

For New Technology Network

NTN®

NTNcorporation

Bearing Units with Ductile Cast Iron Housing

CAT. No. 3901-III / E



NTN Ductile Cast Iron Housing Series: Improved materials for design solutions



NTN maintains the highest quality control by manufacturing all processes in house.

1. Characteristics

NTN ductile iron series housings **weight 40 % less** in comparison with standard NTN housings made with gray cast iron.

NTN ductile cast iron series housings are **approximately 30% stronger** than standard NTN housings made with gray cast iron.

NTN ductile cast iron series housings are **interchangeable** with standard NTN bearing units.

NTN supplies both relubricatable and non-lubricatable bearing units.

| INDEX | Page | Page | |
|---------------------------|------|------------------------------|------|
| 1. Characteristics | 1 | 6. Dimension Tables | 5~10 |
| 2. Applications | 2 | UCPE type, UCFE type | 5 |
| 3. Housing Material | 2 | UKPE type, UKFE type | 6 |
| 4. Design | 3 | UELPE type, UELFE type | 7 |
| 5. Technical data | 3~4 | AELPE type, AELFE type | 8 |
| | | ASPE type, ASFE type | 9 |
| | | CSPE type, CSFE type | 10 |

2. Applications

Ductile cast iron housings are designed to be lighter and more compact than gray cast iron units. Since ductile cast iron is stronger, these compact units can commonly replace standard units. Like standard units, ductile cast iron units will perform well in harsh environments. As with all housed units, before applying, please check the allowable load limit, insert bearing life, and safety factors.

3. Housing Material

The housing material for the current standard bearing units is gray cast iron (FC200). The FC200 material contains black lead and graphite distributed as shown in **photo 1**. When heavy shock loads are applied to the housing, cracks spread along the black lead/graphite strands and the housing may fracture. In FCD450 material, the black lead and graphite nodules are distributed as shown **photo 2**. This black lead/graphite distribution can prevent the spreading of cracks. Also the shock resistance at low temperature, of FCD450 is superior to that of FC200.

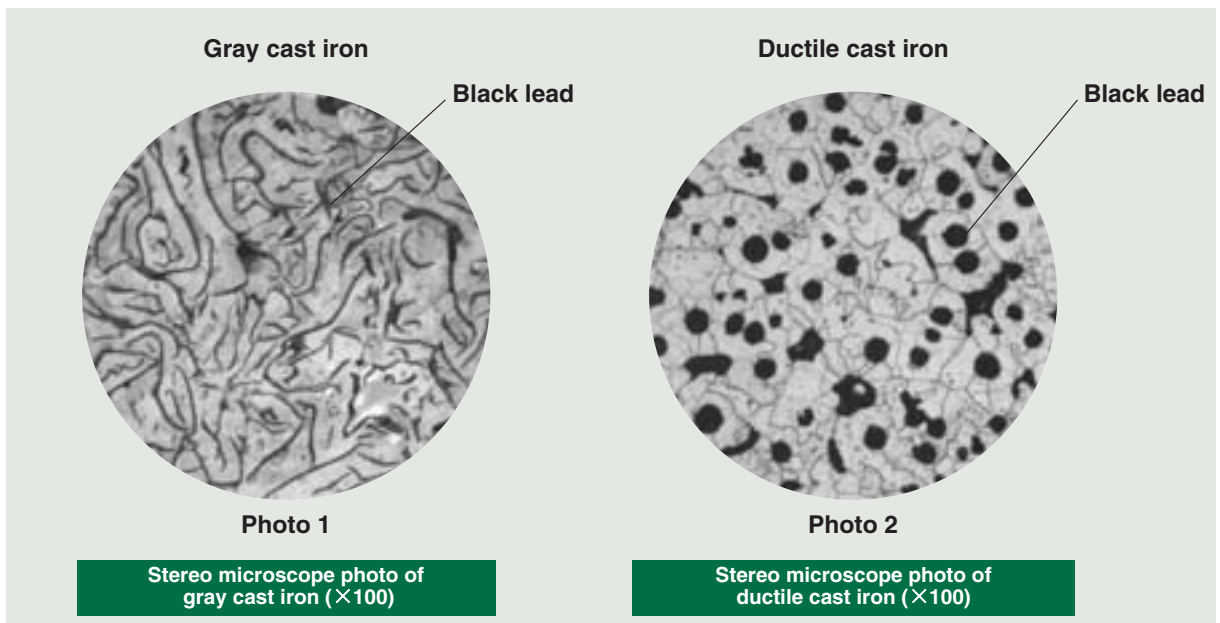
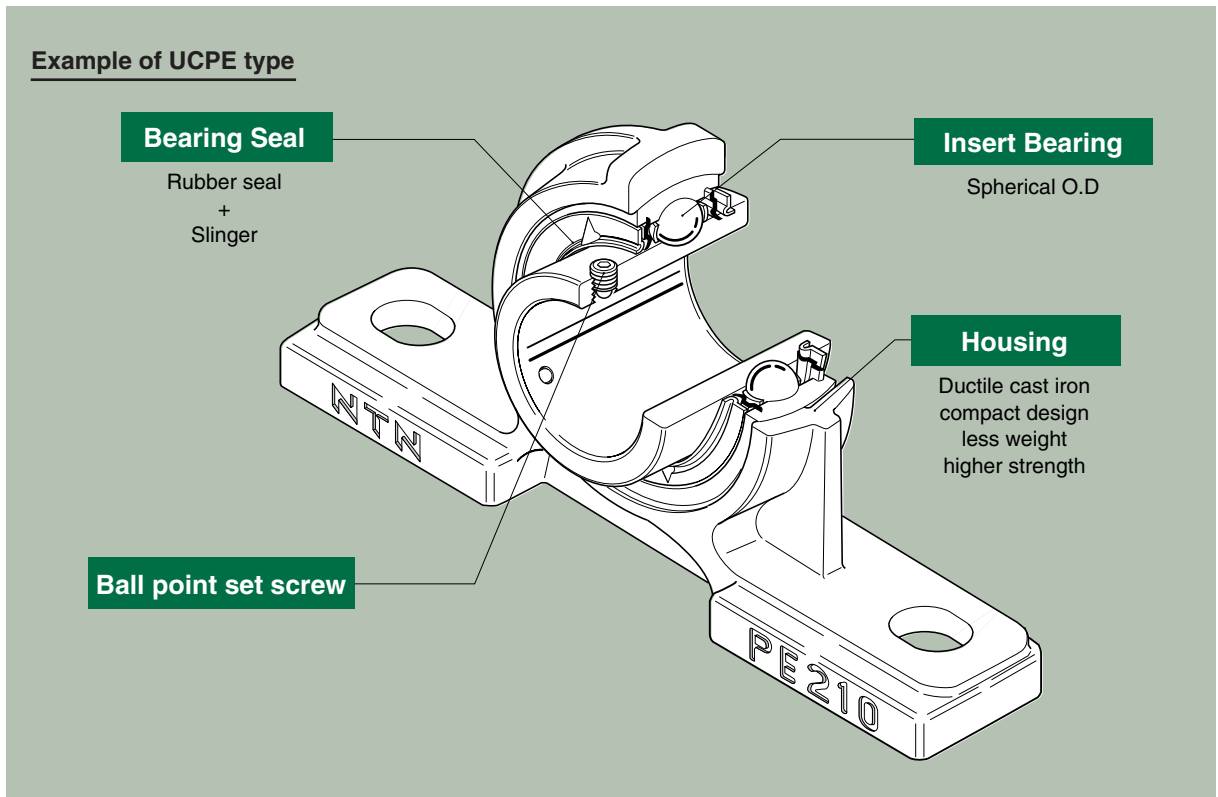


Table 1 Comparison of characteristics of ductile cast iron and gray cast iron

| Material | Symbol | Tensile strength N/mm ² | Elongation % | Hardness HB |
|-------------------|--------|------------------------------------|---------------|-------------|
| Ductile cast iron | FCD450 | Minimum 450 | Minimum 10 | 143~217 |
| Gray cast iron | FC200 | Minimum 200 | Not specified | Maximum 223 |

30 mm non-machined test piece.

4. Design



5. Technical data

The strength of the housings are affected by unit type, direction of load, flatness, and strength of the frame on which the housings are mounted.

For example, pillow block units are best suited to accept loads that are directed into the the base of the unit. Pillow blocks are also designed to accept loads acting in other directions. When this occurs, a bearing unit with a safety factor (S_0) suitable for the application should be selected. The allowable housing load can be calculated with equation (1). A guide for suitable safety factors is shown in **Table 2**.

$$P_0 = P_{st} / S_0 \text{-----} (1)$$

P_0 : allowable housing load (N)
 P_{st} : static strength of housing (N)
 S_0 : safety factor (**Table 2**)

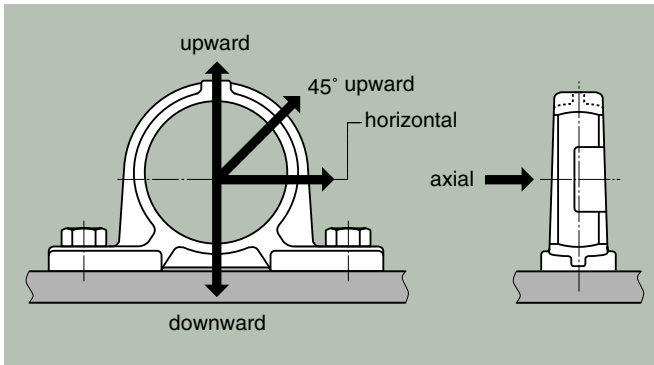


Table 2 Safety factor of housing.

| Load | | Safety factor S_0 |
|------------------|---------------|---------------------|
| Static Load | | 4 |
| Alternative Load | One direction | 6 |
| | Bidirectional | 10 |
| Shock Load | | 15 |

- When pillow block type units are under large horizontal loads or large loads angled upwards at 45°, the housing may slip at the base. An axial stopper should be designed to prevent this.
- A safety cover should be designed to protect the operator.

Table 3 Static strength of housing for pillow block type unit.

Unit : 10^3 N

| Load direction Basic size | Upward | | 45° Upward | | Horizontal | | Downward | | Axial | |
|------------------------------|--------|----|------------|----|------------|-----|----------|-----|-------|----|
| | PE | P | PE | P | PE | P | PE | P | PE | P |
| 203 | 30 | 25 | 25 | 21 | 45 | 36 | 90 | 75 | 11 | 10 |
| 204 | 33 | 27 | 30 | 23 | 47 | 36 | 100 | 80 | 17 | 16 |
| 205 | 40 | 29 | 37 | 25 | 57 | 50 | 118 | 95 | 20 | 17 |
| 206 | 50 | 37 | 43 | 32 | 67 | 53 | 137 | 130 | 26 | 22 |
| 207 | 59 | 41 | 50 | 34 | 78 | 57 | 160 | 160 | 31 | 23 |
| 208 | 71 | 43 | 54 | 35 | 90 | 62 | 186 | 170 | 34 | 24 |
| 209 | 79 | 44 | 65 | 36 | 100 | 66 | 215 | 180 | 41 | 25 |
| 210 | 88 | 48 | 75 | 38 | 110 | 74 | 255 | 200 | 46 | 27 |
| 211 | 105 | 56 | 81 | 44 | 140 | 100 | 350 | 210 | 55 | 34 |
| 212 | 123 | 72 | 95 | 55 | 172 | 118 | 400 | 280 | 70 | 40 |

PE : Ductile housing P : NTN standard

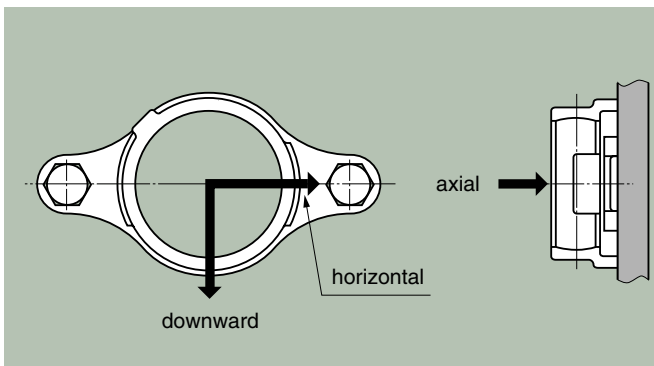


Table 4 Static strength of housing for flange type unit.

Unit : 10^3 N

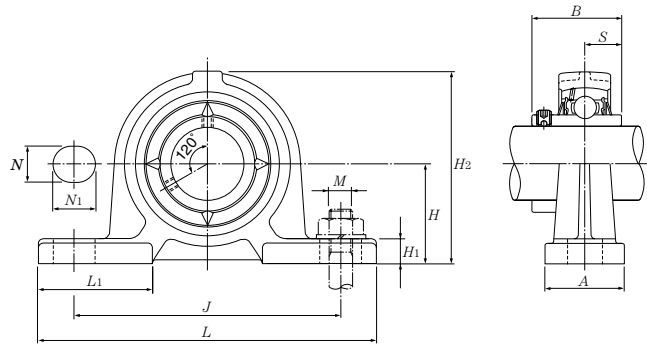
| Load direction Basic size | Horizontal | | Downward | | Axial | |
|------------------------------|------------|-----|----------|-----|-------|----|
| | FE | FL | FE | FL | FE | FL |
| 204 | 30 | 16 | 45 | 28 | 41 | 20 |
| 205 | 37 | 20 | 54 | 48 | 42 | 28 |
| 206 | 53 | 25 | 62 | 49 | 43 | 29 |
| 207 | 68 | 40 | 70 | 50 | 44 | 29 |
| 208 | 81 | 68 | 79 | 52 | 46 | 30 |
| 209 | 106 | 70 | 87 | 65 | 48 | 33 |
| 210 | 113 | 72 | 96 | 85 | 51 | 40 |
| 211 | 165 | 101 | 147 | 107 | 77 | 74 |
| 212 | 203 | 150 | 151 | 152 | 84 | 77 |

FE : Ductile housing FL : NTN standard

Pillow block unit

UCPE type

Cylindrical bore with set screw



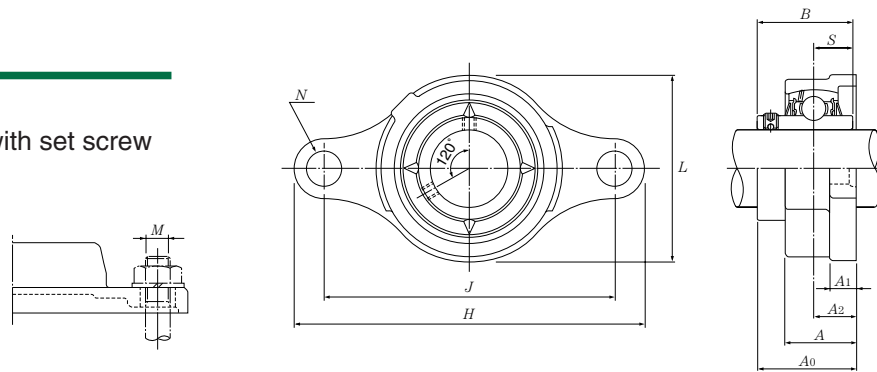
| Shaft dia. mm | Unit number | Bearing number | Housing number | Nominal dimensions mm | | | | | | | | | | | Bolt size | Basic load ratings | | Mass of unit kg |
|---------------|-------------|----------------|----------------|-----------------------|-----|-----|----|----|----------------|----------------|----------------|----------------|------|------|-----------|--------------------|------------------------------|-----------------|
| | | | | H | L | J | A | N | N ₁ | H ₁ | H ₂ | L ₁ | B | S | | M | dynamic kN C _r | |
| 12 | UCPE201 | UC201D1 | PE203 | 30.2 | 120 | 95 | 30 | 12 | 14 | 9 | 61 | 42 | 31 | 12.7 | M10 | 12.8 | 6.65 | 0.5 |
| 15 | UCPE202 | UC202D1 | PE203 | 30.2 | 120 | 95 | 30 | 12 | 14 | 9 | 61 | 42 | 31 | 12.7 | M10 | 12.8 | 6.65 | 0.5 |
| 17 | UCPE203 | UC203D1 | PE203 | 30.2 | 120 | 95 | 30 | 12 | 14 | 9 | 61 | 42 | 31 | 12.7 | M10 | 12.8 | 6.65 | 0.5 |
| 20 | UCPE204 | UC204D1 | PE204 | 33.3 | 120 | 95 | 30 | 12 | 14 | 9 | 64 | 42 | 31 | 12.7 | M10 | 12.8 | 6.65 | 0.5 |
| 25 | UCPE205 | UC205D1 | PE205 | 36.5 | 130 | 105 | 30 | 12 | 14 | 10 | 70 | 42 | 34.1 | 14.3 | M10 | 14.0 | 7.85 | 0.5 |
| 30 | UCPE206 | UC206D1 | PE206 | 42.9 | 155 | 121 | 36 | 17 | 20 | 11 | 82 | 54 | 38.1 | 15.9 | M14 | 19.5 | 11.3 | 0.9 |
| 35 | UCPE207 | UC207D1 | PE207 | 47.6 | 161 | 127 | 38 | 17 | 20 | 12 | 92 | 54 | 42.9 | 17.5 | M14 | 25.7 | 15.3 | 1.1 |
| 40 | UCPE208 | UC208D1 | PE208 | 49.2 | 171 | 137 | 40 | 17 | 20 | 12 | 98 | 52 | 49.2 | 19 | M14 | 29.1 | 17.8 | 1.4 |
| 45 | UCPE209 | UC209D1 | PE209 | 54 | 180 | 146 | 40 | 17 | 20 | 13 | 105 | 60 | 49.2 | 19 | M14 | 32.5 | 20.4 | 1.5 |
| 50 | UCPE210 | UC210D1 | PE210 | 57.2 | 195 | 159 | 45 | 19 | 22 | 14 | 114 | 65 | 51.6 | 19 | M16 | 35.0 | 23.2 | 1.8 |
| 55 | UCPE211 | UC211D1 | PE211 | 63.5 | 207 | 171 | 45 | 19 | 22 | 15 | 125 | 65 | 55.6 | 22.2 | M16 | 43.5 | 29.2 | 2.7 |
| 60 | UCPE212 | UC212D1 | PE212 | 69.8 | 220 | 184 | 55 | 19 | 22 | 17 | 137 | 70 | 65.1 | 25.4 | M16 | 52.5 | 36.0 | 3.7 |

① If relubricatable type is needed, please order with suffix "D1". (Ex:UCPE201D1)

Flange unit

UCFE type

Cylindrical bore with set screw



| Shaft dia. mm | Unit number | Bearing number | Housing number | Nominal dimensions mm | | | | | | | | | | | Bolt size | Basic load ratings | | Mass of unit kg |
|---------------|-------------|----------------|----------------|-----------------------|-----|----------------|----------------|----|----|-----|----------------|------|------|-----|-----------|------------------------------|------------------------------|-----------------|
| | | | | H | J | A ₂ | A ₁ | A | N | L | A ₀ | B | S | M | | dynamic kN C _r | static kN C _{or} | |
| 12 | UCFE201 | UC201D1 | FE204 | 112 | 90 | 15 | 10 | 25 | 12 | 57 | 33.3 | 31 | 12.7 | M10 | 12.8 | 6.65 | 0.4 | |
| 15 | UCFE202 | UC202D1 | FE204 | 112 | 90 | 15 | 10 | 25 | 12 | 57 | 33.3 | 31 | 12.7 | M10 | 12.8 | 6.65 | 0.4 | |
| 17 | UCFE203 | UC203D1 | FE204 | 112 | 90 | 15 | 10 | 25 | 12 | 57 | 33.3 | 31 | 12.7 | M10 | 12.8 | 6.65 | 0.4 | |
| 20 | UCFE204 | UC204D1 | FE204 | 112 | 90 | 15 | 10 | 25 | 12 | 57 | 33.3 | 31 | 12.7 | M10 | 12.8 | 6.65 | 0.4 | |
| 25 | UCFE205 | UC205D1 | FE205 | 127 | 99 | 16 | 10 | 26 | 16 | 62 | 35.8 | 34.1 | 14.3 | M14 | 14.0 | 7.85 | 0.4 | |
| 30 | UCFE206 | UC206D1 | FE206 | 145 | 117 | 18 | 10 | 30 | 16 | 73 | 40.2 | 38.1 | 15.9 | M14 | 19.5 | 11.3 | 0.7 | |
| 35 | UCFE207 | UC207D1 | FE207 | 158 | 130 | 19 | 12 | 32 | 16 | 86 | 44.4 | 42.9 | 17.5 | M14 | 25.7 | 15.3 | 1.0 | |
| 40 | UCFE208 | UC208D1 | FE208 | 172 | 144 | 21 | 12 | 35 | 16 | 95 | 51.2 | 49.2 | 19 | M14 | 29.1 | 17.8 | 1.2 | |
| 45 | UCFE209 | UC209D1 | FE209 | 180 | 148 | 22 | 13 | 36 | 19 | 101 | 52.2 | 49.2 | 19 | M16 | 32.5 | 20.4 | 1.4 | |
| 50 | UCFE210 | UC210D1 | FE210 | 189 | 157 | 22 | 13 | 37 | 19 | 106 | 54.6 | 51.6 | 19 | M16 | 35.0 | 23.2 | 1.6 | |
| 55 | UCFE211 | UC211D1 | FE211 | 216 | 184 | 25 | 18 | 41 | 19 | 118 | 58.4 | 55.6 | 22.2 | M16 | 43.5 | 29.2 | 2.5 | |
| 60 | UCFE212 | UC212D1 | FE212 | 241 | 202 | 29 | 18 | 46 | 23 | 129 | 68.7 | 65.1 | 25.4 | M20 | 52.5 | 36.0 | 3.4 | |

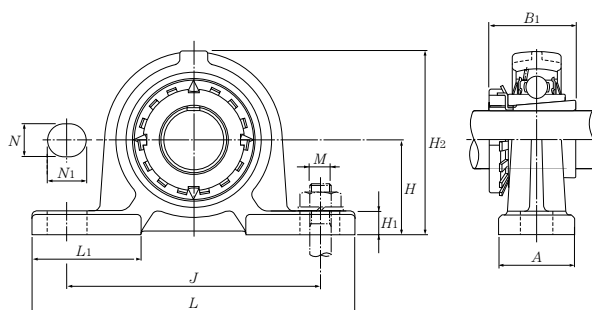
① If relubricatable type is needed, please order with suffix "D1". (Ex:UCFE201D1)

Note: Please check NTN catalogue NO.2400/E. for tolerances of insert and housings. Tolerance of insert bearings according to JIS B 1558. Tolerance of housing according to JIS B 1559. If inch size bore is needed, please contact NTN.

Pillow block unit

UKPE type

Tapered bore with adapter



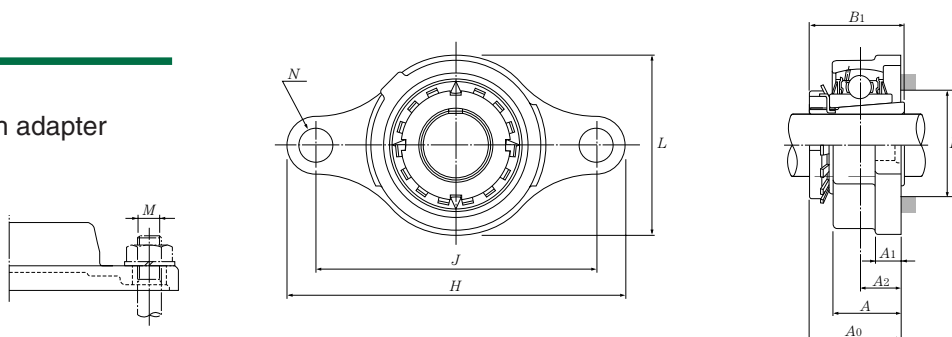
| Shaft dia. mm | Unit number | Bearing number | Housing number | Nominal dimensions mm | | | | | | | | | | Bolt size M | Basic load dynamic kN C_r | Basic load static kN C_{or} | Mass of unit kg |
|---------------|----------------|----------------|----------------|-----------------------|-----|-----|----|----|----------------|----------------|----------------|----------------|----------------|-------------|-----------------------------|-------------------------------|-----------------|
| | | | | H | L | J | A | N | N ₁ | H ₁ | H ₂ | L ₁ | B ₁ | | | | |
| 20 | UKPE205;H2305X | UK205D1;H2305X | PE205 | 36.5 | 130 | 105 | 30 | 12 | 14 | 10 | 70 | 42 | 35 | M10 | 14.0 | 7.85 | 0.6 |
| 25 | UKPE206;H2306X | UK206D1;H2306X | PE206 | 42.9 | 155 | 121 | 36 | 17 | 20 | 11 | 82 | 54 | 38 | M14 | 19.5 | 11.3 | 0.9 |
| 30 | UKPE207;H2307X | UK207D1;H2307X | PE207 | 47.6 | 161 | 127 | 38 | 17 | 20 | 12 | 92 | 54 | 43 | M14 | 25.7 | 15.3 | 1.2 |
| 35 | UKPE208;H2308X | UK208D1;H2308X | PE208 | 49.2 | 171 | 137 | 40 | 17 | 20 | 12 | 98 | 52 | 46 | M14 | 29.1 | 17.8 | 1.5 |
| 40 | UKPE209;H2309X | UK209D1;H2309X | PE209 | 54 | 180 | 146 | 40 | 17 | 20 | 13 | 105 | 60 | 50 | M14 | 32.5 | 20.4 | 1.6 |
| 45 | UKPE210;H2310X | UK210D1;H2310X | PE210 | 57.2 | 195 | 159 | 45 | 19 | 22 | 14 | 114 | 65 | 55 | M16 | 35.0 | 23.2 | 2.0 |
| 50 | UKPE211;H2311X | UK211D1;H2311X | PE211 | 63.5 | 207 | 171 | 45 | 19 | 22 | 15 | 125 | 65 | 59 | M16 | 43.5 | 29.2 | 2.9 |
| 55 | UKPE212;H2312X | UK212D1;H2312X | PE212 | 69.8 | 220 | 184 | 55 | 19 | 22 | 17 | 137 | 70 | 62 | M16 | 52.5 | 36.0 | 3.8 |

① If relubricatable type is needed, please order with suffix "D1". (Ex:UKPE205D1;H2305X)

Flange unit

UKFE type

Tapered bore with adapter



| Shaft dia. mm | Unit number | Bearing number | Housing number | Nominal dimensions mm | | | | | | | | | | Bolt size M | Basic load dynamic kN C_r | Basic load static kN C_{or} | Mass of unit kg |
|---------------|----------------|----------------|----------------|-----------------------|-----|----------------|----------------|----|----|-----|----------------|----------------|------------------|-------------|-----------------------------|-------------------------------|-----------------|
| | | | | H | J | A ₂ | A ₁ | A | N | L | A ₀ | B ₁ | F _{min} | | | | |
| 20 | UKFE205;H2305X | UK205D1;H2305X | FE205 | 127 | 99 | 16 | 10 | 26 | 16 | 62 | 35.5 | 35 | 30 | M14 | 14.0 | 7.85 | 0.5 |
| 25 | UKFE206;H2306X | UK206D1;H2306X | FE206 | 145 | 117 | 18 | 10 | 30 | 16 | 73 | 39 | 38 | 36 | M14 | 19.5 | 11.3 | 0.7 |
| 30 | UKFE207;H2307X | UK207D1;H2307X | FE207 | 158 | 130 | 19 | 12 | 32 | 16 | 86 | 42.5 | 43 | 40 | M14 | 25.7 | 15.3 | 1.0 |
| 35 | UKFE208;H2308X | UK208D1;H2308X | FE208 | 172 | 144 | 21 | 12 | 35 | 16 | 95 | 46.5 | 46 | 46 | M14 | 29.1 | 17.8 | 1.3 |
| 40 | UKFE209;H2309X | UK209D1;H2309X | FE209 | 180 | 148 | 22 | 13 | 36 | 19 | 101 | 48.5 | 50 | 52 | M16 | 32.5 | 20.4 | 1.5 |
| 45 | UKFE210;H2310X | UK210D1;H2310X | FE210 | 189 | 157 | 22 | 13 | 37 | 19 | 106 | 50 | 55 | 57 | M16 | 35.0 | 23.2 | 1.8 |
| 50 | UKFE211;H2311X | UK211D1;H2311X | FE211 | 216 | 184 | 25 | 18 | 41 | 19 | 118 | 54.5 | 59 | 64 | M16 | 43.5 | 29.2 | 2.7 |
| 55 | UKFE212;H2312X | UK212D1;H2312X | FE212 | 241 | 202 | 29 | 18 | 46 | 23 | 129 | 61 | 62 | 69 | M16 | 52.5 | 36.0 | 3.5 |

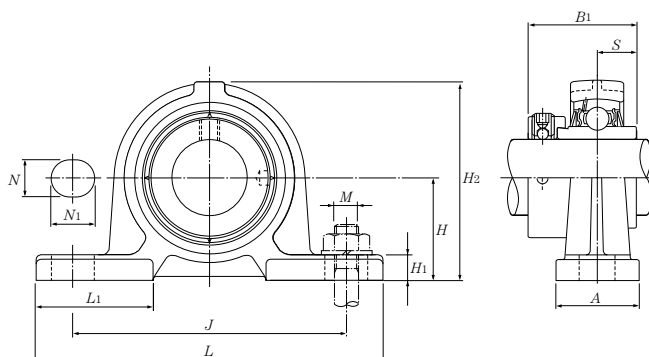
① If relubricatable type is needed, please order with suffix "D1". (Ex:UKFE205D1;H2305X)

Note: Please check NTN catalogue NO.2400/E. for tolerances of insert and housings. Tolerance of insert bearings according to JIS B 1558. Tolerance of housing according to JIS B 1559. If inch size bore is needed, please contact NTN.

Pillow block unit

UELPE type

cylindrical bore with eccentric locking collar



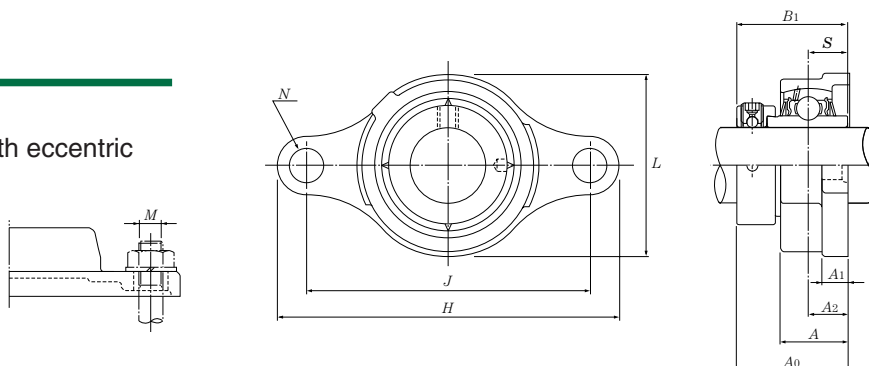
| Shaft dia. mm | Unit number | Bearing number | Housing number | Nominal dimensions mm | | | | | | | | | | | Bolt size M | Basic load ratings dynamic kN C_r | static kN C_{or} | Mass of unit kg |
|---------------|-------------|----------------|----------------|-----------------------|-----|-----|----|----|-------|-------|-------|-------|-------|------|-------------|-------------------------------------|--------------------|-----------------|
| | | | | H | L | J | A | N | N_1 | H_1 | H_2 | L_1 | B_1 | S | | | | |
| 20 | UELPE204 | UEL204D1 | PE204 | 33.3 | 120 | 95 | 30 | 12 | 14 | 9 | 64 | 42 | 43.7 | 17.1 | M10 | 12.8 | 6.65 | 0.5 |
| 25 | UELPE205 | UEL205D1 | PE205 | 36.5 | 130 | 105 | 30 | 12 | 14 | 10 | 70 | 42 | 44.4 | 17.5 | M10 | 14.0 | 7.85 | 0.6 |
| 30 | UELPE206 | UEL206D1 | PE206 | 42.9 | 155 | 121 | 36 | 17 | 20 | 11 | 82 | 54 | 48.4 | 18.3 | M14 | 19.5 | 11.3 | 1.0 |
| 35 | UELPE207 | UEL207D1 | PE207 | 47.6 | 161 | 127 | 38 | 17 | 20 | 12 | 92 | 54 | 51.1 | 18.8 | M14 | 25.7 | 15.3 | 1.2 |
| 40 | UELPE208 | UEL208D1 | PE208 | 49.2 | 171 | 137 | 40 | 17 | 20 | 12 | 98 | 52 | 56.3 | 21.4 | M14 | 29.1 | 17.8 | 1.5 |
| 45 | UELPE209 | UEL209D1 | PE209 | 54 | 180 | 146 | 40 | 17 | 20 | 13 | 105 | 60 | 56.3 | 21.4 | M14 | 32.5 | 20.4 | 1.7 |
| 50 | UELPE210 | UEL210D1 | PE210 | 57.2 | 195 | 159 | 45 | 19 | 22 | 14 | 114 | 65 | 62.7 | 24.6 | M16 | 35.0 | 23.2 | 2.0 |
| 55 | UELPE211 | UEL211D1 | PE211 | 63.5 | 207 | 171 | 45 | 19 | 22 | 15 | 125 | 65 | 71.4 | 27.8 | M16 | 43.5 | 29.2 | 3.0 |
| 60 | UELPE212 | UEL212D1 | PE212 | 69.8 | 220 | 184 | 55 | 19 | 22 | 17 | 137 | 70 | 77.8 | 31 | M16 | 52.5 | 36.0 | 4.1 |

① If relubricatable type is needed, please order with suffix "D1". (Ex:UELPE204D1)

Flange unit

UELFE type

cylindrical bore with eccentric locking collar



| Shaft dia. mm | Unit number | Bearing number | Housing number | Nominal dimensions mm | | | | | | | | | | | Bolt size M | Basic load ratings dynamic kN C_r | static kN C_{or} | Mass of unit kg |
|---------------|-------------|----------------|----------------|-----------------------|-----|-------|-------|----|----|-----|-------|-------|------|-----|-------------|-------------------------------------|--------------------|-----------------|
| | | | | H | J | A_2 | A_1 | A | N | L | A_0 | B_1 | S | | | | | |
| 20 | UELFE204 | UEL204D1 | FE204 | 112 | 90 | 15 | 10 | 25 | 12 | 57 | 41.6 | 43.7 | 17.1 | M10 | 12.8 | 6.65 | 0.4 | |
| 25 | UELFE205 | UEL205D1 | FE205 | 127 | 99 | 16 | 10 | 26 | 16 | 62 | 42.9 | 44.4 | 17.5 | M14 | 14.0 | 7.85 | 0.5 | |
| 30 | UELFE206 | UEL206D1 | FE206 | 145 | 117 | 18 | 10 | 30 | 16 | 73 | 48.1 | 48.4 | 18.3 | M14 | 19.5 | 11.3 | 0.8 | |
| 35 | UELFE207 | UEL207D1 | FE207 | 158 | 130 | 19 | 12 | 32 | 16 | 86 | 51.3 | 51.1 | 18.8 | M14 | 25.7 | 15.3 | 1.1 | |
| 40 | UELFE208 | UEL208D1 | FE208 | 172 | 144 | 21 | 12 | 35 | 16 | 95 | 55.9 | 56.3 | 21.4 | M14 | 29.1 | 17.8 | 1.3 | |
| 45 | UELFE209 | UEL209D1 | FE209 | 180 | 148 | 22 | 13 | 36 | 19 | 101 | 56.9 | 56.3 | 21.4 | M16 | 32.5 | 20.4 | 1.6 | |
| 50 | UELFE210 | UEL210D1 | FE210 | 189 | 157 | 22 | 13 | 37 | 19 | 106 | 60.1 | 62.7 | 24.6 | M16 | 35.0 | 23.2 | 1.8 | |
| 55 | UELFE211 | UEL211D1 | FE211 | 216 | 184 | 25 | 18 | 41 | 19 | 118 | 68.6 | 71.4 | 27.8 | M16 | 43.5 | 29.2 | 2.7 | |
| 60 | UELFE212 | UEL212D1 | FE212 | 241 | 202 | 29 | 18 | 46 | 23 | 129 | 74.8 | 77.8 | 31 | M20 | 52.5 | 36.0 | 3.8 | |

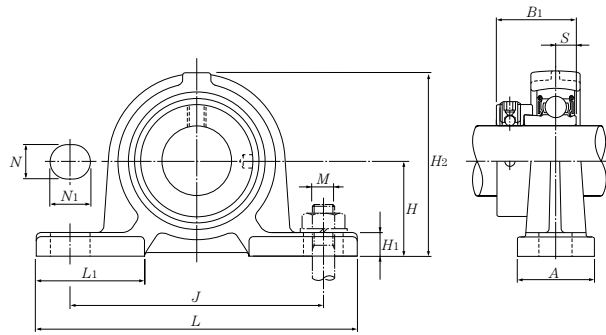
① If relubricatable type is needed, please order with suffix "D1" (Ex:UELFE204D1)

Note: Please check NTN catalogue NO.2400/E. for tolerances of inserts and housings. Tolerance of insert bearings according to JIS B 1558. Tolerance of housing according to JIS B 1559. If inch size bore is needed, please contact NTN.

Pillow block unit

AELPE type

cylindrical bore with eccentric locking collar



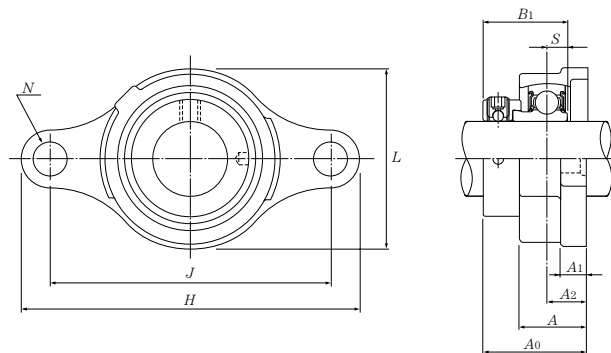
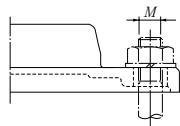
| Shaft dia. mm | Unit ^① number | Bearing ^① number | Housing ^① number | Nominal dimensions mm | | | | | | | | | | | Bolt size M | Basic load ratings dynamic kN C _r | static kN C _{or} | Mass of unit kg |
|---------------|--------------------------|-----------------------------|-----------------------------|-----------------------|-----|-----|----|----|----------------|----------------|----------------|----------------|----------------|-----|-------------|--|---------------------------|-----------------|
| | | | | H | L | J | A | N | N ₁ | H ₁ | H ₂ | L ₁ | B ₁ | S | | | | |
| 20 | AELPE204 | AEL204 | PE204 | 33.3 | 120 | 95 | 30 | 12 | 14 | 9 | 64 | 42 | 31 | 7.5 | M10 | 12.8 | 6.65 | 0.5 |
| 25 | AELPE205 | AEL205 | PE205 | 36.5 | 130 | 105 | 30 | 12 | 14 | 10 | 70 | 42 | 31 | 7.5 | M10 | 14.0 | 7.85 | 0.5 |
| 30 | AELPE206 | AEL206 | PE206 | 42.9 | 155 | 121 | 36 | 17 | 20 | 11 | 82 | 54 | 35.7 | 9 | M14 | 19.5 | 11.3 | 0.9 |
| 35 | AELPE207 | AEL207 | PE207 | 47.6 | 161 | 127 | 38 | 17 | 20 | 12 | 92 | 54 | 38.9 | 9.5 | M14 | 25.7 | 15.3 | 1.1 |
| 40 | AELPE208 | AEL208 | PE208 | 49.2 | 171 | 137 | 40 | 17 | 20 | 12 | 98 | 52 | 43.7 | 11 | M14 | 29.1 | 17.8 | 1.4 |
| 45 | AELPE209 | AEL209 | PE209 | 54 | 180 | 146 | 40 | 17 | 20 | 13 | 105 | 60 | 43.7 | 11 | M14 | 32.5 | 20.4 | 1.5 |
| 50 | AELPE210 | AEL210 | PE210 | 57.2 | 195 | 159 | 45 | 19 | 22 | 14 | 114 | 65 | 43.7 | 11 | M16 | 35.0 | 23.2 | 1.8 |

① If relubricatable type is needed, please order with suffix "D1". (Ex:AELPE204D1)

Flange unit

AELFE type

Cylindrical bore with eccentric locking collar



| Shaft dia. mm | Unit ^① number | Bearing ^① number | Housing ^① number | Nominal dimensions mm | | | | | | | | | | | Bolt size M | Basic load ratings dynamic kN C _r | static kN C _{or} | Mass of unit kg |
|---------------|--------------------------|-----------------------------|-----------------------------|-----------------------|-----|----------------|----------------|----|----|-----|----------------|----------------|-----|-----|-------------|--|---------------------------|-----------------|
| | | | | H | J | A ₂ | A ₁ | A | N | L | A ₀ | B ₁ | S | | | | | |
| 20 | AELFE204 | AEL204 | FE204 | 112 | 90 | 15 | 10 | 25 | 12 | 57 | 38.5 | 31 | 7.5 | M10 | 12.8 | 6.65 | 0.4 | |
| 25 | AELFE205 | AEL205 | FE205 | 127 | 99 | 16 | 10 | 26 | 16 | 62 | 39.5 | 31 | 7.5 | M14 | 14.0 | 7.85 | 0.4 | |
| 30 | AELFE206 | AEL206 | FE206 | 145 | 117 | 18 | 10 | 30 | 16 | 73 | 44.7 | 35.7 | 9 | M14 | 19.5 | 11.3 | 0.7 | |
| 35 | AELFE207 | AEL207 | FE207 | 158 | 130 | 19 | 12 | 32 | 16 | 86 | 48.4 | 38.9 | 9.5 | M14 | 25.7 | 15.3 | 1.0 | |
| 40 | AELFE208 | AEL208 | FE208 | 172 | 144 | 21 | 12 | 35 | 16 | 95 | 53.7 | 43.7 | 11 | M14 | 29.1 | 17.8 | 1.2 | |
| 45 | AELFE209 | AEL209 | FE209 | 180 | 148 | 22 | 13 | 36 | 19 | 101 | 54.7 | 43.7 | 11 | M16 | 32.5 | 20.4 | 1.4 | |
| 50 | AELFE210 | AEL210 | FE210 | 189 | 157 | 22 | 13 | 37 | 19 | 106 | 54.7 | 43.7 | 11 | M16 | 35.0 | 23.2 | 1.6 | |

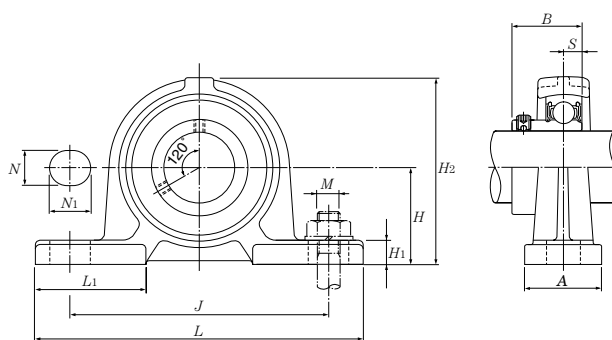
① If relubricatable type is needed, please order with suffix "D1" (Ex:AELFE204D1)

Note: Please check **NTN** catalogue NO.2400/E. for tolerances of inserts and housings. Tolerance of insert bearings according to JIS B 1558. Tolerance of housing according to JIS B 1559. If inch size bore is needed, please contact **NTN**.

Pillow block unit

ASPE type

Cylindrical bore with set screw



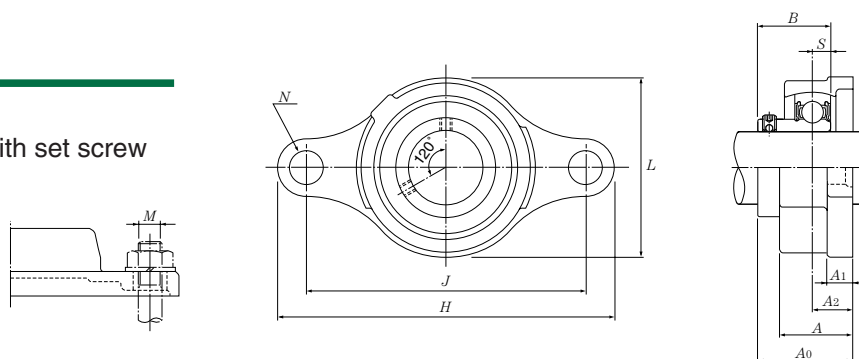
| Shaft dia. mm | Unit ^① number | Bearing ^① number | Housing ^① number | Nominal dimensions mm | | | | | | | | | | Bolt size | Basic load ratings | | Mass of unit kg | |
|------------------|-----------------------------|--------------------------------|--------------------------------|-----------------------|-----|-----|----|----|----|----|-----|----|----|-----------|--------------------|------|--------------------|---------------|
| | | | | | | | | | | | | | | | | | | dynamic kN |
| 20 | ASPE204 | AS204 | PE204 | 33.3 | 120 | 95 | 30 | 12 | 14 | 9 | 64 | 42 | 25 | 7 | M10 | 12.8 | 6.65 | 0.4 |
| 25 | ASPE205 | AS205 | PE205 | 36.5 | 130 | 105 | 30 | 12 | 14 | 10 | 70 | 42 | 27 | 7.5 | M10 | 14.0 | 7.85 | 0.5 |
| 30 | ASPE206 | AS206 | PE206 | 42.9 | 155 | 121 | 36 | 17 | 20 | 11 | 82 | 54 | 29 | 8 | M14 | 19.5 | 11.3 | 0.8 |
| 35 | ASPE207 | AS207 | PE207 | 47.6 | 161 | 127 | 38 | 17 | 20 | 12 | 92 | 54 | 34 | 8.5 | M14 | 25.7 | 15.3 | 1.0 |
| 40 | ASPE208 | AS208 | PE208 | 49.2 | 171 | 137 | 40 | 17 | 20 | 12 | 98 | 52 | 38 | 9 | M14 | 29.1 | 17.8 | 1.2 |
| 45 | ASPE209 | AS209 | PE209 | 54 | 180 | 146 | 40 | 17 | 20 | 13 | 105 | 60 | 40 | 9.5 | M14 | 32.5 | 20.4 | 1.4 |
| 50 | ASPE210 | AS210 | PE210 | 57.2 | 195 | 159 | 45 | 19 | 22 | 14 | 114 | 65 | 42 | 10 | M16 | 35.0 | 23.2 | 1.7 |

① If relubricatable type is needed, please order with suffix "D1". (Ex:ASPE204D1)

Flange unit

ASFE type

Cylindrical bore with set screw



| Shaft dia. mm | Unit ^① number | Bearing ^① number | Housing ^① number | Nominal dimensions mm | | | | | | | | | | Bolt size | Basic load ratings | | Mass of unit kg |
|------------------|-----------------------------|--------------------------------|--------------------------------|-----------------------|-----|----------------|----------------|----|----|-----|----------------|----|-----|-----------|--------------------|---------------------------------|--------------------|
| | | | | H | J | A ₂ | A ₁ | A | N | L | A ₀ | B | S | | M | dynamic kN C _r | |
| 20 | ASFE204 | AS204 | FE204 | 112 | 90 | 15 | 10 | 25 | 12 | 57 | 33 | 25 | 7 | M10 | 12.8 | 6.65 | 0.3 |
| 25 | ASFE205 | AS205 | FE205 | 127 | 99 | 16 | 10 | 26 | 16 | 62 | 35.5 | 27 | 7.5 | M14 | 14.0 | 7.85 | 0.4 |
| 30 | ASFE206 | AS206 | FE206 | 145 | 117 | 18 | 10 | 30 | 16 | 73 | 39 | 29 | 8 | M14 | 19.5 | 11.3 | 0.6 |
| 35 | ASFE207 | AS207 | FE207 | 158 | 130 | 19 | 12 | 32 | 16 | 86 | 44.5 | 34 | 8.5 | M14 | 25.7 | 15.3 | 0.8 |
| 40 | ASFE208 | AS208 | FE208 | 172 | 144 | 21 | 12 | 35 | 16 | 95 | 50 | 38 | 9 | M14 | 29.1 | 17.8 | 1.1 |
| 45 | ASFE209 | AS209 | FE209 | 180 | 148 | 22 | 13 | 36 | 19 | 101 | 52.5 | 40 | 9.5 | M16 | 32.5 | 20.4 | 1.3 |
| 50 | ASFE210 | AS210 | FE210 | 189 | 157 | 22 | 13 | 37 | 19 | 106 | 54 | 42 | 10 | M16 | 35.0 | 23.2 | 1.5 |

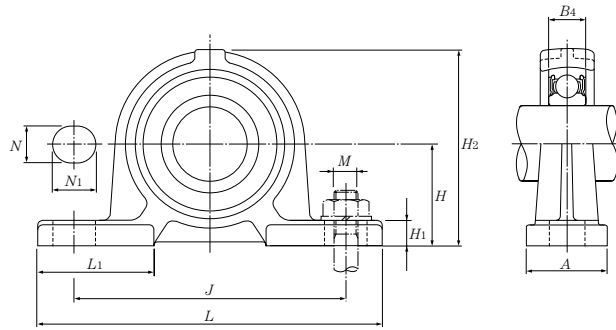
① If relubricatable type is needed, please order with suffix "D1". (Ex:ASFE204D1)

Note: Please check NTN catalogue NO.2400/E. for tolerances of inserts and housings. Tolerance of insert bearings according to JIS B 1558. Tolerance of housing according to JIS B 1559. If inch size bore is needed, please contact NTN.

Pillow block unit

CSPE type

Cylindrical bore

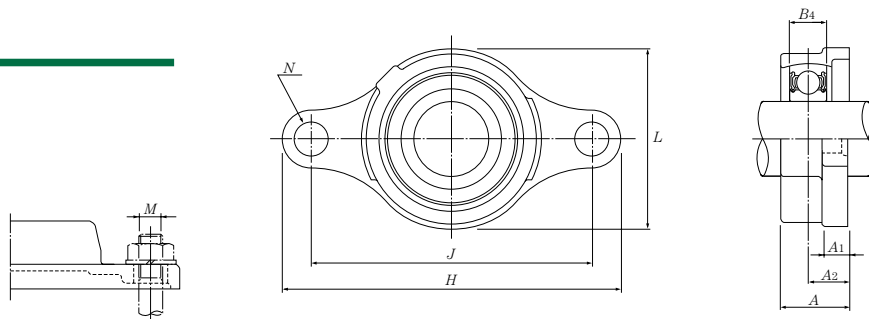


| Shaft dia. mm | Unit number | Bearing number | Housing number | Nominal dimensions mm | | | | | | | | | | Bolt size <i>M</i> | Basic load ratings | | Mass of unit kg |
|---------------|-------------|----------------|----------------|-----------------------|----------|----------|----------|----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------------------|---------------------------------------|-----------------|
| | | | | <i>H</i> | <i>L</i> | <i>J</i> | <i>A</i> | <i>N</i> | <i>N</i> ₁ | <i>H</i> ₁ | <i>H</i> ₂ | <i>L</i> ₁ | <i>B</i> ₄ | | dynamic kN <i>C_r</i> | static kN <i>C_{0r}</i> | |
| 20 | CSPE204LLU | CS204LLU | PE204 | 33.3 | 120 | 95 | 30 | 12 | 14 | 9 | 64 | 42 | 14 | M10 | 12.8 | 6.65 | 0.4 |
| 25 | CSPE205LLU | CS205LLU | PE205 | 36.5 | 130 | 105 | 30 | 12 | 14 | 10 | 70 | 42 | 15 | M10 | 14.0 | 7.85 | 0.4 |
| 30 | CSPE206LLU | CS206LLU | PE206 | 42.9 | 155 | 121 | 36 | 17 | 20 | 11 | 82 | 54 | 16 | M14 | 19.5 | 11.3 | 0.7 |
| 35 | CSPE207LLU | CS207LLU | PE207 | 47.6 | 161 | 127 | 38 | 17 | 20 | 12 | 92 | 54 | 17 | M14 | 25.7 | 15.3 | 0.9 |
| 40 | CSPE208LLU | CS208LLU | PE208 | 49.2 | 171 | 137 | 40 | 17 | 20 | 12 | 98 | 52 | 18 | M14 | 29.1 | 17.8 | 1.1 |
| 45 | CSPE209LLU | CS209LLU | PE209 | 54 | 180 | 146 | 40 | 17 | 20 | 13 | 105 | 60 | 19 | M14 | 32.5 | 20.4 | 1.2 |
| 50 | CSPE210LLU | CS210LLU | PE210 | 57.2 | 195 | 159 | 45 | 19 | 22 | 14 | 114 | 65 | 20 | M16 | 35.0 | 23.2 | 1.5 |

Flange unit

CSFE type

Cylindrical bore



| Shaft dia. mm | Unit number | Bearing number | Housing number | Nominal dimensions mm | | | | | | | | Bolt size <i>M</i> | Basic load ratings | | Mass of unit kg |
|---------------|-------------|----------------|----------------|-----------------------|----------|-----------------------|-----------------------|----------|----------|----------|-----------------------|-----------------------|---------------------------------------|---------------------------------------|-----------------|
| | | | | <i>H</i> | <i>J</i> | <i>A</i> ₂ | <i>A</i> ₁ | <i>A</i> | <i>N</i> | <i>L</i> | <i>B</i> ₄ | | dynamic kN <i>C_r</i> | static kN <i>C_{0r}</i> | |
| 20 | CSFE204LLU | CS204LLU | FE204 | 112 | 90 | 15 | 10 | 25 | 12 | 57 | 14 | M10 | 12.8 | 6.65 | 0.3 |
| 25 | CSFE205LLU | CS205LLU | FE205 | 127 | 99 | 16 | 10 | 26 | 16 | 62 | 15 | M14 | 14.0 | 7.85 | 0.4 |
| 30 | CSFE206LLU | CS206LLU | FE206 | 145 | 117 | 18 | 10 | 30 | 16 | 73 | 16 | M14 | 19.5 | 11.3 | 0.5 |
| 35 | CSFE207LLU | CS207LLU | FE207 | 158 | 130 | 19 | 12 | 32 | 16 | 86 | 17 | M14 | 25.7 | 15.3 | 0.8 |
| 40 | CSFE208LLU | CS208LLU | FE208 | 172 | 144 | 21 | 12 | 35 | 16 | 95 | 18 | M14 | 29.1 | 17.8 | 0.9 |
| 45 | CSFE209LLU | CS209LLU | FE209 | 180 | 148 | 22 | 13 | 36 | 19 | 101 | 19 | M16 | 32.5 | 20.4 | 1.1 |
| 50 | CSFE210LLU | CS210LLU | FE210 | 189 | 157 | 22 | 13 | 37 | 19 | 106 | 20 | M16 | 35.0 | 23.2 | 1.3 |

Housing tolerances according to JIS B 1559.