

0107

Extruder Drive Selection Table

Screw Size (inches)	Screw Pressure (P.S.I.)	Screw Thrust (pounds)	Reducer Size	Reducer Ctr Distance (inches)	L10 Bearing Life (100 RPM output) (hours)
1"	5000	3930	35	3.5	725000
	7500	5890	35	3.5	188000
	10000	7850	35	3.5	72450
1 1/4"	5000	6135	35	3.5	164630
	7500	9200	40	4.0	182850
	10000	12270	40	4.0	70090
1 1/2"	5000	8840	40	4.0	208880
	7500	13250	40	4.0	54270
	10000	17670	50	5.0	40000
1 3/4"	5000	12030	40	4.0	75000
	7500	18040	60	6.0	120000
	10000	24050	60	6.0	46070
2"	5000	15700	50	5.0	59060
	7500	23560	60	6.0	49360
	10000	31400	70	7.0	83000
2 1/2"	5000	24540	70	7.0	188600
	7500	36800	70	7.0	48900
	10000	49090	80	8.0	39500
3"	5000	35340	70	7.0	64780
	7500	53010	100	10.0	53080
	10000	70686	120	12.0	247090
3 1/2"	5000	48100	100	10.0	73370
	7500	72160	120	12.0	230670
	10000	96210	120	12.0	88512
4"	5000	62830	120	12.0	365790
	7500	94250	120	12.0	94790
	10000	125660	120	12.0	36370
4 1/2"	5000	79520	120	12.0	166930
	7500	119280	120	12.0	43270

Cone Drive's double-enveloping worm gear speed reducer, with a heavy duty thrust bearing, is perfectly suited to the rugged requirements of extruder service. The double-enveloping design provides more tooth area contact and more teeth in mesh than other worm gear designs. Multi-tooth contact produces lower stress levels in the mesh area, resulting in increased durability, higher load capacity and longer gear life.

Selection procedure

Based on your screw size and your screw pressure, select the appropriate reducer size from the extruder drive selection table. The calculated L10 bearing life based on 100 RPM output is also shown for your review. With this size selection refer to our standard catalog, section 2, and select the ratio and hand of assembly required. All standard and special ratios can be provided in the extruder drive reducer. The selected reducer size must have a thermal horsepower rating equal to or greater than the motor horsepower and provide a 1.3 service factor based on the mechanical horsepower rating. Fan cooling, water cooling and motor adapter options are available as may be required. The reducer model can be selected from page 4, 5 and 6 of this catalog supplement. All other required ordering information follows the same procedure as standard Cone Drive reducers.
(See section 1 of Cone Drive catalog.)

Note Bearing life calculated based on 100 RPM of thrust bearing using Timken L10 formula.

For reducer mechanical and thermal ratings, ratio availability, fan and water cooling options- -consult the Cone Drive catalog and our application engineering group.