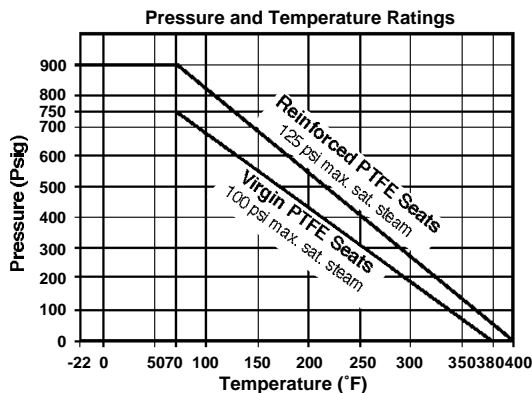


# Clean Stainless Steel Ball Valve Model 60

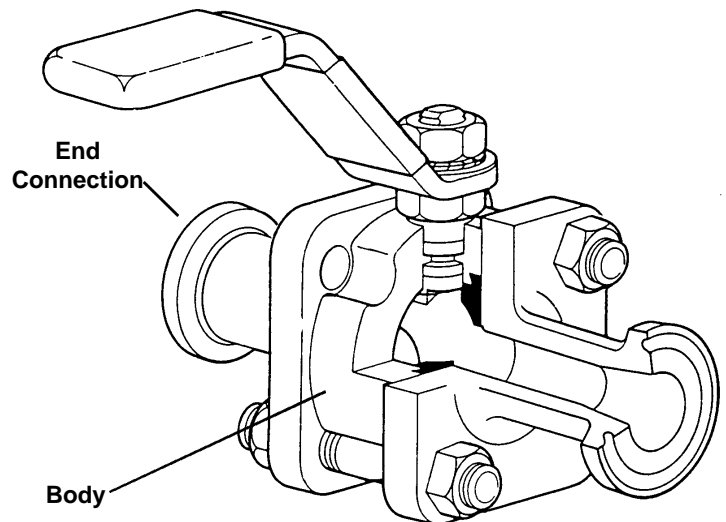
## Description

Model 60 clean ball valve uses a 3-piece design comprising a body and two end connections. It is for use in high purity and aseptic processes and is suitable for steam, liquid and gas service ranging from vacuum to high temperature and pressure.

## Limiting Conditions



Note: Lower limits may be imposed by end connection type



## 1. Installing the Valve

### 1.1 Installation

Although the valve has great structural integrity, severe misalignment and/or the pulling effect of incorrect pipe length will have a detrimental effect on the valve and must be avoided.

Particular attention should be paid to correct pipe alignment such that the inlet pipework and valve are all on the same axis.

Valves may be installed with flow in either direction.

When used on steam services:

- Fit a trapped drain pocket upstream of the valve.
- Open valve slowly to prevent the risk of water hammer damage.

### 1.2 Socket Weld/Piping Butt Weld Valves

Prior to any welding it will be necessary to:

- Dismantle the end caps from the body.
- Remove the seats.
- Weld each end cap to the pipeline.
- Re-assemble.

**NOTE:** O.D. TUBE CONNECTIONS CAN BE DIRECTLY WELDED USING ORBITAL WELDING TECHNIQUES WITHOUT THE NEED TO DISMANTLE THE VALVE.

## 2. Maintenance

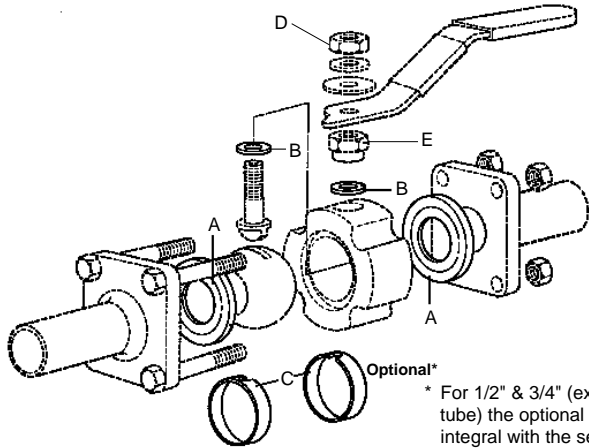
**Before commencing any dismantling work, ensure that no flow is taking place in the pipeline; that the line is isolated elsewhere, or that the flow of the fluid is discontinued. Any fluid remaining in the line should be drained off before dismantling the valve.**

### 2.1 General

Maintenance work can be carried out without removing the complete ball valve from the pipeline. Remove the two upper studs and nuts and loosen the lower two. The complete body assembly can then be removed and any new parts fitted.

### 2.2 Available Spares

The spare parts available are shown in heavy outline on the exploded view (over). Parts drawn in broken line are not supplied as spares.



\* For 1/2" & 3/4" (except DIN20 ISO tube) the optional cavity filler is integral with the seat

Spares Description	Spare Part
Seat and Stem Seal Kit	A,B
Combined Seat/Cavity Filler & Stem Seal Kit (1/2" or 3/4" sizes only)	A/C, B
Cavity Filler**	C

\*\* For 1/2" and 3/4" sizes, cavity filler is integral with the seat

Cavity fillers are designated by number:

Number 1:	1/2" O.D. tube and Tri-Clamp®
Number 2:	1/2" NPT, BW, SW
Number 3:	3/4" all connections
Number 4:	1" all connections
Number 6:	1-1/2" all connections
Number 7:	2" all connections

NOTE: For DIN/ISO connections, consult factory.

### 2.3 How to Order Spares

Always order spares by using the description given in the Available Spares Section 2.2, stating seat material (RPTFE or PTFE), size, and type of ball valve.

**Example:** 1 RPTFE Seat and Stem Seal Kit for 1/2" Spirax Sarco Model 60 Ball Valve

### 2.4 To Replace Seats and Cavity Fillers

- Remove body as described in section 2 and 2.1
- With body removed, remove seats (A) and cavity filler (C) (where fitted).
- Fit new seats, pushing them into body recesses. If separate cavity fillers are being used, these must first be fitted around each side of the ball.

### 2.5 To Replace Stem Seals

- Remove body as described in sections 2 and 2.1
- Remove nuts (D) and (E).
- Replace stem seals (B).

### 2.6 Re-Assembly

The securing studs and nuts and stem nut (E) should be tightened to the following torques:

	Studs/Nuts	Stem Nut
Tri-Clamp® 1/2", 3/4"	8 lbft	10 lbft
Tube Imperial 1/2", 3/4"	11 Nm	14 Nm
Tube DIN DN10, 15, 20		
Tube ISO DN8, 10, 15		
Tri-Clamp® 1"	18 lbft	13 lbft
Tube Imperial 1"	25 Nm	18 Nm
Tube DIN DN25		
Tube ISO DN20, 25		
Tri-Clamp® 1-1/2"	28 lbft	17 lbft
Tube Imperial 1-1/2"	38 Nm	23 Nm
Tube DIN DN40		
Tri-Clamp® 2"	44 lbft	17 lbft
Tube Imperial 1-1/2"	59 Nm	23 Nm
Tube DIN DN50		
Tube ISO DN40		

\*Tri-Clamp® is a registered trademark of Tri-Clover, Inc.

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