



## INTERNATIONAL BRASS BALL VALVES

### Figure 141S, 171N, 171S

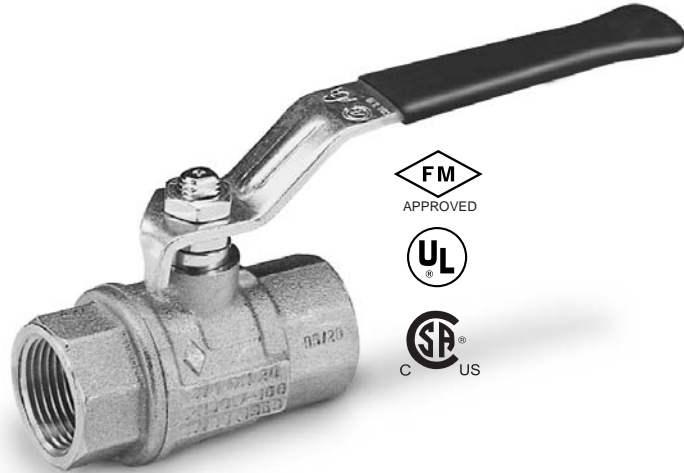


Figure 171N

The Anvil Figure 141S, 171N and 171S Brass Ball Valves have a rugged, dependable design, meeting rigid specification for world wide use. Every valve is individually tested in an open and closed position at 80 psi. The two piece 171S and 171N full port design are available in sizes 1/4" - 4". A "T" handled version of the 171N is also available as Figure 171N-T in sizes 3/8" - 1". The two piece 141S standard port is available in sizes 1/2" - 2". All valves conform to MSS-SP-110, MSS-SP-25 and Federal Specification WW-V-35B Type II, Class A Style 3.

Features of these valves include triple stem seal, hard chrome plated ball, blowout proof stem, adjustable packing gland, a bubble tight shut off and a floating ball for an economical solution for residential, commercial and industrial applications.

Anvil's Brass Ball Valves are available in the soldered end standard port (Figure 141S), full port threaded end (Figure 171N), and full port soldered end (Figure 171S).

**SIZE RANGE:** 1/2" - 2" (141S)

1/4" - 4" (171N/171S)

**PRESSURE RATING:** from full vacuum to 600 psi WOG

150 psi steam

#### Material Specifications:

<b>Body</b>	Brass, ASTM B124, Alloy C37700
<b>Retainer</b>	Brass, ASTM B124, Alloy C37700
<b>Ball</b>	Brass, ASTM B124, Alloy C37700 Chrome Plated
<b>Stem</b>	Brass, ASTM B124, Alloy C37700 Nickel Plated
<b>Seat Ring</b>	PTFE
<b>Packing</b>	PTFE
<b>Packing Nut</b>	Steel, Zinc
<b>Packing Gland</b>	Brass, ASTM B124, Alloy C37700 Nickel Plated
<b>Friction Washer</b>	PTFE
<b>Stem O-Ring</b>	NBR 75 Shore A

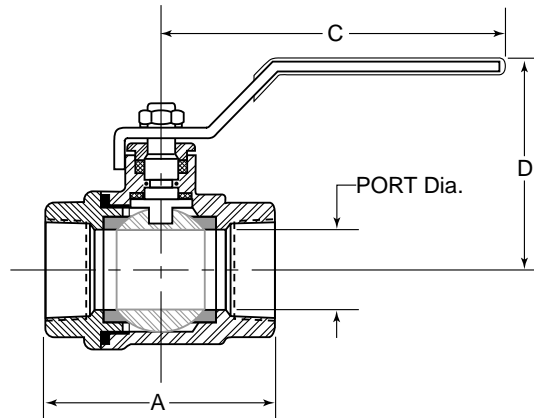
<b>Handle</b>	Steel, Zinc Plated to 2", Aluminum to 4"
<b>Handle Cover</b>	Yellow PVC Coated to 2", Yellow Enamel to 4"
<b>Handle Nut</b>	Steel, Zinc Plated

#### Available Options\*

<b>Lever Handle</b>	1/4" - 4"
<b>Lock Device</b>	1/4" - 2" (171N)
<b>Memory Stop</b>	1/4" - 2" (171N/171S)
<b>Stem Extension</b>	1/4" - 4" (171N)
<b>"T" Handle</b>	1/4" - 1" (171N)

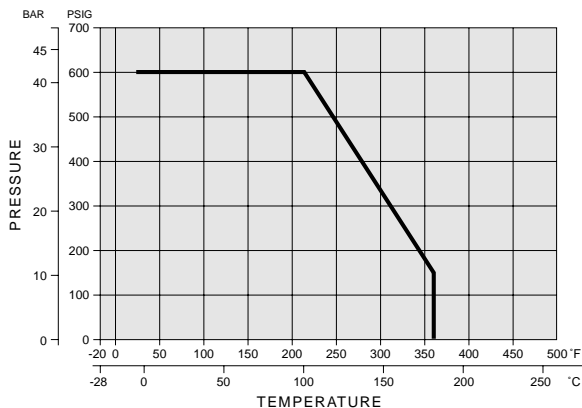
\*Not all options available for all sizes. Please contact your local Anvil Regional Service Center for assistance.

# Anvil International Brass Ball Valves



Valve Code	NPS	Port Dia.		A		C		D		Cv	Weight	
		inch	mm	inch	mm	inch	mm	inch	mm		lbs	kg
141S	1/2"	.47	12	2.05	52	3.85	98	1.81	46	6.3	.70	.32
Standard	3/4"	.59	15	2.68	68	3.85	98	1.92	49	9.5	.84	.38
Port	1"	.78	20	3.19	81	4.80	122	2.32	59	22.2	1.1	.50
	1 1/4"	.98	25	3.56	90	4.80	122	2.48	63	30.8	1.5	.70
	1 1/2"	1.25	32	3.98	101	6.02	153	3.07	78	60.9	2.2	.98
	2"	1.57	40	5.04	128	6.02	153	3.34	85	92.9	3.1	1.4
171N	1/4"	.39	10	2.02	51	3.85	98	1.75	44	6	.30	.14
Full	3/8"	.39	10	2.02	51	3.85	98	1.75	44	7	.28	.13
Port	1/2"	.59	15	2.44	62	3.85	98	1.88	48	19	.41	.19
	3/4"	.78	20	2.71	69	4.80	122	2.28	58	35	.67	.31
	1"	.96	24	3.07	78	4.80	122	2.44	62	50	1.0	.50
	1 1/4"	1.25	32	3.42	87	6.02	153	3.07	78	104	2.0	.92
	1 1/2"	1.57	40	3.89	99	6.02	153	3.34	85	268	3.1	1.4
	2"	1.96	50	4.33	110	6.37	162	3.79	96	309	4.2	1.9
	2 1/2"	2.56	65	5.59	142	8.07	205	5.02	128	629	8.0	3.7
	3"	3.15	80	6.45	164	8.07	205	5.45	138	1018	12.0	5.9
	4"	3.94	100	7.60	193	10.23	260	6.34	161	1622	22	10
171S	1/2"	.59	15	2.53	64	3.85	98	1.88	48	19	.48	.22
Full	3/4"	.78	20	2.99	76	4.80	122	2.32	59	35	.70	.32
Port	1"	.98	25	3.58	91	4.80	122	2.48	63	50	1.1	.49
	1 1/4"	1.25	32	4.09	104	6.02	153	3.14	80	104	2.0	.89
	1 1/2"	1.57	40	4.56	116	6.02	153	3.38	86	268	2.7	1.2
	2"	1.96	50	5.43	138	6.41	163	3.70	94	309	3.9	1.8
	2 1/2"	2.56	65	6.90	176	8.07	205	5.02	128	629	9.4	4.3
	3"	3.15	80	8.20	209	8.07	205	5.45	138	1018	14.5	6.6
	4"	3.94	100	10.30	261	10.23	260	6.34	161	1622	24.7	11.2

## Pressure Vs. Temperature



## Notes

1. Dimensions of solder joint ends conform to ANSI B16.22. Solder end valves are designed to be used with solders not exceeding a melting point of 470°F/250°C. Higher temperatures may damage the seal material.
2. For solder joint valves, the pressure/temperature rating is dependent on the solder material used. Please refer to the limitations listed in ANSI B16.18.

3. Rate of Flow Calculations for liquids:

To determine the flow rate of a liquid passing through a valve, use the following formula:

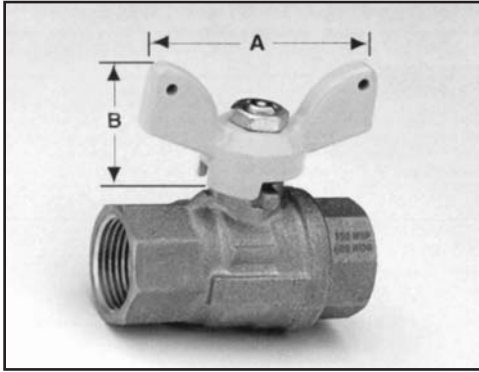
$$Q_L = C_v \left( \sqrt{\frac{\Delta P}{S_L}} \right)$$

Where:  $Q_L$  = flow of liquid in gallons per minute (GPM)  
 $C_v$  = flow coefficient  
 $\Delta P$  = pressure drop (PSI)  
 $S_L$  = specific gravity of liquid

# Anvil International Brass Ball Valves

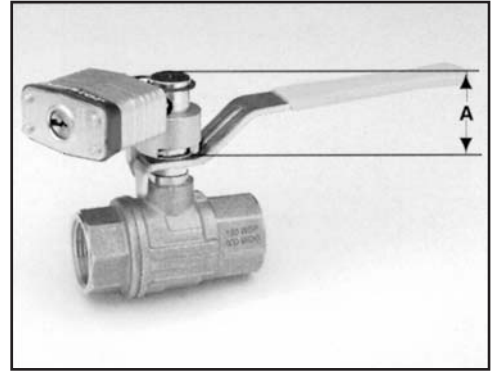
## • Options •

### "T" Handle



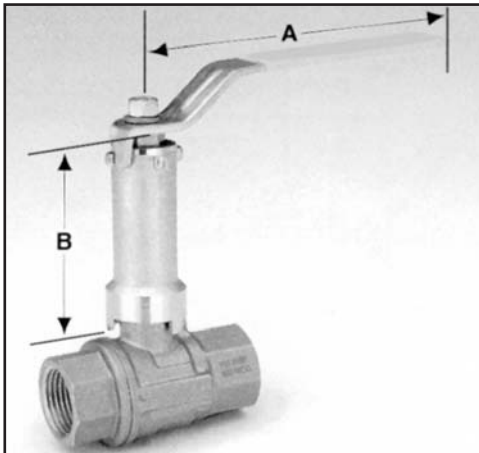
171N	DIMENSIONS		A		B	
	NPS	DN	inch	mm	inch	mm
"T" Handle	1/4 - 3/8 - 1/2	8 - 10 - 15	2.0	50	1.08	27.5
	3/4 - 1	20 - 25	2.5	64	1.30	33.0

### Lock Device



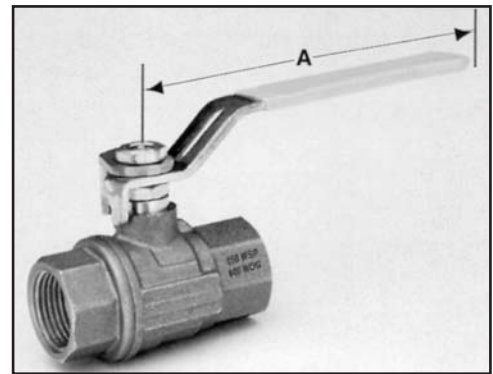
171N	DIMENSIONS		A	
	NPS	DN	inch	mm
Lock Device	1/4 - 3/8 - 1/2	8 - 10 - 15	1.7	44.0
	3/4 - 1	20 - 25	1.9	47.0
	1 1/4 - 1 1/2	32 - 40	3.5	88.5
	2	50	3.7	94.5

### Stem Extension (Brass)



171N	DIMENSIONS		A		B	
	NPS	DN	inch	mm	inch	mm
Stem Extension	1/4 - 3/8 - 1/2	8 - 10 - 15	3.8	97.0	2.4	60.5
(Brass)	3/4 - 1	20 - 25	4.8	121.5	2.6	67.0
	1 1/4 - 1 1/2	32 - 40	5.9	151.0	2.6	67.0
	2	50	6.4	162.0	2.6	67.0

### Memory Stop



171N/171S	DIMENSIONS		A	
	NPS	DN	inch	mm
Memory Stop	1/4 - 3/8 - 1/2	8 - 10 - 15	3.8	97.0
	3/4 - 1	20 - 25	4.8	121.5
	1 1/4 - 1 1/2	32 - 40	5.9	151.0
	2	50	6.4	162.0



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