

## FLEXDUR

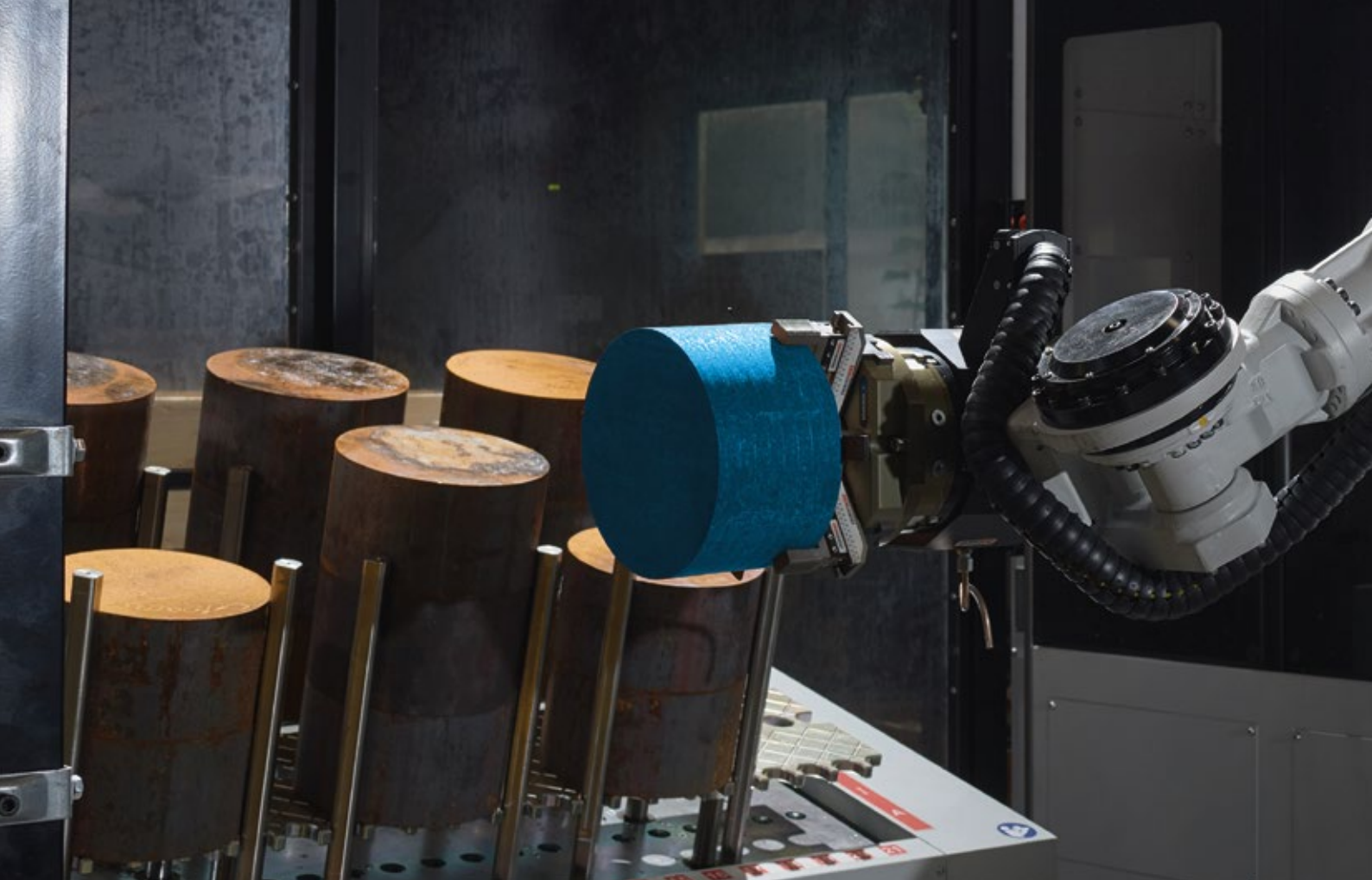
Disc coupling

[www.reich-kupplungen.com](http://www.reich-kupplungen.com)



SIMPLY **POWERFUL.**





## D2C – Designed to Customer

The guiding principle of Designed to Customer is the recipe for success behind REICH. In addition to the catalogue products, we supply our customers with couplings developed to their specific requirements. The designs are mainly based on modular components to provide effective and efficient customer solutions. The special nature of our close cooperation with our partners ranges from; consulting, development, design, manufacture and integration to existing environments, to customer-specific production, logistics concepts and after-sales service - worldwide. This customer-oriented concept applies to both standard products and production in small batch sizes.

The company policy at REICH embraces, first and foremost, principles such as customer satisfaction, flexibility, quality, prompt delivery and adaptability to the requirements of our customers.

REICH supplies not only a coupling, but a solution:  
Designed to Customer – SIMPLY **POWERFUL**.



A large industrial robot arm, likely a Mazak model, is shown in a dark industrial setting. The arm is white and grey, with a prominent orange light at the end. The background is dark, highlighting the metallic surfaces of the robot.

# FLEXDUR

## Contents

## Coupling Information

**04** General Technical Description

---

**05** Advantages and Uses

---

**06** Standard Types

---

**08** Special Types

---

**10** General Technical Data

---

**16** Selection of the Coupling Size

## Dimension Tables

**18** Type N + S

---

**20** Type CA + CB

---

**22** Type NO + SO

---

**24** Type NX + SX

---

**26** Type NZ + SZ

---

**28** Type F

---

**30** Type NY + SY

---

**32** Type NK + SK

---

**34** Type SP-CA + SP-CB

# FLEXDUR

## General Technical Description

### FLEXDUR

## Torsionally rigid, flexible coupling

The coupling uses bushed flexible disc packs of stainless spring steel as power transmitting elements. The special shape of the precision bushes results in a uniform tension distribution of the disc pack. The high grade fitting screws ensure backlash-free torque transmission.

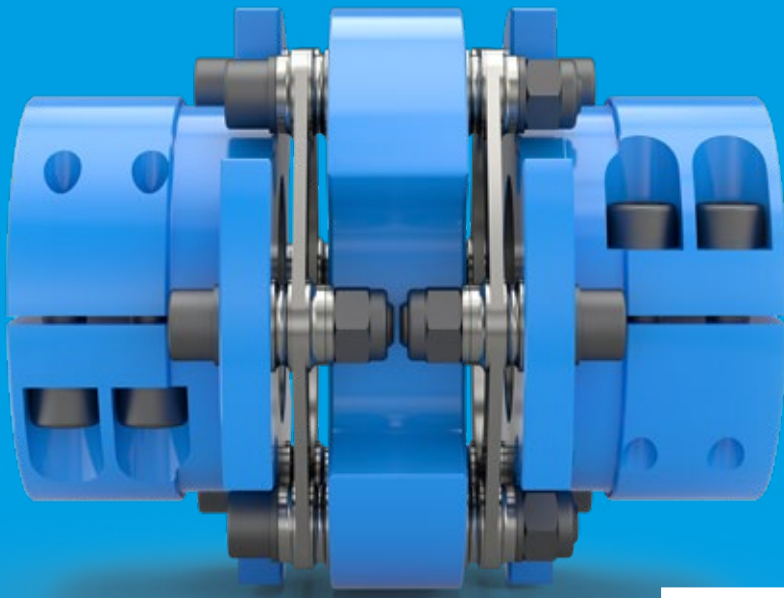
**The FLEXDUR (short form: FD-C) has a modular design and can therefore be adapted to a wide variety of installation situations:**

FLEXDUR 1 (e.g. type N) can be used as a single joint coupling with a flexible disc pack to compensate for axial and angular displacement.

FLEXDUR 2 (e.g. type S) as a double-jointed coupling with two flexible disc packs compensates for axial, radial and angular displacement and is therefore flexible in all directions. Different mounting lengths are available as standard.

In addition to the standard FD-C version a design with strengthened discs, FD-CL, is available. Special designs e.g. for vertical mounting positions are possible on request.

For totally backlash free connection, designs with clamping hubs can be used.




## FLEXDUR

Nominal torques from 18 Nm to 130 000 Nm

## FLEXDUR

### Advantages and Uses

#### Key features and benefits of the FLEXDUR coupling:

|   |   |
|---|---|
| → Torsionally rigid and backlash-free torque transmission   | → Long service life even with alternating loads with zero passage.  |
| → Compensation of axial, radial and angular shaft displacements   | → Ensures a high level of operational stability of your system with reduced loads, thereby increasing your productivity |
| → Small restoring forces for shaft displacement by means of disc packs  | → Long service life, lower life cycle costs   |
| → No maintenance or lubrication required  | → Little effort during the period of use You have fewer down-times. Less maintenance for optimised operating costs      |
| → For use at ambient temperatures from -25 °C to +250 °C  | → Global use possible under the toughest conditions   |
| → Compact design, also suitable for high speeds   | → Large range of use, including for applications with little installation space   |
| → Almost unlimited lifetime and wear-free with proper shaft alignment   | → High cost-efficiency  |
| → Extended range of application due to Atex  | → High level of safety, as it can be used in potentially explosive environments   |
| → Modular type  | → Optimum cost-benefit ratio<br>Favourable investment costs, high cost-efficiency                                       |

# FLEXDUR

## Standard Types

Single joint FD-C 1



**FD-C N**

Standard



Double joint FD-C 2



**FD-C CA**

compact, short type



Double joint FD-C 2



**FD-C S DBSEmin**

Standard, short type



Double joint FD-C 2



**FD-C CB**

compact



Double joint FD-C 2



**FD-C S**

Standard



### FD-C NO

Flange version



Single joint FD-C 1

### FD-C SO DBSEmin

flange version, short type



Double joint FD-C 2

### FD-C SO

Flange version



Double joint FD-C 2

# FLEXDUR

## Special Types

Single joint FD-C 1



### FD-C NX

with internal locking device

Single joint FD-C 1



### FD-C NZ

clamping with shrink disc



Double joint FD-C 2



### FD-C SX DBSEmin

with internal locking device, short type

Double joint FD-C 2



### FD-C SZ DBSEmin

clamping with shrink disc, short type



Double joint FD-C 2



### FD-C SX

with internal locking device

Double joint FD-C 2



### FD-C SZ

clamping with shrink disc



Double joint FD-C 2



### FD-C F

API 610+API 671





### FD-C NY

with clamping hub,  
split



Single joint FD-C 1

### FD-C NK

with clamping hub,  
slotted



Single joint FD-C 1

### FD-C SY DBSEmin

with clamping hub,  
split, short type



Double joint FD-C 2

### FD-C SK DBSEmin

with clamping hub,  
slotted, short type



Double joint FD-C 2

### FD-C SY

with clamping hub,  
split



Double joint FD-C 2

### FD-C SK

with clamping hub,  
slotted



Double joint FD-C 2

### FD-C SP-CA

compact, short type  
split spacer



Double joint FD-C 2

### FD-C SP-CB

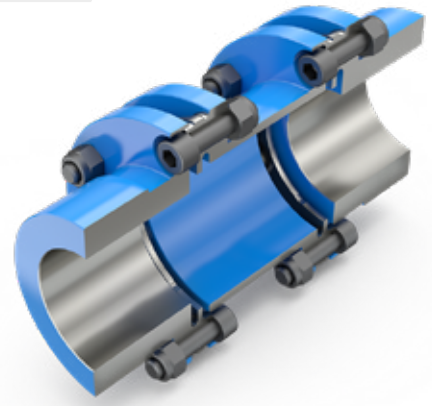
compact, split spacer



Double joint FD-C 2

# FLEXDUR FD-C

## General Technical Data



### Standard Design

| Coupling size |                  |                    |                                  | FD-C 1<br>Single joint coupling |                      |                     |                          |                             | FD-C 2<br>Double joint coupling |                          |                      |                     |                          |                             |     |
|---------------|------------------|--------------------|----------------------------------|---------------------------------|----------------------|---------------------|--------------------------|-----------------------------|---------------------------------|--------------------------|----------------------|---------------------|--------------------------|-----------------------------|-----|
|               | Nominal torque   | Maximum torque     | Maximum speed                    | Permissible displacement        |                      |                     | Moment of inertia        | Dynamic torsional stiffness | Spacer                          | Permissible displacement |                      |                     | Moment of inertia        | Dynamic torsional stiffness |     |
|               | $T_{KN}$<br>[Nm] | $T_{Kmax}$<br>[Nm] | $n^{2)}$<br>[min <sup>-1</sup> ] | $\Delta K_a$<br>[± mm]          | $\Delta K_r$<br>[mm] | $\Delta K_w$<br>[°] | J<br>[kgm <sup>2</sup> ] | $C_T$<br>[kNm/rad]          | DBSE <sup>1)</sup><br>[mm]      | $\Delta K_a$<br>[± mm]   | $\Delta K_r$<br>[mm] | $\Delta K_w$<br>[°] | J<br>[kgm <sup>2</sup> ] | $C_T$<br>[kNm/rad]          |     |
| FD-C 40       | 18               | 31.5               | 16700                            | 0.4                             | 0                    | 1.0                 | 0.00002                  | 19                          | 16.0                            | 0.8                      | 0.2                  | 2                   | 0.00004                  | 9                           |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 26.0                            |                          |                      |                     |                          |                             | 0.3 |
| FD-C 53       | 90               | 157                | 16200                            | 0.4                             | 0                    | 1.0                 | 0.00011                  | 90                          | 30.0                            | 0.8                      | 0.3                  | 2                   | 0.00016                  | 44                          |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 43.0                            |                          |                      |                     |                          |                             | 0.4 |
| FD-C 72       | 170              | 295                | 12200                            | 0.5                             | 0                    | 1.0                 | 0.00049                  | 173                         | 31.2                            | 1.1                      | 0.3                  | 2                   | 0.00071                  | 84                          |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 60.0                            |                          |                      |                     |                          |                             | 0.8 |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 100.0                           |                          |                      |                     |                          |                             | 1.5 |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 140.0                           |                          |                      |                     |                          |                             | 2.2 |
| FD-C 89       | 320              | 560                | 9900                             | 0.6                             | 0                    | 1.0                 | 0.0016                   | 281                         | 37.6                            | 1.2                      | 0.4                  | 2                   | 0.0022                   | 136                         |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 70.0                            |                          |                      |                     |                          |                             | 1   |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 80.0                            |                          |                      |                     |                          |                             | 1.1 |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 100.0                           |                          |                      |                     |                          |                             | 1.5 |
| FD-C 118      | 750              | 1310               | 7500                             | 0.8                             | 0                    | 1.0                 | 0.0059                   | 637                         | 140.0                           | 1.6                      | 0.5                  | 2                   | 0.0080                   | 309                         |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 100.0                           |                          |                      |                     |                          |                             | 1.4 |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 140.0                           |                          |                      |                     |                          |                             | 2.1 |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 180.0                           |                          |                      |                     |                          |                             | 2.8 |
| FD-C 142      | 1350             | 2360               | 6200                             | 1.0                             | 0                    | 1.0                 | 0.014                    | 1173                        | 55.0                            | 2.1                      | 0.7                  | 2                   | 0.018                    | 569                         |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 100.0                           |                          |                      |                     |                          |                             | 1.5 |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 140.0                           |                          |                      |                     |                          |                             | 2.1 |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 180.0                           |                          |                      |                     |                          |                             | 2.8 |
| FD-C 168      | 2400             | 4200               | 5250                             | 1.2                             | 0                    | 1.0                 | 0.035                    | 2000                        | 62.6                            | 2.5                      | 0.9                  | 2                   | 0.039                    | 952                         |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 100.0                           |                          |                      |                     |                          |                             | 1.4 |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 140.0                           |                          |                      |                     |                          |                             | 2.1 |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 180.0                           |                          |                      |                     |                          |                             | 2.8 |
| FD-C 200      | 4000             | 7000               | 4400                             | 1.4                             | 0                    | 1.0                 | 0.084                    | 2992                        | 140.0                           | 2.8                      | 2                    | 0.12                | 1306                     |                             |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 180.0                           |                          |                      |                     |                          | 2.7                         |     |
| FD-C 238      | 6500             | 11375              | 3650                             | 1.7                             | 0                    | 1.0                 | 0.23                     | 5269                        | 140.0                           | 3.4                      | 2                    | 0.34                | 2467                     |                             |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 180.0                           |                          |                      |                     |                          | 2.6                         |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 250.0                           |                          |                      |                     |                          | 3.8                         |     |
| FD-C 295      | 21000            | 36750              | 2950                             | 1.1                             | 0                    | 0.5                 | 0.70                     | 21848                       | 200.0                           | 2.2                      | 1.4                  | 1                   | 1.07                     | 8995                        |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 250.0                           |                          |                      |                     |                          |                             | 1.8 |
| FD-C 345      | 36000            | 63000              | 2500                             | 1.3                             | 0                    | 0.5                 | 1.75                     | 37204                       | 224.0                           | 2.6                      | 1.6                  | 1                   | 2.62                     | 14975                       |     |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 250.0                           |                          |                      |                     |                          |                             | 1.8 |
|               |                  |                    |                                  |                                 |                      |                     |                          |                             | 300.0                           |                          |                      |                     |                          |                             | 2.2 |
| FD-C 420      | 74000            | 129500             | 2050                             | 1.6                             | 0                    | 0.5                 | 3.26                     | 46192                       | 280.0                           | 3.2                      | 2.5                  | 1                   | 5.35                     | 18116                       |     |
| FD-C 510      | 130000           | 227500             | 1700                             | 2.0                             | 0                    | 0.5                 | 8.65                     | 87706                       | 350.0                           | 4                        | 3                    | 1                   | 14.43                    | 36134                       |     |

**i** 1) DBSE available up to 3 000 mm upon request 2) Higher speeds only following consultation

# FLEXDUR FD-CL

## General Technical Data

### Standard Design

| Coupling size |                  |                    |                                  | FD-CL 1<br>Single joint coupling |                      |                     |                          |                             | FD-CL 2<br>Double joint coupling |                          |                      |                     |                          |                             |     |         |       |
|---------------|------------------|--------------------|----------------------------------|----------------------------------|----------------------|---------------------|--------------------------|-----------------------------|----------------------------------|--------------------------|----------------------|---------------------|--------------------------|-----------------------------|-----|---------|-------|
|               | Nominal torque   | Maximum torque     | Maximum speed                    | Permissible displacement         |                      |                     | Moment of inertia        | Dynamic torsional stiffness | Spacer                           | Permissible displacement |                      |                     | Moment of inertia        | Dynamic torsional stiffness |     |         |       |
|               | $T_{KN}$<br>[Nm] | $T_{Kmax}$<br>[Nm] | $n^{2)}$<br>[min <sup>-1</sup> ] | $\Delta K_a$<br>[± mm]           | $\Delta K_r$<br>[mm] | $\Delta K_w$<br>[°] | J<br>[kgm <sup>2</sup> ] | $C_T$<br>[kNm/rad]          | DBSE <sup>1)</sup><br>[mm]       | $\Delta K_a$<br>[± mm]   | $\Delta K_r$<br>[mm] | $\Delta K_w$<br>[°] | J<br>[kgm <sup>2</sup> ] | $C_T$<br>[kNm/rad]          |     |         |       |
| FD-CL 72      | 230              | 402.5              | 12200                            | 0.4                              | 0                    | 0.7                 | 0.00049                  | 184                         | 31.4                             | 0.8                      | 0.2                  | 1.4                 | 0.00070                  | 89                          |     |         |       |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 60.2                             |                          |                      |                     |                          |                             | 0.6 | 0.00076 | 75    |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 100.2                            |                          |                      |                     |                          |                             | 1.1 | 0.00081 | 62    |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 140.2                            |                          |                      |                     |                          |                             | 1.5 | 0.00087 | 53    |
| FD-CL 89      | 420              | 735.0              | 9900                             | 0.5                              | 0                    | 0.7                 | 0.016                    | 312                         | 38.0                             | 1.0                      | 0.3                  | 1.4                 | 0.00219                  | 151                         |     |         |       |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 70.4                             |                          |                      |                     |                          |                             | 0.7 | 0.0025  | 139   |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 80.4                             |                          |                      |                     |                          |                             | 0.8 | 0.0026  | 134   |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 100.4                            |                          |                      |                     |                          |                             | 1.1 | 0.0027  | 127   |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 140.4                            |                          |                      |                     |                          |                             | 1.6 | 0.0028  | 114   |
| FD-CL 118     | 1050             | 1837.5             | 7500                             | 0.6                              | 0                    | 0.7                 | 0.0059                   | 743                         | 47.1                             | 1.2                      | 0.4                  | 1.4                 | 0.00812                  | 360                         |     |         |       |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 100.8                            |                          |                      |                     |                          |                             | 1.1 | 0.0091  | 308   |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 140.8                            |                          |                      |                     |                          |                             | 1.5 | 0.0095  | 277   |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 180.8                            |                          |                      |                     |                          |                             | 2.1 | 0.0099  | 251   |
| FD-CL 142     | 1750             | 3062.5             | 6200                             | 0.7                              | 0                    | 0.7                 | 0.014                    | 1251                        | 55.4                             | 1.4                      | 0.5                  | 1.4                 | 0.01840                  | 607                         |     |         |       |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 100.4                            |                          |                      |                     |                          |                             | 1.0 | 0.021   | 543   |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 140.4                            |                          |                      |                     |                          |                             | 1.5 | 0.022   | 494   |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 180.4                            |                          |                      |                     |                          |                             | 2.0 | 0.023   | 454   |
| FD-CL 168     | 3000             | 5250.0             | 5250                             | 0.8                              | 0                    | 0.7                 | 0.035                    | 2082                        | 62.6                             | 1.6                      | 0.6                  | 1.4                 | 0.039                    | 990                         |     |         |       |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 100.0                            |                          |                      |                     |                          |                             | 1.0 | 0.052   | 948   |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 140.0                            |                          |                      |                     |                          |                             | 1.5 | 0.054   | 884   |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 180.0                            |                          |                      |                     |                          |                             | 2.0 | 0.056   | 829   |
| FD-CL 200     | 5200             | 9100.0             | 4400                             | 1.0                              | 0                    | 0.7                 | 0.084                    | 3142                        | 140.4                            | 2.0                      | 1.5                  | 1.4                 | 0.12                     | 1362                        |     |         |       |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 180.4                            |                          |                      |                     |                          |                             | 2.0 | 0.13    | 1279  |
| FD-CL 238     | 11000            | 19250.0            | 3650                             | 1.2                              | 0                    | 0.7                 | 0.23                     | 6586                        | 142.4                            | 2.4                      | 1.4                  | 1.4                 | 0.34                     | 3035                        |     |         |       |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 182.4                            |                          |                      |                     |                          |                             | 1.9 | 0.35    | 2898  |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 252.4                            |                          |                      |                     |                          |                             | 2.7 | 0.36    | 2686  |
| FD-CL 295     | 26000            | 45500.0            | 2950                             | 0.8                              | 0                    | 0.4                 | 0.70                     | 22285                       | 200.4                            | 1.6                      | 1.2                  | 0.8                 | 1.07                     | 9142                        |     |         |       |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 250.4                            |                          |                      |                     |                          |                             | 1.5 | 1.10    | 8389  |
| FD-CL 345     | 44000            | 77000.0            | 2500                             | 0.9                              | 0                    | 0.4                 | 1.75                     | 37868                       | 224.4                            | 1.8                      | 1.3                  | 0.8                 | 2.62                     | 15190                       |     |         |       |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 250.4                            |                          |                      |                     |                          |                             | 1.5 | 2.64    | 14497 |
|               |                  |                    |                                  |                                  |                      |                     |                          |                             | 300.4                            |                          |                      |                     |                          |                             | 1.8 | 2.68    | 13328 |

**i** 1) DBSE available up to 3 000 mm upon request    2) Higher speeds only following consultation

# FLEXDUR FD-C

## General Technical Data



### Special types FD-C F

FD-C 2  
Double joint coupling

| Coupling size | Nominal torque | Maximum torque | Maximum speed        | Spacer              |       | Permissible displacement |                                      |              |              | Moment of inertia         |                     | Dynamic torsional stiffness   |           |
|---------------|----------------|----------------|----------------------|---------------------|-------|--------------------------|--------------------------------------|--------------|--------------|---------------------------|---------------------|-------------------------------|-----------|
|               | $T_{KN}$       | $T_{Kmax}$     | n                    | DBSE <sub>min</sub> | DBSE  | $\Delta K_a$             | $\Delta K_r$ for DBSE <sub>min</sub> | $\Delta K_r$ | $\Delta K_w$ | J for DBSE <sub>min</sub> | J                   | $C_T$ for DBSE <sub>min</sub> | $C_T$     |
|               | [Nm]           | [Nm]           | [min <sup>-1</sup> ] | [mm]                | [mm]  | [± mm]                   | [mm]                                 | [mm]         | [°]          | [kgm <sup>2</sup> ]       | [kgm <sup>2</sup> ] | [kNm/rad]                     | [kNm/rad] |
| FD-C 89       | 320            | 560            | 15800                | 50.0                | 62.0  | 1.2                      | 0.7                                  | 0.93         | 2            | 0.0054                    | 0.0055              | 134.0                         | 129.6     |
|               |                |                |                      |                     | 102.0 |                          |                                      | 1.63         |              |                           | 0.0057              |                               | 116.8     |
| FD-C 118      | 750            | 1310           | 12300                | 61.0                | 96.0  | 1.6                      | 0.9                                  | 1.49         | 2            | 0.0184                    | 0.0188              | 300.2                         | 273.1     |
|               |                |                |                      |                     | 136.0 |                          |                                      | 2.19         |              |                           | 0.0192              |                               | 247.5     |
| FD-C 142      | 1350           | 2360           | 10000                | 63.0                | 91.0  | 2.1                      | 0.9                                  | 1.38         | 2            | 0.0485                    | 0.0491              | 561.2                         | 524.0     |
|               |                |                |                      |                     | 131.0 |                          |                                      | 2.08         |              |                           | 0.0501              |                               | 478.7     |
| FD-C 168      | 2400           | 4200           | 8400                 | 74.0                | 119.0 | 2.5                      | 1.0                                  | 1.85         | 2            | 0.1114                    | 0.1127              | 909.4                         | 818.7     |
|               |                |                |                      |                     | 189.0 |                          |                                      | 3.07         |              |                           | 0.1149              |                               | 691.5     |
| FD-C 200      | 4000           | 7000           | 7400                 | 90.0                | 110.0 | 2.8                      | 1.3                                  | 1.66         | 2            | 0.2649                    | 0.2661              | 1383.4                        | 1321.3    |
|               |                |                |                      |                     | 180.0 |                          |                                      | 2.88         |              |                           | 0.2701              |                               | 1141.8    |
| FD-C 238      | 6500           | 11375          | 6000                 | 105.4               | 167.4 | 3.4                      | 1.5                                  | 2.56         | 2            | 0.6501                    | 0.6618              | 2525.1                        | 2335.9    |
|               |                |                |                      |                     | 217.4 |                          |                                      | 3.43         |              |                           | 0.6713              |                               | 2202.8    |
| FD-C 295      | 21000          | 36750          | 4900                 | 138.0               | 153.0 | 2.2                      | 0.9                                  | 1.09         | 1            | 1.7477                    | 1.7522              | 9573.5                        | 9149.4    |
|               |                |                |                      |                     | 203.0 |                          |                                      | 1.53         |              |                           | 1.7674              |                               | 7972.0    |
| FD-C 345      | 36000          | 63000          | 4200                 | 155.0               | 177.0 | 2.6                      | 1.0                                  | 1.26         | 1            | 3.9224                    | 3.9400              | 17098.0                       | 16344.8   |
|               |                |                |                      |                     | 227.0 |                          |                                      | 1.70         |              |                           | 3.9800              |                               | 14857.4   |

# FLEXDUR FD-CL

## General Technical Data

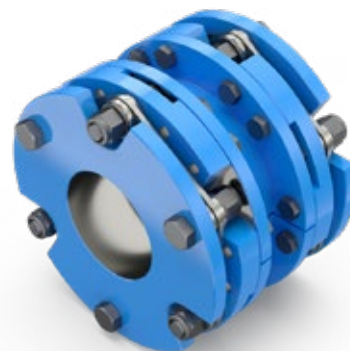
### Special types FD-CL F

#### FD-CL 2 Double joint coupling

| Coupling size | Nominal torque | Maximum torque | Maximum speed        | Spacer              |       | Permissible displacement |                                      |              |              | Moment of inertia         |                     | Dynamic torsional stiffness   |           |
|---------------|----------------|----------------|----------------------|---------------------|-------|--------------------------|--------------------------------------|--------------|--------------|---------------------------|---------------------|-------------------------------|-----------|
|               | $T_{KN}$       | $T_{Kmax}$     | n                    | DBSE <sub>min</sub> | DBSE  | $\Delta K_a$             | $\Delta K_r$ for DBSE <sub>min</sub> | $\Delta K_r$ | $\Delta K_w$ | J for DBSE <sub>min</sub> | J                   | $C_T$ for DBSE <sub>min</sub> | $C_T$     |
|               | [Nm]           | [Nm]           | [min <sup>-1</sup> ] | [mm]                | [mm]  | [± mm]                   | [mm]                                 | [mm]         | [°]          | [kgm <sup>2</sup> ]       | [kgm <sup>2</sup> ] | [kNm/rad]                     | [kNm/rad] |
| FD-CL 89      | 420            | 735.0          | 15800                | 50.4                | 62.4  | 1.0                      | 0.5                                  | 0.65         | 1.4          | 0.0054                    | 0.0055              | 148.0                         | 142.7     |
|               |                |                |                      |                     | 102.4 |                          |                                      | 1.14         |              |                           | 0.0057              |                               | 127.3     |
| FD-CL 118     | 1050           | 1837.5         | 12300                | 61.8                | 96.8  | 1.2                      | 0.6                                  | 1.05         | 1.4          | 0.0184                    | 0.0188              | 346.9                         | 311.1     |
|               |                |                |                      |                     | 136.8 |                          |                                      | 1.54         |              |                           | 0.0192              |                               | 278.3     |
| FD-CL 142     | 1750           | 3062.5         | 10000                | 63.4                | 91.4  | 1.4                      | 0.6                                  | 0.97         | 1.4          | 0.0485                    | 0.0491              | 596.8                         | 554.9     |
|               |                |                |                      |                     | 131.4 |                          |                                      | 1.46         |              |                           | 0.0501              |                               | 504.4     |
| FD-CL 168     | 3000           | 5250.0         | 8400                 | 74.0                | 119.0 | 1.6                      | 0.7                                  | 1.29         | 1.4          | 0.1114                    | 0.1123              | 963.7                         | 846.0     |
|               |                |                |                      |                     | 189.0 |                          |                                      | 2.15         |              |                           | 0.1149              |                               | 710.8     |
| FD-CL 200     | 5200           | 9100.0         | 7400                 | 90.4                | 110.4 | 2.0                      | 0.9                                  | 1.16         | 1.4          | 0.2649                    | 0.2661              | 1447.3                        | 1379.4    |
|               |                |                |                      |                     | 180.4 |                          |                                      | 2.02         |              |                           | 0.2701              |                               | 1184.9    |
| FD-CL 238     | 11000          | 19250.0        | 6000                 | 107.8               | 169.8 | 2.4                      | 1.0                                  | 1.81         | 1.4          | 0.6501                    | 0.6618              | 3123.8                        | 2839.3    |
|               |                |                |                      |                     | 219.4 |                          |                                      | 2.42         |              |                           | 0.6713              |                               | 2645.0    |
| FD-CL 295     | 26000          | 45500.0        | 4900                 | 138.4               | 153.4 | 1.6                      | 0.8                                  | 0.87         | 0.8          | 1.7477                    | 1.7522              | 9740.9                        | 9302.1    |
|               |                |                |                      |                     | 203.4 |                          |                                      | 1.22         |              |                           | 1.7674              |                               | 8087.8    |
| FD-CL 345     | 44000          | 77000.0        | 4200                 | 155.4               | 177.4 | 1.8                      | 0.9                                  | 1.01         | 0.8          | 3.9224                    | 3.9400              | 17378.1                       | 16600.6   |
|               |                |                |                      |                     | 227.4 |                          |                                      | 1.36         |              |                           | 3.9800              |                               | 15068.4   |

# FLEXDUR FD-C

## General Technical Data



### Special types FD-C SP

FD-C 2  
Double joint coupling

| Coupling size | Nominal torque | Maximum torque | Maximum speed        | Spacer | Permissible displacement |              |              | Moment of inertia   |                     | Dynamic torsional stiffness |
|---------------|----------------|----------------|----------------------|--------|--------------------------|--------------|--------------|---------------------|---------------------|-----------------------------|
|               | $T_{KN}$       | $T_{Kmax}$     | $n$                  | DBSE   | $\Delta K_a$             | $\Delta K_r$ | $\Delta K_w$ | J<br>CA             | J<br>CB             | $C_T$                       |
|               | [Nm]           | [Nm]           | [min <sup>-1</sup> ] | [mm]   | [± mm]                   | [mm]         | [°]          | [kgm <sup>2</sup> ] | [kgm <sup>2</sup> ] | [kNm/rad]                   |
| FD-C 89       | 320            | 560            | 9900                 | 80.0   | 1.2                      | 1.2          | 2            | 0.0023              | 0.0024              | 127.1                       |
| FD-C 118      | 750            | 1310           | 7500                 | 79.0   | 1.6                      | 1.2          | 2            | 0.0196              | 0.0208              | 298.6                       |
| FD-C 142      | 1350           | 2360           | 6200                 | 93.0   | 2.1                      | 1.5          | 2            | 0.1053              | 0.1110              | 546.3                       |
| FD-C 168      | 2400           | 4200           | 5250                 | 112.0  | 2.5                      | 1.7          | 2            | 0.8306              | 0.9173              | 942.7                       |
| FD-C 200      | 4000           | 7000           | 4400                 | 124.0  | 2.8                      | 1.9          | 2            | 0.2649              | 0.2649              | 1404.8                      |
| FD-C 238      | 6500           | 11375          | 3650                 | 144.0  | 3.4                      | 2.2          | 2            | 0.6501              | 0.6501              | 2527.4                      |
| FD-C 295      | 21000          | 36750          | 2950                 | 199.0  | 2.2                      | 1.5          | 1            | 1.7477              | 1.7477              | 9843.9                      |
| FD-C 345      | 36000          | 63000          | 2500                 | 223.0  | 2.6                      | 1.7          | 1            | 3.9224              | 3.9224              | 16947.3                     |

# FLEXDUR FD-CL

## General Technical Data

### Special types FD-CL SP

#### FD-CL 2 Double joint coupling

| Coupling size | Nominal torque | Maximum torque | Maximum speed        | Spacer | Permissible displacement |              |              | Moment of inertia   |                     | Dynamic torsional stiffness |
|---------------|----------------|----------------|----------------------|--------|--------------------------|--------------|--------------|---------------------|---------------------|-----------------------------|
|               | $T_{KN}$       | $T_{Kmax}$     | $n$                  | DBSE   | $\Delta K_a$             | $\Delta K_r$ | $\Delta K_w$ | J<br>CA             | J<br>CB             | $C_T$                       |
|               | [Nm]           | [Nm]           | [min <sup>-1</sup> ] | [mm]   | [± mm]                   | [mm]         | [°]          | [kgm <sup>2</sup> ] | [kgm <sup>2</sup> ] | [kNm/rad]                   |
| FD-CL 89      | 420            | 735.0          | 9900                 | 80.4   | 1.0                      | 0.9          | 1.4          | 0.0023              | 0.0024              | 139.6                       |
| FD-CL 118     | 1050           | 1837.5         | 7500                 | 79.8   | 1.2                      | 0.9          | 1.4          | 0.0076              | 0.0081              | 344.8                       |
| FD-CL 142     | 1750           | 3062.5         | 6200                 | 93.4   | 1.4                      | 1.0          | 1.4          | 0.0196              | 0.0208              | 580.0                       |
| FD-CL 168     | 3000           | 5250.0         | 5250                 | 112.0  | 1.6                      | 1.2          | 1.4          | 0.0473              | 0.0502              | 979.1                       |
| FD-CL 200     | 5200           | 9100.0         | 4400                 | 124.4  | 2.0                      | 1.3          | 1.4          | 0.1053              | 0.1110              | 1470.8                      |
| FD-CL 238     | 11000          | 19250.0        | 3650                 | 146.4  | 2.4                      | 1.6          | 1.4          | 0.2596              | 0.2936              | 3127.3                      |
| FD-CL 295     | 26000          | 45500.0        | 2950                 | 199.4  | 1.6                      | 1.2          | 0.8          | 0.8306              | 0.9173              | 10021.0                     |
| FD-CL 345     | 44000          | 77000.0        | 2500                 | 223.4  | 1.8                      | 1.3          | 0.8          | 1.8281              | 2.1153              | 17222.4                     |

# FLEXDUR

## Selection of the Coupling Size

First the service factor ( $S_f$ ) is determined: it is based on the displacement factor ( $S_1$ ), the load factor ( $S_2$ ) and the temperature factor ( $S_3$ ):

$S_f = S_1 \cdot S_2 \cdot S_3$  (see following sections).

The product of service factor ( $S_f$ ) and transmitted torque  $T$  must not exceed the nominal torque  $T_{KN}$  (acc. table "General Technical Data").

$T_{KN} > T \cdot S_f$

### Displacement factor $S_1$

The values for displacement, given in the table 'General technical data', are maximum values which may not occur simultaneously. An existing axial displacement  $\Delta K_a$  as shown in fig.1 reduces the permissible values for radial displacement  $\Delta K_r$  and angular displacement  $\Delta K_w$ . The total angular displacement  $\Sigma \Delta K$  [°] is calculated from the formula:

$$\Sigma \Delta K [^\circ] = \frac{\Delta K_w}{2} + \arctan \frac{\Delta K_r}{(DBSE - S)}$$

(Values for DBSE and S per table "Standard size" on page 10)

The displacement factor ( $S_1$ ) is a function of  $\Sigma \Delta K$  [°] acc. to fig. 2.

### Load factor $S_2$

for electric or hydraulic motors, gas or steam turbines.

The load factor must be increased:

| Driven machine   | $S_2$ |
|--|-------|
| Paper machines and textile machines                        | 2.00  |
| Woodworking machines, gear pumps, conveyors                | 1.50  |
| Machine tools: main drives                                 | 1.75  |
| Machine tools: auxiliary drives                            | 1.10  |
| Elevators and cranes                                       | 2.00  |
| Mills, reciprocating pumps                                 | 2.50  |
| Centrifugal pumps: small inertias and thin fluid materials | 1.10  |
| Centrifugal pumps: large inertias or semi-fluid materials  | 1.75  |
| Presses  | 3.00  |
| Blowers with low inertias                                  | 1.10  |
| Blowers with high inertias                                 | 2.00  |

- $S_2+1$ : for applications with 4- or 5-cylinder combustion engines
- $S_2+0.5$ : for applications with 6-cylinder combustion engines, hydraulic turbines or at starting torque  $\geq 2$ .
- Applications with high recurring peak loads:
  - non-reversing duty:  $T_{KN} > \text{max peak load}$
  - reversing duty:  $T_{KN} > 1.5 \times \text{max. peak load}$

### Temperature factor $S_3$

FLEXDUR can be used up to 80 °C as a standard. Higher temperatures must be specified in the order due to the use of self-locking nuts with plastic ring. For temperatures above 160 °C, the factor  $S_3$  must be selected acc. to fig. 3.

## General Technical Information

The technical data applies only to the complete coupling or the corresponding coupling elements. It is the customer/user's responsibility to ensure that there are no inadmissible loads acting on any of the components. In particular, existing connections, e.g. bolted connections, must be checked with regard to the torques to be transmitted. If necessary, further measures, such as additional reinforcement with pins, may be necessary. It is the customer/user's responsibility to make sure the dimensioning of the shaft and keyed or other connection, e.g. shrinking or clamping connection, is correct. All components that can rust are protected against

corrosion as standard. REICH have an extensive range of couplings and coupling systems to cover nearly every drive configuration. Customised solutions can be developed and manufactured even in small batches or as prototypes. In addition calculation programs are available for all necessary dimensioning.



## Diagrams

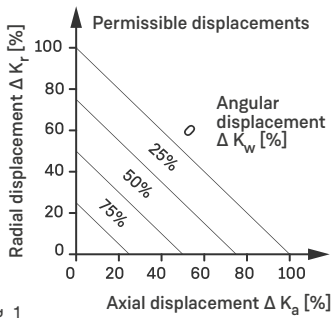


Fig. 1

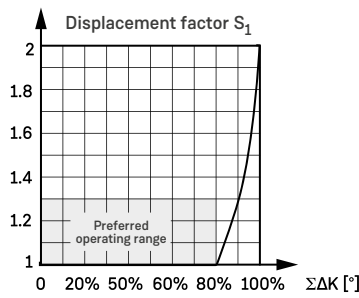


Fig. 2

**i** Note: Displacements which have occurred during operation (e.g. thermal factor) must be taken into account. For larger displacements please contact us.

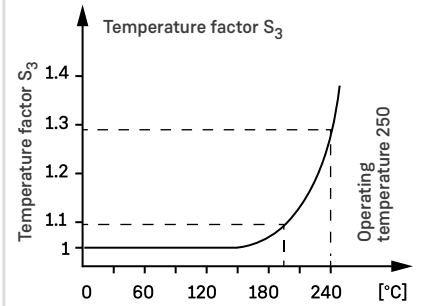


Fig. 3

**i** Note: Application temperatures above 80° must be specified in the order.

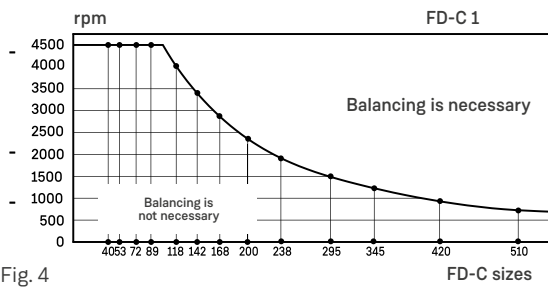


Fig. 4

**i** The balancing grade for the standard elements is G 6.3 according to DIN ISO 2194. Balancing is recommended at operating speeds above the curves shown in Figures 4 and 5.

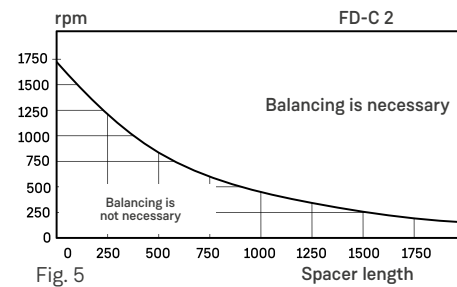


Fig. 5

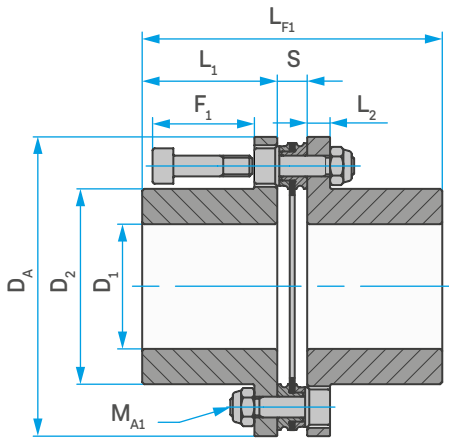
## Ordering example

| Element version      | Size    | Number of screws | Version   | Mounting situation   | Hub type                                    | Type of bore   |
|----------------------|---------|------------------|---|--|---|--|
| FD-C = Standard      |         |                  | N = Single joint coupling standard                                  | Distance between shaft ends (DBSE) (Type N - no declaration) |   | with key connection acc. to DIN 6885/1 => $\emptyset D_1$ or $\emptyset D_9$ |
| FD-CL = Strengthened |         |                  | S = Double joint coupling standard                                  |  | O = Flange coupling for Drop-Out version    | with K => $\emptyset D_{11}$<br>with Z => $\emptyset D_7 + \emptyset D_6$    |
|                      |         |                  | CA = Compact, two hubs mounted to the inside                        |  | K = Clamping hub, slotted                   | with Y => type of clamping element + $\emptyset D_6$                         |
|                      |         |                  | CB = Compact, one hub mounted to the inside                         |  | Z = Outside clamping set                    | with X => type of clamping element + $\emptyset D_3$                         |
|                      |         |                  | F = Double joint coupling, compliant with API 610, API 671 and ATEX |  | Y = Clamping hub, split                     |  |
|                      |         |                  | SP-CA = Split spacer, two hubs mounted to the inside                |  | X = Internal locking device                 |  |
|                      |         |                  | SP-CB = Split spacer, one hub mounted to the inside                 |  | V <sub>1</sub> = small clamping bush design |  |
|                      |         |                  |   |  | V <sub>2</sub> = large clamping bush design |  |
| FD-C                 | 142 - 6 | 6                | S   | 180  | X   | 2820.50/2820.55  |

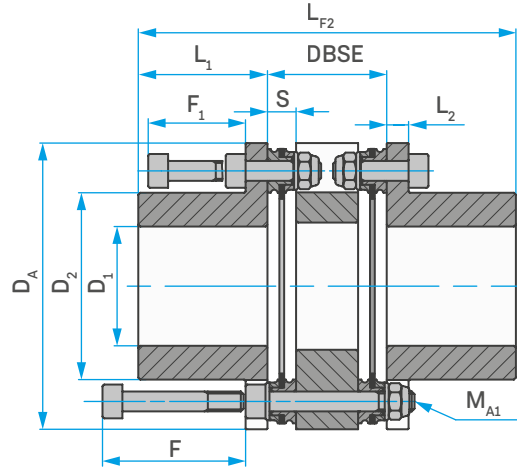
Designation: FD-C 142 - 6 S 180 X 2820.50 - X 2820.55

# FLEXDUR

## Type N + S



FD-C N: Standard

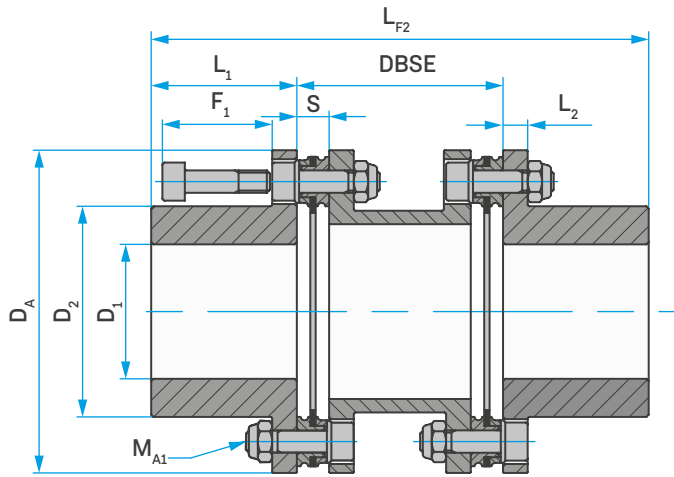


FD-C S DBSE<sub>min</sub>: Standard, short type



### Coupling details

| Coupling size | L <sub>1</sub><br>[mm] | D <sub>A</sub><br>[mm] | D <sub>1min</sub><br>pre-drilled<br>[mm] | D <sub>1max</sub><br>[mm] | D <sub>2</sub><br>[mm] | F<br>[mm] | F <sub>1</sub><br>[mm] | L <sub>2</sub><br>[mm] |
|---------------|------------------------|------------------------|--|---------------------------|------------------------|-----------|------------------------|------------------------|
| 40            | 17.0                   | 40.0                   | 6  | 18                        | 26.0                   | 25        | 15                     | 4                      |
| 53            | 24.5                   | 53.0                   | 6  | 22                        | 32.5                   | 43        | 24                     | 5                      |
| 72            | 39.5                   | 70.5                   | 10                                       | 32                        | 47.0                   | 43        | 24                     | 5                      |
| 89            | 45.0                   | 88.0                   | 14                                       | 42                        | 62.5                   | 53        | 32                     | 8                      |
| 118           | 55.0                   | 116.5                  | 15                                       | 55                        | 82.0                   | 67        | 40                     | 10                     |
| 142           | 60.0                   | 140.5                  | 19                                       | 65                        | 98.0                   | 82        | 47                     | 11                     |
| 168           | 75.0                   | 166.5                  | 25                                       | 80                        | 118.0                  | 94        | 55                     | 12                     |
| 200           | 90.0                   | 198.5                  | 30                                       | 95                        | 141.0                  | -         | 64                     | 14                     |
| 238           | 125.0                  | 238.0                  | 39                                       | 115                       | 169.0                  | -         | 81                     | 16                     |
| 295           | 160.0                  | 295.0                  | 59                                       | 140                       | 205.0                  | -         | 112                    | 22                     |
| 345           | 200.0                  | 345.0                  | 79                                       | 175                       | 254.0                  | -         | 133                    | 26                     |
| 420           | 210.0                  | 420.0                  | 90                                       | 180                       | 262.0                  | -         | 137                    | 32                     |
| 510           | 240.0                  | 510.0                  | 100                                      | 215                       | 316.0                  | -         | 172                    | 38                     |



FD-C S: Standard

**Mounting instruction:**

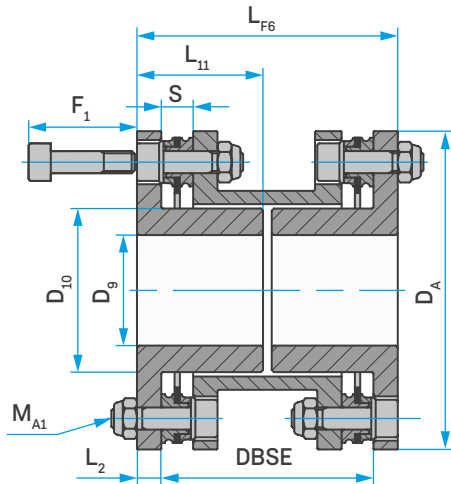
Standard type, pilot bore or finish bore with keyway.  
Key connection not suitable for backlash-free torque transmission. Disc pack radial dismounting without hub displacement.

| Coupling size | FD-C     |       |      |                    |          |          | FD-CL    |        |      |                    |          |          |
|---------------|----------|-------|------|--------------------|----------|----------|----------|--------|------|--------------------|----------|----------|
|               | $M_{A1}$ |       | S    | DBSE <sup>1)</sup> | $L_{F1}$ | $L_{F2}$ | $M_{A1}$ |        | S    | DBSE <sup>1)</sup> | $L_{F1}$ | $L_{F2}$ |
|               | [-]      | [Nm]  | [mm] | [mm]               | [mm]     | [mm]     | [-]      | [Nm]   | [mm] | [mm]               | [mm]     | [mm]     |
| 40            | M3       | 1.5   | 2.9  | 16.0               | 36.9     | 50.0     | -        | -      | -    | -                  | -        | -        |
|               |          |       |      | 26.0               |          | 60.0     |          |        |      |                    |          |          |
| 53            | M5       | 7.0   | 6.9  | 30.0               | 55.9     | 79.0     | -        | -      | -    | -                  | -        | -        |
|               |          |       |      | 43.0               |          | 92.0     |          |        |      |                    |          |          |
| 72            | M5       | 8.0   | 7.5  | 31.2               | 86.5     | 110.2    | M5       | 9.0    | 7.6  | 31.4               | 86.6     | 110.4    |
|               |          |       |      | 60.0               |          | 139.0    |          |        |      | 60.2               |          | 139.2    |
|               |          |       |      | 100.0              |          | 179.0    |          |        |      | 100.2              |          | 179.2    |
|               |          |       |      | 140.0              |          | 219.0    |          |        |      | 140.2              |          | 219.2    |
|               |          |       |      | 37.6               |          | 127.6    |          |        |      | 38.0               |          | 128.0    |
| 89            | M6       | 14.0  | 8.8  | 70.0               | 98.8     | 160.0    | M6       | 15.0   | 9.0  | 70.4               | 99.0     | 160.4    |
|               |          |       |      | 80.0               |          | 170.0    |          |        |      | 80.4               |          | 170.4    |
|               |          |       |      | 100.0              |          | 190.0    |          |        |      | 100.4              |          | 190.4    |
|               |          |       |      | 140.0              |          | 230.0    |          |        |      | 140.4              |          | 230.4    |
|               |          |       |      | 37.6               |          | 127.6    |          |        |      | 38.0               |          | 128.0    |
| 118           | M8       | 31.0  | 10.4 | 46.3               | 120.4    | 156.3    | M8       | 35.0   | 10.8 | 47.1               | 120.8    | 157.1    |
|               |          |       |      | 100.0              |          | 210.0    |          |        |      | 100.8              |          | 210.8    |
|               |          |       |      | 140.0              |          | 250.0    |          |        |      | 140.8              |          | 250.8    |
|               |          |       |      | 180.0              |          | 290.0    |          |        |      | 180.8              |          | 290.8    |
|               |          |       |      | 55.0               |          | 175.0    |          |        |      | 55.4               |          | 175.4    |
| 142           | M10      | 62.0  | 12.0 | 100.0              | 132.0    | 220.0    | M10      | 73.0   | 12.2 | 100.4              | 132.2    | 220.4    |
|               |          |       |      | 140.0              |          | 260.0    |          |        |      | 140.4              |          | 260.4    |
|               |          |       |      | 180.0              |          | 300.0    |          |        |      | 180.4              |          | 300.4    |
|               |          |       |      | 62.6               |          | 212.6    |          |        |      | 62.6               |          | 212.6    |
| 168           | M12      | 110.0 | 13.0 | 100.0              | 163.0    | 250.0    | M12      | 130.0  | 13.0 | 100.0              | 163.0    | 250.0    |
|               |          |       |      | 140.0              |          | 290.0    |          |        |      | 140.0              |          | 290.0    |
|               |          |       |      | 180.0              |          | 330.0    |          |        |      | 180.0              |          | 330.0    |
|               |          |       |      | 62.6               |          | 212.6    |          |        |      | 62.6               |          | 212.6    |
| 200           | M14      | 180.0 | 15.0 | 140.0              | 195.0    | 320.0    | M14      | 210.0  | 15.2 | 140.4              | 195.2    | 320.4    |
|               |          |       |      | 180.0              |          | 360.0    |          |        |      | 180.4              |          | 360.4    |
| 238           | M16      | 280.0 | 20.8 | 140.0              | 270.8    | 390.0    | M16      | 320.0  | 22.0 | 142.4              | 272.0    | 392.4    |
|               |          |       |      | 180.0              |          | 430.0    |          |        |      | 182.4              |          | 432.4    |
|               |          |       |      | 250.0              |          | 500.0    |          |        |      | 252.4              |          | 502.4    |
| 295           | M20      | 540.0 | 28.0 | 200.0              | 348.0    | 520.0    | M20      | 620.0  | 28.2 | 200.4              | 348.2    | 520.4    |
|               |          |       |      | 250.0              |          | 570.0    |          |        |      | 250.4              |          | 570.4    |
| 345           | M24      | 950.0 | 32.2 | 224.0              | 432.2    | 624.0    | M24      | 1000.0 | 32.4 | 224.4              | 432.4    | 624.4    |
|               |          |       |      | 250.0              |          | 650.0    |          |        |      | 250.4              |          | 650.4    |
|               |          |       |      | 300.0              |          | 700.0    |          |        |      | 300.4              |          | 700.4    |
| 420           | M10      | 60.0  | 34.0 | 280.0              | 454.0    | 700.0    | -        | -      | -    | -                  | -        | -        |
| 510           | M12      | 105.0 | 46.8 | 350.0              | 526.8    | 830.0    | -        | -      | -    | -                  | -        | -        |

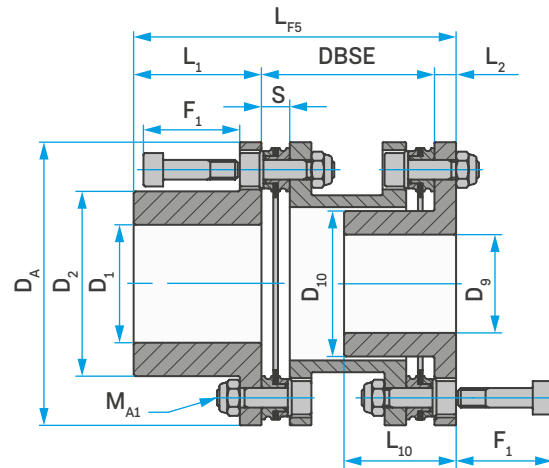
**i** 1) DBSE available up to 3 000 mm upon request

# FLEXDUR

## Type CA + CB



FD-C CA: compact, short type



FD-C CB: compact




### Coupling details

| Coupling size | L <sub>1</sub> | L <sub>3</sub> | L <sub>4</sub> | D <sub>A</sub> | D <sub>1min</sub><br>pre-drilled | D <sub>3min</sub><br>pre-drilled | D <sub>1max</sub> | D <sub>3max</sub> | D <sub>2</sub> | D <sub>4</sub> | F <sub>1</sub> | L <sub>2</sub> |
|---------------|----------------|----------------|----------------|----------------|----------------------------------|----------------------------------|-------------------|-------------------|----------------|----------------|----------------|----------------|
|               | [mm]           | [mm]           | [mm]           | [mm]           | [mm]                             | [mm]                             | [mm]              | [mm]              | [mm]           | [mm]           | [mm]           | [mm]           |
| 53            | 24.5           | 24.5           | 24.5           | 53.0           | 6                                | 6                                | 22                | 17                | 32.5           | 24.5           | 24             | 5              |
| 72            | 39.5           | 39.5           | 34.5           | 70.5           | 10                               | 10                               | 32                | 25                | 47.0           | 37.0           | 24             | 5              |
|               |                | 39.5           | 39.5           |                |                                  |                                  |                   |                   |                |                |                |                |
|               |                | 39.5           | 39.5           |                |                                  |                                  |                   |                   |                |                |                |                |
| 89            | 45.0           | 45.0           | 40.0           | 88.0           | 14                               | 14                               | 42                | 32                | 62.5           | 48.0           | 32             | 8              |
|               |                | 45.0           | 45.0           |                |                                  |                                  |                   |                   |                |                |                |                |
|               |                | 45.0           | 45.0           |                |                                  |                                  |                   |                   |                |                |                |                |
|               |                | 45.0           | 45.0           |                |                                  |                                  |                   |                   |                |                |                |                |
| 118           | 55.0           | 55.0           | 55.0           | 116.5          | 15                               | 15                               | 55                | 44                | 82.0           | 64.0           | 40             | 10             |
|               |                | 55.0           | 55.0           |                |                                  |                                  |                   |                   |                |                |                |                |
|               |                | 55.0           | 55.0           |                |                                  |                                  |                   |                   |                |                |                |                |
| 142           | 60.0           | 60.0           | 58.0           | 140.5          | 19                               | 19                               | 65                | 50                | 98.0           | 77.0           | 47             | 11             |
|               |                | 60.0           | 60.0           |                |                                  |                                  |                   |                   |                |                |                |                |
|               |                | 60.0           | 60.0           |                |                                  |                                  |                   |                   |                |                |                |                |
| 168           | 75.0           | 75.0           | 60.0           | 166.5          | 25                               | 25                               | 80                | 60                | 118.0          | 90.5           | 55             | 12             |
|               |                | 75.0           | 75.0           |                |                                  |                                  |                   |                   |                |                |                |                |
|               |                | 75.0           | 75.0           |                |                                  |                                  |                   |                   |                |                |                |                |
| 200           | 90.0           | 90.0           | 81.0           | 198.5          | 30                               | 30                               | 95                | 75                | 141.0          | 114.0          | 64             | 14             |
|               |                | 90.0           | 90.0           |                |                                  |                                  |                   |                   |                |                |                |                |
|               |                | 90.0           | 90.0           |                |                                  |                                  |                   |                   |                |                |                |                |
| 238           | 125.0          | 125.0          | -              | 238.0          | 39                               | 39                               | 115               | 90                | 169.0          | 135.0          | 81             | 16             |
|               |                | 125.0          | 104.0          |                |                                  |                                  |                   |                   |                |                |                |                |
|               |                | 125.0          | 125.0          |                |                                  |                                  |                   |                   |                |                |                |                |
| 295           | 160.0          | 160.0          | -              | 295.0          | 59                               | 59                               | 140               | 115               | 205.0          | 170.0          | 112            | 22             |
|               |                | 160.0          | 140.0          |                |                                  |                                  |                   |                   |                |                |                |                |
|               |                | 160.0          | 140.0          |                |                                  |                                  |                   |                   |                |                |                |                |
| 345           | 200.0          | 200.0          | -              | 345.0          | 79                               | 79                               | 175               | 120               | 254.0          | 180.0          | 133            | 26             |
|               |                | 200.0          | 145.0          |                |                                  |                                  |                   |                   |                |                |                |                |
|               |                | 200.0          | 168.0          |                |                                  |                                  |                   |                   |                |                |                |                |

 **Mounting instruction:**

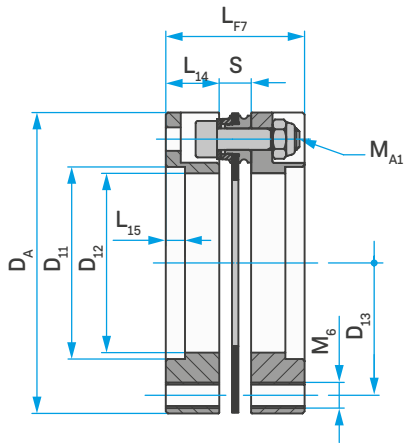
Compact type. Prebored or finish bore with keyway.  
Key connection not suitable for backlash-free torque transmission.

| Coupling size | FD-C            |       |      |                    |                 |                 | FD-CL           |        |      |                    |                 |                 |
|---------------|-----------------|-------|------|--------------------|-----------------|-----------------|-----------------|--------|------|--------------------|-----------------|-----------------|
|               | M <sub>A1</sub> |       | S    | DBSE <sup>1)</sup> | L <sub>F1</sub> | L <sub>F2</sub> | M <sub>A1</sub> |        | S    | DBSE <sup>1)</sup> | L <sub>F1</sub> | L <sub>F2</sub> |
|               | [-]             | [Nm]  | [mm] | [mm]               | [mm]            | [mm]            | [-]             | [Nm]   | [mm] | [mm]               | [mm]            | [mm]            |
| 53            | M5              | 7.0   | 6.9  | 43                 | 72.5            | 53              | -               | -      | -    | -                  | -               | -               |
| 72            | M5              | 8.0   | 7.5  | 60                 | 104.5           | 70              | M5              | 9.0    | 7.6  | 60.2               | 104.7           | 70.2            |
|               |                 |       |      | 100                | 144.5           | 110             |                 |        |      | 100.2              | 144.7           | 110.2           |
|               |                 |       |      | 140                | 184.5           | 150             |                 |        |      | 140.2              | 184.7           | 150.2           |
| 89            | M6              | 14.0  | 8.8  | 70                 | 123.0           | 86              | M6              | 15.0   | 9.0  | 70.4               | 123.4           | 86.4            |
|               |                 |       |      | 80                 | 133.0           | 96              |                 |        |      | 80.4               | 133.4           | 96.4            |
|               |                 |       |      | 100                | 153.0           | 116             |                 |        |      | 100.4              | 153.4           | 116.4           |
|               |                 |       |      | 140                | 193.0           | 156             |                 |        |      | 140.4              | 193.4           | 156.4           |
| 118           | M8              | 31.0  | 10.4 | 100                | 165.0           | 120             | M8              | 35.0   | 10.8 | 100.8              | 165.8           | 120.8           |
|               |                 |       |      | 140                | 205.0           | 160             |                 |        |      | 140.8              | 205.8           | 160.8           |
|               |                 |       |      | 180                | 245.0           | 200             |                 |        |      | 180.8              | 245.8           | 200.8           |
| 142           | M10             | 62.0  | 12.0 | 100                | 171.0           | 122             | M10             | 73.0   | 12.2 | 100.4              | 171.4           | 122.4           |
|               |                 |       |      | 140                | 211.0           | 162             |                 |        |      | 140.4              | 211.4           | 162.4           |
|               |                 |       |      | 180                | 251.0           | 202             |                 |        |      | 180.4              | 251.4           | 202.4           |
| 168           | M12             | 110.0 | 13.0 | 100                | 187.0           | 124             | M12             | 130.0  | 13.0 | 100.0              | 187.0           | 124.0           |
|               |                 |       |      | 140                | 227.0           | 164             |                 |        |      | 140.0              | 227.0           | 164.0           |
|               |                 |       |      | 180                | 267.0           | 204             |                 |        |      | 180.0              | 267.0           | 204.0           |
| 200           | M14             | 180.0 | 15.0 | 140                | 244.0           | 168             | M14             | 210.0  | 15.2 | 140.4              | 244.4           | 168.4           |
|               |                 |       |      | 180                | 284.0           | 208             |                 |        |      | 180.4              | 284.4           | 208.4           |
| 238           | M16             | 280.0 | 20.8 | 140                | 281.0           | -               | M16             | 320.0  | 22.0 | 142.4              | 283.4           | -               |
|               |                 |       |      | 180                | 321.0           | 212             |                 |        |      | 182.4              | 323.4           | 214.4           |
|               |                 |       |      | 250                | 391.0           | 282             |                 |        |      | 252.4              | 393.4           | 284.4           |
| 295           | M20             | 540.0 | 28.0 | 200                | 382.0           | -               | M20             | 620.0  | 28.2 | 200.4              | 382.4           | -               |
|               |                 |       |      | 250                | 432.0           | 294             |                 |        |      | 250.4              | 432.4           | 294.4           |
| 345           | M24             | 950.0 | 32.2 | 224                | 450.0           | -               | M24             | 1000.0 | 32.4 | 224.4              | 450.4           | -               |
|               |                 |       |      | 250                | 476.0           | 302             |                 |        |      | 250.4              | 476.4           | 302.4           |
|               |                 |       |      | 300                | 526.0           | 352             |                 |        |      | 300.4              | 526.4           | 352.4           |

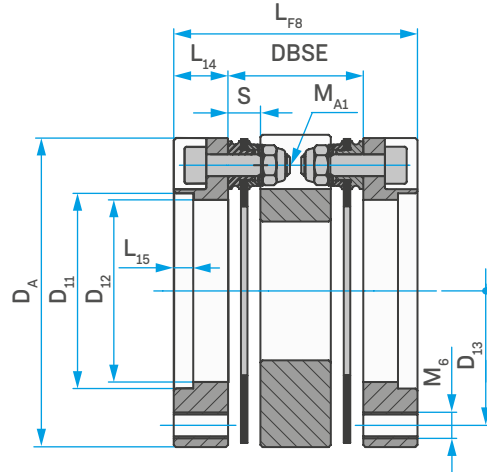
 1) DBSE available up to 3 000 mm upon request

# FLEXDUR

Type N0 + S0



FD-C N0: Flange version

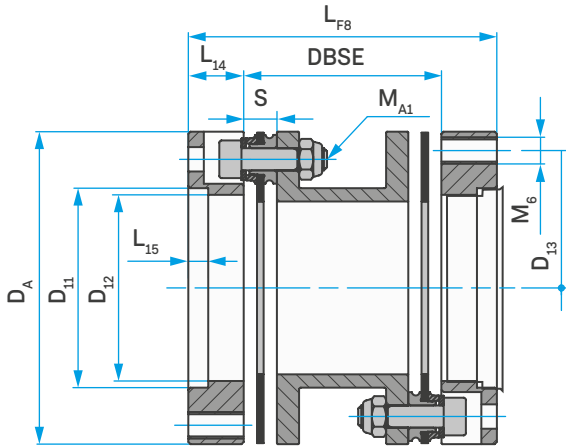


FD-C S0 DBSE<sub>min</sub>: flange version, short type



## Coupling details

| Coupling size | L <sub>1</sub><br>[mm] | D <sub>A</sub><br>[mm] | D <sub>1</sub><br>[mm] | D <sub>3</sub><br>[mm] | L <sub>2</sub><br>[mm] | M <sub>1</sub><br>[mm] | D <sub>3</sub><br>[mm] |
|---------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| 72            | 12.5                   | 70.5                   | 45                     | 42                     | 4.5                    | 6xM8                   | 62                     |
| 89            | 17.0                   | 88.0                   | 50                     | 48                     | 4.5                    | 6xM8                   | 75                     |
| 118           | 22.0                   | 116.5                  | 75                     | 72                     | 5.0                    | 6xM10                  | 103                    |
| 142           | 27.0                   | 140.5                  | 92                     | 89                     | 5.0                    | 6xM12                  | 116                    |
| 168           | 31.0                   | 166.5                  | 105                    | 100                    | 5.0                    | 6xM14                  | 140                    |
| 200           | 34.0                   | 198.5                  | 120                    | 115                    | 7.0                    | 6xM16                  | 175                    |
| 238           | 41.0                   | 238.0                  | 140                    | 135                    | 7.0                    | 6xM20                  | 210                    |
| 295           | 52.0                   | 306.0                  | 160                    | 155                    | 7.0                    | 8xM24                  | 240                    |
| 345           | 64.0                   | 360.0                  | 180                    | 175                    | 7.0                    | 8xM30                  | 275                    |



FD-C S0: Flange version

**Mounting instruction:**

Flange coupling. For disc pack disassembly, axial displacement of the flanges required.

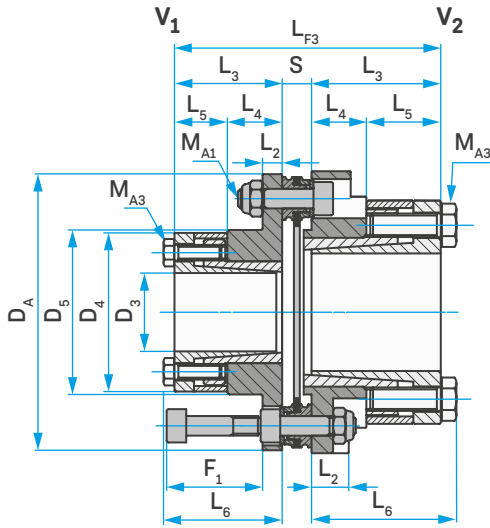
**Drop out** with appropriate hubs possible. The complete coupling can be radially dismantled without any displacement of the components, and without releasing the screws of the disc pack.

| Coupling size | FD-C                   |           |           |                            |                         |                         | FD-CL                  |           |           |                            |                         |                         |
|---------------|------------------------|-----------|-----------|----------------------------|-------------------------|-------------------------|------------------------|-----------|-----------|----------------------------|-------------------------|-------------------------|
|               | M <sub>A1</sub><br>[-] | S<br>[Nm] | S<br>[mm] | DBSE <sup>1)</sup><br>[mm] | L <sub>F1</sub><br>[mm] | L <sub>F2</sub><br>[mm] | M <sub>A1</sub><br>[-] | S<br>[Nm] | S<br>[mm] | DBSE <sup>1)</sup><br>[mm] | L <sub>F1</sub><br>[mm] | L <sub>F2</sub><br>[mm] |
| 72            | M5                     | 8.0       | 7.5       | 31.2                       | 32.5                    | 56.2                    | M5                     | 9.0       | 7.6       | 31.4                       | 32.6                    | 56.4                    |
|               |                        |           |           | 60.0                       |                         | 85.0                    |                        |           |           | 60.2                       |                         | 85.2                    |
|               |                        |           |           | 100.0                      |                         | 125.0                   |                        |           |           | 100.2                      |                         | 125.2                   |
|               |                        |           |           | 140.0                      |                         | 165.0                   |                        |           |           | 140.2                      |                         | 165.2                   |
| 89            | M6                     | 14.0      | 8.8       | 37.6                       | 42.8                    | 71.6                    | M6                     | 15.0      | 9.0       | 38.0                       | 43.0                    | 72.0                    |
|               |                        |           |           | 70.0                       |                         | 104.0                   |                        |           |           | 70.4                       |                         | 104.4                   |
|               |                        |           |           | 80.0                       |                         | 114.0                   |                        |           |           | 80.4                       |                         | 114.4                   |
|               |                        |           |           | 100.0                      |                         | 134.0                   |                        |           |           | 100.4                      |                         | 134.4                   |
| 118           | M8                     | 31.0      | 10.4      | 46.3                       | 54.4                    | 90.3                    | M8                     | 35.0      | 10.8      | 47.1                       | 54.8                    | 91.1                    |
|               |                        |           |           | 100.0                      |                         | 144.0                   |                        |           |           | 100.8                      |                         | 144.8                   |
|               |                        |           |           | 140.0                      |                         | 184.0                   |                        |           |           | 140.8                      |                         | 184.8                   |
|               |                        |           |           | 180.0                      |                         | 224.0                   |                        |           |           | 180.8                      |                         | 224.8                   |
| 142           | M10                    | 62.0      | 12.0      | 55.0                       | 66.0                    | 109.0                   | M10                    | 73.0      | 12.2      | 55.4                       | 66.2                    | 109.4                   |
|               |                        |           |           | 100.0                      |                         | 154.0                   |                        |           |           | 100.4                      |                         | 154.4                   |
|               |                        |           |           | 140.0                      |                         | 194.0                   |                        |           |           | 140.4                      |                         | 194.4                   |
|               |                        |           |           | 180.0                      |                         | 234.0                   |                        |           |           | 180.4                      |                         | 234.4                   |
| 168           | M12                    | 110.0     | 13.0      | 62.6                       | 75.0                    | 124.6                   | M12                    | 130.0     | 13.0      | 62.6                       | 75.0                    | 124.6                   |
|               |                        |           |           | 100.0                      |                         | 162.0                   |                        |           |           | 100.0                      |                         | 162.0                   |
|               |                        |           |           | 140.0                      |                         | 202.0                   |                        |           |           | 140.0                      |                         | 202.0                   |
|               |                        |           |           | 180.0                      |                         | 242.0                   |                        |           |           | 180.0                      |                         | 242.0                   |
| 200           | M14                    | 180.0     | 15.0      | 140.0                      | 83.0                    | 208.0                   | M14                    | 210.0     | 15.2      | 140.4                      | 83.2                    | 208.4                   |
|               |                        |           |           | 180.0                      |                         | 248.0                   |                        |           |           | 180.4                      |                         | 248.4                   |
| 238           | M16                    | 280.0     | 20.8      | 140.0                      | 102.8                   | 222.0                   | M16                    | 320.0     | 22.0      | 142.4                      | 104.0                   | 224.4                   |
|               |                        |           |           | 180.0                      |                         | 262.0                   |                        |           |           | 182.4                      |                         | 264.4                   |
|               |                        |           |           | 250.0                      |                         | 332.0                   |                        |           |           | 252.4                      |                         | 334.4                   |
| 295           | M20                    | 540.0     | 28.0      | 200.0                      | 132.0                   | 304.0                   | M20                    | 620.0     | 28.2      | 200.4                      | 132.2                   | 304.4                   |
|               |                        |           |           | 250.0                      |                         | 354.0                   |                        |           |           | 250.4                      |                         | 354.4                   |
| 345           | M24                    | 950.0     | 32.2      | 224.0                      | 160.2                   | 352.0                   | M24                    | 1000.0    | 32.4      | 224.4                      | 160.4                   | 352.4                   |
|               |                        |           |           | 250.0                      |                         | 378.0                   |                        |           |           | 250.4                      |                         | 378.4                   |
|               |                        |           |           | 300.0                      |                         | 428.0                   |                        |           |           | 300.4                      |                         | 428.4                   |

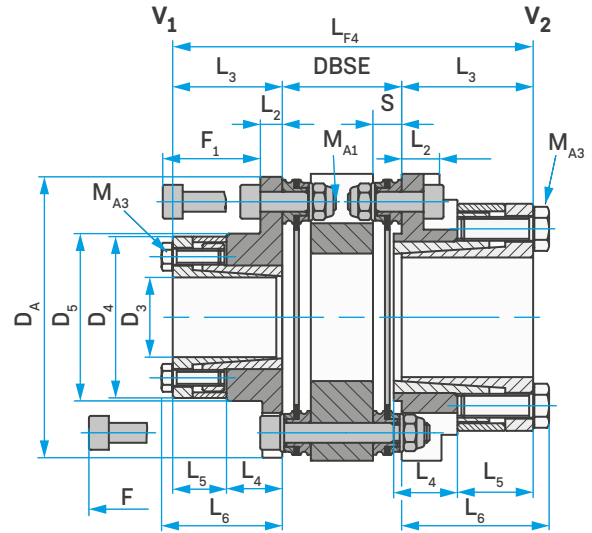
<sup>1)</sup> DBSE available up to 3 000 mm upon request

# FLEXDUR

## Type NX + SX



FD-C NX: with internal locking device

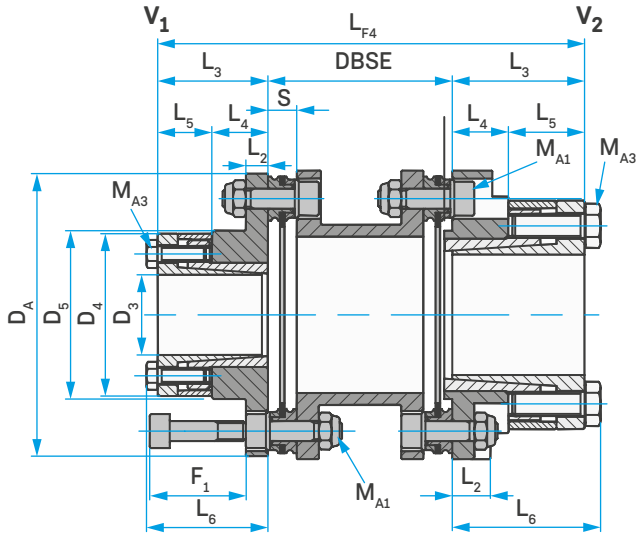


FD-C SX DBSE<sub>min</sub>: with internal locking device, short type

### Coupling details

| Coupling size | Type | D <sub>A</sub><br>[mm] | L <sub>2</sub><br>[mm] | F<br>[mm] | F <sub>1</sub><br>[mm] | L <sub>1</sub><br>[mm] | L <sub>3</sub><br>[mm] | L <sub>4</sub><br>[mm] | L <sub>5</sub><br>[mm] | D <sub>2</sub><br>[mm] | D <sub>3</sub><br>[mm] | M <sub>A2</sub><br>[-] | M <sub>A2</sub><br>[Nm] |
|---------------|------|------------------------|------------------------|-----------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|
| 53 + 145      | V2   | 53.0                   | 9.5                    | -         | -                      | 25.5                   | 14.0                   | 13.5                   | 28.5                   | 40.5                   | 42                     | M4                     | 5                       |
| 72 + 145      | V1   | 70.5                   | 5.0                    | 43        | 25                     | 27.5                   | 14.0                   | 13.5                   | 30.5                   | 40.5                   | 42                     | M4                     | 5                       |
| 72 + 330      | V2   | 70.5                   | 10.0                   | -         | -                      | 33.0                   | 14.0                   | 19.0                   | 37.0                   | 57.0                   | 58                     | M6                     | 17                      |
| 89 + 500      | V1   | 88.0                   | 8.0                    | 53        | 32                     | 44.5                   | 27.0                   | 19.0                   | 48.5                   | 57.0                   | 60                     | M6                     | 17                      |
| 89 + 920      | V2   | 88.0                   | 15.0                   | -         | -                      | 44.5                   | 25.5                   | 19.0                   | 48.5                   | 70.5                   | 72                     | M6                     | 17                      |
| 118 + 1140    | V1   | 116.5                  | 10.0                   | 67        | 40                     | 35.0                   | 16.5                   | 18.5                   | 39.0                   | 74.0                   | 80                     | M6                     | 17                      |
| 118 + 1370    | V2   | 116.5                  | 19.0                   | -         | -                      | 44.0                   | 27.0                   | 19.0                   | 50.0                   | 89.5                   | 92                     | M6                     | 17                      |
| 142 + 920     | V1   | 140.5                  | 11.0                   | 82        | 47                     | 45.5                   | 26.5                   | 19.0                   | 50.0                   | 70.5                   | 72                     | M6                     | 17                      |
| 142 + 2820    | V1   | 140.5                  | 11.0                   | 82        | 47                     | 59.5                   | 36.5                   | 23.0                   | 65.0                   | 96.5                   | 98                     | M8                     | 41                      |
| 168 + 2820    | V1   | 166.5                  | 12.0                   | 94        | 55                     | 59.5                   | 36.5                   | 23.0                   | 65.0                   | 96.5                   | 98                     | M8                     | 41                      |
| 200 + 2820    | V1   | 198.5                  | 14.0                   | -         | 64                     | 59.5                   | 36.5                   | 23.0                   | 65.0                   | 96.5                   | 98                     | M8                     | 41                      |





FD-C SX: with internal locking device

**Mounting instruction:**

Hub with internal locking device.

Backlash-free torque transmission.

**V<sub>1</sub>**: Disc pack radial dismounting without hub displacement.

**V<sub>2</sub>**: Radial disassembly of the disc pack after loosening and axial shifting of the clamping device possible.

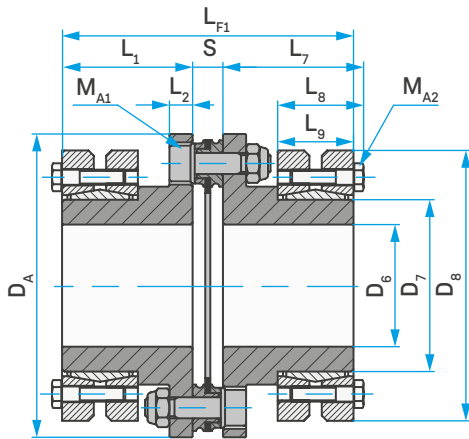
| Coupling size | FD-C            |        |        |              |                 |                 | FD-CL           |        |        |        |                 |                 |       |       |
|---------------|-----------------|--------|--------|--------------|-----------------|-----------------|-----------------|--------|--------|--------|-----------------|-----------------|-------|-------|
|               | M <sub>A1</sub> |        | S      | DBSE         | L <sub>F1</sub> | L <sub>F2</sub> | M <sub>A1</sub> |        | S      | DBSE   | L <sub>F1</sub> | L <sub>F2</sub> |       |       |
|               | [ - ]           | [ Nm ] | [ mm ] | [ mm ]       | [ mm ]          | [ mm ]          | [ - ]           | [ Nm ] | [ mm ] | [ mm ] | [ mm ]          | [ mm ]          |       |       |
| 53 + 145      | M5              | 7.0    | 6.9    | 30.0<br>43.0 | 57.9            | 81.0<br>94.0    | -               | -      | -      | -      | -               | -               |       |       |
| 72 + 145      | M5              | 8.0    | 7.5    | 31.2         | 62.5            | 86.2            | M5              | 9.0    | 7.6    | 31.4   | 73.6            | 86.4            |       |       |
|               |                 |        |        | 60.0         |                 | 115.0           |                 |        |        | 60.2   |                 | 115.2           |       |       |
|               |                 |        |        | 100.0        |                 | 155.0           |                 |        |        | 100.2  |                 | 155.2           |       |       |
|               |                 |        |        | 140.0        |                 | 195.0           |                 |        |        | 140.2  |                 | 195.2           |       |       |
| 72 + 330      | M5              | 8.0    | 7.5    | 31.2         | 73.5            | 97.2            | M5              | 9.0    | 7.6    | 31.4   | 73.6            | 97.4            |       |       |
|               |                 |        |        | 60.0         |                 | 126.0           |                 |        |        | 60.2   |                 | 126.2           |       |       |
|               |                 |        |        | 100.0        |                 | 166.0           |                 |        |        | 100.2  |                 | 166.2           |       |       |
|               |                 |        |        | 140.0        |                 | 206.0           |                 |        |        | 140.2  |                 | 206.2           |       |       |
| 89 + 500      | M6              | 14.0   | 8.8    | 37.6         | 97.8            | 126.6           | M6              | 15.0   | 9.0    | 38.0   | 98.0            | 127.0           |       |       |
|               |                 |        |        | 70.0         |                 | 159.0           |                 |        |        | 70.4   |                 | 159.4           |       |       |
|               |                 |        |        | 80.0         |                 | 169.0           |                 |        |        | 80.4   |                 | 169.4           |       |       |
|               |                 |        |        | 100.0        |                 | 189.0           |                 |        |        | 100.4  |                 | 189.4           |       |       |
| 89 + 920      | M6              | 14.0   | 8.8    | 37.6         | 97.8            | 126.6           | M6              | 15.0   | 9.0    | 38.0   | 98.0            | 127.0           |       |       |
|               |                 |        |        | 70.0         |                 | 159.0           |                 |        |        | 70.4   |                 | 159.4           |       |       |
|               |                 |        |        | 80.0         |                 | 169.0           |                 |        |        | 80.4   |                 | 169.4           |       |       |
|               |                 |        |        | 100.0        |                 | 189.0           |                 |        |        | 100.4  |                 | 189.4           |       |       |
| 118 + 1140    | M8              | 31.0   | 10.4   | 46.3         | 80.4            | 116.3           | M8              | 35.0   | 10.8   | 47.1   | 80.8            | 117.1           |       |       |
|               |                 |        |        | 100.0        |                 | 170.0           |                 |        |        | 100.8  |                 | 170.4           |       |       |
|               |                 |        |        | 140.0        |                 | 210.0           |                 |        |        | 140.8  |                 | 210.4           |       |       |
|               |                 |        |        | 180.0        |                 | 250.0           |                 |        |        | 180.8  |                 | 250.4           |       |       |
| 118 + 1370    | M8              | 31.0   | 10.4   | 46.3         | 98.4            | 134.3           | M8              | 35.0   | 10.8   | 47.1   | 98.8            | 135.1           |       |       |
|               |                 |        |        | 100.0        |                 | 188.0           |                 |        |        | 100.8  |                 | 188.4           |       |       |
|               |                 |        |        | 140.0        |                 | 228.0           |                 |        |        | 140.8  |                 | 228.4           |       |       |
|               |                 |        |        | 180.0        |                 | 268.0           |                 |        |        | 180.8  |                 | 268.4           |       |       |
| 142 + 920     | M10             | 62.0   | 12.0   | 55.0         | 103.0           | 146.0           | M10             | 73.0   | 12.2   | 55.4   | 103.2           | 146.4           |       |       |
|               |                 |        |        | 100.0        |                 | 191.0           |                 |        |        | 100.4  |                 | 191.4           |       |       |
|               |                 |        |        | 140.0        |                 | 231.0           |                 |        |        | 140.4  |                 | 231.4           |       |       |
|               |                 |        |        | 180.0        |                 | 271.0           |                 |        |        | 180.4  |                 | 271.4           |       |       |
| 142 + 2820    | M10             | 62.0   | 12.0   | 55.0         | 131.0           | 174.0           | M10             | 73.0   | 12.2   | 55.4   | 131.2           | 174.4           |       |       |
|               |                 |        |        | 100.0        |                 | 219.0           |                 |        |        | 100.4  |                 | 219.4           |       |       |
|               |                 |        |        | 140.0        |                 | 259.0           |                 |        |        | 140.4  |                 | 259.4           |       |       |
|               |                 |        |        | 180.0        |                 | 299.0           |                 |        |        | 180.4  |                 | 299.4           |       |       |
| 168 + 2820    | M12             | 110.0  | 13.0   | 62.6         | 132.0           | 181.6           | M12             | 130.0  | -      | -      | -               | -               |       |       |
|               |                 |        |        | 100.0        |                 | 219.0           |                 |        |        |        |                 |                 | 100.0 | 219.0 |
|               |                 |        |        | 140.0        |                 | 259.0           |                 |        |        |        |                 |                 | 140.0 | 259.0 |
|               |                 |        |        | 180.0        |                 | 299.0           |                 |        |        |        |                 |                 | 180.0 | 299.0 |
| 200 + 2820    | M14             | 180.0  | 15.0   | 140.0        | 134.0           | 259.0           | M14             | 210.0  | -      | -      | -               | -               |       |       |
|               |                 |        |        | 180.0        |                 | 299.0           |                 |        |        |        |                 |                 | 180.0 | 299.0 |

**Type NX - SX Preferred bores [mm]/transmittable torque [Nm] of the clamping set for shaft tolerance h8**

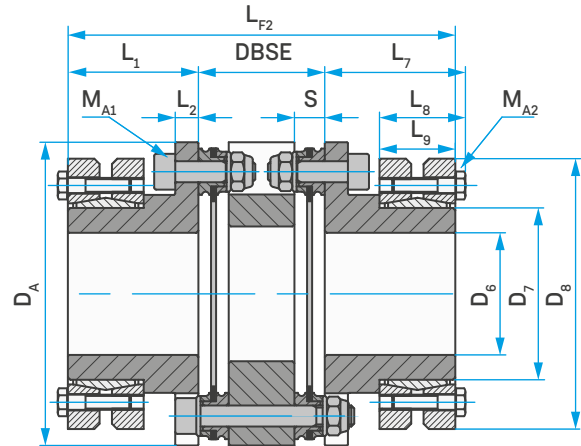
| Size      | D <sub>1</sub> [mm] | 11 | 12 | 14 | 15 | 16  | 18  | 19  | 20  | 22  | 24  | 25  | 28  | 30   | 32   | 35   | 38   | 40   | 42   | 45   | 48   | 50   | 55   | 60   |      |
|-----------|---------------------|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| 145 [Nm]  |                     | 50 | 55 | 90 | 95 | 115 | 130 | 140 | 145 | -   | -   | -   | -   | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |      |
| 330 [Nm]  |                     | -  | -  | -  | -  | -   | -   | 195 | 200 | 240 | 265 | 275 | 310 | 330  | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |      |
| 500 [Nm]  |                     | -  | -  | -  | -  | -   | -   | 310 | 330 | 360 | 400 | 410 | 460 | 500  | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |      |
| 920 [Nm]  |                     | -  | -  | -  | -  | -   | -   | -   | -   | -   | 470 | 490 | 550 | 590  | 700  | 770  | 840  | 880  | 920  | -    | -    | -    | -    | -    |      |
| 1140 [Nm] |                     | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -    | 540  | 710  | 780  | 820  | 950  | 1020 | 1090 | 1140 | -    | -    |      |
| 1370 [Nm] |                     | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -    | -    | -    | -    | -    | -    | -    | -    | -    | 1250 | 1370 |      |
| 2820 [Nm] |                     | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | 1240 | 1330 | 1420 | 1550 | 1780 | 1880 | 1970 | 2110 | 2250 | 2350 | 2590 | 2820 |

# FLEXDUR

## Type NZ + SZ



FD-C NZ: with outside clamping set

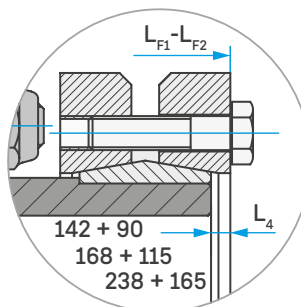
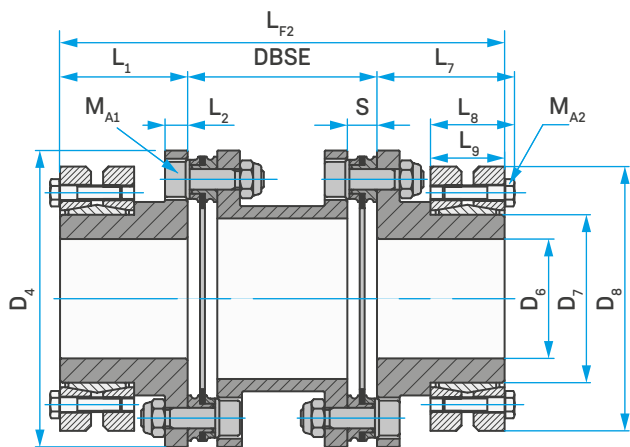


FD-C SZ DBSE<sub>min</sub>: with outside clamping set, short type



### Coupling details

| Coupling size | D <sub>2</sub> | L <sub>1</sub> | L <sub>3</sub> | D <sub>A</sub> | D <sub>1</sub> <sup>2)</sup> | L <sub>2</sub> | D <sub>3</sub>  | L <sub>4</sub> | L <sub>5</sub> | M <sub>A2</sub> |      | TL Limited torque           |
|---------------|----------------|----------------|----------------|----------------|------------------------------|----------------|-----------------|----------------|----------------|-----------------|------|-----------------------------|
|               | [mm]           | [mm]           | [mm]           |                | [mm]                         |                | [mm]            | [mm]           | [mm]           | [mm]            | [mm] |                             |
| 89            | 30             | 45.0           | 48.5           | 88.0           | 24-25-26                     | 8              | 60              | 24.5           | 21             | M5              | 6    | 310-340-380                 |
|               | 36             |                | 49.0           |                | 28-30-31                     |                | 72              | 27.0           | 23             | M6              | 12   | 460-590-630                 |
|               | 44             |                | 49.0           |                | 32-35-36                     |                | 80              | 29.0           | 25             | M6              | 12   | 630-780-860                 |
|               | 50             |                | 49.0           |                | 38-40-42                     |                | 90              | 31.0           | 27             | M6              | 12   | 940-1100-1300               |
| 118           | 50             | 55.0           | 59.0           | 116.5          | 38-40-42                     | 10             | 90              | 31.0           | 27             | M6              | 12   | 940-1100-1300               |
|               | 55             |                | 59.0           |                | 42-45-48                     |                | 100             | 34.0           | 30             | M6              | 12   | 1200-1500-1900              |
|               | 75             |                | 60.5           |                | 50-55-60-65                  |                | 138             | 37.5           | 32             | M8              | 30   | 2000-2500-3200-3900         |
| 142           | 68             | 60.0           | 64.0           | 140.5          | 50-55-60                     | 11             | 115             | 34.0           | 30             | M6              | 12   | 2000-2500-3100              |
|               | 90             | 63.5           | 69.0           |                | 65-70-75                     |                | 155             | 44.5           | 39             | M8              | 30   | 4700-6000-7200              |
| 168           | 68             | 75.0           | 79.0           | 166.5          | 50-55-60                     | 12             | 110             | 34.0           | 30             | M6              | 12   | 2000-2500-3100              |
|               | 90             | 75.0           | 80.5           |                | 65-70-75                     |                | 155             | 44.5           | 39             | M8              | 30   | 4700-6000-7200              |
|               | 115            | 80.5           | 87.0           |                | 80-85-90                     |                | 188             | 56.5           | 50             | M10             | 59   | 8500-10000-12000            |
| 200           | 68             | 90.0           | 94.0           | 198.5          | 50-55-60                     | 14             | 110             | 34.0           | 30             | M6              | 12   | 2000-2500-3100              |
|               | 90             |                | 95.5           |                | 65-70-75                     |                | 155             | 44.5           | 39             | M8              | 30   | 4700-6000-7200              |
|               | 115            |                | 96.5           |                | 80-85-90                     |                | 188             | 56.5           | 50             | M10             | 59   | 8500-10000-12000            |
|               | 130            |                | 97.0           |                | 90-95-100-110                |                | 215             | 59.0           | 52             | M10             | 59   | 13700-15800-18200-23500     |
|               | 100            |                | 125.0          |                | 130.5                        |                | 70-75-80        | 170            | 49.5           | 44              | M8   | 30                          |
| 238           | 130            | 125.0          | 132.0          | 238.0          | 90-95-100-110                | 16             | 215             | 59.0           | 52             | M10             | 59   | 13700-15800-18200-23500     |
|               | 155            | 125.0          | 132.5          |                | 105-110-115-120              |                | 265             | 71.5           | 64             | M12             | 100  | 20000-23000-26000-29500     |
|               | 165            | 129.0          | 139.0          |                | 115-120-125-135              |                | 290             | 81.0           | 71             | M16             | 250  | 36000-39000-44000-51200     |
|               | 130            | 160.0          | 167.0          |                | 90-95-100-110                |                | 215             | 59.0           | 52             | M10             | 59   | 13700-15800-18200-23500     |
| 295           | 160            | 160.0          | 167.5          | 295.0          | 110-115-120-125              | 22             | 265             | 71.5           | 64             | M12             | 100  | 22500-25500-28600-33000     |
|               | 175            |                | 170.0          |                | 125-130-135-140              |                | 300             | 81.0           | 71             | M16             | 250  | 40000-44000-49000-52500     |
|               | 185            |                | 170.0          |                | 130-140-145-150              |                | 330             | 96.0           | 86             | M16             | 250  | 50000-55000-60000-65000     |
|               | 195            |                | 170.0          |                | 140-150-155-165              |                | 350             | 96.0           | 86             | M16             | 250  | 66000-76000-82000-96000     |
|               | 170            |                | 200.0          |                | 210.0                        |                | 120-125-130-135 | 290            | 81.0           | 71              | M16  | 250                         |
| 345           | 195            | 200.0          | 210.0          | 345.0          | 140-150-155-165              | 26             | 350             | 96.0           | 86             | M16             | 250  | 66000-76000-82000-96000     |
|               | 220            |                | 210.0          |                | 160-165-170-180              |                | 370             | 114.0          | 104            | M16             | 250  | 95000-102000-110000-128000  |
|               | 250            |                | 212.5          |                | 180-190-200-210              |                | 405             | 120.5          | 108            | M16             | 250  | 160000-180000-200000-212000 |
|               | 195            |                | 220.0          |                | 140-150-155-165              |                | 350             | 96.0           | 86             | M16             | 250  | 66000-76000-82000-96000     |
|               | 220            |                | 210.0          |                | 160-165-170-180              |                | 370             | 114.0          | 104            | M16             | 250  | 95000-102000-110000-128000  |
| 420           | 260            | 210.0          | 222.5          | 420.0          | 180-190-200-220              | 32             | 430             | 132.5          | 120            | M20             | 490  | 165000-185000-204000-214000 |
|               | 220            |                | 250.0          |                | 160-165-170-180              |                | 370             | 114.0          | 104            | M16             | 250  | 95000-102000-110000-128000  |
|               | 260            |                | 252.5          |                | 180-190-200-220              |                | 430             | 132.5          | 120            | M16             | 250  | 165000-185000-204000-214000 |
|               | 300            |                | 260.0          |                | 230-240-250-260              |                | 485             | 142.0          | 122            | M20             | 490  | 274000-296000-316000-364000 |



### Mounting instruction:

Hub with outside clamping set. Backlash-free torque transmission. Radial disassembly of the disc pack after loosening and axial shifting of the clamping device possible.

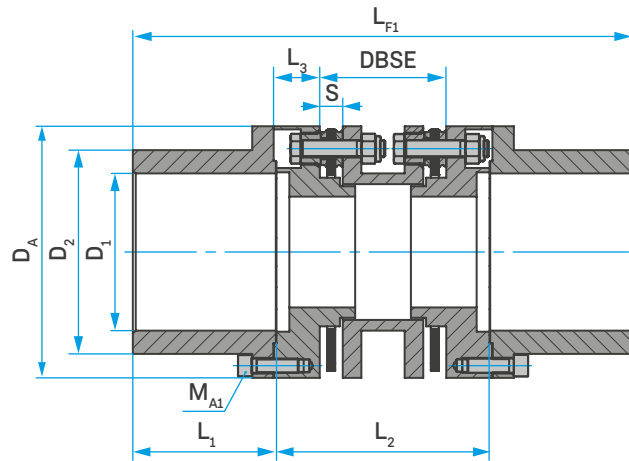
FD-C SZ: with outside clamping set

| Coupling size | FD-C                   |                         |           |                            |                         |                         | FD-CL                  |                         |           |                            |                         |                         |
|---------------|------------------------|-------------------------|-----------|----------------------------|-------------------------|-------------------------|------------------------|-------------------------|-----------|----------------------------|-------------------------|-------------------------|
|               | M <sub>A1</sub><br>[-] | M <sub>A1</sub><br>[Nm] | S<br>[mm] | DBSE <sup>1)</sup><br>[mm] | L <sub>F1</sub><br>[mm] | L <sub>F2</sub><br>[mm] | M <sub>A1</sub><br>[-] | M <sub>A1</sub><br>[Nm] | S<br>[mm] | DBSE <sup>1)</sup><br>[mm] | L <sub>F1</sub><br>[mm] | L <sub>F2</sub><br>[mm] |
| 89            | M6                     | 14.0                    | 8.8       | 37.6                       | 98.8                    | 127.6                   | M6                     | 15.0                    | 9.0       | -                          | 99.0                    | 128.0                   |
|               |                        |                         |           | 70.0                       |                         | 160.0                   |                        |                         |           |                            |                         | 160.4                   |
|               |                        |                         |           | 80.0                       |                         | 170.0                   |                        |                         |           |                            |                         | 170.4                   |
|               |                        |                         |           | 100.0                      |                         | 190.0                   |                        |                         |           |                            |                         | 190.4                   |
|               |                        |                         |           | 140.0                      |                         | 230.0                   |                        |                         |           |                            |                         | 230.4                   |
|               |                        |                         |           | 46.3                       |                         | 156.3                   |                        |                         |           |                            |                         | 157.1                   |
| 118           | M8                     | 31.0                    | 10.4      | 100.0                      | 100.4                   | 210.0                   | M8                     | 35.0                    | 10.8      | -                          | 100.8                   | 210.4                   |
|               |                        |                         |           | 140.0                      |                         | 250.0                   |                        |                         |           |                            |                         | 250.4                   |
|               |                        |                         |           | 180.0                      |                         | 290.0                   |                        |                         |           |                            |                         | 290.4                   |
|               |                        |                         |           | 55.0                       |                         | 175.0                   |                        |                         |           |                            |                         | 175.4                   |
|               |                        |                         |           | 100.0                      |                         | 220.0                   |                        |                         |           |                            |                         | 220.4                   |
|               |                        |                         |           | 140.0                      |                         | 260.0                   |                        |                         |           |                            |                         | 260.4                   |
| 142           | M10                    | 62.0                    | 12.0      | 180.0                      | 132.0                   | 300.0                   | M10                    | 73.0                    | 12.2      | -                          | 132.2                   | 300.4                   |
|               |                        |                         |           | 55.0                       |                         | 182.0 <sup>3)</sup>     |                        |                         |           |                            |                         | 182.4                   |
|               |                        |                         |           | 100.0                      | 227.0 <sup>3)</sup>     | 227.4 <sup>3)</sup>     |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 140.0                      | 267.0 <sup>3)</sup>     | 267.4 <sup>3)</sup>     |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 180.0                      | 307.0 <sup>3)</sup>     | 307.4 <sup>3)</sup>     |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 62.6                       | 216.6                   | 216.6                   |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 100.0                      | 250.0                   | 250.0                   |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 140.0                      | 290.0                   | 290.0                   |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 180.0                      | 320.0                   | 320.0                   |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 100.0                      | 261.0 <sup>4)</sup>     | 261.0 <sup>4)</sup>     |                        |                         |           |                            |                         |                         |
| 168           | M12                    | 110.0                   | 13.0      | 140.0                      | 163.0                   | 341.0 <sup>4)</sup>     | M12                    | 130.0                   | 13.0      | -                          | 163.0                   | 341.0 <sup>4)</sup>     |
|               |                        |                         |           | 100.0                      |                         | 301.0 <sup>4)</sup>     |                        |                         |           |                            |                         | 301.0 <sup>4)</sup>     |
|               |                        |                         |           | 140.0                      | 341.0 <sup>4)</sup>     | 341.0 <sup>4)</sup>     |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 100.0                      | 174.0                   | 174.0                   |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 140.0                      | 301.0 <sup>4)</sup>     | 301.0 <sup>4)</sup>     |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 180.0                      | 341.0 <sup>4)</sup>     | 341.0 <sup>4)</sup>     |                        |                         |           |                            |                         |                         |
| 200           | M14                    | 180.0                   | 15.0      | 140.0                      | 195.0                   | 320.0                   | M14                    | 210.0                   | 15.2      | -                          | 195.2                   | 320.4                   |
|               |                        |                         |           | 180.0                      |                         | 360.0                   |                        |                         |           |                            |                         | 360.4                   |
| 238           | M16                    | 280.0                   | 20.8      | 140.0                      | 270.8                   | 390.0                   | M16                    | 320.0                   | 22.0      | -                          | 272.0                   | 392.4                   |
|               |                        |                         |           | 180.0                      |                         | 430.0                   |                        |                         |           |                            |                         | 432.4                   |
|               |                        |                         |           | 250.0                      | 500.0                   | 502.4                   |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 140.0                      | 398.0 <sup>5)</sup>     | 400.4 <sup>5)</sup>     |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 180.0                      | 438.0 <sup>5)</sup>     | 440.4 <sup>5)</sup>     |                        |                         |           |                            |                         |                         |
|               |                        |                         |           | 250.0                      | 508.0 <sup>5)</sup>     | 510.4 <sup>5)</sup>     |                        |                         |           |                            |                         |                         |
| 295           | M20                    | 540.0                   | 28.0      | 200.0                      | 348                     | 520.0                   | M20                    | 620.0                   | 28.2      | -                          | 348.2                   | 520.4                   |
|               |                        |                         |           | 250.0                      |                         | 570.0                   |                        |                         |           |                            |                         | 570.4                   |
| 345           | M24                    | 950.0                   | 32.2      | 224.0                      | 432.2                   | 624.0                   | M24                    | 1000.0                  | 32.4      | -                          | 432.4                   | 624.4                   |
|               |                        |                         |           | 250.0                      |                         | 650.0                   |                        |                         |           |                            |                         | 650.4                   |
|               |                        |                         |           | 300.0                      |                         | 700.0                   |                        |                         |           |                            |                         | 700.4                   |
| 420           | M10                    | 60.0                    | 34.0      | 280.0                      | 454.0                   | 700.0                   | -                      | -                       | -         | -                          | -                       | -                       |
| 510           | M12                    | 105.0                   | 46.8      | 350.0                      | 526.8                   | 830.0                   | -                      | -                       | -         | -                          | -                       | -                       |

1) DBSE available up to 3 000 mm upon request 2) Fitting tolerances for shaft and hub: Ø 24 - Ø 30 = H6-j6 / Ø 30 - Ø 50 = H6-h6 / Ø 50 - Ø 80 = H6-g6 / Ø 80 - Ø 260 = H7-g6 3) L<sub>6</sub>= 3.5 - 4) L<sub>6</sub>=5.5 - 5) L<sub>6</sub>=4

# FLEXDUR

## Type F



FD-C F: API 610 + 671




### Coupling details

| Coupling size | $L_1$<br>[mm] | $D_A$<br>[mm] | $D_{1min}$<br>pre-drilled<br>[mm] | $D_{1max}$<br>[mm] | $D_2$<br>[mm] | $L_3$<br>[mm] |
|---------------|---------------|---------------|-----------------------------------|--------------------|---------------|---------------|
| 89            | 50            | 94            | 14                                | 50                 | 69            | 20            |
| 118           | 70            | 121           | 14                                | 70                 | 91            | 23            |
| 142           | 80            | 148           | 19                                | 80                 | 112           | 26            |
| 168           | 100           | 176           | 24                                | 105                | 135           | 32.5          |
| 200           | 120           | 202           | 29                                | 120                | 160           | 37            |
| 238           | 140           | 250           | 39                                | 140                | 192           | 43.5          |
| 295           | 180           | 302           | 59                                | 180                | 240           | 50.5          |
| 345           | 200           | 352           | 79                                | 220                | 285           | 64.5          |

 **Mounting instruction:**

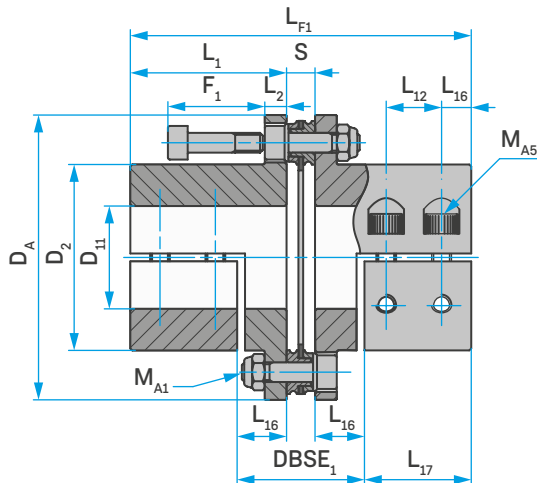
Special types according to API 610/671 specification.  
The complete coupling unit can be radially dismantled without any displacement of the shafts, and without releasing the screws of the disc packs. Catch device to secure the spacer coupling in case of disc breakage.

| Coupling size | FD-C            |      |           |                            |                                      |                         | FD-CL           |      |           |                            |                                      |                         |
|---------------|-----------------|------|-----------|----------------------------|--------------------------------------|-------------------------|-----------------|------|-----------|----------------------------|--------------------------------------|-------------------------|
|               | M <sub>A1</sub> |      | S<br>[mm] | DBSE <sup>1)</sup><br>[mm] | L <sub>2</sub> <sup>1)</sup><br>[mm] | L <sub>F1</sub><br>[mm] | M <sub>A1</sub> |      | S<br>[mm] | DBSE <sup>1)</sup><br>[mm] | L <sub>2</sub> <sup>1)</sup><br>[mm] | L <sub>F1</sub><br>[mm] |
|               | [-]             | [Nm] |           |                            |                                      |                         | [-]             | [mm] |           |                            |                                      |                         |
| 89            | M6              | 17   | 8.8       | 50                         | 88                                   | 188                     | M6              | 17   | 9.0       | 50.4                       | 88.4                                 | 188.4                   |
|               |                 |      |           | 62                         | 100                                  | 200                     |                 |      |           | 62.4                       | 100.4                                | 200.4                   |
|               |                 |      |           | 102                        | 140                                  | 240                     |                 |      |           | 102.4                      | 140.4                                | 240.4                   |
| 118           | M8              | 41   | 10.4      | 61                         | 105                                  | 245                     | M8              | 41   | 10.8      | 61.8                       | 105.8                                | 245.8                   |
|               |                 |      |           | 96                         | 140                                  | 280                     |                 |      |           | 96.8                       | 140.8                                | 280.8                   |
|               |                 |      |           | 136                        | 180                                  | 320                     |                 |      |           | 136.8                      | 180.8                                | 320.8                   |
| 142           | M8              | 41   | 12        | 63                         | 112                                  | 272                     | M8              | 41   | 12.2      | 63.4                       | 112.4                                | 272.4                   |
|               |                 |      |           | 91                         | 140                                  | 300                     |                 |      |           | 91.4                       | 140.4                                | 300.4                   |
|               |                 |      |           | 131                        | 180                                  | 340                     |                 |      |           | 131.4                      | 180.4                                | 340.4                   |
| 168           | M10             | 83   | 13        | 74                         | 135                                  | 335                     | M10             | 83   | 13.0      | 74.0                       | 135.0                                | 335.0                   |
|               |                 |      |           | 119                        | 180                                  | 380                     |                 |      |           | 119.0                      | 180.0                                | 380.0                   |
|               |                 |      |           | 189                        | 250                                  | 450                     |                 |      |           | 189.0                      | 250.0                                | 450.0                   |
| 200           | M12             | 145  | 15        | 90                         | 160                                  | 400                     | M12             | 145  | 15.2      | 90.4                       | 160.4                                | 400.4                   |
|               |                 |      |           | 110                        | 180                                  | 420                     |                 |      |           | 110.4                      | 180.4                                | 420.4                   |
|               |                 |      |           | 180                        | 250                                  | 490                     |                 |      |           | 180.4                      | 250.4                                | 490.4                   |
| 238           | M16             | 355  | 20.8      | 105.4                      | 188                                  | 468                     | M16             | 355  | 22.0      | 107.8                      | 190.4                                | 470.4                   |
|               |                 |      |           | 167.4                      | 250                                  | 530                     |                 |      |           | 169.8                      | 252.4                                | 532.4                   |
|               |                 |      |           | 217.4                      | 300                                  | 580                     |                 |      |           | 219.4                      | 302.4                                | 582.0                   |
| 295           | M16             | 355  | 28        | 138                        | 235                                  | 595                     | M16             | 355  | 28.2      | 138.4                      | 235.4                                | 595.4                   |
|               |                 |      |           | 153                        | 250                                  | 610                     |                 |      |           | 153.4                      | 250.4                                | 610.4                   |
|               |                 |      |           | 203                        | 300                                  | 660                     |                 |      |           | 203.4                      | 300.4                                | 660.4                   |
| 345           | M20             | 690  | 32.2      | 155                        | 278                                  | 678                     | M20             | 690  | 32.4      | 155.4                      | 278.4                                | 678.4                   |
|               |                 |      |           | 177                        | 300                                  | 700                     |                 |      |           | 177.4                      | 300.4                                | 700.4                   |
|               |                 |      |           | 227                        | 350                                  | 750                     |                 |      |           | 227.4                      | 350.4                                | 750.4                   |

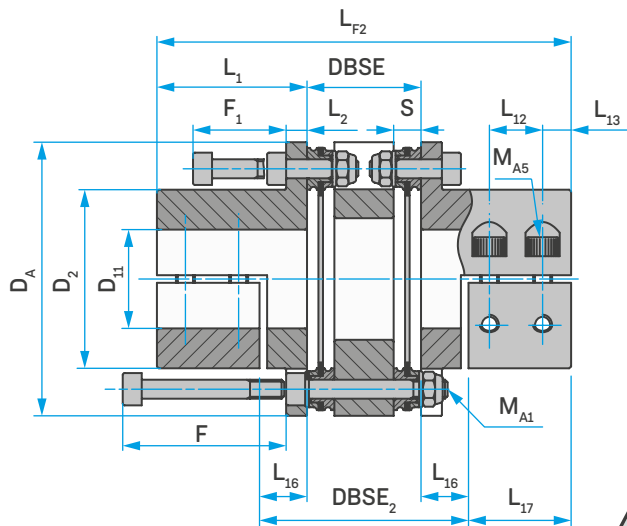
 1) DBSE available up to 3000 mm upon request

# FLEXDUR

Type NY + SY



FD-C NY: with clamping hub, split



FD-C SY DBSE<sub>min</sub>: with clamping hub, split, short type



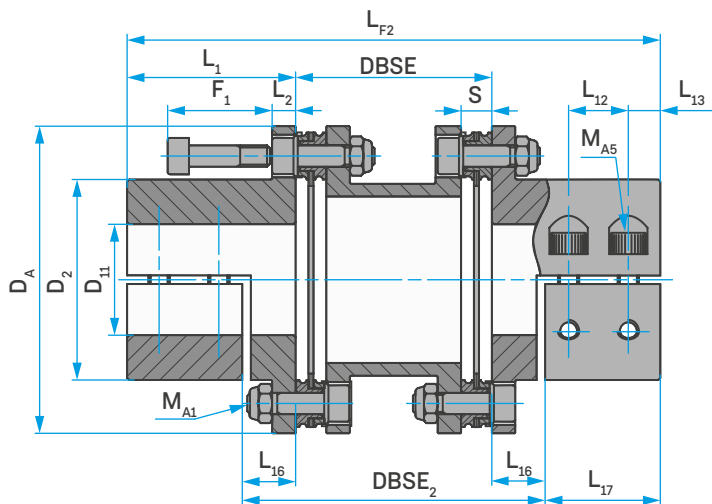
## Coupling details

| Coupling size | L <sub>1</sub> | D <sub>A</sub> | D <sub>2</sub> | F    | F <sub>1</sub> | L <sub>2</sub> | M <sub>A2</sub> |       | L <sub>4</sub> | L <sub>5</sub> | L <sub>3</sub> | L <sub>6</sub> |
|---------------|----------------|----------------|----------------|------|----------------|----------------|-----------------|-------|----------------|----------------|----------------|----------------|
|               | [mm]           | [mm]           | [mm]           | [mm] | [mm]           | [mm]           | [-]             | [Nm]  | [mm]           | [mm]           | [mm]           | [mm]           |
| 72            | 39.5           | 70.5           | 47.0           | 43.0 | 24.0           | 5.0            | M6              | 17.0  | 7.5            | 12.5           | 13.0           | 27.0           |
|               |                |                |                |      |                |                | M5              | 9.7   |                |                |                |                |
| 89            | 45.0           | 88.0           | 62.5           | 53.0 | 32.0           | 8.0            | M8              | 41.0  | 8.0            | 17.5           | 14.0           | 27.5           |
|               |                |                |                |      |                |                | M6              | 17.0  |                |                |                |                |
| 118           | 55.0           | 116.5          | 82.0           | 67.0 | 40.0           | 10.0           | M10             | 83.0  | 10.0           | 21.0           | 17.0           | 34.0           |
|               |                |                |                |      |                |                | M8              | 41.0  |                |                |                |                |
| 142           | 60.0           | 140.5          | 98.0           | 82.0 | 47.0           | 11.0           | M10             | 83.0  | 10.0           | 25.0           | 18.5           | 35.0           |
| 168           | 75.0           | 166.5          | 118.0          | 94.0 | 55.0           | 12.0           | M12             | 145.0 | 13.0           | 30.0           | 23.0           | 45.0           |

Type NY - SY preferred bores [mm]/transmittable torque [Nm] of the clamping set for shaft tolerance h7 without parallel key

| Size | D <sub>1 max</sub> |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      | M <sub>A2</sub> |      |      |      |      |      |
|------|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|-----------------|------|------|------|------|------|
|      | 15                 | 16  | 18  | 19  | 20  | 22  | 24  | 25  | 28  | 30  | 32  | 35  | 38   | 40   | 42   | 45   | 48   | 50   | 55   | 60   | 65   | 70              | 75   | 80   | [-]  | [Nm] |      |
| 72   | 130                | 140 | 155 | 165 | 175 | 190 | 210 | 220 | -   | -   | -   | -   | -    | -    | -    | -    | -    | -    | -    | -    | -    | -               | -    | -    | M6   | 17.0 |      |
| 89   | -                  | -   | -   | -   | 320 | 350 | 385 | 400 | 450 | 480 | 515 | 560 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -               | -    | -    | M5   | 9.7  |      |
|      | -                  | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 335  | 350  | -    | -    | -    | -    | -    | -    | -    | -               | -    | -    | M8   | 41.0 |      |
| 118  | -                  | -   | -   | -   | -   | -   | -   | -   | -   | 780 | 835 | 910 | 990  | 1040 | 1095 | 1175 | -    | -    | -    | -    | -    | -               | -    | -    | M6   | 17.0 |      |
|      | -                  | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -    | -    | -    | 770  | 805  | 885  | -    | -    | -    | -               | -    | -    | M10  | 83.0 |      |
| 142  | -                  | -   | -   | -   | -   | -   | -   | -   | -   | 780 | 835 | 910 | 990  | 1040 | 1095 | 1175 | 1250 | 1305 | 1435 | 1565 | 1700 | -               | -    | -    | M8   | 41.0 |      |
| 168  | -                  | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | 1350 | 1470 | 1545 | 1625 | 1740 | 1855 | 1935 | 2125 | 2320 | 2515            | 2700 | 2900 | 3095 | M10  | 83.0 |
|      |                    |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |                 |      |      |      | M12  | 145  |

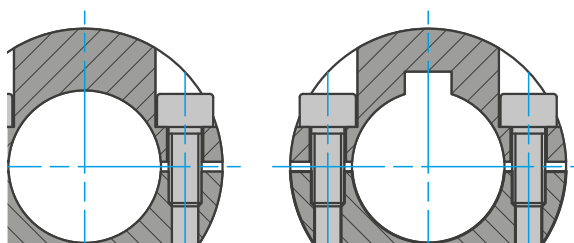
M<sub>A2</sub> [Nm] = clamping screw tightening torque



FD-C SY: with clamping hub, split

Standard

with keyway



**Mounting instruction:**

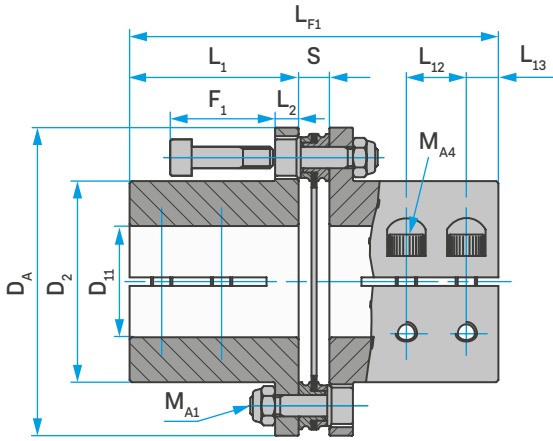
Clamping hub, split. Bore with keyway available. Backlash-free torque transmission. Disc pack radial dismounting without hub displacement. The complete coupling can be radially dismounted without any displacement of the shafts, and without releasing the screws of the disc pack.

| Coupling size | FD-C            |      |      |                    |                   |                 |                   |                 | FD-CL           |      |      |                    |                   |                 |                   |                 |
|---------------|-----------------|------|------|--------------------|-------------------|-----------------|-------------------|-----------------|-----------------|------|------|--------------------|-------------------|-----------------|-------------------|-----------------|
|               | M <sub>A1</sub> |      | S    | DBSE <sup>1)</sup> | DBSE <sub>1</sub> | L <sub>F1</sub> | DBSE <sub>2</sub> | L <sub>F2</sub> | M <sub>A1</sub> |      | S    | DBSE <sup>1)</sup> | DBSE <sub>1</sub> | L <sub>F1</sub> | DBSE <sub>2</sub> | L <sub>F2</sub> |
|               | [-]             | [Nm] | [mm] | [mm]               | [mm]              | [mm]            | [mm]              | [mm]            | [-]             | [Nm] | [mm] | [mm]               | [mm]              | [mm]            | [mm]              | [mm]            |
| 72            | M5              | 8    | 7.5  | 31.2               | 32.5              | 86.5            | 56.2              | 110.2           | M5              | 9    | 7.6  | 31.4               | 32.6              | 86.6            | 56.4              | 110.4           |
|               |                 |      |      | 60.0               |                   |                 | 85.0              | 139.0           |                 |      |      | 60.2               |                   |                 | 85.2              | 139.2           |
|               |                 |      |      | 100.0              |                   |                 | 125.0             | 179.0           |                 |      |      | 100.2              |                   |                 | 125.2             | 179.2           |
|               |                 |      |      | 140.0              |                   |                 | 165.0             | 219.0           |                 |      |      | 140.2              |                   |                 | 165.2             | 219.2           |
| 89            | M6              | 14   | 8.8  | 37.6               | 43.8              | 98.8            | 72.6              | 127.6           | M6              | 15   | 9.0  | 38.0               | 44.0              | 99.0            | 73.0              | 128.0           |
|               |                 |      |      | 70.0               |                   |                 | 105.0             | 160.0           |                 |      |      | 70.4               |                   |                 | 105.4             | 160.4           |
|               |                 |      |      | 80.0               |                   |                 | 115.0             | 170.0           |                 |      |      | 80.4               |                   |                 | 115.4             | 170.4           |
|               |                 |      |      | 100.0              |                   |                 | 135.0             | 190.0           |                 |      |      | 100.4              |                   |                 | 135.4             | 190.4           |
|               |                 |      |      | 140.0              |                   |                 | 175.0             | 230.0           |                 |      |      | 140.4              |                   |                 | 175.4             | 230.4           |
| 118           | M8              | 31   | 10.4 | 46.3               | 52.4              | 120.4           | 88.3              | 156.3           | M8              | 35   | 10.8 | 47.1               | 52.8              | 120.8           | 89.1              | 157.1           |
|               |                 |      |      | 100.0              |                   |                 | 142.0             | 210.0           |                 |      |      | 100.8              |                   |                 | 142.8             | 210.8           |
|               |                 |      |      | 140.0              |                   |                 | 182.0             | 250.0           |                 |      |      | 140.8              |                   |                 | 182.8             | 250.8           |
|               |                 |      |      | 180.0              |                   |                 | 222.0             | 290.0           |                 |      |      | 180.8              |                   |                 | 222.8             | 290.8           |
|               |                 |      |      | 55.0               |                   |                 | 105.0             | 175.0           |                 |      |      | 55.4               |                   |                 | 105.4             | 175.4           |
| 142           | M10             | 62   | 12.0 | 100.0              | 62.0              | 132.0           | 150.0             | 220.0           | M10             | 73   | 12.2 | 100.4              | 62.2              | 132.2           | 150.4             | 220.4           |
|               |                 |      |      | 140.0              |                   |                 | 190.0             | 260.0           |                 |      |      | 140.4              |                   |                 | 190.4             | 260.4           |
|               |                 |      |      | 180.0              |                   |                 | 230.0             | 300.0           |                 |      |      | 180.4              |                   |                 | 230.4             | 300.4           |
|               |                 |      |      | 62.6               |                   |                 | 122.6             | 212.6           |                 |      |      | 62.6               |                   |                 | -                 | 212.6           |
|               |                 |      |      | 100.0              |                   |                 | 160.0             | 250.0           |                 |      |      | 100.0              |                   |                 | 160.0             | 250.0           |
| 168           | M12             | 110  | 13.0 | 140.0              | 73.0              | 163.0           | 200.0             | 290.0           | M12             | 130  | 13.0 | 140.0              | 73.0              | 163.0           | 200.0             | 290.0           |
|               |                 |      |      | 180.0              |                   |                 | 240.0             | 330.0           |                 |      |      | 180.0              |                   |                 | 240.0             | 330.0           |

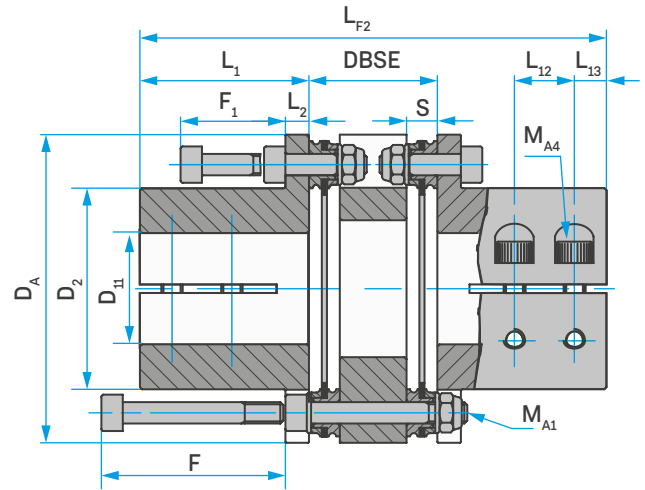
**i** 1) DBSE available up to 3000 mm upon request

# FLEXDUR

## Type NK + SK



FD-C NK: with clamping hub, slotted



FD-C SK DBSE<sub>min</sub>: with clamping hub, slotted, short type

### Coupling details

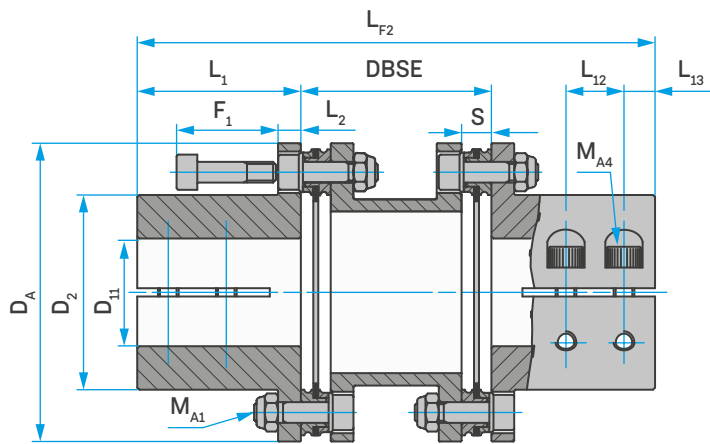
| Coupling size | L <sub>1</sub><br>[mm] | D <sub>A</sub><br>[mm] | D <sub>2</sub><br>[mm] | F<br>[mm] | F <sub>1</sub><br>[mm] | L <sub>2</sub><br>[mm] | M <sub>A2</sub> |      | L <sub>3</sub><br>[mm] | L <sub>4</sub><br>[mm] |
|---------------|------------------------|------------------------|------------------------|-----------|------------------------|------------------------|-----------------|------|------------------------|------------------------|
|               |                        |                        |                        |           |                        |                        | [-]             | [Nm] |                        |                        |
| 40            | 17.0                   | 40.0                   | 26.0                   | 25.0      | 15.0                   | 4.0                    | M4              | 5.2  | -                      | 4.5                    |
|               |                        |                        |                        |           |                        |                        | M3              | 2.6  |                        |                        |
| 53            | 24.5                   | 53.0                   | 32.5                   | 43.0      | 24.0                   | 5.0                    | M4              | 5.2  | 9.0                    | 5.0                    |
| 72            | 39.5                   | 70.5                   | 47.0                   | 43.0      | 24.0                   | 5.0                    | M6              | 17.0 | 13.0                   | 7.5                    |
| 89            | 45.0                   | 88.0                   | 62.5                   | 53.0      | 32.0                   | 8.0                    | M8              | 41.0 | 16.0                   | 9.0                    |
| 118           | 55.0                   | 116.5                  | 82.0                   | 67.0      | 40.0                   | 10.0                   | M10             | 83.0 | 19.5                   | 10.5                   |
| 142           | 60.0                   | 140.5                  | 98.0                   | 82.0      | 47.0                   | 11.0                   | M10             | 83.0 | 20.0                   | 11.5                   |

Type NK - SK preferred bores [mm]/transmittable torque [Nm] of the clamping set for shaft tolerance h7 without parallel key

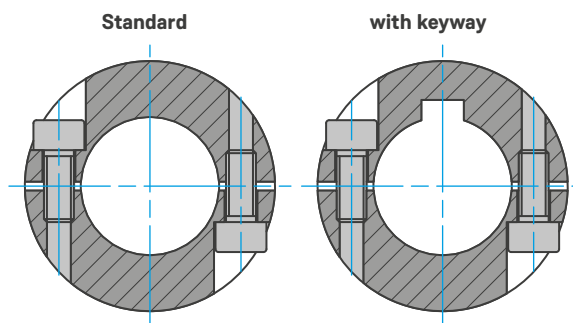
| Size | D <sub>1</sub><br>max | D <sub>1</sub> [mm] |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     |     | M <sub>A2</sub> |     |      |      |     |      |      |
|------|-----------------------|---------------------|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|-----|------|------|-----|------|------|
|      |                       | 8                   | 10 | 11 | 12 | 14 | 15 | 16 | 18  | 19  | 20  | 22  | 24  | 25  | 28  | 30  | 32  | 35  | 38  | 40  | 42  | 45              | 48  | 50   | 55   | 60  | [-]  | [Nm] |
| 40   | 9                     | 12                  | 12 | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -               | -   | -    | -    | -   | M4   | 5.2  |
|      |                       | -                   | -  | -  | 12 | 15 | -  | -  | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -               | -   | -    | -    | -   | M3   | 2.6  |
| 53   | -                     | -                   | -  | 50 | 55 | 60 | 70 | 82 | 95  | 100 | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -   | -               | -   | -    | -    | M4  | 5.2  |      |
| 72   | -                     | -                   | -  | -  | -  | 65 | 75 | 90 | 100 | 115 | 140 | 170 | 180 | -   | -   | -   | -   | -   | -   | -   | -   | -               | -   | -    | -    | M6  | 17.0 |      |
| 89   | -                     | -                   | -  | -  | -  | -  | -  | -  | -   | 120 | 150 | 180 | 210 | 250 | 300 | 350 | 360 | -   | -   | -   | -   | -               | -   | -    | -    | M8  | 41.0 |      |
| 118  | -                     | -                   | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | 360 | 420 | 490 | 550 | 650 | 720 | 790 | -               | -   | -    | -    | M10 | 83.0 |      |
| 142  | -                     | -                   | -  | -  | -  | -  | -  | -  | -   | -   | -   | -   | -   | -   | 340 | 380 | 420 | 470 | 500 | 600 | 650 | 750             | 900 | 1200 | 1450 | M10 | 83.0 |      |

M<sub>A2</sub> [Nm] = clamping screw tightening torque





FD-C SK: with clamping hub, slotted



**Mounting instruction:**

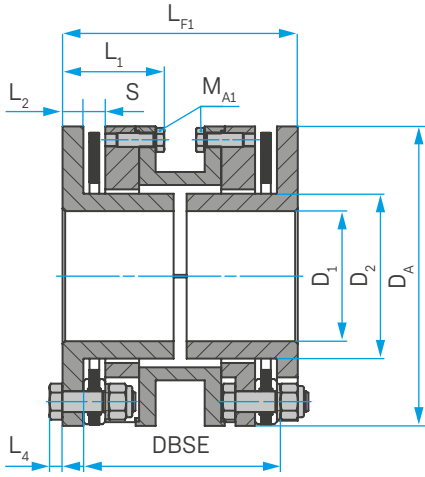
- Clamping hub, slotted. Bore with keyway available.
- Backlash-free torque transmission.
- Disc pack radial dismounting without hub displacement.

| Coupling size | FD-C            |      |      |                    |                 |                 | FD-CL           |      |      |                    |                 |                 |
|---------------|-----------------|------|------|--------------------|-----------------|-----------------|-----------------|------|------|--------------------|-----------------|-----------------|
|               | M <sub>A1</sub> |      | S    | DBSE <sup>1)</sup> | L <sub>F1</sub> | L <sub>F2</sub> | M <sub>A1</sub> |      | S    | DBSE <sup>1)</sup> | L <sub>F1</sub> | L <sub>F2</sub> |
|               | [-]             | [Nm] | [mm] | [mm]               | [mm]            | [mm]            | [-]             | [Nm] | [mm] | [mm]               | [mm]            | [mm]            |
| 40            | M3              | 1.5  | 2.9  | 16.0               | 36.9            | 50.0            | -               | -    | -    | -                  | -               | -               |
|               |                 |      |      | 26.0               |                 | 60.0            |                 |      |      |                    |                 |                 |
| 53            | M5              | 7.0  | 6.9  | 30.0               | 55.9            | 79.0            | -               | -    | -    | -                  | -               | -               |
|               |                 |      |      | 43.0               |                 | 92.0            |                 |      |      |                    |                 |                 |
| 72            | M5              | 8.0  | 7.5  | 31.2               | 86.5            | 110.2           | M5              | 9    | 7.6  | 31.4               | 86.6            | 110.4           |
|               |                 |      |      | 60.0               |                 | 139.0           |                 |      |      | 60.2               |                 | 139.2           |
|               |                 |      |      | 100.0              |                 | 179.0           |                 |      |      | 100.2              |                 | 179.2           |
|               |                 |      |      | 140.0              |                 | 219.0           |                 |      |      | 140.2              |                 | 219.2           |
| 89            | M6              | 14.0 | 8.8  | 37.6               | 98.8            | 127.6           | M6              | 15   | 9.0  | 38.0               | 99.0            | 128.0           |
|               |                 |      |      | 70.0               |                 | 160.0           |                 |      |      | 70.4               |                 | 160.4           |
|               |                 |      |      | 80.0               |                 | 170.0           |                 |      |      | 80.4               |                 | 170.4           |
|               |                 |      |      | 100.0              |                 | 190.0           |                 |      |      | 100.4              |                 | 190.4           |
| 118           | M8              | 31.0 | 10.4 | 46.3               | 120.4           | 156.3           | M8              | 35   | 10.8 | 47.1               | 120.8           | 157.1           |
|               |                 |      |      | 100.0              |                 | 210.0           |                 |      |      | 100.8              |                 | 210.8           |
|               |                 |      |      | 140.0              |                 | 250.0           |                 |      |      | 140.8              |                 | 250.8           |
|               |                 |      |      | 180.0              |                 | 290.0           |                 |      |      | 180.8              |                 | 290.8           |
| 142           | M10             | 62.0 | 12.0 | 55.0               | 132.0           | 175.0           | M10             | 73   | 12.2 | 55.4               | 132.2           | 175.4           |
|               |                 |      |      | 100.0              |                 | 220.0           |                 |      |      | 100.4              |                 | 220.4           |
|               |                 |      |      | 140.0              |                 | 260.0           |                 |      |      | 140.4              |                 | 260.4           |
|               |                 |      |      | 180.0              |                 | 300.0           |                 |      |      | 180.4              |                 | 300.4           |

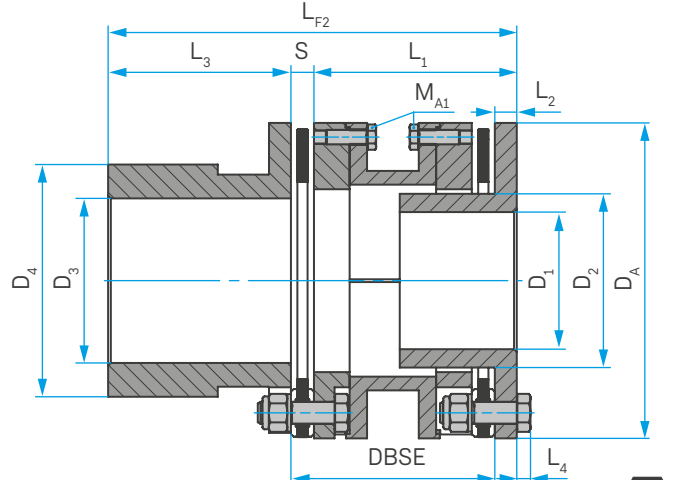
<sup>1)</sup> DBSE available up to 3 000 mm upon request

# FLEXDUR

## Type SP-CA + SP-CB



**FD-C SP-CA:** Compact, short type, split spacer



**FD-C SP-CB:** Compact, split spacer



### Coupling details

| Coupling size | L <sub>1</sub><br>[mm] | L <sub>3</sub><br>[mm] | D <sub>A</sub><br>[mm] | D <sub>1max</sub><br>[mm] | D <sub>3max</sub><br>[mm] | D <sub>2</sub><br>[mm] | D <sub>4</sub><br>[mm] | L <sub>2</sub><br>[mm] | L <sub>4</sub><br>[mm] |
|---------------|------------------------|------------------------|------------------------|---------------------------|---------------------------|------------------------|------------------------|------------------------|------------------------|
| 89            | 45                     | 45                     | 88                     | 35                        | 45 <sup>1)</sup>          | 48                     | 58                     | 7                      | 4                      |
| 118           | 45                     | 55                     | 116.5                  | 50                        | 60                        | 64                     | 81                     | 8                      | 5.5                    |
| 142           | 53                     | 60                     | 140.5                  | 60                        | 70                        | 77                     | 94                     | 9                      | 7                      |
| 168           | 64                     | 75                     | 166.5                  | 75 <sup>1)</sup>          | 90                        | 93                     | 115                    | 11                     | 8                      |
| 200           | 71                     | 90                     | 198.5                  | 90 <sup>1)</sup>          | 110 <sup>1)</sup>         | 114                    | 136                    | 12.5                   | 9                      |
| 238           | 82                     | 125                    | 238                    | 100                       | 120                       | 135                    | 169                    | 14.5                   | 10                     |
| 295           | 112                    | 160                    | 295                    | 130                       | 150                       | 170                    | 205                    | 19                     | 13                     |
| 345           | 128                    | 200                    | 345                    | 150 <sup>1)</sup>         | 180                       | 190                    | 254                    | 24                     | 15                     |

<sup>1)</sup> D<sub>1max</sub> - D<sub>3max</sub> with keyway according to DIN 6885/3

 **Mounting instruction:**

Compact type with split spacer.

Prebored or finish bore with keyway.

Special design enables maintenance of the coupling without moving the hubs and without disassembling the disc pack.

| Coupling size | FD-C            |      |      |      |                 |                 | FD-CL           |      |      |       |                 |                 |
|---------------|-----------------|------|------|------|-----------------|-----------------|-----------------|------|------|-------|-----------------|-----------------|
|               | M <sub>A1</sub> |      | S    | DBSE | L <sub>F1</sub> | L <sub>F2</sub> | M <sub>A1</sub> |      | S    | DBSE  | L <sub>F1</sub> | L <sub>F2</sub> |
|               | [-]             | [Nm] | [mm] | [mm] | [mm]            | [mm]            | [-]             | [Nm] | [mm] | [mm]  | [mm]            | [mm]            |
| 89            | M5              | 8    | 6.8  | 80   | 102             | 136             | M5              | 8    | 7    | 80.4  | 102.4           | 136.4           |
| 118           | M6              | 14   | 9.4  | 79   | 106             | 147.5           | M6              | 14   | 9.8  | 79.8  | 106.8           | 148.3           |
| 142           | M8              | 35   | 9.6  | 93   | 125             | 169             | M8              | 35   | 9.8  | 93.4  | 125.4           | 169.4           |
| 168           | M8              | 35   | 11.6 | 112  | 150             | 206             | M8              | 35   | 11.6 | 112   | 150             | 206             |
| 200           | M10             | 69   | 12.0 | 124  | 167             | 235.5           | M10             | 69   | 12.2 | 124.4 | 167.4           | 235.9           |
| 238           | M12             | 120  | 15.8 | 144  | 193             | 293.5           | M12             | 120  | 17   | 146.4 | 195.4           | 295.4           |
| 295           | M14             | 190  | 24.0 | 199  | 263             | 391             | M14             | 190  | 24.2 | 199.4 | 263.4           | 391.4           |
| 345           | M16             | 295  | 25.2 | 223  | 301             | 462             | M16             | 295  | 25.4 | 223.4 | 301.4           | 462.4           |

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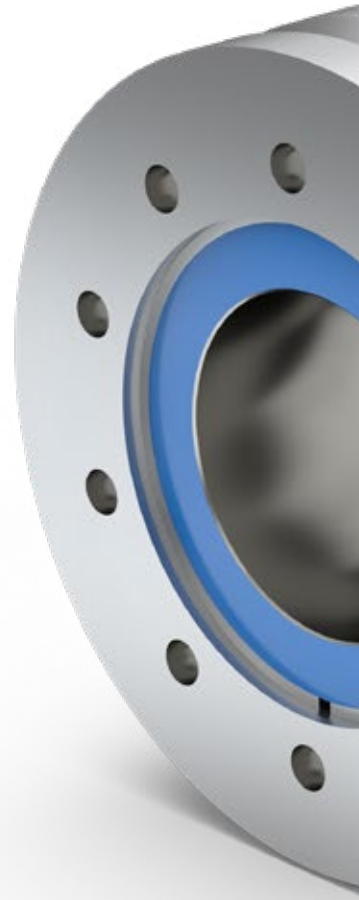
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