

**1. USE:**

1.1 Life of valve can be maximized if the valve is used within the rated range, in accordance with pressure, temperature, and corrosion data.

**2. MANUAL OPERATION:**

- 2.1 To open or close the valve, turn the handle ¼ turn (90 degrees).
  - A. Valve in Open Position – the handle is in parallel (in-line) with the valve or pipeline.
  - B. Valve in Closed Position – the handle is perpendicular (crossed) with the valve or pipeline.

**3. DISASSEMBLING & CLEANING THE VALVE:**

- 3.1 Ball valves can trap fluids in ball cavity when it is in closed position.
- 3.2 If the valve has been used in hazardous media, it must be decontaminated before disassembly.
  - A. Relieve the line pressure.
  - B. Place valve in half-open position and flush the line to remove any hazardous material from valve.
  - C. All persons involved in the removal and disassembly of the valve should wear the proper protective clothing, such as face shield, glove, apron, etc.

**4. REPLACING THE THRUST WASHER, PACKING, AND SEATS**

- 4.1 Before replacing the stem seal and the packing, the pipeline must be de-pressurized.
- 4.2 Take-off the valve from the pipeline.
- 4.3 Place valve in its' fully open position.
- 4.4 Take-off end cap.
- 4.5 Close the valve and remove the seat, body seals and ball.
- 4.6 Remove the valve stem nut, handle, gland nut and remove the valve stem through the body cavity.
- 4.7 Remove the stem trust washer from the stem cavity.
- 4.8 Examine all metallic sealing surfaces such as ball, stem and end cap for damage, if the ball or stem is excessively damaged, ball and stem need to be replaced.

**5. RE-ASSEMBLING**

Having assured that all critical surfaces and components have been inspected, cleaned and or replaced, re-assemble can begin.

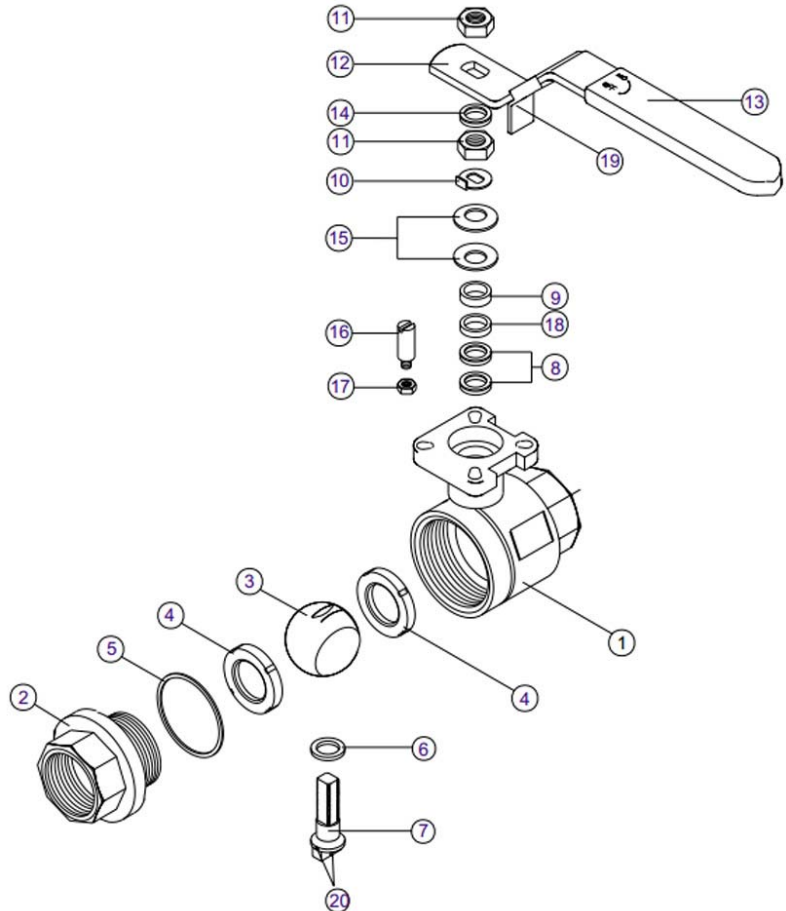
- 5.1 Place new stem seal on stem and install the stem.
- 5.2 Install new gland packing, bushing, gland bush, belleville washer and stem nut
- 5.3 Tighten stem nut to torque specification in Table 1.
- 5.4 Lightly lubricate seats and body seals using a lubricant.
- 5.5 Re-install end cap.

**Table 1**

Valve Size	Stem Nut Torque (In-Lbs.)
½" ~ ¾"	90
1"	120
1-1/2"	225
2" ~ 2-1/2"	310
3"	400

**MATERIALS LIST**

	PART NAME	MATERIAL	Q'TY
1	Body	CF8M WCB	1
2	End Cap	CF8M WCB	1
3	Ball	SUS316	1
4	Seat	PTFE/RTFE	2
5	Joint Gasket	PTFE	2
6	Stem Seal	PTFE/RTFE	1
7	Stem	SUS 316	1
8	Gland Packing	MG1241	2
9	Gland Bush	SUS 304	1
10	Stop Washer	SUS 304	1
11	Stem Nut	SUS 304	2
12	Handle	SUS 304	1
13	Handle Sleeve	Vinyl	1
14	Stem Washer	SUS 304	1
15	Belleville Washer	SUS 301	2
16	Stop Pin	SUS 304	1
17	Pin Nut	SUS 304	1
18	Bushing	25% RTFE	1
19	Locking Device	SUS 304	1
20	Anti-static Device	SUS 304	2



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