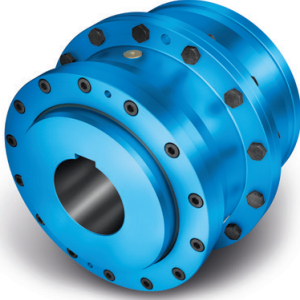


# TORSIONALLY RIGID GEAR COUPLINGS

## ZAPEX ZW SERIES



|                           |            |
|---------------------------|------------|
| <b>General</b>            | <b>4/3</b> |
| Benefits                  | 4/3        |
| Application               | 4/3        |
| Design and configurations | 4/4        |
| Function                  | 4/4        |
| Technical specifications  | 4/5        |
| <hr/>                     |            |
| Type ZWN                  | 4/6        |
| Type ZZS                  | 4/8        |
| Type ZZW                  | 4/10       |
| Type ZWH                  | 4/12       |
| Type ZWBT                 | 4/13       |
| Type ZWBG                 | 4/14       |
| Type ZWB                  | 4/15       |
| Type ZWTR                 | 4/16       |
| Type ZBR                  | 4/17       |
| Type ZWS                  | 4/18       |
| Type ZWNV                 | 4/19       |
| Type ZWSE                 | 4/20       |
| Customized hub design     | 4/21       |
| Spare and wear parts      | 4/23       |



ZAPEX ZW  
**FLENDER**




# GENERAL




Coupling suitable for use in potentially explosive atmospheres.

Complies with the current ATEX Directive for:

CE  II 2G Ex h IIC T6 ... T5 Gb X

 II 2D Ex h IIIC T85 °C ... 100 °C Db X

 I M2 Ex h Mb X

4

## Benefits

ZAPEX gear couplings link machine shafts and compensate for shaft misalignment with weak restorative forces. High transmissible torque combined with compactness and light weight are characteristic of ZAPEX couplings. ZAPEX coupling types are constructed on a modular principle.

This means that application-specific solutions can be delivered quickly. ZAPEX couplings require very little maintenance. Regular grease or oil changes at the prescribed intervals prolongs the service life of the coupling.

## Application

ZAPEX couplings are especially suited for operation in harsh operating conditions, such as drives in the iron smelting or cement industry.

ZAPEX couplings are suitable for reverse operation and horizontal mounting positions and, in the case of type ZWNV, for vertical mounting positions.

# GENERAL

## Design and configurations

4

A ZAPEX coupling comprises two hub sections with external teeth which are mounted on the machine shafts. Each set of external teeth engages in a flanged socket with mating internal teeth. The flanged sleeves are connected via two flanges with close-fitting bolts. The teeth are lubricated with oil or grease. On the ZAPEX type ZW, DUO sealing rings are used to seal the tooth space. The DUO sealing rings prevent the lubricant from escaping and dirt from entering the tooth space. The parallel keyways must be sealed during assembly to prevent lubricant from escaping. Customized hub designs are described after the types.

| Type | Description                        |
|------|------------------------------------|
| ZWN  | Standard type                      |
| ZZS  | with adapter                       |
| ZZW  | with intermediate shaft            |
| ZWH  | with coupling sleeve               |
| ZWBT | with offset brake disk             |
| ZWBG | with straight brake disk           |
| ZWB  | with brake drum                    |
| ZWTR | for rope drums                     |
| ZBR  | with shear pins                    |
| ZWS  | Clutch                             |
| ZWNV | Vertical type                      |
| ZWSE | Simple clutch-coupling combination |

Further application-specific coupling types are available; dimension sheets for and information on these are available on request.

## Function

The torque is transmitted through the coupling teeth. The teeth are crowned, so angular displacement per tooth plane is possible. Radial displacement can be compensated for via the space VA between the tooth planes. The internal teeth of the flanged sleeves are significantly wider than the external teeth of the hub parts, permitting a relatively high axial misalignment.

A small angular misalignment on the coupling teeth results in an advantageous distribution of the lubricant film and a very low wear rate. This favorable condition can be deliberately set by aligning the drive with the machine shafts with a slight radial misalignment.

## Technical specifications

| Power ratings |                |                  |                 |                |                        |   |
|---------------|----------------|------------------|-----------------|----------------|------------------------|---|
| Size          | Rated torque   | Maximum torque   | Overload torque | Fatigue torque | Torsional stiffness ZW | Permitted axial shaft misalignment $\Delta K_a$<br>mm |
|               | $T_{KN}$<br>Nm | $T_{Kmax}$<br>Nm | $T_{KOL}$<br>Nm | $T_{KW}$<br>Nm | $C_{Tdyn}$<br>kNm/rad  |   |
| 112           | 1300           | 2600             | 5200            | 520            | 2000                   | 1.0   |
| 128           | 2500           | 5000             | 10000           | 1000           | 3600                   | 1.0   |
| 146           | 4300           | 8600             | 17200           | 1720           | 6900                   | 1.0   |
| 175           | 7000           | 14000            | 28000           | 2800           | 9360                   | 1.0   |
| 198           | 11600          | 23200            | 46400           | 4640           | 15600                  | 1.0   |
| 230           | 19000          | 38000            | 76000           | 7600           | 26300                  | 1.0   |
| 255           | 27000          | 54000            | 108000          | 10800          | 33400                  | 1.5   |
| 290           | 39000          | 78000            | 156000          | 15600          | 44000                  | 1.5   |
| 315           | 54000          | 108000           | 216000          | 21600          | 64100                  | 1.5   |
| 342           | 69000          | 138000           | 276000          | 27600          | 81600                  | 1.5   |
| 375           | 98000          | 196000           | 392000          | 39200          | 115600                 | 1.5   |
| 415           | 130000         | 260000           | 520000          | 52000          | 106000                 | 1.5   |
| 465           | 180000         | 360000           | 720000          | 72000          | 134600                 | 2.0   |
| 505           | 250000         | 500000           | 1000000         | 100000         | 168700                 | 2.0   |
| 545           | 320000         | 640000           | 1280000         | 128000         | 216900                 | 2.0   |
| 585           | 400000         | 800000           | 1600000         | 160000         | 263200                 | 2.0   |
| 640           | 510000         | 1020000          | 2040000         | 204000         | 356000                 | 2.0   |
| 690           | 660000         | 1320000          | 2640000         | 264000         | 431000                 | 2.0   |
| 730           | 790000         | 1580000          | 3160000         | 316000         | 538000                 | 2.0   |
| 780           | 1000000        | 2000000          | 4000000         | 400000         | 696000                 | 3.0   |
| 852           | 1200000        | 2400000          | 4800000         | 480000         | 926000                 | 3.0   |
| 910           | 1600000        | 3200000          | 6400000         | 640000         | 1118000                | 3.0   |
| 1020          | 1900000        | 3800000          | 7600000         | 760000         | 1339000                | 3.0   |
| 1080          | 2200000        | 4400000          | 8800000         | 880000         | 1605000                | 3.0   |
| 1150          | 2700000        | 5400000          | 10800000        | 1080000        | 2120000                | 3.0   |
| 1160          | 3350000        | 6700000          | 13400000        | 1340000        | 2474000                | 3.0   |
| 1240          | 3800000        | 7600000          | 15200000        | 1520000        | 3079000                | 3.0   |
| 1310          | 4600000        | 9200000          | 18400000        | 1840000        | 3693000                | 4.0   |
| 1380          | 5300000        | 10600000         | 21200000        | 2120000        | 4383000                | 4.0   |
| 1440          | 6250000        | 12500000         | 25000000        | 2500000        | 5056000                | 4.0   |
| 1540          | 7200000        | 14400000         | 28800000        | 2880000        | 6115000                | 4.0   |

In the case of type ZWTR, the rated torques which deviate from the above are specified in the dimension table.

The stated torsional stiffness "ZW" applies to coupling types ZWN and ZWNV.  
Torsional stiffness of the remaining types on request.

The axial misalignment  $\Delta K_a$  must be understood as the maximum permitted enlargement of the hub distance S of the coupling.

The axial misalignment for the types ZWBT, ZWBG and ZWNV is  $1/2 \cdot \Delta K_a$ .

#### Angular misalignment $\Delta K_w$

Types ZWN, ZZS, ZZW, ZWH, ZWB, ZBR, ZWS:  $\Delta K_w = 1^\circ$

Types ZWBT and ZWBG:  $\Delta K_w = 0.2^\circ$

Type ZWSE:  $\Delta K_w = 0.4^\circ$

#### Radial misalignment $\Delta K_r$

Types ZWN, ZZS, ZZW, ZWH, ZWB, ZBR, ZWS:

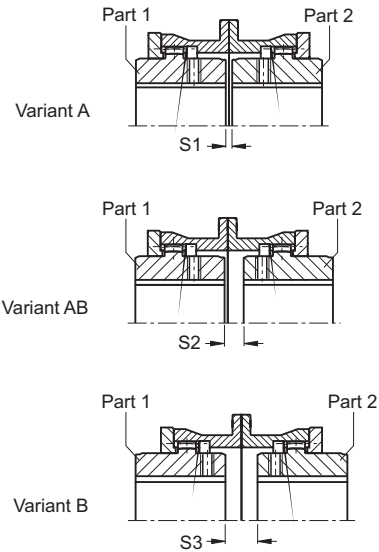
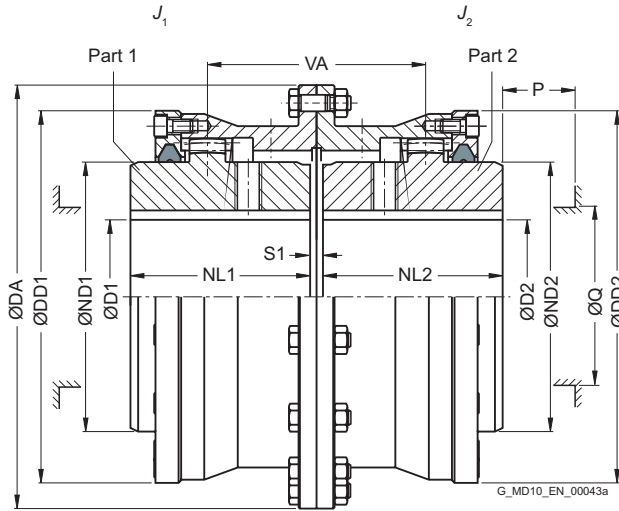
$\Delta K_r \leq VA \cdot \tan 1^\circ$

Types ZWBT and ZWBG:  $\Delta K_r \leq VA \cdot \tan 0,2^\circ$

Type ZWSE:  $\Delta K_r \leq VA \cdot 0.4^\circ$

For the tooth distance VA, see the relevant table for the subassembly.

# TYPE ZWN



4

| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm                           |     |     |             |             |             |    |     |     |     |     |    |       | Mass moment of inertia<br>$J_1/J_2$<br>kgm <sup>2</sup> | Article no. <sup>1)</sup> |             |      | Weight<br>$m$<br>kg |
|------|--------------------------------|------------------------------------|--|-----|-----|-------------|-------------|-------------|----|-----|-----|-----|-----|----|-------|---|---------------------------|-------------|------|---------------------|
|      |                                |                                    | D1, D2 Keyway<br>DIN 6885-1<br>min.   max. |     | DA  | ND1/<br>ND2 | NL1/<br>NL2 | DD1/<br>DD2 | S1 | S2  | S3  | VA  | Q   | P  | Type  |   | A                         | B           | AB   |                     |
|      |                                |                                    |  |     |     |             |             |             |    |     |     |     |     |    |       |   |                           |             |      |                     |
| 112  | 1300                           | 9400                               | 0  | 49  | 143 | 65          | 50          | 110         | 6  | -   | -   | 56  | 50  | 35 | 0.007 | 2LC0300-0AA   | 2LC0300-0AB               | 2LC0300-0AC | 5.8  |                     |
| 128  | 2500                           | 8300                               | 0  | 61  | 157 | 80          | 60          | 128         | 6  | 13  | 20  | 73  | 65  | 45 | 0.014 | 2LC0300-1AA   | 2LC0300-1AB               | 2LC0300-1AC | 7.9  |                     |
| 146  | 4300                           | 7300                               | 0  | 72  | 177 | 95          | 75          | 146         | 6  | 13  | 20  | 88  | 75  | 45 | 0.021 | 2LC0300-2AA   | 2LC0300-2AB               | 2LC0300-2AC | 11.5 |                     |
| 175  | 7000                           | 6400                               | 0  | 85  | 215 | 112         | 90          | 175         | 8  | 14  | 20  | 104 | 85  | 50 | 0.049 | 2LC0300-3AA   | 2LC0300-3AB               | 2LC0300-3AC | 19   |                     |
| 198  | 11600                          | 5500                               | 0  | 100 | 237 | 135         | 100         | 198         | 8  | 19  | 30  | 119 | 110 | 50 | 0.086 | 2LC0300-4AA   | 2LC0300-4AB               | 2LC0300-4AC | 26.5 |                     |
| 230  | 19000                          | 4700                               | 0  | 120 | 265 | 160         | 110         | 230         | 8  | 20  | 32  | 130 | 135 | 50 | 0.16  | 2LC0300-5AA   | 2LC0300-5AB               | 2LC0300-5AC | 37   |                     |
| 255  | 27000                          | 4100                               | 0  | 140 | 294 | 185         | 125         | 255         | 10 | 25  | 40  | 150 | 160 | 50 | 0.26  | 2LC0300-6AA   | 2LC0300-6AB               | 2LC0300-6AC | 49   |                     |
| 290  | 39000                          | 3700                               | 70   | 160 | 330 | 210         | 140         | 290         | 10 | 30  | 50  | 170 | 180 | 60 | 0.51  | 2LC0300-7AA   | 2LC0300-7AB               | 2LC0300-7AC | 72   |                     |
| 315  | 54000                          | 3300                               | 80   | 175 | 366 | 230         | 160         | 315         | 10 | 30  | 50  | 190 | 200 | 60 | 0.81  | 2LC0300-8AA   | 2LC0300-8AB               | 2LC0300-8AC | 99   |                     |
| 342  | 69000                          | 3000                               | 90   | 195 | 392 | 255         | 180         | 340         | 12 | 42  | 72  | 222 | 225 | 60 | 1.2   | 2LC0301-0AA   | 2LC0301-0AB               | 2LC0301-0AC | 125  |                     |
| 375  | 98000                          | 2700                               | 100  | 220 | 430 | 290         | 200         | 375         | 12 | 42  | 72  | 242 | 260 | 60 | 2     | 2LC0301-1AA   | 2LC0301-1AB               | 2LC0301-1AC | 170  |                     |
| 415  | 130000                         | 2500                               | 120  | 240 | 478 | 320         | 220         | 415         | 12 | 74  | 136 | 294 | 285 | 80 | 3.1   | 2LC0301-2AA   | 2LC0301-2AB               | 2LC0301-2AC | 225  |                     |
| 465  | 180000                         | 2200                               | 140  | 270 | 528 | 360         | 240         | 465         | 16 | 96  | 176 | 336 | 325 | 80 | 5.2   | 2LC0301-3AA   | 2LC0301-3AB               | 2LC0301-3AC | 300  |                     |
| 505  | 250000                         | 2000                               | 160  | 300 | 568 | 400         | 260         | 505         | 16 | 106 | 196 | 366 | 365 | 80 | 7.7   | 2LC0301-4AA   | 2LC0301-4AB               | 2LC0301-4AC | 380  |                     |
| 545  | 320000                         | 1800                               | 180  | 330 | 620 | 440         | 280         | 545         | 16 | 126 | 236 | 406 | 405 | 80 | 12    | 2LC0301-5AA   | 2LC0301-5AB               | 2LC0301-5AC | 490  |                     |
| 585  | 400000                         | 1700                               | 210  | 360 | 660 | 480         | 310         | 585         | 20 | 150 | 280 | 460 | 445 | 80 | 17    | 2LC0301-6AA   | 2LC0301-6AB               | 2LC0301-6AC | 620  |                     |
| 640  | 510000                         | 1600                               | 230  | 360 | 738 | 480         | 330         | 640         | 20 | 149 | 278 | 445 | 475 | 90 | 25    | 2LC0301-7AA   | 2LC0301-7AB               | 2LC0301-7AC | 780  |                     |
|      |                                |                                    | >360                                       | 390 |     | 520         |             |             |    |     |     | 475 |     |    |       |   |                           |             | 27   | 800                 |
| 690  | 660000                         | 1450                               | 250  | 390 | 788 | 520         | 350         | 690         | 20 | 166 | 312 | 475 | 515 | 90 | 35    | 2LC0301-8AA   | 2LC0301-8AB               | 2LC0301-8AC | 950  |                     |
|      |                                |                                    | >390                                       | 420 |     | 560         |             |             |    |     |     | 515 |     |    |       |   |                           |             | 38   | 980                 |
| 730  | 790000                         | 1350                               | 275  | 420 | 834 | 560         | 380         | 730         | 20 | 180 | 340 | 515 | 555 | 90 | 48    | 2LC0302-0AA   | 2LC0302-0AB               | 2LC0302-0AC | 1150 |                     |
|      |                                |                                    | >420                                       | 450 |     | 600         |             |             |    |     |     | 555 |     |    |       |   |                           |             | 52   | 1200                |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm         |      |      |         |         |         |    |     |     |     |      |     |      | Mass moment of inertia<br>$J_1/J_2$<br>kgm <sup>2</sup> | Article no. <sup>1)</sup> |             |      | Weight<br>$m$<br>kg |
|------|--------------------------------|------------------------------------|--------------------------|------|------|---------|---------|---------|----|-----|-----|-----|------|-----|------|---|---------------------------|-------------|------|---------------------|
|      |                                |                                    | D1, D2 Keyway DIN 6885-1 |      | DA   | ND1/ND2 | NL1/NL2 | DD1/DD2 | S1 | S2  | S3  | VA  | Q    | P   | Type |   |                           |             |      |                     |
|      |                                |                                    | min.                     | max. |      |         |         |         |    |     |     |     |      |     | A    |   | B                         | AB          |      |                     |
| 780  | 1000000                        | 1250                               | 300                      | 450  | 900  | 600     | 400     | 780     | 25 | 176 | 327 | 576 | 555  | 110 | 68   | 2LC0302-1AA   | 2LC0302-1AB               | 2LC0302-1AC | 1450 |                     |
|      |                                |                                    | >450                     | 490  |      | 650     |         |         |    |     |     |     | 595  |     | 77   |   |                           |             | 1450 |                     |
| 852  | 1200000                        | 1150                               | 325                      | 490  | 970  | 650     | 420     | 850     | 25 | 185 | 345 | 605 | 595  | 110 | 100  | 2LC0302-2AA   | 2LC0302-2AB               | 2LC0302-2AC | 1750 |                     |
|      |                                |                                    | >490                     | 535  |      | 710     |         |         |    |     |     |     | 655  |     | 110  |   |                           |             | 1800 |                     |
| 910  | 1600000                        | 1050                               | 350                      | 535  | 1030 | 710     | 450     | 910     | 25 | 215 | 405 | 665 | 655  | 110 | 140  | 2LC0302-3AA   | 2LC0302-3AB               | 2LC0302-3AC | 2100 |                     |
|      |                                |                                    | >535                     | 570  |      | 750     |         |         |    |     |     |     | 695  |     | 145  |   |                           |             | 2150 |                     |
| 1020 | 1900000                        | 1000                               | 375                      | 570  | 1112 | 750     | 480     | 1020    | 25 | 213 | 401 | 693 | 695  | 130 | 200  | 2LC0302-4AA   | 2LC0302-4AB               | 2LC0302-4AC | 2600 |                     |
|      |                                |                                    | >570                     | 600  |      | 800     |         |         |    |     |     |     | 735  |     | 220  |   |                           |             | 2800 |                     |
| 1080 | 2200000                        | 950                                | 400                      | 600  | 1162 | 800     | 500     | 1080    | 30 | 226 | 422 | 726 | 735  | 135 | 255  | 2LC0302-5AA   | 2LC0302-5AB               | 2LC0302-5AC | 3100 |                     |
|      |                                |                                    | >600                     | 650  |      | 860     |         |         |    |     |     |     | 795  |     | 285  |   |                           |             | 3200 |                     |
| 1150 | 2700000                        | 900                                | 425                      | 650  | 1222 | 860     | 520     | 1150    | 30 | 238 | 446 | 758 | 795  | 135 | 330  | 2LC0302-6AA   | 2LC0302-6AB               | 2LC0302-6AC | 3600 |                     |
|      |                                |                                    | >650                     | 705  |      | 930     |         |         |    |     |     |     | 865  |     | 380  |   |                           |             | 3700 |                     |
| 1160 | 3350000                        | 850                                | 450                      | 650  | 1292 | 860     | 550     | 1160    | 30 | 260 | 490 | 810 | 795  | 135 | 420  | 2LC0302-7AA   | 2LC0302-7AB               | 2LC0302-7AC | 4000 |                     |
|      |                                |                                    | >650                     | 705  |      | 930     |         |         |    |     |     |     | 865  |     | 450  |   |                           |             | 4100 |                     |
| 1240 | 3800000                        | 800                                | >705                     | 750  | 1400 | 930     | 580     | 1240    | 30 | 250 | 470 | 830 | 910  | 155 | 500  | 2LC0302-8AA   | 2LC0302-8AB               | 2LC0302-8AC | 4300 |                     |
|      |                                |                                    | >750                     | 800  |      | 1055    |         |         |    |     |     |     | 865  |     | 580  |   |                           |             | 4900 |                     |
| 1310 | 4600000                        | 750                                | 500                      | 705  | 1470 | 930     | 610     | 1310    | 35 | 265 | 495 | 875 | 910  | 155 | 770  | 2LC0303-0AA   | 2LC0303-0AB               | 2LC0303-0AC | 5600 |                     |
|      |                                |                                    | >705                     | 750  |      | 990     |         |         |    |     |     |     | 910  |     | 770  |   |                           |             | 5700 |                     |
| 1380 | 5300000                        | 700                                | >750                     | 800  | 1540 | 1055    | 640     | 1310    | 35 | 275 | 515 | 915 | 975  | 155 | 840  | 2LC0303-1AA   | 2LC0303-1AB               | 2LC0303-1AC | 5900 |                     |
|      |                                |                                    | >800                     | 850  |      | 1120    |         |         |    |     |     |     | 910  |     | 930  |   |                           |             | 6200 |                     |
| 1440 | 6250000                        | 670                                | >850                     | 890  | 1600 | 1170    | 670     | 1380    | 35 | 295 | 555 | 965 | 1030 | 155 | 1050 | 2LC0303-2AA   | 2LC0303-2AB               | 2LC0303-2AC | 6500 |                     |
|      |                                |                                    | >890                     | 940  |      | 1440    |         |         |    |     |     |     | 1080 |     | 1150 |   |                           |             | 7500 |                     |
| 1540 | 7200000                        | 630                                | 550                      | 800  | 1710 | 1055    | 700     | 1440    | 35 | 275 | 515 | 975 | 975  | 175 | 1200 | 2LC0303-3AA   | 2LC0303-3AB               | 2LC0303-3AC | 7600 |                     |
|      |                                |                                    | >800                     | 850  |      | 1120    |         |         |    |     |     |     | 1030 |     | 1450 |   |                           |             | 8200 |                     |
| 1540 | 7200000                        | 630                                | >850                     | 890  | 1710 | 1170    | 700     | 1540    | 35 | 275 | 515 | 975 | 1030 | 175 | 1550 | 2LC0303-3AA   | 2LC0303-3AB               | 2LC0303-3AC | 8800 |                     |
|      |                                |                                    | >890                     | 940  |      | 1240    |         |         |    |     |     |     | 1080 |     | 1600 |   |                           |             | 8900 |                     |
| 1540 | 7200000                        | 630                                | >940                     | 995  | 1710 | 1310    | 700     | 1610    | 35 | 275 | 515 | 975 | 1150 | 175 | 1700 | 2LC0303-3AA   | 2LC0303-3AB               | 2LC0303-3AC | 9200 |                     |
|      |                                |                                    | >940                     | 995  |      | 1310    |         |         |    |     |     |     | 1220 |     | 1900 |   |                           |             | 9600 |                     |

Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

Notes

- Mass moments of inertia apply to a coupling half with maximum bore diameter.
- Weights apply to the entire coupling with maximum bores.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings.

Ordering example

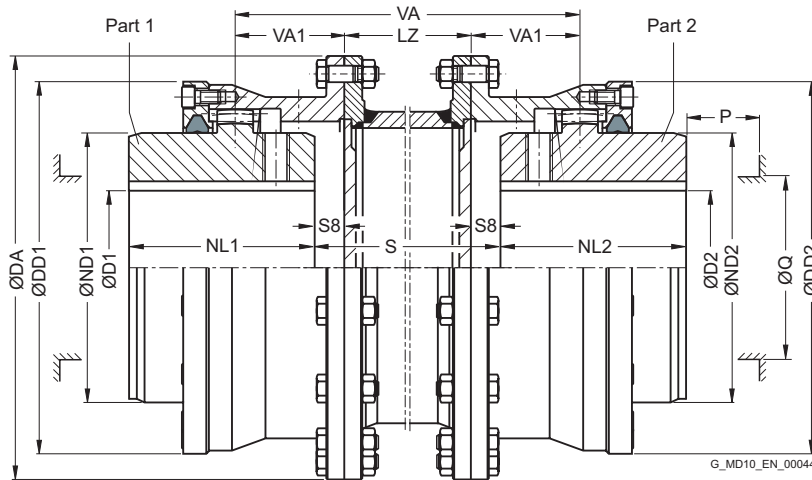
- ZAPEX ZWN coupling, size 146, variant A
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

Article no.: 2LC0300-2AA99-0AA0-Z L0W+M1A+M13

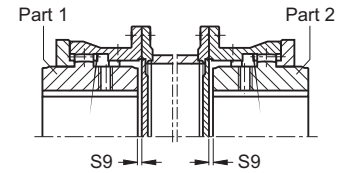
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

# TYPE ZZS



Variant B



Variant A

| Size | Rated torque<br>$T_{KN}$<br>Nm | Dimensions in mm         |      |     |         |         |         |       |      |       |     |     |     | ➤ Article no. <sup>1)</sup> |             | Weight each 100 mm pipe |      |
|------|--------------------------------|--------------------------|------|-----|---------|---------|---------|-------|------|-------|-----|-----|-----|-----------------------------|-------------|-------------------------|------|
|      |                                | D1, D2 Keyway DIN 6885-1 |      | DA  | ND1/ND2 | NL1/NL2 | DD1/DD2 | S8    | S9   | VA1   | Q   | P   | LZ  | Type                        |             | kg                      | m    |
|      |                                | min.                     | max. |     |         |         |         |       |      |       |     |     |     | A                           | B           |                         |      |
| 112  | 1300                           | 0                        | 49   | 143 | 65      | 50      | 110     | 3     | 3    | 28    | 50  | 35  | 120 | 2LC0300-0AD                 | 2LC0300-0AE | 0.8                     | 9.4  |
| 128  | 2500                           | 0                        | 61   | 157 | 80      | 60      | 128     | 10    | 3    | 36.5  | 65  | 45  | 120 | 2LC0300-1AD                 | 2LC0300-1AE | 1.3                     | 12.5 |
| 146  | 4300                           | 0                        | 72   | 177 | 95      | 75      | 146     | 10    | 3    | 44    | 75  | 45  | 120 | 2LC0300-2AD                 | 2LC0300-2AE | 1.8                     | 17   |
| 175  | 7000                           | 0                        | 85   | 215 | 112     | 90      | 175     | 10    | 4    | 52    | 85  | 50  | 130 | 2LC0300-3AD                 | 2LC0300-3AE | 2.3                     | 27.5 |
| 198  | 11600                          | 0                        | 100  | 237 | 135     | 100     | 198     | 15    | 4    | 59.5  | 110 | 50  | 130 | 2LC0300-4AD                 | 2LC0300-4AE | 3.5                     | 37   |
| 230  | 19000                          | 0                        | 120  | 265 | 160     | 110     | 230     | 16    | 4    | 65    | 135 | 50  | 130 | 2LC0300-5AD                 | 2LC0300-5AE | 4.5                     | 50   |
| 255  | 27000                          | 0                        | 140  | 294 | 185     | 125     | 255     | 20    | 5    | 75    | 160 | 50  | 140 | 2LC0300-6AD                 | 2LC0300-6AE | 6.3                     | 68   |
| 290  | 39000                          | 70                       | 160  | 330 | 210     | 140     | 290     | 25    | 5    | 85    | 180 | 60  | 140 | 2LC0300-7AD                 | 2LC0300-7AE | 7.2                     | 93   |
| 315  | 54000                          | 80                       | 175  | 366 | 230     | 160     | 315     | 25    | 5    | 95    | 200 | 60  | 180 | 2LC0300-8AD                 | 2LC0300-8AE | 9.1                     | 135  |
| 342  | 69000                          | 90                       | 195  | 392 | 255     | 180     | 340     | 36    | 6    | 111   | 225 | 60  | 180 | 2LC0301-0AD                 | 2LC0301-0AE | 12                      | 170  |
| 375  | 98000                          | 100                      | 220  | 430 | 290     | 200     | 375     | 36    | 6    | 121   | 260 | 60  | 180 | 2LC0301-1AD                 | 2LC0301-1AE | 15                      | 220  |
| 415  | 130000                         | 120                      | 240  | 478 | 320     | 220     | 415     | 68    | 6    | 147   | 285 | 80  | 200 | 2LC0301-2AD                 | 2LC0301-2AE | 17                      | 295  |
| 465  | 180000                         | 140                      | 270  | 528 | 360     | 240     | 465     | 88    | 8    | 168   | 325 | 80  | 200 | 2LC0301-3AD                 | 2LC0301-3AE | 19                      | 380  |
| 505  | 250000                         | 160                      | 300  | 568 | 400     | 260     | 505     | 98    | 8    | 183   | 365 | 80  | 200 | 2LC0301-4AD                 | 2LC0301-4AE | 24                      | 470  |
| 545  | 320000                         | 180                      | 330  | 620 | 440     | 280     | 545     | 118   | 8    | 203   | 405 | 80  | 220 | 2LC0301-5AD                 | 2LC0301-5AE | 30                      | 640  |
| 585  | 400000                         | 210                      | 360  | 660 | 480     | 310     | 585     | 140   | 10   | 230   | 445 | 80  | 220 | 2LC0301-6AD                 | 2LC0301-6AE | 33                      | 780  |
| 640  | 510000                         | 230                      | 360  | 738 | 480     | 330     | 640     | 139   | 10.0 | 239.5 | 445 | 90  | 250 | 2LC0301-7AD                 | 2LC0301-7AE | 39                      | 1010 |
|      |                                | >360                     | 390  |     | 520     |         |         |       |      |       | 475 |     |     |                             |             |                         | 1050 |
| 690  | 660000                         | 250                      | 390  | 788 | 520     | 350     | 690     | 156   | 10.0 | 258   | 475 | 90  | 250 | 2LC0301-8AD                 | 2LC0301-8AE | 48                      | 1200 |
|      |                                | >390                     | 420  |     | 560     |         |         |       |      |       | 515 |     |     |                             |             |                         | 1250 |
| 730  | 790000                         | 275                      | 420  | 834 | 560     | 380     | 730     | 170   | 10.0 | 280   | 515 | 90  | 250 | 2LC0302-0AD                 | 2LC0302-0AE | 51                      | 1450 |
|      |                                | >420                     | 450  |     | 600     |         |         |       |      |       | 555 |     |     |                             |             |                         | 1500 |
| 780  | 1000000                        | 300                      | 450  | 900 | 600     | 400     | 780     | 163.5 | 12.5 | 288   | 555 | 110 | 280 | 2LC0302-1AD                 | 2LC0302-1AE | 55                      | 1850 |
|      |                                | >450                     | 490  |     | 650     |         |         |       |      |       | 595 |     |     |                             |             |                         | 1900 |

## Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

➤ For online configuration on [flender.com](http://flender.com), click on the item no.



| Size | Rated torque<br>$T_{KN}$<br>Nm | Dimensions in mm         |      |      |         |         |         |       |      |       |      |     |     | Article no. <sup>1)</sup> |             | Weight each 100 mm pipe<br>m |      |   |
|------|--------------------------------|--------------------------|------|------|---------|---------|---------|-------|------|-------|------|-----|-----|---------------------------|-------------|------------------------------|------|---|
|      |                                | D1, D2 Keyway DIN 6885-1 |      | DA   | ND1/ND2 | NL1/NL2 | DD1/DD2 | S8    | S9   | VA1   | Q    | P   | LZ  | Type                      | A           | B                            | kg   | m |
|      |                                | min.                     | max. |      |         |         |         |       |      |       |      |     |     |                           |             |                              |      |   |
| 852  | 1200000                        | 325                      | 490  | 970  | 650     | 420     | 850     | 172.5 | 12.5 | 302.5 | 595  | 110 | 280 | 2LC0302-2AD               | 2LC0302-2AE | 68                           | 2300 |   |
|      |                                | >490                     | 535  |      | 710     |         |         |       |      |       | 655  |     |     |                           |             |                              | 2400 |   |
| 910  | 1600000                        | 350                      | 535  | 1030 | 710     | 450     | 910     | 202.5 | 12.5 | 332.5 | 655  | 110 | 280 | 2LC0302-3AD               | 2LC0302-3AE | 94                           | 2800 |   |
|      |                                | >535                     | 570  |      | 750     |         |         |       |      |       | 695  |     |     |                           |             |                              | 2850 |   |
| 1020 | 1900000                        | 375                      | 570  | 1112 | 750     | 480     | 1020    | 200.5 | 12.5 | 346.5 | 695  | 130 | 380 | 2LC0302-4AD               | 2LC0302-4AE |                              |      |   |
| 1080 | 2200000                        | 400                      | 600  | 1162 | 800     | 500     | 1080    | 211   | 15.0 | 363   | 735  | 135 | 380 | 2LC0302-5AD               | 2LC0302-5AE |                              |      |   |
|      |                                | >600                     | 650  |      | 860     |         |         |       |      |       | 795  |     |     |                           |             |                              |      |   |
| 1150 | 2700000                        | 425                      | 650  | 1222 | 860     | 520     | 1150    | 223   | 15.0 | 379   | 795  | 135 | 380 | 2LC0302-6AD               | 2LC0302-6AE |                              |      |   |
|      |                                | >650                     | 705  |      | 930     |         |         |       |      |       | 865  |     |     |                           |             |                              |      |   |
| 1160 | 3350000                        | 450                      | 650  | 1292 | 860     | 550     | 1160    | 245   | 15.0 | 405   | 795  | 135 | 380 | 2LC0302-7AD               | 2LC0302-7AE |                              |      |   |
|      |                                | >650                     | 705  |      | 930     |         |         |       |      |       | 865  |     |     |                           |             |                              |      |   |
| 1240 | 3800000                        | 475                      | 705  | 1400 | 930     | 580     | 1240    | 235   | 15.0 | 415   | 865  | 155 | 400 | 2LC0302-8AD               | 2LC0302-8AE |                              |      |   |
|      |                                | >705                     | 750  |      | 990     |         |         |       |      |       | 910  |     |     |                           |             |                              |      |   |
| 1310 | 4600000                        | 500                      | 705  | 1470 | 930     | 610     | 1310    | 247.5 | 17.5 | 437.5 | 865  | 155 | 400 | 2LC0303-0AD               | 2LC0303-0AE |                              |      |   |
|      |                                | >705                     | 750  |      | 1055    |         |         |       |      |       | 910  |     |     |                           |             |                              |      |   |
| 1380 | 5300000                        | 525                      | 750  | 1540 | 990     | 640     | 1380    | 257.5 | 17.5 | 457.5 | 910  | 155 | 400 | 2LC0303-1AD               | 2LC0303-1AE |                              |      |   |
|      |                                | >750                     | 800  |      | 1120    |         |         |       |      |       | 1030 |     |     |                           |             |                              |      |   |
| 1440 | 6250000                        | 550                      | 800  | 1600 | 1055    | 670     | 1440    | 277.5 | 17.5 | 482.5 | 975  | 155 | 400 | 2LC0303-2AD               | 2LC0303-2AE |                              |      |   |
|      |                                | >800                     | 850  |      | 1170    |         |         |       |      |       | 1080 |     |     |                           |             |                              |      |   |
| 1540 | 7200000                        | 575                      | 850  | 1710 | 1120    | 700     | 1540    | 257.5 | 17.5 | 487.5 | 1030 | 175 | 600 | 2LC0303-3AD               | 2LC0303-3AE |                              |      |   |
|      |                                | >850                     | 890  |      | 1240    |         |         |       |      |       | 1150 |     |     |                           |             |                              |      |   |
|      |                                | >940                     | 995  |      | 1310    |         | 1610    |       |      |       | 1220 |     |     |                           |             |                              |      |   |

Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

Notes

- Mass moments of inertia apply to a coupling half with maximum bore diameter.
- Weights apply to maximum bores and an adapter length of LZ min.
- Weights from size 1020 on request.
- $VA = 2 \cdot VA1 + LZ$
- Mass moment of inertia on request.
- Maximum speed, limited by weight and critical adapter speed, on request.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings.

Ordering example

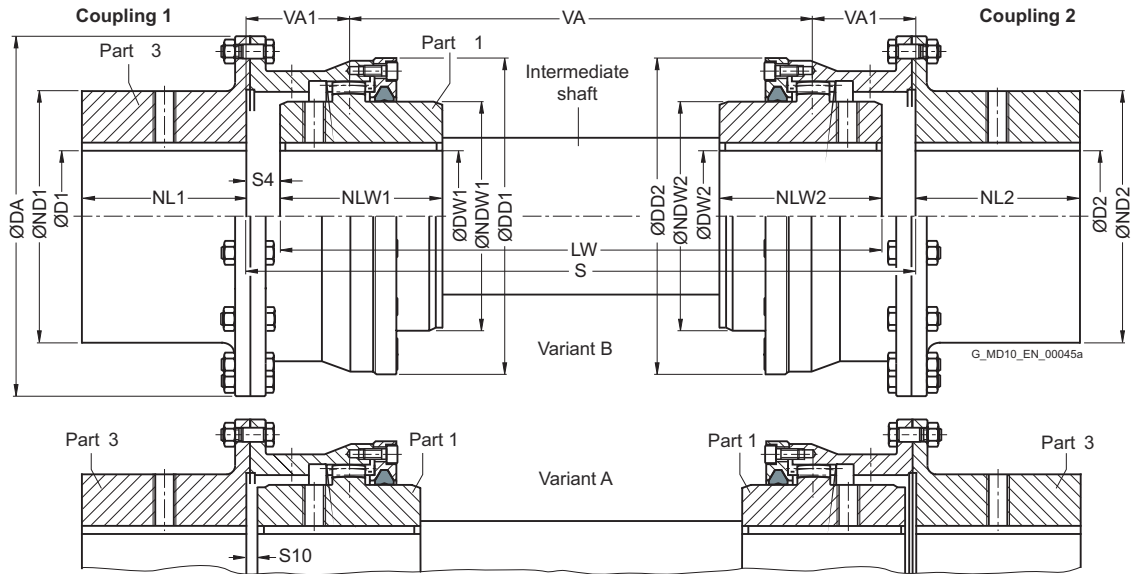
- ZAPEX ZZS coupling, size 146, variant B
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

Article no.: 2LC0300-2AE99-0AZ0-Z L0W+M1A+Q0Y+M13  
Plain text to Q0Y: 250 mm (dimension S)

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [fletcher.com](http://fletcher.com).

➤ For online configuration on [fletcher.com](http://fletcher.com), click on the item no.

# TYPE ZZW



| Size | Rated torque<br>$T_{KN}$<br>Nm | Dimensions in mm               |      |     |             |                               |                                  |      |               |             |       |      | Article no. <sup>1)</sup> |             | Weight<br><br>m<br>kg |      |
|------|--------------------------------|--------------------------------|------|-----|-------------|-------------------------------|----------------------------------|------|---------------|-------------|-------|------|---------------------------|-------------|-----------------------|------|
|      |                                | D1, D2<br>Keyway<br>DIN 6885-1 |      | DA  | ND1/<br>ND2 | NL1/<br>NL2/<br>NLW1/<br>NLW2 | DW1, DW2<br>Keyway<br>DIN 6885-1 |      | NDW1/<br>NDW2 | DD1/<br>DD2 | S4    | S10  | VA1                       | Type        |                       |      |
|      |                                | min.                           | max. |     |             |                               | min.                             | max. |               |             |       |      |                           | A           |                       | B    |
| 112  | 1300                           | 20                             | 61   | 143 | 80          | 50                            | 0                                | 49   | 65            | 110         | 12.5  | 12.5 | 37.5                      | 2LC0300-0BD | 2LC0300-0BE           | 5.1  |
| 128  | 2500                           | 25                             | 72   | 157 | 95          | 60                            | 0                                | 61   | 80            | 128         | 12.5  | 5.5  | 39                        | 2LC0300-1BD | 2LC0300-1BE           | 6.8  |
| 146  | 4300                           | 30                             | 85   | 177 | 112         | 75                            | 0                                | 72   | 95            | 146         | 12.5  | 5.5  | 46.5                      | 2LC0300-2BD | 2LC0300-2BE           | 9.8  |
| 175  | 7000                           | 35                             | 100  | 215 | 135         | 90                            | 0                                | 85   | 112           | 175         | 12.5  | 6.5  | 54.5                      | 2LC0300-3BD | 2LC0300-3BE           | 16.5 |
| 198  | 11600                          | 40                             | 120  | 237 | 160         | 100                           | 0                                | 100  | 135           | 198         | 17.5  | 6.5  | 62                        | 2LC0300-4BD | 2LC0300-4BE           | 23   |
| 230  | 19000                          | 50                             | 140  | 265 | 185         | 110                           | 0                                | 120  | 160           | 230         | 18.5  | 6.5  | 67.5                      | 2LC0300-5BD | 2LC0300-5BE           | 32   |
| 255  | 27000                          | 60                             | 160  | 294 | 210         | 125                           | 0                                | 140  | 185           | 255         | 23.5  | 8.5  | 78.5                      | 2LC0300-6BD | 2LC0300-6BE           | 43   |
| 290  | 39000                          | 70                             | 175  | 330 | 230         | 140                           | 70                               | 160  | 210           | 290         | 28.5  | 8.5  | 88.5                      | 2LC0300-7BD | 2LC0300-7BE           | 61   |
| 315  | 54000                          | 80                             | 195  | 366 | 255         | 160                           | 80                               | 175  | 230           | 315         | 28.5  | 8.5  | 98.5                      | 2LC0300-8BD | 2LC0300-8BE           | 86   |
| 342  | 69000                          | 90                             | 220  | 392 | 290         | 180                           | 90                               | 195  | 255           | 340         | 39.5  | 9.5  | 114.5                     | 2LC0301-0BD | 2LC0301-0BE           | 115  |
| 375  | 98000                          | 100                            | 240  | 430 | 320         | 200                           | 100                              | 220  | 290           | 375         | 39.5  | 9.5  | 124.5                     | 2LC0301-1BD | 2LC0301-1BE           | 150  |
| 415  | 130000                         | 120                            | 270  | 478 | 360         | 220                           | 120                              | 240  | 320           | 415         | 71.5  | 9.5  | 150.5                     | 2LC0301-2BD | 2LC0301-2BE           | 205  |
| 465  | 180000                         | 140                            | 300  | 528 | 400         | 240                           | 140                              | 270  | 360           | 465         | 91.5  | 11.5 | 171.5                     | 2LC0301-3BD | 2LC0301-3BE           | 275  |
| 505  | 250000                         | 160                            | 330  | 568 | 440         | 260                           | 160                              | 300  | 400           | 505         | 102.5 | 12.5 | 187.5                     | 2LC0301-4BD | 2LC0301-4BE           | 350  |
| 545  | 320000                         | 180                            | 360  | 620 | 480         | 280                           | 180                              | 330  | 440           | 545         | 122.5 | 12.5 | 207.5                     | 2LC0301-5BD | 2LC0301-5BE           | 450  |
| 585  | 400000                         | 210                            | 360  | 660 | 480         | 310                           | 210                              | 360  | 480           | 585         | 144.5 | 14.5 | 234.5                     | 2LC0301-6BD | 2LC0301-6BE           | 540  |
|      |                                | >360                           | 390  |     | 520         |                               | 570                              |      |               |             |       |      |                           |             |                       |      |
| 640  | 510000                         | 230                            | 390  | 738 | 520         | 330                           | 230                              | 360  | 480           | 640         | 143.5 | 14.5 | 244                       | 2LC0301-7BD | 2LC0301-7BE           | 700  |
|      |                                | >390                           | 420  |     | 560         |                               | >360                             | 390  |               |             |       |      |                           |             |                       | 520  |
| 690  | 660000                         | 250                            | 420  | 788 | 560         | 350                           | 250                              | 390  | 520           | 690         | 160.5 | 14.5 | 262.5                     | 2LC0301-8BD | 2LC0301-8BE           | 850  |
|      |                                | >420                           | 450  |     | 600         |                               | >390                             | 420  |               |             |       |      |                           |             |                       | 560  |
| 730  | 790000                         | 275                            | 450  | 834 | 600         | 380                           | 275                              | 420  | 560           | 730         | 176   | 16   | 286                       | 2LC0302-0BD | 2LC0302-0BE           | 1050 |
|      |                                | >450                           | 490  |     | 650         |                               | >420                             | 450  |               |             |       |      |                           |             |                       | 600  |
| 780  | 1000000                        | 300                            | 490  | 900 | 650         | 400                           | 300                              | 450  | 600           | 780         | 171.5 | 20.5 | 296                       | 2LC0302-1BD | 2LC0302-1BE           | 1300 |
|      |                                | >490                           | 535  |     | 710         |                               | >450                             | 490  |               |             |       |      |                           |             |                       | 650  |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

| Size | Rated torque<br>$T_{KN}$<br>Nm | Dimensions in mm               |      |      |             |                               |                                  |      |               |             |       |      |       | Article no. <sup>1)</sup> |             | Weight<br><br>m<br>kg |
|------|--------------------------------|--------------------------------|------|------|-------------|-------------------------------|----------------------------------|------|---------------|-------------|-------|------|-------|---------------------------|-------------|-----------------------|
|      |                                | D1, D2<br>Keyway<br>DIN 6885-1 |      | DA   | ND1/<br>ND2 | NL1/<br>NL2/<br>NLW1/<br>NLW2 | DW1, DW2<br>Keyway<br>DIN 6885-1 |      | NDW1/<br>NDW2 | DD1/<br>DD2 | S4    | S10  | VA1   | Type                      |             |                       |
|      |                                | min.                           | max. |      |             |                               | min.                             | max. |               |             |       |      |       | A                         | B           |                       |
| 852  | 1200000                        | 325                            | 535  | 970  | 710         | 420                           | 325                              | 490  | 650           | 850         | 180.5 | 20.5 | 310.5 | 2LC0302-2BD               | 2LC0302-2BE | 1550                  |
|      |                                | >535                           | 570  |      | 750         |                               | >490                             | 535  | 710           |             |       |      |       |                           |             | 1650                  |
| 910  | 1600000                        | 350                            | 570  | 1030 | 750         | 450                           | 350                              | 535  | 710           | 910         | 210.5 | 20.5 | 340.5 | 2LC0302-3BD               | 2LC0302-3BE | 1900                  |
|      |                                | >570                           | 600  |      | 800         |                               | >535                             | 570  | 750           |             |       |      |       |                           |             | 2000                  |
| 1020 | 1900000                        | 375                            | 600  | 1112 | 800         | 480                           | 375                              | 570  | 750           | 1020        | 210.5 | 22.5 | 356.5 | 2LC0302-4BD               | 2LC0302-4BE | 2300                  |
|      |                                | >600                           | 650  |      | 860         |                               | >570                             | 600  | 800           |             |       |      |       |                           |             | 2500                  |
| 1080 | 2200000                        | 400                            | 650  | 1162 | 860         | 500                           | 400                              | 600  | 800           | 1080        | 221   | 25   | 373   | 2LC0302-5BD               | 2LC0302-5BE | 2750                  |
|      |                                | >650                           | 705  |      | 930         |                               | >600                             | 650  | 860           |             |       |      |       |                           |             | 2900                  |
| 1150 | 2700000                        | 425                            | 650  | 1222 | 860         | 520                           | 425                              | 650  | 860           | 1150        | 233   | 25   | 389   | 2LC0302-6BD               | 2LC0302-6BE | 3100                  |
|      |                                | >650                           | 705  |      | 930         |                               | >650                             | 705  | 930           |             |       |      |       |                           |             | 3200                  |
| 1160 | 3350000                        | 450                            | 705  | 1292 | 930         | 550                           | 450                              | 650  | 860           | 1160        | 255   | 25   | 415   | 2LC0302-7BD               | 2LC0302-7BE | 3400                  |
|      |                                | >705                           | 750  |      | 990         |                               | >650                             | 705  | 930           |             |       |      |       |                           |             | 3600                  |
| 1240 | 3800000                        | 475                            | 705  | 1400 | 930         | 580                           | 475                              | 705  | 930           | 1240        | 245   | 25   | 425   | 2LC0302-8BD               | 2LC0302-8BE | 3700                  |
|      |                                | >705                           | 750  |      | 990         |                               | >705                             | 750  | 990           |             |       |      |       |                           |             | 4000                  |
| 1310 | 4600000                        | 500                            | 750  | 1470 | 990         | 610                           | 500                              | 705  | 930           | 1310        | 257.5 | 27.5 | 447.5 | 2LC0303-0BD               | 2LC0303-0BE | 4200                  |
|      |                                | >750                           | 800  |      | 1055        |                               | >705                             | 750  | 990           |             |       |      |       |                           |             | 4400                  |
| 1380 | 5300000                        | 525                            | 800  | 1540 | 1055        | 640                           | 525                              | 750  | 990           | 1380        | 267.5 | 27.5 | 467.5 | 2LC0303-1BD               | 2LC0303-1BE | 4600                  |
|      |                                | >800                           | 850  |      | 1120        |                               | >750                             | 800  | 1055          |             |       |      |       |                           |             | 4900                  |
| 1440 | 6250000                        | 550                            | 850  | 1600 | 1120        | 670                           | 550                              | 800  | 1055          | 1440        | 287.5 | 27.5 | 492.5 | 2LC0303-2BD               | 2LC0303-2BE | 5100                  |
|      |                                | >850                           | 890  |      | 1170        |                               | >800                             | 850  | 1120          |             |       |      |       |                           |             | 5300                  |
| 1540 | 7200000                        | 575                            | 890  | 1710 | 1170        | 700                           | 575                              | 850  | 1120          | 1540        | 267.5 | 27.5 | 497.5 | 2LC0303-3BD               | 2LC0303-3BE | 5600                  |
|      |                                | >890                           | 940  |      | 1240        |                               | >850                             | 890  | 1170          |             |       |      |       |                           |             | 5700                  |
|      |                                | >940                           | 1040 |      | 1390        |                               | >940                             | 995  | 1310          | 1610        |       |      |       |                           |             | 7700                  |
|      |                                |                                |      |      |             |                               |                                  |      |               |             |       |      |       |                           |             | 8100                  |
|      |                                |                                |      |      |             |                               |                                  |      |               |             |       |      |       |                           |             | 8900                  |

Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

Notes

- $VA = S - 2 \cdot VA1$
- Mass moment of inertia on request.
- Weights apply to either coupling 1 or 2 with maximum bore diameter, without intermediate shaft.
- Maximum speed, limited by weight and critical speed of intermediate shaft, on request.

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

Ordering example

- Coupling 1:  
ZAPEX ZZW coupling, size 146, variant B,  
Part 3: Bore D1 = 45K7 mm, keyway to DIN 6885-1 P9 and set screw, Part 1: Bore DW1 = 45H7 mm, keyway to DIN 6885-1 P9 and set screw.

Article no.: 2LC0300-2BE99-0AA0-Z L1A+M1A+L13

- Intermediate shaft:  
Intermediate shaft for ZAPEX coupling ZZW, size 146,  
length LW = 570 mm, for shaft distance S = 595 mm  
shaft journal Ø45p6 x 75 long; keyway DIN 6885-1.

Article no.: 2LC0308-8XX00-0AA0-Z Y99

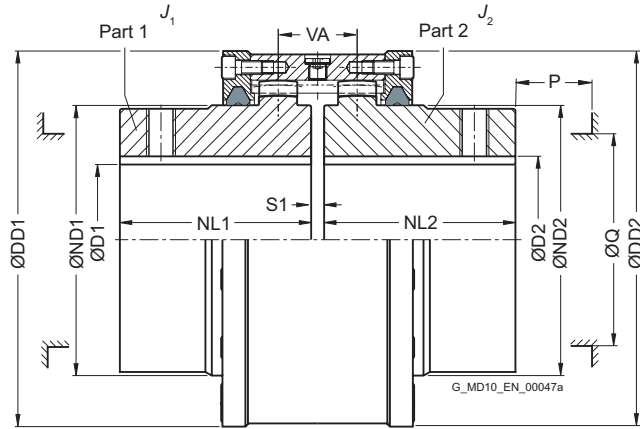
Plain text to Y99: DW1 = 45p6 mm, NLW1 = 75 mm,  
DW2 = 45p6 mm, NLW2 = 75 mm, LW = 570 mm

- Coupling 2:  
ZAPEX ZZW coupling, size 146, variant B,  
Part 1: Bore DW2 = 45H7 mm, keyway to DIN 6885-1 P9 and set screw, Part 3: Bore D2 = 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Article no.: 2LC0300-2BE99-0AA0-Z L1A+M1A+L13

# TYPE ZWH

4



| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm         |     |         |         |         |    |     |     |     | Mass moment of inertia<br>$J_1/J_2$<br>kgm <sup>2</sup> | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |
|------|--------------------------------|------------------------------------|--------------------------|-----|---------|---------|---------|----|-----|-----|-----|---|---------------------------|---------------------|
|      |                                |                                    | D1, D2 Keyway DIN 6885-1 |     | ND1/ND2 | NL1/NL2 | DD1/DD2 | S1 | VA  | Q   | P   |   |                           |                     |
| min. |                                | max.                               |                          |     |         |         |         |    |     |     |     |   |                           |                     |
| 112  | 1300                           | 9400                               | 0                        | 49  | 65      | 50      | 110     | 6  | 28  | 50  | 35  | 0.003   | 2LC0300-0BB               | 3.5                 |
| 128  | 2500                           | 8300                               | 0                        | 61  | 80      | 60      | 128     | 6  | 30  | 65  | 45  | 0.007   | 2LC0300-1BB               | 5.1                 |
| 146  | 4300                           | 7300                               | 0                        | 72  | 95      | 75      | 146     | 6  | 33  | 75  | 45  | 0.012   | 2LC0300-2BB               | 7.8                 |
| 175  | 7000                           | 6400                               | 0                        | 85  | 112     | 90      | 175     | 8  | 46  | 85  | 50  | 0.031   | 2LC0300-3BB               | 13.5                |
| 198  | 11600                          | 5500                               | 0                        | 100 | 135     | 100     | 198     | 8  | 48  | 110 | 50  | 0.056   | 2LC0300-4BB               | 20                  |
| 230  | 19000                          | 4700                               | 0                        | 120 | 160     | 110     | 230     | 8  | 50  | 135 | 50  | 0.11  | 2LC0300-5BB               | 28.5                |
| 255  | 27000                          | 4100                               | 0                        | 140 | 185     | 125     | 255     | 10 | 55  | 160 | 50  | 0.18  | 2LC0300-6BB               | 38                  |
| 290  | 39000                          | 3700                               | 70                       | 160 | 210     | 140     | 290     | 10 | 58  | 180 | 60  | 0.35  | 2LC0300-7BB               | 56                  |
| 315  | 54000                          | 3300                               | 80                       | 175 | 230     | 160     | 315     | 10 | 62  | 200 | 60  | 0.55  | 2LC0300-8BB               | 74                  |
| 342  | 69000                          | 3000                               | 90                       | 195 | 255     | 180     | 340     | 12 | 70  | 225 | 60  | 0.82  | 2LC0301-0BB               | 95                  |
| 375  | 98000                          | 2700                               | 100                      | 220 | 290     | 200     | 375     | 12 | 72  | 260 | 60  | 1.3   | 2LC0301-1BB               | 130                 |
| 415  | 130000                         | 2500                               | 120                      | 240 | 320     | 220     | 415     | 12 | 76  | 285 | 80  | 2.3   | 2LC0301-2BB               | 175                 |
| 465  | 180000                         | 2200                               | 140                      | 270 | 360     | 240     | 465     | 16 | 90  | 325 | 80  | 4   | 2LC0301-3BB               | 245                 |
| 505  | 250000                         | 2000                               | 160                      | 300 | 400     | 260     | 505     | 16 | 92  | 365 | 80  | 6   | 2LC0301-4BB               | 310                 |
| 545  | 320000                         | 1800                               | 180                      | 330 | 440     | 280     | 545     | 16 | 96  | 405 | 80  | 8.8   | 2LC0301-5BB               | 390                 |
| 585  | 400000                         | 1700                               | 210                      | 360 | 480     | 310     | 585     | 20 | 102 | 445 | 80  | 13  | 2LC0301-6BB               | 500                 |
| 640  | 510000                         | 1600                               | 230                      | 360 | 480     | 330     | 640     | 20 | 105 | 445 | 90  | 18  | 2LC0301-7BB               | 620                 |
|      |                                |                                    | >360                     | 390 | 520     |         |         |    |     | 475 |     | 19.5  |                           | 650                 |
| 690  | 660000                         | 1450                               | 250                      | 390 | 520     | 350     | 690     | 20 | 108 | 475 | 90  | 25.5  | 2LC0301-8BB               | 760                 |
|      |                                |                                    | >390                     | 420 | 560     |         |         |    |     | 515 |     | 28  |                           | 790                 |
| 730  | 790000                         | 1350                               | 275                      | 420 | 560     | 380     | 730     | 20 | 112 | 515 | 90  | 35  | 2LC0302-0BB               | 920                 |
|      |                                |                                    | >420                     | 450 | 600     |         |         |    |     | 555 |     | 39  |                           | 950                 |
| 780  | 1000000                        | 1250                               | 300                      | 450 | 600     | 400     | 780     | 25 | 120 | 555 | 110 | 48  | 2LC0302-1BB               | 1150                |
|      |                                |                                    | >450                     | 490 | 650     |         |         |    |     | 595 |     | 57  |                           |                     |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- Larger size couplings on request.
- Mass moments of inertia apply to a coupling half with maximum bore diameter.
- Weights apply to the entire coupling with maximum bores.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings.

### Ordering example

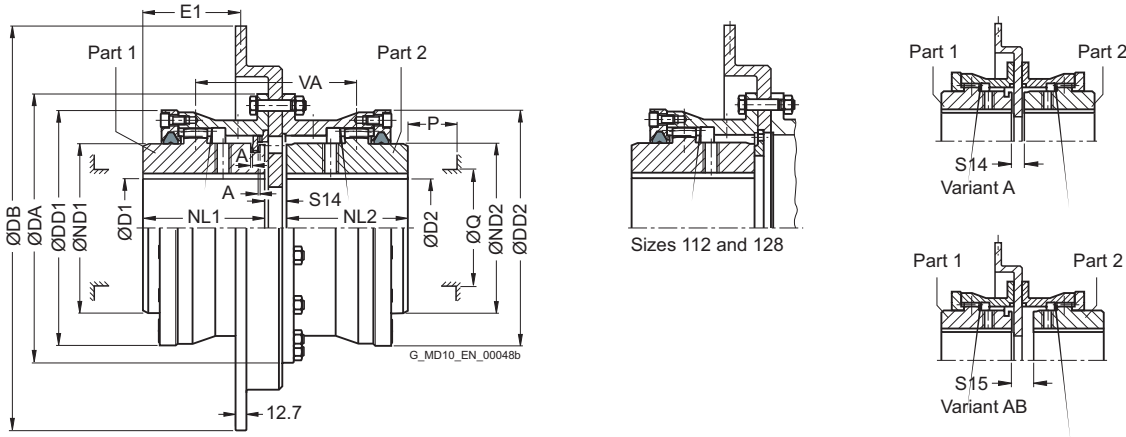
- ZAPEX ZWH coupling, size 146
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

Article no.: 2LC0300-2BB99-0AA0-Z L0W+M1A+M13

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

# TYPE ZWBT



| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm                     |     |                                      |     |     |             |             |             |      |      |     |      |     | Brake disk |        | Article no. <sup>1)</sup> |             | Weight<br>$m$<br>kg |     |  |
|------|--------------------------------|------------------------------------|--------------------------------------|-----|--------------------------------------|-----|-----|-------------|-------------|-------------|------|------|-----|------|-----|------------|--------|---------------------------|-------------|---------------------|-----|--|
|      |                                |                                    | D1 Keyway<br>DIN 6885-1<br>min. max. |     | D2 Keyway<br>DIN 6885-1<br>min. max. |     | DA  | ND1/<br>ND2 | NL1/<br>NL2 | DD1/<br>DD2 | S14  | S15  | A   | VA   | Q   | P          | DB     | E1                        | Type        |                     |     |  |
|      |                                |                                    |                                      |     |                                      |     |     |             |             |             |      |      |     |      |     |            |        |                           | A           | AB                  |     |  |
| 112  | 1300                           | 3800                               | 0                                    | 49  | 0                                    | 49  | 143 | 65          | 50          | 110         | 20   | -    | 0.5 | 70   | 50  | 35         | 300    | 32.35                     | 2LC0300-0AS | 2LC0300-0AT         | 13  |  |
|      |                                | 23                                 |                                      |     |                                      |     |     |             |             |             | -    | 73   |     | 356  |     |            | 22.35  | 2LC0300-0AS               | 2LC0300-0AT | 16.5                |     |  |
| 128  | 2500                           | 3200                               | 0                                    | 61  | 0                                    | 61  | 157 | 80          | 60          | 128         | 23.5 | 30.5 | 0.5 | 90.5 | 65  | 45         | 356    | 32.85                     | 2LC0300-1AS | 2LC0300-1AT         | 19  |  |
|      |                                | 20.5                               |                                      |     |                                      |     |     |             |             |             | 27.5 | 87.5 |     | 406  |     |            | 29.85  | 2LC0300-1AS               | 2LC0300-1AT | 21.5                |     |  |
| 146  | 4300                           | 2800                               | 0                                    | 65  | 0                                    | 72  | 177 | 95          | 75          | 146         | 19   | 26   | 0.5 | 101  | 75  | 45         | 406    | 43.35                     | 2LC0300-2AS | 2LC0300-2AT         | 25  |  |
|      |                                | 22                                 |                                      |     |                                      |     |     |             |             |             | 29   | 104  |     | 457  |     |            | 46.35  | 2LC0300-2AS               | 2LC0300-2AT | 30                  |     |  |
| 175  | 7000                           | 2800                               | 0                                    | 80  | 0                                    | 85  | 215 | 112         | 90          | 175         | 21   | 27   | 0.5 | 117  | 85  | 50         | 406    | 59.35                     | 2LC0300-3AS | 2LC0300-3AT         | 33  |  |
|      |                                | 24                                 |                                      |     |                                      |     |     |             |             |             | 30   | 120  |     | 457  |     |            | 62.35  | 2LC0300-3AS               | 2LC0300-3AT | 38                  |     |  |
| 198  | 11600                          | 2200                               | 0                                    | 95  | 0                                    | 100 | 237 | 135         | 100         | 198         | 24   | 30   | 0.5 | 120  | 110 | 50         | 514    | 62.35                     | 2LC0300-3AS | 2LC0300-3AT         | 43  |  |
|      |                                | 24                                 |                                      |     |                                      |     |     |             |             |             | 35   | 135  |     | 457  |     |            | 72.35  | 2LC0300-4AS               | 2LC0300-4AT | 46                  |     |  |
| 230  | 19000                          | 2200                               | 0                                    | 117 | 0                                    | 120 | 265 | 160         | 110         | 230         | 24   | 36   | 0.5 | 146  | 135 | 50         | 514    | 82.35                     | 2LC0300-5AS | 2LC0300-5AT         | 62  |  |
|      |                                | 24                                 |                                      |     |                                      |     |     |             |             |             | 36   | 146  |     | 610  |     |            | 82.35  | 2LC0300-5AS               | 2LC0300-5AT | 73                  |     |  |
| 255  | 27000                          | 2200                               | 0                                    | 140 | 0                                    | 140 | 294 | 185         | 125         | 255         | 26   | 41   | 1   | 166  | 160 | 50         | 514    | 98.35                     | 2LC0300-6AS | 2LC0300-6AT         | 73  |  |
|      |                                | 26                                 |                                      |     |                                      |     |     |             |             |             | 41   | 166  |     | 610  |     |            | 98.35  | 2LC0300-6AS               | 2LC0300-6AT | 84                  |     |  |
| 290  | 39000                          | 1850                               | 70                                   | 155 | 70                                   | 160 | 330 | 210         | 140         | 290         | 26   | 46   | 1   | 186  | 180 | 60         | 610    | 113.35                    | 2LC0300-7AS | 2LC0300-7AT         | 110 |  |
|      |                                | 29                                 |                                      |     |                                      |     |     |             |             |             | 49   | 189  |     | 711  |     |            | 116.35 | 2LC0300-7AS               | 2LC0300-7AT | 125                 |     |  |
| 315  | 54000                          | 1850                               | 80                                   | 175 | 80                                   | 175 | 366 | 230         | 160         | 315         | 26   | 46   | 1   | 206  | 200 | 60         | 610    | 133.35                    | 2LC0300-8AS | 2LC0300-8AT         | 135 |  |
|      |                                | 29                                 |                                      |     |                                      |     |     |             |             |             | 49   | 209  |     | 711  |     |            | 136.35 | 2LC0300-8AS               | 2LC0300-8AT | 150                 |     |  |
| 342  | 69000                          | 1600                               | 90                                   | 195 | 90                                   | 195 | 392 | 255         | 180         | 340         | 31   | 61   | 1   | 241  | 225 | 60         | 711    | 157.35                    | 2LC0301-0AS | 2LC0301-0AT         | 180 |  |
| 375  | 98000                          | 1600                               | 100                                  | 220 | 100                                  | 220 | 430 | 290         | 200         | 375         | 31   | 61   | 1   | 261  | 260 | 60         | 711    | 177.35                    | 2LC0301-1AS | 2LC0301-1AT         | 220 |  |
| 415  | 130000                         | 1400                               | 120                                  | 240 | 120                                  | 240 | 478 | 320         | 220         | 415         | 37   | 99   | 1   | 319  | 285 | 80         | 812    | 203.35                    | 2LC0301-2AS | 2LC0301-2AT         | 320 |  |
| 465  | 180000                         | 1400                               | 140                                  | 270 | 140                                  | 270 | 528 | 360         | 240         | 465         | 41   | 121  | 1   | 361  | 325 | 80         | 812    | 225.35                    | 2LC0301-3AS | 2LC0301-3AT         | 400 |  |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- Mass moment of inertia on request.
- Weights apply to maximum bores.
- Variant limited in displacement and axial movement. Max. displacement 0.2°.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings.

### Ordering example

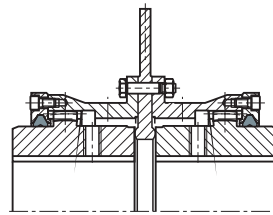
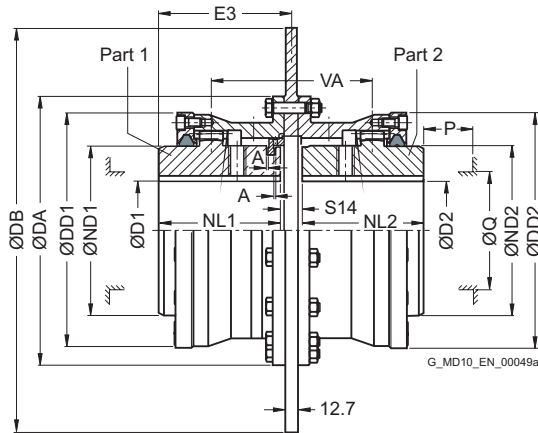
- ZAPEX ZWBT coupling, size 146, variant A, brake disk diameter DB = 457 mm
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

Article no.: 2LC0300-2AS99-0BA0-Z L0W+M1A+M13

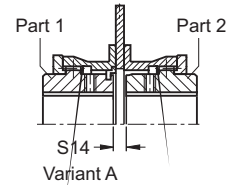
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [fletcher.com](http://fletcher.com).

➤ For online configuration on [fletcher.com](http://fletcher.com), click on the item no.

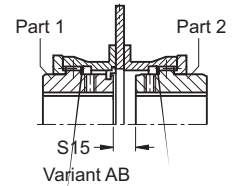
# TYPE ZWBG



Sizes 112 and 128



Variant A



Variant AB

| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm                        |     |   |     |     |             |             |             |     |     |     |     |     |    | Brake disk |       | Article no. <sup>1)</sup> |             | Weight<br>$m$<br>kg |
|------|--------------------------------|------------------------------------|---|-----|---|-----|-----|-------------|-------------|-------------|-----|-----|-----|-----|-----|----|------------|-------|---------------------------|-------------|---------------------|
|      |                                |                                    | D1<br>Keyway<br>DIN 6885-1<br>min. max. |     | D2<br>Keyway<br>DIN 6885-1<br>min. max. |     | DA  | ND1/<br>ND2 | NL1/<br>NL2 | DD1/<br>DD2 | S14 | S15 | A   | VA  | Q   | P  | DB         | E3    | Type                      |             |                     |
|      |                                |                                    | A                                       | AB  |   |     |     |             |             |             |     |     |     |     |     |    |            |       |                           |             |                     |
| 112  | 1300                           | 3800                               | 0                                       | 49  | 0                                       | 49  | 143 | 65          | 50          | 110         | 19  | -   | 0.5 | 69  | 50  | 35 | 300        | 59.5  | 2LC0300-0AU               | 2LC0300-0AV | 13                  |
|      |                                | 3200                               |   |     |   |     |     |             |             |             | 22  | -   |     | 72  |     |    | 356        | 61    | 2LC0300-0AU               | 2LC0300-0AV | 16                  |
| 128  | 2500                           | 3200                               | 0                                       | 61  | 0                                       | 61  | 157 | 80          | 60          | 128         | 22  | 29  | 0.5 | 89  | 65  | 45 | 356        | 71    | 2LC0300-1AU               | 2LC0300-1AV | 18                  |
|      |                                | 2800                               |   |     |   |     |     |             |             |             | 19  | 26  |     | 86  |     |    | 406        | 69.5  | 2LC0300-1AU               | 2LC0300-1AV | 20.5                |
| 146  | 4300                           | 2800                               | 0                                       | 65  | 0                                       | 72  | 177 | 95          | 75          | 146         | 19  | 26  | 0.5 | 101 | 75  | 45 | 406        | 84.5  | 2LC0300-2AU               | 2LC0300-2AV | 24                  |
|      |                                | 2500                               |   |     |   |     |     |             |             |             | 22  | 29  |     | 104 |     |    | 457        | 86    | 2LC0300-2AU               | 2LC0300-2AV | 28.5                |
| 175  | 7000                           | 2800                               | 0                                       | 80  | 0                                       | 85  | 215 | 112         | 90          | 175         | 21  | 27  | 0.5 | 117 | 85  | 50 | 406        | 100.5 | 2LC0300-3AU               | 2LC0300-3AV | 31                  |
|      |                                | 2500                               |   |     |   |     |     |             |             |             | 24  | 30  |     | 120 |     |    | 457        | 102   | 2LC0300-3AU               | 2LC0300-3AV | 35                  |
| 198  | 11600                          | 2500                               | 0                                       | 95  | 0                                       | 100 | 237 | 135         | 100         | 198         | 24  | 35  | 0.5 | 135 | 110 | 50 | 457        | 112   | 2LC0300-4AU               | 2LC0300-4AV | 43                  |
|      |                                | 2200                               |   |     |   |     |     |             |             |             | 24  | 35  |     | 135 |     |    | 514        | 112   | 2LC0300-4AU               | 2LC0300-4AV | 47                  |
| 230  | 19000                          | 2200                               | 0                                       | 117 | 0                                       | 120 | 265 | 160         | 110         | 230         | 24  | 36  | 0.5 | 146 | 135 | 50 | 514        | 122   | 2LC0300-5AU               | 2LC0300-5AV | 58                  |
|      |                                | 1850                               |   |     |   |     |     |             |             |             | 24  | 36  |     | 146 |     |    | 610        | 122   | 2LC0300-5AU               | 2LC0300-5AV | 66                  |
| 255  | 27000                          | 2200                               | 0                                       | 140 | 0                                       | 140 | 294 | 185         | 125         | 255         | 26  | 41  | 1   | 166 | 160 | 50 | 514        | 138   | 2LC0300-6AU               | 2LC0300-6AV | 69                  |
|      |                                | 1850                               |   |     |   |     |     |             |             |             | 26  | 41  |     | 166 |     |    | 610        | 138   | 2LC0300-6AU               | 2LC0300-6AV | 77                  |
| 290  | 39000                          | 1850                               | 70                                      | 155 | 70                                      | 160 | 330 | 210         | 140         | 290         | 26  | 46  | 1   | 186 | 180 | 60 | 610        | 153   | 2LC0300-7AU               | 2LC0300-7AV | 100                 |
|      |                                | 1600                               |   |     |   |     |     |             |             |             | 29  | 49  |     | 189 |     |    | 711        | 154.5 | 2LC0300-7AU               | 2LC0300-7AV | 110                 |
| 315  | 54000                          | 1850                               | 80                                      | 175 | 80                                      | 175 | 366 | 230         | 160         | 315         | 26  | 46  | 1   | 206 | 200 | 60 | 610        | 173   | 2LC0300-8AU               | 2LC0300-8AV | 130                 |
|      |                                | 1600                               |   |     |   |     |     |             |             |             | 29  | 49  |     | 209 |     |    | 711        | 174.5 | 2LC0300-8AU               | 2LC0300-8AV | 140                 |
| 342  | 69000                          | 1600                               | 90                                      | 195 | 90                                      | 195 | 392 | 255         | 180         | 340         | 31  | 61  | 1   | 241 | 225 | 60 | 711        | 195.5 | 2LC0301-0AU               | 2LC0301-0AV | 165                 |
| 375  | 98000                          | 1600                               | 100                                     | 220 | 100                                     | 220 | 430 | 290         | 200         | 375         | 31  | 61  | 1   | 261 | 260 | 60 | 711        | 215.5 | 2LC0301-1AU               | 2LC0301-1AV | 205                 |
| 415  | 130000                         | 1400                               | 120                                     | 240 | 120                                     | 240 | 478 | 320         | 220         | 415         | 37  | 99  | 1   | 319 | 285 | 80 | 812        | 238.5 | 2LC0301-2AU               | 2LC0301-2AV | 280                 |
| 465  | 180000                         | 1400                               | 140                                     | 270 | 140                                     | 270 | 528 | 360         | 240         | 465         | 41  | 121 | 1   | 361 | 325 | 80 | 812        | 260.5 | 2LC0301-3AU               | 2LC0301-3AV | 360                 |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- Mass moment of inertia on request.
- Weights apply to maximum bores.
- Variant limited in displacement and axial movement. Max. displacement 0.2°.
- Modified brake disk dimensions on request
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings.

### Ordering example

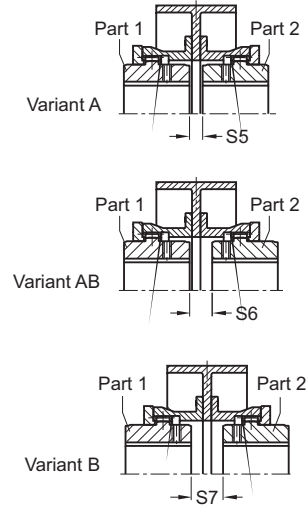
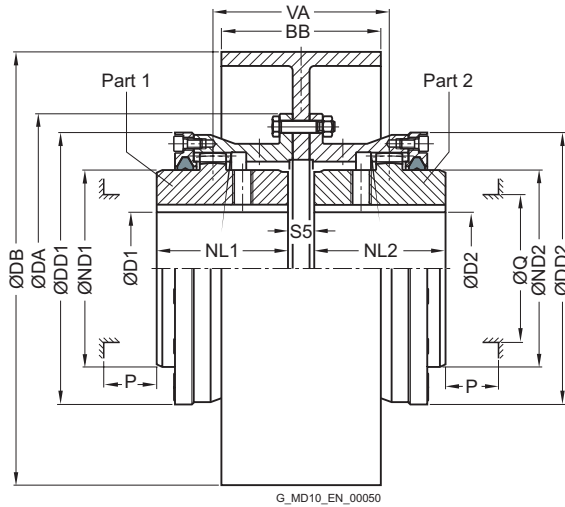
- ZAPEX ZWBG coupling, size 146, variant A, brake disk diameter DB = 457 mm
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

Article no.: 2LC0300-2AU99-0BA0-Z L0W+M1A+M13

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

# TYPE ZWB



| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm         |      |     |         |         |         |    |    |     |     |     |    |     | Brake disk  |             | Article no. <sup>1)</sup> |             |      | Weight<br>$m$<br>kg |
|------|--------------------------------|------------------------------------|--------------------------|------|-----|---------|---------|---------|----|----|-----|-----|-----|----|-----|-------------|-------------|---------------------------|-------------|------|---------------------|
|      |                                |                                    | D1, D2 Keyway DIN 6885-1 |      | DA  | ND1/ND2 | NL1/NL2 | DD1/DD2 | S5 | S6 | S7  | VA  | Q   | P  | DB  | BB          | Type        |                           |             |      |                     |
|      |                                |                                    | min.                     | max. |     |         |         |         |    |    |     |     |     |    |     |             | A           | B                         | AB          |      |                     |
| 128  | 2500                           | 2500                               | 0                        | 61   | 157 | 80      | 60      | 128     | 16 | 23 | 30  | 83  | 60  | 45 | 200 | 75          | 2LC0300-1AW | 2LC0300-1AX               | 2LC0300-1BA | 12.5 |                     |
|      |                                | 16                                 |                          |      |     |         |         |         | 23 | 30 | 83  | 250 |     |    | 95  | 2LC0300-1AW |             |                           |             |      | 2LC0300-1AX         |
| 146  | 4300                           | 2000                               | 0                        | 72   | 177 | 95      | 75      | 146     | 16 | 23 | 30  | 98  | 75  | 45 | 250 | 95          | 2LC0300-2AW | 2LC0300-2AX               | 2LC0300-2BA | 19   |                     |
|      |                                | 18                                 |                          |      |     |         |         |         | 25 | 32 | 100 | 315 |     |    | 118 | 2LC0300-2AW |             |                           |             |      | 2LC0300-2AX         |
| 175  | 7000                           | 1600                               | 0                        | 85   | 215 | 112     | 90      | 175     | 20 | 26 | 32  | 116 | 85  | 50 | 315 | 118         | 2LC0300-3AW | 2LC0300-3AX               | 2LC0300-3BA | 33   |                     |
|      |                                | 22                                 |                          |      |     |         |         |         | 28 | 34 | 118 | 400 |     |    | 150 | 2LC0300-3AW |             |                           |             |      | 2LC0300-3AX         |
| 198  | 11600                          | 1600                               | 0                        | 100  | 237 | 135     | 100     | 198     | 20 | 31 | 42  | 131 | 110 | 50 | 315 | 118         | 2LC0300-4AW | 2LC0300-4AX               | 2LC0300-4BA | 41   |                     |
|      |                                | 22                                 |                          |      |     |         |         |         | 33 | 44 | 133 | 400 |     |    | 150 | 2LC0300-4AW |             |                           |             |      | 2LC0300-4AX         |
| 230  | 19000                          | 1250                               | 0                        | 120  | 265 | 160     | 110     | 230     | 22 | 34 | 46  | 144 | 135 | 50 | 400 | 150         | 2LC0300-5AW | 2LC0300-5AX               | 2LC0300-5BA | 64   |                     |
|      |                                | 23                                 |                          |      |     |         |         |         | 35 | 47 | 145 | 500 |     |    | 190 | 2LC0300-5AW |             |                           |             |      | 2LC0300-5AX         |
| 255  | 27000                          | 1000                               | 0                        | 140  | 294 | 185     | 125     | 255     | 25 | 40 | 55  | 165 | 160 | 50 | 500 | 190         | 2LC0300-6AW | 2LC0300-6AX               | 2LC0300-6BA | 95   |                     |
|      |                                | 28                                 |                          |      |     |         |         |         | 43 | 58 | 168 | 630 |     |    | 236 | 2LC0300-6AW |             |                           |             |      | 2LC0300-6AX         |
| 290  | 39000                          | 1000                               | 70                       | 160  | 330 | 210     | 140     | 290     | 28 | 48 | 68  | 188 | 180 | 60 | 630 | 236         | 2LC0300-7AW | 2LC0300-7AX               | 2LC0300-7BA | 160  |                     |
|      |                                | 28                                 |                          |      |     |         |         |         | 48 | 68 | 188 | 710 |     |    | 265 | 2LC0300-7AW |             |                           |             |      | 2LC0300-7AX         |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- Mass moment of inertia on request.
- Weights apply to maximum bores.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings.

### Ordering example

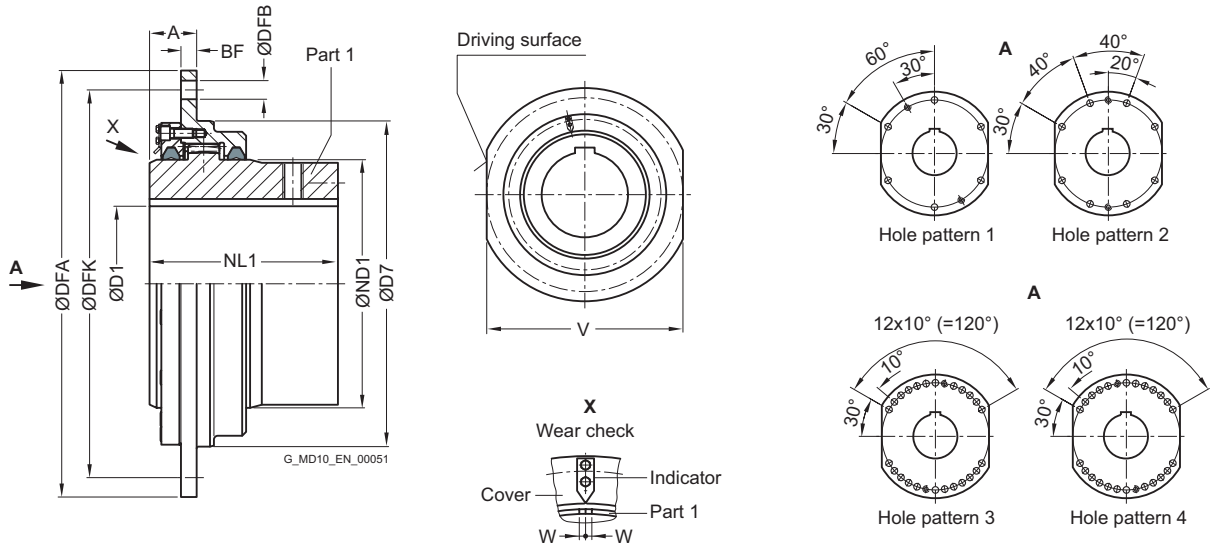
- ZAPEX ZWB coupling, size 146, variant A, brake disk diameter DB = 315 mm, BB = 118 mm
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

Article no.: 2LC0300-2AW99-0BA0-Z L0W+M1A+M13

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

# TYPE ZWTR



| Size              | Rated torque<br>$T_{KN}$ | Max. perm. radial load | Dimensions in mm           |      |     |     |     |     |     |    |     |     |              |            | Article no. <sup>1)</sup> | Weight<br>$m$ |     |
|-------------------|--------------------------|------------------------|----------------------------|------|-----|-----|-----|-----|-----|----|-----|-----|--------------|------------|---------------------------|---------------|-----|
|                   |                          |                        | D1<br>Keyway<br>DIN 6885-1 | ND1  | NL1 | DFA | D7  | V   | A   | BF | DFK | DFB | Hole pattern | Perm. wear |                           |               |     |
|                   | Nm                       | N                      | min.                       | max. |     |     |     | h6  | h9  |    |     |     |              |            | W                         | kg            |     |
| 198               | 14500                    | 32500                  | 0                          | 95   | 135 | 125 | 340 | 220 | 300 | 45 | 15  | 300 | 15           | 1          | 2                         | 2LC0300-4BN   | 25  |
| 230               | 17500                    | 36500                  | 0                          | 110  | 160 | 130 | 360 | 240 | 320 | 45 | 15  | 320 | 15           | 1          | 2                         | 2LC0300-5BN   | 30  |
| 255               | 24000                    | 45500                  | 0                          | 125  | 185 | 145 | 380 | 260 | 340 | 45 | 15  | 340 | 19           | 1          | 2                         | 2LC0300-6BN   | 35  |
| 290 <sup>2)</sup> | 31500                    | 50000                  | 0                          | 145  | 210 | 170 | 400 | 280 | 360 | 45 | 15  | 360 | 19           | 1          | 3                         | 2LC0300-7BN   | 45  |
| 315               | 42000                    | 70000                  | 0                          | 160  | 230 | 175 | 420 | 310 | 380 | 60 | 20  | 380 | 24           | 1          | 3                         | 2LC0300-8BN   | 60  |
| 342 <sup>2)</sup> | 55000                    | 90000                  | 0                          | 180  | 255 | 185 | 450 | 340 | 400 | 60 | 20  | 400 | 24           | 1          | 3                         | 2LC0301-0BN   | 70  |
| 375               | 78000                    | 110000                 | 0                          | 200  | 290 | 220 | 510 | 400 | 460 | 60 | 20  | 460 | 24           | 1          | 3                         | 2LC0301-1BN   | 100 |
| 415 <sup>2)</sup> | 104000                   | 150000                 | 0                          | 220  | 320 | 240 | 550 | 420 | 500 | 60 | 20  | 500 | 24           | 1          | 3                         | 2LC0301-2BN   | 130 |
| 465 <sup>2)</sup> | 155000                   | 165000                 | 0                          | 250  | 360 | 260 | 580 | 450 | 530 | 60 | 20  | 530 | 24           | 2          | 4                         | 2LC0301-3BN   | 160 |
| 505 <sup>2)</sup> | 235000                   | 200000                 | 0                          | 275  | 400 | 315 | 650 | 530 | 580 | 65 | 25  | 600 | 24           | 2          | 4                         | 2LC0301-4BN   | 240 |
| 545 <sup>2)</sup> | 390000                   | 325000                 | 0                          | 300  | 440 | 350 | 680 | 560 | 600 | 65 | 25  | 630 | 24           | 3          | 4                         | 2LC0301-5BN   | 320 |
| 585 <sup>2)</sup> | 460000                   | 380000                 | 0                          | 330  | 480 | 380 | 710 | 600 | 640 | 81 | 35  | 660 | 28           | 4          | 4                         | 2LC0301-6BN   | 400 |
| 640 <sup>2)</sup> | 600000                   | 420000                 | 0                          | 360  | 520 | 410 | 780 | 670 | 700 | 81 | 35  | 730 | 28           | 4          | 4                         | 2LC0301-7BN   | 510 |
| 730 <sup>2)</sup> | 880000                   | 500000                 | 0                          | 415  | 600 | 450 | 850 | 730 | 760 | 81 | 35  | 800 | 28           | 4          | 5                         | 2LC0302-0BN   | 690 |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore

### Notes

- Total wear must not exceed 1 x W.
- Mass moment of inertia on request.
- Weights apply to maximum bores.

### Ordering example

- ZAPEX ZWTR coupling, size 198, bore 80H7 mm, keyway to DIN 6885-1 P9 and set screw.

Article no.: 2LC0300-4BN90-0AA0-Z L1J

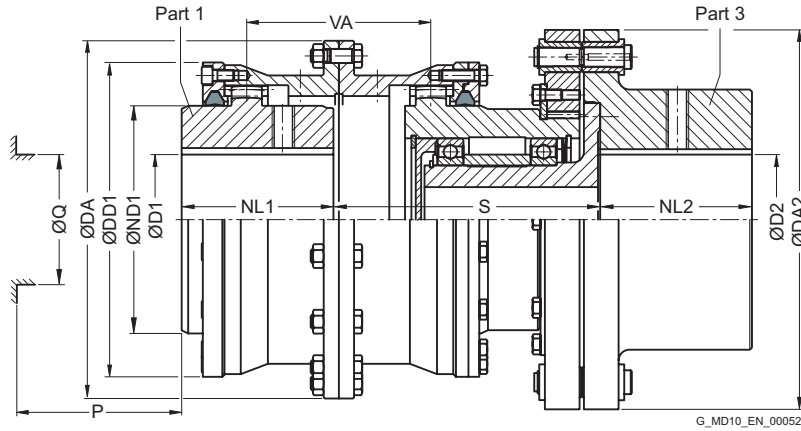
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

<sup>2)</sup> These sizes have connection dimensions according to SEB 666 212.

↗ For online configuration on [flender.com](http://flender.com), click on the item no.



# TYPE ZBR



| Size | Rated torque<br>$T_{KN}$ | Max. shear torque<br>$T_{BR}$ | Maximum speed<br>$n_{Kmax}$ | Dimensions in mm        |            |                         |      |            |            |             |      |     |     |            |     | Article no. <sup>1)</sup> | Weight<br>$m$ |      |
|------|--------------------------|-------------------------------|-----------------------------|-------------------------|------------|-------------------------|------|------------|------------|-------------|------|-----|-----|------------|-----|---------------------------|---------------|------|
|      |                          |                               |                             | D1 Keyway<br>DIN 6885-1 |            | D2 Keyway<br>DIN 6885-1 |      | DA         | ND1        | NL1/<br>NL2 | DA2  | DD1 | S   | VA         | Q   |                           |               | P    |
|      | Nm                       | Nm                            | rpm                         | min.                    | max.       | min.                    | max. |            |            |             |      |     |     |            |     |                           |               | kg   |
| 112  | 1300                     | 1690                          | 9400                        | 0                       | 49         | 0                       | 60   | 143        | 65         | 50          | 170  | 110 | 115 | 56         | 50  | 35                        | 2LC0300-0BH   | 14.5 |
| 128  | 2500                     | 3250                          | 8300                        | 0                       | 61         | 0                       | 75   | 157        | 80         | 60          | 190  | 128 | 125 | 73         | 65  | 45                        | 2LC0300-1BH   | 19   |
| 146  | 4300                     | 5590                          | 7300                        | 0                       | 72         | 0                       | 90   | 177        | 95         | 75          | 205  | 146 | 140 | 88         | 75  | 45                        | 2LC0300-2BH   | 27.5 |
| 175  | 7000                     | 9100                          | 6400                        | 0                       | 85         | 0                       | 105  | 215        | 112        | 90          | 235  | 175 | 170 | 104        | 85  | 50                        | 2LC0300-3BH   | 43   |
| 198  | 11600                    | 15080                         | 5500                        | 0                       | 100        | 0                       | 120  | 237        | 135        | 100         | 285  | 198 | 185 | 119        | 110 | 50                        | 2LC0300-4BH   | 67   |
| 230  | 19000                    | 24700                         | 4700                        | 0                       | 120        | 0                       | 135  | 265        | 160        | 110         | 300  | 230 | 200 | 130        | 135 | 50                        | 2LC0300-5BH   | 91   |
| 255  | 27000                    | 35100                         | 4100                        | 0                       | 140        | 0                       | 155  | 294        | 185        | 125         | 335  | 255 | 215 | 150        | 160 | 50                        | 2LC0300-6BH   | 120  |
| 290  | 39000                    | 50700                         | 3700                        | 70                      | 160        | 70                      | 185  | 330        | 210        | 140         | 390  | 290 | 240 | 170        | 180 | 60                        | 2LC0300-7BH   | 170  |
| 315  | 54000                    | 70200                         | 3300                        | 80                      | 175        | 80                      | 200  | 366        | 230        | 160         | 415  | 315 | 257 | 190        | 200 | 60                        | 2LC0300-8BH   | 215  |
| 342  | 69000                    | 89700                         | 3000                        | 90                      | 195        | 90                      | 235  | 392        | 255        | 180         | 460  | 340 | 290 | 222        | 225 | 60                        | 2LC0301-0BH   | 295  |
| 375  | 98000                    | 127400                        | 2700                        | 100                     | 220        | 100                     | 240  | 430        | 290        | 200         | 495  | 375 | 300 | 242        | 260 | 60                        | 2LC0301-1BH   | 380  |
| 415  | 130000                   | 169000                        | 2500                        | 120                     | 240        | 120                     | 255  | 478        | 320        | 220         | 540  | 415 | 370 | 294        | 285 | 80                        | 2LC0301-2BH   | 520  |
| 465  | 180000                   | 234000                        | 2200                        | 140                     | 270        | 140                     | 285  | 528        | 360        | 240         | 635  | 465 | 400 | 336        | 325 | 80                        | 2LC0301-3BH   | 720  |
| 505  | 250000                   | 325000                        | 2000                        | 160                     | 300        | 160                     | 320  | 568        | 400        | 260         | 710  | 505 | 420 | 366        | 365 | 80                        | 2LC0301-4BH   | 970  |
| 545  | 320000                   | 416000                        | 1800                        | 180                     | 330        | 180                     | 370  | 620        | 440        | 280         | 800  | 545 | 460 | 406        | 405 | 80                        | 2LC0301-5BH   | 1250 |
| 585  | 400000                   | 520000                        | 1700                        | 210                     | 360        | 210                     | 390  | 660        | 480        | 310         | 860  | 585 | 500 | 460        | 445 | 80                        | 2LC0301-6BH   | 1600 |
| 640  | 510000                   | 663000                        | 1600                        | 230<br>>360             | 360<br>390 | 230                     | 425  | 738<br>520 | 480<br>520 | 330         | 900  | 640 | 530 | 479<br>475 | 90  | 2LC0301-7BH               | 1850          |      |
| 690  | 660000                   | 858000                        | 1450                        | 250<br>>390             | 390<br>420 | 250                     | 450  | 788<br>560 | 520<br>560 | 350         | 1020 | 690 | 580 | 516<br>515 | 90  | 2LC0301-8BH               | 2600<br>2650  |      |
| 730  | 790000                   | 1027000                       | 1350                        | 275<br>>420             | 420<br>450 | 275                     | 485  | 834<br>600 | 560<br>600 | 380         | 1080 | 730 | 620 | 560<br>555 | 90  | 2LC0302-0BH               | 3200          |      |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- Mass moment of inertia on request.
- Weights apply to maximum bores.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings.

### Ordering example

- ZAPEX coupling ZBR, size 146, ultimate moment  $T_{break} = 3500$  Nm
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 3: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

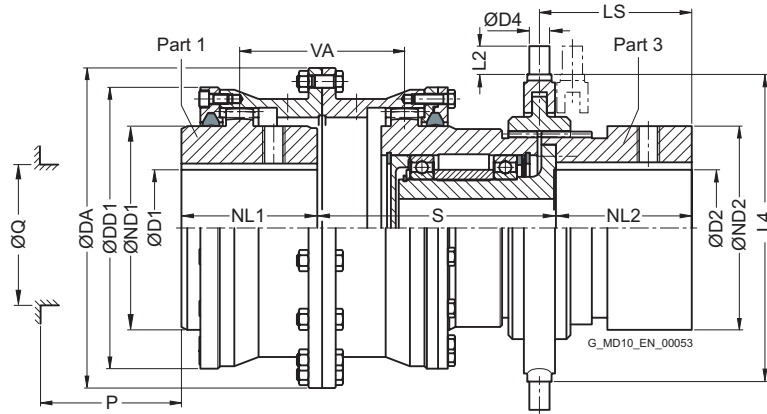
Article no.: 2LC0300-2BH99-0BA0-Z L0W+M1A+M13+Y99  
Plain text to Y99:  $T_{break} = 3500$  Nm

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [fletcher.com](http://fletcher.com).

↗ For online configuration on [fletcher.com](http://fletcher.com), click on the item no.

# TYPE ZWS

4



| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm        |      |                         |      |     |             |             |     |     |     |     |    |     |            |    |             | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |             |      |
|------|--------------------------------|------------------------------------|-------------------------|------|-------------------------|------|-----|-------------|-------------|-----|-----|-----|-----|----|-----|------------|----|-------------|---------------------------|---------------------|-------------|------|
|      |                                |                                    | D1 Keyway<br>DIN 6885-1 |      | D2 Keyway<br>DIN 6885-1 |      | DA  | ND1/<br>ND2 | NL1/<br>NL2 | DD1 | S   | VA  | Q   | P  | LS  | Shift ring |    | Switch size |                           |                     |             |      |
|      |                                |                                    | min.                    | max. | min.                    | max. |     |             |             |     |     |     |     |    | L4  | D4         | L2 | KSHN        | KSZH                      |                     |             |      |
| 128  | 2500                           | 1500                               | 0                       | 61   | 0                       | 50   | 157 | 80          | 60          | 128 | 135 | 73  | 65  | 45 | 70  | 150        | 15 | 14          | 14/11                     | -                   | 2LC0300-1BK | 16   |
| 146  | 4300                           | 1300                               | 0                       | 72   | 0                       | 50   | 177 | 95          | 75          | 146 | 131 | 88  | 75  | 45 | 86  | 180        | 16 | 16          | 16/12                     | -                   | 2LC0300-2BK | 22   |
| 175  | 7000                           | 1100                               | 0                       | 85   | 0                       | 70   | 215 | 112         | 90          | 175 | 165 | 104 | 85  | 50 | 101 | 180        | 16 | 16          | 16/12                     | -                   | 2LC0300-3BK | 35   |
| 198  | 11600                          | 960                                | 0                       | 100  | 0                       | 80   | 237 | 135         | 100         | 198 | 182 | 119 | 110 | 50 | 116 | 210        | 20 | 18          | 18/13                     | -                   | 2LC0300-4BK | 52   |
| 230  | 19000                          | 830                                | 0                       | 120  | 0                       | 90   | 265 | 160         | 110         | 230 | 198 | 130 | 135 | 50 | 126 | 260        | 22 | 20          | 18/15                     | 14/14               | 2LC0300-5BK | 77   |
| 255  | 27000                          | 750                                | 0                       | 140  | 0                       | 115  | 294 | 185         | 125         | 255 | 215 | 150 | 160 | 50 | 142 | 300        | 25 | 22          | 21/17                     | 16/17               | 2LC0300-6BK | 98   |
| 290  | 39000                          | 660                                | 70                      | 160  | 70                      | 130  | 330 | 210         | 140         | 290 | 236 | 170 | 180 | 60 | 157 | 315        | 25 | 35          | -                         | 16/211              | 2LC0300-7BK | 140  |
| 315  | 54000                          | 600                                | 80                      | 175  | 80                      | 140  | 366 | 230         | 160         | 315 | 257 | 190 | 200 | 60 | 182 | 360        | 30 | 24          | -                         | 18/18               | 2LC0300-8BK | 200  |
| 342  | 69000                          | 560                                | 90                      | 195  | 90                      | 160  | 392 | 255         | 180         | 340 | 280 | 222 | 225 | 60 | 202 | 360        | 30 | 24          | -                         | 18/18               | 2LC0301-0BK | 230  |
| 375  | 98000                          | 510                                | 100                     | 220  | 100                     | 180  | 430 | 290         | 200         | 375 | 292 | 242 | 260 | 60 | 222 | 430        | 34 | 26          | -                         | 24/20               | 2LC0301-1BK | 340  |
| 415  | 130000                         | 460                                | 120                     | 240  | 120                     | 210  | 478 | 320         | 220         | 415 | 349 | 294 | 285 | 80 | 247 | 430        | 34 | 26          | -                         | 24/20               | 2LC0301-2BK | 430  |
| 465  | 180000                         | 410                                | 140                     | 270  | 140                     | 230  | 528 | 360         | 240         | 465 | 380 | 336 | 325 | 80 | 267 | -          | -  | -           | -                         | -                   | 2LC0301-3BK | 570  |
| 505  | 250000                         | 380                                | 160                     | 300  | 160                     | 260  | 568 | 400         | 260         | 505 | 395 | 366 | 365 | 80 | 287 | -          | -  | -           | -                         | -                   | 2LC0301-4BK | 740  |
| 545  | 320000                         | 350                                | 180                     | 330  | 180                     | 270  | 620 | 440         | 280         | 545 | 460 | 406 | 405 | 80 | 315 | -          | -  | -           | -                         | -                   | 2LC0301-5BK | 1000 |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- Mass moment of inertia on request.
- Weights apply to maximum bores.
- Pneumatically or hydraulically actuated switches also available.
- For engaging/disengaging during standstill.
- Part 3 should be mounted on the shaft while the shaft is disconnected and not being driven.
- KSHN Manual lever switch type KSHN to M4218  
KSZH Toothed rack type KSZH to M4215

### Ordering example

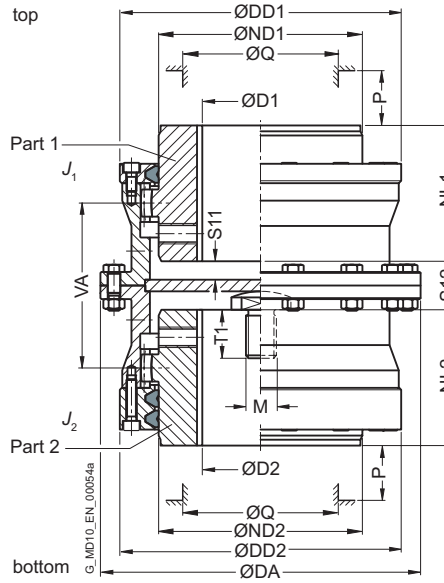
- ZAPEX ZWS coupling, size 146
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 3: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

Article no.: 2LC0300-2BK99-0AA0-Z L0W+M1A+M13

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

# TYPE ZWNV



| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm                              |     |             |             |             |     |     |     |     |    |       | Mass moment of inertia<br>$J_1/J_2$<br>kgm <sup>2</sup> | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |
|------|--------------------------------|------------------------------------|---|-----|-------------|-------------|-------------|-----|-----|-----|-----|----|-------|---|---------------------------|---------------------|
|      |                                |                                    | D1, D2<br>Keyway<br>DIN 6885-1<br>min.   max. | DA  | ND1/<br>ND2 | NL1/<br>NL2 | DD1/<br>DD2 | S11 | S12 | VA  | Q   | P  |       |   |                           |                     |
| 128  | 2500                           | 8300                               | 0   61  | 157 | 80          | 60          | 128         | 6.5 | 26  | 73  | 65  | 45 | 0.015 | 2LC0300-1AH   | 9.1                       |                     |
| 146  | 4300                           | 7300                               | 0   72  | 177 | 95          | 75          | 146         | 6   | 28  | 88  | 75  | 45 | 0.023 | 2LC0300-2AH   | 13                        |                     |
| 175  | 7000                           | 6400                               | 0   85  | 215 | 112         | 90          | 175         | 5.5 | 33  | 104 | 85  | 50 | 0.055 | 2LC0300-3AH   | 22                        |                     |
| 198  | 11600                          | 5500                               | 0   100                                       | 237 | 135         | 100         | 198         | 10  | 40  | 119 | 110 | 50 | 0.095 | 2LC0300-4AH   | 31                        |                     |
| 230  | 19000                          | 4700                               | 0   120                                       | 265 | 160         | 110         | 230         | 11  | 32  | 130 | 135 | 50 | 0.18  | 2LC0300-5AH   | 43                        |                     |
| 255  | 27000                          | 4100                               | 0   140                                       | 294 | 185         | 125         | 255         | 14  | 40  | 150 | 160 | 50 | 0.28  | 2LC0300-6AH   | 56                        |                     |
| 290  | 39000                          | 3700                               | 70   160                                      | 330 | 210         | 140         | 290         | 19  | 50  | 170 | 180 | 60 | 0.55  | 2LC0300-7AH   | 81                        |                     |
| 315  | 54000                          | 3300                               | 80   175                                      | 366 | 230         | 160         | 315         | 18  | 50  | 190 | 200 | 60 | 0.88  | 2LC0300-8AH   | 110                       |                     |
| 342  | 69000                          | 3000                               | 90   195                                      | 392 | 255         | 180         | 340         | 29  | 72  | 222 | 225 | 60 | 1.3   | 2LC0301-0AH   | 140                       |                     |
| 375  | 98000                          | 2700                               | 100   220                                     | 430 | 290         | 200         | 375         | 29  | 72  | 242 | 260 | 60 | 2.1   | 2LC0301-1AH   | 185                       |                     |
| 415  | 130000                         | 2500                               | 120   240                                     | 478 | 320         | 220         | 415         | 60  | 136 | 294 | 285 | 80 | 3.4   | 2LC0301-2AH   | 250                       |                     |
| 465  | 180000                         | 2200                               | 140   270                                     | 528 | 360         | 240         | 465         | 80  | 176 | 336 | 325 | 80 | 5.6   | 2LC0301-3AH   | 340                       |                     |
| 505  | 250000                         | 2000                               | 160   300                                     | 568 | 400         | 260         | 505         | 89  | 196 | 366 | 365 | 80 | 8.2   | 2LC0301-4AH   | 420                       |                     |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- When ordering, state thread size M and thread length T1 of the thrust piece.
- Mass moments of inertia apply to a coupling half with maximum bore diameter.
- Weights apply to the entire coupling with maximum bores.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings.

### Ordering example

- ZAPEX ZWNV coupling, size 146, thread M10 x 20 deep
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

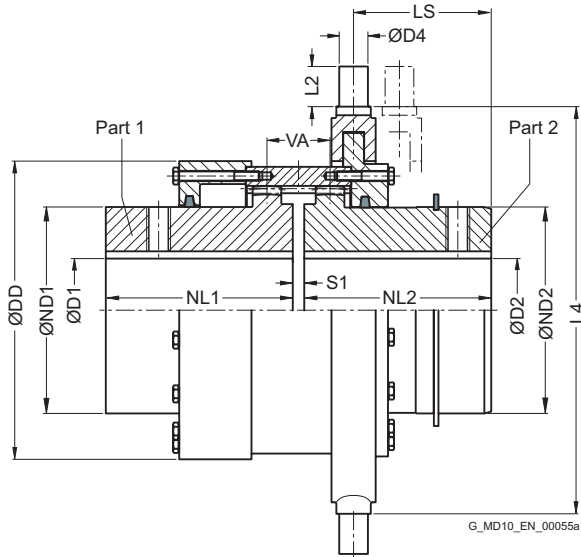
Article no.: 2LC0300-2AH99-0AA0-Z L0W+M1A+M13+Y99  
Plain text to Y99: Thread M10 x 20 mm

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

# TYPE ZWSE

4



| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm                       |     |  |     |      |     |     |     |     |    |    |      |     |    | Shift ring | Switch size |      | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |
|------|--------------------------------|------------------------------------|--|-----|--|-----|------|-----|-----|-----|-----|----|----|------|-----|----|------------|-------------|------|---------------------------|---------------------|
|      |                                |                                    | D1 Keyway<br>DIN 6885-1<br>min.   max. |     | D2 Keyway<br>DIN 6885-1<br>min.   max. |     | ND1  | ND2 | NL1 | NL2 | DD  | S1 | VA | LS   | L4  | D4 |            | L2          | KSHN |                           |                     |
| 128  | 2500                           | 730                                | 0                                      | 55  | 0                                      | 55  | 76.5 | 75  | 60  | 60  | 130 | 6  | 30 | 36.5 | 180 | 16 | 16         | 16          | -    | 2LC0300-1BM               | 8.8                 |
| 146  | 4300                           | 630                                | 0                                      | 69  | 0                                      | 65  | 91.5 | 90  | 75  | 75  | 150 | 6  | 33 | 50   | 210 | 20 | 18         | 18          | -    | 2LC0300-2BM               | 13.5                |
| 175  | 7000                           | 530                                | 0                                      | 80  | 0                                      | 75  | 108  | 105 | 90  | 90  | 180 | 8  | 46 | 56.5 | 250 | 20 | 30         | 18          | -    | 2LC0300-3BM               | 23                  |
| 198  | 11600                          | 470                                | 0                                      | 95  | 0                                      | 95  | 130  | 130 | 100 | 100 | 204 | 8  | 48 | 64.5 | 260 | 22 | 20         | 18          | -    | 2LC0300-4BM               | 32                  |
| 230  | 19000                          | 410                                | 0                                      | 115 | 0                                      | 110 | 155  | 155 | 110 | 110 | 236 | 8  | 50 | 73   | 300 | 25 | 22         | 21          | -    | 2LC0300-5BM               | 44                  |
| 255  | 27000                          | 370                                | 0                                      | 135 | 0                                      | 130 | 180  | 180 | 125 | 125 | 260 | 10 | 55 | 82   | 355 | 25 | 35         | 24          | -    | 2LC0300-6BM               | 63                  |
| 290  | 39000                          | 330                                | 70                                     | 155 | 70                                     | 145 | 210  | 210 | 140 | 140 | 295 | 10 | 38 | 64.5 | 355 | 25 | 35         | 24          | -    | 2LC0300-7BM               | 82                  |
| 315  | 54000                          | 300                                | 80                                     | 170 | 80                                     | 165 | 230  | 230 | 160 | 160 | 325 | 10 | 42 | 76   | 355 | 25 | 35         | 24          | -    | 2LC0300-8BM               | 105                 |
| 342  | 69000                          | 280                                | 90                                     | 190 | 90                                     | 175 | 255  | 255 | 180 | 180 | 345 | 12 | 46 | 82   | 430 | 34 | 26         | -           | 24   | 2LC0301-0BM               | 145                 |
| 375  | 98000                          | 250                                | 100                                    | 210 | 100                                    | 200 | 280  | 280 | 200 | 200 | 378 | 12 | 48 | 90   | 430 | 34 | 26         | -           | 24   | 2LC0301-1BM               | 180                 |
| 415  | 130000                         | 220                                | 120                                    | 240 | 120                                    | 225 | 320  | 320 | 220 | 240 | 425 | 12 | 52 | 120  | 580 | 40 | 40         | -           | 24   | 2LC0301-2BM               | 295                 |
| 465  | 180000                         | 200                                | 140                                    | 270 | 140                                    | 250 | 360  | 360 | 240 | 260 | 470 | 16 | 60 | 150  | 580 | 40 | 40         | -           | 24   | 2LC0301-3BM               | 350                 |
| 505  | 250000                         | 180                                | 160                                    | 300 | 160                                    | 270 | 400  | 400 | 260 | 280 | 510 | 16 | 62 | 161  | -   | -  | -          | -           | 24   | 2LC0301-4BM               | 400                 |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- Mass moment of inertia on request.
- Weights apply to maximum bores.
- For engaging/disengaging during standstill.
- Part 2 should be mounted on the shaft while the shaft is disconnected and not being driven.
- Protect sliding surfaces from dirt and corrosion; sprayed with adhesive grease.

### Ordering example

- ZAPEX ZWSE coupling, size 146
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw,
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw.

Article no.: 2LC0300-2BM99-0AA0-Z L0W+M1A+M13

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

# CUSTOMIZED HUB DESIGN

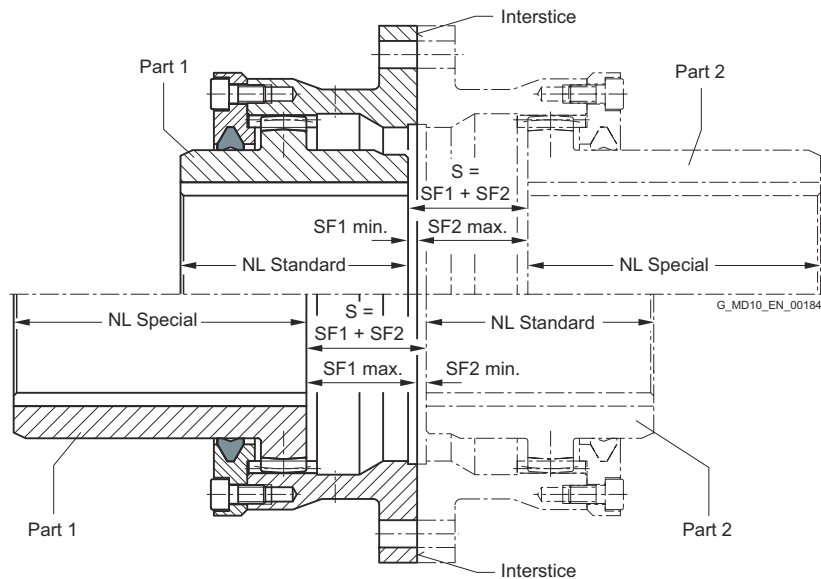
ZAPEX couplings can be provided with customized S-dimensions and hub lengths.

The entire dimension S results from the sum of the individual measurements SF1 and SF2. SF1 and SF2 are the measurements from the interstice of the coupling ring flange up to the beginning of the respective hub. As standard SF1 and SF2 are identical to each other and the entire S-dimension arises in accordance with them.

SF1 and SF2 can be chosen different on customer request, however the minimal and maximum values of the following table have to be observed. Within these limits the measurements SF1 and SF2 may be chosen freely.

The distance VA of the coupling teeth, the permitted bore diameter and the hub diameter remain unchanged.

By stating the hub S-dimension and both hub lengths the coupling is completely described.



| Geometric data |                                 |                                       |                                       |
|----------------|---------------------------------|---------------------------------------|---------------------------------------|
| Size           | Standard hub length<br>NL<br>mm | Minimal dimension<br>SF1 or SF2<br>mm | Maximum dimension<br>SF1 or SF2<br>mm |
| 112            | 50                              | 3                                     | 23                                    |
| 128            | 60                              | 3                                     | 30.5                                  |
| 146            | 75                              | 3                                     | 36.5                                  |
| 175            | 90                              | 4                                     | 43                                    |
| 198            | 100                             | 4                                     | 49.5                                  |
| 230            | 110                             | 4                                     | 54                                    |
| 255            | 125                             | 5                                     | 62.5                                  |
| 290            | 140                             | 5                                     | 71                                    |
| 315            | 160                             | 5                                     | 79                                    |
| 342            | 180                             | 6                                     | 94                                    |
| 375            | 200                             | 6                                     | 103                                   |
| 415            | 220                             | 6                                     | 127                                   |
| 465            | 240                             | 8                                     | 146                                   |
| 505            | 260                             | 8                                     | 160                                   |

The minimal hub lengths are not to fall below the standard hub lengths. If there's no other possibility, for hub lengths smaller than standard hub lengths the order codes "Y50" for part 1 and "Y51" for part 2 must be stated in plain text.

## Article number

The Article number of the respective ZAPEX coupling type must be supplemented with "-Z" and order codes for non standard SF-dimensions (order code "Y38" for part 1 and "Y39" for part 2). For no standard hub lengths the order codes "Y40" to "Y49" must be specified (see table Page 4/22).

## Ordering example

- ZAPEX coupling ZWN 175, variant A
- Hub left: Bore D1 = 70H7 mm, keyway to DIN 6885-1 P9 and set screw; NL1 = 160 mm; SF1 = 10 mm
- Hub right: Bore D2 = 75H7 mm, keyway to DIN 6885-1 P9 and set screw; NL2 = 100 mm; SF2 = 25 mm

Article no.: 2LC0300-3AA99-0AA0-Z L1G M1H Y38 Y39 Y41 Y46

Plain text to Y38: SF1 = 10 mm

Plain text to Y39: SF2 = 25 mm

Plain text to Y46: NL1 = 160 mm

Plain text to Y41: NL2 = 100 mm

# CUSTOMIZED HUB DESIGN

Order code for hub prolongations (Y4). (Std-NL = Standard hub length)

4

| Part 1                             |                                 |  |
|------------------------------------|---------------------------------|--|
| Selected (special) hub length min. | max.                            | Order code (specification of hub length in plain text) |
| >Std-NL                            | $\leq 1.25 \cdot \text{Std-NL}$ | Y40  |
| >1.25 · Std-NL                     | $\leq 1.5 \cdot \text{Std-NL}$  | Y42  |
| >1.5 · Std-NL                      | $\leq 1.75 \cdot \text{Std-NL}$ | Y44  |
| >1.75 · Std-NL                     | $\leq 2 \cdot \text{Std-NL}$    | Y46  |
| >2 · Std-NL                        |                                 | Y48  |

| Part 2                             |                                 |  |
|------------------------------------|---------------------------------|--|
| Selected (special) hub length min. | max.                            | Order code (specification of hub length in plain text) |
| >Std-NL                            | $\leq 1.25 \cdot \text{Std-NL}$ | Y41  |
| >1.25 · Std-NL                     | $\leq 1.5 \cdot \text{Std-NL}$  | Y43  |
| >1.5 · Std-NL                      | $\leq 1.75 \cdot \text{Std-NL}$ | Y45  |
| >1.75 · Std-NL                     | $\leq 2 \cdot \text{Std-NL}$    | Y47  |
| >2 · Std-NL                        |                                 | Y49  |

# SPARE AND WEAR PARTS

## DUO sealing rings

The DUO sealing rings are wear parts and must be replaced in accordance with the operating instructions.

| Size | Hub diameter<br>ND1/ND2<br>mm | Article No.        |
|------|-------------------------------|--------------------|
| 112  | 65                            | 2LC0300-0XG00-0AA0 |
| 128  | 80                            | 2LC0300-1XG00-0AA0 |
| 146  | 95                            | 2LC0300-2XG00-0AA0 |
| 175  | 112                           | 2LC0300-3XG00-0AA0 |
| 198  | 135                           | 2LC0300-4XG00-0AA0 |
| 230  | 160                           | 2LC0300-5XG00-0AA0 |
| 255  | 185                           | 2LC0300-6XG00-0AA0 |
| 290  | 210                           | 2LC0300-7XG00-0AA0 |
| 315  | 230                           | 2LC0300-8XG00-0AA0 |
| 342  | 255                           | 2LC0301-0XG00-0AA0 |
| 375  | 290                           | 2LC0301-1XG00-0AA0 |
| 415  | 320                           | 2LC0301-2XG00-0AA0 |
| 465  | 360                           | 2LC0301-3XG00-0AA0 |
| 505  | 400                           | 2LC0301-4XG00-0AA0 |
| 545  | 440                           | 2LC0301-5XG00-0AA0 |
| 585  | 480                           | 2LC0301-6XG00-0AA0 |
| 640  | 480                           | 2LC0301-7XG10-0AA0 |
|      | 520                           | 2LC0301-7XG20-0AA0 |
| 690  | 520                           | 2LC0301-8XG10-0AA0 |
|      | 560                           | 2LC0301-8XG20-0AA0 |
| 730  | 560                           | 2LC0302-0XG10-0AA0 |
|      | 600                           | 2LC0302-0XG20-0AA0 |
| 780  | 600                           | 2LC0302-1XG10-0AA0 |
|      | 650                           | 2LC0302-1XG20-0AA0 |
| 852  | 650                           | 2LC0302-2XG10-0AA0 |
|      | 710                           | 2LC0302-2XG20-0AA0 |
| 910  | 710                           | 2LC0302-3XG10-0AA0 |
|      | 750                           | 2LC0302-3XG20-0AA0 |

| Size | Hub diameter<br>ND1/ND2<br>mm | Article No.        |
|------|-------------------------------|--------------------|
| 1020 | 750                           | 2LC0302-4XG10-0AA0 |
|      | 800                           | 2LC0302-4XG20-0AA0 |
| 1080 | 800                           | 2LC0302-5XG10-0AA0 |
|      | 860                           | 2LC0302-5XG20-0AA0 |
| 1150 | 860                           | 2LC0302-6XG10-0AA0 |
|      | 930                           | 2LC0302-6XG20-0AA0 |
| 1160 | 860                           | 2LC0302-7XG10-0AA0 |
|      | 930                           | 2LC0302-7XG20-0AA0 |
| 1240 | 990                           | 2LC0302-7XG30-0AA0 |
|      | 930                           | 2LC0302-8XG10-0AA0 |
| 1310 | 990                           | 2LC0302-8XG20-0AA0 |
|      | 1055                          | 2LC0302-8XG30-0AA0 |
| 1380 | 930                           | 2LC0303-0XG10-0AA0 |
|      | 990                           | 2LC0303-0XG20-0AA0 |
| 1440 | 1055                          | 2LC0303-0XG30-0AA0 |
|      | 1120                          | 2LC0303-0XG40-0AA0 |
| 1540 | 990                           | 2LC0303-1XG10-0AA0 |
|      | 1055                          | 2LC0303-1XG20-0AA0 |
| 1540 | 1120                          | 2LC0303-1XG30-0AA0 |
|      | 1170                          | 2LC0303-1XG40-0AA0 |
| 1540 | 1120                          | 2LC0303-2XG10-0AA0 |
|      | 1170                          | 2LC0303-2XG20-0AA0 |
| 1540 | 1240                          | 2LC0303-2XG30-0AA0 |
|      | 1240                          | 2LC0303-2XG40-0AA0 |
| 1540 | 1120                          | 2LC0303-3XG10-0AA0 |
|      | 1170                          | 2LC0303-3XG20-0AA0 |
| 1540 | 1240                          | 2LC0303-3XG30-0AA0 |
|      | 1310                          | 2LC0303-3XG40-0AA0 |

## High-performance grease

| Container | Content<br>g | Article No.     |
|-----------|--------------|-----------------|
| Cartridge | 300          | FFA:00000501027 |

## Sealing compound

| Container | Content<br>ml | Article No.      |
|-----------|---------------|------------------|
| Tube      | 60            | FFA:000001443780 |





# TORSIONALLY RIGID GEAR COUPLINGS

## ZAPEX ZN SERIES



|   |             |
|---|-------------|
| <b>General</b>                                | <b>5/3</b>  |
| Benefits                                      | 5/3         |
| Application                                   | 5/3         |
| Design and configurations                     | 5/4         |
| Function                                      | 5/4         |
| Technical specifications                      | 5/5         |
| -----   |             |
| <b>Type ZNN</b>                               | <b>5/6</b>  |
| -----   |             |
| <b>Type ZNZS</b>                              | <b>5/7</b>  |
| -----   |             |
| <b>Type ZNW</b>                               | <b>5/8</b>  |
| -----   |             |
| <b>Type ZNBG</b>                              | <b>5/10</b> |
| -----   |             |
| <b>Type ZNNA</b>                              | <b>5/12</b> |
| -----   |             |
| <b>Type ZNZA</b>                              | <b>5/13</b> |
| -----   |             |
| <b>Type ZNNV</b>                              | <b>5/14</b> |
| -----   |             |
| <b>Type ZNN for axial displacement</b>        | <b>5/15</b> |
| -----   |             |
| <b>Customized hub design</b>                  | <b>5/16</b> |
| -----   |             |
| <b>Type ZN – flange connection dimensions</b> | <b>5/18</b> |
| -----   |             |
| <b>Spare and wear parts</b>                   | <b>5/19</b> |
| -----   |             |



ZAPEX ZN  
**FLENDER**




# GENERAL




Coupling suitable for use in potentially explosive atmospheres.

Complies with the current ATEX Directive for:

CE  II 2G Ex h IIC T6 ... T5 Gb X

 II 2D Ex h IIIC T85 °C ... 100 °C Db X

 I M2 Ex h Mb X

## Materials

- Hubs and flanged sleeves: Steel
- O ring: Perbunan
- Lubricant: Grease filling

## Benefits

ZAPEX gear couplings link machine shafts and compensate for shaft misalignment with weak restorative forces. High transmissible torque combined with compactness and light weight are characteristic of ZAPEX couplings. ZAPEX coupling types are constructed on a modular principle, so application-related solutions can be delivered quickly.

This coupling requires very little maintenance. Regular grease changes at the prescribed intervals prolong the service life of the coupling.

## Application

ZAPEX couplings are especially suited for operation in harsh operating conditions, such as drives in the iron smelting or cement industry.

ZAPEX couplings are suitable for reverse operation and horizontal mounting positions and, in the case of type ZNNV, for vertical mounting positions.

# GENERAL

## Design and configurations

A ZAPEX coupling comprises two hub sections with external teeth which are mounted on the machine shafts. The external teeth engage with a flanged sleeve with corresponding internal teeth. The flanged sleeves are connected via two flanges with close-fitting bolts. The teeth are lubricated with grease. On the ZAPEX type ZN, O-rings are used to seal the tooth space. The O-rings prevent the lubricant from escaping and dirt from entering the tooth space. The parallel keyways must be sealed during assembly to prevent lubricant from escaping. Customized hub designs are described after the types.

| Type | Description                             |
|------|---|
| ZNN  | Standard type                           |
| ZNZS | with adapter                            |
| ZNW  | with intermediate shaft                 |
| ZNBG | with straight brake disk                |
| ZNNA | With axial backlash limiter             |
| ZNZA | With adapter and axial backlash limiter |
| ZNNV | Vertical type                           |
| ZNN  | For axial displacement                  |

Further application-specific coupling types are available; dimension sheets for and information on these are available on request.

## Function

The torque is transmitted through the coupling teeth. The teeth are crowned, so angular displacement per tooth plane is possible. Radial displacement can be compensated for via the space VA between the tooth planes. The internal teeth of the flanged sleeves are significantly wider than the external teeth of the hub parts, permitting a relatively high axial misalignment.

A small angular misalignment on the coupling teeth results in an advantageous distribution of the lubricant film in contact with the teeth and a very low wear rate. This favorable condition can be deliberately set by aligning the drive with the machine shafts with a slight radial misalignment.

## Technical specifications

| Power ratings |                |                  |                 |                |                           |   |
|---------------|----------------|------------------|-----------------|----------------|---------------------------|---|
| Size          | Rated torque   | Maximum torque   | Overload torque | Fatigue torque | Torsional stiffness<br>ZN | Permitted axial shaft<br>misalignment<br>$\Delta K_a$<br>mm |
|               | $T_{KN}$<br>Nm | $T_{Kmax}$<br>Nm | $T_{KOL}$<br>Nm | $T_{KW}$<br>Nm | $C_{Tdyn}$<br>kNm/rad     |   |
| 83            | 1020           | 2040             | 4080            | 408            | 500                       | 1   |
| 107           | 2210           | 4420             | 8840            | 884            | 1400                      | 1   |
| 130           | 4020           | 8040             | 16080           | 1600           | 2500                      | 1   |
| 156           | 6600           | 13200            | 26400           | 2640           | 5800                      | 1   |
| 181           | 11000          | 22000            | 44000           | 4400           | 9200                      | 1   |
| 211           | 19200          | 38400            | 76800           | 7680           | 16600                     | 1   |
| 250           | 30680          | 61360            | 122720          | 12270          | 27300                     | 1   |
| 274           | 43550          | 87100            | 174200          | 17400          | 41500                     | 1.5   |
| 307           | 61750          | 123500           | 247000          | 24700          | 61000                     | 1.5   |
| 333           | 87100          | 174200           | 348400          | 34800          | 79000                     | 1.5   |
| 364           | 117000         | 234000           | 468000          | 46800          | 99000                     | 1.5   |
| 424           | 162500         | 325000           | 650000          | 64800          | 156000                    | 1.5   |

The specified torsional stiffness "ZN" applies to coupling types ZNN, ZNNA, ZNNV and ZNN for axial displacement. Torsional stiffness of types ZNZS, ZNW, ZNBG and ZNZA on request.

The axial misalignment  $\Delta K_a$  must be understood as the maximum permitted enlargement of the hub distance S of the coupling.

The axial misalignment  $\Delta K_a$  does not apply to the types ZNNA, ZNNV, ZNBG and ZNZA.

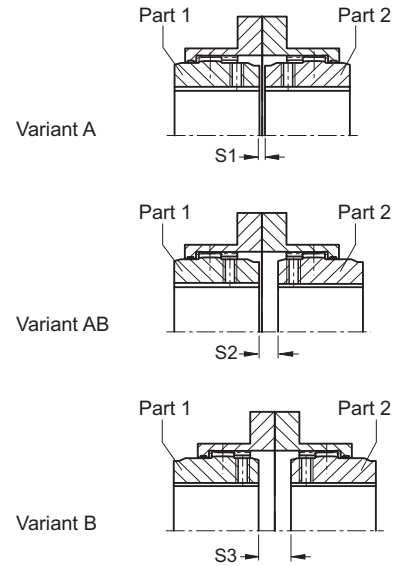
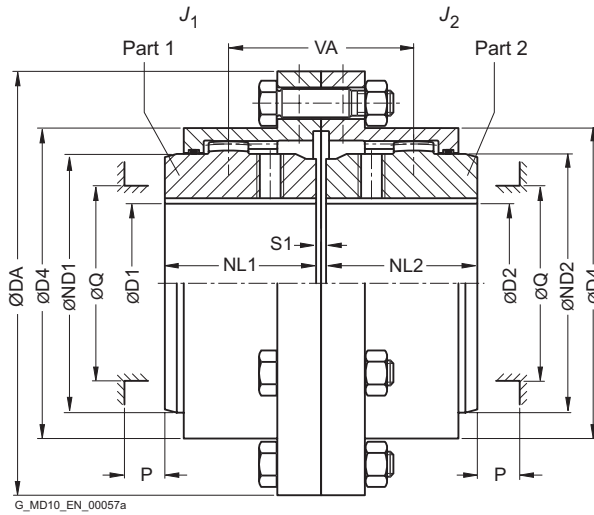
### Angular misalignment $\Delta K_w$

Types ZNN, ZNZS, ZNW, ZNNV, ZNN for axial displacement:  $\Delta K_w = 0.5^\circ$   
Types ZNBG, ZNNA, ZNZA:  $\Delta K_w = 0.2^\circ$

### Radial misalignment $\Delta K_r$

Types ZNN, ZNZS, ZNW, ZNNV, ZNN for axial displacement:  $\Delta K_r \leq VA \cdot \tan 0.5^\circ$   
Types ZNBG, ZNNA, ZNZA:  $\Delta K_r \leq VA \cdot \tan 0.2^\circ$   
For the tooth distance VA, see the relevant table for the subassembly.

# TYPE ZNN



5

| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm         |      |       |         |         |       |    |    |    |     |     | Mass moment of inertia<br>$J_1/J_2$<br>kgm <sup>2</sup> | Article no. <sup>1)</sup> |             |             | Weight<br>$m$<br>kg |      |
|------|--------------------------------|------------------------------------|--------------------------|------|-------|---------|---------|-------|----|----|----|-----|-----|---|---------------------------|-------------|-------------|---------------------|------|
|      |                                |                                    | D1, D2 Keyway DIN 6885-1 |      | DA    | ND1/ND2 | NL1/NL2 | D4    | S1 | S2 | S3 | VA  | Q   |   | P                         | Type        |             |                     |      |
|      |                                |                                    | min.                     | max. |       |         |         |       |    |    |    |     |     |   |                           | A           | B           |                     | AB   |
| 83   | 1020                           | 8500                               | 0                        | 50   | 117   | 67      | 43      | 83    | 3  | 12 | 21 | 55  | 52  | 31  | 0.003                     | 2LC0330-0AA | 2LC0330-0AB | 2LC0330-0AC         | 3.2  |
| 107  | 2210                           | 7700                               | 0                        | 65   | 152   | 87      | 50      | 107   | 3  | 9  | 15 | 59  | 68  | 34  | 0.009                     | 2LC0330-1AA | 2LC0330-1AB | 2LC0330-1AC         | 6.5  |
| 130  | 4020                           | 6900                               | 0                        | 82   | 178   | 108     | 62      | 129.5 | 3  | 17 | 31 | 79  | 85  | 42  | 0.02                      | 2LC0330-2AA | 2LC0330-2AB | 2LC0330-2AC         | 9.8  |
| 156  | 6600                           | 6200                               | 0                        | 100  | 213   | 130     | 76      | 156   | 5  | 17 | 29 | 93  | 110 | 47  | 0.05                      | 2LC0330-3AA | 2LC0330-3AB | 2LC0330-3AC         | 17.5 |
| 181  | 11000                          | 5800                               | 0                        | 116  | 240   | 153     | 90      | 181   | 5  | 19 | 33 | 109 | 130 | 58  | 0.09                      | 2LC0330-4AA | 2LC0330-4AB | 2LC0330-4AC         | 25.5 |
| 211  | 19200                          | 5100                               | 0                        | 137  | 280   | 180     | 105     | 211   | 6  | 23 | 40 | 128 | 150 | 67  | 0.21                      | 2LC0330-5AA | 2LC0330-5AB | 2LC0330-5AC         | 43   |
| 250  | 30680                          | 4500                               | 0                        | 164  | 318   | 214     | 120     | 249.5 | 6  | 24 | 42 | 144 | 175 | 72  | 0.39                      | 2LC0330-6AA | 2LC0330-6AB | 2LC0330-6AC         | 60   |
| 274  | 43550                          | 4000                               | 80                       | 178  | 347   | 233     | 135     | 274   | 8  | 29 | 50 | 164 | 190 | 81  | 0.59                      | 2LC0330-7AA | 2LC0330-7AB | 2LC0330-7AC         | 82   |
| 307  | 61750                          | 3750                               | 90                       | 198  | 390   | 260     | 150     | 307   | 8  | 32 | 56 | 182 | 220 | 91  | 1.1                       | 2LC0330-8AA | 2LC0330-8AB | 2LC0330-8AC         | 115  |
| 333  | 87100                          | 3550                               | 100                      | 216  | 425.5 | 283     | 175     | 332.5 | 8  | 39 | 70 | 214 | 250 | 104   | 1.8                       | 2LC0331-0AA | 2LC0331-0AB | 2LC0331-0AC         | 155  |
| 364  | 117000                         | 3400                               | 120                      | 242  | 457   | 312     | 190     | 364   | 8  | 46 | 84 | 236 | 265 | 126   | 2.3                       | 2LC0331-1AA | 2LC0331-1AB | 2LC0331-1AC         | 180  |
| 424  | 162500                         | 3200                               | 150                      | 288  | 527   | 371     | 220     | 423.5 | 10 | 43 | 76 | 263 | 300 | 140   | 4.9                       | 2LC0331-2AA | 2LC0331-2AB | 2LC0331-2AC         | 275  |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- Mass moments of inertia apply to a coupling half with maximum bore diameter.
- Weights apply to the entire coupling with maximum bores.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

### Ordering example

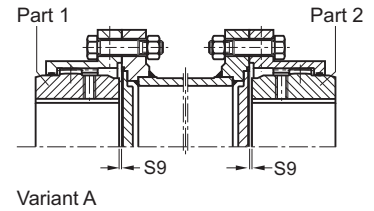
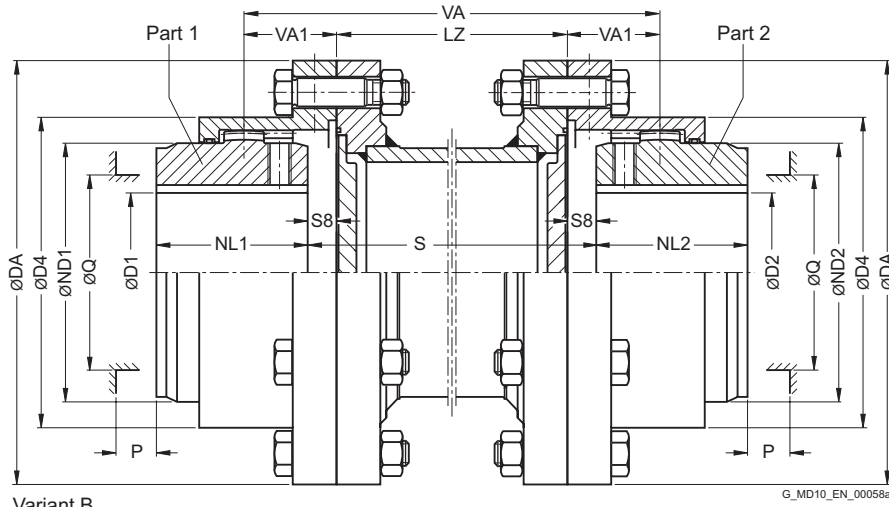
- ZAPEX ZNN coupling, size 107, variant A
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

Article no.: 2LC0330-1AA99-0AA0-Z L0W+M1A+M13

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

➤ For online configuration on [flender.com](http://flender.com), click on the item no.

# TYPE ZNZZ



| Size | Rated torque<br>$T_{KN}$<br>Nm | Dimensions in mm                   |     |       |         |         |       |      |     |       |     |     |         | Article no. <sup>1)</sup> |             | Weight each 100 mm pipe |     |
|------|--------------------------------|------------------------------------|-----|-------|---------|---------|-------|------|-----|-------|-----|-----|---------|---------------------------|-------------|-------------------------|-----|
|      |                                | D1, D2 Keyway DIN 6885-1 min. max. |     | DA    | ND1/ND2 | NL1/NL2 | D4    | S8   | S9  | VA1   | Q   | P   | LZ min. | Type A                    | Type B      | kg                      | m   |
| 83   | 1020                           | 0                                  | 50  | 117   | 67      | 43      | 83    | 10.5 | 1.5 | 27.5  | 52  | 31  | 75      | 2LC0330-0AD               | 2LC0330-0AE | 0.9                     | 5.5 |
| 107  | 2210                           | 0                                  | 65  | 152   | 87      | 50      | 107   | 7.5  | 1.5 | 29.5  | 68  | 34  | 85      | 2LC0330-1AD               | 2LC0330-1AE | 0.8                     | 12  |
| 130  | 4020                           | 0                                  | 82  | 178   | 108     | 62      | 129.5 | 15.5 | 1.5 | 39.5  | 85  | 42  | 95      | 2LC0330-2AD               | 2LC0330-2AE | 1.2                     | 16  |
| 156  | 6600                           | 0                                  | 100 | 213   | 130     | 76      | 156   | 14.5 | 2.5 | 46.5  | 110 | 47  | 110     | 2LC0330-3AD               | 2LC0330-3AE | 2.3                     | 28  |
| 181  | 11000                          | 0                                  | 116 | 240   | 153     | 90      | 181   | 16.5 | 2.5 | 54.5  | 130 | 58  | 110     | 2LC0330-4AD               | 2LC0330-4AE | 3.5                     | 40  |
| 211  | 19200                          | 0                                  | 137 | 280   | 180     | 105     | 211   | 20   | 3   | 64    | 150 | 67  | 125     | 2LC0330-5AD               | 2LC0330-5AE | 4.5                     | 64  |
| 250  | 30680                          | 0                                  | 164 | 318   | 214     | 120     | 249.5 | 21   | 3   | 72    | 175 | 72  | 125     | 2LC0330-6AD               | 2LC0330-6AE | 6.3                     | 91  |
| 274  | 43550                          | 80                                 | 178 | 347   | 233     | 135     | 274   | 25   | 4   | 82    | 190 | 81  | 125     | 2LC0330-7AD               | 2LC0330-7AE | 7.2                     | 115 |
| 307  | 61750                          | 90                                 | 198 | 390   | 260     | 150     | 307   | 28   | 4   | 91    | 220 | 91  | 145     | 2LC0330-8AD               | 2LC0330-8AE | 9.1                     | 175 |
| 333  | 87100                          | 100                                | 216 | 425.5 | 283     | 175     | 332.5 | 35   | 4   | 107   | 250 | 104 | 145     | 2LC0331-0AD               | 2LC0331-0AE | 12                      | 220 |
| 364  | 117000                         | 120                                | 242 | 457   | 312     | 190     | 364   | 42   | 4   | 118   | 265 | 126 | 145     | 2LC0331-1AD               | 2LC0331-1AE | 15                      | 245 |
| 424  | 162500                         | 150                                | 288 | 527   | 371     | 220     | 423.5 | 38   | 5   | 131.5 | 300 | 140 | 145     | 2LC0331-2AD               | 2LC0331-2AE | 16                      | 360 |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- $VA = 2 \cdot VA1 + LZ$
- Mass moment of inertia on request.
- Weights apply to the entire coupling with maximum bores and an adapter length of LZ min.
- Maximum speed, limited by weight and critical adapter speed, on request.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

### Ordering example

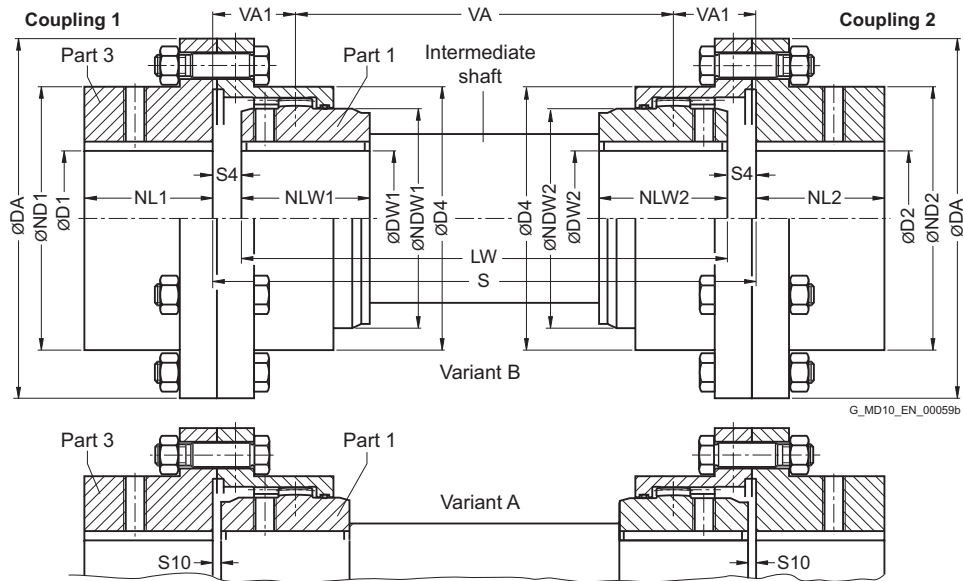
- ZAPEX ZNZZ coupling, size 107, variant B, adapter for S = 250 mm
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

Article no.: 2LC0330-1AE99-0AZ0-Z L0W+M1A+Q0Y+M13  
Plain text to Q0Y: 250 mm (dimension S)

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

➤ For online configuration on [flender.com](http://flender.com), click on the item no.

# TYPE ZNW



| Size | Rated torque<br>$T_{KN}$<br>Nm | Dimensions in mm               |      |       |             |                      |                                  |      |               |       |    |     | ➤ Article no. <sup>1)</sup> |             | Weight<br>$m$<br>kg |      |
|------|--------------------------------|--------------------------------|------|-------|-------------|----------------------|----------------------------------|------|---------------|-------|----|-----|-----------------------------|-------------|---------------------|------|
|      |                                | D1, D2<br>Keyway<br>DIN 6885-1 |      | DA    | ND1/<br>ND2 | NL1/NL2/<br>NLW1/LW2 | DW1, DW2<br>Keyway<br>DIN 6885-1 |      | NDW1/<br>NDW2 | D4    | S4 | S10 | VA1                         | Type        |                     |      |
|      |                                | min.                           | max. |       |             |                      | min.                             | max. |               |       |    |     |                             | A           | B                   |      |
| 83   | 1020                           | 0                              | 61   | 117   | 83          | 43                   | 0                                | 50   | 67            | 83    | 12 | 3   | 29                          | 2LC0330-0AV | 2LC0330-0AW         | 3.1  |
| 107  | 2210                           | 0                              | 79   | 152   | 107         | 50                   | 0                                | 65   | 87            | 107   | 9  | 3   | 31                          | 2LC0330-1AV | 2LC0330-1AW         | 6.2  |
| 130  | 4020                           | 0                              | 96   | 178   | 129.5       | 62                   | 0                                | 82   | 108           | 129.5 | 17 | 3   | 41                          | 2LC0330-2AV | 2LC0330-2AW         | 9.5  |
| 156  | 6600                           | 0                              | 116  | 213   | 156         | 76                   | 0                                | 100  | 130           | 156   | 17 | 5   | 49                          | 2LC0330-3AV | 2LC0330-3AW         | 17   |
| 181  | 11000                          | 0                              | 134  | 240   | 181         | 90                   | 0                                | 116  | 153           | 181   | 19 | 5   | 57                          | 2LC0330-4AV | 2LC0330-4AW         | 24.5 |
| 211  | 19200                          | 0                              | 156  | 280   | 211         | 105                  | 0                                | 137  | 180           | 211   | 23 | 6   | 67                          | 2LC0330-5AV | 2LC0330-5AW         | 41   |
| 250  | 30680                          | 0                              | 184  | 318   | 249.5       | 120                  | 0                                | 164  | 214           | 249.5 | 24 | 6   | 75                          | 2LC0330-6AV | 2LC0330-6AW         | 58   |
| 274  | 43550                          | 80                             | 202  | 347   | 274         | 135                  | 80                               | 178  | 233           | 274   | 29 | 8   | 86                          | 2LC0330-7AV | 2LC0330-7AW         | 76   |
| 307  | 61750                          | 90                             | 228  | 390   | 307         | 150                  | 90                               | 198  | 260           | 307   | 32 | 8   | 95                          | 2LC0330-8AV | 2LC0330-8AW         | 110  |
| 333  | 87100                          | 100                            | 247  | 425.5 | 332.5       | 175                  | 100                              | 216  | 283           | 332.5 | 39 | 8   | 111                         | 2LC0331-0AV | 2LC0331-0AW         | 150  |
| 364  | 117000                         | 120                            | 270  | 457   | 364         | 190                  | 120                              | 242  | 312           | 364   | 46 | 8   | 122                         | 2LC0331-1AV | 2LC0331-1AW         | 170  |
| 424  | 162500                         | 150                            | 313  | 527   | 423.5       | 220                  | 150                              | 288  | 371           | 423.5 | 43 | 10  | 136.5                       | 2LC0331-2AV | 2LC0331-2AW         | 270  |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

➤ For online configuration on [flender.com](http://flender.com), click on the item no.



## Notes

---

- $VA = S - 2 \cdot VA1$
  - Mass moment of inertia on request.
  - Weights apply to either coupling 1 or 2 with maximum bores, without intermediate shaft.
  - Maximum speed, limited by weight and critical speed of intermediate shaft, on request.
- 

## Ordering example

---

- Coupling 1:  
ZAPEX ZNW coupling, size 107, variant B,  
Part 3: Bore 45K7 mm, keyway to DIN 6885-1 P9  
and set screw, Part 1: Bore 45H7 mm,  
keyway to DIN 6885-1 P9 and set screw.
- 

**Article no.:** 2LC0330-1AW99-0AA0-Z L1A+L13+M1A

---

- Intermediate shaft:  
Intermediate shaft to ZAPEX ZNW coupling, size 107,  
length LW = 570 mm, shaft journal  $\varnothing 45p6$  x 50 long;  
keyway DIN 6885-1.
- 

**Article no.:** 2LC9310-0XH00-0AA0-Z Y99

**Plain text to Y99:** DW1 = 45p6 mm, NLW1 = 50 mm,  
DW2 = 45p6 mm, NLW2 = 50 mm, LW = 570 mm

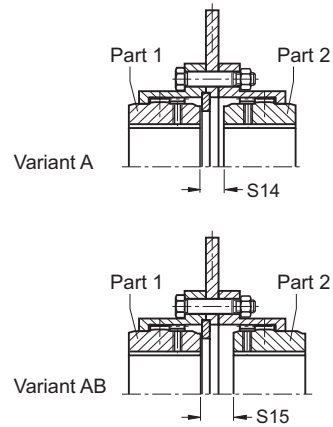
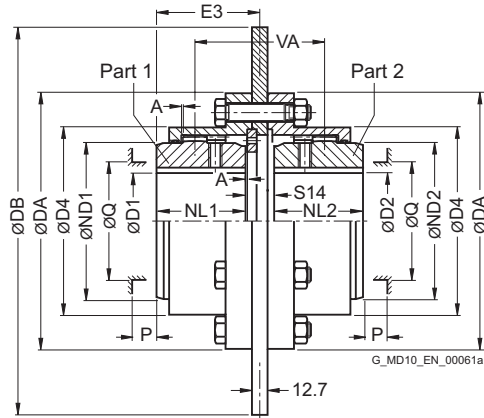
---

- Coupling 2:  
ZAPEX ZNW coupling, size 107, variant B,  
Part 1: Bore 45H7 mm, keyway to DIN 6885-1 P9  
and set screw, Part 3: Bore 45K7 mm,  
keyway to DIN 6885-1 P9 and set screw.
- 

**Article no.:** 2LC0330-0AW99-0AA0-Z L1A+M1A+L13

---

# TYPE ZNBG



5

| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm                      |     |     |         |         |       |      |      |     |       |     | Brake disk |       | Article no. <sup>1)</sup> |             | Weight<br>$m$<br>kg |      |
|------|--------------------------------|------------------------------------|---------------------------------------|-----|-----|---------|---------|-------|------|------|-----|-------|-----|------------|-------|---------------------------|-------------|---------------------|------|
|      |                                |                                    | D1, D2 Keyway DIN 6885-1<br>min. max. |     | DA  | ND1/ND2 | NL1/NL2 | D4    | S14  | S15  | A   | VA    | Q   | P          | DB    | E3                        | Type        |                     | A    |
| 83   | 1020                           | 3800                               | 0                                     | 50  | 117 | 67      | 43      | 83    | 17   | 26   | 0.5 | 69    | 52  | 31         | 300   | 52                        | 2LC0330-0AQ | 2LC0330-0AR         | 10   |
| 107  | 2210                           | 3200                               | 0                                     | 65  | 152 | 87      | 50      | 107   | 20.5 | 26.5 | 0.5 | 76.5  | 68  | 34         | 356   | 61                        | 2LC0330-1AQ | 2LC0330-1AR         | 16   |
| 130  | 4020                           | 3200                               | 0                                     | 82  | 178 | 108     | 62      | 129.5 | 20.5 | 34.5 | 0.5 | 96.5  | 85  | 42         | 356   | 73                        | 2LC0330-2AQ | 2LC0330-2AR         | 16.5 |
|      |                                | 17.5                               |                                       |     |     |         |         |       | 31.5 | 93.5 |     | 406   |     |            | 71.5  | 2LC0330-2AQ               | 2LC0330-2AR | 19.5                |      |
| 156  | 6600                           | 2800                               | 0                                     | 100 | 213 | 130     | 76      | 156   | 20   | 32   | 0.5 | 108   | 110 | 47         | 406   | 87                        | 2LC0330-3AQ | 2LC0330-3AR         | 29   |
|      |                                | 23                                 |                                       |     |     |         |         |       | 35   | 111  |     | 457   |     |            | 88.5  | 2LC0330-3AQ               | 2LC0330-3AR | 33                  |      |
| 181  | 11000                          | 2800                               | 0                                     | 116 | 240 | 153     | 90      | 181   | 20   | 34   | 0.5 | 124   | 130 | 58         | 406   | 101                       | 2LC0330-4AQ | 2LC0330-4AR         | 38   |
|      |                                | 23                                 |                                       |     |     |         |         |       | 37   | 127  |     | 457   |     |            | 102.5 | 2LC0330-4AQ               | 2LC0330-4AR | 42                  |      |
| 211  | 19200                          | 2500                               | 0                                     | 137 | 280 | 180     | 105     | 211   | 24.5 | 41.5 | 0.5 | 146.5 | 150 | 67         | 457   | 102.5                     | 2LC0330-4AQ | 2LC0330-4AR         | 46   |
|      |                                | 23                                 |                                       |     |     |         |         |       | 37   | 127  |     | 457   |     |            | 118.5 | 2LC0330-5AQ               | 2LC0330-5AR | 58                  |      |
| 250  | 30680                          | 2200                               | 0                                     | 164 | 318 | 214     | 120     | 249.5 | 24.5 | 41.5 | 1   | 162   | 175 | 72         | 514   | 118.5                     | 2LC0330-5AQ | 2LC0330-5AR         | 63   |
|      |                                | 24                                 |                                       |     |     |         |         |       | 42   | 162  |     | 610   |     |            | 118.5 | 2LC0330-5AQ               | 2LC0330-5AR | 71                  |      |
|      |                                | 1850                               | 0                                     |     |     |         |         |       | 24   | 42   | 1   | 162   | 175 | 72         | 514   | 133                       | 2LC0330-6AQ | 2LC0330-6AR         | 77   |
|      |                                | 1850                               |                                       |     |     |         |         |       | 24   | 42   |     | 162   |     |            | 610   | 133                       | 2LC0330-6AQ | 2LC0330-6AR         | 87   |
|      |                                | 1600                               |                                       |     |     |         |         |       | 27   | 45   |     | 165   |     |            | 711   | 134.5                     | 2LC0330-6AQ | 2LC0330-6AR         | 97   |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm         |       |     |         |         |      |      |     |       |     |     |     |       | Brake disk  |             | Article no. <sup>1)</sup> |     | Weight<br>$m$<br>kg |
|------|--------------------------------|------------------------------------|--------------------------|-------|-----|---------|---------|------|------|-----|-------|-----|-----|-----|-------|-------------|-------------|---------------------------|-----|---------------------|
|      |                                |                                    | D1, D2 Keyway DIN 6885-1 |       | DA  | ND1/ND2 | NL1/NL2 | D4   | S14  | S15 | A     | VA  | Q   | P   | DB    | E3          | Type        |                           |     |                     |
|      |                                |                                    | min.                     | max.  |     |         |         |      |      |     |       |     |     |     |       |             | A           | AB                        |     |                     |
| 274  | 43550                          | 2200                               | 178                      | 347   | 233 | 135     | 274     | 26.5 | 47.5 | 1   | 182.5 | 190 | 81  | 514 | 149.5 | 2LC0330-7AQ | 2LC0330-7AR | 97                        |     |                     |
|      |                                | 1850                               |                          |       |     |         |         | 26.5 | 47.5 |     | 182.5 |     |     | 610 | 149.5 | 2LC0330-7AQ | 2LC0330-7AR | 105                       |     |                     |
|      |                                | 1600                               |                          |       |     |         |         | 29.5 | 50.5 |     | 185.5 |     |     | 711 | 151   | 2LC0330-7AQ | 2LC0330-7AR | 115                       |     |                     |
|      |                                | 1400                               |                          |       |     |         |         | 35.5 | 56.5 |     | 191.5 |     |     | 812 | 154   | 2LC0330-7AQ | 2LC0330-7AR | 130                       |     |                     |
| 307  | 61750                          | 1850                               | 198                      | 390   | 260 | 150     | 307     | 27   | 51   | 1   | 201   | 220 | 91  | 610 | 165   | 2LC0330-8AQ | 2LC0330-8AR | 140                       |     |                     |
|      |                                | 1600                               |                          |       |     |         |         | 30   | 54   |     | 204   |     |     | 711 | 166.5 | 2LC0330-8AQ | 2LC0330-8AR | 155                       |     |                     |
|      |                                | 1400                               |                          |       |     |         |         | 36   | 60   |     | 210   |     |     | 812 | 169.5 | 2LC0330-8AQ | 2LC0330-8AR | 170                       |     |                     |
| 333  | 87100                          | 1600                               | 216                      | 425.5 | 283 | 175     | 332.5   | 30   | 61   | 1   | 236   | 250 | 104 | 711 | 191.5 | 2LC0331-0AQ | 2LC0331-0AR | 190                       |     |                     |
|      |                                | 1400                               |                          |       |     |         |         | 36   | 67   |     | 242   |     |     | 812 | 194.5 | 2LC0331-0AQ | 2LC0331-0AR | 205                       |     |                     |
| 364  | 117000                         | 1400                               | 120                      | 242   | 457 | 312     | 190     | 364  | 36   | 74  | 1     | 264 | 265 | 126 | 812   | 209.5       | 2LC0331-1AQ | 2LC0331-1AR               | 235 |                     |

Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

Notes

- Mass moment of inertia on request.
- Weights apply to maximum bores.
- Variant limited in displacement and axial movement. Max. displacement 0.2°.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

Ordering example

- ZAPEX ZN BG coupling, size 107, variant A, brake disk diameter DB = 356 mm
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

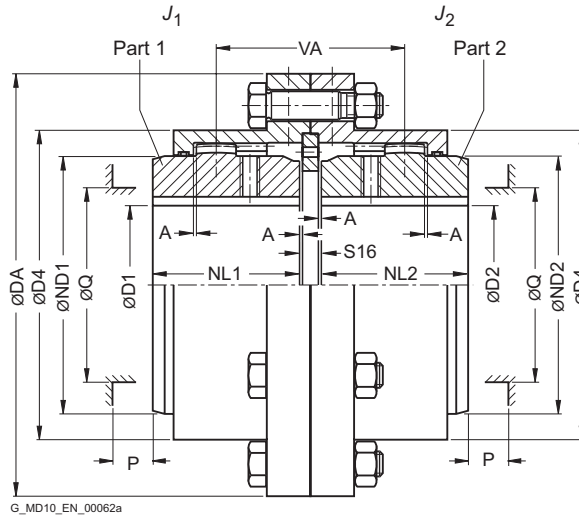
Article no.: 2LC0330-1AQ99-0AA0-Z L0W+M1A+M13

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

# TYPE ZNNA

5



| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm         |      |       |         |         |       |     |     |     |     |     | Mass moment of inertia<br>$J_1/J_2$<br>kgm <sup>2</sup> | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |  |
|------|--------------------------------|------------------------------------|--------------------------|------|-------|---------|---------|-------|-----|-----|-----|-----|-----|---|---------------------------|---------------------|--|
|      |                                |                                    | D1, D2 Keyway DIN 6885-1 |      | DA    | ND1/ND2 | NL1/NL2 | D4    | S16 | A   | VA  | Q   | P   |   |                           |                     |  |
|      |                                |                                    | min.                     | max. |       |         |         |       |     |     |     |     |     |   |                           |                     |  |
| 83   | 1020                           | 8500                               | 0                        | 50   | 117   | 67      | 43      | 83    | 5   | 0.5 | 57  | 52  | 31  | 0.003   | 2LC0330-0AF               | 3.3                 |  |
| 107  | 2210                           | 7700                               | 0                        | 65   | 152   | 87      | 50      | 107   | 6   | 0.5 | 62  | 68  | 34  | 0.01  | 2LC0330-1AF               | 6.7                 |  |
| 130  | 4020                           | 6900                               | 0                        | 82   | 178   | 108     | 62      | 129.5 | 6   | 0.5 | 82  | 85  | 42  | 0.021   | 2LC0330-2AF               | 10.5                |  |
| 156  | 6600                           | 6200                               | 0                        | 100  | 213   | 130     | 76      | 156   | 9   | 0.5 | 97  | 110 | 47  | 0.05  | 2LC0330-3AF               | 18                  |  |
| 181  | 11000                          | 5800                               | 0                        | 116  | 240   | 153     | 90      | 181   | 9   | 0.5 | 113 | 130 | 58  | 0.095   | 2LC0330-4AF               | 26.5                |  |
| 211  | 19200                          | 5100                               | 0                        | 137  | 280   | 180     | 105     | 211   | 11  | 0.5 | 133 | 150 | 67  | 0.22  | 2LC0330-5AF               | 44                  |  |
| 250  | 30680                          | 4500                               | 0                        | 164  | 318   | 214     | 120     | 249.5 | 10  | 1   | 148 | 175 | 72  | 0.4   | 2LC0330-6AF               | 62                  |  |
| 274  | 43550                          | 4000                               | 80                       | 178  | 347   | 233     | 135     | 274   | 13  | 1   | 169 | 190 | 81  | 0.64  | 2LC0330-7AF               | 82                  |  |
| 307  | 61750                          | 3750                               | 90                       | 198  | 390   | 260     | 150     | 307   | 14  | 1   | 188 | 220 | 91  | 1.1   | 2LC0330-8AF               | 115                 |  |
| 333  | 87100                          | 3550                               | 100                      | 216  | 425.5 | 283     | 175     | 332.5 | 14  | 1   | 220 | 250 | 104 | 1.8   | 2LC0331-0AF               | 155                 |  |
| 364  | 117000                         | 3400                               | 120                      | 242  | 457   | 312     | 190     | 364   | 14  | 1   | 242 | 265 | 126 | 2.4   | 2LC0331-1AF               | 185                 |  |
| 424  | 162500                         | 3200                               | 150                      | 288  | 527   | 371     | 220     | 423.5 | 18  | 1   | 271 | 300 | 140 | 4.9   | 2LC0331-2AF               | 285                 |  |

### Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- Mass moments of inertia apply to a coupling half with maximum bore diameter.
- Weights apply to the entire coupling with maximum bores.
- Variant limited in displacement and axial movement. Max. displacement 0.2°.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

### Ordering example

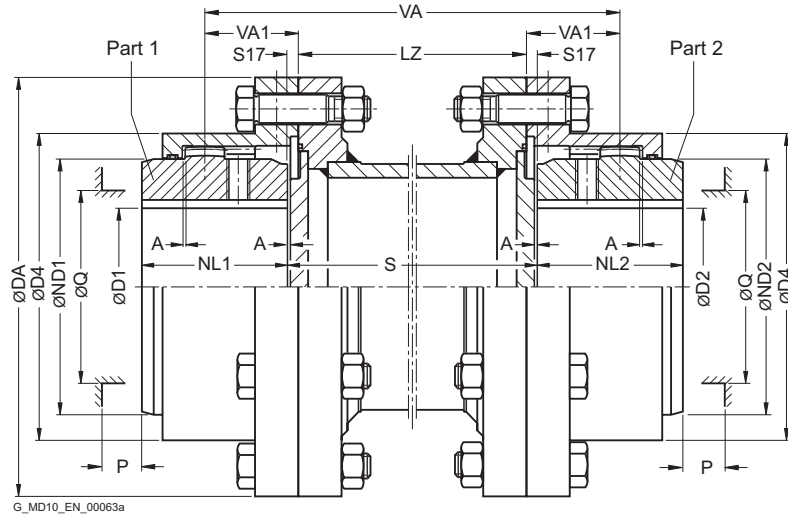
- ZAPEX ZNNA coupling, size 107
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

Article no.: 2LC0330-1AF99-0AA0-Z L0W+M1A+M13

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

↗ For online configuration on [flender.com](http://flender.com), click on the item no.

# TYPE ZNZA



| Size | Rated torque<br>$T_{KN}$<br>Nm | Dimensions in mm         |      |       |         |         |       |     |     |       |     |     | Article no. <sup>1)</sup> | Weight each 100 mm pipe |     |     |
|------|--------------------------------|--------------------------|------|-------|---------|---------|-------|-----|-----|-------|-----|-----|---------------------------|-------------------------|-----|-----|
|      |                                | D1, D2 Keyway DIN 6885-1 |      | DA    | ND1/ND2 | NL1/NL2 | D4    | S17 | A   | VA1   | Q   | P   |                           | LZ                      | m   | m   |
|      |                                | min.                     | max. |       |         |         |       |     |     |       |     |     | min.                      |                         | kg  | kg  |
| 83   | 1020                           | 0                        | 50   | 117   | 67      | 43      | 83    | 2.5 | 0.5 | 28.5  | 52  | 31  | 75                        | 2LC0330-0AG             | 0.9 | 5.5 |
| 107  | 2210                           | 0                        | 65   | 152   | 87      | 50      | 107   | 3   | 0.5 | 31    | 68  | 34  | 85                        | 2LC0330-1AG             | 0.8 | 12  |
| 130  | 4020                           | 0                        | 82   | 178   | 108     | 62      | 129.5 | 3   | 0.5 | 41    | 85  | 42  | 95                        | 2LC0330-2AG             | 1.2 | 16  |
| 156  | 6600                           | 0                        | 100  | 213   | 130     | 76      | 156   | 4.5 | 0.5 | 48.5  | 110 | 47  | 110                       | 2LC0330-3AG             | 2.3 | 28  |
| 181  | 11000                          | 0                        | 116  | 240   | 153     | 90      | 181   | 4.5 | 0.5 | 56.5  | 130 | 58  | 110                       | 2LC0330-4AG             | 3.5 | 40  |
| 211  | 19200                          | 0                        | 137  | 280   | 180     | 105     | 211   | 5.5 | 0.5 | 66.5  | 150 | 67  | 125                       | 2LC0330-5AG             | 4.5 | 64  |
| 250  | 30680                          | 0                        | 164  | 318   | 214     | 120     | 249.5 | 5   | 1   | 74    | 175 | 72  | 125                       | 2LC0330-6AG             | 6.3 | 91  |
| 274  | 43550                          | 80                       | 178  | 347   | 233     | 135     | 274   | 6.5 | 1   | 84.5  | 190 | 81  | 125                       | 2LC0330-7AG             | 7.2 | 115 |
| 307  | 61750                          | 90                       | 198  | 390   | 260     | 150     | 307   | 7   | 1   | 94    | 220 | 91  | 145                       | 2LC0330-8AG             | 9.1 | 175 |
| 333  | 87100                          | 100                      | 216  | 425.5 | 283     | 175     | 332.5 | 7   | 1   | 110   | 250 | 104 | 145                       | 2LC0331-0AG             | 12  | 220 |
| 364  | 117000                         | 120                      | 242  | 457   | 312     | 190     | 364   | 7   | 1   | 121   | 265 | 126 | 145                       | 2LC0331-1AG             | 15  | 245 |
| 424  | 162500                         | 150                      | 288  | 527   | 371     | 220     | 423.5 | 9   | 1   | 135.5 | 300 | 140 | 145                       | 2LC0331-2AG             | 16  | 360 |

### Configurable variants<sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- $VA = 2 \cdot VA1 + LZ$
- Mass moment of inertia on request.
- Weights apply to the entire coupling with maximum bores and an adapter length of LZ min.
- Maximum speed, limited by weight and critical adapter speed, on request.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

### Ordering example

- ZAPEX ZNZA coupling, size 107, adapter for S = 250 mm
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

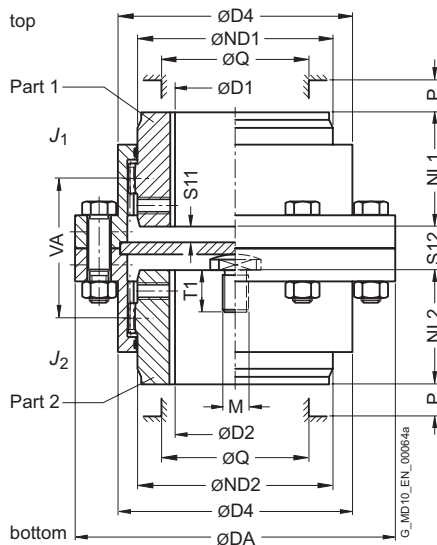
Article no.: 2LC0330-1AG99-0AZ0-Z L0W+M1A+Q0Y+M13  
Plain text to Q0Y: 250 mm (dimension S)

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [fletcher.com](http://fletcher.com).

➤ For online configuration on [fletcher.com](http://fletcher.com), click on the item no.

# TYPE ZNNV

5



| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm         |      |       |         |         |       |      |     |     |     |     | Mass moment of inertia<br>$J_1/J_2$<br>kgm <sup>2</sup> | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |  |
|------|--------------------------------|------------------------------------|--------------------------|------|-------|---------|---------|-------|------|-----|-----|-----|-----|---|---------------------------|---------------------|--|
|      |                                |                                    | D1, D2 Keyway DIN 6885-1 |      | DA    | ND1/ND2 | NL1/NL2 | D4    | S11  | S12 | VA1 | Q   | P   |   |                           |                     |  |
|      |                                |                                    | min.                     | max. |       |         |         |       |      |     |     |     |     |   |                           |                     |  |
| 83   | 1020                           | 8500                               | 0                        | 50   | 117   | 67      | 43      | 83    | 8    | 21  | 55  | 52  | 31  | 0.003   | 2LC0330-0AH               | 3.5                 |  |
| 107  | 2210                           | 7700                               | 0                        | 65   | 152   | 87      | 50      | 107   | 4.5  | 15  | 59  | 68  | 34  | 0.009   | 2LC0330-1AH               | 6.6                 |  |
| 130  | 4020                           | 6900                               | 0                        | 82   | 178   | 108     | 62      | 129.5 | 12.5 | 31  | 79  | 85  | 42  | 0.023   | 2LC0330-2AH               | 10.5                |  |
| 156  | 6600                           | 6200                               | 0                        | 100  | 213   | 130     | 76      | 156   | 10.5 | 29  | 93  | 110 | 47  | 0.055   | 2LC0330-3AH               | 17                  |  |
| 181  | 11000                          | 5800                               | 0                        | 116  | 240   | 153     | 90      | 181   | 12.5 | 33  | 109 | 130 | 58  | 0.1   | 2LC0330-4AH               | 25.5                |  |
| 211  | 19200                          | 5100                               | 0                        | 137  | 280   | 180     | 105     | 211   | 15   | 40  | 128 | 150 | 67  | 0.22  | 2LC0330-5AH               | 40                  |  |
| 250  | 30680                          | 4500                               | 0                        | 164  | 318   | 214     | 120     | 249.5 | 17   | 42  | 144 | 175 | 72  | 0.37  | 2LC0330-6AH               | 54                  |  |
| 274  | 43550                          | 4000                               | 80                       | 178  | 347   | 233     | 135     | 274   | 19.5 | 50  | 164 | 190 | 81  | 0.64  | 2LC0330-7AH               | 87                  |  |
| 307  | 61750                          | 3750                               | 90                       | 198  | 390   | 260     | 150     | 307   | 22   | 56  | 182 | 220 | 91  | 1.2   | 2LC0330-8AH               | 130                 |  |
| 333  | 87100                          | 3550                               | 100                      | 216  | 425.5 | 283     | 175     | 332.5 | 29   | 70  | 214 | 250 | 104 | 1.8   | 2LC0331-0AH               | 160                 |  |
| 364  | 117000                         | 3400                               | 120                      | 242  | 457   | 312     | 190     | 364   | 36   | 84  | 236 | 265 | 126 | 2.6   | 2LC0331-1AH               | 190                 |  |
| 424  | 162500                         | 3200                               | 150                      | 288  | 527   | 371     | 220     | 423.5 | 30   | 76  | 263 | 300 | 140 | 5.4   | 2LC0331-2AH               | 270                 |  |

## Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

## Notes

- Mass moments of inertia apply to a coupling half with maximum bore diameter.
- Weights apply to the entire coupling with maximum bores.
- When ordering, state thread size M and thread length T1 of the thrust piece.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

## Ordering example

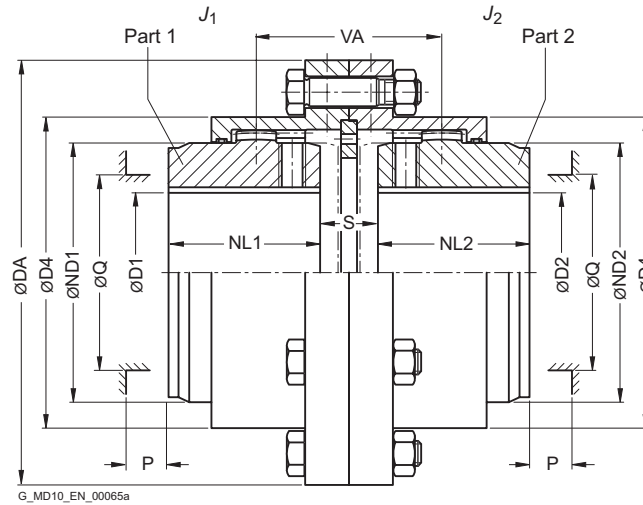
- ZAPEX ZNNV coupling, size 107
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw, thread M10 x 20 deep.

Article no.: 2LC0330-1AH99-0AA0-Z L0W+M1A+M13+Y99  
Plain text to Y99: Thread M10 x 20

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](https://www.flender.com).

➤ For online configuration on [flender.com](https://www.flender.com), click on the item no.

# TYPE ZNN FOR AXIAL DISPLACEMENT



| Size | Rated torque<br>$T_{KN}$<br>Nm | Maximum speed<br>$n_{Kmax}$<br>rpm | Dimensions in mm         |      |       |         |         |       |      |      |     |     |     | Mass moment of inertia<br>$J_1/J_2$<br>kgm <sup>2</sup> | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |
|------|--------------------------------|------------------------------------|--------------------------|------|-------|---------|---------|-------|------|------|-----|-----|-----|---|---------------------------|---------------------|
|      |                                |                                    | D1, D2 Keyway DIN 6885-1 |      | DA    | ND1/ND2 | NL1/NL2 | D4    | S    |      | VA  | Q   | P   |   |                           |                     |
|      |                                |                                    | min.                     | max. |       |         |         |       | min. | max. |     |     |     |   |                           |                     |
| 83   | 1020                           | 8500                               | 0                        | 50   | 117   | 67      | 43      | 83    | 6    | 21   | 55  | 52  | 31  | 0.003   | 2LC0330-0AY               | 3.3                 |
| 107  | 2210                           | 7700                               | 0                        | 65   | 152   | 87      | 50      | 107   | 7    | 15   | 59  | 68  | 34  | 0.01  | 2LC0330-1AY               | 6.7                 |
| 130  | 4020                           | 6900                               | 0                        | 82   | 178   | 108     | 62      | 129.5 | 16   | 31   | 79  | 85  | 42  | 0.021   | 2LC0330-2AY               | 10.5                |
| 156  | 6600                           | 6200                               | 0                        | 100  | 213   | 130     | 76      | 156   | 11   | 29   | 93  | 110 | 47  | 0.05  | 2LC0330-3AY               | 18                  |
| 181  | 11000                          | 5800                               | 0                        | 116  | 240   | 153     | 90      | 181   | 11   | 33   | 109 | 130 | 58  | 0.095   | 2LC0330-4AY               | 26.5                |
| 211  | 19200                          | 5100                               | 0                        | 137  | 280   | 180     | 105     | 211   | 14   | 40   | 128 | 150 | 67  | 0.22  | 2LC0330-5AY               | 44                  |
| 250  | 30680                          | 4500                               | 0                        | 164  | 318   | 214     | 120     | 249.5 | 12   | 42   | 144 | 175 | 72  | 0.4   | 2LC0330-6AY               | 62                  |
| 274  | 43550                          | 4000                               | 80                       | 178  | 347   | 233     | 135     | 274   | 16   | 50   | 164 | 190 | 81  | 0.64  | 2LC0330-7AY               | 82                  |
| 307  | 61750                          | 3750                               | 90                       | 198  | 390   | 260     | 150     | 307   | 17   | 56   | 182 | 220 | 91  | 1.1   | 2LC0330-8AY               | 115                 |
| 333  | 87100                          | 3550                               | 100                      | 216  | 425.5 | 283     | 175     | 332.5 | 17   | 70   | 214 | 250 | 104 | 1.8   | 2LC0331-0AY               | 155                 |
| 364  | 117000                         | 3400                               | 120                      | 242  | 457   | 312     | 190     | 364   | 17   | 84   | 236 | 265 | 126 | 2.4   | 2LC0331-1AY               | 185                 |
| 424  | 162500                         | 3200                               | 150                      | 288  | 527   | 371     | 220     | 423.5 | 23   | 76   | 263 | 300 | 140 | 4.9   | 2LC0331-2AY               | 285                 |

### Configurable variants<sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore

### Notes

- VA Valid at S max.
- Mass moments of inertia apply to a coupling half with maximum bore diameter.
- Weights apply to the entire coupling with maximum bores.
- Q Diameter required for renewing the sealing rings.  
P Length required for renewing the sealing rings, aligning the coupling parts and tightening the set screw.

### Ordering example

- ZAPEX ZNN coupling for axial displacement, size 107, S min. = 7 mm, S max. = 15 mm
- Part 1: Bore 40H7mm, keyway to DIN 6885-1 P9 and set screw
- Part 2: Bore 45K7 mm, keyway to DIN 6885-1 P9 and set screw

Article no.: 2LC0330-0AY99-0AA0-Z L0W+M1A+M13

<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

➤ For online configuration on [flender.com](http://flender.com), click on the item no.

# CUSTOMIZED HUB DESIGN

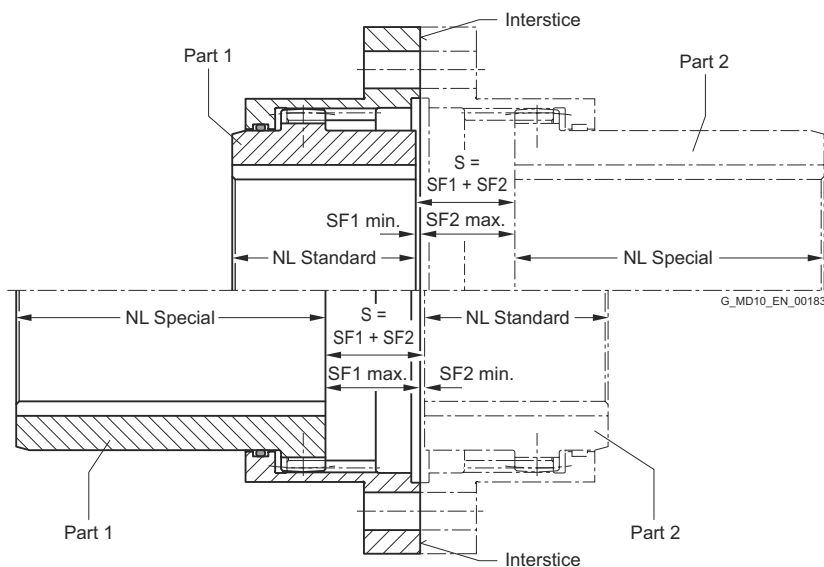
ZAPEX couplings can be provided with customized S-dimensions and hub lengths.

The entire dimension S results from the sum of the individual measurements SF1 and SF2. SF1 and SF2 are the measurements from the interstice of the coupling ring flange up to the beginning of the respective hub. As standard SF1 and SF2 are identical to each other and the entire S-dimension arises in accordance with them.

SF1 and SF2 can be chosen different on customer request, however the minimal and maximum values of the following table have to be observed. Within these limits the measurements SF1 and SF2 may be chosen freely.

The distance VA of the coupling teeth, the permitted bore diameter and the hub diameter remain unchanged.

By stating the hub S-dimension and both hub lengths the coupling is completely described.



| Geometric data |                     |                                 |                                 |
|----------------|---------------------|---------------------------------|---------------------------------|
| Size           | Standard hub length | Minimal dimension SF1 or SF2 mm | Maximum dimension SF1 or SF2 mm |
|                | NL mm               |                                 |                                 |
| 83             | 43                  | 1.5                             | 22                              |
| 107            | 50                  | 1.5                             | 23.5                            |
| 130            | 62                  | 1.5                             | 32                              |
| 156            | 76                  | 2.5                             | 36.5                            |
| 181            | 90                  | 2.5                             | 43.5                            |
| 211            | 105                 | 3                               | 51                              |
| 250            | 120                 | 3                               | 59                              |
| 274            | 135                 | 4                               | 64.5                            |
| 307            | 150                 | 4                               | 72                              |
| 333            | 175                 | 4                               | 85                              |
| 364            | 190                 | 4                               | 92                              |
| 424            | 220                 | 5                               | 100                             |

The minimal hub lengths are not to fall below the standard hub lengths. If there's no other possibility, for hub lengths smaller than standard hub lengths the order codes "Y50" for part 1 and "Y51" for part 2 must be stated in plain text.

## Article number

The Article number of the respective ZAPEX coupling type must be supplemented with "-Z" and order codes for non standard SF-dimensions (order code "Y38" for part 1 and "Y39" for part 2). For no standard hub lengths the order codes "Y40" to "Y49" must be specified (see Page 5/17).

## Ordering example

- ZAPEX coupling ZNN 130, variant A
- Hub left: Bore D1 = 70H7 mm, keyway to DIN 6885-1 P9 and set screw; NL1 = 110 mm; SF1 = 10 mm
- Hub right: Bore D2 = 75H7 mm, keyway to DIN 6885-1 P9 and set screw; NL2 = 75 mm; SF2 = 25 mm

Article no.: 2LC0330-2AA99-0AA0-Z L1G M1H Y38 Y39 Y41 Y46

Plain text to Y38: SF1 = 10 mm

Plain text to Y39: SF2 = 25 mm

Plain text to Y46: NL1 = 110 mm

Plain text to Y41: NL2 = 75 mm

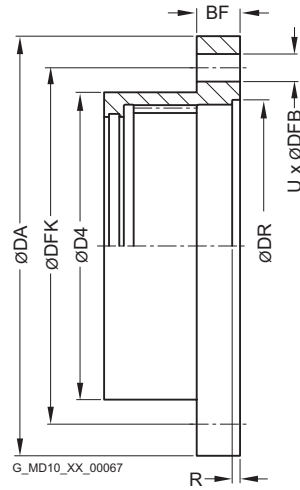


## Order code for hub prolongations Y4. (Std-NL = Standard hub length)

| Part 1                             |                                 |  |
|------------------------------------|---------------------------------|--|
| Selected (special) hub length min. | max.                            | Order code (specification of hub length in plain text) |
| >Std-NL                            | $\leq 1.25 \cdot \text{Std-NL}$ | Y40  |
| >1.25 · Std-NL                     | $\leq 1.5 \cdot \text{Std-NL}$  | Y42  |
| >1.5 · Std-NL                      | $\leq 1.75 \cdot \text{Std-NL}$ | Y44  |
| >1.75 · Std-NL                     | $\leq 2 \cdot \text{Std-NL}$    | Y46  |
| >2 · Std-NL                        |                                 | Y48  |

| Part 2                             |                                 |  |
|------------------------------------|---------------------------------|--|
| Selected (special) hub length min. | max.                            | Order code (specification of hub length in plain text) |
| >Std-NL                            | $\leq 1.25 \cdot \text{Std-NL}$ | Y41  |
| >1.25 · Std-NL                     | $\leq 1.5 \cdot \text{Std-NL}$  | Y43  |
| >1.5 · Std-NL                      | $\leq 1.75 \cdot \text{Std-NL}$ | Y45  |
| >1.75 · Std-NL                     | $\leq 2 \cdot \text{Std-NL}$    | Y47  |
| >2 · Std-NL                        |                                 | Y49  |

# TYPE ZN – FLANGE CONNECTION DIMENSIONS



| Size | Dimensions in mm |      |       |     |     |          |     |     |
|------|------------------|------|-------|-----|-----|----------|-----|-----|
|      | DA               | BF   | D4    | DFK | DFB | U Number | DR  | R   |
| 83   | 117              | 14   | 83    | 100 | 9   | 6        | 82  | 2.5 |
| 107  | 152              | 19   | 107   | 131 | 11  | 6        | 105 | 3   |
| 130  | 178              | 19   | 129.5 | 157 | 11  | 8        | 130 | 3   |
| 156  | 213              | 22   | 156   | 188 | 13  | 6        | 153 | 4   |
| 181  | 240              | 22   | 181   | 213 | 13  | 10       | 178 | 4   |
| 211  | 280              | 28.5 | 211   | 249 | 17  | 8        | 205 | 5   |
| 250  | 318              | 28.5 | 249.5 | 287 | 17  | 10       | 243 | 4   |
| 274  | 347              | 28.5 | 274   | 315 | 17  | 12       | 265 | 5.5 |
| 307  | 390              | 38   | 307   | 352 | 21  | 12       | 302 | 6   |
| 333  | 425.5            | 38   | 332.5 | 385 | 21  | 14       | 320 | 6   |
| 364  | 457              | 26   | 364   | 416 | 21  | 16       | 353 | 6   |
| 424  | 527              | 28.5 | 423.5 | 482 | 25  | 16       | 412 | 8   |

# SPARE AND WEAR PARTS

## Sealing rings

The sealing rings are wear parts and must be replaced in accordance with the operating instructions.

| Size | Hub diameter<br>ND1/ND2<br>mm | Article No.        |
|------|-------------------------------|--------------------|
| 83   | 67                            | 2LC0330-0XE00-0AA0 |
| 107  | 87                            | 2LC0330-1XE00-0AA0 |
| 130  | 108                           | 2LC0330-2XE00-0AA0 |
| 156  | 130                           | 2LC0330-3XE00-0AA0 |
| 181  | 153                           | 2LC0330-4XE00-0AA0 |
| 211  | 180                           | 2LC0330-5XE00-0AA0 |
| 250  | 214                           | 2LC0330-6XE00-0AA0 |
| 274  | 233                           | 2LC0330-7XE00-0AA0 |
| 307  | 260                           | 2LC0330-8XE00-0AA0 |
| 333  | 283                           | 2LC0331-0XE00-0AA0 |
| 364  | 312                           | 2LC0331-1XE00-0AA0 |
| 424  | 371                           | 2LC0331-2XE00-0AA0 |

5

## High-performance grease

| Container | Content<br>g | Article No.      |
|-----------|--------------|------------------|
| Cartridge | 300          | FFA:000000501027 |

## Sealing compound

| Container | Content<br>ml | Article No.      |
|-----------|---------------|------------------|
| Tube      | 60            | FFA:000001443780 |