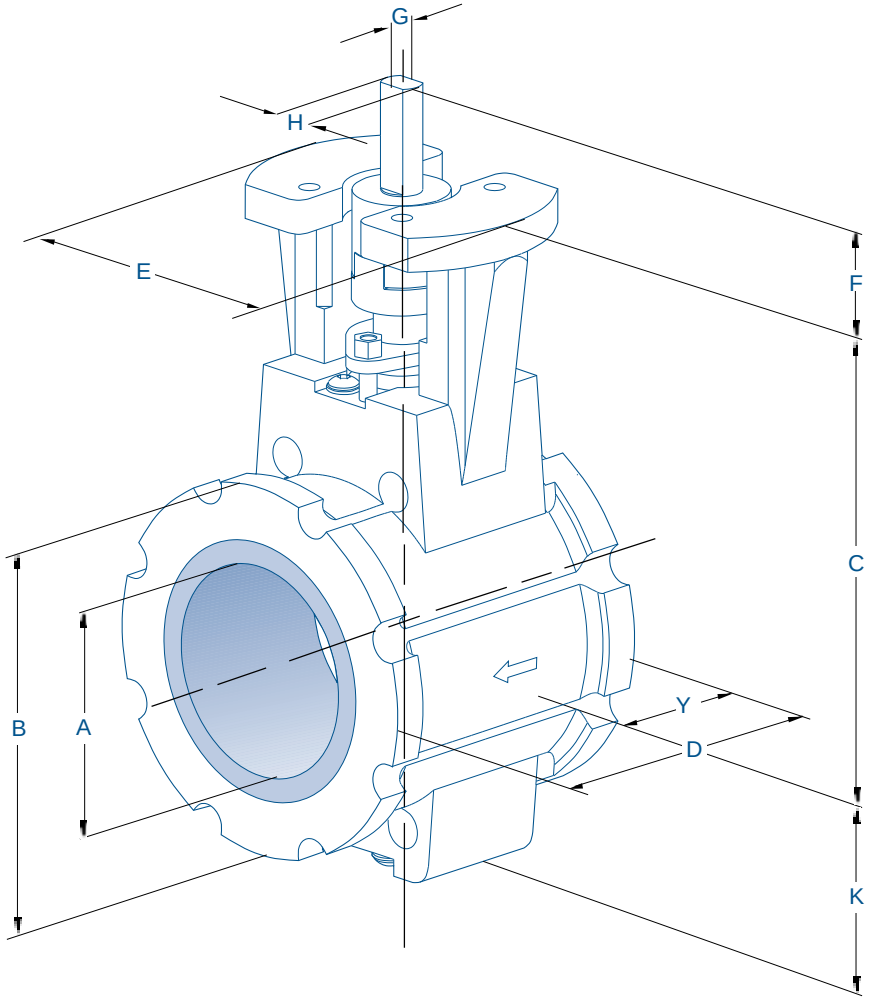
VALVE AND FLOW CONTROL SPECIALISTS

SERVICE AND RELIABILITY

F638



Dimensions (mm)

Valve Size mm	Stem Conn. Code	Shaft Dia. inches	A mm	B mm	C mm	D mm	E mm	F mm	K mm	Y mm	Stem Conn. H x G inches	Key Inches	Top Plate PCD. mm	Top Plate No. Holes	Top Plate Hole Dia. mm	Mass kg	Kv @ Full Open
50	BAD	9/16	50	114	162	80	110	51	60	50	3/4 x 1/2	-	83	4	11	7	52
80	BAD	3/4	82	145	196	120	115	51	84	75	3/4 x 1/2	-	83	4	11	13	179
100	BAD	1	100	175	208	150	140	51	102	90	3/4 x 1/2	-	83	4	11	22	289
150	CAF	1	153	235	238	230	152	51	131	140	1 1/8	1/4 x 1/4	127	4	14	44	1051
200	CAF	1 1/4	203	343	295	305	182	51	167	190	1 1/8	1/4 x 1/4	127	4	14	88	1999
250	CAK	1 1/2	253	406	329	385	182	108	230	242	2 1/4	1/2 x 3/8	127	4	14	180	3415
300	CAK	1 1/2	300	483	374	455	182	108	275	290	2 1/4	1/2 x 3/8	127	4	14	220	5510
350	CAK	1 3/4	332	533	390	476	182	108	292	238	2 1/4	1/2 x 3/8	127	4	14	280	6882
400	CAK	1 3/4	382	597	427	500	182	108	330	250	2 1/4	1/2 x 3/8	127	4	14	320	9433
450	DAK	2	432	635	457	550	200	108	359	275	2 1/4	1/2 x 3/8	165	4	21	370	12013
500	DAK	2 1/4	482	700	492	600	220	108	390	300	2 1/4	1/2 x 3/8	165	4	21	470	15101

Notes:

** H dimension is the stem connection.*

** G dimension is across stem flats.*

** Mass dependent on materials used.*

Kv = The flow rate of water in m^3/hr that will pass through a valve with a differential pressure drop of 1 bar (100 kPa) @ 20°C.

Cv = 1.155Kv

Dimensions are nominal to ±1mm.

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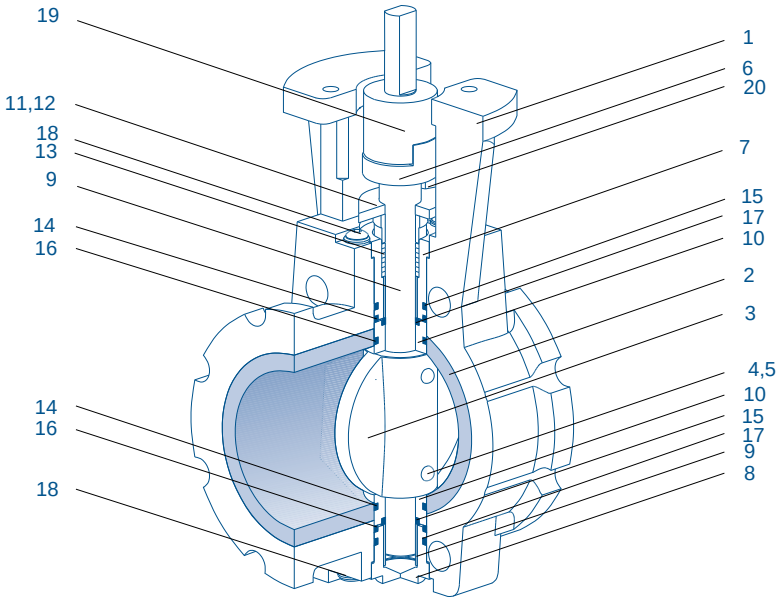


Size Range:
50-500mm

Pressure Rating:
1400 kPa

Temperature Rating:
up to 230°C Max

Standard Flange Drilling:
ANSI B16.5 Class 150 F.F.

Parts List

No.	Description	Material
1	Body	Carbon Steel
2	Liner	28% Chromium Iron 650 min Brinell hardness Ceramic PSZ 1120 Vickers hardness
3	Disc	28% Chromium Iron 650 min Brinell hardness Ceramic PSZ 1120 Vickers hardness
4	Disc Pin	Carbon Steel Plated 2RK65 S/S
5	Disc Drive Screw	Carbon Steel Plated Ceramic Paste
6	Shaft	431 S/S 2RK65 S/S
7	Upper Insert	431 S/S 2RK65 S/S
8	Lower Insert	431 S/S 2RK65 S/S
9	Bearings	PTFE/Glass Glacier DU*
10	Disc End Spacers	Tool Steel D2-A Ceramic PSZ
11	Gland Follower Plate	Carbon Steel Plated
12	Gland Follower Collar	431 S/S
13	Gland Packing	PTFE
14	O-Ring	Viton
15	O-Ring	Viton
16	O-Ring	Viton
17	O-Ring	Viton
18	Insert Retaining Screw	Alloy Steel
19	Drive Adaptor	431 S/S

Note:
**Glacier Bearings only in valves 250-500mm.*

Available Actuators/Accessories

- F790 Pneumatic Actuators, double acting or spring return in hard anodised aluminium.
- F777 Electric Actuators
- F793 Positioners
- F792 Switches
- F791 Solenoid Valves

Heavy duty slurry control valve, extended body style with replaceable body sleeve.

F638

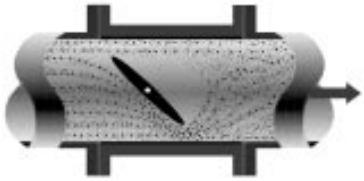
H E A V Y D U T Y S L U R R Y V A L V E

Features

- Robust construction.
- Uses an extended body and liner to ensure that the medium impingement takes place within the valve, not the pipeline.
- High wear resistance materials, 28% Chromium Iron or Ceramic PSZ.
- Hardened tool steel disc end spacers to protect the shaft from aggressive mediums.
- Multiple Viton stem seals.
- Extensive size range available.
- Maintenance friendly.
- Adjustable Teflon packing.
- Replaceable body liner and disc to significantly extend valve life.
- Direct mounting of actuators eliminates the need for mounting brackets.

Flow Diagram

The extended body design of the F638 valve protects downstream piping from wear when used on high velocity control valve applications.



General Applications

Ideally suited for use on Bauxite slurry, coal washeries, tailing dispersal, cement and caustic applications.

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Anticipated Seating & Unseating Torque Values - Nm

Valve Size	Shut off Pressure - kPa									
	Normal Service					Severe Service				
mm	0	350	700	1000	1400	0	350	700	1000	1400
50	25	26	27	28	29	37	38	40	41	42
80	36	38	41	43	45	54	56	59	61	63
100	54	58	61	64	68	81	85	88	92	95
150	102	113	124	136	147	152	164	175	186	198
200	169	192	215	237	260	254	277	299	322	345
250	260	294	328	362	395	390	424	458	492	525
300	350	407	463	520	576	525	582	638	695	751
350	486	576	667	757	847	729	819	910	1000	1090
400	621	757	893	1028	1164	932	1068	1203	1339	1475
450	780	983	1186	1390	1593	1170	1373	1576	1780	1977
500	960	1243	1525	1808	2090	1441	1723	2006	2288	2570
600	1152	1429	1754	2079	2466	1701	2033	2387	2746	3085

Guidelines

Operating torques for these valves are generated from bearing/packing friction, component weight, hydro-dynamic and contaminant forces etc.
There are no hard and fast rules which can accurately and practically determine the sum total of all these forces. Refer Control Valve Manual for further information).

Common sense and experience are the best judges.
The following guidelines are considered to be conservative and can confidently be used for routine duties.

If you have any doubts or if the service is unusual, discuss the application.
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Duty Definitions

Normal
- Liquid Service to 3 m/s
- Light-medium slurries
- Pneumatic conveying

Severe
- Hi-Velocity liquids to 5 m/s
- Medium-heavy slurries
- Crystallising media
- Dry bulk handling

Typical Specifying Sequence

100	F638	034	ANSI 150
Valve Size	Figure Number	Trim Code	End Connection

Valve Trims

Figure No.	Trim Code		Body	Disc	Shaft	Seat	Bearing	Packing
	Alpha	Numeric						
F638	-	032	Carbon Steel	28% Cr Iron	431 S/S	28% Cr Iron	PTFE/Glass Glacier DU	PTFE
F638	-	034	Carbon Steel	28% Cr Iron	431 S/S	Ceramic PSZ	PTFE/Glass Glacier DU	PTFE
F638	-	026	Carbon Steel	Ceramic PSZ	2RK65	Ceramic PSZ	PTFE/Glass Glacier DU	PTFE

End Connections (to suit).
- ANSI B 16.5 Class 150 F.F. (std).
- Others available on request.

Note:
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