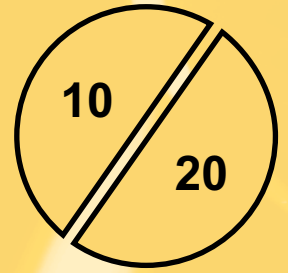




Quality products for Mechanical
& Fluid Power



BACKLASH FREE

SIPEX[®] & BIPEX-S[®] COUPLINGS



N-EUPEX[®], RUPEX[®] and N-BIPEX[®]
Flexible Couplings

Flexible Flender couplings have a wide range of possible applications. A broad standard modular system as well as specially designed application specific couplings are available.



N-EUPEX
 cam couplings
 Rated torque: 19 Nm ... 85,000 Nm



RUPEX
 pin-and-bush couplings
 Rated torque: 200 Nm ... 1,300,000 Nm



N-BIPEX
 cam couplings
 Rated torque: 12 Nm ... 1,300 Nm

ELPEX[®], ELPEX-B[®] and ELPEX-S[®]
Highly Flexible Couplings

ELPEX[®] couplings are free of circumferential back-lash. Their damping capacity and low torsional stiffness make them especially well-suited for coupling machines with widely variable torque characteristics or large shaft misalignment.



ELPEX
 elastic ring couplings
 Rated torque: 1,600 Nm ... 90,000 Nm



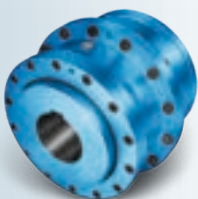
ELPEX-B
 elastic tire couplings
 Rated torque: 24 Nm ... 14,500 Nm



ELPEX-S
 rubber disk couplings
 Rated torque: 330 Nm ... 63,000 Nm

ZAPEX[®] gear couplings and ARPEX[®] all-steel couplings
Torsionally Rigid Couplings

For transmission of high torques, we offer both ARPEX all-steel disc couplings and ZAPEX gear couplings in a range of versions. The applications vary according to specific requirements, with respect to shaft misalignment, temperature and torque.



ZAPEX
 gear couplings
 Rated torque: 1,300 Nm ... 7,200,000 Nm



ARPEX
 high performance disc couplings
 Rated torque: 1,000 Nm ... 80,000 Nm



N-ARPEX and ARPEX
 all-steel disc couplings
 Rated torque: 92 Nm ... 2,000,000 Nm

BIPEX-S[®] and SIPEX[®]
Backlash-Free Couplings

The vibration-damping, electrically insulating plug-in BIPEX-S elastomer couplings and SIPEX metal bellows couplings deliver especially accurate component positioning.



BIPEX-S and SIPEX
 Rated torque: 0.1 Nm ... 5,000 Nm





FLUDEX® couplings are hydrodynamic fluid couplings which operate on the Fottinger principle.

FLUDEX® couplings limit starting and maximum torque in the drive train and, through the property of rotational slip, serve as an aid to starting the motor, as overload protection in the event of fault and for isolating torsional vibration. To compensate for shaft misalignment, the FLUDEX® coupling is combined with a displacement coupling e.g. of the N-EUPEX® type.

#FLUDEX

Railway Couplings

Couplings for rail vehicles developed, tested and produced for reliability and safety.



ZBG series [read info ...](#)



LBK series [read info ...](#)



GKG series [read info ...](#)



MBG series [read info ...](#)



MBG-ISO series [read info ...](#)



ARS series [read info ...](#)

Couplings designed for partially and fully suspended drives which can be mounted between motor and gear unit or gear unit and wheel-set shaft. Designed and tested to withstand the high forces created by axle loads of up to 32 t, motor speeds of over 6,000 rpm and driving speeds of more than 400 km/h. All models tested under extreme conditions to guarantee maximum reliability. A broad range of products in all necessary sizes and designs as standard.

FLENDER Railway Couplings offer:

- » High quality.
- » 100% component traceability.
- » Great depth within an extensive product range.
- » Component compatibility with Flender gear units for rail vehicles.
- » Low maintenance costs and a high level of serviceability.

#railway-couplings



Mechanical Power Transmission Couplings Fitting Recommendations

Parallel Key Connections to Din 6885-1
The standard keying according to the following table also refers to conventional
in order to ensure conditions of fitting according to ISO 286 and ISO 332-1 in order to
avoid excessive loading. The values in this table are given in rounded values.
The shafting will have to be finished to the tolerance class

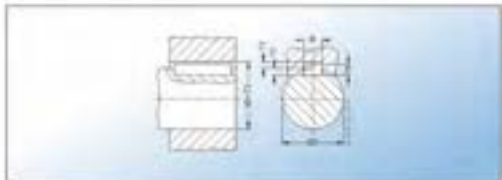


Table with 14 columns: Shaft diameter, Hub diameter, Shaft tolerance, Hub tolerance, Fit, etc.

Mechanical Power Transmission Couplings Technical Information

Key to symbols table with columns: Symbol, Name, Unit, and Description.

Mechanical Power Transmission Couplings Technical Information

Key to symbols table with columns: Symbol, Name, Unit, and Description.

Table with columns: Shaft diameter, Hub diameter, Key width, etc., for different coupling models.

Selection of the Coupling Series
The coupling series is selected according to the maximum torque, shaft diameter, shaft tolerance and key width.

Table with columns: Shaft diameter, Hub diameter, Key width, etc.

Mechanical Power Transmission Couplings Technical Information

Key to symbols table with columns: Symbol, Name, Unit, and Description.

Typical coupling solutions for different example applications
This table provides typical coupling solutions for different applications. The solutions are given in the form of a table.

Table with columns: Application, Coupling type, Key type, etc.



- See the FLENDER COUPLINGS INTRODUCTION for:
» Shaft coupling types.
» Shaft misalignment.
» Balancing.
» Shaft hub connections.
» Key to symbols & selection of coupling series.
» Typical coupling solutions for different applications.
» Selection of coupling size.
» Checking shaft hub connection & environmental conditions.
» Fitting recommendations including DIN ISO 286 details.
» Cylindrical shaft ends, extract from DIN 748 Part 1 (long) & central holes according to DIN 332 Part 2.
» Parallel Key Connections to Din 6885-1.

#couplings-technical-info



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E & OE

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FLENDER **Flender**
9,544 followers
1w •

<https://lnkd.in/eArCCRi>

New distribution partnership in the UK: We have now partnered with **jbj Techniques Limited** as the official partner for our whole couplings range in the United Kingdom and kicked off our cooperation by a digital signing of the partnership contract. JBJ has a wealth of experience in established and niche applications, such examples are: Mechanical drives for subsea wave energy, steel works crucible handling equipment or marine winch drives. We are happy to have them on our side for our UK coupling customers, especially for the supply of the recently optimized N-EUPEX!

Get to know the industry benchmark in couplings and reach out to **Mat Jackson**, Product Manager Couplings at Flender UK, and **Mike Davis**, Managing Director at JBJ for further queries.

Learn more about our couplings range here: <https://lnkd.in/dAir-av>

#flender #couplings #neupex #newpartnership #cooperation #WeMoveTheWorld





The product code consists of a combination of digits and letters and is divided into three blocks linked by hyphens for better clarity.

The coupling series, the type and the size are encoded in blocks 1 and 2. Block 3 contains information applying only to the coupling specified in blocks 1 and 2.

The three blocks of the article number are supplemented by information on the bore of the coupling hub parts and information on "Special Types".

The bore details with the code letter L always refer to the bore diameter D1 of the hub part shown on the left on the dimension drawing. The order code beginning with M always refers to the bore diameter D2 of the hub part shown on the right on the dimension drawing.

The order code without the letter "-Z" refers to tolerance H7 without keyway. An exception to this rule is type BNN of series BIPEX-S to which tolerance H7 with keyway applies.

To order other types with keyway, the letter "-Z" must be appended to the product code.

L40 / M40 = Keyway according to DIN 6885, keyway width JS9

L41 / M41 = Keyway according to DIN 6885, keyway width P9

| Structure of the Article No. | Place | 1 | 2 | 3 | 4 | 5 | 6 | 7 | - | 8 | 9 | 10 | 11 | 12 | - | 13 | 14 | 15 | 16 | |
|---|---|---|---|---|---------------|--------|--------|-------------|---|---------------|---------------|----|----|----|---|----|----|----|----|-----|
| Standard couplings | | | | | | | | | | | | | | | | | | | | |
| 1st to 3rd place Digit, letter, letter | Type | 2 | L | C | | | | | | | | | | | | | | | | |
| 4th place Digit | Coupling design | | | | 0 ... 9 | | | | | | | | | | | | | | | |
| 5th and 6th place Digits | Series SIPEX BIPEX-S | | | | | 5 1 | 9 9 | | | | | | | | | | | | | |
| 7th and 8th place Digits | Size | | | | | | | 0 1 2 | | 0 ... 8 | | | | | | | | | | |
| 9th and 10th place Letters | Type, subassembly or component part | | | | | | | | | | A ... H | A | | | | | | | | |
| 11th place Digit | Shaft-hub connection, flange connection | | | | | | | | | | | | 9 | | | | | | | |
| 12th place Digit | Shaft-hub connection, flange connection, V-belt pulley | | | | | | | | | | | | | 9 | | | | | | |
| 13th to 16th place Digit, letter, letter, digit | Further technical design details Z requires order code Q0Y and additional information in plain text for dimension S. | | | | | | | | | | | | | | | 0 | A | A | 0 | |
| Bore specifications | Additional order codes for bores finished in delivery condition $\varnothing D1$ and $\varnothing D2$ Specification of "9" in the 11th Place of the article number (article number without "-Z") with order codes L.. for $\varnothing D1$ and/or specification of "9" in the 12th Place of the article number (article number without "-Z") with order codes M.. for $\varnothing D2$ Selection of order codes for diameter and tolerance in the following tables under "Bore specifications". | | | | | | | | | | | | | | | | | | | |
| Special types | Additional order codes (article number with "-Z") and, if required, plain text | | | | | | | | | | | | | | | | | | | - Z |



Options

Additional identification code with order codes for bore specifications (no letter "-Z" required) Identification codes with order codes have been specified for the bore specifications.

A bore is ordered by specifying the digit 9 in the 11th and 12th places of the article number and by adding the appropriate order codes for $\varnothing D1$ and $\varnothing D2$ from the table below.

Unless a different bore tolerance is specified, H7 is selected for all metric bore diameters. To order a bore diameter other than the values stated in the table, the digit 9 must be specified in the 11th and/or 12th place of the article number; in addition, the letter "-Z" must be added to the article number as well as the order code L9Y with plain text for the left-hand hub and/or order code M9Y with plain text for the right-hand hub.

| Bore diameter metric in mm | | | | | | | | |
|----------------------------|------------------------------|------------------|---------------|------------------------------|------------------|---------------|------------------------------|------------------|
| Bore diameter | Order code for bore diameter | | Bore diameter | Order code for bore diameter | | Bore diameter | Order code for bore diameter | |
| | $\varnothing D1$ | $\varnothing D2$ | | $\varnothing D1$ | $\varnothing D2$ | | $\varnothing D1$ | $\varnothing D2$ |
| 1 | L3L | M3L | 16 | L0J | M0J | 42 | L0X | M0X |
| 2 | L3M | M3M | 18 | L0K | M0K | 45 | L1A | M1A |
| 3 | L3N | M3N | 19 | L0L | M0L | 48 | L1B | M1B |
| 4 | L3P | M3P | 20 | L0M | M0M | 50 | L1C | M1C |
| 5 | L3Q | M3Q | 22 | L0N | M0N | 55 | L1D | M1D |
| 6 | L0A | M0A | 24 | L0P | M0P | 60 | L1E | M1E |
| 7 | L0B | M0B | 25 | L0Q | M0Q | 65 | L1F | M1F |
| 8 | L0C | M0C | 28 | L0R | M0R | 70 | L1G | M1G |
| 9 | L0D | M0D | 30 | L0S | M0S | 75 | L1H | M1H |
| 10 | L0E | M0E | 32 | L0T | M0T | 80 | L1J | M1J |
| 11 | L0F | M0F | 35 | L0U | M0U | 85 | L1K | M1K |
| 12 | L0G | M0G | 38 | L0V | M0V | 90 | L1L | M1L |
| 14 | L0H | M0H | 40 | L0W | M0W | | | |

Unless a different bore tolerance is specified, H7 is selected for all imperial bore diameters.

| Bore diameter imperial in inches | | | | | | | | |
|----------------------------------|------------------------------|------------------|---------------|------------------------------|------------------|---------------|------------------------------|------------------|
| Bore diameter | Order code for bore diameter | | Bore diameter | Order code for bore diameter | | Bore diameter | Order code for bore diameter | |
| | $\varnothing D1$ | $\varnothing D2$ | | $\varnothing D1$ | $\varnothing D2$ | | $\varnothing D1$ | $\varnothing D2$ |
| 0.1875 | L5A | M5A | 1.3125 | L5T | M5T | 2.375 | L6N | M6N |
| 0.25 | L5B | M5B | 1.375 | L5U | M5U | 2.4375 | L6P | M6P |
| 0.3215 | L5C | M5C | 1.4375 | L5V | M5V | 2.5 | L6Q | M6Q |
| 0.375 | L5D | M5D | 1.5 | L5W | M5W | 2.5625 | L6R | M6R |
| 0.5 | L5E | M5E | 1.5625 | L5X | M5X | 2.625 | L6S | M6S |
| 0.5625 | L5F | M5F | 1.625 | L6A | M6A | 2.6875 | L6T | M6T |
| 0.625 | L5G | M5G | 1.6875 | L6B | M6B | 2.75 | L6U | M6U |
| 0.6875 | L5H | M5H | 1.75 | L6C | M6C | 2.8125 | L6V | M6V |
| 0.75 | L5J | M5J | 1.8125 | L6D | M6D | 2.875 | L6W | M6W |
| 0.8125 | L5K | M5K | 1.875 | L6E | M6E | 2.9375 | L6X | M6X |
| 0.875 | L5L | M5L | 1.9375 | L6F | M6F | 3 | L7A | M7A |
| 0.9375 | L5M | M5M | 2 | L6G | M6G | 3.0625 | L7B | M7B |
| 1 | L5N | M5N | 2.0625 | L6H | M6H | 3.125 | L7C | M7C |
| 1.0625 | L5P | M5P | 2.125 | L6J | M6J | 3.3125 | L7D | M7D |
| 1.125 | L5Q | M5Q | 2.1875 | L6K | M6K | 3.375 | L7E | M7E |
| 1.1875 | L5R | M5R | 2.25 | L6L | M6L | 3.4375 | L7F | M7F |
| 1.25 | L5S | M5S | 2.3125 | L6M | M6M | 3.5 | L7G | M7G |

Additional identification code with order code for shaft distance (no letter "-Z" required).

Order specification with order code Q0Y has been specified for the shaft distance.

Shaft distance is ordered by specifying the letter Z in the 15th place of the article number, adding order code Q0Y and providing additional information in plain text for dimension S (shaft distance).

Ordering example:

SIPEX SHH-W coupling, size 60

Shaft distance S = 1000 mm

Total length LG = 1044 mm

Bore $\varnothing D1$ 24 H7

Bore $\varnothing D2$ 28 H7

Product code: **2LC0591-1AH99-0AZ0 L0P+M0R+Q0Y**

Plain text for Q0Y: S = 1000 mm



Transmissible torques of the different clamping connections as a function of hub design and shaft diameter.

SIPEX series

| Size | Hub design | Transmissible torque of clamping connection in Nm | | | | | | | | | | | | | | | | | | | | | | | | |
|------|------------|---|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|----|----|----|------|------|------|----|
| | | Bore diameter \varnothing D1/D2 in mm | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 19 | 20 | 22 | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42 | 45 | 48 | 50 | 55 |
| 5 | G | - | 1.1 | 1.2 | 1.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | H | - | 0.6 | 0.8 | 1.3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10 | G | - | 1.1 | 1.2 | 1.4 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | H | - | 0.6 | 0.8 | 1.3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 15 | G | - | 2.4 | 2.5 | 2.8 | 3.1 | 3.3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | H | - | 1.1 | 1.4 | 2.1 | 2.8 | 3.5 | 4.2 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 20 | G | - | 4.4 | 4.6 | 5.1 | 5.5 | 5.9 | 6.3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | H | - | 1.6 | 2.2 | 3.2 | 4.3 | 5.4 | 6.5 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 45 | G | - | - | - | 8.1 | 8.6 | 9.2 | 9.7 | 10.3 | 10.8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | H | - | - | - | 5.5 | 7.4 | 9.2 | 11 | 12.9 | 14.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 100 | G | - | - | - | 10.3 | 10.8 | 11.4 | 11.9 | 12.5 | 13.1 | 13.8 | 14.2 | 14.7 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | H | - | - | - | 5.5 | 7.4 | 9.2 | 11 | 12.9 | 14.7 | 16.6 | 18.4 | 20.2 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 18 | G | - | - | - | - | 25.7 | 26.9 | 28.1 | 29.3 | 30.5 | 32.3 | 33 | 34 | 35.3 | 36 | - | - | - | - | - | - | - | - | - | - | - |
| | H | - | - | - | - | 12.2 | 15.2 | 18.3 | 21.3 | 24.4 | 29 | 30.5 | 33.5 | 36.6 | 38 | - | - | - | - | - | - | - | - | - | - | - |
| | K | - | - | - | - | 22 | 35 | 50 | 68 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | I | - | - | - | - | 17 | 27 | 39 | 53 | 69 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 30 | G | - | - | - | - | 42.2 | 44 | 45.6 | 47.3 | 50 | 50.7 | 52.4 | 54 | 55 | 57.4 | 59 | - | - | - | - | - | - | - | - | - | - |
| | H | - | - | - | - | 21.5 | 25.8 | 30.1 | 34.4 | 40.9 | 43 | 47.3 | 51.6 | 53.9 | 60.2 | 64.5 | - | - | - | - | - | - | - | - | - | - |
| | K | - | - | - | - | 39 | 53 | 69 | 97 | 108 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | I | - | - | - | - | 33 | 44 | 58 | 82 | 90 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 60 | G | - | - | - | - | 93 | 96 | 99 | 104 | 105 | 108 | 112 | 113 | 118 | 121 | 124 | 129 | - | - | - | - | - | - | - | - | - |
| | H | - | - | - | - | 47.4 | 55.3 | 63.2 | 75 | 79 | 87 | 95 | 99 | 111 | 119 | 126 | 138 | - | - | - | - | - | - | - | - | - |
| | K | - | - | - | - | 65 | 92 | 102 | 123 | 147 | 159 | 200 | 229 | 261 | - | - | - | - | - | - | - | - | - | - | - | - |
| | I | - | - | - | - | 63 | 86 | 112 | 158 | 175 | 211 | 251 | 273 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 80 | G | - | - | - | - | 173 | 178 | 185 | 188 | 193 | 198 | 200 | 207 | 212 | 217 | 225 | 232 | 237 | 242 | - | - | - | - | - | - | - |
| | H | - | - | - | - | 88 | 100 | 120 | 126 | 138 | 151 | 157 | 176 | 189 | 201 | 220 | 239 | 251 | 264 | - | - | - | - | - | - | - |
| | K | - | - | - | - | 131 | 159 | 189 | 205 | 257 | 295 | 336 | 402 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | I | - | - | - | - | 147 | 178 | 212 | 230 | 289 | 331 | 330 | 394 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 150 | G | - | - | - | - | 172 | 178 | 185 | 188 | 193 | 198 | 200 | 207 | 212 | 217 | 225 | 232 | 237 | 242 | - | - | - | - | - | - | - |
| | H | - | - | - | - | 88 | 100 | 120 | 126 | 138 | 151 | 157 | 176 | 189 | 201 | 220 | 239 | 251 | 264 | - | - | - | - | - | - | - |
| | K | - | - | - | - | 131 | 159 | 189 | 205 | 257 | 295 | 336 | 402 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | I | - | - | - | - | 147 | 178 | 212 | 230 | 289 | 331 | 330 | 394 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 200 | G | - | - | - | - | 300 | 306 | 313 | 317 | 328 | 335 | 342 | 353 | 364 | 371 | 378 | 389 | - | - | - | - | - | - | - | - | - |
| | H | - | - | - | - | 183 | 202 | 220 | 229 | 257 | 275 | 293 | 321 | 348 | 367 | 385 | 413 | - | - | - | - | - | - | - | - | - |
| | K | - | - | - | - | 151 | 182 | 217 | 235 | 295 | 339 | 285 | 341 | 402 | 446 | 491 | - | - | - | - | - | - | - | - | - | - |
| | I | - | - | - | - | 147 | 178 | 212 | 230 | 289 | 331 | 330 | 394 | 395 | 438 | 483 | - | - | - | - | - | - | - | - | - | - |
| 300 | G | - | - | - | - | 338 | 342 | 353 | 360 | 367 | 378 | 389 | 396 | 403 | 414 | 425 | 432 | - | - | - | - | - | - | - | - | - |
| | H | - | - | - | - | 220 | 229 | 257 | 275 | 293 | 321 | 348 | 367 | 385 | 413 | 440 | 458 | - | - | - | - | - | - | - | - | - |
| | K | - | - | - | - | 328 | 412 | 472 | 538 | 643 | 758 | 687 | 757 | 869 | 1073 | - | - | - | - | - | - | - | - | - | - | - |
| | I | - | - | - | - | 314 | 394 | 452 | 515 | 616 | 726 | 804 | 744 | 854 | 972 | 1055 | - | - | - | - | - | - | - | - | - | - |
| 500 | G | - | - | - | - | 588 | 603 | 613 | 623 | 638 | 658 | 662 | 687 | 712 | - | - | - | - | - | - | - | - | - | - | - | - |
| | H | - | - | - | - | 441 | 478 | 504 | 529 | 567 | 604 | 630 | 692 | 755 | - | - | - | - | - | - | - | - | - | - | - | - |
| | K | - | - | - | - | 477 | 562 | 623 | 686 | 788 | 897 | 973 | 1177 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | I | - | - | - | - | 373 | 425 | 508 | 599 | 664 | 732 | 840 | 884 | 959 | 1160 | - | - | - | - | - | - | - | - | - | - | - |
| 800 | K | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1773 | 2146 | 2553 | |
| 1400 | K | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1773 | 2146 | 2553 | |

G = clamping hub
H = half-shell
K = external taper
I = internal taper



Overview

SIPEX couplings are torsionally rigid and backlash-free. They are characterized by their compact design and high power density.

SIPEX couplings connect machine shafts and compensate for shaft misalignment that can occur during assembly or operation.

SIPEX couplings are suitable for all drive applications which require a coupling that offers positioning accuracy as well as a reliable, wear and maintenance free torque transmission.

Benefits

SIPEX couplings are suitable for mounting horizontally, vertically or in any desired position. The coupling parts can be arranged as required on the shaft ends to be connected.

The metal bellows are very torsional-resistant and combined with different clamping options ensure torque transmission between the connected shafts. The moment of inertia is low.

SIPEX couplings compensate axial, radial and angular shaft misalignment with only low restoring forces. SIPEX couplings are wear-free when used within their catalogue rating, offering an extended service life.

Application

SIPEX couplings are available in 19 sizes within the standard catalogue range, 7 of which are miniature versions whilst the remaining 12 being of standard design. Rated torques range from 0.1 to 5000 Nm.

The coupling is suitable for ambient temperatures of between -30 °C to +120 °C.

Alternative couplings are available for higher ambient temperatures up to +250 °C.

SIPEX couplings from the standard range are especially suitable for application in highly dynamic drives such as, linear axes in machine tools, packaging machines or printing presses, or drives for automation.

SIPEX couplings from the miniature range are designed for use in combination with rotary encoders, stepper motors or tachometers.





Design

SIPEX couplings consist of two hub parts that are connected by means of bellows made of high-strength stainless steel.

The hubs can be coupled to the shafts by many different methods including set screws, key joint, slotted clamping hubs, half-shell hubs, clamping hubs or expanding hubs.

Thanks to their metal bellows, SIPEX couplings are torsionally rigid, but flexible. Misalignment between the connected shafts deforms the metal bellows.

Coupling materials

Depending on the coupling version, hubs are made of aluminium (N, G, H) or steel (K, I), but stainless-steel variants are also an available option.

All the metal bellows are made of stainless steel and are available as single-wall or multiple-wall devices depending on size and application. Metal bellows come in various standard lengths.

Metal bellows can be combined with different hub versions to create a complete unit. Once the hubs have been joined to metal bellows, they cannot be dismantled again.

Hub versions

N: Hub with set screws

G: Slotted clamping hub

H: Half-shell clamping hub

K: Clamping hub with external taper

I: Clamping hub with internal taper

S: Expanding hub

Hubs are supplied as standard with bore tolerance H7 and without keyway.

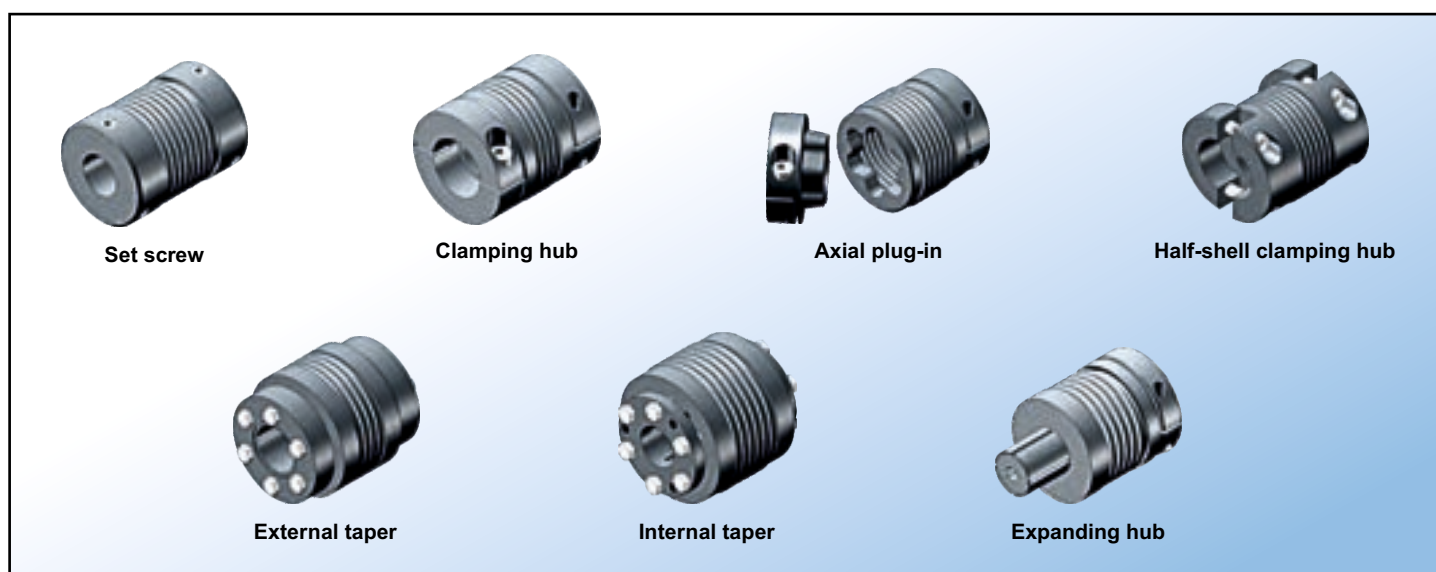
The fitting tolerance of the coupled shaft ends should be g6 or h7.

Versions N, G and H are optionally available with keyway in accordance with DIN 6885-1.

Versions of SIPEX couplings

| Type | Description |
|-------|---|
| SNN | Hub with set screw on both sides |
| SGG | Slotted clamping hub on both sides |
| SGG-A | Slotted clamping hub - for axial plug-in |
| SHH | Half-shell clamping hub on both sides |
| SKK | Clamping hub with external taper on both sides |
| SGS | Hub 1: Slotted, Hub 2: Expanding hub |
| SHH-W | Drive shaft with half-shell clamping hubs |
| SII | Clamping hubs with internal taper on both sides |

Hub Variants





Coupling Dimensioning

Dimensioning according to torque

It must be ensured that the coupling is capable of safely transmitting peak torques that regularly occur at the drive or load end. The service factor is provided in order to calculate the deviation between the real coupling load and ideal load conditions:

$$T_{KN} \geq T_{AS} \times FB \text{ or } T_{LS} \times FB$$

Torque characteristic of drive Service factor FB

| | |
|-----------------------------|---------|
| Uniform | 1.5 |
| Non Uniform | 2 |
| Rough | 2.5 - 4 |
| Servomotors (machine tools) | 1.5 - 2 |

Dimensioning according to acceleration torques

The correct coupling size can be calculated more accurately on the basis of acceleration or deceleration torques because the peak torque at the coupling is reduced by the ratio between the moments of inertia on the drive and load ends:

$$T_{KN} \geq T_s \times FB$$

$$T_s = T_{AS} \times \frac{J_L}{J_A + J_L} \quad \text{or} \quad T_s = T_{LS} \times \frac{J_L}{J_A + J_L}$$

Checking the maximum torsion angle

If the application requires a maximum torsion angle of the coupling, the selected coupling size must be checked to ensure that it is sufficiently torsionally rigid for the application in question:

$$\varphi = \frac{180}{\pi} \times \frac{T_s}{C_{Tdyn}}$$

Checking the maximum speed

For all load situations:

$$n_{Kmax} > n_{max}$$

Checking the permitted shaft misalignment

The actual shaft misalignment must be less than the permitted shaft misalignment for all load situations.

Checking the shaft-hub connection

In the case of clamping connections without feather key, it must be ensured that the transmissible torque of the hub connection is greater than the peak torque at the coupling.

| Name | Formula Symbol | Unit | Explanation |
|--------------------------------|----------------|------------------|--|
| Rated coupling torque | T_{KN} | Nm | Torque which can be transmitted as static torque by the coupling over the period of use. |
| Coupling overload torque | T^{KOL} | Nm | Torque which can be transmitted very rarely as maximum torque by the coupling. |
| Peak torque at drive end | T_{AS} | Nm | Peak torque during non-periodic torque surges at drive end. |
| Peak torque at load end | T_{LS} | Nm | Peak torque during non-periodic torque surges at load end. |
| Peak torque | T_s | Nm | Peak torque at the coupling. |
| Service factor | FB | | Factor that expresses the real coupling load as a ratio of the nominal coupling load. |
| Moment of inertia of drive end | J_A | kgm ² | Sum of the moments of inertia at the drive end referred to the coupling speed. |
| Moment of inertia of load end | J_L | kgm ² | Sum of the moments of inertia at the load end referred to the coupling speed. |
| Torsion angle | φ | ° | Torsion angle of the coupling under torsional load. |
| Torsional stiffness, dynamic | C_{Tdyn} | Nm/rad | Dynamic torsional stiffness of the coupling. |
| Axial stiffness | C_a | N/mm | Axial stiffness of the coupling. |
| Radial stiffness | C_r | N/mm | Radial stiffness of the coupling. |
| Rated speed | n_N | rpm | Coupling speed. |
| Maximum coupling speed | n_{Kmax} | rpm | Maximum permissible coupling speed. |
| Axial misalignment | ΔK_a | mm | Axial misalignment of the coupling halves. |
| Radial misalignment | ΔK_r | mm | Radial misalignment of the coupling halves. |
| Angular misalignment | ΔK_w | ° | Angular misalignment of the coupling halves. |



Power Ratings of Miniature Series

| Size | Rated Torque T_{KN} (Nm) | Maximum Torque T_{KOL} (Nm) | Maximum Speed n_{Kmax} (rpm) | Torsional Stiffness C_{Tdyn} (Nm/rad) | Stiffness | | Permitted Shaft Misalignment | | |
|------|----------------------------------|-------------------------------------|--------------------------------------|---|---------------------------|--------------------------|------------------------------|----------------------|---------------------------|
| | | | | | Radial C_r (N/mm) | Axial C_a (N/mm) | ΔK_a (mm) | ΔK_r (mm) | ΔK_w (degrees) |
| 1 | 0.1 | 0.15 | 15000 | 65 | 10 | 14 | 0.2 | 0.1 | 1.5 |
| 5 | 0.5 | 0.75 | 15000 | 258 | 128 | 18 | 0.2 | 0.1 | 1.5 |
| | | | | 195 | 54 | 13 | 0.3 | 0.2 | 1.5 |
| | | | | 160 | 26 | 11 | 0.4 | 0.2 | 2 |
| 10 | 1 | 1.5 | 15000 | 510 | 187 | 36 | 0.2 | 0.1 | 1.5 |
| | | | | 380 | 82 | 27 | 0.3 | 0.2 | 1.5 |
| | | | | 308 | 42 | 22 | 0.4 | 0.2 | 2 |
| 15 | 1.5 | 2.25 | 15000 | 750 | 139 | 23 | 0.3 | 0.1 | 1.5 |
| | | | | 700 | 81 | 12 | 0.4 | 0.2 | 2 |
| | | | | 1510 | 147 | 18 | 0.3 | 0.2 | 1.5 |
| 20 | 2 | 3 | 15000 | 1300 | 96 | 14 | 0.4 | 0.2 | 1.5 |
| | | | | 1040 | 46 | 9 | 0.5 | 0.3 | 2 |
| | | | | 6480 | 444 | 47 | 0.3 | 0.1 | 1.5 |
| 45 | 4.5 | 6.75 | 15000 | 4100 | 108 | 29 | 0.5 | 0.2 | 2 |
| | | | | 8080 | 361 | 46 | 0.4 | 0.2 | 1.5 |
| 100 | 10 | 15 | 15000 | 6750 | 193 | 34 | 0.6 | 0.3 | 2 |

Power Ratings of Standard Series

| Size | Rated Torque T_{KN} (Nm) | Maximum Torque T_{KOL} (Nm) | Maximum Speed n_{Kmax} (rpm) | Torsional Stiffness C_{Tdyn} (Nm/rad) | Stiffness | | Permitted Shaft Misalignment | | |
|------|----------------------------------|-------------------------------------|--------------------------------------|---|---------------------------|--------------------------|------------------------------|----------------------|---------------------------|
| | | | | | Radial C_r (N/mm) | Axial C_a (N/mm) | ΔK_a (mm) | ΔK_r (mm) | ΔK_w (degrees) |
| 18 | 18 | 27 | 12800 | 19 | 200 | 50 | 0.5 | 0.2 | 1.5 |
| | | | | 17 | 85 | 40 | 0.5 | 0.2 | 2.0 |
| 30 | 30 | 45 | 10300 | 36 | 720 | 50 | 0.5 | 0.2 | 1.5 |
| | | | | 26 | 220 | 30 | 0.8 | 0.2 | 2.0 |
| 60 | 60 | 90 | 8700 | 75 | 1100 | 90 | 0.5 | 0.2 | 1.5 |
| | | | | 50 | 330 | 55 | 0.8 | 0.2 | 2.0 |
| 80 | 80 | 120 | 6900 | 128 | 1200 | 80 | 0.5 | 0.2 | 1.5 |
| | | | | 75 | 400 | 55 | 0.7 | 0.2 | 2.0 |
| 150 | 150 | 225 | 6900 | 155 | 2000 | 150 | 0.5 | 0.2 | 1.5 |
| | | | | 102 | 600 | 85 | 0.6 | 0.2 | 2.0 |
| 200 | 200 | 300 | 6400 | 175 | 2500 | 150 | 0.5 | 0.2 | 1.5 |
| | | | | 120 | 450 | 85 | 0.7 | 0.2 | 2.0 |
| 300 | 300 | 450 | 6000 | 502 | 6300 | 280 | 0.5 | 0.2 | 1.5 |
| | | | | 282 | 1500 | 85 | 0.7 | 0.2 | 2.0 |
| 500 | 500 | 750 | 5000 | 690 | 8800 | 100 | 0.5 | 0.2 | 1.5 |
| | | | | 315 | 1000 | 85 | 0.8 | 0.2 | 2.0 |
| 800 | 800 | 1200 | 3700 | 760 | 510 | 190 | 0.8 | 0.2 | 1.8 |
| 1400 | 1400 | 2100 | 3700 | 1300 | 710 | 280 | 0.8 | 0.2 | 1.8 |
| 3000 | 3000 | 4500 | 2800 | 2800 | 8060 | 880 | 0.8 | 0.2 | 1.5 |
| 5000 | 5000 | 7500 | 2800 | 4800 | 9190 | 740 | 0.8 | 0.2 | 1.5 |

Permitted Shaft Misalignment

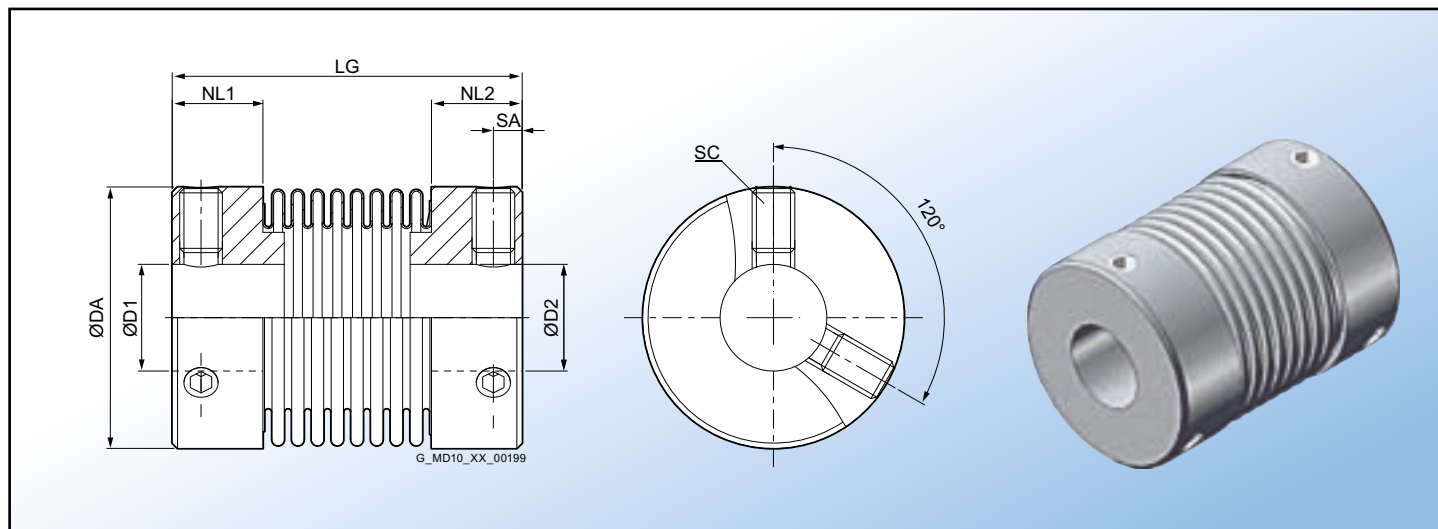
The permitted shaft misalignments ΔK_a , ΔK_r and ΔK_w are maximum values and must not occur simultaneously. The following formula can be used to calculate whether combinations of misalignments are permissible:

$$\frac{\Delta K_{r \text{ act}}}{\Delta K_r} + \frac{\Delta K_{a \text{ act}}}{\Delta K_a} + \frac{\Delta K_{w \text{ act}}}{\Delta K_w} < 1$$

The different torsional stiffness values apply to the various lengths of metal bellows of the relevant SIPEX type.



Miniature series with set screws



| Size | Rated Torque T_{KN} (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | Screw EN ISO 4027 | | Moment of Inertia J (gcm ²) | Product Code* | Weight m (g) | |
|------|----------------------------------|--------------------------------------|-----------------|--------------|------|---------|----|-------------------|----|---|---------------|----------------------|---------------|
| | | | DA | D1, D2 H7 | | NL1/NL2 | LG | SA | SC | | | | T_A (Nm) |
| | | | | min. | max. | | | | | | | | |
| 1 | 0.1 | 15000 | 10 | 2 | 5 | 4.2 | 22 | 2 | M3 | 0.5 | 0.5 | 2LC0590-1AA99-0AA0 | 3 |
| 5 | 0.5 | 15000 | 15 | 3 | 8 | 6 | 19 | 2.2 | M3 | 0.5 | 2 | 2LC0590-2AA99-0AA0 | 5.6 |
| | | | | | | | 23 | | | | 2.1 | 2LC0590-2AA99-0AB0 | 6 |
| | | | | | | | 27 | | | | 2.3 | 2LC0590-2AA99-0AC0 | 6.5 |
| 10 | 1 | 15000 | 15 | 3 | 8 | 6 | 21 | 2.2 | M3 | 0.5 | 2.5 | 2LC0590-3AA99-0AA0 | 7 |
| | | | | | | | 25 | | | | 2.7 | 2LC0590-3AA99-0AB0 | 7.5 |
| | | | | | | | 29 | | | | 2.9 | 2LC0590-3AA99-0AC0 | 8 |
| 15 | 1.5 | 15000 | 20.5 | 3 | 12 | 8 | 26 | 3 | M4 | 1.5 | 8.7 | 2LC0590-4AA99-0AA0 | 13 |
| | | | | | | | 30 | | | | 9.2 | 2LC0590-4AA99-0AB0 | 13.9 |
| | | | | | | | 27 | | | | 19.2 | 2LC0590-5AA99-0AA0 | 20.3 |
| 20 | 2 | 15000 | 24.5 | 3 | 14 | 8.5 | 33 | 2.7 | M4 | 1.5 | 23 | 2LC0590-5AA99-0AB0 | 23.8 |
| | | | | | | | 37 | | | | 26 | 2LC0590-5AA99-0AC0 | 26.5 |
| | | | | | | | 40 | | | | 80 | 2LC0590-6AA99-0AA0 | 51 |
| 45 | 4.5 | 15000 | 32 | 6 | 18 | 12.3 | 48 | 4.5 | M6 | 3 | 110 | 2LC0590-6AA99-0AB0 | 68 |
| | | | | | | | 45 | | | | 188 | 2LC0590-7AA99-0AA0 | 74 |
| | | | | | | | 55 | | | | 292 | 2LC0590-7AA99-0AB0 | 109 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

Shaft connected to hub by means of set screws according to EN ISO 4027.
A keyway according to DIN 6885-1 can be selected additionally as an option.
Weights and mass moments of inertia apply to maximum bore diameters.

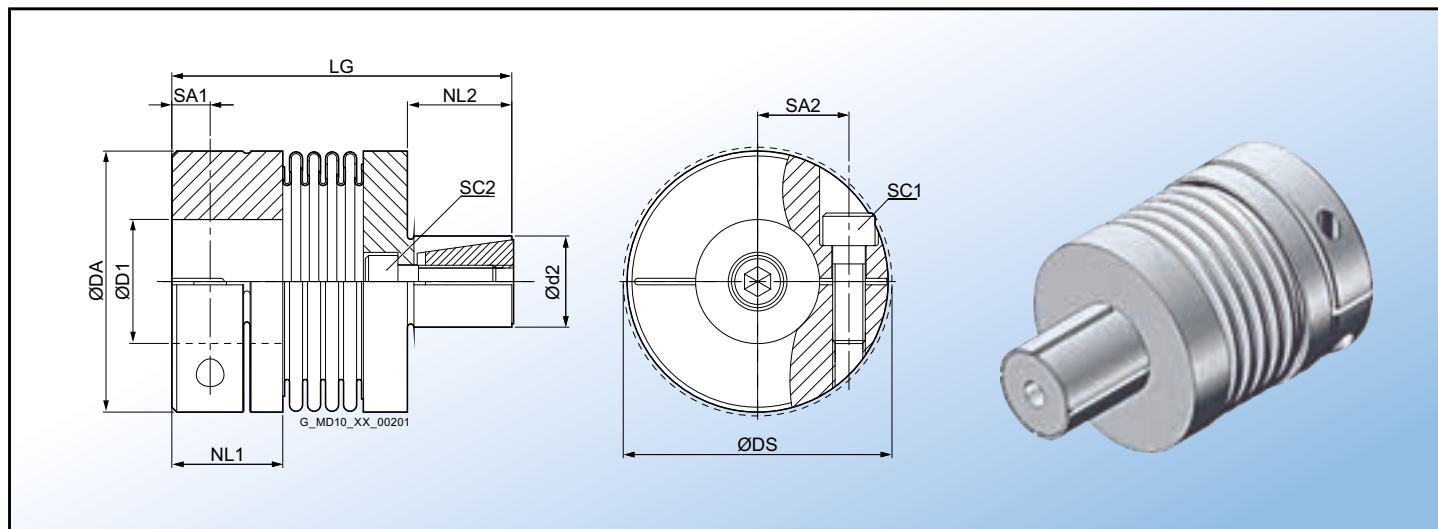
Ordering example:

SIPEX SNN coupling, size 45
Total length LG = 40 mm
Bore ØD1 14 H7
Bore ØD2 18 H7

Product Code: 2LC0590-6AA99-0AA0 L0H+M0K



Miniature series with expanding hub



| Size | Rated Torque T_{KN} (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | | | | Screw EN ISO 4762 | | | | Moment of Inertia J (gcm ²) | Product Code* | Weight m (g) |
|------|----------------------------------|--------------------------------------|-----------------|------|----------|------|----------|-----|-----|----|-----|------|-------------------|---------------|-----|---------------|---|--------------------|--------------------|
| | | | DA | DS | D1 H7 | | d2 h7 | NL1 | NL2 | LG | SA1 | SA2 | SC1 | T_A (Nm) | SC2 | T_A (Nm) | | | |
| | | | | | min. | max. | | | | | | | | | | | | | |
| 5 | 0.5 | 15000 | 15.5 | 17.5 | 3 | 7 | 8 | 6.8 | 8 | 28 | 2.4 | 5.2 | M2 | 0.43 | M3 | 1 | 2.5 | 2LC0590-2AD90-0AA0 | 9.3 |
| | | | | | | | | | | 32 | | | | | | | 2.6 | 2LC0590-2AD90-0AB0 | 9.7 |
| | | | | | | | | | | 36 | | | | | | | 2.8 | 2LC0590-2AD90-0AC0 | 10.1 |
| 10 | 1 | 15000 | 15.5 | 17.5 | 3 | 7 | 8 | 6.8 | 8 | 30 | 2.4 | 5.2 | M2 | 0.43 | M3 | 1 | 3 | 2LC0590-3AD90-0AA0 | 10.6 |
| | | | | | | | | | | 34 | | | | | | | 3.2 | 2LC0590-3AD90-0AB0 | 11 |
| | | | | | | | | | | 38 | | | | | | | 3.4 | 2LC0590-3AD90-0AC0 | 11.8 |
| 15 | 1.5 | 15000 | 20.5 | 21 | 3 | 10 | 10 | 8.5 | 12 | 37 | 3 | 7 | M2.5 | 0.85 | M4 | 3 | 7.8 | 2LC0590-4AD90-0AA0 | 18.5 |
| | | | | | | | | | | 41 | | | | | | | 8.4 | 2LC0590-4AD90-0AB0 | 19.3 |
| | | | | | | | | | | 41 | | | | | | | 20.6 | 2LC0590-5AD90-0AA0 | 27.8 |
| 20 | 2 | 15000 | 25.5 | 27 | 3 | 12.5 | 10 | 11 | 12 | 46 | 3.5 | 9 | M3 | 2 | M4 | 3 | 24.2 | 2LC0590-5AD90-0AB0 | 31.3 |
| | | | | | | | | | | 50 | | | | | | | 27.7 | 2LC0590-5AD90-0AC0 | 34.8 |
| | | | | | | | | | | 52 | | | | | | | 68 | 2LC0590-6AD90-0AA0 | 57 |
| 45 | 4.5 | 15000 | 32.5 | 34 | 6 | 16 | 14 | 13 | 16 | 60 | 4.5 | 11.5 | M4 | 3.5 | M5 | 5.9 | 99 | 2LC0590-6AD90-0AB0 | 74 |
| | | | | | | | | | | 61 | | | | | | | 153 | 2LC0590-7AD90-0AA0 | 81 |
| | | | | | | | | | | 71 | | | | | | | 257 | 2LC0590-7AD90-0AB0 | 117 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

A hollow shaft can be connected to the expanding hub.

The bore for connecting the expanding hub must have tolerance H7.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

SIPEX SGS coupling, size 45

Total length LG = 52 mm

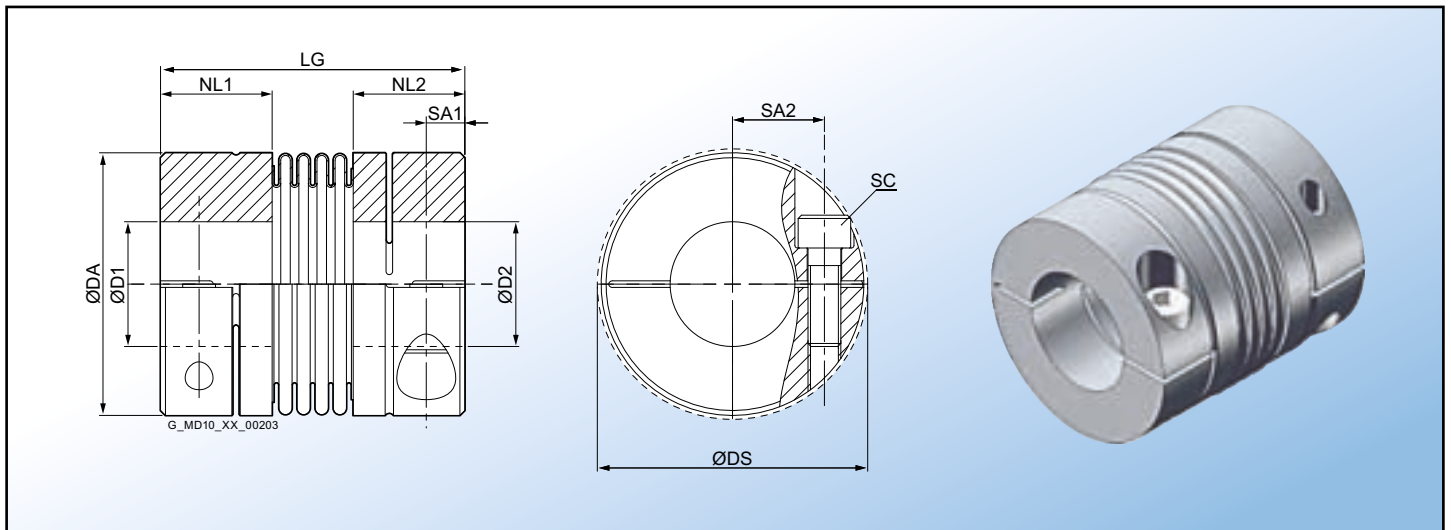
Bore ØD1 14 H7

Bore ØD2 14 h7

Product Code: 2LC0590-6AD90-0AA0 L0H



Miniature series with clamping hub



| Size | Rated Torque T_{KN} (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | Screw EN ISO 4762 | | Moment of Inertia J (gcm ²) | Product Code* | Weight m (g) | |
|------|----------------------------------|--------------------------------------|-----------------|------|--------------|------|-------------|----|-----|-------------------|------|---|---------------|----------------------|---------------|
| | | | DA | DS | D1, D2 H7 | | NL1/ NL2 | LG | SA1 | SA2 | SC | | | | T_A (Nm) |
| | | | | | min. | max. | | | | | | | | | |
| 5 | 0.5 | 15000 | 15.5 | 17.5 | 3 | 7 | 6.8 | 21 | 2.5 | 5.3 | M2 | 0.3 | 2.4 | 2LC0590-2AB99-0AA0 | 6.6 |
| | | | | | | | | 25 | | | | | 2.5 | 2LC0590-2AB99-0AB0 | 7 |
| | | | | | | | | 28 | | | | | 2.7 | 2LC0590-2AB99-0AC0 | 7.5 |
| 10 | 1 | 15000 | 15.5 | 17.5 | 3 | 7 | 6.8 | 23 | 2.5 | 5.3 | M2 | 0.3 | 2.9 | 2LC0590-3AB99-0AA0 | 7.9 |
| | | | | | | | | 27 | | | | | 3.1 | 2LC0590-3AB99-0AB0 | 8.5 |
| | | | | | | | | 31 | | | | | 3.3 | 2LC0590-3AB99-0AC0 | 9 |
| 15 | 1.5 | 15000 | 20 | 21 | 3 | 10 | 8.5 | 27 | 3 | 7 | M2.5 | 0.8 | 7.7 | 2LC0590-4AB99-0AA0 | 12.5 |
| | | | | | | | | 31 | | | | | 8.3 | 2LC0590-4AB99-0AB0 | 13.3 |
| | | | | | | | | 32 | | | | | 24 | 2LC0590-5AB99-0AA0 | 25 |
| 20 | 2 | 15000 | 25 | 27 | 3 | 12.5 | 11 | 38 | 3.5 | 9 | M3 | 1.5 | 28 | 2LC0590-5AB99-0AB0 | 28 |
| | | | | | | | | 42 | | | | | 31 | 2LC0590-5AB99-0AC0 | 31 |
| | | | | | | | | 42 | | | | | 80 | 2LC0590-6AB99-0AA0 | 49 |
| 45 | 4.5 | 15000 | 32.5 | 34 | 6 | 16 | 13 | 50 | 4.5 | 12 | M4 | 3 | 110 | 2LC0590-6AB99-0AB0 | 66 |
| | | | | | | | | 48 | | | | | 193 | 2LC0590-7AB99-0AA0 | 74 |
| | | | | | | | | 57 | | | | | 298 | 2LC0590-7AB99-0AB0 | 110 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

The slotted clamping hub allows a frictionally engaged connection to the input and output shaft.

A single tightening screw per hub ensures easy assembly.

The maximum torques that can be transmitted by the clamping connection are listed in the table on page 3.

A keyway according to DIN 6885-1 can be selected additionally as an option.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

SIPEX SGG coupling, size 45

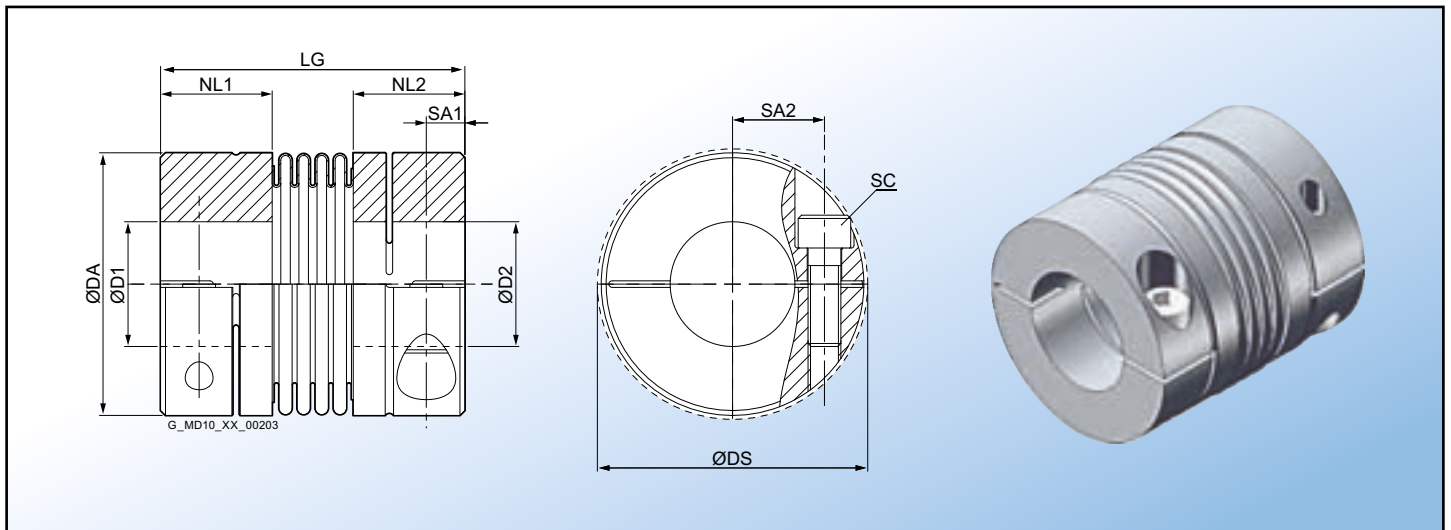
Total length LG = 42 mm

Bore ØD1 12 H7

Bore ØD2 16 h7

Product Code: 2LC0590-6AB99-0AA0 L0G+M0J

Miniature series with clamping hub



| Size | Rated Torque T_{KN} (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | Screw EN ISO 4762 | | Moment of Inertia J (gcm ²) | Product Code* | Weight m (g) | |
|------|----------------------------------|--------------------------------------|-----------------|-----|--------------|------|-------------|-----|------|-------------------|-----|---|---------------|----------------------|---------------|
| | | | DA | DS | D1, D2 H7 | | NL1/ NL2 | LG | SA1 | SA2 | SC | | | | T_A (Nm) |
| | | | | | min. | max. | | | | | | | | | |
| 18 | 18 | 12800 | 45 | 47 | 8 | 25 | 20.5 | 63 | 5.7 | 17.5 | M5 | 8 | 0.05 | 2LC0590-8AB99-0AA0 | 0.14 |
| | | | | | | | | 72 | | | | | | | |
| 30 | 30 | 10300 | 54 | 56 | 10 | 30 | 24.5 | 65 | 7.5 | 20 | M6 | 15 | 0.11 | 2LC0591-0AB99-0AA0 | 0.23 |
| | | | | | | | | 74 | | | | | | | |
| 60 | 60 | 8700 | 65 | 67 | 12 | 35 | 29 | 79 | 10 | 24 | M8 | 40 | 0.31 | 2LC0591-1AB99-0AA0 | 0.44 |
| | | | | | | | | 89 | | | | | | | |
| 80 | 80 | 6900 | 79 | 84 | 14 | 42 | 34 | 92 | 11.8 | 28 | M10 | 72 | 0.76 | 2LC0591-2AB99-0AA0 | 0.74 |
| | | | | | | | | 103 | | | | | | | |
| 150 | 150 | 6900 | 79 | 84 | 14 | 42 | 34 | 92 | 11.8 | 28 | M10 | 84 | 0.76 | 2LC0591-3AB99-0AA0 | 0.74 |
| | | | | | | | | 103 | | | | | | | |
| 200 | 200 | 6400 | 90 | 93 | 20 | 43 | 38 | 101 | 12.5 | 31.5 | M12 | 125 | 1.41 | 2LC0591-4AB99-0AA0 | 1.1 |
| | | | | | | | | 113 | | | | | | | |
| 300 | 300 | 6000 | 109 | 110 | 24 | 50 | 38 | 103 | 13 | 35 | M12 | 145 | 3 | 2LC0591-5AB99-0AA0 | 1.7 |
| | | | | | | | | 116 | | | | | | | |
| 500 | 500 | 5000 | 119 | 122 | 35 | 60 | 41.5 | 111 | 15 | 42 | M14 | 190 | 4.5 | 2LC0591-6AB99-0AA0 | 1.99 |
| | | | | | | | | 123 | | | | | | | |

* With finished bore; required order code for bore diameters and tolerances see page 2.

The slotted clamping hub allows a frictionally engaged connection to the input and output shaft.

A single tightening screw per hub ensures easy assembly.

The maximum torques that can be transmitted by the clamping connection are listed in the table on page 3.

A keyway according to DIN 6885-1 can be selected additionally as an option.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

SIPEX SGG coupling, size 80

Total length LG = 103 mm

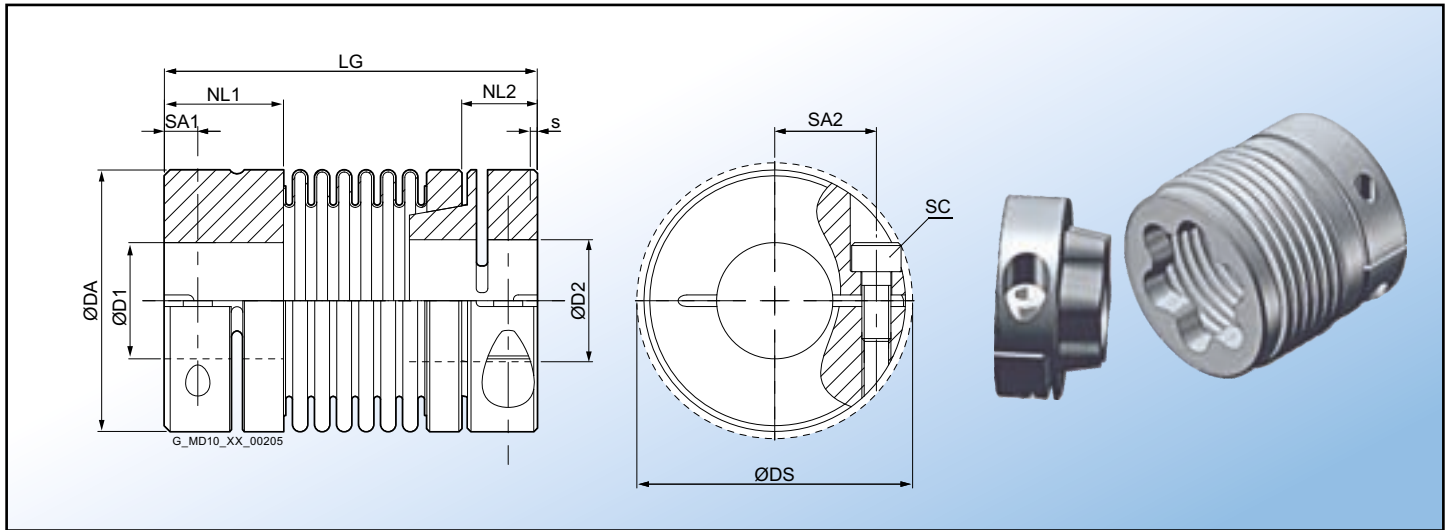
Bore ØD1 30 H7

Bore ØD2 38 h7

Product Code: 2LC0591-2AB99-0AB0 L0S+M0V



Miniature and standard series with axially plug-in clamping hub



| Size | Rated Torque T_{KN} (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | | | | | Screw EN ISO 4762 | | Moment of Inertia J (10^{-3} × kgm ²) | Product Code* | Weight m (g) | |
|-------------------------|----------------------------------|--------------------------------------|-----------------|------|----------------------|------------|------------|------|------|-----|------------|------|------|-------------------|------------------------|---|--------------------|--------------------|--|
| | | | DA | DS | D1, D2 H7 min. | D1 max. | D2 max. | NL1 | NL2 | LG | s | SA1 | SA2 | SC | T _A (Nm) | | | | |
| Miniature series | | | | | | | | | | | | | | | | | | | |
| 45 | 4.5 | 15000 | 32.5 | 34 | 5 | 16 | 14 | 13 | 13 | 48 | 0.7 | 4.5 | 12 | M4 | 3.5 | 0.0000088 | 2LC0590-6AE99-0AA0 | 58 | |
| | | | | | | | | | | 56 | | | | | | 0.0000095 | 2LC0590-6AE99-0AB0 | 68 | |
| 100 | 10 | 15000 | 40 | 41.5 | 6 | 22 | 18 | 14 | 13 | 54 | 1.0 | 4.7 | 15.5 | M4 | 4.5 | 0.0000230 | 2LC0590-7AE99-0AA0 | 90 | |
| | | | | | | | | | | 64 | | | | | | 0.0000260 | 2LC0590-7AE99-0AB0 | 120 | |
| Standard series | | | | | | | | | | | | | | | | | | | |
| 18 | 18 | 12800 | 45 | 47 | 8 | 25 | 21 | 20.5 | 13 | 62 | 0.5 to 1.0 | 5.7 | 17.5 | M5 | 8 | 0.04 | 2LC0590-8AE99-0AA0 | 0.12 | |
| | | | | | | | | | | 69 | | | | | | 0.05 | 2LC0590-8AE99-0AB0 | 0.15 | |
| 30 | 30 | 10300 | 54 | 56 | 10 | 30 | 23 | 24.5 | 19.5 | 70 | 0.5 to 1.0 | 7.5 | 20 | M6 | 15 | 0.12 | 2LC0591-0AE99-0AA0 | 0.27 | |
| | | | | | | | | | | 78 | | | | | | 0.13 | 2LC0591-0AE99-0AB0 | 0.28 | |
| 60 | 60 | 8700 | 65 | 67 | 12 | 35 | 30 | 29 | 25.5 | 84 | 0.5 to 1.5 | 10 | 24 | M8 | 40 | 0.33 | 2LC0591-1AE99-0AA0 | 0.50 | |
| | | | | | | | | | | 94 | | | | | | 0.34 | 2LC0591-1AE99-0AB0 | 0.52 | |
| 80 | 80 | 6900 | 79 | 84 | 14 | 42 | 38 | 34 | 26 | 95 | 0.5 to 1.5 | 11.8 | 28 | M10 | 72 | 0.78 | 2LC0591-2AE99-0AA0 | 0.79 | |
| | | | | | | | | | | 105 | | | | | | 0.84 | 2LC0591-2AE99-0AB0 | 0.83 | |
| 150 | 150 | 6900 | 79 | 84 | 14 | 42 | 38 | 34 | 24 | 95 | 0.5 to 1.5 | 1.8 | 28 | M10 | 84 | 0.78 | 2LC0591-3AE99-0AA0 | 0.79 | |
| | | | | | | | | | | 105 | | | | | | 1.05 | 2LC0591-3AE99-0AB0 | 0.96 | |
| 200 | 200 | 6400 | 90 | 93 | 20 | 45 | 40 | 38 | 31.5 | 105 | 0.5 to 1.5 | 12.5 | 31.5 | M12 | 125 | 1.47 | 2LC0591-4AE99-0AA0 | 1.16 | |
| | | | | | | | | | | 117 | | | | | | 1.58 | 2LC0591-4AE99-0AB0 | 1.25 | |
| 300 | 300 | 6000 | 109 | 110 | 24 | 50 | 45 | 38 | 32 | 110 | 0.5 to 1.5 | 13 | 35 | M12 | 145 | 3.2 | 2LC0591-5AE99-0AA0 | 1.8 | |
| | | | | | | | | | | 121 | | | | | | 3.3 | 2LC0591-5AE99-0AB0 | 1.85 | |
| 500 | 500 | 5000 | 119 | 122 | 35 | 60 | 60 | 41.5 | 39 | 126 | 0.5 to 2.0 | 15 | 42 | M14 | 190 | 5.0 | 2LC0591-6AE99-0AA0 | 2.25 | |
| | | | | | | | | | | 137 | | | | | | 5.2 | 2LC0591-6AE99-0AB0 | 2.3 | |

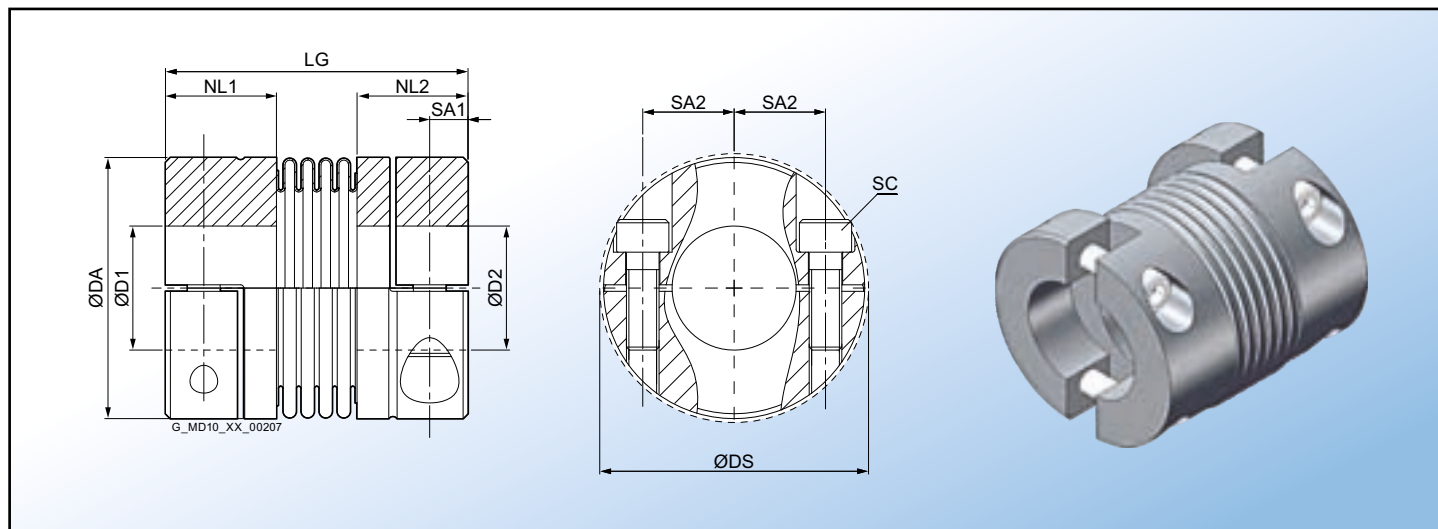
The variant with axially plug-in clamping hub is designed for simple blind or bell housing assembly.
 The maximum torques that can be transmitted by the clamping connection are listed in the table on page 3.
 A keyway according to DIN 6885-1 can be selected additionally as an option.
 Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

SIPEX SGG-A coupling, size 80
 Total length LG = 95 mm
 Bore ØD1 30 H7
 Bore ØD2 38 h7
Product Code: 2LC0591-2AE99-0AA0 L0S+M0V



Miniature series with half-shell clamping hub



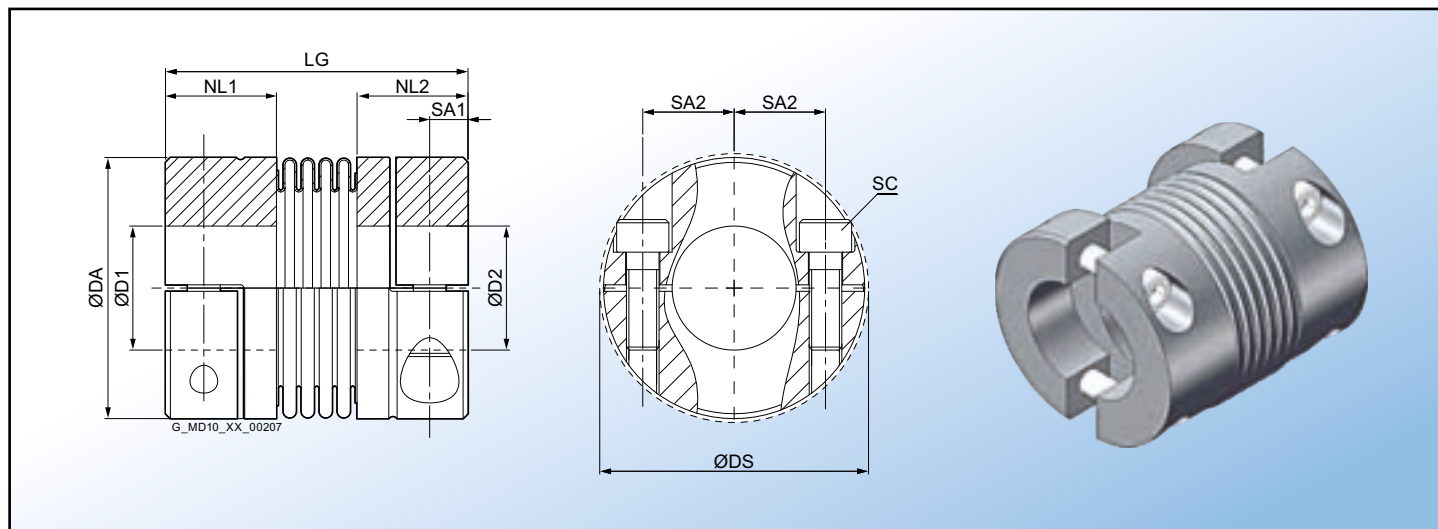
| Size | Rated Torque T_{KN} (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | Screw EN ISO 4762 | | Moment of Inertia J (gcm ²) | Product Code* | Weight m (g) | | | |
|------|----------------------------------|--------------------------------------|-----------------|------|--------------|------|-------------|----|-----|-------------------|------|---|---------------|----------------------|---------------|-----|------|
| | | | DA | DS | D1, D2 H7 | | NL1/ NL2 | LG | SA1 | SA2 | SC | | | | T_A (Nm) | | |
| | | | | | min. | max. | | | | | | | | | | | |
| 5 | 0.5 | 15000 | 15.5 | 17.5 | 3 | 7 | 6.8 | 21 | 2.4 | 5.2 | M2 | 0.5 | 1.4 | 2LC0590-2AC99-0AA0 | 4 | | |
| | | | | | | | | 25 | | | | | | | | 2.6 | 7.3 |
| | | | | | | | | 28 | | | | | | | | | |
| 10 | 1 | 15000 | 15.5 | 17.5 | 3 | 7 | 6.8 | 23 | 2.4 | 5.2 | M2 | 0.5 | 3 | 2LC0590-3AC99-0AA0 | 8.2 | | |
| | | | | | | | | 27 | | | | | | | | 3.2 | 8.8 |
| | | | | | | | | 31 | | | | | | | | | |
| 15 | 1.5 | 15000 | 20 | 21 | 3 | 10 | 8.5 | 27 | 3 | 7 | M2.5 | 0.9 | 8.4 | 2LC0590-4AC99-0AA0 | 13.7 | | |
| | | | | | | | | 31 | | | | | | | | 8.5 | 13.8 |
| | | | | | | | | 32 | | | | | | | | | |
| 20 | 2 | 15000 | 25 | 27 | 3 | 12.5 | 11 | 38 | 3.5 | 9 | M3 | 2 | 28 | 2LC0590-5AC99-0AA0 | 29 | | |
| | | | | | | | | 42 | | | | | | | | 32 | 32 |
| | | | | | | | | 42 | | | | | | | | | |
| 45 | 4.5 | 15000 | 32.5 | 34 | 6 | 16 | 13 | 42 | 4.5 | 11.5 | M4 | 3.5 | 82 | 2LC0590-6AC99-0AA0 | 50 | | |
| | | | | | | | | 50 | | | | | | | | 113 | 68 |
| | | | | | | | | 48 | | | | | | | | | |
| 100 | 10 | 15000 | 40 | 41.5 | 6 | 22 | 14 | 48 | 4.7 | 15.5 | M4 | 4.5 | 196 | 2LC0590-7AC99-0AA0 | 75 | | |
| | | | | | | | | 57 | | | | | | | | 300 | 111 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

It is possible to radially assemble and dismantle the hub version with half-shells without moving the connected units.
The maximum torques that can be transmitted by the clamping connection are listed in the table on page 3.



Miniature series with half-shell clamping hub



| Size | Rated Torque T_{KN} (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | | Screw EN ISO 4762 | | Moment of Inertia J (gcm^2) | Product Code* | Weight m (g) |
|------|----------------------------------|--------------------------------------|-----------------|-----|--------------|------|-------------|-----|------|------|-------------------|---------------|---|--------------------|----------------------|
| | | | DA | DS | D1, D2 H7 | | NL1/ NL2 | LG | SA1 | SA2 | SC | T_A (Nm) | | | |
| | | | | | min. | max. | | | | | | | | | |
| 18 | 18 | 12800 | 45 | 48 | 8 | 25 | 20.5 | 63 | 5.7 | 17.5 | M5 | 8 | 0.05 | 2LC0590-8AC99-0AA0 | 0.15 |
| | | | | | | | | 72 | | | | | 0.05 | 2LC0590-8AC99-0AB0 | 0.16 |
| 30 | 30 | 10300 | 54 | 56 | 10 | 30 | 24.5 | 65 | 7.5 | 20 | M6 | 15 | 0.11 | 2LC0591-0AC99-0AA0 | 0.23 |
| | | | | | | | | 74 | | | | | 0.12 | 2LC0591-0AC99-0AB0 | 0.25 |
| 60 | 60 | 8700 | 65 | 67 | 12 | 35 | 29 | 79 | 10 | 24 | M8 | 40 | 0.32 | 2LC0591-1AC99-0AA0 | 0.46 |
| | | | | | | | | 89 | | | | | 0.33 | 2LC0591-1AC99-0AB0 | 0.49 |
| 80 | 80 | 6900 | 79 | 84 | 14 | 42 | 34 | 91 | 11.8 | 28 | M10 | 72 | 0.83 | 2LC0591-2AC99-0AA0 | 0.81 |
| | | | | | | | | 102 | | | | | 0.89 | 2LC0591-2AC99-0AB0 | 0.85 |
| 150 | 150 | 6900 | 79 | 84 | 14 | 42 | 34 | 91 | 11.8 | 28 | M10 | 84 | 0.83 | 2LC0591-3AC99-0AA0 | 0.81 |
| | | | | | | | | 102 | | | | | 0.89 | 2LC0591-3AC99-0AB0 | 0.85 |
| 200 | 200 | 6400 | 90 | 93 | 20 | 45 | 38 | 101 | 12.5 | 31.5 | M12 | 125 | 1.45 | 2LC0591-4AC99-0AA0 | 1.14 |
| | | | | | | | | 113 | | | | | 1.55 | 2LC0591-4AC99-0AB0 | 1.21 |
| 300 | 300 | 6000 | 109 | 110 | 24 | 50 | 38 | 103 | 13 | 35 | M12 | 145 | 3.04 | 2LC0591-5AC99-0AA0 | 1.69 |
| | | | | | | | | 116 | | | | | 3.15 | 2LC0591-5AC99-0AB0 | 1.73 |
| 500 | 500 | 5000 | 119 | 122 | 35 | 60 | 41.5 | 111 | 14 | 42 | M14 | 190 | 4.59 | 2LC0591-6AC99-0AA0 | 2.05 |
| | | | | | | | | 123 | | | | | 4.77 | 2LC0591-6AC99-0AB0 | 2.11 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

It is possible to radially assemble and dismantle the hub version with half-shells without moving the connected units.

The maximum torques that can be transmitted by the clamping connection are listed in the table on page 3.

A keyway according to DIN 6885-1 can be selected additionally as an option.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example:

SIPEX SHH coupling, size 80

Total length LG = 91 mm

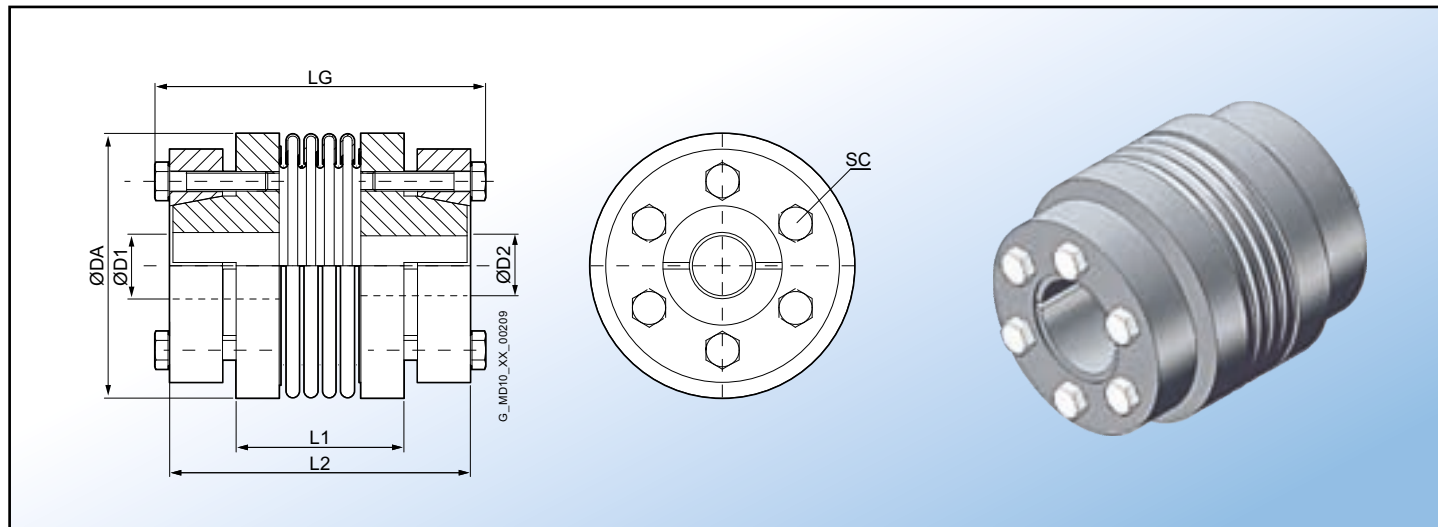
Bore ØD1 30 H7

Bore ØD2 38 h7

Product Code: 2LC0591-2AC99-0AA0 L0S+M0V



Miniature and standard series with external taper



| Size | Rated Torque T_{KN} (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | Screw EN ISO 4017 | | Moment of Inertia J ($10^{-3} \times \text{kgm}^2$) | Product Code* | Weight m (g) |
|-------------------------|----------------------------------|--------------------------------------|-----------------|--------------|------|-----|-----|-----|-------------------|---------------|---|--------------------|----------------------|
| | | | DA | D1, D2 H7 | | L1 | L2 | LG | SC | T_A (Nm) | | | |
| | | | | min. | max. | | | | | | | | |
| Miniature series | | | | | | | | | | | | | |
| 45 | 4.5 | 15000 | 32 | 6 | 10 | 25 | 37 | 42 | M3 | 1.3 | 0.0000064 | 2LC0590-6AF99-0AA0 | 49 |
| | | | | | | 33 | 45 | 50 | | | 0.0000095 | 2LC0590-6AF99-0AB0 | 65 |
| 100 | 10 | 15000 | 40 | 8 | 14 | 33 | 45 | 48 | M3 | 1.3 | 0.0000166 | 2LC0590-7AF99-0AA0 | 77 |
| | | | | | | 42 | 54 | 57 | | | 0.0000270 | 2LC0590-7AF99-0AB0 | 113 |
| Standard series | | | | | | | | | | | | | |
| 18 | 18 | 12800 | 47 | 8 | 15 | 37 | 57 | 65 | M5 | 5.9 | 0.07 | 2LC0590-8AF99-0AA0 | 0.30 |
| | | | | | | 45 | 65 | 73 | | | 0.08 | 2LC0590-8AF99-0AB0 | 0.31 |
| 30 | 30 | 10300 | 56 | 12 | 20 | 30 | 52 | 60 | M5 | 5.9 | 0.12 | 2LC0591-0AF99-0AA0 | 0.43 |
| | | | | | | 38 | 60 | 68 | | | 0.17 | 2LC0591-0AF99-0AB0 | 0.44 |
| 60 | 60 | 8700 | 64 | 15 | 32 | 34 | 70 | 79 | M6 | 8.7 | 0.57 | 2LC0591-1AF99-0AA0 | 0.89 |
| | | | | | | 44 | 80 | 89 | | | 0.57 | 2LC0591-1AF99-0AB0 | 0.90 |
| 80 | 80 | 6900 | 82 | 20 | 35 | 48 | 88 | 97 | M6 | 15 | 1.42 | 2LC0591-2AF99-0AA0 | 1.63 |
| | | | | | | 60 | 100 | 109 | | | 1.44 | 2LC0591-2AF99-0AB0 | 1.66 |
| 150 | 150 | 6900 | 82 | 20 | 35 | 48 | 88 | 97 | M6 | 15 | 1.42 | 2LC0591-3AF99-0AA0 | 1.63 |
| | | | | | | 60 | 100 | 109 | | | 1.44 | 2LC0591-3AF99-0AB0 | 1.66 |
| 200 | 200 | 6400 | 90 | 20 | 42 | 50 | 89 | 98 | M6 | 15 | 1.5 | 2LC0591-4AF99-0AA0 | 1.80 |
| | | | | | | 62 | 101 | 110 | | | 1.6 | 2LC0591-4AF99-0AB0 | 1.85 |
| 300 | 300 | 6000 | 110 | 25 | 50 | 55 | 99 | 110 | M8 | 25 | 4.9 | 2LC0591-5AF99-0AA0 | 3.05 |
| | | | | | | 65 | 109 | 120 | | | 5.0 | 2LC0591-5AF99-0AB0 | 3.09 |
| 500 | 500 | 5000 | 122 | 35 | 55 | 60 | 113 | 125 | M8 | 36 | 8.3 | 2LC0591-6AF99-0AA0 | 4.39 |
| | | | | | | 70 | 123 | 135 | | | 8.5 | 2LC0591-6AF99-0AB0 | 4.45 |
| 800 | 800 | 3700 | 157 | 50 | 70 | 92 | 166 | 182 | M12 | 85 | 36 | 2LC0591-7AF99-0AA0 | 10.9 |
| 1400 | 1400 | 3700 | 157 | 50 | 70 | 92 | 166 | 182 | M12 | 115 | 36 | 2LC0591-8AF99-0AA0 | 10.9 |
| 3000 | 3000 | 2800 | 157 | 55 | 75 | 92 | 166 | 182 | M12 | 125 | 36 | 2LC0592-0AF99-0AA0 | 10.9 |
| 5000 | 5000 | 2800 | 210 | 60 | 90 | 140 | 219 | 240 | M16 | 210 | 165 | 2LC0592-1AF99-0AA0 | 30.4 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

The clamping hubs with external taper are the ideal solution for high-speed and highly dynamic applications.

The maximum torques that can be transmitted by the clamping connection are listed in the table on page 3.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example

SIPEX SGG-A coupling, size 80

Total length LG = 97 mm

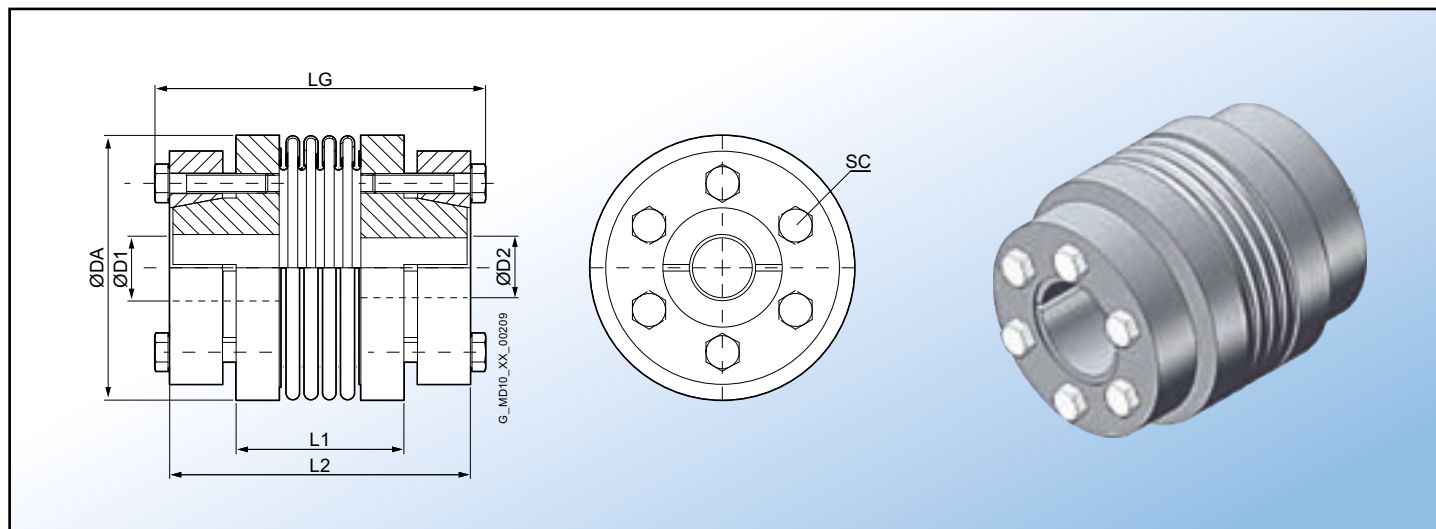
Bore $\varnothing D1$ 30 H7

Bore $\varnothing D2$ 38 H7

Product Code: 2LC0591-2AF99-0AA0 L0S+M0V



Miniature and standard series with external taper



| Size | Rated Torque T_{KN} (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | Screw EN ISO 4017 | | Moment of Inertia J ($10^{-3} \times \text{kgm}^2$) | Product Code* | Weight m (g) |
|------|----------------------------------|--------------------------------------|-----------------|--------------|------|-----|-----|-----|-------------------|---------------|---|--------------------|----------------------|
| | | | DA | D1, D2 H7 | | L1 | L2 | LG | SC | T_A (Nm) | | | |
| | | | | min. | max. | | | | | | | | |
| 18 | 18 | 12800 | 47 | 10 | 17 | 62 | 42 | 57 | M4 | 4 | 0.05 | 2LC0590-8AG99-0AA0 | 0.20 |
| | | | | | | 70 | 50 | 64 | | | 0.05 | 2LC0590-8AG99-0AB0 | 0.21 |
| 30 | 30 | 10300 | 56 | 12 | 20 | 53 | 34 | 47 | M4 | 4.5 | 0.08 | 2LC0591-0AG99-0AA0 | 0.24 |
| | | | | | | 61 | 42 | 55 | | | 0.09 | 2LC0591-0AG99-0AB0 | 0.27 |
| 60 | 60 | 8700 | 64 | 15 | 25 | 62 | 34 | 53 | M6 | 8.5 | 0.22 | 2LC0591-1AG99-0AA0 | 0.46 |
| | | | | | | 73 | 45 | 64 | | | 0.25 | 2LC0591-1AG99-0AB0 | 0.48 |
| 80 | 80 | 6900 | 82 | 20 | 35 | 79 | 50 | 70 | M6 | 10 | 0.65 | 2LC0591-2AG99-0AA0 | 0.82 |
| | | | | | | 90 | 60 | 81 | | | 0.71 | 2LC0591-2AG99-0AB0 | 0.87 |
| 150 | 150 | 6900 | 82 | 20 | 35 | 79 | 50 | 70 | M6 | 15 | 0.65 | 2LC0591-3AG99-0AA0 | 0.82 |
| | | | | | | 90 | 60 | 81 | | | 0.71 | 2LC0591-3AG99-0AB0 | 0.87 |
| 200 | 200 | 6400 | 90 | 20 | 40 | 79 | 50 | 70 | M6 | 15 | 0.85 | 2LC0591-4AG99-0AA0 | 0.92 |
| | | | | | | 92 | 63 | 84 | | | 0.95 | 2LC0591-4AG99-0AB0 | 0.94 |
| 300 | 300 | 6000 | 110 | 25 | 50 | 90 | 53 | 78 | M8 | 17 | 2.58 | 2LC0591-5AG99-0AA0 | 1.82 |
| | | | | | | 103 | 65 | 91 | | | 2.85 | 2LC0591-5AG99-0AB0 | 1.86 |
| 500 | 500 | 5000 | 122 | 35 | 55 | 103 | 65 | 91 | M8 | 25 | 4.20 | 2LC0591-6AG99-0AA0 | 2.34 |
| | | | | | | 113 | 71 | 101 | | | 4.42 | 2LC0591-6AG99-0AB0 | 2.40 |
| 800 | 800 | 3700 | 157 | 50 | 70 | 170 | 108 | 148 | M16 | 45 | 28.4 | 2LC0591-7AG99-0AA0 | 9.69 |
| 1400 | 1400 | 3700 | 157 | 50 | 70 | 170 | 108 | 148 | M16 | 80 | 28.4 | 2LC0591-8AG99-0AA0 | 9.69 |
| 3000 | 3000 | 2800 | 157 | 55 | 75 | 170 | 108 | 148 | M16 | 115 | 32.5 | 2LC0592-0AG99-0AA0 | 10.2 |
| 5000 | 5000 | 2800 | 210 | 60 | 90 | 202 | 140 | 180 | M16 | 210 | 115 | 2LC0592-1AG99-0AA0 | 20.9 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

The clamping hubs with internal taper are the ideal solution for high-speed and highly dynamic applications. These couplings require less installation space than type SKK.

The maximum torques that can be transmitted by the clamping connection are listed in the table on page 3.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example

SIPEX SII coupling, size 80

Total length LG = 79 mm

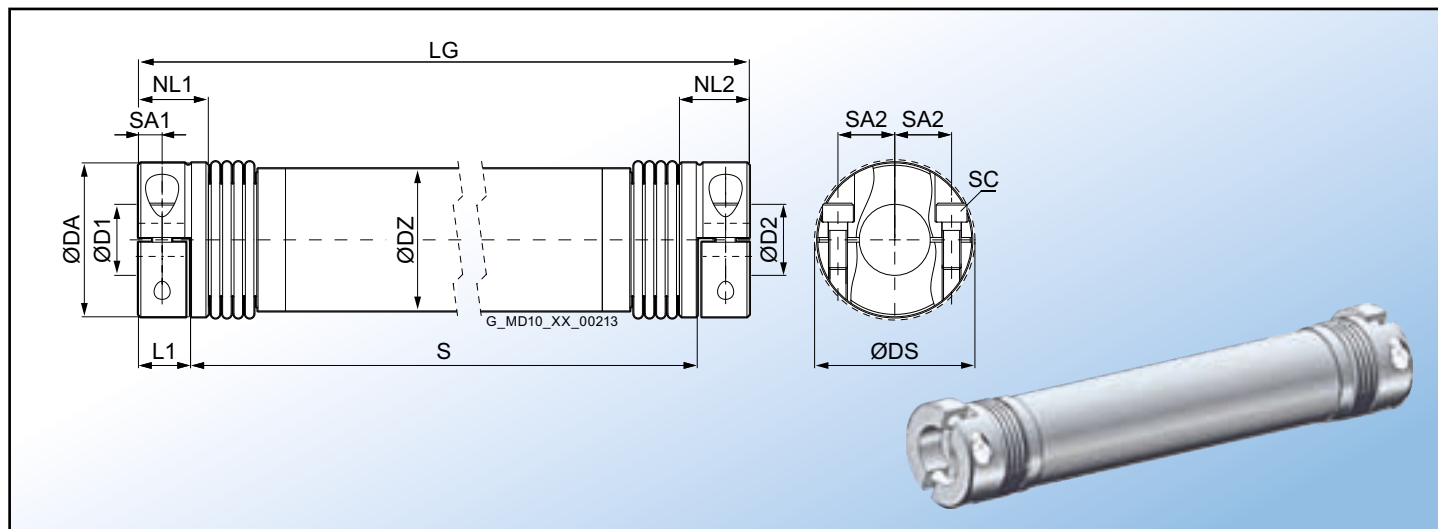
Bore ØD1 30 H7

Bore ØD2 38 H7

Product Code: **2LC0591-2AG99-0AA0 L0S+M0V**



Drive shaft with half-shell clamping hubs



| Size | Rated Torque T_{KN} (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | | | | Screw EN ISO 4762 | | Moment of Inertia J DBSE = 1000 mm (10 ³ × kgm ²) | Product Code* | Weight m (g) | |
|------|----------------------------------|--------------------------------------|-----------------|-----|-------|----|-----|-------------|------|------|------|------|-------------------|-----|--|---------------|--------------------|---------------|
| | | | DA | DS | D1 H7 | D2 | DZ | NL1/ NL2 | L1 | LG | | SA1 | SA2 | SC | | | | T_A (Nm) |
| | | | | | | | | | | min. | max. | | | | | | | |
| 18 | 18 | 1500 | 45 | 48 | 8 | 25 | 40 | 20.5 | 13.5 | 132 | 3000 | 5.7 | 17.5 | M5 | 8 | 0.51 | 2LC0590-8AH99-0AZ0 | 1.63 |
| 30 | 30 | 1500 | 54 | 56 | 10 | 30 | 50 | 24.5 | 17 | 130 | 3000 | 7.5 | 20 | M6 | 15 | 1.13 | 2LC0591-0AH99-0AZ0 | 2.29 |
| 60 | 60 | 1500 | 65 | 67 | 12 | 35 | 60 | 29 | 22 | 165 | 3000 | 10 | 24 | M8 | 40 | 2.42 | 2LC0591-1AH99-0AZ0 | 3.34 |
| 150 | 150 | 1500 | 79 | 84 | 14 | 42 | 75 | 34 | 24 | 196 | 3000 | 11.8 | 28 | M10 | 84 | 5.77 | 2LC0591-3AH99-0AZ0 | 5.1 |
| 200 | 200 | 1500 | 90 | 93 | 14 | 42 | 90 | 38 | 28 | 218 | 3000 | 12.5 | 31.5 | M12 | 125 | 9.53 | 2LC0591-4AH99-0AZ0 | 5.9 |
| 300 | 300 | 1500 | 109 | 110 | 20 | 45 | 100 | 38 | 28 | 220 | 3000 | 13 | 35 | M12 | 145 | 14.6 | 2LC0591-5AH99-0AZ0 | 7.1 |
| 500 | 500 | 1500 | 119 | 122 | 35 | 60 | 110 | 41.5 | 31.5 | 250 | 3000 | 14 | 42 | M14 | 190 | 18.6 | 2LC0591-6AH99-0AZ0 | 7.3 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

The clamping hubs with internal taper are the ideal solution for high-speed and highly dynamic applications. These couplings require less installation space than type SKK.

The maximum torques that can be transmitted by the clamping connection are listed in the table on page 3.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example

SIPEX SII coupling, size 80

Total length LG = 79 mm

Bore ØD1 30 H7

Bore ØD2 38 H7

Product Code: 2LC0591-2AG99-0AA0 L0S+M0V



The product code consists of a combination of digits and letters and is divided into three blocks linked by hyphens for better clarity.

The coupling series, the type and the size are encoded in blocks 1 and 2. Block 3 contains information applying only to the coupling specified in blocks 1 and 2.

The three blocks of the article number are supplemented by information on the bore of the coupling hub parts and information on "Special Types".

The bore details with the code letter L always refer to the bore diameter D1 of the hub part shown on the left on the dimension drawing. The order code beginning with M always refers to the bore diameter D2 of the hub part shown on the right on the dimension drawing.

The order code without the letter "-Z" refers to tolerance H7 without keyway. An exception to this rule is type BNN of series BIPEX-S to which tolerance H7 with keyway applies.

To order other types with keyway, the letter "-Z" must be appended to the product code.

L40 / M40 = Keyway according to DIN 6885, keyway width JS9

L41 / M41 = Keyway according to DIN 6885, keyway width P9

| Structure of the Article No. | Place | 1 | 2 | 3 | 4 | 5 | 6 | 7 | - 8 | 9 | 10 | 11 | 12 | - 13 | 14 | 15 | 16 |
|---|---|---|---|---|---------------|--------|--------|-------------|-----|---------------|----|----|----|------|----|------------------|-----|
| Standard couplings | | | | | | | | | | | | | | | | | |
| 1st to 3rd place Digit, letter, letter | Type | 2 | L | C | | | | | | | | | | | | | |
| 4th place Digit | Coupling design | | | | 0 ... 9 | | | | | | | | | | | | |
| 5th and 6th place Digits | Series SIPEX BIPEX-S | | | | | 5 1 | 9 9 | | | | | | | | | | |
| 7th and 8th place Digits | Size | | | | | | | 0 1 2 | | 0 ... 8 | | | | | | | |
| 9th and 10th place Letters | Type, subassembly or component part | | | | | | | | | A ... H | A | | | | | | |
| 11th place Digit | Shaft-hub connection, flange connection | | | | | | | | | | | 9 | | | | | |
| 12th place Digit | Shaft-hub connection, flange connection, V-belt pulley | | | | | | | | | | | | 9 | | | | |
| 13th to 16th place Digit, letter, letter, digit | Further technical design details Z requires order code Q0Y and additional information in plain text for dimension S. | | | | | | | | | | | | | 0 | A | A B C Z | 0 |
| Bore specifications | Additional order codes for bores finished in delivery condition $\varnothing D1$ and $\varnothing D2$ Specification of "9" in the 11th Place of the article number (article number without "-Z") with order codes L.. for $\varnothing D1$ and/or specification of "9" in the 12th Place of the article number (article number without "-Z") with order codes M.. for $\varnothing D2$ Selection of order codes for diameter and tolerance in the following tables under "Bore specifications". | | | | | | | | | | | | | | | | |
| Special types | Additional order codes (article number with "-Z") and, if required, plain text | | | | | | | | | | | | | | | | - Z |

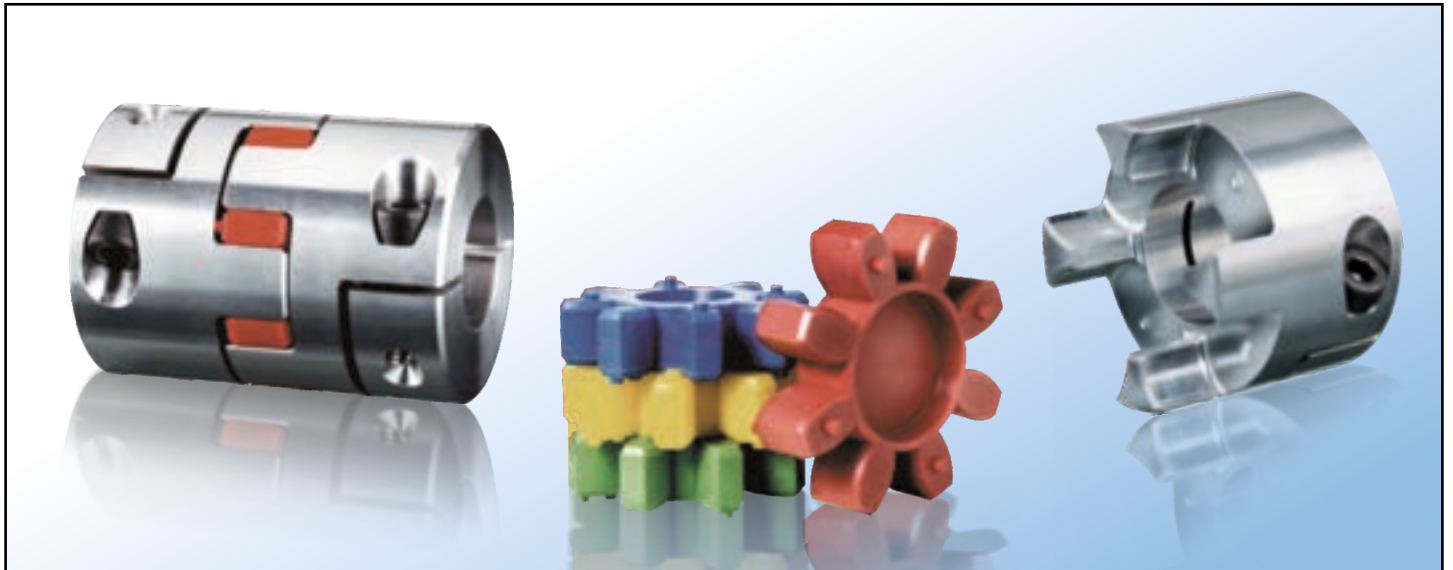


Transmissible torques of the different clamping connections as a function of hub design and shaft diameter.

BIPEX-S series

| Size | Hub design | Transmissible torque by clamping connection in Nm | | | | | | | | | | | | | | | | | | | | | | | | |
|------|------------|---|-----|-----|------|-----|------|------|------|------|------|------|------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| | | Bore diameter \varnothing D1/D2 in mm | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 19 | 20 | 22 | 24 | 25 | 28 | 30 | 32 | 35 | 38 | 40 | 42 | 45 | 48 | 50 | 55 |
| 5 | G | 0.5 | 0.6 | 0.6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 7 | G | - | 1 | 1.2 | 1.3 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9 | G | - | - | 3.1 | 3.4 | 3.7 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 14 | G | - | - | - | 5.9 | 6.3 | 6.7 | 7.1 | 7.8 | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | C | - | - | - | 5.9 | 6.3 | 6.7 | 7.1 | 7.8 | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | H | - | - | - | 4 | 5.3 | 6.6 | 8 | 9.2 | 10.6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | K | - | - | - | 13.2 | 25 | 25 | 37 | 52 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 19 | G | - | - | - | - | 26 | 27.5 | 28.9 | 30 | 31.6 | 33.7 | 34.5 | 35.9 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | C | - | - | - | - | 23 | 24 | 25 | 26 | 27.5 | 29 | 30 | 31 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | H | - | - | - | - | 21 | 26.5 | 31.8 | 37 | 42 | 50 | 53 | 58 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| | K | - | - | - | - | 29 | 56 | 89 | 74 | 129 | 146 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 24 | G | - | - | - | - | - | 42 | 44 | 45.5 | 47 | 50 | 50.5 | 53 | 54 | 55 | 57 | 59 | - | - | - | - | - | - | - | - | - |
| | C | - | - | - | - | - | 42 | 44 | 45.5 | 47 | 50 | 50.5 | 53 | 54 | 55 | 57 | 59 | - | - | - | - | - | - | - | - | - |
| | H | - | - | - | - | - | 26.5 | 31.8 | 37 | 42 | 50 | 53 | 58 | 64 | 66 | 74 | 79 | - | - | - | - | - | - | - | - | - |
| | K | - | - | - | - | - | 48 | 71 | 164 | 132 | 234 | 275 | 249 | 327 | 371 | - | - | - | - | - | - | - | - | - | - | - |
| 28 | G | - | - | - | - | - | - | - | - | 100 | 105 | 107 | 110 | 113 | 115 | 119 | 122 | 125 | 130 | 135 | - | - | - | - | - | - |
| | C | - | - | - | - | - | - | - | - | 100 | 105 | 107 | 110 | 113 | 115 | 119 | 122 | 125 | 130 | 135 | - | - | - | - | - | - |
| | H | - | - | - | - | - | - | - | - | 78 | 92 | 97 | 107 | 117 | 121 | 136 | 146 | 156 | 178 | 185 | - | - | - | - | - | - |
| | K | - | - | - | - | - | - | - | - | 171 | 276 | 204 | 268 | 341 | 381 | 423 | 509 | 466 | 593 | 738 | - | - | - | - | - | - |
| 38 | G | - | - | - | - | - | - | - | - | 118 | 122 | 124 | 127 | 130 | 131 | 136 | 139 | 142 | 147 | 152 | 155 | 158 | 163 | 167 | - | - |
| | C | - | - | - | - | - | - | - | - | 188 | 195 | 197 | 202 | 207 | 210 | 217 | 222 | 227 | 234 | 242 | 247 | 252 | 259 | 267 | - | - |
| | H | - | - | - | - | - | - | - | - | 78 | 92 | 97 | 107 | 117 | 121 | 136 | 146 | 156 | 178 | 185 | 195 | 204 | 219 | 233 | - | - |
| | K | - | - | - | - | - | - | - | - | - | - | 287 | 374 | 474 | 529 | 589 | 708 | 653 | 827 | 827 | 947 | 863 | 1036 | 1227 | - | - |
| 42 | G | - | - | - | - | - | - | - | - | 207 | 210 | 215 | 220 | 222 | 230 | 234 | 239 | 247 | 254 | 259 | 264 | 271 | 279 | 284 | - | - |
| | C | - | - | - | - | - | - | - | - | - | - | - | - | - | 222 | 230 | 234 | 239 | 247 | 254 | 259 | 264 | 271 | 279 | 284 | - |
| | H | - | - | - | - | - | - | - | - | - | 147 | 155 | 170 | 186 | 193 | 217 | 232 | 248 | 271 | 294 | 309 | 325 | 349 | 372 | 387 | - |
| | K | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 532 | 641 | 588 | 750 | 747 | 858 | 802 | 967 | 1049 | 1280 | - |
| 48 | G | - | - | - | - | - | - | - | - | - | - | - | - | - | 345 | 360 | 367 | 374 | 385 | 396 | 403 | 410 | 421 | 432 | 439 | 457 |
| | C | - | - | - | - | - | - | - | - | - | - | - | - | - | 345 | 360 | 367 | 374 | 385 | 396 | 403 | 410 | 421 | 432 | 439 | 457 |
| | H | - | - | - | - | - | - | - | - | - | - | - | - | - | 283 | 316 | 339 | 361 | 39 | 429 | 452 | 474 | 509 | 542 | 565 | 621 |
| | K | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 857 | 1004 | 1248 | 1262 | 1429 | 1362 | 1609 | 1880 | 1710 | 2150 |

G = clamping hub
 C = clamping hub compact
 H = half-shell
 K = external taper



Overview

BIPEX-S couplings are torsionally flexible and are free of backlash in the pre-tensioned state. They are characterized by their compact design and high power density. BIPEX-S couplings connect machine shafts and compensate for shaft misalignment that can occur during assembly or operation. The damping properties of the couplings can be varied by the use of elastomer coupling elements of various degrees of hardness. BIPEX-S couplings are suitable for all drive applications which require a coupling that offers positioning accuracy and vibration damping.

Benefits

BIPEX-S couplings are suitable for mounting horizontally, vertically or in any desired position. The coupling parts can be arranged as required on the shaft ends to be connected. The coupling can be axially plugged in. The coupling element is pre-tensioned and is therefore assembled without backlash. The lobes attached to the element allow the coupling to compensate shaft misalignment, and also provide electrical isolation since they prevent contact between the two hub parts. BIPEX-S couplings are fail-safe. When the coupling element is worn, the claws of the coupling hubs provide for fail-safe operation. Available in 4 different Shore hardness grades, the coupling elements allow to select the optimum degree of rigidity for any application.

Application

BIPEX-S couplings within the standard catalogue range are available in 10 sizes with torque ratings ranging from 0.5 to 655 Nm. The coupling is suitable for ambient temperatures of between -30 °C and +90 °C. Coupling elements with alternative hardness grades can be supplied for ambient temperatures down to -50 °C or up to +120 °C.

BIPEX-S couplings are ideal for use in servo drives, linear axes or rotary encoders of the type typically deployed in machine tools, packaging machines or printing presses.



Design

BIPEX-S couplings each comprise two hub parts connected by a coupling element or 'cam ring' made of polyurethane (PU).

The couplings can be axially plugged in during assembly. The hubs can be coupled to the shafts by many different methods including set screws, key joint, slotted clamping hubs, half-shell hubs, clamping hubs or expanding hubs.

BIPEX-S couplings are positive-locking and torsionally flexible thanks to the polyurethane cam ring. Misalignment between the connected shafts deforms the coupling element/cam ring.



Coupling materials:

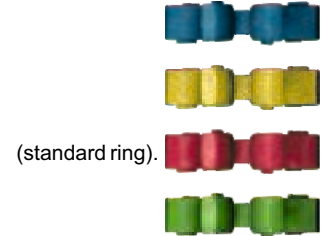
Hubs: Up to size 38 aluminum
 Sizes 42 and 48 steel.

Coupling element / Cam ring: » PU 80 ShoreA -50 °C to +80 °C.

» PU 92 ShoreA -40 °C to +90 °C.

» PU 98 ShoreA -30 °C to +90 °C

» PU 64 ShoreD -50 °C to +120 °C.



Note: The coupling types can be combined from the available range of hub versions and different elastomer grades.

Hub versions:

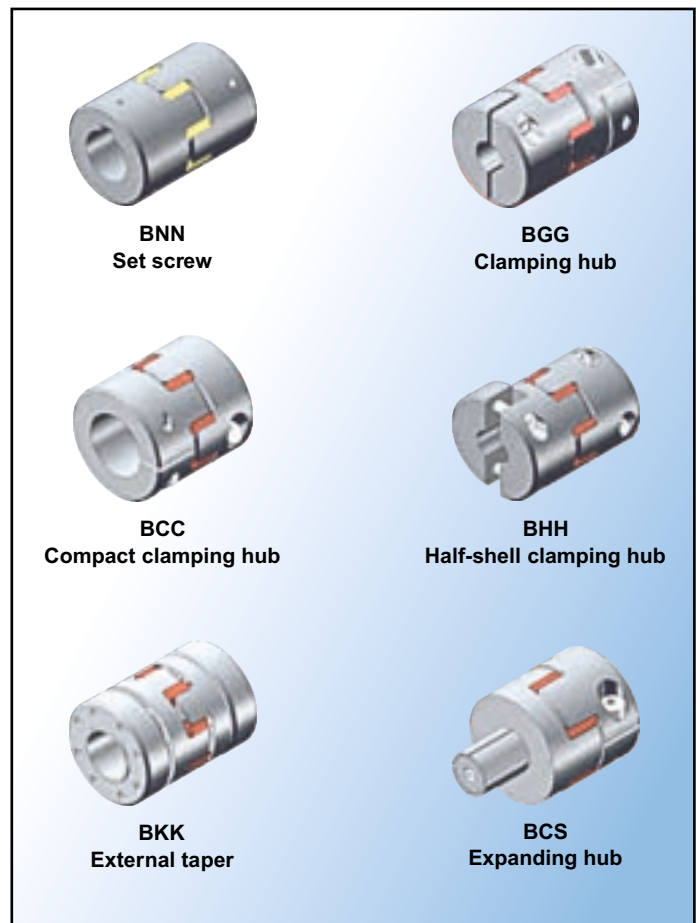
- N: Hub with set screw
 - G: Slotted clamping hub
 - C: Slotted clamping hub, compact
 - H: Half-shell clamping hub
 - K: Clamping hub with external taper
 - S: Expanding hub
- Versions N, G, C and H are optionally available with keyway.

BIPEX-S coupling standard versions:

| Type | Description |
|-------|--|
| BNN | Hub with set screw on both sides |
| BGG | Clamping hub on both sides |
| BCC | Compact clamping hub on both sides |
| BHH | Half-shell clamping hubs on both sides |
| BKK | Clamping hub with external taper on both sides |
| BCS | Hub 1: Clamping hub/Hub 2: Expanding hub |
| BHH-W | Drive shaft with half-shell clamping hub. |

BIPEX-S coupling combination versions:

| Type | Description |
|------|---|
| BNG | Hub 1: Set screw Hub 2: Clamping hub |
| BNC | Hub 1: Set screw Hub 2: Compact clamping hub |
| BNH | Hub 1: Set screw Hub 2: Half-shell |
| BNK | Hub 1: Set screw Hub 2: External taper |
| BGC | Hub 1: Clamping hub Hub 2: Compact clamping hub |
| BGH | Hub 1: Clamping hub Hub 2: Half-shell |
| BGK | Hub 1: Clamping hub Hub 2: External taper |
| BGS | Hub 1: Clamping hub Hub 2: Expanding hub |
| BCH | Hub 1: Compact clamping hub Hub 2: Half-shell |
| BCK | Hub 1: Compact clamping hub Hub 2: External taper |
| BHK | Hub 1: Half-shell Hub 2: External taper |
| BHS | Hub 1: Expanding hub Hub 2: Half-shell |
| BKS | Hub 1: Expanding hub Hub 2: External taper |





Preliminary dimensioning

Dimensioning according to torque

The coupling must be dimensioned such that the rated torque of the drive including service factors does not exceed the rated torque of the coupling.

$$T_{KN} \geq T_N \times FB \times FT$$

Torque characteristic of drive Service factor FB

| | |
|-------------|------|
| Uniform | 1.25 |
| Non Uniform | 1.5 |
| Rough | 2.0 |

In order to increase the torsional rigidity and therefore minimize the torsional backlash, it is possible to apply significantly higher service factors for main spindle or positioning drives.

Temperature range Temperature factor FT

| | |
|------------------|-----|
| -30 °C to +30 °C | 1.0 |
| to +60 °C | 1.4 |
| to +80 °C | 1.8 |
| to +100 °C | 2.0 |
| to +120 °C | 2.8 |

Please note the permissible temperature ranges of different coupling elements / cam rings.

| Starts per hour | Startup factor FA |
|-----------------|-------------------|
| < 125 | 1.0 |
| 125 to 250 | 1.3 |
| 250 to 500 | 1.6 |
| 500 to 1000 | 1.8 |
| > 1000 | 2.0 |

Checking the peak torques

The coupling size selected during the preliminary dimensioning process must also be suitable with respect to peak torques at the drive and load ends.

$$TKN \geq TS \times FB \times FT$$

$$T_s = T_{AS} \times \frac{J_L}{J_A + J_L} \times FA \text{ or } T_s = T_{LS} \times \frac{J_A}{J_A + J_L} \times FA$$

Checking the maximum speed

For all load situations $n_{Kmax} > n_{max}$

Checking the permitted shaft misalignment

The actual shaft misalignment must be less than the permitted shaft misalignment for all load situations.

Checking the shaft-hub connection

In the case of clamping connections without feather key, it must be ensured that the transmissible torque of the hub connection is greater than the peak torque at the coupling.

For formula symbols see page 6.

| Size | Shore Hardness | Rated Torque | Maximum Torque | Maximum Speed Type BNN | Maximum Speed Type BGG, BHH, BCC, BCS | Maximum Speed Type BKK | Torsional Stiffness | Radial Stiffness | Permitted shaft misalignment at * | | |
|------|----------------|----------------------|-----------------------|-------------------------|---------------------------------------|-------------------------|----------------------------|------------------------|-----------------------------------|----------------------|------------------------|
| | | T _{KN} (Nm) | T _{KOL} (Nm) | n _{KmaxL} (Nm) | n _{KmaxL} (Nm) | n _{KmaxL} (Nm) | C _{Tdyn} (Nm/rad) | C _r (Nm/mm) | ΔK _a (mm) | ΔK _v (mm) | ΔK _w degree |
| 5 | 80 ShoreA | 0.3 | 0.6 | 47500 | 38000 | – | 10 | 82 | 0.4 | 0.12 | 1.1 |
| | 92 ShoreA | 0.5 | 1.0 | | | | 16 | 154 | 0.4 | 0.06 | 1 |
| | 98 ShoreA | 0.9 | 1.8 | | | | 25 | 296 | 0.4 | 0.04 | 0.9 |
| 7 | 80 ShoreA | 0.7 | 1.4 | 35000 | 26000 | – | 26 | 114 | 0.6 | 0.15 | 1.1 |
| | 92 ShoreA | 1.2 | 2.4 | | | | 43 | 219 | 0.6 | 0.1 | 1 |
| | 98 ShoreA | 2.0 | 4.0 | | | | 69 | 421 | 0.6 | 0.06 | 0.9 |
| | 64 ShoreD | 2.4 | 4.8 | | | | 103 | 630 | 0.6 | 0.04 | 0.8 |
| 9 | 80 ShoreA | 1.8 | 3.6 | 24000 | 18000 | – | 52 | 125 | 0.8 | 0.19 | 1.1 |
| | 92 ShoreA | 3.0 | 6 | | | | 95 | 262 | 0.8 | 0.13 | 1 |
| | 98 ShoreA | 5.0 | 10 | | | | 155 | 518 | 0.8 | 0.08 | 0.9 |
| | 64 ShoreD | 6.0 | 12 | | | | 224 | 769 | 0.8 | 0.05 | 0.8 |
| 14 | 80 ShoreA | 4.0 | 8 | 16000 | 12000 | 25000 | 180 | 153 | 1 | 0.21 | 1.1 |
| | 92 ShoreA | 7.5 | 15 | | | | 344 | 335 | 1 | 0.15 | 1 |
| | 98 ShoreA | 12.5 | 25 | | | | 513 | 655 | 1 | 0.09 | 0.9 |
| | 64 ShoreD | 16 | 32 | | | | 702 | 855 | 1 | 0.06 | 0.8 |
| 19 | 80 ShoreA | 5 | 10 | 12000 | 9500 | 18500 | 1030 | 582 | 1.2 | 0.15 | 1.1 |
| | 92 ShoreA | 10 | 20 | | | | 1720 | 1125 | 1.2 | 0.1 | 1 |
| | 98 ShoreA | 17 | 34 | | | | 2580 | 2010 | 1.2 | 0.06 | 0.9 |
| | 64 ShoreD | 21 | 42 | | | | 3720 | 2950 | 1.2 | 0.04 | 0.8 |
| 24 | 92 ShoreA | 35 | 70 | 8700 | 7000 | 13900 | 4300 | 1490 | 1.4 | 0.14 | 1 |
| | 98 ShoreA | 60 | 120 | | | | 6190 | 2550 | 1.4 | 0.1 | 0.9 |
| | 64 ShoreD | 75 | 150 | | | | 8930 | 3695 | 1.4 | 0.07 | 0.8 |
| 28 | 92 ShoreA | 95 | 190 | 7400 | 6000 | 11800 | 6880 | 1785 | 1.5 | 0.15 | 1 |
| | 98 ShoreA | 160 | 320 | | | | 10310 | 3210 | 1.5 | 0.11 | 0.9 |
| | 64 ShoreD | 200 | 400 | | | | 13050 | 4350 | 1.5 | 0.08 | 0.8 |
| 38 | 92 ShoreA | 190 | 380 | 6000 | 4700 | 9600 | 13750 | 2350 | 1.8 | 0.17 | 1 |
| | 98 ShoreA | 325 | 650 | | | | 21490 | 4410 | 1.8 | 0.12 | 0.9 |
| | 64 ShoreD | 405 | 810 | | | | 31620 | 6475 | 1.8 | 0.09 | 0.8 |
| 42 | 92 ShoreA | 265 | 530 | 5000 | 4000 | 8000 | 24300 | 2440 | 2 | 0.19 | 1 |
| | 98 ShoreA | 450 | 900 | | | | 48000 | 5575 | 2 | 0.14 | 0.9 |
| | 64 ShoreD | 560 | 1120 | | | | 71700 | 7280 | 2 | 0.1 | 0.8 |
| 48 | 92 ShoreA | 310 | 620 | 4600 | 3500 | 7100 | 18055 | 2590 | 2.1 | 0.23 | 1 |
| | 98 ShoreA | 525 | 1050 | | | | 55925 | 5950 | 2.1 | 0.16 | 0.9 |
| | 64 ShoreD | 655 | 1310 | | | | 90500 | 8280 | 2.1 | 0.11 | 0.8 |

Torsional stiffness and damping

The values stated in the above table apply to a capacity utilization of 50%, an excitation amplitude of 10% T_{KN} with a frequency of 10 Hz and an ambient temperature of 20 °C. The dynamic torsional stiffness is load-dependent and increases in proportion to capacity utilization.

The relative damping coefficient is

ψ = 0.8 for 98, 92 and 80 ShA

ψ = 0.75 for 64 ShD.

T_{KOL} is the torque which can be transmitted very rarely as maximum torque by the coupling.

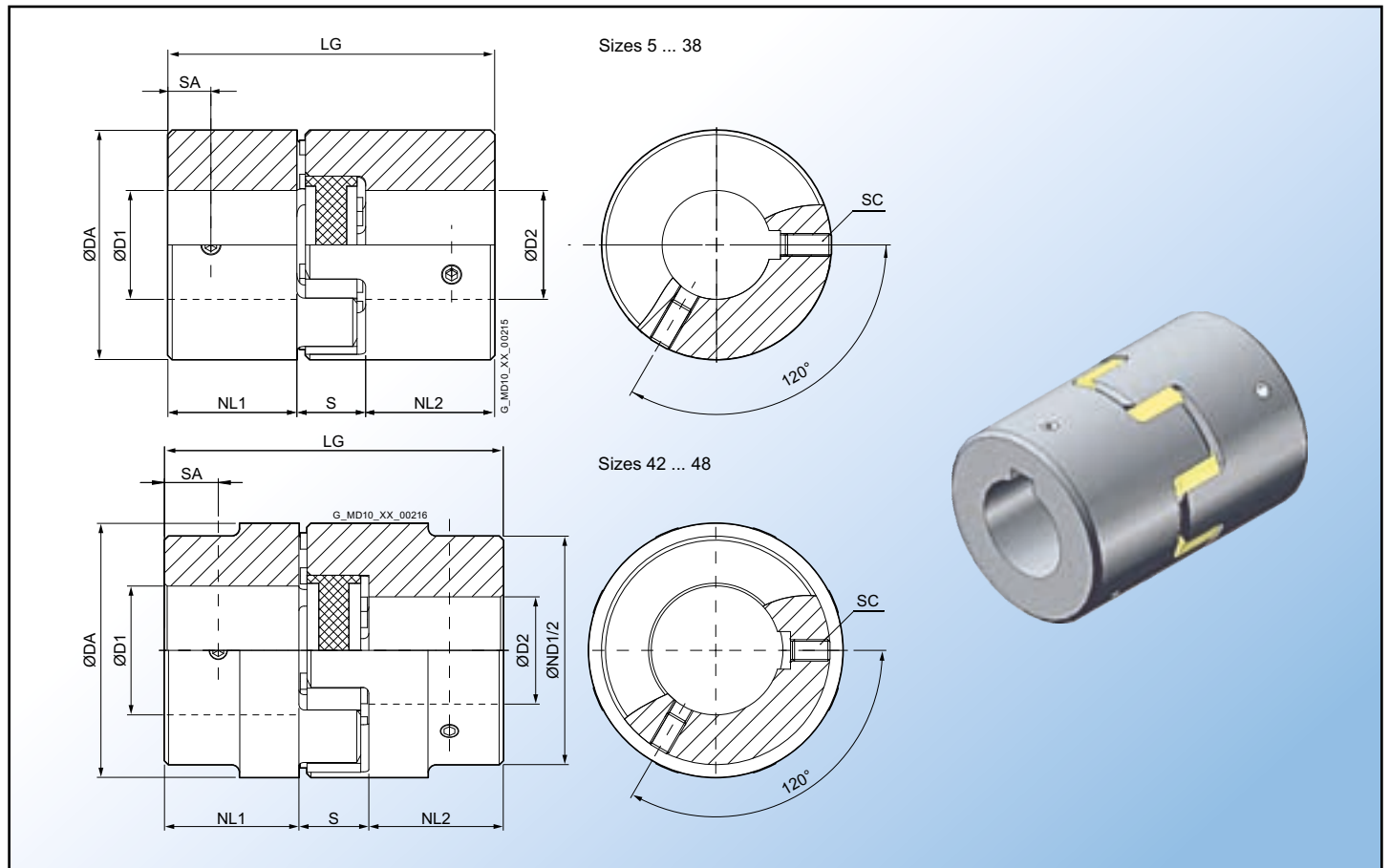
Permitted shaft misalignment

The permitted shaft misalignments ΔK_a, ΔK_v and ΔK_w are maximum values and must not occur simultaneously. The following formula can be used to roughly calculate whether combinations of misalignments are permissible:

$$\frac{\Delta K_{\text{ract}}}{\Delta K_r} + \frac{\Delta K_{\text{aact}}}{\Delta K_a} + \frac{\Delta K_{\text{wact}}}{\Delta K_w} < 1$$



Hubs with set screws



| Size | Rated Torque T_{KN} 98ShA (Nm) | Rated Torque T_{KN} 92ShA (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | | Screw EN ISO 4027 | | Moment of Inertia J ($10^6 \times \text{kgm}^2$) | Product Code* | Weight m (g) |
|------|---|---|--------------------------------------|-----------------|--------------|------|-------------|-------------|----|-----|-----|----------------------|---------------|--|--------------------|--------------------|
| | | | | DA | D1, D2 H7 | | ND1/ ND2 | NL1/ NL2 | S | LG | SA | SC | T_A (Nm) | | | |
| | | | | | min. | max. | | | | | | | | | | |
| 5 | 0.9 | 0.5 | 47500 | 10 | 2 | 5 | — | 5 | 5 | 15 | 2.5 | M3 | 2.5 | 0.04 | 2LC0190-0AA99-0AA0 | 0.003 |
| 7 | 2 | 1.2 | 35000 | 14 | 3 | 7 | — | 7 | 8 | 22 | 3.5 | M3 | 2.5 | 0.2 | 2LC0190-1AA99-0AA0 | 0.007 |
| 9 | 5 | 3 | 24000 | 20 | 4 | 10 | — | 10 | 10 | 30 | 5 | M4 | 5 | 1.1 | 2LC0190-2AA99-0AA0 | 0.018 |
| 14 | 12.5 | 7.5 | 16000 | 30 | 5 | 16 | — | 11 | 13 | 35 | 5 | M4 | 5 | 6.4 | 2LC0190-3AA99-0AA0 | 0.045 |
| 19 | 17 | 10 | 12000 | 40 | 6 | 24 | — | 25 | 16 | 66 | 10 | M5 | 10 | 37 | 2LC0190-4AA99-0AA0 | 0.14 |
| 24 | 60 | 35 | 8700 | 55 | 8 | 28 | — | 30 | 18 | 78 | 10 | M5 | 10 | 171 | 2LC0190-5AA99-0AA0 | 0.36 |
| 28 | 160 | 95 | 7400 | 65 | 10 | 38 | — | 35 | 20 | 90 | 15 | M8 | 15 | 370 | 2LC0190-6AA99-0AA0 | 0.53 |
| 38 | 325 | 190 | 6000 | 80 | 12 | 45 | — | 45 | 24 | 114 | 15 | M8 | 15 | 1100 | 2LC0190-7AA99-0AA0 | 1.1 |
| 42 | 450 | 265 | 5000 | 95 | 14 | 55 | 85 | 50 | 26 | 126 | 20 | M8 | 20 | 4960 | 2LC0190-8AA99-0AA0 | 3.5 |
| 48 | 525 | 310 | 4600 | 105 | 15 | 62 | 95 | 56 | 28 | 140 | 20 | M8 | 0 | 9900 | 2LC0191-0AA99-0AA0 | 5.3 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

Shaft is connected to hub by means of feather key according to DIN 6885-1. The keyway can be optionally omitted and the shaft connected to the hub solely by means of set screws. Coupling element / cam ring made of polyurethane with Shore hardness 92 ShA as standard (yellow). For other hardness grades, see page 23. Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example

BIPEX-S BNN coupling, size 24

Part 1: Bore $\varnothing D1$ 20 H7

Part 2: Bore $\varnothing D2$ 24 H7

Product Code: **2LC0190-5AA99-0AA0 LOM + M0P**

Options for other Shore hardness grades:

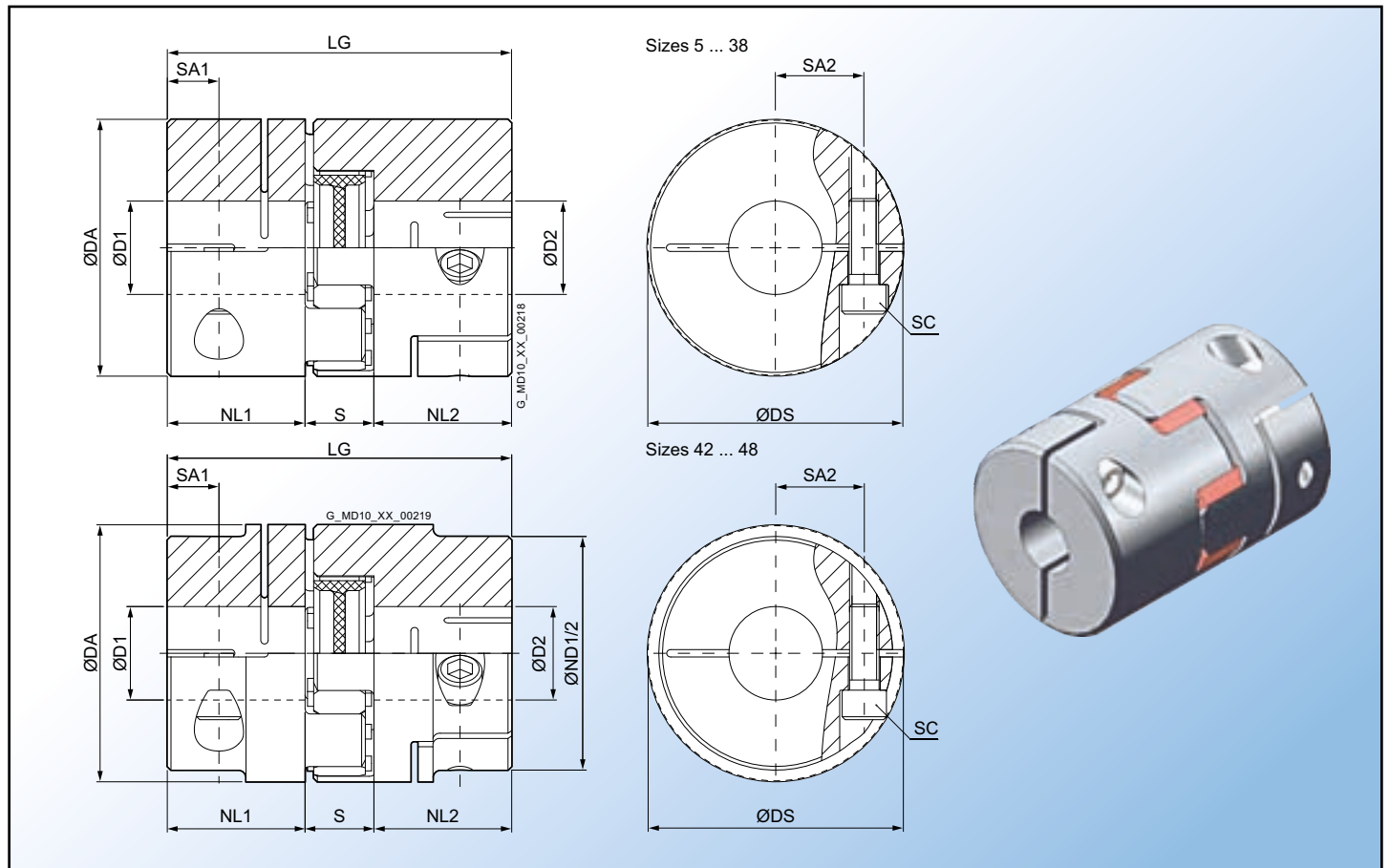
-Z K03 = 80 ShA (blue)

-Z K01 = 98 ShA (red)

-Z K04 = 64 ShD (green)



Standard clamping hubs (type BGG)



| Size | Rated Torque T_{KN} 98ShA (Nm) | Rated Torque T_{KN} 92ShA (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | | | | Screw EN ISO 4762 | | Moment of Inertia J (10^{-6} \times kgm ²) | Product Code* | Weight m (g) |
|------|---|---|--------------------------------------|-----------------|------|--------------|------|-------------|-------------|----|-----|------|------|----------------------|------------------------|--|--------------------|--------------------|
| | | | | DA | DS | D1, D2 H7 | | ND1/ ND2 | NL1/ NL2 | S | LG | SA1 | SA2 | SC | T _A (Nm) | | | |
| | | | | | | min. | max. | | | | | | | | | | | |
| 5 | 0.9 | 0.5 | 38000 | 10 | 11.5 | 2 | 4 | – | 5 | 5 | 15 | 2.5 | 3.5 | M1.6 | 0.3 | 0.04 | 2LC0190-0AB99-0AA0 | 0.003 |
| 7 | 2 | 1.2 | 26000 | 14 | 16.5 | 3 | 7 | – | 7 | 8 | 22 | 3.5 | 5 | M2 | 0.4 | 0.2 | 2LC0190-1AB99-0AA0 | 0.007 |
| 9 | 5 | 3 | 18000 | 20 | 23.4 | 5 | 9 | – | 10 | 10 | 30 | 5 | 7.3 | M2.5 | 0.8 | 1.1 | 2LC0190-2AB99-0AA0 | 0.019 |
| 14 | 12.5 | 7.5 | 12000 | 30 | 32.2 | 6 | 16 | – | 11 | 13 | 35 | 5 | 11 | M3 | 2 | 6.3 | 2LC0190-3AB99-0AA0 | 0.04 |
| 19 | 17 | 10 | 9500 | 40 | 45.7 | 8 | 24 | – | 25 | 16 | 66 | 11 | 14.5 | M6 | 11 | 37 | 2LC0190-4AB99-0AA0 | 0.14 |
| 24 | 60 | 35 | 7000 | 55 | 57.4 | 10 | 28 | – | 30 | 18 | 78 | 10.5 | 20 | M6 | 15 | 165 | 2LC0190-5AB99-0AA0 | 0.35 |
| 28 | 160 | 95 | 6000 | 65 | 72.6 | 15 | 38 | – | 35 | 20 | 90 | 11 | 24.5 | M8 | 32 | 390 | 2LC0190-6AB99-0AA0 | 0.51 |
| 38 | 325 | 190 | 4700 | 80 | 83.3 | 15 | 45 | – | 45 | 24 | 114 | 15.5 | 30 | M8 | 38 | 1060 | 2LC0190-7AB99-0AA0 | 1.0 |
| 42 | 450 | 265 | 4000 | 95 | 95 | 19 | 50 | 85 | 50 | 26 | 126 | 18 | 32.5 | M10 | 84 | 4800 | 2LC0190-8AB99-0AA0 | 3.6 |
| 48 | 525 | 310 | 3500 | 105 | 105 | 25 | 55 | 95 | 56 | 28 | 140 | 21 | 36 | M12 | 145 | 8180 | 2LC0191-0AB99-0AA0 | 5.0 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

The slotted clamping hub allows a frictionally engaged connection to the input and output shaft. A single tightening screw per hub ensures easy assembly. The maximum torques that can be transmitted by the clamping connection are listed in the table on page 19.

A keyway according to DIN 6885-1 can be selected additionally as an option. Cam ring made of polyurethane with Shore hardness 98 ShA as standard (red). For other hardness grades, see page 23.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example

BIPEX-S BGG coupling, size 24

Part 1: Bore ØD1 20 H7

Part 2: Bore ØD2 24 H7

Element / cam ring 98 ShA

Product Code: 2LC0190-5AF99-0AA0 LOM + M0P

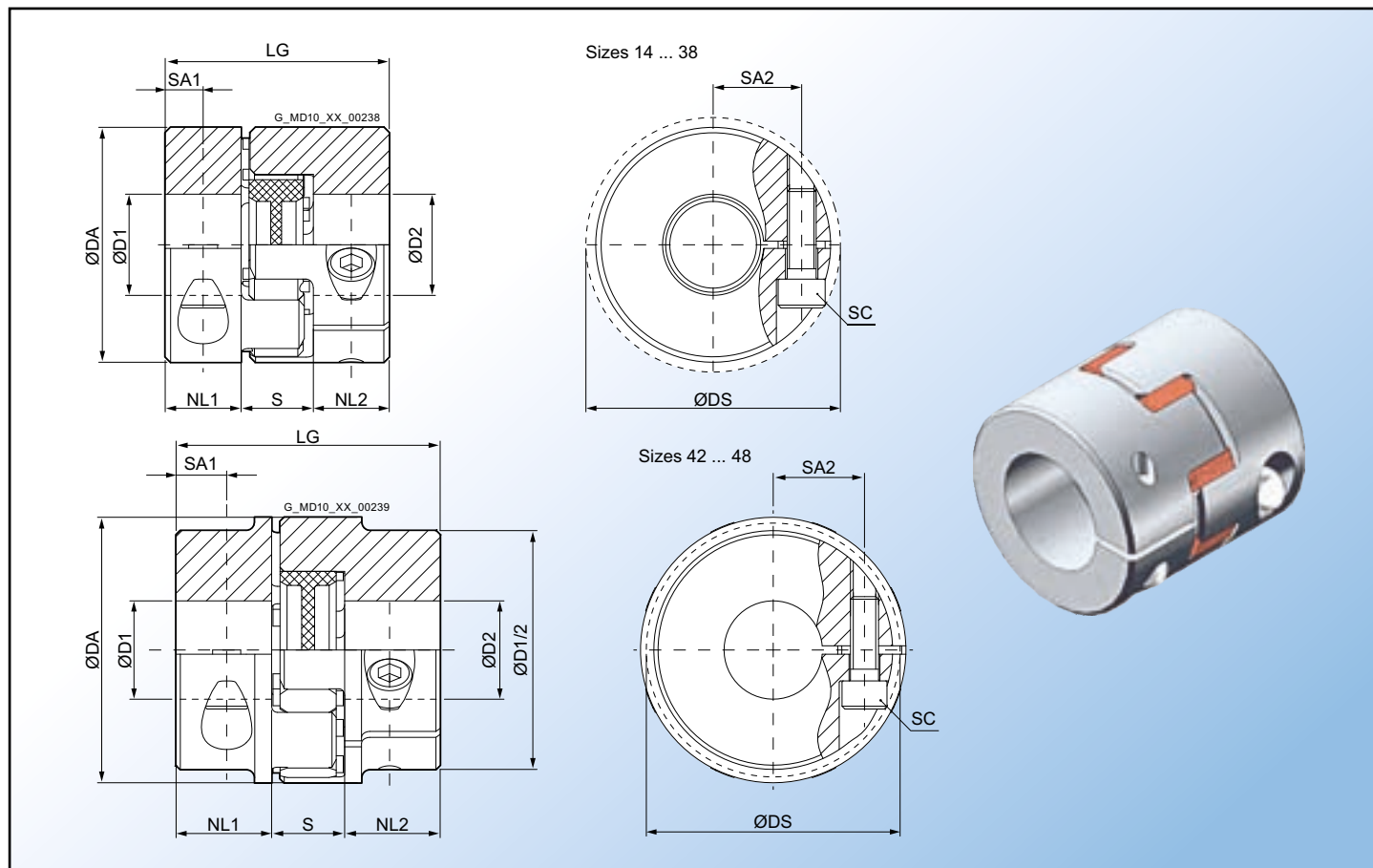
Options for other Shore hardness grades:

-Z K03 = 80 ShA (blue)

-Z K02 = 98 ShA (yellow)

-Z K04 = 64 ShD (green)

Clamping hubs in compact design (type BCC)



| Size | Rated Torque T_{KN} 98ShA (Nm) | Rated Torque T_{KN} 92ShA (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | | | | Screw EN ISO 4762 | | Moment of Inertia J (10^{-6} \times kgm ²) | Product Code* | Weight m (g) |
|------|---|---|--------------------------------------|-----------------|------|--------------|------|-------------|-------------|----|-----|------|------|----------------------|------------------------|--|--------------------|--------------------|
| | | | | DA | DS | D1, D2 H7 | | ND1/ ND2 | NL1/ NL2 | S | LG | SA1 | SA2 | SC | T _A (Nm) | | | |
| | | | | | | min. | max. | | | | | | | | | | | |
| 14 | 12.5 | 7.5 | 12000 | 30 | 32.2 | 6 | 16 | - | 11 | 13 | 35 | 5 | 11 | M3 | 2 | 6.3 | 2LC0190-3AF99-0AA0 | 0.04 |
| 19 | 17 | 10 | 9500 | 40 | 45.7 | 10 | 24 | - | 17 | 16 | 50 | 8.5 | 15 | M5 | 10 | 29 | 2LC0190-4AF99-0AA0 | 0.11 |
| 24 | 60 | 35 | 7000 | 55 | 57.4 | 12 | 28 | - | 20 | 18 | 58 | 10 | 20 | M6 | 18 | 123 | 2LC0190-5AF99-0AA0 | 0.26 |
| 28 | 160 | 95 | 6000 | 65 | 72.6 | 15 | 35 | - | 21 | 20 | 62 | 10.5 | 24.5 | M8 | 43 | 253 | 2LC0190-6AF99-0AA0 | 0.38 |
| 38 | 325 | 190 | 4700 | 80 | 83.3 | 16 | 45 | - | 31 | 24 | 86 | 15.5 | 30 | M10 | 84 | 816 | 2LC0190-7AF99-0AA0 | 0.79 |
| 42 | 450 | 265 | 4000 | 95 | 95 | 19 | 50 | 85 | 34 | 26 | 94 | 18 | 32.5 | M10 | 84 | 3290 | 2LC0190-8AF99-0AA0 | 2.5 |
| 48 | 525 | 310 | 3500 | 105 | 105 | 25 | 55 | 95 | 40 | 28 | 108 | 21 | 36 | M12 | 145 | 5459 | 2LC0191-0AF99-0AA0 | 3.3 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

The slotted clamping hub allows a frictionally engaged connection to the input and output shaft. A single tightening screw per hub ensures easy assembly. The maximum torques that can be transmitted by the clamping connection are listed in the table on page 19.

A keyway according to DIN 6885-1 can be selected additionally as an option. Cam ring made of polyurethane with Shore hardness 98 ShA as standard (red) For other hardness grades, see page 23.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example

BIPEX-S CCG coupling, size 24

Part 1: Bore ØD1 20 H7

Part 2: Bore ØD2 24 H7

Element / cam ring 98 ShA

Product Code: **2LC0190-5AB99-0AA0 L0M + M0P**

Options for other Shore hardness grades:

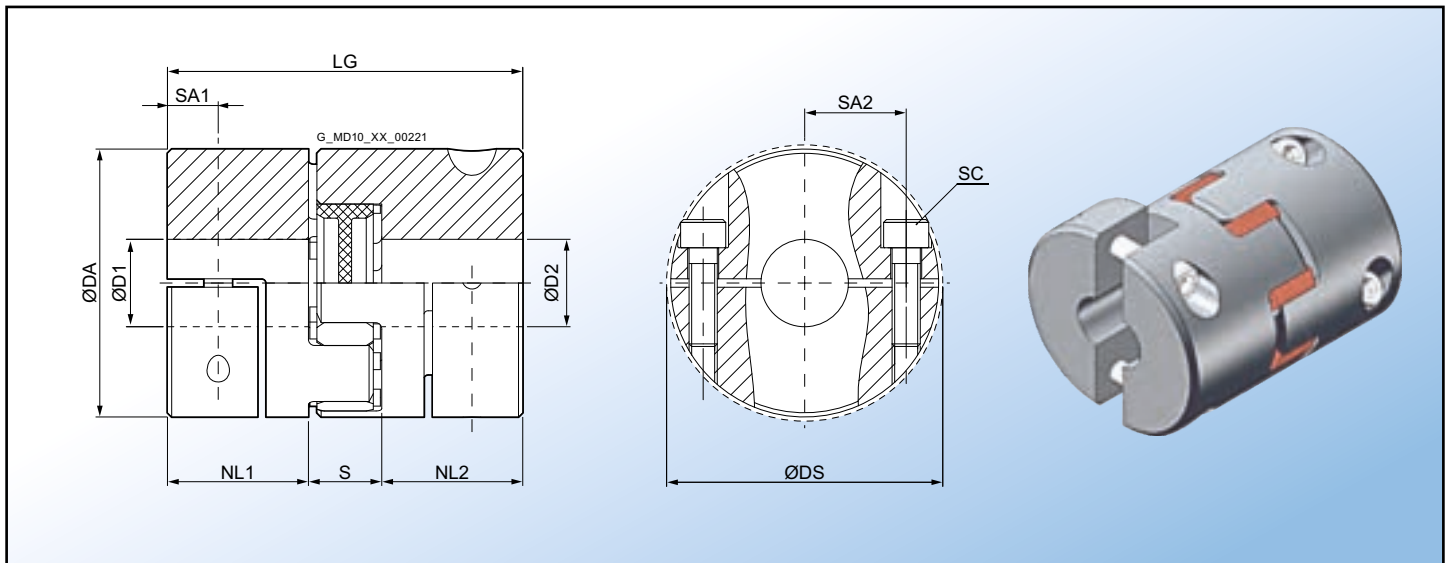
-Z K03 = 80 ShA (blue)

-Z K02 = 98 ShA (yellow)

-Z K04 = 64 ShD (green)



Half-shell clamping hub



| Size | Rated Torque T_{KN} 98ShA (Nm) | Rated Torque T_{KN} 92ShA (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | | Screw EN ISO 4762 | | Moment of Inertia J (10^{-6} \times kgm ²) | Product Code* | Weight m (g) | |
|------|---|---|--------------------------------------|-----------------|-----|--------------|------|-------------|----|-----|------|----------------------|-----|--|---------------|--------------------|---------------|
| | | | | DA | DS | D1, D2 H7 | | NL1/ NL2 | S | LG | SA1 | SA2 | SC | | | | T_A (Nm) |
| | | | | | | min. | max. | | | | | | | | | | |
| 14 | 12.5 | 7.5 | 12000 | 30 | 33 | 6 | 16 | 11 | 13 | 35 | 5 | 11 | M4 | 1.4 | 5.6 | 2LC0190-3AC99-0AA0 | 0.02 |
| 19 | 17 | 10 | 9500 | 40 | 45 | 8 | 23 | 25 | 16 | 66 | 6 | 14.5 | M5 | 8 | 38 | 2LC0190-4AC99-0AA0 | 0.15 |
| 24 | 60 | 35 | 7000 | 55 | 57 | 10 | 30 | 30 | 18 | 78 | 10.5 | 20 | M6 | 10.5 | 166 | 2LC0190-5AC99-0AA0 | 0.35 |
| 28 | 160 | 95 | 6000 | 65 | 70 | 15 | 38 | 35 | 20 | 90 | 11 | 24.5 | M8 | 25 | 370 | 2LC0190-6AC99-0AA0 | 0.53 |
| 38 | 325 | 190 | 4700 | 80 | 83 | 15 | 48 | 45 | 24 | 114 | 15.5 | 30 | M8 | 25 | 1040 | 2LC0190-7AC99-0AA0 | 0.98 |
| 42 | 450 | 265 | 4000 | 95 | 95 | 19 | 50 | 50 | 26 | 126 | 18 | 32.5 | M10 | 69 | 5970 | 2LC0190-8AC99-0AA0 | 4.1 |
| 48 | 525 | 310 | 3500 | 105 | 105 | 25 | 55 | 56 | 28 | 140 | 15 | 40 | M12 | 120 | 9830 | 2LC0191-0AC99-0AA0 | 5.6 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

It is possible to radially assemble and dismantle the hub version with half-shells without moving the connected units.

The maximum torques that can be transmitted by the clamping connection are listed in the table on page 19.

A keyway according to DIN 6885-1 can be selected additionally as an option.

Cam ring made of polyurethane with Shore hardness 98 ShA as standard (red).

For other hardness grades, see page 23.

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example

BIPEX-S BHH coupling, size 24

Part 1: Bore ØD1 20 H7

Part 2: Bore ØD2 24 H7

Element / cam ring 98 ShA

Product Code: 2LC0190-5AC99-0AA0 L0M + M0P

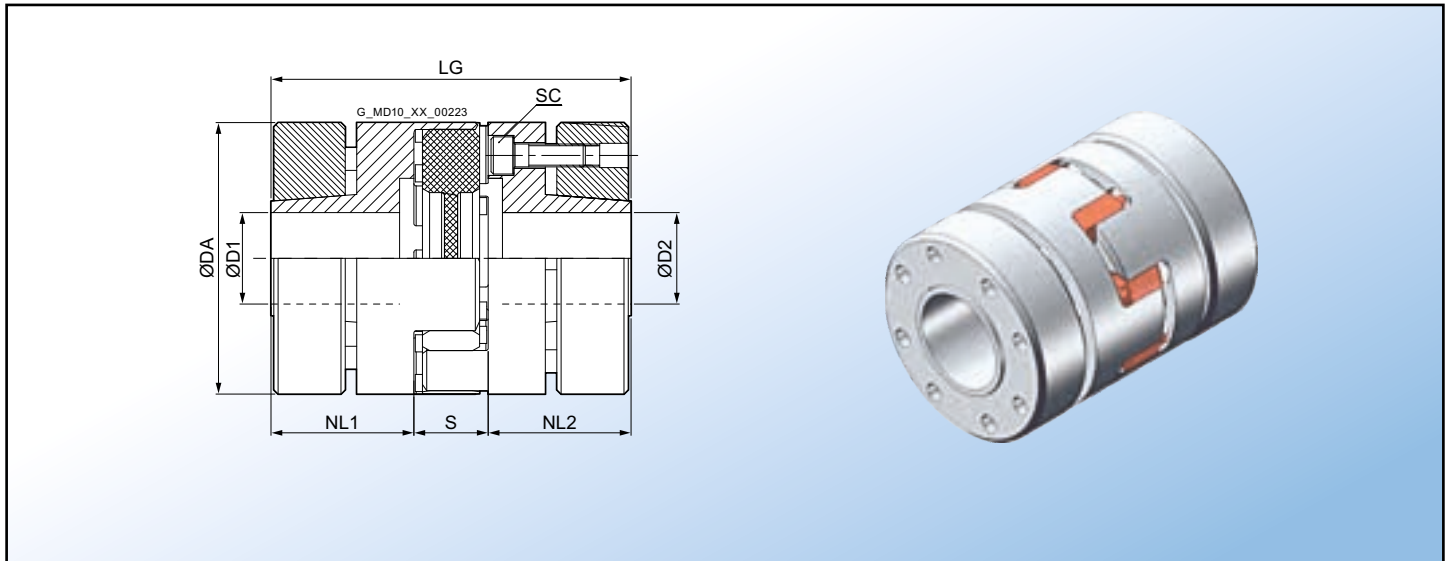
Options for other Shore hardness grades:

-Z K03 = 80 ShA (blue)

-Z K02 = 98 ShA (yellow)

-Z K04 = 64 ShD (green)

Clamping hubs with external taper



| Size | Rated Torque T_{KN} 98ShA (Nm) | Rated Torque T_{KN} 92ShA (Nm) | Maximum Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | Screw EN ISO 4762 | | Moment of Inertia J (10^{-6} \times kgm ²) | Product Code* | Weight m (g) |
|------|---|---|--------------------------------------|-----------------|--------------|------|-------------|----|-----|----------------------|---------------|--|--------------------|--------------------|
| | | | | DA | D1, D2 H7 | | NL1/ NL2 | S | LG | SC | T_A (Nm) | | | |
| | | | | | min. | max. | | | | | | | | |
| 14 | 12.5 | 7.5 | 25000 | 30 | 5 | 14 | 18.5 | 13 | 50 | M3 | 1.3 | 18 | 2LC0190-3AD99-0AA0 | 0.11 |
| 19 | 17 | 10 | 18500 | 40 | 10 | 20 | 25 | 15 | 65 | M4 | 2.9 | 57 | 2LC0190-4AD99-0AA0 | 0.23 |
| 24 | 60 | 35 | 13900 | 55 | 10 | 25 | 30 | 18 | 78 | M5 | 6 | 268 | 2LC0190-5AD99-0AA0 | 0.57 |
| 28 | 160 | 95 | 11800 | 65 | 15 | 36 | 35 | 20 | 90 | M5 | 6 | 610 | 2LC0190-6AD99-0AA0 | 0.86 |
| 38 | 325 | 190 | 9600 | 80 | 20 | 48 | 43.5 | 24 | 111 | M6 | 10 | 1690 | 2LC0190-7AD99-0AA0 | 1.5 |
| 42 | 450 | 265 | 8000 | 95 | 28 | 50 | 50 | 26 | 126 | M8 | 35 | 5880 | 2LC0190-8AD99-0AA0 | 4.0 |
| 48 | 525 | 310 | 7100 | 105 | 30 | 55 | 56 | 28 | 140 | M10 | 69 | 9600 | 2LC0191-0AD99-0AA0 | 5.4 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

The clamping hubs with external taper are the ideal solution for high-speed and highly dynamic applications. The clamping ring is made of steel.

The maximum torques that can be transmitted by the clamping connection are listed in the table on page 19.

Cam ring made of polyurethane with Shore hardness 98 ShA as standard (red).

For other hardness grades, see page 23.

Sizes 14 to 48 are also available on request as a light-weight version with hubs and clamping rings made of aluminum (type designation BKK-L).

Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example

BIPEX-S BKK coupling, size 24

Part 1: Bore \varnothing D1 20 H7

Part 2: Bore \varnothing D2 24 H7

Element / cam ring 98 ShA

Product Code: 2LC0190-5AD99-0AA0 L0M + M0P

Options for other Shore hardness grades:

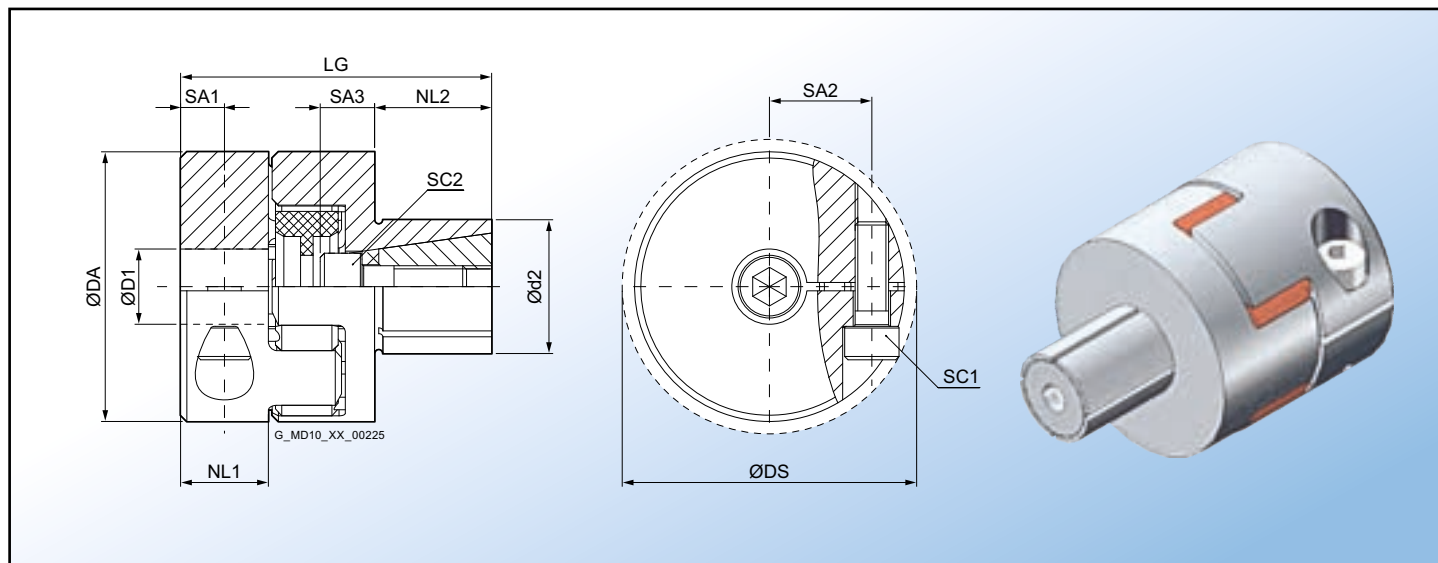
-Z K03 = 80 ShA (blue)

-Z K02 = 98 ShA (yellow)

-Z K04 = 64 ShD (green)



Compact clamping hubs and expanding hub



| Size | Rated Torque T_{KN} 98ShA (Nm) | Rated Torque T_{KN} 92ShA (Nm) | Max. Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | | | | | | Screw DIN EN ISO 4762 | | Screw DIN EN ISO 4027 | | Moment of Inertia J (10^{-6} \times kgm ²) | Product Code* | Weight m (g) |
|------|---|---|-----------------------------------|-----------------|------|----------|------|----------|------|-----|------|------|------|------|-----|-----------------------------|---------------|-----------------------------|---------------|---|--------------------|--------------------|
| | | | | DA | DS | D1 H7 | | d2 h7 | | NL1 | NL2 | LG | SA1 | SA2 | SA3 | SC1 | T_A (Nm) | SC2 | T_A (Nm) | | | |
| | | | | | | min. | max. | min. | max. | | | | | | | | | | | | | |
| 9 | 5 | 3 | 18000 | 20 | 23.4 | 5 | 9 | 10 | 16 | 10 | 11 | 40 | 5 | 7.3 | 9 | M2.5 | 0.75 | M4 | 8 | 1.0 | 2LC0190-2AE99-0AA0 | 0.03 |
| 14 | 12.5 | 7.5 | 12000 | 30 | 32.2 | 6 | 16 | 13 | 25 | 11 | 12.5 | 42.5 | 5 | 11 | 7 | M3 | 2 | M5 | 9 | 7.0 | 2LC0190-3AE99-0AA0 | 0.06 |
| 19 | 17 | 10 | 9500 | 40 | 45.7 | 10 | 24 | 14 | 30 | 17 | 20 | 61 | 8.5 | 14.5 | 8 | M5 | 15 | M6 | 15 | 28 | 2LC0190-4AE99-0AA0 | 0.13 |
| 24 | 60 | 35 | 7000 | 55 | 57.4 | 12 | 28 | 23 | 38 | 20 | 30 | 76 | 10 | 20 | 12 | M6 | 15 | M8 | 35 | 113 | 2LC0190-5AE99-0AA0 | 0.33 |
| 28 | 160 | 95 | 6000 | 65 | 72.6 | 15 | 35 | 26 | 42 | 21 | 36 | 85 | 10.5 | 24.5 | 13 | M8 | 35 | M10 | 70 | 222 | 2LC0190-6AE99-0AA0 | 0.50 |
| 38 | 325 | 190 | 4700 | 80 | 83.3 | 16 | 45 | 38 | 60 | 31 | 45 | 113 | 15.5 | 30 | 17 | M8 | 35 | M12 | 120 | 800 | 2LC0190-7AE99-0AA0 | 1.1 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

A hollow shaft can be connected to the expanding hub.
 The bore for connecting the expanding hub must have tolerance H7.
 Coupling element / cam ring made of polyurethane with Shore hardness 98 ShA as standard.
 For other hardness grades, see page 23.
 Weights and mass moments of inertia apply to maximum bore diameters.

Ordering example

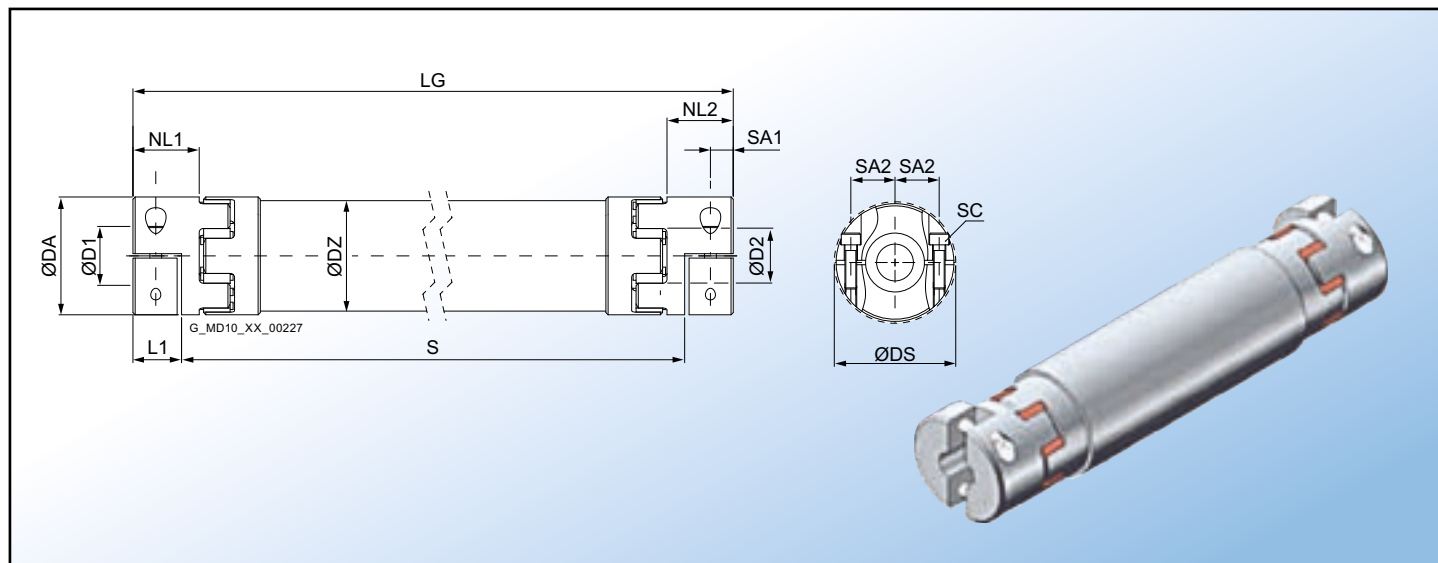
BIPEX-S BCS coupling, size 24
 Part 1: Bore \varnothing D1 20 H7
 Part 2: Bore \varnothing D2 24 H7
 Element / cam ring 98 ShA

Product Code: 2LC0190-5AE99-0AA0 L0M + M0P

Options for other Shore hardness grades:

- Z K03 = 80 ShA (blue)
- Z K02 = 98 ShA (yellow)
- Z K04 = 64 ShD (green)

Drive shaft with half-shell clamping hubs



| Size | Rated Torque T_{KN} 98Sha (Nm) | Max. Speed n_{Kmax} (rpm) | Dimensions (mm) | | | | | | | | | | | Screw DIN EN ISO 4762 | | Moment of Inertia J for DBSE = 1000 mm (10 ⁻⁶ × kgm ²) | Product Code* | Weight m (g) |
|------|---|-----------------------------------|-----------------|-----|--------------|------|-----|-------------|------|------|------|------|------|-----------------------------|---------------|--|--------------------|--------------------|
| | | | DA | DS | D1, D2 H7 | | DZ | NL1/ NL2 | L1 | LG | | SA1 | SA2 | SC | T_A (Nm) | | | |
| | | | | | min. | max. | | | | min. | max. | | | | | | | |
| 14 | 12.5 | 1500 | 30 | 33 | 6 | 16 | 30 | 11 | 9 | 85 | 3000 | 5 | 11 | M4 | 3 | 79 | 2LC0190-3AH99-0AZ0 | 0.54 |
| 19 | 17 | 1500 | 40 | 45 | 8 | 23 | 40 | 25 | 13.4 | 135 | 3000 | 6 | 15 | M5 | 5.9 | 151 | 2LC0190-4AH99-0AZ0 | 0.58 |
| 24 | 60 | 1500 | 55 | 57 | 10 | 30 | 50 | 30 | 21 | 165 | 3000 | 10.5 | 20 | M6 | 15 | 2250 | 2LC0190-5AH99-0AZ0 | 3.4 |
| 28 | 160 | 1500 | 65 | 70 | 15 | 38 | 60 | 35 | 23.5 | 205 | 3000 | 11 | 24.5 | M8 | 32 | 2510 | 2LC0190-6AH99-0AZ0 | 3.5 |
| 38 | 325 | 1500 | 80 | 83 | 15 | 48 | 75 | 45 | 33 | 250 | 3000 | 15.5 | 30 | M8 | 38 | 8360 | 2LC0190-7AH99-0AZ0 | 7.8 |
| 42 | 450 | 1500 | 95 | 95 | 19 | 50 | 90 | 50 | 35 | 265 | 3000 | 18 | 32.5 | M10 | 84 | 1780 | 2LC0190-8AH99-0AZ0 | 11.8 |
| 48 | 525 | 1500 | 105 | 105 | 25 | 55 | 110 | 56 | 32.5 | 285 | 3000 | 15 | 40 | M12 | 145 | 21150 | 2LC0191-0AH99-0AZ0 | 15.3 |

* With finished bore; required order code for bore diameters and tolerances see page 2.

It is possible to radially assemble and dismantle the hub version with half-shells without moving the connected units. It must be noted that the total length LG is obtained with shaft distance $S + 2 \times L1$.

The intermediate tubes in the standard version are made of aluminum. Tubes made of carbon-fiber-reinforced plastic (CFRP) are also available as an option.

Weights and mass moments of inertia apply to maximum bore diameters and a shaft distance $S = 1000$ mm.

Ordering example

BIPEX-S HH-W coupling, size 24
 Shaft distance $S = 1000$ mm
 Total length $LG = 1042$ mm
 Part 1: Bore $\varnothing D1$ 20 H7
 Part 2: Bore $\varnothing D2$ 24 H7

Product Code: 2LC0190-5AH99-0AZ0 L0M + M0P + Q0Y

Plain text for Q0Y: $S = 1000$ mm

Options for other Shore hardness grades:

-Z K04 = 64 ShD (green)



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