

4.3 Heavy duty screw

Heavy duty ball screws provide more than double load capacity and rigidity compared to the standard ball screws due to a modified radius of the thread profile.

The high-load ball screws have lower efficiency and are designed for slow-running applications only. The high-load ball screws are usually produced as non-preloaded.

Basic technical parameters:

- The recommended thread diameter range from 40 to 200 mm
- Minimum strength of the shaft material is $R_m = 900 \text{ MPa}$
- Efficiency approx. 93-95 %
- These ball screws should be lubricated by lubricants for high loads
- Dynamic loads up to 4,000,000 N

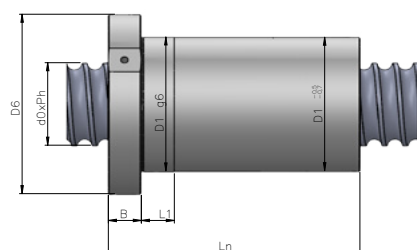
Category characteristics:

- Ball screws for high axial loads

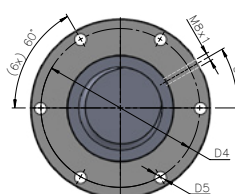
Application

- Injection molding machines
- Electric presses
- Lifting equipment
- Replacements of hydraulic cylinders
- Others

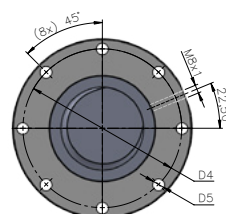




FLANGE TYPE 1



FLANGE TYPE 2



Recirculation system	Maximum speed coefficient
IN	100 000 / d_0

Diameter d_0	Pitch P_h	Number of effective turns i	Length of the nut L_n	Ball nut diameter D_1	L_1	Flange diameter D_6	Flange width B	D_4	D_5	Flange type	Lubrication hole	Ball diameter D_w	C_{am}	C_{om}
	mm	i	mm	mm	mm	mm	mm	mm	mm	[-]	[-]	mm	[N]	[N]
40	12	6	123	70	18	104	18	86	9	1	M8x1	7,938	149 000	335 000
50	12	8	149	77	20	111	20	94	9	1	M8x1	7,938	222 000	595 000
	16	8	196	95	28	135	28	113	9	1	M8x1	12,7	382 000	863 000
63	16	8	201	105	28	139	28	122	9	1	M8x1	12,7	448 000	1 146 000
	16	10	237	105	28	139	28	122	9	1	M8x1	12,7	543 000	1 433 000
	20	8	250	117	28	157	28	137	11	1	M8x1	15,875	572 000	1 350 000
80	16	8	202	120	32	158	32	139	9	1	M8x1	12,7	518 000	1 525 000
	20	8	244	125	32	165	32	145	11	1	M8x1	15,875	669 000	1 793 000
100	20	12	337	145	32	185	32	165	11	2	M8x1	15,875	1 097 000	3 574 000
	20	15	412	145	40	185	40	165	11	2	M8x1	15,875	1 330 000	4 467 000
	25	10	370	160	40	212	40	189	17,5	2	M8x1	20,638	1 306 000	3 779 000
125	20	12	360	180	40	232	40	206	17,5	2	M8x1	15,875	1 248 000	4 682 000
	20	15	430	180	40	232	40	206	17,5	2	M8x1	15,875	1 512 000	5 853 000
	25	10	370	190	40	238	40	212	17,5	2	M8x1	20,638	1 454 000	4 727 000
140	25	12	445	200	50	252	50	226	17,5	2	M8x1	20,638	1 872 000	6 782 000
	32	12	540	220	50	272	50	246	17,5	2	M8x1	25,4	2 403 000	8 003 000
160	25	15	550	220	60	272	60	246	17,5	2	M8x1	20,638	2 432 000	9 886 000
	32	12	570	230	60	282	60	256	17,5	2	M8x1	25,4	2 558 000	9 151 000