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YOUNGJIN
FLEX



SINCE 1991
BEST QUALITY



**CATALOGUE
PRODUCTION
SPECIFICATION**

**FLEXIBLE JOINT
EXPANSION JOINT
FLEXIBLE CONNECTOR**



YOUNGJIN FLEX Co.,Ltd.

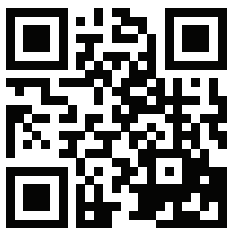
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Manufacturing Method and Characteristics of the Bellows

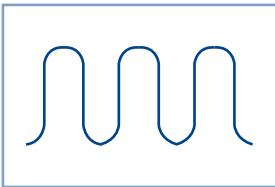
Piping purpose is well served when pipeline is protected from stress generated from various factors, such as expansion and contraction of pipe due to fluctuating temperature of ambient air, fluid and vibrating equipment as well as from moving pipes from wind or quakes

| | |
|-----------------|-----------------------------------------------|
| Material | SS 304 / SS 316L |
| Used For | Expansion Joint, Flexible Joint, Bellows, etc |

Bellows Type

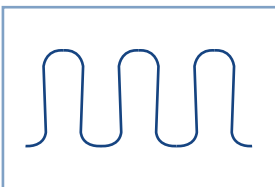
| TYPE | |
|---------------------|--------|
| Annular (One pitch) | Spiral |
| | |

One Pitch Type



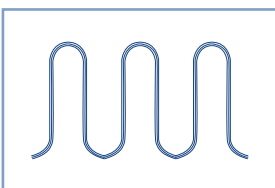
U type

- The most widely used shape
- Excellent elasticity
- When using for high pressure, insert a separate control ring into the bend of the bellows



Compression type

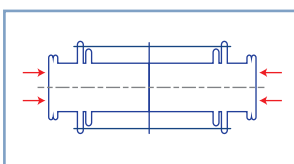
- Stronger resistance to pressure than U-type
- Used for relatively high pressure
- Used when the elongation amount is less than 50% of the compression amount



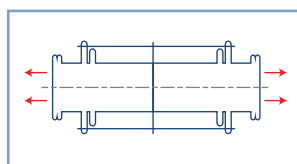
Multi-Ply type

- More than 2 layers of bellows
- Robust structure: Absorbs the expansion and contraction of single-layer U-shaped bellows. Withstanding high pressure.

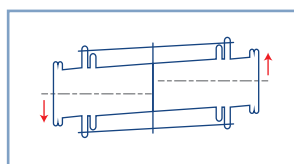
Application Range of Expansion Joint



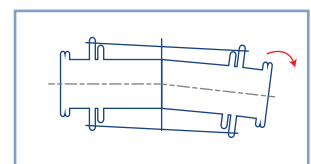
Axial compression



Axial extension



Lateral movements



Angular movements

EXPANSION JOINT

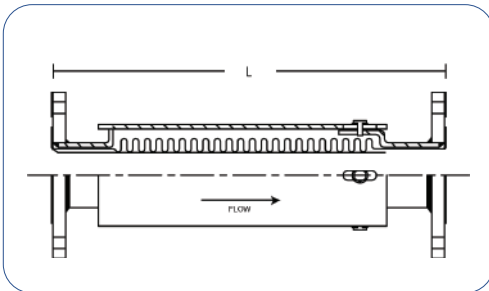


Bellows Type for Steel Pipes

| | |
|--------------------|---------------------------------|
| Application | Steam , Gas , Air , Water , Oil |
| Design Pressure | 9.8 bar |
| Design Temperature | 428°F (220°C) |
| Bellows | SS 304 / SS 316L |
| Inner Tube | SS 304 / SS 316L |
| Outer Tube | CS |
| Flange | CS |

- Excellent corrosion resistance and durability of bellows: Stainless steel
- Prevention of damage caused by external impact
: External cylinder protection device
- Less pressure loss in the fluid
- Excellent inner cylinder configuration for flexible flow
- Long product life
- Flange spec. : ANSI / DIN / EN / BS / JIS

TKE-11BS (Single)

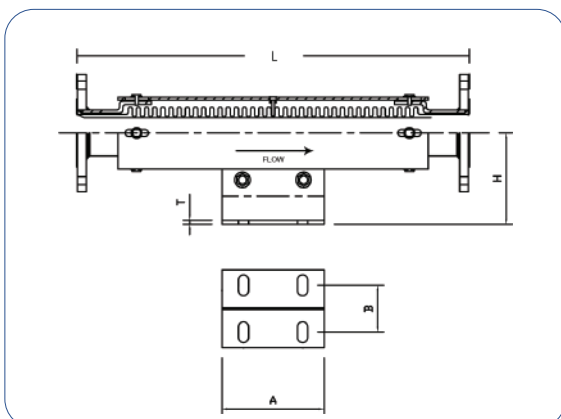


(mm)

| Type | Length | Expansion Range | |
|------------|--------|-----------------|-------|
| | | Exp. | Comp. |
| 20A (¾") | 365 | 10 | 25 |
| 25A (1") | 365 | 10 | 25 |
| 32A (1¼") | 365 | 10 | 25 |
| 40A (1½") | 365 | 10 | 25 |
| 50A (2") | 365 | 10 | 25 |
| 65A (2½") | 415 | 10 | 25 |
| 80A (3") | 415 | 10 | 25 |
| 100A (4") | 415 | 10 | 25 |
| 125A (5") | 440 | 10 | 25 |
| 150A (6") | 440 | 10 | 25 |
| 200A (8") | 440 | 10 | 25 |
| 250A (10") | 465 | 10 | 25 |
| 300A (12") | 465 | 10 | 25 |

※ Welding type or out of standard: made to order

TKE-11BD (Dual)



(mm)

| Type | Length | Expansion Range | | A | B | C |
|------------|--------|-----------------|-------|-----|-----|-----|
| | | Exp. | Comp. | | | |
| 20A (¾") | 680 | 20 | 50 | 130 | 60 | 100 |
| 25A (1") | 680 | 20 | 50 | 130 | 60 | 100 |
| 32A (1¼") | 680 | 20 | 50 | 130 | 70 | 120 |
| 40A (1½") | 680 | 20 | 50 | 130 | 70 | 120 |
| 50A (2") | 680 | 20 | 50 | 130 | 80 | 130 |
| 65A (2½") | 780 | 20 | 50 | 150 | 100 | 140 |
| 80A (3") | 780 | 20 | 50 | 150 | 110 | 150 |
| 100A (4") | 880 | 20 | 50 | 150 | 130 | 170 |
| 125A (5") | 880 | 20 | 50 | 200 | 150 | 200 |
| 150A (6") | 930 | 20 | 50 | 200 | 180 | 220 |
| 200A (8") | 930 | 20 | 50 | 250 | 220 | 250 |
| 250A (10") | 980 | 20 | 50 | 250 | 280 | 300 |
| 300A (12") | 980 | 20 | 50 | 250 | 300 | 350 |

※ Welding type or out of standard: made to order

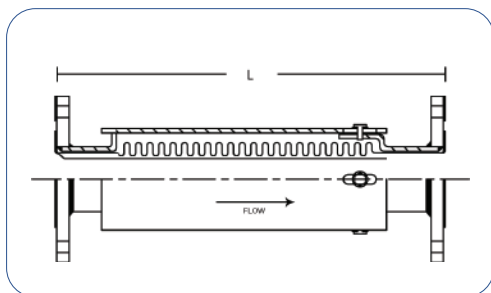
Bellows Type for Stainless

| | |
|--------------------|---------------------------------|
| Application | Steam , Gas , Air , Water , Oil |
| Design Pressure | 9.8 bar |
| Design Temperature | 428°F (220°C) |
| Bellows | SS 304 / SS 316L |
| Inner Tube | SS 304 / SS 316L |
| Outer Tube | SS 304 |
| Flange | SS 304 |

- Excellent corrosion resistance and durability :Using Stainless steel
- Prevention of damage caused by external impact : External cylinder protection device
- Less pressure loss in the fluid
- Excellent inner cylinder configuration for flexible flow
- Long product life
- Flange spec. : ANSI / DIN / EN / BS / JIS

TKE-12BS (Single)

(mm)

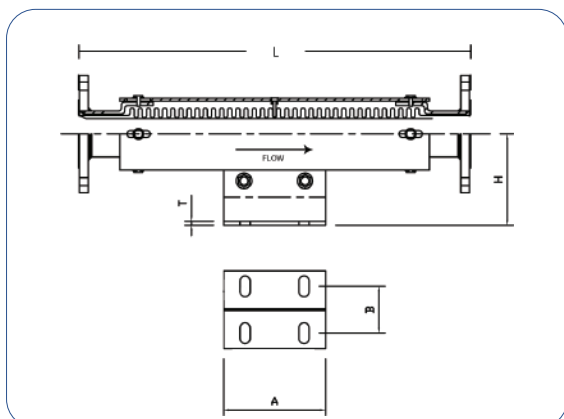


| Type | Length | Expansion Range | |
|------------|--------|-----------------|-------|
| | | Exp. | Comp. |
| 20A (¾") | 365 | 10 | 25 |
| 25A (1") | 365 | 10 | 25 |
| 32A (1¼") | 365 | 10 | 25 |
| 40A (1½") | 365 | 10 | 25 |
| 50A (2") | 365 | 10 | 25 |
| 65A (2½") | 415 | 10 | 25 |
| 80A (3") | 415 | 10 | 25 |
| 100A (4") | 415 | 10 | 25 |
| 125A (5") | 440 | 10 | 25 |
| 150A (6") | 440 | 10 | 25 |
| 200A (8") | 440 | 10 | 25 |
| 250A (10") | 465 | 10 | 25 |
| 300A (12") | 465 | 10 | 25 |

※ Welding type or out of standard: made to order

TKE-12BD (Dual)

(mm)



| Type | Length | Expansion Range | | A | B | C |
|------------|--------|-----------------|-------|-----|-----|-----|
| | | Exp. | Comp. | | | |
| 20A (¾") | 680 | 20 | 50 | 130 | 60 | 100 |
| 25A (1") | 680 | 20 | 50 | 130 | 60 | 100 |
| 32A (1¼") | 680 | 20 | 50 | 130 | 70 | 120 |
| 40A (1½") | 680 | 20 | 50 | 130 | 70 | 120 |
| 50A (2") | 680 | 20 | 50 | 130 | 80 | 130 |
| 65A (2½") | 780 | 20 | 50 | 150 | 100 | 140 |
| 80A (3") | 780 | 20 | 50 | 150 | 110 | 150 |
| 100A (4") | 880 | 20 | 50 | 150 | 130 | 170 |
| 125A (5") | 880 | 20 | 50 | 200 | 150 | 200 |
| 150A (6") | 930 | 20 | 50 | 200 | 180 | 220 |
| 200A (8") | 930 | 20 | 50 | 250 | 220 | 250 |
| 250A (10") | 980 | 20 | 50 | 250 | 280 | 300 |
| 300A (12") | 980 | 20 | 50 | 250 | 300 | 350 |

※ Welding type or out of standard: made to order

FREE-Type Expansion Joint

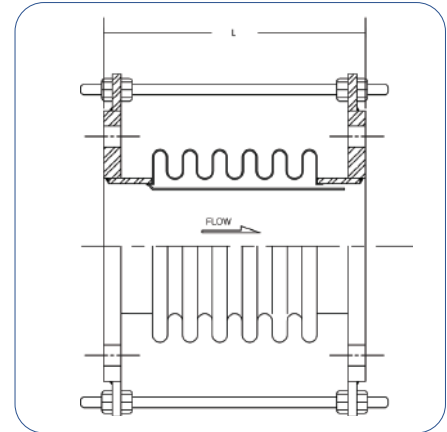
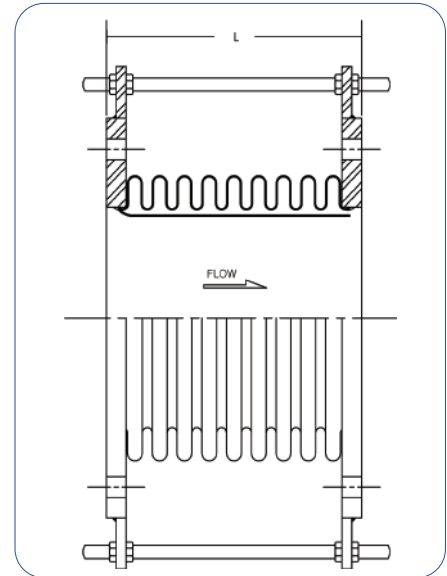
| | |
|--------------------|------------------------------|
| Application | Steam , Exhaust , Air piping |
| Design Pressure | Vaccum ~ 4.9 bar |
| Design Temperature | 428°F (220°C) |
| Bellows | SS 304 / SS 316L |
| End Pipe | CS / SS 304 / SS 316L |
| Sleeve | SS 304 / SS 316L |
| Flange | CS / SS 304 |

- Both ends of bellows: Standard Flanges / Angle Flange / Butt welded single pipe

- Usage: Gas pipe, exhaust pipe, duct, for expansion and contraction absorption of flue, etc., for engine exhaust pipe, and for dustproofing at blower inlet/outlet

- Flange spec. : ANSI / DIN / EN / BS / JIS

TKE-21FS



| Type (A) | Bellows Thickness | P X H | No. of corrugation | Overall length | Axial movement displacement | Lateral deflection | Angular rotation | Retraction force | | Bellows O.D | Effective section surfaces |
|----------|-------------------|-------|--------------------|----------------|-----------------------------|--------------------|------------------|------------------|----------|-------------|----------------------------|
| | | | | | | | | X (kg) | Y (kg) | | |
| 50A | 0.3 | 11x8 | 14 | 240 | ±12 | 5.5 | 20.2 | 5.0 | 3.5 | 68 | 36 |
| 65A | 0.4 | 12x9 | 14 | 250 | ±12 | 4.4 | 16.5 | 6.1 | 6.3 | 83 | 54 |
| 80A | 0.4 | 11x10 | 14 | 250 | ±25 | 15.8 | 28.1 | 3.1 | 3.3 | 102 | 82 |
| 100A | 0.4 | 12x10 | 14 | 250 | ±39 | 26.5 | 28.0 | 2.0 | 0.7 | 102 | 113 |
| 125A | 0.5 | 16x12 | 17 | 250 | ±40 | 21.9 | 31.6 | 3.0 | 1.7 | 148 | 172 |
| 150A | 0.5 | 17x14 | 15 | 300 | ±34 | 15.7 | 22.5 | 6.4 | 5.0 | 174 | 238 |
| 200A | 0.6 | 20x17 | 11 | 300 | ±44 | 16.4 | 21.4 | 7.5 | 9.0 | 232 | 423 |
| 250A | 0.6 | 23x17 | 11 | 300 | ±43 | 13.5 | 17.7 | 8.5 | 14.7 | 284 | 633 |
| 300A | 0.6 | 25x19 | 10 | 300 | ±29 | 5.2 | 9.9 | 13.2 | 69.3 | 337 | 892 |
| 350A | 1.0 | 45x35 | 3 | 300 | ±19 | 2.0 | 6.0 | 21.9 | 317.2 | 373 | 1093 |
| | | | 5 | 440 | ±29 | 4.7 | 9.0 | 14.6 | 94.0 | | |
| | | | 6 | 524 | ±39 | 8.3 | 12.0 | 10.9 | 39.6 | | |
| 400A | 1.0 | 45x35 | 3 | 300 | ±19 | 1.8 | 5.2 | 25.1 | 475.9 | 427 | 1432 |
| | | | 5 | 475 | ±29 | 4.1 | 7.7 | 16.7 | 141.0 | | |
| | | | 6 | 545 | ±39 | 7.3 | 10.4 | 12.5 | 59.5 | | |
| 450A | 1.0 | 50x45 | 3 | 300 | ±27 | 2.9 | 6.3 | 13.2 | 184.6 | 488 | 1870 |
| | | | 5 | 475 | ±40 | 6.6 | 9.5 | 8.8 | 54.7 | | |
| | | | 6 | 545 | ±47 | 9.0 | 11.1 | 7.6 | 343.4 | | |
| 500A | 1.0 | 50x45 | 3 | 300 | ±27 | 2.6 | 5.7 | 14.6 | 248.7 | 539 | 2282 |
| | | | 5 | 475 | ±40 | 6.0 | 8.6 | 9.7 | 73.7 | | |
| | | | 6 | 545 | ±47 | 8.1 | 10.0 | 8.3 | 46.4 | | |
| 600A | 1.0 | 50x45 | 3 | 300 | ±27 | 2.2 | 4.8 | 17.2 | 418.4 | 641 | 3227 |
| | | | 5 | 475 | ±40 | 5.0 | 7.2 | 11.6 | 124.00 | | |
| | | | 6 | 545 | ±47 | 6.8 | 8.4 | 9.9 | 78.1 | | |
| 700A | 1.0 | 50x45 | 3 | 300 | ±27 | 1.9 | 4.1 | 20.1 | 851.5 | 743 | 4336 |
| | | | 5 | 475 | ±40 | 4.3 | 6.2 | 13.4 | 193.1 | | |
| | | | 6 | 545 | ±47 | 5.9 | 7.3 | 11.5 | 121.6 | | |
| 800A | 1.0 | 50x45 | 3 | 300 | ±23 | 1.3 | 3.2 | 41.1 | 1972.6 | 848 | 5648 |
| | | | 5 | 475 | ±39 | 3.8 | 5.3 | 24.7 | 426.1 | | |
| | | | 6 | 545 | ±47 | 5.5 | 6.4 | 20.6 | 246.6 | | |
| 900A | 1.0 | 50x45 | 3 | 300 | ±23 | 1.2 | 2.75 | 46.1 | 2773.5 | 950 | 7088 |
| | | | 5 | 475 | ±39 | 3.4 | 4.7 | 27.7 | 599.1 | | |
| | | | 6 | 545 | ±47 | 4.9 | 5.7 | 23.0 | 346.7 | | |
| 1000A | 1.0 | 60x50 | 3 | 400 | ±23 | 1.1 | 2.5 | 51.0 | 3766.2 | 1052 | 8692 |
| | | | 5 | 600 | ±39 | 3.1 | 4.3 | 30.6 | 813.5 | | |
| | | | 6 | 640 | ±47 | 4.5 | 5.1 | 25.5 | 470.8 | | |
| 1100A | 1.0 | 60x50 | 3 | 400 | ±28 | 1.4 | 2.8 | 56.9 | 3616.4 | 1162 | 10605 |
| | | | 5 | 580 | ±47 | 4.0 | 4.5 | 34.1 | 781.1 | | |
| | | | 6 | 640 | ±56 | 5.8 | 5.6 | 27.4 | 452.1 | | |
| 1200A | 1.0 | 60x50 | 3 | 400 | ±28 | 1.3 | 2.5 | 61.3 | 4536.7 | 1264 | 12548 |
| | | | 5 | 580 | ±47 | 3.7 | 4.2 | 36.8 | 979.9 | | |
| | | | 6 | 640 | ±56 | 5.3 | 5.1 | 30.7 | 567.1 | | |
| 1300A | 1.2 | 60x50 | 3 | 400 | ±28 | 1.2 | 2.3 | 66.3 | 5726.0 | 1365 | 14655 |
| | | | 5 | 580 | ±47 | 3.4 | 3.9 | 39.8 | 14236.8 | | |
| | | | 6 | 640 | ±56 | 4.7 | 4.7 | 33.1 | 715.7 | | |
| 1400A | 1.2 | 60x50 | 3 | 400 | ±28 | 1.1 | 2.2 | 71.2 | 7106.8 | 1468 | 16926 |
| | | | 5 | 580 | ±47 | 3.2 | 3.6 | 42.7 | 1535.1 | | |
| | | | 6 | 640 | ±56 | 4.6 | 4.4 | 35.6 | 888.4 | | |
| 1500A | 1.2 | 60x50 | 3 | 400 | ±30 | 1.1 | 2.1 | 101.9 | 11771.5 | 1580 | 19607 |
| | | | 5 | 580 | ±50 | 3.1 | 3.6 | 61.1 | 2542.6 | | |
| | | | 6 | 640 | ±60 | 4.5 | 4.3 | 50.9 | 1471.4 | | |
| 2000A | 1.2 | 60x50 | 3 | 420 | ±30 | 0.8 | 1.6 | 134.6 | 27167.5 | 2088 | 34241 |
| | | | 5 | 600 | ±50 | 2.4 | 2.7 | 80.8 | 5868.2 | | |
| | | | 6 | 660 | ±60 | 3.4 | 3.3 | 67.3 | 3395.9 | | |
| 2500A | 1.2 | 60x50 | 3 | 460 | ±25 | 0.6 | 1.1 | 392.7 | 120081.2 | 2570 | 51875 |
| | | | 5 | 620 | ±42 | 1.6 | 1.9 | 235.6 | 25937.5 | | |
| | | | 6 | 700 | ±51 | 2.4 | 2.2 | 196.4 | 15010.2 | | |
| 3000A | 1.2 | 60x50 | 3 | 560 | ±25 | 0.5 | 0.9 | 469.1 | 204687.2 | 3070 | 74023 |
| | | | 5 | 720 | ±42 | 1.3 | 1.6 | 281.5 | 4421.4 | | |
| | | | 6 | 800 | ±51 | 2.0 | 1.9 | 234.6 | 25585.9 | | |

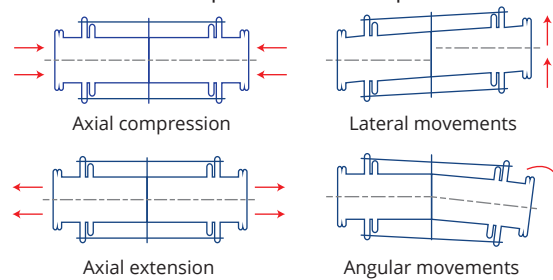
※ Axial expansion and contraction, axial expansion and contraction, angular displacement: values guaranteed for 7000 cycles when each acted alone

※ Out of standard: made to order

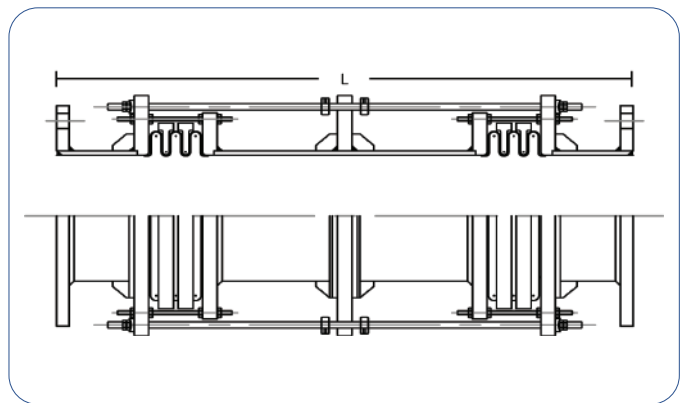
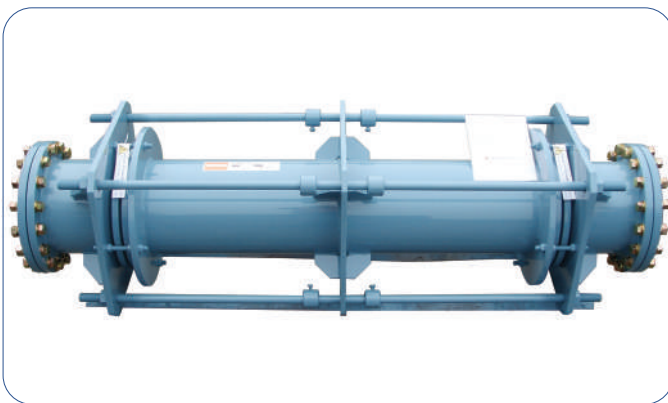
Universal Type Expansion Joint

| | |
|--------------------|----------------------------------------------------------------------|
| Application | Sinking of the Ground for Oil Tank, Stream, Oil Piping, Power Piping |
| Design Pressure | 1.96 bar ~ 19.6 bar |
| Design Temperature | 428°F (220°C) |
| Bellows | SS 304 / SS 316L |
| End Pipe | CS / SS 304 |
| Control Ring | SS 304 / SS400 |
| Flange | CS / SS 304 |

- Structure: Combination of two bellows / tie rod / middle pipe
- Flange spec. : ANSI / DIN / EN / BS / JIS
- Three-Direction displacement absorption:



TKE-23UVS



| Type | No. of corrugation | Lateral deflection setting length (L) | | | | | |
|-------|--------------------|---------------------------------------|------|------|------|------|------|
| | | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 |
| 200A | 3+3 | 84 | 122 | 159 | 197 | 234 | 271 |
| 250A | | 101 | 147 | 193 | 239 | 286 | 332 |
| 300A | | 107 | 158 | 210 | 262 | 314 | 365 |
| 350A | | 95 | 143 | 190 | 238 | 285 | 333 |
| 400A | | 78 | 107 | 158 | 209 | 239 | 279 |
| 450A | | 69 | 105 | 141 | 177 | 214 | 250 |
| 500A | | 65 | 99 | 133 | 168 | 203 | 237 |
| 550A | | 62 | 96 | 130 | 164 | 199 | 234 |
| 600A | | 54 | 85 | 116 | 148 | 179 | 211 |
| 650A | | 51 | 80 | 109 | 139 | 168 | 198 |
| 700A | | 3+3 | 44 | 71 | 98 | 126 | 153 |
| | 4+4 | 53 | 68 | 124 | 160 | 196 | 232 |
| 800A | 3+3 | 39 | 63 | 87 | 111 | 135 | 159 |
| | 4+4 | 47 | 68 | 109 | 141 | 173 | 205 |
| 900A | 3+3 | 35 | 57 | 78 | 100 | 122 | 143 |
| | 4+4 | 42 | 70 | 98 | 127 | 156 | 185 |
| 1000A | 3+3 | 28 | 47 | 67 | 87 | 106 | 126 |
| | 4+4 | 33 | 58 | 84 | 110 | 136 | 162 |

※ Out of standard: made to order

FLEXIBLE JOINT



Bellows & Hose

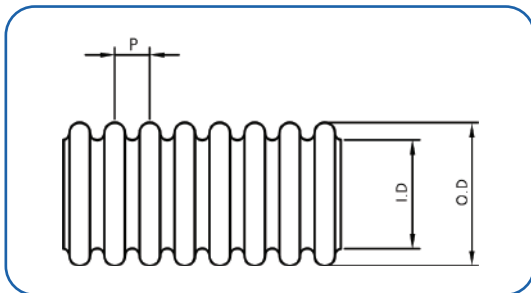
Absorbs excessive stress as below to protect equipment and prevent accidents

- Contraction and expansion of pipeline: temperature of pipe transport fluid
- Vibration: engine, wind pressure, earthquake

TKE-BHO



Bellows Annular Type



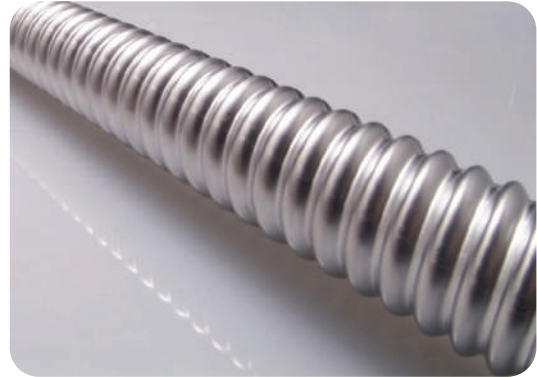
1. Bellows Annual Type

(mm)

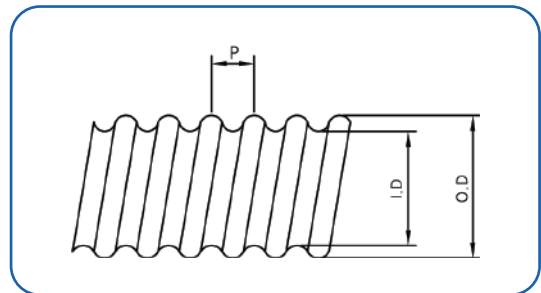
| Type | I.D | O/D | P | T |
|------|-------|-------|------|------|
| 20A | 22.0 | 27.0 | 7.0 | 0.25 |
| 25A | 27.4 | 41.4 | 8.6 | 0.3 |
| 32A | 32.8 | 46.8 | 9.2 | 0.3 |
| 40A | 41.7 | 55.7 | 9.2 | 0.3 |
| 50A | 52.5 | 68.5 | 10.2 | 0.3 |
| 65A | 67.5 | 69.5 | 11.8 | 0.4 |
| 80A | 78.9 | 102.9 | 11.0 | 0.4 |
| 100A | 103.8 | 127.8 | 12.0 | 0.5 |
| 125A | 129.9 | 159.9 | 15.4 | 0.5 |
| 150A | 152.2 | 182.2 | 16.2 | 0.5 |
| 200A | 202.2 | 236.2 | 19.2 | 0.7 |
| 250A | 252.2 | 286.2 | 22.7 | 0.7 |
| 300A | 300.0 | 338.0 | 24.5 | 0.7 |

※ Out of standard : made to order

TKE-BHS



Bellows Spiral Type



2. Bellows Spiral Type

(mm)

| Type | I.D | O/D | T |
|------|------|-------|------|
| 20A | 20.5 | 32.5 | 0.25 |
| 25A | 25.9 | 32.9 | 0.25 |
| 32A | 34.0 | 48.5 | 0.30 |
| 40A | 40.5 | 48.5 | 0.30 |
| 50A | 53.0 | 67.7 | 0.30 |
| 65A | 65.5 | 76.7 | 0.40 |
| 80A | 76.0 | 90.0 | 0.40 |
| 100A | 97.1 | 110.0 | 0.40 |

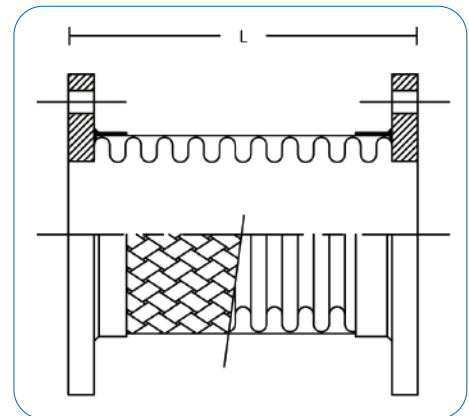
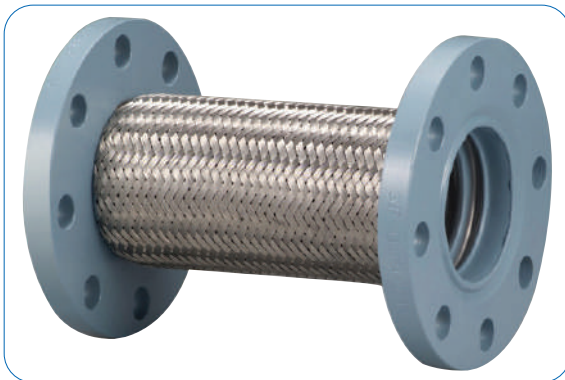
※ Out of standard : made to order

Flexible Joint

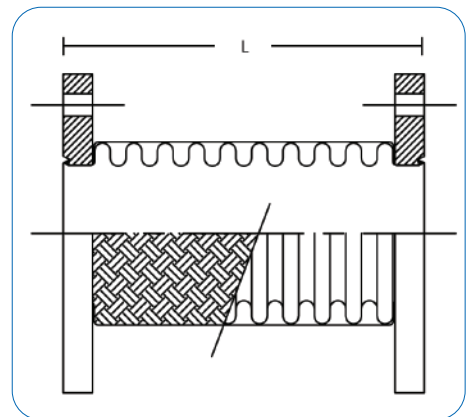
| | |
|--------------------|---------------------------------|
| Application | Steam , Gas , Air , Water , Oil |
| Design Pressure | 9.8 bar / 1.96 bar |
| Design Temperature | 428°F (220°C) |
| Bellows | SS 304 / SS 316L |
| Braid | SS 304 |
| Flange | CS / SS 304 |

- Suitable for piping facilities in narrow spaces
- Effective vibration absorption
- Withstanding high temperature and high pressure
- U-shaped bellows: Good flexibility
- Flange spec. : ANSI / DIN / EN / BS / JIS

TKF-31S



Ribbon Braid



Wire Braid

| Type | Length | Braid Type |
|------|--------|------------|
| 25A | 200 | WIRE |
| 32A | 200 | WIRE |
| 40A | 230 | WIRE |
| 50A | 230 | WIRE |
| 65A | 230 | WIRE |
| 80A | 230 | WIRE |
| 100A | 230 | WIRE |
| 125A | 280 | WIRE |
| 150A | 280 | WIRE |
| 200A | 300 | RIBBON |
| 250A | 300 | RIBBON |
| 300A | 300 | RIBBON |
| 350A | 350 | RIBBON |

※ Out of standard: made to order

Flexible Metal Hose

| | |
|--------------------|---------------------------------|
| Application | Steam , Gas , Air , Water , Oil |
| Design Pressure | 9.8 bar / 19.6 bar |
| Design Temperature | 428°F (220°C) |
| Bellows | SS 304 / SS 316L |
| Braid | SS 304 |

- Using self-developed and manufactured bellows
- Easy to install piping in narrow space - Short and flexible
- Excellent vibration and shock absorption
- Maximization of product function: Organically combined Utype and Omega-type bellows (according to the user)

TKF-32H-CL

(mm)

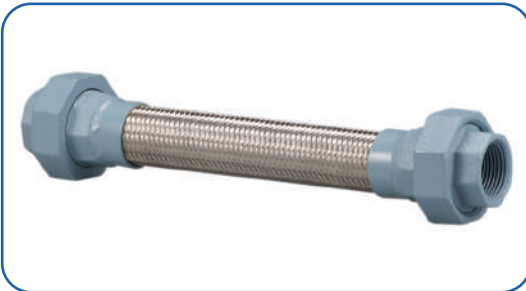


| Type | Length |
|------|--------|
| 15A | 300L |
| 20A | 300L |
| 25A | 300L |
| 32A | 300L |
| 40A | 300L |
| 50A | 300L |

* Out of standard : made to order

TKF-32H-U

(mm)

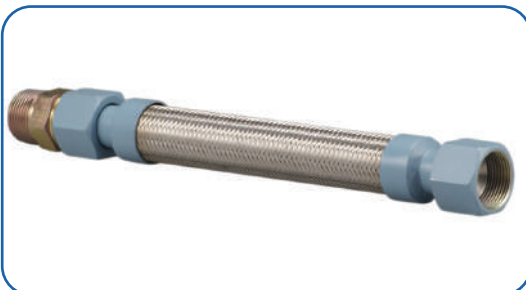


| Type | Length |
|------|--------|
| 15A | 300L |
| 20A | 300L |
| 25A | 300L |
| 32A | 300L |
| 40A | 300L |
| 50A | 300L |

* Out of standard : made to order

TKF-32H-O

(mm)

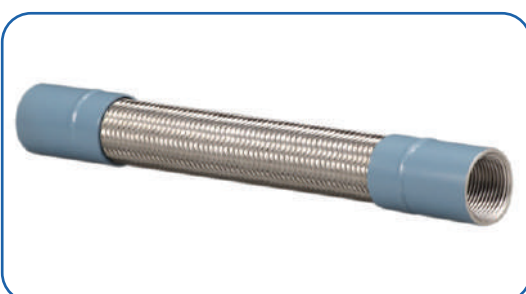


| Type | Length |
|------|--------|
| 15A | 300L |
| 20A | 300L |
| 25A | 300L |
| 32A | 300L |
| 40A | 300L |
| 50A | 300L |

* Out of standard : made to order

TKF-32H-S

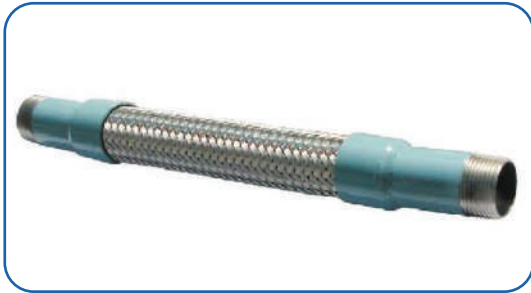
(mm)



| Type | Length |
|------|--------|
| 15A | 300L |
| 20A | 300L |
| 25A | 300L |
| 32A | 300L |
| 40A | 300L |
| 50A | 300L |

* Out of standard : made to order

TKF-32H-N

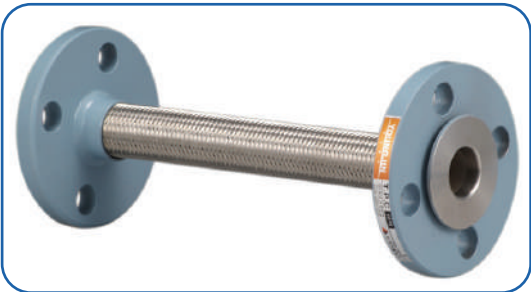


(mm)

| Type | Length |
|------|--------|
| 15A | 300L |
| 20A | 300L |
| 25A | 300L |
| 32A | 300L |
| 40A | 300L |
| 50A | 300L |

※ Out of standard : made to order

TKF-32H-L



(mm)

| Type | Length |
|------|--------|
| 15A | 300L |
| 20A | 300L |
| 25A | 300L |
| 32A | 300L |
| 40A | 300L |
| 50A | 300L |

※ Out of standard : made to order

TKF-32H-P



(mm)

| Type | Length |
|------|--------|
| 15A | 300L |
| 20A | 300L |
| 25A | 300L |
| 32A | 300L |
| 40A | 300L |
| 50A | 300L |

※ Out of standard : made to order

TKF-32H-TU



(mm)

| Type | Length |
|------|--------|
| 15A | 1000L |
| 20A | 1000L |
| 25A | 1000L |
| 32A | 1000L |
| 40A | 1000L |
| 50A | 1000L |

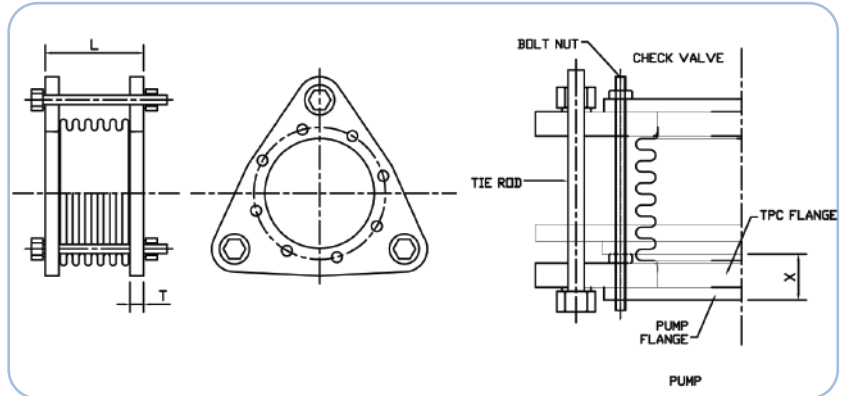
※ Out of standard : made to order

Tie Rod Pump Connectors (T.P.C)

| | |
|--------------------|---------------------------------|
| Application | Steam , Gas , Air , Water , Oil |
| Design Pressure | 9.8 bar / 19.6 bar |
| Design Temperature | 428°F (220°C) |
| Bellows | SS 304 / SS 316L |
| Bolt. Nut | CS / SS 304 |
| Flange | CS / SS 304 |

- Use of multi-layer bellows : Less reaction force of spring
- No braid: No vibration transmission by braid
- Use of tie rods: prevent damage to bellows due to propulsion
- No friction noise with tie rods
- Flange spec. : ANSI / DIN / EN / BS / JIS

TKF-TPC



- Displacement when the pump is filled with fluid
 +) Displacement when the pump is operated

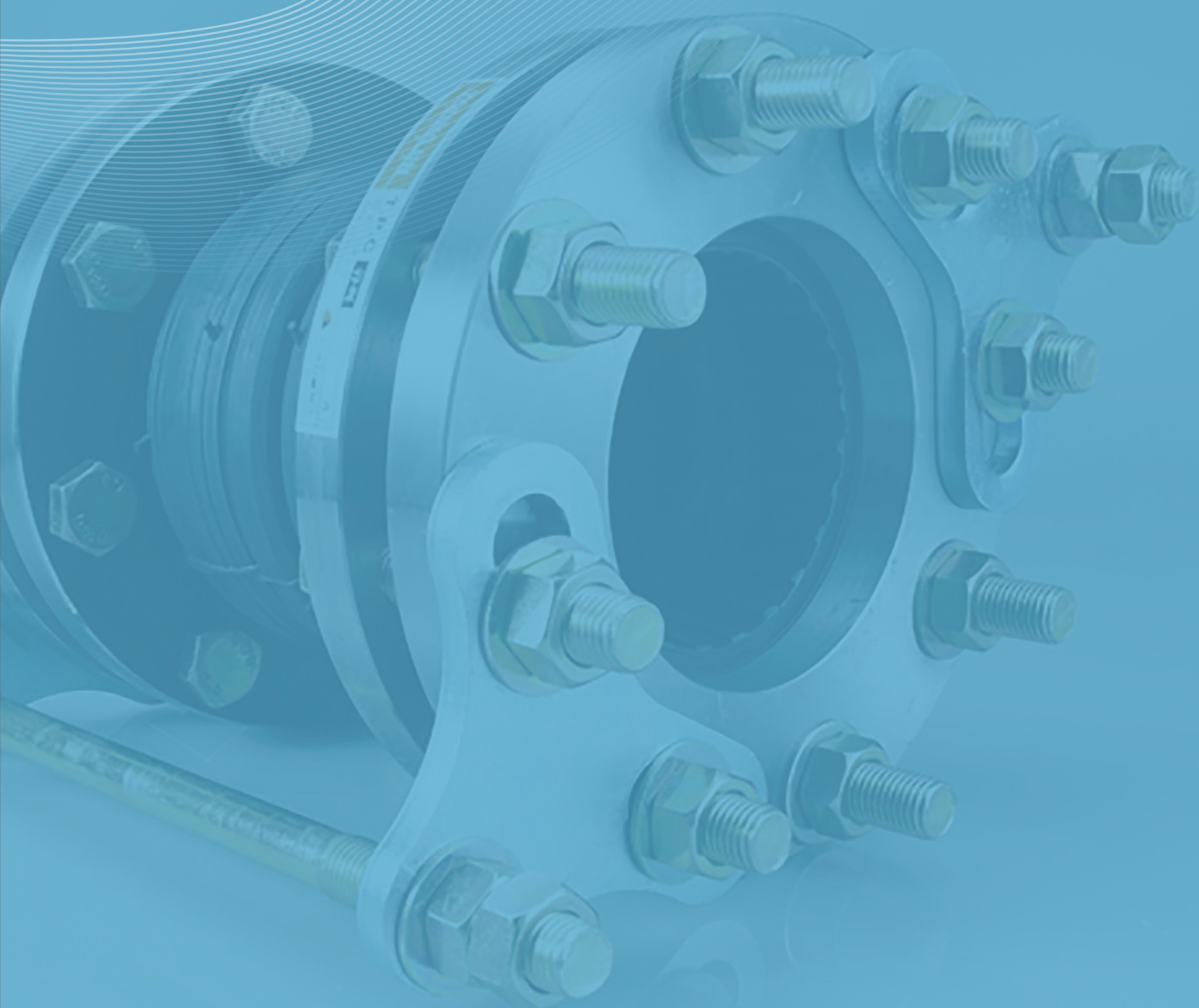
Total Displacement - Vibration Support

(mm)

| TYPE | Dimmension | | | | Movement | | |
|------|------------|----|----------|----|---------------|-------------|---------|
| | 10 kg /㎏ | | 20 kg /㎏ | | Axial Lateral | | Lateral |
| | L | T | L | T | Expansion | Contraction | |
| 25A | 80 | 16 | 80 | 16 | 3 | 12 | 3 |
| 32A | 80 | 16 | 85 | 18 | 3 | 12 | 3 |
| 40A | 80 | 16 | 85 | 18 | 3 | 12 | 3 |
| 50A | 115 | 16 | 119 | 18 | 3 | 12 | 3 |
| 65A | 120 | 16 | 128 | 20 | 3 | 12 | 3 |
| 80A | 120 | 16 | 132 | 22 | 3 | 12 | 3 |
| 100A | 125 | 16 | 141 | 24 | 3 | 12 | 3 |
| 125A | 130 | 19 | 144 | 26 | 3 | 12 | 3 |
| 150A | 140 | 19 | 158 | 28 | 3 | 12 | 3 |
| 200A | 150 | 19 | 172 | 30 | 3 | 12 | 3 |
| 250A | 200 | 25 | 218 | 34 | 3 | 12 | 3 |
| 300A | 200 | 25 | 222 | 36 | 3 | 12 | 3 |
| 350A | 200 | 25 | 230 | 40 | 3 | 12 | 3 |
| 400A | 200 | 28 | 236 | 46 | 3 | 12 | 3 |
| 450A | 200 | 28 | 250 | 48 | 3 | 12 | 3 |
| 500A | 215 | 30 | 253 | 50 | 3 | 12 | 3 |

※ Out of standard : made to order

FLEXIBLE CONNECTOR

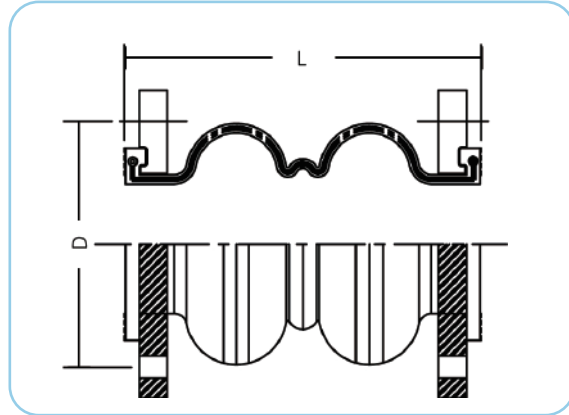


Flexible Connector - Two Ball Type

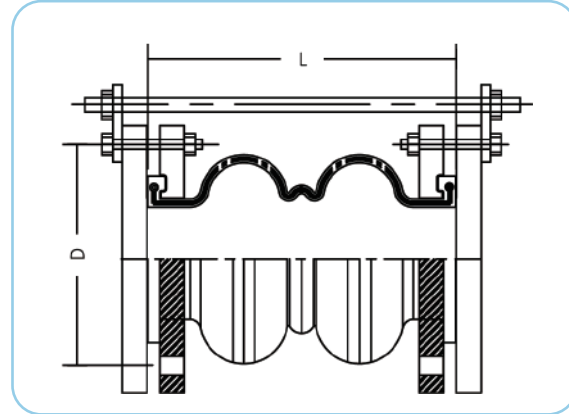
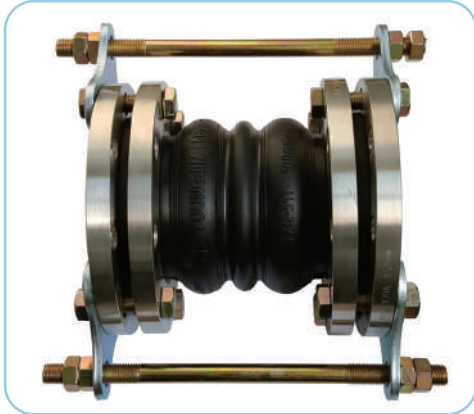
| | |
|--------------------|-------------------|
| Application | Air , Water , Oil |
| Design Pressure | 9.8 bar |
| Design Temperature | 140°F (60°C) |
| Rubber | EPDM |
| Flange | CS / SS 304 |

- Rib-structure formed inside the connector : For smooth fluid flow
- Using Nylon tire cord to reinforce : To withstand high temperature and high pressure
- Material - EPDM (3 layered synthetic rubber) : Good resistance to high temperature / high pressure / abrasion / ozone / oxidation
- Flange spec. : ANSI / DIN / EN / BS / JIS

TKQ-51T



TKQ-51TC



(mm)

| TYPE | Length (L) | D (PCD) | Axial | |
|------|------------|-----------|-----------|-------------|
| | | | Expansion | Contraction |
| 25A | 150 | 90 | 15 | 10 |
| 32A | 150 | 100 | 15 | 10 |
| 40A | 150 | 105 | 15 | 10 |
| 50A | 150 | 120 | 15 | 10 |
| 65A | 150 | 140 | 15 | 10 |
| 80A | 150 | 150 | 15 | 10 |
| 100A | 200 | 175 | 20 | 15 |
| 125A | 200 | 210 | 20 | 15 |
| 150A | 200 | 240 | 20 | 15 |
| 200A | 220 | 290 | 20 | 15 |
| 250A | 220 | 355 | 20 | 15 |
| 300A | 220 | 400 | 20 | 15 |

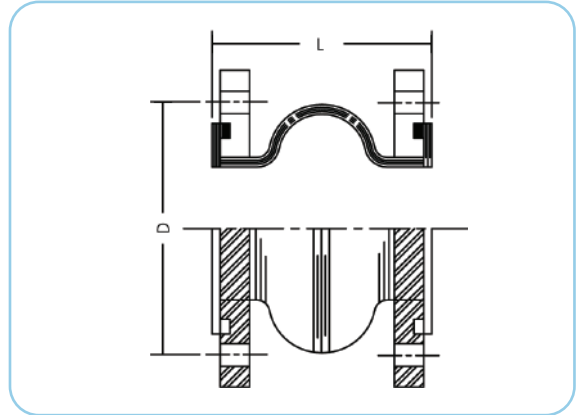
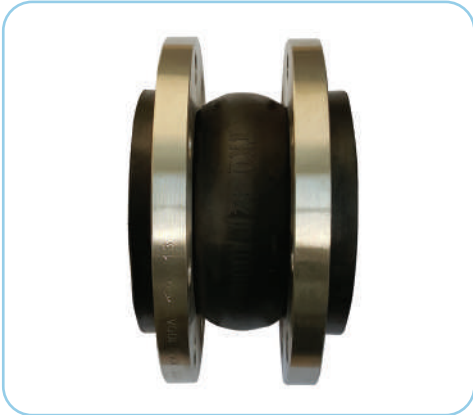
* Out of standard : made to order

Flexible Connector - One Ball Type

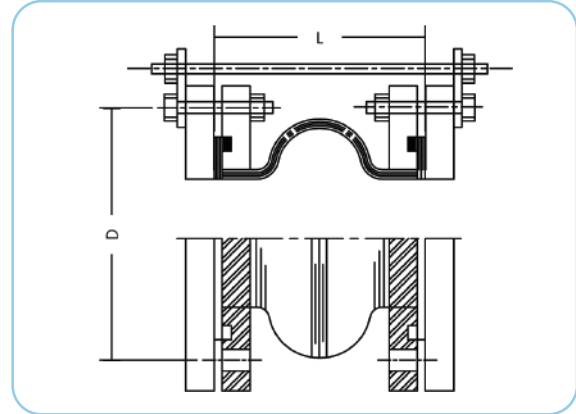
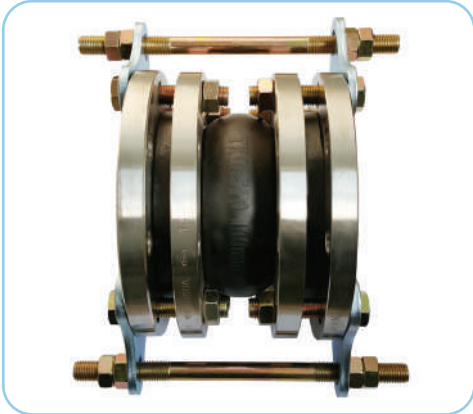
| | |
|--------------------|-------------------|
| Application | Air , Water , Oil |
| Design Pressure | 9.8 bar |
| Design Temperature | 140°F (60°C) |
| Rubber | EPDM |
| Flange | CS / SS 304 |

- Rib-structure formed inside the connector : For smooth fluid flow
- Using Nylon tire cord to reinforce : To withstand high temperature and high pressure
- Material - EPDM (3 layered synthetic rubber) : Good resistance to high temperature / high pressure / abrasion / ozone / oxidation
- Flange spec. : ANSI / DIN / EN / BS / JIS

TKQ-520



TKQ-520C



(mm)

| TYPE | Length (L) | D (PCD) | Axial | |
|------|------------|-----------|-----------|-------------|
| | | | Expansion | Contraction |
| 40A | 150 | 105 | 12 | 6 |
| 50A | 150 | 120 | 12 | 6 |
| 65A | 150 | 140 | 12 | 6 |
| 80A | 150 | 150 | 12 | 6 |
| 100A | 150 | 175 | 12 | 6 |
| 125A | 150 | 210 | 12 | 6 |
| 150A | 150 | 240 | 12 | 6 |
| 200A | 150 | 290 | 20 | 10 |
| 250A | 200 | 355 | 20 | 10 |
| 300A | 200 | 400 | 20 | 10 |

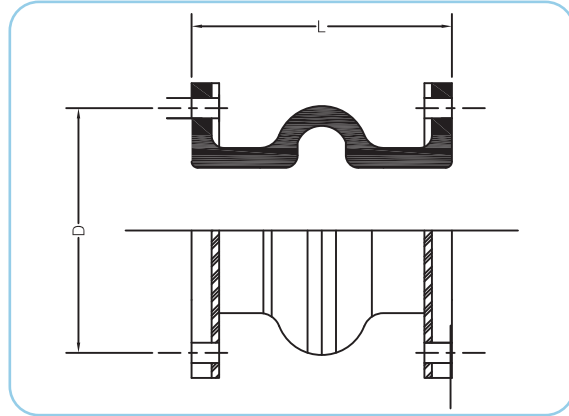
※ Out of standard : made to order

Rubber Expansion Joint - One Ball Type

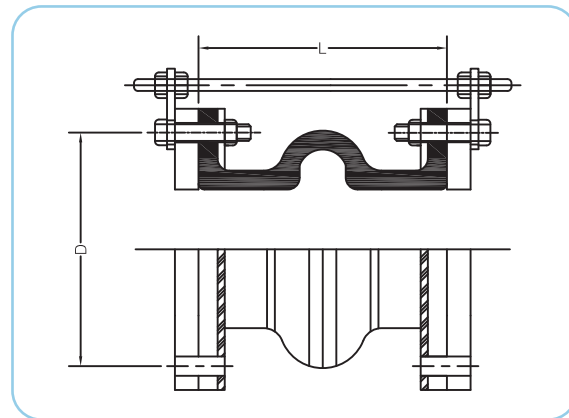
| | |
|--------------------|-------------------|
| Application | Air , Water , Oil |
| Design Pressure | 9.8 bar |
| Design Temperature | 140°F (60°C) |
| Rubber | EPDM |
| Flange | CS , SS 304 |

- Rib-structure formed inside the connector : For smooth fluid flow
- Using Nylon tire cord to reinforce : To withstand high temperature and high pressure
- Material - EPDM (3 layered synthetic rubber)
: good resi stance to high temperature / high pressure / abrasion / ozone / oxidation
- Flange spec. : ANSI / DIN / EN / BS / JIS

TKQ-530E



TKQ-530EC



(mm)

| TYPE | Length (L) | D (PCD) | Axial | |
|------|------------|-----------|-----------|-------------|
| | | | Expansion | Contraction |
| 25A | 150 | 90 | 12 | 6 |
| 32A | 150 | 100 | 12 | 6 |
| 40A | 150 | 105 | 12 | 6 |
| 50A | 150 | 120 | 12 | 6 |
| 65A | 150 | 140 | 12 | 6 |
| 80A | 150 | 150 | 12 | 6 |
| 100A | 150 | 175 | 12 | 6 |
| 125A | 150 | 210 | 12 | 6 |
| 150A | 150 | 240 | 12 | 6 |
| 200A | 200 | 290 | 19 | 10 |
| 250A | 200 | 355 | 19 | 10 |
| 300A | 200 | 400 | 19 | 10 |
| 350A | 200 | 445 | 19 | 10 |
| 400A | 200 | 510 | 19 | 10 |
| 450A | 250 | 565 | 19 | 10 |
| 500A | 250 | 620 | 19 | 10 |

* Out of standard : made to order

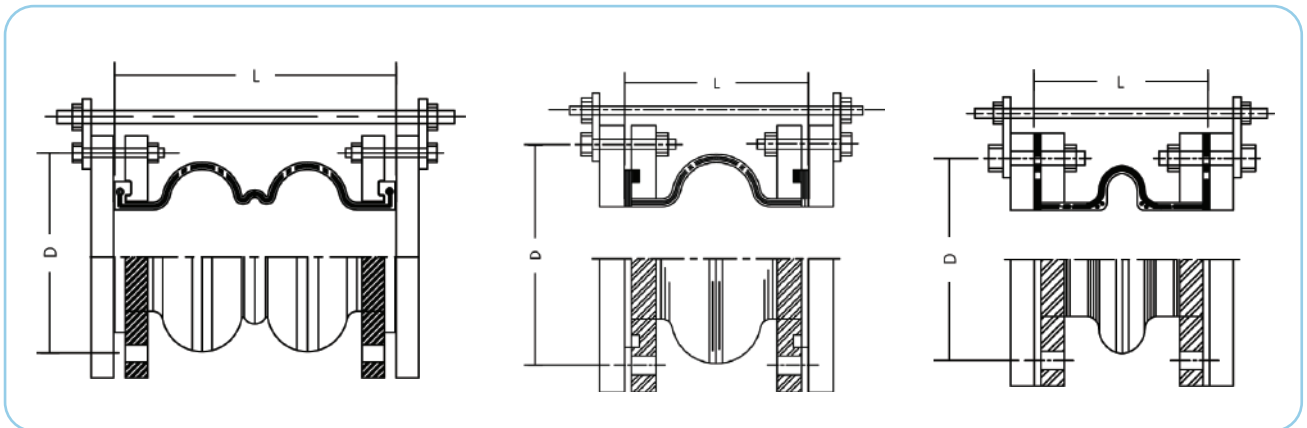
Control Rods

| | |
|-------------------|-------------|
| Three Angle Board | CS / SS 304 |
| Support Bar | CS / SS 304 |

- Protection from damage to the pipe line/flexible connector due to excessive expansion and contraction of the pipe when the fluid exceeds the allowable pressure.

- Control rod must be installed: When the pipe support is weak and the pipe load affects the flexible connector

TKQ-CR



| TYPE | 1 set | | IMAGE |
|------|-------------------|-------------|-------|
| | Three Angle Board | Support Bar | |
| 25A | 4 | 2 | |
| 32A | 4 | 2 | |
| 40A | 4 | 2 | |
| 50A | 4 | 2 | |
| 65A | 4 | 2 | |
| 80A | 4 | 2 | |
| 100A | 4 | 2 | |
| 125A | 4 | 2 | |
| 150A | 4 | 2 | |
| 200A | 6 | 3 | |
| 250A | 6 | 3 | |
| 300A | 6 | 3 | |
| 350A | 6 | 3 | |
| 400A | 6 | 3 | |

※ Out of standard : made to order



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