

# 4" (DN 100) 5REB3 LOW-PROFILE BOTTOM- UNLOADING STANDARD- PORT VALVES FOR TANK CAR APPLICATIONS (AAR NO. E079027)

## DESCRIPTION

For bottom unloading applications involving minimum clearances, JAMESBURY® has engineered the low-profile 5REB3 ball valve. A high-performance ball valve, it has proven to be completely reliable over a wide variety of applications.

The 5REB3 ball valve shown with steam jacket offers the advantages of quick quarter-turn operation, long service life, and easy cycling. It is much faster to operate than multi-turn types of valves. In addition, it is easy to cycle even after being set in one position for an extended period.

This valve is available with a steam jacket, 4" (DN 100) 5REB3-SJ (pictured) and also non-jacketed, 4" (DN 100) 5REB3.

## UNIQUE SEALING

The superior performance of JAMESBURY tank car ball valves is achieved by the unique design of the seat. The flexible-lip PTFE seats exert continuous sealing pressure on the ball. The seat automatically compensates for wear and for changes in temperature and pressure.

In addition, this valve is designed to withstand the demanding service requirements of the railroad industry.

In JAMESBURY's "corner sealing" of the stem, the compression of low-friction box rings stops stem leakage by avoiding straight-line leakage paths. Stem seal adjustment, if required, is done simply by tightening the bonnet plate nuts.

## MATERIALS

5REB3 valves are available in carbon steel with 316 stainless steel trim and all 316 stainless steel. Other materials are available for special applications.

## FIRE-TITE® DESIGN

All JAMESBURY tank car ball valves have the JAMESBURY FIRE-TITE design. In the event of a fire resulting in partial or complete destruction of the PTFE seats, a secondary metal sealing surface provides continuous effective shutoff.



## FLOW DATA

The 4" (DN 100) 5REB3 has an installed  $C_v$  value of 350.  $C_v$  is defined as the flow of water through the valve in U.S. gallons per minute at a pressure drop of 1 psi. This  $C_v$  value is an estimate of the installed flow capacity and considers typical inlet losses.

## RATINGS

5REB3 valves are rated for pressures and temperatures well in excess of those that are normally encountered in tank car service. Carbon steel valves are rated from  $-20^{\circ}\text{F}$  to  $+500^{\circ}\text{F}$  ( $-29^{\circ}\text{C}$  to  $+260^{\circ}\text{C}$ ). 316 stainless-steel valves are rated from  $-60^{\circ}\text{F}$  to  $+500^{\circ}\text{F}$  ( $-51^{\circ}\text{C}$  to  $+260^{\circ}\text{C}$ ). The pressure rating is shown in the table below.

### MAXIMUM PRESSURE RATING (psi)

Carbon steel body w/ ASTM A193 Gr B7 bolting	285
Stainless steel body w/ ASTM A193 Gr B7 bolting	275
Stainless steel body w/ stainless steel bolting	100

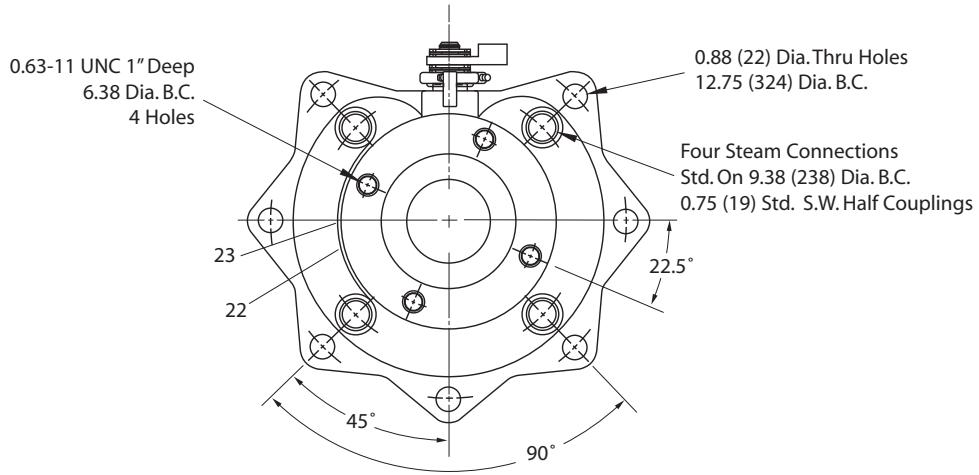
## SERVICE

Representative stocks of 5REB3 valves are maintained by Metso Automation's network of authorized stocking distributors located in key industrial areas of the United States and Canada. For your local distributor call 1-800-626-5965 or visit our web site at [www.metso.com/automation](http://www.metso.com/automation).

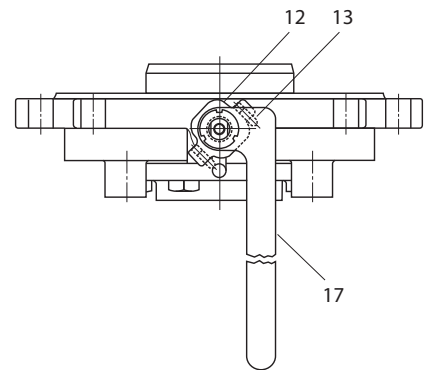
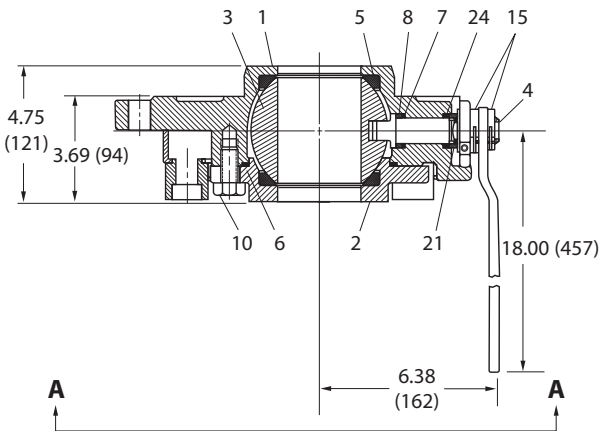
**DIMENSIONS**

**4" (DN 100) 5REB3 Low-Profile Bottom-Unloading Standard-Port Ball Valves – inches (mm)**

\* Optionally Available w/o Steam Jacket



**VIEW A-A'**



<b>BILL OF MATERIALS AND PARTS LIST</b>			
<b>Part No.</b>	<b>Part Name</b>	<b>Body Material</b>	
		<b>Carbon Steel with 316 Stainless Steel Trim (22HB)</b>	<b>316 Stainless Steel (36HB)</b>
1	Body	Carbon steel ASTM A216 Type WCB	316 Stainless steel ASTM A351 Type CF8M
2	Body Cap	Carbon steel ASTM A216 Type WCB	316 Stainless steel ASTM A351 Type CF8M
3	Ball	316 Stainless steel	
4	Stem	17-4 PH Stainless steel	
5	Seat	PTFE or Filled PTFE	
6	Body Seal	Spiral-wound 316 Stainless steel and PTFE	
7	Secondary Stem Seal	Graphite	
8	Stem Seal	PTFE	
10	Hex Head Cap Screw	ASTM A193 GR. B7	
12	Indicator Stop	Carbon steel	
13	Socket Head Set Screw	Stainless steel	
15	Stem Nut	Carbon steel	
17	Handle	Carbon steel	
21	Compression Ring	Stainless steel	
22	Identification Tag	Stainless steel	
23	Drive Screw	Stainless steel	
24	Upper Stem Seal	PTFE	
Optional trim materials available upon request.			

## HOW TO ORDER 5REB3 BALL VALVES

To specify one of these valves, it is necessary only to select the proper body material to meet a particular service requirement. All other components are of materials appropriate for the most severe conditions.

The catalog designations below fully describe a valve, identifying body, trim, seat, and seal materials. The codes are:

### Carbon steel body with 316 stainless steel trim:

**4" (DN 100) 5REB3-22HB TT**

**4" (DN 100) 5REB3-SJ-22HBTT**

### 316 Stainless steel body and trim:

**4" (DN 100) 5REB3-36HB TT**

**4" (DN 100) 5REB3-SJ-36HB TT**

For steam jacketed valves, add "SJ" to valve description.

For filled PTFE seats, simply substitute MT for TT.

To order a Service Kit for these valves, specify RKN80 TT or RKR80 MT.

Subject to change without prior notice.

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