

CPD-450

CPD-450 Mechanical Specifications		Performance Configuration		
	Units	High Load - Low Speed	Medium Load - Medium Speed	Low Load - High Speed
Frame Size	in	4.5		
Standard Stroke Lengths <i>(Custom Lengths Available)</i>	in	4, 8, 12, 16, 20, 24, 30, 36		
Maximum Allowable Continuous Dynamic Force	lbf	30,600		
	kN	136.1		
Maximum Allowable Static Force	lbf	64,530		
	kN	287		
Maximum Allowable Input Torque	lb-ft	42	98	317
	N-m	56.9	132.9	429.8
Limiting Input Speed	RPM	23,333	9,917	3,061
Standard Operating Temperature Range	F	-15° to 165°		
	C	-26.1° to 73.9°		
Roller Screw Lead	mm	12		
Accuracy	in	0.003		
Efficiency	%	85.2%	87.8%	87.8%
Repeatability	in	0.0008		
Total Actuator Speed Ratio		5.4:1	2.125:1	.656:1

Note: Information in this catalog is intended for marketing purposes. Any inaccuracies are unintentional and information is subject to change without notice.

CPD-450 Reflective Inertia

CPD -450 Reflective Inertias			High Load - Low Speed	Medium Load - Medium Speed	High Speed - Low Load
Parallel Motor Mount	$J_1^{(5)}$	slug-ft ²	9.372E-03	3.818E-03	4.159E-03
		kg-m ²	1.271E-02	5.177E-03	5.638E-03
	$J_2^{(6,7)}$	slug-ft ² /in	3.815E-05	4.010E-06	1.097E-05
		kg-m ² /in	5.172E-05	5.437E-06	1.488E-05
(5)	J_1 = Fixed inertia of internal rotating components				
(6)	J_2 = Variable inertia of rotating components that are dependent on system stroke length				
(7)	$J_{TOTAL} = J_1 + L * J_2$				

CPD-450 System Weight

Basic Actuator Weight ⁽⁴⁾					
Stroke Length		6 in	12 in	18 in	24 in
Oil Filled	lb	74.7	86.0	97.4	108.8
	kg	33.9	39.0	44.2	49.3
Dry	lb	66.4	74.5	82.6	90.8
	kg	30.1	33.8	37.5	41.2

Configuration Specific Weight Adjustments ⁽⁴⁾															
Parallel Drive (Excluding Motor)		Front Flange		Rear Flange		Rear Clevis		Rear Eye		Angle Mounts		Trunnions		Dual Foot	
lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg
12.0	5.5	2.8	1.3	7.9	3.6	8.6	3.9	9.0	4.1	n/a	n/a	7.8	3.5	4.7	2.1
⁽⁴⁾		For complete configuration weight, add basic actuator weight to appropriate configuration specific weight adjustments. For example, 12" stroke oil filled system with parallel drive configuration and trunnion mounts: $86.0 \text{ lb} + 12.0 \text{ lb} + 7.8 \text{ lb} = 105.8 \text{ lb}$													