

# ELECTRIC CYLINDERS QUICK REFERENCE

Use the following charts to select the electric cylinder that best fits your application. Refer to drawings on page 134. Contact Joyce with questions regarding the proper selection of electric cylinders.

20-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	3HP	5HP	
<b>ACME Screw</b>														
ECAL2420	20	0.250	1.76	10	8%		6,459	10,813	15,552					
ECAL2420	20	0.250	1.71	10	8%								40,000	
ECAM2420	20	0.500	3.53	10	13%		5,484	9,181	13,205					
ECAM2420	20	0.500	3.42	10	14%								40,000	
ECAH2420	20	0.750	5.29	10	16%		4,560	7,634	10,979					
ECAH2420	20	0.750	5.13	10	17%								38,366	
ECAM2420	20	0.500	6.94	5	15%			4,305	6,621	10,972	15,324			
ECAM2420	20	0.500	7.29	5	15%								23,176	39,948
ECAM820	20	0.500	10.59	10	17%				5,276					
ECAM820	20	0.500	10.25	10	18%								19,447	
ECAH820	20	0.750	15.38	10	22%				4,387					
ECAH820	20	0.750	14.89	10	23%								16,170	
ECAL2420	20	0.250	18.23	Direct drive	11%								4,701	9,678
ECAM820	20	0.500	20.83	5	19%					4,127	5,935			
ECAM820	20	0.500	21.88	5	19%								9,218	16,187
ECAH820	20	0.750	31.25	5	23%						4,935			
ECAH820	20	0.750	32.81	5	24%								7,665	13,459
<b>Ball Screw</b>														
ECBL2420	20	0.500	3.53	10	33%	7,425	13,710	22,953	33,012					
ECBL2420	20	0.500	3.42	10	35%								40,000	
ECBL2420	20	0.500	6.94	5	37%		5,442	10,763	16,553	27,431	38,309			
ECBL2420	20	0.500	7.29	5	39%								40,000	
ECBL820	20	0.500	10.59	10	43%		4,876	8,857	13,189					
ECBL820	20	0.500	10.25	10	45%								40,000	
ECBL820	20	0.500	20.83	5	47%				5,797	10,317	14,837			
ECBL820	20	0.500	21.88	5	48%								23,046	40,000
ECBL2420	20	0.500	36.46	Direct drive	49%						4,697			
ECBL820	20	0.500	109.38	Direct drive	55%									6,665

20-Ton Electric Cylinders			
	Maximum Rise		Cylinder Tube Torque (in*lb) Per Pound Thrust
	Vertical Operation	Horizontal Operation	
<b>ACME Screw</b>			
ECAL	100"	75"	.178
ECAM	78"	58"	.210
ECAH	88"	66"	.244
<b>Ball Screw</b>			
ECBL	72"	54"	.089

## 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 left.
- 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 4 letter ComDRIVE 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.

