

## LUNKENHEIMER FIGURE 628 BAYONET ISOLATION VALVE

DN 100 - 450

Bayonet tank isolation valve designed for service in the alumina industry or other applications where built up scale or settled slurries need to be cleared to allow the flow of media.



### FEATURES

- Hydraulic actuation.
- Bevel gearbox.
- Belleville disc springs for gradual loading and grinding facility.
- Unique single action valve operation and isolation grinding.
- Visual indication.
- Lubrication points.
- Live loaded gland sealing.
- Shaft scraper ring.
- Dual cutting action plug.
- Wear resistant metal to metal isolation with tungsten carbide sealing faces.
- Lifting points.
- Jacking screws.
- Integrated shaft and plug seal.
- Available with liquor injection points.
- Manual and automatic operation.
- Suitable for use on pH range 4 to 14.
- Body configurations in either 45° or 90° body branch angles.
- Available with long or short nozzles to suit each application.
- Custom designs available.
- Manufactured under quality system ISO 9001:2008. Certificate No.Mel 0400133.

### GENERAL APPLICATION

Designed and engineered specifically for the mining and process industry, or other applications where built up scale or settled slurries need to be cleared to allow flow of media.

- Alumina - tertiary and secondary thickener, filter press feed line isolation, precipitation pump off, re-slurry isolation in calcination area and lead agglomerate pump offs.
- Precipitation
- Filtrate underflow
- Hydrate slurry storage

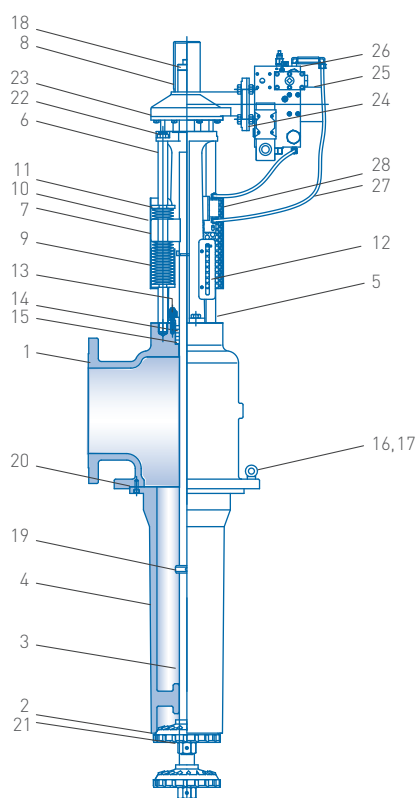
### TECHNICAL DATA

Size range:	DN 100 - 450
Temperature rating:	Up to 240°C (464°F)
Pressure rating:	1200 kPa (174 psi) at 105°C (221°F)
Standard flange:	ASME B16.5
Drilling:	Class 150 F.F



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## PARTS LIST

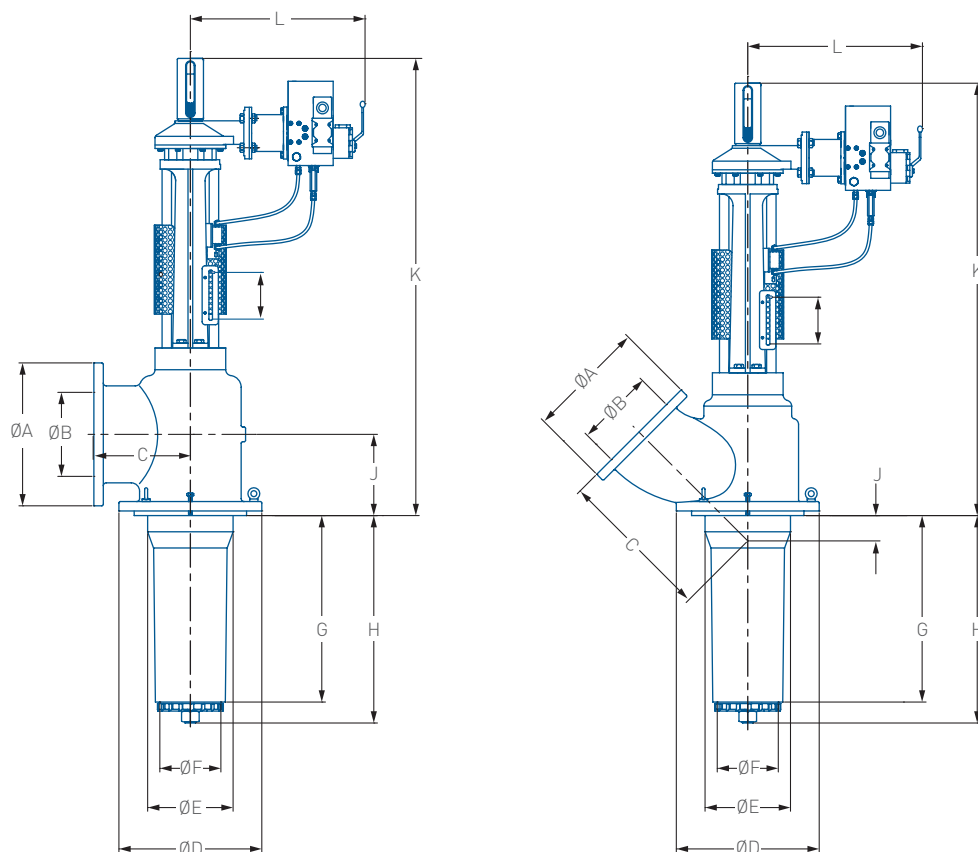
No.	Description	Material	Standard
1	Body	Carbon steel	AS2074 C3/ASTM A216 WCB
2	Plug	Carbon steel/Tungsten carbide	AS2074 C3 / HPHVOF WCNi
3	Shaft	Carbon steel	AS1443 K1040/1045
4	Nozzle	Carbon steel	AS2074 C3
5	Upstand	SG Iron	AS1831 400-15
6	Pillar	Carbon steel	AS3678 Grade 250
7	Spindle nut	431 S/S	ASTM A276 431 Condition A
8	Shroud	Carbon steel	AS1442 CS1030
9	Spring shroud	Carbon steel	AS3678 Grade 250
10	Disc spring	Galvanised carbon steel	Commercial
11	Pillar clamp	Spring alloy steel	Commercial
12	Position indicator	Carbon steel	AS1443 S12L14
13	Gland follower	Carbon steel	AS1443 S12L14
14	Gland packing	Carbon steel	AS3678 Grade 250
15	Shaft scraper	PTFE braid	PTFE
16	Eyebolts	Carbon steel	AS1443 S12L14
17	Jacking screw	Alloy steel	Commercial
18	Travel stop	Carbon steel	Commercial
19	Shaft travel stop	Carbon steel	ASTM A276 431 Condition A
20	Gasket	Carbon steel	ASTM A276 431 Condition A
21	O-ring	Compressed fiber	Sentinel® Non-stick
22	Fasteners	Viton®	Viton®
23	Bevel gearbox	Carbon steel	Commercial
24	Motor adaptor	Cast iron/SG Iron/Alloy steel	Commercial
25	Hydraulic motor	Carbon steel	Commercial
26	Hydraulic manifold	Alloy steel	Commercial
27	Hydraulic hoses	Carbon steel	Commercial
28	Hydraulic diverter valve	Commercial	Commercial

## OPTIONS

- Bevel gear operator driven by a low speed high torque hydraulic motor.
- Manual operation
- Solenoid operation
- Manifold or remote mounted hydraulic controls
- Full automation
- Flushing port

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### DIMENSIONS FOR 90° BODY STYLE

Valve size												
DN	ØA	ØB	C	ØD	ØE	ØF	G	H	J	K	L	Travel
100x150	229	101	229	279	102	84	95	145	179	1066	420	140
200x250	343	188	286	405	246	200	175	250	224	1485	500	150
300x300	485	285	329	485	290	200	800	875	276	1565	600	150
350x350	538	334	368	538	322	286	354	451	305	1985	660	190

### DIMENSIONS FOR 45° BODY STYLE

Valve size												
DN	ØA	ØB	C	ØD	ØE	ØF	G	H	J	K	L	Travel
200x250	343	203	424	405	246	200	175	250	56	1370	465	150
250x300	405	254	522	485	290	200	633	708	86	1430	465	150
350x400	538	325	652	602	372	305	300	407	118	2070	710	190
450x500	641	434	939	705	476	387	650	770	94	2760	675	220

### PRINCIPLE OF OPERATION

The hydraulic F628 bayonet tank isolation valve is a self-grinding valve, which utilizes hydraulic fluid power to eliminate operator injuries and fatigue with the option of remote and full-automated control. The F628 is a globe valve where the plug seats against a tapered sealing face to give a metal to metal seal on closure. It isolates by using a unique self-grinding action to isolate and grind the seat during every cycle.

A bevel gearbox powered by a hydraulic motor rotates the shaft through a spindle nut. As the shaft rotates it moves in and out of the valve by a screw thread on the spindle nut. During the closing operation, the plug gradually closes on the seat while rotating at the same time. Once the plug hits the seat it continues to rotate and grind the seat until the pre-set hydraulic pressure has been reached.

During the opening cycle the plug cuts away built up scale as the valve is opening. If the plug hits a piece of scale, it will gradually cut the scale with increasing force until it is removed. A position indicator located on the side of the valve identifies the position of the plug within the valve.

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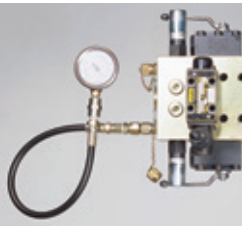
## DESCRIPTION OF FEATURES



- Sealing faces are coated with tungsten carbide for corrosion & wear resistance.
- Integral shaft seal ensures no leakage between shaft & plug.
- Proven scale-breaking cutters cast onto plug to breakdown built up scale during opening & closing cycles.
- The operating forces are transmitted through a tapered shaft & key retained by a pinned nut.



- Visual position indicator.
- Self-grinding operation with dual action loading via disc springs.
- Anti-galling spindle nut with lubrication access.
- Rigid upstand assembly.
- Supplied with spring travel stops & perforated shroud for operator safety. (not shown)



- Actuation supplied by a low speed, high torque hydraulic motor through a bevel gearbox.
- Manifold or remote mounted hydraulic controls with tamper proof relief valves & test points.
- Fully automated option is available.
- The motor can be detached for manual operation with air tool torque multipliers in emergency shutdowns.
- The hydraulic actuation eliminates operator effort, fatigue, & risk of injury.



- Live loaded gland for absolute leakage protection.
- Shaft scraper ring to prevent gland packing damage.
- Shaft support to eliminate vibration.

## TYPICAL SPECIFYING SEQUENCE

Example	F628	00	L	90	ASME 150
DN 300 x 250					
Inlet flange size x outlet flange size					
Figure no.					
Method of operation					
00 = opening out					
Nozzle length #					
L = long					
S = short					
Body branch angle					
45°					
90°					
End connections					
ASME Class 150 F.F * (std)					

### NOTE:

#Customer to specify required length

\*Others available on request

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