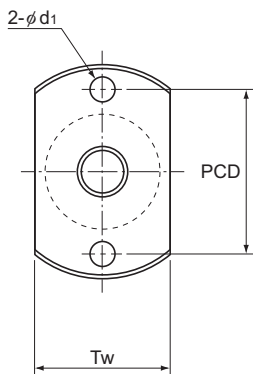


# MTF (Unfinished Shaft Ends) No Preload

|          |        |
|----------|--------|
| DN value | 50,000 |
|----------|--------|



| Model No.    | Screw shaft outer diameter<br>d | Lead<br>Ph | Ball center-to-center diameter<br>dp | Thread minor diameter<br>dc | No. of loaded circuits<br>Rows×turns | Basic load rating |           | Rigidity<br>K<br>N/μm |                     |                       |
|--------------|---------------------------------|------------|--------------------------------------|-----------------------------|--------------------------------------|-------------------|-----------|-----------------------|---------------------|-----------------------|
|              |                                 |            |                                      |                             |                                      | Ca<br>kN          | Cca<br>kN |                       | Outer diameter<br>D | Flange diameter<br>D1 |
| MTF 0601-3.7 | 6                               | 1          | 6.15                                 | 5.3                         | 1×3.7                                | 0.7               | 1.2       | 70                    | 13                  | 30                    |
| MTF 0802-3.7 | 8                               | 2          | 8.3                                  | 6.6                         | 1×3.7                                | 2.1               | 3.8       | 90                    | 20                  | 40                    |
| MTF 1002-3.7 | 10                              | 2          | 10.3                                 | 8.6                         | 1×3.7                                | 2.3               | 4.8       | 110                   | 23                  | 43                    |
| MTF 1202-3.7 | 12                              | 2          | 12.3                                 | 10.6                        | 1×3.7                                | 2.5               | 5.8       | 130                   | 25                  | 47                    |

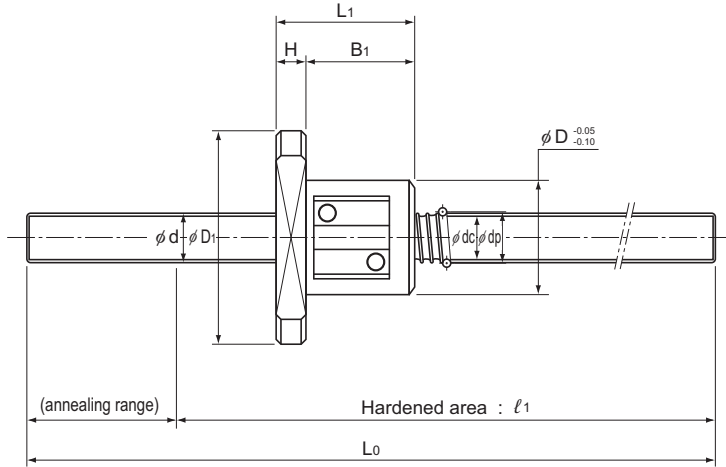
## Model number coding

**MTF 08 02 -3.7 +250L C7 T**

|                                       |                 |                                 |  |
|---------------------------------------|-----------------|---------------------------------|--|
| Model No.                             | Lead<br>(in mm) | Overall shaft length<br>(in mm) | Symbol for ball screw shaft                  |
| Screw shaft outer diameter<br>(in mm) | Lead<br>(in mm) |                                 | Accuracy symbol (No symbol for Normal Grade) |

Notes: Model MTF is only sold as a set (ball screw nut and screw shaft).  
Model MTF has only anti-rust oil applied.

# Transport Ball Screw



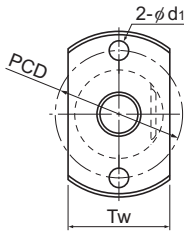
Unit: mm

| Nut dimensions |   |                |      |                |                |                       | Axial clearance | Standard shaft length | $l_1$                  | Screw shaft inertial moment/<br>mm | Nut mass | Shaft mass | Permissible rotational speed |
|----------------|---|----------------|------|----------------|----------------|-----------------------|-----------------|-----------------------|------------------------|------------------------------------|----------|------------|------------------------------|
| Overall length | H | B <sub>1</sub> | PCD  | d <sub>i</sub> | T <sub>w</sub> | kg·m <sup>2</sup> /mm |                 |                       |                        |                                    |          |            |                              |
| L <sub>1</sub> |   |                |      |                |                |                       |                 |                       |                        |                                    |          |            |                              |
| 21             | 5 | 16             | 21.5 | 3.4            | 17             | 0.05                  | 150             | 100                   | $9.99 \times 10^{-10}$ | 0.03                               | 0.19     | 3,500      |                              |
|                |   |                |      |                |                |                       | 250             | 200                   |                        |                                    |          |            |                              |
| 28             | 6 | 22             | 30   | 4.5            | 24             | 0.05                  | 150             | 95                    | $3.16 \times 10^{-9}$  | 0.08                               | 0.31     | 3,500      |                              |
|                |   |                |      |                |                |                       | 250             | 195                   |                        |                                    |          |            |                              |
| 28             | 6 | 22             | 33   | 4.5            | 27             | 0.05                  | 200             | 140                   | $7.71 \times 10^{-9}$  | 0.1                                | 0.52     | 3,500      |                              |
|                |   |                |      |                |                |                       | 300             | 240                   |                        |                                    |          |            |                              |
| 30             | 8 | 22             | 36   | 5.5            | 29             | 0.05                  | 200             | 140                   | $1.6 \times 10^{-8}$   | 0.13                               | 0.77     | 3,500      |                              |
|                |   |                |      |                |                |                       | 300             | 240                   |                        |                                    |          |            |                              |

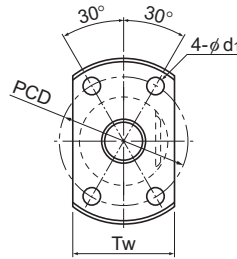
Ball Screw

# MTF No Preload

|          |        |
|----------|--------|
| DN value | 50,000 |
|----------|--------|



Nut type I



Nut type II

| Model No.      | Screw shaft outer diameter<br>d | Lead<br>Ph | Ball center-to-center diameter<br>dp | Thread minor diameter<br>dc | No. of loaded circuits<br>Rows X turns | Basic load rating |                 | Rigidity<br>K | Outer diameter<br>D | Flange diameter<br>D <sub>1</sub> | Overall length<br>L <sub>1</sub> |
|----------------|---------------------------------|------------|--------------------------------------|-----------------------------|--|-------------------|-----------------|---------------|---------------------|-----------------------------------|----------------------------------|
|                |                                 |            |                                      |                             |  | Ca                | C <sub>0a</sub> |               |                     |                                   |                                  |
|                |                                 |            |                                      |                             |  | kN                | kN              | N/μm          |                     |                                   |                                  |
| ○ MTF 0601-3.7 | 6                               | 1          | 6.15                                 | 5.3                         | 1×3.7                                  | 0.7               | 1.2             | 70            | 13                  | 30                                | 21                               |
| MTF 0801-3.7   | 8                               | 1          | 8.15                                 | 7.3                         | 1×3.7                                  | 0.78              | 1.65            | 95            | 16                  | 29                                | 17                               |
| ○ MTF 0802-3.7 | 8                               | 2          | 8.3                                  | 6.6                         | 1×3.7                                  | 2.1               | 3.8             | 90            | 20                  | 40                                | 28                               |
| MTF 0805-2.7   | 8                               | 5          | 8.3                                  | 6.6                         | 1×2.7                                  | 1.85              | 3               | 82            | 18                  | 31                                | 28                               |
| ○ MTF 1002-3.7 | 10                              | 2          | 10.3                                 | 8.6                         | 1×3.7                                  | 2.3               | 4.8             | 110           | 23                  | 43                                | 28                               |
| MTF 1004-2.7   | 10                              | 4          | 10.3                                 | 8.2                         | 1×2.7                                  | 3                 | 5.2             | 104           | 24                  | 41                                | 28                               |
| ○ MTF 1202-3.7 | 12                              | 2          | 12.3                                 | 10.6                        | 1×3.7                                  | 2.5               | 5.8             | 130           | 25                  | 47                                | 30                               |
| MTF 1402-3.7   | 14                              | 2          | 14.3                                 | 12.6                        | 1×3.7                                  | 3.2               | 7.5             | 176           | 26                  | 45                                | 25                               |

### Model number coding

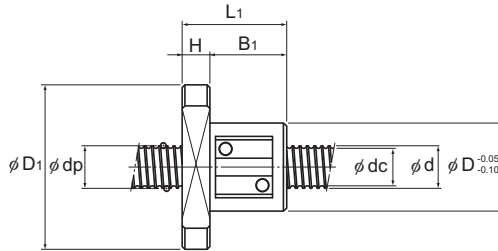
**MTF 0802-3.7 +250L C7 T**

Model No.

Overall screw shaft length (in mm)

Symbol for rolled shaft

Accuracy code: (No code for Normal Grade)



Unit: mm

| Nut dimensions |                |      |                |    |          |      | Axial clearance | Standard shaft length  | Screw shaft inertial moment/<br>mm | Nut mass | Shaft mass | Permissible rotational speed |
|----------------|----------------|------|----------------|----|----------|------|-----------------|------------------------|------------------------------------|----------|------------|------------------------------|
| H              | B <sub>1</sub> | PCD  | d <sub>1</sub> | Tw | Nut type |      |                 |                        |                                    |          |            |                              |
| 5              | 16             | 21.5 | 3.4            | 17 | I        | 0.05 | 150, 250        | $9.99 \times 10^{-10}$ | 0.03                               | 0.19     | 3,500      |                              |
| 4              | 13             | 23   | 3.4            | 18 | II       | 0.05 | —               | $3.16 \times 10^{-9}$  | 0.02                               | 0.36     | 3,500      |                              |
| 6              | 22             | 30   | 4.5            | 24 | I        | 0.05 | 150, 250        | $3.16 \times 10^{-9}$  | 0.08                               | 0.31     | 3,500      |                              |
| 4              | 24             | 25   | 3.4            | 20 | II       | 0.05 | —               | $3.16 \times 10^{-9}$  | 0.05                               | 0.33     | 3,500      |                              |
| 6              | 22             | 33   | 4.5            | 27 | I        | 0.05 | 200, 300        | $7.71 \times 10^{-9}$  | 0.1                                | 0.52     | 3,500      |                              |
| 5              | 23             | 33   | 4.5            | 26 | II       | 0.05 | —               | $7.71 \times 10^{-9}$  | 0.09                               | 0.52     | 3,500      |                              |
| 8              | 22             | 36   | 5.5            | 29 | I        | 0.05 | 200, 300        | $1.60 \times 10^{-8}$  | 0.13                               | 0.77     | 3,500      |                              |
| 6              | 19             | 36   | 5.5            | 28 | II       | 0.05 | —               | $2.96 \times 10^{-8}$  | 0.08                               | 1.07     | 3,500      |                              |

○: indicates MTF model numbers for which nuts are processed with AP-C treatment as standard. For details, see [B0-20](#).

Notes: Seals are not installed on the Model MTF.

Model MTF is only sold as a set (ball screw nut and screw shaft).

Model MTF has only anti-rust oil applied.