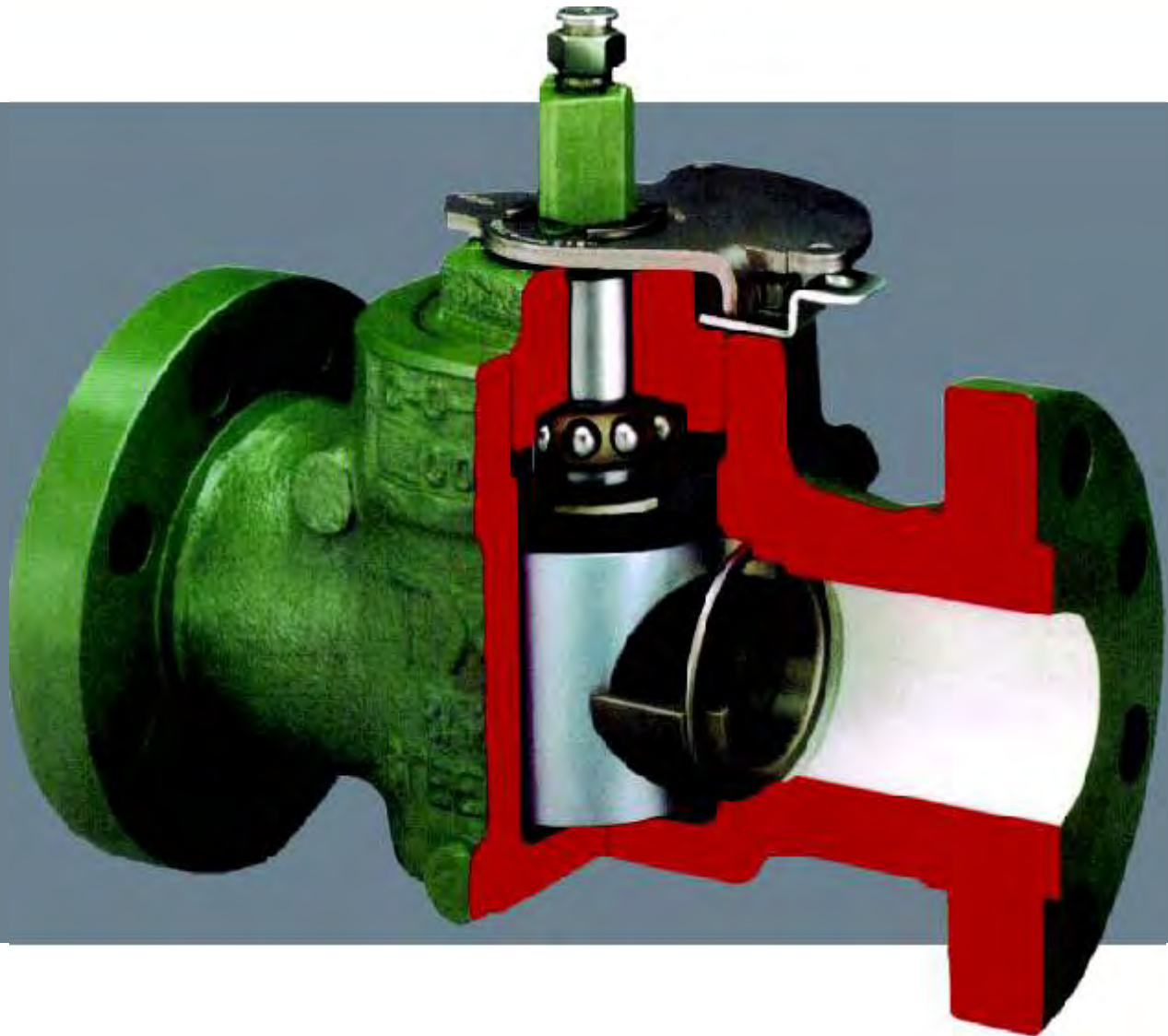


Super G Lubricated-Non-Lubricated Plug Valve

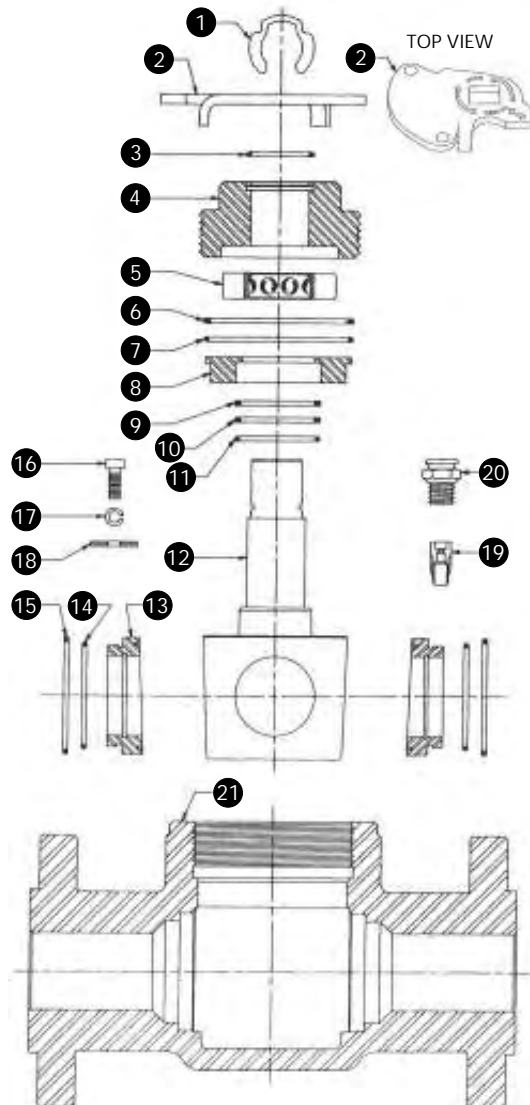


TEXSTEAM™

SUPER G EXCLUSIVE FEATURES

- Built and tested in accordance with API 6A, API 6D & B16.34
- Lubricated and non-lubricated in same valve. Use it either way
- Metal-to-metal seating; zero leakage
- Top entry, field repairable - no special tools or training required
- Pressure Balanced Plus™ - low torque
- Full port or reduced port
- Fire safe to API 6FA-certified by "DNV" Det Norske Veritas
- Valve position indicator
- Blowout-proof plug - integral plug and stem
- Construction to NACE MR0175 (2002) standard
- Wrench, bar or worm gear operated - actuator compatible
- Renewable plug, seats and trim parts - fully interchangeable without lapping, special fitting or machining
- Round ports-low turbulence/pressure drop
- Equipped with a lock open/close position indicator

PARTS LIST



When ordering parts, please furnish item number and part name as given below, plus valve model, size and working pressure.

Item	No. Req'd.	Description	Material
1	1	Collar Retaining Ring	Steel, Nickel Plated
2	1	Locking Collar Position Indicator	Steel, Nickel Plated
3	1	Dirt Excluder	PC Buna-N
4	1	Adjusting Nut	ASTM A487 4C
5	1	Thrust Bearing	Alloy Steel
#! 6	1	Packing Ring	Grafoil
#! 7	1	Body O-Ring	PC Buna-N Standard FKM Optional
#! 8	1	Packing Plate	AISI 1018 Steel
#! 9	1	Stem Packing	Grafoil
#! 10	1	Backup Ring	Teflon
#! 11	1	Stem O-Ring	PC Buna-N Standard FKM Optional
%! 12	1	Plug	1018 Steel Chrome Plated
! 13	2	Seat	Nickel Alloy ASTM B584
! 14	2	Seat O-Ring	PC Buna-N Standard FKM Optional
! 15	2	Spacer Ring	Alloy Steel, Nickel Plated
16	1	Stop Screw	304 Stainless Steel
17	1	Lock Washer	Steel, Zinc Plated
18	1	Lock Plate	Steel, Zinc Plated
% 19	1	Lube Check	316 Stainless Steel
% 20	1	Button Head Fitting	316 Stainless Steel
21	1	Body	ASTM A487 4C

1 Packing Plate Assembly Parts

% 1 Plug Assembly Parts

! 1 Repair Kit

Conversion kit requires all parts less body.

Please contact Cameron, Valves & Measurement for current Trademark information.

SUPER G ACCESSORIES/REPAIR KITS

Stem Wrenches

Valve Size (in.)	Part Number	Weight (lbs.)
2 RP	9D-GB-1742	12
2 FP	9D-GB-1743	15
2 1/2 RP	9D-GB-1743	15
2 1/2 FP	9D-GB-1744	18
3 RP	9D-GB-1744	18
3 FP	9D-GB-1745	20
4 RP	9D-GB-1745	20
4 FP	9D-GB-1745	20
6 RP	9D-GB-1745	20

Wrench Heads (Operated with bar or rod)

Valve Size (in.)	Part Number
2 RP	9D-GA-3247
2 FP	9D-GA-3248
2 1/2 RP	9D-GA-3248
2 1/2 FP	9D-GA-3249
3 RP	9D-GA-3249
3 FP	9D-GA-3250
4 RP	9D-GA-3250
4 FP	N/A } Use Gear Operator
6 RP	N/A } Use Gear Operator

Adjusting Nut Wrenches

Valve Size (in.)	Part Number
2 RP	9D-GB-1728
2 FP	9D-GB-1729
2 1/2 RP	9D-GB-1729
2 1/2 FP	9D-GB-1730
3 RP	9D-GB-1730
3 FP	9D-GB-1731
4 RP	9D-GB-1731
4 FP	9D-GB-1772
6 RP	9D-GB-1772

Conversion Kits

Valve Size (in.)		Kit Part Number (Applicable for either threaded or flanged valves)	
		API 1000/1500/2000 ASME 400/600	API 3000/5000 ASME 900/5000/2500
2 RP		9D-GA-3118*-0	9D-GA-3118*-1
2 FP		9D-GA-3119*-0	9D-GA-3119*-1
2 1/2 RP		9D-GA-3119*-0	9D-GA-3119*-1
2 1/2 FP		9D-GA-3120*-0	9D-GA-3120*-1
3 RP		9D-GA-3120*-0	9D-GA-3120*-1
3 FP		9D-GA-3121*-0	9D-GA-3121*-1
4 RP		9D-GA-3121*-0	9D-GA-3121*-1

Conversion Kits contain all parts needed to convert standard G Series valves to Super G valves.

* When ordering Conversion Kits, specify plug material
A-Aluminum Bronze C-Hard Chrome Plated Steel.

Example: GA-3118C-0

Existing G Series valves can be converted to a Super G with a cost effective, easy-to-install kit.

Manual Worm Gear Operators

Valve Size (in.)	Part Number	Weight (lbs.)
2 FP	9D-GA-3251	35
2 1/2 RP	9D-GA-3251	35
2 1/2 FP	9D-GA-3252	65
3 RP	9D-GA-3252	65
3 FP	9D-GA-3253	65
4 RP	9D-GA-3253	65
4 FP	9D-GA-3254	65
• 6 RP (Low Pressure)	9D-GA-3254	65
• 6 RP (High Pressure)	9D-GA-3263	85
8 RP	Consult Factory	

- Low Pressure ASME 400, 600, API 1000, 1500, 2000
- High Pressure ASME 900, 1500, 2500, API 3000, 5000

Sealant

For General Oilfield and Hydrocarbon Service

Part Number	Description
9D-GA-3125-01	1 lb. cartridges (box of 10)
9D-GA-3125-05	10 pound pail
9D-GA-3125-12	K stick 1 1/2 in. x 10 in. (box of 10)
9D-GA-3125-40	40 pound pail

Repair Kits

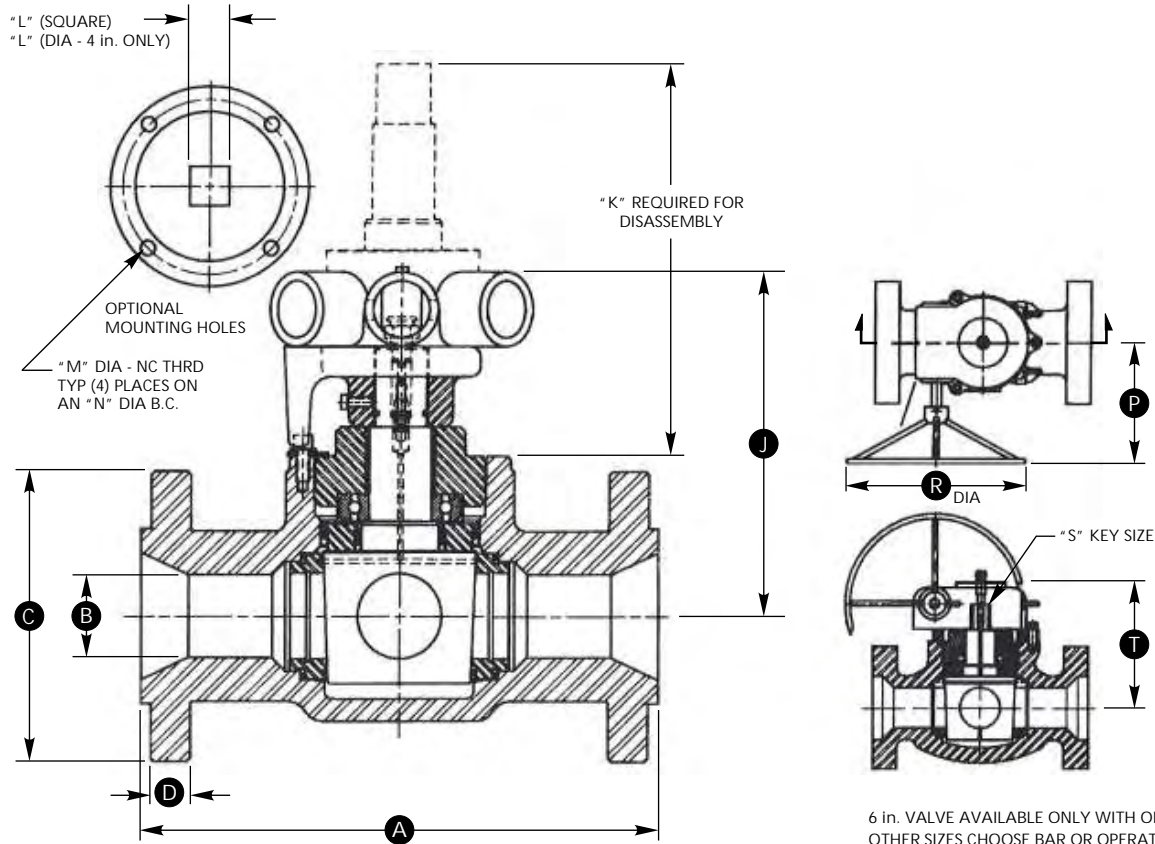
Valve Size (in.)		Kit Part Number (Applicable for either threaded or flanged valves)	
		API 1000/1500/2000 ASME 400/600	API 3000/5000 ASME 900/5000/2500
2 RP		9D-GA-3113*-0	9D-GA-3113*-1
2 FP		9D-GA-3114*-0	9D-GA-3114*-1
2 1/2 RP		9D-GA-3114*-0	9D-GA-3114*-1
2 1/2 FP		9D-GA-3115*-0	9D-GA-3115*-1
3 RP		9D-GA-3115*-0	9D-GA-3115*-1
3 FP		9D-GA-3116*-0	9D-GA-3116*-1
4 RP		9D-GA-3116*-0	9D-GA-3116*-1
4 FP		9D-GA-3256*-0	9D-GA-3256*-1
6 RP		9D-GA-3256*-0	9D-GA-3256*-1
8 RP		Consult Factory	Consult Factory

Repair Kits include the plug, seats, all soft parts and packing plate.

* When ordering Repair Kits, specify plug material A-Aluminum Bronze C-Hard Chrome Plated Steel.

Example: GA-3113C-0

SUPER G REDUCED PORT VALVE

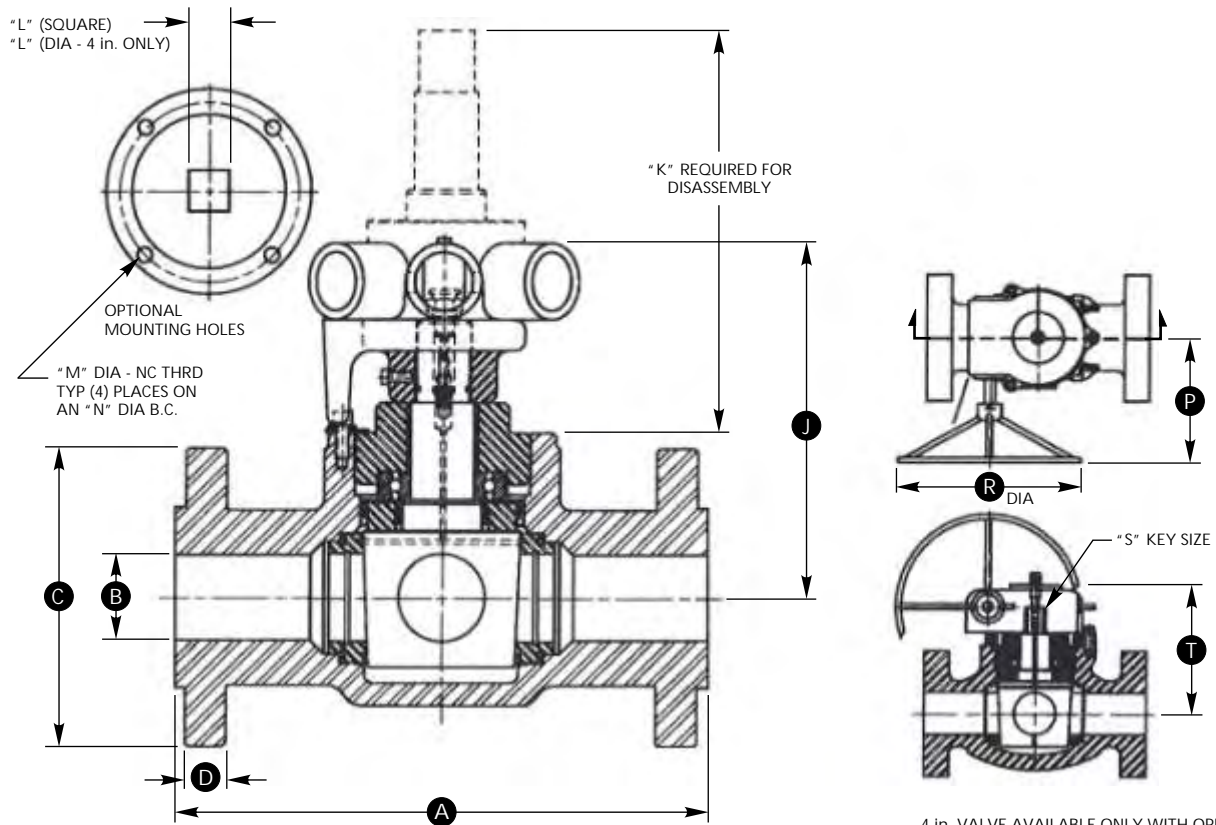


6 in. VALVE AVAILABLE ONLY WITH OPERATOR.
OTHER SIZES CHOOSE BAR OR OPERATOR.

DIMENSIONS & WEIGHTS

Size (in.)	Pressure Class		A			B	C	D	J	K	L	M	N	P	R	S	T	Weight (lbs.)		
	ASME	API	RF	RJ	SE/BW													Flg.	Thrd.	
2	400/600	2000	11.50	11.63	7.50	1.75	6.50	1.25	7.06	7.00	-	-	-	-	-	-	-	-	54	28
	900/1500	3000/5000	14.50	14.63	8.75	1.75	8.50	1.75	7.56	7.25	-	-	-	-	-	-	-	-	98	35
	2500	-	17.75	17.88	-	1.75	9.25	2.25	7.56	7.25	-	-	-	-	-	-	-	-	146	-
2 1/2	400/600	2000	13.00	13.12	10.25	2.12	7.50	1.38	8.63	8.25	1.24	3/8-16	5.00	9.63	12	0.25 sq	8.56	114	48	
	900	3000	16.50	16.62	10.25	2.12	8.62	1.88	8.63	8.25	1.24	3/8-16	5.00	9.63	12	0.25 sq	8.56	153	50	
	1500	5000	16.50	16.62	10.25	2.12	9.25	1.88	8.63	8.25	1.24	3/8-16	5.00	9.63	12	0.25 sq	8.56	185	50	
	2500	-	20.00	20.12	-	2.12	9.25	2.50	8.63	8.25	1.24	3/8-16	5.00	9.63	12	0.25 sq	8.56	225	-	
3	400/600	2000	14.00	14.12	11.63	2.62	8.25	1.50	9.25	9.13	1.50	1/2-13	6.00	10.94	18	0.50 sq	9.53	182	74	
	900	3000	15.00	15.12	11.63	2.62	9.50	1.75	9.25	9.13	1.50	1/2-13	6.00	10.94	18	0.50 sq	9.53	210	82	
	1500	5000	18.50	18.62	11.63	2.62	10.50	2.13	9.25	9.13	1.50	1/2-13	6.00	10.94	18	0.50 sq	9.53	272	82	
	2500	-	22.75	22.88	-	2.62	12.00	2.88	9.25	9.13	1.50	1/2-13	6.00	10.94	18	0.50 sq	9.53	320	-	
4	400	-	16.00	16.12	-	3.12	10.00	1.63	10.13	10.50	1.75	1/2-13	6.88	10.94	30	0.50 sq	10.41	240	-	
	600	2000	17.00	17.12	12.00	3.12	10.75	1.75	10.13	10.50	1.75	1/2-13	6.88	10.94	30	0.50 sq	10.41	261	115	
	900	3000	18.00	18.12	12.00	3.12	11.50	2.00	10.13	10.50	1.75	1/2-13	6.88	10.94	30	0.50 sq	10.41	271	115	
	1500	5000	21.50	21.62	12.00	3.12	12.25	2.38	10.13	10.50	1.75	1/2-13	6.88	10.94	30	0.50 sq	10.41	314	120	
	2500	-	26.50	26.88	-	3.12	14.00	3.25	10.13	10.50	1.75	1/2-13	6.88	10.94	30	0.50 sq	10.41	474	-	
6	300	-	15.87	-	-	4.06	12.50	1.38	-	14.81	2.97	3/4-10	13.00	13.81	30	0.75 sq	12.06	420	-	
	600	2000	22.00	22.12	18.50	4.06	14.00	2.19	-	14.81	2.97	3/4-10	13.00	14.91	30	0.75 sq	12.06	571	-	
	900	3000	24.00	24.12	-	4.06	15.00	2.50	-	14.81	2.97	3/4-10	13.00	16.75	36	0.75 sq	12.06	700	-	
	1500	5000	27.75	28.00	-	4.06	15.50	3.62	-	14.81	2.97	3/4-10	13.00	16.75	36	0.75 sq	12.06	715	-	
8	600	-	26.00	26.12	-	6.06	16.50	2.19	Consult Factory											
	1500	-	32.75	33.12	-	6.06	19.00	3.62	Consult Factory											

SUPER G FULL PORT VALVE



DIMENSIONS & WEIGHTS

Size (in.)	Pressure Class		A			B	C	D	J	K	L	M	N	P	R	S	T	Weight (lbs.)	
	ASME	API	RF	RJ	SE/BW													Flg.	Thrd.
2	300	-	11.12	-	-	2.12	6.50	0.875	8.63	8.25	1.24	3/8-16	5.00	9.63	12	0.25 sq	8.56	105	-
	400/600	2000	13.00	13.12	10.25	2.12	6.50	1.75	8.63	8.25	1.24	3/8-16	5.00	9.63	12	0.25 sq	8.56	117	57
	900	3000	15.00	15.12	10.25	2.12	8.50	1.75	8.63	8.25	1.24	3/8-16	5.00	9.63	12	0.25 sq	8.56	145	57
	1500	5000	15.38	15.50	10.25	2.12	8.50	1.75	8.63	8.25	1.24	3/8-16	5.00	9.63	12	0.25 sq	8.56	155	57
	2500	-	17.75	17.88	-	2.12	9.25	2.00	8.63	8.25	1.24	3/8-16	5.00	9.63	12	0.25 sq	8.56	175	-
2 1/2	400/600	2000	15.00	15.12	11.63	2.62	7.50	1.38	9.25	9.13	1.50	1/2-13	6.00	10.94	18	0.50 sq	9.53	183	90
	900	3000	17.00	17.12	11.63	2.62	9.63	1.88	9.25	9.13	1.50	1/2-13	6.00	10.94	18	0.50 sq	9.53	215	90
	1500	5000	17.88	18.00	11.63	2.62	9.63	1.88	9.25	9.13	1.50	1/2-13	6.00	10.94	18	0.50 sq	9.53	255	90
	2500	-	20.00	20.12	-	2.62	10.50	2.25	9.25	9.13	1.50	1/2-13	6.00	10.94	18	0.50 sq	9.53	285	-
3	300	-	15.25	-	-	3.12	8.25	1.12	8.81	10.50	1.75	-	-	-	-	-	-	215	-
	600	2000	17.50	17.62	12.00	3.12	8.25	1.50	10.13	10.50	1.75	1/2-13	6.88	10.94	30	0.50 sq	10.41	245	121
	900	3000	18.50	18.62	12.00	3.12	9.50	1.75	10.13	10.50	1.75	1/2-13	6.88	10.94	30	0.50 sq	10.41	272	126
	1500	5000	20.63	20.75	12.00	3.12	10.50	2.13	10.13	10.50	1.75	1/2-13	6.88	10.94	30	0.50 sq	10.41	320	126
	2500	-	22.75	22.88	-	3.12	12.00	2.63	10.13	10.50	1.75	1/2-13	6.88	10.94	30	0.50 sq	10.41	355	-
4	300	-	18.00	-	-	4.06	10.00	1.25	11.93	14.81	1.75	-	-	-	-	-	-	350	-
	600	2000	22.00	20.12	-	4.06	11.50	1.81	-	14.81	2.97	3/4-10	13.00	14.91	30	0.75 sq	12.06	439	-
	900	3000	22.00	22.12	-	4.06	11.50	1.94	-	14.81	2.97	3/4-10	13.00	16.75	36	0.75 sq	12.06	570	-
	1500	5000	24.62	24.75	-	4.06	12.25	2.19	-	14.81	2.97	3/4-10	13.00	16.75	36	0.75 sq	12.06	619	-
6	600	-	26.00	26.12	-	6.06	14.00	1.88	Consult Factory										
	900	-	24.00	24.12	-	6.06	15.00	2.19											
	1500	-	27.75	28.00	-	6.06	15.50	3.25											

Note: 6 in. Full Port ASME 900 and ASME 1500 have the same Face-to-Face as Reduced Port.

SUPER G DESIGN STANDARDS

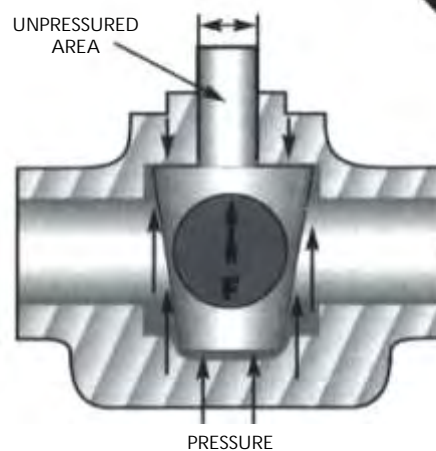
Whenever applicable Super G valves conform to the latest edition of the following standard specification as to pressure ratings, dimensions and construction:

- ASME - American National Standards Institute
- B1.20.1 - Pipe Threads, General Purpose
- B16.5 - Pipe Flanges and Flange Fittings
- B16.10 - Face-to-Face and End-to-End Dimensions of Valves
- B16.25 - Butt-Welding Ends
- B16.34 - Valves-Flanged, Threaded and Welding End
- API - American petroleum Institute
- 6A - Specification for Wellhead and Christmas Tree Equipment
- 6D - Specification for Pipeline Valves-Monogram Available
- 6FA - Fire Test for Valves
- MSS - Manufacture's Standardization Society of the Valve and Fittings Industry
- SP-6 - Standard Finishes for Contact Faces of Pipe Flanges and Connecting End Flanges of Valves and Fittings
- SP-25 - Standard Marking System for Valves, fittings, Flanges and Unions
- SP-55 - Quality Standard for Steel Castings for Valves, Flanges and Fittings and other Piping Components (Visual Methods)
- NACE - National Association of Corrosion Engineers
- MR0175 (2002) - Sulfide Stress Cracking Resistant Metallic Materials for Oil Field Equipment

COMPARISON CHART: SUPER G vs. CONVENTIONAL PLUG VALVE

Performance Feature	Super G	Plug Valve
Top entry - field repairable	Yes	No
Integral plug and stem	Yes	No
Fire Safe (API 6FA)	Yes	Yes
Removable seats	Yes	No
Part interchangeability	Yes	No
Tight shut-off without sealant	Yes	No
Metal-to-Metal seats	Yes	Yes
Lubricated	Yes	Yes
Low pressure drop	Yes	No
Low turbulence	Yes	No
Full open	Yes	No
NACE standard	Yes	No
Abrasive/erosive service	Yes	Yes
CO ₂ service	Yes	No
H ₂ S service	Yes	Yes

Super G
Solves Wedging Problems



Unpressured area at stem results in lifting force "F" which prevents wedging of plug.

SUPER G FLOW COEFFICIENTS (C_v)

Valve Size (in.)	Bore Type	Plug Port	Body Port	C _v
2	RP	1.75	2.06	156
	FP	2.12	2.06	341
2 1/2	RP	2.12	2.62	363
	FP	2.62	2.62	601
3	RP	2.62	3.12	395
	FP	3.12	3.12	891
4	RP	3.12	4.06	610
	FP	4.06	4.06	949
6	RP	4.06	6.06	824
	FP	6.00	6.06	2266
8	RP	6.06	8.00	2302

PRESSURE DROP ACROSS VALVE

$$DP = (r / 62.4) (Q / C_v)^2$$

Where: DP = Pressure drop (psi)
 r = Fluid density (lbs/ft³)
 Q = Fluid flow rate (gallons/minute)
 C_v = Flow coefficient of valve

Example:

Given: Through a 4 in. Reduced port (RP) TXT Super "G" plug valve at a flow rate of 400 gallons per minute.

$$r = 60.1 \text{ (lbs/ft}^3\text{) @ 200}^\circ\text{F.}$$

$$Q = 400 \text{ gallons/minute.}$$

$$C_v = 610$$

Find: Pressure drop, DP, across valve.

Solution:

$$DP = (60.1/62.4) \times (400/610)^2$$

$$DP = 0.963 \times (0.656)^2$$

$$DP = 0.963 \times 0.430$$

$$DP = 0.414 \text{ psi}$$

MAINTENANCE

In-line, top entry, field repairability with integral plug and stem and removable seats makes the Super G unique among block valves.

Routine maintenance, or replacement of plug and seats, can be achieved quickly, simply and without special tools or training.

Seats and plugs are interchangeable thus eliminating special lapping or matching of parts. Removable seats avoid expensive machining of internal body surfaces and system downtime. Bubble-tight, zero leakage sealing is assured.

Nine simple steps are all that are involved to achieve successful field repair.

(WARNING: All pressure should be removed from the line).

1. Remove wrench/rod mechanism and top adjusting body nut.
2. Withdraw bearing and packing plate assemblies.
3. Withdraw plug assembly.
4. Withdraw seats and rings.
5. Clean body cavities.
6. Install new seats and rings (if required).
7. Install new plug assemblies (if required).
8. Install new packing plate assembly and thrust bearing.
9. Refit and adjust top body nut and operator mechanism.

SUPER G AVERAGE OPERATING TORQUE

2 in. Reduced Port through 8 in. Reduced Port (ft-lbs.)

SIZE (in.) BORE (in.)	2 1.75	2 1/2 2.12	3 2.62	4 3.12	4 3.44	6 4.06	6 5.189	8 6.06	8 6.81
psi									
0	22	55	88	88	88	110	132	165	306
500	44	110	132	154	154	303	396	1000	1850
1000	66	165	198	242	296	638	880	1829	3385
1500	88	220	264	330	508	858	1518	2659	4918
2000	121	275	330	413	678	1078	1761	3488	6453
2500	143	330	385	495	889	1320	2464	4290	7937
3000	165	385	440	583	1058	1540	2723	5225	9667
3500	193	440	495	671	1186	1782	3300	6050	11193
4000	209	495	572	770	1397	2024	3795	6807	12593
4500	237	550	635	858	1566	2255	4235	7636	14127
5000	264	605	682	935	1779	2475	4565	8466	15662
5500	286	660	748	1023	1936	2695	5170	9295	17196
6000	319	715	825	1111	2145	2915	5610	10120	18730
6500	338	770	875	1196	2332	3177	6160	10954	20264
7000	362	825	936	1282	2475	3410	6600	11375	N/A
7500	386	880	998	1368	2640	3644	7150	12172	N/A
8000	410	935	1059	1454	2860	3878	7480	12968	N/A
8500	436	990	1120	1541	3014	4112	8030	13765	N/A
9000	460	1045	1181	1627	3190	4345	8470	14562	N/A
9500	484	1100	1243	1714	3410	4579	9020	15358	N/A
10000	508	1155	1304	1801	3575	4813	9460	16155	N/A

All torques are in FT-LBS.
 These torques do not include a safety factor.
 For actuator sizing add 50% to the listed torques.

See Dimension "B" on page 4 & 5.

Please contact Cameron, Valves & Measurement for current Terms and Conditions and Trademark information.

TEXSTEAM™



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 USA Toll Free 800 323 9160

For the most current contact and location information go to: www.c-a-m.com