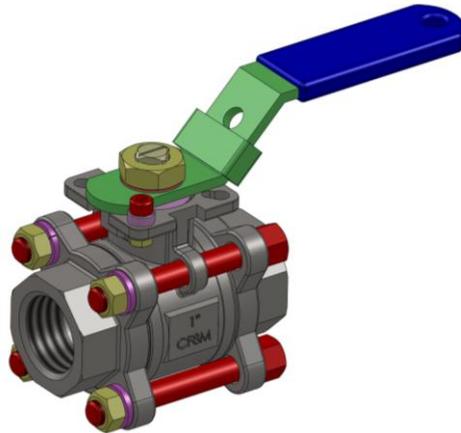


INSTALLATION, MAINTENANCE AND OPERATING INSTRUCTIONS**BOSS B380D****1/2"~2"****3 PIECE BALL VALVES****Design Features:**

1. Locking device, stop pin for fixing the handle.
2. Blow out proof stem
3. Stem with Anti-static function.
4. ISO 5211 mounting pad

WARNING

FOR YOUR SAFETY, IT IS IMPORTANT THAT THE FOLLOWING PRECAUTIONS BE TAKEN PRIOR TO REMOVAL OF THE VALVE FROM THE LINE OR BEFORE ANY DISASSEMBLY.

1. WEAR ANY PROTECTIVE CLOTHING OR EQUIPMENT NORMALLY REQUIRED WHEN WORKING WITH THE FLUID INVOLVED.
2. DEPRESSURIZE THE LINE AND CYCLE THE VALVE AS FOLLOWS :
 - A. PLACE THE VALVE IN THE OPEN POSITION AND DRAIN THE LINE
 - B. CYCLE THE VALVE TO RELIEVE RESIDUAL PRESSURE IN THE BODY CAVITY BEFORE REMOVING THE VALVE FROM THE LINE.
 - C. AFTER REMOVAL AND BEFORE ANY DISASSEMBLY, CYCLE THE VALVE AGAIN SEVERAL TIMES.
3. THIS VALVE IS NOT USED FOR UNSTABLE GASES, H₂SO₄, HF, HCL AND OTHER DANGEROUS (FLUID) (ANY PROBLEM ABOUT THE USED FLUID, PLEASE CONTACT THE MANUFACTURER.)

INSTALLATION**SCREWED END STYLE**

1. The valve may be installed for flow in either direction. Use standard piping practices when

installing valves with threaded parts. When tightening the valve to the pipe, apply the wrench to the end cap nearest the pipe being worked. Adjust packing prior to installation.

2. When installing the above valves, be sure that the threads on the mating pipe are free from excessive grit, dirt or burrs.
3. Take care to assure that any pipe sealants used are not so excessively applied to the pipe threads that the valve seats, ball and or cavity becomes fouled.

OPERATION

1. The valve can be used under the temperature between -10°C and 160°C and shall not be applied under an environment of low and high temperature.
2. The valve pressure rating casts on the valve body; user shall make sure the fluid pressure does not exceed valve rated pressure.
3. Any inappropriate operation will cause leakage or other problems; in case of emergency, must release the fluid inside the pipeline and then follow the procedures.
4. Operating torques shall not exceed the data shown on Table 1. Otherwise, it may be over-torque to make the stem bent, and also cause the failure of operational structure.

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MAINTENANCE

Periodically observe the valve to be sure of proper performance. More frequent observation is recommended under extreme operating conditions. Routine maintenance consists of tightening the stem nut 1/4 turn periodically to compensate for the wear caused by the stem's turning against the resilient RTFE seal.

DISASSEMBLY(1/4"~1")

NOTE : If complete disassembly becomes necessary, replacement of all seats and seals is recommended. Before disassembly, user should check the service kit is available in the local market, if not, please make an order from the original manufacturer or local agent for the service kit of the product in hand.

1. Unscrew the bolt nut (28-1), remove the spring washer (22), cap bolt (42) and body cap (6). See Figure 1.
2. Take out the seat (11), ball (7) and gasket (16).
3. Remove the stop nut (28-2), washer(21), stop bolt (43), handle nut (28), lock washer (24), and handle (30), snap ronc (36), bell washer (23) ,gland (26),and stem packing (15). Then press the stem (8) from the top into the valve body and remove it through the body.
4. Remove the stem seal (12) and o-ring (18) from stem (8).
5. Parts inspection, maintenance and replacement
 - a. Check the surface of ball (7) whether is it hurt? If there is any damaged on the surface, than found out the root cause such as the dirt fluid, surplus, etc. It must avoid the damage factors as far as possible.
 - b. Check the inner surface of valve body (1) and body cap (6). If there is any corrosion condition occurred, the minimum wall thickness shall be measured and evaluated for safety purpose. Minimum wall thickness for relevant material group and nominal pressure is regulated in ASME B16.34 table 3.
 - c. Check the ball seats (11) whether hurt? If there is any damaged on the surface, than found out the root cause such as the dirt fluid, surplus, etc. It must avoid the damage factors as far as possible. Whatever the seats are

hurt or not, it is recommended to replace them.

- d. The stem packing (15) may be replaced by the new parts after dismantle the valve.

DISASSEMBLY(1 1/4"~2")

NOTE : If complete disassembly becomes necessary, replacement of all seats and seals is recommended. Before disassembly, user should check the service kit is available in the local market, if not, please make an order from the original manufacturer or local agent for the service kit of the product in hand.

1. Unscrew the bolt nut (28-1), remove the spring washer (22), cap bolt (42) and body cap (6). See Figure 1.
2. Take out the seat (11), ball (7) and gasket (16).
3. Remove the stop nut (28-2), washer(21), stop bolt (43), nut (28), lock washer (24), and handle (30), lock washer (24-1), nut (28), bell washer (23) ,gland (26),and stem packing (15). Then press the stem (8) from the top into the valve body and remove it through the body.
4. Remove the stem seal (12) and o-ring (18) from stem (8).
5. Parts inspection, maintenance and replacement
 - a. Check the surface of ball (7) whether is it hurt? If there is any damaged on the surface, than found out the root cause such as the dirt fluid, surplus, etc. It must avoid the damage factors as far as possible.
 - b. Check the inner surface of valve body (1) and body cap (6). If there is any corrosion condition occurred, the minimum wall thickness shall be measured and evaluated for safety purpose. Minimum wall thickness for relevant material group and nominal pressure is regulated in ASME B16.34 table 3.
 - c. Check the ball seats (11) whether hurt? If there is any damaged on the surface, than found out the root cause such as the dirt fluid, surplus, etc. It must avoid the damage factors as far as possible. Whatever the seats are hurt or not, it is recommended to replace them.
 - d. The stem packing (15) may be replaced by the new parts after dismantle the valve.

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ASSEMBLY : (1/4"~1")

The following instructions are for in-line assembly. For bench assembly, which may be more convenient, follow a similar procedure by holding the valve in a vise by one end cap. Use care not to cut or scratch the seats (11) or stem packing (15).

1. Air-blasting the valve body (1). Insert the spring(33), plunger(34/35), stem seal (12),o-ring (18) into the stem (8). Then insert the stem (8) into the stem bore and up out the top of the valve.
2. Place a wrench through the body on the bottom of the stem blade to hold the stem stationary. Then, install the stem packing (15), gland (26) , bell washer (23) and snap ring (36)into the stem (8) .
3. Align the stem blade inside the valve body (1) with the ball (7). Insert the ball (7) and rotate the stem (8) to the fully closed position.
4. Working at either end of the valve body (1), place a seat (11) into the valve body (1). Push the seat (11) snugly against the closed ball (7).
5. Place a gasket (16) into the machined sealing groove of the body (1). Be certain the groove and seal are clean.
6. Repeat steps 4 and 5 for assembly of the opposite end of the valve.
7. Turn the stem to the fully open position.
8. Swing the entire body assembly back into the properly aligned and interlocked position between the body caps (6), being careful not to scratch the gasket (16). The body caps (6) may have to be spread slightly to accept the valve body (1).
9. Close the valve.
10. Bolt the valve together with cap bolts (42), spring washer (22) and bolt nuts (28-1). Tighten the nuts evenly, alternating between them to the torque listed in Table 1.
11. Turn the ball (7) a round at least.
12. Install washer (21) stop bolt (43) and stop nut (28-2) into the body (1) and place the handle (30), lock washer (24) and handle nut (28) over the stem (8). Tighten the nut (28) until snug.
13. Cycle the valve slowly twice to endure permanent position of the ball between the two seats.

ASSEMBLY : (1 1/4"~2")

The following instructions are for in-line assembly. For bench assembly, which may be more convenient, follow a similar procedure by holding the valve in a vise by one end cap. Use care not to cut or scratch the seats (11) or stem packing (15).

1. Air-blasting the valve body (1). Insert the spring(33), plunger(34/35), stem seal (12),o-ring (18) into the stem (8). Then insert the stem (8) into the stem bore and up out the top of the valve.
2. Place a wrench through the body on the bottom of the stem blade to hold the stem stationary. Then, install the stem packing (15), gland (26) , bell washer (23), nut (28), and lock washer (24-1) into the stem (8) .
3. Align the stem blade inside the valve body (1) with the ball (7). Insert the ball (7) and rotate the stem (8) to the fully closed position.
4. Working at either end of the valve body (1), place a seat (11) into the valve body (1). Push the seat (11) snugly against the closed ball (7).
5. Place a gasket (16) into the machined sealing groove of the body (1). Be certain the groove and seal are clean.
6. Repeat steps 4 and 5 for assembly of the opposite end of the valve.
7. Turn the stem to the fully open position.
8. Swing the entire body assembly back into the properly aligned and interlocked position between the body caps (6), being careful not to scratch the gasket (16). The body caps (6) may have to be spread slightly to accept the valve body (1).
9. Close the valve.
10. Bolt the valve together with cap bolts (42), spring washer (22) and bolt nuts (28-1). Tighten the nuts evenly, alternating between them to the torque listed in Table 1.
11. Turn the ball (7) a round at least.
12. Install washer (21) stop bolt (43) and stop nut (28-2) into the body (1) and place the handle (30), lock washer (24) and handle nut (28) over the stem (8). Tighten the nut (28) until snug.
13. Cycle the valve slowly twice to endure permanent position of the ball between the two seats.

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TABLE 1 :

Valve size	Cap Nut Torque (in · lbf)	Maximum Operating Torque (in · lbf)
1/4"	177	50
3/8"		
1/2"		
3/4"		
1"	354	100
1 1/4"		160
1 1/2"		210
2"	561	320

TABLE 2 :

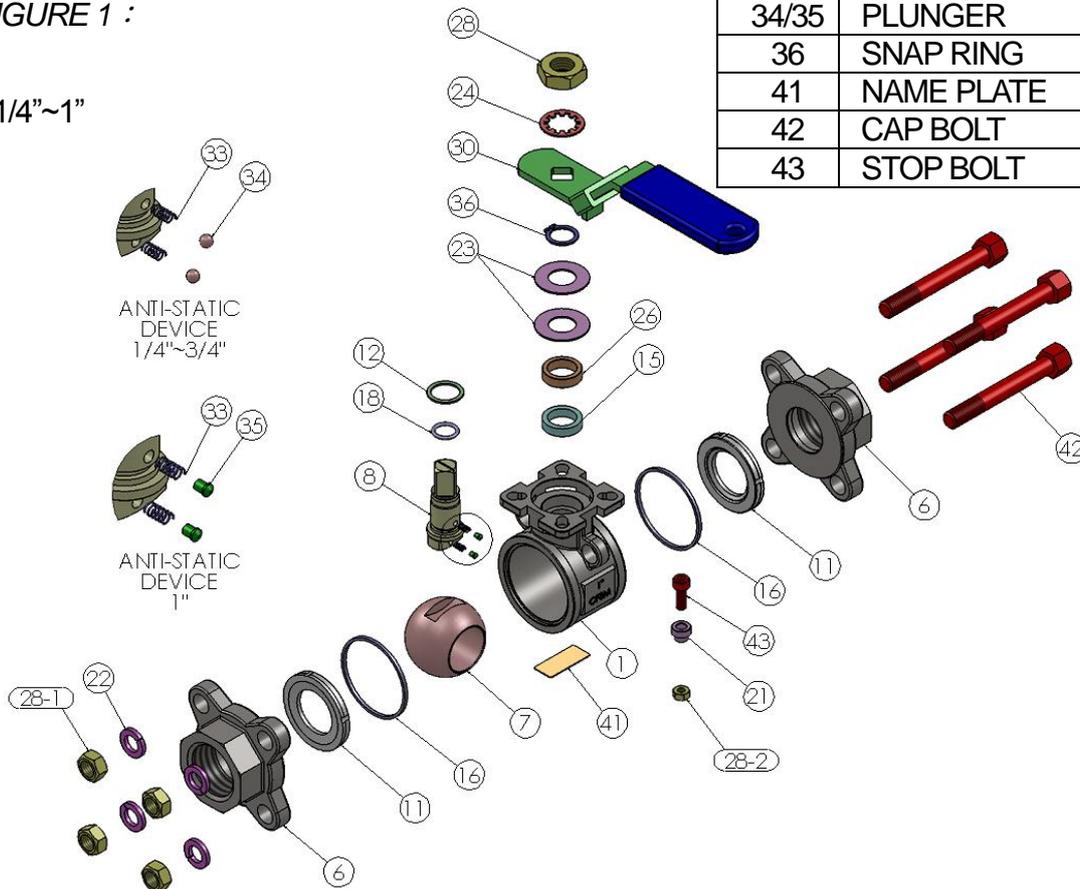
PARTS LIST :

1/4"~1"

ITEM	PART NAME	Q'TY
1	BODY	1
6	BODY CAP	2
7	BALL	1
8	STEM	1
11	SEAT	2
12	STEM SEAL	1
15	STEM PACKING	1
16	GASKET	2
18	O-RING	1
21	WASHER	1
22	SPRING WASHER	1 SET
23	BELL WASHER	2
24	LOCK WASHER	1
26	CLAND	1
28	NUT	1
28-1	BOLT NUT	1 SET
28-2	STOP NUT	1
30	HANDLE	1
33	SPRING	2
34/35	PLUNGER	2
36	SNAP RING	1
41	NAME PLATE	1
42	CAP BOLT	1 SET
43	STOP BOLT	1

FIGURE 1 :

1/4"~1"

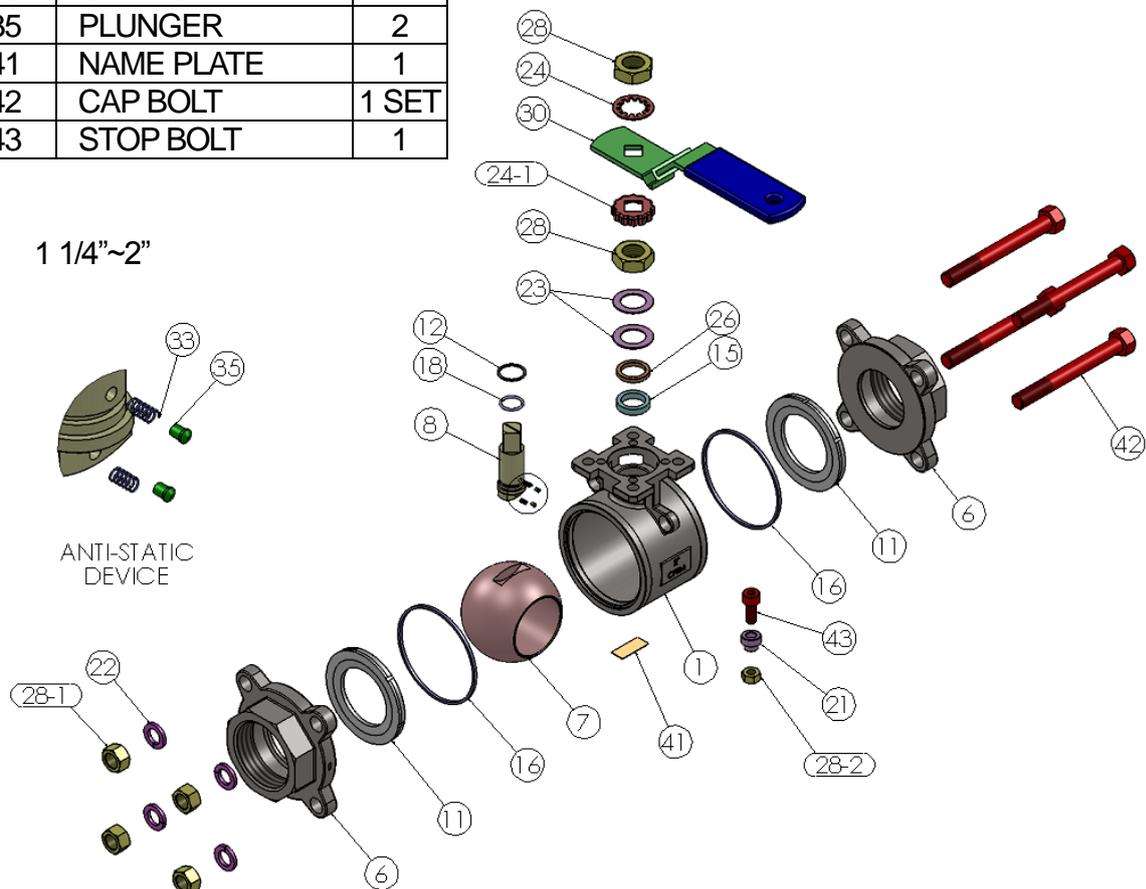


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PARTS LIST :

1 1/4"~2"

ITEM	PART NAME	QTY
1	BODY	1
6	BODY CAP	2
7	BALL	1
8	STEM	1
11	SEAT	2
12	STEM SEAL	1
15	STEM PACKING	1
16	GASKET	2
18	O-RING	1
21	WASHER	1
22	SPRING WASHER	1 SET
23	BELL WASHER	2
24	LOCK WASHER	1
24-1	LOCK WASHER	1
26	CLAND	1
28	NUT	2
28-1	BOLT NUT	1 SET
28-2	STOP NUT	1
30	HANDLE	1
33	SPRING	2
35	PLUNGER	2
41	NAME PLATE	1
42	CAP BOLT	1 SET
43	STOP BOLT	1



BOSS B380D 3 Piece Stainless Steel Ball Valves

Technical Support

Telephone: 0844 800 721

Email: peglerandlouden@bssgroup.com

Web: www.bssindustrial.co.uk

BSS Industrial

Registered Office: Lodge Way House, Lodge Way, Harlestone Road,

Northampton, NN5 7UG

Registered No. 60987 England