

AT SERIES

Dart Valve Actuator

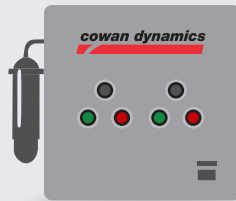
Durable, Accurate, Compact, Modular

- Thrusts up to 55,000 lbs
- SIL-3 Capable
- GT3 Triple Seal Gland for Severe Service Applications



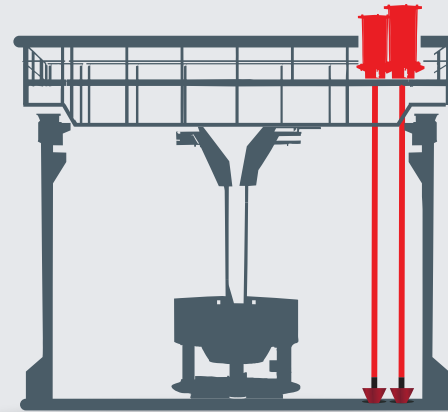


Control Station

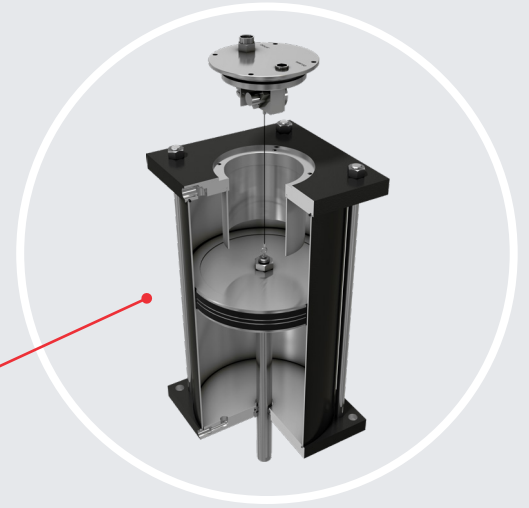


Cowan Pneumatic Control Panel

With and without
local manual override



Flotation Tank



Cowan AT Series
Pneumatic Modulating Actuator

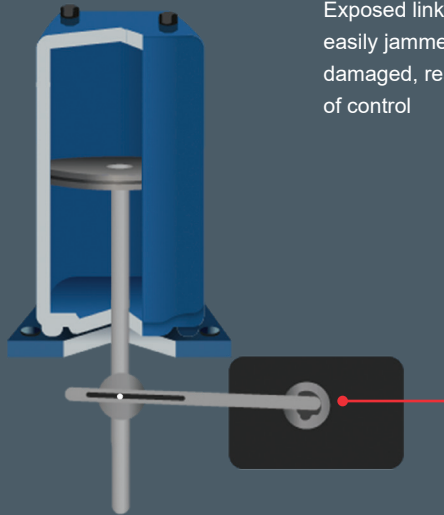
Increased Yield:

- Maximize throughput by optimized control of the dart valves
- Closed loop control with compact design with self contained transducer
- Local control panel with closed-loop and manual position control

Reduced Maintenance

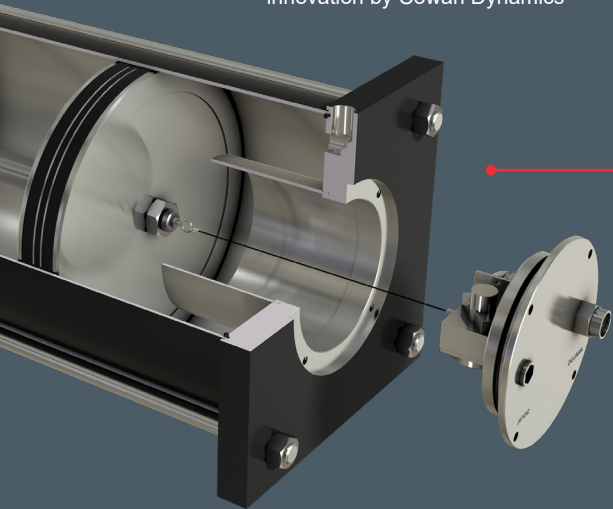
- Transducer is protected from the harsh environment
- No exposed transducer or clumsy linkage arms
- Modular transducer for easy installation and /or service
- Remote positioner simplifies operation and maintenance

Design

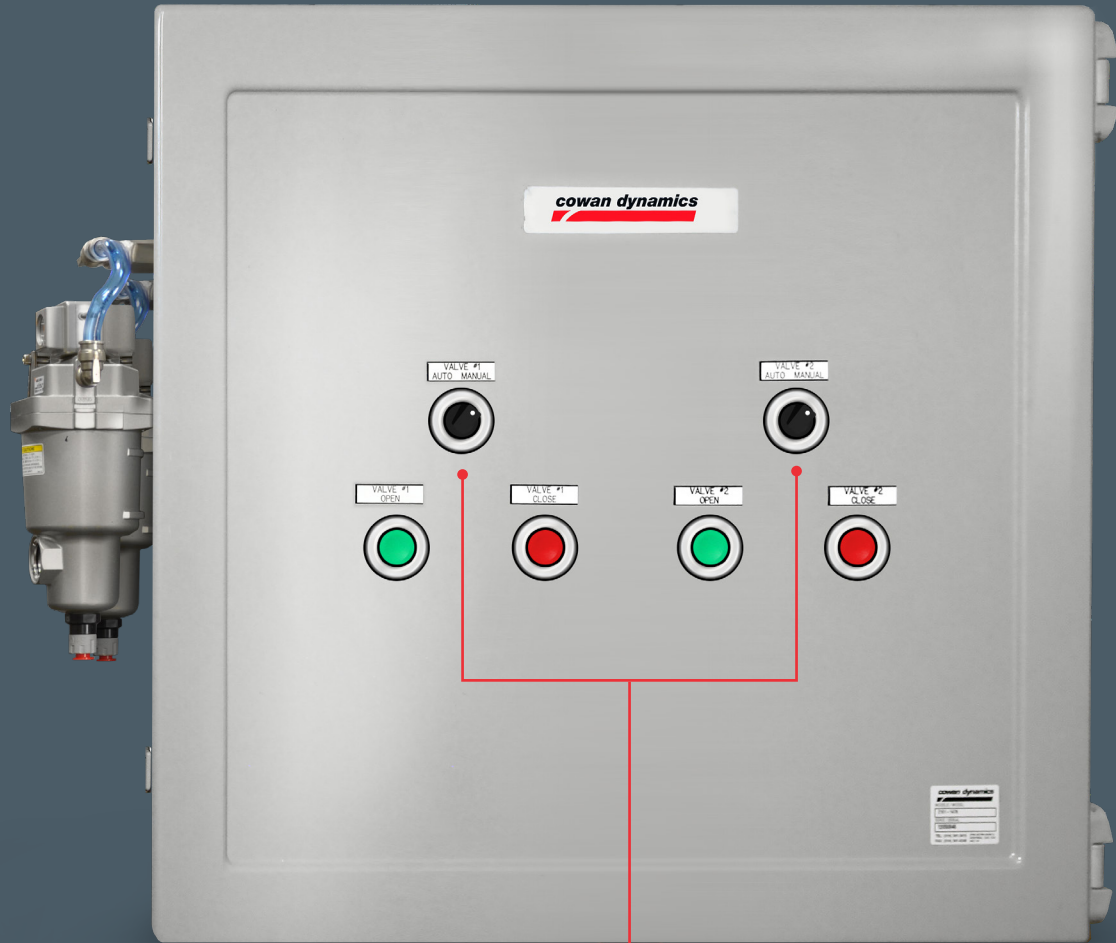


Exposed linkage arms are easily jammed, loosened or damaged, resulting in a loss of control

Conventional linkage arms are replaced with a fully-enclosed transducer – a patented design innovation by Cowan Dynamics



Panel Protects Positioners From the Environment



Toggles on the front of the panel allow the user to quickly switch between auto and manual modes for easy and quick setups

Compatible Positioner Brands

The AT's cable type transducer is compatible with the most popular brands of positioners. PMV is our standard.

It's also compatible with Fisher DVC6000, Masoneilan SV2, Siemens and more. Our engineers can help you select the appropriate positioner to ensure compatibility.



Specifications

Digital Positioners

- Zero-bleed pneumatic positioner has very low air consumption to provide additional cost-savings

NEMA 4X/IP66

- Fail Close or Open Upon loss of power
- With optional Fail Last module
- Intrinsically-safe version available for installation in hazardous areas
- Supports all key communication protocols, including:



CABLE SPECIFICATIONS	
Protection Class	Meets NEMA 1, 3, 4, 6P and IEC IP67
Cable Ratings	UL: ITC/PLTC/AWM, 105°C, 300 V CSA: CMX-OUTDOOR-CMG/AWM, 105°C, 300 V



Stainless Steel AT Series with remote positioner in a potash plant

Add-Ons

Digital Positioner Options



Remote Mount

Digital positioners mounted remotely in a cabinet are ideal for harsh environments and any application with difficult or limited access to the actuator.

- Cabinets available: NEMA 4/4X or for hazardous areas.
- Manual override Customized to suit your application



Direct Mount

No mechanical linkage requirement gives you the flexibility to mount directly on the actuator or the valve in any orientation

Boosters

A²A Booster

A2A Systems are significantly smaller and lighter than a conventional air tank system.

They are up to 85% smaller and up to 45% lighter providing a more economical solution.



Volume Booster

Volume boosters are recommended with larger modulating actuators for smooth operations.

Typically required for 10" bore and above. Booster can be installed either directly on the AT or in a remote panel.



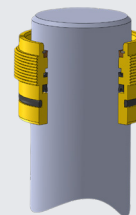
Gland Seals

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.

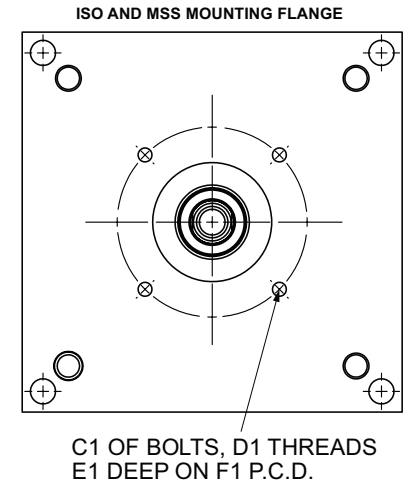
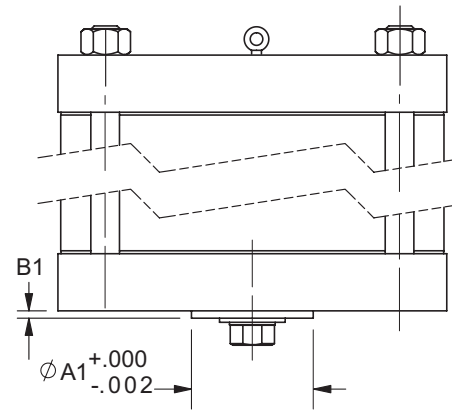
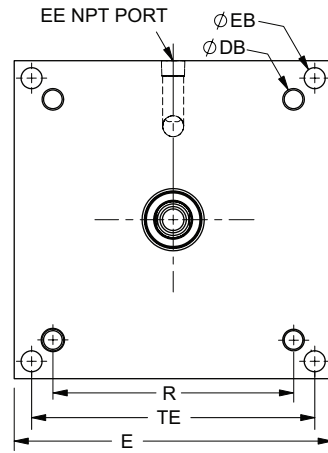
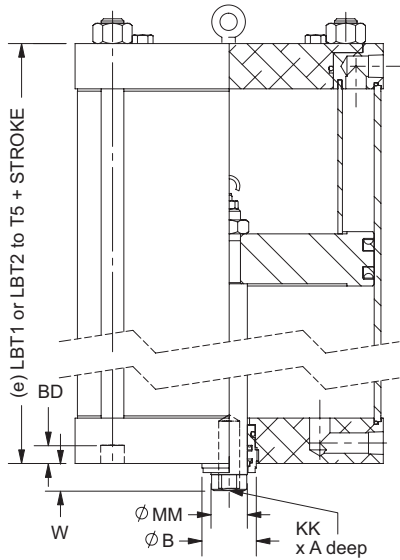
Options:

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



Actuator Dimensions: 5"– 26" Bore

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



Actuator Dimensions (in)											Thrust Values (lbs)			ISO or MSS Mounting Pattern*		Volume Booster
BORE	BD	DB	EB	E	EE	R	LBT1	LBT2	MM	TE	60 PSI	80 PSI	100 PSI	STD	OPT	(Y or No)
5	3/4	1/2-20	N/A	5.50	1/4	3.32	N/A	8.88	1 3/8	N/A	1,131	1,508	1,885	F/FA07		No
6	7/8	1/2-20	N/A	6.50	1/4	4.10	N/A	9.38	1 3/8	N/A	1,649	2,199	2,749	F/FA07		No
7	1/2	5/8-18	N/A	7.50	3/8	4.88	N/A	8.88	1 3/8	N/A	2,262	3,016	3,770	F/FA07		No
8	N/A	N/A	0.56	8.50	3/8	N/A	9.50	8.88	1 3/8	7.60	2,969	3,958	4,948	F/FA10	F/FA07	No
10	N/A	N/A	0.81	10.75	1/2	N/A	9.63	9.00	1 3/4	9.40	4,623	6,164	7,705	F/FA10	F/FA07	Y
12	N/A	N/A	0.81	12.75	1/2	N/A	10.00	9.38	1 3/4	11.10	6,697	8,929	11,161	F/FA14	F/FA10	Y
14	N/A	N/A	0.94	14.88	1/2	N/A	10.75	10.13	1 3/4	12.87	9,147	12,196	15,245	F/FA14	F/FA10	Y
16	N/A	N/A	1.06	17.00	3/4	N/A	11.25	10.63	2	14.85	11,875	15,834	19,792	F/FA14	F/FA10	Y
18	N/A	N/A	1.19	19.00	3/4	N/A	11.25	10.63	2 1/2	16.70	15,080	20,106	25,133	F/FA16	F/FA14	Y
20	N/A	N/A	1.31	21.00	3/4	N/A	12.00	11.38	3	18.40	18,555	24,740	30,925	F/FA16	F/FA14	Y
24	N/A	N/A	1.31	25.25	3/4	N/A	14.00	13.38	3	21.75	26,719	35,626	44,532	F/FA25	F/FA16	Y
26	N/A	N/A	C/F	27.50	3/4	N/A	15.00	9.50	3 1/2	23.34	31,278	41,705	52,131	F/FA30	F/FA25	Y

MSS Flange Mounting Dimensions (in)							
MSS FLANGE	MAX. THRUST (lbs.)	A1	B1	C1	D1	E1	F1
FA07	4,500	2.166	0.120	4	3/16-18	1 1/16	2.750
FA10	9,000	2.312	0.120	4	3/8-16	1 1/16	4.000
FA14	25,000	3.750	0.160	4	3/8-11	1 3/16	5.500
FA16	35,000	5.000	0.190	4	3/4-10	1 1/8	6.500
FA25	50,000	6.000	0.190	8	5/8-11	1 1/8	10.000
FA30	75,000	7.000	0.190	8	3/4-10	1 1/8	11.750
FA35	140,000	8.500	0.190	8	1-8	1 1/4	14.000
FA40	230,000	9.000	0.320	8	1 1/4-7	1 1/2	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	3/4	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

Consult factory for more detailed dimensions and larger sizes
 *Other Mounting Patterns are available; consult factory

MM	A	B	KK	W
1 3/8	2.25	2.00	0.75	0.88
1 3/4	2.25	2.38	1-14	1.13
2	2.25	2.63	1.12	1.13
2 1/2	2.25	3.13	1.25	1.13
3	3.50	3.75	1.25	1.25
3 1/2	3.50	4.25	1.28	1.25

How to Order

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

SERIES

AT

BORE SIZE

K - 5" S - 14" B - 26"
 L - 6" T - 16" F - 28"
 M - 7" W - 18" I - 30"
 N - 8" X - 20" J - 32"
 P - 10" A - 22" Q - 36"
 R - 12" Y - 24" V - 42"

ROD DIAMETER

E - 1" M - 3 1/2"
 G - 1 3/8" N - 4"
 H - 1 3/4" P - 4 1/2"
 J - 2" R - 5"
 K - 2 1/2" S - 5 1/2"
 L - 3"

ROD END

A4 - Series AT Female

CUSHIONS

8 - none

TRANSDUCER OPTIONS

T1 - Analog output (Ratiometric)
 Digital output (discrete contacts)
 T2 - Analog output (Ratiometric)
 T3 - Analog output (0-20 mA)
 T4 - Analog output (4-20 mA)
 T5 - Analog output (0-5/0-10 Vdc)

POSITIONER

-- Omit if Positioner integrated with Stainless fittings and Stainless Steel braided tubing
 S - Positioner with Stainless Steel Tubing and fittings
 R - Remote Positioner

SEALS

N - Standard Seals
 L - Low Temp

PORTS

NXX - NPT
 TXX - BSPT
 ** XX denotes position
 ex: 12 = Pos 1 head,
 Pos 2 Cap

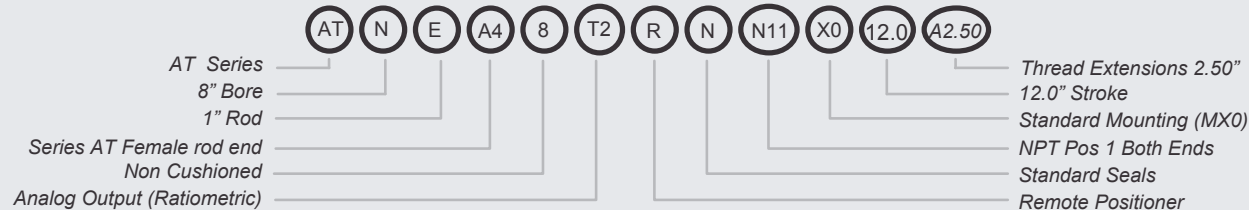
MOUNTINGS

X1 - tie rods extended b.e. (MX1)
 X3 - tie rods extended h.e. (MX3)
 X2 - tie rods extended c.e. (MX2)
 X0 - standard (MX0)
 IS - ISO mounting flange
 MS - MSS mounting flange

MODS

- Omit if none required
 A# - Thread extensions ex: A2.50 = A = 2.50"
 C1 - Epoxy Paint (Non Stainless Steel parts only)
 C2 - Nickel Plate (Do not specify with C1 or C5)
 C5 - All Stainless Steel construction*
 C6 - Stainless Steel construction with Carbon Fibre barrel*
 LE - Lifting Lugs (8" bore and above)
 M2 - Stainless Steel tie rods (Do not specify with C5 or C6)
 M3 - Stainless Steel piston rod (Do not specify with C5 or C6)
 W# - Rod Extension ex: W2.50 = W = 2.50"
 Modifications to be listed alpha numerically after the stroke #
 ex: ANEA48NN11X012.0A2.50C1W5.50

EXAMPLE



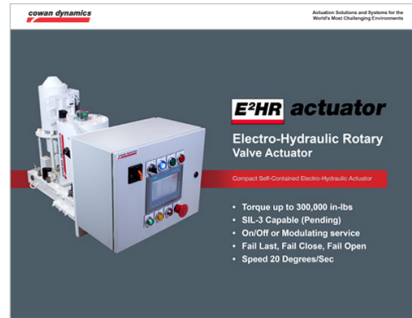
EXAMPLE WITH AUTOMATION OPTIONS



* Refer to Cowan Quote or Invoice for details.

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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

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