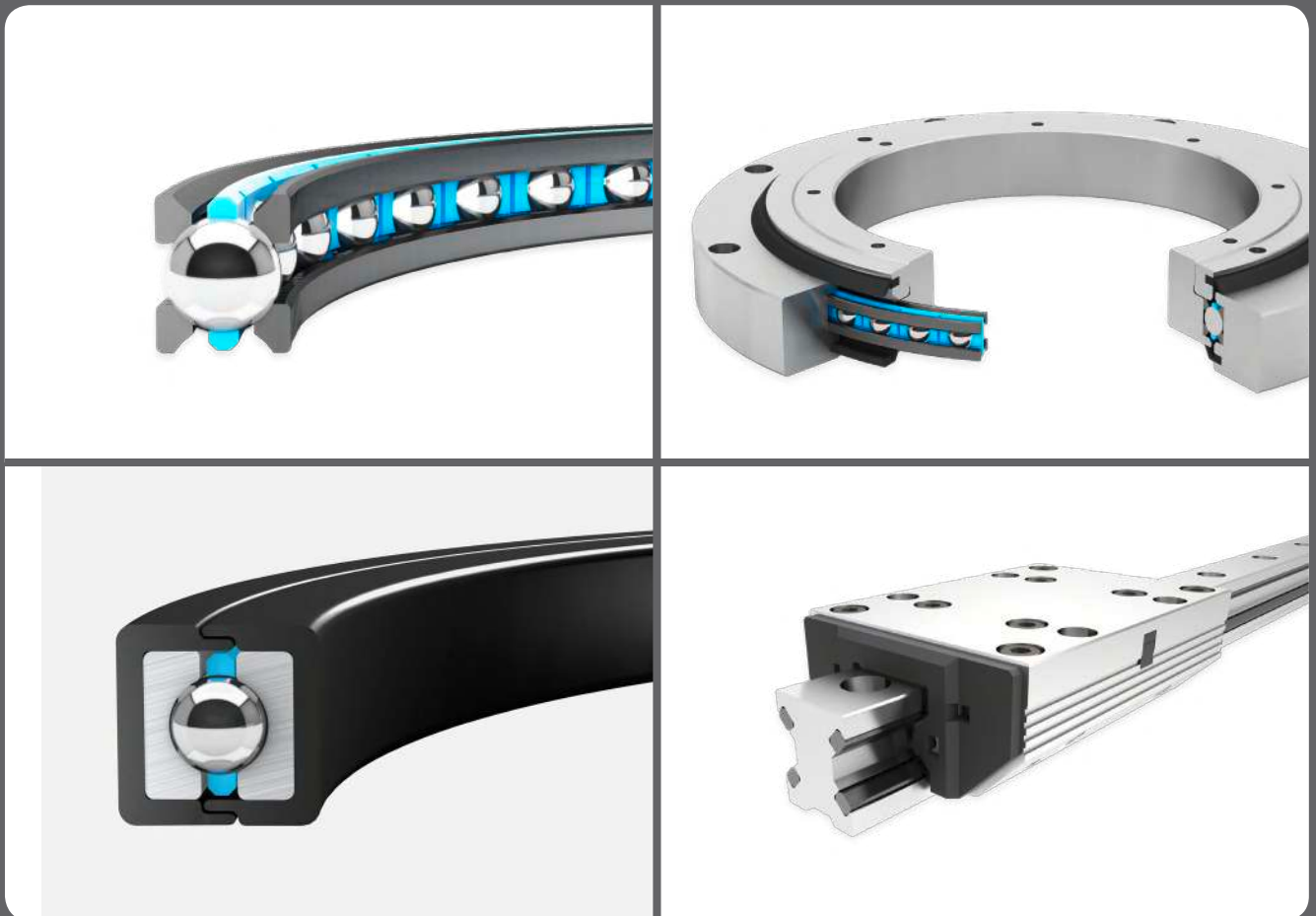

Wire Race Bearings Slim Bearings Bearing Assemblies Rotary Tables

Linear Guides Linear Tables Linear Modules

Standard Program



An ingeniously simple principle

Franke wire race bearings are based on a simple and ingenious principle. Single raceways made of hardened wire are provided with a raceway that is exactly adapted to the diameter of the rolling elements. The rolling process does not take place directly between rolling elements and enclosing construction, but with only low friction on the four open races.



Function principle and application examples:

YouTube, search for „Franke Prinziple“.

Further information, bearing selector, application samples, accessories, further data, etc.:

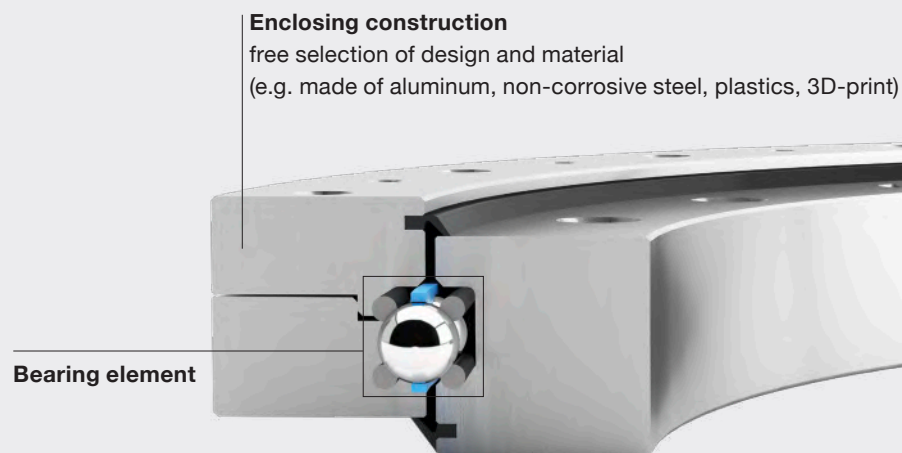
www.franke-gmbh.com

Reduced to the essentials, Franke Wire Race Bearings enable innovative designs with substantial weight, energy and space savings, while offering comparable rigidity and maximum precision over the entire service life.




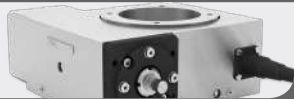
Compact, precise, lightweight and durable bearing elements and bearing assemblies

The principle of the wire race bearing allows the free design of the enclosing construction in terms of geometry and choice of materials. In addition, it is characterized by other advantages:



- 4-point system - load capacity from all directions
- Rotational resistance freely adjustable - a preloaded system
- Compact design - minimal installation space
- Insensitive to environmental influences, shock and impact elastic

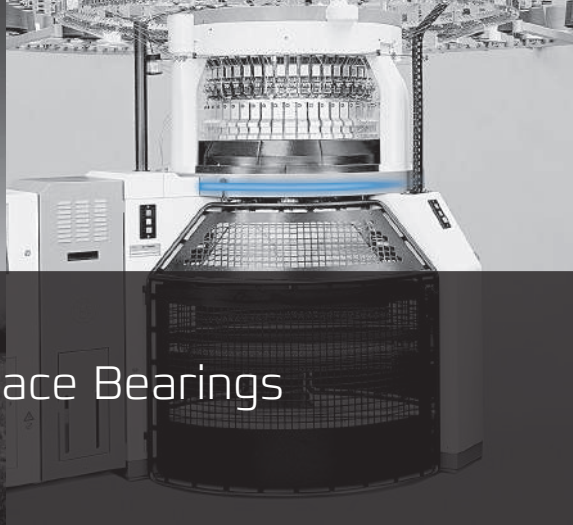
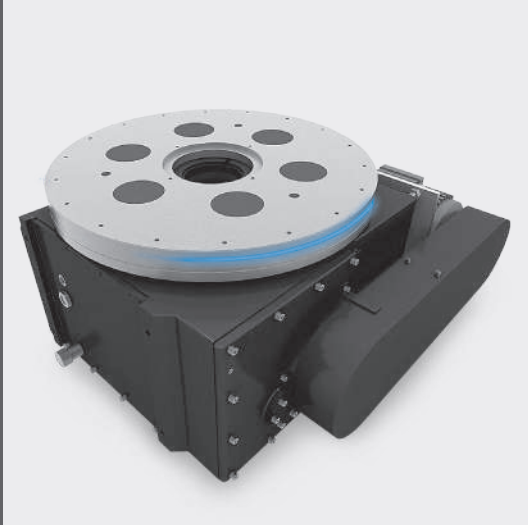
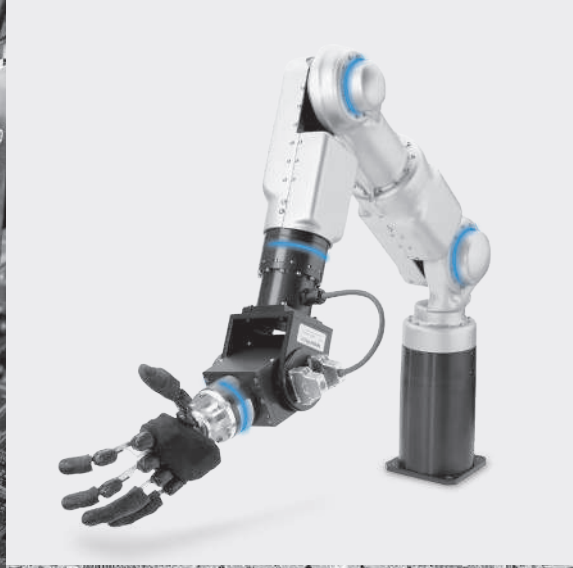
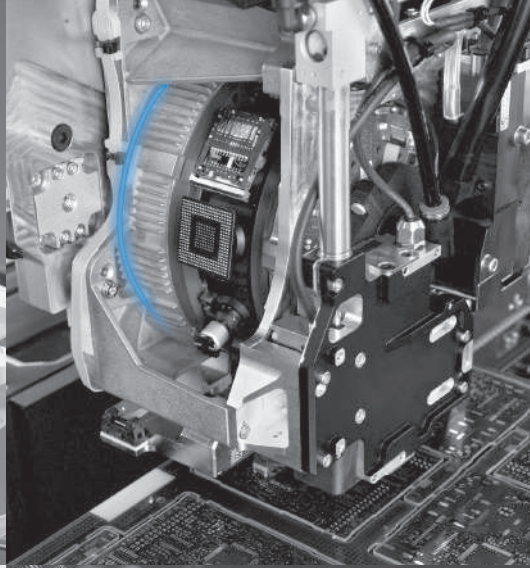


Wire Race Bearings Types and Characteristics

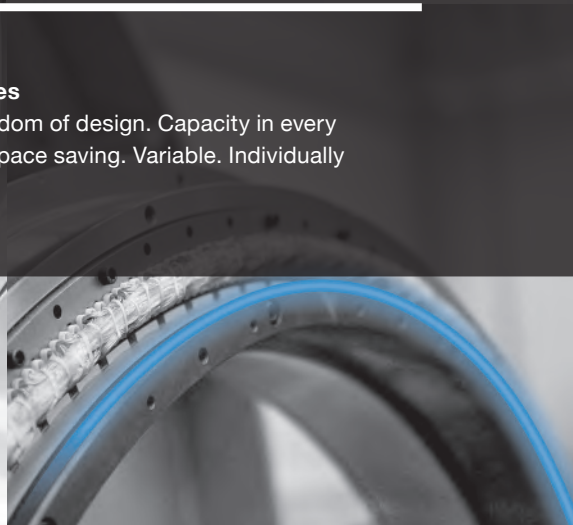
| | | | Page | Characteristics |
|--|---------------------------|-----|------|---|
|  | Bearing Elements | LEL | 8 | <ul style="list-style-type: none"> • highest possible degree of integration • cost-sensitive series applications • maximum flexibility in terms of preload, running behaviour, diameter ranges |
| | | LER | 9 | |
|  | Slim Bearings | LSA | 10 | <ul style="list-style-type: none"> • simple, space-saving integration, • cost effective alternative to conventional slim bearings • non-preloaded bearings |
| | | LSC | 11 | |
|  | Bearing Assemblies | LVA | 12 | <ul style="list-style-type: none"> • ready to install with a large selection range • preloaded system (optimized in terms of stiffness, speed, service life) • short-term availability • Type LVC for high rotational speeds • Type LVG as a double row roller bearing |
| | | LVB | 13 | |
| | | LVC | 14 | |
| | | LVD | 15 | |
| | | LVE | 16 | |
| LVG | 17 | | | |
|  | Rotary Tables | LTA | 18 | <ul style="list-style-type: none"> • Turntables for fast-turning or high-precision handling and measuring tasks • Bearing assemblies with direct drive • maximum flexibility in terms of preload, running characteristics, diameter ranges |
| | | LTB | 19 | |

Linear Systems Types and Characteristics

| | | | | |
|---|---|-----|----|--|
|  | Linear Guides | FDA | 22 | <ul style="list-style-type: none"> • Aluminum roller guides in different variants (eg Niro, lubricant-free, LowCost) • all variants with inserted steel raceways • large rollers for easy and quiet running • Sliding resistance individually adjustable |
| | | FDB | | |
| | | FDC | | |
| | | FDD | | |
| | | FDE | | |
| | | FDG | | |
| | | FDH | | |
|  | Linear Tables Linear Modules | FTB | 25 | <ul style="list-style-type: none"> • motorized modules with stroke lengths up to 7 m • Tooth belt or spindle drive • Linear table for exact positioning |
| | | FTC | 26 | |
| | | FTD | 27 | |

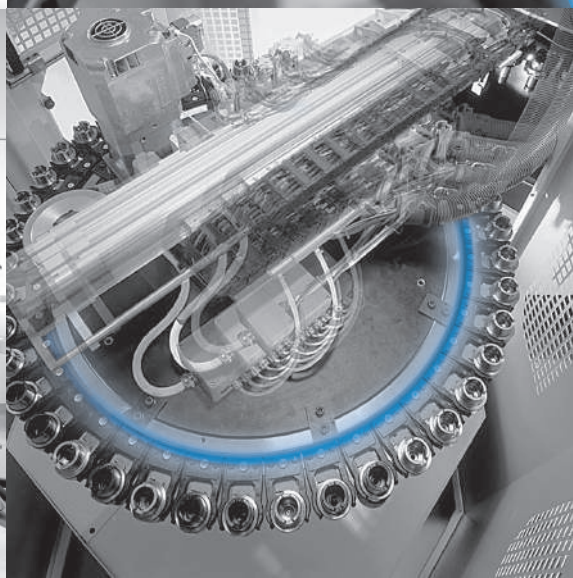
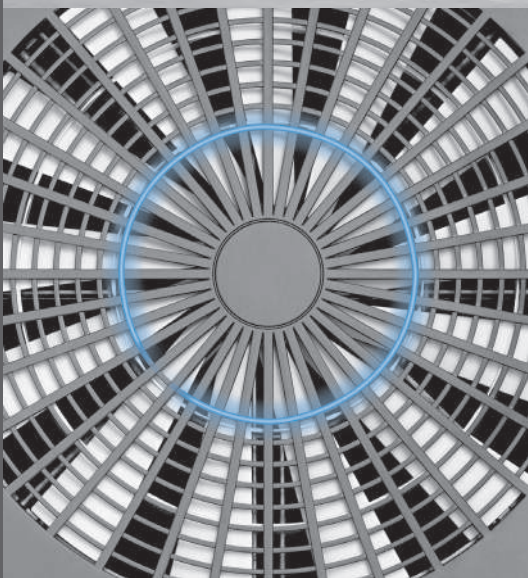


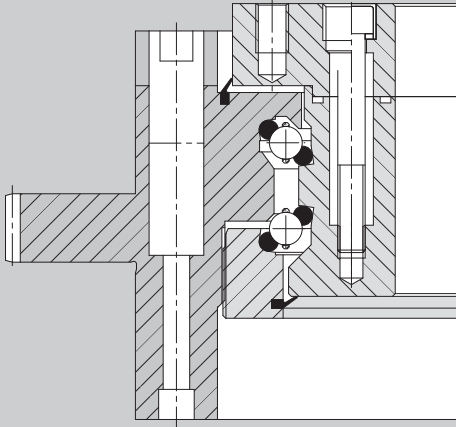
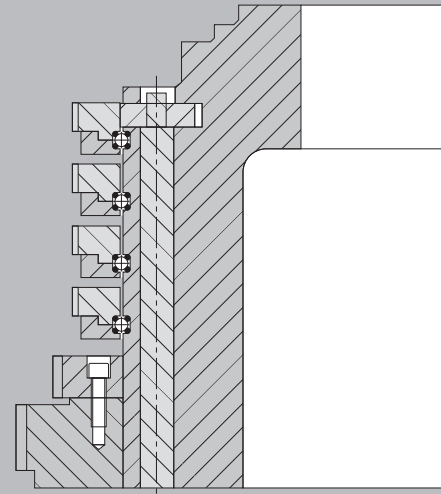
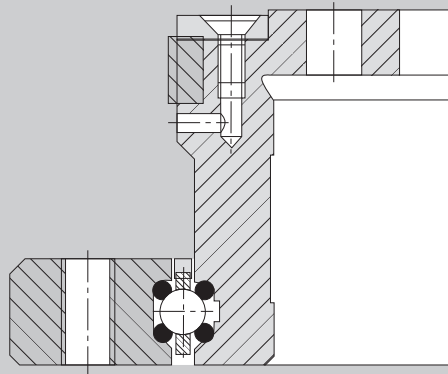
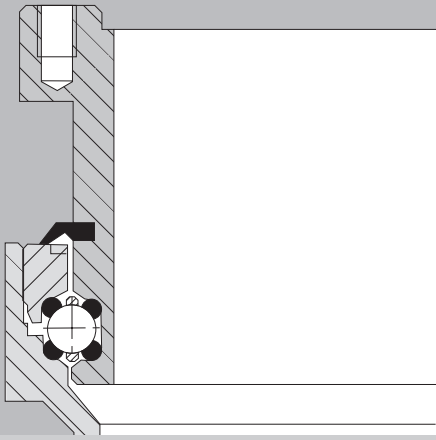
Wire Race Bearings



In all Branches

Universal freedom of design. Capacity in every application. Space saving. Variable. Individually customizable.

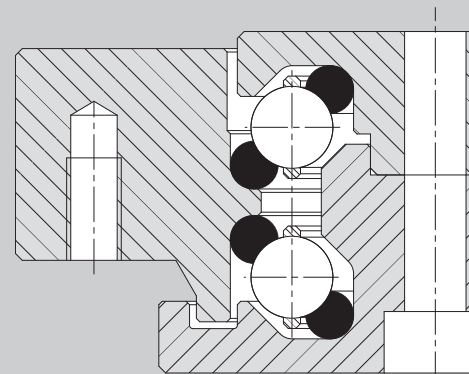
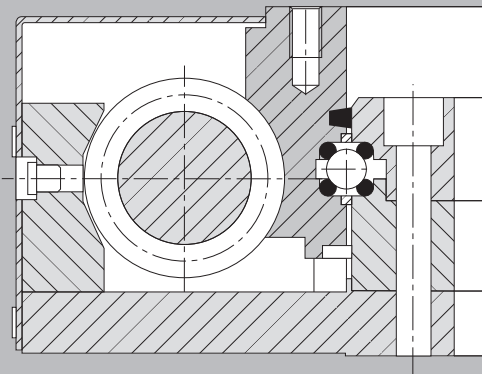
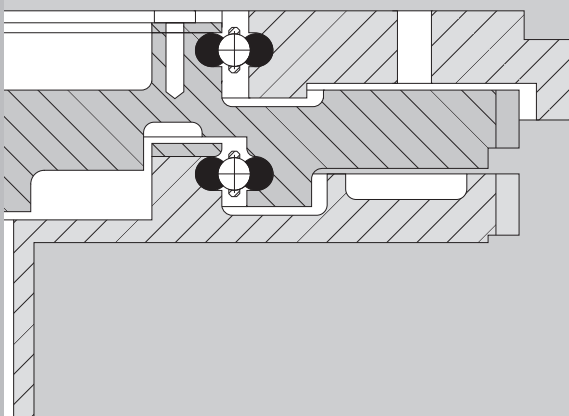
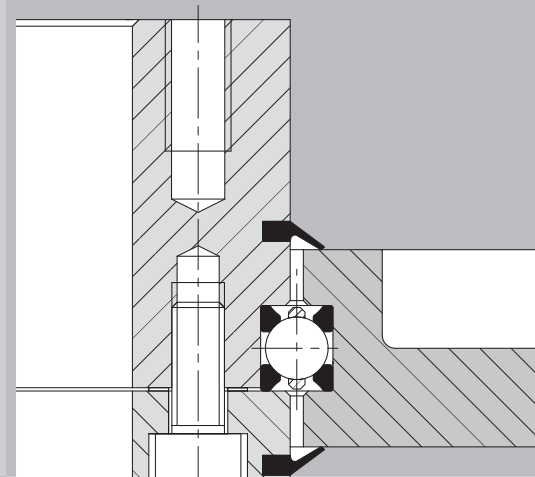
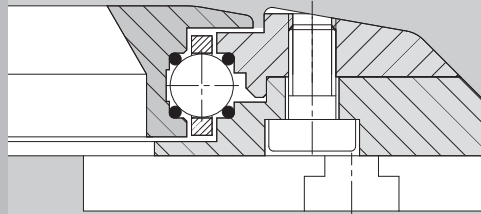
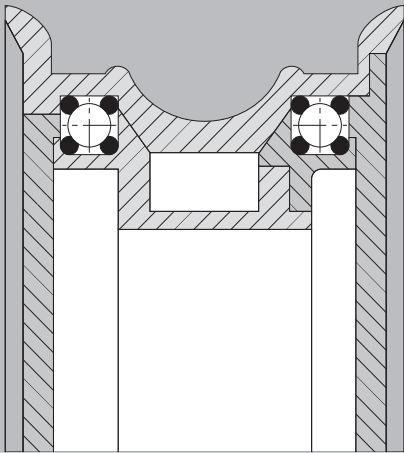




Constructive examples

Greatest possible freedom

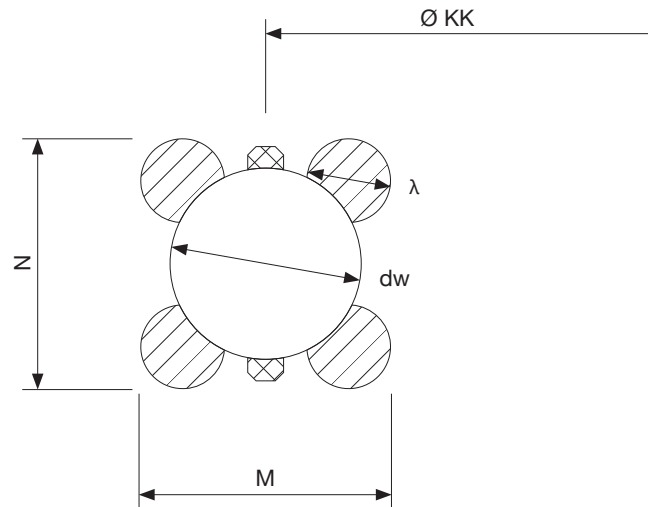
The housing parts are not directly exposed to the load of the rolling elements and can be extremely thin-walled. Together with the small mounting space of the wire race bearings compact and lightweight constructions can easily be realised.



Bearing Elements

Type LEL

Ground Raceways



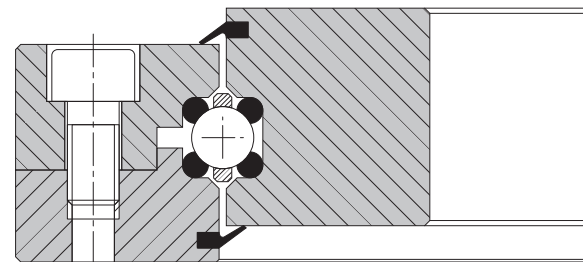
Dimensions

| Size | Dimensions mm | | | | Load rating kN | | | | stat. moment kNm C_{om} | Weight kg |
|--------|------------------|---------------|-------|-----|-------------------|------------|----------|----------|---------------------------------|--------------|
| | Ø KK | M x N | dw | λ | C_{oa} | C_{or} | C_a | C_r | | |
| LEL1,5 | 70 - 150 | 5,9 x 5,9 | 5 | 1,5 | 13 - 30 | 6 - 14 | 7 - 10 | 6 - 8 | 0,2 - 1 | 0,04 - 0,09 |
| LEL2,5 | 160 - 300 | 9,2 x 9,2 | 8 | 2,5 | 73 - 141 | 35 - 66 | 20 - 25 | 17 - 22 | 3 - 10 | 0,10 - 0,18 |
| LEL4 | 200 - 1500 | 12,86 x 12,86 | 9,525 | 4 | 118 - 905 | 55 - 426 | 26 - 55 | 23 - 48 | 6 - 319 | 0,39 - 2,94 |
| LEL5 | 220 - 1500 | 15,5 x 15,5 | 12 | 5 | 257 - 1782 | 121 - 839 | 41 - 83 | 35 - 72 | 13 - 629 | 0,70 - 4,77 |
| LEL7 | 340 - 2000 | 20,9 x 20,9 | 16 | 7 | 441 - 2629 | 207 - 1237 | 62 - 119 | 53 - 103 | 35 - 1237 | 1,89 - 11,24 |

Characteristics

Franke bearing elements in type LEL meet high standards in terms of runnability and accuracy. Their hardened and CNC-ground raceways, along with the ideal geometric adjustment of ball and raceway radius, lend them outstanding bearing properties. Bearing elements in the LEL type permit the greatest possible freedom of bearing design. The standard mounting space is between 5.9 mm and 20.9 mm. Race ring thickness of up to 20 mm and bearing sizes up to 50 mm are possible to meet special requirements.

Constructive example



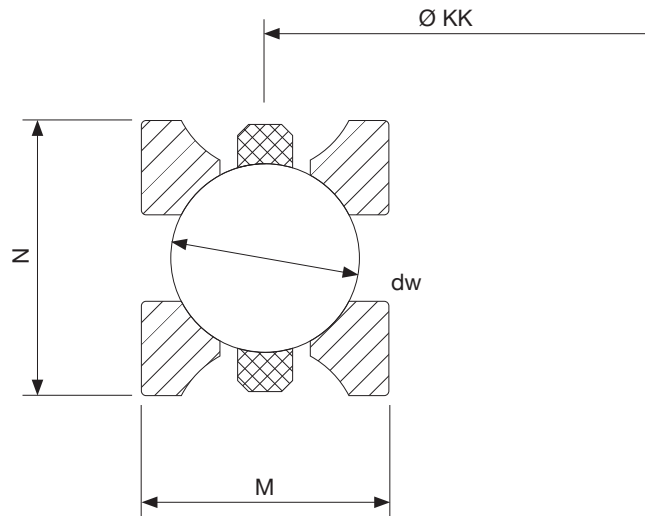
Technical details

| | |
|---------------------------|---|
| Material | Ball race rings: 54SiCr6, rolling element: 100Cr6, cage: PA12 |
| Temperature in use | -30 °C to +80 °C, briefly up to +100 °C |
| Circumfer. speed | max. 5 m/s, without seals max. 10 m/s |
| Lubricant grease | Klüber ISOFLEX TOPAS NCA52 |

Bearing Element

Type LER

Rectangular profile/profiled raceway



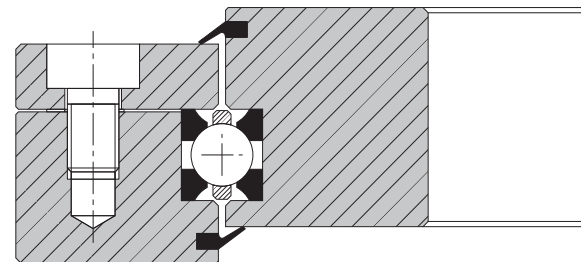
Dimensions

| Size | Dimensions mm | | | Load rating kN | | | | stat. moment kNm | Weight kg |
|------|------------------|--------------|-------|-------------------|-----------|----------|---------|---------------------|--------------|
| | Ø KK | M x N | dw | C_{0a} | C_{0r} | C_a | C_r | | |
| LER2 | 80 - 400 | 7,5 x 9 | 6 | 28 - 142 | 13 - 67 | 10 - 18 | 8 - 15 | 1 - 13 | 0,07 - 0,34 |
| LER3 | 100 - 1500 | 11 x 13 | 9,525 | 54 - 847 | 25 - 398 | 18 - 52 | 16 - 45 | 1 - 299 | 0,13 - 2,63 |
| LER4 | 200 - 1500 | 14 x 16 | 12 | 174 - 1348 | 82 - 635 | 44 - 94 | 38 - 82 | 8 - 476 | 0,61 - 4,59 |
| LER5 | 250 - 1800 | 15,75 x 17,5 | 12 | 260 - 1925 | 122 - 906 | 48 - 101 | 42 - 87 | 15 - 815 | 0,95 - 6,87 |

Characteristics

Franke bearing elements in type LER are designed for medium rotational speeds and accuracies. They run smoothly, possess high dynamism and require just compact mounting space. The straight contact surface ensures simple integration in the mating structure and also a high rigidity. The attractive price makes this bearing element type LER an economic solution. LER are generally mounted free from clearance. The preload can be defined individually to meet the specific requirement. See 'Technical information' for the adjustment methods.

Constructive example



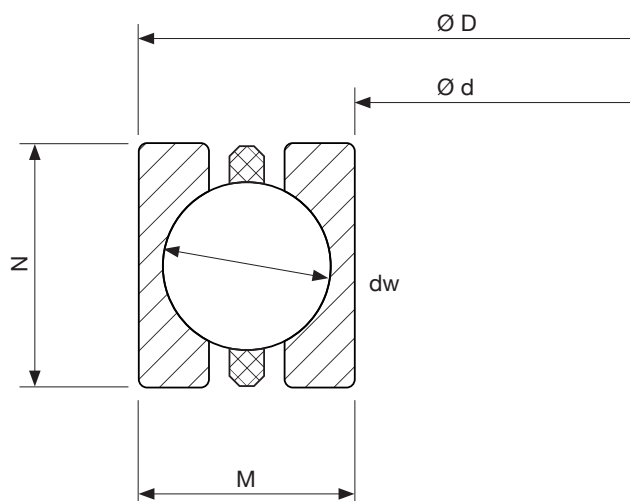
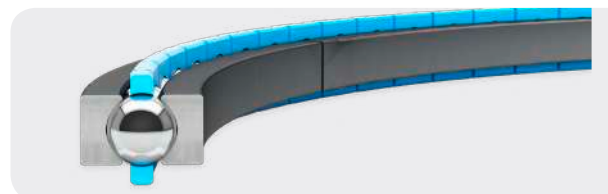
Technical details

| | |
|---------------------------|---|
| Material | Ball race rings: 54SiCr6, rolling element: 100Cr6, cage: PA12 |
| Temperature in use | -30 °C to +80 °C, briefly up to +100 °C |
| Circumfer. speed | max. 5 m/s, without seals max. 10 m/s |
| Lubricant grease | Klüber ISOFLEX TOPAS NCA52 |

Slim Bearings

Type LSA

2 race rings/profiled raceways



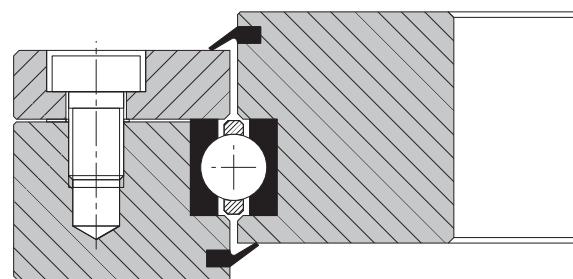
Dimensions

| Size | Dimensions mm | | | | Load rating kN | | | | stat. moment kNm | Weight kg |
|------|------------------|-------------|-------------|----|-------------------|-----------------|----------------|----------------|---------------------|--------------|
| | Ø D | Ø d | M x N | dw | C _{oa} | C _{or} | C _a | C _r | C _{om} | |
| LSA4 | 90,2 - 395 | 76,2 - 381 | 7 x 4 | 4 | 20 - 95 | 9 - 45 | 5 - 10 | 5 - 8 | 0,4 - 9 | 0,04 - 0,19 |
| LSA6 | 127 - 393,7 | 114,3 - 381 | 6,35 x 6,40 | 4 | 41 - 131 | 19 - 62 | 6 - 10 | 5 - 8 | 1 - 12 | 0,08 - 0,27 |
| LSA8 | 155,58 - 777,88 | 139,7 - 762 | 7,94 x 7,94 | 5 | 55 - 294 | 26 - 138 | 10 - 18 | 9 - 16 | 2 - 54 | 0,13 - 0,79 |

Characteristics

Franke slim bearings of type LSA deliver a convincingly smooth run, require extremely compact mounting space, ensure simple assembly and come at a favorable price. Slim bearings type LSA consist of one inner and one outer race ring with hardened and profiled raceway and a plastic cage with retained balls. The rolling elements touch the race rings at two points each, hence ensuring the 4-point system. The race rings are separated; their diameter can therefore be altered elastically for mounting.

Constructive example



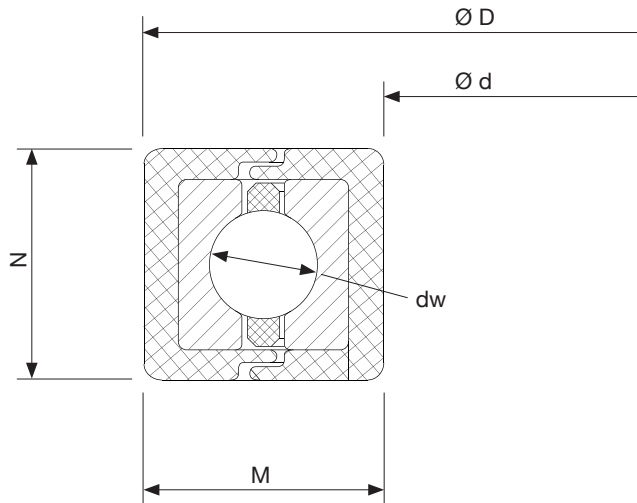
Technical details

| | |
|---------------------------|---|
| Material | Ball race rings: 54SiCr6, rolling element: 100Cr6, cage: PA12 |
| Temperature in use | -30 °C to +80 °C, briefly up to +100 °C |
| Circumfer. speed | max. 5 m/s, without seals max. 10 m/s |
| Lubricant grease | Klüber ISOFLEX TOPAS NCA52/Shell Gadus S3 V220 |

Slim Bearings

Type LSC

2 race rings/profiled/Elastomer sleeve



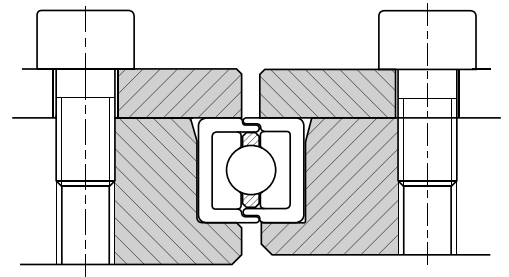
Dimensions

| Größe | Dimensions mm | | | | Load rating kN | | | | stat. moment kNm | Weight kg |
|-------|------------------|-----------------|---------------|----|-------------------|-----------------|----------------|----------------|---------------------|--------------|
| | Ø D | Ø d | M x N | dw | C _{oa} | C _{or} | C _a | C _r | C _{om} | |
| LSC4 | 119,25 - 398,65 | 97,95 - 377,35 | 10,65 x 6 | 4 | 26 - 95 | 12 - 45 | 6 - 10 | 5 - 8 | 0,7 - 9 | 0,05 - 0,19 |
| LSC8 | 158,81 - 781,11 | 136,47 - 758,77 | 11,17 x 10,74 | 5 | 55 - 294 | 26 - 138 | 10 - 18 | 9 - 16 | 2 - 54 | 0,16 - 0,84 |

Characteristics

Franke slim bearings of type LSC deliver a convincingly smooth run, require extremely compact mounting space, ensure simple assembly and come at a favorable price. Slim bearings type LSC consist of an inner and outer race ring with a hardened and profiled raceway and a plastic cage with retained balls. They are covered by elastomer profiles, which take over the sealing, tolerance compensation and vibration elimination of the bearing. Due to the overlapping lips of the elastomer sleeves further sealing of the bearing is not necessary.

Constructive example



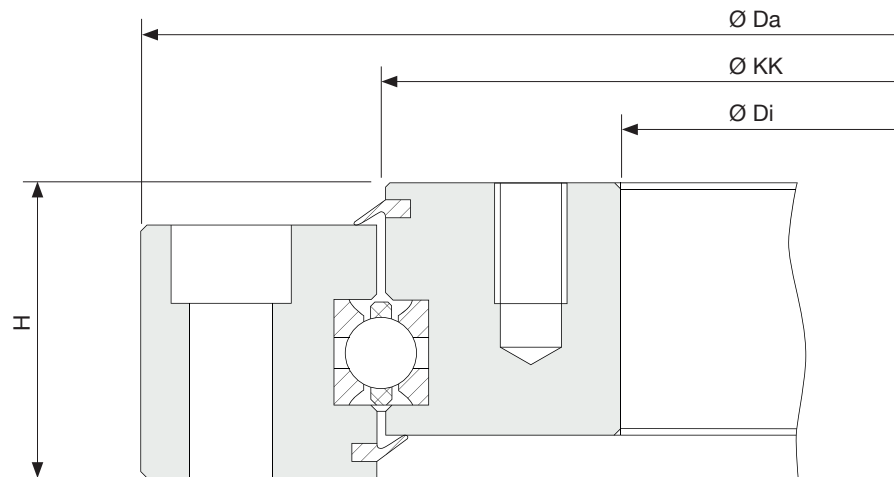
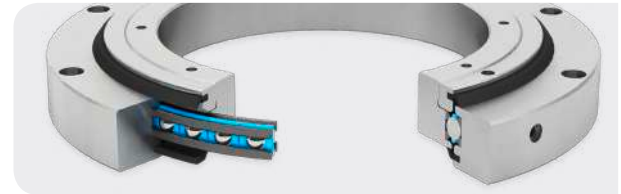
Technical details

| | |
|---------------------------|---|
| Material | Ball race rings: 54SiCr6, rolling element: 100Cr6, cage: PA12, Elastomer: NBR |
| Temperature in use | -30 °C to +80 °C, briefly up to +100 °C |
| Circumfer. speed | max. 5 m/s, without seals max. 10 m/s |
| Lubricant grease | Shell Gadus S3 V220 |

Bearing Assemblies

Type LVA

Steel Version



Dimensions

| Size* | Dimensions mm | | | | Load rating kN | | | | stat. moment | Weight | Available |
|---------|---------------|------|------|----|-----------------|-----------------|----------------|----------------|---------------------|--------|------------|
| | Ø KK | Ø Da | Ø Di | H | C _{oa} | C _{or} | C _a | C _r | C _{om} kNm | kg | |
| LVA0100 | 100 | 150 | 50 | 34 | 54 | 25 | 18 | 16 | 1 | 3,0 | from Stock |
| LVA0150 | 150 | 200 | 100 | 34 | 82 | 39 | 22 | 19 | 3 | 4,6 | from Stock |
| LVA0200 | 200 | 250 | 150 | 34 | 110 | 52 | 24 | 21 | 5 | 6,1 | from Stock |
| LVA0250 | 250 | 300 | 200 | 34 | 138 | 65 | 26 | 23 | 8 | 7,6 | from Stock |
| LVA0300 | 300 | 360 | 240 | 38 | 166 | 78 | 28 | 24 | 12 | 12,8 | from Stock |
| LVA0400 | 400 | 470 | 330 | 44 | 424 | 199 | 54 | 47 | 40 | 23,7 | from Stock |
| LVA0500 | 500 | 580 | 420 | 49 | 530 | 249 | 59 | 51 | 62 | 39,1 | from Stock |
| LVA0600 | 600 | 680 | 520 | 49 | 635 | 299 | 63 | 54 | 63 | 46,9 | from Stock |
| LVA1800 | 1800 | 1930 | 1670 | 90 | 2367 | 1114 | 114 | 99 | 1003 | 449,0 | |

*Intermediate sizes and other diameters can be found at www.franke-gmbh.com

Characteristics

LVA is a bearing assembly with housing rings made of steel and integrated bearing element. Franke bearing assemblies in type LVA are designed for medium rotational speeds and accuracies. They are available on short notice, in some cases even from the warehouse. Franke bearing assemblies type LVA are ready-to-use, complete bearings with integrated Wire Race Bearings. Designed as 4-point bearings, they absorb equal load from all sides and are insensitive to impact and vibration. The bearing assemblies are sealed on both sides and set free from clearance and are preloaded.

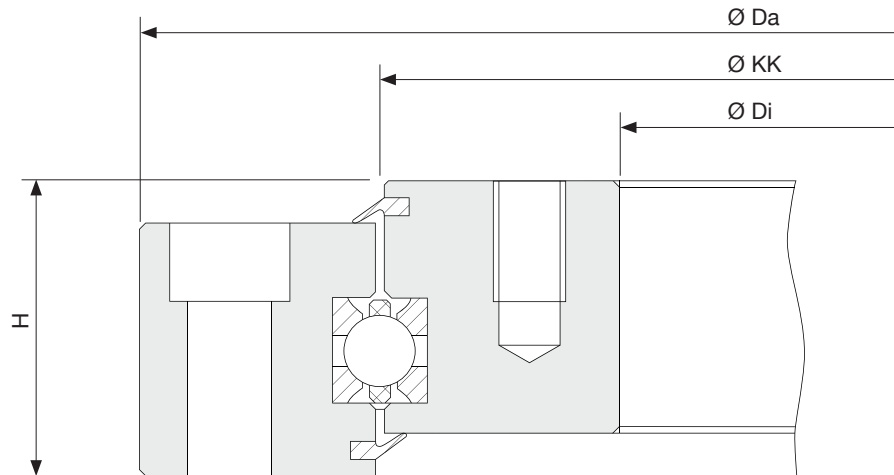
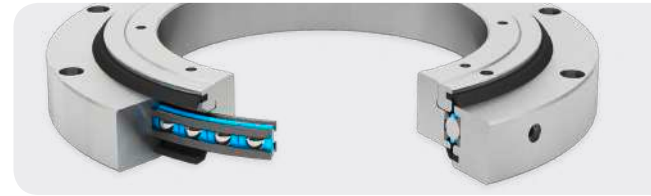
Technical details

| | |
|---------------------------|---|
| Material | Inner / Outer ring: C45N, ball race rings: 54SiCr6, rolling elements: 100Cr6, cage: PA12, seal: NBR |
| Temperature in use | -30 °C to +80 °C, briefly up to +100 °C |
| Circumfer. speed | max. 5 m/s, without seals max. 10 m/s |
| Lubricant grease | Klüber Isoflex Topas NCA52 |
| Lubrication | using grease nipples according to DIN 3405 |

Bearing Assembly

Type LVB

Aluminum Version



Dimensions

| Size* | Dimensions mm | | | | Load rating kN | | | | stat. moment kNm C_{om} | Weight kg | Available |
|---------|------------------|------|------|----|-------------------|----------|-------|-------|---------------------------------|--------------|------------|
| | Ø KK | Ø Da | Ø Di | H | C_{oa} | C_{or} | C_a | C_r | | | |
| LVB0100 | 100 | 150 | 50 | 34 | 54 | 25 | 18 | 16 | 1 | 1,2 | from Stock |
| LVB0150 | 150 | 200 | 100 | 34 | 82 | 39 | 22 | 19 | 3 | 1,8 | |
| LVB0200 | 200 | 250 | 150 | 34 | 110 | 52 | 24 | 21 | 5 | 2,4 | from Stock |
| LVB0250 | 250 | 300 | 200 | 34 | 138 | 65 | 26 | 23 | 8 | 3,0 | |
| LVB0300 | 300 | 360 | 240 | 38 | 166 | 78 | 28 | 24 | 12 | 4,9 | from Stock |
| LVB0400 | 400 | 470 | 330 | 44 | 424 | 199 | 54 | 47 | 40 | 9,5 | |
| LVB0500 | 500 | 580 | 420 | 49 | 530 | 249 | 59 | 51 | 62 | 15,0 | |
| LVB0600 | 600 | 680 | 520 | 49 | 635 | 299 | 63 | 54 | 63 | 18,2 | |
| LVB1800 | 1800 | 1930 | 1670 | 90 | 2367 | 1114 | 114 | 99 | 1003 | 166,7 | |

*Intermediate sizes and other diameters can be found at www.franke-gmbh.com

Characteristics

LVB is a bearing assembly with housing rings made of aluminium and integrated bearing element. Franke bearing assemblies in type LVB are designed for medium rotational speeds and accuracies. They are available on short notice, in some cases even from stock. Franke bearing assemblies type LVB are ready-to-use, complete bearings with integrated Wire Race Bearings. Designed as 4-point bearings, they absorb equal load from all sides and are insensitive to impact and vibration. The bearing assemblies are sealed on both sides and set free from clearance and are preloaded.

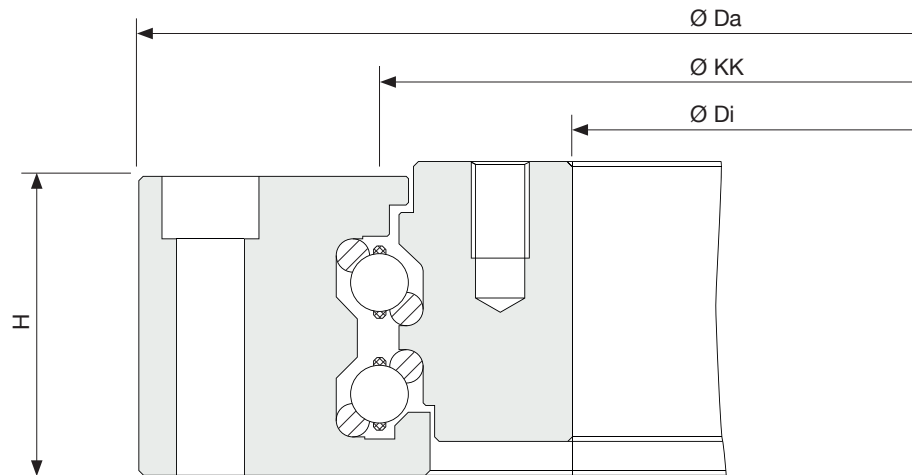
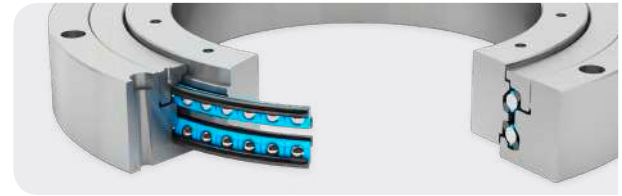
Technical details

| | |
|---------------------------|---|
| Material | Inner / outer ring: AlZnMgCu05, ball race rings: 54SiCr6, rolling elements: 100Cr6, cage: PA12, seal: NBR |
| Temperature in use | -30 °C bis +80 °C, briefly up to +100 °C |
| Circumfer. speed | max. 5 m/s, without seals max. 10 m/s |
| Lubricant grease | Klüber Isoflex Topas NCA52 |
| Lubrication | using grease nipples according to DIN 3405 |

Beaing Assemblies

Type LVC

Angular Ball Bearing / Steel Version



Dimensions

| Size* | Dimensions mm | | | | Load rating kN | | | | stat. moment kNm | Weight kg |
|---------|------------------|------|------|----|-------------------|-----------------|----------------|----------------|---------------------|--------------|
| | Ø KK | Ø Da | Ø Di | H | C _{oa} | C _{or} | C _a | C _r | C _{om} | |
| LVC0100 | 100 | 150 | 50 | 34 | 55 | 26 | 11 | 10 | 1 | 3,7 |
| LVC0200 | 200 | 250 | 150 | 34 | 113 | 53 | 15 | 13 | 7 | 7,4 |
| LVC0400 | 400 | 480 | 330 | 57 | 318 | 150 | 33 | 27 | 30 | 36,7 |
| LVC0600 | 600 | 700 | 520 | 65 | 816 | 384 | 67 | 58 | 115 | 76,2 |
| LVC0800 | 800 | 900 | 720 | 65 | 1094 | 515 | 74 | 64 | 206 | 101,1 |
| LVC1000 | 1000 | 1100 | 920 | 65 | 1372 | 646 | 81 | 70 | 323 | 126,0 |
| LVC1200 | 1200 | 1300 | 1085 | 69 | 1644 | 774 | 86 | 75 | 464 | 192,6 |
| LVC1800 | 1800 | 1930 | 1670 | 84 | 2472 | 1163 | 100 | 87 | 1047 | 437,9 |

*Intermediate sizes and other diameters can be found at www.franke-gmbh.com

Characteristics

LVC is a bearing assembly designed as double-row angular contact ball bearing made of steel with two integrated bearing elements. Franke bearing assemblies in type LVC are suitable for the highest circumferential speeds. Convincing aspects include their high dynamism and low rotational resistance. Franke bearing assemblies type LVC are ready-to-use, complete bearings. The double-row angular contact ball bearing in 4-point adjustment is preloaded free of clearance. It is insensitive to impact and vibration. The low rotational resistance and the minimal breakaway torque reduce the necessary drive power. Bearing assemblies type LVC operate practically without maintenance and achieve a high service life due to the low friction values.

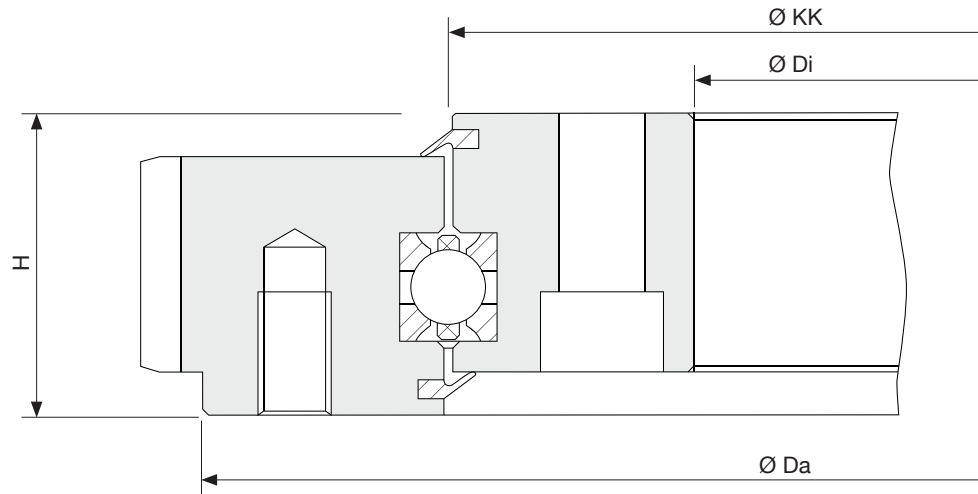
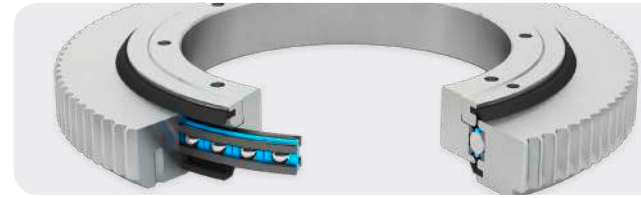
Technical details

| | |
|---------------------------|---|
| Material | Inner / outer ring C45N, ball race rings: 54SiCr6, rolling elements: 100Cr6, cage: PA12 |
| Temperature in use | -30 °C to +80 °C, briefly up to +100 °C |
| Circumfer. speed | max. 20 m/s |
| Lubricant grease | Klüber Isoflex Topas NCA52 |
| Lubrication | using grease nipples according to DIN 3405 |

Bearing Assemblies

Type LVD

External Gear/Steel Version



Dimensions

| Size* | Dimensions mm | | | | Load rating kN | | | | stat. moment | Weight | Available |
|---------|------------------|------|------|----|-------------------|-----------------|----------------|----------------|------------------------|--------|------------|
| | Ø KK | Ø Da | Ø Di | H | C _{oa} | C _{or} | C _a | C _r | kNm C _{om} | kg | |
| LVD0100 | 100 | 150 | 50 | 34 | 54 | 25 | 18 | 16 | 1 | 3,4 | |
| LVD0200 | 200 | 250 | 150 | 34 | 110 | 52 | 24 | 21 | 5 | 6,7 | from Stock |
| LVD0300 | 300 | 360 | 240 | 38 | 166 | 78 | 28 | 24 | 12 | 14,1 | from Stock |
| LVD0400 | 400 | 470 | 330 | 44 | 424 | 199 | 54 | 47 | 40 | 26,0 | from Stock |
| LVD0600 | 600 | 680 | 520 | 49 | 635 | 299 | 63 | 54 | 63 | 50,8 | |
| LVD0800 | 800 | 890 | 710 | 53 | 852 | 401 | 70 | 61 | 160 | 83,2 | |
| LVD1000 | 1000 | 1090 | 910 | 53 | 1068 | 503 | 76 | 66 | 251 | 104,0 | |
| LVD1800 | 1800 | 1930 | 1670 | 90 | 2367 | 1114 | 114 | 99 | 1003 | 484,2 | |

*Intermediate sizes and other diameters can be found at www.franke-gmbh.com

Characteristics

LVD is a bearing assembly with external gear type and housing rings made of steel and integrated bearing element. Franke bearing assemblies in type LVD are designed for medium rotational speeds and accuracies. They are available on short notice, in some cases even from stock. Franke bearing assemblies type LVD are ready-to-use, complete bearings with integrated Wire Race Bearings. Designed as 4-point bearings, they absorb equal load from all sides and are insensitive to impact and vibration. The bearing assemblies are sealed on both sides and set free from clearance and are preloaded.

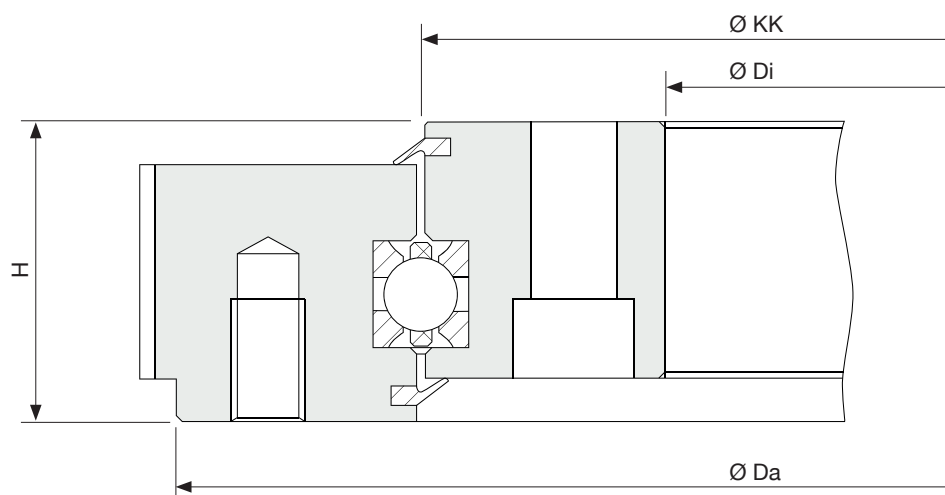
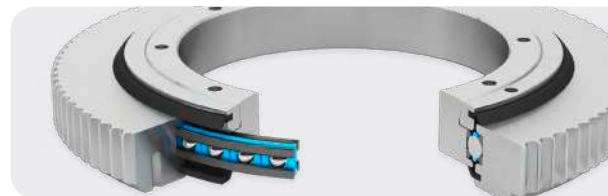
Technical details

| | |
|---------------------------|--|
| Material | Inner ring: C45N, outer ring: 42CrMo4V, ball race rings: 54SiCr6, balls: 100Cr6, cage: PA12, seal: NBR |
| Temperature in use | -30 °C to +80 °C, briefly up to +100 °C |
| Circumfer. speed | max. 5 m/s, without seals max. 10 m/s |
| Lubricant grease | Klüber Isoflex Topas NCA52 |
| Lubrication | using grease nipples according to DIN 3405 |

Bearing Assemblies

Type LVE

Toothed Belt Gear/Aluminum Version



Dimensions

| Size* | Dimensions mm | | | | Load rating kN | | | | stat. moment | Weight | Available |
|---------|------------------|------|------|----|-------------------|-----------------|----------------|----------------|-----------------|--------|------------|
| | Ø KK | Ø Da | Ø Di | H | C _{oa} | C _{or} | C _a | C _r | C _{om} | kg | |
| LVE0100 | 100 | 150 | 50 | 34 | 54 | 25 | 18 | 16 | 1 | 1,2 | |
| LVE0200 | 200 | 250 | 150 | 34 | 110 | 52 | 24 | 21 | 5 | 2,4 | from Stock |
| LVE0300 | 300 | 360 | 240 | 38 | 166 | 78 | 28 | 24 | 12 | 5,0 | from Stock |
| LVE0400 | 400 | 470 | 330 | 44 | 424 | 199 | 54 | 47 | 40 | 9,5 | from Stock |
| LVE0600 | 600 | 680 | 520 | 49 | 635 | 299 | 63 | 54 | 63 | 18,2 | |
| LVE0800 | 800 | 890 | 710 | 53 | 852 | 401 | 70 | 61 | 160 | 29,6 | |
| LVE1000 | 1000 | 1090 | 910 | 53 | 1068 | 503 | 76 | 66 | 251 | 37,0 | |
| LVE1800 | 1800 | 1930 | 1670 | 90 | 2367 | 1114 | 114 | 99 | 1003 | 181,1 | |

*Intermediate sizes and other diameters can be found at www.franke-gmbh.com

Characteristics

LVE is a bearing assembly with toothed belt gear type and housing rings made of aluminium and integrated bearing element. Franke bearing assemblies in type LVE are designed for medium rotational speeds and accuracies. They are available on short notice, in some cases even from stock. Franke bearing assemblies type LVE are ready-to-use, complete bearings with integrated Wire Race Bearings. Designed as 4-point bearings, they absorb equal load from all sides and are insensitive to impact and vibration. The bearing assemblies are sealed on both sides and set free from clearance and are preloaded.

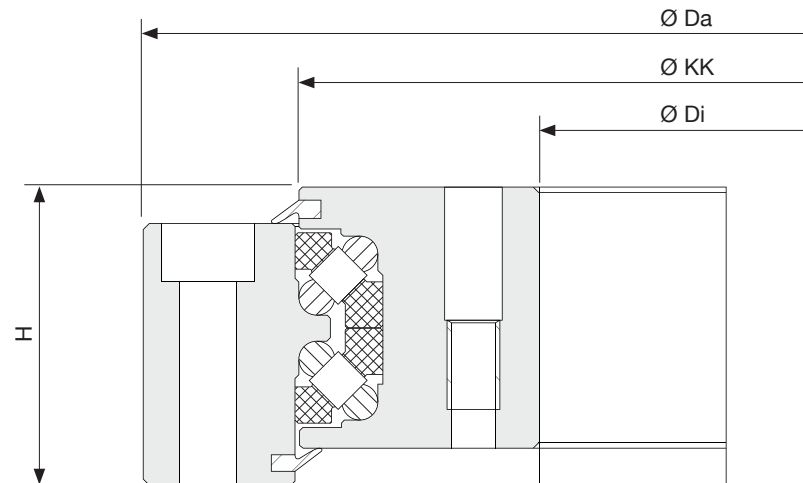
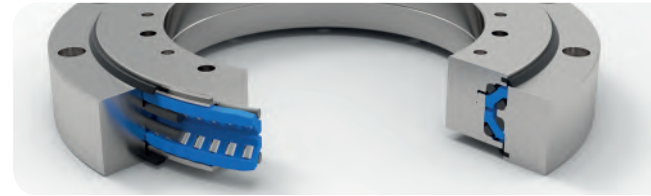
Technical details

| | |
|---------------------------|---|
| Material | Inner / outer ring: AlZnMgCu05, ball race rings: 54SiCr6, rolling elements: 100Cr6, cage: PA12, seal: NBR |
| Temperature in use | -30 °C to +80 °C, briefly up to +100 °C |
| Circumfer. speed | max. 5 m/s, without seals max. 10 m/s |
| Lubricant grease | Klüber Isoflex Topas NCA52 |
| Lubrication | using grease nipples according to DIN 3405 |

Bearing Assemblies

Type LVG

2-row Roller Bearing/Aluminum



New

Dimensions

| Size | Dimensions mm | | | | Load rating kN | | | | stat. moment kNm | Weight kg |
|---------|------------------|------|------|----|-------------------|-----------------|----------------|----------------|---------------------|--------------|
| | Ø KK | Ø Da | Ø Di | H | C _{oa} | C _{or} | C _a | C _r | C _{om} | |
| LVG0200 | 200 | 262 | 140 | 47 | 309 | 124 | 39 | 36 | 14 | 4,1 |
| LVG0300 | 300 | 375 | 223 | 57 | 617 | 247 | 78 | 72 | 39 | 9,3 |
| LVG0400 | 400 | 475 | 323 | 57 | 827 | 331 | 90 | 83 | 60 | 12,4 |

Characteristics

LVG is a 2-row angular roller bearing with aluminum housing and two integrated bearing elements. Franke bearing assemblies type LVG are suitable for highest load capacities. They convince by high rigidity, low rotational resistance and low weight. Franke bearing assemblies type LVG are ready-to-use, complete bearings with integrated Wire Race Bearings. Designed as roller bearings, they absorb equal load from all sides and are insensitive to impact and vibration. The bearing assemblies are sealed from both sides and adjusted free from clearance. Due to the housing parts made of aluminum the weight is reduced by 60% compared to steel bearings.

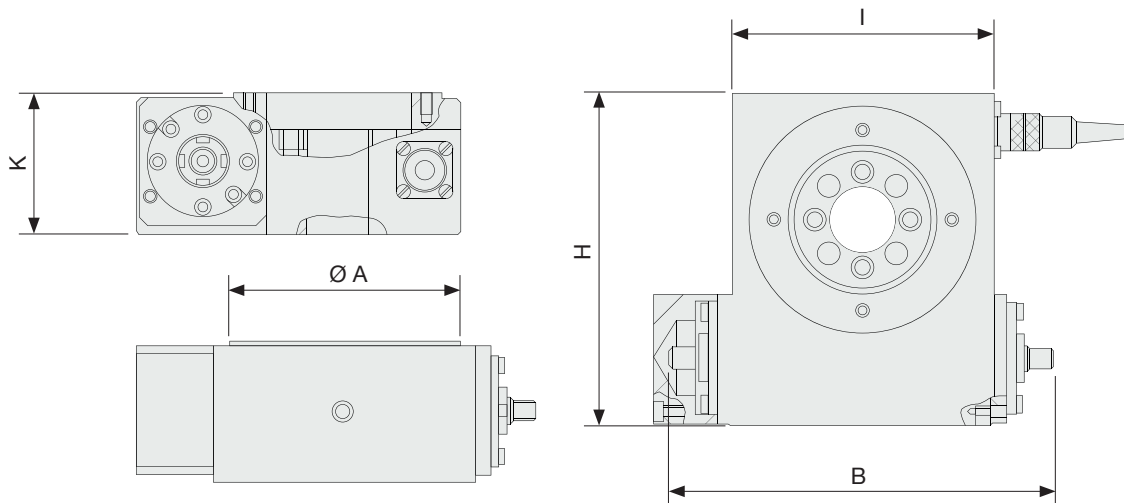
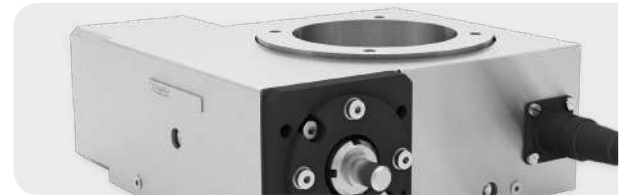
Technical details

| | |
|---------------------------|---|
| Material | Inner / Outer ring: ALZnMgCu0,5, ball race rings: CrSi70, rollers: 100Cr6, cage: POM, seal: NBR |
| Temperature in use | -30 °C to +80 °C, briefly up to +100 °C |
| Circumfer. speed | max. 4 m/s |
| Lubricant grease | Klüber Isoflex Topas NCA52 |
| Lubrication | using grease nipples according to DIN 3405 |

Rotary Tables

Type LTA

Highly dynamic / Worm Drive



Dimensions

| Size | Dimensions mm | | | | | Weight kg |
|--------|------------------|-----|-----|-----|----|--------------|
| | Ø A | B | H | I | K | |
| LTA100 | 100 | 183 | 155 | 125 | 65 | 5,5 |
| LTA200 | 200 | 278 | 255 | 220 | 70 | 10,0 |

Performance Overview

| | | LTA100 | LTA200 |
|-----------------------------|--------------|--------|--------|
| Planarity and concentricity | µm | 30 | 30 |
| Positioning accuracy | sec | 160 | 120 |
| Repeatability | sec | 20 | 14 |
| Load rating C_o | kN | 17,5 | 43 |
| Load rating C | kN | 9 | 18 |
| Tilting moment C_{om} | Nm | 289 | 433 |
| reduction | i | 18 | 36 |
| Input speed N_{1max} | U/min | 1800 | 2200 |
| Output speed N_{2max} | U/min | 100 | 61 |
| Input torque M_{1max} | Nm | 5 | 5 |
| Output torque M_{2max} | Nm | 54 | 108 |

Characteristics

Franke rotary tables of type LTA are lightweight, compact, ready-to-use positioning units. They are highly resilient and deliver outstanding radial and axial run accuracy. Franke rotary tables type LTA are versatile in use and are well-suited to light processing applications and also for dynamic handling and assembly applications.

Technical Details

Material Baseplate: Aluminium, Housing: V2A, Ball race rings: 54SiCr6, Rolling elements: 100Cr6, Worm wheel: wear-resistant bronze alloy, Worm shaft: CK45N hardened and ground

Temperature in use -10 °C to +80 °C

Mounting position any, but we recommend positions in which the drive module occupies the lowest point

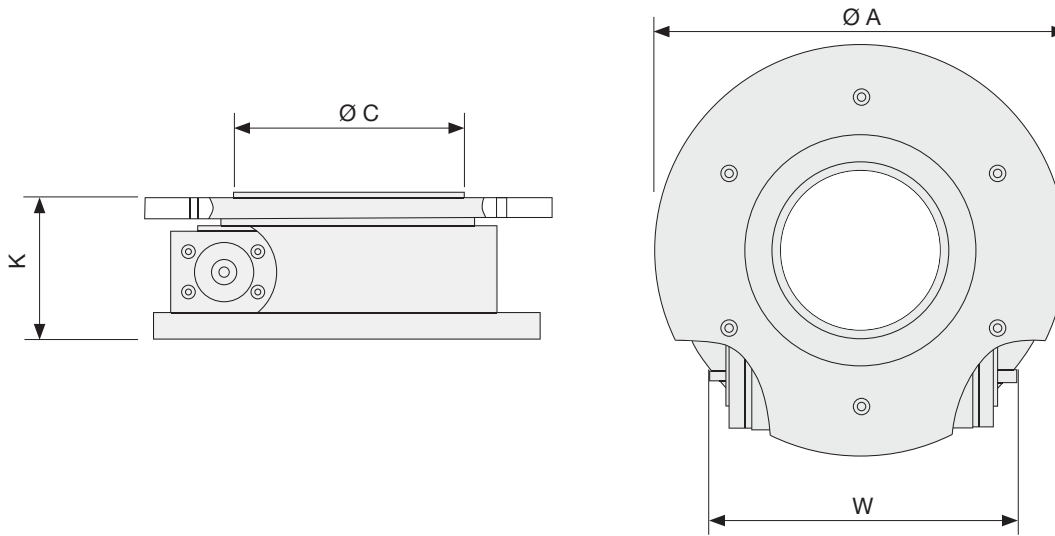
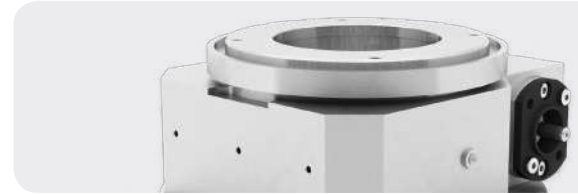
Lubrication with bearing grease via grease nipples

Option inductive proximity switch, flange/coupling to mount the motor, motorization

Rotary Tables

Type LTB

High Precision / Worm Drive



Dimensions

| Size | Dimensions mm | | | | Weight kg |
|--------|------------------|-----|-----|-----|--------------|
| | Ø A | C | K | W | |
| LTB125 | 125 | - | 75 | 135 | 3 |
| LTB175 | 175 | - | 82 | 196 | 6 |
| LTB265 | 265 | 150 | 90 | 193 | 10 |
| LTB400 | 400 | 300 | 100 | 251 | 27 |

Performance Overview

| | LTB125 | LTB175 | LTB265 | LTB400 | |
|-----------------------------|------------|--------|--------|--------|------|
| Planarity and concentricity | µm | 20 | 20 | 20 | 30 |
| Positioning accuracy | sec | 80 | 80 | 70 | 50 |
| Repeatability | sec | 16 | 14 | 10 | 8 |
| Load rating C_o | kN | 2 | 2,6 | 4,2 | 14,1 |
| Tilting moment C_{om} | Nm | 110 | 140 | 310 | 1780 |
| Reduction | i | 360 | 360 | 360 | 360 |
| Input speed N_{1max} | rpm | 2500 | 2500 | 2500 | 2500 |
| Output speed N_{2max} | rpm | 7 | 7 | 7 | 7 |
| Input torque M_{1max} | Nm | 0,7 | 0,9 | 1,5 | 2 |
| Output torque M_{2max} | Nm | 70 | 75 | 160 | 290 |

Characteristics

Franke rotary tables of type LTB are open-center, ready-to-use positioning units. They are highly resilient, lightweight (aluminium housing) and deliver outstanding ATR accuracy and discrimination. Franke rotary tables of type LTB are versatile in use and are primarily suited to movement and positioning tasks in the fields of measurement, testing and orientation.

Technical Details

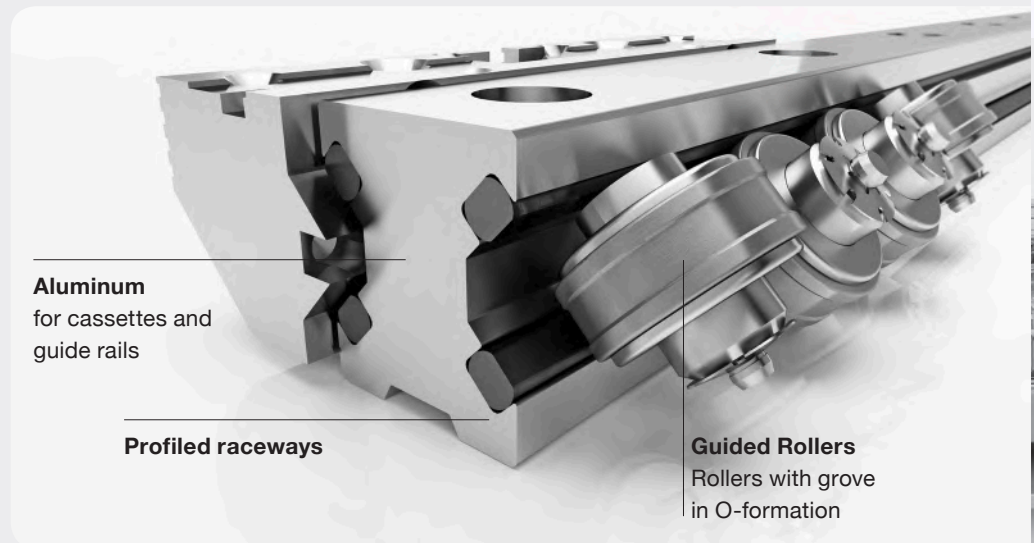
| | |
|---------------------------|--|
| Material | Baseplate: Aluminium, Housing: V2A, Ball race rings: 54SiCr6, Rolling elements: 100Cr6, Worm wheel: wear-resistant bronze alloy, Worm shaft: CK45N hardened and ground |
| Temperature in use | -10 °C to +80 °C |
| Mounting position | any, but we recommend positions in which the drive module occupies the lowest point |
| Lubrication | with bearing grease via grease nipples |
| Option | inductive proximity switch, flange/coupling to mount the motor, motorization |

Low Weight as well as smooth and easy running

Franke Aluminum Linear Systems are the best solution when it comes to speed and lightweight construction. The design principle of Franke Linear Systems makes them highly dynamic, quiet and maintenance-free. Franke Linear Systems can be modified individually to suit customer needs, thanks to their modular structure.

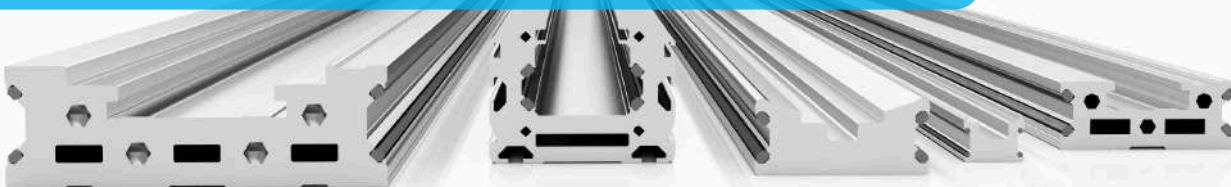
Franke Linear Systems can be modified individually to suit customer needs, thanks to their modular structure. You will always receive a solution that is ideally tailored to match your specific applications due to the use of various rail profiles and roller shoes, special cassettes, variable track widths or an integrated direct drive.

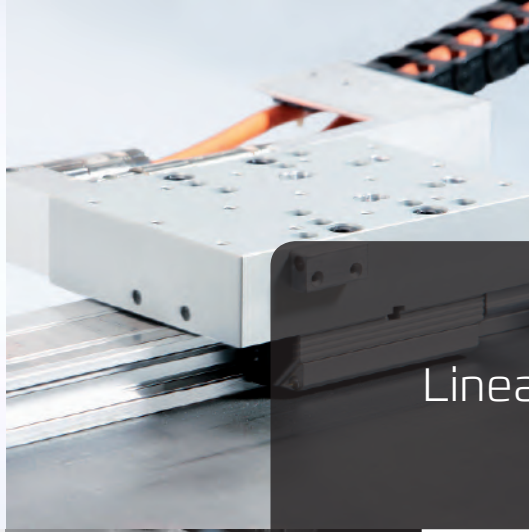
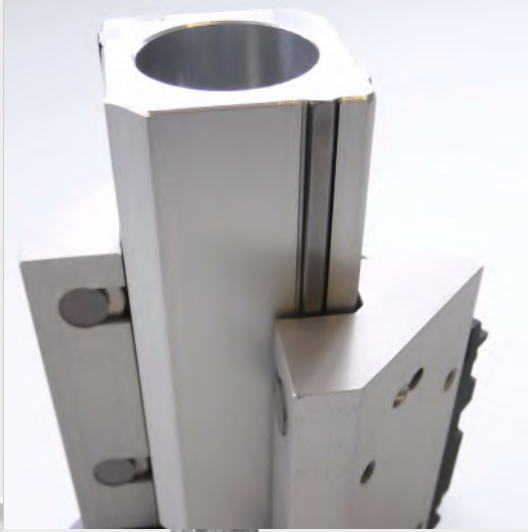
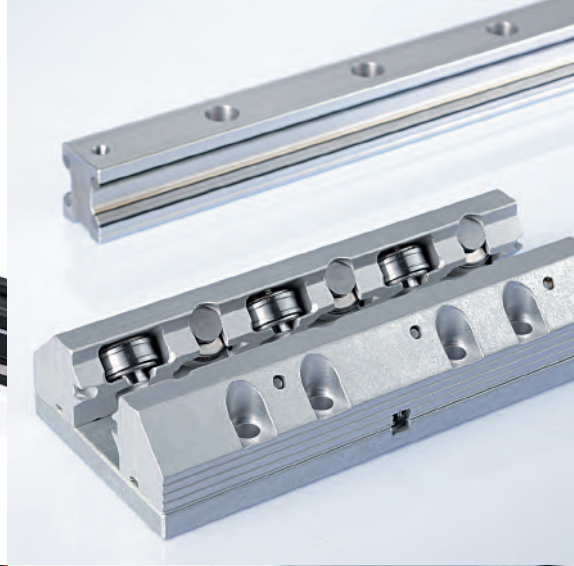
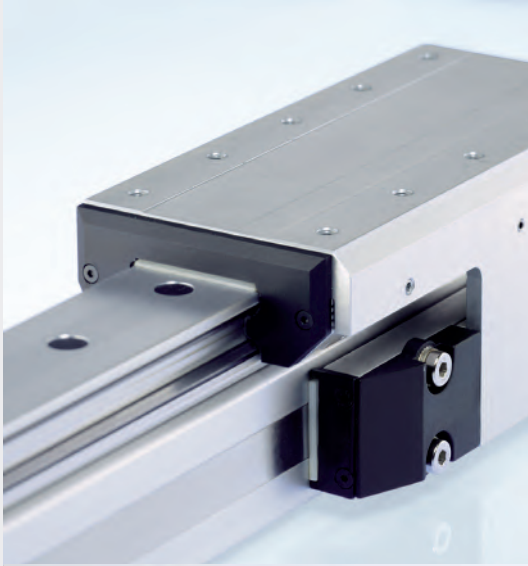
- Lightweight designs
- Homogeneous material properties in assemblies with aluminium profiles
- Low moved masses
- Low drive energy required
- High dynamism and speed



Customer-specific rail profile

The Franke principle of inserted raceways can be transferred to almost any aluminium profile. This enables you to structure your design individually..

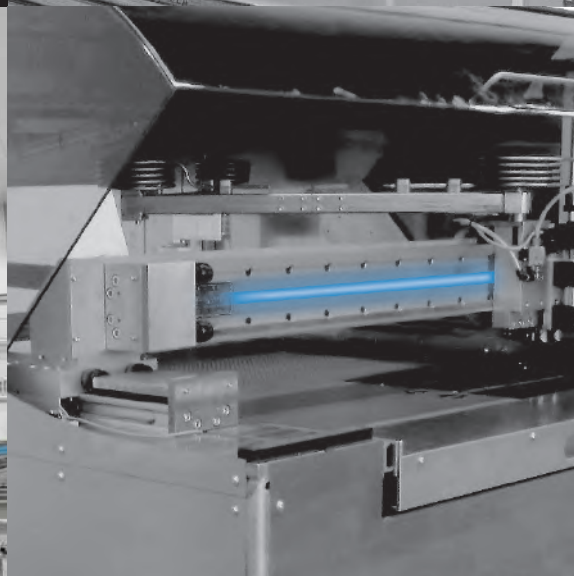
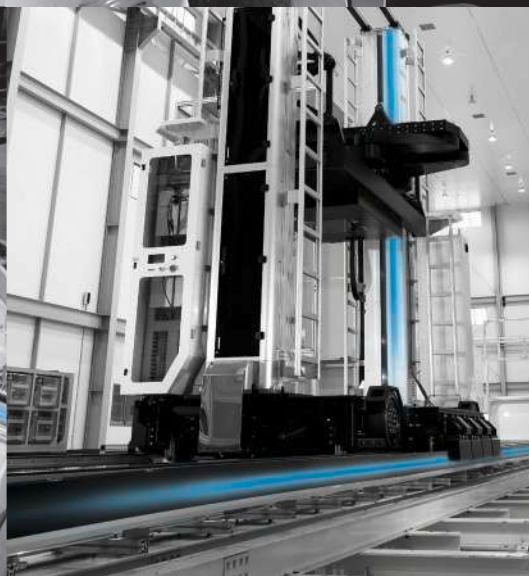
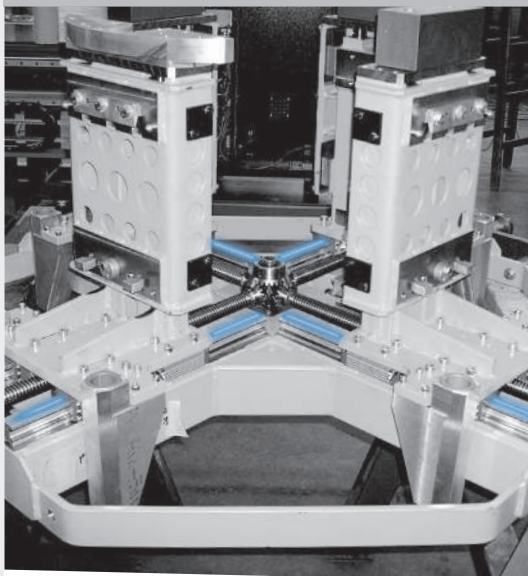
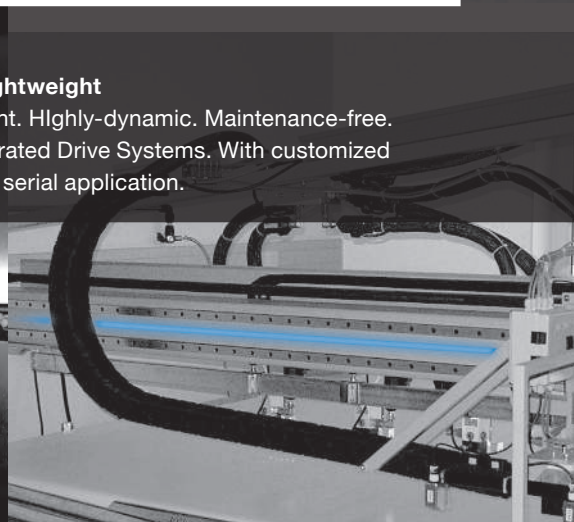
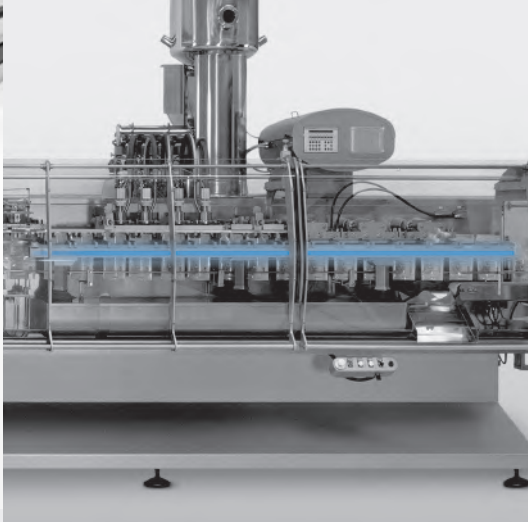




Linear Systems

Linear Lightweight

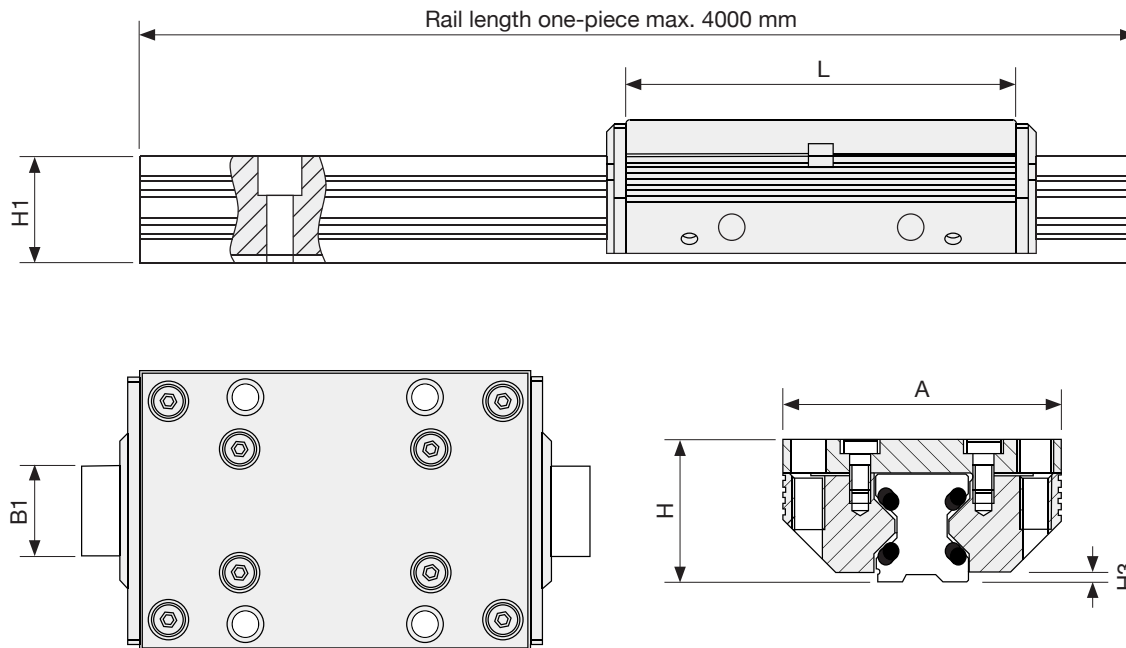
Light. Silent. Highly-dynamic. Maintenance-free.
With integrated Drive Systems. With customized
design for serial application.



Linear Guides

Type FD

Double Rail / Cassette



Dimensions

| Size | Dimensions mm | | | | | | Available Types |
|------|------------------|------|----|------|-----|-----|-----------------------------------|
| | A | B1 | H | H1 | H3 | L | |
| 12 | 37 | 12,0 | 19 | 14,7 | 1,4 | 64 | FDA, FDB, FDC, - , FDE, FDG, - |
| 15 | 47 | 15,5 | 24 | 18,7 | 2,0 | 78 | FDA, FDB, FDC, - , FDE, FDG, - |
| 20 | 63 | 21,0 | 30 | 22,6 | 2,0 | 92 | FDA, FDB, FDC, - , FDE, FDG, - |
| 25 | 70 | 23,0 | 36 | 27,0 | 2,5 | 98 | FDA, FDB, FDC, FDD, FDE, FDG, FDH |
| 35 | 100 | 32,0 | 48 | 37,0 | 3,5 | 135 | FDA, FDB, FDC, - , FDE, FDG, FDH |
| 45 | 120 | 45,0 | 60 | 46,0 | 4,0 | 165 | FDA, FDB, FDC, - , FDE, FDG, FDH |

Characteristics

Franke Aluminum Linear Systems are the best solution when it comes to speed and lightweight construction. The design principle of Franke Linear Systems makes them highly dynamic, quiet and maintenance-free. Franke Linear Systems can be modified individually to suit customer needs, thanks to their modular structure. The slide resistance of the cassettes can be adjusted individually. The guide rails are available in one piece up to 4000mm and can be coupled to endless stroke lengths.

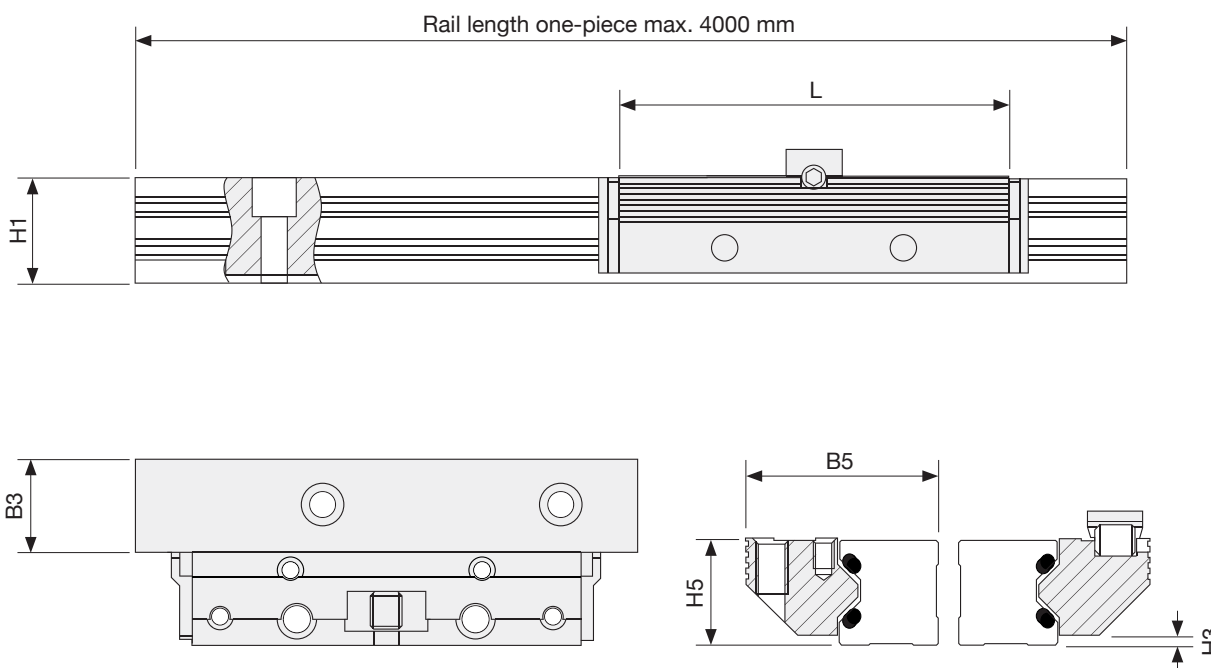
Technical Details

| | |
|---------------------------|--|
| Material | Cassette plate, roller shoes and rail body: Aluminum; Rollers and raceways according to type: steel, non-corrosive steel, mag. steel |
| Temperature in use | -10 °C to +80 °C |
| Vmax | 10 m/s |
| Mounting position | any |
| Lubrication | lifetime lubrication, maintenance-free |

Linear Guides

Type FD

Pair of Single Rails / Pair of Roller Shoes



Dimensions

| Size | Dimensions mm | | | | | L | Available Types |
|------|------------------|------|------|-----|------|-----|-----------------------------------|
| | B3 | B5 | H1 | H3 | H5 | | |
| 12 | 12,00 | 24,4 | 14,7 | 1,4 | 15,0 | 64 | FDA, FDB, FDC, - , FDE, FDG, - |
| 15 | 15,25 | 30,9 | 18,7 | 2,0 | 19,0 | 78 | FDA, FDB, FDC, - , FDE, FDG, - |
| 20 | 20,00 | 40,9 | 22,6 | 2,0 | 23,0 | 92 | FDA, FDB, FDC, - , FDE, FDG, - |
| 25 | 25,00 | 48,4 | 27,0 | 2,5 | 27,5 | 98 | FDA, FDB, FDC, FDD, FDE, FDG, FDH |
| 35 | 35,00 | 68,9 | 37,0 | 3,5 | 37,5 | 135 | FDA, FDB, FDC, - , FDE, FDG, FDH |
| 45 | 45,00 | 82,4 | 46,0 | 4,0 | 46,5 | 165 | FDA, FDB, FDC, - , FDE, FDG, FDH |

Characteristics

Franke Aluminum Linear Systems are the best solution when it comes to speed and lightweight construction. The design principle of Franke Linear Systems makes them highly dynamic, quiet and maintenance-free. Franke Linear Systems can be modified individually to suit customer needs, thanks to their modular structure. The slide resistance of the roller shoes can be adjusted individually. The guide rails are available in one piece up to 4000mm and can be coupled to endless stroke lengths.

Technical Details

| | |
|---------------------------|--|
| Material | Roller shoes and rail body: Aluminum; Rollers and raceways according to type: steel, non-corrosive steel, amagn. steel |
| Temperature in use | -10 °C to +80 °C |
| Vmax | 10 m/s |
| Mounting position | any |
| Lubrication | lifetime lubrication, maintenance-free |

Linear Guides

Type FD

Available Types



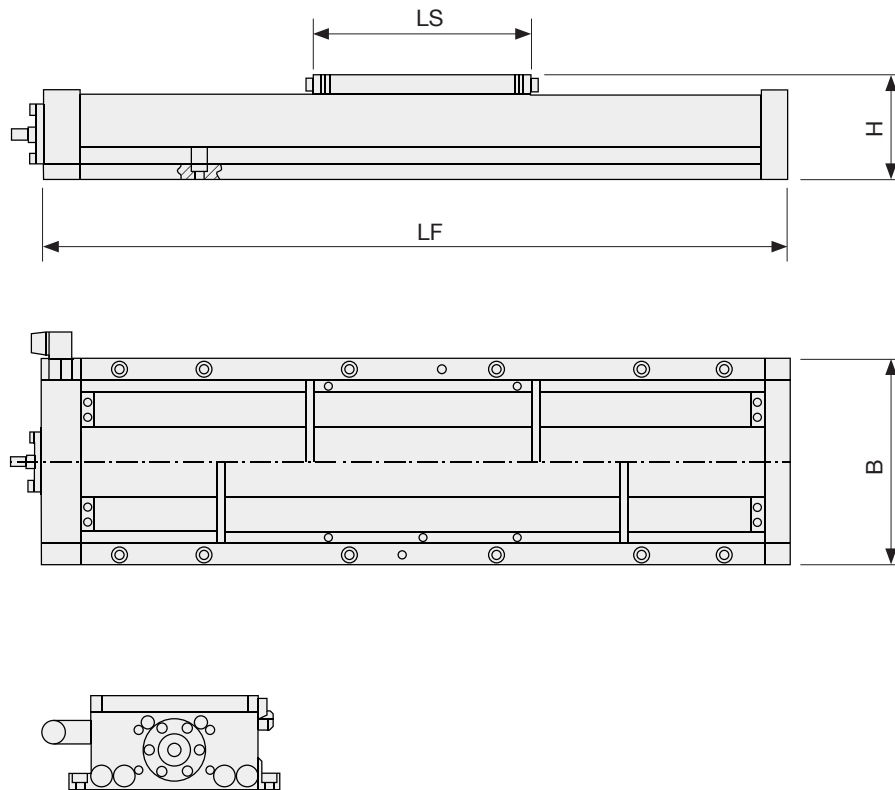
Types

| Type | Characteristics | Recommended Application |
|------|---|---|
| FDA | <ul style="list-style-type: none"> Aluminum roller guide in Standard version Integrated raceways made of steel Rollers with needle bearings for smooth and easy running | Suitable for linear motion applications in almost all industries. Sealed rollers for maintenance-free operation over the entire service life. Light, clean run. |
| FDB | <ul style="list-style-type: none"> Aluminum roller guide in Low-cost-design Integrated raceways made of steel Rollers with ball bearings | Suitable for linear motion applications in almost all industries. Particularly suitable for cost-sensitive applications and reduced demands on load capacity and noise. |
| FDC | <ul style="list-style-type: none"> Aluminum roller guide in Non-corrosive design Integrated raceways made of non-corrosive steel Rollers with needle bearings for smooth and easy running | Suitable for linear motion applications in almost all industries. Insensitive to environmental influences such as moisture or cleaning agents. |
| FDD | <ul style="list-style-type: none"> Aluminum roller guide in Non-magnetic design Integrated raceways made of non-magnetic steel Rollers in needle bearings for smooth and easy running | Suitable for linear motion applications in almost all industries. Nonmagnetic guide rails without influence on prevailing magnetic fields (e.g., in medical or electronics manufacturing). |
| FDE | <ul style="list-style-type: none"> Aluminum roller guide in Lubricant-free design Integrated raceways made of steel Lubricant-free rollers for smooth and clean running | Suitable for linear motion applications in almost all industries. Special rollers without lubricants. Suitable for use in a vacuum or in clean rooms. |
| FDG | <ul style="list-style-type: none"> Aluminum roller guide in Non-corrosive low cost design Integrated raceways made of non-corrosive steel Rollers with ball bearings | Suitable for linear motion applications in almost all industries. Particularly suitable for cost-sensitive applications in harsh environments or when using cleaning agents. |
| FDH | <ul style="list-style-type: none"> Aluminum roller guide in highly dynamic design Integrated raceways made of steel Rollers with angular ball bearings for high speed and acceleration | Suitable for linear motion applications in almost all industries. Rollers with angular contact ball bearings for maximum acceleration and speed values, for example when using linear motors as the drive source. |

Linear Tables

Type FTB

Spindle Drive / Metal Cover



Dimensions

| Size | Dimensions mm | | | | | Load rating N C | Moment load Nm | | | Weight kg |
|--------|------------------|-----|----|----------|-----|-----------------------|-------------------|-----------------|------------|--------------|
| | Hub | B | H | LF | LS | | M_{cx} | M_{cy}/M_{cz} | | |
| FTB06A | 100-1500 | 155 | 70 | 315-1715 | 165 | 15000 | 670 | 220 | 6,4 - 21,8 | |
| FTB06B | 100-1500 | 155 | 70 | 430-1830 | 280 | 30000 | 1380 | 1930 | 7,5 - 22,9 | |

Characteristics

Franke type FTB linear tables are lightweight, compact, ready-to-install positioning units. They are highly resilient and have excellent positioning accuracy. Franke type FTB linear tables are equipped with an integrated aluminum roller guide, preloaded ball screw drive and a metal cover.

Technical Details

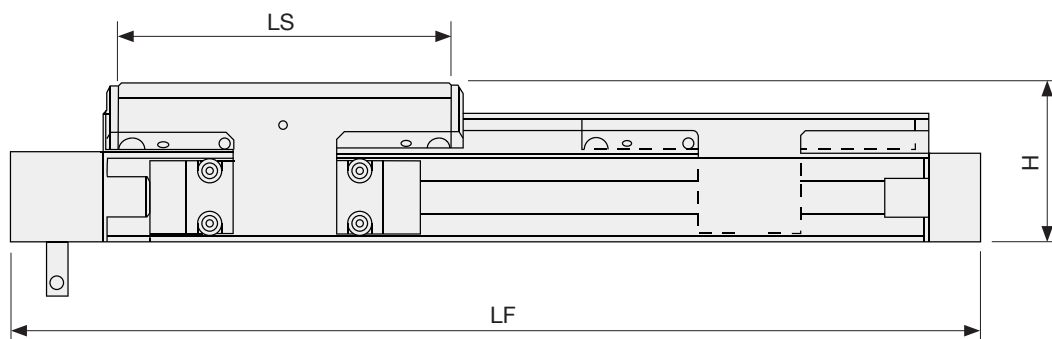
| | |
|---------------------------|---|
| Material | Base plate: AlZnMgCu05, integrated roller guide: AlZnMgCu05, raceways: steel, rollers: steel, covers: non-corrosive steel |
| Temperature in use | -10 °C to +80 °C |
| Vmax | 15 m/min |
| Mounting position | any |
| Lubrication | lifetime lubrication, maintenance-free |

Linear Modules

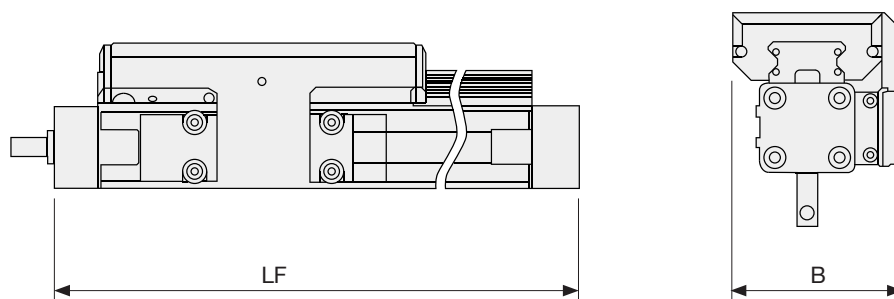
Type FTC

Spindle Drive / Belt Drive

Version with
Belt Drive



Version with
Spindle Drive



Dimensions

| Größe | Dimensions mm | | | | | Tragzahl N C | Momente Nm | | Weight kg |
|----------------------|------------------|-------|-------|----------|-----|--------------------|---------------|-----------------|--------------|
| | Hub | B | H | LF | LS | | M_{cx} | M_{cy}/M_{cz} | |
| Belt Drive | | | | | | | | | |
| FTC15 | 100-3400 | 72,5 | 73,5 | 360-3660 | 154 | 4200 | 81 | 190 | 3,0-13,9 |
| FTC20 | 100-3400 | 91,0 | 88,0 | 411-3711 | 197 | 5400 | 133 | 338 | 5,5-28,6 |
| FTC25 | 100-3200 | 117,0 | 118,5 | 524-3624 | 276 | 13500 | 483 | 922 | 12,4-43,4 |
| Spindle Drive | | | | | | | | | |
| FTC15 | 100-1100 | 72,5 | 73,5 | 300-1300 | 154 | 4200 | 81 | 190 | 3,0-7,0 |
| FTC20 | 100-2000 | 91,0 | 88,0 | 350-2250 | 197 | 5400 | 133 | 338 | 5,6-18,9 |
| FTC25 | 100-3200 | 117,0 | 118,5 | 500-3600 | 276 | 13500 | 483 | 922 | 12,6-53,2 |

Characteristics

Franke liner modules type FTC are lightweight, compact, ready-to-install positioning units. They are particularly suitable for fast, dynamic movement tasks. The external guide system is moved by an internal spindle or toothed belt drive. Franke linear modules type FTC are versatile. The guide cassette can be customized to meet customer requirements.

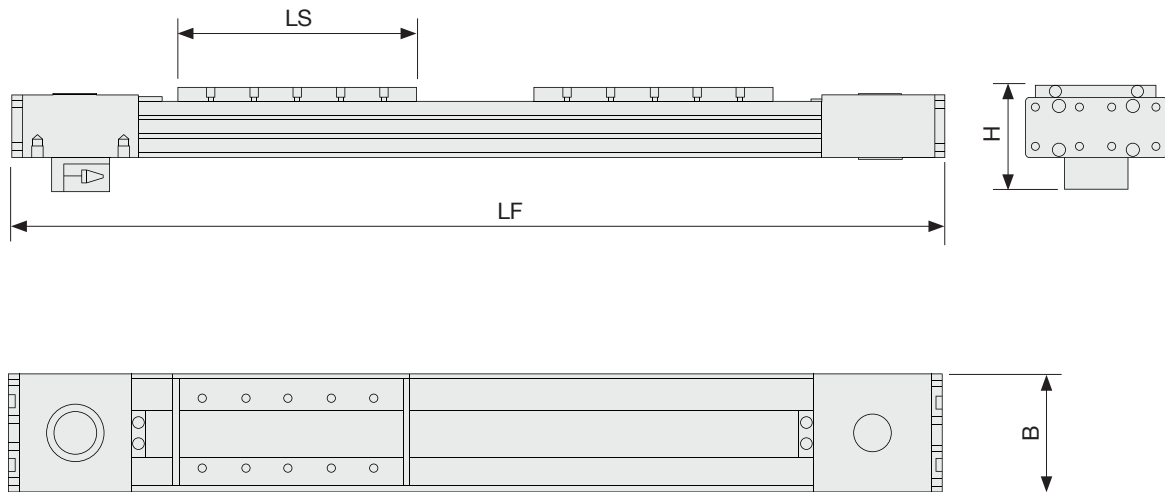
Technical Details

| | |
|---------------------------|--|
| Material | Housing: AlZnMgCu05, external roller guide: AlZnMgCu05, raceway/rollers: steel, optional steel spindle or plastic toothed belt |
| Temperature in use | -10 °C to +80 °C |
| Vmax | 5 m/s |
| Mounting position | any |
| Lubrication | lifetime lubrication, maintenance-free |

Linear Modules

Type FTD

Belt Drive



Dimensions

| Size | Dimensions mm | | | | | Load rating N C | Moments Nm | | Weight kg |
|-------|------------------|-----|------|----------|-----|-----------------------|---------------|-----------------|--------------|
| | Hub | B | H | LF | LS | | M_{cx} | M_{cy}/M_{cz} | |
| FTD15 | 100-7000 | 93 | 52,5 | 536-7436 | 178 | 4200 | 45 | 274 | 5,2-35 |
| FTD20 | 100-7000 | 116 | 66,5 | 624-7524 | 218 | 5400 | 76 | 460 | 10,3-56,5 |
| FTD35 | 100-7000 | 175 | 92,5 | 794-7694 | 263 | 12500 | 294 | 1233 | 28,8-133,7 |

Characteristics

Franke FTD linear modules are lightweight, compact, ready-to-install positioning units. They are extremely space-saving and combine the guide system and the toothed belt drive protected within the module housing. Franke linear modules of the type FTD are versatile and also bridge large stroke ranges of up to 7 meters in length.

Technical Details

| | |
|---------------------------|---|
| Material | Housing: AlZnMgCu05, integrated roller guide: AlZnMgCu05, raceways/rollers: steel, toothed belt: plastics |
| Temperature in use | -10 °C to +80 °C |
| Vmax | 10 m/s |
| Mounting position | any |
| Lubrication | lifetime lubrication, maintenance-free |

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