



CALSENS

SLUICE/GATE VALVES



TECHNICAL DATA SHEETS

CALSENS Sluice Valves are now a name to reckon among engineers throughout the country. Each valve is specially tested under strict supervision and quality control. Unique design, superb production and hard gained field experience have made these valve reliable. Maximum utility is provided by these valves in Irrigation, River Control installations, Industrial Plants & Projects and in the works of Public Health Projects etc.

CALSENS guarantees a trouble free service for years for their Valves.

APPLICATIONS

It is applicable to handle clear water with turbidity upto 5000 ppm and temperature not more than 45°C. For handling hot water and steam, SS trims are recommended. Also suitable in the boiler line, for non-IBR Applications.

STANDARDS

- 1) IS 780/84 – 50 mm to 300 PN 1.0 to 1.6
- 2) IS 2906/84 – 350 mm to 1200 PN 0.4 to 1.6

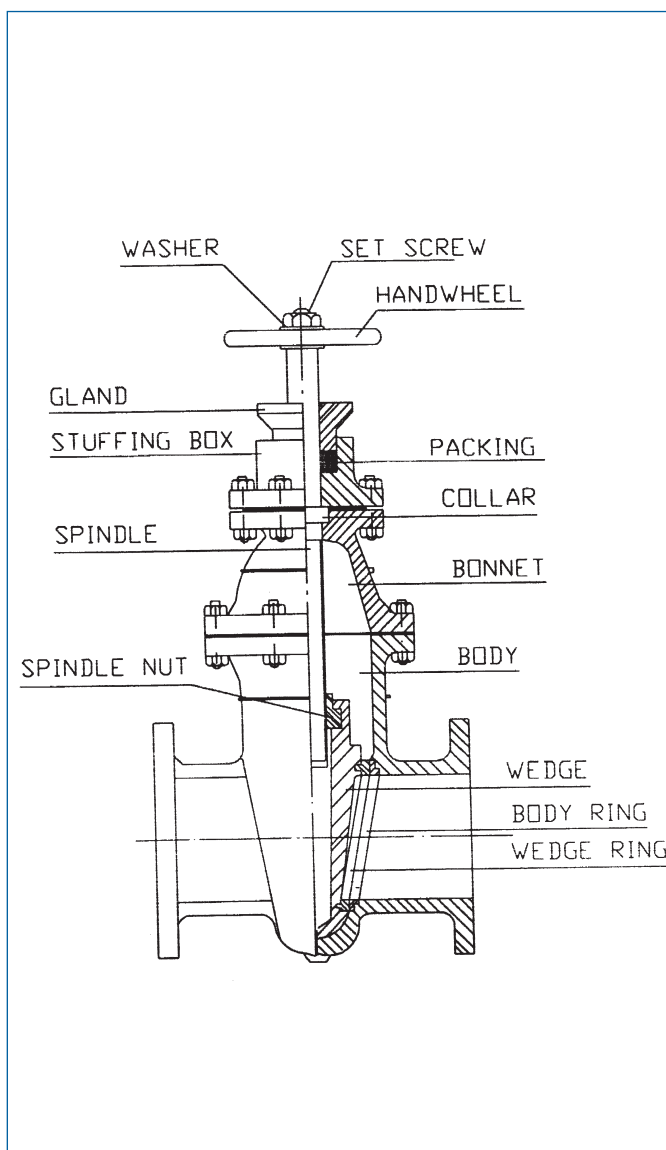
MATERIALS & CONSTRUCTION

- 1) Body, Bonnet Wedge – Grey Cast Iron, Confirming to IS-210. Gr. FG-200/260
- 2) Spindle – High Tensile Brass/13% Cr. Stainless Steel
- 3) Spindle Nut – Lead Gun Metal
- 4) Seat & Face Rings – Lead Gun Metal in Body & Wedge. Rings of SS can be supplied on demand
- 5) Hand Wheel & Cap – Grey Cast Iron, IS-210 Gr. FG-200/260
- 6) Flanges – Faced and Drilled to IS 1538/1969, BS 10T-D/E On demand drilling as per DIN, ANSI B 16.5 & undrilled possible.
- 7) Operation – Anti-clockwise opening, Clockwise closing.

ACCESSORIES

Following accessories can be supplied on specific request :

- 1) Spur/Worm/Bevel Gear
- 2) Gate Travel Indicator
- 3) Headstock & Extn. Spindle
- 4) Drain Plug/Scour Plug
- 5) Shoe-Channel
- 6) Back Seating
- 7) Actuator
- 8) By-Pass
- 9) Thrust ball bearing for Anti-friction movement.

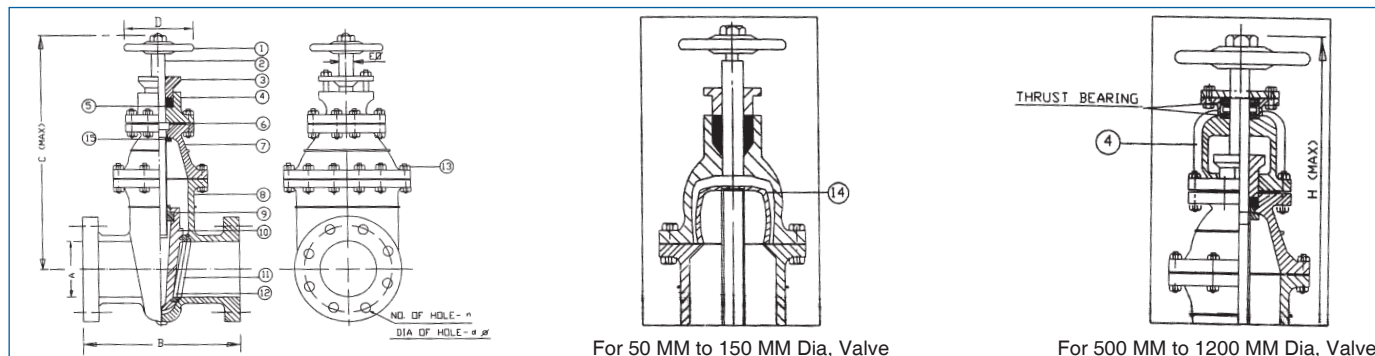


Current Standard	—	IS 14846 : 2000
50 mm to 600 mm	—	PN 1.0 & PN 1.6 rating
700 mm to 1200 mm	—	PN 1.0 rating

Test Pressure for Sluice Valves

PN Rating	Test for Body/Seat	Test Pressure Mpa (Gauge)
PN 1.0	Body	1.5
	Seat	1.0
PN 1.6	Body	2.4
	Seat	1.6

CAST IRON SLUICE VALVE (IS : 14846/2000) NON-RISING SPINDLE



15	Back Seat Bush (for 350 and above)	1	L.T.B	IS:318Gr. LTB-2
14	Thrust Plate	1	Cast Iron	IS:210 Gr. & G - 200
13	Nuts & Bolts	AS Reqd.	Carbon Steel	IS:1363CL-4 & 4.6
12	Wedge Ring	2	S.S./L.T.B.	AISI : 304/IS:318 Gr. L.T.B.-2
11	Body Ring	2	S.S./L.T.B.	AISI : 304/IS:318 Gr. L.T.B.-2
10	Wedge	1	Cast Iron	IS : 210 Gr. FG-200
9	Spindle Nut	1	L.T.B.	IS : 318 Gr. FG-200
8	Body	1	Cast Iron	IS : 210 Gr. FG-200
7	Cover	1	Cast Iron	IS : 210 Gr. FG-200
6	Gasket	—	Rubber	IS : 638 Type-B
5	Packing	—	Jute & HEMP.	IS : 5414
4	Top Cover	1	Cast Iron	IS : 210 Gr. FG-200
3	Gland	1	Cast Iron	IS : 210 Gr. FG-200
2	Spindle	1	SS	AISI : 410
1	Hand Wheel	1	Cast Iron	IS : 210 Gr. FG-200
SL No.	Description	Qty. Per Value	Material	Specification

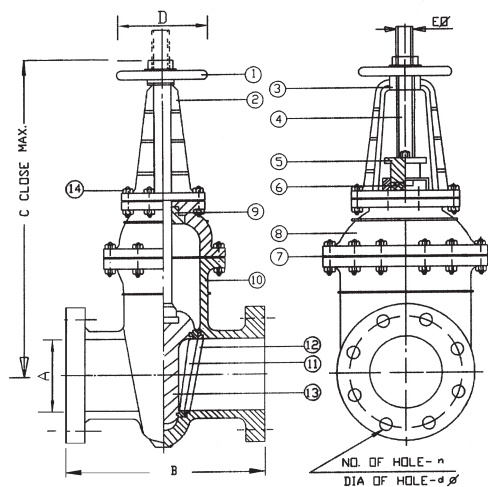
PARTS LIST

DIMENSION TABLE

ALL DIMENSION ARE IN MM

A	B						C Mox.		D		E Min.	
Size	PN 1.0			PN 1.6			PN 1.0	PN 1.6	PN 1.0	PN 1.6	PN 1.0	PN 1.6
	PD	ALT-I	ALT-II	PD	ALT-I	ALT-II						
50	178	250	215	178	250	215	365	365	225	280	22	22
65	190	270	230	190	270	230	380	380	225	280	22	22
80	203	280	230	203	280	230	425	425	225	280	22	22
100	229	300	225	229	300	255	470	470	320	360	27	27
125	254	325	266	254	325	266	485	485	320	360	27	27
150	267	350	280	267	350	280	595	595	320	360	27	27
200	292	400	318	292	400	318	725	725	360	450	32	32
250	330	450	355	330	450	355	835	835	400	640	36	36
300	356	500	380	356	500	380	910	910	400	640	36	36
350	381	550	-	381	550	690	1020	1030	500	640	37	42
400	406	600	-	406	600	750	1110	1110	640	730	42	47
450	432	650	-	432	650	820	1200	1210	720	800	47	52
500	457	700	-	457	700	880	1300	1340	720	800	47	52
600	508	800	-	508	800	1000	1500	1500	720	800	47	57
700	610	900	1130	-	-	-	1670	-	800	-	62	-
750	610	950	1200	-	-	-	1780	-	900	-	67	-
800	660	1000	1250	-	-	-	1930	-	900	-	67	-
900	711	1100	1380	-	-	-	2080	-	900	-	77	-
1000	811	1200	1500	-	-	-	2200	-	900	-	77	-
1100	-	-	1650	-	-	-	2450	-	1000	-	87	-
1200	-	-	1800	-	-	-	2580	-	1000	-	87	-

CAST IRON GATE VALVE RISING SPINDLE



14	Bolts & Nuts	AS Req'd	Carbon Steel	IS : 1363 CL - 4.6 & 4
13	Wedge	1	Cast Iron	IS : 210 Gr. FG - 200
12	Body Ring	2	S.S./L.T.B.	AISI : 304/IS : 318 Gr. L.T.B.-2
11	Wedge Ring	2	S.S./L.T.B.	AISI : 304/IS : 318 Gr. L.T.B.-2
10	Body	1	Cast Iron	IS : 210 Gr. FG-200
9	Back Seat	1	L.T.B.	IS : 318 GR. L.T.B. TB-2
8	Cover	1	Cast Iron	IS : 210 Gr. FG-200
7	Gasket	—	Rubber	IS : 638 Type-B
6	Packing	—	Jute & HEMP.	IS : 5414
5	Gland	1	Cast Iron	IS : 210 Gr. FG-200
4	Spindle	1	S. S.	AISI - 410
3	Bush	1	L.T.B.	IS : 318 Gr. L.T.B.-2
2	Yoke	1	Cast Iron	IS : 210 Gr. FG-200
1	Hand Wheel	1	Cast Iron	IS : 210 Gr. FG-200
Sl. No.	Description	Qty. Per Value	Material	Specification

PARTS LIST

DIMENSION TABLE

ALL DIMENSION ARE IN MM

A	B						C Max.		D		E Min.	
Size	PN 1.0			PN 1.6			PN 1.0	PN 1.6	PN 1.0	PN 1.6	PN 1.0	PN 1.6
50	178	250	215	178	250	215	490	490	225	280	22	22
65	190	270	230	190	270	230	550	550	225	280	22	22
80	203	280	230	203	280	230	590	590	225	280	22	22
100	229	300	255	229	300	255	620	620	320	360	27	27
125	254	325	266	254	325	266	690	690	320	360	27	27
150	267	350	280	267	350	280	740	740	320	360	27	27
200	292	400	318	292	400	318	980	980	360	450	32	32
250	330	450	355	330	450	355	1130	1130	400	640	36	36
300	356	500	380	356	500	380	1190	1190	400	640	36	36
350	381	550	—	381	550	690	1480	1390	500	640	37	42
400	406	600	—	406	600	750	1680	1630	640	730	42	47
450	432	650	—	432	650	820	1720	1770	720	800	47	52
500	457	700	—	457	700	880	1990	1900	720	800	47	52
600	508	800	—	508	800	1000	2280	2200	720	800	47	57
700	610	900	1130	—	—	—	2600	—	800	—	62	—
750	610	950	1200	—	—	—	2750	—	900	—	67	—
800	660	1000	1250	—	—	—	2900	—	900	—	67	—
900	711	1100	1380	—	—	—	3150	—	900	—	77	—
1000	811	1200	1500	—	—	—	3420	—	900	—	77	—
1100	—	—	1650	—	—	—	3780	—	1000	—	87	—
1200	—	—	1800	—	—	—	4140	—	1000	—	87	—

ENQUIRY QUESTIONNAIRE

When enquiring/ordering the following data will assist in correct supply :

- Valve size, type and quantity
- Fluid Flowing/Application
- Max Temperature
- Test Pressure
- Max Working Pressure
- Max Unbalanced Pressure
- End Connections
- Cap or Handwheel

For Special Application a sketch the proposed layout is helpful.

For power operation or for operation against high unbalanced pressure our expert advice is available without any obligation. Our engineers are always ready to help.

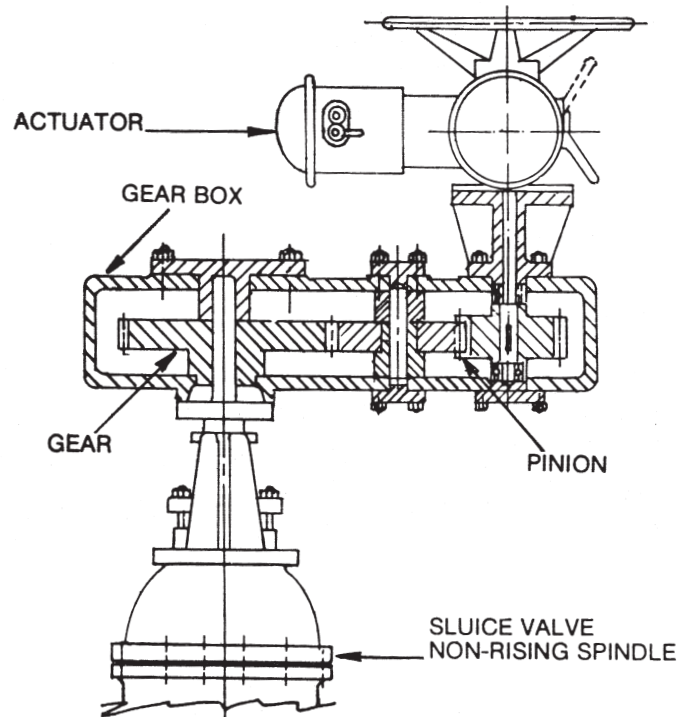
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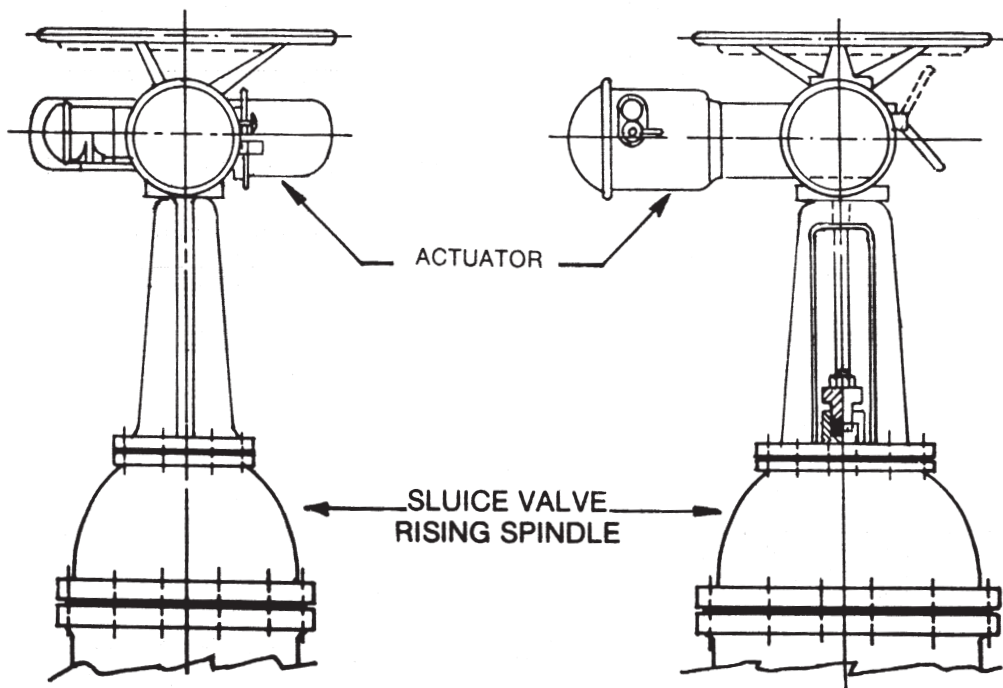
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IS : 14846 - 2000

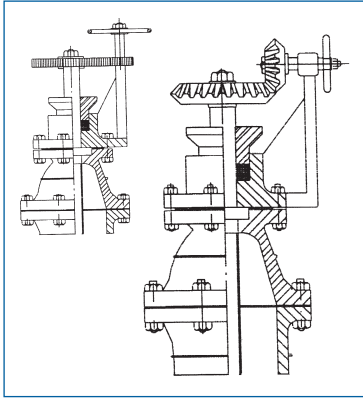
Valves with Reduction Gear & Actuator arrangement



Valves Actuator arrangement

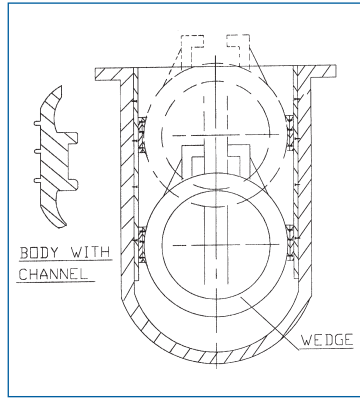


Spur/Bevel Gear Arrangement



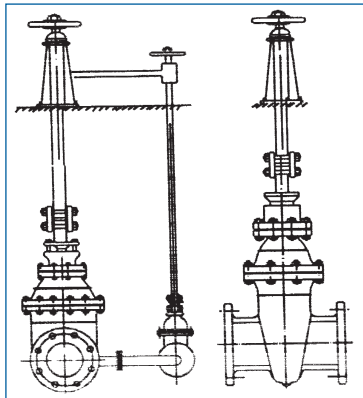
In order to make easy operation of the large diameter Valves from Size 300 mm to 700 mm without thrust ball bearing and Valves from 700 mm and above with thrust ball bearings.

Channel & Shoe Arrangement



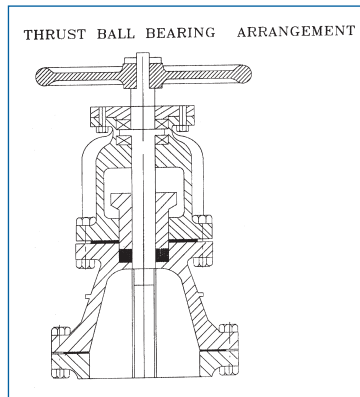
Brass lined CI Channel on the body and bronze shoe on the wedge is used as anti-friction device to minimise the friction between the guide surfaces of Body/Wedge. Recommended for actuator and horizontal Operation.

Head Stock & Extension Arrangement



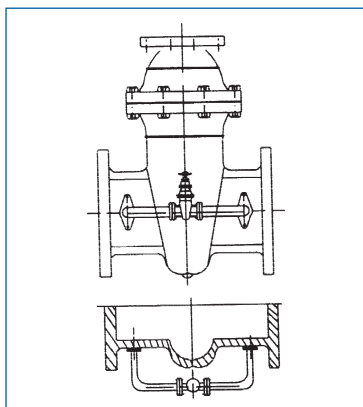
For underground operation of Valve at place inaccessible, the Valve is operated through the hand wheel of Headstock and extension shaft.

Thrust Ball Bearing Arrangement



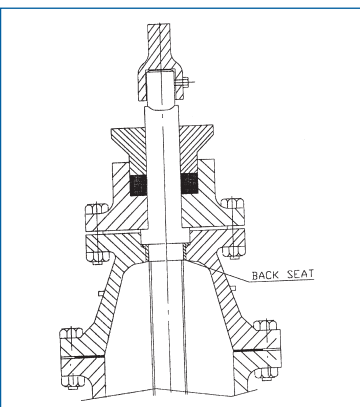
Thrust ball bearings are provided on both sides of the collars to minimise the friction of rotary force between collar, cover and stuffing box which help an easy operation of the Valves.

By-Pass Arrangement for Sluice Valves



By-pass arrangement is provided to reduce the unbalanced load and to supply water for priming.

Back Seating Arrangement



For changing of gland packing when the Valve is fully open. It also maintains condition of flow undisturbed by sealing the atmosphere within the Valves.



CALSENS PRIVATE LIMITED

An ISO 9001 : 2008 Registered Firm

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