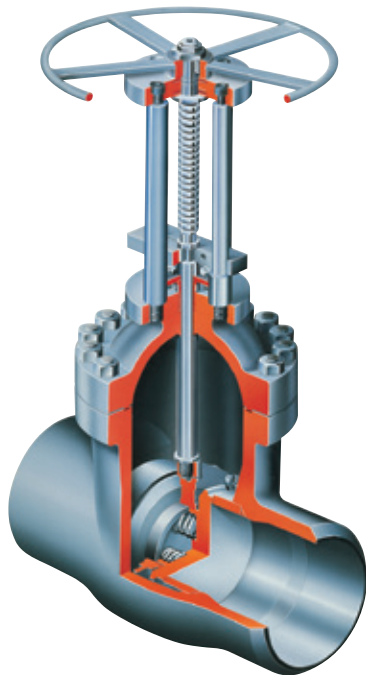




SEMPPELL DEWRANCE PARALLEL SLIDE GATE VALVES LOW PRESSURE CAST STEEL

Positive and reliable isolation, with low operating forces.



FEATURES

- Excellent reliability
 - Self cleaning action between disk and seat
 - Welded-in seats hard-faced with Stellite® or equivalent
 - Low cost maintenance
 - Lower operating forces than wedge gate design
 - Interchangeability of parts
 - Simplified seat refurbishment (only requires flat lapping, no critical angles to be matched to ensure sealing capability)
- Improved performance
 - Lower pressure drop characteristic than wedge gate valve
 - Reduced actuator size/cost by 30% when compared to wedge gate
 - Improved sealing assisted by line pressure
 - Low operating torque, seals on position not torque

GENERAL APPLICATION

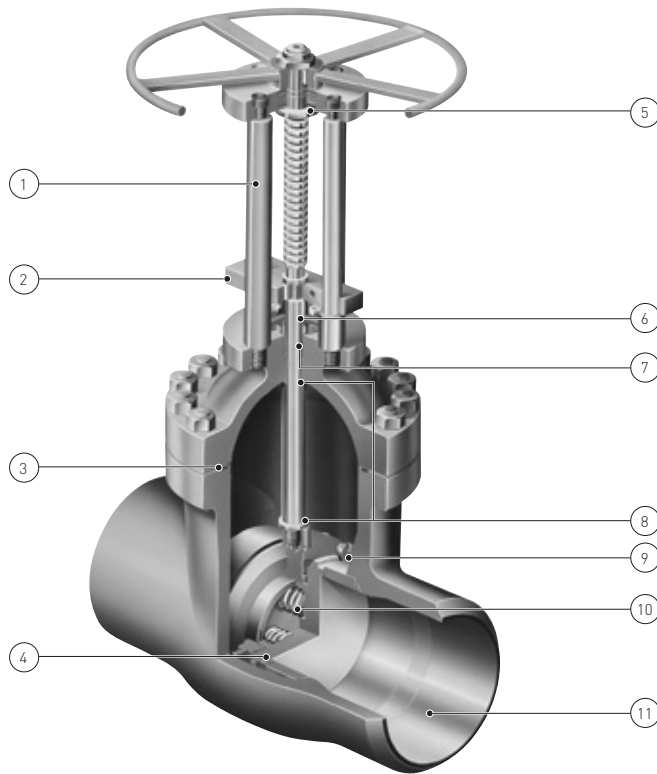
The Dewrance low pressure parallel slide gate valves are specifically designed for use in water and steam applications, such as reheated steam isolation, boiler feed-pump isolation, LP feed heater isolation, spray water and general service isolation duty.

TECHNICAL DATA

Size range:	NPS 2 ½- 20 (DN 65 - 500)
Materials:	ASME B16.34
Valve overall lengths to:	ASME B16.10
Pressure class:	ASME 300 & 600

SEMPELL DEWRANCE PARALLEL SLIDE GATE VALVES

LOW PRESSURE CAST STEEL 300 CLASS



LEGEND

- 1 Four pillar design for rigidity and accessibility.
- 2 Stem stop clearly indicates valve position and prevents stem rotation.
- 3 Aluminium reinforced expanded graphite gasket located in tongue and groove.
- 4 Hard faced Stellite® or equivalent discs and seats.
- 5 Anti-friction bearings are fitted for direct handwheel operation.
- 6 Two piece gland.
- 7 Specially designed stuffing box to suit expanded graphite packing.
- 8 Hard faced Stellite® or equivalent back seat.
- 9 Disc retainer.
- 10 Spring or springs to hold disc against seat face for initial sealing.
- 11 Modular body design accommodates a wide range of flanged and weld connections.

NOTE:

By-pass and drains can be supplied as required.

IMPERIAL 300 INT. CLASS (ASME B16.34)

Prod. No.	ASTM Body mat. cast	ASME code B16.34	-20° to 100°	Pressure in lbf/sq. in. at temp. °F (for intermediate ratings use linear interpolation)															
				200	300	400	500	600	650	700	750	800	850♦	900	950	1000	1050	1100	
P31	WCB	Std. *	741	683	655	633	602	567	550	531	504	412	319						
P31	WCB	Spec. **	750	749	740	734	732	729	714	687	632	515	400						
P31	WC6	Std. *	750	747	721	694	662	609	589	567	531	509	484	435	332	217	149	99	
P31	WC6	Spec. **	750	750	750	750	750	750	748	736	730	717	674	576	415	271	186	123	
P31	WC9	Std. *	750	747	730	702	662	609	589	567	531	509	484	445	372	268	180	114	
P31	WC9	Spec. **	750	749	740	728	725	721	715	709	708	706	674	591	468	335	226	143	
P32	WCB	Std. *	741	683	655	633	602	567	550	531	504	412	319						
P32	WC6	Std. *	750	747	721	694	662	609	589	567	531	509	484	435	332	217	149	99	
P32	WC9	Std. *	750	747	730	702	662	609	589	567	531	509	484	445	372	268	180	114	

♦ Permissible but not recommended for prolonged usage above 800°F (425°C)

METRIC 300 INT. CLASS (ASME B16.34)

Prod. No.	ASTM Body mat. cast	ASME code B16.34	-30° to 38°	Pressure in bar at temp. °C (for intermediate ratings use linear interpolation)																
				50	100	150	200	250	300	325	350	375	400	425♦	450	475	500	538	550	575
P31	WCB	Std. *	51.1	50.1	46.6	45.1	43.8	41.9	39.8	38.7	37.6	36.4	34.7	28.8						
P31	WCB	Spec. **	51.7	51.7	51.6	51.0	50.6	50.5	50.1	48.9	47.1	43.4	36.0							
P31	WC6	Std. *	51.7	51.7	51.5	49.7	48.0	46.3	42.9	41.4	40.3	38.9	36.5	35.2	33.7	31.7	25.7	14.9	12.7	8.8
P31	WC6	Spec. **	51.7	51.7	51.7	51.7	51.7	51.7	51.7	51.7	51.5	50.6	50.3	49.6	47.3	42.8	32.2	18.6	15.9	11.0
P31	WC9	Std. *	51.7	51.7	51.5	50.3	48.6	46.3	42.9	41.4	40.3	38.9	36.5	35.2	33.7	31.7	28.2	18.4	15.6	10.5
P31	WC9	Spec. **	51.7	51.7	51.6	51.0	50.2	50.0	49.8	49.6	49.2	48.8	48.8	48.8	47.3	42.8	35.6	23.0	19.5	13.2
P32	WCB	Std. *	51.1	50.1	46.6	45.1	43.8	41.9	39.8	38.7	37.6	36.4	34.7	28.8						
P32	WC6	Std. *	51.7	51.7	51.5	49.7	48.0	46.3	42.9	41.4	40.3	38.9	36.5	35.2	33.7	31.7	25.7	14.9	12.7	8.8
P32	WC9	Std. *	51.7	51.7	51.5	50.3	48.6	46.3	42.9	41.4	40.3	38.9	36.5	35.2	33.7	31.7	28.2	18.4	15.6	10.5

♦ Permissible but not recommended for prolonged usage above 800°F (425°C)

Pressure boundary materials to ASTM specifications

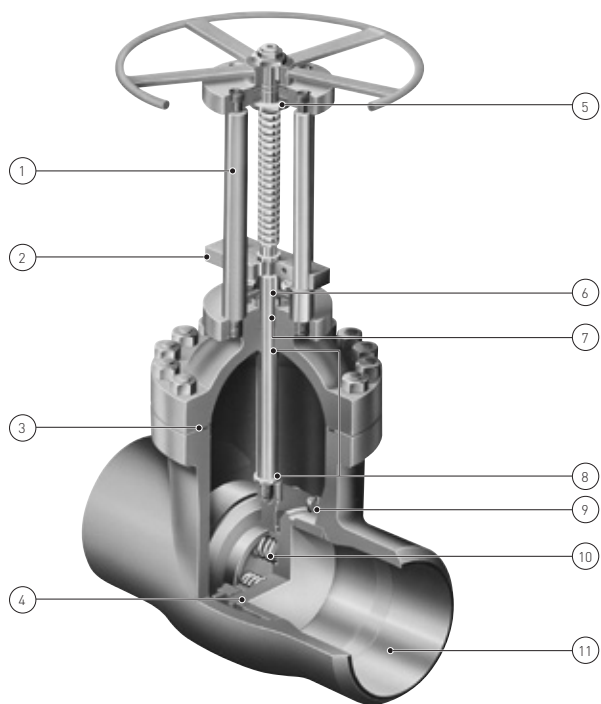
All other materials to stated comparable U.S. specifications

Std.* ASME B16.34 Standard Class

Spec.** ASME B16.34 Special Class

SEMPELL DEWRANCE PARALLEL SLIDE GATE VALVES

LOW PRESSURE CAST STEEL 600 CLASS



IMPERIAL 600 INT. CLASS (ASME B16.34)

Prod No.	ASTM Body mat'l cast	ASME code B16.34	-20° to 100°	Pressure in lbf/sq. in. at temp. °F (for intermediate ratings use linear interpolation)															
				200	300	400	500	600	650	700	750	800	850♦	900	950	1000	1050	1100	
P51	WCB	Std. *	1481	1365	1309	1266	1204	1135	1098	1060	1009	823	639						
P51	WCB	Spec. **	1500	1498	1481	1466	1466	1458	1428	1374	1264	1029	798						
P51	WC6	Std. *	1500	1495	1444	1387	1324	1215	1175	1132	1066	1013	971	870	664	434	298	198	
P51	WC6	Spec. **	1500	1500	1500	1500	1500	1500	1493	1469	1459	1436	1346	1151	829	542	373	248	
P51	WC9	Std. *	1500	1495	1456	1404	1324	1215	1175	1132	1066	1013	971	891	745	537	362	228	
P51	WC9	Spec. **	1500	1497	1478	1456	1449	1441	1430	1416	1414	1411	1346	1181	940	671	452	285	
P52	WCB	Std. *	1481	1365	1309	1266	1204	1135	1098	1060	1009	823	639						
P52	WC6	Std. *	1500	1495	1444	1387	1324	1215	1175	1132	1066	1013	971	870	664	434	298	198	
P52	WC9	Std. *	1500	1495	1456	1404	1324	1215	1175	1132	1066	1013	971	891	745	537	362	228	

♦ Permissible but not recommended for prolonged usage above 800°F (425°C)

METRIC 600 INT. CLASS (ASME B16.34)

Prod No.	ASTM Body mat'l cast	ASME code B16.34	-30° to 38°	Pressure in bar at temp. °C (for intermediate ratings use linear interpolation)																
				50	100	150	200	250	300	325	350	375	400	425♦	450	475	500	538	550	575
P51	WCB	Std. *	102.1	100.2	93.2	90.2	87.6	83.9	79.6	77.4	75.1	72.7	69.4	57.5						
P51	WCB	Spec. **	103.4	103.4	103.3	102.1	101.1	101.1	101.1	100.2	97.8	94.2	86.8	71.9						
P51	WC6	Std. *	103.4	103.4	103.0	99.5	95.9	92.7	85.7	82.6	80.4	77.6	73.3	70.0	67.7	63.4	51.5	29.8	25.4	17.6
P51	WC6	Spec. **	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	102.8	101.0	100.6	99.3	94.4	85.5	64.3	37.2	31.8	22.0
P51	WC9	Std. *	103.4	103.4	103.0	100.3	97.2	92.7	85.7	82.6	80.4	77.6	73.3	70.0	67.7	63.4	56.5	36.9	31.3	21.1
P51	WC9	Spec. **	103.4	103.4	103.2	101.9	100.4	100.0	99.6	99.2	98.4	97.5	97.5	97.5	94.4	85.5	71.5	46.1	39.1	26.3
P52	WCB	Std. *	102.1	100.2	93.2	90.2	87.6	83.9	79.6	77.4	75.1	72.7	69.4	57.5						
P52	WC6	Std. *	103.4	103.4	103.0	99.5	95.9	92.7	85.7	82.6	80.4	77.6	73.3	70.0	67.7	63.4	51.5	29.8	25.4	17.6
P52	WC9	Std. *	103.4	103.4	103.0	100.3	97.2	92.7	85.7	82.6	80.4	77.6	73.3	70.0	67.7	63.4	56.5	36.9	31.3	21.1

♦ Permissible but not recommended for prolonged usage above 800°F (425°C)

Std.* Standard

Spec.** Special

SEMPELL DEWRANCE PARALLEL SLIDE GATE VALVES

LOW PRESSURE CAST STEEL 300 CLASS

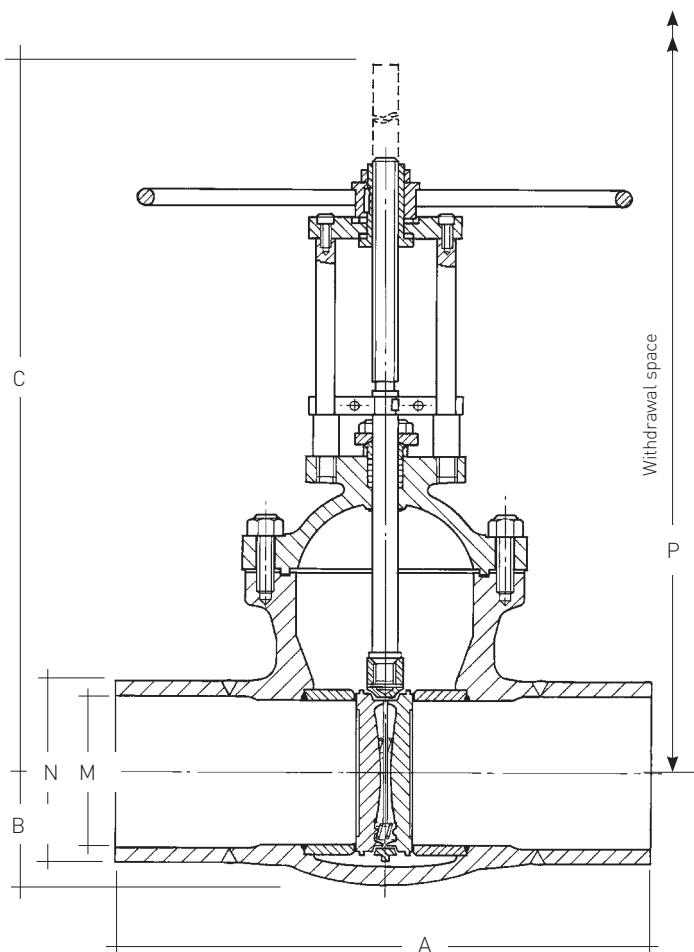
SIZES NPS 2½" - 20" (DN 65 - 500) ASME B16.34 300 INT. CLASS

MAIN COMPONENT MATERIALS

Description	Carbon steel	Alloy steel
Body	ASTM A-216 Gr. WCB	ASTM A-217 Gr. WC6
Bonnet	ASTM A-216 Gr. WCB	ASTM A-217 Gr. WC6
Stem	EN1008 17CrNi16-2 (1.4057)	EN1008 17CrNi16-2 (1.4057)
Gland	Aluminium Bronze	Aluminium Bronze
Seats	A105/A106	A182-F22
Yoke Sleeve	Aluminium Bronze	Aluminium Bronze
Handwheel	Cast Iron/Steel	Cast Iron/Steel
Disc	A105	A182-F22
Gland Packing	Expanded Graphite	Expanded Graphite
Gasket	Expanded Graphite	Expanded Graphite

HYDROSTATIC SHELL AND SEAT LEAK TEST PRESSURES

Pressure Class	Shell psi (bar)	Seat psi (bar)
300	1125 (78)	825 (57)



SEMPELL DEWRANCE PARALLEL SLIDE GATE VALVES

'P31' DESIGN, BUTT WELD ENDS

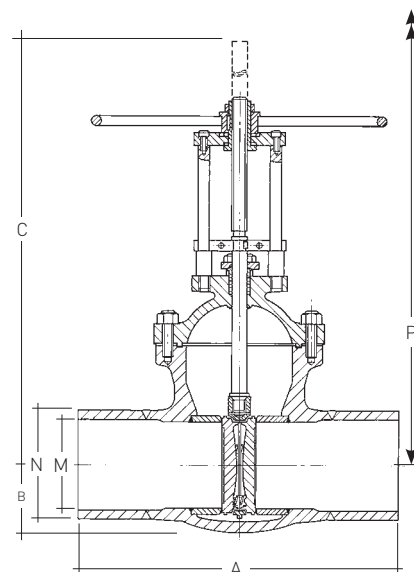
SIZES NPS 2 1/2" - 20" (DN 65 - 500) ASME B16.34 300 CLASS

DIMENSIONS (imperial)

Size NPS	A❖	C	M	N	P	Weight lb	C _v	K Factor
2½	9.5"	16.63"	2.47"	2.88"	20.35"	64	266	0.471
3	11.13"	19.92"	3.07"	3.5"	23.23"	84	550	0.263
4	12"	23.4"	4.03"	4.5"	26.81"	130	972	0.247
6	15.88"	31.93"	6.06"	6.63"	37.17"	258	2246	0.239
8	16.5"	40.59"	8"	8.63"	47.44"	359	3906	0.24
10	18"	43.8"	10.02"	10.75"	56.81"	724	5808	0.265
12	19.75"	57.17"	11.94"	12.75"	67.2"	939	8668	0.241
14	30"	60.79"	13.12"	14"	71.3"	1314	10882	0.223
16	33"	68.39"	15"	16"	79.96"	1772	14932	0.203
18	36"	77.87"	16.88"	18"	91.18"	2300	18591	0.21
20	39"	83.66"	18.81"	20"	97.64"	3056	23740	0.199

DIMENSIONS (metric)

Size DN	A❖	C	M	N	P	Weight kg	C _v	K Factor
65	241	430	62.7	73.2	517	29.1	266	0.471
80	283	506	78	88.9	590	38.2	550	0.263
100	305	594	102	114.3	681	59	972	0.247
150	403	811	154	168.3	944	117	2246	0.239
200	419	1031	203	219.1	1205	163	3906	0.24
250	457	1229	254.4	273	1443	329	5808	0.265
300	502	1452	303.2	323.9	1707	426	8668	0.241
350	762	1544	333.3	355.6	1811	597	10882	0.223
400	838	1737	381	406.4	2031	805	14932	0.203
450	914	1978	428.6	457.2	2316	1045	18591	0.21
500	991	2125	477.8	508	2480	1386	23740	0.199



NOTES

- ❖ Per ASME B16.10

SEMPELL DEWRANCE PARALLEL SLIDE GATE VALVES

'P32' DESIGN, FLANGED ENDS

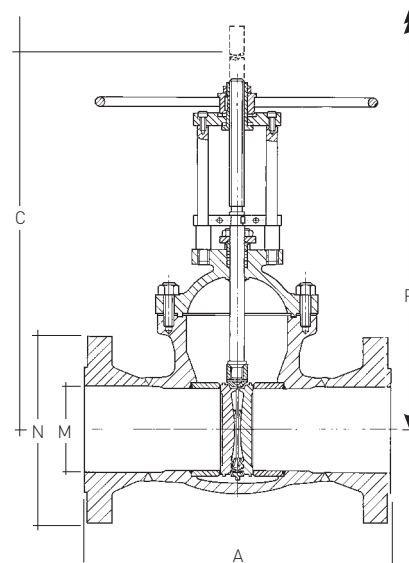
SIZES NPS 2½" - 20" (DN65 - 500) ASME B16.34 300 CLASS

DIMENSIONS (imperial)

Size NPS	A	C	M	N	P	Weight (lbs)	C _v	K Factor
2½	9.5"	16.63"	2.47"	7.5"	20.35"	81	266	0.471
3	11.13"	19.92"	3.07"	8.25"	23.23"	111	550	0.263
4	12"	23.4"	4.03"	10"	26.81"	198	972	0.247
6	15.88"	31.93"	6.06"	12.5"	37.17"	319	2246	0.239
8	16.5"	40.59"	8"	15"	47.44"	508	3906	0.24
10	18"	43.8"	10.02"	17.5"	56.81"	887	5808	0.265
12	19.75"	57.17"	11.94"	20.5"	67.2"	1180	8668	0.241
14	30"	60.79"	13.12"	23"	71.3"	1622	10882	0.223
16	33"	68.39"	15"	25.5"	79.96"	2168	14932	0.203
18	36"	77.87"	16.88"	28"	91.18"	2793	18591	0.21
20	39"	83.66"	18.81"	30.5"	97.64"	3635	23740	0.199

DIMENSIONS (metric)

Size DN	A	C	M	N	P	Weight (kg)	C _v	K Factor
65	241	430	62.7	191	517	37	266	0.471
80	283	506	78	210	590	50	550	0.263
100	305	594	102	254	681	90	972	0.247
150	403	811	154	318	944	145	2246	0.239
200	419	1031	203	381	1205	231	3906	0.24
250	457	1229	254.4	445	1443	403	5808	0.265
300	502	1452	303.2	521	1707	536	8668	0.241
350	762	1544	333.3	584	1811	737	10882	0.223
400	838	1737	381	648	2031	985	14932	0.203
450	914	1978	428.6	711	2316	1270	18591	0.21
500	991	2125	477.8	775	2480	1652	23740	0.199



NOTES

- ❖ Per ASME B16.10

SEMPELL DEWRANCE PARALLEL SLIDE GATE VALVES

LOW PRESSURE CAST STEEL 600 CLASS

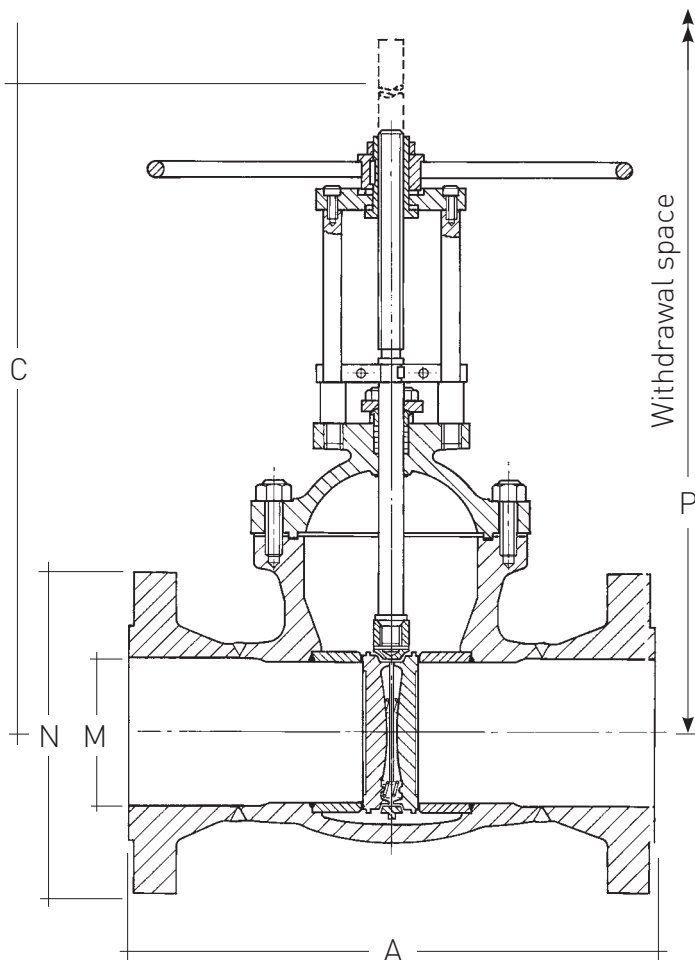
SIZES NPS 2½" - 20" (DN65 - 500) ASME B16.34 600 INT. CLASS

MAIN COMPONENT MATERIALS

Description	Carbon steel	Alloy steel
Body	ASTM A-216 Gr. WCB	ASTM A-217 Gr. WC6
Bonnet	ASTM A-216 Gr. WCB	ASTM A-217 Gr. WC6
Stem	EN1008 17CrNi16-2 (1.4057)	EN1008 17CrNi16-2 (1.4057)
Gland	Aluminium Bronze	Aluminium Bronze
Seats	A105/A106	A182-F22
Yoke Sleeve	Aluminium Bronze	Aluminium Bronze
Handwheel	Cast Iron/Steel	Cast Iron/Steel
Disc	A105	A182-F22
Gland Packing	Expanded Graphite	Expanded Graphite
Gasket	Expanded Graphite	Expanded Graphite

HYDROSTATIC SHELL AND SEAT LEAK TEST PRESSURES

Pressure Class	Shell psi (bar)	Seat psi (bar)
600	2250 (156)	1650 (114)



SEMPELL DEWRANCE PARALLEL SLIDE GATE VALVES

'P51' DESIGN, BUTT WELD ENDS 600 CLASS

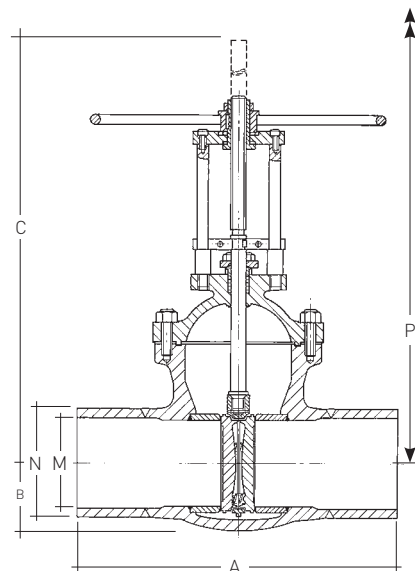
SIZES NPS 2½" - 20" (DN 65 - 500) ASME B16.34 600 CLASS

DIMENSIONS (imperial)

Size NPS	A❖	C	M	N	P	Weight lb	C _v	K Factor
2½	13"	16.93"	2.32"	2.88"	20.35"	69	306	0.276
3	14"	19.92"	2.9"	3.5"	23.23"	89	633	0.158
4	17"	23.4"	3.83"	4.5"	26.81"	135	1152	0.145
6	22"	31.93"	5.76"	6.63"	37.17"	293	2670	0.138
8	26"	40.59"	7.63"	8.63"	47.44"	477	4806	0.131
10	31"	48.38"	9.56"	10.75"	56.81"	802	7698	0.126
12	33"	57.17"	11.38"	12.75"	67.2"	1116	11086	0.122
14	35"	60.79"	12.5"	14"	71.3"	1477	13543	0.119
16	39"	68.39"	14.31"	16"	79.96"	1932	18027	0.116
18	43"	77.87"	16.13"	18"	91.18"	2500	23040	0.114
20	47"	83.66"	17.94"	20"	97.64"	3275	28884	0.111

DIMENSIONS (metric)

Size DN	A❖	C	M	N	P	Weight kg	C _v	K Factor
65	330	430	58.9	73.2	517	31.4	306	0.276
80	356	506	73.7	88.9	590	40.5	633	0.158
100	432	594	97.3	114.3	681	61.4	1152	0.145
150	559	811	146	168.3	944	133	2670	0.138
200	660	1031	194	219.1	1205	217	4806	0.131
250	787	1229	243	273	1443	365	7698	0.126
300	838	1452	289	323.9	1707	507	11086	0.122
350	889	1544	318	355.6	1811	671	13543	0.119
400	991	1737	363	406.4	2031	878	18027	0.116
450	1092	1978	410	457.2	2316	1136	23040	0.114
500	1194	2125	456	508	2480	1489	28884	0.111



SEMPELL DEWRANCE PARALLEL SLIDE GATE VALVES

'P52' DESIGN, FLANGED ENDS

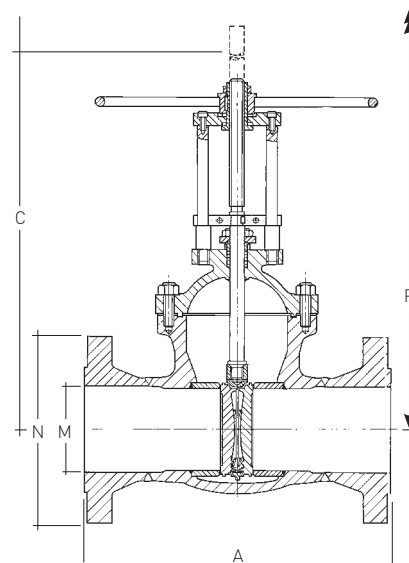
SIZES NPS 2½" - 20" (DN 65 - 500) ASME B16.34 600 CLASS

DIMENSIONS (imperial)

Size NPS	A❖	C	M	N	P	Weight lb	C _v	K Factor
2½	13"	16.93"	2.32"	7.5"	20.35"	93	306	0.276
3	14"	19.92"	2.9"	8.25"	23.23"	121	633	0.158
4	17"	23.4"	3.83"	10.75"	26.81"	205	1152	0.145
6	22"	31.93"	5.76"	14"	37.17"	430	2670	0.138
8	26"	40.59"	7.63"	16.5"	47.44"	687	4806	0.131
10	31"	48.38"	9.56"	20"	56.81"	1137	7698	0.126
12	33"	57.17"	11.38"	22"	67.2"	1488	11086	0.122
14	35"	60.79"	12.5"	23.75"	71.3"	1820	13543	0.119
16	39"	68.39"	14.31"	27"	79.96"	2545	18027	0.116
18	43"	77.87"	16.13"	29.25"	91.18"	3280	23040	0.114
20	47"	83.66"	17.94"	32"	97.64"	4250	28884	0.111

DIMENSIONS (metric)

Size DN	A❖	C	M	N	P	Weight kg	C _v	K Factor
65	330	430	58.9	191	517	42.3	306	0.276
80	356	506	73.7	210	590	55	633	0.158
100	432	594	97.3	273	681	93.2	1152	0.145
150	559	811	146	356	944	195	2670	0.138
200	660	1031	194	419	1205	312	4806	0.131
250	787	1229	243	508	1443	516	7698	0.126
300	838	1452	289	559	1707	675	11086	0.122
350	889	1544	318	603	1811	826	13543	0.119
400	991	1737	363	686	2031	1154	18027	0.116
450	1092	1978	410	743	2316	1488	23040	0.114
500	1194	2125	456	813	2480	1928	28884	0.111



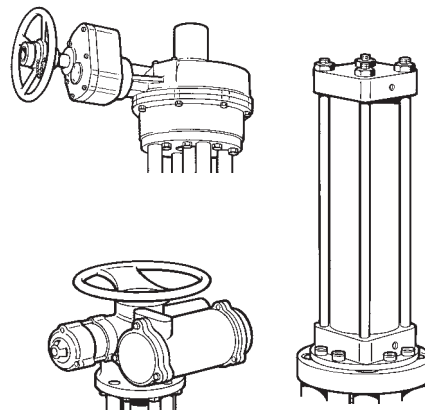
SEMPELL DEWRANCE PARALLEL SLIDE GATE VALVES

LOW PRESSURE CAST STEEL

OPERATORS

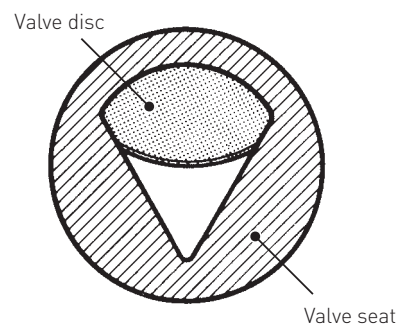
Dewrance Parallel Slide Gate Valves can be equipped with gear operators – when handwheel rim torque exceeds 50 lbs. push and 50 lbs. pull. Bevel gear; bevel and spur gear; and spur gear operators are available.

Power operators – All Dewrance Parallel Slide Gate Valves may be adapted for motor operators, pneumatic or hydraulic cylinders. The low torque requirements and the position seating of the Dewrance Valve provides economic power operator sizing.



PARALLEL SLIDE VALVES FOR REGULATING DUTY

If a valve is required for flow regulation duties Dewrance can supply a parallel slide valve fitted with a 'vee-ported' seat, and special pattern discs. The upstream seat is drilled to provide a pressure equalizing feature and the valve becomes unidirectional.



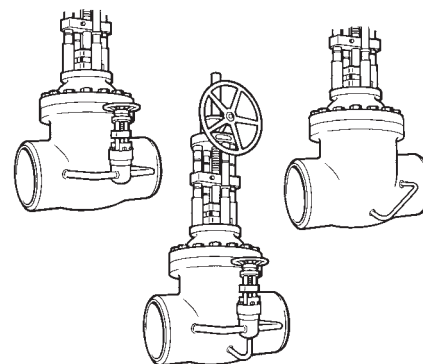
View through outlet of Vee-port seated valve

BY-PASS VALVES

Dewrance Parallel Slide Gate Valves can be fitted with By-Pass Valves when specified by the customer. Dewrance By-Pass Valves have a parallel slide gate design with a pressure seal bonnet, a forged body, butt-weld ends, can be motor operated and are in accordance with MSS SP-45.

By-pass, equalizing by-pass, equalizing pipe and drain arrangements are available to suit customer design installation. Application requests should include the following additional information:

- Unidirectional or bidirectional flow
- Main valve installation position
- Piping variations or restriction unique to your design.



SEMPELL DEWRANCE PARALLEL SLIDE GATE VALVES

LOW PRESSURE CAST STEEL

SELECTION GUIDE

Example:	P	51	E	H	200	P	F	D	A
Valve Type									
P	Parallel slide gate valve								
Pressure class									
31	300 Class - Butt weld end								
32	300 Class - Flanged ends								
51	600 Class - Butt weld end								
52	600 Class - Flanged ends								
Body material									
E	ASTM A216 WCB								
J	ASTM A217 WC6								
Valve operation									
A	Bevel gear - operated from below.								
B	Bevel gear - operated from above.								
C	Chain wheel								
D	Hydraulic actuator								
E	Limiterque actuator								
F	Sleeve coupling								
G	Bevel gear - manual operation								
H	Handwheel operation								
L	Locking device								
M	Adaptor plate								
N	Pneumatic actuator								
P	Spur gear - operated from below.								
Q	Spur gear - operated from above.								
R	Rotork actuator								
T	Universal joint								
U	Undrilled/block ends - Hand operated								
V	Special								
W	Power assisted								
Y	Auma actuator								
Nominal Size (mm)									
Design Change									
P	Standard design								
Ancillary Valve Arrangement									
B	One bypass								
C	One equalizing bypass								
D	One bypass and one equalizing bypass								
F	No bypass arrangement								
G	Equalizing bypass								
H	Vee port seat								
J	One bypass and one bypass drain valve								
K	One drain valve								
L	One equalizing pipe and one drain valve								
M	Vee port seat and equalizing pipe								
Bypass Operation									
A	Bevel gear - operated from below.								
B	Bevel gear - operated from above.								
C	Chain wheel								
D	No bypass								
E	Limiterque actuator								
F	Sleeve coupling								
G	Bevel gear - manual operation								
H	Handwheel operation								
L	Locking device								
P	Spur gear - operated from below.								
Q	Spur gear - operated from above.								
R	Rotork actuator								
Y	Auma actuator								
Minor Product Variation									

