

Suzhou **Global Racks**
Science 齿条 科技有限公司
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GLOBAL RACK

晓宇宙齿条企业概况

苏州晓宇宙齿条科技有限公司是专业生产齿条的企业，生产基地位于江苏太仓。本公司拥有世界先进的制造齿条的德国进口铣齿设备和磨齿设备，德国高精度的辅助设备，采用世界级高精度检测仪器测量和检验产品，使得产品有稳定的质量保障，具有及时发现问题和解决问题的能力。辅之以优秀的制造技术和长久从事齿条加工经验，有优良的齿条加工工艺，生产的齿条质量、耐用度和精准度能达到国际同等的精度要求，从而完全有能力替代国外进口的高精度齿条，与世界高精度齿条相比不逊色。俱有相当竞争力。

合理，务实，认真，诚实，稳定，创新是企业的理念。与客户组成优良的供应链是企业的宗旨，发展技术和开拓创新是企业的生命力，愿我们共同努力创造共同美好的未来。

Suzhou global rack Science and Technology Co., Ltd. is specialized in producing gear rack enterprise, the production base is located in Taicang, Jiangsu province. The company has advanced manufacturing rack milling equipment imported from Germany and grinding equipment. The German precision auxiliary equipment. Using world-class high-precision measurement and testing products, testing instruments, allowing for a stable quality assurance, with the timely detection And solve problems. Complemented by excellent manufacturing technology and long experience in the processing rack. rack production quality, durability and precision to achieve the same accuracy requirements of international, which are fully capable and foreign imports high-precision rack competition, with not less than the world's high-precision rack. Both are very competitive.

Reasonable, pragmatic, serious, honest, stable, and innovation is the concept. Excellent composition with the customer is the purpose of the supply chain, technology and innovation development of the vitality of the enterprise, we would like to work together to create a better future together.





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Global Rack

从事齿条加工悠久历史
专业生产齿条企业



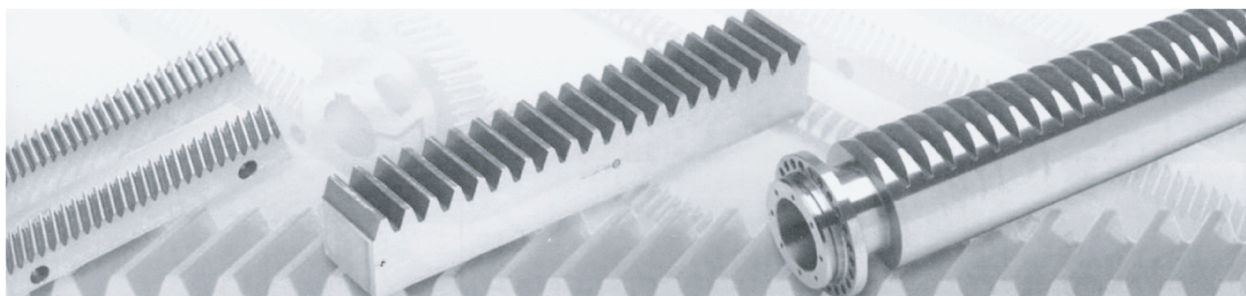
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库存产品

特殊加工

根据您的图纸

我们的加工能力

齿条

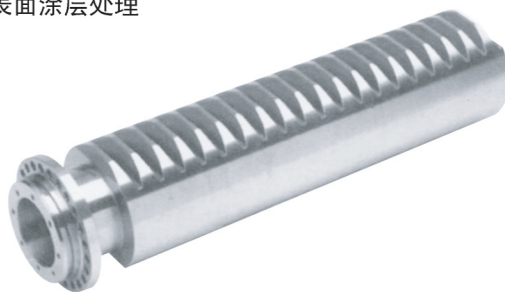
直齿或斜齿

制齿加工长度可至4000mm

铣齿、模数为0.5-30

材质，热处理方式或是表面涂层处理
可根据客户需求订做

磨齿、模数可至24



stock programme

made to order

on request

our manufacture possibilities

racks

straight or helical teeth

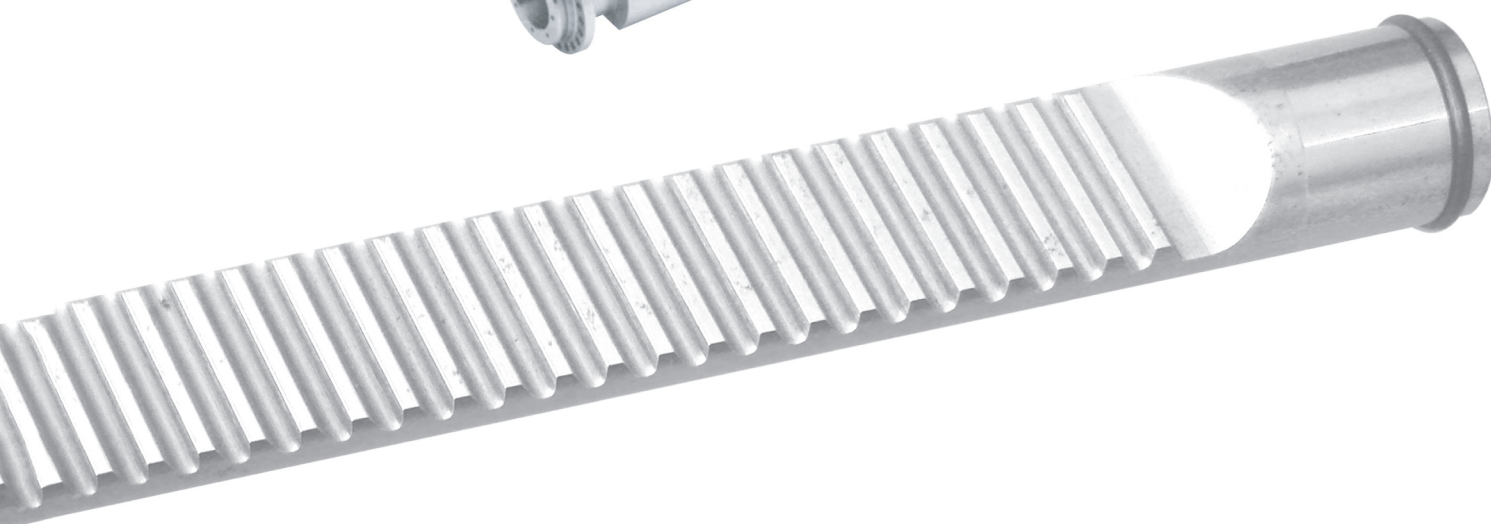
max. length in one setting

is 4 000 mm

milled modules 0.5-30

material, hardened or plated
to customers design

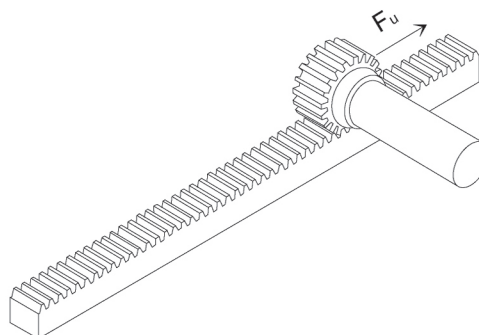
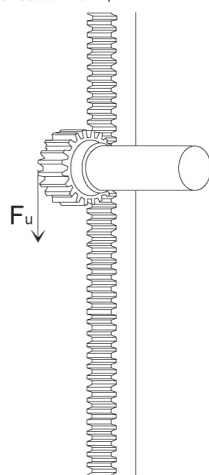
with ground teeth
up to module 24



我公司的设计师将竭诚帮助您实现您的计划。欢迎与我们联系！

We offer more than competitive prices - contact our engineering department!

齿条传动形式 | selection rack and pinion drive



上升/下降 | lift/lower

$$F_u = m \cdot g + m \cdot a$$

概括 | general

名称 | description

加速度 | acceleration

速度 | speed

距离 | distance

时间 | time

转速 | revolutions per minute, rpm

分度圆直径 | pitch diameter

扭矩 | torque

功率 | power

设计参数

使用系数 1,0

齿间连接安全系数 1,0

防齿裂安全系数 1,4

使用寿命 20,000h

所测得的试验齿条的弯曲疲劳极限 σ_{Flim} 和
试验齿条的接触疲劳极限 σ_{Hlim} 值如下

水平 | drive

$$F_u = m \cdot g \cdot \mu + m \cdot a$$

代号/公式
symbol/formula

单位
dimension

$$a = \frac{v}{t} = \frac{2 \cdot s}{t^2}$$

m/s²

$$v = \frac{s}{t} = \sqrt{2 \cdot a \cdot s}$$

m/s

$$s$$

m

$$t$$

s

$$n = \frac{v \cdot 60 \cdot 000}{\pi \cdot d_0}$$

1/min

$$d_0$$

mm

$$M = \frac{F_u \cdot d_0}{2000}$$

Nm

$$P = \frac{M \cdot n}{9550} = \frac{F_u \cdot n \cdot d_0}{19100}$$

kW

The dimensioning happened with

application factor: 1,0

safety for stress at single tooth contact: 1,0

safety for Tooth root stress: 1,4

service life in hours: 20,000h

We calculate with following values for rolling load σ_{Flim}
and bending load σ_{Hlim}

材料	$\sigma_{Flim} [N/mm^2]$	$\sigma_{Hlim} [N/mm^2]$
C45	440	550
C45 高频淬火 induction hardened	750	1250
16MnCr5 渗碳淬火 carburized and hardened	920	1500
42CrMo4V	600	730

承载力选择表 selection and load tables

在具有充足的润滑油脂，安全及使用系数1.0，
线速度 $v=1.5\text{m/s}$ 的情况下，最大允许扭矩Nm

maximum permissible torques in Nm with adequate lubrication with
safety-and application factor 1.0; and a speed of 1.5m/s

模数 module		1 b=10 mm				1,5 b=15 mm				2 b=20 mm				
齿数 number of teeth		15	20	25	40	15	20	25	40	15	20	25	30	40
齿条 rack 材料和齿形 material & tooth system	圆柱齿轮 pinion													
C45 软材 C45 soft 直齿 straight	C45 软材 C45 soft	0,3	0,9	1,1	10,7	1,0	2,8	8,8	35,3	4,4	14,1	26,9	44,2	98,2
	C45 高频淬火 C45 ind.- hardened	1,2	2,5	4,5	14,7	2,0	5,7	17,7	60,0	13,8	28,1	48,0	74,1	134,7
C45 高频淬火 C45 ind.- hardened 直齿 straight	C45 高频淬火 C45 ind.- hardened	2,0	8,7	14,7	25,3	7,0	28,2	52,9	95,3	29,8	75,0	128,2	151,7	200,2
C45 高频淬火 C45 ind.- hardened 齿面经磨削 直齿 ground teeth; straight	C45 高频淬火 C45 ind.- hardened													
C45 高频淬火 C45 ind.- hardened 齿面经磨削 斜齿 ground teeth; helical	C45 高频淬火 C45 ind.- hardened													
16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 直齿 ground teeth; straight	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth												159,8	200,0 238,2 320,3
16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 斜齿 ground teeth; helical	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth												180,9	227,8 270,2 365,2
42CrMo4V 调质 42CrMo4V quenched & tempered 直齿 straight	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth												42,8	68,2 100,2 186,7
42CrMo4V 调质 42CrMo4V quenched & tempered 斜齿 helical	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth												45,9	73,0 104,8 195,1

模数 module		2,5 b=25 mm				3 b=30 mm				
齿数 number of teeth		15	20	25	40	15	20	25	30	40
齿条 rack 材料和齿形 material & tooth system	圆柱齿轮 pinion									
C45 软材 C45 soft 直齿 straight	C45 软材 C45 soft	8,5	25,1	52,8	175,2	13	46	97,2	159,6	339,8
	C45 高频淬火 C45 ind- hardened	15,6	45,1	95	145,2	40,8	91,9	168,2	243,4	450,3
C45 高频淬火 C45 ind- hardened 直齿 straight	C45 高频淬火 C45 ind- hardened	60	149,9	255,8	399,7	87,1	215,1	440,0	497,3	780
C45 高频淬火 C45 ind- hardened 齿面经磨削 直齿 ground teeth; straight	C45 高频淬火 C45 ind- hardened									
C45 高频淬火 C45 ind- hardened 齿面经磨削 斜齿 ground teeth; helical	C45 高频淬火 C45 ind- hardened									
16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 直齿 ground teeth; straight	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth						420,1	530,2	880,0	
16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 斜齿 ground teeth; helical	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth						504,7	605		
42CrMo4V 调质 42CrMo4V quenched & tempered 直齿 straight	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth						138,0	234,8	620,2	
42CrMo4V 调质 42CrMo4V quenched & tempered 斜齿 helical	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth						145	245,1		

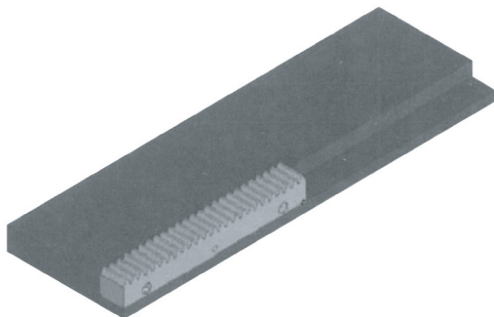
承载力选择表 selection and load tables

在具有充足的润滑油脂，安全及使用系数1.0，
线速度 $v=1.5\text{m/s}$ 的情况下，最大允许扭矩Nm

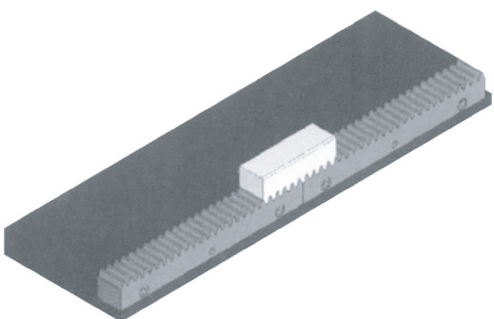
maximum permissible torques in Nm with adequate lubrication with
safety- and application factor 1.0; and a speed of 1.5m/s

模数 module		4 b=40 mm					5 b=50 mm				6 b=60 mm		
齿数 number of teeth		15	20	25	30	40	15	20	25	40	15	20	25
齿条 rack 材料和齿形 material & tooth system	圆柱齿轮 pinion												
C45 软材 C45 soft 直齿 straight	C45 软材 C45 soft	39,9	115,1	240,2	414,1	850,1	89,8	230,0	489,7	800,4	170,2	429,7	870,4
	C45 高频淬火 C45 ind- hardened	130	249,9	415,2	593,2	1100,4	259,7	499,7	800,4	1200,1	470	810,3	1400,5
C45 高频淬火 C45 ind- hardened 直齿 straight	C45 高频淬火 C45 ind- hardened	220,2	640,1	1070,1	1306,9	1710,4	450	1150,0	1660,4	1999,5	794,6	2200,5	2950,0
C45 高频淬火 C45 ind- hardened 齿面经磨削 直齿 ground teeth; straight	C45 高频淬火 C45 ind- hardened						1080		2060,0				3640,0
C45 高频淬火 C45 ind- hardened 齿面经磨削 斜齿 ground teeth; helical	C45 高频淬火 C45 ind- hardened						1330					3170,0	4180,0
16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 直齿 ground teeth; straight	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth		1070,1	1330,4		2000,3							
16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 斜齿 ground teeth; helical	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth	770,1	1219,7	1530,2									
42CrMo4V 调质 42CrMo4V quenched & tempered 直齿 straight	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth		355,2	575,0		1550,4							
42CrMo4V 调质 42CrMo4V quenched & tempered 斜齿 helical	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth	204,8	370,3	589,9									

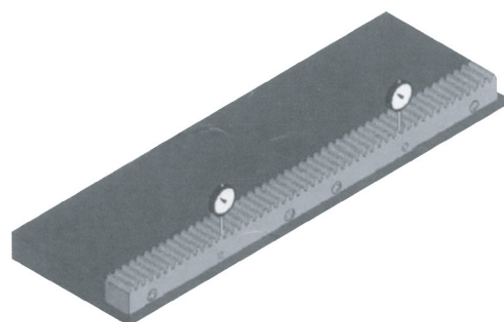
模数 module		8 b=80 mm			10 b=100 mm	
齿数 number of teeth		15	20	25	20	
齿条 rack 材料和齿形 material & tooth system	圆柱齿轮 pinion					
C45 软材 C45 soft 直齿 straight	C45 软材 C45 soft	420,1	1050,5	2101,0	4000	
	C45 高频淬火 C45 ind- hardened	1149,5	2101,0	3398,0		
C45 高频淬火 C45 ind- hardened 直齿 straight	C45 高频淬火 C45 ind- hardened	1898,0	4502,0	7500,0	9900,0	
C45 高频淬火 C45 ind- hardened 齿面经磨削 直齿 ground teeth; straight	C45 高频淬火 C45 ind- hardened		6870,0		12850,0	
C45 高频淬火 C45 ind- hardened 齿面经磨削 斜齿 ground teeth; helical	C45 高频淬火 C45 ind- hardened				14000,0	
16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 直齿 ground teeth; straight	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth					
16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 斜齿 ground teeth; helical	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth					
42CrMo4V 调质 42CrMo4V quenched & tempered 直齿 straight	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth					
42CrMo4V 调质 42CrMo4V quenched & tempered 斜齿 helical	16MnCr5 渗碳淬火 16MnCr5 case-hardened 齿面经磨削 ground teeth					



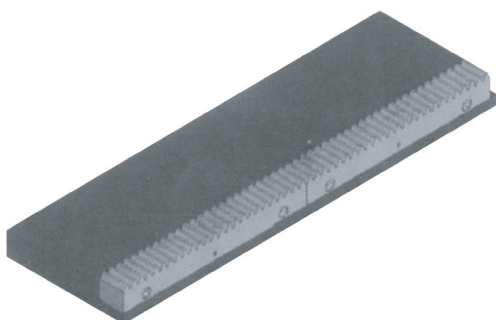
- 齿条的定位和固定(例如:用螺旋卡钳)。
- 用紧固螺栓根据预紧力将齿条紧固。
- positioning and fixing the rack (for example with clamps) .
- mount the rack with screws accordant to the defined torque.



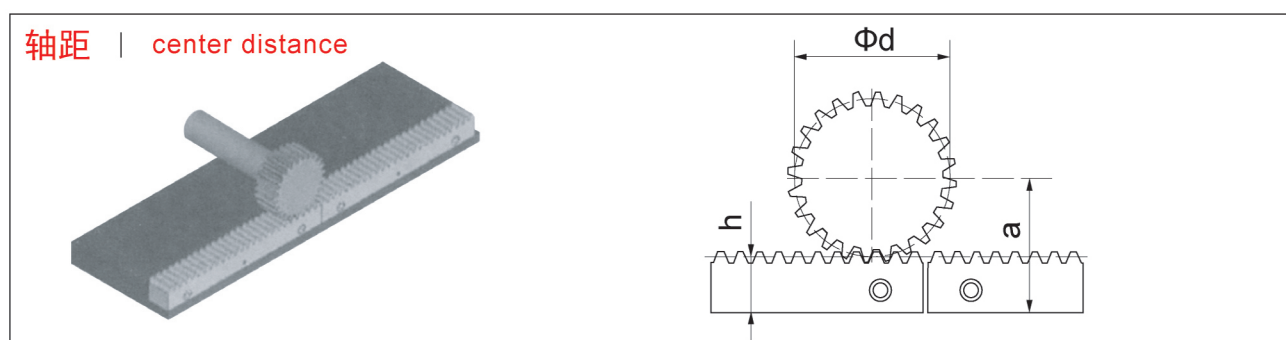
- 用安装块辅助安装续接齿条。
- 用紧固螺栓根据预紧力将齿条紧固。
- connect another rack with the help of the mounting piece
- mount the rack with screws accordant to the defined torque.



- 安装后检验齿条的平行度及各齿条之间的平行度。
- 同时还要检验齿条的直线度。
- after mounting these racks check the parallelism and the connetion from one rack to the other.
- as well check the correct aligning of the racks.



- 在检验完后，将配铰齿条销孔，安装定位销。
- after the checkup the register pins reaming and pin the racks.



齿轮轴中心到齿条背面的轴距 a 可通过下面公式计算：

The center distance a resulting in the distance from the middle of the pinion to the back area of the rack to following formula:

$$a = h + \frac{d}{2}$$

安装块 Mounting Pieces

安装块 直齿 钢号1. 0503 [C45] | mounting piece, straight teeth, steel 1.0503 [C45]

模数 Module	L1	b	订购编号 Part No.
1	200,00	10	994-010-001
1,5	200,00	15	994-015-001
2	200,00	25	994-020-001
2,5	200,00	25	994-025-001
3	200,00	30	994-030-001
4	200,00	40	994-040-001
5	200,00	50	994-050-001
6	200,00	60	994-060-001
8	200,00	80	994-080-001
10	220,00	100	994-100-001

模数 Module	齿距 Pitch	L1	b	订购编号 Part No.
1,591	5mm	200,00	15	994-016-001
3,183	10mm	200,00	30	994-031-001

安装块 斜齿 钢号1. 0503 [C45] | mounting piece, helical teeth, steel 1.0503 [C45]

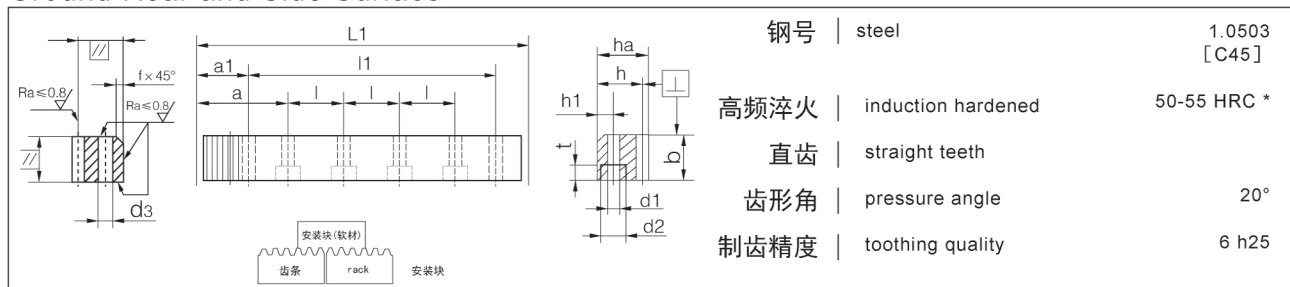
螺旋角 $19^{\circ} 31' 42''$ 左旋 | helix angle $19^{\circ} 31' 42''$ left hand

模数 Module	L1	b	订购编号 Part No.
2	200	25	993-020-001
3	200	30	993-030-001
4	200	40	993-040-001
5	200	50	993-050-001
6	200	60	993-060-001
8	200	80	993-080-001
10	235	100	993-100-001

可续接安装式齿条 齿面经磨削 直齿 背面及侧面经磨削

Racks for Continuous Mounting with Ground Teeth, Straight Teeth Ground Rear and Side Surface

GLOBAL RACK



带孔 | with bores

模数 Module	理论长 L ₁	z**	b	h _a	h	f ^{+0.5}	a	l	h ₁	d ₁	d ₂	t	a ₁	l ₁	d ₃	kg	订购编号 Part No.
2	502,65	80	24	24	22	2	62,8	125,66	8	7	11	7	31,3	440,1	5,7	2,10	994-020-405
2	1005,30	160	24	24	22	2	62,8	125,66	8	7	11	7	31,3	942,7	5,7	4,20	994-020-410
3	508,93	54	29	29	26	2	63,6	127,23	9	10	15	9	34,4	440,1	7,7	3,00	994-030-405
3	1017,87	108	29	29	26	2	63,6	127,23	9	10	15	9	34,4	949,1	7,7	6,00	994-030-410
4	502,65	40	39	39	35	3	62,8	125,66	12	10	15	9	37,5	427,7	7,7	5,25	994-040-405
4	1005,30	80	39	39	35	3	62,8	125,66	12	10	15	9	37,5	930,3	7,7	10,50	994-040-410
4	2010,61	160	39	39	35	3	62,8	125,66	12	10	15	9	37,5	1935,6	7,7	21,00	994-040-420
5	502,65	32	49	39	34	3	62,8	125,66	12	14	20	13	30,1	442,4	11,7	6,70	994-050-405
5	1005,3	64	49	39	34	3	62,8	125,66	12	14	20	13	30,1	945	11,7	13,40	994-050-410
5	2010,61	128	49	39	34	3	62,8	125,66	12	14	20	13	30,1	1950,4	11,7	26,80	994-050-420
6	508,93	27	59	49	43	3	63,6	127,23	16	18	26	17	31,4	446,1	15,7	10,40	994-060-405
6	1017,87	54	59	49	43	3	63,6	127,23	16	18	26	17	31,4	955,0	15,7	20,20	994-060-410
6	2035,75	108	59	49	43	3	63,6	127,23	16	18	26	17	31,4	1973,0	15,7	40,40	994-060-420
8	502,65	20	79	79	71	3	62,8	125,66	25	22	33	21	26,6	449,5	19,7	22,38	994-080-405
8	1005,30	40	79	79	71	3	62,8	125,66	25	22	33	21	26,6	952,0	19,7	44,76	994-080-410
8	2010,61	80	79	79	71	3	62,8	125,66	25	22	33	21	26,6	1957,3	19,7	89,50	994-080-420
10	1005,30	32	99	99	89	3	62,8	125,66	32	33	48	32	125,7	754,0	19,7	68,72	994-100-410

不带孔 | without bores

模数 Module	理论长 L ₁	z**	b	h _a	h	f ^{+0.5}	kg	订购编号 Part No.
2	502,65	80	24	24	22	2	2,10	994-020-305
2	1005,30	160	24	24	22	2	4,20	994-020-310
3	508,93	54	29	29	26	2	3,00	994-030-305
3	1017,87	108	29	29	26	2	6,00	994-030-310
4	502,65	40	39	39	35	3	5,25	994-040-305
4	1005,30	80	39	39	35	3	10,50	994-040-310
4	2010,61	160	39	39	35	3	21,00	994-040-320
5	502,65	32	49	39	34	3	6,70	994-050-305
5	1005,3	64	49	39	34	3	13,40	994-050-310
5	2010,61	128	49	39	34	3	26,80	994-050-320
6	508,93	27	59	49	43	3	10,40	994-060-305
6	1017,87	54	59	49	43	3	20,20	994-060-310
6	2035,75	108	59	49	43	3	40,40	994-060-320
8	502,65	20	79	79	71	3	22,38	994-080-305
8	1005,30	40	79	79	71	3	44,76	994-080-310
8	2010,61	80	79	79	71	3	89,50	994-080-320
10	1005,30	32	99	99	89	3	68,72	994-100-310

带孔, 不带销孔 | with bores, without pin holes

新设计中不再使用! | not to use for new design!

模数 Module	理论长 L ₁	z**	b	h _a	h	f ^{+0.5}	a	l	h ₁	d ₁	d ₂	t	kg	订购编号 Part No.
2	999,02	159	24	24	22	2	99,5	200	8	6,6	11	7	4,20	994-020-410-999
3	999,02	106	29	29	26	2	99,5	200	9	9	15	9	6,00	994-030-410-999
4	1005,30	80	39	39	35	3	102,6	200	12	9	15	9	10,50	994-040-410-999

z*... 齿数 | number of teeth

* 模数1-3, 齿面和齿跟高频淬火, 从模数4开始只在齿面高频淬火。

*module 1 to 3 tooth flank and tooth root inductive hardened (all-tooth hardening), module 4 to 10 only tooth flank inductive hardened (single-tooth hardening)

齿条两端可以任意连接齿条, 以达到所需长度。

安装时, 我们推荐使用安装块。

Both ends of the racks are manufactured that they can be joined together in each length.

For the mounting we propose the use of mounting pieces.

可续接安装式齿条 齿面经磨削 斜齿 背面及侧面经磨削

Racks for Continuous Mounting with Ground Teeth, Helical Teeth Ground Rear and Side Surface

	钢号 steel	1.0503 [C45]
	高频淬火 induction hardened	50-55 HRC *
	螺旋角 helix angle	19°31'42" 右旋 right hand
	齿形角 pressure angle	20°
	制齿精度 toothing quality	6 h25

带孔 | with bores

模数 Module	理论长 L ₁	L ₂	z**	b	h _a	h	f ^{+0.5}	a	l	h ₁	d ₁	d ₂	t	a ₁	l ₁	d ₃	kg	订购编号 Part No.
2	500,00	8,5	75	24	24	22	2	62,5	125	8	7	11	7	31,7	436,6	5,7	2,1	993-020-405
2	1000,00	8,5	150	24	24	22	2	62,5	125	8	7	11	7	31,7	936,6	5,7	4,1	993-020-410
3	500,00	10,3	50	29	29	26	2	62,5	125	9	10	15	9	35,0	430,0	7,7	2,9	993-030-405
3	1000,00	10,3	100	29	29	26	2	62,5	125	9	10	15	9	35,0	930,0	7,7	5,9	993-030-410
4	506,66	13,8	38	39	39	35	3	62,5	125	12	10	15	9	33,3	433,0	7,7	5,4	993-040-405
4	1000,00	13,8	75	39	39	35	3	62,5	125	12	10	15	9	33,3	933,4	7,7	10,7	993-040-410
4	2000,00	13,8	150	39	39	35	3	62,5	125	12	10	15	9	33,3	1933,4	7,7	21,4	993-040-420
5	500,00	17,4	30	49	39	34	3	62,5	125	12	14	20	13	37,5	425,0	11,7	6,5	993-050-405
5	1000,00	17,4	60	49	39	34	3	62,5	125	12	14	20	13	37,5	925,0	11,7	13,0	993-050-410
5	2000,00	17,4	120	49	39	34	3	62,5	125	12	14	20	13	37,5	1925,0	11,7	26,0	993-050-420
6	500,00	20,9	25	59	49	43	3	62,5	125	16	18	26	17	37,5	425,0	15,7	9,9	993-060-405
6	1000,00	20,9	50	59	49	43	3	62,5	125	16	18	26	17	37,5	925,0	15,7	19,8	993-060-410
6	2000,00	20,9	100	59	49	43	3	62,5	125	16	18	26	17	37,5	1925,0	15,7	36,2	993-060-420
8	480,00	28,0	18	79	79	71	3	60,0	120	25	22	33	21	120,0	240,0	19,7	21,0	993-080-405
8	960,00	28,0	36	79	79	71	3	60,0	120	25	22	33	21	120,0	720,0	19,7	42,5	993-080-410
8	1920,00	28,0	72	79	79	71	3	60,0	120	25	22	33	21	120,0	1680,0	19,7	85,0	993-080-420
10	1000,00	35,1	30	99	99	89	3	62,5	125	32	33	48	32	125,0	750,0	19,7	68,7	993-100-410

不带孔 | without bores

模数 Module	理论长 L ₁	L ₂	z**	b	h _a	h	f ^{+0.5}	kg	订购编号 Part No.
2	500,00	8,5	75	24	24	22	2	2,1	993-020-305
2	1000,00	8,5	150	24	24	22	2	4,1	993-020-310
3	500,00	10,3	50	29	29	26	2	2,9	993-030-305
3	1000,00	10,3	100	29	29	26	2	5,9	993-030-310
4	506,66	13,8	38	39	39	35	3	5,4	993-040-305
4	1000,00	13,8	75	39	39	35	3	10,7	993-040-310
4	2000,00	13,8	150	39	39	35	3	21,4	993-040-320
5	500,00	17,4	30	49	39	34	3	6,5	993-050-305
5	1000,00	17,4	60	49	39	34	3	13,0	993-050-310
5	2000,00	17,4	120	49	39	34	3	26,0	993-050-320
6	500,00	20,9	25	59	49	43	3	9,9	993-060-305
6	1000,00	20,9	50	59	49	43	3	19,8	993-060-310
6	2000,00	20,9	100	59	49	43	3	36,2	993-060-320
8	480,00	28,0	18	79	79	71	3	21,0	993-080-305
8	960,00	28,0	36	79	79	71	3	42,5	993-080-310
8	1920,00	28,0	72	79	79	71	3	85,0	993-080-320
10	1000,00	35,1	30	99	99	89	3	68,7	993-100-310

带孔, 不带销孔 | with bores, without pin holes

新设计中不再使用! | not to use for new design!

模数 Module	理论长 L ₁	L ₂	z**	b	h _a	h	f ^{+0.5}	a	l	h ₁	d ₁	d ₂	t	kg	订购编号 Part No.
2	1000,00	8,5	150	24	24	22	2	91,5	200	8	6,6	11	7	4,20	993-020-410-999
3	1000,00	10,3	100	29	29	26	3	89,7	200	9	9	15	9	6,00	993-030-410-999
4	1000,00	13,8	75	39	39	35	3	86,2	200	12	9	15	9	10,50	993-040-410-999

z**...齿数 | number of teeth

* 模数1-3, 齿面和齿跟高频淬火, 从模数4开始只在齿面高频淬火。

* module 1 to 3 tooth flank and tooth root inductive hardened (all-tooth hardening), module 4 to 10 only tooth flank inductive hardened (single-tooth hardening)

齿条两端可以任意连接齿条, 以达到所需长度。

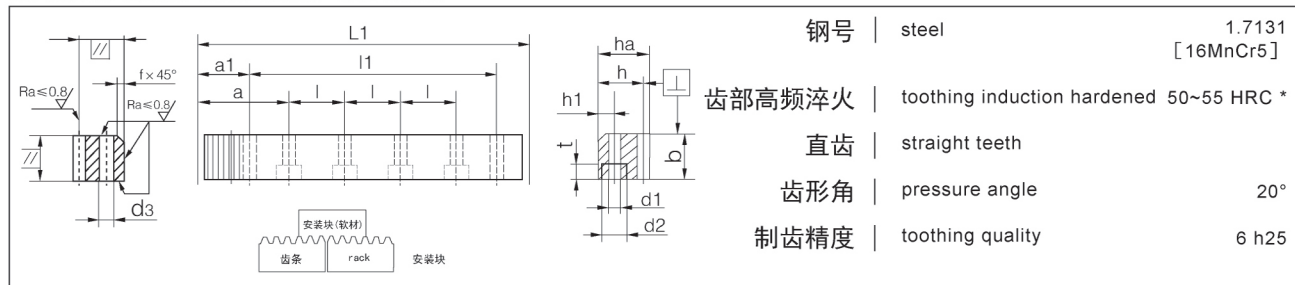
安装时, 我们推荐使用安装块。

Both ends of the racks are manufactured that they can be joined together in each length.

For the mounting we propose the use of mounting pieces.

可续接安装式齿条 齿面经磨削 直齿 背面及侧面经磨削

Racks for Continuous Mounting with Ground Teeth, Straight Teeth Ground Rear and Side Surface



带孔 | with bores

模数 Module	理论长 L ₁	z**	b	h _a	h	f +0.5	a	l	h ₁	d ₁	d ₂	t	a ₁	l ₁	d ₃	kg	订购编号 Part No.
2	502,65	80	24	24	22	2	62,8	125,66	8	7	11	7	31,3	440,1	5,7	2,10	994-020-205
2	1005,30	160	24	24	22	2	62,8	125,66	8	7	11	7	31,3	942,7	5,7	4,20	994-020-210
3	508,93	54	29	29	26	2	63,6	127,23	9	10	15	9	34,4	440,1	7,7	3,00	994-030-205
3	1017,87	108	29	29	26	2	63,6	127,23	9	10	15	9	34,4	949,1	7,7	6,00	994-030-210
4	502,65	40	39	39	35	3	62,8	125,66	12	10	15	9	37,5	427,7	7,7	5,30	994-040-205
4	1005,30	80	39	39	35	3	62,8	125,66	12	10	15	9	37,5	930,3	7,7	10,60	994-040-210

不带孔 | without bores

模数 Module	理论长 L ₁	z**	b	h _a	h	f +0.5	kg	订购编号 Part No.
2	502,65	80	24	24	22	2	2,10	994-020-105
2	1005,30	160	24	24	22	2	4,20	994-020-110
3	508,93	54	29	29	26	2	3,00	994-030-105
3	1017,87	108	29	29	26	2	6,00	994-030-110
4	502,65	40	39	39	35	3	5,30	994-040-105
4	1005,30	80	39	39	35	3	10,60	994-040-110

z**... 齿数 | number of teeth

* 模数1-3, 齿面和齿跟高频淬火, 从模数4开始只在齿面高频淬火。

*case hardening steel-module 1 to 3 tooth flank and tooth root inductive hardened (all-tooth hardening), module 4 to 10 only tooth flank inductive hardened (single-tooth hardening)

齿条两端可以任意连接齿条, 以达到所需长度。

安装时, 我们推荐使用安装块。

Both ends of the racks are manufactured that they can be joined together in each length.

For the mounting we propose the use of mounting pieces.

润滑齿条和齿轮时, 我们推荐使用自动润滑系统

For lubrication of racks and pinions we propose the use of automatical lubrication donors.

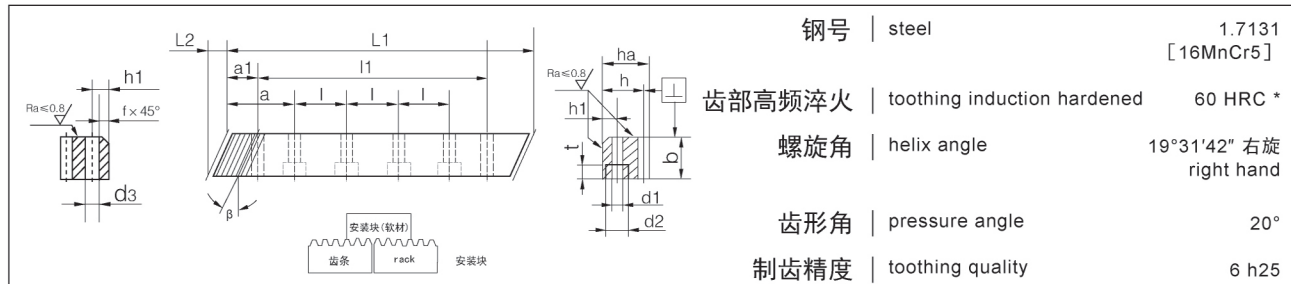
如果您需要其他尺寸, 我们的设计师将竭诚为您服务

If you need other dimensions-please contact our engineering department.



可续接安装式齿条 齿面经磨削 斜齿 背面及侧面经磨削

Racks for Continuous Mounting with Ground Teeth, Helical Teeth
Ground Rear and Side Surface



带孔 | with bores

模数 Module	理论长 L1	L2	z**	b	ha	h	f +0.5	a	l	h1	d1	d2	t	a1	l1	d3	kg	订购编号 Part No.
2	500,00	8,5	75	24	24	22	2	62,5	125	8	7	11	7	31,7	436,6	5,7	2,10	993-020-205
2	1000,00	8,5	150	24	24	22	2	62,5	125	8	7	11	7	31,7	936,6	5,7	4,20	993-020-210
3	500,00	10,30	50	29	29	26	2	62,5	125	9	10	15	9	35,0	430,0	7,7	3,00	993-030-205
3	1000,00	10,30	100	29	29	26	2	62,5	125	9	10	15	9	35,0	930,0	7,7	6,00	993-030-210
4	506,66	13,80	38	39	39	35	3	62,5	125	12	10	15	9	33,3	433,0	7,7	5,30	993-040-205
4	1000,00	13,80	75	39	39	35	3	62,5	125	12	10	15	9	33,3	933,4	7,7	10,60	993-040-210

不带孔 | without bores

模数 Module	理论长 L1	L2	z**	b	ha	h	f +0.5	kg	订购编号 Part No.
2	500,00	8,5	75	24	24	22	2	2,10	993-020-105
2	1000,00	8,5	150	24	24	22	2	4,20	993-020-110
3	500,00	10,3	50	29	29	26	2	3,00	993-030-105
3	1000,00	10,3	100	29	29	26	2	6,00	993-030-110
4	506,66	13,8	38	39	39	35	3	5,30	993-040-105
4	1000,00	13,8	75	39	39	35	3	10,60	993-040-110

z**... 齿数 | number of teeth

* 模数1-3, 齿面和齿跟高频淬火, 从模数4开始只在齿面高频淬火。

*case hardening steel-module 1 to 3 tooth flank and tooth root inductive hardened (all-tooth hardening) ,module 4 to 10 only tooth flank inductive hardened (single-tooth hardening)

齿条两端可以任意连接齿条, 以达到所需长度。

安装时, 我们推荐使用安装块。

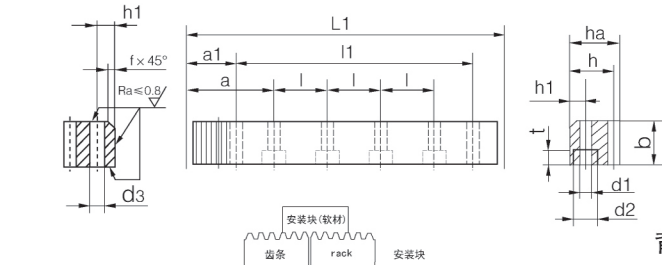
Both ends of the racks are manufactured that they can be joined together in each length.

For the mounting we propose the use of mounting pieces.



可续接安装式齿条 经调质处理 直齿 背面及定位面经磨削

Racks for Continuous Mounting - Quenched and Tempered, Straight Teeth
Ground Rear and Side Surface

		钢号 steel	1.7225 [42 CrMo4 V]
		直齿 straight teeth	
		齿形角 pressure angle	20°
		制齿精度 tooth quality	8 e27
		背面及定位面经磨削 ground rear and contact surface	

带孔 | with bores

模数 Module	理论长 L ₁	z**	b	h _a	h	f ^{+0.5}	a	l	h ₁	d ₁	d ₂	t	a ₁	l ₁	d ₃	kg	订购编号 Part No.
2	502,65	80	24	24	22	2	62,8	125,66	8	7	11	7	31,3	440,1	5,7	2,20	996-020-205
2	1005,30	160	24	24	22	2	62,8	125,66	8	7	11	7	31,3	942,7	5,7	4,30	996-020-210
2	2010,61	320	24	24	22	2	62,8	125,66	8	7	11	7	31,3	1948,0	5,7	8,60	996-020-220
3	508,93	54	29	29	26	2	63,6	127,23	9	10	15	9	34,4	440,1	7,7	3,10	996-030-205
3	1017,87	108	29	29	26	2	63,6	127,23	9	10	15	9	34,4	949,1	7,7	6,20	996-030-210
3	2035,75	216	29	29	26	2	63,6	127,23	9	10	15	9	34,4	1967,0	7,7	12,40	996-030-220
4	502,65	40	39	39	35	3	62,8	125,66	12	10	15	9	37,5	427,7	7,7	5,50	996-040-205
4	1005,30	80	39	39	35	3	62,8	125,66	12	10	15	9	37,5	930,3	7,7	11,00	996-040-210
4	2010,61	160	39	39	35	3	62,8	125,66	12	10	15	9	37,5	1935,6	7,7	22,00	996-040-220
5	502,65	32	49	39	34	3	62,8	125,66	12	14	20	13	30,2	442,3	11,7	6,80	996-050-205
5	1005,30	64	49	39	34	3	62,8	125,66	12	14	20	13	30,2	945,0	11,7	13,60	996-050-210
5	2010,61	128	49	39	34	3	62,8	125,66	12	14	20	13	30,2	1950,0	11,7	27,20	996-050-220

不带孔 | without bores

模数 Module	理论长 L ₁	z**	b	h _a	h	f ^{+0.5}	kg	订购编号 Part No.
2	502,65	80	24	24	22	2	2,20	996-020-105
2	1005,30	160	24	24	22	2	4,30	996-020-110
2	2010,61	320	24	24	22	2	8,60	996-020-120
3	508,93	54	29	29	26	2	3,10	996-030-105
3	1017,87	108	29	29	26	2	6,20	996-030-110
3	2035,75	216	29	29	26	2	12,40	996-030-120
4	502,65	40	39	39	35	3	5,50	996-040-105
4	1005,30	80	39	39	35	3	11,00	996-040-110
4	2010,61	160	39	39	35	3	22,00	996-040-120
5	502,65	32	49	39	34	3	6,80	996-050-105
5	1005,30	64	49	39	34	3	13,60	996-050-110
5	2010,61	128	49	39	34	3	27,20	996-050-120

z**...齿数 | number of teeth

齿条两端可以任意连接齿条, 以达到所需长度。

安装时, 我们推荐使用安装块。

Both ends of the racks are manufactured that they can be joined together in each length.

For the mounting we propose the use of mounting pieces.

可续接安装式齿条 经调质处理 斜齿 背面及定位面经磨削

Racks for Continuous Mounting - Quenched and Tempered, Helical Teeth
Ground Rear and Contact Surface

	钢号	steel	1.7225 [42 CrMo4 V]
	螺旋角	helix angle	19°31'42" 右旋 right hand
	齿形角	pressure angle	20°
	制齿精度	toothing quality	8 e27
	背面及定位面经磨削	ground rear and contact surface	

带孔 | with bores

模数 Module	理论长 L ₁	L ₂	z**	b	h _a	h	f ^{+0.5}	a	l	h ₁	d ₁	d ₂	t	a ₁	l ₁	d ₃	kg	订购编号 Part No.
2	500,00	8,5	75	24	24	22	2	62,5	125	8	7	11	7	31,7	436,6	5,7	2,10	993-020-505
2	1000,00	8,5	150	24	24	22	2	62,5	125	8	7	11	7	31,7	936,6	5,7	4,30	993-020-510
2	2000,00	8,5	300	24	24	22	2	62,5	125	8	7	11	7	31,7	1936,6	7,7	8,60	993-020-520
3	500,00	10,3	50	29	29	26	2	62,5	125	9	10	15	9	35,0	430,0	7,7	3,00	993-030-505
3	1000,00	10,3	100	29	29	26	2	62,5	125	9	10	15	9	35,0	930,0	7,7	6,10	993-030-510
3	2000,00	10,3	200	29	29	26	2	62,5	125	9	10	15	9	35,0	1930,0	7,7	12,2	993-030-520
4	506,66	13,8	38	39	39	35	3	62,5	125	12	10	15	9	33,3	433,0	7,7	5,50	993-040-505
4	1000,00	13,8	75	39	39	35	3	62,5	125	12	10	15	9	33,3	933,4	7,7	10,90	993-040-510
4	2000,00	13,8	150	39	39	35	3	62,5	125	12	10	15	9	33,3	1933,4	7,7	21,80	993-040-520
5	500,00	17,4	30	49	39	34	3	62,5	125	12	14	20	13	37,5	425,0	11,7	6,50	993-050-505
5	1000,00	17,4	60	49	39	34	3	62,5	125	12	14	20	13	37,5	925,0	11,7	13,00	993-050-510
5	2000,00	17,4	120	49	39	34	3	62,5	125	12	14	20	13	37,5	1925,0	11,7	26,00	993-050-520

不带孔 | without bores

模数 Module	理论长 L ₁	L ₂	z**	b	h _a	h	f ^{+0.5}	kg	订购编号 Part No.
2	500,00	8,5	75	24	24	22	2	2,10	993-020-705
2	1000,00	8,5	150	24	24	22	2	4,30	993-020-710
2	2000,00	8,5	300	24	24	22	2	8,60	993-020-720
3	500,00	10,3	50	29	29	26	2	3,00	993-030-705
3	1000,00	10,3	100	29	29	26	2	6,1	993-030-710
3	2000,00	10,3	200	29	29	26	2	12,2	993-030-720
4	506,66	13,8	38	39	39	35	3	5,50	993-040-705
4	1000,00	13,8	75	39	39	35	3	10,90	993-040-710
4	2000,00	13,8	150	39	39	35	3	21,8	993-040-720
5	500,00	17,4	30	49	39	34	3	6,50	993-050-705
5	1000,00	17,4	60	49	39	34	3	13,00	993-050-710
5	2000,00	17,4	120	49	39	34	3	26,00	993-050-720

z**...齿数 | number of teeth

齿条两端可以任意连接齿条, 以达到所需长度。

安装时, 我们推荐使用安装块。

Both ends of the racks are manufactured that they can be joined together in each length.

For the mounting we propose the use of mounting pieces.

可续接安装式齿条 高频淬火 直齿 背面及侧面经磨削

Racks for Continuous Mounting - Induction Hardened, Straight Teeth Ground Rear and Side Surface

GLOBAL RACK

	钢号 steel	1.0503 [C45]
	高频淬火 induction hardened	50-55 HRC *
	直齿 straight teeth	
	齿形角 pressure angle	20°
	制齿精度 tooth quality	10 e27

带孔 | with bores

模数 Module	理论长 L ₁	z**	b	h _a	h	f ^{+0.5}	a	l	h ₁	d ₁	d ₂	t	a ₁	l ₁	d ₃	kg	订购编号 Part No.
2	502,65	80	24	24	22	2	62,8	125,66	8	7	11	7	31,3	440,1	5,7	2,10	994-020-805
2	1005,30	160	24	24	22	2	62,8	125,66	8	7	11	7	31,3	942,7	5,7	4,20	994-020-810
2	2010,61	320	24	24	22	2	62,8	125,66	8	7	11	7	31,3	1948,0	5,7	8,40	994-020-820
3	508,93	54	29	29	26	2	63,6	127,23	9	10	15	9	34,4	440,1	7,7	3,00	994-030-805
3	1017,87	108	29	29	26	2	63,6	127,23	9	10	15	9	34,4	949,1	7,7	6,00	994-030-810
3	2035,75	216	29	29	26	2	63,6	127,23	9	10	15	9	34,4	1967,0	7,7	12,00	994-030-820
4	502,65	40	39	39	35	3	62,83	125,66	12	10	15	9	37,5	427,7	7,7	5,30	994-040-805
4	1005,30	80	39	39	35	3	62,83	125,66	12	10	15	9	37,5	930,3	7,7	10,60	994-040-810
4	2010,61	160	39	39	35	3	62,83	125,66	12	10	15	9	37,5	1935,6	7,7	21,20	994-040-820
5	502,65	32	49	39	34	3	62,83	125,66	12	14	20	13	30,2	442,3	11,7	6,90	994-050-805
5	1005,30	64	49	39	34	3	62,83	125,66	12	14	20	13	30,2	945,0	11,7	13,80	994-050-810
5	2010,61	128	49	39	34	3	62,83	125,66	12	14	20	13	30,2	1950,3	11,7	27,60	994-050-820
6	508,93	27	59	49	43	3	63,62	127,23	16	18	26	17	31,4	446,1	15,7	10,50	994-060-805
6	1017,87	54	59	49	43	3	63,62	127,23	16	18	26	17	31,4	955,0	15,7	21,00	994-060-810
6	2035,75	108	59	49	43	3	63,62	127,23	16	18	26	17	31,4	1972,9	15,7	42,00	994-060-820

不带孔 | without bores

模数 Module	理论长 L ₁	z**	b	h _a	h	f ^{+0.5}	kg	订购编号 Part No.
2	502,65	80	24	24	22	2	2,10	994-020-905
2	1005,30	160	24	24	22	2	4,20	994-020-910
2	2010,61	320	24	24	22	2	8,40	994-020-920
3	508,93	54	29	29	26	2	3,00	994-030-905
3	1017,87	108	29	29	26	2	6,00	994-030-910
3	2035,75	216	29	29	26	2	12,00	994-030-920
4	502,65	40	39	39	35	3	5,30	994-040-905
4	1005,30	80	39	39	35	3	10,60	994-040-910
4	2010,60	160	39	39	35	3	21,20	994-040-920
5	502,65	32	49	39	34	3	6,90	994-050-905
5	1005,30	64	49	39	34	3	13,80	994-050-910
5	2010,61	128	49	39	34	3	27,60	994-050-920
6	508,93	27	59	49	43	3	10,50	994-060-905
6	1017,87	54	59	49	43	3	21,00	994-060-910
6	2035,75	108	59	49	43	3	42,00	994-060-920

z**...齿数 | number of teeth

* 模数1-3, 齿面和齿跟高频淬火, 从模数4开始只在齿面高频淬火。

*module 1 to 3 tooth flank and tooth root inductive hardened (all-tooth hardening), module 4 to 10 only tooth flank inductive hardened (single-tooth hardening)

齿条两端可以任意连接齿条, 以达到所需长度。

安装时, 我们推荐使用安装块。

Both ends of the racks are manufactured that they can be joined together in each length.

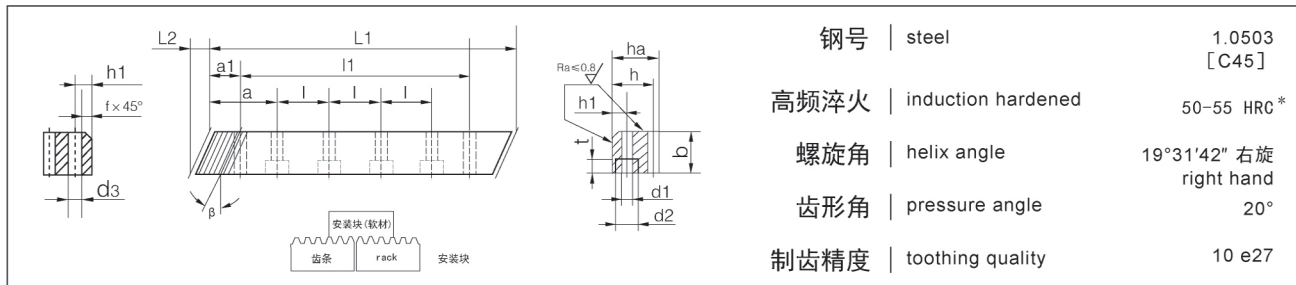
For the mounting we propose the use of mounting pieces.

如果您需要其他尺寸, 我们的设计师将竭诚为您服务。

If you need other dimensions-please contact our engineering department.

可续接安装式齿条 高频淬火 斜齿 背面及侧面经磨削

Racks for Continuous Mounting - Induction Hardened, Helical Teeth Ground Rear and Side Surface



带孔 | with bores

模数 Module	理论长 L1	L2	z**	b	ha	h	f +0.5	a	l	h1	d1	d2	t	a1	l1	d3	kg	订购编号 Part No.
2	500,00	8,5	75	24	24	22	2	62,5	125	8	7	11	7	31,7	436,6	5,7	2,10	993-020-805
2	1000,00	8,5	150	24	24	22	2	62,5	125	8	7	11	7	31,7	936,6	5,7	4,20	993-020-810
3	500,00	10,3	50	29	29	26	2	62,5	125	9	10	15	9	35,0	430,0	7,7	3,00	993-030-805
3	1000,00	10,3	100	29	29	26	2	62,5	125	9	10	15	9	35,0	930,6	7,7	6,00	993-030-810
4	506,66	13,8	38	39	39	35	3	62,5	125	12	10	15	9	33,3	433,0	7,7	5,30	993-040-805
4	1000,00	13,8	75	39	39	35	3	62,5	125	12	10	15	9	33,3	933,4	7,7	10,60	993-040-810
5	500,00	17,4	30	49	39	34	3	62,5	125	12	14	20	13	37,5	425,0	11,7	6,50	993-050-805
5	1000,00	17,4	60	49	39	34	3	62,5	125	12	14	20	13	37,5	925,0	11,7	13,00	993-050-810
6	500,00	20,90	25	59	49	43	3	62,5	125	16	18	26	17	37,5	425,0	15,7	9,90	993-060-805
6	1000,00	20,90	50	59	49	43	3	62,5	125	16	18	26	17	37,5	925,0	15,7	19,80	993-060-810

不带孔 | without bores

模数 Module	理论长 L1	L2	z**	b	ha	h	f +0.5	kg	订购编号 Part No.
2	500,00	8,5	75	24	24	22	2	2,10	993-020-905
2	1000,00	8,5	150	24	24	22	2	4,20	993-020-910
3	500,00	10,3	50	29	29	26	2	3,00	993-030-905
3	1000,00	10,3	100	29	29	26	2	6,00	993-030-910
4	506,66	13,8	38	39	39	35	2	5,30	993-040-905
4	1000,00	13,8	75	39	39	35	3	10,60	993-040-910
5	500,00	17,4	30	49	39	34	3	6,50	993-050-905
5	1000,00	17,4	60	49	39	34	3	13,00	993-050-910
6	500,00	20,90	25	59	49	43	3	9,90	993-060-905
6	1000,00	20,90	50	59	49	43	3	19,80	993-060-910

z**...齿数 | number of teeth

* 模数1-3, 齿面和齿跟高频淬火, 从模数4开始只在齿面高频淬火。

*module 1 to 3 tooth flank and tooth root inductive hardened (all-tooth hardening) ,module 4 to 10 only tooth flank inductive hardened (single-tooth hardening)

齿条两端可以任意连接齿条, 以达到所需长度。

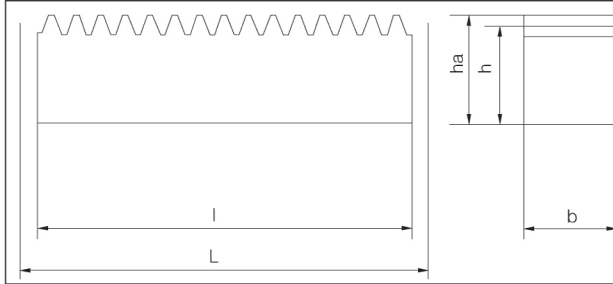
安装时, 我们推荐使用安装块。

Both ends of the racks are manufactured that they can be joined together in each length.

For the mounting we propose the use of mounting pieces.

可续接安装式齿条 高频淬火

Racks for Continuous Mounting Induction Hardened



钢号	steel	1.0503 [C45]
直齿	straight teeth	
齿形角	pressure angle	20°
高频淬火	induction hardened	50-55 HRC *
制齿精度	tooth quality	10 e27

模数 Module	理论长 L	l	z**	b h ₁₁	h _a	h	kg	订购编号 Part No.	
1	499,51	499,0	+/- 0,5	159	10	9,80	8,80	0,34	996-010-405
1	999,02	998,5	+/- 0,5	318	10	9,80	8,80	0,68	996-010-410
1.5	499,51	499,1	+/- 0,5	106	15	14,80	13,30	0,78	996-015-405
1.5	999,02	998,6	+/- 0,5	212	15	14,80	13,30	1,55	996-015-410
1.5	1998,05	1997,6	+/- 0,5	424	15	14,80	13,30	3,10	996-015-420
2	502,65	502,1	+/- 0,5	80	20	19,75	17,75	1,40	996-020-405
2	999,02	998,5	+/- 0,5	159	20	19,75	17,75	2,80	996-020-410
2	1998,05	1997,5	+/- 0,5	318	20	19,75	17,75	5,60	996-020-420
2.5	502,65	502,1	+/- 0,5	64	25	24,75	22,25	2,10	996-025-405
2.5	997,45	996,9	+/- 0,5	127	25	24,75	22,25	4,20	996-025-410
2.5	2002,76	2002,3	+/- 0,5	255	25	24,75	22,25	8,40	996-025-420
3	499,51	498,9	+/- 0,5	53	30	29,75	26,75	3,10	996-030-405
3	999,02	998,4	+/- 0,5	106	30	29,75	26,75	6,20	996-030-410
3	1998,05	1997,4	+/- 0,5	212	30	29,75	26,75	12,40	996-030-420
4	502,65	501,9	+/- 0,5	40	40	39,70	35,70	5,50	996-040-405
4	1005,30	1004,6	+/- 0,5	80	40	39,70	35,70	11,00	996-040-410
4	1998,05	1997,3	+/- 0,5	159	40	39,70	35,70	22,00	996-040-420
5	502,65	501,8	+/- 0,6	32	50	49,70	44,70	8,60	996-050-405
5	1005,30	1004,5	+/- 0,6	64	50	49,70	44,70	17,20	996-050-410
5	2010,61	2009,8	+/- 0,6	128	50	49,70	44,70	34,40	996-050-420
6	508,93	508,0	+/- 0,6	27	60	59,65	53,65	12,30	996-060-405
6	999,02	998,1	+/- 0,6	53	60	59,65	53,65	24,50	996-060-410
6	1998,05	1997,2	+/- 0,6	106	60	59,65	53,65	49,00	996-060-420
8	502,65	501,4	+/- 0,6	20	80	79,60	71,60	21,40	996-080-405
8	1005,30	1004,0	+/- 0,6	40	80	79,60	71,60	42,70	996-080-410
8	2010,61	2009,4	+/- 0,6	80	80	79,60	71,60	85,40	996-080-420
10	1005,30	1003,9	+/- 0,6	32	100	99,60	89,60	70,60	996-100-410

模数 Module	齿距 pitch	理论长 L	l		z**	b h ₁₁	h _a	h	kg	订购编号 Part No.
1,591	5	500	499,6	+/- 0,5	100	15	14,80	13,21	0,78	996-016-405
1,591	5	1000	999,6	+/- 0,5	200	15	14,80	13,21	1,55	996-016-410
1,591	5	2000	1999,1	+/- 0,5	400	15	14,80	13,21	3,10	996-016-420
3,183	10	500	499,4	+/- 0,5	50	30	29,70	26,52	3,10	996-031-405
3,183	10	1000	999,4	+/- 0,5	100	30	29,70	26,52	6,20	996-031-410
3,183	10	2000	1999,4	+/- 0,5	200	30	29,70	26,52	12,40	996-031-420

z*...齿数 | number of teeth

* 模数1-3, 齿面和齿跟高频淬火, 从模数4开始只在齿面高频淬火。

*module 1 to 3 tooth flank and tooth root inductive hardened (all-tooth hardening), module 4 to 10 only tooth flank inductive hardened (single-tooth hardening)

齿条两端可以任意连接齿条, 以达到所需长度。

安装时, 我们推荐使用安装块。

Both ends of the racks are manufactured that they can be joined together in each length.

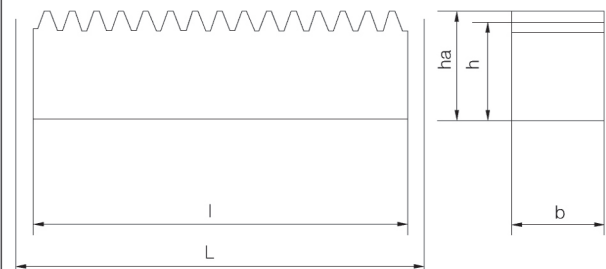
For the mounting we propose the use of mounting pieces.

如果您需要其他尺寸, 我们的设计师将竭诚为您服务。

If you need other dimensions-please contact our engineering department.

可续接安装式齿条 不锈钢

Racks for Continuous Mounting Stainless Steel

	钢号	steel	1.4305
	直齿	straight teeth	
	齿形角	pressure angle	20°
	制齿精度	tooth quality	8 e27

模数 Module	理论长							订购编号 Part No.	
	L	l	z**	b	h _a	h	kg		
1	499,51	499,0	+/- 0,3	159	10	9,80	8,80	0,34	996-010-605
1	999,02	998,5	+/- 0,3	318	10	9,80	8,80	0,68	996-010-610
1.5	499,51	499,1	+/- 0,3	106	15	14,80	13,30	0,78	996-015-605
1.5	999,02	998,6	+/- 0,3	212	15	14,80	13,30	1,55	996-015-610
2	502,65	502,1	+/- 0,3	80	20	19,75	17,75	1,40	996-020-605
2	999,02	998,5	+/- 0,3	159	20	19,75	17,75	2,80	996-020-610
2	1998,05	1997,5	+/- 0,3	318	20	19,75	17,75	5,60	996-020-620
3	499,51	498,9	+/- 0,3	53	30	29,75	26,75	3,10	996-030-605
3	999,02	998,4	+/- 0,3	106	30	29,75	26,75	6,20	996-030-610
3	1998,05	1997,4	+/- 0,3	212	30	29,75	26,75	12,40	996-030-620
4	1005,30	1004,6	+/- 0,3	80	40	39,70	35,70	11,00	996-040-610
4	1998,05	1997,3	+/- 0,3	159	40	39,70	35,70	22,00	996-040-620

模数 Module	齿距 pitch	理论长 L	l	z**	b	h _a	h	kg	订购编号 Part No.	
1,591	5	250	249,6	+/- 0,30	50	15	14,80	13,21	0,39	996-016-602
1,591	5	500	499,6	+/- 0,30	100	15	14,80	13,21	0,78	996-016-605
1,591	5	1000	999,6	+/- 0,30	200	15	14,80	13,21	1,55	996-016-610
3,183	10	250	249,4	+/- 0,30	25	30	29,70	26,52	1,55	996-031-602
3,183	10	500	499,4	+/- 0,30	50	30	29,70	26,52	3,10	996-031-605
3,183	10	1000	999,4	+/- 0,30	100	30	29,70	26,52	6,20	996-031-610
3,183	10	2000	1999,4	+/- 0,30	200	30	29,70	26,52	12,40	996-031-620

z**...齿数 | number of teeth

齿条两端可以任意连接齿条, 以达到所需长度。

安装时, 我们推荐使用安装块。

Both ends of the racks are manufactured that they can be joined together in each length.

For the mounting we propose the use of mounting pieces.

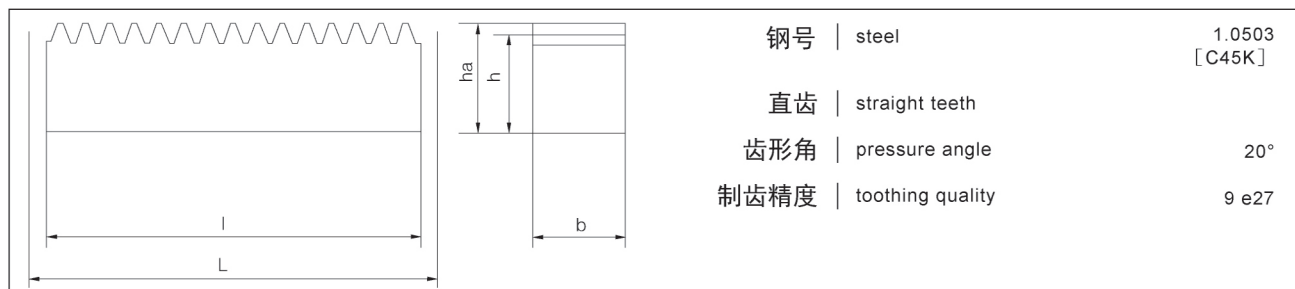
如果您需要其他尺寸, 我们的设计师将竭诚为您服务。

If you need other dimensions-please contact our engineering department.



可续接安装式齿条

Racks for Continuous Mounting



模数 Module	理论长 L								订购编号 Part No.
	l	z**	b h ₁₁	h _a	h	kg			
1	499,51	499,0	+/- 0,30	159	10	9,80	8,80	0,34	996-010-005
1	999,02	998,5	+/- 0,30	318	10	9,80	8,80	0,68	996-010-010
1.5	499,51	499,1	+/- 0,30	106	15	14,80	13,30	0,78	996-015-005
1.5	999,02	998,6	+/- 0,30	212	15	14,80	13,30	1,55	996-015-010
1.5	1998,05	1997,6	+/- 0,30	424	15	14,80	13,30	3,10	996-015-020
2	502,65	502,1	+/- 0,30	80	20	19,75	17,75	1,40	996-020-005
2	999,02	998,5	+/- 0,30	159	20	19,75	17,75	2,80	996-020-010
2	1998,05	1997,5	+/- 0,30	318	20	19,75	17,75	5,60	996-020-020
2	3015,92	3015,4	+/- 0,30	480	20	19,75	17,75	8,50	996-020-030
2.5	502,65	502,1	+/- 0,30	64	25	24,75	22,25	2,10	996-025-005
2.5	997,45	996,9	+/- 0,30	127	25	24,75	22,25	4,20	996-025-010
2.5	2002,76	2002,3	+/- 0,30	255	25	24,75	22,25	8,40	996-025-020
2.5	3000,22	2999,7	+/- 0,30	382	25	24,75	22,25	12,60	996-025-030
3	499,51	498,9	+/- 0,30	53	30	29,75	26,75	3,10	996-030-005
3	999,02	998,4	+/- 0,30	106	30	29,75	26,75	6,20	996-030-010
3	1998,05	1997,4	+/- 0,30	212	30	29,75	26,75	12,40	996-030-020
3	3053,62	3053,0	+/- 0,30	324	30	29,75	26,75	19,32	996-030-030
4	502,65	501,9	+/- 0,30	40	40	39,70	35,70	5,50	996-040-005
4	1005,30	1004,6	+/- 0,30	80	40	39,70	35,70	11,00	996-040-010
4	1998,05	1997,3	+/- 0,30	159	40	39,70	35,70	22,00	996-040-020
4	3015,92	3015,2	+/- 0,30	240	40	39,70	35,70	33,93	996-040-030
5	502,65	501,8	+/- 0,40	32	50	49,70	44,70	8,60	996-050-005
5	1005,30	1004,5	+/- 0,40	64	50	49,70	44,70	17,20	996-050-010
5	2010,61	2009,8	+/- 0,40	128	50	49,70	44,70	34,40	996-050-020
5	3015,93	3015,1	+/- 0,40	192	50	49,70	44,70	34,40	996-050-030
6	508,93	508,0	+/- 0,40	27	60	59,65	53,65	12,30	996-060-005
6	999,02	998,1	+/- 0,40	53	60	59,65	53,65	24,50	996-060-010
6	1998,05	1997,2	+/- 0,40	106	60	59,65	53,65	49,00	996-060-020
8	502,65	501,4	+/- 0,50	20	80	79,60	71,60	21,40	996-080-005
8	1005,30	1004,0	+/- 0,50	40	80	79,60	71,60	42,70	996-080-010
8	2010,61	2009,4	+/- 0,50	80	80	79,60	71,60	85,40	996-080-020
10	1005,30	1003,9	+/- 0,50	32	100	99,60	89,60	70,60	996-100-010

模数 Module	齿距 pitch	理论长 L	l	z**	b h ₁₁	h _a	h	kg	订购编号 Part No.	
1,591	5	500	499,6	+/- 0,30	100	15	14,80	13,21	0,78	996-016-005
1,591	5	1000	999,6	+/- 0,30	200	15	14,80	13,21	1,55	996-016-010
1,591	5	2000	1999,6	+/- 0,30	400	15	14,80	13,21	3,10	996-016-020
3,183	10	500	499,4	+/- 0,30	50	30	29,70	26,52	3,10	996-031-005
3,183	10	1000	999,4	+/- 0,30	100	30	29,70	26,52	6,20	996-031-010
3,183	10	2000	1999,4	+/- 0,30	200	30	29,70	26,52	12,40	996-031-020

z**...齿数 | number of teeth

齿条两端可以任意连接齿条, 以达到所需长度。
安装时, 我们推荐使用安装块。

Both ends of the racks are manufactured that they can be joined together in each length.

For the mounting we propose the use of mounting pieces.

如果您需要其他尺寸, 我们的设计师将竭诚为您服务。

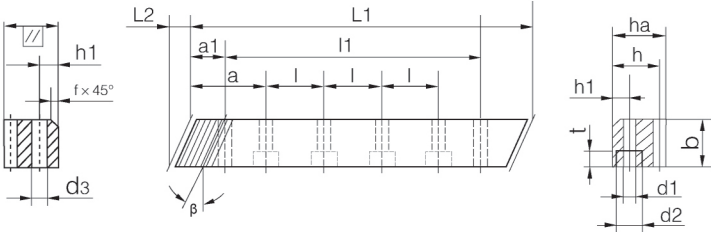
If you need other dimensions-please contact our engineering department.

标准齿条是用过齿顶式铣刀,
由1.0503 [C45] 冷拔方钢, 依据
DIN1789级制齿精度, 并依据
DIN3962, 3963和3967加工而成。

Standard racks made out of
material Steel 1.0503 (C45k) are
manufactured according to
DIN 178 in tooth quality 9
according to DIN 3962,3963 and 3967

可续接安装式齿条 斜齿

Racks for Continuous Mounting, Helical Teeth

		钢号 steel	1.0503 [C45k]
		螺旋角 helix angle	19°31'42" 右旋 right hand
		齿形角 pressure angle	20°
		制齿精度 toothing quality	9 e27

带孔 | with bores

模数 Module	理论长 L1	L2	z**	b	ha	ho	f +0,5	a	l	h1	d1	d2	t	a1	l1	d3	kg	订购编号 Part No.
2	500	8,9	75	25	24,75	22,75	2	62,5	125	8	7	11	7	31,7	436,6	5,7	2,2	995-020-205
2	1000	8,9	150	25	24,75	22,75	2	62,5	125	8	7	11	7	31,7	936,6	5,7	4,4	995-020-210
2	2000	8,9	300	25	24,75	22,75	2	62,5	125	8	7	11	7	31,7	1936,6	5,7	8,8	995-020-220
3	500	10,6	50	30	29,75	26,75	2	62,5	125	9	10	15	9	35	430	7,7	3,1	995-030-205
3	1000	10,6	100	30	29,75	26,75	2	62,5	125	9	10	15	9	35	930	7,7	6,2	995-030-210
3	2000	10,6	200	30	29,75	26,75	2	62,5	125	9	10	15	9	35	1930	7,7	12,5	995-030-220
4	506,66	14,5	38	40	39,70	35,70	3	62,5	125	12	10	15	9	33,3	433	7,7	5,6	995-040-205
4	1000	14,2	75	40	39,70	35,70	3	62,5	125	12	10	15	9	33,3	933,4	7,7	11,1	995-040-210
4	2000	14,2	150	40	39,70	35,70	3	62,5	125	12	10	15	9	33,3	1933,4	7,7	22,2	995-040-220
5	1000	17,7	60	50	39,70	34,70	3	62,5	125	12	14	20	13	37,5	925	11,7	13,26	995-050-210
5	2000	17,7	120	50	39,70	34,70	3	62,5	125	12	14	20	13	37,5	1925	11,7	26,52	995-050-220
6	1000	21,3	50	60	49,70	43,70	3	62,5	125	16	18	26	17	37,5	925	15,7	20,12	995-060-210
6	2000	21,3	100	60	49,70	43,70	3	62,5	125	16	18	26	17	37,5	1925	15,7	40,24	995-060-220
8	960	28,4	36	80	79,60	71,60	3	60	120	25	25	33	21	120	720	19,7	44,85	995-080-210
8	1920	28,4	72	80	79,60	71,60	3	60	120	25	25	33	21	120	1680	19,7	89,71	995-080-220
10	1000	35,5	30	100	99,00	89,00	3	62,5	125	32	33	48	32	125	750	19,7	69,80	995-100-210

不带孔 | without bores

模数 Module	理论长 L1	L2	z**	b	ha	ho	f +0,5	kg	订购编号 Part No.
2	500	8,9	75	25	24,75	22,75	2	2,2	995-020-105
2	1000	8,9	150	25	24,75	22,75	2	4,4	995-020-110
2	2000	8,9	300	25	24,75	22,75	2	8,8	995-020-120
3	500	10,6	50	30	29,75	26,75	2	3,1	995-030-105
3	1000	10,6	100	30	29,75	26,75	2	6,2	995-030-110
3	2000	10,6	200	30	29,75	26,75	2	12,5	995-030-120
4	506,66	14,5	38	40	39,70	35,70	3	5,6	995-040-105
4	1000	14,2	75	40	39,70	35,70	3	11,1	995-040-110
4	2000	14,2	150	40	39,70	35,70	3	22,2	995-040-120
5	1000	17,7	60	50	39,70	34,70	3	13,26	995-050-110
5	2000	17,7	120	50	39,70	34,70	3	26,52	995-050-120
6	1000	21,3	50	60	49,70	43,70	3	20,12	995-060-110
6	2000	21,3	100	60	49,70	43,70	3	40,24	995-060-120
8	960	28,4	36	80	79,60	71,60	3	44,85	995-080-110
8	1920	28,4	72	80	79,60	71,60	3	89,71	995-080-120
10	1000	35,5	30	100	99,00	89,00	3	69,80	995-100-110

z**...齿数 | number of teeth

齿条两端可以任意连接齿条, 以达到所需长度。

安装时, 我们推荐使用安装块。

Both ends of the racks are manufactured that they can be joined together in each length.

For the mounting we propose the use of mounting pieces.

齿条 Racks

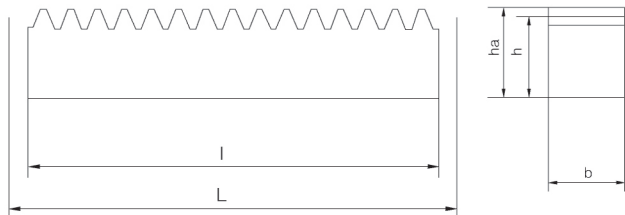
钢号 | steel 1.0503 [C45k]
 直齿 | straight teeth
 齿形角 | pressure angle 20°
 制齿精度 | tooth quality 9 e27

模数 Module	L	b	h ₁₁	h _a	h	kg	订购编号 Part No.
1	250	10	9,80	8,80	0,17	990-010-002	
1	500	10	9,80	8,80	0,34	990-010-005	
1	1000	10	9,80	8,80	0,68	990-010-010	
1.5	250	15	14,80	13,30	0,39	990-015-002	
1.5	500	15	14,80	13,30	0,78	990-015-005	
1.5	1000	15	14,80	13,30	1,55	990-015-010	
1.5	2000	15	14,80	13,30	3,10	990-015-020	
2	500	20	19,75	17,75	1,40	990-020-005	
2	1000	20	19,75	17,75	2,80	990-020-010	
2	2000	20	19,75	17,75	5,60	990-020-020	
2.5	500	25	24,75	22,25	2,10	990-025-005	
2.5	1000	25	24,75	22,25	4,20	990-025-010	
2.5	2000	25	24,75	22,25	8,40	990-025-020	
3	500	30	29,75	26,75	3,10	990-030-005	
3	1000	30	29,75	26,75	6,20	990-030-010	
3	2000	30	29,75	26,75	12,40	990-030-020	
4	500	40	39,70	35,70	5,50	990-040-005	
4	1000	40	39,70	35,70	11,00	990-040-010	
4	2000	40	39,70	35,70	22,00	990-040-020	
5	500	50	49,70	44,70	8,60	990-050-005	
5	1000	50	49,70	44,70	17,20	990-050-010	
5	2000	50	49,70	44,70	34,40	990-050-020	
6	500	60	59,65	53,65	12,30	990-060-005	
6	1000	60	59,65	53,65	24,50	990-060-010	
6	2000	60	59,65	53,65	49,00	990-060-020	
8	500	80	79,60	71,60	21,40	990-080-050	
8	1000	80	79,60	71,60	42,70	990-080-010	
8	2000	80	79,60	71,60	85,40	990-080-020	

模数 Module	齿距 pitch	L	b _{h11}	h _a	h	kg	订购编号 Part No.
1,591	5	250	15	14,80	13,21	0,39	990-016-002
1,591	5	500	15	14,80	13,21	0,78	990-016-005
1,591	5	1000	15	14,80	13,21	1,55	990-016-010
1,591	5	2000	15	14,80	13,21	3,10	990-016-020
3,183	10	250	30	29,70	26,52	1,55	990-031-002
3,183	10	500	30	29,70	26,52	3,10	990-031-005
3,183	10	1000	30	29,70	26,52	6,20	990-031-010
3,183	10	2000	30	29,70	26,52	12,40	990-031-020

塑料齿条

Synthetic Racks

	聚酰胺 P6	nylon P6
	切削加工	mat. machined
	直齿	straight teeth
	齿形角	pressure angle 20°
	制齿精度	toothing quality 10 e27

模数 Module	理论长 L	l	z **	b	ha	h	订购编号 Part No.
1	251,32	250,8	80	10	10	9,0	998-010-602
1	499,51	499,0	159	10	10	9,0	998-010-605
1	999,02	998,5	318	15	15	14,0	998-010-610
1.5	249,75	249,3	53	15	15	13,5	998-015-602
1.5	499,51	499,1	106	15	15	13,5	998-015-605
1.5	999,02	998,6	212	17	17	15,5	998-015-610
2	251,32	250,8	40	20	20	18,0	998-020-602
2	502,65	502,1	80	20	20	18,0	998-020-605
2	999,02	998,5	159	20	20	18,0	998-020-610
2.5	251,32	250,8	32	25	25	22,5	998-025-602
2.5	502,65	502,2	64	25	25	22,5	998-025-605
2.5	997,45	997,0	127	25	25	22,5	998-025-610
3	254,46	253,8	27	30	30	27,0	998-030-602
3	499,51	498,9	53	30	30	27,0	998-030-605
3	999,02	998,4	106	30	30	27,0	998-030-610

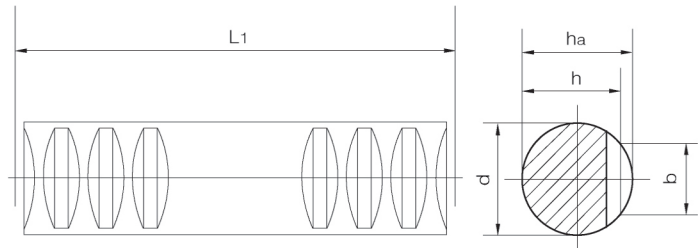
	乙醛树脂	acetal Resin
	[Hostaform C]	[hostaform C]
	直齿	straight teeth
	齿形角 20°	pressure angle 20°
	注塑成型	injection moulded

模数 Module	理论长 L	z **	b	ha	h	订购编号 Part No.
0.5	250,0	158	4	4,5	4,0	999-005-602
0.7	250,0	112	6	6,7	6,0	999-007-602
1.0	250,0	79	9	9,0	8,0	999-010-602
1.25	250,0	63	10	11,0	9,8	999-012-602
1.5	250,0	53	12	12,0	10,5	999-015-602
2.0	250,0	39	15,4	11,0	9,0	999-020-602
2.5	250,0	32	17	13,0	10,5	999-025-602
3.0	250,0	26	19,4	15,0	12,0	999-030-602

z**... 齿数 | number of teeth

可续接安装式圆柱齿条 不锈钢

Round Racks for Continuous Mounting - Stainless Steel

		钢号	steel	1.4305
		直齿	straight teeth	
		齿形角	pressure angle	20°
		制齿精度	toothing quality	8 e27

外径 h9 | outside diameter h9

模数 Module	理论长 L1	z **	d _{h9}	b	ha	h	kg	订购编号 Part No.
1	499,51	159	10	6,2	9,9	8,9	0,66	991-510-050
1	999,02	318	10	6,2	9,9	8,9	1,35	991-510-100
1.5	499,51	106	15	9,3	14,9	13,4	0,84	991-515-050
1.5	999,02	212	15	9,3	14,9	13,4	1,70	991-515-100
2	502,65	80	20	12,5	19,8	17,8	1,10	991-520-050
2	999,02	159	20	12,5	19,8	17,8	2,20	991-520-100
3	499,51	53	30	18,5	29,8	26,8	2,50	991-530-050
3	999,02	106	30	18,5	29,8	26,8	5,10	991-530-100

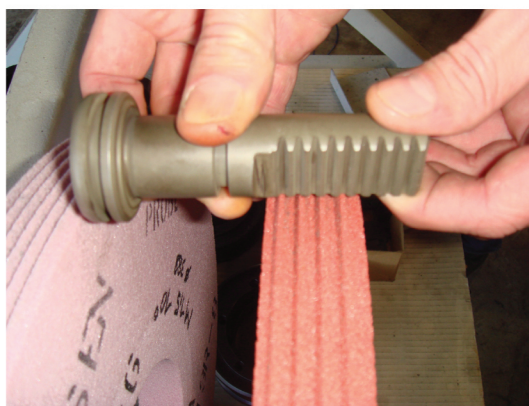
z**...齿数 | number of teeth

外径精度等级为h9。

The outside diameter is h9.

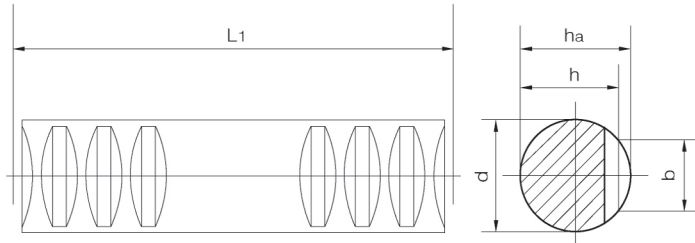
齿条两端可以任意连接齿条, 以达到所需长度。

Both ends of the racks are manufactured that they can be joined together in each length.



可续接安装式圆柱齿条

Round Racks for Continuous Mounting

		钢号 steel	1.0503 [C45]
		直齿 straight teeth	
		齿形角 pressure angle	20°
		制齿精度 toothing quality	8 e27

模数 Module	理论长 L1	z **	d _{h11}	b	ha	h	kg	订购编号 Part No.
1	499,51	159	15	7,5	15	14,0	0,66	991-610-050
1	999,02	318	15	7,5	15	14,0	1,35	991-610-100
1.5	499,51	106	17	9,6	17	15,5	0,84	991-615-050
1.5	999,02	212	17	9,6	17	15,5	1,70	991-615-100
2	502,65	80	20	12,0	20	18,0	1,10	991-620-050
2	999,02	159	20	12,0	20	18,0	2,20	991-620-100
2.5	502,65	64	25	15,0	25	22,5	1,80	991-625-050
2.5	997,45	127	25	15,0	25	22,5	3,60	991-625-100
3	499,51	53	30	18,0	30	27,0	2,50	991-630-050
3	999,02	106	30	18,0	30	27,0	5,10	991-630-100
4	502,65	40	40	24,0	40	36,0	4,50	991-640-050
4	1005,30	80	40	24,0	40	36,0	9,10	991-640-100
5	502,65	32	50	30,0	50	45,0	7,10	991-650-050
5	1005,30	64	50	30,0	50	45,0	14,30	991-650-100

制齿精度 8 e27 | toothing quality 8 e27

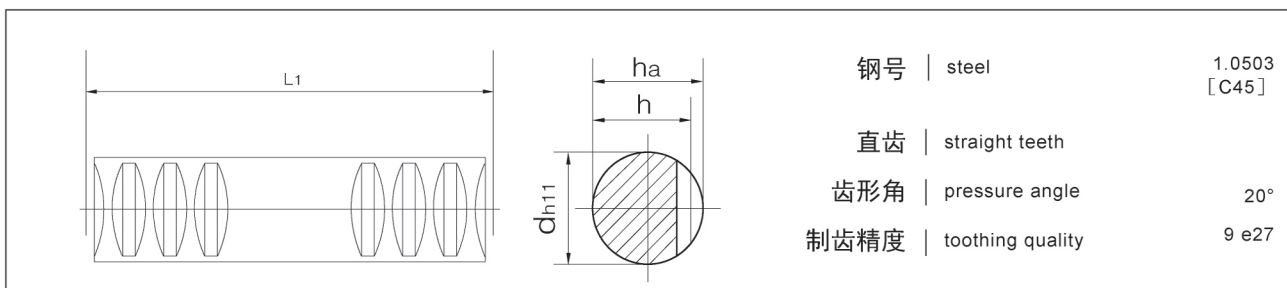
模数 Module	齿距 Pitch	理论长 L1	z **	d _{h11}	b	ha	h	kg	订购编号 Part No.
1,591	5	500	100	15	9,7	14,8	13,2	0,85	991-616-050
1,591	5	1000	200	15	9,7	14,8	13,2	1,7	991-616-100
3,183	10	500	50	30	19,3	29,7	26,5	2,5	991-631-050
3,183	10	1000	100	30	19,3	29,7	26,5	5,1	991-631-100

z**...齿数 | number of teeth

外径精度等级为h11。
The outside diameter is h11.

齿条两端可以任意连接齿条, 以达到所需长度。
Both ends of the racks are manufactured that they can be joined together in each length.

圆柱齿条 Round Racks



模数 Module	L	d_{h11}	h_a	h	kg	订购编号 Part No.
1	250	10	9,8	8,8	0,14	991-010-025
1	500	10	9,8	8,8	0,27	991-010-050
1.5	250	15	14,8	13,3	0,31	991-015-025
1.5	500	15	14,8	13,3	0,61	991-015-050
1.5	1000	15	14,8	13,3	1,22	991-015-100
2	250	20	19,75	17,75	0,55	991-020-025
2	500	20	19,75	17,75	1,10	991-020-050
2	1000	20	19,75	17,75	2,20	991-020-100
2.5	250	25	24,75	22,25	0,83	991-025-025
2.5	500	25	24,75	22,25	1,65	991-025-050
2.5	1000	25	24,75	22,25	3,30	991-025-100
3	250	30	29,75	26,75	1,22	991-030-025
3	500	30	29,75	26,75	2,44	991-030-050
3	1000	30	29,75	26,75	4,80	991-030-100
4	500	40	39,7	35,70	4,32	991-040-050
4	1000	40	39,7	35,70	8,64	991-040-100
5	500	50	49,7	44,70	6,75	991-050-050
5	1000	50	49,7	44,70	13,5	991-050-100

模数 Module	齿距 Pitch	l	d_{h11}	h_a	h	kg	订购编号 Part No.
1,591	5	500	15	14,8	13,21	0,78	991-016-050
1,591	5	1000	15	14,8	13,21	1,55	991-016-100
3,183	10	500	30	29,7	26,52	3,10	991-031-050
3,183	10	1000	30	29,7	26,52	6,20	991-031-100

z^{**} ...齿数 | number of teeth

外径精度等级为h11。
The outside diameter is h11.

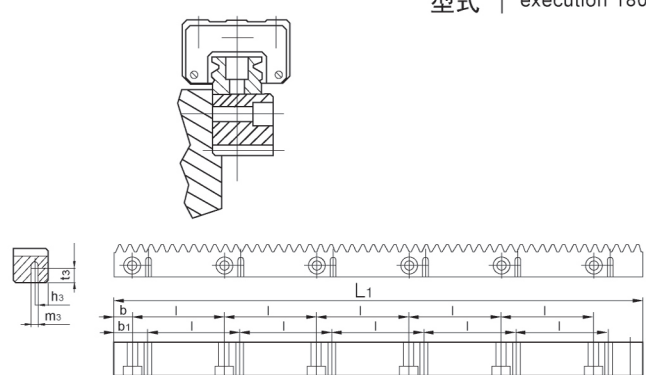
如果您需要其他尺寸，我们的设计师将竭诚为您服务。
If you need other dimensions-please contact our engineering department.



可续接安装式导轨齿条

齿面经磨削 直齿 背面及侧面经磨削

Racks for Guideways, for Continuous Mounting
with Ground Teeth, Straight Teeth, Ground Rear and Side Surface



型式 | execution 180°

钢号 | steel 1.0503 [C45]

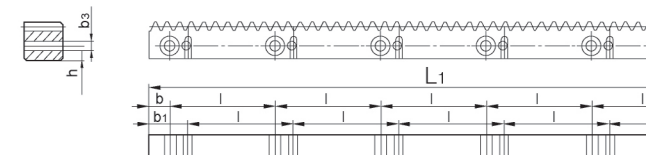
高频淬火 | induction hardened 50-55 HRC

直齿 | straight teeth

齿形角 | pressure angle 20°

制齿精度 | toothing quality 6 h25

模数 Module	齿距 Pitch	理论长 L ₁	Z **	b	h _a	h	f	a	l	孔数 No. of holes	h ₁	d ₁	d ₂	t	a ₁	d ₃	h ₃	t ₃	kg	订购编号 Part No.
1,591	5	960	144	19	19,50	17,91	1	10	60	16	7,5	5,8	10	6	30	M4	7,5	8,0	2,7	994-816-110
1,591	5	960	144	24	24,50	22,91	1	10	60	16	10,0	7,0	11	7	30	M5	10,0	11,0	4,2	994-816-210
3,183	10	960	96	29	29,75	26,57	2	10	60	16	11,5	10,0	15	9	30	M6	11,5	13,5	5,6	994-831-210



型式 | execution 90°

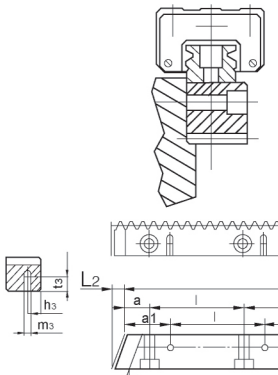
模数 Module	齿距 Pitch	理论长 L ₁	Z **	b	h _a	h	f	a	l	孔数 No. of holes	h ₁	d ₁	d ₂	t	a ₁	d ₃	kg	订购编号 Part No.
1,591	5	960	144	19	19,50	17,91	1	10	60	16	7,5	4,5	7,5	5,3	30	4,5	2,7	994-916-110
1,591	5	960	144	24	24,50	22,91	1	10	60	16	10,0	6,0	9,5	8,5	30	6,0	4,2	994-916-210
3,183	10	960	96	29	29,75	26,57	2	10	60	16	11,5	7,0	11,0	9,0	30	7,0	5,6	994-931-210

z**...齿数 | number of teeth



可续接安装式导轨齿条 齿面经磨削 直齿 背面及侧面经磨削

Racks for Guideways, for Continuous Mounting
with Ground Teeth, Straight Teeth, Ground Rear and Side Surface



型式 | execution 180°

钢号 | steel

高频淬火 | induction hardened

螺旋角 | helix angle

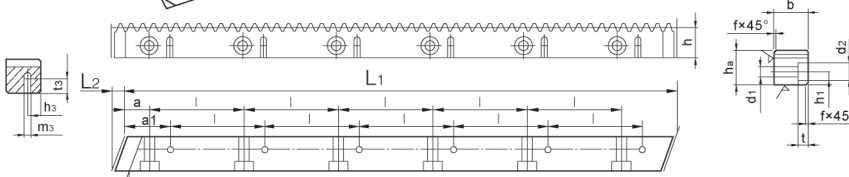
齿形角 | pressure angle

制齿精度 | tooth quality

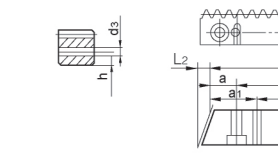
1.0503
[C45]

50-55 HRC
19°31' 42" 右旋
20°

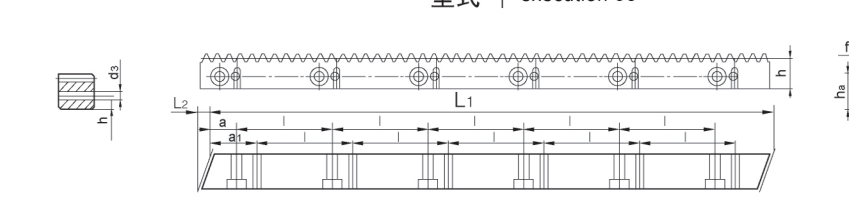
6 h25



模数 Module	理论长 L ₁	L ₂	Z **	b	h _a	h	f	a	l	孔数 No. of holes	h ₁	d ₁	d ₂	t	a ₁	m ₃	h ₃	t ₃	kg	订购编号 Part No.
2	960	6,7	144	19	19,50	17,50	1	10	60	16	7,5	5,8	10	6	30	M4	7,5	8,0	2,7	993-820-110
2	960	8,5	144	24	24,50	22,50	1	10	60	16	10,0	7,0	11	7	30	M5	10,0	11,0	4,2	993-820-210
3	960	10,3	96	29	29,75	26,75	2	10	60	16	11,5	10,0	15	9	30	M6	11,5	13,5	5,6	993-830-210
4	960	13,83	72	39	39,75	35,75	2	20	80	12	14,0	12,0	18	12	40	M8	14,0	16,0	10,5	993-840-310
4	960	13,83	72	39	48,75	44,75	2	20	80	12	17,0	12,0	18	12	40	M8	17,0	16,0	13,0	993-840-410
4	840	17,38	63	49	58,00	54,00	2	30	105	8	22,5	14,0	20	13	60	M12	22,5	25,0	17,3	993-840-510



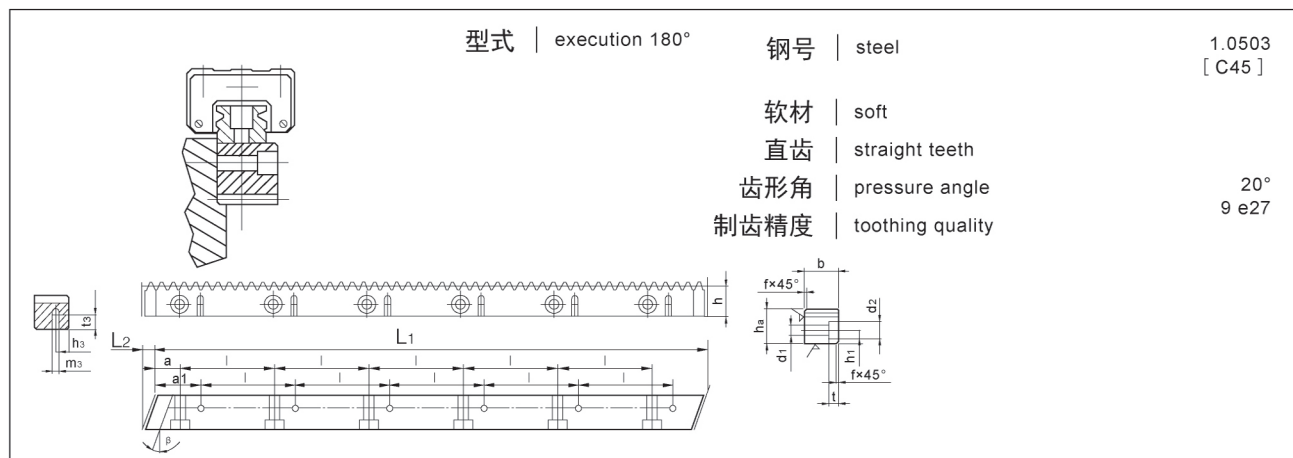
型式 | execution 90°



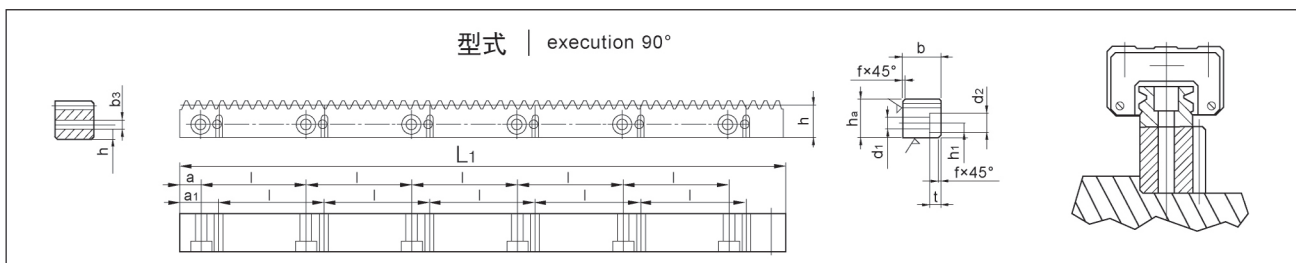
模数 Module	理论长 L ₁	L ₂	Z **	b	h _a	h	f	a	l	孔数 No. of holes	h ₁	d ₁	d ₂	t	a ₁	d ₃	kg	订购编号 Part No.
2	960	6,7	144	19	19,50	17,50	1	10	60	16	7,5	4,5	7,5	5,3	30	4,5	2,7	993-920-110
2	480	6,7	72	19	19,50	17,50	1	10	60	8	7,5	4,5	7,5	5,3	30	4,5	1,3	993-920-105
2	960	8,5	144	24	24,50	22,50	1	10	60	16	10,0	6,0	9,5	8,5	30	6,0	4,2	993-920-210
2	480	8,5	72	24	24,50	22,50	1	10	60	8	10,0	6,0	9,5	8,5	30	6,0	2,1	993-920-205
3	960	10,3	96	29	29,75	26,75	2	10	60	16	11,5	7,0	11,0	9,0	30	7,0	5,6	993-930-210
3	480	10,3	48	29	29,75	26,75	2	10	60	8	11,5	7,0	11,0	9,0	30	7,0	2,8	993-930-205
4	960	13,83	72	39	39,75	35,75	2	20	80	12	14,0	10,0	15,0	9,0	40	10,0	10,5	993-940-310
4	480	13,83	36	39	39,75	35,75	2	20	80	6	14,0	10,0	15,0	9,0	40	10,0	5,2	993-940-305
4	960	13,83	72	39	48,75	44,75	2	20	80	12	17,0	10,0	15,0	9,0	40	10,0	13,0	993-940-410
4	480	13,83	36	39	48,75	44,75	2	20	80	6	17,0	10,0	15,0	9,0	40	10,0	6,5	993-940-405
4	840	17,38	63	49	58,00	54,00	2	30	105	8	22,5	14,0	20,0	13,0	60	14,0	17,3	993-940-510

可续接安装式导轨齿条 铣削齿 直齿

Racks for Guideways, for Continuous Mounting - with Milled Teeth, Straight Teeth



模数 Module	齿距 Pitch	理论长 L ₁	Z **	b	h _a	h	f	a	l	孔数 No. of holes	h ₁	d ₁	d ₂	t	a ₁	m ₃	h ₃	t ₃	kg	订购编号 Part No.
1,591	5,0	1920	384	20	19,50	17,91	1	10	60	32	7,5	5,8	10	6	30	M4	7,5	8,0	5,4	996-816-120
1,591	5,0	1920	384	25	24,50	22,91	1	10	60	32	10,0	7,0	11	7	30	M5	10,0	11,0	8,4	996-816-220
3,183	10,0	1920	192	30	29,75	26,57	2	10	60	32	11,5	10,0	15	9	30	M6	11,5	13,5	11,2	996-831-220



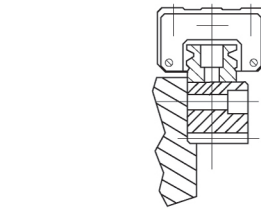
模数 Module	齿距 Pitch	理论长 L ₁	Z **	b	h _a	h	f	a	l	孔数 No. of holes	h ₁	d ₁	d ₂	t	a ₁	d ₃	kg	订购编号 Part No.
1,591	5,0	1920	384	20	19,50	17,91	1	10	60	32	7,5	4,5	7,5	5,3	30	4,5	5,4	996-916-120
1,591	5,0	1920	384	25	24,50	22,91	1	10	60	32	10,0	6,0	9,5	8,5	30	6,0	8,4	996-916-220
3,183	10,0	1920	192	30	29,75	26,57	2	10	60	32	11,5	7,0	11,0	9,0	30	7,0	11,2	996-931-220

z**...齿数 | number of teeth



可续接安装式导轨齿条 铣削齿 斜齿

Racks for Guideways, for Continuous Mounting - with Milled Teeth, Helical Teeth



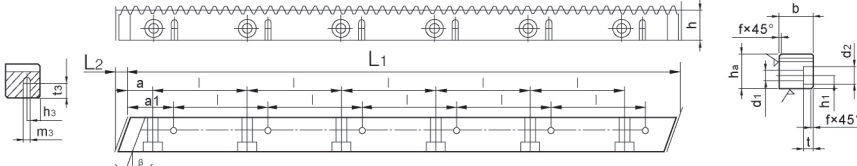
型式 | execution 180° 钢号 | steel 1.0503 [C45]

软材 | soft

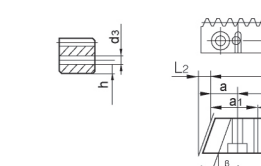
螺旋角 | helix angle 19°31' 42" 右旋

齿形角 | pressure angle 19°31' 42" right hand

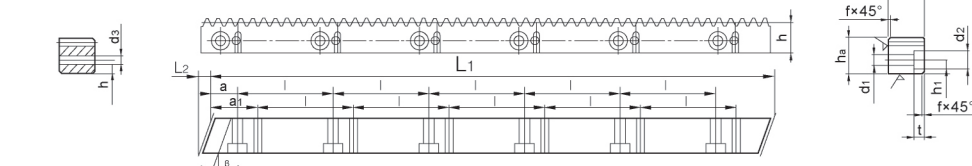
制齿精度 | toothing quality 20° 9 e27



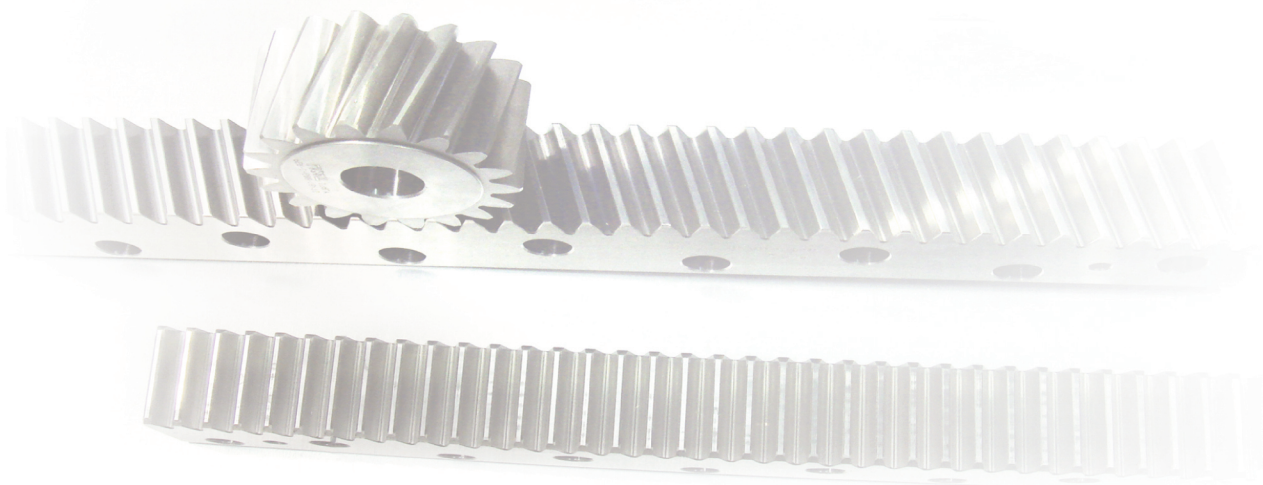
模数 Module	理论长 L1	L2	Z **	b	ha	h	f	a	l	孔数 No. of holes	h1	d1	d2	t	a1	m3	h3	t3	kg	订购编号 Part No.
2	1920	7,1	288	20	19,50	17,50	1	10	60	32	7,5	5,8	10	6	30	M4	7,5	8,0	5,4	995-820-120
2	1920	8,9	288	25	24,50	22,50	1	10	60	32	10,0	7,0	11	7	30	M5	10,0	11,0	8,4	995-820-220
3	1920	10,6	192	30	29,75	26,75	2	10	60	32	11,5	10,0	15	9	30	M6	11,5	13,5	11,2	995-830-220
4	1920	14,2	144	40	39,75	35,75	2	20	80	24	14,0	12,0	18	12	40	M8	14,0	16,0	21,5	995-840-320

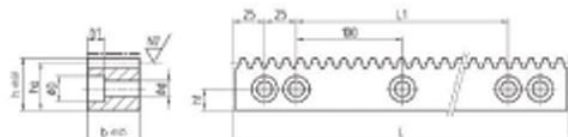
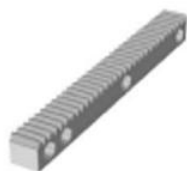


型式 | execution 90°



模数 Module	理论长 L1	L2	Z **	b	ha	h	f	a	l	孔数 No. of holes	h1	d1	d2	t	a1	d3	kg	订购编号 Part No.
2	1920	7,1	288	20	19,50	17,50	1	10	60	32	7,5	4,5	7,5	5,3	30	4,5	5,4	995-920-120
2	1920	8,9	288	25	24,50	22,50	1	10	60	32	10,0	6,0	9,5	8,5	30	6,0	8,4	995-920-220
3	1920	10,6	192	30	29,75	26,75	2	10	60	32	11,5	7,0	11,0	9,0	30	7,0	11,2	995-930-220
4	1920	14,2	144	40	39,75	35,75	2	20	80	24	14,0	10,0	15,0	9,0	40	10,0	21,5	995-940-320





Material:51CrV4 QUALITY :9h25

L	L1	Module	p	h0	b	h	h1	D	d	b1	Fp	m (kg)	Part No.
2000	1900	3.183	10.0	25.82	29	29	11.5	15	9.0	9	0.142	12.0	992100200
1000	900	3.183	10.0								0.108	6.0	992100100
2000	1900	3.979	12.5	35.02	39	39	14.0	18	11.0	11	0.137	22.5	992125200
1000	900	3.979	12.5								0.108	11.75	992125100
2000	1900	5.093	16.0	43.91	49	49	24.0	20	13.5	13	0.121	35.3	992160200
1000	900	5.093	16.0								0.099	17.7	992160100
2000	1900	6.366	20.0	52.63	59	59	29.0	20	13.5	13	0.125	50.5	992200200
1000	900	6.366	20.0								0.104	30.3	992200100
2000	1900	7.958	25.0	71.04	79	79	39.0	26	17.5	17.5	0.115	89.3	992250200
1000	900	7.958	25.0								0.098	45.7	992250100

M a t e r i a l : 5 1 C r V 4 Q U A L I T Y : 6 h 2 5

L	L1	Module	p	h0	b	h	h1	D	d	b1	Fp	N	m (kg)	Part No.
2000	1900	3.183	10.0	25.82	29	29	11.5	15	9.0	9	0.04	6	12.0	962100200
1000	900	3.183	10.0								0.036	6	6.0	962100100
2000	1900	3.979	12.5	35.02	39	39	14.0	18	11.0	11	0.045	6	22.5	962125200
1000	900	3.979	12.5								0.040	6	11.75	962125100
2000	1900	5.093	16.0	43.91	49	49	24.0	20	13.5	13	0.045	6	35.3	962160200
1000	900	5.093	16.0								0.036	6	17.7	962160100
2000	1900	6.366	20.0	52.63	59	59	29.0	20	13.5	13	0.045	6	50.5	962200200
1000	900	6.366	20.0								0.040	6	30.3	962200100
2000	1900	7.958	25.0	71.04	79	79	39.0	26	17.5	17.5	0.045	6	89.3	962250200
1000	900	7.958	25.0								0.040	6	45.7	962250100



零背隙

滚轮齿条的新系列产品

零背隙/Non-backlash

齿(滚销)时常有2~3处保持接触, 正反方向切不发生齿背间隙

Trochoidal profiled tooth enables us to make a plurality of mutual teeth mesh at one time. The teeth always mesh via two or three portions and eliminate backlash when rotated in one or another direction.

高精度/High accuracy

进给精度(回转-直线比)和定位精度逼近精密滚珠丝杆。

Instead of gears, a combination of cam and roller makes a positioning accuracy and feeding accuracy (rotation-linearity ratio) as nearly as that of the ball-screw structure.

低噪音·低振动/Low noise and low vibration

轴承支撑的滚销在次摆线齿轮上圆滑滚动。不会产生令不悦的敲齿音和滚动声。同时也减少了振动。

Rollers smoothly mesh with the optimized trochoidal tooth surface so as to avoid rattling noise, tooth striking noise and rotating noise from being induced together with the least amount of vibration.

低灰尘/Low dust

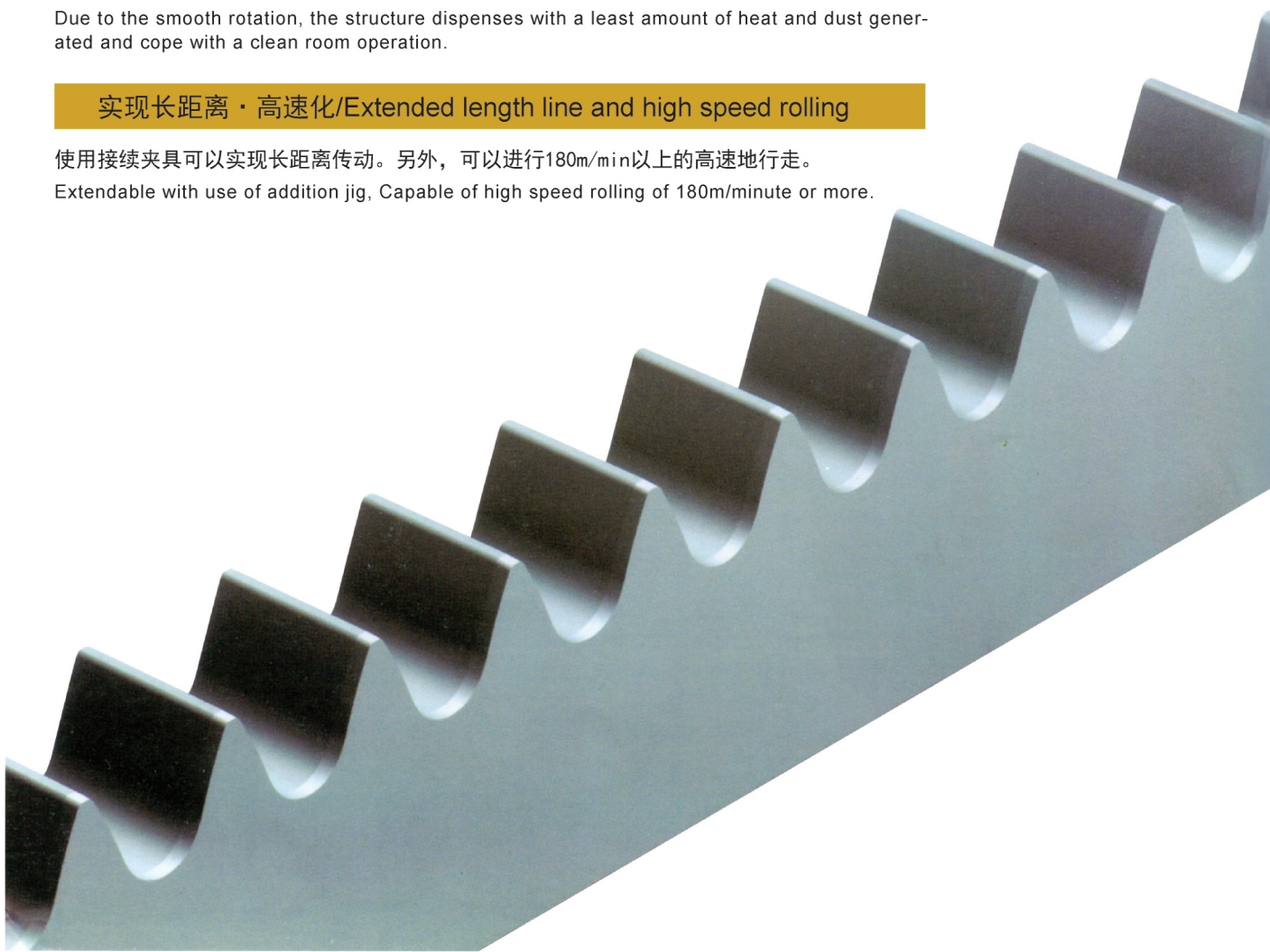
由于是圆滑的滚动接触、同时旋转部分是小径低速, 低摩擦只产生微小的发热和灰尘。

Due to the smooth rotation, the structure dispenses with a least amount of heat and dust generated and cope with a clean room operation.

实现长距离·高速化/Extended length line and high speed rolling

使用接续夹具可以实现长距离传动。另外, 可以进行180m/min以上的高速地行走。

Extendable with use of addition jig, Capable of high speed rolling of 180m/minute or more.



● 滚销/Roller Pins

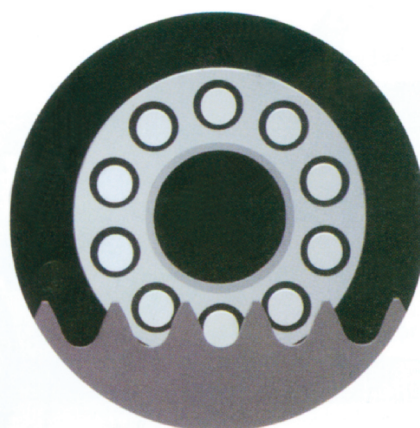
两端由轴承支撑的滚销平稳滚动
Roller pins supported by bearing at both ends smoothly roll.

● 接触部/Contact Region

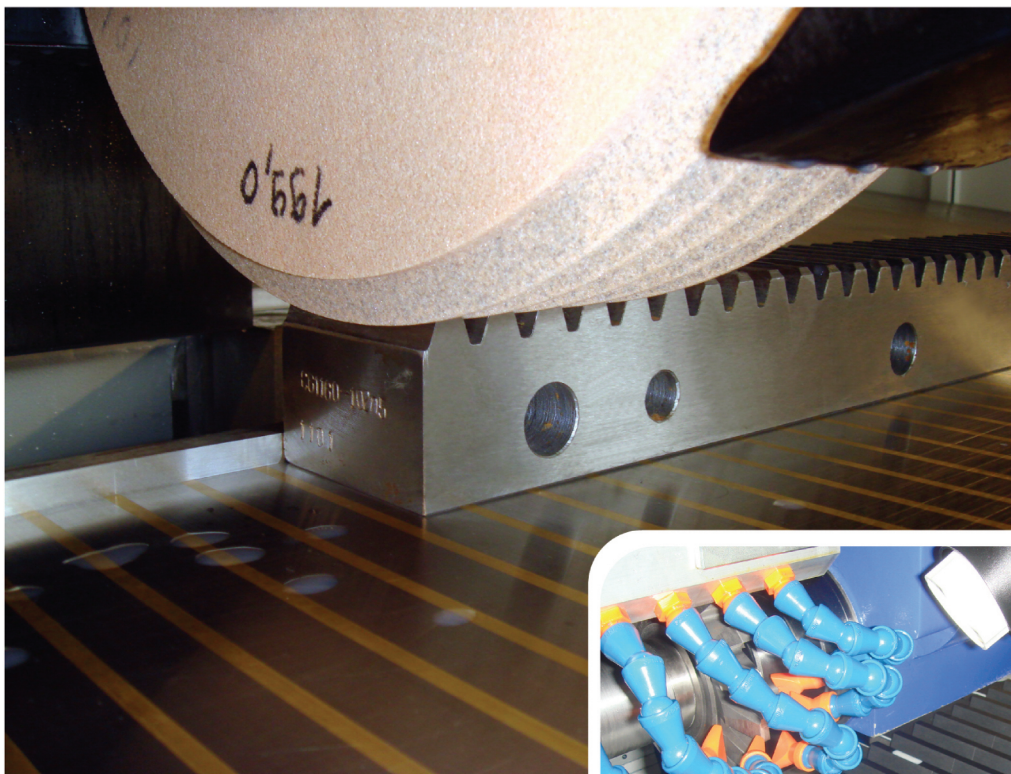
时常有2-3处保持接触，正逆方向不产生齿背间隙。
All-time engagement against two or three roller pins eliminates backlash in dual direction.

● 齿形/Tooth profile

采用可以实现复数啮合的次摆线齿形。
Trochoidal profile makes plural teeth mesh at one time.



啮合部分/Meshing portions

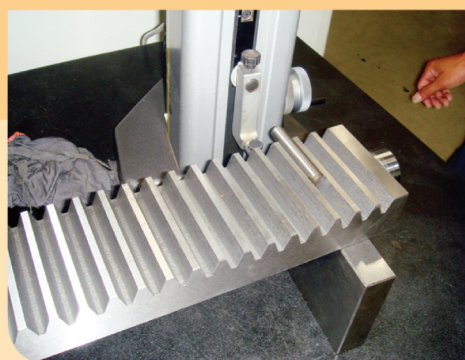


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在于对产品质量的控制力，
质量是企业的基石！





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