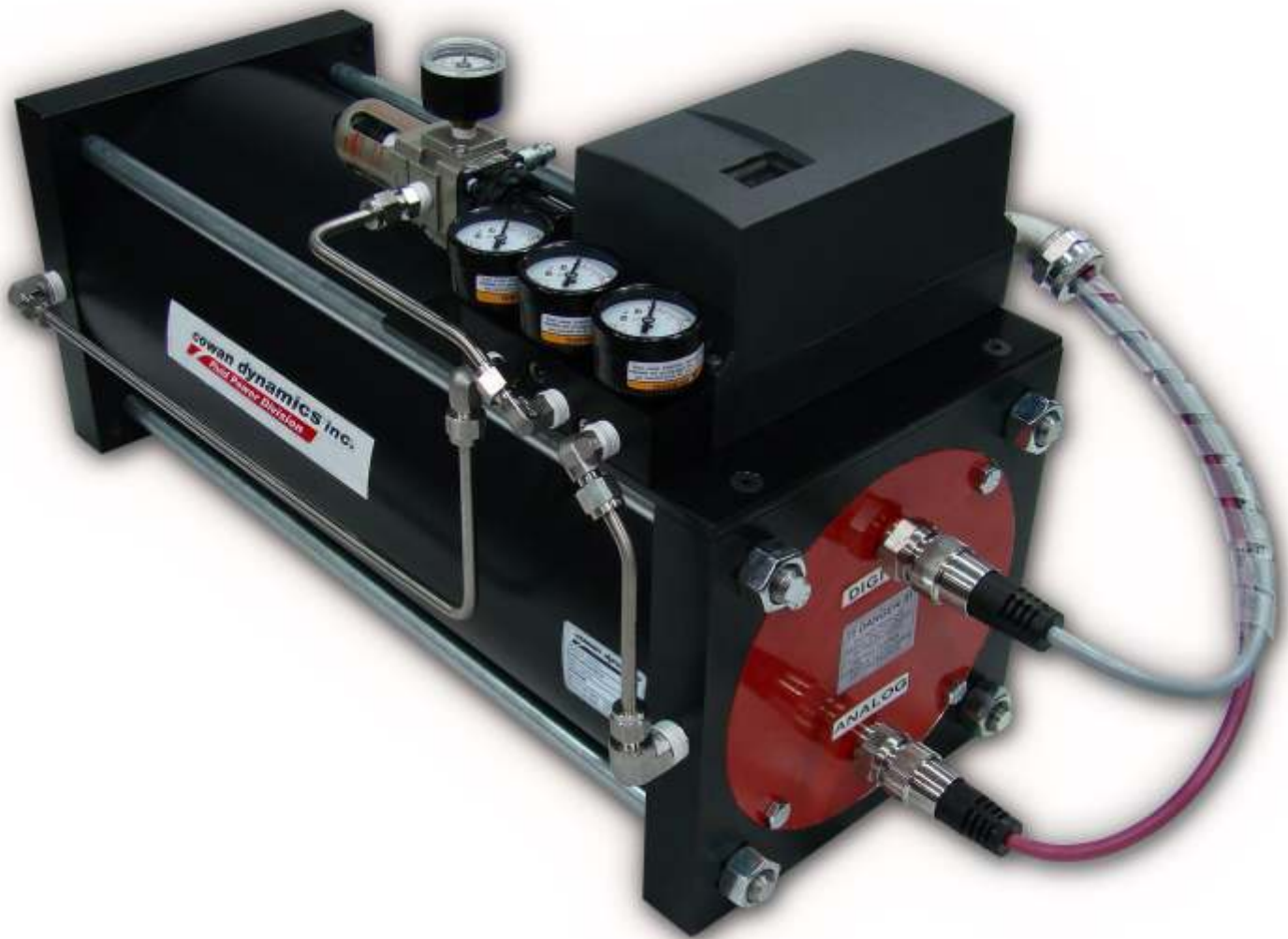


# SERIES AT

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*

**cowan dynamics inc.**



# 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

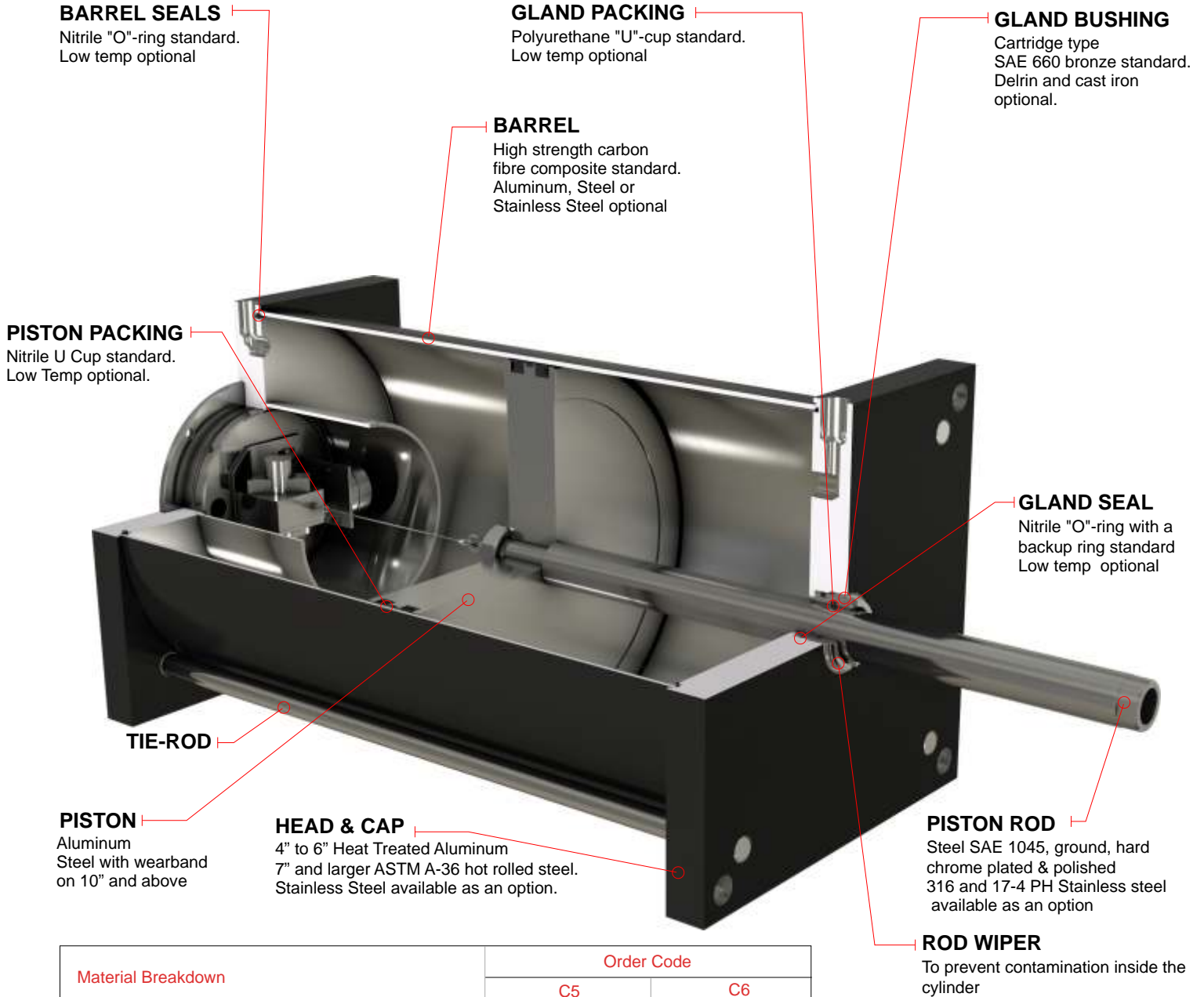
## Built In MIL Type Connector

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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	Delrin	Delrin
Gland	316	316
Tie Rod 4" - 6"	316	316
Tie Rod 7" & Above	17 - 4	17 - 4

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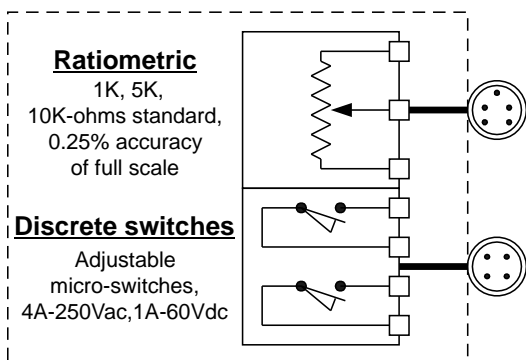
# SERIES "AT" DESIGN & MATERIALS

3 1/4 " and 4" Bore

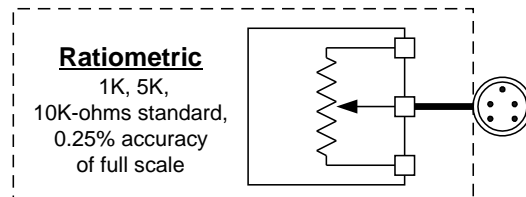
(Under Development)

## SERIES "AT" ELECTRICAL OPTIONS

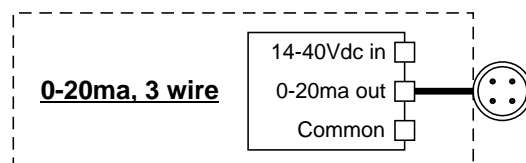
OPTION  
**T1**



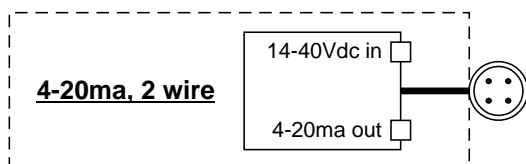
OPTION  
**T2**



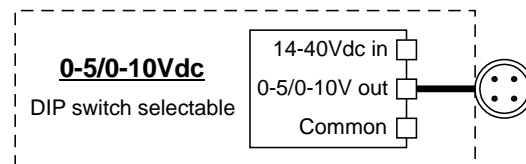
OPTION  
**T3**



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	MSS FLANGE	MAX THRUST (lbs.)	A1	B1	C1	D1	E1	F1
F07	4495	2.165	0.118	4	M8	7/16	2.755	FA07	4500	2.166	0.120	4	5/16-18	5/8	2.750
F10	8990	2.756	0.118	4	M10	5/8	4.016	FA10	9000	2.312	0.120	4	3/8-16	5/8	4.000
F14	22480	3.937	0.157	4	M16	¾	5.512	FA14	25000	3.750	0.160	4	5/8-11	¾	5.500
F16	33723	5.118	0.197	4	M20	7/8	6.496	FA16	35000	5.000	0.190	4	3/4-10	7/8	6.500
F25	44964	7.874	0.197	8	M16	7/8	10.000	FA25	50000	6.000	0.190	8	5/8-11	7/8	10.000
F30	73066	9.055	0.197	8	M20	7/8	11.732	FA30	75000	7.000	0.190	8	3/4-10	7/8	11.750
F35	157374	10.236	0.197	8	M30	7/8	14.016	FA35	140000	8.500	0.190	8	1-8	1-1/4	14.000
F40	247302	11.811	0.314	8	M36	7/8	15.984	FA40	230000	9.000	0.320	8	1-1/4-7	1-1/2	16.000

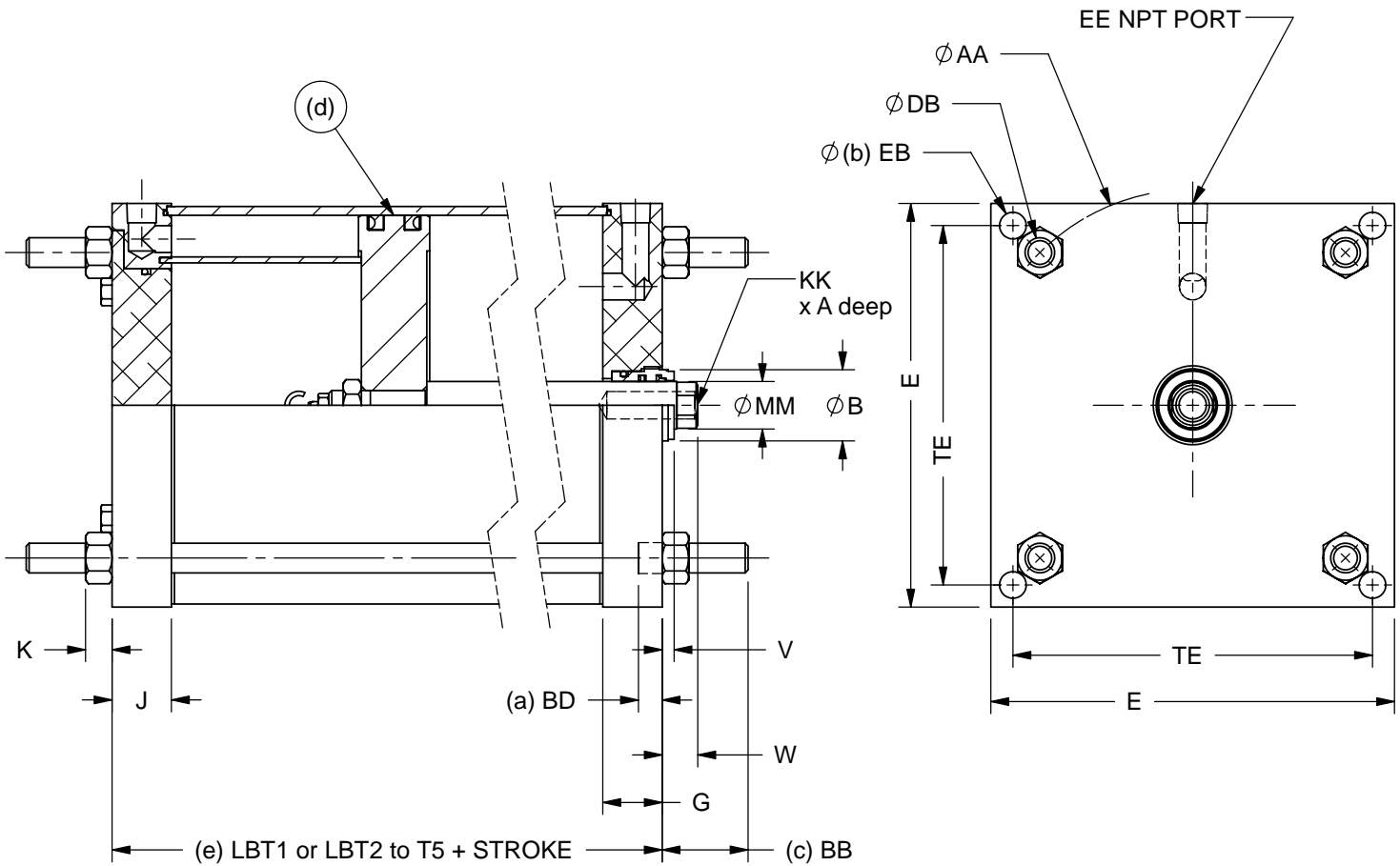
### EYE BOLT MOUNTING HOLES

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

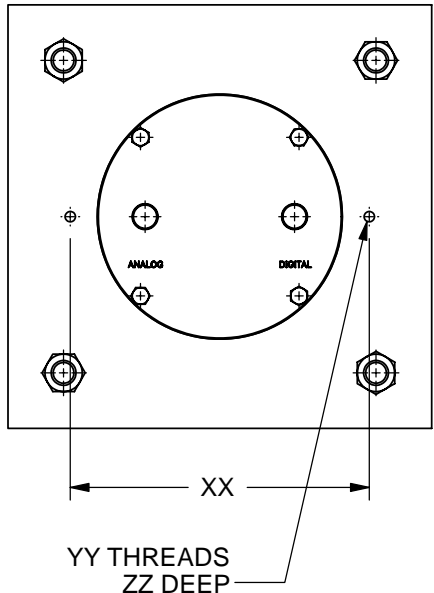
### STANDARD SEAL KIT

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

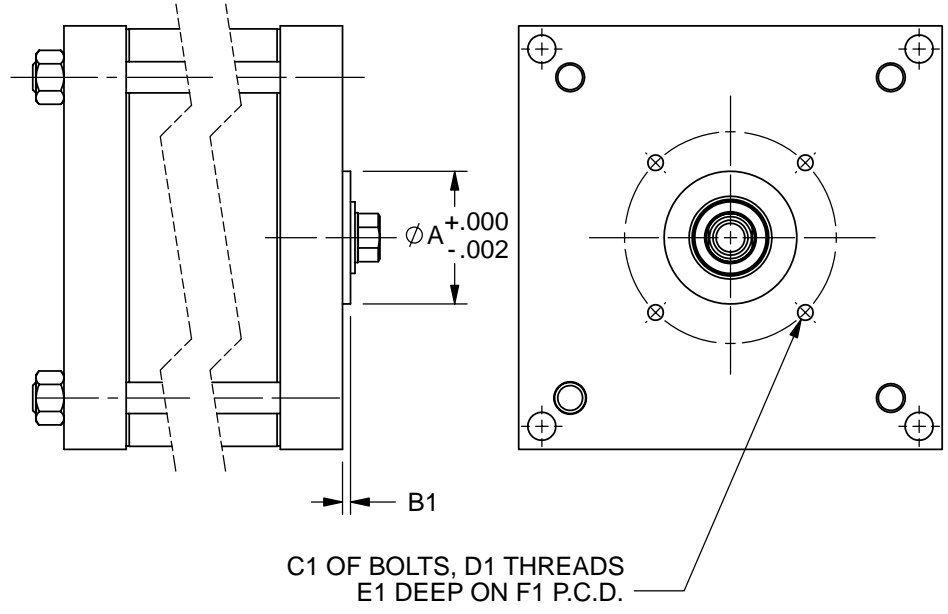
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NOTE:  
 a- 4" TO 7" BORE ONLY  
 b- 8" TO 30" BORE ONLY  
 c- FOR MOUNTING MX1, MX2, MX3  
 d- WEAR BAND FOR 10" BORE AND OVER  
 e- LBT1= FOR USE WITH OPTION T1, LBT2 TO LBT5= FOR USE WITH OPTION T2 TO T5



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



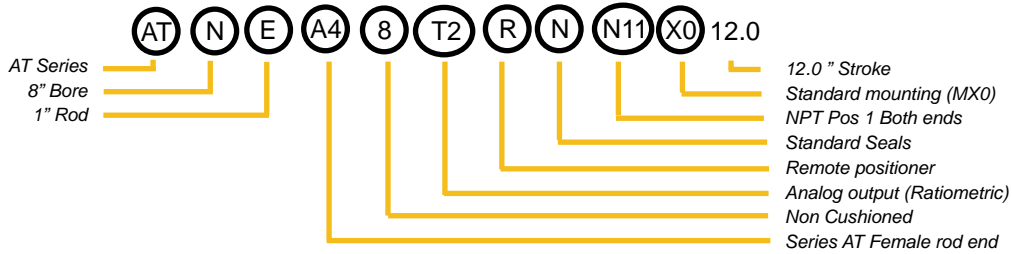
ISO AND MSS MOUNTING FLANGE

# how to order...

SERIES	BORE SIZE	ROD DIAMETER	ROD END
AT	K - 5" T - 16" L - 6" W - 18" M - 7" X - 20" N - 8" A - 22" P - 10" Y - 24" R - 12" B - 26" S - 14" 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

## EXAMPLE



## MODEL CODE FOR SPECIAL CONFIGURATIONS



\* Refer to Cowan Quote or Invoice for details.

Visit our web site to configure your cylinder online

[www.cowandynamics.com/Coder\\_AT.html](http://www.cowandynamics.com/Coder_AT.html)

Cowan's standard warranty terms apply

