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# SGEG - SGEA - SGES - SGEK - EGE series

Flexible half-coupling in aluminium, cast iron and steel

## SOFTWARE FOR AUTOMATIC CALCULATION

The web-based software program will allow you to select the most suitable MP Filtri's Filters, in accordance with your process design requirements.

The program will automatically check your input design process prior to propose you the acceptable solutions and create an output in PDF report style format.

The MP Filtri Selection Tool software program is easy to use with a flexible fast design method and provides improved layout formats with full descriptions.



**BELL-HOUSINGS  
& COUPLINGS**



# BELL-HOUSINGS & COUPLINGS SIZING

## A GUIDE TO SELECT THE CORRECT BELL-HOUSING AND DRIVE COUPLING MANUALLY

### DATA REQUIRED

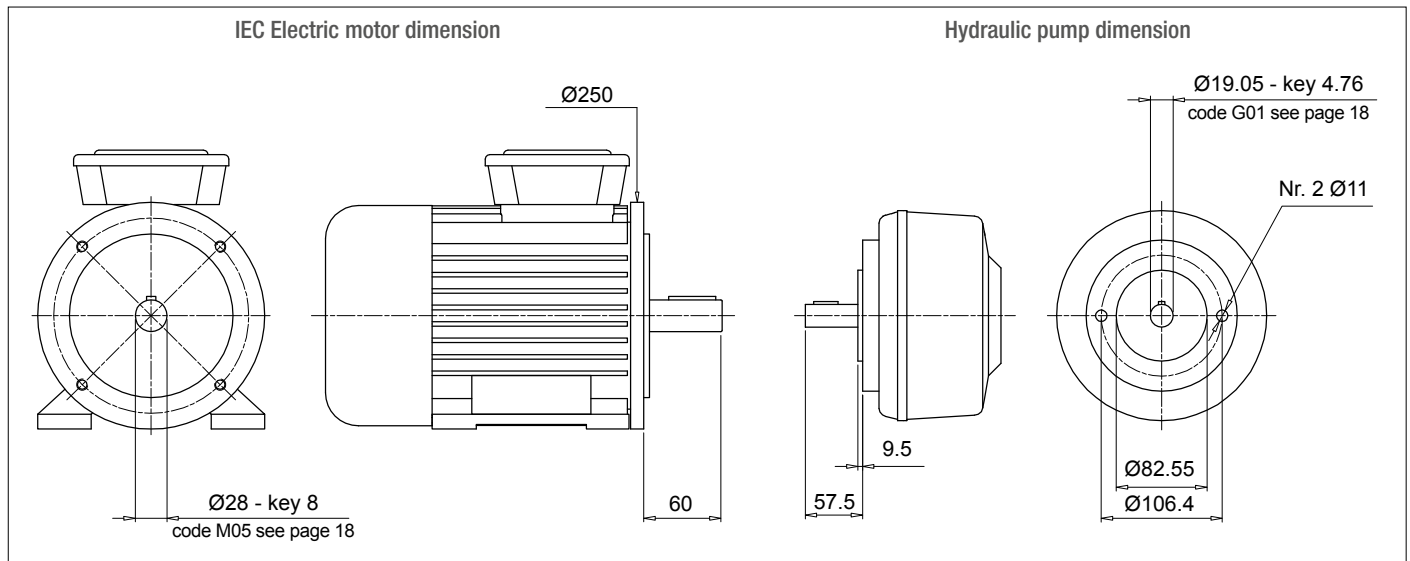
- Electric motor power/motor size
- Manufacturer and pump type

### TO VERIFY:

- 1 - Pump and motor shaft dimensions (see electric motor data sheet)
- 2 - Shaft and flange pump (see pump data sheet)

### Example:

- Electric motor 2.2 kW - size 100-112
- Atos pump code PFE31 - Shaft 1



### Bell-Housing's length calculation

- $H = 60 + 18 + 57.5 = 135.5$  mm (18 = Sp spider - see page 31)
- Choose type of bell-housing (LMC - LMS):  
For monobloc bell-housing LMC/LDC series see pages 75 ÷ 81  
For Low noise bell-housing LMS/LDS series see pages 81 ÷ 89  
For Multi-components 2-3 bell housing series see pages 91 ÷ 111

#### Note:

The length of bell-housing must be  $\geq$  than the length calculated (135.5 mm)

### Case A

#### Solution with monobloc bell-housing series **LMC/LDC**

Pages 75 ÷ 81 for IEC Electric motor size 100-112 - LMC250

LMC 250 bell-housing with height  $\geq 135.5$  - LMC250AFSQ

The bell-housing code must be completed with pump drilling code (see pages 60-61).

For the specific case:

Spigot hole 82.55 - PCD 106.4 - Nr.2 holes M10 : Drilling code 060

Definitive bell-housing code **LMC250AFSQ060**

### Case B

#### Solution with low noise bell-housing series **LMS/LDS**

Pages 83 ÷ 89 for IEC Electric motor size 100-112 - LMS250

LMS 250 bell-housing with height  $\geq 135.5$  - LMS250AFSA

The bell-housing code must be completed with pump drilling code (see pages 60-61).

For the specific case:

Spigot hole 82.55 - PCD 106.4 - Nr.2 holes M10 : Drilling code 060

Definitive bell-housing code **LMS250AFSA060**

# BELL-HOUSINGS & COUPLINGS SIZING

## A GUIDE TO SELECT THE CORRECT BELL-HOUSING AND DRIVE COUPLING MANUALLY

### Coupling selection

#### Motor half-coupling (see page 26)

For IEC Electric motor size 100/112, the half-coupling is **SGEA21M05060**

#### Spider (see page 31)

For SGEA21, EGE2 - EGE2RR

(choose spider material on the base of the application, oil, temperature and cycle machine, etc.)

#### Pump half-coupling

Choose the drilling code - see pages 18-19 for shaft 19.05 - key 4.76 - code: **G01**

Pump half-coupling length = BH length - THK Spider - THK Spigot

$$\text{LMC} = 138 \text{ mm} - 60 - 18 - 9.5 = 50.5 \text{ mm}$$

$$\text{LMS} = 148 \text{ mm} - 60 - 18 - 9.5 = 60.5 \text{ mm}$$

LMC - Choose the half-coupling's length at page 26  $\leq$  50.5 mm.

LMS - Choose the half-coupling's length at page 26  $\leq$  60.5 mm.

LMC - Available length for SGEA21 = 50 mm

LMS - Available length for SGEA21 = 60 mm

Half coupling for LMC: **SGEA21G01050**

Half coupling for LMS: **SGEA21G01050**

**Note:** for multi pumps we recommend to use a specific support on the base of the pump's dimensions and weight.

The half-couplings series SGE\*\*\* allow secure transmission between the electric motor and the driven side; they are able to absorb shocks and vibration, in addition to compensating radial misalignment, angular and axial.

The complete range of couplings are extrapolated from the on-line software, with a length equal than the shaft on which must be mounted and they are completed with grub screw for fixing located on the key.

The assembly of the couplings can be horizontal/vertical, withstanding vibration and load reversals.

Available for cylindrical shaft with metric and imperial dimensions as well for splined shafts as per specification DIN, ISO and SAE.

## Admissible misalignment radial, angular and axial

### Max admissible radial misalignment

Half-coupling	R [mm]
SGE * 01	0.5
SGE * 21	1.0
SGE * 31	1.0
SGE * 40	1.0
SGE * 51	1.5
SGE * 60	1.5
SGE * 80	2.0
SGE * 90	2.0

### Max admissible angular misalignment

Half-coupling	$\beta$ [°]
SGE * 01	1.5°
SGE * 21	
SGE * 31	
SGE * 40	
SGE * 51	
SGE * 60	
SGE * 80	
SGE * 90	

### Max admissible angular alignment

Half-coupling	A [mm]
SGE * 01	2.0
SGE * 21	2.5
SGE * 31	3.0
SGE * 40	3.5
SGE * 51	3.5
SGE * 60	3.5
SGE * 80	4.0
SGE * 90	5.0

Standard ATEX Directive 2014/34/EU and UK Regulation S.I. 2016 No. 1107 (as amended)



Half-couplings are available to use in hazardous area.

The couplings are certified according to Standard ATEX Directive 2014/34/EU and UK Regulation S.I. 2016 No. 1107 (as amended) - Category certified 2G - Area 1 and 2.

MP Filtri couplings are developed with:



Examples verification of the coupling

Torque transmitted by electric motor:

**Mt:**  $9560 \times \text{kW} / \text{rpm} = \text{Nm}$

**Me >**  $Mt \times S = \text{Nm}$

Where:

**Mt:** Torque transmitted by electric motor

**Me:** Torque transmitted by coupling

**kW:** Power of electric motor

**Rpm:** Revolutions per minute of electric motor

**S:** Service factor

Table 1

<b>Small pumps, uniform load, low operating pressures</b> e.g. rotary action machine tools - 5/8 work cycles per hour	<b>1.3</b>
<b>Small pumps, uniform load, high working pressures</b> e.g. lifting equipment - 120-150 work cycles per hour	<b>1.5</b>
<b>Pumps, non-uniform load</b> e.g. lifting equipment - 280-300 work cycles per hour	<b>1.7</b>

**Example**

Electric motor, 4 pole - 4 kW  
hydraulic pump, uniform load, low operating pressure

**Mt:**  $9560 \times 4 / 1500 = 25.45 \text{ Nm}$

**Me >**  $25.49 \times 1.3 = 33 \text{ Nm}$

**Half-coupling SGEA21 meets the above requirement.**

Select the half-coupling of the calculated size from the motor half-couplings table.

**Note:** When selecting the coupling, remember that for pumps with splined shaft, only cast iron couplings of the SGEG series can be used.

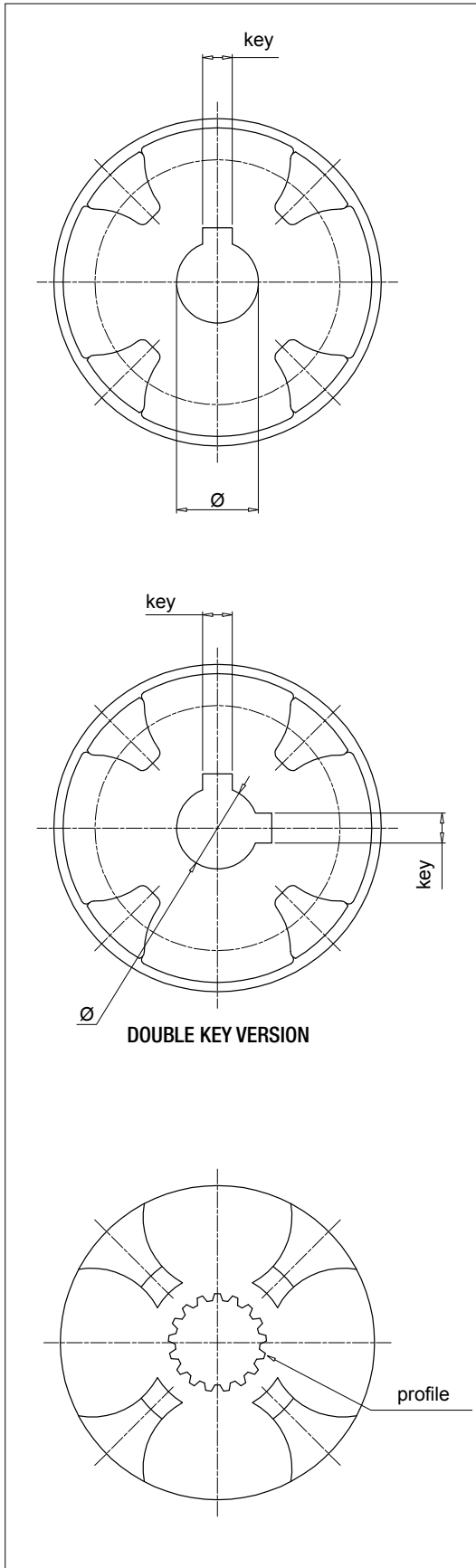
Determine the size of the coupling according to the type of installation and application envisaged, on the basis of the formulas and the following tables:

Table 2

Half-coupling type	External diameter [mm]	Nominal torque Me - Nm	Maximum transmissible torque Me - Nm	
<b>ROTAFIT</b>				
<b>SGEA01</b>	<b>SGEK01</b>	44	10	20
<b>SGEA21</b>	<b>SGEK21</b>	70	95	190
<b>SGEA31</b>	<b>SGEK31</b>	85	190	380
<b>SGEA51</b>	<b>SGEK51</b>	109.5	310	620
<b>ALUMINIUM</b>				
<b>SGEG01</b>		40	10	20
<b>SGEG30</b>		80	190	380
<b>SGEG40</b>	<b>SGEK40</b>	95	310	620
<b>SGEG60</b>	<b>SGEK60</b>	120	430	860
<b>SGEG80</b>	<b>SGEK80</b>	160	1250	2500
<b>SGEG90</b>		200	5500	6100
<b>CAST IRON</b>				
<b>SGES40</b>		95	310	620
<b>SGES60</b>		120	430	860
<b>SGES80</b>		180	1250	2500
<b>STEEL</b>				

Nominal and maximum torque values are referred to couplings assembled with standard flexible spiders of the **EGE\*\*** series (see page 31).

Where higher torques are to be transmitted, use flexible spiders of the **EGE\*\*RR** series (see page 31).



Parallel shaft - Metric Dimensions

Ø [mm]	key [mm]	Code
12	4	<b>C00</b>
15	5	<b>C01</b>
16	4	<b>C02</b>
16	5	<b>C03</b>
17	5	<b>C04</b>
18	6	<b>C05</b>
20	5	<b>C06</b>
19	5	<b>C07</b>
30	10	<b>C08</b>
20	6	<b>C09</b>
16	5	<b>C10</b>
15	4	<b>C11</b>
22	6	<b>D00</b>
24	6	<b>D01</b>
25	8	<b>D02</b>
30	8	<b>D03</b>
32	10	<b>D04</b>
35	10	<b>D05</b>
40	12	<b>D06</b>
45	14	<b>D07</b>
50	14	<b>D08</b>
70	20	<b>D09</b>
22	8	<b>D10</b>
52	16	<b>D20</b>
8	3	<b>E00</b>
10	3	<b>E01</b>
22	5	<b>E02</b>
32	8	<b>E03</b>
35	8	<b>E04</b>
82	22	<b>E05</b>
25	7	<b>E06</b>
63	18	<b>E07</b>
9	3	<b>M00</b>
11	4	<b>M01</b>
14	5	<b>M02</b>
19	6	<b>M03</b>
24	8	<b>M04</b>
28	8	<b>M05</b>
38	10	<b>M06</b>
42	12	<b>M07</b>
48	14	<b>M08</b>
55	16	<b>M09</b>
60	18	<b>M10</b>
65	18	<b>M11</b>
75	20	<b>M12</b>
80	22	<b>M13</b>
90	25	<b>M14</b>
95	25	<b>M15</b>
100	28	<b>M16</b>
110	28	<b>M17</b>
85	22	<b>M18</b>

Parallel shaft - Imperial Dimensions

Ø		key		Code
[inch]	[mm]	[inch]	[mm]	
7/16"	11.11	1/8"	3.18	<b>G00</b>
3/4"	19.05	3/16"	4.76	<b>G01</b>
7/8"	22.22	3/16"	4.76	<b>G02</b>
7/8"	22.22	1/4"	6.35	<b>G03</b>
1"	25.4	3/16"	4.76	<b>G04</b>
1"	25.40	1/4"	6.35	<b>G05</b>
1 1/4"	31.75	1/4"	6.35	<b>G06</b>
1 1/4"	31.75	5/16"	7.94	<b>G07</b>
1 3/8"	34.94	5/16"	7.94	<b>G08</b>
1 1/2"	38.1	3/8"	9.52	<b>G09</b>
1 5/8"	41.27	3/8"	9.52	<b>H00</b>
1 3/4"	44.45	7/16"	11.11	<b>H01</b>
2"	50.8	1/2"	12.7	<b>H02</b>
2 11/32"	53.94	1/2"	12.7	<b>H03</b>
3/4"	19.02	1/8"	3.17	<b>H04</b>
1"	25.4	3/16"	4.76	<b>H05</b>
5/8"	15.87	3/16"	4.76	<b>H06</b>
17/32"	13.45	1/8"	3.18	<b>H07</b>
11/16"	17.46	3/16"	4.76	<b>H08</b>
1/2"	12.7	1/8"	3.18	<b>H09</b>
5/8"	15.87	5/32"	3.97	<b>L00</b>
7/8"	22.22	5/32"	4	<b>L01</b>
11/8"	28.58	1/4"	6.35	<b>L02</b>
3/4"	19.05	1/4"	6.35	<b>L03</b>
1 7/8"	47.63	1/2"	12.7	<b>L04</b>
3 3/8"	85.73	7/8"	22.23	<b>L05</b>
2 3/8"	60.33	5/8"	15.88	<b>L06</b>
2 3/8"	60.33	1/2"	12.7	<b>L07</b>
2 7/8"	73.03	3/4"	19.05	<b>L08</b>
3 5/8"	92.07	7/8"	22.22	<b>L09</b>
1 5/8"	41.6	15/32"	12	<b>L10</b>
1 1/8"	28.58	5/16"	7.94	<b>L15</b>

Parallel shaft - Double Key

Ø [mm]	key [mm]	Code
16.00	4.00	<b>C02***2H</b>
	5.00	
20.00	5.00	<b>C06***2M</b>
	6.00	
19.00	5.00	<b>C07***2L</b>
	6.00	
24.00	6.00	<b>D01***2N</b>
	8.00	
30.00	8.00	<b>D03***2P</b>
	10.00	
22.22	4.76	<b>G02***2E</b>
	6.35	
25.40	6.35	<b>G04***2F</b>
	4.76	
31.75	6.35	<b>G06***2G</b>
	7.94	

\*\*\* = coupling length

SAE Bore - ANS.B.92.1-1970

Profile	Nr. of Th	Code
17 th 8/16	17	<b>PD01</b>
14 th 12/24	14	<b>PD02</b>
16 th 12/24	16	<b>PD03</b>
17 th 12/24	17	<b>PD04</b>
9 th 16/32	9	<b>PD05</b>
11 th 16/32	11	<b>PD06</b>
12 th 16/32	12	<b>PD07</b>
13 th 16/32	13	<b>PD08</b>
15 th 16/32	15	<b>PD09</b>
21 th 16/32	21	<b>PD10</b>
23 th 16/32	23	<b>PD11</b>
27 th 16/32	27	<b>PD12</b>
40 th 16/32	40	<b>PD13</b>
20 th 24/48	20	<b>PD14</b>
21 th 24/48	21	<b>PD15</b>
23 th 24/48	23	<b>PD16</b>
25 th 24/48	25	<b>PD17</b>
26 th 24/48	26	<b>PD18</b>
27 th 12/48	27	<b>PD19</b>
28 th 24/48	28	<b>PD20</b>
29 th 24/48	29	<b>PD21</b>
32 th 24/48	32	<b>PD22</b>
21 th 32/64	21	<b>PD23</b>
30 th 32/64	30	<b>PD24</b>
33 th 32/64	33	<b>PD25</b>
23 th 40/80	23	<b>PD26</b>
36 th 48/96	36	<b>PD27</b>
41 th 48/96	41	<b>PD28</b>
47 th 48/96	47	<b>PD29</b>
13 th 8/16	13	<b>PD30</b>
15 th 8/16	15	<b>PD31</b>
14 th 16/32	14	<b>PD32</b>
40 th 16/32	40	<b>PD33</b>
33 th 16/32	33	<b>PD34</b>
9 th 20/40	9	<b>PD35</b>
10 th 16/32	10	<b>PD36</b>
25 th 20/40	25	<b>PD37</b>

Splined bore as per standard DIN5480

Profile	Nr. of Th	Code
W18 x 1.25 x 13	13	<b>PA01</b>
W20 x 1.25 x 14	14	<b>PA02</b>
W25 x 1.25 x 18	18	<b>PA03</b>
W28 x 1.25 x 21	21	<b>PA04</b>
W32 x 1.25 x 24	24	<b>PA05</b>
W38 x 1.25 x 29	29	<b>PA06</b>
W30 x 2 x 14	14	<b>PA07</b>
W32 x 2 x 14	14	<b>PA08</b>
W35 x 2 x 16	16	<b>PA09</b>
W37 x 2 x 17	17	<b>PA10</b>
W38 x 2 x 18	18	<b>PA11</b>
W40 x 2 x 18	18	<b>PA12</b>
W42 x 2 x 20	20	<b>PA13</b>
W45 x 2 x 21	21	<b>PA14</b>
W50 x 2 x 24	24	<b>PA15</b>
W55 x 2 x 26	26	<b>PA16</b>
W60 x 2 x 28	28	<b>PA17</b>
W70 x 2 x 34	34	<b>PA18</b>
W80 x 2 x 38	38	<b>PA19</b>
W60 x 3 x 18	18	<b>PA20</b>
W70 x 3 x 22	22	<b>PA21</b>
W75 x 3 x 24	24	<b>PA22</b>
W90 x 3 x 28	28	<b>PA23</b>
W105 x 3 x 34	34	<b>PA24</b>
W80 x 3 x 25	25	<b>PA25</b>
W50 x 1.25 x 38	38	<b>PA26</b>
W62 x 1.25 x 48	48	<b>PA27</b>
W40 x 1.5 x 25	25	<b>PA28</b>
W32 x 1.5 x 20	20	<b>PA29</b>
W40 x 1.25 x 30	30	<b>PA30</b>

Splined bore as per standard DIN5481

Profile	Nr. of Th	Code
8 x 10	28	<b>PC01</b>
10 x 12	30	<b>PC02</b>
12 x 14	31	<b>PC03</b>
15 x 17	32	<b>PC04</b>
17 x 20	33	<b>PC05</b>
21 x 24	34	<b>PC06</b>
26 x 30	35	<b>PC07</b>
30 x 34	36	<b>PC08</b>
60 x 65	41	<b>PC09</b>

Splined bore as per standard DIN5482

Profile	Nr. of Th	Code
A15 x 12	8	<b>PB01</b>
A17 x 14	9	<b>PB02</b>
A18 x 15	10	<b>PB03</b>
A20 x 17	12	<b>PB04</b>
A22 x 19	13	<b>PB05</b>
A25 x 22	14	<b>PB06</b>
A28 x 25	15	<b>PB07</b>
A30 x 27	16	<b>PB08</b>
A32 x 28	17	<b>PB09</b>
A35 x 31	18	<b>PB10</b>
A38 x 34	19	<b>PB11</b>
A40 x 36	20	<b>PB12</b>
A42 x 38	21	<b>PB13</b>
A45 x 41	22	<b>PB14</b>
A48 x 44	23	<b>PB15</b>
A50 x 45	24	<b>PB16</b>
A52 x 47	25	<b>PB17</b>
A55 x 50	26	<b>PB18</b>
A58 x 53	27	<b>PB19</b>
A60 x 55	28	<b>PB20</b>
A62 x 57	29	<b>PB21</b>
A65 x 60	30	<b>PB22</b>
A68 x 62	31	<b>PB23</b>
A70 x 64	32	<b>PB24</b>
A72 x 66	33	<b>PB25</b>
A75 x 69	34	<b>PB26</b>
A78 x 72	35	<b>PB27</b>
A80 x 74	36	<b>PB28</b>
A82 x 76	37	<b>PB29</b>
A85 x 79	38	<b>PB30</b>
A88 x 82	39	<b>PB31</b>
A90 x 84	40	<b>PB32</b>
A92 x 86	41	<b>PB33</b>
A95 x 89	42	<b>PB34</b>
A98 x 92	43	<b>PB35</b>
A100 x 94	44	<b>PB36</b>

## Technical data

### Couplings - Flexible half-coupling in aluminium, cast iron and steel

#### Half-couplings materials

SGEA: Pressure die cast aluminium

SGEG: Cast Iron en-GJL-250 (gg25)

SGES: Steel C40

SGEK: Pressure die cast aluminium

SGEK: Cast Iron en-GJL-250 (gg25)



#### Spider materials

EGE\*\* series: Oil-resistant NBR 85 Shore A - black colour

EGE\*\*RR series: in polyurethane Laripur - 92 Shore A - LPR202-95A - red colour

#### Compatibility with fluids

- Mineral oils types HH-HL-HM-HR-HV, to ISO 6743/4 standard
- Water based emulsions types HFAE-HFAS, to ISO 6743/4 standard
- Water glycol type HFC, to ISO 6743/4 standard: ask for anodized version

#### Special Applications

Any applications not covered by the normal indications contained in this catalogue must be evaluated and approved by MP Filtri Technical and Sales Department

#### Temperature

Spider oil-resistant rubber: from -20 °C to +90 °C

Spider polyurethane resin: from -30 °C to +120 °C

#### Note

For temperatures outside this range, contact MP Filtri Technical and Sales Department



## Range

IEC Electric Motors size	Aluminium		G25 UNI 5007 Cast Iron - C40 Carbon Steel			
	Shaft ISO 3019-2	Shaft ISO 3019-2	Shaft ANSI B92. 1A 1976	Shaft DIN 5480	Shaft DIN 5481	Shaft DIN 5482
IEC 80 Ø200 - Ø19x40	●	●	●	●	●	●
IEC 90 Ø200 - Ø24x50	●	●	●	●	●	●
IEC 100 Ø250 - Ø28x60	●	●	●	●	●	●
IEC 112 Ø250 - Ø28x60	●	●	●	●	●	●
IEC 132 Ø300 - Ø38x80	●	●	●	●	●	●
IEC 160 Ø350 - Ø42x110	●	●	●	●	●	●
IEC 180 Ø350 - Ø48x110	●	●	●	●	●	●
IEC 200 Ø400 - Ø55x110	●	●	●	●	●	●
IEC 225 Ø450 - Ø60x140		●	●	●	●	●
IEC 250 Ø550 - Ø65x140		●	●	●	●	●
IEC 280 Ø550 - Ø75x140		●	●	●	●	●
IEC 315 Ø660 - Ø80x170		●	●	●	●	●
IEC 355 Ø800 - Ø90x170		●	●	●	●	●

IEC Electric Motors size	European standard size						German standard size		
	0.5	1	2	3	3.5	4	ZB	ZF	ZG
IEC 63 Ø140 - Ø11x23	●	●	●				●		
IEC 71 Ø160 - Ø14x30	●	●	●				●		
IEC 80 Ø200 - Ø19x40	●	●	●	●			●	●	
IEC 90 Ø200 - Ø24x50	●	●	●	●			●	●	
IEC 110 Ø250 - Ø28x60		●	●	●	●		●	●	
IEC 112 Ø250 - Ø28x60		●	●	●	●		●	●	
IEC 132 Ø300 - Ø38x80		●	●	●	●	●		●	●
IEC 160 Ø350 - Ø42x110			●	●	●	●		●	●
IEC 180 Ø350 - Ø48x110			●	●	●	●		●	●
IEC 200 Ø400 - Ø55x110			●	●	●	●		●	●
IEC 225 Ø450 - Ø60x140				●	●	●			●

## Couplings for standard IEC motors, protection class IP 54 / IP 55

A. C. motor 50 Hz			Motor output n=3000 RPM 2 poles		Coupling size	Motor output n=1500 RPM 4 poles		Coupling size	Motor output n=1000 RPM 6 poles		Coupling size	Motor output n=750 RPM 8 poles		Coupling size
Size	Shaft end Ø x L [mm]		Output P [kW]	Torque T [Nm]		Output P [kW]	Torque T [Nm]		Output P [kW]	Torque T [Nm]		Output P [kW]	Torque T [Nm]	
	2-pole	4, 6, 8 pole												
<b>56</b>	9 x 20		0.09	0.32		0.06	0.43		0.037	0.43				
			0.12	0.41		0.09	0.64		0.045	0.52				
<b>63</b>	11 x 23		0.18	0.62	01	0.12	0.88	01	0.06	0.7	01			01
			0.25	0.86		0.18	1.3		0.09	1.1				
<b>71</b>	14 x 30		0.37	1.3		0.25	1.8		0.18	2		0.09	1.4	
			0.55	1.9		0.37	2.5		0.25	2.8		0.12	1.8	
<b>80</b>	19 x 40		0.75	2.5		0.55	3.7		0.37	3.9		0.18	2.5	
			1.1	3.7		0.75	5.1		0.55	5.8		0.25	3.5	
<b>90S</b>	24 x 50		1.5	5	21	1.1	7.5	21	0.75	8	21	0.37	5.3	21
<b>90L</b>			2.2	7.4		1.5	10		1.1	12		0.55	7.9	
<b>100L</b>	28 x 60		3	9.8		2.2	15		1.5	15		0.75	11	
			3	20		1.5	15		1.1	16				
<b>112M</b>			4	13		4	27		2.2	22		1.5	21	
<b>132S</b>	38 x 80		5.5	18		5.5	36		3	30		2.2	30	
			7.5	25		31	7.5		49	31		3	40	
<b>132M</b>									5.5	55				
<b>160M</b>	42 x 110		11	36		11	72		7.5	75		4	54	
			15	49		5.5	74							
<b>160L</b>			18.5	60	40/51	15	98	40/51	11	109	40/51	7.5	100	40/51
<b>180M</b>	48 x 110		22	71		18.5	121							
<b>180L</b>			22	144		15	148		11	145				
<b>200L</b>	55 x 110		30	97		30	196		18.5	181		15	198	
			37	120		22	215							
<b>200S</b>	55 x 110	60 x 140			60	37	240	60			60	18.5	244	60
<b>225M</b>			45	145		45	292		30	293		22	290	
<b>250M</b>	60 x 140	65 x 140	55	177		55	356		37	361		30	392	
<b>280S</b>		75 x 140	75	241		75	484		45	438		37	483	
<b>280M</b>			90	289		90	581		55	535		45	587	
<b>315S</b>			110	353		110	707		75	727		55	712	
<b>315M</b>	65 x 140	80 x 170	132	423	80	132	849	80	90	873	80	75	971	80
			160	513		160	1030		110	1070		90	1170	
<b>315L</b>			200	641		200	1290		132	1280		110	1420	
			160	1550		132	1710							
<b>315</b>	85 x 170		250	802		250	1600		200	1930		160	2070	
			315	1010		315	2020		250	2410		200	2580	
<b>355</b>	75 x 140		355	1140		355	2280							
			400	1280		400	2570		315	3040		250	3220	
<b>400</b>	80 x 170	110 x 210	500	1600	90	500	3210	90	400	3850	90	315	4060	90
			560	1790		560	3580		450	4330		355	4570	
<b>400</b>	80 x 170		630	2020		630	4030		500	4810		400	5150	
			710	2270		710	4540		560	5390		450	5790	
			800	2560		800	5120		630	6060		500	6420	

# SGEG-SGEA-SGES-SGEK

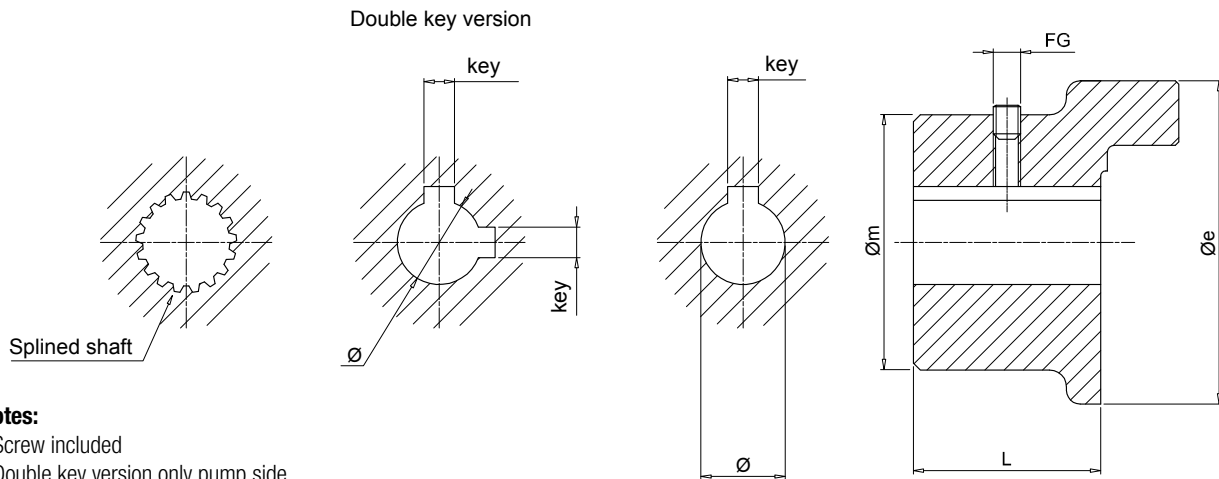
## Designation & Ordering code

### PUMP HALF-COUPLING FOR PARALLEL SHAFT

<b>Pump half-coupling</b>	Configuration example: <b>SGE</b> <b>A</b> <b>21</b> <b>G02</b> <b>050</b> <b>2E</b>					
<b>SGE</b>						
<b>Series and material</b>						
<b>A</b>	Aluminium					
<b>G</b>	Cast Iron					
<b>S</b>	Steel					
<b>K</b>	Aluminium / Cast Iron - Reduced length <b>ROTAFIT</b>					
<b>Size</b>	<b>SGEG</b>	<b>SGEA</b>	<b>SGES</b>	<b>SGEK</b>		
	01	01	01	01		
	30	21	30	21		
	40	31	40	31		
	60	51	60	51		
	80		80	40		
	90		90	60		
				80		
<b>Pump shaft code</b>						
<b>G02</b>	See page 18					
<b>Length</b>						
<b>050</b>	See pages 26 ÷ 30					
<b>Double key way (available combinations only)</b>						
<b>2E</b>	See page 18 (parallel shaft - double key)					

### PUMP HALF-COUPLING FOR SPLINED SHAFT

<b>Pump half-coupling</b>	Configuration example: <b>SGE</b> <b>G</b> <b>40</b> <b>PD02</b> <b>050</b>				
<b>SGE</b>					
<b>Series and material</b>					
<b>G</b>	Cast Iron				
<b>S</b>	Steel				
<b>K</b>	Cast Iron - Reduced length <b>ROTAFIT</b>				
<b>Size</b>	<b>SGEG</b>	<b>SGES</b>	<b>SGEK</b>		
	01	01	01		
	30	30	21		
	40	40	31		
	60	60	51		
	80	80	40		
	90	90	60		
			80		
<b>Pump shaft code</b>					
<b>PD02</b>	See pages 19				
<b>Length</b>					
<b>050</b>	See pages 28 ÷ 30				



**Notes:**

- Screw included
- Double key version only pump side

### Motor half-coupling

IEC - Electric motors		Half-coupling code	Dimensions [mm]							Weight [kg]
Motor size	Shaft end [Ø x L]		Øe	Øm	L	Ø	key	FG		
63	11x23	<b>SGEG01M01021</b>	40	50	21	11	4	M6	0.32	
71	14x30	<b>SGEG01M02028</b>	40	50	28	14	5	M6	0.42	
80	19x40	<b>SGEG01M03040</b>	40	50	40	19	6	M6	0.61	
90	24x50	<b>SGEG01M04050</b>	40	50	50	24	8	M6	0.77	
100 - 112	28x60	<b>SGEG30M05060</b>	80	65	60	28	8	M8	2.35	
		<b>SGEG40M05060</b>	95	75	60	28	8	M8	2.65	
132	38x80	<b>SGEG30M06080</b>	80	65	80	38	10	M8	3.15	
		<b>SGEG40M06080</b>	95	75	80	38	10	M8	3.55	
160	42x110	<b>SGEG40M07110</b>	95	75	110	42	12	M8	4.70	
180	48x110	<b>SGEG40M08110</b>	95	95	110	48	14	M8	4.55	
200	55x110	<b>SGEG40M09110</b>	95	95	110	55	16	M8	4.35	
		<b>SGEG60M09110</b>	120	98	110	55	16	M8	9.00	
225	60x140	<b>SGEG60M10140</b>	120	118	140	60	18	M8	12.30	
		<b>SGEG60M11140</b>	120	118	140	65	18	M8	12.00	
250	65x140	<b>SGEG80M11140</b>	160	138	140	65	18	M8	18.30	
		<b>SGEG80M12140</b>	160	138	140	75	20	M10	17.70	
280	75x140	<b>SGEG90M12100</b>	200	160	100	75	20	M10	21.00	
		<b>SGEG80M13170</b>	160	138	170	80	22	M10	20.60	
315	80x170	<b>SGEG90M13100</b>	200	160	100	80	22	M10	20.00	
		<b>SGEG90M15100</b>	200	160	100	95	25	M10	19.00	
400	100x210	<b>SGEG90M16100</b>	200	160	100	100	28	M10	18.00	

### Pump half-couplings

Half-coupling code	Dimensions [mm]					Standard lengths [mm]
	Ø min	Ø max	Øe	L min	L max	
<b>SGEG01 *** **</b>	-	24	40	20	50	every 5 mm
<b>SGEG30 *** **</b>	-	42	80	30	80	
<b>SGEG40 *** **</b>	-	55	95	30	110	
<b>SGEG60 *** **</b>	-	75	120	40	140	
<b>SGEG80 *** **</b>	-	85	160	50	170	
<b>SGEG90 *** **</b>	-	100	200	40	100	

Complete the half-coupling code with the shaft's code and length

Example: **SGEG40PD02040**

**PD02** - see page 19

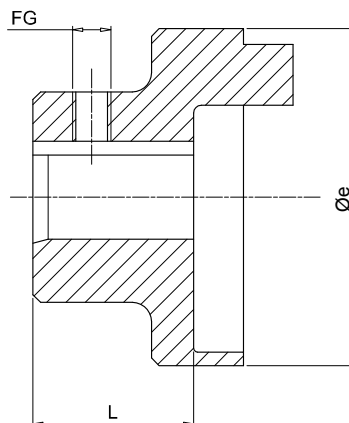
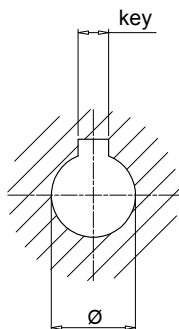
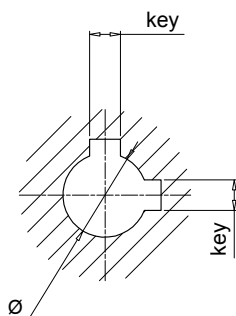
**040** - table "pump half-coupling - standard lengths"

All SGEG series half-couplings are supplied with a grub screw hole as standard, and with a grub screw **UNI 5929 DIN 916** fitted to the hub.

**Note:** For lengths other than those indicated in "Pump half-coupling" table, contact MP Filtri Technical and Sales Department.

## Dimensions

Double key version



**Notes:**

- Screw not included
- Double key version pump side only

### Motor half-coupling

IEC - Electric motors		Half-coupling code	Øe	Dimensions [mm]				FG	Weight [kg]
Motor size	Shaft end [Ø x L]			L	Ø	key	key		
63	11x23	<b>SGEA01M01019</b>	44.0	21	11	4	M5	0.07	
71	14x30	<b>SGEA01M02028</b>	44.0	28	14	5	M5	0.08	
80	19x40	<b>SGEA01M03040</b>	44.0	40	19	6	M5	0.12	
		<b>SGEA21M03040</b>	70.0	40	19	6	M6	0.30	
90	24x50	<b>SGEA01M04048</b>	44.0	48	24	8	M5	0.13	
		<b>SGEA21M04048</b>	70.0	48	24	8	M6	0.28	
100 - 112	28x60	<b>SGEA21M05060</b>	70.0	60	28	8	M6	0.33	
		<b>SGEA31M05060</b>	85.0	60	28	8	M8	0.48	
		<b>SGEA21M06080</b>	70.0	80	38	10	M6	0.44	
132	38x80	<b>SGEA31M06077</b>	85.0	77	38	10	M8	0.78	
		<b>SGEA51M06077</b>	109.5	77	38	10	M8	1.60	
		<b>SGEA51M07109</b>	109.5	109	42	12	M8	1.60	
160	42x110	<b>SGEA51M07109</b>	109.5	109	42	12	M8	1.60	
180	48x110	<b>SGEA51M08109</b>	109.5	109	48	14	M8	1.60	
200	55x110	<b>SGEA51M09109</b>	109.5	109	55	16	M8	1.90	

### Pump half-couplings

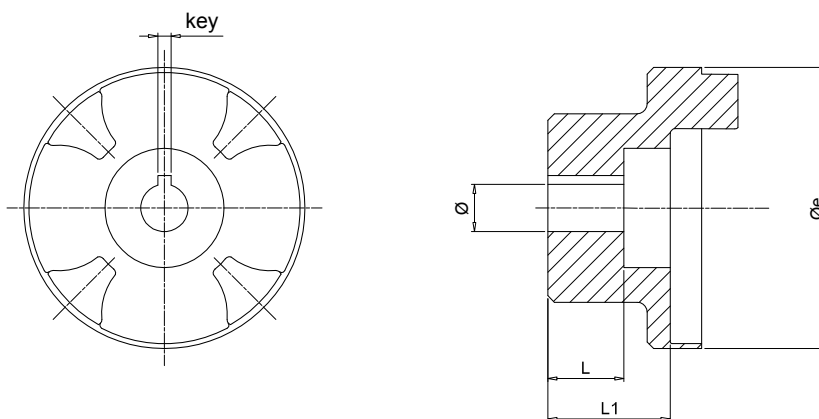
Half-coupling code	Dimensions [mm]					Standard lengths [mm]										FG		
	Ø min	Ø max	Øe	L min	L max	17	23	30	40	44	48	-	-	-	-		-	-
<b>SGEA01 *** **</b>	11	19	44.0	17	50	17	23	30	40	44	48	-	-	-	-	-	-	M5
<b>SGEA21 *** **</b>	15	24	70.0	23	50	35	40	42	44	48	50	-	-	-	-	-	-	M6
<b>SGEA21 *** **</b>	25	28	70.0	40	60	40	42	44	48	50	55	58	60	-	-	-	-	M6
<b>SGEA31 *** **</b>	18	32	85.0	40	60	42	45	48	50	52	55	58	60	-	-	-	-	M8
<b>SGEA31 *** **</b>	38	42	85.0	60	80	60	65	70	77	80	-	-	-	-	-	-	-	M8
<b>SGEA51 *** **</b>	18	40	109.5	40	70	42	45	48	50	52	55	58	60	65	70	-	-	M8
<b>SGEA51 *** **</b>	38	55	109.5	70	109	70	75	80	85	90	95	100	105	109	-	-	-	M8

Complete the half-coupling code with the shaft's code and length

Example: **SGEA51D02040**

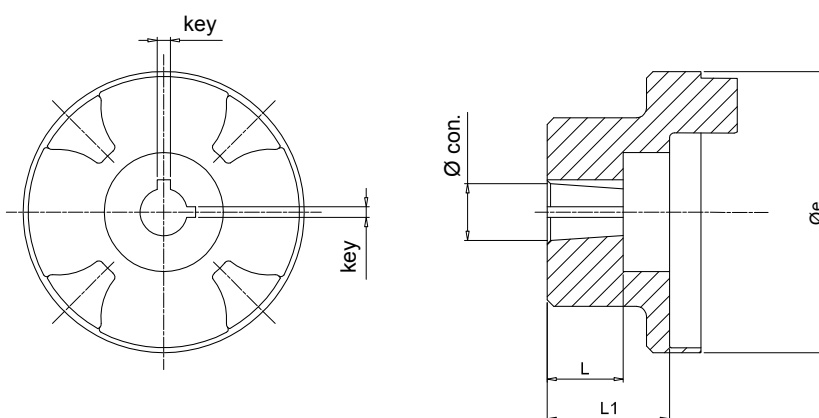
**D02** - see page 18

**040** - table "pump half-coupling - standard lengths"



### Half-coupling for gear pumps - parallel

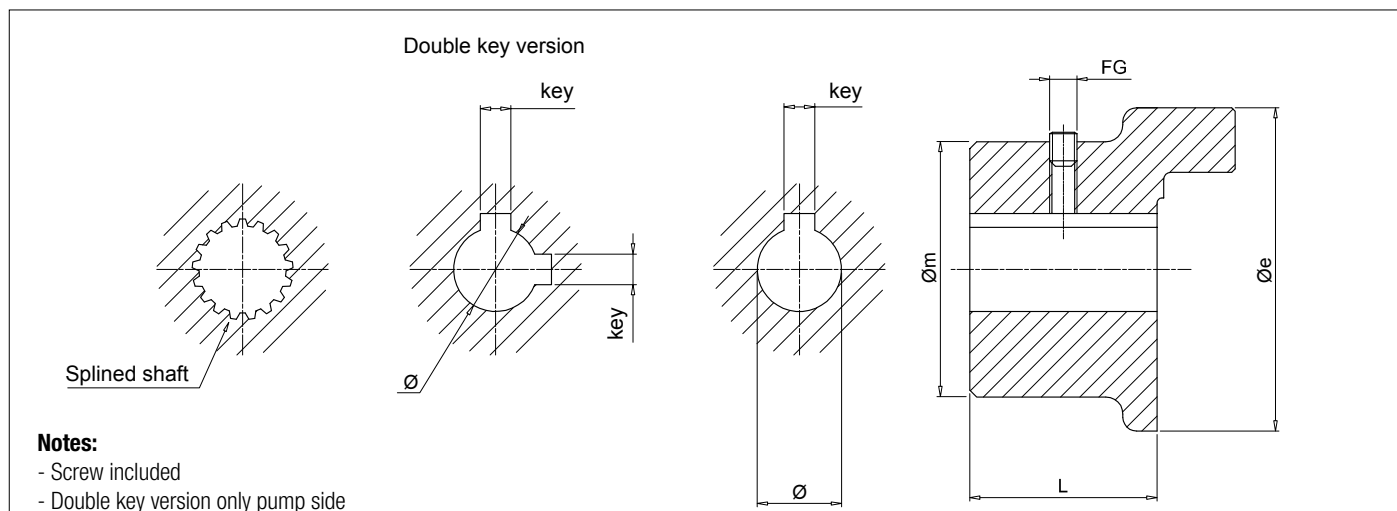
Half-coupling code	Dimensions [mm]					Weight [kg]
	Øe	L	L1	Ø	key	
<b>SGEA01FS05M</b>	44	10.0	17.0	6	2	0.07
<b>SGEA01FS05C</b>	44	10.0	17.0	7	2	0.08
<b>SGEA01FS1C0</b>	44	-	17.0	12	3	0.13
<b>SGEA21FS1C0</b>	70	14.5	21.5	12	3	0.48
<b>SGEA31FS1C0</b>	85	14.5	37.0	12	3	1.90



### Half-coupling for gear pumps - tapered

Half-coupling code	Dimensions [mm]					Weight [kg]	Conical
	Øe	L	L1	Ø	key		
<b>SGEA01FS100</b>	44.0	14.5	16.0	9.7	2.4	0.12	1:8
<b>SGEA01FS1M0</b>	44.0	16.0	16.0	13.9	3	0.30	1:8
<b>SGEA01FSZBR</b>	44.0	11.5	14.5	9.8	2	0.28	1:5
<b>SGEA21FS100</b>	70.0	14.5	21.5	9.7	2.4	0.33	1:8
<b>SGEA21FS1M0</b>	70.0	18.5	21.5	13.9	3	0.78	1:8
<b>SGEA21FS200</b>	70.0	21.5	21.5	17.2	3.2 - 4	1.60	1:8
<b>SGEA21FSZFR</b>	70.0	20.0	21.5	16.9	3	1.60	1:5
<b>SGEA21FS300</b>	70.0	27.0	41.0	21.6	4	1.60	1:8
<b>SGEA31FS100</b>	85.0	14.5	37.0	9.7	2.4	1.90	1:8
<b>SGEA31FS1M0</b>	85.0	17.5	36.0	13.9	3	0.33	1:8
<b>SGEA31FS200</b>	85.0	23.0	37.0	17.2	3.2 - 4	0.48	1:8
<b>SGEA31FS300</b>	85.0	27.0	37.0	21.6	4	0.78	1:8
<b>SGEA31FS350</b>	85.0	35.0	37.0	25.6	4.76 - 5	1.60	1:8
<b>SGEA31FSZFR</b>	85.0	17.0	37.0	16.9	3	1.60	1:5
<b>SGEA31FSZGR</b>	85.0	27.0	34.0	25.2	5	1.60	1:5
<b>SGEA51FS200</b>	109.5	23.5	32.0	17.2	3.2 - 4	1.90	1:8
<b>SGEA51FS300</b>	109.5	25.0	32.0	21.6	4	1.90	1:8
<b>SGEA51FS350</b>	109.5	32.0	32.0	25.6	4.76 - 5	1.60	1:8
<b>SGEA51FSZFR</b>	109.5	19.5	32.0	16.9	3	1.90	1:5
<b>SGEA51FSZGR</b>	109.5	25.0	32.0	24.6	5	1.90	1:5

## Dimensions



### Notes:

- Screw included
- Double key version only pump side

## Motor half-coupling

IEC - Electric motors		Half-coupling code	Dimensions [mm]							Weight [kg]
Motor size	Shaft end [Ø x L]		Øe	Øm	L	Ø	key	FG		
63	11x23	<b>SGES01M01021</b>	40	50	21	11	4	M6	0.32	
71	14x30	<b>SGES01M02028</b>	40	50	28	14	5	M6	0.42	
80	19x40	<b>SGES01M03040</b>	40	50	40	19	6	M6	0.61	
90	24x50	<b>SGES01M04050</b>	40	50	50	24	8	M6	0.77	
100 - 112	28x60	<b>SGES31M05060</b>	80	-	60	28	8	M8	2.35	
		<b>SGES40M05060</b>	95	-	60	28	8	M8	2.65	
132	38x80	<b>SGES31M06080</b>	80	-	80	38	10	M8	3.15	
		<b>SGES40M06080</b>	95	-	80	38	10	M8	3.55	
160	42x110	<b>SGES40M07110</b>	95	-	110	42	12	M8	4.70	
180	48x110	<b>SGES40M08110</b>	95	-	110	48	14	M8	4.55	
200	55x110	<b>SGES40M09110</b>	95	-	110	55	16	M8	4.35	
		<b>SGES60M09110</b>	120	-	110	55	16	M8	9.00	
225	60x140	<b>SGES60M10140</b>	120	-	140	60	18	M8	12.30	
250	65x140	<b>SGES60M11140</b>	120	-	140	65	18	M8	12.00	
		<b>SGES80M11140</b>	160	-	140	65	18	M8	18.30	
280	75x140	<b>SGES80M12140</b>	160	-	140	75	20	M10	17.70	
		<b>SGES90M12100</b>	200	-	100	75	20	M10	21.00	
315	80x170	<b>SGES80M13170</b>	160	-	170	80	22	M10	20.60	
		<b>SGES90M13100</b>	200	-	100	80	22	M10	20.00	
355	95x140	<b>SGES90M15100</b>	200	-	100	95	25	M10	19.00	
400	100x210	<b>SGES90M16100</b>	200	-	100	100	28	M10	18.00	

## Pump half-couplings

Half-coupling code	Dimensions [mm]					Standard lengths [mm]
	Ø min	Ø max	Øe	L min	L max	
<b>SGES01 *** **</b>	-	24	40	20	50	every 5 mm
<b>SGES30 *** **</b>	-	42	80	30	80	
<b>SGES40 *** **</b>	-	55	95	30	110	
<b>SGES60 *** **</b>	-	75	120	40	140	
<b>SGES80 *** **</b>	-	85	160	50	170	
<b>SGES90 *** **</b>	-	100	200	40	100	

Complete the half-coupling code with the shaft's code and length

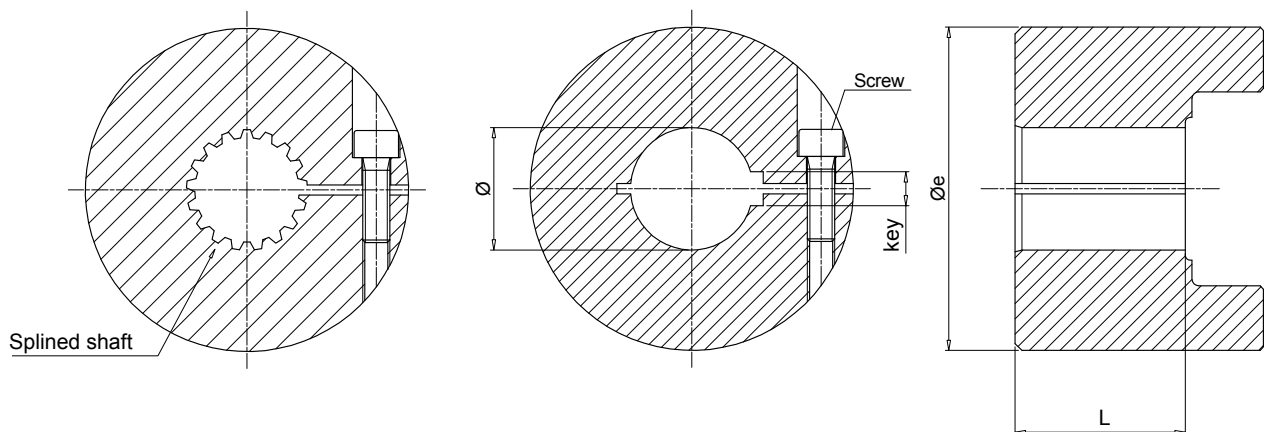
Example: **SGES40PD02040**

**PD02** - see page 19

**040** - table "pump half-coupling - standard lengths"

All SGES series half-couplings are supplied with a grub screw hole as standard, and with a grub screw **UNI 5929 DIN 916** fitted to the hub.

**Note:** For lengths other than those indicated in "Pump half-coupling" table, contact MP Filtri Technical and Sales Department.



### Motor half-coupling

IEC - Electric motors		Half-coupling code	Dimensions [mm]					Weight [kg]
Motor size	Shaft end [Ø x L]		Øe	L	Ø	key	Screw	
132	38x80	<b>SGES40M06050GO</b>	95	50	38	10	M8	4.00
160	42x110	<b>SGES40M07065GO</b>	95	65	42	12	M8	5.00
180	48x110	<b>SGES40M08065GO</b>	95	65	48	14	M8	5.00
200	55x110	<b>SGES60M09085GO</b>	120	85	55	16	M10	8.00
225	60x140	<b>SGES60M10085GO</b>	120	85	60	18	M10	8.00
250	65x140	<b>SGES60M11085GO</b>	120	85	65	18	M10	8.00
280	75x140	<b>SGES60M12085GO</b>	120	85	75	20	M10	8.00
315	80x170	<b>SGES80M13085GO</b>	160	85	80	22	M10	13.00

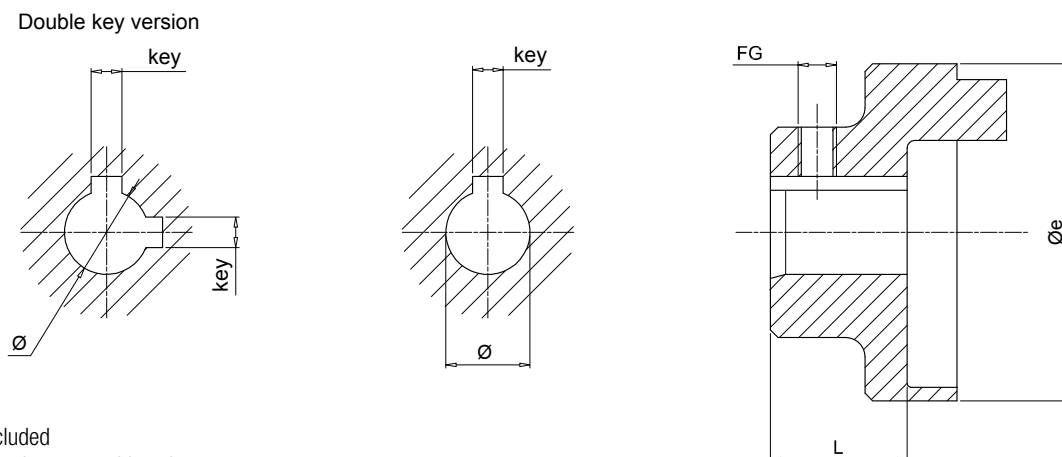
### Pump half-couplings

Half-coupling code	Dimensions [mm]			
	Ø min	Ø max	Øe	L
<b>SGES40 *** **</b>	-	55	95	35
<b>SGES60 *** **</b>	-	65	120	65
<b>SGES80 *** **</b>	-	75	160	85

Complete the half-coupling designation with the pump interface code and the length.

Example: **SGES40PD02035GO** (see page 19).

Dimensions



- Notes:**
- Screw not included
  - Double key version pump side only

Motor half-coupling

IEC - Electric motors		Half-coupling code	Dimensions [mm]					Weight [kg]
Motor size	Shaft end [Ø x L]		Øe	L	Ø	key	FG	
63	11x23	<b>SGEA01M01019</b>	44.0	21	11	4	M5	0.07
71	14x30	<b>SGEA01M02028</b>	44.0	28	14	5	M5	0.08
80	19x40	<b>SGEA01M03040</b>	44.0	40	19	6	M5	0.12
		<b>SGEA21M03040</b>	70.0	40	19	6	M6	0.30
90	24x50	<b>SGEA01M04048</b>	44.0	48	24	8	M5	0.13
		<b>SGEA21M04048</b>	70.0	48	24	8	M6	0.28
100 - 112	28x60	<b>SGEA21M05060</b>	70.0	60	28	8	M6	0.33
		<b>SGEA31M05060</b>	85.0	60	28	8	M8	0.48
132	38x80	<b>SGEA21M06080</b>	70.0	80	38	10	M6	0.44
		<b>SGEA31M06077</b>	85.0	77	38	10	M8	0.78
		<b>SGEA51M06077</b>	109.5	77	38	10	M8	1.60
160	42x110	<b>SGEA51M07109</b>	109.5	109	42	12	M8	1.60
180	48x110	<b>SGEA51M08109</b>	109.5	109	48	14	M8	1.60
200	55x110	<b>SGEA51M09109</b>	109.5	109	55	16	M8	1.90

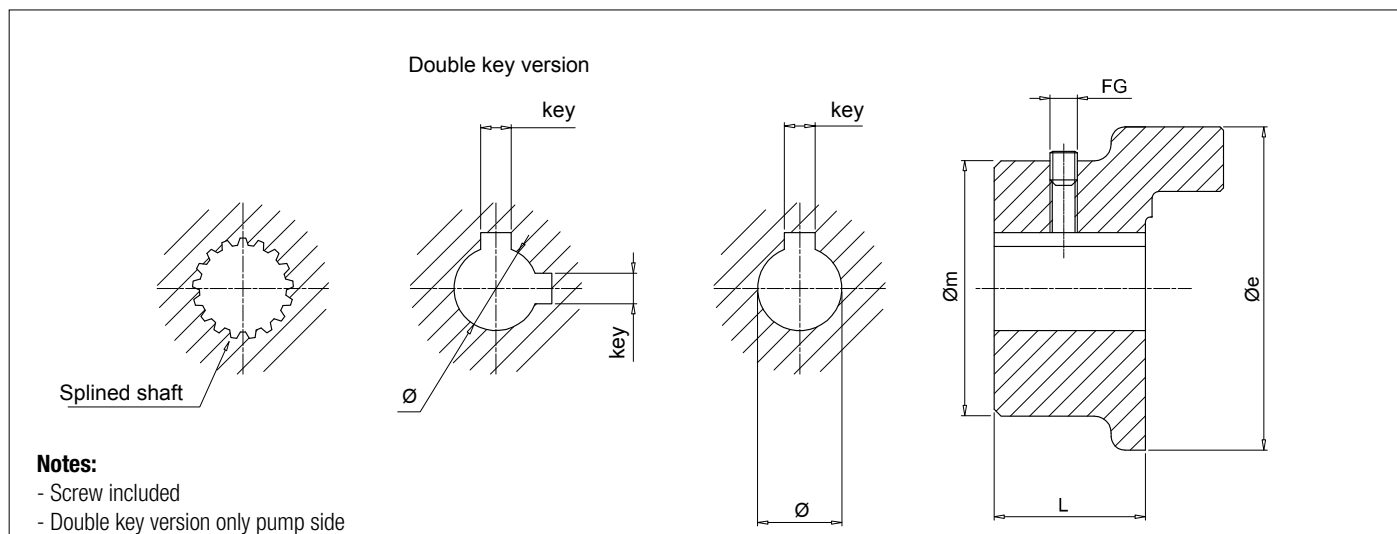
Pump half-couplings

Half-coupling code	Dimensions [mm]				FG	Weight [kg]
	Ø min	Ø max	Øe	L		
<b>SGEK01 *** **</b>	11	19	44.0	25	M5	0.08
<b>SGEK21 *** **</b>	15	28	70.0	35	M6	0.10
<b>SGEK31 *** **</b>	18	42	85.0	45	M8	0.15
<b>SGEK51 *** **</b>	18	55	109.5	50	M8	0.35

Complete the half-coupling code with the shaft's code and length  
 Example: **SGEK51D02050**

**D02** - see page 18

**050** - table "pump half coupling - dimension L"


**Notes:**

- Screw included
- Double key version only pump side

**Motor half-coupling**

IEC - Electric motors		Half-coupling code	Dimensions [mm]							Weight [kg]
Motor size	Shaft end [Ø x L]		Øe	Øm	L	Ø	key	FG		
63	11x23	<b>SGEG01M01021</b>	40	50	21	11	4	M6	0.32	
71	14x30	<b>SGEG01M02028</b>	40	50	28	14	5	M6	0.42	
80	19x40	<b>SGEG01M03040</b>	40	50	40	19	6	M6	0.61	
90	24x50	<b>SGEG01M04050</b>	40	50	50	24	8	M6	0.77	
100 - 112	28x60	<b>SGEG30M05060</b>	80	65	60	28	8	M8	2.35	
		<b>SGEG40M05060</b>	95	75	60	28	8	M8	2.65	
132	38x80	<b>SGEG30M06080</b>	80	65	80	38	10	M8	3.15	
		<b>SGEG40M06080</b>	95	75	80	38	10	M8	3.55	
160	42x110	<b>SGEG40M07110</b>	95	75	110	42	12	M8	4.70	
180	48x110	<b>SGEG40M08110</b>	95	95	110	48	14	M8	4.55	
200	55x110	<b>SGEG40M09110</b>	95	95	110	55	16	M8	4.35	
		<b>SGEG60M09110</b>	120	98	110	55	16	M8	9.00	
225	60x140	<b>SGEG60M10140</b>	120	118	140	60	18	M8	12.30	
250	65x140	<b>SGEG60M11140</b>	120	118	140	65	18	M8	12.00	
		<b>SGEG80M11140</b>	160	138	140	65	18	M8	18.30	
280	75x140	<b>SGEG80M12140</b>	160	138	140	75	20	M10	17.70	
		<b>SGEG90M12100</b>	200	160	100	75	20	M10	21.00	
315	80x170	<b>SGEG80M13170</b>	160	138	170	80	22	M10	20.60	
		<b>SGEG90M13100</b>	200	160	100	80	22	M10	20.00	
355	95x140	<b>SGEG90M15100</b>	200	160	100	95	25	M10	19.00	
400	100x210	<b>SGEG90M16100</b>	200	160	100	100	28	M10	18.00	

**Pump half-couplings**

Half-coupling code	Dimensions [mm]				FG	Weight [kg]
	Ø min	Ø max	Øe	L		
<b>SGEK40 *** **</b>	-	55	95	50	M8	3
<b>SGEK60 *** **</b>	-	75	12	65	M8	6
<b>SGEK80 *** **</b>	-	85	160	85	M10	8

Complete the half-coupling code with the shaft's code and length

Example: **SGEK40PD02050**

**PD02** - see page 19

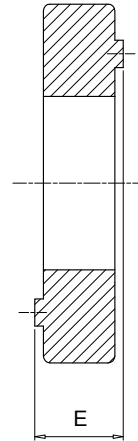
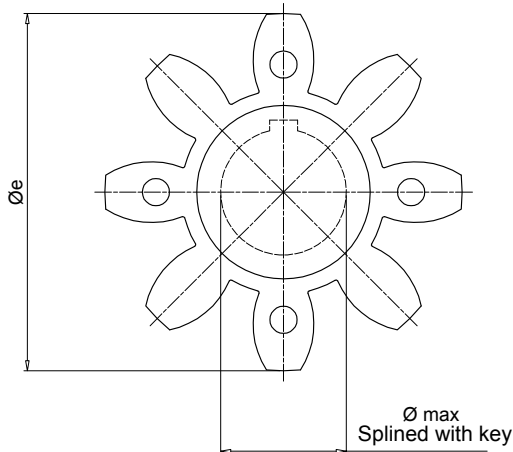
**050** - table "pump half coupling - dimension L"

All SGEK/SGEK series half-couplings are supplied with a grub screw hole as standard, and with a grub screw **UNI 5929 DIN 916** fitted to the hub.

**Note:** For lengths other than those indicated in "Pump half-coupling" table, contact MP Filtri Technical and Sales Department.

# EGE Spiders

## Dimensions

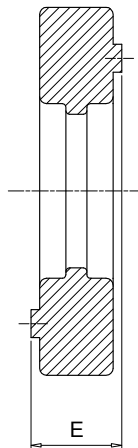
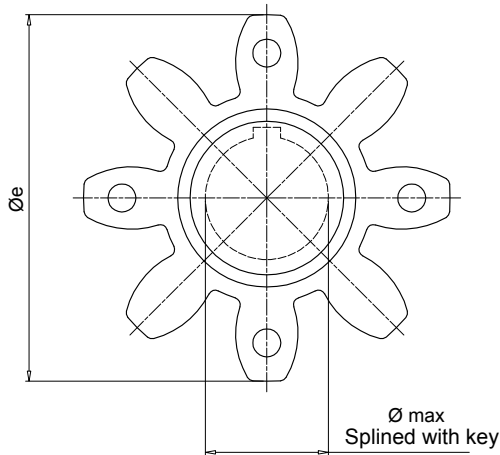


### Notes:

Made of black oil-resistant rubber, these components serve to interconnect the two halves (motor - pump) of a flexible coupling.

## EGE\*\* series

Code	Half-coupling code		Dimensions [mm]			Nominal torque Nm	Max torque Nm	Weight [kg]
			E	Øe	Ø max			
		<b>RCTAFIT</b>						
<b>EGE0</b>	SGEA01 - SGEG01	SGEK01	15	40	16	10	20	0.006
<b>EGE2</b>	SGEA21	SGEK21	18	65	25	95	190	0.02
<b>EGE3</b>	SGEA31 - SGEG30	SGEK31	22	80	35	190	380	0.04
<b>EGE5</b>	SGEA51	SGEK51	26	105	45	310	620	0.06
<b>EGE4</b>	SGEG40 - SGES40	SGEK40	24	95	40	310	620	0.09
<b>EGE6</b>	SGEG60 - SGES60	SGEK60	28	120	55	430	860	0.13
<b>EGE8</b>	SGEG80 - SGES80	SGEK80	38	160	75	1250	2500	0.36



### Notes:

Made in polyurethane Laripur - LPR202-95A, red colour, are suitable for applications where high levels of torque are transmitted.

## EGE\*\*RR series

Code	Half-coupling code		Dimensions [mm]			Nominal torque Nm	Max torque Nm	Weight [kg]
			E	Øe	Ø max			
		<b>RCTAFIT</b>						
<b>EGE0RR</b>	SGEA01 - SGEG01	SGEK01	15	40	16	15	30	0.006
<b>EGE2RR</b>	SGEA21	SGEK21	18	65	25	115	230	0.02
<b>EGE3RR</b>	SGEA31 - SGEG30	SGEK31	22	80	35	250	500	0.04
<b>EGE5RR</b>	SGEA51	SGEK51	26	105	45	400	800	0.06
<b>EGE4RR</b>	SGEG40 - SGES40	SGEK40	24	95	40	380	760	0.09
<b>EGE6RR</b>	SGEG60 - SGES60	SGEK60	28	120	55	550	1100	0.13
<b>EGE8RR</b>	SGEG80 - SGES80	SGEK80	38	160	75	1400	2900	0.36
<b>EGE9RP</b>	SGEG90	-	45	200	95	5500	6100	0.59

Version for extreme temperatures available on request.

For further information, contact MP Filtri Technical and Sales Department.





# Half-coupling bore sizes SGEG-SGEA-SGES-SGEK

## SAE involute spline (angle 30°) - ANS.B.92.1.1970

Size	Materials	Nr. of th - Diametral pitch															
		9 16/32	10 16/32	11 16/32	12 16/32	13 16/32	14 16/32	15 16/32	21 16/32	23 16/32	27 16/32	33 16/32	40 16/33	14 12/24	16 12/24	17 12/24	13 8/16
01	Steel	•	•	•	•	•	•	•						•			
	Cast Iron	•	•	•	•	•	•	•						•			
21	Steel	•	•	•	•	•	•	•						•			
	Cast Iron	•	•	•	•	•	•	•						•			
31	Steel	•	•	•	•	•	•	•	•	•	•			•	•	•	•
	Cast Iron	•	•	•	•	•	•	•	•	•	•			•	•	•	•
40	Steel			•	•	•	•	•	•	•	•	•		•	•	•	•
	Cast Iron			•	•	•	•	•	•	•	•	•		•	•	•	•
60	Steel					•	•	•	•	•	•	•		•	•	•	•
	Cast Iron					•	•	•	•	•	•	•		•	•	•	•
80	Steel								•	•	•	•	•		•	•	•
	Cast Iron								•	•	•	•	•		•	•	•
90	Steel								•	•	•	•	•		•	•	•
	Cast Iron								•	•	•	•	•		•	•	•

Size	Materials	Nr. of th - Diametral pitch														
		15 8/16	17 8/16	20 24/48	21 24/48	23 24/48	25 24/48	26 24/48	28 24/48	29 24/48	32 24/48	23 40/80	36 48/96	41 48/96	47 48/96	33 32/64
01	Steel			•	•	•			•	•		•	•	•	•	
	Cast Iron			•	•	•			•	•		•	•	•	•	
21	Steel			•	•	•	•	•	•	•		•	•	•	•	
	Cast Iron			•	•	•	•	•	•	•		•	•	•	•	
31	Steel	•		•	•	•	•	•	•	•	•	•	•	•	•	
	Cast Iron	•		•	•	•	•	•	•	•	•	•	•	•	•	•
40	Steel	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Cast Iron	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
60	Steel	•	•	•	•	•	•	•	•	•	•			•	•	•
	Cast Iron	•	•	•	•	•	•	•	•	•	•			•	•	•
80	Steel	•	•								•					•
	Cast Iron	•	•								•					•
90	Steel	•	•								•					•
	Cast Iron	•	•								•					•

# SGEG-SGEA-SGES-SGEK Half-coupling bore sizes

## Spline bores to DIN 5480

Size	Materials	Nr. of th - Size										
		13 18x1.25	14 20x1.25	14 30x2	14 32x2	16 35x2	17 37x2	18 25x1.25	18 38x2	18 40x2	20 42x2	18 60x3
01	Steel	•	•									
	Cast Iron	•	•									
21	Steel	•	•	•	•	•		•				
	Cast Iron	•	•	•	•	•		•				
31	Steel	•	•	•	•	•	•	•				
	Cast Iron	•	•	•	•	•	•	•				
40	Steel	•	•	•	•	•	•	•	•	•	•	
	Cast Iron	•	•	•	•	•	•	•	•	•	•	
60	Steel	•	•	•	•	•	•	•	•	•	•	•
	Cast Iron	•	•	•	•	•	•	•	•	•	•	•
80	Steel				•	•	•		•	•	•	•
	Cast Iron				•	•	•		•	•	•	•
90	Steel								•	•	•	•
	Cast Iron								•	•	•	•

Size	Materials	Nr. of th - Size									
		21 28x1.25	21 45x2	22 70x3	24 32x1.25	24 50x2	26 55x2	28 60x2	29 38x1.25	34 70x2	38 80x2
01	Steel										
	Cast Iron										
21	Steel	•									
	Cast Iron	•									
31	Steel	•			•				•		
	Cast Iron	•			•				•		
40	Steel	•	•		•				•		
	Cast Iron	•	•		•				•		
60	Steel	•	•		•	•	•	•	•		
	Cast Iron	•	•		•	•	•	•	•		
80	Steel		•	•	•	•	•	•	•	•	•
	Cast Iron		•	•	•	•	•	•	•	•	•
90	Steel		•	•		•	•	•	•	•	•
	Cast Iron		•	•		•	•	•	•	•	•



# SGDR series

Curved-tooth steel gear coupling

## SOFTWARE FOR AUTOMATIC CALCULATION

The web-based software program will allow you to select the most suitable MP Filtri's Filters, in accordance with your process design requirements.

The program will automatically check your input design process prior to propose you the acceptable solutions and create an output in PDF report style format.

The MP Filtri Selection Tool software program is easy to use with a flexible fast design method and provides improved layout formats with full descriptions.



# BELL-HOUSINGS & COUPLINGS SIZING

## A GUIDE TO SELECT THE CORRECT BELL-HOUSING AND DRIVE COUPLING MANUALLY

### DATA REQUIRED

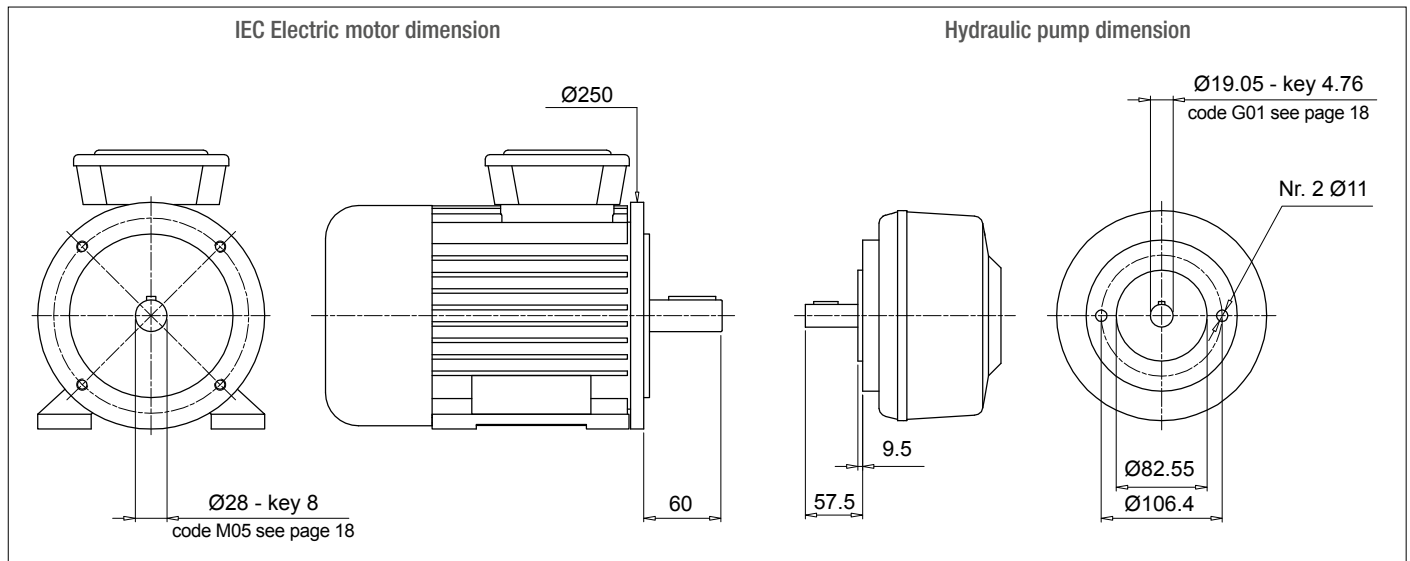
- Electric motor power/motor size
- Manufacturer and pump type

### TO VERIFY:

- 1 - Pump and motor shaft dimensions (see electric motor data sheet)
- 2 - Shaft and flange pump (see pump data sheet)

### Example:

- Electric motor 2.2 kW - size 100-112
- Atos pump code PFE31 - Shaft 1



### Bell-Housing's length calculation

- $H = 60 + 18 + 57.5 = 135.5$  mm (18 = Sp spider - see page 31)
- Choose type of bell-housing (LMC - LMS):  
For monobloc bell-housing LMC/LDC series see pages 75 ÷ 81  
For Low noise bell-housing LMS/LDS series see pages 81 ÷ 89  
For Multi-components 2-3 bell housing series see pages 91 ÷ 111

#### Note:

The length of bell-housing must be  $\geq$  than the length calculated (135.5 mm)

### Case A

#### Solution with monobloc bell-housing series **LMC/LDC**

Pages 75 ÷ 81 for IEC Electric motor size 100-112 - LMC250

LMC 250 bell-housing with height  $\geq 135.5$  - LMC250AFSQ

The bell-housing code must be completed with pump drilling code (see pages 60-61).

For the specific case:

Spigot hole 82.55 - PCD 106.4 - Nr.2 holes M10 : Drilling code 060

Definitive bell-housing code **LMC250AFSQ060**

### Case B

#### Solution with low noise bell-housing series **LMS/LDS**

Pages 83 ÷ 89 for IEC Electric motor size 100-112 - LMS250

LMS 250 bell-housing with height  $\geq 135.5$  - LMS250AFSA

The bell-housing code must be completed with pump drilling code (see pages 60-61).

For the specific case:

Spigot hole 82.55 - PCD 106.4 - Nr.2 holes M10 : Drilling code 060

Definitive bell-housing code **LMS250AFSA060**

# BELL-HOUSINGS & COUPLINGS SIZING

## A GUIDE TO SELECT THE CORRECT BELL-HOUSING AND DRIVE COUPLING MANUALLY

### Coupling selection

#### Motor half-coupling (see page 26)

For IEC Electric motor size 100/112, the half-coupling is **SGEA21M05060**

#### Spider (see page 31)

For SGEA21, EGE2 - EGE2RR

(choose spider material on the base of the application, oil, temperature and cycle machine, etc.)

#### Pump half-coupling

Choose the drilling code - see pages 18-19 for shaft 19.05 - key 4.76 - code: **G01**

Pump half-coupling length = BH length - THK Spider - THK Spigot

$$\text{LMC} = 138 \text{ mm} - 60 - 18 - 9.5 = 50.5 \text{ mm}$$

$$\text{LMS} = 148 \text{ mm} - 60 - 18 - 9.5 = 60.5 \text{ mm}$$

LMC - Choose the half-coupling's length at page 26  $\leq$  50.5 mm.

LMS - Choose the half-coupling's length at page 26  $\leq$  60.5 mm.

LMC - Available length for SGEA21 = 50 mm

LMS - Available length for SGEA21 = 60 mm

Half coupling for LMC: **SGEA21G01050**

Half coupling for LMS: **SGEA21G01050**

**Note:** for multi pumps we recommend to use a specific support on the base of the pump's dimensions and weight.

The half-couplings series SGE\*\*\* allow secure transmission between the electric motor and the driven side; they are able to absorb shocks and vibration, in addition to compensating radial misalignment, angular and axial.

The complete range of couplings are extrapolated from the on-line software, with a length equal than the shaft on which must be mounted and they are completed with grub screw for fixing located on the key.

The assembly of the couplings can be horizontal/vertical, withstanding vibration and load reversals.

Available for cylindrical shaft with metric and imperial dimensions as well for splined shafts as per specification DIN, ISO and SAE.

## Admissible misalignment radial, angular and axial

### Max admissible radial misalignment

Half-coupling	R [mm]
SGE * 01	0.5
SGE * 21	1.0
SGE * 31	1.0
SGE * 40	1.0
SGE * 51	1.5
SGE * 60	1.5
SGE * 80	2.0
SGE * 90	2.0

### Max admissible angular misalignment

Half-coupling	$\beta$ [°]
SGE * 01	1.5°
SGE * 21	
SGE * 31	
SGE * 40	
SGE * 51	
SGE * 60	
SGE * 80	
SGE * 90	

### Max admissible angular alignment

Half-coupling	A [mm]
SGE * 01	2.0
SGE * 21	2.5
SGE * 31	3.0
SGE * 40	3.5
SGE * 51	3.5
SGE * 60	3.5
SGE * 80	4.0
SGE * 90	5.0

Standard ATEX Directive 2014/34/EU and UK Regulation S.I. 2016 No. 1107 (as amended)



Half-couplings are available to use in hazardous area.

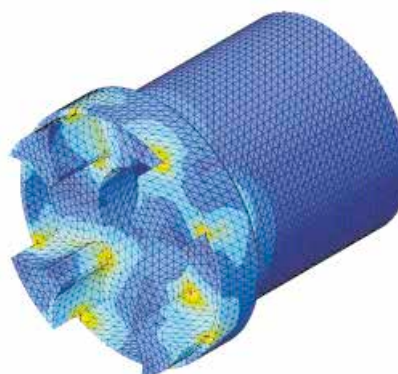
The couplings are certified according to Standard ATEX Directive 2014/34/EU and UK Regulation S.I. 2016 No. 1107 (as amended) - Category certified 2G - Area 1 and 2.

MP Filtri couplings are developed with:

CAD 3D



FEM



Examples verification of the coupling

Torque transmitted by electric motor:

**Mt:**  $9560 \times \text{kW} / \text{rpm} = \text{Nm}$

**Me >**  $Mt \times S = \text{Nm}$

Where:

**Mt:** Torque transmitted by electric motor

**Me:** Torque transmitted by coupling

**kW:** Power of electric motor

**Rpm:** Revolutions per minute of electric motor

**S:** Service factor

Table 1

<b>Small pumps, uniform load, low operating pressures</b> e.g. rotary action machine tools - 5/8 work cycles per hour	<b>1.3</b>
<b>Small pumps, uniform load, high working pressures</b> e.g. lifting equipment - 120-150 work cycles per hour	<b>1.5</b>
<b>Pumps, non-uniform load</b> e.g. lifting equipment - 280-300 work cycles per hour	<b>1.7</b>

**Example**

Electric motor, 4 pole - 4 kW  
hydraulic pump, uniform load, low operating pressure

**Mt:**  $9560 \times 4 / 1500 = 25.45 \text{ Nm}$

**Me >**  $25.49 \times 1.3 = 33 \text{ Nm}$

**Half-coupling SGEA21 meets the above requirement.**

Select the half-coupling of the calculated size from the motor half-couplings table.

**Note:** When selecting the coupling, remember that for pumps with splined shaft, only cast iron couplings of the SGEG series can be used.

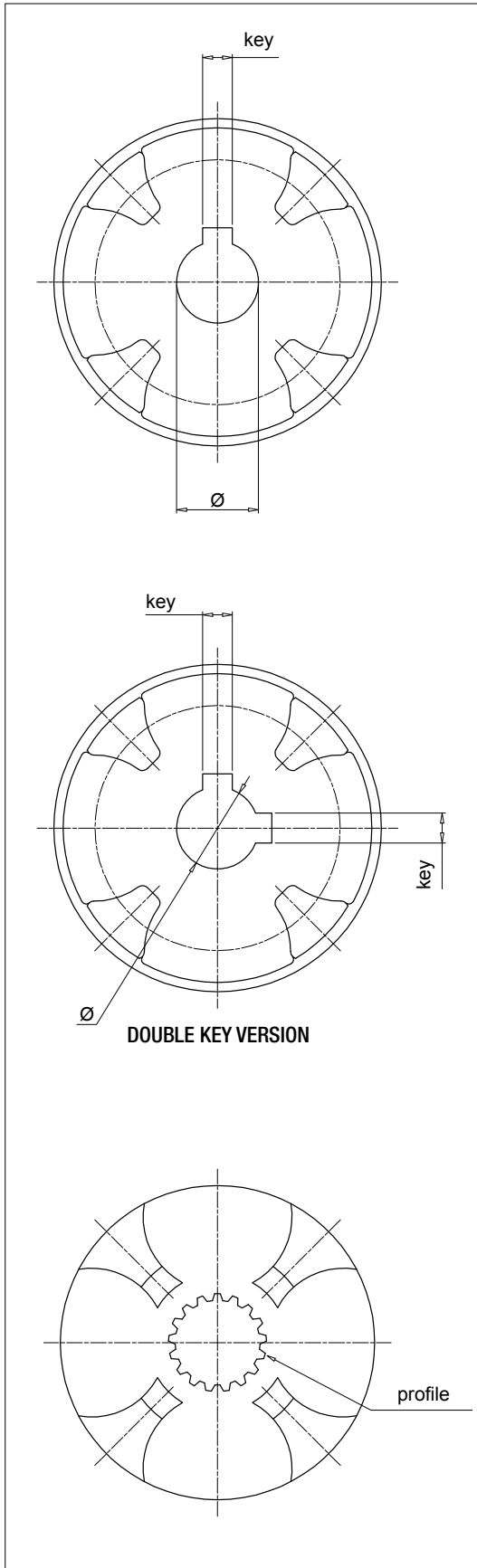
Determine the size of the coupling according to the type of installation and application envisaged, on the basis of the formulas and the following tables:

Table 2

Half-coupling type	External diameter [mm]	Nominal torque Me - Nm	Maximum transmissible torque Me - Nm	
<b>ROTAFIT</b>				
<b>SGEA01</b>	<b>SGEK01</b>	44	10	20
<b>SGEA21</b>	<b>SGEK21</b>	70	95	190
<b>SGEA31</b>	<b>SGEK31</b>	85	190	380
<b>SGEA51</b>	<b>SGEK51</b>	109.5	310	620
<b>ALUMINIUM</b>				
<b>SGEG01</b>		40	10	20
<b>SGEG30</b>		80	190	380
<b>SGEG40</b>	<b>SGEK40</b>	95	310	620
<b>SGEG60</b>	<b>SGEK60</b>	120	430	860
<b>SGEG80</b>	<b>SGEK80</b>	160	1250	2500
<b>SGEG90</b>		200	5500	6100
<b>CAST IRON</b>				
<b>SGES40</b>		95	310	620
<b>SGES60</b>		120	430	860
<b>SGES80</b>		180	1250	2500
<b>STEEL</b>				

Nominal and maximum torque values are referred to couplings assembled with standard flexible spiders of the **EGE\*\*** series (see page 31).

Where higher torques are to be transmitted, use flexible spiders of the **EGE\*\*RR** series (see page 31).



Parallel shaft - Metric Dimensions

Ø [mm]	key [mm]	Code
12	4	<b>C00</b>
15	5	<b>C01</b>
16	4	<b>C02</b>
16	5	<b>C03</b>
17	5	<b>C04</b>
18	6	<b>C05</b>
20	5	<b>C06</b>
19	5	<b>C07</b>
30	10	<b>C08</b>
20	6	<b>C09</b>
16	5	<b>C10</b>
15	4	<b>C11</b>
22	6	<b>D00</b>
24	6	<b>D01</b>
25	8	<b>D02</b>
30	8	<b>D03</b>
32	10	<b>D04</b>
35	10	<b>D05</b>
40	12	<b>D06</b>
45	14	<b>D07</b>
50	14	<b>D08</b>
70	20	<b>D09</b>
22	8	<b>D10</b>
52	16	<b>D20</b>
8	3	<b>E00</b>
10	3	<b>E01</b>
22	5	<b>E02</b>
32	8	<b>E03</b>
35	8	<b>E04</b>
82	22	<b>E05</b>
25	7	<b>E06</b>
63	18	<b>E07</b>
9	3	<b>M00</b>
11	4	<b>M01</b>
14	5	<b>M02</b>
19	6	<b>M03</b>
24	8	<b>M04</b>
28	8	<b>M05</b>
38	10	<b>M06</b>
42	12	<b>M07</b>
48	14	<b>M08</b>
55	16	<b>M09</b>
60	18	<b>M10</b>
65	18	<b>M11</b>
75	20	<b>M12</b>
80	22	<b>M13</b>
90	25	<b>M14</b>
95	25	<b>M15</b>
100	28	<b>M16</b>
110	28	<b>M17</b>
85	22	<b>M18</b>

Parallel shaft - Imperial Dimensions

Ø		key		Code
[inch]	[mm]	[inch]	[mm]	
7/16"	11.11	1/8"	3.18	<b>G00</b>
3/4"	19.05	3/16"	4.76	<b>G01</b>
7/8"	22.22	3/16"	4.76	<b>G02</b>
7/8"	22.22	1/4"	6.35	<b>G03</b>
1"	25.4	3/16"	4.76	<b>G04</b>
1"	25.40	1/4"	6.35	<b>G05</b>
1 1/4"	31.75	1/4"	6.35	<b>G06</b>
1 1/4"	31.75	5/16"	7.94	<b>G07</b>
1 3/8"	34.94	5/16"	7.94	<b>G08</b>
1 1/2"	38.1	3/8"	9.52	<b>G09</b>
1 5/8"	41.27	3/8"	9.52	<b>H00</b>
1 3/4"	44.45	7/16"	11.11	<b>H01</b>
2"	50.8	1/2"	12.7	<b>H02</b>
2 11/32"	53.94	1/2"	12.7	<b>H03</b>
3/4"	19.02	1/8"	3.17	<b>H04</b>
1"	25.4	3/16"	4.76	<b>H05</b>
5/8"	15.87	3/16"	4.76	<b>H06</b>
17/32"	13.45	1/8"	3.18	<b>H07</b>
11/16"	17.46	3/16"	4.76	<b>H08</b>
1/2"	12.7	1/8"	3.18	<b>H09</b>
5/8"	15.87	5/32"	3.97	<b>L00</b>
7/8"	22.22	5/32"	4	<b>L01</b>
11/8"	28.58	1/4"	6.35	<b>L02</b>
3/4"	19.05	1/4"	6.35	<b>L03</b>
1 7/8"	47.63	1/2"	12.7	<b>L04</b>
3 3/8"	85.73	7/8"	22.23	<b>L05</b>
2 3/8"	60.33	5/8"	15.88	<b>L06</b>
2 3/8"	60.33	1/2"	12.7	<b>L07</b>
2 7/8"	73.03	3/4"	19.05	<b>L08</b>
3 5/8"	92.07	7/8"	22.22	<b>L09</b>
1 5/8"	41.6	15/32"	12	<b>L10</b>
1 1/8"	28.58	5/16"	7.94	<b>L15</b>

Parallel shaft - Double Key

Ø [mm]	key [mm]	Code
16.00	4.00	<b>C02***2H</b>
	5.00	
20.00	5.00	<b>C06***2M</b>
	6.00	
19.00	5.00	<b>C07***2L</b>
	6.00	
24.00	6.00	<b>D01***2N</b>
	8.00	
30.00	8.00	<b>D03***2P</b>
	10.00	
22.22	4.76	<b>G02***2E</b>
	6.35	
25.40	6.35	<b>G04***2F</b>
	4.76	
31.75	6.35	<b>G06***2G</b>
	7.94	

\*\*\* = coupling length

**SAE Bore - ANS.B.92.1-1970**

Profile	Nr. of Th	Code
17 th 8/16	17	<b>PD01</b>
14 th 12/24	14	<b>PD02</b>
16 th 12/24	16	<b>PD03</b>
17 th 12/24	17	<b>PD04</b>
9 th 16/32	9	<b>PD05</b>
11 th 16/32	11	<b>PD06</b>
12 th 16/32	12	<b>PD07</b>
13 th 16/32	13	<b>PD08</b>
15 th 16/32	15	<b>PD09</b>
21 th 16/32	21	<b>PD10</b>
23 th 16/32	23	<b>PD11</b>
27 th 16/32	27	<b>PD12</b>
40 th 16/32	40	<b>PD13</b>
20 th 24/48	20	<b>PD14</b>
21 th 24/48	21	<b>PD15</b>
23 th 24/48	23	<b>PD16</b>
25 th 24/48	25	<b>PD17</b>
26 th 24/48	26	<b>PD18</b>
27 th 12/48	27	<b>PD19</b>
28 th 24/48	28	<b>PD20</b>
29 th 24/48	29	<b>PD21</b>
32 th 24/48	32	<b>PD22</b>
21 th 32/64	21	<b>PD23</b>
30 th 32/64	30	<b>PD24</b>
33 th 32/64	33	<b>PD25</b>
23 th 40/80	23	<b>PD26</b>
36 th 48/96	36	<b>PD27</b>
41 th 48/96	41	<b>PD28</b>
47 th 48/96	47	<b>PD29</b>
13 th 8/16	13	<b>PD30</b>
15 th 8/16	15	<b>PD31</b>
14 th 16/32	14	<b>PD32</b>
40 th 16/32	40	<b>PD33</b>
33 th 16/32	33	<b>PD34</b>
9 th 20/40	9	<b>PD35</b>
10 th 16/32	10	<b>PD36</b>
25 th 20/40	25	<b>PD37</b>

**Splined bore as per standard DIN5480**

Profile	Nr. of Th	Code
W18 x 1.25 x 13	13	<b>PA01</b>
W20 x 1.25 x 14	14	<b>PA02</b>
W25 x 1.25 x 18	18	<b>PA03</b>
W28 x 1.25 x 21	21	<b>PA04</b>
W32 x 1.25 x 24	24	<b>PA05</b>
W38 x 1.25 x 29	29	<b>PA06</b>
W30 x 2 x 14	14	<b>PA07</b>
W32 x 2 x 14	14	<b>PA08</b>
W35 x 2 x 16	16	<b>PA09</b>
W37 x 2 x 17	17	<b>PA10</b>
W38 x 2 x 18	18	<b>PA11</b>
W40 x 2 x 18	18	<b>PA12</b>
W42 x 2 x 20	20	<b>PA13</b>
W45 x 2 x 21	21	<b>PA14</b>
W50 x 2 x 24	24	<b>PA15</b>
W55 x 2 x 26	26	<b>PA16</b>
W60 x 2 x 28	28	<b>PA17</b>
W70 x 2 x 34	34	<b>PA18</b>
W80 x 2 x 38	38	<b>PA19</b>
W60 x 3 x 18	18	<b>PA20</b>
W70 x 3 x 22	22	<b>PA21</b>
W75 x 3 x 24	24	<b>PA22</b>
W90 x 3 x 28	28	<b>PA23</b>
W105 x 3 x 34	34	<b>PA24</b>
W80 x 3 x 25	25	<b>PA25</b>
W50 x 1.25 x 38	38	<b>PA26</b>
W62 x 1.25 x 48	48	<b>PA27</b>
W40 x 1.5 x 25	25	<b>PA28</b>
W32 x 1.5 x 20	20	<b>PA29</b>
W40 x 1.25 x 30	30	<b>PA30</b>

**Splined bore as per standard DIN5481**

Profile	Nr. of Th	Code
8 x 10	28	<b>PC01</b>
10 x 12	30	<b>PC02</b>
12 x 14	31	<b>PC03</b>
15 x 17	32	<b>PC04</b>
17 x 20	33	<b>PC05</b>
21 x 24	34	<b>PC06</b>
26 x 30	35	<b>PC07</b>
30 x 34	36	<b>PC08</b>
60 x 65	41	<b>PC09</b>

**Splined bore as per standard DIN5482**

Profile	Nr. of Th	Code
A15 x 12	8	<b>PB01</b>
A17 x 14	9	<b>PB02</b>
A18 x 15	10	<b>PB03</b>
A20 x 17	12	<b>PB04</b>
A22 x 19	13	<b>PB05</b>
A25 x 22	14	<b>PB06</b>
A28 x 25	15	<b>PB07</b>
A30 x 27	16	<b>PB08</b>
A32 x 28	17	<b>PB09</b>
A35 x 31	18	<b>PB10</b>
A38 x 34	19	<b>PB11</b>
A40 x 36	20	<b>PB12</b>
A42 x 38	21	<b>PB13</b>
A45 x 41	22	<b>PB14</b>
A48 x 44	23	<b>PB15</b>
A50 x 45	24	<b>PB16</b>
A52 x 47	25	<b>PB17</b>
A55 x 50	26	<b>PB18</b>
A58 x 53	27	<b>PB19</b>
A60 x 55	28	<b>PB20</b>
A62 x 57	29	<b>PB21</b>
A65 x 60	30	<b>PB22</b>
A68 x 62	31	<b>PB23</b>
A70 x 64	32	<b>PB24</b>
A72 x 66	33	<b>PB25</b>
A75 x 69	34	<b>PB26</b>
A78 x 72	35	<b>PB27</b>
A80 x 74	36	<b>PB28</b>
A82 x 76	37	<b>PB29</b>
A85 x 79	38	<b>PB30</b>
A88 x 82	39	<b>PB31</b>
A90 x 84	40	<b>PB32</b>
A92 x 86	41	<b>PB33</b>
A95 x 89	42	<b>PB34</b>
A98 x 92	43	<b>PB35</b>
A100 x 94	44	<b>PB36</b>

## Technical data

### Couplings - Curved-tooth steel gear coupling

#### Gear couplings materials

Couplings: Steel C40

Sleeve: Polyamide PA66 Blue color

#### Compatibility with fluids

- Mineral oils types HH-HL-HM-HR-HV, to ISO 6743/4 standard
- Water based emulsions types HFAE-HFAS, to ISO 6743/4 standard
- Water glycol type HFC, to ISO 6743/4 standard: ask for anodized version

#### Special Applications

Any applications not covered by the normal indications contained in this catalogue must be evaluated and approved by MP Filtri Technical and Sales Department

#### Temperature

Sleeve Polyamide PA66: from -20 °C to +90 °C

#### Note

For temperatures outside this range, contact MP Filtri Technical and Sales Department



## IEC Electric motors

IEC Electric Motors size	C40 Carbon Steel				
	Shaft ISO 3019-2	Shaft ANSI B92. 1A 1976	Shaft DIN 5480	Shaft DIN 5481	Shaft DIN 5482
IEC 80 Ø200 - Ø19x40	●	●	●	●	●
IEC 90 Ø200 - Ø24x50	●	●	●	●	●
IEC 100 Ø250 - Ø28x60	●	●	●	●	●
IEC 112 Ø250 - Ø28x60	●	●	●	●	●
IEC 132 Ø300 - Ø38x80	●	●	●	●	●
IEC 160 Ø350 - Ø42x110	●	●	●	●	●
IEC 180 Ø350 - Ø48x110	●	●	●	●	●
IEC 200 Ø400 - Ø55x110	●	●	●	●	●

## BLANK HALF-COUPLING

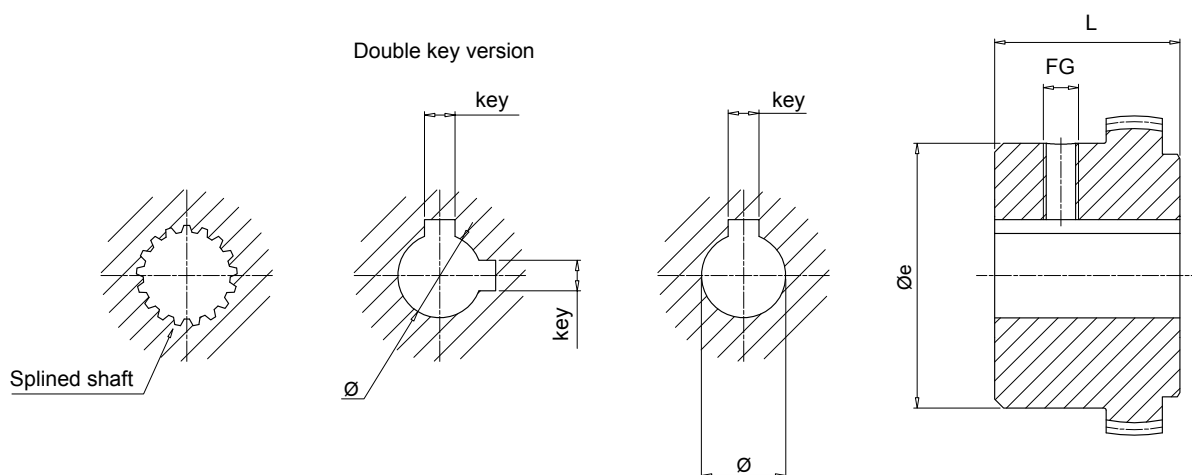
<b>Pump half-coupling</b> <b>SGDR</b>	Configuration example: <b>SGDR</b> <b>28</b> <b>PB</b>
<b>Size</b> 28 42 55	
<b>Without bore</b> <b>PB</b>	

## HALF-COUPLING FOR PARALLEL SHAFT

<b>Pump half-coupling</b> <b>SGDR</b>	Configuration example: <b>SGDR</b> <b>28</b> <b>G02</b> <b>040</b> <b>2E</b>
<b>Size</b> 28 42 55	
<b>Bore size code</b> <b>G02</b> See page 18	
<b>Length</b> <b>040</b> See page 50	
<b>Double key way (available combinations only)</b> <b>2E</b> See page 18 (Parallel shaft - double key only)	

## HALF-COUPLING FOR SPLINED SHAFT

<b>Pump half-coupling</b> <b>SGDR</b>	Configuration example: <b>SGDR</b> <b>28</b> <b>PD02</b> <b>040</b>
<b>Size</b> 28 42 55	
<b>Bore size code</b> <b>PD02</b> See page 19	
<b>Length</b> <b>040</b> See page 50	



### Notes:

- Screw included
- Double key version only pump side

### Motor half-coupling

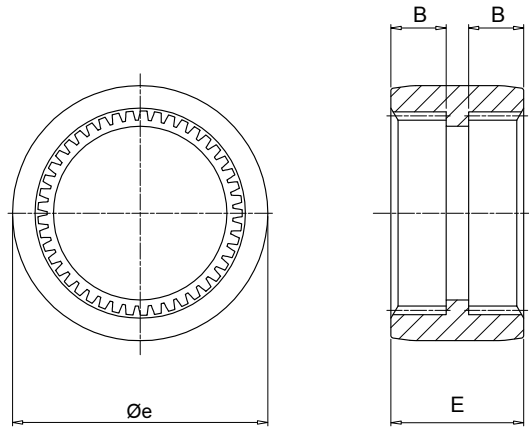
IEC - Electric motors		Half-coupling code	Dimensions [mm]					Weight [kg]
Motor size	Shaft end [Ø x L]		Øe	L	Ø	key	Fg	
80	19x40	<b>SGDR28M03040</b>	45	40	19	6	M6	0.5
90	24x50	<b>SGDR28M04040</b>	45	40	24	8	M6	0.5
100-112	28x60	<b>SGDR28M05040</b>	45	40	28	8	M6	0.5
132	38x80	<b>SGDR42M06042</b>	60	42	38	10	M8	1.0
160	42x110	<b>SGDR42M07042</b>	60	42	42	12	M8	1.0
180	48x110	<b>SGDR55M08060</b>	84	60	48	14	M8	2.5
200	55x110	<b>SGDR55M09060</b>	84	60	55	16	M8	2.5

### Pump half-couplings

Half-coupling code	Dimensions [mm]		Weight [kg]
	Øe	L	
<b>SGDR28***</b>	45	40	0.5
<b>SGDR42***</b>	60	42	1.0
<b>SGDR55***</b>	84	60	2.5

Complete the half-coupling designation with the pump interface code and the length.

Example: **SGDR280PD02050** (see page 19).



### Sleeve

Code	Half-coupling code	Dimensions [mm]			Nominal torque [Nm]	Maximum torque [Nm]	Weight [kg]
		$\varnothing e$	E	B			
<b>EGR066PA</b>	SGDR28	66	38	16	30	90	0.050
<b>EGR090PA</b>	SGDR42	90	52	22	120	360	0.150
<b>EGR125PA</b>	SGDR55	125	65	27	200	600	0.371

# AKG series

IEC electric motor range from size 63 up to size 225

## SOFTWARE FOR AUTOMATIC CALCULATION

The web-based software program will allow you to select the most suitable MP Filtri's Filters, in accordance with your process design requirements.

The program will automatically check your input design process prior to propose you the acceptable solutions and create an output in PDF report style format.

The MP Filtri Selection Tool software program is easy to use with a flexible fast design method and provides improved layout formats with full descriptions.



**BELL-HOUSINGS  
& COUPLINGS**



# BELL-HOUSINGS & COUPLINGS SIZING

## A GUIDE TO SELECT THE CORRECT BELL-HOUSING AND DRIVE COUPLING MANUALLY

### DATA REQUIRED

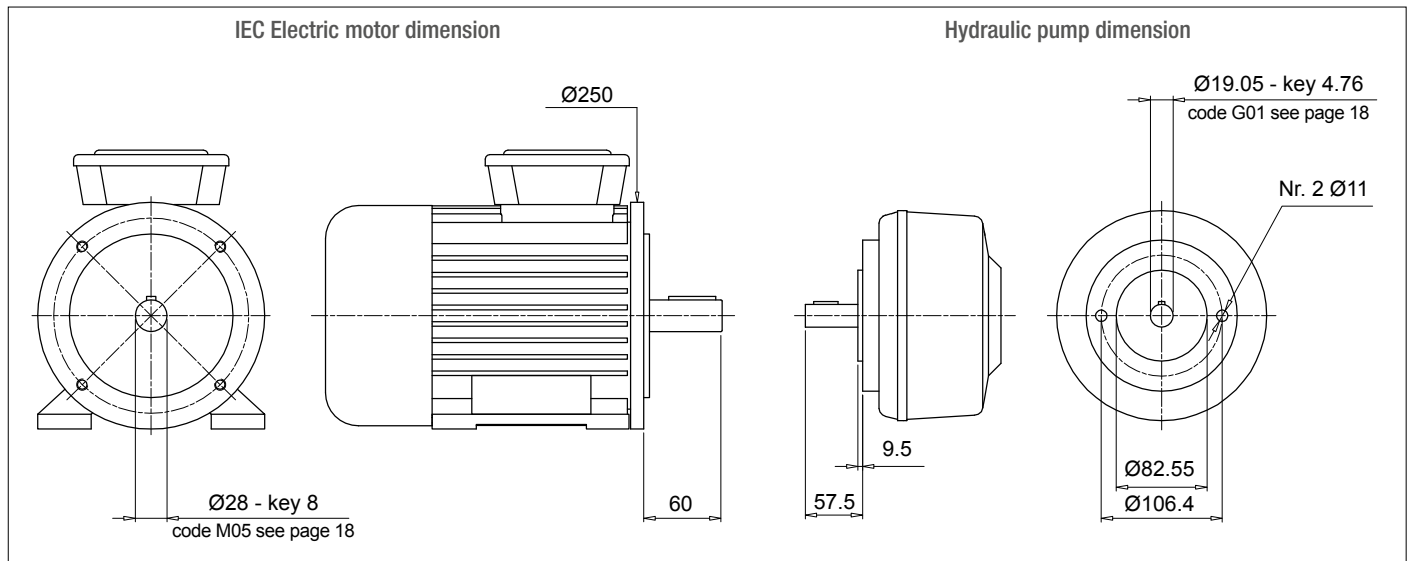
- Electric motor power/motor size
- Manufacturer and pump type

### TO VERIFY:

- 1 - Pump and motor shaft dimensions (see electric motor data sheet)
- 2 - Shaft and flange pump (see pump data sheet)

### Example:

- Electric motor 2.2 kW - size 100-112
- Atos pump code PFE31 - Shaft 1



### Bell-Housing's length calculation

- $H = 60 + 18 + 57.5 = 135.5$  mm (18 = Sp spider - see page 31)
- Choose type of bell-housing (LMC - LMS):  
For monobloc bell-housing LMC/LDC series see pages 75 ÷ 81  
For Low noise bell-housing LMS/LDS series see pages 81 ÷ 89  
For Multi-components 2-3 bell housing series see pages 91 ÷ 111

#### Note:

The length of bell-housing must be  $\geq$  than the length calculated (135.5 mm)

### Case A

#### Solution with monobloc bell-housing series **LMC/LDC**

Pages 75 ÷ 81 for IEC Electric motor size 100-112 - LMC250

LMC 250 bell-housing with height  $\geq 135.5$  - LMC250AFSQ

The bell-housing code must be completed with pump drilling code (see pages 60-61).

For the specific case:

Spigot hole 82.55 - PCD 106.4 - Nr.2 holes M10 : Drilling code 060

Definitive bell-housing code **LMC250AFSQ060**

### Case B

#### Solution with low noise bell-housing series **LMS/LDS**

Pages 83 ÷ 89 for IEC Electric motor size 100-112 - LMS250

LMS 250 bell-housing with height  $\geq 135.5$  - LMS250AFSA

The bell-housing code must be completed with pump drilling code (see pages 60-61).

For the specific case:

Spigot hole 82.55 - PCD 106.4 - Nr.2 holes M10 : Drilling code 060

Definitive bell-housing code **LMS250AFSA060**

# BELL-HOUSINGS & COUPLINGS SIZING

## A GUIDE TO SELECT THE CORRECT BELL-HOUSING AND DRIVE COUPLING MANUALLY

### Coupling selection

#### Motor half-coupling (see page 26)

For IEC Electric motor size 100/112, the half-coupling is **SGEA21M05060**

#### Spider (see page 31)

For SGEA21, EGE2 - EGE2RR

(choose spider material on the base of the application, oil, temperature and cycle machine, etc.)

#### Pump half-coupling

Choose the drilling code - see pages 18-19 for shaft 19.05 - key 4.76 - code: **G01**

Pump half-coupling length = BH length - THK Spider - THK Spigot

$$\text{LMC} = 138 \text{ mm} - 60 - 18 - 9.5 = 50.5 \text{ mm}$$

$$\text{LMS} = 148 \text{ mm} - 60 - 18 - 9.5 = 60.5 \text{ mm}$$

LMC - Choose the half-coupling's length at page 26  $\leq$  50.5 mm.

LMS - Choose the half-coupling's length at page 26  $\leq$  60.5 mm.

LMC - Available length for SGEA21 = 50 mm

LMS - Available length for SGEA21 = 60 mm

Half coupling for LMC: **SGEA21G01050**

Half coupling for LMS: **SGEA21G01050**

**Note:** for multi pumps we recommend to use a specific support on the base of the pump's dimensions and weight.

The half-couplings series SGE\*\*\* allow secure transmission between the electric motor and the driven side; they are able to absorb shocks and vibration, in addition to compensating radial misalignment, angular and axial.

The complete range of couplings are extrapolated from the on-line software, with a length equal than the shaft on which must be mounted and they are completed with grub screw for fixing located on the key.

The assembly of the couplings can be horizontal/vertical, withstanding vibration and load reversals.

Available for cylindrical shaft with metric and imperial dimensions as well for splined shafts as per specification DIN, ISO and SAE.

## Admissible misalignment radial, angular and axial

### Max admissible radial misalignment

Half-coupling	R [mm]
SGE * 01	0.5
SGE * 21	1.0
SGE * 31	1.0
SGE * 40	1.0
SGE * 51	1.5
SGE * 60	1.5
SGE * 80	2.0
SGE * 90	2.0

### Max admissible angular misalignment

Half-coupling	$\beta$ [°]
SGE * 01	1.5°
SGE * 21	
SGE * 31	
SGE * 40	
SGE * 51	
SGE * 60	
SGE * 80	
SGE * 90	

### Max admissible angular alignment

Half-coupling	A [mm]
SGE * 01	2.0
SGE * 21	2.5
SGE * 31	3.0
SGE * 40	3.5
SGE * 51	3.5
SGE * 60	3.5
SGE * 80	4.0
SGE * 90	5.0

Standard ATEX Directive 2014/34/EU and UK Regulation S.I. 2016 No. 1107 (as amended)



Half-couplings are available to use in hazardous area.

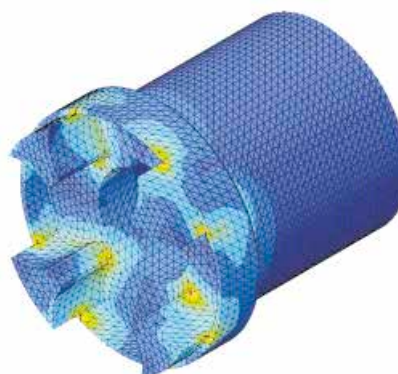
The couplings are certified according to Standard ATEX Directive 2014/34/EU and UK Regulation S.I. 2016 No. 1107 (as amended) - Category certified 2G - Area 1 and 2.

MP Filtri couplings are developed with:

CAD 3D



FEM



Examples verification of the coupling

Torque transmitted by electric motor:

**Mt:**  $9560 \times \text{kW} / \text{rpm} = \text{Nm}$

**Me >**  $Mt \times S = \text{Nm}$

Where:

**Mt:** Torque transmitted by electric motor

**Me:** Torque transmitted by coupling

**kW:** Power of electric motor

**Rpm:** Revolutions per minute of electric motor

**S:** Service factor

Table 1

<b>Small pumps, uniform load, low operating pressures</b> e.g. rotary action machine tools - 5/8 work cycles per hour	<b>1.3</b>
<b>Small pumps, uniform load, high working pressures</b> e.g. lifting equipment - 120-150 work cycles per hour	<b>1.5</b>
<b>Pumps, non-uniform load</b> e.g. lifting equipment - 280-300 work cycles per hour	<b>1.7</b>

**Example**

Electric motor, 4 pole - 4 kW  
hydraulic pump, uniform load, low operating pressure

**Mt:**  $9560 \times 4 / 1500 = 25.45 \text{ Nm}$

**Me >**  $25.49 \times 1.3 = 33 \text{ Nm}$

**Half-coupling SGEA21 meets the above requirement.**

Select the half-coupling of the calculated size from the motor half-couplings table.

**Note:** When selecting the coupling, remember that for pumps with splined shaft, only cast iron couplings of the SGEG series can be used.

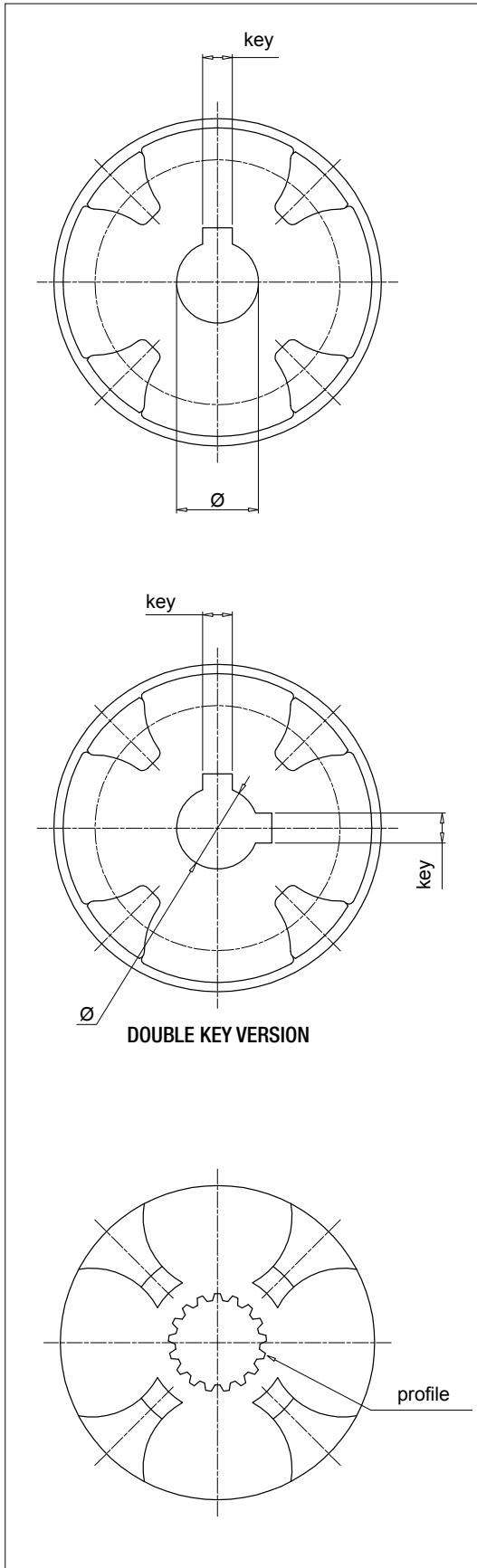
Determine the size of the coupling according to the type of installation and application envisaged, on the basis of the formulas and the following tables:

Table 2

Half-coupling type	External diameter [mm]	Nominal torque Me - Nm	Maximum transmissible torque Me - Nm	
<b>ROTAFIT</b>				
<b>SGEA01</b>	<b>SGEK01</b>	44	10	20
<b>SGEA21</b>	<b>SGEK21</b>	70	95	190
<b>SGEA31</b>	<b>SGEK31</b>	85	190	380
<b>SGEA51</b>	<b>SGEK51</b>	109.5	310	620
<b>ALUMINIUM</b>				
<b>SGEG01</b>		40	10	20
<b>SGEG30</b>		80	190	380
<b>SGEG40</b>	<b>SGEK40</b>	95	310	620
<b>SGEG60</b>	<b>SGEK60</b>	120	430	860
<b>SGEG80</b>	<b>SGEK80</b>	160	1250	2500
<b>SGEG90</b>		200	5500	6100
<b>CAST IRON</b>				
<b>SGES40</b>		95	310	620
<b>SGES60</b>		120	430	860
<b>SGES80</b>		180	1250	2500
<b>STEEL</b>				

Nominal and maximum torque values are referred to couplings assembled with standard flexible spiders of the **EGE\*\*** series (see page 31).

Where higher torques are to be transmitted, use flexible spiders of the **EGE\*\*RR** series (see page 31).



Parallel shaft - Metric Dimensions

Ø [mm]	key [mm]	Code
12	4	<b>C00</b>
15	5	<b>C01</b>
16	4	<b>C02</b>
16	5	<b>C03</b>
17	5	<b>C04</b>
18	6	<b>C05</b>
20	5	<b>C06</b>
19	5	<b>C07</b>
30	10	<b>C08</b>
20	6	<b>C09</b>
16	5	<b>C10</b>
15	4	<b>C11</b>
22	6	<b>D00</b>
24	6	<b>D01</b>
25	8	<b>D02</b>
30	8	<b>D03</b>
32	10	<b>D04</b>
35	10	<b>D05</b>
40	12	<b>D06</b>
45	14	<b>D07</b>
50	14	<b>D08</b>
70	20	<b>D09</b>
22	8	<b>D10</b>
52	16	<b>D20</b>
8	3	<b>E00</b>
10	3	<b>E01</b>
22	5	<b>E02</b>
32	8	<b>E03</b>
35	8	<b>E04</b>
82	22	<b>E05</b>
25	7	<b>E06</b>
63	18	<b>E07</b>
9	3	<b>M00</b>
11	4	<b>M01</b>
14	5	<b>M02</b>
19	6	<b>M03</b>
24	8	<b>M04</b>
28	8	<b>M05</b>
38	10	<b>M06</b>
42	12	<b>M07</b>
48	14	<b>M08</b>
55	16	<b>M09</b>
60	18	<b>M10</b>
65	18	<b>M11</b>
75	20	<b>M12</b>
80	22	<b>M13</b>
90	25	<b>M14</b>
95	25	<b>M15</b>
100	28	<b>M16</b>
110	28	<b>M17</b>
85	22	<b>M18</b>

Parallel shaft - Imperial Dimensions

Ø		key		Code
[inch]	[mm]	[inch]	[mm]	
7/16"	11.11	1/8"	3.18	<b>G00</b>
3/4"	19.05	3/16"	4.76	<b>G01</b>
7/8"	22.22	3/16"	4.76	<b>G02</b>
7/8"	22.22	1/4"	6.35	<b>G03</b>
1"	25.4	3/16"	4.76	<b>G04</b>
1"	25.40	1/4"	6.35	<b>G05</b>
1 1/4"	31.75	1/4"	6.35	<b>G06</b>
1 1/4"	31.75	5/16"	7.94	<b>G07</b>
1 3/8"	34.94	5/16"	7.94	<b>G08</b>
1 1/2"	38.1	3/8"	9.52	<b>G09</b>
1 5/8"	41.27	3/8"	9.52	<b>H00</b>
1 3/4"	44.45	7/16"	11.11	<b>H01</b>
2"	50.8	1/2"	12.7	<b>H02</b>
2 11/32"	53.94	1/2"	12.7	<b>H03</b>
3/4"	19.02	1/8"	3.17	<b>H04</b>
1"	25.4	3/16"	4.76	<b>H05</b>
5/8"	15.87	3/16"	4.76	<b>H06</b>
17/32"	13.45	1/8"	3.18	<b>H07</b>
11/16"	17.46	3/16"	4.76	<b>H08</b>
1/2"	12.7	1/8"	3.18	<b>H09</b>
5/8"	15.87	5/32"	3.97	<b>L00</b>
7/8"	22.22	5/32"	4	<b>L01</b>
11/8"	28.58	1/4"	6.35	<b>L02</b>
3/4"	19.05	1/4"	6.35	<b>L03</b>
1 7/8"	47.63	1/2"	12.7	<b>L04</b>
3 3/8"	85.73	7/8"	22.23	<b>L05</b>
2 3/8"	60.33	5/8"	15.88	<b>L06</b>
2 3/8"	60.33	1/2"	12.7	<b>L07</b>
2 7/8"	73.03	3/4"	19.05	<b>L08</b>
3 5/8"	92.07	7/8"	22.22	<b>L09</b>
1 5/8"	41.6	15/32"	12	<b>L10</b>
1 1/8"	28.58	5/16"	7.94	<b>L15</b>

Parallel shaft - Double Key

Ø [mm]	key [mm]	Code
16.00	4.00	<b>C02***2H</b>
	5.00	
20.00	5.00	<b>C06***2M</b>
	6.00	
19.00	5.00	<b>C07***2L</b>
	6.00	
24.00	6.00	<b>D01***2N</b>
	8.00	
30.00	8.00	<b>D03***2P</b>
	10.00	
22.22	4.76	<b>G02***2E</b>
	6.35	
25.40	6.35	<b>G04***2F</b>
	4.76	
31.75	6.35	<b>G06***2G</b>
	7.94	

\*\*\* = coupling length

SAE Bore - ANS.B.92.1-1970

Profile	Nr. of Th	Code
17 th 8/16	17	<b>PD01</b>
14 th 12/24	14	<b>PD02</b>
16 th 12/24	16	<b>PD03</b>
17 th 12/24	17	<b>PD04</b>
9 th 16/32	9	<b>PD05</b>
11 th 16/32	11	<b>PD06</b>
12 th 16/32	12	<b>PD07</b>
13 th 16/32	13	<b>PD08</b>
15 th 16/32	15	<b>PD09</b>
21 th 16/32	21	<b>PD10</b>
23 th 16/32	23	<b>PD11</b>
27 th 16/32	27	<b>PD12</b>
40 th 16/32	40	<b>PD13</b>
20 th 24/48	20	<b>PD14</b>
21 th 24/48	21	<b>PD15</b>
23 th 24/48	23	<b>PD16</b>
25 th 24/48	25	<b>PD17</b>
26 th 24/48	26	<b>PD18</b>
27 th 12/48	27	<b>PD19</b>
28 th 24/48	28	<b>PD20</b>
29 th 24/48	29	<b>PD21</b>
32 th 24/48	32	<b>PD22</b>
21 th 32/64	21	<b>PD23</b>
30 th 32/64	30	<b>PD24</b>
33 th 32/64	33	<b>PD25</b>
23 th 40/80	23	<b>PD26</b>
36 th 48/96	36	<b>PD27</b>
41 th 48/96	41	<b>PD28</b>
47 th 48/96	47	<b>PD29</b>
13 th 8/16	13	<b>PD30</b>
15 th 8/16	15	<b>PD31</b>
14 th 16/32	14	<b>PD32</b>
40 th 16/32	40	<b>PD33</b>
33 th 16/32	33	<b>PD34</b>
9 th 20/40	9	<b>PD35</b>
10 th 16/32	10	<b>PD36</b>
25 th 20/40	25	<b>PD37</b>

Splined bore as per standard DIN5480

Profile	Nr. of Th	Code
W18 x 1.25 x 13	13	<b>PA01</b>
W20 x 1.25 x 14	14	<b>PA02</b>
W25 x 1.25 x 18	18	<b>PA03</b>
W28 x 1.25 x 21	21	<b>PA04</b>
W32 x 1.25 x 24	24	<b>PA05</b>
W38 x 1.25 x 29	29	<b>PA06</b>
W30 x 2 x 14	14	<b>PA07</b>
W32 x 2 x 14	14	<b>PA08</b>
W35 x 2 x 16	16	<b>PA09</b>
W37 x 2 x 17	17	<b>PA10</b>
W38 x 2 x 18	18	<b>PA11</b>
W40 x 2 x 18	18	<b>PA12</b>
W42 x 2 x 20	20	<b>PA13</b>
W45 x 2 x 21	21	<b>PA14</b>
W50 x 2 x 24	24	<b>PA15</b>
W55 x 2 x 26	26	<b>PA16</b>
W60 x 2 x 28	28	<b>PA17</b>
W70 x 2 x 34	34	<b>PA18</b>
W80 x 2 x 38	38	<b>PA19</b>
W60 x 3 x 18	18	<b>PA20</b>
W70 x 3 x 22	22	<b>PA21</b>
W75 x 3 x 24	24	<b>PA22</b>
W90 x 3 x 28	28	<b>PA23</b>
W105 x 3 x 34	34	<b>PA24</b>
W80 x 3 x 25	25	<b>PA25</b>
W50 x 1.25 x 38	38	<b>PA26</b>
W62 x 1.25 x 48	48	<b>PA27</b>
W40 x 1.5 x 25	25	<b>PA28</b>
W32 x 1.5 x 20	20	<b>PA29</b>
W40 x 1.25 x 30	30	<b>PA30</b>

Splined bore as per standard DIN5481

Profile	Nr. of Th	Code
8 x 10	28	<b>PC01</b>
10 x 12	30	<b>PC02</b>
12 x 14	31	<b>PC03</b>
15 x 17	32	<b>PC04</b>
17 x 20	33	<b>PC05</b>
21 x 24	34	<b>PC06</b>
26 x 30	35	<b>PC07</b>
30 x 34	36	<b>PC08</b>
60 x 65	41	<b>PC09</b>

Splined bore as per standard DIN5482

Profile	Nr. of Th	Code
A15 x 12	8	<b>PB01</b>
A17 x 14	9	<b>PB02</b>
A18 x 15	10	<b>PB03</b>
A20 x 17	12	<b>PB04</b>
A22 x 19	13	<b>PB05</b>
A25 x 22	14	<b>PB06</b>
A28 x 25	15	<b>PB07</b>
A30 x 27	16	<b>PB08</b>
A32 x 28	17	<b>PB09</b>
A35 x 31	18	<b>PB10</b>
A38 x 34	19	<b>PB11</b>
A40 x 36	20	<b>PB12</b>
A42 x 38	21	<b>PB13</b>
A45 x 41	22	<b>PB14</b>
A48 x 44	23	<b>PB15</b>
A50 x 45	24	<b>PB16</b>
A52 x 47	25	<b>PB17</b>
A55 x 50	26	<b>PB18</b>
A58 x 53	27	<b>PB19</b>
A60 x 55	28	<b>PB20</b>
A62 x 57	29	<b>PB21</b>
A65 x 60	30	<b>PB22</b>
A68 x 62	31	<b>PB23</b>
A70 x 64	32	<b>PB24</b>
A72 x 66	33	<b>PB25</b>
A75 x 69	34	<b>PB26</b>
A78 x 72	35	<b>PB27</b>
A80 x 74	36	<b>PB28</b>
A82 x 76	37	<b>PB29</b>
A85 x 79	38	<b>PB30</b>
A88 x 82	39	<b>PB31</b>
A90 x 84	40	<b>PB32</b>
A92 x 86	41	<b>PB33</b>
A95 x 89	42	<b>PB34</b>
A98 x 92	43	<b>PB35</b>
A100 x 94	44	<b>PB36</b>

## Technical data

## Couplings - IEC electric motor range from size 63 up to size 225

**Materials**

- Hubs: Aluminium, cast iron, steel
- Spider materials: NBR rubber 87 Sh A  
Polyurethane 95 Sh A

**Compatibility with fluids**

Modular bell-housing components compatible for use with:

- Mineral oils types HH-HL-HM-HR-HV, to ISO 6743/4 standard
- Water based emulsions types HFAE-HFAS, to ISO 6743/4 standard
- Water glycol type HFC, to ISO 6743/4 standard: ask for anodized version

**Special Applications**

Any applications not covered by the normal indications contained in this catalogue must be evaluated and approved by MP Filtri Technical and Sales Department



Standard ATEX Directive 2014/34/EU  
and UK Regulation S.I. 2016 No. 1107 (as amended).

On request, it's possible to certificate the AKG according to ATEX CAT. 2G - Areas 1 - 2

**Temperature**

From -30 °C to +80 °C

**Note**

For temperatures outside this range, contact MP Filtri Technical and Sales Department



## IEC Electric motors

Coupling size	European standard size						German standard size			IEC Motors size
	0.5	1	2	3	3.5	4	ZB	ZF	ZG	
AKG02	●	●	●				●			IEC 63 Ø140 - Ø11x23
AKG03	●	●	●				●			IEC 71 Ø160 - Ø14x30
AKG04	●	●	●	●			●	●		IEC 80 Ø200 - Ø19x40
AKG05	●	●	●	●			●	●		IEC 90 Ø200 - Ø24x50
AKG07		●	●	●			●	●		IEC 110 Ø250 - Ø28x60
AKG07		●	●	●			●	●		IEC 112 Ø250 - Ø28x60
AKG11		●	●	●	●	●		●	●	IEC 132 Ø300 - Ø38x80
AKG12			●	●	●	●	●	●	●	IEC 160 Ø350 - Ø42x110
AKG13			●	●	●	●	●	●	●	IEC 180 Ø350 - Ø48x110
AKG16			●	●	●	●	●	●	●	IEC 200 Ø400 - Ø55x110
AKG18			●	●	●	●	●	●	●	IEC 225 Ø450 - Ø60x140




**KIT COUPLING FOR GEAR PUMPS**

Motors identification code Configuration example:

Size	Size
<b>02</b> 63 B3-B5	<b>13</b> 180 B3-B5
<b>03</b> 71 B3-B5	<b>43</b> 63 B14
<b>04</b> 80 B3-B5	<b>44</b> 71 B14
<b>05</b> 90 B3-B5	<b>45</b> 80 B14
<b>07</b> 100/112 B3-B5	<b>46</b> 90 B14
<b>11</b> 132 B3-B5	<b>48</b> 100/112 B14
<b>12</b> 160 B3-B5	

Pump flange identification code  
**FS200** See pages 43 - 44 - 45

Pump identification code  
**Z** Revision index

ATEX certification identification code  
**EX** ATEX Directive 2014/34/EU and UK Regulation S.I. 2016 No. 1107 (as amended)   




**KIT COUPLING FOR PISTON PUMPS VANES AND SCREWS**

Motors identification code Configuration example:

Size	Size
<b>M01</b> 80 B3-B5	<b>M07</b> 200 B3-B5
<b>M02</b> 90 B3-B5	<b>M08</b> 225 B3-B5
<b>M03</b> 100/112 B3-B5	<b>M09</b> 250 B3-B5
<b>M04</b> 132 B3-B5	<b>M10</b> 280 B3-B5
<b>M05</b> 160 B3-B5	<b>M11</b> 315 B3-B5
<b>M06</b> 180 B3-B5	<b>M12</b> 355 B3-B5

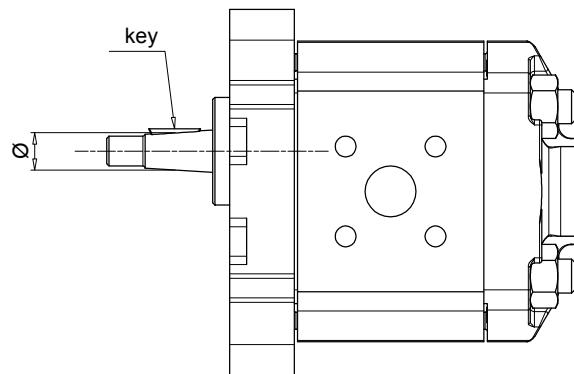
Electric motor identification code  
**M01** See software

Pump identification code  
**Z0000** See software

ATEX certification identification code  
**EX** ATEX Directive 2014/34/EU and UK Regulation S.I. 2016 No. 1107 (as amended)   

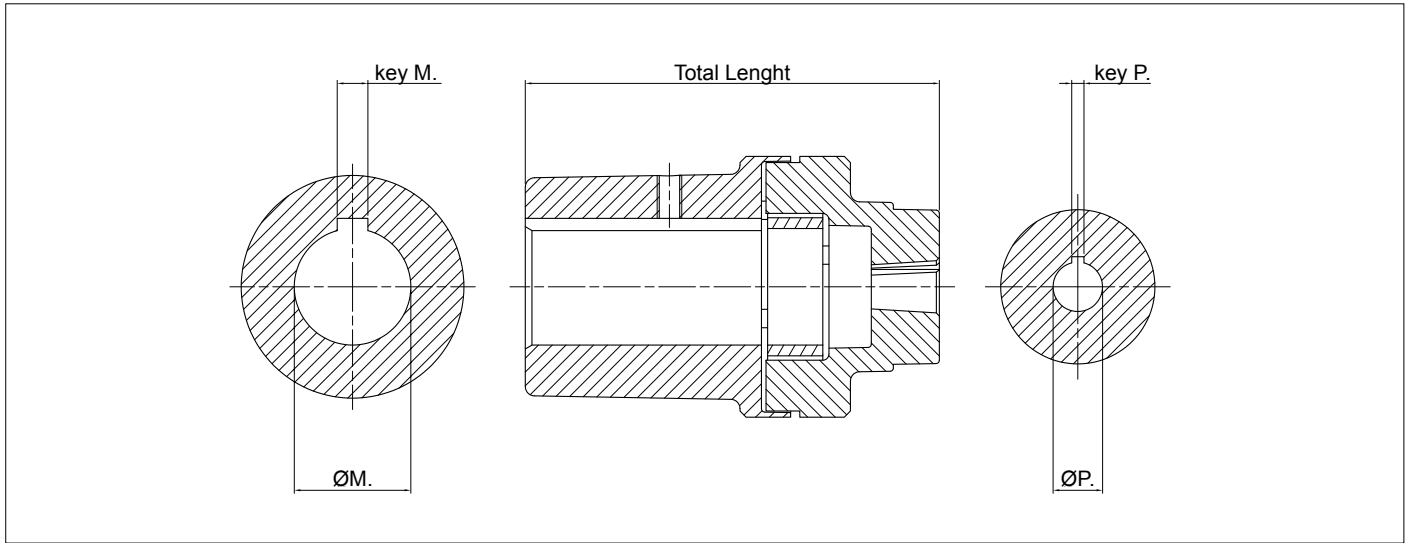
**NOTE:**

The complete code of the coupling kit can be selected following the selection of electric motor



### Shaft identification

Pump group	d	Key	Shaft type	Pump half-coupling code
<b>05</b>	6.0	2.0	parallel	<b>FS05M</b>
	7.0	2.0	parallel	<b>FS05C</b>
<b>1</b>	9.7	2.4	tapered 1:8	<b>FS100</b>
	12.0	3.0	parallel	<b>FS1C0</b>
	13.9	3.0	tapered 1:8	<b>FS1M0</b>
<b>2</b>	17.2	3.2 - 4	tapered 1:8	<b>FS200</b>
	22.2	4.0	tapered 1:8	<b>FS300</b>
<b>3</b>	22.2	4.0	tapered 1:8	<b>FS300</b>
	22.2	4.0	tapered 1:8	<b>FS300</b>
	22.2	4.0	tapered 1:8	<b>FS300</b>
	22.2	4.0	tapered 1:8	<b>FS300</b>
<b>3.5</b>	25.6	4.76 - 5.0	tapered 1:8	<b>FS350</b>
	25.6	4.76 - 5.0	tapered 1:8	<b>FS350</b>
<b>4</b>	33.3	6.35 - 7.0	tapered 1:8	<b>FS400</b>
	33.3	6.35 - 7.0	tapered 1:8	<b>FS400</b>
<b>Bosch</b>	9.8	2.0	tapered 1:5	<b>FSZBR</b>
	16.9	3.0	tapered 1:5	<b>FSZFR</b>
	25.2	5.0	tapered 1:5	<b>FSZGR</b>



IEC Motors B3/5 - standard gear pump

IEC - Electric motors		Pump identification code	Components										
Motor size	Shaft end [Ø x L]		Motor half-coupling code	Spider code	Codice Semigiunto pompa	Complete coupling kit code	ØM.	Key M.	ØP.	Key P.	Tot. L.		
63	11x23	<b>FS05M</b>	SGEA01M01019	EGE 0	SGEA01FS05M	AKG02FS05MZEX	11	4	6	2	50		
		<b>FS05C</b>			SGEA01FS05C	AKG02FS05CZEX			7	2			
		<b>FS100</b>			SGEA01FS100	AKG02FS100ZEX			9.7-1:8	2.4			
		<b>FS1C0</b>			SGEA01FS1C0	AKG02FS1C0ZEX			12	3			
		<b>FS1M0</b>			SGEA01FS1M0	AKG02FS1MOZEX			13.9-1:8	3			
		<b>FSZBR</b>			SGEA01FSZBR	AKG02FSZBRZEX			9.8-1:5	2			
71	14x30	<b>FS05M</b>	SGEA01M02028	EGE 0	SGEA01FS05M	AKG03FS05MZEX	14	5	6	2	59		
		<b>FS05C</b>			SGEA01FS05C	AKG03FS05CZEX			7	2			
		<b>FS100</b>			SGEA01FS100	AKG03FS100ZEX			9.7-1:8	2.4			
		<b>FS1C0</b>			SGEA01FS1C0	AKG03FS1C0ZEX			12	3			
		<b>FS1M0</b>			SGEA01FS1M0	AKG03FS1MOZEX			13.9-1:8	3			
		<b>FSZBR</b>			SGEA01FSZBR	AKG03FSZBRZEX			9.8-1:5	2			
80	19x40	<b>FS05M</b>	SGEA01M03048	EGE 0	SGEA01FS05M	AKG04FS05MZEX	19	6	6	2	80		
		<b>FS05C</b>			SGEA01FS05C	AKG04FS05CZEX			7	2			
		<b>FS100</b>			SGEA01FS100	AKG04FS100ZEX			9.7-1:8	2.4			
		<b>FS1C0</b>			SGEA01FS1C0	AKG04FS1C0ZEX			12	3			
		<b>FS1M0</b>			SGEA01FS1M0	AKG04FS1MOZEX			13.9-1:8	3			
		<b>FSZBR</b>			SGEA01FSZBR	AKG04FSZBRZEX			9.8-1:5	2			
			<b>FS200</b>	SGEA21M03048	EGE 2	SGEA21FS200	AKG04FS200ZEX	19	6	17.2-1:8	3.5/4	94	
			<b>FSZFR</b>			SGEA21FSZFR	AKG04FSZFRZEX			16.9	3		
			<b>FS05M</b>	SGEA01M04048	EGE 0	SGEA01FS05M	AKG05FS05MZEX	24	8	6	2		80
			<b>FS05C</b>			SGEA01FS05C	AKG05FS05CZEX			7	2		
<b>FS100</b>	SGEA01FS100	AKG05FS100ZEX	9.7-1:8			2.4							
<b>FS1C0</b>	SGEA01FS1C0	AKG05FS1C0ZEX	12			3							
		<b>FS1M0</b>	SGEA01FS1M0	EGE 0	SGEA01FS1M0	AKG05FS1MOZEX	24	8	13.9-1:8	3	94		
		<b>FSZBR</b>			SGEA01FSZBR	AKG05FSZBRZEX			9.8-1:5	2			
100 112	28x60	<b>FS200</b>	SGEA21M05055	EGE 2	SGEA21FS200	AKG05FS200ZEX	28	8	17.2-1:8	3.5/4	94		
		<b>FSZFR</b>			SGEA21FSZFR	AKG05FSZFRZEX			16.9-1:5	3			
		<b>FS100</b>			SGEA21FS100	AKG07FS100ZEX			9.7-1:8	2.4			
		<b>FS1C0</b>			SGEA21FS1C0	AKG07FS1C0ZEX			12	3			
		<b>FS1M0</b>			SGEA21FS1M0	AKG07FS1MOZEX			13.9-1:8	3			
		<b>FSZBR</b>			SGEA21FSZBR	AKG07FSZBRZEX			25.2-1:5	5			
		<b>FS25T</b>			SGEA21FS25T	AKG07FS25TZEX			17.2-1:8	3.2/4			
		<b>FS300</b>			SGEA21FS300	AKG07FS300ZEX			22.22-1:8	4			
		<b>FS3M0</b>			SGEA21FS3M0	AKG07FS3M0ZEX			22.22-1:8	4			
		<b>FS3T0</b>			SGEA21FS3T0	AKG07FS3T0ZEX			22.22-1:8	4			

## IEC Motors B3/5 - standard gear pump

IEC - Electric motors Motor size	Shaft end [Ø x L]	Pump identification code	Components								
			Motor half-coupling code	Spider code	Pump half-coupling code	Complete coupling kit code	ØM.	Key M.	ØP.	Key P.	Tot. L.
132	38x80	<b>FS100</b>	SGEA31M06077	EGE 3	SGEA31FS100	AKG11FS100ZEX	38	10	9.7-1.8	2.4	135
		<b>FS1C0</b>			SGEA31FS1C0	AKG11FS1C0ZEX			12	3	
		<b>FS1M0</b>			SGEA31FS1M0	AKG11FS1M0ZEX			13.9-1.8	3	
		<b>FSZGR</b>			SGEA31FSZGR	AKG11FSZGRZEX			25.2-1.5	5	
		<b>FS200</b>			SGEA31FS200	AKG11FS200ZEX			17.2-1.8	3.2/4	
		<b>FSZFR</b>			SGEA31FSZFR	AKG11FSZFRZEX			16.9-1.5	3	
		<b>FS25T</b>			SGEA31FS25T	AKG11FS25TZEX			22.22-1.8	4	
		<b>FS300</b>			SGEA31FS300	AKG11FS300ZEX			22.22-1.8	4	
		<b>FS3M0</b>			SGEA31FS3M0	AKG11FS3M0ZEX			22.22-1.8	4	
		<b>FS3T0</b>			SGEA31FS3T0	AKG11FS3T0ZEX			22.22-1.8	4	
		<b>FS35M</b>			SGEA31FS35M	AKG11FS35MZEX			25.6-1.5	4.76/5	
		<b>FS350</b>			SGEA31FS350	AKG11FS350ZEX			25.6-1.5	4.76/5	
160	42x110	<b>FSZGR</b>	SGEA51M07109	EGE 5	SGEA51FSZGR	AKG12FSZGRZEX	42	12	25.2-1.5	5	167
		<b>FS200</b>			SGEA51FS200	AKG12FS200ZEX			17.2-1.8	3.2/4	
		<b>FSZFR</b>			SGEA51FSZFR	AKG12FSZFRZEX			16.9-1.5	3	
		<b>FS25T</b>			SGEA51FS25T	AKG12FS25TZEX			22.22-1.8	4	
		<b>FS300</b>			SGEA51FS300	AKG12FS300ZEX			22.22-1.8	4	
		<b>FS3M0</b>			SGEA51FS3M0	AKG12FS3M0ZEX			22.22-1.8	4	
		<b>FS3T0</b>			SGEA51FS3T0	AKG12FS3T0ZEX			22.22-1.8	4	
		<b>FS35M</b>			SGEA51FS35M	AKG12FS35MZEX			25.6-1.5	4.76/5	
		<b>FS350</b>			SGEA51FS350	AKG12FS350ZEX			25.6-1.5	4.76/5	
		180			48x110	<b>FSZGR</b>			SGEA51M08109	EGE 5	
<b>FS200</b>	SGEA51FS200		AKG13FS200ZEX	17.2-1.8		3.2/4					
<b>FSZFR</b>	SGEA51FSZFR		AKG13FSZFRZEX	16.9-1.5		3					
<b>FS25T</b>	SGEA51FS25T		AKG13FS25TZEX	22.22-1.8		4					
<b>FS300</b>	SGEA51FS300		AKG13FS300ZEX	22.22-1.8		4					
<b>FS3M0</b>	SGEA51FS3M0		AKG13FS3M0ZEX	22.22-1.8		4					
<b>FS3T0</b>	SGEA51FS3T0		AKG13FS3T0ZEX	22.22-1.8		4					
<b>FS35M</b>	SGEA51FS35M		AKG13FS35MZEX	25.6-1.5		4.76/5					
<b>FS350</b>	SGEA51FS350		AKG13FS350ZEX	25.6-1.5		4.76/5					
200	55x110		<b>FS200</b>	SGEA51M09109		EGE 5	SGEA51FS200	AKG16FS200ZEX			55
		<b>FS300</b>	SGEA51FS300		AKG16FS300ZEX		22.22-1.8	4			
		<b>FS3M0</b>	SGEA51FS3M0		AKG16FS3M0ZEX		22.22-1.8	4			
		<b>FS35M</b>	SGEA51FS35M		AKG16FS35MZEX		25.6-1.5	4.76/5			
		<b>FS350</b>	SGEA51FS350		AKG16FS350ZEX		25.6-1.5	4.76/5			
		<b>FSZFR</b>	SGEA51FSZFR		AKG16FSZFRZEX		16.9-1.5	3			
		<b>FSZGR</b>	SGEA51FSZGR		AKG16FSZGRZEX		25.2-1.5	5			
225	60x140	<b>FS300</b>	SGEG60M10110	EGE 6	SGEG60FS300	AKG18FS300ZEX	60	18	22.22-1.8	4	167
		<b>FS3M0</b>			SGEG60FS3M0	AKG18FS3M0ZEX			22.22-1.8	4	
		<b>FS35M</b>			SGEG60FS35M	AKG18FS35MZEX			25.6-1.5	4.76/5	
		<b>FS350</b>			SGEG60FS350	AKG18FS350ZEX			25.6-1.5	4.76/5	
		<b>FSZGR</b>			SGEG60FSZGR	AKG18FSZGRZEX			25.2-1.5	5	
250	65x140	<b>FS300</b>	SGEG60M11140	EGE 6	SGEG60FS300	AKG20FS300ZEX	65	18	22.22-1.8	4	168
		<b>FS3M0</b>			SGEG60FS3M0	AKG20FS3M0ZEX			22.22-1.8	4	
		<b>FS35M</b>			SGEG60FS35M	AKG20FS35MZEX			25.6-1.5	4.76/5	
		<b>FS350</b>			SGEG60FS350	AKG20FS350ZEX			25.6-1.5	4.76/5	
		<b>FSZGR</b>			SGEG60FSZGR	AKG20FSZGRZEX			25.2-1.5	5	
280	75x140	<b>FS300</b>	SGEG80M12140	EGE 8	SGEG80FS300	AKG22FS300ZEX	75	20	22.22-1.8	4	198
		<b>FS3M0</b>			SGEG80FS3M0	AKG22FS3M0ZEX			22.22-1.8	4	
		<b>FS35M</b>			SGEG80FS35M	AKG22FS35MZEX			25.6-1.5	4.76/5	
		<b>FS350</b>			SGEG80FS350	AKG22FS350ZEX			25.6-1.5	4.76/5	
		<b>FSZGR</b>			SGEG80FSZGR	AKG22FSZGRZEX			25.2-1.5	5	
315	80x170	<b>FS300</b>	SGEG80M13170	EGE 8	SGEG80FS300	AKG26FS300ZEX	80	22	22.22-1.8	4	228
		<b>FS3M0</b>			SGEG80FS3M0	AKG26FS3M0ZEX			22.22-1.8	4	
		<b>FS35M</b>			SGEG80FS35M	AKG26FS35MZEX			25.6-1.5	4.76/5	
		<b>FS350</b>			SGEG80FS350	AKG26FS350ZEX			25.6-1.5	4.76/5	
		<b>FSZGR</b>			SGEG80FSZGR	AKG26FSZGRZEX			25.2-1.5	5	

IEC Electric motors B14 mounting

IEC - Electric motors		Pump identification code	Components									
Motor size	Shaft end [Ø x L]		Motor half-coupling code	Spider code	Pump half-coupling code	Complete coupling kit code	ØM.	Key M.	ØP.	Key P.	Tot. L.	
63	11x23	<b>FS05M</b>	SGEA01M01019	EGE0	SGEA00FS05M	AKG43FS05MZEX	11	4	6	2	50	
		<b>FS05C</b>			SGEA01FS05C	AKG43FS05CZEX			7	2		
		<b>FS100</b>			SGEA01FS100	AKG43FS100ZEX			9.7-1:8	2.4		
		<b>FS1C0</b>			SGEA01FS1C0	AKG43FS1C0ZEX			12	3		
		<b>FS1M0</b>			SGEA01FS1M0	AKG43FS1M0ZEX			13.9-1:8	3		
		<b>FSZBR</b>			SGEA01FSZBR	AKG43FSZBRZEX			9.8-1:5	2		
71	14x30	<b>FS05M</b>	SGEA01M02028	EGE 0	SGEA01FS05M	AKG44FS05MZEX	14	5	6	2	59	
		<b>FS05C</b>			SGEA01FS05C	AKG44FS05CZEX			7	2		
		<b>FS100</b>			SGEA01FS100	AKG44FS100ZEX			9.7-1:8	2.4		
		<b>FS1C0</b>			SGEA01FS1C0	AKG44FS1C0ZEX			12	3		
		<b>FS1M0</b>			SGEA01FS1M0	AKG44FS1M0ZEX			13.9-1:8	3		
		<b>FSZBR</b>			SGEA01FSZBR	AKG44FSZBRZEX			9.8-1:5	2		
80	19x40	<b>FS05M</b>	SGEA01M03048	EGE 0	SGEA01FS05M	AKG45FS05MZEX	19	6	6	2	79	
		<b>FS05C</b>			SGEA01FS05C	AKG45FS05CZEX			7	2		
		<b>FS100</b>			SGEA01FS100	AKG45FS100ZEX			9.7-1:8	2.4		
		<b>FS1C0</b>			SGEA01FS1C0	AKG45FS1C0ZEX			12	3		
		<b>FS1M0</b>			SGEA01FS1M0	AKG45FS1M0ZEX			13.9-1:8	3		
		<b>FSZBR</b>			SGEA01FSZBR	AKG45FSZBRZEX			9.8-1:5	2		
			<b>FS200</b>	SGEA21M03048	EGE 2	SGEA21FS200	AKG45FS200ZEX	19	6	17.2-1:8	3.2/4	87
			<b>FSZFR</b>			SGEA21FSZFR	AKG45FSZFRZEX			16.9	3	
90	24x50	<b>FS05M</b>	SGEA01M04048	EGE 0	SGEA01FS05M	AKG46FS05MZEX	24	8	6	2	79	
		<b>FS05C</b>			SGEA01FS05C	AKG46FS05CZEX			7	2		
		<b>FS100</b>			SGEA01FS100	AKG46FS100ZEX			9.7-1:8	2.4		
		<b>FS1C0</b>			SGEA01FS1C0	AKG46FS1C0ZEX			12	3		
		<b>FS1M0</b>			SGEA01FS1M0	AKG46FS1M0ZEX			13.9-1:8	3		
		<b>FSZBR</b>			SGEA01FSZBR	AKG46FSZBRZEX			9.8-1:5	2		
			<b>FS200</b>	SGEA21M04048	EGE 2	SGEA21FS200	AKG46FS200ZEX	24	8	17.2-1:8	3.5/4	87
			<b>FSZFR</b>			SGEA21FSZFR	AKG46FSZFRZEX			16.9	3	
100 112	28x60	<b>FS05M</b>	SGEA21M05055	EGE 2	SGEA21FS05M	AKG48FS05MZEX	28	8	6	2	94	
		<b>FS05C</b>			SGEA21FS05C	AKG48FS05CZEX			7	2		
		<b>FS100</b>			SGEA21FS100	AKG48FS100ZEX			9.7-1:8	2.4		
		<b>FS1C0</b>			SGEA21FS1C0	AKG48FS1C0ZEX			12	3		
		<b>FS1M0</b>			SGEA21FS1M0	AKG48FS1M0ZEX			13.9-1:8	3		
		<b>FSZBR</b>			SGEA21FSZBR	AKG48FSZBRZEX			9.8-1:5	2		
		<b>FS200</b>			SGEA21FS200	AKG48FS200ZEX			17.2-1:8	3.5/4		
		<b>FSZFR</b>			SGEA21FSZFR	AKG48FSZFRZEX			16.9	3		

# COMPONENTS FOR e-PTO SYSTEMS

## SOFTWARE FOR AUTOMATIC CALCULATION

The web-based software program will allow you to select the most suitable MP Filtri's Filters, in accordance with your process design requirements.

The program will automatically check your input design process prior to propose you the acceptable solutions and create an output in PDF report style format.

The MP Filtri Selection Tool software program is easy to use with a flexible fast design method and provides improved layout formats with full descriptions.



**BELL-HOUSINGS  
& COUPLINGS**



# BELL-HOUSINGS & COUPLINGS SIZING

## A GUIDE TO SELECT THE CORRECT BELL-HOUSING AND DRIVE COUPLING MANUALLY

### DATA REQUIRED

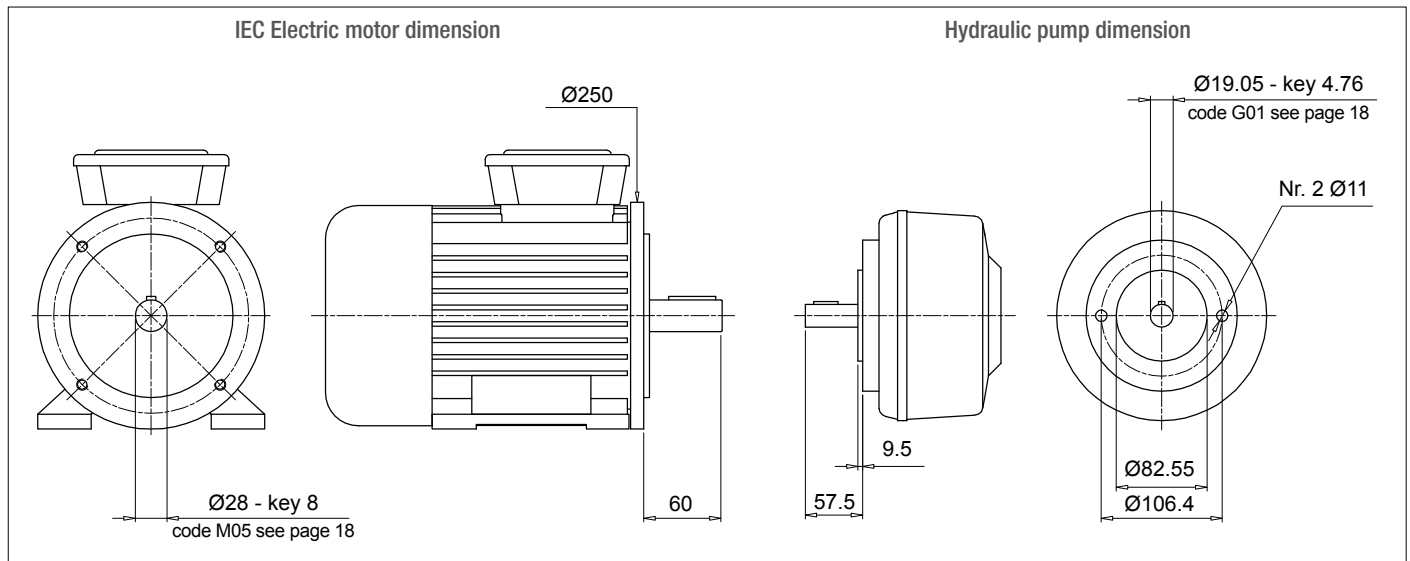
- Electric motor power/motor size
- Manufacturer and pump type

### TO VERIFY:

- 1 - Pump and motor shaft dimensions (see electric motor data sheet)
- 2 - Shaft and flange pump (see pump data sheet)

### Example:

- Electric motor 2.2 kW - size 100-112
- Atos pump code PFE31 - Shaft 1



### Bell-Housing's length calculation

- $H = 60 + 18 + 57.5 = 135.5$  mm (18 = Sp spider - see page 31)
- Choose type of bell-housing (LMC - LMS):  
For monobloc bell-housing LMC/LDC series see pages 75 ÷ 81  
For Low noise bell-housing LMS/LDS series see pages 81 ÷ 89  
For Multi-components 2-3 bell housing series see pages 91 ÷ 111

#### Note:

The length of bell-housing must be  $\geq$  than the length calculated (135.5 mm)

### Case A

#### Solution with monobloc bell-housing series **LMC/LDC**

Pages 75 ÷ 81 for IEC Electric motor size 100-112 - LMC250

LMC 250 bell-housing with height  $\geq 135.5$  - LMC250AFSQ

The bell-housing code must be completed with pump drilling code (see pages 60-61).

For the specific case:

Spigot hole 82.55 - PCD 106.4 - Nr.2 holes M10 : Drilling code 060

Definitive bell-housing code **LMC250AFSQ060**

### Case B

#### Solution with low noise bell-housing series **LMS/LDS**

Pages 83 ÷ 89 for IEC Electric motor size 100-112 - LMS250

LMS 250 bell-housing with height  $\geq 135.5$  - LMS250AFSA

The bell-housing code must be completed with pump drilling code (see pages 60-61).

For the specific case:

Spigot hole 82.55 - PCD 106.4 - Nr.2 holes M10 : Drilling code 060

Definitive bell-housing code **LMS250AFSA060**

# BELL-HOUSINGS & COUPLINGS SIZING

## A GUIDE TO SELECT THE CORRECT BELL-HOUSING AND DRIVE COUPLING MANUALLY

### Coupling selection

#### Motor half-coupling (see page 26)

For IEC Electric motor size 100/112, the half-coupling is **SGEA21M05060**

#### Spider (see page 31)

For SGEA21, EGE2 - EGE2RR

(choose spider material on the base of the application, oil, temperature and cycle machine, etc.)

#### Pump half-coupling

Choose the drilling code - see pages 18-19 for shaft 19.05 - key 4.76 - code: **G01**

Pump half-coupling length = BH length - THK Spider - THK Spigot

$$\text{LMC} = 138 \text{ mm} - 60 - 18 - 9.5 = 50.5 \text{ mm}$$

$$\text{LMS} = 148 \text{ mm} - 60 - 18 - 9.5 = 60.5 \text{ mm}$$

LMC - Choose the half-coupling's length at page 26  $\leq$  50.5 mm.

LMS - Choose the half-coupling's length at page 26  $\leq$  60.5 mm.

LMC - Available length for SGEA21 = 50 mm

LMS - Available length for SGEA21 = 60 mm

Half coupling for LMC: **SGEA21G01050**

Half coupling for LMS: **SGEA21G01050**

**Note:** for multi pumps we recommend to use a specific support on the base of the pump's dimensions and weight.

The half-couplings series SGE\*\*\* allow secure transmission between the electric motor and the driven side; they are able to absorb shocks and vibration, in addition to compensating radial misalignment, angular and axial.

The complete range of couplings are extrapolated from the on-line software, with a length equal than the shaft on which must be mounted and they are completed with grub screw for fixing located on the key.

The assembly of the couplings can be horizontal/vertical, withstanding vibration and load reversals.

Available for cylindrical shaft with metric and imperial dimensions as well for splined shafts as per specification DIN, ISO and SAE.

## Admissible misalignment radial, angular and axial

### Max admissible radial misalignment

Half-coupling	R [mm]
SGE * 01	0.5
SGE * 21	1.0
SGE * 31	1.0
SGE * 40	1.0
SGE * 51	1.5
SGE * 60	1.5
SGE * 80	2.0
SGE * 90	2.0

### Max admissible angular misalignment

Half-coupling	$\beta$ [°]
SGE * 01	1.5°
SGE * 21	
SGE * 31	
SGE * 40	
SGE * 51	
SGE * 60	
SGE * 80	
SGE * 90	

### Max admissible angular alignment

Half-coupling	A [mm]
SGE * 01	2.0
SGE * 21	2.5
SGE * 31	3.0
SGE * 40	3.5
SGE * 51	3.5
SGE * 60	3.5
SGE * 80	4.0
SGE * 90	5.0

Standard ATEX Directive 2014/34/EU and UK Regulation S.I. 2016 No. 1107 (as amended)



Half-couplings are available to use in hazardous area.

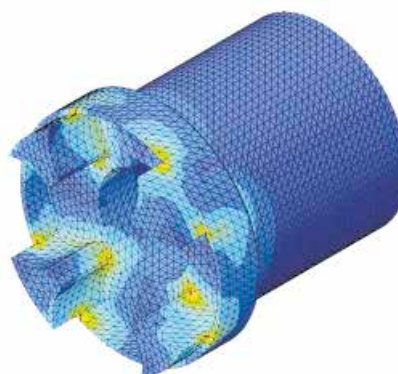
The couplings are certified according to Standard ATEX Directive 2014/34/EU and UK Regulation S.I. 2016 No. 1107 (as amended) - Category certified 2G - Area 1 and 2.

MP Filtri couplings are developed with:

CAD 3D



FEM



Examples verification of the coupling

Torque transmitted by electric motor:

**Mt:**  $9560 \times \text{kW} / \text{rpm} = \text{Nm}$

**Me >**  $Mt \times S = \text{Nm}$

Where:

**Mt:** Torque transmitted by electric motor

**Me:** Torque transmitted by coupling

**kW:** Power of electric motor

**Rpm:** Revolutions per minute of electric motor

**S:** Service factor

Table 1

<b>Small pumps, uniform load, low operating pressures</b> e.g. rotary action machine tools - 5/8 work cycles per hour	<b>1.3</b>
<b>Small pumps, uniform load, high working pressures</b> e.g. lifting equipment - 120-150 work cycles per hour	<b>1.5</b>
<b>Pumps, non-uniform load</b> e.g. lifting equipment - 280-300 work cycles per hour	<b>1.7</b>

**Example**

Electric motor, 4 pole - 4 kW  
hydraulic pump, uniform load, low operating pressure

**Mt:**  $9560 \times 4 / 1500 = 25.45 \text{ Nm}$

**Me >**  $25.49 \times 1.3 = 33 \text{ Nm}$

**Half-coupling SGEA21 meets the above requirement.**

Select the half-coupling of the calculated size from the motor half-couplings table.

**Note:** When selecting the coupling, remember that for pumps with splined shaft, only cast iron couplings of the SGEG series can be used.

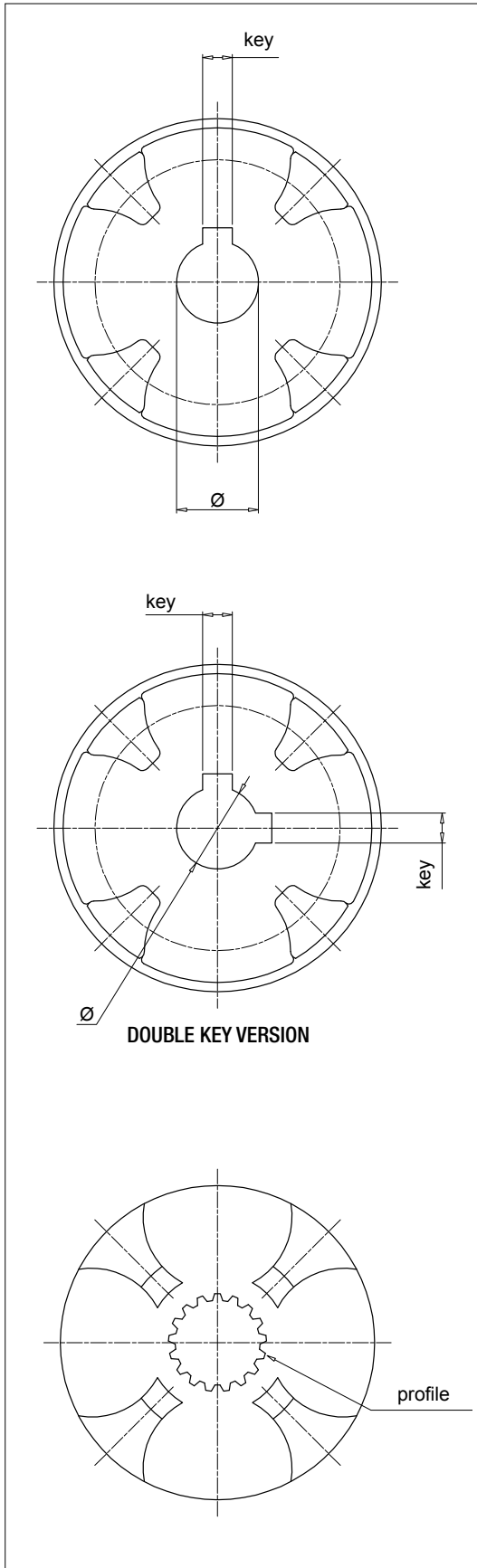
Determine the size of the coupling according to the type of installation and application envisaged, on the basis of the formulas and the following tables:

Table 2

Half-coupling type	External diameter [mm]	Nominal torque Me - Nm	Maximum transmissible torque Me - Nm	
<b>ROTAFIT</b>				
<b>SGEA01</b>	<b>SGEK01</b>	44	10	20
<b>SGEA21</b>	<b>SGEK21</b>	70	95	190
<b>SGEA31</b>	<b>SGEK31</b>	85	190	380
<b>SGEA51</b>	<b>SGEK51</b>	109.5	310	620
<b>ALUMINIUM</b>				
<b>SGEG01</b>		40	10	20
<b>SGEG30</b>		80	190	380
<b>SGEG40</b>	<b>SGEK40</b>	95	310	620
<b>SGEG60</b>	<b>SGEK60</b>	120	430	860
<b>SGEG80</b>	<b>SGEK80</b>	160	1250	2500
<b>SGEG90</b>		200	5500	6100
<b>CAST IRON</b>				
<b>SGES40</b>		95	310	620
<b>SGES60</b>		120	430	860
<b>SGES80</b>		180	1250	2500
<b>STEEL</b>				

Nominal and maximum torque values are referred to couplings assembled with standard flexible spiders of the **EGE\*\*** series (see page 31).

Where higher torques are to be transmitted, use flexible spiders of the **EGE\*\*RR** series (see page 31).



Parallel shaft - Metric Dimensions

Ø [mm]	key [mm]	Code
12	4	<b>C00</b>
15	5	<b>C01</b>
16	4	<b>C02</b>
16	5	<b>C03</b>
17	5	<b>C04</b>
18	6	<b>C05</b>
20	5	<b>C06</b>
19	5	<b>C07</b>
30	10	<b>C08</b>
20	6	<b>C09</b>
16	5	<b>C10</b>
15	4	<b>C11</b>
22	6	<b>D00</b>
24	6	<b>D01</b>
25	8	<b>D02</b>
30	8	<b>D03</b>
32	10	<b>D04</b>
35	10	<b>D05</b>
40	12	<b>D06</b>
45	14	<b>D07</b>
50	14	<b>D08</b>
70	20	<b>D09</b>
22	8	<b>D10</b>
52	16	<b>D20</b>
8	3	<b>E00</b>
10	3	<b>E01</b>
22	5	<b>E02</b>
32	8	<b>E03</b>
35	8	<b>E04</b>
82	22	<b>E05</b>
25	7	<b>E06</b>
63	18	<b>E07</b>
9	3	<b>M00</b>
11	4	<b>M01</b>
14	5	<b>M02</b>
19	6	<b>M03</b>
24	8	<b>M04</b>
28	8	<b>M05</b>
38	10	<b>M06</b>
42	12	<b>M07</b>
48	14	<b>M08</b>
55	16	<b>M09</b>
60	18	<b>M10</b>
65	18	<b>M11</b>
75	20	<b>M12</b>
80	22	<b>M13</b>
90	25	<b>M14</b>
95	25	<b>M15</b>
100	28	<b>M16</b>
110	28	<b>M17</b>
85	22	<b>M18</b>

Parallel shaft - Imperial Dimensions

Ø		key		Code
[inch]	[mm]	[inch]	[mm]	
7/16"	11.11	1/8"	3.18	<b>G00</b>
3/4"	19.05	3/16"	4.76	<b>G01</b>
7/8"	22.22	3/16"	4.76	<b>G02</b>
7/8"	22.22	1/4"	6.35	<b>G03</b>
1"	25.4	3/16"	4.76	<b>G04</b>
1"	25.40	1/4"	6.35	<b>G05</b>
1 1/4"	31.75	1/4"	6.35	<b>G06</b>
1 1/4"	31.75	5/16"	7.94	<b>G07</b>
1 3/8"	34.94	5/16"	7.94	<b>G08</b>
1 1/2"	38.1	3/8"	9.52	<b>G09</b>
1 5/8"	41.27	3/8"	9.52	<b>H00</b>
1 3/4"	44.45	7/16"	11.11	<b>H01</b>
2"	50.8	1/2"	12.7	<b>H02</b>
2 11/32"	53.94	1/2"	12.7	<b>H03</b>
3/4"	19.02	1/8"	3.17	<b>H04</b>
1"	25.4	3/16"	4.76	<b>H05</b>
5/8"	15.87	3/16"	4.76	<b>H06</b>
17/32"	13.45	1/8"	3.18	<b>H07</b>
11/16"	17.46	3/16"	4.76	<b>H08</b>
1/2"	12.7	1/8"	3.18	<b>H09</b>
5/8"	15.87	5/32"	3.97	<b>L00</b>
7/8"	22.22	5/32"	4	<b>L01</b>
11/8"	28.58	1/4"	6.35	<b>L02</b>
3/4"	19.05	1/4"	6.35	<b>L03</b>
1 7/8"	47.63	1/2"	12.7	<b>L04</b>
3 3/8"	85.73	7/8"	22.23	<b>L05</b>
2 3/8"	60.33	5/8"	15.88	<b>L06</b>
2 3/8"	60.33	1/2"	12.7	<b>L07</b>
2 7/8"	73.03	3/4"	19.05	<b>L08</b>
3 5/8"	92.07	7/8"	22.22	<b>L09</b>
1 5/8"	41.6	15/32"	12	<b>L10</b>
1 1/8"	28.58	5/16"	7.94	<b>L15</b>

Parallel shaft - Double Key

Ø [mm]	key [mm]	Code
16.00	4.00	<b>C02***2H</b>
	5.00	
20.00	5.00	<b>C06***2M</b>
	6.00	
19.00	5.00	<b>C07***2L</b>
	6.00	
24.00	6.00	<b>D01***2N</b>
	8.00	
30.00	8.00	<b>D03***2P</b>
	10.00	
22.22	4.76	<b>G02***2E</b>
	6.35	
25.40	6.35	<b>G04***2F</b>
	4.76	
31.75	6.35	<b>G06***2G</b>
	7.94	

\*\*\* = coupling length

**SAE Bore - ANS.B.92.1-1970**

Profile	Nr. of Th	Code
17 th 8/16	17	<b>PD01</b>
14 th 12/24	14	<b>PD02</b>
16 th 12/24	16	<b>PD03</b>
17 th 12/24	17	<b>PD04</b>
9 th 16/32	9	<b>PD05</b>
11 th 16/32	11	<b>PD06</b>
12 th 16/32	12	<b>PD07</b>
13 th 16/32	13	<b>PD08</b>
15 th 16/32	15	<b>PD09</b>
21 th 16/32	21	<b>PD10</b>
23 th 16/32	23	<b>PD11</b>
27 th 16/32	27	<b>PD12</b>
40 th 16/32	40	<b>PD13</b>
20 th 24/48	20	<b>PD14</b>
21 th 24/48	21	<b>PD15</b>
23 th 24/48	23	<b>PD16</b>
25 th 24/48	25	<b>PD17</b>
26 th 24/48	26	<b>PD18</b>
27 th 12/48	27	<b>PD19</b>
28 th 24/48	28	<b>PD20</b>
29 th 24/48	29	<b>PD21</b>
32 th 24/48	32	<b>PD22</b>
21 th 32/64	21	<b>PD23</b>
30 th 32/64	30	<b>PD24</b>
33 th 32/64	33	<b>PD25</b>
23 th 40/80	23	<b>PD26</b>
36 th 48/96	36	<b>PD27</b>
41 th 48/96	41	<b>PD28</b>
47 th 48/96	47	<b>PD29</b>
13 th 8/16	13	<b>PD30</b>
15 th 8/16	15	<b>PD31</b>
14 th 16/32	14	<b>PD32</b>
40 th 16/32	40	<b>PD33</b>
33 th 16/32	33	<b>PD34</b>
9 th 20/40	9	<b>PD35</b>
10 th 16/32	10	<b>PD36</b>
25 th 20/40	25	<b>PD37</b>

**Splined bore as per standard DIN5480**

Profile	Nr. of Th	Code
W18 x 1.25 x 13	13	<b>PA01</b>
W20 x 1.25 x 14	14	<b>PA02</b>
W25 x 1.25 x 18	18	<b>PA03</b>
W28 x 1.25 x 21	21	<b>PA04</b>
W32 x 1.25 x 24	24	<b>PA05</b>
W38 x 1.25 x 29	29	<b>PA06</b>
W30 x 2 x 14	14	<b>PA07</b>
W32 x 2 x 14	14	<b>PA08</b>
W35 x 2 x 16	16	<b>PA09</b>
W37 x 2 x 17	17	<b>PA10</b>
W38 x 2 x 18	18	<b>PA11</b>
W40 x 2 x 18	18	<b>PA12</b>
W42 x 2 x 20	20	<b>PA13</b>
W45 x 2 x 21	21	<b>PA14</b>
W50 x 2 x 24	24	<b>PA15</b>
W55 x 2 x 26	26	<b>PA16</b>
W60 x 2 x 28	28	<b>PA17</b>
W70 x 2 x 34	34	<b>PA18</b>
W80 x 2 x 38	38	<b>PA19</b>
W60 x 3 x 18	18	<b>PA20</b>
W70 x 3 x 22	22	<b>PA21</b>
W75 x 3 x 24	24	<b>PA22</b>
W90 x 3 x 28	28	<b>PA23</b>
W105 x 3 x 34	34	<b>PA24</b>
W80 x 3 x 25	25	<b>PA25</b>
W50 x 1.25 x 38	38	<b>PA26</b>
W62 x 1.25 x 48	48	<b>PA27</b>
W40 x 1.5 x 25	25	<b>PA28</b>
W32 x 1.5 x 20	20	<b>PA29</b>
W40 x 1.25 x 30	30	<b>PA30</b>

**Splined bore as per standard DIN5481**

Profile	Nr. of Th	Code
8 x 10	28	<b>PC01</b>
10 x 12	30	<b>PC02</b>
12 x 14	31	<b>PC03</b>
15 x 17	32	<b>PC04</b>
17 x 20	33	<b>PC05</b>
21 x 24	34	<b>PC06</b>
26 x 30	35	<b>PC07</b>
30 x 34	36	<b>PC08</b>
60 x 65	41	<b>PC09</b>

**Splined bore as per standard DIN5482**

Profile	Nr. of Th	Code
A15 x 12	8	<b>PB01</b>
A17 x 14	9	<b>PB02</b>
A18 x 15	10	<b>PB03</b>
A20 x 17	12	<b>PB04</b>
A22 x 19	13	<b>PB05</b>
A25 x 22	14	<b>PB06</b>
A28 x 25	15	<b>PB07</b>
A30 x 27	16	<b>PB08</b>
A32 x 28	17	<b>PB09</b>
A35 x 31	18	<b>PB10</b>
A38 x 34	19	<b>PB11</b>
A40 x 36	20	<b>PB12</b>
A42 x 38	21	<b>PB13</b>
A45 x 41	22	<b>PB14</b>
A48 x 44	23	<b>PB15</b>
A50 x 45	24	<b>PB16</b>
A52 x 47	25	<b>PB17</b>
A55 x 50	26	<b>PB18</b>
A58 x 53	27	<b>PB19</b>
A60 x 55	28	<b>PB20</b>
A62 x 57	29	<b>PB21</b>
A65 x 60	30	<b>PB22</b>
A68 x 62	31	<b>PB23</b>
A70 x 64	32	<b>PB24</b>
A72 x 66	33	<b>PB25</b>
A75 x 69	34	<b>PB26</b>
A78 x 72	35	<b>PB27</b>
A80 x 74	36	<b>PB28</b>
A82 x 76	37	<b>PB29</b>
A85 x 79	38	<b>PB30</b>
A88 x 82	39	<b>PB31</b>
A90 x 84	40	<b>PB32</b>
A92 x 86	41	<b>PB33</b>
A95 x 89	42	<b>PB34</b>
A98 x 92	43	<b>PB35</b>
A100 x 94	44	<b>PB36</b>

### e-PTO CONCEPT

Designed to power the onboard hydraulic systems of heavy vehicles, such as waste collection vehicles and cranes, the e-PTO uses the electric energy of a Banke e-PTO instead of traditional diesel. This innovation represents a significant step towards sustainability and energy efficiency in the industrial vehicle sector.

One of the main advantages of the e-PTO is its quiet operation and zero CO<sub>2</sub> emissions. This system allows for up to a 50% reduction in the energy consumed by onboard hydraulic systems.

The e-PTO system consists of:

- **Aluminum lantern:** customizable based on the pump mounted by the manufacturer
- **Steel half-coupling:** engine side with integrated shaft, ensuring robustness and reliability
- **Polyurethane elastic insert:** for a flexible and durable connection
- **Pump side half-coupling:** customizable based on the mounted pump
- **Hydraulic pump:** chosen by the manufacturer for equipment movement
- **Intelligent electronic control system:** manages the entire process to ensure efficiency and reliability.

### Versatile Applications

The e-PTO is particularly suitable for vehicle outfitters who build:

- Loader cranes
- Refrigerated vehicles
- Cement mixers
- Urban distribution vehicles
- Dumper
- Aircraft Tug
- Sweeper machines.

## Technical data

### Couplings - Solutions for e-PTO

#### Half-couplings materials

SGES: Steel C40

#### Spider materials

EGE\*\*RR series: in polyurethane Laripur - 92 Shore A - LPR202-95A - red colour

#### Compatibility with fluids

- Mineral oils types HH-HL-HM-HR-HV, to ISO 6743/4 standard
- Water based emulsions types HFAE-HFAS, to ISO 6743/4 standard
- Water glycol type HFC, to ISO 6743/4 standard: ask for anodized version

#### Temperature

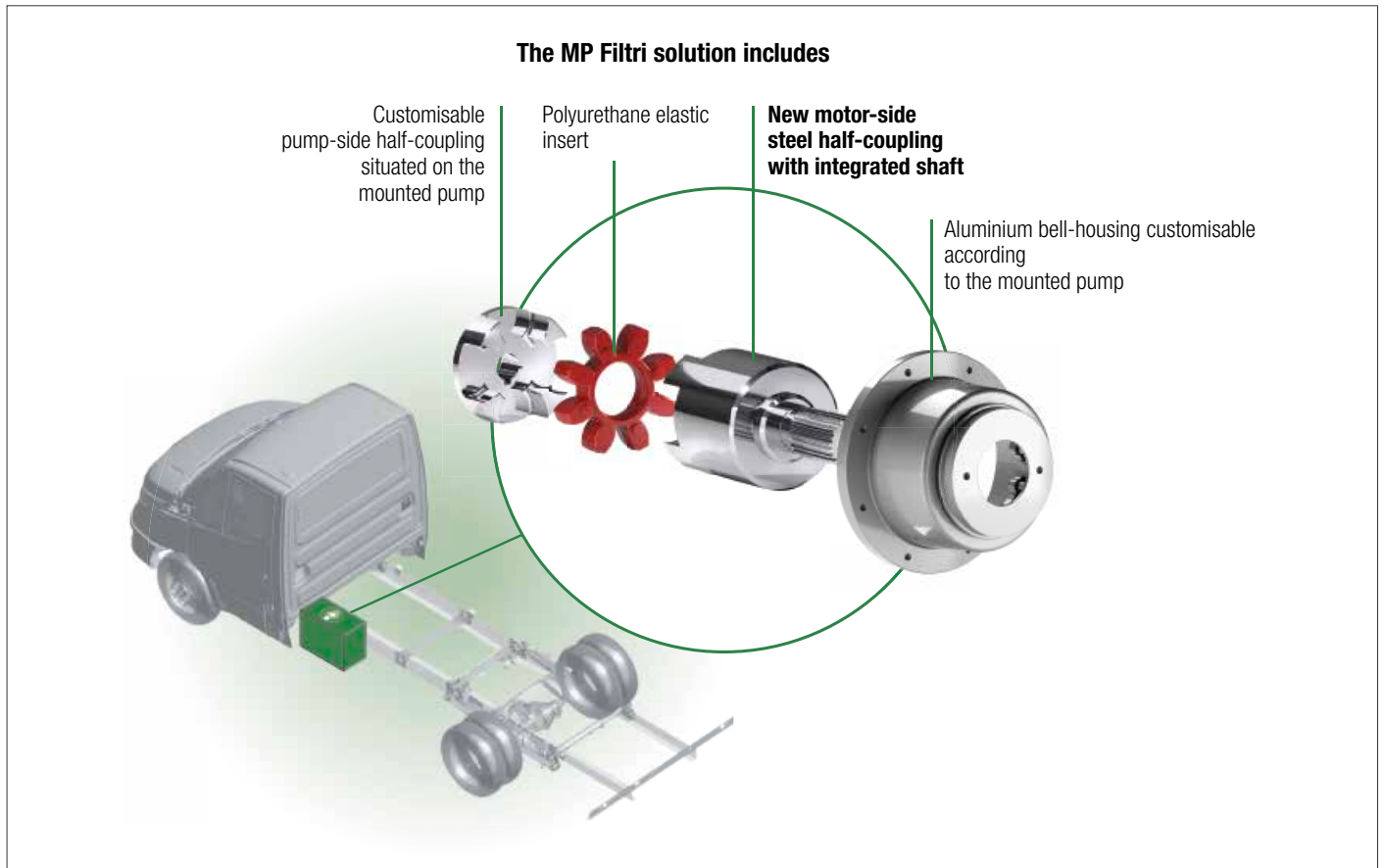
Spider polyurethane resin: from -30 °C to +120 °C

#### Note

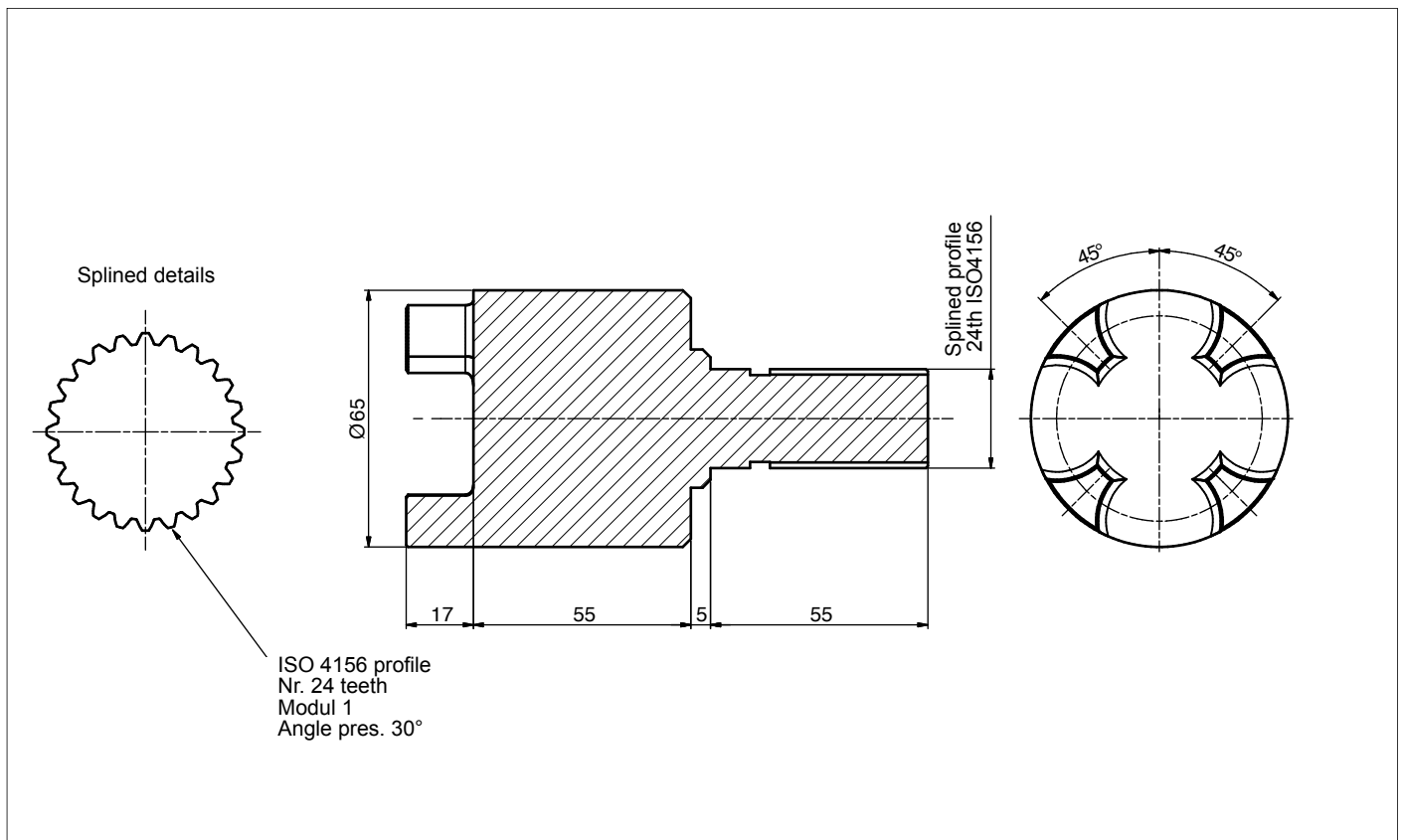
For temperatures outside this range, contact MP Filtri Technical and Sales Department

#### Ordering code

Motor half-coupling code: **SGES21IS04156**



## Dimensions



**Notes:**

Please contact the Technical Department to discuss possible combinations between the electric motor installed on the machine and the pump mounted on the vehicle.

## По вопросам продаж и поддержки обращайтесь:

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