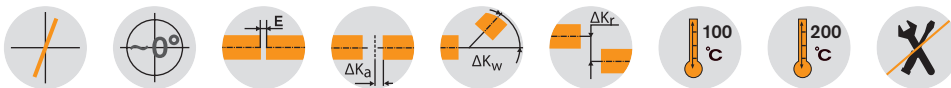


Type S: With clamping hubs



TOOLFLEX® Type S with clamping hubs

| Size | Dimensions [mm] | | | | | | | | | | | |
|------------------|-----------------------|--------|---------|---------------------------------|------|----------------|----------------|---------------------------------|----------------|----------------|----------------|---------------------|
| | Min./max. finish bore | | General | | | | | Clamping screws DIN EN ISO 4762 | | | | |
| | min. d | max. d | L | l ₁ ; l ₂ | E | D _H | d _H | M ₁ | D ₃ | t ₁ | e ₁ | T _A [Nm] |
| 7 | 3 | 7 | 24 | 9 | 6 | 15 | 9 | M2 | 16,5 | 3,2 | 5 | 0,37 |
| 9 | 3 | 9 | 29 | 11 | 7 | 20 | 12 | M2,5 | 21,5 | 3,5 | 7,1 | 0,76 |
| 12 | 4 | 12 | 34,5 | 13 | 8,5 | 25 | 16 | M3 | 26,5 | 4 | 8,5 | 1,34 |
| 16 | 5 | 16 | 45 | 17,0 | 11 | 32 | 20 | M4 | 35,0 | 5 | 12,0 | 2,9 |
| 20 | 8 | 20 | 55 | 21,5 | 12 | 40 | 27 | M5 | 43,5 | 6 | 14,5 | 6 |
| 30 | 10 | 30 | 63 | 23,0 | 17 | 55 | 33 | M6 | 58,0 | 7 | 19 | 10 |
| 38 | 12 | 38 | 69 | 25,5 | 18 | 65 | 42 | M8 | 72,6 | 9 | 25 | 25 |
| 42 | 14 | 42 | 84 | 30,0 | 24 | 70 | 46 | M8 | 76,1 | 9 | 27 | 25 |
| 45 | 14 | 45 | 86,5 | 32,0 | 22,5 | 83 | 58 | M10 | 89,0 | 11 | 30 | 49 |
| 55 Al | 20 | 55 | 111 | 40,0 | 31 | 100 | 73 | M12 | 106,0 | 14 | 37 | 86 |
| 55 ³⁾ | 20 | 55 | 111 | 40,0 | 31 | 100 | 73 | M12 | 106,0 | 14 | 37 | 120 |
| 65 ³⁾ | 30 | 65 | 126 | 45,0 | 36 | 125 | 95 | M14 | 127,2 | 15 | 45 | 185 |

Technical data

| Size | Bel- low-hub- connection | Torque of bellow T _{KN} ¹⁾ [Nm] | Max. speed n [rpm] | Hub material | Moment of inertia ²⁾ [x10 ⁻⁶ kgm ²] | Torsion spring stiffness C _T [Nm/rad] | Axial spring stiff- ness [N/mm] | Radial spring stiff- ness [N/mm] | Perm. displacements | | | Weight ²⁾ [kg] |
|------------------|--------------------------------|---|-----------------------|--------------|---|--|--|---|---------------------|-------------|----------------------|------------------------------|
| | | | | | | | | | Axial [mm] | Radial [mm] | Angular [degrees] | |
| 7 | Bonded | 1 | 31800 | Aluminium | 0,26 | 390 | — | — | ±0,3 | 0,10 | 0,7 | 0,007 |
| 9 | | 1,5 | 23800 | Aluminium | 0,97 | 750 | — | — | ±0,35 | 0,15 | 1,0 | 0,014 |
| 12 | | 2 | 19100 | Aluminium | 2,6 | 1270 | — | — | ±0,4 | 0,15 | 1,0 | 0,025 |
| 16 | | 5 | 14900 | Aluminium | 9 | 4500 | 43 | 138 | ±0,3 | 0,15 | 1,0 | 0,06 |
| 20 | Flanged | 15 | 11950 | Aluminium | 30 | 9600 | 63 | 189 | ±0,4 | 0,15 | 1,0 | 0,12 |
| 30 | | 35 | 8700 | Aluminium | 114 | 17800 | 97 | 233 | ±0,5 | 0,20 | 1,5 | 0,24 |
| 38 | | 65 | 7350 | Aluminium | 245 | 37400 | 108 | 318 | ±0,6 | 0,20 | 1,5 | 0,35 |
| 42 | | 95 | 6820 | Aluminium | 396 | 54700 | 120 | 499 | ±0,6 | 0,20 | 1,5 | 0,49 |
| 45 | | 170 | 5750 | Aluminium | 931 | 95800 | 132 | 738 | ±0,9 | 0,20 | 1,5 | 0,82 |
| 55 Al | | 340 | 4800 | Aluminium | 1665 | 144100 | 160 | 894 | ±1,1 | 0,25 | 1,5 | 1,50 |
| 55 ³⁾ | | 340 | 4800 | Stahl | 4996 | 144100 | 160 | 894 | ±1,0 | 0,25 | 1,5 | 3,20 |
| 65 ³⁾ | | 600 | 3850 | Stahl | 13318 | 322740 | 212 | 1365 | ±1,0 | 0,30 | 1,5 | 5,50 |

¹⁾ For selection see page 18 et seqq.

²⁾ Details referring to the overall coupling with max. bore

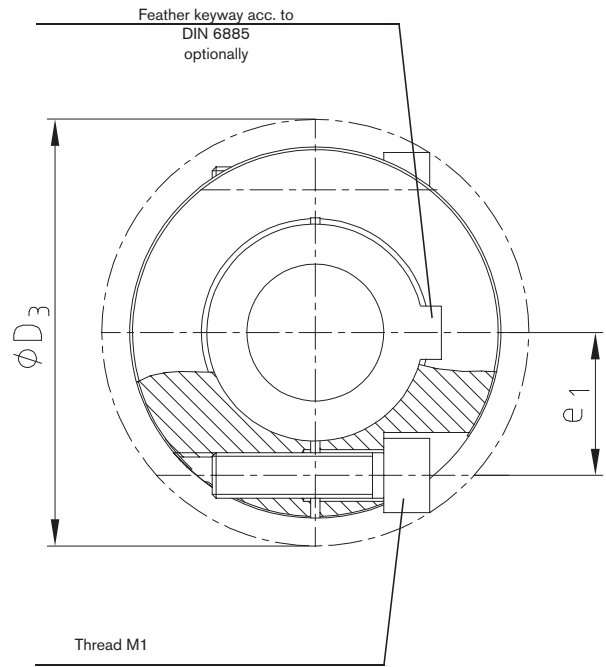
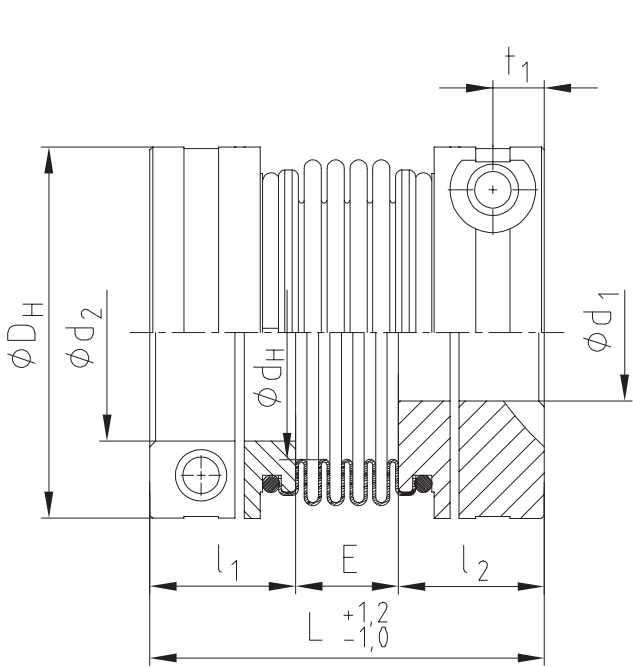
³⁾ Hub made of steel welded to bellow

Review of shaft-hub-connection: Friction torques for hub type 2.5

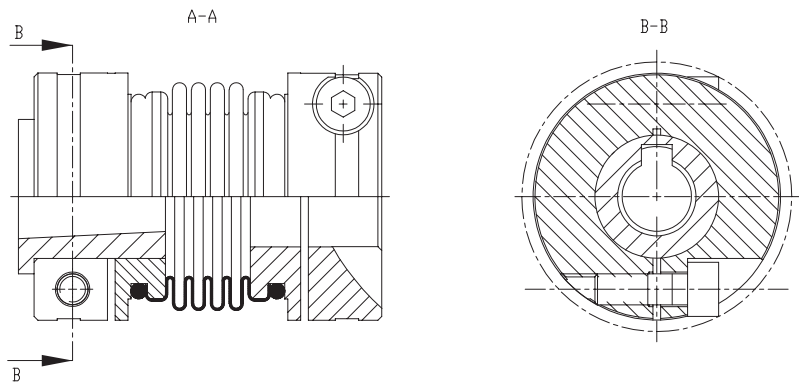
| Size | Ø3 | Ø4 | Ø5 | Ø6 | Ø7 | Ø8 | Ø9 | Ø10 | Ø11 | Ø12 | Ø14 | Ø15 | Ø16 | Ø18 | Ø19 | Ø20 | Ø24 | Ø25 | Ø28 | Ø30 | Ø32 | Ø35 | Ø38 | Ø40 | Ø42 | Ø45 | Ø50 | Ø55 | Ø60 | Ø65 | |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 7 | 0,84 | 0,91 | 0,97 | 1,04 | 1,10 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 1,87 | 1,98 | 2,09 | 2,20 | 2,31 | 2,41 | 2,52 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | 3,48 | 3,65 | 3,81 | 3,98 | 4,14 | 4,31 | 4,48 | 4,64 | 4,81 | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | 8,5 | 8,8 | 9,1 | 9,4 | 9,7 | 9,9 | 10,2 | 10,5 | 11,1 | 11,4 | 11,7 | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | 17,6 | 18,1 | 18,6 | 19,1 | 19,5 | 20,5 | 21,0 | 21,4 | 22,4 | 22,9 | 23,3 | | | | | | | | | | | | | | | |
| 30 | | | | | | | | | | 33,1 | 33,8 | 35,1 | 35,8 | 36,5 | 37,8 | 38,5 | 39,2 | 41,9 | 42,5 | 44,6 | 45,9 | | | | | | | | | | |
| 38 | | | | | | | | | | | 79,2 | 80,4 | 81,7 | 84,2 | 85,4 | 86,6 | 91,6 | 92,8 | 96,5 | 99,0 | 102 | 105 | 109 | | | | | | | | |
| 42 | | | | | | | | | | | 84,2 | 85,4 | 86,6 | 89,1 | 90,3 | 91,6 | 96,5 | 97,8 | 102 | 104 | 106 | 110 | 114 | 116 | 119 | | | | | | |
| 45 | | | | | | | | | | | | | | 157 | 165 | 167 | 173 | 177 | 181 | 187 | 193 | 197 | 200 | 206 | | | | | | | |
| 55 Al | | | | | | | | | | | | | | | | 270 | 281 | 284 | 293 | 298 | 304 | 313 | 321 | 327 | 333 | 341 | 356 | 371 | | | |
| 55 ³⁾ | | | | | | | | | | | | | | | | | 397 | 401 | 413 | 421 | 429 | 442 | 454 | 462 | 470 | 482 | 502 | 523 | | | |
| 65 ³⁾ | | | | | | | | | | | | | | | | | | | | | 720 | 732 | 750 | 768 | 780 | 792 | 810 | 840 | 870 | 900 | 930 |

Ordering-
example:

| | | | | |
|--------------------------------|----------|-------------|----------|-------------|
| TOOLFLEX® 30 S | 2.5 | Ø25 | 2.5 | Ø30 |
| Size and type of cou- pling | Hub type | Finish bore | Hub type | Finish bore |



Other types:
Type for FANUC motors



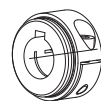
Hub types

Type 2.5



Clamping hub, double slotted, without feather keyway

Type 2.6



Clamping hub, single slotted, with feather keyway