



NEW PRODUCT BULLETIN

Stopper Cylinders

ST'B'



ST'C'



Global Series™ 32



ST'D'



"ST" Series Stopper Cylinders

Features

- ✓ Magnetic piston is included as a standard feature.
- ✓ Rugged body is machined from aluminum extrusion and mounts rigidly to equipment in a minimum of space.
- ✓ A variety of styles are offered to meet different application requirements.
- ✓ The direction of rollers are adjustable for use in different applications.
- ✓ Shock absorbers are available as safety stops.
- ✓ Magnetic sensors can be mounted on cylinder surfaces when input signals are required for controllers.

Standard Stroke Table

Stroke / Bore	10	15	20	25	30
∅32	-	-	✓	N/A	N/A
∅40	N/A	N/A	-	-	✓
∅50	N/A	N/A	-	-	✓

✓ Standard – For shorter strokes consult factory.
N/A = Not available



Specifications

Action	Double Acting, Magnetic Piston
Bore Size	32, 40 and 50mm
Operating Media	Compressed Air
Max. Operating Pressure	145 psi (10 bar)
Piston Speed	50 - 100 mm/sec
Temperature Range	-10°C to +70°C (14°F to 158°F)
Lubrication	Air line lubrication recommended
Cushion	Buna-N bumpers at both ends
Stroke tolerance	+1.4 / -0
Sensors	See page 6 for ordering information

How to Order

ST C 32 x 20 A

- 1) Specify "ST"
- 3) Specify the rod end style
- 3) Specify the bore
- 4) Specify the stroke
- 5) Specify action

Note: Please order sensors separately from the tables on page 6

Series

Rod end style

Bore (mm)

Stroke (mm)

Action

Ports

- A = Round bar
- B = Anti-rotation
- C = Roller
- D = Lever
- F = Lever w/Lock-out cap
- G = Lever w/Latch
- H = Lever w/Latch & Lock-out cap

- ∅32
- ∅40
- ∅50

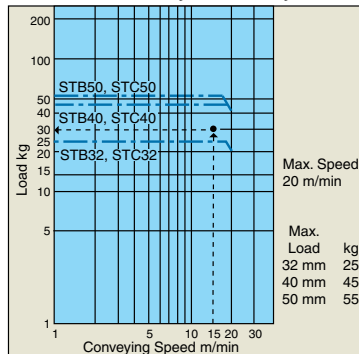
- 20: ∅32
 - 30: ∅40
 - 30: ∅50
- A: Double acting
 - B: Double acting with built-in spring extended rod
 - C: Single acting, spring extended rod

- Blank = NPT
- P = BSP Taper

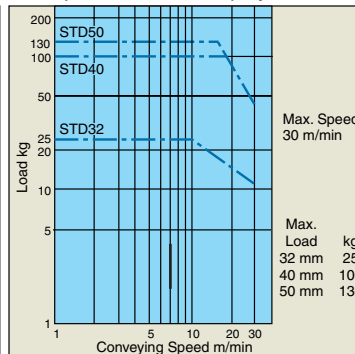
Selection Guide

Example:
Roller Style Stopper Cylinder with 30 kg load moving at 15 m/min. Locate intersection of conveying speed & load in the chart (shown as black dotted lines on the chart). Choose nearest next larger size, STC40, for the model which is acceptable for the application.

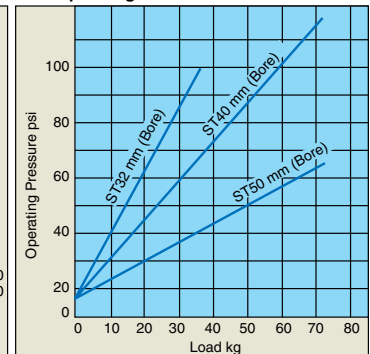
Round Bar, Anti-rotary or Roller Style



Lever (with shock absorber) Style

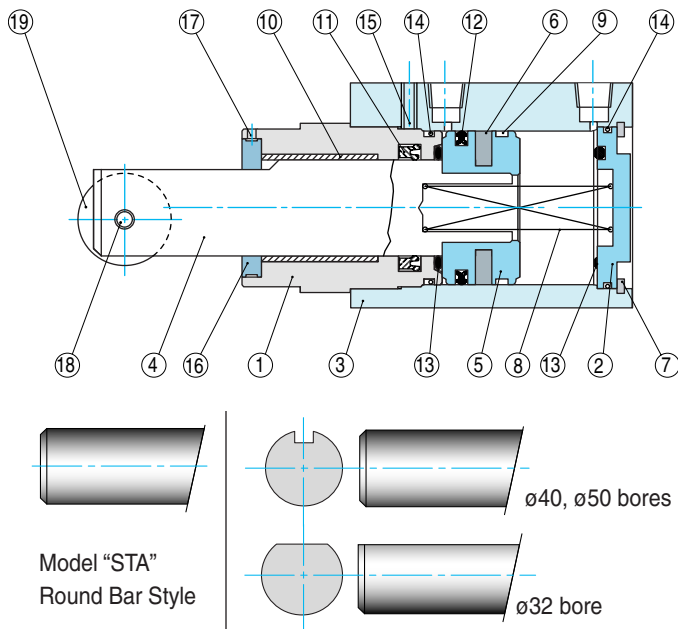


Min. Operating Pressure for Load & Model



Conversions: 1 kg = 2.2 lbs; 1 m = 3.3 ft

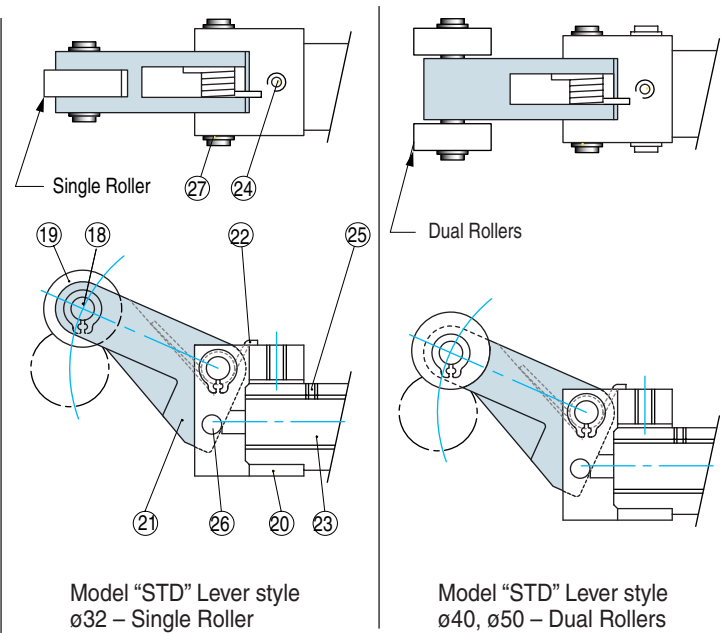
Roller Style (STC) – Action “B” shown



Model “STA”
Round Bar Style

‡ Model “STB” Anti-rotation style:
ø32 Bore - Flatted shaft with matching plate;
ø40 & ø50 bores - pin, roller & slot in shaft.

Anti-rotation plate (No. 16) can be released from locking set screws to orient rod flat (STB), rollers (STC) or lever (STD, STF or STG) to other positions.



Model “STD” Lever style
ø32 – Single Roller

Model “STD” Lever style
ø40, ø50 – Dual Rollers

† Shock absorber (No. 23) is a standard feature of all Lever Style Models. It is easily removed for screw adjustment of the damping characteristics.

Quick Reference to Components

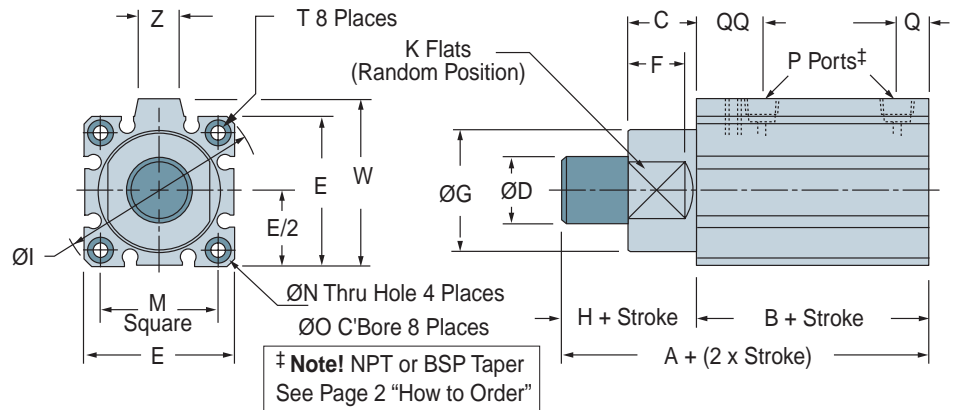
No.	Description	Material	Qty.	No.	Description	Material	Qty.
1	Front end cover	Anodized aluminum alloy	1	15	Set screw	Carbon steel	1
2	Rear end cover	Anodized aluminum alloy	1	16	Anti-rotating plate ‡	Delrin	1
3	Housing	Anodized aluminum alloy	1	17	Set screw	Carbon steel	1
4	Piston rod	Hard chrome plated stainless steel	1	18	Pin	Hardened alloy steel	2
5	Piston	Aluminum alloy	1	19	Roller	Delrin	See Dwg.
6	Magnet	Magnet	1	20	Connector	Cast iron	1
7	Snap ring	Carbon steel	1	21	Driven block	Carbon steel	1
8	Spring	Piano wire	1	22	Spring	Piano wire	1
9	Wear ring	Synthetic resin	1	23	Shock absorber †	–	1
10	Bushing	Oil filled, sintered bronze	1	24	Set screw	Carbon steel	2
11	Seal	Buna-N	1	25	Set screw †	Carbon steel	1
12	Seal	Buna-N	1	26	Steel ball	Carbon steel	1
13	O’Ring	Buna-N	2	27	Snap ring	Carbon steel	4
14	O’Ring	Buna-N	1				

Weight Table (lbs)

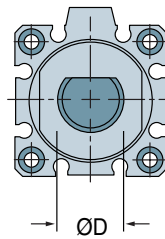
Action	Bore	Rod End Style	10	15	20	25	30
Single acting,	ø32	Round bar, Anti-rotation, Roller	0.92	0.97	1.01	–	–
		Lever	1.12	1.17	1.21	–	–
Double acting,	ø40	Round bar, Anti-rotation, Roller	–	–	1.62	1.76	1.89
		Lever	–	–	2.13	2.22	2.31
Double acting with built-in spring	ø50	Round bar, Anti-rotation, Roller	–	–	2.26	2.35	2.44
		Lever	–	–	2.77	2.86	2.95

“ST” Series Stopper Cylinders

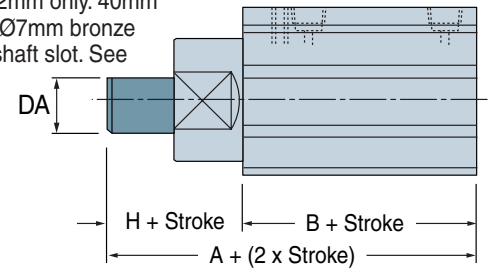
Round Bar Style (STA)



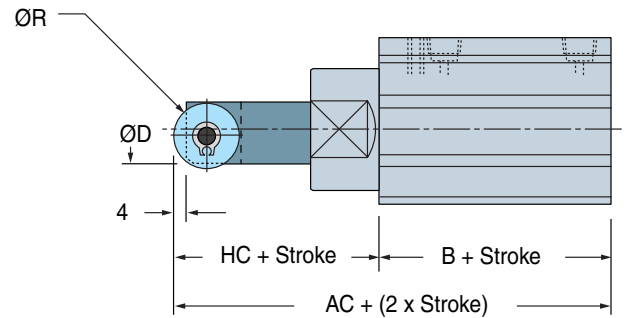
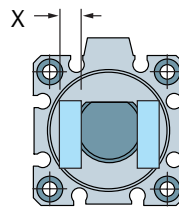
Anti-rotation Style (STB)



DA applies to 32mm only. 40mm and 50mm use Ø7mm bronze roller on pin in shaft slot. See page 3.



Roller Style (STC)



Dimensions (mm)

Bore (mm)	A	AC	B	C	ØD	DA	E	F	ØG	H	HC	I	K	M
ø32	68	88.5	48	20	20	18	45	13	36	20	40.5	60	32	34
ø40	80.5	106	52.5	28	25	—	52	15	44	28	53	69	41	40
ø50	82	107	54	28	25	—	64	15	56	28	53	86	50	50

Bore (mm)	ØN	ØO	P	Q	QQ	ØR	T Threads	W	X	Z
ø32	5.5	9 x 7 dp	1/8	9	20	20	M6 x 1.0 - 10 dp	49.5	6	18
ø40	5.5	9 x 7 dp	1/8	10	24.5	24	M6 x 1.0 - 10 dp	57	8	18
ø50	6.6	11 x 8 dp	1/4	10	24.5	24	M8 x 1.25 - 14 dp	71	8	22

Specifications subject to change without notice or incurring obligation

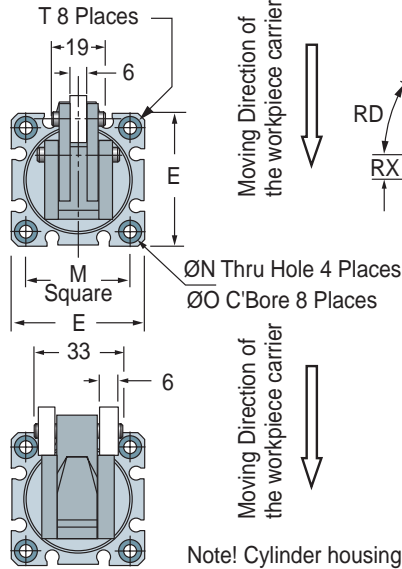
– Dimensions

Lever Style (STD)

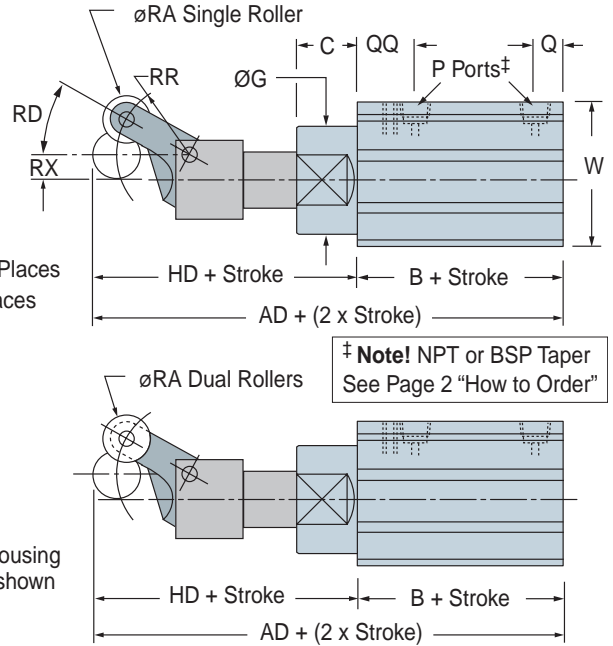


Ø32
Single Roller

Ø40, Ø50
Dual Rollers

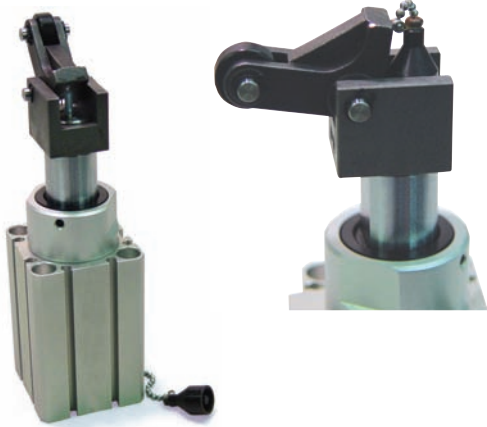


Note! Cylinder housing dimensions not shown are the same as Model STA



Lever Style (STF) – with lockout cap

A ball-chain retained lockout cap fits over the shock absorber stem to position the roller out of the conveyor stream.



Lever Style (STG) – with latch

When a workpiece pushes the lever through the shock absorber stroke the latch locks the lever in alignment to the rod. This reduces additional strokes to the shock absorber. The latching mechanism is released when the rod fully retracts.



Lever Style (STH) – with latch and lockout cap

Latch is the same as STG; lockout cap is the same as STF.

Dimensions (mm)

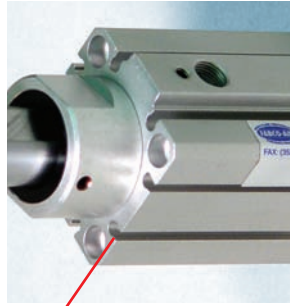
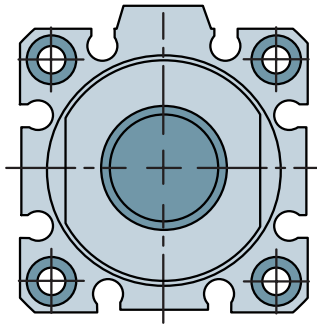
Bore (mm)	AD	B	C	E	ØG	HD	M	ØN	ØO
ø32	120.5	48	20	45	36	72.5	34	5.5	9 x 7 dp
ø40	152.5	52.5	28	52	44	100	40	5.5	9 x 7 dp
ø50	154	54	28	64	56	100	50	6.6	11 x 8 dp

Bore (mm)	P	Q	QQ	øRA	RD	RR	RX	T Threads	W
ø32	1/8	9	20	15	30°	28	10.5	M6 x 1.0 - 10 dp	49.5
ø40	1/8	10	24.5	20	24°	38	14	M6 x 1.0 - 10 dp	57
ø50	1/4	10	24.5	20	24°	38	14	M8 x 1.25 - 14 dp	71

Specifications subject to change without notice or incurring obligation

Magnetically Actuated Sensors

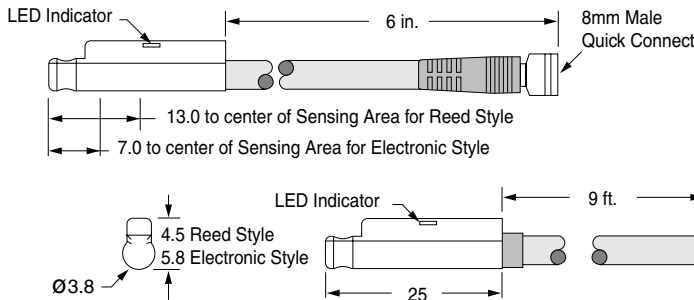
Magnetic Piston is a standard feature of Fabco-Air stopper cylinders. When position sensing is desired for input to signal controllers, Fabco-Air sensors mount easily and securely in slots on the cylinder body.



Rod end view showing 4mm keyhole slots on an anti-rotation ST Series stopper cylinder

4mm keyhole slots for mounting sensors shown on $\varnothing 50$ bore (8 places)

Sensor Dimensions (mm unless noted)



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

Round Profile Sensors feature surge suppression, polarity protection, LED indicator, and extremely fast switching speeds. They slide into mating 4mm keyhole slots on either side of the cylinder housing 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 3 pin configuration in 2 and 5 meter lengths.

Order sensors and cordsets separately from the tables below.



Prewired sensor shown with 9 ft. lead



3 pin cordset shown with sensor pigtail

8mm Female Cordsets for Quick Connect Sensors

Cordset Description	Part No.
2 meters, 3-Pin	CFC-2M
5 meters, 3-Pin	CFC-5M

Magnetic Sensors – Electrical Characteristics							Part Numbers and Prices	
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.	1.5 μ s operate 0.5 μ s 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	1.5 μ s operate 0.5 μ s release	1.5 Volts	9C49-000-032	9C49-000-332 Requires 3 pin cordset

Global Series™ 32 Stopper Cylinder



The cylinder mounting flange is designed with a 1.062" diameter hub intended to mate with a close fitting pilot hole. This not only aids alignment and location requirements, but also helps to withstand the impact loads commonly found in conveyor stop cylinder applications.

FABCO-AIR is now offering a modified version of its 32mm bore Global Series® cylinder for use in conveyor stopping applications. With its new, heavy duty mounting, oversized piston rod, and its **special rod bearing** with increased surface area, the cylinder stands tough against the abuse of side impact loading. (See bearing comparisons below.)

How to Order

Model Number Availability: 1 to 3 working days!

GN - **C** **032** -

Bore
32mm

N - Standard Piston
D - Magnetic Piston

Flange Pattern
E- Non-ISO
G- ISO
M- Interchange

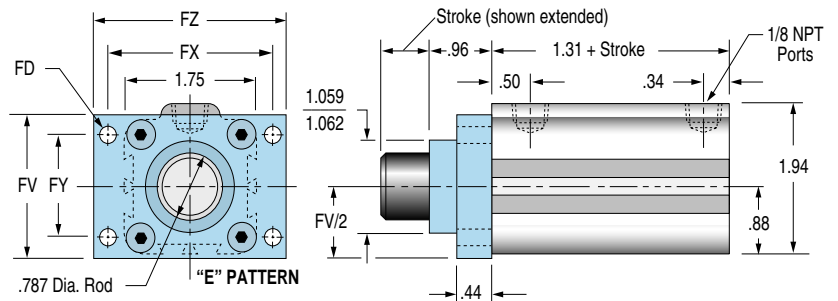
Code Stroke
01010mm
01515mm
02020mm
02525mm
05050mm

D- Double Acting
T- Double Acting, Failsafe, Spring Extend (10 thru 25 Stroke)
EE- Extra Rod Extension (25mm max.)
V- Viton Seals

Engineering Specifications

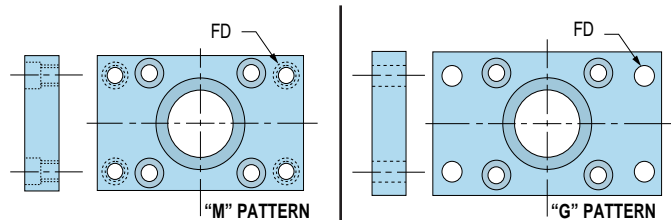
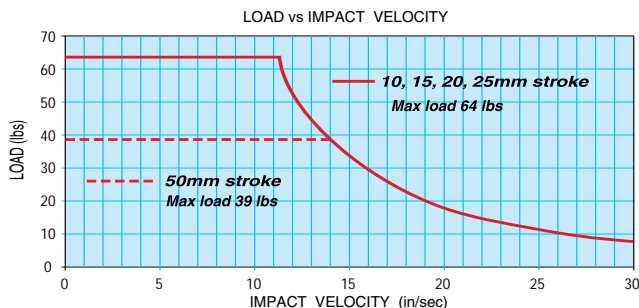
- Operating Pressure: 150 psi Maximum
- Operating Temperature: . . . -25°F to +250°F
- Lubrication: Magnalube® -G Grease
- Cylinder Body: Hard Coated Aluminum
- Piston Rod: Hard Chrome Plated
303 Stainless Steel
- Mounting Flange: Black Anodized Aluminum
- Seals: Internally Lubricated Buna N
- †Rod Bearing: Bronze with PTFE and Lead Lining**

Dimensional Data



Bearing Comparison

Material	Load Capacity
Bronze w/PTFE and Lead Lining	36,000 psi
Sintered Bronze	8,000 psi
Hard Anodize (Ceramic)	5,000 psi
Sintered Iron	8,000 psi

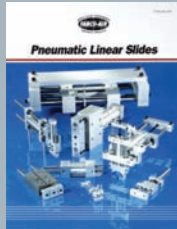


Flange Pattern	Dimensions				
	FD	FV	FX	FY	FZ
E	.22	1.89	2.21	1.34	2.56
G	.28	1.89	2.52	1.26	2.99
M	1/4-20 Tapped Hole C'Bored for #10 SHCS	1.75	2.25	1.25	2.75

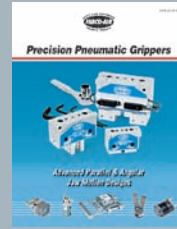
Fabco-Air Product Catalog Library



Cylinders, Valves & Accessories Cat. CV9 Describes Pancake®, Square 1®, Longstroke™, Multi-Power®, and HiPower™, cylinder lines. Also details various valves, air-over-oil tanks, boosters and accessories.



Linear Slides Catalog LS-03 Line includes 6 families of slides, pick & place units, and thin parts placers. 5/16" to 4" bores. Guide shafts 1/4" to 1-1/2".



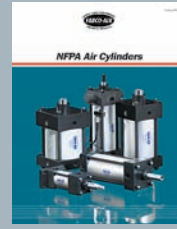
Pneumatic Grippers Catalog GR-8 • SPG & LPG parallel jaw motion with strokes from 1/4" to 24" & forces to 402 lbs. • GR & GS angular jaw styles with on-the-fly adjustment.



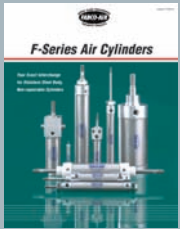
New Linear Thrusters Bulletin GB-JA02 Features longer strokes to 10" – and 4mm round profile sensors with surge suppression and polarity protection.



Air Preparation - FRLs Catalog #FRL-06 Broad line with port sizes from 1/8 NPT to 1 NPT includes new 3-way slide valves. Modular assembly. New 3-way lock out/tag out valves for safe equipment maintenance.



NFFA Interchangeable Air Cylinders Catalog NF-6 All the desirable NFFA mounts. Bores from 1-1/2" to 6"; strokes to 99". Aluminum or high strength composite cylinder body. Magnetic position sensing.



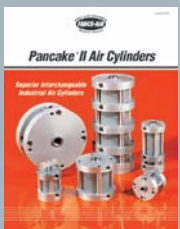
Stainless Steel Body Air Cylinders Catalog SSB-03 Exact interchange in bores from 5/16" to 3", strokes to 32". Popular options includes magnetic piston, non-rotating, and position feedback.



Multi-Power® Air Presses Catalog FP16 Details the powerful line of precision, force-multiplying air presses. Deliver forces to 11,000 pounds.



Swing Clamps Bulletin #SC-DB04 Clamp arm rotates 90° as it extends away from the workpiece. Features standard magnetic piston.



Pancake® II Cylinders Catalog Pan2-2 The direct industrial interchange. High strength composite cylinder barrel. 4 popular styles: Standard, Nonrotating, Multi-Power® and 3-position.



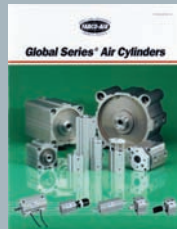
Square Pancake® II Catalog SqPan2 Drop-in interchangeable standard & non-rotating models. 3/4" to 4" bores. Strokes to 4". High strength composite barrel, hard chrome plated piston rod and more.



Specialty Valves and Control Valves Bulletin #14CAN Composite body solenoid valves in 2 or 3-way, N/O or N/C, and manifoldable configurations. Process Solenoid valves. 5 Ported, 3 position, 1/4 NPT 4-way air valves.



Dual Function Slides Bulletin EDF-10 Either of two slide styles (gantry or thruster) can be made from a single set of parts. Users can inventory less parts and assemble styles as needed.



Global Series™ Air Cylinders Cat. GC-15 Widest choice of models and options. Features non-lube service to 150 psi. Bores 12mm to 100mm. Strokes 5mm to 150mm. NPT or Metric ports.