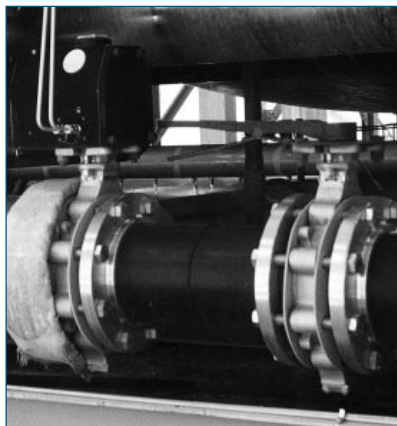




K-LOK® High Performance Butterfly Valve Sizes 50mm–900mm ANSI Class 150 and 300

Features

- Integrally cast mounting pad provides direct mounting of Keystone F79U pneumatic actuators.
- Rocker-shaped gland bridge compensates for uneven adjustment of gland nuts.
- Extended neck allows for 50mm of pipeline insulation.
- Flattened body bore positions stem bearings near disc, providing maximum stem support.
- Disc taper pins are tangentially positioned half in disc and half in stem, placing them in compression rather than shear, which eliminates potential for failure.
- Integrally cast disc position stop perfectly locates the disc in seat, achieving maximum seat and seal life.
- Uninterrupted flange face retaining ring allows use of standard spiral wound gaskets.
- K-LOK polymer seats incorporate a true interference seat design that does not rely on line pressure to assist sealing. This design provides bi-directional, drop-tight closure in vacuum and throughout all pressure ranges, as well as at full rated differential pressure. A variety of materials allows optimum seat life in all applications.

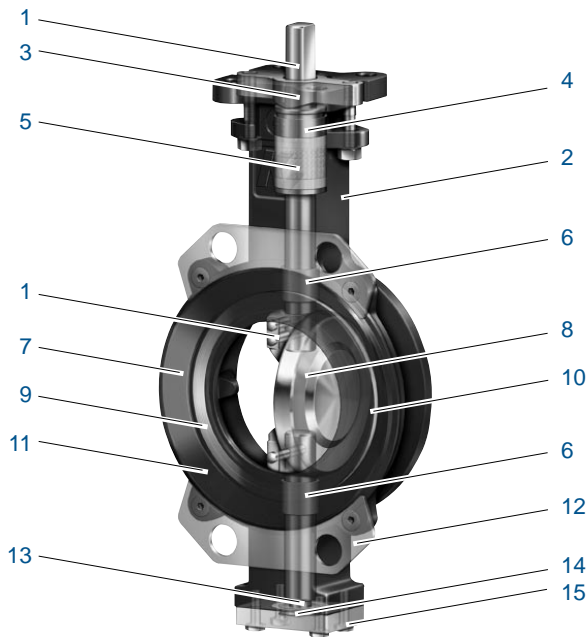


General Applications

The Keystone K-LOK is designed for a wide range of applications such as:

- Flow Control
- Food Processing
- Chlorine
- Sour Gas
- Reverse Osmosis
- Military
- Category 'M' Fluids
- Vacuum
- Slurry
- Oxygen
- Pharmaceutical

Butterfly Valves - K-LOK F360/362 and F370



Parts list

No.	Description	Material	Typical Standard
1	Stem/Disc Taper Pins	17-4 P.H. K-Monel 500 Inconel 718	ASTM A564 Condition H1075 or H1100 QQ-N286 UNS N005500 Class A Age Hardened -
2	Body	Carbon Steel Stainless Steel Nickel Aluminum Bronze	ASTM A216-WCB ASTM A351-CF8M MIL B24480 CDA C95800/ASTM B148
3	Gland Bridge	17-4 P.H.	-
4	Packing Gland Follower	316 S/S	-
5	Stem Packing	PTFE, Graphite,	-
6	Stem Bearing	RTFE/Fiberglass Epoxy 316 S/S/Nitride	-
7	Body Gasket	Fiber Graphite, RTFE	-
8	Disc	316 S/S 316 S/S/ENP Monel (Nickel Plated) ®	ASTM A351-CF8M ASTM A351-CF8M/Electroless Nickel Plated QQ-N-286 Composition A
9	Seat	Polymer Metal	RTFE, UHMWPE 316 S/S, MONEL®
10	Seat Backing Ring	316 S/S	-
11	Seat Retainer Ring	Carbon Steel, Stainless Steel, chrome plated monel Nickel Aluminum Bronze	-
12	Flange Locator Plate	Stainless Steel, Carbon Steel/Zinc Plated	-
13	Disc Locating Shoulder	316 S/S	-
14	Bottom Cover Gasket	Fiber Graphite, RTFE	-
15	Bottom Cover Plate	316 S/S	ASTM A743 - CF8M

Notes:

® MONEL is a registered trademark of the INCO Family of Products
ENP: Electroless Nickel Plated

Principles of operation

Double Offset Disc/stem

K-LOK's unique two-piece stem and double-offset disc/stem design allows for high cycling and eliminates a portion of the disc hub to create a high profile capacity range of 33:1.

In addition to increasing the flow area across the disc, this design minimises wear points between seat and disc.

The K-LOK design uses a 'double offset' disc/stem design.

The first offset is achieved by locating the stems downstream of the centre-line of the seat. This allows for a totally unobstructed 360° sealing surface.

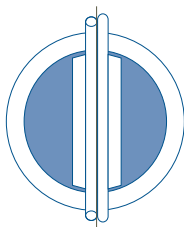
The second offset locates the stems off-centre of the seat vertical axis.

The combination of these two offsets creates a camming effect as the disc swings into and out of the seat. The disc lifts quickly out of the seat in the first few degrees of travel and does not contact the seat again until it is nearly closed. There are no wear points between the seat and disc, while operating torques are reduced and seat life is extended.

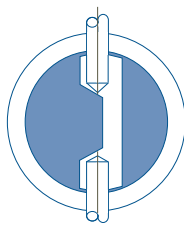
Two-piece Stem vs. One-piece Stem

K-LOK's disc geometry maximizes flow capacity by increasing the available flow area through the valve. This increase in disc efficiency results in a higher valve Kv.

**Competitor
one-piece stem**

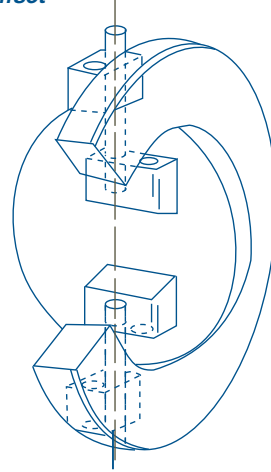


**K-LOK
two-piece stem**

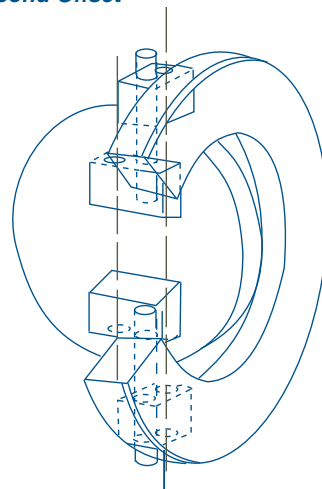


$$\text{Aspect Ratio} = \text{Open Area} \div \text{Disc Area}$$

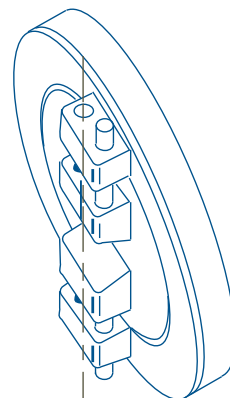
First Offset



Second Offset

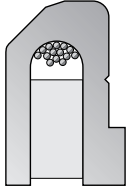


Double Offset



Butterfly Valves - K-LOK F360/362 and F370

Seat material and construction



Seat	Material	Typical Applications
RTFE	Reinforced Polytetrafluoroethylene	Saturated steam, chlorine, ammonia, natural gas, vacuum, oxygen, nitrogen.
UHMWPE	Ultra High Molecular Weight Polyethylene	Abrasives, suspended solids, scaling mediums.
Wire Wrap	302 S/S Braided Wire	
Backing Ring	Polyester or Phenolic Stainless Steel	General purpose services. Steam, ammonia.
Metal	316 S/S (flash chrome coated)	High temperature, low temperature, abrasives, fly ash, slurries.
Wire Wrap	316 S/S	

Seat design

The K-LOK seat is a true interference seat design and does not rely on line pressure to assist sealing. Seats seal drop-tight at low and high pressure. Polymer (RTFE and UHMWPE) seats incorporate a stainless steel, nylon coated, braided wire winding, enclosed in a U-shape envelope to provide seating energy and memory. This wire winding allows axial flexibility in both directions of flow. The winding also allows radial flexibility when the disc is not fully closed, reducing seat/disc interference, seat wear and stem torque. When the disc closes, it provides circumferential stiffness and assures the required disc/seat interference.

Metal seats employ a stainless steel or MONEL® ring of convoluted shape, reinforced by stainless steel wire windings. The thin, convoluted shape allows for expansion and contraction from thermal cycling. Flash coating the seat with chrome assures long life.



Butterfly Valves - K-LOK F360/362 and F370

ANSI/FCI 70-2-1976 Control valve seat leakages

ANSI B16.104-1976	Maximum Leakage	Test Medium	Pressure and Temperature
Class IV	0.01% valve capacity at full travel	Air or Water	Service ΔP or 340 kPa differential, whichever is lower, at 10°C to 52°C
Class V	5 x 10 ⁻¹² m ³ /sec/bar differential/mm port dia. (5 x 10 ⁻⁴ ml/min/psid/in. port dia)	Water	Service ΔP at 10°C to 52°C
Class VI	Nominal Port Diameter (mm)	Bubbles per Minute*	ml per Minute
	50	3	0.45
	65	4	0.60
	80	6	0.90
	100	11	1.70
	150	27	4.00
	200	45	6.75

Note:

*Using the ANSI/FCI specified calibrated measuring device.
Reference ANSI/FCI 70-2-1976 Section 5.3 for further information.

K-Lok Seat Leakage Specifications

Class	Seat	Keystone Specification
IV	Metal	Less than 0.01% of rated valve capacity
VI	RTFE and UHMWPE	Zero drops @110% of rated pressure

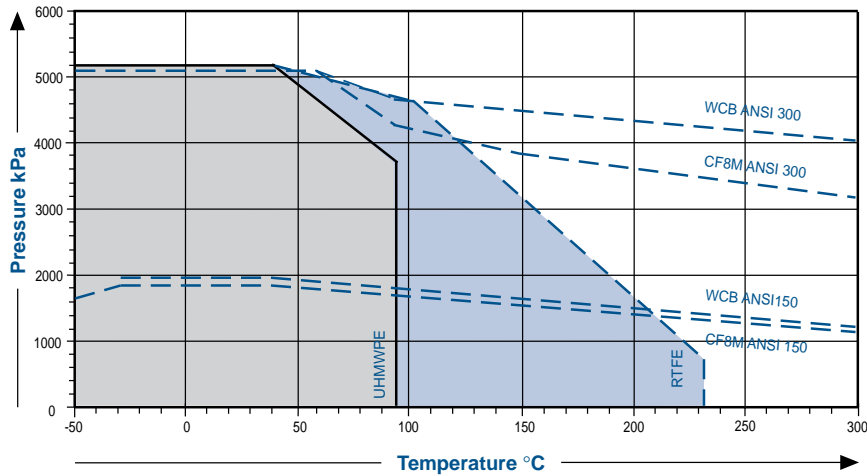
Kv Values vs. Travel Position

Size (mm)	Angle of Opening (Degrees)								CL 150 90°	CL 300 90°
	10°	20°	30°	40°	50°	60°	70°	80°		
50	5	9	16	29	44	67	91	116	141	138
65	5	9	16	29	46	69	96	128	151	147
80	7	10	21	37	58	87	120	161	190	186
100	14	20	38	69	112	168	233	311	368	357
125	26	38	72	129	209	317	436	582	688	679
150	43	61	112	199	320	476	657	874	1034	986
200	72	101	217	378	601	910	1294	1731	2111	1990
250	125	175	393	652	1025	1575	2259	3063	3927	3748
300	180	263	586	909	1406	2393	3320	4606	5981	5709
350	222	311	646	1026	1651	2700	3820	5385	7180	6851
400	266	374	695	1230	1980	3126	4542	6513	8685	8287
450	323	474	970	1617	2586	4096	5820	8516	10778	10285
500	400	588	1202	2002	3469	5341	7608	10947	13347	12733
600	562	857	1796	3290	5242	7864	11505	15973	18736	17875
750	878	1341	2803	4040	8183	12283	18511	25777	31140	30708
900	1263	1990	4014	5147	11851	18165	26296	38060	48440	48008

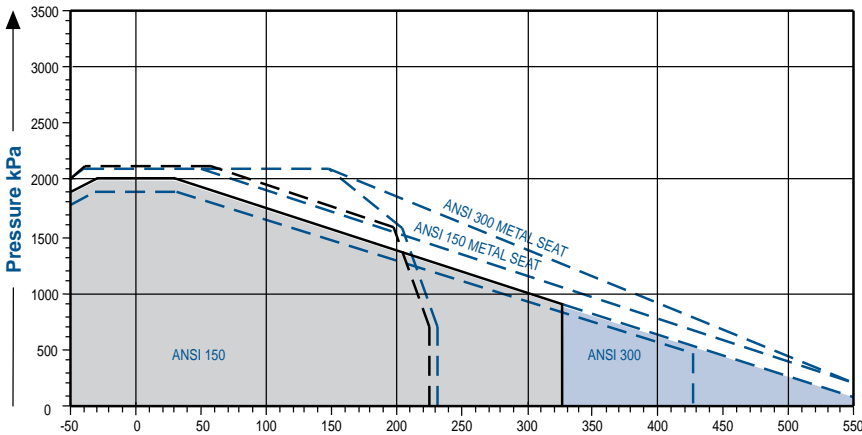
Butterfly Valves - K-LOK F360/362 and F370

Pressure/Temperature ratings for seat materials

Polymer Seats



Metal Seats



Legend - Metal Seats

- Inconel 718 Stem
- 17-4 PH Stem
- CF-8M ANSI 150 Body
- WCB ANSI 150 Body

Butterfly Valves - K-LOK F360/362 and F370

Extension lengths (mm) for various temperatures

Pipeline Fluid Temperature	Required Extension Length			
	Handle	Gear Op.	Std. F79U	Std. F777
-73°C to 190°C	None	None	None	None
191°C to 235°C	100	None	None	100
236°C to 290°C	150	100	100	100
291°C to 340°C	150	100	100	100
341°C to 385°C	150	150	150	150
386°C to 440°C	200	200	200	200
441°C to 495°C	250	200	200	200
496°C to 535°C	250	250	250	250

Notes:

- Surrounding air temperature is assumed to be 21°C. For every degree over 40°C of the surrounding air, deduct 2 degrees from the temperature ranges shown above.
(Example: 50°C external air temperature reduces maximum Pipeline Fluid Temperature values to 170°C, 215°C, 270°C, 320°C, etc.)
- Valves may be insulated or uninsulated.
- Brackets may be open rectangular tubes or the standard closed Keystone tubular stem extensions.
- All actuators have a maximum service temperature (outside atmosphere). These temperature limitations apply regardless of K-LOK extension lengths.

F401 handle capacity

Handle Size (mm)	Valve Size (mm)	RTFE		UHMWPE		Metal	
		ANSI 150	ANSI 300	ANSI 150	ANSI 300	ANSI 150	ANSI 300
265	50	Yes	Yes	Yes	Yes	Yes	Yes
265	65	Yes	Yes	Yes	Yes	Yes	Yes
265	80	Yes	Yes	Yes	Yes	Yes	Yes
265	100	Yes	Yes	Yes	No	Yes	Yes
265	125	Yes	No	No	No	No	No
355	150	No	No	No	No	No	No

Notes:

- The maximum safe effort made by an operator is about 530 N. The effective length of the handle moment arm is 235mm for the 265mm handle and 325mm for the 355mm handle. This is due to the operator average hand width.
- Chart is based on full pressure differential.
K-LOKs up to 150mm can be fitted with a handle when pressure is reduced. Please contact Keystone for assistance.

Vacuum Rating

The combination of interference fit seats and bi-directional packing makes the K-LOK especially well suited for vacuum service.

Standard K-LOK high performance valves are rated to an absolute pressure of 4×10^{-5} in Hg. Special cleaning may be required for high vacuum applications.

Actuator selection

Actuator Type	Figure	Remark
Handle	F401	Leverlock
Gear	F427 K Range	Heavy duty gear operator
Pneumatic	F79U and Extended Performance Range	Double acting and spring return rack and pinion designs
Gear & Pneumatic	F453 + F790	Dec clutchable gear unit provides manual override for the Keystone pneumatic actuator
Electric	F777 and F77Q	Standard and heavy duty electric actuators

Butterfly Valves - K-LOK F360/362 and F370

RTFE seated valve torques (Nm)

Valve Size mm	Line Pressure (kPa)					
	0	1000	2000	3000	4000	5100
50	23	25	43	54	61	85
65	23	25	43	54	61	65
80	26	28	49	61	69	73
100	45	53	93	117	131	139
125	92	104	154	184	203	215
150	111	153	210	252	270	328
200	194	231	366	488	620	759
250	305	375	539	754	932	1113
300	424	515	732	983	1218	1462
350	624	758	1045	1367	1650	1944
400	802	1048	1436	1794	2155	2509
450	983	1333	1804	2299	2724	3220
500	1130	1742	2394	2986	3524	4084
600	1384	2417	3489	4376	5206	6102
750	-	3299	4915	6475	7723	9040
900	-	5932	7909	10100	12055	14123

Notes:

1. RTFE seated valves trim code numbers are: -158
-159
-123
-124
2. The torque values represent tested breakaway torques with adequate safety margin for clean service with temperature above minus 29°C with operating frequency of at least once per month.
3. These values include packing and bearing as well as eccentric disc imbalance torques.
4. Consult the Keystone Control Valve Manual when sizing is to be based on dynamic torque.

UHMWPE seated valve torques (Nm)

Valve Size mm	Line Pressure (kPa)					
	0	1000	2000	3000	4000	5100
50	30	32	60	70	79	84
65	30	32	60	70	79	84
80	34	36	64	79	90	95
100	58	69	121	152	170	181
125	120	135	200	239	264	280
150	144	199	273	328	351	426
200	252	300	476	634	806	987
250	396	487	701	980	1212	1447
300	551	669	952	1278	1583	1901
350	811	985	1358	1777	2145	2527
400	1043	1362	1867	2332	2801	3262
450	1278	1733	2345	2989	3541	4186
500	1469	2265	3112	3882	4581	5309
600	1799	3187	4495	5688	6768	7933
750	-	4289	6389	8418	10040	11750
900	-	7711	10282	13130	15672	18360

Notes:

1. UHMWPE seated valves trim code numbers are: -106
-107
2. For abrasive or solids service multiply these values by 1.3.
3. The torque values represent tested breakaway torques with adequate safety margin for clean service with temperature above minus 29°C with operating frequency of at least once per month.
4. These values include packing and bearing as well as eccentric disc imbalance torques.
5. Consult the Keystone Control Valve Manual when sizing is to be based on dynamic torque.

Butterfly Valves - K-LOK F360/362 and F370

Metal seated valve torques (Nm)

Valve Size mm	Torque Value
50	86
65	86
80	97
100	185
125	305
150	418
200	723
250	1062
300	1446
350	2068
400	2848
450	3571
500	4746
600	6916
750	9830
900	15818

Notes:

1. Metal seated valves trim code numbers are: -113
-114
2. Use these values regardless of actual line pressure.
3. The torque values represent tested breakaway torques with adequate safety margin for clean service with temperature above minus 29°C.
4. Above values include packing and bearing as well as eccentric disc imbalance torques.
5. Consult the Keystone Control Valve Manual when sizing is to be based on dynamic torque.

Standards and specifications

Standard		Descriptions
ANSI	B16.34	Steel valves
	B31.1	Power piping
	B31.3	Chemical plant and petroleum refinery piping
	B16.5	Steel pipe flanges and flange fittings
MSS	SP-6	Standard finishes for pipe flanges
	SP-25	Standard marking systems for valves
	SP-55	Quality standard for steel casting
	SP-61	Pressure testing of steel valves
	SP-67	Butterfly valves
	SP-68	High pressure offset disc butterfly valves
API	609	Butterfly valves
	607	Fire test for soft seated quarter-turn valves
	598	Valve inspection and test
BS	5146	Inspection and test of steel valves for the petroleum, petrochemical and allied industries
	4504	Flanges and bolting for pipes, valves and fittings
DIN	3230	Technical conditions of delivery for valves
ISO	5752	Metal valves for use in flanged pipe systems
	2084	Pipeline flanges for general use

Butterfly Valves - K-LOK F360/362 and F370

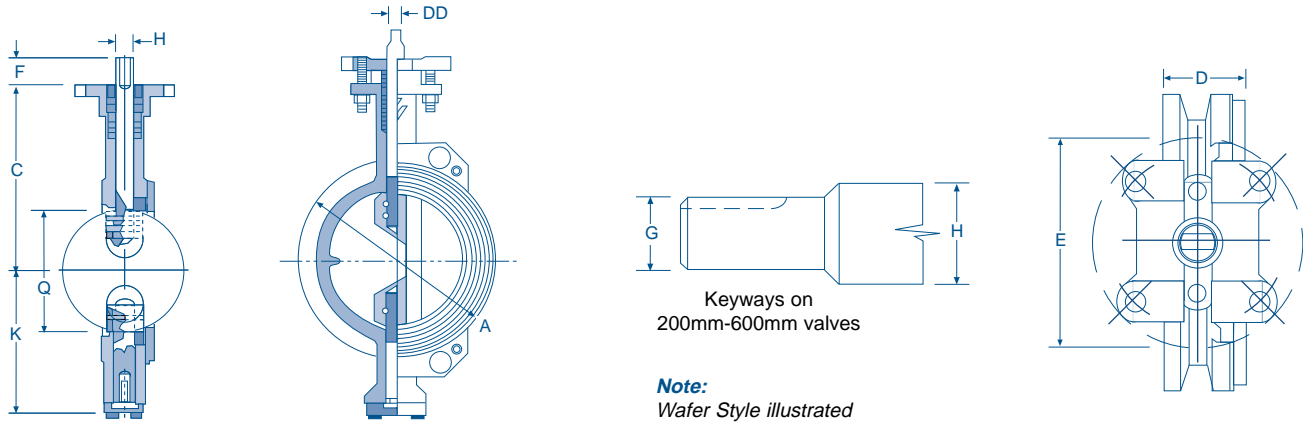


Figure 360 ANSI Class 150 - Dimensions (mm)

Valve Size mm	Stem Code	A	C	K	E	D	F	G inches	H	Q	DD or Keyway inches	Top Plate Data			Mass kg.
											No. Hole PCD			Hole Dia.	
50	BAB	108	150	103	100	60	32	9/16	9/16	48	3/8	83	4	11	4
65	BAB	105	150	103	100	48	32	9/16	9/16	60	3/8	83	4	11	4
80	BAC	127	168	117	100	48	32	5/8	5/8	75	7/16	83	4	11	5.5
100	BAD	157	190	140	100	54	32	3/4	3/4	98	1/2	83	4	11	9
125	BAD	184	192	141	100	57	32	3/4	3/4	122	1/2	83	4	11	11
150	CAD	218	222	170	152	57	32	3/4	7/8	148	1/2	127	4	14	14
150*	CAE	218	222	170	152	57	32	7/8	7/8	148	5/8 *	127	4	14	15
200	CAF	270	257	205	152	64	51	11/8	11/8	194	1/4 x 1/4 x 15/8	127	4	14	23
250	CAF	324	289	238	152	71	51	11/8	13/8	243	1/4 x 1/4 x 15/8	127	4	14	35
250*	CAG	324	289	238	152	71	76	13/8	13/8	243	5/16 x 5/16 x 25/8*	127	4	14	35
300	DAG	375	330	268	203	81	76	13/8	11/2	289	5/16 x 5/16 x 25/8	165	4	21	56
350	DAH	413	336	294	203	92	76	15/8	15/8	317	3/8 x 3/8 x 25/8	165	4	21	64
400	DAH	470	368	319	203	102	76	15/8	13/4	364	3/8 x 3/8 x 25/8	165	4	21	104
450	DAJ	533	406	341	203	114	108	17/8	17/8	409	1/2 x 3/8 x 37/8	165	4	21	138
500	DAK	584	443	382	203	127	108	21/4	21/4	455	1/2 x 3/8 x 37/8	165	4	21	158
600	DAK	699	500	443	203	154	108	21/4	21/2	548	1/2 x 3/8 x 37/8	165	4	21	281
750	MAZ	857	622	527	241	187	178	3	3	698	3/4 x 3/4 x 57/8	248	4	27	463
900	MBE	1022	721	616	241	216	203	31/2	31/2	851	7/8 x 7/8 x 57/8	248	4	27	839

Note:

* E.N.P. discs require larger upper stem connection dia. on 150mm and 250mm sizes (i.e. UHMWPE seat and metal seat).

Figure 370 ANSI Class 300 - Dimensions (mm)

Valve Size mm	Stem Code	A	C	K	E	D	F	G inches	H	Q	DD or Keyway inches	Top Plate Data			Tapped Lug Data			Mass kg.
											No. Hole PCD			No. Hole PCD				
50	BAB	105	150	103	100	60	32	9/16	9/16	48	3/8	83	4	11	-	-	-	4
65	BAB	105	150	103	100	48	32	9/16	9/16	60	3/8	83	4	11	-	-	-	4
80	BAC	127	168	117	100	48	32	5/8	5/8	75	7/16	83	4	11	-	-	-	5.5
100	BAD	157	191	140	100	54	32	3/4	3/4	98	1/2	83	4	11	-	-	-	9
125	BAD	184	192	141	100	59	32	3/4	3/4	122	1/2	83	4	11	-	-	-	11
150	CAE	218	222	170	152	59	32	7/8	7/8	148	5/8	127	4	14	-	-	-	14
200	CAF	270	257	205	152	73	51	11/8	11/8	194	1/4 x 1/4 x 15/8	127	4	14	-	-	-	29
250	CAG	324	289	238	152	83	76	13/8	13/8	243	5/16 x 5/16 x 25/8	127	4	14	-	-	-	43
300	DAG	375	330	268	203	92	76	13/8	11/2	289	5/16 x 5/16 x 25/8	165	4	21	-	-	-	66
350	DAJ	413	365	311	203	117	108	17/8	17/8	317	1/2 x 3/8 x 4	165	4	21	4	514	11/8-8UN	123
400	DAK	470	406	340	203	133	108	21/4	21/4	364	1/2 x 3/8 x 4	165	4	21	4	571	11/4-8UN	138
450	DBA	533	432	375	203	149	108	21/2	21/2	409	5/8 x 5/8 x 4	165	4	21	4	629	11/4-8UN	175
500	LAX	584	513	414	190	159	165	23/4	23/4	455	5/8 x 5/8 x 53/4	203	4	21	4	686	11/4-8UN	204
600	MAY	699	594	492	241	181	173	31/2	31/2	548	7/8 x 7/8 x 53/4	248	4	27	4	813	11/2-8UN	349
750	NAW	857	676	610	254	241	200	41/2	41/2	698	1 x 1 x 61/4	254	4	28	4	997	13/4-8UN	499
900	EBD	1022	784	708	311	273	203	5	5	851	11/4 x 11/4 x 63/4	305	4	28	4	1168	2-8UN	721

Butterfly Valves - K-LOK F360/362 and F370

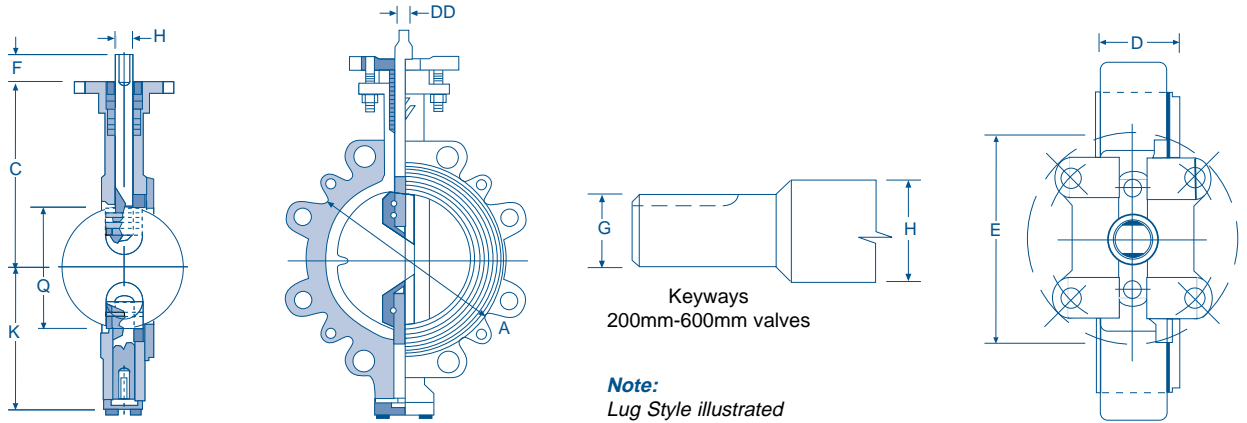


Figure 362 ANSI Class 150 - Dimensions (mm)

Valve Size mm	Stem Code	A	C	K	E	D	F	G	H	Q	DD or Keyway inches	Top Plate Data			Tapped Lug Data			Mass kg.
												PCD	No. Holes	Hole Dia.	No. Holes	PCD	Tap inches	
50	BAB	105	150	103	100	60	32	9/16	9/16	48	3/8	83	4	11	4	127	5/8-11UNC	6
65	BAB	105	150	103	100	48	32	9/16	9/16	60	3/8	83	4	11	4	140	5/8-11UNC	7
80	BAC	127	168	117	100	48	32	5/8	5/8	75	7/16*	83	4	11	4	152	5/8-11UNC	7
100	BAD	157	191	140	100	54	32	3/4	3/4	98	1/2	83	4	11	8	191	5/8-11UNC	12
125	BAD	184	192	141	100	57	32	3/4	3/4	122	1/2	83	4	11	8	216	3/4-10UNC	14
150	CAD	218	222	170	152	57	32	3/4	7/8	148	1/2	127	4	14	8	241	3/4-10UNC	18
150*	CAE	218	222	170	152	57	32	7/8	7/8	148	5/8	127	4	14	8	241	3/4-10UNC	19
200	CAF	270	257	205	152	64	51	11/8	11/8	194	1/4 x 1/4 x 15/8	127	4	14	8	298	3/4-10UNC	29
250	CAF	324	289	238	152	71	51	11/8	13/8	243	1/4 x 1/4 x 15/8	127	4	14	12	362	7/8-9UNC	48
250*	CAG	324	289	238	152	71	76	13/8	13/8	243	5/16 x 5/16 x 25/8	127	4	14	12	362	7/8-9UNC	49
300	DAG	375	330	268	203	81	76	13/8	11/2	289	5/16 x 5/16 x 25/8	165	4	21	12	432	7/8-9UNC	73
350	DAH	413	337	294	203	92	76	15/8	15/8	318	3/8 x 3/8 x 25/8	165	4	21	12	476	1-8UN	120
400	DAH	470	368	319	203	102	76	15/8	13/4	364	3/8 x 3/8 x 25/8	165	4	21	16	540	1-8UN	138
450	DAJ	533	406	341	203	114	108	17/8	17/8	410	1/2 x 3/8 x 37/8	165	4	21	16	578	11/8-8UN	188
500	DAK	584	443	383	203	127	108	21/4	21/4	456	1/2 x 3/8 x 37/8	165	4	21	20	635	11/8-8UN	227
600	DAK	699	500	443	203	154	108	21/4	21/2	548	1/2 x 3/8 x 37/8	165	4	21	20	749	11/4-8UN	340
750	MAZ	857	622	527	241	187	178	3	3	699	3/4 x 3/4 x 57/8	248	4	27	28	914	11/4-8UN	617
900	MBE	1022	721	616	241	216	203	31/2	31/2	851	7/8 x 7/8 x 57/8	248	4	27	32	1086	11/2-8UN	1021

Note:

* E.N.P. discs require larger upper stem connection dia. on 150mm and 250mm valve sizes (i.e. UHMWPE seat and metal seat).

Figure 372 ANSI Class 300 - Dimensions (mm)

Valve Size mm	Stem Code	A	C	K	E	D	F	G	H	Q	DD or Keyway inches	Top Plate Data			Tapped Lug Data			Mass kg.
												PCD	No. Holes	Hole Dia.	No. Holes	PCD	Tap inches	
50	BAB	105	150	103	100	60	32	9/16	9/16	48	3/8	83	4	11	8	127	5/8-11UNC	8
65	BAB	105	150	103	100	48	32	9/16	9/16	60	3/8	83	4	11	8	149	3/4-10UNC	9
80	BAC	127	168	117	100	48	32	5/8	5/8	75	7/16	83	4	11	8	168	3/4-10UNC	9
100	BAD	157	190	140	100	54	32	3/4	3/4	98	1/2	83	4	11	8	200	3/4-10UNC	12
125	BAD	184	192	141	100	59	32	3/4	3/4	122	1/2	83	4	11	8	235	3/4-10UNC	14
150	CAE	218	222	170	152	59	32	7/8	7/8	148	5/8	127	4	14	12	270	3/4-10UNC	25
200	CAF	270	257	205	152	73	51	11/8	11/8	194	1/4 x 1/4 x 15/8	127	4	14	12	330	7/8-9UNC	36
250	CAG	324	289	238	152	83	76	13/8	13/8	243	5/16 x 5/16 x 25/8	127	4	14	16	387	1-8UN	62
300	DAG	375	330	268	203	92	76	13/8	11/2	289	5/16 x 5/16 x 25/8	165	4	21	16	451	11/8-8UN	84
350	DAJ	413	365	311	203	117	108	17/8	17/8	317	1/2 x 3/8 x 4	165	4	21	20	514	11/4-8UN	154
400	DAK	470	406	340	203	133	108	21/4	21/4	364	1/2 x 3/8 x 4	165	4	21	20	571	11/4-8UN	196
450	DBA	533	432	375	203	149	108	21/2	21/2	409	5/8 x 5/8 x 4	165	4	21	24	629	11/4-8UN	250
500	LAX	584	513	414	190	159	165	23/4	23/4	455	5/8 x 5/8 x 53/4	203	4	21	24	686	11/4-8UN	386
600	MAY	692	594	492	241	181	173	31/2	31/2	548	7/8 x 7/8 x 53/4	248	4	27	24	813	11/2-8UN	580
750	NAW	857	676	610	254	241	200	41/2	41/2	698	1 x 1 x 61/4	254	4	28	28	997	13/4-8UN	1111
900	EBD	1022	784	708	311	273	203	5	5	851	11/4 x 11/4 x 63/4	305	4	28	32	1168	2-8UN	1293

Butterfly Valves - K-LOK F360/362 and F370

Typical specifying sequence

Example:	100	F360	159	ANSI 150
	Size	Figure No.	Trim Code	End Connections

Valve types

Figure No.	Valve Type
F360	ANSI Class 150, Wafer Style
F362	ANSI Class 150, Full-lugged
F370	ANSI Class 300, Wafer Style

General purpose trims

Trim	Body	Disc	Stem	Seat	Bushing	Packing
158	Carbon Steel	316 S/S	17-4 PH S/S	RTFE	316S/S Nitride	PTFE
159	316 S/S	316 S/S	17-4 PH S/S	RTFE	316S/S Nitride	PTFE

Steam trims

Trim	Body	Disc	Stem	Seat	Bushing	Packing
123	Carbon Steel	316 S/S ENP	17-4 PH S/S	RTFE	316S/S Nitride	PTFE
124	316 S/S	316 S/S ENP	17-4 PH S/S	RTFE	316S/S Nitride	PTFE

Navy/oxygen trims

Trim	Body	Disc	Stem	Seat	Bushing	Packing
144	Nickel Al.Bronze	Nickel plated Monel	Monel	RTFE & Chrome plated Monel	RTFE Epoxy Glass	Graphite

High temperature trims

Trim	Body	Disc	Stem	Seat	Bushing	Packing
244	316 S/S	316 S/S ENP	Inconel 718	316 S/S	316 S/S Nitride	Graphite
250	Carbon Steel	316 S/S ENP	Inconel 718	316 S/S	316 S/S Nitride	Graphite
113	316 S/S	316 S/S ENP	17-4 PH S/S	316 S/S	316 S/S Nitride	Graphite
114	Carbon Steel	316 S/S ENP	17-4 PH S/S	316 S/S	316 S/S Nitride	Graphite

Abrasive resistant trims

Trim	Body	Disc	Stem	Seat	Bushing	Packing
106	Carbon Steel	316 S/S ENP	17-4 PH S/S	UHMWPE	316 S/S Nitride	PTFE
107	316 S/S	316 S/S ENP	17-4 PH S/S	UHMWPE	TFE/Glass	PTFE

Notes:

All of the above trims are suitable for use with any K-Lok body configuration.

Other K-Lok trims are available, please consult Keystone for details.

ENP = Electroless Nickel Plated

UHMWPE = Ultra High Molecular Weight Polyethylene

For Firesafe trim valves refer to Winn Hi-seal literature sheet.