

# ALTA-ROBBINS

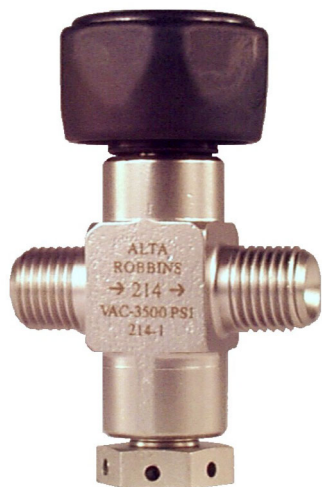
Manometers □ Valves □ Air Purification

VALVE  
PRODUCTS

314 RD Series  
Data Sheet

INFORMATION FOR ORDERING, IDENTIFICATION, INSPECTION, INSTALLATION AND MAINTENANCE

## SAFE – VERSATILE – ECONOMICAL

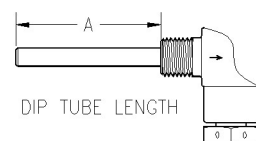
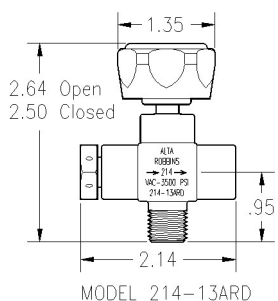
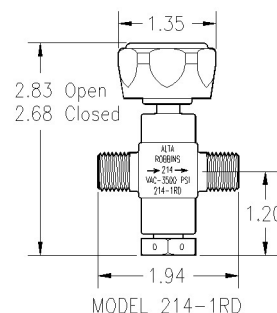
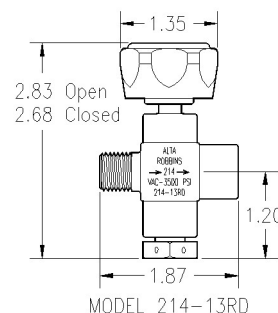
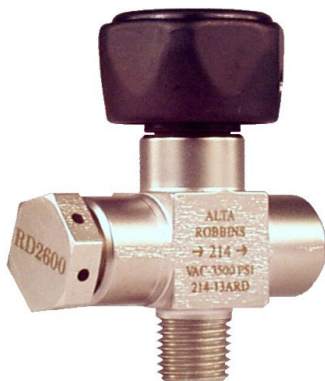


### Reliable Over-Pressure Protection

- Rupture discs used with ALTA-ROBBINS 314 Series valves provide a reliable method of over-pressure protection for small sample cylinders or systems.
- The rupture disc holder is threaded into an integral port in the valve body and seals the rupture disc against the body utilizing a Teflon washer.
- Rupture discs are easily replaced or switched to change the burst pressure.

**Extensively Field-Tested**  
by the oil refining industry...in sample bomb use...in laboratory applications.

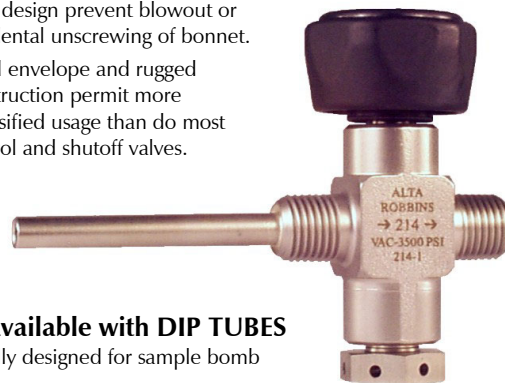
- Bubble-tight shutoff with fingertip effort.
- Extra large orifice and flow passage.
- Handle skirt protects stem threads from dirt and damage.



Dimension A Add to Model No.  
2" -2E  
3 3/4" -3 3/4E  
Dip tubes can be added to any ALTA-ROBBINS 214 Valve.

### Designed for use on Sample Cylinders

- Bonnet Safety Lock Ring and stem design prevent blowout or accidental unscrewing of bonnet.
- Small envelope and rugged construction permit more diversified usage than do most control and shutoff valves.



### Also available with DIP TUBES

especially designed for sample bomb use.

- The Dip Tube forms an integral part of the valve and is available in any lengths - 2" & 3/4" are standard.

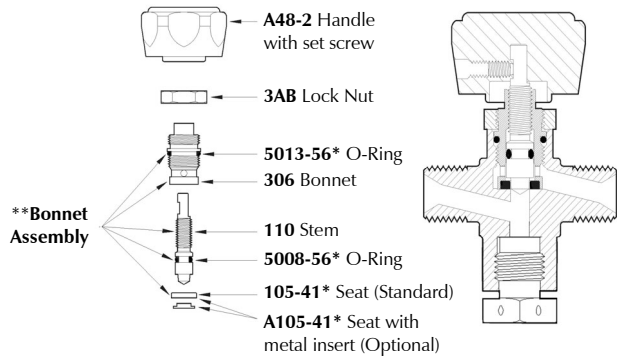


**Simple to service** — all functional parts can be removed for cleaning or replacement without disturbing body connections.

### TECHNICAL DATA

Operating Pressure:	Vacuum — 3500 PSI
Safety Factor:	4:1
C <sub>v</sub> :	0.31
Leakage:	Zero
Orifice Diameter:	0.187 inches
Operating Temperature:	-40° F to +250° F
Body Material:	303 or 316 Stainless Steel
Bonnet Material:	303 or 316 Stainless Steel
Stem Material:	303 or 316 Stainless Steel
Handle Material:	Aluminum (black anodized)
Lock Nut Material:	Stainless Steel
O-Ring Material:	See Ordering Information
Rupture Disc Holder Material:	303 Stainless Steel
Rupture Disc Washer Material:	Teflon
Rupture Disc Material:	Monel
Seat Material:	See Ordering Information
Port Connection:	See Ordering Information
Weight:	See Ordering Information
Handle Turns To Open:	5 (approximately)

## REPLACEMENT PARTS



- \* This part is available in various materials. The part number shown above is considered standard - See ordering information for other options.  
 \*\* See Bonnet Assemblies for part numbers and seat materials.

## ORDERING INFORMATION

### VALVES

Model Number	Inlet Port	Outlet Port
314-1RD ___ ***	1/4 NPT Male	1/4 NPT Male
314-7RD ___ ***	3/8 NPT Male	1/4 NPT Female
314-13RD ___ ***	1/4 NPT Male	1/4 NPT Female
314-13ARD ___ ***	1/4 NPT Male	1/4 NPT Female

\*\*\*To complete the above Model Number, add the desired nominal burst pressure from the following standard choices - 500, 1000, 1500, 1900, & 2850. Other burst pressures are available by special order. Selected burst pressure is etched on disc holder.

**Note :** The above models ship with Buna-N O-Rings, Kel-F seats (without metal insert), black handles, and 303 stainless steel bodies, bonnets, and stems. The above models do not include dip tubes. To change the standard configuration - add the following dash codes to the model number:

316 Stainless Steel Body, Bonnet, and Stem	-768
Monel Body, Bonnet, and Stem	-M
Viton O-Rings	-12
Buna-N O-Rings for MTBE Service	-59
Kalrez™ O-Rings	-08
Ethylene Propylene O-Rings	-06
Teflon Seat	-T
Nylon Seat	-N
Seat with Metal Insert	-763
2" Dip Tube	-2E
3 3/4" Dip Tube	-3 3/4
Red Handle (other colors available on special order)	-R

Note: If more than one modification is required, add dash code to model number in sequence listed. Dash codes also apply to Bonnet Assemblies and Rupture Disc Tees where applicable.

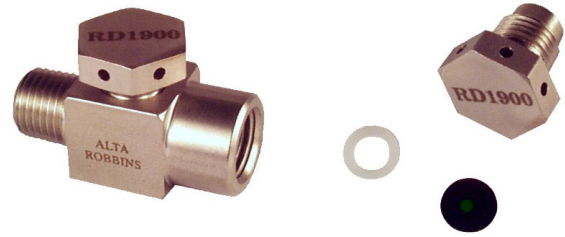
## BONNET ASSEMBLIES

Part Number	Seat Material
KA309	Kel-F
TA309	Teflon
NA309	Nylon



## RUPTURE DISC TEE

ALTA-ROBBINS Rupture Disc Tees are designed to be installed into existing systems to provide reliable over-pressure protection. They are available in a variety of port connections and materials. Rupture Disc Tees use the same rupture discs, washers, and rupture disc holders as ALTA-ROBBINS 314 Series Rupture Disc Valves. Dip tubes are also available.



Use Model Number RDT-RD \_\_\_ \*\*\* +dash codes

## RUPTURE DISC ASSEMBLIES

The nominal rupture disc burst pressure should be at least 40% higher than the system operating pressure. Rupture disc burst pressure will be reduced by pulsating pressures, elevated temperature, and internal or external corrosion. In corrosive applications, regular inspections or pressure tests are necessary.

Use of this rupture disc in vacuum or alternating vacuum/pressure applications may cause premature disc failure. When vented, the rupture unit presents a potential danger caused by noise and escaping pressure, chemicals or fragmented particles.

The complete Rupture Disc Assembly consists of the disc, washer & holder. Each holder is etched with the nominal burst pressure and each disc is color coded for identification.

To replace or inspect rupture disc: 1 -Remove holder, Disc, & Washer from valve body. 2 - Re-install or replace the washer & disc, then thread in the holder. Holder should be torqued per the following:

Nominal Burst Pressure	Color Code	Torque in Inch Pounds
500	Blue	40
1000	Red	75
1500	Yellow	120
1900	Green	140
2850	Orange	215

## MAINTENANCE

### Valve Can Be Serviced Without Removal from Line

**IMPORTANT:** Lubricate stem threads and stem o-rings regularly with Halocarbon 25-5S or equal.

### REPLACEMENT OF SEAT AND/OR O-RING SEALS

- Open valve fully. Loosen handle set screw and remove handle.
- Remove lock nut with 11/16" wrench.
- Unscrew bonnet with a 5/16" wrench. Remove bonnet o-ring.
- Using handle as a wrench, screw stem out of bonnet clockwise, thereby ejecting seat and stem. Remove stem o-ring.
- Clean all parts well with solvent. Lightly lubricate threads and both o-rings.
- Screw stem into bonnet slowly until engaged with bonnet threads; use handle to retract stem to full limit.
- Replace seat in bonnet cavity, chamfered end first (toward handle), making sure it is well seated.
- Screw bonnet slowly into body to allow o-ring to flow into bonnet bore. Torque to 75 inch pounds for Kel-F seat and 100 inch pounds for all seats with metal inserts.
- Replace lock nut and tighten firmly (100 inch pounds). Replace handle and tighten set screw firmly.