.8 microns. The valve seat adopts standard 2mm StelliteR21 overlay welding.

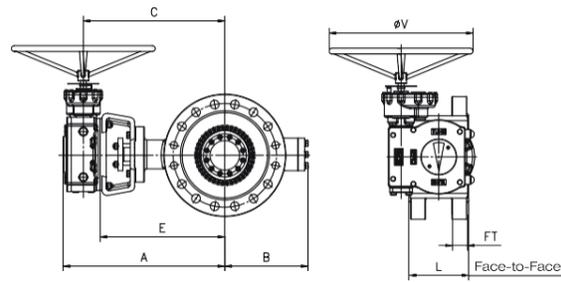


Size and Weight/ASME 150lbs

Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 13 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	22.3	114	125	30	37
100	4	370	141	328	290	22.3	127	125	45	52
150	6	410	165	368	330	23.9	140	125	55	62
200	8	475	214	424	385	27.0	152	300	90	101
250	10	515	243	464	425	28.6	165	300	125	136
300	12	592	286	539	490	30.2	178	500	165	178
350	14	627	312	574	525	33.4	190	500	200	213
400	16	670	350	600	545	35.0	216	600	260	290
450	18	705	383	635	580	38.1	222	600	315	345
500	20	765	407	695	640	41.3	229	700	395	425
600	24	845	484	750	690	46.1	267	300	570	616

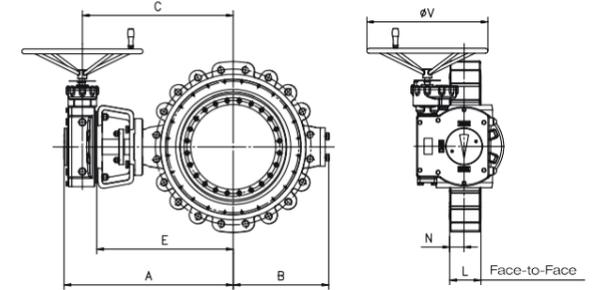
ASME B16.5 150# TRIM TYPE B



Lugged Face-to-Face API 609 150# (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	48	20	125	13	20
100	4	370	141	328	290	54	24	125	17	24
150	6	410	165	368	330	57	26	125	23	30
200	8	475	214	424	385	64	28	300	36	47
250	10	515	243	464	425	71	32	300	49	60
300	12	592	286	539	490	81	38	500	83	96
350	14	627	312	574	525	92	44	500	117	130
400	16	670	350	600	545	102	49	600	160	190
450	18	705	383	635	580	114	55	600	194	224
500	20	765	407	695	640	127	63	700	270	300
600	24	845	484	750	690	154	78	300	387	433

ASME B16.5 150# TRIM TYPE B



Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 13 (Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
3	80	13.50	5.00	11.75	10.25	0.88	4.50	5.00	66	82
4	100	14.63	5.63	13.00	11.50	0.88	5.00	5.00	99	115
6	150	16.25	6.50	14.50	13.00	0.94	5.50	5.00	121	137
8	200	18.75	8.50	16.75	15.25	1.06	6.00	11.88	198	223
10	250	20.38	9.63	18.38	16.75	1.13	6.50	11.88	276	300
12	300	23.38	11.38	21.25	19.38	1.19	7.00	19.75	364	392
14	350	24.75	12.38	22.63	20.75	1.31	7.50	19.75	441	470
16	400	26.50	13.88	23.63	21.50	1.38	8.50	23.63	573	639
18	450	27.88	15.13	25.00	22.88	1.50	8.75	23.63	694	761
20	500	30.13	16.13	27.38	25.25	1.63	9.00	27.63	871	937
24	600	33.38	19.13	29.63	27.25	1.81	10.50	11.88	1257	1358

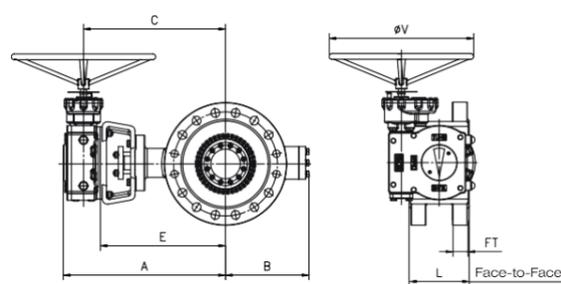
Lugged Face-to-Face API 609 150# (Imperial)

NPS	DN	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
3	80	13.50	5.00	11.75	10.25	1.88	0.88	5.00	29	44
4	100	14.63	5.63	13.00	11.50	2.12	1.00	5.00	37	53
6	150	16.25	6.50	14.50	13.00	2.25	1.13	5.00	51	66
8	200	18.75	8.50	16.75	15.25	2.50	1.13	11.88	79	104
10	250	20.38	9.63	18.38	16.75	2.81	1.38	11.88	108	132
12	300	23.38	11.38	21.25	19.38	3.19	1.50	19.75	183	212
14	350	24.75	12.38	22.63	20.75	3.62	1.75	19.75	258	287
16	400	26.50	13.88	23.63	21.50	4.00	2.00	23.63	353	419
18	450	27.88	15.13	25.00	22.88	4.50	2.25	23.63	428	494
20	500	30.13	16.13	27.38	25.25	5.00	2.50	27.63	595	661
24	600	33.38	19.13	29.63	27.25	6.06	3.13	11.88	853	955

Double Flange Long Body-
Face-to-Face API 609 Long Type-ASME B16.10 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	22.3	203	125	32	39
100	4	370	141	328	290	22.3	229	125	48	55
150	6	410	165	368	330	23.9	267	125	66	73
200	8	475	214	424	385	27.0	292	300	98	109
250	10	515	243	464	425	28.6	330	300	135	146
300	12	592	286	539	490	30.2	356	500	179	192
350	14	627	312	574	525	33.4	381	500	230	243
400	16	670	350	600	545	35.0	406	600	303	333
450	18	705	383	635	580	38.1	432	600	366	396
500	20	765	407	695	640	41.3	457	700	448	478
600	24	845	484	750	690	46.1	508	300	647	693

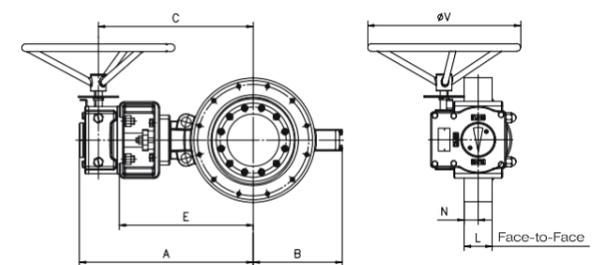
ASME B16.5 150# TRIM TYPE B



Wafer Face-to-Face API 609 150# (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	48	20	125	14	21
100	4	370	141	328	290	54	24	125	15	22
150	6	410	165	368	330	57	26	125	20	27
200	8	475	214	424	385	64	28	300	34	45
250	10	515	243	464	425	71	32	300	45	56
300	12	592	286	539	490	81	38	500	73	86
350	14	627	312	574	525	92	44	500	97	110
400	16	670	350	600	545	102	49	600	123	153
450	18	705	383	635	580	114	55	600	164	194
500	20	765	407	695	640	127	63	700	220	250
600	24	845	484	750	690	154	78	300	324	370

ASME B16.5 150# TRIM TYPE B



Double Flange Long Body-
Face-to-Face API 609 Long Type-ASME B16.10(Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
3	80	13.50	5.00	11.75	10.25	0.88	8.00	5.00	71	86
4	100	14.63	5.63	13.00	11.50	0.88	9.00	5.00	106	121
6	150	16.25	6.50	14.50	13.00	0.94	10.50	5.00	146	161
8	200	18.75	8.50	16.75	15.25	1.06	11.50	11.88	216	240
10	250	20.38	9.63	18.38	16.75	1.13	13.00	11.88	298	322
12	300	23.38	11.38	21.25	19.38	1.19	14.00	19.75	395	423
14	350	24.75	12.38	22.63	20.75	1.31	15.00	19.75	507	536
16	400	26.50	13.88	23.63	21.50	1.38	16.00	23.63	668	734
18	450	27.88	15.13	25.00	22.88	1.50	17.00	23.63	807	873
20	500	30.13	16.13	27.38	25.25	1.63	18.00	27.63	988	1054
24	600	33.38	19.13	29.63	27.25	1.81	20.00	11.88	1426	1528

Wafer Face-to-Face API 609 150# (Imperial)

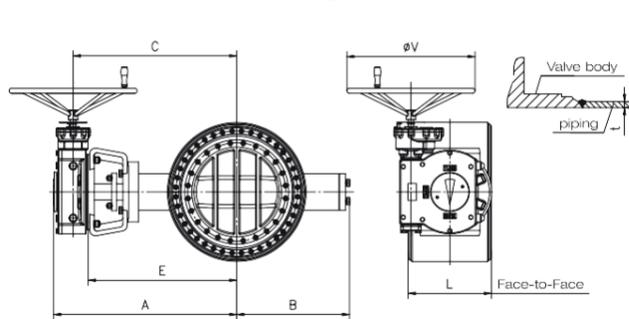
NPS	DN	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
3	80	13.50	5.00	11.75	10.25	1.88	0.88	5.00	31	46
4	100	14.63	5.63	13.00	11.50	2.12	1.00	5.00	33	49
6	150	16.25	6.50	14.50	13.00	2.25	1.13	5.00	44	60
8	200	18.75	8.50	16.75	15.25	2.50	1.13	11.88	75	99
10	250	20.38	9.63	18.38	16.75	2.81	1.38	11.88	99	123
12	300	23.38	11.38	21.25	19.38	3.19	1.50	19.75	161	190
14	350	24.75	12.38	22.63	20.75	3.62	1.75	19.75	214	243
16	400	26.50	13.88	23.63	21.50	4.00	2.00	23.63	271	337
18	450	27.88	15.13	25.00	22.88	4.50	2.25	23.63	362	428
20	500	30.13	16.13	27.38	25.25	5.00	2.50	27.63	485	551
24	600	33.38	19.13	29.63	27.25	6.06	3.13	11.88	714	816



BW Face-to-Face ISO 5752 Standard Series 14 (Metric)

DN	NPS	A	B	C	E	L	t*	ØV	VALVE	TOTAL WEIGHT
mm	kg	kg								
80	3	340	125	298	260	180	≤80	125	19	26
100	4	370	141	328	290	190	≤80	125	27	34
150	6	410	165	368	330	210	≤80	125	32	39
200	8	475	214	424	385	230	≤60	300	42	53
250	10	515	243	464	425	250	≤40	300	56	67
300	12	592	286	539	490	270	≤40	500	82	95
350	14	627	312	574	525	290	≤40	500	108	121
400	16	670	350	600	545	310	≤40	600	127	157
450	18	705	383	635	580	330	≤40	600	144	174
500	20	765	407	695	640	350	≤40	700	196	226
600	24	845	484	750	690	390	≤40	300	283	329

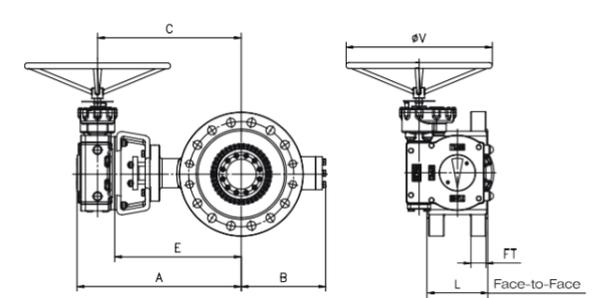
ASME B16.5 150# TRIM TYPE B



Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 13 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	27.0	114	125	35	42
100	4	370	141	328	290	30.2	127	125	45	52
150	6	440	189	389	350	35.0	140	300	80	91
200	8	517	236	464	415	39.7	152	500	120	133
250	10	557	272	504	455	46.1	165	500	175	188
300	12	615	310	545	490	49.3	178	600	235	265
350	14	670	335	600	545	52.4	190	700	320	350
400	16	730	389	635	575	55.6	216	300	420	466
450	18	815	422	720	660	58.8	222	500	495	542
500	20	855	461	760	700	62.0	229	500	605	652
600	24	990	531	883	785	68.3	267	820	905	1070

ASME B16.5 300# TRIM TYPE C



BW Face-to-Face ISO 5752 Standard Series 14 (Imperial)

NPS	DN	A	B	C	E	L	t*	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
3	80	13.50	5.00	11.75	10.25	7.09	≤80	5.00	42	57
4	100	14.63	5.63	13.00	11.50	7.48	≤80	5.00	60	75
6	150	16.25	6.50	14.50	13.00	8.27	≤80	5.00	71	86
8	200	18.75	8.50	16.75	15.25	9.06	≤60	11.88	93	117
10	250	20.38	9.63	18.38	16.75	9.84	≤40	11.88	123	148
12	300	23.38	11.38	21.25	19.38	10.63	≤40	19.75	181	209
14	350	24.75	12.38	22.63	20.75	11.42	≤40	19.75	238	267
16	400	26.50	13.88	23.63	21.50	12.20	≤40	23.63	280	346
18	450	27.88	15.13	25.00	22.88	12.99	≤40	23.63	317	384
20	500	30.13	16.13	27.38	25.25	13.78	≤40	27.63	432	498
24	600	33.38	19.13	29.63	27.25	15.35	≤40	11.88	624	725

*Registration of maximum allowable pipeline wall thickness

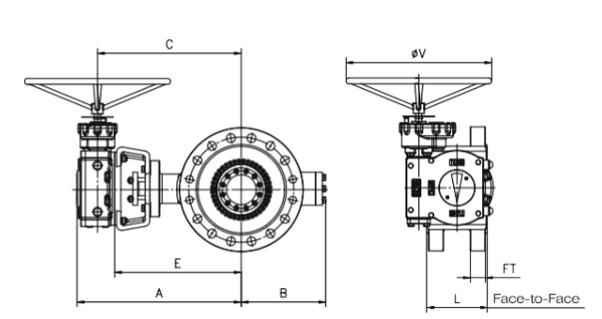
Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 13 (Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
3	80	13.50	5.00	11.75	10.25	1.06	4.50	5.00	77	93
4	100	14.63	5.63	13.00	11.50	1.19	5.00	5.00	99	115
6	150	17.38	7.50	15.38	13.88	1.38	5.50	11.88	176	201
8	200	20.38	9.38	18.38	16.38	1.56	6.00	19.75	265	293
10	250	22.00	10.75	19.88	18.00	1.81	6.50	19.75	386	414
12	300	24.25	12.25	21.50	19.38	1.94	7.00	23.63	518	584
14	350	26.50	13.25	23.63	21.50	2.06	7.50	27.63	705	772
16	400	28.75	15.38	25.00	22.75	2.19	8.50	11.88	926	1027
18	450	32.13	16.63	28.38	26.00	2.31	8.75	19.75	1091	1195
20	500	33.75	18.25	30.00	27.63	2.44	9.00	19.75	1334	1437
24	600	39.00	21.00	34.88	31.00	2.69	10.50	32.38	1995	2359

Double Flange Long Body-
Face-to-Face API 609 Long Type-ASME B16.10 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	27.0	283	125	40	47
100	4	370	141	328	290	30.2	305	125	57	64
150	6	440	189	389	350	35.0	404	300	102	113
200	8	517	236	464	415	39.7	419	500	145	158
250	10	557	272	504	455	46.1	457	500	223	236
300	12	615	310	545	490	49.3	502	600	301	331
350	14	670	335	600	545	52.4	762	700	414	444
400	16	730	389	635	575	55.6	838	300	585	631
450	18	815	422	720	660	58.8	914	500	767	814
500	20	855	461	760	700	62.0	991	500	897	944
600	24	990	531	883	785	68.3	1143	820	1355	1520

ASME B16.5 300# TRIM TYPE C



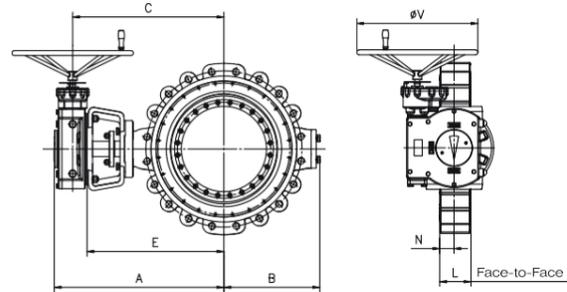
Double Flange Long Body-
Face-to-Face API 609 Long Type-ASME B16.10(Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
3	80	13.50	5.00	11.75	10.25	1.06	11.12	5.00	88	104
4	100	14.63	5.63	13.00	11.50	1.19	12.00	5.00	126	141
6	150	17.38	7.50	15.38	13.88	1.38	15.88	11.88	225	249
8	200	20.38	9.38	18.38	16.38	1.56	16.50	19.75	320	348
10	250	22.00	10.75	19.88	18.00	1.81	18.00	19.75	492	520
12	300	24.25	12.25	21.50	19.38	1.94	19.75	23.63	664	730
14	350	26.50	13.25	23.63	21.50	2.06	30.00	27.63	913	979
16	400	28.75	15.38	25.00	22.75	2.19	33.00	11.88	1290	1391
18	450	32.13	16.63	28.38	26.00	2.31	36.00	19.75	1691	1795
20	500	33.75	18.25	30.00	27.63	2.44	39.00	19.75	1978	2081
24	600	39.00	21.00	34.88	31.00	2.69	45.00	32.38	2987	3351

Lugged Face-to-Face API 609 300# (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
		mm	mm	mm	mm	mm	mm	mm	kg	kg
80	3	340	125	298	260	48	20	125	18	25
100	4	370	141	328	290	54	24	125	22	29
150	6	440	189	389	350	59	26	300	41	52
200	8	517	236	464	415	73	32	500	56	69
250	10	557	272	504	455	83	37	500	77	90
300	12	615	310	545	490	92	39	600	119	149
350	14	670	335	600	545	117	60	700	254	284
400	16	730	389	635	575	133	65	300	300	346
450	18	815	422	720	660	149	73	500	455	502
500	20	855	461	760	700	159	72	500	499	546
600	24	990	531	883	785	181	82	820	788	953

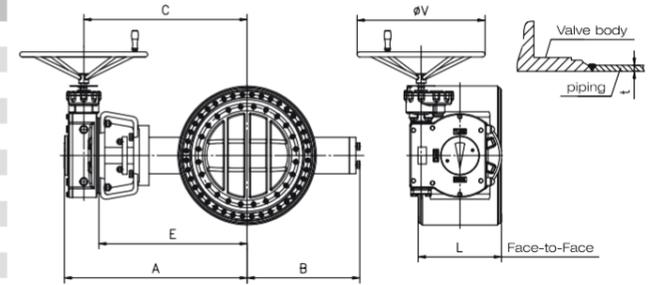
ASME B16.5 300# TRIM TYPE C



Butt welding-Face-to-Face ISO 5752 Standard Series 14 (Metric)

DN	NPS	A	B	C	E	L	t*	ØV	VALVE	TOTAL WEIGHT
		mm	mm	mm	mm	mm	mm	mm	kg	kg
80	3	340	125	298	260	180	≤ 80	125	21	28
100	4	370	141	328	290	190	≤ 80	125	30	37
150	6	440	189	389	350	210	≤ 80	300	34	45
200	8	517	236	464	415	230	≤ 80	500	56	69
250	10	557	272	504	455	250	≤ 80	500	74	87
300	12	615	310	545	490	270	≤ 80	600	109	139
350	14	670	335	600	545	290	≤ 60	700	168	198
400	16	730	389	635	575	310	≤ 40	300	196	242
450	18	815	422	720	660	330	≤ 40	500	313	360
500	20	855	461	760	700	350	≤ 40	500	355	402
600	24	990	531	883	785	390	≤ 40	820	503	668

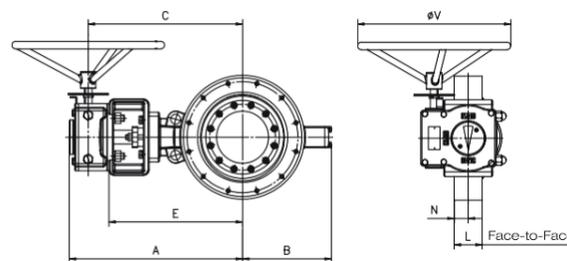
ASME B16.34 300# TRIM TYPE C



Lugged Face-to-Face API 609 300# (Imperial)

NPS	DN	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
		inch	inch	inch	inch	inch	inch	inch	lbs	lbs
3	80	13.50	5.00	11.75	10.25	1.88	0.88	5.00	40	55
4	100	14.63	5.63	13.00	11.50	2.12	1.00	5.00	49	64
6	150	17.38	7.50	15.38	13.88	2.31	1.13	11.88	90	115
8	200	20.38	9.38	18.38	16.38	2.88	1.38	19.75	123	152
10	250	22.00	10.75	19.88	18.00	3.25	1.50	19.75	170	198
12	300	24.25	12.25	21.50	19.38	3.62	1.63	23.63	262	328
14	350	26.50	13.25	23.63	21.50	4.62	2.38	27.63	560	626
16	400	28.75	15.38	25.00	22.75	5.25	2.63	11.88	661	763
18	450	32.13	16.63	28.38	26.00	5.88	2.88	19.75	1003	1107
20	500	33.75	18.25	30.00	27.63	6.25	2.88	19.75	1100	1204
24	600	39.00	21.00	34.88	31.00	7.12	3.25	32.38	1737	2101

ASME B16.5 300# TRIM TYPE C



Butt welding-Face-to-Face ISO 5752 Standard Series 14 (Imperial)

NPS	DN	A	B	C	E	L	t*	ØV	VALVE	TOTAL WEIGHT
		inch	inch	inch	inch	inch	inch	inch	lbs	lbs
3	80	13.50	5.00	11.75	10.25	7.09	≤ 80	5.00	46	62
4	100	14.63	5.63	13.00	11.50	7.48	≤ 80	5.00	66	82
6	150	17.38	7.50	15.38	13.88	8.27	≤ 80	11.88	75	99
8	200	20.38	9.38	18.38	16.38	9.06	≤ 80	19.75	123	152
10	250	22.00	10.75	19.88	18.00	9.84	≤ 80	19.75	163	192
12	300	24.25	12.25	21.50	19.38	10.63	≤ 80	23.63	240	306
14	350	26.50	13.25	23.63	21.50	11.42	≤ 60	27.63	370	437
16	400	28.75	15.38	25.00	22.75	12.20	≤ 40	11.88	432	534
18	450	32.13	16.63	28.38	26.00	12.99	≤ 40	19.75	690	794
20	500	33.75	18.25	30.00	27.63	13.78	≤ 40	19.75	783	886
24	600	39.00	21.00	34.88	31.00	15.35	≤ 40	32.38	1109	1473

*Registration of maximum allowable pipeline wall thickness

Wafer type-Face-to-Face API 609 300# (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
		mm	mm	mm	mm	mm	mm	mm	kg	kg
80	3	340	125	298	260	48	20	125	14	21
100	4	370	141	328	290	54	24	125	15	22
150	6	440	189	389	350	59	26	300	29	40
200	8	517	236	464	415	73	32	500	50	63
250	10	557	272	504	455	83	37	500	75	88
300	12	615	310	545	490	92	39	600	109	139
350	14	670	335	600	545	117	60	700	164	194
400	16	730	389	635	575	133	65	300	228	274
450	18	815	422	720	660	149	73	500	285	332
500	20	855	461	760	700	159	72	500	343	390
600	24	990	531	883	785	181	82	820	513	678

Wafer type-Face-to-Face API 609 300# (Imperial)

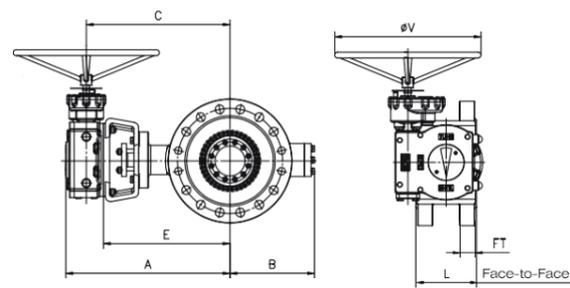
NPS	DN	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
		inch	inch	inch	inch	inch	inch	inch	lbs	lbs
3	80	13.50	5.00	11.75	10.25	1.88	0.88	5.00	31	46
4	100	14.63	5.63	13.00	11.50	2.12	1.00	5.00	33	49
6	150	17.38	7.50	15.38	13.88	2.31	1.13	11.88	64	88
8	200	20.38	9.38	18.38	16.38	2.88	1.38	19.75	110	139
10	250	22.00	10.75	19.88	18.00	3.25	1.50	19.75	165	194
12	300	24.25	12.25	21.50	19.38	3.62	1.63	23.63	240	306
14	350	26.50	13.25	23.63	21.50	4.62	2.38	27.63	362	428
16	400	28.75	15.38	25.00	22.75	5.25	2.63	11.88	503	604
18	450	32.13	16.63	28.38	26.00	5.88	2.88	19.75	628	732
20	500	33.75	18.25	30.00	27.63	6.25	2.88	19.75	756	860
24	600	39.00	21.00	34.88	31.00	7.12	3.25	32.38	1131	1495

Size and Weight/ASME 600lbs

Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 14 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
		mm	mm	mm	mm	mm	mm	mm	kg	kg
100	4	388	185	337	298	38.1	190	300	75	86
150	6	522	216	469	420	47.7	210	500	130	143
200	8	570	265	500	445	55.6	230	600	205	235
250	10	660	315	565	505	63.5	250	300	320	366
300	12	755	362	660	600	66.7	270	500	440	487
350	14	815	390	708	610	69.9	290	820	490	655
400	16	885	440	778	680	76.2	310	820	690	855
450	18	888	460	795	683	82.5	330	680	820	992
500	20	1000	526	901	795	88.9	350	680	1100	1390
600	24	1090	623	991	885	101.6	390	680	1620	1910

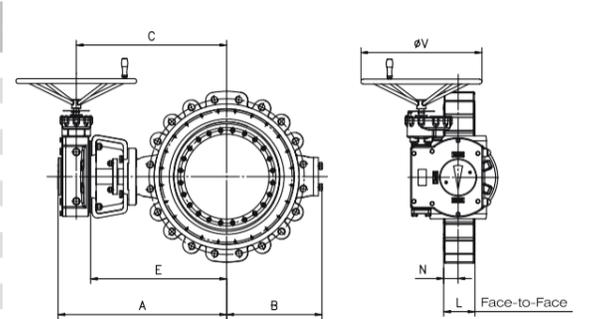
ASME B16.5 600# - TRIM TYPED



Lugged Face-Face-to-Face API 609 600# (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
		mm	mm	mm	mm	mm	mm	mm	kg	kg
100	4	388	185	337	298	64	29.0	300	31	42
150	6	522	216	469	420	78	38.0	500	80	93
200	8	570	265	500	445	102	52.5	600	135	165
250	10	660	315	565	505	117	60.0	300	198	244
300	12	755	362	660	600	140	71.5	500	347	394
350	14	815	390	708	610	155	68.0	820	343	508
400	16	885	440	778	680	178	84.0	820	434	599
450	18	888	460	795	683	200	92.0	680	684	856
500	20	1000	526	901	795	216	101.0	680	824	1114
600	24	1090	623	991	885	232	102.0	680	1414	1704

ASME B16.5 600# - TRIM TYPE D



Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 14 (Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
		inch	inch	inch	inch	inch	inch	inch	lbs	lbs
4	100	15.38	7.38	13.38	11.75	1.50	7.48	11.88	165	190
6	150	20.63	8.63	18.50	16.63	1.88	8.27	19.75	287	315
8	200	22.50	10.50	19.75	17.63	2.19	9.06	23.63	452	518
10	250	26.00	12.50	22.25	20.00	2.50	9.84	11.88	705	807
12	300	29.75	14.38	26.00	23.63	2.63	10.63	19.75	970	1074
14	350	32.13	15.38	27.88	24.13	2.75	11.42	32.38	1080	1444
16	400	34.88	17.38	30.75	26.88	3.00	12.20	32.38	1521	1885
18	450	35.00	18.13	31.38	27.00	3.25	12.99	26.88	1808	2187
20	500	39.38	20.75	35.50	31.38	3.50	13.78	26.88	2425	3064
24	600	43.00	24.63	39.13	34.88	4.00	15.35	26.88	3571	4211

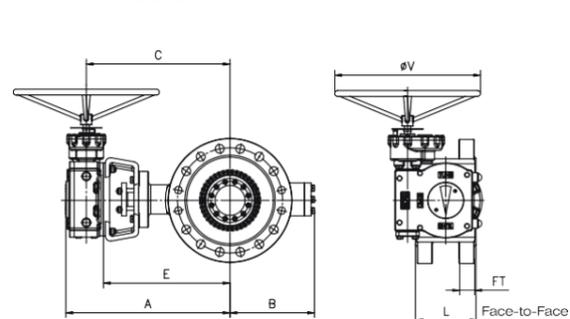
Lugged Face-Face-to-Face API 609 600#(Imperial)

NPS	DN	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
		inch	inch	inch	inch	inch	inch	inch	lbs	lbs
4	100	15.38	7.38	13.38	11.75	2.50	1.25	11.88	68	93
6	150	20.63	8.63	18.50	16.63	3.06	1.50	19.75	176	205
8	200	22.50	10.50	19.75	17.63	4.00	2.13	23.63	298	364
10	250	26.00	12.50	22.25	20.00	4.62	2.38	11.88	437	538
12	300	29.75	14.38	26.00	23.63	5.50	2.88	19.75	765	869
14	350	32.13	15.38	27.88	24.13	6.12	2.75	32.38	756	1120
16	400	34.88	17.38	30.75	26.88	7.00	3.38	32.38	957	1321
18	450	35.00	18.13	31.38	27.00	7.88	3.63	26.88	1508	1887
20	500	39.38	20.75	35.50	31.38	8.50	4.00	26.88	1817	2456
24	600	43.00	24.63	39.13	34.88	9.13	4.13	26.88	3117	3757

Double Flange Long Body-
Face-to-Face API 609 Long Type-ASME B16.10 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
		mm	mm	mm	mm	mm	mm	mm	kg	kg
150	6	522	216	469	420	47.7	559	500	165	178
200	8	570	265	500	445	55.6	660	600	265	295
250	10	660	315	565	505	63.5	787	300	456	502
300	12	755	362	660	600	66.7	838	500	596	643
350	14	815	390	708	610	69.9	889	820	706	871
400	16	885	440	778	680	76.2	991	820	982	1147
450	18	888	460	795	683	82.5	1092	680	1231	1403
500	20	1000	526	901	795	88.9	1194	680	1669	1959
600	24	1090	623	991	885	101.6	1397	680	2514	2804

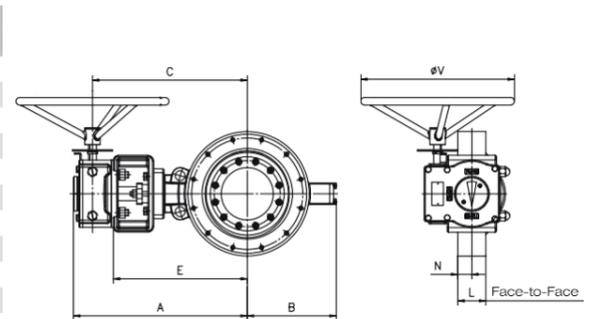
ASME B16.5 600# - TRIM TYPED



Wafer type-Face-to-Face API 609 600# (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
		mm	mm	mm	mm	mm	mm	mm	kg	kg
100	4	388	185	337	298	64	29.0	300	28	39
150	6	522	216	469	420	78	38.0	500	59	72
200	8	570	265	500	445	102	52.5	600	105	135
250	10	660	315	565	505	117	60.0	300	196	242
300	12	755	362	660	600	140	71.5	500	220	267
350	14	815	390	708	610	155	68.0	820	283	448
400	16	885	440	778	680	178	84.0	820	340	505
450	18	888	460	795	683	200	92.0	680	470	642
500	20	1000	526	901	795	216	101.0	680	510	800
600	24	1090	623	991	885	232	102.0	680	1015	1305

ASME B16.5 600# - TRIM TYPE D



Double Flange Long Body-
Face-to-Face API 609 Long Type-ASME B16.10(Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
		inch	inch	inch	inch	inch	inch	inch	lbs	lbs
6	150	20.63	8.63	18.50	16.63	1.88	22.00	19.75	364	392
8	200	22.50	10.50	19.75	17.63	2.19	26.00	23.63	584	650
10	250	26.00	12.50	22.25	20.00	2.50	31.00	11.88	1005	1107
12	300	29.75	14.38	26.00	23.63	2.63	33.00	19.75	1314	1418
14	350	32.13	15.38	27.88	24.13	2.75	35.00	32.38	1556	1920
16	400	34.88	17.38	30.75	26.88	3.00	39.00	32.38	2165	2529
18	450	35.00	18.13	31.38	27.00	3.25	43.00	26.88	2714	3093
20	500	39.38	20.75	35.50	31.38	3.50	47.00	26.88	3680	4319
24	600	43.00	24.63	39.13	34.88	4.00	55.00	26.88	5542	6182

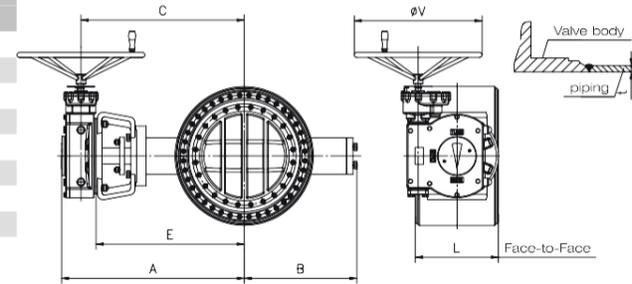
Wafer type-Face-to-Face API 609 600# (Imperial)

NPS	DN	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
		inch	inch	inch	inch	inch	inch	inch	lbs	lbs
4	100	15.38	7.38	13.38	11.75	2.50	1.25	11.88	62	86
6	150	20.63	8.63	18.50	16.63	3.06	1.50	19.75	130	159
8	200	22.50	10.50	19.75	17.63	4.00	2.13	23.63	231	298
10	250	26.00	12.50	22.25	20.00	4.62	2.38	11.88	432	534
12	300	29.75	14.38	26.00	23.63	5.50	2.88	19.75	485	589
14	350	32.13	15.38	27.88	24.13	6.12	2.75	32.38	624	988
16	400	34.88	17.38	30.75	26.88	7.00	3.38	32.38	750	1113
18	450	35.00	18.13	31.38	27.00	7.88	3.63	26.88	1036	1415
20	500	39.38	20.75	35.50	31.38	8.50	4.00	26.88	1124	1764
24	600	43.00	24.63	39.13	34.88	9.13	4.13	26.88	2238	2877

Butt welding-Face-to-Face ISO 5752 Standard Series 14 (Metric)

DN	NPS	A	B	C	E	L	t*	ØV	VALVE	TOTAL WEIGHT
		mm	mm	mm	mm	mm	mm	mm	kg	kg
150	6	522	216	469	420	210	≤ 80	500	71	84
200	8	570	265	500	445	230	≤ 100	600	110	140
250	10	660	315	565	505	250	≤ 100	300	162	208
300	12	755	362	660	600	270	≤ 100	500	215	262
350	14	815	390	708	610	290	≤ 100	820	243	408
400	16	885	440	778	680	310	≤ 80	820	425	590
450	18	888	460	795	683	330	≤ 80	680	512	684
500	20	1000	526	901	795	350	≤ 80	680	600	890
600	24	1090	623	991	885	390	≤ 80	680	848	1138

ASME B16.34 600# - TRIM TYPE D



Butt welding-Face-to-Face ISO 5752 Standard Series 14 (Imperial)

NPS	DN	A	B	C	E	L	t*	ØV	VALVE	TOTAL WEIGHT
		inch	lbs	lbs						
6	150	20.63	8.63	18.50	16.63	8.27	≤ 80	19.75	157	185
8	200	22.50	10.50	19.75	17.63	9.06	≤ 100	23.63	243	309
10	250	26.00	12.50	22.25	20.00	9.84	≤ 100	11.88	357	459
12	300	29.75	14.38	26.00	23.63	10.63	≤ 100	19.75	474	578
14	350	32.13	15.38	27.88	24.13	11.42	≤ 100	32.38	536	899
16	400	34.88	17.38	30.75	26.88	12.20	≤ 80	32.38	937	1301
18	450	35.00	18.13	31.38	27.00	12.99	≤ 80	26.88	1129	1508
20	500	39.38	20.75	35.50	31.38	13.78	≤ 80	26.88	1323	1962
24	600	43.00	24.63	39.13	34.88	15.35	≤ 80	26.88	1870	2509

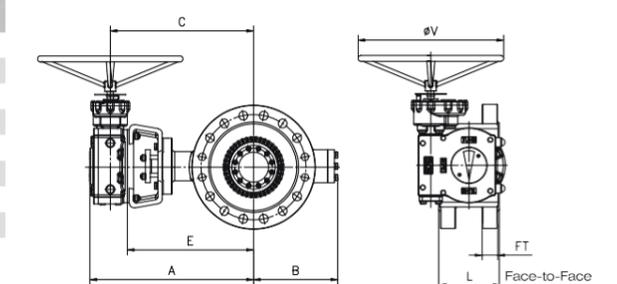
*Registration of maximum allowable pipeline wall thickness

Size and Weight/ASME 900lbs

Double Flange Short Body-Face-to-Face ISO 5752 Standard Series 8 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
		mm	mm	mm	mm	mm	mm	mm	kg	kg
150	6	507	226	454	405	55.6	225	500	180	193
200	8	610	277	540	485	63.5	275	700	295	325
250	10	730	337	635	575	69.9	325	500	460	507
300	12	860	401	753	655	79.4	375	820	630	795
350	14	878	456	785	673	85.8	425	680	810	982
400	16	935	492	842	730	88.9	475	680	1025	1197
450	18	975	510	876	770	101.6	500	680	1290	1580
500	20	1137	590	1010	870	108.0	575	680	1795	2230
600	24	1297	673	1170	1030	139.7	675	680	2995	3430

ASME B16.5 900# - TRIM TYPE E



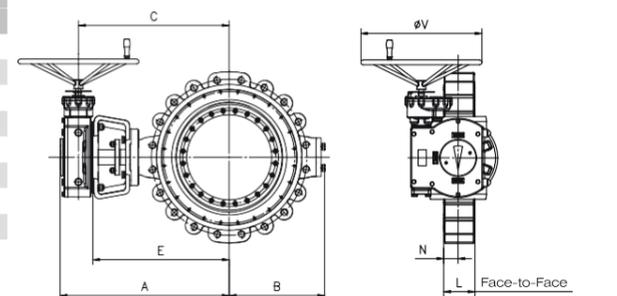
Double Flange Short Body-Face-to-Face ISO 5752 Standard Series 8 (Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
		inch	inch	inch	inch	inch	inch	inch	lbs	lbs
6	150	20.00	9.00	17.88	16.00	2.19	8.88	19.75	397	425
8	200	24.13	11.00	21.38	19.13	2.50	10.88	27.63	650	717
10	250	28.75	13.38	25.00	22.75	2.75	12.75	19.75	1014	1118
12	300	33.88	15.88	29.75	25.88	3.13	14.75	32.38	1389	1753
14	350	34.63	18.00	31.00	26.50	3.38	16.75	26.88	1786	2165
16	400	36.88	19.38	33.25	28.75	3.50	18.75	26.88	2260	2639
18	450	38.50	20.13	34.50	30.38	4.00	19.63	26.88	2844	3483
20	500	44.88	23.25	39.88	34.38	4.25	22.63	26.88	3957	4916
24	600	51.13	26.50	46.13	40.63	5.50	26.63	26.88	6603	7562

Lugged Face-Face-to-Face K&W Standards (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
		mm	mm	mm	mm	mm	mm	mm	kg	kg
150	6	507	226	454	405	105	52.5	500	115	128
200	8	610	277	540	485	140	70.0	700	260	290
250	10	730	337	635	575	155	77.5	500	327	374
300	12	860	401	753	655	178	89.0	820	490	655
350	14	878	456	785	673	229	114.0	680	670	842
400	16	935	492	842	730	241	117.0	680	888	1060
450	18	975	510	876	770	244	122.0	680	1053	1343
500	20	1137	590	1010	870	300	150.0	680	1441	1876
600	24	1297	673	1170	1030	350	175.0	680	2238	2673

ASME B16.5 900# - TRIM TYPE E



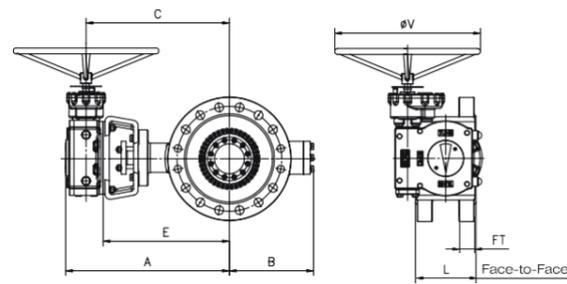
Lugged Face-Face-to-Face K&W Standards (Imperial)

NPS	DN	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
		inch	inch	inch	inch	inch	inch	inch	lbs	lbs
6	150	20.00	9.00	17.88	16.00	4.13	2.13	19.75	254	282
8	200	24.13	11.00	21.38	19.13	5.50	2.88	27.63	573	639
10	250	28.75	13.38	25.00	22.75	6.13	3.13	19.75	721	825
12	300	33.88	15.88	29.75	25.88	7.00	3.63	32.38	1080	1444
14	350	34.63	18.00	31.00	26.50	9.00	4.50	26.88	1477	1856
16	400	36.88	19.38	33.25	28.75	9.50	4.63	26.88	1958	2337
18	450	38.50	20.13	34.50	30.38	9.63	4.88	26.88	2321	2961
20	500	44.88	23.25	39.88	34.38	11.81	6.00	26.88	3177	4136
24	600	51.13	26.50	46.13	40.63	13.75	7.00	26.88	4934	5893

Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 13 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	kg
700	28	1000	556	893	795	69.9	292	820	702	867
750	30	1070	611	963	865	73.1	318	820	990	1155
800	32	1070	611	963	865	79.4	318	820	1015	1180
900	36	1205	736	1112	1000	88.9	330	680	1585	1757
1000	40	1335	801	1236	1130	88.9	410	680	1995	2285
1050	42	1335	801	1236	1130	95.3	410	680	2385	2675
1200	48	1557	941	1430	1290	106.4	470	680	3240	3675
1350	54	1627	1060	1500	1360	119.1	530	680	4050	4485
1400	56	1745	1060	1553	1360	122.3	530	820	4450	5095
1500	60	1820	1078	1628	1435	130.2	600	820	5652	6297

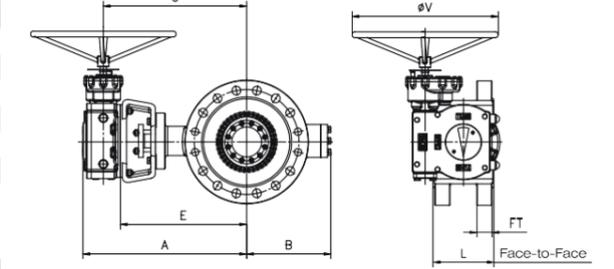
ASME B16.47 150# - TRIM TYPE A



Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 14 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	kg
700	28	1450	760	1258	1065	111	430	820	2230	2875
750	30	1485	785	1293	1100	114	430	820	2730	3375
800	32	1485	785	1293	1100	117	430	820	2730	3375
900	36	1547	865	1348	1155	124	510	820	3725	4520
1000	40	1944	1021	1712	1480	159	550	1400	4820	5765
1200	48	2201	1236	1873	1640	189	630	1400	9500	10665

ASME B16.47 600# - TRIM TYPE A



Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 13 (Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
28	700	39.38	22.00	35.25	31.38	2.75	11.50	32.38	1548	1911
30	750	42.25	24.13	38.00	34.13	2.88	12.52	32.38	2183	2546
32	800	42.25	24.13	38.00	34.13	3.13	12.52	32.38	2238	2601
36	900	47.50	29.00	43.88	39.38	3.50	12.99	26.88	3494	3874
40	1000	52.63	31.63	48.75	44.50	3.50	16.14	26.88	4398	5038
42	1050	52.63	31.63	48.75	44.50	3.75	16.14	26.88	5258	5897
48	1200	61.38	37.13	56.38	50.88	4.19	18.50	26.88	7143	8102
54	1350	64.13	41.75	59.13	53.63	4.69	20.88	26.88	8929	9888
56	1400	68.75	41.75	61.25	53.63	4.81	20.88	32.38	9811	11233
60	1500	71.75	42.50	64.13	56.50	5.13	23.63	32.38	12461	13882

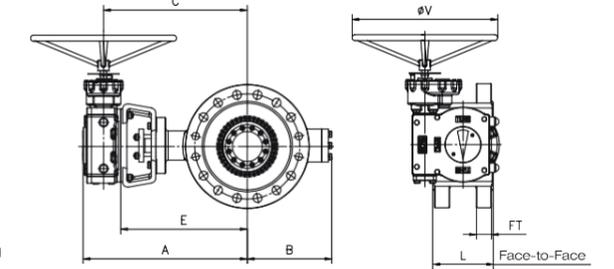
Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 14 (Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
28	700	57.13	30.00	49.63	42.00	4.38	16.88	32.38	4916	6338
30	750	58.50	31.00	51.00	43.38	4.50	16.88	32.38	6019	7441
32	800	58.50	31.00	51.00	43.38	4.62	16.88	32.38	6019	7441
36	900	61.00	34.13	53.13	45.50	4.88	20.13	32.38	8212	9965
40	1000	76.63	40.25	67.50	58.38	6.25	21.63	55.13	10626	12710
48	1200	86.75	48.75	73.75	64.63	7.44	24.75	55.13	20944	23512

Double Flange Short Body- Face-to-Face K&W standards (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	kg
700	28	1522	800	1323	1130	143.0	775	820	4200	4995
750	30	1722	871	1523	1330	149.0	875	820	5240	6035
800	32	1722	871	1523	1330	158.0	875	820	5590	6385
900	36	1884	991	1652	1420	172.0	850	1400	6050	6995
1000	40	2131	1166	1803	1570	196.9	950	1400	10250	11380
1050	42	2131	1166	1803	1570	206.4	950	1400	10700	11830

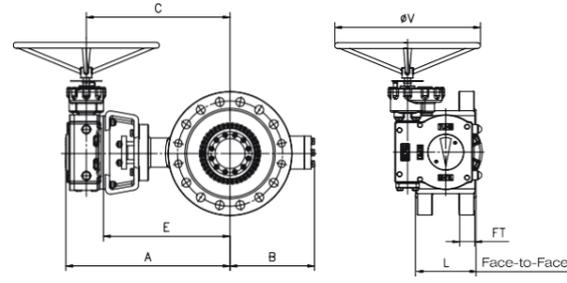
ASME B16.47 900# - TRIM TYPE A



Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 13 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	kg
700	28	1097	617	1046	880	84.2	292	680	1382	1554
750	30	1222	671	1166	1000	90.5	318	680	1735	2025
800	32	1222	671	1166	1000	96.9	318	680	1805	2095
900	36	1417	801	1290	1150	103.0	330	680	2460	2895
1000	40	1417	801	1290	1150	113.0	410	680	2270	2705
1050	42	1482	900	1355	1215	117.0	410	680	2940	3375
1200	48	1692	991	1493	1300	132.0	470	820	3875	4670
1350	54	2119	1190	1887	1655	151.0	530	1400	5650	6595
1400	56	2119	1190	1887	1655	152.0	530	1400	5950	6895
1500	60	2164	1235	1932	1700	162.0	600	1400	6878	7823

ASME B16.47 300# - TRIM TYPE A



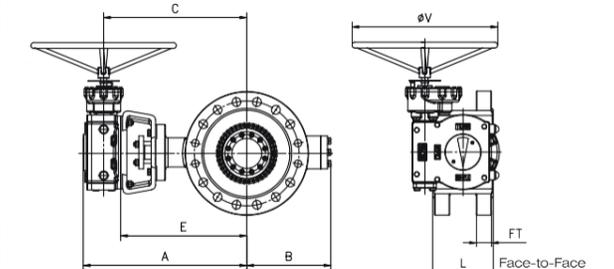
Double Flange Short Body-Face-to-Face K&W standards (Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
28	700	60.00	31.50	52.13	44.50	5.62	30.50	32.38	9259	11012
30	750	67.88	34.38	60.00	52.38	5.88	34.50	32.38	11552	13305
32	800	67.88	34.38	60.00	52.38	6.25	34.50	32.38	12324	14076
36	900	74.25	39.13	65.13	56.00	6.75	33.50	55.13	13338	15421
40	1000	84.00	46.00	71.00	61.88	7.75	37.38	55.13	22597	25089
42	1050	84.00	46.00	71.00	61.88	8.13	37.38	55.13	23589	26081

Double Flange Long Body-
Face-to-Face API 609 Long Type-ASME B16.10(Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	kg
700	28	1000	556	893	795	69.9	610	820	830	995
750	30	1070	611	963	865	73.1	610	820	1103	1268
800	32	1070	611	963	865	79.4	660	820	1135	1300
900	36	1205	736	1112	1000	88.9	711	680	1905	2077

ASME B16.47 150# - TRIM TYPE A



Double Flange Short Body-
Face-to-Face ISO 5752 Standard Series 13 (Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
28	700	43.25	24.38	41.25	34.75	3.31	11.50	26.88	3047	3426
30	750	48.25	26.50	46.00	39.38	3.56	12.52	26.88	3825	4464
32	800	48.25	26.50	46.00	39.38	3.81	12.52	26.88	3979	4619
36	900	55.88	31.63	50.88	45.38	4.06	12.99	26.88	5423	6382
40	1000	55.88	31.63	50.88	45.38	4.44	16.14	26.88	5004	5963
42	1050	58.38	35.50	53.38	47.88	4.63	16.14	26.88	6482	7441
48	1200	66.63	39.13	58.88	51.25	5.19	18.50	32.38	8543	10296
54	1350	83.50	46.88	74.38	65.25	5.94	20.88	55.13	12456	14539
56	1400	83.50	46.88	74.38	65.25	6.00	20.88	55.13	13117	15201
60	1500	85.25	48.63	76.13	67.00	6.38	23.63	55.13	15163	17247

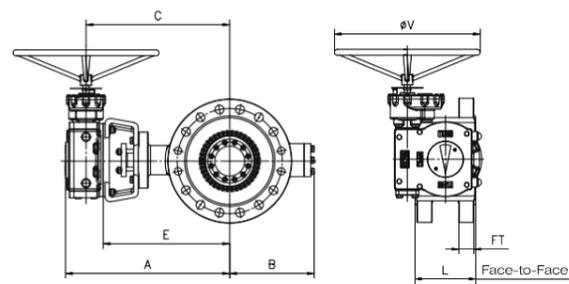
Double Flange Long Body-
Face-to-Face API 609 Long Type-ASME B16.10(Imperial)

NPS	DN	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs	lbs
28	700	39.38	22.00	35.25	31.38	2.75	24.00	32.38	1830	2194
30	750	42.25	24.13	38.00	34.13	2.88	24.00	32.38	2432	2795
32	800	42.25	24.13	38.00	34.13	3.13	26.00	32.38	2502	2866
36	900	47.50	29.00	43.88	39.38	3.50	28.00	26.88	4200	4579

Double Flange Short Body-
Face-to-Face EN 558 Standard Series 13 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	24	114	125	30	37
100	4	370	141	328	290	24	127	125	45	52
150	6	410	165	368	330	25.5	140	125	55	62
200	8	475	214	424	385	30	152	300	90	101
250	10	515	243	464	425	30	165	300	125	136
300	12	592	286	539	490	32	178	500	165	178
350	14	627	312	574	525	35	190	500	200	213
400	16	670	350	600	545	37	216	600	260	290
450	18	705	383	635	580	40	222	600	315	345
500	20	765	407	695	640	43	229	700	395	425
600	24	834	484	766	690	48	267	300	570	645

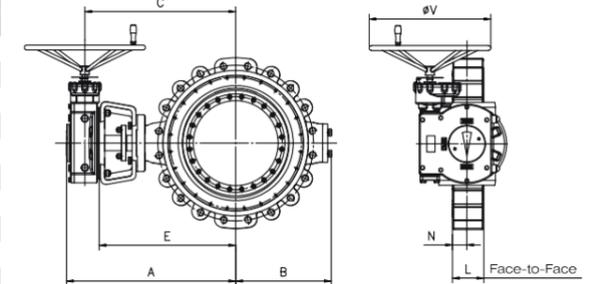
EN 1092-1 PN 10 - TRIM TYPE B



Lugged Face-Face-to-Face EN 558 Standard Series 16 (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	64	34	125	19	26
100	4	370	141	328	290	64	30	125	21	28
150	6	410	165	368	330	76	41	125	30	37
200	8	475	214	424	385	89	49	300	52	63
250	10	515	243	464	425	114	70	300	66	77
300	12	592	286	539	490	114	65	500	87	100
350	14	627	312	574	525	127	72	500	175	188
400	16	670	350	600	545	140	80	600	223	253
450	18	705	383	635	580	152	85	600	294	324
500	20	765	407	695	640	152	80	700	348	378
600	24	834	484	766	690	178	94	300	456	531

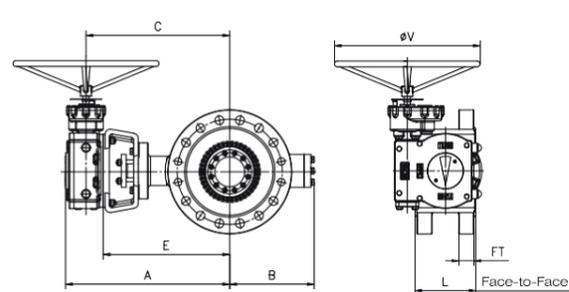
EN 1092-1 PN 10/PN 16 - TRIM TYPE B



Double Flange Short Body-
Face-to-Face EN 558 Standard Series 13 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	24	114	125	30	37
100	4	370	141	328	290	24	127	125	45	52
150	6	410	165	368	330	25.5	140	125	55	62
200	8	475	214	424	385	30	152	300	90	101
250	10	515	243	464	425	30	165	300	125	136
300	12	592	286	539	490	32	178	500	165	178
350	14	627	312	574	525	35	190	500	200	213
400	16	670	350	600	545	37	216	600	260	290
450	18	705	383	635	580	40	222	600	330	360
500	20	765	407	695	640	48	229	700	420	450
600	24	834	484	766	690	58	267	300	700	775

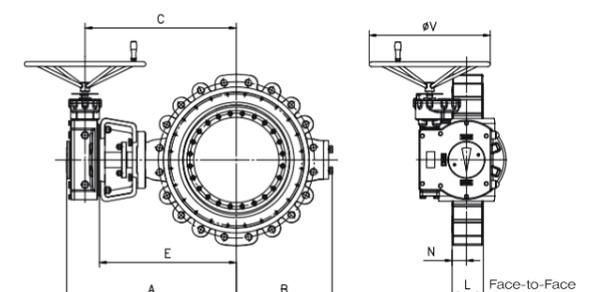
EN 1092-1 PN 16 - TRIM TYPE B



Lugged Face-Face-to-Face EN 558 Standard Series 16 (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	-	-	-	-	-	-	-	-	-
100	4	-	-	-	-	-	-	-	-	-
150	6	-	-	-	-	-	-	-	-	-
200	8	475	214	424	385	89	49	300	52	63
250	10	515	243	464	425	114	70	300	66	77
300	12	592	286	539	490	114	65	500	108	121
350	14	627	312	574	525	127	72	500	175	188
400	16	670	350	600	545	140	80	600	223	253
450	18	705	383	635	580	152	85	600	303	333
500	20	765	407	695	640	152	80	700	348	378
600	24	834	484	766	690	178	94	300	456	531

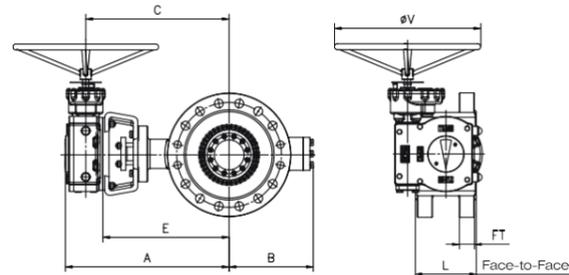
EN 1092-1 PN 25 - TRIM TYPE B



Double Flange Short Body-
Face-to-Face EN 558 Standard Series 13 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	kg
80	3	-	-	-	-	-	-	-	-	-
100	4	-	-	-	-	-	-	-	-	-
150	6	-	-	-	-	-	-	-	-	-
200	8	475	214	424	385	30	152	300	90	101
250	10	515	243	464	425	32	165	300	125	136
300	12	592	286	539	490	34	178	500	165	178
350	14	627	312	574	525	38	190	500	228	241
400	16	670	350	600	545	40	216	600	283	313
450	18	705	383	635	580	46	222	600	350	380
500	20	765	407	695	640	48	229	700	420	450
600	24	834	484	766	690	58	267	300	700	775

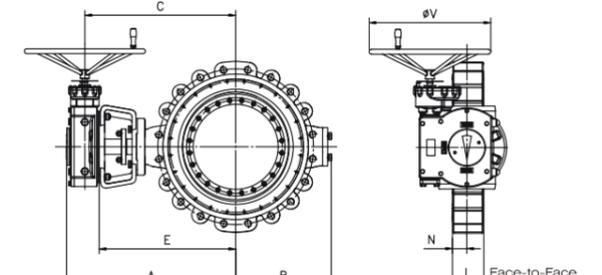
EN 1092-1 PN 25 - TRIM TYPE B



Lugged Face-Face-to-Face EN 558 Standard Series 16 (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	64	34	125	19	26
100	4	370	141	328	290	64	30	125	21	28
150	6	440	189	389	350	76	36	300	40	51
200	8	517	236	464	415	89	44	500	60	73
250	10	557	272	504	455	114	63	500	91	104
300	12	615	310	545	490	114	55	600	132	162
350	14	670	335	600	545	127	63	700	251	281
400	16	730	389	635	575	140	69	300	310	356
450	18	815	422	720	660	152	73	500	420	467
500	20	855	461	760	700	152	63	500	441	488
600	24	990	531	883	785	178	77	820	675	745

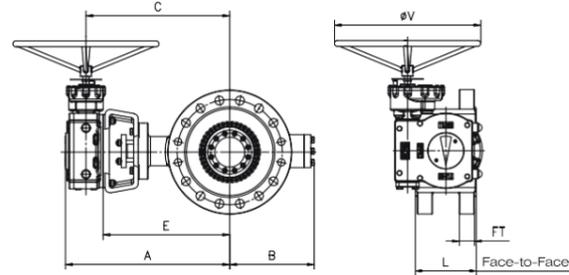
EN 1092-1 PN 40 - TRIM TYPE C



Double Flange Short Body-
Face-to-Face EN 558 Standard Series 13 (Metric)

DN	NPS	A	B	C	E	FT	L	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	27.0	114	125	35	42
100	4	370	141	328	290	30.2	127	125	45	52
150	6	440	189	389	350	35.0	140	300	80	91
200	8	517	236	464	415	39.7	152	500	120	133
250	10	557	272	504	455	46.1	165	500	175	188
300	12	615	310	545	490	49.3	178	600	235	265
350	14	670	335	600	545	54.0	190	700	320	350
400	16	730	389	635	575	57.0	216	300	420	466
450	18	815	422	720	660	60.0	222	500	495	542
500	20	855	461	760	700	63.5	229	500	605	652
600	24	990	531	883	785	72.0	267	820	905	1070

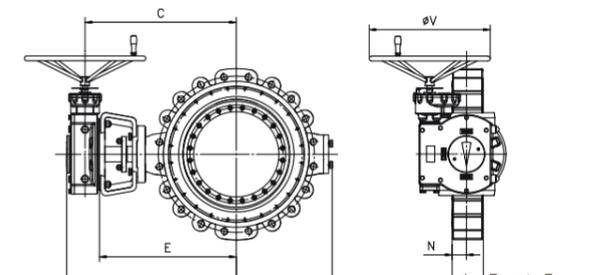
EN 1092-1 PN 40 - TRIM TYPE C



Wafer type-Face-to-Face EN 558 Standard Series 16 (Imperial)

NPS	DN	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
inch	lbs	lbs								
80	3	340	125	298	260	64	34	125	16	23
100	4	370	141	328	290	64	30	125	17	24
150	6	410	165	368	330	76	41	125	21	28
200	8	475	214	424	385	89	49	300	40	51
250	10	515	243	464	425	114	70	300	53	64
300	12	592	286	539	490	114	65	500	77	90
350	14	627	312	574	525	127	72	500	119	132
400	16	670	350	600	545	140	80	600	139	169
450	18	705	383	635	580	152	85	600	181	211
500	20	765	407	695	640	152	80	700	256	286
600	24	834	484	766	690	178	94	300	364	439

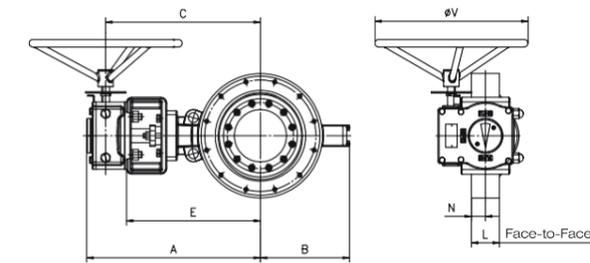
EN 1092-1 PN 10/PN 16 - TRIM TYPE B



Wafer type-Face-to-Face EN 558 Standard Series 16 (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	-	-	-	-	-	-	-	-	-
100	4	-	-	-	-	-	-	-	-	-
150	6	-	-	-	-	-	-	-	-	-
200	8	475	214	424	385	89	49	300	40	51
250	10	515	243	464	425	114	70	300	53	64
300	12	592	286	539	490	114	65	500	77	90
350	14	627	312	574	525	127	72	500	119	132
400	16	670	350	600	545	140	80	600	139	169
450	18	705	383	635	580	152	85	600	181	211
500	20	765	407	695	640	152	80	700	256	286
600	24	834	484	766	690	178	94	300	364	439

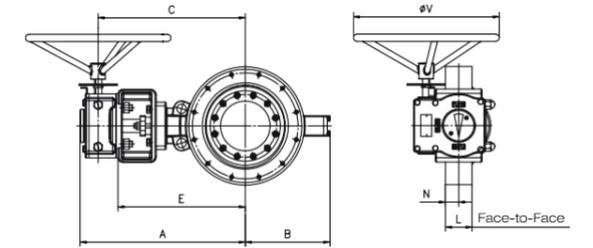
EN 1092-1 PN 25 - TRIM TYPE B



Wafer type-Face-to-Face API 609 class B (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	48	20	125	14	21
100	4	370	141	328	290	54	24	125	15	22
150	6	440	189	389	350	59	26	300	29	40
200	8	517	236	464	415	73	32	500	50	63
250	10	557	272	504	455	83	37	500	75	88
300	12	615	310	545	490	92	39	600	109	139
350	14	670	335	600	545	117	60	700	164	194
400	16	719	389	651	575	133	65	300	228	303
450	18	804	422	736	660	149	73	500	285	360
500	20	844	461	776	700	159	72	500	343	418
600	24	990	531	887	785	181	82	820	513	678

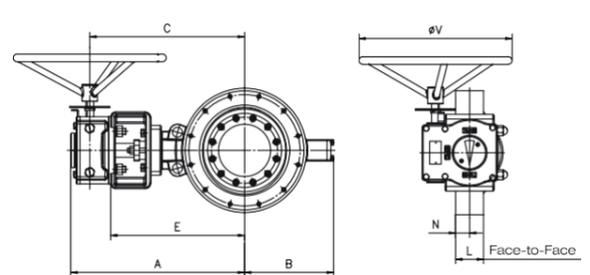
EN 1092-1 PN 40 - TRIM TYPE C



Wafer type-Face-to-Face EN 558 Standard Series 16 (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	64	34	125	16	23
100	4	370	141	328	290	64	30	125	17	24
150	6	440	189	389	350	76	36	300	32	43
200	8	517	236	464	415	89	44	500	53	66
250	10	557	272	504	455	114	63	500	86	99
300	12	615	310	545	490	114	55	600	111	141
350	14	670	335	600	545	127	63	700	165	195
400	16	730	389	635	575	140	69	300	227	273
450	18	815	422	720	660	152	73	500	285	332
500	20	855	461	760	700	152	63	500	325	372
600	24	990	531	883	785	178	77	820	496	566

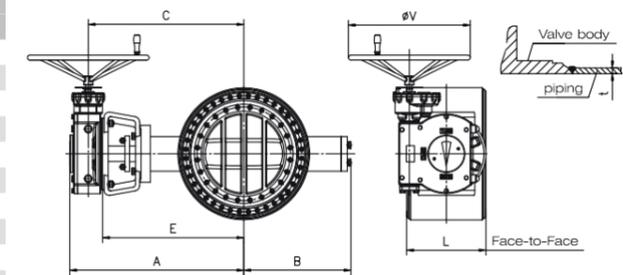
EN 1092-1 PN 40 - TRIM TYPE C



Butt welding-Face-to-Face EN 12982 Standard Series 14 (Metric)

DN	NPS	A	B	C	E	L	t*	ØV	VALVE	TOTAL WEIGHT
mm	mm	kg	kg							
80	3	340	125	298	260	180	8	125	19	26
100	4	370	141	328	290	190	9	125	27	34
150	6	410	165	368	330	210	11	125	32	39
200	8	475	214	424	385	230	10.5	300	42	53
250	10	515	243	464	425	250	9.5	300	56	67
300	12	592	286	539	490	270	10.5	500	82	95
350	14	627	312	574	525	290	11.5	500	108	121
400	16	670	350	600	545	310	13	600	127	157
450	18	705	383	635	580	330	14.5	600	144	174
500	20	765	407	695	640	350	15	700	196	226
600	24	834	484	766	690	390	17.5	300	283	358

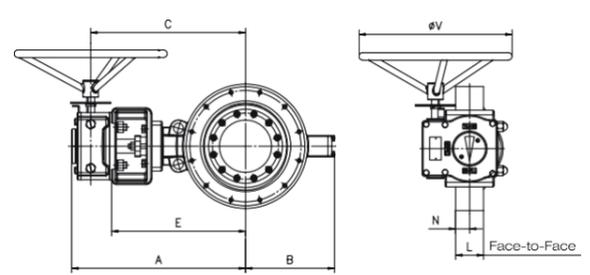
EN 12516 PN 10-16-25 - TRIM TYPE B



Wafer type-Face-to-Face API 609 class B (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	340	125	298	260	48	20	125	14	21
100	4	370	141	328	290	54	24	125	15	22
150	6	410	165	368	330	57	26	125	20	27
200	8	475	214	424	385	64	28	300	34	45
250	10	515	243	464	425	71	32	300	45	56
300	12	592	286	539	490	81	38	500	73	86
350	14	627	312	574	525	92	44	500	97	110
400	16	670	350	600	545	102	49	600	123	153
450	18	705	383	635	580	114	55	600	164	194
500	20	765	407	695	640	127	63	700	220	250
600	24	834	484	766	690	154	78	300	324	399

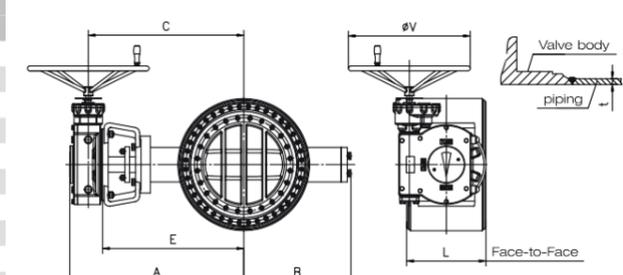
EN 1092-1 PN 10/PN 16 - TRIM TYPE B



Butt welding-Face-to-Face EN 12982 Standard Series 14 (Metric)

DN	NPS	A	B	C	E	L	t*	ØV	VALVE	TOTAL WEIGHT
mm	mm	kg	kg							
80	3	340	125	298	260	180	8.0	125	21	28
100	4	370	141	328	290	190	9.0	125	30	37
150	6	440	189	389	350	210	11.0	300	34	45
200	8	517	236	464	415	230	13.0	500	56	69
250	10	557	272	504	455	250	16.0	500	74	87
300	12	615	310	545	490	270	18.0	600	109	139
350	14	670	335	600	545	290	16.0	700	168	198
400	16	730	389	635	575	310	12.7	300	196	242
450	18	815	422	720	660	330	14.5	500	313	360
500	20	855	461	760	700	350	15.5	500	355	402
600	24	990	531	883	785	390	17.5	820	503	668

EN 12516-1 PN 40- TRIM TYPE C



Wafer type-Face-to-Face API 609 class B (Metric)

DN	NPS	A	B	C	E	L	N	ØV	VALVE	TOTAL WEIGHT
mm	mm	mm	kg	kg						
80	3	-	-	-	-	-	-	-	-	-
100	4	-	-	-	-	-	-	-	-	-
150	6	-	-	-	-	-	-	-	-	-
200	8	475	214	424	385	64	28	300	34	45
250	10	515	243	464	425	71	32	300	45	56
300	12	592	286	539	490	81	38	500	73	86
350	14	627	312	574	525	92	44	500	97	110
400	16	670	350	600	545	102	49	600	123	153
450	18	705	383	635	580	114	55	600	164	194
500	20	765	407	695	640	127	63	700	220	250
600	24	834	484	766	690	154	78	300	324	399

EN 1092-1 PN 25 - TRIM TYPE B

