

# Fluid Couplings FLUDEX Series



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# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### General information

#### Overview



**Coupling suitable for potentially explosive environments. Complies with Directive 94/9/EC for:**

CE Ex II 2 Gc T3 D160 °C II B  
-30 °C ≤ T<sub>a</sub> ≤ +50 °C

CE Ex I M2

For Ex zones 2 and 22, device category 3 is available upon request:

CE Ex II 3 Gc T4 D120 °C II B

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

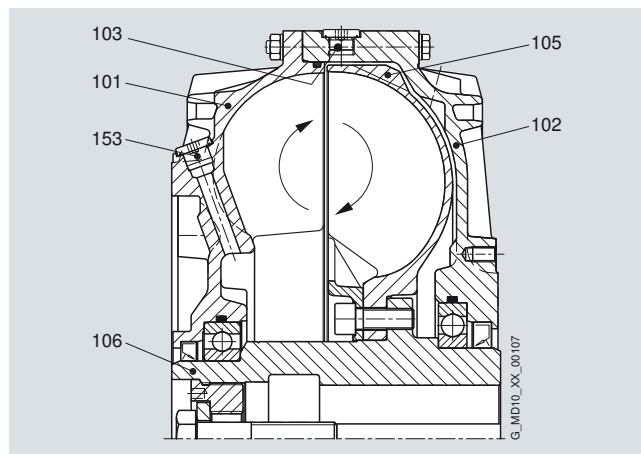
FLUDEX couplings are used in drives for conveyor systems such as belt conveyors, bucket elevators and chain conveyors. In heavy industry FLUDEX couplings are used for applications such as blade wheel drives, crushers, roller presses, mixers, large ventilators, boiler feed pumps, large compressors, centrifuges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

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

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

#### Design

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.



# FLENDER Standard Couplings Fluid Couplings – FLUDEX Series

## General information

### Materials

#### Blade wheel and housing

Cast aluminum AISi10Mg

#### 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 with a yield point higher than 400 N/mm<sup>2</sup>

### 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.

### 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.

### Assignment

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

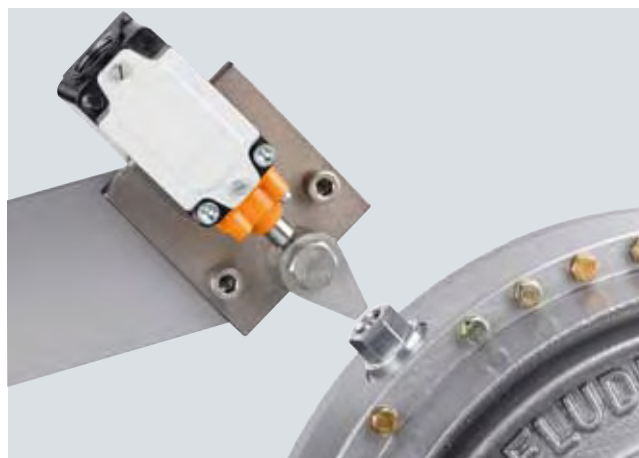
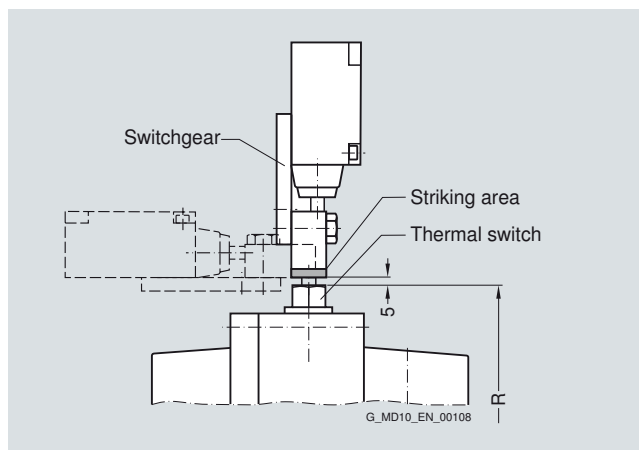
### Thermal equipment

Equipment	Suitability	Fusible safety plug	Sealing material	Additional order info -Z with order code
	<b>1</b>	110 °C	NBR FPM	<b>F01</b> <b>F05</b>
Standard	<b>1</b>	140 °C	NBR	–
	<b>1</b>	140 °C	FPM	<b>F07</b>
	<b>2</b>	160 °C	FPM	<b>F08</b>
ATEX	<b>1</b>	110 °C ex	NBR FPM	<b>F02</b> <b>F06</b>
With thermal switch <sup>1)</sup>	<b>1</b>	140 °C + thermal switch 110 °C	NBR FPM	<b>F03</b> <b>F10</b>
	<b>2</b>	160 °C + thermal switch 140 °C	FPM	<b>F11</b>
With transmitter <sup>1)</sup>	<b>2</b>	160 °C + EOC transmitter (125 °C)	NBR FPM	<b>F04</b> <b>F12</b>
Incl. switchgear				<b>F25</b>
Incl. sensor and evaluation instrument				<b>F26</b>

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

### Suitability:

- 1** = Suitable for continuous coupling operation temperatures up to 85 °C
- 2** = Suitable for continuous coupling operation temperatures up to 110 °C



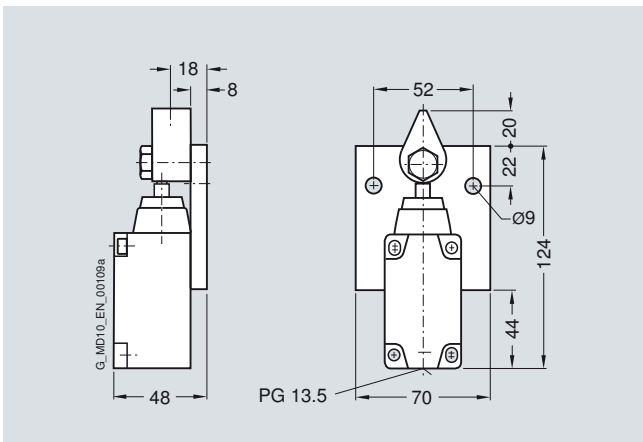
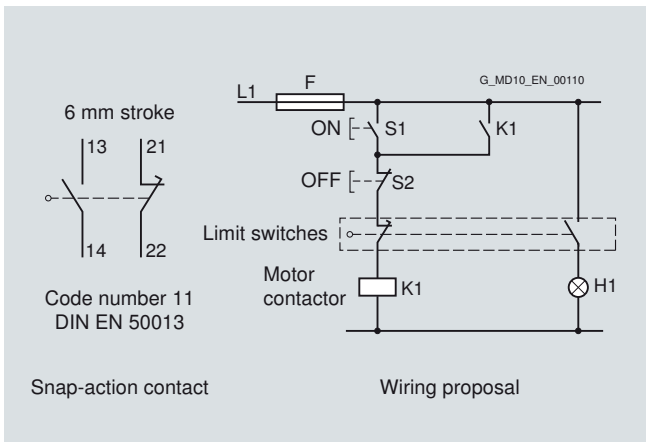
	Size												
	297	342	370	395	425	450	490	516	565	590	655	755	887
Perm. speed in rpm	2500	2240	2100	2000	1900	1800	1650	1600	1500	1450	1250	1100	1000
Radius of travel R in mm	188	215	226	239	251	271	292	307	330	346	383	435	507

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.

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### General information

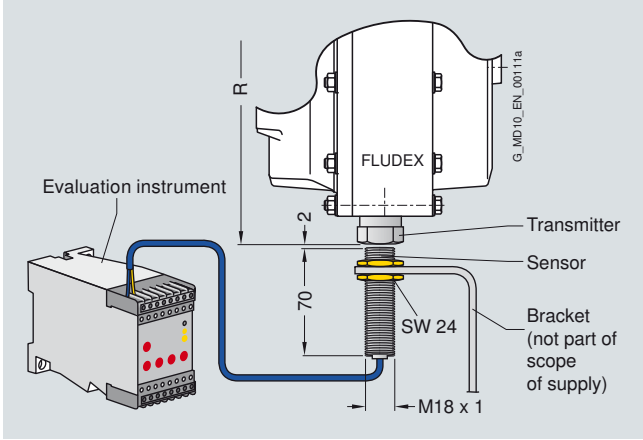
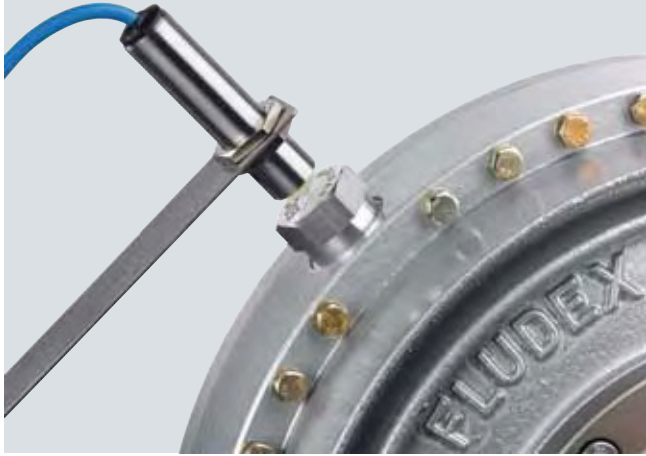


Switchgear: FFA:000000652020

### 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.

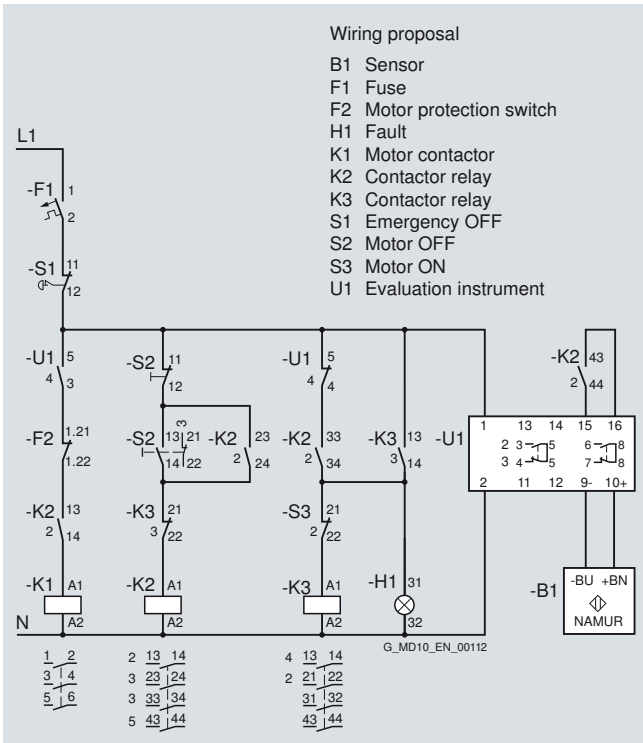


Radius of travel R to the transmitter

Size	297	342	370	395	425	450	490	516	565	590	655	755	887
R in mm	188	215	226	239	251	271	292	307	330	346	383	435	507

### Components of the EOC system

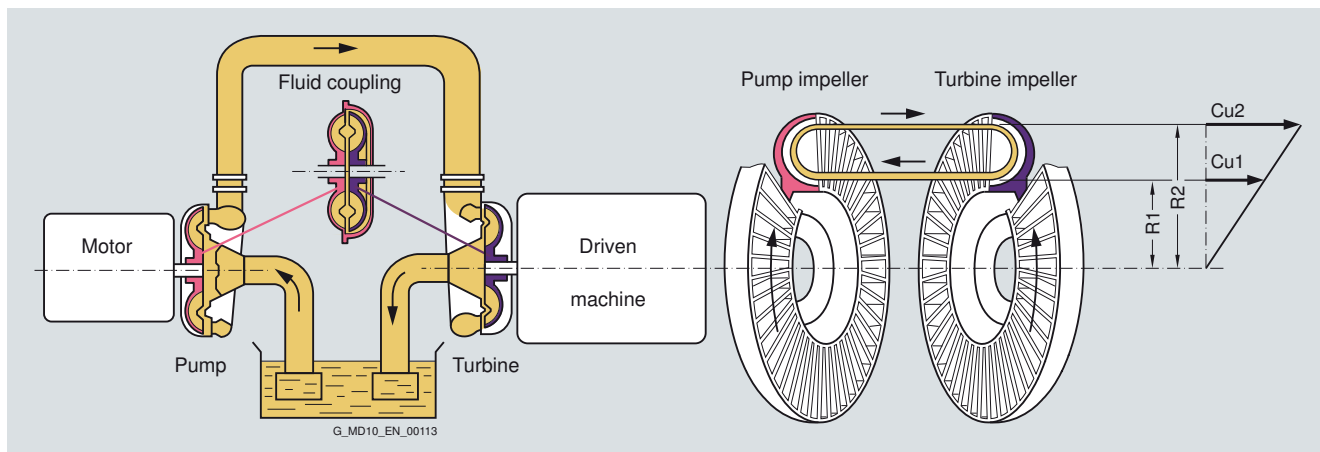
Component	Product code
EOC transmitter with seal	FFA:000001194899
Sensor EOC	FFA:000000361460
Evaluation instrument EWD	FFA:000001205294



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### Function

#### Föttinger principle



Two opposing, radially bladed impellers are housed in a leak-proof 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.

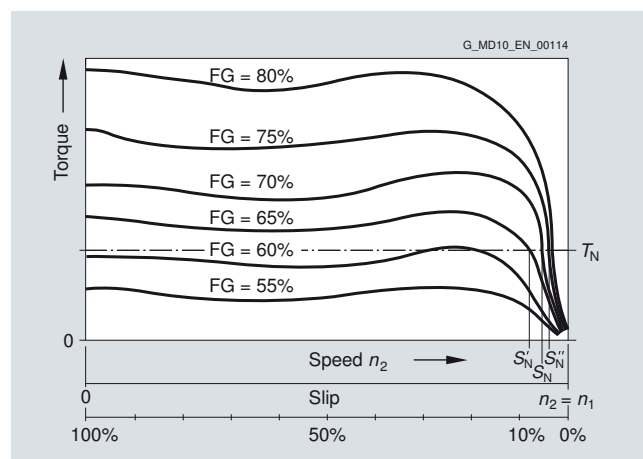
Hydrodynamic couplings have the characteristic properties of fluid flow engines. The transmissible torque depends on the density and quantity of the operating fluid and increases as the square of the drive speed and the fifth power of the profile diameter denoting the coupling size. In the driven pump 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.



Slip-torque characteristics for different filling levels  $FG$

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.

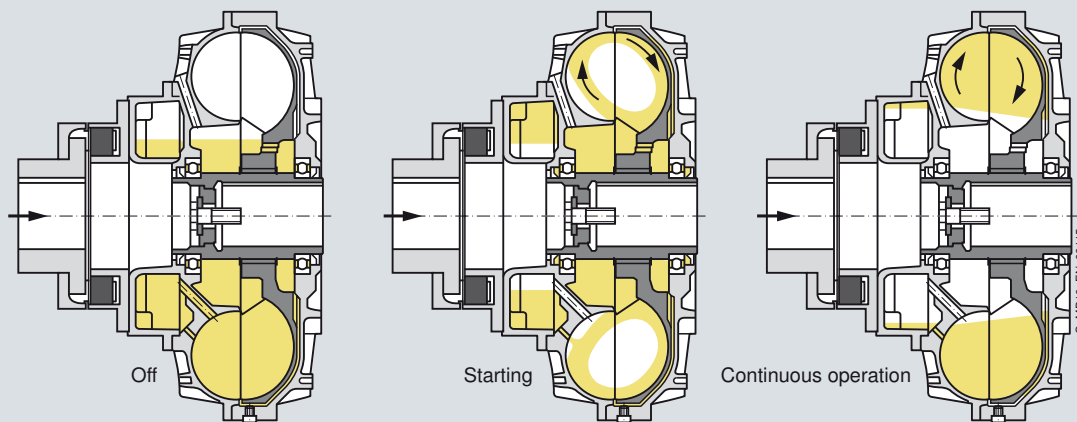
Conversely, with a lower filling level the starting torque decreases, the coupling becomes softer, while slip and coupling temperature rise.



# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### General information



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 work-

ing 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 data

#### Balancing FLUDEX couplings

In deviation from the balancing specifications in catalog section 2, all FLUDEX couplings complying with DIN ISO 1940 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 (order code +W03 required).

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, using the product code key (see catalog section 2).

Add-on couplings are subject to the standards as set out in catalog section 2.

#### Oil filling

FLUDEX couplings can be delivered with or without oil filling.

- Delivery without oil filling:  
without order code
- Delivery with oil filling:  
product code with **-Z** and order code **F16** and **Y90** with plain text specification of the oil filling quantity in liters.
- Delivery without oil filling but with oil filling quantity specification: Product code with **-Z** and order code **Y90** with plain text specification of the oil filling quantity in liters.

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

Variants of FLUDEX hollow shafts only with finished bore:  
Order code for bore diameter is required.

#### 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.

For the selection of the operating oil for low temperatures, attention must be paid to a sufficient low freezing point of the oil and his compatibility to 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.

#### Operating conditions for FLUDEX couplings in potentially explosive environments

The coupling with fusible safety plugs with identity marking  $\text{Ex}$  T3 is suitable for the operating conditions set out in Directive 94/9/EC:

- 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

$\text{Ex}$  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.

$\text{Ex}$  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.

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### General information

#### Axial retention

Axial retention is provided by a set screw or end washer with a retaining screw for shaft ends to DIN 748/1 with a centering thread to DIN 332/2. Other methods must be specified in the order, using the product code with **-Z** and order code **Y99** with plain text specification, unless ordering options are available.

Bore and keyway width tolerances are specified in catalog section 15.

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.

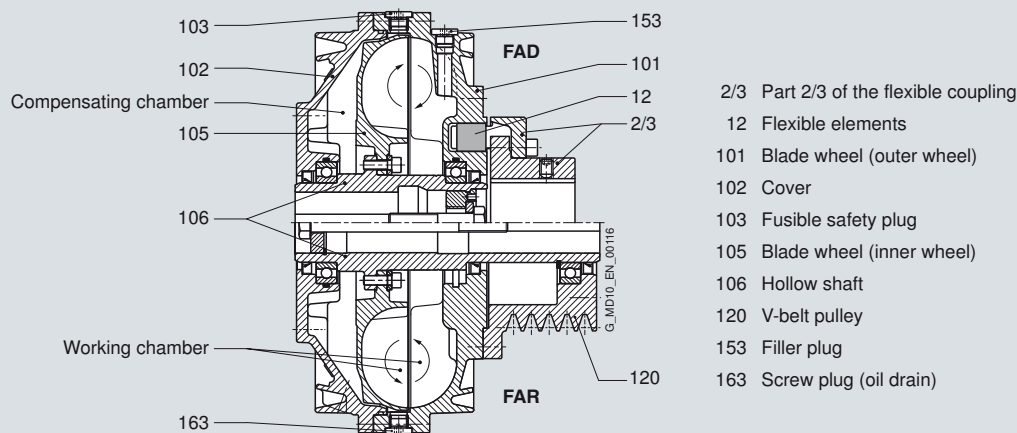
#### Selection of FLUDEX series

FLUDEX couplings which are to be used without special conditions solely as an aid to starting the motor can be selected using the assignment tables on page 13/12 (for  $n = 1500$  rpm) or page 13/14 (for  $n = 3000$  rpm).

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" can be used for this purpose.

#### Description of the FLUDEX series

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



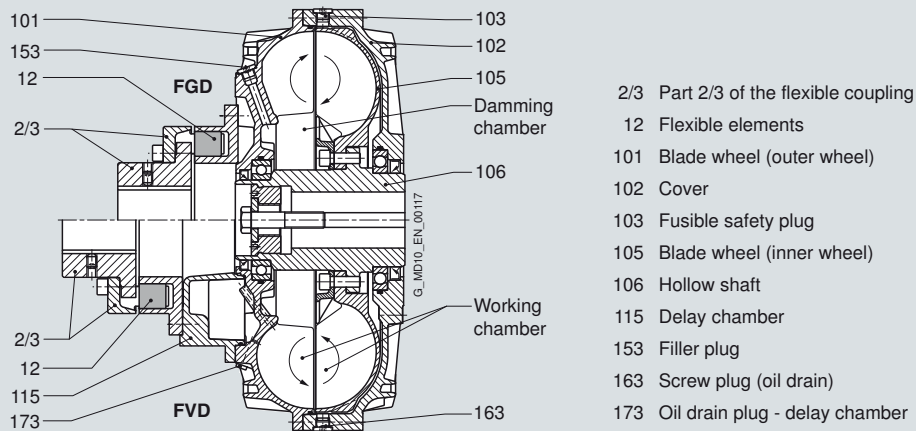
FLUDEX FA series couplings are basic couplings (without delay chamber) which are driven via the hollow shaft (106) with attached blade wheel (105). This enables the advantages of the compensating chamber and the working chamber to be used to best effect. Combinations with brake drums/disks and pulleys 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  $T_N$ ) 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 of the rated value. During run-up to speed the compensating chamber again empties into the working chamber, and this helps to reduce slip.

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### General information

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 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.

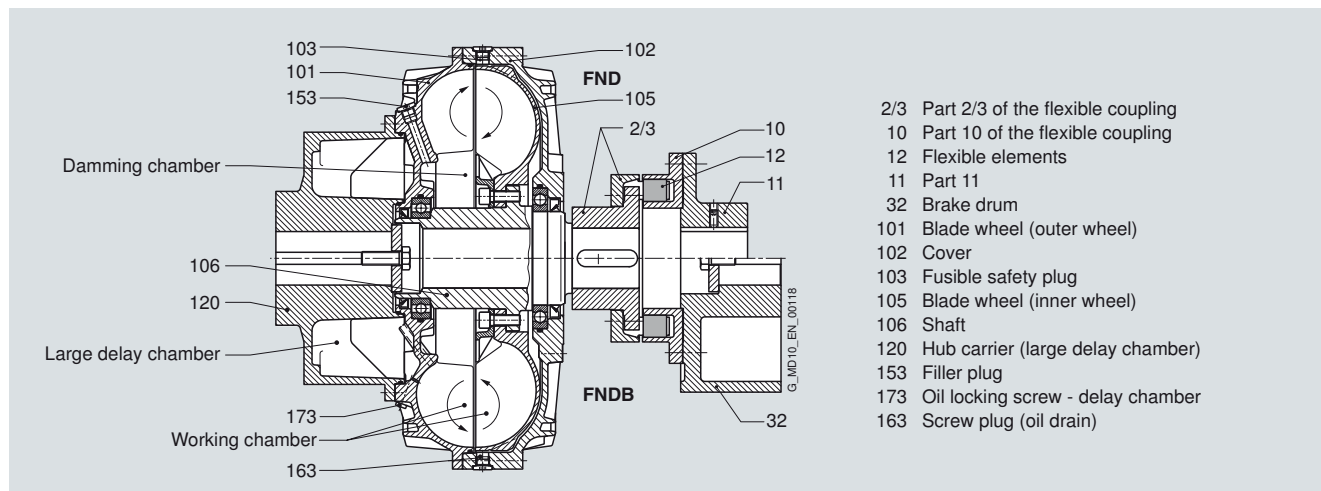
This replenishing function enables a drive to be soft-started with a very low starting torque and with an almost load-free motor. At the same time, however, increased load torques can be overcome by the torque increase in the coupling.

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.



## FN series – drive via the housing

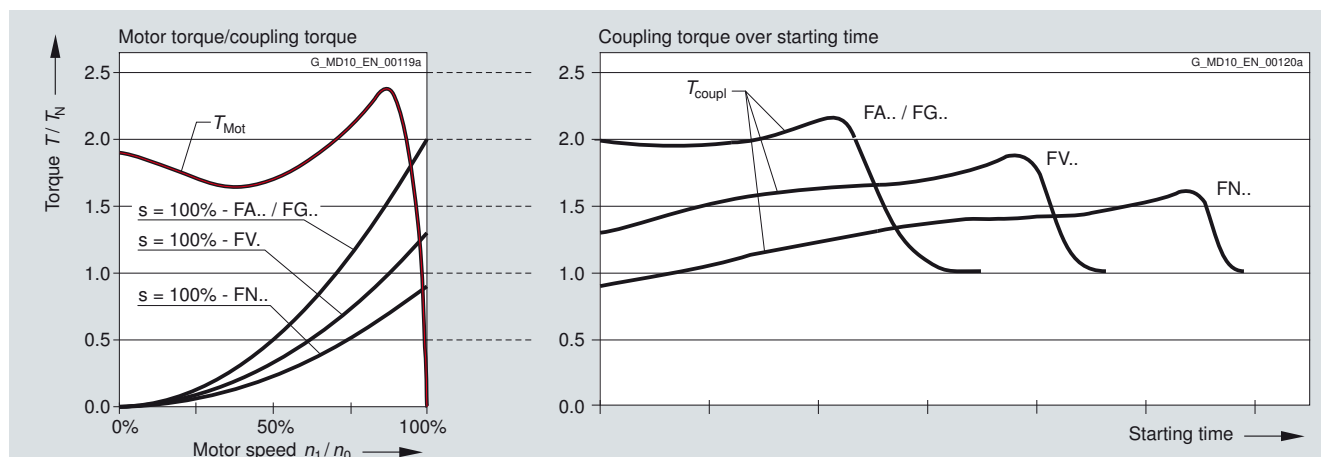


FLUDEX FN series couplings have a larger delay chamber than the FV series. The delay chamber is designed as a hub carrier (120) and is mounted on the motor shaft. The hub carrier is flange-fitted to the housing (101, 102) of the FLUDEX coupling. Output is via the blade wheel (105) and the shaft (106) 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.

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

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.

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



## FLUDEX series:

Series	Description
<b>FA../FG..</b>	Basic coupling without delay chamber
<b>FV..</b>	Coupling with delay chamber
<b>FN..</b>	Coupling with large delay chamber

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### General information

#### 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	Type	Add-on coupling	Characteristic feature
<b>FA</b> - without delay chamber - impeller-driven - Starting torque: $T_{\max} = 2.0 \times T_{\text{eff}}$ - Starting aid for standard motors and torsional vibration isolation	FAO	Without	Basic coupling with connecting flange
	FAR	Without	with attached pulley
	FAD	N-EUPEX <b>D</b>	<sup>1)</sup>
	FAE	N-EUPEX <b>E</b>	enables larger bores on the output side
	FAM	N-EUPEX <b>M</b>	enables a short fitting length
	FADB	N-EUPEX <b>D</b>	with brake drum
	FADS SB	N-EUPEX <b>D</b>	<sup>1)</sup> with brake disk for stopping brakes
FADS HB	N-EUPEX <b>D</b>	<sup>1)</sup> with brake disk for blocking brakes	
<b>FG</b> - without delay chamber - Housing-driven - Starting torque: $T_{\max} = 2.0 \times T_{\text{eff}}$ - Starting aid for standard motors, for torsional vibration isolation and for overload limitation in the event of drive blockage.	FGO	Without	Basic coupling with connecting flange
	FGD	N-EUPEX <b>D</b>	<sup>1)</sup>
	FGE	N-EUPEX <b>E</b>	enables larger bores on the output side
	FGM	N-EUPEX <b>M</b>	enables a short fitting length
<b>FV</b> - with delay chamber - Housing-driven - Starting torque: $T_{\max} = 1.5 \times T_{\text{eff}}$ - Starting aid for motors and soft-starting of conveyor equipment	FVO	Without	Coupling with connecting flange
	FVD	N-EUPEX <b>D</b>	<sup>1)</sup>
	FVE	N-EUPEX <b>E</b>	enables larger bores on the output side
	FVM	N-EUPEX <b>M</b>	enables a short fitting length
<b>FN</b> - with large delay chamber - Housing drive via hub carrier - Starting torque: $T_{\max} = 1.3 \times T_{\text{eff}}$ - Starting aid for motors with very unfavorable characteristic and soft-starting of empty and full conveying equipment - favorable weight distribution on brake-drum variant	FNO	Without	Coupling with connecting shaft
	FNA	N-EUPEX <b>A</b>	<sup>1)</sup> enables a short fitting length
	FND	N-EUPEX <b>D</b>	<sup>1) 2)</sup>
	FNDB	N-EUPEX <b>D</b>	<sup>1) 2)</sup> with brake drum
	FNDS SB	N-EUPEX <b>D</b>	<sup>1) 2)</sup> with brake disk for stopping brakes
	FNDS HB	N-EUPEX <b>D</b>	<sup>1) 2)</sup> with brake disk for blocking brakes

The maximum shaft misalignments permissible for an N-EUPEX add-on coupling are shown in catalog section 7. For greater shaft misalignments FLUDEX couplings can be combined with cardan shafts or other displacement couplings.

<sup>1)</sup> Enables change of flexible elements without moving the machines axially.

<sup>2)</sup> Enables the coupling to be fitted or dismantled without displacing the coupled machines.

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### General information

#### 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 cou-

pling 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.

#### FA series

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

#### FG, FV and FN series

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

The specified coupling weights of the following selection tables are effective for maximum bores without oil filling.

<sup>1)</sup> D = double-flow variant on request.

# FLENDER Standard Couplings

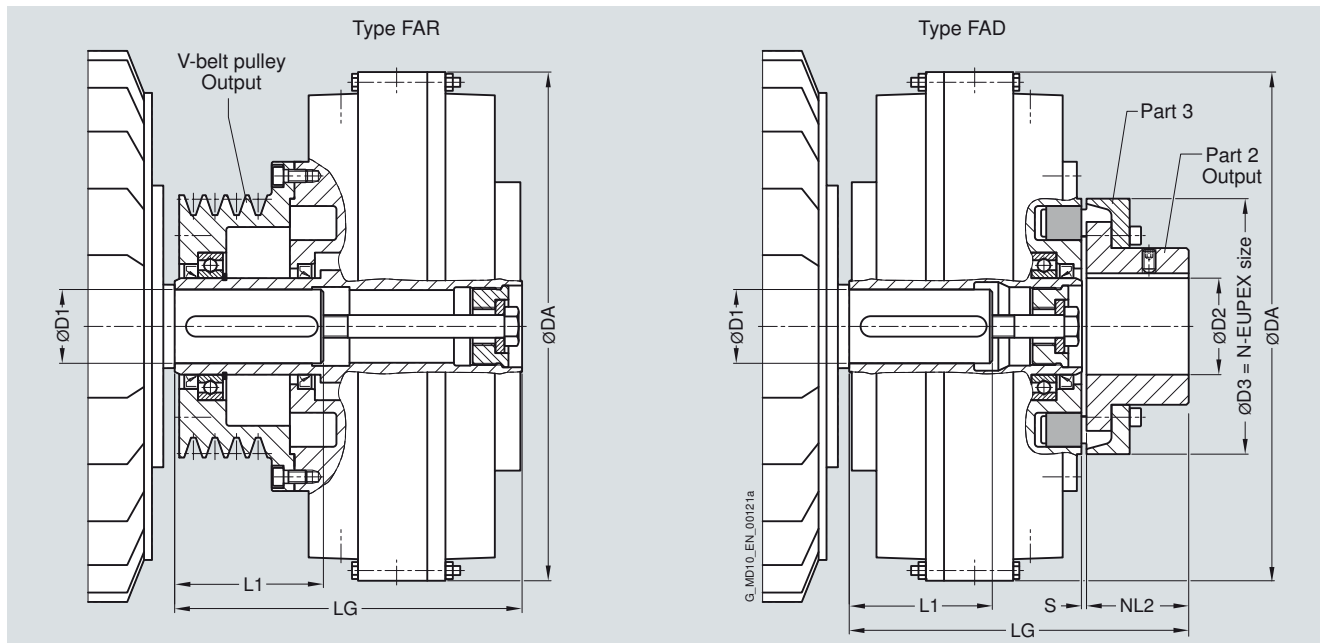
## Fluid Couplings – FLUDEX Series

**FLUDEX coupling as aid to starting IEC motors**

### Selection and ordering data

#### Speed $n = 1500 \text{ rpm}$

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.



Three-phase motor Size $F_M$ 1500 rpm D1 x L1	FLUDEX		Type FAR (with V-belt pulley)				Type FAD (with N-EUPEX D add-on coupling)									
	Size	Oil filling	DA	Profile, pitch Ø	No. of grooves	Recommended no. of belts <sup>1)</sup>	LG	Product code	Weight	LG	NL2	D3	D2 <sup>2)</sup> max.	Product code	Weight	
kW	mm	l	mm	mm		mm	mm	with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	m	mm	mm	mm	mm	with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	m	
<b>80 M</b>	0.55	19 x 40	<b>222</b>	0.9	263	SPZ 2	1	153	2LC0900-0AF90-0AA0 L0L	12	180	40	110	38	2LC0900-0AA9 -0AA0 L0L+M..	12
<b>80 M</b>	0.75	19 x 40		1.0		SPZ 2	1		2LC0900-0AF90-0AA0 L0L					2LC0900-0AA9 -0AA0 L0L+M..		
<b>90 S</b>	1.1	24 x 50		1.1		SPZ 2	1		2LC0900-0AF90-0AA0 L0P					2LC0900-0AA9 -0AA0 L0P+M..		
<b>90 L</b>	1.5	24 x 50		1.2		SPZ 2	1		2LC0900-0AF90-0AA0 L0P					2LC0900-0AA9 -0AA0 L0P+M..		
<b>100 L</b>	2.2	28 x 60		1.4		SPZ 2	2		2LC0900-0AF90-0AA0 L0R					2LC0900-0AA9 -0AA0 L0R+M..		
<b>100 L</b>	3	28 x 60		1.5		SPZ 2	2		2LC0900-0AF90-0AA0 L0R					2LC0900-0AA9 -0AA0 L0R+M..		
<b>112 M</b>	4	28 x 60		1.6		SPZ 3	2		2LC0900-0AF91-0AA0 L0R	14				2LC0900-0AA9 -0AA0 L0R+M..		
<b>132 S</b>	5.5	38 x 80		1.65		SPZ 3	2		2LC0900-0AF91-0AA0 L0V					2LC0900-0AA9 -0AA0 L0V+M..		

ØD2: • Without finished bore  
• With finished bore – With order codes for diameter and tolerance (product code without -Z)

1  
9

1) If the recommended number of belts is ..X, raw-edged belts are required.

2) Larger bores on the output side are possible with type FAE.

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

FLUDEX coupling as aid to starting IEC motors

Three-phase motor		FLUDEX				Type FAR (with V-belt pulley)				Type FAD (with N-EUPEX D add-on coupling)						
Size	$P_M$ 1500 rpm D1 x L1	Size	Oil filling	DA	Pro- file, pitch Ø	No. of grooves	Recom- mended no. of belts <sup>1)</sup>	LG	Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight <i>m</i>	LG	NL2	D3	D2 <sup>2)</sup> max.	Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight <i>m</i>
	kW mm		l mm	mm	mm		mm	mm	kg	mm	mm	mm	mm	kg		
<b>132 M</b>	7.5 38 x 80	<b>297</b>	3.2	340	SPZ 150	5	3	226	<b>2LC0900-1AF90-0AA0 L0V</b>	27	233	50	125	45	<b>2LC0900-1AA9 -0AA0 L0V+M..</b>	24
<b>160 M</b>	11 42 x 110		3.5		SPZ 150	5	4		<b>2LC0900-1AF90-0AA0 LOX</b>						<b>2LC0900-1AA9 -0AA0 LOX+M..</b>	
<b>160 L</b>	15 42 x 110		3.8		SPZ 150	5	5		<b>2LC0900-1AF90-0AA0 LOX</b>						<b>2LC0900-1AA9 -0AA0 LOX+M..</b>	
<b>180 M</b>	18.5 48 x 110		4.0		SPA 190	4	4		<b>2LC0900-1AF91-0AA0 L1B</b>	32					<b>2LC0900-1AA9 -0AA0 L1B+M..</b>	
<b>180 L</b>	22 48 x 110	<b>342</b>	5.5	400	SPA 180	5	5	278	<b>2LC0900-2AF90-0AA0 L1B</b>	40	271	55	140	50	<b>2LC0900-2AA9 -0AA0 L1B+M..</b>	34
<b>200 L</b>	30 55 x 110		6.0		SPA 180	5	5X		<b>2LC0900-2AF90-0AA0 L1D</b>						<b>2LC0900-2AA9 -0AA0 L1D+M..</b>	
<b>225 S</b>	37 60 x 140	<b>395</b>	7.6	448	SPB 224	5	5	325	<b>2LC0900-3AF90-0AA0 L1E</b>	63	299	90	225	85	<b>2LC0900-3AA9 -0AA0 L1E+M..</b>	53
<b>225 M</b>	45 60 x 140		7.9		SPB 224	5	5		<b>2LC0900-3AF90-0AA0 L1E</b>						<b>2LC0900-3AA9 -0AA0 L1E+M..</b>	
<b>250 M</b>	55 65 x 140		8.4		SPB 224	5	5X		<b>2LC0900-3AF90-0AA0 L1F</b>						<b>2LC0900-3AA9 -0AA0 L1F+M..</b>	
<b>280 S</b>	75 75 x 140	<b>450</b>	10.8	512	SPB 250	8	7	410	<b>2LC0900-4AF90-0AA0 L1H</b>	94	338	100	250	95	<b>2LC0900-4AA9 -0AA0 L1H+M..</b>	70
<b>280 M</b>	90 75 x 140		11.3		SPB 250	8	8		<b>2LC0900-4AF90-0AA0 L1H</b>						<b>2LC0900-4AA9 -0AA0 L1H+M..</b>	
<b>315 S</b>	110 80 x 170		12.0		SPB 250	8	8X		<b>2LC0900-4AF90-0AA0 L1J</b>						<b>2LC0900-4AA9 -0AA0 L1J+M..</b>	
<b>315 M</b>	132 80 x 170	<b>516</b>	17.7	584	SPB 315	10	10	491	<b>2LC0900-5AF90-0AA0 L1J</b>	152	398	125	315	120	<b>2LC0900-5AA9 -0AA0 L1J+M..</b>	113
<b>315 M</b>	160 80 x 170		18.6		SPB 315	10	10X		<b>2LC0900-5AF90-0AA0 L1J</b>						<b>2LC0900-5AA9 -0AA0 L1J+M..</b>	

ØD2:   
 • Without finished bore for sizes 222 to 450 and 516 with small hub (ØD2 max. 100 mm) – Without order code M.. **1**  
 • Without finished bore only for size 516 with large hub (ØD2 max. 88 ... 120 mm) – Without order code M.. **2**  
 • With finished bore – With order codes for diameter and tolerance (product code without -Z) **9**

Delivery without oil filling: Without order code.

Delivery with oil filling (only above -20 °C): Product code with “-Z” and order codes “F16” and “Y90” with plain text specification of the oil filling quantity in liters.

Delivery with specification of oil filling quantity: Product code with “-Z” and order code “Y90” with plain text specification of the oil filling quantity in liters.

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

Other methods must be specified in the order using the product code with “-Z” and order code “Y99” with plain text specification.

Ordering example:

Drive with motor 200 L, 30 kW at 1470 rpm with starting clutch and pulley

Selection:

FLUDEX FAR 342 coupling, standard type,  
Hollow shaft: Bore ØD1 = 55H7 with keyway to DIN 6885/1 and retaining screw,  
with pulley 5xSPA Ø180.

Product code:

- Delivery without oil filling:  
**2LC0900-2AF90-0AA0 L1D**

- Delivery with oil filling:  
**2LC0900-1AF90-0AA0-Z L1D+F16+Y90**  
plain text to Y90: **6.0 l**

- Delivery with specification of oil filling quantity:  
**2LC0900-1AF90-0AA0-Z L1D+Y90**  
plain text to Y90: **6.0 l**

<sup>1)</sup> If the recommended number of belts is ..X, raw-edged belts are required.

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

# FLENDER Standard Couplings

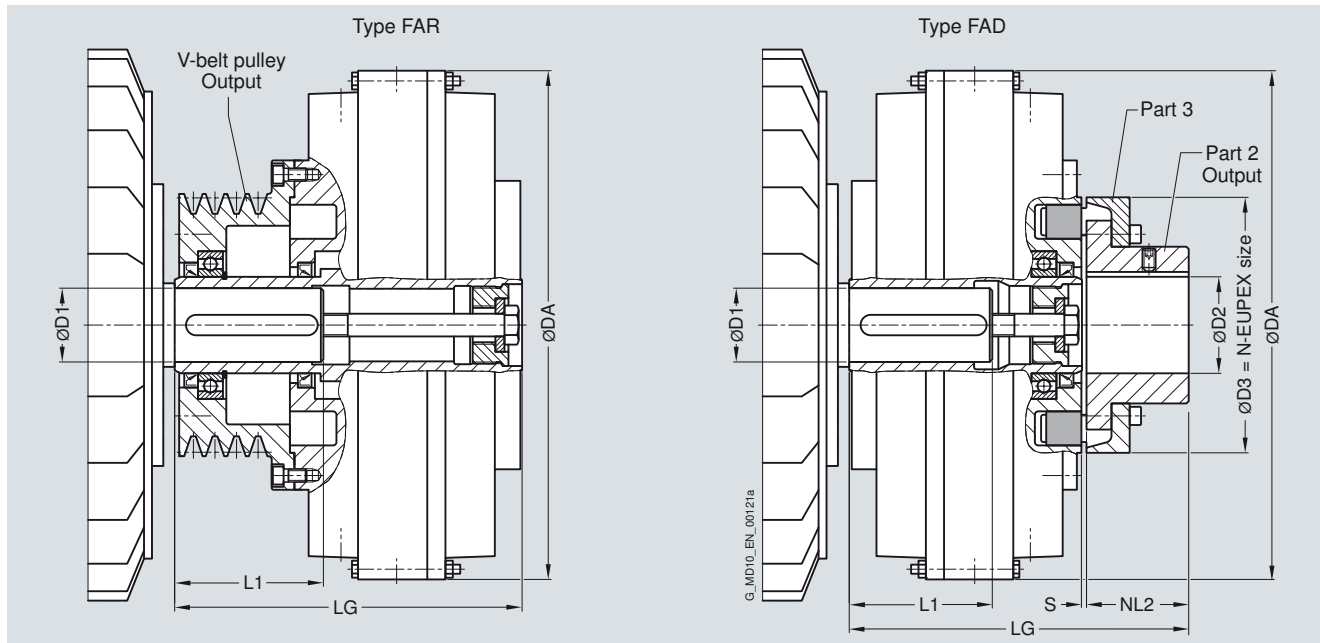
## Fluid Couplings – FLUDEX Series

**FLUDEX coupling as aid to starting IEC motors**

### Selection and ordering data

#### Speed $n = 3000 \text{ rpm}$

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.



Three-phase motor		FLUDEX		Type FAR (with V-belt pulley)				Type FAD (with N-EUPEX D add-on coupling)								
Size	$P_M$ 3000 rpm D1 x L1	Size	Oil filling	DA	Profile, pitch Ø	No. of grooves	Recommended no. of belts <sup>1)</sup>	LG	Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight m	LG	NL2	D3	D2 <sup>2)</sup> max.	Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight m
	kW	mm	l	mm	mm			mm	<b>Available at short term</b>	kg	mm	mm	mm	mm	<b>Available at short term</b>	kg
<b>90 S</b>	1.5	24 x 50	222	0.7	263	SPZ 100	2	1	2LC0900-0AF90-0AA0-Z LOP+W03	12	180	40	110	38	2LC0900-0AA9 -0AA0-Z LOP+M..+W03	12
<b>90 L</b>	2.2	24 x 50		0.8		SPZ 100	2	1	2LC0900-0AF90-0AA0-Z LOP+W03						2LC0900-0AA9 -0AA0-Z LOP+M..+W03	
<b>100 L</b>	3	28 x 60		0.9		SPZ 100	2	1	2LC0900-0AF90-0AA0-Z LOR+W03						2LC0900-0AA9 -0AA0-Z LOR+M..+W03	
<b>112 M</b>	4	28 x 60		1.0		SPZ 100	2	2	2LC0900-0AF90-0AA0-Z LOR+W03						2LC0900-0AA9 -0AA0-Z LOR+M..+W03	
<b>132 S</b>	5.5	38 x 80		1.0		SPZ 100	2	2	2LC0900-0AF90-0AA0-Z LOV+W03						2LC0900-0AA9 -0AA0-Z LOV+M..+W03	
<b>132 S</b>	7.5	38 x 80		1.1		SPZ 160	3	2	2LC0900-0AF91-0AA0-Z LOV+W03	14					2LC0900-0AA9 -0AA0-Z LOV+M..+W03	
<b>160 M</b>	11	42 <sup>3)</sup> x 110		1.2		SPZ 160	3	2	2LC0900-0AF91-0AA0-Z LOX+W03						2LC0900-0AA9 -0AA0-Z LOX+M..+W03	
<b>160 M</b>	15	42 <sup>3)</sup> x 110		1.3		SPZ 160	3	3	2LC0900-0AF91-0AA0-Z LOX+W03						2LC0900-0AA9 -0AA0-Z LOX+M..+W03	
<b>160 L</b>	18.5	42 <sup>3)</sup> x 110		1.4		SPZ 160	3	3	2LC0900-0AF91-0AA0-Z LOX+W03						2LC0900-0AA9 -0AA0-Z LOX+M..+W03	

ØD2: • Without finished bore – Without order code M..  
 • With finished bore – With order codes for diameter and tolerance (product code without -Z)

1  
9

1) If the recommended number of belts is ..X, raw-edged belts are required.

3) Variant with shallow keyway to DIN 6885/3.

2) Larger bores on the output side are possible with type FAE.



# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### FLUDEX coupling as aid to starting IEC motors

Three-phase motor			FLUDEX		Type <b>FAR</b> (with V-belt pulley)				Type <b>FAD</b> (with N-EUPEX D add-on coupling)													
Size	$P_M$ 3000 rpm	D1 x L1	Size	Oil filling	DA	Profile, pitch Ø	No. of grooves	Recommended no. of belts <sup>1)</sup>	LG	Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight <i>m</i>	LG	NL2	D3	D2 <sup>2)</sup> max.	Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight <i>m</i>					
	kW	mm	l		mm	mm			mm		kg	mm	mm	mm	mm		kg					
<b>180 M</b>	22	48 x 110	<b>297</b>	2.5	340	SPZ 150	5	4	226	<b>2LC0900-1AF90-0AA0-Z L1B+W03</b>	27	233	50	125	45	<b>2LC0900-1AA9 -0AA0-Z L1B+M..+W03</b>	24					
<b>200 L</b>	30	55 x 110		2.7		SPZ 150	5	5		<b>2LC0900-1AF90-0AA0-Z L1D+W03</b>										<b>2LC0900-1AA9 -0AA0-Z L1D+M..+W03</b>		
<b>200 L</b>	37	55 x 110		2.8		SPA 190	4	4		<b>2LC0900-1AF91-0AA0-Z L1D+W03</b>	32									<b>2LC0900-1AA9 -0AA0-Z L1D+M..+W03</b>		
<b>225 M</b>	45	55 x 110		2.9		SPA 224	5	4		<b>2LC0900-1AF92-0AA0-Z L1D+W03</b>	35										<b>2LC0900-1AA9 -0AA0-Z L1D+M..+W03</b>	
<b>250 M</b>	55	60 <sup>3)</sup> x 140		3.1		SPA 224	5	5		<b>2LC0900-1AF92-0AA0-Z L1E+W03</b>											<b>2LC0900-1AA9 -0AA0-Z L1E+M..+W03</b>	
<b>280 S</b>	75	65 x 140	<b>395</b>	5.3	448	SPB 236	7	5	363.5	<b>2LC0900-3AF91-0AA0-Z L1F+W03</b>	70	299	90	225	85	<b>2LC0900-3AA9 -0AA0-Z L1F+M..+W03</b>	53					
<b>280 M</b>	90	65 x 140		5.6		SPB 236	7	6		<b>2LC0900-3AF91-0AA0-Z L1F+W03</b>										<b>2LC0900-3AA9 -0AA0-Z L1F+M..+W03</b>		
<b>315 S</b>	110	65 x 140		5.9		SPB 236	7	7		<b>2LC0900-3AF91-0AA0-Z L1F+W03</b>										<b>2LC0900-3AA9 -0AA0-Z L1F+M..+W03</b>		
<b>315 M</b>	132	65 x 140		6.2		SPB 236	7	7X		<b>2LC0900-3AF91-0AA0-Z L1F+W03</b>										<b>2LC0900-3AA9 -0AA0-Z L1F+M..+W03</b>		
<b>315 L</b>	160	65 x 140		6.8		SPB 280	7	7X		<b>2LC0900-3AF92-0AA0-Z L1F+W03</b>	83										<b>2LC0900-3AA9 -0AA0-Z L1F+M..+W03</b>	

ØD2: • Without finished bore – Without order code M..

• With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

1

9

Delivery without oil filling: Without order code.

Delivery with oil filling (only above -20 °C): Product code with **"-Z"** and order codes **"F16"** and **"Y90"** with plain text specification of the oil filling quantity in liters.

Delivery with specification of oil filling quantity: Product code with **"-Z"** and order code **"Y90"** with plain text specification of the oil filling quantity in liters.

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

Other methods must be specified in the order using the product code with **"-Z"** and order code **"Y99"** with plain text specification.

Ordering example:

Drive with motor 280 M, 90 kW at 2950 rpm with starting clutch for connecting two shafts.

Selection:

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.

Product code:

- Delivery without oil filling:  
**2LC0900-3AA99-0AA0-Z L1F+M1E+W03**
- Delivery with oil filling:  
**2LC0900-3AA99-0AA0-Z L1F+M1E+W03+F16+Y90**  
plain text to Y90: **5.6 I**
- Delivery with specification of oil filling quantity:  
**2LC0900-3AA99-0AA0-Z L1F+M1E+W03+Y90**  
plain text to Y90: **5.6 I**

<sup>1)</sup> If the recommended number of belts is ..X, raw-edged belts are required.

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

<sup>3)</sup> Variant with shallow keyway to DIN 6885/3.

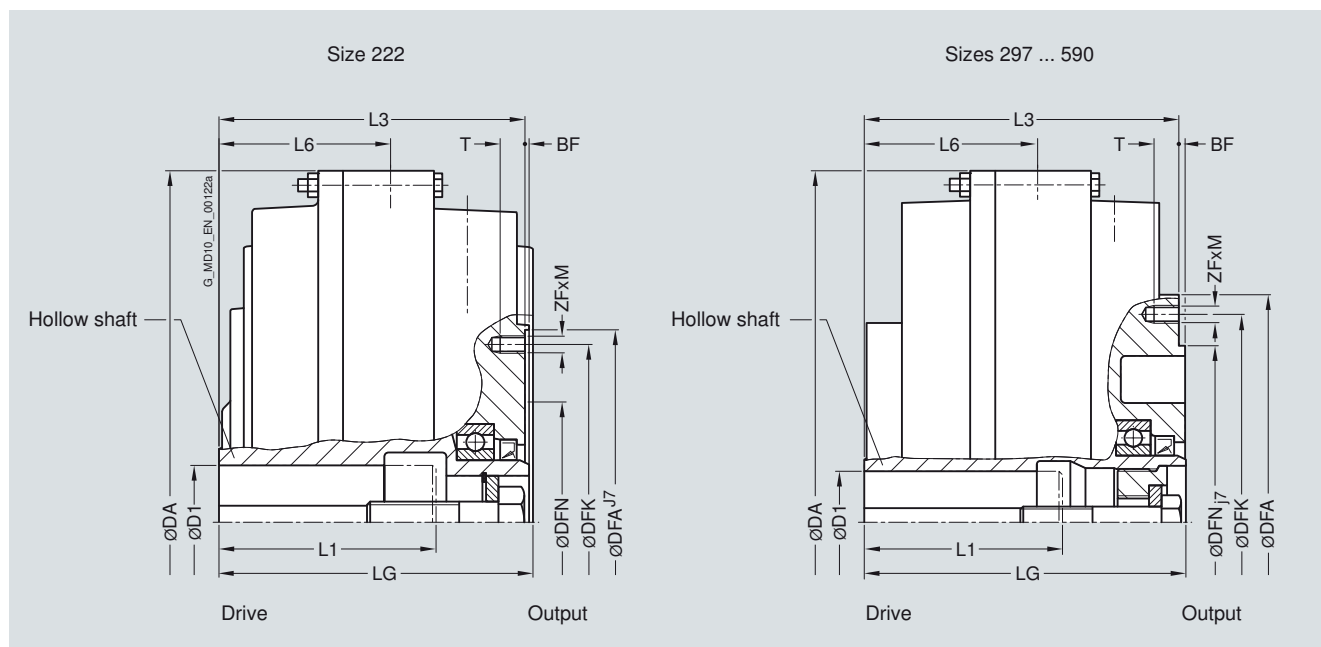
# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Type FAO

#### Selection and ordering data

Basic coupling of the FA series with connecting flange.



Size	Maximum speed $n_{kmax}$	Dimensions in mm											Tightening torque for screws in thread ZF x M $T_A$	Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight $m$			
		D1	L1	DA	LG	L3	L6	DFN	DFA	BF	DFK	ZF x M				T		
	rpm	Keyway to DIN 6885 max. min. max. Preferred bore														kg		
<b>222</b>	3600	38	28	80	263	112	110	58	90	144	2	128	6 x M8	12	18.7	<b>2LC0900-0AG90-0AA0</b> L..	10	
		>38 <sup>1)</sup>	42 <sup>1)</sup>															
<b>297</b>	3600	38		80	340	150	145	83	125	195	3	172	6 x M8	12	18.7	<b>2LC0900-1AG90-0AA0</b> L..	18	
		>38	55	42	110													
		>55 <sup>1)</sup>	60 <sup>1)</sup>	110														
<b>342</b>	3600	55	48 + 55	110	400	180	174	101	140	230	4	205	8 x M10	15	31	<b>2LC0900-2AG90-0AA0</b> L..	26	
		>55 <sup>1)</sup>	60 <sup>1)</sup>	120														
<b>395</b>	3000	65	60 + 65	140	448	205	200.5	110.5	225	290	4	265	8 x M12	18	54	<b>2LC0900-3AG90-0AA0</b> L..	40	
<b>450</b>	3000	75	65 + 75	140	512	233	228	126	250	310	4	285	8 x M12	18	54	<b>2LC0900-4AG90-0AA0</b> L..	53	
		>75	80	170														
<b>516</b>	2300	55		140	584	270	263	147	315	390	5	360	8 x M16	24	135	<b>2LC0900-5AG90-0AA0</b> L..	84	
		>55	90	80	170													
<b>590</b>	2000	75		140	662	305	298	166	315	390	5	360	8 x M16	24	135	<b>2LC0900-6AG90-0AA0</b> L..	109	
		>75	95	170														
		>95	100	210														

#### Ordering example:

Motor 37 kW,  $P_{eff} = 30$  kW,  $n_1 = 1470$  rpm, maximum output torque:  $T_{max} = 2.0 \times T_{eff}$ .

#### Selection:

FLUDEX FAO coupling size 342,

Hollow shaft: Bore  $\text{ØD1} = 60\text{H7}$  mm with keyway to DIN 6885/3 and retaining screw,

seal set Viton.

Specification of oil filling quantity: 6.0 l (see under oil filling quantities for the FA series in this catalog section).

#### Product code:

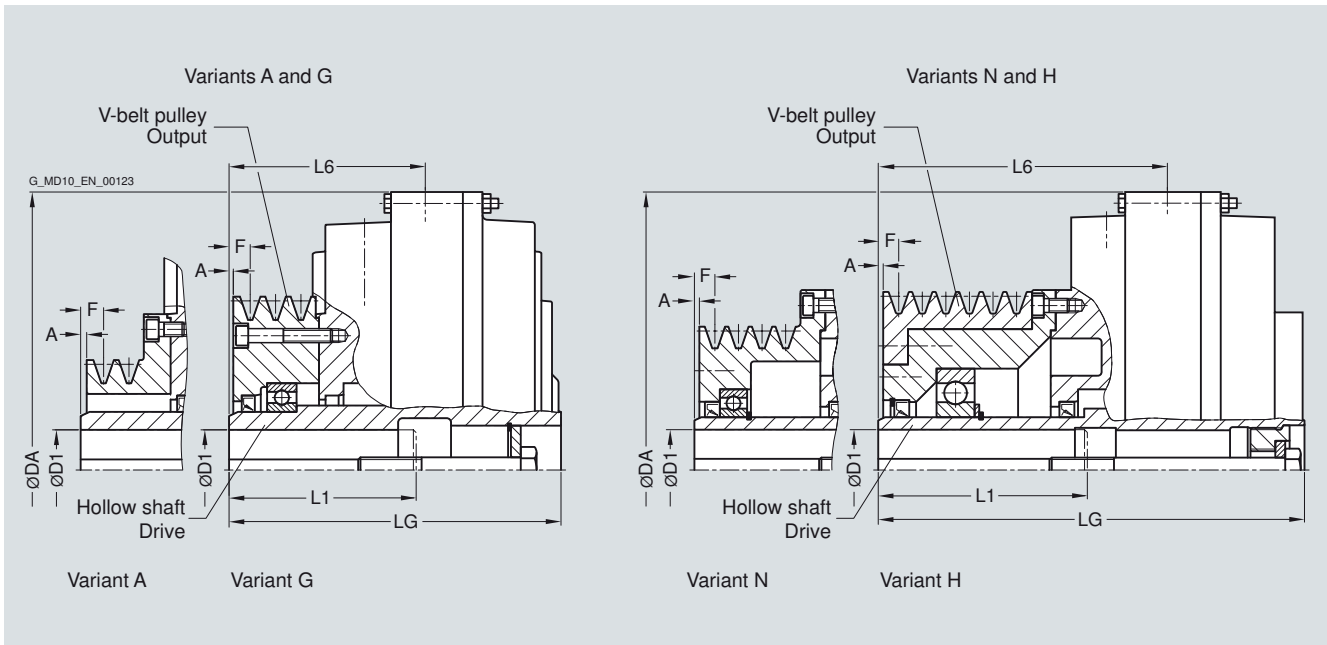
- With 110 °C fuse:  
**2LC0900-2AG90-0AA0-Z**  
**L1E+Y90+F05**  
plain text to Y90: **6.0 l**
- With 140 °C fuse:  
**2LC0900-2AG90-0AA0-Z**  
**L1E+Y90+F07**  
plain text to Y90: **6.0 l**

<sup>1)</sup> Variant with shallow keyway to DIN 6885/3.

# FLENDER Standard Couplings Fluid Couplings – FLUDEX Series

Type FAR with attached V-belt pulley

## Selection and ordering data



Size	Maximum speed $n_{kmax}$	Dimensions in mm						V-belt pulley Profile, pitch diameter	No. of grooves	A	F	Variant	Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight <i>m</i>
		D1 min.	D1 max.	L1 max.	DA	LG	L6							
222	3600 rpm	28	28	60	263	153	95	SPZ 100	2	1	9	A	<b>2LC0900-0AF90-0AA0</b> L..	12
		>28	38	105				SPZ 160	3			G	<b>2LC0900-0AF91-0AA0</b> L..	14
		>38 <sup>1)</sup>	42 <sup>1)</sup>	110										
297	3600 rpm	38		80	340	226	143	SPZ 150	5	2	10	N	<b>2LC0900-1AF90-0AA0</b> L..	27
		>38	55	42	110			SPZ 150	5	2		N	<b>2LC0900-1AF90-0AA0</b> L..	27
		>55 <sup>1)</sup>	59 <sup>1)</sup>	110				SPA 190	4	0		H	<b>2LC0900-1AF91-0AA0</b> L..	32
		>59 <sup>1)</sup>	60 <sup>1)</sup>	140				SPA 224	5	0		G	<b>2LC0900-1AF92-0AA0</b> L..	35
342	3600 rpm	55	55	110	400	278	177	SPA 180	5	4	14	N	<b>2LC0900-2AF90-0AA0</b> L..	40
395	3000 rpm	55		110	448	325	214.5	SPB 224	5	4	16.5	N	<b>2LC0900-3AF90-0AA0</b> L..	63
		>55	65	60 + 65	140							N	<b>2LC0900-3AF91-0AA0</b> L..	70
	2700 rpm	>55	75	140				SPB 280	7			H	<b>2LC0900-3AF92-0AA0</b> L..	83
450	3000 rpm	55		110	512	410	284	SPB 250	8	4	16.5	N	<b>2LC0900-4AF90-0AA0</b> L..	94
		>55	75	65 + 75	140									
		>75	80	170										
516	2300 rpm	55		110	584	491	344	SPB 315	10	4	16.5	N	<b>2LC0900-5AF90-0AA0</b> L..	152
		>55	75	140										
		>75	95	170										
		>95	100	210										
590	2000 rpm	55		110	662	642	476	SPC 315	12	4	21	N	<b>2LC0900-6AF90-0AA0</b> L..	208
		>55	75	140										
		>75	95	170										
		>95	100	210										

General specifications and ordering instructions on page 13/10, 13/11. **Ordering example on page 13/24.**

<sup>1)</sup> Variant with shallow keyway to DIN 6885/3.

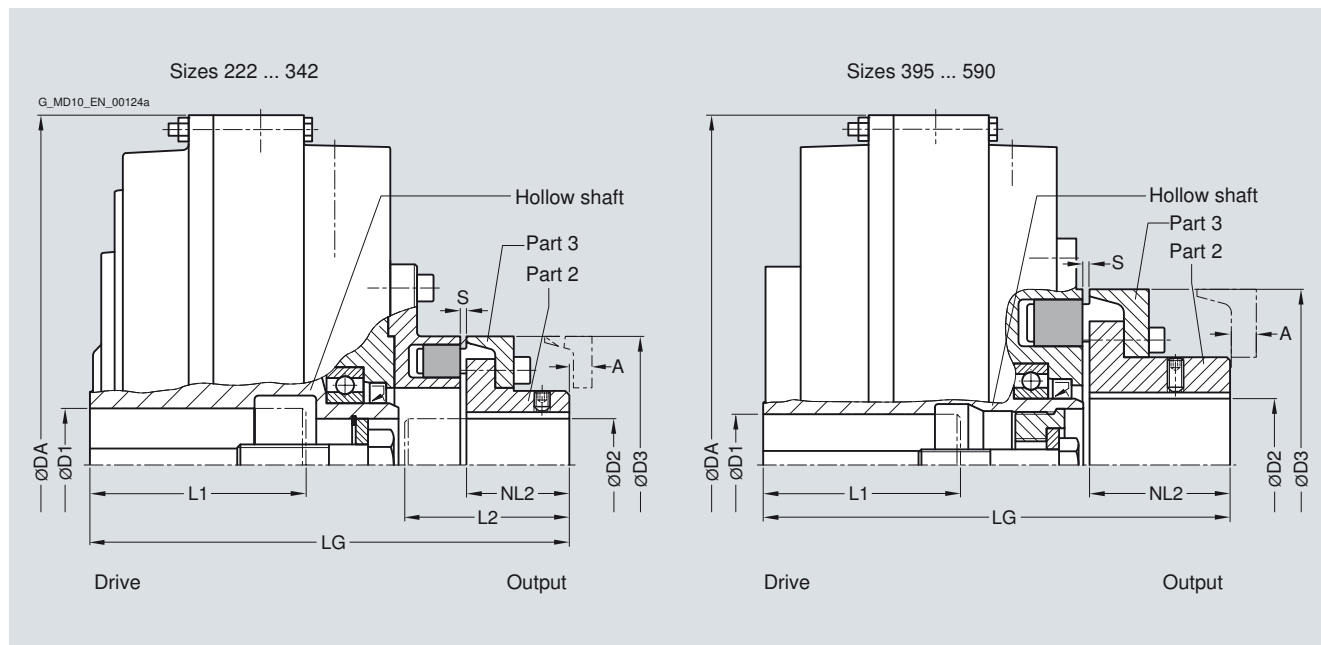
# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Type FAD

#### Selection and ordering data

Type with attached N-EUPEX D coupling. Enables change of flexible elements without axial displacement of the shafts if the space "A" is provided.



Size	Maximum speed $n_{kmax}$	Dimensions in mm FLUDEX coupling					N-EUPEX D coupling					Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight <i>m</i>	
		D1 Keyway to DIN 6885		L1 max.	DA	LG	D2 max.	L2 max.	NL2	D3	S			A
	rpm	min.	max.	Preferred bore					N-EUPEX size				<b>In standard type available ex stock</b>	kg
													<b>Available at short term</b>	
<b>222</b>	3600	38	28	80	263	180	38	65	40	110	2...4	13	<b>2LC0900-0AA9 -0AA0</b> L...M..	12
		>38 <sup>1)</sup>	42 <sup>1)</sup>											
<b>297</b>	3600	38		80	340	233	45	80	50	125	2...4	11	<b>2LC0900-1AA9 -0AA0</b> L...M..	24
		>38	55	42	110									
		>55 <sup>1)</sup>	60 <sup>1)</sup>		110									
<b>342</b>	3600	55	48 + 55	110	400	271	50	88	55	140	2...4	16	<b>2LC0900-2AA9 -0AA0</b> L...M..	34
		>55 <sup>1)</sup>	60 <sup>1)</sup>		120									
<b>395</b>	3000	65	60 + 65	140	448	299	85	90	90	225	3...6	9	<b>2LC0900-3AA9 -0AA0</b> L...M..	53
<b>450</b>	3000	75	65 + 75	140	512	338	95	100	100	250	3...8	11	<b>2LC0900-4AA9 -0AA0</b> L...M..	70
		>75	80		170									
<b>516</b>	2300	55		140	584	398	120	125	125	315	3...8	0	<b>2LC0900-5AA9 -0AA0</b> L...M..	113
		>55	90	80	170									
<b>590</b>	2000	75		140	662	433	120	125	125	315	3...8	0	<b>2LC0900-6AA9 -0AA0</b> L...M..	138
		>75	95		170									
		>95	100		210									

- ØD2:
- Without finished bore for sizes 222 to 450, 516 and 590 with small hub (ØD2 max. 100 mm) – Without order code M.. **1**
  - Without finished bore only for sizes 516 and 590 with large hub (ØD2 max. 88 ... 120 mm) – Without order code M.. **2**
  - With finished bore – With order codes for diameter and tolerance (product code without **-Z**) **9**

#### Ordering example:

Motor 160 kW,  $P_{eff} = 132$  kW,  $n_1 = 1470$  rpm, maximum output torque:  $T_{max} = 2.0 \times T_{eff}$ .

#### Selection:

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

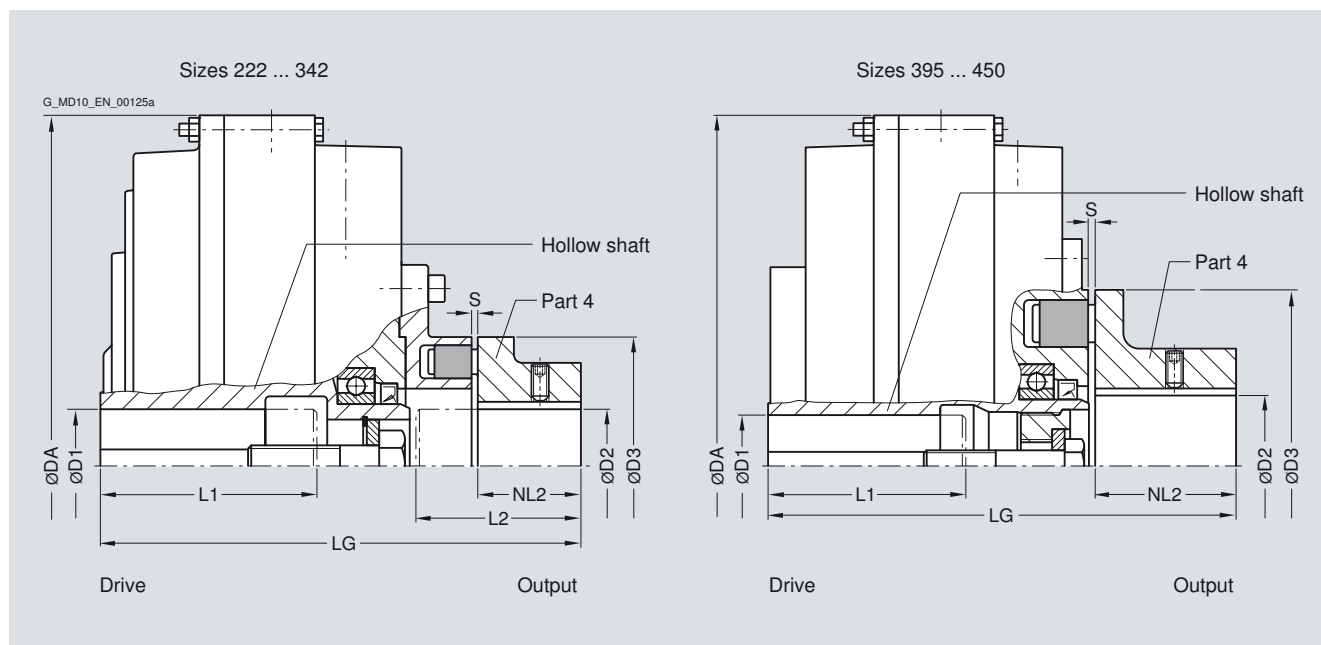
Specification of oil filling quantity: 16.9 l (see under oil filling quantities for the FA series in this catalog section).

Product code:  
**2LC0900-5AA99-0AA0-Z**  
**L1J+M1J+Y90**  
plain text to Y90: **16.9 l**

<sup>1)</sup> Variant with shallow keyway to DIN 6885/3.

### Selection and ordering data

Type with attached N-EUPEX E coupling. Enables larger bores on the output side.



Size	Maximum speed $n_{kmax}$	Dimensions in mm FLUDEX coupling					N-EUPEX E coupling					Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight
		D1 Keyway to DIN 6885		L1 max.	DA	LG	D2 max.	L2 max.	NL2	D3	S		
	rpm	min.	max.	Preferred bore									
222	3600	38	28	80	263	180	48	65	40	110	2...4	2LC0900-0AB9 ■ -0AA0 L...M..	kg
		>38 <sup>1)</sup>	42 <sup>1)</sup>										12
297	3600	38		80	340	233	55	80	50	125	2...4	2LC0900-1AB9 ■ -0AA0 L...M..	24
		>38	55	42	110								
		>55 <sup>1)</sup>	60 <sup>1)</sup>		110								
342	3600	55	48 + 55	110	400	271	60	88	55	140	2...4	2LC0900-2AB9 ■ -0AA0 L...M..	34
		>55 <sup>1)</sup>	60 <sup>1)</sup>		120								
395	3000	65	60 + 65	140	448	299	90	90	90	225	3...6	2LC0900-3AB9 ■ -0AA0 L...M..	50
450	3000	75	65 + 75	140	512	338	100	100	100	250	3...8	2LC0900-4AB9 ■ -0AA0 L...M..	68
		>75	80		170								

ØD2: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without -Z)

1

9

#### Ordering example:

Motor 45 kW,  $P_{eff} = 42$  kW,  $n_1 = 2950$  rpm

#### Selection:

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 with keyway to DIN 6885/1 and  
set screw,

with micro-balancing (high speed),  
with electronic or mechanical operation monitoring, seal set  
Perbunan.

Delivery without oil filling, no oil filling quantity specification.

#### Product code:

- With 110 °C thermal switch:  
**2LC0900-2AB99-0AA0-Z**  
**L1D+M1E+W03+F03**  
plain text to Y90: **16.9 I**
- With 125 °C EOC transmitter:  
**2LC0900-2AB99-0AA0-Z**  
**L1D+M1E+W03+F04**

<sup>1)</sup> Variant with shallow keyway to DIN 6885/3.

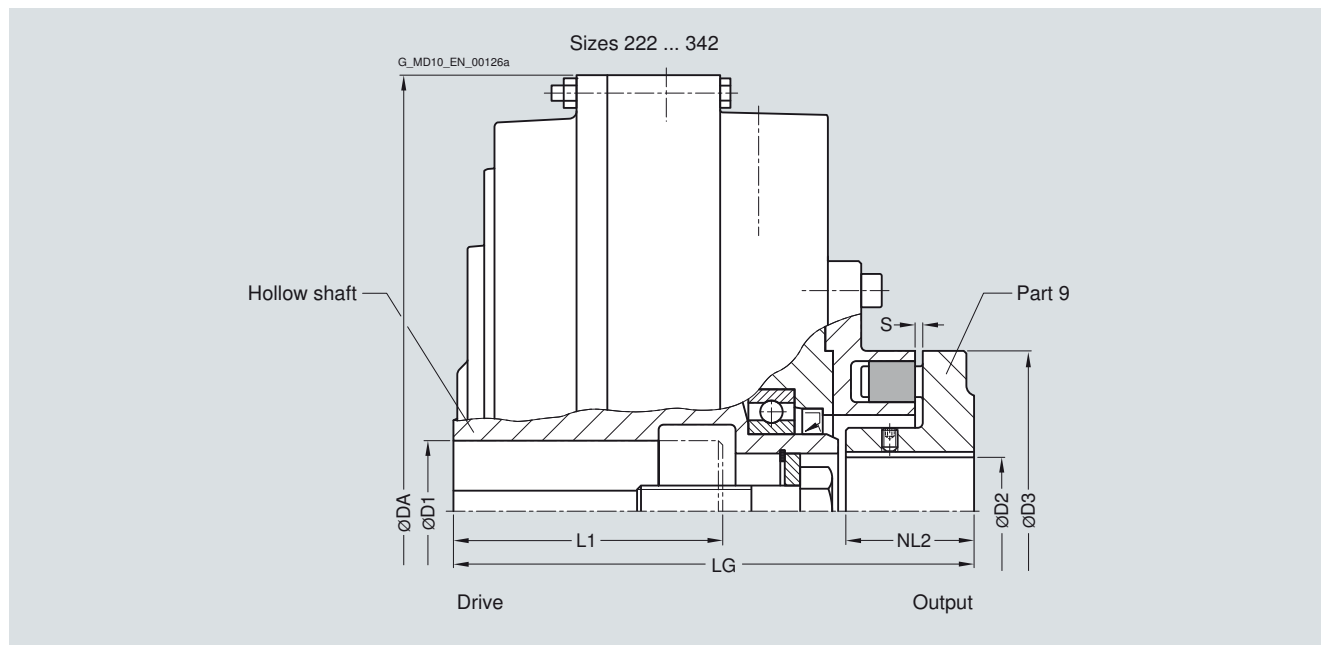
# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Type FAM

#### Selection and ordering data

Type with attached N-EUPEX M coupling. Enables a short fitting length.



Size	Maximum speed $n_{kmax}$	Dimensions in mm FLUDEX coupling					N-EUPEX M coupling					Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight <i>m</i>
		D1 Keyway to DIN 6885		L1 max.	DA	LG	D2 max.	NL2	D3	S	N-EUPEX size		
	rpm	min.	max.	Preferred bore									
<b>222</b>	3600	38	28	80	263	150	38	36	110	2...4	<b>2LC0900-0AH9</b> ■ <b>-0AA0</b> <b>L...M..</b>	kg	
		>38 <sup>1)</sup>	42 <sup>1)</sup>									12	
<b>297</b>	3600	38	80	340	203	48	50	125	2...4	<b>2LC0900-1AH9</b> ■ <b>-0AA0</b> <b>L...M..</b>	kg		
		>38	55	42	110						24		
		>55 <sup>1)</sup>	60 <sup>1)</sup>	110									
<b>342</b>	3600	55	48 + 55	110	400	238	52	55	140	2...4	<b>2LC0900-2AH9</b> ■ <b>-0AA0</b> <b>L...M..</b>	kg	
		>55 <sup>1)</sup>	60 <sup>1)</sup>	120								34	

ØD2: • Without finished bore – Without order codes  
 • With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

#### Ordering example:

Motor 37 kW,  $P_{eff} = 30$  kW,  $n_1 = 1470$  rpm

#### Selection:

FLUDEX FAM coupling size 342,

Hollow shaft: Bore ØD1 = 60H7 mm with keyway to DIN 6885/1 and retaining screw,

Part 9: Bore ØD2 = 50H7 mm with keyway to DIN 6885/1 and set screw.

Delivery without oil filling, no oil filling quantity specification.

#### Product code:

- With drive via hollow shaft:  
**2LC0900-2AH99-0AA0-Z**  
**L1E+M1C**  
plain text to Y90: **16.9 I**
- With drive via housing:  
**2LC0900-2AH99-0AA0-Z**  
**L1E+M1C+F23**

<sup>1)</sup> Variant with shallow keyway to DIN 6885/3.

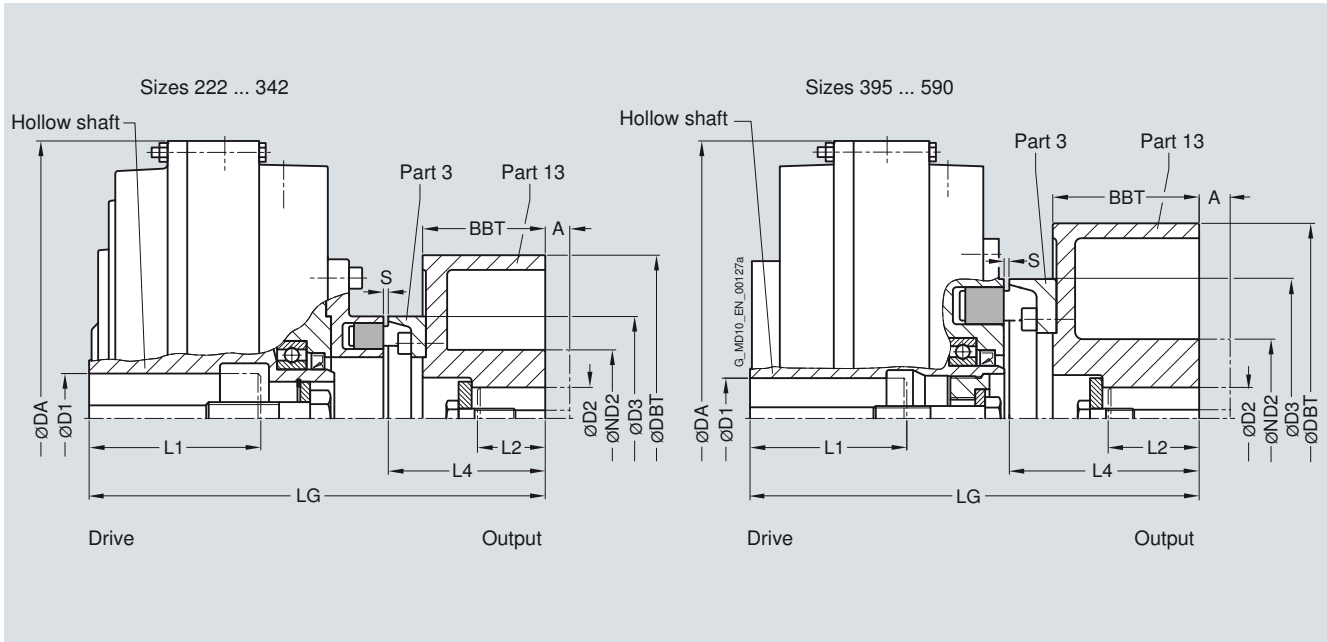


# FLENDER Standard Couplings Fluid Couplings – FLUDEX Series

Type FADB

## Selection and ordering data

Type with attached N-EUPEX coupling and brake drum.



Size	Maximum speed $n_{Kmax}$ rpm	Dimensions in mm FLUDEX coupling				N-EUPEX coupling			Part 13					Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight  m  kg
		D1	L1	DA	LG	D3	S	L4	D2	ND2	DBT	BBT	A		
222	3600	38	80	263	232	110	2...4	92	42	84	200	75	30	<b>2LC0900-0AC9</b> ■ -0 ■ <b>A0-Z</b> L..+M..+Y..	17
		>38 <sup>1)</sup>	42 <sup>1)</sup>												
297	3600	38	80	340	279	125	2...4	96	55	84	200	75	30	<b>2LC0900-1AC9</b> ■ -0 ■ <b>A0-Z</b> L..+M..+Y..	29
		>38	55	110											
		>55 <sup>1)</sup>	60 <sup>1)</sup>	110											
342	3000	55	110	400	337	140	2...4	121	60	128	250	95	50	<b>2LC0900-2AC9</b> ■ -0 ■ <b>A0-Z</b> L..+M..+Y..	48
		>55 <sup>1)</sup>	60 <sup>1)</sup>	120											
395	2400	65	140	448	362	225	3...6	153	80	128	315	118	50	<b>2LC0900-3AC9</b> ■ -0 ■ <b>A0-Z</b> L..+M..+Y..	71
450	2400	75	140	512	395	250	3...8	157	80	128	315	118	50	<b>2LC0900-4AC9</b> ■ -0 ■ <b>A0-Z</b> L..+M..+Y..	86
		>75	80	170											
516	1900	55	140	584	466	315	3...8	193	100	160	400	150	80	<b>2LC0900-5AC9</b> ■ -0 ■ <b>A0-Z</b> L..+M..+Y..	146
		>55	90	170											
590	1500 <sup>2)</sup>	75	140	662	540	315	3...8	232	110	175	500	190	110	<b>2LC0900-6AC9</b> ■ -0 ■ <b>A0-Z</b> L..+M..+Y..	207
		>75	95	170											
		>95	100	210											

ØD2: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

Part 13 • Standard brake drum, without extension A

• Long brake drum (increase of lengths L4 and LG by the amount A)

1

9

A

B

L2 denotes the shaft insertion depth.

In the case of shaft ends deviating from DIN 748 the insertion depth must be specified in plain text with **Y29**.

For ordering example, see page 13/24.

1) Variant with shallow keyway to DIN 6885/3.

2) With version of brake drum in grey cast iron: Maximum speed 1800 rpm possible.

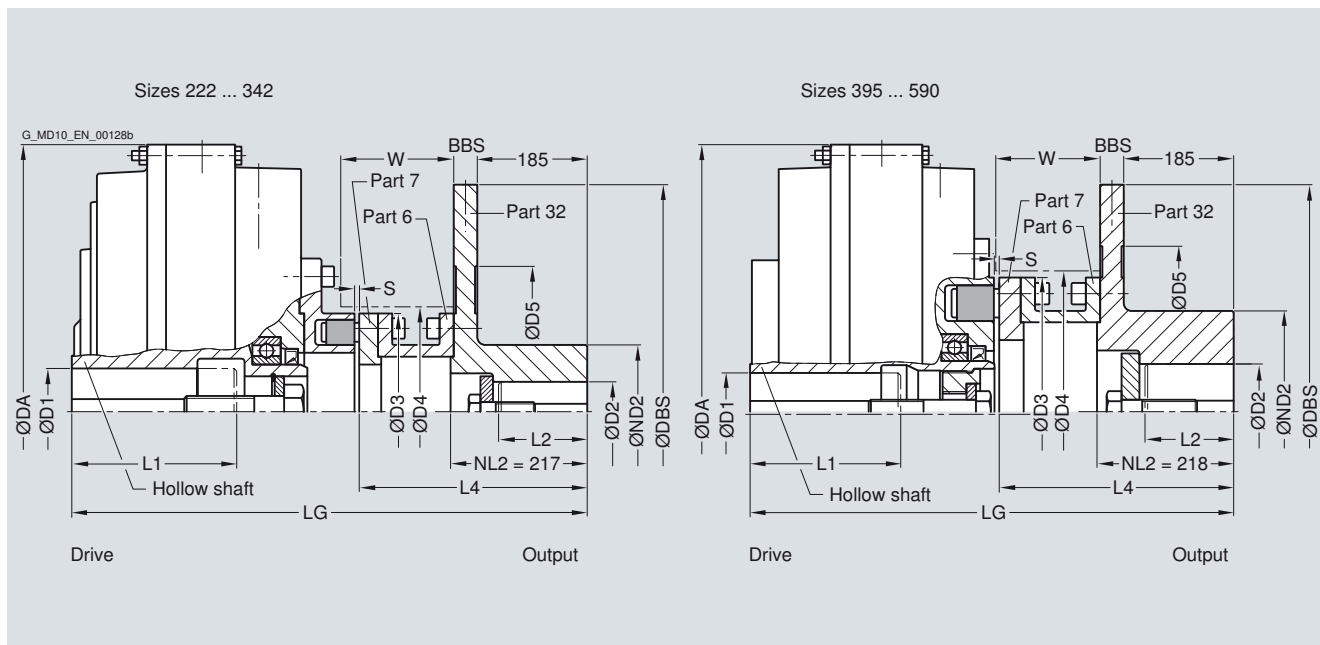
# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Type FADS SB

#### Selection and ordering data

Type with attached N-EUPEX coupling and brake drum for stopping brakes.



Size	Maximum speed $n_{Kmax}$ rpm	Dimensions in mm FLUDEX coupling			N-EUPEX coupling			Part 32 <sup>1)</sup>			Space dimensions			Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight <i>m</i> kg
		D1 Keyway to DIN 6885 min. max.	L1 max.	DA LG	D3 N-EUPEX size	S L4	D2 max.	ND2 DBS	BBS D5	D4 W	D4 W	D4 W			
<b>222</b>	3000	38 >38 <sup>2)</sup>	80 42 <sup>2)</sup>	263 494	110	5...6 352	42	100 315	30 165	115 149	Available at short term			35	
<b>297</b>	2600	38 >38 >55 <sup>2)</sup>	80 55 60 <sup>2)</sup> 110	340 537 125	125	5...6 352	60	120 355	30 205	130 154	Available at short term			68	
<b>342</b>	2300	55 >55 <sup>2)</sup>	110 60 <sup>2)</sup> 120	400 570 140	140	5...6 352	60	120 400	30 250	145 155	Available at short term			83	
<b>395</b>	2100	65	140	448 602	225	6...7 391.5	80	150 450	30 300	230 182	Available at short term			102	
<b>450</b>	1700	75 >75	140 80 170	512 631.5 250	250	8...9 390.5	90	160 560	30 370	260 182	Available at short term			141	
<b>516</b>	1500	55 >55	140 90 170	584 706.5 315	315	8...9 430.5	100	160 630	30 440	325 222	Available at short term			199	
<b>590</b>	1500	75 >75 >95	140 95 170 210	662 741.5 315	315	8...9 430.5	100	160 630	30 440	325 222	Available at short term			224	

ØD2: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

1  
9

#### Ordering example:

Motor 90 kW,  $P_{eff} = 75$  kW,  $n_1 = 1470$  rpm

Selection:

FLUDEX FADS SB coupling size 450,  
Hollow shaft: Bore ØD1 = 75H7 mm with keyway to DIN 6885/1  
and retaining screw,

Part 32: Bore ØD2 = 80H7 mm with keyway to DIN 6885/1 and  
retaining screw,

with preservative suitable for storage indoors,  
shaft end insertion depth L2 = 90 mm.

Delivery without oil filling, no oil filling quantity specification.

Product code:

with preservation 24 months:

**2LC0900-4AD99-0AA0-Z**

**L1H+M1J+B28+Y29**

plain text Y29: **L2 = 90 mm**

L2 denotes the shaft insertion depth.

In the case of shaft ends deviating from DIN 748 the insertion  
depth must be specified in plain text with **Y29**.

<sup>1)</sup> Hub reduction possible; specify product code with **"-Z"** and order code **"Y99"** with dimension NL2 in plain text..

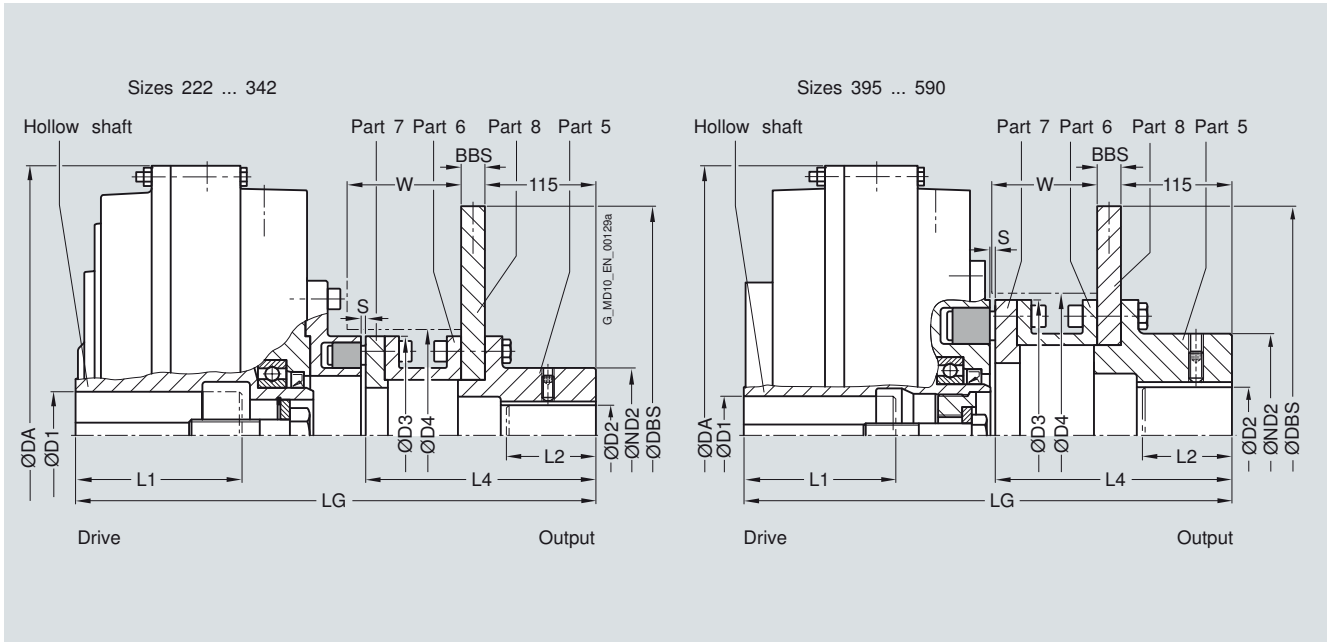
<sup>2)</sup> Variant with shallow keyway to DIN 6885/3.

# FLENDER Standard Couplings Fluid Couplings – FLUDEX Series

Type FADS HB

## Selection and ordering data

Type with attached N-EUPEX coupling and brake disk for blocking brakes.



Size	Maximum speed $n_{kmax}$ rpm	Dimensions in mm										Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight <i>m</i> kg			
		FLUDEX coupling					N-EUPEX coupling			Part 5/8 <sup>1)</sup>				Space dimensions		
		D1	L1	DA	LG	D3	S	L4	D2	ND2	DBS	BBS	D4	W		
		Keyway to DIN 6885 min. max.	max.			N-EUPEX size			max.							
<b>222</b>	3600	38 >38 <sup>2)</sup>	80 42 <sup>2)</sup>	263	366.5	110	5...6	224.5	42	70	250	12.5	115	109	<b>2LC0900-0AE9</b> ■ -0AA0 L..+M..	22
<b>297</b>	3600	38 >38 <sup>2)</sup>	80 55 60 <sup>2)</sup>	340	409.5	125	5...6	224.5	60	85	250	12.5	130	114	<b>2LC0900-1AE9</b> ■ -0AA0 L..+M..	33
<b>342</b>	3600	55 >55 <sup>2)</sup>	110 60 <sup>2)</sup>	400	442.5	140	5...6	224.5	60	90	250	12.5	145	115	<b>2LC0900-2AE9</b> ■ -0AA0 L..+M..	45
<b>395</b>	3000	65	140	448	478	225	6...7	267.5	80	150	355	16	230	142	<b>2LC0900-3AE9</b> ■ -0AA0 L..+M..	80
<b>450</b>	3000	75 >75	140 80	512	546.5	250	8...9	306.5	90	160	355	16	260	182	<b>2LC0900-4AE9</b> ■ -0AA0 L..+M..	101
<b>516</b>	2300	55 >55	140 90	584	566.5	315	8...9	290.5	100	160	450	16	325	166	<b>2LC0900-5AE9</b> ■ -0AA0 L..+M..	154
<b>590</b>	2000	75 >75 >95	140 95 170	662	601.5	315	8...9	290.5	100	160	450	16	325	166	<b>2LC0900-6AE9</b> ■ -0AA0 L..+M..	179

ØD2: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without -Z)

1  
9

L2 denotes the shaft insertion depth.  
In the case of shaft ends deviating from DIN 748 the insertion depth must be specified in plain text with **Y29**.

For ordering example, see page 13/25.

1) Hub reduction possible; specify product code with "-Z" and order code "Y99" in plain text.

2) Variant with shallow keyway to DIN 6885/3.

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Oil filling quantities for FA series

#### Selection and ordering data

This assignment is valid for a maximum starting torque  $T_{\max} = 2.0 \times T_{\text{eff}}$  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  $T_{\max} \neq 2.0 \times T_{\text{eff}}$ , changed filling quantities must be observed!

$P_{\text{eff}}$ kW	Speed in rpm										Size
	600	740	890	980	1180	1470	1770	2300	2950	3550	
	Oil filling quantity in l										
0.55	4.3	1.5	1.4	1.3	1.1						
0.75	4.7	1.65	1.5	1.4	1.2						
1.1	5.1	4.4	1.65	1.6	1.4	1.1					
2.2	6.2	5.2	4.5	4.2	1.6	1.4	1.2				
3.0	9.5	5.6	4.9	4.6	1.65	1.5	1.3	1.0			
4.0	10.2	6.1	5.3	4.9	4.3	1.6	1.4	1.1			
5.5	11.0	9.4	5.7	5.3	4.6	1.65	1.5	1.2	1.0		
7.5	12.0	10.2	6.2	5.8	5.0	4.3	1.6	1.3	1.1		
11	13.4	11.2	9.7	6.4	5.5	4.7	4.1	1.5	1.2	1.0	222
15	24.8	12.2	10.5	9.8	6.0	5.0	4.4	1.6	1.3	1.1	
18	25.9	12.9	11.0	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	4.0	1.4	1.25	
30	29.7	25.2	12.7	11.7	10.1	6.0	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	4.0	3.5	342
55		29.5	25.5	23.7	11.9	10.0	8.8	5.0	4.2	3.7	
75			27.6	25.7	22.3	10.8	9.4	5.4	4.5	3.9	
90			29.0	26.9	23.4	11.3	9.8	8.1	4.7	4.1	
110				28.3	24.5	12.0	10.4	8.6	4.9	4.3	
132				29.7	25.7	21.9	10.8	8.9	7.6	4.5	
160					27.0	22.9	20.0	9.3	7.8		450
180					27.8	23.5	20.6	10.0	8.0		
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				590
400							26.4				

Ordering example type FAR from page 13/17:

Motor 45 kW,  $P_{\text{eff}} = 37$  kW,  $n_1 = 1470$  rpm, maximum output torque:  $T_{\max} = 2.0 \times T_{\text{eff}}$ .

Selection:

FLUDEX FAR coupling size 395,

Hollow shaft: Bore  $\varnothing D1 = 60H7$  mm with keyway to DIN 6885/1 and retaining screw.

Specification of oil filling quantity: 7.6 l (see under oil filling quantities for the FA series in this catalog section).

Product code:

- With pulley 5xSPB224:  
**2LC0900-3AF90-0AA0-Z**  
**L1E+Y90**  
plain text to Y90: **7.6 l**
- With pulley 7xSPB236:  
**2LC0900-3AF91-0AA0-Z**  
**L1E+Y90**  
plain text to Y90: **7.6 l**
- With 160 °C fuse:  
**2LC0900-3AF90-0AA0-Z**  
**L1E+Y90+F08**  
plain text to Y90: **7.6 l**

Ordering example type FADB from page 13/21:

Motor 30 kW,  $P_{\text{eff}} = 22$  kW,  $n_1 = 1470$  rpm

Selection:

FLUDEX FADB coupling size 342, standard type,

Hollow shaft: Bore  $\varnothing D1 = 55H7$  mm with keyway to DIN 6885/1 and retaining screw,

Part 13: Bore  $\varnothing D2 = 50H7$  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.

Product code:

- Part 13: Standard brake drum  
**2LC0900-2AC99-0AA0-Z**  
**L1D+M1C+Y29**  
plain text to Y29: **90 mm**
- Part 13: Long brake drum  
**2LC0900-2AC99-0BA0-Z**  
**L1D+M1C+Y29**  
plain text to Y29: **90 mm**

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Oil filling quantities for FA series

$P_{\text{eff}}$ kW	Speed in rpm										Size	
	600	740	890	980	1180	1470	1770	2300	2950	3550		
0.55	3.2	2.8										
0.75	3.5	3.0	2.6									
1.1	3.9	3.3	2.9	2.7								
2.2	7.3	4.0	3.4	3.2	2.8							
3.0	7.9	6.8	3.7	3.4	3.0	2.5						
4.0	8.5	7.3	4.0	3.7	3.2	2.7						
5.5	9.4	7.9	6.8	4.1	3.5	2.9	2.6					
7.5	17.0	8.5	7.4	6.9	3.8	3.2	2.8	2.4				
11	18.7	16.0	8.1	7.6	6.6	3.5	3.0	2.5				
15	20.3	17.3	8.9	8.2	7.1	3.8	3.3	2.7				
18	21.4	18.0	15.7	8.6	7.4	4.0	3.4	2.8	2.4			
22		19.0	16.5	15.4	7.8	6.6	3.6	3.0	2.5			
30		20.6	17.8	16.6	8.5	7.2	6.3	3.2	2.7	2.4		297
37			18.8	17.5	15.2	7.6	6.6	3.4	2.8	2.5		
45			19.8	18.4	16.0	7.9	6.9	3.6	2.9	2.6		
55			21.0	19.3	16.8	8.4	7.3	6.0	3.1	2.7		
75				21.1	18.1	15.4	7.9	6.5	5.3	2.9		
90					19.0	16.1	14.1	6.7	5.6	3.0		
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				

Ordering example type FADS HB from page 13/23:

Motor 160 kW,  $P_{\text{eff}} = 132$  kW,  $n_1 = 2950$  rpm

Selection:

FLUDEX FADS HB coupling size 395,

Hollow shaft: Bore  $\text{Ø}D1 = 65\text{H}7$  mm with keyway to DIN 6885/1 and retaining screw,

Part 5: Bore  $\text{Ø}D2 = 80\text{H}7$  mm with keyway to DIN 6885/1 and set screw,

Fitting position: horizontal/vertical, motor overhead (MO)/motor underneath (MU),

shaft insertion depth  $L2 = 80$  mm.

Delivery without oil filling, no oil filling quantity specification.

Product code:

- Horizontal version:  
**2LC0900-3AE99-0AA0-Z**  
**L1F+M1J+Y29**  
plain text to Y29: **80 mm**
- Vertical version MO:  
**2LC0900-3AE99-0AA0-Z**  
**L1F+M1J+F13+Y29**  
plain text to Y29: **80 mm**
- Vertical version MU:  
**2LC0900-3AE99-0AA0-Z**  
**L1F+M1J+F14+Y29**  
plain text to Y29: **80 mm**

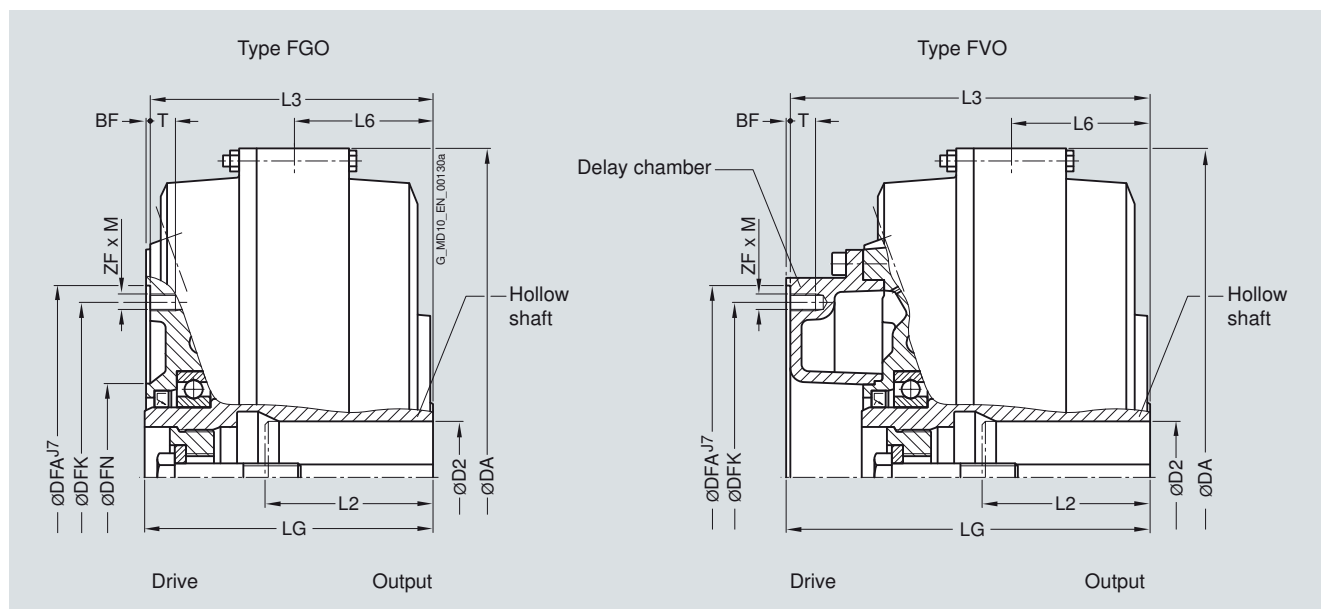
# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Types FGO/FVO

#### Selection and ordering data

Basic coupling of the FG series and delay chamber coupling of the FV series with connecting flange.



Size	Type	Maximum speed $n_{Kmax}$ rpm	Dimensions in mm		Flange connection dimensions										Tightening torque for screws in thread ZF x M $T_A$ Nm	Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight m kg
			Installation dimensions		D2	L2	DA	LG	L3	L6	DFN	DFA	BF	DFK			
370	FGO	3600	75	140	420	185	182	84	125	220	3	200	8 x M10	15	31	2LC0900-8CE09-0AA0 M..	35
	FVO					228	225									2LC0900-8ED09-0AA0 M..	38
425	FGO	3000	80	140	470	205	202	99	134	274	3	250	8 x M12	18	54	2LC0901-0CE09-0AA0 M..	46
	FVO					260	257									2LC0901-0ED09-0AA0 M..	50
490	FGO	2600	55	110	555	236	232	105	138	314	4	282	8 x M16	24	135	2LC0901-1CE09-0AA0 M..	77
	FVO		>55 >75	75 100	140 170		301	297								2LC0901-1ED09-0AA0 M..	83
565	FGO	2300	110	170	630	254	250	123	170	344	4	312	8 x M16	24	135	2LC0901-2CE09-0AA0 M..	98
	FVO					337	333									2LC0901-2ED09-0AA0 M..	106
655	FGO	2000	130	210	736	301	296	145	180	430	5	390	8 x M20	25	260	2LC0901-3CE09-0AA0 M..	144
	FVO					389	384									2LC0901-3ED09-0AA0 M..	156
755	FGO	1800	150	240	840	346	341	176	226	480	5	440	10 x M20	25	260	2LC0901-4CE09-0AA0 M..	210
	FVO					445	440									2LC0901-4ED09-0AA0 M..	223
887	FGO	1500	150	275	990	396	391	217	244	520	5	480	10 x M20	25	260	2LC0901-5CE09-0AA0 M..	380
	FVO					498	493									2LC0901-5ED09-0AA0 M..	404

For ordering example, see page 13/30.

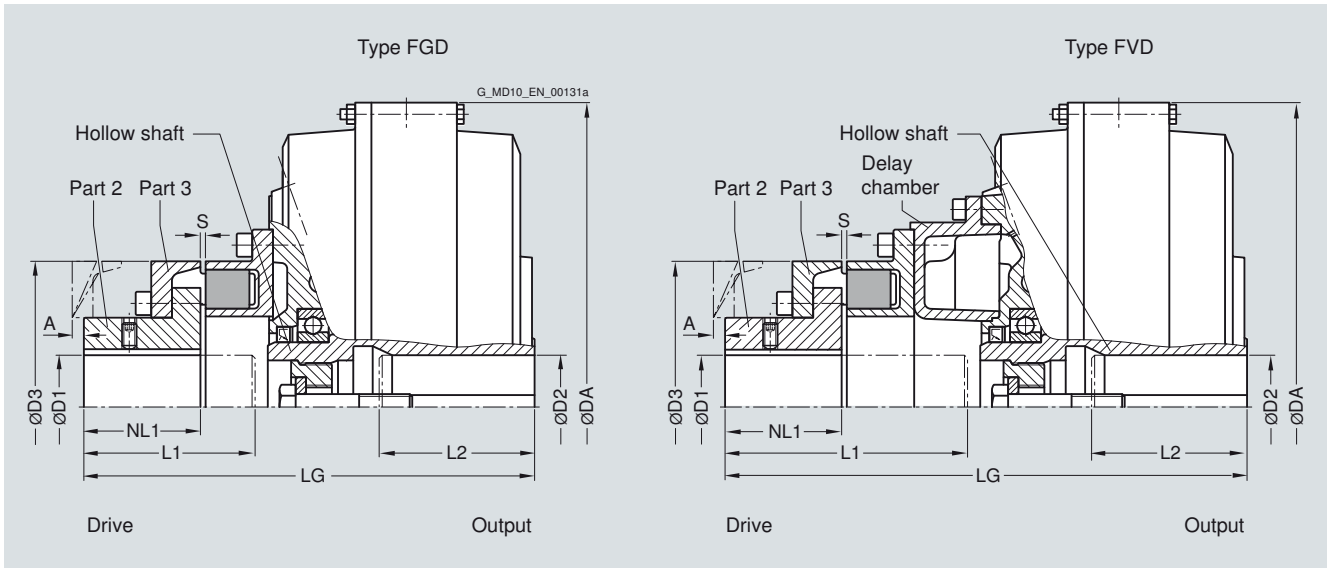


# FLENDER Standard Couplings Fluid Couplings – FLUDEX Series

Types FGD/FVD

## Selection and ordering data

Type with attached N-EUPEX D coupling.  
Enables change of flexible elements without axial displacement of the shafts if the space "A" is provided.



Size	Type	Maximum speed $n_{kmax}$ rpm	Dimensions in mm FLUDEX coupling				N-EUPEX D coupling					Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight m	
			D2	L2	DA	LG	D1	L1	NL1	D3	S			A
370	FGD	3600	75	140	420	298	65	110	70	180	2...6	10	2LC0900-8CA ■ 9-0AA0 L..+M..	46
	FVD												341	150
425	FGD	3000	80	140	470	348	85	140	90	225	2...6	9	2LC0901-0CA ■ 9-0AA0 L..+M..	66
	FVD												403	195
490	FGD	2600	55	110	555	397	95	158	100	250	3...8	11	2LC0901-1CA ■ 9-0AA0 L..+M..	106
	FVD												>55 >75	75 140
565	FGD	2300	110	170	630	430	105	170	110	280	3...8	5	2LC0901-2CA ■ 9-0AA0 L..+M..	134
	FVD												513	255
655	FGD	2000	130	210	736	515	140	210	140	350	3...8	0	2LC0901-3CA ■ 9-0AA0 L..+M..	214
	FVD												603	295
755	FGD	1800	150	240	840	584	150	230	160	400	3...8	0	2LC0901-4CA ■ 9-0AA0 L..+M..	302
	FVD												683	330
887	FGD	1500	150	275	990	665	160	260	180	440	5...10	0	2LC0901-5CA ■ 9-0AA0 L..+M..	502
	FVD												767	365

ØD1: Without finished bore from size 655 with small hub for:

- Size 655 ØD1max = 110 mm
- Size 755 ØD1max = 120 mm
- Size 887 ØD1max = 130 mm – Without order code L..

Without finished bore from size 655 with large hub for:

- Size 655 ØD1 = 88 ... 140
- Size 755 ØD1 = 98 ... 150
- Size 887 ØD1 = 118 ... 160 – Without order code L..

With finished bore – With order codes for diameter and tolerance (product code without -Z)

1  
2  
9

For ordering example, see page 13/31.

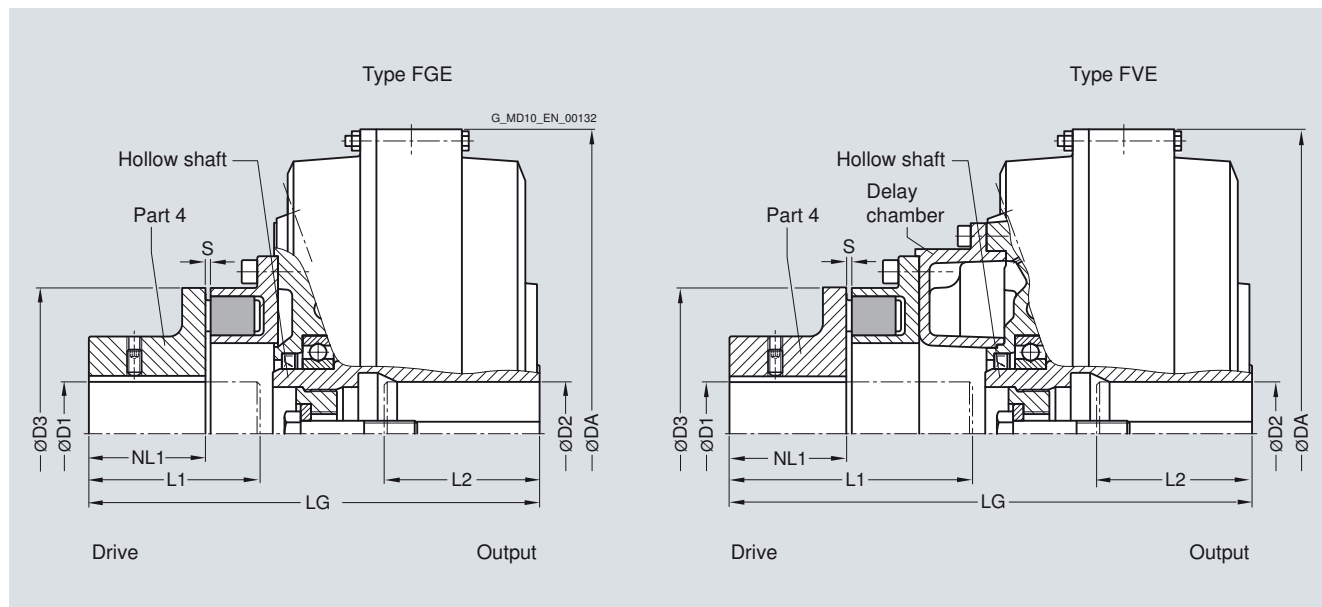
# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Types FGE/FVE

#### Selection and ordering data

Type with attached N-EUPEX E coupling. Enables larger bores on the drive side.



Size	Type	Maximum speed $n_{Kmax}$ rpm	Dimensions in mm FLUDEX coupling				N-EUPEX E coupling					Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight <i>m</i> kg
			D2	L2	DA	LG	D1	L1	NL1	D3	S		
370	FGE	3600	75	140	420	298	75	110	70	180	2...6	2LC0900-8CB ■ 9-0AA0 L...M..	45
	FVE					341							150
425	FGE	3000	80	140	470	348	90	140	90	225	2...6	2LC0901-0CB ■ 9-0AA0 L...M..	63
	FVE					403							195
490	FGE	2600	55	110	555	397	100	158	100	250	3...8	2LC0901-1CB ■ 9-0AA0 L...M..	104
	FVE					>55 >75							75 100
565	FGE	2300	110	170	630	430	110	170	110	280	3...8	2LC0901-2CB ■ 9-0AA0 L...M..	138
	FVE					513							255

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

1  
9

#### Ordering example:

Motor 45 kW,  $P_{eff} = 37$  kW,  $n_1 = 1470$  rpm

#### Selection:

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 Perbunan.

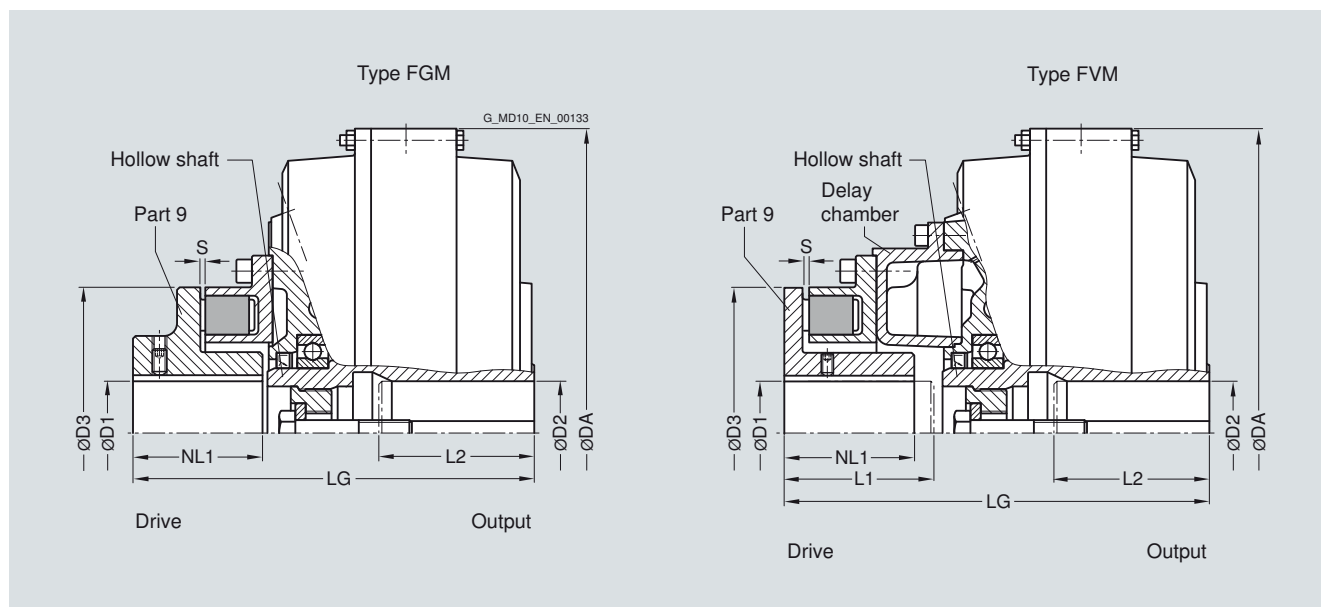
Delivery without oil filling, no oil filling quantity specification.

#### Product code:

- With 110 °C thermal switch:  
**2LC0900-8EB99-0AA0-Z  
L1E+M1E+F03**
- With 125 °C EOC transmitter:  
**2LC0900-8EB99-0AA0-Z  
L1E+M1E+F04**

### Selection and ordering data

Type with attached N-EUPEX M coupling. Enables a short fitting length.



Size	Type	Maximum speed $n_{Kmax}$ rpm	Dimensions in mm FLUDEX coupling				N-EUPEX M coupling					Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight <i>m</i> kg
			D2	L2	DA	LG	D1	L1	NL1	D3	S		
370	FGM	3600	75	140	420	274	70	80	80	180	2...6	2LC0900-8CD ■ 9-0AA0 L...M..	48
	FVM					288		100	85				
425	FGM	3000	80	140	470	310	85	100	100	225	2...6	2LC0901-0CD ■ 9-0AA0 L...M..	67
	FVM					327		120	100				
490	FGM	2600	55	110	555	350	90	105	105	250	3...8	2LC0901-1CD ■ 9-0AA0 L...M..	105
	FVM					>55 >75		75 100	140 170				
565	FGM	2300	110	170	630	380	100	120	120	280	3...8	2LC0901-2CD ■ 9-0AA0 L...M..	134
	FVM					425		165	130				

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without -Z)

1  
9

#### Ordering example:

Motor 45 kW,  $P_{eff} = 37$  kW,  $n_1 = 1470$  rpm

#### Selection:

FLUDEX FGM coupling size 370,

Hollow shaft: Bore ØD2 = 60H7 mm with keyway (for number of keyways, see “Special types”) 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.

#### Product code:

- With one keyway:  
**2LC0900-8CD99-0AA0  
L1E+M1E**
- With two keyways set 180° apart:  
**2LC0900-8CD99-0AA0-Z  
L1E+M1E+L46**
- With two keyways set 120° apart:  
**2LC0900-8CD99-0AA0-Z  
L1E+M1E+L47**

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Oil filling quantities for FG/FV series

#### Selection and ordering data

This assignment is valid for a maximum starting torque  $T_{\max} = 2.0 \times T_{\text{eff}}$  (FG series) or  $T_{\max} = 1.5 \times T_{\text{eff}}$  (FV series), 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  $T_{\max} \neq 2.0 \times T_{\text{eff}}$  or  $T_{\max} \neq 1.5 \times T_{\text{eff}}$ , changed filling quantities must be observed!

$P_{\text{eff}}$	Speed in rpm																				Size
	600	740	890	980	1180	1470	1770	2300	2950	3550											
kW	Series																				
	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	
	Oil filling quantity in l																				
1.1		5.3																			
2.2	6.4	6.7		5.5																	
3.0	7.0	7.4	5.9	6.1		5.0															
4.0	7.2	8.0	6.4	6.6		5.6		5.0													
5.5	13.0	13.8	6.9	7.4	6.0	6.2		5.6													
7.5	14.4	15.2	7.2	8.0	6.5	6.8		6.0	6.2		5.1										
11	15.9	17.4	13.3	14.1	7.2	7.7	6.7	7.1	5.7	5.9											
15	17.0	18.5	14.7	15.6	12.4	13.0	7.2	7.7	6.2	6.5		5.2									
18	17.0	31.6	15.4	16.6	13.1	13.8	12.0	12.5	6.5	6.9		5.5									
22	31.1	33.2	16.2	17.7	14.0	14.8	12.7	13.4	6.9	7.3	5.7	5.9		4.8							
30	35.9	36.5	17.0	18.5	15.2	16.3	14.1	14.9	11.8	12.3	6.3	6.5	5.3	5.5							
37	37.9	39.9	29.9	32.4	16.1	17.5	14.9	15.9	12.6	13.3	6.6	7.0	5.7	5.9		4.2					
45	39.7	44.0	32.3	34.0	17.0	18.5	15.7	17.0	13.4	14.1	7.0	7.5	6.0	6.2		4.6					
55	40.0	44.0	35.5	36.2	28.4	31.0	16.6	18.1	14.3	15.1	11.6	12.0	6.4	6.7	5.0	5.1					
75	70.5	75.8	38.7	41.4	31.7	33.6	28.5	31.2	15.5	16.7	12.7	13.5	6.9	7.4	5.5	5.7	4.3	4.2			
90	74.7	80.0	40.0	44.0	34.4	35.4	30.4	32.7	16.3	17.7	13.5	14.3	11.4	11.6	5.9	6.1	4.6	4.5			
110	81.0	84.3	40.0	44.0	37.0	38.2	33.0	34.5	27.3	29.9	14.4	15.2	12.1	12.6	6.2	6.4	4.9	5.0	4.0	4.1	370
132	88.2	89.2	69.3	74.6	38.8	41.6	36.0	36.7	28.6	31.3	15.1	16.2	12.8	13.5	6.5	6.9	5.2	5.4	4.4	4.2	
160	93.5	96.3	73.3	78.7	40.0	44.0	37.8	39.8	30.6	32.9	15.9	17.3	13.6	14.4	10.6	10.4	5.5	5.7	4.7	4.6	
180	96.4	101.8	76.5	81.3	65.4	44.0	38.9	42.1	32.1	33.9	26.2	17.9	14.1	14.9	11.0	11.0	5.8	6.0	4.9	4.9	
200	98.0	107.0	79.8	83.6	67.0	72.1	39.9	44.0	33.7	34.9	26.9	29.4	14.6	15.4	11.4	11.7	6.0	6.2	5.0	5.1	
250	98.0	107.0	88.7	89.5	70.9	76.3	40.0	44.0	36.8	37.9	28.4	31.1	15.4	16.7	12.2	12.8			5.4	5.5	
315		84.7	98.5	76.6	81.5	69.8	75.6	39.0	42.1	30.8	33.0	26.2	28.6	13.1	13.9					490	
350		97.2	103.6	80.0	83.7	71.8	77.7	39.9	44.0	32.2	33.9	26.9	29.5	13.6	14.4						
400		98.0	107.0	85.1	86.9	75.2	80.5	64.5	68.4	34.2	35.3	27.8	30.4							655	
500		98.0	107.0	92.4	94.5	82.5	85.3	68.1	73.8	37.1	38.4	29.7	32.3								
600				96.9	102.9	90.1	90.6	71.5	77.3	38.8	41.8	31.9	33.8								
750				98.0	107.0	95.3	99.6	77.3	81.9	64.0	67.8	35.4	36.2								
900					98.0	107.0	83.7	86.0	67.0	72.7											887
1100							81.1	92.3	70.4	76.2											
1300							95.2	99.3	74.2	79.8											
1600								80.6	84.0												

Ordering example type FGO/FVO from page 13/26:

Motor 132 kW,  $P_{\text{eff}} = 110$  kW,  $n_1 = 1470$  rpm

Selection:

FLUDEX FGO/FGV coupling size 490,

Hollow shaft: Bore  $\varnothing D_2 = 70H7$  mm with keyway to DIN 6885/1 and retaining screw.

Delivery with oil filling: FGO = 14.4 l / FVO = 15.2 l (see under oil filling quantities for FG/FV series in this catalog section).

Product code:

- In type FGO:  
**2LC0901-1CE09-0AA0-Z**  
**L1G+F16+Y90**  
plain text to Y90: **14.4 l**
- In type FGV:  
**2LC0901-1ED09-0AA0-Z**  
**L1G+F16+Y90**  
plain text to Y90: **15.2 l**

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Oil filling quantities for FG/FV series

$P_{\text{eff}}$	Speed in rpm																				Size
	600		740		890		980		1180		1470		1770		2300		2950		3550		
kW	Series																				
	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	
Oil filling quantity in l																					
3.0	8.7	9.1																			
4.0	9.5	9.9		8.1																	
5.5	10.3	11.1	8.7	9.0																	
7.5	10.9	12.0	9.5	9.9			8.3		7.4												
11	19.9	21.4	10.5	11.3	9.1	9.4			8.6												
15	22.0	23.7	10.9	12.0	9.8	10.4	9.1	9.5		7.8											
18	23.2	25.2	19.1	20.5	10.3	11.1	9.6	10.1		8.4											
22	24.3	27.0	20.3	21.9	10.9	11.7	10.1	10.8	8.6	9.0											
30	42.0	45.0	22.4	24.2	18.9	20.1	10.9	11.8	9.5	9.9			7.9								
37	44.4	47.5	23.7	26.0	20.1	21.7	18.5	19.5	10.0	10.7	8.2	8.6			6.7						
45	47.7	50.0	24.9	27.7	21.5	23.1	19.5	21.0	10.5	11.3	8.8	9.2			7.5						
55	52.0	53.0	25.5	28.0	22.8	24.6	20.8	22.5	17.5	18.3	9.3	9.7	7.8	8.1							
75	58.0	59.5	45.6	48.5	24.6	27.4	22.9	24.8	19.3	20.7	10.1	10.8	8.6	9.0			6.5				
90	60.5	65.5	49.1	50.5	25.5	28.9	23.9	26.5	20.4	22.0	10.7	11.4	9.2	9.5	7.2	7.1					
110	61.0	67.0	54.0	54.0	43.2	46.4	25.5	28.0	21.8	23.4	17.7	18.7	9.7	10.2	7.6	7.8					
132			57.0	58.0	45.8	48.7	42.1	45.1	23.0	24.9	18.7	19.9	10.1	10.9	8.1	8.4	6.3	6.1		425	
160			60.0	63.5	49.5	51.0	44.3	47.4	24.0	26.7	19.8	21.4	16.7	16.8	8.6	8.9	6.8	6.6			
180			61.5	67.0	52.3	53.0	46.2	49.0	24.8	27.6	20.6	22.2	17.3	18.0	8.8	9.3	7.0	6.9			
200			62.5	67.0	55.0	55.0	48.1	50.0	25.5	43.7	21.4	23.0	17.9	18.9	9.2	9.6	7.3	7.3			
250					58.5	60.5	53.5	53.5	42.9	46.0	22.8	24.7	19.2	20.6	14.6	14.7	7.8	8.0			
315					61.0	67.0	57.5	58.5	46.2	49.0	24.2	26.8	20.6	22.3	16.1	16.1	8.3	8.7			
350					62.5	67.0	59.0	61.5	48.2	50.0	39.7	42.4	21.4	23.0	16.7	16.8				565	
400							61.0	66.0	51.0	52.0	41.0	44.0	22.2	24.0	17.4	18.1					
500							61.0	67.0	56.0	56.5	43.3	46.5	37.8	40.0	18.7	19.9					
600									59.0	61.0	46.0	49.0	39.5	42.1		21.2					
750											50.5	51.5	41.7	45.0						755	
900											55.5	55.0	43.7	47.0							
1100													46.8	49.5							

Ordering example type FGD from page 13/27:

Motor 350 kW,  $P_{\text{eff}} = 315$  kW,  $n_1 = 1470$  rpm

Selection:

FLUDEX FGD coupling size 655, standard type,  
Hollow shaft: Bore  $\text{Ø}D_2 = 120\text{H}7$  mm with keyway to DIN 6885/1  
and retaining screw,

Part 2: Bore  $\text{Ø}D_1 =$  see ordering data table "Without finished  
bore" and "With finished bore",

keyway to DIN 6885/1 and set screw.

Delivery without oil filling, no oil filling quantity specification.

Product code:

- Without finished bore for  $\text{Ø}D_1 = 110$  mm:  
**2LC0901-3CA19-0AA0**  
**L1S**
- Without finished bore for  $\text{Ø}D_1 = 130$  mm:  
**2LC0901-3CA29-0AA0**  
**L1S**
- With finished bore for  $\text{Ø}D_1 = 140\text{H}7$  mm:  
**2LC0901-3CA99-0AA0**  
**L1S+M1V**

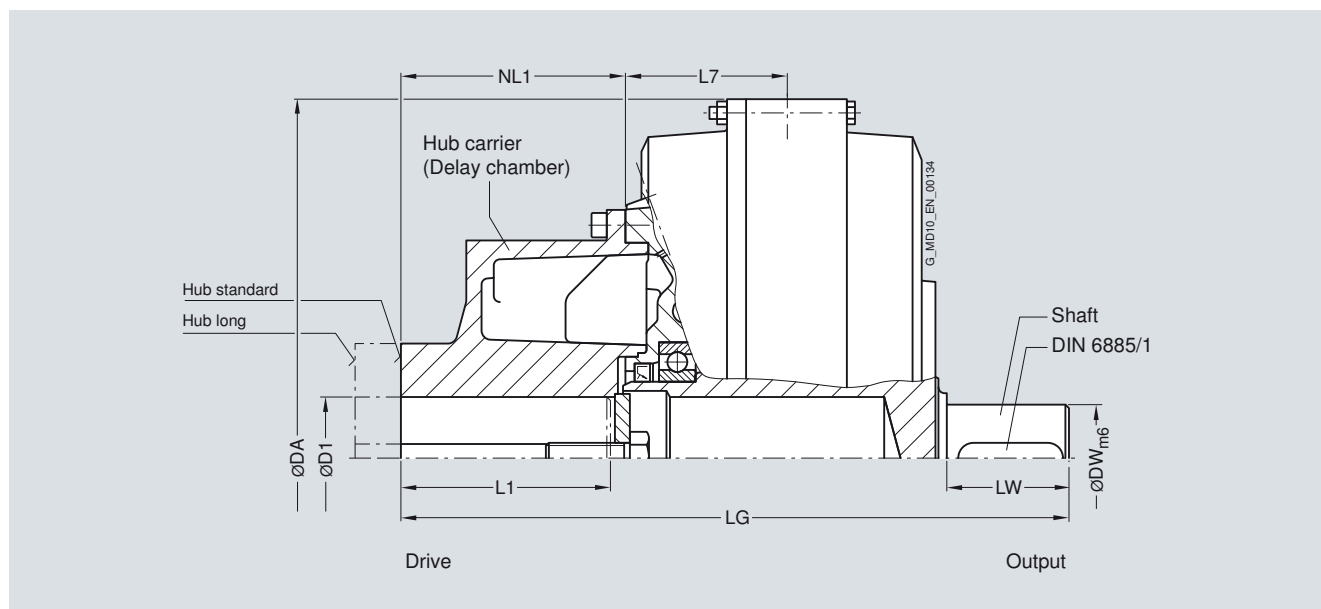
# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Type FNO

#### Selection and ordering data

Type with large delay chamber and connecting shaft.



Size	Maximum speed $n_{Kmax}$ rpm	Hub carrier Hub Standard Long	Dimensions in mm Installation dimensions							Connection dimensions		Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight $m$ kg
			D1 Keyway to DIN 6885 min.	max.	L1 max.	NL1	DA	LG	L7	DW	LW		
370	3600	Standard	38	55	110	115	420	380	101	60	70	2LC0900-8GA ■ 0-1AA0 L..	56
		Long	38	80	140	145	420	410				2LC0900-8GA ■ 0-2AA0 L..	54
425	3000	Standard	42	75	140	147	470	437	106	70	80	2LC0901-0GA ■ 0-1AA0 L..	77
		Long	42	100	170	177	470	467				2LC0901-0GA ■ 0-2AA0 L..	74
490	2600	Standard	48	75	140	148	555	485	131	70	90	2LC0901-1GA ■ 0-1AA0 L..	120
		Long	48	110	170	178	555	515				2LC0901-1GA ■ 0-2AA0 L..	115
565	2300	Standard	65	95	170	178	630	543	131	90	100	2LC0901-2GA ■ 0-1AA0 L..	161
		Long	65	120	210	218	630	583				2LC0901-2GA ■ 0-2AA0 L..	159
655	2000	Standard	65	110	210	218	736	644	156	100	125	2LC0901-3GA ■ 0-1AA0 L..	233
		Long	65	135	250	258	736	684				2LC0901-3GA ■ 0-2AA0 L..	232
755	1800	Standard	65	120	210	219	840	705	170	110	140	2LC0901-4GA ■ 0-1AA0 L..	309
		Long	65	150	250	259	840	745				2LC0901-4GA ■ 0-2AA0 L..	307
887	1500	Standard	65	150	250	251	990	835	187	120	178	2LC0901-5GA ■ 0-1AA0 L..	541
		Long	65	170	300	301	990	885				2LC0901-5GA ■ 0-2AA0 L..	544

$\varnothing D1$ : Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without -Z)

1  
9

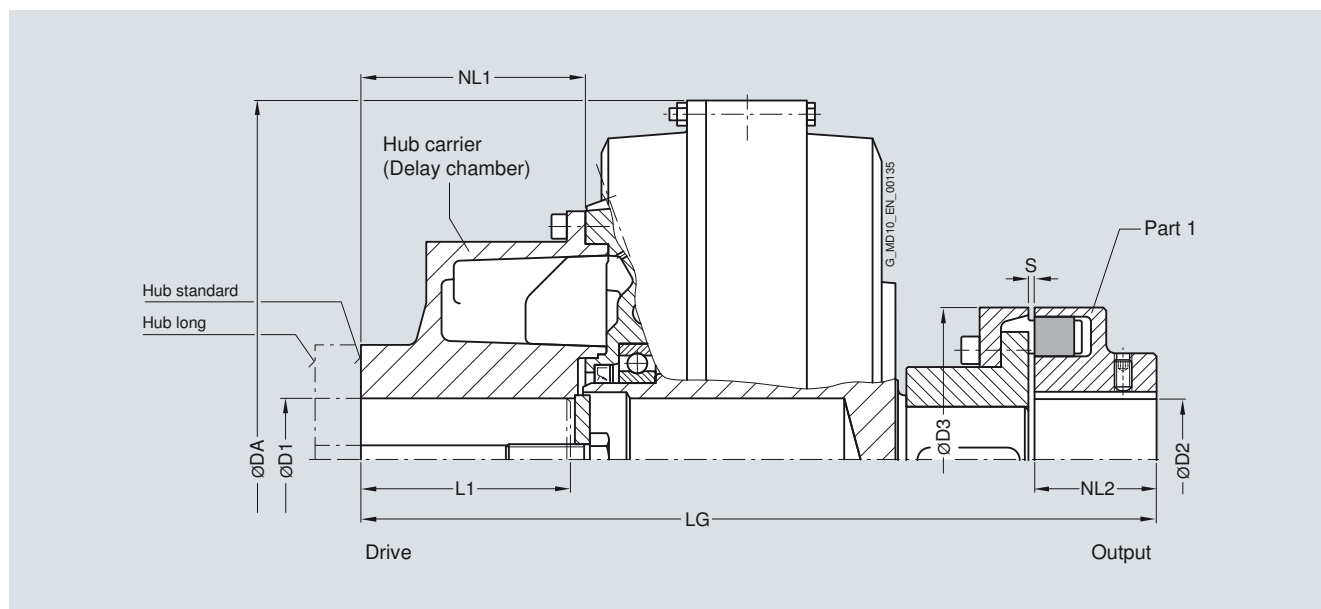
For centroidal distance  $Y$  and weight  $F_y$ , see page 13/47.

For ordering example, see page 13/39.



### Selection and ordering data

Type with large delay chamber and attached N-EUPEX A coupling. Enables a short fitting length.



Size	Maximum speed $n_{Kmax}$ rpm	Hub carrier Hub	Dimensions in mm FLUDEX coupling					N-EUPEX A coupling					Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight <i>m</i> kg
			D1 Keyway to DIN 6885 min.	L1 max.	NL1	DA	LG	D2 max.	NL2	D3 N-EUPEX size	S			
370	3600	Standard	38	55	110	115	420	454	75	70	180	3...6	<b>2LC0900-8GB</b> ■ ■ ■ <b>-1AA0</b> L...M..	69
		Long	38	80	140	145	420	484					<b>2LC0900-8GB</b> ■ ■ ■ <b>-2AA0</b> L...M..	67
425	3000	Standard	42	75	140	147	470	521	85	80	200	3...6	<b>2LC0901-0GB</b> ■ ■ ■ <b>-1AA0</b> L...M..	99
		Long	42	100	170	177	470	551					<b>2LC0901-0GB</b> ■ ■ ■ <b>-2AA0</b> L...M..	96
490	2600	Standard	48	75	140	148	555	579	90	90	225	3...6	<b>2LC0901-1GB</b> ■ ■ ■ <b>-1AA0</b> L...M..	149
		Long	48	110	170	178	555	609					<b>2LC0901-1GB</b> ■ ■ ■ <b>-2AA0</b> L...M..	144
565	2300	Standard	65	95	170	178	630	648	100	100	250	3...8	<b>2LC0901-2GB</b> ■ ■ ■ <b>-1AA0</b> L...M..	200
		Long	65	120	210	218	630	688					<b>2LC0901-2GB</b> ■ ■ ■ <b>-2AA0</b> L...M..	199
655	2000	Standard	65	110	210	218	736	774	120	125	315	3...8	<b>2LC0901-3GB</b> ■ ■ ■ <b>-1AA0</b> L...M..	308
		Long	65	135	250	258	736	814					<b>2LC0901-3GB</b> ■ ■ ■ <b>-2AA0</b> L...M..	307
755	1800	Standard	65	120	210	219	840	850	140	140	350	3...8	<b>2LC0901-4GB</b> ■ ■ ■ <b>-1AA0</b> L...M..	426
		Long	65	150	250	259	840	890					<b>2LC0901-4GB</b> ■ ■ ■ <b>-2AA0</b> L...M..	424
887	1500	Standard	65	150	250	251	990	1023	160	180	440	5...10	<b>2LC0901-5GB</b> ■ ■ ■ <b>-1AA0</b> L...M..	693
		Long	65	170	300	301	990	1073					<b>2LC0901-5GB</b> ■ ■ ■ <b>-2AA0</b> L...M..	697

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

1  
9

ØD2: Without finished bore from size 655 with small hub for:

Size 655 ØD2max = 100 mm, size 755 ØD2max = 110 mm, size 887 ØD2max = 130 mm – Without order codes

Without finished bore from size 655 with large hub for:

Size 655 ØD2 = 88 ... 120, size 755 ØD2 = 88 ... 140, size 887 ØD2 = 118 ... 160 – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

1  
2  
9

For centroidal distance  $Y$  and weight  $F_y$ , see page 13/47.

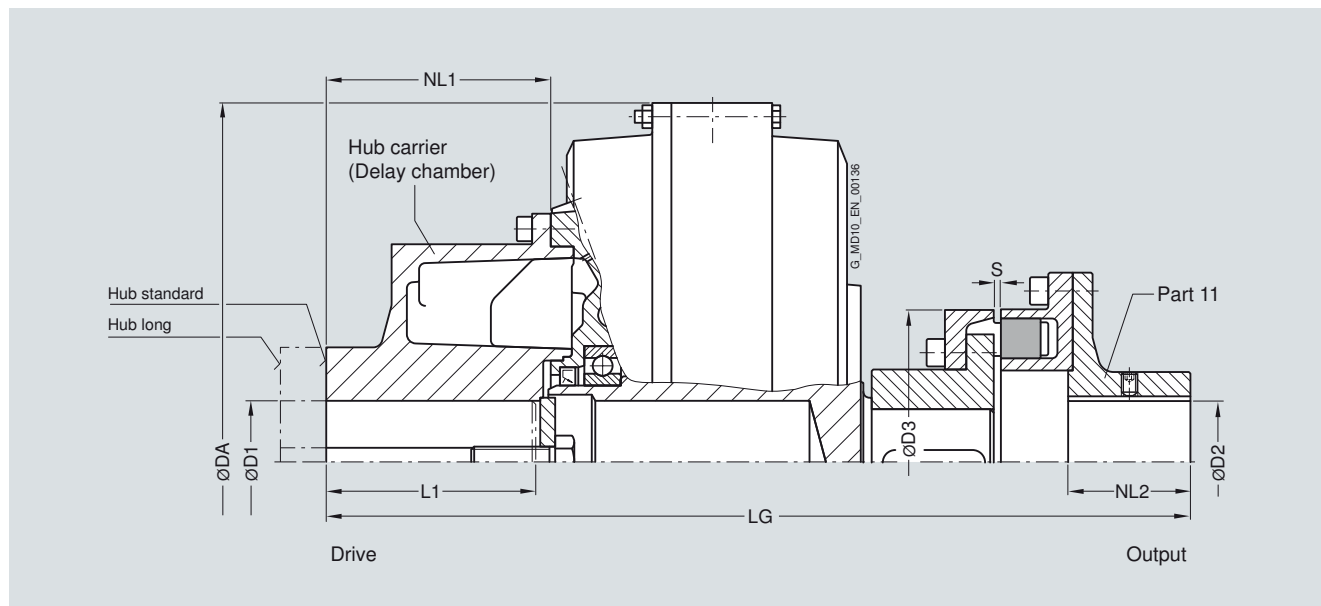
# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Type FND

#### Selection and ordering data

Type with large delay chamber and attached N-EUPEX D coupling.  
Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



Size	Maximum speed $n_{kmax}$	Hub carrier	Dimensions in mm FLUDEX coupling					N-EUPEX D coupling					Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight $m$	
			D1	L1	NL1	DA	LG	D2	NL2	D3	S				
	rpm	Hub													kg
370	3600	Standard	38	55	110	115	420	494	70	70	180	4...6	2LC0900-8GC ■ ■ -1AA0 L...M..	74	
		Long	38	80	140	145	420	524					2LC0900-8GC ■ ■ -2AA0 L...M..	72	
425	3000	Standard	42	75	140	147	470	566	80	80	200	4...6	2LC0901-0GC ■ ■ -1AA0 L...M..	101	
		Long	42	100	170	177	470	596					2LC0901-0GC ■ ■ -2AA L...M..0	99	
490	2600	Standard	48	75	140	148	555	629	90	90	225	4...6	2LC0901-1GC ■ ■ -1AA0 L...M..	153	
		Long	48	110	170	178	555	659					2LC0901-1GC ■ ■ -2AA0 L...M..	149	
565	2300	Standard	65	95	170	178	630	706	100	100	250	5...8	2LC0901-2GC ■ ■ -1AA0 L...M..	207	
		Long	65	120	210	218	630	746					2LC0901-2GC ■ ■ -2AA0 L...M..	206	
655	2000	Standard	65	110	210	218	736	842	110	125	315	5...8	2LC0901-3GC ■ ■ -1AA0 L...M..	315	
		Long	65	135	250	258	736	882					2LC0901-3GC ■ ■ -2AA0 L...M..	314	
755	1800	Standard	65	120	210	219	840	921	120	140	350	5...8	2LC0901-4GC ■ ■ -1AA0 L...M..	433	
		Long	65	150	250	259	840	961					2LC0901-4GC ■ ■ -2AA0 L...M..	431	
887	1500	Standard	65	150	250	251	990	1104	130	180	440	5...10	2LC0901-5GC ■ ■ -1AA0 L...M..	719	
		Long	65	170	300	301	990	1154					2LC0901-5GC ■ ■ -2AA0 L...M..	723	

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without -Z)

1

9

ØD2: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (product code without -Z)

1

9

For centroidal distance  $Y$  and weight  $F_y$ , see page 13/47.

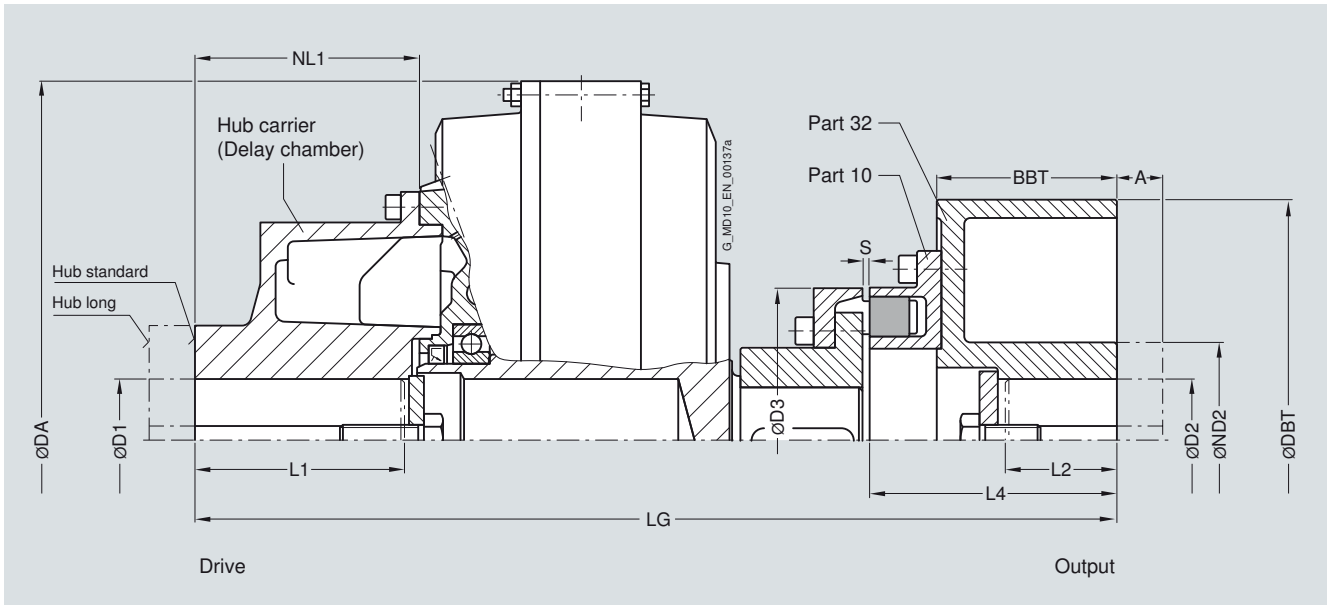
For ordering example, see page 13/39.

# FLENDER Standard Couplings Fluid Couplings – FLUDEX Series

Type FNDB

## Selection and ordering data

Type with large delay chamber and attached N-EUPEX coupling and brake drum.  
Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



Size	Maximum speed $n_{kmax}$ rpm	Hub carrier	Dimensions in mm FLUDEX coupling						N-EUPEX coupling			Part 32 – Brake drum					Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight <i>m</i> kg
			D1	L1	NL1	DA	LG	D3	S	L4	D2	ND2	DBT	BBT	A			
370	2400	Hub Standard	38	55	110	115	420	542	180	4...6	157	80	128	315	118	50	2LC0900-8GD L..+M..	98
		Hub Long	38	80	140	145	420	572									2LC0900-8GD L..+M..	97
	1900	Hub Standard	38	55	110	115	420	574			189	90	160	400	150	80	2LC0900-8GD L..+M..	125
		Hub Long	38	80	140	145	420	604									2LC0900-8GD L..+M..	124
425	2400	Hub Standard	42	75	140	147	470	604	200	4...6	162	80	128	315	118	50	2LC0901-0GD L..+M..	126
		Hub Long	42	100	170	177	470	634									2LC0901-0GD L..+M..	125
	1900	Hub Standard	42	75	140	147	470	636			194	90	160	400	150	80	2LC0901-0GD L..+M..	151
		Hub Long	42	100	170	177	470	666									2LC0901-0GD L..+M..	150

ØD1:	Without finished bore – Without order codes	1
	With finished bore – With order codes for diameter and tolerance (product code without <b>-Z</b> )	9
ØD2:	Without finished bore – Without order codes	1
	With finished bore – With order codes for diameter and tolerance (product code without <b>-Z</b> )	9
Part 32:	Small brake drum, without extension A	A
	Small brake drum, with extension A (increase of lengths L4 and LG by the amount A)	B
	Large brake drum, without extension A	C
	Large brake drum, with extension A (increase of lengths L4 and LG by the amount A)	D

L2 denotes the shaft insertion depth.  
In the case of shaft ends deviating from DIN 748 the insertion depth must be specified in plain text and with **Y29**.

**For centroidal distance Y and weight  $F_y$ , see page 13/47.**

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Type FNDB

Size	Maximum speed $n_{Kmax}$	Hub carrier	Dimensions in mm														Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight <i>m</i>
			FLUDEX coupling						N-EUPEX coupling			Part 32 – Brake drum						
	rpm	Hub	D1	L1	NL1	DA	LG	D3	S	L4	D2	ND2	DBT	BBT	A			
			Keyway to DIN 6885	max.	min.	max.		N-EUPEX size			max.							
490	1900	Standard	48	75	140	148	555	689	225	4...6	199	90	160	400	150	80	<b>2LC0901-1GD</b> ■ ■ -1 ■ A0 L..+M..	201
		Long	48	110	170	178	555	719									<b>2LC0901-1GD</b> ■ ■ -2 ■ A0 L..+M..	198
	1500 <sup>1)</sup>	Standard	48	75	140	148	555	729			247	100	175	500	190	110	<b>2LC0901-1GD</b> ■ ■ -1 ■ A0 L..+M..	240
		Long	48	110	170	178	555	759									<b>2LC0901-1GD</b> ■ ■ -2 ■ A0 L..+M..	237
565	1900	Standard	65	95	170	178	630	756	250	5...8	207	100	160	400	150	80	<b>2LC0901-2GD</b> ■ ■ -1 ■ A0 L..+M..	258
		Long	65	120	210	218	630	796									<b>2LC0901-2GD</b> ■ ■ -2 ■ A0 L..+M..	256
	1500 <sup>1)</sup>	Standard	65	95	170	178	630	796			247	110	175	500	190	110	<b>2LC0901-2GD</b> ■ ■ -1 ■ A0 L..+M..	291
		Long	65	120	210	218	630	836									<b>2LC0901-2GD</b> ■ ■ -2 ■ A0 L..+M..	293
655	1500 <sup>1)</sup>	Standard	65	110	210	218	736	907	315	5...8	257	110	175	500	190	110	<b>2LC0901-3GD</b> ■ ■ -1 ■ A0 L..+M..	394
		Long	65	135	250	258	736	947									<b>2LC0901-3GD</b> ■ ■ -2 ■ A0 L..+M..	390
	1500	Standard	65	110	210	218	736	953			303	140	224	630	236	100	<b>2LC0901-3GD</b> ■ ■ -1 ■ A0 L..+M..	449
		Long	65	135	250	258	736	993									<b>2LC0901-3GD</b> ■ ■ -2 ■ A0 L..+M..	445
755	1500	Standard	65	120	210	219	840	1018	350	5...8	307	140	224	630	236	100	<b>2LC0901-4GD</b> ■ ■ -1 ■ A0 L..+M..	569
		Long	65	150	250	259	840	1058									<b>2LC0901-4GD</b> ■ ■ -2 ■ A0 L..+M..	572
887	1300	Standard	65	150	250	251	990	1190	440	5...10	347	160	265	710	265	-	<b>2LC0901-5GD</b> ■ ■ -1 A A0 L..+M..	902
		Long	65	170	300	301	990	1240									<b>2LC0901-5GD</b> ■ ■ -2 A A0 L..+M..	915
ØD1:		Without finished bore – Without order codes														1		
		With finished bore – With order codes for diameter and tolerance (product code without <b>-Z</b> )														9		
ØD2:		Without finished bore – Without order codes														1		
		With finished bore – With order codes for diameter and tolerance (product code without <b>-Z</b> )														9		
Part 32:		Small brake drum, without extension A															A	
		Small brake drum, with extension A (increase of lengths L4 and LG by the amount A)															B	
		Large brake drum, without extension A															C	
		Large brake drum, with extension A (increase of lengths L4 and LG by the amount A)															D	

#### Ordering example:

Motor 55 kW,  $P_{eff} = 45$  kW,  $n_1 = 1470$  rpm

#### Selection:

FLUDEX FNDB coupling size 370, standard type,  
Hub carrier: Long hub bore ØD1 = 65H7 mm with keyway to  
DIN 6885/1 and set screw,  
Part 32: Ø315 x 118, bore ØD2 = 80H7 mm with keyway to  
DIN 6885/1 and retaining screw,  
with electronic or mechanical operation monitoring, seal set  
Perbunan.  
Delivery without oil filling, no oil filling quantity specification.

#### Product code:

- With brake drum part 32 Ø315 x 118:  
**2LC0900-8GD99-2AA0**  
**L1F+M1J**
- With brake drum part 32 Ø400 x 150 extended:  
**2LC0900-8GD99-2DA0**  
**L1F+M1J**

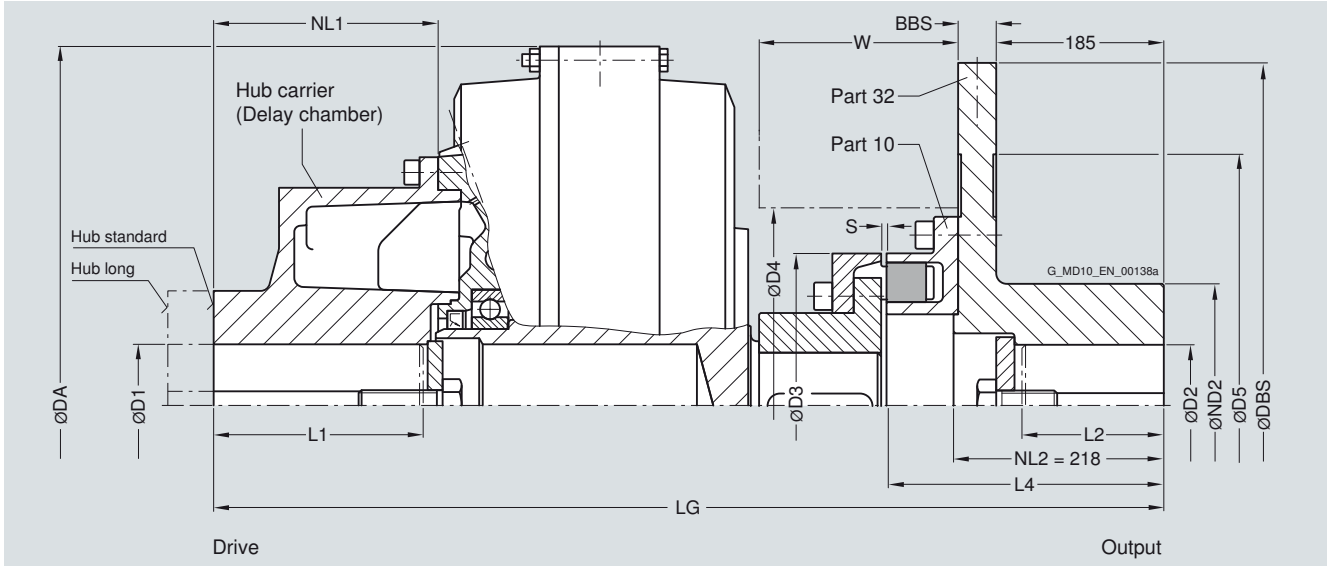
<sup>1)</sup> With version of brake drum in grey cast iron: Maximum speed 1800 rpm possible.

# FLENDER Standard Couplings Fluid Couplings – FLUDEX Series

Type FNDS SB with large delay chamber and brake disk for stopping brake

## Selection and ordering data

Type with large delay chamber, attached N-EUPEX coupling and brake disk for stopping brakes. Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



Size	Maximum speed $n_{kmax}$ rpm	Hub carrier	Dimensions in mm FLUDEX coupling						N-EUPEX coupling			Part 32 – Brake disk <sup>1)</sup>			Space dimensions		Product code with order codes for bore diameters and tolerances (product code without -Z) – selection in catalog part 3	Weight <i>m</i> kg		
			D1	L1	NL1	DA	LG	D3	S	L4	D2	ND2	DBS	BBS	D5	D4			W	
370	2100	Hub Standard	38	55	110	115	420	642	180	4...6	257	80	145	450	30	300	222	127	2LC0900-8GE ■■ -1CA0 L..+M..	109
		Hub Long	38	80	140	145	420	672											2LC0900-8GE ■■ -2CA0 L..+M..	108
425	1900	Hub Standard	42	75	140	147	470	704	200	4...6	262	80	160	500	30	340	250	144	2LC0901-0GE ■■ -1BA0 L..+M..	161
		Hub Long	42	100	170	177	470	734											2LC0901-0GE ■■ -2BA0 L..+M..	159
490	1800	Hub Standard	48	75	140	148	555	757	225	4...6	267	90	160	560	30	370	276	159	2LC0901-1GE ■■ -1BA0 L..+M..	214
		Hub Long	48	110	170	178	555	787											2LC0901-1GE ■■ -2BA0 L..+M..	211
565	1800	Hub Standard	65	95	170	178	630	824	250	5...8	275	100	175	630	30	440	317	181	2LC0901-2GE ■■ -1BA0 L..+M..	290
		Hub Long	65	120	210	218	630	864											2LC0901-2GE ■■ -2BA0 L..+M..	291
655	1800	Hub Standard	65	110	210	218	736	935	315	5...8	285	100	175	630	30	440	385	203	2LC0901-3GE ■■ -1AA0 L..+M..	382
		Hub Long	65	135	250	258	736	975											2LC0901-3GE ■■ -2AA0 L..+M..	385
755	1500	Hub Standard	65	120	210	219	840	1000	350	5...8	289	140	220	710	30	520	435	222	2LC0901-4GE ■■ -1AA0 L..+M..	508
		Hub Long	65	150	250	259	840	1040											2LC0901-4GE ■■ -2AA0 L..+M..	511
887	1200	Hub Standard	65	150	250	251	990	1144	440	5...10	301	140	220	800	30	610	525	268	2LC0901-5GE ■■ -1AA0 L..+M..	788
		Hub Long	65	170	300	301	990	1194											2LC0901-5GE ■■ -2AA0 L..+M..	801

ØD1:	Without finished bore – Without order codes	1
	With finished bore – With order codes for diameter and tolerance (product code without -Z)	9
ØD2:	Without finished bore – Without order codes	1
	With finished bore – With order codes for diameter and tolerance (product code without -Z)	9

L2 denotes the shaft insertion depth.  
In the case of shaft ends deviating from DIN 748 the insertion depth must be specified in plain text and with **Y29**.

**For centroidal distance Y and weight  $F_y$ , see page 13/47.**

**For ordering example, see page 13/40.**

<sup>1)</sup> Hub reduction possible; specify product code with "-Z" and order code "Y99" with dimension NL2 in plain text.

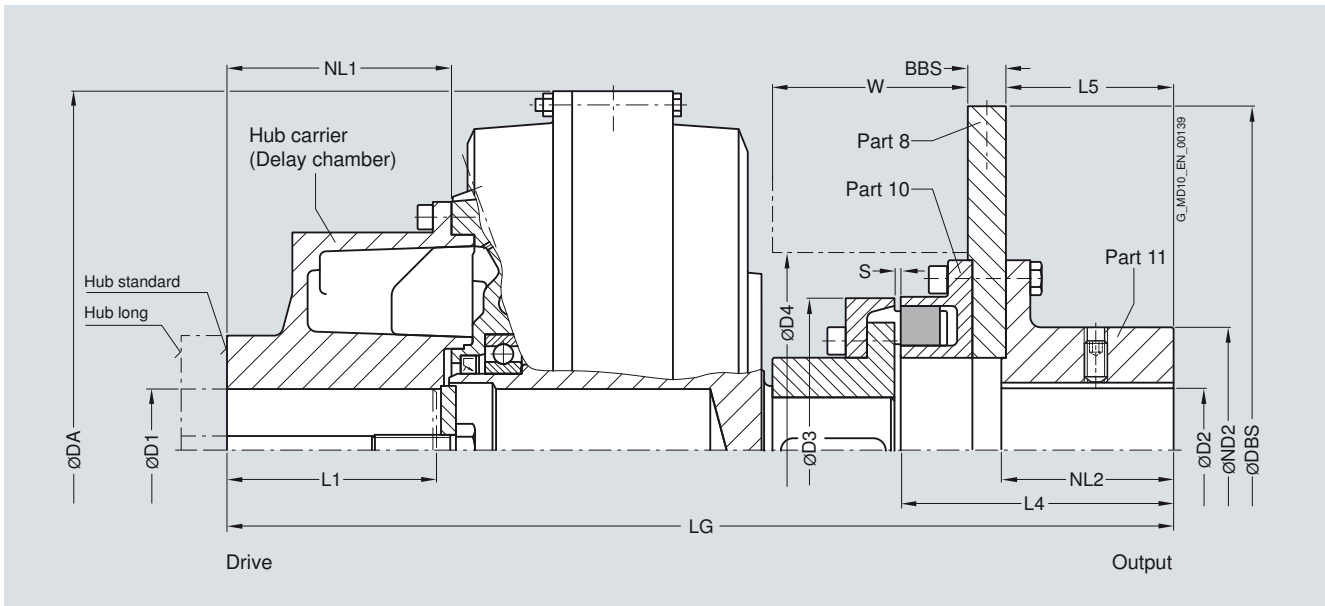
# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

**Type FNDS HB with large delay chamber and brake disk for blocking brake**

### Selection and ordering data

Type with large delay chamber, attached N-EUPEX coupling and brake disk for blocking brakes. Enables fitting and dismantling of the coupling without displacement of the coupled shafts.



Size	Maximum speed $n_{kmax}$ rpm	Hub carrier	Dimensions in mm FLUDEX coupling					N-EUPEX coupling				Part 8 – Brake disk/ part 11 – hub		Space dimensions		Product code with order codes for bore diameters and tolerances (product code without <b>-Z</b> ) – selection in catalog part 3	Weight  m  kg				
			D1	L1	NL1	DA	LG	D3	S	L4	D2	NL2	ND2	DBS	BBS			L5 <sup>1)</sup>	D4	W	
370	3200	Hub Standard	38	55	110	115	420	555	180	4...6	170	80	118	130	355	16	115	222	127	2LC0900-8GF ■ ■ -1AA0 L..+M..	84
		Long	38	80	140	145	420	585												2LC0900-8GF ■ ■ -2AA0 L..+M..	83
425	3000	Standard	42	75	140	147	470	617	200	4...6	175	80	118	130	355	16	115	250	144	2LC0901-0GF ■ ■ -1AA0 L..+M..	116
		Long	42	100	170	177	470	647												2LC0901-0GF ■ ■ -2AA0 L..+M..	115
490	2600	Standard	48	75	140	148	555	670	225	4...6	180	90	118	135	400	16	115	276	159	2LC0901-1GF ■ ■ -1AA0 L..+M..	169
		Long	48	110	170	178	555	700												2LC0901-1GF ■ ■ -2AA0 L..+M..	166
565	2300	Standard	65	95	170	178	630	737	250	5...8	188	100	118	160	450	16	115	317	181	2LC0901-2GF ■ ■ -1AA0 L..+M..	227
		Long	65	120	210	218	630	777												2LC0901-2GF ■ ■ -2AA0 L..+M..	229
655	2000	Standard	65	110	210	218	736	848	315	5...8	198	100	118	170	500	16	115	385	203	2LC0901-3GF ■ ■ -1AA0 L..+M..	348
		Long	65	135	250	258	736	888												2LC0901-3GF ■ ■ -2AA0 L..+M..	351
755	1800	Standard	65	120	210	219	840	961	350	5...8	250	140	164	225	630	20	160	435	222	2LC0901-4GF ■ ■ -1AA0 L..+M..	486
		Long	65	150	250	259	840	1001												2LC0901-4GF ■ ■ -2AA0 L..+M..	489
887	1500	Standard	65	150	250	251	990	1105	440	5...10	262	140	164	225	710	20	160	525	268	2LC0901-5GF ■ ■ -1AA0 L..+M..	769
		Long	65	170	300	301	990	1155												2LC0901-5GF ■ ■ -2AA0 L..+M..	782

ØD1: Without finished bore – Without order codes  
 With finished bore – With order codes for diameter and tolerance (product code without **-Z**)  
 ØD2: Without finished bore – Without order codes  
 With finished bore – With order codes for diameter and tolerance (product code without **-Z**)

For centroidal distance **Y** and weight **F<sub>y</sub>**, see page 13/47. For ordering example, see page 13/40.

<sup>1)</sup> Hub reduction possible; specify product code with **"-Z"** and order code **"Y99"** with dimension L5 in plain text.

### Selection and ordering data

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

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

$P_{\text{eff}}$ kW	Speed in rpm										Size	
	600	740	890	980	1180	1470	1770	2300	2950	3550		
1.1	5.6											
2.2	7.1	5.7										
3.0	7.9	6.4	5.1									
4.0	8.2	7.0	5.8	5.1								
5.5	14.4	7.8	6.5	5.9								
7.5	16.0	8.2	7.2	6.5	5.3							
11	18.2	14.7	8.2	7.4	6.2							
15	19.0	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	19.0	17.0	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	45.0	36.2	19.0	17.7	14.7	7.9	6.6	4.7				
55	45.0	38.2	32.9	19.0	15.8	12.2	7.0	5.3				
75	76.5	43.0	35.8	33.1	17.4	14.0	7.8	6.0	4.3			
90	80.5	45.0	37.6	34.8	18.7	14.9	11.7	6.4	4.6			
110	85.2	45.0	40.1	36.7	31.8	16.0	13.1	6.8	5.1			
132	89.5	74.7	43.3	38.6	33.2	16.9	14.0	7.2	5.6	4.3	370	
160	95.6	80.0	45.0	41.5	35.0	18.1	15.0	10.7	6.0	4.7		
200	105.5	84.5	71.5	45.0	37.1	31.1	16.2	11.8	6.5	5.2		
250	110.0	89.7	76.9	45.0	39.7	33.0	17.4	13.2		5.8		
315		97.5	82.4	76.5	43.8	35.1	30.2	14.5			490	
350		102.1	84.6	78.4	45.0	36.1	31.2	15.0				
400		108.9	87.6	81.2	45.0	37.4	32.3				655	
500			94.1	86.1	73.3	40.2	34.2					
600			101.4	90.6	78.1	43.5	35.9					
750			110.0	98.5	82.9	66.9	38.2					
900				107.2	86.8	72.7					887	
1100					92.1	77.1						
1300					98.2	80.4						
1600						84.9						

Ordering example type FNO from page 13/32:

Motor 110 kW,  $P_{\text{eff}} = 90$  kW,  $n_1 = 1470$  rpm, maximum output torque  $T_{\max} = 1.3 \times T_{\text{eff}}$

Selection:

FLUDEX FNO coupling size 425,  
Hub carrier: Standard hub bore  $\text{ØD1} = 75\text{H7}$  mm with keyway to DIN 6885/1 and retaining screw, seal set Viton.

Specification of oil filling quantity: 12.4 l (see under oil filling quantities for the FN series in this catalog section).

Product code:

- With 110 °C fuse:  
**2LC0901-0GA90-1AA0-Z**  
**L1H+Y90+F05**  
plain text to Y90: **12.4 l**
- With 140 °C fuse:  
**2LC0901-0GA90-1AA0-Z**  
**L1H+Y90+F07**  
plain text to Y90: **12.4 l**
- With 160 °C fuse:  
**2LC0901-0GA90-1AA0-Z**  
**L1H+Y90+F08**  
plain text to Y90: **12.4 l**

Ordering example type FND from page 13/34:

Motor 132 kW,  $P_{\text{eff}} = 110$  kW,  $n_1 = 1470$  rpm

Selection:

FLUDEX FND coupling size 490,  
Hub carrier: Long hub bore  $\text{ØD1} = 80\text{H7}$  mm with keyway to DIN 6885/1 and set screw,  
Part 11: Bore  $\text{ØD1} = 80\text{H7}$  mm with keyway to DIN 6885/1 and set screw,  
with electronic or mechanical operation monitoring, seal set Perbunan.  
Delivery without oil filling, no oil filling quantity specification.

Product code:

- With 110 °C thermal switch:  
**2LC0901-1GC99-2AA0-Z**  
**L1J+M1J+F03**
- With 125 °C EOC transmitter:  
**2LC0901-1GC99-2AA0-Z**  
**L1J+M1J+F04**



# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Oil filling quantities for FN series

$P_{\text{eff}}$ kW	Speed in rpm										Size	
	600	740	890	980	1180	1470	1770	2300	2950	3550		
3.0	9.7											
4.0	10.7	8.6										
5.5	12.0	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	12.0	10.8	8.9							
22	28.6	23.1	12.5	11.6	9.6							
30	46.3	25.7	21.1	12.5	10.7	8.5						
37	48.6	27.5	22.9	20.5	11.4	9.2	7.1					
45	51.5	29.0	24.5	22.0	12.3	9.8	7.8					
55	54.0	29.0	26.1	23.7	18.7	10.5	8.6					
75	60.0	49.5	29.0	26.3	21.7	11.6	9.7	6.9				
90	65.0	52.0	29.0	27.9	23.2	12.4	10.3	7.4				
110	69.0	55.0	47.5	29.0	24.9	19.0	11.0	8.3				
132		58.5	50.0	46.4	26.3	20.9	11.7	8.9	6.6		425	
160		63.5	52.5	48.5	28.1	22.5	17.4	9.6	6.9			
180		67.5	54.0	50.0	29.0	23.4	18.4	10.0	7.2			
200		69.0	55.5	51.5	44.4	24.3	19.5	10.3	7.6			
250			60.5	54.5	47.0	26.2	21.6	16.0	8.6			
315			67.5	59.0	50.0	28.3	23.5	16.7	9.3			
350				62.0	51.5	43.1	24.4	17.4			565	
400				66.0	53.5	44.9	25.5	18.5				
500					57.0	47.5	40.7	20.8				
600					61.0	50.0	42.9	22.3				
750						53.0	45.9				755	
900						55.5	48.0					
1100							50.5					
1200							53.0					

#### Ordering example type FNDS SB from page 13/37:

Motor 37 kW,  $P_{\text{eff}} = 30$  kW,  $n_1 = 1470$  rpm

#### Selection:

FLUDEX FNDS SB coupling size 370,  
Hub carrier: Standard hub bore  $\varnothing D1 = 55H7$  mm with keyway to DIN 6885/1 and retaining screw,  
Part 32: Bore  $\varnothing D2 = 75H7$  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.

#### Product code:

- With standard preservation:  
**2LC0900-8GE99-1CA0  
L1D+M1H**
- With preservation for 6 months:  
**2LC0900-8GE99-1CA0-Z  
L1D+M1H+B31**
- With preservation for 24 months:  
**2LC0900-8GE99-1CA0-Z  
L1D+M1H+B28**
- With preservation for 36 months:  
**2LC0900-8GE99-1CA0-Z  
L1D+M1H+B34**

#### Ordering example type FNDS HB from page 13/38:

Motor 200 kW,  $P_{\text{eff}} = 160$  kW,  $n_1 = 1470$  rpm

#### Selection:

FLUDEX FNDS HB coupling size 490,  
Hub carrier: Long hub bore  $\varnothing D1 = 110H7$  mm with keyway to DIN 6885/1 and set screw,  
Part 11: Bore  $\varnothing D2 = 80H7$  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.

#### Product code:

- In horizontal version:  
**2LC0901-1GF99-2AA0  
L1Q+M1J**
- In vertical version MU:  
**2LC0901-1GF99-2AA0-Z  
L1Q+M1J+F14**

### Selection and ordering data

Apply to standard catalog couplings

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

Series	FLUDEX size	Type	N-EUPEX size	Number flexibles per set	Product code for one set flexibles
FA	222	FAK <sup>1)</sup> ; FAKB <sup>1)</sup>	95	6	FFA:000001194870
		Other types	110	6	FFA:000001194871
	297	FAK <sup>1)</sup> ; FAKB <sup>1)</sup>	125	6	FFA:000001194872
		FAK <sup>2)</sup> ; FAKB <sup>2)</sup>	125	6	FFA:000001194873
		Other types	125	6	FFA:000001194873
	342	All types	140	6	FFA:000001194874
	395	FAD <sup>1)</sup> ; FAE <sup>1)</sup> ; FADB <sup>1)</sup>	225	8	FFA:000001194875
		FAD <sup>2)</sup> ; FAE <sup>2)</sup> ; FADB <sup>2)</sup>	225	8	FFA:000001194876
		Other types	225	8	FFA:000001194876
	450	FAD <sup>1)</sup> ; FAE <sup>1)</sup> ; FADB <sup>1)</sup>	250	8	FFA:000001194877
		FAD <sup>2)</sup> ; FAE <sup>2)</sup> ; FADB <sup>2)</sup>	250	8	FFA:000001194878
		Other types	250	8	FFA:000001194878
	516	FAD <sup>1)</sup> ; FADB <sup>1)</sup>	315	9	FFA:000001194879
		FAD <sup>2)</sup> ; FADB <sup>2)</sup>	315	9	FFA:000001194880
		Other types	315	9	FFA:000001194880
590	All types until 2010	315	9	FFA:000001194879	
	All types from 2011 on	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
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:000001194879
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.

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Spare parts

#### Thermal equipment

FLUDEX size	Thread	Part no.	Fuse element	Response temperature	Product code (FFA) for one unit
<b>222</b>	M10	103 + 104 203 + 204	Fusible safety plug	110 °C	<b>FFA:000001194896</b>
				140 °C	<b>FFA:000001194897</b>
				160 °C	<b>FFA:000001194898</b>
	M10	153 + 104	Oil filler plug	–	<b>FFA:000001194894</b>
<b>297</b>	M10	153 + 104	Oil filler plug	–	<b>FFA:000001194894</b>
<b>297 - 887</b>	M18 x 1.5	103 203	Fusible safety plug	110 °C	<b>FFA:000001250338</b>
				140 °C	<b>FFA:000001250339</b>
				160 °C	<b>FFA:000001250380</b>
	M18 x 1.5	110 210	Thermal switch	110 °C	<b>FFA:000001361795</b>
				140 °C	<b>FFA:000001361796</b>
	M18 x 1.5	153 163	Oil filler plug (except size 887) Screw plug	–	<b>FFA:000001337653</b>
	–	301	Cut-out device	–	<b>FFA:000000652020</b>
	–	142	EOC transmitter with seal	125 °C	<b>FFA:000001194899</b>
–	245	Sensor EOC	–	<b>FFA:000000361460</b>	
–	244	Evaluation instrument EWD 20 ... 250 V AC/DC	–	<b>FFA:000001205294</b>	
<b>370 - 755</b>	M10	173 + 174	Oil drain plug - delay chamber	–	<b>FFA:000001194894</b>
<b>887</b>	M30 x 1.5	153 + 154	Oil filler plug (up to and including year of construction 2007)	–	<b>FFA:000001194893</b>
				153	Oil filler plug (from year of construction 2008)
	M16	173 + 174	Oil drain plug - delay chamber	–	<b>FFA:000001154895</b>

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

FLUDEX size	Seal set material	Product code (FFA) for one seal set	Product code (FFA) for one rolling bearing set
<b>222</b> (Up to and including year of construction 2000)	NBR	<b>FFA:000001194900</b>	<b>FFA:000001194800</b>
<b>222</b> (From year of construction 2001)	NBR	<b>FFA:000001194901</b>	<b>FFA:000001194801</b>
	FPM	<b>FFA:000001194902</b>	
<b>297</b> (Up to and including year of construction 2000)	NBR	<b>FFA:000001194903</b>	<b>FFA:000001194802</b>
	FPM	<b>FFA:000001194904</b>	
<b>297</b> (From year of construction 2001)	NBR	<b>FFA:000001194905</b>	<b>FFA:000001194803</b>
	FPM	<b>FFA:000001194906</b>	
<b>342</b>	NBR	<b>FFA:000001194907</b>	<b>FFA:000001194804</b>
	FPM	<b>FFA:000001194908</b>	
<b>395</b>	NBR	<b>FFA:000001194909</b>	<b>FFA:000001194805</b>
	FPM	<b>FFA:000001194910</b>	
<b>450</b>	NBR	<b>FFA:000001194911</b>	<b>FFA:000001194806</b>
	FPM	<b>FFA:000001194912</b>	
<b>516</b>	NBR	<b>FFA:000001194913</b>	<b>FFA:000001194807</b>
	FPM	<b>FFA:000001194914</b>	
<b>590</b>	NBR	<b>FFA:000001194915</b>	<b>FFA:000001194808</b>
	FPM	<b>FFA:000001194916</b>	

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

Spare parts

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

FLUDEX size	Variant	Up to and including year of construction	From year of construction	Seal set material	Product code (FFA) for one seal set	Product code (FFA) for one rolling bearing set		
222	2 x SPZ 100	2000	2001	NBR	FFA:000001194917	FFA:000001194809		
				NBR	FFA:000001194918	FFA:000001194810		
				FPM	FFA:000001194919			
	3 x SPZ 160		2001	NBR	FFA:000001194920	FFA:000001194811		
				FPM	FFA:000001194921			
297	5 x SPZ 140	2000		NBR	FFA:000001194922	FFA:000001194812		
				FPM	FFA:000001194923			
	7 x SPZ 140	2000		NBR	FFA:000001194924	FFA:000001194813		
				FPM	FFA:000001194925			
5 x SPZ 150			2001	NBR	FFA:000001194926	FFA:000001194814		
				FPM	FFA:000001194927			
4 x SPA 190			2001	NBR	FFA:000001194928			
				FPM	FFA:000001194929			
5 x SPA 224			2001	NBR	FFA:000001194928			
				FPM	FFA:000001194929			
342	5 x SPA 180			NBR	FFA:000001194930	FFA:000001194815		
				FPM	FFA:000001194931			
				NBR	FFA:000001194932	FFA:000001194816		
7 x SPA 180	2000			FPM	FFA:000001194933			
				NBR	FFA:000001194934	FFA:000001194817		
				FPM	FFA:000001194935			
395	5 x SPB 224			NBR	FFA:000001194936	FFA:000001194818		
				FPM	FFA:000001194937			
	7 x SPB 224	2000			NBR	FFA:000001194938	FFA:000001194819	
					FPM	FFA:000001194939		
7 x SPB 236			2001	NBR	FFA:000001194938	FFA:000001194819		
				FPM	FFA:000001194939			
7 x SPB 280			2001	NBR	FFA:000001194938			
				FPM	FFA:000001194939			
450	8 x SPB 250	2000		( $\text{ØD1} \leq 75$ )				
				NBR	FFA:000001194940	FFA:000001194820		
				FPM	FFA:000001194941			
				$\text{ØD1} \leq 75$	2001	NBR	FFA:000001194942	FFA:000001194821
				FPM	FFA:000001194943			
				$\text{ØD1} = 73.025$	2001	NBR	FFA:000001194944	FFA:000001194822
FPM	FFA:000001194945							
10 x SPB 250	2000			NBR	FFA:000001194946	FFA:000001194823		
				FPM	FFA:000001194947			
516	10 x SPB 315	2000		NBR	FFA:000001194948	FFA:000001194824		
				FPM	FFA:000001194949			
				2001	NBR	FFA:000001194950	FFA:000001194825	
				FPM	FFA:000001194951			
12 x SPB 315	2000			NBR	FFA:000001194952	FFA:000001194826		
				FPM	FFA:000001194953			
590	12 x SPC 315	2000		NBR	FFA:000001194954	FFA:000001194827		
				FPM	FFA:000001194955			
				2001	NBR	FFA:000001194956	FFA:000001194828	
				FPM	FFA:000001194957			

<sup>1)</sup> Spare parts valid only for specified pulleys. When enquiring for other numbers of grooves, please quote original delivery number.

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Spare parts

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

FLUDEX size	Series	Additional bore specifications	Seal set material	Product code (FFA) for one seal set	Product code (FFA) for one rolling bearing set	
370	FG		NBR	<b>FFA:000001194958</b>	Up to and including year of construction 2000: <b>FFA:000001194850</b>	
			FPM	<b>FFA:000001194959</b>		
	FV/FN		NBR	<b>FFA:000001194960</b>	From year of construction 2001: <b>FFA:000001194851</b>	
			FPM	<b>FFA:000001194961</b>		
425	FG		NBR	<b>FFA:000001194962</b>	<b>FFA:000001194852</b>	
			FPM	<b>FFA:000001194963</b>		
	FV/FN		NBR	<b>FFA:000001194964</b>		
			FPM	<b>FFA:000001194965</b>		
490	FG		NBR	<b>FFA:000001194966</b>	<b>FFA:000001194853</b>	
			FPM	<b>FFA:000001194967</b>		
	FV/FN		NBR	<b>FFA:000001194968</b>		
			FPM	<b>FFA:000001194969</b>		
565	FG		NBR	<b>FFA:000001194970</b>	<b>FFA:000001194854</b>	
			FPM	<b>FFA:000001194971</b>		
	FV/FN		NBR	<b>FFA:000001194972</b>		
			FPM	<b>FFA:000001194973</b>		
655	FG	ØD2 ≤ 100	NBR	<b>FFA:000001194974</b>	<b>FFA:000001194855</b>	
			FPM	<b>FFA:000001194975</b>		
			ØD2 > 100	NBR	<b>FFA:000001194976</b>	<b>FFA:000001194856</b>
				FPM	<b>FFA:000001194977</b>	
	FV	ØD2 ≤ 100		NBR	<b>FFA:000001194978</b>	<b>FFA:000001194855</b>
				FPM	<b>FFA:000001194979</b>	
		ØD2 > 100	NBR	<b>FFA:000001194980</b>	<b>FFA:000001194856</b>	
			FPM	<b>FFA:000001194981</b>		
FN			NBR	<b>FFA:000001194978</b>	<b>FFA:000001194855</b>	
			FPM	<b>FFA:000001194979</b>		
755	FG	ØD2 ≤ 110	NBR	<b>FFA:000001194982</b>	<b>FFA:000001194857</b>	
			FPM	<b>FFA:000001194983</b>		
			ØD2 > 110	NBR	<b>FFA:000001194984</b>	<b>FFA:000001194858</b>
				FPM	<b>FFA:000001194985</b>	
	FV	ØD2 ≤ 110		NBR	<b>FFA:000001194986</b>	<b>FFA:000001194857</b>
				FPM	<b>FFA:000001194987</b>	
		ØD2 > 110	NBR	<b>FFA:000001194988</b>	<b>FFA:000001194858</b>	
			FPM	<b>FFA:000001194989</b>		
FN			NBR	<b>FFA:000001194990</b>	<b>FFA:000001194859</b>	
			FPM	<b>FFA:000001194991</b>		
887	FG		FPM	<b>FFA:000001194993</b>	<b>FFA:000001194860</b>	
			FV/FN	FPM		<b>FFA:000001194992</b>

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

Mass moments of inertia  
and maximum oil filling quantities

### Technical data

**FA series** (for type FAR, see separate table)

FLUDEX size	Series	Types	FAD	FAE	FAM	FADB	FADS SB	FADS HB	Oil filling quantity
	FA	FAO							max.
	$J_I$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	l
<b>222</b>	0.014	0.056	0.061	0.061	0.060	0.084	0.287	0.109	1.65
<b>297</b>	0.040	0.173	0.193	0.193	0.193	0.226	0.673	0.246	4.2
<b>342</b>	0.092	0.314	0.356	0.352	0.353	0.469	1.002	0.420	6.6
<b>395</b>	0.203	0.660	0.745	0.730	–	1.030	1.814	1.150	9.5
<b>450</b>	0.404	1.087	1.217	1.217	–	1.497	3.611	1.818	13.4
<b>516</b>	0.896	2.109	2.439	–	–	3.359	5.969	3.238	22.7
<b>590</b>	1.295	3.455	3.785	–	–	6.605	7.315	4.584	33

### Type FAR

FLUDEX size	$J_I$	$J_A$	Oil filling quantity		
	kgm <sup>2</sup>	kgm <sup>2</sup>	max. l		
<b>222</b>	0.014	2 x SPZ 100 0.062	3 x SPZ 160 0.071	1.65	
<b>297</b>	0.107	5 x SPZ 150 0.202	4 x SPA 190 0.235	5 x SPA 224 0.273	4.2
<b>342</b>	0.095	5 x SPA 180 0.386		6.6	
<b>395</b>	5 x SPB = 0.214 7 x SPB = 0.210	5 x SPB 224 0.840	7 x SPB 236 0.960	7 x SPB 280 1.144	9.5
<b>450</b>	0.426	8 x SPB 250 1.467		13.4	
<b>516</b>	0.946	10 x SPB 315 3.209		22.7	
<b>590</b>	1.375	12 x SPC 315 4.955		33	

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Mass moments of inertia and maximum oil filling quantities

#### FG/FV series

FLUDEX size	Series		Types								Oil filling quantity	
	FG	FV	FGO	FVO	FGD	FVD	FGE	FVE	FGM	FVM	FG	FV
	$J_I$ kgm <sup>2</sup>	$J_I$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	$J_A$ kgm <sup>2</sup>	max. l	max. l
<b>370</b>	0.191	0.191	0.519	0.551	0.571	0.603	0.571	0.603	0.571	0.603	7.2	8
<b>425</b>	0.342	0.342	0.819	0.876	0.989	1.046	0.974	1.031	0.963	1.020	11	12
<b>490</b>	0.723	0.723	1.992	2.110	2.312	2.430	2.272	2.390	2.264	2.382	17	18.5
<b>565</b>	1.269	1.269	3.216	3.441	3.696	3.921	3.636	3.861	3.616	3.841	25.5	28
<b>655</b>	2.567	2.567	7.287	7.757	8.687	9.157	–	–	–	–	40	44
<b>755</b>	4.856	4.856	12.575	13.291	14.775	15.491	–	–	–	–	61	67
<b>887</b>	11.817	11.817	26.832	28.212	30.102	31.482	–	–	–	–	98	107

#### FN series (for type FNDB, see separate table)

FLUDEX size	Hub carrier	Series	Types						Weights		Oil filling quantity
		FN	FNO	FNA	FND	FNDS SB	FNDS HB	Y	F <sub>Y</sub>	max. l	
	Hub	$J_A$ kgm <sup>2</sup>	$J_I$ kgm <sup>2</sup>	$J_I$ kgm <sup>2</sup>	$J_I$ kgm <sup>2</sup>	$J_I$ kgm <sup>2</sup>	$J_I$ kgm <sup>2</sup>	mm	N		
<b>370</b>	Standard	0.657	0.237	0.281	0.320	1.180	0.386	197	665	8.2	
	Long	0.647						227			
<b>425</b>	Standard	1.107	0.343	0.470	0.491	1.841	0.659	224	940	12.5	
	Long	1.102						254			
<b>490</b>	Standard	2.480	0.737	0.954	0.999	3.009	1.285	235	1420	19	
	Long	2.474						265			
<b>565</b>	Standard	4.175	1.364	1.715	1.835	5.075	2.081	278	1900	29	
	Long	4.251						318			
<b>655</b>	Standard	9.319	2.567	3.587	3.777	6.777	4.701	330	3000	45	
	Long	9.523						370			
<b>755</b>	Standard	15.616	4.910	6.878	7.198	12.078	9.689	352	4200	69	
	Long	15.950						392			
<b>887</b>	Standard	33.662	11.832	15.132	16.632	24.030	20.428	406	6900	110	
	Long	34.462						456			



# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

Mass moments of inertia  
and maximum oil filling quantities

### Type FNDB

FLUDEX size	Hub carrier	Brake drum	$J_A$	$J_I$	Weights		Oil filling quantity max.
					Y	$F_Y$	
	Hub	ØDBT x BBT	kgm <sup>2</sup>	kgm <sup>2</sup>	mm	N	l
<b>370</b>	Standard	Ø315 x 118	0.657	0.640	197	665	8.2
		Ø400 x 150		1.341			
	Long	Ø315 x 118	0.647	0.640	227		
		Ø400 x 150		1.341			
<b>425</b>	Standard	Ø315 x 118	1.107	0.811	224	940	12.5
		Ø400 x 150		1.492			
	Long	Ø315 x 118	1.102	0.811	254		
		Ø400 x 150		1.492			
<b>490</b>	Standard	Ø400 x 150	2.480	1.994	235	1420	19
		Ø500 x 190		4.009			
	Long	Ø400 x 150	2.474	1.994	265		
		Ø500 x 190		4.009			
<b>565</b>	Standard	Ø400 x 150	4.175	2.835	278	1900	29
		Ø500 x 190		4.775			
	Long	Ø400 x 150	4.251	2.835	318		
		Ø500 x 190		4.775			
<b>655</b>	Standard	Ø500 x 190	9.319	6.677	330	3000	45
		Ø630 x 236		11.577			
	Long	Ø500 x 190	9.523	6.677	370		
		Ø630 x 236		11.577			
<b>755</b>	Standard	Ø630 x 236	15.616	15.178	352	4200	69
				15.950			
	Long						
<b>887</b>	Standard	Ø710 x 265	33.662	30.832	406	6900	110
				34.462			
	Long						

$J_I$  Mass moment of inertia of the inner rotor (hollow shaft (106)/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) + any hub carrier (120) or add-on coupling) in kgm<sup>2</sup>

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

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

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Special types

#### Selection and ordering data

##### Selection of additional ordering data

Special types	Additional ordering data <b>-Z</b> with order code and, if necessary with plain text specification
<b>Oil filling</b>	
Without oil filling and without oil filling quantity specification stamped on the coupling	Without addition – standard
With oil filling (specification of oil filling quantity "+Y90" required)	<b>F16</b>
With specification of oil filling quantity	<b>Y90</b> • and orderer specification
<b>Thermal equipment</b>	
Standard type (fuse 140 °C, seal set Perbunan)	Without addition – standard
Fuse 110 °C, seal set Perbunan	<b>F01</b>
Explosion protection in conformity to 94/9EG ATEX100A, seal set Perbunan	<b>F02</b>
Thermal switch 110 °C, fuse 140 °C, seal set Perbunan (option not available with size 222)	<b>F03</b>
EOC transmitter 125 °C, fuse 160 °C, seal set Perbunan (option not available with size 222)	<b>F04</b>
Explosion protection in conformity to 94/9EG ATEX100A, seal set Viton	<b>F06</b>
Fuse 110 °C, seal set Viton	<b>F05</b>
Fuse 140 °C, seal set Viton	<b>F07</b>
Fuse 160 °C, seal set Viton	<b>F08</b>
Thermal switch 110 °C, fuse 140 °C, seal set Viton (option not available with size 222)	<b>F10</b>
Thermal switch 140 °C, fuse 160 °C, seal set Viton (option not available with size 222)	<b>F11</b>
EOC transmitter 125 °C, fuse 160 °C, seal set Viton (option not available with size 222)	<b>F12</b>
<b>Accessories for thermal monitoring equipment</b>	
With switchgear	<b>F25</b>
With sensor and evaluation instrument	<b>F26</b>
<b>For preservation, see catalog section 3</b>	
<b>Drive</b>	
Standard drive side	Without addition – standard
FA series with housing drive	<b>F23</b>
FG/FV/FN series with impeller drive	<b>F24</b>
<b>Position</b>	
Horizontal version	Without addition – standard
Vertical version, motor overhead (option not permitted in FV and FN series)	<b>F13</b>
Vertical version, motor underneath	<b>F14</b>

# FLENDER Standard Couplings

## Fluid Couplings – FLUDEX Series

### Special types

Special types	Additional ordering data <b>-Z</b> with order code and, if necessary with plain text specification
<b>Shaft and bore</b>	
Shaft insertion depth to DIN 748/1	Without addition – standard
Shaft insertion depth 1 deviating from DIN 748/1	<b>Y28</b> and plain text specification for L1
Shaft insertion depth 2 deviating from DIN 748/1	<b>Y29</b> and plain text specification for L2
Bore tolerance ISO H7	Without addition – standard <sup>1)</sup>
Bore tolerance ISO K7 for hollow shafts with imperial bores	<b>L13/M13</b> <sup>1)</sup>
Bore tolerance ISO M7 for hub parts with imperial bores	<b>L14/M14</b> <sup>1)</sup>
Keyway to DIN 6885/1 or DIN 6885/3 keyway width JS9	Without addition – standard
Keyway to ASME B17.1, if necessary with reduced keyway depth	<b>L43/M43</b> <sup>1)</sup>
2 parallel keyways set 180° apart	<b>L46/M46</b> <sup>1)</sup>
Half parallel key balancing (before keyseating)	Without addition – standard
Full parallel key balancing (after keyseating)	<b>L52/M52</b> <sup>1)</sup>
<b>Internal add-on parts</b>	
No additional internal add-on parts	Without addition – standard
With baffle plate (only for FA series)	<b>F17</b>
<b>For documentation, test certificates and acceptances, see catalog section 3 <sup>2)</sup></b>	
No test certificate, acceptance certificates	Without addition – standard
<b>Other additions</b>	
Micro-balancing, high speed	<b>W03</b>
With special fixed bearings	<b>F20</b> <sup>3)</sup>
With additional dust seal	<b>F21</b> <sup>3)</sup>
Special data	<b>Y99</b> and plain text specification

- This order code designates only the type price – plain text required additionally.

<sup>1)</sup> Order code "**L.**" for hollow shaft side and "**M.**" for opposite side.  
<sup>2)</sup> Surface crack and ultrasound testing are not possible on FLUDEX couplings.

<sup>3)</sup> Fitting length on request.

