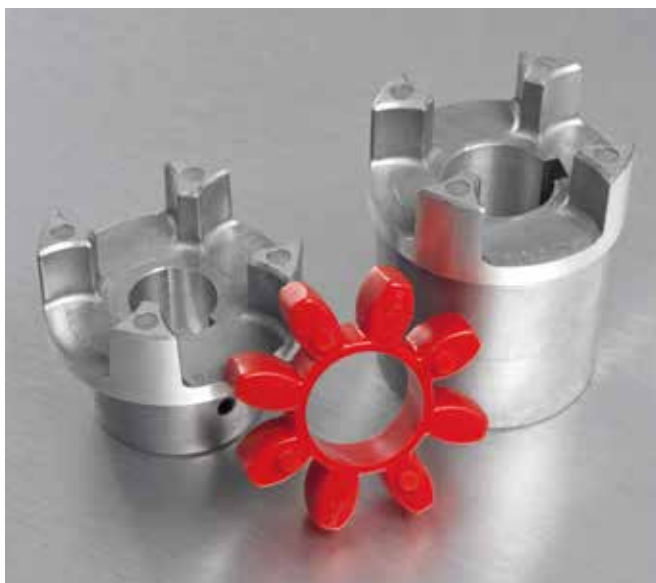




SOFTEX® COUPLINGS

SOFTEX® COUPLINGS



CONTENT

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| Technical data ES spiders | 164 |

SOFTEX® ELASTIC COUPLINGS

SOFTEX® COUPLINGS

- Torsionally flexible, maintenance free, good dynamic properties
- Vibration reducing
- Axially pluggable
- Compact design / low flywheel effects
- Different elastomer hardnesses of the spiders
- Finish bores with keyway, taper (1:5/1:8), and tothing
- Hub materials: aluminium, cast iron, spheroidal cast iron, sintered steel and steel
- ATEX certification
- Basic programme (please see page 152) available from stock
- Special machining on request



Order code SOFTEX® COUPLINGS

| Coupling type | Size | Hub | Bore | Hub | Bore | Hub material | Spider |
|---------------|-------|-----|------|-----|------|--------------|--------|
| SOFTEX® | 38/45 | B | Ø 38 | A | N/2 | Alu | 92° |

SOFTEX® FA COUPLINGS

- Flange hubs for heavy machinery
- All sizes are available unmachined or ready for assembly
- 2 flanges can be combined or FA flange with standard Softex® hub
- Material: cast iron



Order code SOFTEX® FA couplings

| Coupling type | Size | Hub |
|---------------|-------|-----|
| SOFTEX® | 42/55 | FA |

SOFTEX® TL COUPLINGS

- For all driving applications in the mechanical engineering
- Friction-locked, detachable shafts / hub connections
- Coupling combination TL 1/1; TL 2/2 and TL 1/2 possible
- Coupling hubs TL 2 axially separable
- Application with all standard taper bushes

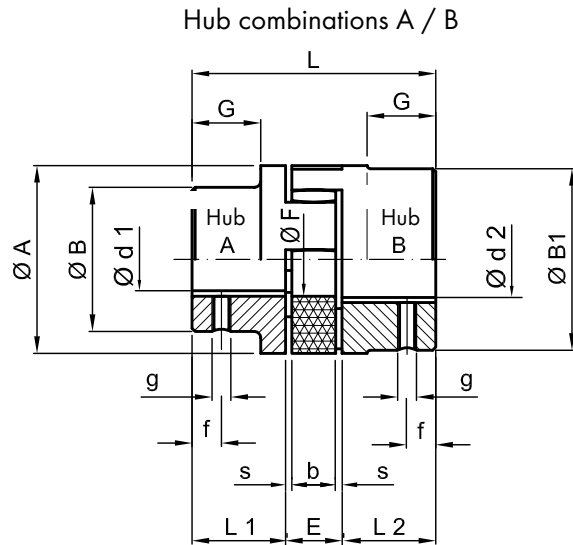


Order code SOFTEX® TL couplings

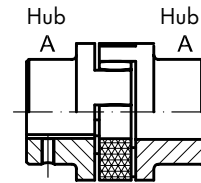
| Coupling type | Size | Hub | Bore | Hub | Bore | Spider |
|---------------|-------|-----|------|-----|------|--------|
| SOFTEX® | 42/55 | TL1 | Ø 28 | TL2 | Ø 38 | 92° |

SOFTEX® ELASTIC COUPLINGS

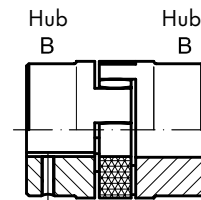
DIMENSIONS



Hub combinations A / A



Hub combinations B / B



| SOFTEX® type | Finish bore [mm] | | | | Dimensions [mm] | | | | | | | | | | | | | Extended hub B | Weight [kg] |
|---|------------------|------|-------|-----|-----------------|-----|------|-----|-------|----|-----|----|-----|-----|-----|----|-----|-------------------|----------------|
| | Hub A | | Hub B | | ø A | ø B | ø B1 | L | L1+L2 | E | s | b | G | ø F | g | f | L2 | | |
| | ø d1 | ø d2 | min | max | | | | | | | | | | | | | | | |
| | min | max | | | | | | | | | | | | | | | | min | max |
| Material: Aluminium die casting | | | | | | | | | | | | | | | | | | | |
| 19/24 Alu | 6 | 19 | 20 | 24 | 40 | 31 | 38 | 66 | 25 | 16 | 2 | 12 | 20 | 18 | M5 | 10 | - | 0.11 | |
| 24/30 Alu | 8 | 24 | 25 | 30 | 55 | 39 | 48 | 78 | 30 | 18 | 2 | 14 | 24 | 27 | M5 | 10 | 50 | 0.24 | |
| 28/38 Alu | 10 | 28 | 30 | 38 | 65 | 46 | 61 | 90 | 35 | 20 | 2.5 | 15 | 28 | 30 | M6 | 15 | 60 | 0.42 | |
| 38/45 Alu | 14 | 38 | 40 | 45 | 80 | 64 | 75 | 114 | 45 | 24 | 3 | 18 | 37 | 38 | M8 | 15 | - | 0.86 | |
| Material: sintered steel "S", cast iron "GG", steel "ST" | | | | | | | | | | | | | | | | | | | |
| 14/16 S | - | - | 4 | 16 | 30 | - | 30 | 35 | 11 | 13 | 1.5 | 10 | - | 8 | M4 | 5 | - | 0.14 | |
| 19/24 S | - | - | 6 | 24 | 40 | - | 40 | 66 | 25 | 16 | 2 | 12 | - | 18 | M5 | 10 | 40 | 0.34 | |
| 24/30 S | - | - | 8 | 32 | 55 | - | 55 | 78 | 30 | 18 | 2 | 14 | - | 27 | M5 | 10 | 50 | 0.90 | |
| 28/38 S | - | - | 10 | 38 | 65 | - | 65 | 90 | 35 | 20 | 2.5 | 15 | - | 30 | M6 | 15 | 60 | 1.5 | |
| 38/45 GG* | 14 | 38 | 40 | 45 | 80 | 66 | 78 | 114 | 45 | 24 | 3 | 18 | 37 | 38 | M8 | 15 | 70 | 2.35 | |
| 42/55 GG* | 16 | 42 | 45 | 55 | 95 | 75 | 93 | 126 | 50 | 26 | 3 | 20 | 40 | 46 | M8 | 20 | 75 | 3.55 | |
| 48/60 GG* | 19 | 48 | 50 | 60 | 105 | 85 | 103 | 140 | 56 | 28 | 3.5 | 21 | 45 | 51 | M8 | 20 | 80 | 4.85 | |
| 55/70 GG | 22 | 55 | 60 | 70 | 120 | 98 | 118 | 160 | 65 | 30 | 4 | 22 | 52 | 60 | M10 | 20 | 90 | 7.4 | |
| 65/75 GG | 25 | 65 | 70 | 75 | 135 | 115 | 133 | 185 | 75 | 35 | 4.5 | 26 | 61 | 68 | M10 | 20 | 100 | 10.8 | |
| 75/90 GG | 30 | 75 | 80 | 90 | 160 | 135 | 158 | 210 | 85 | 40 | 5 | 30 | 69 | 80 | M10 | 25 | 110 | 17.7 | |
| 90/100 GG | - | - | 45 | 100 | 200 | - | 170 | 245 | 100 | 45 | 5.5 | 34 | 81 | 100 | M10 | 25 | - | 29.6 | |
| 100/110ST | - | - | 45 | 110 | 225 | - | 180 | 270 | 110 | 50 | 6 | 38 | 89 | 113 | M12 | 30 | - | 39.0 | |
| 110/125 ST | - | - | 60 | 125 | 255 | - | 200 | 295 | 120 | 55 | 6.5 | 42 | 96 | 127 | M16 | 35 | - | 55.0 | |
| 125/145 ST | - | - | 60 | 145 | 290 | - | 230 | 340 | 140 | 60 | 7 | 46 | 112 | 147 | M16 | 40 | - | 77.0 | |

Finish bores acc. to ISO standard H 7, keyway acc. to DIN 6885, sheet 1 - JS9

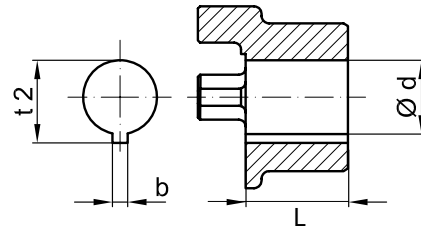
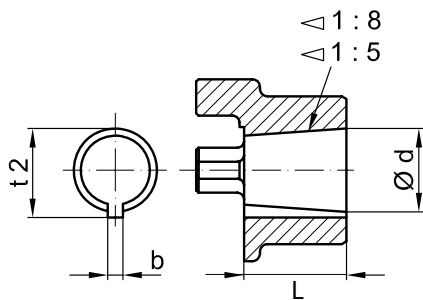
Weights refer to materials aluminium / GG with max d1 without keyway

*Sizes as A hub also available in GGG 40 (EN-GJ2-400-15)

Sizes 28/38 to 90/100 as B hubs also available in steel (S355J2)

Assembly instruction available in the download section of our webpage www.hbe-hydraulics.com

BORE CODES



CONICAL (TAPER) BORES

| Code | Bore details taper 1:8 [mm] | | | |
|----------|-----------------------------|------------|------------|------|
| | $\varnothing d + 0.05$ | $b + 0.05$ | $t2 + 0.1$ | L |
| ... N/1 | 9.7 | 2.4 | 10.7 | 16.5 |
| ... N/1c | 11.6 | 3 | 12.9 | 16.5 |
| ... N/1e | 13 | 2.4 | 13.8 | 21 |
| ... N/1d | 14 | 3 | 15.5 | 17.5 |
| ... N/1b | 14.3 | 3.2 | 15.7 | 19.5 |
| ... N/2 | 17.2 | 3.2 | 18.3 | 24 |
| ... N/2a | 17.2 | 4 | 19.0 | 24 |
| ... N/2b | 17.2 | 3 | 18.4 | 24 |
| ... N/3 | 22 | 4 | 23.5 | 28 |
| ... N/4 | 25.4 | 4.78 | 27.8 | 36 |
| ... N/4b | 25.4 | 5 | 28.2 | 36 |
| ... N/4a | 27 | 4.78 | 28.8 | 32.5 |
| ... N/4g | 28.45 | 6 | 29.3 | 38.5 |
| ... N/5 | 33 | 6.35 | 35.5 | 44 |
| ... N/5a | 33 | 7 | 35.5 | 44 |
| ... N/6 | 43.05 | 7.95 | 46.5 | 51 |
| ... N/6a | 41.15 | 8 | 44.2 | 42.5 |

| Code | Bore details taper 1:5 [mm] | | | |
|-----------|-----------------------------|-----|------------|------|
| | $\varnothing d + 0.05$ | JS9 | $t2 + 0.1$ | L |
| ... A 10 | 9.85 | 2 | 10.85 | 11.5 |
| ... B 17 | 16.85 | 3 | 18.65 | 18.5 |
| ... C 20 | 19.85 | 4 | 22.05 | 21.5 |
| ... Cs 22 | 21.95 | 3 | 23.75 | 21.5 |
| ... D 25 | 24.85 | 5 | 27.75 | 26.5 |
| ... E 30 | 29.85 | 6 | 32.45 | 31.5 |
| ... F 35 | 34.85 | 6 | 37.45 | 36.5 |
| ... G 40 | 39.85 | 6 | 42.45 | 41.5 |

INCH BORES

| Code | Metric [mm] | | | Inch | |
|------|-----------------|------------|------------|-----------------|------|
| | $\varnothing d$ | $b + 0.05$ | $t2 + 0.1$ | $\varnothing d$ | b |
| DNB | 11.11 M7 | 2.4 | 12.5 | 7/16 | 3/32 |
| V | 11.11 + 0.03 | 3.2 | 12.6 | 7/16 | 1/8 |
| Ta | 12.7 + 0.03 | 3.2 | 14.3 | 1/2 | 1/8 |
| E | 15.87 + 0.03 | 3.2 | 17.5 | 5/8 | 1/8 |
| Ed | 15.87 + 0.03 | 4.75 | 18.1 | 5/8 | 3/16 |
| ES | 15.88 + 0.03 | 4.0 | 17.7 | 5/8 | 5/32 |
| Ad | 19.02 + 0.03 | 3.2 | 20.7 | 3/4 | 1/8 |
| A | 19.05 + 0.03 | 4.78 | 21.3 | 3/4 | 3/16 |
| Gs | 22.22 + 0.03 | 4.78 | 24.4 | 7/8 | 3/16 |
| G | 22.22 + 0.03 | 4.75 | 24.7 | 7/8 | 3/16 |
| F | 22.22 + 0.03 | 6.35 | 25.2 | 7/8 | 1/4 |
| B | 25.37 + 0.03 | 4.78 | 27.8 | 1 | 3/16 |
| Bs | 25.38 + 0.03 | 6.37 | 28.3 | 1 | 1/4 |
| HS | 25.4 + 0.03 | 6.35 | 28.7 | 1 | 1/4 |
| SB | 28.58 + 0.03 | 6.35 | 31.5 | 1 1/8 | 1/4 |
| Sd | 28.58 + 0.03 | 7.93 | 32.1 | 1 1/8 | 5/16 |
| Js | 31.75 + 0.03 | 6.35 | 34.6 | 1 1/4 | 1/4 |
| J | 31.75 + 0.03 | 7.93 | 34.4 | 1 1/4 | 5/16 |
| K | 31.75 M7 | 7.93 | 35.5 | 1 1/4 | 5/16 |
| KS | 31.75 + 0.03 | 7.93 | 36.6 | 1 1/4 | 5/16 |
| M | 34.92 + 0.03 | 7.93 | 38.6 | 1 3/8 | 5/16 |
| CB | 36.5 + 0.03 | 9.55 | 38.6 | 1 7/16 | 3/8 |
| C | 38.07 + 0.03 | 9.55 | 42.5 | 1 1/2 | 3/8 |
| N | 41.25 + 0.03 | 9.55 | 45.6 | 1 5/8 | 3/8 |
| L | 44.45 K7 | 11.11 | 49.4 | 1 3/4 | 7/16 |
| NM | 47.625 + 0.03 | 12.73 | 53.5 | 1 7/8 | 1/2 |
| DS | 50.77 + 0.03 | 12.73 | 56.4 | 2 | 1/2 |
| P | 53.95 + 0.03 | 12.73 | 59.6 | 2 1/8 | 1/2 |
| U | 57.1 + 0.03 | 12.73 | 62.9 | 2 1/4 | 1/2 |
| UB | 60.3 + 0.03 | 15.87 | 67.6 | 2 3/8 | 5/8 |
| W | 69.85 M7 | 15.875 | 77.3 | 2 3/4 | 5/8 |
| WA | 73.0 + 0.03 | 19.05 | 82.9 | 2 7/8 | 3/4 |
| WD | 85.725 + 0.03 | 22.225 | 95.8 | 3 3/8 | 7/8 |
| WE | 88.9 + 0.03 | 22.225 | 98.6 | 3 5/8 | 7/8 |
| WF | 92.075 M7 | 22.225 | 101.9 | 3 5/8 | 7/8 |

SOFTEX® ELASTIC COUPLINGS

BASIC PROGRAMME INCH BORES

| SOFTEX® type | Material | Inch bores | | | | | | | | | | | | | | | | |
|--------------|----------|------------|----|---|----|----|---|---|---|---|---|---|----|----|----|----|----|---|
| | | A | Bs | C | Ed | Es | F | G | K | L | M | N | NM | Sb | Ta | WA | WD | |
| 19/24 | Al | • | | | • | | | • | | | | | | | • | | | |
| | S | • | | | | | | • | | | | | | | | | | |
| 24/30 | Al | • | • | | • | • | • | • | | | | | | • | | | | |
| | S | • | | | | | | • | | | | | | | | | | |
| 28/38 | Al | • | • | • | • | • | • | • | • | | | | | • | • | | | |
| | S | • | • | | | | | • | • | • | | • | | | | | | |
| 38/45 | Al | • | • | | | | | • | • | • | | | | | | | | |
| | GG | • | | • | | | | • | • | • | | • | • | | | | | |
| 42/55 | GG | | • | • | | | | • | • | • | • | | • | | | | | |
| 48/60 | GG | | | • | | | | • | | | • | • | • | | | | | |
| 55/70 | GG | | | • | | | | • | • | | | | • | | | | | |
| 65/75 | GG | | | • | | | | • | • | | | | | | | | • | |
| 75/90 | GG | | | | | | | | | | | | | | | | • | • |

BASIC PROGRAMME TAPER BORES

| SOFTEX® type | Material | Taper 1:5 | | | | Taper 1:8 | | | | |
|--------------|----------|-----------|-----|-----|-----|-----------|-----|-----|------|-----|
| | | A10 | B17 | C20 | D25 | N/1 | N1d | N/2 | N/2a | N/3 |
| 19/24 | Al | • | | | | • | • | | | |
| | S | • | | | | • | • | | | |
| 24/30 | Al | • | • | • | • | • | • | • | • | • |
| | S | | • | • | • | | | • | • | • |
| 28/38 | Al | | • | • | • | | | • | • | • |
| | S | | • | • | • | | | • | • | • |
| 38/45 | Al | | • | | • | | | • | • | • |
| | GG | | • | | • | | | • | • | • |
| 42/55 | GG | | • | | • | | | • | • | • |

AVAILABLE INTERNAL TOOTHINGS

| SAE profile | Profile DIN 5480 | Profile DIN 5482 | Profile DIN 5462 |
|--------------|------------------|------------------|------------------|
| 8/16 x 13Z* | N20 x 1,25 | A17 x 14 | B8 x 32 x 36* |
| 8/16 x 15Z | N25 x 1,5 | A22 x 19 | |
| 8/16 x 17Z | N30 x 2 | A25 x 22 | |
| 12/24 x 14Z* | N35 x 2* | A28 x 25 | |
| 12/24 x 17Z* | N40 x 2 | A30 x 27 | |
| 16/32 x 9Z* | N45 x 2 | A35 x 31 | |
| 16/32 x 11Z | N50 x 2* | A40 x 36 | |
| 16/32 x 13Z* | N55 x 2 | A45 x 41* | |
| 16/32 x 15Z* | N60 x 2 | A48 x 44 | |
| 16/32 x 21Z | N70 x 3 | A50 x 45 | |
| 16/32 x 23Z | N80 x 3 | A58 x 53 | |
| 16/32 x 27Z | N90 x 3 | | |

*Basic programme

BASIC PROGRAMME METRIC BORES

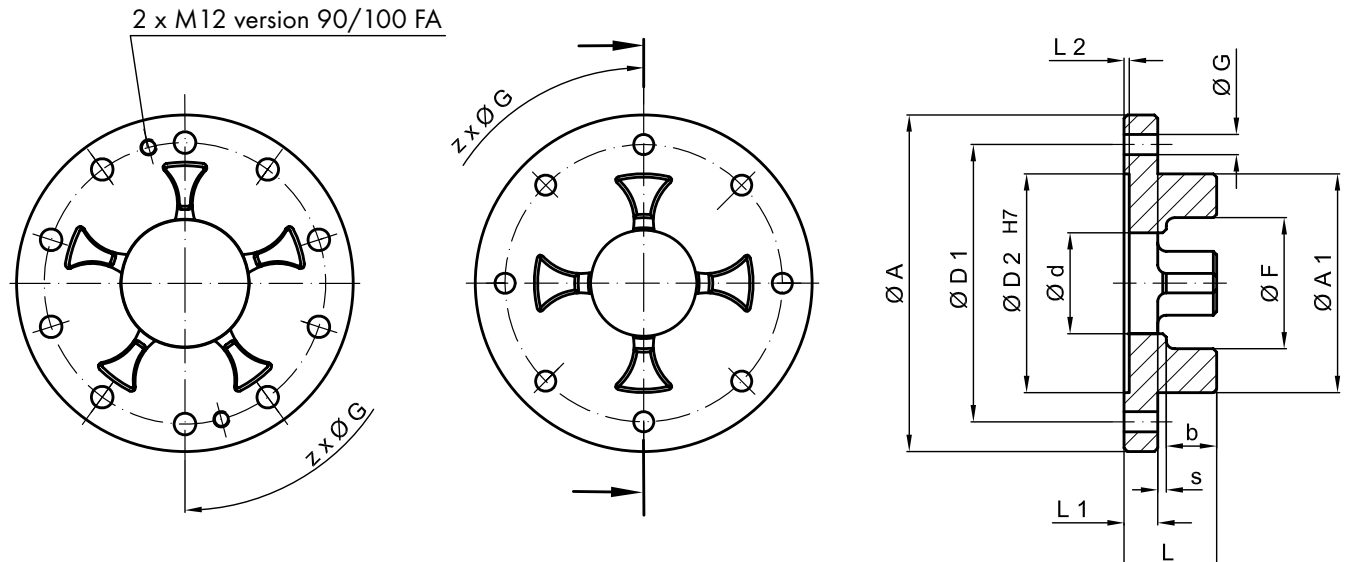
| SOFTEX® type | Material | Hub | Finish bores acc. ISO standard H 7, keyway acc. to DIN 6885, sheet 1 [mm] | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|----------|---------|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|
| | | | 6 | 8 | 9 | 10 | 11 | 12 | 14 | 15 | 16 | 18 | 19 | 20 | 22 | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42 | 45 | | |
| 19/24 | Al | A | • | • | • | • | • | • | • | • | • | • | | | | | | | | | | | | | | | |
| | | B | | | | | | | | | | | • | • | • | | | | | | | | | | | | |
| | S | B | | | | • | • | • | • | • | • | • | • | • | • | | | | | | | | | | | | |
| | | B-verl. | | | | | | | ■ | | | | ■ | | | ■ | | | | | | | | | | | |
| 24/30 | Al | A | | | | • | • | • | • | • | • | • | • | • | | | | | | | | | | | | | |
| | | B | | | | | | | | | | | | | | | • | • | • | | | | | | | | |
| | | B-verl. | | | | | | | | | | | ■ | | | ■ | | | ■ | | | | | | | | |
| | S | B | | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | | | | | | | | |
| B-verl. | | | | | | | | | | | | | | | | | | | ■ | | | | | | | | |
| 28/38 | Al | A | | | | | | | • | • | • | • | • | • | • | • | | | | | | | | | | | |
| | | B | | | | | | | | | | | | | | | | | | | | • | • | • | • | | |
| | | B-verl. | | | | | | | | | | | | | | | | | | | | | | | ■ | | |
| | S | B | | | | | | | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • | |
| B-verl. | | | | | | | | | | | | | | | | | | | | | | | | ■ | | | |
| 38/45 | Al | A | | | | | | | | | | | | | | • | • | • | • | • | • | • | • | • | • | | |
| | | B | | | | | | | | | | | | | | | | | | | | | | | • | • | • |
| | GG | A | | | | | | | | | | | | | | • | • | • | • | • | • | • | • | • | • | • | |
| | | B | | | | | | | | | | | | | | | | | | | | | | | | • | • |
| | | B-verl. | | | | | | | | | | | | | | | | | | | | | | | ■ | | |

| SOFTEX® type | Material | Hub | Finish bores acc. to ISO standard H7, keyway acc. to DIN 6885, sheet 1 [mm] | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|----------|---------|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|---|---|---|
| | | | 22 | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42 | 45 | 48 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 100 | | | |
| 42/55 | GG | A | • | • | • | • | • | • | • | • | • | • | | | | | | | | | | | | | | | |
| | | B | | | | | | | | | | | • | • | • | • | | | | | | | | | | | |
| | | B-verl. | | | | | | | | | | | ■ | | ■ | | ■ | | | | | | | | | | |
| 48/60 | GG | A | | | | • | • | • | • | • | • | • | • | • | | | | | | | | | | | | | |
| | | B | | | | | | | | | | | | | • | • | • | | | | | | | | | | |
| | | B-verl. | | | | | | | | | | | | | | | ■ | ■ | | | | | | | | | |
| 55/70 | GG | A | | | | | | | • | • | • | • | • | • | • | | | | | | | | | | | | |
| | | B | | | | | | | | | | | | | | | | • | • | • | | | | | | | |
| | | B-verl. | | | | | | | | | | | | | | | | | ■ | ■ | ■ | | | | | | |
| 65/75 | GG | A | | | | | | | | | | | | | | | • | • | • | | | | | | | | |
| | | B | | | | | | | | | | | | | | | | | | | | | | | • | • | |
| 75/90 | GG | A | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | B | | | | | | | | | | | | | | | | | | | | | | | | • | • |
| 90/100 | GG | A/B | | | | | | | | | | | | | | | | | | | | | | | | | |

Al = Aluminium; S = sintered steel; GG = cast iron; B-verl. = Hub B extended

SOFTEX® FA ELASTIC FLANGE COUPLINGS

DIMENSIONS

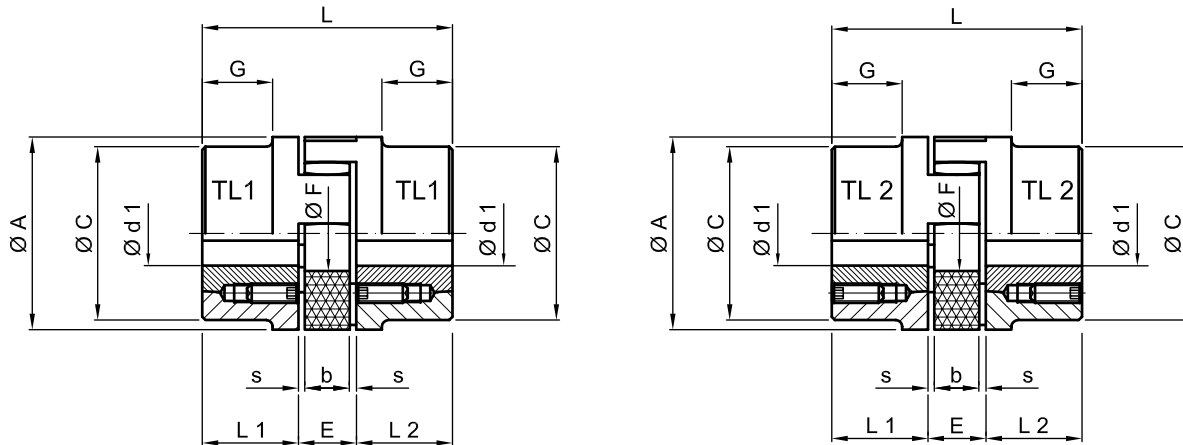


| Art. No. | Type | Dimensions [mm] | | | | | | | | | | | | | Number of z | Weight ¹⁾ [kg] |
|----------|------------|-----------------|------|------|----|-----|------|-----|-----|------|------|-----|-----|----|-------------|---------------------------|
| | | ø A | ø A1 | L | L1 | s | b | ø F | L2 | ø D1 | ø D2 | ø d | ø G | | | |
| 6468 | 24/30 FA | 80 | 55 | 24 | 8 | 1 | 15 | 35 | 1.5 | 65 | 55 | 27 | 4.5 | 5 | 0.33 | |
| 6741 | 28/38 FA | 100 | 65 | 27.5 | 10 | 1.5 | 16 | 39 | 1.5 | 80 | 65 | 30 | 7 | 6 | 0.55 | |
| 6991 | 38/45 FA | 115 | 80 | 31 | 10 | 2 | 19 | 48 | 1.5 | 95 | 80 | 38 | 7 | 6 | 0.75 | |
| 7188 | 42/55 FA | 140 | 95 | 35 | 12 | 2 | 21 | 57 | 2 | 115 | 95 | 46 | 9 | 6 | 1.35 | |
| 7391 | 48/60 FA | 150 | 105 | 36.5 | 12 | 2.5 | 22 | 63 | 2 | 125 | 105 | 51 | 9 | 8 | 1.55 | |
| 7471 | 55/70 FA | 175 | 120 | 42 | 16 | 2.5 | 23.5 | 74 | 2 | 145 | 120 | 60 | 11 | 8 | 2.70 | |
| 7692 | 65/75 FA | 190 | 135 | 46.5 | 16 | 3 | 27.5 | 83 | 2 | 160 | 135 | 68 | 11 | 10 | 3.30 | |
| 7897 | 75/90 FA | 215 | 160 | 54 | 19 | 3.5 | 31.5 | 98 | 2.5 | 185 | 160 | 80 | 14 | 10 | 4.90 | |
| 8056 | 90/100 FA | 260 | 200 | 59.5 | 20 | 4 | 35.5 | 122 | 3 | 225 | 200 | 100 | 14 | 12 | 6.70 | |
| 8103 | 100/110 FA | 285 | 225 | 69 | 25 | 6 | 38 | 137 | 4 | 250 | 225 | 113 | 14 | 12 | 9.5 | |

¹⁾Weights refer to material GG.

For combinable standard hubs, please see chart on page 150 and for all technical data please see pages 156 to 158. All sizes are also available unmachined without dimensions D1-D2-12-G.

SOFTEX® TL ELASTIC COUPLINGS WITH TAPER BUSH



| SOFTEX® type | Taper bush | Dimensions [mm] | | | | | | | | | Weight [kg] |
|--------------|-------------------|-----------------|-----|-----|---------|----|-----|----|----|-----|-------------|
| | | Ø A | Ø C | L | L1 + L2 | E | s | b | G | Ø F | |
| 28/38 | 1108 | 65 | 65 | 66 | 23 | 20 | 2,5 | 15 | - | 30 | 1.0 |
| 38/45 | 1108 | 80 | 78 | 70 | 23 | 24 | 3 | 18 | 15 | 38 | 2.7 |
| 42/55 | 1610 | 95 | 93 | 78 | 26 | 26 | 3 | 20 | 16 | 46 | 3.0 |
| 48/60 | 1615 | 105 | 103 | 106 | 39 | 28 | 3.5 | 21 | 28 | 51 | 4.8 |
| 55/70 | 2012 | 120 | 118 | 96 | 33 | 30 | 4 | 22 | 20 | 60 | 4.9 |
| 65/75 | 2012 | 135 | 115 | 101 | 33 | 35 | 4.5 | 26 | 19 | 68 | 6.9 |
| 75/90 | 2517 ¹ | 160 | 158 | 144 | 52 | 40 | 5 | 30 | 36 | 80 | 14.5 |
| | 3020 ² | | | | | | | | | | |

¹only available for TL 1

²only available for TL 2

| SOFTEX® type | Moment of inertia ³ [kg m ²] | Fixing screws for taper bush | | | |
|--------------|---|------------------------------|-------------|--------|------------------------|
| | | Size [inch] | Length [mm] | Number | Tightening torque [Nm] |
| 28/38 | 0.0007 | 1/4 | 13 | 2 | 5,6 |
| 38/45 | 0.0030 | 1/4 | 13 | 2 | 5,6 |
| 42/55 | 0.0036 | 3/8 | 16 | 2 | 20 |
| 48/60 | 0.0080 | 3/8 | 16 | 2 | 20 |
| 55/70 | 0.0120 | 7/16 | 22 | 2 | 31 |
| 65/75 | 0.0140 | 7/16 | 22 | 2 | 31 |
| 75/90 | 0.0650 | 1/2 | 25 | 2 | 50 |
| | | 5/8 | 32 | | 90 |

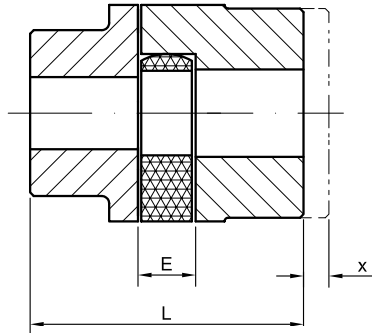
³with max. bore diameter

| Taper bush size | Available bore dimensions Ø d1 [mm] | | | | | | | | | | | | | | | | | | |
|-----------------|-------------------------------------|----|----|----|----|----|----|----|----|----|----|----|-----|----|-----|----|----|----|----|
| 1108 | 9 | 10 | 11 | 12 | 14 | 16 | 18 | 19 | 20 | 22 | 24 | 25 | 28* | | | | | | |
| 1610 | 14 | 16 | 18 | 19 | 20 | 22 | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42* | | | | |
| 1615 | 14 | 16 | 18 | 19 | 20 | 22 | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42* | | | | |
| 2012 | 14 | 16 | 18 | 19 | 20 | 22 | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42 | 45 | 48 | 50 | |
| 2517 | 16 | 18 | 19 | 20 | 22 | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42 | 45 | 48 | 50 | 55 | 60 |

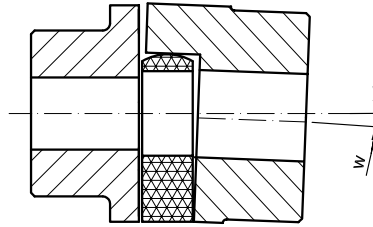
standard H7; keyway acc. to DIN 6885 sheet 1; *bore with keyway (flat version) DIN 6885 sheet 3

SOFTEX® ELASTIC COUPLINGS

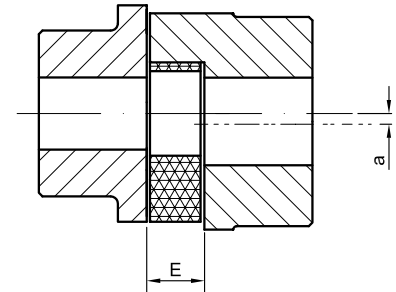
MISALIGNMENT VALUES



Axial displacement



Angular displacement or



Radial displacement

| SOFTEX® type | Coupling dimensions | | Max. misalignments | | |
|-----------------|---------------------|-----------|------------------------------|-------------------------------|-------------------------------|
| | E [mm] | L [mm] | Axial ¹ x [mm] | Angular ¹ w [°] | Radial ¹ a [mm] |
| 14/16 | 13 | 35 | 1.0 | 0.9 | 0.17 |
| 19/24 | 16 | 66 | 1.2 | 0.9 | 0.2 |
| 24/30 | 18 | 78 | 1.4 | 0.9 | 0.22 |
| 28/38 | 20 | 90 | 1.5 | 0.9 | 0.25 |
| 38/45 | 24 | 114 | 1.8 | 1 | 0.28 |
| 42/55 | 26 | 126 | 2.0 | 1 | 0.32 |
| 48/60 | 28 | 140 | 2.1 | 1.1 | 0.36 |
| 55/70 | 30 | 160 | 2.2 | 1.1 | 0.38 |
| 65/75 | 35 | 185 | 2.6 | 1.2 | 0.42 |
| 75/90 | 40 | 210 | 3.0 | 1.2 | 0.48 |
| 90/100 | 45 | 245 | 3.4 | 1.2 | 0.50 |
| 100/110 | 50 | 270 | 3.8 | 1.2 | 0.52 |
| 110/125 | 55 | 295 | 4.2 | 1.3 | 0.55 |
| 125/145 | 60 | 340 | 4.6 | 1.3 | 0.60 |

¹at speed of 1,500 1/min

The specified values are guide values and are based on the nominal torque T_{KN} , the speed and the ambient temperature of +30°C.

In case of axial misalignments, the factors "E" and "L" are the max. values.

When mounting the coupling, dimension "E" must be set exactly in order to keep the coupling axially flexible.

In case of additional angular and radial displacement, the values should be used pro rata. The misalignment values are depending on speed and performance.

The stability of the coupling will be increased by careful alignment of the shafts.


Assembly instruction available in the download section of our webpage www.hbe-hydraulics.com

TECHNICAL DATA SPIDERS

| SOFTEX® type | 80° Shore A [Nm] | | | 92° Shore A [Nm] | | | 98° Shore A [Nm] | | | 64° Shore D [Nm] | | | Max. speed [1/min] | |
|--------------|-----------------------|-------------------------|-----------------------------|-----------------------|-------------------------|-----------------------------|-----------------------|-------------------------|-----------------------------|-----------------------|-------------------------|-----------------------------|--------------------|----------|
| | Cont. T _{KN} | max. T _{Kmax.} | Alternating T _{KW} | Cont. T _{KN} | max. T _{Kmax.} | Alternating T _{KW} | Cont. T _{KN} | max. T _{Kmax.} | Alternating T _{KW} | Cont. T _{KN} | max. T _{Kmax.} | Alternating T _{KW} | v=30 m/s | v=40 m/s |
| 14/16 | 4 | 8 | 1 | 7.5 | 15 | 2 | 12.5 | 25 | 3.3 | - | - | - | 19000 | - |
| 19/24 | 4.9 | 9.7 | 1.3 | 10 | 20 | 2.6 | 17 | 34 | 4.4 | - | - | - | 14000 | 19000 |
| 24/30 | 17 | 34 | 4.4 | 35 | 70 | 9 | 60 | 120 | 16 | 75 | 150 | 20 | 10600 | 14000 |
| 28/38 | 46 | 92 | 12 | 95 | 190 | 25 | 160 | 320 | 42 | 200 | 400 | 52 | 8500 | 11800 |
| 38/45 | 93 | 186 | 24 | 190 | 380 | 49 | 325 | 650 | 85 | 405 | 810 | 105 | 7100 | 9500 |
| 42/55 | 130 | 260 | 34 | 265 | 530 | 69 | 450 | 900 | 120 | 560 | 1120 | 145 | 6000 | 8000 |
| 48/60 | 150 | 300 | 39 | 310 | 620 | 81 | 525 | 1050 | 137 | 655 | 1310 | 170 | 5600 | 7100 |
| 55/70 | 180 | 360 | 47 | 410 | 820 | 93 | 685 | 1370 | 163 | 750 | 1500 | 195 | 4750 | 6300 |
| 65/75 | 205 | 410 | 53 | 625 | 1250 | 111 | 940 | 1880 | 169 | 800 | 1600 | 208 | 4250 | 5600 |
| 75/90 | 475 | 950 | 124 | 1280 | 2560 | 254 | 1920 | 3840 | 390 | 1830 | 3660 | 476 | 3550 | 4750 |
| 90/100 | 1175 | 2350 | 306 | 2400 | 4800 | 624 | 3600 | 7200 | 963 | 4500 | 9000 | 1170 | 2800 | 3750 |
| 100/110 | - | - | - | - | - | - | 4950 | 9900 | 1287 | - | - | - | 2500 | 3350 |
| 110/125 | - | - | - | - | - | - | 7200 | 14400 | 1560 | - | - | - | 2240 | 3000 |
| 125/145 | - | - | - | - | - | - | 7500 | 15000 | 1950 | - | - | - | 2000 | 2650 |

For peripheral speeds exceeding $V = 30$ m/s dynamically balanced hubs made of GGG or steel instead of GG hubs are required.

TECHNICAL FEATURES SPIDERS

| Characteristics | 80° Shore A | 92° Shore A | 98° Shore A | 64° Shore D |
|--|---|---|--|---|
| Colour |  |  |  |  |
| Material | Polyurethane | | | Hytrel |
| Permissible durable temperature range | -50°C up to +80°C | -40°C up to +90°C | -30°C up to +90°C | -50°C up to +120°C |
| Permissible short term temperature peaks | -60°C up to +80°C | -50°C up to +120°C | -40°C up to +120°C | -60°C up to +150°C |
| Damping | Very good | Good | Medium | Low |
| Elasticity | Soft | Medium | Hard | Very hard |
| Wear resistance | Very good | Very good | Good | Good |
| Durability | Excellent | Very good | Very good | Very good |
| Typical applications | Normal drives, also with resonance speed possibility | Normal drives | Normal drives with high performance | High performance with small torsional angle |

SOFTEX® ELASTIC COUPLINGS

SERVICE FACTORS COUPLING SELECTION

| Service factor K1 | | | | | | |
|-------------------|--|-------------|-------------------------------------|-----------|-----------|-----------|
| Type | Driven machine / Example | Prime motor | | | | |
| | | E-motor | Diesel / petrol engines (cylinders) | | | |
| | | | ≥ 4 | 3 | 2 | 1 |
| a | Uniform operation with small masses to be accelerated Hydraulic and centrifugal pump, light generators, ventilators, transport systems | 1.0 - 1.25 | 1.2 - 1.5 | 1.5 - 1.7 | 1.7 - 2.0 | 2.4 - 2.7 |
| b | Uniform operation with medium masses to be accelerated Bending machines, wood processing machines, textile machines, tooling machines, conveyors, mixer, agitators | 1.6 - 1.8 | 1.7 - 2.0 | 2.0 - 2.3 | 2.3 - 2.5 | 2.8 - 3.0 |
| c | Irregular operation with medium masses to be accelerated Printing machines, dye machines, grinders, ring spinning machines, wood processing machines, conveyors, generators, centrifugal pumps and agitators for semifluid goods, freight elevators, mixers, shredders, lifts | 1.8 - 1.9 | 2.0 - 2.0 | 2.3 - 2.5 | 2.5 - 2.7 | 2.9 - 3.1 |
| d | Irregular operation with medium masses to be accelerated and shocks Concrete mixers, threshing machines, blowers, overhead tracks, planing machines, chain conveyor, cranes, millstones, mills, lifts, slat conveyors, press pumps, ship shafts, rope winches, road rollers, compressors, roller mills, looms, centrifuges | 1.8 - 2.0 | 2.2 - 2.5 | 2.5 - 2.7 | 2.7 - 3.0 | 3.1 - 3.4 |
| e | Irregular operation with large masses to be accelerated and heavy shocks xcavators, roll stands, wire drawing, hammer mills, wood grinder, piston pumps / compressors with light flywheel, presses, Rotary rigs, vibromachines, scissors, forge presses, punching machines | 2.1 - 2.3 | 2.5 - 2.7 | 2.7 - 3.0 | 3.2 - 3.4 | 3.5 - 3.8 |
| f | Irregular operation, very large masses to be accelerated and very heavy shocks Piston compressors / pumps without speed regulation, heavy roller conveyors, welding generators, stone crushers, rolling mills for metals, brick presses | 2.5 - 3.1 | 3.0 - 3.3 | 3.3 - 3.6 | 3.7 - 4.0 | 4.1 - 4.5 |

| Safety factor K2 | | | |
|--------------------------------|-----|----|-----|
| Operation period (hours / day) | | | |
| more than | - | 2 | 12 |
| up to | 2 | 12 | 24 |
| Factor K2 | 0.9 | 1 | 1.1 |

| Safety factor K3 | | | | | |
|------------------|----|------|-----|------|-----|
| Starts per hour | | | | | |
| more than | - | 10 | 40 | 125 | 500 |
| up to | 10 | 40 | 125 | 500 | - |
| Type a - c | 1 | 1.05 | 1.3 | 1.45 | 1.6 |
| Type d - f | 1 | 1.05 | 1.1 | 1.15 | 1.5 |

| Further factors | | | | | |
|--------------------------|-----------------------|-----|-------|-----|-----|
| Further factors | Definition | | | | |
| Starting factor S_z | z | 100 | 200 | 400 | 800 |
| | S_z | 1 | 1.2 | 1.4 | 1.6 |
| Temperature factor S_T | T [°C] | | S_T | | |
| | -25°C | | +30°C | 1.0 | |
| | +30°C | | +40°C | 1.2 | |
| | +40°C | | +60°C | 1.4 | |
| | +60°C | | +80°C | 1.6 | |
| Shock factor S_N/S_L | Slight starting shock | | | 1.5 | |
| | Medium starting shock | | | 1.8 | |
| | Heavy starting shock | | | 2.2 | |

Coupling selection*

$$T_N = T_{KN} \times K1 \times K2 \times K3$$

*The largest possible torque T_N should be used as a basis. The catalogue torque T_{KN} has to be multiplied with all safety factors. For drives with dangerous torsional vibrations, the critical speed must be considered.

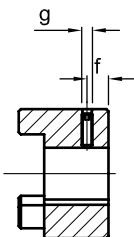
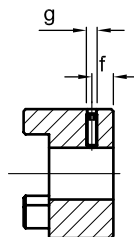
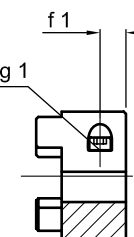
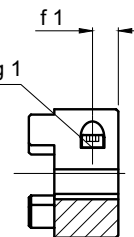
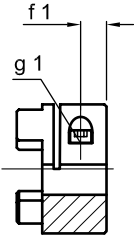
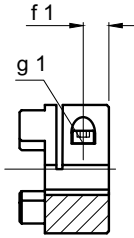
SOFTEx® ES NO BACKLASH COUPLINGS

PRODUCT DESCRIPTION

- Under initial tension no backlash shaft connection
- Triple axially pluggable version
- Simple blind mounting, no time-consuming screwings
- Small structural dimensions – low flywheel effects
- Maintenance free, simple optical test
- Different elastomer hardnesses of the spiders
- Available for all common shaft dimensions
- Finish bores with ISO standard H7, (clamping hub F7), keyway from $\varnothing 6$ acc. to DIN 6885 sheet 1-JS9
- Hub materials: aluminium up to size 38/45, steel for larger sizes



HUB TYPES

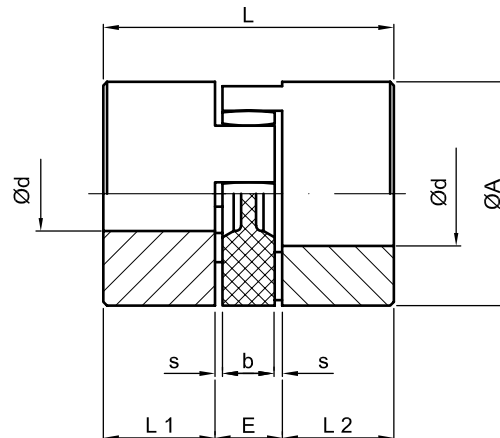
| | |
|---|---|
| <p>1.0</p>  <p>Type 1.0 with keyway and fixing screw</p> <ul style="list-style-type: none"> • Positive transmission • Permissible torque depending on permissible surface pressure • Not suitable for backlash-free power transmission for heavily reversing operation | <p>1.1</p>  <p>Type 1.1 without keyway with fixing screw</p> <ul style="list-style-type: none"> • Non-positive locking torque transmission • Suitable for a backlash transmission of very low torques |
| <p>2.0</p>  <p>Type 2.0 slotted once without keyway</p> <ul style="list-style-type: none"> • Frictional, backlash shaft-hub-connection • Transmissible torques depending on bore diameter • Up to size 19/24 | <p>2.1</p>  <p>Type 2.1 slotted once with keyway</p> <ul style="list-style-type: none"> • Positive transmission with additional frictional connection • Due to frictional connection a reverse backlash is prevented resp. reduced • Surface pressure of the keyway connection is reduced |
| <p>2.5</p>  <p>Type 2.5 slotted twice without keyway</p> <ul style="list-style-type: none"> • Frictional, backlash shaft-hub-connection • Transmissible torques depending on bore diameter • From size 24/30 | <p>2.6</p>  <p>Type 2.6 slotted twice with keyway</p> <ul style="list-style-type: none"> • Positive transmission with additional frictional connection • Due to frictional connection a reverse backlash is prevented resp. reduced • Surface pressure of the keyway connection is reduced |

Order code SOFTEx® ES no backlash couplings

| Coupling type | Size | Bore | Design | Bore | Design | Spider |
|---------------|-------|------|--------|------|--------|--------|
| SOFTEx® ES | 19/24 | 24F7 | 2.0 | 19H7 | 1.0 | 98° |

SOFTEX® ES NO BACKLASH COUPLINGS

DIMENSIONS



| SOFTEX® ES type | Finish bores* [mm] | | | Dimensions [mm] 1.0/1.1 | | | | | | | | Clamping screw 2.0/2.5 | | | |
|----------------------------|-----------------------|-----|---------|-------------------------------|-----|---------|----|----|-----|----|----|---------------------------|----------------|---------------------|--|
| | Hub type | | | Ø A | L | L1 + L2 | E | b | s | g | f | g ₁ | f ₁ | T _A [Nm] | |
| | 1.0 | 1.1 | 2.0/2.5 | | | | | | | | | | | | |
| Material: aluminium | | | | | | | | | | | | | | | |
| 9 | 9 | 11 | 11 | 20 | 30 | 10 | 10 | 8 | 1.0 | M4 | 5 | M2.5 | 5.0 | 0.76 | |
| 14 | 15 | 16 | 16 | 30 | 35 | 11 | 13 | 10 | 1.5 | M4 | 5 | M3 | 5.0 | 1.34 | |
| 19/24 | 24 | 24 | 20 | 40 | 66 | 25 | 16 | 12 | 2.0 | M5 | 10 | M6 | 12.0 | 10.5 | |
| 24/30 | 30 | 30 | 28 | 55 | 78 | 30 | 18 | 14 | 2.0 | M5 | 10 | M6 | 10.5 | 10.5 | |
| 28/38 | 38 | 38 | 38 | 65 | 90 | 35 | 20 | 15 | 2.5 | M8 | 15 | M8 | 11.5 | 25.0 | |
| 38/45 | 45 | 45 | 45 | 80 | 114 | 45 | 24 | 18 | 3.0 | M8 | 15 | M8 | 15.5 | 25.0 | |

*Special bores on request

BORE RANGE Ød AND CORRESPONDING TRANSFERABLE FRICTION TORQUES T_r [Nm] OF THE CLAMPING HUB

| Type 2.0 | | | | | | | | | | | | | | | | | | | | |
|--------------------|------------------|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| SOFTEX® ES type | Finish bore [mm] | | | | | | | | | | | | | | | | | | | |
| | 8 | 9 | 10 | 11 | 14 | 15 | 16 | 19 | 20 | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42 | 45 | 50 |
| 9 | 2.5 | 2.6 | 2.7 | 2.8 | | | | | | | | | | | | | | | | |
| 14 | 5.1 | 5.3 | 5.5 | 5.6 | 8.1 | 6.3 | 6.5 | | | | | | | | | | | | | |
| 19/24 | 25 | 26 | 27 | 27 | 29 | 30 | 31 | 32 | 34 | | | | | | | | | | | |

| Type 2.5 | | | | | | | | | | | | | | | | | | | | |
|--------------------|------------------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| SOFTEX® ES type | Finish bore [mm] | | | | | | | | | | | | | | | | | | | |
| | 10 | 11 | 14 | 15 | 16 | 19 | 20 | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42 | 45 | 50 | 55 | 60 |
| 24/30 | 34 | 35 | 36 | 38 | 39 | 19 | 41 | 43 | 45 | 46 | | | | | | | | | | |
| 28/38 | | | 80 | 81 | 81 | 85 | 87 | 91 | 92 | 97 | 99 | 102 | 105 | 109 | | | | | | |
| 38/45 | | | | 92 | 94 | 98 | 99 | 104 | 105 | 109 | 112 | 113 | 118 | 122 | 123 | 126 | 130 | | | |
| 42/55 | | | | | | | 232 | 244 | 246 | 255 | 260 | 266 | 274 | 283 | 288 | 294 | 301 | 309 | 315 | |
| 48/60 | | | | | | | | | 393 | 405 | 413 | 421 | 434 | 445 | 454 | 462 | 473 | 486 | 494 | 514 |

Finish bores hub types 1.0 and 1.1 H7 fit,
types 2.0 and 2.5 F7 fit keyway acc. to DIN 6885, sheet 1 Tol. JS 9

SOFTEX® ES NO BACKLASH COUPLINGS (6.0 / 6.0P)

TYPE 6.0

- Zero backlash shaft connection under high friction torque
- For Servo motor applications such as main spindle drives of tooling machines and heavy load of presses
- No imbalances of keyways or slotted clamping elements
- Smooth running with good stability even at 40 m/s peripheral speed
- Also suitable for ATEX explosion protection applications (when considering the selection in accordance with the influence of high friction torques)
- Easy assembly by internal clamping screws
- ISO fit H7 up to \varnothing 50 mm and ISO fit G7 over \varnothing 50 mm
- Materials: Hub = aluminium / clamping ring = steel, both also available in steel S355J2



Order code type 6.0

| Coupling type | Size | Bore | Type | Bore | Type | Spider |
|---------------|------|------|------|------|------|--------|
| SOFTEX® ES | 28 | 28H7 | 6.0 | 25H7 | 6.0 | 98° |

TYPE 6.0P

- High precision, zero backlash shaft connection under high friction torque
- Developed for high speed short and multi spindles for tooling machines (DIN 69002)
- Smooth running with good stability even at 75 m/s peripheral speed
- Also suitable for ATEX explosion protection applications (when considering the selection in accordance with the influence of high friction torques)
- Easy assembly by internal clamping screws
- Spiders with 98° SH A or 64° SH D incl. bore required
- ISO fit H6
- Hub and clamping ring made of 42CrMo4

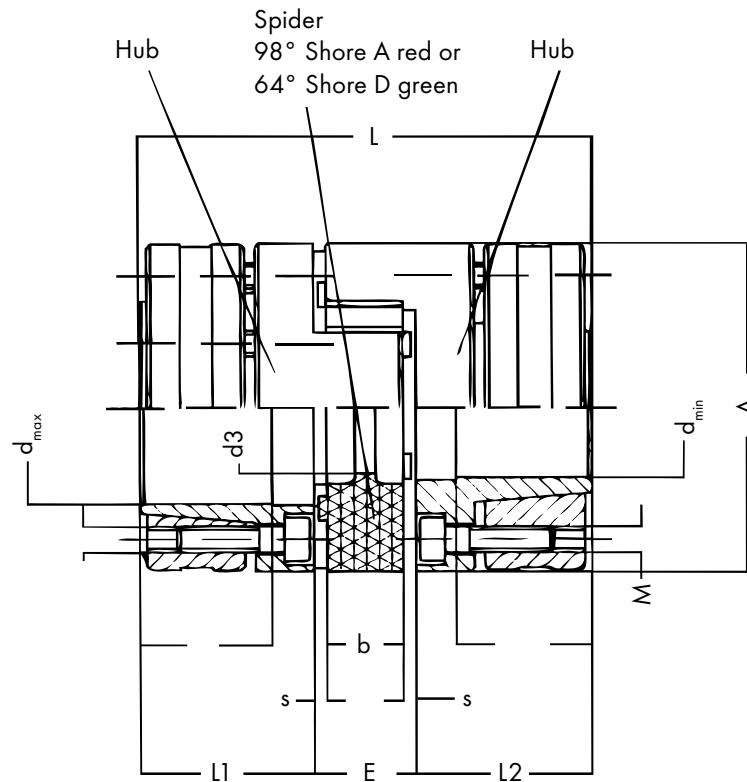


Order code type 6.0P

| Coupling type | Size | Bore | Type | Bore | Type | Spider |
|---------------|------|------|------|------|------|--------|
| SOFTEX® ES | 28 | 28H6 | 6.0P | 25H6 | 6.0P | 64° |

SOFTEX® ES NO BACKLASH COUPLINGS (6.0 / 6.0P)

DIMENSIONS



| SOFTEX® ES type | Dimensions [mm] | | | | | | | | | |
|-----------------|-----------------|-----|---------|----|-----|----|------------------|------------------|------|-----|
| | A | L | L1 + L2 | E | s | b | d _{min} | d _{max} | d3* | M |
| 14P | 30 | 50 | 18.5 | 13 | 1.5 | 10 | 8 | 14 | 8.5 | M3 |
| 19P | 40 | 66 | 25 | 16 | 2.0 | 12 | 10 | 20 | 9.5 | M4 |
| 24P | 55 | 78 | 30 | 18 | 2.0 | 14 | 14 | 28 | 12.5 | M5 |
| 28P | 65 | 90 | 35 | 20 | 2.5 | 15 | 18 | 38 | 14.5 | M5 |
| 38P | 80 | 114 | 45 | 24 | 3.0 | 18 | 20 | 40 | 16.5 | M6 |
| 42P | 95 | 126 | 50 | 26 | 3.0 | 20 | 28 | 50 | 18.5 | M8 |
| 48P | 105 | 140 | 56 | 28 | 3.5 | 21 | 32 | 48 | 20.5 | M10 |

*only with type 6.0P

TECHNICAL DATA

| SOFTEX® ES type | Material | | Clamping screw 6.0 | | | Hub 6.0 | | Clamping screw 6.0P | | | Hub 6.0P | |
|--------------------|----------|-----------------------|-----------------------|--------|------|----------------|---|------------------------|--------|------|----------------|---|
| | Hub | Clamp- ing ring | Size | Number | TA | Weight [kg] | Moment of inertia J [kg cm ²] | Size | Number | TA | Weight [kg] | Moment of inertia J [kg cm ²] |
| | | | M | z | [Nm] | | | M | z | [Nm] | | |
| 14 | AL-H | ST | M3 | 4 | 1.34 | 0.049 | 0.07 | - | - | - | - | - |
| 19 | AL-H | ST | M4 | 6 | 3 | 0.120 | 0.31 | - | - | - | - | - |
| 24 | AL-H | ST | M5 | 4 | 6 | 0.280 | 1.35 | - | - | - | - | - |
| 28 | AL-H | ST | M5 | 8 | 6 | 0.450 | 3.13 | - | - | - | - | - |
| 38 | AL-H | ST | M6 | 8 | 10 | 0.950 | 9.60 | - | - | - | - | - |
| 42 | ST | ST | M8 | 4 | 35 | 2.300 | 31.7 | - | - | - | - | - |
| 48 | ST | ST | M10 | 4 | 69 | 3.080 | 52.0 | - | - | - | - | - |
| 14P | 42CrMo | - | - | - | - | - | - | M3 | 4 | 2 | 0.08 | 0.1 |
| 19P | 42CrMo | - | - | - | - | - | - | M4 | 6 | 3 | 0.19 | 0.37 |
| 24P | 42CrMo | - | - | - | - | - | - | M5 | 4 | 8.5 | 0.44 | 2.0 |
| 28P | 42CrMo | - | - | - | - | - | - | M5 | 8 | 8.5 | 0.64 | 4.4 |
| 38P | 42CrMo | - | - | - | - | - | - | M6 | 8 | 14 | 1.32 | 13.3 |
| 42P | 42CrMo | - | - | - | - | - | - | M8 | 4 | 35 | 2.30 | 30.0 |
| 48P | 42CrMo | - | - | - | - | - | - | M10 | 4 | 69 | 3.09 | 50.0 |

Bore range d and corresponding transferable friction torques Tr [Nm]
of the clamping ring hub

| Nm | ø 6 | ø 10 | ø 11 | ø 14 | ø 15 | ø 16 | ø 19 | ø 20 | ø 24 | ø 25 | ø 28 | ø 30 | ø 32 |
|----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| 14 | 8.6 | 13.8 | 15 | 22.7 | | | | | | | | | |
| 19 | | 31 | 37 | 62 | 68 | 70 | 83 | 90 | | | | | |
| 24 | | | | 67 | 74 | 80 | 90 | 97 | 112 | 120 | 143 | | |
| 28 | | | | | 142 | 154 | 189 | 190 | 237 | 250 | 280 | 307 | 310 |
| 38 | | | | | | | | 269 | 337 | 356 | 396 | 436 | 442 |
| 42 | | | | | | | | | | 399 | 445 | 506 | 470 |
| 48 | | | | | | | | | | | | 650 | 685 |

Bore range d and corresponding transferable friction torques Tr [Nm]
of the clamping ring hub

| Nm | ø 35 | ø 38 | ø 40 | ø 42 | ø 45 | ø 48 | ø 50 | ø 55 |
|----|------|------|------|------|------|------|------|------|
| 14 | | | | | | | | |
| 19 | | | | | | | | |
| 24 | | | | | | | | |
| 28 | 353 | 389 | | | | | | |
| 38 | 501 | 533 | 572 | 615 | 644 | | | |
| 42 | 566 | 581 | 647 | 630 | 728 | 836 | 858 | |
| 48 | 809 | 841 | 926 | 916 | 1042 | 1181 | 1125 | 1311 |

SOFTEX® ES NO BACKLASH COUPLINGS

TECHNICAL DATA SPIDERS

| SOFTEX® ES type | Spider | Torque [Nm] | | | Max. speed [1/min] V=30 m/s | Static torsional stiffness [Nm/rad] | Permissible misalignment at n=1500 1/min | | | Radial elongation per unit force Cr [N/mm] | Weight* [kg] | Moment of inertia* J [kgcm ²] |
|-----------------|--------|-----------------|-----------------------|------------------------|--------------------------------|-------------------------------------|--|------------------|------------------|--|--------------|---|
| | | T _{SP} | Cont. T _{KN} | max. T _{Kmax} | | | Axial Δ ka [mm] | Radial Δ kr [mm] | Angular Δ kw [°] | | | |
| 9 | 92A | 0.45 | 3 | 6 | 28000 | 32 | 0.8 | 0.15 | 1.0 | 260 | 0.015 | 0.01 |
| | 98A | | 5 | 10 | | 51 | | 0.09 | 0.9 | 520 | | |
| | 64D | | 6 | 12 | | 74 | | 0.05 | 0.9 | 739 | | |
| 14 | 92A | 1 | 7,5 | 15 | 13000 | 114 | 1.0 | 0.15 | 1.0 | 335 | 0.06 | 0.06 |
| | 98A | | 12,5 | 25 | | 172 | | 0.09 | 0.9 | 605 | | |
| | 64D | | 16 | 32 | | 234 | | 0.06 | 0.8 | 856 | | |
| 19/24 | 92A | 2.5 | 10 | 20 | 10000 | 570 | 1.2 | 0.10 | 1.0 | 1120 | 0.13 | 0.37 |
| | 98A | | 17 | 34 | | 855 | | 0.07 | 0.9 | 2010 | | |
| | 64D | | 21 | 42 | | 1240 | | 0.04 | 0.8 | 2830 | | |
| 24/30 | 92A | - | 35 | 70 | 7000 | 1430 | 1.4 | 0.14 | 1.0 | 1780 | 0.28 | 1.35 |
| | 98A | | 60 | 120 | | 2060 | | 0.10 | 0.9 | 2565 | | |
| | 64D | | 75 | 150 | | 2980 | | 0.07 | 0.8 | 3696 | | |
| 28/38 | 92A | - | 95 | 190 | 6000 | 2292 | 1.5 | 0.15 | 1.0 | 1785 | 0.46 | 3.10 |
| | 98A | | 160 | 320 | | 3440 | | 0.11 | 0.9 | 3200 | | |
| | 64D | | 200 | 400 | | 4350 | | 0.09 | 0.8 | 4348 | | |
| 38/45 | 92A | - | 190 | 380 | 5000 | 4.584 | 1.8 | 0.17 | 1.0 | 2350 | 0.90 | 9.62 |
| | 98A | | 325 | 650 | | 7160 | | 0.12 | 0.9 | 4400 | | |
| | 64D | | 405 | 810 | | 10540 | | 0.09 | 0.8 | 6474 | | |
| 42/55 | 92A | - | 265 | 530 | 4000 | 9800 | 2.0 | 0.19 | 1.0 | 4100 | 2.70 | 57.40 |
| | 98A | | 450 | 900 | | 15180 | | 0.14 | 0.9 | 5940 | | |
| | 64D | | 560 | 1120 | | 16500 | | 0.10 | 0.8 | 7590 | | |
| 48/60 | 92A | - | 310 | 620 | 3600 | 12000 | 2.1 | 0.23 | 1.0 | 4500 | 3.60 | 95.80 |
| | 98A | | 525 | 1050 | | 16600 | | 0.16 | 0.9 | 6820 | | |
| | 64D | | 655 | 1310 | | 31350 | | 0.11 | 0.8 | 9000 | | |

- In case of higher speeds a dynamic balancing of the hubs is required.
- The length dimension L is increased by the indicated Δ ka values.
- The specified misalignment values are general guide values.
- In case of current angular and radial misalignment the indicated values can only be utilised proportionately.
- In case of a temperature increase the permissible torques and the max. permissible radial and angular misalignment values must be multiplied by the temperature factor St.

*Complete coupling type 1.0 with medium bore on both sides

| Temperature | -25°C < +30°C | +30°C < +40°C | +40°C < +60°C | +60°C < +80°C |
|-----------------------|---------------|---------------|---------------|---------------|
| Temperature factor St | 1.0 | 1.2 | 1.4 | 1.8 |

| Characteristics | 92° Shore A | | 98° Shore A | 64° Shore D |
|-------------------------------|---|--|---|--|
| Colour |  | |  |  |
| Material | Polyurethane | | Polyurethane | Hytrel |
| Permissible temperature range | -40°C up to +90°C | | -30°C up to +90°C | -50°C up to +120°C |
| Permissible temperature peaks | -50°C up to +120°C | | -40°C up to +120°C | -60°C up to +150°C |
| Applications | Servo drives, positioning drives, main spindle drives, planetary gears, no backlash gears | | | |