

Product description

Elaflex couplings EFK, EFG, EFL

INKOMA-Elaflex couplings are available in a number of basic versions. They are used in general machinery in any situation where there is difficulty in achieving precise alignment between torque transmission components.

Because of their simple design and wide range of options, INKOMA-Elaflex couplings are extremely versatile. They provide positive drive, are fail-safe and are suitable for use in both directions of rotation. Effective damping of vibration and shock is achieved via the centre spider.

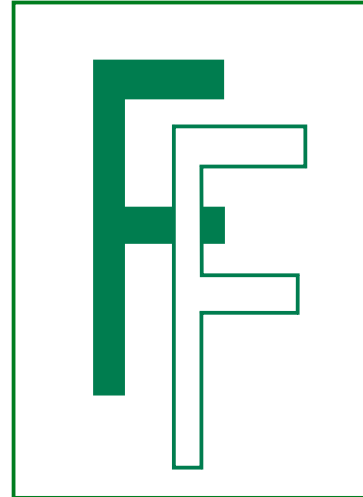
Through the use of different Shore hardness for the elastic 'spider' the INKOMA-Elaflex coupling allows the connection of the drive to be torsionally soft or torsionally hard according to the requirements of the application.

The 'spiders' are hard wearing and are proof against oil, ozone and tropical conditions.

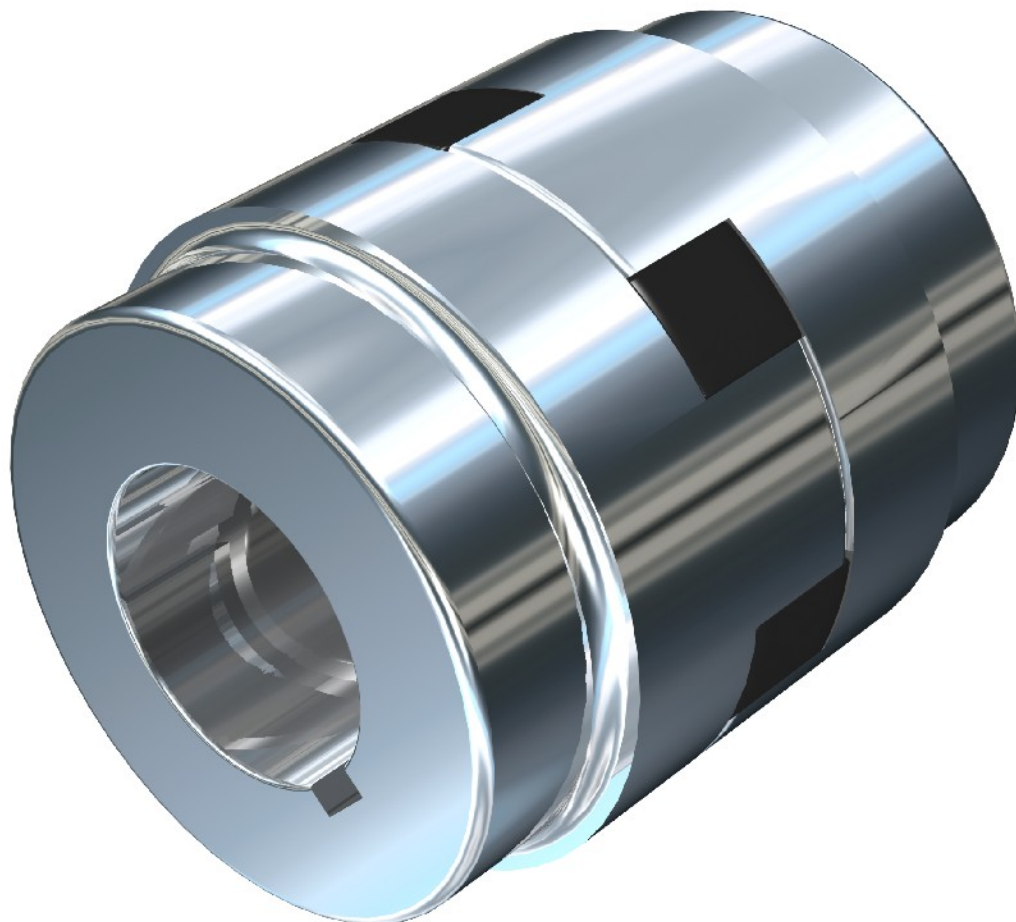
INKOMA-Elaflex couplings, when correctly applied, provide very high operating reliability. In addition to the basic designs we manufacture special executions to customer requirements. INKOMA-Elaflex couplings are used anywhere in machines where a dependable, economical, easy-to-install method of transmission is required.

INKOMA - GROUP
Couplings

by



FRANCIS AND FRANCIS Ltd.
www.powertransmissions.co.uk



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Technical information

Elaflex couplings EFK, EFG, EFL

1. Scope of delivered coupling

INKOMA-Elaflex couplings are supplied ready-to-use with finished bores, or are pilot bored for subsequent machining. The elastic 'spider' is hard wearing and is resistant to oil, ozone and tropical conditions. It withstands temperatures between -40°C and +100°C.

Trouble free operation is assured when the coupling is selected and applied according to the table provided.

2. Configuration and supply of coupling hubs

INKOMA-Elaflex couplings are supplied ready-to-use with finished bores, or are pilot bored for subsequent machining. A clamping screw is provided for locking the coupling onto the shaft. Hubs can also be prepared with special bores, including Splined, Polygon and square profiles.

Where no other information is provided, the bore will be finished to tolerance $\varnothing H7$. For special bores, refer to the table for the maximum diameter per coupling. The listed maximum diameter includes the provision of a keyway.

3. Flange connection to another component

Direct connection of couplings to brake discs, flywheels and similar is at the customer's risk.

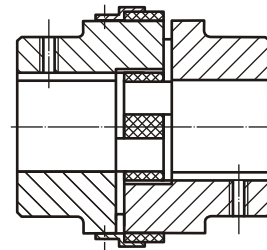
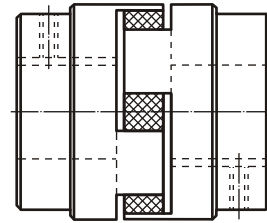
4. Protection

Couplings should be positioned so that they are able to rotate freely without contacting other components.

Shaft support bearings should be situated as close to the hubs as possible and should prevent axial and radial displacement of the shafts during operation.

5. Selection and size calculation of the coupling

Use the illustration as a basis to help in selecting the correct coupling.



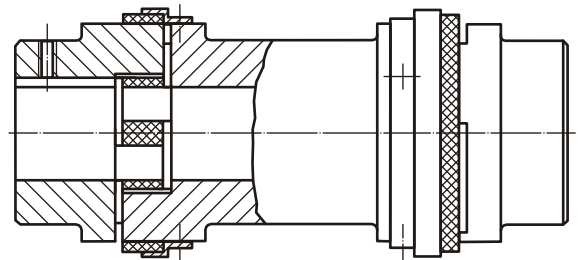
Technical tips

INKOMA-Elaflex couplings are torsionally resilient and compensate for small axial, radial and angular errors. Suitable for bi-directional use, they are compact, torsionally damping and fail safe.

The torque is transmitted via flexible spiders with Shore hardness 80 or 92. Spiders with Shore hardness 80 are supplied as standard. Shore 92 is optionally available at additional cost. Standard spiders can withstand temperatures of between -40°C and +100°C. Spiders suitable for higher temperatures can also be supplied.

Standard hub materials are sintered iron (S) for couplings up to 36mm dia, and grey cast iron (G) for larger sizes. Aluminium hubs (A) are optionally available. For peripheral speeds of over 30 m/s, only steel or spheroidal graphite cast iron should be used. Dynamic balancing is necessary at elevated speeds.

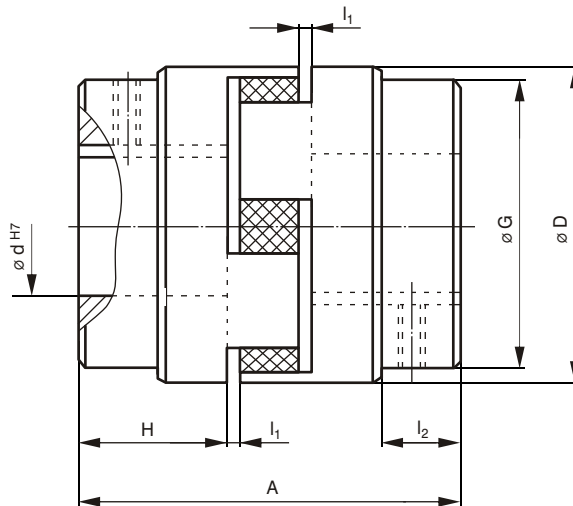
INKOMA-Elaflex couplings are compact with minimal mass and low inertia, for efficient torque transmittal. Their simple design and wide range of options makes them extremely versatile.



Dimensions EFK

EFK - Elaflex coupling

INKOMA-Elaflex coupling EFK - standard range. Spiders in two hardnesses (80 / 92 Shore) are available.



Ordering example:

Elaflex coupling
External diameter "D"
Material
Hub bore "d"
Shore hardness

EFK - 054 . G . 19/24 . 80

Order code	Hub bore d ^{H7} with keyway to BS 4235 (DIN 6885/1) and clamping screw					Dimensions [mm]						Angular misalignment ²⁾ α [°]	Radial offset ²⁾ R [±mm]	max. speed n [min ⁻¹]	Torque [Nm]						Mass					
															80 Shore			92 Shore								
						Ex-stock		Pilot bore	max. \varnothing	A	D				G	H	I ₁	I ₂	Nom.	Max	Oscillating load	Nom.	Max	Oscillating load	min. bore [kg]	max. bore [kg]
EFK-016.S ¹⁾	-	-	-	9	20	16	-	6,5	1	-	1	0,15	10000	1	2	0,3	2	4	0,6	0,12	0,11					
EFK-027.S	9	11	14	4,5	16	43	27	-	15	1	-	1	0,15	8000	3	6	0,8	6	12	1,6	0,18	0,16				
EFK-036.S	14	19	-	9	19	52	36	-	19	2	-	1	0,15	7000	6	12	1,6	12	24	3,2	0,20	0,15				
EFK-036.A	14	19	-	9	19	52	36	-	19	2	-	1	0,15	8000	6	12	1,6	12	24	3,2	0,10	0,08				
EFK-045.S	14	19	24	9,5	24	55	45	-	21	2	-	1	0,15	7000	10	20	2,8	20	40	5,6	0,20	0,16				
EFK-054.A	19	24	-	11	28	64	54	-	25	2	-	1	0,15	6000	25	50	7,0	51	102	14,5	0,35	0,30				
EFK-054.G	19	24	28	8,5	28	64	54	49	25	2	13	1	0,15	5000	37,5	75	10,5	77	144	20,5	0,75	0,50				
EFK-065.G	24	28	32	17	38	89	65	57	35	2	22	1	0,15	5000	75	150	21,0	154	308	40,5	1,50	1,00				
EFK-085.G	28	32	38	17	42	108	85	76	43	3	32	1	0,15	4500	80	160	22,5	164	328	43	3,20	2,30				
EFK-096.G	38	42	48	15	48	116	96	80	45	3	32	1	0,15	4500	120	240	33,5	246	592	65	3,90	3,20				
EFK-115.G	42	48	55	18	55	134	115	102	54	3	35	1	0,15	4000	150	300	42,0	307	614	81	7,20	5,40				
EFK-127.G	42	48	55	19,5	60	154	127	108	64	3	45	1	0,15	4000	225	450	63,0	409	818	107	8,50	7,50				

¹⁾ Without keyway, but with clamping screw.

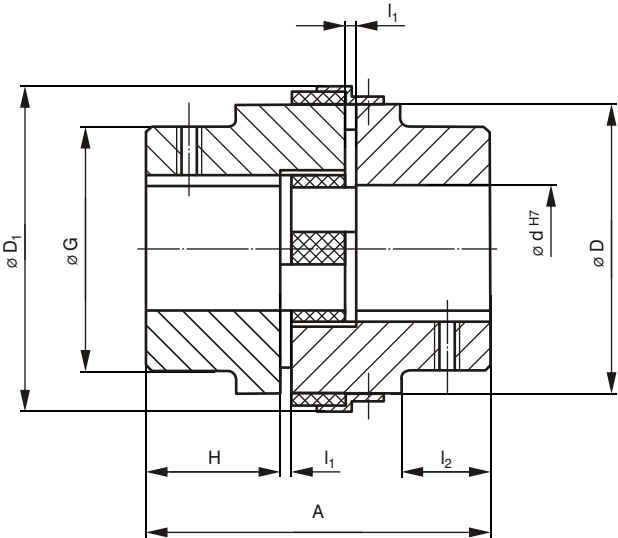
²⁾ max. offset at n= 1500 1/min

Material: S Sintered metal
G Grey cast iron
A Aluminium

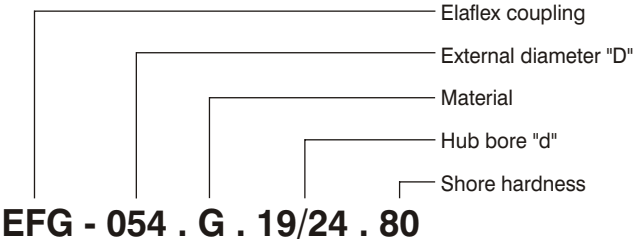
Dimensions EFG, EFL

EFG - Elaflex coupling

INKOMA-Elaflex coupling EFG - flexible spider inserted from the periphery.
Spiders in two hardnesses (80 / 92 Shore) are available.

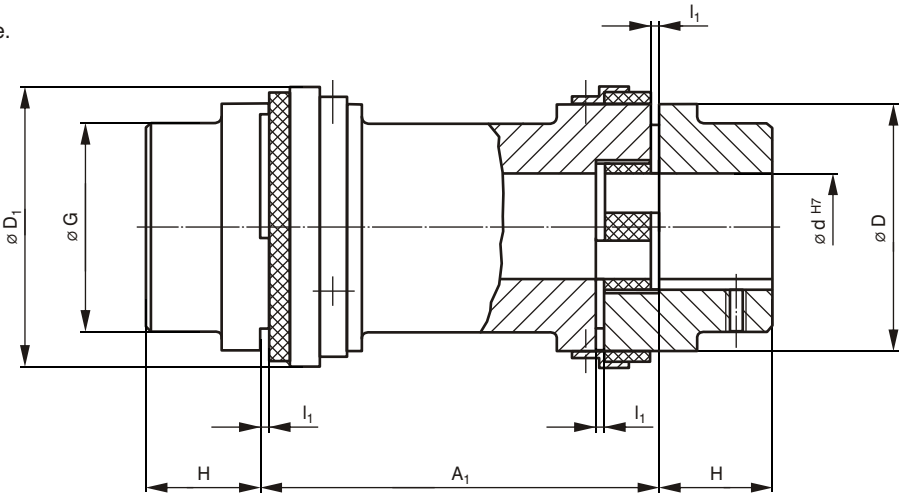


Ordering example:

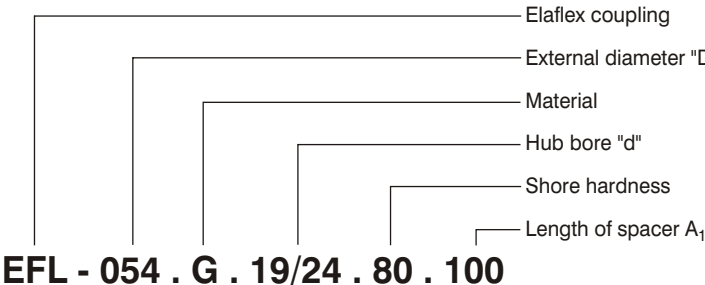


EFL - Elaflex coupling

INKOMA-Elaflex coupling EFL with spacer to bridge between shafts.
Spiders in two hardnesses (80 / 92 Shore) are available.



Ordering example:



Elaflex couplings

Order code	Hub bore d ^{H7} with keyway to BS 4235 (DIN 6885/1) and clamping screw					Dimensions [mm]							Angular misalignment ¹⁾ α [°]	Radial offset ¹⁾ R [±mm]	max. speed n [min ⁻¹]	Torque [Nm]						Mass	
																80 Shore			92 Shore				
						Ex-stock		Pilot bore	max. ∅	A	D	D ₁				G	H	I ₁	I ₂	T _{KN} Nom.	T _{Kmax} Max	T _{KW} Oscillating load	T _{KN} Nom.
EFG-054.G	19	24	28	11	28	64	54	64	49	25	2	13	1	0,15	5000	37,5	75	10,5	77	144	20,5	0,75	0,7
EFG-065.G	24	28	32	10	38	89	65	77	57	35	2	22	1	0,15	5000	75	150	21,0	154	308	40,5	1,10	0,8
EFG-085.G	28	32	38	15,5	42	108	85	95	76	43	3	32	1	0,15	4500	80	160	22,5	164	328	43	3,20	2,3
EFG-096.G	38	42	48	15	48	116	96	110	80	45	3	32	1	0,15	4500	120	240	33,5	246	592	65	3,90	2,5
EFG-115.G	42	48	55	20	55	134	115	128	102	54	3	35	1	0,15	4000	150	300	42,0	307	614	81	7,50	5,4
EFG-127.G	42	48	55	19	60	154	127	141	108	64	3	45	1	0,15	4000	225	450	63,0	409	818	107	10,50	7,5

¹⁾ max. offset at n= 1500 1/min

Material: G Grey cast iron

Order code	Hub bore d ^{H7} with keyway to BS 4235 (DIN 6885/1) and clamping screw					Dimensions [mm]							Angular misalignment ¹⁾ α [°]	Radial offset ¹⁾ R [±mm]	max. speed n [min ⁻¹]	Torque [Nm]						Mass	
																80 Shore			92 Shore				
						Ex-stock		Pilot bore	max. ∅	A ₁	D	D ₁				G	H	I ₁	T _{KN} Nom.	T _{Kmax} Max	T _{KW} Oscillating load	T _{KN} Nom.	T _{Kmax} Max
EFL-054.G	19	24	28	11	28	90, 100	54	64	49	25	2	1	0,15	5000	37,5	75	10,5	77	144	20,5	1,0	1,25	
EFL-065.G	24	28	32	10	35	90, 100, 140	65	77	57	35	2	1	0,15	5000	75	150	21,0	154	308	40,5	2,0	2,5	
EFL-085.G	28	32	38	15,5	42	90, 100, 140	85	95	76	43	3	1	0,15	4500	80	160	22,5	164	328	43	4,1	4,8	
EFL-096.G	38	42	48	15	48	90, 100, 140	96	110	80	45	3	1	0,15	4500	120	240	33,5	246	592	65	5,0	6,1	
EFL-115.G	42	48	55	20	55	90, 100, 140	115	128	102	54	3	1	0,15	4000	150	300	42,0	307	614	81	9,6	10,2	
EFL-127.G	42	48	55	19	60	90, 100, 140	127	141	108	64	3	1	0,15	4000	225	450	63,0	409	818	107	13,4	15	

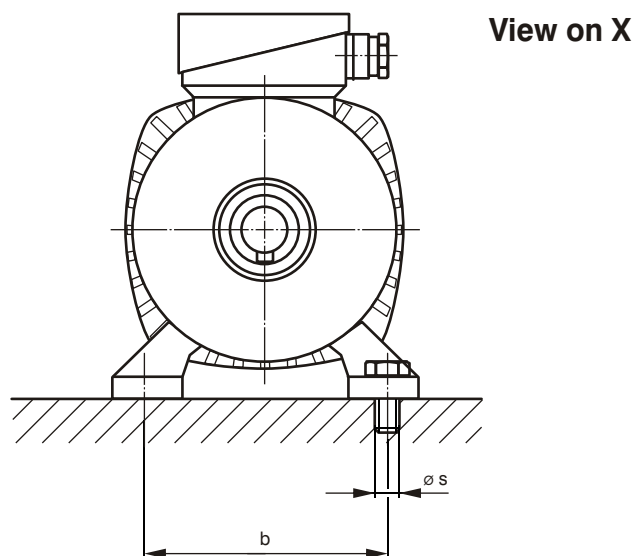
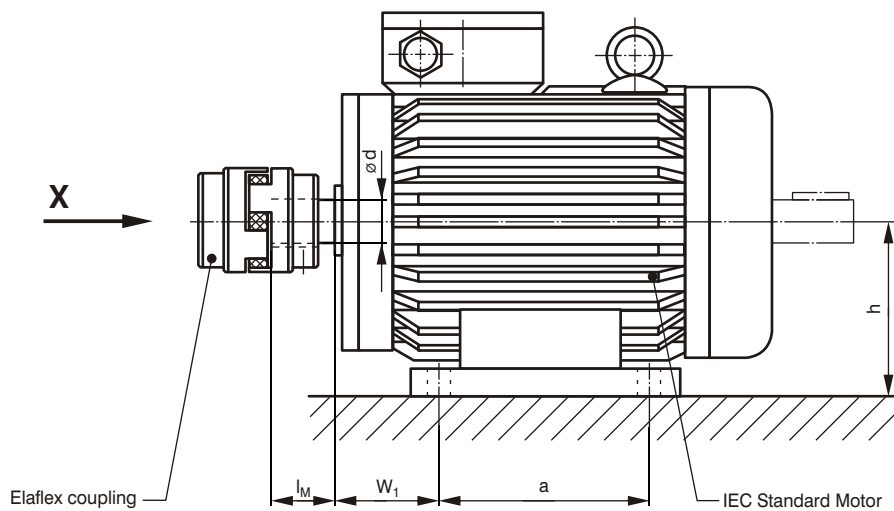
¹⁾ max. offset at n= 1500 1/min

Material: G Grey cast iron

Arrangement for IEC standard motors

Elaflex coupling selection for: IEC standard motors protection class IP54 / IP55 (Spider 80 / 90 Shore)

For INKOMA-Elaflex couplings for assembly to IEC standard motors the shore hardness must be correctly selected. The required hardness (80 / 92 Shore) is shown in the table.



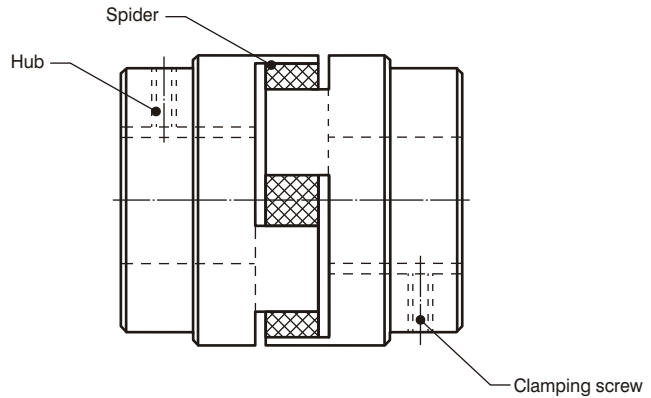
3 phase induction motor 50 HZ Size	Shaft d x l _M [mm] 2, 4, 6, 8-pole	Motor power n = 3000 1/min 2-pole P [kW]	Coupling type EFK with spider 80/92 Shore	Motor power n = 1500 1/min 4-pole P [kW]	Coupling type EFK with spider 80/92 Shore	Motor power n = 1000 1/min 6-pole P [kW]	Coupling type EFK with spider 80/92 Shore	Motor power n = 750 1/min 8-pole P [kW]	Coupling type EFK with spider 80/92 Shore	Mounting dimensions for IEC standard motor [mm]				
										h	a	b	w ₁	s
56	9x20	0,09	027/027	0,06	027/027	-	-	-	-	56	71	90	36	M5
56	9x20	0,12	027/027	0,09	027/027	-	-	-	-	56	71	90	36	M5
63	11x23	0,18	027/027	0,12	027/027	0,06	027/027	-	-	63	80	100	40	M6
63	11x23	0,25	027/027	0,18	027/027	0,09	027/027	-	-	63	80	100	40	M6
71	14x30	0,37	027/027	0,25	027/027	0,18	027/027	0,09	027/027	71	90	112	45	M6
71	14x30	0,55	027/027	0,37	027/027	0,25	027/027	0,12	027/027	71	90	112	45	M6
80	19x40	0,75	036/036	0,55	036/036	0,37	036/036	0,18	036/036	80	100	125	50	M8
80	19x40	1,10	036/036	0,75	045/045	0,55	045/045	0,25	045/045	80	100	125	50	M8
90 S	24x50	1,50	054/054	1,10	054/054	0,75	054/054	0,37	054/054	90	100	140	56	M8
90 L	24x50	2,20	054/054	1,50	054/054	1,10	054/054	0,55	054/054	90	125	140	56	M8
100 L	28x60	3,00	054/054	2,20	054/054	1,50	054/054	0,75	054/065	100	140	160	63	M10
100 LX	28x60	-	-	3,00	054/054	-	-	1,10	054/065	100	140	160	63	M10
112 M	28x60	4,00	065/054	4,00	065/065	2,20	065/065	1,50	065/065	112	140	190	70	M10
132 S	38x80	5,50	085/065	5,50	085/065	3,00	085/065	2,20	085/065	132	140	216	89	M10
132 SX	38x80	7,50	085/065	-	-	-	-	-	-	132	140	216	89	M10
132 M	38x80	-	-	7,50	085/085	4,00	085/085	3,00	085/065	132	178	216	89	M10
132 MX	38x80	-	-	-	-	5,50	085/085	-	-	132	178	216	89	M10
160 M	42x110	11,00	096/085	11,00	096/085	7,50	096/085	4,00	096/085	160	210	254	108	M12
160 MX	42x110	15,00	096/085	-	-	-	-	5,50	096/085	160	210	254	108	M12
160 L	42x110	18,50	096/085	15,00	096/096	11,00	096/096	7,50	096/096	160	254	254	108	M12
180 M	48x110	22,00	115/096	18,50	115/096	-	-	-	-	180	241	279	121	M12
180 L	48x110	-	-	22,00	115/115	15,00	115/115	11,00	115/115	180	279	279	121	M12
200 L	55x110	30,00	127/115	30,00	127/127	18,50	127/127	15,00	127/127	200	305	318	133	M16
200 LX	55x110	37,00	127/115	-	-	22,00	127/127	-	-	200	305	318	133	M16
225 S	60x140	-	-	37,00	127/1)	-	-	-	-	225	286	356	149	M16
225 M	55x110/60x140	45,00	127/115	45,00	127/1)	30,00	127/1)	22,00	127/1)	225	311	356	149	M16
250 M	60x140/65x140	55,00	1)/127	55,00	1)	37,00	1)	30,00	1)	250	349	406	168	M20
280 S	65x140/75x140	75,00	1)	75,00	1)	45,00	1)	37,00	1)	280	368	457	190	M20
280 M	65x140/75x140	90,00	1)	90,00	1)	55,00	1)	45,00	1)	280	419	457	190	M20
315 S	65x140/70x170	110,00	1)	110,00	1)	75,00	1)	55,00	1)	315	406	508	216	M24
315 M	65x140/80x170	132,00	1)	132,00	1)	90,00	1)	75,00	1)	315	457	508	216	M24

1) Please enquire. Currently unavailable, in course of preparation.

Spares list elaflex coupling

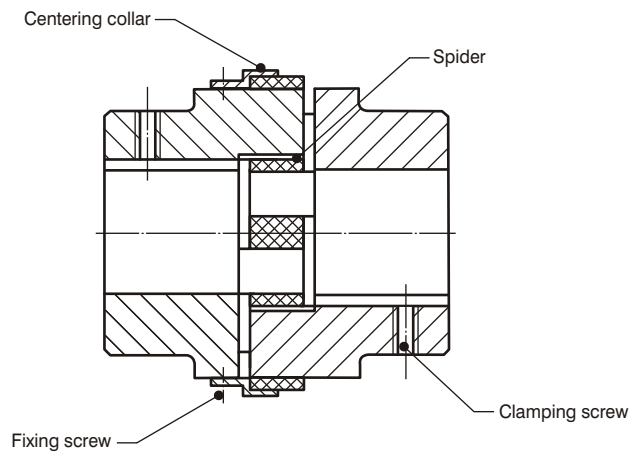
Spares list EFK

Clamping screw
Hub
Spider



Spares list EFG

Fixing screw
Clamping screw
Hub
Spider
Centering collar



Spares list EFL

Fixing screw
Spacer
Clamping screw
Hub
Spider
Centering collar

