

ELECTRIC CYLINDERS QUICK REFERENCE

Use the following charts to select the electric cylinder that best fits your application. Refer to drawings on page 131. Contact Joyce with questions regarding the proper selection of electric cylinders.

3-Ton Thrust Capacity Electric Cylinders											
Model	Max Static Capacity (tons)	Screw Lead (in)	Linear Speed (in/min)	External Gearbox Ratio	Estimated Efficiency	Max Dynamic Load at HP (lbs)					
						.33HP	.5HP	.75HP	1HP	1.5HP	2HP
ACME Screw											
ECAL243	3	0.250	1.76	10	12%	6,000					
ECAL243	3	0.250	2.38	7.5	13%	6,000					
ECAL123	3	0.250	3.53	10	15%	5,183	6,000				
ECAL123	3	0.250	4.76	7.5	16%	3,926	6,000				
ECAL63	3	0.250	7.06	10	17%	2,906	4,547	6,000			
ECAL63	3	0.250	9.52	7.5	18%	2,179	3,446	5,310			
ECAL63	3	0.250	13.89	5	19%	1,468	2,375	3,710	5,162		
ECAL243	3	0.250	18.23	Direct drive	18%		1,215				
ECAL63	3	0.250	72.92	Direct drive	22%				899	1,499	2,098
Ball Screw											
ECBL243	3	0.200	1.41	10	30%	6,000					
ECBL243	3	0.200	1.90	7.5	32%	6,000					
ECBL123	3	0.200	2.82	10	38%	6,000					
ECBL123	3	0.200	3.81	7.5	40%	6,000					
ECBH243	3	0.625	4.41	10	30%	6,000					
ECBL63	3	0.200	5.65	10	43%	6,000					
ECBH243	3	0.625	5.95	7.5	32%	6,000					
ECBL63	3	0.200	7.62	7.5	45%	6,000					
ECBH123	3	0.625	8.82	10	38%	5,183	6,000				
ECBL63	3	0.200	11.11	5	47%	4,587	6,000				
ECBH123	3	0.625	11.90	7.5	40%	3,926	6,000				
ECBL243	3	0.200	14.58	Direct drive	46%	1,686	3,798				
ECBH63	3	0.625	17.65	10	43%	2,906	4,547	6,000			
ECBH63	3	0.625	23.80	7.5	45%	2,179	3,446	5,310			
ECBL123	3	0.200	29.17	Direct drive	52%	758	1,952	3,709	5,465	6,000	
ECBH63	3	0.625	34.72	5	47%	1,468	2,375	3,710	5,162		
ECBH243	3	0.625	45.57	Direct drive	46%		1,215				
ECBL63	3	0.200	58.33	Direct drive	55%		937	1,874	2,810	4,683	6,000
ECBH123	3	0.625	91.15	Direct drive	52%		625	1,187	1,749	2,873	
ECBH63	3	0.625	182.29	Direct drive	55%				899	1,499	2,098

3-Ton Electric Cylinders			
	Maximum Rise		Cylinder Tube Torque
	Vertical Operation	Horizontal Operation	(in*lb) Per Pound Thrust
ACME Screw			
ECAL	48"	36"	.113
Ball Screw			
ECBL	56"	42"	.036
ECBH	46"	34"	.111

Selection Guidelines:

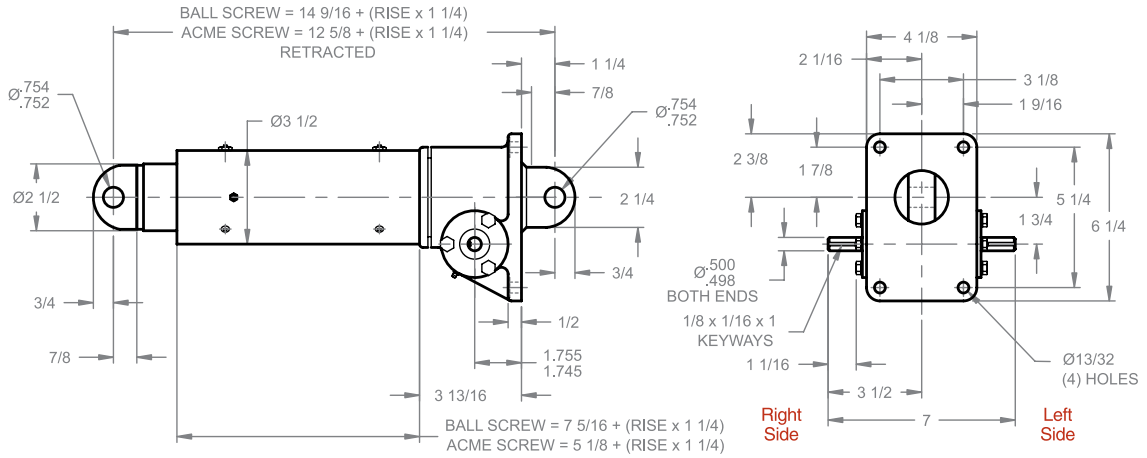
- Select the model most closely matching your desired load and speed requirements. The charts are sorted by static capacity, then screw type (ACME or ball), then travel speed.
- To determine the maximum rise for the model selected, see maximum rise charts above and to the right.
- L, M, and H in the model numbers designate low, medium, or high screw leads.
- ECA models are not suitable for duty cycles greater than 25%.
- **All models with efficiencies >30% require a brake motor.**
- Models with efficiencies ≤30% are self-locking in the absence of vibration. A brake motor is required if vibration is present or faster stopping times are desired.
- Loads and speeds shown assume use of a 1750 rpm 3ph AC induction motor.
- Cylinder tube torque per pound thrust is the means to calculate how much torque must be resisted at the mounting locations of the cylinder. To calculate torque (in*lb), multiply the value in the chart times the load in pounds.
- When ordering cylinders with a ComDRIVE the reducer listed in the part number should specify the proper ComDRIVE 4 letter shaft code from page 121. Units with a "direct drive" listing should specify the proper 4 letter motor mount code listed on page 121.
- Note: For normal operation, the translating tube end must be restrained from rotation.

ELECTRIC CYLINDERS

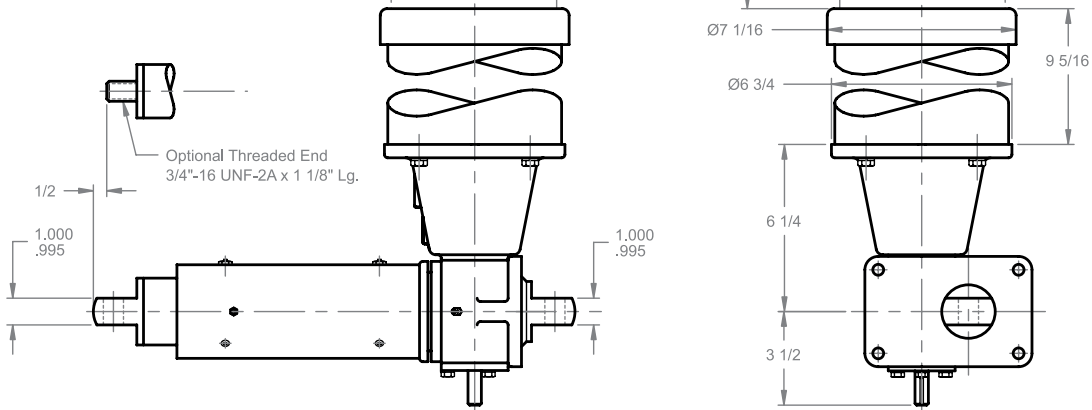
3 TON ELECTRIC CYLINDER

ECA (ACME SCREW)
ECB (BALL SCREW)

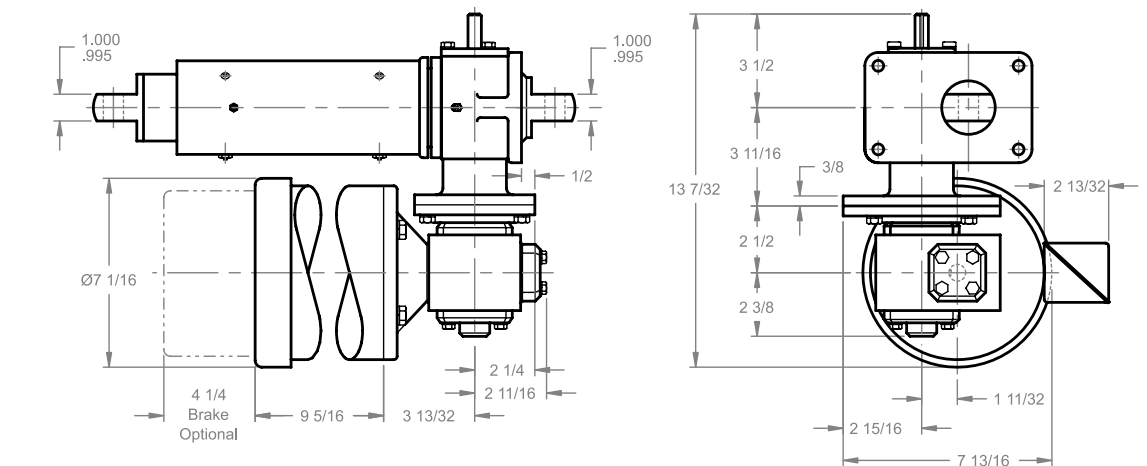
STANDARD



MOTOR MOUNT



ComDRIVE®



NOTE: FOR CAPACITY AND MAXIMUM RISE SEE PAGE 126.

Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.