# Power-Lock® TF Series

Sizes : φ6～φ90
Shaft tolerance : h8
Hub bore tolerance : H8
Surface roughness : Ra1.6

All models are RoHs compliant.

## Features

### 1 Designed to Fit Small Hub Diameters

The small difference between the inner and outer diameters reduces contact pressure and makes mounting to small hubs possible.

### 2 Self-Centering

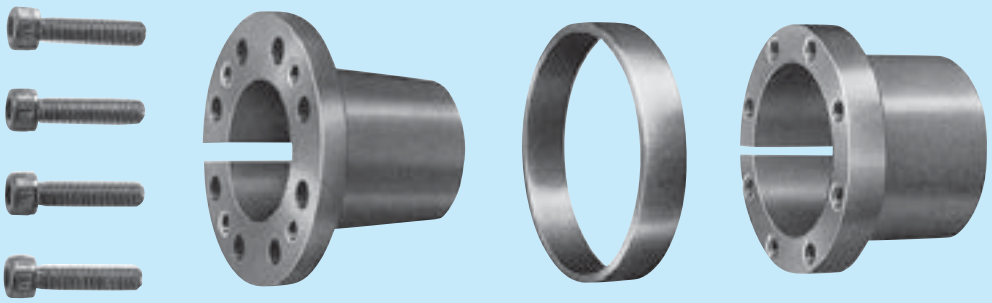
These units provide accurate shaft-hub alignment and concentricity, allowing straight bore mounting.

### 3 Full Line of Electroless Nickel-Plated Models

Electroless nickel-plated finish is available for all units above φ10. Most suitable for clean-room operation requiring minimum rust.

TF

## Parts



Locking Bolts | Inner Ring | Spacer | Outer Ring

"Power-Lock" TF Series shaft-hub locking devices are simply constructed of the following four parts: inner and outer rings, a spacer and locking bolts. Simply tighten these bolts to achieve a completely secure connection.

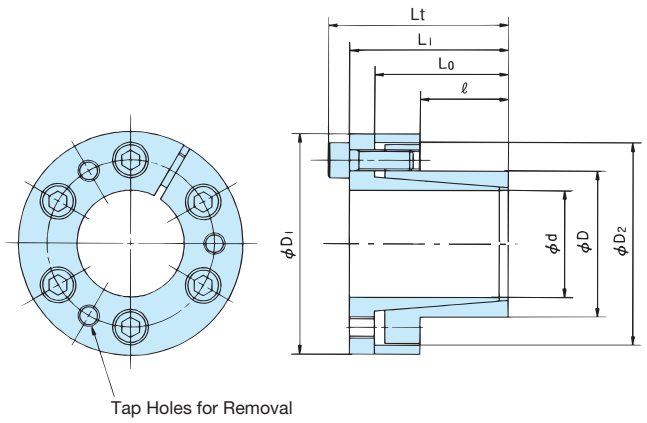
## Reference Number System

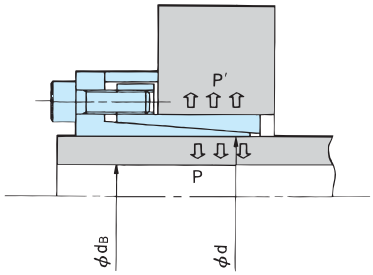
**PL 010 X 018 TF**

- TF:Standard
  TF-KP:Electroless Nickel-Plated
- 018: Outer Diameter mm
- 010: Shaft Diameter mm
- PL: Power-Lock

# Model Numbers and Specifications

## Standard (TF) Models




P and P' represent the average contact pressure applied to the shaft and hub respectively. These values may vary from -20% to +40%, depending on the amount of friction applied to the bolts. Transmissible torque Mt and transmissible thrust Pax are calculated from the minimum allowable contact pressure.

* Note) 3

| Model No. d X D Shaft Diameter X Outer Diameter mm | Dimensions mm | | | | | | Transmissible Torque | | Transmissible Thrust | | Contact Pressure | | | | Locking Bolts | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Mt | | Pax | | Shaft P | | Hub P' | | Quantity | Size | Tightening Torque MA | | |
| | ℓ | Lo | L1 | Lt | D1 | D2 | N·m | {kgf·m} | kN | {kgf} | MPa | {kgf/mm²} | MPa | {kgf/mm²} | | | N·m | {kgf·m} | kg |
| **PL 006 X 012 TF** | 10 | 19 | 21 | 24 | 25 | 23.0 | 11 | 1.2 | 3.78 | 386 | 186 | 19.0 | 93 | 9.5 | 3 | M3x10 | 2.25 | 0.23 | 0.05 |
| **PL 007 X 012 TF** | 10 | 19 | 21 | 24 | 25 | 22.5 | 13 | 1.4 | 3.78 | 386 | 160 | 16.3 | 93 | 9.5 | 3 | M3x10 | 2.25 | 0.23 | 0.05 |
| **PL 008 X 015 TF** | 12 | 22 | 25 | 29 | 27 | 24.0 | 26 | 2.7 | 6.53 | 666 | 200 | 20.4 | 107 | 10.9 | 3 | M4x10 | 4.80 | 0.49 | 0.07 |
| **PL 010 X 018 TF** | 14 | 23 | 26 | 30 | 32 | 28.0 | 44 | 4.4 | 8.70 | 888 | 183 | 18.7 | 102 | 10.4 | 4 | M4x10 | 4.80 | 0.49 | 0.09 |
| **PL 011 X 018 TF** | 14 | 23 | 26 | 30 | 32 | 28.0 | 48 | 4.9 | 8.70 | 888 | 167 | 17.0 | 102 | 10.4 | 4 | M4x10 | 4.80 | 0.49 | 0.08 |
| **PL 012 X 020 TF** | 14 | 23 | 26 | 30 | 34 | 30.0 | 52 | 5.3 | 8.70 | 888 | 153 | 15.6 | 92 | 9.3 | 4 | M4x10 | 4.80 | 0.49 | 0.10 |
| **PL 014 X 022 TF** | 14 | 23 | 26 | 30 | 38 | 33.0 | 61 | 6.2 | 8.70 | 888 | 131 | 13.4 | 83 | 8.5 | 4 | M4x10 | 4.80 | 0.49 | 0.12 |
| **PL 015 X 023 TF** | 14 | 24 | 30 | 35 | 39 | 35.5 | 107 | 10.9 | 14.2 | 1450 | 199 | 20.4 | 130 | 13.3 | 4 | M5x14 | 9.80 | 1.00 | 0.12 |
| **PL 016 X 024 TF** | 14 | 24 | 30 | 35 | 40 | 36.5 | 114 | 11.6 | 14.2 | 1450 | 187 | 19.1 | 125 | 12.7 | 4 | M5x14 | 9.80 | 1.00 | 0.16 |
| **PL 018 X 026 TF** | 18 | 31 | 38 | 44 | 47 | 42 | 196 | 20 | 21.6 | 2200 | 217 | 22.1 | 126 | 12.9 | 4 | M6x18 | 16.7 | 1.7 | 0.27 |
| **PL 019 X 027 TF** | 18 | 31 | 38 | 44 | 49 | 43 | 206 | 21 | 21.6 | 2200 | 205 | 20.9 | 122 | 12.4 | 4 | M6x18 | 16.7 | 1.7 | 0.29 |
| **PL 020 X 028 TF** | 18 | 31 | 38 | 44 | 50 | 44 | 216 | 22 | 21.6 | 2200 | 195 | 19.9 | 118 | 12.0 | 4 | M6x18 | 16.7 | 1.7 | 0.30 |
| **PL 022 X 032 TF** | 25 | 38 | 45 | 51 | 54 | 48 | 245 | 25 | 21.6 | 2200 | 121 | 12.3 | 74 | 7.5 | 4 | M6x18 | 16.7 | 1.7 | 0.38 |
| **PL 024 X 034 TF** | 25 | 38 | 45 | 51 | 56 | 50 | 265 | 27 | 21.6 | 2200 | 111 | 11.3 | 70 | 7.1 | 4 | M6x18 | 16.7 | 1.7 | 0.41 |
| **PL 025 X 034 TF** | 25 | 38 | 45 | 51 | 56 | 50 | 274 | 28 | 21.6 | 2200 | 107 | 10.9 | 70 | 7.1 | 4 | M6x18 | 16.7 | 1.7 | 0.39 |
| **PL 028 X 039 TF** | 25 | 38 | 45 | 51 | 61 | 55 | 461 | 47 | 32.3 | 3300 | 142 | 14.5 | 91 | 9.3 | 6 | M6x18 | 16.7 | 1.7 | 0.47 |
| **PL 030 X 041 TF** | 25 | 38 | 45 | 51 | 62 | 57 | 500 | 51 | 32.3 | 3300 | 133 | 13.6 | 86 | 8.8 | 6 | M6x18 | 16.7 | 1.7 | 0.48 |
| **PL 032 X 043 TF** | 25 | 38 | 45 | 51 | 65 | 59 | 529 | 54 | 32.3 | 3300 | 124 | 12.7 | 82 | 8.4 | 6 | M6x18 | 16.7 | 1.7 | 0.52 |
| **PL 035 X 047 TF** | 32 | 45 | 52 | 58 | 69 | 62 | 774 | 79 | 44.1 | 4500 | 116 | 11.8 | 78 | 8.0 | 8 | M6x18 | 16.7 | 1.7 | 0.63 |
| **PL 038 X 050 TF** | 32 | 45 | 52 | 58 | 72 | 66 | 843 | 86 | 44.1 | 4500 | 107 | 10.9 | 74 | 7.5 | 8 | M6x18 | 16.7 | 1.7 | 0.67 |
| **PL 040 X 053 TF** | 32 | 45 | 52 | 58 | 75 | 69 | 882 | 90 | 44.1 | 4500 | 101 | 10.3 | 70 | 7.1 | 8 | M6x18 | 16.7 | 1.7 | 0.73 |
| **PL 042 X 055 TF** | 32 | 45 | 52 | 58 | 78 | 71 | 931 | 95 | 44.1 | 4500 | 96 | 9.8 | 68 | 6.9 | 8 | M6x18 | 16.7 | 1.7 | 0.78 |
| **PL 045 X 059 TF** | 45 | 62 | 70 | 78 | 86 | 80 | 1850 | 189 | 82.3 | 8400 | 119 | 12.1 | 82 | 8.4 | 8 | M8x22 | 40.2 | 4.1 | 1.23 |
| **PL 048 X 062 TF** | 45 | 62 | 70 | 78 | 87 | 81 | 1970 | 201 | 82.3 | 8400 | 111 | 11.3 | 78 | 8.0 | 8 | M8x22 | 40.2 | 4.1 | 1.24 |
| **PL 050 X 065 TF** | 45 | 62 | 70 | 78 | 92 | 86 | 2060 | 210 | 82.3 | 8400 | 107 | 10.9 | 74 | 7.6 | 8 | M8x22 | 40.2 | 4.1 | 1.40 |
| **PL 055 X 071 TF** | 55 | 72 | 80 | 88 | 98 | 92 | 2550 | 260 | 92.1 | 9400 | 87 | 8.9 | 63 | 6.4 | 9 | M8x22 | 40.2 | 4.1 | 1.70 |
| **PL 060 X 077 TF** | 55 | 72 | 80 | 88 | 104 | 98 | 2770 | 283 | 92.1 | 9400 | 80 | 8.2 | 58 | 5.9 | 9 | M8x22 | 40.2 | 4.1 | 1.90 |
| **PL 065 X 084 TF** | 55 | 72 | 80 | 88 | 111 | 105 | 3010 | 307 | 92.1 | 9400 | 74 | 7.6 | 53 | 5.4 | 9 | M8x22 | 40.2 | 4.1 | 2.21 |
| **PL 070 X 090 TF** | 65 | 86 | 96 | 106 | 119 | 113 | 5150 | 525 | 147 | 15000 | 92 | 9.4 | 67 | 6.8 | 9 | M10x25 | 81.3 | 8.3 | 3.05 |
| **PL 075 X 095 TF** | 65 | 86 | 96 | 106 | 126 | 119 | 5490 | 560 | 147 | 15000 | 86 | 8.8 | 63 | 6.4 | 9 | M10x25 | 81.3 | 8.3 | 3.32 |
| **PL 080 X 100 TF** | 65 | 86 | 96 | 106 | 131 | 125 | 7840 | 800 | 196 | 20000 | 108 | 11.0 | 79 | 8.1 | 12 | M10x25 | 81.3 | 8.3 | 3.50 |
| **PL 085 X 106 TF** | 65 | 86 | 96 | 106 | 137 | 131 | 8330 | 850 | 196 | 20000 | 101 | 10.3 | 75 | 7.7 | 12 | M10x25 | 81.3 | 8.3 | 3.81 |
| **PL 090 X 112 TF** | 65 | 86 | 96 | 106 | 144 | 137 | 8820 | 900 | 196 | 20000 | 96 | 9.8 | 72 | 7.3 | 12 | M10x25 | 81.3 | 8.3 | 4.20 |

Notes) 1. Stocked models are in bold.
2. Mt indicates torque at 0 transmissible thrust, while Pax indicates transmissible thrust at 0 torque. If transmissible torque and thrust apply simultaneously calculate and compare the combined value with the transmissible torque provided in the table.
3. Dimensions when this product is attached to the shaft and hub.

# Model Numbers and Specifications

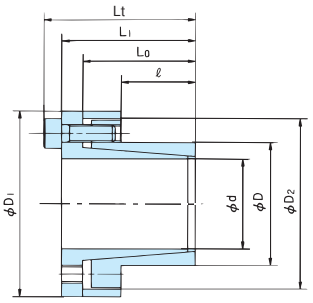
## Electroless Nickel-Plated (TF-KP) Models

● Notes

1. Dimensions and transmissible torque are the same as the standard TF models.
2. The units are plated with peel-proof electroless nickel.
3. The locking bolts are DISGO treated so that assembly lubrication is not necessary. The electroless nickel-plated models are chrome-free and environmentally friendly.

● Applications

Most suitable for clean-room operation requiring minimum rust.




* Note) 3

| Model No. (d X D Shaft Diameter X Outer Diameter) mm | Dimensions mm | | | | | | Transmissible Torque | | Transmissible Thrust | | Contact Pressure | | | | Locking Bolts | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ℓ | L0 | L1 | Lt | D1 | D2 | Mt | | Pax | | Shaft P | | Hub P′ | | Quantity | Size | Tightening Torque MA | | |
| | | | | | | | N·m | {kgf·m} | kN | {kgf} | MPa | {kgf/mm²} | MPa | {kgf/mm²} | | | N·m | {kgf·m} | kg |
| **PL 010 X 018 TF-KP** | 14 | 23 | 26 | 30 | 32 | 28.0 | 44 | 4.4 | 8.70 | 888 | 183 | 18.7 | 102 | 10.4 | 4 | M 4x10 | 4.80 | 0.49 | 0.09 |
| **PL 011 X 018 TF-KP** | 14 | 23 | 26 | 30 | 32 | 28.0 | 48 | 4.9 | 8.70 | 888 | 167 | 17.0 | 102 | 10.4 | 4 | M 4x10 | 4.80 | 0.49 | 0.08 |
| **PL 012 X 020 TF-KP** | 14 | 23 | 26 | 30 | 34 | 30.0 | 52 | 5.3 | 8.70 | 888 | 153 | 15.6 | 92 | 9.3 | 4 | M 4x10 | 4.80 | 0.49 | 0.10 |
| **PL 014 X 022 TF-KP** | 14 | 23 | 26 | 30 | 38 | 33.0 | 61 | 6.2 | 8.70 | 888 | 131 | 13.4 | 83 | 8.5 | 4 | M 4x10 | 4.80 | 0.49 | 0.12 |
| **PL 015 X 023 TF-KP** | 14 | 24 | 30 | 35 | 39 | 35.5 | 107 | 10.9 | 14.2 | 1450 | 199 | 20.4 | 130 | 13.3 | 4 | M 5x14 | 9.80 | 1.00 | 0.12 |
| **PL 016 X 024 TF-KP** | 14 | 24 | 30 | 35 | 40 | 36.5 | 114 | 11.6 | 14.2 | 1450 | 187 | 19.1 | 125 | 12.7 | 4 | M 5x14 | 9.80 | 1.00 | 0.16 |
| **PL 018 X 026 TF-KP** | 18 | 31 | 38 | 44 | 47 | 42 | 196 | 20 | 21.6 | 2200 | 217 | 22.1 | 126 | 12.9 | 4 | M 6x18 | 16.7 | 1.7 | 0.27 |
| **PL 019 X 027 TF-KP** | 18 | 31 | 38 | 44 | 49 | 43 | 206 | 21 | 21.6 | 2200 | 205 | 20.9 | 122 | 12.4 | 4 | M 6x18 | 16.7 | 1.7 | 0.29 |
| **PL 020 X 028 TF-KP** | 18 | 31 | 38 | 44 | 50 | 44 | 216 | 22 | 21.6 | 2200 | 195 | 19.9 | 118 | 12.0 | 4 | M 6x18 | 16.7 | 1.7 | 0.30 |
| **PL 022 X 032 TF-KP** | 25 | 38 | 45 | 51 | 54 | 48 | 245 | 25 | 21.6 | 2200 | 121 | 12.3 | 74 | 7.5 | 4 | M 6x18 | 16.7 | 1.7 | 0.38 |
| **PL 024 X 034 TF-KP** | 25 | 38 | 45 | 51 | 56 | 50 | 265 | 27 | 21.6 | 2200 | 111 | 11.3 | 70 | 7.1 | 4 | M 6x18 | 16.7 | 1.7 | 0.41 |
| **PL 025 X 034 TF-KP** | 25 | 38 | 45 | 51 | 56 | 50 | 274 | 28 | 21.6 | 2200 | 107 | 10.9 | 70 | 7.1 | 4 | M 6x18 | 16.7 | 1.7 | 0.39 |
| **PL 028 X 039 TF-KP** | 25 | 38 | 45 | 51 | 61 | 55 | 461 | 47 | 32.3 | 3300 | 142 | 14.5 | 91 | 9.3 | 6 | M 6x18 | 16.7 | 1.7 | 0.47 |
| **PL 030 X 041 TF-KP** | 25 | 38 | 45 | 51 | 62 | 57 | 500 | 51 | 32.3 | 3300 | 133 | 13.6 | 86 | 8.8 | 6 | M 6x18 | 16.7 | 1.7 | 0.48 |
| **PL 032 X 043 TF-KP** | 25 | 38 | 45 | 51 | 65 | 59 | 529 | 54 | 32.3 | 3300 | 124 | 12.7 | 82 | 8.4 | 6 | M 6x18 | 16.7 | 1.7 | 0.52 |
| **PL 035 X 047 TF-KP** | 32 | 45 | 52 | 58 | 69 | 62 | 774 | 79 | 44.1 | 4500 | 116 | 11.8 | 78 | 8.0 | 8 | M 6x18 | 16.7 | 1.7 | 0.63 |
| **PL 038 X 050 TF-KP** | 32 | 45 | 52 | 58 | 72 | 66 | 843 | 86 | 44.1 | 4500 | 107 | 10.9 | 74 | 7.5 | 8 | M 6x18 | 16.7 | 1.7 | 0.67 |
| **PL 040 X 053 TF-KP** | 32 | 45 | 52 | 58 | 75 | 69 | 882 | 90 | 44.1 | 4500 | 101 | 10.3 | 70 | 7.1 | 8 | M 6x18 | 16.7 | 1.7 | 0.73 |
| **PL 042 X 055 TF-KP** | 32 | 45 | 52 | 58 | 78 | 71 | 931 | 95 | 44.1 | 4500 | 96 | 9.8 | 68 | 6.9 | 8 | M 6x18 | 16.7 | 1.7 | 0.78 |
| **PL 045 X 059 TF-KP** | 45 | 62 | 70 | 78 | 86 | 80 | 1850 | 189 | 82.3 | 8400 | 119 | 12.1 | 82 | 8.4 | 8 | M 8x22 | 40.2 | 4.1 | 1.23 |
| **PL 048 X 062 TF-KP** | 45 | 62 | 70 | 78 | 87 | 81 | 1970 | 201 | 82.3 | 8400 | 111 | 11.3 | 78 | 8.0 | 8 | M 8x22 | 40.2 | 4.1 | 1.24 |
| **PL 050 X 065 TF-KP** | 45 | 62 | 70 | 78 | 92 | 86 | 2060 | 210 | 82.3 | 8400 | 107 | 10.9 | 74 | 7.6 | 8 | M 8x22 | 40.2 | 4.1 | 1.40 |
| PL 055 X 071 TF-KP | 55 | 72 | 80 | 88 | 98 | 92 | 2550 | 260 | 92.1 | 9400 | 87 | 8.9 | 63 | 6.4 | 9 | M 8x22 | 40.2 | 4.1 | 1.70 |
| PL 060 X 077 TF-KP | 55 | 72 | 80 | 88 | 104 | 98 | 2770 | 283 | 92.1 | 9400 | 80 | 8.2 | 58 | 5.9 | 9 | M 8x22 | 40.2 | 4.1 | 1.90 |
| PL 065 X 084 TF-KP | 55 | 72 | 80 | 88 | 111 | 105 | 3010 | 307 | 92.1 | 9400 | 74 | 7.6 | 53 | 5.4 | 9 | M 8x22 | 40.2 | 4.1 | 2.21 |
| PL 070 X 090 TF-KP | 65 | 86 | 96 | 106 | 119 | 113 | 5150 | 525 | 147 | 15000 | 92 | 9.4 | 67 | 6.8 | 9 | M10x25 | 81.3 | 8.3 | 3.05 |
| PL 075 X 095 TF-KP | 65 | 86 | 96 | 106 | 126 | 119 | 5490 | 560 | 147 | 15000 | 86 | 8.8 | 63 | 6.4 | 9 | M10x25 | 81.3 | 8.3 | 3.32 |
| PL 080 X 100 TF-KP | 65 | 86 | 96 | 106 | 131 | 125 | 7840 | 800 | 196 | 20000 | 108 | 11.0 | 79 | 8.1 | 12 | M10x25 | 81.3 | 8.3 | 3.50 |
| PL 085 X 106 TF-KP | 65 | 86 | 96 | 106 | 137 | 131 | 8330 | 850 | 196 | 20000 | 101 | 10.3 | 75 | 7.7 | 12 | M10x25 | 81.3 | 8.3 | 3.81 |
| PL 090 X 112 TF-KP | 65 | 86 | 96 | 106 | 144 | 137 | 8820 | 900 | 196 | 20000 | 96 | 9.8 | 72 | 7.3 | 12 | M10x25 | 81.3 | 8.3 | 4.20 |

Notes) 1. Stocked models are in bold.
2. Mt indicates torque at 0 transmissible thrust, while Pax indicates transmissible thrust at 0 torque. If transmissible torque and thrust apply simultaneously calculate and compare the combined value with the transmissible torque provided in the table.
3. Dimensions when this product is attached to the shaft and hub.

TF

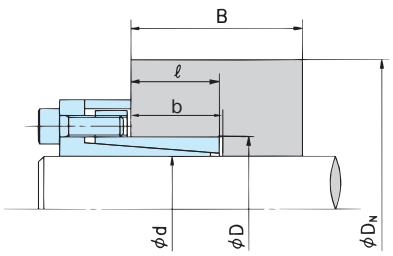
# Hub Diameters (1)

## ■ Standard (TF) and Electroless Nickel-Plated (TF-KP) Models (Same dimensions and capacities)

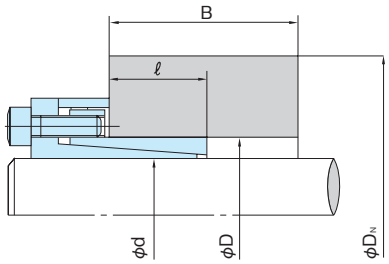
(1) Installing to hubs with a guide portion when B ≧ 2 ℓ
(See Installation Example A)

(2) Installing to hubs without a guide portion when B ≧ 2 ℓ
(See Installation Example B)

$D_N$ is the minimum hub diameter required to tolerate P' or the pressure exerted from within the hub.




Installation Example(A)
When installing to hubs with a guide portion, the hub configuration coefficient is as follows: $K_3 = 0.8$




Installation Example(B)
When installing to hubs without a guide portion, the hub configuration coefficient is as follows: $K_3 = 0.8$

### Hub Configuration Coefficient $K_3 = 0.8$

Minimum hub diameter φDN(mm)

| Model No. (d X D Shaft Diameter X Outer Diameter) mm | Hub Contact Pressure P' MPa | Hub Contact Pressure P' {kgf/mm²} | Yield Point of Hub Material σ 0.2 MPa (kgf/mm²) 206 (21) | 225 (23) | 245 (25) | 274 (28) | 294 (30) | 343 (35) | 392 (40) | 441 (45) | Hub boring depth b (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FC350 SS400 SC410 S10C FCMB360 | SC450 S15C SF440 | FCD400 SS490 SC480 S20C SF490 | S30C SF540 | FCD450 S35C SF590 | FCD500 S45C | FCD600 S55C | FCD700 | |
| PL 006 X 012 TF | 93 | 9.5 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 12 |
| PL 007 X 012 TF | 93 | 9.5 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 12 |
| PL 008 X 015 TF | 107 | 10.9 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 14 |
| PL 010 X 018 TF (-KP) | 102 | 10.4 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 16 |
| PL 011 X 018 TF (-KP) | 102 | 10.4 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 16 |
| PL 012 X 020 TF (-KP) | 92 | 9.3 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 16 |
| PL 014 X 022 TF (-KP) | 83 | 8.5 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 16 |
| PL 015 X 023 TF (-KP) | 130 | 13.3 | 41 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 16 |
| PL 016 X 024 TF (-KP) | 125 | 12.7 | 41 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 16 |
| PL 018 X 026 TF (-KP) | 126 | 12.9 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 20 |
| PL 019 X 027 TF (-KP) | 122 | 12.4 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 20 |
| PL 020 X 028 TF (-KP) | 118 | 12.0 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 20 |
| PL 022 X 032 TF (-KP) | 74 | 7.5 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 27 |
| PL 024 X 034 TF (-KP) | 70 | 7.1 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 27 |
| PL 025 X 034 TF (-KP) | 70 | 7.1 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 27 |
| PL 028 X 039 TF (-KP) | 91 | 9.3 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 27 |
| PL 030 X 041 TF (-KP) | 86 | 8.8 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 27 |
| PL 032 X 043 TF (-KP) | 82 | 8.4 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 27 |
| PL 035 X 047 TF (-KP) | 78 | 8.0 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 34 |
| PL 038 X 050 TF (-KP) | 74 | 7.5 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 34 |
| PL 040 X 053 TF (-KP) | 70 | 7.1 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 34 |
| PL 042 X 055 TF (-KP) | 68 | 6.9 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 34 |
| PL 045 X 059 TF (-KP) | 82 | 8.4 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 86 | 47 |
| PL 048 X 062 TF (-KP) | 78 | 8.0 | 87 | 87 | 87 | 87 | 87 | 87 | 87 | 87 | 47 |
| PL 050 X 065 TF (-KP) | 74 | 7.6 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 47 |
| PL 055 X 071 TF (-KP) | 63 | 6.4 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 57 |
| PL 060 X 077 TF (-KP) | 58 | 5.9 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 57 |
| PL 065 X 084 TF (-KP) | 53 | 5.4 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 57 |
| PL 070 X 090 TF (-KP) | 67 | 6.8 | 119 | 119 | 119 | 119 | 119 | 119 | 119 | 119 | 67 |
| PL 075 X 095 TF (-KP) | 63 | 6.4 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 126 | 67 |
| PL 080 X 100 TF (-KP) | 79 | 8.1 | 138 | 134 | 131 | 131 | 131 | 131 | 131 | 131 | 67 |
| PL 085 X 106 TF (-KP) | 75 | 7.7 | 144 | 140 | 137 | 137 | 137 | 137 | 137 | 137 | 67 |
| PL 090 X 112 TF (-KP) | 72 | 7.3 | 149 | 146 | 144 | 144 | 144 | 144 | 144 | 144 | 67 |

Notes) 1. The above figures do not take safety rates into account. Consider them prior to operation.
2. Calculate hub diameters using the formula $K_3=0.8$ as discussed in Selection Procedure.

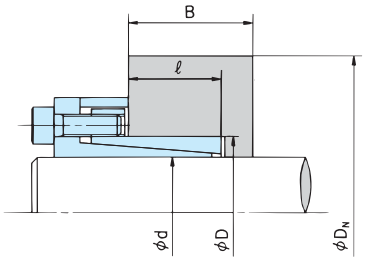
# Hub Diameters (2)

## ■ Standard (TF) and Electroless Nickel-Plated (TF-KP) Models (Same dimensions and capacities)

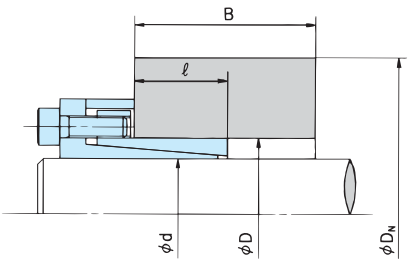
(3) Installing to hubs with a guide portion when $\ell \leqq B < 2\ell$
(See Installation Example C)

(4) Installing to hubs without a guide portion when $\ell \leqq B < 2\ell$
(See Installation Example D)

$D_N$ is the minimum hub diameter required to tolerate P' or the pressure exerted from within the hub.




Installation Example(C)
When installing to hubs with a guide portion, the hub configuration coefficient is as follows: $K_3 = 1.0$




Installation Example(D)
When installing to hubs without a guide portion, the hub configuration coefficient is as follows: $K_3 = 1.0$

### Hub Configuration Coefficient $K_3 = 1.0$

Minimum hub diameter ϕDN(mm)

| Model No. (d X D Shaft Diameter X Outer Diameter) mm | Hub Contact Pressure P' MPa | Hub Contact Pressure P' {kgf/mm²} | Yield Point of Hub Material σ 0.2 MPa {kgf/mm²} 206 {21} FC350 SS400 SC410 S10C FCMB360 | 225 {23} SC450 S15C SF440 | 245 {25} FCD400 SS490 SC480 S20C SF490 | 274 {28} S30C SF540 | 294 {30} FCD450 S35 SF590 | 343 {35} FCD500 S45C | 392 {40} FCD600 S55C | 441 {45} FCD700 | Hub boring depth b (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| PL 006 X 012 TF | 93 | 9.5 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 12 |
| PL 007 X 012 TF | 93 | 9.5 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 12 |
| PL 008 X 015 TF | 107 | 10.9 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 14 |
| PL 010 X 018 TF (-KP) | 102 | 10.4 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 16 |
| PL 011 X 018 TF (-KP) | 102 | 10.4 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 16 |
| PL 012 X 020 TF (-KP) | 92 | 9.3 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 16 |
| PL 014 X 022 TF (-KP) | 83 | 8.5 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 16 |
| PL 015 X 023 TF (-KP) | 130 | 13.3 | 49 | 45 | 42 | 39 | 39 | 39 | 39 | 39 | 16 |
| PL 016 X 024 TF (-KP) | 125 | 12.7 | 49 | 45 | 43 | 40 | 40 | 40 | 40 | 40 | 16 |
| PL 018 X 026 TF (-KP) | 126 | 12.9 | 54 | 49 | 47 | 47 | 47 | 47 | 47 | 47 | 20 |
| PL 019 X 027 TF (-KP) | 122 | 12.4 | 54 | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 20 |
| PL 020 X 028 TF (-KP) | 118 | 12.0 | 54 | 50 | 50 | 50 | 50 | 50 | 50 | 50 | 20 |
| PL 022 X 032 TF (-KP) | 74 | 7.5 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 27 |
| PL 024 X 034 TF (-KP) | 70 | 7.1 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 27 |
| PL 025 X 034 TF (-KP) | 70 | 7.1 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 27 |
| PL 028 X 039 TF (-KP) | 91 | 9.3 | 63 | 61 | 61 | 61 | 61 | 61 | 61 | 61 | 27 |
| PL 030 X 041 TF (-KP) | 86 | 8.8 | 65 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 27 |
| PL 032 X 043 TF (-KP) | 82 | 8.4 | 66 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 27 |
| PL 035 X 047 TF (-KP) | 78 | 8.0 | 71 | 69 | 69 | 69 | 69 | 69 | 69 | 69 | 34 |
| PL 038 X 050 TF (-KP) | 74 | 7.5 | 73 | 72 | 72 | 72 | 72 | 72 | 72 | 72 | 34 |
| PL 040 X 053 TF (-KP) | 70 | 7.1 | 76 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 34 |
| PL 042 X 055 TF (-KP) | 68 | 6.9 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 34 |
| PL 045 X 059 TF (-KP) | 82 | 8.4 | 91 | 87 | 86 | 86 | 86 | 86 | 86 | 86 | 47 |
| PL 048 X 062 TF (-KP) | 78 | 8.0 | 93 | 90 | 87 | 87 | 87 | 87 | 87 | 87 | 47 |
| PL 050 X 065 TF (-KP) | 74 | 7.6 | 96 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 47 |
| PL 055 X 071 TF (-KP) | 63 | 6.4 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 98 | 57 |
| PL 060 X 077 TF (-KP) | 58 | 5.9 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 57 |
| PL 065 X 084 TF (-KP) | 53 | 5.4 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 57 |
| PL 070 X 090 TF (-KP) | 67 | 6.8 | 126 | 123 | 120 | 119 | 119 | 119 | 119 | 119 | 67 |
| PL 075 X 095 TF (-KP) | 63 | 6.4 | 131 | 127 | 126 | 126 | 126 | 126 | 126 | 126 | 67 |
| PL 080 X 100 TF (-KP) | 79 | 8.1 | 151 | 145 | 141 | 136 | 133 | 131 | 131 | 131 | 67 |
| PL 085 X 106 TF (-KP) | 75 | 7.7 | 156 | 151 | 146 | 141 | 138 | 137 | 137 | 137 | 67 |
| PL 090 X 112 TF (-KP) | 72 | 7.3 | 161 | 156 | 152 | 147 | 144 | 144 | 144 | 144 | 67 |

Notes) 1. The above figures do not take safety rates into account. Consider them prior to operation.
2. Calculate hub diameters using the formula $K_3$=1.0 as discussed in Selection Procedure.

Innovation in Motion

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