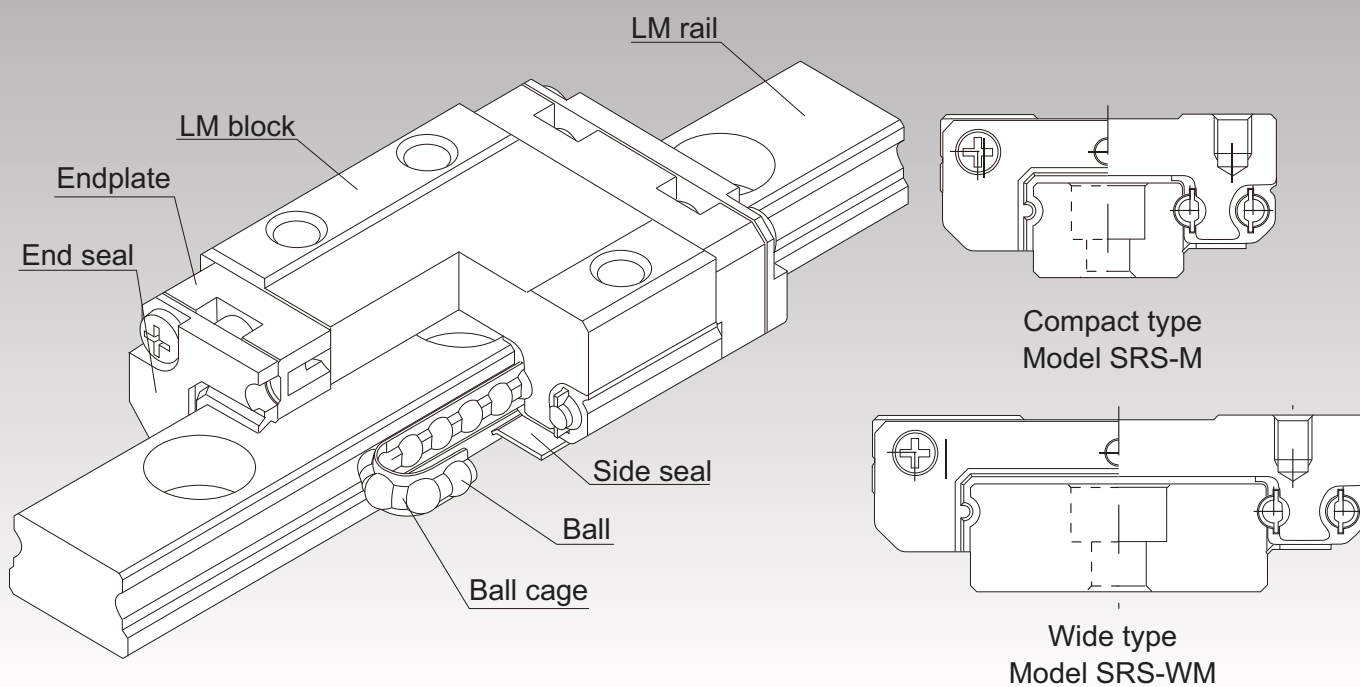


## Caged Ball LM Guide Miniature Type Model SRS



\*For the ball cage, see A1-88 .

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## Structure and Features

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Caged Ball LM Guide model SRS has a structure where two raceways are incorporated into the compact body, enabling the model to receive loads in all directions, and to be used in locations where a moment is applied with a single rail. In addition, use of ball cages eliminates friction between balls, thus achieving high speed, low noise, acceptable running sound, long service life, and long-term maintenance-free operation.

### [Low Dust Generation]

Use of ball cages eliminates friction between balls and retains lubricant, thus achieving low dust generation. In addition, the LM block and LM rail use stainless steel, which is highly resistant to corrosion.

### [Compact]

Since SRS has a compact structure where the rail cross section is designed to be low and that contains only two rows of balls, it can be installed in space-saving locations.

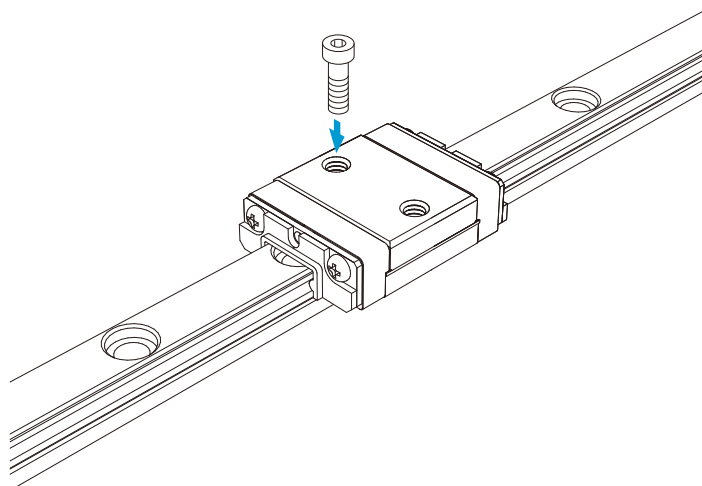
### [Lightweight]

Since part of the LM block (e.g., around the ball relief hole) is made of resin and formed through insert molding, SRS is a lightweight, low inertia type of LM Guide.

### Model SRS5M

Specification Table⇒A1-152

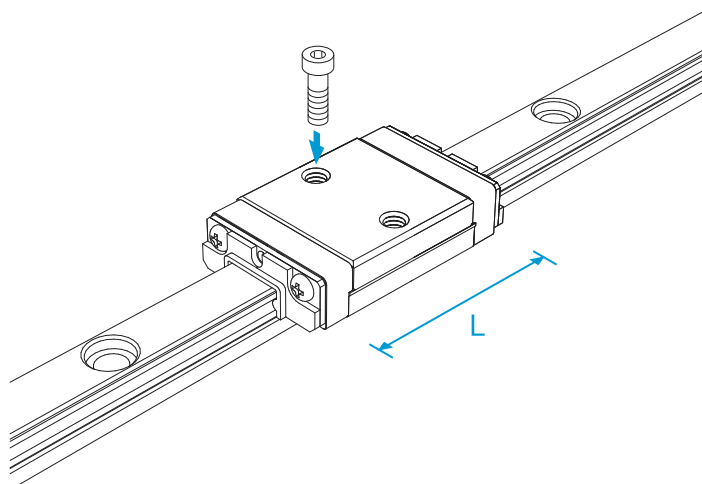
SRS5 is the smallest caged ball LM guide.



### Model SRS-5N

Specification Table⇒A1-152

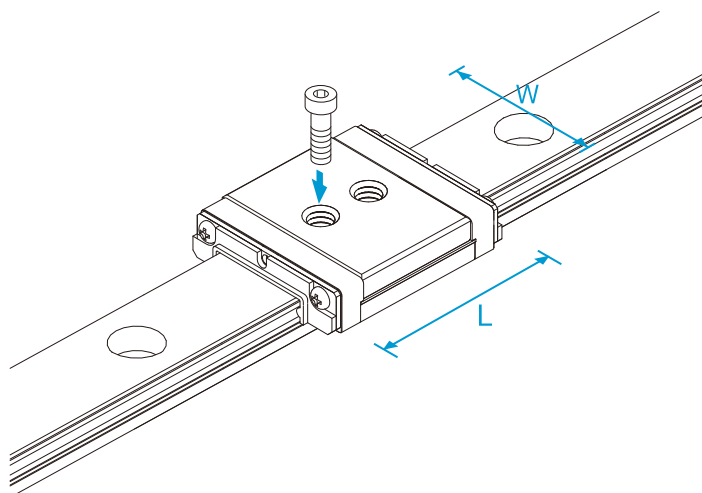
Overall LM block length (L) is greater than for model SRS5M; load rating and permissible moment are higher as well.



### Model SRS5WM

Specification Table⇒A1-156

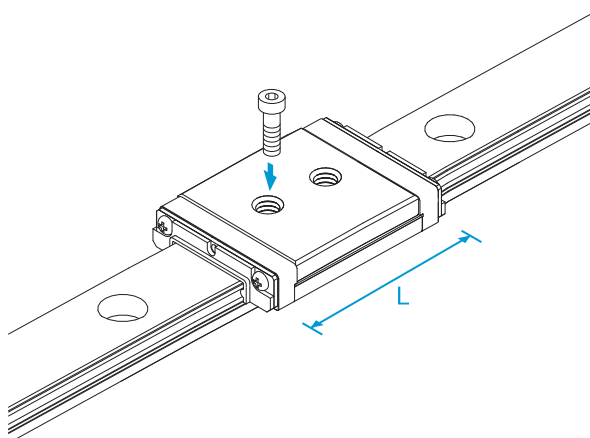
This model has a larger overall LM block length (L), width (W), rated load and permissible moment than model SRS5M.



## Model SRS-5WN

Overall LM block length (L) is greater than for model SRS5WM; load rating and permissible moment are higher as well.

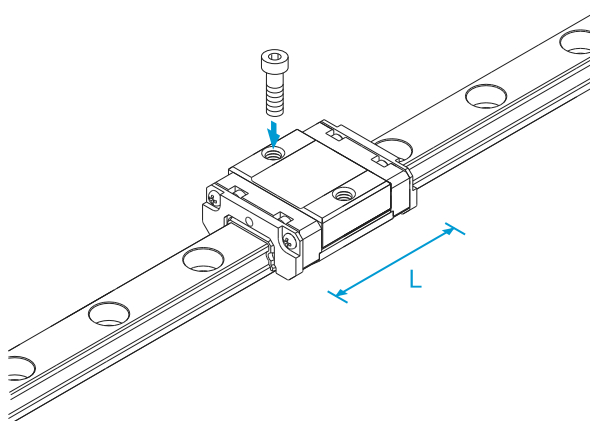
Specification Table⇒A1-156



## Model SRS-S

Overall LM block length (L) is less than that of model SRS-M.

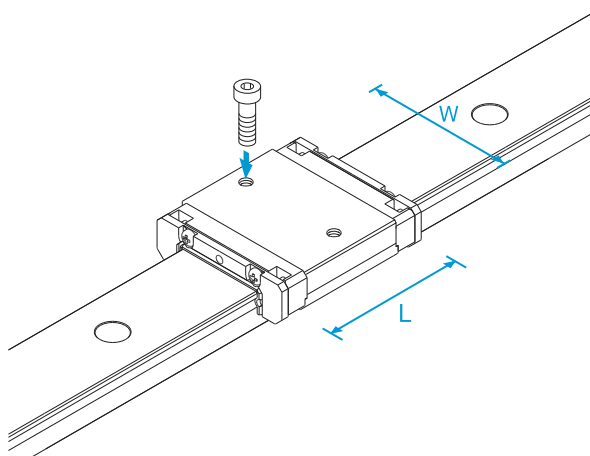
Specification Table⇒A1-152



## Model SRS-WS

Has a longer overall LM block length (L), a greater width and a larger rated load and permissible moment than SRS-S.

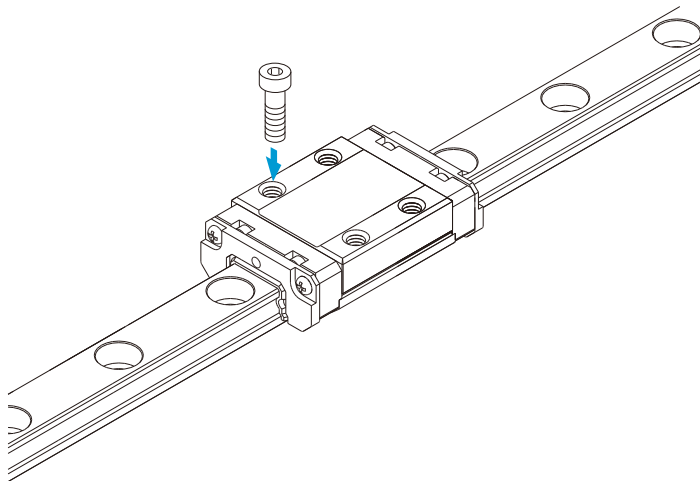
Specification Table⇒A1-156



## Model SRS-M

A standard type of SRS.

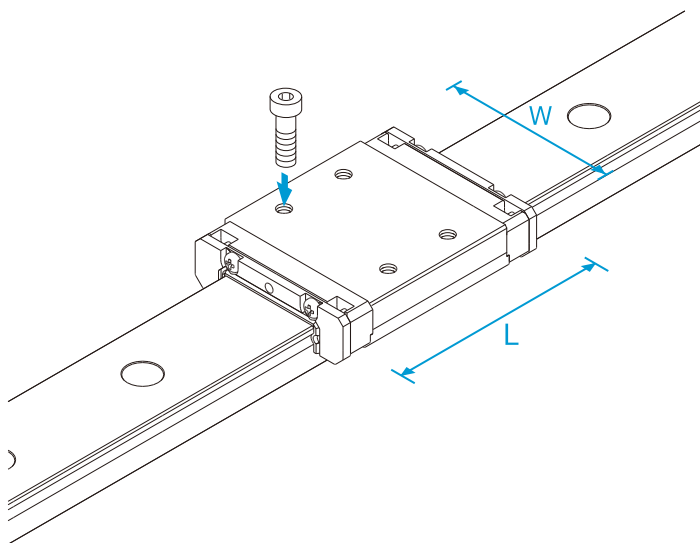
Specification Table⇒A1-152



## Model SRS-WM

Has a longer overall LM block length (L), a greater width and a larger rated load and permissible moment than SRS-M.

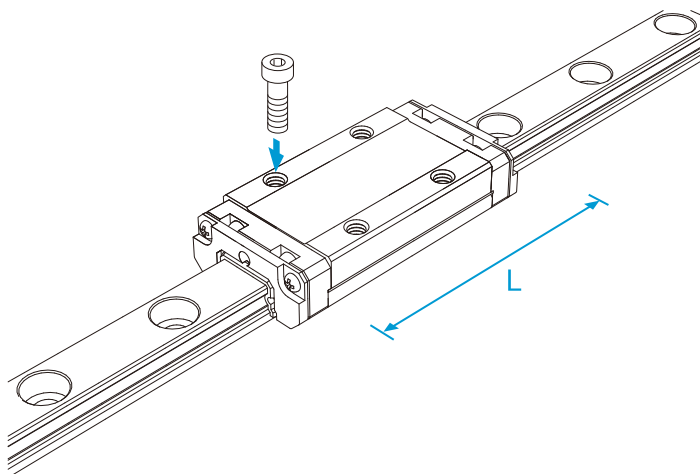
Specification Table⇒A1-156



## Model SRS-N

Compared with model SRS-M, it has a longer total LM block length (L) and a higher load rating and permissible moment.

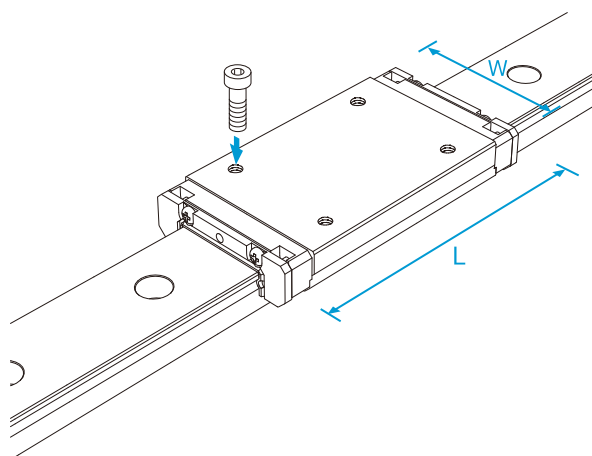
Specification Table⇒A1-152



## Model SRS-WN

Compared with Model SRS-WM, it has a longer total LM block length (L) and a higher load rating and permissible moment.

Specification Table⇒A1-156



## SRS-G

Specification Table⇒A1-152 to A1-158

The SRS-G, a model equipped with uncaged, full-complement bearings, is also available. Due to its cageless design, however, the SRS-G's dynamic load rating is lower than that of standard SRS models. For specific data, please refer to the dimension tables in this catalog.

## Flatness of the LM Rail and the LM Block Mounting Surface

Since the Model SRS has Gothic-arch grooves, any precision errors in the mounting surface may negatively affect its operability. Therefore, we recommend using SRS on mounting surfaces made with high precision.

Table1 Flatness of the LM Rail and the LM Block Mounting Surface

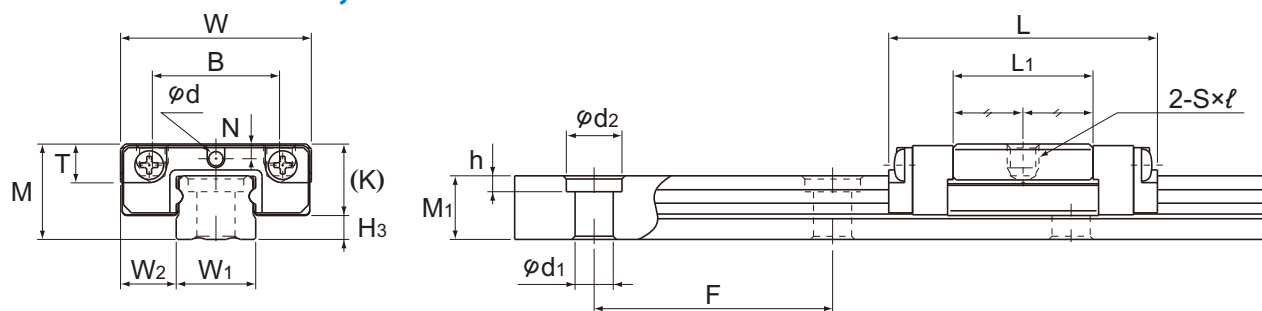
Unit: mm

| Model No. | Flatness error |
|-----------|----------------|
| SRS 5     | 0.015/200      |
| SRS 7     | 0.025/200      |
| SRS 9     | 0.035/200      |
| SRS 12    | 0.050/200      |
| SRS 15    | 0.060/200      |
| SRS 20    | 0.070/200      |
| SRS 25    | 0.070/200      |

Note 1) As many factors can affect the mounting precision, we recommend using values 70% or less than those shown.

Note 2) The above figures apply to normal clearances. When using two or more rails with C1 clearance, we recommend using values 50% or less than those shown.

# Models SRS-S, SRS-M and SRS-N



Model SRS5

| Model No.           | Outer dimensions |       |        | LM block dimensions |    |          |                |     |     |      |               | H <sub>3</sub> |
|---------------------|------------------|-------|--------|---------------------|----|----------|----------------|-----|-----|------|---------------|----------------|
|                     | Height           | Width | Length |                     |    |          |                |     |     |      | Greasing hole |                |
|                     | M                | W     | L      | B                   | C  | S × ℓ    | L <sub>1</sub> | T   | K   | N    | d             |                |
| SRS 5M<br>SRS 5GM   | 6                | 12    | 16.9   | 8                   | —  | M2 × 1.5 | 8.8            | 1.7 | 4.5 | 0.93 | 0.8           | 1.5            |
| SRS 5N<br>SRS 5GN   | 6                | 12    | 20.1   | 8                   | —  | M2 × 1.5 | 12             | 1.7 | 4.5 | 0.93 | 0.8           | 1.5            |
| SRS 7S<br>SRS 7GS   | 8                | 17    | 19     | 12                  | —  | M2 × 2.3 | 9              | 3.3 | 6.7 | 1.6  | 1.2           | 1.3            |
| SRS 7M<br>SRS 7GM   | 8                | 17    | 23.4   | 12                  | 8  | M2 × 2.3 | 13.4           | 3.3 | 6.7 | 1.6  | 1.2           | 1.3            |
| SRS 7N<br>SRS 7GN   | 8                | 17    | 31     | 12                  | 13 | M2 × 2.3 | 21             | 3.3 | 6.7 | 1.6  | 1.2           | 1.3            |
| SRS 9XS<br>SRS 9XGS | 10               | 20    | 21.5   | 15                  | —  | M3 × 2.8 | 10.5           | 4.5 | 8.5 | 2.4  | 1.6           | 1.5            |
| SRS 9XM<br>SRS 9XGM | 10               | 20    | 30.8   | 15                  | 10 | M3 × 2.8 | 19.8           | 4.5 | 8.5 | 2.4  | 1.6           | 1.5            |
| SRS 9XN<br>SRS 9XGN | 10               | 20    | 40.8   | 15                  | 16 | M3 × 2.8 | 29.8           | 4.5 | 8.5 | 2.4  | 1.6           | 1.5            |
| SRS 12S<br>SRS 12GS | 13               | 27    | 25     | 20                  | —  | M3 × 3.2 | 11.2           | 5.7 | 11  | 3    | 2             | 2              |
| SRS 12M<br>SRS 12GM | 13               | 27    | 34.4   | 20                  | 15 | M3 × 3.2 | 20.6           | 5.7 | 11  | 3    | 2             | 2              |
| SRS 12N<br>SRS 12GN | 13               | 27    | 47.1   | 20                  | 20 | M3 × 3.2 | 33.3           | 5.7 | 11  | 3    | 2             | 2              |

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.  
The SRS-G is equipped with uncaged, full-complement bearings.  
Using a greasing hole other than for greasing may cause damage.

## Model number coding

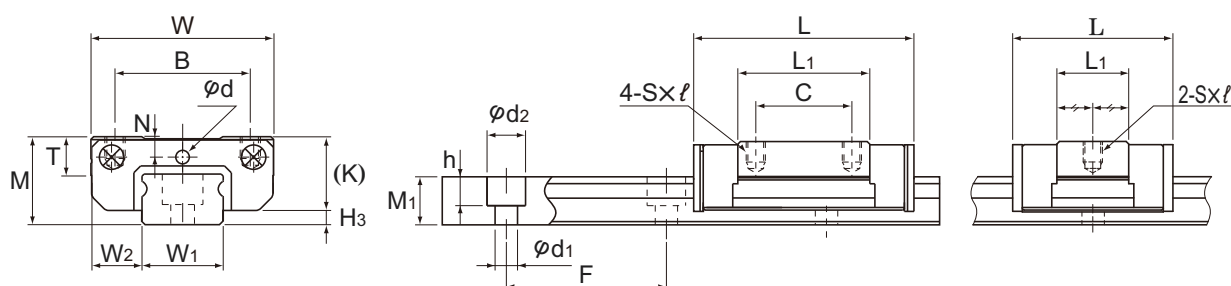
**2 SRS12M QZ UU C1 +220L P M - II**

Model No. With QZ Lubricator Contamination protection accessory symbol (\*1) LM rail length (in mm) Stainless steel LM rail Symbol for No. of rails used on the same plane (\*4)

No. of LM blocks used on the same rail Radial clearance symbol (\*2) Normal (No symbol)/Light preload (C1) Accuracy symbol (\*3) Normal grade (No Symbol)/High accuracy grade (H) Precision grade (P)

(\*1) See contamination protection accessory on A1-496 . (\*2) See A1-70 . (\*3) See A1-82 . (\*4) See A1-13 .

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)  
Those models equipped with QZ Lubricator cannot have a grease nipple. When desiring a grease nipple for a model attached with QZ, contact THK.



Models SRS7M/N, 9XM/XN, 12M/N

Models SRS7S, 9XS, 12S

Unit: mm

|  | LM rail dimensions               |                |                |       |                                     |         | Basic load rating |                | Static permissible moment N-m* |               |                |               |                | Mass     |         |
|--|----------------------------------|----------------|----------------|-------|-------------------------------------|---------|-------------------|----------------|--------------------------------|---------------|----------------|---------------|----------------|----------|---------|
|  | Width                            |                | Height         | Pitch |                                     | Length* | C                 | C <sub>0</sub> | M <sub>A</sub>                 |               | M <sub>B</sub> |               | M <sub>C</sub> | LM block | LM rail |
|  | W <sub>1</sub>                   | W <sub>2</sub> | M <sub>1</sub> | F     | d <sub>1</sub> × d <sub>2</sub> × h | Max     | kN                | kN             | 1 block                        | Double blocks | 1 block        | Double blocks | 1 block        | kg       | kg/m    |
|  | 5 <sup>0</sup> <sub>-0.02</sub>  | 3.5            | 4              | 15    | 2.4 × 3.5 × 1                       | 220     | 0.439<br>0.366    | 0.468<br>0.527 | 0.74<br>0.79                   | 5.11<br>5.76  | 0.86<br>0.94   | 5.99<br>6.91  | 1.21<br>1.37   | 0.002    | 0.13    |
|  | 5 <sup>0</sup> <sub>-0.02</sub>  | 3.5            | 4              | 15    | 2.4 × 3.5 × 1                       | 220     | 0.515<br>0.448    | 0.586<br>0.703 | 1.12<br>1.34                   | 7.45<br>8.82  | 1.31<br>1.57   | 8.73<br>10.3  | 1.52<br>1.83   | 0.003    | 0.13    |
|  | 7 <sup>0</sup> <sub>-0.02</sub>  | 5              | 4.7            | 15    | 2.4 × 4.2 × 2.3                     | 480     | 1.09<br>0.946     | 0.964<br>1.16  | 1.60<br>1.96                   | 12.6<br>14.7  | 1.83<br>2.25   | 14.5<br>16.9  | 3.73<br>4.49   | 0.005    | 0.25    |
|  | 7 <sup>0</sup> <sub>-0.02</sub>  | 5              | 4.7            | 15    | 2.4 × 4.2 × 2.3                     | 480     | 1.51<br>1.16      | 1.29<br>1.54   | 3.09<br>3.61                   | 17.2<br>25.5  | 3.69<br>4.14   | 17.3<br>29.4  | 5.02<br>6.57   | 0.009    | 0.25    |
|  | 7 <sup>0</sup> <sub>-0.02</sub>  | 5              | 4.7            | 15    | 2.4 × 4.2 × 2.3                     | 480     | 2.01<br>1.63      | 2.31<br>2.51   | 7.77<br>8.08                   | 43.2<br>46.9  | 8.96<br>9.32   | 50.0<br>54.2  | 8.96<br>9.72   | 0.012    | 0.25    |
|  | 9 <sup>0</sup> <sub>-0.02</sub>  | 5.5            | 5.5            | 20    | 3.5 × 6 × 3.3                       | 1240    | 1.78<br>1.37      | 1.53<br>1.53   | 3.15<br>2.85                   | 22.2<br>22.6  | 3.61<br>3.27   | 25.6<br>26    | 7.04<br>7.04   | 0.009    | 0.36    |
|  | 9 <sup>0</sup> <sub>-0.02</sub>  | 5.5            | 5.5            | 20    | 3.5 × 6 × 3.3                       | 1240    | 2.69<br>2.22      | 2.75<br>3.06   | 9.31<br>9.87                   | 52.2<br>57.9  | 10.7<br>11.4   | 60.3<br>66.9  | 12.7<br>14.1   | 0.016    | 0.36    |
|  | 9 <sup>0</sup> <sub>-0.02</sub>  | 5.5            | 5.5            | 20    | 3.5 × 6 × 3.3                       | 1240    | 3.48<br>2.94      | 3.98<br>4.59   | 18.7<br>21.1                   | 96.5<br>111   | 21.6<br>24.4   | 112<br>128    | 18.3<br>21.1   | 0.024    | 0.36    |
|  | 12 <sup>0</sup> <sub>-0.02</sub> | 7.5            | 7.5            | 25    | 3.5 × 6 × 4.5                       | 2000    | 2.70<br>2.07      | 2.10<br>2.10   | 4.62<br>4.17                   | 37.5<br>38.1  | 4.62<br>4.17   | 37.5<br>38.1  | 13.8<br>13.8   | 0.017    | 0.65    |
|  | 12 <sup>0</sup> <sub>-0.02</sub> | 7.5            | 7.5            | 25    | 3.5 × 6 × 4.5                       | 2000    | 4.00<br>3.36      | 3.53<br>3.55   | 12.0<br>12.1                   | 78.5<br>79.0  | 12.0<br>12.1   | 78.5<br>79.0  | 23.1<br>23.2   | 0.027    | 0.65    |
|  | 12 <sup>0</sup> <sub>-0.02</sub> | 7.5            | 7.5            | 25    | 3.5 × 6 × 4.5                       | 2000    | 5.82<br>4.72      | 5.30<br>6.83   | 28.4<br>34.8                   | 151<br>195    | 28.4<br>34.8   | 151<br>195    | 34.7<br>44.7   | 0.049    | 0.65    |

Note1) The maximum length under "Length\*" indicates the standard maximum length of an LM rail. (See A1-160 .)

Static permissible moment\* 1 block: the static permissible moment with one LM block

Double blocks: static permissible moment when two LM blocks are in close contact with each other

Total block length L : The total block length L shown in the table is the length with the dust proof parts, code UU or SS.

If other contamination protection accessories or lubricant equipment are installed, the total block length will increase.

(See A1-472 or A1-492 )

For the SRS5M and SRS5N LM guide, the balls will fall out of the block if it is removed from the rail.

To secure the LM rail of model SRS5M, use cross-recessed head screws for precision equipment (No. 0 pan head screw, class 1) M2.

Note2) The basic load rating in the dimension table is for a load in the radial direction. Use Table7 on A 1-58 to calculate

the load rating for loads in the reverse radial direction or lateral direction.

● Reference bolt tightening torque when mounting an LM block for model SRS 5 and 7 are shown in the table below.

Reference tightening torque

| Model No. | Model No. of screw | Screw depth (mm) | Reference tightening torque(N-m)* |
|-----------|--------------------|------------------|-----------------------------------|
| SRS 5     | M2                 | 1.5              | 0.4                               |
| SRS 7     | M2                 | 2.3              | 0.4                               |

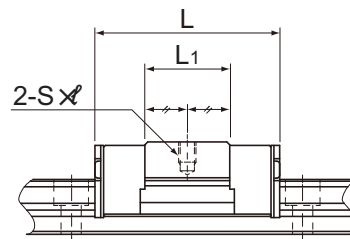
\*Tightening above the tightening torque affects accuracy.

Be sure to tighten at or below the defined tightening torque.

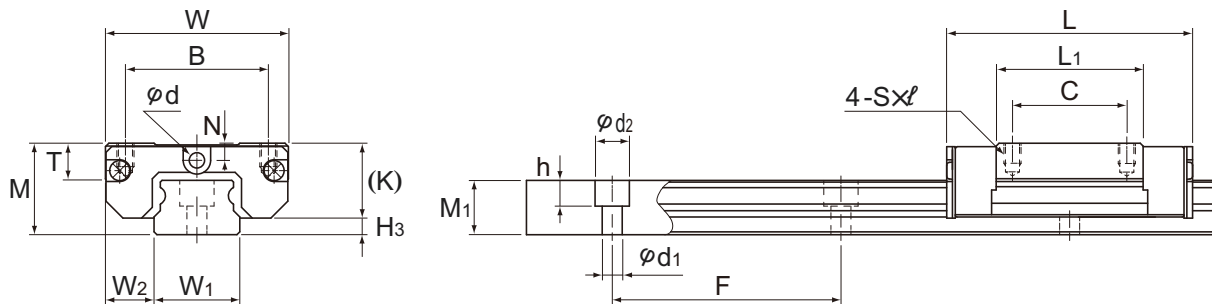
Options ⇒ A1-459



# Models SRS-S, SRS-M and SRS-N



Model SRS15S



Models SRS15M/N, 20M, 25M

| Model No.           | Outer dimensions |       |        | LM block dimensions |    |          |                |     |      |   |          |               |               | H <sub>3</sub> |
|---------------------|------------------|-------|--------|---------------------|----|----------|----------------|-----|------|---|----------|---------------|---------------|----------------|
|                     | Height           | Width | Length | B                   | C  | S × ℓ    | L <sub>1</sub> | T   | K    | N | E        | Greasing hole | Grease nipple |                |
|                     | M                | W     | L      |                     |    |          |                |     |      |   |          | d             |               |                |
| SRS 15S<br>SRS 15GS | 16               | 32    | 32     | 25                  | —  | M3 × 3.5 | 14.7           | 6.5 | 13.3 | 3 | —<br>4   | 3<br>—        | —<br>PB107    | 2.7            |
| SRS 15M<br>SRS 15GM | 16               | 32    | 43     | 25                  | 20 | M3 × 3.5 | 25.7           | 6.5 | 13.3 | 3 | —<br>4   | 3<br>—        | —<br>PB107    | 2.7            |
| SRS 15N<br>SRS 15GN | 16               | 32    | 60.8   | 25                  | 25 | M3 × 3.5 | 43.5           | 6.5 | 13.3 | 3 | —<br>4   | 3<br>—        | —<br>PB107    | 2.7            |
| SRS 20M<br>SRS 20GM | 20               | 40    | 50     | 30                  | 25 | M4 × 6   | 34             | 9   | 16.6 | 4 | —<br>3.5 | 3<br>—        | —<br>PB107    | 3.4            |
| SRS 25M<br>SRS 25GM | 25               | 48    | 77     | 35                  | 35 | M6 × 7   | 56             | 11  | 20   | 5 | —<br>4   | 4<br>—        | —<br>PB1021B  | 5              |

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.  
The SRS-G is equipped with uncaged, full-complement bearings.  
For the SRS15S/M/N, 20M, and 25M, if a grease nipple is required, please specify upon ordering.  
Using a greasing hole other than for greasing may cause damage.

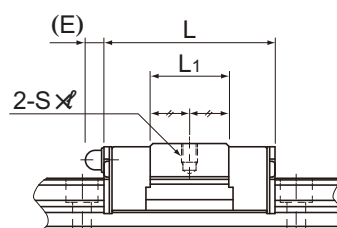
## Model number coding

**2 SRS20M QZ UU C1 +220L P M - II**

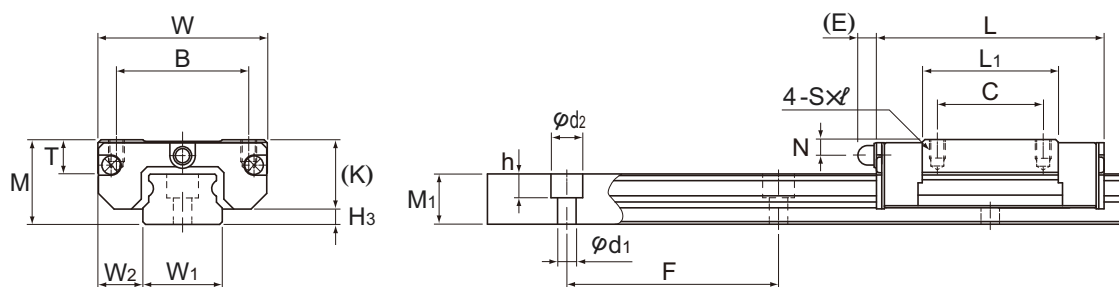
|  |                           |  |                               |   |  |
|--|---------------------------|--|-------------------------------|---|--|
| <p>Model No.</p> <p>No. of LM blocks used on the same rail</p> | <p>With QZ Lubricator</p> | <p>Contamination protection accessory symbol (*1)</p> <p>Radial clearance symbol (*2)</p> <p>Normal (No symbol)/Light preload (C1)</p> | <p>LM rail length (in mm)</p> | <p>Stainless steel LM rail</p> <p>Accuracy symbol (*3)</p> <p>Normal grade (No Symbol)/High accuracy grade (H)</p> <p>Precision grade (P)</p> | <p>Symbol for No. of rails used on the same plane (*4)</p> |
|--|---------------------------|--|-------------------------------|---|--|

(\*1) See contamination protection accessory on A1-496 . (\*2) See A1-70 . (\*3) See A1-82 . (\*4) See A1-13 .

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.) Those models equipped with QZ Lubricator cannot have a grease nipple. When desiring a grease nipple for a model attached with QZ, contact THK.






Model SRS15GS



Models SRS15GM/GN, 20GM, 25GM

Unit: mm

|  | LM rail dimensions               |                |                |       |                                     |         | Basic load rating |                | Static permissible moment N-m*  |               |   |               |   | Mass     |         |
|--|----------------------------------|----------------|----------------|-------|-------------------------------------|---------|-------------------|----------------|---|---------------|---|---------------|---|----------|---------|
|  | Width                            |                | Height         | Pitch |                                     | Length* | C                 | C <sub>0</sub> |  |               |  |               |  | LM block | LM rail |
|  |                                  |                |                |       |                                     |         |                   |                | 1 block   | Double blocks | 1 block   | Double blocks | 1 block   |          |         |
|  | W <sub>1</sub>                   | W <sub>2</sub> | M <sub>1</sub> | F     | d <sub>1</sub> × d <sub>2</sub> × h | Max     | kN                | kN             |   |               |   |               |   | kg       | kg/m    |
|  | 15 <sup>0</sup> <sub>-0.02</sub> | 8.5            | 9.5            | 40    | 3.5 × 6 × 4.5                       | 2000    | 4.50<br>4.01      | 3.39<br>4.24   | 9.54<br>12.6  | 77.5<br>92.7  | 9.54<br>12.6  | 77.5<br>92.7  | 24.1<br>30.1  | 0.033    | 0.96    |
|  | 15 <sup>0</sup> <sub>-0.02</sub> | 8.5            | 9.5            | 40    | 3.5 × 6 × 4.5                       | 2000    | 6.66<br>5.59      | 5.7<br>5.72    | 26.2<br>24.8  | 154<br>158    | 26.2<br>24.8  | 154<br>158    | 40.4<br>40.6  | 0.047    | 0.96    |
|  | 15 <sup>0</sup> <sub>-0.02</sub> | 8.5            | 9.5            | 40    | 3.5 × 6 × 4.5                       | 2000    | 9.71<br>8.27      | 8.55<br>11.9   | 59.7<br>82.3  | 312<br>433    | 59.7<br>82.3  | 312<br>433    | 60.7<br>84.5  | 0.095    | 0.96    |
|  | 20 <sup>0</sup> <sub>-0.03</sub> | 10             | 11             | 60    | 6 × 9.5 × 8                         | 1800    | 7.75<br>5.95      | 9.77<br>9.4    | 54.3<br>44.7  | 296<br>242    | 62.4<br>53.3  | 341<br>289    | 104<br>91.4   | 0.11     | 1.68    |
|  | 23 <sup>0</sup> <sub>-0.03</sub> | 12.5           | 15             | 60    | 7 × 11 × 9                          | 1800    | 16.5<br>13.3      | 20.2<br>22.3   | 177<br>181  | 932<br>962    | 177<br>181  | 932<br>962    | 248<br>255  | 0.24     | 2.6     |

Note1) The maximum length under "Length\*" indicates the standard maximum length of an LM rail. (See A1-160 .)

Static permissible moment\* 1 block: the static permissible moment with one LM block

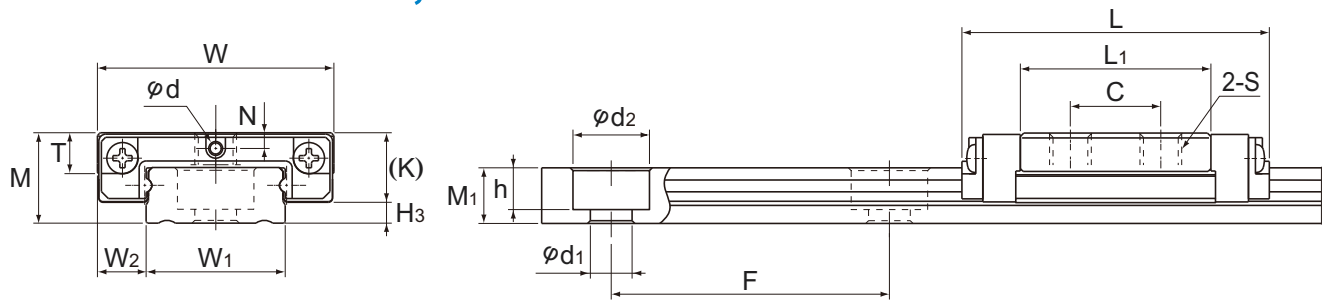
Double blocks: static permissible moment when two LM blocks are in close contact with each other  
Total block length L : The total block length L shown in the table is the length with the dust proof parts, code UU or SS. If other contamination protection accessories or lubricant equipment are installed, the total block length will increase.

(See A1-472 or A1-492 )

Note2) The basic load rating in the dimension table is for a load in the radial direction. Use Table7 on A 1-58 to calculate the load rating for loads in the reverse radial direction or lateral direction.

Options⇒A1-459

# Models SRS-WS, SRS-WM and SRS-WN



Model SRS5

| Model No.             | Outer dimensions |       |        | LM block dimensions |     |            |                |     |     |     |               | H <sub>3</sub> |
|-----------------------|------------------|-------|--------|---------------------|-----|------------|----------------|-----|-----|-----|---------------|----------------|
|                       | Height           | Width | Length |                     |     |            |                |     |     |     | Greasing hole |                |
|                       | M                | W     | L      | B                   | C   | S×ℓ        | L <sub>1</sub> | T   | K   | N   | d             |                |
| SRS 5WM<br>SRS 5WGM   | 6.5              | 17    | 22.1   | —                   | 6.5 | M3 through | 13.7           | 2.7 | 5   | 1.1 | 0.8           | 1.5            |
| SRS 5WN<br>SRS 5WGN   | 6.5              | 17    | 28.1   | —                   | 11  | M3 through | 19.7           | 2.7 | 5   | 1.1 | 0.8           | 1.5            |
| SRS 7WS<br>SRS 7WGS   | 9                | 25    | 22.5   | 19                  | —   | M3×2.8     | 11.9           | 3.8 | 7.2 | 1.8 | 1.2           | 1.8            |
| SRS 7WM<br>SRS 7WGM   | 9                | 25    | 31     | 19                  | 10  | M3×2.8     | 20.4           | 3.8 | 7.2 | 1.8 | 1.2           | 1.8            |
| SRS 7WN<br>SRS 7WGN   | 9                | 25    | 40.9   | 19                  | 17  | M3×2.8     | 30.3           | 3.8 | 7.2 | 1.8 | 1.2           | 1.8            |
| SRS 9WS<br>SRS 9WGS   | 12               | 30    | 26.5   | 21                  | —   | M3×2.8     | 14.5           | 4.9 | 9.1 | 2.3 | 1.6           | 2.9            |
| SRS 9WM<br>SRS 9WGM   | 12               | 30    | 39     | 21                  | 12  | M3×2.8     | 27             | 4.9 | 9.1 | 2.3 | 1.6           | 2.9            |
| SRS 9WN<br>SRS 9WGN   | 12               | 30    | 50.7   | 23                  | 24  | M3×2.8     | 38.7           | 4.9 | 9.1 | 2.3 | 1.6           | 2.9            |
| SRS 12WS<br>SRS 12WGS | 14               | 40    | 30.5   | 28                  | —   | M3×3.5     | 16.9           | 5.7 | 11  | 3   | 2             | 3              |
| SRS 12WM<br>SRS 12WGM | 14               | 40    | 44.5   | 28                  | 15  | M3×3.5     | 30.9           | 5.7 | 11  | 3   | 2             | 3              |
| SRS 12WN<br>SRS 12WGN | 14               | 40    | 59.5   | 28                  | 28  | M3×3.5     | 45.9           | 5.7 | 11  | 3   | 2             | 3              |

Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.  
The SRS-G is equipped with uncaged, full-complement bearings.  
Using a greasing hole other than for greasing may cause damage.

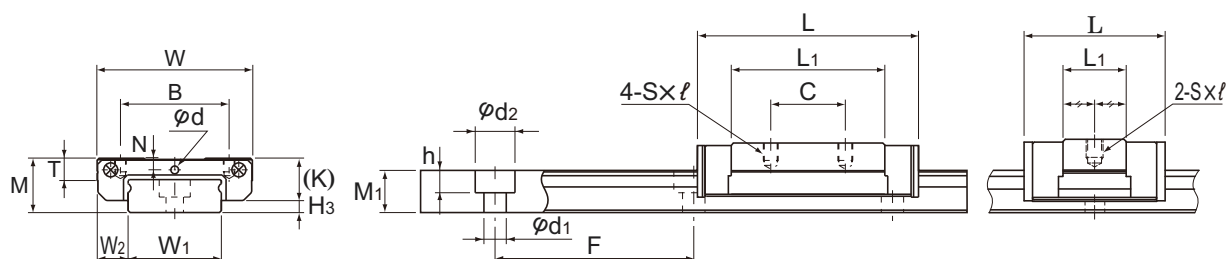
## Model number coding

**2 SRS12WM QZ UU C1 +470L P M - II**

|  |                           |   |  |   |  |
|--|---------------------------|---|--|---|--|
| <p>Model No.</p> <p>No. of LM blocks used on the same rail</p> | <p>With QZ Lubricator</p> | <p>Contamination protection accessory symbol (*1)</p> | <p>LM rail length (in mm)</p> <p>Radial clearance symbol (*2)<br/>Normal (No symbol)/<br/>Light preload (C1)</p> | <p>Stainless steel LM rail</p> <p>Accuracy symbol (*3)<br/>Normal grade (No Symbol)/High accuracy grade (H)<br/>Precision grade (P)</p> | <p>Symbol for No. of rails used on the same plane (*4)</p> |
|--|---------------------------|---|--|---|--|

(\*1) See contamination protection accessory on A1-496 . (\*2) See A1-70 . (\*3) See A1-82 . (\*4) See A1-13 .

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)  
Those models equipped with QZ Lubricator cannot have a grease nipple. When desiring a grease nipple for a model attached with QZ, contact THK.



Models SRS7WM/WN,9WM/WN,12WM/WN

Models SRS7 to 12WS  
Unit: mm

|  | LM rail dimensions               |                |                |                |       |                                     |         | Basic load rating |                | Static permissible moment N-m* |               |                |               |                | Mass     |         |
|--|----------------------------------|----------------|----------------|----------------|-------|-------------------------------------|---------|-------------------|----------------|--------------------------------|---------------|----------------|---------------|----------------|----------|---------|
|  | Width                            |                |                | Height         | Pitch |                                     | Length* | C                 | C <sub>0</sub> | M <sub>A</sub>                 |               | M <sub>B</sub> |               | M <sub>C</sub> | LM block | LM rail |
|  | W <sub>1</sub>                   | W <sub>2</sub> | W <sub>3</sub> | M <sub>1</sub> | F     | d <sub>1</sub> × d <sub>2</sub> × h | Max     | kN                | kN             | 1 block                        | Double blocks | 1 block        | Double blocks | 1 block        | kg       | kg/m    |
|  | 10 <sup>0</sup> <sub>-0.02</sub> | 3.5            | —              | 4              | 20    | 3 × 5.5 × 3                         | 220     | 0.584<br>0.498    | 0.703<br>0.82  | 1.57<br>1.79                   | 9.59<br>11.1  | 1.83<br>2.15   | 11.24<br>13.3 | 3.58<br>4.18   | 0.005    | 0.27    |
|  | 10 <sup>0</sup> <sub>-0.02</sub> | 3.5            | —              | 4              | 20    | 3 × 5.5 × 3                         | 220     | 0.746<br>0.64     | 0.996<br>1.17  | 3.01<br>3.54                   | 16.8<br>19.6  | 3.53<br>4.15   | 19.7<br>23    | 5.08<br>5.97   | 0.007    | 0.27    |
|  | 14 <sup>0</sup> <sub>-0.02</sub> | 5.5            | —              | 5.2            | 30    | 3.5 × 6 × 3.2                       | 480     | 1.38<br>1.06      | 1.35<br>1.35   | 2.89<br>2.58                   | 19.6<br>20.0  | 3.32<br>2.96   | 22.7<br>23.1  | 9.95<br>9.95   | 0.011    | 0.56    |
|  | 14 <sup>0</sup> <sub>-0.02</sub> | 5.5            | —              | 5.2            | 30    | 3.5 × 6 × 3.2                       | 480     | 2.01<br>1.63      | 1.94<br>2.51   | 6.47<br>8.87                   | 36.4<br>51.5  | 7.71<br>10.2   | 42.3<br>59.5  | 14.33<br>20.3  | 0.018    | 0.56    |
|  | 14 <sup>0</sup> <sub>-0.02</sub> | 5.5            | —              | 5.2            | 30    | 3.5 × 6 × 3.2                       | 480     | 2.56<br>2.12      | 3.28<br>3.66   | 15.0<br>16.6                   | 78.9<br>87.7  | 17.4<br>19.2   | 91.2<br>101   | 24.2<br>27     | 0.026    | 0.56    |
|  | 18 <sup>0</sup> <sub>-0.02</sub> | 6              | —              | 7.5            | 30    | 3.5 × 6 × 4.5                       | 1430    | 2.03<br>1.73      | 1.84<br>2.14   | 4.49<br>5.15                   | 32.1<br>36.9  | 5.15<br>5.92   | 38.9<br>42.6  | 17.4<br>20.2   | 0.018    | 1.01    |
|  | 18 <sup>0</sup> <sub>-0.02</sub> | 6              | —              | 7.5            | 30    | 3.5 × 6 × 4.5                       | 1430    | 3.29<br>2.67      | 3.34<br>3.35   | 14.0<br>13.9                   | 78.6<br>69.7  | 16.2<br>16.6   | 91.0<br>96.7  | 31.5<br>31.7   | 0.031    | 1.01    |
|  | 18 <sup>0</sup> <sub>-0.02</sub> | 6              | —              | 7.5            | 30    | 3.5 × 6 × 4.5                       | 1430    | 4.20<br>3.48      | 4.37<br>5.81   | 25.1<br>33.2                   | 130<br>172    | 29.1<br>40     | 151<br>208    | 41.3<br>54.9   | 0.049    | 1.01    |
|  | 24 <sup>0</sup> <sub>-0.02</sub> | 8              | —              | 8.5            | 40    | 4.5 × 8 × 4.5                       | 2000    | 3.58<br>3.05      | 3.15<br>3.68   | 9.77<br>11.1                   | 63<br>72.6    | 9.77<br>11.1   | 63<br>72.6    | 39.5<br>46.2   | 0.034    | 1.52    |
|  | 24 <sup>0</sup> <sub>-0.02</sub> | 8              | —              | 8.5            | 40    | 4.5 × 8 × 4.5                       | 2000    | 5.48<br>4.46      | 5.3<br>5.32    | 26.4<br>25.7                   | 143<br>146    | 26.4<br>25.7   | 143<br>146    | 66.5<br>66.8   | 0.055    | 1.52    |
|  | 24 <sup>0</sup> <sub>-0.02</sub> | 8              | —              | 8.5            | 40    | 4.5 × 8 × 4.5                       | 2000    | 7.13<br>5.93      | 7.07<br>9.46   | 49.2<br>64.7                   | 249<br>332    | 49.2<br>64.7   | 249<br>332    | 88.7<br>119    | 0.091    | 1.52    |

Note1) The maximum length under "Length \* " indicates the standard maximum length of an LM rail. (See A1-160 .)

Static permissible moment\* 1 block: the static permissible moment with one LM block

Double blocks: static permissible moment when two LM blocks are in close contact with each other

Total block length L : The total block length L shown in the table is the length with the dust proof parts, code UU or SS. If other contamination protection accessories or lubricant equipment are installed, the total block length will increase.

(See A1-472 or A1-492 )

For the SRS5WM and SRS5WN, the balls will fall out of the block if it is removed from the rail.

Note2) The basic load rating in the dimension table is for a load in the radial direction. Use Table7 on A 1-58 to calculate the load rating for loads in the reverse radial direction or lateral direction.

- Reference bolt tightening torque when mounting an LM block for model SRS 5 and 7W are shown in the table below.

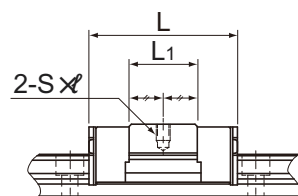
Reference tightening torque

| Model No. | Model No. of screw | Screw depth (mm) | Reference tightening torque(N-m)* |
|-----------|--------------------|------------------|-----------------------------------|
| SRS 5W    | M3                 | 2.3              | 0.4                               |
| SRS 7W    | M3                 | 2.8              | 0.4                               |

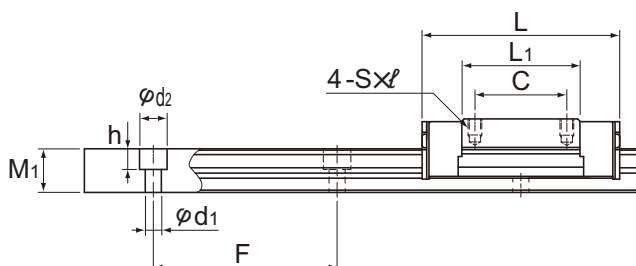
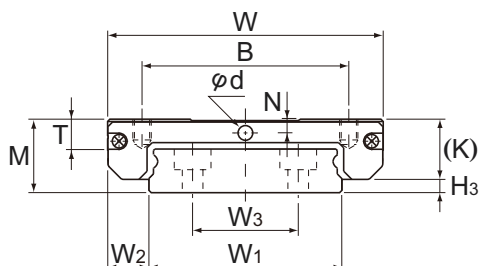
\*Tightening above the tightening torque affects accuracy.

Be sure to tighten at or below the defined tightening torque.

# Models SRS-WS, SRS-WM and SRS-WN



Model SRS15WS



Model SRS15WM/WN

| Model No.             | Outer dimensions |       |        | LM block dimensions |    |          |                |     |      |   |        |               |               | H <sub>3</sub> |
|-----------------------|------------------|-------|--------|---------------------|----|----------|----------------|-----|------|---|--------|---------------|---------------|----------------|
|                       | Height           | Width | Length | B                   | C  | S × ℓ    | L <sub>1</sub> | T   | K    | N | E      | Greasing hole | Grease nipple |                |
|                       | M                | W     | L      |                     |    |          |                |     |      |   |        | d             |               |                |
| SRS 15WS<br>SRS 15WGS | 16               | 60    | 41.5   | 45                  | —  | M4 × 4.5 | 24.9           | 6.5 | 13.3 | 3 | —<br>4 | 3<br>—        | —<br>PB107    | 2.7            |
| SRS 15WM<br>SRS 15WGM | 16               | 60    | 55.5   | 45                  | 20 | M4 × 4.5 | 38.9           | 6.5 | 13.3 | 3 | —<br>4 | 3<br>—        | —<br>PB107    | 2.7            |
| SRS 15WN<br>SRS 15WGN | 16               | 60    | 74.5   | 45                  | 35 | M4 × 4.5 | 57.9           | 6.5 | 13.3 | 3 | —<br>4 | 3<br>—        | —<br>PB107    | 2.7            |

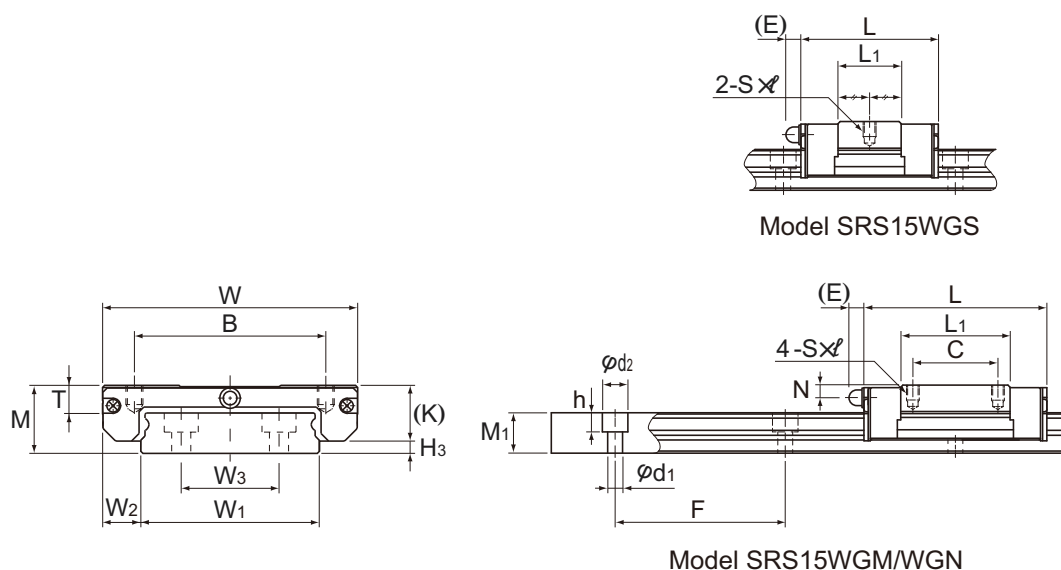
Note) Since stainless steel is used in the LM block, LM rail and balls, these models are highly resistant to corrosion and environment.  
The SRS-G is equipped with uncaged, full-complement bearings.  
For the SRS15WS/WM/WN, if a grease nipple is required, please specify upon ordering.  
Using a greasing hole other than for greasing may cause damage.

## Model number coding

|  |                |                    |  |   |                        |                         |   |          |   |
|--|----------------|--------------------|--|---|------------------------|-------------------------|---|----------|---|
| <b>2</b>                               | <b>SRS15WM</b> | <b>QZ</b>          | <b>UU</b>                                      | <b>C1</b>   | <b>+550L</b>           | <b>P</b>                | <b>M</b>  | <b>-</b> | <b>II</b>   |
| No. of LM blocks used on the same rail | Model No.      | With QZ Lubricator | Contamination protection accessory symbol (*1) | Radial clearance symbol (*2)<br>Normal (No symbol)/<br>Light preload (C1) | LM rail length (in mm) | Stainless steel LM rail | Accuracy symbol (*3)<br>Normal grade (No Symbol)/High accuracy grade (H)<br>Precision grade (P) |          | Symbol for No. of rails used on the same plane (*4) |

(\*1) See contamination protection accessory on A1-496 . (\*2) See A1-70 . (\*3) See A1-82 . (\*4) See A1-13 .

Note) This model number indicates that a single-rail unit constitutes one set. (i.e., required number of sets when 2 rails are used in parallel is 2 at a minimum.)  
Those models equipped with QZ Lubricator cannot have a grease nipple. When desiring a grease nipple for a model attached with QZ, contact THK.



Unit: mm

|  | LM rail dimensions               |                |                |                |       |                                     |         | Basic load rating |                | Static permissible moment N-m* |               |                |               |                | Mass     |         |
|--|----------------------------------|----------------|----------------|----------------|-------|-------------------------------------|---------|-------------------|----------------|--------------------------------|---------------|----------------|---------------|----------------|----------|---------|
|  | Width                            |                |                | Height         | Pitch |                                     | Length* | C                 | C <sub>0</sub> | M <sub>A</sub>                 |               | M <sub>B</sub> |               | M <sub>C</sub> | LM block | LM rail |
|  | W <sub>1</sub>                   | W <sub>2</sub> | W <sub>3</sub> | M <sub>1</sub> | F     | d <sub>1</sub> × d <sub>2</sub> × h | Max     | kN                | kN             | 1 block                        | Double blocks | 1 block        | Double blocks | 1 block        | kg       | kg/m    |
|  | 42 <sup>0</sup> <sub>-0.02</sub> | 9              | 23             | 9.5            | 40    | 4.5 × 8 × 4.5                       | 2000    | 6.64<br>5.59      | 5.94<br>6.78   | 25.4<br>29                     | 158<br>178    | 25.4<br>29     | 158<br>178    | 123<br>140     | 0.087    | 2.87    |
|  | 42 <sup>0</sup> <sub>-0.02</sub> | 9              | 23             | 9.5            | 40    | 4.5 × 8 × 4.5                       | 2000    | 9.12<br>7.43      | 8.55<br>8.59   | 51.2<br>52.7                   | 290<br>293    | 51.2<br>52.7   | 290<br>293    | 176<br>178     | 0.13     | 2.87    |
|  | 42 <sup>0</sup> <sub>-0.02</sub> | 9              | 23             | 9.5            | 40    | 4.5 × 8 × 4.5                       | 2000    | 12.4<br>9.87      | 12.1<br>15.3   | 106<br>133                     | 532<br>671    | 106<br>133     | 532<br>671    | 250<br>317     | 0.201    | 2.87    |

Note) The maximum length under "Length \* " indicates the standard maximum length of an LM rail. (See A1-160 .)

Static permissible moment\*

1 block: the static permissible moment with one LM block

Double blocks: static permissible moment when two LM blocks are in close contact with each other

Total block length L

: The total block length L shown in the table is the length with the dust proof parts, code UU or SS. If other contamination protection accessories or lubricant equipment are installed, the total block length will increase.

(See A1-472 or A1-492)

## Standard Length and Maximum Length of the LM Rail

Table2 shows the standard lengths and the maximum lengths of model SRS variations. If the maximum length of the desired LM rail exceeds them, jointed rails will be used. Contact THK for details. For the G dimension when a special length is required, we recommend selecting the corresponding G value from the table. The longer the G dimension is, the less stable the G area may become after installation, thus causing an adverse impact to accuracy.

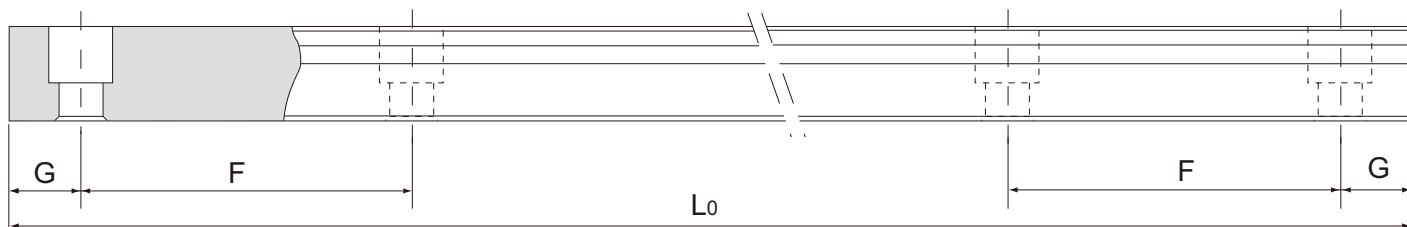


Table2 Standard Length and Maximum Length of the LM Rail for Model SRS

Unit: mm

| Model No.                         | SRS 5 | SRS 5W | SRS 7 | SRS 7W | SRS 9 | SRS 9W | SRS 12 | SRS 12W | SRS 15 | SRS 15W | SRS 20 | SRS 25 |
|-----------------------------------|-------|--------|-------|--------|-------|--------|--------|---------|--------|---------|--------|--------|
| LM rail standard length ( $L_0$ ) | 40    | 50     | 40    | 50     | 55    | 50     | 70     | 70      | 70     | 110     | 220    | 220    |
|                                   | 55    | 70     | 55    | 80     | 75    | 80     | 95     | 110     | 110    | 150     | 280    | 280    |
|                                   | 70    | 90     | 70    | 110    | 95    | 110    | 120    | 150     | 150    | 190     | 340    | 340    |
|                                   | 100   | 110    | 85    | 140    | 115   | 140    | 145    | 190     | 190    | 230     | 460    | 460    |
|                                   | 130   | 130    | 100   | 170    | 135   | 170    | 170    | 230     | 230    | 270     | 640    | 640    |
|                                   | 160   | 150    | 115   | 200    | 155   | 200    | 195    | 270     | 270    | 310     | 880    | 880    |
|                                   |       | 170    | 130   | 260    | 175   | 260    | 220    | 310     | 310    | 430     | 1000   | 1000   |
|                                   |       |        |       | 290    | 195   | 290    | 245    | 390     | 350    | 550     |        |        |
|                                   |       |        |       |        | 275   | 320    | 270    | 470     | 390    | 670     |        |        |
|                                   |       |        |       |        | 375   |        | 320    | 550     | 430    | 790     |        |        |
|                                   |       |        |       |        |       |        | 370    |         | 470    |         |        |        |
|                                   |       |        |       |        |       |        | 470    |         | 550    |         |        |        |
|                                   |       |        |       |        |       |        | 570    |         | 670    |         |        |        |
|                                   |       |        |       |        |       |        |        |         | 870    |         |        |        |
| Standard pitch F                  | 15    | 20     | 15    | 30     | 20    | 30     | 25     | 40      | 40     | 40      | 60     | 60     |
| G                                 | 5     | 5      | 5     | 10     | 7.5   | 10     | 10     | 15      | 15     | 15      | 20     | 20     |
| Max length                        | 220   | 220    | 480   | 480    | 1240  | 1430   | 2000   | 2000    | 2000   | 2000    | 1800   | 1800   |

Note1) The maximum length varies with accuracy grades. Contact THK for details.

Note2) If jointed rails are not allowed and a greater length than the maximum values above is required, contact THK.

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