

# ONE TOUGH CYLINDER<sup>®</sup>



**ENGINEERED TO WITHSTAND  
THE RIGOROUS CONDITIONS  
OF THE TRUCKING INDUSTRY**



**HIGH LIFT  
CYLINDERS**



**TARP PULL  
CYLINDERS**



**TAILGATE  
LATCH**



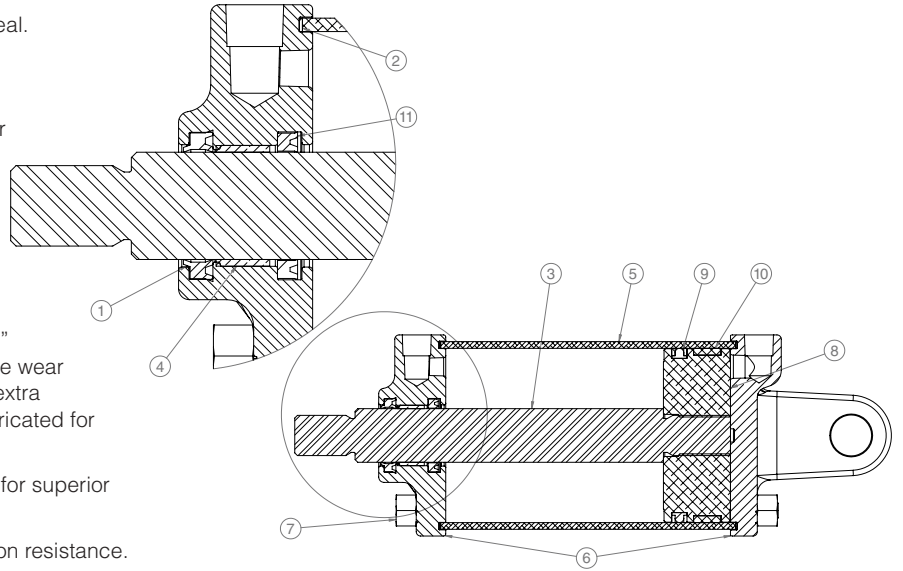
**LIVE  
BOTTOM**



**BELLY  
DUMP**

# AIR CYLINDER CONSTRUCTION FEATURES

- 1. Rod Wiper:** Urethane HW style wiper and secondary seal. Keeps dirt out. -65 to +220 °F
- 2. End Seal:** Buna N gasket -65 to +220 °F
- 3. Piston Rod:** Black nitrided piston rod provides superior corrosion resistance, better lubrication retention and dent resistance. Surface will not flake then cut rod seal like chrome plated shafting.
- 4. Bearing:** Oilite® oil-impregnated bronze bushing. Extra long bearing surface for maximum support and resistance to side load.
- 5. Tube:** Aluminum alloy tube with a hard-coated "Alumite" smooth bore that has excellent resistance to sliding type wear and abrasion. Also available with composite barrel for extra corrosion and dent resistance. All cylinders are pre-lubricated for millions of trouble-free cycles.
- 6. End Caps:** Cast iron with yellow zinc dichromate finish for superior strength and corrosion resistance.
- 7. Tie Rods:** Stainless steel with stainless nuts for corrosion resistance.
- 8. Piston:** Aluminum 6061T6 machined on piece, anaerobically and mechanically locked to the piston.
- 9. Piston Seal:** Buna N T-Seal, combination of hard split back up rings on each side of sealing element provides a non-spiraling, ice resistant durable seal. -65 to +220 °F



- 10. Wear Strip:** Reinforced nylon with bronze properties. Prevents tube scoring and helps with breakaway in freezing conditions.
- 11. Rod Seal:** HRU 80 durometer Buna N style U cup Navy spec. AN6266 -40 to +250 °F

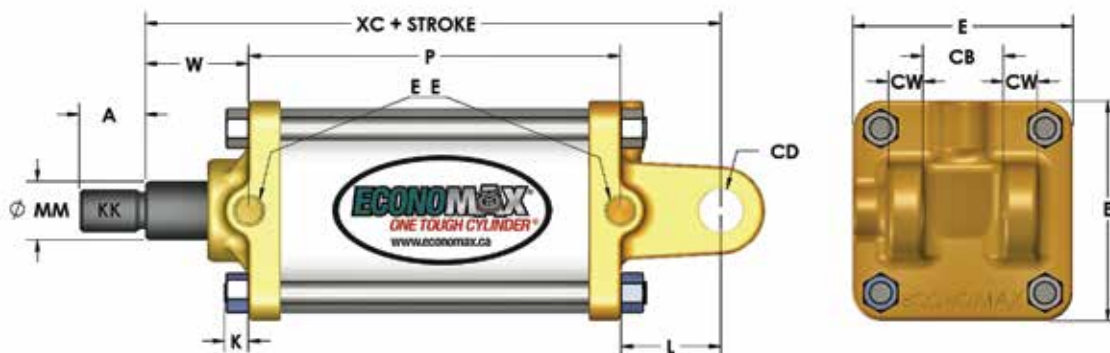
## DIMENSIONS

BORE	MM	E	CB	CD	CW	EE NPT	L	K	W*	P*	XC*
										ADD STROKE	
2 1/2	1	3	3/4	1/2	1/2	1/4	1 3/16	5/16	1 3/4	2 5/16	5 3/4
3 1/4	1	3 3/4	1 1/4	3/4	5/8	1/4	1 11/16	3/8	1 3/4	2 5/16	6 1/4
4	1	4 1/2	1 1/4	3/4	5/8	3/8	1 11/16	3/8	1 3/4	2 5/16	6 1/4
5	1	5 1/2	1 1/4	3/4	5/8	3/8	1 11/16	1/2	1 3/4	2 5/16	6 1/2
6	1 3/8	6 1/2	1 1/2	1	3/4	1/2	1 15/16	5/8	1 3/4	2 15/16	7 1/4
8	1 3/8	8 1/2	1 1/2	1	3/4	1/2	1 15/16	5/8	1 3/4	2 15/16	7 3/8

### Rod Thread Dimensions

ORDER CODE	KK	A
A	5/8-18	1/2
B	7/16-20	3/4
C	1/2-20	3/4
D	3/4-16	1 1/8
F	1-14	1 5/8

\*Standard dimension, but can be shorter or longer. For Stock Size list contact our Sales Department.





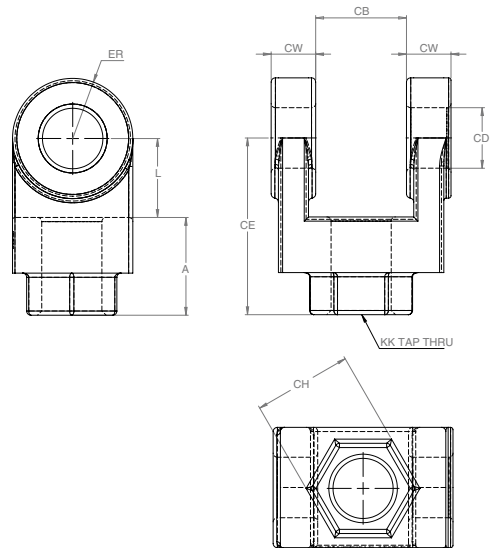
**CORROSION RESISTANT • ICE RESISTANT SEALS  
PRE-LUBRICATED • 100% TESTED • REPAIRABLE  
BUILT TO LAST • RELIABLE & DURABLE • TWO-YEAR WARRANTY**

## ACCESSORIES

### Rod Clevis

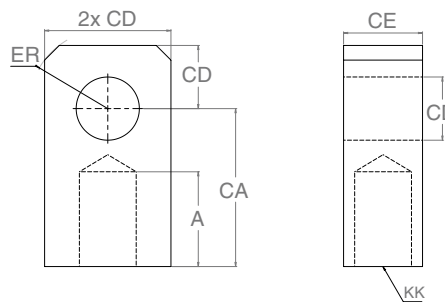
	CD	CE	A	CB	CW	CH	ER	KK	L
BDC-05	1/2	1 1/4	3/4	.765	1/2	1	1/2	7/16-20	3/4
BDC-061	1/2	1 3/4	1/2	.540	3/8	N/A	1/2	5/8-18	1 1/4
BDC-07	3/4	2 3/8	1 1/8	1.265	3/4	1 1/4	3/4	3/4-16	1 1/4
BDC-07M	3/4	2 1/8	1 1/8	1.265	3/4	1 3/8	3/4	3/4-16	1
BDC-07/1	1	2 3/8	1 1/8	1.265	3/4	1 3/8	3/4	3/4-16	1 1/4
BDC-07-06	3/4	6 5/64	1 4/9	.800	.420	N/A	3/4	3/4-16	4 9/16
BDC-10M	1	2 15/16	1 5/8	1.523	3/4	1 1/2	1	1-14	1 3/8

All accessories are black-oxide treated, except BDC-061 & BDC-07-6, which are zinc plated.



### Rod Eye

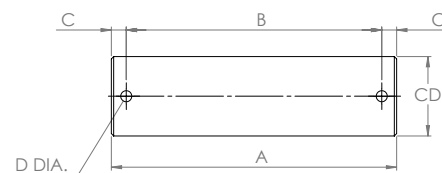
	CD	A	CB	CA	ER	KK
BDE-05	1/2	1	3/4	1 1/2	9/16	7/16-20
BDE-07	3/4	1 1/8	1 1/4	2 1/16	7/8	3/4-16
BDE-10	1	1 5/8	1 1/2	2 13/16	1 3/16	1-14



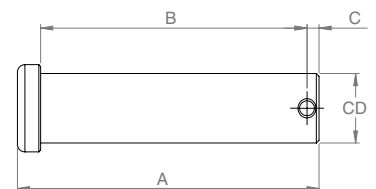
### Pins

	CD	A	B	C	D
BDP-05H	1/2	2.281	1.938	.172	.106
BDP-07H	3/4	3.094	2.719	.188	.140
BDP-10H	1	3.594	3.219	.188	.140
ZY-CP-224	1/2	1.500	1.350	.150	.162
ZY-CP-290	3/4	3.000	2.850	.150	.162

#### BDP Style



#### ZY Style



BDP's are black oxide treated, ZY are zinc plated.

# HOW DO ECONOMAX AIR CYLINDERS COMPARE TO A STANDARD AIR CYLINDER?



## Standard Aluminum Air Cylinder

**End Caps** Aluminum, anodized – will corrode from salt and leak at barrel. Bolt on clevis could vibrate loose.

**Piston Seals** Lip seals – tear easily and do not last long.

**Piston Guide** Usually does not have one.

**Piston Rods** Chrome plated – flakes off, chips and will cut rod seals.

**Rod Wipers** Buna material is softer and can be damaged from caked on dirt and salt. Temp -30 to +120 °F.

**Tie Rod Nuts** Steel sleeve nuts will corrode, making it impossible to repair.

**Rod Seals** 60 durometer Buna pressure. Temp -30 to +120 °F.

**Barrels** Clear hard coated aluminum.

**Tie Rods** Steel – will rust.

**Bearings** Are not designed for the misalignment stresses produced by a motor vehicle.

## ECONOMAX® Cylinder

Zinc plated cast iron – 320 hours of salt spray, will not corrode or leak. Clevis is integral to cap for maximum strength.

T-Seal is best for low temperature and resists being cut by ice. Temp -65 to +225 °F.

Gives extra support on rod, critical when tarp cylinder is extended and truck is moving.

Black nitriding has 3x the service life of chrome. A hardness level of 64 to 71 RC to protect against contact damages.

Urethane HW style, hard material helps to wipe off caked on salt and dirt. Temp -40 to +220 °F.

Stainless steel – easy to repair.

80 durometer navy spec – Buna pressure energized seal has tougher skin to resist cutting. Temp -40 to +220 °F.

Options – hard coated aluminum or lightweight fiberglass composite tubing.

Stainless steel – will never rust.

An enclosed long nose provides a solid steel support for the bronze lube-for-life bearing. Superior rod support to address bounce and misalignment.

**ECONOMAX®**  
ONE TOUGH CYLINDER®

EconoMAX® brand  
manufactured by:



CATALOGUE #0214  
MADE IN NORTH AMERICA

Higginson Equipment Inc.  
1175 Corporate Drive, Unit 1  
Burlington, Ontario  
Canada L7L 5V5

1-877-225-5437  
sales@higginson.ca