

Conventional Manual Pinch Valve – RF VALVE® Comparison

Most conventional pinch valves are not manufactured to standard ASME/ANSI B16.10 face-to-face, DIN or ISO dimensions, therefore NOT interchangeable with standard ball, gate, diaphragm and plug valves of the same ID and standard. Typical conventional designs (see cut-away pictures, below) include an exposed carbon steel shaft, nut, and pinch bar mechanism that can fail in a number of ways causing significant operational and maintenance expenses over time.



Conventional Pinch Valve

[1] Sleeve failure causes slurry or liquid to fill and coat the body cavity and pinch mechanism. **If not cleaned thoroughly, lubricated, and recalibrated, the internal components are subject to abrasion, corrosion, and failure** (picture, left).” Straight sleeves” without vacuum resistant, flexible folds, more likely to collapse on suction side of pump or other vacuum services.

[2] Most designs **do not have a mechanical stop**. When excessive force is applied to hand wheel [as when internal components are contaminated or corroded] **the elastomer sleeve can be damaged or cut, reducing sleeve life especially when closing device has “pipe style” cylindrical pinch bars** (picture, left & right).



Open Body Pinch Valve

[3] Moisture, corrosive mists (salt water) and condensation **often corrode internal pinching mechanism, inhibiting open/ close function**. This internal corrosion typically goes undetected until failure (picture, left). Exposed to elements, screw, nut and lubrication of open body valve design, can result in actuator failure (picture, right)

[4] Open body designs (upper right) do not offer protection in the case of a sleeve rupture when slurry can spray out at high velocity risking operator injury, environmental contamination, or damage to equipment.

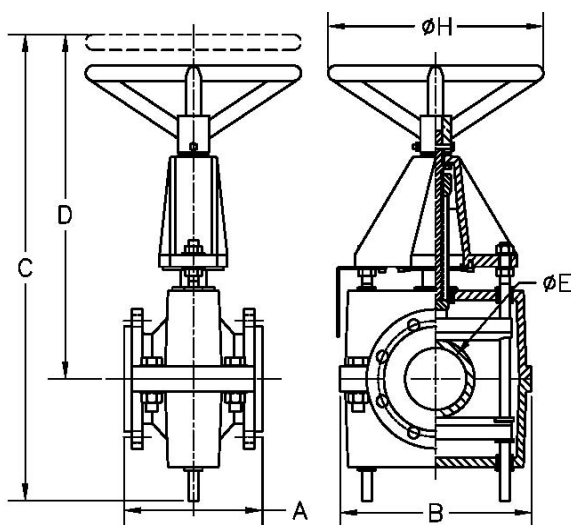
A SUPERIOR ALTERNATIVE



RF VALVE® - ISO 9001
HIGH QUALITY – HIGH RELIABILITY

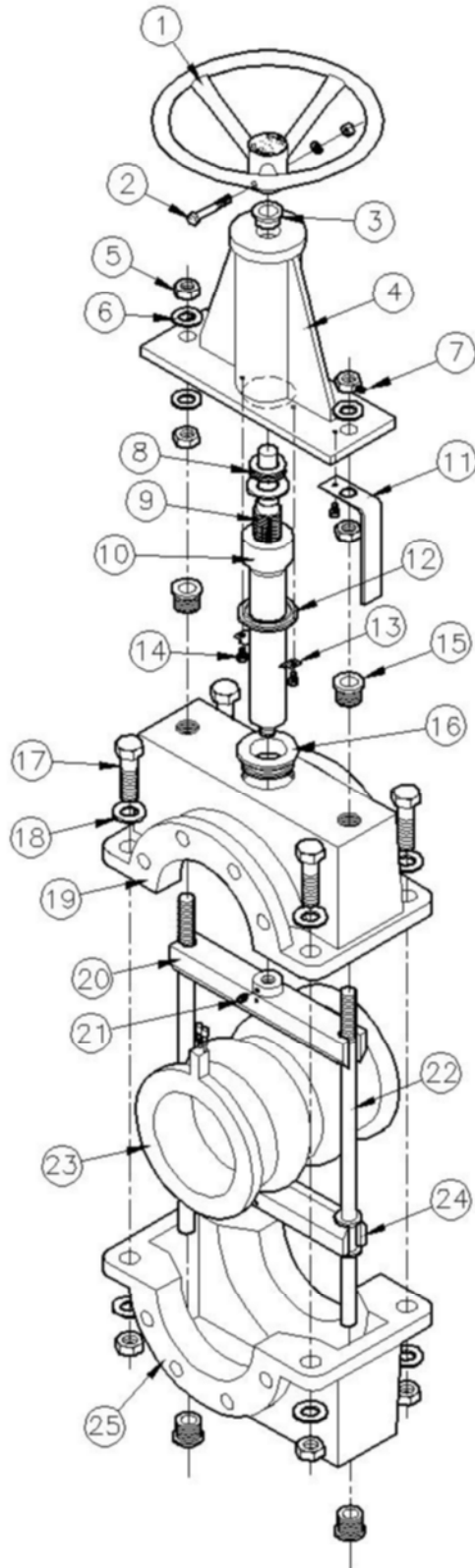


Standard features include:



[1] Standard ASME/ANSI B16, ISO & DIN face-to-face length, 1” to 60” ID interchangeable with most ball, diaphragm, gate, and plug valves of same ID [2] Stainless steel screw & Teflon lubricated nut located in separate housing, isolating key closing mechanism components from process fluids upon sleeve failure [3] Mechanical stops prevent sleeve damage [4] Flexible arches built into elastomer sleeve life and insure full opening under negative pressure [5] Wear sensor wire available for preventive maintenance alert [6] Reduced sleeve flange inside bolt holes provide in-line replacement of sleeve without recalibration [7] Stainless steel pull bars & fasteners [8] painted interior including pinch bars.

RF VALVE®



MATERIALS OF CONSTRUCTION

LINE	DESCRIPTION	MATERIAL
1	HANDWHEEL	STEEL
2	HEX BOLT	AISI 304
3	HANDWHEEL BUSHING	POLY ACETAL
4	ACTUATOR BODY	CAST IRON (2, 2.5, 3, 4) WELDED STEEL (1, 1.25, 1.5 5, 6, 8)
5	HEX NUT	AISI 304
6	FLAT WASHER	AISI 304
7	SET SCREW	AISI 304
8	BEARING	POLY ACETAL (1 THRU 5) STEEL (6, 8)
9	STEM SCREW	AISI 316
10	STEM TUBE	STEEL & AISI 316
11	ON/OFF INDICATOR	AISI 304
12	STEM BUSHING	POLY ACETAL
13	FIXING CLIP	AISI 316
14	SCREW	AISI 304
15	PULL BAR BUSHING	POLY ACETAL
16	CENTER BUSHING	POLY ACETAL
17	HEX BOLT	AISI 304
18	FLAT WASHER	AISI 304
19	UPPER VALVE BODY	CAST IRON
20	UPPER PINCH BAR	STEEL
21	SET SCREW	AISI 304
22	PULL BAR	AISI 316
23	ELASTOMER TUBE	RUBBER
24	LOWER PINCH BAR	STEEL
25	LOWER VALVE BODY	CAST IRON

SEE PAGE 1 FOR
OVERALL DIMENSIONS

 RF Technologies, Inc.

BEX MX-XXX MAT'L S OF CONSTRUCTION
MANUALLY ACTUATED (WITHOUT GEAR REDUCTION)

Drawn by: Stachura

SIZE
A

FSCM NO.

DWG NO.

REV

000A258A

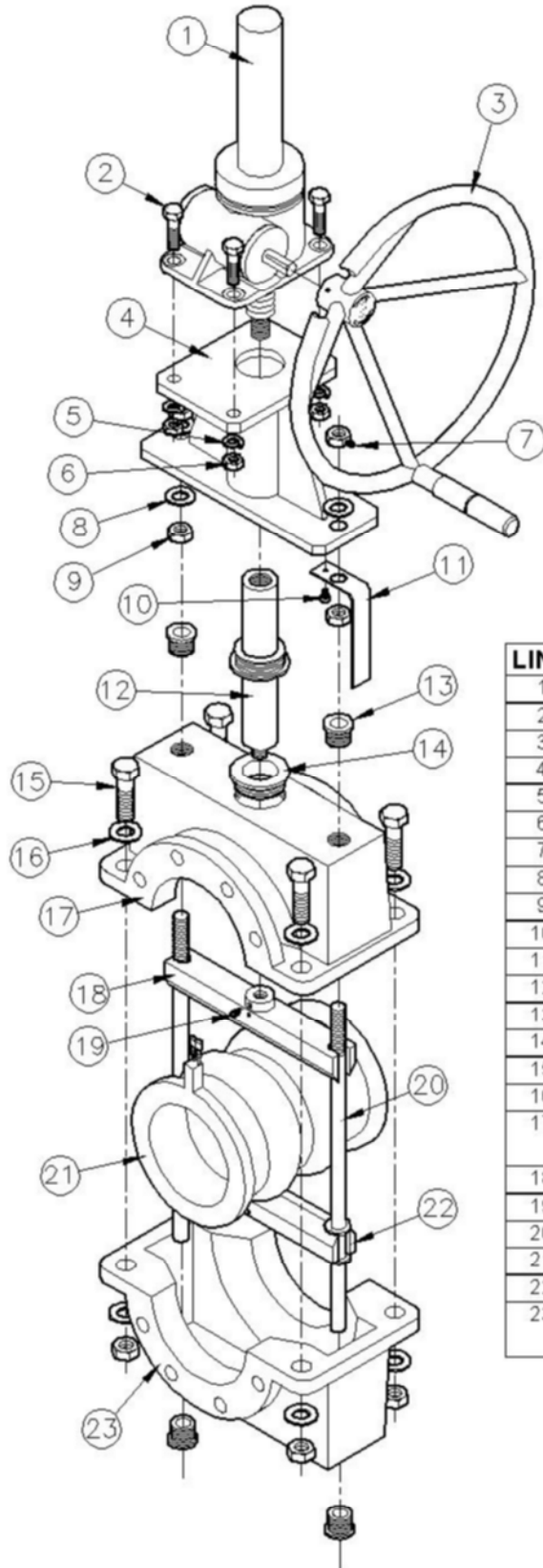
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SCALE 1:8

APPROVED

SHEET 2 OF 2

RF VALVE®



MATERIALS OF CONSTRUCTION

LINE	DESCRIPTION	MATERIAL
1	GEAR REDUCER	STEEL, CAST IRON, BONZE
2	HEX BOLT	AISI 304
3	HANDWHEEL	STEEL
4	ACTUATOR BODY	WELDED STEEL
5	LOCK WASHER	AISI 304
6	HEX NUT	AISI 304
7	SET SCREW	AISI 304
8	FLAT WASHER	AISI 304
9	HEX NUT	AISI 304
10	SCREW	AISI 304
11	ON/OFF INDICATOR	AISI 304
12	EXTENSION BUSHING	AISI 304
13	PULL BAR BUSHING	POLY ACETAL
14	CENTER BUSHING	POLY ACETAL
15	HEX BOLT	AISI 304
16	FLAT WASHER	AISI 304
17	UPPER VALVE BODY	CAST IRON (6, 8) WELDED STEEL (10+)
18	UPPER PINCH BAR	STEEL
19	SET SCREW	AISI 304
20	PULL BAR	AISI 316
21	ELASTOMER TUBE	RUBBER
22	LOWER PINCH BAR	STEEL
23	LOWER VALVE BODY	CAST IRON (6, 8) WELDED STEEL (10+)

SEE PAGE 1 FOR
OVERALL DIMENSIONS

 RF Technologies, Inc.

BEX MGX-XXX MAT'LS OF CONSTRUCTION
MANUALLY ACTUATED (WITH GEAR REDUCTION)

Drawn by: Stachura

SIZE
A

FSCM NO.

DWG NO.

REV

000A259A

7/24/03

SCALE 1:8

APPROVED

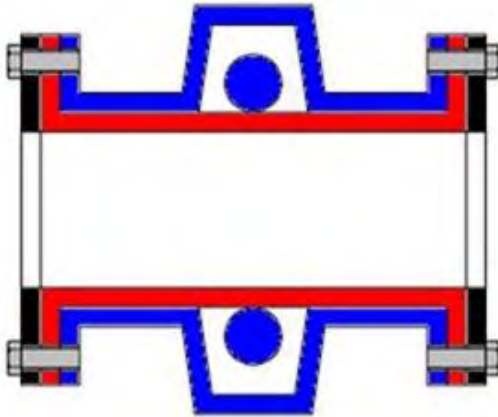
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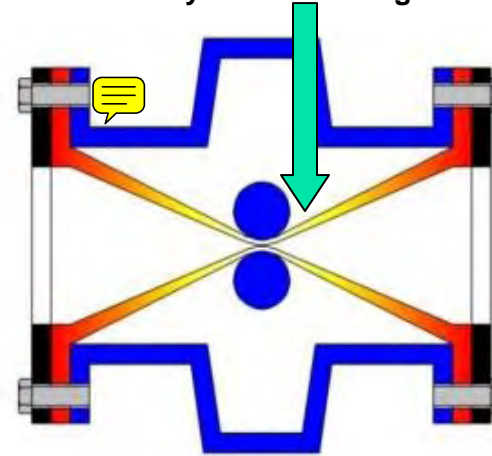
“Commodity Sleeve” vs. RF VALVE[®] Elastomer Tube

Revised 3/5/08

THE PAST - Commodity Sleeve - Straight Design (Open)



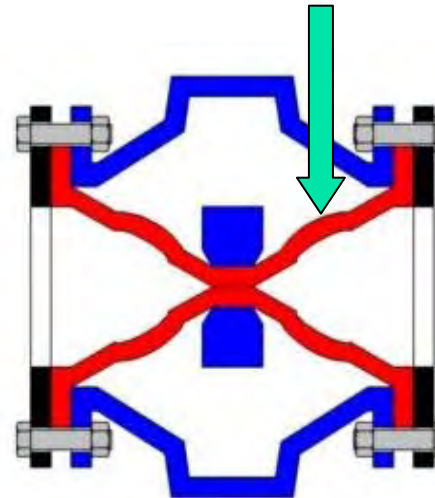
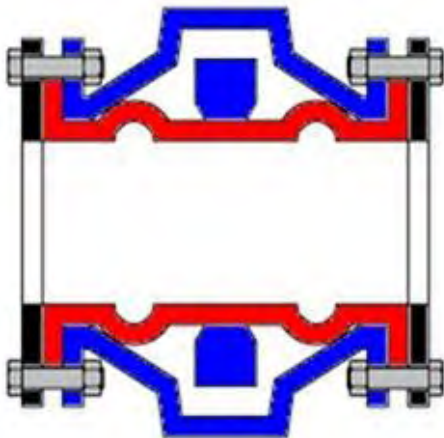
Commodity Sleeve - Straight Design (Closed)



95% of sleeve wear occurs during the last 10% of closure when stress velocity and abrasion are the highest

Mechanical stress and stretch reduces sleeve life

15 YEARS OF PROVEN RESULTS



RF VALVE[®] and aiRFlex[®] Elastomer tube folds prevent stretching and are the key to longer life

Reduced mechanical stress increases tube life 2x – 4x