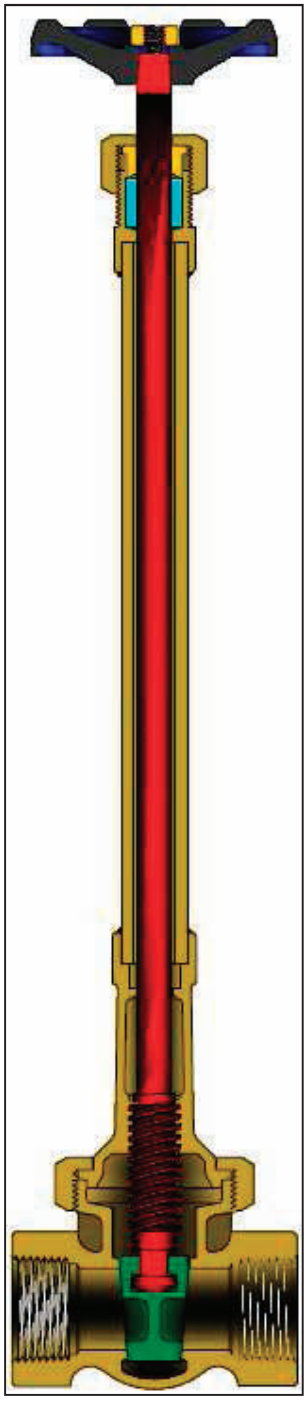
MSS SP-80 GATE VALVE
UNION BONNET, THREADED ENDS
¼ TO 3" (6 TO 75mm) CLASSES 200 AND 300
BRONZE RISING STEM



STANDARD MATERIALS

PART	MATERIALS
Body	B61
Bonnet	B61
Bonnet Ring	B61
Wedge	B61
Retaining Ring (1)	SST 304
Retaining Plate (1)	B371 C69400
Wedge Insert (1)	PCTFE
Stem	SST 303
Packing Nut	B62 or B16
Gland	B16
Packing	PTFE
Packing Sleeve	B371 C69400
Extension Column	SST 304
Hand Wheel	Malleable Iron or Steel
Hand Wheel Nut	Brass
Wheel Plate	Aluminum
Body / Bonnet Stud (2)	A193 Gr. B8
Body / Bonnet Nut (2)	A194 Gr. 8
Gasket (2)	Graphite

(1) On soft seated valves only.
(2) Sizes 2½" and 3" use a bolted bonnet design.

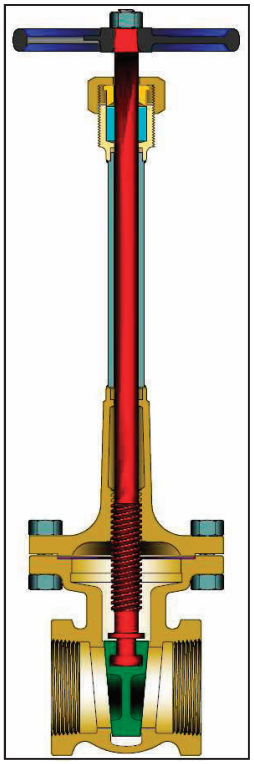
Design Specifications

Item	Applicable Specification
Pressure - temperature ratings	MSS SP-80
General valve design	MSS SP-80
Thread design	ASME B1.20.1
Materials	ASTM

Class	Fig. No.
200	0375
300	0377

DESIGN FEATURES:

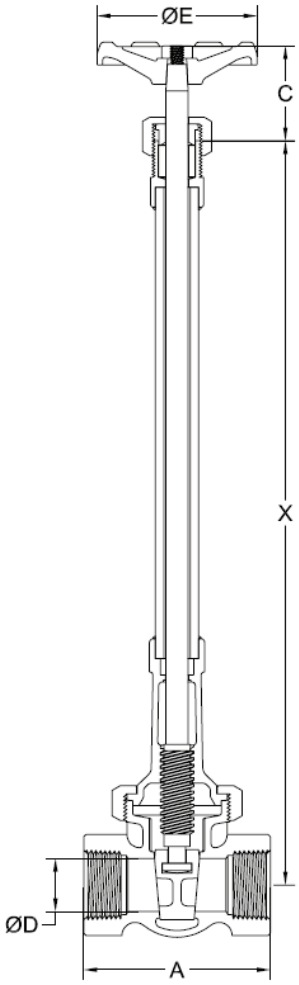
- **Renewable** solid wedges.
- **Integral** seats.
- **Stems** are rotating / rising design.
- **Available** soft-seated for sizes 2", 2½", and 3".
- **Each** valve is shell and seat pressure tested per industry standard MSS SP-80.
- **Valves** are specially cleaned and processed for oxygen or cryogenic service and are then sealed to prevent contamination.
- **Bonnet** chamber ventilation, in order to prevent excess pressure build up caused by trapped cryogenic liquids, is available upon request.
- **Valves** available with non-extended bonnets. See Bronze and Iron Catalog for dimensions and weights of non-extended design.



Bolted Bonnet Design (2)

GATE VALVE DIMENSIONS (CLASSES 200 & 300).

SIZE	FIG 0375								FIG 0377							
in / mm	A	C	D	E	X (1)	WT	lb / kg	C_V	A	C	D	E	X (1)	WT	lb / kg	C_V
¼	1.81	2.0	0.25	2.1	13.0	0.8		3.2	1.94	2.2	0.25	3.0	13.0	1.0		3.2
6	46	51	6	54	330	0.4			49	56	6	76	330	0.5		
⅜	2.06	2.0	0.38	2.1	13.0	0.9		7.1	2.13	2.2	0.38	3.0	13.0	1.1		7.1
10	52	51	10	54	330	0.4			54	56	10	76	330	0.5		
½	2.44	2.2	0.50	2.5	13.0	1.2		12.6	2.44	2.5	0.50	3.3	13.0	1.8		12.6
13	62	56	13	64	330	0.5			62	64	13	83	330	0.8		
¾	2.56	2.6	0.75	2.8	13.0	2.0		30	2.69	3.0	0.75	3.6	13.0	3.0		30
20	65	66	19	70	330	0.9			68	76	19	92	330	1.4		
1	2.94	3.1	1.00	3.0	14.0	2.7		55	3.00	3.4	1.00	4.1	14.0	4.9		55
25	75	79	25	76	356	1.2			76	86	25	105	356	2.2		
1¼	3.13	3.9	1.25	3.3	14.0	4.7		90	3.38	4.3	1.25	4.6	14.0	6.5		90
32	79	99	32	83	356	2.1			86	109	32	117	356	2.9		
1½	3.50	3.9	1.50	3.6	14.0	5.5		130	3.75	4.3	1.50	5.1	14.0	8.9		130
40	89	99	38	92	356	2.5			95	109	38	130	356	4.0		
2	4.00	4.6	2.00	4.1	16.0	9.1		240	4.38	5.0	2.00	5.7	16.0	16.7		240
50	102	117	51	103	406	4.1			111	127	51	144	406	7.6		
2½	4.63	5.8	2.50	4.7	18.0	18.9		350	5.00	5.9	2.50	8.0	18.0	24		350
65	117	147	64	119	457	8.6			127	150	64	203	457	11		
3	5.13	6.4	3.00	5.7	20.0	25		510	5.63	6.6	3.00	9.0	20.0	32		510
75	130	163	76	145	508	11			143	168	76	229	508	15		



C = Packing sleeve to top open
X = Center to top of stuffing box (Std)

WT = Weight
C_V = Flow Coefficient

(1) Other extensions available. Consult Powell Engineering.