

## Carriages KWSE20-L (Series KWSE..-L)

long carriage for six-row linear recirculating ball bearing and guideway assembly

The datasheet is only an overview of dimensions and basic load ratings of the selected product. Please always observe all the guidelines in these overview pages. Further information is given on many products under the menu item "Description". You can also order comprehensive information via the Catalogue ordering system ([https://www.schaeffler.de/content.schaeffler.de/en/news\\_media/index.jsp](https://www.schaeffler.de/content.schaeffler.de/en/news_media/index.jsp)) or by telephone on +49 (91 32) 82 - 28 97.

|        |               |                                                                         |
|--------|---------------|-------------------------------------------------------------------------|
| H      | 30 mm         |                                                                         |
| B      | 63 mm         |                                                                         |
| L      | 91,9 mm       | Minimum covered length for sealing the upper lubrication connections N2 |
|        |               |                                                                         |
| 1)     | Locating face |                                                                         |
| 2)     | Marking       |                                                                         |
| A1     | 21,5 mm       |                                                                         |
| A2     | 5 mm          |                                                                         |
| A3     | 5,8 mm        | Maximum screw depth in end piece 7mm                                    |
| aL max | 53 mm         | aL and aR are dependent on the guideway length.                         |
| aL min | 20 mm         | aL and aR are dependent on the guideway length.                         |
| aR max | 53 mm         | aL and aR are dependent on the guideway length.                         |
| aR min | 20 mm         | aL and aR are dependent on the guideway length.                         |

|                |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| b              | 20 mm   | Tolerance: -0,005/-0,03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| d <sub>1</sub> | 5,8 mm  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| D <sub>2</sub> | 5,5     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| G <sub>2</sub> | M6      | <p>for screws to DIN ISO 4762-12.9</p> <p>Max. tightening torque [MA]:</p> <p>M6 = 10 Nm</p> <p>M8 = 24 Nm</p> <p>M10 = 41 Nm</p> <p>M12 = 83 Nm</p> <p>M14 = 140 Nm</p> <p>M16 = 220 Nm</p> <p>M20 = 470 Nm</p> <p>The stated torques represent maximum values for the reliable transmission of forces in vibration-free, quasistatic applications (S0=1). We recommend that the tightening torques of the screw connection to the adjacent construction should be determined at the customer under the specific application conditions and operating conditions, observing the data in VDI Guideline 2230 Part 1 (2015) and the data in the description.</p> |
| h              | 18 mm   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H <sub>1</sub> | 4,6 mm  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| h <sub>1</sub> | 9,8 mm  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H <sub>4</sub> | 10,6 mm |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| H <sub>5</sub> | 5 mm    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| J <sub>B</sub> | 53 mm   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| J <sub>L</sub> | 40 mm   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| j <sub>L</sub> | 60 mm   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

|     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| JL5 | 20,19 mm | Position of lubrication hole in adjacent construction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| JLZ | 35 mm    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| K1  | M5       | <p>for screws to DIN ISO 4762-12.9</p> <p>Max. tightening torque [MA]:</p> <p>M5 = 10 Nm</p> <p>M6 = 17 Nm</p> <p>M8 = 41 Nm</p> <p>M10 = 83 Nm</p> <p>M12 = 140 Nm</p> <p>M16 = 350 Nm</p> <p>The stated torques represent maximum values for the reliable transmission of forces in vibration-free, quasistatic applications (S0=1). We recommend that the tightening torques of the screw connection to the adjacent construction should be determined at the customer under the specific application conditions and operating conditions, observing the data in VDI Guideline 2230 Part 1 (2015) and the data in the description.</p> |
| K3  | M5       | <p>for screws to DIN ISO 4762-12.9</p> <p>Max. tightening torque [MA]:</p> <p>M5 = 10 Nm</p> <p>M6 = 17 Nm</p> <p>M8 = 41 Nm</p> <p>M10 = 83 Nm</p> <p>M12 = 140 Nm</p> <p>M16 = 350 Nm</p> <p>The stated torques represent maximum values for the reliable transmission of forces in vibration-free, quasistatic applications (S0=1). We recommend that the tightening torques of the screw connection to the adjacent construction should be determined at the customer under the specific application conditions and operating conditions, observing the data in VDI Guideline 2230 Part 1 (2015) and the data in the description.</p> |
| K6  | M5       | <p>for screws to DIN ISO 7984-8.8</p> <p>Max. tightening torque [MA]:</p> <p>M5 = 5,8 Nm</p> <p>M6 = 10 Nm</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

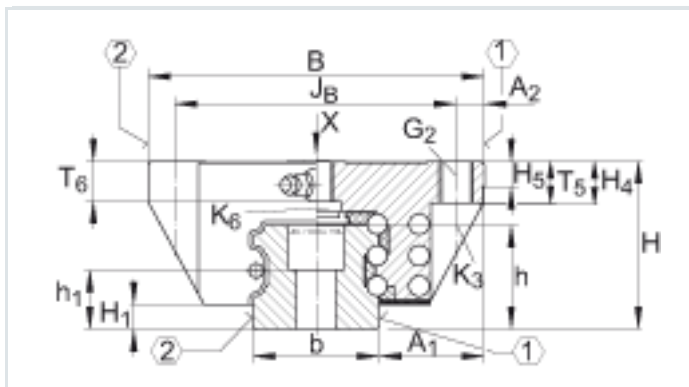
M8 = 24 Nm

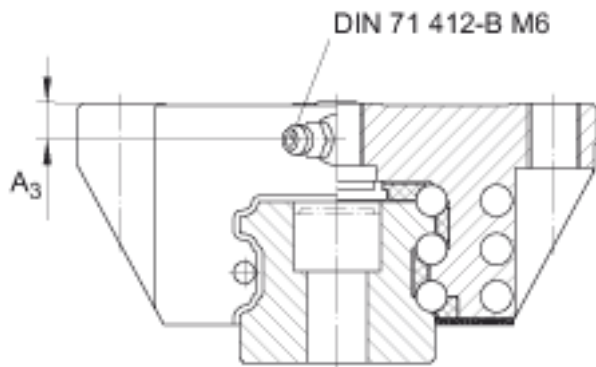
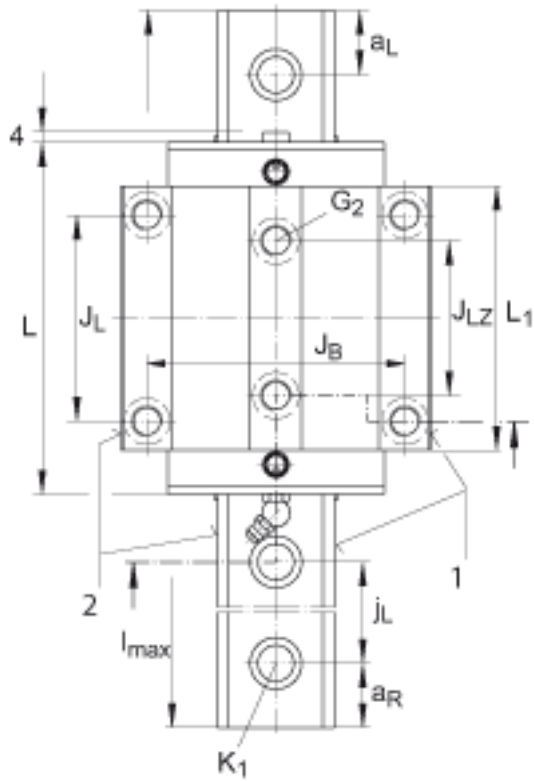
M10 = 48 Nm

The stated torques represent maximum values for the reliable transmission of forces in vibration-free, quasistatic applications ( $S_0=1$ ). We recommend that the tightening torques of the screw connection to the adjacent construction should be determined at the customer under the specific application conditions and operating conditions, observing the data in VDI Guideline 2230 Part 1 (2015) and the data in the description.

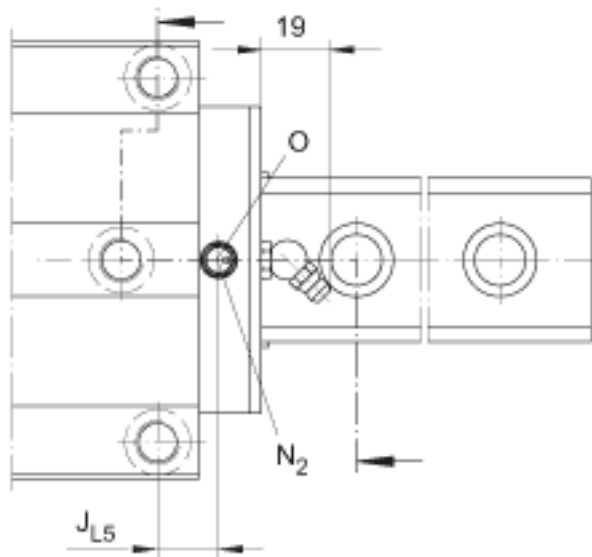
|                   |          |                                                                                                   |
|-------------------|----------|---------------------------------------------------------------------------------------------------|
| L1                | 72,9 mm  |                                                                                                   |
| l <sub>max</sub>  | 3900 mm  | Maximum length of single-piece guideways. Permissible guideway segments, see Technical principles |
| N2                | 3 mm     | Maximum diameter of lubrication hole in adjacent construction                                     |
| O                 | 3x1,5 mm | DIN 3771                                                                                          |
| T5                | 10 mm    |                                                                                                   |
| T6                | 7,2 mm   | for location from above:<br>max. screw depth for central threaded holes<br>T6 + 3 mm              |
|                   |          |                                                                                                   |
| m <sub>w</sub>    | 0,6 kg   | Mass of carriage                                                                                  |
| m <sub>s</sub>    | 2,3 kg/m | Mass of guideway                                                                                  |
| C <sub>I</sub>    | 35000 N  | Load direction I: compressive load                                                                |
| C <sub>0 I</sub>  | 83000 N  | Load direction I: compressive load                                                                |
| C <sub>II</sub>   | 25000 N  | Load direction II: tensile load                                                                   |
| C <sub>0 II</sub> | 47000 N  | Load direction II: tensile load                                                                   |

|        |                                                                                                                                            |                                   |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| CIII   | 26000 N                                                                                                                                    | Load direction III: lateral load  |
| C0 III | 48000 N                                                                                                                                    | Load direction III: lateral load  |
|        | The full load rating can only be supported if the full thread length is used and the adjacent construction is correspondingly dimensioned. |                                   |
| M0x    | 730 Nm                                                                                                                                     | Static moment rating about X axis |
| M0y    | 640 Nm                                                                                                                                     | Static moment rating about Y axis |
| M0z    | 570 Nm                                                                                                                                     | Static moment rating about Z axis |

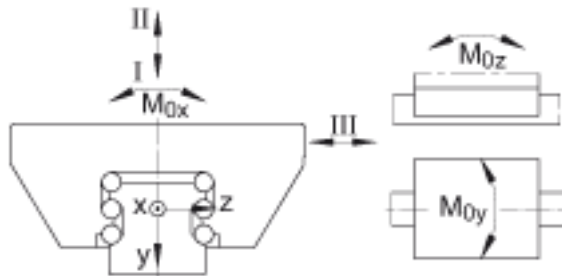




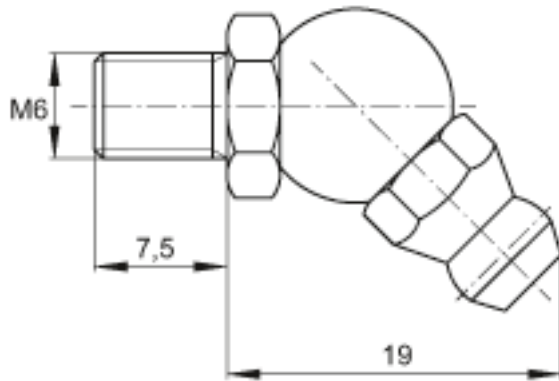
Lubrication connector on end face



Lubrication connector in top face



Load directions



Lubrication connector S05