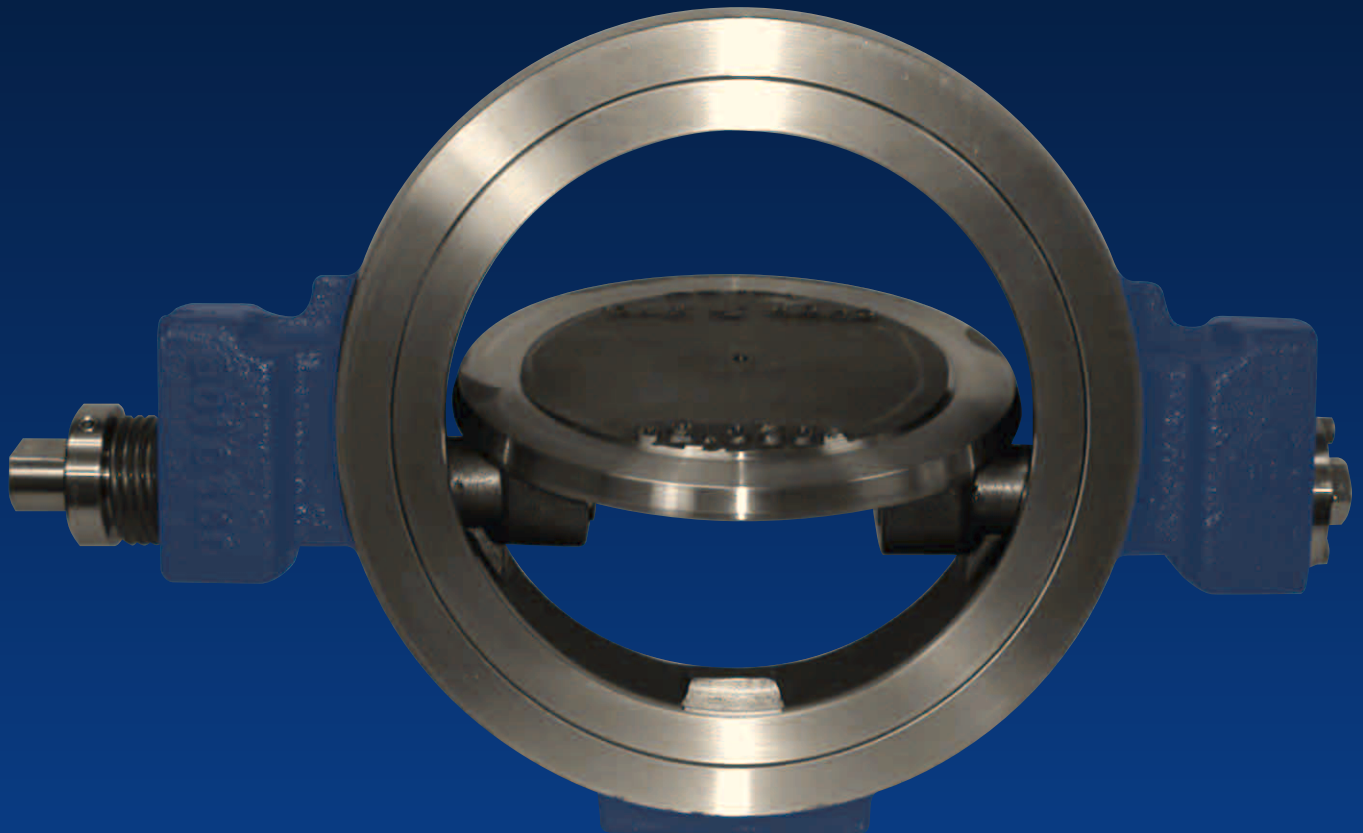


# **Retesco**

**LTD**

## **Style C Tilting Disc Wafer Check Valve**



***“When Quality Counts, Count on RETSCO”***

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# Features, Descriptions, Specifications

## Features

- ANSI 150 and 300 class in sizes 3" thru 14", ANSI 150 in sizes 16' and up
- Low profile wafer style body
- Double offset disc outperforms most piston, double door, swing checks, plug and cone valves
- High Cv's and Low pressure differentials
- Non-wetted spring is easily adjustable
- Disc centering device precisely positions the disc relative to the seat
- Integral seat seal provides bubble tight closure
- Valve assemblies available with position indicators, lost motion operating levers, and locking devices. Although rarely necessary, counterweights and dampening devices are also available.
- All parts, including the seat, are easily field replaceable, thus minimizing down time
- Blow out proof shafts
- Body is pre-drilled and tapped for mounting accessories

RETSCO tilting disc wafer check valves offer a single slightly unbalance disc that reduces or eliminates slamming and permits opening with a minimal pressure differential. The wafer design is much lighter and more cost effective than the conventional full body style swing check or tilt check valves used in the past. The large opening in the valve body provides extremely high Cv's and low pressure drops.

The valve features a double offset disc design that lifts off the seat as the disc begins to pivot. This prevents the disc from scrubbing the seat, thereby increasing seat life. A unique seat design with an integral seal provides for "live" seating that provides bubble tight shutoff.

A non-wetted externally adjustable spring is provided to allow for easily adjusting the amount of closing torque that is exerted upon the disc. This feature allows the valve to be "finetuned" in the field if water hammer should be encountered in the piping system.

RETSCO tilting disc wafer check valves are designed to provide long service life in high cycle operations such as pump and compressor discharge. The design utilizes large diameter stems which are secured to the disc. The stems extend through the valve body and are positioned by two sets of self-lubricated sleeve bearings to prevent stem and body seal bore wear.

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## Description

The check valve will be a single disc, off-center shaft type valve capable of bubble tight shutoff service under pressure or vacuum.

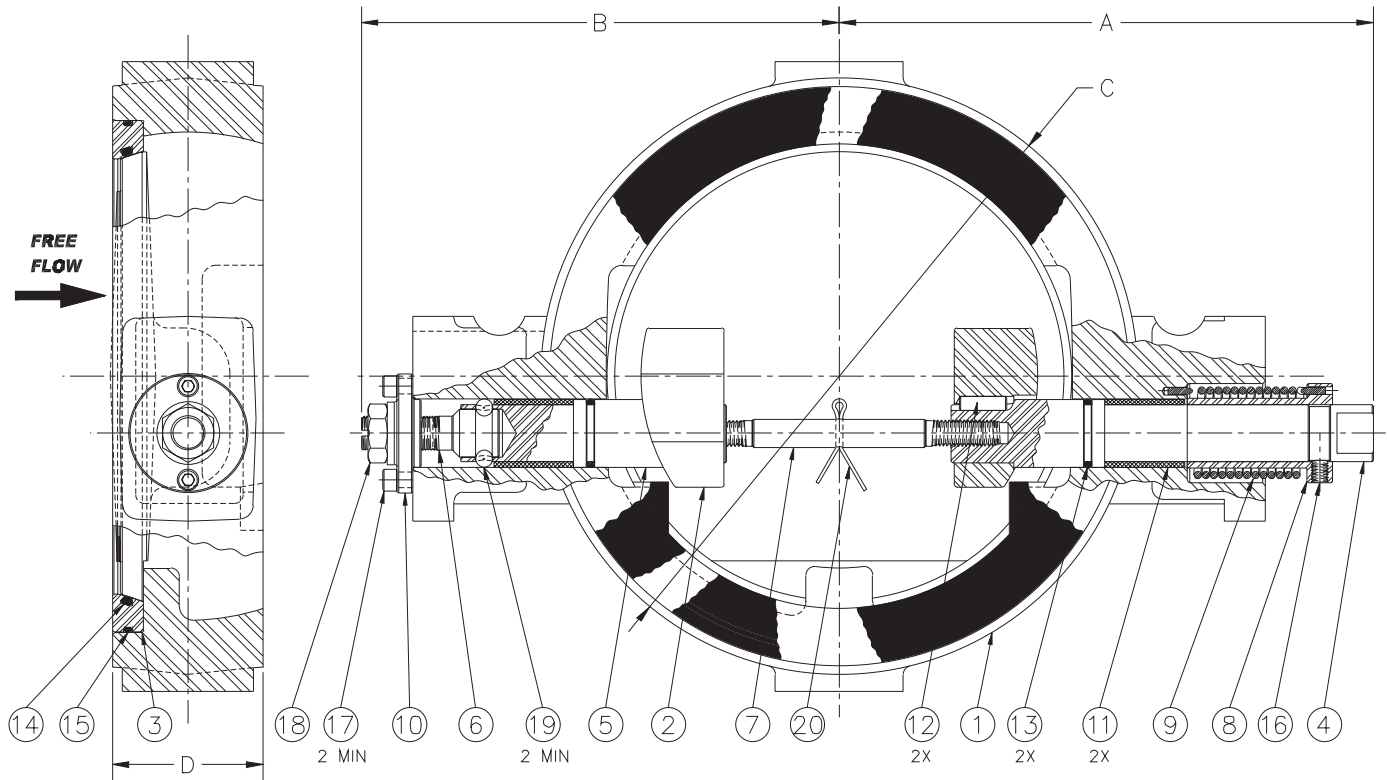
1. Valve body will be of cored interior design in either wafer or wafer lug type body.
2. Valve will contain a soft seat design that is sensitive to system pressure (seating more positively as back pressure is increase).
3. Valve seat, disc, and bearing, will be field replaceable without the use of special tools.
4. Valve closure will be provided by an adjustable torsion spring that is external to the flow media.
5. Valve disc centering will be provided by an external adjusting mechanism.
6. Shafts will be blow-out proof even in the event keys shear.

\*\*\* CAUTION: Adjacent piping must have sufficient bore and straight length to allow for disc rotation. Consult factory for details.

## Specifications

1. Valve will be designed for installation in Schedule 40 pipe between pipe flanges conforming to ANSI B16.1 Class 125 Cast iron flanges and B16.5 Class 150 and 300 steel flanges.
2. Valve body will be carbon steel, stainless steel, or as specified. The Valve Disc is CF8M stainless steel or as specified.
3. Valve shaft material will be 316 Stainless Steel or as specified.
4. Valve shaft bearings will be self-lubricated or as specified and will be furnished at both ends of the shaft.
5. Valve seating ring will be 316 stainless steel or as specified.
6. Standard shaft seals will be Viton.
7. Valve torsion spring will be non-wetted and manufactured from PH17-7 stainless steel or as specified.
8. Valve shall be capable of counterweight, position indicator, dampening cylinder, or other accessories as specified.
9. Valve will comply with ANSI B16.34.

# Valve Fits Between ANSI 150 & 300 Class Flanges



PAT. PEND.

## Standard Material List\*

Part	Specification	Part	Specification
1. Body	ASTM A216 WCB Carbon or ASTM A351 CF8M Stainless	11. Sleeve Bearing	Polyetheretherketone or Polyphenylene sulfide/PTFE alloy
2. Disc	ASTM A351 CF8M Stainless	12. Shaft Key	ASTM A564 Type 630 HH1150
3. Seat Ring	ASTM A276, UNS S31600 Stainless	13. Shaft Seal	Viton
4. Extended Shaft	ASTM A276, UNS S31600 Stainless	14. Seat Seal, Inner	Viton
5. Centering Shaft	ASTM A276, UNS S31600 Stainless	15. Seat Seal, Outer	Viton
6. Centering Screw	ASTM A276, UNS S31600 Stainless	16. Hex Socket Set Screw	18-8/302 Stainless
7. Shaft Retainer	ASTM A276, UNS S31600 Stainless	17. Socket Head Cap Screw	18-8/302 Stainless
8. Spring Cap	ASTM A276, UNS S31600 Stainless	18. Hex Jam Nut	18-8/302 Stainless
9. Torsion Spring	ASTM A313 Type 631 CH900 Stainless	19. Ball	440C Stainless
10. Centering Flange	ASTM A276, UNS S31600 Stainless	20. Cotter Pin	AISI 316 Stainless

## Dimensions (inches)

Nominal Size	Center to Extended Shaft end A	Center to Centering Screw End B	Nominal Body Diameter C	Thickness, Face-to-Face D	Weight, LBS
3	6.35	5.07	5.28	2.00	13.7#
4	7.31	5.75	6.75	2.25	17.4#
6	9.00	7.44	8.69	2.81	35.4#
8	9.87	8.44	10.84	3.19	58.0#
10	11.75	10.50	13.12	3.31	93.0#
12	13.08	11.52	16.00	3.56	125.3#
14	14.53	12.91	17.59	3.88	194.5#

For 16" 18" 20" 24" 30" 36" and 42", consult factory.

\*For materials not shown, consult factory.



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- **Reset Relief Valves**
- **Shear Relief Valves**
- **Rig Expendables**
- **Solids Control Equipment**
- **Drill Pipe Float Valves**
- **Lancaster Production Chokes  
and Actuators**
- **Lancaster Retrofit Choke  
Upgrade Kits**

### **Warranty**

RETSCO, Inc. warrants its products to be free from defects in material and workmanship under normal use and service for a period of (1) year from date of shipment. Any part which is determined by RETSCO to be defective in material or workmanship and returned to RETSCO shipping cost prepaid, will be, as the exclusive remedy, repaired or replaced, or if agreed upon, refund of the purchase price in exchange for the product.

Any liability for consequential and incidental damages is expressly disclaimed. RETSCO's liability in all events is limited to, and shall not exceed, the purchase price paid.

### ***For More Information Call...***

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