

Fluid Couplings FLUDEX Series



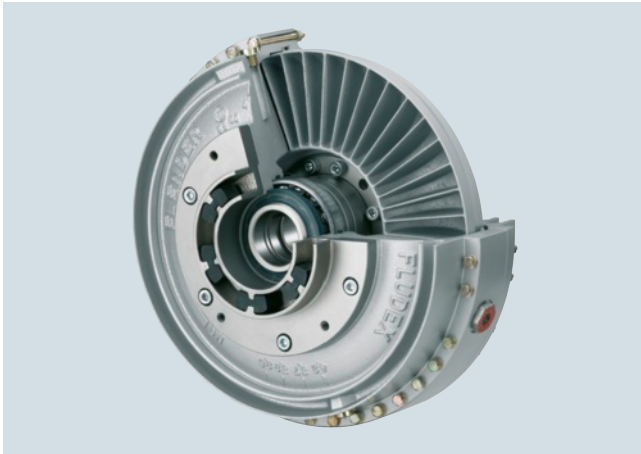
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FLENDER Standard Couplings

Fluid Couplings – FLUDEX Series

General information

Overview



Coupling suitable for use in potentially explosive atmospheres.

Complies with the current ATEX Directive for:

CE Ex II 2 G c T3 IIB -30 °C ≤ T_a ≤ +50 °C
II 2 D T160 °C -30 °C ≤ T_a ≤ +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

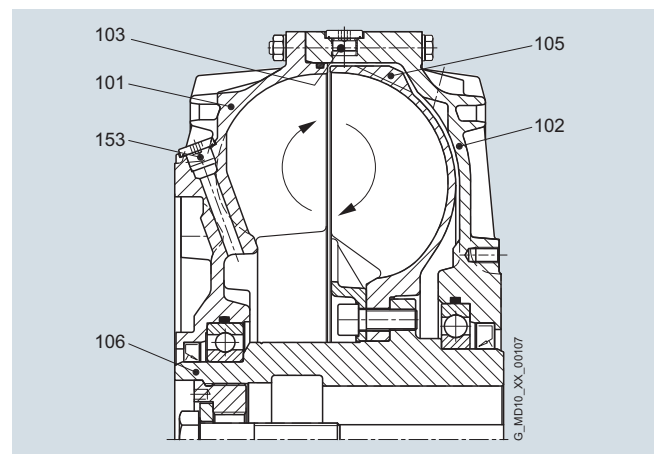
FLUDEX couplings are used in drives for conveyor systems such as belt conveyors, bucket elevators and chain conveyors. In heavy industry FLUDEX couplings are used for applications such as blade wheel drives, crushers, roller presses, mixers, large ventilators, boiler feed pumps, large compressors, centrifuges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



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FLENDER Standard Couplings Fluid Couplings – FLUDEX Series

General information

Materials

Blade wheel and housing

Cast aluminum AISi10Mg or AISi9Mg

Shaft and hollow shaft

Steel with a yield point higher than 400 N/mm²

Static seals and radial shaft seals

Perbunan NBR or Viton FPM

Add-on parts

Grey cast iron EN-GJL-250, spheroidal graphite cast iron EN-GJS-400 or steel

Fusible safety plugs

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

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

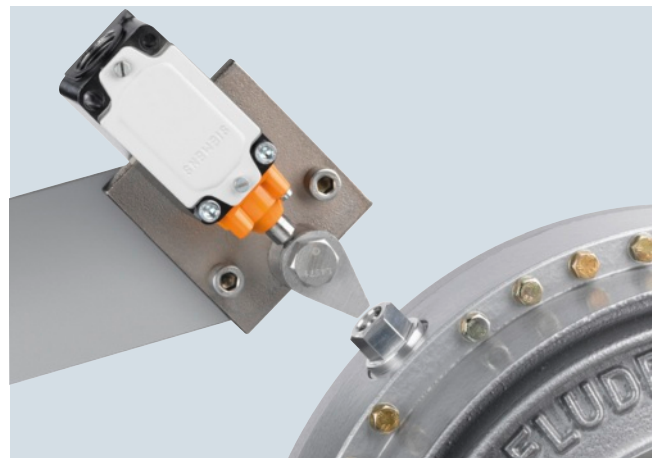
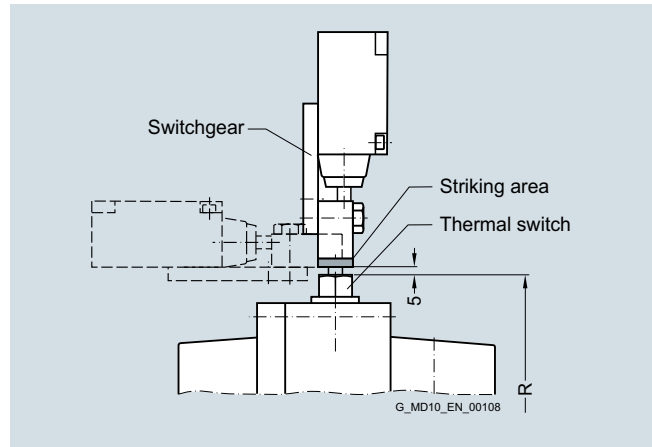
Thermal equipment

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

¹⁾ 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



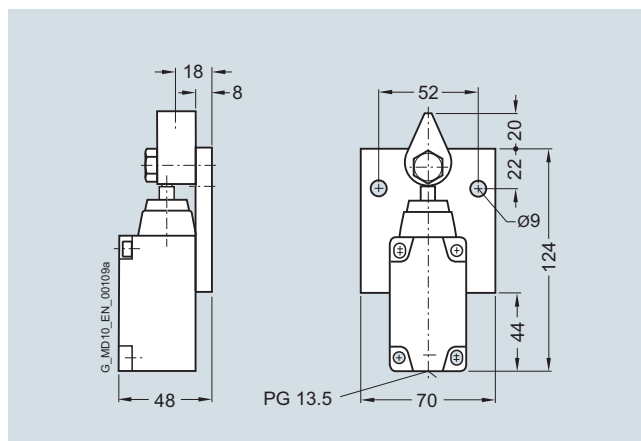
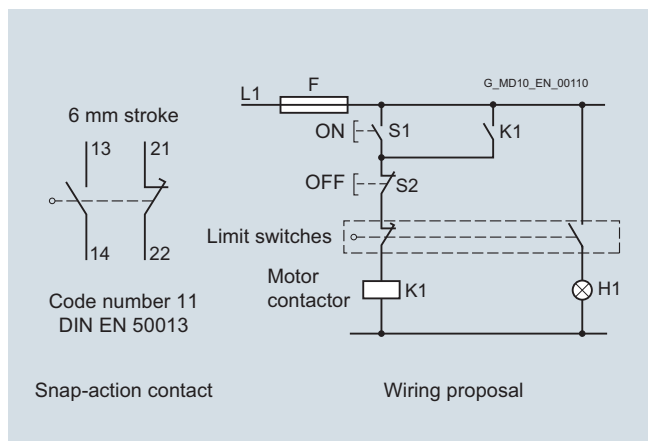
	Size												
	297	342	370	395	425	450	490	516	565	590	655	755	887
Perm. speed in rpm	2500	2240	2100	2000	1900	1800	1650	1600	1500	1450	1250	1100	1000
Radius of travel R in mm	188	215	226	239	251	271	292	307	330	346	383	435	507

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.

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General information

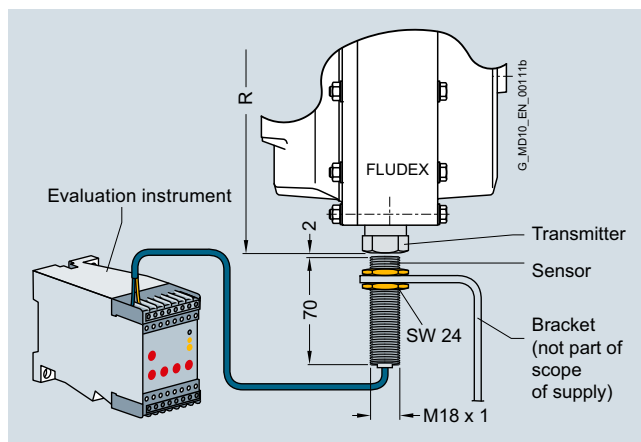


Switchgear: FFA:000000652020

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.



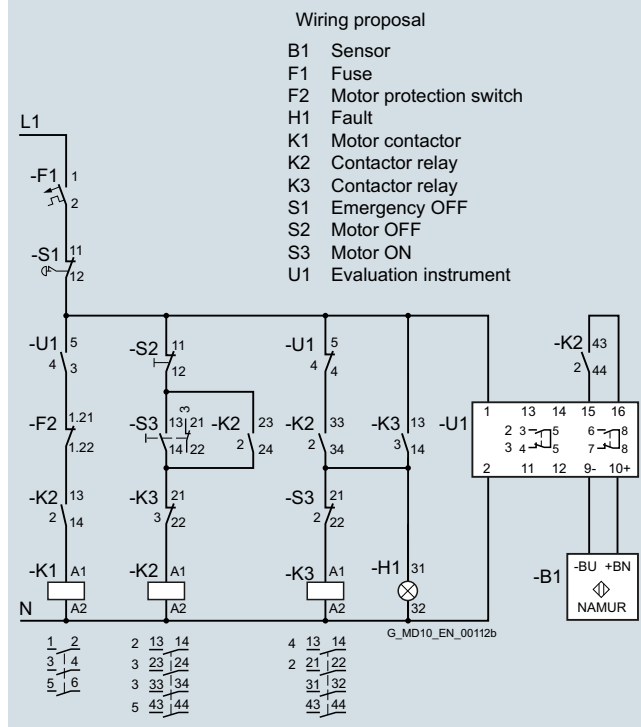
Radius of travel R to the transmitter

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

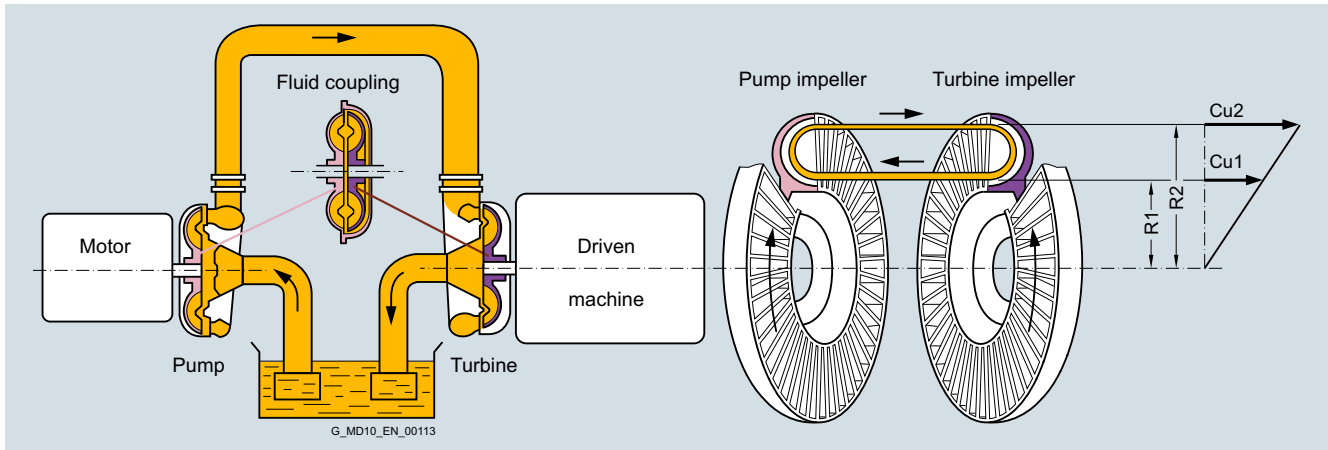
Component	Article No.
EOC transmitter with seal	FFA:000001194899
Sensor EOC	FFA:000000361460
Evaluation instrument EWD	FFA:000001205294



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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.

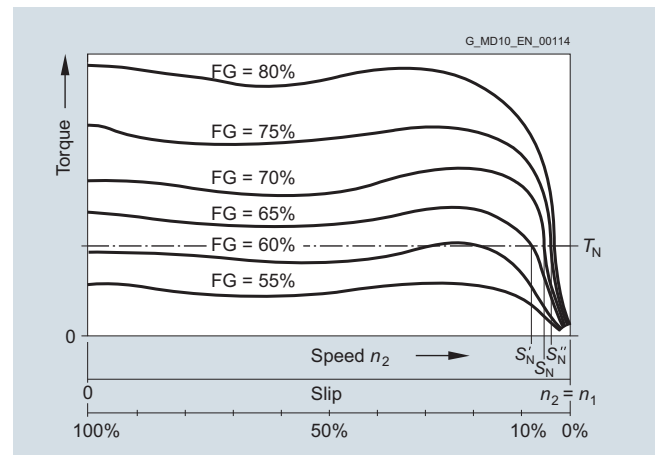
Hydrodynamic couplings have the characteristic properties of fluid flow engines. The transmissible torque depends on the density and quantity of the operating fluid and increases as the square of the drive speed and the fifth power of the profile diameter denoting the coupling size. In the driven pump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

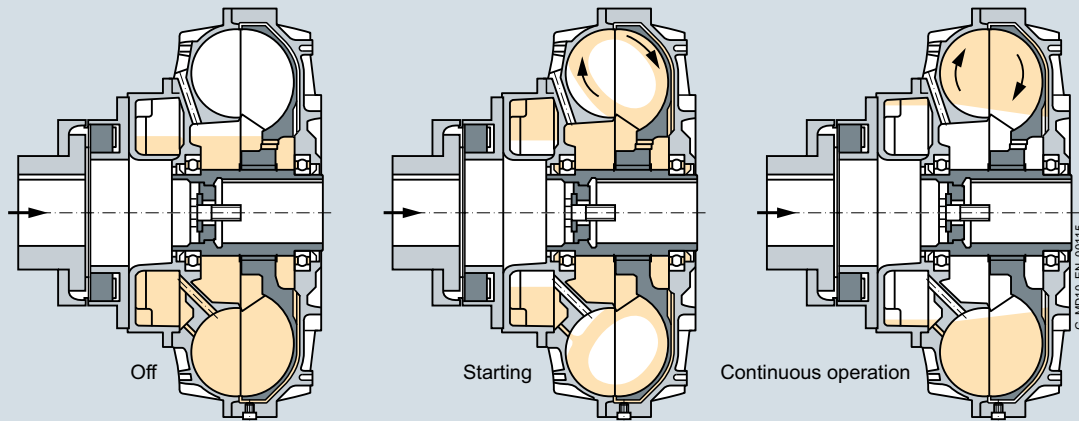
The torque characteristic depends on the oil filling quantity FG in the coupling. This enables the transmissible torque on starting up to be set via the filling level. With a higher filling level the starting torque increases, while the operating slip and thus the coupling temperature rise decreases.

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

FLENDER Standard Couplings

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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 article number 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: article number 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: Article number 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

Variant 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 atmospheres

The coupling with fusible safety plugs with identity marking Ex T3 is suitable for the operating conditions set out in the current ATEX Directive:

- 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 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.

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.

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Axial retention

Axial retention is provided by a set screw or end washer with a retaining screw for shaft ends to DIN 748/1 long with a centering thread to DIN 332/2. Other methods must be specified in the order, using the article number 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.

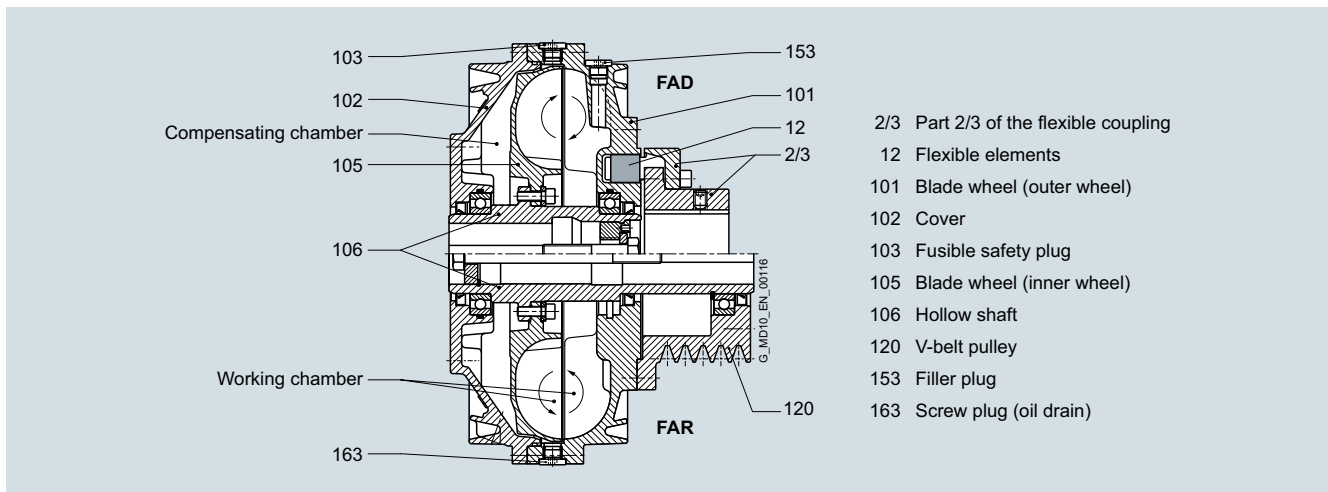
Selection of FLUDEX series

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)



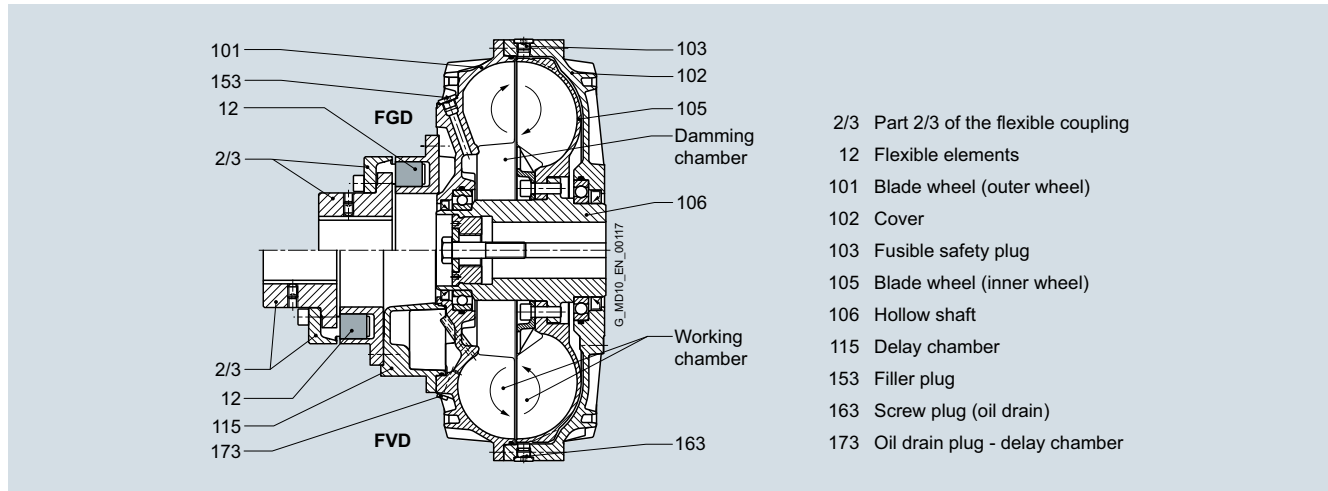
FLUDEX FA series couplings are basic couplings (without delay chamber) which are driven via the hollow shaft (106) with attached blade wheel (105). This enables the advantages of the compensating chamber and the working chamber to be used to best effect. Combinations with brake drums/disks and pulleys 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.

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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 motor starting. In the FV series the delay chamber also receives part of the oil filling in accordance with the fluid level when the coupling is stationary. During starting the effective oil filling in the working chamber is reduced by the amount of fluid in the delay chamber,

thus considerably reducing the starting torque (approx. 1.5 times T_N). From the delay chamber located on the drive side, the oil is fed back time-dependently to the working chamber via small holes and the coupling torque is raised, even if the output is blocked.

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

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

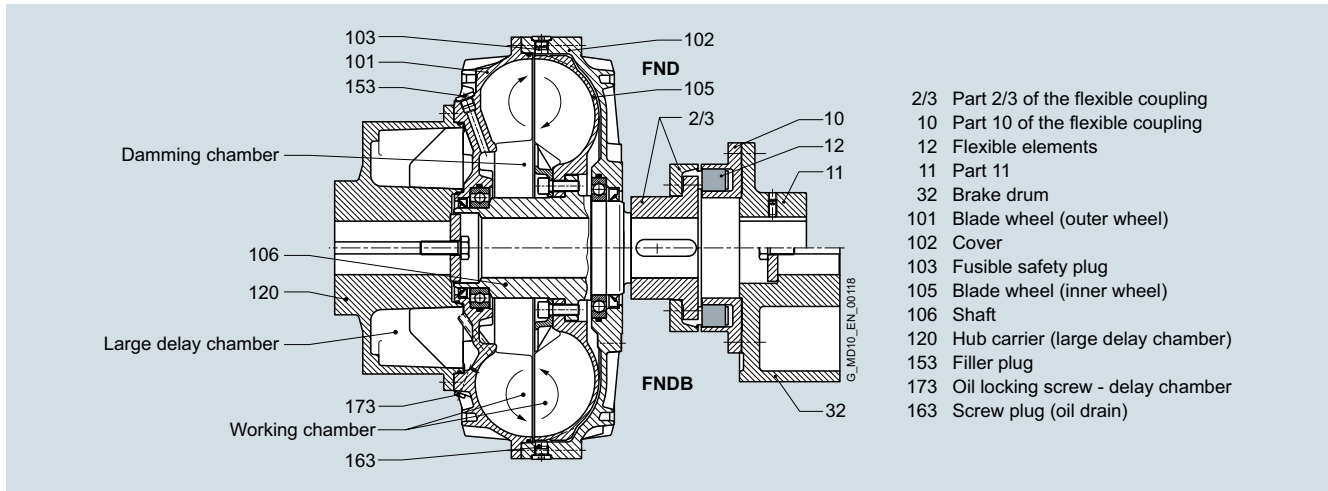
FG series couplings are used for normal starting torque limitation, as a starting clutch for isolating vibration and for overload limitation in the event of drive blockage.

FLUDEX Standard Couplings

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FN series – drive via the housing

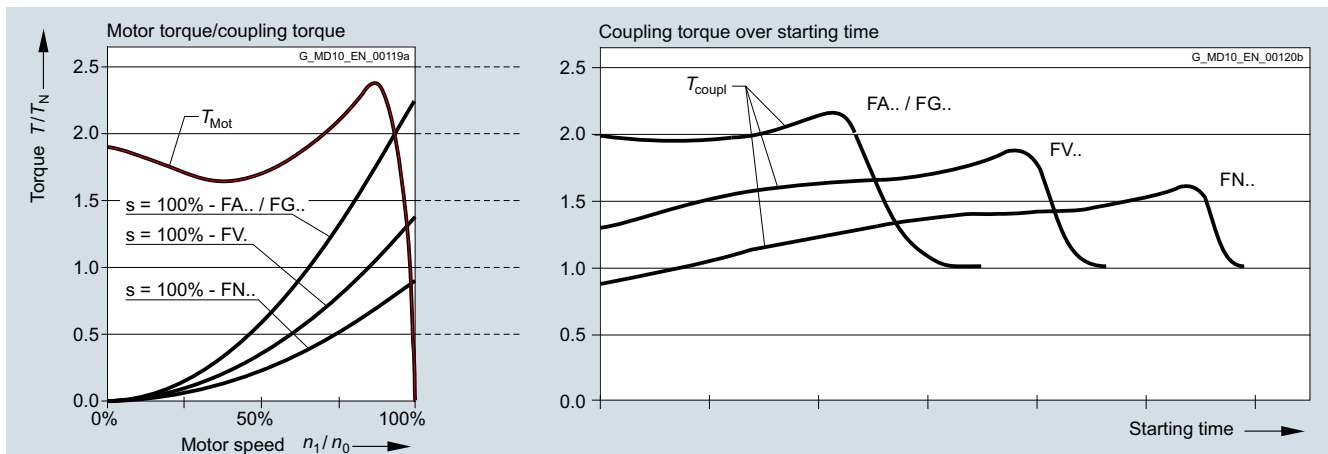


FLUDEX FN series couplings have a larger delay chamber than the FV series. The delay chamber is designed as a hub carrier (120) and is mounted on the motor shaft. The hub carrier is flange-fitted to the housing (101, 102) of the FLUDEX coupling. Output is via the blade wheel (105) and the shaft (106) 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 motor 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
FA../FG..	Basic coupling without delay chamber
FV..	Coupling with delay chamber
FN..	Coupling with large delay chamber

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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
FA - 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 D	¹⁾
	FAE	N-EUPEX E	enables larger bores on the output side
	FAM	N-EUPEX M	enables a short fitting length
	FADB	N-EUPEX D	with brake drum
	FADS SB	N-EUPEX D	¹⁾ with brake disk for stopping brakes
FADS HB	N-EUPEX D	¹⁾ with brake disk for blocking brakes	
FG - 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 D	¹⁾
	FGE	N-EUPEX E	enables larger bores on the output side
	FGM	N-EUPEX M	enables a short fitting length
FV - 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 D	¹⁾
	FVE	N-EUPEX E	enables larger bores on the output side
	FVM	N-EUPEX M	enables a short fitting length
FN - 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 A	¹⁾ enables a short fitting length
	FND	N-EUPEX D	^{1) 2)}
	FNDB	N-EUPEX D	^{1) 2)} with brake drum
	FNDS SB	N-EUPEX D	^{1) 2)} with brake disk for stopping brakes
	FNDS HB	N-EUPEX D	^{1) 2)} 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.

¹⁾ Enables change of flexible elements without moving the machines axially.

²⁾ Enables the coupling to be fitted or dismantled without displacing the coupled machines.

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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	222	
1.2	2.3	4	5.5	9	14	18.5	23	29	37	48	60	70	90	297	
2.6	4.8	8.7	11.5	18	27	34	40	51	65	82	97	120	145	342	
5.7	10	16	21	36	49	61	74	87	105	135	165	180		395	
11	21	32	41	65	90	110	127	155	190	230	290	370		450	
19	36	60	75	115	154	190	215	260	310	395				516	
37	69	109	134	200	260	320	360	435	540					590	

FG, FV and FN series

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	370	
7.5	15	23	30	48	70	90	115	140	175	220	280	340		425	
15	30	45	58	95	140	180	210	245	300	380	480			490	
28	55	85	110	180	255	300	350	420	525	660				565	
55	110	170	220	350	450	520	600	730	900					655	
110	210	330	440	600	760	870	1010	1220						755	
240	440	700	810	1130	1440	1660								887	
480	880	1400	1600	2000	2350	2500								887D¹⁾	

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

¹⁾ D = double-flow variant on request.

FLENDER Standard Couplings

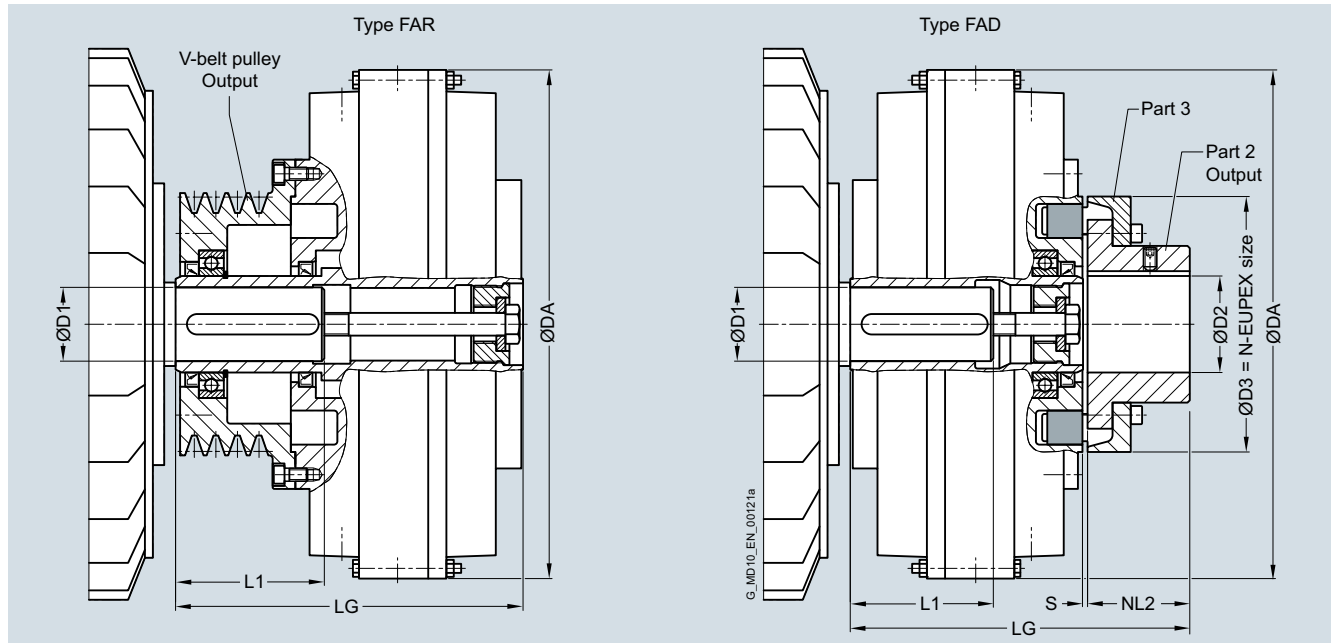
Fluid Couplings – FLUDEX Series

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	FLUDEX			Type FAR (with V-belt pulley)				Type FAD (with N-EUPEX D add-on coupling)									
Size	P_M	D_1	Size	Oil filling	DA	Profile, pitch Ø	No. of grooves	Recommended no. of belts ¹⁾	LG	Article No.	Weight	LG	NL2	D3	D2 ²⁾	Article No.	Weight
	1500 rpm	$\frac{D_1}{L_1}$								with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3	m				max.	with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3	m
	kW	mm		l	mm	mm			mm	Available ex stock	kg			mm	mm	Available at short term	kg
80 M	0.55	19 x 40	222	0.9	263	SPZ 100	2	1	153	2LC0900-0AF90-0AA0 L0L	12	180	40	110	38	2LC0900-0AA9 -0AA0 L0L+M..	12
80 M	0.75	19 x 40		1.0		SPZ 100	2	1		2LC0900-0AF90-0AA0 L0L						2LC0900-0AA9 -0AA0 L0L+M..	
90 S	1.1	24 x 50		1.1		SPZ 100	2	1		2LC0900-0AF90-0AA0 L0P						2LC0900-0AA9 -0AA0 L0P+M..	
90 L	1.5	24 x 50		1.2		SPZ 100	2	1		2LC0900-0AF90-0AA0 L0P						2LC0900-0AA9 -0AA0 L0P+M..	
100 L	2.2	28 x 60		1.4		SPZ 100	2	2		2LC0900-0AF90-0AA0 L0R						2LC0900-0AA9 -0AA0 L0R+M..	
100 L	3	28 x 60		1.5		SPZ 100	2	2		2LC0900-0AF90-0AA0 L0R						2LC0900-0AA9 -0AA0 L0R+M..	
112 M	4	28 x 60		1.6		SPZ 160	3	2		2LC0900-0AF91-0AA0 L0R	14					2LC0900-0AA9 -0AA0 L0R+M..	
132 S	5.5	38 x 80		1.65		SPZ 160	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 (article number 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.

13

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	Profile, pitch Ø	No. of grooves	Recommended no. of belts ¹⁾	LG	Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3	Weight <i>m</i>	LG	NL2	D3	D2 ²⁾ max.	Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3	Weight <i>m</i>
	kW	mm	l	mm	mm				mm	Available ex stock	kg	mm	mm	mm	mm	Available at short term	kg
132 M	7.5	38 x 80	297	3.2	340	SPZ 150	5	3	226	2LC0900-1AF90-0AA0 L0V	27	233	50	125	45	2LC0900-1AA9 -0AA0 L0V+M..	24
160 M	11	42 x 110		3.5		SPZ 150	5	4		2LC0900-1AF90-0AA0 L0X						2LC0900-1AA9 -0AA0 L0X+M..	
160 L	15	42 x 110		3.8		SPZ 150	5	5		2LC0900-1AF90-0AA0 L0X						2LC0900-1AA9 -0AA0 L0X+M..	
180 M	18.5	48 x 110		4.0		SPA 190	4	4		2LC0900-1AF91-0AA0 L1B	32					2LC0900-1AA9 -0AA0 L1B+M..	
180 L	22	48 x 110	342	5.5	400	SPA 180	5	5	278	2LC0900-2AF90-0AA0 L1B	40	271	55	140	50	2LC0900-2AA9 -0AA0 L1B+M..	34
200 L	30	55 x 110		6.0		SPA 180	5	5X		2LC0900-2AF90-0AA0 L1D						2LC0900-2AA9 -0AA0 L1D+M..	
225 S	37	60 x 140	395	7.6	448	SPB 224	5	5	325	2LC0900-3AF90-0AA0 L1E	63	299	90	225	85	2LC0900-3AA9 -0AA0 L1E+M..	53
225 M	45	60 x 140		7.9		SPB 224	5	5		2LC0900-3AF90-0AA0 L1E						2LC0900-3AA9 -0AA0 L1E+M..	
250 M	55	65 x 140		8.4		SPB 224	5	5X		2LC0900-3AF90-0AA0 L1F						2LC0900-3AA9 -0AA0 L1F+M..	
280 S	75	75 x 140	450	10.8	512	SPB 250	8	7	410	2LC0900-4AF90-0AA0 L1H	94	338	100	250	95	2LC0900-4AA9 -0AA0 L1H+M..	70
280 M	90	75 x 140		11.3		SPB 250	8	8		2LC0900-4AF90-0AA0 L1H						2LC0900-4AA9 -0AA0 L1H+M..	
315 S	110	80 x 170		12.0		SPB 250	8	8X		2LC0900-4AF90-0AA0 L1J						2LC0900-4AA9 -0AA0 L1J+M..	
315 M	132	80 x 170	516	17.7	584	SPB 315	10	10	491	2LC0900-5AF90-0AA0 L1J	152	398	125	315	120	2LC0900-5AA9 -0AA0 L1J+M..	113
315 M	160	80 x 170		18.6		SPB 315	10	10X		2LC0900-5AF90-0AA0 L1J						2LC0900-5AA9 -0AA0 L1J+M..	

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

1
2
9

Delivery without oil filling: Without order code.

Delivery with oil filling (only above -20 °C): Article number 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: Article number 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 long with a centering thread to DIN 332/2.

Other methods must be specified in the order using the article number 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.

Article No.:

• 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**

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

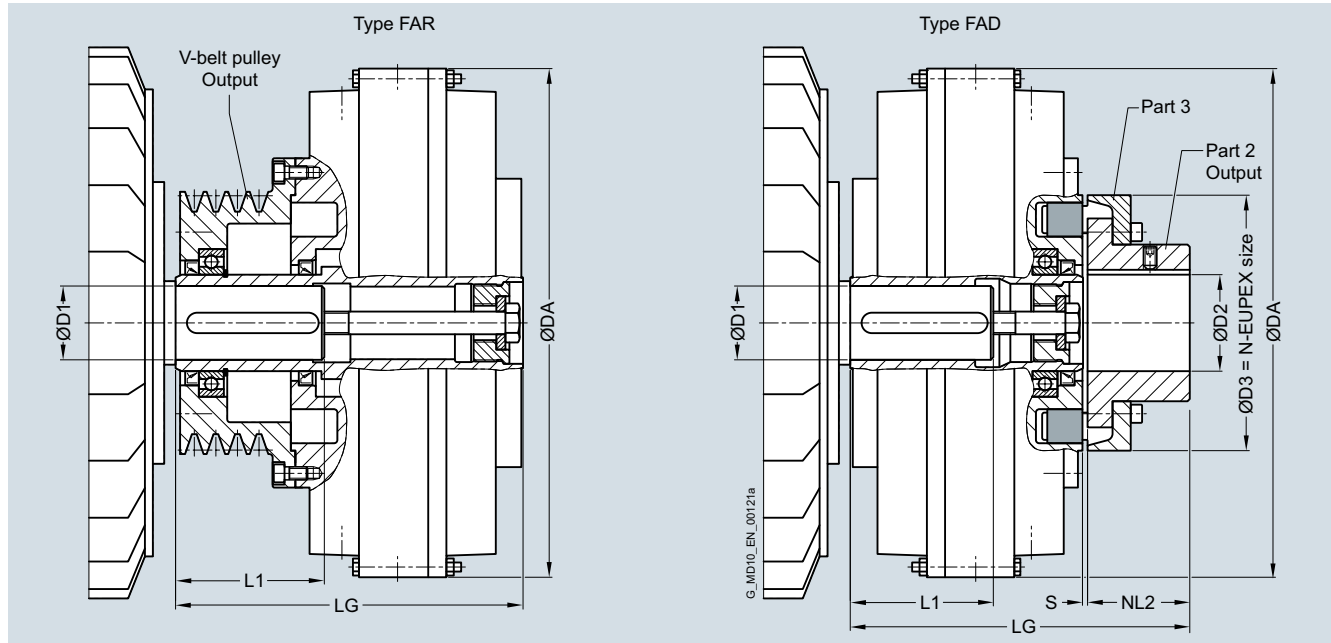
Fluid Couplings – FLUDEX Series

FLUDEX coupling as aid to starting IEC motors

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 ¹⁾	LG	Article No. with order codes for bore diameters and tolerances (article number without "-Z") - selection in catalog part 3	Weight <i>m</i>	LG	NL2	D3	D2 ²⁾ max.	Article No. with order codes for bore diameters and tolerances (article number without "-Z") - selection in catalog part 3	Weight <i>m</i>
	kW	mm	l	mm	mm	mm	mm	mm	mm	kg	mm	mm	mm	mm	mm	kg	
90 S	1.5	24 x 50	222	0.7	263	SPZ 100	2	1	153	2LC0900-0AF90-0AA0-Z LOP+W03	12	180	40	110	38	2LC0900-0AA9 -0AA0-Z LOP+M..+W03	12
90 L	2.2	24 x 50		0.8		SPZ 100	2	1		2LC0900-0AF90-0AA0-Z LOP+W03						2LC0900-0AA9 -0AA0-Z LOP+M..+W03	
100 L	3	28 x 60		0.9		SPZ 100	2	1		2LC0900-0AF90-0AA0-Z LOR+W03						2LC0900-0AA9 -0AA0-Z LOR+M..+W03	
112 M	4	28 x 60		1.0		SPZ 100	2	2		2LC0900-0AF90-0AA0-Z LOR+W03						2LC0900-0AA9 -0AA0-Z LOR+M..+W03	
132 S	5.5	38 x 80		1.0		SPZ 100	2	2		2LC0900-0AF90-0AA0-Z LOV+W03						2LC0900-0AA9 -0AA0-Z LOV+M..+W03	
132 S	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	
160 M	11	42 ³⁾ x 110		1.2		SPZ 160	3	2		2LC0900-0AF91-0AA0-Z LOX+W03						2LC0900-0AA9 -0AA0-Z LOX+M..+W03	
160 M	15	42 ³⁾ x 110		1.3		SPZ 160	3	3		2LC0900-0AF91-0AA0-Z LOX+W03						2LC0900-0AA9 -0AA0-Z LOX+M..+W03	
160 L	18.5	42 ³⁾ 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 (article number 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.

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

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

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

• With finished bore – With order codes for diameter and tolerance (article number without "-Z")

1
9

Delivery without oil filling: Without order code.

Delivery with oil filling (only above -20 °C): Article number 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: Article number 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 long with a centering thread to DIN 332/2.

Other methods must be specified in the order using the article number 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.

Article No.:

- 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 l**
- Delivery with specification of oil filling quantity:
2LC0900-3AA99-0AA0-Z L1F+M1E+W03+Y90
Plain text to Y90: **5.6 l**

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.

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

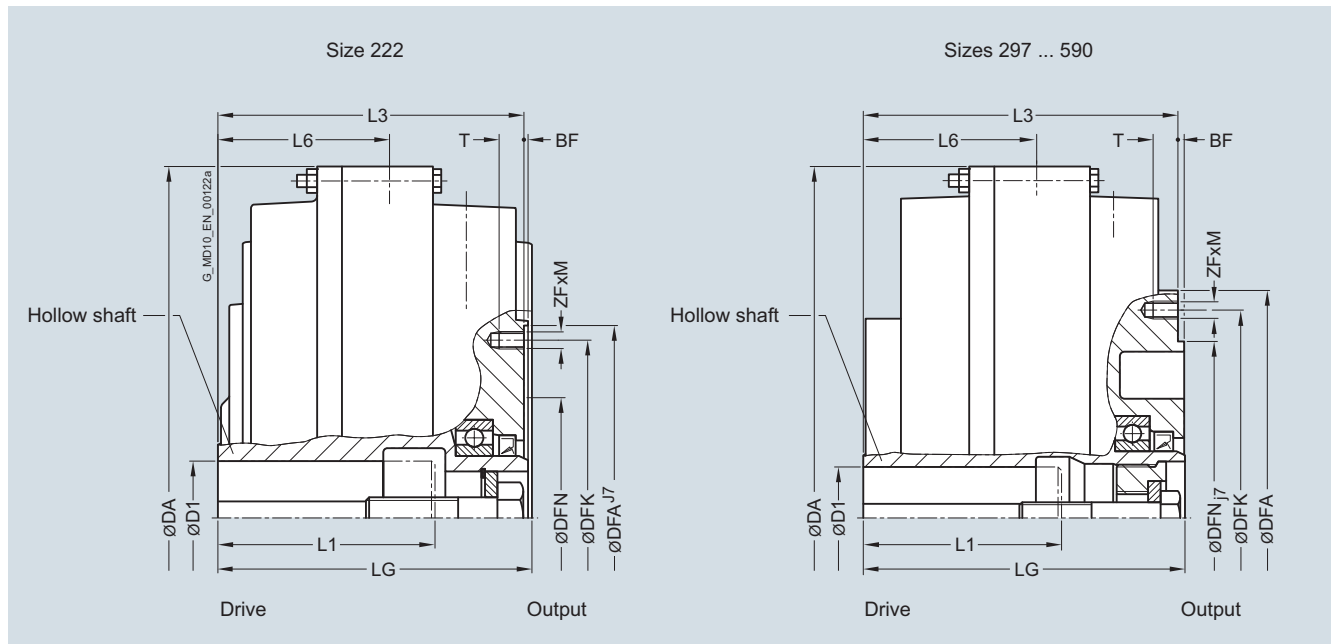
FLENDER Standard Couplings

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	Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3	Weight m			
		D1	L1	DA	LG	L3	L6	DFN	DFA	BF	DFK	ZF x M				T		
	rpm	min.	max.	Preferred bore												Nm		kg
222	3600	38	28	80	263	112	110	58	90	144	2	128	6 x M8	12	18.7	2LC0900-0AG90-0AA0 L..	10	
		>38 ¹⁾	42 ¹⁾															
297	3600	38	80	340	150	145	83	125	195	3	172	6 x M8	12	18.7	2LC0900-1AG90-0AA0 L..	18		
		>38	55	42	110													
		>55 ¹⁾	60 ¹⁾	110														
342	3600	55	48 + 55	110	400	180	174	101	140	230	4	205	8 x M10	15	31	2LC0900-2AG90-0AA0 L..	26	
		>55 ¹⁾	60 ¹⁾	120														
395	3000	65	60 + 65	140	448	205	200.5	110.5	225	290	4	265	8 x M12	18	54	2LC0900-3AG90-0AA0 L..	40	
450	3000	75	65 + 75	140	512	233	228	126	250	310	4	285	8 x M12	18	54	2LC0900-4AG90-0AA0 L..	53	
		>75	80	170														
516	2300	55	140	584	270	263	147	315	390	5	360	8 x M16	24	135	2LC0900-5AG90-0AA0 L..	84		
		>55	90	80	170													
590	2000	75	140	662	305	298	166	315	390	5	360	8 x M16	24	135	2LC0900-6AG90-0AA0 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).

Article No.:

- 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**

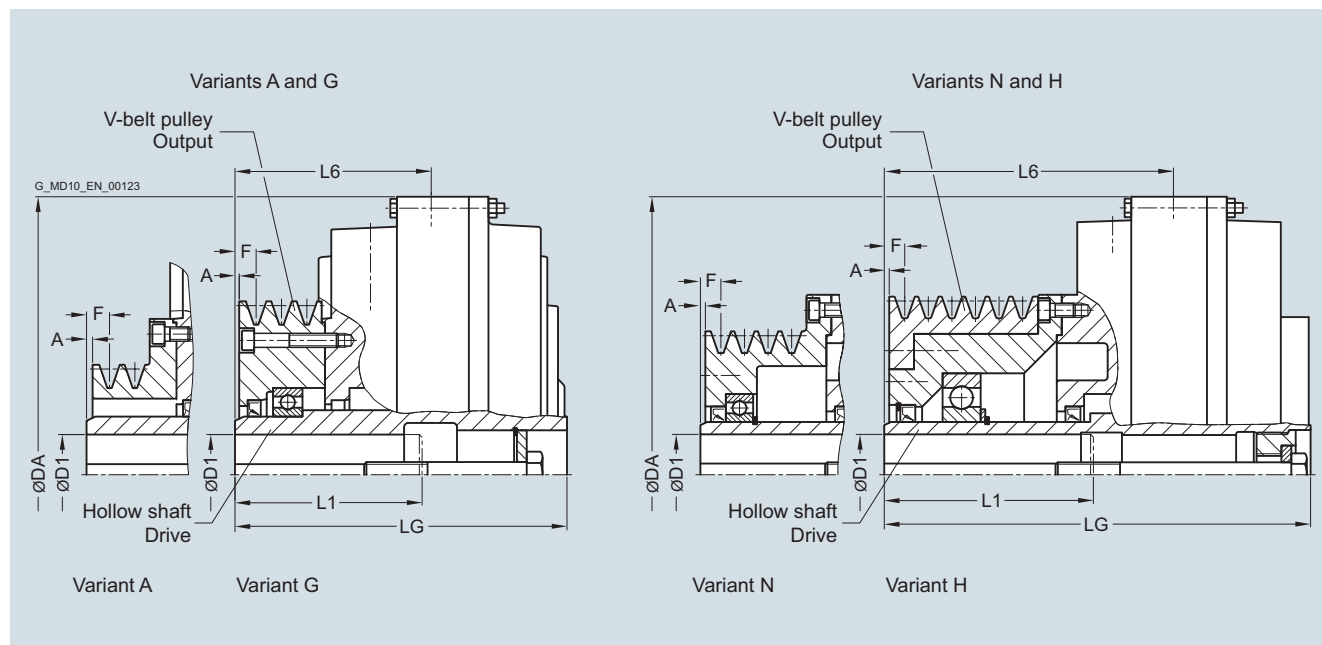
¹⁾ Variant with shallow keyway to DIN 6885/3.

FLENDER Standard Couplings

Fluid Couplings – FLUDEX Series

Type FAR with attached V-belt pulley

Selection and ordering data



Size	Maximum speed n_{kmax} rpm	Dimensions in mm						V-belt pulley				Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3 Available at short term	Weight <i>m</i> kg
		D1 Keyway to DIN 6885 min. max. Preferred bore	L1 max.	DA	LG	L6	Profile, pitch diameter	No. of grooves	A	F	Variant		
222	3600	28 28 60	263	153	95	SPZ 100	2	1	9	A	2LC0900-0AF90-0AA0 L..	12	
		>28 38 105				SPZ 160	3			G	2LC0900-0AF91-0AA0 L..	14	
		>38 ¹⁾ 42 ¹⁾ 110											
297	3600	38 80 340	226	143		SPZ 150	5	2	10	N	2LC0900-1AF90-0AA0 L..	27	
		>38 55 42 110				SPZ 150	5	2		N	2LC0900-1AF90-0AA0 L..	27	
		>55 ¹⁾ 59 ¹⁾ 110				SPA 190	4	0		H	2LC0900-1AF91-0AA0 L..	32	
		>59 ¹⁾ 60 ¹⁾ 140				SPA 224	5	0		G	2LC0900-1AF92-0AA0 L..	35	
342	3600	55 55 110	400	278	177	SPA 180	5	4	14	N	2LC0900-2AF90-0AA0 L..	40	
395	3000	55 110 448	325	214.5		SPB 224	5	4	16.5	N	2LC0900-3AF90-0AA0 L..	63	
		>55 65 60 + 65 140											
	3000	55 110 448	363.5	253		SPB 236	7			N	2LC0900-3AF91-0AA0 L..	70	
	2700	>55 75 140				SPB 280	7			H	2LC0900-3AF92-0AA0 L..	83	
450	3000	55 110 512	410	284		SPB 250	8	4	16.5	N	2LC0900-4AF90-0AA0 L..	94	
		>55 75 65 + 75 140											
		>75 80 170											
516	2300	55 110 584	491	344		SPB 315	10	4	16.5	N	2LC0900-5AF90-0AA0 L..	152	
		>55 75 140											
		>75 95 170											
		>95 100 210											
590	2000	55 110 662	642	476		SPC 315	12	4	21	N	2LC0900-6AF90-0AA0 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.**

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

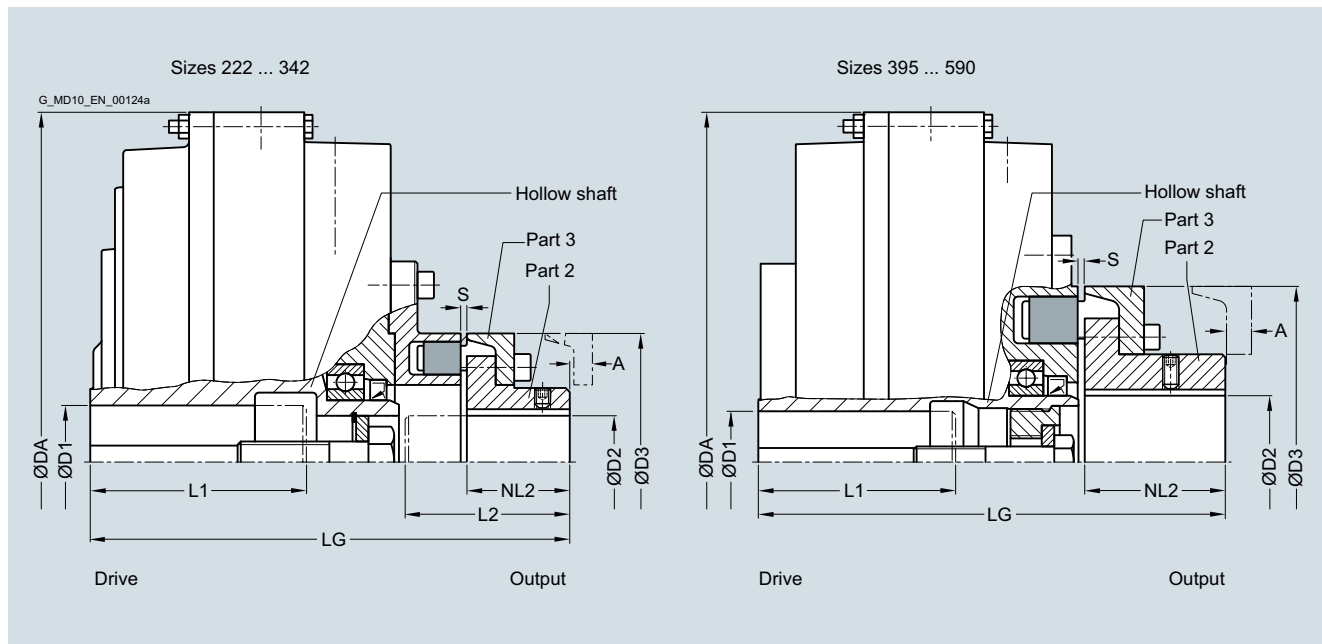
FLENDER Standard Couplings

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					Article No. with order codes for bore diameters and tolerances (article number without "-Z") - selection in catalog part 3	Weight <i>m</i>	
		D1	L1	DA	LG	D2	L2	NL2	D3	S	A			
	rpm	min.	max.	Preferred bore		max.								
		In standard type available ex stock Available at short term												
222	3600	38	28	80	263	180	38	65	40	110	3 ⁺¹ ₋₁	13	2LC0900-0AA9 ■ -0AA0 L...M..	12
		>38 ¹⁾	42 ¹⁾											
297	3600	38	42	110	340	233	45	80	50	125	3 ⁺¹ ₋₁	11	2LC0900-1AA9 ■ -0AA0 L...M..	24
		>38	55	110										
		>55 ¹⁾	60 ¹⁾	110										
342	3600	55	48 + 55	110	400	271	50	88	55	140	3 ⁺¹ ₋₁	16	2LC0900-2AA9 ■ -0AA0 L...M..	34
		>55 ¹⁾	60 ¹⁾	120										
395	3000	65	60 + 65	140	448	299	85	90	90	225	4,5 ^{+1,5} _{-1,5}	9	2LC0900-3AA9 ■ -0AA0 L...M..	53
450	3000	75	65 + 75	140	512	338	95	100	100	250	6 ⁺² ₋₃	11	2LC0900-4AA9 ■ -0AA0 L...M..	70
		>75	80	170										
516	2300	55	80	140	584	398	120	125	125	315	5 ⁺³ ₋₂	0	2LC0900-5AA9 ■ -0AA0 L...M..	113
		>55	90	170										
590	2000	75	80	140	662	433	120	125	125	315	5 ⁺³ ₋₂	0	2LC0900-6AA9 ■ -0AA0 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..
- Without finished bore only for sizes 516 and 590 with large hub (ØD2 max. 88 ... 120 mm) – Without order code M..
- With finished bore – With order codes for diameter and tolerance (article number without "-Z")

1
2
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).

Article No.:

2LC0900-5AA99-0AA0-Z

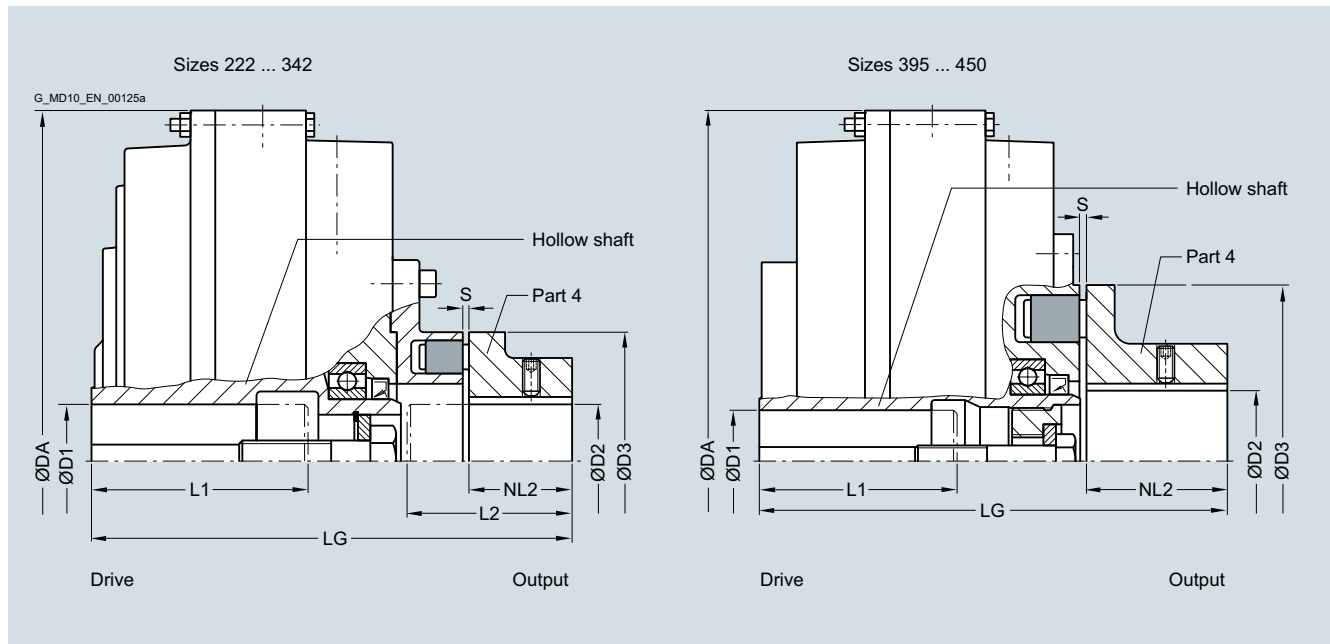
L1J+M1J+Y90

Plain text to Y90: **16.9 l**

1) 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					Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3 In standard type available ex stock Available at short term	Weight <i>m</i>
		D1 Keyway to DIN 6885		L1 max.	DA	LG	D2 max.	L2 max.	NL2	D3	S		
	rpm	min.	max.	Preferred bore					N-EUPEX size				kg
222	3600	38 >38 ¹⁾	28 42 ¹⁾	80	263	180	48	65	40	110	3 ⁺¹ ₋₁	2LC0900-0AB9 ■ -0AA0 L..+M..	12
297	3600	38 >38 >55 ¹⁾	55 60 ¹⁾	80 110 110	340	233	55	80	50	125	3 ⁺¹ ₋₁	2LC0900-1AB9 ■ -0AA0 L..+M..	24
342	3600	55 >55 ¹⁾	48 + 55 60 ¹⁾	110 120	400	271	60	88	55	140	3 ⁺¹ ₋₁	2LC0900-2AB9 ■ -0AA0 L..+M..	34
395	3000	65	60 + 65	140	448	299	90	90	90	225	4,5 ^{+1.5} _{-1.5}	2LC0900-3AB9 ■ -0AA0 L..+M..	50
450	3000	75 >75	65 + 75 80	140 170	512	338	100	100	100	250	6 ⁺² ₋₃	2LC0900-4AB9 ■ -0AA0 L..+M..	68

ØD2: • Without finished bore – Without order codes

• With finished bore – With order codes for diameter and tolerance (article number 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.

Article No.:

- 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

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

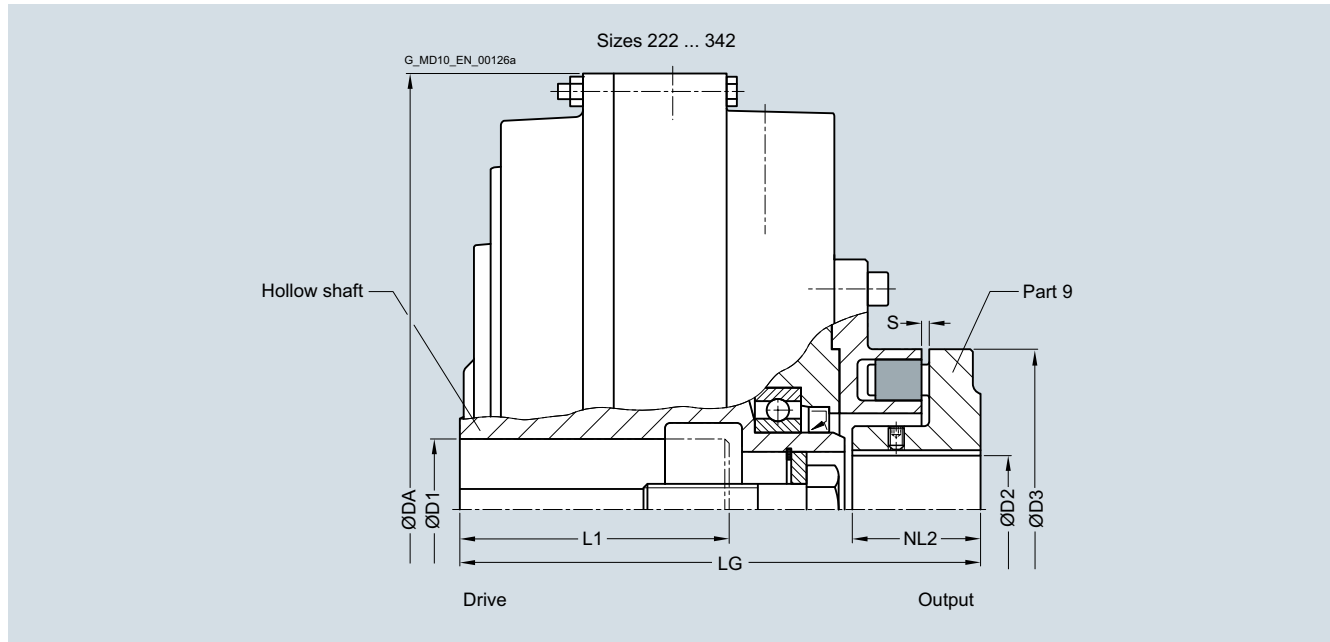
FLENDER Standard Couplings

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					Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3 In standard type available ex stock Available at short term	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									kg
222	3600	38	28	80	263	150	38	36	110	3 ⁺¹ ₋₁	2LC0900-0AH9 ■ -0AA0 L...M..	12	
		>38 ¹⁾	42 ¹⁾										
297	3600	38	80	340	203	48	50	125	3 ⁺¹ ₋₁	2LC0900-1AH9 ■ -0AA0 L...M..	24		
		>38	55	42	110								
		>55 ¹⁾	60 ¹⁾	110									
342	3600	55	48 + 55	110	400	238	52	55	140	3 ⁺¹ ₋₁	2LC0900-2AH9 ■ -0AA0 L...M..	34	
		>55 ¹⁾	60 ¹⁾	120									

ØD2: • Without finished bore – Without order codes
• With finished bore – With order codes for diameter and tolerance (article number without "-Z")

1
9

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.

Article No.:

- 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

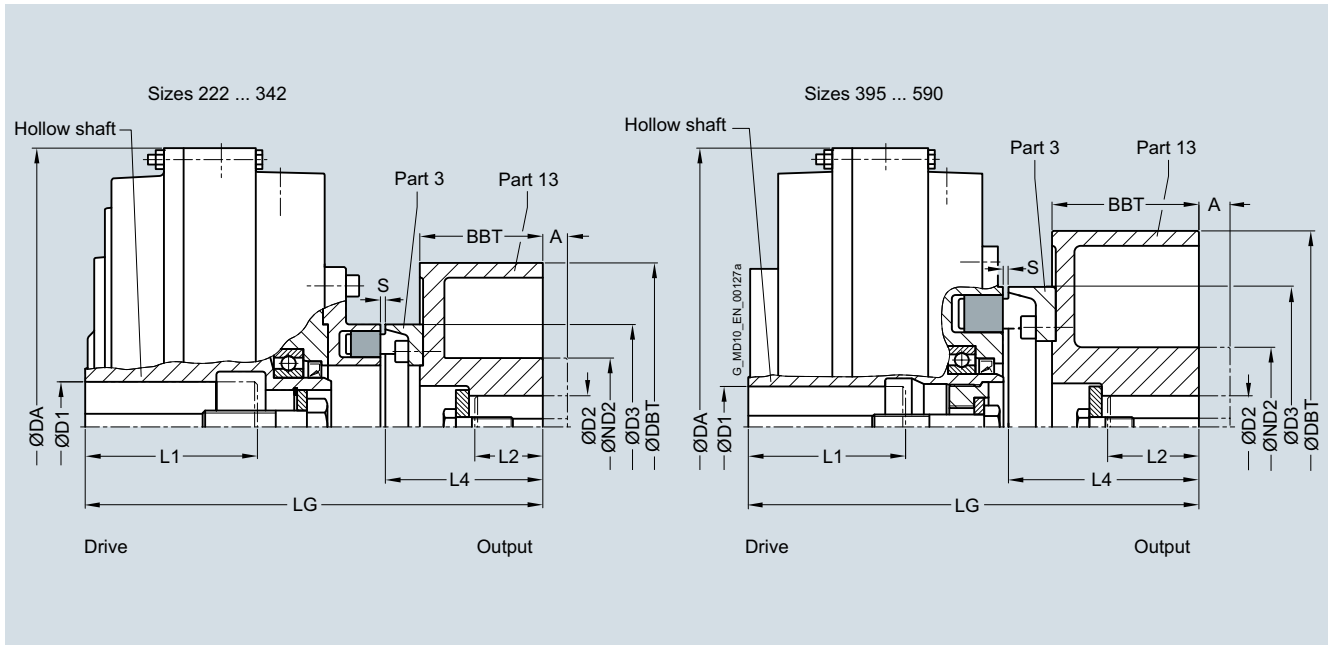
¹⁾ Variant with shallow keyway to DIN 6885/3.

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					Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3	Weight <i>m</i> kg	
		D1	L1	DA	LG	D3	S	L4	D2	ND2	DBT	BBT			A
222	3600	38	80	263	232	110	3^{+1}_{-1}	92	42	68	200	75	30	2LC0900-0AC9 ■ -0 ■ A0-Z L..+M..+Y..	17
		>38 ¹⁾	42 ¹⁾												
297	3600	38	80	340	279	125	3^{+1}_{-1}	96	55	84	200	75	30	2LC0900-1AC9 ■ -0 ■ A0-Z L..+M..+Y..	29
		>38	55	110											
		>55 ¹⁾	60 ¹⁾	110											
342	3000	55	110	400	337	140	3^{+1}_{-1}	121	60	100	250	95	50	2LC0900-2AC9 ■ -0 ■ A0-Z L..+M..+Y..	48
		>55 ¹⁾	60 ¹⁾	120											
395	2400	65	140	448	362	225	$4.5^{+1.5}_{-1.5}$	153	80	128	315	118	50	2LC0900-3AC9 ■ -0 ■ A0-Z L..+M..+Y..	71
		>75	80	170											
450	2400	75	140	512	395	250	6^{+2}_{-3}	157	80	128	315	118	50	2LC0900-4AC9 ■ -0 ■ A0-Z L..+M..+Y..	86
		>75	80	170											
516	1900	55	140	584	466	315	5^{+3}_{-2}	193	100	160	400	150	80	2LC0900-5AC9 ■ -0 ■ A0-Z L..+M..+Y..	146
		>55	90	170											
590	1500 ²⁾	75	140	662	540	315	5^{+3}_{-2}	232	110	175	500	190	110	2LC0900-6AC9 ■ -0 ■ A0-Z 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 (article number 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

Weight *m*: Without hub prolongations "A", with set screw.

For ordering example, see page 13/24.

L2 denotes the shaft insertion depth.

In the case of shaft ends deviating from DIN 748/1 long the insertion depth must be specified in plain text with "Y29".

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

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

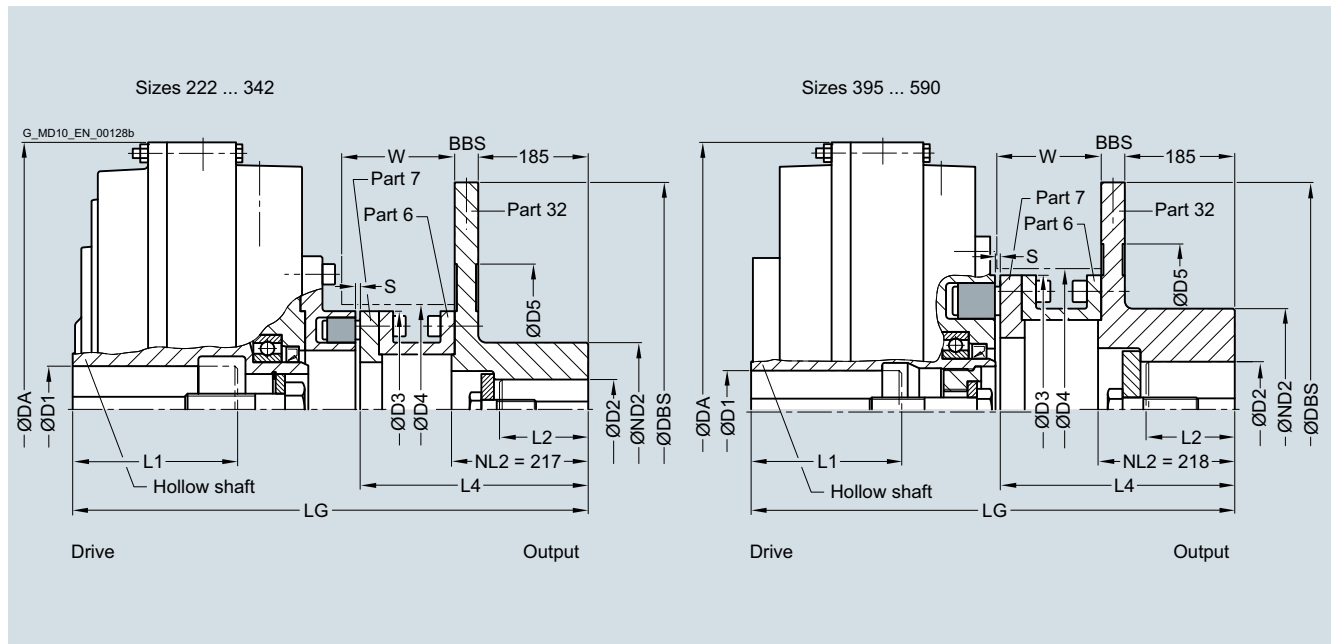
FLENDER Standard Couplings

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															Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3 Available at short term	Weight m kg
		FLUDEX coupling			N-EUPEX coupling			Part 32 ¹⁾			Space dimensions			D4	W			
		D1	L1	DA	LG	D3	S	L4	D2	ND2	DBS	BBS	D5			D4	W	
222	3000	38	80	263	494	110	5 ⁺¹	352	42	100	315	30	165	115	149	2LC0900-0AD9	-0AA0	35
		>38 ²⁾	42 ²⁾													L..+M..		
297	2600	38	80	340	537	125	5 ⁺¹	352	60	120	355	30	205	130	155	2LC0900-1AD9	-0AA0	68
		>38	55	110												L..+M..		
		>55 ²⁾	60 ²⁾	110														
342	2300	55	110	400	570	140	5 ⁺¹	352	60	120	400	30	250	145	155	2LC0900-2AD9	-0AA0	83
		>55 ²⁾	60 ²⁾	120												L..+M..		
395	2100	65	140	448	602	225	6 ⁺¹	391.5	80	150	450	30	300	230	182	2LC0900-3AD9	-0AA0	102
																L..+M..		
450	1700	75	140	512	630.5	250	8 ⁺¹	390.5	90	160	560	30	370	260	182	2LC0900-4AD9	-0AA0	141
		>75	80	170												L..+M..		
516	1500	55	140	584	706.5	315	8 ⁺¹	430.5	100	160	630	30	440	325	222	2LC0900-5AD9	-0AA0	199
		>55	90	170												L..+M..		
590	1500	75	140	662	741.5	315	8 ⁺¹	430.5	100	160	630	30	440	325	222	2LC0900-6AD9	-0AA0	224
		>75	95	170												L..+M..		
		>95	100	210														

ØD2: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (article number 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.

Article No.:

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 748/1 long the insertion depth must be specified in plain text with "Y29".

¹⁾ Hub reduction possible; specify article number with "-Z" and order code "Y99" with dimension NL2 in plain text..

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

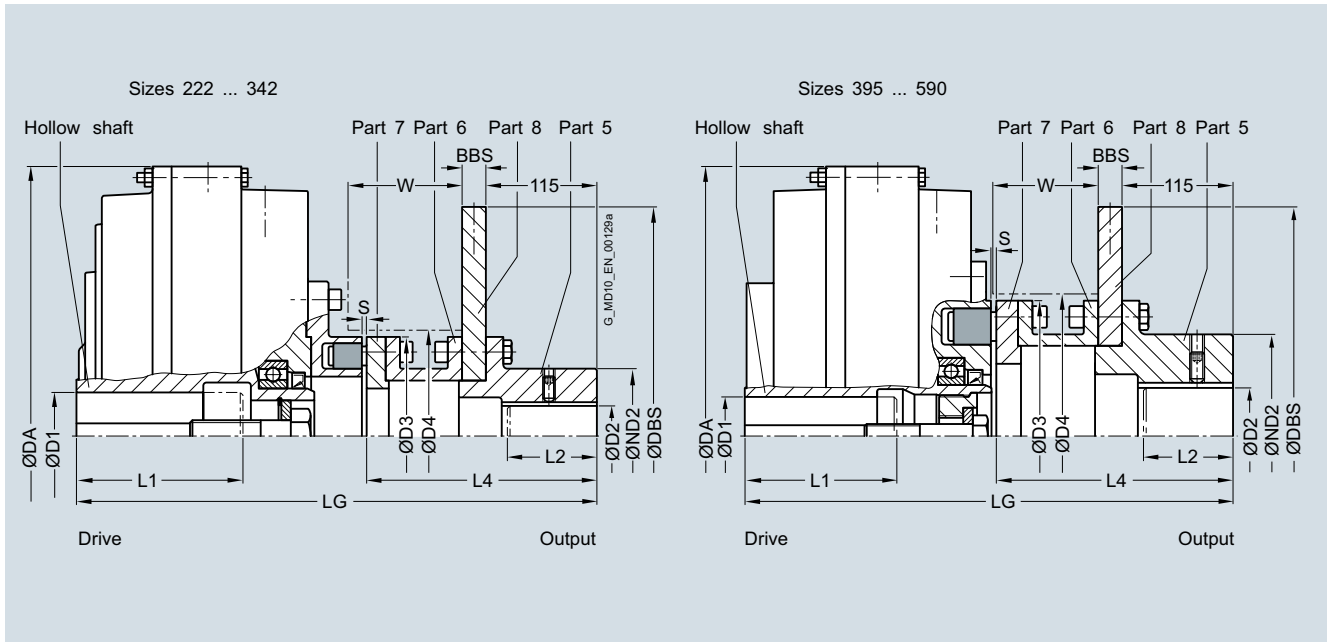
FLENDER Standard Couplings

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													Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3 Available at short term	Weight m kg	
		FLUDEX coupling				N-EUPEX coupling				Part 5/8 ¹⁾		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.								
222	3600	38 80 >38 ²⁾ 42 ²⁾	263	366.5	110	5 ⁺¹	224.5	42	70	250	12.5	115	109			2LC0900-0AE9 ■ -0AA0 L..+M..	22
297	3600	38 80 >38 55 >55 ²⁾ 60 ²⁾	340	409.5	125	5 ⁺¹	224.5	60	85	250	12.5	130	115			2LC0900-1AE9 ■ -0AA0 L..+M..	33
342	3600	55 110 >55 ²⁾ 60 ²⁾	400	442.5	140	5 ⁺¹	224.5	60	90	250	12.5	145	115			2LC0900-2AE9 ■ -0AA0 L..+M..	45
395	3000	65 140	448	478	225	6 ⁺¹	267.5	80	150	355	16	230	142			2LC0900-3AE9 ■ -0AA0 L..+M..	80
450	3000	75 140 >75 80 170	512	546.5	250	8 ⁺¹	306.5	90	160	355	16	260	182			2LC0900-4AE9 ■ -0AA0 L..+M..	101
516	2300	55 140 >55 90 170	584	566.5	315	8 ⁺¹	290.5	100	160	450	16	325	166			2LC0900-5AE9 ■ -0AA0 L..+M..	154
590	2000	75 140 >75 95 170 >95 100 210	662	601.5	315	8 ⁺¹	290.5	100	160	450	16	325	166			2LC0900-6AE9 ■ -0AA0 L..+M..	179

ØD2: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (article number without "-Z")

1
9

L2 denotes the shaft insertion depth.

In the case of shaft ends deviating from DIN 748/1 long the insertion depth must be specified in plain text with "Y29".

For ordering example, see page 13/25.

¹⁾ Hub reduction possible; specify article number 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_{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).

Article No.:

- 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.

Article No.:

- 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_{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 $\varnothing D1 = 65H7$ mm with keyway to DIN 6885/1 and retaining screw,

Part 5: Bore $\varnothing D2 = 80H7$ 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.

Article No.:

- 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**

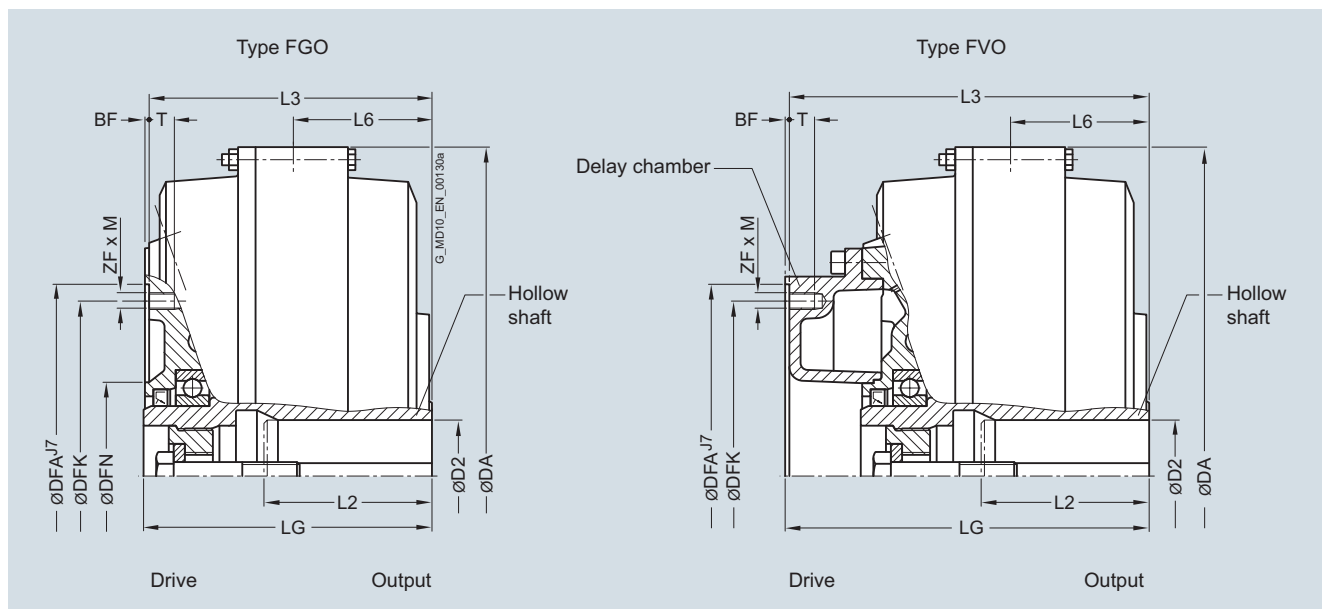
FLENDER Standard Couplings

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			Installation dimensions							Flange connection dimensions				Tightening torque for screws in thread ZF x M T_A Nm	Article No. with order codes for bore diameters and tolerances (article number without "-Z") - selection in catalog part 3	Weight m kg
			D2	L2	DA	LG	L3	L6	DFN	DFA	BF	DFK	ZF x M	T					
370	FGO	3600	75	140	420	185	182	84	126	220	3	200	8 x M10	15	31	2LC0900-8CE09-0AA0 M..	34		
	FVO					228	225	-								2LC0900-8ED09-0AA0 M..	37		
425	FGO	3000	80	140	470	205	202	99	134	274	3	250	8 x M12	18	54	2LC0901-0CE09-0AA0 M..	45		
	FVO					260	257	-								2LC0901-0ED09-0AA0 M..	47		
490	FGO	2600	55	110	555	236	232	105	141	314	4	282	8 x M16	24	135	2LC0901-1CE09-0AA0 M..	75		
	FVO		>55	75	140											2LC0901-1ED09-0AA0 M..	80		
565	FGO	2300	110	170	630	254	250	123	166	344	4	312	8 x M16	24	135	2LC0901-2CE09-0AA0 M..	95		
	FVO					337	333	-								2LC0901-2ED09-0AA0 M..	103		
655	FGO	2000	130	210	736	301	296	145	180	430	5	390	8 x M20	25	260	2LC0901-3CE09-0AA0 M..	142		
	FVO					389	384	-								2LC0901-3ED09-0AA0 M..	154		
755	FGO	1800	150	240	840	346	341	176	226	480	5	440	10 x M20	25	260	2LC0901-4CE09-0AA0 M..	208		
	FVO					445	440	-								2LC0901-4ED09-0AA0 M..	224		
887	FGO	1500	150	275	990	396	391	217	249	520	5	480	10 x M20	25	260	2LC0901-5CE09-0AA0 M..	362		
	FVO					498	493	-								2LC0901-5ED09-0AA0 M..	385		

For ordering example, see page 13/30.

FLENDER Standard Couplings

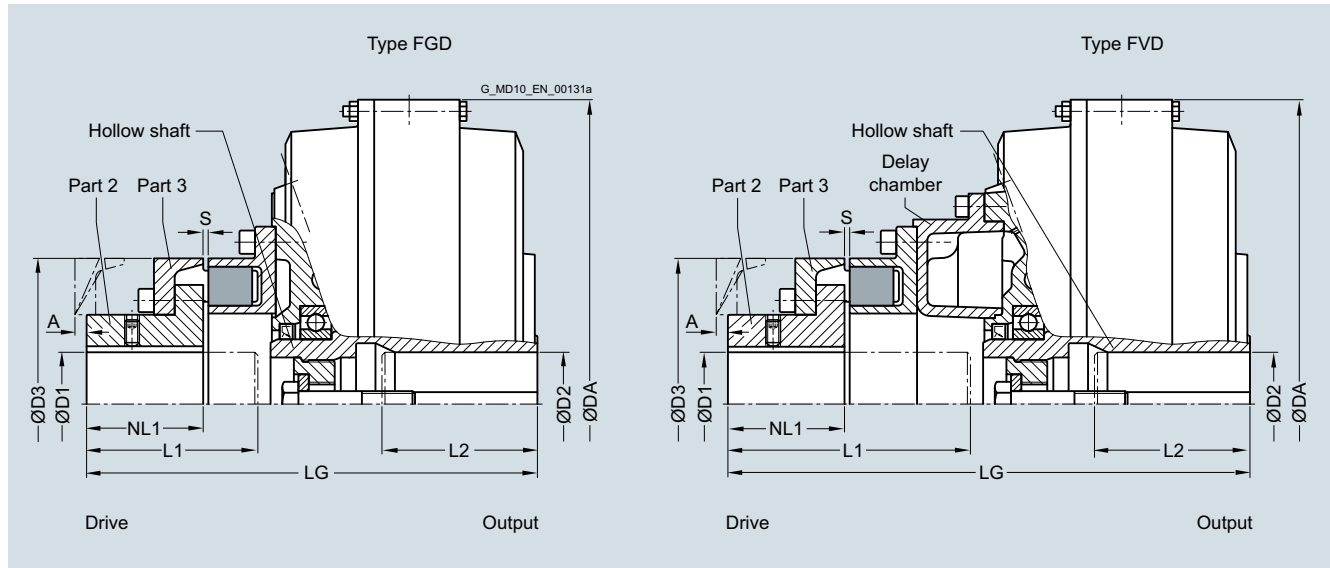
Fluid Couplings – FLUDEX Series

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							Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3 Available at short term	Weight <i>m</i> kg
			D2 Keyway to DIN 6885 min.	L2 max.	DA	LG	D1 max.	L1 max.	NL1	D3 N-EUPEX size	S	A			
370	FGD	3600	75	140	420	298	65	110	70	180	4 ⁺² ₋₂	10	2LC0900-8CA ■ 9-0AA0 L..+M..	44	
	FVD					341		150	47						
425	FGD	3000	80	140	470	348	85	140	90	225	4 ⁺² ₋₂	9	2LC0901-0CA ■ 9-0AA0 L..+M..	66	
	FVD					403		190	68						
490	FGD	2600	55	110	555	397	95	155	100	250	5 ⁺³ ₋₂	11	2LC0901-1CA ■ 9-0AA0 L..+M..	105	
	FVD		>55 >75	75 100		140 170		462	220					166	
565	FGD	2300	110	170	630	430	105	170	110	280	5 ⁺³ ₋₂	5	2LC0901-2CA ■ 9-0AA0 L..+M..	134	
	FVD					513		250	142						
655	FGD	2000	130	210	736	515	140	210	140	350	5 ⁺³ ₋₂	0	2LC0901-3CA ■ 9-0AA0 L..+M..	217	
	FVD					603		295	229						
755	FGD	1800	150	240	840	584	150	230	160	400	5 ⁺³ ₋₂	0	2LC0901-4CA ■ 9-0AA0 L..+M..	307	
	FVD					683		330	323						
887	FGD	1500	150	275	990	665	160	260	180	440	8 ⁺² ₋₃	0	2LC0901-5CA ■ 9-0AA0 L..+M..	491	
	FVD					767		365	514						

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 (article number without "-Z")

1

2

9

For ordering example, see page 13/31.

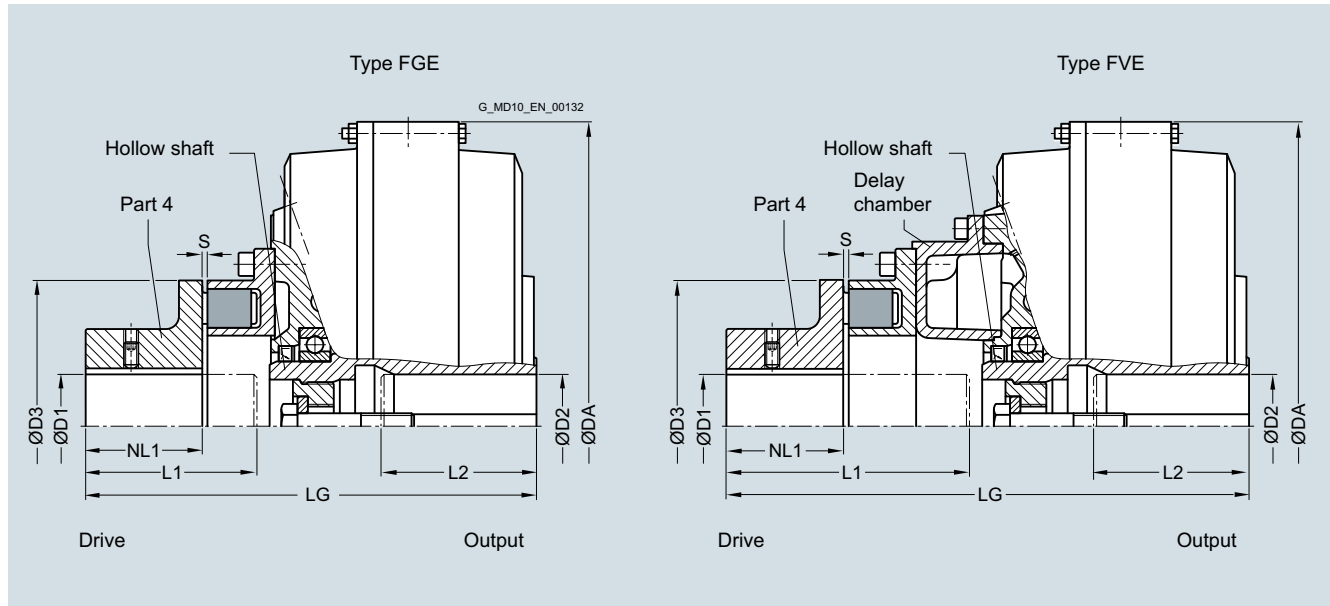
FLENDER Standard Couplings

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					Article No. with order codes for bore diameters and tolerances (article number without "-Z") – 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	4 ⁺² ₋₂	2LC0900-8CB ■ 9-0AA0 L...M..	44
	FVE												
425	FGE	3000	80	140	470	348	90	140	90	225	4 ⁺² ₋₂	2LC0901-0CB ■ 9-0AA0 L...M..	64
	FVE												
490	FGE	2600	55	110	555	397	100	155	100	250	5 ⁺³ ₋₂	2LC0901-1CB ■ 9-0AA0 L...M..	101
	FVE												
565	FGE	2300	110	170	630	430	110	170	110	280	5 ⁺³ ₋₂	2LC0901-2CB ■ 9-0AA0 L...M..	129
	FVE												

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (article number 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.

Article No.:

- With 110 °C thermal switch:

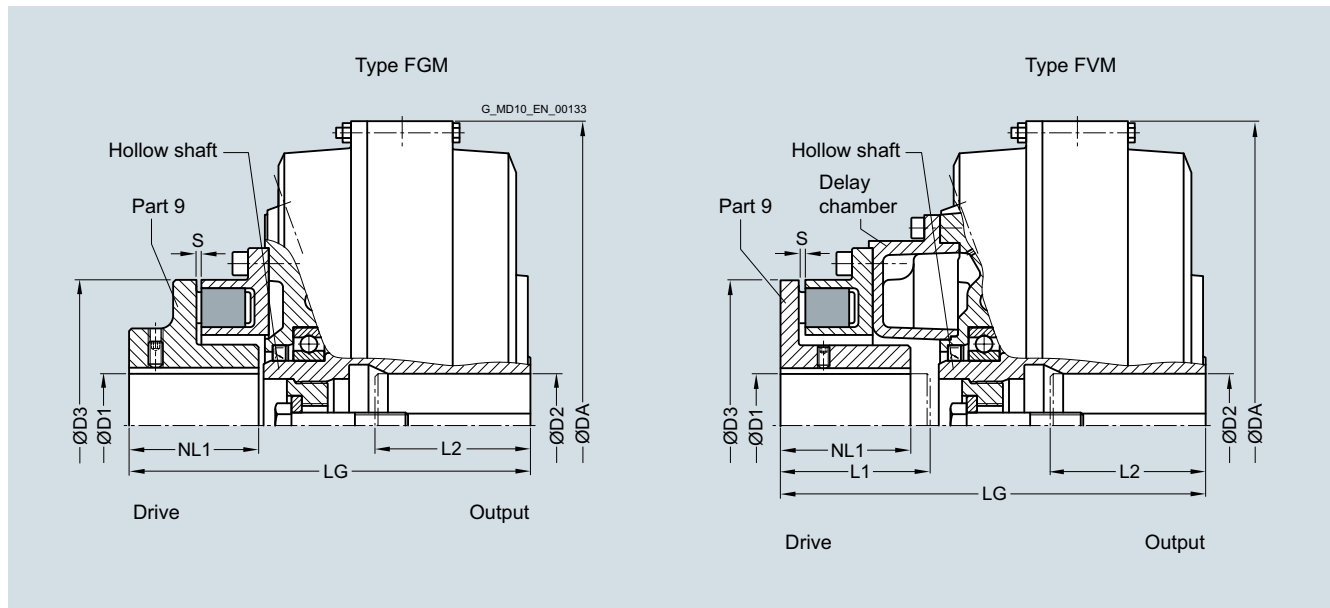
**2LC0900-8EB99-0AA0-Z
L1E+M1E+F03**

- 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					Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3	Weight m
			D2 Keyway to DIN 6885 min.	L2 max.	DA	LG	D1 max.	L1 max.	NL1	D3 N-EUPEX size	S		
370	FGM	3600	75	140	420	274	70	80	80	180	4 ⁺² ₋₂	2LC0900-8CD ■ 9-0AA0 L..+M..	44
	FVM					288		100	85				
425	FGM	3000	80	140	470	310	85	100	100	225	4 ⁺² ₋₂	2LC0901-0CD ■ 9-0AA0 L..+M..	64
	FVM					327		115	100				
490	FGM	2600	55	110	555	350	90	105	105	250	5 ⁺³ ₋₂	2LC0901-1CD ■ 9-0AA0 L..+M..	101
	FVM					>55 >75		75 100	140 170				
565	FGM	2300	110	170	630	380	100	120	120	280	5 ⁺³ ₋₂	2LC0901-2CD ■ 9-0AA0 L..+M..	128
	FVM					425		165	130				

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (article number 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.

Article No.:

- 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_{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	5.2	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	5.4	5.6		5.0													
5.5	13.0	13.8	6.9	7.4	6.0	6.2	5.4	5.6													
7.5	14.4	15.2	7.2	8.0	6.5	6.8	6.0	6.2	5.1	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	28.9	31.6	15.4	16.6	13.1	13.8	12.0	12.5	6.5	6.9	5.4	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	4.7	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	74.3	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	
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			94.7	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					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									91.1	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).

Article No.:

- 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_{eff}	Speed in rpm																		Size
	600		740		890		980		1180		1470		1770		2300		2950		
kW	Series		Series		Series		Series		Series		Series		Series		Series		Series		
	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	FG	FV	
	Oil filling quantity in l																		
2.2	7.8	8.0																	
3.0	8.7	9.1																	
4.0	9.5	9.9	7.8	8.1															
5.5	10.3	11.1	8.7	9.0															
7.5	10.9	12.0	9.5	9.9	7.9	8.3		7.4											
11	19.9	21.4	10.5	11.3	9.1	9.4	8.2	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	8.0	8.4									
22	24.3	27.0	20.3	21.9	10.9	11.7	10.1	10.8	8.6	9.0									
30	40.2	43.2	22.4	24.2	18.9	20.1	10.9	11.8	9.5	9.9		7.9							
37	42.6	45.7	23.7	26.0	20.1	21.7	18.5	19.5	10.0	10.7	8.2	8.6		6.7					
45	45.8	48.3	24.9	27.7	21.5	23.1	19.5	21.0	10.5	11.3	8.8	9.2		7.5					
55	50.1	51.2	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	55.6	58.0	43.8	46.8	24.6	27.4	22.9	24.8	19.3	20.7	10.1	10.8	8.6	9.0		6.5			
90	58.1	63.7	47.1	49.2	25.5	28.0	23.9	26.5	20.4	22.0	10.7	11.4	9.2	9.5	7.2	7.1			
110			51.7	52.3	41.5	44.5	25.5	28.0	21.8	23.4	17.7	18.7	9.7	10.2	7.6	7.8			
132			54.7	56.3	44.0	46.9	40.3	43.3	23.0	24.9	18.7	19.9	10.1	10.9	8.1	8.4	6.3	6.1	425
160			57.4	61.9	47.5	49.5	42.5	45.6	24.0	26.7	19.8	21.4	16.7	16.8	8.6	8.9	6.8	6.6	
200			59.0	65.0	52.9	53.2	46.2	48.6	25.5	41.7	21.4	23.0	17.9	18.9	9.2	9.6	7.3	7.3	
250					56.0	58.6	51.2	51.9	41.2	44.2	22.8	24.7	19.2	20.6	14.6	14.7	7.8	8.0	
315					59.0	65.0	55.1	57.0	44.4	47.3	24.2	26.8	20.6	22.3	16.1	16.1	8.3	8.7	
350							56.6	60.0	46.2	48.6	38.0	40.3	21.4	23.0	16.7	16.8			565
400							58.4	64.4	49.0	50.5	39.3	42.2	22.2	24.0	17.4	18.1			
500									53.7	54.7	41.6	44.6	36.3	37.9	18.7	19.9			
600									56.4	59.5	44.1	47.1	37.9	40.0		21.2			
750											48.4	50.0	40.0	42.9					755
900											52.8	53.2	42.0	45.0					
1100													45.0	47.7					

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 $\varnothing D_2 = 120H7$ mm with keyway to DIN 6885/1
and retaining screw,

Part 2: Bore $\varnothing D_1 =$ 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.

Article No.:

- Without finished bore for $\varnothing D_1 = 110$ mm:
2LC0901-3CA19-0AAO
L1S
- Without finished bore for $\varnothing D_1 = 130$ mm:
2LC0901-3CA29-0AAO
L1S
- With finished bore for $\varnothing D_1 = 140H7$ mm:
2LC0901-3CA99-0AAO
L1S+M1V

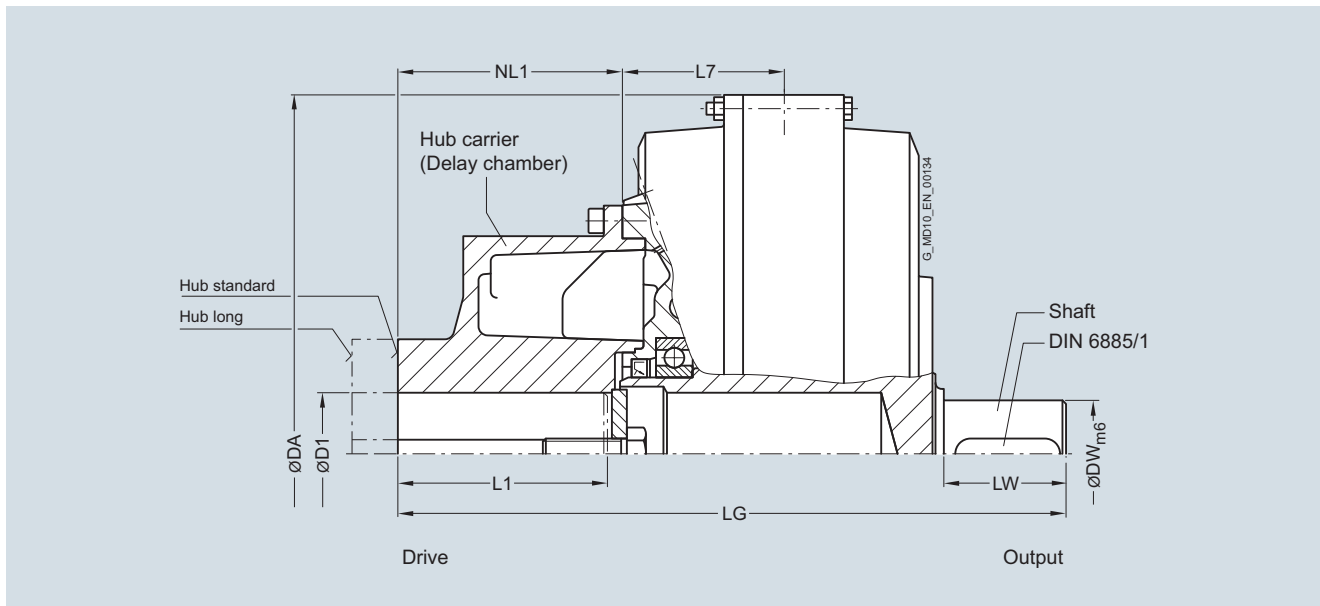
FLENDER Standard Couplings

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	Dimensions in mm Installation dimensions		Connection dimensions							Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3 Available at short term	Weight m kg	
			D1 Keyway to DIN 6885 min.	L1 max.	NL1	DA	LG	L7	DW	LW				
370	3600	Standard	38	55	110	115	420	380	101	60	70	2LC0900-8GA L..	0-1AA0	56
		Long	38	80	140	145	420	410				2LC0900-8GA L..	0-2AA0	55
425	3000	Standard	42	75	140	147	470	437	106	70	80	2LC0901-0GA L..	0-1AA0	77
		Long	42	100	170	177	470	467				2LC0901-0GA L..	0-2AA0	77
490	2600	Standard	48	75	140	148	555	485	131	70	90	2LC0901-1GA L..	0-1AA0	116
		Long	48	110	170	178	555	515				2LC0901-1GA L..	0-2AA0	116
565	2300	Standard	65	95	170	178	630	543	131	90	100	2LC0901-2GA L..	0-1AA0	158
		Long	65	120	210	218	630	583				2LC0901-2GA L..	0-2AA0	160
655	2000	Standard	65	110	210	218	736	644	156	100	125	2LC0901-3GA L..	0-1AA0	240
		Long	65	135	250	258	736	684				2LC0901-3GA L..	0-2AA0	240
755	1800	Standard	65	120	210	219	840	705	170	110	140	2LC0901-4GA L..	0-1AA0	321
		Long	65	150	250	259	840	745				2LC0901-4GA L..	0-2AA0	318
887	1500	Standard	65	150	250	251	990	835	187	120	178	2LC0901-5GA L..	0-1AA0	562
		Long	65	170	300	301	990	885				2LC0901-5GA L..	0-2AA0	563

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (article number without "-Z")

1

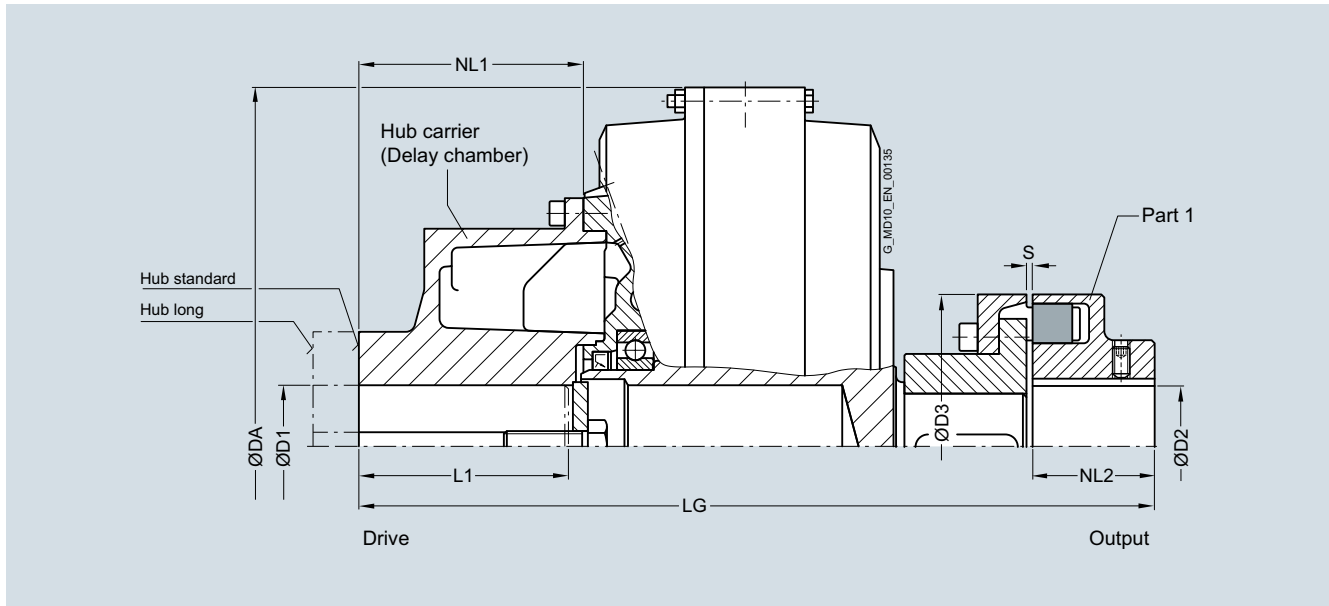
9

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					Article No. with order codes for bore diameters and tolerances (article number without "-Z") – 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	4 ⁺² ₋₂	2LC0900-8GB ■ ■ -1AA0 L..+M..	68
		Long	38	80	140	145	420	484					2LC0900-8GB ■ ■ -2AA0 L..+M..	67
425	3000	Standard	42	75	140	147	470	521	85	80	200	4 ⁺² ₋₂	2LC0901-0GB ■ ■ -1AA0 L..+M..	93
		Long	42	100	170	177	470	551					2LC0901-0GB ■ ■ -2AA0 L..+M..	93
490	2600	Standard	48	75	140	148	555	579	90	90	225	4 ⁺² ₋₂	2LC0901-1GB ■ ■ -1AA0 L..+M..	143
		Long	48	110	170	178	555	609					2LC0901-1GB ■ ■ -2AA0 L..+M..	143
565	2300	Standard	65	95	170	178	630	648	100	100	250	5 ⁺³ ₋₂	2LC0901-2GB ■ ■ -1AA0 L..+M..	193
		Long	65	120	210	218	630	688					2LC0901-2GB ■ ■ -2AA0 L..+M..	195
655	2000	Standard	65	110	210	218	736	774	120	125	315	5 ⁺³ ₋₂	2LC0901-3GB ■ ■ -1AA0 L..+M..	311
		Long	65	135	250	258	736	814					2LC0901-3GB ■ ■ -2AA0 L..+M..	311
755	1800	Standard	65	120	210	219	840	850	140	140	350	5 ⁺³ ₋₂	2LC0901-4GB ■ ■ -1AA0 L..+M..	420
		Long	65	150	250	259	840	890					2LC0901-4GB ■ ■ -2AA0 L..+M..	417
887	1500	Standard	65	150	250	251	990	1023	160	180	440	8 ⁺² ₋₃	2LC0901-5GB ■ ■ -1AA0 L..+M..	726
		Long	65	170	300	301	990	1073					2LC0901-5GB ■ ■ -2AA0 L..+M..	727

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (article number without "-Z")

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

Size 655 ØD2 max = 100 mm, size 755 ØD2 max = 110 mm, size 887 ØD2 max = 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 (article number without "-Z")

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

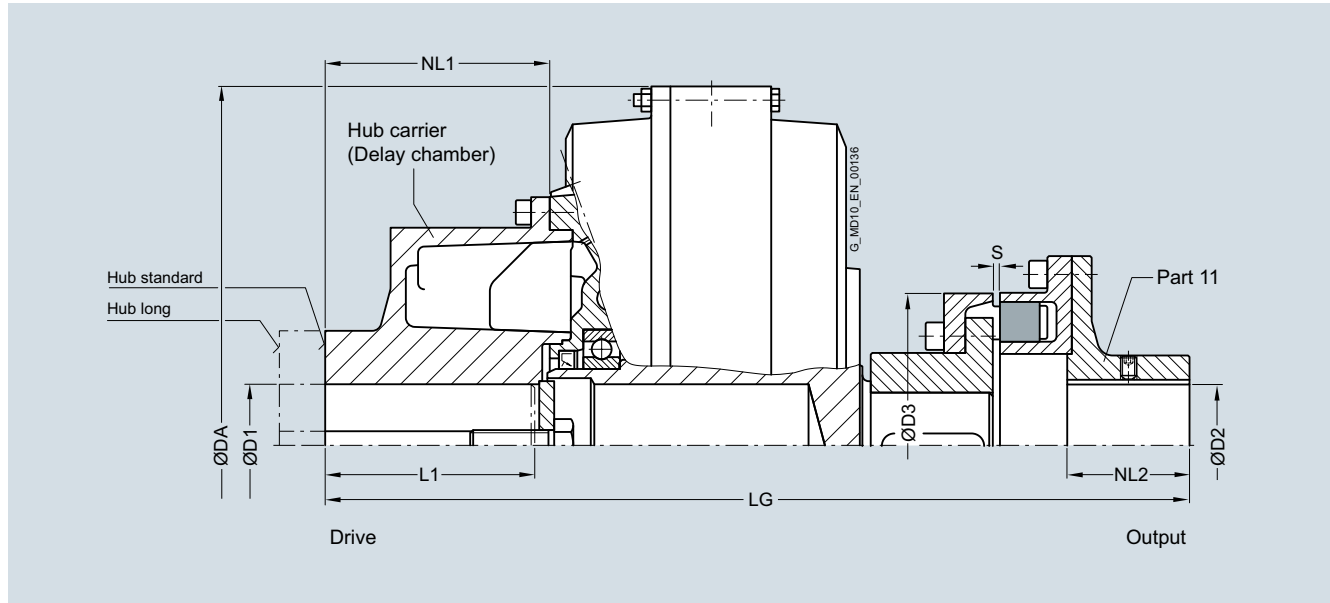
FLENDER Standard Couplings

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} rpm	Hub carrier Hub Standard Long	Dimensions in mm FLUDEX coupling						N-EUPEX D coupling				Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3	Weight m 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	494	70	70	180	5 ⁺¹ ₋₁	2LC0900-8GC ■ ■ -1AA0 L..+M..	72
		Long	38	80	140	145	420	524					2LC0900-8GC ■ ■ -2AA0 L..+M..	71
425	3000	Standard	42	75	140	147	470	566	80	80	200	5 ⁺¹ ₋₁	2LC0901-0GC ■ ■ -1AA0 L..+M..	99
		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	5 ⁺¹ ₋₁	2LC0901-1GC ■ ■ -1AA0 L..+M..	150
		Long	48	110	170	178	555	659					2LC0901-1GC ■ ■ -2AA0 L..+M..	150
565	2300	Standard	65	95	170	178	630	706	100	100	250	6 ⁺² ₋₁	2LC0901-2GC ■ ■ -1AA0 L..+M..	204
		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	6 ⁺² ₋₁	2LC0901-3GC ■ ■ -1AA0 L..+M..	324
		Long	65	135	250	258	736	882					2LC0901-3GC ■ ■ -2AA0 L..+M..	324
755	1800	Standard	65	120	210	219	840	921	120	140	350	6 ⁺² ₋₁	2LC0901-4GC ■ ■ -1AA0 L..+M..	440
		Long	65	150	250	259	840	961					2LC0901-4GC ■ ■ -2AA0 L..+M..	437
887	1500	Standard	65	150	250	251	990	1104	130	180	440	8 ⁺² ₋₂	2LC0901-5GC ■ ■ -1AA0 L..+M..	747
		Long	65	170	300	301	990	1154					2LC0901-5GC ■ ■ -2AA0 L..+M..	748

ØD1: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (article number without "-Z")

1

9

ØD2: Without finished bore – Without order codes

With finished bore – With order codes for diameter and tolerance (article number without "-Z")

1

9

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

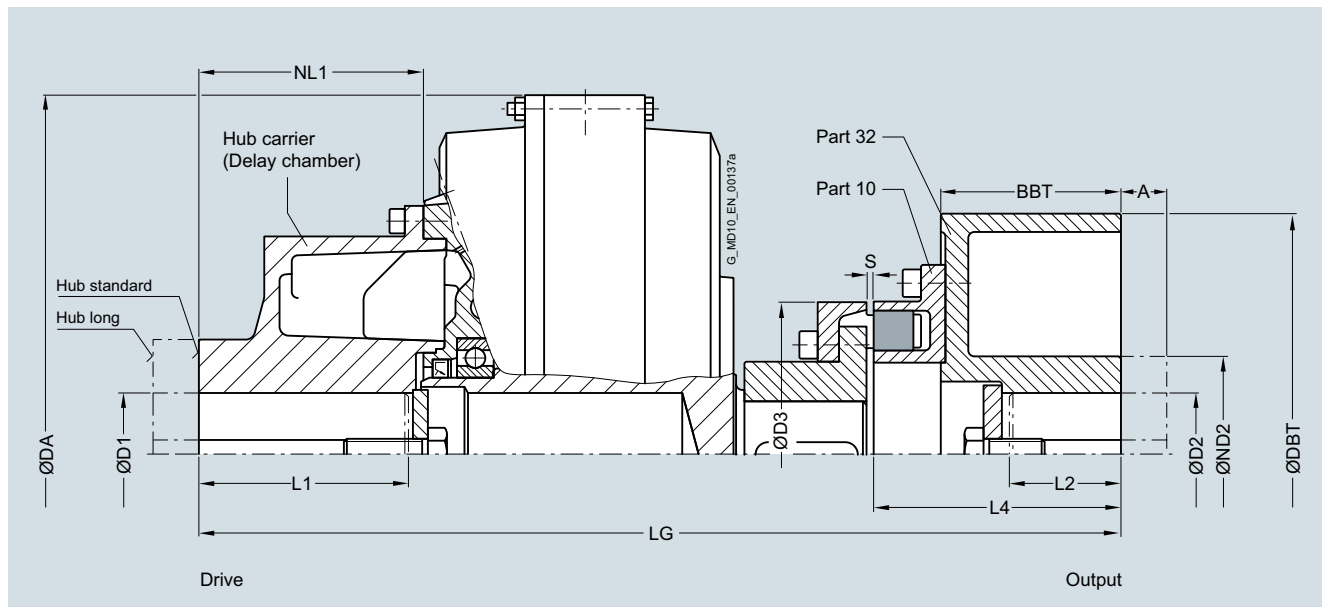
For ordering example, see page 13/39.

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}	Hub carrier	Dimensions in mm FLUDEX coupling							N-EUPEX coupling			Part 32 – Brake drum					Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3	Weight <i>m</i>	
			D1	L1	NL1	DA	LG	D3	S	L4	D2	ND2	DBT	BBT	A					
			Keyway to max. DIN 6885				N-EUPEX size		max.					Available at short term					kg	
			min.		max.															
370	2400 rpm	Hub Standard	38	55	110	115	420	542	180	5 ⁺¹ ₋₁	157	80	128	315	118	50	2LC0900-8GD L..+M..	-1	A0	87
		Hub Long	38	80	140	145	420	572									2LC0900-8GD L..+M..	-2	A0	86
	1900 rpm	Hub Standard	38	55	110	115	420	574			189	90	160	400	150	80	2LC0900-8GD L..+M..	-1	A0	111
		Hub Long	38	80	140	145	420	604									2LC0900-8GD L..+M..	-2	A0	110
425	2400 rpm	Hub Standard	42	75	140	147	470	604	200	5 ⁺¹ ₋₁	162	80	128	315	118	50	2LC0901-0GD L..+M..	-1	A0	113
		Hub Long	42	100	170	177	470	634									2LC0901-0GD L..+M..	-2	A0	113
	1900 rpm	Hub Standard	42	75	140	147	470	636			194	90	160	400	150	80	2LC0901-0GD L..+M..	-1	A0	137
		Hub Long	42	100	170	177	470	666									2LC0901-0GD L..+M..	-2	A0	137

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

Weight *m*: Without hub prolongations "A", with set screw.

L2 denotes the shaft insertion depth.
In the case of shaft ends deviating from DIN 748/1 long the insertion depth must be specified in plain text 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														Article No. with order codes for bore diameters and tolerances (article number without "-Z") – 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		kg	
			Keyway to DIN 6885	max.	min.	max.		N-EUPEX size			max.							
490	1900	Standard	48	75	140	148	555	689	225	5 ⁺¹ ₋₁	199	90	160	400	150	80	2LC0901-1GD L..+M..	183
		Long	48	110	170	178	555	719									2LC0901-1GD L..+M..	183
	1500 ¹⁾	Standard	48	75	140	148	555	729			239	110	175	500	190	110	2LC0901-1GD L..+M..	218
		Long	48	110	170	178	555	759									2LC0901-1GD L..+M..	218
565	1900	Standard	65	95	170	178	630	756	250	6 ⁺² ₋₁	207	100	160	400	150	80	2LC0901-2GD L..+M..	234
		Long	65	120	210	218	630	796									2LC0901-2GD L..+M..	236
	1500 ¹⁾	Standard	65	95	170	178	630	796			247	110	175	500	190	110	2LC0901-2GD L..+M..	268
		Long	65	120	210	218	630	836									2LC0901-2GD L..+M..	270
655	1500 ¹⁾	Standard	65	110	210	218	736	907	315	6 ⁺² ₋₁	257	110	175	500	190	110	2LC0901-3GD L..+M..	377
		Long	65	135	250	258	736	947									2LC0901-3GD L..+M..	377
	1500	Standard	65	110	210	218	736	953			303	140	224	630	236	100	2LC0901-3GD L..+M..	437
		Long	65	135	250	258	736	993									2LC0901-3GD L..+M..	437
755	1500	Standard	65	120	210	219	840	1018	350	6 ⁺² ₋₁	307	140	224	630	236	100	2LC0901-4GD L..+M..	541
		Long	65	150	250	259	840	1058									2LC0901-4GD L..+M..	538
887	1300	Standard	65	150	250	251	990	1190	440	8 ⁺² ₋₂	347	160	265	710	265	-	2LC0901-5GD L..+M..	892
		Long	65	170	300	301	990	1240									2LC0901-5GD L..+M..	893

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

Weight *m*: Without hub prolongations "A", with set screw.

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.

Article No.:

- 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

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

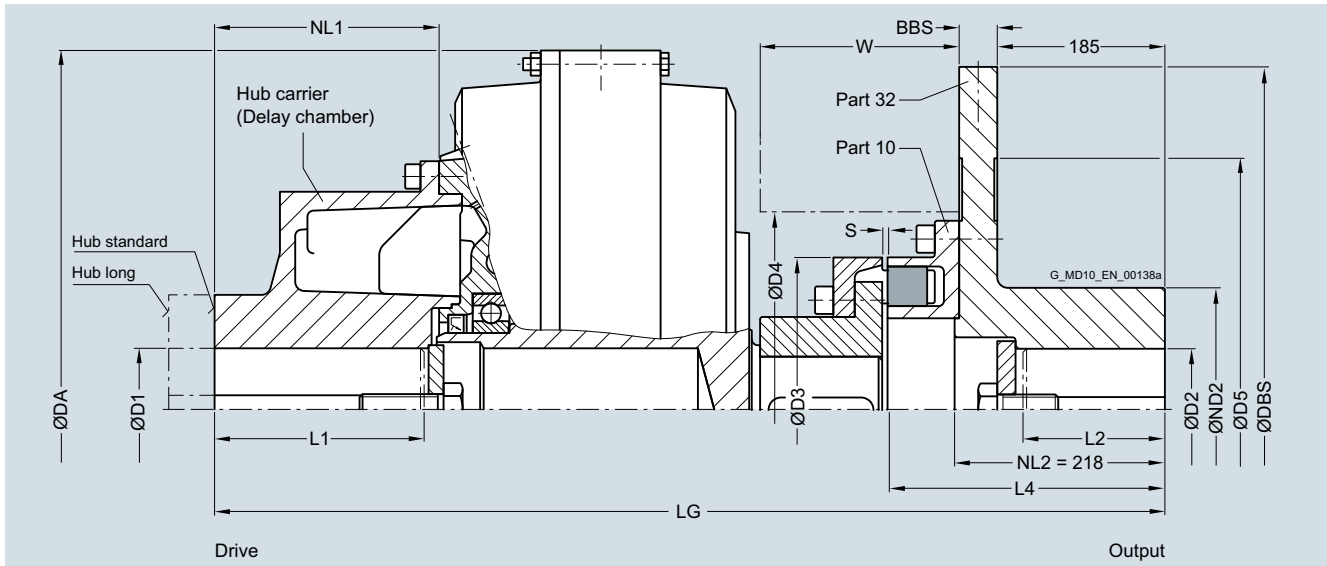
FLENDER Standard Couplings

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 dismounting 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 ¹⁾		Space dimensions		Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3	Weight m kg				
			D1 Keyway to DIN 6885 min. max.	L1 max.	NL1	DA	LG	D3 N-EUPEX size	S	L4	D2 max.	ND2	DBS	BBS			D5	D4	W	
370	2100	Standard	38	55	110	115	420	642	180	5^{+1}_{-1}	257	80	145	450	30	300	222	130	2LC0900-8GE ■ ■ -1CA0 L..+M..	116
		Long	38	80	140	145	420	672											2LC0900-8GE ■ ■ -2CA0 L..+M..	115
425	1900	Standard	42	75	140	147	470	704	200	5^{+1}_{-1}	262	80	160	500	30	340	250	144	2LC0901-0GE ■ ■ -1BA0 L..+M..	155
		Long	42	100	170	177	470	734											2LC0901-0GE ■ ■ -2BA0 L..+M..	155
490	1800	Standard	48	75	140	148	555	757	225	5^{+1}_{-1}	267	90	160	560	30	370	276	162	2LC0901-1GE ■ ■ -1BA0 L..+M..	212
		Long	48	110	170	178	555	787											2LC0901-1GE ■ ■ -2BA0 L..+M..	212
565	1800	Standard	65	95	170	178	630	824	250	6^{+2}_{-1}	275	100	175	630	30	440	317	179	2LC0901-2GE ■ ■ -1BA0 L..+M..	279
		Long	65	120	210	218	630	864											2LC0901-2GE ■ ■ -2BA0 L..+M..	281
655	1800	Standard	65	110	210	218	736	935	315	6^{+2}_{-1}	285	100	175	630	30	440	385	200	2LC0901-3GE ■ ■ -1AA0 L..+M..	388
		Long	65	135	250	258	736	975											2LC0901-3GE ■ ■ -2AA0 L..+M..	388
755	1500	Standard	65	120	210	219	840	1000	350	6^{+2}_{-1}	289	140	220	710	30	520	435	219	2LC0901-4GE ■ ■ -1AA0 L..+M..	518
		Long	65	150	250	259	840	1040											2LC0901-4GE ■ ■ -2AA0 L..+M..	515
887	1200	Standard	65	150	250	251	990	1144	440	8^{+2}_{-2}	301	140	220	800	30	610	525	268	2LC0901-5GE ■ ■ -1AA0 L..+M..	828
		Long	65	170	300	301	990	1194											2LC0901-5GE ■ ■ -2AA0 L..+M..	829

ØD1: Without finished bore – Without order codes
With finished bore – With order codes for diameter and tolerance (article number without "-Z")

ØD2: Without finished bore – Without order codes
With finished bore – With order codes for diameter and tolerance (article number without "-Z")

L2 denotes the shaft insertion depth.
In the case of shaft ends deviating from DIN 748/1 long the insertion depth must be specified in plain text and with "Y29".

¹⁾ Hub reduction possible; specify article number with "-Z" and order code "Y99" with dimension NL2 in plain text.

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

For ordering example, see page 13/40.

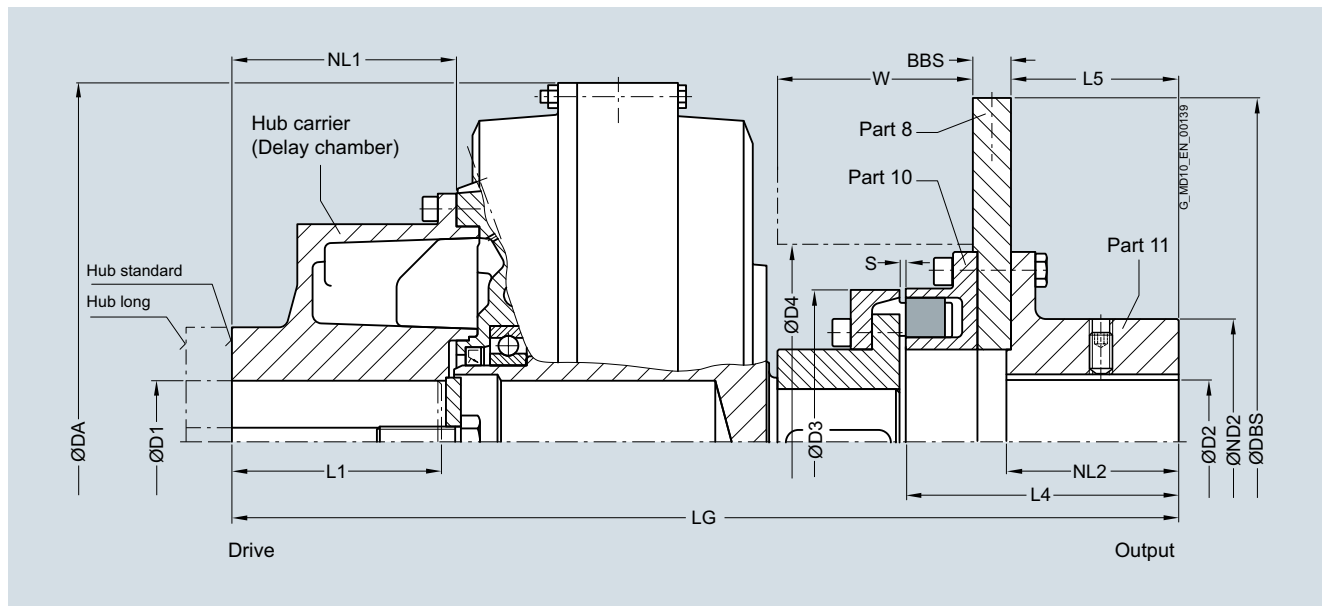
FLENDER Standard Couplings

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 Hub Standard Long	Dimensions in mm FLUDEX coupling			N-EUPEX coupling			Part 8 – Brake disk/ part 11 – hub			Space dimensions			Article No. with order codes for bore diameters and tolerances (article number without "-Z") – selection in catalog part 3 Available at short term	Weight m kg					
			D1	L1	NL1	DA	LG	D3	S	L4	D2	NL2	ND2	DBS			BBS	L5 ¹⁾	D4	W	
370	3200	Standard	38	55	110	115	420	555	180	5 ⁺¹ ₋₁	170	80	118	130	355	16	115	222	127	2LC0900-8GF ■ ■ -1AA0 L..+M..	87
		Long	38	80	140	145	420	585												2LC0900-8GF ■ ■ -2AA0 L..+M..	86
425	3000	Standard	42	75	140	147	470	617	200	5 ⁺¹ ₋₁	175	80	118	130	355	16	115	250	141	2LC0901-0GF ■ ■ -1AA0 L..+M..	115
		Long	42	100	170	177	470	647												2LC0901-0GF ■ ■ -2AA0 L..+M..	115
490	2600	Standard	48	75	140	148	555	670	225	5 ⁺¹ ₋₁	180	90	118	135	400	16	115	276	159	2LC0901-1GF ■ ■ -1AA0 L..+M..	166
		Long	48	110	170	178	555	700												2LC0901-1GF ■ ■ -2AA0 L..+M..	166
565	2300	Standard	65	95	170	178	630	737	250	6 ⁺² ₋₁	188	100	118	160	450	16	115	317	176	2LC0901-2GF ■ ■ -1AA0 L..+M..	224
		Long	65	120	210	218	630	777												2LC0901-2GF ■ ■ -2AA0 L..+M..	226
655	2000	Standard	65	110	210	218	736	848	315	6 ⁺² ₋₁	198	100	118	170	500	16	115	385	197	2LC0901-3GF ■ ■ -1AA0 L..+M..	347
		Long	65	135	250	258	736	888												2LC0901-3GF ■ ■ -2AA0 L..+M..	347
755	1800	Standard	65	120	210	219	840	961	350	6 ⁺² ₋₁	250	140	164	225	630	20	160	435	215	2LC0901-4GF ■ ■ -1AA0 L..+M..	495
		Long	65	150	250	259	840	1001												2LC0901-4GF ■ ■ -2AA0 L..+M..	492
887	1500	Standard	65	150	250	251	990	1105	440	8 ⁺² ₋₂	262	140	164	225	710	20	160	525	264	2LC0901-5GF ■ ■ -1AA0 L..+M..	799
		Long	65	170	300	301	990	1155												2LC0901-5GF ■ ■ -2AA0 L..+M..	800

ØD1: Without finished bore – Without order codes
 With finished bore – With order codes for diameter and tolerance (article number without "-Z") 1
9

ØD2: Without finished bore – Without order codes
 With finished bore – With order codes for diameter and tolerance (article number without "-Z") 1
9

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

For ordering example, see page 13/40.

¹⁾ Hub reduction possible; specify article number with "-Z" and order code "Y99" with dimension L5 in plain text.

FLENDER Standard Couplings

Fluid Couplings – FLUDEX Series

Oil filling quantities for FN series

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_{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	68.0	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 $\varnothing D1 = 75H7$ 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).

Article No.:

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

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 $\varnothing D1 = 80H7$ mm with keyway to
 DIN 6885/1 and set screw,
 Part 11: Bore $\varnothing D1 = 80H7$ 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.

Article No.:

- 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_{eff} kW	Speed in rpm										Size
	600	740	890	980	1180	1470	1770	2300	2950		
2.2	8.5										
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	44.1	25.7	21.1	12.5	10.7	8.5					
37	46.8	27.5	22.9	20.5	11.4	9.2	7.1				
45	49.5	29.0	24.5	22.0	12.3	9.8	7.8				
55	52.4	29.0	26.1	23.7	18.7	10.5	8.6				
75	58.5	47.8	29.0	26.3	21.7	11.6	9.7	6.9			
90	63.8	50.5	29.0	27.9	23.2	12.4	10.3	7.4			
110		53.5	45.6	29.0	24.9	19.0	11.0	8.3			
132		57.0	47.9	44.3	26.3	20.9	11.7	8.9	6.6	425	
160		62.0	50.8	46.7	28.1	22.5	17.4	9.6	6.9		
200		67.0	54.2	49.9	42.1	24.3	19.5	10.3	7.6		
250			59.0	53.1	45.3	26.2	21.6	16.0	8.6		
315			66.2	57.6	48.3	28.3	23.5	16.7	9.3		
350				60.3	49.9	40.8	24.4	17.4		565	
400				64.4	51.8	42.6	25.5	18.5			
500					55.4	45.7	37.8	20.8			
600					59.8	48.1	40.6	22.3			
750						51.3	43.7			755	
900						54.2	46.1				
1100							48.8				
1200							50.1				

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 $\text{ØD1} = 55\text{H7}$ mm with keyway to
DIN 6885/1 and retaining screw,
Part 32: Bore $\text{ØD2} = 75\text{H7}$ mm with keyway to DIN 6885/1 and
retaining screw,
with preservation suitable for indoor storage.
Delivery without oil filling, no oil filling quantity specification.

Article No.:

- With standard preservation:
2LC0900-8GE99-1CA0
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 $\text{ØD1} = 110\text{H7}$ mm with keyway to
DIN 6885/1 and set screw,
Part 11: Bore $\text{ØD2} = 80\text{H7}$ mm with keyway to DIN 6885/1 and
set screw,
Fitting position: Horizontal/vertical motor underneath (MU).
Delivery without oil filling, no oil filling quantity specification.

Article No.:

- In horizontal version:
2LC0901-1GF99-2AA0
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	Article No. (FFA) for one set flexibles
FA	222	FAK ¹⁾ ; FAKB ¹⁾	95	6	FFA:000001194870
		Other types	110	6	FFA:000001194871
	297	FAK ¹⁾ ; FAKB ¹⁾	125	6	FFA:000001194872
		FAK ²⁾ ; FAKB ²⁾	125	6	FFA:000001194873
		Other types	125	6	FFA:000001194873
	342	All types	140	6	FFA:000001194874
	395	FAD ¹⁾ ; FAE ¹⁾ ; FADB ¹⁾	225	8	FFA:000001194875
		FAD ²⁾ ; FAE ²⁾ ; FADB ²⁾	225	8	FFA:000001194876
		Other types	225	8	FFA:000001194876
	450	FAD ¹⁾ ; FAE ¹⁾ ; FADB ¹⁾	250	8	FFA:000001194877
		FAD ²⁾ ; FAE ²⁾ ; FADB ²⁾	250	8	FFA:000001194878
		Other types	250	8	FFA:000001194878
	516	FAD ¹⁾ ; FADB ¹⁾	315	9	FFA:000001194879
		FAD ²⁾ ; FADB ²⁾	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 ³⁾	200	8
All types			180	8	FFA:000001194881
425		All types	200	8	FFA:000001194886
490		FNDB ØDBT = 500 ³⁾	250	8	FFA:000001194878
		All types	225	8	FFA:000001194876
565		All types	250	8	FFA:000001194878
655			315	9	FFA:000001194880
755			350	9	FFA:000001194883
887		440	10	FFA:000001194885	

¹⁾ For couplings up to and including year of construction 2003.

²⁾ For couplings from year of construction 2004.

³⁾ 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	Marking	Article No. (FFA) for one unit
222	M10	103 + 104 ¹⁾ 203 + 204 ¹⁾	Fusible safety plug	110 °C	yellow	FFA:000001194896
				140 °C	red	FFA:000001194897
				160 °C	green	FFA:000001194898
	M10	153 + 104 ¹⁾	Oil filler plug	–		FFA:000001194894
297	M10	153 + 104 ¹⁾	Oil filler plug	–		FFA:000001194894
297 - 887	M18 x 1.5	103 ²⁾ 203 ²⁾	Fusible safety plug	110 °C	yellow	FFA:000001250338
				140 °C	red	FFA:000001250339
				160 °C	green	FFA:000001250380
	M18 x 1.5	110 ²⁾ 210 ²⁾	Thermal switch	110 °C		FFA:000001361795
				140 °C		FFA:000001361796
	M18 x 1.5	153 ²⁾ 163 ²⁾	Oil filler plug (except size 887) Screw plug	–		FFA:000001337653
	–	301	Cut-out device	–		FFA:000000652020
	–	142 + 104 ¹⁾	EOC transmitter with seal	125 °C		FFA:000001194899
–	245	Sensor EOC	–		FFA:000000361460	
–	244	Evaluation instrument EWD 20 ... 250 V AC/DC	–		FFA:000001205294	
370 - 755	M10	173 + 174 ¹⁾	Oil drain plug - delay chamber	–		FFA:000001194894
887	M30 x 1.5	153 + 154 ¹⁾	Oil filler plug (up to and including year of construction 2007)	–		FFA:000001194893
				–		FFA:000001349554
	M16	173 + 174 ¹⁾	Oil drain plug - delay chamber	–		FFA:000001194895

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

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

¹⁾ With separate sealing ring.

²⁾ With integrated sealing ring.

FLENDER Standard Couplings

Fluid Couplings – FLUDEX Series

Spare parts

Seal and rolling bearing sets for type FAR¹⁾

FLUDEX size	Variant	Up to and including year of construction	From year of construction	Seal set material	Article No. (FFA) for one seal set	Article No. (FFA) for one rolling bearing set	
222	2 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	
	7 x SPZ 140	2000		FPM	FFA:000001194923		
				NBR	FFA:000001194924	FFA:000001194813	
	5 x SPZ 150		2001		FPM	FFA:000001194925	
					NBR	FFA:000001194926	FFA:000001194814
4 x SPA 190				FPM	FFA:000001194927		
5 x SPA 224		2001		NBR	FFA:000001194928		
342	5 x SPA 180			FPM	FFA:000001194929		
				NBR	FFA:000001194930	FFA:000001194815	
				FPM	FFA:000001194931		
7 x SPA 180	2000			NBR	FFA:000001194932	FFA:000001194816	
				FPM	FFA:000001194933		
				NBR	FFA:000001194934	FFA:000001194817	
395	5 x SPB 224			FPM	FFA:000001194935		
	7 x SPB 224	2000		NBR	FFA:000001194936	FFA:000001194818	
				FPM	FFA:000001194937		
	7 x SPB 236		2001		NBR	FFA:000001194938	FFA:000001194819
7 x SPB 280		2001		FPM	FFA:000001194939		
				NBR	FFA:000001194938	FFA:000001194819	
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		
				NBR	FFA:000001194950	FFA:000001194825	
	12 x SPB 315	2000			FPM	FFA:000001194951	
					NBR	FFA:000001194952	FFA:000001194826
590	12 x SPC 315	2000		FPM	FFA:000001194953		
				NBR	FFA:000001194954	FFA:000001194827	
			2001	FPM	FFA:000001194955		
				NBR	FFA:000001194956	FFA:000001194828	
				FPM	FFA:000001194957		

¹⁾ 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	Article No. (FFA) for one seal set	Article No. (FFA) for one rolling bearing set	
370	FG		NBR	FFA:000001194958	Up to and including year of construction 2000: FFA:000001194850	
			FPM	FFA:000001194959		
	FV/FN		NBR	FFA:000001194960	From year of construction 2001: FFA:000001194851	
			FPM	FFA:000001194961		
425	FG		NBR	FFA:000001194962	FFA:000001194852	
			FPM	FFA:000001194963		
	FV/FN		NBR	FFA:000001194964		
			FPM	FFA:000001194965		
490	FG		NBR	FFA:000001194966	FFA:000001194853	
			FPM	FFA:000001194967		
	FV/FN		NBR	FFA:000001194968		
			FPM	FFA:000001194969		
565	FG		NBR	FFA:000001194970	FFA:000001194854	
			FPM	FFA:000001194971		
	FV/FN		NBR	FFA:000001194972		
			FPM	FFA:000001194973		
655	FG	$\text{ØD2} \leq 100$	NBR	FFA:000001194974	FFA:000001194855	
			FPM	FFA:000001194975		
			$\text{ØD2} > 100$	NBR	FFA:000001194976	FFA:000001194856
				FPM	FFA:000001194977	
	FV	$\text{ØD2} \leq 100$	NBR	FFA:000001194978	FFA:000001194855	
			FPM	FFA:000001194979		
		$\text{ØD2} > 100$	NBR	FFA:000001194980	FFA:000001194856	
			FPM	FFA:000001194981		
FN			NBR	FFA:000001194978	FFA:000001194855	
			FPM	FFA:000001194979		
755	FG	$\text{ØD2} \leq 110$	NBR	FFA:000001194982	FFA:000001194857	
			FPM	FFA:000001194983		
			$\text{ØD2} > 110$	NBR	FFA:000001194984	FFA:000001194858
				FPM	FFA:000001194985	
	FV	$\text{ØD2} \leq 110$	NBR	FFA:000001194986	FFA:000001194857	
			FPM	FFA:000001194987		
		$\text{ØD2} > 110$	NBR	FFA:000001194988	FFA:000001194858	
			FPM	FFA:000001194989		
FN			NBR	FFA:000001194990	FFA:000001194859	
			FPM	FFA:000001194991		
887	FG		FPM	FFA:000001194993	FFA:000001194860	
			FV/FN	FPM		FFA:000001194992

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 ²	J_A kgm ²	J_A kgm ²	J_A kgm ²	J_A kgm ²	J_A kgm ²	J_A kgm ²	J_A kgm ²	l
222	0.014	0.056	0.061	0.061	0.060	0.084	0.287	0.109	1.65
297	0.040	0.173	0.193	0.193	0.193	0.226	0.673	0.246	4.2
342	0.092	0.314	0.356	0.352	0.353	0.469	1.002	0.420	6.6
395	0.203	0.660	0.745	0.730	–	1.030	1.814	1.150	9.5
450	0.404	1.087	1.217	1.217	–	1.497	3.611	1.818	13.4
516	0.896	2.109	2.439	–	–	3.359	5.969	3.238	22.7
590	1.295	3.455	3.785	–	–	6.605	7.315	4.584	33

Type FAR

FLUDEX size	J_I	J_A	Oil filling quantity		
	kgm ²	kgm ²	max. l		
222	0.014	2 x SPZ 100 0.062	3 x SPZ 160 0.071	1.65	
297	0.107	5 x SPZ 150 0.202	4 x SPA 190 0.235	5 x SPA 224 0.273	4.2
342	0.095	5 x SPA 180 0.386		6.6	
395	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
450	0.426	8 x SPB 250 1.467		13.4	
516	0.946	10 x SPB 315 3.209		22.7	
590	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 max. l	FV max. l
	J_I kgm ²	J_I kgm ²	J_A kgm ²	J_A kgm ²	J_A kgm ²	J_A kgm ²	J_A kgm ²	J_A kgm ²	J_A kgm ²	J_A kgm ²		
370	0.191	0.191	0.519	0.551	0.571	0.603	0.571	0.603	0.571	0.603	7.2	8
425	0.342	0.342	0.819	0.876	0.989	1.046	0.974	1.031	0.963	1.020	11	12
490	0.723	0.723	1.992	2.110	2.312	2.430	2.272	2.390	2.264	2.382	17	18.5
565	1.269	1.269	3.216	3.441	3.696	3.921	3.636	3.861	3.616	3.841	25.5	28
655	2.567	2.567	7.287	7.757	8.687	9.157	–	–	–	–	40	44
755	4.856	4.856	12.575	13.291	14.775	15.491	–	–	–	–	59	65
887	11.817	11.817	26.832	28.212	30.102	31.482	–	–	–	–	98	107

FN series (for type FNDB, see separate table)

FLUDEX size	Hub carrier	Series		Types				Weights		Oil filling quantity max. l
		FN	FNO	FNA	FND	FNDS SB	FNDS HB	Y	F _Y	
	Hub	J_A kgm ²	J_I kgm ²	J_I kgm ²	J_I kgm ²	J_I kgm ²	J_I kgm ²	mm	N	
370	Standard	0.657	0.237	0.281	0.320	1.180	0.386	197	685	8.2
	Long	0.647						227		
425	Standard	1.107	0.343	0.470	0.491	1.841	0.659	224	970	12.5
	Long	1.102						254		
490	Standard	2.480	0.737	0.954	0.999	3.009	1.285	235	1450	19
	Long	2.474						265		
565	Standard	4.175	1.364	1.715	1.835	5.075	2.081	278	2050	29
	Long	4.251						318		
655	Standard	9.319	2.567	3.587	3.777	6.777	4.701	330	3100	45
	Long	9.523						370		
755	Standard	15.616	4.910	6.878	7.198	12.078	9.689	352	4300	67
	Long	15.950						392		
887	Standard	33.662	11.832	15.132	16.632	24.030	20.428	406	7250	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 Y mm	F_Y N	Oil filling quantity max. l
370	Standard	ØDBT x BBT	0.657	0.640	197	685	8.2
		Ø400 x 150					
	Long	Ø315 x 118	0.647	0.640	227		
		Ø400 x 150					
425	Standard	Ø315 x 118	1.107	0.811	224	970	12.5
		Ø400 x 150					
	Long	Ø315 x 118	1.102	0.811	254		
		Ø400 x 150					
490	Standard	Ø400 x 150	2.480	1.994	235	1450	19
		Ø500 x 190					
	Long	Ø400 x 150	2.474	1.994	265		
		Ø500 x 190					
565	Standard	Ø400 x 150	4.175	2.835	278	2050	29
		Ø500 x 190					
	Long	Ø400 x 150	4.251	2.835	318		
		Ø500 x 190					
655	Standard	Ø500 x 190	9.319	6.677	330	3100	45
		Ø630 x 236					
	Long	Ø500 x 190	9.523	6.677	370		
		Ø630 x 236					
755	Standard	Ø630 x 236	15.616	15.178	352	4300	67
	Long		15.950	30.832	406	7250	110
887	Standard	Ø710 x 265	33.662	30.832	406	7250	110
	Long		34.462	30.832	456	7250	110

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^2

J_A Mass moment of inertia of the outer housing (shell (101) + cover (102) + any hub carrier (120) or add-on coupling) in kgm^2

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 including maximum oil filling quantity

FLENDER Standard Couplings

Fluid Couplings – FLUDEX Series

Special types

Selection and ordering data

Selection of additional ordering data

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

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

FLENDER Standard Couplings

Fluid Couplings – FLUDEX Series

Special types

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

¹⁾ Order code "L.." for hollow shaft side and "M.." for opposite side.

²⁾ Surface crack and ultrasound testing are not possible on FLUDEX couplings.

³⁾ Fitting length on request.

FLENDER Standard Couplings

Fluid Couplings – FLUDEX Series

Technical specifications for the selection of type and size for FLUDEX fluid couplings

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

1. Intended use of coupling

- As starting aid For overload protection For torsional vibration isolation

2. Data for prime mover

- 2.1. Electric motor characteristic enclosed
 Power rating $P_1 =$ kW at speed $n_1 =$ rpm
 Starting: Direct Star delta Other:
 Motor shaft: \varnothing x length mm
- 2.2. Internal combustion engine Number of cylinders:
 Planned max. power rating: kW at rpm
 Operating range min. power rating: kW at rpm
 Attachment via shaft \varnothing x length mm Attachment to flywheel SAE"
 Motor rigidly Motor flexibly installed on foundation/base frame

3. Data for driven machine

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

4. Ambient conditions

- 4.1. Place of installation: < 1000 m above sea-level m above sea-level
 out of doors in narrow space other:
- 4.2. Temperature of the ambient air (cooling air): min. °C max. °C
- 4.3. Fitting into guard bell housing
 Holes: with large (well ventilated) with small (less well ventilated)
 without holes: with forced ventilation without forced ventilation
- 4.4. Environment: normally dusty extremely dusty abrasively dusty
 aggressive atmosphere:
- 4.5. Use in potentially explosive atmospheres
 in conformity with ATEX: II 2 G c T3 IIB -30 °C $\leq T_a \leq$ +50 °C / II 2 D T160 °C -30 °C $\leq T_a \leq$ +50 °C / I M2
 other class:

5. Arrangement of coupling

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