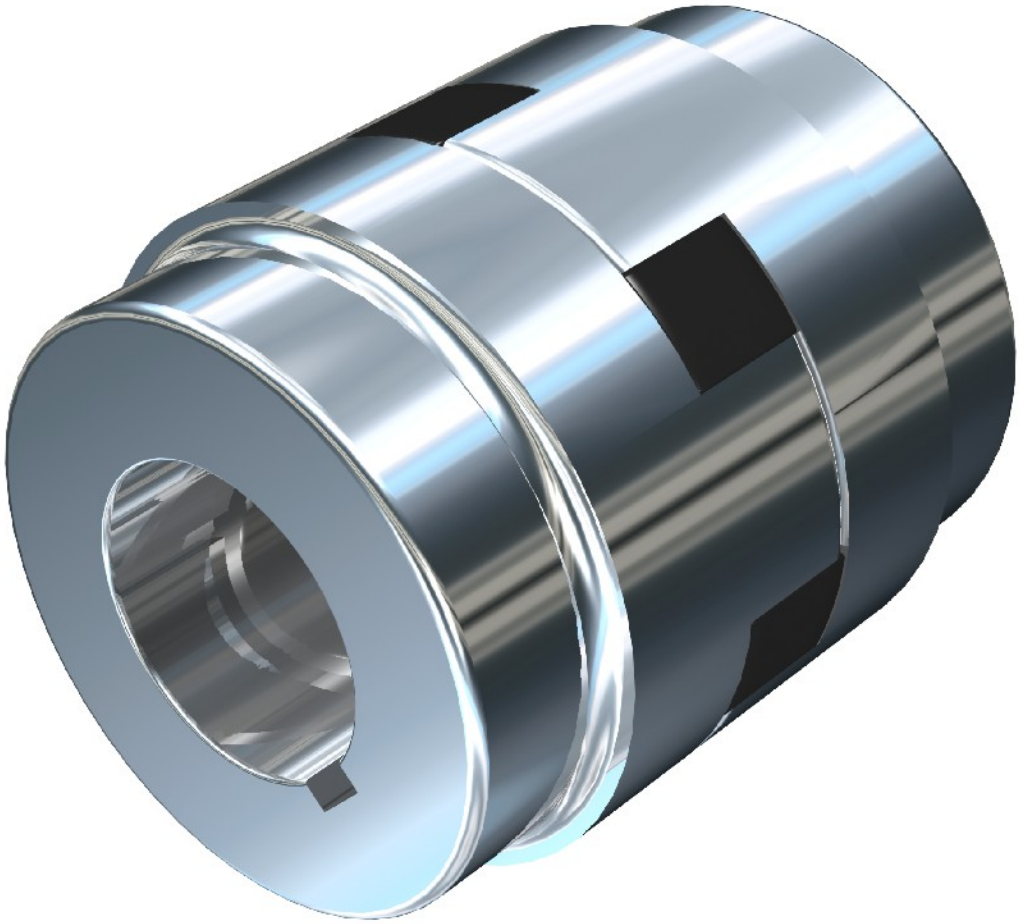
# Product description

## 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 transmisson 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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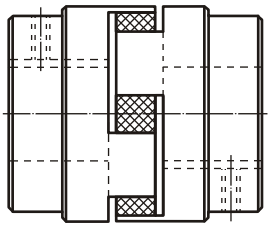
# Contents list

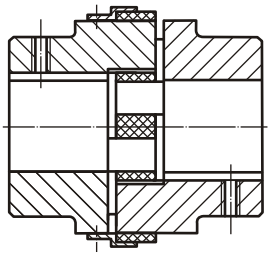
## Elaflex couplings types EFK, EFG, EFL

# Technical information

## Elaflex couplings EFK, EFG, EFL

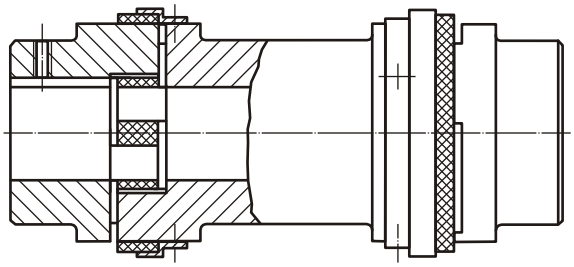
1. **Scope of delivered coupling**
INKOMA-Elaflex couplings are supplied ready-to-use with finished bores, or are pilot bored for subsequent machining. The elastic 'spider' is hard wearing and is resistant to oil, ozone and tropical conditions. It withstands temperatures between -40°C and +100°C.
Trouble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

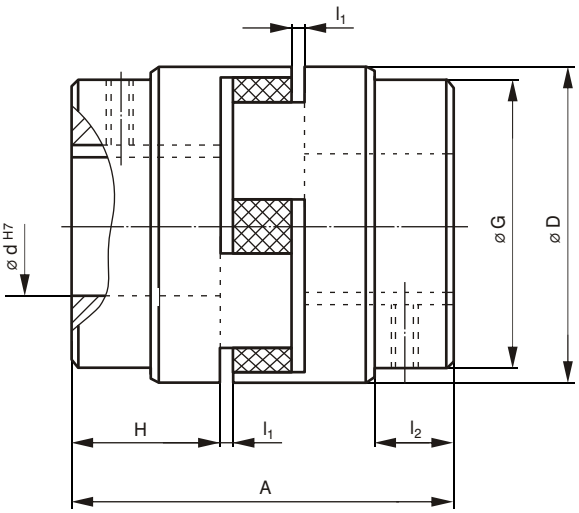
INKOMA-Elaflex couplings are torsionally resilient and compensate for small axial, radial and angular errors. Suitable for bi-directional use, they are compact, torsionally damping and fail safe.
The torque is transmitted via flexible spiders with Shore hardness 80 or 92. Spiders with Shore hardness 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.



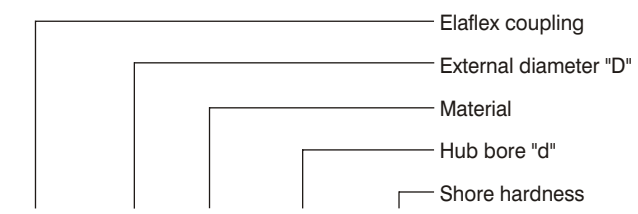
# Dimensions EFK

## EFK - Elaflex coupling

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




## Ordering example:




**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) | Radial offset 2) | max. speed | Torque [Nm] | | | | | | Mass | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ex-stock | | | Pilot bore | max. ⌀ | A | D | G | H | $l_1$ | $l_2$ | | | | 80 Shore | | | 92 Shore | | | | |
| | | | | | | | | | | | | | | | Nom. | Max | Oscillating load | Nom. | Max | Oscillating load | min. bore | max. bore |
| | | | | | | | | | | | | α [°] | R [±mm] | n [min-1] | $T_{KN}$ | $T_{Kmax}$ | $T_{KW}$ | $T_{KN}$ | $T_{Kmax}$ | $T_{KW}$ | [kg] | [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.

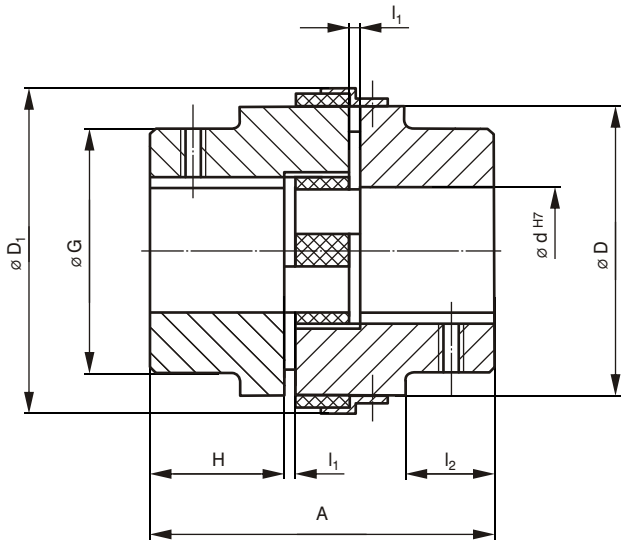
2) max. offset at n= 1500 1/min

Material: S Sintered metal
G Grey cast iron
A Aluminium

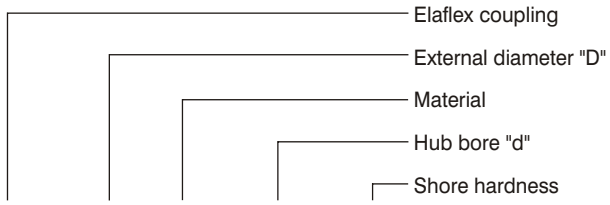
# Dimensions EFG, EFL

## EFG - Elaflex coupling

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



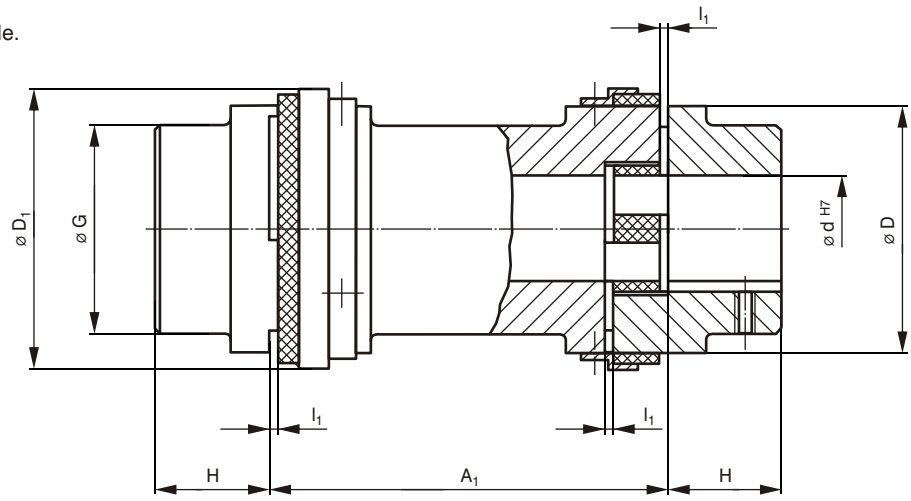

### Ordering example:



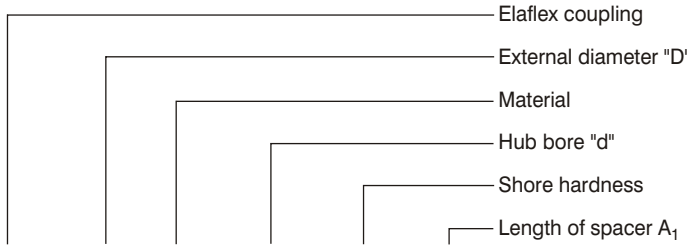

**EFG - 054 . G . 19/24 . 80**

## EFL - Elaflex coupling

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




### Ordering example:




**EFL - 054 . G . 19/24 . 80 . 100**

| Order code | Hub bore d H7 with keyway to BS 4235 (DIN 6885/1) and clamping screw | | | | | Dimensions [mm] | | | | | | | Angular misalignment 1) | Radial offset 1) | max. speed | Torque [Nm] | | | | | | Mass | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ex-stock | | | Pilot bore | max. | | | | | | | | | | | 80 Shore | | | 92 Shore | | | | |
| | | | | | | | | | | | | | | | | Nom. | Max | Oscillating load | Nom. | Max | Oscillating load | min. bore | max. bore |
| | | | | | ⌀ | A | D | $D_1$ | G | H | $l_1$ | $l_2$ | α [°] | R [±mm] | n [min⁻¹] | $T_{KN}$ | $T_{Kmax}$ | $T_{KW}$ | $T_{KN}$ | $T_{Kmax}$ | $T_{KW}$ | [kg] | [kg] |
| 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

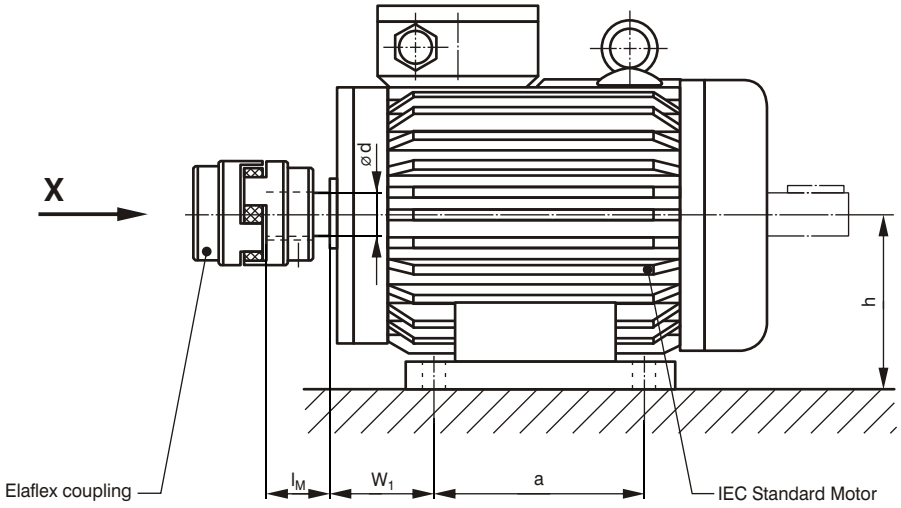
| Order code | Hub bore d H7 with keyway to BS 4235 (DIN 6885/1) and clamping screw | | | | | Dimensions [mm] | | | | | | Angular misalignment 1) | Radial offset 1) | max. speed | Torque [Nm] | | | | | | Mass | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ex-stock | | | Pilot bore | max. | | | | | | | | | | 80 Shore | | | 92 Shore | | | | |
| | | | | | | | | | | | | | | | Nom. | Max | Oscillating load | Nom. | Max | Oscillating load | min. bore | max. bore |
| | | | | | ⌀ | $A_1$ | D | $D_1$ | G | H | $l_1$ | α [°] | R [±mm] | n [min⁻¹] | $T_{KN}$ | $T_{Kmax}$ | $T_{KW}$ | $T_{KN}$ | $T_{Kmax}$ | $T_{KW}$ | [kg] | [kg] |
| 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

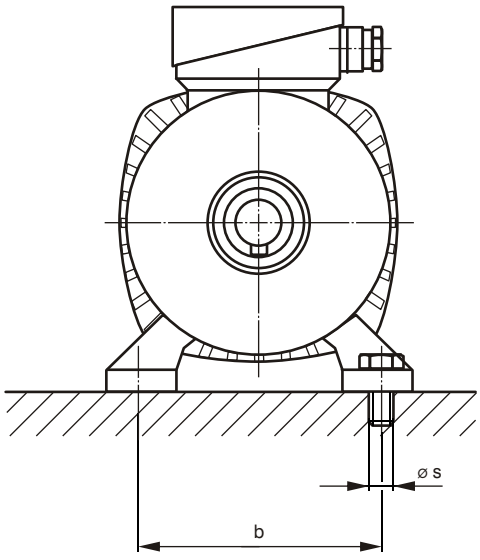
# Arrangement for IEC standard motors

## 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.




**View on X**



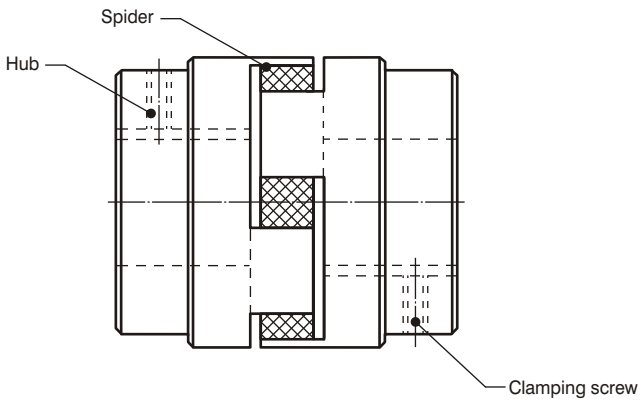
| 3 phase induction motor 50 HZ Size | Shaft d x $l_M$ [mm] 2, 4, 6, 8-pole | Motor power n = 3000 1/min 2-pole P [kW] | Coupling type EFK with spider 80/92 Shore | Motor power n = 1500 1/min 4-pole P [kW] | Coupling type EFK with spider 80/92 Shore | Motor power n = 1000 1/min 6-pole P [kW] | Coupling 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

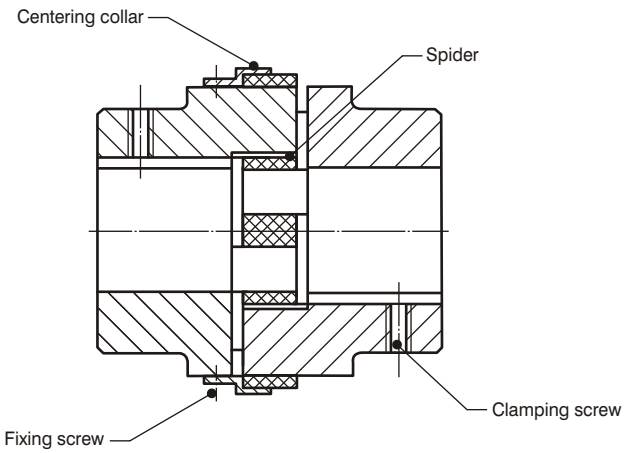
## Spares list EFK

Clamping screw
Hub
Spider



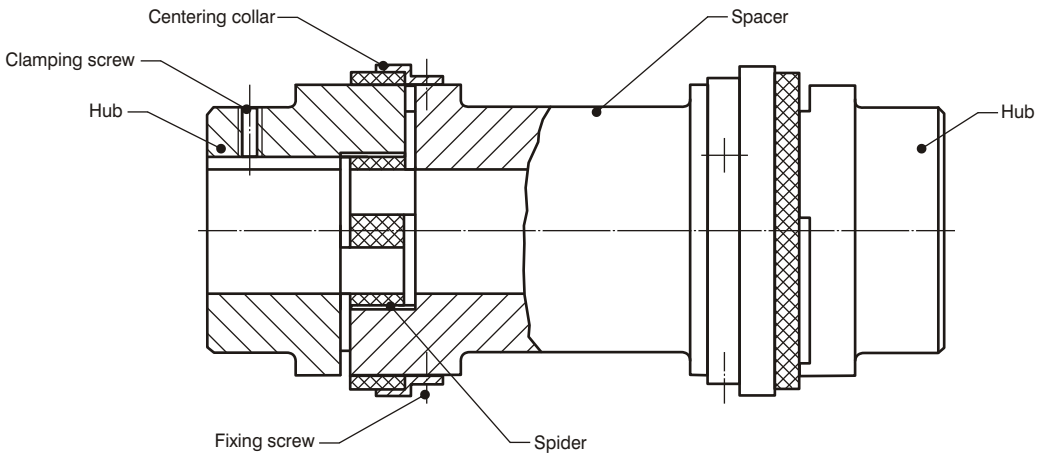

## Spares list EFG

Fixing screw
Clamping screw
Hub
Spider
Centering collar




## Spares list EFL

Fixing screw
Spacer
Clamping screw
Hub
Spider
Centering collar





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