

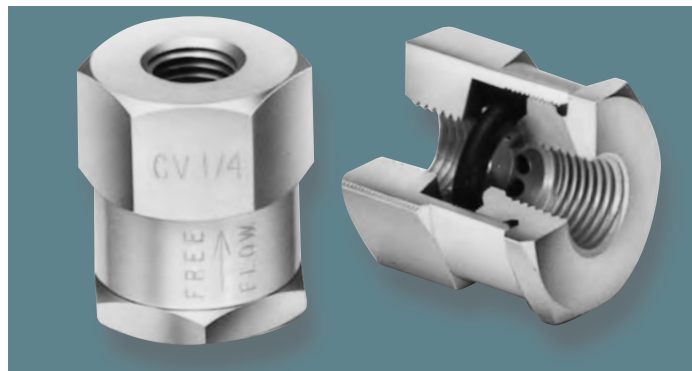
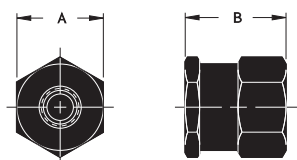
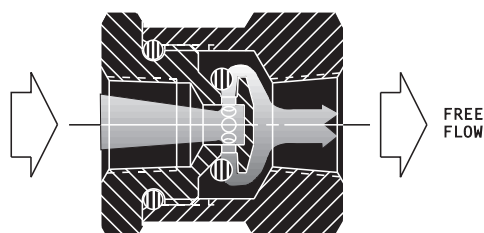
FLAIRLINE® CHECK VALVES AND FLOW CONTROLS

CHECK VALVES

O-CHECK®

SERIES CV

Lightweight aluminum O-Check® features a dilating O-ring as the only moving part. Quick to open, quick to close, O-Check 'out-flows' the competition, will last millions of cycles (factory tests to 50 million cycles show no discernible wear) and always provides positive sealing (no bubble leakage). Standard NPTF sizes $\frac{1}{8}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ " and $\frac{3}{4}$ " and orifices available for fixed flow control applications.



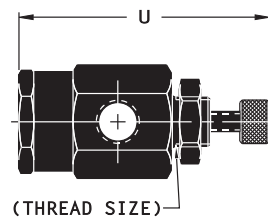
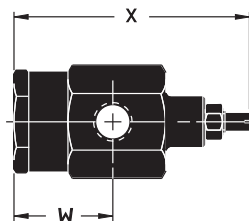
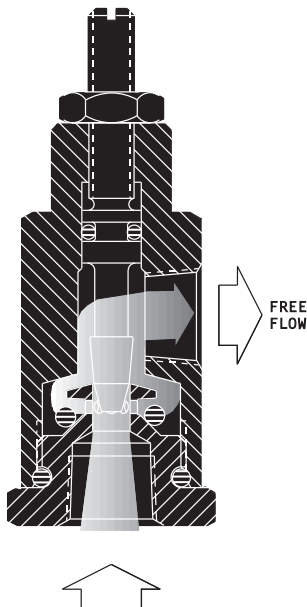
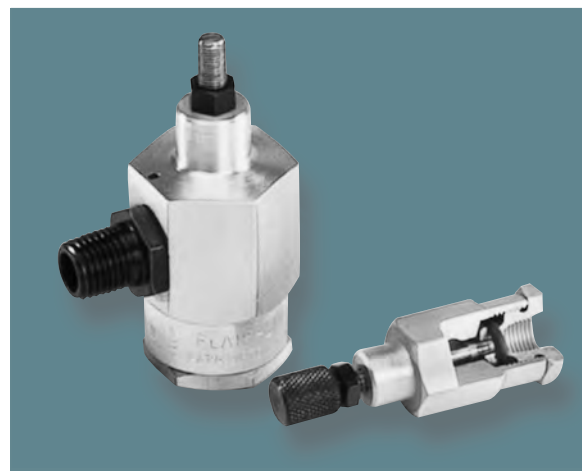
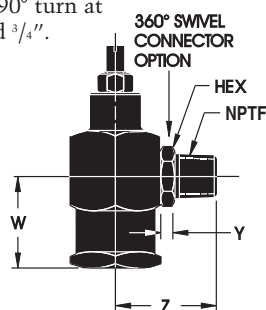
Model No.	Pipe Thread	A	B
CV- $\frac{1}{8}$	$\frac{1}{8}$ -27	$\frac{3}{4}$	$\frac{15}{16}$
CV- $\frac{1}{4}$	$\frac{1}{4}$ -18	$1\frac{1}{8}$	$1\frac{5}{16}$
CV- $\frac{3}{8}$	$\frac{3}{8}$ -18	$1\frac{1}{8}$	$1\frac{5}{16}$
CV- $\frac{1}{2}$	$\frac{1}{2}$ -14	$1\frac{5}{8}$	$1\frac{9}{16}$
CV- $\frac{3}{4}$	$\frac{3}{4}$ -14	$1\frac{7}{8}$	$2\frac{5}{16}$

FLOW CONTROLS

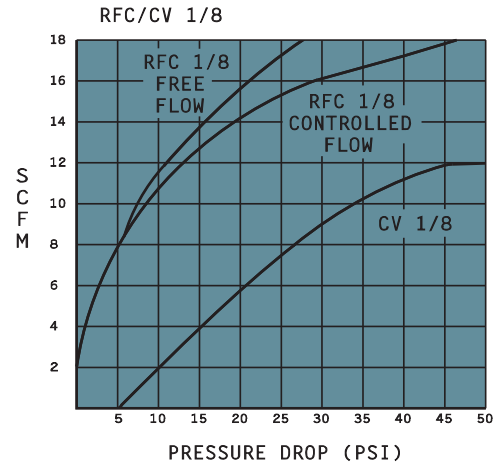
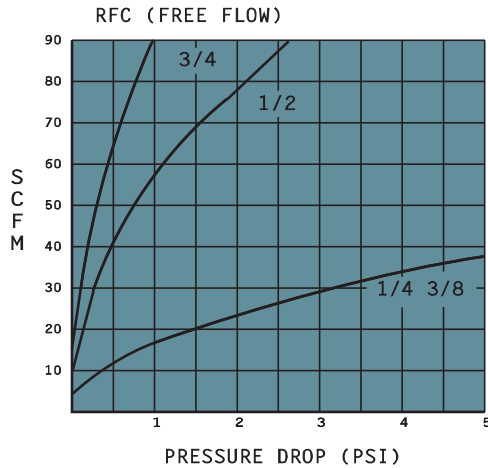
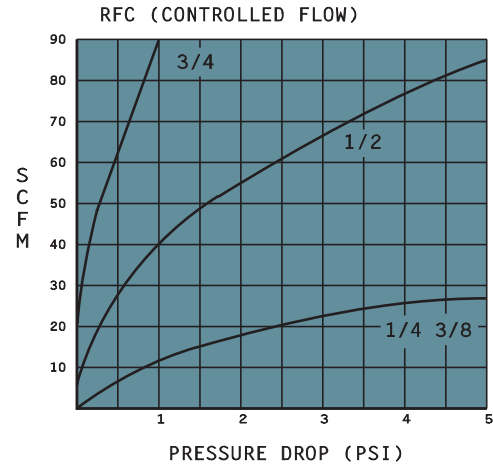
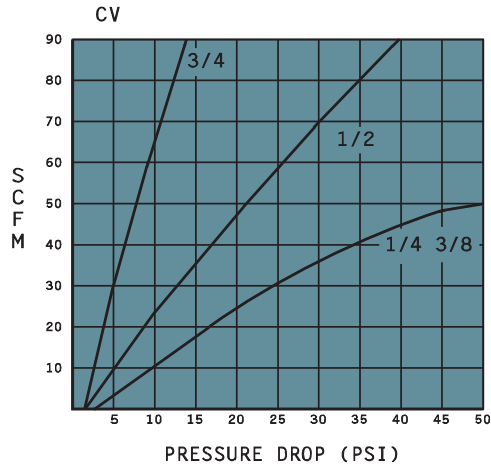
RIGHT ANGLE FLOW CONTROL

SERIES RFC

Flairline right angle flow controls incorporate O-Check as the bypass valve. RFC permits full free flow in one direction, accurately metered flow in opposite direction. Standard metering needle design includes compound needle taper of 5° and 15° and fine adjustment stem threads (RFC $\frac{1}{4}$ for example is $\frac{1}{4}$ "-36). Right angle design eliminates the need for pipe ell normally used to make 90° turn at cylinder port. Standard NPTF sizes $\frac{1}{8}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ " and $\frac{3}{4}$ ". Adjustment knobs and panel mounting available (NPTF sizes $\frac{1}{8}$ ", $\frac{1}{4}$ " and $\frac{3}{8}$ " only). Optional swivel connector allows "direct" cylinder mounting and 360° rotation for ease of installation and space saving (NPTF sizes $\frac{1}{8}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ ", and $\frac{1}{2}$ " only).



Right Angle Flow Control Model RFC-(NPTF)								
NPTF	T	U	V	W	X	Y	Z	HEX
$\frac{1}{8}$	$\frac{1}{2}$ -20	$2\frac{7}{16}$	$\frac{3}{4}$	$\frac{7}{8}$	$2\frac{1}{8}$.13	.91	$\frac{1}{2}$
$\frac{1}{4}$	$\frac{5}{8}$ -18	$3\frac{3}{16}$	$1\frac{1}{4}$	$1\frac{1}{4}$	3	.15	1.34	$\frac{3}{4}$
$\frac{3}{8}$	$\frac{5}{8}$ -18	$3\frac{3}{16}$	$1\frac{1}{4}$	$1\frac{1}{4}$	3	.15	1.34	$\frac{3}{4}$
$\frac{1}{2}$			$1\frac{5}{8}$	$1\frac{5}{8}$	$3\frac{3}{4}$.28	1.84	$\frac{7}{8}$
$\frac{3}{4}$			2	$1\frac{1}{4}$	$3\frac{3}{4}$			



SPECIFICATIONS

Operating Pressure: 250 psi
 Operating Temperature Range: -40° - +225°F.
 Standard O-Ring Material: Buna-N (Viton available on 1/8", 1/4" and 3/8" NPTF models)
 Standard Valve Body Material: Aluminum
 Standard Needle Material: Brass
 Standard Swivel Connector Material: Zinc-Plated Steel

FEATURES

- Flairline Valves' compact design add to the appearance of any type of equipment.
- All Flairline Valves are individually tested before they leave the factory.
- Tests up to 50 million cycles show no discernible wear and still perform "bubble-tite."

ORDERING INSTRUCTIONS

CHECK VALVES AND FLOW CONTROLS

SERIES CV AND RFC

EXAMPLE:

		RFC	1/8	PK		
SERIES	CODE	NPTF	OPTIONS	CODE	O-RINGS	CODE
O-Check	CV	$\frac{1}{8}$ to $\frac{3}{8}$	$\frac{1}{32}$ Orifice $\frac{1}{16}$ Orifice $\frac{3}{32}$ Orifice $\frac{1}{8}$ Orifice *Contact Factory for other sizes	031 063 094 125	Buna-N (Standard) Viton	V
		$\frac{1}{2}$ and $\frac{3}{4}$			Buna-N (Only)	
Right Angle Flow Control	RFC	$\frac{1}{8}$ to $\frac{3}{8}$	Knob Panel Mount Knob & Panel Mt. Swivel Swivel & Knob	K P PK S SK	Buna-N (Standard) Viton	V
		$\frac{1}{2}$	Swivel	S	Buna-N (Only)	
		$\frac{3}{4}$				

All specifications and dimensions are subject to change without notice.

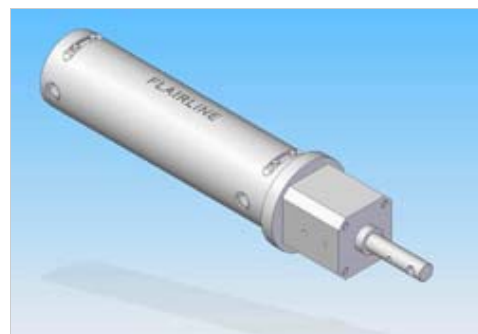
FLAIRLINE® TORQUE REACTION AIR BALANCER (TRAC)

This product is designed to provide ergonomic assistance to operators and operations where repetitive weight lifting is required. The TRAC provides a nearly zero G lifting force for the operator assisted machining or assembly operations. The Flairline non-rotating torque cylinder counteracts the twisting load of the rod attached equipment and maintains the proper orientation for the operator. This product makes operators and processes more efficient and reduces costs. The non-rotating system is completely enclosed within the cylinder making it more compact and efficient. TRAC product is available in Light duty and Medium Duty model.



Features and Benefits are:

- > Unique low friction technology
- > Near Zero Gravity movement
- > Built for millions of cycles
- > Compact design
- > Easily repairable
- > Competitively priced
- > Easy Mounting Cap End
- > NFPA pivot mounts standard
- > Rod Locking optional
- > Low Maintenance



Specifications	Medium Bore	Large Bore
Bore	2.500 In. (63mm)	4.000 IN. (100mm)
Rod Diameter	.625 IN. (16mm)	1.000 IN. (25mm)
Lifting Capacity	250 lb (110kg)	700 lb (315kg)
Push / Pull Force	3.3lb - ft (1.5kg)	6.6lb-ft (3kg)
Twist / Load	102Nm	150Nm
Pressure Rating	90 psi (7 bar)	
Standard Strokes	Any stroke through 20 inches	

FLAIRLINE® BORETTI SILENCERS

Flairline offers a complete line of silencers with outstanding features and performance to quiet noisy air-operated devices and prolong the life of your air tools. The **Boretti** silencers reduce air turbulence upstream, within the silencer and upon exhaust thus providing less irritating air exhaust and excellent muffling performance than other silencers.



Features:

- > Quiet exhaust operation
- > Low exit velocity
- > Easy installation
- > Inexpensive models
- > Reduces blockage from dirty air
- > 8 models from 1/8" to 1" NPT
- > Miniature size available

Maximum Operating Pressure - 300 psig (20.7 bars)

Maximum Operating Temperature - 160 degree F (71 degrees C)

Pipe Size	Model No. *	Thread	Flow Factor CV	Diam. In.	Overall Length In.	Weight in Oz.
1/8	1000-1	Male	1.0	3/4	1	1/2
1/4	1000-2-F	Female	2.3	1/8	2	1-1/4
3/8	1000-3-F	Female	5.5	1-1/4	2-61/64	3
1/2	1000-34-F	Female	6.6	1-1/4	2-61/64	3
1/2	1000-4-F	Female	7.0	1-1/2	3-25/32	5-2/3
3/4	1000-46-F	Female	8.0	1-1/2	3-25/32	5-2/3
3/4	1000-86-F	Female	19.0	2	4-43/64	.715
1	1000-8-F	Female	19.8	2	4-43/64	.665

* Substitute suffix "M" for "F" for Male thread.

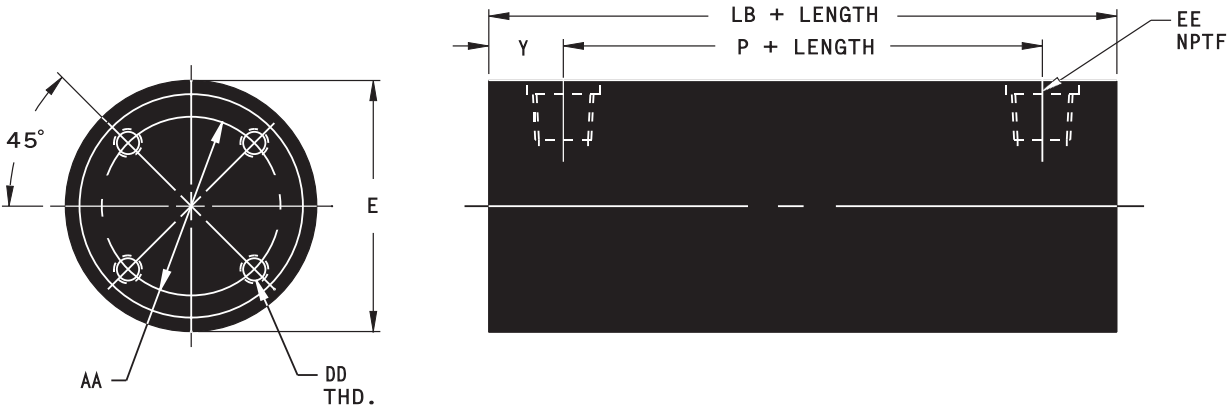
VOLUME CHAMBERS

SERIES VC

Flairline offers a wide range of volume chambers for a variety of uses. These volume chambers are constructed of lightweight aluminum caps and barrels. The barrels are hard-anodized for corrosion resistance. The optional mountings are NFPA interchangeable and are made of anodized aluminum or oxidized steel. See page 24 for mounting styles.

For ordering information, see page 18.

Standard Bore Sizes – 1½, 2, 2½, 3¼, 4
Length Sizes – Any length up to 130"
Pneumatic – 150 psi maximum
Hydraulic – consult factory



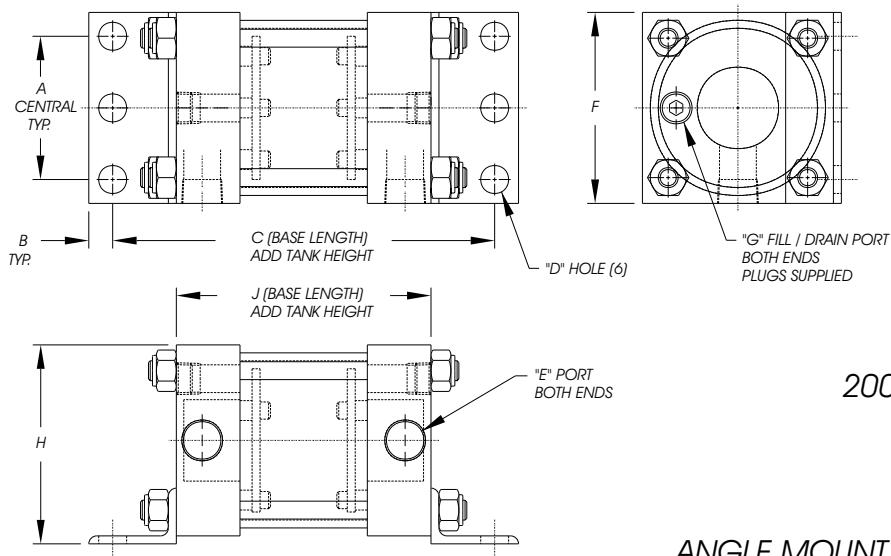
DIMENSIONAL DATA

Bore Size	DIMENSIONS						
	AA	E	DD	EE	LB	P	Y
1½	1.21	1¾	#6-32 X ½	¼-18	3⅝	2.29	.67
2	1.60	2¼	¼-20 X ⅝	¼-18	3⅝	2.29	.67
2½	2.00	2¾	⅝-18 X ¾	¼-18	3¾	2.42	.67
3¼	2.62	3½	⅜-16 X 7/8	½-14	4¼	2.44	.91
4	2.62	4¼	⅜-16 X 7/8	½-14	4¼	2.44	.91

VOLUME DATA

Bore Size	DIMENSIONS	
	Basic Volume (add to total)	Add per 1.0 inch of length
1½	1.95 in³	1.77 in³
2	3.35 in³	3.14 in³
2½	4.14 in³	4.91 in³
3¼	8.45 in³	8.30 in³
4	11.29 in³	12.57 in³

FLAIRLINE® Air/Oil Tanks AO Series



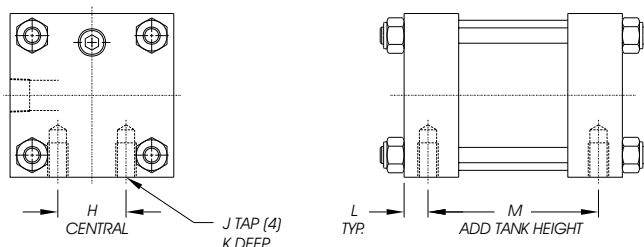
200 PSI MAXIMUM RATING

ANGLE MOUNT

BORE SIZE	AREA	*GALS./ INCH	DIM. A	DIM. B	DIM. C	DIA. D	PORT E	DIM. F	PORT G	DIM. H	DIM. J
2.000	3.14	.0135	1.75	.38	4.00	.44	3/8	2.50	1/4	2.69	2.00
2.500	4.90	.0212	2.25	.38	4.00	.44	3/8	3.00	1/4	3.13	2.00
3.250	8.29	.0358	2.75	.50	5.00	.56	1/2	3.75	3/8	3.81	2.50
4.000	12.56	.0544	3.50	.50	5.00	.56	1/2	4.50	1/2	4.50	2.50
5.000	19.63	.0849	4.25	.63	5.25	.69	1/2	5.50	1/2	5.50	2.50
6.000	28.27	.1223	5.25	.63	5.75	.81	3/4	6.50	3/4	6.50	3.00
8.000	50.26	.2175	7.13	.69	6.63	.81	3/4	8.50	3/4	8.50	3.00

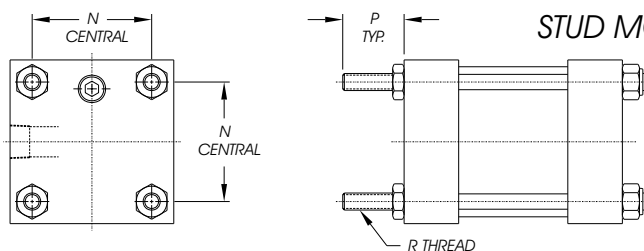
* THIS IS TOTAL INTERNAL VOLUME, NOT RECOMMENDED USABLE OIL CAPACITY

TAPPED MOUNT



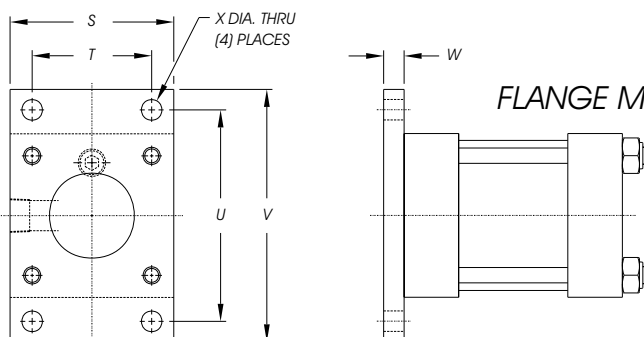
BORE SIZE	DIM. H	THREAD J	DIM. K	DIM. L	DIM. M
2.000	.88	5/16-18	.50	.44	1.13
2.500	1.25	3/8-16	.63	.44	1.13
3.250	1.50	1/2-13	.81	.56	1.38
4.000	2.06	1/2-13	.81	.56	1.38
5.000	2.69	5/8-11	1.0	.56	1.38
6.000	3.25	3/4-10	1.19	.69	1.63
8.000	4.50	3/4-10	1.25	.69	1.63

STUD MOUNT

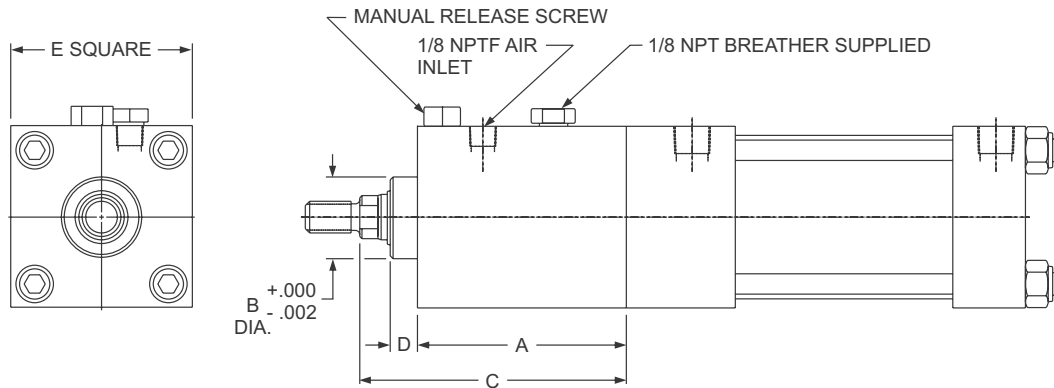


BORE SIZE	DIM. N	DIM. P	THREAD R
2.000	1.84	1.13	5/16-24
2.500	2.19	1.13	5/16-24
3.250	2.76	1.38	3/8-24
4.000	3.32	1.38	3/8-24
5.000	4.10	1.81	1/2-20
6.000	4.88	1.81	1/2-20
8.000	6.44	2.31	5/8-18

FLANGE MOUNT



BORE SIZE	DIM. S	DIM. T	DIM. U	DIM. V	DIM. W	DIA. X
2.000	2.50	1.84	3.38	4.13	.38	.38
2.500	3.00	2.19	3.88	4.63	.38	.38
3.250	3.75	2.76	4.69	5.50	.63	.44
4.000	4.50	3.32	5.44	6.25	.63	.44
5.000	5.50	4.10	6.63	7.63	.63	.56
6.000	6.50	4.88	7.63	8.63	.75	.56
8.000	NOT AVAILABLE					



T, TL, TLS, TS SERIES CONSTRUCTION
REFER TO CATALOG FL-16 FOR DIMENSIONS NOT SHOWN

BORE/ROD COMBINATION	RATED FORCE	MANUAL RELEASE TORQUE (FT-LBS)	*PART NUMBERS		DIMENSION					
			BASE	WITH MANUAL RELEASE OPTION	A STANDARD	A WITH MANUAL RELEASE OPTION	B	C	D	E
1.500/.625	180	2	LK1563	LK1563MR	2.400	2.625	1.124	3.375	.375	2.00
2.000/.625	314	5	LK2063	LK2063MR	2.440	2.875	1.124	3.625	.375	2.50
2.000/1.000	250	5	LK2010	LK2010MR	3.375	3.875	1.499	4.875	.500	2.50
2.500/.625	491	7	LK2563	LK2563MR	2.540	2.875	1.124	3.750	.500	3.00
2.500/1.000	491	7	N/A	LK2510MR	N/A	4.000	1.499	5.000	.500	3.00
3.250/1.000	830	17	LK3210	LK3210MR	4.000	4.500	1.499	5.500	.500	3.75
3.250/1.375	830	17	N/A	LK3213MR	N/A	4.875	1.999	6.125	.625	3.75
4.000/1.000	1256	45	LK4010	LK4010MR	4.000	4.875	1.499	5.875	.500	4.50
4.000/1.375	1256	45	LK4013	LK4013MR	4.188	5.125	1.999	6.500	.750	4.50
5.000/1.000	1963	72	LK5010	LK5010MR	4.438	5.375	1.499	6.375	.500	5.50
5.000/1.375	1963	72	LK5013	LK5013MR	4.188	5.750	1.999	7.125	.750	5.50
6.000/1.375	2830	135	LK6013	LK6013MR	5.340	6.375	1.999	7.750	.750	6.50
6.000/1.750	2830	135	LK6017	LK6017MR	N/A	6.875	2.374	8.750	.875	6.50
**8.000/1.375	5026	160	N/A	LK8013MR	N/A	6.625	1.999	8.250	.750	8.50
**8.000/1.750	5026	160	N/A	LK8017MR	N/A	7.125	2.374	9.000	.875	8.50

*Base locks are supplied without manual release option and have brushed aluminum finish. Locks with manual release option are supplied with black anodize coating.

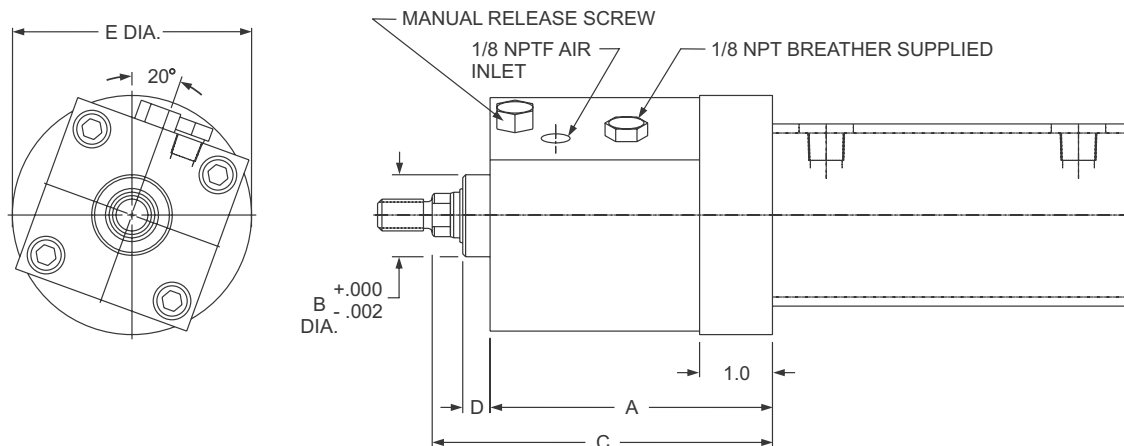
**The 8 inch bore locks are held on with tie rods. Refer to catalog for clearance dimensions for the tie rod nuts.

Standard mounting configuration to tie rod cylinder requires head to be threaded (FC1 mount).

Not all NFPA mounting configurations will work with rod lock attached. Contact factory for questions regarding mount styles.

Rod locks used with low-friction style cylinders do not increase running friction of cylinders.

TO ORDER FLAIRLINE CYLINDERS WITH ROD LOCKS INSTALLED, THE ROD LOCK PART NUMBER MUST BE INCLUDED AT THE END OF THE STANDARD CYLINDER DESCRIPTION. EXAMPLE: TL 2-1/2 x 10, MP2, LK2563MR



FI, OI, OILF SERIES CONSTRUCTION
REFER TO CATALOG FL-32 FOR DIMENSIONS NOT SHOWN

BORE/ROD COMBINATION	RATED FORCE	MANUAL RELEASE TORQUE (ft-lbs)	*PART NUMBERS		DIMENSION					
			BASE	WITH MANUAL RELEASE OPTION	A STANDARD	A WITH MANUAL RELEASE OPTION	B	C	D	E
1.500/.625	180	2	LK1563AP	LK1563APMR	3.400	3.625	1.124	4.375	.375	2.84
2.000/.625	314	5	LK2063AP	LK2063APMR	3.440	3.875	1.124	4.625	.375	3.54
2.500/.625	491	7	LK2563AP	LK2563APMR	3.540	3.875	1.124	4.750	.500	4.25
3.250/1.000	830	17	LK3210AP	LK3210APMR	5.000	5.500	1.499	6.500	.500	5.31
4.000/1.000	1256	45	LK4010AP	LK4010APMR	5.000	5.875	1.499	6.875	.500	6.38

* Base locks are supplied without manual release option and have brushed aluminum finish. Locks with manual release option are supplied with black anodize coating. Adaptor plate is zinc coated.

To add rod locks to existing cylinders in the field please contact factory.

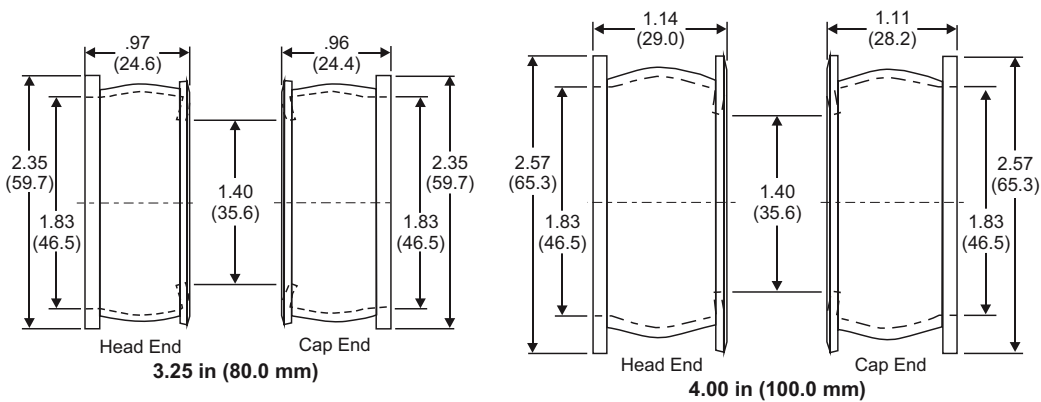
Not all NFPA mounting configurations will work with rod lock attached. Contact factory for questions regarding mount styles.

Rod locks used with low-friction style cylinders do not increase running friction of cylinders.

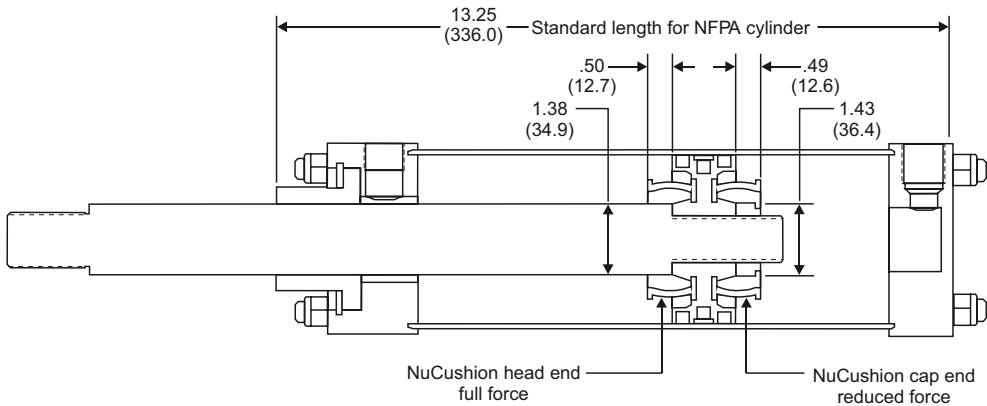
Rod locks can be used on different bore/rod combinations other than those listed. Contact factory with your requirements.

TO ORDER FLAIRLINE CYLINDERS WITH ROD LOCKS INSTALLED, THE ROD LOCK PART NUMBER MUST BE INCLUDED AT THE END THE STANDARD CYLINDER DESCRIPTION.

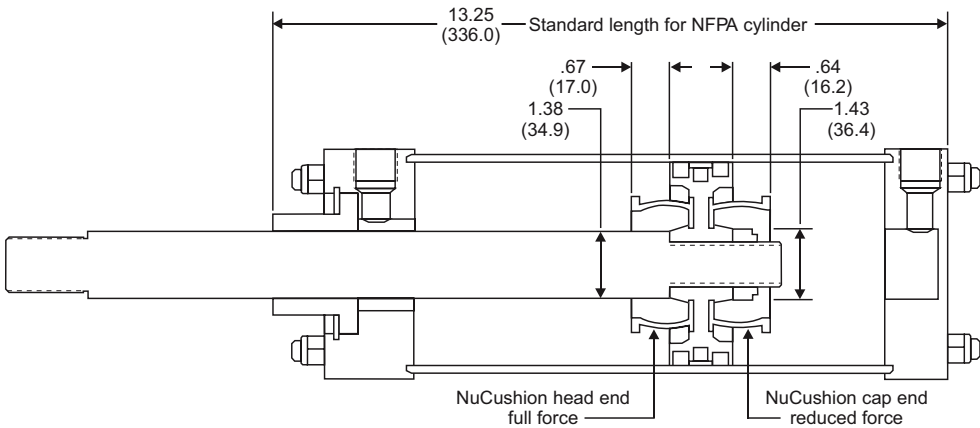
EXAMPLE: OILF 2-1/2 x 20, HC, MP4, LK2563APMR



NuCushions Installed in Flairline NFPA Pneumatic Cylinders



Flairline NFPA cylinder with NuCushions, 3.25 in (80.0 mm) bore x 8.00 in (200.0 mm) stroke



Flairline NFPA cylinder with NuCushions, 4.00 in (100.0 mm) bore x 8.00 in (200.0 mm) stroke

NuCushion Specifications for Flairline NFPA Cylinders						
Bore in (mm)	Rod Size in (mm)		Velocity fps (mps)		Force lbs (N)	
	Small	Large	Min.	Max.	Min.	Max.
3.25 (80.0)	1.00 (25.4)	1.37 (34.8)	0.50 (0.1)	2.50 (0.8)	250 (1,112.0)	560 (2,491.0)
4.00 (100.0)	1.00 (25.4)	1.37 (34.8)	0.50 (0.1)	2.50 (0.8)	375 (1,688.1)	850 (3,780.1)

STANDARD SENSOR SWITCHES - CURRENTLY AVAILABLE

Switch Series	Switch Type	Wire Leads P/N		8mm Connect P/N		12mm Connect P/N	
		Round Body	Tie-Rod	Round Body	Tie-Rod	Round Body	Tie-Rod
7000	REED	N/A	43-CRR	N/A	N/A	N/A	43-CRR-12M
7000	HALL/SOURCE	N/A	43-HPP	N/A	N/A	N/A	43-HPP-12M
7000	HALL/SINK	N/A	43-HNN	N/A	N/A	N/A	43-HNN-12M
7HL	REED	N/A	43-CRHZ	N/A	N/A	N/A	N/A
8000	REED	43-CR	43-CRT	43-CR-8M	43-CRT-8M	N/A	N/A
8000	HALL/SOURCE	43-HP	43-HPT	43-HP-8M	43-HPT-8M	N/A	N/A
8000	HALL/SINK	43-HN	43-HNT	43-HN-8M	43-HNT-8M	N/A	N/A

UNIVERSAL WORLD TYPE SWITCHES - OFFERED AS SPECIAL WITH NO MOUNTING HARDWARE UNLESS SPECIFIED

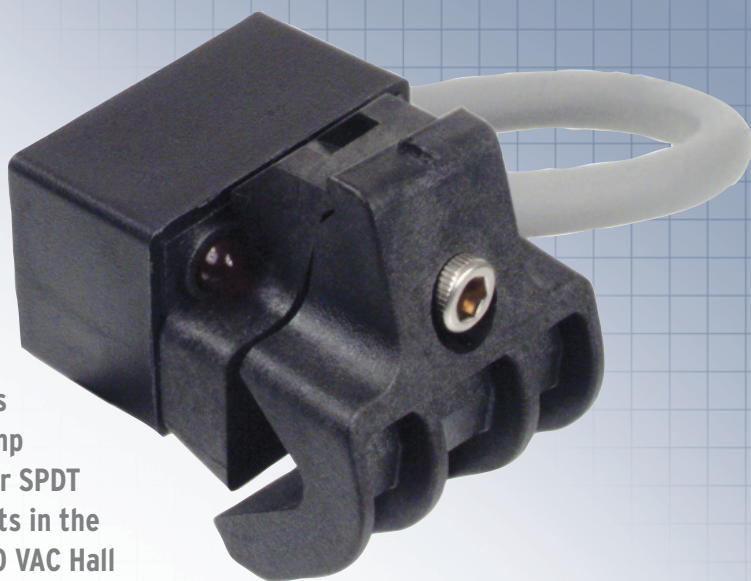
Switch Series	Switch Type	Wire Leads P/N	8mm Connect P/N	12mm Connect P/N	
8WS	REED	43-CRW	43-CRW-8M	N/A	N/A
8WS	HALL/SOURCE	43-HPW	43-HPW-8M	N/A	N/A
8WS	HALL/SINK	43-HNW	43-HNW-8M	N/A	N/A
9C	REED	43-CRC	43-CRC-8M	N/A	N/A
9C	HALL/SOURCE	43-HPC	43-HPC-8M	N/A	N/A
9C	HALL/SINK	43-HNC	43-HNC-8M	N/A	N/A
9D	REED	43-CRD	43-CRD-8M	N/A	N/A
9D	HALL/SOURCE	43-HPD	43-HPD-8M	N/A	N/A
9D	HALL/SINK	43-HND	43-HND-8M	N/A	N/A
9E	REED	43-CRE	43-CRE-8M	N/A	N/A
9E	HALL/SOURCE	43-HPE	43-HPE-8M	N/A	N/A
9E	HALL/SINK	43-HNE	43-HNE-8M	N/A	N/A

N/A = Not Available

REED AND ELECTRONIC SENSORS FOR 2" TO 8" BORE TIE ROD CYLINDERS

GENERAL DESCRIPTION

The Flairline Series 7000 proximity sensors are used to sense position on cylinders from 2 to 8 inch bore. This proven design is rugged yet cost effective. All switches feature a self adjusting clamp that grips standard NFPA and custom cylinders eliminating stocking requirements of many clamps for different bore sizes. The Series 7000 boasts the largest number of custom circuits to match applications found in the market. Examples include; 1 or 4 Amp reed switches, normally open, normally closed or SPDT switch types, reed or electronic sensing elements in the same package style, and the industry's first 120 VAC Hall sensor. A wide range of enclosures and connector options are available.



FEATURES

- One switch for a majority of voltages and cylinder sizes
- 2" - 6" bore, same clamp (8" bore optional)
- 5 - 240 VAC or DC / Indicator light same brightness
- Wash down compatible NEMA 6 (most versions)
- Materials: Ultem®, Nylon, PVC wire and stainless steel
- Industry's first 120 VAC all electronic
- 1 Amp standard, 4 Amps optional output
- CSA approved versions
- "Floating" clamp
- Quick connect versions
- Surge suppression
- Extremely consistent repeatability
- Compatible with IS (Intrinsically Safe) barriers

TECHNICAL DATA

- Temperature Range: Operational from -20° to +80°C.
- Shock: Operational up to 30G (11 ms.) reeds only. Not applicable for electronics.
- Vibration: Operational up to 20 G (10 - 55Hz) reeds only. Not applicable for electronics.
- Sensitivity and orientation: 85 gauss parallel minimum required for proper operation, as measured on sensor surface. Size of sensing area depends on size and strength of magnet and thickness of cylinder wall.

HAZARDOUS LOCATION MAGNETIC PROXIMITY SENSORS FOR TIE ROD CYLINDERS

GENERAL DESCRIPTION

The Flairline Connector 7HL is a rugged magnetic proximity sensor designed to sense actuator position in stringent, hazardous location applications. The switch features a robust, aircraft aluminum body, epoxy-filled, vibration and shock resistant, electronic circuit, and a 1/2" conduit female thread with hard-usage multiconductor cable. Available in a normally open contact, the 7HL can switch current up to .5 Amps and has a voltage range of 0-120VAC/VDC 50/60 Hz.

Designed to operate in hazardous locations, this switch is CSA approved for Class I, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F and G; and Class III.

The 7HL features an expansion of the popular Series 7000 "floating" clamp design and will clamp on 2 to 8 inch bore NFPA tie rod linear actuators.



FEATURES

- Meets hazardous location specifications
- Normally open reed switch for hazardous location
- Metal body with robust 1/2" conduit
- Fully encapsulated electronics
- Cam-lock clamp ensures proper assembly and sensor position
- Compatible for wash down and corrosive environments
- Compatible with anodized 6061 Aluminum material

TECHNICAL DATA

- Temperature Range: Operational from -20° to +80°C
- Shock: Operational up to 30 G (11ms)
- Vibration: Operational up to 20 G (10 - 55 Hz)
- Sensitivity: 85 Gauss parallel minimum, as measured on the surface of actuator
- Pollution Degree: 3
- Environmental protection: NEMA 1, 4 and 13
- Hazardous location ratings: CSA: Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F and G; and Class III
- Body Material: Anodized 6061-T6 Aluminum, Epoxy encapsulated printed circuit board
- Wire: SJE00W 18/3 Leads
- Circuit: S.P.S.T., Normally Open
- Operating Voltage: 0 - 120 V AC/DC 50/60 Hz
- Maximum Load (Power Rating): 10W, Resistive Only
- Maximum Current: 0.5A Max.
- Response Time ON: 0.5ms
- Response Time OFF: 0.1ms

REED & ELECTRONIC SENSORS FOR ROUND, TIE-ROD, OR EXTRUDED CYLINDERS

GENERAL DESCRIPTION

The Flairline Connector Series 8000 Reed and Electronic sensors are compact units designed for sensing applications on round cylinders from 9/16" - 4" and tie-rod pneumatic cylinders from 3/4" - 8" bore. These sensors offer a wide voltage range from 0-120 VAC/VDC 50/60 Hz and high current capacity up to 0.5 Amps. They include high intensity indicator lights and a wide viewing angle. The sensor's small package can fit easily on the smallest cylinder without appearing too large. The Series 8000's design promotes ease of installation with a tight fit. Options include nine (9) foot cable or 8mm Nema 4 Quick Connect housing version.



FEATURES

- Quick connect versions available
- Extremely consistent repeatability
- Compact design
- Surge suppression available (standard on electronic)
- Reverse polarity protection
- Wide voltage range
- Compatible with IS (Intrinsically Safe) barriers
- High intensity light (LED) standard on most models
- Compatible with most corrosive and washdown applications
- High current capacity for small size (up to 10 times the competition)
- Both reed and electronic versions work with the same (reed) magnet
- Encapsulated circuit for wet environment (NEMA 4)
- Available for tie-rod, round or extruded cylinder mounting

TECHNICAL DATA

- Temperature Range: Operational from -20° to +80°C
- Shock: Operational up to 30G (11 ms.) reeds only. Not applicable for electronic.
- Vibration: Operational up to 20G (10 - 55 Hz) reeds only. Not applicable for electronic.
- Sensitivity and orientation: 85 gauss parallel (standard minimum required for proper operation, as measured on sensor surface. Size of sensing area depends on size and strength of magnet and thickness of cylinder wall)
- Most versions designed to meet NEMA 4/IP65 specifications
- NEMA 6 versions available. Consult factory

REED & ELECTRONIC SENSORS FOR PNEUMATIC CYLINDERS WITH 12MM DOVETAIL

GENERAL DESCRIPTION

The Flairline Connector Series 8WS reed and electronic magnet sensors are rugged yet compact switches used to sense position on pneumatic actuators equipped with a magnetic piston and 12mm dovetail groove. The switch can be slipped in and tightened from anywhere along the groove that is fabricated into the cylinder wall or clamping system.

The switch features a die cast holder which clamps to the cylinder groove while the electronics are fully encapsulated and resistance to environment. These sensors offer a wide voltage range from 0-120 V AC/DC 50/60Hz and have a up to a 500 mA switching current rating. The switch has a high intensity indicator light which indicates power to the switch and load. The switch comes standard with 9ft fl exible pressure extruded cable or 6 inch 8mm pigtail quick connector.



FEATURES

- Robust design
- Metal housing
- Simple installation
- Compatible with many 12mm Dovetail type cylinders
- Quick connect designs available
- Wide voltage range
- High current capacity
- Reed and Electronic sensors work with same magnet
- Indicator light can be seen from all angles

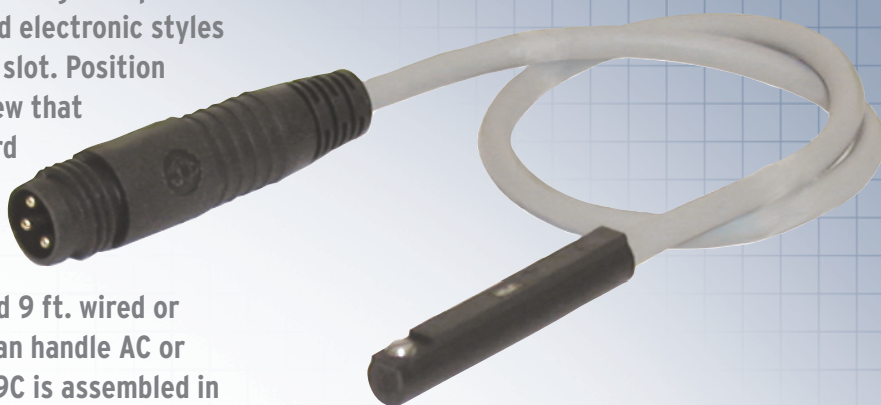
TECHNICAL DATA

- Temperature Range: Operational from -20° to +80°C
- Shock: Operational up to 30G (11 ms.) reeds only. Not applicable for electronic.
- Vibration: Operational up to 20G (10 - 55 Hz) reeds only. Not applicable for electronic.
- Sensitivity and orientation: 85 gauss parallel (standard minimum required for proper operation, as measured on sensor surface. Size of sensing area depends on size and strength of magnet and thickness of cylinder wall.
- Most versions designed to meet NEMA 6/IP67 specifications

REED & ELECTRONIC MAGNETIC SENSORS FOR ROUND KEYWAY GROOVE

GENERAL DESCRIPTION

The Series 9C is a compact, universal, magnetically operated proximity switch commonly used on aluminum extruded profile type linear actuators equipped with magnetic pistons. The switches are available in both reed and electronic styles and made to fit into a 4mm key hole type slot. Position fixing is accomplished by means of a screw that is supplied in the switch body. The on board indicator light shows instant switch diagnostics to minimize downtime and facilitate installation and can be seen from wide angles. Available in the standard 9 ft. wired or optional 8mm quick connect, the switch can handle AC or DC current in several configurations. The 9C is assembled in engineered polymers and designed to meet NEMA 6 / IP 67 environmental specifications.



FEATURES

- Ultra small sensor fits where other sensors will not
- Will fit in all standard round or dovetail keyway mountings
- Reverse polarity protection and surge suppression (electronic)
- Indicator light
- Corrosion and washdown resistance
- Solid state version available (no moving parts)
- Quick connect version
- 9 ft cable standard

TECHNICAL DATA

- Temperature Range: operational from -10° to +70°C
- Sensitivity and orientation: 40 gauss parallel (electronic)
60 gauss parallel (reed)
- Meets NEMA 6 / IP65 specifications
- CE Approved

REED & ELECTRONIC SENSORS FOR UNIVERSAL APPLICATIONS

GENERAL DESCRIPTION

The Flairline Connector Series 9D is a universal, ultra-small, magnetic proximity switch available in both solid state electronic and reed styles. These sensors are designed to fit the most stringent space requirements by use of a standard .250 inch dovetail slot. Many other mounting options are also available. The electronic sensor exhibits greater sensitivity to magnetism with reduced dead-band and hysteresis as compared to competitive devices. The reed sensor offers a wide operating voltage range. The molded switch has an on board indicator light that can be viewed from wide angles. Standard connection to the sensor is provided by a 9 ft. cable or an optional industry standard 8mm circular connector. The rugged 20% glass-filled polypropylene switch is mounting hardware ready for installation.



FEATURES

- Small sensor fits most space requirements.
- Stand-alone mounting into any 1/4" dovetail slot (machined or extruded)
- Other special mounting clamp styles available
- Indicator light
- Corrosion and washdown resistance.
- Electronic sensing version (no moving parts)
- 60° wire outlet for close mounting
- Reverse polarity protection
- DC or AC voltage versions
- Compatible with IS (Intrinsically Safe) barriers
- Molded construction for wet environment (NEMA 6)
- Available for dovetail, round, tie-rod and rodless cylinder mountings.

TECHNICAL DATA

- Temperature Range: Operational from -20° to +80°C
- Shock: Operational up to 30G (11 ms.) reeds only. Not applicable for electronic.
- Vibration: Operational up to 20G (10 - 55 Hz) reeds only. Not applicable for electronic.
- Most versions designed to meet NEMA 6 / IP67 specifications
- Sensitivity and Orientation: 85 gauss parallel (standard for reeds) 25 gauss parallel (standard for electronic)

HAZARDOUS LOCATION MAGNETIC PROXIMITY SENSORS FOR TIE ROD CYLINDERS

GENERAL DESCRIPTION

The Flairline Connector Series 9E is a universal, ultra-small, magnetic proximity switch available in both solid state electronic and reed styles. These sensors are designed to fit the most stringent space requirements by use of a standard .250 inch dovetail slot. Many other mounting options are also available. The electronic sensor exhibits greater sensitivity to magnetism with reduced dead-band and hysteresis as compared to competitive devices. The reed sensor offers a wide operating voltage range. The molded switch has an on board indicator light that can be viewed from wide angles. Standard connection to the sensor is provided by a 9 ft. cable or an optional industry standard 8mm circular connector with 6 inch cable. The rugged 20% glass-filled polypropylene switch is shipped with mounting hardware ready for installation.



FEATURES

- Small sensor fits most space requirements.
- Stand-alone mounting into any 1/4" dovetail slot (machined or extruded)
- Other special mounting clamp styles available
- Indicator light
- Corrosion and washdown resistance.
- Electronic sensing version (no moving parts)
- Reverse polarity protection
- DC or AC voltage versions
- Compatible with IS (Intrinsically Safe) barriers
- Molded construction for wet environment (NEMA 6)
- Available for dovetail, round, tie-rod and rodless cylinder mountings.

TECHNICAL DATA

- Temperature Range: Operational from -20° to +80°C
- Shock: Operational up to 30G (11 ms.) reeds only. Not applicable for electronic.
- Vibration: Operational up to 20G (10 - 55 Hz) reeds only. Not applicable for electronic.
- Most versions designed to meet NEMA 6 / IP67 specifications
- Sensitivity and Orientation: 85 gauss parallel (standard for reeds)
25 gauss parallel (standard for electronic)