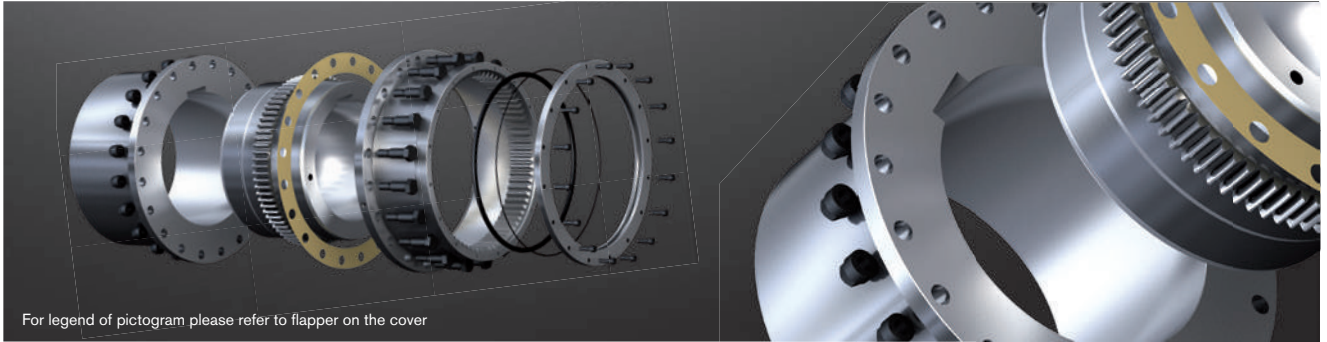


GEARex® FR and DR

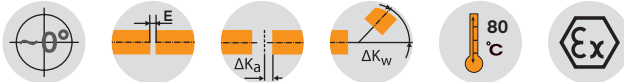
All-steel gear couplings

Morskate®

Single-cardanic, high power density



For legend of pictogram please refer to flapper on the cover



| Dimensions | | | | | | | | | | | | | | | | | |
|------------------|-----------------|---------------------------|------------------|----------------|---------------------------------|---|-----|-------------------|-------------------|-------|------|-----------------|------------------------------|--------------------|-----|------------------------------------|---------------------|
| Size | Torque [Nm] | | Max. finish bore | | Dimensions [mm] | | | | | | | | | Dowel screw (10.9) | | Grease capacity [dm ³] | |
| | T _{KN} | T _{KN} (42CrMo4) | d ₁ | d ₄ | l ₁ , l ₂ | Hub lengthened max. l ₁ , l ₂ | D | DA1 ²⁾ | DA2 ²⁾ | DF | LR | F ¹⁾ | d ₃ ¹⁾ | z | M | | T _A [Nm] |
| 10 ³⁾ | 930 | 1580 | 50 | 60 | 43 | 105 | 67 | 111 | 84 | 84 | 88 | 74 | 52 | 6 | M6 | 15 | 0.02 |
| 15 ³⁾ | 2000 | 3300 | 64 | 78 | 50 | 115 | 87 | 152 | 107 | 107 | 103 | 84 | 68 | 8 | M8 | 36 | 0.04 |
| 20 | 3500 | 6300 | 80 | 95 | 62 | 130 | 108 | 178 | 130 | 130 | 127 | 104 | 85 | 6 | M10 | 72 | 0.08 |
| 25 | 6500 | 11000 | 98 | 115 | 76 | 150 | 130 | 213 | 158 | 158 | 157 | 123 | 110 | 6 | M12 | 125 | 0.12 |
| 30 | 10000 | 17400 | 112 | 135 | 90 | 170 | 153 | 240 | 182 | 182 | 185 | 148 | 130 | 8 | M12 | 125 | 0.18 |
| 35 | 17000 | 28800 | 133 | 155 | 105 | 185 | 180 | 280 | 214 | 214 | 216 | 172 | 150 | 8 | M14 | 200 | 0.22 |
| 40 | 28500 | 48500 | 158 | 185 | 120 | 215 | 214 | 318 | 250 | 250 | 244 | 192 | 175 | 8 | M14 | 200 | 0.35 |
| 45 | 37000 | 62000 | 172 | 200 | 135 | 245 | 233 | 347 | 274 | 274 | 276 | 216 | 190 | 10 | M14 | 200 | 0.45 |
| 50 | 51000 | 86000 | 192 | 225 | 150 | 295 | 260 | 390 | 309 | 309 | 305 | 241 | 220 | 8 | M18 | 430 | 0.70 |
| 55 | 65000 | 110000 | 210 | 245 | 175 | 300 | 283 | 425.5 | 334 | 334 | 356 | 275 | 250 | 14 | M18 | 430 | 0.90 |
| 60 | 85000 | 145000 | 232 | 265 | 190 | 305 | 312 | 457 | 365.5 | 365.5 | 386 | 316 | 265 | 14 | M18 | 430 | 1.15 |
| 70 | 135000 | 240000 | 276 | 310 | 220 | 310 | 371 | 527 | 425 | 425 | 450 | 360 | 300 | 16 | M20 | 610 | 1.50 |
| 80 | 175000 | 300000 | 300 | 340 | 280 | - | 394 | 545 | 475 | 462 | 570 | 340 | 310 | 18 | M20 | 610 | 2.50 |
| 85 | 225000 | 380000 | 325 | 370 | 292 | - | 430 | 585 | 515 | 500 | 597 | 352 | 330 | 20 | M20 | 610 | 3.00 |
| 90 | 290000 | 500000 | 350 | 400 | 305 | - | 464 | 640 | 560 | 546 | 623 | 365 | 360 | 20 | M24 | 1000 | 4.00 |
| 100 | 380000 | 650000 | 390 | 440 | 330 | - | 512 | 690 | 612 | 594 | 673 | 390 | 400 | 24 | M24 | 1000 | 5.00 |
| 110 | 480000 | 820000 | 420 | 480 | 350 | - | 560 | 765 | 665 | 647 | 710 | 410 | 420 | 20 | M30 | 1700 | 6.00 |
| 120 | 620000 | 1050000 | 450 | 520 | 420 | - | 608 | 825 | 720 | 700 | 852 | 480 | 470 | 24 | M30 | 1700 | 7.50 |
| 130 | - | 1450000 | 500 | 560 | 440 | - | 684 | 950 | 805 | 760 | 890 | 520 | 520 | 20 | M36 | 2800 | 9.00 |
| 140 | - | 1950000 | 550 | 610 | 460 | - | 750 | 1020 | 875 | 835 | 930 | 570 | 590 | 24 | M36 | 2800 | 12.00 |
| 150 | - | 2750000 | 630 | 690 | 520 | - | 850 | 1140 | 975 | 935 | 1055 | 630 | 670 | 30 | M36 | 2800 | 15.00 |

■ = Standard

¹⁾ Space required to align the coupling and replace the gasket

²⁾ For dimension type F see page 108. For type D see page 110.

³⁾ Only available as type F

| | | | |
|-------------------|---------------------------|---|---|
| Ordering example: | GEARex® FR 10 | d ₁ Ø50 | d ₄ Ø60 |
| | Type and size of coupling | Finish bore with keyway to DIN 6885 sheet 1 | Finish bore with keyway to DIN 6885 sheet 1 |

Any questions? Please contact us.

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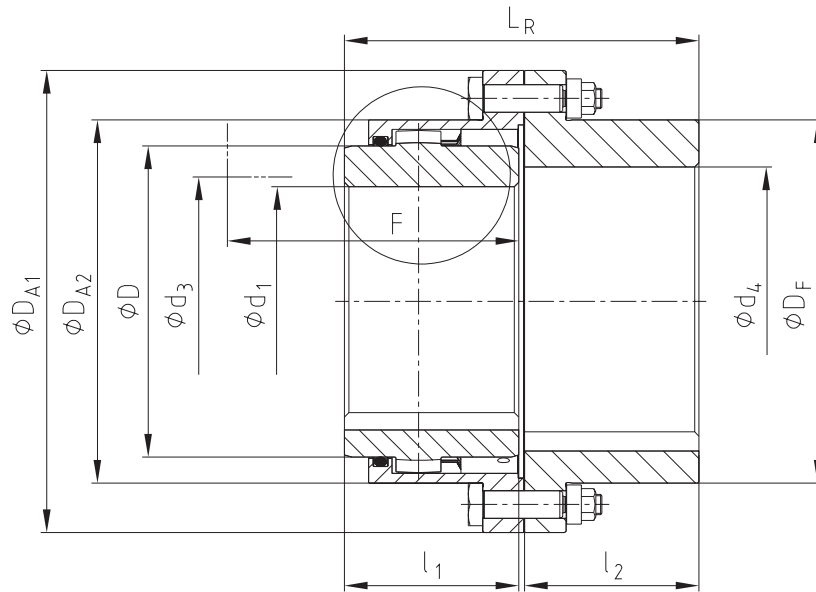
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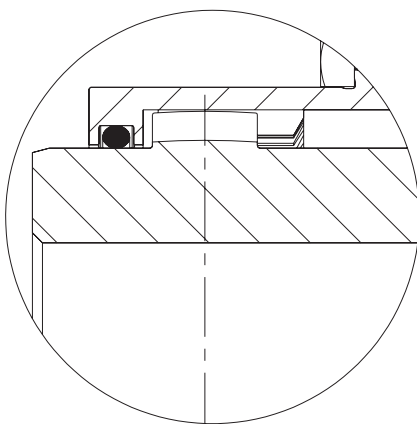
Components



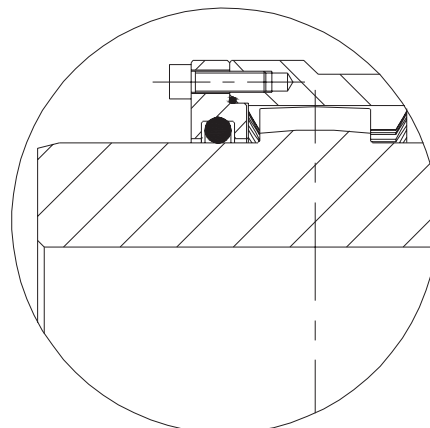
BoWex®

Types

Type FR



Type DR



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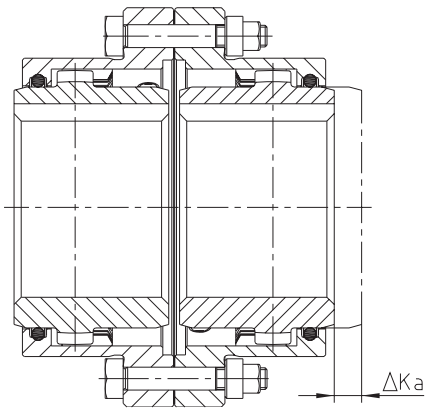
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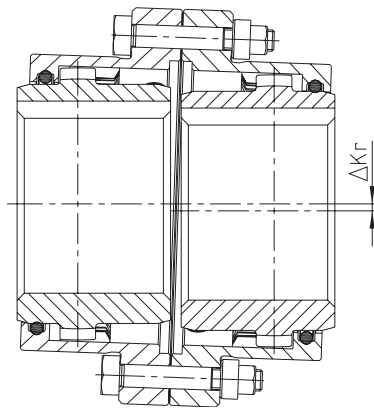
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Displacements

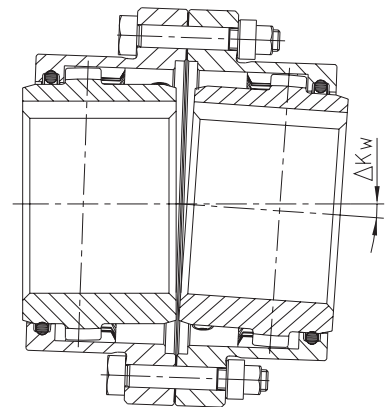
Axial displacement



Radial displacement



Angular displacement

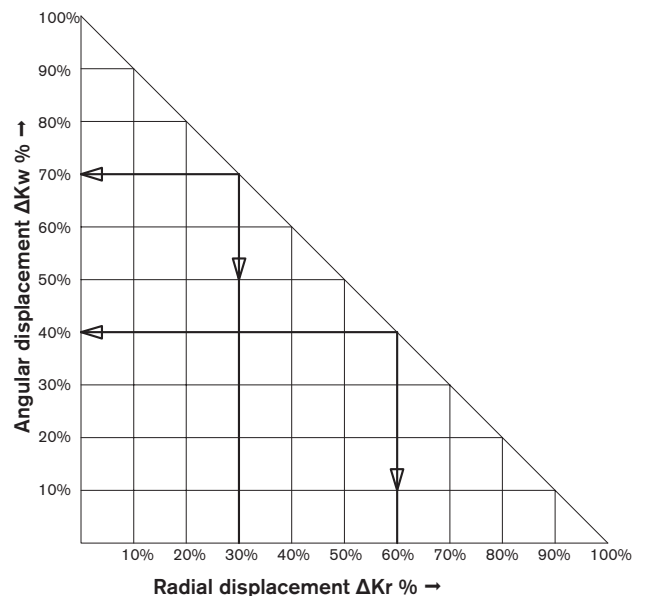


| Displacements | | | |
|---------------|----------------------------------|--|---------------|
| Size | Max. axial displacement ΔKa [mm] | Max. permissible displacements ¹⁾ | |
| | | ΔKr [mm] | ΔKw [°] |
| 10 | | ± 0.4 | |
| 15 | | ± 0.5 | |
| 20 | | ± 0.6 | |
| 25 | ± 1.0 | ± 0.8 | |
| 30 | | ± 1.0 | |
| 35 | | ± 1.0 | |
| 40 | | ± 1.2 | |
| 45 | | ± 1.4 | |
| 50 | | ± 1.6 | |
| 55 | ± 1.5 | ± 1.8 | |
| 60 | | ± 2.0 | 0.5° each hub |
| 70 | | ± 2.2 | |
| 80 | | ± 2.5 | |
| 85 | | ± 2.8 | |
| 90 | ± 2.0 | ± 3.0 | |
| 100 | | ± 3.2 | |
| 110 | | ± 4.4 | |
| 120 | | ± 5.5 | |
| 130 | | ± 5.7 | |
| 140 | ± 2.5 | ± 6.0 | |
| 150 | | ± 6.6 | |

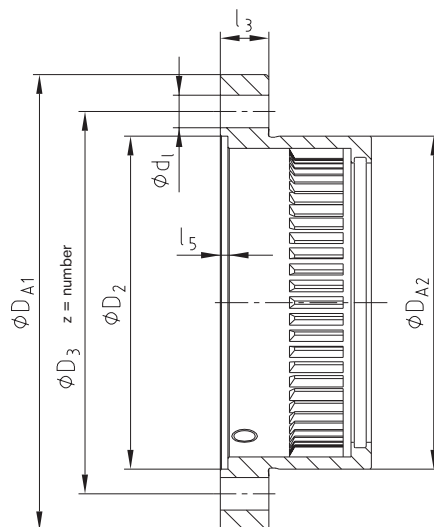
¹⁾ The displacement figures are maximum figures which must not arise in parallel. If radial and angular displacements arise in parallel, the figures need to be reduced (see examples of calculation and diagramme).

Example 1:
ΔKr = 30%
ΔKw = 70%

Example 2:
ΔKr = 60%
ΔKw = 40%



Flange dimensions in accordance with AGMA 9008-B00



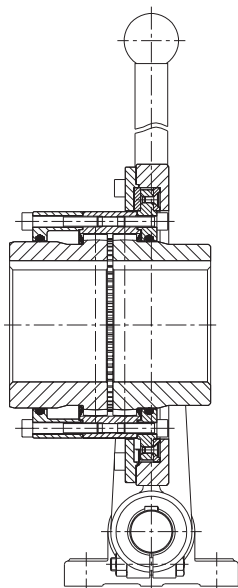
BoWex[®]

Gear couplings

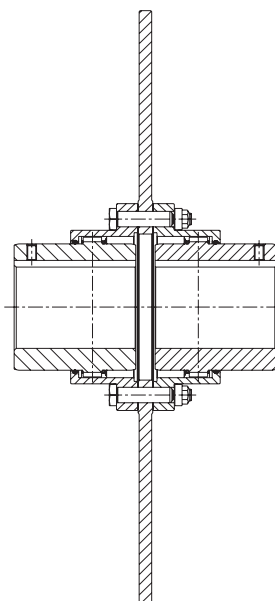
| Flange dimensions | | | | | | | | |
|-------------------|-----------------|----------|-------|--------|-------|---------------------|-------|-------|
| Size | Dimensions [mm] | | | | | | | |
| | D_{A1} | D_{A2} | D_2 | D_3 | d_1 | $z = \text{number}$ | l_3 | l_5 |
| 10 | 111 | 84 | 82 | 95.25 | 6.35 | 6 | 14 | 3 |
| 15 | 152 | 107 | 105 | 122.24 | 9.52 | 8 | 19 | 3 |
| 20 | 178 | 130 | 130 | 149.23 | 12.70 | 6 | 19 | 3 |
| 25 | 213 | 158 | 153 | 180.97 | 15.87 | 6 | 22 | 4 |
| 30 | 240 | 182 | 178 | 206.38 | 15.87 | 8 | 22 | 4 |
| 35 | 280 | 214 | 205 | 241.30 | 19.05 | 8 | 28.5 | 5 |
| 40 | 318 | 250 | 243 | 279.40 | 19.05 | 8 | 28.5 | 4 |
| 45 | 347 | 274 | 265 | 304.80 | 19.05 | 10 | 28.5 | 5.5 |
| 50 | 390 | 309 | 302 | 342.90 | 22.22 | 8 | 38 | 6 |
| 55 | 425.5 | 334 | 320 | 368.30 | 22.22 | 14 | 38 | 6 |
| 60 | 457 | 365.5 | 353 | 400.05 | 22.22 | 14 | 26 | 6 |
| 70 | 527 | 425 | 412 | 463.55 | 25.40 | 16 | 28.5 | 8 |

Other types

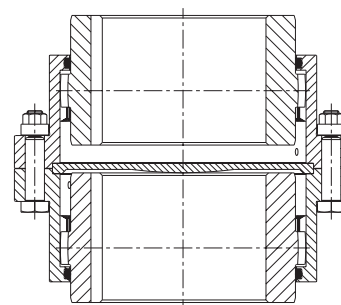
Type SD



Type with brake disk



Type VD (vertical assembly)



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