DFC
DYNAMIC
FLUID CONTROL

VOSA®

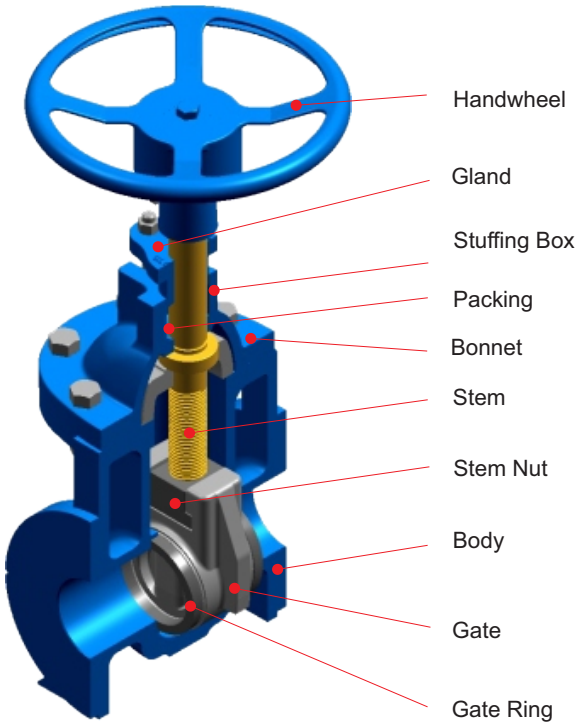
D SERIES WEDGE GATE VALVES

Features and Benefits

Body Bonnet Shape	
Guides	
Seats	
Stem	Strong stub acme or trapezoidal form thread
Gland bolt housing	
Markings	Standard requirements clearly marked on body

Valves are of metal seated wedge gate design and are available in both bronze fitted and all iron fitted seat versions, with the choice of non-rising or rising stem.

Typical Non Rising Stem



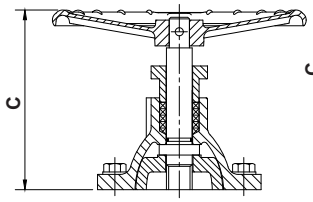
Standard Materials of Construction

Body, bonnet, stuffing box yoke, gland and handwheel	Ductile Iron to SANS 936 SG 42 /BS 2789 GR. 420/12
Seat and Gate Rings (Bronze Fitted)	Gunmetal BS 1400 Grade Lg2
Seat and Gate Rings (All Iron Fitted)	Malleable Iron - Metal to Metal
Stem	Stainless Steel BS970:420 S37 or BS 970: 431 S29
Jointing	Klingerite
Packing	Graphited Fibre

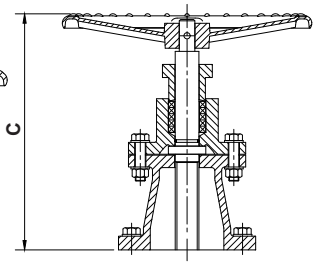
World Class Performance

VOSA®

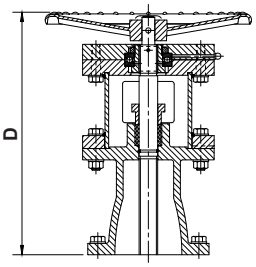
Bonnet Variations - Non Rising Stem



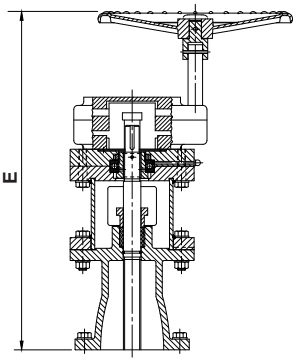
80mm-100mm
Integral Stuffing Box



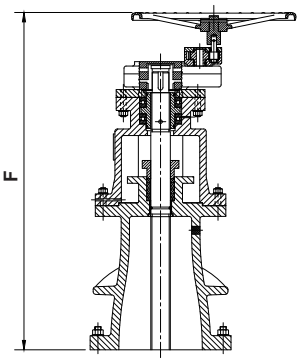
150-200mm
Bolted Stuffing Box



200mm-300mm
Tube Assembly
Thrust Bearing Handwheel

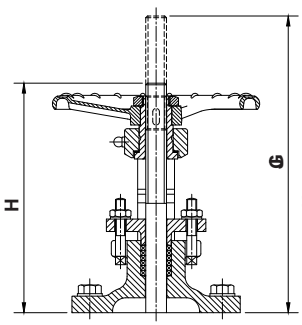


200mm-600mm
Tube Assembly
Thrust Bearing Gearbox

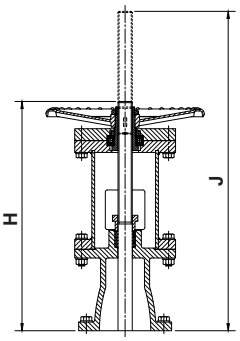


700mm-900mm
Distance Piece
Thrust Bearing Gearbox

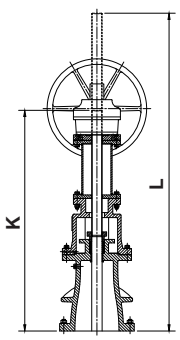
Bonnet Variations - Rising Stem



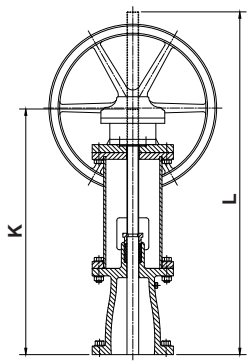
80mm-150mm
Integral Yoke



200mm-300mm
Tube Assembly
RS Handwheel

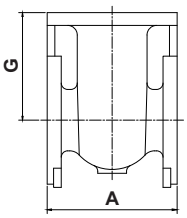


200mm-600mm
Tube Assembly
RS Gearbox & Handwheel

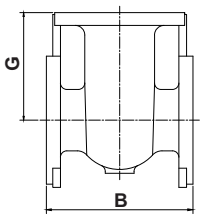


700mm-900mm
Distance Piece
Tube Assembly
RS Gearbox & Handwheel

Body End Connections



Flanged End
SABS 665



Flanged End
SABS 664

Valve Dimensions and Weights

NOMINAL BORE		80	100	150	200	250	300	350	400	450	500	600	700	800	900
FACE TO FACE SANS 665 OR BS5150/BS5163	A	203	229	267	292	330	356	381	406	432	457	508	610	660	711
FACE TO FACE SANS 664	B	229	254	280	317	356	380	470	470	485	510	600	610	660	711
BONNET FLANGE TO STEM (N/R)	C	223	223	379	425	-	-	-	-	-	-	-	-	-	-
BONNET FLANGE TO STEM (N/R)	D	-	-	-	470	484	513	-	-	-	-	-	-	-	-
BONNET FLANGE TO GBX + HWL (N/R)	E	-	-	-	696	710	739	882	914	1034	1095	1161	-	-	-
BONNET FLANGE TO GBX + HWL (N/R)	F	-	-	-	-	-	-	-	-	-	-	-	1292	1431	1502
CENTRE TO BONNET FLANGE	G	168	209	194	240	-	-	-	-	-	-	-	-	-	-
BONNET FLANGE TO STEM (CLOSED)	H	277	269	466	580	635	732	-	-	-	-	-	-	-	-
BONNET FLANGE TO STEM (OPEN)	J	358	375	636	808	899	1046	-	-	-	-	-	-	-	-
BONNET FLANGE TO STEM (CLOSED)	K	-	-	-	580	634	727	923	1026	1158	1302	1428	1598	1815	2034
BONNET FLANGE TO STEM (OPEN)	L	-	-	-	808	898	1041	1288	1458	1631	1834	2061	2301	2627	2985
HANDWHEEL DIAMETER WITH GBX R/S		-	-	-	400	400	500	630	630	720	720	720	720	720	720
HANDWHEEL DIAMETER N/R		315	315	400	400	400	400	400	400	400	500	630	630	720	720
HANDWHEEL DIAMETER R/S		250	250	315	400	400	400	-	-	-	-	-	-	-	-
WEIGHT (APPROX) kg N/R		25	32	57	96	165	215	428	472	630	750	1082	1810	2130	2950
WEIGHT (APPROX) kg R/S		27	34	62	100	172	223	434	503	646	781	1148	1880	2220	3070

All dimensions in mm

Figure Numbers for Specifying Trim and End Connections

			SANS 664	SANS 665 (or BS5150/BS5163)			
BONNET ASSEMBLY	DIRECTION OF CLOSING	CAP TOP / HANDWHEEL	BRONZE TRIM	BRONZE TRIM		ALL IRON TRIM	
			FLANGED PN16	FLANGED PN16	FLANGED PN25	FLANGED PN16	FLANGED PN25
Non Rising Stem	CC	CT	D324 / D724	D534 / D834	D536 / D836	D414	D416
	CC	HW	D334 / D734				
	AC	CT	D344 / D744				
	AC	HW	D354 / D754				
Rising Stem	CC	HW	D364 / D764	D564 / D864	D566 / D866	D464	D466

Manual Operation of Gate Valves

The following table gives an approximate guide to the maximum unbalanced pressures in kPa against which wedge gate valves can be operated by one man exerting an effort of 200 N at the rim of the handwheel of standard dimensions, or two people exerting an effort of 400 N.

	Maximum Unbalanced Pressure (kPa)			
	Handwheel			
		Ball Thrust Collar		
Valve Size	Plain Thrust Collar	One Man Operation	Two Man Operation	Gearbox with Ball Thrust Collar
80	2500			
100	2500			
150	2500			
200	1600	2500		
250	-	1800	2500	
300	-	1300	2200	2500
350	-	1000	1600	2500
400	-	750	1300	2500
450	-	600	800	2500
500	-	370	650	2500
600	-	250	450	2500
700	-	-	-	1600
800	-	-	-	1600
900	-	-	-	1600

Optional Accessories

For valve operation:
Spur or bevel gearing, electric actuators with actuator mounted direct or remote and floor mounted pedestals with extension tubes assembly plus muff or universal couplings.

Anti-friction devices:
The use of machined bronze gate slides which assist the movement of the gate up and down the body, recommended for valves under relatively high differential pressures and/or valves mounted on their sides. 80 - 300mm (on request only.) 350mm - 900mm standard with channels.
Ball thrust bearings fitted at stem collar, thereby reducing the torque required to operate the valve.

Sundry:
Gate valves can be provided with: Integral mounted bypass arrangements; drain or easing screws at the bottom of the body; plate or differential open to shut indicators; stems in stainless steel or other special materials.

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