

truflow

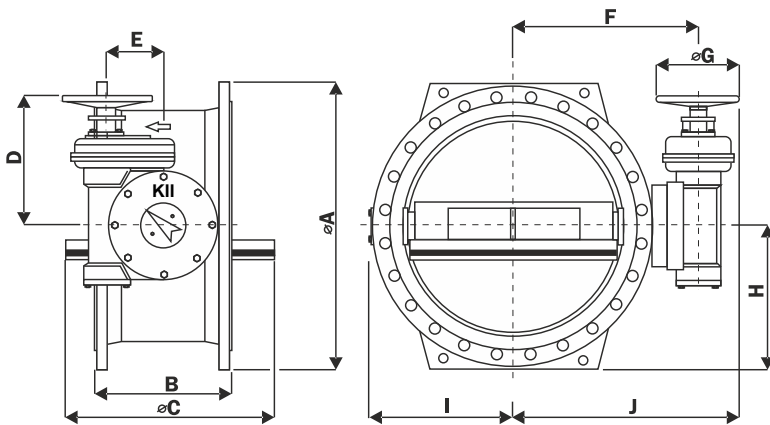


KII

DOUBLE OFFSET BUTTERFLY VALVES

High Performance Valves

Technical Data



DESIGN TYPE

Double Offset , Double Flanged , Bi-Directional Butterfly Valve

APPLICABLE STANDARDS

Double Offset to EN 593 specifications
Face to Face length to EN 558 - Series 13 or Series 14 specification
Double Flanged and alignment to SANS 1123 or EN 1092-2
Drip tight sealing in both flow directions to EN 12266 specifications

ACCEPTABLE MEDIA

Water and neutral liquids

OPERATING PRESSURE RANGE

PN10, PN16, PN25 a PN40

OPERATING TEMPERATURE RANGE

0° to 70° C

SIZE RANGE

DN150 to DN1200 - Larger valves available on request

MATERIALS OF CONSTRUCTION

Body and Disc: Steel to 350 WA or BS EN 10025: 2004 Grade S275 alternatively Ductile Iron SABS 936 Grade SG42
Valve Seal Retainer : S/Steel 304
Valve Seal: EPDM
O-Rings: EPDM
Bearings: Gunmetal to BS EN CC491K or, Aluminum Bronze or Polyamide.
Shafts: Stainless Steel 431 or 316
Seat: Stainless 316 Deposit welded then accurately machined

CORROSION PROTECTION

Body and Disc fusion bonded epoxy coated to SABS 1217 to a DFT of 300 microns

STANDARD FACTORY TESTS

Seat 1.1 times PN
Body: 1.5 times PN

END CONNECTIONS

SANS 1123 or BS EN 1092

DESIGN AND OPERATING OPTIONS

Electric or Hydraulic Actuation
Full Rubber lining of body
Seal in Disc or Seal in Body Design
Alternative materials of Construction

RECOMMENDED MAX VELOCITIES

PN 16: 4 m/s
PN 25: 5 m/s
PN 40: 6 m/s

ACCESSORIES

T Key
Extension Spindle
Dismantling Joint

PN16

DN	A	B		C	D	E	F	G	H	I	J	Weight (kg)
		Series 13	Series 14									
150	285	210	140	152	212	71	229	245	143	143	352	43
200	340	230	152	199	212	71	255	245	170	170	377	55
250	400	250	165	251	239	95	320	245	213	208	443	100
300	455	270	178	281	239	95	320	245	240	239	494	125
350	520	290	190	336	271	110	411	370	270	281	593	172
400	580	310	216	385	372	110	408	370	300	297	595	200
450	640	330	222	434	372	110	44	370	330	331	629	235
500	715	350	229	474	420	156	492	370	368	356	677	330
600	840	390	267	576	420	156	558	370	430	429	743	490
700	910	430	292	671	484	190	600	370	465	470	785	632
800	1025	470	318	766	484	190	655	370	523	518	885	820
900	1125	510	330	861	519	242	713	370	573	576	898	1020
1000	1255	550	410	951	519	242	781	370	638	641	965	1318
1200	1485	630	470	1147	625	290	938	485	753	758	1181	2470

PN25

DN	A	B		C	D	E	F	G	H	I	J	Weight (kg)
		Series 13	Series 14									
150	212	210	140	152	212	71	252	245	150	155	374	48
200	268	230	152	199	212	71	290	245	180	193	413	66
250	320	250	165	251	271	110	367	370	223	259	552	160
300	378	270	178	281	372	110	383	370	253	271	568	187
350	520	290	190	336	372	110	430	370	288	311	615	208
400	438	310	216	379	420	156	480	370	320	340	665	289
450	490	330	222	427	420	156	502	370	345	380	687	352
500	550	350	229	474	484	190	560	370	375	385	745	470
600	610	390	267	567	484	190	609	370	433	459	794	690
700	725	430	292	663	519	242	664	370	490	533	849	860
800	795	470	318	747	519	242	749	370	518	588	934	1184
900	1000	510	330	854	519	290	853	485	553	677	1095	1800
1000	1115	550	410	952	625	290	928	485	670	734	965	2084
1200	1330	630	470	1147	625	290	1043	485	765	820	1286	2700

PN40

DN	A	B		C	D	E	F	G	H	I	J	Weight (kg)
		Series 13	Series 14									
150	218	210	140	152	212	71	252	245	150	155	374	48
200	285	230	152	199	212	71	290	245	188	193	413	70
250	345	250	165	251	271	110	367	370	223	259	552	179
300	410	270	178	281	372	110	383	370	268	271	568	200
350	465	290	190	336	372	110	430	370	300	311	615	270
400	535	310	216	379	420	156	480	370	340	340	665	380
450	560	330	222	427	420	156	502	370	345	380	687	460
500	615	350	229	474	484	190	560	370	388	385	745	520
600	735	390	267	567	484	190	609	370	455	459	794	760
700		430	292	663	519	242	664	370	508	533	849	1020
800		470	318	747	519	242	749	370	553	588	934	1480
900		510	330	854	519	290	853	485	603	677	1095	2250
1000		550	410	952	625	290	928	485	670	734	965	2600



KII Double Offset Butterfly Valves

Technical Features and Benefits

The KII Double Offset Butterfly Valve has evolved from a long lineage of design excellence into a product that is synonymous with quality, innovation and performance.

The KII design has been developed in a modular format to allow for short delivery cycles and different disc and seat arrangements to suit all flow and operating conditions. Valves are available in sizes DN150 to DN1200 and for pressure ratings of PN 10, PN16, PN25 and PN40 as standard.

KII Double Offset valves are designed to provide optimum performance across their entire operating range. The integrity of the design ensures ease of operation and the specific construction makes it structurally sound and mechanically superior to other designs. The TruFlo KII design offers the following:

Double Offset Design

Double Offset disc allows the seal to disengage immediately on opening reducing seal wear.

Disc

The KII design has a streamlined disc profile that provides smooth flow and ensures a low pressure drop across the valve. The disc is designed for strength and to eliminate possible flutter under low flow operating conditions.

Body Seat and Dic Seal

The KII designs has a Stainless Steel 316 Seat which is deposit welded and specifically profiled to reduce the opening and closing torque and ensure drop tight sealing.

The resilient Disc Seal is positively retained in the KII design to prevent seal roll out in arduous operating conditions, In addition, the seal is of a single piece design that is replaceable with the valve insitu.

Shaft Bearings

Liberal sized self-lubricating thermoplastic or aluminium bronze shaft bearings are used in the KII design to reduce shaft friction and operating torque.

Quality and Local Manufacture

The KII design offers a 100% locally manufactured, high quality product with short lead times and a great degree of adaptability in materials combinations and operating options.

Body - Steel 350 WA

Alternatively Ductile Iron SG42
Fusion Bonded Epoxy Coated
High strength design with a
Safety factor of 4

Upper Flange

Valve is easily automated. All
valves have upper flange in
accordance to ISO 5210 to a broad
range of actuators

Gearbox

Generously sized with large but accurate
gearing to ensure no backlash during
operation and low effort to open and close.
Gearbox fitted as standard with position
indicator and with limiting pins

Disc - Steel 350 WA

Alternatively Ductile Iron SG42
Fusion Bonded Epoxy Coated
Aerofoil Design for low headloss
and stability under low flow

Shaft Bearing Bronze/ Polymide

Self Lubricating ensuring very low
torque requirements. Designed for
Vertical and Horizontal operation

Retaining Ring

S/Steel 304/ 316

Shaft Seal

Series of O-Rings to provide
drip tight operation under all
operating conditions

Valve Seal - EPDM

Endless Seal with specific Tee
profile accurately fitted and with
specific shore hardness to ensure
bi-directional sealing

Shafts - S/Steel 431 or 316

Two Stub Shaft liberally sized to
withstand all working conditions

Valve Seat - S/Steel 316

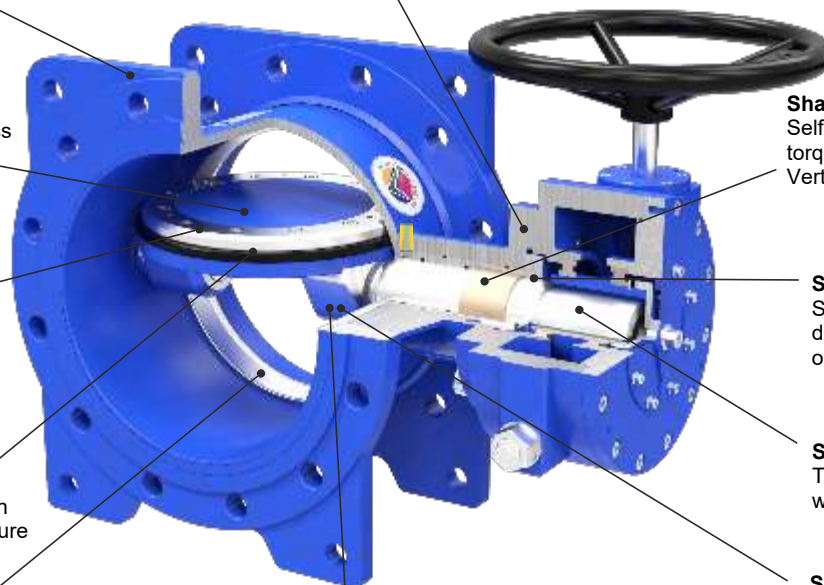
Deposit Welded and accurately
machined with a good lead into
the face to ensure a positive
seal at all times

Shaft Pins - S/Steel 316

Two Tapered Shaft Pins liberally sized to absorb the torques and stresses of operation. Can be supplied in place of or, in conjunction with Shaft Keys

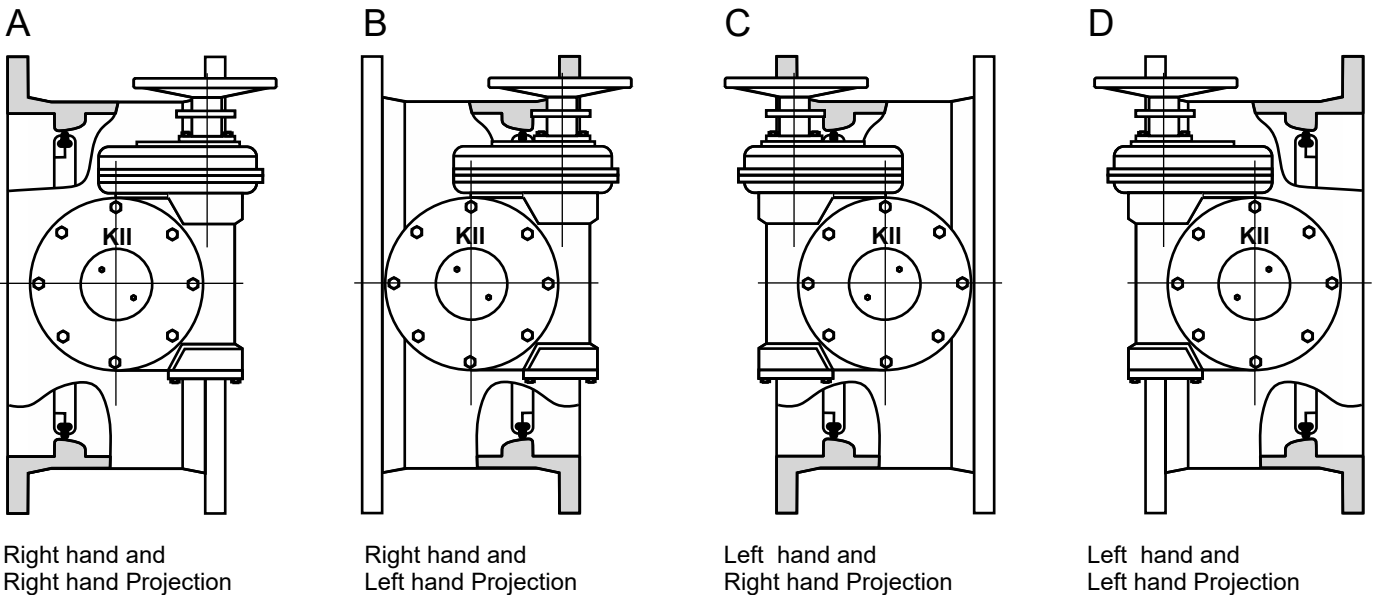
Shaft Key

For positive Disc to Shaft
connection

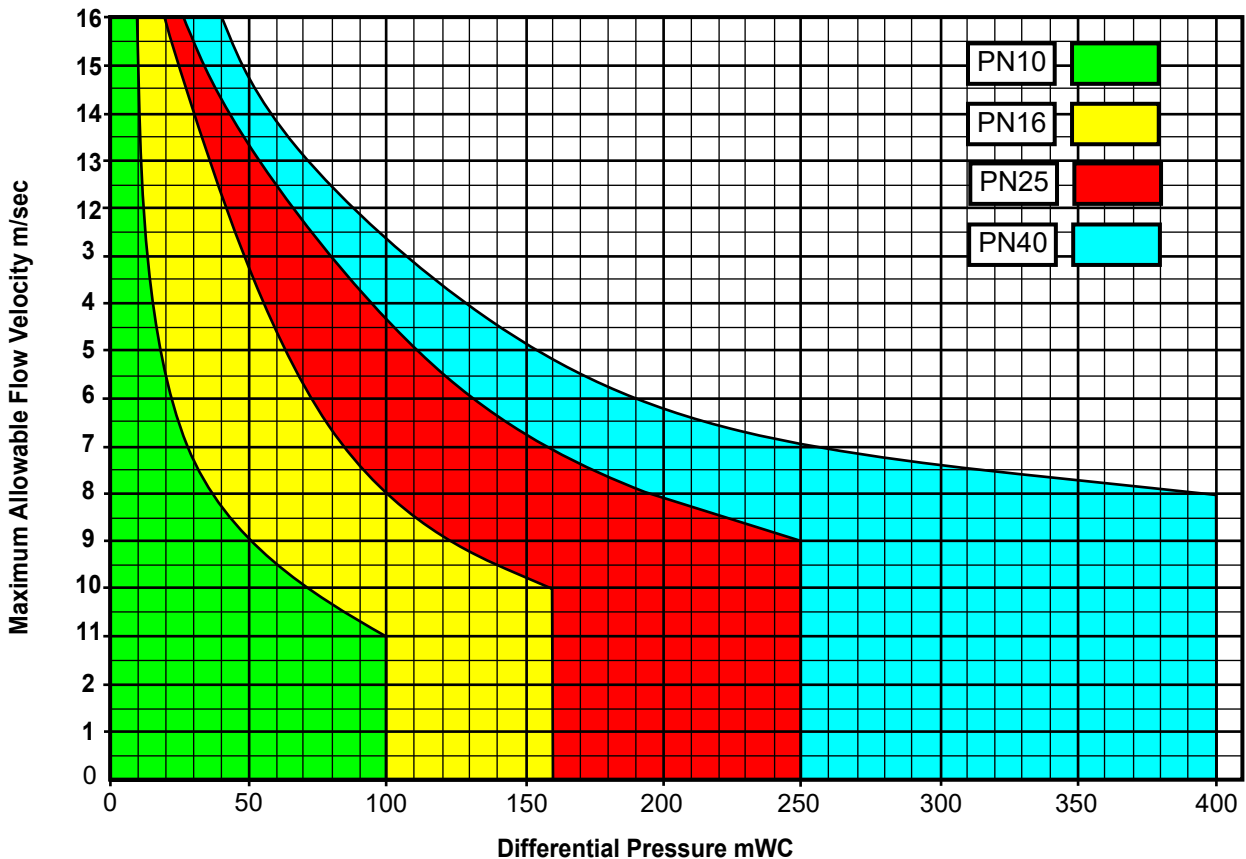


Gearbox Orientation

KII Double Offset Butterfly is Bi-Directional and the Gearbox can be installed in any position. However, we recommend one of four options, specifically if the valve is operating against high differential pressures. These positions are based on the Gearbox Orientation may be supplied with the Gearbox either on the Right or Left of the valve from the the upstream side (from the direction of flow) and the Projection refers to the position of the Hand wheel when facing the Gearbox as follows:



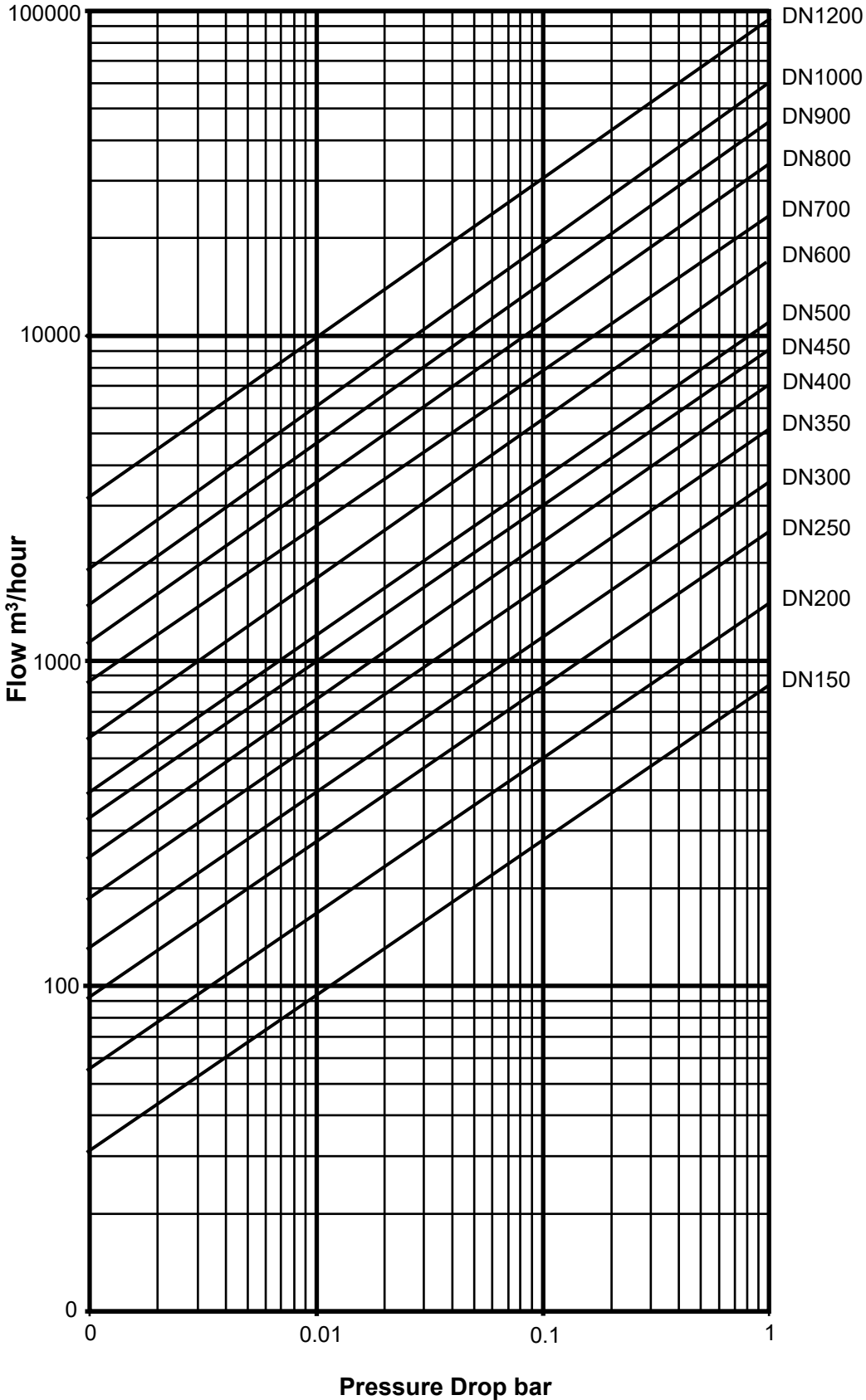
Maximum Flow Velocity vs Differential Pressure





KII Double Offset Butterfly Valves

Performance Characteristics All Sizes and Pressure Ratings



DN mm	Kv
150	934
200	1860
250	2135
300	3525
350	6767
400	8902
450	10897
500	14204
600	21065
700	30084
800	39067
900	51366
1000	66640
1200	92317

$$Q = Kv \cdot \sqrt{\frac{\Delta P}{SG}}$$

Q: Flow rate m3/hour
 ΔP : Pressure Drop bar
 SG: Specific Gravity (1 for water)
 Kv: Flow coefficient



KII Double Offset Butterfly Valves

Valve Closing Torque an Gearbox Size

KII Double Offset Butterfly Valves are designed with a mounting pad for the Gearbox/ Actuator to ISO 5211 specifications thereby obviating the need for an additional extension piece. Our Butterfly Valves can be matched to any of the well known Actuator manufacturers such as Rotork or Auma. If the client informs us of the brand of Actuator they choose to use then, we can recommend the appropriate model number to fit the valve size.

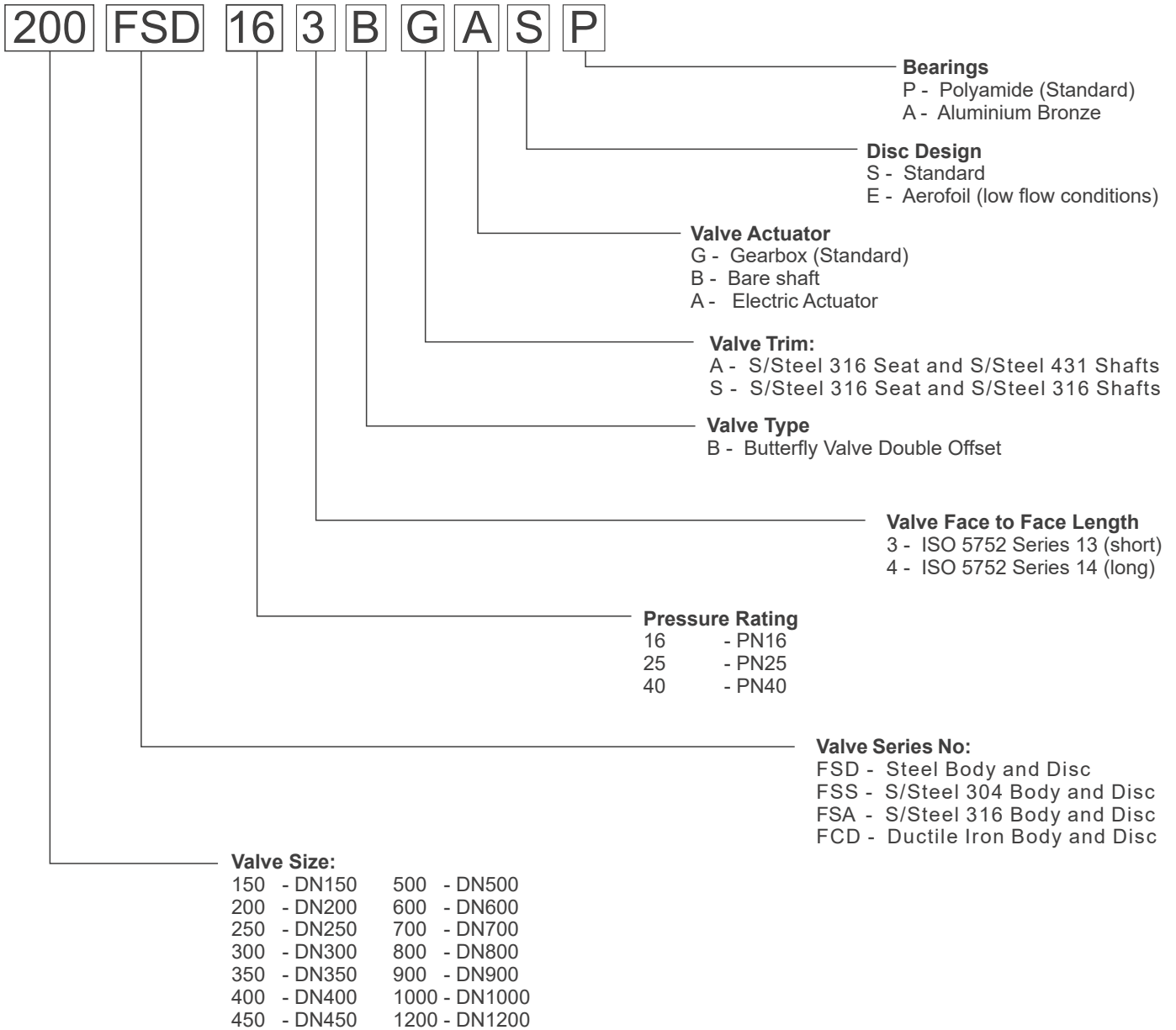
DN	M ₁		M ₂		GEAR REDUCTION RATIO		No. OF TURNS TO CLOSE		GEARBOX SIZE	
	OUTPUT SHAFT TORQUE Nm		GEAR SHAFT TORQUE Nm							
	PN 10	PN 16	PN 10	PN 16	PN 10	PN 16	PN 10	PN 16	PN 10	PN 16
150	130	150	5	7	80:1	80:1	20	20	F10	F10
200	220	300	10	13	80:1	80:1	20	20	F10	F10
250	400	600	17	25	80:1	80:1	20	20	F10	F12
300	550	800	23	34	80:1	80:1	20	20	F12	F12
350	800	1200	33	50	80:1	80:1	20	20	F12	F14
400	1300	1900	39	57	112:1	112:1	28	28	F14	F14
450	1750	2800	50	84	112:1	112:1	28	28	F16	F16
500	2400	3800	72	88	112:1	144:1	28	36	F16	F25
600	3500	5800	81	134	144:1	144:1	36	36	F16	F25
700	5000	8700	116	143	204:1	204:1	51	51	F25	F30
800	8100	13400	133	220	204:1	204:1	51	51	F25	F30
900	11400	18300	187	300	204:1	204:1	51	51	F25	F30
1000	14900	24700	245	404	204:1	204:1	51	51	F30	F35
1200	25700	41800	420	202	204:1	816:1	51	204	F30	F35

DN	M ₁		M ₂		GEAR REDUCTION RATIO		No. OF TURNS TO CLOSE		GEARBOX SIZE	
	OUTPUT SHAFT TORQUE Nm		GEAR SHAFT TORQUE Nm							
	PN 25	PN 40	PN 25	PN 40	PN 25	PN 40	PN 25	PN 40	PN 25	PN 40
150	240	510	10	22	80:1	80:1	20	20	F10	F10
200	510	800	22	34	80:1	80:1	20	20	F12	F12
250	960	1500	40	45	80:1	112:1	20	28	F14	F14
300	1700	2600	50	80	112:1	112:1	28	28	F14	F16
350	2100	3300	63	99	112:1	112:1	28	28	F16	F16
400	2900	4500	87	105	112:1	144:1	28	36	F16	F25
450	4200	6100	98	142	144:1	144:1	36	36	F25	F25
500	5300	8400	123	140	144:1	204:1	36	51	F25	F30
600	8700	14300	142	245	204:1	204:1	51	51	F30	F30
700	13100	21800	220	356	204:1	204:1	51	51	F30	F35
800	22000	34700	360	167	204:1	816:1	51	204	F30	F35
900	30500	57250	148	210	816:1	1072:1	204	268	F35	F40
1000	38400	80800	185	296	816:1	1072:1	204	268	F40	F40
1200	69300	133200	185	354	1474:1	1474:1	368	368	F40	F40



KII Double Offset Butterfly Valves

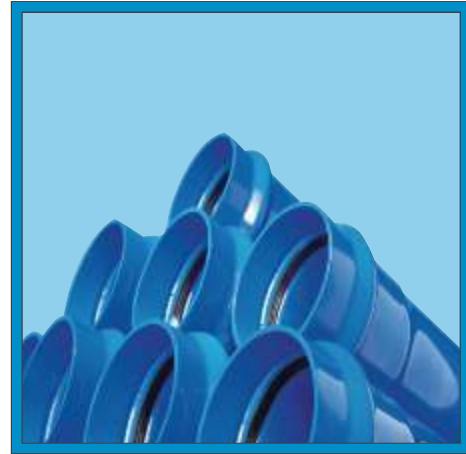
Model Numbers



TruFlo is a designer, manufacturer and supplier of Pipe, Valves, Fittings and Couplings. Our products and services include:



TruFlo KII Couplings Flange Adaptors and Dismantling Joints are 100% locally manufactured in sizes 40mm to 1600mm and for pressure ratings of up to PN40 as standard. We offer short lead times



In addition to Ductile Iron Pipe, TruFlo is a large distributor of PVC, HDPE and Steel Pipe in diameters up to 1000 NB. All pipe is supplied with associated Valves and Fittings



TruFlo is the manufacturer and supplier of the AirFlo range of air valves for Water and Sewer pipelines. Air Valves are manufactured in sizes DN25 to DN300 and for pressure ratings of up to PN100. AirFlo air valves have four functions as stand including automatic Surge protection



TruFlo manufactures Double Offset Butterfly valves in sizes DN200 to DN1200 and for pressure ratings PN10 to PN40. Valves are available fusion bonded epoxy coated and in various trim options.



TruFlo is the manufacturer and supplier of the CheckFlo range of Nozzle Check, Swing Check and Silent for Water pipelines. Check Valves are manufactured in sizes DN50 to DN1200 and for pressure ratings of up to PN100. CheckFlo valves have low headloss, are maintenance free and prevent Surge.



TruFlo is one of the largest manufactures of fabricated Steel fittings for Water and Wastewater pipelines. Our fittings are manufactured under the VeroFlo brand in sizes DN50 to DN 1600 and for pressure ratings of PN64 as standard. All fittings are fusion bonded epoxy coated as standard.

TruFlo provides the most comprehensive, technical, logistical and after sales support in the industry. Try Us!