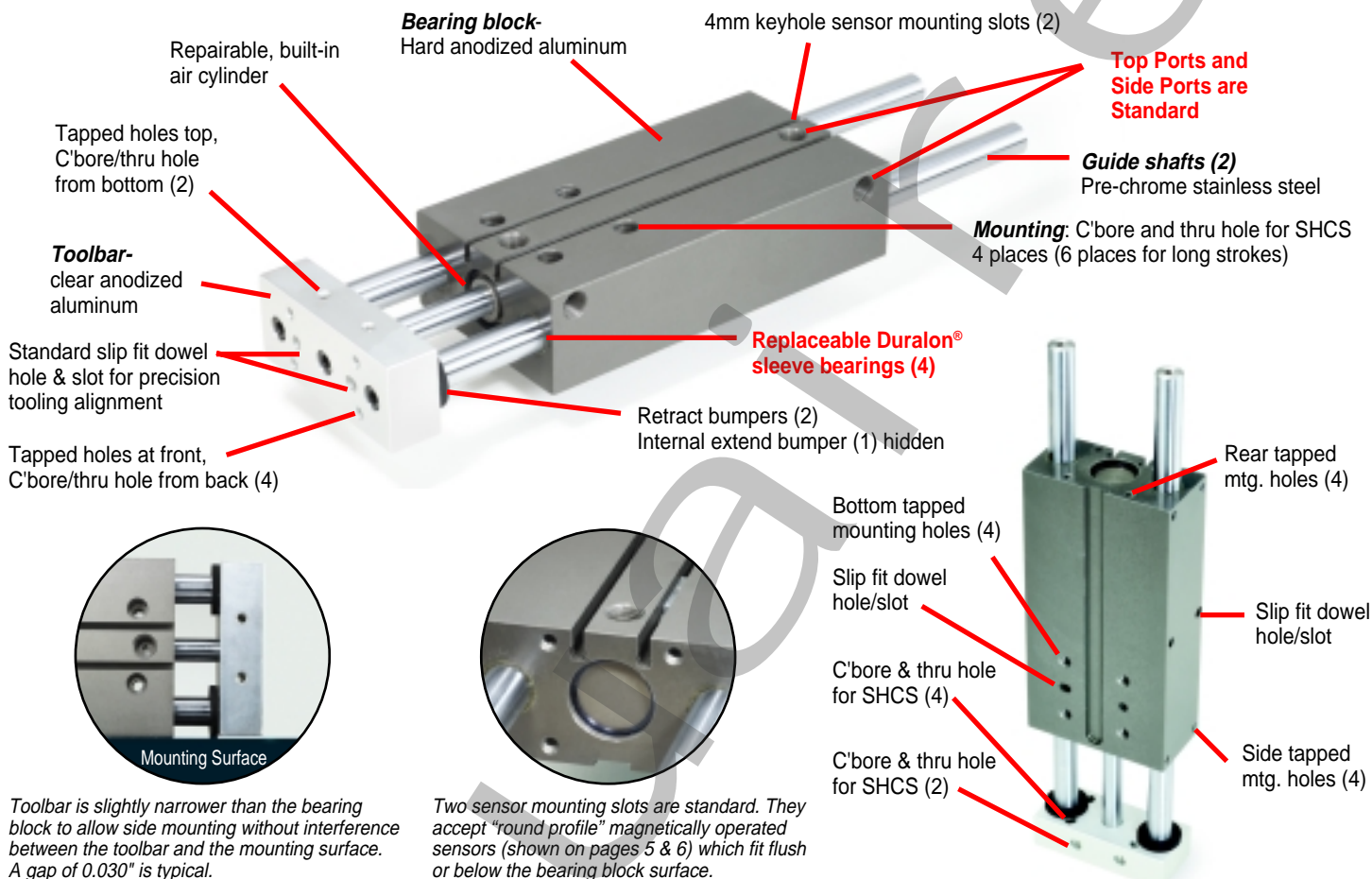




NEW PRODUCT BULLETIN

Linear Thrusters

"GB" Series Block Style Slides



Toolbar is slightly narrower than the bearing block to allow side mounting without interference between the toolbar and the mounting surface. A gap of 0.030" is typical.

Two sensor mounting slots are standard. They accept "round profile" magnetically operated sensors (shown on pages 5 & 6) which fit flush or below the bearing block surface.

Check list of NEW Key Features of "GB" Series Block Style Slides

- ✓ Longer strokes:
GB375 - Now 1/2" thru 6" strokes
GB500 - Now 1" thru 10" strokes
GB750 - Now 1" thru 10" strokes
- ✓ Two 4mm keyhole sensor mounting slots
- ✓ New round profile sensors with advanced technical features

Check list of Standard Features

- ✓ Tapped/thru hole combination mounting holes top & bottom
- ✓ Tapped holes front face of toolbar (4)
- ✓ Clear anodized toolbar, hard anodized bearing block
- ✓ Extend and retract bumpers
- ✓ Replaceable sleeve bearings
- ✓ Side tapped mounting holes in body
- ✓ Slip fit dowel holes/slots on bottom and side of body
- ✓ Toolbar is slightly narrower than body, allowing side mounting of slide with clearance between toolbar and mounting surface
- ✓ Slip fit dowel hole/slot on front face of toolbar
- ✓ Top and side ports

- ✓ Rear tapped holes in body - can be used for rear flange mounting
- ✓ Toolbar has square pattern front face tapped holes (4) that are also counterbored at back for thru bolt mounting
- ✓ Toolbar has vertical tapped/counterbored mounting holes

Check list of versatile Options Availability

- ✓ V - Viton seals allow operation to 325°F
- ✓ E - Magnetic piston for position sensing
- ✓ T1 - "Blank" toolbar
- ✓ A - Pair of clamp collars with rubber bumpers for extend adjustable stop
- ✓ B - Rear clampbar with rubber bumpers for extend adjustable stop (instead of collars)
- ✓ C - Tapped guide shafts at rear
- ✓ D - Rear stopbar, stop bolt and stop plate for adjustable extend stop
- ✓ F - Rear toolbar; same as front toolbar with matching hole pattern

Exceptional Guide Shaft Bearings - The better the bearing, the more cycle life you can expect from your slides.

Fabco-Air has incorporated a truly superior bearing material, Duralon®, for smooth performance and longer product life.

Duralon® is a composite of a Teflon®/Dacron® fabric liner bonded to a supporting filament-wound, high strength, fiberglass and epoxy resin shell. Resistant to corrosion, moisture and temperature to 325°F, the bearing is reliable in any environment. It has an extremely high load bearing capacity, very low friction, and will not gall or score the piston rod (see physical properties in the table below).

Duralon® Bearings Excel

Load Capacity (psi)		Friction Properties		
Machine Design 1972/73				
Bearing Reference Issue				
			Coefficient	Slip-stick
Porous Bronze	4,500	Steel-on-steel	.50	Yes
Porous iron	8,000	Bronze-on-steel	.35	Yes
Phenolics	6,000	Sintered Bronze-on-steel		
Nylon®	1,000	with mineral oil	.13	No
TFE	500	Bronze-on-steel		
Reinforced Teflon®	2,500	with mineral oil	.16	No
*TFE fabric	60,000	Copper lead alloy-on-steel	.22	Yes
Polycarbonate	1,000	Acetal-on-steel	.20	No
Acetal	1,000	Nylon-on-steel	.32	Yes
Carbon-graphite	600	Duralon-on-steel	.05 - .16	No

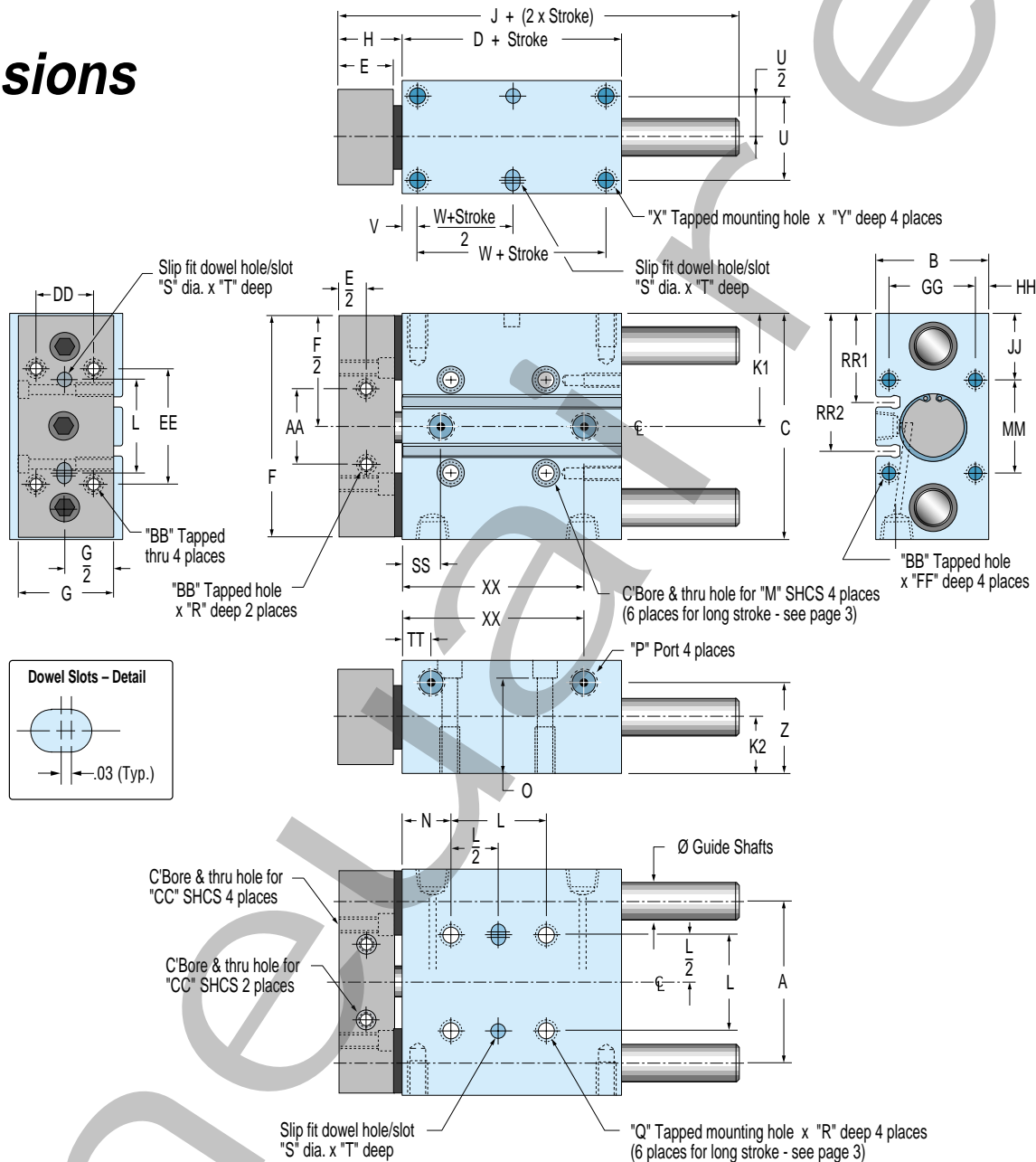
* Shows Duralon bearing classification. Not to be used for design purposes.

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"GB" Series Linear Slides

Interchangeable, rugged construction

Dimensions



Slide Dimensions

"XX" Dimension (varies with stroke)												
Stroke	1/2	1	1-1/2	2	3	4	5	6	7	8	9	10
Model 375	1.247	1.875	2.375	2.875	3.875	4.875	5.875	6.875	-	-	-	-
Model 500	-	2.375	-	3.375	4.375	5.375	6.375	7.375	8.375	9.375	10.375	11.375
Model 750	-	2.125	-	3.125	4.125	5.125	6.125	7.125	8.125	9.125	10.125	11.125

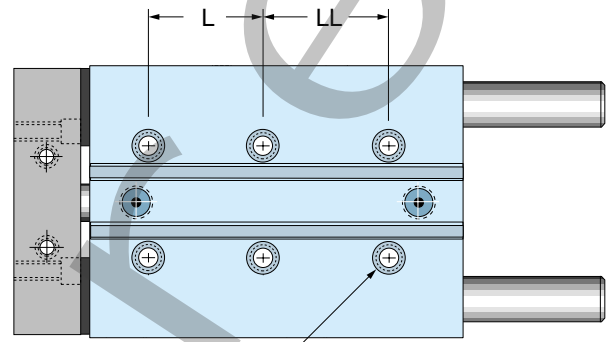
Model	Bore mm	Bore Inch	Ø Guide Shaft Dia	A	B	C	D	E	F	G	H	J	K1	K2	L	M	N	O	P	Q	R
375	12	0.47	3/8"	1.625	1.00	2.25	1.375	.500	2.188	.812	.56	2.44	1.125	.500	.875	#6	.562	.79	10 - 32	10 - 24	.50
500	20	0.78	1/2"	2.125	1.50	3.00	1.875	.750	2.938	1.250	.88	3.31	1.500	.750	1.250	#10	.625	1.20	1/8 NPT	1/4-20	.63
750	32	1.26	3/4"	2.875	2.00	4.00	2.125	1.000	3.938	1.750	1.19	4.06	2.000	1.000	1.688	1/4"	.812	1.74	1/8 NPT	5/16-18	.88

Model	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	JJ	MM	RR1	RR2	SS	TT
375	1/8	.12	.750	.187	1.000	8 - 32	.38	.85	.625	6 - 32	#4	.500	1.000	.25	.625	.187	.688	.875	.92	1.34	.372	.372
500	3/16	.18	1.125	.187	1.500	10-24	.44	1.22	1.000	10-24	#6	.750	1.500	.50	1.125	.187	.875	1.250	1.17	1.83	.500	.375
750	1/4	.25	1.500	.250	1.625	1/4-20	.50	1.69	1.375	1/4-20	#10	1.000	2.000	.50	1.000	.500	1.156	1.688	1.58	2.43	.500	.500

struction with longer strokes, and more features than other block-style slides

Dimension Variations for longer stroke models

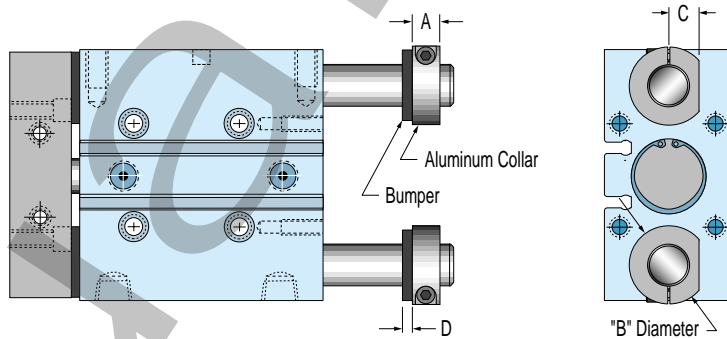
"LL" Dimension (varies with stroke)								
Stroke	3	4	5	6	7	8	9	10
Model 375	2.188	3.188	4.188	5.188	-	-	-	-
Model 500	-	-	4.000	5.000	6.000	7.000	8.000	9.000
Model 750	-	-	3.125	4.125	5.125	6.125	7.125	8.125



Hole for 'M' SHCS and 'Q' tapped hole 6 places

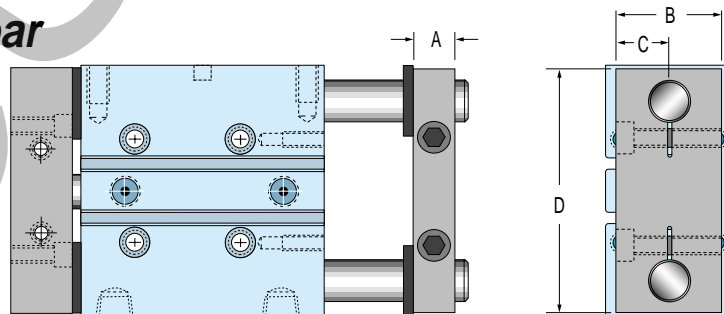
Option "A" Stop Collars

Model	A	B	C	D
375	.34	.88	.31	.06
500	.41	1.13	.44	.13
750	.50	1.50	.56	.19



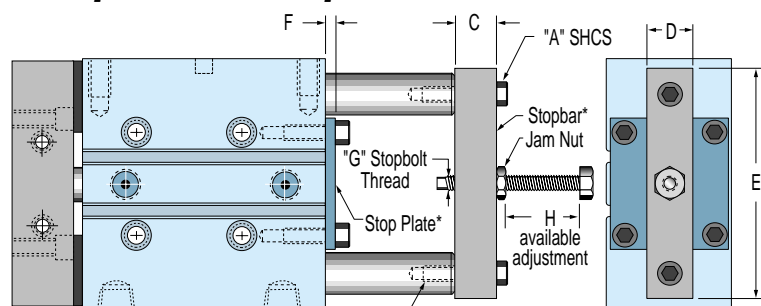
Option "B" Rear Clampbar

Model	A	B	C	D
375	.38	.75	.41	2.19
500	.50	1.25	.63	2.94
750	.50	1.75	.88	3.94



Option "C" Tapped Guide Shafts at Rear Option "D" Rear Stopbar, Stopbolt & Stop Plate

Model	A	B	C	D	E	F	G	H
375	8-32	.38	.25	.50	2.13	.13	10-24	1.25
500	10-32	.50	.31	.63	2.75	.13	1/4-20	1.59
750	5/16-24	.63	.38	.88	3.75	.13	5/16-18	1.31



"A" Tapped hole x "B" deep

*Note: Stopbar & Stop Plate are steel

Engineering Data

Model	GB375	GB500	GB750
Guide Shaft Diameter	3/8"	1/2"	3/4"
Bore	12 mm (.472")	20 mm (.787")	32 mm (1.260")
Power Factor Extend	.17	.49	1.25
Power Factor Retract	.13	.37	0.94

Pressure Rating: Maximum operating pressure is 150 psi Air

Output Force: Output Force = Pressure X Power Factor

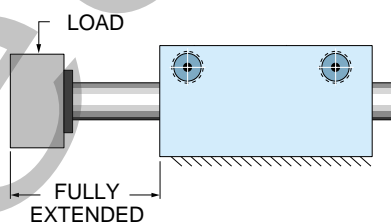
Speed: Safe speed range is determined by a number of factors. The most important consideration is total reciprocating weight. High loads combined with high speeds can develop severe and damaging impact loads. For speeds over 10 inches per second use extend bumpers (Options "A" or "B").

Accuracy: GB Series Slides feature replaceable, high performance, self lubricating Duralon® sleeve bearings and special ground guide shafts. Straightness tolerance is .0015" per foot of guide shaft. Repeatability of extend stroke is .001" with Option "D".

Model Number	WEIGHT (lbs.)											
	Stroke (inches)											
	1/2	1	1-1/2	2	3	4	5	6	7	8	9	10
GB375	.58	.74	.88	1.03	1.32	1.61	1.90	2.19	-	-	-	-
GB500	-	1.78	-	2.36	2.96	3.55	4.14	4.74	5.33	5.93	6.52	7.12
GB750	-	3.83	-	4.96	6.11	7.23	8.36	9.50	10.63	11.76	12.90	14.02

Load Sizing Guide

GB Series



Load Limits: Safe loading involves a combination of factors including: bearing capacity, shaft strength and allowable deflection, life expectancy, how the load is applied, and how fast the load is accelerated/decelerated.

DO NOT OVERLOAD – Overloading can cause reduced product life, shaft bending and loss of position accuracy, as well as seal and bearing failure. **CAUTION:** Heavy reciprocating loads can cause damaging impact forces at end of stroke. It may be necessary to use stop collars and/or bumpers, or reduce speeds to avoid damage to slide and/or tooling.

Model Number	SAFE LOADS (lbs.)											Maximum Deflection	
	Stroke (inches)												
	1/2	1	1-1/2	2	3	4	5	6	7	8	9		10
GB375	6.0	6.0	6.0	6.0	6.0	3.5	3.0	2.5					.005"
	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0					.015"
GB500	17.0		17.0	17.0	12.0	10.0	6.0	3.0	2.5	2.0	1.5		.005"
	17.0		17.0	17.0	17.0	16.0	12.0	8.0	6.0	4.0	2.5		.015"
GB750	42.0		42.0	42.0	42.0	34.0	26.0	18.0	10.0	7.0	4.0		.005"
	42.0		42.0	42.0	42.0	40.0	35.0	28.0	21.5	15.0	10.0		.015"

How to Order

Model Number Code

Series Model Size Stroke Options
GB 500 – 10.0 – AET1

*Note:
 Force (pounds) at toolbar = (power factor) x (psi)
 Operating pressure range: 20 – 150 psi

Model Size	Guide Shaft Diameter	Bore	Power Factor*		Standard Stroke Lengths (inches)
			Extend	Retract	
375	3/8"	12mm	.17	.13	1/2, 1, 1-1/2, 2, 3, 4, 5, 6
500	1/2"	20mm	.49	.37	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
750	3/4"	32mm	1.25	1.94	1, 2, 3, 4, 5, 6, 7, 8, 9, 10

Option Descriptions

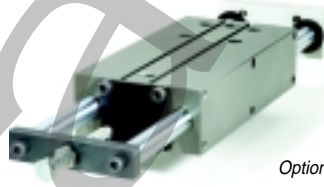
A – Pair of clamp collars with rubber bumpers for extend adjustable stop (Bumpers may be removed if not desired)



Option "A"

Model Size	
375	
500	
750	

D – Rear stopbar, stop bolt and stop plate for adjustable extend stop (includes Option "C")



Option "D"

Model Size	
375	
500	
750	

B – Rear clampbar with rubber bumpers for alternate extend adjustable stop (instead of collars) - bumpers may be removed if not desired



Option "B"

Model Size	
375	
500	
750	

E – Magnetic piston for position sensing (Operating temperature range: -4°F to 176°F)

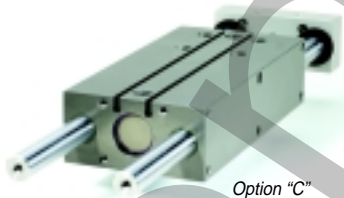
Order magnetic sensors separately - see back cover, page 6.



Option "E"

Model Size	
375	
500	
750	

C – Tapped guide shafts at rear



Option "C"

Model Size	
375	
500	
750	

F – Rear toolbar; same as front toolbar with matching hole pattern (will be blank if "T1" specified; includes Option "C")



Option "F"

Model Size	
375	
500	
750	

T1 – "Blank" toolbar (no mounting holes) – No charge

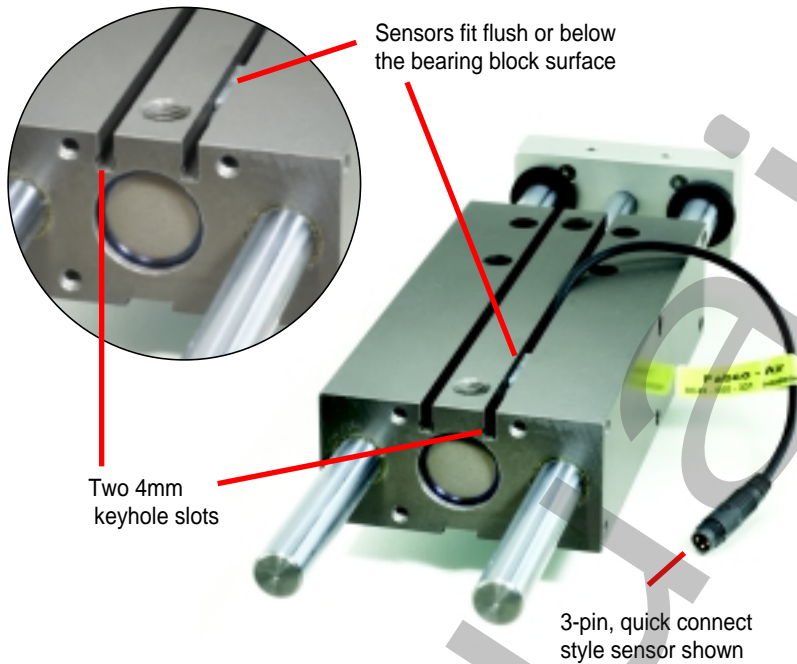
V – Viton seals. Increases operating temperature limit to 325°F

Model Size	
375	
500	
750	

Special Option: Proximity Switches – consult factory.



Magnetically Actuated Sensors – Use with Option “E”



Round Profile Sensors feature surge suppression, polarity protection, LED indicator, and extremely fast switching speeds. They slide into mating 4mm keyhole slots on the top face of the bearing block and are easily positioned and locked in place with a set screw. They are offered in two styles: a quick connect style with a 6 inch pigtail and male connector, or a prewired style with a 9 foot lead.

Female Cordsets are available in both 3 and 4 pin configurations in 2 and 5 meter lengths.

Specify Option E and order sensors and cordsets separately from the tables below.

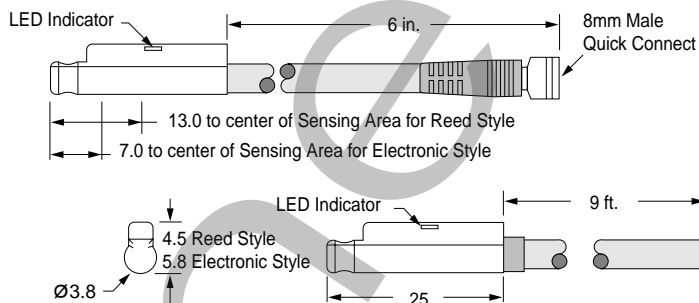


Prewired sensor shown with 9 ft. lead



3 pin cordset shown with sensor pigtail

Sensor Dimensions (mm unless noted)



All sensors feature surge suppression, polarity protection, LED indicator, and extremely fast switching speeds.

8mm Female Cordsets for Quick Connect Sensors		
Cordset Description	Part No.	
2 meters, 3-Pin	CFC-2M	
5 meters, 3-Pin	CFC-5M	
2 meters, 4-Pin	CFC4-2M	
5 meters, 4-Pin	CFC4-5M	

Magnetic Sensors – Electrical Characteristics							Part Numbers		
Sensor Type	Function	Switching Voltage	Switching Current	Switching Power	Switching Speed	Voltage Drop	Prewired 9 ft. Part No.		Quick Connect Part No.
Reed Switch for PLC's w/LED (current limiting)	SPST Normally Open	5-120V AC/DC 50/60 Hz	0.04 Amp max 0.005 Amp min.	4 Watts max.	0.5 ms operate 0.1 ms release	2.5 Volts	9C49-000-002		9C49-000-302 Requires 3 pin cordset
Electronic LED and Sourcing	PNP Normally Open	6-30 VDC	0.2 Amp max.	6 Watts max.	1.5µs operate 0.5µs release	1.5 Volts	9C49-000-031		9C49-000-331 Requires 3 pin cordset
Electronic LED and Sinking	NPN Normally Open	6-30 VDC	0.2 Amp max.	6 Watts max.	1.5µs operate 0.5µs release	1.5 Volts	9C49-000-032		9C49-000-332 Requires 3 pin cordset
Electronic LED & Dual Output Sinking or Sourcing	Normally Open NPN or PNP Output	6-30 VDC	0.2 Amp max.	6 Watts max.	1.5µs operate 0.5µs release	1.5 Volts	9C49-000-050		9C49-000-350 Requires 4 pin cordset