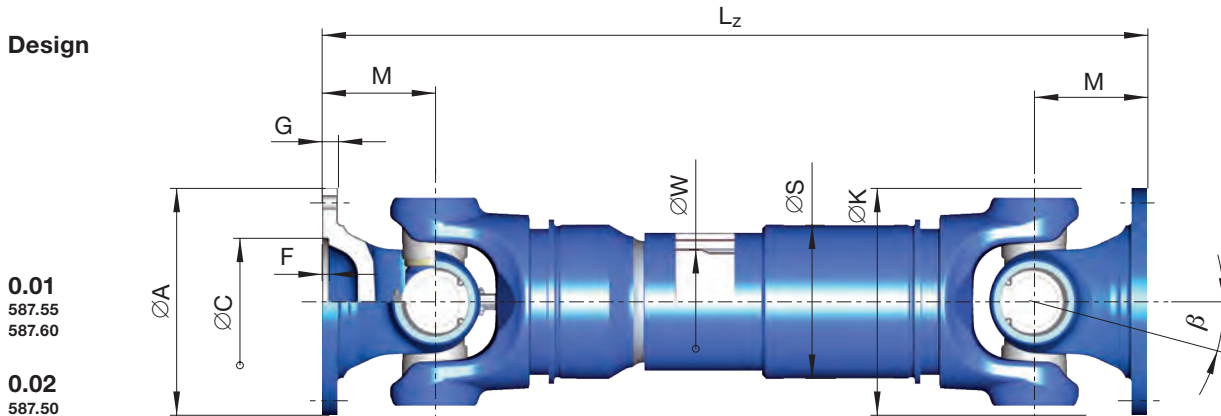


Data sheet series 587

0.01 with length compensation, tubular design
 0.02 with large length compensation, tubular design
 0.03 without length compensation, tubular design

9.01 with length compensation, short design
 9.02 with length compensation, short design
 9.03 with length compensation, short design
 9.04 without length compensation, double flange shaft design

Design



0.01
587.55
587.60

0.02
587.50

| Shaft size | | 587.50 | | 587.55 | | 587.60 | |
|------------------------------|-----|----------|----------|-------------|-------------|-------------|-------------|
| T _{CS} | kNm | 43 | | 52 | | 57 | |
| T _{DW} | kNm | 13 | | 23 | | 23 | |
| L _c | - | 1,8 | | 7,8 | | 25,3 | |
| β | ∠°γ | 24 | 24 | 20 | 20 | 20 | 20 |
| A | mm | 225 | 250 | 250 | 285 | 285 | 285 |
| K | mm | 215 | 215 | 250 | 250 | 265 | 265 |
| B ± 0,1 mm | mm | 196 | 218 | 218 | 245 | 245 | 245 |
| B _s ± 0,1 mm | mm | - | 214 | 214 | - | 240 | - |
| C H7 | mm | 140 | 140 | 140 | 175 | 175 | 175 |
| F ¹⁾ | mm | 4,4 | 5,4 | 5,5 | 6 | 6 | 6 |
| G | mm | 15 | 18 | 18 | 20 | 20 | 20 |
| H + 0,2 mm | mm | 16,1 | 18,1 | 18,1 | 20,1 | 20,1 | 20,1 |
| H _s H12 | mm | - | 25 | 25 | - | 28 | - |
| I ²⁾ | - | 8 | 8 | 8 | 8 | 8 | 8 |
| I _s ³⁾ | - | - | 4 | 4 | - | 4 | - |
| M | mm | 108 | 108 | 125 | 125 | 135 | 135 |
| S | mm | 144 x 7 | 144 x 7 | 167,7 x 9,8 | 167,7 x 9,8 | 167,7 x 9,8 | 167,7 x 9,8 |
| W DIN 5480 | mm | 90 x 2,5 | 90 x 2,5 | 120 x 2,5 | 120 x 2,5 | 120 x 2,5 | 120 x 2,5 |

T_{CS} = Functional limit torque*
 If the permissible functional limit torque T_{CS} is to be fully utilized, the flange connection (e.g., with dowel pins) must be reinforced.
 Yield torque 30% over T_{CS}

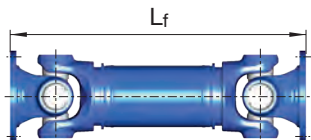
T_{DW} = Reversing fatigue torque*
L_c = Bearing capacity factor*
 * See specifications of driveshafts.
 β = Maximum deflection angle per joint

1) Effective spigot depth
 2) Number of flange holes (standard flange connection)
 3) Number of flange holes (dowel pin connection)

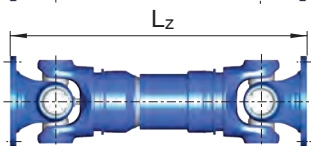
Data sheet series 587

Design

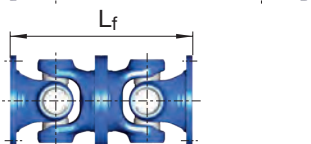
0.03



9.01

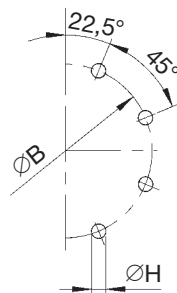


9.02

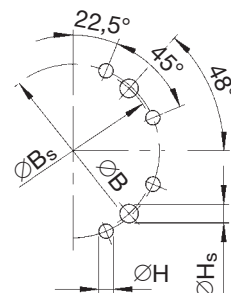


9.04

Standard flange connection



8-hole flange



8-hole flange

Dowel pin connection according to DIN 15451

| Design | Shaft size | 587.50 | | | | 587.55 | | | | 587.60 | | | |
|--------|--------------------|------------------|-------------------------|-------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----|-----|-----|
| | | | | | | | | | | | | | |
| 0.01 | L _{z min} | mm | - | - | 840 | 934 | 840 | 934 | 870 | 964 | | | |
| | L _a | mm | - | - | 110 | 140 | 110 | 140 | 110 | 140 | | | |
| | G | kg | - | - | 131 | 137 | 136 | 142 | 145 | 151 | | | |
| | G _R | kg | - | - | 38,2 | 38,2 | 38,2 | 38,2 | 38,2 | 38,2 | | | |
| | J _m | kgm ² | - | - | 0,675 | 0,691 | 0,755 | 0,771 | 0,968 | 0,984 | | | |
| | J _{mR} | kgm ² | - | - | 0,239 | 0,239 | 0,239 | 0,239 | 0,239 | 0,239 | | | |
| | C | Nm/rad. | - | - | 9,41 x 10 ⁵ | 9,37 x 10 ⁵ | 9,41 x 10 ⁵ | 9,37 x 10 ⁵ | 1,05 x 10 ⁶ | 1,04 x 10 ⁶ | | | |
| | C _R | Nm/rad. | - | - | 2,43 x 10 ⁶ | 2,43 x 10 ⁶ | 2,43 x 10 ⁶ | 2,43 x 10 ⁶ | 2,43 x 10 ⁶ | 2,43 x 10 ⁶ | | | |
| 0.02* | L _{z min} | mm | 800 | 800 | 1.185 | | 1.185 | | 1.215 | | | | |
| | L _{a min} | mm | 110 | 110 | 300 | | 300 | | 300 | | | | |
| | G | kg | 86 | 91 | 165 | | 170 | | 189 | | | | |
| | G _R | kg | 23,7 | 23,7 | 38,2 | | 38,2 | | 38,2 | | | | |
| 0.03 | L _f | mm | 540 | 540 | 610 | | 610 | | 640 | | | | |
| | G | kg | 72 | 77 | 88 | | 93 | | 103 | | | | |
| | G _R | kg | 23,7 | 23,7 | 38,2 | | 38,2 | | 38,2 | | | | |
| | J _m | kgm ² | 0,27 | 0,306 | 0,547 | | 0,627 | | 0,84 | | | | |
| | J _{mR} | kgm ² | 0,111 | 0,111 | 0,239 | | 0,239 | | 0,239 | | | | |
| | C | Nm/rad. | 7,2 x 10 ⁵ | 7,2 x 10 ⁵ | 9,8 x 10 ⁵ | | 9,8 x 10 ⁵ | | 11,5 x 10 ⁵ | | | | |
| | C _R | Nm/rad. | 11,33 x 10 ⁵ | 11,33 x 10 ⁵ | 2,43 x 10 ⁶ | | 2,43 x 10 ⁶ | | 2,43 x 10 ⁶ | | | | |
| 9.01 | L _{z min} | mm | - | - | 813 | | 813 | | 843 | | | | |
| | L _a | mm | - | - | 100 | | 100 | | 100 | | | | |
| | G | kg | - | - | 110 | | 115 | | 142 | | | | |
| | J _m | kgm ² | - | - | 0,64 | | 0,72 | | 0,93 | | | | |
| | C | Nm/rad. | - | - | 8,8 x 10 ⁵ | | 8,8 x 10 ⁵ | | 9,7 x 10 ⁵ | | | | |
| 9.02 | L _z | mm | - | - | 780 | | 780 | | 810 | | | | |
| | L _a | mm | - | - | 65 | | 65 | | 70 | | | | |
| | G | kg | - | - | 108 | | 113 | | 125 | | | | |
| 9.03 | L _z | mm | 550 | 600 | 650 | 696 | 550 | 600 | 650 | 696 | | | |
| | L _a | mm | 60 | 75 | 90 | 110 | 60 | 75 | 90 | 110 | | | |
| | G | kg | 61 | 66 | 68 | 70 | 66 | 71 | 73 | 75 | | | |
| 9.04 | L _f | mm | 432 | | | | 432 | | | | 500 | 500 | 540 |
| | G | kg | 58 | | | | 68 | | | | 81 | 91 | 110 |

L_{z min} = Shortest possible compressed length
 L_a = Length compensation
 L_{f min} = Shortest fixed length
 L_z + L_a = Maximum operating length

G = Weight of shaft
 G_R = Weight per 1.000 mm tube
 J_m = Moment of inertia
 J_{mR} = Moment of inertia per 1.000 mm tube

C = Torsional stiffness of shaft without tube
 C_R = Torsional stiffness per 1.000 mm tube
 * Larger length compensation available on request