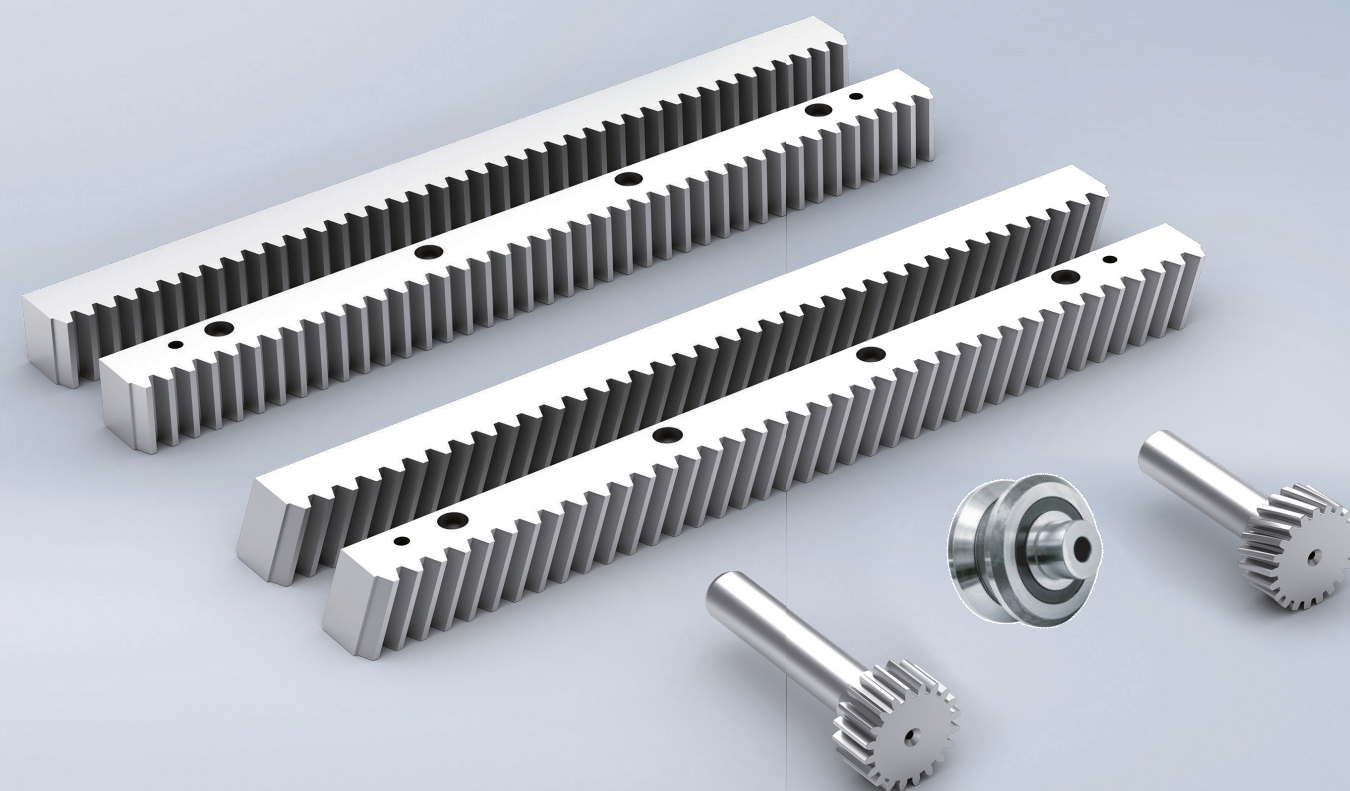


# Racks, Pinions & Rollers

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## Catalog



WANSHSIN SEIKOU (HUNAN)CO.,LTD

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## WANSHSIN SEIKOU (HUNAN) CO., LTD

WANSHSIN was founded in 2009 in Dongguan Guangdong, and moved its headquarters to Changsha, Hunan in 2014. At present, WANSHSIN has five manufacturing bases in Dongguan, changsha and Zhuzhou of Hunan province, and three technology innovation platforms. WANSHSIN has also established three R&D centers in Japan, Shenzhen and Hunan headquarters to lead the high-quality development of the industry with innovation.

WANSHSIN is a professional gearbox and gear motor manufacturer and intelligent automation complete solution provider, integrating R&D, production, sales and service. WANSHSIN ranks the First in this industry in Hunan Province and the Tenth in China. Products include gear reducer, gear motor and controller (servo driver, inverter, etc).They are widely used in lithium battery industry, automated production lines, robots, automobile manufacturing, engineering machinery, warehousing and logistics, metallurgy chemicals, ceramics, animal husbandry and other industries. WANSHSIN has gradually become a reliable long-term partner of those leading enterprises of relevant industries.



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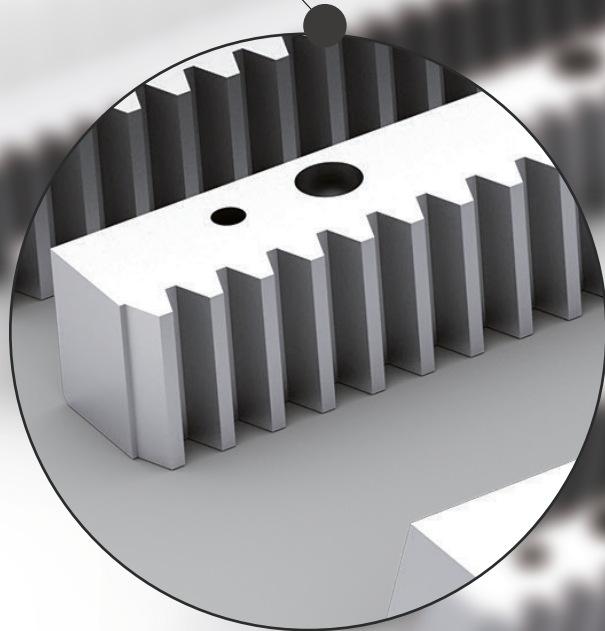
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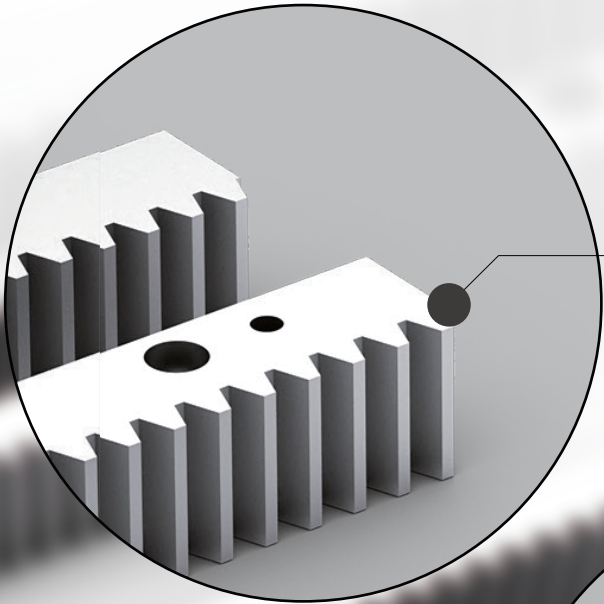
Module

|                |      |      |      |       |       |       |       |       |       |
|----------------|------|------|------|-------|-------|-------|-------|-------|-------|
| m <sub>n</sub> | 1.5  | 2.0  | 2.5  | 3.0   | 4.0   | 5.0   | 6.0   | 8.0   | 10.0  |
| P <sub>n</sub> | 4.72 | 6.28 | 7.85 | 9.42  | 12.57 | 15.71 | 18.85 | 25.13 | 31.42 |
| P <sub>t</sub> | 5.00 | 6.66 | 8.33 | 10.00 | 13.33 | 16.66 | 20.00 | 26.66 | 33.33 |

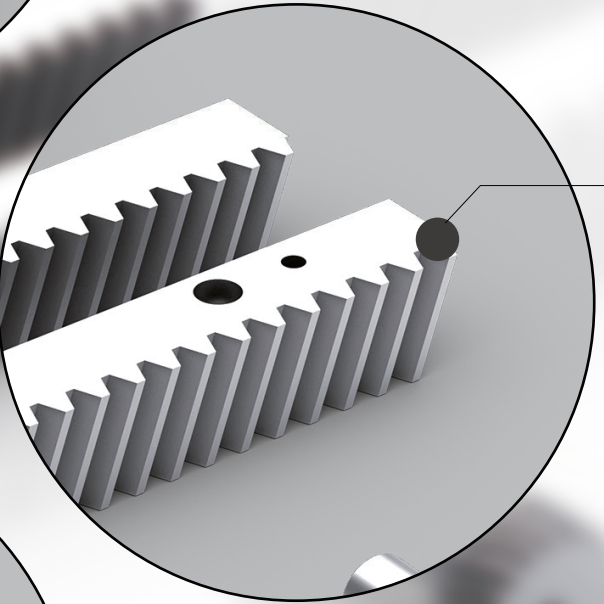
Rack



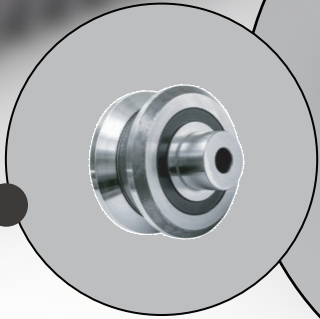
Straight teeth



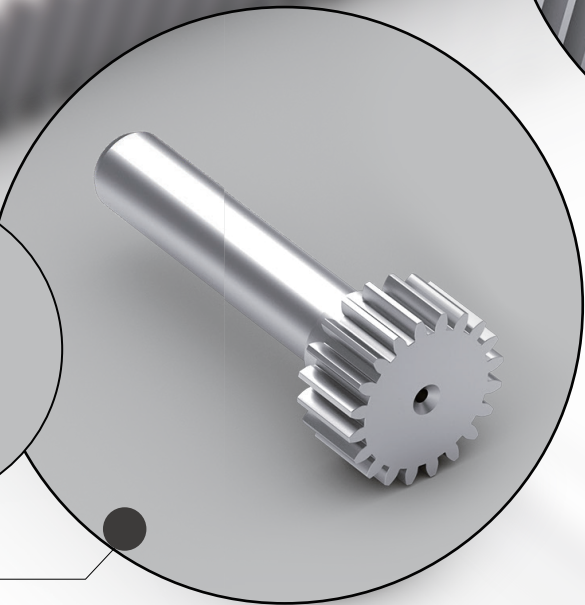
Helical teeth



Roller



Pinion



Precision of the Rack and Pinion

We provide racks and pinions in various qualities and finishes. Alongside our standard offerings, we can also manufacture application-specific designs tailored to your needs. This ensures you receive the ideal product for every application and industry.

We provide nine sizes ranging from module 1.5 to 10, available in both straight and helical tooth designs.

Quality Grade

Demand-Oriented Performance –  
Quality Tailored to Your Needs

Our standard portfolio includes five quality grades, ranging from Q5 to Q9. The Q5, Q6, and Q8 racks are hardened and ground, while the Q7 racks are milled from alloyed tempered steel. Q9 quality racks are milled and hardened.  
Depending on your application, we also offer racks made from stainless steel

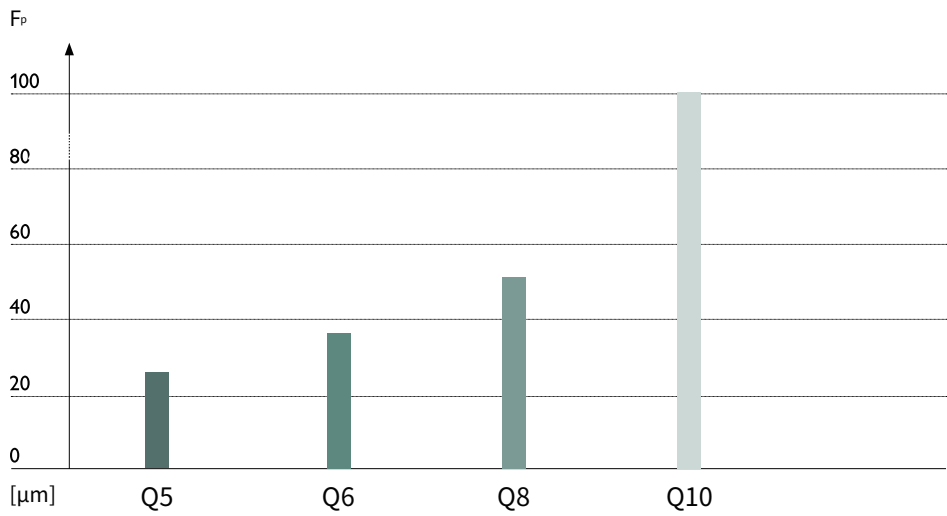


Illustration of cumulative pitch deviation FpF\_pFp for a module 4.0 over a length of 1000 mm.

|           |          |        |           |
|-----------|----------|--------|-----------|
| Materials | Steel    |        | Stainless |
| Processes | Hardened | Milled | Ground    |

Function Module

Your Perfect Drive System –  
Highly Accurate & Cost-Effective

System includes:  
Precision planetary gearboxes, along with racks, pinions and rollers.  
Wanshsin's products complement each other seamlessly, making them ideal for a high-performance drive system. They meet the highest standards for accuracy and efficiency. Our compact designs enable highly dynamic drive systems that are versatile in terms of installation position.  
This optimal drive system is designed for applications requiring precision, strength, and high dynamics, even over long distances. It is suitable for cutting, tooling, woodworking machines, as well as applications in robotics and conveyor technology.

Q5

Q6

Q8

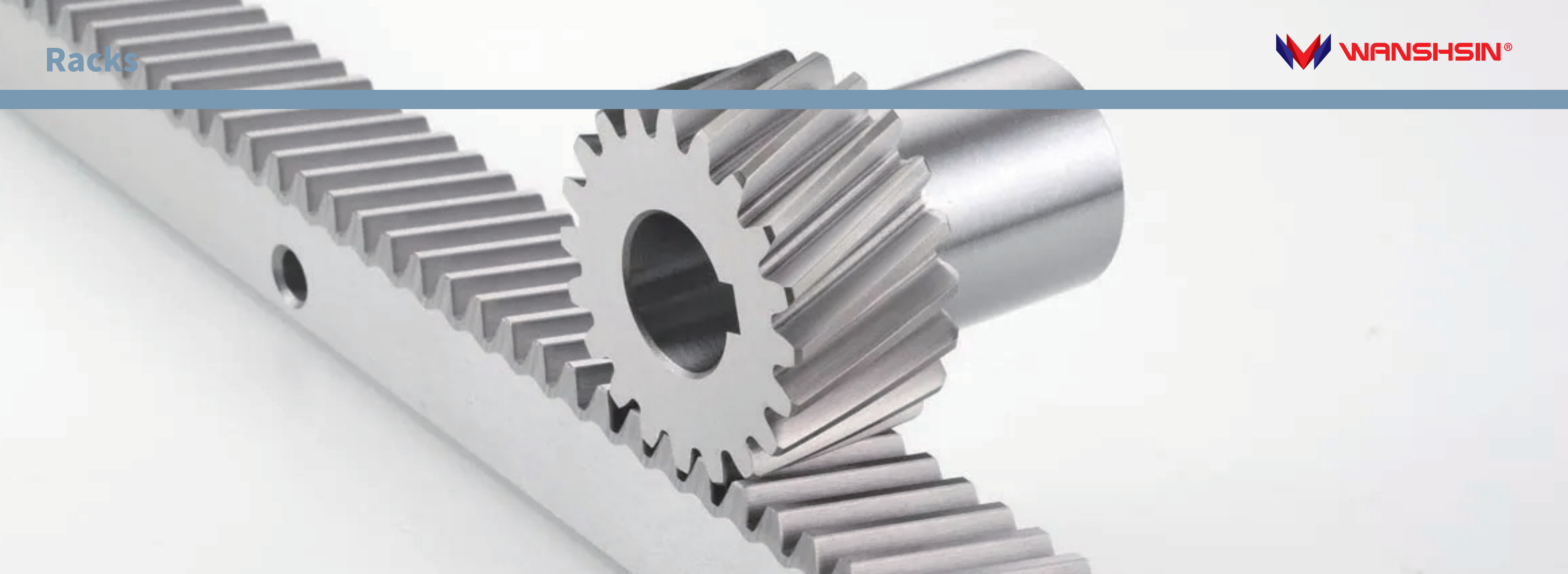
Q10

Quality grades

High precision planetary gearbox

|            | High-end applications |    | Standard applications |     | Basic applications |          |
|------------|-----------------------|----|-----------------------|-----|--------------------|----------|
| Rack       | Q6                    |    | Q8                    |     | Q10                |          |
| Gearbox    | P1                    | P3 | P1                    | P12 | P5                 | P12      |
| Precision  | High                  |    |                       |     |                    | Standard |
| Feed force | High                  |    | Medium                |     | Elevated           |          |



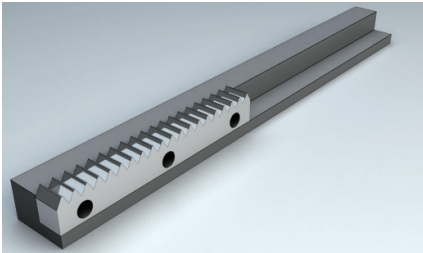


Code Description:

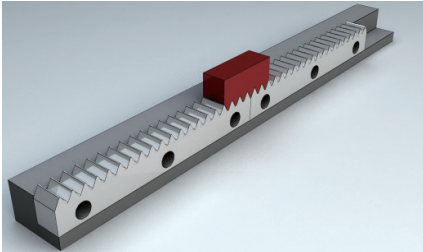
| Material      | Rack Type     | Shape                                                                               |             | Treatment of Tooth                                                                  | Hardness                               | Module         | Length         | Holes         | Sides Ground    |
|---------------|---------------|-------------------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------|----------------------------------------|----------------|----------------|---------------|-----------------|
| <b>C</b><br>↓ | <b>S</b><br>↓ | <b>T</b><br>↓                                                                       |             | <b>G</b><br>↓                                                                       | <b>H/Q</b><br>↓                        | <b>20</b><br>↓ | <b>05</b><br>↓ | <b>N</b><br>↓ | <b>-G</b><br>↓  |
| C=S45C        | S= Straight   |  | T= Tetragon |  | G= Ground                              | M2             | 05=500mm       | N= No Holes   | G= Sides Ground |
| M=SCM440      | H= Helical    |  | R= Round    |  | M= Milled                              |                | 10=1,000mm     |               |                 |
|               |               |                                                                                     |             |                                                                                     | Q= Tempered& quenched Without Hardness |                |                |               |                 |

Assembling Instruction:

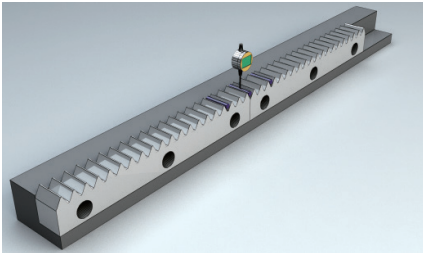
The racks can be connected to any length .The gap between two adjacent racks should be adjusted to match the pitch .Locking pins should be used when assembling the racks.



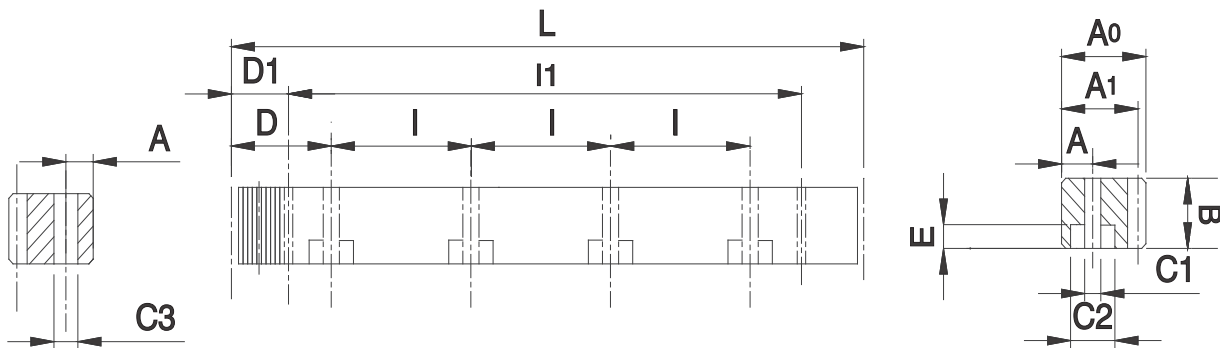
1、 Fix the rack.



2、 Use opposite tooth gauge to fix next ack.



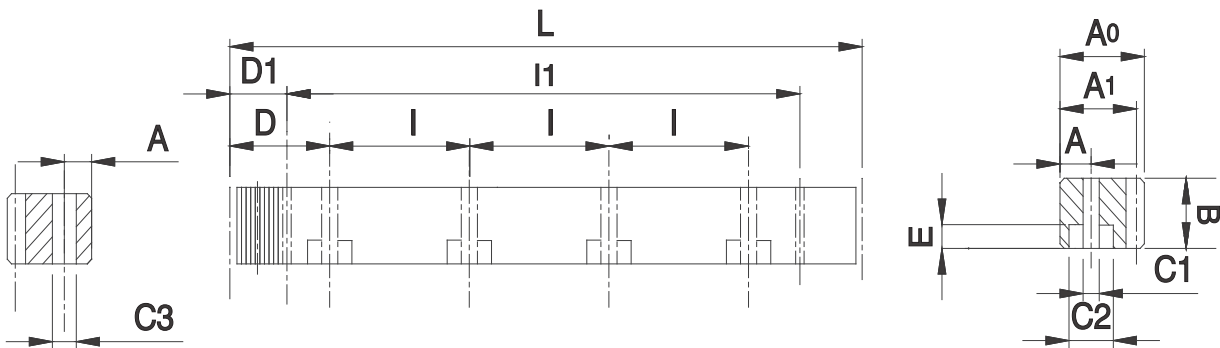
3、 Check every joint and measure the levelling of the racks with round bars.



Dimension:mm

| Code  |     |    | Module | L       | Tooth No. | B   | A0  | A1   | D     | I      | Hole No. | A  | C1 | C2 | E  | D1     | I1     | C3   |
|-------|-----|----|--------|---------|-----------|-----|-----|------|-------|--------|----------|----|----|----|----|--------|--------|------|
| CSTGH | 010 | 05 | 1      | 499.51  | 159       | 15  | 15  | 14   | -     | -      | -        | -  | -  | -  | -  | -      | -      | -    |
| CSTGH | 015 | 05 | 1.5    | 499.51  | 106       | 19  | 19  | 17.5 | 62.44 | 124.88 | 4        | 8  | 7  | 11 | 7  | 29     | 440.5  | 5.7  |
| CSTGH | 015 | 10 | 1.5    | 999.03  | 212       | 19  | 19  | 17.5 | 62.44 | 124.88 | 8        | 8  | 7  | 11 | 7  | 29     | 941    | 5.7  |
| CSTGH | 020 | 05 | 2      | 502.65  | 80        | 24  | 24  | 22   | 62.83 | 125.66 | 4        | 8  | 7  | 11 | 7  | 31.3   | 440.1  | 5.7  |
| CSTGH | 020 | 10 | 2      | 1005.31 | 160       | 24  | 24  | 22   | 62.83 | 125.66 | 8        | 8  | 7  | 11 | 7  | 31.3   | 942.7  | 5.7  |
| CSTGH | 030 | 05 | 3      | 508.94  | 54        | 29  | 29  | 26   | 63.62 | 127.23 | 4        | 9  | 10 | 15 | 9  | 34.4   | 440.1  | 7.7  |
| CSTGH | 030 | 10 | 3      | 1017.88 | 108       | 29  | 29  | 26   | 63.62 | 127.23 | 8        | 9  | 10 | 15 | 9  | 34.4   | 949.1  | 7.7  |
| CSTGH | 040 | 05 | 4      | 502.65  | 40        | 39  | 39  | 35   | 62.83 | 125.66 | 4        | 12 | 10 | 15 | 9  | 37.5   | 427.7  | 7.7  |
| CSTGH | 040 | 10 | 4      | 1005.31 | 80        | 39  | 39  | 35   | 62.83 | 125.66 | 8        | 12 | 10 | 15 | 9  | 37.5   | 930.3  | 7.7  |
| CSTGH | 050 | 05 | 5      | 502.65  | 32        | 49  | 39  | 34   | 62.83 | 125.66 | 4        | 12 | 14 | 20 | 13 | 30.1   | 442.4  | 11.7 |
| CSTGH | 050 | 10 | 5      | 1005.31 | 64        | 49  | 39  | 34   | 62.83 | 125.66 | 8        | 12 | 14 | 20 | 13 | 30.1   | 945    | 11.7 |
| CSTGH | 060 | 05 | 6      | 508.94  | 27        | 59  | 49  | 43   | 63.62 | 127.23 | 4        | 16 | 18 | 26 | 17 | 31.4   | 446.1  | 15.7 |
| CSTGH | 060 | 10 | 6      | 1017.88 | 54        | 59  | 49  | 43   | 63.62 | 127.23 | 8        | 16 | 18 | 26 | 17 | 31.4   | 955.0  | 15.7 |
| CSTGH | 080 | 05 | 8      | 502.65  | 20        | 79  | 79  | 71   | 62.83 | 125.66 | 4        | 25 | 22 | 33 | 21 | 26.6   | 449.5  | 19.7 |
| CSTGH | 080 | 10 | 8      | 1005.31 | 40        | 79  | 79  | 71   | 62.83 | 125.66 | 8        | 25 | 22 | 33 | 21 | 26.6   | 952    | 19.7 |
| CSTGH | 100 | 10 | 10     | 1005.31 | 32        | 99  | 99  | 89   | 62.83 | 125.66 | 8        | 32 | 33 | 48 | 32 | 125.7  | 753.96 | 19.7 |
| CSTGH | 120 | 12 | 12     | 1017.90 | 27        | 120 | 120 | 108  | 63.6  | 127.23 | 8        | 40 | 39 | 58 | 38 | 127.23 | 763.4  | 19.7 |

|                                            |
|--------------------------------------------|
| Manufacturing description:                 |
| Precision grade: DIN 6h25                  |
| Material: (S45C medium carbon steel) C45   |
| Type: straight rack                        |
| Treatment of teeth: ground                 |
| Hardness: high frequency,HRC 48~52 degree. |
| Sides ground: included                     |
| Pressure angle: 20 degree                  |
| Total pitch error:0.036mm/1000mm           |

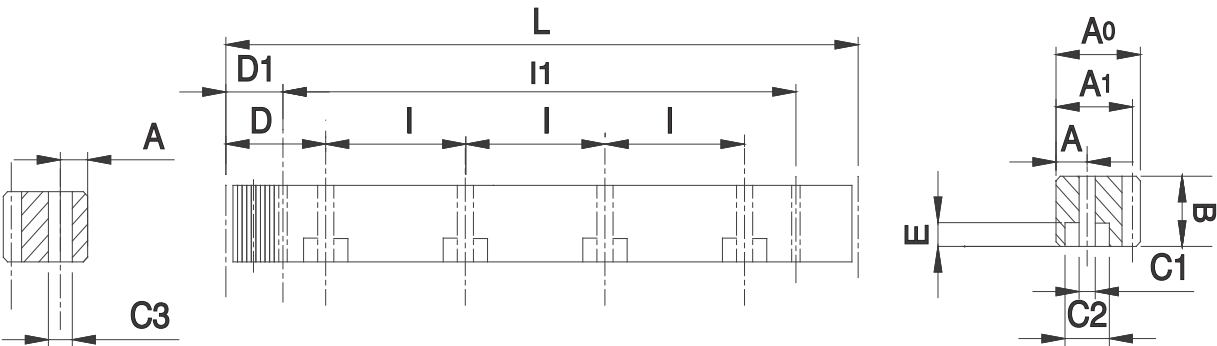


Dimension:mm

| Code  |     |    | Module | L       | Tooth No. | B  | A0 | A1   | D     | I      | Hole No. | A  | C1 | C2 | E  | D1    | I1     | C3   |
|-------|-----|----|--------|---------|-----------|----|----|------|-------|--------|----------|----|----|----|----|-------|--------|------|
| CSTMQ | 010 | 05 | 1      | 499.51  | 159       | 15 | 15 | 14   | -     | -      | -        | -  | -  | -  | -  | -     | -      | -    |
| CSTMQ | 015 | 05 | 1.5    | 499.51  | 106       | 19 | 19 | 17.5 | 62.44 | 124.88 | 4        | 8  | 7  | 11 | 7  | 29    | 441.5  | 5.7  |
| CSTMQ | 015 | 10 | 1.5    | 999.03  | 212       | 19 | 19 | 17.5 | 62.44 | 124.88 | 8        | 8  | 7  | 11 | 7  | 29    | 941    | 5.7  |
| CSTMQ | 020 | 05 | 2      | 502.65  | 80        | 24 | 24 | 22   | 62.83 | 125.66 | 4        | 8  | 7  | 11 | 7  | 31.3  | 440.1  | 5.7  |
| CSTMQ | 020 | 10 | 2      | 1005.31 | 160       | 24 | 24 | 22   | 62.83 | 125.66 | 8        | 8  | 7  | 11 | 7  | 31.3  | 942.7  | 5.7  |
| CSTMQ | 030 | 05 | 3      | 508.94  | 54        | 29 | 29 | 26   | 63.62 | 127.23 | 4        | 9  | 10 | 15 | 9  | 34.4  | 440.1  | 7.7  |
| CSTMQ | 030 | 10 | 3      | 1017.88 | 108       | 29 | 29 | 26   | 63.62 | 127.23 | 8        | 9  | 10 | 15 | 9  | 34.4  | 949.1  | 7.7  |
| CSTMQ | 040 | 05 | 4      | 502.65  | 40        | 39 | 39 | 35   | 62.83 | 125.66 | 4        | 12 | 10 | 15 | 9  | 37.5  | 427.7  | 7.7  |
| CSTMQ | 040 | 10 | 4      | 1005.31 | 80        | 39 | 39 | 35   | 62.83 | 125.66 | 8        | 12 | 10 | 15 | 9  | 37.5  | 930.3  | 7.7  |
| CSTMQ | 050 | 05 | 5      | 502.65  | 32        | 49 | 39 | 34   | 62.83 | 125.66 | 4        | 12 | 14 | 20 | 13 | 30.1  | 442.4  | 11.7 |
| CSTMQ | 050 | 10 | 5      | 1005.31 | 64        | 49 | 39 | 34   | 62.83 | 125.66 | 8        | 12 | 14 | 20 | 13 | 30.1  | 945.0  | 11.7 |
| CSTMQ | 060 | 05 | 6      | 508.94  | 27        | 59 | 49 | 43   | 63.62 | 127.23 | 4        | 16 | 18 | 26 | 17 | 31.4  | 446.1  | 15.7 |
| CSTMQ | 060 | 10 | 6      | 1017.88 | 54        | 59 | 49 | 43   | 63.62 | 127.23 | 8        | 16 | 18 | 26 | 17 | 31.4  | 955.0  | 15.7 |
| CSTMQ | 080 | 05 | 8      | 502.65  | 20        | 79 | 79 | 71   | 62.83 | 125.66 | 4        | 25 | 22 | 33 | 21 | 26.6  | 449.5  | 19.7 |
| CSTMQ | 080 | 10 | 8      | 1005.31 | 40        | 79 | 79 | 71   | 62.83 | 125.66 | 8        | 25 | 22 | 33 | 21 | 26.6  | 952    | 19.7 |
| CSTMQ | 100 | 10 | 10     | 1005.31 | 32        | 99 | 99 | 89   | 62.83 | 125.66 | 8        | 32 | 33 | 48 | 32 | 125.7 | 753.96 | 19.7 |

|                                |
|--------------------------------|
| Manufacturing description:     |
| Precision grade: DIN 8e27      |
| Material: S45C                 |
| Type: straight rack            |
| Treatment of teeth:milled      |
| Hardness:hrc 18~20 degree      |
| Sides ground:not included      |
| Pressure angle:20 degree       |
| Total pitch error:0.1mm/1000mm |

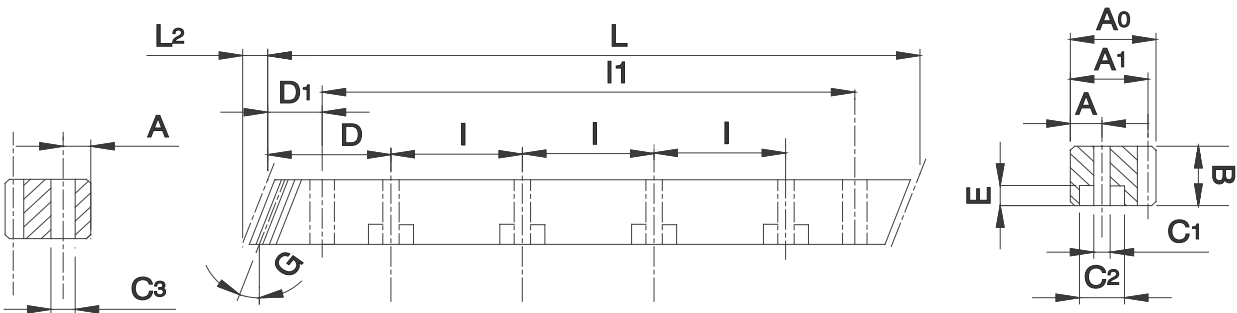




Dimension:mm

| Code         | Module | L       | Tooth No. | B  | A0 | A1   | D     | I      | Hole No. | A  | C1 | C2 | E  | D1    | I1     | C3   |
|--------------|--------|---------|-----------|----|----|------|-------|--------|----------|----|----|----|----|-------|--------|------|
| CSTMH 010 05 | 1      | 499.51  | 159       | 15 | 15 | 14   | -     | -      | -        | -  | -  | -  | -  | -     | -      | -    |
| CSTMH 015 05 | 1.5    | 499.51  | 106       | 19 | 19 | 17.5 | 62.44 | 124.88 | 4        | 8  | 7  | 11 | 7  | 29.0  | 441.5  | 5.7  |
| CSTMH 015 10 | 1.5    | 999.03  | 212       | 19 | 19 | 17.5 | 62.44 | 124.88 | 8        | 8  | 7  | 11 | 7  | 29.0  | 941.0  | 5.7  |
| CSTMH 020 05 | 2      | 502.65  | 80        | 24 | 24 | 22   | 62.83 | 125.66 | 4        | 8  | 7  | 11 | 7  | 31.3  | 440.1  | 5.7  |
| CSTMH 020 10 | 2      | 1005.31 | 160       | 24 | 24 | 22   | 62.83 | 125.66 | 8        | 8  | 7  | 11 | 7  | 31.3  | 942.7  | 5.7  |
| CSTMH 030 05 | 3      | 508.94  | 54        | 29 | 29 | 26   | 63.62 | 127.23 | 4        | 9  | 10 | 15 | 9  | 34.4  | 440.1  | 7.7  |
| CSTMH 030 10 | 3      | 1017.88 | 108       | 29 | 29 | 26   | 63.62 | 127.23 | 8        | 9  | 10 | 15 | 9  | 34.4  | 949.1  | 7.7  |
| CSTMH 040 05 | 4      | 502.65  | 40        | 39 | 39 | 35   | 62.83 | 125.66 | 4        | 12 | 10 | 15 | 9  | 37.5  | 427.7  | 7.7  |
| CSTMH 040 10 | 4      | 1005.31 | 80        | 39 | 39 | 35   | 62.83 | 125.66 | 8        | 12 | 10 | 15 | 9  | 37.5  | 930.3  | 7.7  |
| CSTMH 050 05 | 5      | 502.65  | 32        | 49 | 39 | 34   | 62.83 | 125.66 | 4        | 12 | 14 | 20 | 13 | 30.1  | 442.4  | 11.7 |
| CSTMH 050 10 | 5      | 1005.31 | 64        | 49 | 39 | 34   | 62.83 | 125.66 | 8        | 12 | 14 | 20 | 13 | 30.1  | 945    | 11.7 |
| CSTMH 060 05 | 6      | 508.94  | 27        | 59 | 49 | 43   | 63.62 | 127.23 | 4        | 16 | 18 | 26 | 17 | 31.4  | 446.1  | 15.7 |
| CSTMH 060 10 | 6      | 1017.88 | 54        | 59 | 49 | 43   | 63.62 | 127.23 | 8        | 16 | 18 | 26 | 17 | 31.4  | 955    | 15.7 |
| CSTMH 080 05 | 8      | 502.65  | 20        | 79 | 79 | 71   | 62.83 | 125.66 | 4        | 25 | 22 | 33 | 21 | 26.6  | 449.5  | 19.7 |
| CSTMH 080 10 | 8      | 1005.31 | 40        | 79 | 79 | 71   | 62.83 | 125.66 | 8        | 25 | 22 | 33 | 21 | 26.6  | 952    | 19.7 |
| CSTMH 100 10 | 10     | 1005.31 | 32        | 99 | 99 | 89   | 62.83 | 125.66 | 8        | 32 | 33 | 48 | 32 | 125.7 | 753.96 | 19.7 |

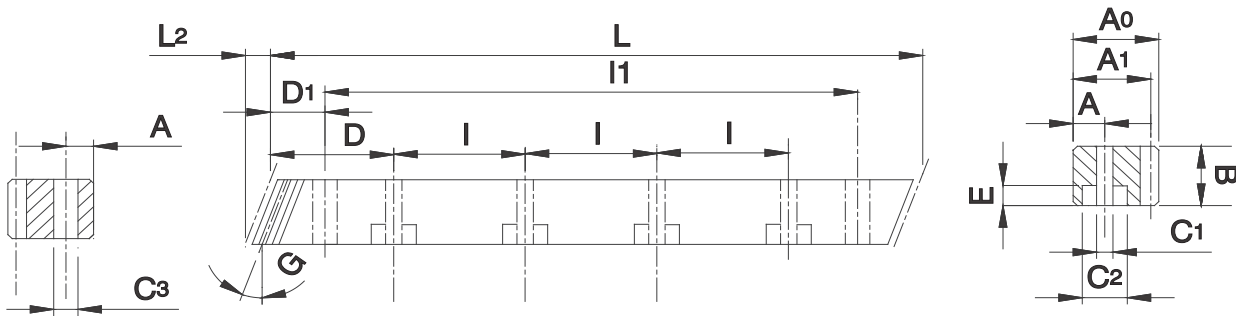
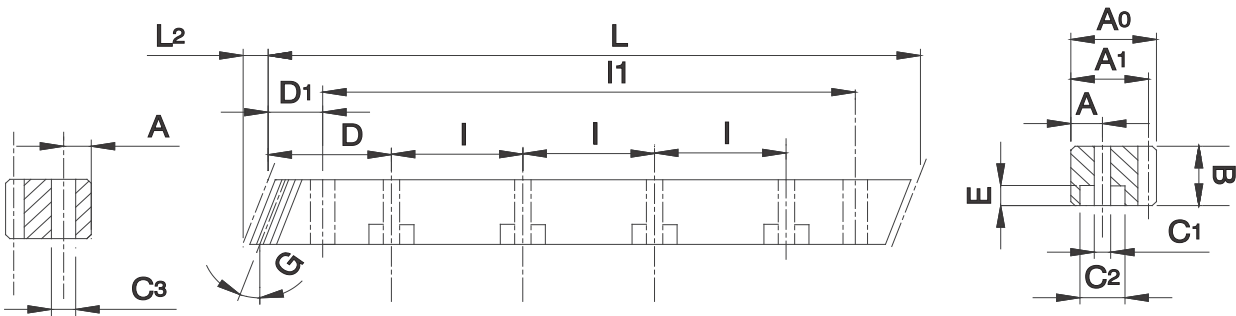
|                                          |
|------------------------------------------|
| Manufacturing description:               |
| Precision grade: DIN 10e27               |
| Material: S45C                           |
| Type: straight rack                      |
| Treatment of teeth: milled               |
| Hardness:high frequency,HRC 48-52 degree |
| Sides ground: not included               |
| Pressure angle:20 degree                 |
| Total pitch error:0.2mm/1000mm           |



Dimension:mm

| Code         | Module | L       | L2    | Tooth No. | B   | A0  | A1   | D     | I   | Hole No. | A  | C1 | C2 | E  | D1    | I1    | C3   |
|--------------|--------|---------|-------|-----------|-----|-----|------|-------|-----|----------|----|----|----|----|-------|-------|------|
| CHTGH 010 05 | 1      | 500.00  | 3.14  | 150       | 15  | 15  | 14   | -     | -   | -        | -  | -  | -  | -  | -     | -     | -    |
| CHTGH 015 05 | 1.5    | 500.00  | 6.7   | 100       | 19  | 19  | 17.5 | 62.50 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7  | 436.6 | 5.7  |
| CHTGH 015 10 | 1.5    | 1000.00 | 6.7   | 200       | 19  | 19  | 17.5 | 62.50 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7  | 936.6 | 5.7  |
| CHTGH 020 05 | 2      | 500.00  | 8.5   | 75        | 24  | 24  | 22   | 62.50 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7  | 436.6 | 5.7  |
| CHTGH 020 10 | 2      | 1000.00 | 8.5   | 150       | 24  | 24  | 22   | 62.50 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7  | 936.6 | 5.7  |
| CHTGH 030 05 | 3      | 500.00  | 10.3  | 50        | 29  | 29  | 26   | 62.50 | 125 | 4        | 9  | 10 | 15 | 9  | 35.0  | 430.0 | 7.7  |
| CHTGH 030 10 | 3      | 1000.00 | 10.3  | 100       | 29  | 29  | 26   | 62.50 | 125 | 8        | 9  | 10 | 15 | 9  | 35.0  | 930.0 | 7.7  |
| CHTGH 040 05 | 4      | 506.67  | 13.8  | 38        | 39  | 39  | 35   | 62.50 | 125 | 4        | 12 | 10 | 15 | 9  | 33.3  | 433.0 | 7.7  |
| CHTGH 040 10 | 4      | 1000.00 | 13.8  | 75        | 39  | 39  | 35   | 62.50 | 125 | 8        | 12 | 10 | 15 | 9  | 33.3  | 933.4 | 7.7  |
| CHTGH 050 05 | 5      | 500.00  | 17.4  | 30        | 49  | 39  | 34   | 62.50 | 125 | 4        | 12 | 14 | 20 | 13 | 37.5  | 425.0 | 11.7 |
| CHTGH 050 10 | 5      | 1000.00 | 17.4  | 60        | 49  | 39  | 34   | 62.50 | 125 | 8        | 12 | 14 | 20 | 13 | 37.5  | 925.0 | 11.7 |
| CHTGH 060 05 | 6      | 500.00  | 20.9  | 25        | 59  | 49  | 43   | 62.50 | 125 | 4        | 16 | 18 | 26 | 17 | 37.5  | 425.0 | 15.7 |
| CHTGH 060 10 | 6      | 1000.00 | 20.9  | 50        | 59  | 49  | 43   | 62.50 | 125 | 8        | 16 | 18 | 26 | 17 | 37.5  | 925.0 | 15.7 |
| CHTGH 080 05 | 8      | 480.00  | 28.0  | 18        | 79  | 79  | 71   | 60.00 | 120 | 4        | 25 | 22 | 33 | 21 | 120.0 | 240.0 | 19.7 |
| CHTGH 080 10 | 8      | 960.00  | 28.0  | 36        | 79  | 79  | 71   | 60.00 | 120 | 8        | 25 | 22 | 33 | 21 | 120.0 | 720.0 | 19.7 |
| CHTGH 100 10 | 10     | 1000.00 | 35.11 | 30        | 99  | 99  | 89   | 62.50 | 125 | 8        | 32 | 33 | 48 | 32 | 125.0 | 750.0 | 19.7 |
| CHTGH 120 10 | 12     | 1000.00 | 42.56 | 25        | 120 | 120 | 108  | 40.00 | 125 | 8        | 40 | 39 | 58 | 38 | 125.0 | 750.0 | 19.7 |

|                                           |
|-------------------------------------------|
| Manufacturing description:                |
| Precision grade: DIN 6h25                 |
| Material: S45C                            |
| Type: helical rack                        |
| Treatment of teeth: ground                |
| Hardness: heat treatment,HRC 48~52 degree |
| Sides ground: included                    |
| Right hand angle: 19° 31'42"              |
| Pressure angle: 20 degree                 |
| Total pitch error: 0.036mm/1000mm         |



Dimension:mm

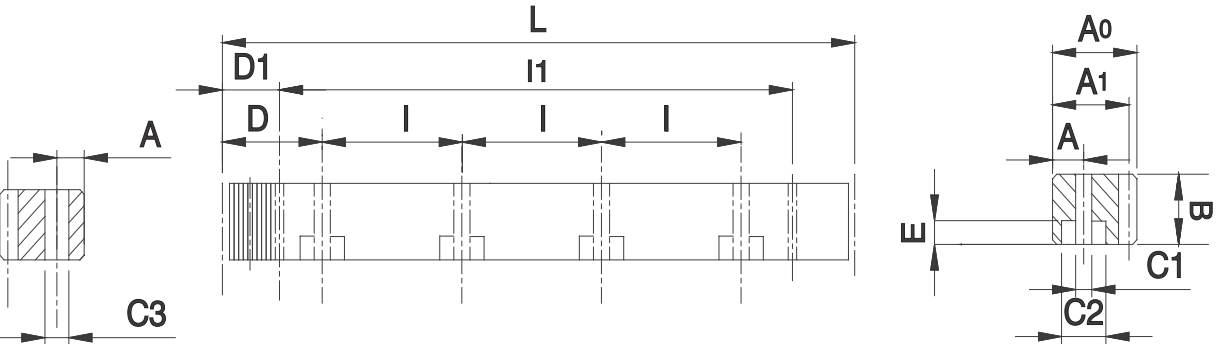
| Code  |     |    | Module | L       | L2    | Tooth No. | B  | A0 | A1   | D    | I   | Hole No. | A  | C1 | C2 | E  | D1    | I1    | C3   |
|-------|-----|----|--------|---------|-------|-----------|----|----|------|------|-----|----------|----|----|----|----|-------|-------|------|
| CHTMQ | 010 | 05 | 1      | 500.00  | 3.14  | 150       | 15 | 15 | 14   | -    | -   | -        | -  | -  | -  | -  | -     | -     | -    |
| CHTMQ | 015 | 05 | 1.5    | 500.00  | 6.7   | 100       | 19 | 19 | 17.5 | 62.5 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7  | 436.6 | 5.7  |
| CHTMQ | 015 | 10 | 1.5    | 1000.00 | 6.7   | 200       | 19 | 19 | 17.5 | 62.5 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7  | 936.6 | 5.7  |
| CHTMQ | 020 | 05 | 2      | 500.00  | 8.9   | 75        | 24 | 24 | 22   | 62.5 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7  | 436.6 | 5.7  |
| CHTMQ | 020 | 10 | 2      | 1000.00 | 8.9   | 150       | 24 | 24 | 22   | 62.5 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7  | 936.6 | 5.7  |
| CHTMQ | 030 | 05 | 3      | 500.00  | 10.6  | 50        | 29 | 29 | 26   | 62.5 | 125 | 4        | 9  | 10 | 15 | 9  | 35.0  | 430.0 | 7.7  |
| CHTMQ | 030 | 10 | 3      | 1000.00 | 10.6  | 100       | 29 | 29 | 26   | 62.5 | 125 | 8        | 9  | 10 | 15 | 9  | 35.0  | 930.0 | 7.7  |
| CHTMQ | 040 | 05 | 4      | 506.67  | 14.2  | 38        | 39 | 39 | 35   | 62.5 | 125 | 4        | 12 | 10 | 15 | 9  | 33.3  | 433.0 | 7.7  |
| CHTMQ | 040 | 10 | 4      | 1000.00 | 14.2  | 75        | 39 | 39 | 35   | 62.5 | 125 | 8        | 12 | 10 | 15 | 9  | 33.3  | 933.4 | 7.7  |
| CHTMQ | 050 | 05 | 5      | 500.00  | 17.4  | 30        | 49 | 39 | 34   | 62.5 | 125 | 4        | 12 | 14 | 20 | 13 | 37.5  | 425.0 | 11.7 |
| CHTMQ | 050 | 10 | 5      | 1000.00 | 17.4  | 60        | 49 | 39 | 34   | 62.5 | 125 | 8        | 12 | 14 | 20 | 13 | 37.5  | 925.0 | 11.7 |
| CHTMQ | 060 | 05 | 6      | 500.00  | 20.9  | 25        | 59 | 49 | 43   | 62.5 | 125 | 4        | 16 | 18 | 26 | 17 | 37.5  | 425.0 | 15.7 |
| CHTMQ | 060 | 10 | 6      | 1000.00 | 20.9  | 50        | 59 | 49 | 43   | 62.5 | 125 | 8        | 16 | 18 | 26 | 17 | 37.5  | 925.0 | 15.7 |
| CHTMQ | 080 | 05 | 8      | 480.00  | 28.0  | 18        | 79 | 79 | 71   | 60.0 | 120 | 4        | 25 | 22 | 33 | 21 | 120.0 | 240.0 | 19.7 |
| CHTMQ | 080 | 10 | 8      | 960.00  | 28.0  | 36        | 79 | 79 | 71   | 60.0 | 120 | 8        | 25 | 22 | 33 | 21 | 120.0 | 720.0 | 19.7 |
| CHTMQ | 100 | 10 | 10     | 1000.00 | 35.11 | 30        | 99 | 99 | 89   | 62.5 | 125 | 8        | 32 | 33 | 48 | 32 | 120.0 | 750.0 | 19.7 |

|                                     |
|-------------------------------------|
| Manufacturing description:          |
| Precision grade: DIN 8e27           |
| Material: S45C                      |
| Type: helical rack                  |
| Treatment of teeth: milled          |
| Hardness: qucnched,HRC 18~20 degree |
| Sides ground: not included          |
| Right hand angle: 19° 31'42"        |
| Pressure angle: 20 degree           |
| Total pitch error:0.1mm/1000mm      |

Dimension:mm

| Code  |     |    | Module | L       | L2    | Tooth No. | B   | A0  | A1   | D    | I   | Hole No. | A  | C1 | C2 | E  | D1    | I1    | C3   |
|-------|-----|----|--------|---------|-------|-----------|-----|-----|------|------|-----|----------|----|----|----|----|-------|-------|------|
| CHTMH | 010 | 05 | 1      | 500.00  | 5.35  | 150       | 15  | 15  | 14   | -    | -   | -        | -  | -  | -  | -  | -     | -     | -    |
| CHTMH | 015 | 05 | 1.5    | 500.00  | 6.7   | 100       | 19  | 19  | 17.5 | 62.5 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7  | 436.6 | 5.7  |
| CHTMH | 015 | 10 | 1.5    | 1000.00 | 6.7   | 200       | 19  | 19  | 17.5 | 62.5 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7  | 936.6 | 5.7  |
| CHTMH | 020 | 05 | 2      | 500.00  | 8.5   | 75        | 24  | 24  | 22   | 62.5 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7  | 436.6 | 5.7  |
| CHTMH | 020 | 10 | 2      | 1000.00 | 8.5   | 150       | 24  | 24  | 22   | 62.5 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7  | 936.6 | 5.7  |
| CHTMH | 030 | 05 | 3      | 500.00  | 10.3  | 50        | 29  | 29  | 26   | 62.5 | 125 | 4        | 9  | 10 | 15 | 10 | 35.0  | 430.0 | 7.7  |
| CHTMH | 030 | 10 | 3      | 1000.00 | 10.3  | 100       | 29  | 29  | 26   | 62.5 | 125 | 8        | 9  | 10 | 15 | 10 | 35.0  | 930.0 | 7.7  |
| CHTMH | 040 | 05 | 4      | 506.67  | 13.8  | 38        | 39  | 39  | 35   | 62.5 | 125 | 4        | 12 | 10 | 15 | 10 | 33.3  | 433.0 | 7.7  |
| CHTMH | 040 | 10 | 4      | 1000.00 | 13.8  | 75        | 39  | 39  | 35   | 62.5 | 125 | 8        | 12 | 10 | 15 | 10 | 33.3  | 933.0 | 7.7  |
| CHTMH | 050 | 05 | 5      | 500.00  | 17.4  | 30        | 49  | 39  | 34   | 62.5 | 125 | 4        | 12 | 14 | 20 | 14 | 37.5  | 425.0 | 11.7 |
| CHTMH | 050 | 10 | 5      | 1000.00 | 17.4  | 60        | 49  | 39  | 34   | 62.5 | 125 | 8        | 12 | 14 | 20 | 14 | 37.5  | 925.0 | 11.7 |
| CHTMH | 060 | 05 | 6      | 500.00  | 20.9  | 25        | 59  | 49  | 43   | 62.5 | 125 | 4        | 16 | 18 | 26 | 18 | 37.5  | 425.0 | 15.7 |
| CHTMH | 060 | 10 | 6      | 1000.00 | 20.9  | 50        | 59  | 49  | 43   | 62.5 | 125 | 8        | 16 | 18 | 26 | 18 | 37.5  | 925.0 | 15.7 |
| CHTMH | 080 | 05 | 8      | 480.00  | 28.0  | 18        | 79  | 79  | 71   | 60.0 | 120 | 4        | 25 | 22 | 33 | 22 | 120   | 240.0 | 19.7 |
| CHTMH | 080 | 10 | 8      | 960.00  | 28.0  | 36        | 79  | 79  | 71   | 60.0 | 120 | 8        | 25 | 22 | 33 | 22 | 120   | 720.0 | 19.7 |
| CHTMH | 100 | 10 | 10     | 1000.00 | 35.11 | 30        | 99  | 99  | 89   | 62.5 | 125 | 8        | 32 | 33 | 48 | 33 | 125   | 750.0 | 19.7 |
| CHTMH | 120 | 10 | 12     | 1000.00 | 42.56 | 25        | 120 | 120 | 108  | 40   | 125 | 8        | 40 | 39 | 58 | 39 | 102.5 | 750.0 | 19.7 |

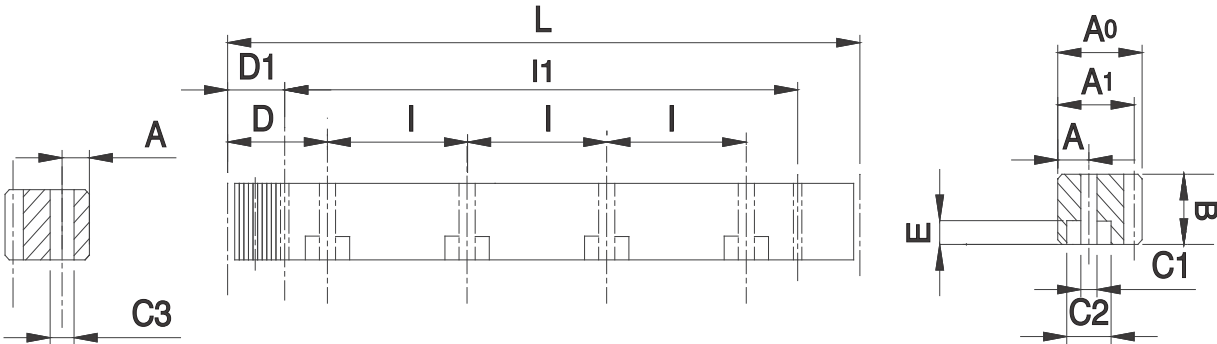
|                                           |
|-------------------------------------------|
| Manufacturing description:                |
| Precision grade: DIN 10e27                |
| Material: S45C                            |
| Type: helical rack                        |
| Treatment of teeth: milled                |
| Hardness: heat treatment,HRC 48~52 degree |
| Sides ground: not included                |
| Right hand angle: 19° 31'42"              |
| Pressure angle: 20 degree                 |
| Total pitch error:0.2mm/1000mm            |



Dimension:mm

| Code  |     |    | Module | L       | Tooth No. | B  | A0 | A1   | D     | I      | Hole No. | A  | C1 | C2 | E  | D1    | I1     | C3   |
|-------|-----|----|--------|---------|-----------|----|----|------|-------|--------|----------|----|----|----|----|-------|--------|------|
| MSTGH | 010 | 05 | 1      | 499.51  | 159       | 15 | 15 | 14   | -     | -      | -        | -  | -  | -  | -  | -     | -      | -    |
| MSTGH | 015 | 05 | 1.5    | 499.51  | 106       | 19 | 19 | 17.5 | 62.44 | 124.88 | 4        | 8  | 7  | 11 | 7  | 29.0  | 441.5  | 5.7  |
| MSTGH | 015 | 10 | 1.5    | 999.03  | 212       | 19 | 19 | 17.5 | 62.44 | 124.88 | 8        | 8  | 7  | 11 | 7  | 29.0  | 941.0  | 5.7  |
| MSTGH | 020 | 05 | 2      | 502.65  | 80        | 24 | 24 | 22   | 62.83 | 125.66 | 4        | 8  | 7  | 11 | 7  | 31.3  | 440.1  | 5.7  |
| MSTGH | 020 | 10 | 2      | 1005.31 | 160       | 24 | 24 | 22   | 62.83 | 125.66 | 8        | 8  | 7  | 11 | 7  | 31.3  | 942.7  | 5.7  |
| MSTGH | 030 | 05 | 3      | 508.94  | 54        | 29 | 29 | 26   | 63.62 | 127.23 | 4        | 9  | 10 | 15 | 9  | 34.4  | 440.1  | 7.7  |
| MSTGH | 030 | 10 | 3      | 1017.88 | 108       | 29 | 29 | 26   | 63.62 | 127.23 | 8        | 9  | 10 | 15 | 9  | 34.4  | 949.1  | 7.7  |
| MSTGH | 040 | 05 | 4      | 502.65  | 40        | 39 | 39 | 35   | 62.83 | 125.66 | 4        | 12 | 10 | 15 | 9  | 37.5  | 427.7  | 7.7  |
| MSTGH | 040 | 10 | 4      | 1005.31 | 80        | 39 | 39 | 35   | 62.83 | 125.66 | 8        | 12 | 10 | 15 | 9  | 37.5  | 930.3  | 7.7  |
| MSTGH | 050 | 05 | 5      | 502.65  | 32        | 49 | 39 | 34   | 62.83 | 125.66 | 4        | 12 | 14 | 20 | 13 | 30.1  | 442.4  | 11.7 |
| MSTGH | 050 | 10 | 5      | 1005.31 | 64        | 49 | 39 | 34   | 62.83 | 125.66 | 8        | 12 | 14 | 20 | 13 | 30.1  | 945    | 11.7 |
| MSTGH | 060 | 05 | 6      | 508.94  | 27        | 59 | 49 | 43   | 63.62 | 127.23 | 4        | 16 | 18 | 26 | 17 | 31.4  | 446.1  | 15.7 |
| MSTGH | 060 | 10 | 6      | 1017.88 | 54        | 59 | 49 | 43   | 63.62 | 127.23 | 8        | 16 | 18 | 26 | 17 | 31.4  | 955.0  | 15.7 |
| MSTGH | 080 | 05 | 8      | 502.65  | 20        | 79 | 79 | 71   | 62.83 | 125.66 | 4        | 25 | 22 | 33 | 21 | 26.6  | 449.5  | 19.7 |
| MSTGH | 080 | 10 | 8      | 1005.31 | 40        | 79 | 79 | 71   | 62.83 | 125.66 | 8        | 25 | 22 | 33 | 21 | 26.6  | 952    | 19.7 |
| MSTGH | 100 | 10 | 10     | 1005.31 | 32        | 99 | 99 | 89   | 62.83 | 125.66 | 8        | 32 | 33 | 48 | 32 | 125.7 | 753.96 | 19.7 |

|                                                           |
|-----------------------------------------------------------|
| Manufacturing description:                                |
| Precision grade: DIN 6h25                                 |
| Material (SCM440 chromium molybdenum alloy steel) 42CrMo4 |
| Type: straight rack                                       |
| Treatment of teeth: ground                                |
| Hardness:heat treatment,HRC 50-55 degree                  |
| Sides ground: included                                    |
| Pressure angle:20 degree                                  |
| Total pitch error:0.036mm/1000mm                          |

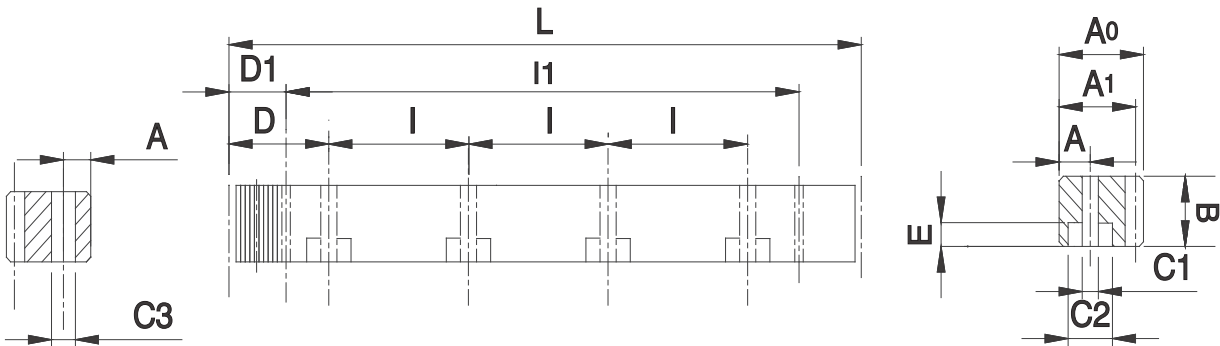


Dimension:mm

| Code  |     |    | Module | L       | Tooth No. | B  | A0 | A1   | D     | I      | Hole No. | A  | C1 | C2 | E  | D1    | I1     | C3   |
|-------|-----|----|--------|---------|-----------|----|----|------|-------|--------|----------|----|----|----|----|-------|--------|------|
| MSTMQ | 010 | 05 | 1      | 499.51  | 159       | 15 | 15 | 14   | -     | -      | -        | -  | -  | -  | -  | -     | -      | -    |
| MSTMQ | 015 | 05 | 1.5    | 499.51  | 106       | 19 | 19 | 17.5 | 62.44 | 124.88 | 4        | 8  | 7  | 11 | 7  | 29.0  | 441.5  | 5.7  |
| MSTMQ | 015 | 10 | 1.5    | 999.03  | 212       | 19 | 19 | 17.5 | 62.44 | 124.88 | 8        | 8  | 7  | 11 | 7  | 29.0  | 941.0  | 5.7  |
| MSTMQ | 020 | 05 | 2      | 502.65  | 80        | 24 | 24 | 22   | 62.83 | 125.66 | 4        | 8  | 7  | 11 | 7  | 31.3  | 440.1  | 5.7  |
| MSTMQ | 020 | 10 | 2      | 1005.31 | 160       | 24 | 24 | 22   | 62.83 | 125.66 | 8        | 8  | 7  | 11 | 7  | 31.3  | 942.7  | 5.7  |
| MSTMQ | 030 | 05 | 3      | 508.94  | 54        | 29 | 29 | 26   | 63.62 | 127.23 | 4        | 9  | 10 | 15 | 9  | 34.4  | 440.1  | 7.7  |
| MSTMQ | 030 | 10 | 3      | 1017.88 | 108       | 29 | 29 | 26   | 63.62 | 127.23 | 8        | 9  | 10 | 15 | 9  | 34.4  | 949.1  | 7.7  |
| MSTMQ | 040 | 05 | 4      | 502.65  | 40        | 39 | 39 | 35   | 62.83 | 125.66 | 4        | 12 | 10 | 15 | 9  | 37.5  | 427.7  | 7.7  |
| MSTMQ | 040 | 10 | 4      | 1005.31 | 80        | 39 | 39 | 35   | 62.83 | 125.66 | 8        | 12 | 10 | 15 | 9  | 37.5  | 930.3  | 7.7  |
| MSTMQ | 050 | 05 | 5      | 502.65  | 32        | 49 | 39 | 34   | 62.83 | 125.66 | 4        | 12 | 14 | 20 | 13 | 30.1  | 442.4  | 11.7 |
| MSTMQ | 050 | 10 | 5      | 1005.31 | 64        | 49 | 39 | 34   | 62.83 | 125.66 | 8        | 12 | 14 | 20 | 13 | 30.1  | 945    | 11.7 |
| MSTMQ | 060 | 05 | 6      | 508.94  | 27        | 59 | 49 | 43   | 63.62 | 127.23 | 4        | 16 | 18 | 26 | 17 | 31.4  | 446.1  | 15.7 |
| MSTMQ | 060 | 10 | 6      | 1017.88 | 54        | 59 | 49 | 43   | 63.62 | 127.23 | 8        | 16 | 18 | 26 | 17 | 31.4  | 955.0  | 15.7 |
| MSTMQ | 080 | 05 | 8      | 502.65  | 20        | 79 | 79 | 71   | 62.83 | 125.66 | 4        | 25 | 22 | 33 | 21 | 26.6  | 449.5  | 19.7 |
| MSTMQ | 080 | 10 | 8      | 1005.31 | 40        | 79 | 79 | 71   | 62.83 | 125.66 | 8        | 25 | 22 | 33 | 21 | 26.6  | 952    | 19.7 |
| MSTMQ | 100 | 10 | 10     | 1005.31 | 32        | 99 | 99 | 89   | 62.83 | 125.66 | 8        | 32 | 33 | 48 | 32 | 125.7 | 753.96 | 19.7 |

|                                                            |
|------------------------------------------------------------|
| Manufacturing description:                                 |
| Precision grade: DIN 8e27                                  |
| Material: (SCM440 chromium molybdenum alloy steel) 42CrMo4 |
| Type: straight rack                                        |
| Treatment of teeth: milled                                 |
| Hardness:quenched,HRC21~24 degree                          |
| Sides ground: not included                                 |
| Pressure angle:20 degree                                   |
| Total pitch error:0.1mm/1000mm                             |

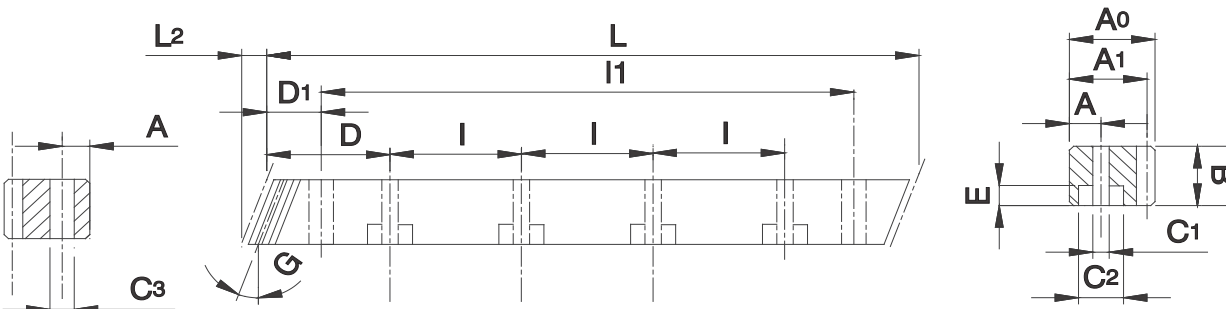




Dimension:mm

| Code  |        | Module | L       | Tooth No. | B  | A0 | A1   | D     | I      | Hole No. | A  | C1 | C2 | E  | D1    | I1     | C3   |
|-------|--------|--------|---------|-----------|----|----|------|-------|--------|----------|----|----|----|----|-------|--------|------|
| MSTMH | 010 05 | 1      | 499.51  | 159       | 15 | 15 | 14   | -     | -      | -        | -  | -  | -  | -  | -     | -      | -    |
| MSTMH | 015 05 | 1.5    | 499.51  | 106       | 19 | 19 | 17.5 | 62.44 | 124.88 | 4        | 8  | 7  | 11 | 7  | 29.0  | 441.5  | 5.7  |
| MSTMH | 015 10 | 1.5    | 999.03  | 212       | 19 | 19 | 17.5 | 62.44 | 124.88 | 8        | 8  | 7  | 11 | 7  | 29.0  | 941.0  | 5.7  |
| MSTMH | 020 05 | 2      | 502.65  | 80        | 24 | 24 | 22   | 62.83 | 125.66 | 4        | 8  | 7  | 11 | 7  | 31.3  | 440.1  | 5.7  |
| MSTMH | 020 10 | 2      | 1005.31 | 160       | 24 | 24 | 22   | 62.83 | 125.66 | 8        | 8  | 7  | 11 | 7  | 31.3  | 942.7  | 5.7  |
| MSTMH | 030 05 | 3      | 508.94  | 54        | 29 | 29 | 26   | 63.62 | 127.23 | 4        | 9  | 10 | 15 | 9  | 34.4  | 440.1  | 7.7  |
| MSTMH | 030 10 | 3      | 1017.88 | 108       | 29 | 29 | 26   | 63.62 | 127.23 | 8        | 9  | 10 | 15 | 9  | 34.4  | 949.1  | 7.7  |
| MSTMH | 040 05 | 4      | 502.65  | 40        | 39 | 39 | 35   | 62.83 | 125.66 | 4        | 12 | 10 | 15 | 9  | 37.5  | 427.7  | 7.7  |
| MSTMH | 040 10 | 4      | 1005.31 | 80        | 39 | 39 | 35   | 62.83 | 125.66 | 8        | 12 | 10 | 15 | 9  | 37.5  | 930.3  | 7.7  |
| MSTMH | 050 05 | 5      | 502.65  | 32        | 49 | 39 | 34   | 62.83 | 125.66 | 4        | 12 | 14 | 20 | 13 | 30.1  | 442.4  | 11.7 |
| MSTMH | 050 10 | 5      | 1005.31 | 64        | 49 | 39 | 34   | 62.83 | 125.66 | 8        | 12 | 14 | 20 | 13 | 30.1  | 945    | 11.7 |
| MSTMH | 060 05 | 6      | 508.94  | 27        | 59 | 49 | 43   | 63.62 | 127.23 | 4        | 16 | 18 | 26 | 17 | 31.4  | 446.1  | 15.7 |
| MSTMH | 060 10 | 6      | 1017.88 | 54        | 59 | 49 | 43   | 63.62 | 127.23 | 8        | 16 | 18 | 26 | 17 | 31.4  | 955.0  | 15.7 |
| MSTMH | 080 05 | 8      | 502.65  | 20        | 79 | 79 | 71   | 62.83 | 125.66 | 4        | 25 | 22 | 33 | 21 | 26.6  | 449.5  | 19.7 |
| MSTMH | 080 10 | 8      | 1005.31 | 40        | 79 | 79 | 71   | 62.83 | 125.66 | 8        | 25 | 22 | 33 | 21 | 26.6  | 952    | 19.7 |
| MSTMH | 100 10 | 10     | 1005.31 | 32        | 99 | 99 | 89   | 62.83 | 125.66 | 8        | 32 | 33 | 48 | 32 | 125.7 | 753.96 | 19.7 |

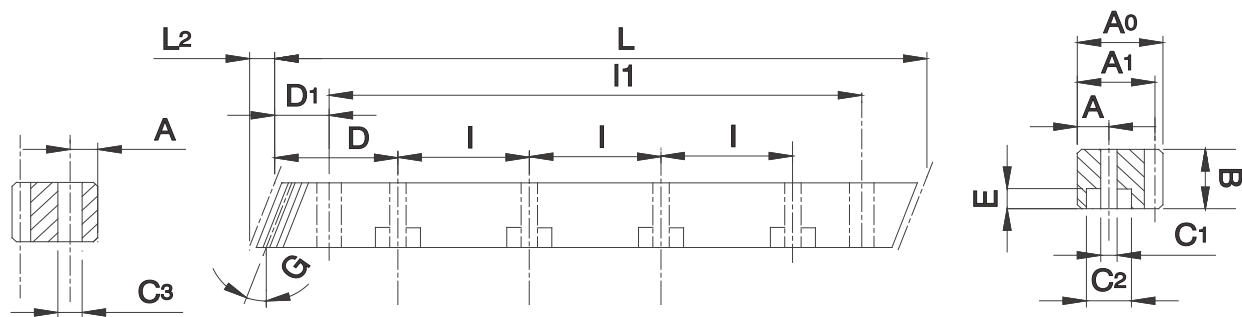
|                                                            |
|------------------------------------------------------------|
| Manufacturing description:                                 |
| Precision grade: DIN 10e27                                 |
| Material: (SCM440 chromium molybdenum alloy steel) 42CrMo4 |
| Type: straight rack                                        |
| Treatment of teeth: milled                                 |
| Hardness:high frequency HRC 50~55 degree                   |
| Sides ground: not included                                 |
| Pressure angle:20 degree                                   |
| Total pitch error:0.2mm/1000mm                             |



Dimension:mm

| Code  |        | Module | L       | L2    | Tooth No. | B  | A0 | A1   | D     | I   | Hole No. | A  | C1 | C2 | E  | D1    | I1    | C3   |
|-------|--------|--------|---------|-------|-----------|----|----|------|-------|-----|----------|----|----|----|----|-------|-------|------|
| CHTGH | 010 05 | 1      | 500.00  | 3.14  | 150       | 15 | 15 | 14   | -     | -   | -        | -  | -  | -  | -  | -     | -     | -    |
| CHTGH | 015 05 | 1.5    | 500.00  | 6.7   | 100       | 19 | 19 | 17.5 | 62.50 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7  | 436.6 | 5.7  |
| CHTGH | 015 10 | 1.5    | 1000.00 | 6.7   | 200       | 19 | 19 | 17.5 | 62.50 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7  | 936.6 | 5.7  |
| CHTGH | 020 05 | 2      | 500.00  | 8.5   | 75        | 24 | 24 | 22   | 62.50 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7  | 436.6 | 5.7  |
| CHTGH | 020 10 | 2      | 1000.00 | 8.5   | 150       | 24 | 24 | 22   | 62.50 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7  | 936.6 | 5.7  |
| CHTGH | 030 05 | 3      | 500.00  | 10.3  | 50        | 29 | 29 | 26   | 62.50 | 125 | 4        | 9  | 10 | 15 | 9  | 35.0  | 430.0 | 7.7  |
| CHTGH | 030 10 | 3      | 1000.00 | 10.3  | 100       | 29 | 29 | 26   | 62.50 | 125 | 8        | 9  | 10 | 15 | 9  | 35.0  | 930.0 | 7.7  |
| CHTGH | 040 05 | 4      | 506.67  | 13.8  | 38        | 39 | 39 | 35   | 62.50 | 125 | 4        | 12 | 10 | 15 | 9  | 33.3  | 433.0 | 7.7  |
| CHTGH | 040 10 | 4      | 1000.00 | 13.8  | 75        | 39 | 39 | 35   | 62.50 | 125 | 8        | 12 | 10 | 15 | 9  | 33.3  | 933.4 | 7.7  |
| CHTGH | 050 05 | 5      | 500.00  | 17.4  | 30        | 49 | 39 | 34   | 62.50 | 125 | 4        | 12 | 14 | 20 | 13 | 37.5  | 425.0 | 11.7 |
| CHTGH | 050 10 | 5      | 1000.00 | 17.4  | 60        | 49 | 39 | 34   | 62.50 | 125 | 8        | 12 | 14 | 20 | 13 | 37.5  | 925.0 | 11.7 |
| CHTGH | 060 05 | 6      | 500.00  | 20.9  | 25        | 59 | 49 | 43   | 62.50 | 125 | 4        | 16 | 18 | 26 | 17 | 37.5  | 425.0 | 15.7 |
| CHTGH | 060 10 | 6      | 1000.00 | 20.9  | 50        | 59 | 49 | 43   | 62.50 | 125 | 8        | 16 | 18 | 26 | 17 | 37.5  | 925.0 | 15.7 |
| CHTGH | 080 05 | 8      | 480.00  | 28.0  | 18        | 79 | 79 | 71   | 60.00 | 120 | 4        | 25 | 22 | 33 | 21 | 120.0 | 240.0 | 19.7 |
| CHTGH | 080 10 | 8      | 960.00  | 28.0  | 36        | 79 | 79 | 71   | 60.00 | 120 | 8        | 25 | 22 | 33 | 21 | 120.0 | 720.0 | 19.7 |
| CHTGH | 100 10 | 10     | 1000.00 | 35.11 | 30        | 99 | 99 | 89   | 62.50 | 125 | 8        | 32 | 33 | 48 | 32 | 125.0 | 750.0 | 19.7 |

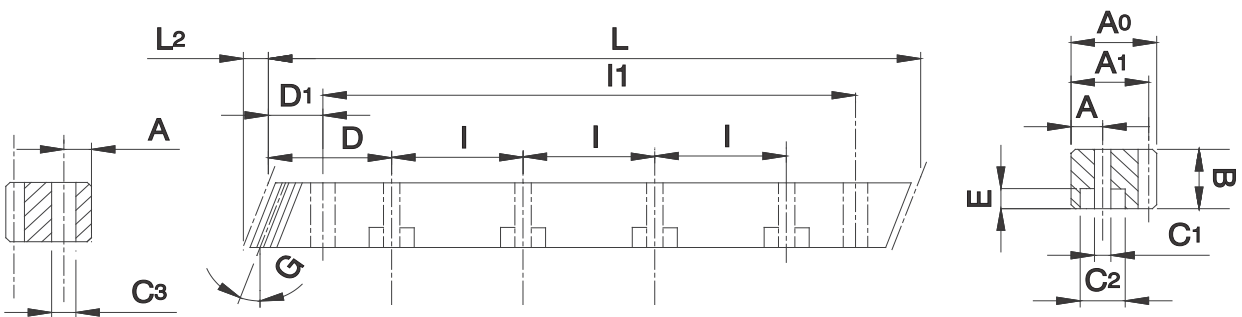
|                                                           |
|-----------------------------------------------------------|
| Manufacturing description:                                |
| Precision grade: DIN 6h25                                 |
| Material: (SCM440 chromium molybdenum alloy steel)42CrMo4 |
| Type: helical rack                                        |
| Treatment of teeth: ground                                |
| Hardness: heat treatment:50~55 degree                     |
| Sides ground: included                                    |
| Right hand angle: 19° 31'42"                              |
| Pressure angle: 20 degree                                 |
| Total pitch error: 0.036mm/1000mm                         |



Dimension:mm

| Code  |     |    | Module | L       | L2    | Tooth No. | B  | A0 | A1   | D    | I   | Hole No. | A  | C1 | C2 | E  | D1    | I1    | C3   |
|-------|-----|----|--------|---------|-------|-----------|----|----|------|------|-----|----------|----|----|----|----|-------|-------|------|
| MHTMQ | 010 | 05 | 1      | 500.00  | 5.35  | 150       | 15 | 15 | 14   | -    | -   | -        | -  | -  | -  | -  | -     | -     | -    |
| MHTMQ | 015 | 05 | 1.5    | 500.00  | 6.7   | 100       | 19 | 19 | 17.5 | 62.5 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7  | 436.6 | 5.7  |
| MHTMQ | 015 | 10 | 1.5    | 1000.00 | 6.7   | 200       | 19 | 19 | 17.5 | 62.5 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7  | 936.6 | 5.7  |
| MHTMQ | 020 | 05 | 2      | 500.00  | 8.9   | 75        | 24 | 24 | 22   | 62.5 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7  | 436.6 | 5.7  |
| MHTMQ | 020 | 10 | 2      | 1000.00 | 8.9   | 150       | 24 | 24 | 22   | 62.5 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7  | 936.6 | 5.7  |
| MHTMQ | 030 | 05 | 3      | 500.00  | 10.6  | 50        | 29 | 29 | 26   | 62.5 | 125 | 4        | 9  | 10 | 15 | 9  | 35.0  | 430.0 | 7.7  |
| MHTMQ | 030 | 10 | 3      | 1000.00 | 10.6  | 100       | 29 | 29 | 26   | 62.5 | 125 | 8        | 9  | 10 | 15 | 9  | 35.0  | 930.0 | 7.7  |
| MHTMQ | 040 | 05 | 4      | 506.67  | 14.2  | 38        | 39 | 39 | 35   | 62.5 | 125 | 4        | 12 | 10 | 15 | 9  | 33.3  | 433.0 | 7.7  |
| MHTMQ | 040 | 10 | 4      | 1000.00 | 14.2  | 75        | 39 | 39 | 35   | 62.5 | 125 | 8        | 12 | 10 | 15 | 9  | 33.3  | 933.4 | 7.7  |
| MHTMQ | 050 | 05 | 5      | 500.00  | 17.4  | 30        | 49 | 39 | 34   | 62.5 | 125 | 4        | 12 | 14 | 20 | 13 | 37.5  | 425.0 | 11.7 |
| MHTMQ | 050 | 10 | 5      | 1000.00 | 17.4  | 60        | 49 | 39 | 34   | 62.5 | 125 | 8        | 12 | 14 | 20 | 13 | 37.5  | 925.0 | 11.7 |
| MHTMQ | 060 | 05 | 6      | 500.00  | 20.9  | 25        | 59 | 49 | 43   | 62.5 | 125 | 4        | 16 | 18 | 26 | 17 | 37.5  | 425.0 | 15.7 |
| MHTMQ | 060 | 10 | 6      | 1000.00 | 20.9  | 50        | 59 | 49 | 43   | 62.5 | 125 | 8        | 16 | 18 | 26 | 17 | 37.5  | 925.0 | 15.7 |
| MHTMQ | 080 | 05 | 8      | 480.00  | 8.0   | 18        | 79 | 79 | 71   | 60.0 | 120 | 4        | 25 | 22 | 33 | 21 | 120.0 | 240.0 | 19.7 |
| MHTMQ | 080 | 10 | 8      | 960.00  | 28.0  | 36        | 79 | 79 | 71   | 60.0 | 120 | 8        | 25 | 22 | 33 | 21 | 120.0 | 720.0 | 19.7 |
| MHTMQ | 100 | 10 | 10     | 1000.00 | 35.11 | 30        | 99 | 99 | 89   | 62.5 | 125 | 8        | 32 | 33 | 48 | 32 | 125.0 | 750.0 | 19.7 |

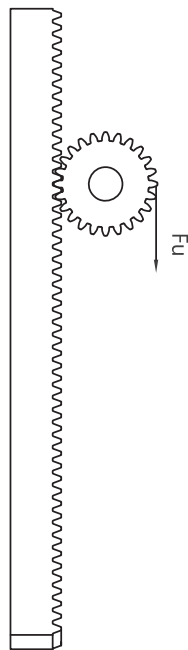
|                                                            |
|------------------------------------------------------------|
| Manufacturing description:                                 |
| Precision grade: DIN 8e27                                  |
| Material: (SCM440 chromium molybdenum alloy steel) 42CrMo4 |
| Type: helical rack                                         |
| Treatment of teeth: milled                                 |
| Hardness: quenched; HRC 21~24 degree                       |
| Sides ground: not included                                 |
| Right hand angle: 19° 31'42"                               |
| Pressure angle: 20 degree                                  |
| Total pitch error: 0.1mm/1000mm                            |



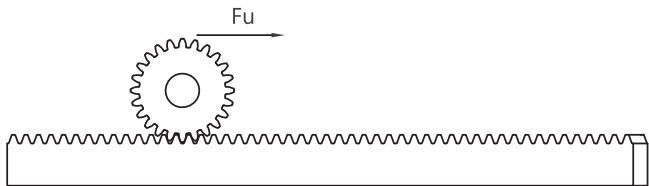
Dimension:mm

| Code  |     |    | Module | L       | L2    | Tooth No. | B  | A0 | A1   | D    | I   | Hole No. | A  | C1 | C2 | E  | D1   | I1    | C3   |
|-------|-----|----|--------|---------|-------|-----------|----|----|------|------|-----|----------|----|----|----|----|------|-------|------|
| MHTMH | 010 | 05 | 1      | 500.00  | 5.35  | 150       | 15 | 15 | 14   | -    | -   | -        | -  | -  | -  | -  | -    | -     | -    |
| MHTMH | 015 | 05 | 1.5    | 500.00  | 6.7   | 100       | 19 | 19 | 17.5 | 62.5 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7 | 436.6 | 5.7  |
| MHTMH | 015 | 10 | 1.5    | 1000.00 | 6.7   | 200       | 19 | 19 | 17.5 | 62.5 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7 | 936.6 | 5.7  |
| MHTMH | 020 | 05 | 2      | 500.00  | 8.5   | 75        | 24 | 24 | 22   | 62.5 | 125 | 4        | 8  | 7  | 11 | 7  | 31.7 | 436.6 | 5.7  |
| MHTMH | 020 | 10 | 2      | 1000.00 | 8.5   | 150       | 24 | 24 | 22   | 62.5 | 125 | 8        | 8  | 7  | 11 | 7  | 31.7 | 936.6 | 5.7  |
| MHTMH | 030 | 05 | 3      | 500.00  | 10.3  | 50        | 29 | 29 | 26   | 62.5 | 125 | 4        | 9  | 10 | 15 | 9  | 35.0 | 430.0 | 7.7  |
| MHTMH | 030 | 10 | 3      | 1000.00 | 10.3  | 100       | 29 | 29 | 26   | 62.5 | 125 | 8        | 9  | 10 | 15 | 9  | 35.0 | 930.0 | 7.7  |
| MHTMH | 040 | 05 | 4      | 506.67  | 13.8  | 38        | 39 | 39 | 35   | 62.5 | 125 | 4        | 12 | 10 | 15 | 9  | 33.3 | 433.0 | 7.7  |
| MHTMH | 040 | 10 | 4      | 1000.00 | 13.8  | 75        | 39 | 39 | 35   | 62.5 | 125 | 8        | 12 | 10 | 15 | 9  | 33.3 | 933.4 | 7.7  |
| MHTMH | 050 | 05 | 5      | 500.00  | 17.4  | 30        | 49 | 39 | 34   | 62.5 | 125 | 4        | 12 | 14 | 20 | 13 | 37.5 | 425.0 | 11.7 |
| MHTMH | 050 | 10 | 5      | 1000.00 | 17.4  | 60        | 49 | 39 | 34   | 62.5 | 125 | 8        | 12 | 14 | 20 | 13 | 37.5 | 925.0 | 11.7 |
| MHTMH | 060 | 05 | 6      | 500.00  | 20.9  | 25        | 59 | 49 | 43   | 62.5 | 125 | 4        | 16 | 18 | 26 | 17 | 37.5 | 425.0 | 15.7 |
| MHTMH | 060 | 10 | 6      | 1000.00 | 20.9  | 50        | 59 | 49 | 43   | 62.5 | 125 | 8        | 16 | 18 | 26 | 17 | 37.5 | 925.0 | 15.7 |
| MHTMH | 080 | 05 | 8      | 480.00  | 28.0  | 18        | 79 | 79 | 71   | 60.0 | 120 | 4        | 25 | 22 | 33 | 21 | 120  | 240.0 | 19.7 |
| MHTMH | 080 | 10 | 8      | 960.00  | 28.0  | 36        | 79 | 79 | 71   | 60.0 | 120 | 8        | 25 | 22 | 33 | 21 | 120  | 720.0 | 19.7 |
| MHTMH | 100 | 10 | 10     | 1000.00 | 35.11 | 30        | 99 | 99 | 89   | 62.5 | 125 | 8        | 32 | 33 | 48 | 32 | 125  | 750.0 | 19.7 |

|                                                           |
|-----------------------------------------------------------|
| Manufacturing description:                                |
| Precision grade: DIN 10e27                                |
| Material: (SCM440 chromium molybdenum alloy steel)42CrMo4 |
| Type: helical rack                                        |
| Treatment of teeth: milled                                |
| Hardness: heat treatment,HRC 50~55 degree                 |
| Sides ground: not included                                |
| Right hand angle: 19° 31'42"                              |
| Pressure angle: 20 degree                                 |
| Total pitch error: 0.2mm/1000mm                           |



Lift/Lower  
 $F_u = m \cdot g + m \cdot a$



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

| Description                                   | formula                                                            | Description      |
|-----------------------------------------------|--------------------------------------------------------------------|------------------|
| Acceleration                                  | $a = \frac{v}{t} = \frac{2 \cdot s}{t^2}$                          | m/s <sup>2</sup> |
| Speed                                         | $v = \frac{s}{t} = \sqrt{2 \cdot a \cdot s}$                       | m/s              |
| Distance                                      | s                                                                  | m                |
| Time                                          | t                                                                  | s                |
| Rpm                                           | $n = \frac{v \cdot 60}{\pi \cdot d_0}$                             | 1/min            |
| Pitch Diameter                                | d <sub>0</sub>                                                     | mm               |
| Torque                                        | $m = \frac{F_u \cdot d_0}{2000}$                                   | Nm               |
| Power                                         | $P = \frac{m \cdot n}{9550} = \frac{F_u \cdot n \cdot d_0}{19100}$ | kw               |
| Application Factor:                           | 1.0                                                                |                  |
| Safety Factor of Teeth Connection             | 1.0                                                                |                  |
| Safety Factor of Prevention of Teeth Cracking | 1.4                                                                |                  |
| Life Time 20.000 hrs                          | 20,000h                                                            |                  |



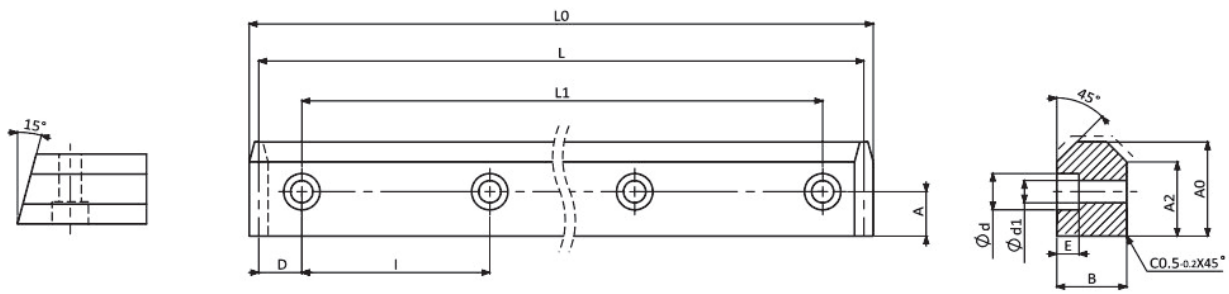
Content of Guideway Racks

| Code     | Material | Type     | Type                 | Shape    | Teeth Treatment | Hardness            | CP       | Grade DIN |
|----------|----------|----------|----------------------|----------|-----------------|---------------------|----------|-----------|
| MSVGH-CP | SCM440   | Straight | V Type Guideway Rack | Hexgan   | Teeth Ground    | Hardened HRC 53°58° | 5,7.5,10 | DIN6      |
| MNVGH-00 | SCM440   | N/A      | V Type Guideway      | Hexgan   | Ground          | Hardened HRC 53°58° | N/A      | DIN6      |
| MSTGH-CP | SCM440   | Straight | Guideway Rack        | Tetragon | Teeth Ground    | Hardened HRC 53°58° | 5,7.5,10 | DIN6      |
| MNTGH-00 | SCM440   | N/A      | Guideway             | Tetragon | Ground          | Hardened HRC 53°58° | N/A      | DIN6      |

Guideway Rack Code Instruction

| Material | Type                    | Shape                          | Teeth Treatment        | Hardness   | CP                | Length                              | Grade |
|----------|-------------------------|--------------------------------|------------------------|------------|-------------------|-------------------------------------|-------|
| M        | S/H                     | V/T                            | G                      | H          | CP                | 10                                  | Q6    |
| M=SCM440 | S=Straight<br>H=Helical | V=V Type Bar<br>T=Tetragon Bar | G=Teeth Ground /Ground | H=Hardened | CP=Circular Pitch | CP5=1030<br>CP7.5=1230<br>CP10=1230 | Q=DIN |





Dimension:mm

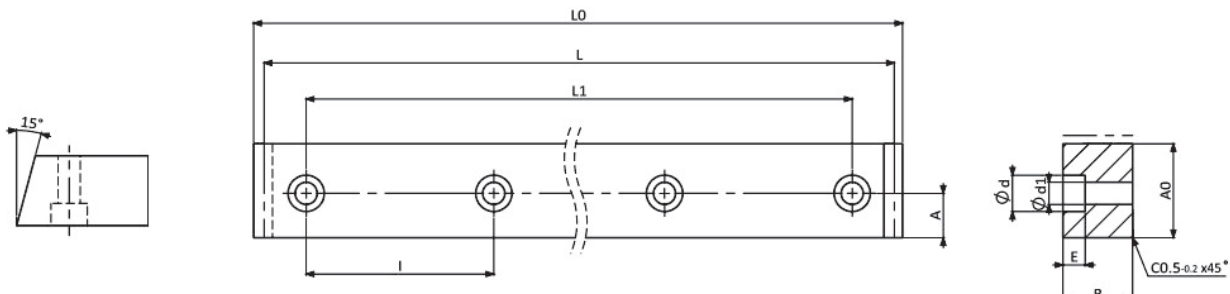
| Code     | No | Q   | L0      | L    | L1   | B    | A0   | D  | I   | Ød | Ød1 | E  | A2   | KG   |
|----------|----|-----|---------|------|------|------|------|----|-----|----|-----|----|------|------|
| MNVGH-00 | 1  | -Q6 | 1033.89 | 1030 | 1000 | 14.5 | 24.5 | 15 | 100 | 11 | 7   | 7  | 20.0 | 2.3  |
| MNVGH-00 | 2  | -Q6 | 1035.23 | 1030 | 1000 | 19.5 | 29.5 | 15 | 100 | 15 | 9   | 9  | 23.5 | 3.6  |
| MNVGH-00 | 3  | -Q6 | 1236.62 | 1230 | 1200 | 24.7 | 33.0 | 15 | 100 | 15 | 9   | 9  | 25.2 | 6.3  |
| MNVGH-00 | 4  | -Q6 | 1239.27 | 1230 | 1200 | 34.6 | 46.6 | 15 | 100 | 18 | 11  | 11 | 36.7 | 12.5 |

Series MNVGH-00-Q6 V type ground guideway

Material SCM440 (chromium molybdenum alloy steel)

Hardness HRC 53°~58°

6 sides ground after hardening



Dimension:mm

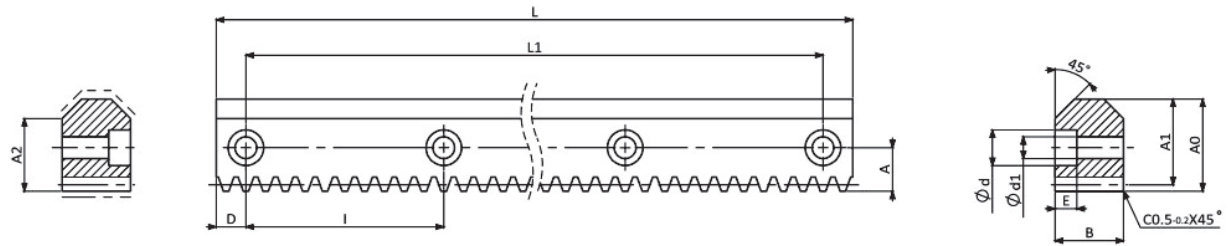
| Code     | No | Q   | L0      | L    | L1   | B    | A0   | D  | I   | Ød | Ød1 | E  | KG   |
|----------|----|-----|---------|------|------|------|------|----|-----|----|-----|----|------|
| MNTGH-00 | 1  | -Q6 | 1033.89 | 1030 | 1000 | 14.5 | 24.5 | 15 | 100 | 11 | 7   | 7  | 2.5  |
| MNTGH-00 | 2  | -Q6 | 1035.23 | 1030 | 1000 | 19.5 | 29.5 | 15 | 100 | 15 | 9   | 9  | 4.0  |
| MNTGH-00 | 3  | -Q6 | 1236.62 | 1230 | 1200 | 24.7 | 33.0 | 15 | 100 | 15 | 9   | 9  | 6.8  |
| MNTGH-00 | 4  | -Q6 | 1239.27 | 1230 | 1200 | 34.6 | 46.6 | 15 | 100 | 18 | 11  | 11 | 13.4 |

Series MNTGH-00-Q6 ground guideway

Material SCM440 (chromium molybdenum alloy steel)

Hardness HRC 53°~58°

4 sides ground after hardening



Dimension:mm

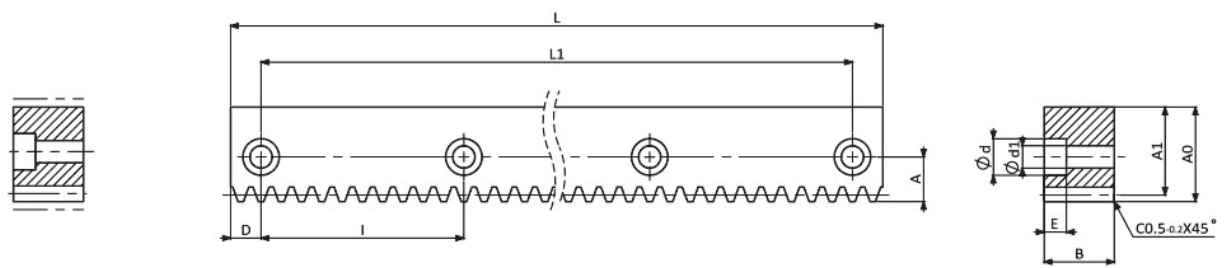
| Code            | No | Q   | CP  | L    | L1   | Module | B    | A0   | A1    | D  | I   | A    | Ød | Ød1 | E  | A2   | KG   |
|-----------------|----|-----|-----|------|------|--------|------|------|-------|----|-----|------|----|-----|----|------|------|
| MSVGH-CP 050 10 | 1  | -Q6 | 5   | 1030 | 1000 | 1.5915 | 14.5 | 24.5 | 22.91 | 15 | 100 | 11.5 | 11 | 7   | 7  | 20.0 | 2.2  |
| MSVGH-CP 050 10 | 2  | -Q6 | 5   | 1030 | 1000 | 1.5915 | 19.5 | 29.5 | 27.91 | 15 | 100 | 14.0 | 15 | 9   | 9  | 23.5 | 3.5  |
| MSVGH-CP 075 12 | 1  | -Q6 | 7.5 | 1230 | 1200 | 2.3873 | 24.7 | 33.0 | 30.61 | 15 | 100 | 14.5 | 15 | 9   | 9  | 25.2 | 5.8  |
| MSVGH-CP 100 12 | 1  | -Q6 | 10  | 1230 | 1200 | 3.1831 | 34.6 | 46.6 | 43.42 | 15 | 100 | 18   | 18 | 11  | 11 | 36.7 | 11.7 |

Series MSVGH-CP-Q6 straight V type ground guideway racks

Material SCM440 (chromium molybdenum alloy steel)

Hardness HRC 53°~58°

6 sides ground and teeth ground after hardening



Dimension:mm

| Code            | No | Q   | CP  | L    | L1   | Module | B    | A0   | A1    | D  | I   | A    | Ød | Ød1 | E  | KG   |
|-----------------|----|-----|-----|------|------|--------|------|------|-------|----|-----|------|----|-----|----|------|
| MSTGH-CP 050 10 | 1  | -Q6 | 5   | 1030 | 1000 | 1.5915 | 14.5 | 24.5 | 22.91 | 15 | 100 | 11.5 | 11 | 7   | 7  | 2.2  |
| MSTGH-CP 050 10 | 2  | -Q6 | 5   | 1030 | 1000 | 1.5915 | 19.5 | 29.5 | 27.91 | 15 | 100 | 14.0 | 15 | 9   | 9  | 3.8  |
| MSTGH-CP 075 12 | 1  | -Q6 | 7.5 | 1230 | 1200 | 2.3873 | 24.7 | 33.0 | 30.61 | 15 | 100 | 14.5 | 15 | 9   | 9  | 6.3  |
| MSTGH-CP 100 12 | 1  | -Q6 | 10  | 1230 | 1200 | 3.1831 | 34.6 | 46.6 | 43.42 | 15 | 100 | 18   | 18 | 11  | 11 | 12.5 |

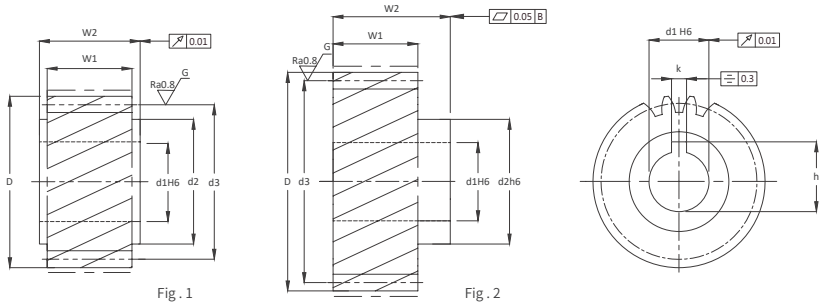
Series MSTGH-CP-Q6 ground guideway racks

Material SCM440 (chromium molybdenum alloy steel)

Hardness HRC 53°~58°

4 sides ground and teeth ground after hardening

MHGH-DIN6



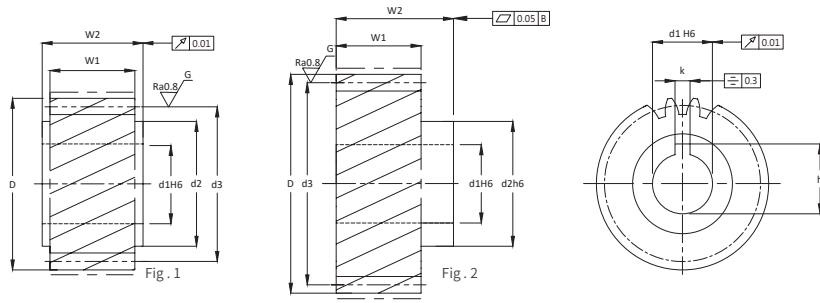
Dimension : mm

Series MHGH-DIN6 Helical Teeth Ground Pinions  
Quality Grade DIN 6

Material SCM415/SCM440  
Left hand angle 19°31'42"  
Hardness: HRC 50~55°  
Teeth ground after hardening

| Code        | Fig. | DIN   | No. of Teeth | d1 | d2 | d3     | D     | W1 | W2 | k | h    | F <sub>ta</sub><br>kN | KG   |
|-------------|------|-------|--------------|----|----|--------|-------|----|----|---|------|-----------------------|------|
| Module 1.5  |      |       |              |    |    |        |       |    |    |   |      |                       |      |
| MHGH0150201 | 1    | -DIN6 | 20           | 11 | 25 | 31.83  | 34.83 | 20 | 22 | 4 | 12.8 | 4.48                  | 0.10 |
| MHGH0150202 | 1    | -DIN6 | 20           | 13 | 25 | 31.83  | 34.83 | 20 | 22 | 5 | 15.3 | 4.48                  | 0.10 |
| MHGH0150203 | 1    | -DIN6 | 20           | 14 | 25 | 31.83  | 34.83 | 20 | 22 | 5 | 16.3 | 4.48                  | 0.10 |
| MHGH0150204 | 1    | -DIN6 | 20           | 16 | 25 | 31.83  | 34.83 | 20 | 22 | 5 | 18.3 | 4.48                  | 0.10 |
| MHGH0150205 | 2    | -DIN6 | 20           | 16 | 25 | 31.83  | 34.83 | 20 | 30 | 5 | 18.3 | 4.48                  | 0.11 |
| MHGH0150206 | 2    | -DIN6 | 20           | 16 | 24 | 31.83  | 34.83 | 20 | 50 | * | *    | 4.48                  | 0.15 |
| MHGH0150211 | 2    | -DIN6 | 21           | 16 | 30 | 33.42  | 36.42 | 20 | 46 | 5 | 18.3 | 5.29                  | 0.30 |
| MHGH0150221 | 2    | -DIN6 | 22           | 16 | 25 | 35.01  | 38.01 | 20 | 30 | 5 | 18.3 | 5.56                  | 0.14 |
| MHGH0150222 | 2    | -DIN6 | 22           | 16 | 24 | 35.01  | 38.01 | 20 | 50 | * | *    | 5.56                  | 0.18 |
| MHGH0150251 | 2    | -DIN6 | 25           | 16 | 30 | 39.78  | 42.78 | 20 | 46 | 5 | 18.3 | 6.37                  | 0.18 |
| MHGH0150252 | 2    | -DIN6 | 25           | 16 | 25 | 39.79  | 42.79 | 20 | 30 | 5 | 18.3 | 6.37                  | 0.18 |
| MHGH0150253 | 2    | -DIN6 | 25           | 16 | 24 | 39.79  | 42.79 | 20 | 50 | * | *    | 6.37                  | 0.22 |
| MHGH0150301 | 2    | -DIN6 | 30           | 16 | 25 | 47.75  | 50.75 | 20 | 30 | 5 | 18.3 | 7.12                  | 0.27 |
| MHGH0150302 | 2    | -DIN6 | 30           | 16 | 24 | 47.75  | 50.75 | 20 | 50 | * | *    | 7.12                  | 0.31 |
| Module 2    |      |       |              |    |    |        |       |    |    |   |      |                       |      |
| MHGH0200181 | 1    | -DIN6 | 18           | 16 | 25 | 38.197 | 42.20 | 28 | 30 | 5 | 18.3 | 7.47                  | 0.20 |
| MHGH0200201 | 1    | -DIN6 | 20           | 19 | 30 | 42.44  | 46.40 | 28 | 30 | 6 | 21.8 | 8.36                  | 0.20 |
| MHGH0200202 | 2    | -DIN6 | 20           | 19 | 30 | 42.44  | 46.40 | 28 | 56 | 6 | 21.8 | 8.36                  | 0.20 |
| MHGH0200203 | 1    | -DIN6 | 20           | 20 | 30 | 42.44  | 46.40 | 28 | 30 | 6 | 22.8 | 8.36                  | 0.20 |
| MHGH0200204 | 2    | -DIN6 | 20           | 22 | 36 | 42.44  | 46.40 | 28 | 56 | 6 | 24.8 | 8.36                  | 0.20 |
| MHGH0200205 | 1    | -DIN6 | 20           | 22 | 30 | 42.44  | 46.40 | 28 | 30 | 6 | 24.8 | 8.36                  | 0.20 |
| MHGH0200206 | 2    | -DIN6 | 20           | 22 | 36 | 42.44  | 46.40 | 28 | 36 | 6 | 24.8 | 8.36                  | 0.20 |
| MHGH0200207 | 2    | -DIN6 | 20           | 22 | 35 | 42.44  | 46.44 | 25 | 40 | 6 | 24.8 | 8.36                  | 0.26 |
| MHGH0200208 | 2    | -DIN6 | 20           | 22 | 30 | 42.44  | 46.44 | 25 | 60 | * | *    | 8.36                  | 0.29 |
| MHGH0200211 | 1    | -DIN6 | 21           | 16 | 25 | 44.56  | 48.60 | 28 | 30 | 5 | 18.3 | 8.81                  | 0.30 |
| MHGH0200212 | 2    | -DIN6 | 21           | 22 | 36 | 44.56  | 48.60 | 28 | 30 | 6 | 24.8 | 8.81                  | 0.30 |
| MHGH0200221 | 1    | -DIN6 | 22           | 19 | 30 | 46.69  | 50.70 | 28 | 30 | 6 | 21.8 | 10.38                 | 0.30 |
| MHGH0200222 | 2    | -DIN6 | 22           | 19 | 30 | 46.69  | 50.70 | 28 | 56 | 6 | 21.8 | 10.38                 | 0.30 |
| MHGH0200223 | 1    | -DIN6 | 22           | 22 | 30 | 46.69  | 50.70 | 28 | 30 | 6 | 24.8 | 10.38                 | 0.30 |
| MHGH0200224 | 2    | -DIN6 | 22           | 22 | 36 | 46.69  | 50.70 | 28 | 56 | 6 | 24.8 | 10.38                 | 0.30 |
| MHGH0200225 | 2    | -DIN6 | 22           | 22 | 35 | 46.69  | 50.69 | 25 | 40 | 6 | 24.8 | 9.27                  | 0.32 |
| MHGH0200226 | 2    | -DIN6 | 22           | 22 | 35 | 46.69  | 50.69 | 25 | 60 | * | *    | 9.27                  | 0.35 |
| MHGH0200251 | 1    | -DIN6 | 25           | 19 | 30 | 53.05  | 57.10 | 28 | 30 | 6 | 21.8 | 11.90                 | 0.40 |
| MHGH0200252 | 2    | -DIN6 | 25           | 19 | 30 | 53.05  | 57.10 | 28 | 56 | 6 | 21.8 | 11.90                 | 0.40 |
| MHGH0200253 | 1    | -DIN6 | 25           | 20 | 30 | 53.05  | 57.10 | 28 | 30 | 6 | 22.8 | 11.90                 | 0.40 |
| MHGH0200254 | 1    | -DIN6 | 25           | 22 | 30 | 53.05  | 57.10 | 28 | 30 | 6 | 24.8 | 11.90                 | 0.40 |
| MHGH0200255 | 2    | -DIN6 | 25           | 22 | 36 | 53.05  | 57.10 | 28 | 56 | 6 | 24.8 | 11.90                 | 0.40 |
| MHGH0200256 | 1    | -DIN6 | 25           | 25 | 36 | 53.05  | 57.10 | 28 | 30 | 6 | 27.8 | 11.90                 | 0.40 |
| MHGH0200257 | 2    | -DIN6 | 25           | 22 | 35 | 53.05  | 57.05 | 25 | 40 | 6 | 24.8 | 10.62                 | 0.42 |
| MHGH0200258 | 2    | -DIN6 | 25           | 22 | 30 | 53.05  | 57.05 | 25 | 60 | * | *    | 10.62                 | 0.45 |
| MHGH0200281 | 1    | -DIN6 | 28           | 19 | 30 | 59.42  | 63.40 | 28 | 30 | 6 | 21.8 | 13.06                 | 0.40 |
| MHGH0200282 | 2    | -DIN6 | 28           | 19 | 30 | 59.42  | 63.40 | 28 | 56 | 6 | 21.8 | 13.06                 | 0.40 |
| MHGH0200283 | 1    | -DIN6 | 28           | 22 | 30 | 59.42  | 63.40 | 28 | 30 | 6 | 24.8 | 13.06                 | 0.40 |
| MHGH0200284 | 2    | -DIN6 | 28           | 22 | 36 | 59.42  | 63.40 | 28 | 56 | 6 | 24.8 | 13.06                 | 0.40 |

MHGH-DIN6

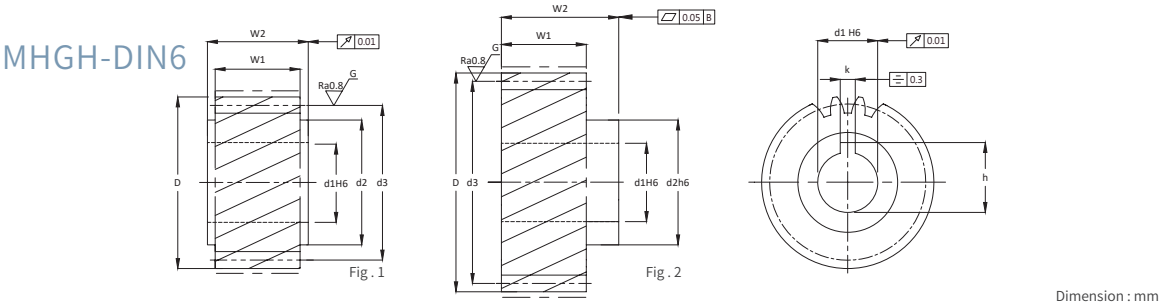


Dimension : mm

Series MHGH-DIN6 Helical Teeth Ground Pinions  
Quality Grade DIN 6

Material SCM415/SCM440  
Left hand angle 19°31'42"  
Hardness: HRC 50~55°  
Teeth ground after hardening

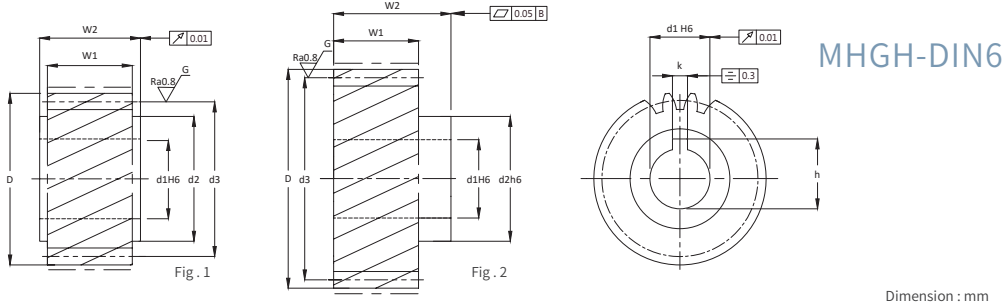
| Code        | Fig. | DIN   | No. of Teeth | d1 | d2 | d3    | D     | W1 | W2 | k  | h    | F <sub>ta</sub><br>kN | KG   |
|-------------|------|-------|--------------|----|----|-------|-------|----|----|----|------|-----------------------|------|
| Module 2    |      |       |              |    |    |       |       |    |    |    |      |                       |      |
| MHGH0200285 | 1    | -DIN6 | 28           | 35 | 48 | 59.42 | 63.40 | 28 | 30 | 10 | 38.3 | 13.06                 | 0.40 |
| MHGH0200301 | 1    | -DIN6 | 30           | 16 | 25 | 63.66 | 67.70 | 28 | 30 | 5  | 18.3 | 13.30                 | 0.70 |
| MHGH0200302 | 1    | -DIN6 | 30           | 20 | 30 | 63.66 | 67.70 | 28 | 30 | 6  | 22.8 | 13.30                 | 0.70 |
| MHGH0200303 | 2    | -DIN6 | 30           | 22 | 36 | 63.66 | 67.70 | 28 | 56 | 6  | 24.8 | 13.30                 | 0.70 |
| MHGH0200304 | 1    | -DIN6 | 30           | 25 | 36 | 63.66 | 67.70 | 28 | 30 | 8  | 28.3 | 13.30                 | 0.70 |
| MHGH0200305 | 1    | -DIN6 | 30           | 30 | 45 | 63.66 | 67.70 | 28 | 30 | 8  | 33.3 | 13.30                 | 0.70 |
| MHGH0200306 | 2    | -DIN6 | 30           | 30 | 50 | 63.66 | 67.70 | 28 | 60 | 8  | 33.3 | 13.30                 | 0.70 |
| MHGH0200307 | 2    | -DIN6 | 30           | 32 | 55 | 63.66 | 67.70 | 28 | 65 | 10 | 35.3 | 13.30                 | 0.70 |
| MHGH0200308 | 2    | -DIN6 | 30           | 22 | 35 | 63.66 | 67.66 | 25 | 40 | 6  | 24.8 | 11.87                 | 0.61 |
| MHGH0200309 | 2    | -DIN6 | 30           | 22 | 30 | 63.66 | 67.66 | 25 | 60 | *  | *    | 11.87                 | 0.64 |
| MHGH0200321 | 1    | -DIN6 | 32           | 20 | 30 | 67.91 | 71.90 | 28 | 30 | 6  | 22.8 | 13.49                 | 0.70 |
| MHGH0200322 | 1    | -DIN6 | 32           | 22 | 30 | 67.91 | 71.90 | 28 | 30 | 6  | 24.8 | 13.49                 | 0.70 |
| MHGH0200323 | 2    | -DIN6 | 32           | 22 | 36 | 67.91 | 71.90 | 28 | 56 | 6  | 24.8 | 13.49                 | 0.70 |
| MHGH0200324 | 1    | -DIN6 | 32           | 25 | 36 | 67.91 | 71.90 | 28 | 30 | 8  | 28.3 | 13.49                 | 0.70 |
| MHGH0200325 | 1    | -DIN6 | 32           | 35 | 48 | 67.91 | 71.90 | 28 | 30 | 10 | 38.3 | 13.49                 | 0.70 |
| MHGH0200361 | 1    | -DIN6 | 36           | 35 | 48 | 76.39 | 80.40 | 28 | 30 | 10 | 38.3 | 13.84                 | 0.80 |
| MHGH0200391 | 2    | -DIN6 | 39           | 32 | 55 | 82.76 | 86.80 | 28 | 65 | 10 | 35.3 | 14.06                 | 1.40 |
| MHGH0200401 | 1    | -DIN6 | 40           | 35 | 48 | 84.88 | 88.90 | 28 | 30 | 10 | 38.3 | 14.13                 | 1.20 |
| Module 3    |      |       |              |    |    |       |       |    |    |    |      |                       |      |
| MHGH0300181 | 1    | -DIN6 | 18           | 25 | 36 | 54.00 | 60.00 | 28 | 30 | 8  | 28.3 | 12.51                 | 0.40 |
| MHGH0300201 | 1    | -DIN6 | 20           | 25 | 36 | 60.00 | 66.00 | 28 | 30 | 8  | 28.3 | 14.00                 | 0.50 |
| MHGH0300202 | 2    | -DIN6 | 20           | 25 | 44 | 63.66 | 69.70 | 28 | 60 | 8  | 28.3 | 14.00                 | 1.10 |
| MHGH0300203 | 1    | -DIN6 | 20           | 30 | 45 | 63.66 | 69.70 | 28 | 30 | 8  | 33.3 | 14.00                 | 0.50 |
| MHGH0300204 | 2    | -DIN6 | 20           | 30 | 50 | 63.66 | 69.70 | 28 | 60 | 8  | 33.3 | 14.00                 | 1.10 |
| MHGH0300205 | 2    | -DIN6 | 20           | 32 | 55 | 63.66 | 69.70 | 28 | 65 | 10 | 35.3 | 14.00                 | 1.20 |
| MHGH0300206 | 1    | -DIN6 | 20           | 35 | 48 | 63.66 | 69.70 | 28 | 30 | 10 | 38.3 | 14.00                 | 0.50 |
| MHGH0300207 | 2    | -DIN6 | 20           | 22 | 35 | 63.66 | 69.66 | 30 | 40 | 6  | 24.8 | 15.06                 | 0.69 |
| MHGH0300208 | 2    | -DIN6 | 20           | 22 | 30 | 63.66 | 69.66 | 30 | 65 | *  | *    | 15.06                 | 0.74 |
| MHGH0300209 | 2    | -DIN6 | 20           | 32 | 50 | 63.66 | 69.66 | 30 | 60 | 10 | 35.3 | 15.06                 | 0.81 |
| MHGH0300210 | 2    | -DIN6 | 20           | 32 | 44 | 63.66 | 69.66 | 30 | 70 | *  | *    | 15.06                 | 0.78 |
| MHGH0300221 | 1    | -DIN6 | 22           | 25 | 36 | 70.03 | 76.00 | 28 | 30 | 8  | 28.3 | 17.65                 | 0.60 |
| MHGH0300222 | 1    | -DIN6 | 22           | 30 | 45 | 70.03 | 76.00 | 28 | 30 | 8  | 33.3 | 17.65                 | 0.60 |
| MHGH0300223 | 2    | -DIN6 | 22           | 32 | 55 | 70.03 | 76.00 | 28 | 65 | 10 | 35.3 | 17.65                 | 1.40 |
| MHGH0300224 | 1    | -DIN6 | 22           | 35 | 48 | 70.03 | 76.00 | 28 | 30 | 10 | 38.3 | 17.65                 | 0.60 |
| MHGH0300225 | 2    | -DIN6 | 22           | 40 | 62 | 70.03 | 76.00 | 28 | 65 | 12 | 43.3 | 17.65                 | 1.40 |
| MHGH0300226 | 2    | -DIN6 | 22           | 22 | 35 | 70.03 | 76.03 | 30 | 40 | 6  | 24.8 | 16.68                 | 0.85 |
| MHGH0300227 | 2    | -DIN6 | 22           | 22 | 30 | 70.03 | 76.03 | 30 | 65 | *  | *    | 16.68                 | 0.90 |
| MHGH0300228 | 2    | -DIN6 | 22           | 32 | 50 | 70.03 | 76.03 | 30 | 60 | 10 | 35.3 | 16.68                 | 0.96 |
| MHGH0300229 | 2    | -DIN6 | 22           | 32 | 44 | 70.03 | 76.03 | 30 | 70 | *  | *    | 16.68                 | 0.93 |
| MHGH0300251 | 2    | -DIN6 | 25           | 22 | 36 | 79.58 | 85.60 | 28 | 56 | 6  | 24.8 | 19.01                 | 1.50 |
| MHGH0300252 | 1    | -DIN6 | 25           | 25 | 36 | 79.58 | 85.60 | 28 | 30 | 8  | 28.3 | 19.01                 | 0.80 |
| MHGH0300253 | 2    | -DIN6 | 25           | 25 | 44 | 79.58 | 85.60 | 28 | 60 | 8  | 28.3 | 19.01                 | 1.60 |
| MHGH0300254 | 1    | -DIN6 | 25           | 30 | 45 | 79.58 | 85.60 | 28 | 30 | 8  | 33.3 | 19.01                 | 0.80 |
| MHGH0300255 | 2    | -DIN6 | 25           | 30 | 50 | 79.58 | 85.60 | 28 | 60 | 8  | 33.3 | 19.01                 | 1.60 |



Series MHGH-DIN6 Helical Teeth Ground Pinions  
Quality Grade DIN 6

Material SCM415/SCM440  
Left hand angle 19°31'42"  
Hardness: HRC 50~55°  
Teeth ground after hardening

| Code         | Fig. | DIN   | No. of Teeth | d1 | d2 | d3     | D      | W1 | W2 | k  | h    | F <sub>ta</sub><br>kN | KG   |
|--------------|------|-------|--------------|----|----|--------|--------|----|----|----|------|-----------------------|------|
| Module 3     |      |       |              |    |    |        |        |    |    |    |      |                       |      |
| MHGH0300256  | 2    | -DIN6 | 25           | 32 | 55 | 79.58  | 85.60  | 28 | 65 | 10 | 35.3 | 19.01                 | 1.80 |
| MHGH0300257  | 1    | -DIN6 | 25           | 35 | 48 | 79.58  | 85.60  | 28 | 30 | 10 | 38.3 | 19.01                 | 0.80 |
| MHGH0300258  | 2    | -DIN6 | 25           | 35 | 55 | 79.58  | 85.60  | 28 | 65 | 10 | 38.3 | 19.01                 | 1.80 |
| MHGH0300259  | 1    | -DIN6 | 25           | 40 | 70 | 79.58  | 85.60  | 28 | 50 | 12 | 43.3 | 19.01                 | 1.40 |
| MHGH03002510 | 2    | -DIN6 | 25           | 40 | 62 | 79.58  | 85.60  | 28 | 65 | 12 | 43.3 | 19.01                 | 1.80 |
| MHGH03002511 | 2    | -DIN6 | 25           | 22 | 35 | 79.58  | 85.58  | 30 | 40 | 6  | 24.8 | 20.37                 | 1.11 |
| MHGH03002512 | 2    | -DIN6 | 25           | 22 | 30 | 79.58  | 85.58  | 30 | 65 | *  | *    | 20.37                 | 1.17 |
| MHGH03002513 | 2    | -DIN6 | 25           | 32 | 50 | 79.58  | 85.58  | 30 | 60 | 10 | 35.3 | 20.37                 | 1.23 |
| MHGH03002514 | 2    | -DIN6 | 25           | 32 | 44 | 79.58  | 85.58  | 30 | 70 | *  | *    | 20.37                 | 1.20 |
| MHGH0300281  | 2    | -DIN6 | 28           | 32 | 55 | 89.13  | 95.10  | 28 | 65 | 10 | 35.3 | 19.59                 | 2.20 |
| MHGH0300282  | 2    | -DIN6 | 28           | 40 | 62 | 89.13  | 95.10  | 28 | 65 | 12 | 43.3 | 19.59                 | 2.20 |
| MHGH0300301  | 2    | -DIN6 | 30           | 22 | 35 | 95.49  | 101.49 | 30 | 40 | 6  | 24.8 | 21.37                 | 1.62 |
| MHGH0300302  | 2    | -DIN6 | 30           | 22 | 30 | 95.49  | 101.49 | 30 | 65 | *  | *    | 21.37                 | 1.67 |
| MHGH0300303  | 2    | -DIN6 | 30           | 32 | 50 | 95.49  | 101.49 | 30 | 60 | 10 | 35.3 | 21.37                 | 1.74 |
| MHGH0300304  | 2    | -DIN6 | 30           | 32 | 44 | 95.49  | 101.49 | 30 | 70 | *  | *    | 21.37                 | 1.71 |
| MHGH0300321  | 2    | -DIN6 | 32           | 32 | 55 | 101.86 | 107.85 | 28 | 65 | 10 | 35.3 | 20.24                 | 2.80 |
| MHGH0300322  | 2    | -DIN6 | 32           | 40 | 62 | 101.86 | 107.85 | 28 | 65 | 12 | 43.3 | 20.24                 | 2.00 |
| Module 4     |      |       |              |    |    |        |        |    |    |    |      |                       |      |
| MHGH0400151  | 1    | -DIN6 | 15           | 35 | 52 | 63.66  | 71.70  | 40 | 50 | 10 | 38.3 | 17.53                 | 0.80 |
| MHGH0400181  | 2    | -DIN6 | 18           | 32 | 55 | 76.39  | 84.40  | 40 | 75 | 10 | 35.3 | 23.92                 | 1.60 |
| MHGH0400201  | 1    | -DIN6 | 20           | 35 | 52 | 84.88  | 92.90  | 40 | 50 | 10 | 38.3 | 26.78                 | 1.30 |
| MHGH0400202  | 1    | -DIN6 | 20           | 45 | 65 | 84.88  | 92.90  | 40 | 50 | 14 | 48.8 | 26.78                 | 1.30 |
| MHGH0400203  | 2    | -DIN6 | 20           | 32 | 50 | 84.88  | 92.88  | 40 | 60 | 10 | 35.3 | 26.78                 | 1.67 |
| MHGH0400204  | 2    | -DIN6 | 20           | 32 | 44 | 84.88  | 92.88  | 40 | 80 | *  | *    | 26.78                 | 1.73 |
| MHGH0400205  | 2    | -DIN6 | 20           | 40 | 60 | 84.88  | 92.88  | 40 | 85 | 12 | 43.3 | 26.78                 | 1.89 |
| MHGH0400206  | 2    | -DIN6 | 20           | 40 | 50 | 84.88  | 92.88  | 40 | 85 | *  | *    | 26.78                 | 1.58 |
| MHGH0400211  | 2    | -DIN6 | 21           | 32 | 55 | 89.13  | 97.10  | 40 | 75 | 10 | 35.3 | 28.23                 | 2.20 |
| MHGH0400212  | 2    | -DIN6 | 21           | 35 | 55 | 89.13  | 97.10  | 40 | 75 | 10 | 38.3 | 28.23                 | 2.20 |
| MHGH0400213  | 2    | -DIN6 | 21           | 40 | 62 | 89.13  | 97.10  | 40 | 75 | 12 | 43.3 | 28.23                 | 2.20 |
| MHGH0400214  | 2    | -DIN6 | 21           | 45 | 68 | 89.13  | 97.10  | 40 | 75 | 14 | 48.8 | 28.23                 | 2.20 |
| MHGH0400221  | 1    | -DIN6 | 22           | 35 | 52 | 93.37  | 101.40 | 40 | 50 | 10 | 38.3 | 29.66                 | 1.60 |
| MHGH0400222  | 1    | -DIN6 | 22           | 45 | 65 | 93.37  | 101.40 | 40 | 50 | 14 | 48.8 | 29.66                 | 1.60 |
| MHGH0400223  | 2    | -DIN6 | 22           | 32 | 50 | 93.37  | 101.37 | 40 | 60 | 10 | 35.3 | 29.66                 | 2.04 |
| MHGH0400224  | 2    | -DIN6 | 22           | 32 | 44 | 93.37  | 101.37 | 40 | 80 | *  | *    | 29.66                 | 2.10 |
| MHGH0400225  | 2    | -DIN6 | 22           | 40 | 60 | 93.37  | 101.37 | 40 | 85 | 12 | 43.3 | 29.66                 | 2.26 |
| MHGH0400226  | 2    | -DIN6 | 22           | 40 | 50 | 93.37  | 101.37 | 40 | 85 | *  | *    | 29.66                 | 1.95 |
| MHGH0400241  | 2    | -DIN6 | 24           | 32 | 55 | 101.86 | 109.90 | 40 | 75 | 10 | 35.3 | 35.79                 | 2.80 |
| MHGH0400242  | 2    | -DIN6 | 24           | 35 | 55 | 101.86 | 109.90 | 40 | 75 | 10 | 38.3 | 35.79                 | 2.80 |
| MHGH0400243  | 2    | -DIN6 | 24           | 40 | 62 | 101.86 | 109.90 | 40 | 75 | 12 | 43.3 | 35.79                 | 2.80 |
| MHGH0400244  | 2    | -DIN6 | 24           | 45 | 68 | 101.86 | 109.90 | 40 | 75 | 14 | 48.8 | 35.79                 | 2.80 |
| MHGH0400245  | 2    | -DIN6 | 24           | 55 | 80 | 101.86 | 109.90 | 40 | 80 | 16 | 59.3 | 35.79                 | 3.00 |
| MHGH0400251  | 1    | -DIN6 | 25           | 35 | 52 | 106.10 | 114.10 | 40 | 50 | 10 | 38.3 | 36.22                 | 2.00 |
| MHGH0400252  | 1    | -DIN6 | 25           | 45 | 65 | 106.10 | 114.10 | 40 | 50 | 14 | 48.8 | 36.22                 | 2.00 |

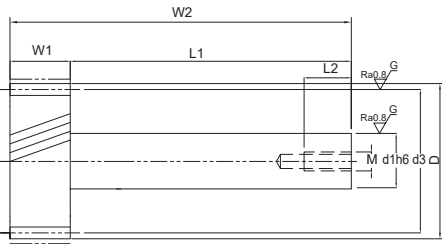


Series MHGH-DIN6 Helical Teeth Ground Pinions  
Quality Grade DIN 6

Material SCM415/SCM440  
Left hand angle 19°31'42"  
Hardness: HRC 50~55°  
Teeth ground after hardening

| Code        | Fig. | DIN   | No. of Teeth | d1 | d2  | d3     | D      | W1  | W2  | k  | h    | F <sub>ta</sub><br>kN | KG    |
|-------------|------|-------|--------------|----|-----|--------|--------|-----|-----|----|------|-----------------------|-------|
| Module 4    |      |       |              |    |     |        |        |     |     |    |      |                       |       |
| MHGH0400253 | 2    | -DIN6 | 25           | 55 | 80  | 106.10 | 114.10 | 40  | 80  | 16 | 59.3 | 36.22                 | 3.20  |
| MHGH0400254 | 2    | -DIN6 | 25           | 32 | 50  | 106.10 | 114.10 | 40  | 60  | 10 | 35.3 | 36.22                 | 2.66  |
| MHGH0400255 | 2    | -DIN6 | 25           | 32 | 44  | 106.10 | 114.10 | 40  | 80  | *  | *    | 36.22                 | 2.72  |
| MHGH0400256 | 2    | -DIN6 | 25           | 40 | 60  | 106.10 | 114.10 | 40  | 85  | 12 | 43.3 | 36.22                 | 2.88  |
| MHGH0400257 | 2    | -DIN6 | 25           | 40 | 50  | 106.10 | 114.10 | 40  | 85  | *  | *    | 36.22                 | 2.58  |
| MHGH0400301 | 2    | -DIN6 | 30           | 32 | 50  | 127.32 | 135.32 | 40  | 60  | 10 | 35.3 | 38.00                 | 3.88  |
| MHGH0400302 | 2    | -DIN6 | 30           | 32 | 44  | 127.32 | 135.32 | 40  | 80  | 10 | *    | 38.00                 | 3.94  |
| MHGH0400303 | 2    | -DIN6 | 30           | 40 | 60  | 127.32 | 135.32 | 40  | 85  | 12 | 43.3 | 38.00                 | 4.10  |
| MHGH0400304 | 2    | -DIN6 | 30           | 40 | 50  | 127.32 | 135.32 | 40  | 85  | *  | *    | 38.00                 | 3.80  |
| Module 5    |      |       |              |    |     |        |        |     |     |    |      |                       |       |
| MHGH0500181 | 2    | -DIN6 | 18           | 45 | 68  | 95.49  | 105.50 | 50  | 85  | 14 | 48.8 | 37.38                 | 2.90  |
| MHGH0500201 | 2    | -DIN6 | 20           | 40 | 60  | 106.10 | 116.10 | 50  | 85  | 12 | 43.3 | 41.84                 | 3.34  |
| MHGH0500202 | 2    | -DIN6 | 20           | 40 | 50  | 106.10 | 116.10 | 50  | 90  | *  | *    | 41.84                 | 3.16  |
| MHGH0500221 | 2    | -DIN6 | 22           | 40 | 60  | 116.71 | 126.71 | 50  | 85  | 12 | 43.3 | 46.34                 | 4.06  |
| MHGH0500222 | 2    | -DIN6 | 22           | 40 | 50  | 116.71 | 126.71 | 50  | 90  | *  | *    | 46.34                 | 3.88  |
| MHGH0500241 | 2    | -DIN6 | 24           | 45 | 68  | 127.32 | 137.30 | 50  | 85  | 14 | 48.8 | 55.93                 | 4.90  |
| MHGH0500242 | 2    | -DIN6 | 24           | 55 | 80  | 127.32 | 137.30 | 50  | 90  | 16 | 59.3 | 55.93                 | 5.20  |
| MHGH0500243 | 2    | -DIN6 | 24           | 75 | 110 | 127.32 | 137.30 | 50  | 110 | 20 | 79.9 | 55.93                 | 6.40  |
| MHGH0500251 | 2    | -DIN6 | 25           | 40 | 60  | 132.63 | 142.63 | 50  | 85  | 12 | 43.3 | 56.58                 | 5.28  |
| MHGH0500252 | 2    | -DIN6 | 25           | 40 | 50  | 132.63 | 142.63 | 50  | 90  | *  | *    | 56.58                 | 5.10  |
| MHGH0500301 | 2    | -DIN6 | 30           | 40 | 60  | 159.16 | 169.16 | 50  | 85  | 12 | 43.3 | 59.37                 | 7.66  |
| MHGH0500302 | 2    | -DIN6 | 30           | 40 | 50  | 159.16 | 169.16 | 50  | 90  | *  | *    | 59.37                 | 7.48  |
| Module 6    |      |       |              |    |     |        |        |     |     |    |      |                       |       |
| MHGH0600201 | 2    | -DIN6 | 20           | 55 | 80  | 127.32 | 139.30 | 60  | 100 | 16 | 59.3 | 60.26                 | 6.00  |
| MHGH0600202 | 2    | -DIN6 | 20           | 75 | 110 | 127.32 | 139.30 | 60  | 120 | 20 | 79.9 | 60.26                 | 7.20  |
| MHGH0600203 | 2    | -DIN6 | 20           | 55 | 80  | 127.32 | 139.32 | 60  | 85  | 16 | 59.3 | 60.26                 | 5.28  |
| MHGH0600204 | 2    | -DIN6 | 20           | 55 | 68  | 127.32 | 139.32 | 60  | 105 | *  | *    | 60.26                 | 5.25  |
| MHGH0600221 | 2    | -DIN6 | 22           | 55 | 80  | 140.06 | 152.06 | 60  | 85  | 16 | 59.3 | 66.74                 | 6.53  |
| MHGH0600222 | 2    | -DIN6 | 22           | 55 | 68  | 140.06 | 152.06 | 60  | 105 | *  | *    | 66.74                 | 6.50  |
| MHGH0600251 | 2    | -DIN6 | 25           | 55 | 80  | 159.16 | 171.20 | 60  | 100 | 16 | 59.3 | 81.49                 | 9.00  |
| MHGH0600252 | 2    | -DIN6 | 25           | 75 | 110 | 159.16 | 171.20 | 60  | 120 | 20 | 79.9 | 81.49                 | 10.80 |
| MHGH0600253 | 2    | -DIN6 | 25           | 55 | 80  | 159.16 | 171.16 | 60  | 85  | 16 | 59.3 | 81.49                 | 8.64  |
| MHGH0600254 | 2    | -DIN6 | 25           | 55 | 68  | 159.16 | 171.16 | 60  | 105 | *  | *    | 81.49                 | 8.61  |
| MHGH0600301 | 2    | -DIN6 | 30           | 55 | 80  | 190.99 | 212.99 | 60  | 85  | 16 | 59.3 | 85.49                 | 12.74 |
| MHGH0600302 | 2    | -DIN6 | 30           | 55 | 68  | 190.99 | 212.99 | 60  | 105 | *  | *    | 85.49                 | 12.71 |
| Module 8    |      |       |              |    |     |        |        |     |     |    |      |                       |       |
| MHGH0800181 | 2    | -DIN6 | 18           | 75 | 110 | 152.79 | 168.80 | 80  | 140 | 20 | 79.9 | 95.68                 | 11.00 |
| MHGH0800202 | 2    | -DIN6 | 20           | 85 | 125 | 169.80 | 185.80 | 80  | 145 | 22 | 90.4 | 107.12                | 14.00 |
| Module 10   |      |       |              |    |     |        |        |     |     |    |      |                       |       |
| MHGH1000201 | 2    | -DIN6 | 20           | 85 | 125 | 212.21 | 232.20 | 100 | 165 | 22 | 90.4 | 167.38                | 26.00 |

MHGH-L-DIN6



Dimension:mm

Series MHGH-L-DIN6 Helical Teeth Ground Pinion Shaft  
Quality Grade DIN 6

Material SCM415/SCM440  
Left hand angle 19°31'42"  
Hardness: HRC 50~55°  
Teeth ground after hardening

| Code           | DIN   | Code | No. of Teeth | d1   | d3     | D      | W1   | W2  | L1    | L2 | Hole | F <sub>ta</sub><br>kN | KG  |
|----------------|-------|------|--------------|------|--------|--------|------|-----|-------|----|------|-----------------------|-----|
| Module 1.5     |       |      |              |      |        |        |      |     |       |    |      |                       |     |
| MHGH-L-0150201 | -DIN6 | 1.5  | 20           | 20h6 | 31.831 | 34.831 | 11.5 | 110 | 98.5  | 19 | M8   | 2.96                  | 0.5 |
| MHGH-L-0150202 | -DIN6 | 1.5  | 20           | 20h6 | 31.831 | 34.831 | 14.5 | 90  | 75.5  | 19 | M8   | 3.64                  | 0.6 |
| Module 2.5     |       |      |              |      |        |        |      |     |       |    |      |                       |     |
| MHGH-L-0250161 | -DIN6 | 2.5  | 16           | 25h6 | 42.441 | 47.441 | 19.5 | 108 | 88.5  | 22 | M10  | 5.86                  | 0.6 |
| MHGH-L-0250181 | -DIN6 | 2.5  | 18           | 25h6 | 47.747 | 52.747 | 19.5 | 108 | 88.5  | 22 | M10  | 6.63                  | 0.7 |
| Module 3       |       |      |              |      |        |        |      |     |       |    |      |                       |     |
| MHGH-L-0300201 | -DIN6 | 3    | 20           | 40h6 | 63.662 | 69.662 | 29.5 | 162 | 132.5 | 28 | M12  | 14.81                 | 1.9 |
| MHGH-L-0300281 | -DIN6 | 3    | 28           | 40h6 | 89.127 | 95.127 | 29.5 | 162 | 132.5 | 28 | M12  | 20.64                 | 2.0 |

CHM-DIN8

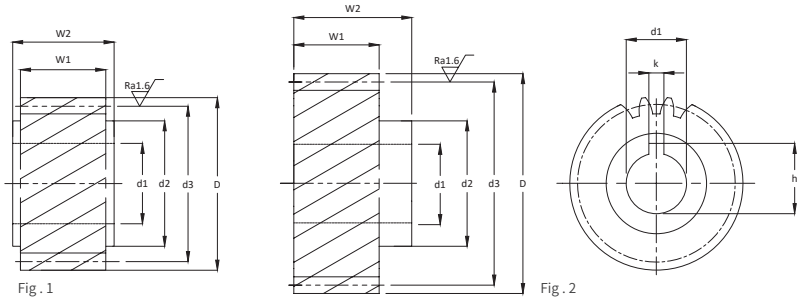


Fig .1

Fig .2

Dimension:mm

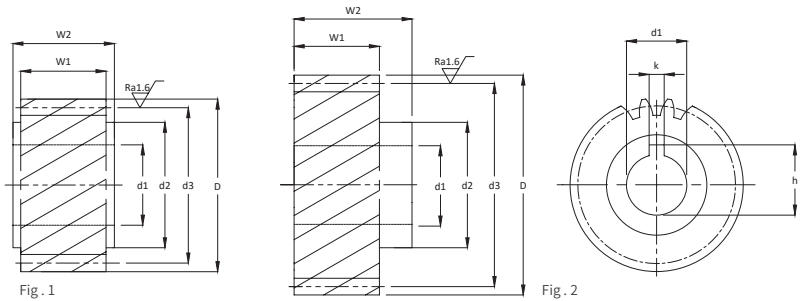
Series CHM-DIN8 Helical Pinions  
Quality Grade DIN 8

Material S45C / S50C  
Left hand angle 19°31'42"

| Code       | Fig. | DIN   | No. of Teeth | d1 | d2 | d3     | D     | W1 | W2 | k  | h    | F <sub>ta</sub><br>kN | KG  |
|------------|------|-------|--------------|----|----|--------|-------|----|----|----|------|-----------------------|-----|
| Module 1.5 |      |       |              |    |    |        |       |    |    |    |      |                       |     |
| CHM0150201 | 1    | -DIN8 | 20           | 11 | 25 | 31.83  | 34.83 | 20 | 22 | 4  | 12.8 | 0.51                  | 0.1 |
| CHM0150202 | 1    | -DIN8 | 20           | 13 | 25 | 31.83  | 34.83 | 20 | 22 | 5  | 15.3 | 0.51                  | 0.1 |
| CHM0150203 | 1    | -DIN8 | 20           | 14 | 25 | 31.83  | 34.83 | 20 | 22 | 5  | 16.3 | 0.51                  | 0.1 |
| CHM0150204 | 1    | -DIN8 | 20           | 16 | 25 | 31.83  | 34.83 | 20 | 22 | 5  | 18.3 | 0.51                  | 0.1 |
| CHM0150211 | 2    | -DIN8 | 21           | 16 | 30 | 33.42  | 36.42 | 20 | 46 | 5  | 18.3 | 0.61                  | 0.3 |
| Module 2   |      |       |              |    |    |        |       |    |    |    |      |                       |     |
| CHM0200181 | 1    | -DIN8 | 18           | 16 | 25 | 38.197 | 42.2  | 28 | 30 | 5  | 18.3 | 0.86                  | 0.2 |
| CHM0200201 | 1    | -DIN8 | 20           | 19 | 30 | 42.44  | 46.4  | 28 | 30 | 6  | 21.8 | 0.96                  | 0.3 |
| CHM0200202 | 2    | -DIN8 | 20           | 19 | 30 | 42.44  | 46.4  | 28 | 56 | 6  | 21.8 | 0.96                  | 0.6 |
| CHM0200203 | 1    | -DIN8 | 20           | 20 | 30 | 42.44  | 46.4  | 28 | 30 | 6  | 22.8 | 0.96                  | 0.3 |
| CHM0200204 | 2    | -DIN8 | 20           | 22 | 36 | 42.44  | 46.4  | 28 | 56 | 6  | 24.8 | 0.96                  | 0.6 |
| CHM0200205 | 1    | -DIN8 | 20           | 22 | 30 | 42.44  | 46.4  | 28 | 30 | 6  | 24.8 | 0.96                  | 0.3 |
| CHM0200211 | 1    | -DIN8 | 21           | 16 | 25 | 44.56  | 48.6  | 28 | 30 | 5  | 18.3 | 1.01                  | 0.3 |
| CHM0200212 | 2    | -DIN8 | 21           | 22 | 36 | 44.56  | 48.6  | 28 | 30 | 6  | 24.8 | 1.01                  | 0.3 |
| CHM0200221 | 1    | -DIN8 | 22           | 19 | 30 | 46.69  | 50.7  | 28 | 30 | 6  | 21.8 | 1.19                  | 0.4 |
| CHM0200222 | 2    | -DIN8 | 22           | 19 | 30 | 46.69  | 50.7  | 28 | 56 | 6  | 21.8 | 1.19                  | 0.7 |
| CHM0200223 | 1    | -DIN8 | 22           | 22 | 30 | 46.69  | 50.7  | 28 | 30 | 6  | 24.8 | 1.19                  | 0.4 |
| CHM0200224 | 2    | -DIN8 | 22           | 22 | 36 | 46.69  | 50.7  | 28 | 56 | 6  | 24.8 | 1.19                  | 0.7 |
| CHM0200251 | 1    | -DIN8 | 25           | 19 | 30 | 53.05  | 57.1  | 28 | 30 | 6  | 21.8 | 1.37                  | 0.5 |
| CHM0200252 | 2    | -DIN8 | 25           | 19 | 30 | 53.05  | 57.1  | 28 | 56 | 6  | 21.8 | 1.37                  | 0.8 |
| CHM0200253 | 1    | -DIN8 | 25           | 20 | 30 | 53.05  | 57.1  | 28 | 30 | 6  | 22.8 | 1.37                  | 0.5 |
| CHM0200254 | 1    | -DIN8 | 25           | 22 | 30 | 53.05  | 57.1  | 28 | 30 | 6  | 24.8 | 1.37                  | 0.5 |
| CHM0200255 | 2    | -DIN8 | 25           | 22 | 36 | 53.05  | 57.1  | 28 | 56 | 6  | 24.8 | 1.37                  | 0.8 |
| CHM0200256 | 1    | -DIN8 | 25           | 25 | 36 | 53.05  | 57.1  | 28 | 30 | 6  | 27.8 | 1.37                  | 0.5 |
| CHM0200281 | 1    | -DIN8 | 28           | 19 | 30 | 59.42  | 63.4  | 28 | 30 | 6  | 21.8 | 1.54                  | 0.6 |
| CHM0200282 | 2    | -DIN8 | 28           | 19 | 30 | 59.42  | 63.4  | 28 | 56 | 6  | 21.8 | 1.54                  | 1.0 |
| CHM0200283 | 1    | -DIN8 | 28           | 22 | 30 | 59.42  | 63.4  | 28 | 30 | 6  | 24.8 | 1.54                  | 0.6 |
| CHM0200284 | 2    | -DIN8 | 28           | 22 | 36 | 59.42  | 63.4  | 28 | 56 | 6  | 24.8 | 1.54                  | 1.0 |
| CHM0200285 | 1    | -DIN8 | 28           | 35 | 48 | 59.42  | 63.4  | 28 | 30 | 10 | 38.3 | 1.54                  | 0.6 |
| CHM0200301 | 1    | -DIN8 | 30           | 16 | 25 | 63.66  | 67.7  | 28 | 30 | 5  | 18.3 | 1.66                  | 0.6 |
| CHM0200302 | 1    | -DIN8 | 30           | 20 | 30 | 63.66  | 67.7  | 28 | 30 | 6  | 22.8 | 1.66                  | 0.6 |
| CHM0200303 | 2    | -DIN8 | 30           | 22 | 36 | 63.66  | 67.7  | 28 | 56 | 6  | 24.8 | 1.66                  | 1.2 |
| CHM0200304 | 1    | -DIN8 | 30           | 25 | 36 | 63.66  | 67.7  | 28 | 30 | 8  | 28.3 | 1.66                  | 0.6 |
| CHM0200305 | 1    | -DIN8 | 30           | 30 | 45 | 63.66  | 67.7  | 28 | 30 | 8  | 33.3 | 1.66                  | 0.6 |
| CHM0200306 | 2    | -DIN8 | 30           | 30 | 50 | 63.66  | 67.7  | 28 | 60 | 8  | 33.3 | 1.66                  | 1.3 |
| CHM0200307 | 2    | -DIN8 | 30           | 32 | 55 | 63.66  | 67.7  | 28 | 65 | 10 | 35.3 | 1.66                  | 1.4 |
| CHM0200321 | 1    | -DIN8 | 32           | 20 | 30 | 67.91  | 71.9  | 28 | 30 | 6  | 22.8 | 1.78                  | 0.7 |
| CHM0200322 | 1    | -DIN8 | 32           | 22 | 30 | 67.91  | 71.9  | 28 | 30 | 6  | 24.8 | 1.78                  | 0.7 |
| CHM0200323 | 2    | -DIN8 | 32           | 22 | 36 | 67.91  | 71.9  | 28 | 56 | 6  | 27.8 | 1.78                  | 1.3 |
| CHM0200324 | 1    | -DIN8 | 32           | 25 | 36 | 67.91  | 71.9  | 28 | 30 | 8  | 28.3 | 1.78                  | 0.7 |
| CHM0200325 | 1    | -DIN8 | 32           | 35 | 48 | 67.91  | 71.9  | 28 | 30 | 10 | 38.3 | 1.78                  | 0.7 |
| CHM0200361 | 1    | -DIN8 | 36           | 35 | 48 | 76.39  | 80.4  | 28 | 30 | 10 | 38.3 | 2.29                  | 0.9 |
| CHM0200391 | 2    | -DIN8 | 39           | 32 | 55 | 82.76  | 86.8  | 28 | 65 | 10 | 35.3 | 2.49                  | 2.3 |
| CHM0200401 | 1    | -DIN8 | 40           | 35 | 48 | 84.88  | 88.9  | 28 | 30 | 10 | 38.3 | 2.56                  | 1.1 |



CHM-DIN8



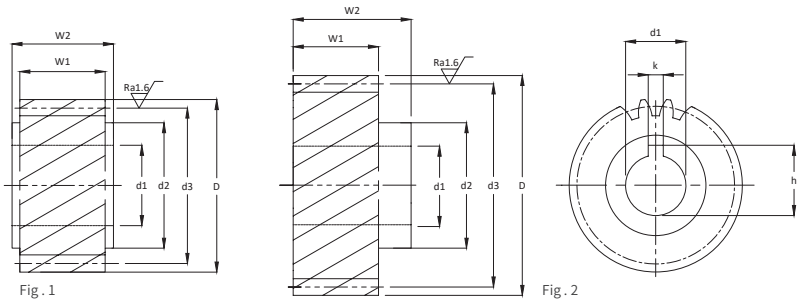
Dimension:mm

Series CHM-DIN8 Helical Pinions  
Quality Grade DIN 8

Material S45C / S50C  
Left hand angle 19°31'42"

| Code        | Fig. | DIN   | No. of Teeth | d1 | d2 | d3     | D      | W1 | W2 | k  | h    | F <sub>ta</sub><br>kN | KG  |
|-------------|------|-------|--------------|----|----|--------|--------|----|----|----|------|-----------------------|-----|
| Module 3    |      |       |              |    |    |        |        |    |    |    |      |                       |     |
| CHM0300201  | 2    | -DIN8 | 20           | 22 | 36 | 63.66  | 69.7   | 28 | 56 | 6  | 24.8 | 1.61                  | 1.0 |
| CHM0300202  | 2    | -DIN8 | 20           | 25 | 44 | 63.66  | 69.7   | 28 | 60 | 8  | 28.3 | 1.61                  | 1.1 |
| CHM0300203  | 1    | -DIN8 | 20           | 30 | 45 | 63.66  | 69.7   | 28 | 30 | 8  | 33.3 | 1.61                  | 0.5 |
| CHM0300204  | 2    | -DIN8 | 20           | 30 | 50 | 63.66  | 69.7   | 28 | 60 | 8  | 33.3 | 1.61                  | 1.1 |
| CHM0300205  | 2    | -DIN8 | 20           | 32 | 55 | 63.66  | 69.7   | 28 | 65 | 10 | 35.3 | 1.61                  | 1.2 |
| CHM0300206  | 1    | -DIN8 | 20           | 35 | 48 | 63.66  | 69.7   | 28 | 30 | 10 | 38.3 | 1.61                  | 0.5 |
| CHM0300221  | 1    | -DIN8 | 22           | 25 | 36 | 70.03  | 76.0   | 28 | 30 | 8  | 28.3 | 2.03                  | 0.6 |
| CHM0300222  | 1    | -DIN8 | 22           | 30 | 45 | 70.03  | 76.0   | 28 | 30 | 8  | 33.3 | 2.03                  | 0.6 |
| CHM0300223  | 2    | -DIN8 | 22           | 32 | 55 | 70.03  | 76.0   | 28 | 65 | 10 | 35.3 | 2.03                  | 1.4 |
| CHM0300224  | 1    | -DIN8 | 22           | 35 | 48 | 70.03  | 76.0   | 28 | 30 | 10 | 38.3 | 2.03                  | 0.6 |
| CHM0300225  | 2    | -DIN8 | 22           | 40 | 62 | 70.03  | 76.0   | 28 | 65 | 12 | 43.3 | 2.03                  | 1.4 |
| CHM0300251  | 2    | -DIN8 | 25           | 22 | 36 | 79.58  | 85.6   | 28 | 56 | 6  | 24.8 | 2.32                  | 1.5 |
| CHM0300252  | 1    | -DIN8 | 25           | 25 | 36 | 79.58  | 85.6   | 28 | 30 | 8  | 28.3 | 2.32                  | 0.8 |
| CHM0300253  | 2    | -DIN8 | 25           | 25 | 44 | 79.58  | 85.6   | 28 | 60 | 8  | 28.3 | 2.32                  | 1.6 |
| CHM0300254  | 1    | -DIN8 | 25           | 30 | 45 | 79.58  | 85.6   | 28 | 30 | 8  | 33.3 | 2.32                  | 0.8 |
| CHM0300255  | 2    | -DIN8 | 25           | 30 | 50 | 79.58  | 85.6   | 28 | 60 | 8  | 33.3 | 2.32                  | 1.6 |
| CHM0300256  | 2    | -DIN8 | 25           | 32 | 55 | 79.58  | 85.6   | 28 | 65 | 10 | 35.3 | 2.32                  | 1.8 |
| CHM0300257  | 1    | -DIN8 | 25           | 35 | 48 | 79.58  | 85.6   | 28 | 30 | 10 | 38.3 | 2.32                  | 0.8 |
| CHM0300258  | 2    | -DIN8 | 25           | 35 | 55 | 79.58  | 85.6   | 28 | 65 | 10 | 38.3 | 2.32                  | 1.8 |
| CHM0300259  | 1    | -DIN8 | 25           | 40 | 70 | 79.58  | 85.6   | 28 | 50 | 12 | 43.3 | 2.32                  | 1.4 |
| CHM03002510 | 2    | -DIN8 | 25           | 40 | 62 | 79.58  | 85.6   | 28 | 65 | 12 | 43.3 | 2.32                  | 1.8 |
| CHM0300281  | 2    | -DIN8 | 28           | 32 | 55 | 89.13  | 95.1   | 28 | 65 | 10 | 35.3 | 2.62                  | 2.2 |
| CHM0300282  | 2    | -DIN8 | 28           | 40 | 62 | 89.13  | 95.1   | 28 | 65 | 12 | 43.3 | 2.62                  | 2.2 |
| CHM0300321  | 2    | -DIN8 | 32           | 32 | 55 | 101.86 | 107.85 | 28 | 65 | 10 | 35.3 | 3.02                  | 2.8 |
| CHM0300322  | 2    | -DIN8 | 32           | 40 | 62 | 101.86 | 107.85 | 28 | 65 | 12 | 43.3 | 3.02                  | 2.8 |

CHM-DIN8

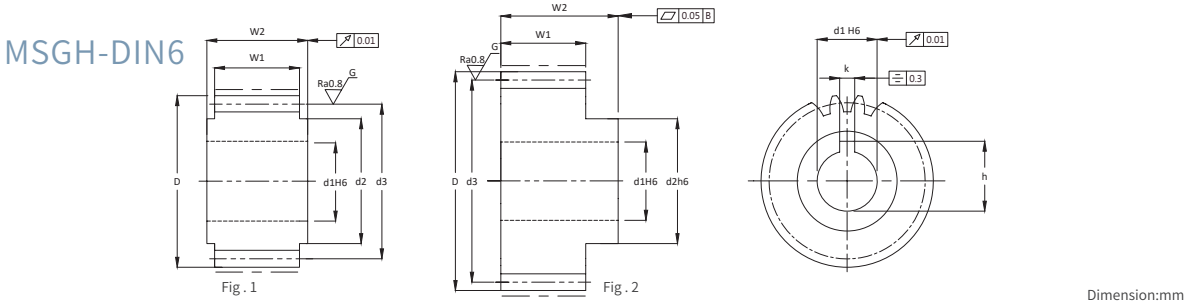


Dimension:mm

Series CHM-DIN8 Helical Pinions  
Quality Grade DIN 8

Material S45C / S50C  
Left hand angle 19°31'42"

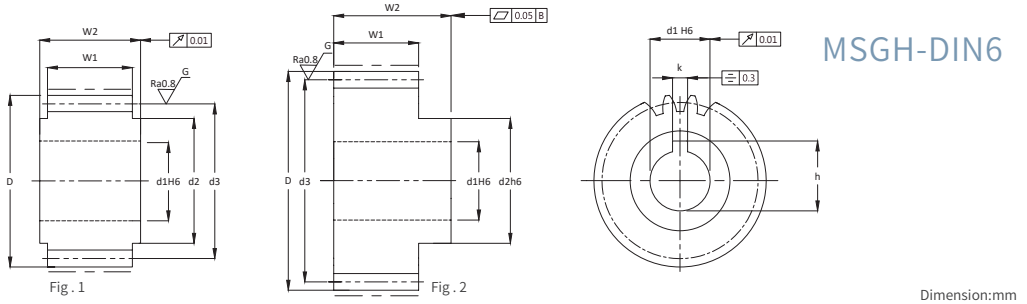
| Code       | Fig. | DIN   | No. of Teeth | d1 | d2  | d3     | D     | W1  | W2  | k  | h    | F <sub>ta</sub><br>kN | KG   |
|------------|------|-------|--------------|----|-----|--------|-------|-----|-----|----|------|-----------------------|------|
| Module 4   |      |       |              |    |     |        |       |     |     |    |      |                       |      |
| CHM0400151 | 1    | -DIN8 | 15           | 35 | 52  | 63.66  | 71.7  | 40  | 50  | 10 | 38.3 | 2.01                  | 0.8  |
| CHM0400181 | 2    | -DIN8 | 18           | 32 | 55  | 76.39  | 84.4  | 40  | 75  | 10 | 35.3 | 2.74                  | 1.6  |
| CHM0400201 | 1    | -DIN8 | 20           | 35 | 52  | 84.88  | 92.9  | 40  | 50  | 10 | 38.3 | 3.07                  | 1.3  |
| CHM0400202 | 1    | -DIN8 | 20           | 45 | 65  | 84.88  | 92.9  | 40  | 50  | 14 | 48.8 | 3.07                  | 1.3  |
| CHM0400211 | 2    | -DIN8 | 21           | 32 | 55  | 89.13  | 97.1  | 40  | 75  | 10 | 35.3 | 3.24                  | 2.2  |
| CHM0400212 | 2    | -DIN8 | 21           | 35 | 55  | 89.13  | 97.1  | 40  | 75  | 10 | 38.3 | 3.24                  | 2.2  |
| CHM0400213 | 2    | -DIN8 | 21           | 40 | 62  | 89.13  | 97.1  | 40  | 75  | 12 | 43.3 | 3.24                  | 2.2  |
| CHM0400214 | 2    | -DIN8 | 21           | 45 | 68  | 89.13  | 97.1  | 40  | 75  | 14 | 48.8 | 3.24                  | 2.2  |
| CHM0400221 | 1    | -DIN8 | 22           | 35 | 52  | 93.37  | 101.4 | 40  | 50  | 10 | 38.3 | 3.40                  | 1.6  |
| CHM0400222 | 1    | -DIN8 | 22           | 45 | 65  | 93.37  | 101.4 | 40  | 50  | 14 | 48.8 | 3.40                  | 1.6  |
| CHM0400241 | 2    | -DIN8 | 24           | 32 | 55  | 101.86 | 109.9 | 40  | 75  | 10 | 35.3 | 4.25                  | 2.8  |
| CHM0400242 | 2    | -DIN8 | 24           | 35 | 55  | 101.86 | 109.9 | 40  | 75  | 10 | 38.3 | 4.25                  | 2.8  |
| CHM0400243 | 2    | -DIN8 | 24           | 40 | 62  | 101.86 | 109.9 | 40  | 75  | 12 | 43.3 | 4.25                  | 2.8  |
| CHM0400244 | 2    | -DIN8 | 24           | 45 | 68  | 101.86 | 109.9 | 40  | 75  | 14 | 48.8 | 4.25                  | 2.8  |
| CHM0400245 | 2    | -DIN8 | 24           | 55 | 80  | 101.86 | 109.9 | 40  | 80  | 16 | 59.3 | 4.25                  | 3.0  |
| CHM0400251 | 1    | -DIN8 | 25           | 35 | 52  | 106.1  | 114.1 | 40  | 50  | 10 | 38.3 | 4.44                  | 2.0  |
| CHM0400252 | 1    | -DIN8 | 25           | 45 | 65  | 106.1  | 114.1 | 40  | 50  | 14 | 48.8 | 4.44                  | 2.0  |
| CHM0400253 | 2    | -DIN8 | 25           | 55 | 80  | 106.1  | 114.1 | 40  | 80  | 16 | 59.3 | 4.44                  | 3.2  |
| Module 5   |      |       |              |    |     |        |       |     |     |    |      |                       |      |
| CHM0500181 | 2    | -DIN8 | 18           | 45 | 68  | 95.49  | 105.5 | 50  | 85  | 14 | 48.8 | 4.29                  | 2.9  |
| CHM0500241 | 2    | -DIN8 | 24           | 45 | 68  | 127.32 | 137.3 | 50  | 85  | 14 | 48.8 | 6.64                  | 4.9  |
| CHM0500242 | 2    | -DIN8 | 24           | 55 | 80  | 127.32 | 137.3 | 50  | 90  | 16 | 59.3 | 6.64                  | 5.2  |
| CHM0500243 | 2    | -DIN8 | 24           | 75 | 110 | 127.32 | 137.3 | 50  | 110 | 20 | 79.9 | 6.64                  | 6.4  |
| Module 6   |      |       |              |    |     |        |       |     |     |    |      |                       |      |
| CHM0600201 | 2    | -DIN8 | 20           | 55 | 80  | 127.32 | 139.3 | 60  | 100 | 16 | 59.3 | 6.91                  | 6.0  |
| CHM0600202 | 2    | -DIN8 | 20           | 75 | 110 | 127.32 | 139.3 | 60  | 120 | 20 | 79.9 | 6.91                  | 7.2  |
| CHM0600251 | 2    | -DIN8 | 25           | 55 | 80  | 159.16 | 171.2 | 60  | 100 | 16 | 59.3 | 9.99                  | 9.0  |
| CHM0600252 | 2    | -DIN8 | 25           | 75 | 110 | 159.16 | 171.2 | 60  | 120 | 20 | 79.9 | 9.99                  | 10.8 |
| Module 8   |      |       |              |    |     |        |       |     |     |    |      |                       |      |
| CHM0800181 | 2    | -DIN8 | 18           | 75 | 110 | 152.79 | 168.8 | 80  | 140 | 20 | 79.9 | 10.98                 | 12.3 |
| CHM0800202 | 2    | -DIN8 | 20           | 85 | 125 | 169.8  | 185.8 | 80  | 145 | 22 | 90.4 | 12.29                 | 15.4 |
| Module 10  |      |       |              |    |     |        |       |     |     |    |      |                       |      |
| CHM1000201 | 2    | -DIN8 | 20           | 85 | 125 | 212.21 | 232.2 | 100 | 165 | 22 | 90.4 | 19.20                 | 27.4 |



Series MSGH-DIN6 Straight Teeth Ground Pinions  
Quality Grade DIN 6

Material SCM415/SCM440  
Hardness: HRC 50~55°  
Teeth ground after hardening

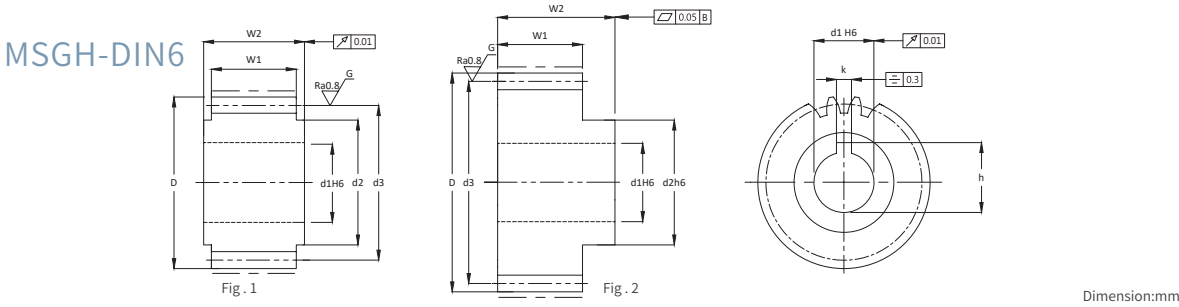
| Code        | Fig. | DIN   | No. of Teeth | d1 | d2 | d3 | D  | W1 | W2 | k  | h    | F <sub>ta</sub><br>kN | KG  |
|-------------|------|-------|--------------|----|----|----|----|----|----|----|------|-----------------------|-----|
| Module 2    |      |       |              |    |    |    |    |    |    |    |      |                       |     |
| MSGH0200161 | 1    | -DIN6 | 16           | 15 | 25 | 32 | 36 | 28 | 30 | 5  | 17.3 | 3.32                  | 0.2 |
| MSGH0200181 | 1    | -DIN6 | 18           | 15 | 30 | 36 | 40 | 28 | 30 | 5  | 17.3 | 4.04                  | 0.2 |
| MSGH0200182 | 1    | -DIN6 | 18           | 20 | 25 | 36 | 40 | 28 | 30 | 6  | 22.8 | 4.04                  | 0.2 |
| MSGH0200201 | 1    | -DIN6 | 20           | 15 | 25 | 40 | 44 | 28 | 30 | 6  | 17.8 | 4.49                  | 0.3 |
| MSGH0200202 | 1    | -DIN6 | 20           | 19 | 30 | 40 | 44 | 28 | 30 | 6  | 21.8 | 4.49                  | 0.3 |
| MSGH0200203 | 2    | -DIN6 | 20           | 19 | 30 | 40 | 44 | 28 | 56 | 6  | 21.8 | 4.49                  | 0.5 |
| MSGH0200204 | 1    | -DIN6 | 20           | 20 | 30 | 40 | 44 | 28 | 30 | 6  | 22.8 | 4.49                  | 0.3 |
| MSGH0200205 | 1    | -DIN6 | 20           | 22 | 30 | 40 | 44 | 28 | 30 | 6  | 24.8 | 4.49                  | 0.3 |
| MSGH0200206 | 2    | -DIN6 | 20           | 22 | 36 | 40 | 44 | 28 | 56 | 6  | 24.8 | 4.49                  | 0.5 |
| MSGH0200221 | 1    | -DIN6 | 22           | 15 | 25 | 44 | 48 | 28 | 30 | 5  | 17.3 | 4.94                  | 0.3 |
| MSGH0200222 | 1    | -DIN6 | 22           | 19 | 30 | 44 | 48 | 28 | 30 | 6  | 21.8 | 4.94                  | 0.3 |
| MSGH0200223 | 2    | -DIN6 | 22           | 19 | 30 | 44 | 48 | 28 | 56 | 6  | 21.8 | 4.94                  | 0.6 |
| MSGH0200224 | 1    | -DIN6 | 22           | 20 | 30 | 44 | 48 | 28 | 30 | 6  | 22.8 | 4.94                  | 0.3 |
| MSGH0200225 | 2    | -DIN6 | 22           | 22 | 36 | 44 | 48 | 28 | 56 | 6  | 24.8 | 4.94                  | 0.6 |
| MSGH0200226 | 1    | -DIN6 | 22           | 22 | 30 | 44 | 48 | 28 | 30 | 6  | 24.8 | 4.94                  | 0.3 |
| MSGH0200227 | 1    | -DIN6 | 22           | 25 | 36 | 44 | 48 | 28 | 30 | 8  | 28.3 | 4.94                  | 0.3 |
| MSGH0200251 | 2    | -DIN6 | 25           | 16 | 30 | 50 | 54 | 28 | 54 | 5  | 18.3 | 6.29                  | 0.7 |
| MSGH0200252 | 1    | -DIN6 | 25           | 19 | 30 | 50 | 54 | 28 | 30 | 6  | 21.8 | 6.29                  | 0.4 |
| MSGH0200253 | 2    | -DIN6 | 25           | 19 | 30 | 50 | 54 | 28 | 56 | 6  | 21.8 | 6.29                  | 0.8 |
| MSGH0200254 | 1    | -DIN6 | 25           | 20 | 30 | 50 | 54 | 28 | 30 | 6  | 22.8 | 6.29                  | 0.4 |
| MSGH0200255 | 1    | -DIN6 | 25           | 22 | 30 | 50 | 54 | 28 | 30 | 6  | 24.8 | 6.29                  | 0.4 |
| MSGH0200256 | 2    | -DIN6 | 25           | 22 | 36 | 50 | 54 | 28 | 56 | 6  | 24.8 | 6.29                  | 0.8 |
| MSGH0200257 | 1    | -DIN6 | 25           | 25 | 36 | 50 | 54 | 28 | 30 | 8  | 28.3 | 6.29                  | 0.4 |
| MSGH0200258 | 1    | -DIN6 | 25           | 30 | 45 | 50 | 54 | 28 | 30 | 8  | 33.3 | 6.29                  | 0.4 |
| MSGH0200281 | 1    | -DIN6 | 28           | 19 | 30 | 56 | 60 | 28 | 30 | 6  | 21.8 | 7.05                  | 0.5 |
| MSGH0200282 | 2    | -DIN6 | 28           | 19 | 30 | 56 | 60 | 28 | 56 | 6  | 21.8 | 7.05                  | 0.9 |
| MSGH0200283 | 1    | -DIN6 | 28           | 20 | 30 | 56 | 60 | 28 | 30 | 6  | 22.8 | 7.05                  | 0.5 |
| MSGH0200284 | 1    | -DIN6 | 28           | 22 | 30 | 56 | 60 | 28 | 30 | 6  | 24.8 | 7.05                  | 0.5 |
| MSGH0200285 | 2    | -DIN6 | 28           | 22 | 36 | 56 | 60 | 28 | 56 | 6  | 24.8 | 7.05                  | 0.9 |
| MSGH0200286 | 1    | -DIN6 | 28           | 25 | 36 | 56 | 60 | 28 | 30 | 8  | 28.3 | 7.05                  | 0.5 |
| MSGH0200287 | 1    | -DIN6 | 28           | 30 | 45 | 56 | 60 | 28 | 30 | 8  | 33.3 | 7.05                  | 0.5 |
| MSGH0200288 | 2    | -DIN6 | 28           | 30 | 50 | 56 | 60 | 28 | 60 | 8  | 33.3 | 7.05                  | 1.0 |
| MSGH0200289 | 1    | -DIN6 | 28           | 35 | 48 | 56 | 60 | 28 | 30 | 10 | 38.3 | 7.05                  | 0.5 |
| MSGH0200321 | 2    | -DIN6 | 32           | 16 | 30 | 64 | 68 | 28 | 54 | 5  | 18.3 | 8.05                  | 1.2 |
| MSGH0200322 | 1    | -DIN6 | 32           | 20 | 30 | 64 | 68 | 28 | 30 | 6  | 22.8 | 8.05                  | 0.6 |
| MSGH0200323 | 1    | -DIN6 | 32           | 22 | 30 | 64 | 68 | 28 | 30 | 6  | 24.8 | 8.05                  | 0.6 |
| MSGH0200324 | 2    | -DIN6 | 32           | 22 | 36 | 64 | 68 | 28 | 56 | 6  | 24.8 | 8.05                  | 1.2 |
| MSGH0200325 | 1    | -DIN6 | 32           | 25 | 36 | 64 | 68 | 28 | 30 | 8  | 28.3 | 8.05                  | 0.6 |
| MSGH0200326 | 1    | -DIN6 | 32           | 30 | 45 | 64 | 68 | 28 | 30 | 8  | 33.3 | 8.05                  | 0.6 |
| MSGH0200327 | 2    | -DIN6 | 32           | 30 | 50 | 64 | 68 | 28 | 60 | 8  | 33.3 | 8.05                  | 1.3 |
| MSGH0200328 | 2    | -DIN6 | 32           | 32 | 55 | 64 | 68 | 28 | 65 | 10 | 35.3 | 8.05                  | 1.4 |
| MSGH0200329 | 1    | -DIN6 | 32           | 35 | 48 | 64 | 68 | 28 | 30 | 10 | 38.3 | 8.05                  | 0.6 |
| MSGH0200361 | 1    | -DIN6 | 36           | 20 | 30 | 72 | 76 | 28 | 30 | 6  | 22.8 | 10.31                 | 0.8 |



Series MSGH-DIN6 Straight Teeth Ground Pinions  
Quality Grade DIN 6

Material SCM415/SCM440  
Hardness: HRC 50~55°  
Teeth ground after hardening

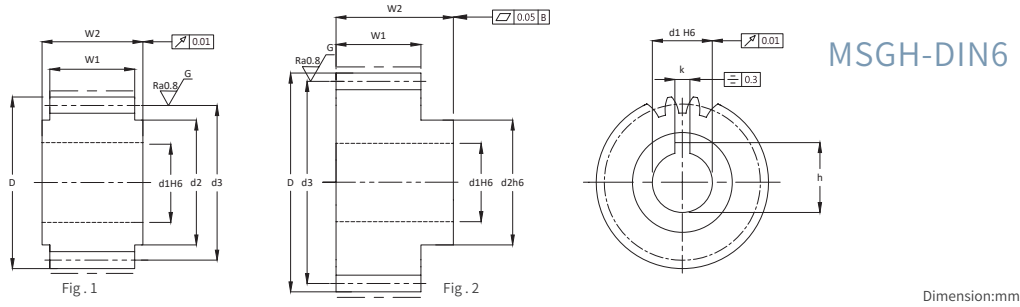
| Code        | Fig. | DIN   | No. of Teeth | d1 | d2 | d3  | D   | W1 | W2 | k  | h    | F <sub>ta</sub><br>kN | KG  |
|-------------|------|-------|--------------|----|----|-----|-----|----|----|----|------|-----------------------|-----|
| Module 2    |      |       |              |    |    |     |     |    |    |    |      |                       |     |
| MSGH0200362 | 1    | -DIN6 | 36           | 25 | 36 | 72  | 76  | 28 | 30 | 8  | 28.3 | 10.31                 | 0.8 |
| MSGH0200363 | 1    | -DIN6 | 36           | 30 | 45 | 72  | 76  | 28 | 30 | 8  | 33.3 | 10.31                 | 0.8 |
| MSGH0200364 | 1    | -DIN6 | 36           | 35 | 48 | 72  | 76  | 28 | 30 | 10 | 38.3 | 10.31                 | 0.8 |
| MSGH0200365 | 2    | -DIN6 | 36           | 40 | 62 | 72  | 76  | 28 | 65 | 12 | 43.3 | 10.31                 | 1.7 |
| MSGH0200366 | 1    | -DIN6 | 36           | 45 | 58 | 72  | 76  | 28 | 30 | 14 | 48.8 | 10.31                 | 0.8 |
| MSGH0200401 | 1    | -DIN6 | 40           | 15 | 36 | 80  | 84  | 28 | 30 | 5  | 17.3 | 11.45                 | 1.0 |
| MSGH0200402 | 1    | -DIN6 | 40           | 20 | 30 | 80  | 84  | 28 | 30 | 6  | 22.8 | 11.45                 | 1.0 |
| MSGH0200403 | 1    | -DIN6 | 40           | 25 | 36 | 80  | 84  | 28 | 30 | 8  | 28.3 | 11.45                 | 1.0 |
| MSGH0200404 | 1    | -DIN6 | 40           | 30 | 45 | 80  | 84  | 28 | 30 | 8  | 33.3 | 11.45                 | 1.0 |
| MSGH0200405 | 2    | -DIN6 | 40           | 32 | 55 | 80  | 84  | 28 | 65 | 10 | 35.3 | 11.45                 | 2.1 |
| MSGH0200406 | 1    | -DIN6 | 40           | 35 | 48 | 80  | 84  | 28 | 30 | 10 | 38.3 | 11.45                 | 1.0 |
| MSGH0200407 | 2    | -DIN6 | 40           | 40 | 62 | 80  | 84  | 28 | 65 | 12 | 43.3 | 11.45                 | 2.1 |
| MSGH0200408 | 1    | -DIN6 | 40           | 45 | 58 | 80  | 84  | 28 | 30 | 14 | 48.8 | 11.45                 | 1.0 |
| MSGH0200409 | 2    | -DIN6 | 40           | 45 | 68 | 80  | 84  | 28 | 65 | 14 | 48.8 | 11.45                 | 2.1 |
| MSGH0200451 | 1    | -DIN6 | 45           | 20 | 30 | 90  | 94  | 28 | 30 | 6  | 22.8 | 11.73                 | 1.2 |
| MSGH0200452 | 1    | -DIN6 | 45           | 25 | 36 | 90  | 94  | 28 | 30 | 8  | 28.3 | 11.73                 | 1.2 |
| MSGH0200453 | 1    | -DIN6 | 45           | 35 | 48 | 90  | 94  | 28 | 30 | 10 | 38.3 | 11.73                 | 1.2 |
| MSGH0200454 | 1    | -DIN6 | 45           | 45 | 58 | 90  | 94  | 28 | 30 | 14 | 48.8 | 11.73                 | 1.2 |
| MSGH0200501 | 1    | -DIN6 | 50           | 20 | 30 | 100 | 104 | 28 | 30 | 6  | 22.8 | 11.96                 | 1.5 |
| MSGH0200502 | 1    | -DIN6 | 50           | 25 | 36 | 100 | 104 | 28 | 30 | 8  | 28.3 | 11.96                 | 1.5 |
| MSGH0200503 | 1    | -DIN6 | 50           | 35 | 48 | 100 | 104 | 28 | 30 | 10 | 38.3 | 11.96                 | 1.5 |
| MSGH0200504 | 1    | -DIN6 | 50           | 45 | 58 | 100 | 104 | 28 | 30 | 14 | 48.8 | 11.96                 | 1.5 |
| MSGH0200505 | 2    | -DIN6 | 50           | 45 | 68 | 100 | 104 | 28 | 65 | 14 | 48.8 | 11.96                 | 3.3 |
| MSGH0200561 | 1    | -DIN6 | 56           | 25 | 36 | 112 | 116 | 28 | 30 | 8  | 28.3 | 12.17                 | 1.9 |
| MSGH0200562 | 1    | -DIN6 | 56           | 35 | 48 | 112 | 116 | 28 | 30 | 10 | 38.3 | 12.17                 | 1.9 |



Series MSGH-DIN6 Straight Teeth Ground Pinions  
Quality Grade DIN 6

Material SCM415/SCM440  
Hardness: HRC 50~55°  
Teeth ground after hardening

| Code         | Fig. | DIN   | No. of Teeth | d1 | d2 | d3  | D   | W1 | W2 | k  | h    | F <sub>ta</sub><br>kN | KG  |
|--------------|------|-------|--------------|----|----|-----|-----|----|----|----|------|-----------------------|-----|
| Module 3     |      |       |              |    |    |     |     |    |    |    |      |                       |     |
| MSGH0300181  | 1    | -DIN6 | 18           | 25 | 36 | 54  | 60  | 28 | 30 | 8  | 28.3 | 6.79                  | 0.4 |
| MSGH0300201  | 1    | -DIN6 | 20           | 25 | 36 | 60  | 66  | 28 | 30 | 8  | 28.3 | 7.55                  | 0.5 |
| MSGH0300202  | 1    | -DIN6 | 20           | 30 | 45 | 60  | 66  | 28 | 30 | 8  | 33.3 | 7.55                  | 0.5 |
| MSGH0300203  | 1    | -DIN6 | 20           | 35 | 48 | 60  | 66  | 28 | 30 | 10 | 38.3 | 7.55                  | 0.5 |
| MSGH0300221  | 2    | -DIN6 | 22           | 22 | 36 | 66  | 72  | 28 | 56 | 6  | 24.8 | 8.30                  | 1.1 |
| MSGH0300222  | 1    | -DIN6 | 22           | 25 | 36 | 66  | 72  | 28 | 30 | 8  | 28.3 | 8.30                  | 0.6 |
| MSGH0300223  | 2    | -DIN6 | 22           | 25 | 44 | 66  | 72  | 28 | 60 | 8  | 28.3 | 8.30                  | 1.2 |
| MSGH0300224  | 1    | -DIN6 | 22           | 30 | 45 | 66  | 72  | 28 | 30 | 8  | 33.3 | 8.30                  | 0.6 |
| MSGH0300225  | 2    | -DIN6 | 22           | 32 | 55 | 66  | 72  | 28 | 65 | 10 | 35.3 | 8.30                  | 1.2 |
| MSGH0300226  | 2    | -DIN6 | 22           | 30 | 50 | 66  | 72  | 28 | 60 | 8  | 33.3 | 8.30                  | 1.2 |
| MSGH0300227  | 1    | -DIN6 | 22           | 35 | 48 | 66  | 72  | 28 | 30 | 10 | 38.3 | 8.30                  | 0.6 |
| MSGH0300228  | 2    | -DIN6 | 22           | 35 | 55 | 66  | 72  | 28 | 65 | 10 | 38.3 | 8.30                  | 1.2 |
| MSGH0300229  | 2    | -DIN6 | 22           | 40 | 62 | 66  | 72  | 28 | 65 | 12 | 43.3 | 8.30                  | 1.2 |
| MSGH0300251  | 1    | -DIN6 | 25           | 25 | 36 | 75  | 81  | 28 | 30 | 8  | 28.3 | 10.74                 | 0.7 |
| MSGH0300252  | 1    | -DIN6 | 25           | 30 | 45 | 75  | 81  | 28 | 30 | 8  | 33.3 | 10.74                 | 0.7 |
| MSGH0300253  | 2    | -DIN6 | 25           | 32 | 55 | 75  | 81  | 28 | 65 | 10 | 35.3 | 10.74                 | 1.6 |
| MSGH0300254  | 1    | -DIN6 | 25           | 35 | 48 | 75  | 81  | 28 | 30 | 10 | 38.3 | 10.74                 | 0.7 |
| MSGH0300255  | 2    | -DIN6 | 25           | 40 | 62 | 75  | 81  | 28 | 65 | 12 | 43.3 | 10.74                 | 1.6 |
| MSGH0300256  | 1    | -DIN6 | 25           | 45 | 58 | 75  | 81  | 28 | 30 | 14 | 48.8 | 10.74                 | 0.7 |
| MSGH0300281  | 2    | -DIN6 | 28           | 22 | 36 | 84  | 90  | 28 | 56 | 6  | 24.8 | 12.02                 | 1.7 |
| MSGH0300282  | 1    | -DIN6 | 28           | 25 | 36 | 84  | 90  | 28 | 30 | 8  | 28.3 | 12.02                 | 0.9 |
| MSGH0300283  | 2    | -DIN6 | 28           | 25 | 44 | 84  | 90  | 28 | 60 | 8  | 28.3 | 12.02                 | 1.8 |
| MSGH0300284  | 1    | -DIN6 | 28           | 30 | 45 | 84  | 90  | 28 | 30 | 8  | 33.3 | 12.02                 | 0.9 |
| MSGH0300285  | 2    | -DIN6 | 28           | 30 | 50 | 84  | 90  | 28 | 60 | 8  | 33.3 | 12.02                 | 1.8 |
| MSGH0300286  | 2    | -DIN6 | 28           | 32 | 55 | 84  | 90  | 28 | 65 | 10 | 35.3 | 12.02                 | 1.9 |
| MSGH0300287  | 1    | -DIN6 | 28           | 35 | 48 | 84  | 90  | 28 | 30 | 10 | 38.3 | 12.02                 | 0.9 |
| MSGH0300288  | 2    | -DIN6 | 28           | 35 | 55 | 84  | 90  | 28 | 65 | 10 | 38.3 | 12.02                 | 1.9 |
| MSGH0300289  | 2    | -DIN6 | 28           | 40 | 62 | 84  | 90  | 28 | 65 | 12 | 43.3 | 12.02                 | 1.9 |
| MSGH03002810 | 1    | -DIN6 | 28           | 45 | 58 | 84  | 90  | 28 | 30 | 14 | 48.8 | 12.02                 | 0.9 |
| MSGH03002811 | 2    | -DIN6 | 28           | 45 | 68 | 84  | 90  | 28 | 65 | 14 | 48.8 | 12.02                 | 1.9 |
| MSGH0300321  | 1    | -DIN6 | 32           | 25 | 36 | 96  | 102 | 28 | 30 | 8  | 28.3 | 13.74                 | 1.2 |
| MSGH0300322  | 1    | -DIN6 | 32           | 30 | 45 | 96  | 102 | 28 | 30 | 8  | 33.3 | 13.74                 | 1.2 |
| MSGH0300323  | 2    | -DIN6 | 32           | 32 | 55 | 96  | 102 | 28 | 65 | 10 | 35.3 | 13.74                 | 2.5 |
| MSGH0300324  | 1    | -DIN6 | 32           | 35 | 48 | 96  | 102 | 28 | 30 | 10 | 38.3 | 13.74                 | 1.2 |
| MSGH0300325  | 2    | -DIN6 | 32           | 40 | 62 | 96  | 102 | 28 | 65 | 12 | 43.3 | 13.74                 | 2.5 |
| MSGH0300326  | 1    | -DIN6 | 32           | 45 | 58 | 96  | 102 | 28 | 30 | 14 | 48.8 | 13.74                 | 1.2 |
| MSGH0300327  | 1    | -DIN6 | 32           | 60 | 80 | 96  | 102 | 28 | 30 | 18 | 64.4 | 13.74                 | 1.2 |
| MSGH0300361  | 1    | -DIN6 | 36           | 25 | 36 | 108 | 114 | 28 | 30 | 8  | 28.3 | 15.46                 | 1.4 |
| MSGH0300362  | 1    | -DIN6 | 36           | 35 | 48 | 108 | 114 | 28 | 30 | 10 | 38.3 | 15.46                 | 1.4 |
| MSGH0300363  | 1    | -DIN6 | 36           | 45 | 58 | 108 | 114 | 28 | 30 | 14 | 48.8 | 15.46                 | 1.4 |
| MSGH0300364  | 2    | -DIN6 | 36           | 45 | 68 | 108 | 114 | 28 | 65 | 14 | 48.8 | 15.46                 | 1.3 |
| MSGH0300365  | 1    | -DIN6 | 36           | 60 | 80 | 108 | 114 | 28 | 30 | 18 | 64.4 | 15.46                 | 1.4 |
| MSGH0300401  | 1    | -DIN6 | 40           | 25 | 36 | 120 | 126 | 28 | 30 | 8  | 28.3 | 17.18                 | 1.8 |

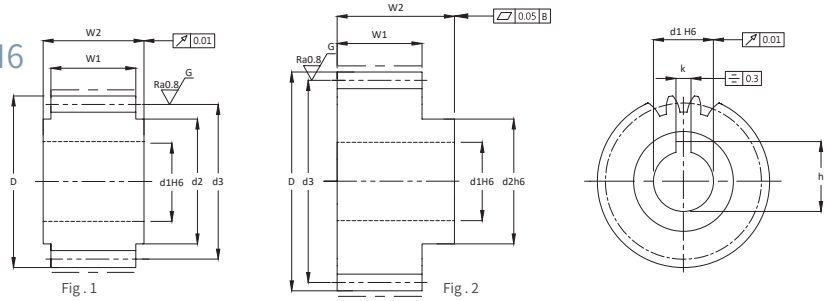


Series MSGH-DIN6 Straight Teeth Ground Pinions  
Quality Grade DIN 6

Material SCM415/SCM440  
Hardness: HRC 50~55°  
Teeth ground after hardening

| Code        | Fig. | DIN   | No. of Teeth | d1 | d2 | d3  | D   | W1 | W2 | k  | h    | F <sub>ta</sub><br>kN | KG  |
|-------------|------|-------|--------------|----|----|-----|-----|----|----|----|------|-----------------------|-----|
| Module 3    |      |       |              |    |    |     |     |    |    |    |      |                       |     |
| MSGH0300402 | 1    | -DIN6 | 40           | 35 | 48 | 120 | 126 | 28 | 30 | 10 | 38.3 | 17.18                 | 1.8 |
| MSGH0300403 | 1    | -DIN6 | 40           | 45 | 58 | 120 | 126 | 28 | 30 | 14 | 48.8 | 17.18                 | 1.8 |
| MSGH0300404 | 1    | -DIN6 | 40           | 60 | 80 | 120 | 126 | 28 | 30 | 18 | 64.4 | 17.18                 | 1.8 |
| MSGH0300451 | 1    | -DIN6 | 45           | 25 | 36 | 135 | 141 | 28 | 30 | 8  | 28.3 | 17.60                 | 2.2 |
| MSGH0300452 | 1    | -DIN6 | 45           | 35 | 48 | 135 | 141 | 28 | 30 | 10 | 38.3 | 17.60                 | 2.2 |
| MSGH0300453 | 1    | -DIN6 | 45           | 45 | 58 | 135 | 141 | 28 | 30 | 14 | 48.8 | 17.60                 | 2.2 |
| MSGH0300454 | 1    | -DIN6 | 45           | 60 | 80 | 135 | 141 | 28 | 30 | 18 | 64.4 | 17.60                 | 2.2 |
| MSGH0300501 | 1    | -DIN6 | 50           | 35 | 48 | 150 | 156 | 28 | 30 | 10 | 38.3 | 17.94                 | 2.7 |
| MSGH0300502 | 1    | -DIN6 | 50           | 45 | 58 | 150 | 156 | 28 | 30 | 14 | 48.8 | 17.94                 | 2.7 |
| MSGH0300561 | 1    | -DIN6 | 56           | 45 | 58 | 168 | 174 | 28 | 30 | 14 | 48.8 | 18.25                 | 3.4 |
| MSGH0300631 | 1    | -DIN6 | 63           | 45 | 58 | 189 | 195 | 28 | 30 | 14 | 48.8 | 18.57                 | 4.2 |
| MSGH0300632 | 1    | -DIN6 | 63           | 60 | 80 | 189 | 195 | 28 | 30 | 18 | 64.4 | 18.57                 | 4.2 |

MSGH-DIN6

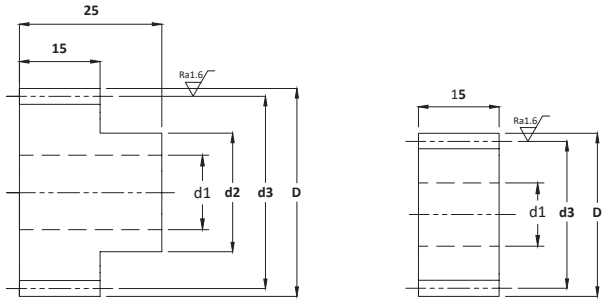


Dimension:mm

Series MSGH-DIN6 Straight Teeth Ground Pinions  
Quality Grade DIN 6  
Material SCM415/SCM440  
Hardness: HRC 50~55°  
Teeth ground after hardening

| Code        | Fig. | DIN   | No. of Teeth | d1 | d2  | d3  | D   | W1 | W2  | k  | h    | F <sub>ta</sub><br>kN | KG   |
|-------------|------|-------|--------------|----|-----|-----|-----|----|-----|----|------|-----------------------|------|
| Module 4    |      |       |              |    |     |     |     |    |     |    |      |                       |      |
| MSGH0400181 | 1    | -DIN6 | 18           | 32 | 55  | 72  | 80  | 40 | 75  | 10 | 35.3 | 12.93                 | 1.2  |
| MSGH0400201 | 2    | -DIN6 | 20           | 32 | 55  | 80  | 88  | 40 | 75  | 10 | 35.3 | 14.37                 | 1.8  |
| MSGH0400202 | 1    | -DIN6 | 20           | 35 | 52  | 80  | 88  | 40 | 50  | 10 | 38.3 | 14.37                 | 1.2  |
| MSGH0400203 | 2    | -DIN6 | 20           | 35 | 55  | 80  | 88  | 40 | 75  | 10 | 38.3 | 14.37                 | 1.8  |
| MSGH0400204 | 1    | -DIN6 | 20           | 45 | 65  | 80  | 88  | 40 | 50  | 14 | 48.8 | 14.37                 | 1.2  |
| MSGH0400205 | 2    | -DIN6 | 20           | 40 | 62  | 80  | 88  | 40 | 75  | 12 | 43.3 | 14.37                 | 1.8  |
| MSGH0400221 | 1    | -DIN6 | 22           | 35 | 52  | 88  | 96  | 40 | 50  | 10 | 38.3 | 15.81                 | 1.4  |
| MSGH0400222 | 1    | -DIN6 | 22           | 45 | 65  | 88  | 96  | 40 | 50  | 14 | 48.8 | 15.81                 | 1.4  |
| MSGH0400223 | 2    | -DIN6 | 22           | 45 | 68  | 88  | 96  | 40 | 75  | 14 | 48.8 | 15.81                 | 2.1  |
| MSGH0400251 | 2    | -DIN6 | 25           | 32 | 55  | 100 | 108 | 40 | 75  | 10 | 35.3 | 20.45                 | 2.7  |
| MSGH0400252 | 1    | -DIN6 | 25           | 35 | 52  | 100 | 108 | 40 | 50  | 10 | 38.3 | 20.45                 | 1.8  |
| MSGH0400253 | 2    | -DIN6 | 25           | 35 | 55  | 100 | 108 | 40 | 75  | 10 | 38.3 | 20.45                 | 2.7  |
| MSGH0400254 | 2    | -DIN6 | 25           | 40 | 62  | 100 | 108 | 40 | 75  | 12 | 43.3 | 20.45                 | 2.7  |
| MSGH0400255 | 1    | -DIN6 | 25           | 45 | 65  | 100 | 108 | 40 | 50  | 14 | 48.8 | 20.45                 | 1.8  |
| MSGH0400256 | 2    | -DIN6 | 25           | 55 | 80  | 100 | 108 | 40 | 80  | 16 | 59.3 | 20.45                 | 2.9  |
| MSGH0400281 | 1    | -DIN6 | 28           | 35 | 52  | 112 | 120 | 40 | 50  | 10 | 38.3 | 22.90                 | 2.2  |
| MSGH0400282 | 1    | -DIN6 | 28           | 45 | 65  | 112 | 120 | 40 | 50  | 14 | 48.8 | 22.90                 | 2.2  |
| MSGH0400283 | 2    | -DIN6 | 28           | 45 | 68  | 112 | 120 | 40 | 75  | 14 | 48.8 | 22.90                 | 3.3  |
| MSGH0400321 | 1    | -DIN6 | 32           | 35 | 52  | 128 | 136 | 40 | 50  | 10 | 38.3 | 26.18                 | 2.9  |
| MSGH0400322 | 1    | -DIN6 | 32           | 45 | 65  | 128 | 136 | 40 | 50  | 14 | 48.8 | 26.18                 | 2.9  |
| MSGH0400323 | 2    | -DIN6 | 32           | 55 | 80  | 128 | 136 | 40 | 80  | 16 | 59.3 | 26.18                 | 4.6  |
| MSGH0400324 | 2    | -DIN6 | 32           | 75 | 110 | 128 | 136 | 40 | 100 | 20 | 79.9 | 26.18                 | 5.7  |
| MSGH0400401 | 1    | -DIN6 | 40           | 45 | 65  | 160 | 168 | 40 | 50  | 14 | 48.8 | 32.72                 | 4.4  |
| MSGH0400402 | 1    | -DIN6 | 40           | 60 | 80  | 160 | 168 | 40 | 50  | 18 | 64.4 | 32.72                 | 4.4  |
| MSGH0400403 | 2    | -DIN6 | 40           | 75 | 110 | 160 | 168 | 40 | 100 | 20 | 79.9 | 32.72                 | 8.7  |
| Module 5    |      |       |              |    |     |     |     |    |     |    |      |                       |      |
| MSGH0500211 | 2    | -DIN6 | 21           | 45 | 68  | 105 | 115 | 50 | 85  | 14 | 48.8 | 23.59                 | 3.5  |
| MSGH0500212 | 2    | -DIN6 | 21           | 55 | 80  | 105 | 115 | 50 | 90  | 16 | 59.3 | 23.59                 | 3.7  |
| MSGH0500251 | 2    | -DIN6 | 25           | 45 | 68  | 125 | 135 | 50 | 85  | 14 | 48.8 | 31.95                 | 4.8  |
| MSGH0500252 | 2    | -DIN6 | 25           | 55 | 80  | 125 | 135 | 50 | 90  | 16 | 59.3 | 31.95                 | 5.1  |
| MSGH0500253 | 2    | -DIN6 | 25           | 75 | 110 | 125 | 135 | 50 | 110 | 20 | 79.9 | 31.95                 | 6.2  |
| Module 6    |      |       |              |    |     |     |     |    |     |    |      |                       |      |
| MSGH0600211 | 2    | -DIN6 | 21           | 55 | 80  | 126 | 138 | 60 | 100 | 16 | 59.3 | 33.97                 | 5.9  |
| MSGH0600212 | 2    | -DIN6 | 21           | 75 | 110 | 126 | 138 | 60 | 120 | 20 | 79.9 | 33.97                 | 7.0  |
| MSGH0600251 | 2    | -DIN6 | 25           | 55 | 80  | 150 | 162 | 60 | 100 | 16 | 59.3 | 46.01                 | 8.1  |
| MSGH0600252 | 2    | -DIN6 | 25           | 75 | 110 | 150 | 162 | 60 | 120 | 20 | 79.9 | 46.01                 | 9.7  |
| Module 8    |      |       |              |    |     |     |     |    |     |    |      |                       |      |
| MSGH0800201 | 2    | -DIN6 | 20           | 75 | 110 | 160 | 176 | 80 | 140 | 20 | 79.9 | 57.51                 | 13.4 |
| MSGH0800202 | 2    | -DIN6 | 20           | 85 | 125 | 160 | 176 | 80 | 145 | 22 | 90.4 | 57.51                 | 13.8 |

CSM-DIN8



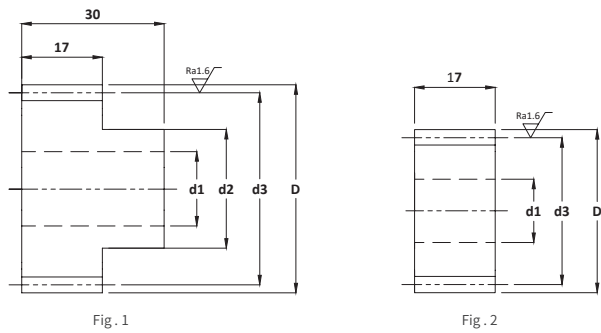
Dimension:mm

Series CSM-DIN8 Straight Pinions  
Quality Grade DIN 8  
Material S45C / S50C

| Code       | Fig. | DIN   | No. of Teeth | d1 | d2 | d3    | D     | W1 | W2 | k | h | F <sub>ta</sub><br>kN | KG  |
|------------|------|-------|--------------|----|----|-------|-------|----|----|---|---|-----------------------|-----|
| Module 1   |      |       |              |    |    |       |       |    |    |   |   |                       |     |
| CSM0100121 | 1    | -DIN8 | 12           | 6  | 9  | 12.0  | 14.0  | *  | *  | * | * | *                     | 0.1 |
| CSM0100131 | 1    | -DIN8 | 13           | 6  | 9  | 13.0  | 15.0  | *  | *  | * | * | *                     | 0.1 |
| CSM0100141 | 1    | -DIN8 | 14           | 6  | 11 | 14.0  | 16.0  | *  | *  | * | * | *                     | 0.1 |
| CSM0100151 | 1    | -DIN8 | 15           | 6  | 12 | 15.0  | 17.0  | *  | *  | * | * | *                     | 0.1 |
| CSM0100161 | 1    | -DIN8 | 16           | 6  | 12 | 16.0  | 18.0  | *  | *  | * | * | 0.10                  | 0.1 |
| CSM0100171 | 1    | -DIN8 | 17           | 6  | 14 | 17.0  | 19.0  | *  | *  | * | * | 0.11                  | 0.1 |
| CSM0100181 | 1    | -DIN8 | 18           | 6  | 15 | 18.0  | 20.0  | *  | *  | * | * | 0.12                  | 0.1 |
| CSM0100191 | 1    | -DIN8 | 19           | 6  | 15 | 19.0  | 21.0  | *  | *  | * | * | 0.13                  | 0.1 |
| CSM0100201 | 1    | -DIN8 | 20           | 6  | 16 | 20.0  | 22.0  | *  | *  | * | * | 0.14                  | 0.1 |
| CSM0100211 | 1    | -DIN8 | 21           | 6  | 16 | 21.0  | 23.0  | *  | *  | * | * | 0.15                  | 0.1 |
| CSM0100221 | 1    | -DIN8 | 22           | 6  | 18 | 22.0  | 24.0  | *  | *  | * | * | 0.15                  | 0.1 |
| CSM0100231 | 1    | -DIN8 | 23           | 6  | 18 | 23.0  | 25.0  | *  | *  | * | * | 0.16                  | 0.1 |
| CSM0100241 | 1    | -DIN8 | 24           | 9  | 20 | 24.0  | 26.0  | *  | *  | * | * | 0.17                  | 0.1 |
| CSM0100251 | 1    | -DIN8 | 25           | 9  | 20 | 25.0  | 27.0  | *  | *  | * | * | 0.19                  | 0.1 |
| CSM0100301 | 1    | -DIN8 | 30           | 9  | 20 | 30.0  | 32.0  | *  | *  | * | * | 0.23                  | 0.1 |
| CSM0100351 | 1    | -DIN8 | 35           | 9  | 25 | 35.0  | 37.0  | *  | *  | * | * | 0.27                  | 0.2 |
| CSM0100381 | 1    | -DIN8 | 38           | 9  | 25 | 38.0  | 40.0  | *  | *  | * | * | 0.33                  | 0.2 |
| CSM0100401 | 1    | -DIN8 | 40           | 9  | 25 | 40.0  | 42.0  | *  | *  | * | * | 0.35                  | 0.2 |
| CSM0100451 | 1    | -DIN8 | 45           | 9  | 30 | 45.0  | 47.0  | *  | *  | * | * | 0.40                  | 0.3 |
| CSM0100481 | 1    | -DIN8 | 48           | 9  | 30 | 48.0  | 50.0  | *  | *  | * | * | 0.42                  | 0.3 |
| CSM0100501 | 1    | -DIN8 | 50           | 9  | 30 | 50.0  | 52.0  | *  | *  | * | * | 0.44                  | 0.3 |
| CSM0100571 | 1    | -DIN8 | 57           | 9  | 40 | 57.0  | 59.0  | *  | *  | * | * | 0.50                  | 0.4 |
| CSM0100601 | 1    | -DIN8 | 60           | 9  | 40 | 60.0  | 62.0  | *  | *  | * | * | 0.53                  | 0.4 |
| CSM0100761 | 2    | -DIN8 | 76           | 10 | *  | 76.0  | 78.0  | *  | *  | * | * | 0.81                  | 0.7 |
| CSM0100801 | 2    | -DIN8 | 80           | 10 | *  | 80.0  | 82.0  | *  | *  | * | * | 0.85                  | 0.8 |
| CSM0100951 | 2    | -DIN8 | 95           | 10 | *  | 95.0  | 97.0  | *  | *  | * | * | 1.01                  | 1.1 |
| CSM0101001 | 2    | -DIN8 | 100          | 10 | *  | 100.0 | 102.0 | *  | *  | * | * | 1.06                  | 1.2 |
| CSM0101141 | 2    | -DIN8 | 114          | 10 | *  | 114.0 | 116.0 | *  | *  | * | * | 1.16                  | 1.6 |



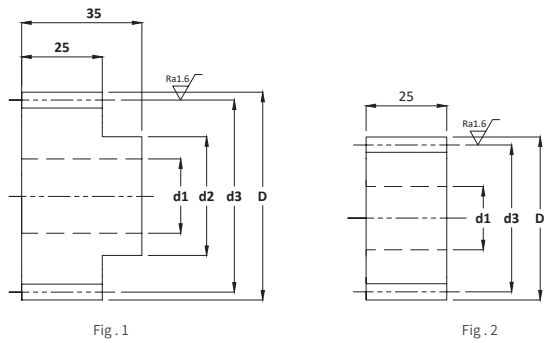
CSM-DIN8



Series CSM-DIN8 Straight Pinions  
Quality Grade DIN 8  
Material S45C / S50C

| Code       | Fig. | DIN   | No. of Teeth | d1 | d2 | d3    | D     | W1 | W2 | k | h | F <sub>ta</sub><br>kN | KG  |
|------------|------|-------|--------------|----|----|-------|-------|----|----|---|---|-----------------------|-----|
| Module 1.5 |      |       |              |    |    |       |       |    |    |   |   |                       |     |
| CSM0150121 | 1    | -DIN8 | 12           | 6  | 14 | 18.0  | 21.0  | *  | *  | * | * | *                     | 0.1 |
| CSM0150131 | 1    | -DIN8 | 13           | 6  | 14 | 19.5  | 22.5  | *  | *  | * | * | *                     | 0.1 |
| CSM0150141 | 1    | -DIN8 | 14           | 6  | 16 | 21.0  | 24.0  | *  | *  | * | * | *                     | 0.1 |
| CSM0150151 | 1    | -DIN8 | 15           | 6  | 18 | 22.5  | 25.5  | *  | *  | * | * | *                     | 0.1 |
| CSM0150161 | 1    | -DIN8 | 16           | 6  | 18 | 24.0  | 27.0  | *  | *  | * | * | 0.19                  | 0.1 |
| CSM0150171 | 1    | -DIN8 | 17           | 9  | 20 | 25.5  | 28.5  | *  | *  | * | * | 0.20                  | 0.1 |
| CSM0150181 | 1    | -DIN8 | 18           | 9  | 20 | 27.0  | 30.0  | *  | *  | * | * | 0.21                  | 0.1 |
| CSM0150191 | 1    | -DIN8 | 19           | 9  | 20 | 28.5  | 31.5  | *  | *  | * | * | 0.25                  | 0.1 |
| CSM0150201 | 1    | -DIN8 | 20           | 9  | 25 | 30.0  | 33.0  | *  | *  | * | * | 0.26                  | 0.2 |
| CSM0150211 | 1    | -DIN8 | 21           | 9  | 25 | 31.5  | 34.5  | *  | *  | * | * | 0.28                  | 0.2 |
| CSM0150221 | 1    | -DIN8 | 22           | 9  | 25 | 33.0  | 36.0  | *  | *  | * | * | 0.29                  | 0.2 |
| CSM0150222 | 1    | -DIN8 | 22           | 8  | 28 | 33.0  | 36.0  | *  | *  | * | * | 0.29                  | 0.2 |
| CSM0150231 | 1    | -DIN8 | 23           | 9  | 25 | 34.5  | 37.5  | *  | *  | * | * | 0.30                  | 0.2 |
| CSM0150241 | 1    | -DIN8 | 24           | 9  | 25 | 36.0  | 39.0  | *  | *  | * | * | 0.32                  | 0.2 |
| CSM0150251 | 1    | -DIN8 | 25           | 9  | 25 | 37.5  | 40.5  | *  | *  | * | * | 0.33                  | 0.2 |
| CSM0150301 | 1    | -DIN8 | 30           | 9  | 25 | 45.0  | 48.0  | *  | *  | * | * | 0.45                  | 0.3 |
| CSM0150351 | 1    | -DIN8 | 35           | 9  | 40 | 52.5  | 55.5  | *  | *  | * | * | 0.52                  | 0.4 |
| CSM0150381 | 1    | -DIN8 | 38           | 9  | 40 | 57.0  | 60.0  | *  | *  | * | * | 0.57                  | 0.5 |
| CSM0150401 | 1    | -DIN8 | 40           | 9  | 40 | 60.0  | 63.0  | *  | *  | * | * | 0.60                  | 0.6 |
| CSM0150451 | 1    | -DIN8 | 45           | 12 | 50 | 67.5  | 70.5  | *  | *  | * | * | 0.67                  | 0.7 |
| CSM0150481 | 1    | -DIN8 | 48           | 12 | 50 | 72.0  | 75.0  | *  | *  | * | * | 0.72                  | 0.8 |
| CSM0150501 | 1    | -DIN8 | 50           | 12 | 50 | 75.0  | 78.0  | *  | *  | * | * | 0.75                  | 0.8 |
| CSM0150571 | 1    | -DIN8 | 57           | 12 | 60 | 85.5  | 88.5  | *  | *  | * | * | 1.03                  | 1.1 |
| CSM0150601 | 1    | -DIN8 | 60           | 12 | 60 | 90.0  | 93.0  | *  | *  | * | * | 1.08                  | 1.2 |
| CSM0150761 | 2    | -DIN8 | 76           | 16 | *  | 114.0 | 117.0 | *  | *  | * | * | 1.37                  | 1.9 |
| CSM0150801 | 2    | -DIN8 | 80           | 16 | *  | 120.0 | 123.0 | *  | *  | * | * | 1.45                  | 2.1 |
| CSM0150951 | 2    | -DIN8 | 95           | 20 | *  | 142.5 | 145.5 | *  | *  | * | * | 1.72                  | 2.9 |

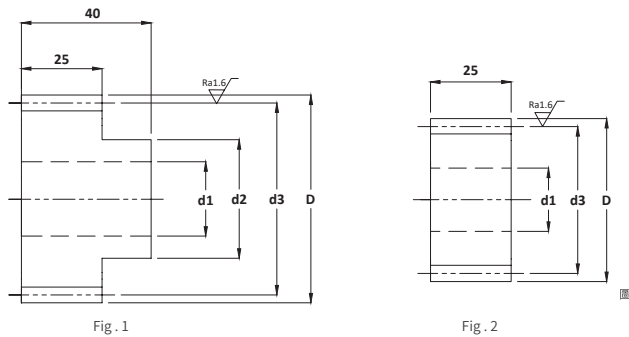
CSM-DIN8



Series CSM-DIN8 Straight Pinions  
Quality Grade DIN 8  
Material S45C / S50C

| Code       | Fig. | DIN   | No. of Teeth | d1 | d2   | d3    | D     | W1 | W2 | k | h | F <sub>ta</sub><br>kN | KG  |
|------------|------|-------|--------------|----|------|-------|-------|----|----|---|---|-----------------------|-----|
| Module 2   |      |       |              |    |      |       |       |    |    |   |   |                       |     |
| CSM0200121 | 1    | -DIN8 | 12           | 9  | 18   | 24.0  | 28.0  | *  | *  | * | * | *                     | 0.1 |
| CSM0200131 | 1    | -DIN8 | 13           | 9  | 19   | 26.0  | 30.0  | *  | *  | * | * | *                     | 0.1 |
| CSM0200141 | 1    | -DIN8 | 14           | 9  | 19   | 28.0  | 32.0  | *  | *  | * | * | *                     | 0.2 |
| CSM0200151 | 1    | -DIN8 | 15           | 9  | 24.5 | 30.0  | 34.0  | *  | *  | * | * | *                     | 0.2 |
| CSM0200161 | 1    | -DIN8 | 16           | 9  | 25   | 32.0  | 36.0  | *  | *  | * | * | 0.37                  | 0.2 |
| CSM0200171 | 1    | -DIN8 | 17           | 9  | 25   | 34.0  | 38.0  | *  | *  | * | * | 0.39                  | 0.2 |
| CSM0200181 | 1    | -DIN8 | 18           | 9  | 25   | 36.0  | 40.0  | *  | *  | * | * | 0.41                  | 0.3 |
| CSM0200191 | 1    | -DIN8 | 19           | 9  | 25   | 38.0  | 42.0  | *  | *  | * | * | 0.44                  | 0.3 |
| CSM0200201 | 1    | -DIN8 | 20           | 9  | 30   | 40.0  | 44.0  | *  | *  | * | * | 0.46                  | 0.3 |
| CSM0200211 | 1    | -DIN8 | 21           | 9  | 30   | 42.0  | 46.0  | *  | *  | * | * | 0.54                  | 0.3 |
| CSM0200221 | 1    | -DIN8 | 22           | 9  | 30   | 44.0  | 48.0  | *  | *  | * | * | 0.57                  | 0.4 |
| CSM0200231 | 1    | -DIN8 | 23           | 9  | 30   | 46.0  | 50.0  | *  | *  | * | * | 0.59                  | 0.4 |
| CSM0200241 | 1    | -DIN8 | 24           | 12 | 35   | 48.0  | 52.0  | *  | *  | * | * | 0.62                  | 0.4 |
| CSM0200251 | 1    | -DIN8 | 25           | 12 | 35   | 50.0  | 54.0  | *  | *  | * | * | 0.64                  | 0.5 |
| CSM0200281 | 1    | -DIN8 | 28           | 12 | 40   | 56.0  | 60.0  | *  | *  | * | * | 0.72                  | 0.6 |
| CSM0200301 | 1    | -DIN8 | 30           | 12 | 40   | 60.0  | 64.0  | *  | *  | * | * | 0.77                  | 0.7 |
| CSM0200321 | 1    | -DIN8 | 32           | 12 | 40   | 64.0  | 68.0  | *  | *  | * | * | 0.94                  | 0.7 |
| CSM0200351 | 1    | -DIN8 | 35           | 12 | 50   | 70.0  | 74.0  | *  | *  | * | * | 1.03                  | 0.9 |
| CSM0200361 | 1    | -DIN8 | 36           | 12 | 50   | 72.0  | 76.0  | *  | *  | * | * | 1.06                  | 0.9 |
| CSM0200381 | 1    | -DIN8 | 38           | 12 | 50   | 76.0  | 80.0  | *  | *  | * | * | 1.11                  | 1.0 |
| CSM0200401 | 1    | -DIN8 | 40           | 12 | 50   | 80.0  | 84.0  | *  | *  | * | * | 1.17                  | 1.1 |
| CSM0200451 | 1    | -DIN8 | 45           | 12 | 60   | 90.0  | 94.0  | *  | *  | * | * | 1.32                  | 1.4 |
| CSM0200481 | 1    | -DIN8 | 48           | 15 | 70   | 96.0  | 100.0 | *  | *  | * | * | 1.41                  | 1.6 |
| CSM0200501 | 1    | -DIN8 | 50           | 15 | 70   | 100.0 | 104.0 | *  | *  | * | * | 1.47                  | 1.8 |
| CSM0200561 | 1    | -DIN8 | 56           | 15 | 70   | 112.0 | 116.0 | *  | *  | * | * | 1.64                  | 2.2 |
| CSM0200571 | 1    | -DIN8 | 57           | 15 | 70   | 114.0 | 118.0 | *  | *  | * | * | 1.67                  | 2.3 |
| CSM0200601 | 1    | -DIN8 | 60           | 15 | 70   | 120.0 | 124.0 | *  | *  | * | * | 1.76                  | 2.5 |
| CSM0200761 | 2    | -DIN8 | 76           | 20 | *    | 152.0 | 156.0 | *  | *  | * | * | 2.69                  | 3.9 |
| CSM0200801 | 2    | -DIN8 | 80           | 20 | *    | 160.0 | 164.0 | *  | *  | * | * | 2.84                  | 4.4 |
| CSM0200951 | 2    | -DIN8 | 95           | 20 | *    | 190.0 | 194.0 | *  | *  | * | * | 3.37                  | 6.1 |

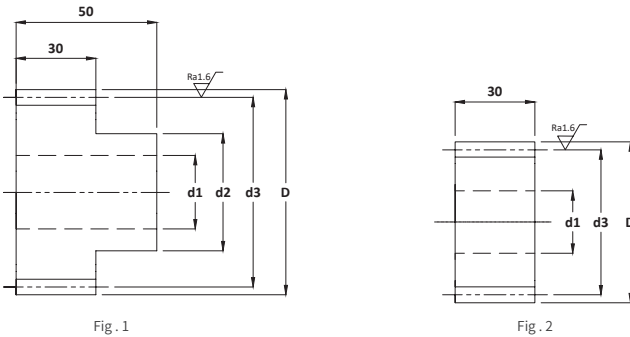
CSM-DIN8



Series CSM-DIN8 Straight Pinions  
Quality Grade DIN 8  
Material S45C / S50C

| Code       | Fig. | DIN   | No. of Teeth | d1 | d2 | d3    | D     | W1 | W2 | k | h | F <sub>ta</sub><br>kN | KG   |
|------------|------|-------|--------------|----|----|-------|-------|----|----|---|---|-----------------------|------|
| Module 2.5 |      |       |              |    |    |       |       |    |    |   |   |                       |      |
| CSM0250121 | 1    | -DIN8 | 12           | 9  | 20 | 30.0  | 35.0  | *  | *  | * | * | *                     | 0.2  |
| CSM0250131 | 1    | -DIN8 | 13           | 9  | 20 | 32.5  | 37.5  | *  | *  | * | * | *                     | 0.3  |
| CSM0250141 | 1    | -DIN8 | 14           | 9  | 25 | 35.0  | 40.0  | *  | *  | * | * | *                     | 0.3  |
| CSM0250151 | 1    | -DIN8 | 15           | 9  | 25 | 37.5  | 42.5  | *  | *  | * | * | *                     | 0.3  |
| CSM0250161 | 1    | -DIN8 | 16           | 9  | 30 | 40.0  | 45.0  | *  | *  | * | * | 0.46                  | 0.4  |
| CSM0250171 | 1    | -DIN8 | 17           | 9  | 30 | 42.5  | 47.5  | *  | *  | * | * | 0.55                  | 0.4  |
| CSM0250181 | 1    | -DIN8 | 18           | 9  | 35 | 45.0  | 50.0  | *  | *  | * | * | 0.58                  | 0.5  |
| CSM0250191 | 1    | -DIN8 | 19           | 12 | 35 | 47.5  | 52.5  | *  | *  | * | * | 0.61                  | 0.5  |
| CSM0250201 | 1    | -DIN8 | 20           | 12 | 35 | 50.0  | 55.0  | *  | *  | * | * | 0.64                  | 0.6  |
| CSM0250211 | 1    | -DIN8 | 21           | 12 | 35 | 52.5  | 57.5  | *  | *  | * | * | 0.68                  | 0.6  |
| CSM0250221 | 1    | -DIN8 | 22           | 12 | 40 | 55.0  | 60.0  | *  | *  | * | * | 0.71                  | 0.7  |
| CSM0250231 | 1    | -DIN8 | 23           | 12 | 40 | 57.5  | 62.5  | *  | *  | * | * | 0.74                  | 0.7  |
| CSM0250241 | 1    | -DIN8 | 24           | 12 | 40 | 60.0  | 65.0  | *  | *  | * | * | 0.77                  | 0.8  |
| CSM0250251 | 1    | -DIN8 | 25           | 12 | 45 | 62.5  | 67.5  | *  | *  | * | * | 0.92                  | 0.8  |
| CSM0250301 | 1    | -DIN8 | 30           | 12 | 50 | 75.0  | 80.0  | *  | *  | * | * | 1.10                  | 1.2  |
| CSM0250351 | 1    | -DIN8 | 35           | 12 | 60 | 87.5  | 92.5  | *  | *  | * | * | 1.28                  | 1.6  |
| CSM0250381 | 1    | -DIN8 | 38           | 12 | 60 | 95.0  | 100.0 | *  | *  | * | * | 1.39                  | 1.8  |
| CSM0250401 | 1    | -DIN8 | 40           | 12 | 70 | 100.0 | 105.0 | *  | *  | * | * | 1.47                  | 2.0  |
| CSM0250451 | 1    | -DIN8 | 45           | 15 | 70 | 112.5 | 117.5 | *  | *  | * | * | 1.65                  | 2.6  |
| CSM0250481 | 1    | -DIN8 | 48           | 15 | 80 | 120.0 | 125.0 | *  | *  | * | * | 1.76                  | 2.9  |
| CSM0250501 | 1    | -DIN8 | 50           | 15 | 80 | 125.0 | 130.0 | *  | *  | * | * | 2.22                  | 3.1  |
| CSM0250571 | 1    | -DIN8 | 57           | 15 | 90 | 142.5 | 147.5 | *  | *  | * | * | 2.53                  | 4.0  |
| CSM0250601 | 1    | -DIN8 | 60           | 15 | 90 | 150.0 | 155.0 | *  | *  | * | * | 2.66                  | 4.4  |
| CSM0250761 | 1    | -DIN8 | 76           | 20 | *  | 190.0 | 195.0 | *  | *  | * | * | 3.37                  | 7.0  |
| CSM0250801 | 1    | -DIN8 | 80           | 25 | *  | 200.0 | 205.0 | *  | *  | * | * | 3.54                  | 7.8  |
| CSM0250951 | 1    | -DIN8 | 95           | 25 | *  | 237.5 | 242.5 | *  | *  | * | * | 4.21                  | 10.9 |

CSM-DIN8



Series CSM-DIN8 Straight Pinions  
Quality Grade DIN 8  
Material S45C / S50C

| Code       | Fig. | DIN   | No. of Teeth | d1 | d2 | d3  | D   | W1 | W2 | k | h | F <sub>ta</sub><br>kN | KG   |
|------------|------|-------|--------------|----|----|-----|-----|----|----|---|---|-----------------------|------|
| Module 3   |      |       |              |    |    |     |     |    |    |   |   |                       |      |
| CSM0300121 | 1    | -DIN8 | 12           | 14 | 25 | 36  | 42  | *  | *  | * | * | *                     | 0.3  |
| CSM0300131 | 1    | -DIN8 | 13           | 14 | 25 | 39  | 45  | *  | *  | * | * | *                     | 0.4  |
| CSM0300141 | 1    | -DIN8 | 14           | 14 | 25 | 42  | 48  | *  | *  | * | * | *                     | 0.4  |
| CSM0300151 | 1    | -DIN8 | 15           | 14 | 35 | 45  | 51  | *  | *  | * | * | *                     | 0.5  |
| CSM0300161 | 1    | -DIN8 | 16           | 14 | 35 | 48  | 54  | *  | *  | * | * | 0.66                  | 0.5  |
| CSM0300171 | 1    | -DIN8 | 17           | 14 | 42 | 51  | 57  | *  | *  | * | * | 0.79                  | 0.6  |
| CSM0300181 | 1    | -DIN8 | 18           | 14 | 45 | 54  | 60  | *  | *  | * | * | 0.84                  | 0.7  |
| CSM0300191 | 1    | -DIN8 | 19           | 14 | 45 | 57  | 63  | *  | *  | * | * | 0.88                  | 0.7  |
| CSM0300201 | 1    | -DIN8 | 20           | 14 | 45 | 60  | 66  | *  | *  | * | * | 0.93                  | 0.8  |
| CSM0300211 | 1    | -DIN8 | 21           | 14 | 45 | 63  | 69  | *  | *  | * | * | 0.97                  | 0.9  |
| CSM0300221 | 1    | -DIN8 | 22           | 14 | 50 | 66  | 72  | *  | *  | * | * | 1.02                  | 1.0  |
| CSM0300231 | 1    | -DIN8 | 23           | 14 | 50 | 69  | 75  | *  | *  | * | * | 1.07                  | 1.0  |
| CSM0300241 | 1    | -DIN8 | 24           | 14 | 50 | 72  | 78  | *  | *  | * | * | 1.11                  | 1.1  |
| CSM0300251 | 1    | -DIN8 | 25           | 14 | 60 | 75  | 81  | *  | *  | * | * | 1.32                  | 1.2  |
| CSM0300271 | 1    | -DIN8 | 27           | 14 | 60 | 81  | 87  | *  | *  | * | * | 1.43                  | 1.4  |
| CSM0300281 | 1    | -DIN8 | 28           | 14 | 60 | 84  | 90  | *  | *  | * | * | 1.48                  | 1.5  |
| CSM0300282 | 1    | -DIN8 | 28           | 15 | 60 | 84  | 90  | *  | *  | * | * | 1.48                  | 1.5  |
| CSM0300301 | 1    | -DIN8 | 30           | 14 | 60 | 90  | 96  | *  | *  | * | * | 1.58                  | 1.7  |
| CSM0300321 | 1    | -DIN8 | 32           | 14 | 60 | 96  | 102 | *  | *  | * | * | 1.69                  | 1.9  |
| CSM0300351 | 1    | -DIN8 | 35           | 14 | 80 | 105 | 111 | *  | *  | * | * | 1.85                  | 2.3  |
| CSM0300361 | 1    | -DIN8 | 36           | 14 | 80 | 108 | 114 | *  | *  | * | * | 1.90                  | 2.4  |
| CSM0300381 | 1    | -DIN8 | 38           | 14 | 80 | 114 | 120 | *  | *  | * | * | 2.01                  | 2.7  |
| CSM0300401 | 1    | -DIN8 | 40           | 14 | 80 | 120 | 126 | *  | *  | * | * | 2.11                  | 2.9  |
| CSM0300451 | 2    | -DIN8 | 45           | 20 | *  | 135 | 141 | *  | *  | * | * | 2.38                  | 3.7  |
| CSM0300481 | 2    | -DIN8 | 48           | 20 | *  | 144 | 150 | *  | *  | * | * | 2.53                  | 4.2  |
| CSM0300501 | 2    | -DIN8 | 50           | 25 | *  | 150 | 156 | *  | *  | * | * | 3.19                  | 4.5  |
| CSM0300521 | 2    | -DIN8 | 52           | 25 | *  | 156 | 162 | *  | *  | * | * | 3.32                  | 5.0  |
| CSM0300561 | 2    | -DIN8 | 56           | 25 | *  | 168 | 174 | *  | *  | * | * | 3.57                  | 5.6  |
| CSM0300601 | 2    | -DIN8 | 60           | 25 | *  | 180 | 186 | *  | *  | * | * | 3.83                  | 6.4  |
| CSM0300761 | 2    | -DIN8 | 76           | 25 | *  | 228 | 234 | *  | *  | * | * | 4.85                  | 10.1 |
| CSM0300801 | 2    | -DIN8 | 80           | 25 | *  | 240 | 246 | *  | *  | * | * | 5.10                  | 11.2 |
| CSM0300951 | 2    | -DIN8 | 95           | 25 | *  | 285 | 291 | *  | *  | * | * | 6.06                  | 15.7 |

CSM-DIN8

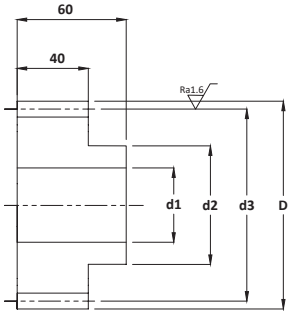


Fig. 1

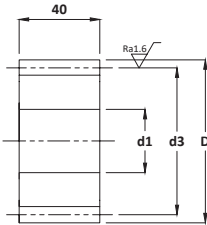


Fig. 2

Dimension:mm

Series CSM-DIN8 Straight Pinions  
Quality Grade DIN 8  
Material S45C / S50C

| Code       | Fig. | DIN   | No. of Teeth | d1 | d2 | d3  | D   | W1 | W2 | k | h | F <sub>ta</sub><br>kN | KG   |
|------------|------|-------|--------------|----|----|-----|-----|----|----|---|---|-----------------------|------|
| Module 4   |      |       |              |    |    |     |     |    |    |   |   |                       |      |
| CSM0400121 | 1    | -DIN8 | 12           | 16 | 35 | 48  | 56  | *  | *  | * | * | *                     | 0.6  |
| CSM0400131 | 1    | -DIN8 | 13           | 16 | 35 | 52  | 60  | *  | *  | * | * | *                     | 0.7  |
| CSM0400141 | 1    | -DIN8 | 14           | 16 | 45 | 56  | 64  | *  | *  | * | * | *                     | 0.8  |
| CSM0400151 | 1    | -DIN8 | 15           | 16 | 45 | 60  | 68  | *  | *  | * | * | *                     | 0.9  |
| CSM0400161 | 1    | -DIN8 | 16           | 16 | 45 | 64  | 72  | *  | *  | * | * | 1.18                  | 1.0  |
| CSM0400171 | 1    | -DIN8 | 17           | 16 | 50 | 68  | 76  | *  | *  | * | * | 1.40                  | 1.1  |
| CSM0400181 | 1    | -DIN8 | 18           | 16 | 50 | 72  | 80  | *  | *  | * | * | 1.49                  | 1.2  |
| CSM0400191 | 1    | -DIN8 | 19           | 16 | 60 | 76  | 84  | *  | *  | * | * | 1.57                  | 1.3  |
| CSM0400201 | 1    | -DIN8 | 20           | 16 | 60 | 80  | 88  | *  | *  | * | * | 1.65                  | 1.4  |
| CSM0400211 | 1    | -DIN8 | 21           | 16 | 70 | 84  | 92  | *  | *  | * | * | 1.73                  | 1.6  |
| CSM0400221 | 1    | -DIN8 | 22           | 16 | 70 | 88  | 96  | *  | *  | * | * | 1.81                  | 1.7  |
| CSM0400231 | 1    | -DIN8 | 23           | 16 | 75 | 92  | 100 | *  | *  | * | * | 1.90                  | 1.8  |
| CSM0400241 | 1    | -DIN8 | 24           | 16 | 75 | 96  | 104 | *  | *  | * | * | 1.98                  | 2.0  |
| CSM0400251 | 1    | -DIN8 | 25           | 16 | 75 | 100 | 108 | *  | *  | * | * | 2.35                  | 2.2  |
| CSM0400301 | 1    | -DIN8 | 30           | 16 | 75 | 120 | 128 | *  | *  | * | * | 2.82                  | 3.0  |
| CSM0400381 | 2    | -DIN8 | 38           | 25 | *  | 152 | 160 | *  | *  | * | * | 3.57                  | 4.7  |
| CSM0400401 | 2    | -DIN8 | 40           | 25 | *  | 160 | 168 | *  | *  | * | * | 3.75                  | 5.2  |
| CSM0400451 | 2    | -DIN8 | 45           | 25 | *  | 180 | 188 | *  | *  | * | * | 4.22                  | 6.5  |
| CSM0400481 | 2    | -DIN8 | 48           | 25 | *  | 192 | 200 | *  | *  | * | * | 4.51                  | 7.4  |
| CSM0400501 | 2    | -DIN8 | 50           | 25 | *  | 200 | 208 | *  | *  | * | * | 5.67                  | 8.0  |
| CSM0400521 | 2    | -DIN8 | 52           | 25 | *  | 208 | 216 | *  | *  | * | * | 5.90                  | 8.6  |
| CSM0400561 | 2    | -DIN8 | 56           | 25 | *  | 224 | 232 | *  | *  | * | * | 6.35                  | 10.0 |
| CSM0400601 | 2    | -DIN8 | 60           | 25 | *  | 240 | 248 | *  | *  | * | * | 6.80                  | 11.4 |
| CSM0400761 | 2    | -DIN8 | 76           | 25 | *  | 304 | 312 | *  | *  | * | * | 8.62                  | 18.0 |
| CSM0400801 | 2    | -DIN8 | 80           | 25 | *  | 320 | 328 | *  | *  | * | * | 9.07                  | 19.9 |
| CSM0400951 | 2    | -DIN8 | 95           | 25 | *  | 380 | 388 | *  | *  | * | * | 10.77                 | 27.8 |

CSM-DIN8

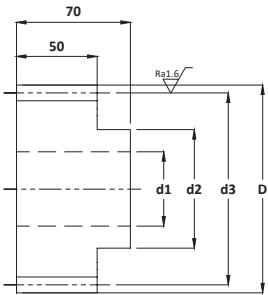


Fig. 1

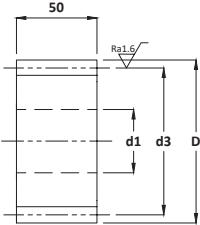


Fig. 2

Dimension:mm

Series CSM-DIN8 Straight Pinions  
Quality Grade DIN 8  
Material S45C / S50C

| Code       | Fig. | DIN   | No. of Teeth | d1 | d2 | d3  | D   | W1 | W2 | k | h | F <sub>ta</sub><br>kN | KG   |
|------------|------|-------|--------------|----|----|-----|-----|----|----|---|---|-----------------------|------|
| Module 5   |      |       |              |    |    |     |     |    |    |   |   |                       |      |
| CSM0500121 | 1    | -DIN8 | 12           | 20 | 45 | 60  | 70  | *  | *  | * | * | *                     | 1.1  |
| CSM0500131 | 1    | -DIN8 | 13           | 20 | 45 | 65  | 75  | *  | *  | * | * | *                     | 1.2  |
| CSM0500141 | 1    | -DIN8 | 14           | 20 | 55 | 70  | 80  | *  | *  | * | * | *                     | 1.4  |
| CSM0500151 | 1    | -DIN8 | 15           | 20 | 60 | 75  | 85  | *  | *  | * | * | *                     | 1.6  |
| CSM0500161 | 1    | -DIN8 | 16           | 20 | 60 | 80  | 90  | *  | *  | * | * | 1.84                  | 1.7  |
| CSM0500171 | 1    | -DIN8 | 17           | 20 | 70 | 85  | 95  | *  | *  | * | * | 2.19                  | 1.9  |
| CSM0500181 | 1    | -DIN8 | 18           | 20 | 70 | 90  | 100 | *  | *  | * | * | 2.32                  | 2.2  |
| CSM0500191 | 1    | -DIN8 | 19           | 20 | 70 | 95  | 105 | *  | *  | * | * | 2.45                  | 2.4  |
| CSM0500201 | 1    | -DIN8 | 20           | 20 | 70 | 100 | 110 | *  | *  | * | * | 2.58                  | 2.6  |
| CSM0500211 | 1    | -DIN8 | 21           | 20 | 70 | 105 | 115 | *  | *  | * | * | 2.71                  | 2.9  |
| CSM0500221 | 1    | -DIN8 | 22           | 20 | 80 | 110 | 120 | *  | *  | * | * | 2.84                  | 3.1  |
| CSM0500231 | 1    | -DIN8 | 23           | 20 | 80 | 115 | 125 | *  | *  | * | * | 2.96                  | 3.4  |
| CSM0500241 | 1    | -DIN8 | 24           | 20 | 80 | 120 | 130 | *  | *  | * | * | 3.09                  | 3.6  |
| CSM0500251 | 1    | -DIN8 | 25           | 20 | 80 | 125 | 135 | *  | *  | * | * | 3.67                  | 3.9  |
| CSM0500301 | 1    | -DIN8 | 30           | 20 | 90 | 150 | 160 | *  | *  | * | * | 4.40                  | 5.5  |
| CSM0500361 | 2    | -DIN8 | 36           | 30 | *  | 180 | 190 | *  | *  | * | * | 5.28                  | 7.8  |
| CSM0500381 | 2    | -DIN8 | 38           | 30 | *  | 190 | 200 | *  | *  | * | * | 5.57                  | 8.6  |
| CSM0500401 | 2    | -DIN8 | 40           | 30 | *  | 200 | 210 | *  | *  | * | * | 5.87                  | 9.5  |
| CSM0500451 | 2    | -DIN8 | 45           | 30 | *  | 225 | 235 | *  | *  | * | * | 6.60                  | 11.9 |
| CSM0500481 | 2    | -DIN8 | 48           | 30 | *  | 240 | 250 | *  | *  | * | * | 7.04                  | 13.5 |
| CSM0500501 | 2    | -DIN8 | 50           | 30 | *  | 250 | 260 | *  | *  | * | * | 8.86                  | 14.6 |
| CSM0500521 | 2    | -DIN8 | 52           | 30 | *  | 260 | 270 | *  | *  | * | * | 9.21                  | 15.7 |
| CSM0500561 | 2    | -DIN8 | 56           | 30 | *  | 280 | 290 | *  | *  | * | * | 9.92                  | 18.1 |
| CSM0500601 | 2    | -DIN8 | 60           | 30 | *  | 300 | 310 | *  | *  | * | * | 10.63                 | 20.7 |
| CSM0500761 | 2    | -DIN8 | 76           | 30 | *  | 380 | 390 | *  | *  | * | * | 13.47                 | 32.8 |
| CSM0500801 | 2    | -DIN8 | 80           | 30 | *  | 400 | 410 | *  | *  | * | * | 14.18                 | 36.3 |
| CSM0500951 | 2    | -DIN8 | 95           | 30 | *  | 475 | 485 | *  | *  | * | * | 16.83                 | 50.8 |

CSM-DIN8

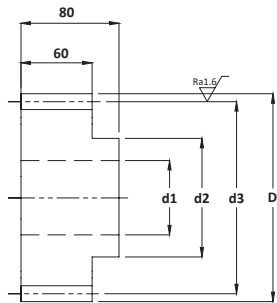


Fig. 1

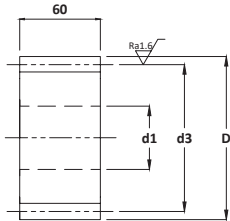


Fig. 2

Dimension:mm

Series CSM-DIN8 Straight Pinions  
Quality Grade DIN 8  
Material S45C / S50C

| Code       | Fig. | DIN   | No. of Teeth | d1 | d2  | d3  | D   | W1 | W2 | k | h | F <sub>ta</sub><br>kN | KG   |
|------------|------|-------|--------------|----|-----|-----|-----|----|----|---|---|-----------------------|------|
| Module 6   |      |       |              |    |     |     |     |    |    |   |   |                       |      |
| CSM0600151 | 1    | -DIN8 | 15           | 20 | 60  | 90  | 102 | *  | *  | * | * | *                     | 2.6  |
| CSM0600191 | 1    | -DIN8 | 19           | 20 | 80  | 114 | 126 | *  | *  | * | * | 3.53                  | 3.9  |
| CSM0600201 | 1    | -DIN8 | 20           | 20 | 90  | 120 | 132 | *  | *  | * | * | 3.71                  | 4.3  |
| CSM0600211 | 1    | -DIN8 | 21           | 20 | 90  | 126 | 138 | *  | *  | * | * | 3.90                  | 4.7  |
| CSM0600221 | 1    | -DIN8 | 22           | 20 | 100 | 132 | 144 | *  | *  | * | * | 4.08                  | 5.1  |
| CSM0600251 | 1    | -DIN8 | 25           | 20 | 110 | 150 | 162 | *  | *  | * | * | 5.28                  | 6.5  |
| CSM0600301 | 2    | -DIN8 | 30           | 30 | *   | 180 | 192 | *  | *  | * | * | 6.34                  | 9.1  |
| CSM0600361 | 2    | -DIN8 | 36           | 30 | *   | 216 | 228 | *  | *  | * | * | 7.60                  | 12.8 |

CSM-DIN8

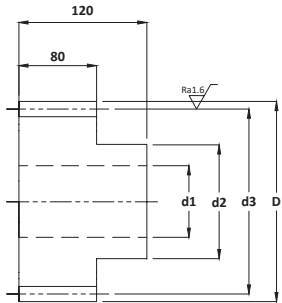


Fig. 1

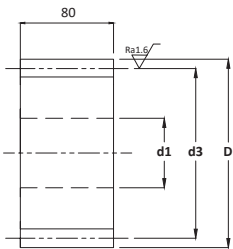


Fig. 2

Dimension:mm

Series CSM-DIN8 Straight Pinions  
Quality Grade DIN 8  
Material S45C / S50C

| Code       | Fig. | DIN   | No. of Teeth | d1 | d2  | d3  | D   | W1 | W2 | k | h | F <sub>ta</sub><br>kN | KG   |
|------------|------|-------|--------------|----|-----|-----|-----|----|----|---|---|-----------------------|------|
| Module 8   |      |       |              |    |     |     |     |    |    |   |   |                       |      |
| CSM0800151 | 1    | -DIN8 | 15           | 40 | 90  | 120 | 136 | *  | *  | * | * | *                     | 6.8  |
| CSM0800181 | 1    | -DIN8 | 18           | 40 | 100 | 144 | 160 | *  | *  | * | * | 5.94                  | 9.5  |
| CSM0800201 | 1    | -DIN8 | 20           | 40 | 120 | 160 | 176 | *  | *  | * | * | 6.60                  | 11.5 |
| CSM0800241 | 1    | -DIN8 | 24           | 40 | 150 | 192 | 208 | *  | *  | * | * | 7.92                  | 16.0 |
| CSM0800251 | 1    | -DIN8 | 25           | 40 | 150 | 200 | 216 | *  | *  | * | * | 9.39                  | 17.3 |
| CSM0800301 | 1    | -DIN8 | 30           | 40 | 190 | 240 | 256 | *  | *  | * | * | 11.26                 | 24.2 |

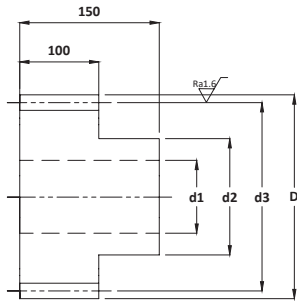


Fig. 1

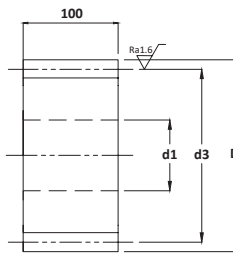


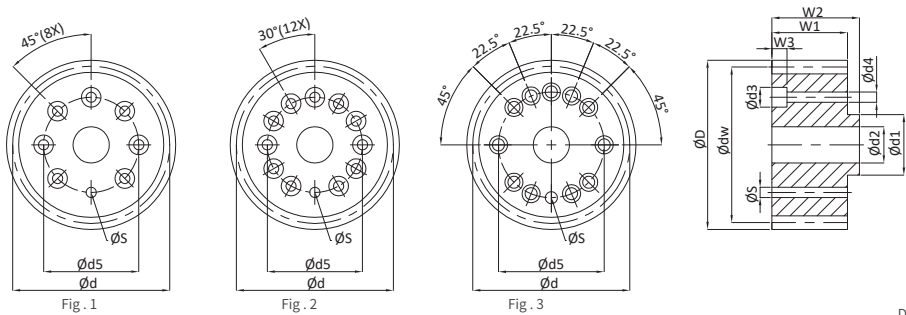
Fig. 2

Dimension:mm

| Code       | Fig. | DIN   | No. of Teeth | d1 | d2  | d3  | D   | W1 | W2 | k | h | F <sub>ta</sub><br>kN | KG   |
|------------|------|-------|--------------|----|-----|-----|-----|----|----|---|---|-----------------------|------|
| Module 10  |      |       |              |    |     |     |     |    |    |   |   |                       |      |
| CSM1000201 | 2    | -DIN8 | 20           | 40 | 150 | 200 | 220 | *  | *  | * | * | 10.31                 | 22.4 |



MHFGH-DIN6



Dimension:mm

Series MHFGH-DIN6 Helical Flange Teeth Ground Pinions  
Quality Grade DIN 6

Material SCM415/ SCM440  
Hardness: HRC 50~55°  
Teeth ground after hardening

| Code         | Fig. | DIN   | No. of Teeth | $x^o$<br>Shift Coefficient | D       | d<br>Pitch Dia. | $d^w$<br>Working Pitch Dia. | d1   | d2   | d3   | d4   | d5    | W1 | W2 | W3   | $F_{\tau a}$<br>kN |
|--------------|------|-------|--------------|----------------------------|---------|-----------------|-----------------------------|------|------|------|------|-------|----|----|------|--------------------|
| Module 2     |      |       |              |                            |         |                 |                             |      |      |      |      |       |    |    |      |                    |
| MHFGH0200261 | 1    | -DIN6 | 26           | 0.407                      | 60.800  | 55.174          | 56.800                      | 20.0 | 16.2 | 9.5  | 5.5  | 31.5  | 26 | 29 | 12.0 | 11.52              |
| MHFGH0200262 | 1    | -DIN6 | 26           | 0.407                      | 60.802  | 55.174          | 56.802                      | 20.0 | 16.0 | 9.5  | 5.5  | 31.5  | 26 | 31 | 11.0 | 11.52              |
| MHFGH0200271 | 1    | -DIN6 | 27           | 0.000                      | 61.296  | 57.296          | 57.296                      | 20.0 | 16.2 | 9.5  | 5.5  | 31.5  | 30 | 33 | 11.0 | 10.95              |
| MHFGH0200272 | 1    | -DIN6 | 27           | 0.000                      | 61.296  | 57.296          | 57.296                      | 20.0 | 16.0 | 9.5  | 5.5  | 31.5  | 26 | 31 | 11.0 | 11.99              |
| MHFGH0200291 | 1    | -DIN6 | 29           | 0.415                      | 67.200  | 61.540          | 63.200                      | 20.0 | 16.2 | 9.5  | 5.5  | 31.5  | 26 | 29 | 12.0 | 12.25              |
| MHFGH0200292 | 1    | -DIN6 | 29           | 0.415                      | 67.200  | 61.540          | 63.200                      | 25.0 | 20.3 | 11.0 | 6.6  | 40.0  | 26 | 29 | 10.5 | 12.25              |
| MHFGH0200293 | 1    | -DIN6 | 29           | 0.415                      | 67.200  | 61.540          | 63.200                      | 20.0 | 16.0 | 9.5  | 5.5  | 31.5  | 26 | 31 | 11.0 | 12.25              |
| MHFGH0200331 | 1    | -DIN6 | 33           | 0.393                      | 75.599  | 70.028          | 71.599                      | 31.5 | 23.7 | 11.0 | 6.6  | 50.0  | 26 | 29 | 14.0 | 12.62              |
| MHFGH0200332 | 1    | -DIN6 | 33           | 0.393                      | 75.599  | 70.028          | 71.600                      | 31.5 | 20.0 | 11.0 | 6.6  | 50.0  | 26 | 31 | 11.0 | 12.62              |
| MHFGH0200351 | 1    | -DIN6 | 35           | 0.382                      | 79.800  | 74.272          | 75.800                      | 20.0 | 16.2 | 9.5  | 5.5  | 31.5  | 26 | 29 | 12.0 | 12.78              |
| MHFGH0200352 | 1    | -DIN6 | 35           | 0.382                      | 79.800  | 74.272          | 75.800                      | 20.0 | 16.0 | 9.5  | 5.5  | 31.5  | 26 | 31 | 11.0 | 12.78              |
| MHFGH0200361 | 1    | -DIN6 | 36           | 0.000                      | 80.394  | 76.394          | 76.394                      | 31.5 | 23.7 | 11.0 | 6.6  | 50.0  | 30 | 33 | 8.0  | 14.83              |
| MHFGH0200362 | 1    | -DIN6 | 36           | 0.000                      | 80.394  | 76.394          | 76.394                      | 31.5 | 20.0 | 11.0 | 6.6  | 50.0  | 26 | 31 | 11.0 | 12.85              |
| MHFGH0200371 | 1    | -DIN6 | 37           | 0.421                      | 84.200  | 78.517          | 80.200                      | 31.5 | 23.7 | 11.0 | 6.6  | 50.0  | 26 | 29 | 14.0 | 12.93              |
| MHFGH0200372 | 2    | -DIN6 | 37           | 0.421                      | 84.200  | 78.517          | 80.200                      | 31.5 | 23.7 | 11.0 | 6.6  | 50.0  | 26 | 29 | 14.0 | 12.93              |
| MHFGH0200373 | 1    | -DIN6 | 37           | 0.421                      | 84.200  | 78.517          | 80.200                      | 31.5 | 20.0 | 11.0 | 6.6  | 50.0  | 26 | 31 | 11.0 | 12.93              |
| Module 3     |      |       |              |                            |         |                 |                             |      |      |      |      |       |    |    |      |                    |
| MHFGH0300311 | 2    | -DIN6 | 31           | 0.354                      | 106.800 | 98.676          | 100.800                     | 31.5 | 23.7 | 11.0 | 6.6  | 50.0  | 31 | 35 | 14.0 | 22.25              |
| MHFGH0300312 | 1    | -DIN6 | 31           | 0.354                      | 106.800 | 98.676          | 100.800                     | 31.5 | 23.7 | 11.0 | 6.6  | 50.0  | 31 | 35 | 14.0 | 22.25              |
| MHFGH0300313 | 1    | -DIN6 | 31           | 0.354                      | 106.800 | 98.676          | 100.800                     | 31.5 | 20.0 | 11.0 | 6.6  | 50.0  | 31 | 36 | 11.0 | 22.25              |
| MHFGH0300314 | 3    | -DIN6 | 31           | 0.354                      | 106.800 | 98.676          | 100.800                     | 40.0 | 31.5 | 11.0 | 6.6  | 63.0  | 31 | 36 | 11.0 | 22.25              |
| MHFGH0300351 | 2    | -DIN6 | 35           | 0.365                      | 119.600 | 111.409         | 113.600                     | 50.0 | 32.2 | 14.0 | 9.0  | 80.0  | 31 | 35 | 10.5 | 22.86              |
| MHFGH0300352 | 3    | -DIN6 | 35           | 0.365                      | 119.598 | 111.409         | 113.598                     | 40.0 | 31.5 | 11.0 | 6.6  | 63.0  | 31 | 36 | 11.0 | 22.86              |
| MHFGH0300401 | 2    | -DIN6 | 40           | 0.379                      | 135.599 | 127.324         | 129.599                     | 50.0 | 32.2 | 14.0 | 9.0  | 80.0  | 31 | 35 | 10.5 | 23.46              |
| MHFGH0300402 | 3    | -DIN6 | 40           | 0.379                      | 135.598 | 127.324         | 129.598                     | 40.0 | 31.5 | 11.0 | 6.6  | 63.0  | 31 | 36 | 11.0 | 23.46              |
| MHFGH0300403 | 2    | -DIN6 | 40           | 0.379                      | 135.598 | 127.324         | 129.598                     | 50.0 | 40.0 | 14.0 | 9.0  | 80.0  | 31 | 36 | 11.0 | 23.46              |
| Module 4     |      |       |              |                            |         |                 |                             |      |      |      |      |       |    |    |      |                    |
| MHFGH0400301 | 2    | -DIN6 | 30           | 0.000                      | 135.324 | 127.324         | 127.324                     | 50.0 | 32.2 | 14.0 | 9.0  | 80.0  | 45 | 49 | 9.5  | 42.75              |
| MHFGH0400302 | 3    | -DIN6 | 30           | 0.000                      | 135.324 | 127.324         | 127.324                     | 40.0 | 32.2 | 14.0 | 9.0  | 63.0  | 45 | 49 | 9.5  | 42.75              |
| MHFGH0400303 | 2    | -DIN6 | 30           | 0.000                      | 135.324 | 127.324         | 127.234                     | 50.0 | 40.0 | 14.0 | 9.0  | 80.0  | 41 | 46 | 16.0 | 38.95              |
| MHFGH0400381 | 2    | -DIN6 | 38           | 0.240                      | 171.200 | 161.277         | 163.200                     | 80.0 | 56.1 | 17.5 | 11.0 | 125.0 | 41 | 45 | 10.5 | 40.98              |
| MHFGH0400382 | 2    | -DIN6 | 38           | 0.24                       | 171.197 | 161.277         | 163.197                     | 80.0 | 60.0 | 17.5 | 11.0 | 125.0 | 41 | 46 | 16.0 | 40.98              |
| Module 5     |      |       |              |                            |         |                 |                             |      |      |      |      |       |    |    |      |                    |
| MHFGH0500211 | 2    | -DIN6 | 21           | 0.000                      | 121.109 | 111.409         | 111.409                     | 50.0 | 32.2 | 14.0 | 9.0  | 80.0  | 59 | 64 | 11.5 | 52.04              |
| MHFGH0500212 | 2    | -DIN6 | 21           | 0.000                      | 121.409 | 111.409         | 111.409                     | 50.0 | 40.0 | 14.0 | 9.0  | 80.0  | 51 | 56 | 16.0 | 44.98              |
| MHFGH0500361 | 2    | -DIN6 | 36           | 0.000                      | 200.986 | 190.986         | 190.986                     | 80.0 | 56.1 | 17.5 | 11.0 | 125.0 | 55 | 60 | 12.5 | 67.96              |
| MHFGH0500362 | 2    | -DIN6 | 36           | 0.000                      | 200.986 | 190.986         | 190.986                     | 80.0 | 60.0 | 17.5 | 11.0 | 125.0 | 51 | 56 | 16.0 | 50.66              |

MSGH-CP-DIN6

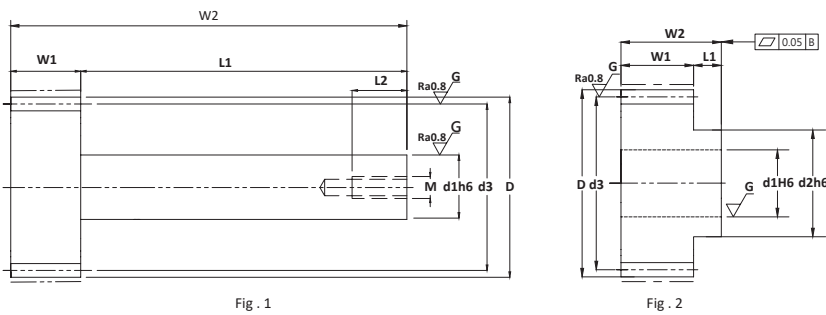


Fig . 1

Fig . 2

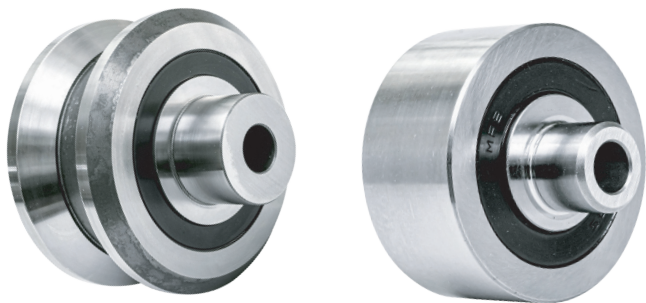
Dimension : mm

Series MSGH-CP-DIN6 Straight Teeth Ground Pinions  
Quality Grade DIN 6

Material SCM415/ SCM440  
Hardness: HRC 50~55°  
Teeth ground after hardening

| Code           | Fig. | DIN   | Module | No. of Teeth | d1   | d2 | d3     | D      | W1   | W2  | L1    | L2 | Hole | F <sub>ta</sub><br>kN | KG  |
|----------------|------|-------|--------|--------------|------|----|--------|--------|------|-----|-------|----|------|-----------------------|-----|
| CP 5           |      |       |        |              |      |    |        |        |      |     |       |    |      |                       |     |
| MSGH-CP0500201 | 1    | -DIN6 | 1.5915 | 20           | 20h6 | *  | 31.831 | 35.014 | 11.5 | 90  | 78.5  | 19 | M8   | 1.87                  | 1.4 |
| MSGH-CP0500202 | 1    | -DIN6 | 1.5915 | 20           | 20h6 | *  | 31.831 | 35.014 | 14.5 | 90  | 75.5  | 19 | M8   | 2.07                  | 1.4 |
| MSGH-CP0500203 | 2    | -DIN6 | 1.5915 | 20           | 10h6 | 25 | 31.831 | 35.014 | 14.5 | 23  | 8.5   | *  | *    | 2.07                  | 0.5 |
| CP 7.5         |      |       |        |              |      |    |        |        |      |     |       |    |      |                       |     |
| MSGH-CP0750201 | 1    | -DIN6 | 2.3873 | 20           | 25h6 | *  | 47.746 | 52.520 | 19.5 | 108 | 88.5  | 22 | M10  | 4.18                  | 3.7 |
| MSGH-CP0750202 | 2    | -DIN6 | 2.3873 | 20           | 15h7 | 40 | 47.746 | 52.520 | 19.5 | 30  | 10.5  | *  | *    | 4.18                  | 1.4 |
| CP 10          |      |       |        |              |      |    |        |        |      |     |       |    |      |                       |     |
| MSGH-CP1000201 | 1    | -DIN6 | 3.1831 | 20           | 40h6 | *  | 63.662 | 70.028 | 29.5 | 162 | 132.5 | 28 | M12  | 8.44                  | 9.8 |
| MSGH-CP1000202 | 2    | -DIN6 | 3.1831 | 20           | 15h7 | 50 | 63.662 | 70.028 | 29.5 | 43  | 13.5  | *  | *    | 8.44                  | 3.7 |

Pinion Code Instruction

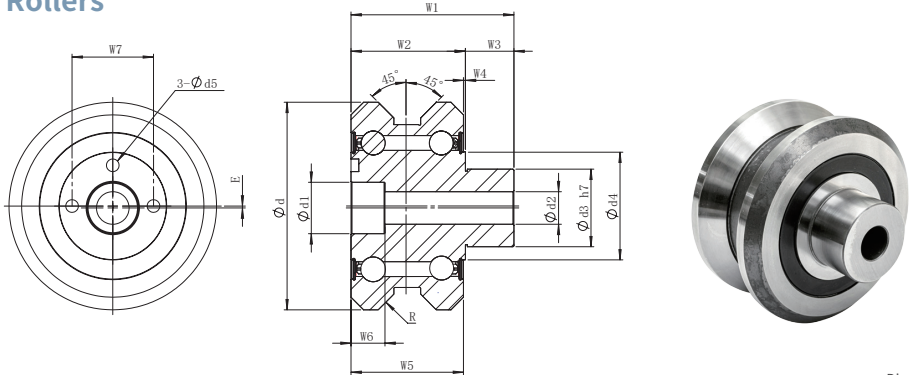


| Code | Material         | Type          | Shaft Dia. | Page  |
|------|------------------|---------------|------------|-------|
| UV   | SUJ2<br>(100Cr6) | V Type Roller | 15         | P.120 |
|      |                  |               | 20         |       |
|      |                  |               | 25         |       |
|      |                  |               | 40         |       |
| UR   | SUJ2<br>(100Cr6) | Round Roller  | 15         | P.121 |
|      |                  |               | 20         |       |
|      |                  |               | 25         |       |
|      |                  |               | 40         |       |

Rollers Code Instruction

| 1st                | 2nd                  | 3rd                  | 4th            |
|--------------------|----------------------|----------------------|----------------|
| Material           | Type                 | Shaft Dia.           | Excenter       |
| U=SUJ2<br>(100Cr6) | V= V Type<br>R=Round | 15<br>20<br>25<br>40 | Y=1mm<br>N=0mm |
|                    |                      |                      | Y=1mm<br>N=0mm |

UV Guide Rail Rollers

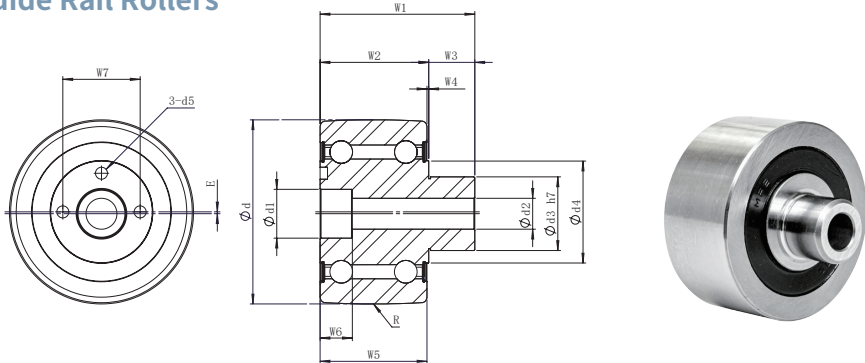


Dimension:mm

Series UV guide rail rollers  
Material SUJ2  
Type: V type  
Hardness: HRC 60~64°  
Radial tolerance 0~0.01 mm

| Code  | Shaft Dia. | Excenter | ød  | ød1  | W1 | W2 | W3 | W4 | W5 | W6   | W7   | R    | ød2  | ød3 | ød4   | ød5   | C r(KN) | C or(KN) | KG  |
|-------|------------|----------|-----|------|----|----|----|----|----|------|------|------|------|-----|-------|-------|---------|----------|-----|
| UV15Y | 15         | 1 mm     | 53  | 13.5 | 35 | 23 | 12 | 1  | 22 | 9    | 18.5 | R250 | 8.4  | 15  | 23    | 2.4x3 | 14.40   | 8.47     | 0.2 |
| UV15N | 15         | 0 mm     | 53  | 13.5 | 35 | 23 | 12 | 1  | 22 | 9    | 18.5 | R250 | 8.4  | 15  | 23    | 2.4x3 | 14.40   | 8.47     | 0.2 |
| UV20Y | 20         | 1 mm     | 63  | 16.5 | 46 | 31 | 15 | 1  | 30 | 11   | 22.5 | R300 | 10.5 | 20  | 26.7  | 2.4x3 | 15.76   | 10.18    | 0.5 |
| UV20N | 20         | 0 mm     | 63  | 16.5 | 46 | 31 | 15 | 1  | 30 | 11   | 22.5 | R300 | 10.5 | 20  | 26.7  | 2.4x3 | 15.76   | 10.18    | 0.5 |
| UV25Y | 25         | 1 mm     | 77  | 20.5 | 60 | 40 | 20 | 1  | 39 | 13   | 27.5 | R360 | 13.0 | 25  | 35.4  | 4.1x3 | 26.46   | 18.10    | 1.0 |
| UV25N | 25         | 0 mm     | 77  | 20.5 | 60 | 40 | 20 | 1  | 39 | 13   | 27.5 | R360 | 13.0 | 25  | 35.4  | 4.1x3 | 26.46   | 18.10    | 1.0 |
| UV35Y | 35         | 1 mm     | 107 | 28.5 | 84 | 59 | 25 | 1  | 58 | 17.5 | 42   | R500 | 16.8 | 40  | 55.55 | 4.1x3 | 45.15   | 35.15    | 2.5 |
| UV35N | 35         | 0 mm     | 107 | 28.5 | 84 | 59 | 25 | 1  | 58 | 17.5 | 42   | R500 | 16.8 | 40  | 55.55 | 4.1x3 | 45.15   | 35.15    | 2.5 |

UR Guide Rail Rollers



Dimension:mm

Series UR Guide Rail Rollers  
Material SUJ2  
Type: round  
Hardness: HRC 60~64°  
Radial tolerance 0~0.01 mm

| Code  | Shaft Dia. | Excenter | ød  | ød1  | W1 | W2 | W3 | W4 | W5 | W6   | W7   | R    | ød2  | ød3 | ød4   | ød5    | C r(KN) | C or(KN) | KG  |
|-------|------------|----------|-----|------|----|----|----|----|----|------|------|------|------|-----|-------|--------|---------|----------|-----|
| UR15Y | 15         | 1 mm     | 47  | 13.5 | 35 | 23 | 12 | 1  | 22 | 9    | 18.5 | R500 | 8.4  | 15  | 23    | 2.36x4 | 14.40   | 8.47     | 0.2 |
| UR20Y | 20         | 1 mm     | 72  | 16.5 | 46 | 31 | 15 | 1  | 30 | 17.5 | 22.5 | R500 | 10.5 | 20  | 26.7  | 2.2x3  | 15.76   | 10.18    | 0.6 |
| UR25Y | 25         | 1 mm     | 85  | 20   | 60 | 40 | 20 | 1  | 39 | 17.5 | 27.5 | R500 | 13   | 25  | 35.4  | 4x4    | 26.46   | 18.10    | 1.0 |
| UR35Y | 35         | 1 mm     | 100 | 26.5 | 84 | 59 | 25 | 1  | 58 | 17.5 | 42   | R500 | 16.8 | 40  | 55.55 | 6.5x4  | 45.15   | 35.15    | 2.7 |