

SERIES AT

150 PSI

Pneumatic Valve Actuator
with integral position transducer



Cowan Dynamics Inc.



SERIES “AT” OVERVIEW

■ Our proven valve actuators just got a lot more exciting

- ⇒ Compact design with self contained transducer
- ⇒ No exposed transducer or clumsy linkage arms
- ⇒ Modular transducer for easy installation
- ⇒ Switchable analog or digital output.



- ⇒ Integrated, Intelligent, Pneumatic
POSITIONER Packages available
- ⇒ Available for the following communication protocols:
 - FOUNDATION FIELDBUS
 - PROFIBUS
 - HART
- ⇒ Fail Open/Close available as an option

Patent Pending

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SERIES “AT” OVERVIEW

- ➔ **Vibration resistance:** up to 10G's at 2000 Hz
- ➔ **Operating temperature:** -40C to +90C
- ➔ **Air supply:** Max 150 PSI must be used with Instrument quality air
- ➔ **Stroke:** from 2” to 100”
- ➔ **Analog/Digital Output:** See page 5 for options



TRANSDUCER MODULE

Easy-access for field maintenance and replacement
Completely self contained.

No need to disassemble cylinder or remove the valve assembly

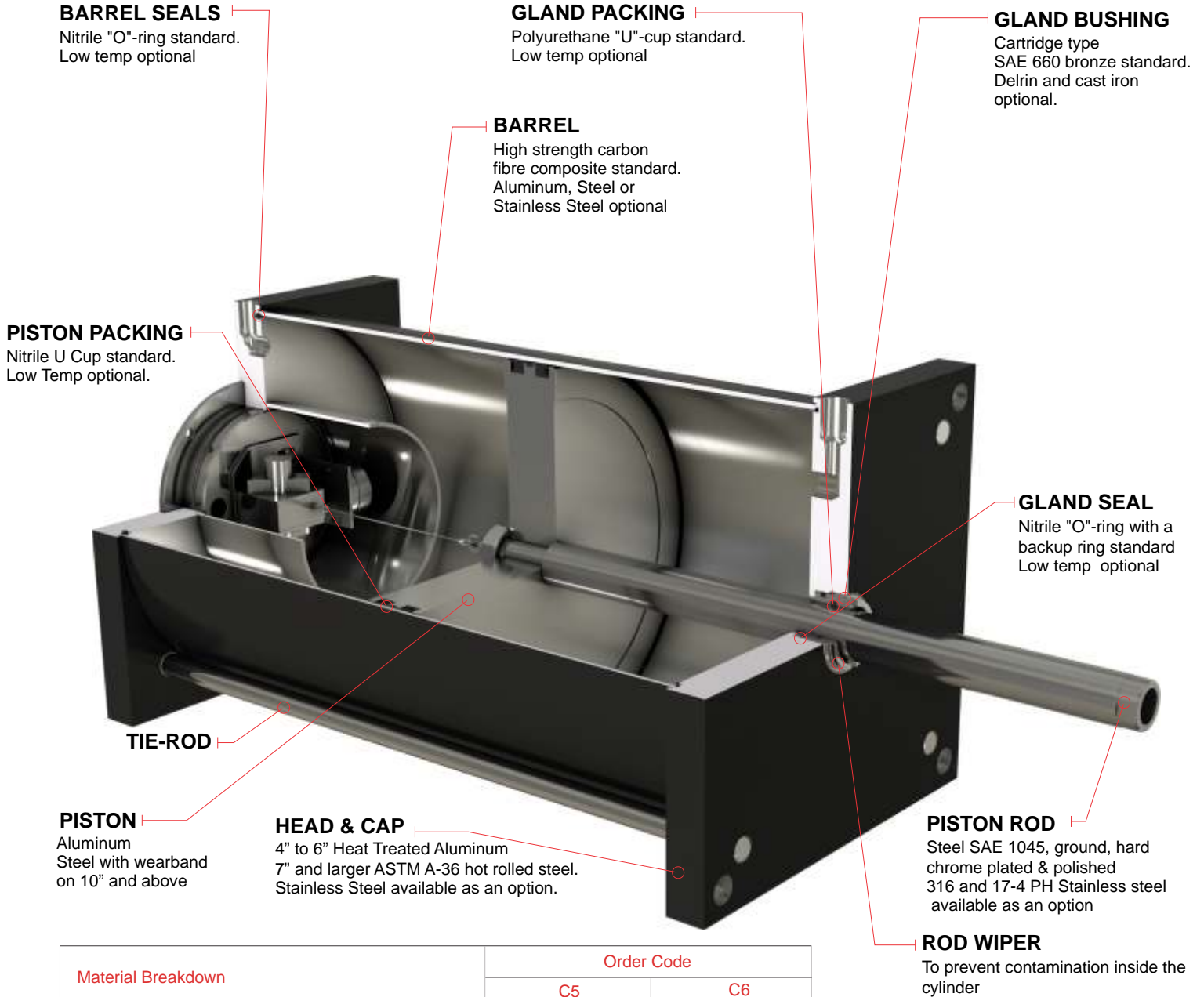
Built In MIL Type Connector

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SERIES "AT" DESIGN & MATERIALS

5 " Bore and above



Material Breakdown	Order Code	
	C5	C6
Head & Cap	316	316
Barrel	316	Carbon Fibre
Piston	Std (See note above)	Std (See note above)
Piston Rod	316	316
Gland	Delrin	Delrin
Tie Rod 4" - 6"	316	316
Tie Rod 7" & Above	17 - 4	17 - 4

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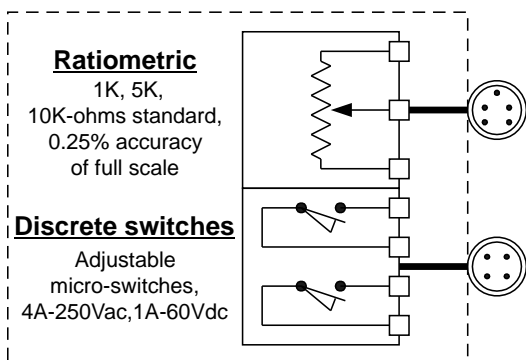
SERIES "AT" DESIGN & MATERIALS

3 1/4 " and 4" Bore

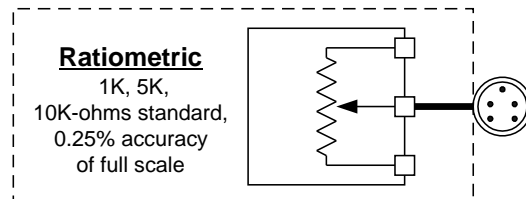
(Under Development)

SERIES "AT" ELECTRICAL OPTIONS

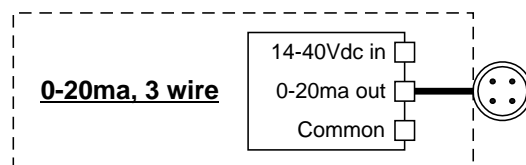
OPTION
T1



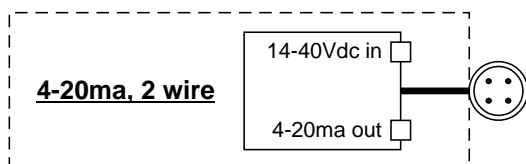
OPTION
T2



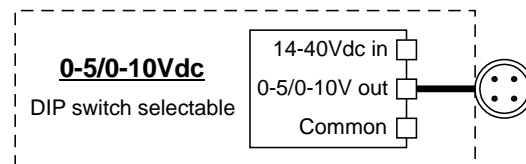
OPTION
T3



OPTION
T4



OPTION
T5



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SERIES "AT" DIMENSIONS

- ⇒ Designed for a wide range of applications for the process valve industry.
- ⇒ The actuators are available with Square-head, ISO, MSS or extended tie-rod mountings
- ⇒ Convenient threaded holes for lifting eye bolts are provided on bore sizes 12" and larger at no extra charge.
- ⇒ Fibre composite barrels are standard on all bore sizes for greater thermal stability, corrosion resistance and weight reduction.
- ⇒ Dual piston U-cups, low friction wear bands and barrel seals are standard
- ⇒ We can provide valve mounting hardware or full automation services

ACTUATOR DIMENSIONS

BORE	A	AA	B	BB	BD	DB UNF	E	EB	EE NPT	G	J	K	KK UNF	LB T1	LB T2	MM	TE	V	W
5	1.750	5.800	1.500	1-13/16	3/4	1/2-20	5.500	x	¼	1.500	1.500	0.563	5/8-18	N/A	8.875	1.000	x	0.250	0.750
6	1.750	6.900	1.500	1-13/16	7/8	1/2-20	6.500	x	¼	1.625	1.625	0.563	5/8-18	N/A	9.375	1.000	x	0.250	0.750
7	1.750	8.100	1.500	2-5/16	½	5/8-18	7.500	x	3/8	1.250	1.250	0.438	5/8-18	N/A	8.875	1.000	x	0.250	0.750
8	1.750	9.100	1.500	2-5/16	x	5/8-18	8.500	0.563	3/8	1.250	1.250	0.438	5/8-18	9.50	8.875	1.000	7.570	0.250	0.750
10	2.250	11.200	2.000	2-11/16	x	3/4-16	10.750	0.813	½	1.250	1.250	0.750	1-14	9.625	9.00	1.375	9.400	0.250	0.875
12	2.250	13.300	2.000	2-11/16	x	3/4-16	12.750	0.813	½	1.250	1.250	0.750	1-14	10.00	9.375	1.375	11.100	0.250	0.875
14	2.250	15.400	2.000	3-3/16	x	7/8-14	14.875	0.938	½	1.500	1.500	0.875	1-14	10.75	10.125	1.375	12.870	0.250	0.875
16	2.250	17.800	2.625	3-5/8	x	1-14	17.000	1.063	¾	1.750	1.750	1.000	1-1/4-12	11.25	10.625	2.000	14.850	0.250	1.125
18	2.250	20.000	2.625	3-3/4	x	1-1/8-12	19.000	1.188	¾	1.750	1.750	1.125	1-1/4-12	11.25	10.625	2.000	16.690	0.250	1.125
20	2.250	22.250	3.125	4	x	1-1/4-12	21.000	1.313	¾	2.000	2.000	1.250	1-1/4-12	12.00	11.375	2.500	18.430	0.250	1.125
24	3.500	26.500	3.750	4-1/2	x	1-1/4-12	25.250	1.313	¾	2.500	2.500	1.250	2-1/4-12	14.00	13.375	3.000	21.745	0.250	1.250
26	3.500	28.750	4.250	5.5	x	1-1/2-12	27.500	C/F	¾	2.500	2.500	1.500	2-1/2-12	15.00	9.500	3.500	C/F	0.250	1.250
28	3.500	30.625	4.250	5.5	x	1-1/8-12	31.250	C/F	¾	4.000	3.250	1.500	2-1/2-12	17.00	12.250	3.500	C/F	0.250	1.250
30	3.500	30.625	4.250	5.5	x	1-1/8-12	31.500	C/F	1 ½	4.000	3.250	1.500	2-1/2-12	17.00	12.250	3.500	C/F	0.250	1.250

ISO & MSS FLANGE MOUNTING DIMENSIONS

ISO FLANGE	MAX THRUST (lbs.)	A1	B1	C1	D1	E1	F1
F07	4495	2.165	0.118	4	M8	7/16	2.755
F10	8990	2.756	0.118	4	M10	5/8	4.016
F14	22480	3.937	0.157	4	M16	¾	5.512
F16	33723	5.118	0.197	4	M20	7/8	6.496
F25	44964	7.874	0.197	8	M16	7/8	10.000
F30	73066	9.055	0.197	8	M20	7/8	11.732
F35	157374	10.236	0.197	8	M30	7/8	14.016
F40	247302	11.811	0.314	8	M36	7/8	15.984

MSS FLANGE	MAX THRUST (lbs.)	A1	B1	C1	D1	E1	F1
FA07	4500	2.166	0.120	4	5/16-18	5/8	2.750
FA10	9000	2.312	0.120	4	3/8-16	5/8	4.000
FA14	25000	3.750	0.160	4	5/8-11	¾	5.500
FA16	35000	5.000	0.190	4	3/4-10	7/8	6.500
FA25	50000	6.000	0.190	8	5/8-11	7/8	10.000
FA30	75000	7.000	0.190	8	3/4-10	7/8	11.750
FA35	140000	8.500	0.190	8	1-8	1-1/4	14.000
FA40	230000	9.000	0.320	8	1-1/4-7	1-1/2	16.000

EYE BOLT MOUNTING HOLES

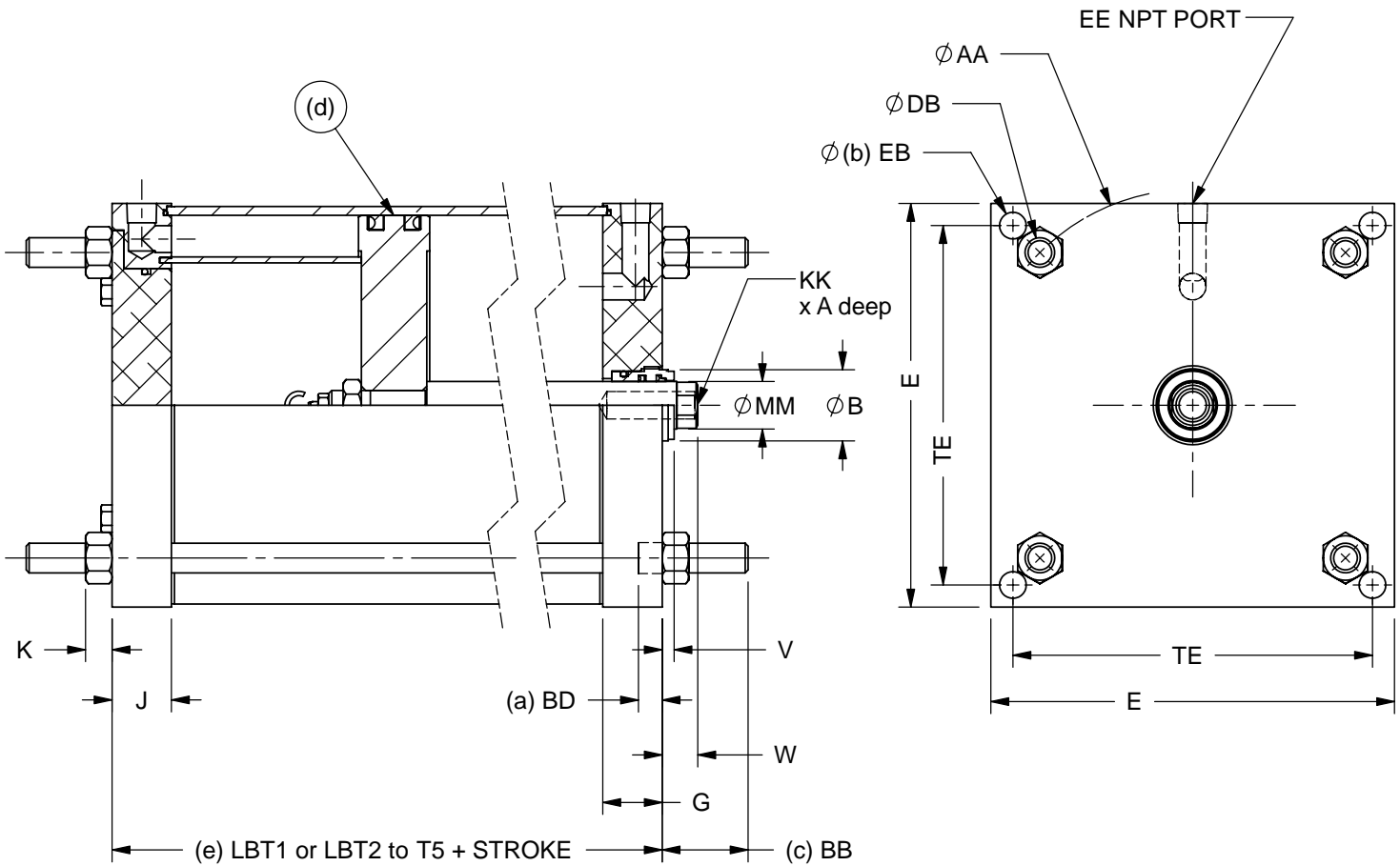
BORE	XX	YY	ZZ
12	9	3/8-16	11/16
14	10	3/8-16	1
16	12	9/16-12	1
18	12	9/16-12	1
20	14	3/4-10	1
22	16	3/4-10	1
24	18	3/4-10	1-1/4

STANDARD SEAL KIT

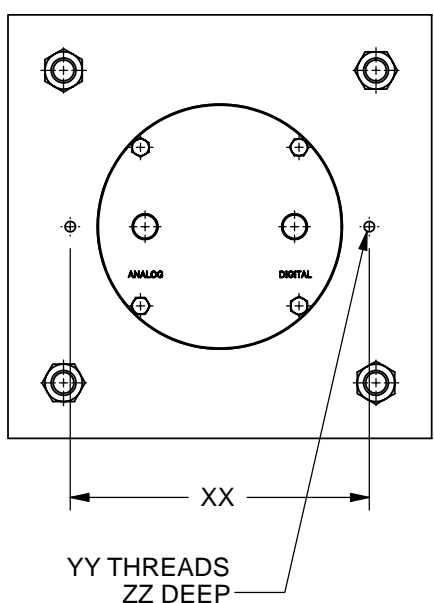
ITEM	DESCRIPTION
95-ATKE	5" Bore, 1" Rod
95-ATLE	6" Bore, 1" Rod
95-ATME	7" Bore, 1" Rod
95-ATNE	8" Bore, 1" Rod
95-ATPG	10" Bore, 1 3/8" Rod
95-ATRG	12" Bore, 1 3/8" Rod
95-ATSJ	14" Bore, 1 3/8" Rod
95-ATTJ	16" Bore, 2" Rod
95-ATWJ	18" Bore, 2" Rod
95-ATXJ	20" Bore, 2 ½" Rod
95-ATYL	24" Bore, 3" Rod
95-ATBE	26" Bore, 3 ½" Rod
95-ATIE	30" Bore, 3 ½" Rod

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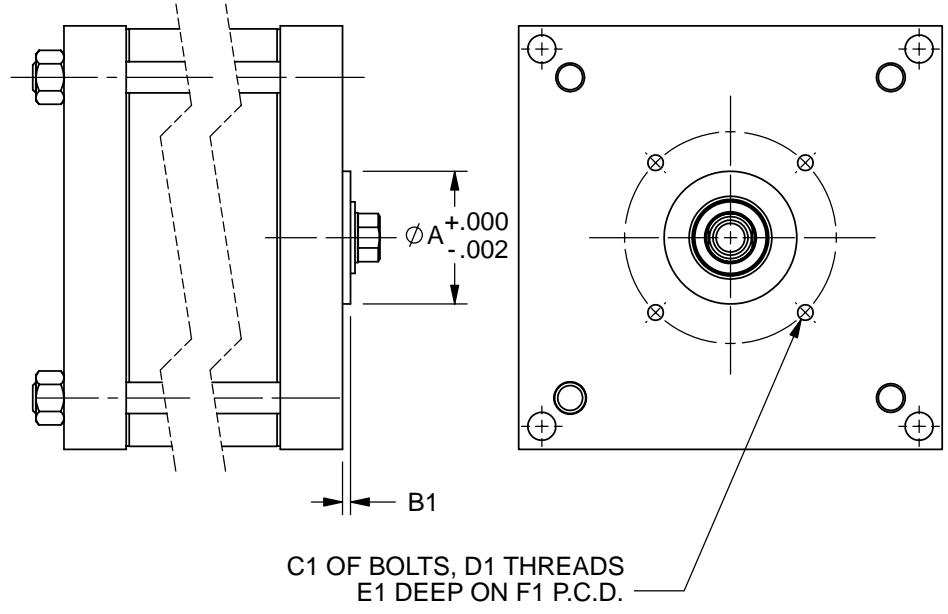




NOTE:
 a- 4" TO 7" BORE ONLY
 b- 8" TO 30" BORE ONLY
 c- FOR MOUNTING MX1, MX2, MX3
 d- WEAR BAND FOR 10" BORE AND OVER
 e- LBT1= FOR USE WITH OPTION T1, LBT2 TO LBT5= FOR USE WITH OPTION T2 TO T5



MOUNTING HOLES FOR EYE BOLTS FOR 12" TO 30" BORE

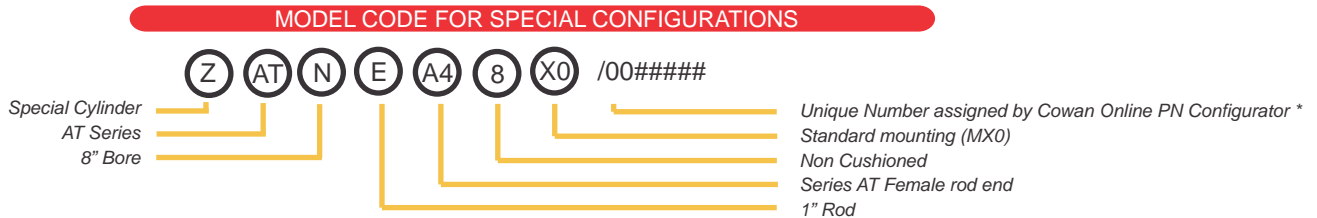
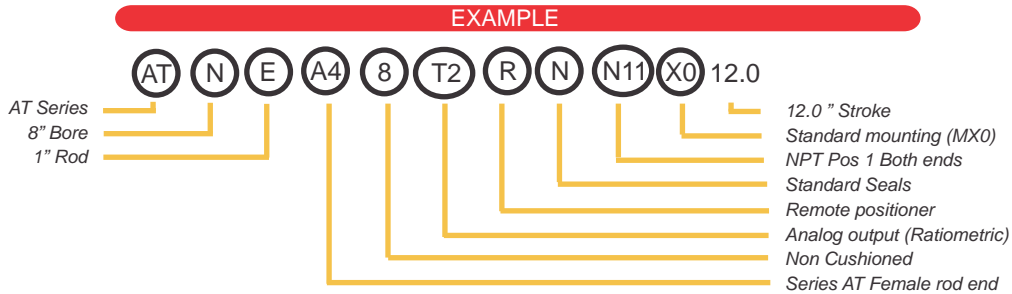


ISO AND MSS MOUNTING FLANGE

how to order...

SERIES	BORE SIZE	ROD DIAMETER	ROD END	
AT	K - 5" L - 6" M - 7" N - 8" P - 10" R - 12" S - 14"	T - 16" W - 18" X - 20" A - 22" Y - 24" B - 26" F - 28" I - 30"	E - 1" G - 1 3/8" H - 1 3/4" J - 2" K - 2 1/2" L - 3"	A4 - Series AT Female
CUSHIONS	TRANSDUCER OPTIONS	POSITIONER	SEALS	
8 - none	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)	- - Omit if Integrated Positioner R - Remote Positioner	N - Standard Seals L - Low Temp E - EPDM	
PORTS	MOUNTINGS	MODS		
NXX - NPT PXX - NPTF XX denotes position ex: 12 = Pos 1 head, Pos 2 Cap	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	- - Omit if none required A# - Thread extension ex: A2.5 = 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* M2 - Stainless Steel tie rods (Do not specify with C5) M3 - Stainless Steel piston rod (Do not specify with C5) W# - Rod Extension ex: W2.5 = W = 2.50" Modifications to be listed alpha numerically after the stroke # ex: ATNEA48T1NN11X012.0A2.5C1W5.5		

* See page 4 for details



* Refer to Cowan Quote or Invoice for details.

Visit our web site to configure your cylinder online

www.cowandynamics.com/Coder_AT.html

Cowan's standard warranty terms apply

