

## Precision Gear Racks Made from Steel, Helical Tooth System, Teeth Hardened and Ground

**Material:** 16MnCr5, Material-No. 1.7131, teeth induction hardened to about 60 HRC after hardening ground all around. As only the teeth are hardened subsequent drilling and pinning is easily possible.

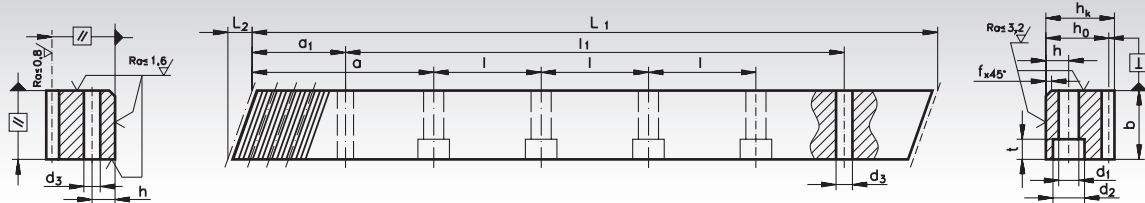
As only the teeth are hardened subsequent drilling and pinning is easily possible. Tooth quality 6h25.

Helical tooth system, right hand 19° 31' 42".

For continuous linking.

Matching helical-toothed spur gears page 255.

Ordering Details: e.g.: Product No. 251 603 01, Gear Rack, Helical Tooth System, hardened, Teeth Ground, Module 2.0, 500 mm



### Module 2.0

Product No. with Bores	L <sub>1</sub>	L <sub>2</sub>	Number of teeth	b	h <sub>k</sub>	h <sub>0</sub>	f	a	l	No. of h bores		d <sub>1</sub>	d <sub>2</sub>	t	a <sub>1</sub>	l <sub>1</sub>	d <sub>3</sub>	GT <sub>f</sub> /300 <sup>1)</sup>	Fu* N	Weight kg
	mm	mm								mm	mm									
251 603 01	500,00	8,5	75	24	24	22	2	62,50	125	4	8	7	11	7	31,7	436,6	5,7	0,022	8500	2,10
251 605 01	1000,00	8,5	150	24	24	22	2	62,50	125	8	8	7	11	7	31,7	936,6	5,7	0,022	8500	4,10
<b>without Bores</b>																				
251 603 00	500,00	8,5	75	24	24	22	2											0,022	8500	2,10
251 605 00	1000,00	8,5	150	24	24	22	2											0,022	8500	4,10
<b>Counterpart for mounting</b>																				
251 600 00	200,00	8,5	30	25	24	22														0,85

### Module 3.0

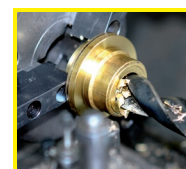
Product No. with Bores	L <sub>1</sub>	L <sub>2</sub>	Number of teeth	b	h <sub>k</sub>	h <sub>0</sub>	f	a	l	No. of h bores		d <sub>1</sub>	d <sub>2</sub>	t	a <sub>1</sub>	l <sub>1</sub>	d <sub>3</sub>	GT <sub>f</sub> /300 <sup>1)</sup>	Fu* N	Weight kg
	mm	mm								mm	mm									
253 603 01	500,00	10,3	50	29	29	26	2	62,50	125	4	9	10	15	9	35	430,0	7,7	0,024	15000	2,90
253 605 01	1000,00	10,3	100	29	29	26	2	62,50	125	8	9	10	15	9	35	930,0	7,7	0,024	15000	5,90
<b>without Bores</b>																				
253 603 00	500,00	10,3	50	29	29	26	2											0,024	15000	2,90
253 605 00	1000,00	10,3	100	29	29	26	2											0,024	15000	5,90
<b>Counterpart for mounting</b>																				
253 600 00	200,00	10,3	20	30	29	26														1,20

### Module 4.0

Product No. with Bores	L <sub>1</sub>	L <sub>2</sub>	Number of teeth	b	h <sub>k</sub>	h <sub>0</sub>	f	a	l	No. of h bores		d <sub>1</sub>	d <sub>2</sub>	t	a <sub>1</sub>	l <sub>1</sub>	d <sub>3</sub>	GT <sub>f</sub> /300 <sup>1)</sup>	Fu* N	Weight kg
	mm	mm								mm	mm									
254 603 01	506,67	13,8	38	39	39	35	3	62,50	125	4	12	10	15	9	33,3	433,0	7,7	0,024	25000	5,40
254 605 01	1000,00	13,8	75	39	39	35	3	62,50	125	8	12	10	15	9	33,3	933,4	7,7	0,024	25000	10,70
<b>without Bores</b>																				
254 603 00	506,67	13,8	38	39	39	35	3											0,024	25000	5,40
254 605 00	1000,00	13,8	75	39	39	35	3											0,024	25000	10,70
<b>Counterpart for mounting</b>																				
254 600 00	200,00	13,8	15	40	39	35														2,70

<sup>1)</sup> GT<sub>f</sub> /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 L<sub>300</sub>, with L<sub>300</sub> = (m / cos β) • π • z<sub>300</sub>.

\* 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%.



**Reworking within  
24h-service possible.  
Custom made parts  
on request.**