

A black, industrial-grade pneumatic valve actuator is shown in a close-up view, mounted on a large white pipe. The actuator has a cylindrical upper section with two lifting eyes on top, a central vertical shaft, and a lower section with a triple seal gland. The background is a dark blue gradient with a red diagonal stripe.

A SERIES Double-Acting Pneumatic Valve Actuator

Designed & engineered for severe-service applications

- Thrusts up to 425,000 lbs
- SIL-3 Capable
- GT3 Triple Seal Gland for Severe Service Applications

A SERIES Design & Materials

Piston Packing
Nitrile U-Cup standard for long service life
High and Low Temp optional

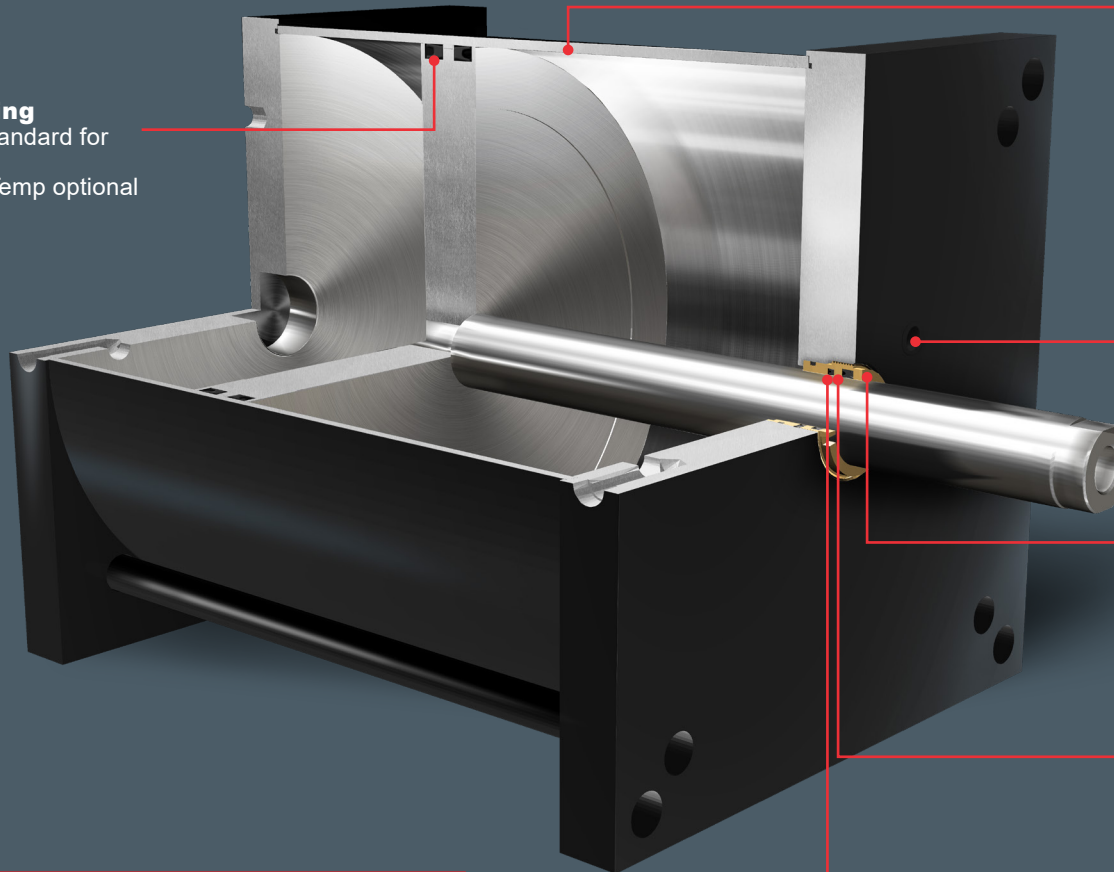
High-Strength Composite Barrel
Light-weight, low-friction and corrosion-resistant.

Flange Mounting Hole
ISO/MSS Flange mounting holes See *Actuator Dimensions Page* for details

Cartridge Bushing
Allows for quick and easy rod seal replacement without disassembling the actuator

Rod Wiper
To prevent contamination inside the cylinder for long seal life. High or low temp optional

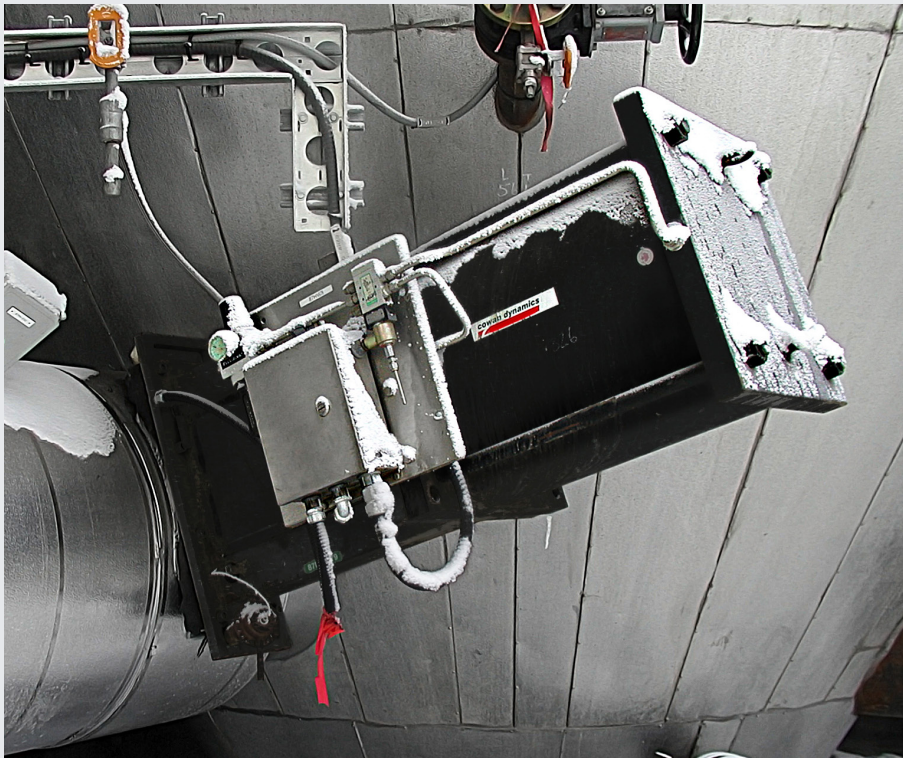
Gland Packing
Nitrile U-cup standard
High or low temp optional



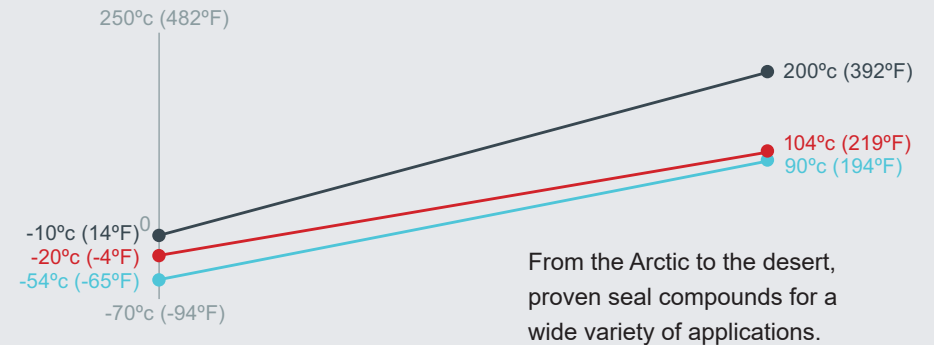
Material Breakdown	STANDARD	Corrosion Resistant	AWWA
Head & Cap	Steel	SS 316	Cad Plated
Barrel	Composite	Composite	Composite
Piston	Aluminum (4"-8") & Steel (10" and above)	Steel	Cad Plated
Piston Rod	AISI 1045	SS 316	SS 316
Gland	SAE 660	Delrin	Delrin
Tie Rod 4" - 10"	AISI 1045	SS 316	SS 316
Tie Rod 12" & Above	AISI 1045	SS 17 - 4 PH	SS 17 - 4 PH

Specifications

Cowan A Series Double-Acting Pneumatic Valve Actuators are designed to suit a wide range of applications; from commodity to severe-service extremes.

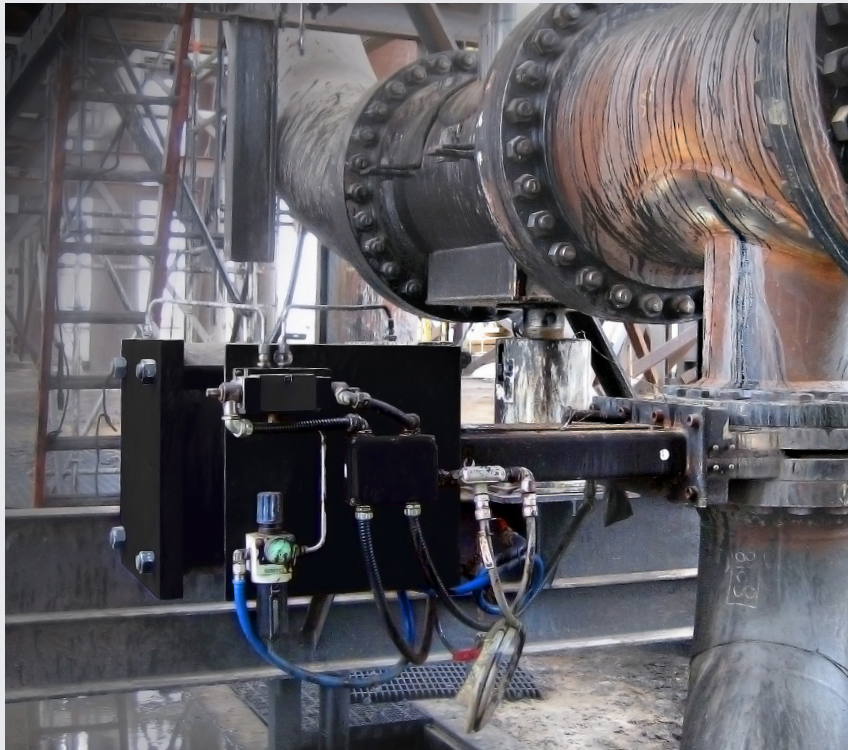


Canadian Oil Sands Production Facility:
14" Bore A-Series with Low Temperature seals and control package capable of -54°C



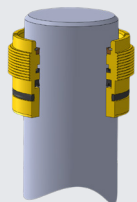
- **Thrust: up to 425,000 lbs**
- **Bore size: 4" - 42"**
- **Configuration: Single-Stage and Tandem**
- **Stroke Range: Up to 144"**
- **Pressure Rating: 150 psi**
- **Rod Size: 1" to 5½"**

Add-Ons



Dirty Environment: 12" Series A with GT3 Gland

Gland Seals



GT3 Gland for Harsh Environments:

Triple-seal gland with dual wipers. Rugged metallic scraper and urethane double-acting wiper deflect contamination away from the rod seal for long service life.

- Low Temp available
- Cast iron construction for applications where yellow metals are not allowed

Mounting Kits: ISO, MSS & Customized Patterns Available

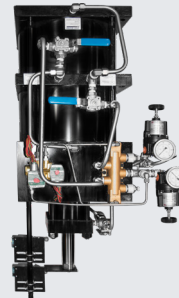
Cowan valve mounting kits can be designed for any linear valve. Mounting kits available in steel and stainless steel construction.



Anti-Rotation Torque Arm:
Maintains constant alignment between valve stem and cylinder piston-rod. Compatible with rotary type switch boxes and beacons.

Field-Adjustable Travel Stops:
to limit stroke for position-seated or limited-travel applications. Ensures valve reaches positive sealing every time without damage to valve internals

Automation Packages



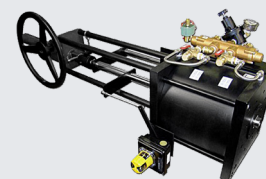
Integration of Control Accessories:
Solenoid Valves
Pilot Valves
Quick Exhausts
Positioners

Position Feedback:
Limit switches and position sensors
Field-adjustable for open and close indication.
Analog and digital feedback

Ask about Cowan's new C-PAC Manifold solution!

Manual Overrides

Manual override options are available.



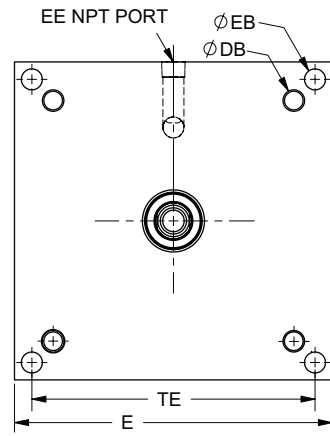
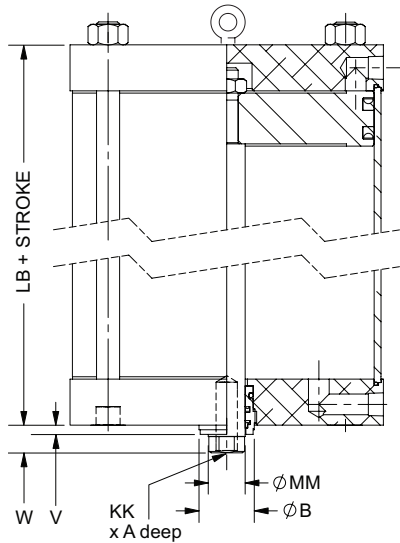
Screwjack with handwheel



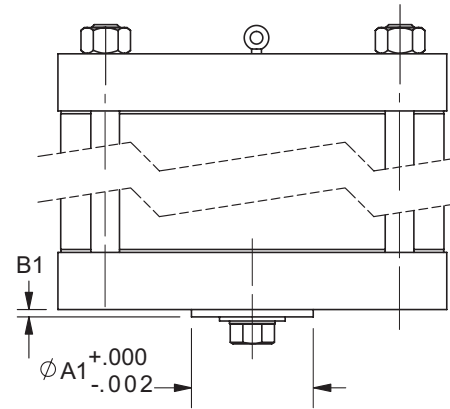
Hydraulic manual override with indicator

Actuator Dimensions: A Series Single-Stage

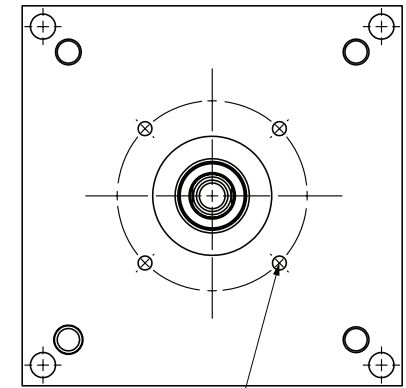
Actuation Solutions and Systems for the World's Most Challenging Environments



Flange Mounting Dimensions



ISO AND MSS MOUNTING FLANGE



C1 OF BOLTS, D1 THREADS
E1 DEEP ON F1 P.C.D.

Actuator Dimensions (in)											Thrust Values (lbs)			ISO or MSS Mounting Pattern*	
BORE	A	B	E	EE NPT	KK	LB	MM	TE	V	W	60 PSI	80 PSI	100 PSI	STD	OPT
4	1.75	1.50	4.50	¼	⅝-18	3.50	1.00	N/A	0.25	0.75	707	942	1,178	F/FA07	
5	1.75	1.50	5.50	¼	⅝-18	4.00	1.00	N/A	0.25	0.75	1,131	1,508	1,885	F/FA07	
6	1.75	1.50	6.50	¼	⅝-18	4.50	1.00	N/A	0.25	0.75	1,649	2,199	2,749	F/FA07	
7	1.75	1.50	7.50	⅜	⅝-18	4.00	1.00	N/A	0.25	0.75	2,262	3,016	3,770	F/FA07	
8	1.75	1.50	8.50	⅜	⅝-18	4.00	1.00	7.60	0.25	0.75	2,969	3,958	4,948	F/FA10	F/FA07
10	2.25	2.00	10.75	½	1-14	4.13	1.38	9.40	0.25	0.88	4,623	6,164	7,705	F/FA10	F/FA07
12	2.25	2.00	12.75	½	1-14	4.50	1.38	11.10	0.25	0.88	6,697	8,929	11,161	F/FA14	F/FA10
14	2.25	2.00	14.88	½	1-14	5.25	1.38	12.87	0.25	0.88	9,147	12,196	15,245	F/FA14	F/FA10
16	2.25	2.63	17.00	¾	1¼-12	5.75	2.00	14.85	0.25	1.13	11,875	15,834	19,792	F/FA14	F/FA10
18	2.25	2.63	19.00	¾	1¼-12	5.75	2.00	16.70	0.25	1.13	15,080	20,106	25,133	F/FA16	F/FA14
20	2.25	3.13	21.00	¾	1¼-12	6.50	2.50	18.40	0.25	1.13	18,555	24,740	30,925	F/FA16	F/FA14
22	2.25	3.75	23.00	¾	2¼-12	7.50	3.00	20.15	0.25	1.25	22,384	29,845	37,306	F/FA25	F/FA16
24	3.50	3.75	25.25	¾	2¼-12	8.50	3.00	21.75	0.25	1.25	26,719	35,626	44,532	F/FA25	F/FA16
26	3.50	4.25	27.50	¾	2¼-12	9.50	3.50	23.34	0.25	1.25	31,278	41,705	52,131	F/FA30	F/FA25

Consult factory for more detailed dimensions

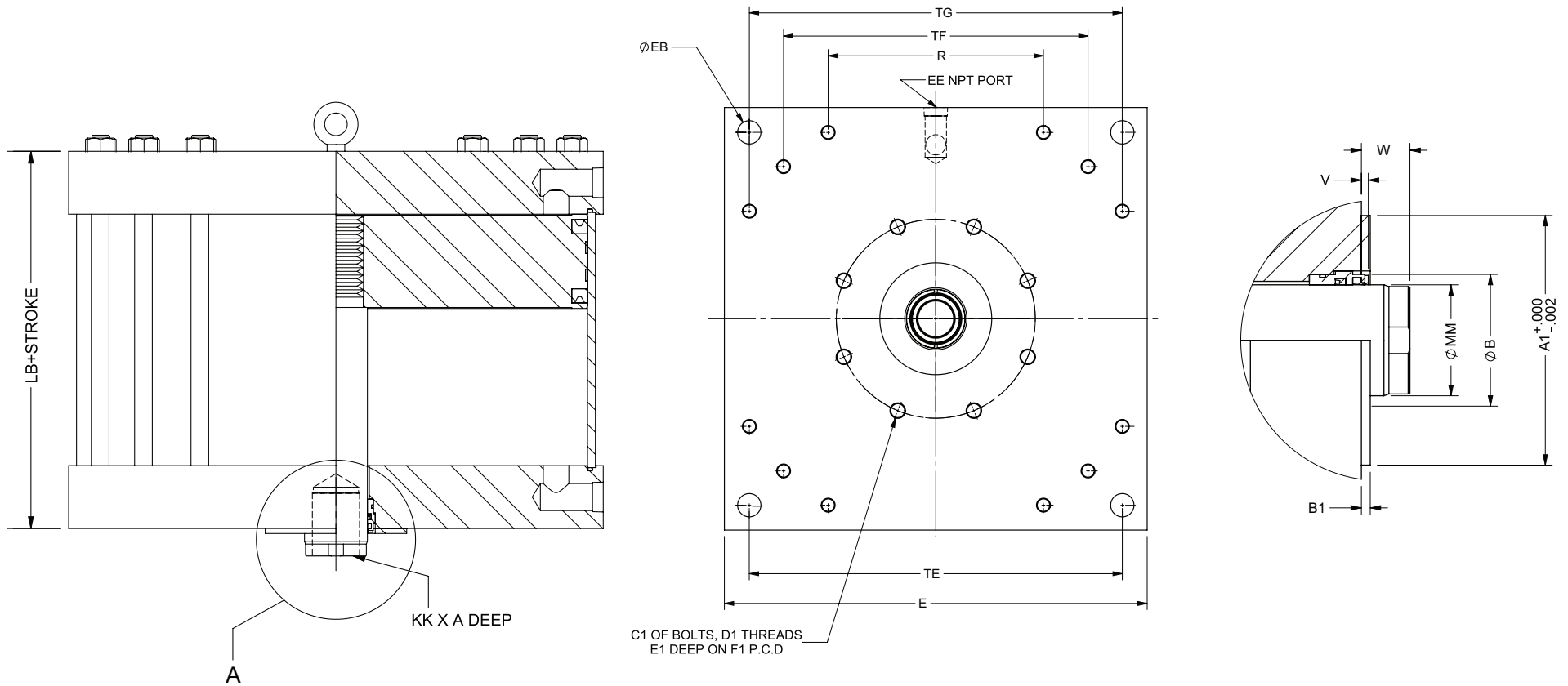
*Other Mounting Patterns are available; consult factory

MSS Flange Mounting Dimensions (in)							
MSS FLANGE	MAX. THRUST (lbs.)	A1	B1	C1	D1	E1	F1
FA07	4,500	2.166	0.120	4	⅝-18	1¼	2.750
FA10	9,000	2.312	0.120	4	⅜-16	1¼	4.000
FA14	25,000	3.750	0.160	4	⅝-11	1¾	5.500
FA16	35,000	5.000	0.190	4	¾-10	1⅝	6.500
FA25	50,000	6.000	0.190	8	⅝-11	1⅝	10.000
FA30	75,000	7.000	0.190	8	¾-10	1⅝	11.750
FA35	140,000	8.500	0.190	8	1-8	1¼	14.000
FA40	230,000	9.000	0.320	8	1¼-7	1½	16.000

ISO Flange Mounting Dimensions (in)							
ISO FLANGE	MAX. THRUST (lbs.)	A1	B1	C1	D1	E1	F1
F07	4,495	2.165	0.118	4	M8	7/16	2.755
F10	8,990	2.756	0.118	4	M10	5/8	4.016
F14	22,480	3.937	0.157	4	M16	¾	5.512
F16	33,723	5.118	0.197	4	M20	7/8	6.496
F25	44,964	7.874	0.197	8	M16	7/8	10.000
F30	73,066	9.055	0.197	8	M20	7/8	11.732
F35	157,374	10.236	0.197	8	M30	7/8	14.016
F40	247,302	11.811	0.314	8	M36	7/8	15.984

Actuator Dimensions: Large Bore Single-Stage

Actuation Solutions and Systems for the World's Most Challenging Environments



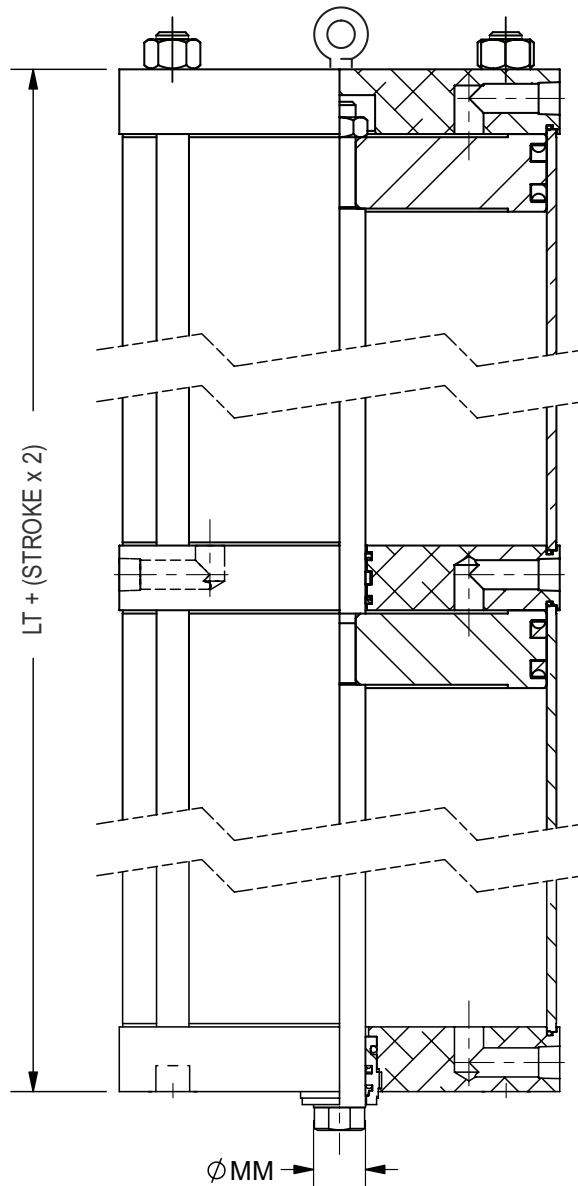
Actuator Dimensions (in)														Thrust Values (lbs)			ISO or MSS Mounting Pattern*		
BORE	A	B	E	EB	EE	KK	LB+Stroke	MM	V	W	R	TE	TF	TG	60 PSI	80 PSI	100 PSI	STD	OPT
28	3.50	4.25	31.25	1.56	¾	2 1/4-12UN	12.25	3.50	0.25	1.25	17.60	26.00	25.00	N/A	36,368	48,490	60,613	F/FA25	F/FA30
30	3.50	4.25	31.50	1.88	1 ½NP	2 1/4-12UN	12.25	3.50	0.25	1.50	18.70	26.70	26.70	N/A	41,834	55,779	69,724	F/FA25	F/FA30
32	3.50	4.75	34.00	1.88	1 ½NP	2 3/4-12UN	14.00	4.00	0.25	1.75	17.30	30.00	30.00	N/A	47,501	63,334	79,168	F/FA30	F/FA35
36	4.50	6.25	39.00	2.50	1 ½NP	4-12UN	20.00	5.50	0.25	1.75	13.30	33.00	27.60	36.60	59,647	79,529	99,412	F/FA30	F/FA35
42	4.50	6.25	45.00	2.50	1 ½NP	4-12UN	20.00	5.50	0.25	1.75	15.40	38.00	31.80	42.30	81,701	108,935	136,168	F/FA30	F/FA35

Consult factory for more detailed dimensions

*Other Mounting Patterns are available; consult factory

Actuator Dimensions: A Series Tandem

Actuation Solutions and Systems for the World's Most Challenging Environments



Actuator Dimensions (in)			Thrust Values (lbs)			ISO or MSS Mounting Pattern*	
BORE	LT	MM	60 PSI	80 PSI	100 PSI	STD	OPT
4	5.75	1.00	1,414	1,885	2,356	F/FA07	
5	6.50	1.00	2,262	3,016	3,770	F/FA07	
6	7.38	1.00	3,299	4,398	5,498	F/FA07	F/FA10
7	6.75	1.00	4,524	6,032	7,540	F/FA07	F/FA10
8	6.75	1.00	5,938	7,917	9,896	F/FA14	F/FA10
10	7.00	1.38	9,247	12,329	15,411	F/FA14	F/FA10
12	7.75	1.38	13,393	17,858	22,322	F/FA14	F/FA10
14	9.00	1.38	18,294	24,392	30,491	F/FA16	F/FA14
16	9.75	2.00	23,750	31,667	39,584	F/FA25	F/FA16
18	9.75	2.00	30,159	40,212	50,265	F/FA30	F/FA25
20	11.00	2.50	37,110	49,480	61,850	F/FA30	F/FA25
22	13.00	3.00	44,768	59,690	74,613	F/FA30	F/FA25
24	14.50	3.00	53,438	71,251	89,064	F/FA35	F/FA30
26	16.50	3.50	62,557	83,409	104,262	F/FA35	F/FA30
28	21.25	3.50	72,736	96,981	121,226	F/FA35	F/FA30
30	21.50	3.50	83,668	111,558	139,447	F/FA35	F/FA30
32	24.00	4.00	95,002	126,669	158,336	F/FA40	F/FA35
36	34.00	5.50	119,294	159,059	198,823	F/FA40	F/FA35
42	34.00	5.50	163,402	217,869	272,337	F/FA40	F/FA35

Refer to Single-stage Dimensions Tables for dimensions not shown

Consult factory for more detailed dimensions

* Other Mounting Patterns are available; consult factory

Related materials

Visit our website to download or request a printed catalogue.



Solutions Include:

Valve Actuators

Fail-Safe Systems

Digital Process Control Panels

Pneumatic Process Control Panels

For sales and technical information, Contact us at:

Head Office/Factory:

6194 Notre Dame West
Montreal, Quebec H4C 1V4
TOLL-FREE: 855-341-3415
info@cowandynamics.com

f /cowandynamics

in /company/cowan-dynamics

You Tube /cowandynamics

