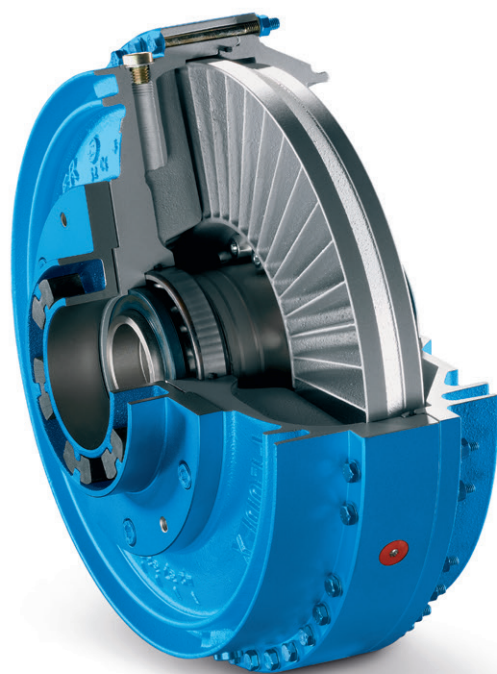


FLENDER COUPLINGS  
CATALOG **FLE 10.4**  
EDITION 2024.1 EN



FLUID COUPLINGS  
FLUDEX



# FLUID COUPLINGS



Catalog FLE 10.4 Edition 2024.1 EN

## Introduction

Torsionally Rigid Gear Couplings

ZAPEX ZW

ZAPEX ZN

Torsionally Rigid All-Steel Couplings

N-ARPEX, ARPEX

Flexible Couplings

N-EUPEX

RUPEX

BIPEX

Highly Flexible Couplings

ELPEX-B

ELPEX-S

ELPEX

Fluid Couplings

FLUDEX

Backlash-free Couplings

SIPEX

BIPEX-S

Appendix

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A

# FLE 10 CATALOG GROUP



Product catalog FLE 10.1  
FLEX-C10001-00-7600  
**Torsionally Rigid Couplings**



Product catalog FLE 10.3  
FLEX-C10003-00-7600  
**Highly Flexible Couplings**



Product catalog FLE 10.2  
FLEX-C10001-00-7600  
**Flexible Couplings**



Product catalog FLE 10.4  
FLEX-C10004-00-7600  
**Fluid Couplings**

For further coupling catalogs, see page A/6

FLENDER COUPLINGS  
CATALOG **FLE 10.5**  
EDITION EN



HIGH PERFORMANCE COUPLINGS  
ARPEX

[flender.com](http://flender.com)

**FLENDER**

Product catalog FLE 10.5  
FLEX-C10120-00-7600  
**High Performance Couplings**

FLENDER-COUPLINGS  
CATALOG **FLE 10.7**  
EDITION EN



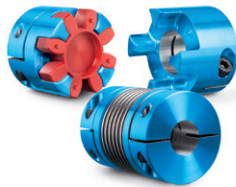
SAFETY COUPLINGS  
ARPEX

[flender.com](http://flender.com)

**FLENDER**

Product catalog FLE 10.7  
FLEX-C10122-00-7600  
**Safety couplings**

FLENDER COUPLINGS  
CATALOG **FLE 10.6**  
EDITION EN



BACKLASH-FREE COUPLINGS  
SIPEX AND BIPEX-S

[flender.com](http://flender.com)

**FLENDER**

Product catalog FLE 10.6  
FLEX-C10121-00-7600  
**Backlash-free couplings**

FLENDER CLAMPING ELEMENTS  
CATALOG **FLE 10.8**  
EDITION EN



CLAMPING ELEMENTS  
FASTEX

[flender.com](http://flender.com)

**FLENDER**

Product catalog FLE 10.8  
FLEX-C10152-7600  
**Clamping elements**

# INTRODUCTION

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The mechanical drive train comprises individual units such as motor, gear unit and driven machine. The coupling connects these component assemblies.

As well as the transmission of rotary motion and torque, other requirements may be made of the coupling.

- Compensation for shaft misalignment with low restorative forces
- Control of characteristic angular vibration frequency and damping
- Interruption or limitation of torque
- Noise insulation, electrical insulation

Couplings are frequently chosen after the machines to be connected have already been selected. Thanks to a large number of different coupling assembly options, specified marginal conditions for clearance and connection geometry can be met from the standard range. The coupling also performs secondary functions, e.g. providing a brake disk or brake drum for operating or blocking brakes, devices to record speed or the attachment of sprockets or pulleys.

Couplings are divided into two main groups, couplings and clutches.

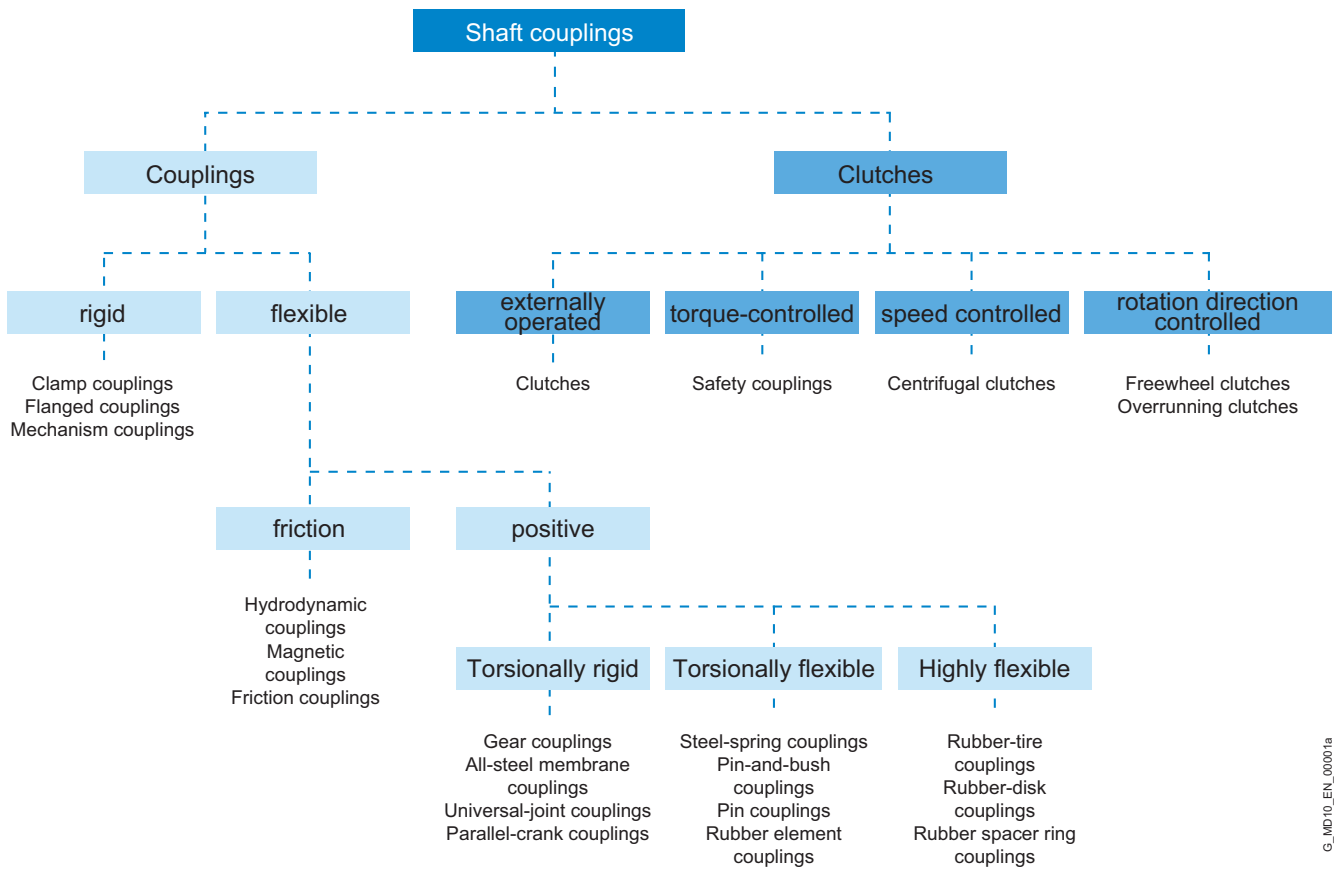
Clutches interrupt or limited the transmissible torque. The engaging and disengaging forces on externally operated clutches are introduced via a mechanically, electrically, hydraulically or pneumatically operating mechanism. Overload, centrifugal or freewheel clutches draw their engaging energy from the transmitted output.

Rigid couplings, designed as clamp, flanged or mechanism couplings, connect machines which must not undergo any shaft misalignment. Hydrodynamic couplings, often also called fluid or Föttinger couplings, are used as starting couplings in drives with high mass moments of inertia of the driven machine. In drive technology very often flexible, positive couplings, which may be designed to be torsionally rigid, torsionally flexible or highly flexible, are used.

Torsionally rigid couplings are designed to be rigid in a peripheral direction and flexible in radial and axial directions. The angle of rotation and torque are conducted through the coupling without a phase shift.

Torsionally flexible couplings have resilient elements usually manufactured from elastomer materials. Using an elastomer material with a suitable ShoreA hardness provides the most advantageous torsional stiffness and damping for the application. Shaft misalignment causes the resilient elements to deform.

Highly flexible couplings have large-volume (elastomer) resilient elements of low stiffness. The angle of rotation and torque are conducted through the coupling with a considerable phase shift.



G\_MD10\_EN\_00001a

# OUR COUPLING GROUPS AT A GLANCE

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N-EUPEX, RUPEX and BIPEX

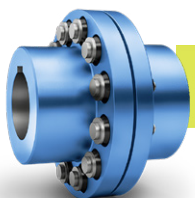
## Flexible Couplings

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



AIQ  
Detect  
ready

**N-EUPEX**  
cam couplings  
Rated torque:  
12 Nm ... 93,500 Nm



AIQ  
Detect  
ready

**RUPEX**  
pin-and-bush couplings  
Rated torque:  
120 Nm ... 1,690,000 Nm



**BIPEX**  
cam couplings  
Rated torque:  
21 Nm ... 5,100 Nm

ELPEX, ELPEX-B and ELPEX-S

## Highly Flexible Couplings

ELPEX® couplings are free of circumferential back-lash. Their damping capacity and low torsional stiff-ness make them especially well-suited for coupling machines with strongly non-uniform torque characteristics or large shaft misalignment.



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



**ELPEX-B**  
elastic tire couplings  
Rated torque:  
57 Nm ... 19,000 Nm

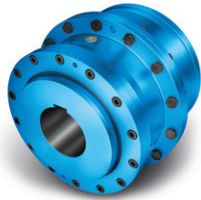


**ELPEX-S**  
rubber disk couplings  
Rated torque:  
200 Nm ... 63,000 Nm

ZAPEX gear couplings and ARPEX all-steel couplings

## Torsionally rigid couplings

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



**ZAPEX**  
gear couplings  
Rated torque:  
1,020 Nm ... 7,200,000 Nm



**ARPEX**  
high Performance Couplings  
Rated torque:  
1,100 Nm ... 936,000 Nm

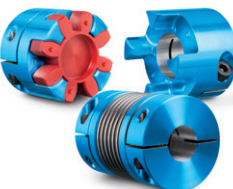


**N-ARPEX and ARPEX**  
all-steel couplings  
Rated torque:  
92 Nm ... 2,000,000 Nm

BIPEX-S and SIPEX

## Backlash-free couplings

The vibration-damping, electrically insulating plug-in BIPEX-S elastomer couplings and SIPEX metal bellows couplings with very high torsional stiffness deliver especially isogonal torque transmission.



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

FLUDEX

## Hydrodynamic couplings

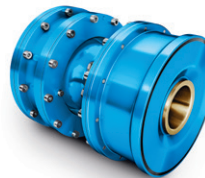
The FLUDEX hydrodynamic fluid coupling works according to the Föttinger principle. It functions entirely free of wear.



**FLUDEX**  
fluid Couplings  
Power:  
1.2 kW ... 2,500 kW

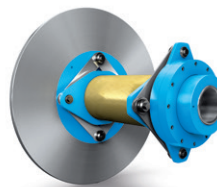
## Application-specific couplings

Couplings for rail vehicles must meet high demands. Due to their high degree of standardization and wide variety, they can be used in the most diverse vehicle types.



**Railway coupling**  
Rated torque:  
1,000 Nm ... 9,500 Nm

Each wind turbine coupling is designed to optimally meet the requirements of the respective wind turbine. The coupling connects the fast-running gear shaft with the generator shaft and is available for wind turbines with a capacity of up to 12 MW.

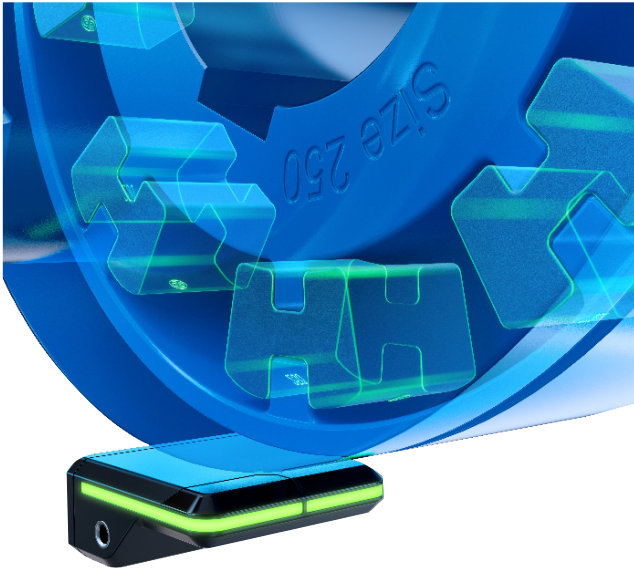


**Wind turbine couplings**  
Rated torque:  
10,000 Nm ... 60,000 Nm

# AIQ DETECT

for wear detection on the N-EUPEX and RUPEX

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The AIQ Detect uses several Hall sensors to determine the wear on the flexible Flender couplings of the N-EUPEX and RUPEX via sensor magnets installed on the coupling side. The progressive wear of the elastomer components of the RUPEX and N-EUPEX results in a torsion angle between the coupling halves. This angle of rotation and the resulting time difference between the coupling halves make it possible to detect the degree of wear of the RUPEX and N-EUPEX flexible couplings. The speed of the coupling is also determined.

This information can be evaluated in the customer's control system via analogue and digital outputs that can be configured by the customer. The AIQ Detect also enables the wear status to be output via the built-in LED light strip on the sensor (green = the wear status is OK, yellow = the elastomer components must be replaced, red = the drivetrain must be stopped). This information can also be analyzed and displayed via a Bluetooth interface with a mobile device using the AIQ app.

## Benefits:

- Continuous wear monitoring
- Coupling status at a glance
- Prevents system failures = maximum operational reliability
- Supports service and maintenance personnel
- Waste reduction (replacement of elastomers only if necessary)
- No annual testing of elastomers necessary
- Flexible and easy to use

## Functions:

- Detects wear on elastomers
- Speed measurement
- Remaining life forecast
- Coupling failure detection
- Configurable output signals
- Firmware upgrades via AIQ app

| Coupling | Types                             | Size        | Article No. |
|----------|-----------------------------------|-------------|-------------|
| N-EUPEX  | A, B, B with clamping elements, H | 80 – 140    | F2E01528467 |
|          |                                   | 160 – 280   | F2E01528468 |
|          |                                   | 315 – 710   | F2E01528469 |
| RUPEX    | RWN, RWS                          | 105 – 1120  | F2E01528472 |
|          |                                   | 1250 – 2000 | F2E01528473 |

### Notes

- The AIQ Detect is used for continuous wear monitoring of Flender N-EUPEX and RUPEX couplings and can be ordered as an accessory to the coupling
- Make sure that the Flender coupling has the 'AIQ Detect-ready' status (see ordering example)

### Ordering example

- N-EUPEX coupling A, size 110 with the status "AIQ Detect-ready" (Article No. addition A99)
- AIQ Detect for wear monitoring of N-EUPEX coupling A, size 110

Article No. N-EUPEX: 2LC0170-4AB99-0AA0-Z L0M+M0P+A99

Article No. AIQ Detect: F2E01528467 (according to the table)



# TECHNICAL INFORMATION AND COUPLING SELECTION

E

|                                                                |             |
|----------------------------------------------------------------|-------------|
| <b>Technical Information</b>                                   | <b>E/12</b> |
| Shaft misalignment                                             | E/12        |
| Balancing                                                      | E/13        |
| Shaft-hub connections                                          | E/15        |
| Standards                                                      | E/16        |
| Key to symbols                                                 | E/17        |
| <b>Selection of the coupling series</b>                        | <b>E/18</b> |
| Typical coupling solutions for different example applications  | E/19        |
| <b>Selection of the coupling size</b>                          | <b>E/20</b> |
| Coupling load in continuous operation                          | E/20        |
| Coupling load at maximum and overload conditions               | E/21        |
| Coupling load due to dynamic torque load                       | E/21        |
| Checking the maximum speed                                     | E/22        |
| Checking permitted shaft misalignment                          | E/22        |
| Checking bore diameter, mounting geometry and coupling design  | E/22        |
| Coupling behavior under overload conditions                    | E/22        |
| Checking shaft-hub connection                                  | E/22        |
| Checking low temperature and chemically aggressive environment | E/22        |
| <b>Features of the standard type</b>                           | <b>E/23</b> |

# TECHNICAL INFORMATION

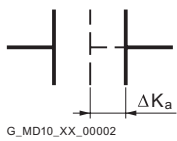
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## Shaft misalignment

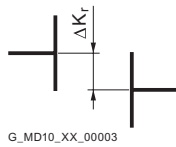
Shaft misalignment is the result of displacement during assembly and operation and, where machines constructed with two radial bearings each are rigidly coupled, will cause high loads being placed on the bearings. Elastic deformation of base frame, foundation and machine housing will lead to shaft misalignment which cannot be prevented, even by precise alignment.

Furthermore, because individual components of the drive train heat up differently during operation, heat expansion of the machine housings causes shaft misalignment. Poorly aligned drives are often the cause of seal, rolling bearing or coupling failure. Alignment should be carried out by specialist personnel in accordance with operating instructions.

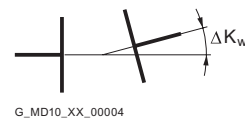
Depending on the direction of the effective shaft misalignment a distinction is made between:



Axial misalignment



Radial misalignment



Angular misalignment

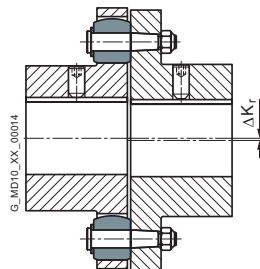
Couplings can be categorized into one of the following groups:

### Single-joint couplings

Couplings with flexible elements mainly made of elastomer materials. Shaft misalignment results in deformation of the elastomer elements. The elastomer elements can absorb shaft misalignment as deformations in an axial, radial and angular direction. The degree of permissible misalignment depends on the coupling size, the speed and the type of elastomer element. Single-joint couplings do not require an adapter and are therefore short versions.

#### Example:

In the case of a RUPLEX RWN 198 coupling with an outer diameter of 198 mm and a speed of 1500 rpm, the permitted radial misalignment is  $\Delta K_r = 0.3$  mm.

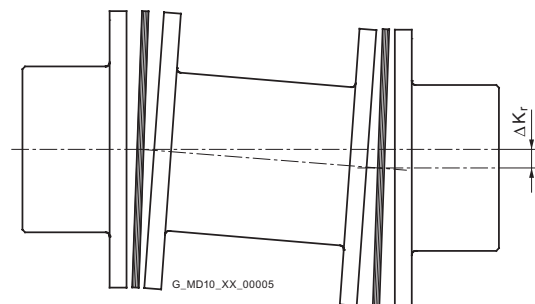


### Two-joint couplings

Two-joint couplings are always designed with an adapter. The two joint levels are able to absorb axial and angular misalignment. Radial misalignment occurs via the gap between the two joint levels and the angular displacement of the joint levels. The permitted angular misalignment per joint level is frequently about  $0.5^\circ$ . The permitted shaft misalignment of the coupling can be adjusted via the length of the adapter. If there are more than two joint levels, it is not possible to define the position of the coupling parts relative to the axis of rotation. (The less frequently used parallel-crank couplings are an exception).

#### Example:

N-ARPEX ARN-6 NEN 217-6 with a shaft distance of 140 mm with a permitted radial misalignment of  $\Delta K_r = 2.2$  mm [angle per joint level  $1.0^\circ$ ].



## Balancing

### Balance quality levels

The so-called quality level G to DIN ISO 21940 indicates a range of permitted residual imbalance from zero up to an upper limit. Applications can be grouped on the basis of similarity analysis. For many applications a coupling balance quality of G 16 is sufficient. On drives susceptible to vibration the balance quality should be G 6.3. Only in special cases is a better balance quality required.

### Balancing standard in accordance with DIN ISO 21940-32

Besides the required balance quality, it is necessary to set standards which define how the mass of the parallel key is to be taken into consideration when balancing. In the past, motor rotors have frequently been balanced in accordance with the full parallel key standard. The "appropriate" balance condition of the coupling hub was described as "balancing with open keyway" or "balancing after keyseating". Today it is usual for the motor rotor, as well as the gear unit and driven machine shaft, to be balanced in accordance with the half parallel key standard.

### Full parallel key standard

The parallel key is inserted in the shaft keyway, then balancing is carried out. The coupling hub must be balanced without parallel key after keyseating.

Marking of shaft and hub with "F" (for "full").

### Half parallel key standard

The balancing standard normally applied today. Before balancing, a half parallel key is inserted in the shaft and another in the coupling hub. Alternatively, balancing can be carried out before cutting the keyway.

The balanced parts must be marked with an "H". This marking can be dispensed with if it is absolutely clear which parallel key standard has been applied.

### No parallel key standard

Balancing of shaft and coupling hub after keyseating, but without parallel key. Not used in practice. Marking of shaft and hub with "N" (for "no").  
The length of the parallel key is determined by the shaft keyway. Coupling hubs may be designed considerably shorter than the shaft.

To prevent imbalance forces caused by projecting parallel key factors when balancing in accordance with the half parallel key standard in the case of applications with high balancing quality requirements, grooved spacer rings can be fitted or stepped parallel keys used.

### Flender Balancing Standard

The balancing quality level, together with the operating speed, results in the maximum permissible eccentricity of the center of gravity of the coupling or the coupling subassembly. In the Flender article number the balancing quality can be preset with the help of the order code. Additionally, also the balance quality level to DIN ISO 21940 can be preset together with the operating speed belonging to it, which then be taken as priority.

$$e_{\text{perm}} = 9550 \cdot \frac{G}{n}$$

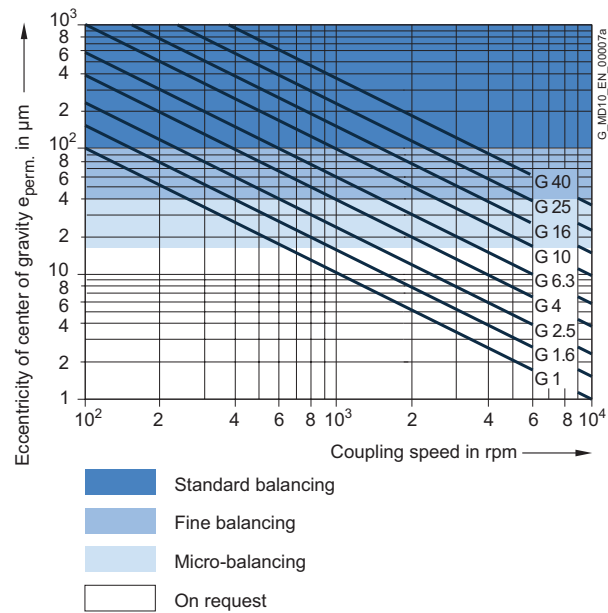
$$e_{\text{coupl}} \leq e_{\text{perm}}$$

Permitted eccentricity of center of gravity  $e_{\text{perm}}$  in  $\mu\text{m}$   
Eccentricity of center of gravity of coupling  $e_{\text{coupl}}$  in  $\mu\text{m}$   
Balancing quality level  $G$  in  $\text{mm/s}$   
Coupling speed  $n$  in  $\text{rpm}$

| Eccentricity of center of gravity of coupling $e_{\text{coupl}}$ | Flender balancing quality | Order code            |
|------------------------------------------------------------------|---------------------------|-----------------------|
| maximum 100 $\mu\text{m}$                                        | standard balancing        | without specification |
| maximum 40 $\mu\text{m}$                                         | fine balancing            | W02                   |
| maximum 16 $\mu\text{m}$                                         | micro-balancing           | W03                   |
| better than 16 $\mu\text{m}$                                     | special balancing         | on request            |

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Example:  
 Coupling speed = 1450 rpm  
 required balancing quality level G 6.3

$$e_{perm} = 9550 \cdot \frac{G}{n} = 9550 \cdot \frac{6.3}{1450} \mu m$$

Thus, the required eccentricity of center of gravity is 41.5  $\mu m$ . The fine balancing with a maximum eccentricity of center of gravity of 40 mm fulfills this requirement; therefore, the order code W02 has to be specified when ordering.

For many applications the following balancing quality recommendation applies:

| Coupling                                 | standard balancing<br>$v = DA \cdot n/19100$ | fine balancing |
|------------------------------------------|----------------------------------------------|----------------|
| short version with $LG \leq 3 \times DA$ | $v \leq 30$ m/s                              | $v > 30$ m/s   |
| long version with $LG > 3 \times DA$     | $v \leq 15$ m/s                              | $v > 15$ m/s   |

|                         |      |         |
|-------------------------|------|---------|
| Peripheral speed        | $v$  | in mm/s |
| Coupling outer diameter | $DA$ | in mm   |
| Coupling speed          | $n$  | in rpm  |
| Coupling length         | $LG$ | in mm   |

The following standards on balancing must be observed:

- couplings are balanced in subassemblies.
- hub parts without finished bore are unbalanced.
- the number of balancing levels (one- or two-level balancing) is specified by Flender.
- without special specification balancing is done in accordance with the half-parallel-key standard. Balancing in accordance with the full-parallel-key standard must be specified in the order number.
- For FLUDEX couplings special balancing standards specified in Section 13 apply.
- ARPEX couplings in standard balancing quality are unbalanced. Thanks to steel components machined all over and precisely guided adapters the balancing quality of standard balancing is nearly always adhered to.

## Shaft-hub connections

The bore and the shaft-hub connection of the coupling are determined by the design of the machine shaft. In the case of IEC standard motors, the shaft diameters and parallel key connections are specified in accordance with DIN EN 50347. For diesel motors, the flywheel connections are frequently specified in accordance with SAE J620d or DIN 6288. Besides the very widely used connection of shaft and hub with parallel keys to DIN 6885 and cylindrically bored hubs, couplings with Taper clamping bushes, clamping sets, shrink-fit connections and splines to DIN 5480 are common.

The form stability of the shaft/hub connection can only be demonstrated when shaft dimensions and details of the connection are available. The coupling torques specified in the tables of power ratings of the coupling series do not apply to the shaft-hub connection unrestrictedly.

In the case of the shaft-hub connection with parallel key, the coupling hub must be axially secured, e.g. with a set screw or end washer. The parallel key must be secured against axial displacement in the machine shaft.

All Flender couplings with a finished bore and parallel keyway are designed with a set screw. Exceptions are some couplings of the FLUDEX series, in which end washers are used. During assembly, Taper clamping bushes are frictionally connected to the machine shaft.

# TECHNICAL INFORMATION

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## Standards

### Machines

|                 |                                                                                     |
|-----------------|-------------------------------------------------------------------------------------|
| 2006/42/EG      | EC Machinery Directive                                                              |
| 2014/34/EU      | ATEX Directive – Manufacturer                                                       |
| 1999/92/EG      | ATEX Directive – Operator – and ATEX Guideline to Directive 1999/92/EC              |
| DIN EN 80079-36 | Non-electrical equipment for use in potentially explosive atmospheres               |
| DIN EN 1127     | Explosive atmospheres, explosion prevention and protection                          |
| DIN EN 50347    | General-purpose three-phase induction motors having standard dimensions and outputs |

### Couplings

|                    |                                                                                                                                         |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| DIN 740            | Flexible shaft couplings Part 1 and Part 2                                                                                              |
| VDI Guideline 2240 | Shaft couplings - Systematic subdivision according to their properties VDI Technical Group Engineering Design 1971                      |
| API 610            | Centrifugal Pumps for Petroleum, Chemical and Gas Industry Services                                                                     |
| API 671            | Special Purpose Couplings for Petroleum, Chemical and Gas Industry Services                                                             |
| ISO 10441          | Petroleum, petrochemical and natural gas industries – Flexible couplings for mechanical power transmission-special-purpose applications |
| ISO 13709          | Centrifugal pumps for petroleum, petrochemical and natural gas industries                                                               |

### Balancing

|                  |                                                                                                                   |
|------------------|-------------------------------------------------------------------------------------------------------------------|
| DIN ISO 21940    | Requirements for the balancing quality of rigid rotors                                                            |
| DIN ISO 21940-32 | Mechanical vibrations; standard governing the type of parallel key during balancing of shafts and composite parts |

### Shaft-hub connections

|              |                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------|
| DIN 6885     | Driver connections without taper action – parallel keys – keyways                                             |
| SAE J620d    | Flywheels for industrial engines ...                                                                          |
| DIN 6288     | Reciprocating internal combustion engines<br>Dimensions and requirements for flywheels and flexible couplings |
| ASME B17.1   | Keys and keyseats                                                                                             |
| DIN EN 50347 | General-purpose three-phase induction motors with standard dimensions and output data                         |
| BS 46-1:1958 | Keys and keyways and taper pins Specification                                                                 |

## Key to symbols

| Name                         | Symbols      | Unit             | Explanation                                                                                                                 |
|------------------------------|--------------|------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Torsional stiffness, dynamic | $C_{Tdyn}$   | Nm/rad           | For calculating torsional vibration                                                                                         |
| Excitation frequency         | $f_{err}$    | Hz               | Excitation frequency of motor or driven machine                                                                             |
| Moment of inertia            | $J$          | kgm <sup>2</sup> | Moment of inertia of coupling sides 1 and 2                                                                                 |
| Axial misalignment           | $\Delta K_a$ | mm               | Axial misalignment of the coupling halves                                                                                   |
| Radial misalignment          | $\Delta K_r$ | mm               | Radial misalignment of the coupling halves                                                                                  |
| Angular misalignment         | $\Delta K_w$ | °                | Angular misalignment of the coupling halves                                                                                 |
| Service factor               | FB           |                  | Factor expressing the real coupling load as a ratio of the nominal coupling load                                            |
| Frequency factor             | FF           |                  | Factor expressing the frequency dependence of the fatigue torque load                                                       |
| Temperature factor           | FT           |                  | Factor taking into account the reduction in strength of flexible rubber materials at a higher temperature                   |
| Weight                       | $m$          | kg               | Weight of the coupling                                                                                                      |
| Rated speed                  | $n_N$        | rpm              | Coupling speed                                                                                                              |
| Maximum coupling speed       | $n_{Kmax}$   | rpm              | Maximum permissible coupling speed                                                                                          |
| Rated power                  | $P_N$        | kW               | Rated output on the coupling, usually the output of the driven machine                                                      |
| Rated torque                 | $T_N$        | Nm               | Rated torque as nominal load on the coupling                                                                                |
| Fatigue torque               | $T_W$        | Nm               | Amplitude of the dynamic coupling load                                                                                      |
| Maximum torque               | $T_{max}$    | Nm               | More frequently occurring maximum load, e.g. during starting                                                                |
| Overload torque              | $T_{OL}$     | Nm               | Very infrequently occurring maximum load, e.g. during short circuit or blocking conditions                                  |
| Rated coupling torque        | $T_{KN}$     | Nm               | Torque which can be transmitted as static torque by the coupling over the period of use.                                    |
| Maximum coupling torque      | $T_{Kmax}$   | Nm               | Torque which can be frequently transmitted (up to 25 times an hour) as maximum torque by the coupling.                      |
| Coupling overload torque     | $T_{KOL}$    | Nm               | Torque which can very infrequently be transmitted as maximum torque by the coupling.                                        |
| Fatigue coupling torque      | $T_{KW}$     | Nm               | Torque amplitude which can be transmitted by the coupling as dynamic torque at a frequency of 10 Hz over the period of use. |
| Resonance factor             | $V_R$        |                  | Factor specifying the torque increase at resonance                                                                          |
| Temperature                  | $T_a$        | °C               | Ambient temperature of the coupling in operation                                                                            |
| Damping coefficient          | $\Psi$       | psi              | Damping parameter                                                                                                           |

# SELECTION OF THE COUPLING SERIES

E

The coupling series is frequently determined by the driven machine and the design of the drive train. Common selection criteria are listed below and assigned to coupling properties, which are used to select the coupling series. Additionally, the price of the coupling and availability are important criteria for determining the coupling series to be used.

The **FLUDEX series** operates positively and transmits the torque with the aid of a flowing oil or water filling.

FLUDEX couplings are used to reduce starting and/or overload torques. During starting, the motor may, for example, run up within a very short time; because of the FLUDEX coupling, the drive train with the driven machine may accelerate after a delay and without increased torque load.

The FLUDEX coupling cannot compensate for shaft misalignment and is therefore designed in combination with a displacement coupling, a cardan shaft or a belt drive. The displacement coupling may be selected in accordance with the criteria described below.

| Selection criteria |                                                   |                                                                       |                     |                      |                 |                             |
|--------------------|---------------------------------------------------|-----------------------------------------------------------------------|---------------------|----------------------|-----------------|-----------------------------|
|                    | Torque range<br>Rated coupling torque<br>$T_{KN}$ | Speed range<br>Peripheral speed<br>$v_{max} = DA \cdot n_{max}/19100$ | Torsional stiffness |                      | Highly flexible | Operating temperature range |
|                    |                                                   |                                                                       | torsionally rigid   | torsionally flexible |                 |                             |
| ZAPEX              | 1020 ... 7200000 Nm                               | 60 m/s                                                                | ■                   | –                    | –               | -20 ... +80 °C              |
| N-ARPEX            | 350 ... 2000000 Nm                                | 110 m/s                                                               | ■                   | –                    | –               | -50 ... +280 °C             |
| N-EUPEX            | 12 ... 93500 Nm                                   | 36 m/s                                                                | –                   | ■                    | –               | -50 ... +100 °C             |
| N-EUPEX DS         | 19 ... 21200 Nm                                   | 36 m/s                                                                | –                   | ■                    | –               | -30 ... +80 °C              |
| RUPEX              | 120 ... 1690000 Nm                                | 60 m/s                                                                | –                   | ■                    | –               | -50 ... +100 °C             |
| BIPEX              | 21 ... 5100 Nm                                    | 40 m/s                                                                | –                   | ■                    | –               | -50 ... +100 °C             |
| ELPEX-B            | 57 ... 19000 Nm                                   | 45 m/s                                                                | –                   | –                    | ■               | -50 ... +70 °C              |
| ELPEX-S            | 200 ... 63000 Nm                                  | 66 m/s                                                                | –                   | –                    | ■               | -40 ... +120 °C             |
| ELPEX              | 1600 ... 90000 Nm                                 | 60 m/s                                                                | –                   | –                    | ■               | -40 ... +80 °C              |

## Typical coupling solutions for different example applications

The specified application factors are recommendations; regulations, rules and practical experience take priority as assessment criteria.  
No application factor need be taken into account with FLUDEX couplings.

In the case of highly flexible couplings of the ELPEX, ELPEX-S and ELPEX-B series, deviating application factors are stated in the product descriptions.  
FLUDEX couplings are mostly mounted on the high-speed gear shaft.

| Example applications                                | Application factor FB |
|-----------------------------------------------------|-----------------------|
| <b>Electric motor without gear unit</b>             |                       |
| Centrifugal pumps                                   | 1.0                   |
| Piston pumps                                        | 1.5                   |
| Vacuum pumps                                        | 1.5                   |
| Fans with $T_N$ less than 75 Nm                     | 1.5                   |
| Fans with $T_N$ from 75 to 750 Nm                   | 1.75                  |
| Fans with $T_N$ larger than 750 Nm                  | 1.75                  |
| Blowers                                             | 1.5                   |
| Frequency converters / generators                   | 1.25                  |
| Reciprocating compressors                           | 1.75                  |
| Screw-type compressors                              | 1.5                   |
| <b>Internal-combustion engine without gear unit</b> |                       |
| Generators                                          | 1.75                  |
| Pumps                                               | 1.5                   |
| Fans                                                | 1.75                  |
| Hydraulic pumps, excavators, construction machines  | 1.5                   |
| Compressors / screw-type compressors                | 1.5                   |
| Agricultural machinery                              | 1.75                  |
| <b>Other</b>                                        |                       |
| Turbine gear units                                  | 1.5                   |
| Hydraulic motor - gear unit                         | 1.25                  |
| <b>Electric motor with gear unit</b>                |                       |
| <b>Chemical industry</b>                            |                       |
| Extruders                                           | 1.5                   |
| Pumps - centrifugal pumps                           | 1.0                   |
| Pumps - piston pumps                                | 1.75                  |
| Pumps - plunger pumps                               | 1.5                   |
| Reciprocating compressors                           | 1.75                  |
| Calenders                                           | 1.5                   |
| Kneaders                                            | 1.75                  |
| Cooling drums                                       | 1.25                  |
| Mixers                                              | 1.25                  |
| Stirrers                                            | 1.25                  |
| Toasters                                            | 1.25                  |
| Drying drums                                        | 1.25                  |
| Centrifuges                                         | 1.25                  |
| Crushers                                            | 1.5                   |
| <b>Power generation and conversion</b>              |                       |
| Compressed air, reciprocating compressors           | 1.75                  |

| Example applications                          | Application factor FB |
|-----------------------------------------------|-----------------------|
| Compressed air, screw-type compressors        | 1.25                  |
| Air - Blowers                                 | 1.5                   |
| Air - Cooling tower fans                      | 1.5                   |
| Air - Turbine blowers                         | 1.5                   |
| Generators, converters                        | 1.25                  |
| Welding generators                            | 1.25                  |
| <b>Metal production, iron and steel works</b> |                       |
| Plate tilters                                 | 1.5                   |
| Ingot pushers                                 | 1.75                  |
| Slabbing mill                                 | 1.75                  |
| Coiling machines                              | 1.5                   |
| Roller straightening machines                 | 1.5                   |
| Roller tables                                 | 1.75                  |
| Shears                                        | 1.75                  |
| Rollers                                       | 1.75                  |
| <b>Metal working machines</b>                 |                       |
| Plate bending machines                        | 1.5                   |
| Plate straightening machines                  | 1.5                   |
| Hammers                                       | 1.75                  |
| Planing machines                              | 1.75                  |
| Presses, forging presses                      | 1.75                  |
| Shears                                        | 1.5                   |
| Grinding machines                             | 1.25                  |
| Punches                                       | 1.5                   |
| Machine tools: Main drives                    | 1.5                   |
| Machine tools: Auxiliary drives               | 1.25                  |
| <b>Food industry</b>                          |                       |
| Filling machines                              | 1.25                  |
| Kneading machines                             | 1.5                   |
| Mashers                                       | 1.5                   |
| Sugar cane production                         | 1.5                   |
| <b>Production machines</b>                    |                       |
| Construction machines, hydraulic pumps        | 1.25                  |
| Construction machines, traversing gears       | 1.5                   |
| Construction machines, suction pumps          | 1.5                   |
| Construction machines, concrete mixers        | 1.5                   |
| Printing machines                             | 1.25                  |
| Woodworking - barking drums                   | 1.5                   |
| Woodworking - planing machines                | 1.5                   |

| Example applications                       | Application factor FB |
|--------------------------------------------|-----------------------|
| Woodworking - reciprocating saws           | 1.5                   |
| Grinding machines                          | 1.5                   |
| Textile machines - winders                 | 1.5                   |
| Textile machines - printing machines       | 1.5                   |
| Textile machines - tanning vats            | 1.5                   |
| Textile machines - shredders               | 1.5                   |
| Textile machines - looms                   | 1.5                   |
| Packaging machines                         | 1.5                   |
| Brick molding machines                     | 1.75                  |
| <b>Transport and logistics</b>             |                       |
| Passenger transport - elevators            | 1.5                   |
| Passenger transport - escalators           | 1.5                   |
| Conveyor systems - bucket elevators        | 1.5                   |
| Conveyor systems - hauling winches         | 1.5                   |
| Conveyor systems - belt conveyors          | 1.5                   |
| Conveyor systems - endless-chain conveyors | 1.5                   |
| Conveyor systems - circular conveyors      | 1.5                   |
| Conveyor systems - screw conveyors         | 1.5                   |
| Conveyor systems - inclined hoists         | 1.5                   |
| Crane traversing gear                      | 1.5                   |
| Hoisting gear                              | 1.5                   |
| Crane lifting gear                         | 2.0                   |
| Crane traveling gear                       | 1.5                   |
| Crane slewing gear                         | 1.5                   |
| Crane fly jib hoists                       | 1.5                   |
| Cable railways                             | 1.5                   |
| Drag lifts                                 | 1.5                   |
| Winches                                    | 1.5                   |
| <b>Cellulose and paper</b>                 |                       |
| Paper-making machines, all                 | 1.5                   |
| Pulper drives                              | 1.5                   |
| <b>Cement industry</b>                     |                       |
| Crushers                                   | 1.75                  |
| Rotary furnaces                            | 1.5                   |
| Hammer mills                               | 1.75                  |
| Ball mills                                 | 1.75                  |
| Pug mills                                  | 1.75                  |
| Mixers                                     | 1.5                   |
| Pipe mills                                 | 1.5                   |
| Beater mills                               | 1.75                  |
| Separators                                 | 1.5                   |
| Roller presses                             | 1.75                  |

# SELECTION OF THE COUPLING SIZE

E

The torque load of the coupling must be determined from the output of the driven machine and the coupling speed.

Rated coupling load  $T_N = 9550 \times P_N / n_N$   
( $T_N$  in Nm;  $P_N$  in kW;  $n_N$  in rpm)

The rated coupling load obtained in this way must be multiplied by factors and compared with the rated coupling torque. An ideal but expensive method is to measure the torque characteristic on the coupling. For this, Flender offers special adapters fitted with torque measuring devices.

The rated coupling torque  $T_{KN}$  is the torque which can be transmitted by the coupling over an appropriate period of use if the load is applied to the coupling purely statically at room temperature.

Application factors are to express the deviation of the real coupling load from the "ideal" load condition.

## Coupling load in continuous operation

The operating principles of the driving and driven machines are divided into categories and the application factor FB derived from these in accordance with DIN 3990-1.

**Application factor for N-EUPEX, N-EUPEX-DS, RUPEX, BIPEX, ELPEX-B, N-ARPEX, ARPEX, ZAPEX and FLUDEX**

| Torque characteristic of the driving machine | Torque characteristic of the driven machine |                                   |             |            |
|----------------------------------------------|---------------------------------------------|-----------------------------------|-------------|------------|
|                                              | uniform                                     | uniform with moderate shock loads | non uniform | very rough |
| uniform                                      | 1.0                                         | 1.25                              | 1.5         | 1.75       |
| uniform with moderate shock loads            | 1.25                                        | 1.5                               | 1.75        | 2.0        |
| non uniform                                  | 1.5                                         | 1.75                              | 2.0         | 2.5        |

### Examples of torque characteristic of driving machines:

- uniform: Electric motors with soft starting, steam turbines
- uniform with moderate shock loads: Electric motors without soft starting, hydraulic motors, gas and water turbines
- non uniform: Internal-combustion engines

### Examples of torque characteristic in driven machines:

- uniform: Generators, centrifugal pumps for light fluids
- uniform with moderate shock loads: Centrifugal pumps for viscous fluids, elevators, machine tool drives, centrifuges, extruders, blowers, crane drives
- non uniform: Excavators, kneaders, conveyor systems, presses, mills
- very rough: Crushers, excavators, shredders, iron/smeltering machinery

| Temperature factor FT |                    |                    |                                   |                    |             |             |             |             |              |              |              |
|-----------------------|--------------------|--------------------|-----------------------------------|--------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
| Coupling              | Elastomer material | Low temperature °C | Temperature $T_a$ on the coupling |                    |             |             |             |             |              |              |              |
|                       |                    |                    | under -30 °C                      | -30 °C up to 50 °C | up to 60 °C | up to 70 °C | up to 80 °C | up to 90 °C | up to 100 °C | up to 110 °C | up to 120 °C |
| N-EUPEX               | NBR                | -30                | –                                 | 1.0                | 1.0         | 1.0         | 1.0         | –           | –            | –            | –            |
| N-EUPEX               | NR                 | -50                | 1.1 <sup>1)</sup>                 | 1.0                | –           | –           | –           | –           | –            | –            | –            |
| N-EUPEX               | HNBR               | -10                | –                                 | 1.0                | 1.0         | 1.0         | 1.0         | 1.25        | 1.25         | –            | –            |
| N-EUPEX               | TPU                | -50                | 1.0                               | 1.0                | 1.05        | 1.10        | 1.15        | –           | –            | –            | –            |
| N-EUPEX DS            | NBR                | -30                | –                                 | 1.0                | 1.0         | 1.0         | 1.0         | –           | –            | –            | –            |
| RUPEX                 | NBR                | -30                | –                                 | 1.0                | 1.0         | 1.0         | 1.0         | –           | –            | –            | –            |
| RUPEX                 | NR                 | -50                | 1.1                               | 1.0                | –           | –           | –           | –           | –            | –            | –            |
| RUPEX                 | HNBR               | -10                | –                                 | 1.0                | 1.0         | 1.0         | 1.0         | 1.25        | 1.25         | –            | –            |
| BIPEX                 | TPU                | -50                | 1.0                               | 1.0                | 1.0         | 1.0         | 1.0         | 1.0         | 1.0          | 1.3          | 1.5          |
| ELPEX                 | NR                 | -40                | 1.1                               | 1.0                | 1.25        | 1.40        | 1.60        | –           | –            | –            | –            |
| ELPEX-B               | NR                 | -50                | 1.1                               | 1.0                | –           | –           | –           | –           | –            | –            | –            |
| ELPEX-B               | CR                 | -15                | –                                 | 1.0                | 1.0         | 1.0         | –           | –           | –            | –            | –            |
| ELPEX-S SN, NN, WN    | NR                 | -40                | 1.1                               | 1.0                | 1.25        | 1.40        | 1.60        | –           | –            | –            | –            |
| ELPEX-S NX            | VMQ                | -40                | 1.1                               | 1.0                | 1.0         | 1.0         | 1.0         | 1.1         | 1.25         | 1.4          | 1.6          |

NR = natural rubber, natural-synthetic rubber mixture

NBR = nitril-butadiene-rubber (Perbunan)

HNBR = hydrated acrylonitrile butadiene rubber

CR = chloroprene rubber (FRAS fire-resistant and anti-static)

VMQ = silicone

TPU = polyurethane

<sup>1)</sup> The N-EUPEX coupling is not suitable for shock loads when used at low temperatures.

Coupling size  $T_{KN} \geq T_N \cdot FB \cdot FT$

In the case of ARPEX and ZAPEX coupling types, no temperature factor (FT = 1.0) need be taken into account.

## Coupling load at maximum and overload conditions

The maximum torque is the highest load acting on the coupling in normal operation.

Maximum torques at a frequency of up to 25 times an hour are permitted and must be lower than the maximum coupling torque. Examples of maximum torque conditions are: Starting operations, stopping operations or usual operating conditions with maximum load.

$$T_{Kmax} \geq T_{Max} \cdot FT$$

Overload torques are maximum loads which occur only in combination with special, infrequent operating conditions. Examples of overload torque conditions are: Motor short circuit, emergency stop or blocking because of component breakage. Overload torques at a frequency of once a month are permitted and must be lower than the maximum overload torque of the coupling. The overload condition may last only a short while, i.e. fractions of a second.

$$T_{KOL} \geq T_{OL} \cdot FT$$

## Coupling load due to dynamic torque load

Applying the frequency factor FF, the dynamic torque load must be lower than the coupling fatigue torque.

Dynamic torque load

$$T_{KW} \geq T_W \cdot FF$$

Frequency of the dynamic torque load  
 $f_{err} \leq 10$  Hz frequency factor FF = 1.0

Frequency of the dynamic torque load  
 $f_{err} > 10$  Hz frequency factor FF =  $\sqrt{(f_{err}/10 \text{ Hz})}$

**For the ZAPEX and ARPEX series, the frequency factor is always FF = 1.0.**

# SELECTION OF THE COUPLING SIZE

E

## Checking the maximum speed

For all load situations  $n_{Kmax} \geq n_{max}$

## Checking permitted shaft misalignment

For all load situations, the actual shaft misalignment must be less than the permitted shaft misalignment.

## Checking bore diameter, mounting geometry and coupling design

The check must be made on the basis of the dimension tables. The maximum bore diameter applies to parallel keyways to DIN 6885. For other keyway geometries, the maximum bore diameter can be reduced.

On request, couplings with adapted geometry can be provided.

## Coupling behavior under overload conditions

The ZAPEX, N-ARPEX, ARPEX, N-EUPEX, RUPEX and BIPEX coupling series can withstand overloads until the breakage of metal parts. These coupling series are designated as fail-safe.

The N-EUPEX DS, ELPEX-B, ELPEX-S and ELPEX coupling series throw overload. The elastomer element of these couplings is irreparably damaged without damage to metal parts when subjected to excessive overload.

These coupling series are designated as non-fail-safe. These types that fail can be fitted with a so-called fail-safe device. This additional component enables emergency operation, even after the rubber element of the coupling has been irreparably damaged.

## Checking shaft-hub connection

The torques specified in the tables of power ratings data of the coupling series do not necessarily apply to the shaft-hub connection. Depending on the shaft-hub connection, proof of form stability is required. Flender recommends obtaining proof of form strength by using calculation methods in accordance with the current state of the art.

Fitting recommendations for the shaft-hub connection are given in the **Appendix**.

The coupling hub is frequently fitted flush with the shaft end face. If the shaft projects, the risk of collision with other coupling parts must be checked. If the shaft is set back, in addition to the load-bearing capacity of the shaft-hub connection, the correct positioning of the hub must be ensured as well. If the bearing hub length is insufficient, restorative forces may cause tilting movements and so wear to and impairment of the axial retention. Also, the position of the set screw to be positioned on sufficient shaft or parallel key material must be noted.

| Shaft-hub connection                       | Suggestion for calculation method |
|--------------------------------------------|-----------------------------------|
| Keyway connection to DIN 6885-1            | DIN 6892                          |
| Shrink fit                                 | DIN 7190                          |
| Spline to DIN 5480                         |                                   |
| Bolted flange connection                   | VDI 2230                          |
| Flange connection with close-fitting bolts |                                   |

## Checking low temperature and chemically aggressive environment

The minimum permitted coupling temperature is specified in the Temperature factor FT table. In the case of chemically aggressive environments, please consult the manufacturer.

# FEATURES OF THE STANDARD TYPE

| Couplings                                                                                                                                                                     | Features of the standard type                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| All coupling series except ARPEX clamping hubs and FLUDEX with keyway to ASME B17.1                                                                                           | Bore tolerance H7                                                  |
| N-ARPEX and ARPEX clamping hubs                                                                                                                                               | Bore tolerance G6 (suitable for shaft tolerance h6)                |
| FLUDEX couplings with keyway to ASME B17.1                                                                                                                                    | Hollow shafts: bore tolerance K7<br>other parts: bore tolerance M7 |
| All coupling series with bore diameter - imperial                                                                                                                             | Parallel keyway to ASME B17.1                                      |
| Bore diameter metric in the case of ZAPEX, N-ARPEX and ARPEX coupling series as well as coupling hubs with applied brake disks or brake drums of the N-EUPEX and RUPEX series | Parallel keyway to DIN 6885-1 keyway width P9                      |
| Bore diameter metric in the case of the N-EUPEX, RUPEX, BIPEX, ELPEX-S, ELPEX-B, ELPEX, FLUDEX coupling series                                                                | Parallel keyway to DIN 6885-1 keyway width JS9                     |
| All coupling series except FLUDEX                                                                                                                                             | Axial locking by means of set screw                                |
| FLUDEX coupling series                                                                                                                                                        | Axial lock by means of set screw or end washer                     |
| All coupling series                                                                                                                                                           | Balancing in accordance with half parallel key standard            |
| ZAPEX, N-ARPEX, ARPEX, N-EUPEX, RUPEX, BIPEX, ELPEX-S, ELPEX-B and ELPEX coupling series                                                                                      | Balancing quality G16                                              |
| FLUDEX coupling series                                                                                                                                                        | Balancing quality G6.3                                             |
| SIPEX and BIPEX-S coupling series                                                                                                                                             | Balancing quality G6.3 for 3600 rpm                                |
| All series                                                                                                                                                                    | Unpainted                                                          |
| All series                                                                                                                                                                    | Preservation with cleaning emulsion                                |
| FLUDEX couplings                                                                                                                                                              | Fuse 140 °C                                                        |

## Configurator

The article number can be obtained with the help of the Configurator. The coupling can be selected in a product configurator and specified using selection menus.

The Configurator is available under **flender.com**.

The coupling can be selected via "Technical selection" (technical selection) or via "Direct selection" (via article no.).



# FLUID COUPLINGS FLUDEX SERIES



|                                      |             |
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|                                                                  |              |
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| <b>Oil filling quantities<br/>for FG series</b>                  | <b>13/44</b> |
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| <b>Oil filling quantities<br/>for FV series</b>                  | <b>13/50</b> |
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| <b>Oil filling quantities<br/>for FN series</b>                  | <b>13/62</b> |
| <b>Spare and wear parts</b>                                      | <b>13/64</b> |



**FLUDEX**  
**FLENDER**

# GENERAL



Coupling suitable for use in potentially explosive atmospheres.

Complies with the current ATEX Directive for:

**CE** II 2G Ex h IIB T3 Gb X

II 2D Ex h IIIC T160°C Db X

I M2 Ex h Mb X

FLUDEX couplings marked with Ex are constructed with fusible safety plugs 110 °C.

## Benefits

FLUDEX couplings are hydrodynamic fluid couplings which operate on the Föttinger principle. The coupling parts on the input and output sides are not mechanically connected to each other. Output is transmitted via the oil filling which rotates in the coupling and is conducted over radially arranged blades.

FLUDEX couplings limit starting and maximum torque in the drive train and, through the property of rotational slip, serve as an aid to starting the motor, as overload protection in the event of fault and for isolating torsional vibration.

When large masses are started up, the drive train is accelerated only at the torque determined by the coupling characteristic. The starting operation is spread over time, the driven machine started softly and smoothly.

In the case of special operating conditions, such as overload or blocking of the driven machine, the FLUDEX coupling limits the maximum torque load and prevents the inert effect of the rotating motor mass on the drive train. The coupling then acts as a load-holding safety clutch until the drive is shut off by the motor control or coupling monitoring system.

The FLUDEX coupling further acts as a means of decoupling during torsional vibration excitation. Torsional vibration excitation with a frequency of > 5 Hz is virtually absorbed by the coupling.

To compensate for shaft misalignment, the FLUDEX coupling is combined with a displacement coupling e.g. of the N-EUPEX type.

All FLUDEX couplings are designed with radial unset blades and are therefore suitable for rotation in both directions and reversing operation. They can be fitted horizontally, at an angle or vertically. In the case of FLUDEX couplings with a delay chamber it must be ensured, when fitting at an angle or vertically, that the delay chamber is below the working chamber.

## Application

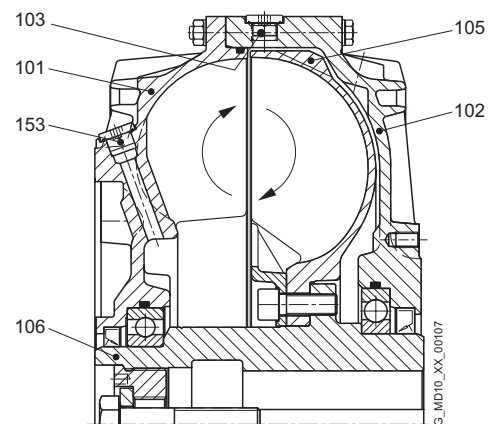
FLUDEX couplings are used in drives for conveyor systems such as belt conveyors, bucket elevators and chain conveyors. In heavy industry FLUDEX couplings are used for applications such as blade wheel drives, crushers, roller presses, mixers, large ventilators, boiler feed pumps, large compressors, centrifuges and auxiliary drives for mills.

Further applications are, for example, pump drives, PTO generator drives, wind power systems and door and gate drives.

In drives with diesel engines, FLUDEX couplings are used on driven machines with a high mass moment of inertia.

## Design and configurations

FLUDEX couplings are constructed of just a few, robust components. Internal components include the hollow shaft or solid shaft (106), to which the blade wheel (105) is connected. The outer housing comprises the cover (102) and the blade wheel housing (101). The joint is constructed as a bolted flange joint and sealed with an O ring. The outer housing and the shaft or hollow shaft have double bearing support and are sealed off to the outside with radial shaft seals. The coupling is provided with two filler plugs (153) with integral overflow protection and with one or two fusible safety plugs (103) in the coupling housing for protection against overheating. The fusible safety plug or a screw plug fitted in the same position also serves as a fluid drain plug and with the aid of a scale marking on the housing can be used as a level indicator.



## Materials

- Blade wheel and housing:  
Cast aluminum AlSi10Mg or AlSi9Mg
- Shaft and hollow shaft:  
Steel with a yield point higher than 400 N/mm<sup>2</sup>
- Static seals and radial shaft seals:  
Perbunan NBR or Viton FPM
- Add-on parts:  
Grey cast iron EN-GJL-250, spheroidal graphite cast iron EN-GJS-400 or steel

## Fusible safety plugs

If a FLUDEX coupling is operated with an impermissibly high slip for a prolonged period, the oil filling and the coupling housing will overheat. Fusible safety plugs which release the oil filling into the environment upon reaching a preset temperature are therefore fitted in each coupling housing. These protect the coupling from irreparable damage through overheating or overpressure and disconnect the drive motor from the driven machine.

# GENERAL

## Thermal equipment

| Equipment                         | Suitability for coupling continuous operating temperatures | Fusible safety plug               | Sealing materials |
|-----------------------------------|------------------------------------------------------------|-----------------------------------|-------------------|
| Standard                          | up to 85 °C                                                | 110 °C                            | NBR               |
|                                   |                                                            |                                   | FPM               |
|                                   | up to 85 °C                                                | 140 °C                            | NBR               |
| ATEX                              | up to 110 °C                                               | 160 °C                            | FPM               |
|                                   | up to 85 °C                                                | 110 °C ex                         | NBR               |
| With thermal switch <sup>1)</sup> | up to 85 °C                                                | 140 °C + thermal switch 110 °C    | FPM               |
|                                   | up to 110 °C                                               | 160 °C + thermal switch 140 °C    | FPM               |
|                                   | up to 85 °C                                                | 160 °C + EOC transmitter (125 °C) | NBR               |
| With transmitter <sup>1)</sup>    | up to 110 °C                                               |                                   | FPM               |

## Optional temperature monitoring systems

### Thermal switching equipment

By adding thermal switching equipment leakage and loss of the hydraulic fluid as well as a risk to and contamination of the environment in the event that the coupling overheats can be avoided.

The thermal switching equipment does not work if a machine side is blocked and the coupling housing is connected to this side. If the coupling is stationary, the switching pin cannot actuate the switching equipment.

The thermal switching equipment comprises the thermal switch and the switchgear.

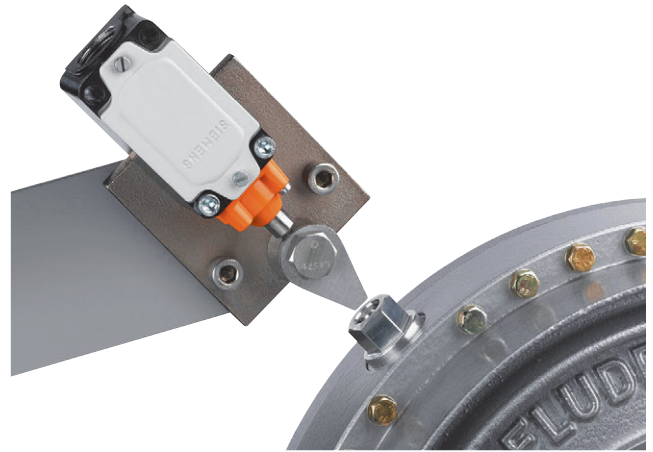
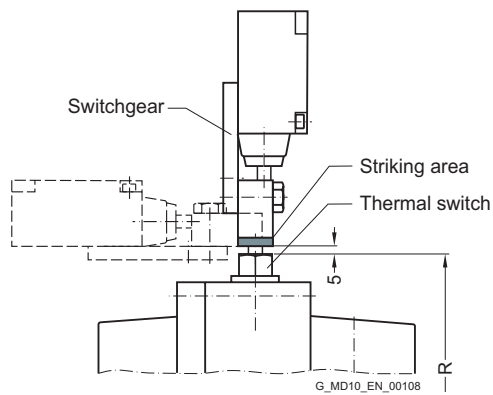
The switchgear comprises a limit switch with a make-and-break contact and a swiveling cam. Limit switch and cam are mounted on a common base plate. The thermal switch is screwed into the housing in place of a screw plug. The fusible safety plug (with a higher response temperature)

remains in the coupling for additional safety.

If the set temperature is exceeded, the switching pin is released from the fusible element, emerges 10 mm from the housing and actuates the switchgear while the coupling is rotating. The switchgear can cut out the drive motor and/or trigger an optical or acoustic alarm signal. The housing of the coupling remains closed and no operating fluid will escape.

| Continuous operating temperature | Thermal switch | Fusible safety plug |
|----------------------------------|----------------|---------------------|
| ≤ 85 °C                          | 110 °C         | 140 °C              |
| > 85 ° ... 110 °C                | 140 °C         | 160 °C              |

<sup>1)</sup> Not available for size 222.



|                          | Coupling size |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|
|                          | 297           | 342  | 370  | 395  | 425  | 450  | 490  | 516  | 565  | 590  | 655  | 755  | 887  |
| Perm. speed in rpm       | 2500          | 2240 | 2100 | 2000 | 1900 | 1800 | 1650 | 1600 | 1500 | 1450 | 1250 | 1100 | 1000 |
| Radius of travel R in mm | 188           | 215  | 226  | 239  | 251  | 271  | 292  | 307  | 330  | 346  | 383  | 435  | 507  |

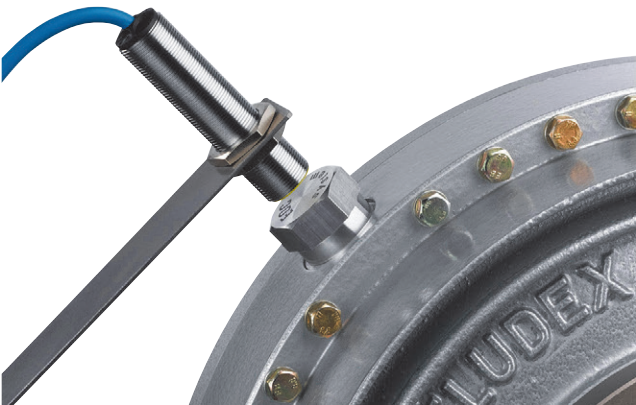
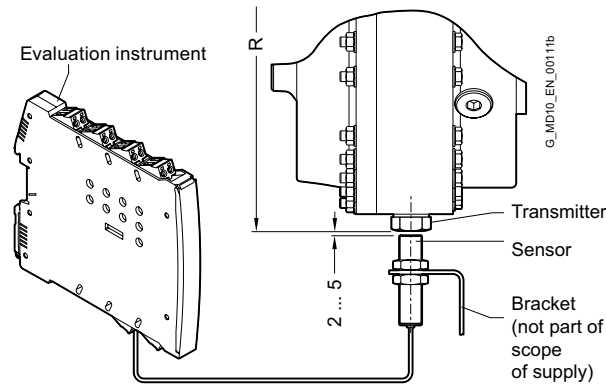
From coupling size 297, the thermal switching equipment can be used up to a peripheral speed of 50 m/s. At higher speeds, an EOC system should be provided.

# GENERAL

## EOC system

On the EOC system the temperature-dependent magnitude of the magnetic field of the EOC transmitter is measured and used for a switching pulse. The transmitter signal is transmitted via the fixed sensor to the evaluation instrument and there compared with the set value. If the signal does not exceed the minimum value or no signal is received, the relay of the evaluation instrument switches over. This can cause a malfunction message to be sent and the motor cut out. The coupling housing remains closed.

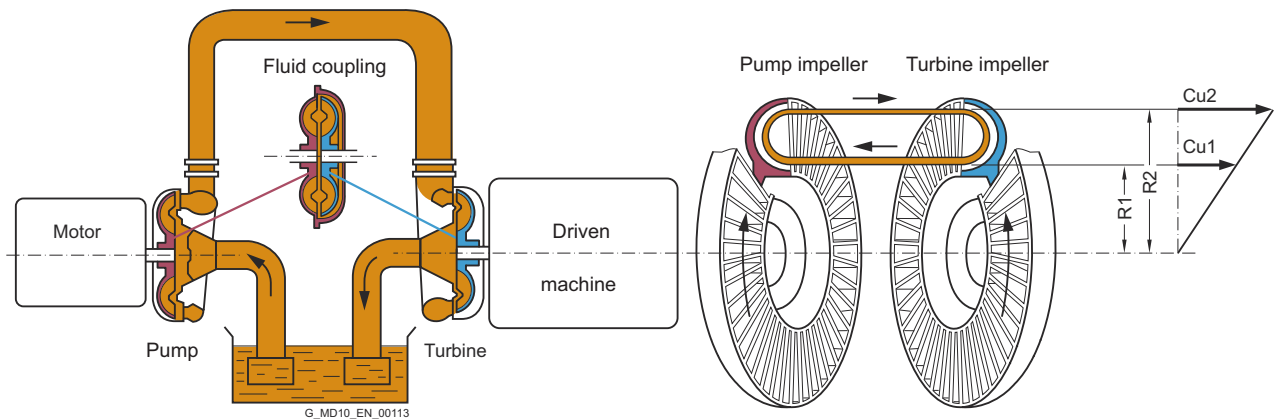
The fusible safety plug with a higher response temperature remains in the coupling for additional safety. The response temperature of the EOC system is 125 °C.



|                                             | Coupling size |     |     |     |     |     |     |     |     |     |     |     |     |
|---------------------------------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                                             | 297           | 342 | 370 | 395 | 425 | 450 | 490 | 516 | 565 | 590 | 655 | 755 | 887 |
| Radius of travel R to the transmitter in mm | 188           | 215 | 226 | 239 | 251 | 271 | 292 | 307 | 330 | 346 | 383 | 435 | 507 |

## Function

### Föttinger principle



Two opposing, radially bladed impellers are housed in a leakproof housing. The impellers are not mechanically connected to each other. Because of the axially parallel arranged blades, the torque is transmitted independently of the direction of rotation and solely by the oil filling.

Hydrodynamic couplings have the characteristic properties of fluid flow engines. The transmissible torque depends on the density and quantity of the operating fluid and increases as the square of the drive speed and the fifth power of the profile diameter denoting the coupling size. In the driven pump impeller, mechanical energy is converted into kinetic flow energy of the operating fluid. In the turbine impeller, which is connected to the output side, flow energy is converted back to mechanical energy.

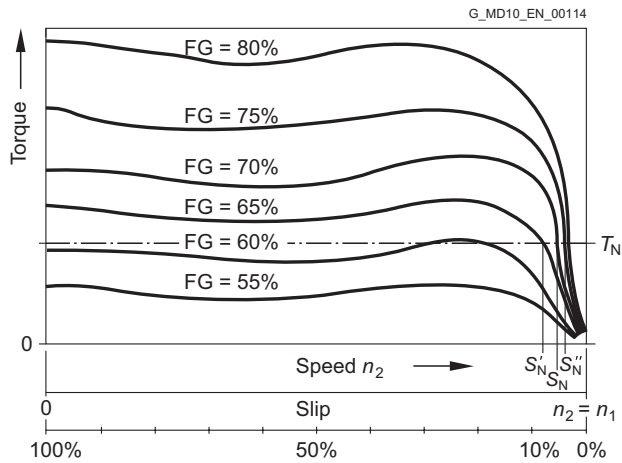
To generate the operating fluid circulation necessary for torque transmission, a difference in speed is necessary between the pump and turbine impellers. A centrifugal force pressure field is set up that is greater in the faster rotating pump impeller than in the turbine impeller. The difference in speed, usually termed "slip", at the continuous operating point of the coupling is between 2 % and 6 %, depending on application and coupling size. Immediately after drive motor start-up slip is 100 %, i.e. the pump impeller is driven at the speed of the motor, but the turbine impeller remains stationary.

Slip multiplied by the transmitted power represents the power loss of the coupling, which is converted into heat inside the oil filling. The amount of heat generated must be released into the environment via the coupling housing to prevent an impermissible temperature rise. The rated coupling output is mainly determined by the power loss which can be dissipated at a still acceptable operating temperature or a reasonable set slip limit. This distinguishes the FLUDEX coupling from all positively acting coupling assembly options for which the rated coupling torque is the defining characteristic.

Depending on the FLUDEX coupling series, drive is via the inner rotor (shaft/hollow shaft with rigidly connected blade wheel) or via the bladed housing impeller (blade wheel housing). The driving impeller is the pump impeller, and the driven impeller is the turbine impeller.

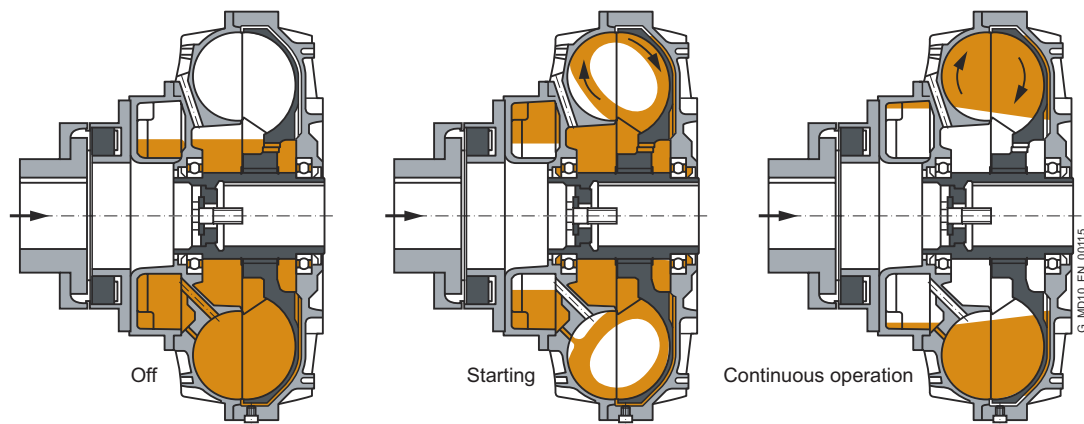
A low-viscosity mineral oil VG 22/VG 32, which also serves to lubricate the bearings, is used as fluid. In special types water, a water emulsion or low-flammability fluid may be used as a non-combustible fluid.

# GENERAL



The torque characteristic depends on the oil filling quantity FG in the coupling. This enables the transmissible torque on starting up to be set via the filling level. With a higher filling level the starting torque increases, while the operating slip and thus the coupling temperature rise decreases.

Conversely, with a lower filling level the starting torque decreases, the coupling becomes softer, while slip and coupling temperature rise.



Operation of the delay chamber

Starting torque can be reduced without increasing continuous operating slip by using a type of coupling with a delay chamber. On these couplings part of the oil filling is initially stored inactively in the delay chamber. The starting torque is considerably reduced because of the thus reduced starting filling in the working chamber of the coupling. The filling in the delay chamber runs very slowly,

mostly only at the finish of the starting operation, from the delay chamber into the working chamber, causing the active filling in it to rise gradually and the continuous operating slip to reach a value corresponding to the whole filling.

## Technical specifications

### Balancing FLUDEX couplings

In deviation from the balancing specifications in **Chapter E**, all FLUDEX couplings complying with DIN ISO 21940 are balanced to balancing quality G6.3 for 1800 rpm. For operating speeds higher than 1800 rpm micro-balancing, based on operating speed, can be requested.

Balancing is a two-level balancing with the specified oil quantity or a 75 % filling.

FLUDEX couplings are balanced in accordance with the half parallel key standard. Other balancing standards must be specified in the order.

Add-on couplings are subject to the standards as set out in **Chapter E**.

### Oil filling

FLUDEX couplings can be delivered with or without oil filling.

- Delivery without oil filling
- Delivery with oil filling
- Delivery without oil filling but with oil filling quantity specification in liters

### Hollow shafts of the FA, FG and FV series

Variant of FLUDEX hollow shafts only with finished bore.

### Operating temperature range of FLUDEX couplings

FLUDEX couplings are suitable for ambient temperatures of between -40 °C and +40 °C.

For use at temperatures below -15 °C, FLUDEX couplings are exclusively delivered with NBR seals (Perbunan).

For use at temperatures below -20 °C, FLUDEX couplings are generally delivered without oil filling.

To select the operating oil for low temperatures, ensure that the pour point of the oil is sufficiently low and that it is compatible with the sealing elements.

The temperature limits of the N-EUPEX add-on coupling are shown in part 7 of this catalogue.

If other displacement couplings are combined with a FLUDEX coupling, their respective temperature limits must be taken into account.

# GENERAL

## Operating conditions for FLUDEX couplings in potentially explosive atmospheres

The coupling with fusible safety plugs with identity marking  T3 is suitable for the operating conditions set out in the ATEX Directive 2014/34/EU:

### Equipment group II (above-ground applications)

Temperature class T3 of categories 2 and 3 for environments where there are potentially explosive gas, vapors, mist and air mixtures and for environments where dust can form potentially explosive atmospheres.

### Equipment group I (below-ground applications) of category M2

-  If used in potentially explosive environments under ground, aluminum couplings must be provided with a robust enclosure to preclude the risk of ignition caused by e.g. friction, impact or friction sparks. The deposit of heavy-metal oxides (rust) on the coupling housing must be prevented by the enclosure or other suitable means.
-  FLUDEX couplings can be delivered with fitted brake disk or V-belt pulley.  
Designing the belt drive or the brake disk to conform with the guidelines is the responsibility of the subassembly supplier. It should be noted that there is a risk from, amongst other things, electrostatic charges and hot surfaces.  
Under BGR 132 (regulations of German Institute for Occupational Safety) the use of V-belts in conjunction with IIC gases is not permitted.

## Axial retention

Axial retention is provided by a set screw or end washer with a retaining screw for shaft ends to DIN 748/1 long with a centering thread to DIN 332/2.

Bore and keyway width tolerances are specified in **Chapter A**.

Weights specified in the dimension order tables apply to maximum bore diameters without oil filling.

## Configuration

### Selection of FLUDEX coupling

In accordance with the requirements catalog various series, sizes and types of FLUDEX coupling are available. The FLUDEX coupling series is characterized by various flow chamber configurations, fitted delay chambers or fittings in the flow chamber. The types are determined by the design of the add-on coupling.

This results in different starting factors and characteristics which can be used for the most varied applications. The size is specified by stating the flow outside diameter.

When selecting, the series required for the application, taking into account the starting factor and the characteristic, must be selected.

### Selection of FLUDEX series

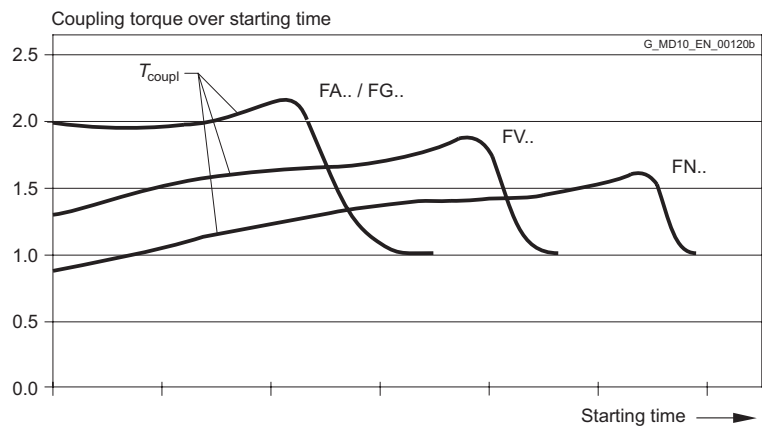
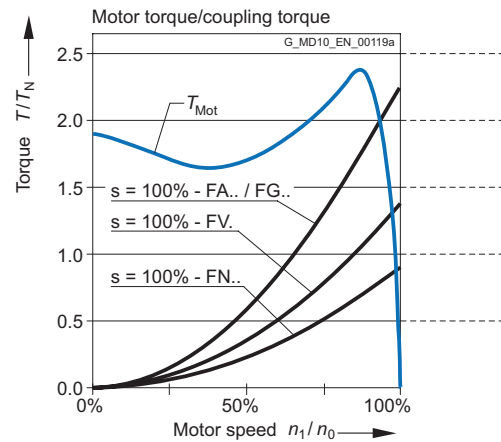
| Series    | Description                          |
|-----------|--------------------------------------|
| FA../FG.. | Basic coupling without delay chamber |
| FV..      | Coupling with delay chamber          |
| FN..      | Coupling with large delay chamber    |

FLUDEX couplings, which are to be used solely as an aid to starting the motor under no special conditions, can be selected according to the assignment tables from **Page 13/20** (for  $n = 1500 \text{ min}^{-1}$ ) or from **Page 13/24** (for  $n = 3000 \text{ min}^{-1}$ ).

If special requirements, based on the operating method of the prime mover or driven machine, are made of the coupling or the coupling is to be used in extreme environmental conditions, please give specific details in the enquiry or order. The form "Technical specifications for the selection of type and size" on **Page 13/19** can be used for this purpose.

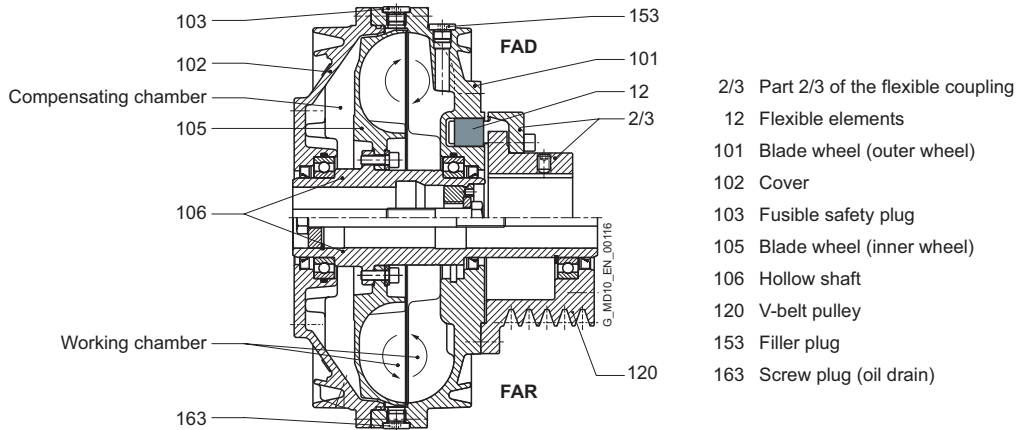
### Start-up characteristics during the starting process

Depending on the series selected, different starting characteristics arise during starting.



# GENERAL

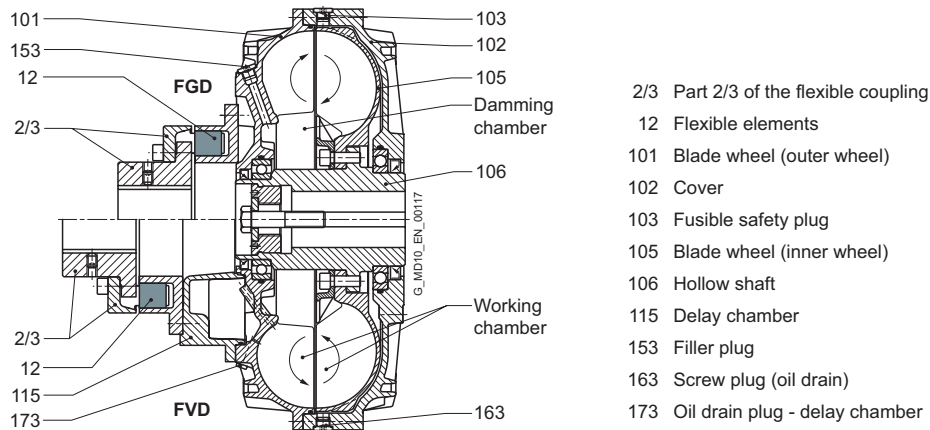
## FA series – drive via the hollow shaft (impeller drive)



FLUDEX FA series couplings are basic couplings (without delay chamber) which are driven via the hollow shaft (106) with attached blade wheel (105). This enables the advantages of the compensating chamber and the working chamber to be used to best effect. Combinations with brake drums/disks and pulleys can also be easily achieved. When the coupling is started, part of the oil filling in the area of greatest slip is forced into the radially inner chambers and the compensating chamber by the strong rotational flow. This causes the effective oil filling in the working

chamber to be reduced and the desired torque limitation (approx. twice TN) to be achieved during starting. By means of additional fittings the coupling torque at the start of the starting operation can be limited to approx. 1.5 times the rated value. During run-up to speed the compensating chamber again empties into the working chamber, and this helps to reduce slip.

## FG and FV series – drive via the housing



FLUDEX FG and FV series couplings are designed for drive via the coupling housing. In the FV series (coupling with delay chamber), the motor drives the coupling housing, comprising a blade wheel (101) and a cover (102), via the flexible N-EUPEX coupling (part 2/3) and the delay chamber (115). The rotational flow of the coupling filling drives the blade wheel (105) and the hollow shaft (106) on the output side, which is mounted on the gear unit or driven machine shaft. In the FG series (basic coupling), there is no delay chamber, and the flexible coupling is directly flange-mounted on the blade wheel.

When the coupling is started up, part of the oil filling is forced into the damming chamber. This enables the desired torque limitation (approx. twice  $T_N$ ) to be achieved during motor starting. In the FV series the delay chamber also receives part of the oil filling in accordance with the fluid level when the coupling is stationary. During starting the effective oil filling in the working chamber is reduced by the amount of fluid in the delay chamber, thus considerably reducing the starting torque (approx. 1.5 times  $T_N$ ).

From the delay chamber located on the drive side, the oil is fed back time-dependently to the working chamber via small holes and the coupling torque is raised, even if the output is blocked.

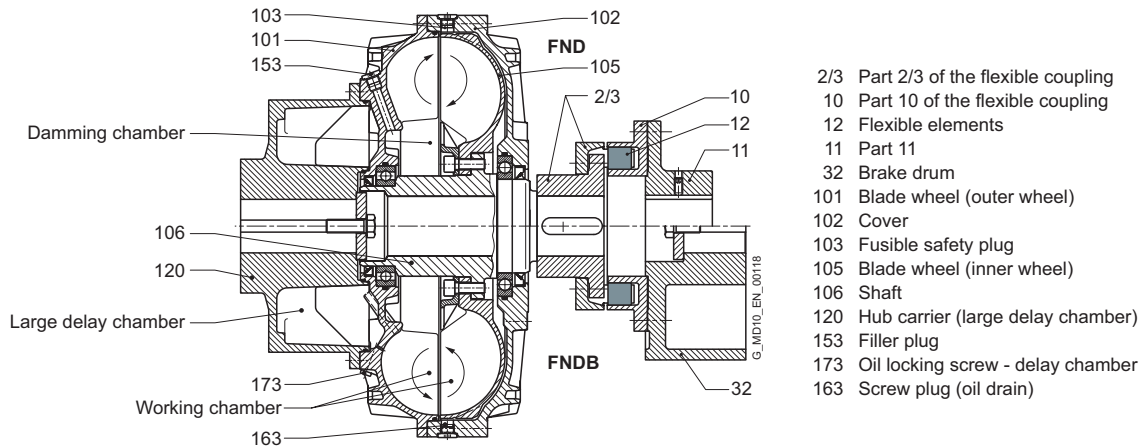
This replenishing function enables a drive to be soft-started with a very low starting torque and with an almost load-free motor. At the same time, however, increased load torques can be overcome by the torque increase in the coupling.

The property of the coupling with delay chamber can be used advantageously, for example, to soft-start empty, partly loaded and fully loaded conveyor belts.

FG series couplings are used for normal starting torque limitation, as a starting clutch for isolating vibration and for overload limitation in the event of drive blockage.

# GENERAL

## FN series – drive via the housing



FLUDEX FN series couplings have a larger delay chamber than the FV series. The delay chamber is designed as a hub carrier (120) and is mounted on the motor shaft. The hub carrier is flange-fitted to the housing (101, 102) of the FLUDEX coupling. Output is via the blade wheel (105) and the shaft (106) to the flexible N-EUPEX coupling connecting to the gear unit or driven machine. With types FND, FNDB and FNDS the coupling can be dismantled radially without moving the coupled machines.

The normally stronger motor shaft bears the weight of the hub carrier (cast version) and the main coupling. The gear unit shaft carries only the brake drum or disk and the output-side part of the flexible coupling. At the same time, the principle of the drive-side delay chamber with the capacity for increasing torque time-dependently is retained. FN couplings have the same fields of application as FV couplings. However, they offer special advantages in the brake disk design because of the weight distribution.

Because of the larger delay chamber, FN couplings enable even softer starting than FV couplings. Torque limitation during motor starting is approx. 1.3 times  $T_N$ . A further advantage of types FNDB and FNDS is the favorable weight distribution.

### Selection of FLUDEX type

Listed in the catalog are FLUDEX couplings with pulley, brake drum, brake disk and flexible N-EUPEX coupling.

Further types, e.g. in combination with a torsionally rigid steel membrane coupling of the ARPEX series or a highly flexible coupling of the ELPEX or ELPEX-S series, are available.

| Series | Description                                                                                                                                                                                                                                                                                                                                                                             | Type    | Add-on coupling | Characteristic feature                                                                                                                                                                                                    |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FA     | <ul style="list-style-type: none"> <li>without delay chamber</li> <li>impeller-driven</li> <li>Starting torque: <math>T_{\max} = 2,0 \cdot T_{\text{eff}}</math></li> <li>Starting aid for standard motors and torsional vibration isolation</li> </ul>                                                                                                                                 | FA0     | <b>Without</b>  | • Basic coupling with connecting flange                                                                                                                                                                                   |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FAR     | Without         | • with attached pulley                                                                                                                                                                                                    |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FAD     | N-EUPEX D       | • enables change of flexible elements without axial displacement of the machine                                                                                                                                           |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FAE     | N-EUPEX E       | • enables larger bores on the output side                                                                                                                                                                                 |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FAM     | N-EUPEX M       | • enables a short fitting length                                                                                                                                                                                          |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FADB    | N-EUPEX D       | • with brake drum                                                                                                                                                                                                         |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FADS SB | N-EUPEX D       | • with brake disk for stopping brakes<br>• enables change of flexible elements without axial displacement of the machine                                                                                                  |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FADS HB | N-EUPEX D       | • with brake disk for blocking brakes<br>• enables change of flexible elements without axial displacement of the machine                                                                                                  |
| FG     | <ul style="list-style-type: none"> <li>without delay chamber</li> <li>Housing-driven</li> <li>Starting torque: <math>T_{\max} = 2,0 \cdot T_{\text{eff}}</math></li> <li>Starting aid for standard motors, for torsional vibration isolation and for overload limitation in the event of drive blockage.</li> </ul>                                                                     | FG0     | <b>Without</b>  | • Basic coupling with connecting flange                                                                                                                                                                                   |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FGD     | N-EUPEX D       | • enables change of flexible elements without axial displacement of the machine                                                                                                                                           |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FG E    | N-EUPEX E       | • enables larger bores on the output side                                                                                                                                                                                 |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FGM     | N-EUPEX M       | • enables a short fitting length                                                                                                                                                                                          |
| FV     | <ul style="list-style-type: none"> <li>with delay chamber</li> <li>Housing-driven</li> <li>Starting torque: <math>T_{\max} = 1,5 \cdot T_{\text{eff}}</math></li> <li>Starting aid for motors and soft-starting of conveyor equipment</li> </ul>                                                                                                                                        | FV0     | <b>Without</b>  | • Coupling with connecting flange                                                                                                                                                                                         |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FVD     | N-EUPEX D       | • enables change of flexible elements without axial displacement of the machine                                                                                                                                           |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FVE     | N-EUPEX E       | • enables larger bores on the output side                                                                                                                                                                                 |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FVM     | N-EUPEX M       | • enables a short fitting length                                                                                                                                                                                          |
| FN     | <ul style="list-style-type: none"> <li>with large delay chamber</li> <li>Housing drive via hub carrier</li> <li>Starting torque: <math>T_{\max} = 1,3 \cdot T_{\text{eff}}</math></li> <li>Starting aid for motors with very unfavorable characteristic and soft-starting of empty and full conveying equipment</li> <li>favorable weight distribution on brake-drum variant</li> </ul> | FNO     | <b>Without</b>  | • Coupling with connecting shaft                                                                                                                                                                                          |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FNA     | N-EUPEX A       | • enables a short fitting length<br>• enables change of flexible elements without axial displacement of the machine                                                                                                       |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FND     | N-EUPEX D       | • enables change of flexible elements without axial displacement of the machine<br>• enables fitting and dismantling of the coupling without displacement of the coupled machine                                          |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FNDB    | N-EUPEX D       | • with brake drum<br>• enables change of flexible elements without axial displacement of the machine<br>• enables fitting and dismantling of the coupling without displacement of the coupled machine                     |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FNDS SB | N-EUPEX D       | • with brake disk for stopping brakes<br>• enables change of flexible elements without axial displacement of the machine<br>• enables fitting and dismantling of the coupling without displacement of the coupled machine |
|        |                                                                                                                                                                                                                                                                                                                                                                                         | FNDS HB | N-EUPEX D       | • with brake disk for blocking brakes<br>• enables change of flexible elements without axial displacement of the machine<br>• enables fitting and dismantling of the coupling without displacement of the coupled machine |

The maximum shaft misalignments permissible for an N-EUPEX add-on coupling are shown in **catalog FLE 10.2**. For greater shaft misalignments FLUDEX couplings can be combined with cardan shafts or other displacement couplings.

FLUDEX couplings designed specifically for operation with water/water emulsion are available for use in mining applications.

# GENERAL

## Selection of FLUDEX size

The FLUDEX size is determined by the output to be transmitted in comparison with the rated outputs listed in the following tables. No application factors or additional safety factors need be taken into consideration.

The rated outputs stated in the tables normally require the maximum permissible filling (80 % to 85 %) of the coupling and because of operating slip, lead to the coupling heating up by approx. 50 °C relative to the ambient (cooling air) temperature. With lower outputs, coupling heating will be proportionately lower.

If for continuous operation of the coupling an absolute temperature (ambient temperature + coupling heating) of >85 °C is expected, the coupling must be fitted with FPM seals and 160 °C fusible safety plugs.

When selecting the size of a FLUDEX coupling in ATEX design or for operation with water/water emulsion, please note that these versions are normally designed with fusible safety plugs 110 °C and the maximum permitted coupling temperature must be limited to 85 °C.

| FA series                |     |     |      |      |      |      |      |      |      |      |      |      |      | FLUDEX size |
|--------------------------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|-------------|
| Speed in rpm             |     |     |      |      |      |      |      |      |      |      |      |      |      |             |
| 600                      | 740 | 890 | 980  | 1180 | 1350 | 1470 | 1600 | 1770 | 2000 | 2300 | 2600 | 2950 | 3550 |             |
| Rated output $P_N$ in kW |     |     |      |      |      |      |      |      |      |      |      |      |      |             |
|                          | 1.2 | 1.6 | 2.8  | 4.2  | 5.5  | 6.9  | 8.7  | 11.7 | 15   | 19   | 24   | 33   | 222  |             |
| 1.2                      | 2.3 | 4   | 5.5  | 9    | 14   | 18.5 | 23   | 29   | 37   | 48   | 60   | 70   | 90   | 297         |
| 2.6                      | 4.8 | 8.7 | 11.5 | 18   | 27   | 34   | 40   | 51   | 65   | 82   | 97   | 120  | 145  | 342         |
| 5.7                      | 10  | 16  | 21   | 36   | 49   | 61   | 74   | 87   | 105  | 135  | 165  | 180  |      | 395         |
| 11                       | 21  | 32  | 41   | 65   | 90   | 110  | 127  | 155  | 190  | 230  | 290  | 370  |      | 450         |
| 19                       | 36  | 60  | 75   | 115  | 154  | 190  | 215  | 260  | 310  | 395  |      |      |      | 516         |
| 37                       | 69  | 109 | 134  | 200  | 260  | 320  | 360  | 435  | 540  |      |      |      |      | 590         |

| FG, FV and FN series     |     |      |      |      |      |      |      |      |      |      |      |      |      | FLUDEX size        |
|--------------------------|-----|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|
| Speed in rpm             |     |      |      |      |      |      |      |      |      |      |      |      |      |                    |
| 600                      | 740 | 890  | 980  | 1180 | 1350 | 1470 | 1600 | 1770 | 2000 | 2300 | 2600 | 2950 | 3550 |                    |
| Rated output $P_N$ in kW |     |      |      |      |      |      |      |      |      |      |      |      |      |                    |
| 4                        | 7.5 | 12   | 16   | 26   | 38   | 48   | 61   | 85   | 110  | 140  | 170  | 220  | 290  | 370                |
| 7.5                      | 15  | 23   | 30   | 48   | 70   | 90   | 115  | 140  | 175  | 220  | 280  | 340  |      | 425                |
| 15                       | 30  | 45   | 58   | 95   | 140  | 180  | 210  | 245  | 300  | 380  | 480  |      |      | 490                |
| 28                       | 55  | 85   | 110  | 180  | 255  | 300  | 350  | 420  | 525  | 660  |      |      |      | 565                |
| 55                       | 110 | 170  | 220  | 350  | 450  | 520  | 600  | 730  | 900  |      |      |      |      | 655                |
| 110                      | 210 | 330  | 440  | 600  | 760  | 870  | 1010 | 1220 |      |      |      |      |      | 755                |
| 240                      | 440 | 700  | 810  | 1130 | 1440 | 1660 |      |      |      |      |      |      |      | 887                |
| 480                      | 880 | 1400 | 1600 | 2000 | 2350 | 2500 |      |      |      |      |      |      |      | 887D <sup>1)</sup> |

<sup>1)</sup> D = Multi-pass version on request.

## Mass moments of inertia

| FA series   |                                 |                                  |                                  |                                  |                                  |                                   |                                      |                                      |                      |
|-------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------------------|--------------------------------------|--------------------------------------|----------------------|
| FLUDEX size | Series                          | Types                            |                                  |                                  |                                  |                                   |                                      |                                      | Oil filling quantity |
|             | FA<br>$J_I$<br>kgm <sup>2</sup> | FAO<br>$J_A$<br>kgm <sup>2</sup> | FAD<br>$J_A$<br>kgm <sup>2</sup> | FAE<br>$J_A$<br>kgm <sup>2</sup> | FAM<br>$J_A$<br>kgm <sup>2</sup> | FADB<br>$J_A$<br>kgm <sup>2</sup> | FADS SB<br>$J_A$<br>kgm <sup>2</sup> | FADS HB<br>$J_A$<br>kgm <sup>2</sup> | max.<br>l            |
| 222         | 0.014                           | 0.056                            | 0.061                            | 0.061                            | 0.06                             | 0.084                             | 0.287                                | 0.109                                | 1.55                 |
| 297         | 0.04                            | 0.173                            | 0.193                            | 0.193                            | 0.193                            | 0.226                             | 0.673                                | 0.246                                | 3.7                  |
| 342         | 0.092                           | 0.314                            | 0.356                            | 0.352                            | 0.353                            | 0.469                             | 1.002                                | 0.42                                 | 6.6                  |
| 395         | 0.203                           | 0.66                             | 0.745                            | 0.73                             | –                                | 1.03                              | 1.814                                | 1.15                                 | 9.5                  |
| 450         | 0.404                           | 1.087                            | 1.217                            | 1.217                            | –                                | 1.497                             | 3.611                                | 1.818                                | 13.4                 |
| 516         | 0.896                           | 2.109                            | 2.439                            | –                                | –                                | 3.359                             | 5.969                                | 3.238                                | 22.7                 |
| 590         | 1.295                           | 3.455                            | 3.785                            | –                                | –                                | 6.605                             | 7.315                                | 4.584                                | 33                   |

| FAR series  |                                    |                        |                      |                             |
|-------------|------------------------------------|------------------------|----------------------|-----------------------------|
| FLUDEX size |                                    |                        |                      | Oil filling quantity max. l |
|             | $J_I$ kgm <sup>2</sup>             | $J_A$ kgm <sup>2</sup> |                      |                             |
| 222         | 0.014                              | 2 · SPZ 100<br>0.062   | 3 · SPZ 160<br>0.071 | 1.55                        |
| 297         | 0.107                              | 5 · SPZ 150<br>0.202   | 4 · SPA 190<br>0.235 | 5 · SPA 224<br>0.273<br>3.7 |
| 342         | 0.095                              | 5 · SPA 180<br>0.386   |                      | 6.6                         |
| 395         | 5 · SPB = 0,214<br>7 · SPB = 0,210 | 5 · SPB 224<br>0.84    | 7 · SPB 236<br>0.96  | 7 · SPB 280<br>1.144<br>9.5 |
| 450         | 0.426                              | 8 · SPB 250<br>1.467   |                      | 13.4                        |
| 516         | 0.946                              | 10 · SPB 315<br>3.209  |                      | 22.7                        |
| 590         | 1.375                              | 12 · SPC 315<br>4.955  |                      | 33                          |

| FG/FV series |                                 |                                 |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                                  |                      |                 |
|--------------|---------------------------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------|-----------------|
| FLUDEX size  | Series                          |                                 | Types                            |                                  |                                  |                                  |                                  |                                  |                                  |                                  | Oil filling quantity |                 |
|              | FG<br>$J_I$<br>kgm <sup>2</sup> | FV<br>$J_I$<br>kgm <sup>2</sup> | FGO<br>$J_A$<br>kgm <sup>2</sup> | FVO<br>$J_A$<br>kgm <sup>2</sup> | FGD<br>$J_A$<br>kgm <sup>2</sup> | FVD<br>$J_A$<br>kgm <sup>2</sup> | FGE<br>$J_A$<br>kgm <sup>2</sup> | FVE<br>$J_A$<br>kgm <sup>2</sup> | FGM<br>$J_A$<br>kgm <sup>2</sup> | FVM<br>$J_A$<br>kgm <sup>2</sup> | FG<br>max.<br>l      | FV<br>max.<br>l |
| 370          | 0.191                           | 0.191                           | 0.519                            | 0.551                            | 0.571                            | 0.603                            | 0.571                            | 0.603                            | 0.571                            | 0.603                            | 7.2                  | 8               |
| 425          | 0.342                           | 0.342                           | 0.819                            | 0.876                            | 0.989                            | 1.046                            | 0.974                            | 1.031                            | 0.963                            | 1.02                             | 11                   | 12              |
| 490          | 0.723                           | 0.723                           | 1.992                            | 2.11                             | 2.312                            | 2.43                             | 2.272                            | 2.39                             | 2.264                            | 2.382                            | 17                   | 18.5            |
| 565          | 1.269                           | 1.269                           | 3.216                            | 3.441                            | 3.696                            | 3.921                            | 3.636                            | 3.861                            | 3.616                            | 3.841                            | 25.5                 | 28              |
| 655          | 2.567                           | 2.567                           | 7.287                            | 7.757                            | 8.687                            | 9.157                            | –                                | –                                | –                                | –                                | 40                   | 44              |
| 755          | 4.856                           | 4.856                           | 12.575                           | 13.291                           | 14.775                           | 15.491                           | –                                | –                                | –                                | –                                | 59                   | 65              |
| 887          | 11.817                          | 11.817                          | 26.832                           | 28.212                           | 30.102                           | 31.482                           | –                                | –                                | –                                | –                                | 98                   | 107             |

## Note

- Mass moments of inertia  $J$  (including the power-transmitting oil filling components) apply to maximum bores

$J_I$  Mass moment of inertia of the inner rotor (hollow shaft [106] + blade wheel [105]) in kgm<sup>2</sup>

$J_A$  Mass moment of inertia of the outer housing (shell [101] + cover [102]) + any parts of the add-on coupling connected to them) in kgm<sup>2</sup>

# GENERAL

| FN series   |                  |                                 |                                  |                                  |                                  |                                      |                                      |         |            |                      |
|-------------|------------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------------|--------------------------------------|---------|------------|----------------------|
| FLUDEX size | Hub carrier part | Series                          | Types                            |                                  |                                  |                                      |                                      | Weights |            | Oil filling quantity |
|             |                  | FN<br>$J_A$<br>kgm <sup>2</sup> | FNO<br>$J_I$<br>kgm <sup>2</sup> | FNA<br>$J_I$<br>kgm <sup>2</sup> | FND<br>$J_I$<br>kgm <sup>2</sup> | FNDS SB<br>$J_I$<br>kgm <sup>2</sup> | FNDS HB<br>$J_I$<br>kgm <sup>2</sup> | Y<br>mm | $F_Y$<br>N | max.<br>l            |
| 370         | Standard         | 0.657                           | 0.237                            | 0.281                            | 0.32                             | 1.18                                 | 0.386                                | 197     | 685        | 8.2                  |
|             | Long             | 0.647                           |                                  |                                  |                                  |                                      |                                      | 227     |            |                      |
| 425         | Standard         | 1.107                           | 0.343                            | 0.47                             | 0.491                            | 1.841                                | 0.659                                | 224     | 970        | 12.5                 |
|             | Long             | 1.102                           |                                  |                                  |                                  |                                      |                                      | 254     |            |                      |
| 490         | Standard         | 2.48                            | 0.737                            | 0.954                            | 0.999                            | 3.009                                | 1.285                                | 235     | 1450       | 19                   |
|             | Long             | 2.474                           |                                  |                                  |                                  |                                      |                                      | 265     |            |                      |
| 565         | Standard         | 4.175                           | 1.364                            | 1.715                            | 1.835                            | 5.075                                | 2.081                                | 278     | 2050       | 29                   |
|             | Long             | 4.251                           |                                  |                                  |                                  |                                      |                                      | 318     |            |                      |
| 655         | Standard         | 9.319                           | 2.567                            | 3.587                            | 3.777                            | 6.777                                | 4.701                                | 330     | 3100       | 45                   |
|             | Long             | 9.523                           |                                  |                                  |                                  |                                      |                                      | 370     |            |                      |
| 755         | Standard         | 15.616                          | 4.91                             | 6.878                            | 7.198                            | 12.078                               | 9.689                                | 352     | 4300       | 67                   |
|             | Long             | 15.95                           |                                  |                                  |                                  |                                      |                                      | 392     |            |                      |
| 887         | Standard         | 33.662                          | 11.832                           | 15.132                           | 16.632                           | 24.03                                | 20.428                               | 406     | 7250       | 110                  |
|             | Long             | 34.462                          |                                  |                                  |                                  |                                      |                                      | 456     |            |                      |

| Type FNDB   |                  |            |                        |                        |          |         |                             |
|-------------|------------------|------------|------------------------|------------------------|----------|---------|-----------------------------|
| FLUDEX size | Hub carrier part | Brake drum |                        |                        | Weights  |         | Oil filling quantity max. l |
|             |                  | ØDBT · BBT | $J_A$ kgm <sup>2</sup> | $J_I$ kgm <sup>2</sup> | $F_Y$ mm | $F_Y$ N |                             |
| 370         | Standard         | Ø315 · 118 | 0.657                  | 0.64                   | 197      | 685     | 8.2                         |
|             |                  | Ø400 · 150 |                        | 1.341                  |          |         |                             |
|             | Long             | Ø315 · 118 | 0.647                  | 0.64                   | 227      |         |                             |
|             |                  | Ø400 · 150 |                        | 1.341                  |          |         |                             |
| 425         | Standard         | Ø315 · 118 | 1.107                  | 0.811                  | 224      | 970     | 12.5                        |
|             |                  | Ø400 · 150 |                        | 1.492                  |          |         |                             |
|             | Long             | Ø315 · 118 | 1.102                  | 0.811                  | 254      |         |                             |
|             |                  | Ø400 · 150 |                        | 1.492                  |          |         |                             |
| 490         | Standard         | Ø400 · 150 | 2.48                   | 1.994                  | 235      | 1450    | 19                          |
|             |                  | Ø500 · 190 |                        | 4.009                  |          |         |                             |
|             | Long             | Ø400 · 150 | 2.474                  | 1.994                  | 265      |         |                             |
|             |                  | Ø500 · 190 |                        | 4.009                  |          |         |                             |
| 565         | Standard         | Ø400 · 150 | 4.175                  | 2.835                  | 278      | 2050    | 29                          |
|             |                  | Ø500 · 190 |                        | 4.775                  |          |         |                             |
|             | Long             | Ø400 · 150 | 4.251                  | 2.835                  | 318      |         |                             |
|             |                  | Ø500 · 190 |                        | 4.775                  |          |         |                             |
| 655         | Standard         | Ø500 · 190 | 9.319                  | 6.677                  | 330      | 3100    | 45                          |
|             |                  | Ø630 · 236 |                        | 11.577                 |          |         |                             |
|             | Long             | Ø500 · 190 | 9.523                  | 6.677                  | 370      |         |                             |
|             |                  | Ø630 · 236 |                        | 11.577                 |          |         |                             |
| 755         | Standard         | Ø630 · 236 | 15.616                 | 15.178                 | 352      | 4300    | 67                          |
|             | Long             |            | 15.95                  |                        | 392      |         |                             |
| 887         | Standard         | Ø710 · 265 | 33.662                 | 30.832                 | 406      | 7250    | 110                         |
|             | Long             |            | 34.462                 |                        | 456      |         |                             |

## Note

- Mass moments of inertia  $J$  (including the power-transmitting oil filling components) apply to maximum bores

$J_I$  Mass moment of inertia of the inner rotor (shaft [106] + blade wheel [105]) + any parts of the add-on coupling connected to them in kgm<sup>2</sup>

$J_A$  Mass moment of inertia of the outer housing (shell [101] + cover [102]) + hub carrier [120] in kgm<sup>2</sup>

Y Centroidal distance of the drive-side coupling masses, measured from the hub end face of the hub carrier.

$F_Y$  Effective weight in mass center including maximum oil filling quantity

## Technical data for type selection

Please complete as far as possible and return to your Flender Sales Office.

### 1. Intended use of coupling

- ☐ As starting aid ☐ For overload protection ☐ For torsional vibration isolation

### 2. Data for prime mover

- 2.1 ☐ Electric motor ☐ Characteristic enclosed  
 Power rating  $P_1 =$  ..... kW at speed  $n_1 =$  ..... rpm  
 Starting: ☐ Direct ☐ Star delta ☐ Other: .....  
 Motor shaft: Ø ..... · Length ..... mm
- 2.2 ☐ Internal-combustion engine Number of cylinders: .....  
 Planned max. power rating: ..... kW at ..... rpm  
 operating range min. power rating: ..... kW at ..... rpm  
☐ Attachment via shaft Ø ..... · Length ..... mm ☐ Attachment to flywheel SAE .....  
☐ Motor rigidly ☐ Motor flexibly installed on foundation/base frame

### 3. Data for driven machine

- 3.1 Type of driven machine: .....  
 3.2 Required power rating  $P_2$ : ..... kW at  $n_2 =$  ..... rpm  
 3.3 Mass moment of inertia  $J =$  ..... kgm<sup>2</sup> (based on  $n_2$ )  
 3.4 Operational cycle: ☐ uniform operation ☐ non uniform operation  
 3.4.1. Starting frequency min.: ☐ 1 x / day ☐ 1 x / week ☐ 1 x / month ☐ Continuous operation (min. 2 months without stopping)  
 Starting frequency max.: ☐ < 3 x in succession Number in succession: .....  
☐ < 5 x / hour Number per hour: .....  
 3.4.2. Duty cycle per operational cycle: ☐ 60 - 100% ☐ ED = ..... %  
 3.4.3. Dimensions of the gear unit/machine shaft on the coupling side Ø ..... · Length ..... mm

### 4. Ambient conditions

- 4.1 Place of installation: ☐ < 1000 m a.s.l. ☐ ..... m a.s.l.  
☐ out of doors ☐ in narrow space ☐ other: .....  
 4.2 Temperature of the ambient air (cooling air): min. .... °C max. .... °C  
 4.3 ☐ Fitting into guard ☐ bell housing  
 Holes: ☐ with large (well ventilated) ☐ with small (less well ventilated)  
☐ without holes: ☐ with forced ventilation ☐ without forced ventilation  
 4.4 Environment: ☐ normally dusty ☐ extremely dusty ☐ abrasively dusty  
☐ aggressive atmosphere: .....  
 4.5 Use in potentially explosive atmospheres  
☐ in conformity with ATEX: II 2G Ex h IIB T3 Gb X / II 2D Ex h IIIC T160 °C Db X / I M2 Ex h Mb X  
☐ other class: .....

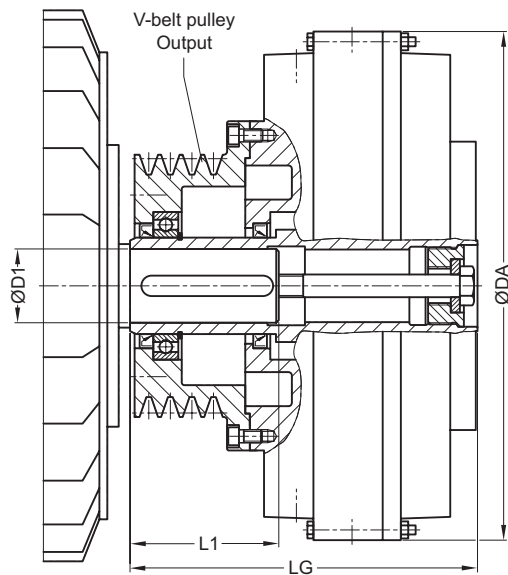
### 5. Arrangement of coupling

- 5.1 ☐ horizontal ☐ at an angle (max 20°) ☐ vertical: motor overhead ☐ vertical: motor underneath
- 5.2 between: and:  
 Motor ☐ Driven machine  
 Gear unit ( $n_1 =$  ..... rpm) ☐ Gear unit  
 Transmission/belt drives ☐ Transmission/belt drives

# FLUDEX COUPLING AS AN AID FOR STARTING THE IEC MOTORS

Speed  $n = 1500 \text{ rpm}$ , Type FAR with fitted V-belt pulley

This assignment offers safety in normal load cases and includes standard types with 140 °C fusible safety plugs, for horizontal fitting and an ambient air temperature from -40 °C to +40 °C.



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| Three-phase motor |                        |         | FLUDEX coupling |             |     |     | V-belt pulley       |                   |                             | ➤ Article no. <sup>1)</sup> | Weight<br><br><i>m</i><br><br>kg |                    |
|-------------------|------------------------|---------|-----------------|-------------|-----|-----|---------------------|-------------------|-----------------------------|-----------------------------|----------------------------------|--------------------|
| Size              | 1500 min <sup>-1</sup> |         | Size            | Oil filling |     |     | Profile,<br>pitch Ø | Chamfer<br>number | Recommended<br>no. of belts |                             |                                  |                    |
|                   | <i>P<sub>M</sub></i>   | D1 · L1 |                 |             | DA  | LG  |                     |                   |                             |                             |                                  |                    |
|                   | kW                     | mm      |                 | l           | mm  | mm  | mm                  |                   |                             |                             |                                  |                    |
| 80 M              | 0.55                   | 19 · 40 | 222             | 0.9         | 263 | 153 | SPZ 100             | 2                 | 1                           | 2LC0900-0AF90-0AA0          | 12                               |                    |
|                   | 0.75                   | 19 · 40 |                 | 1           |     |     | SPZ 100             | 2                 | 1                           |                             |                                  |                    |
| 90 S              | 1.1                    | 24 · 50 |                 | 1.1         |     |     | SPZ 100             | 2                 | 1                           |                             |                                  | 2LC0900-0AF90-0AA0 |
| 90 L              | 1.5                    | 24 · 50 |                 | 1.2         |     |     | SPZ 100             | 2                 | 1                           | 2LC0900-0AF90-0AA0          |                                  |                    |
| 100 L             | 2.2                    | 28 · 60 |                 | 1.4         |     |     | SPZ 100             | 2                 | 2                           | 2LC0900-0AF90-0AA0          |                                  |                    |
|                   | 3                      | 28 · 60 |                 | 1.5         |     |     | SPZ 100             | 2                 | 2                           |                             |                                  |                    |
| 112 M             | 4                      | 28 · 60 |                 | 1.55        |     |     | SPZ 160             | 3                 | 2                           | 2LC0900-0AF91-0AA0          |                                  | 14                 |
| 132 S             | 5.5                    | 38 · 80 |                 | 1.55        |     |     | SPZ 160             | 3                 | 2                           | 2LC0900-0AF91-0AA0          |                                  |                    |

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

- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

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

<sup>2)</sup> Flank-open belts required.

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

| Three-phase motor |                            |               | FLUDEX coupling |             |     |     | V-belt pulley       |                   |                             | Article no. <sup>1)</sup> | Weight<br><i>m</i><br>kg |
|-------------------|----------------------------|---------------|-----------------|-------------|-----|-----|---------------------|-------------------|-----------------------------|---------------------------|--------------------------|
| Size              | 1500 min <sup>-1</sup>     |               | Size            | Oil filling | DA  | LG  | Profile,<br>pitch Ø | Chamfer<br>number | Recommended<br>no. of belts |                           |                          |
|                   | <i>P<sub>M</sub></i><br>kW | D1 · L1<br>mm |                 | l           | mm  | mm  | mm                  |                   |                             |                           |                          |
| 132 M             | 7.5                        | 38 · 80       | 297             | 3.2         | 340 | 226 | SPZ 150             | 5                 | 3                           | 2LC0900-1AF90-0AA0        | 27                       |
| 160 M             | 11                         | 42 · 110      |                 | 3.5         |     |     | SPZ 150             | 5                 | 4                           | 2LC0900-1AF90-0AA0        |                          |
| 160 L             | 15                         | 42 · 110      |                 | 3.7         |     |     | SPZ 150             | 5                 | 5                           | 2LC0900-1AF90-0AA0        |                          |
| 180 M             | 18.5                       | 48 · 110      | 342             | 3.7         | 400 | 278 | SPA 190             | 4                 | 4                           | 2LC0900-1AF91-0AA0        | 32                       |
| 180 L             | 22                         | 48 · 110      |                 | 5.5         |     |     | SPA 180             | 5                 | 5                           | 2LC0900-2AF90-0AA0        |                          |
| 200 L             | 30                         | 55 · 110      |                 | 6           |     |     | SPA 180             | 5                 | 5 <sup>2)</sup>             | 2LC0900-2AF90-0AA0        |                          |
| 225 S             | 37                         | 60 · 140      | 395             | 7.6         | 448 | 325 | SPB 224             | 5                 | 5                           | 2LC0900-3AF90-0AA0        | 63                       |
| 225 M             | 45                         | 60 · 140      |                 | 7.9         |     |     | SPB 224             | 5                 | 5                           | 2LC0900-3AF90-0AA0        |                          |
| 250 M             | 55                         | 65 · 140      |                 | 8.4         |     |     | SPB 224             | 5                 | 5 <sup>2)</sup>             | 2LC0900-3AF90-0AA0        |                          |
| 280 S             | 75                         | 75 · 140      | 450             | 10.8        | 512 | 410 | SPB 250             | 8                 | 7                           | 2LC0900-4AF90-0AA0        | 94                       |
| 280 M             | 90                         | 75 · 140      |                 | 11.3        |     |     | SPB 250             | 8                 | 8                           | 2LC0900-4AF90-0AA0        |                          |
| 315 S             | 110                        | 80 · 170      |                 | 12          |     |     | SPB 250             | 8                 | 8 <sup>2)</sup>             | 2LC0900-4AF90-0AA0        |                          |
| 315 M             | 132                        | 80 · 170      | 516             | 17.7        | 584 | 491 | SPB 315             | 10                | 10                          | 2LC0900-5AF90-0AA0        | 152                      |
|                   | 160                        | 80 · 170      |                 | 18.6        |     |     | SPB 315             | 10                | 10 <sup>2)</sup>            |                           |                          |

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

- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

### Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C
- Axial retention is provided by a set screw and/or end washer with a retaining screw for shaft ends to DIN 748/1 long with a centering thread to DIN 332/2.
- For mass moments of inertia, centroidal distance Y and weight FY, see Page 13/18.

### Ordering example

- Drive with motor 200 L, 30 kW at 1470 rpm with starting clutch and pulley
- FLUDEX FAR 342 coupling, standard type
- Hollow shaft: Bore ØD1 = 55H7 with keyway to DIN 6885/1 and retaining screw, with pulley 5xSPA Ø180.

Article no. delivery without oil filling:

2LC0900-2AF90-0AA0-Z L1D

Article no. delivery with oil filling:

2LC0900-1AF90-0AA0-Z L1D+F16+Y90

Plain text to Y90: 6.0 l

Article no. delivery with specification of oil filling quantity:

2LC0900-1AF90-0AA0-Z L1D+Y90

Plain text to Y90: 6.0 l

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

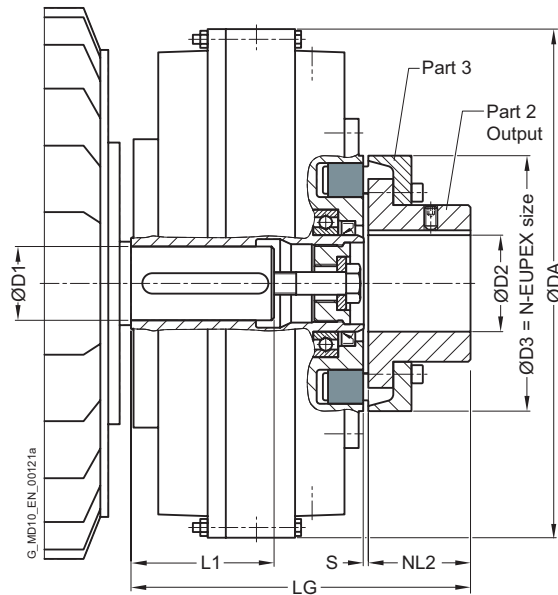
<sup>2)</sup> Flank-open belts required.

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

# FLUDEX COUPLING AS AN AID FOR STARTING THE IEC MOTORS

Speed  $n = 1500 \text{ rpm}$ , Type FAD with N-EUPEX D add-on coupling

This assignment offers safety in normal load cases and includes standard types with  $140^\circ\text{C}$  fusible safety plugs, for horizontal fitting and an ambient air temperature from  $-40^\circ\text{C}$  to  $+40^\circ\text{C}$ .



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| Three-phase motor<br>Size | 1500 min <sup>-1</sup> |               | FLUDEX coupling<br>Size | Oil filling | DA  | LG  | N-EUPEX D add-on coupling |     |                                | Article no. <sup>1)</sup> | Weight<br><i>m</i><br>kg |
|---------------------------|------------------------|---------------|-------------------------|-------------|-----|-----|---------------------------|-----|--------------------------------|---------------------------|--------------------------|
|                           | $P_M$<br>kW            | D1 · L1<br>mm |                         |             |     |     | NL2                       | D3  | D2 <sup>2)</sup><br>max.<br>mm |                           |                          |
| 80 M                      | 0.55                   | 19 · 40       | 222                     | 0.9         | 263 | 180 | 40                        | 110 | 45                             | 2LC0900-0AA9              | 12                       |
|                           | 0.75                   | 19 · 40       |                         | 1           |     |     |                           |     |                                | 2LC0900-0AA9              |                          |
| 90 S                      | 1.1                    | 24 · 50       |                         | 1.1         |     |     |                           |     |                                | 2LC0900-0AA9              |                          |
| 90 L                      | 1.5                    | 24 · 50       |                         | 1.2         |     |     |                           |     |                                | 2LC0900-0AA9              |                          |
| 100 L                     | 2.2                    | 28 · 60       |                         | 1.4         |     |     |                           |     |                                | 2LC0900-0AA9              |                          |
|                           | 3                      | 28 · 60       |                         | 1.5         |     |     |                           |     |                                | 2LC0900-0AA9              |                          |
| 112 M                     | 4                      | 28 · 60       |                         | 1.55        |     |     |                           |     |                                | 2LC0900-0AA9              |                          |
| 132 S                     | 5.5                    | 38 · 80       |                         | 1.55        |     |     |                           |     |                                | 2LC0900-0AA9              |                          |

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

- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

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

<sup>2)</sup> Larger bores on the power takeoff side are possible with the FAE type.

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

| Three-phase motor |                                                      |               | FLUDEX coupling |                  |          |          | N-EUPEX D add-on coupling |          |                                | Article no. <sup>1)</sup> | Weight<br><i>m</i><br>kg |
|-------------------|------------------------------------------------------|---------------|-----------------|------------------|----------|----------|---------------------------|----------|--------------------------------|---------------------------|--------------------------|
| Size              | 1500 min <sup>-1</sup><br><i>P<sub>M</sub></i><br>kW | D1 · L1<br>mm | Size            | Oil filling<br>l | DA<br>mm | LG<br>mm | NL2<br>mm                 | D3<br>mm | D2 <sup>2)</sup><br>max.<br>mm |                           |                          |
| 132 M             | 7.5                                                  | 38 · 80       | 297             | 3.2              | 340      | 233      | 50                        | 125      | 55                             | 2LC0900-1AA9              | 24                       |
| 160 M             | 11                                                   | 42 · 110      |                 | 3.5              |          |          |                           |          |                                | 2LC0900-1AA9              |                          |
| 160 L             | 15                                                   | 42 · 110      |                 | 3.7              |          |          |                           |          |                                | 2LC0900-1AA9              |                          |
| 180 M             | 18.5                                                 | 48 · 110      |                 | 3.7              |          |          |                           |          |                                | 2LC0900-1AA9              |                          |
| 180 L             | 22                                                   | 48 · 110      | 342             | 5.5              | 400      | 271      | 55                        | 140      | 60                             | 2LC0900-2AA9              | 34                       |
| 200 L             | 30                                                   | 55 · 110      |                 | 6                |          |          |                           |          |                                | 2LC0900-2AA9              |                          |
| 225 S             | 37                                                   | 60 · 140      | 395             | 7.6              | 448      | 299      | 90                        | 225      | 100                            | 2LC0900-3AA9              | 53                       |
| 225 M             | 45                                                   | 60 · 140      |                 | 7.9              |          |          |                           |          |                                | 2LC0900-3AA9              |                          |
| 250 M             | 55                                                   | 65 · 140      | 450             | 8.4              | 512      | 338      | 100                       | 250      | 115                            | 2LC0900-4AA9              | 70                       |
| 280 S             | 75                                                   | 75 · 140      |                 | 10.8             |          |          |                           |          |                                | 2LC0900-4AA9              |                          |
| 280 M             | 90                                                   | 75 · 140      |                 | 11.3             |          |          |                           |          |                                | 2LC0900-4AA9              |                          |
| 315 S             | 110                                                  | 80 · 170      |                 | 12               |          |          |                           |          |                                | 2LC0900-4AA9              |                          |
| 315 M             | 132                                                  | 80 · 170      | 516             | 17.7             | 584      | 398      | 125                       | 315      | 145                            | 2LC0900-5AA9              | 113                      |
|                   | 160                                                  | 80 · 170      |                 | 18.6             |          |          |                           |          |                                |                           |                          |

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

- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

### Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C
- Axial retention is provided by a set screw and/or end washer with a retaining screw for shaft ends to DIN 748/1 long with a centering thread to DIN 332/2.
- For mass moments of inertia, centroidal distance Y and weight FY, see **Page 13/18**.

### Ordering example

- Drive with motor 250 M, 55 kW at 1470 rpm with starting clutch for connecting two shafts.
- FLUDEX FAD 395 coupling, standard type
- Hollow shaft: Bore ØD1 = 65H7 with keyway to DIN 6885/1 and retaining screw
- Part 2: Bore ØD2 = 45H7 with keyway to DIN 6885/1 and set screw

Article no. delivery without oil filling:  
2LC0900-3AA99-0AA0-Z L1F+M1A

Article no. delivery with oil filling:  
2LC0900-3AA99-0AA0-Z L1F+M1A+F16+Y90  
Plain text to Y90: 8.4 l

Article no. delivery with specification of oil filling quantity:  
2LC0900-3AA99-0AA0-Z L1F+M1A+Y90  
Plain text to Y90: 8.4 l

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

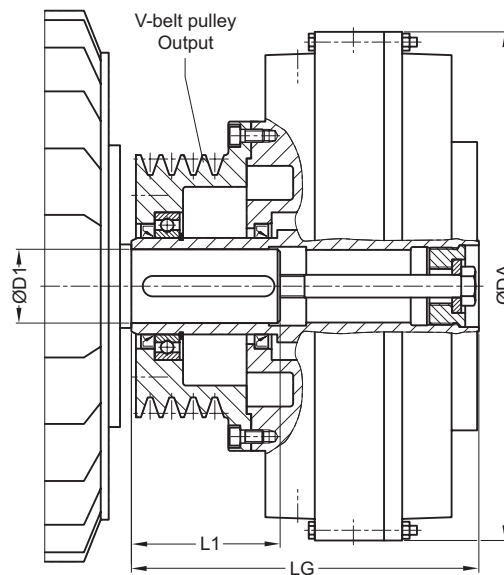
<sup>2)</sup> Larger bores on the power takeoff side are possible with the FAE type.

➤ For online configuration on **flender.com**, click on the item no.

# FLUDEX COUPLING AS AN AID FOR STARTING THE IEC MOTORS

Speed  $n = 3000 \text{ rpm}$ , Type FAR with fitted V-belt pulley

This assignment offers safety in normal load cases and includes standard types with  $140^\circ\text{C}$  fusible safety plugs, for horizontal fitting and an ambient air temperature from  $-40^\circ\text{C}$  to  $+40^\circ\text{C}$ .



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| Three-phase motor |                            |                        | FLUDEX coupling |             |     |     | V-belt pulley       |                   |                             | Article no. <sup>1)</sup> | Weight<br><i>m</i><br>kg |
|-------------------|----------------------------|------------------------|-----------------|-------------|-----|-----|---------------------|-------------------|-----------------------------|---------------------------|--------------------------|
| Size              | 3000 min <sup>-1</sup>     |                        | Size            | Oil filling | DA  | LG  | Profile,<br>pitch Ø | Chamfer<br>number | Recommended<br>no. of belts |                           |                          |
|                   | <i>P<sub>M</sub></i><br>kW | D1 · L1<br>mm          |                 | l           | mm  | mm  | mm                  |                   |                             |                           |                          |
| 90 S              | 1.5                        | 24 · 50                | 222             | 0.7         | 263 | 153 | SPZ 100             | 2                 | 1                           | 2LC0900-0AF90-0AA0        | 12                       |
| 90 L              | 2.2                        | 24 · 50                |                 | 0.8         |     |     | SPZ 100             | 2                 | 1                           |                           |                          |
| 100 L             | 3                          | 28 · 60                |                 | 0.9         |     |     | SPZ 100             | 2                 | 1                           | 2LC0900-0AF90-0AA0        |                          |
| 112 M             | 4                          | 28 · 60                |                 | 1           |     |     | SPZ 100             | 2                 | 2                           | 2LC0900-0AF90-0AA0        |                          |
| 132 S             | 5.5                        | 38 · 80                |                 | 1           |     |     | SPZ 100             | 2                 | 2                           | 2LC0900-0AF90-0AA0        |                          |
|                   | 7.5                        | 38 · 80                |                 | 1.1         |     |     | SPZ 160             | 3                 | 2                           | 2LC0900-0AF91-0AA0        |                          |
| 160 M             | 11                         | 42 <sup>3)</sup> · 110 |                 | 1.2         |     |     | SPZ 160             | 3                 | 2                           | 2LC0900-0AF91-0AA0        | 14                       |
|                   | 15                         | 42 <sup>3)</sup> · 110 |                 | 1.3         |     |     | SPZ 160             | 3                 | 3                           |                           |                          |
| 160 L             | 18.5                       | 42 <sup>3)</sup> · 110 |                 | 1.4         |     |     | SPZ 160             | 3                 | 3                           | 2LC0900-0AF91-0AA0        |                          |

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

- Delivery without oil filling
- Delivery with oil filling with specification of oil filling quantity in l
- Delivery without oil filling with oil filling quantity specification in l

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

<sup>2)</sup> Flank-open belts required.

<sup>3)</sup> Version with flat groove as per DIN 6885/3.

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

| Three-phase motor |                                                      |                        | FLUDEX coupling |                  |          |          | V-belt pulley             |                   |                             | Article no. <sup>1)</sup> | Weight<br><i>m</i><br>kg |
|-------------------|------------------------------------------------------|------------------------|-----------------|------------------|----------|----------|---------------------------|-------------------|-----------------------------|---------------------------|--------------------------|
| Size              | 3000 min <sup>-1</sup><br><i>P<sub>M</sub></i><br>kW | D1 · L1<br>mm          | Size            | Oil filling<br>l | DA<br>mm | LG<br>mm | Profile,<br>pitch Ø<br>mm | Chamfer<br>number | Recommended<br>no. of belts |                           |                          |
| 180 M             | 22                                                   | 48 · 110               | 297             | 2.5              | 340      | 226      | SPZ 150                   | 5                 | 4                           | 2LC0900-1AF90-0AA0        | 27                       |
| 200 L             | 30                                                   | 55 · 110               |                 | 2.7              |          |          | SPZ 150                   | 5                 | 5                           | 2LC0900-1AF90-0AA0        |                          |
|                   | 37                                                   | 55 · 110               |                 | 2.8              |          |          | SPA 190                   | 4                 | 4                           | 2LC0900-1AF91-0AA0        | 32                       |
| 225 M             | 45                                                   | 55 · 110               |                 | 2.9              |          |          | SPA 224                   | 5                 | 4                           | 2LC0900-1AF92-0AA0        | 35                       |
| 250 M             | 55                                                   | 60 <sup>3)</sup> · 140 | 395             | 3.1              | 448      | 363.5    | SPA 224                   | 5                 | 5                           | 2LC0900-1AF92-0AA0        |                          |
| 280 S             | 75                                                   | 65 · 140               |                 | 5.3              |          |          | SPB 236                   | 7                 | 5                           | 2LC0900-3AF91-0AA0        | 70                       |
| 280 M             | 90                                                   | 65 · 140               |                 | 5.6              |          |          | SPB 236                   | 7                 | 6                           | 2LC0900-3AF91-0AA0        |                          |
| 315 S             | 110                                                  | 65 · 140               |                 | 5.9              |          |          | SPB 236                   | 7                 | 7                           | 2LC0900-3AF91-0AA0        |                          |
| 315 M             | 132                                                  | 65 · 140               |                 | 6.2              |          |          | SPB 236                   | 7                 | 7 <sup>2)</sup>             | 2LC0900-3AF91-0AA0        |                          |
| 315 L             | 160                                                  | 65 · 140               |                 | 6.8              |          |          | SPB 280                   | 7                 | 7 <sup>2)</sup>             | 2LC0900-3AF92-0AA0        | 83                       |

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

- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

### Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C
- Axial retention is provided by a set screw and/or end washer with a retaining screw for shaft ends to DIN 748/1 long with a centering thread to DIN 332/2.
- For mass moments of inertia, centroidal distance Y and weight FY, see **Page 13/18**.

### Ordering example

- Drive with motor 200 L, 37 kW at 2950 rpm with starting clutch and pulley
- FLUDEX FAR 297 coupling, standard type
- Hollow shaft: Bore ØD1 = 55H7 with keyway to DIN 6885/1 and retaining screw, with pulley 4xSPA Ø190.

Article no. delivery without oil filling:  
2LC0900-1AF91-0AA0-Z L1D+W03+Y95

Plain text to Y95: G=6.3;n=3000rpm

Article no. delivery with oil filling:  
2LC0900-1AF91-0AA0-Z L1D+F16+W03+Y90+Y95

Plain text to Y90: 2.8 l

Plain text to Y95: G=6.3;n=3000rpm

Article no. delivery with specification of oil filling quantity:

2LC0900-1AF91-0AA0-Z L1D+W03+Y90+Y95

Plain text to Y90: 2.8 l

Plain text to Y95: G=6.3;n=3000rpm

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

<sup>2)</sup> Flank-open belts required.

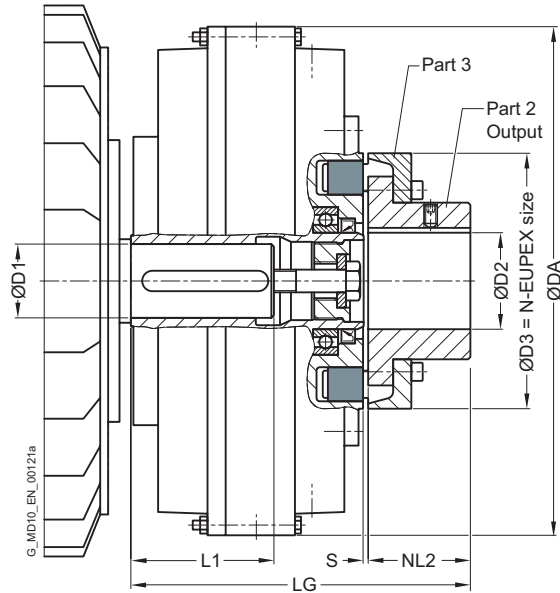
<sup>3)</sup> Version with flat groove as per DIN 6885/3.

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

# FLUDEX COUPLING AS AN AID FOR STARTING THE IEC MOTORS

Speed  $n = 3000$  rpm, Type FAD with N-EUPEX D add-on coupling

This assignment offers safety in normal load cases and includes standard types with 140 °C fusible safety plugs, for horizontal fitting and an ambient air temperature from -40 °C to +40 °C.



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| Three-phase motor |                                                      |                        | FLUDEX coupling |                  |          |          | N-EUPEX D add-on coupling |          |                                | Article no. <sup>1)</sup> | Weight<br><i>m</i><br>kg |
|-------------------|------------------------------------------------------|------------------------|-----------------|------------------|----------|----------|---------------------------|----------|--------------------------------|---------------------------|--------------------------|
| Size              | 3000 min <sup>-1</sup><br><i>P<sub>M</sub></i><br>kW | D1 · L1<br>mm          | Size            | Oil filling<br>l | DA<br>mm | LG<br>mm | NL2<br>mm                 | D3<br>mm | D2 <sup>2)</sup><br>max.<br>mm |                           |                          |
| 90 S              | 1.5                                                  | 24 · 50                | 222             | 0.7              | 263      | 180      | 40                        | 110      | 45                             | 2LC0900-0AA9              | 12                       |
| 90 L              | 2.2                                                  | 24 · 50                |                 | 0.8              |          |          |                           |          |                                | 2LC0900-0AA9              |                          |
| 100 L             | 3                                                    | 28 · 60                |                 | 0.9              |          |          |                           |          |                                | 2LC0900-0AA9              |                          |
| 112 M             | 4                                                    | 28 · 60                |                 | 1                |          |          |                           |          |                                | 2LC0900-0AA9              |                          |
| 132 S             | 5.5                                                  | 38 · 80                |                 | 1                |          |          |                           |          |                                | 2LC0900-0AA9              |                          |
|                   | 7.5                                                  | 38 · 80                |                 | 1.1              |          |          |                           |          |                                | 2LC0900-0AA9              |                          |
| 160 M             | 11                                                   | 42 <sup>3)</sup> · 110 |                 | 1.2              |          |          |                           |          |                                | 2LC0900-0AA9              |                          |
|                   | 15                                                   | 42 <sup>3)</sup> · 110 |                 | 1.3              |          |          |                           |          |                                | 2LC0900-0AA9              |                          |
| 160 L             | 18.5                                                 | 42 <sup>3)</sup> · 110 |                 | 1.4              |          |          |                           |          |                                | 2LC0900-0AA9              |                          |

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

- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

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

<sup>2)</sup> Larger bores on the power takeoff side are possible with the FAE type.

<sup>3)</sup> Version with flat groove as per DIN 6885/3.

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

| Three-phase motor |                                                      |                        | FLUDEX coupling |                         |          |          | N-EUPEX D add-on coupling |          |                                | Article no. <sup>1)</sup> | Weight<br><i>m</i><br>kg |
|-------------------|------------------------------------------------------|------------------------|-----------------|-------------------------|----------|----------|---------------------------|----------|--------------------------------|---------------------------|--------------------------|
| Size              | 3000 min <sup>-1</sup><br><i>P<sub>M</sub></i><br>kW | D1 · L1<br>mm          | Size            | Oil filling<br><i>l</i> | DA<br>mm | LG<br>mm | NL2<br>mm                 | D3<br>mm | D2 <sup>2)</sup><br>max.<br>mm |                           |                          |
| 180 M             | 22                                                   | 48 · 110               | 297             | 2.5                     | 340      | 233      | 50                        | 125      | 55                             | 2LC0900-1AA9              | 24                       |
| 200 L             | 30                                                   | 55 · 110               |                 | 2.7                     |          |          |                           |          |                                | 2LC0900-1AA9              |                          |
| 200 L             | 37                                                   | 55 · 110               |                 | 2.8                     |          |          |                           |          |                                | 2LC0900-1AA9              |                          |
| 225 M             | 45                                                   | 55 · 110               |                 | 2.9                     |          |          |                           |          |                                | 2LC0900-1AA9              |                          |
| 250 M             | 55                                                   | 60 <sup>3)</sup> · 140 |                 | 3.1                     |          |          |                           |          |                                | 2LC0900-1AA9              |                          |
| 280 S             | 75                                                   | 65 · 140               | 395             | 5.3                     | 448      | 299      | 90                        | 225      | 100                            | 2LC0900-3AA9              | 53                       |
| 280 M             | 90                                                   | 65 · 140               |                 | 5.6                     |          |          |                           |          |                                | 2LC0900-3AA9              |                          |
| 315 S             | 110                                                  | 65 · 140               |                 | 5.9                     |          |          |                           |          |                                | 2LC0900-3AA9              |                          |
| 315 M             | 132                                                  | 65 · 140               |                 | 6.2                     |          |          |                           |          |                                | 2LC0900-3AA9              |                          |
| 315 L             | 160                                                  | 65 · 140               |                 | 6.8                     |          |          |                           |          |                                | 2LC0900-3AA9              |                          |

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

- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

### Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C
- Axial retention is provided by a set screw and/or end washer with a retaining screw for shaft ends to DIN 748/1 long with a centering thread to DIN 332/2.
- For mass moments of inertia, centroidal distance Y and weight FY, see Page 13/18.

### Ordering example

- Drive with motor 280 M, 90 kW at 2950 rpm with starting clutch for connecting two shafts.
- FLUDEX FAD 395 coupling, standard type
- Hollow shaft: Bore ØD1 = 65H7 with keyway to DIN 6885/1 and retaining screw
- Part 2: Bore ØD2 = 60H7 with keyway to DIN 6885/1 and set screw

Article no. delivery without oil filling:

2LC0900-3AA99-0AA0-Z L1F+M1E+W03+Y95

Plain text to Y95: G=6.3;n=3000rpm

Article no. delivery with oil filling:

2LC0900-3AA99-0AA0-Z L1F+M1E+F16+W03+Y90+Y95

Plain text to Y90: 5.6 l

Plain text to Y95: G=6.3;n=3000rpm

Article no. delivery with specification of oil filling quantity:

2LC0900-3AA99-0AA0-Z L1F+M1E+W03+Y90+Y95

Plain text to Y90: 5.6 l

Plain text to Y95: G=6.3;n=3000rpm

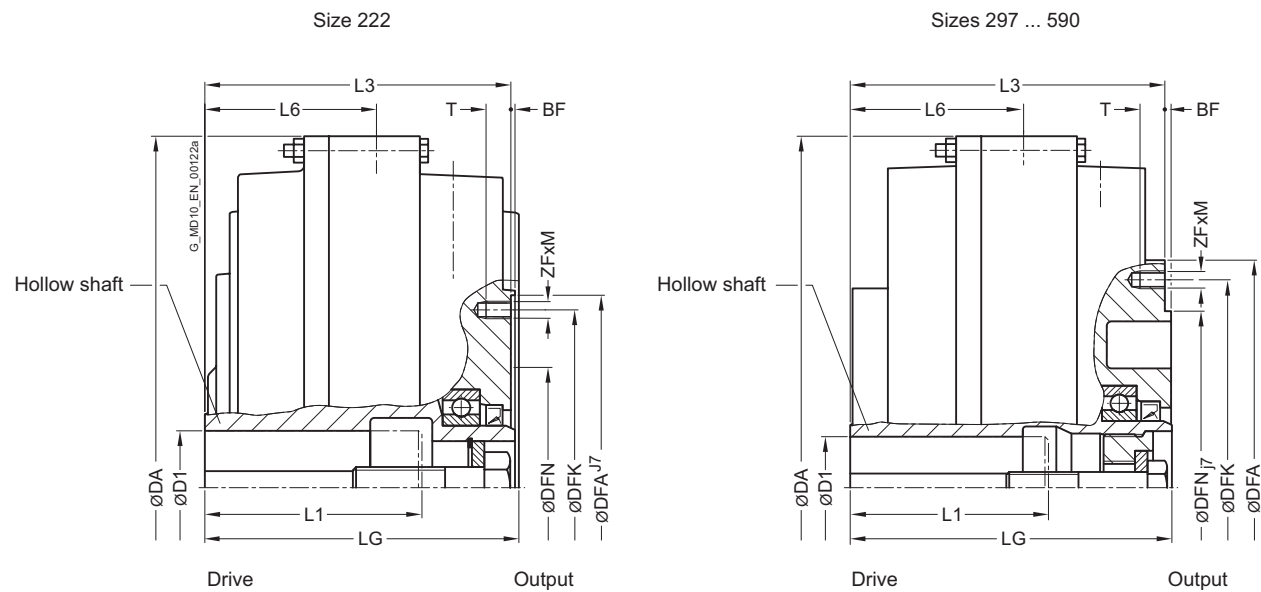
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](https://www.flender.com).

<sup>2)</sup> Larger bores on the power takeoff side are possible with the FAE type.

<sup>3)</sup> Version with flat groove as per DIN 6885/3.

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

TYPE FAO



| Size | Maximum speed | FLUDEX coupling installation dimensions         |                                                 |                   |         |     |       |       |     | Flange connection dimensions |     |     |        |         |      | Tightening torque for screws in thread ZF x M<br>$T_A$ | ➤ Article no. <sup>1)</sup> | Weight |     |
|------|---------------|-------------------------------------------------|-------------------------------------------------|-------------------|---------|-----|-------|-------|-----|------------------------------|-----|-----|--------|---------|------|--------------------------------------------------------|-----------------------------|--------|-----|
|      | $n_{Kmax}$    | D1<br>Keyway to DIN 6885                        |                                                 |                   | L1      | DA  | L3    | L6    | L6  | DFN                          | DFA | BF  | DFK    | ZF · M  | T    |                                                        |                             |        | $m$ |
|      | rpm           | min. mm                                         | max. mm                                         | Preferred bore mm | max. mm | mm  | mm    | mm    | mm  | mm                           | mm  | mm  | mm     | mm      | mm   |                                                        |                             | Nm     |     |
|      |               |                                                 |                                                 |                   |         |     |       |       |     |                              |     |     |        |         |      |                                                        |                             |        |     |
| 222  | 3600          |                                                 | 38                                              | 28                | 80      | 263 | 110   | 58    | 112 | 90                           | 144 | 2   | 128    | 6 · M8  | 12   | 18.7                                                   | 2LC0900-0AG90-0AA0          | 10     |     |
|      |               |                                                 | <sup>&gt;38<sup>2)</sup></sup> 42 <sup>2)</sup> |                   |         |     |       |       |     |                              |     |     |        |         |      |                                                        |                             |        |     |
| 297  | 3600          |                                                 |                                                 |                   | 80      |     |       |       |     |                              |     |     |        |         |      |                                                        |                             |        |     |
|      |               | <sup>&gt;38</sup> 55                            | 42                                              | 110               | 340     | 145 | 83    | 150   | 125 | 195                          | 3   | 172 | 6 · M8 | 12      | 18.7 | 2LC0900-1AG90-0AA0                                     | 18                          |        |     |
|      |               | <sup>&gt;55<sup>2)</sup></sup> 60 <sup>2)</sup> |                                                 | 110               |         |     |       |       |     |                              |     |     |        |         |      |                                                        |                             |        |     |
| 342  | 3600          |                                                 | 55                                              | 48 + 55           | 110     | 400 | 174   | 101   | 180 | 140                          | 230 | 4   | 205    | 8 · M10 | 15   | 31                                                     | 2LC0900-2AG90-0AA0          | 26     |     |
|      |               | <sup>&gt;55<sup>2)</sup></sup> 60 <sup>2)</sup> |                                                 | 120               |         |     |       |       |     |                              |     |     |        |         |      |                                                        |                             |        |     |
| 395  | 3000          |                                                 | 65                                              | 60 + 65           | 140     | 448 | 200.5 | 110.5 | 205 | 225                          | 290 | 4   | 265    | 8 · M12 | 18   | 54                                                     | 2LC0900-3AG90-0AA0          | 40     |     |

Configurable variants <sup>1)</sup>

- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

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

<sup>2)</sup> Version with flat groove as per DIN 6885/3.

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

| Size | Maxi-<br>mum<br>speed | FLUDEX coupling installation dimensions |      |                     |      |     |     |     |     | Flange connection dimensions |     |    |     |         |    | Tightening<br>torque for<br>screws in<br>thread ZF x M<br>$T_A$ | ↗ Article no. <sup>1)</sup> | Weight |     |
|------|-----------------------|-----------------------------------------|------|---------------------|------|-----|-----|-----|-----|------------------------------|-----|----|-----|---------|----|-----------------------------------------------------------------|-----------------------------|--------|-----|
|      | $n_{Kmax}$            | D1<br>Keyway to DIN 6885                |      |                     | L1   | DA  | L3  | L6  | LG  | DFN                          | DFA | BF | DFK | ZF · M  | T  |                                                                 |                             |        | $m$ |
|      |                       | min.                                    | max. | Prefer-<br>red bore | max. |     |     |     |     |                              |     |    |     |         |    |                                                                 |                             |        |     |
|      |                       | mm                                      | mm   | mm                  | mm   | mm  | mm  | mm  | mm  | mm                           | mm  | mm | mm  | mm      | mm |                                                                 |                             | Nm     |     |
| 450  | 3000                  |                                         | 75   | 65 + 75             | 140  | 512 | 228 | 126 | 233 | 250                          | 310 | 4  | 285 | 8 · M12 | 18 | 54                                                              | 2LC0900-4AG90-0AA0          | 53     |     |
|      |                       | >75                                     | 80   |                     | 170  |     |     |     |     |                              |     |    |     |         |    |                                                                 |                             |        |     |
| 516  | 2300                  |                                         | 55   |                     | 140  | 584 | 263 | 147 | 270 | 315                          | 390 | 5  | 360 | 8 · M16 | 24 | 135                                                             | 2LC0900-5AG90-0AA0          | 84     |     |
|      |                       | >55                                     | 90   | 80                  | 170  |     |     |     |     |                              |     |    |     |         |    |                                                                 |                             |        |     |
| 590  | 2000                  |                                         | 75   |                     | 140  | 662 | 298 | 166 | 305 | 315                          | 390 | 5  | 360 | 8 · M16 | 24 | 135                                                             | 2LC0900-6AG90-0AA0          | 109    |     |
|      |                       | >75                                     | 95   |                     | 170  |     |     |     |     |                              |     |    |     |         |    |                                                                 |                             |        |     |
|      |                       | >95                                     | 100  |                     | 210  |     |     |     |     |                              |     |    |     |         |    |                                                                 |                             |        |     |

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

- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

### Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C
- For mass moments of inertia, centroidal distance Y and weight FY, see **Page 13/18**.

### Ordering example

- Motor 37 kW,  $P_{eff} = 30$  kW,  $n_1 = 1470$  rpm, maximum output torque:  $T_{max} = 2.0 \cdot T_{eff}$
- FLUDEX FAO coupling size 342
- Hollow shaft: Bore  $\varnothing D1 = 60H7$  mm with keyway to DIN 6885/3 and retaining screw
- Seal set FPM
- Specification of oil filling quantity: 6.0 l (see **Page 13/9**)

Article no. with 160 °C fuse:

2LC0900-2AG90-0AA0-Z L1E+F08+Y90

Plain text to Y90: 6.0 l

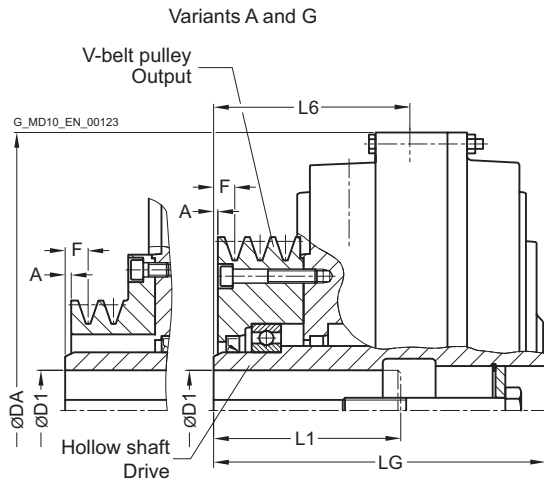
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on **flender.com**.

<sup>2)</sup> Version with flat groove as per DIN 6885/3.

➤ For online configuration on **flender.com**, click on the item no.

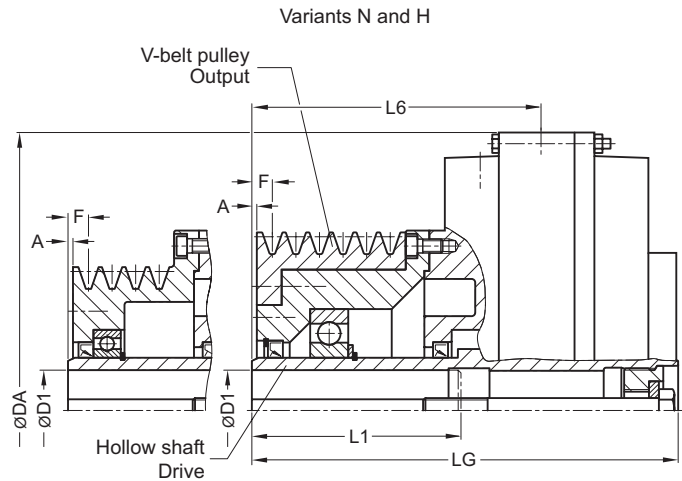
# TYPE FAR

with attached v-belt pulley



Variant A

Variant G



Variant N

Variant H

| Size | Maximum speed<br><br>$n_{Kmax}$<br><br>rpm | FLUDEX coupling          |                  |                |     |       |       |         | V-belt pulley       |                   |                    |    | Article no. <sup>1)</sup> | Weight<br><br>$m$<br><br>kg |                    |    |
|------|--------------------------------------------|--------------------------|------------------|----------------|-----|-------|-------|---------|---------------------|-------------------|--------------------|----|---------------------------|-----------------------------|--------------------|----|
|      |                                            | D1<br>Keyway to DIN 6885 |                  |                | L1  | DA    | L6    | LG      | Profile,<br>pitch Ø | Chamfer<br>number |                    |    |                           |                             | Type               |    |
|      |                                            | min.                     | max.             | Preferred bore |     |       |       |         |                     |                   |                    |    |                           |                             |                    |    |
|      |                                            | mm                       | mm               | mm             | mm  | mm    | mm    | mm      | mm                  |                   |                    | mm |                           |                             | mm                 |    |
| 222  | 3600                                       | 28                       | 28               | 60             | 263 | 95    | 153   | SPZ 100 | 2                   | 1                 | 9                  | A  | 2LC0900-0AF90-0AA0        | 12                          |                    |    |
|      |                                            | >28                      | 38               | 105            |     |       |       | SPZ 160 | 3                   |                   |                    | G  | 2LC0900-0AF91-0AA0        | 14                          |                    |    |
|      |                                            | >38 <sup>2)</sup>        | 42 <sup>2)</sup> | 110            |     |       |       |         |                     |                   |                    |    |                           |                             |                    |    |
| 297  | 3600                                       | 38                       |                  | 80             | 340 | 143   | 226   | SPZ 150 | 5                   | 2                 | 10                 | N  | 2LC0900-1AF90-0AA0        | 27                          |                    |    |
|      |                                            | >38                      | 55               | 42             |     |       |       | 110     | SPA 190             |                   |                    | 4  | 0                         | H                           | 2LC0900-1AF91-0AA0 | 32 |
|      |                                            | >55 <sup>2)</sup>        | 59 <sup>2)</sup> | 110            |     |       |       | SPA 224 | 5                   |                   |                    | 0  | G                         | 2LC0900-1AF92-0AA0          | 35                 |    |
|      |                                            | >59 <sup>2)</sup>        | 60 <sup>2)</sup> | 140            |     |       |       |         |                     |                   |                    |    |                           |                             |                    |    |
| 342  | 3600                                       | 55                       | 55               | 110            | 400 | 177   | 278   | SPA 180 | 5                   | 4                 | 14                 | N  | 2LC0900-2AF90-0AA0        | 40                          |                    |    |
| 395  | 3000                                       | 55                       |                  | 110            | 448 | 214.5 | 325   | SPB 224 | 5                   | 4                 | 16.5               | N  | 2LC0900-3AF90-0AA0        | 63                          |                    |    |
|      | >55                                        | 65                       | 60 + 65          | 140            |     |       |       |         |                     |                   |                    |    |                           |                             |                    |    |
|      | 3000                                       | 55                       |                  | 110            | 448 | 253   | 363.5 | SPB 236 | 7                   |                   |                    | N  | 2LC0900-3AF91-0AA0        | 70                          |                    |    |
| 2700 | >55                                        | 75                       |                  | 140            |     |       |       | SPB 280 | 7                   | H                 | 2LC0900-3AF92-0AA0 | 83 |                           |                             |                    |    |

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

- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

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

<sup>2)</sup> Version with flat groove as per DIN 6885/3.

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

| Size | Maximum speed | FLUDEX coupling          |                   |         |     |     |     |     | V-belt pulley    |                |      |      | ➤ Article no. <sup>1)</sup> | Weight             |      |
|------|---------------|--------------------------|-------------------|---------|-----|-----|-----|-----|------------------|----------------|------|------|-----------------------------|--------------------|------|
|      |               | D1<br>Keyway to DIN 6885 |                   |         | L1  | DA  | L6  | LG  | Profile, pitch Ø | Chamfer number |      |      |                             |                    | Type |
|      | min. mm       | max. mm                  | Preferred bore mm | max. mm | mm  | mm  | mm  | mm  |                  |                | A mm | F mm |                             |                    |      |
|      | rpm           | mm                       | mm                | mm      | mm  | mm  | mm  | mm  | mm               |                | mm   | mm   |                             | kg                 |      |
| 450  | 3000          |                          | 55                |         | 110 | 512 | 284 | 410 | SPB 250          | 8              | 4    | 16.5 | N                           | 2LC0900-4AF90-0AA0 | 94   |
|      |               | >55                      | 75                | 65 + 75 | 140 |     |     |     |                  |                |      |      |                             |                    |      |
|      |               | >75                      | 80                |         | 170 |     |     |     |                  |                |      |      |                             |                    |      |
| 516  | 2300          |                          | 55                |         | 110 | 584 | 344 | 491 | SPB 315          | 10             | 4    | 16.5 | N                           | 2LC0900-5AF90-0AA0 | 152  |
|      |               | >55                      | 75                |         | 140 |     |     |     |                  |                |      |      |                             |                    |      |
|      |               | >75                      | 95                |         | 170 |     |     |     |                  |                |      |      |                             |                    |      |
|      |               | >95                      | 100               |         | 210 |     |     |     |                  |                |      |      |                             |                    |      |
| 590  | 2000          |                          | 55                |         | 110 | 662 | 476 | 642 | SPC 315          | 12             | 4    | 21   | N                           | 2LC0900-6AF90-0AA0 | 208  |
|      |               | >55                      | 75                |         | 140 |     |     |     |                  |                |      |      |                             |                    |      |
|      |               | >75                      | 95                |         | 170 |     |     |     |                  |                |      |      |                             |                    |      |
|      |               | >95                      | 100               |         | 210 |     |     |     |                  |                |      |      |                             |                    |      |

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

- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

### Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C

### Ordering example

- Motor 45 kW,  $P_{eff} = 37$  kW,  $n_1 = 1470$  rpm, maximum output torque:  $T_{max} = 2.0 \cdot T_{eff}$ .
- FLUDEX FAR coupling size 395
- Hollow shaft: Bore ØD1 = 60H7 mm with keyway to DIN 6885/1 and retaining screw
- Specification of oil filling quantity: 7.6 l (see Page 13/9)

Article no. with pulley 5xSPB224:

2LC0900-3AF90-0AA0-Z L1E+Y90

Plain text to Y90: 7.6 l

Article no. with pulley 7xSPB236:

2LC0900-3AF91-0AA0-Z L1E+Y90

Plain text to Y90: 7.6 l

Article no. with 160 °C fuse:

2LC0900-3AF90-0AA0-Z L1E+Y90+F08

Plain text to Y90: 7.6 l

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

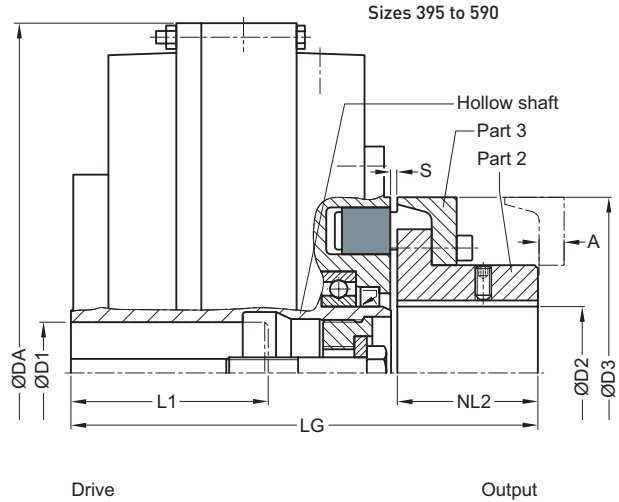
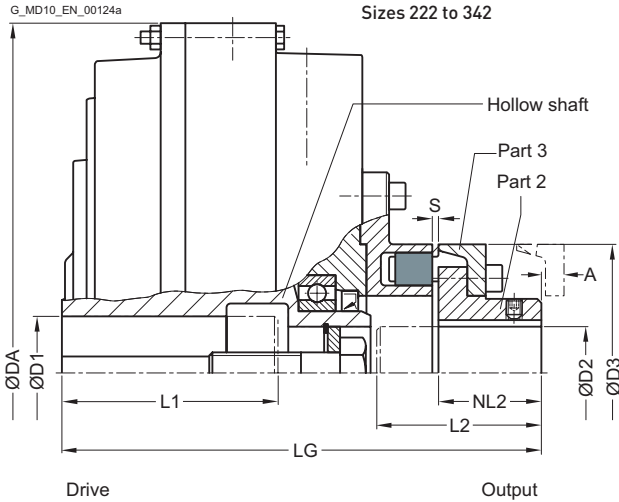
<sup>2)</sup> Version with flat groove as per DIN 6885/3.

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

# TYPE FAD

with N-EUPEX D add-on coupling

Enables change of flexible elements without axial displacement of the shafts if the space "A" is provided.



| Size | Maximum speed<br>$n_{Kmax}$ | FLUDEX coupling          |                  |                         |            |     |     | N-EUPEX D add-on coupling |            |     |         |                                     |    | ↗ Article no. <sup>1)</sup> | Weight<br>$m$ |
|------|-----------------------------|--------------------------|------------------|-------------------------|------------|-----|-----|---------------------------|------------|-----|---------|-------------------------------------|----|-----------------------------|---------------|
|      |                             | D1<br>Keyway to DIN 6885 |                  |                         | L1         | DA  | LG  | D2                        | L2         | NL2 | Size D3 | S                                   | A  |                             |               |
|      | rpm                         | min.<br>mm               | max.<br>mm       | Preferred<br>bore<br>mm | max.<br>mm | mm  | mm  | max.<br>mm                | max.<br>mm | mm  | mm      | mm                                  | mm | mm                          | kg            |
| 222  | 3600                        |                          | 38               | 28                      | 80         | 263 | 180 | 45                        | 65         | 40  | 110     | 3 <sup>+1</sup> <sub>-1</sub>       | 13 | 2LC0900-0AA9                | 12            |
| 297  | 3600                        |                          | 38               | 80                      | 110        | 340 | 233 | 55                        | 80         | 50  | 125     | 3 <sup>+1</sup> <sub>-1</sub>       | 11 | 2LC0900-1AA9                | 24            |
|      |                             | >38 <sup>2)</sup>        | 42 <sup>2)</sup> |                         | 110        |     |     |                           |            |     |         |                                     |    |                             |               |
|      |                             | >55 <sup>2)</sup>        | 60 <sup>2)</sup> |                         | 110        |     |     |                           |            |     |         |                                     |    |                             |               |
| 342  | 3600                        |                          | 55               | 48 + 55                 | 110        | 400 | 271 | 60                        | 88         | 55  | 140     | 3 <sup>+1</sup> <sub>-1</sub>       | 16 | 2LC0900-2AA9                | 34            |
|      |                             | >55 <sup>2)</sup>        | 60 <sup>2)</sup> |                         | 120        |     |     |                           |            |     |         |                                     |    |                             |               |
| 395  | 3000                        |                          | 65               | 60 + 65                 | 140        | 448 | 299 | 100                       | 90         | 90  | 225     | 4,5 <sup>+1.5</sup> <sub>-1.5</sub> | 9  | 2LC0900-3AA9                | 53            |
| 450  | 3000                        |                          | 75               | 65 + 75                 | 140        | 512 | 338 | 115                       | 100        | 100 | 250     | 6 <sup>+2</sup> <sub>-3</sub>       | 11 | 2LC0900-4AA9                | 70            |
|      |                             | >75                      | 80               |                         | 170        |     |     |                           |            |     |         |                                     |    |                             |               |
| 516  | 2300                        |                          | 55               |                         | 140        | 584 | 398 | 145                       | 125        | 125 | 315     | 5 <sup>+3</sup> <sub>-2</sub>       | 0  | 2LC0900-5AA9                | 113           |
|      |                             | >55                      | 90               | 80                      | 170        |     |     |                           |            |     |         |                                     |    |                             |               |
| 590  | 2000                        |                          | 75               |                         | 140        |     |     |                           |            |     |         |                                     |    |                             |               |
|      |                             | >75                      | 95               |                         | 170        | 662 | 433 | 145                       | 125        | 125 | 315     | 5 <sup>+3</sup> <sub>-2</sub>       | 0  | 2LC0900-6AA9                | 138           |
|      |                             | >95                      | 100              |                         | 210        |     |     |                           |            |     |         |                                     |    |                             |               |

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

- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C

## Ordering example

- Motor 160 kW,  $P_{eff} = 132$  kW,  $n_1 = 1470$  rpm, maximum output torque:  $T_{max} = 2.0 \cdot T_{eff}$ .
- FLUDEX FAD coupling size 516
- Hollow shaft: Bore ØD1= 80H7 mm with keyway to DIN 6885/1 and retaining screw
- Part 2: with finished bore ØD2 = 80H7
- Specification of oil filling quantity: 17.7 l (see Page 13/9)

Article no.: 2LC0900-5AA99-0AA0-Z L1J+M1J+Y90

Plain text to Y90: 17.7 l

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

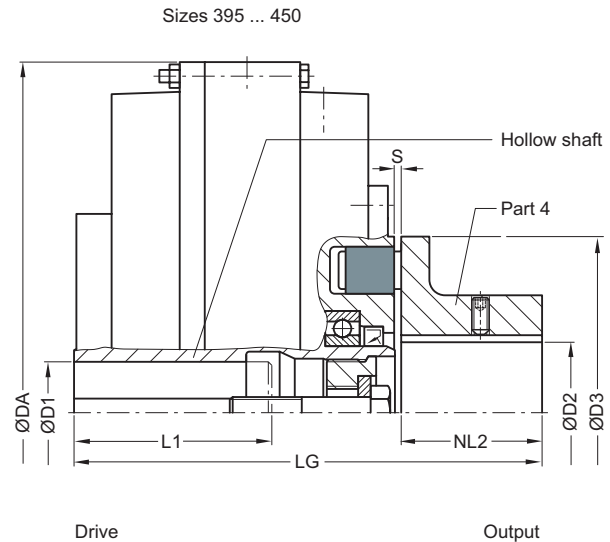
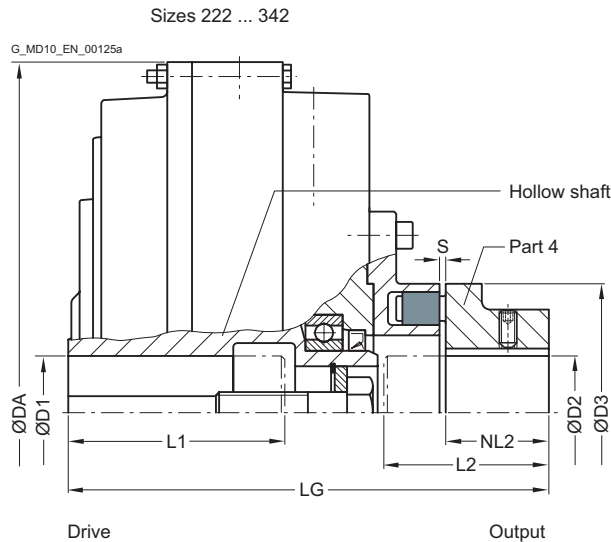
<sup>2)</sup> Version with flat groove as per DIN 6885/3.

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

# TYPE FAE

with N-EUPEX E add-on coupling

Enables larger bores on the output side.



| Size | Maximum speed<br>$n_{Kmax}$<br>rpm | FLUDEX coupling          |                        |                         |            |     |     | N-EUPEX E add-on coupling |            |     |         |                                     | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |
|------|------------------------------------|--------------------------|------------------------|-------------------------|------------|-----|-----|---------------------------|------------|-----|---------|-------------------------------------|---------------------------|---------------------|
|      |                                    | D1<br>Keyway to DIN 6885 |                        |                         | L1         | DA  | LG  | D2                        | L2         | NL2 | Size D3 | S                                   |                           |                     |
|      |                                    | min.<br>mm               | max.<br>mm             | Preferred<br>bore<br>mm | max.<br>mm | mm  | mm  | max.<br>mm                | max.<br>mm | mm  | mm      | mm                                  |                           |                     |
| 222  | 3600                               | >38 <sup>2)</sup>        | 38<br>42 <sup>2)</sup> | 28                      | 80         | 263 | 180 | 55                        | 65         | 40  | 110     | 3 <sup>+1</sup> <sub>-1</sub>       | 2LC0900-0AB9              | 12                  |
| 297  | 3600                               | >38                      | 38                     | 80                      | 110        | 340 | 233 | 60                        | 80         | 50  | 125     | 3 <sup>+1</sup> <sub>-1</sub>       | 2LC0900-1AB9              | 24                  |
|      |                                    | >55 <sup>2)</sup>        | 60 <sup>2)</sup>       | 110                     | 110        |     |     |                           |            |     |         |                                     |                           |                     |
| 342  | 3600                               | >55                      | 55                     | 48 + 55                 | 110        | 400 | 271 | 65                        | 88         | 55  | 140     | 3 <sup>+1</sup> <sub>-1</sub>       | 2LC0900-2AB9              | 34                  |
|      |                                    | >55 <sup>2)</sup>        | 60 <sup>2)</sup>       | 120                     | 120        |     |     |                           |            |     |         |                                     |                           |                     |
| 395  | 3000                               |                          | 65                     | 60 + 65                 | 140        | 448 | 299 | 90                        | 90         | 90  | 225     | 4,5 <sup>+1,5</sup> <sub>-1,5</sub> | 2LC0900-3AB9              | 50                  |
| 450  | 3000                               |                          | 75                     | 65 + 75                 | 140        | 512 | 338 | 100                       | 100        | 100 | 250     | 6 <sup>+2</sup> <sub>-3</sub>       | 2LC0900-4AB9              | 68                  |
|      |                                    | >75                      | 80                     | 170                     | 170        |     |     |                           |            |     |         |                                     |                           |                     |

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

- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C

## Ordering example

- Motor 45 kW,  $P_{eff} = 42$  kW,  $n_1 = 2950$  rpm
- FLUDEX FAE coupling size 342
- Hollow shaft: Bore ØD1 = 55H7 mm with keyway to DIN 6885/1 and retaining screw
- Part 4: Bore ØD2 = 60H7 mm with keyway to DIN 6885/1 and set screw
- with micro-balancing (high speed)
- with electronic operation monitoring
- seal set NBR
- Delivery without oil filling, no oil filling quantity specification

Article no. with EOC system:

2LC0900-2AB99-0AA0-Z L1D+M1E+F04+F26+W03+Y95

Plain text to Y95: G=6.3;n=3000rpm

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

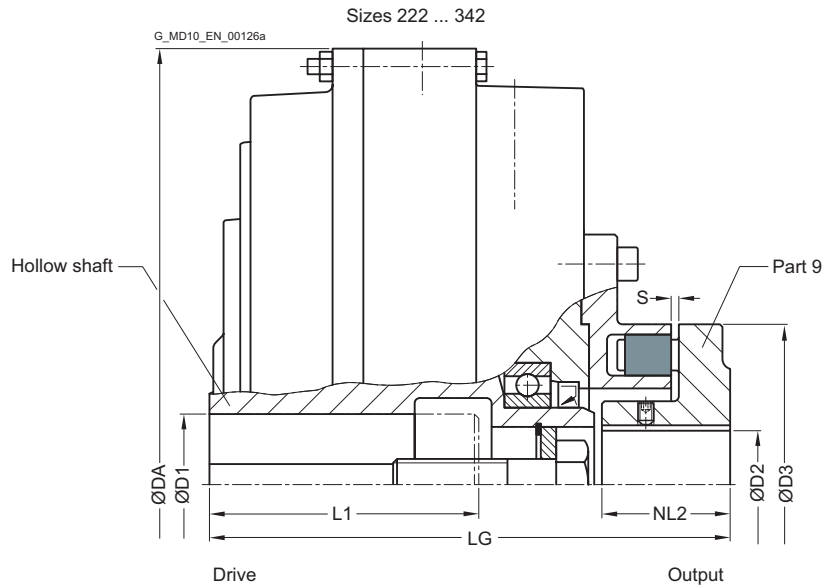
<sup>2)</sup> Version with flat groove as per DIN 6885/3.

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

# TYPE FAM

with N-EUPEX M add-on coupling

Enables a short fitting length.



| Size | Maximum speed<br>$n_{Kmax}$<br><br>rpm | FLUDEX coupling                 |                                    |                      |            |     |     | N-EUPEX M add-on coupling |     |         |                               | ↗ Article no. <sup>1)</sup> | Weight<br><br>$m$<br><br>kg |
|------|----------------------------------------|---------------------------------|------------------------------------|----------------------|------------|-----|-----|---------------------------|-----|---------|-------------------------------|-----------------------------|-----------------------------|
|      |                                        | D1<br>Keyway to DIN 6885        |                                    |                      | L1         | DA  | LG  | D2                        | NL2 | Size D3 | S                             |                             |                             |
|      |                                        | min.<br>mm                      | max.<br>mm                         | Preferred bore<br>mm | max.<br>mm | mm  | mm  | max.<br>mm                | mm  | mm      | mm                            |                             |                             |
| 222  | 3600                                   | <div>&gt;38 <sup>2)</sup></div> | <div>38<br/>42 <sup>2)</sup></div> | 28                   | 80         | 263 | 150 | 42                        | 36  | 110     | 3 <sup>+1</sup> <sub>-1</sub> | 2LC0900-0AH9                | 12                          |
| 297  | 3600                                   | <div>&gt;38</div>               | <div>38</div>                      |                      | 80         | 340 | 203 | 42                        | 50  | 125     | 3 <sup>+1</sup> <sub>-1</sub> | 2LC0900-1AH9                | 24                          |
|      |                                        | <div>&gt;55 <sup>2)</sup></div> | <div>55<br/>60 <sup>2)</sup></div> | 42                   | 110        |     |     |                           |     |         |                               |                             |                             |
| 342  | 3600                                   | <div>&gt;55 <sup>2)</sup></div> | <div>55</div>                      | 48 + 55              | 110        | 400 | 238 | 55                        | 55  | 140     | 3 <sup>+1</sup> <sub>-1</sub> | 2LC0900-2AH9                | 34                          |
|      |                                        | <div>&gt;55 <sup>2)</sup></div> | <div>60 <sup>2)</sup></div>        |                      | 120        |     |     |                           |     |         |                               |                             |                             |

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

- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C

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

<sup>2)</sup> Version with flat groove as per DIN 6885/3.

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

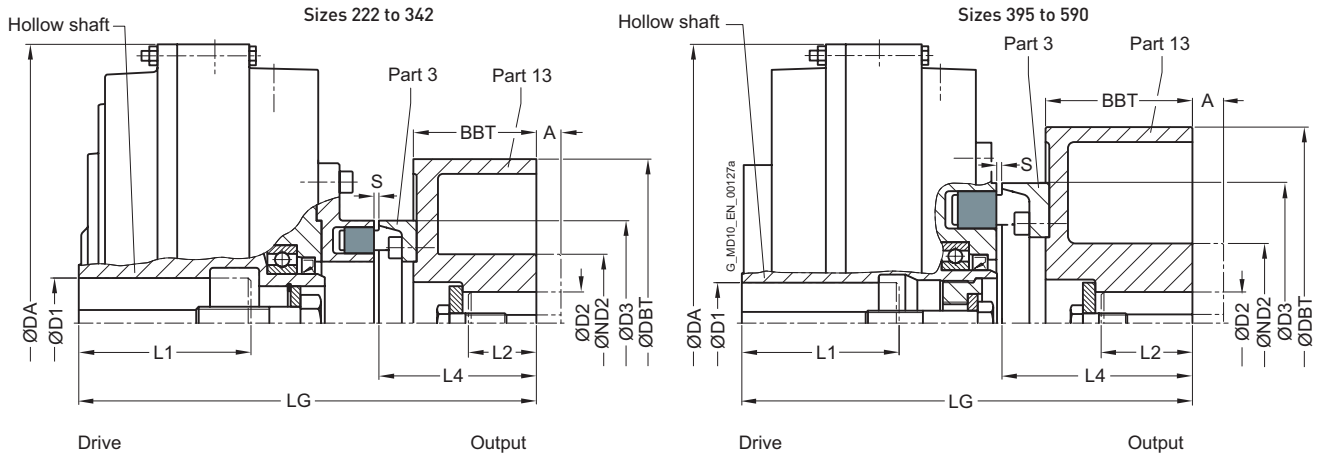
## Ordering example

- Motor 22 kW,  $P_{eff} = 20$  kW,  $n_1 = 1470$  rpm
- FLUDEX FAM coupling size 342
- Hollow shaft: Bore ØD1 = 40H7 mm with keyway to DIN 6885/1 and retaining screw
- Part 9: Bore ØD2 = 48H7 mm with keyway to DIN 6885/1 and set screw
- Delivery without oil filling, no oil filling quantity specification

Article no. with drive via housing:  
2LC0900-2AH99-0AA0-Z L0W+M1B+F23

# TYPE FADB

with N-EUPEX D add-on coupling and brake drum



| Size | Maximum speed<br>$n_{Kmax}$<br><br>rpm | FLUDEX coupling       |                  |                      |              |              | N-EUPEX D<br>add-on coupling |                               |              | Brake drum (Part 13) |                   |               |               |             | ↗ Article no. <sup>1)</sup> | Weight<br><br>$m$<br><br>kg |
|------|----------------------------------------|-----------------------|------------------|----------------------|--------------|--------------|------------------------------|-------------------------------|--------------|----------------------|-------------------|---------------|---------------|-------------|-----------------------------|-----------------------------|
|      |                                        | D1<br>Keyway DIN 6885 |                  | L1<br><br>max.<br>mm | DA<br><br>mm | LG<br><br>mm | Size<br>D3<br><br>mm         | S<br><br>mm                   | L4<br><br>mm | D2<br><br>max.<br>mm | ND2<br><br>mm     | DBT<br><br>mm | BBT<br><br>mm | A<br><br>mm |                             |                             |
|      |                                        | min.<br>mm            | max.<br>mm       |                      |              |              |                              |                               |              |                      |                   |               |               |             |                             |                             |
| 222  | 3600                                   |                       | 38               | 80                   | 263          | 232          | 110                          | 3 <sup>+1</sup> <sub>-1</sub> | 92           | 42                   | 68                | 200           | 75            | 30          | 2LC0900-0AC9                | 17                          |
|      |                                        | >38 <sup>2)</sup>     | 42 <sup>2)</sup> |                      |              |              |                              |                               |              |                      |                   |               |               |             |                             |                             |
| 297  | 3600                                   |                       | 38               | 110                  | 340          | 279          | 125                          | 3 <sup>+1</sup> <sub>-1</sub> | 96           | 55                   | 84                | 200           | 75            | 30          | 2LC0900-1AC9                | 29                          |
|      |                                        | >38                   | 55               |                      |              |              |                              |                               |              |                      |                   |               |               |             |                             |                             |
|      |                                        | >55 <sup>2)</sup>     | 60 <sup>2)</sup> |                      |              |              |                              |                               |              |                      |                   |               |               |             |                             |                             |
| 342  | 3600                                   |                       | 55               | 110                  | 400          | 337          | 140                          | 3 <sup>+1</sup> <sub>-1</sub> | 121          | 60                   | 128 <sup>3)</sup> | 250           | 95            | 50          | 2LC0900-2AC9                | 48                          |
|      |                                        | >55 <sup>2)</sup>     | 60 <sup>2)</sup> |                      |              |              |                              |                               |              |                      |                   |               |               |             |                             |                             |
|      |                                        |                       | 65               |                      |              |              |                              |                               |              |                      |                   |               |               |             |                             |                             |
| 450  | 3000                                   |                       | 75               | 140                  | 512          | 395          | 250                          | 6 <sup>+2</sup> <sub>-3</sub> | 157          | 80                   | 128               | 315           | 118           | 50          | 2LC0900-4AC9                | 86                          |
|      |                                        | >75                   | 80               |                      |              |              |                              |                               |              |                      |                   |               |               |             |                             |                             |
| 516  | 2300                                   |                       | 55               | 140                  | 584          | 466          | 315                          | 5 <sup>+3</sup> <sub>-2</sub> | 193          | 100                  | 160               | 400           | 150           | 80          | 2LC0900-5AC9                | 146                         |
|      |                                        | >55                   | 90               |                      |              |              |                              |                               |              |                      |                   |               |               |             |                             |                             |
| 590  | 1900                                   |                       | 75               | 140                  | 662          | 540          | 315                          | 5 <sup>+3</sup> <sub>-2</sub> | 232          | 110                  | 175               | 500           | 190           | 110         | 2LC0900-6AC9                | 207                         |
|      |                                        | >75                   | 95               |                      |              |              |                              |                               |              |                      |                   |               |               |             |                             |                             |
|      |                                        | >95                   | 100              |                      |              |              |                              |                               |              |                      |                   |               |               |             |                             |                             |

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

- ØD2 Without finished bore  
With finished bore
- Part 13 Standard brake drum  
Long brake drum
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling, without hub prolongations "A" but with set screw
- L2 denotes the shaft insertion depth.  
In the case of shaft ends deviating from DIN 748/1 long, the insertion depth must be specified in plain text with "Y29"
- Delivery with oil filling only above -20 °C

## Ordering example

- Motor 30 kW,  $P_{eff} = 22$  kW,  $n_1 = 1470$  rpm
- FLUDEX FADB coupling size 342, standard type
- Hollow shaft: Bore ØD1 = 55H7 mm with keyway to DIN 6885/1 and retaining screw
- Brake drum (Part 13): Bore ØD2 = 50H7 mm with keyway to DIN 6885/1 and set screw.
- shaft end insertion depth L2 = 90 mm
- Delivery without oil filling, no oil filling quantity specification

Article no. Part 13 Standard brake drum:

2LC0900-2AC99-0AA0-Z L1D+M1C+Y29  
Plain text to Y29: 90 mm

Article no. Part 13 Long brake drum:

2LC0900-2AC99-0BA0-Z L1D+M1C+Y29  
Plain text to Y29: 90 mm

<sup>2)</sup> Version with flat groove as per DIN 6885/3.

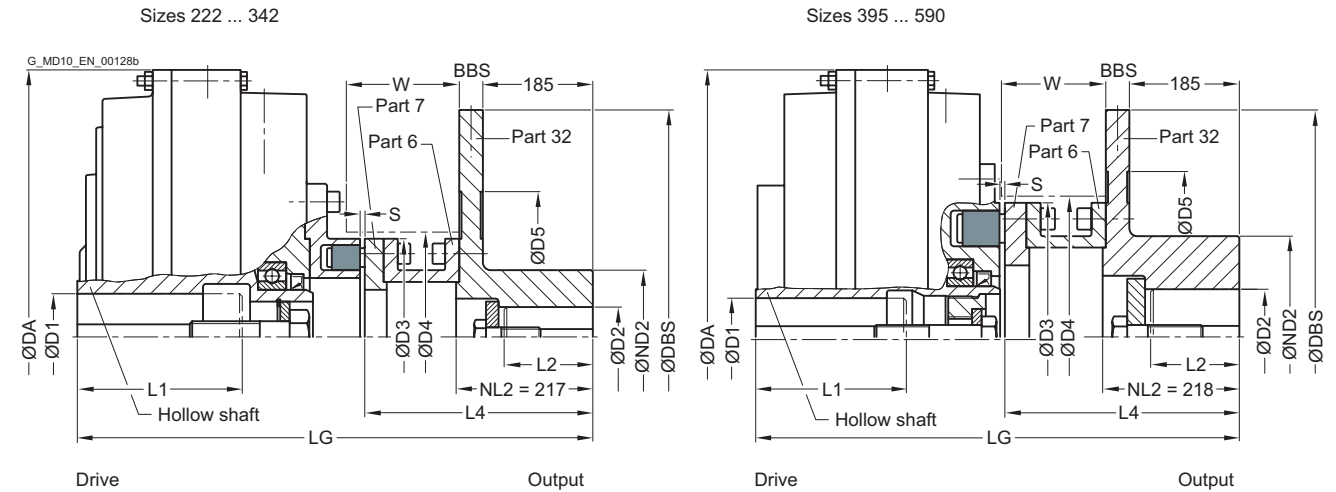
<sup>3)</sup> ND2 = 128 for A = 0  
ND2 = 100 for hub prolongations A = 50

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

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

# TYPE FADS SB

with N-EUPEX D add-on coupling and brake disk for stopping brakes



| Size | Maximum speed<br>$n_{Kmax}$<br>rpm | FLUDEX coupling    |                                    |                  |          |          | N-EUPEX D add-on coupling |                 |          | Brake disk (part 32) <sup>2)</sup> |           |           |           |          | Space dimensions |         | ↗ Article no. <sup>1)</sup> | Weight<br><i>m</i><br>kg |
|------|------------------------------------|--------------------|------------------------------------|------------------|----------|----------|---------------------------|-----------------|----------|------------------------------------|-----------|-----------|-----------|----------|------------------|---------|-----------------------------|--------------------------|
|      |                                    | D1 Keyway DIN 6885 |                                    | L1<br>max.<br>mm | DA<br>mm | LG<br>mm | Size D3<br>mm             | S<br>mm         | L4<br>mm | D2<br>max.<br>mm                   | ND2<br>mm | DBS<br>mm | BBS<br>mm | D5<br>mm | D4<br>mm         | W<br>mm |                             |                          |
|      |                                    | min.<br>mm         | max.<br>mm                         |                  |          |          |                           |                 |          |                                    |           |           |           |          |                  |         |                             |                          |
| 222  | 3600                               |                    | 38                                 | 80               | 263      | 494      | 110                       | 5 <sup>+1</sup> | 352      | 42                                 | 100       | 315       | 30        | 165      | 115              | 149     | 2LC0900-0AD9                | 35                       |
|      |                                    |                    | >38 <sup>3)</sup> 42 <sup>3)</sup> |                  |          |          |                           |                 |          |                                    |           |           |           |          |                  |         |                             |                          |
|      |                                    |                    | 38                                 | 80               |          |          |                           |                 |          |                                    |           |           |           |          |                  |         |                             |                          |
| 297  | 3600                               |                    | >3855                              | 110              | 340      | 537      | 125                       | 5 <sup>+1</sup> | 352      | 60                                 | 120       | 355       | 30        | 205      | 130              | 155     | 2LC0900-1AD9                | 68                       |
|      |                                    |                    | >55 <sup>3)</sup> 60 <sup>3)</sup> | 110              |          |          |                           |                 |          |                                    |           |           |           |          |                  |         |                             |                          |
| 342  | 3300                               |                    | 55                                 | 110              |          |          | 140                       | 5 <sup>+1</sup> | 352      | 60                                 | 120       | 400       | 30        | 250      | 145              | 155     | 2LC0900-2AD9                | 83                       |
|      |                                    |                    | >55 <sup>3)</sup> 60 <sup>3)</sup> | 120              | 400      | 570      |                           |                 |          |                                    |           |           |           |          |                  |         |                             |                          |
| 395  | 3000                               |                    | 65                                 | 140              | 448      | 602      | 225                       | 6 <sup>+1</sup> | 391.5    | 80                                 | 150       | 450       | 30        | 300      | 230              | 182     | 2LC0900-3AD9                | 102                      |
|      |                                    |                    | 75                                 | 140              |          |          |                           |                 |          |                                    |           |           |           |          |                  |         |                             |                          |
| 450  | 2300                               |                    | >7580                              | 170              | 512      | 630.5    | 250                       | 8 <sup>+1</sup> | 390.5    | 90                                 | 160       | 560       | 30        | 370      | 260              | 182     | 2LC0900-4AD9                | 141                      |
|      |                                    |                    | 55                                 | 140              |          |          |                           |                 |          |                                    |           |           |           |          |                  |         |                             |                          |
| 516  | 2100                               |                    | >5590                              | 170              | 584      | 706.5    | 315                       | 8 <sup>+1</sup> | 430.5    | 100                                | 160       | 630       | 30        | 440      | 325              | 222     | 2LC0900-5AD9                | 199                      |
|      |                                    |                    | 75                                 | 140              |          |          |                           |                 |          |                                    |           |           |           |          |                  |         |                             |                          |
| 590  | 2000                               |                    | >7595                              | 170              | 662      | 741.5    | 315                       | 8 <sup>+1</sup> | 430.5    | 100                                | 160       | 630       | 30        | 440      | 325              | 222     | 2LC0900-6AD9                | 224                      |
|      |                                    |                    | >95100                             | 210              |          |          |                           |                 |          |                                    |           |           |           |          |                  |         |                             |                          |

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

- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- L2 denotes the shaft insertion depth.  
In the case of shaft ends deviating from DIN 748/1 long, the insertion depth must be specified in plain text with "Y29"
- Delivery with oil filling only above -20 °C

## Ordering example

- Motor 90 kW,  $P_{eff} = 75$  kW,  $n_1 = 1470$  rpm
- FLUDEX FADS SB coupling size 450
- Hollow shaft: Bore ØD1 = 75H7 mm with keyway to DIN 6885/1 and retaining screw
- Brake disk (part 32): Bore ØD2 = 80H7 mm with keyway to DIN 6885/1 and retaining screw
- with preservation suitable for indoor storage
- shaft end insertion depth L2 = 90 mm
- Delivery without oil filling, no oil filling quantity specification

Article no. with preservation 24 months:

2LC0900-4AD99-0AA0-Z L1H+M1J+B28+Y29

Plain text to Y29: L2 = 90 mm

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

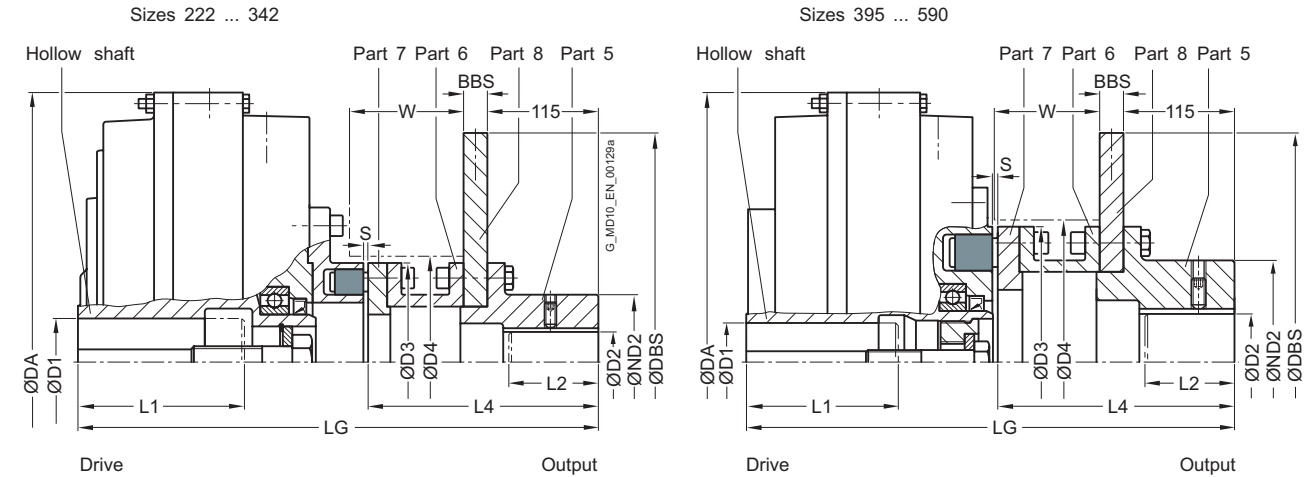
<sup>2)</sup> Hub shortening possible, clearly specify NL2 size

<sup>3)</sup> Version with flat groove as per DIN 6885/3.

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

# TYPE FADS HB

with N-EUPEX D add-on coupling and brake disk for blocking brakes



| Size | Maximum speed<br>$n_{Kmax}$<br><br>rpm | FLUDEX coupling                                                                  |                                                       |                      |              |              | N-EUPEX D<br>add-on coupling |             |              | Brake disk (part 5/8) |               |               |               | Space<br>dimensions |              | Article no. <sup>1)</sup> | Weight<br><br><i>m</i><br><br>kg |
|------|----------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------|----------------------|--------------|--------------|------------------------------|-------------|--------------|-----------------------|---------------|---------------|---------------|---------------------|--------------|---------------------------|----------------------------------|
|      |                                        | D1<br>Keyway DIN 6885                                                            |                                                       | L1<br><br>max.<br>mm | DA<br><br>mm | LG<br><br>mm | Size D3<br><br>mm            | S<br><br>mm | L4<br><br>mm | D2<br><br>max.<br>mm  | ND2<br><br>mm | DBS<br><br>mm | BBS<br><br>mm | D4<br><br>mm        | W<br><br>mm  |                           |                                  |
|      |                                        | min.<br>mm                                                                       | max.<br>mm                                            |                      |              |              |                              |             |              |                       |               |               |               |                     |              |                           |                                  |
|      |                                        |                                                                                  |                                                       |                      |              |              |                              |             |              |                       |               |               |               |                     |              |                           |                                  |
| 222  | 3600                                   | <div><div>38</div><div>&gt;38<sup>2)</sup></div><div>42<sup>2)</sup></div></div> | 80                                                    | 263                  | 366.5        | 110          | 5 <sup>+1</sup>              | 224.5       | 42           | 70                    | 250           | 12.5          | 115           | 109                 | 2LC0900-0AE9 | 22                        |                                  |
| 297  | 3600                                   | <div><div>38</div><div>&gt;38</div><div>&gt;55<sup>2)</sup></div></div>          | <div><div>80</div><div>110</div><div>110</div></div>  | 340                  | 409.5        | 125          | 5 <sup>+1</sup>              | 224.5       | 60           | 85                    | 250           | 12.5          | 130           | 115                 | 2LC0900-1AE9 | 33                        |                                  |
|      |                                        | <div><div>60<sup>2)</sup></div><div>110</div></div>                              |                                                       |                      |              |              |                              |             |              |                       |               |               |               |                     |              |                           |                                  |
| 342  | 3600                                   | <div><div>55</div><div>&gt;55<sup>2)</sup></div><div>60<sup>2)</sup></div></div> | <div><div>110</div><div>120</div></div>               | 400                  | 442.5        | 140          | 5 <sup>+1</sup>              | 224.5       | 60           | 90                    | 250           | 12.5          | 145           | 115                 | 2LC0900-2AE9 | 45                        |                                  |
| 395  | 3000                                   | <div><div>65</div><div>75</div></div>                                            | <div><div>140</div><div>140</div></div>               | 448                  | 478          | 225          | 6 <sup>+1</sup>              | 267.5       | 80           | 150                   | 355           | 16            | 230           | 142                 | 2LC0900-3AE9 | 80                        |                                  |
| 450  | 2750                                   | <div><div>80</div><div>&gt;75</div></div>                                        | <div><div>170</div><div>170</div></div>               | 512                  | 546.5        | 250          | 8 <sup>+1</sup>              | 306.5       | 90           | 160                   | 355           | 16            | 260           | 182                 | 2LC0900-4AE9 | 101                       |                                  |
| 516  | 2150                                   | <div><div>55</div><div>&gt;55</div></div>                                        | <div><div>140</div><div>170</div></div>               | 584                  | 566.5        | 315          | 8 <sup>+1</sup>              | 290.5       | 100          | 160                   | 450           | 16            | 325           | 166                 | 2LC0900-5AE9 | 154                       |                                  |
|      |                                        | <div><div>90</div><div>75</div></div>                                            |                                                       |                      |              |              |                              |             |              |                       |               |               |               |                     |              |                           |                                  |
| 590  | 2000                                   | <div><div>95</div><div>&gt;75</div><div>&gt;95</div></div>                       | <div><div>170</div><div>170</div><div>210</div></div> | 662                  | 601.5        | 315          | 8 <sup>+1</sup>              | 290.5       | 100          | 160                   | 450           | 16            | 325           | 166                 | 2LC0900-6AE9 | 179                       |                                  |
|      |                                        | <div><div>100</div></div>                                                        |                                                       |                      |              |              |                              |             |              |                       |               |               |               |                     |              |                           |                                  |

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

- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- L2 denotes the shaft insertion depth.  
In the case of shaft ends deviating from DIN 748/1 long, the insertion depth must be specified in plain text with "Y29"
- Delivery with oil filling only above -20 °C

## Ordering example

- Motor 160 kW,  $P_{eff} = 132$  kW,  $n_1 = 2950$  rpm
- FLUDEX FADS HB coupling size 395
- Hollow shaft: Bore ØD1 = 65H7 mm with keyway to DIN 6885/1 and retaining screw
- Part 5: Bore ØD2 = 80H7 mm with keyway to DIN 6885/1 and set screw
- Delivery without oil filling, no oil filling quantity specification

Article no.: 2LC0900-3AE99-0AA0-Z L1F+M1J+W03+Y95

Plain text to Y95: G=6.3;n=3000rpm

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

<sup>2)</sup> Version with flat groove as per DIN 6885/3.

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

# OIL FILLING QUANTITIES FOR FA SERIES

This assignment is valid for a maximum starting torque  $T_{\max} = 2.0 \cdot T_{\text{eff}}$  and mineral oils with a viscosity of VG 22/VG 32, with drive via the hollow shaft.

If other operating fluids are used, or with drive via the housing or  $T_{\max} \neq 2.0 \cdot T_{\text{eff}}$ , changed filling quantities must be observed!

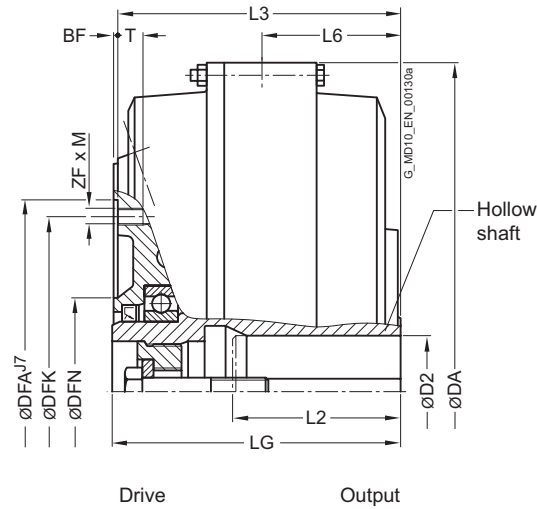
| Sizes 222, 342, 450 and 590 |              |      |      |      |      |      |      |      |      |      |
|-----------------------------|--------------|------|------|------|------|------|------|------|------|------|
| $P_{\text{eff}}$<br>kW      | Speed in rpm |      |      |      |      |      |      |      |      |      |
|                             | 600          | 740  | 890  | 980  | 1180 | 1470 | 1770 | 2300 | 2950 | 3550 |
| Oil filling quantity in l   |              |      |      |      |      |      |      |      |      |      |
| 0.55                        | 4.3          |      | 1.4  | 1.3  | 1.1  |      |      |      |      |      |
| 0.75                        | 4.7          |      | 1.5  | 1.4  | 1.2  |      |      |      |      |      |
| 1.1                         | 5.1          | 4.4  | 1.55 | 1.55 | 1.4  | 1.1  |      |      |      |      |
| 2.2                         | 6.2          | 5.2  | 4.5  | 4.2  | 1.55 | 1.4  | 1.2  |      |      |      |
| 3                           | 9.5          | 5.6  | 4.9  | 4.6  | 1.55 | 1.5  | 1.3  | 1    |      |      |
| 4                           | 10.2         | 6.1  | 5.3  | 4.9  | 4.3  | 1.55 | 1.4  | 1.1  |      |      |
| 5.5                         | 11           | 9.4  | 5.7  | 5.3  | 4.6  | 1.55 | 1.5  | 1.2  | 1    |      |
| 7.5                         | 12           | 10.2 | 6.2  | 5.8  | 5    | 4.3  | 1.55 | 1.3  | 1.1  |      |
| 11                          | 13.4         | 11.2 | 9.7  | 6.4  | 5.5  | 4.7  | 4.1  | 1.5  | 1.2  | 1    |
| 15                          | 24.8         | 12.2 | 10.5 | 9.8  | 6    | 5    | 4.4  | 1.55 | 1.3  | 1.1  |
| 18                          | 25.9         | 12.9 | 11   | 10.3 | 6.3  | 5.3  | 4.6  | 3.9  | 1.4  | 1.2  |
| 22                          | 27.3         | 23.3 | 11.6 | 10.8 | 9.4  | 5.5  | 4.8  | 4    | 1.4  | 1.25 |
| 30                          | 29.7         | 25.2 | 12.7 | 11.7 | 10.1 | 6    | 5.2  | 4.3  | 3.7  | 1.4  |
| 37                          | 31.5         | 26.5 | 23.1 | 12.4 | 10.7 | 9.1  | 5.5  | 4.5  | 3.9  | 1.5  |
| 45                          |              | 27.9 | 24.2 | 22.6 | 11.2 | 9.5  | 5.8  | 4.7  | 4    | 3.5  |
| 55                          |              | 29.5 | 25.5 | 23.7 | 11.9 | 10   | 8.8  | 5    | 4.2  | 3.7  |
| 75                          |              |      | 27.6 | 25.7 | 22.3 | 10.8 | 9.4  | 5.4  | 4.5  | 3.9  |
| 90                          |              |      | 29   | 26.9 | 23.4 | 11.3 | 9.8  | 8.1  | 4.7  | 4.1  |
| 110                         |              |      |      | 28.3 | 24.5 | 12   | 10.4 | 8.6  | 4.9  | 4.3  |
| 132                         |              |      |      | 29.7 | 25.7 | 21.9 | 10.8 | 8.9  | 7.6  | 4.5  |
| 160                         |              |      |      |      | 27   | 22.9 | 20   | 9.3  | 7.8  |      |
| 180                         |              |      |      |      | 27.8 | 23.5 | 20.6 | 10   | 8    |      |
| 200                         |              |      |      |      | 28.6 | 24.2 | 21.2 | 10.9 | 8.2  |      |
| 225                         |              |      |      |      |      | 24.9 | 21.8 | 11.5 | 8.5  |      |
| 250                         |              |      |      |      |      | 25.6 | 22.3 |      | 9.6  |      |
| 280                         |              |      |      |      |      | 26.3 | 22.9 |      | 9.9  |      |
| 315                         |              |      |      |      |      | 27.1 | 23.6 |      | 10.5 |      |
| 350                         |              |      |      |      |      |      | 24.2 |      |      |      |
| 400                         |              |      |      |      |      |      | 26.4 |      |      |      |

## Sizes 297, 395 and 516

| $P_{eff}$<br>kW | Speed in rpm              |      |      |      |      |      |      |      |      |      | Size |
|-----------------|---------------------------|------|------|------|------|------|------|------|------|------|------|
|                 | 600                       | 740  | 890  | 980  | 1180 | 1470 | 1770 | 2300 | 2950 | 3550 |      |
|                 | Oil filling quantity in l |      |      |      |      |      |      |      |      |      |      |
| 0.55            | 3.2                       | 2.8  |      |      |      |      |      |      |      |      | 297  |
| 0.75            | 3.5                       | 3    | 2.6  |      |      |      |      |      |      |      |      |
| 1.1             | 3.7                       | 3.3  | 2.9  | 2.7  |      |      |      |      |      |      |      |
| 2.2             | 7.3                       | 3.7  | 3.4  | 3.2  | 2.8  |      |      |      |      |      |      |
| 3               | 7.9                       | 6.8  | 3.7  | 3.4  | 3    | 2.5  |      |      |      |      |      |
| 4               | 8.5                       | 7.3  | 3.7  | 3.7  | 3.2  | 2.7  |      |      |      |      |      |
| 5.5             | 9.4                       | 7.9  | 6.8  | 3.7  | 3.5  | 2.9  | 2.6  |      |      |      |      |
| 7.5             | 17                        | 8.5  | 7.4  | 6.9  | 3.7  | 3.2  | 2.8  | 2.4  |      |      |      |
| 11              | 18.7                      | 16   | 8.1  | 7.6  | 6.6  | 3.5  | 3    | 2.5  |      |      |      |
| 15              | 20.3                      | 17.3 | 8.9  | 8.2  | 7.1  | 3.7  | 3.3  | 2.7  |      |      |      |
| 18              | 21.4                      | 18   | 15.7 | 8.6  | 7.4  | 3.7  | 3.4  | 2.8  | 2.4  |      |      |
| 22              |                           | 19   | 16.5 | 15.4 | 7.8  | 6.6  | 3.6  | 3    | 2.5  |      |      |
| 30              |                           | 20.6 | 17.8 | 16.6 | 8.5  | 7.2  | 6.3  | 3.2  | 2.7  | 2.4  |      |
| 37              |                           |      | 18.8 | 17.5 | 15.2 | 7.6  | 6.6  | 3.4  | 2.8  | 2.5  |      |
| 45              |                           |      | 19.8 | 18.4 | 16   | 7.9  | 6.9  | 3.6  | 2.9  | 2.6  |      |
| 55              |                           |      | 21   | 19.3 | 16.8 | 8.4  | 7.3  | 6    | 3.1  | 2.7  |      |
| 75              |                           |      |      | 21.1 | 18.1 | 15.4 | 7.9  | 6.5  | 5.3  | 2.9  |      |
| 90              |                           |      |      |      | 19   | 16.1 | 14.1 | 6.7  | 5.6  | 3    |      |
| 110             |                           |      |      |      | 20.1 | 16.9 | 14.8 | 7.1  | 5.9  |      | 395  |
| 132             |                           |      |      |      |      | 17.7 | 15.4 | 7.9  | 6.2  |      |      |
| 160             |                           |      |      |      |      | 18.6 | 16.2 | 13.4 | 6.8  |      |      |
| 180             |                           |      |      |      |      | 19.2 | 16.7 | 13.8 | 7.2  |      |      |
| 200             |                           |      |      |      |      |      | 17.1 | 14.1 |      |      | 516  |
| 225             |                           |      |      |      |      |      | 17.6 | 14.6 |      |      |      |
| 250             |                           |      |      |      |      |      | 18.1 | 14.9 |      |      |      |
| 280             |                           |      |      |      |      |      |      | 15.3 |      |      |      |
| 315             |                           |      |      |      |      |      |      | 15.8 |      |      |      |
| 350             |                           |      |      |      |      |      |      | 17.1 |      |      |      |

# TYPE FGO

Basic coupling of the FG series with connecting flange



| Size | Maximum speed<br>$n_{Kmax}$<br>rpm | Installation dimensions |         |         |     |     |     |     | Flange connection dimensions |     |    |     |          |    | Tightening torque for screws in thread ZF · M<br>$T_A$<br>Nm | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |
|------|------------------------------------|-------------------------|---------|---------|-----|-----|-----|-----|------------------------------|-----|----|-----|----------|----|--------------------------------------------------------------|---------------------------|---------------------|
|      |                                    | D2 Keyway DIN 6885      |         | L2      | DA  | L3  | L6  | LG  | DFN                          | DFA | BF | DFK | ZF · M   | T  |                                                              |                           |                     |
|      |                                    | min. mm                 | max. mm | max. mm | mm  | mm  | mm  | mm  | mm                           | mm  | mm | mm  | mm       | mm |                                                              |                           |                     |
| 370  | 3600                               |                         | 75      | 140     | 420 | 182 | 84  | 185 | 126                          | 220 | 3  | 200 | 8 · M10  | 15 | 31                                                           | 2LC0900-8CE09-0AA0        | 34                  |
| 425  | 3000                               |                         | 80      | 140     | 470 | 202 | 99  | 205 | 134                          | 274 | 3  | 250 | 8 · M12  | 18 | 54                                                           | 2LC0901-0CE09-0AA0        | 45                  |
| 490  | 2600                               |                         | 55      | 110     | 555 | 232 | 105 | 236 | 150                          | 314 | 4  | 282 | 8 · M16  | 24 | 135                                                          | 2LC0901-1CE09-0AA0        | 75                  |
|      |                                    | >55                     | 75      | 140     |     |     |     |     |                              |     |    |     |          |    |                                                              |                           |                     |
|      |                                    | >75                     | 100     | 170     |     |     |     |     |                              |     |    |     |          |    |                                                              |                           |                     |
| 565  | 2300                               |                         | 110     | 170     | 630 | 250 | 123 | 254 | 166                          | 344 | 4  | 312 | 8 · M16  | 24 | 135                                                          | 2LC0901-2CE09-0AA0        | 95                  |
| 655  | 2000                               |                         | 130     | 210     | 736 | 296 | 145 | 301 | 180                          | 430 | 5  | 390 | 8 · M20  | 25 | 260                                                          | 2LC0901-3CE09-0AA0        | 142                 |
| 755  | 1800                               |                         | 150     | 240     | 840 | 341 | 176 | 346 | 226                          | 480 | 5  | 440 | 10 · M20 | 25 | 260                                                          | 2LC0901-4CE09-0AA0        | 208                 |
| 887  | 1500                               |                         | 150     | 275     | 990 | 391 | 217 | 396 | 249                          | 520 | 5  | 480 | 10 · M20 | 25 | 260                                                          | 2LC0901-5CE09-0AA0        | 362                 |

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

- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C

## Ordering example

- Motor 132 kW,  $P_{eff} = 110$  kW,  $n_1 = 1470$  rpm
- FLUDEX FGO coupling size 490
- Hollow shaft: Bore ØD2 = 70H7 mm with keyway to DIN 6885/1 and retaining screw
- Delivery with oil filling: 14.4 l (see Page 13/9)

Article no.: 2LC0901-1CE09-0AA0-Z L1G+F16+Y90

Plain text to Y90: 14.4 l

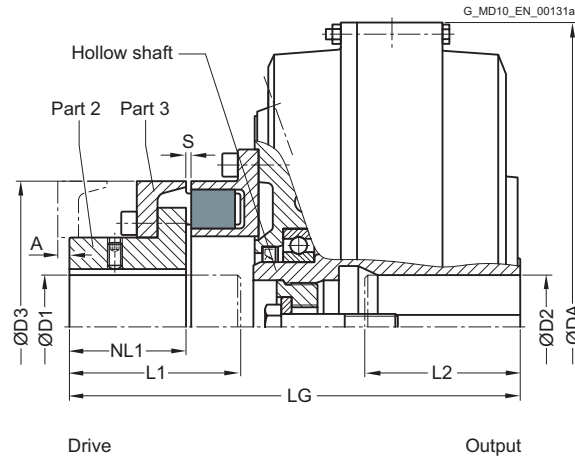
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](https://flender.com).

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

# TYPE FGD

with N-EUPEX D add-on coupling

Enables change of flexible elements without axial displacement of the shafts if the space "A" is provided.



| Size | Maximum speed<br>$n_{Kmax}$ | FLUDEX coupling       |     |                      |              |              | N-EUPEX D add-on coupling |                      |               |                   |                               |             | ↗ Article no. <sup>1)</sup> | Weight<br>$m$ |
|------|-----------------------------|-----------------------|-----|----------------------|--------------|--------------|---------------------------|----------------------|---------------|-------------------|-------------------------------|-------------|-----------------------------|---------------|
|      |                             | D2<br>Keyway DIN 6885 |     | L2<br><br>max.<br>mm | DA<br><br>mm | LG<br><br>mm | D1<br><br>max.<br>mm      | L1<br><br>max.<br>mm | NL1<br><br>mm | Size D3<br><br>mm | S<br><br>mm                   | A<br><br>mm |                             |               |
|      | min.<br>mm                  | max.<br>mm            |     |                      |              |              |                           |                      |               |                   |                               |             |                             |               |
|      | rpm                         |                       |     |                      |              |              |                           |                      |               |                   |                               |             |                             | kg            |
| 370  | 3600                        |                       | 75  | 140                  | 420          | 298          | 80                        | 110                  | 70            | 180               | 4 <sup>+2</sup> <sub>-2</sub> | 10          | 2LC0900-8CA                 | 44            |
| 425  | 3000                        |                       | 80  | 140                  | 470          | 348          | 100                       | 140                  | 90            | 225               | 4 <sup>+2</sup> <sub>-2</sub> | 9           | 2LC0901-0CA                 | 66            |
| 490  | 2600                        |                       | 55  | 110                  |              |              |                           |                      |               |                   |                               |             |                             |               |
|      |                             | >55                   | 75  | 140                  | 555          | 397          | 115                       | 155                  | 100           | 250               | 5 <sup>+3</sup> <sub>-2</sub> | 11          | 2LC0901-1CA                 | 105           |
|      |                             | >75                   | 100 | 170                  |              |              |                           |                      |               |                   |                               |             |                             |               |
| 565  | 2300                        |                       | 110 | 170                  | 630          | 430          | 125                       | 170                  | 110           | 280               | 5 <sup>+3</sup> <sub>-2</sub> | 5           | 2LC0901-2CA                 | 134           |
| 655  | 2000                        |                       | 130 | 210                  | 736          | 515          | 165                       | 210                  | 140           | 350               | 5 <sup>+3</sup> <sub>-2</sub> | 0           | 2LC0901-3CA                 | 217           |
| 755  | 1800                        |                       | 150 | 240                  | 840          | 584          | 180                       | 230                  | 160           | 400               | 5 <sup>+3</sup> <sub>-2</sub> | 0           | 2LC0901-4CA                 | 307           |
| 887  | 1500                        |                       | 150 | 275                  | 990          | 665          | 190                       | 260                  | 180           | 440               | 8 <sup>+2</sup> <sub>-3</sub> | 0           | 2LC0901-5CA                 | 491           |

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

- ØD1 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C

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

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

## Ordering example

- Motor 350 kW,  $P_{eff} = 315$  kW,  $n_1 = 1470$  rpm
- FLUDEX FGD coupling size 655, standard type
- Hollow shaft: Bore ØD2 = 120H7 mm with keyway to DIN 6885/1 and retaining screw
- Part 2: without finished bore (bore ØD1 = 110 mm or ØD1 = 130 mm) or with finished bore (bore ØD1 = 140H7 mm) with keyway to DIN 6885/1 and set screw
- Delivery without oil filling, no oil filling quantity specification

Article no. without finished bore for ØD1 = 110 mm:  
2LC0901-3CA19-0AA0-Z L1S

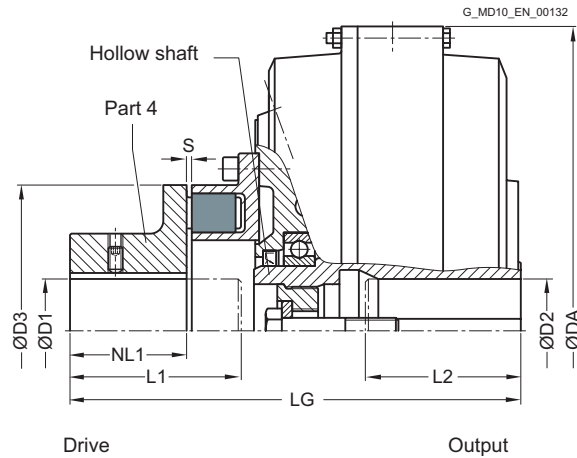
Article no. without finished bore for ØD1 = 130 mm:  
2LC0901-3CA29-0AA0-Z L1S

Article no. with finished bore for ØD1 = 140H7 mm:  
2LC0901-3CA99-0AA0-Z L1S+M1V

# TYPE FGE

with N-EUPEX E add-on coupling

Enables larger bores on the drive side.



| Size | Maximum speed<br>$n_{Kmax}$<br>rpm | FLUDEX coupling                     |            |                  |          |          | N-EUPEX E add-on coupling |                  |           |         |               | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |
|------|------------------------------------|-------------------------------------|------------|------------------|----------|----------|---------------------------|------------------|-----------|---------|---------------|---------------------------|---------------------|
|      |                                    | D2<br>Keyway DIN 6885<br>min.<br>mm | max.<br>mm | L2<br>max.<br>mm | DA<br>mm | LG<br>mm | D1<br>max.<br>mm          | L1<br>max.<br>mm | NL1<br>mm | Size D3 | S<br>mm       |                           |                     |
| 370  | 3600                               |                                     | 75         | 140              | 420      | 298      | 80                        | 110              | 70        | 180     | $4^{+2}_{-2}$ | 2LC0900-8CB               | 44                  |
| 425  | 3000                               |                                     | 80         | 140              | 470      | 348      | 90                        | 140              | 90        | 225     | $4^{+2}_{-2}$ | 2LC0901-0CB               | 64                  |
| 490  | 2600                               |                                     | 55         | 110              |          |          |                           |                  |           |         |               |                           |                     |
|      |                                    | >55                                 | 75         | 140              | 555      | 397      | 100                       | 155              | 100       | 250     | $5^{+3}_{-2}$ | 2LC0901-1CB               | 101                 |
|      |                                    | >75                                 | 100        | 170              |          |          |                           |                  |           |         |               |                           |                     |
| 565  | 2300                               |                                     | 110        | 170              | 630      | 430      | 110                       | 170              | 110       | 280     | $5^{+3}_{-2}$ | 2LC0901-2CB               | 129                 |

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

- $\varnothing D1$  Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above  $-20^{\circ}\text{C}$

## Ordering example

- Motor 160 kW,  $P_{eff} = 145 \text{ kW}$ ,  $n_1 = 1485 \text{ rpm}$
- FLUDEX FGE coupling size 490, vertical version, motor overhead
- Hollow shaft: Bore  $\varnothing D2 = 60\text{H7}$  with keyway to DIN 6885/1 and retaining screw
- Part 4: Bore  $\varnothing D2 = 80\text{H7}$  with keyway to DIN 6885/1 and set screw
- with seal set FPM
- Delivery with oil filling with specification of oil filling quantity

Article no.: 2LC0901-1CB99-0AA0-Z L1J+M1E+F08+F13+F16+Y90  
Plain text to Y90: 15.4 l

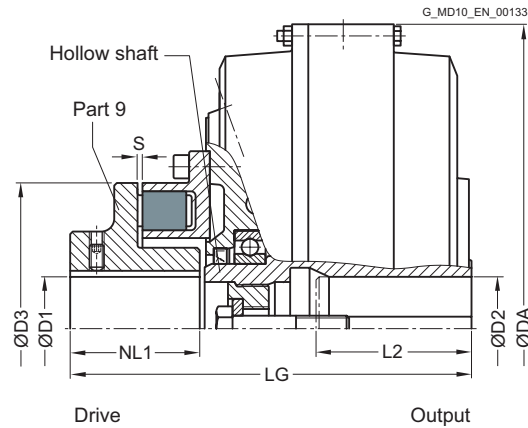
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](https://flender.com).

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

# TYPE FGM

with N-EUPEX M add-on coupling

Enables a short fitting length.



| Size | Maximum speed | FLUDEX coupling    |         |         |     |     | N-EUPEX M add-on coupling |         |     |         |                               | ➤ Article no. <sup>1)</sup> | Weight |
|------|---------------|--------------------|---------|---------|-----|-----|---------------------------|---------|-----|---------|-------------------------------|-----------------------------|--------|
|      | $n_{Kmax}$    | D2 Keyway DIN 6885 |         | L2      | DA  | LG  | D1                        | L1      | NL1 | Size D3 | S                             |                             | $m$    |
|      | rpm           | min. mm            | max. mm | max. mm | mm  | mm  | max. mm                   | max. mm | mm  | mm      | mm                            |                             | kg     |
|      |               |                    |         |         |     |     |                           |         |     |         |                               |                             |        |
| 370  | 3600          |                    | 75      | 140     | 420 | 274 | 75                        | 80      | 80  | 180     | 4 <sup>+2</sup> <sub>-2</sub> | 2LC0900-8CD                 | 44     |
| 425  | 3000          |                    | 80      | 140     | 470 | 310 | 90                        | 100     | 100 | 225     | 4 <sup>+2</sup> <sub>-2</sub> | 2LC0901-0CD                 | 64     |
| 490  | 2600          |                    | 55      | 110     |     |     |                           |         |     |         |                               |                             |        |
|      |               | >55                | 75      | 140     | 555 | 350 | 100                       | 105     | 105 | 250     | 5 <sup>+3</sup> <sub>-2</sub> | 2LC0901-1CD                 | 101    |
|      |               | >75                | 100     | 170     |     |     |                           |         |     |         |                               |                             |        |
| 565  | 2300          |                    | 110     | 170     | 630 | 380 | 110                       | 120     | 120 | 280     | 5 <sup>+3</sup> <sub>-2</sub> | 2LC0901-2CD                 | 128    |

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

- ØD1 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C

## Ordering example

- Motor 45 kW,  $P_{eff} = 37$  kW,  $n_1 = 1470$  rpm
- FLUDEX FGM coupling size 370
- Hollow shaft: Bore ØD2 = 60H7 mm with keyway to DIN 6885/1 and retaining screw
- Part 4: Bore ØD1 = 60H7 mm with keyway to DIN 6885/1 and set screw.
- Delivery without oil filling, no oil filling quantity specification

Article no. with a keyway: 2LC0900-8CD99-0AA0-Z L1E+M1E

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

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

## OIL FILLING QUANTITIES FOR FG SERIES

This assignment is valid for a maximum starting torque  $T_{\max} = 2.0 \cdot T_{\text{eff}}$  and mineral oils with a viscosity of VG 22/VG 32.

If other operating fluids are used, or with drive via the hollow shaft or  $T_{\max} \neq 2.0 \cdot T_{\text{eff}}$  or  $T_{\max} \neq 1.5 \cdot T_{\text{eff}}$ , changed filling quantities must be observed!

## Sizes 370, 490, 655 and 887

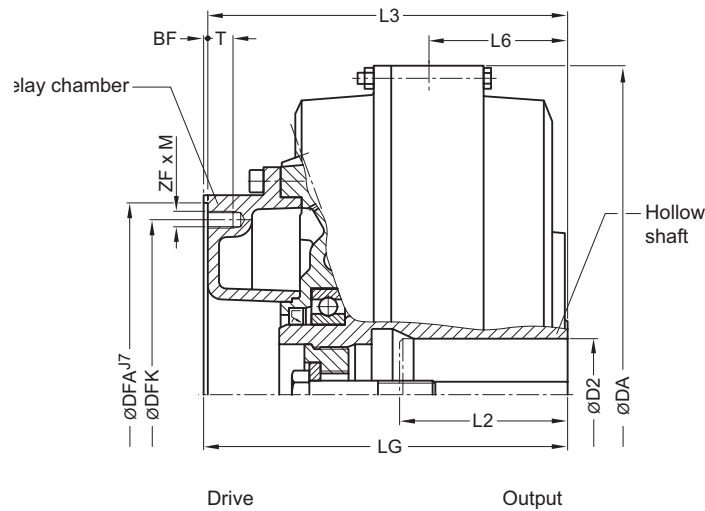
| $P_{\text{eff}}$<br>kW | Speed in rpm              |      |      |      |      |      |      |      |      |      | Size |
|------------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|
|                        | 600                       | 740  | 890  | 980  | 1180 | 1470 | 1770 | 2300 | 2950 | 3550 |      |
|                        | Oil filling quantity in l |      |      |      |      |      |      |      |      |      |      |
| 1.1                    | 5.2                       |      |      |      |      |      |      |      |      |      |      |
| 2.2                    | 6.4                       |      |      |      |      |      |      |      |      |      |      |
| 3                      | 7                         | 5.9  |      |      |      |      |      |      |      |      |      |
| 4                      | 7.2                       | 6.4  | 5.4  |      |      |      |      |      |      |      |      |
| 5.5                    | 13                        | 6.9  | 6    | 5.4  |      |      |      |      |      |      |      |
| 7.5                    | 14.4                      | 7.2  | 6.5  | 6    | 5.1  |      |      |      |      |      |      |
| 11                     | 15.9                      | 13.3 | 7.2  | 6.7  | 5.7  |      |      |      |      |      |      |
| 15                     | 17                        | 14.7 | 12.4 | 7.2  | 6.2  |      |      |      |      |      |      |
| 18                     | 28.9                      | 15.4 | 13.1 | 12   | 6.5  | 5.4  |      |      |      |      |      |
| 22                     | 31.1                      | 16.2 | 14   | 12.7 | 6.9  | 5.7  | 4.7  |      |      |      |      |
| 30                     | 35.9                      | 17   | 15.2 | 14.1 | 11.8 | 6.3  | 5.3  |      |      |      |      |
| 37                     | 37.9                      | 29.9 | 16.1 | 14.9 | 12.6 | 6.6  | 5.7  |      |      |      |      |
| 45                     | 39.7                      | 32.3 | 17   | 15.7 | 13.4 | 7    | 6    |      |      |      |      |
| 55                     | 40                        | 35.5 | 28.4 | 16.6 | 14.3 | 11.6 | 6.4  | 5    |      |      |      |
| 75                     | 70.5                      | 38.7 | 31.7 | 28.5 | 15.5 | 12.7 | 6.9  | 5.5  | 4.3  |      |      |
| 90                     | 74.7                      | 40   | 34.4 | 30.4 | 16.3 | 13.5 | 11.4 | 5.9  | 4.6  |      |      |
| 110                    | 81                        | 40   | 37   | 33   | 27.3 | 14.4 | 12.1 | 6.2  | 4.9  | 4    |      |
| 132                    | 88.2                      | 69.3 | 38.8 | 36   | 28.6 | 15.1 | 12.8 | 6.5  | 5.2  | 4.4  |      |
| 160                    | 93.5                      | 73.3 | 40   | 37.8 | 30.6 | 15.9 | 13.6 | 10.6 | 5.5  | 4.7  | 370  |
| 200                    | 98                        | 79.8 | 67   | 39.9 | 33.7 | 26.9 | 14.6 | 11.4 | 6    | 5    |      |
| 250                    | 98                        | 88.7 | 70.9 | 40   | 36.8 | 28.4 | 15.4 | 12.2 |      | 5.4  |      |
| 315                    |                           | 94.7 | 76.6 | 69.8 | 39   | 30.8 | 26.2 | 13.1 |      |      | 490  |
| 350                    |                           | 97.2 | 80   | 71.8 | 39.9 | 32.2 | 26.9 | 13.6 |      |      |      |
| 400                    |                           | 98   | 85.1 | 75.2 | 64.5 | 34.2 | 27.8 |      |      |      |      |
| 500                    |                           |      | 92.4 | 82.5 | 68.1 | 37.1 | 29.7 |      |      |      | 655  |
| 600                    |                           |      | 96.9 | 90.1 | 71.5 | 38.8 | 31.9 |      |      |      |      |
| 750                    |                           |      | 98   | 95.3 | 77.3 | 64   | 35.4 |      |      |      |      |
| 900                    |                           |      |      | 98   | 83.7 | 67   |      |      |      |      |      |
| 1100                   |                           |      |      |      | 91.1 | 70.4 |      |      |      |      | 887  |
| 1300                   |                           |      |      |      | 95.2 | 74.2 |      |      |      |      |      |
| 1600                   |                           |      |      |      |      | 80.6 |      |      |      |      |      |

## Sizes 425, 565 and 755

| $P_{\text{eff}}$<br>kW | Speed in rpm              |      |      |      |      |      |      |      |      | Size |
|------------------------|---------------------------|------|------|------|------|------|------|------|------|------|
|                        | 600                       | 740  | 890  | 980  | 1180 | 1470 | 1770 | 2300 | 2950 |      |
|                        | Oil filling quantity in l |      |      |      |      |      |      |      |      |      |
| 2.2                    | 7.8                       |      |      |      |      |      |      |      |      |      |
| 3                      | 8.7                       |      |      |      |      |      |      |      |      |      |
| 4                      | 9.5                       | 7.8  |      |      |      |      |      |      |      |      |
| 5.5                    | 10.3                      | 8.7  |      |      |      |      |      |      |      |      |
| 7.5                    | 10.9                      | 9.5  | 7.9  |      |      |      |      |      |      |      |
| 11                     | 19.9                      | 10.5 | 9.1  | 8.2  |      |      |      |      |      |      |
| 15                     | 22                        | 10.9 | 9.8  | 9.1  |      |      |      |      |      |      |
| 18                     | 23.2                      | 19.1 | 10.3 | 9.6  | 8    |      |      |      |      |      |
| 22                     | 24.3                      | 20.3 | 10.9 | 10.1 | 8.6  |      |      |      |      |      |
| 30                     | 40.2                      | 22.4 | 18.9 | 10.9 | 9.5  |      |      |      |      |      |
| 37                     | 42.6                      | 23.7 | 20.1 | 18.5 | 10   | 8.2  |      |      |      |      |
| 45                     | 45.8                      | 24.9 | 21.5 | 19.5 | 10.5 | 8.8  |      |      |      |      |
| 55                     | 50.1                      | 25.5 | 22.8 | 20.8 | 17.5 | 9.3  | 7.8  |      |      |      |
| 75                     | 55.6                      | 43.8 | 24.6 | 22.9 | 19.3 | 10.1 | 8.6  |      |      |      |
| 90                     | 58.1                      | 47.1 | 25.5 | 23.9 | 20.4 | 10.7 | 9.2  | 7.2  |      |      |
| 110                    |                           | 51.7 | 41.5 | 25.5 | 21.8 | 17.7 | 9.7  | 7.6  |      |      |
| 132                    |                           | 54.7 | 44   | 40.3 | 23   | 18.7 | 10.1 | 8.1  | 6.3  |      |
| 160                    |                           | 57.4 | 47.5 | 42.5 | 24   | 19.8 | 16.7 | 8.6  | 6.8  |      |
| 200                    |                           | 59   | 52.9 | 46.2 | 25.5 | 21.4 | 17.9 | 9.2  | 7.3  | 425  |
| 250                    |                           |      | 56   | 51.2 | 41.2 | 22.8 | 19.2 | 14.6 | 7.8  |      |
| 315                    |                           |      | 59   | 55.1 | 44.4 | 24.2 | 20.6 | 16.1 | 8.3  |      |
| 350                    |                           |      |      | 56.6 | 46.2 | 38   | 21.4 | 16.7 |      |      |
| 400                    |                           |      |      | 58.4 | 49   | 39.3 | 22.2 | 17.4 |      | 565  |
| 500                    |                           |      |      |      | 53.7 | 41.6 | 36.3 | 18.7 |      |      |
| 600                    |                           |      |      |      | 56.4 | 44.1 | 37.9 |      |      |      |
| 750                    |                           |      |      |      |      | 48.4 | 40   |      |      | 755  |
| 900                    |                           |      |      |      |      | 52.8 | 42   |      |      |      |
| 1100                   |                           |      |      |      |      |      | 45   |      |      |      |

# TYPE FVO

Delay chamber coupling of the FV series with connecting flange.



| Size | Maximum speed | Installation dimensions |         |         |     |     |     |     | Flange connection dimensions |    |     |          |    | Tightening torque for screws in thread ZF · M<br>$T_A$ | Article no. <sup>1)</sup> | Weight<br><i>m</i><br>kg |
|------|---------------|-------------------------|---------|---------|-----|-----|-----|-----|------------------------------|----|-----|----------|----|--------------------------------------------------------|---------------------------|--------------------------|
|      | $n_{Kmax}$    | D2 Keyway DIN 6885      |         | L2      | DA  | L3  | L6  | L8  | DFA                          | BF | DFK | ZF · M   | T  |                                                        |                           |                          |
|      | rpm           | min. mm                 | max. mm | max. mm | mm  | mm  | mm  | mm  | mm                           | mm | mm  | mm       | mm | Nm                                                     |                           |                          |
| 370  | 3600          |                         | 75      | 140     | 420 | 225 | 84  | 228 | 220                          | 3  | 200 | 8 · M10  | 15 | 31                                                     | 2LC0900-8ED09-0AA0        | 37                       |
| 425  | 3000          |                         | 80      | 140     | 470 | 257 | 99  | 260 | 274                          | 3  | 250 | 8 · M12  | 18 | 54                                                     | 2LC0901-0ED09-0AA0        | 47                       |
| 490  | 2600          |                         | 55      |         |     |     |     |     |                              |    |     |          |    |                                                        |                           |                          |
|      |               | >55                     | 75      | 140     | 555 | 297 | 105 | 301 | 314                          | 4  | 282 | 8 · M16  | 24 | 135                                                    | 2LC0901-1ED09-0AA0        | 80                       |
|      |               | >75                     | 100     | 170     |     |     |     |     |                              |    |     |          |    |                                                        |                           |                          |
| 565  | 2300          |                         | 110     | 170     | 630 | 333 | 123 | 337 | 344                          | 4  | 312 | 8 · M16  | 24 | 135                                                    | 2LC0901-2ED09-0AA0        | 103                      |
| 655  | 2000          |                         | 130     | 210     | 736 | 384 | 145 | 389 | 430                          | 5  | 390 | 8 · M20  | 25 | 260                                                    | 2LC0901-3ED09-0AA0        | 154                      |
| 755  | 1800          |                         | 150     | 240     | 840 | 440 | 176 | 445 | 480                          | 5  | 440 | 10 · M20 | 25 | 260                                                    | 2LC0901-4ED09-0AA0        | 224                      |
| 887  | 1500          |                         | 150     | 275     | 990 | 493 | 217 | 498 | 520                          | 5  | 480 | 10 · M20 | 25 | 260                                                    | 2LC0901-5ED09-0AA0        | 385                      |

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

- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C

## Ordering example

- Motor 132 kW,  $P_{eff} = 110$  kW,  $n_1 = 1470$  rpm
- FLUDEX FVO coupling size 490
- Hollow shaft: Bore  $\varnothing D2 = 70H7$  mm with keyway to DIN 6885/1 and retaining screw
- Delivery with oil filling: 15.2 l (see Page 13/9)

Article no.: 2LC0901-1ED09-0AA0-Z L1G+F16+Y90

Plain text to Y90: 15.2 l

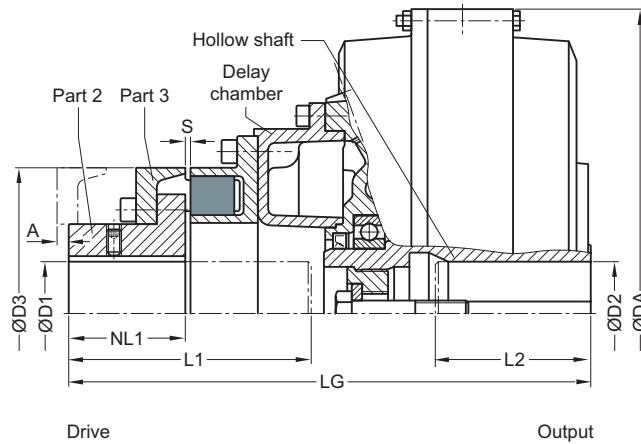
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](https://www.flender.com).

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

# TYPE FVD

with N-EUPEX D add-on coupling

Enables change of flexible elements without axial displacement of the shafts if the space "A" is provided.



| Size | Maximum speed | FLUDEX coupling    |         |         |     |     | N-EUPEX D add-on coupling |         |     |         |                               |    | ➤ Article no. <sup>1)</sup> | Weight |
|------|---------------|--------------------|---------|---------|-----|-----|---------------------------|---------|-----|---------|-------------------------------|----|-----------------------------|--------|
|      | $n_{Kmax}$    | D2 Keyway DIN 6885 |         | L2      | DA  | LG  | D1                        | L1      | NL1 | Size D3 | S                             | A  |                             | $m$    |
|      | rpm           | min. mm            | max. mm | max. mm | mm  | mm  | max. mm                   | max. mm | mm  | mm      | mm                            | mm |                             | kg     |
| 370  | 3600          |                    | 75      | 140     | 420 | 341 | 80                        | 150     | 70  | 180     | 4 <sup>+2</sup> <sub>-2</sub> | 10 | 2LC0900-8EA                 | 47     |
| 425  | 3000          |                    | 80      | 140     | 470 | 403 | 100                       | 190     | 90  | 225     | 4 <sup>+2</sup> <sub>-2</sub> | 9  | 2LC0901-0EA                 | 68     |
| 490  | 2600          |                    | 55      | 110     | 555 | 462 | 115                       | 220     | 100 | 250     | 5 <sup>+3</sup> <sub>-2</sub> | 11 | 2LC0901-1EA                 | 166    |
|      |               | >55                | 75      | 140     |     |     |                           |         |     |         |                               |    |                             |        |
|      |               | >75                | 100     | 170     |     |     |                           |         |     |         |                               |    |                             |        |
| 565  | 2300          |                    | 110     | 170     | 630 | 513 | 125                       | 250     | 110 | 280     | 5 <sup>+3</sup> <sub>-2</sub> | 5  | 2LC0901-2EA                 | 142    |
| 655  | 2000          |                    | 130     | 210     | 736 | 603 | 165                       | 295     | 140 | 350     | 5 <sup>+3</sup> <sub>-2</sub> | 0  | 2LC0901-3EA                 | 229    |
| 755  | 1800          |                    | 150     | 240     | 840 | 683 | 180                       | 330     | 160 | 400     | 5 <sup>+3</sup> <sub>-2</sub> | 0  | 2LC0901-4EA                 | 323    |
| 887  | 1500          |                    | 150     | 275     | 990 | 767 | 190                       | 365     | 180 | 440     | 8 <sup>+2</sup> <sub>-3</sub> | 0  | 2LC0901-5EA                 | 514    |

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

- ØD1 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C

## Ordering example

- Motor 630 kW,  $P_{eff} = 500$  kW,  $n_1 = 1770$  rpm
- FLUDEX FVD coupling size 655
- Hollow shaft: Bore ØD2 = 95H7 with keyway to DIN 6885/1 and retaining screw,
- Part 2: Bore ØD2 = 110H7 with keyway to DIN 6885/1 and set screw
- with seal set FPM
- Delivery without oil filling with oil filling quantity specification (see Page 13/9)

Article no.: 2LC0901-3EA99-0AA0-Z L1Q+M1M+F08+Y90  
Plain text to Y90: 32.3 l

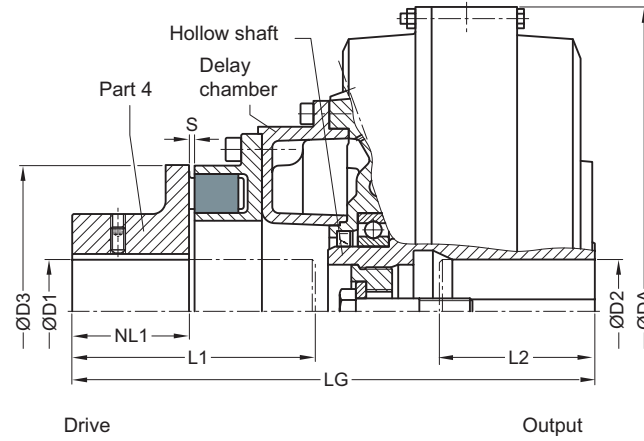
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](https://www.flender.com).

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

# TYPE FVE

with N-EUPEX E add-on coupling

Enables larger bores on the drive side.



| Size | Maximum speed<br>$n_{Kmax}$<br>rpm | FLUDEX coupling                     |            |                  |          |          | N-EUPEX E add-on coupling |                  |           |               |                               | Article no. <sup>1)</sup> | Weight<br><i>m</i><br>kg |
|------|------------------------------------|-------------------------------------|------------|------------------|----------|----------|---------------------------|------------------|-----------|---------------|-------------------------------|---------------------------|--------------------------|
|      |                                    | D2<br>Keyway DIN 6885<br>min.<br>mm | max.<br>mm | L2<br>max.<br>mm | DA<br>mm | LG<br>mm | D1<br>max.<br>mm          | L1<br>max.<br>mm | NL1<br>mm | Size D3<br>mm | S<br>mm                       |                           |                          |
| 370  | 3600                               |                                     | 75         | 140              | 420      | 341      | 80                        | 150              | 70        | 180           | 4 <sup>+2</sup> <sub>-2</sub> | 2LC0900-8EB               | 47                       |
| 425  | 3000                               |                                     | 80         | 140              | 470      | 403      | 90                        | 190              | 90        | 225           | 4 <sup>+2</sup> <sub>-2</sub> | 2LC0901-0EB               | 66                       |
| 490  | 2600                               |                                     | 55         | 110              | 555      | 462      | 100                       | 220              | 100       | 250           | 5 <sup>+3</sup> <sub>-2</sub> | 2LC0901-1EB               | 107                      |
|      |                                    | >55                                 | 75         | 140              |          |          |                           |                  |           |               |                               |                           |                          |
|      |                                    | >75                                 | 100        | 170              |          |          |                           |                  |           |               |                               |                           |                          |
| 565  | 2300                               |                                     | 110        | 170              | 630      | 513      | 110                       | 250              | 110       | 280           | 5 <sup>+3</sup> <sub>-2</sub> | 2LC0901-2EB               | 137                      |

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

- ØD1 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C

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

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

## Ordering example

- Motor 45 kW,  $P_{eff} = 37$  kW,  $n_1 = 1470$  rpm
- FLUDEX FVE coupling size 370
- Hollow shaft: Bore ØD2 = 60H7 mm with keyway to DIN 6885/1 and retaining screw
- Part 4: Bore ØD1 = 60H7 mm with keyway to DIN 6885/1 and set screw
- with electronic or mechanical operation monitoring, seal set NBR
- Delivery without oil filling, no oil filling quantity specification

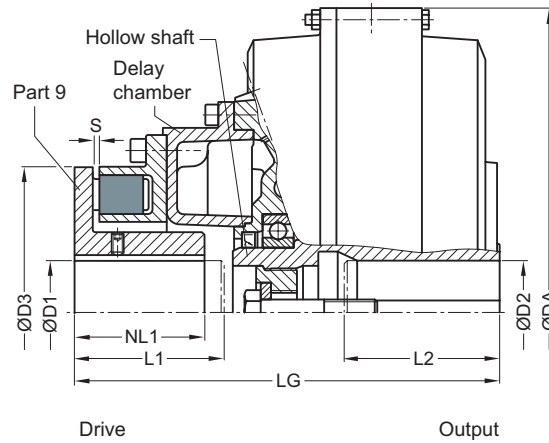
Article no, with 110 °C thermal switch:  
2LC0900-8EB99-0AA0-Z L1E+M1E+F03

Article no. with 125 °C EOC transmitter:  
2LC0900-8EB99-0AA0-Z L1E+M1E+F04

# TYPE FVM

with N-EUPEX M add-on coupling

Enables a short fitting length.



| Size | Maximum speed<br>$n_{Kmax}$<br>rpm | FLUDEX coupling                     |            |                  |          |          | N-EUPEX M add-on coupling |                  |           |               |                               | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |
|------|------------------------------------|-------------------------------------|------------|------------------|----------|----------|---------------------------|------------------|-----------|---------------|-------------------------------|---------------------------|---------------------|
|      |                                    | D2<br>Keyway DIN 6885<br>min.<br>mm | max.<br>mm | L2<br>max.<br>mm | DA<br>mm | LG<br>mm | D1<br>max.<br>mm          | L1<br>max.<br>mm | NL1<br>mm | Size D3<br>mm | S<br>mm                       |                           |                     |
| 370  | 3600                               |                                     | 75         | 140              | 420      | 288      | 75                        | 100              | 85        | 180           | 4 <sup>+2</sup> <sub>-2</sub> | 2LC0900-8EC               | 46                  |
| 425  | 3000                               |                                     | 80         | 140              | 470      | 327      | 90                        | 115              | 100       | 225           | 4 <sup>+2</sup> <sub>-2</sub> | 2LC0901-0EC               | 65                  |
| 490  | 2600                               |                                     | 55         | 110              |          |          |                           |                  |           |               |                               |                           |                     |
|      |                                    | >55                                 | 75         | 140              | 555      | 382      | 100                       | 140              | 110       | 250           | 5 <sup>+3</sup> <sub>-2</sub> | 2LC0901-1EC               | 104                 |
| 565  | 2300                               |                                     | 100        | 170              |          |          |                           |                  |           |               |                               |                           |                     |
|      |                                    | >75                                 | 110        | 170              | 630      | 425      | 110                       | 165              | 130       | 280           | 5 <sup>+3</sup> <sub>-2</sub> | 2LC0901-2EC               | 135                 |

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

- ØD1 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C

## Ordering example

- Motor 250 kW,  $P_{eff} = 180$  kW,  $n_1 = 1470$  rpm
- FLUDEX FVM coupling size 565
- Hollow shaft: Bore ØD2 = 75H7 with keyway to DIN 6885/1 and retaining screw
- Part 9: Bore ØD2 = 95H7 with keyway to DIN 6885/1 and set screw
- with seal set NBR
- thermal control unit for temperature monitoring
- Delivery without oil filling without oil filling quantity specification

Article no.: 2LC0901-2EC99-0AA0-Z L1M+M1H+F03+F25

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

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

# OIL FILLING QUANTITIES FOR FV SERIES

This assignment is valid for a maximum starting torque  $T_{\max} = 1.5 \cdot T_{\text{eff}}$  and mineral oils with a viscosity of VG 22/VG 32.

If other operating fluids are used, or with drive via the hollow shaft or  $T_{\max} \neq 2.0 \cdot T_{\text{eff}}$  or  $T_{\max} \neq 1.5 \cdot T_{\text{eff}}$ , changed filling quantities must be observed!

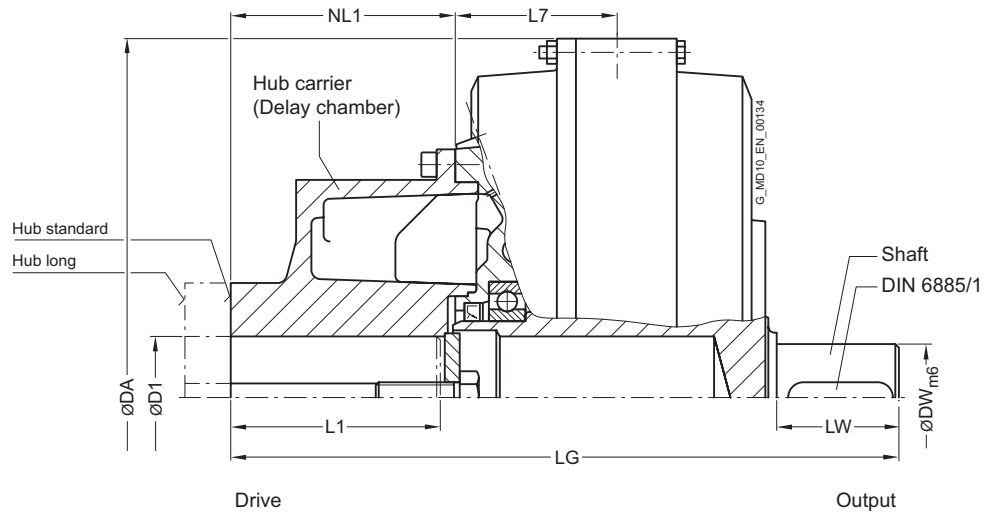
| Sizes 370, 490, 655 and 887 |                           |       |       |      |      |      |      |      |      |      |
|-----------------------------|---------------------------|-------|-------|------|------|------|------|------|------|------|
| $P_{\text{eff}}$            | Speed in rpm              |       |       |      |      |      |      |      |      |      |
| kW                          | 600                       | 740   | 890   | 980  | 1180 | 1470 | 1770 | 2300 | 2950 | 3550 |
|                             | Oil filling quantity in l |       |       |      |      |      |      |      |      |      |
| 1.1                         | 5.3                       |       |       |      |      |      |      |      |      |      |
| 2.2                         | 6.7                       | 5.5   |       |      |      |      |      |      |      |      |
| 3                           | 7.4                       | 6.1   | 5     |      |      |      |      |      |      |      |
| 4                           | 8                         | 6.6   | 5.6   | 5    |      |      |      |      |      |      |
| 5.5                         | 13.8                      | 7.4   | 6.2   | 5.6  |      |      |      |      |      |      |
| 7.5                         | 15.2                      | 8     | 6.8   | 6.2  | 5.1  |      |      |      |      |      |
| 11                          | 17.4                      | 14.1  | 7.7   | 7.1  | 5.9  |      |      |      |      |      |
| 15                          | 18.5                      | 15.6  | 13    | 7.7  | 6.5  | 5.2  |      |      |      |      |
| 18                          | 31.6                      | 16.6  | 13.8  | 12.5 | 6.9  | 5.5  |      |      |      |      |
| 22                          | 33.2                      | 17.7  | 14.8  | 13.4 | 7.3  | 5.9  | 4.8  |      |      |      |
| 30                          | 36.5                      | 18.5  | 16.3  | 14.9 | 12.3 | 6.5  | 5.5  |      |      |      |
| 37                          | 39.9                      | 32.4  | 17.5  | 15.9 | 13.3 | 7    | 5.9  | 4.2  |      |      |
| 45                          | 44                        | 34    | 18.5  | 17   | 14.1 | 7.5  | 6.2  | 4.6  |      |      |
| 55                          | 44                        | 36.2  | 31    | 18.1 | 15.1 | 12   | 6.7  | 5.1  |      |      |
| 75                          | 75.8                      | 41.4  | 33.6  | 31.2 | 16.7 | 13.5 | 7.4  | 5.7  | 4.2  |      |
| 90                          | 80                        | 44    | 35.4  | 32.7 | 17.7 | 14.3 | 11.6 | 6.1  | 4.5  |      |
| 110                         | 84.5                      | 44    | 38.2  | 34.5 | 29.9 | 15.2 | 12.6 | 6.4  | 5    | 4.1  |
| 132                         | 89.2                      | 74.6  | 41.6  | 36.7 | 31.3 | 16.2 | 13.5 | 6.9  | 5.4  | 4.2  |
| 160                         | 96.3                      | 78.7  | 44    | 39.8 | 32.9 | 17.3 | 14.4 | 10.4 | 5.7  | 4.6  |
| 200                         | 107                       | 83.6  | 72.1  | 44   | 34.9 | 29.4 | 15.4 | 11.7 | 6.2  | 5.1  |
| 250                         | 107                       | 89.5  | 76.3  | 44   | 37.9 | 31.1 | 16.7 | 12.8 |      | 5.5  |
| 315                         |                           | 98.5  | 81.5  | 75.6 | 42.1 | 33   | 28.6 | 13.9 |      |      |
| 350                         |                           | 103.6 | 83.7  | 77.7 | 44   | 33.9 | 29.5 | 14.4 |      |      |
| 400                         |                           | 107   | 86.9  | 80.5 | 68.4 | 35.3 | 30.4 |      |      |      |
| 500                         |                           |       | 94.5  | 85.3 | 73.8 | 38.4 | 32.3 |      |      |      |
| 600                         |                           |       | 102.9 | 90.6 | 77.3 | 41.8 | 33.8 |      |      |      |
| 750                         |                           |       | 107   | 99.6 | 81.9 | 67.8 | 36.2 |      |      |      |
| 900                         |                           |       |       | 107  | 86   | 72.7 |      |      |      |      |
| 1100                        |                           |       |       |      | 92.3 | 76.2 |      |      |      |      |
| 1300                        |                           |       |       |      | 99.3 | 79.8 |      |      |      |      |
| 1600                        |                           |       |       |      |      | 84   |      |      |      |      |

# Sizes 425, 565 and 755

| $P_{eff}$<br>kW | Speed in rpm              |      |      |      |      |      |      |      |      | Size |     |
|-----------------|---------------------------|------|------|------|------|------|------|------|------|------|-----|
|                 | 600                       | 740  | 890  | 980  | 1180 | 1470 | 1770 | 2300 | 2950 |      |     |
|                 | Oil filling quantity in l |      |      |      |      |      |      |      |      |      |     |
| 2.2             | 8                         |      |      |      |      |      |      |      |      |      | 425 |
| 3               | 9.1                       |      |      |      |      |      |      |      |      |      |     |
| 4               | 9.9                       | 8.1  |      |      |      |      |      |      |      |      |     |
| 5.5             | 11.1                      | 9    |      |      |      |      |      |      |      |      |     |
| 7.5             | 12                        | 9.9  | 8.3  | 7.4  |      |      |      |      |      |      |     |
| 11              | 21.4                      | 11.3 | 9.4  | 8.6  |      |      |      |      |      |      |     |
| 15              | 23.7                      | 12   | 10.4 | 9.5  | 7.8  |      |      |      |      |      |     |
| 18              | 25.2                      | 20.5 | 11.1 | 10.1 | 8.4  |      |      |      |      |      |     |
| 22              | 27                        | 21.9 | 11.7 | 10.8 | 9    |      |      |      |      |      |     |
| 30              | 43.2                      | 24.2 | 20.1 | 11.8 | 9.9  | 7.9  |      |      |      |      |     |
| 37              | 45.7                      | 26   | 21.7 | 19.5 | 10.7 | 8.6  | 6.7  |      |      |      |     |
| 45              | 48.3                      | 27.7 | 23.1 | 21   | 11.3 | 9.2  | 7.5  |      |      |      |     |
| 55              | 51.2                      | 28   | 24.6 | 22.5 | 18.3 | 9.7  | 8.1  |      |      |      |     |
| 75              | 58                        | 46.8 | 27.4 | 24.8 | 20.7 | 10.8 | 9    | 6.5  |      |      |     |
| 90              | 63.7                      | 49.2 | 28   | 26.5 | 22   | 11.4 | 9.5  | 7.1  |      |      |     |
| 110             |                           | 52.3 | 44.5 | 28   | 23.4 | 18.7 | 10.2 | 7.8  |      |      |     |
| 132             |                           | 56.3 | 46.9 | 43.3 | 24.9 | 19.9 | 10.9 | 8.4  | 6.1  | 425  |     |
| 160             |                           | 61.9 | 49.5 | 45.6 | 26.7 | 21.4 | 16.8 | 8.9  | 6.6  |      |     |
| 200             |                           | 65   | 53.2 | 48.6 | 41.7 | 23   | 18.9 | 9.6  | 7.3  |      |     |
| 250             |                           |      | 58.6 | 51.9 | 44.2 | 24.7 | 20.6 | 14.7 | 8    |      |     |
| 315             |                           |      | 65   | 57   | 47.3 | 26.8 | 22.3 | 16.1 | 8.7  |      |     |
| 350             |                           |      |      | 60   | 48.6 | 40.3 | 23   | 16.8 |      | 565  |     |
| 400             |                           |      |      | 64.4 | 50.5 | 42.2 | 24   | 18.1 |      |      |     |
| 500             |                           |      |      |      | 54.7 | 44.6 | 37.9 | 19.9 |      |      |     |
| 600             |                           |      |      |      | 59.5 | 47.1 | 40   | 21.2 |      |      |     |
| 750             |                           |      |      |      |      | 50   | 42.9 |      |      | 755  |     |
| 900             |                           |      |      |      |      | 53.2 | 45   |      |      |      |     |
| 1100            |                           |      |      |      |      |      | 47.7 |      |      |      |     |

# TYPE FNO

with large delay chamber and connecting shaft



| Size | Maximum speed<br>$n_{Kmax}$<br>rpm | Hub carrier<br>Hub | Installation dimensions          |         |               |           |          |          |          | Connection dimensions |          | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |
|------|------------------------------------|--------------------|----------------------------------|---------|---------------|-----------|----------|----------|----------|-----------------------|----------|---------------------------|---------------------|
|      |                                    |                    | D1<br>Keyway DIN 6885<br>min. mm | max. mm | L1<br>max. mm | NL1<br>mm | DA<br>mm | L7<br>mm | LG<br>mm | DW<br>mm              | LW<br>mm |                           |                     |
| 370  | 3600                               | Standard           | 38                               | 55      | 110           | 115       | 420      | 101      | 380      | 60                    | 70       | 2LC0900-8GA               | 56                  |
|      |                                    | Long               | 38                               | 80      | 140           | 145       | 420      | 101      | 410      | 60                    | 70       | 2LC0900-8GA               | 55                  |
| 425  | 3000                               | Standard           | 42                               | 75      | 140           | 147       | 470      | 106      | 437      | 70                    | 80       | 2LC0901-0GA               | 77                  |
|      |                                    | Long               | 42                               | 100     | 170           | 177       | 470      | 106      | 467      | 70                    | 80       | 2LC0901-0GA               | 77                  |
| 490  | 2600                               | Standard           | 48                               | 75      | 140           | 148       | 555      | 131      | 485      | 70                    | 90       | 2LC0901-1GA               | 116                 |
|      |                                    | Long               | 48                               | 110     | 170           | 178       | 555      | 131      | 515      | 70                    | 90       | 2LC0901-1GA               | 116                 |
| 565  | 2300                               | Standard           | 65                               | 95      | 170           | 178       | 630      | 131      | 543      | 90                    | 100      | 2LC0901-2GA               | 158                 |
|      |                                    | Long               | 65                               | 120     | 210           | 218       | 630      | 131      | 583      | 90                    | 100      | 2LC0901-2GA               | 160                 |
| 655  | 2000                               | Standard           | 65                               | 110     | 210           | 218       | 736      | 156      | 644      | 100                   | 125      | 2LC0901-3GA               | 240                 |
|      |                                    | Long               | 65                               | 135     | 250           | 258       | 736      | 156      | 684      | 100                   | 125      | 2LC0901-3GA               | 240                 |
| 755  | 1800                               | Standard           | 65                               | 120     | 210           | 219       | 840      | 170      | 705      | 110                   | 140      | 2LC0901-4GA               | 321                 |
|      |                                    | Long               | 65                               | 150     | 250           | 259       | 840      | 170      | 745      | 110                   | 140      | 2LC0901-4GA               | 318                 |
| 887  | 1500                               | Standard           | 65                               | 150     | 250           | 251       | 990      | 187      | 835      | 120                   | 178      | 2LC0901-5GA               | 562                 |
|      |                                    | Long               | 65                               | 170     | 300           | 301       | 990      | 187      | 885      | 120                   | 178      | 2LC0901-5GA               | 563                 |

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

- ØD1 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C
- For mass moments of inertia, centroidal distance Y and weight FY, see **Page 13/18**.
- Je nach Bohrung D1 und Wellenlänge L1 erfolgt die axiale Sicherung mit Halteschraube oder radialer Stellschraube

## Ordering example

- Motor 110 kW,  $P_{eff} = 90$  kW,  $n_1 = 1470$  rpm, maximum output torque  $T_{max} = 1.3 \cdot T_{eff}$
- FLUDEX FNO coupling size 425
- Hub carrier: Standard hub bore ØD1 = 75H7 mm with keyway to DIN 6885/1 and retaining screw
- Seal set FPM
- Specification of oil filling quantity: 12.4 l (see **Page 13/9**)

Article no. with 160 °C fuse:

**2LC0901-1GA90-1AA0-Z L1H+Y90+F08**

Plain text to Y90: 12.4 l

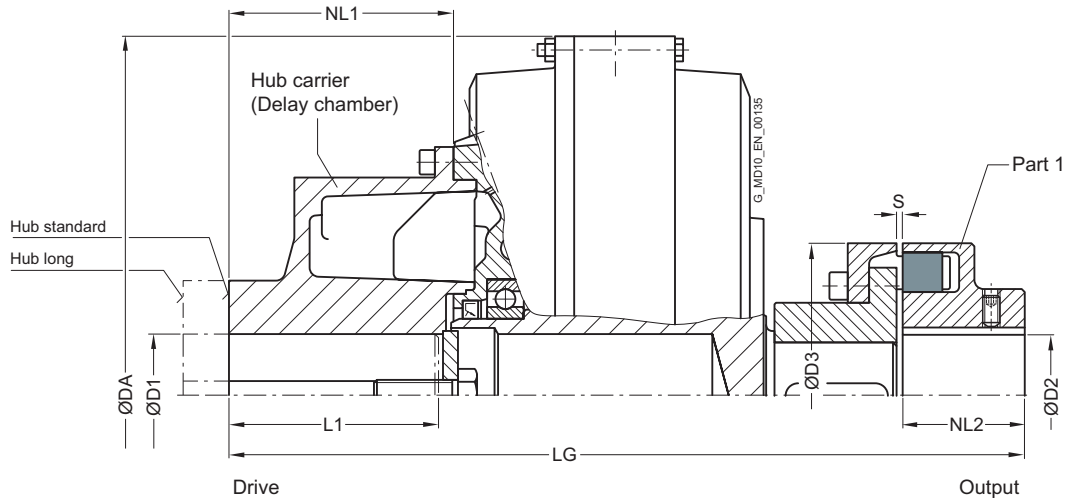
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

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

# TYPE FNA

with large delay chamber and N-EUPEX A add-on coupling

Enables a short fitting length.



| Size | Maximum speed<br>$n_{Kmax}$<br><br>rpm | Hub carrier<br><br>Hub | FLUDEX coupling       |            |                  |           |          |          | N-EUPEX A add-on coupling |           |               |                               | Article no. <sup>1)</sup> | Weight<br><br>$m$<br><br>kg |
|------|----------------------------------------|------------------------|-----------------------|------------|------------------|-----------|----------|----------|---------------------------|-----------|---------------|-------------------------------|---------------------------|-----------------------------|
|      |                                        |                        | D1<br>Keyway DIN 6885 |            | L1<br>max.<br>mm | NL1<br>mm | DA<br>mm | LG<br>mm | D2<br>max.<br>mm          | NL2<br>mm | Size D3<br>mm | S<br>mm                       |                           |                             |
|      |                                        |                        | min.<br>mm            | max.<br>mm |                  |           |          |          |                           |           |               |                               |                           |                             |
| 370  | 3600                                   | Standard               | 38                    | 55         | 110              | 115       | 420      | 454      | 80                        | 70        | 180           | 4 <sup>+2</sup> <sub>-2</sub> | 2LC0900-8GB               | 68                          |
|      |                                        | Long                   | 38                    | 80         | 140              | 145       | 420      | 484      |                           |           |               |                               | 2LC0900-8GB               | 67                          |
| 425  | 3000                                   | Standard               | 42                    | 75         | 140              | 147       | 470      | 521      | 85                        | 80        | 200           | 4 <sup>+2</sup> <sub>-2</sub> | 2LC0901-0GB               | 93                          |
|      |                                        | Long                   | 42                    | 100        | 170              | 177       | 470      | 551      |                           |           |               |                               | 2LC0901-0GB               | 93                          |
| 490  | 2600                                   | Standard               | 48                    | 75         | 140              | 148       | 555      | 579      | 90                        | 90        | 225           | 4 <sup>+2</sup> <sub>-2</sub> | 2LC0901-1GB               | 143                         |
|      |                                        | Long                   | 48                    | 110        | 170              | 178       | 555      | 609      |                           |           |               |                               | 2LC0901-1GB               | 143                         |
| 565  | 2300                                   | Standard               | 65                    | 95         | 170              | 178       | 630      | 648      | 100                       | 100       | 250           | 5 <sup>+3</sup> <sub>-2</sub> | 2LC0901-2GB               | 193                         |
|      |                                        | Long                   | 65                    | 120        | 210              | 218       | 630      | 688      |                           |           |               |                               | 2LC0901-2GB               | 195                         |
| 655  | 2000                                   | Standard               | 65                    | 110        | 210              | 218       | 736      | 774      | 120                       | 125       | 315           | 5 <sup>+3</sup> <sub>-2</sub> | 2LC0901-3GB               | 311                         |
|      |                                        | Long                   | 65                    | 135        | 250              | 258       | 736      | 814      |                           |           |               |                               | 2LC0901-3GB               | 311                         |
| 755  | 1800                                   | Standard               | 65                    | 120        | 210              | 219       | 840      | 850      | 140                       | 140       | 350           | 5 <sup>+3</sup> <sub>-2</sub> | 2LC0901-4GB               | 420                         |
|      |                                        | Long                   | 65                    | 150        | 250              | 259       | 840      | 890      |                           |           |               |                               | 2LC0901-4GB               | 417                         |
| 887  | 1500                                   | Standard               | 65                    | 150        | 250              | 251       | 990      | 1023     | 160                       | 180       | 440           | 8 <sup>+2</sup> <sub>-3</sub> | 2LC0901-5GB               | 726                         |
|      |                                        | Long                   | 65                    | 170        | 300              | 301       | 990      | 1073     |                           |           |               |                               | 2LC0901-5GB               | 727                         |

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

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C
- For mass moments of inertia, centroidal distance Y and weight FY, see Page 13/18.
- Je nach Bohrung D1 und Wellenlänge L1 erfolgt die axiale Sicherung mit Halteschraube oder radialer Stellschraube

## Ordering example

- Motor 750 kW,  $P_{eff} = 600$  kW,  $n_1 = 980$  rpm
- FLUDEX FNA coupling size 887
- Hub carrier: Standard hub bore ØD1 = 40H7 with keyway to DIN 6885/1 and retaining screw
- Part 1: Bore ØD2 = 120H7 with keyway to DIN 6885/1 and set screw
- with seal set FPM
- EOC system for temperature monitoring
- Delivery without oil filling with oil filling quantity specification

### Article no. with EOC system:

2LC0901-5GB99-1AA0-Z L1V+M1S+F12+F26+Y90

Plain text Y90: 90.6 l

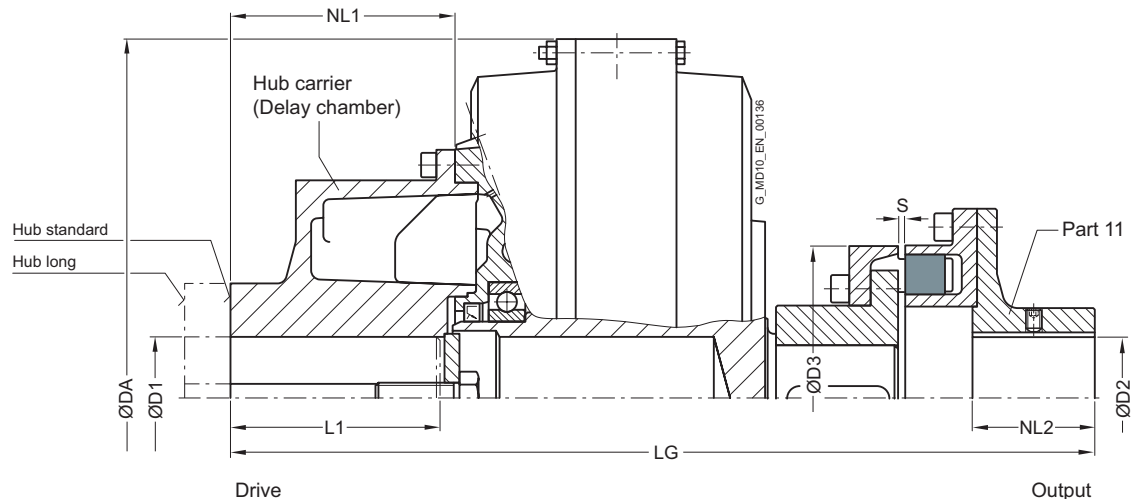
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](http://flender.com).

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

# TYPE FND

with large delay chamber and N-EUPEX D add-on coupling

Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



| Size | Maximum speed<br>$n_{Kmax}$<br>rpm | Hub carrier<br><br>Hub | FLUDEX coupling                             |     |                  |           |          |          | N-EUPEX D coupling |           |               |                               | Article no. <sup>1)</sup> | Weight<br><br>m<br><br>kg |
|------|------------------------------------|------------------------|---------------------------------------------|-----|------------------|-----------|----------|----------|--------------------|-----------|---------------|-------------------------------|---------------------------|---------------------------|
|      |                                    |                        | D1<br>Keyway DIN 6885<br>min. max.<br>mm mm |     | L1<br>max.<br>mm | NL1<br>mm | DA<br>mm | LG<br>mm | D2<br>max.<br>mm   | NL2<br>mm | Size D3<br>mm | S<br>mm                       |                           |                           |
|      |                                    |                        |                                             |     |                  |           |          |          |                    |           |               |                               |                           |                           |
| 370  | 3600                               | Standard               | 38                                          | 55  | 110              | 115       | 420      | 494      | 70                 | 70        | 180           | 5 <sup>+1</sup> <sub>-1</sub> | 2LC0900-8GC               | 72                        |
|      |                                    | Long                   | 38                                          | 80  | 140              | 145       | 420      | 524      |                    |           |               |                               | 2LC0900-8GC               | 71                        |
| 425  | 3000                               | Standard               | 42                                          | 75  | 140              | 147       | 470      | 566      | 80                 | 80        | 200           | 5 <sup>+1</sup> <sub>-1</sub> | 2LC0901-0GC               | 99                        |
|      |                                    | Long                   | 42                                          | 100 | 170              | 177       | 470      | 596      |                    |           |               |                               | 2LC0901-0GC               | 99                        |
| 490  | 2600                               | Standard               | 48                                          | 75  | 140              | 148       | 555      | 629      | 90                 | 90        | 225           | 5 <sup>+1</sup> <sub>-1</sub> | 2LC0901-1GC               | 150                       |
|      |                                    | Long                   | 48                                          | 110 | 170              | 178       | 555      | 659      |                    |           |               |                               | 2LC0901-1GC               | 150                       |

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

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

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

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

| Size | Maximum speed<br>$n_{Kmax}$ | Hub carrier<br><br>Hub | FLUDEX coupling       |     |                  |           |          |          | N-EUPEX D coupling |           |               |               | ↗ Article no. <sup>1)</sup> | Weight<br><br>$m$ |
|------|-----------------------------|------------------------|-----------------------|-----|------------------|-----------|----------|----------|--------------------|-----------|---------------|---------------|-----------------------------|-------------------|
|      |                             |                        | D1<br>Keyway DIN 6885 |     | L1<br>max.<br>mm | NL1<br>mm | DA<br>mm | LG<br>mm | D2<br>max.<br>mm   | NL2<br>mm | Size D3<br>mm | S<br>mm       |                             |                   |
|      | min.<br>mm                  | max.<br>mm             |                       |     |                  |           |          |          |                    |           |               |               |                             |                   |
|      | rpm                         |                        |                       |     |                  |           |          |          |                    |           |               |               |                             |                   |
| 565  | 2300                        | Standard               | 65                    | 95  | 170              | 178       | 630      | 706      | 100                | 100       | 250           | $6_{-1}^{+2}$ | 2LC0901-2GC                 | 204               |
|      |                             | Long                   | 65                    | 120 | 210              | 218       | 630      | 746      |                    |           |               |               | 2LC0901-2GC                 | 206               |
| 655  | 2000                        | Standard               | 65                    | 110 | 210              | 218       | 736      | 842      | 110                | 125       | 315           | $6_{-1}^{+2}$ | 2LC0901-3GC                 | 324               |
|      |                             | Long                   | 65                    | 135 | 250              | 258       | 736      | 882      |                    |           |               |               | 2LC0901-3GC                 | 324               |
| 755  | 1800                        | Standard               | 65                    | 120 | 210              | 219       | 840      | 921      | 120                | 140       | 350           | $6_{-1}^{+2}$ | 2LC0901-4GC                 | 440               |
|      |                             | Long                   | 65                    | 150 | 250              | 259       | 840      | 961      |                    |           |               |               | 2LC0901-4GC                 | 437               |
| 887  | 1500                        | Standard               | 65                    | 150 | 250              | 251       | 990      | 1104     | 130                | 180       | 440           | $8_{-2}^{+2}$ | 2LC0901-5GC                 | 747               |
|      |                             | Long                   | 65                    | 170 | 300              | 301       | 990      | 1154     |                    |           |               |               | 2LC0901-5GC                 | 748               |

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

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

### Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- Delivery with oil filling only above -20 °C
- For mass moments of inertia, centroidal distance Y and weight FY, see **Page 13/18**.
- Depending on the bore D1 and shaft length L1, the axial securing is carried out with a retaining screw or radial adjusting screw

### Ordering example

- Motor 132 kW,  $P_{eff} = 110$  kW,  $n_1 = 1470$  rpm
- FLUDEX FND coupling size 490
- Hub carrier: Long hub bore ØD1 = 80H7 mm with keyway to DIN 6885/1 and set screw
- Part 11: Bore ØD1 = 80H7 mm with keyway to DIN 6885/1 and set screw
- with electronic or mechanical operation monitoring
- seal set NBR
- Delivery without oil filling, no oil filling quantity specification

Article no, with 110 °C thermal switch:

2LC0901-1GC99-2AA0-Z L1J+M1J+F03

Article no. with 125 °C EOC transmitter:

2LC0901-1GC99-2AA0-Z L1J+M1J+F04

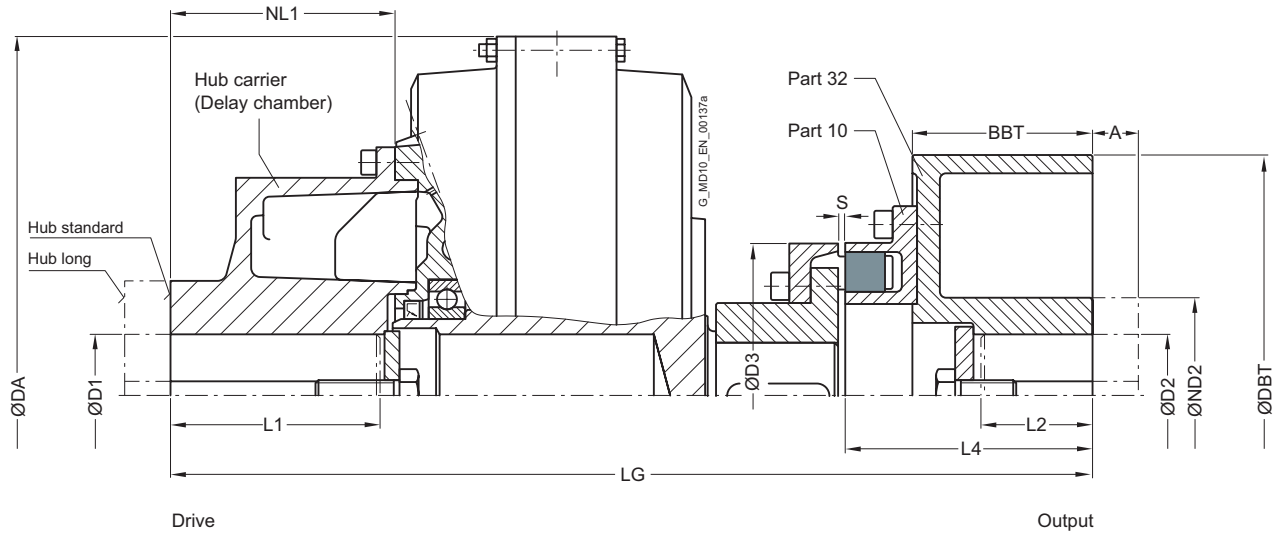
<sup>1)</sup> To identify complete item numbers specifying the available finish boring options and – if necessary – further order options, please use our configurators on [flender.com](https://www.flender.com).

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

# TYPE FNDB

with large delay chamber, N-EUPEX A add-on coupling and brake drum

Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



| Size | Maximum speed<br>$n_{Kmax}$ | Hub carrier<br>Hub | FLUDEX coupling       |            |            |     |     |     | N-EUPEX D<br>add-on coupling |                               |     | Brake drum (Part 32) |     |     |     |             | ➤ Article no. <sup>1)</sup> | Weight<br>$m$ |
|------|-----------------------------|--------------------|-----------------------|------------|------------|-----|-----|-----|------------------------------|-------------------------------|-----|----------------------|-----|-----|-----|-------------|-----------------------------|---------------|
|      |                             |                    | D1<br>Keyway DIN 6885 |            | L1         | NL1 | DA  | LG  | Size D3                      | S                             | L4  | D2                   | ND2 | DBT | BBT | A           |                             |               |
|      | rpm                         |                    | min.<br>mm            | max.<br>mm | max.<br>mm | mm  | mm  | mm  | mm                           | mm                            | mm  | max.<br>mm           | mm  | mm  | mm  | mm          | mm                          | kg            |
| 370  | 3000                        | Standard           | 38                    | 55         | 110        | 115 | 420 | 542 | 180                          | 5 <sup>+1</sup> <sub>-1</sub> | 157 | 80                   | 128 | 315 | 118 | 50          | 2LC0900-8GD                 | 87            |
|      |                             | Long               | 38                    | 80         | 140        | 145 | 420 | 572 |                              |                               | 90  | 160                  | 400 | 150 | 80  | 2LC0900-8GD | 86                          |               |
|      | 2300                        | Standard           | 38                    | 55         | 110        | 115 | 420 | 574 |                              | 189                           | 80  | 160                  | 400 | 150 | 80  | 2LC0900-8GD | 111                         |               |
|      |                             | Long               | 38                    | 80         | 140        | 145 | 420 | 604 |                              |                               | 90  | 160                  | 400 | 150 | 80  | 2LC0900-8GD | 110                         |               |
| 425  | 3000                        | Standard           | 42                    | 75         | 140        | 147 | 470 | 604 | 200                          | 5 <sup>+1</sup> <sub>-1</sub> | 162 | 80                   | 128 | 315 | 118 | 50          | 2LC0901-0GD                 | 113           |
|      |                             | Long               | 42                    | 100        | 170        | 177 | 470 | 634 |                              |                               | 90  | 160                  | 400 | 150 | 80  | 2LC0901-0GD | 113                         |               |
|      | 2300                        | Standard           | 42                    | 75         | 140        | 147 | 470 | 636 |                              | 194                           | 90  | 160                  | 400 | 150 | 80  | 2LC0901-0GD | 137                         |               |
|      |                             | Long               | 42                    | 100        | 170        | 177 | 470 | 666 |                              |                               | 90  | 160                  | 400 | 150 | 80  | 2LC0901-0GD | 137                         |               |

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

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore
- Part 32 Small brake drum  
Large brake drum
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

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

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

| Size | Maximum speed<br>$n_{Kmax}$<br>rpm | Hub carrier<br>Hub | FLUDEX coupling       |            |            |     |     |      | N-EUPEX D<br>add-on coupling |                               |     | Brake drum (Part 32) |     |     |     |     | Article no. <sup>1)</sup> | Weight<br><i>m</i><br>kg |
|------|------------------------------------|--------------------|-----------------------|------------|------------|-----|-----|------|------------------------------|-------------------------------|-----|----------------------|-----|-----|-----|-----|---------------------------|--------------------------|
|      |                                    |                    | D1<br>Keyway DIN 6885 |            | L1         | NL1 | DA  | LG   | Size D3                      | S                             | L4  | D2                   | ND2 | DBT | BBT | A   |                           |                          |
|      |                                    |                    | min.<br>mm            | max.<br>mm | max.<br>mm | mm  | mm  | mm   | mm                           | mm                            | mm  | max.<br>mm           | mm  | mm  | mm  | mm  |                           |                          |
| 490  | 2300                               | Standard           | 48                    | 75         | 140        | 148 | 555 | 689  | 225                          | 5 <sup>+1</sup> <sub>-1</sub> | 199 | 90                   | 160 | 400 | 150 | 80  | 2LC0901-1GD               | 183                      |
|      |                                    | Long               | 48                    | 110        | 170        | 178 | 555 | 719  |                              |                               |     |                      |     |     |     |     | 2LC0901-1GD               | 183                      |
|      | 1900                               | Standard           | 48                    | 75         | 140        | 148 | 555 | 729  |                              |                               | 239 | 110                  | 175 | 500 | 190 | 110 | 2LC0901-1GD               | 218                      |
|      |                                    | Long               | 48                    | 110        | 170        | 178 | 555 | 759  |                              |                               |     |                      |     |     |     |     | 2LC0901-1GD               | 218                      |
| 565  | 2300                               | Standard           | 65                    | 95         | 170        | 178 | 630 | 756  | 250                          | 6 <sup>+2</sup> <sub>-1</sub> | 207 | 100                  | 160 | 400 | 150 | 80  | 2LC0901-2GD               | 234                      |
|      |                                    | Long               | 65                    | 120        | 210        | 218 | 630 | 796  |                              |                               |     |                      |     |     |     |     | 2LC0901-2GD               | 236                      |
|      | 1900                               | Standard           | 65                    | 95         | 170        | 178 | 630 | 796  |                              |                               | 247 | 110                  | 175 | 500 | 190 | 110 | 2LC0901-2GD               | 268                      |
|      |                                    | Long               | 65                    | 120        | 210        | 218 | 630 | 836  |                              |                               |     |                      |     |     |     |     | 2LC0901-2GD               | 270                      |
| 655  | 1900                               | Standard           | 65                    | 110        | 210        | 218 | 736 | 907  | 315                          | 6 <sup>+2</sup> <sub>-1</sub> | 257 | 110                  | 175 | 500 | 190 | 110 | 2LC0901-3GD               | 377                      |
|      |                                    | Long               | 65                    | 135        | 250        | 258 | 736 | 947  |                              |                               |     |                      |     |     |     |     | 2LC0901-3GD               | 377                      |
|      | 1500 <sup>2)</sup>                 | Standard           | 65                    | 110        | 210        | 218 | 736 | 953  |                              |                               | 303 | 140                  | 224 | 630 | 236 | 100 | 2LC0901-3GD               | 437                      |
|      |                                    | Long               | 65                    | 135        | 250        | 258 | 736 | 993  |                              |                               |     |                      |     |     |     |     | 2LC0901-3GD               | 437                      |
| 755  | 1500 <sup>2)</sup>                 | Standard           | 65                    | 120        | 210        | 219 | 840 | 1018 | 350                          | 6 <sup>+2</sup> <sub>-1</sub> | 307 | 140                  | 224 | 630 | 236 | 100 | 2LC0901-4GD               | 541                      |
|      |                                    | Long               | 65                    | 150        | 250        | 259 | 840 | 1058 |                              |                               |     |                      |     |     |     |     | 2LC0901-4GD               | 538                      |
| 887  | 1300 <sup>3)</sup>                 | Standard           | 65                    | 150        | 250        | 251 | 990 | 1190 | 440                          | 8 <sup>+2</sup> <sub>-2</sub> | 347 | 160                  | 265 | 710 | 265 | 100 | 2LC0901-5GD               | 892                      |
|      |                                    | Long               | 65                    | 170        | 300        | 301 | 990 | 1240 |                              |                               |     |                      |     |     |     |     | 2LC0901-5GD               | 893                      |

Configurable variants <sup>1)</sup>

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore
- Part 32 Small brake drum  
Large brake drum
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

## Notes

- The specified coupling weights are effective for maximum bores without oil filling, without hub prolongations "A" but with set screw
- L2 denotes the shaft insertion depth.  
In the case of shaft ends deviating from DIN 748/1 long, the insertion depth must be specified in plain text with "Y29"
- Delivery with oil filling only above -20 °C
- For mass moments of inertia, centroidal distance Y and weight FY, see **Page 13/18**.
- Depending on the bore D1 and shaft length L1, the axial securing is carried out with a retaining screw or radial adjusting screw

## Ordering example:

- Motor 55 kW,  $P_{eff} = 45$  kW,  $n_1 = 1470$  rpm
- FLUDEX FNDB coupling size 370, standard type
- Hub carrier: Long hub bore ØD1 = 65H7 mm  
with keyway to DIN 6885/1 and set screw
- Brake drum (Part 32): Ø315 x 118, bore ØD2 = 80H7 mm  
with keyway to DIN 6885/1 and retaining screw
- seal set NBR
- Delivery without oil filling, no oil filling quantity specification

Article no.: 2LC0900-8GD99-2AA0-Z L1F+M1J

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

<sup>2)</sup> When performing a GGG brake drum:  
Maximum speed 1800 min<sup>-1</sup> possible.

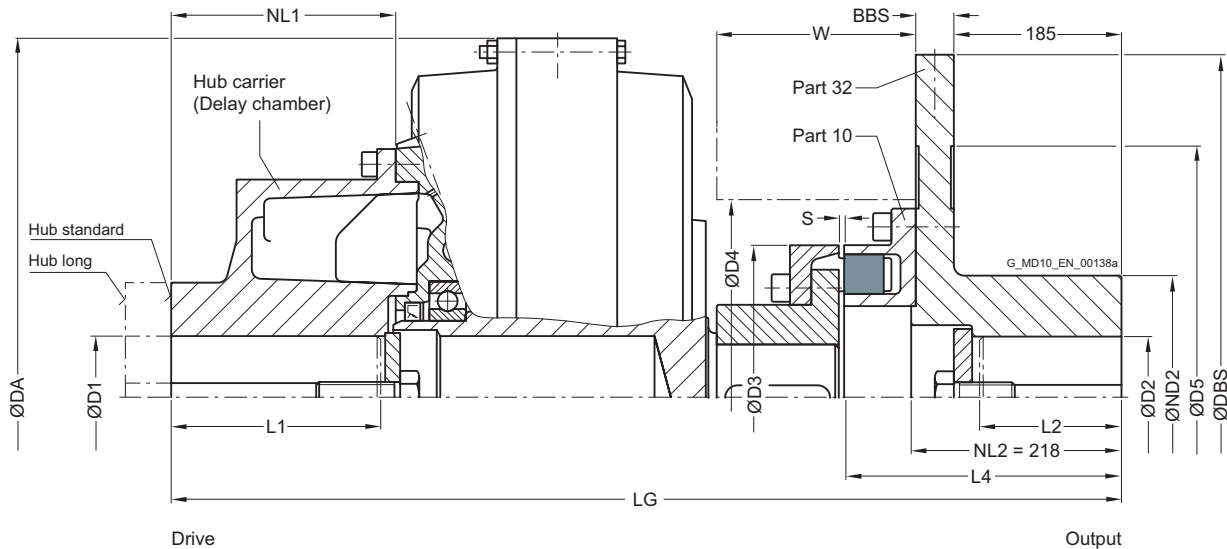
<sup>3)</sup> When performing a GGG brake drum:  
Maximum speed 1500 min<sup>-1</sup> possible.

➤ For online configuration on **flender.com**, click on the item no.

# TYPE FNDS SB

with large delay chamber, N-EUPEX D add-on coupling and brake disk for stopping brakes

Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



| Size | Maximum speed<br>$n_{Kmax}$<br>rpm | Hub carrier<br>Hub | FLUDEX coupling                     |            |                  |           |          |          | N-EUPEX D<br>add-on coupling |                               |          | Brake disk (part 32) <sup>2)</sup> |           |           |           |          | Space<br>dimensions |         | Article no. <sup>1)</sup> | Weight<br><br>m<br>kg |
|------|------------------------------------|--------------------|-------------------------------------|------------|------------------|-----------|----------|----------|------------------------------|-------------------------------|----------|------------------------------------|-----------|-----------|-----------|----------|---------------------|---------|---------------------------|-----------------------|
|      |                                    |                    | D1<br>Keyway DIN 6885<br>min.<br>mm | max.<br>mm | L1<br>max.<br>mm | NL1<br>mm | DA<br>mm | LG<br>mm | Size D3<br>mm                | S<br>mm                       | L4<br>mm | D2<br>max.<br>mm                   | ND2<br>mm | DBS<br>mm | BBS<br>mm | D5<br>mm | D4<br>mm            | W<br>mm |                           |                       |
| 370  | 3000                               | Standard           | 38                                  | 55         | 110              | 115       | 420      | 642      | 180                          | 5 <sup>+1</sup> <sub>-1</sub> | 257      | 80                                 | 145       | 450       | 30        | 300      | 222                 | 130     | 2LC0900-8GE               | 116                   |
|      |                                    | Long               | 38                                  | 80         | 140              | 145       | 420      | 672      |                              |                               |          |                                    |           |           |           |          |                     |         |                           |                       |
| 425  | 2600                               | Standard           | 42                                  | 75         | 140              | 147       | 470      | 704      | 200                          | 5 <sup>+1</sup> <sub>-1</sub> | 262      | 80                                 | 160       | 500       | 30        | 340      | 250                 | 144     | 2LC0901-0GE               | 155                   |
|      |                                    | Long               | 42                                  | 100        | 170              | 177       | 470      | 734      |                              |                               |          |                                    |           |           |           |          |                     |         |                           |                       |
| 490  | 2300                               | Standard           | 48                                  | 75         | 140              | 148       | 555      | 757      | 225                          | 5 <sup>+1</sup> <sub>-1</sub> | 267      | 90                                 | 160       | 560       | 30        | 370      | 276                 | 162     | 2LC0901-1GE               | 212                   |
|      |                                    | Long               | 48                                  | 110        | 170              | 178       | 555      | 787      |                              |                               |          |                                    |           |           |           |          |                     |         |                           |                       |

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

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

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

<sup>2)</sup> Hub shortening possible, clearly specify NL2 size

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

| Size | Maximum speed<br>$n_{Kmax}$ | Hub carrier<br>Hub | FLUDEX coupling                     |            |                  |           |          |          | N-EUPEX D<br>add-on coupling |                               |          | Brake disk (part 32) <sup>2)</sup> |           |           |           |          | Space dimensions |         | Article no. <sup>1)</sup> | Weight<br><i>m</i> |
|------|-----------------------------|--------------------|-------------------------------------|------------|------------------|-----------|----------|----------|------------------------------|-------------------------------|----------|------------------------------------|-----------|-----------|-----------|----------|------------------|---------|---------------------------|--------------------|
|      |                             |                    | D1<br>Keyway DIN 6885<br>min.<br>mm | max.<br>mm | L1<br>max.<br>mm | NL1<br>mm | DA<br>mm | LG<br>mm | Size D3<br>mm                | S<br>mm                       | L4<br>mm | D2<br>max.<br>mm                   | ND2<br>mm | DBS<br>mm | BBS<br>mm | D5<br>mm | D4<br>mm         | W<br>mm |                           |                    |
|      |                             |                    |                                     |            |                  |           |          |          |                              |                               |          |                                    |           |           |           |          |                  |         |                           |                    |
| 565  | 2100                        | Standard           | 65                                  | 95         | 170              | 178       | 630      | 824      | 250                          | 6 <sup>+2</sup> <sub>-1</sub> | 275      | 100                                | 175       | 630       | 30        | 440      | 317              | 179     | 2LC0901-2GE               | 279                |
|      |                             | Long               | 65                                  | 120        | 210              | 218       | 630      | 864      |                              |                               |          |                                    |           |           |           |          |                  |         | 2LC0901-2GE               | 281                |
| 655  | 2000                        | Standard           | 65                                  | 110        | 210              | 218       | 736      | 935      | 315                          | 6 <sup>+2</sup> <sub>-1</sub> | 285      | 100                                | 175       | 630       | 30        | 440      | 385              | 200     | 2LC0901-3GE               | 388                |
|      |                             | Long               | 65                                  | 135        | 250              | 258       | 736      | 975      |                              |                               |          |                                    |           |           |           |          |                  |         | 2LC0901-3GE               | 388                |
| 755  | 1800                        | Standard           | 65                                  | 120        | 210              | 219       | 840      | 1000     | 350                          | 6 <sup>+2</sup> <sub>-1</sub> | 289      | 140                                | 220       | 710       | 30        | 520      | 435              | 219     | 2LC0901-4GE               | 518                |
|      |                             | Long               | 65                                  | 150        | 250              | 259       | 840      | 1040     |                              |                               |          |                                    |           |           |           |          |                  |         | 2LC0901-4GE               | 515                |
| 887  | 1500                        | Standard           | 65                                  | 150        | 250              | 251       | 990      | 1144     | 440                          | 8 <sup>+2</sup> <sub>-2</sub> | 301      | 140                                | 220       | 800       | 30        | 610      | 525              | 268     | 2LC0901-5GE               | 828                |
|      |                             | Long               | 65                                  | 170        | 300              | 301       | 990      | 1194     |                              |                               |          |                                    |           |           |           |          |                  |         | 2LC0901-5GE               | 829                |

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

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

### Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- L2 denotes the shaft insertion depth  
In the case of shaft ends deviating from DIN 748/1 long the insertion depth must be specified in plain text and with "Y29"
- Delivery with oil filling only above -20 °C
- For mass moments of inertia, centroidal distance Y and weight FY, see **Page 13/18**.
- Depending on the bore D1 and shaft length L1, the axial securing is carried out with a retaining screw or radial adjusting screw

### Ordering example

- Motor 37 kW,  $P_{eff} = 30$  kW,  $n_1 = 1470$  rpm
- FLUDEX FNDS SB coupling size 370
- Hub carrier: Standard hub bore ØD1 = 55H7 mm with keyway to DIN 6885/1 and retaining screw
- Brake disk (part 32): Bore ØD2 = 75H7 mm with keyway to DIN 6885/1 and retaining screw
- with preservation suitable for indoor storage
- Delivery without oil filling, no oil filling quantity specification

Article no. with standard preservation:  
2LC0900-8GE99-1CA0-Z L1D+M1H

Article no. with preservation 6 months:  
2LC0900-8GE99-1CA0-Z L1D+M1H+B31

Article no. with preservation 24 months:  
2LC0900-8GE99-1CA0-Z L1D+M1H+B28

Article no. with preservation 36 months:  
2LC0900-8GE99-1CA0-Z L1D+M1H+B34

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

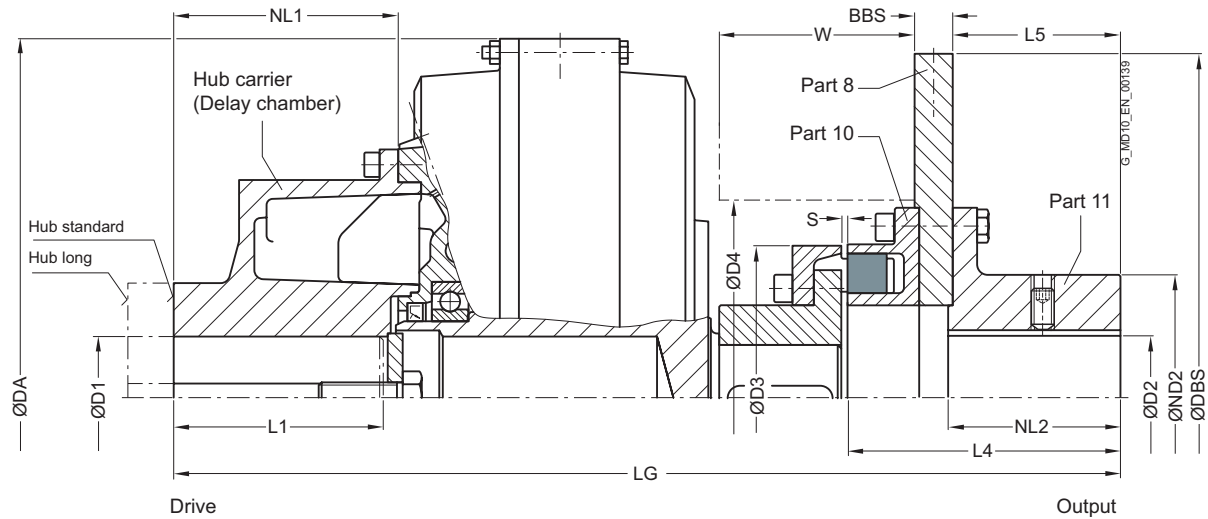
<sup>2)</sup> Hub shortening possible, clearly specify NL2 size

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

# TYPE FNDS HB

with large delay chamber, N-EUPEX D add-on coupling and brake disk for blocking brakes

Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



| Size | Maximum speed<br><br>$n_{Kmax}$ | Hub carrier<br>Hub | FLUDEX coupling          |      |     |     |     |     | N-EUPEX D<br>add-on coupling |                               |     | Brake disk (part 8)<br>Hub (part 11) |     |     |     |     |                  | Space<br>dimensions |     | Article no. <sup>1)</sup> | Weight<br><br>$m$<br><br>kg |
|------|---------------------------------|--------------------|--------------------------|------|-----|-----|-----|-----|------------------------------|-------------------------------|-----|--------------------------------------|-----|-----|-----|-----|------------------|---------------------|-----|---------------------------|-----------------------------|
|      |                                 |                    | D1<br>Keyway<br>DIN 6885 |      | L1  | NL1 | DA  | LG  | Size D3                      | S                             | L4  | D2                                   | NL2 | ND2 | DBS | BBS | L5 <sup>2)</sup> | D4                  | W   |                           |                             |
|      | min.                            |                    | max.                     | max. |     |     |     |     |                              |                               |     |                                      |     |     |     |     |                  |                     |     |                           |                             |
|      | rpm                             |                    | mm                       | mm   | mm  | mm  | mm  | mm  | mm                           | mm                            | mm  | mm                                   | mm  | mm  | mm  | mm  | mm               | mm                  | mm  |                           |                             |
| 370  | 3600                            | Standard           | 38                       | 55   | 110 | 115 | 420 | 555 | 180                          | 5 <sup>+1</sup> <sub>-1</sub> | 170 | 80                                   | 118 | 130 | 355 | 16  | 115              | 222                 | 127 | 2LC0900-8GF               | 87                          |
|      |                                 | Long               | 38                       | 80   | 140 | 145 | 420 | 585 |                              |                               |     |                                      |     |     |     |     |                  |                     |     | 2LC0900-8GF               | 86                          |
| 425  | 3000                            | Standard           | 42                       | 75   | 140 | 147 | 470 | 617 | 200                          | 5 <sup>+1</sup> <sub>-1</sub> | 175 | 80                                   | 118 | 130 | 355 | 16  | 115              | 250                 | 141 | 2LC0901-0GF               | 115                         |
|      |                                 | Long               | 42                       | 100  | 170 | 177 | 470 | 647 |                              |                               |     |                                      |     |     |     |     |                  |                     |     | 2LC0901-0GF               | 115                         |
| 490  | 2600                            | Standard           | 48                       | 75   | 140 | 148 | 555 | 670 | 225                          | 5 <sup>+1</sup> <sub>-1</sub> | 180 | 90                                   | 118 | 135 | 400 | 16  | 115              | 276                 | 159 | 2LC0901-1GF               | 166                         |
|      |                                 | Long               | 48                       | 110  | 170 | 178 | 555 | 700 |                              |                               |     |                                      |     |     |     |     |                  |                     |     | 2LC0901-1GF               | 166                         |

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

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

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

<sup>2)</sup> Hub shortening possible, clearly specify L5 size

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

| Size | Maximum speed<br>$n_{Kmax}$<br>rpm | Hub carrier<br>Hub | FLUDEX coupling          |            |            |     |     |      | N-EUPEX D<br>add-on coupling |                               |     | Brake disk (part 8)<br>Hub (part 11) |     |     |     |     |                  | Space dimensions |     | Article no. <sup>1)</sup> | Weight<br>$m$<br>kg |
|------|------------------------------------|--------------------|--------------------------|------------|------------|-----|-----|------|------------------------------|-------------------------------|-----|--------------------------------------|-----|-----|-----|-----|------------------|------------------|-----|---------------------------|---------------------|
|      |                                    |                    | D1<br>Keyway<br>DIN 6885 |            | L1         | NL1 | DA  | LG   | Size D3                      | S                             | L4  | D2                                   | NL2 | ND2 | DBS | BBS | L5 <sup>2)</sup> | D4               | W   |                           |                     |
|      |                                    |                    | min.<br>mm               | max.<br>mm | max.<br>mm | mm  | mm  | mm   | mm                           | mm                            | mm  | max.<br>mm                           | mm  | mm  | mm  | mm  | mm               | mm               | mm  |                           |                     |
| 565  | 2300                               | Standard           | 65                       | 95         | 170        | 178 | 630 | 737  | 250                          | 6 <sup>+2</sup> <sub>-1</sub> | 188 | 100                                  | 118 | 160 | 450 | 16  | 115              | 317              | 176 | 2LC0901-2GF               | 224                 |
|      |                                    | Long               | 65                       | 120        | 210        | 218 | 630 | 777  |                              |                               |     |                                      |     |     |     |     |                  |                  |     | 2LC0901-2GF               | 226                 |
| 655  | 2000                               | Standard           | 65                       | 110        | 210        | 218 | 736 | 848  | 315                          | 6 <sup>+2</sup> <sub>-1</sub> | 198 | 100                                  | 118 | 170 | 500 | 16  | 115              | 385              | 197 | 2LC0901-3GF               | 347                 |
|      |                                    | Long               | 65                       | 135        | 250        | 258 | 736 | 888  |                              |                               |     |                                      |     |     |     |     |                  |                  |     | 2LC0901-3GF               | 347                 |
| 755  | 1800                               | Standard           | 65                       | 120        | 210        | 219 | 840 | 961  | 350                          | 6 <sup>+2</sup> <sub>-1</sub> | 250 | 140                                  | 164 | 225 | 630 | 20  | 160              | 435              | 215 | 2LC0901-4GF               | 495                 |
|      |                                    | Long               | 65                       | 150        | 250        | 259 | 840 | 1001 |                              |                               |     |                                      |     |     |     |     |                  |                  |     | 2LC0901-4GF               | 492                 |
| 887  | 1500                               | Standard           | 65                       | 150        | 250        | 251 | 990 | 1105 | 440                          | 8 <sup>+2</sup> <sub>-2</sub> | 262 | 140                                  | 164 | 225 | 710 | 20  | 160              | 525              | 264 | 2LC0901-5GF               | 799                 |
|      |                                    | Long               | 65                       | 170        | 300        | 301 | 990 | 1155 |                              |                               |     |                                      |     |     |     |     |                  |                  |     | 2LC0901-5GF               | 800                 |

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

- ØD1 Without finished bore  
With finished bore
- ØD2 Without finished bore  
With finished bore
- Delivery without oil filling  
Delivery with oil filling with specification of oil filling quantity in l  
Delivery without oil filling with oil filling quantity specification in l

### Notes

- The specified coupling weights are effective for maximum bores without oil filling.
- L2 denotes the shaft insertion depth  
In the case of shaft ends deviating from DIN 748/1 long the insertion depth must be specified in plain text and with "Y29"
- Delivery with oil filling only above -20 °C
- For mass moments of inertia, centroidal distance Y and weight FY, see Page 13/18.
- Depending on the bore D1 and shaft length L1, the axial securing is carried out with a retaining screw or radial adjusting screw

### Ordering example

- Motor 200 kW,  $P_{eff} = 160$  kW,  $n_1 = 1470$  rpm
- FLUDEX FNDS HB coupling size 490
- Hub carrier: Long hub bore ØD1 = 110H7 mm with keyway to DIN 6885/1 and set screw
- Hub (part 11): Bore ØD2 = 80H7 mm with keyway to DIN 6885/1 and set screw
- Fitting position: Horizontal/vertical motor underneath (MU)
- Delivery without oil filling, no oil filling quantity specification

Article no. in horizontal version:  
2LC0901-1GF99-2AA0-Z L1Q+M1J

Article no. in vertical version (MU):  
2LC0901-1GF99-2AA0-Z L1Q+M1J+F14

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

<sup>2)</sup> Hub shortening possible, clearly specify L5 size

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

## OIL FILLING QUANTITIES FOR FN SERIES

This assignment is valid for a maximum starting torque  $T_{\max} = 1.3 \cdot T_{\text{eff}}$  and mineral oils with a viscosity of VG 22/VG 32.

If other operating fluids are used, or with drive via the shaft or  $T_{\max} \neq 1.3 \cdot T_{\text{eff}}$ , changed filling quantities must be observed!

| Sizes 370, 490, 655 and 887 |                           |       |       |       |      |      |      |      |      |      |
|-----------------------------|---------------------------|-------|-------|-------|------|------|------|------|------|------|
| $P_{\text{eff}}$            | Speed in rpm              |       |       |       |      |      |      |      |      |      |
| kW                          | 600                       | 740   | 890   | 980   | 1180 | 1470 | 1770 | 2300 | 2950 | 3550 |
|                             | Oil filling quantity in l |       |       |       |      |      |      |      |      |      |
| 1.1                         | 5.6                       |       |       |       |      |      |      |      |      |      |
| 2.2                         | 7.1                       | 5.7   |       |       |      |      |      |      |      |      |
| 3                           | 7.9                       | 6.4   | 5.1   |       |      |      |      |      |      |      |
| 4                           | 8.2                       | 7     | 5.8   | 5.1   |      |      |      |      |      |      |
| 5.5                         | 14.4                      | 7.8   | 6.5   | 5.9   |      |      |      |      |      |      |
| 7.5                         | 16                        | 8.2   | 7.2   | 6.5   | 5.3  |      |      |      |      |      |
| 11                          | 18.2                      | 14.7  | 8.2   | 7.4   | 6.2  |      |      |      |      |      |
| 15                          | 19                        | 16.3  | 13.4  | 8.2   | 6.8  | 5.4  |      |      |      |      |
| 18                          | 33.5                      | 17.3  | 14.4  | 12.9  | 7.2  | 5.8  |      |      |      |      |
| 22                          | 35.4                      | 18.6  | 15.4  | 13.9  | 7.8  | 6.2  | 4.9  |      |      |      |
| 30                          | 38.5                      | 19    | 17    | 15.5  | 12.5 | 6.9  | 5.7  |      |      |      |
| 37                          | 41.6                      | 34.3  | 18.4  | 16.6  | 13.7 | 7.4  | 6.1  | 4.4  |      |      |
| 45                          | 45                        | 36.2  | 19    | 17.7  | 14.7 | 7.9  | 6.6  | 4.7  |      |      |
| 55                          | 45                        | 38.2  | 32.9  | 19    | 15.8 | 12.2 | 7    | 5.3  |      |      |
| 75                          | 76.5                      | 43    | 35.8  | 33.1  | 17.4 | 14   | 7.8  | 6    | 4.3  |      |
| 90                          | 80.5                      | 45    | 37.6  | 34.8  | 18.7 | 14.9 | 11.7 | 6.4  | 4.6  |      |
| 110                         | 85.2                      | 45    | 40.1  | 36.7  | 31.8 | 16   | 13.1 | 6.8  | 5.1  |      |
| 132                         | 89.5                      | 74.7  | 43.3  | 38.6  | 33.2 | 16.9 | 14   | 7.2  | 5.6  | 4.3  |
| 160                         | 95.6                      | 80    | 45    | 41.5  | 35   | 18.1 | 15   | 10.7 | 6    | 4.7  |
| 200                         | 105.5                     | 84.5  | 71.5  | 45    | 37.1 | 31.1 | 16.2 | 11.8 | 6.5  | 5.2  |
| 250                         | 110                       | 89.7  | 76.9  | 45    | 39.7 | 33   | 17.4 | 13.2 |      | 5.8  |
| 315                         |                           | 97.5  | 82.4  | 76.5  | 43.8 | 35.1 | 30.2 | 14.5 |      |      |
| 350                         |                           | 102.1 | 84.6  | 78.4  | 45   | 36.1 | 31.2 | 15   |      |      |
| 400                         |                           | 108.9 | 87.6  | 81.2  | 68   | 37.4 | 32.3 |      |      |      |
| 500                         |                           |       | 94.1  | 86.1  | 73.3 | 40.2 | 34.2 |      |      |      |
| 600                         |                           |       | 101.4 | 90.6  | 78.1 | 43.5 | 35.9 |      |      |      |
| 750                         |                           |       | 110   | 98.5  | 82.9 | 66.9 | 38.2 |      |      |      |
| 900                         |                           |       |       | 107.2 | 86.8 | 72.7 |      |      |      |      |
| 1100                        |                           |       |       |       | 92.1 | 77.1 |      |      |      |      |
| 1300                        |                           |       |       |       | 98.2 | 80.4 |      |      |      |      |
| 1600                        |                           |       |       |       |      | 84.9 |      |      |      |      |

370

490

655

887

## Sizes 425, 565 and 755

| $P_{eff}$<br>kW | Speed in rpm              |      |      |      |      |      |      |      | Size |
|-----------------|---------------------------|------|------|------|------|------|------|------|------|
|                 | 600                       | 740  | 890  | 980  | 1180 | 1470 | 1770 | 2300 |      |
|                 | Oil filling quantity in l |      |      |      |      |      |      |      |      |
| 2.2             | 8.5                       |      |      |      |      |      |      |      |      |
| 3               | 9.7                       |      |      |      |      |      |      |      |      |
| 4               | 10.7                      | 8.6  |      |      |      |      |      |      |      |
| 5.5             | 12                        | 9.7  |      |      |      |      |      |      |      |
| 7.5             | 12.5                      | 10.7 | 8.8  | 7.7  |      |      |      |      |      |
| 11              | 22.6                      | 12.2 | 10.2 | 9.2  |      |      |      |      |      |
| 15              | 25.2                      | 12.5 | 11.2 | 10.2 | 8.3  |      |      |      |      |
| 18              | 26.6                      | 21.4 | 12   | 10.8 | 8.9  |      |      |      |      |
| 22              | 28.6                      | 23.1 | 12.5 | 11.6 | 9.6  |      |      |      |      |
| 30              | 44.1                      | 25.7 | 21.1 | 12.5 | 10.7 | 8.5  |      |      |      |
| 37              | 46.8                      | 27.5 | 22.9 | 20.5 | 11.4 | 9.2  | 7.1  |      |      |
| 45              | 49.5                      | 29   | 24.5 | 22   | 12.3 | 9.8  | 7.8  |      |      |
| 55              | 52.4                      | 29   | 26.1 | 23.7 | 18.7 | 10.5 | 8.6  |      |      |
| 75              | 58.5                      | 47.8 | 29   | 26.3 | 21.7 | 11.6 | 9.7  | 6.9  |      |
| 90              | 63.8                      | 50.5 | 29   | 27.9 | 23.2 | 12.4 | 10.3 | 7.4  |      |
| 110             |                           | 53.5 | 45.6 | 29   | 24.9 | 19   | 11   | 8.3  |      |
| 132             |                           | 57   | 47.9 | 44.3 | 26.3 | 20.9 | 11.7 | 8.9  | 6.6  |
| 160             |                           | 62   | 50.8 | 46.7 | 28.1 | 22.5 | 17.4 | 9.6  | 6.9  |
| 200             |                           | 67   | 54.2 | 49.9 | 42.1 | 24.3 | 19.5 | 10.3 | 7.6  |
| 250             |                           |      | 59   | 53.1 | 45.3 | 26.2 | 21.6 | 16   | 8.6  |
| 315             |                           |      | 66.2 | 57.6 | 48.3 | 28.3 | 23.5 | 16.7 | 9.3  |
| 350             |                           |      |      | 60.3 | 49.9 | 40.8 | 24.4 | 17.4 |      |
| 400             |                           |      |      | 64.4 | 51.8 | 42.6 | 25.5 | 18.5 |      |
| 500             |                           |      |      |      | 55.4 | 45.7 | 37.8 | 20.8 |      |
| 600             |                           |      |      |      | 59.8 | 48.1 | 40.6 | 22.3 |      |
| 750             |                           |      |      |      |      | 51.3 | 43.7 |      |      |
| 900             |                           |      |      |      |      | 54.2 | 46.1 |      |      |
| 1100            |                           |      |      |      |      |      | 48.8 |      |      |
| 1200            |                           |      |      |      |      |      | 50.1 |      |      |

# SPARE AND WEAR PARTS

for standard catalog couplings

## Flexible elements for N-EUPEX add-on coupling

| FLUDEX coupling<br>Series | Size | Type                          | N-EUPEX coupling<br>Size | Number flexibles<br>per set | Article No. (FFA)<br>for one set flexibles |
|---------------------------|------|-------------------------------|--------------------------|-----------------------------|--------------------------------------------|
|                           | 222  | All types from 2004 on        | 110                      | 6                           | FFA:000001194871                           |
|                           | 297  | All types                     | 125                      | 6                           | FFA:000001194873                           |
|                           | 342  | All types                     | 140                      | 6                           | FFA:000001194874                           |
|                           | 395  | All types                     | 225                      | 8                           | FFA:000001194876                           |
|                           | 450  | All types                     | 250                      | 8                           | FFA:000001194878                           |
|                           | 516  | All types                     | 315                      | 9                           | FFA:000001194880                           |
|                           | 590  | All types                     | 315                      | 9                           | FFA:000001194880                           |
| FG/FV                     | 370  | All types                     | 180                      | 8                           | FFA:000001194881                           |
|                           | 425  |                               | 225                      | 8                           | FFA:000001194876                           |
|                           | 490  |                               | 250                      | 8                           | FFA:000001194878                           |
|                           | 565  |                               | 280                      | 8                           | FFA:000001194882                           |
|                           | 655  |                               | 350                      | 9                           | FFA:000001194883                           |
|                           | 755  |                               | 400                      | 10                          | FFA:000001194884                           |
|                           | 887  |                               | 440                      | 10                          | FFA:000001194885                           |
| FN                        | 370  | FNDB ØDBT = 400 <sup>3)</sup> | 200                      | 8                           | FFA:000001194886                           |
|                           |      | All types                     | 180                      | 8                           | FFA:000001194881                           |
|                           | 425  | All types                     | 200                      | 8                           | FFA:000001194886                           |
|                           | 490  | FNDB ØDBT = 500 <sup>3)</sup> | 250                      | 8                           | FFA:000001194878                           |
|                           |      | All types                     | 225                      | 8                           | FFA:000001194876                           |
|                           | 565  | All types                     | 250                      | 8                           | FFA:000001194878                           |
|                           | 655  |                               | 315                      | 9                           | FFA:000001194880                           |
|                           | 755  |                               | 350                      | 9                           | FFA:000001194883                           |
|                           | 887  |                               | 440                      | 10                          | FFA:000001194885                           |

<sup>1)</sup> For couplings up to and including year of construction 2003.

<sup>2)</sup> For couplings from year of construction 2004.

<sup>3)</sup> For couplings up to and including year of construction 2007.

## Thermal equipment

| FLUDEX size | Thread    | Part no.                | Fuse element                                                    | Response temperature | Marking | Article No. (FFA) for one unit |
|-------------|-----------|-------------------------|-----------------------------------------------------------------|----------------------|---------|--------------------------------|
| 222         | M10       | 103 + 104 <sup>1)</sup> | Fusible safety plug                                             | 110 °C               | yellow  | FFA:000001194896               |
|             |           | 203 + 204 <sup>1)</sup> |                                                                 | 140 °C               | red     | FFA:000001194897               |
|             |           |                         |                                                                 | 160 °C               | green   | FFA:000001194898               |
|             | M10       | 153 + 104 <sup>1)</sup> | Oil filler plug                                                 | –                    |         | FFA:000001194894               |
| 297         | M10       | 153 + 104 <sup>1)</sup> | Oil filler plug                                                 | –                    |         | FFA:000001194894               |
| 297 - 887   | M18 x 1.5 | 103 <sup>2)</sup>       | Fusible safety plug                                             | 110 °C               | yellow  | FFA:000001250338               |
|             |           | 203 <sup>2)</sup>       |                                                                 | 140 °C               | red     | FFA:000001250339               |
|             |           |                         |                                                                 | 160 °C               | green   | FFA:000001250380               |
|             | M18 x 1.5 | 110 <sup>2)</sup>       | Thermal switch                                                  | 110 °C               |         | FFA:000001361795               |
|             |           | 210 <sup>2)</sup>       |                                                                 | 140 °C               |         | FFA:000001361796               |
|             | M18 x 1.5 | 153 <sup>2)</sup>       | Oil filler plug (except sizes 297, 887)                         | –                    |         | FFA:000001337653               |
|             |           | 163 <sup>2)</sup>       | Screw plug                                                      | –                    |         |                                |
|             | –         | 301                     | Cut-out device                                                  | –                    |         | FFA:000000652020               |
|             | –         | 142 + 104 <sup>1)</sup> | EOC transmitter with seal                                       | 125 °C               |         | FFA:000001194899               |
|             | –         | 245                     | EOC sensor                                                      | –                    |         | FFA:F2E00711402                |
|             | –         | 244                     | Evaluation instrument to the EOC system 24 V DC                 | –                    |         | FFA:F2E00711483                |
| 370 - 755   | M10       | 173 + 174 <sup>1)</sup> | Oil drain plug - delay chamber                                  | –                    |         | FFA:000001194894               |
| 887         | M30 x 1.5 | 153 + 154 <sup>1)</sup> | Oil filler plug (up to and including year of construction 2007) | –                    |         | FFA:000001194893               |
|             |           | 153 <sup>2)</sup>       | Oil filler plug (from year of construction 2008)                | –                    |         | FFA:000001349554               |
|             | M16       | 173 + 174 <sup>1)</sup> | Oil drain plug - delay chamber                                  | –                    |         | FFA:000001194895               |

## Sealing and rolling bearing sets for the FA series (except type FAR)

| FLUDEX size | Up to and including year of construction | From year of construction | Seal set material | Article No. (FFA) for one seal set | Article No. (FFA) for one rolling bearing set |
|-------------|------------------------------------------|---------------------------|-------------------|------------------------------------|-----------------------------------------------|
| 222         | 2000                                     | 2001                      | NBR               | FFA:000001194900                   | FFA:000001194800                              |
|             |                                          |                           | NBR               | FFA:000001194901                   | FFA:000001194801                              |
|             |                                          |                           | FPM               | FFA:000001194902                   |                                               |
| 297         | 2000                                     | 2001                      | NBR               | FFA:000001194903                   | FFA:000001194802                              |
|             |                                          |                           | FPM               | FFA:000001194904                   |                                               |
|             |                                          |                           | NBR               | FFA:000001194905                   | FFA:000001194803                              |
| 342         |                                          |                           | FPM               | FFA:000001194906                   |                                               |
|             |                                          |                           | NBR               | FFA:000001194907                   | FFA:000001194804                              |
|             |                                          |                           | FPM               | FFA:000001194908                   |                                               |
| 395         |                                          |                           | NBR               | FFA:000001194909                   | FFA:000001194805                              |
|             |                                          |                           | FPM               | FFA:000001194910                   |                                               |
| 450         |                                          |                           | NBR               | FFA:000001194911                   | FFA:000001194806                              |
|             |                                          |                           | FPM               | FFA:000001194912                   |                                               |
| 516         |                                          |                           | NBR               | FFA:000001194913                   | FFA:000001194807                              |
|             |                                          |                           | FPM               | FFA:000001194914                   |                                               |
| 590         |                                          |                           | NBR               | FFA:000001194915                   | FFA:000001194808                              |
|             |                                          |                           | FPM               | FFA:000001194916                   |                                               |

<sup>1)</sup> With separate seal ring.

<sup>2)</sup> With built-in ring seal.

# SPARE AND WEAR PARTS

for standard catalog couplings

## Seal and rolling bearing sets for type FAR <sup>1)</sup>

| FLUDEX size | Type         | Up to and including year of construction | From year of construction | Seal set material | Article No. (FFA) for one seal set | Article No. (FFA) for one rolling bearing set |
|-------------|--------------|------------------------------------------|---------------------------|-------------------|------------------------------------|-----------------------------------------------|
| 222         | 2 · SPZ 100  | 2000                                     | 2001                      | NBR               | FFA:000001194917                   | FFA:000001194809                              |
|             |              |                                          |                           | NBR               | FFA:000001194918                   | FFA:000001194810                              |
|             | 3 · SPZ 160  | 2001                                     | 2001                      | FPM               | FFA:000001194919                   | FFA:000001194811                              |
|             |              |                                          |                           | NBR               | FFA:000001194920                   | FFA:000001194811                              |
| 297         | 5 · SPZ 140  | 2000                                     | 2001                      | FPM               | FFA:000001194921                   | FFA:000001194811                              |
|             |              |                                          |                           | NBR               | FFA:000001194922                   | FFA:000001194812                              |
|             | 7 · SPZ 140  | 2000                                     | 2001                      | FPM               | FFA:000001194923                   | FFA:000001194813                              |
|             |              |                                          |                           | NBR               | FFA:000001194924                   | FFA:000001194813                              |
|             | 5 · SPZ 150  | 2001                                     | 2001                      | FPM               | FFA:000001194925                   | FFA:000001194814                              |
|             |              |                                          |                           | NBR               | FFA:000001194926                   | FFA:000001194814                              |
| 342         | 4 · SPA 190  | 2001                                     | 2001                      | FPM               | FFA:000001194927                   | FFA:000001194814                              |
|             |              |                                          |                           | NBR               | FFA:000001194928                   | FFA:000001194815                              |
|             | 5 · SPA 224  | 2001                                     | 2001                      | FPM               | FFA:000001194929                   | FFA:000001194816                              |
|             |              |                                          |                           | NBR               | FFA:000001194930                   | FFA:000001194815                              |
| 395         | 5 · SPA 180  | 2000                                     | 2001                      | FPM               | FFA:000001194931                   | FFA:000001194816                              |
|             |              |                                          |                           | NBR               | FFA:000001194932                   | FFA:000001194816                              |
|             | 7 · SPA 180  | 2000                                     | 2001                      | FPM               | FFA:000001194933                   | FFA:000001194817                              |
|             |              |                                          |                           | NBR               | FFA:000001194934                   | FFA:000001194817                              |
| 450         | 5 · SPB 224  | 2000                                     | 2001                      | FPM               | FFA:000001194935                   | FFA:000001194818                              |
|             |              |                                          |                           | NBR               | FFA:000001194936                   | FFA:000001194818                              |
|             | 7 · SPB 224  | 2000                                     | 2001                      | FPM               | FFA:000001194937                   | FFA:000001194819                              |
|             |              |                                          |                           | NBR               | FFA:000001194938                   | FFA:000001194819                              |
|             | 7 · SPB 236  | 2001                                     | 2001                      | FPM               | FFA:000001194939                   | FFA:000001194820                              |
|             |              |                                          |                           | NBR               | FFA:000001194940                   | FFA:000001194820                              |
| 516         | 7 · SPB 280  | 2001                                     | 2001                      | FPM               | FFA:000001194941                   | FFA:000001194821                              |
|             |              |                                          |                           | NBR               | FFA:000001194942                   | FFA:000001194821                              |
|             | 8 · SPB 250  | 2001                                     | 2001                      | FPM               | FFA:000001194943                   | FFA:000001194822                              |
|             |              |                                          |                           | NBR               | FFA:000001194944                   | FFA:000001194822                              |
|             | 10 · SPB 250 | 2000                                     | 2001                      | FPM               | FFA:000001194945                   | FFA:000001194823                              |
|             |              |                                          |                           | NBR               | FFA:000001194946                   | FFA:000001194823                              |
| 590         | 10 · SPB 315 | 2000                                     | 2001                      | FPM               | FFA:000001194947                   | FFA:000001194824                              |
|             |              |                                          |                           | NBR               | FFA:000001194948                   | FFA:000001194824                              |
|             | 12 · SPB 315 | 2000                                     | 2001                      | FPM               | FFA:000001194949                   | FFA:000001194825                              |
|             |              |                                          |                           | NBR               | FFA:000001194950                   | FFA:000001194825                              |
|             | 12 · SPC 315 | 2000                                     | 2001                      | FPM               | FFA:000001194951                   | FFA:000001194826                              |
|             |              |                                          |                           | NBR               | FFA:000001194952                   | FFA:000001194826                              |
| 590         | 12 · SPC 315 | 2000                                     | 2001                      | FPM               | FFA:000001194953                   | FFA:000001194827                              |
|             |              |                                          |                           | NBR               | FFA:000001194954                   | FFA:000001194827                              |
|             | 12 · SPC 315 | 2001                                     | 2001                      | FPM               | FFA:000001194955                   | FFA:000001194828                              |
|             |              |                                          |                           | NBR               | FFA:000001194956                   | FFA:000001194828                              |
| 590         | 12 · SPC 315 | 2001                                     | 2001                      | FPM               | FFA:000001194957                   | FFA:000001194828                              |
|             |              |                                          |                           | NBR               | FFA:000001194957                   | FFA:000001194828                              |

<sup>1)</sup> Spare parts only suitable for specified belt pulleys.  
Please request a different number of grooves by specifying the original delivery number.

# Seal and rolling bearing sets for the FG/FV/FN series

| FLUDEX coupling |      |                                               |                                |                   |                                    |                                               |
|-----------------|------|-----------------------------------------------|--------------------------------|-------------------|------------------------------------|-----------------------------------------------|
| Series          | Size | Year of construction                          | Additional bore specifications | Seal set material | Article No. (FFA) for one seal set | Article No. (FFA) for one rolling bearing set |
| FG              | 370  | Up to and including year of construction 2000 |                                | NBR               | FFA:000001194958                   | FFA:000001194850                              |
|                 |      |                                               |                                | FPM               | FFA:000001194959                   |                                               |
|                 |      | From year of construction 2001                |                                | NBR               | FFA:000001194958                   | FFA:000001194851                              |
|                 |      |                                               |                                | FPM               | FFA:000001194959                   |                                               |
|                 | 425  |                                               |                                | NBR               | FFA:000001194962                   | FFA:000001194852                              |
|                 |      |                                               |                                | FPM               | FFA:000001194963                   |                                               |
|                 | 490  |                                               |                                | NBR               | FFA:000001194966                   | FFA:000001194853                              |
|                 |      |                                               |                                | FPM               | FFA:000001194967                   |                                               |
|                 | 565  |                                               |                                | NBR               | FFA:000001194970                   | FFA:000001194854                              |
|                 |      |                                               |                                | FPM               | FFA:000001194971                   |                                               |
|                 | 655  |                                               | ØD2 ≤ 100                      | NBR               | FFA:000001194974                   | FFA:000001194855                              |
|                 |      |                                               |                                | FPM               | FFA:000001194975                   |                                               |
|                 |      | ØD2 > 100                                     |                                | NBR               | FFA:000001194976                   | FFA:000001194856                              |
|                 |      |                                               |                                | FPM               | FFA:000001194977                   |                                               |
|                 | 755  |                                               | ØD2 ≤ 110                      | NBR               | FFA:000001194982                   | FFA:000001194857                              |
|                 |      |                                               |                                | FPM               | FFA:000001194983                   |                                               |
|                 |      | ØD2 > 110                                     |                                | NBR               | FFA:000001194984                   | FFA:000001194858                              |
|                 |      |                                               |                                | FPM               | FFA:000001194985                   |                                               |
|                 | 887  |                                               |                                | FPM               | FFA:000001194993                   | FFA:000001194860                              |
| FV              | 370  | Up to and including year of construction 2000 |                                | NBR               | FFA:000001194960                   | FFA:000001194850                              |
|                 |      |                                               |                                | FPM               | FFA:000001194961                   |                                               |
|                 |      | From year of construction 2001                |                                | NBR               | FFA:000001194960                   | FFA:000001194851                              |
|                 |      |                                               |                                | FPM               | FFA:000001194961                   |                                               |
|                 | 425  |                                               |                                | NBR               | FFA:000001194964                   | FFA:000001194852                              |
|                 |      |                                               |                                | FPM               | FFA:000001194965                   |                                               |
|                 | 490  |                                               |                                | NBR               | FFA:000001194968                   | FFA:000001194853                              |
|                 |      |                                               |                                | FPM               | FFA:000001194969                   |                                               |
|                 | 565  |                                               |                                | NBR               | FFA:000001194972                   | FFA:000001194854                              |
|                 |      |                                               |                                | FPM               | FFA:000001194973                   |                                               |
|                 | 655  |                                               | ØD2 ≤ 100                      | NBR               | FFA:000001194978                   | FFA:000001194855                              |
|                 |      |                                               |                                | FPM               | FFA:000001194979                   |                                               |
|                 |      | ØD2 > 100                                     |                                | NBR               | FFA:000001194980                   | FFA:000001194856                              |
|                 |      |                                               |                                | FPM               | FFA:000001194981                   |                                               |
|                 | 755  |                                               | ØD2 ≤ 110                      | NBR               | FFA:000001194986                   | FFA:000001194857                              |
|                 |      |                                               |                                | FPM               | FFA:000001194987                   |                                               |
|                 |      | ØD2 > 110                                     |                                | NBR               | FFA:000001194988                   | FFA:000001194858                              |
|                 |      |                                               |                                | FPM               | FFA:000001194989                   |                                               |
|                 | 887  |                                               |                                | FPM               | FFA:000001194992                   | FFA:000001194860                              |
| FN              | 370  | Up to and including year of construction 2000 |                                | NBR               | FFA:000001194960                   | FFA:000001194850                              |
|                 |      |                                               |                                | FPM               | FFA:000001194961                   |                                               |
|                 |      | From year of construction 2001                |                                | NBR               | FFA:000001194960                   | FFA:000001194851                              |
|                 |      |                                               |                                | FPM               | FFA:000001194961                   |                                               |
|                 | 425  |                                               |                                | NBR               | FFA:000001194964                   | FFA:000001194852                              |
|                 |      |                                               |                                | FPM               | FFA:000001194965                   |                                               |
|                 | 490  |                                               |                                | NBR               | FFA:000001194968                   | FFA:000001194853                              |
|                 |      |                                               |                                | FPM               | FFA:000001194969                   |                                               |
|                 | 565  |                                               |                                | NBR               | FFA:000001194972                   | FFA:000001194854                              |
|                 |      |                                               |                                | FPM               | FFA:000001194973                   |                                               |
|                 | 655  |                                               |                                | NBR               | FFA:000001194978                   | FFA:000001194855                              |
|                 |      |                                               |                                | FPM               | FFA:000001194979                   |                                               |
|                 | 755  |                                               |                                | NBR               | FFA:000001194990                   | FFA:000001194859                              |
|                 |      |                                               |                                | FPM               | FFA:000001194991                   |                                               |
|                 | 887  |                                               |                                | FPM               | FFA:000001194992                   | FFA:000001194860                              |



# APPENDIX

|                                                               |             |
|---------------------------------------------------------------|-------------|
| <b>Fits</b>                                                   | <b>A/2</b>  |
| Fitting recommendations                                       | A/2         |
| Deviation table to DIN ISO 286                                | A/2         |
| Cylindrical shaft ends, extract from<br>DIN 748 Part 1 (long) | A/3         |
| Central holes according to DIN 332 Part 2                     | A/3         |
| <b>Parallel key connections to DIN 6885-1</b>                 | <b>A/4</b>  |
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| <b>Flender Services</b>                                       | <b>A/16</b> |

# FITS

## Fitting recommendations

For many applications, the fit assignment m6/H7 is especially suitable.

| Description                                                                       | Application                                                                   | Shaft tolerance | Bore tolerance |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------|----------------|
| Facile sliding fit                                                                | For steel or aluminum hubs<br>Preferred for SIPEX and BIPEX-S coupling series | g6              | H7             |
|                                                                                   |                                                                               | h7              | H7             |
|                                                                                   |                                                                               | k6              | F7             |
|                                                                                   |                                                                               | m6              | F7             |
| Sliding fit with parallel key connection<br>not suitable for reversing operation  | For steel and cast hubs                                                       | j6              | H7             |
|                                                                                   |                                                                               | h6              | J7             |
| Press fit with parallel key connection<br>not suitable for reversing operation    | For steel and cast hubs                                                       | h6              | K7             |
|                                                                                   |                                                                               | k6              | H7             |
| Interference fit with parallel key connection<br>suitable for reversing operation | For steel and cast hubs                                                       | m6              | H7             |
|                                                                                   |                                                                               | n6              | H7             |
|                                                                                   |                                                                               | h6              | M7             |
|                                                                                   | Only for steel hubs                                                           | h6              | P7             |
|                                                                                   | Preferred for ZAPEX and ARPEX coupling series                                 | k6              | M7             |
|                                                                                   |                                                                               | m6              | K7             |
|                                                                                   |                                                                               | n6              | J7             |
|                                                                                   |                                                                               | p6              | H7             |
|                                                                                   |                                                                               | s6              | F7             |
| Shrink fit connection without parallel key                                        | Only for steel hubs<br>The permitted hub tension must be urgently checked.    | u6              | H6             |
|                                                                                   |                                                                               | v6              | H6             |
|                                                                                   |                                                                               | x6              | H6             |

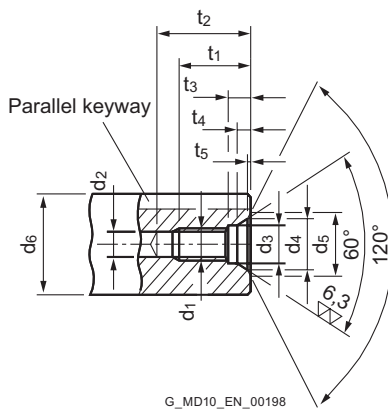
## Deviation table to DIN ISO 286 for above-mentioned fits for bore diameters from 10 mm to 250 mm

| Bore diameter |       | Deviations in $\mu\text{m}$ |     |     |     |     |     |     | Shaft |     |     |     |     |
|---------------|-------|-----------------------------|-----|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|
| above         | up to | Bore F7                     | H7  | J7  | K7  | M7  | P7  | h6  | j6    | k6  | m6  | n6  | p6  |
| 10            | 18    | +34                         | +18 | +10 | +6  | 0   | -11 | 0   | +8    | +12 | +18 | +23 | +29 |
|               |       | +16                         | 0   | -8  | -12 | -18 | -29 | -11 | -3    | +1  | +7  | +12 | +18 |
| 18            | 30    | +41                         | +21 | +12 | +6  | 0   | -14 | 0   | +9    | +15 | +21 | +28 | +35 |
|               |       | +20                         | 0   | -9  | -15 | -21 | -35 | -13 | -4    | +2  | +8  | +15 | +22 |
| 30            | 50    | +50                         | +25 | +14 | +7  | 0   | -17 | 0   | +11   | +18 | +25 | +33 | +42 |
|               |       | +25                         | 0   | -11 | -18 | -25 | -42 | -16 | -5    | +2  | +9  | +17 | +26 |
| 50            | 80    | +60                         | +30 | +18 | +9  | 0   | -21 | 0   | +12   | +21 | +30 | +39 | +51 |
|               |       | +30                         | 0   | -12 | -21 | -30 | -51 | -19 | -7    | +2  | +11 | +20 | +32 |
| 80            | 120   | +71                         | +35 | +22 | +10 | 0   | -24 | 0   | +13   | +25 | +35 | +45 | +59 |
|               |       | +36                         | 0   | -13 | -25 | -35 | -59 | -22 | -9    | +3  | +13 | +23 | +37 |
| 120           | 180   | +83                         | +40 | +26 | +12 | 0   | -28 | 0   | +14   | +28 | +40 | +52 | +68 |
|               |       | +43                         | 0   | -14 | -28 | -40 | -68 | -25 | -11   | +3  | +15 | +27 | +43 |
| 180           | 250   | +96                         | +46 | +30 | +13 | 0   | -33 | 0   | +16   | +33 | +46 | +60 | +79 |
|               |       | +50                         | 0   | -16 | -33 | -46 | -79 | -29 | -13   | +4  | +17 | +31 | +50 |

## Cylindrical shaft ends, extract from DIN 748 Part 1 (long)

|                    | Diameter in mm |    |    |    |    |    |    |     |    |    |    |    |           |     |    |    |    |     |    |     |
|--------------------|----------------|----|----|----|----|----|----|-----|----|----|----|----|-----------|-----|----|----|----|-----|----|-----|
|                    | 24             | 25 | 28 | 30 | 32 | 35 | 38 | 40  | 42 | 45 | 48 | 50 | 55        | 60  | 65 | 70 | 75 | 80  | 85 | 90  |
| ISO tolerance zone | <b>k6</b>      |    |    |    |    |    |    |     |    |    |    |    | <b>m6</b> |     |    |    |    |     |    |     |
| End length in mm   | 50             | 60 | 80 |    |    |    |    | 110 |    |    |    |    |           | 140 |    |    |    | 170 |    | 210 |

## Central holes according to DIN 332 Part 2



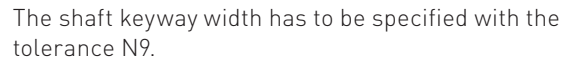
Form DS (with thread) DIN 332/2

| Recommended diameter ranges $d_6$ <sup>1)</sup> |       | DS form dimensions |                     |       |       |       |                     |                       |                     |                          |                          |
|-------------------------------------------------|-------|--------------------|---------------------|-------|-------|-------|---------------------|-----------------------|---------------------|--------------------------|--------------------------|
| above                                           | up to | $d_1$              | $d_2$ <sup>2)</sup> | $d_3$ | $d_4$ | $d_5$ | $t_1$ <sup>+2</sup> | $t_2$ <sup>min.</sup> | $t_3$ <sup>+1</sup> | $t_4$ <sup>approx.</sup> | $t_5$ <sup>approx.</sup> |
| 7                                               | 10    | M3                 | 2.5                 | 3.2   | 5.3   | 5.8   | 9                   | 12                    | 2.6                 | 1.8                      | 0.2                      |
| 10                                              | 13    | M4                 | 3.3                 | 4.3   | 6.7   | 7.4   | 10                  | 14                    | 3.2                 | 2.1                      | 0.3                      |
| 13                                              | 16    | M5                 | 4.2                 | 5.3   | 8.1   | 8.8   | 12.5                | 17                    | 4                   | 2.4                      | 0.3                      |
| 16                                              | 21    | M6                 | 5                   | 6.4   | 9.6   | 10.5  | 16                  | 21                    | 5                   | 2.8                      | 0.4                      |
| 21                                              | 24    | M8                 | 6.8                 | 8.4   | 12.2  | 13.2  | 19                  | 25                    | 6                   | 3.3                      | 0.4                      |
| 24                                              | 30    | M10                | 8.5                 | 10.5  | 14.9  | 16.3  | 22                  | 30                    | 7.5                 | 3.8                      | 0.6                      |
| 30                                              | 38    | M12                | 10.2                | 13    | 18.1  | 19.8  | 28                  | 37                    | 9.5                 | 4.4                      | 0.7                      |
| 38                                              | 50    | M16                | 14                  | 17    | 23    | 25.3  | 36                  | 45                    | 12                  | 5.2                      | 1.0                      |
| 50                                              | 85    | M20                | 17.5                | 21    | 28.4  | 31.3  | 42                  | 53                    | 15                  | 6.4                      | 1.3                      |
| 85                                              | 130   | M24                | 21                  | 25    | 34.2  | 38    | 50                  | 63                    | 18                  | 8                        | 1.6                      |
| 130                                             | 225   | M30 <sup>3)</sup>  | 26.5                | 31    | 40.2  | 44.6  | 60                  | 77                    | 22                  | 8                        | 1.9                      |
| 225                                             | 320   | M36 <sup>3)</sup>  | 32                  | 37    | 49.7  | 55    | 74                  | 93                    | 22                  | 11                       | 2.3                      |
| 320                                             | 500   | M42 <sup>3)</sup>  | 37.5                | 43    | 60.3  | 66.6  | 84                  | 105                   | 26                  | 15                       | 2.7                      |

<sup>1)</sup> Diameter refers to the finished workpiece

<sup>2)</sup> Tap hole drill diameter according to DIN 336 Part 1

<sup>3)</sup> Dimensions not acc. to DIN 332 Part 2



| Diameter   |          | Keyway width | Parallel key height | Shaft keyway depth | Hub keyway depth | Deviation for shaft and hub keyway depth | Deviation table for keyway width B |                  |
|------------|----------|--------------|---------------------|--------------------|------------------|------------------------------------------|------------------------------------|------------------|
| above D mm | up to mm | B mm         | H mm                | T1 mm              | T2 mm            | mm                                       | JS9 $\mu\text{m}$                  | P9 $\mu\text{m}$ |
| 95         | 110      | 28           | 16                  | 10                 | 6.4              | +0.2                                     | +26<br>-26                         | -22<br>-74       |
| 110        | 130      | 32           | 18                  | 11                 | 7.4              | +0.2                                     | +31<br>-31                         | -26<br>-88       |
| 130        | 150      | 36           | 20                  | 12                 | 8.4              | +0.3                                     | +31<br>-31                         | -26<br>-88       |
| 150        | 170      | 40           | 22                  | 13                 | 9.4              | +0.3                                     | +31<br>-31                         | -26<br>-88       |
| 170        | 200      | 45           | 25                  | 15                 | 10.4             | +0.3                                     | +31<br>-31                         | -26<br>-88       |
| 200        | 230      | 50           | 28                  | 17                 | 11.4             | +0.3                                     | +31<br>-31                         | -26<br>-88       |
| 230        | 260      | 56           | 32                  | 20                 | 12.4             | +0.3                                     | +37<br>-37                         | -32<br>-106      |
| 260        | 290      | 63           | 32                  | 20                 | 12.4             | +0.3                                     | +37<br>-37                         | -32<br>-106      |
| 290        | 330      | 70           | 36                  | 22                 | 14.4             | +0.3                                     | +37<br>-37                         | -32<br>-106      |
| 330        | 380      | 80           | 40                  | 25                 | 15.4             | +0.3                                     | +37<br>-37                         | -32<br>-106      |
| 380        | 440      | 90           | 45                  | 28                 | 17.4             | +0.3                                     | +43.5<br>-43.5                     | -37<br>-124      |
| 440        | 500      | 100          | 50                  | 31                 | 19.4             | +0.3                                     | +43.5<br>-43.5                     | -37<br>-124      |

# RELATED CATALOGS

## Torsionally Rigid Couplings

FLE 10.1  
FLEX-C10001-00-7600



## Flexible Couplings

FLE 10.2  
FLEX-C10002-00-7600



## Highly Flexible Couplings

FLE 10.3  
FLEX-C10003-00-7600



## Fluid Couplings

FLE 10.4  
FLEX-C10004-00-7600



## ARPEX

High Performance Couplings  
FLE 10.5  
FLEX-C10120-00-7600



## SIPEX und BIPEX-S

Backlash-free couplings  
FLE 10.6  
FLEX-C10121-00-7600



## ARPEX

Safety couplings  
FLE 10.7  
FLEX-C10122-00-7600



## FASTEX

Clamping elements  
FLE 10.8  
FLEX-C10152-00-7600



**FLENDER SIP**

Standard Industrial Planetary Gear Units

MD 31.1

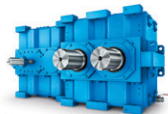
PDMD-C10154-00

**FLENDER CHG**

Helical Gear Units

MD 20.10

PDMD-C10155-00

**Gear units**

Fast Track

MD 20.12

PDMD-C10156-00

**Bucket Elevator Drives**

MD 20.2

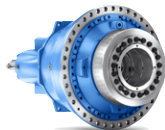
PDMD-C10157-00

**PLANUREX 3**

Planetary Gear Units

FLE 20.3

FLEX-C10052-00-7600

**Paper Machine Drives**

MD 20.5

PDMD-C10159-00

**Conveyor Belt Drives**

MD 20.6

PDMD-C10160-00

**Marine Reduction Gearboxes**

MD 20.7

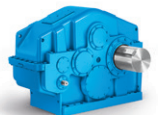
PDMD-C10161-00

**DUORED 2**

Helical Gear Units, Load-sharing

MD 20.8

PDMD-C10162-00

**Pinion Drive for Tube Mills**

MD 20.9

PDMD-C10163-00

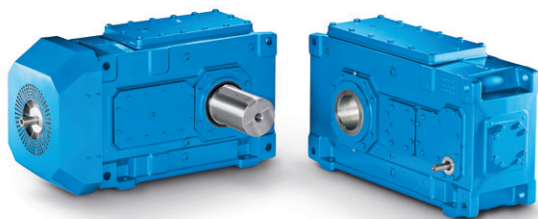




# THE RIGHT GEAR UNIT SOLUTION FOR ANY REQUIREMENT

We provide helical and planetary gear units made up of standard modules or as a complete application solution.

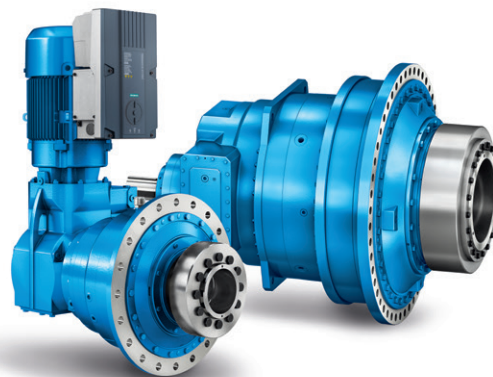
Helical and planetary gear units from Flender are modern drive solutions that satisfy the most varying and extreme demands, day after day and year after year. For decades, plant operators have been achieving high system reliability and low lifecycle costs in every conceivable industry with our helical gear units.



### Helical and bevel helical gear units

Flender helical and bevel helical gear units are by far the most comprehensive range of industrial gear units in the world. It ranges from a multi-faceted universal gear unit portfolio and application-specific gear units to customer-specific solutions.

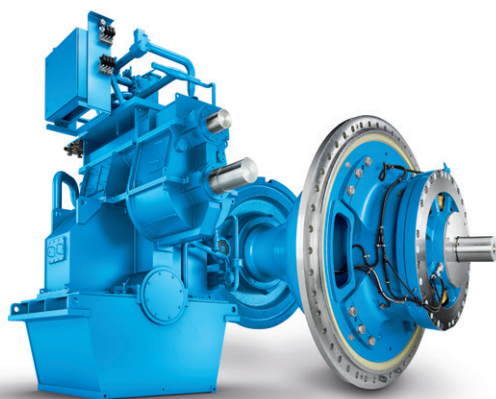
**Rated torque: 3,300 Nm ... 1,400,000 Nm**



### Planetary Gear Units

With Flender planetary gear units, we provide a range of durable, reliable and finely graduated gear unit solutions. The series wins customers over due to its highly integrated planetary geared motor and maximum conformity with all international motor standards. It also brings quality and performance in a good ratio of lifecycle costs to price.

**Rated torque: 10,000 Nm ... 5,450,000 Nm**



### Application-specific gear units

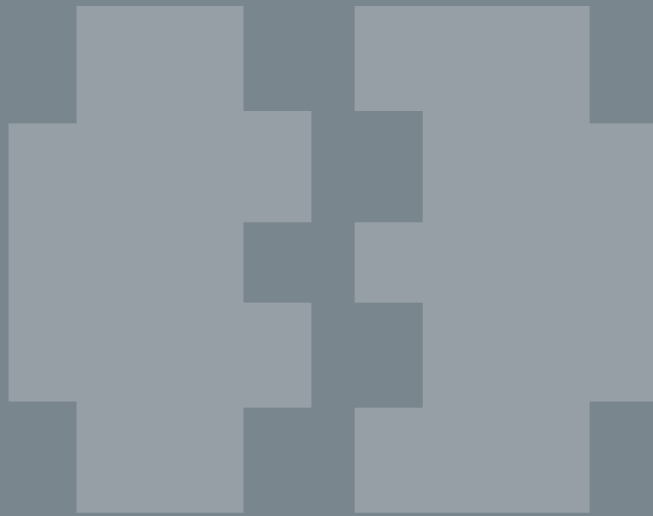
With application-specific gear units, Flender provides by far the most application solutions and thus covers nearly every drive-related need from hundreds of applications in industry and the acquisition of raw materials.

**Rated torque: up to 10,000,000 Nm**



### Customer-specific designs

Our experts are available at any time for special requirements during the development of new products. From designing and simulating complex drive solutions to implementing them, we work together with you to resolve multi-layered tasks.



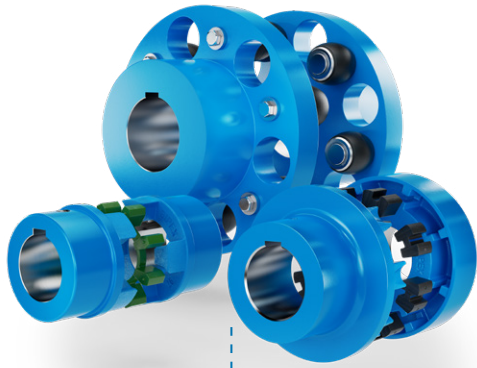
# THE PERFECT COUPLING FOR THE PERFECT GEAR UNIT

We provide elastic, highly elastic, rigid and hydrodynamic solutions.

Regardless of which demands are made on the coupling: Low or high performance, demanding operating conditions or high ambient temperatures, dusty or hazardous environments – we have the right portfolio. Our comprehensive range of couplings offers a large number of sizes and designs with a torque range from 0.5 to 10,000,000 Nm.

In over 90 years of development, conception and production, our product portfolio has grown to its current level of diversity. Nearly every matured coupling solution is available as a standard item in our modular system. This saves our customers time and money.

We are a powerful and flexible player in every market in the world – just like our customers. The production of our coupling components aims for maximum quality. As a trio, the setup, material and design result in optimal coupling solutions – rugged, dependable, largely low-maintenance and, above all, available at any time, anywhere. We provide high quality, first class delivery performance, and comprehensive service.



### Flexible couplings

Our elastic couplings are pluggable and easy to install. The elastomer element equalizes the shaft offset and absorbs impacts from the motor or driven machine.

**Nominal output torque: 12 Nm ... 1,690,000 Nm**



### Torsionally rigid couplings

Our compact steel couplings provide extremely precise transmission of high torques, especially in harsh operating conditions and extreme temperatures.

**Nominal output torque: 92 Nm ... 7,200,000 Nm**



### Hydrodynamic couplings

Soft start, overload protection, torsional vibration damping – FLUDEX® fluid couplings allow the torque-limited approach and have very little slippage at rated load.

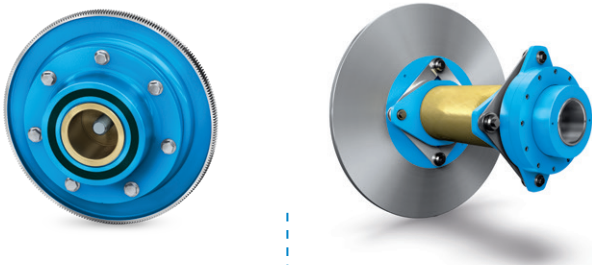
**Power: 1.2 kW ... 2,500 kW**



### Highly-flexible couplings

Highly flexible couplings are well-suited for connecting machines that operate asymmetrically. They are preferred for use in systems that are periodically operated.

**Nominal output torque: 24 Nm ... 90,000 Nm**



### Application-specific couplings

Flender offers a variety of application-specific couplings for rail vehicles and use in wind energy generation.



### Backlash-free couplings

Our couplings act as a modular interface between the motor and the work machine to ensure reliable, backlash-free power transmission in servodrives and positioning drives.

**Nominal output torque: 0.1 Nm ... 5,000 Nm**

Flender's system competence turns first-class components into systems with tangible added value. Drive systems from Flender ensure maximum productivity, energy efficiency and reliability in any automation environment.

### Consultation

Our customers use our interdisciplinary know-how, our application competence, our innovation strength and, last but not least, our experience to find the right drive system for their individual requirements.

Reduced engineering time, lower costs

### Integrated drive portfolio

We not only provide gear units and couplings, but also have the competence in electrical drive technology that enables us to offer the entire drive train – perfectly integrated, with optimal interaction between all components, as a standard or individual solution.

Fewer interface risks, more efficiency



# INDIVIDUAL SOLUTIONS.

## Flender service

From diagnostics and support, replacement part and repair services, all the way to maintenance and retrofit services – the Flender service portfolio creates individual solutions, fully and completely tailored to the needs of our customers. In this way, a gear unit remains an original Flender gear unit.

Increased system availability, reduced lifecycle costs

We have the right solution for you, even if your requirements are special. We no longer have to newly develop every special solution. Many solutions are already available.

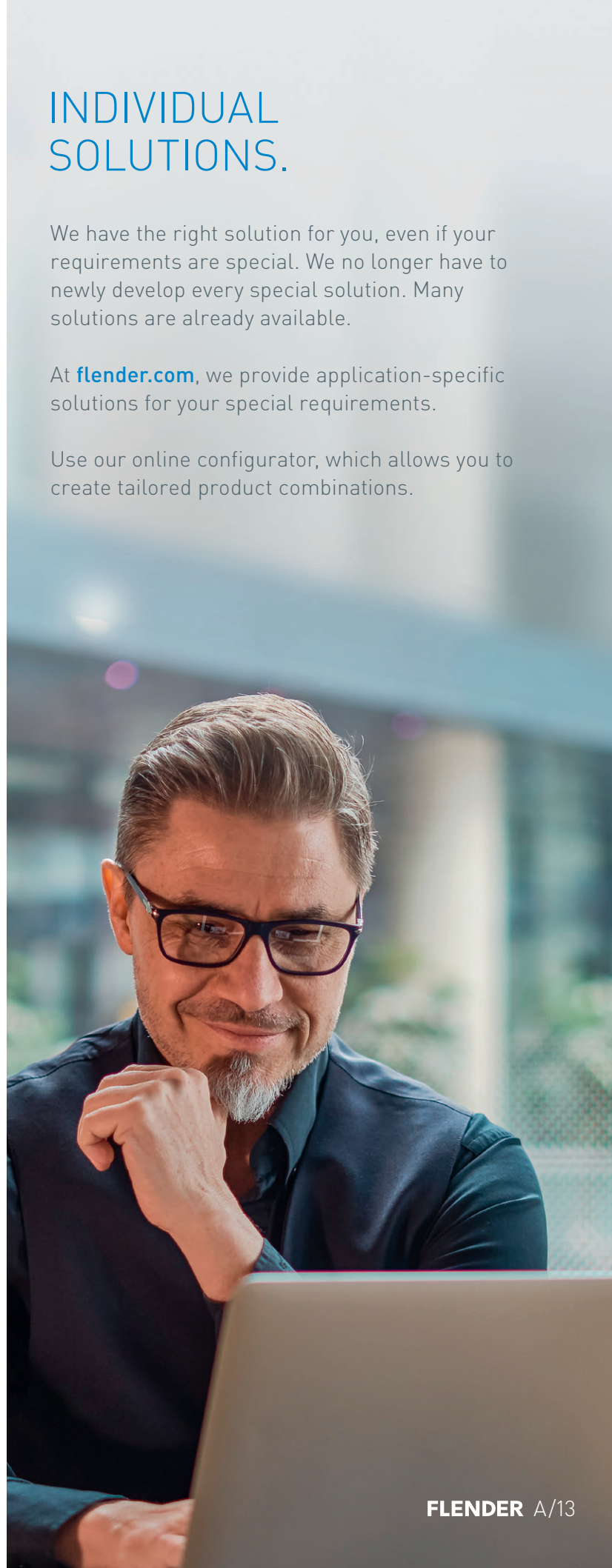
At [flender.com](https://www.flender.com), we provide application-specific solutions for your special requirements.

Use our online configurator, which allows you to create tailored product combinations.

## DIAGNOSTEX

Ensuring the process stability requires status-oriented maintenance of the drive train. With DIAGNOSTEX®, sensors measure deviations of our gear units from the target status. These can be analyzed and evaluated in terms of maximized system availability.

Industrie 4.0, reduced costs



# GREAT EXPERTISE IN YOUR INDUSTRY TOO.

Each industry has its own conditions. Every application has its own specific requirements. We are looking forward to meeting your challenges.

We probably already have the right solution at hand. Here are a few examples:



Minerals and mining

**Requirement:**  
Perfectly coordinated drive system



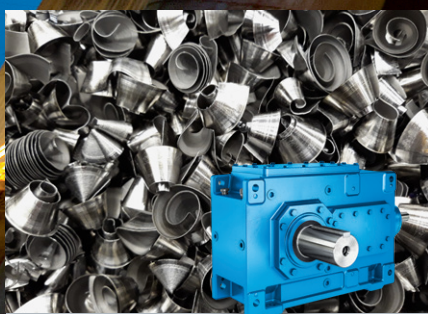
Cement

**Requirement:**  
Low maintenance effort and cost,  
sealing due to dirt in surroundings



Plastics and rubber

**Requirement:**  
Absorption of high axial forces,  
suitability for explosion protection



Environmental and recycling

**Requirement:**  
Highest possible reliability, rugged  
design



Pulp and paper

**Requirement:**  
Suitability for centrally located  
lubrication



Industrial cranes

**Requirement:**  
Quick availability, version with  
double drive shaft



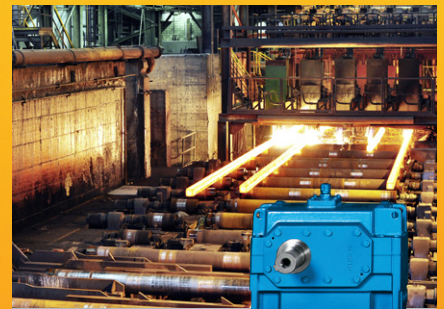
### Chemicals

**Requirement:**  
Absorption of forces from the manufacturing process



### Power generation

**Requirement:**  
Effective cooling, speed adjustment for motor to fan



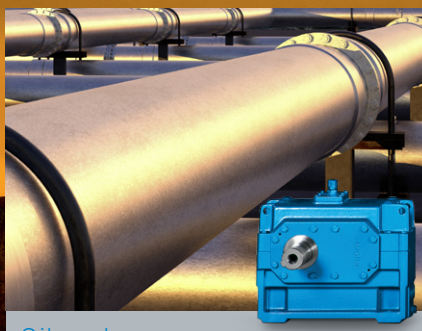
### Metals

**Requirement:**  
Harsh working conditions, high peak loads



### Harbor cranes

**Requirement:**  
Specific axle clearance, frequent start-up



### Oil and gas

**Requirement:**  
Flexible adaptation to speed requirements



### Water and wastewater

**Requirement:**  
Absorption of external forces, oil-retaining pipe required



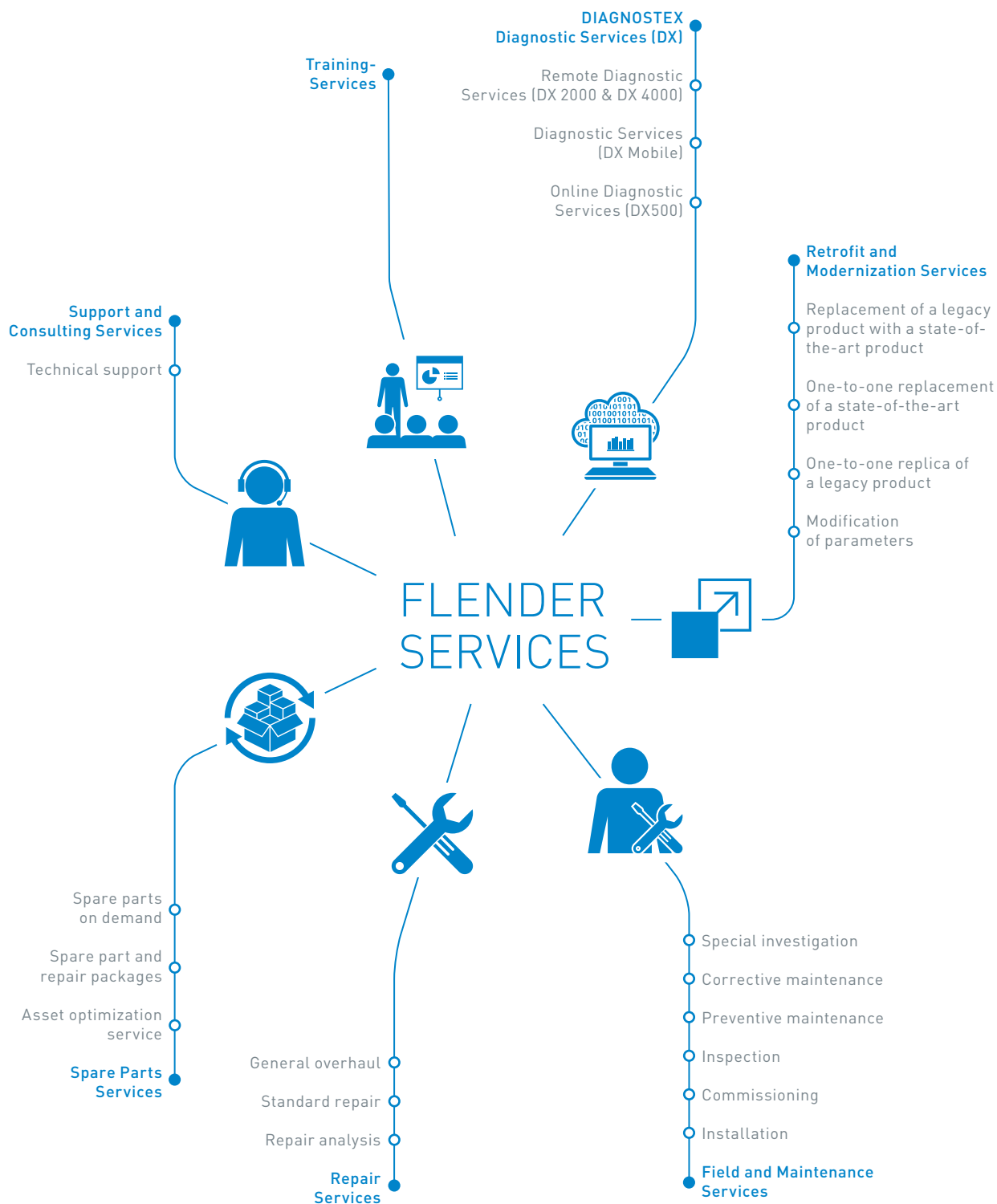
## AN ORIGINAL FOR THE LONG TERM WITH ORIGINAL FLENDER SERVICES

Ever increasing requirements make it more and more important for industrial plants to work with maximum productivity and efficiency. Flender Services give companies a decisive advantage over the competition in industry, the acquisition of raw materials and energy production. In view of the high cost pressure, increasing energy prices and stricter and stricter environmental stipulations, our services are becoming a decisive factor to success over the competition.

Enjoy the support of our service experts, from planning, development and operation to the modernization of your plant and benefit from our experience and in-depth know-how of your application – in more than 100 countries, seven days a week, 24 hours a day.

Reduce standstills, minimize downtimes due to failure, and increase the productivity, flexibility and cost efficiency of your plant.

# OUR OFFER FOR GEAR UNITS AND COUPLINGS AT A GLANCE.







# FLENDER COUPLINGS CATALOG **FLE 10.4** EDITION 2024.1 EN



WE  
**MOVE**<sub>the</sub>  
WORLD

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46395 Bocholt  
Germany

Article no.: FLEX-C10004-00-7600

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