Gear Racks Made from Steel, Helical Toothed, Tempered, Teeth Milled

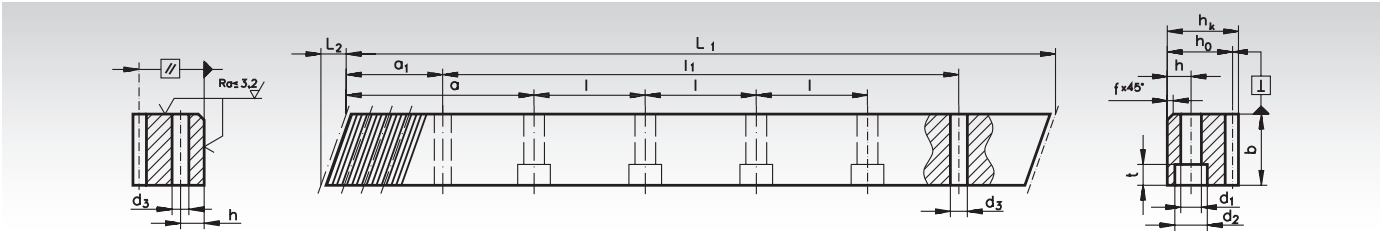
Material: high-quality, specially treated bright steel with approx. 900 N/mm² tensile strength.

Tooth quality 8e27.
Helical tooth system, right hand 19° 31′ 42″.
For continuous linking.

Matching left hand-toothed counterparts, to simplify the mounting, are available at cost.

Matching helical-toothed spur gears page 255.

Ordering Details: e.g.: Product No. 251 603 11, Gear Rack, Helical Toothed, Tempered, Module 2, 500 mm



Module 2

Product No. with Bores	L_1	L_2	Number of teeth	b	h_k	h_0	f	a	l	No. of bores	h	d_1	d_2	t	a_1	l_1	d_3	GT_f /300[1)]	Fu*	Weight
	mm	mm		mm	mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	mm	mm	mm	N	kg
251 603 11	500,00	8,9	75	25	24	22	2	62,50	125	4	8	7	11	7	31,7	436,6	5,7	0,044	2100	2,1
251 605 11	1000,00	8,9	150	25	24	22	2	62,50	125	8	8	7	11	7	31,7	936,6	5,7	0,044	2100	4,3
251 609 11	2000,00	8,9	300	25	24	22	2	62,50	125	16	8	7	11	7	31,7	1936,6	5,7	0,044	2100	8,6
without Bores																				
251 603 10	500,00	8,9	75	25	24	22	2											0,044	2100	2,1
251 605 10	1000,00	8,9	150	25	24	22	2											0,044	2100	4,3
251 609 10	2000,00	8,9	300	25	24	22	2											0,044	2100	8,6
Counterpart for mounting																				
251 600 00	200,00	8,8	30	25	24	22														0,85

Module 3

Product No. with Bores	L_1	L_2	Number of teeth	b	h_k	h_0	f	a	l	No. of bores	h	d_1	d_2	t	a_1	l_1	d_3	GT_f /300[1)]	Fu*	Weight
	mm	mm		mm	mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	mm	mm	mm	N	kg
253 603 11	500,00	10,6	50	30	29	26	2	62,50	125	4	9	10	15	9	35,0	430,0	7,7	0,046	4500	3,0
253 605 11	1000,00	10,6	100	30	29	26	2	62,50	125	8	9	10	15	9	35,0	930,0	7,7	0,046	4500	6,1
253 609 11	2000,00	10,6	200	30	29	26	2	62,50	125	16	9	10	15	9	35,0	1930,0	7,7	0,046	4500	12,2
without Bores																				
253 603 10	500,00	10,6	50	30	29	26	2											0,046	4500	3,0
253 605 10	1000,00	10,6	100	30	29	26	2											0,046	4500	6,1
253 609 10	2000,00	10,6	200	30	29	26	2											0,046	4500	12,2
Counterpart for mounting																				
253 600 00	200,00	10,6	20	30	29	26														2,7

Module 4

Product No. with Bores	L_1	L_2	Number of teeth	b	h_k	h_0	f	a	l	No. of bores	h	d_1	d_2	t	a_1	l_1	d_3	GT_f /300[1)]	Fu*	Weight
	mm	mm		mm	mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	mm	mm	mm	N	kg
254 603 11	506,67	14,2	38	40	39	35	2	62,50	125	4	12	10	15	9	33,3	433,0	7,7	0,048	8700	5,5
254 605 11	1000,00	14,2	75	40	39	35	2	62,50	125	8	12	10	15	9	33,3	933,4	7,7	0,048	8700	10,9
254 609 11	2000,00	14,2	150	40	39	35	2	62,50	125	16	12	10	15	9	33,3	1933,4	7,7	0,048	8700	21,8
without Bores																				
254 603 10	506,67	14,2	38	40	39	35	2											0,048	8700	5,5
254 605 10	1000,00	14,2	75	40	39	35	2											0,048	8700	10,9
254 609 10	2000,00	14,2	150	40	39	35	2											0,048	8700	21,8
Counterpart for mounting																				
254 600 00	200,00	14,2	15	40	39	35														2,7

[1)] GTf /300 = total pitch error, i.e. the max. permissible deviation (per 300 mm) of the measured length of the rack compared to the theoretical length L300, with L300 = (m / cos ß) • π • z_{300}).

* Tangential force at tooth, calculated for a gear with 20 teeth. With a smaller number of teeth, the tangential force has to be reduced by 10%.