



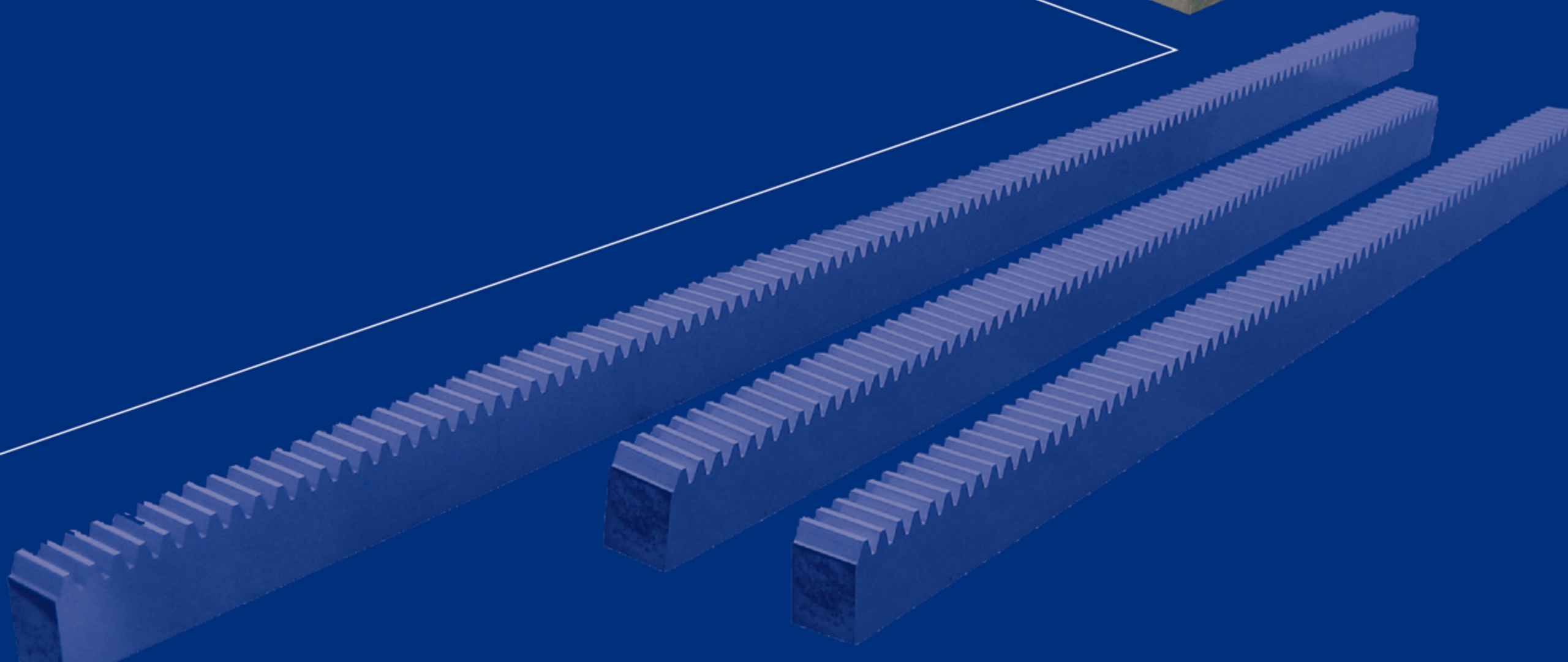
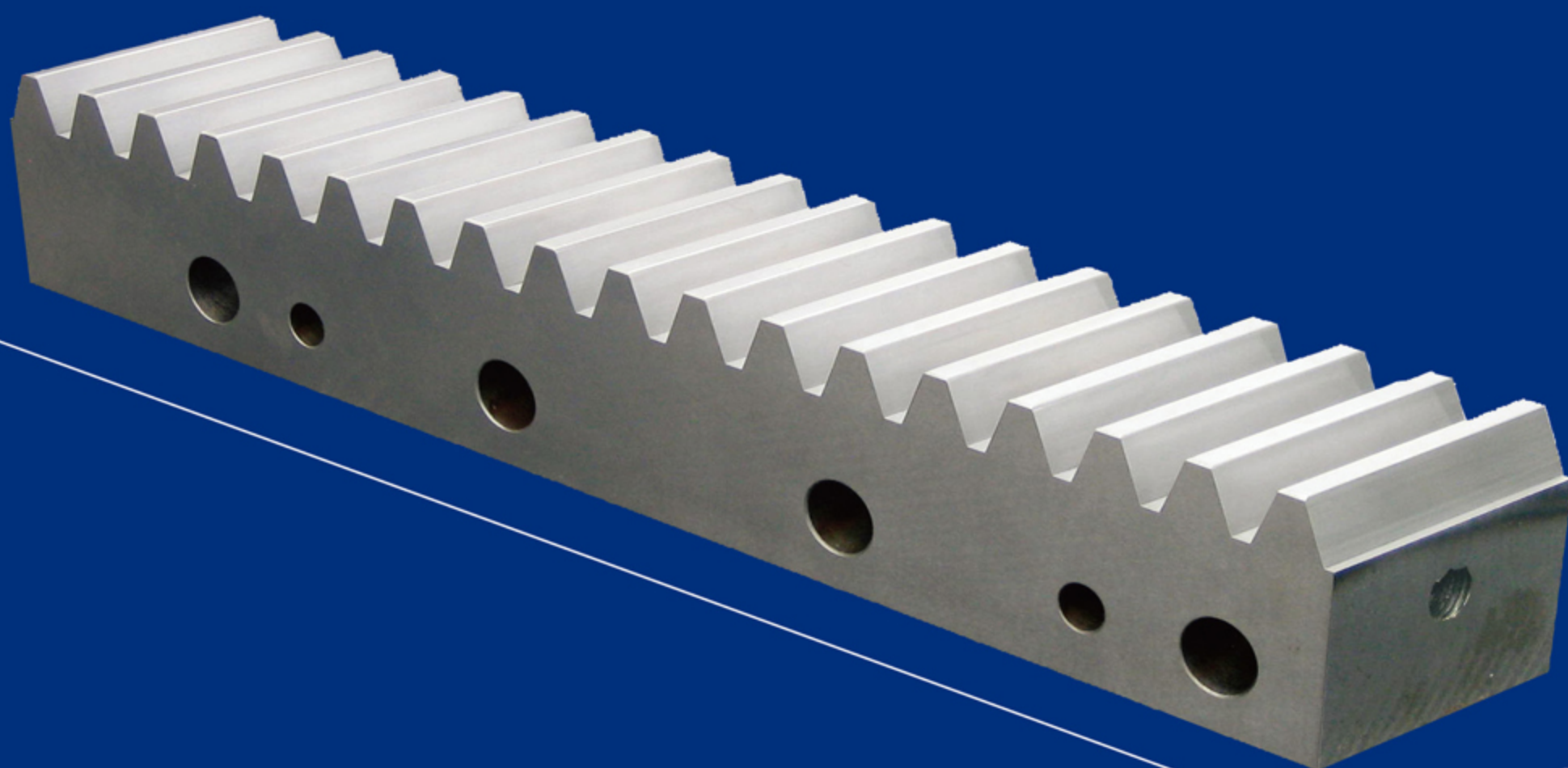
天津市腾达信机电产品有限公司

精密齿条

Precision Racks

直线传动的可靠选择

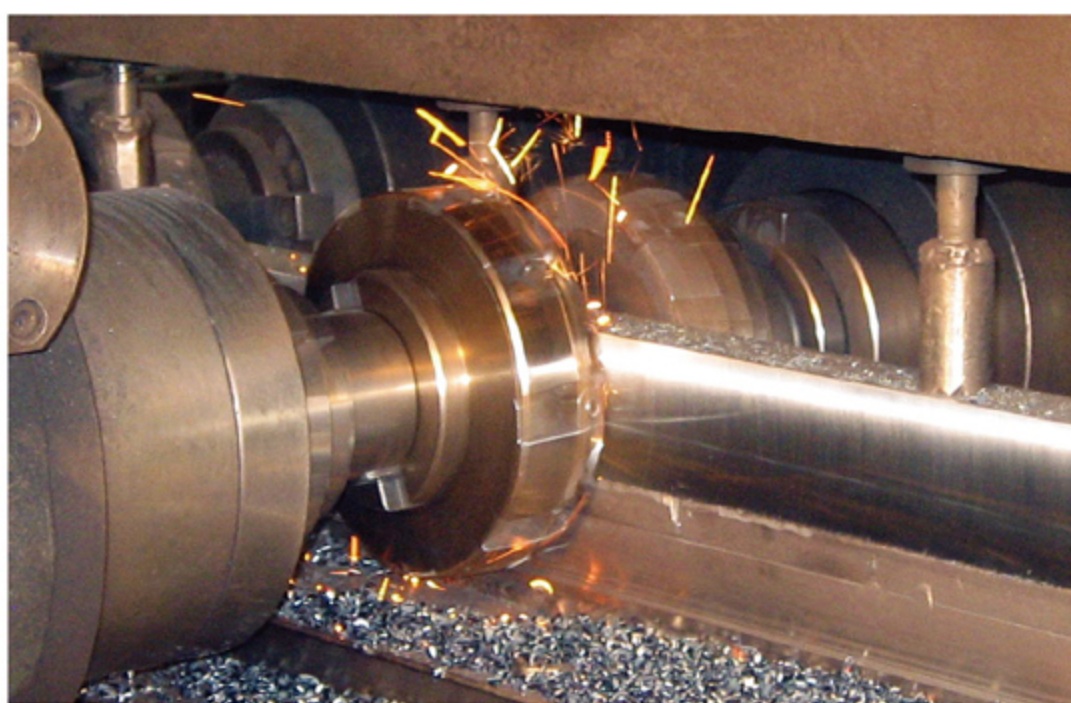
Reliable Quality for Linear Transmission



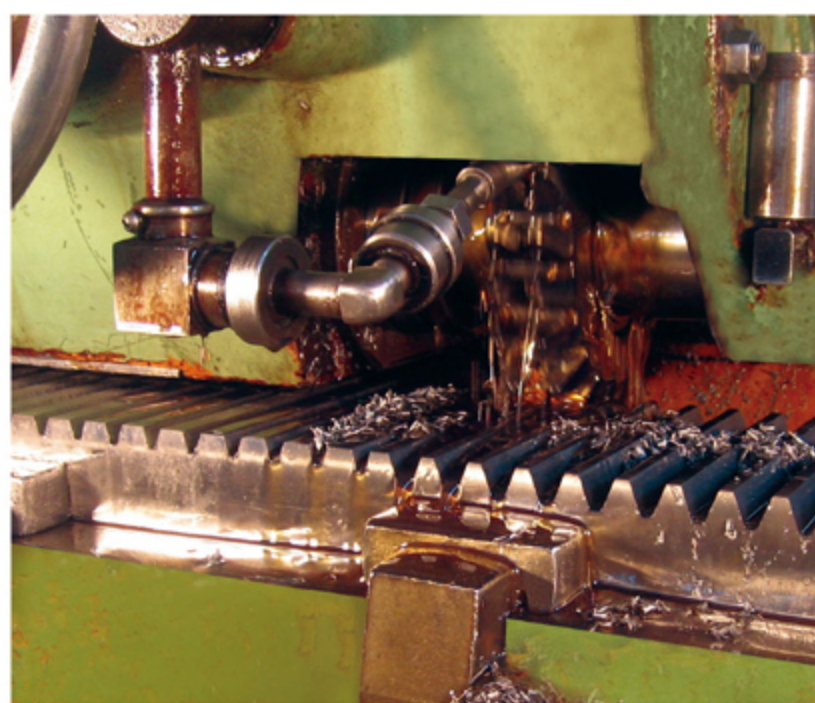


我公司专业生产铣削普通齿条和磨削精密齿条。磨削齿条精度可达德国DIN3962标准5级，模数0.79mm-20mm，长度可达1.5m。齿条有直齿和斜齿，可以齿面淬火，也可整体渗碳淬火。

We are professional manufacturer of milled racks & ground precision racks. The accuracy of our ground racks can reach DIN3962 Grade 5. The module varies from 0.79mm-20mm. The length can be up to 1.5m. The teeth can be straight or helical. The racks can be teeth hardened or case hardened.



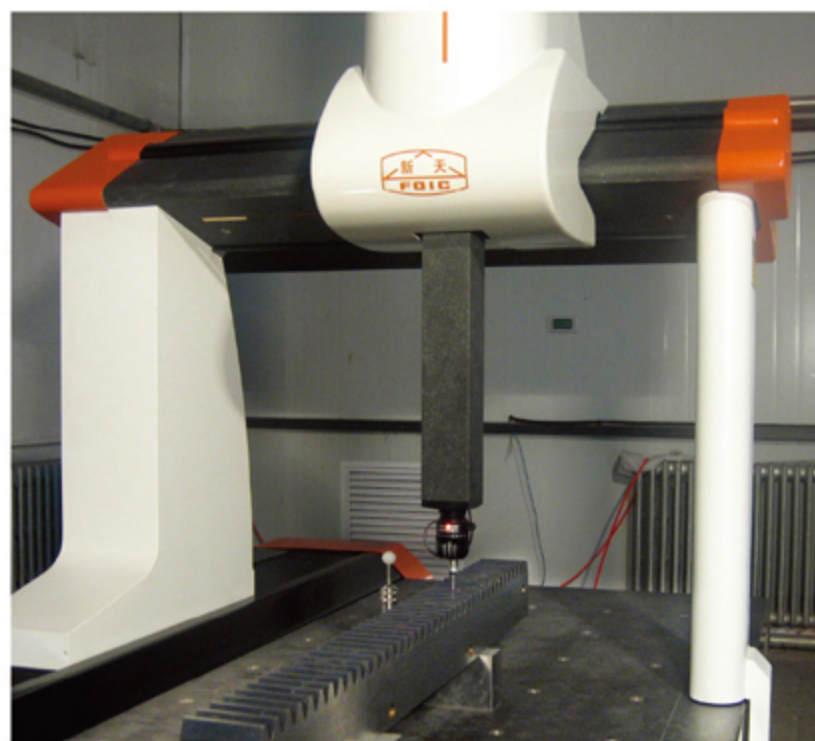
锻造毛坯铣面  
Milling Sides of Forged Steel



铣齿  
Milling Teeth



数控磨齿  
CNC Grinding Teeth



500x500x1600 三坐标测量仪  
500x500x1600 Co-ordinate Detector

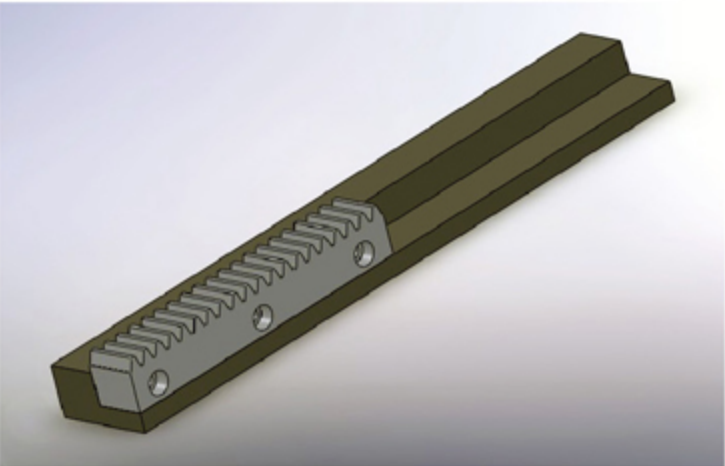


型号说明:  
Code Description:

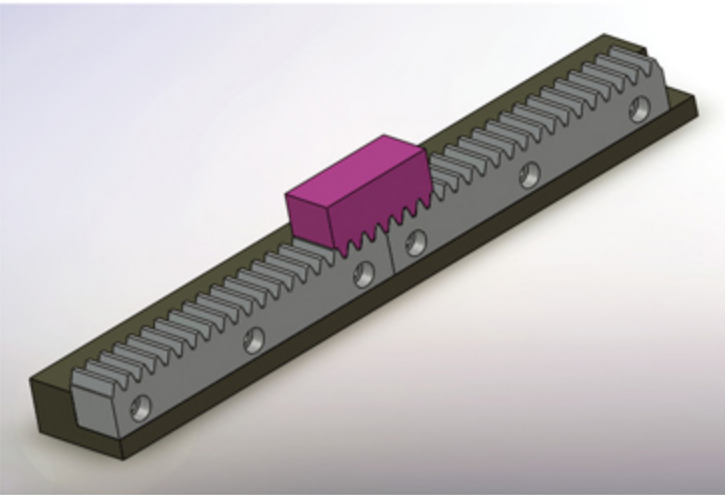
| 材料<br>Material | 齿型<br>Teeth Type    | 齿部加工<br>Teeth Machining | 热处理<br>Heat Treatment          | 模数<br>Module | 长度<br>Length  |
|----------------|---------------------|-------------------------|--------------------------------|--------------|---------------|
| 1<br>C45       | 1<br>直齿<br>Straight | 1<br>磨削<br>Ground       | 1<br>齿面淬火<br>Teeth Hardened    | 020<br>M2    | 050<br>500mm  |
| 2<br>42CrMo4   | 2<br>斜齿<br>Helical  | 2<br>铣削<br>Milled       | 2<br>调质<br>Quenched & Tempered | 100<br>M10   | 100<br>1000mm |

**齿条装配须知:**  
齿条可以对接安装到任意长度。装配时两根齿条之间的间隙需调整至配合齿距。安装齿条需使用定位销。

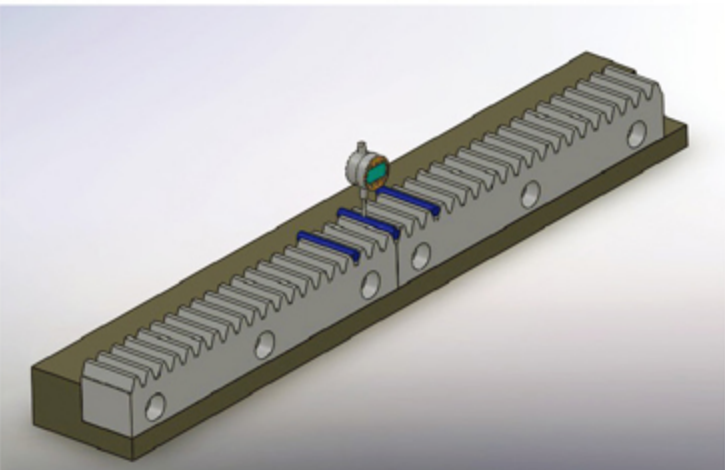
**Assembling Instruction:**  
The racks can be connected to any length. The gap between two adjacent racks should be adjusted to match the pitch. Locking pins should be used when assembling the racks.



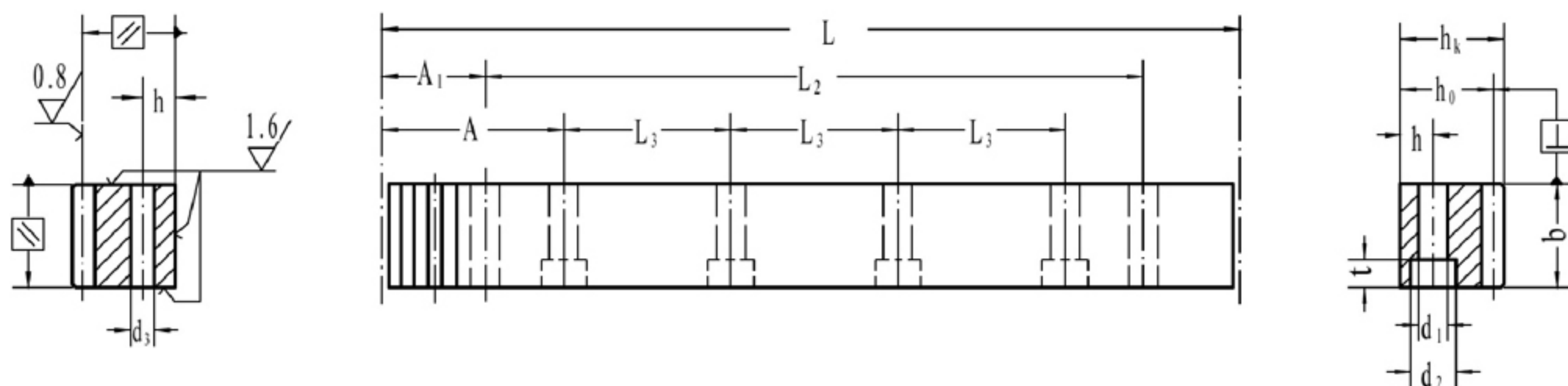
1. 定位并紧固齿条。  
Fix the rack.



2. 用反向齿规为下一根齿条定位。  
Use opposite tooth gauge to fix next rack.



3. 逐个检查每个接口，用圆棒检测齿条的平行度。  
Check every joint and measure the levelling of the racks with round bars



直齿磨削齿条, 压力角 $20^\circ$

Ground racks with straight teeth, pressure angle  $20^\circ$

单位/Unit:mm

| 型号<br>Code    | 模数<br>M | L       | 齿数<br>No of<br>Teeth | b  | h <sub>k</sub> | h <sub>0</sub> | A     | L <sub>3</sub> | 孔数<br>No of<br>Holes | h  | d <sub>1</sub> | d <sub>2</sub> | t  | A <sub>1</sub> | L <sub>2</sub> | d <sub>3</sub> | 累计齿<br>距误差<br>Pitch<br>Error<br>/300mm |
|---------------|---------|---------|----------------------|----|----------------|----------------|-------|----------------|----------------------|----|----------------|----------------|----|----------------|----------------|----------------|----------------------------------------|
| 11 11 020 050 | 2       | 502.65  | 80                   | 24 | 24             | 22             | 62.83 | 125.66         | 4                    | 8  | 7              | 11             | 7  | 31.3           | 440.1          | 5.7            | 0.022                                  |
| 11 11 020 100 | 2       | 1005.31 | 160                  | 24 | 24             | 22             | 62.83 | 125.66         | 8                    | 8  | 7              | 11             | 7  | 31.3           | 942.7          | 5.7            | 0.022                                  |
| 11 11 030 050 | 3       | 508.94  | 54                   | 29 | 29             | 26             | 63.62 | 127.23         | 4                    | 9  | 10             | 15             | 9  | 34.4           | 440.1          | 7.7            | 0.024                                  |
| 11 11 030 100 | 3       | 1017.88 | 108                  | 29 | 29             | 26             | 63.62 | 127.23         | 8                    | 9  | 10             | 15             | 9  | 34.4           | 949.1          | 7.7            | 0.024                                  |
| 11 11 040 050 | 4       | 502.65  | 40                   | 39 | 39             | 35             | 62.83 | 125.66         | 4                    | 12 | 10             | 15             | 9  | 37.5           | 427.7          | 7.7            | 0.025                                  |
| 11 11 040 100 | 4       | 1005.31 | 80                   | 39 | 39             | 35             | 62.83 | 125.66         | 8                    | 12 | 10             | 15             | 9  | 37.5           | 930.3          | 7.7            | 0.025                                  |
| 11 11 050 050 | 5       | 502.65  | 32                   | 49 | 39             | 34             | 62.83 | 125.66         | 4                    | 12 | 14             | 20             | 13 | 30.1           | 442.4          | 11.7           | 0.025                                  |
| 11 11 050 100 | 5       | 1005.31 | 64                   | 49 | 39             | 34             | 62.83 | 125.66         | 8                    | 12 | 14             | 20             | 13 | 30.1           | 945.0          | 11.7           | 0.025                                  |
| 11 11 060 050 | 6       | 508.94  | 27                   | 59 | 49             | 43             | 63.62 | 127.23         | 4                    | 16 | 18             | 26             | 17 | 31.4           | 446.1          | 15.7           | 0.026                                  |
| 11 11 060 100 | 6       | 1017.88 | 54                   | 59 | 49             | 43             | 63.62 | 127.23         | 8                    | 16 | 18             | 26             | 17 | 31.4           | 955.0          | 15.7           | 0.026                                  |
| 11 11 080 050 | 8       | 502.65  | 20                   | 79 | 79             | 71             | 62.83 | 125.66         | 4                    | 25 | 22             | 33             | 21 | 26.6           | 449.5          | 19.7           | 0.027                                  |
| 11 11 080 100 | 8       | 1005.31 | 40                   | 79 | 79             | 71             | 62.83 | 125.66         | 8                    | 25 | 22             | 33             | 21 | 26.6           | 952.0          | 19.7           | 0.027                                  |
| 11 11 100 100 | 10      | 1005.31 | 32                   | 99 | 99             | 89             | 62.83 | 125.66         | 8                    | 32 | 33             | 48             | 32 | 125.7          | 753.96         | 19.7           | 0.028                                  |

精度等级: 6h25

材质: C45

齿型: 直齿

热处理: 齿面淬火

齿面硬度: 50-55HRC

齿面加工: 磨削

四面加工: 磨削

压力角:  $20^\circ$

Precision grade: 6h25

Material: C45

Teeth type: straight

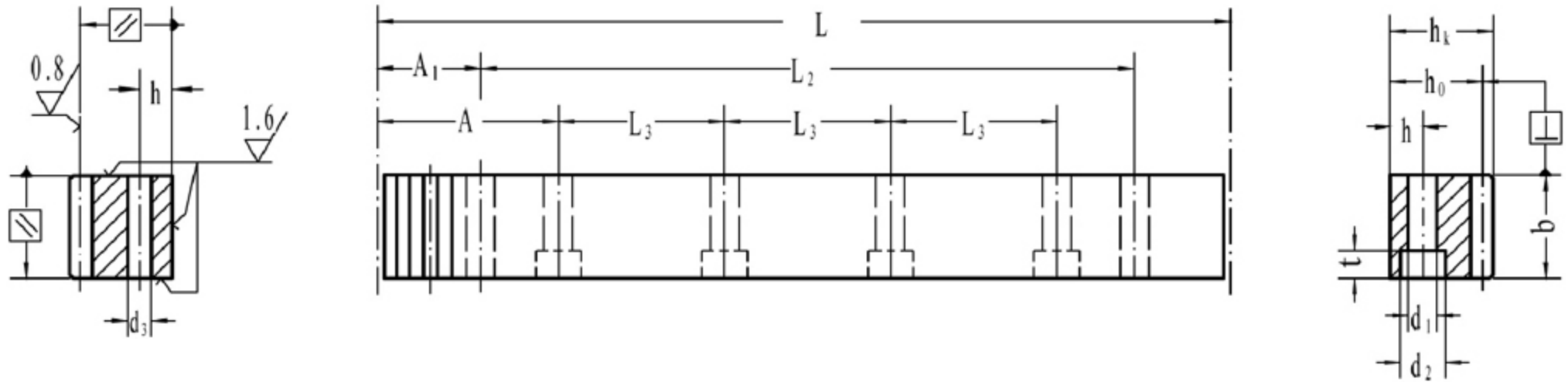
Heat treatment: teeth hardened

Teeth hardness: 50-55HRC

Teeth machining: ground

Four sides: ground

Pressure angle:  $20^\circ$



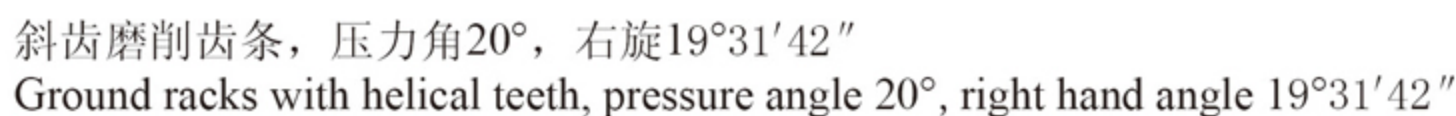
直齿磨削齿条, 压力角 $20^\circ$   
Ground racks with straight teeth, pressure angle  $20^\circ$

单位/Unit:mm

| 型号<br>Code    | 模数<br>M | L       | 齿数<br>No of<br>Teeth | b  | hk | h <sub>0</sub> | A     | L <sub>3</sub> | 孔数<br>No of<br>Holes | h  | d <sub>1</sub> | d <sub>2</sub> | t  | A <sub>1</sub> | L <sub>2</sub> | d <sub>3</sub> | 累计齿<br>距误差<br>Pitch<br>Error<br>/300mm |
|---------------|---------|---------|----------------------|----|----|----------------|-------|----------------|----------------------|----|----------------|----------------|----|----------------|----------------|----------------|----------------------------------------|
| 21 11 020 050 | 2       | 502.65  | 80                   | 24 | 24 | 22             | 62.83 | 125.66         | 4                    | 8  | 7              | 11             | 7  | 31.3           | 440.1          | 5.7            | 0.022                                  |
| 21 11 020 100 | 2       | 1005.31 | 160                  | 24 | 24 | 22             | 62.83 | 125.66         | 8                    | 8  | 7              | 11             | 7  | 31.3           | 942.7          | 5.7            | 0.022                                  |
| 21 11 030 050 | 3       | 508.94  | 54                   | 29 | 29 | 26             | 63.62 | 127.23         | 4                    | 9  | 10             | 15             | 9  | 34.4           | 440.1          | 7.7            | 0.024                                  |
| 21 11 030 100 | 3       | 1017.88 | 108                  | 29 | 29 | 26             | 63.62 | 127.23         | 8                    | 9  | 10             | 15             | 9  | 34.4           | 949.1          | 7.7            | 0.024                                  |
| 21 11 040 050 | 4       | 502.65  | 40                   | 39 | 39 | 35             | 62.83 | 125.66         | 4                    | 12 | 10             | 15             | 9  | 37.5           | 427.7          | 7.7            | 0.025                                  |
| 21 11 040 100 | 4       | 1005.31 | 80                   | 39 | 39 | 35             | 62.83 | 125.66         | 8                    | 12 | 10             | 15             | 9  | 37.5           | 930.3          | 7.7            | 0.025                                  |
| 21 11 050 050 | 5       | 502.65  | 32                   | 49 | 39 | 34             | 62.83 | 125.66         | 4                    | 12 | 14             | 20             | 13 | 30.1           | 442.4          | 11.7           | 0.025                                  |
| 21 11 050 100 | 5       | 1005.31 | 64                   | 49 | 39 | 34             | 62.83 | 125.66         | 8                    | 12 | 14             | 20             | 13 | 30.1           | 945.0          | 11.7           | 0.025                                  |
| 21 11 060 050 | 6       | 508.94  | 27                   | 59 | 49 | 43             | 63.62 | 127.23         | 4                    | 16 | 18             | 26             | 17 | 31.4           | 446.1          | 15.7           | 0.026                                  |
| 21 11 060 100 | 6       | 1017.88 | 54                   | 59 | 49 | 43             | 63.62 | 127.23         | 8                    | 16 | 18             | 26             | 17 | 31.4           | 955.0          | 15.7           | 0.026                                  |
| 21 11 080 050 | 8       | 502.65  | 20                   | 79 | 79 | 71             | 62.83 | 125.66         | 4                    | 25 | 22             | 33             | 21 | 26.6           | 449.5          | 19.7           | 0.027                                  |
| 21 11 080 100 | 8       | 1005.31 | 40                   | 79 | 79 | 71             | 62.83 | 125.66         | 8                    | 25 | 22             | 33             | 21 | 26.6           | 952.0          | 19.7           | 0.027                                  |
| 21 11 100 100 | 10      | 1005.31 | 32                   | 99 | 99 | 89             | 62.83 | 125.66         | 8                    | 32 | 33             | 48             | 32 | 125.7          | 753.96         | 19.7           | 0.028                                  |

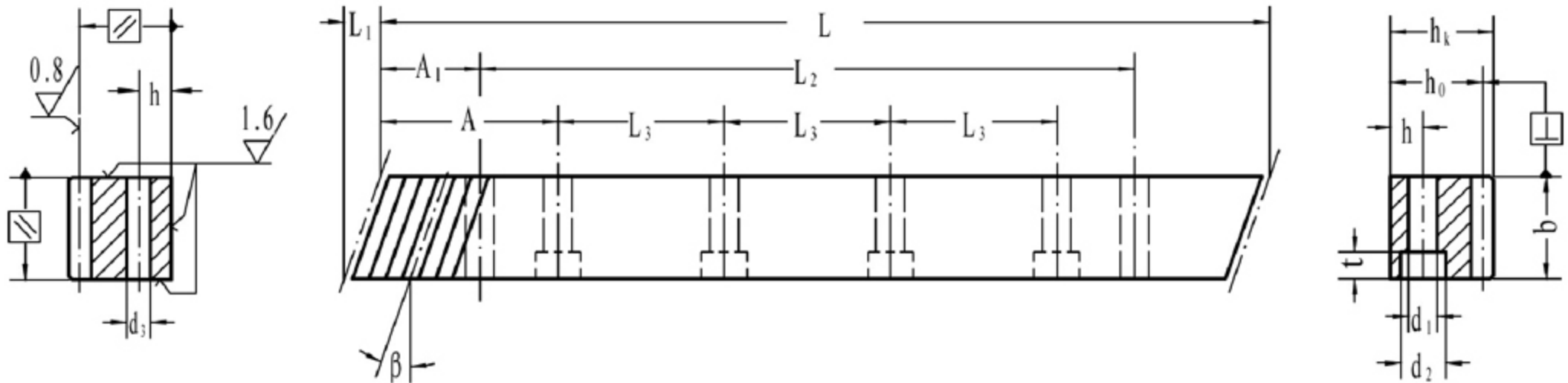
精度等级: 6h25  
材质: 42CrMo4  
齿型: 直齿  
热处理: 齿面淬火  
齿面硬度: 50-55HRC  
齿面加工: 磨削  
四面加工: 磨削  
压力角:  $20^\circ$

Precision grade: 6h25  
Material: 42CrMo4  
Teeth type: straight  
Heat treatment: teeth hardened  
Teeth hardness: 50-55HRC  
Teeth machining: ground  
Four sides: ground  
Pressure angle:  $20^\circ$



| 型号<br>Code    | 模数<br>M | L      | L <sub>1</sub> | 齿数<br>No of<br>Teeth | b  | h <sub>k</sub> | h <sub>0</sub> | A    | L <sub>3</sub> | 孔数<br>Hole<br>No | h  | d <sub>1</sub> | d <sub>2</sub> | t  | A <sub>1</sub> | L <sub>2</sub> | d <sub>3</sub> | 累计齿<br>距误差<br>Pitch<br>Error<br>/300mm |
|---------------|---------|--------|----------------|----------------------|----|----------------|----------------|------|----------------|------------------|----|----------------|----------------|----|----------------|----------------|----------------|----------------------------------------|
| 12 11 020 050 | 2       | 500    | 8.5            | 75                   | 24 | 24             | 22             | 62.5 | 125            | 4                | 8  | 7              | 11             | 7  | 31.7           | 436.6          | 5.7            | 0.022                                  |
| 12 11 020 100 | 2       | 1000   | 8.5            | 150                  | 24 | 24             | 22             | 62.5 | 125            | 8                | 8  | 7              | 11             | 7  | 31.7           | 936.6          | 5.7            | 0.022                                  |
| 12 11 030 050 | 3       | 500    | 10.3           | 50                   | 29 | 29             | 26             | 62.5 | 125            | 4                | 9  | 10             | 15             | 9  | 35.0           | 430.0          | 7.7            | 0.024                                  |
| 12 11 030 100 | 3       | 1000   | 10.3           | 100                  | 29 | 29             | 26             | 62.5 | 125            | 8                | 9  | 10             | 15             | 9  | 35.0           | 930.0          | 7.7            | 0.024                                  |
| 12 11 040 050 | 4       | 506.67 | 13.8           | 38                   | 39 | 39             | 35             | 62.5 | 125            | 4                | 12 | 10             | 15             | 9  | 33.3           | 433.0          | 7.7            | 0.025                                  |
| 12 11 040 100 | 4       | 1000   | 13.8           | 75                   | 39 | 39             | 35             | 62.5 | 125            | 8                | 12 | 10             | 15             | 9  | 33.3           | 933.4          | 7.7            | 0.025                                  |
| 12 11 050 050 | 5       | 500    | 17.4           | 30                   | 49 | 39             | 34             | 62.5 | 125            | 4                | 12 | 14             | 20             | 13 | 37.5           | 425.0          | 11.7           | 0.025                                  |
| 12 11 050 100 | 5       | 1000   | 17.4           | 60                   | 49 | 39             | 34             | 62.5 | 125            | 8                | 12 | 14             | 20             | 13 | 37.5           | 925.0          | 11.7           | 0.025                                  |
| 12 11 060 050 | 6       | 500    | 20.9           | 25                   | 59 | 49             | 43             | 62.5 | 125            | 4                | 16 | 18             | 26             | 17 | 37.5           | 425.0          | 15.7           | 0.026                                  |
| 12 11 060 100 | 6       | 1000   | 20.9           | 50                   | 59 | 49             | 43             | 62.5 | 125            | 8                | 16 | 18             | 26             | 17 | 37.5           | 925.0          | 15.7           | 0.026                                  |
| 12 11 080 050 | 8       | 480    | 28.0           | 18                   | 79 | 79             | 71             | 60.0 | 120            | 4                | 25 | 22             | 33             | 21 | 120            | 240.0          | 19.7           | 0.027                                  |
| 12 11 080 100 | 8       | 960    | 28.0           | 36                   | 79 | 79             | 71             | 60.0 | 120            | 8                | 25 | 22             | 33             | 21 | 120            | 720.0          | 19.7           | 0.027                                  |
| 12 11 100 100 | 10      | 1000   | 35.11          | 30                   | 99 | 99             | 89             | 62.5 | 125            | 8                | 32 | 33             | 48             | 32 | 125            | 750.0          | 19.7           | 0.028                                  |

Precision grade: 6h25  
Material: C45  
Teeth type: helical  
Heat treatment: teeth hardened  
Teeth hardness: 50-55HRC  
Teeth machining: ground  
Four sides: ground  
Pressure angle: 20°



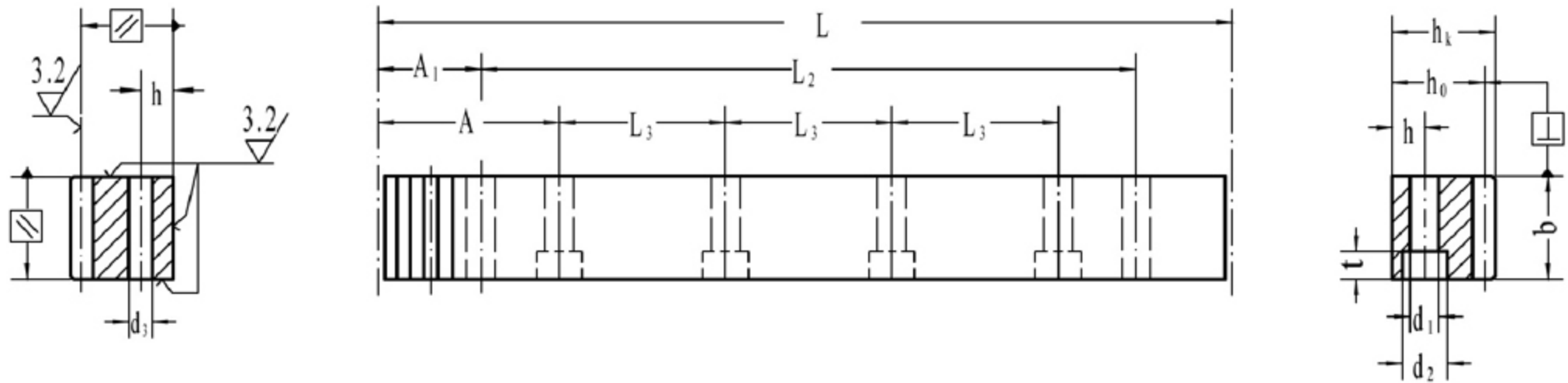
斜齿磨削齿条，压力角 $20^\circ$ ，右旋 $19^\circ 31' 42''$   
Ground racks with helical teeth, pressure angle  $20^\circ$ , right hand angle  $19^\circ 31' 42''$

单位/Unit:mm

| 型号<br>Code    | 模数<br>M | L      | L <sub>1</sub> | 齿数<br>No of<br>Teeth | b  | h <sub>k</sub> | h <sub>0</sub> | A    | L <sub>3</sub> | 孔数<br>Hole<br>No | h  | d <sub>1</sub> | d <sub>2</sub> | t  | A <sub>1</sub> | L <sub>2</sub> | d <sub>3</sub> | 累计齿<br>距误差<br>Pitch<br>Error<br>/300mm |
|---------------|---------|--------|----------------|----------------------|----|----------------|----------------|------|----------------|------------------|----|----------------|----------------|----|----------------|----------------|----------------|----------------------------------------|
| 22 11 020 050 | 2       | 500    | 8.5            | 75                   | 24 | 24             | 22             | 62.5 | 125            | 4                | 8  | 7              | 11             | 7  | 31.7           | 436.6          | 5.7            | 0.022                                  |
| 22 11 020 100 | 2       | 1000   | 8.5            | 150                  | 24 | 24             | 22             | 62.5 | 125            | 8                | 8  | 7              | 11             | 7  | 31.7           | 936.6          | 5.7            | 0.022                                  |
| 22 11 030 050 | 3       | 500    | 10.3           | 50                   | 29 | 29             | 26             | 62.5 | 125            | 4                | 9  | 10             | 15             | 9  | 35.0           | 430.0          | 7.7            | 0.024                                  |
| 22 11 030 100 | 3       | 1000   | 10.3           | 100                  | 29 | 29             | 26             | 62.5 | 125            | 8                | 9  | 10             | 15             | 9  | 35.0           | 930.0          | 7.7            | 0.024                                  |
| 22 11 040 050 | 4       | 506.67 | 13.8           | 38                   | 39 | 39             | 35             | 62.5 | 125            | 4                | 12 | 10             | 15             | 9  | 33.3           | 433.0          | 7.7            | 0.025                                  |
| 22 11 040 100 | 4       | 1000   | 13.8           | 75                   | 39 | 39             | 35             | 62.5 | 125            | 8                | 12 | 10             | 15             | 9  | 33.3           | 933.4          | 7.7            | 0.025                                  |
| 22 11 050 050 | 5       | 500    | 17.4           | 30                   | 49 | 39             | 34             | 62.5 | 125            | 4                | 12 | 14             | 20             | 13 | 37.5           | 425.0          | 11.7           | 0.025                                  |
| 22 11 050 100 | 5       | 1000   | 17.4           | 60                   | 49 | 39             | 34             | 62.5 | 125            | 8                | 12 | 14             | 20             | 13 | 37.5           | 925.0          | 11.7           | 0.025                                  |
| 22 11 060 050 | 6       | 500    | 20.9           | 25                   | 59 | 49             | 43             | 62.5 | 125            | 4                | 16 | 18             | 26             | 17 | 37.5           | 425.0          | 15.7           | 0.026                                  |
| 22 11 060 100 | 6       | 1000   | 20.9           | 50                   | 59 | 49             | 43             | 62.5 | 125            | 8                | 16 | 18             | 26             | 17 | 37.5           | 925.0          | 15.7           | 0.026                                  |
| 22 11 080 050 | 8       | 480    | 28.0           | 18                   | 79 | 79             | 71             | 60.0 | 120            | 4                | 25 | 22             | 33             | 21 | 120            | 240.0          | 19.7           | 0.027                                  |
| 22 11 080 100 | 8       | 960    | 28.0           | 36                   | 79 | 79             | 71             | 60.0 | 120            | 8                | 25 | 22             | 33             | 21 | 120            | 720.0          | 19.7           | 0.027                                  |
| 22 11 100 100 | 10      | 1000   | 35.11          | 30                   | 99 | 99             | 89             | 62.5 | 125            | 8                | 32 | 33             | 48             | 32 | 125            | 750.0          | 19.7           | 0.028                                  |

精度等级：6h25  
材质：42CrMo4  
齿型：斜齿  
热处理：齿面淬火  
齿面硬度：50-55HRC  
齿面加工：磨削  
四面加工：磨削  
压力角： $20^\circ$

Precision grade: 6h25  
Material: 42CrMo4  
Teeth type: helical  
Heat treatment: teeth hardened  
Teeth hardness: 50-55HRC  
Teeth machining: ground  
Four sides: ground  
Pressure angle:  $20^\circ$



直齿铣削齿条, 压力角 $20^\circ$

Milled racks with straight teeth, pressure angle  $20^\circ$

单位/Unit:mm

| 型号<br>Code    | 模数<br>M | L       | 齿数<br>No of<br>Teeth | b  | hk | h <sub>0</sub> | A     | L <sub>3</sub> | 孔数<br>Hole<br>No | h  | d <sub>1</sub> | d <sub>2</sub> | t  | A <sub>1</sub> | L <sub>2</sub> | d <sub>3</sub> | 累计齿<br>距误差<br>Pitch<br>Error<br>/300mm |
|---------------|---------|---------|----------------------|----|----|----------------|-------|----------------|------------------|----|----------------|----------------|----|----------------|----------------|----------------|----------------------------------------|
| 11 22 020 050 | 2       | 502.65  | 80                   | 25 | 24 | 22             | 62.83 | 125.66         | 4                | 8  | 7              | 11             | 7  | 31.3           | 440.1          | 5.7            | 0.044                                  |
| 11 22 020 100 | 2       | 1005.31 | 160                  | 25 | 24 | 22             | 62.83 | 125.66         | 8                | 8  | 7              | 11             | 7  | 31.3           | 942.7          | 5.7            | 0.044                                  |
| 11 22 030 050 | 3       | 508.94  | 54                   | 30 | 29 | 26             | 63.62 | 127.23         | 4                | 9  | 10             | 15             | 9  | 34.4           | 440.1          | 7.7            | 0.046                                  |
| 11 22 030 100 | 3       | 1017.88 | 108                  | 30 | 29 | 26             | 63.62 | 127.23         | 8                | 9  | 10             | 15             | 9  | 34.4           | 949.1          | 7.7            | 0.046                                  |
| 11 22 040 050 | 4       | 502.65  | 40                   | 40 | 39 | 35             | 62.83 | 125.66         | 4                | 12 | 10             | 15             | 9  | 37.5           | 427.7          | 7.7            | 0.048                                  |
| 11 22 040 100 | 4       | 1005.31 | 80                   | 40 | 39 | 35             | 62.83 | 125.66         | 8                | 12 | 10             | 15             | 9  | 37.5           | 930.3          | 7.7            | 0.048                                  |
| 11 22 050 050 | 5       | 502.65  | 32                   | 49 | 39 | 34             | 62.83 | 125.66         | 4                | 12 | 14             | 20             | 13 | 30.1           | 442.4          | 11.7           | 0.050                                  |
| 11 22 050 100 | 5       | 1005.31 | 64                   | 49 | 39 | 34             | 62.83 | 125.66         | 8                | 12 | 14             | 20             | 13 | 30.1           | 945.0          | 11.7           | 0.050                                  |
| 11 22 060 050 | 6       | 508.94  | 27                   | 59 | 49 | 43             | 63.62 | 127.23         | 4                | 16 | 18             | 26             | 17 | 31.4           | 446.1          | 15.7           | 0.055                                  |
| 11 22 060 100 | 6       | 1017.88 | 54                   | 59 | 49 | 43             | 63.62 | 127.23         | 8                | 16 | 18             | 26             | 17 | 31.4           | 955.0          | 15.7           | 0.055                                  |
| 11 22 080 050 | 8       | 502.65  | 20                   | 79 | 79 | 71             | 62.83 | 125.66         | 4                | 25 | 22             | 33             | 21 | 26.6           | 449.5          | 19.7           | 0.060                                  |
| 11 22 080 100 | 8       | 1005.31 | 40                   | 79 | 79 | 71             | 62.83 | 125.66         | 8                | 25 | 22             | 33             | 21 | 26.6           | 952.0          | 19.7           | 0.060                                  |
| 11 22 100 100 | 10      | 1005.31 | 32                   | 99 | 99 | 89             | 62.83 | 125.66         | 8                | 32 | 33             | 48             | 32 | 125.7          | 753.96         | 19.7           | 0.065                                  |

精度等级: 8e27

材质: C45

齿型: 直齿

热处理: 调质

齿面加工: 铣削

四面加工: 铣削

压力角:  $20^\circ$

Precision grade: 8e27

Material: C45

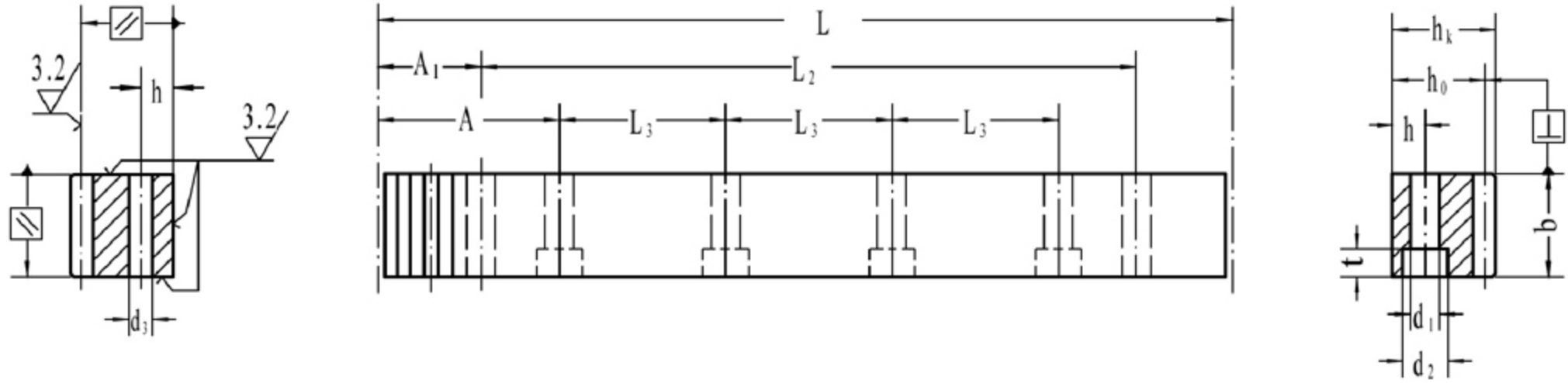
Teeth type: straight

Heat treatment: quenched & tempered

Teeth machining: milled

Four sides: milled

Pressure angle:  $20^\circ$



直齿铣削齿条, 压力角 $20^\circ$

Milled racks with straight teeth, pressure angle  $20^\circ$

单位/Unit:mm

| 型号<br>Code    | 模数<br>M | L       | 齿数<br>No of<br>Teeth | b  | hk | h <sub>0</sub> | A     | L <sub>3</sub> | 孔数<br>Hole<br>No | h  | d <sub>1</sub> | d <sub>2</sub> | t  | A <sub>1</sub> | L <sub>2</sub> | d <sub>3</sub> | 累计齿<br>距误差<br>Pitch<br>Error<br>/300mm |
|---------------|---------|---------|----------------------|----|----|----------------|-------|----------------|------------------|----|----------------|----------------|----|----------------|----------------|----------------|----------------------------------------|
| 21 22 020 050 | 2       | 502.65  | 80                   | 25 | 24 | 22             | 62.83 | 125.66         | 4                | 8  | 7              | 11             | 7  | 31.3           | 440.1          | 5.7            | 0.044                                  |
| 21 22 020 100 | 2       | 1005.31 | 160                  | 25 | 24 | 22             | 62.83 | 125.66         | 8                | 8  | 7              | 11             | 7  | 31.3           | 942.7          | 5.7            | 0.044                                  |
| 21 22 030 050 | 3       | 508.94  | 54                   | 30 | 29 | 26             | 63.62 | 127.23         | 4                | 9  | 10             | 15             | 9  | 34.4           | 440.1          | 7.7            | 0.046                                  |
| 21 22 030 100 | 3       | 1017.88 | 108                  | 30 | 29 | 26             | 63.62 | 127.23         | 8                | 9  | 10             | 15             | 9  | 34.4           | 949.1          | 7.7            | 0.046                                  |
| 21 22 040 050 | 4       | 502.65  | 40                   | 40 | 39 | 35             | 62.83 | 125.66         | 4                | 12 | 10             | 15             | 9  | 37.5           | 427.7          | 7.7            | 0.048                                  |
| 21 22 040 100 | 4       | 1005.31 | 80                   | 40 | 39 | 35             | 62.83 | 125.66         | 8                | 12 | 10             | 15             | 9  | 37.5           | 930.3          | 7.7            | 0.048                                  |
| 21 22 050 050 | 5       | 502.65  | 32                   | 49 | 39 | 34             | 62.83 | 125.66         | 4                | 12 | 14             | 20             | 13 | 30.1           | 442.4          | 11.7           | 0.050                                  |
| 21 22 050 100 | 5       | 1005.31 | 64                   | 49 | 39 | 34             | 62.83 | 125.66         | 8                | 12 | 14             | 20             | 13 | 30.1           | 945.0          | 11.7           | 0.050                                  |
| 21 22 060 050 | 6       | 508.94  | 27                   | 59 | 49 | 43             | 63.62 | 127.23         | 4                | 16 | 18             | 26             | 17 | 31.4           | 446.1          | 15.7           | 0.055                                  |
| 21 22 060 100 | 6       | 1017.88 | 54                   | 59 | 49 | 43             | 63.62 | 127.23         | 8                | 16 | 18             | 26             | 17 | 31.4           | 955.0          | 15.7           | 0.055                                  |
| 21 22 080 050 | 8       | 502.65  | 20                   | 79 | 79 | 71             | 62.83 | 125.66         | 4                | 25 | 22             | 33             | 21 | 26.6           | 449.5          | 19.7           | 0.060                                  |
| 21 22 080 100 | 8       | 1005.31 | 40                   | 79 | 79 | 71             | 62.83 | 125.66         | 8                | 25 | 22             | 33             | 21 | 26.6           | 952.0          | 19.7           | 0.060                                  |
| 21 22 100 100 | 10      | 1005.31 | 32                   | 99 | 99 | 89             | 62.83 | 125.66         | 8                | 32 | 33             | 48             | 32 | 125.7          | 753.96         | 19.7           | 0.065                                  |

精度等级: 8e27

材质: 42CrMo4

齿型: 直齿

热处理: 调质

齿面加工: 铣削

四面加工: 铣削

压力角:  $20^\circ$

Precision grade: 8e27

Material: 42CrMo4

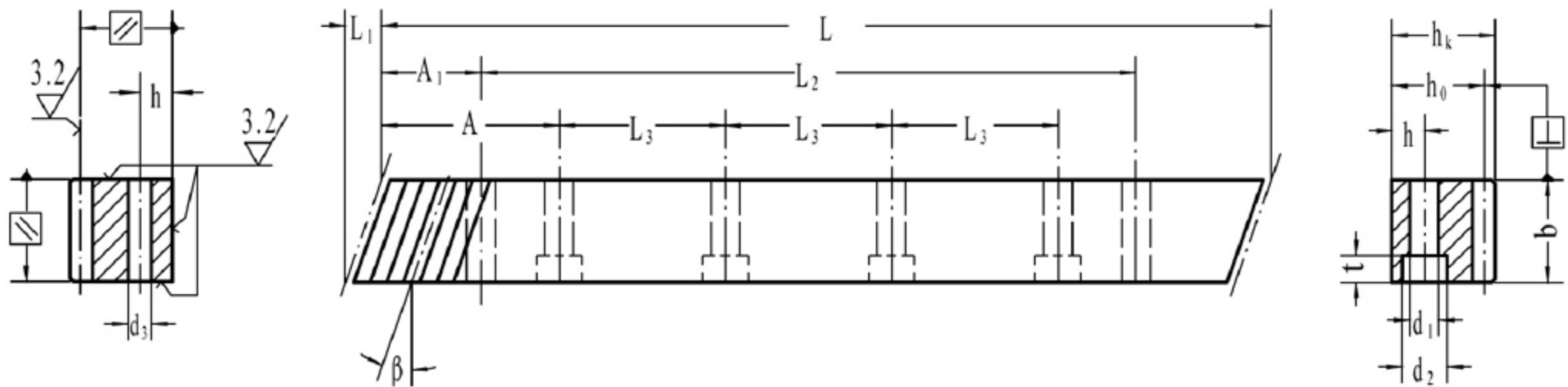
Teeth type: straight

Heat treatment: quenched & tempered

Teeth machining: milled

Four sides: milled

Pressure angle:  $20^\circ$



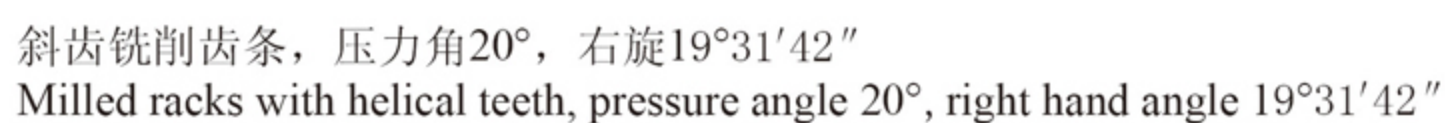
斜齿铣削齿条，压力角 $20^\circ$ ，右旋 $19^\circ 31' 42''$   
Milled racks with helical teeth, pressure angle  $20^\circ$ , right hand angle  $19^\circ 31' 42''$

单位/Unit:mm

| 型号<br>Code    | 模数<br>M | L      | L <sub>1</sub> | 齿数<br>No of<br>Teeth | b  | h <sub>k</sub> | h <sub>0</sub> | A    | L <sub>3</sub> | 孔数<br>Hole<br>No | h  | d <sub>1</sub> | d <sub>2</sub> | t  | A <sub>1</sub> | L <sub>2</sub> | d <sub>3</sub> | 累计齿<br>距误差<br>Pitch<br>error<br>/300mm |
|---------------|---------|--------|----------------|----------------------|----|----------------|----------------|------|----------------|------------------|----|----------------|----------------|----|----------------|----------------|----------------|----------------------------------------|
| 12 22 020 050 | 2       | 500    | 8.9            | 75                   | 25 | 24             | 22             | 62.5 | 125            | 4                | 8  | 7              | 11             | 7  | 31.7           | 436.6          | 5.7            | 0.044                                  |
| 12 22 020 100 | 2       | 1000   | 8.9            | 150                  | 25 | 24             | 22             | 62.5 | 125            | 8                | 8  | 7              | 11             | 7  | 31.7           | 936.6          | 5.7            | 0.044                                  |
| 12 22 030 050 | 3       | 500    | 10.6           | 50                   | 30 | 29             | 26             | 62.5 | 125            | 4                | 9  | 10             | 15             | 9  | 35.0           | 430.0          | 7.7            | 0.046                                  |
| 12 22 030 100 | 3       | 1000   | 10.6           | 100                  | 30 | 29             | 26             | 62.5 | 125            | 8                | 9  | 10             | 15             | 9  | 35.0           | 930.0          | 7.7            | 0.046                                  |
| 12 22 040 050 | 4       | 506.67 | 14.2           | 38                   | 40 | 39             | 35             | 62.5 | 125            | 4                | 12 | 10             | 15             | 9  | 33.3           | 433.0          | 7.7            | 0.048                                  |
| 12 22 040 100 | 4       | 1000   | 14.2           | 75                   | 40 | 39             | 35             | 62.5 | 125            | 8                | 12 | 10             | 15             | 9  | 33.3           | 933.4          | 7.7            | 0.048                                  |
| 12 22 050 050 | 5       | 500    | 17.4           | 30                   | 50 | 39             | 34             | 62.5 | 125            | 4                | 12 | 14             | 20             | 13 | 37.5           | 425.0          | 11.7           | 0.050                                  |
| 12 22 050 100 | 5       | 1000   | 17.4           | 60                   | 50 | 39             | 34             | 62.5 | 125            | 8                | 12 | 14             | 20             | 13 | 37.5           | 925.0          | 11.7           | 0.050                                  |
| 12 22 060 050 | 6       | 500    | 20.9           | 25                   | 59 | 49             | 43             | 62.5 | 125            | 4                | 16 | 18             | 26             | 17 | 37.5           | 425.0          | 15.7           | 0.055                                  |
| 12 22 060 100 | 6       | 1000   | 20.9           | 50                   | 59 | 49             | 43             | 62.5 | 125            | 8                | 16 | 18             | 26             | 17 | 37.5           | 925.0          | 15.7           | 0.055                                  |
| 12 22 080 050 | 8       | 480    | 28.0           | 18                   | 79 | 79             | 71             | 60.0 | 120            | 4                | 25 | 22             | 33             | 21 | 120            | 240.0          | 19.7           | 0.060                                  |
| 12 22 080 100 | 8       | 960    | 28.0           | 36                   | 79 | 79             | 71             | 60.0 | 120            | 8                | 25 | 22             | 33             | 21 | 120            | 720.0          | 19.7           | 0.060                                  |
| 12 22 100 100 | 10      | 1000   | 35.1           | 30                   | 99 | 99             | 89             | 62.5 | 125            | 8                | 32 | 33             | 48             | 32 | 125            | 750.0          | 19.7           | 0.065                                  |

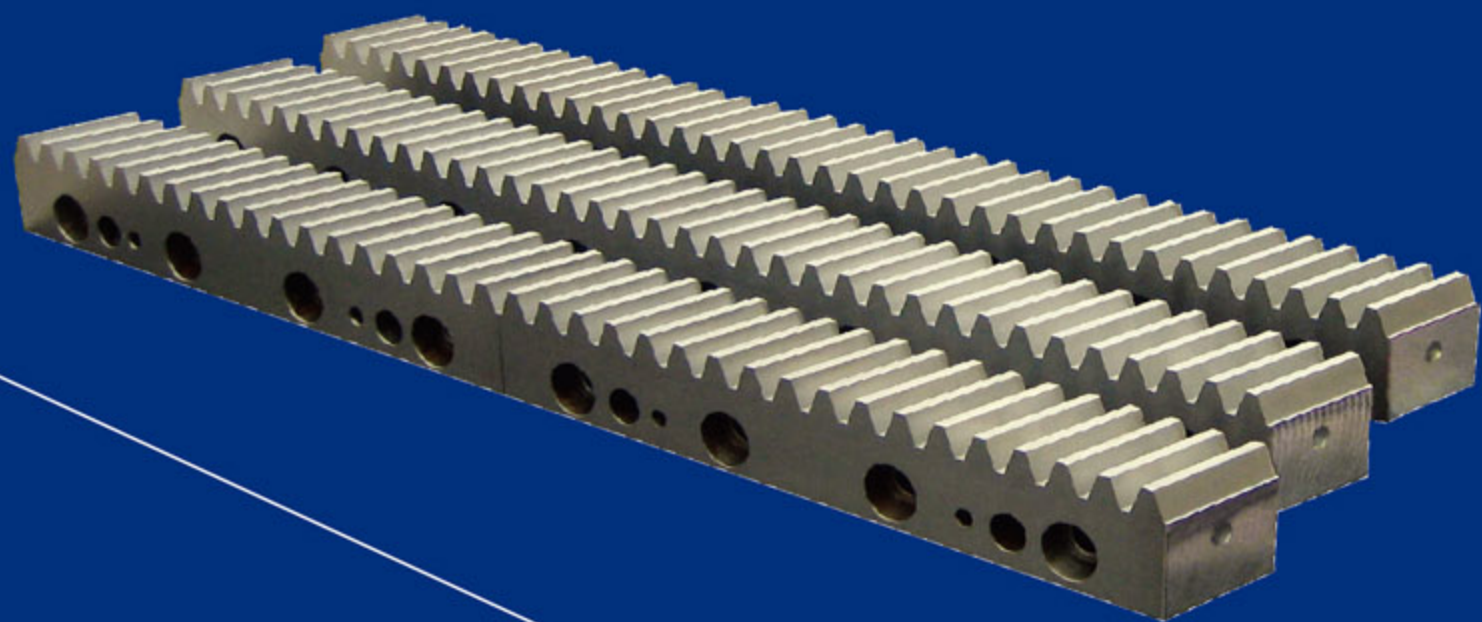
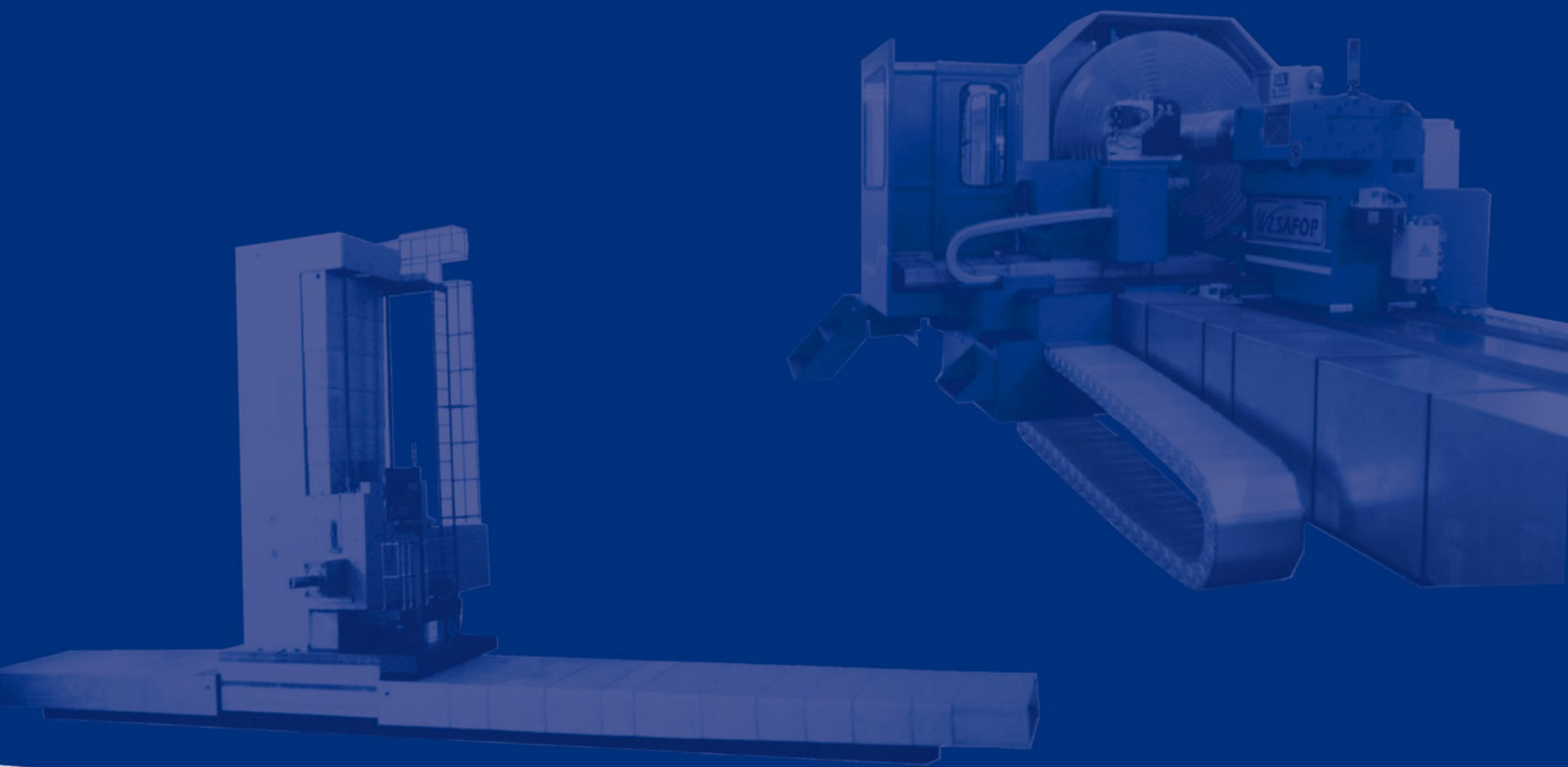
精度等级: 8e27  
材质: C45  
齿型: 斜齿  
热处理: 调质  
齿面加工: 铣削  
四面加工: 铣削  
压力角:  $20^\circ$

Precision grade: 8e27  
Material: C45  
Teeth type: helical  
Heat treatment: quenched & tempered  
Teeth machining: milled  
Four sides: milled  
Pressure angle:  $20^\circ$



| 型号<br>Code    | 模数<br>M | L      | L <sub>1</sub> | 齿数<br>No of<br>Teeth | b  | h <sub>k</sub> | h <sub>0</sub> | A    | L <sub>3</sub> | 孔数<br>Hole<br>No | h  | d <sub>1</sub> | d <sub>2</sub> | t  | A <sub>1</sub> | L <sub>2</sub> | d <sub>3</sub> | 累计齿<br>距误差<br>Pitch<br>error<br>/300mm |
|---------------|---------|--------|----------------|----------------------|----|----------------|----------------|------|----------------|------------------|----|----------------|----------------|----|----------------|----------------|----------------|----------------------------------------|
| 22 22 020 050 | 2       | 500    | 8.9            | 75                   | 25 | 24             | 22             | 62.5 | 125            | 4                | 8  | 7              | 11             | 7  | 31.7           | 436.6          | 5.7            | 0.044                                  |
| 22 22 020 100 | 2       | 1000   | 8.9            | 150                  | 25 | 24             | 22             | 62.5 | 125            | 8                | 8  | 7              | 11             | 7  | 31.7           | 936.6          | 5.7            | 0.044                                  |
| 22 22 030 050 | 3       | 500    | 10.6           | 50                   | 30 | 29             | 26             | 62.5 | 125            | 4                | 9  | 10             | 15             | 9  | 35.0           | 430.0          | 7.7            | 0.046                                  |
| 22 22 030 100 | 3       | 1000   | 10.6           | 100                  | 30 | 29             | 26             | 62.5 | 125            | 8                | 9  | 10             | 15             | 9  | 35.0           | 930.0          | 7.7            | 0.046                                  |
| 22 22 040 050 | 4       | 506.67 | 14.2           | 38                   | 40 | 39             | 35             | 62.5 | 125            | 4                | 12 | 10             | 15             | 9  | 33.3           | 433.0          | 7.7            | 0.048                                  |
| 22 22 040 100 | 4       | 1000   | 14.2           | 75                   | 40 | 39             | 35             | 62.5 | 125            | 8                | 12 | 10             | 15             | 9  | 33.3           | 933.4          | 7.7            | 0.048                                  |
| 22 22 050 050 | 5       | 500    | 17.4           | 30                   | 50 | 39             | 34             | 62.5 | 125            | 4                | 12 | 14             | 20             | 13 | 37.5           | 425.0          | 11.7           | 0.050                                  |
| 22 22 050 100 | 5       | 1000   | 17.4           | 60                   | 50 | 39             | 34             | 62.5 | 125            | 8                | 12 | 14             | 20             | 13 | 37.5           | 925.0          | 11.7           | 0.050                                  |
| 22 22 060 050 | 6       | 500    | 20.9           | 25                   | 59 | 49             | 43             | 62.5 | 125            | 4                | 16 | 18             | 26             | 17 | 37.5           | 425.0          | 15.7           | 0.055                                  |
| 22 22 060 100 | 6       | 1000   | 20.9           | 50                   | 59 | 49             | 43             | 62.5 | 125            | 8                | 16 | 18             | 26             | 17 | 37.5           | 925.0          | 15.7           | 0.055                                  |
| 22 22 080 050 | 8       | 480    | 28.0           | 18                   | 79 | 79             | 71             | 60.0 | 120            | 4                | 25 | 22             | 33             | 21 | 120            | 240.0          | 19.7           | 0.060                                  |
| 22 22 080 100 | 8       | 960    | 28.0           | 36                   | 79 | 79             | 71             | 60.0 | 120            | 8                | 25 | 22             | 33             | 21 | 120            | 720.0          | 19.7           | 0.060                                  |
| 22 22 100 100 | 10      | 1000   | 35.1           | 30                   | 99 | 99             | 89             | 62.5 | 125            | 8                | 32 | 33             | 48             | 32 | 125            | 750.0          | 19.7           | 0.065                                  |

Precision grade: 8e27  
Material: 42CrMo4  
Teeth type: helical  
Heat treatment: quenched & tempered  
Teeth machining: milled  
Four sides: milled  
Pressure angle: 20°



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