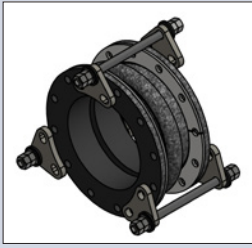


DuraPinch® Valves

General Information



Expansion Joints



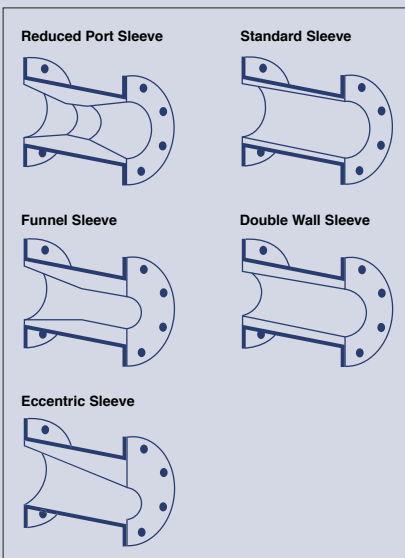
Mechanical Pinch Valves



Shell & Tube



Check Valves



Sleeves

Advantages

- No valve packing
- High corrosion resistance
- Non-clogging

Disadvantages

- Limited by temp & pressure (<250°F; <150 psi)
- Cannot be used with gas media

Examples

- Rotary
- Shell & tube
- Duck bill check

Mechanically Pinched Sleeve

- Linear
- Rotary

Features & Benefits

Service Life

DuraPinch pinch valves are designed for use in throttling or isolation applications and is ideally suited for the harshest chemical, slurry or dry particle environments.

Reliability

All pinch valves are perfectly balanced between size and performance. Multiple actuator types can be used to achieve the best performance possible.

Efficiency

A maintenance friendly feature of the QTP rotary pinch valve is the replaceable sleeve while the valve is in-line which reduces operating downtime and greatly extends the service life of the valve.

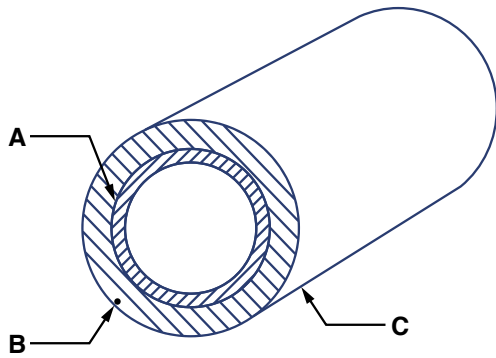
Sleeve Options

Besides a diaphragm valve, all other pinch valves use a removable elastomer sleeve that interfaces with the flange on the inlet and outlet piping. Sleeves can be produced in a variety of port configurations to reach the desired flow. Sleeves are produced using either EPDM, Viton, Buna-N, Natural Rubber, Butyl, Neoprene or Teflon.



Besides a diaphragm valve, all other pinch valves use a removable and replaceable elastomer sleeve that interfaces with the flange on the inlet and outlet piping.

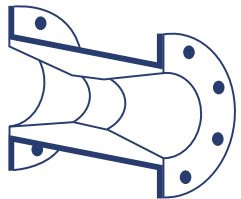
Sleeves can be produced in a variety of port configurations to reach the desired flow. See illustrations for some options. Sleeves are produced using either EPDM, Viton, Buna-N, Natural Rubber, Butyl, Neoprene or Teflon.



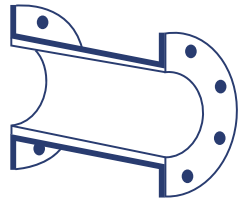
Standard Sleeve Diagram shows (A) Inner Core; (B) outer core; and (C) the outer protective layer

Sleeve Port Configurations

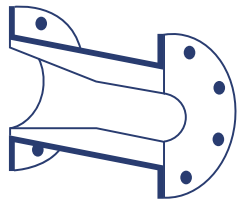
Reduced Port Sleeve



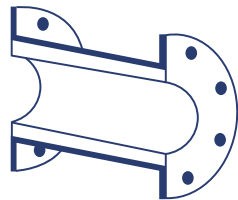
Standard Sleeve



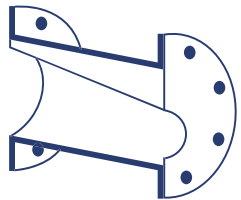
Funnel Sleeve



Double Wall Sleeve

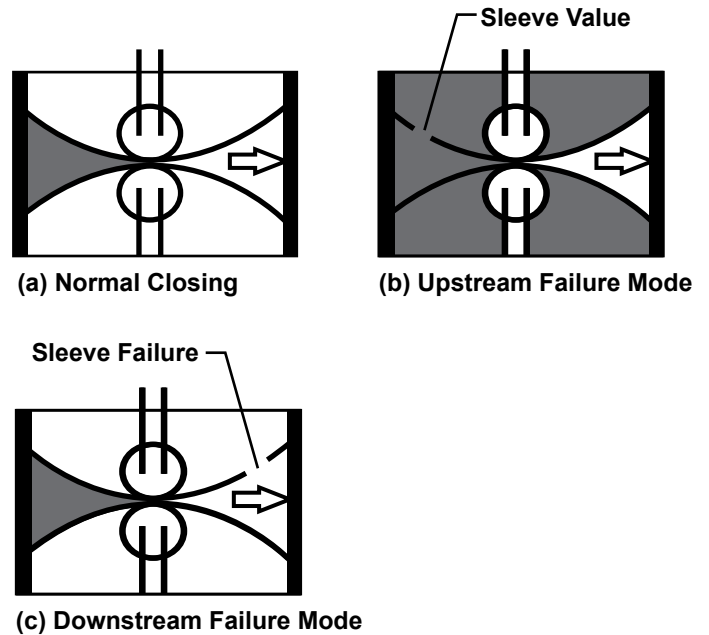


Eccentric Sleeve



Mechanical Pinch Valves Can Regulate Flow Even After Sleeve Failure

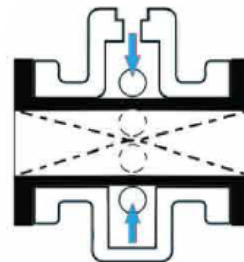
Mechanical pinch valves can maintain flow control after a sleeve failure upstream or downstream from the pinch bar areas.



Mechanical Pinch Valve continuing operation even after sleeve damage (above) (a) closed; (b) failure upstream; (c) failure downstream

Note: The primary failure mode for center-line pinch valve occurs at the flanges as seen in the figure above instead of at the pinch location as in single-direction linear pinch valves.

Sleeve Closure:



Centerline Pinch Operation

DuraPinch Valves always use a center line pinch to ensure maximum longevity and reliability. This allows for the least amount of wear and tear over the lifetime of the sleeve.

DuraPinch® Valves

General Information

Our Services

Service

Our team provides industry leading field-service and support. Our customer service, engineering support, and field services team is dedicated to exceeding expectations.

Training

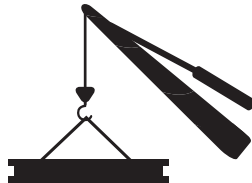
We offer comprehensive training or complete turn-key installation of our valves from one of our qualified field mechanics.

Industries We Serve

Rotary pinch valves are the ideal solution for applications in conveying corrosive, abrasive media, or media containing solids in suspension or in high-purity applications. Depending on the media, various body, body lining and pinch material options are available for chemical compatibility. The moving parts of a rotary pinch valve are isolated from the media being conveyed resulting in durability and isolation. Further, rotary pinch valves can be maintained in-line making them easy to maintain.

Industrial Process

Most industrial processes have applications related to process water, chemical dosing, suspended solids and effluent treatment. Rotary pinch valves are ideally suited for such applications.



Applications:

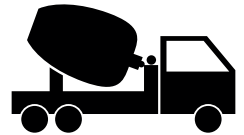
- Corrosive, caustic and acidic
- Sodium hypochlorite (NaClO)
- Sodium chlorate (NaClO₃)
- Sodium chloride (NaCl)
- Chlorine dioxide (ClO₂)
- Hydrogen peroxide (H₂O₂)
- Hydrochloric and sulfuric acid
- Peracetic acid (C₂H₄O₃)
- Water treatment
- Deaerator
- Make-up water
- Effluent streams

Design

Available in a wide variety of sizes and modifications, the DuraPinch valve is the ideal solution for handling abrasive materials in applications.

Cement Industry

Like mineral processing applications, rotary pinch valves are utilized in the cement industry for suspended solids, water, wastewater and chemical dosing applications:



Applications:

- Process water
- Drains and samplings
- Demineralizers
- Chemical dosing
- Effluent streams

Some of the typical applications in the power industry center around demineralized water used in steam boilers and chemical processes, particularly in flue gas treatment processes.

- Dosing valves for caustic solution
- FGD process
- Lime slurry, gypsum, dewatering
- FGD water and waste water
- Filtrate, reclaim, mist eliminator wash
- Wastewater system (chemical dosing)
- Other applications
- Cooling water circulation
- Water treatment
- Deaerator
- Make-up water
- Ash handling

DuraPinch® Valves

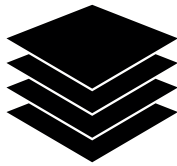
General Information

Pulp and Paper

In pulp and paper there are many applications for rotary pinch valves related to suspended solids in media as well as chemical dosing.

Applications:

- Causticizer
- Chlorine gas containment
- Extraction
- Hypochlorite, sulfuric acid, sodium chlorate
- Kaolin, titanium dioxide and PCC
- Titanium dioxide, varnish, starch, alum and sizing



Mining, Minerals and Metals

Mining and mineral processing industries are the birthplace of the modern rotary pinch valve. Most liquid streams are contaminated with some solids content, therefore making the rotary pinch valve the perfect choice. Further, various corrosive chemicals are routinely used in mining which are the ideal application for rotary pinch valves.

Applications:

- Clarifiers and thickeners
- Clarifier inlet, overflow outlet, flocculent and sludge
- Flotation cells
- Feed lines, wash water, collector reagent lines
- Leaching – chemical dosing valves
- Tailings
- Process water
- Drains and samplings
- Demineralizers
- Chemical feed
- Electrowinning



Who Uses Pinch Valves?

Engineers almost always use pinch valves to control slurry and dry powders; however, they're also used in a variety of sanitary or chemical applications that are caustic or too abrasive for metallic valves.

- Wastewater
- Mining
- Chemical
- Food industry
- Paper mills
- Pharmaceutical

Where are pinch valves specified?

- Pinch valves can be specified in critical processes, but they are usually specified after a cost-benefit analysis is performed to show savings over time.
- Pinch valves are designed for the harshest conditions and will generally outperform any metallic valve.
- Compare to a wheel with no tire.





Expansion Joints

Over 2000 types of molds to meet customer needs

DuraPinch expansion joints absorb noise, shock, vibration, and physical and thermal energy. These joints are made of natural or synthetic elastomers and are reinforced with fabrics and metal for strength and pressure resistance. Metal reinforcement may be used externally for movement control.

DuraPinch expansion joints come in a wide range of sizes, materials and number of arches. Our ordering number generator will help you order exactly what your job requires.

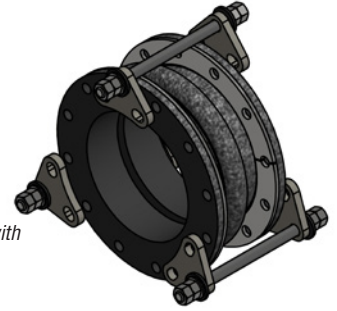


Series FS-21 – Rubber Expansion Joints

Industry Standard Engineered Spool-Type Flexible Connectors

From DuraPinch®

The FS-21 is available in configurations from zero to four arches - depending on movement requirements - and 3 standard pressure ratings in a variety of elastomers. This hand-built expansion joint can be adapted to the most unusual or difficult applications. Available options include filled arches to eliminate settling of solids in the arch, Teflon liners for severe chemical service, soft cuff ends for slip-on installation, and concentric or eccentric tapered ends for connecting different pipe sizes.



All FS-21 Expansion Joints are available with control kits.

FS-21 Series – Sizes 1-12

FF (per Arch) ⁽¹⁾				Size ID	Flange OD ⁽⁴⁾	Bolt Circle	Holes		Ring ID	Work Pressure			Axial Comp.		Axial Ext.		Traverse Def.		Est. Weight	
1	2	3	4				No.	Dia.		SR	LP	HP	AM	TF	AM	TF	AM	TF	Joint	Rings
6	10	12	14	1	4-1/4	3-1/8	4	5/8	2-3/8	165	15	200	1/2	103	1/4	76	1/2	175	2	2.25
6	10	12	14	1-1/4	4-5/8	3-1/2	4	5/8	2-5/8	165	15	200	1/2	129	1/4	96	1/2	219	2.5	2.25
6	10	12	14	1-1/2	5	3-7/8	4	5/8	2-7/8	165	15	200	1/2	154	1/4	115	1/2	262	3	3
6	10	12	14	2	6	4-3/4	4	3/4	3-5/8	165	15	200	1/2	185	1/4	138	1/2	350	4	4
6	10	12	14	2-1/2	7	5-1/2	4	3/4	4-1/8	165	15	200	1/2	232	1/4	172	1/2	381	4.5	4.5
6	10	12	14	3	7-1/2	6	4	3/4	4-5/8	165	15	200	1/2	278	1/4	207	1/2	412	5.5	6
6	10	12	14	4	9	7-1/2	8	3/4	5-7/8	165	15	200	1/2	371	1/4	276	1/2	476	8	7.5
6	10	12	14	5	10	8-1/2	8	7/8	6-7/8	165	15	200	1/2	463	1/4	344	1/2	546	9	8
6	10	12	16	6	11	9-1/2	8	7/8	7-7/8	165	15	200	1/2	556	1/4	413	1/2	617	11	9
6	10	14	16	8	13-1/2	11-3/4	8	7/8	9-7/8	140	15	190	3/4	971	3/8	689	1/2	753	15	12
8	12	14	16	10	16	14-1/4	12	1	12-1/8	140	15	190	3/4	1214	3/8	861	1/2	809	23	16
8	12	14	16	12	19	17	12	1	14-1/2	140	15	190	3/4	1456	3/8	1033	1/2	948	34	22

*Items are normally furnished with filled arches and movement shown should be reduced accordingly.

Ordering Number Generator

Series + Arches Size (I.D.) Sleeve Material

FS-2 - -

- SR = Standard Pressure (psi)
- LP = Low Pressure (psi)
- HP = High Pressure (psi)
- AM⁽²⁾ = Allowable Movement (in.)
- TF⁽³⁾ = Total Force (lbs.)

(1) - Lengths shown are for new design. Replacement parts should be ordered to the exact F/F dimension. *Items are not normally supplied in multiple "open" arches, as squirm can occur. Minimum length of "face to face" can be reduced by eliminating the arch. Number of arches required depends upon anticipated total movement of the expansion joint.

(2) - Multiple arch movement = single arch movement x number of arches. "Filled Arch" construction reduces movement by 50%. *Items are normally furnished with filled arches and movement shown should be reduced accordingly.

(3) - Forces are based on one single open arch at zero pressure conditions, and should therefore be considered only as approximate. Contact DuraPinch

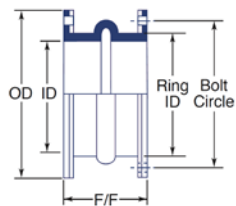
Code	Sleeve Material	Code	Sleeve Material
EPDM	Ethylene Propylene Rubber	CSM	Hypalon™
FKM	Viton™	CIIR	Butyl
NBR	Buna N	CR	Neoprene
PGR/NR	Pure Gum Rubber/Natural Rubber	AFMU	Teflon™

for forces of multiple and filled arch products. Angular force is expressed in "foot pounds". For spring rates, contact DuraPinch.

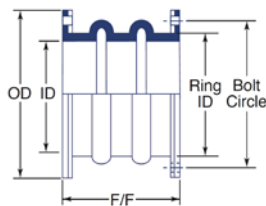
(4) - Flange dimensions shown are in accordance with 125/150 pound standards of ANSI B16.1, B16.5, AWWA C-207 Table 3 Class E; AWWA C-207 Table 1 and 2 Class D. Retaining ring width is 3/8" in all sizes. Flange thickness is DuraPinch standard.

(5) - Flange drilling is also available in all international standards or custom applications. For more information, contact DuraPinch.

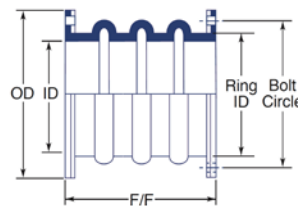
Notes: Control unit assemblies are recommended for all applications. To ensure correct length, customer should provide width of mating flange or flange specification.



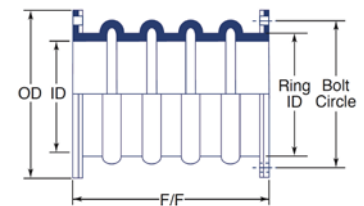
FS-21



FS-22



FS-23



FS-24

DuraPinch® Valves

800.402.0929 | info@durapinch.com | www.durapinch.com

Series FS-21 – Rubber Expansion Joints

Industry Standard Engineered Spool-Type Flexible Connectors

From DuraPinch®

FS-21 Series – Sizes 14-48

FF (per Arch) ⁽¹⁾				Size ID	Flange OD ⁽⁴⁾	Bolt Circle	Holes		Ring ID	Work Pressure			Axial Comp.		Axial Ext.		Traverse Def.		Est. Weight	
1	2	3	4				No.	Dia.		SR	LP	HP	AM	TF	AM	TF	AM	TF	Joint	Rings
8	12	16	20	14	21	18-3/4	12	1-1/8	16-1/2	85	15	130	3/4	1274	3/8	904	1/2	1117	40	25
8	12	16	20	16	23-1/2	21-1/4	16	1-1/8	18-1/2	65	15	110	3/4	1456	3/8	1033	1/2	1286	47	27
8	12	16	20	18	25	22-3/4	16	1-1/4	20-1/2	65	15	110	3/4	1638	3/8	1163	1/2	1420	56	29
8	12	16	20	20	27-1/2	25	20	1-1/4	22-5/8	65	15	110	7/8	2152	3/8	1505	1/2	1588	67	35
10	14	18	22	22	29-1/2	27-1/4	20	1-3/8	24-5/8	65	15	110	7/8	2367	7/16	1656	1/2	1648	70	44
10	14	18	22	24	32	29-1/2	20	1-3/8	26-5/8	65	15	110	7/8	2582	7/16	1807	1/2	1706	79	46
10	14	18	22	26	34-1/4	31-3/4	24	1-3/8	26-7/8	55	15	90	1	2869	1/2	1990	1/2	1829	100	50
10	14	18	22	28	36-1/2	34	28	1-3/8	30-7/8	55	15	90	1	3090	1/2	2143	1/2	1952	102	58
10	14	18	22	30	38-3/4	36	28	1-3/8	32-7/8	55	15	90	1	3311	1/2	2297	1/2	2075	117	55
10	14	18	22	34	43-3/4	40-1/2	32	1-5/8	37	55	15	90	1	3752	1/2	2603	1/2	2801	112	91
10	14	18	22	36	46	42-3/4	32	1-5/8	39	55	15	90	1	3973	1/2	2756	1/2	3164	143	99
10	14	18	22	40	50-3/4	47-1/4	36	1-5/8	43	55	15	90	1	4414	1/2	3062	1/2	3338	173	108
12	14	18	24	42	53	49-1/2	36	1-5/8	45-1/4	55	15	80	1-1/8	4732	1/2	3253	1/2	3423	193	110
12	14	18	24	44	55-1/4	51-3/4	40	1-3/4	47-1/4	55	15	80	1-1/8	4958	1/2	3407	1/2	3571	198	136
12	14	18	24	48	59-1/2	56	44	1-5/8	51-1/4	55	15	80	1-1/8	5408	1/2	3717	1/2	3866	211	154

*Items are normally furnished with filled arches and movement shown should be reduced accordingly.

Ordering Number Generator

Series + Arches Size (I.D.) Sleeve Material

FS-2 - -

SR = Standard Pressure (psi)
 LP = Low Pressure (psi)
 HP = High Pressure (psi)
 AM ⁽²⁾ = Allowable Movement (in.)
 TF ⁽³⁾ = Total Force (lbs.)

Code	Sleeve Material	Code	Sleeve Material
EPDM	Ethylene Propylene Rubber	CSM	Hypalon™
FKM	Viton™	CIIR	Butyl
NBR	Buna N	CR	Neoprene
PGR/NR	Pure Gum Rubber/Natural Rubber	AFMU	Teflon™

(1) - Lengths shown are for new design. Replacement parts should be ordered to the exact F/F dimension. *Items are not normally supplied in multiple "open" arches, as squirm can occur. Minimum length of "face to face" can be reduced by eliminating the arch. Number of arches required depends upon anticipated total movement of the expansion joint.

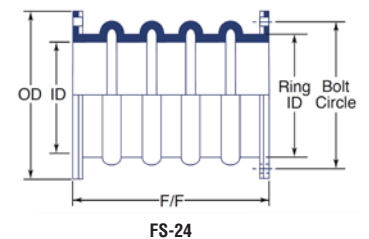
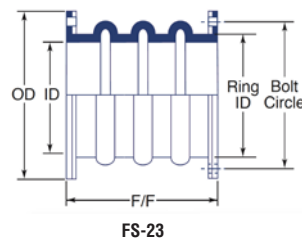
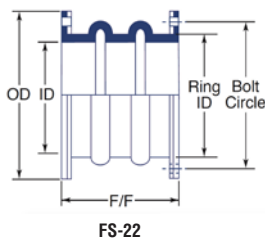
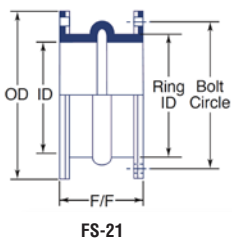
(2) - Multiple arch movement = single arch movement x number of arches. "Filled Arch" construction reduces movement by 50%. *Items are normally furnished with filled arches and movement shown should be reduced accordingly.

(3) - Forces are based on one single open arch at zero pressure conditions, and should therefore be considered only as approximate. Contact DuraPinch for forces of multiple and filled arch products. Angular force is expressed in "foot pounds". For spring rates, contact DuraPinch.

(4) - Flange dimensions shown are in accordance with 125/150 pound standards of ANSI B16.1, B16.5, AWWA C-207 Table 3 Class E; AWWA C-207 Table 1 and 2 Class D. Retaining ring width is 3/8" in all sizes. Flange thickness is DuraPinch standard.

(5) - Flange drilling is also available in all international standards or custom applications. For more information, contact DuraPinch.

Notes: Control unit assemblies are recommended for all applications. To ensure correct length, customer should provide width of mating flange or flange specification.



800.402.0929 | info@durapinch.com | www.durapinch.com

Series FS-21 – Rubber Expansion Joints

Industry Standard Engineered Spool-Type Flexible Connectors

From DuraPinch®

FS-21 Series – Sizes 50-108

FF (per Arch) ⁽¹⁾				Size ID	Flange OD ⁽⁴⁾	Bolt Circle	Holes		Ring ID	Work Pressure			Axial Comp.		Axial Ext.		Traverse Def.		Est. Weight	
1	2	3	4				No.	Dia.		SR	LP	HP	AM	TF	AM	TF	AM	TF	Joint	Rings
12	14	18	24	50	61-3/4	58-1/4	44	1-7/8	53-1/4	55	15	80	1-1/8	5634	1/2	3872	1/2	4012	240	163
12	14	18	24	54	66-1/4	62-3/4	44	2	57-1/4	55	15	80	1-1/8	6085	1/2	4182	1/2	4303	265	185
12	14	18	24	56	68-3/4	65	48	2	59-1/4	55	15	80	1-1/8	6310	1/2	4341	1/2	4448	288	203
12	14	18	24	60	73	69-1/4	52	2	63-1/4	55	15	80	1-1/8	6761	1/2	4651	1/2	4736	309	215
12	14	18	24	62	75-3/4	71-3/4	52	2	65-1/4	55	15	80	1-1/8	7150	1/2	4860	1/2	4820	325	230
12	14	18	24	66	80	76	52	2	69-1/4	55	15	80	1-1/8	7437	1/2	5116	1/2	5108	350	255
12	14	18	24	72	86-1/2	82-1/2	60	2	75-1/4	45	15	70	1-1/8	8113	1/2	5581	1/2	5477	385	300
12	14	18	24	78	93	88-3/4	60	2-1/8	81-1/4	45	15	70	1-1/8	8789	1/2	6046	1/2	5951	410	325
12	14	18	24	84	99-3/4	95-1/2	64	2-1/4	87-1/2	45	15	70	1-1/8	9465	9/16	6511	1/2	6425	435	350
12	16	18	24	96	113-1/4	108-1/2	68	2-1/2	99-3/8	45	15	70	1-1/8	10817	9/16	7441	1/2	7375	485	400
12	16	20	24	102	120	114-1/2	72	2-5/8	--	45	15	70	2	19850	1	12890	1/2	8331	535	450
12	16	20	24	108	126-3/4	120-3/4	72	2-5/8	--	45	15	70	2	21915	1	14506	1/2	9785	585	500

*Items are normally furnished with filled arches and movement shown should be reduced accordingly.

Ordering Number Generator

Series + Arches Size (I.D.) Sleeve Material

FS-2 - -

- SR = Standard Pressure (psi)
- LP = Low Pressure (psi)
- HP = High Pressure (psi)
- AM ⁽²⁾ = Allowable Movement (in.)
- TF ⁽³⁾ = Total Force (lbs.)

Code	Sleeve Material	Code	Sleeve Material
EPDM	Ethylene Propylene Rubber	CSM	Hypalon™
FKM	Viton™	CIIR	Butyl
NBR	Buna N	CR	Neoprene
PGR/NR	Pure Gum Rubber/Natural Rubber	AFMU	Teflon™

(1) - Lengths shown are for new design. Replacement parts should be ordered to the exact F/F dimension. *Items are not normally supplied in multiple "open" arches, as squirm can occur. Minimum length of "face to face" can be reduced by eliminating the arch. Number of arches required depends upon anticipated total movement of the expansion joint.

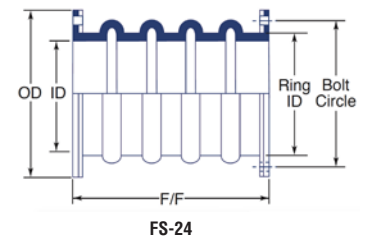
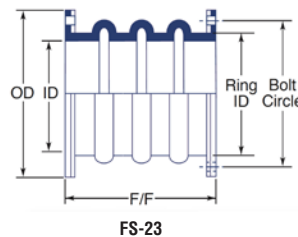
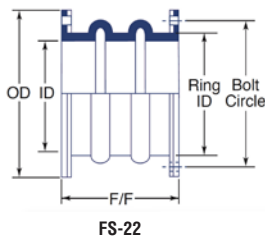
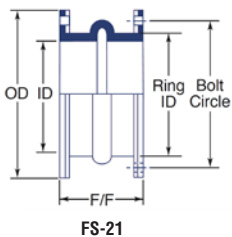
(2) - Multiple arch movement = single arch movement x number of arches. "Filled Arch" construction reduces movement by 50%. *Items are normally furnished with filled arches and movement shown should be reduced accordingly.

(3) - Forces are based on one single open arch at zero pressure conditions, and should therefore be considered only as approximate. Contact DuraPinch for forces of multiple and filled arch products. Angular force is expressed in "foot pounds". For spring rates, contact DuraPinch.

(4) - Flange dimensions shown are in accordance with 125/150 pound standards of ANSI B16.1, B16.5, AWWA C-207 Table 3 Class E; AWWA C-207 Table 1 and 2 Class D. Retaining ring width is 3/8" in all sizes. Flange thickness is DuraPinch standard.

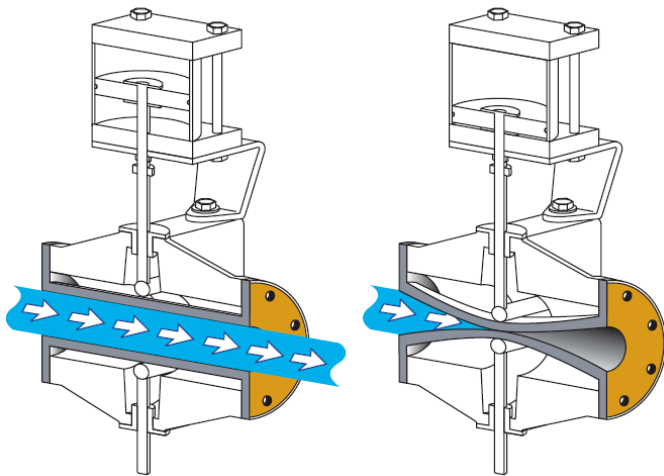
(5) - Flange drilling is also available in all international standards or custom applications. For more information, contact DuraPinch.

Notes: Control unit assemblies are recommended for all applications. To ensure correct length, customer should provide width of mating flange or flange specification.





Closed and open style options



Centerline Pinch Operation

Traditional mechanical design utilizing linear press to open and close the L Series valves.

Multiple Connections

- A01-Flange
- A02-Mini
- A03-Quick Clamp
- A04-AP Connection

- High-grade sleeve materials: styrene to butadiene to numerous other elastomers and rubber compounds perfectly suited for any application.
- L Series linear closing clamp force is best suited for large diameter valves for best actuation efficiency.
- Extraordinarily abrasive/corrosive resistant; well suited for stormwater, slurries, chemicals, dry powders and granular substances.
- Multi-layer sleeve reinforcement perfected with decades of experience.
- Large inventory available in many sizes and materials.

Mechanical pinch valves use a clamping mechanism to squeeze the sleeve closed. The valve closes once the pressure outside the elastomer sleeve overcomes the pressure inside the sleeves.

Advantages

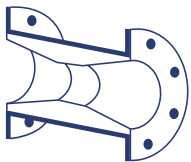
- Replaceable Internals
- Fail-Safe Closing

Drawbacks

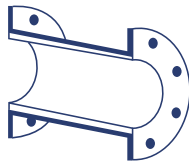
- Large Linear Actuators
- Center-Line Pinch Not Standard
- No In-Line Maintenance

Sleeve Styles and Materials Selection

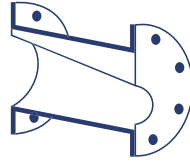
Reduced Port Sleeve



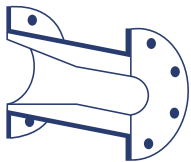
Standard Sleeve



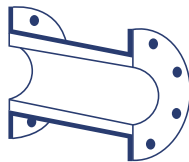
Eccentric Sleeve



Funnel Sleeve



Double Wall Sleeve



DuraPinch linear control valves can be fitted with pre-pinched or reduced port sleeves for precise flow control. Funnel port sleeves are recommended for high pressure drop applications. A wide range of elastomers are available to suit most service conditions.

Series L Linear (with actuator)

Linear Clamp Valves

From DuraPinch®

Ordering Number Generator

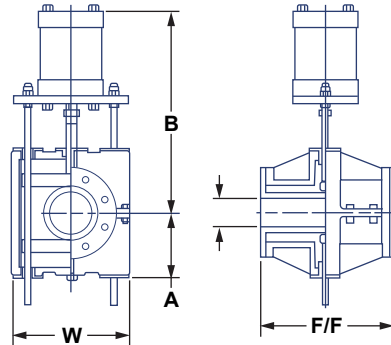
Series Size (I.D.) Operation Sleeve Style Sleeve Material Connection Flange Drilling
(CO - CC - UO - UC)

Linear L - - - - -

Sizing

ID ¹	1	1-1/2	2	2-1/2	3	4	6	8	10	12	14	16	18	20	24-48"
F/F ¹	7-1/4	8-3/4	10	10-7/8	11-3/4	13-7/8	17-3/4	21-3/8	26-1/2	29	35	40	45	50	CONTACT US TODAY
W ¹	6	6-1/2	8	9	10	11-3/4	15-1/2	19	25	28	31-3/8	37	40	44	
A ¹	2-1/4	2-1/2	3	3-1/2	3-3/4	4-1/2	5-1/2	6-3/4	8	9-1/2	10-1/2	11-3/4	12-1/2	13-3/4	
B ¹	Varies according to actuator selection														
Max Work Pressure ²	150	150	150	150	150	150	125	125	125	100	75	50	50	50	
Weight ³ (est.)	Varies according to actuator selection														

Dimensions can be revised to suit custom¹ specifications.
Consult factory to order up to 48" size.



Code	Operation
O1	Open & 1 bar
O2	Open & 2 bars
C1	Closed & 1 bar
C2	Closed & 2 bars
U	Uni-directional
C	Centerline

Code	Sleeve Style
SS	Standard Sleeve
RP	Reduced Port Sleeve
FS	Funnel Sleeve
DW	Double Wall Sleeve

Code	Sleeve Material
EPDM	Ethylene Propylene Rubber
FKM	Viton™
NBR	Buna N
PGR/NR	Pure Gum Rubber/Natural Rubber
CSM	Hypalon™
CIIR	Butyl
CR	Neoprene
AFMU	Teflon™

Code	Connection Style
A02	Flange
A02	Mini
A03	Quick Clamp
A04	AP Connection

Code	Flange Drilling
A	ANSI 125
B	ANSI 300
C	PN 6
D	PN 10
E	PN 16
F	BS 10
G	Other

Note: For electric, pneumatic and custom actuators, consult DuraPinch.



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Series L Linear (with handwheel)

Linear Clamp Valves

From DuraPinch®

Ordering Number Generator

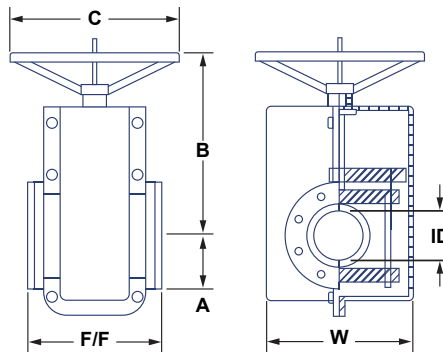
Series Size (I.D.) Operation Sleeve Style Sleeve Material Connection Flange Drilling
(CO - CC - UO - UC)

Linear L - - - - -

Sizing

ID ¹	1	1-1/2	2	2-1/2	3	4	6	8	10	12	14	16	18	20	24-48"
F/F ¹	5	7	9	10	12	9	10-1/2	16	20	26	28	32	36	40	CONTACT US TODAY
W ¹	6	6-5/8	8-3/8	9-1/4	10-1/8	11-3/4	15-1/4	20	24	28	31-3/8	35	37-1/4	44	
A ¹	2-1/8	2-1/2	3	3-1/2	3-3/4	4-1/2	5-1/2	6-3/4	8	9-1/2	10-1/2	11-3/4	12-1/2	13-3/4	
B ¹	Varies according to actuator selection														
Max Work Pressure ²	150	150	150	150	150	150	125	125	125	100	75	50	50	50	
Weight ³ (est.)	Varies according to actuator selection														

Dimensions can be revised to suit custom¹ specifications.
Consult factory to order up to 48" size.



Code	Operation
O1	Open & 1 bar
O2	Open & 2 bars
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Code	Sleeve Style
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Code	Connection Style
A02	Flange
A02	Mini
A03	Quick Clamp
A04	AP Connection

Code	Flange Drilling
A	ANSI 125
B	ANSI 300
C	PN 6
D	PN 10
E	PN 16
F	BS 10
G	Other

Note: For electric, pneumatic and custom actuators, consult DuraPinch.



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Series QTP Rotary Valves

(Quarter-Turn Pinch)

From DuraPinch®



How Rotary Valves Work

The revolutionary design is unmatched in quality, delivery and performance for many slurry, chemical high-purity, and food industry applications.

Rotary Pinch Valve shown with quarter-turn electric actuator.



Increased Service. Reduced Downtime.

The newly patented rotary pinch valves makes actuation a breeze because it's suited for use with a quarter-turn actuator. As the line size goes up, the closing force requirement from the actuator increases exponentially. However, rotary punch valves can easily scale to the task using the mechanical lever arms of the drive system. This reduces actuator costs while maintaining mechanical reliability and allows for an unobstructed sleeve.

Design Features

QTP Valve Series

- Full bore opening
- Self-cleaning
- Non-clogging
- Few parts & inexpensive
- FAST maintenance
- Wear resistant
- Easy to control
- Can be used in throttling
- ZERO leakage
- Low cost

Rotary Advantages

- By using leverage, there is a 3:1 mechanical advantage over linearly driven pinch valves.
- Center-line closing exponentially increase uptime by uniformly stretching the sleeve
- Handwheel sizes significantly reduced
- The compact design reduces the overall footprint and weight by roughly 40%.

Maintenance: Rugged Split Body Design

- The sleeve has a clear exit path should it need to be replaced while the actuator and valve body remain in-place.
- The entire drive assembly can be replaced after years of service while remaining in place.

Valve Packing Available

- A uniform chamber and equally distributed gland bolts provide uniform compression
- Using a secondary leakage protection system is not mandatory as the sleeve and O-ring seals are sufficient; however, a secondary containment system can be used in environments where needed.

 DuraPinch® Valves

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Series QTP Rotary Valves

(Quarter-Turn Pinch)

From DuraPinch®

Step 1

Remove bottom or top of valve assembly while in-line.

Step 2

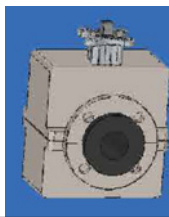
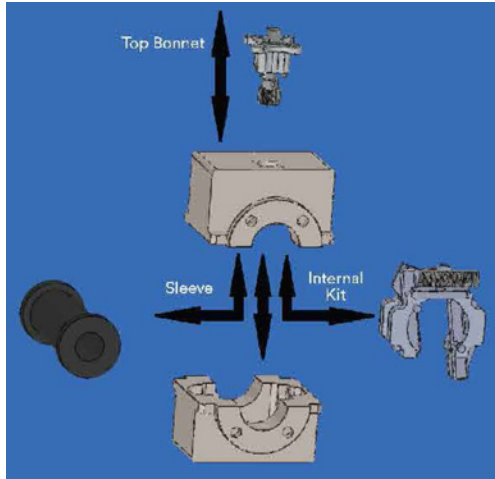
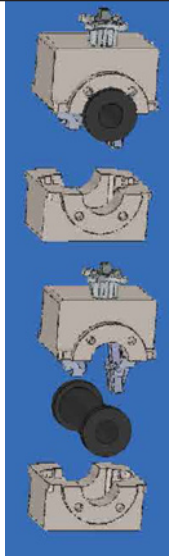
Field inspection of sleeve & internal kit

Step 3

Replace sleeve **OR** internal-replacement-KIT **OR** top bonnet

Step 4

Reconnect top & bottom assembly (can be done in-line for field repairs)



Ordering Number Generator

Materials (see "Materials Chart")

Series Size Body Sleeve Flange Connection

QTP - - -

Materials

Valve Size	Face-to-Face	H1	H2	Working Pressure (psi)
1"	7.25"	2"	8"	150
2"	10"	4.25"	10"	150
3"	11.75"	6.5"	12"	150
4"	13.875"	8.5"	16"	150
6"	17.75"	10"	22"	125
8"	21.375"	9"	28"	125
10"	26.5"	11"	32"	100
12"	29"	12"	38"	100

Part	Codes - (Material Selections)
Body	CF8M (SS316) / DI (Ductile Iron) / AL (Aluminum)
Stem	316 (SS316) / 304 (SS304)/CS (Carbon Steel)
Packing	O (O-ring) / G (Graphite) / PTFE (Impregnated Synthetic Yarn)
Bolts	304 (SS304) / 316 (SS316)
Gaskets	PTFE (Impregnated Synthetic Yarn) / RF (Reinforced Fiber)
Sleeve	NR (Natural Rubber) / L (Linatex) / CR (Neoprene) / EPDM (Ethylene Propylene Rubber)
Standard Materials	
Pinch Arms	SS316
Cams	SS316
Cam Follower	SS316



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Series ST Air Operated

(Shell & Tube)

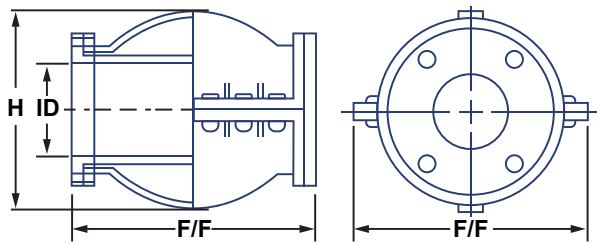
From DuraPinch®



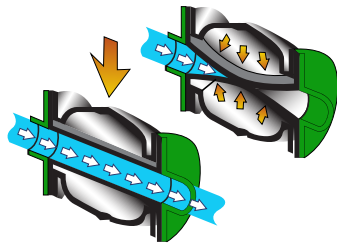
Typical Applications

- Mining
- Waste and Water Treatment
- Food Processing
- Mineral Processing

The body of the DuraPinch Air Operated Pinch Valves is available in cast iron, aluminum or stainless steel.



Series DuraPinch Air Operated Pinch Valves provide an effective means of flow control for hard-to-handle media such as slurries, sludges, and dry solids.



A flexible elastomer sleeve is contained in a cast metal housing.

The annular cavity between the sleeve and the housing acts as the valve's actuator. As pressurized air or water enters the housing, the sleeve is pinched shut. Venting the pressure allows the valve to resume full normal flow.

Operation of DuraPinch Air Operated Pinch Valves

To operate DuraPinch Air Operated Pinch Valves, it takes 25 psi (+/-10 psi) of differential pressure to close the valve tight. For example, if there is a flow of 15 psi running through the valve, expect to require minimum of 40 psi on the control side to fully close the valve. If possible, throttle the control air to give just enough pressure to operate the valve. The lower the pressure, the longer the sleeve will last. Please note that different elastomer, sleeve, and application combinations may require higher differential pressures.

Ordering Number Generator

Series Size (I.D.) Sleeve Material Connection

ST - -

ID ¹	1/2	3/4	1	1-1/2	2	2-1/2	3	4	5	6
F/F ¹	3	4	5	7	9	10	12	12-1/2	16-1/2	20
H ¹	3-1/2	3-7/8	4-1/4	5	7-1/8	7-1/2	8-1/8	10-5/8	11-1/2	13-1/2
W ¹	4-1/2	5	5-3/4	6-1/2	8-1/2	9	10	11-3/4	11-3/4	15-1/4
Max Work Pressure ²	125	125	125	125	125	125	123	100	75	75
Weight ³ (Cast Iron)	5	7	9	17	32	40	51	70	137	180
Weight ³ (Aluminum)	2	4	6	8	15	20	23	34	60	88
Volume ⁴	0.001	0.002	0.004	0.012	0.028	0.054	0.080	0.166	0.348	0.529

1 - inches 2 - psi 3 - pounds 4 - ft

Dimensions can be revised to suit custom specifications.

ID ¹	8	10	12	14	16	18	20	24
F/F ¹	22	24	26	30	34	39	43	51
H ¹	18	22-3/8	25	27-1/2	29-1/2	32-5/8	36-1/2	47
W ¹	17-1/2	19-3/8	21-1/2	24	25	26-1/4	29	37-1/2
Max Work Pressure ²	75	50	50	50	50	25	25	25
Weight ³ (Cast Iron)	257	440	485	625	933	1300	1555	2525
Weight ³ (Aluminum)	120	195	252	291	340	560	670	790
Volume ⁴	1.032	1.815	2.583	3.880	6.579	9.404	12.001	20.116

1 - inches 2 - psi 3 - pounds 4 - ft

Dimensions can be revised to suit custom specifications.

Code	Sleeve Material	Code	Connection Style
EPDM	Ethylene Propylene Rubber	A02	Flange
FKM	Viton™	A02	Mini
NBR	Buna N	A03	Quick Clamp
PGR/NR	Pure Gum Rubber/Natural Rubber	A04	AP Connection
CSM	Hypalon™		
CIIR	Butyl		
CR	Neoprene		
AFMU	Teflon™		



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Series DBC Valves

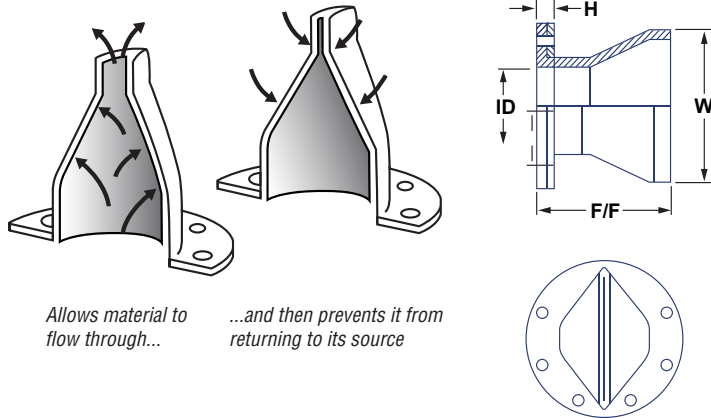
(Duck-Bill Check)

From DuraPinch®



Typical Applications

- Sewer Interceptors
- Wet Wells
- Mine Tailing Systems
- Dredging
- Scrubber Systems
- Outfall Lines
- Wet/Dry Wells



Allows material to flow through...
...and then prevents it from returning to its source

Manufactured with an integral full-faced rubber flange connection and metal backing flange, Series CPF check valves can be attached directly to a tank, pipe or headwall.

- Quiet operation
- Zero maintenance
- Design prevents backflow
- Will seal around solids
- Designed to withstand wear
- Tough enough for abrasive slurries

The heart of the Backflow Preventer is a fabric reinforced rubber “duckbill sleeve manufactured with top quality materials. This flexible sleeve provides maximum flow with a minimum pressure drop across the valve at all times.

Unlike conventional check valves – which require frequent maintenance to replace worn seats, hinge pins, balls or flappers – there is little or no maintenance.

Available in a variety of styles and reinforced elastomers, can be adapted to almost any application.

For engineering specifications or when placing your order, please provide the following information:

	Minimum	Maximum
Flow Rate		
Flow Velocity		
Line Pressure		
Back Pressure		
Media		
Discharge:	<input type="checkbox"/> Atmosphere	<input type="checkbox"/> Water
Type of Backing Ring:	<input type="checkbox"/> SS304	<input type="checkbox"/> SS316
	<input type="checkbox"/> Carbon Steel	<input type="checkbox"/> Other

Ordering Number Generator

Series Size (I.D.) Sleeve Material Connection

DBC - -

Size (ID ¹)	1	1-1/2	2	2-1/2	3	4
F/F ¹	3	3-7/8	5-1/4	8-1/4	7-1/2	9
H ¹	7/8	7/8	7/8	7/8	1-1/8	1-1/8
W ¹	2-1/8	2-5/8	3-7/8	4-5/8	5-1/2	7-3/8
Weight ²	2.5	4	5	8	11	15
ID ¹	18	20	24	28	30	32
F/F ¹	25	32	41	44	46	52
H ¹	1-3/8	1-7/8	1-7/8	1-7/8	1-7/8	1-7/8
W ¹	29-3/4	31-1/2	43	46	49	51
Weight ²	205	315	400	475	551	602

1 - inches 2 - pounds (approx.)

Dimensions can be revised to suit custom specifications.

Consult factory for other sizes. Dimensions are for clearance purposes only.

Actual product dimensions may vary based upon specific application requirements.

Size (ID ¹)	5	6	8	10	12	14	16
F/F ¹	11	12	14	16	18	20	23
H ¹	1-1/8	1-3/8	1-3/8	1-3/8	1-3/8	1-3/8	1-3/8
W ¹	8-3/4	10-1/2	13-3/4	17	19-5/8	24-3/4	26-1/2
Weight ²	17	21	25	37	59	75	124
ID ¹	36	42	48	54	60	63	72
F/F ¹	58	61	70	74	80	88	97
H ¹	1-7/8	2-3/8	2-3/8	2-3/8	2-3/8	2-3/8	2-3/8
W ¹	55-1/4	66-1/4	74-1/2	78-1/4	85	92	105
Weight ²	654	950	997	1070	1271	1310	1480

1 - inches 2 - pounds (approx.)

Dimensions can be revised to suit custom specifications.

Consult factory for other sizes. Dimensions are for clearance purposes only.

Actual product dimensions may vary based upon specific application requirements.

Code	Sleeve Material	Code	Connection Style
EPDM	Ethylene Propylene Rubber	A02	Flange
FKM	Viton™	A02	Mini
NBR	Buna N	A03	Quick Clamp
PGR/NR	Pure Gum Rubber/Natural Rubber	A04	AP Connection
CSM	Hypalon™		
CIIR	Butyl		
CR	Neoprene		



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DuraPinch® Valves

General Information

Ordering Info

A	Body Connection Type		
FL	Flange		
SS	Stainless Steel	AL	Aluminum
DI	Ductile Iron	EP	Epoxy Resin
B	Connection Size		
Customers have a choice between specifying full or reduced port chosen in the next section.			
1	1" (25)	5	5" (125)
1.5	1.5" (40)	6	6" (150)
2	2" (50)	7	8" (200)
3	3" (75)	8	10" (250)
4	4" (100)	9	12" (300)
C	Sleeve		
FP	Full Port	RP	Reduced Port
D	Sleeve Material		
20	PGR	22	Neoprene
21	Viton	23	EPDM
E	Actuator		
M	Manual	E	Electric
P	Pneumatic	H	Hydraulic
F	Flow Control		
1	Isolation	2	Modulating
A	Normally Open	B	Normally Closed
G	Packing		
R	O-Ring	S	Spun Synthetic
P1	PTFE 0-14 ph	P2	PTFE/Graphite 0-14 ph
G1	Graphite 0-14 ph	G2	Graphite/Inconel

A	Body & Connection
B	Connection Size
C	Sleeve Type
D	Sleeve Material
E	Actuator
F	Flow Control
G	Packing

ANSI 125 QTP PN: QT-FLSS-1FP-20-M-1A-R

Example: Quarter-turn-manual-stainless steel flanged ANSI 125 full-port normally open isolating rotary pinch valve with o-ring packing & pure gum rubber sleeve.



Elastomer Selection Guide

Code	Name	Description
EPDM	Ethylene Propylene Rubber	Mostly effective for application involving water, steam or diluted acids.
FKM	Viton™	Resists solvents, halogenated hydrocarbons, oxygen, weather, ozone, oils and chemicals.
NBR	Buna N	Resistant to kerosene, moderate chemicals, fats, oils, grease and many hydrocarbons.
PGR/NR	Pure Gum Rubber/Natural Rubber	Good abrasion resistance, tensile strength and resiliency. Also suitable when dealing with organic acids, alcohols, ketones and most moderate chemicals.
CSM	Hypalon™	Resists strong acids and bases, ozones, weathering, heat and oxidizing chemicals.
CIIR	Butyl	Good resistance to animal and vegetable fats, strong and oxidizing chemicals, oils, heat and greases.
CR	Neoprene	Generally resistant to oil and grease, moderate chemicals, fats, many hydrocarbons and ozone. Resistant to barnacle growth.
AFMU	Teflon™	Excellent resistance to chemicals. Fair abrasion resistance.



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