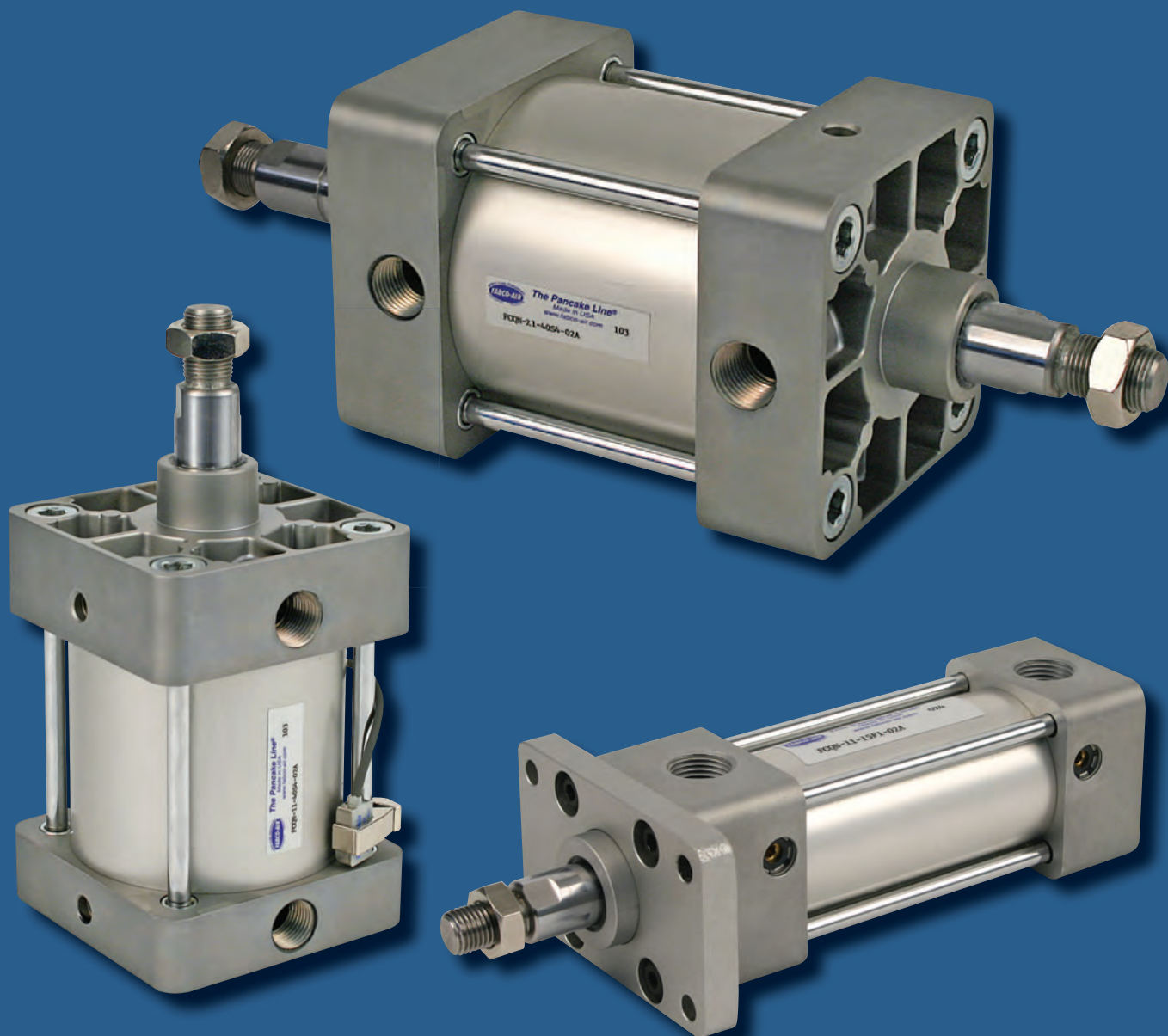


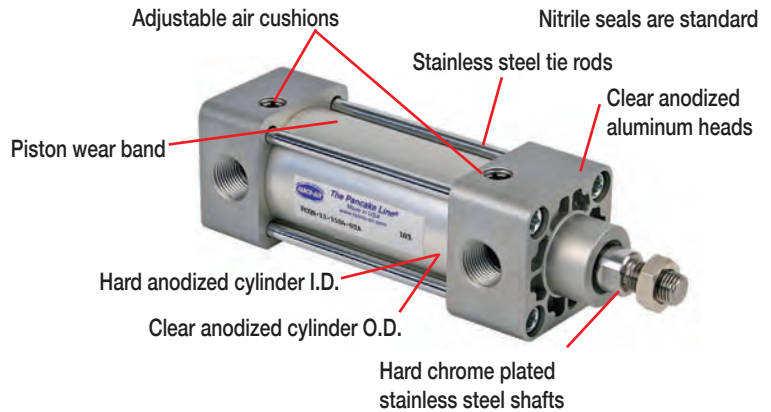
FABCO-AIR

OEM – NFPA Air Cylinders



Features

- **Long life lubrication**
Special bushing provides self lubrication of piston rod. Factory lube is Magnalube-G®.
- **High quality, long service life:**
Hard anodized aluminum cylinder tubes offer high corrosion resistance and low internal friction.
- **Wide range of NFPA interchangeable mounting configurations:**
Mounting dimensions are in accordance with ANSI (NFPA) T3.6.7 R2-1996, fluid power systems and products- square head industrial cylinders- mounting dimensions.



✓ Adjustable air cushions are standard.
✓ Magnetic pistons are standard.

Specifications

Model	FCQN				
Bore (inch)	1 1/2"	2"	2 1/2"	3 1/4"	4"
Tube ID (mm)	40	50	63	80	100
Port size	3/8 NPT		1/2 NPT		
Medium	Air				
Max. operating pressure	140 PSI				
Min. operating pressure	7 PSI				
Ambient temperature	-5° to 60° C; 23° to 140° F				
Piston position sensors	See page 3				

Standard strokes

Bore	Stroke (Inch)
1 1/2"	1, 2, 3, 4, 5, 6, 8, 10
2", 2 1/2"	1, 2, 3, 4, 5, 6, 8, 10
3 1/4", 4"	1, 2, 3, 4, 5, 6, 8, 10

For longer strokes or intermediate strokes not shown, please consult factory

Piston areas

Bore	1 1/2"	2"	2 1/2"	3 1/4"	4"
Extend in ²	1.95	3.04	4.83	7.79	12.17
Retract in ²	1.64	2.73	4.52	7.01	11.39

How to Order

Model Number

FCQN - 11 - 32S4 - 06A - □

Rod

- 11 . . Single rod
- 21 . . Double rod

Bore

- 15 = 1-1/2
- 20 = 2
- 25 = 2-1/2
- 32 = 3-1/4
- 40 = 4

Order Code

NFPA Mounting

Mounting

- F1..... MF1..... Head rectangular flange
- F2..... MF2..... Cap rectangular flange
- P1..... MP1..... Clevis
- P2..... MP2..... Detachable Clevis
- T4..... MT4..... Mid trunnion
- X2..... MX2..... Extended tie rods cap end
- X3..... MX3..... Extended tie rods head end
- S1..... MS1..... Angle mount
- S4..... MS4..... Bottom tapped, flush mount

Stroke Full inches

- 00.....0"
- 01.....1"
- 02.....2"
- 03.....3"
-
- 10.....10"

Options

V . . Viton® seals (Max. 80° C, 176° F)

Stroke Fractional inches

- A = 0"
- E = 1/4"
- I = 1/2"
- M = 3/4"

Sensors

See page 3

Cord sets

See page 3

Accessories

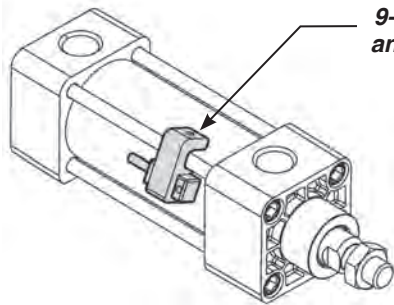
See page 3

Seal Kits

See page 7

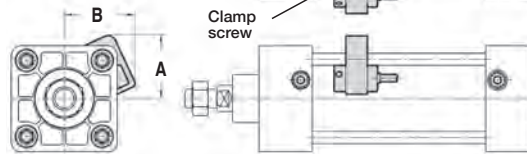
Magnetic Sensors (Order separately)

Temperature Range: -20° to + 80°C (-4° to + 176°F)



9-2A197 Series Sensor and 800-200-000 Clamp

Bore	A	B
1 1/2"	1.10	1.47
2"	1.49	1.68
2 1/2"	1.66	1.86
3 1/4"	1.87	2.13
4"	2.15	2.42



Warning! - Do not exceed sensor ratings. Permanent damage to sensor may occur. Power supply polarity **MUST** be observed for proper operation of sensors. Wiring diagrams included with each sensor.



Cordsets for 9-2A197 Series Quick Disconnect Sensors

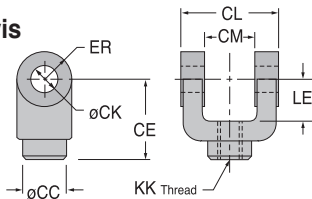
Length	1 Meter	2 Meter	5 Meter
Part No.	CFC-1M	CFC-2M	CFC-5M
Price	-	-	-

LED Lighted Magnetic Piston Position Sensors: Bores 1-1/2" - 4"					
Product	9 ft. Prewired P/N	Price	Quick Discon. P/N	Price	Electrical Characteristics
Reed Switch	9-2A197-1004	-	9-2A197-1304	\$36.60	5-120 VDC/VAC, 0.5 Amp Max., 10 Watt Max., SPST N.O., 3.5 Voltage Drop
Electronic	9-2A197-1033	-	9-2A197-1333	43.15	Sourcing, PNP, 6-24 VDC, 0.5Amp Max., 1.0 Voltage Drop
Electronic	9-2A197-1034	-	9-2A197-1334	43.15	Sinking, NPN, 6-24VDC, 0.5Amp Max., 1.0 Voltage Drop

9-2A197 Series Sensor Mounting Clamps - Part Number 800-200-00

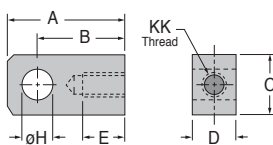
Accessories (Order separately)

Rod Clevis



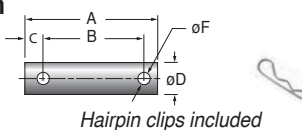
Rod Clevis (Inch)										
Bore	Part No.	Price	CC	CE	CK	CL	CM	ER	KK	LE
1 1/2" ~ 2 1/2"	FCQNC -7/16-20	-	0.87	1.50	0.50	1.75	0.77	0.50	7/16-20	0.75
3 1/4" ~ 4"	FCQNC -3/4-16	-	1.34	2.38	0.75	2.50	1.27	0.75	3/4-16	1.25

Rod Eye



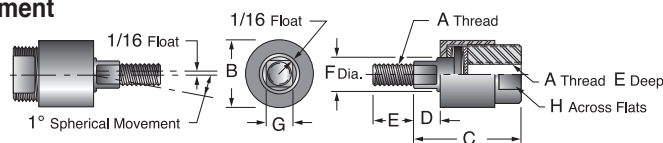
Rod Eye (Inch)									
Bore	Part No.	Price	A	B	C	D	E	KK	
1 1/2" ~ 2 1/2"	FCQNE -7/16-20	-	2.00	1.50	1.00	0.75	0.75	0.50	7/16-20
3 1/4" ~ 4"	FCQNE -3/4-16	-	2.81	2.06	1.50	1.25	1.13	0.75	3/4-16

Pivot Pin



Pivot Pin (Inch)							
Bore	Part No.	Price	A	B	C	F	
1 1/2" ~ 2 1/2"	FCQNP -0.500	-	2.36	1.95	0.20	0.50	0.16
3 1/4" ~ 4"	FCQNP -0.750	-	3.13	2.74	0.19	0.75	0.20

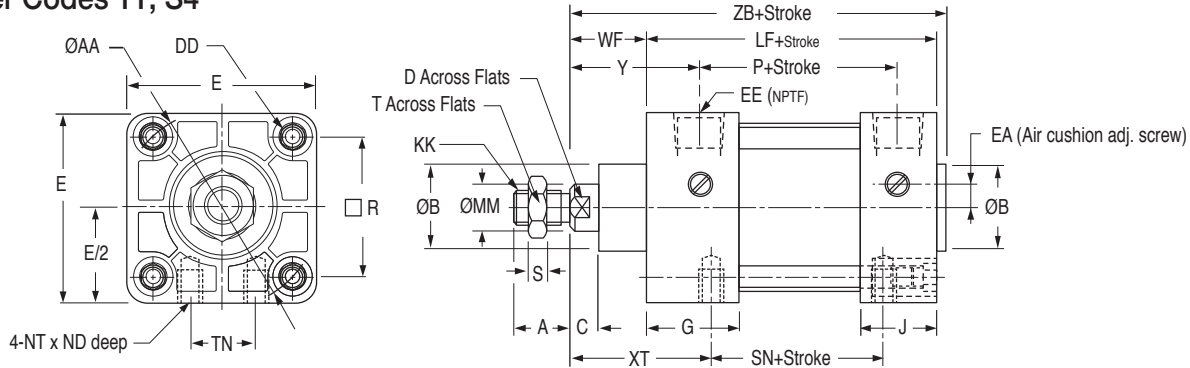
Rod Alignment Couplers



Rod Alignment Couplers (Inch)											
Bore	Part No.	Price	A	B	C	D	E	F	G	H	Max. Pull Lbs.
1 1/2" ~ 2 1/2"	NCP -7/16-20	-	7/16-20	1 1/4	2	1/2	3/4	5/8	1/2	1	2,535
3 1/4" ~ 4"	NCP -3/4-16	-	3/4-16	1 3/4	2 5/16	1/2	1 1/8	31/32	13/16	1 1/2	8,750



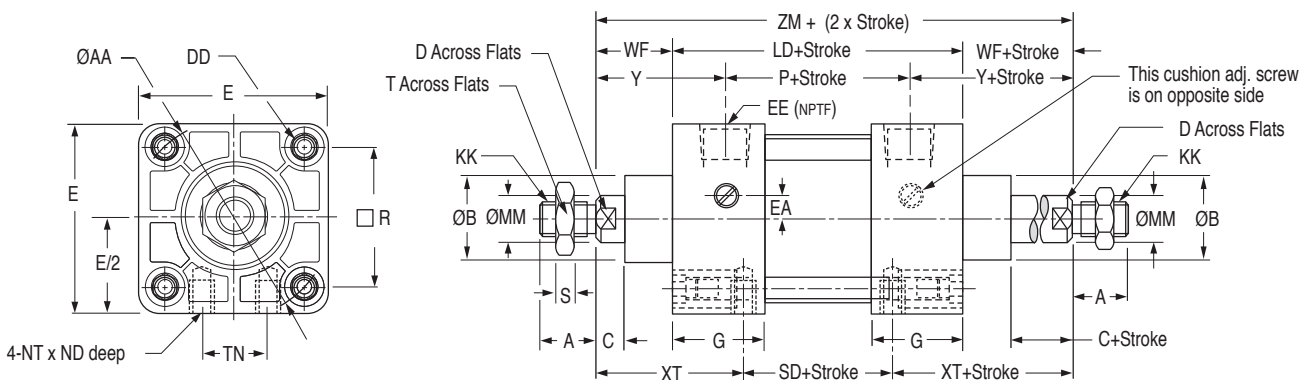
Single Rod Cylinder
S4 Mount - bottom tapped
 with sleeve nuts at both ends
 Order Codes 11, S4



S4 Mount, Single Rod (inches)

Bore	A	AA	B	C	D	DD	E	EA	EE	G	J	KK	LF	MM	ND	NT	P	R	S	SN	T	TN	WF	XT	Y	ZB
1 1/2"	3/4	2.02	1 1/8	3/8	9/16	1/4-28	2	0.32	3/8	1.26	1.01	7/16-20	3.63	5/8	9/32	1/4-20	2.36	1.43	0.26	2.250	0.69	0.625	1	1 15/16	1.71	4.75
2"	3/4	2.60	1 1/8	3/8	9/16	5/16-24	2 1/2	0.43	3/8	1.26	1.06	7/16-20	3.63	5/8	7/16	5/16-18	2.40	1.84	0.26	2.250	0.69	0.875	1	1 15/16	1.71	4.75
2 1/2"	3/4	3.10	1 1/8	3/8	9/16	5/16-24	3	0.47	3/8	1.30	1.06	7/16-20	3.75	5/8	19/32	3/8-16	2.48	2.19	0.26	2.375	0.69	1.250	1	1 15/16	1.75	4.88
3 1/4"	1 1/8	3.90	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	1.18	3/4-16	4.25	1	5/8	1/2-13	2.72	2.76	0.42	2.625	1.12	1.500	1 3/8	2 7/16	2.34	5.83
4"	1 1/8	4.70	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	1.18	3/4-16	4.25	1	5/8	1/2-13	2.72	3.32	0.42	2.625	1.12	2.062	1 3/8	2 7/16	2.34	5.83

Double Rod Cylinder
S4 Mount - bottom tapped
 with sleeve nuts at both ends
 Order Codes 21, S4



S4 Mount, Double Rod (inches)

Bore	A	AA	B	C	D	DD	E	EA	EE	G	KK	LD	MM	ND	NT	P	R	S	SD	T	TN	WF	XT	Y	ZM
1 1/2"	3/4	2.02	1 1/8	3/8	9/16	1/4-28	2	0.32	3/8	1.26	3.78	5/8	9/32	1/4-20	2.36	1.43	0.26	1.90	0.69	0.625	1	1 15/16	1.71	5.78	
2"	3/4	2.60	1 1/8	3/8	9/16	5/16-24	2 1/2	0.43	3/8	1.26	3.82	5/8	7/16	5/16-18	2.40	1.84	0.26	1.94	0.69	0.875	1	1 15/16	1.71	5.82	
2 1/2"	3/4	3.10	1 1/8	3/8	9/16	5/16-24	3	0.47	3/8	1.30	3.98	5/8	19/32	3/8-16	2.48	2.19	0.26	2.10	0.69	1.250	1	1 15/16	1.75	5.98	
3 1/4"	1 1/8	3.90	1 1/2	1/2	7/8	3/8-24	3 3/4	0	1/2	1.57	4.64	1	5/8	1/2-13	2.72	2.76	0.42	2.52	1.12	1.500	1 3/8	2 7/16	2.34	7.40	
4"	1 1/8	4.70	1 1/2	1/2	7/8	3/8-24	4 1/2	0	1/2	1.57	4.64	1	5/8	1/2-13	2.72	3.32	0.42	2.52	1.12	2.062	1 3/8	2 7/16	2.34	7.40	

Weights – Pounds

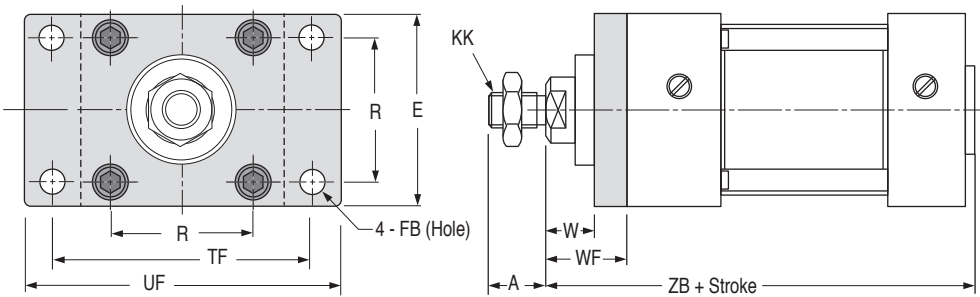
CYLINDERS				
Model	FCQN-11		FCQN-21	
	Bore	Basic Weight	per Inch of Stroke	Basic Weight
1 1/2"	1.49	0.17	2.12	0.26
2"	2.16	0.21	2.80	0.30
2 1/2"	2.94	0.22	3.64	0.37
3 1/4"	5.53	0.44	6.82	0.66
4"	7.28	0.49	9.29	0.71

MOUNTS				
Model	Flange Mount	Trunnion Mount	Angle Mount	Clevis Mount
	Bore	Flange Mount	Trunnion Mount	Angle Mount
1 1/2"	0.54	1.22	0.35	0.50
2"	0.89	1.42	0.53	0.83
2 1/2"	1.27	1.85	0.66	1.15
3 1/4"	3.10	2.42	1.40	2.87
4"	4.44	3.20	2.11	4.01

ACCESSORIES			
Model	Rod Clevis	Rod Eye	Pivot Pin & Clips
	Bore	Rod Clevis	Rod Eye
1 1/2"	0.45	0.33	0.14
2"	0.45	0.33	0.14
2 1/2"	0.45	0.33	0.14
3 1/4"	1.46	1.15	0.39
4"	1.46	1.15	0.39

F1 Mount – Head Rectangular Flange

Order Code F1



F1 Mount (inches)

Bore	A	E	FB	KK	R	TF	UF	W	WF	ZB	Price Adder
1 1/2"	3/4	2	0.25	7/16-20	1.43	2.75	3.38	5/8	1	4.75	-
2"	3/4	2 1/2	0.31	7/16-20	1.84	3.38	4.13	5/8	1	4.75	-
2 1/2"	3/4	3	0.31	7/16-20	2.19	3.88	4.63	5/8	1	4.88	-
3 1/4"	1 1/8	3 3/4	0.38	3/4-16	2.76	4.68	5.50	3/4	1 3/8	5.83	-
4"	1 1/8	4 1/2	0.38	3/4-16	3.32	5.44	6.25	3/4	1 3/8	5.83	-

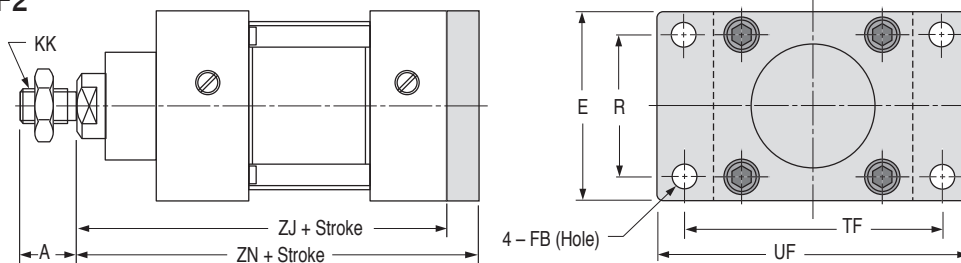
F1 Mount Kit (if ordered separately)

Part No.	Price
FCQN-F1-15	-
FCQN-F1-20	-
FCQN-F1-25	-
FCQN-F1-32	-
FCQN-F1-40	-

Includes fasteners to add F1 mount to cylinders with S4 mounting style.

F2 Mount – Cap Rectangular Flange

Order Code F2



F2 Mount (inches)

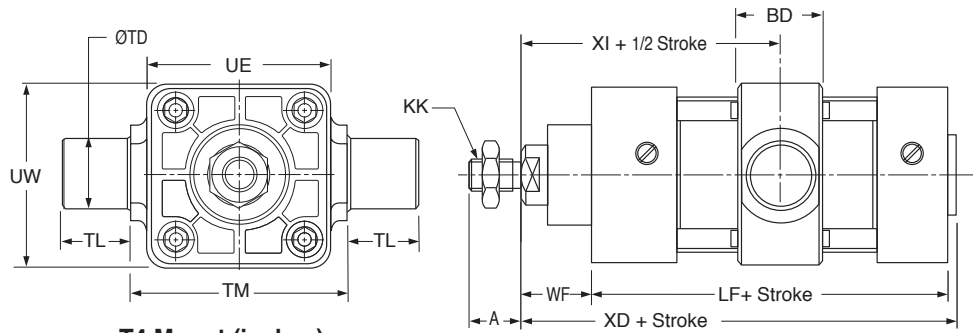
Bore	A	E	FB	KK	R	TF	UF	ZJ	ZN	Price Adder
1 1/2"	3/4	2	0.25	7/16-20	1.43	2.75	3.38	4.63	5.00	-
2"	3/4	2 1/2	0.31	7/16-20	1.84	3.38	4.13	4.63	5.00	-
2 1/2"	3/4	3	0.31	7/16-20	2.19	3.88	4.63	4.75	5.13	-
3 1/4"	1 1/8	3 3/4	0.38	3/4-16	2.76	4.68	5.50	5.63	6.25	-
4"	1 1/8	4 1/2	0.38	3/4-16	3.32	5.44	6.25	5.63	6.25	-

Use F1 Mount Kit for F2 Mount

Part No.	Price
FCQN-F1-15	-
FCQN-F1-20	-
FCQN-F1-25	-
FCQN-F1-32	-
FCQN-F1-40	-

Mounting kit for F2 mount is the same as above. Fasteners are included.

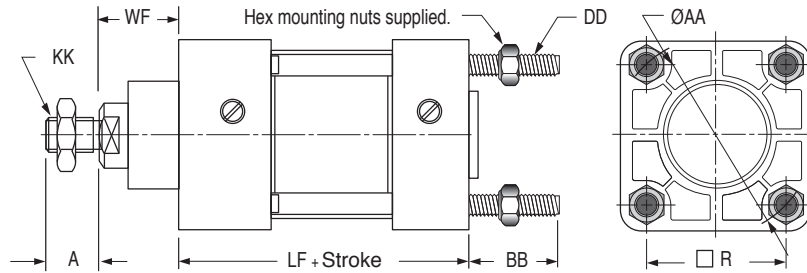
T4 Mount
Mid Trunnion
Order Code T4



T4 Mount (inches)

Bore	A	BD	KK	LF	TD	TL	TM	UE	UW	WF	XD	XI	Price Adder
1 1/2"	3/4	1.04	7/16-20	3.63	1	1	2.50	2.11	2.28	1	4.75	2.89	-
2"	3/4	1.04	7/16-20	3.63	1	1	3.00	2.60	2.60	1	4.75	2.91	-
2 1/2"	3/4	1.10	7/16-20	3.75	1	1	3.50	3.09	3.23	1	4.88	2.99	-
3 1/4"	1 1/8	1.18	3/4-16	4.25	1	1	4.50	3.70	4.17	1 3/8	5.83	3.70	-
4"	1 1/8	1.22	3/4-16	4.25	1	1	5.25	4.49	4.96	1 3/8	5.83	3.74	-

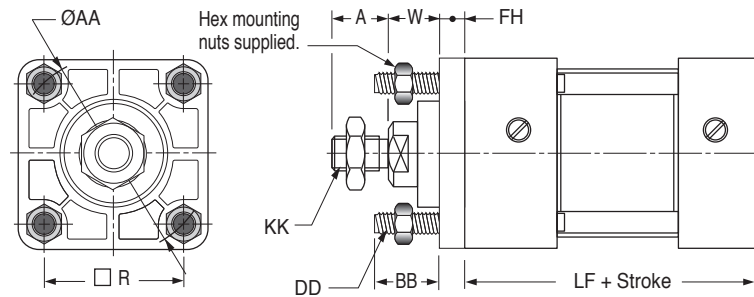
X2 Mount
Cap Extended Tie Rods
Order Code X2



X2 Mount (inches)

Bore	A	AA	BB	DD	KK	LF	R	WF	Price Adder
1 1/2"	3/4	2.02	1.000	1/4-28	7/16-20	3.63	1.43	1	-
2"	3/4	2.60	1.125	5/16-24	7/16-20	3.63	1.84	1	-
2 1/2"	3/4	3.10	1.125	5/16-24	7/16-20	3.75	2.19	1	-
3 1/4"	1 1/8	3.90	1.375	3/8-24	3/4-16	4.25	2.76	1 3/8	-
4"	1 1/8	4.70	1.375	3/8-24	3/4-16	4.25	3.32	1 3/8	-

X3 Mount
Head Extended Tie Rods
Order Code X3



X3 Mount (inches)

Bore	A	AA	BB	DD	FH	KK	LF	R	W	Price Adder
1 1/2"	3/4	2.02	1.000	1/4-28	3/8	7/16-20	3.63	1.43	5/8	-
2"	3/4	2.60	1.125	5/16-24	3/8	7/16-20	3.63	1.84	5/8	-
2 1/2"	3/4	3.10	1.125	5/16-24	3/8	7/16-20	3.75	2.19	5/8	-
3 1/4"	1 1/8	3.90	1.375	3/8-24	5/8	3/4-16	4.25	2.76	3/4	-
4"	1 1/8	4.70	1.375	3/8-24	5/8	3/4-16	4.25	3.32	3/4	-

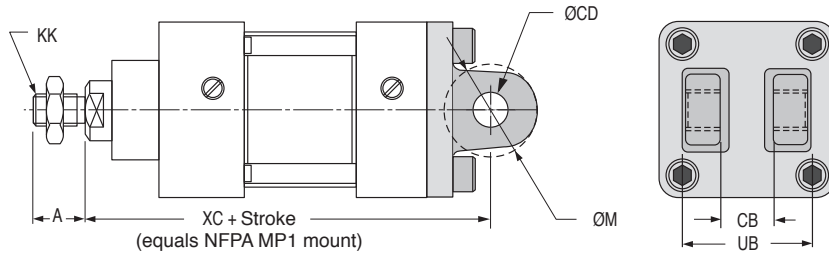
P1 Mount Clevis (Features detachable design)

Order Code P1 (NFPA length dimension = XC)

(Pivot Pins & hairpin clips included)

P2 Mount NFPA detachable clevis

Order Code P2 (NFPA length dimension = XD)



Clevis Mount (inches)

Bore	A	CB	CD	KK	M	UB	XC	XD	Price Adder
1 1/2"	3/4	0.78	0.50	7/16 - 20	1.24	1.75	5.38	5.75	-
2"	3/4	0.78	0.50	7/16 - 20	1.24	1.75	5.38	5.75	-
2 1/2"	3/4	0.78	0.50	7/16 - 20	1.24	1.75	5.50	5.88	-
3 1/4"	1 1/8	1.28	0.75	3/4 - 16	1.88	2.50	6.88	7.50	-
4"	1 1/8	1.28	0.75	3/4 - 16	1.88	2.50	6.88	7.50	-

Clevis Mount Kit (If ordered separately)

Part No.	Price
FCQN-□□-15	-
FCQN-□□-20	-
FCQN-□□-25	-
FCQN-□□-32	-
FCQN-□□-40	-

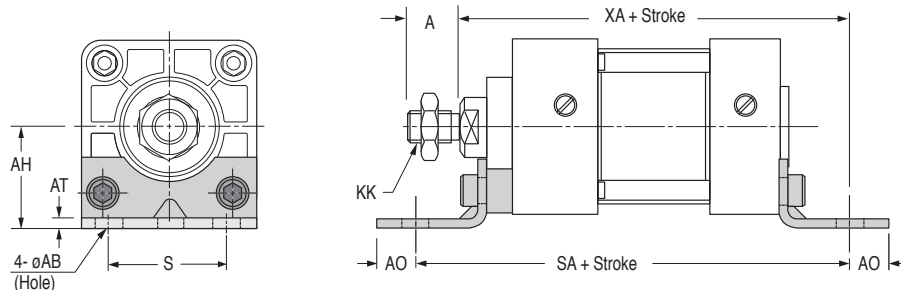
Includes fasteners, pin and clips to add clevis mount to single rod cylinders with S4 mounting style.

Enter P1 or P2 for order code selection

S1 Mount

Angle Mount

Order Code S1



S1 Mount (inches)

Bore	A	AB	AH	AO	AT	KK	S	SA	XA	Price Adder
1 1/2"	3/4	3/8	1.188	7/16	1/8	7/16-20	1.25	6.00	5.63	-
2"	3/4	3/8	1.438	9/16	1/8	7/16-20	1.75	6.00	5.63	-
2 1/2"	3/4	3/8	1.625	9/16	1/8	7/16-20	2.25	6.13	5.75	-
3 1/4"	1 1/8	1/2	1.938	3/4	11/64	3/4-16	2.75	7.38	6.88	-
4"	1 1/8	1/2	2.250	3/4	15/64	3/4-16	3.50	7.38	6.88	-

S1 Mount Kit (If ordered separately)

Part No.	Price
FCQN-S1-15	-
FCQN-S1-20	-
FCQN-S1-25	-
FCQN-S1-32	-
FCQN-S1-40	-

Includes fasteners to add S1 mount to cylinders with S4 mounting style.

Seal Kits

Each kit includes materials for both single and double rod cylinders

Bore	Nitrile Kits		Viton Kits	
	Part No.	Price	Part No.	Price
1 1/2"	FCQN-15-SK	-	FCQN-15-SKV	-
2"	FCQN-20-SK	-	FCQN-20-SKV	-
2 1/2"	FCQN-25-SK	-	FCQN-25-SKV	-
3 1/4"	FCQN-32-SK	-	FCQN-32-SKV	-
4"	FCQN-40-SK	-	FCQN-40-SKV	-



Cylinders, Valves and Accessories
Catalog #CV9



Pancake® II Air Cylinders
Catalog #Pan2-2



Square Pancake® II
Air Cylinders
Catalog #SqPan2



ISO 6431 Cylinders
Catalog #FAQR-09



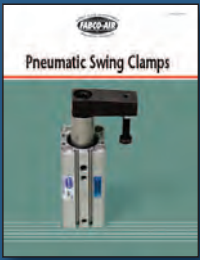
Twin Rod, Non-Rotating
Air Cylinders - Catalogs
#FDf-09 & #FDXs-09



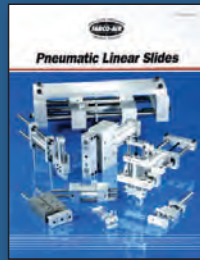
High Closing Force
Angular Grippers
Catalog #FKHC-10



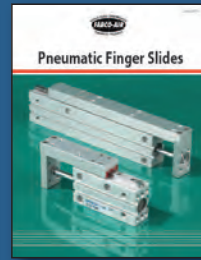
Multi-Power® Air Presses
Catalog #FP16



Swing Clamps
Catalog #SC-DB04



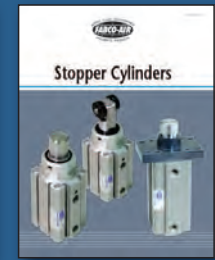
Linear Slides - 6 Families
Catalog #LS-03



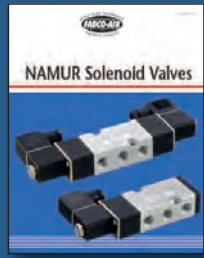
Compact Finger Slides
Catalog #FDH-10



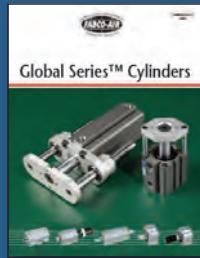
ISO 6432 Cylinders
Catalog #FAE-09



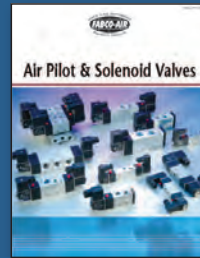
Stopper Cylinders
Catalog #ST-SC



NAMUR Solenoid Valves
Catalog #FVEN-10



Global Series™ Metric
Air Cylinders
Catalog #GC-15



Air Pilot and
Solenoid Valves
Catalog #FVA.E-09



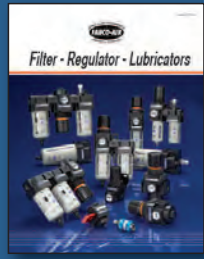
Air Table Slides
Catalog #FGXS-10



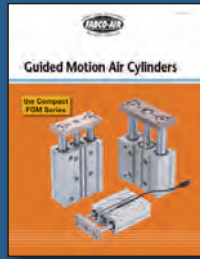
Wide & Narrow Parallel
Grippers - Catalogs
#FKHZ-10 & #FKHQ-10



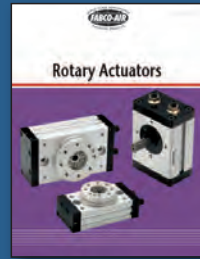
Toggle Type
Angular Grippers
Catalog #FKHT-10



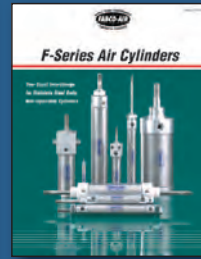
Modular Air Preparation
System - FRLs
Catalog #FRL-06



Guided Motion
Air Cylinders
Catalog #FGM-10



Pneumatic Rotary
Actuators
Catalog #FRA.C-09



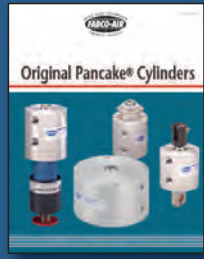
Stainless Steel Body
Air Cylinders
Catalog #SSB-03



Pneumatic & Hydraulic
Swing Clamps
Catalog #FML.H



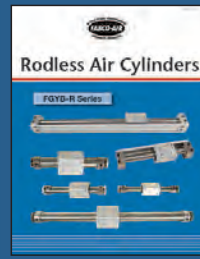
Wide Opening
Parallel Grippers
Catalog #FKHL-10



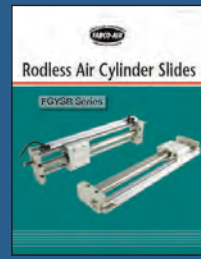
Original Pancake®
Air Cylinders
Catalog #CV9



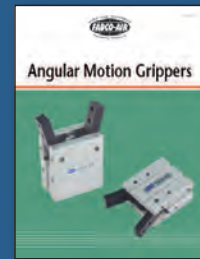
Pneumatic
Crimping Tools
Catalog #FCT-JY07



Magnetically Coupled
Rodless Air Cylinders
Catalog #FGYBR-11



Magnetically Coupled
Rodless Slides
Catalog #FGYS-11



Angular Grippers
Catalog #FKA-09



3 Series of Angular &
Parallel Motion Grippers
Catalog #GR8