

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

CATEGORY 3
ZONE 22
Non conductive dust

General information



Three-phase TEFV induction motors, FLS series with cast iron housing, conforming to IEC 34, 72, EN 50281 power 0.18 to 750 kW, frame size 80 to 450 mm.

- Single speed : 2, 4, 6 and 8-pole: 230/400 V or 400 V Δ , 50 Hz.
- Two-speed : (on request) for general or centrifugal applications 2/4, 4/6 and 6/8 poles 400 V Y ou Δ .

Protection suitable for the harshest environments.

Motors for variable speed operation

- fitted with thermal probes (essential),
- on consultation (to be selected).

Finish : cast iron housing

Assembled using protected fixing accessories. Paint finish **RAL 6000 (green)**.

Shaft end and flange protected against atmospheric corrosion. Individual anti-shock packaging.

A.C. supply

• Standard construction in accordance with IEC 38 ie :

- 230/400 V +10% -10% at 50 Hz.
- 400 V Δ +10% -10% at 50 Hz.



Description of the FLS cast iron three-phase motors - zone 22



II 3D T 125 °C

| Component | Materials | Remarks |
|-----------------------------|--|---|
| Housing with cooling fins | Cast iron | - with integral feet, or without feet <ul style="list-style-type: none"> • 4, 6 or 8 fixing holes for foot mounted housings • lifting rings for frame sizes ≥ 100 - earth terminal on foot or fin |
| Stator | Insulated low carbon magnetic steel laminations Insulated electroplated copper | - low carbon content guarantees long term lamination pack stability - welded packs - semi-enclosed slots - class F insulation |
| Rotor | Insulated low carbon magnetic steel laminations Aluminium (A5L) or copper | - inclined cage bars - rotor cage pressure die cast in aluminium (or alloy for special applications) or soldered in copper - shrink-fitted to shaft, or keyed for soldered rotors - rotor balanced dynamically, level A, 1/2 key |
| Shaft | Steel | - for frame size ≤ 132 : <ul style="list-style-type: none"> • shaft end fitted with screw and washer • captive drive key with rounded ends - for frame size ≥ 160 : <ul style="list-style-type: none"> • tapped hole • open keyway |
| End shields | Cast iron | |
| Bearings and lubrication | | - ball bearings C3 play - type ZZ «greased for life» up to frame size 132 - semi-protected or open type from frame size 160, regreasable - NDE bearings preloaded up to 315 S, preloaded at DE from size 315 M upwards |
| Labyrinth seals Lipseals | Plastic, steel, or synthetic rubber | - labyrinth seal at drive end for foot mounted motors, frame size ≤ 132 - lipseal at drive end for foot and flange mounted or flange-mounted motors, frame size ≤ 132 - lipseal at non drive end for all motors ≤ 132 - lipseal at drive end and non drive end for frame sizes 160 to 225 MT inclusive - labyrinth seal at drive end and non drive end for frame sizes ≥ 355 LK - decompression grooves for frame size 225 M to 355 LD |
| Fan | Composite material or metal | - 2 directions of rotation : straight blades |
| Fan cover | Pressed steel | - fitted, on request, with a drip cover for operation in vertical position, shaft end facing down |
| Terminal box | Cast iron body for all frame sizes Cover in pressed steel for frame sizes 80 to 132, cast iron for larger frame sizes | - IP 55 - fitted with a terminal block with 6 terminals up to 335 LD, 6 or 12 terminals thereafter - terminal box supplied fitted with plastic cable glands up to 132 - sizes 160 to 450 cable gland baseplate without drilled holes (optional horn or cable gland) - 1 earth terminal in each terminal box |
| Paint | | - system II - resistance to saline mist : 250 hours (according to NFX 41002) |

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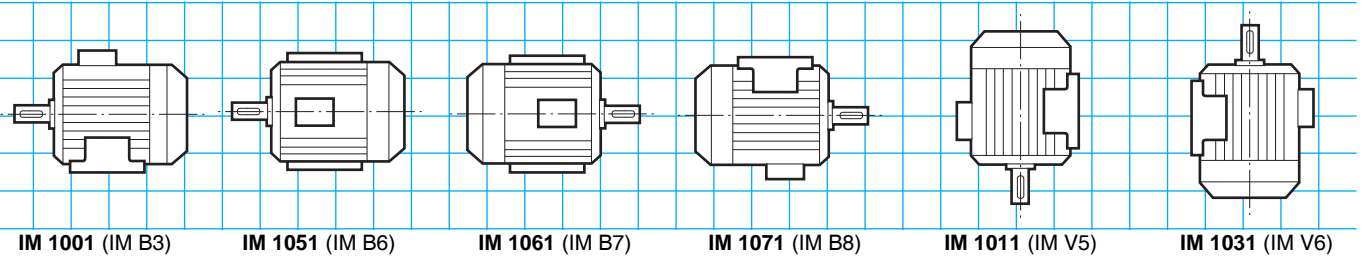


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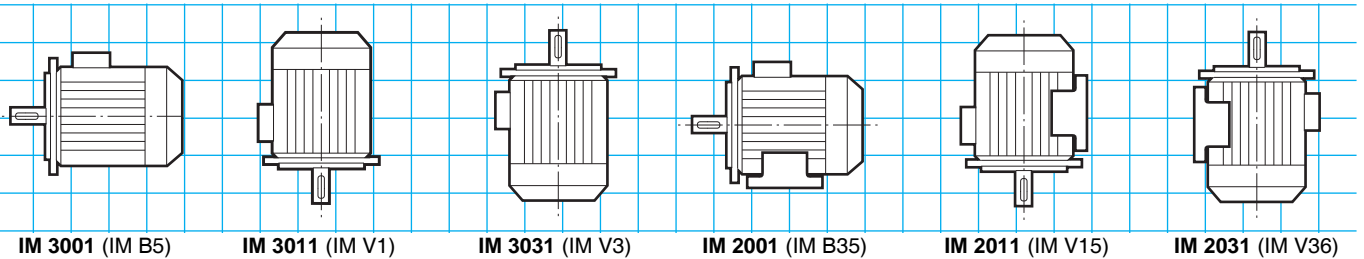
Mounting positions

Foot mounted motors



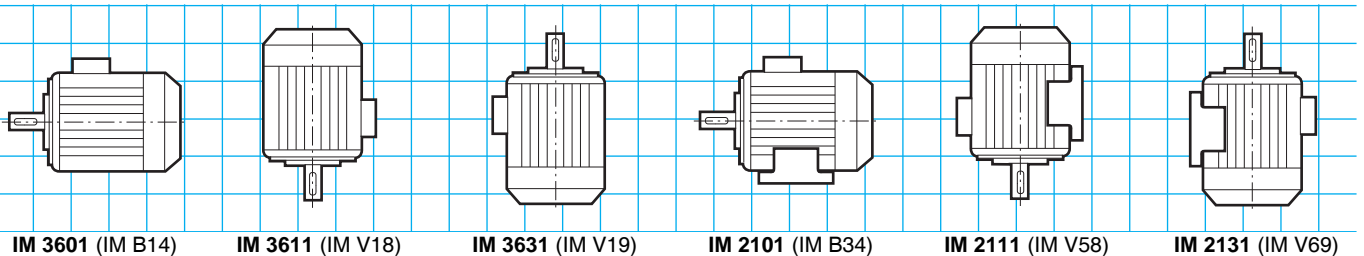
(FF) plain hole flange mounted motors

- Possible position IM 3001 (IM B5) up to 225 frame size inclusive

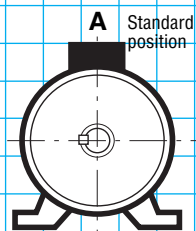


(FT) tapped hole flange mounted motors

- Possible position up to 132 frame size inclusive

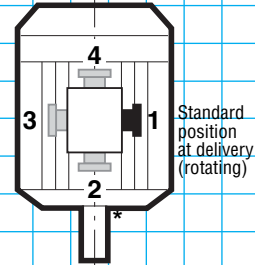


Position of the terminal box in relation to the motor shaft end



A : standard

Position of the cable gland in relation to the motor shaft end



1 : standard

* Position 2 not recommended and not feasible on plain hole flange standard motor (FF)

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Adaptation possibilities

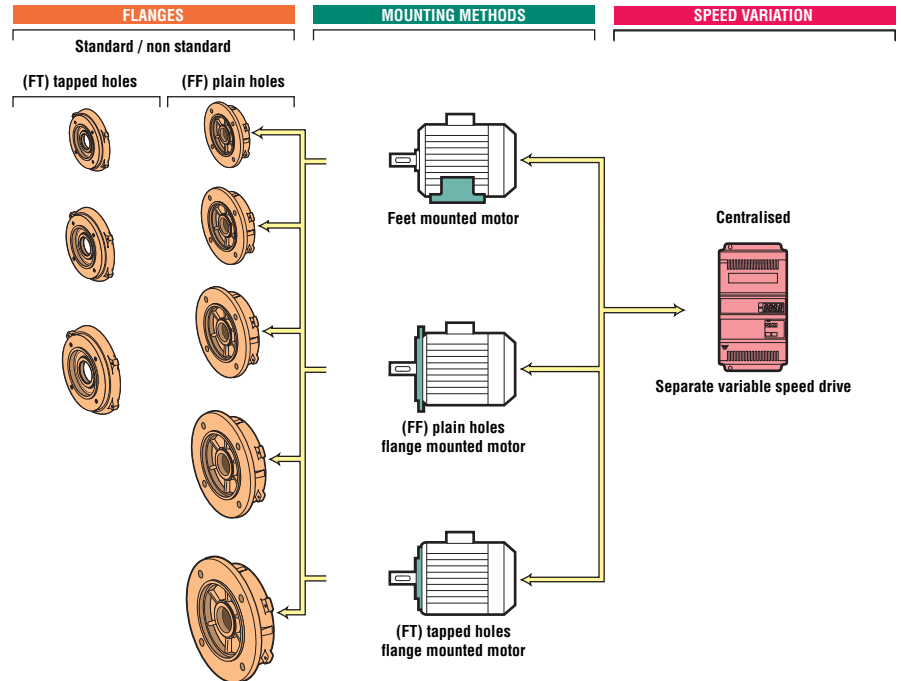
Leroy-Somer offers, for use with the FLS totally enclosed three-phase asynchronous motors, many options which meet the needs of highly diverse applications. They are described below and in the chapters relating to gearboxes and to speed variation. For other variants or any special application, consult the technical specialists at Leroy-Somer.



The FLS motors may be associated to :

- gearboxes
- electronic variable speed drive (1)

(1) Conforming to the regulations of use as indicated by the standard IEC 34-17.



Designation / Codification

| | | | | | | | | | |
|-----------------------|------------------------------|------------|------------------------|---------------------------------------|-------------|-------------------------------|----------------------|------------------------|------------------------|
| ATEX II 3D T 125°C | 4P 1500 min ⁻¹ | FLS | 315 | M | 132 kW | IM 1001 (IM B3) | 400 V Δ | 50 Hz | IP 55 |
| Specific application | Speed polarity | Motor type | IEC 60072-1 frame size | Housing designation and builder index | Rated power | IEC 60034-7 mounting position | Power supply voltage | Power supply frequency | IEC 60034-5 protection |

Codification example :

FLS three-phase asynchronous motor 1500 min⁻¹, 132 kW IM 1001 (IM B3), 400 V Δ - ATEX zone 22

Designation

4P FLS 315 M 132 kW

IM 1001 (IM B3) 400 V Δ - Zone 22 ZA2 13 413

Code

The table above is an example.

It allows the creation of the designation for the required product.

This designation corresponds to a product code.

The product codes that are present in the selection grids can be used directly.

They simplify the ordering process.

The codification table is incorporated in the price list with the designations list.

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Selection

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y - S1



II - 3D - T 125 °C

A

2
poles
3000 min⁻¹

| Type | Rated power at 50 Hz | Rated speed | Rated moment | Rated current | Power factor | Efficiency | Starting torque / Rated torque | Weight |
|------------|----------------------|----------------------------|--------------|------------------|-------------------------|-----------------|--------------------------------|-------------|
| | P_N kW | N_N min ⁻¹ | M_N N.m | $I_N(400V)$ A | $\cos \varphi$ 100 % | η 100 % | I_D / I_N | IM B3 kg |
| FLS 80 L | 0.75 | 2840 | 2.5 | 1.6 | 0.86 | 76 | 5.9 | 15 |
| FLS 80 L | 1.1 | 2837 | 3.7 | 2.4 | 0.84 | 79.5 | 5.6 | 18 |
| FLS 90 S | 1.5 | 2870 | 5 | 3.3 | 0.81 | 82 | 7.3 | 21 |
| FLS 90 L | 2.2 | 2862 | 7.5 | 4.3 | 0.88 | 84.5 | 8.1 | 26 |
| FLS 100 LK | 3 | 2925 | 70 | 5.5 | 0.91 | 86 | 8.4 | 42 |
| FLS 112 M | 4 | 2940 | 13.6 | 7.5 | 0.89 | 86.5 | 8.7 | 48 |
| FLS 132 S | 5.5 | 2940 | 18.7 | 10.6 | 0.86 | 87 | 7.6 | 67 |
| FLS 132 S | 7.5 | 2950 | 25 | 14.1 | 0.87 | 88 | 8.9 | 70 |
| FLS 160 MA | 11 | 2935 | 35.8 | 20 | 0.88 | 88.4 | 8.6 | 97 |
| FLS 160 MB | 15 | 2935 | 48.8 | 27 | 0.88 | 89.7 | 8.6 | 108 |
| FLS 160 L | 18.5 | 2940 | 60 | 33 | 0.9 | 90.8 | 8.4 | 126 |
| FLS 180 MR | 22 | 2940 | 71 | 39 | 0.89 | 91 | 8.5 | 135 |
| FLS 200 LA | 30 | 2950 | 97 | 52 | 0.91 | 92.4 | 7.7 | 245 |
| FLS 200 LB | 37 | 2959 | 120 | 63 | 0.9 | 93.5 | 8.3 | 265 |
| FLS 225 MT | 45 | 2958 | 145 | 78 | 0.89 | 93.8 | 8.3 | 290 |
| FLS 250 M | 55 | 2966 | 177 | 94 | 0.89 | 94.6 | 7.9 | 405 |
| FLS 280 S | 75 | 2965 | 241 | 127 | 0.9 | 94.6 | 8 | 505 |
| FLS 280 M | 90 | 2962 | 290 | 149 | 0.91 | 95.5 | 7.7 | 560 |
| FLS 315 ST | 110 | 2975 | 356 | 178 | 0.93 | 95.8 | 8.2 | 850 |
| FLS 315 M | 132 | 2962 | 427 | 221 | 0.9 | 96 | 7.5 | 1000 |

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Selection

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IP 55 - 50 Hz - Class F - ΔT 80 K - 230 V Δ / 400 V Y - S1



II - 3D - T 125 °C

A

2
poles
3000 min⁻¹

| Type | Rated power at 50 Hz P_N kW | IM 1001 (IM B3) | | IM 3001 (IM B5) | | IM 2001 (IM B35) | | IM 3601 (IM B14) | |
|------------|-------------------------------------|-----------------|-----|-----------------|-----|------------------|-----|------------------|-----|
| | | Code | Qty | Code | Qty | Code | Qty | Code | Qty |
| FLS 80 L | 0.75 | ZA2 75 119 | 3 | ZA2 75 121 | 3 | ZA2 75 1C1 | 2 | ZA2 75 123 | 2 |
| FLS 80 L | 1.1 | ZA2 11 219 | 3 | ZA2 11 221 | 3 | ZA2 11 2C1 | 2 | ZA2 11 223 | 2 |
| FLS 90 S | 1.5 | ZA2 15 218 | 3 | ZA2 15 221 | 3 | ZA2 15 2C1 | 2 | ZA2 15 223 | 2 |
| FLS 90 L | 2.2 | ZA2 22 207 | 3 | ZA2 22 209 | 3 | ZA2 22 2A9 | 2 | ZA2 22 211 | 2 |
| FLS 100 LK | 3 | ZA2 30 207 | 3 | ZA2 30 209 | 3 | ZA2 30 2A9 | 2 | ZA2 30 211 | 2 |
| FLS 112 M | 4 | ZA2 40 207 | 2 | ZA2 40 209 | 2 | ZA2 40 2A9 | 2 | ZA2 40 211 | 2 |
| FLS 132 S | 5.5 | ZA2 55 213 | 2 | ZA2 55 215 | 2 | ZA2 55 2B5 | 2 | ZA2 55 247 | 2 |
| FLS 132 S | 7.5 | ZA2 75 207 | 2 | ZA2 75 209 | 2 | ZA2 75 2A9 | 1 | ZA2 75 211 | 2 |
| FLS 160 MA | 11 | ZA2 11 313 | 1 | ZA2 11 315 | 1 | ZA2 11 3B5 | 1 | | |
| FLS 160 MB | 15 | ZA2 15 313 | 1 | ZA2 15 315 | 1 | ZA2 15 3B5 | 1 | | |
| FLS 160 L | 18.5 | ZA2 18 313 | 1 | ZA2 18 315 | 1 | ZA2 18 3B5 | 1 | | |
| FLS 180 MR | 22 | ZA2 22 313 | 1 | ZA2 22 315 | 1 | ZA2 22 3B5 | 1 | | |
| FLS 200 LA | 30 | ZA2 30 313 | 1 | ZA2 30 315 | 1 | ZA2 30 3B5 | 1 | | |
| FLS 200 LB | 37 | ZA2 37 313 | 1 | ZA2 37 315 | 1 | ZA2 37 3B5 | 1 | | |
| FLS 225 MT | 45 | ZA2 45 313 | 1 | | | ZA2 45 3B5 | 1 | | |
| FLS 250 M | 55 | ZA2 55 313 | 1 | | | ZA2 55 3B5 | 1 | | |
| FLS 280 S | 75 | ZA2 75 313 | 1 | | | ZA2 75 3B5 | 1 | | |
| FLS 280 M | 90 | ZA2 90 313 | 1 | | | ZA2 90 3B5 | 1 | | |
| FLS 315 ST | 110 | ZA2 11 413 | 1 | | | ZA2 11 4B5 | 1 | | |
| FLS 315 M | 132 | ZA2 13 413 | 1 | | | ZA2 13 4B5 | 1 | | |

Selection example :

| | |
|-------------------------|----------------------------------|
| Speed : | 3000 min ⁻¹ - 2 poles |
| Power : | 2.2 kW |
| Mounting and position : | IM 3001 (IM B5) |
| Mains supply voltage : | 230/400 V |
| Application : | ATEX zone 22 |

Designation :

2P FLS 90 L 2.2 kW IM 3001 (IM B5)
230/400 V

Code : ZA2 22 209

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Selection

IP 55 - 50 Hz - Class F - ΔT 80 K - 230 V Δ / 400 V Y - S1



II - 3D - T 125 °C

4
poles
1500 min⁻¹

A

| Type | Rated power at 50 Hz | Rated speed | Rated moment | Rated current | Power factor | Efficiency | Starting torque / Rated torque | Weight |
|------------|----------------------|----------------------------|--------------|------------------|-------------------------|-----------------|--------------------------------|-------------|
| | P_N kW | N_N min ⁻¹ | M_N N.m | $I_N(400V)$ A | $\cos \varphi$ 100 % | η 100 % | I_D / I_N | IM B3 kg |
| FLS 80 L | 0.55 | 1410 | 3.7 | 1.6 | 0.74 | 69.2 | 4.4 | 15 |
| FLS 80 L | 0.75 | 1425 | 5 | 2 | 0.75 | 72.5 | 5.7 | 17 |
| FLS 90 S | 1.1 | 1429 | 7.5 | 2.5 | 0.83 | 78 | 4.9 | 19 |
| FLS 90 L | 1.5 | 1428 | 10 | 3.3 | 0.82 | 79.5 | 5.3 | 21 |
| FLS 90 L | 1.8 | 1438 | 12.3 | 4 | 0.82 | 80.1 | 5.9 | 23 |
| FLS 100 LK | 2.2 | 1457 | 15 | 4.6 | 0.83 | 83.8 | 6.3 | 41 |
| FLS 100 LK | 3 | 1454 | 20 | 6.2 | 0.82 | 84.7 | 6.5 | 44 |
| FLS 112 M | 4 | 1462 | 27.5 | 8.4 | 0.81 | 85.1 | 7.4 | 48 |
| FLS 132 S | 5.5 | 1467 | 37 | 10.9 | 0.84 | 87 | 8 | 65 |
| FLS 132 M | 7.5 | 1450 | 50 | 14.3 | 0.87 | 87 | 7.3 | 70 |
| FLS 160 M | 11 | 1455 | 72.2 | 20.9 | 0.86 | 88.5 | 7.8 | 103 |
| FLS 160 L | 15 | 1455 | 98.5 | 27.9 | 0.86 | 89.5 | 7.8 | 120 |
| FLS 180 MR | 18.5 | 1465 | 120 | 35 | 0.86 | 90 | 7.8 | 135 |
| FLS 180 L | 22 | 1465 | 143 | 40.8 | 0.86 | 91.4 | 7.4 | 184 |
| FLS 200 L | 30 | 1471 | 195 | 55.7 | 0.85 | 91.9 | 6.5 | 260 |
| FLS 225 ST | 37 | 1476 | 240 | 69.6 | 0.82 | 93.6 | 7 | 290 |
| FLS 225 M | 45 | 1483 | 290 | 78.6 | 0.87 | 94.5 | 7 | 388 |
| FLS 250 M | 55 | 1479 | 355 | 101 | 0.84 | 94.5 | 6.5 | 395 |
| FLS 280 S | 75 | 1483 | 484 | 137 | 0.84 | 94.9 | 7.7 | 475 |
| FLS 280 M | 90 | 1478 | 581 | 162 | 0.85 | 95 | 7.6 | 565 |
| FLS 315 ST | 110 | 1482 | 710 | 2.3 | 0.83 | 94.8 | 7.3 | 850 |
| FLS 315 M | 132 | 1489 | 850 | 249 | 0.81 | 95 | 8 | 1000 |
| FLS 315 LA | 160 | 1486 | 1032 | 285 | 0.85 | 95.8 | 7.5 | 1050 |
| FLS 315 LB | 200 | 1487 | 1291 | 369 | 0.82 | 96 | 8 | 1150 |
| FLS 355 LA | 250 | 1487 | 1611 | 427 | 0.88 | 96.5 | 7.4 | 1510 |

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ZONE 22
Non conductive dust

Selection

IP 55 - 50 Hz - Class F - ΔT 80 K - 230 V Δ / 400 V Y - S1



II - 3D - T 125 °C

A

4
poles
1500 min⁻¹

| Type | Rated power at 50 Hz P_N kW | IM 1001 (IM B3) | | IM 3001 (IM B5) | | IM 2001 (IM B35) | | IM 3601 (IM B14) | |
|------------|-------------------------------------|-----------------|-----|-----------------|-----|------------------|-----|------------------|-----|
| | | Code | Qty | Code | Qty | Code | Qty | Code | Qty |
| FLS 80 L | 0.55 | ZA4 55 119 | 3 | ZA4 55 121 | 3 | ZA4 55 1C1 | 2 | ZA4 55 123 | 2 |
| FLS 80 L | 0.75 | ZA4 75 125 | 3 | ZA4 75 127 | 3 | ZA4 75 1C7 | 2 | ZA4 75 129 | 2 |
| FLS 90 S | 1.1 | ZA4 11 225 | 3 | ZA4 11 227 | 3 | ZA4 11 2C7 | 2 | ZA4 11 229 | 2 |
| FLS 90 L | 1.5 | ZA4 15 213 | 3 | ZA4 15 215 | 3 | ZA4 15 2B5 | 2 | ZA4 15 217 | 2 |
| FLS 90 L | 1.8 | ZA4 18 213 | 3 | ZA4 18 215 | 3 | ZA4 18 2B5 | 2 | ZA4 18 217 | 2 |
| FLS 100 LK | 2.2 | ZA4 22 213 | 3 | ZA4 22 215 | 3 | ZA4 22 2B5 | 2 | ZA4 22 217 | 2 |
| FLS 100 LK | 3 | ZA4 30 213 | 3 | ZA4 30 215 | 3 | ZA4 30 2B5 | 2 | ZA4 30 217 | 2 |
| FLS 112 M | 4 | ZA4 40 207 | 2 | ZA4 40 209 | 2 | ZA4 40 2A9 | 2 | ZA4 40 211 | 2 |
| FLS 132 S | 5.5 | ZA4 55 213 | 2 | ZA4 55 215 | 2 | ZA4 55 2B5 | 2 | ZA4 55 217 | 2 |
| FLS 132 M | 7.5 | ZA4 75 225 | 2 | ZA4 75 227 | 2 | ZA4 75 2C7 | 2 | ZA4 75 229 | 2 |
| FLS 160 M | 11 | ZA4 11 325 | 1 | ZA4 11 327 | 1 | ZA4 11 3C7 | 1 | | |
| FLS 160 L | 15 | ZA4 15 325 | 1 | ZA4 15 327 | 1 | ZA4 15 3C7 | 1 | | |
| FLS 180 MR | 18.5 | ZA4 18 325 | 1 | ZA4 18 327 | 1 | ZA4 18 3C7 | 1 | | |
| FLS 180 L | 22 | ZA4 22 325 | 1 | ZA4 22 327 | 1 | ZA4 22 3C7 | 1 | | |
| FLS 200 L | 30 | ZA4 30 325 | 1 | ZA4 30 327 | 1 | ZA4 30 3C7 | 1 | | |
| FLS 225 ST | 37 | ZA4 37 325 | 1 | | | ZA4 37 3C7 | 1 | | |
| FLS 225 M | 45 | ZA4 45 325 | 1 | | | ZA4 45 3C7 | 1 | | |
| FLS 250 M | 55 | ZA4 55 325 | 1 | | | ZA4 55 3C7 | 1 | | |
| FLS 280 S | 75 | ZA4 75 325 | 1 | | | ZA4 75 3C7 | 1 | | |
| FLS 280 M | 90 | ZA4 90 325 | 1 | | | ZA4 90 3C7 | 1 | | |
| FLS 315 ST | 110 | ZA4 11 425 | 1 | | | ZA4 11 4C7 | 1 | | |
| FLS 315 M | 132 | ZA4 13 419 | 1 | | | ZA4 13 4C1 | 1 | | |
| FLS 315 LA | 160 | ZA4 16 419 | 1 | | | ZA4 16 4C1 | 1 | | |
| FLS 315 LB | 200 | ZA4 20 419 | 1 | | | ZA4 20 4C1 | 1 | | |
| FLS 355 LA | 250 | | - | | | | | | |

Selection example :

| | |
|-------------------------|----------------------------------|
| Speed : | 1500 min ⁻¹ - 4 poles |
| Power : | 55 kW |
| Mounting and position : | IM 1001 (IM B3) |
| Mains supply voltage : | 230/400 V |
| Application : | ATEX zone 22 |

Designation :

4P FLS 250 M 55 kW IM 1001 (IM B3)
230/400 V

Code : ZA4 55 325

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ZONE 22
Non conductive dust

Selection

IP 55 - 50 Hz - Class F - Δ T 80 K - 400 V Δ - S1
 II - 3D - T 125 °C

2
poles
3000 min⁻¹

A

| Type | Rated power at 50 Hz P_N kW | Rated speed N_N min ⁻¹ | Rated moment M_N N.m | Rated current I_N (400 V) A | Power factor $\cos \varphi$ 100 % | Efficiency η 100 % | Starting torque / Rated torque I_D / I_N | Weight IM B3 kg |
|-------------------|-------------------------------------|---|------------------------------|-------------------------------------|---|-------------------------------|--|-----------------------|
| FLS 100 LK | 3 | 2925 | 70 | 5.5 | 0.91 | 86 | 8.4 | 42 |
| FLS 112 M | 4 | 2940 | 13.6 | 7.5 | 0.89 | 86.5 | 8.7 | 48 |
| FLS 132 S | 5.5 | 2940 | 18.7 | 10.6 | 0.86 | 87 | 7.6 | 67 |
| FLS 132 S | 7.5 | 2950 | 25 | 14.1 | 0.87 | 88 | 8.9 | 70 |
| FLS 160 MA | 11 | 2935 | 35.8 | 20 | 0.88 | 88.4 | 8.6 | 97 |
| FLS 160 MB | 15 | 2935 | 48.8 | 27 | 0.88 | 89.7 | 8.6 | 108 |
| FLS 160 L | 18.5 | 2940 | 60 | 33 | 0.9 | 90.8 | 8.4 | 126 |
| FLS 180 MR | 22 | 2940 | 71 | 39 | 0.89 | 91 | 8.5 | 135 |
| FLS 200 LA | 30 | 2950 | 97 | 52 | 0.91 | 92.4 | 7.7 | 245 |
| FLS 200 LB | 37 | 2959 | 120 | 63 | 0.9 | 93.5 | 8.3 | 265 |
| FLS 225 MT | 45 | 2958 | 145 | 78 | 0.89 | 93.8 | 8.3 | 290 |
| FLS 250 M | 55 | 2966 | 177 | 94 | 0.89 | 94.6 | 7.9 | 405 |
| FLS 280 S | 75 | 2965 | 241 | 127 | 0.9 | 94.6 | 8 | 505 |
| FLS 280 M | 90 | 2962 | 290 | 149 | 0.91 | 95.5 | 7.7 | 560 |
| FLS 315 ST | 110 | 2975 | 356 | 178 | 0.93 | 95.8 | 8.2 | 850 |
| FLS 315 M | 132 | 2962 | 427 | 221 | 0.9 | 96 | 7.5 | 1000 |

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Selection

IP 55 - 50 Hz - Class F - Δ T 80 K - 400 V Δ - S1
II - 3D - T 125 °C



A

2
poles
3000 min⁻¹

| Type | Rated power at 50 Hz P_N kW | IM 1001 (IM B3) | | IM 3001 (IM B5) | | IM 2001 (IM B35) | | IM 3601 (IM B14) | |
|------------|-------------------------------------|-----------------|-----|-----------------|-----|------------------|-----|------------------|-----|
| | | Code | Qty | Code | Qty | Code | Qty | Code | Qty |
| FLS 100 LK | 3 | ZA2 30 208 | 3 | ZA2 30 210 | 3 | ZA2 30 2B0 | 2 | ZA2 30 212 | 2 |
| FLS 112 M | 4 | ZA2 40 208 | 2 | ZA2 40 210 | 2 | ZA2 40 2B0 | 2 | ZA2 40 212 | 2 |
| FLS 132 S | 5,5 | ZA2 55 214 | 2 | ZA2 55 216 | 2 | ZA2 55 2B6 | 2 | ZA2 55 248 | 2 |
| FLS 132 S | 7,5 | ZA2 75 208 | 2 | ZA2 75 210 | 2 | ZA2 75 2B0 | 2 | ZA2 75 212 | 2 |
| FLS 160 MA | 11 | ZA2 11 314 | 1 | ZA2 11 316 | 1 | ZA2 11 3B6 | 1 | | |
| FLS 160 MB | 15 | ZA2 15 314 | 1 | ZA2 15 316 | 1 | ZA2 15 3B6 | 1 | | |
| FLS 160 L | 18,5 | ZA2 18 314 | 1 | ZA2 18 316 | 1 | ZA2 18 3B6 | 1 | | |
| FLS 180 MR | 22 | ZA2 22 314 | 1 | ZA2 22 316 | 1 | ZA2 22 3B6 | 1 | | |
| FLS 200 LA | 30 | ZA2 30 314 | 1 | ZA2 30 316 | 1 | ZA2 30 3A6 | 1 | | |
| FLS 200 LB | 37 | ZA2 37 314 | 1 | ZA2 37 316 | 1 | ZA2 37 3A6 | 1 | | |
| FLS 225 MT | 45 | ZA2 45 314 | 1 | | | ZA2 45 3B6 | 1 | | |
| FLS 250 M | 55 | ZA2 55 314 | 1 | | | ZA2 55 3B6 | 1 | | |
| FLS 280 S | 75 | ZA2 75 314 | 1 | | | ZA2 75 3B6 | 1 | | |
| FLS 280 M | 90 | ZA2 90 314 | 1 | | | ZA2 90 3B6 | 1 | | |
| FLS 315 ST | 110 | ZA2 11 414 | 1 | | | ZA2 11 4B6 | 1 | | |
| FLS 315 M | 132 | ZA2 13 414 | 1 | | | ZA2 13 4B6 | 1 | | |

Selection example :

| | |
|-------------------------|----------------------------------|
| Speed : | 3000 min ⁻¹ - 2 poles |
| Power : | 30 kW |
| Mounting and position : | IM 2001 (IM B35) |
| Mains supply voltage : | 400 V |
| Application : | ATEX zone 22 |

Designation :

2P FLS 200 LA 30 kW IM 2001 (IM B35) 400 V

Code : ZA2 30 3A6

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Selection

IP 55 - 50 Hz - Class F - ΔT 80 K - 400 V Δ - S1
 II - 3D - T 125 °C

4
poles
1500 min⁻¹

A

| Type | Rated power at 50 Hz | Rated speed | Rated moment | Rated current | Power factor | Efficiency | Starting torque / Rated torque | Weight |
|------------|----------------------|----------------------------|--------------|------------------|-------------------------|-----------------|--------------------------------|-------------|
| | P_N kW | N_N min ⁻¹ | M_N N.m | $I_N(400V)$ A | $\cos \varphi$ 100 % | η 100 % | I_D / I_N | IM B3 kg |
| FLS 100 LK | 3 | 1454 | 20 | 6.2 | 0.82 | 84.7 | 6.5 | 44 |
| FLS 112 M | 4 | 1462 | 27.5 | 8.4 | 0.81 | 85.1 | 7.4 | 48 |
| FLS 132 S | 5.5 | 1467 | 37 | 10.9 | 0.84 | 87 | 8 | 65 |
| FLS 132 M | 7.5 | 1450 | 50 | 14.3 | 0.87 | 87 | 7.3 | 70 |
| FLS 160 M | 11 | 1455 | 72.2 | 20.9 | 0.86 | 88.5 | 7.8 | 103 |
| FLS 160 L | 15 | 1455 | 98.5 | 27.9 | 0.86 | 89.5 | 7.8 | 120 |
| FLS 180 MR | 18.5 | 1465 | 120 | 35 | 0.86 | 90 | 7.8 | 135 |
| FLS 180 L | 22 | 1465 | 143 | 40.8 | 0.86 | 91.4 | 7.4 | 184 |
| FLS 200 L | 30 | 1471 | 195 | 55.7 | 0.85 | 91.9 | 6.5 | 260 |
| FLS 225 ST | 37 | 1476 | 240 | 69.6 | 0.82 | 93.6 | 7 | 290 |
| FLS 225 M | 45 | 1483 | 290 | 78.6 | 0.87 | 94.5 | 7 | 388 |
| FLS 250 M | 55 | 1479 | 355 | 101 | 0.84 | 94.5 | 6.5 | 395 |
| FLS 280 S | 75 | 1483 | 484 | 137 | 0.84 | 94.9 | 7.7 | 475 |
| FLS 280 M | 90 | 1478 | 581 | 162 | 0.85 | 95 | 7.6 | 565 |
| FLS 315 ST | 110 | 1482 | 710 | 2.3 | 0.83 | 94.8 | 7.3 | 850 |
| FLS 315 M | 132 | 1489 | 850 | 249 | 0.81 | 95 | 8 | 1000 |
| FLS 315 LA | 160 | 1486 | 1032 | 285 | 0.85 | 95.8 | 7.5 | 1050 |
| FLS 315 LB | 200 | 1487 | 1291 | 369 | 0.82 | 96 | 8 | 1150 |
| FLS 355 LA | 250 | 1487 | 1611 | 427 | 0.88 | 96.5 | 7.4 | 1510 |
| FLS 355 LB | 300 | 1489 | 1930 | 520 | 0.87 | 96.3 | 6.5 | 1550 |

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

CATEGORY 3
ZONE 22
Non conductive dust

Selection

IP 55 - 50 Hz - Class F - ΔT 80 K - 400 V Δ - S1
II - 3D - T 125 °C



4
poles
1500 min⁻¹



| Type | Rated power at 50 Hz P_N kW | IM 1001 (IM B3) | | IM 3001 (IM B5) | | IM 2001 (IM B35) | | IM 3601 (IM B14) | |
|------------|-------------------------------------|-----------------|-----|-----------------|-----|------------------|-----|------------------|-----|
| | | Code | Qty | Code | Qty | Code | Qty | Code | Qty |
| FLS 100 LK | 3 | ZA4 30 214 | 3 | ZA4 30 216 | 3 | ZA4 30 2B6 | 2 | ZA4 30 218 | 2 |
| FLS 112 M | 4 | ZA4 40 208 | 3 | ZA4 40 210 | 3 | ZA4 40 2B0 | 2 | ZA4 40 212 | 2 |
| FLS 132 S | 5.5 | ZA4 55 214 | 2 | ZA4 55 216 | 2 | ZA4 55 2B6 | 2 | ZA4 55 218 | 2 |
| FLS 132 M | 7.5 | ZA4 75 226 | 2 | ZA4 75 228 | 2 | ZA4 75 2C8 | 2 | ZA4 75 230 | 2 |
| FLS 160 M | 11 | ZA4 11 326 | 1 | ZA4 11 328 | 1 | ZA4 11 3C8 | 1 | | |
| FLS 160 L | 15 | ZA4 15 326 | 1 | ZA4 15 328 | 1 | ZA4 15 3C8 | 1 | | |
| FLS 180 MR | 18.5 | ZA4 18 326 | 1 | ZA4 18 328 | 1 | ZA4 18 3C8 | 1 | | |
| FLS 180 L | 22 | ZA4 22 326 | 1 | ZA4 22 328 | 1 | ZA4 22 3C8 | 1 | | |
| FLS 200 L | 30 | ZA4 30 326 | 1 | ZA4 30 328 | 1 | ZA4 30 3C8 | 1 | | |
| FLS 225 ST | 37 | ZA4 37 326 | 1 | | | ZA4 37 3C8 | 1 | | |
| FLS 225 M | 45 | ZA4 45 326 | 1 | | | ZA4 45 3C8 | 1 | | |
| FLS 250 M | 55 | ZA4 55 326 | 1 | | | ZA4 55 3C8 | 1 | | |
| FLS 280 S | 75 | ZA4 75 326 | 1 | | | ZA4 75 3C8 | 1 | | |
| FLS 280 M | 90 | ZA4 90 326 | 1 | | | ZA4 90 3C8 | 1 | | |
| FLS 315 ST | 110 | ZA4 11 426 | 1 | | | ZA4 11 4C8 | 1 | | |
| FLS 315 M | 132 | ZA4 13 420 | 1 | | | ZA4 13 4C2 | 1 | | |
| FLS 315 LA | 160 | ZA4 16 412 | 1 | | | ZA4 16 4C2 | 1 | | |
| FLS 315 LB | 200 | ZA4 20 412 | 1 | | | ZA4 20 4C2 | 1 | | |
| FLS 355 LA | 250 | ZA4 25 410 | 1 | | | | - | | |
| FLS 355 LB | 300 | ZA4 30 100 | 1 | | | | - | | |

Selection example :

| | |
|-------------------------|----------------------------------|
| Speed : | 1500 min ⁻¹ - 4 poles |
| Power : | 4 kW |
| Mounting and position : | IM 1001 (IM B3) |
| Mains supply voltage : | 400 V |
| Application : | ATEX zone 22 |

Designation :

4P FLS 112 M 4 kW IM 1001 (IM B3)
400 V

Code : ZA4 40 208

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

CATEGORY 3
ZONE 22
Non conductive dust

Selection

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1
II - 3D - T 125 °C



6
poles
1000 min⁻¹

A

| Type | Rated power at 50 Hz | Rated speed | Rated moment | Rated current | Power factor | Efficiency | Starting torque / Rated torque | Weight |
|------------|----------------------|-------------------------|--------------|-----------------|----------------------|--------------|--------------------------------|----------|
| | P_N kW | N_N min ⁻¹ | M_N N.m | I_N (400 V) A | $\cos \varphi$ 100 % | η 100 % | I_D / I_N | IM B3 kg |
| FLS 80 L | 0.25 | 950 | 2.5 | 0.8 | 0.74 | 60.3 | 3.6 | 14 |
| FLS 80 L | 0.37 | 940 | 3.7 | 1.2 | 0.74 | 61 | 3.8 | 15 |
| FLS 80 L | 0.55 | 955 | 5.5 | 1.8 | 0.67 | 65 | 4.4 | 16 |
| FLS 90 S | 0.75 | 940 | 7.5 | 2.1 | 0.8 | 65.2 | 3.5 | 21 |
| FLS 90 L | 1.1 | 940 | 11 | 2.7 | 0.81 | 73.5 | 4.8 | 23 |
| FLS 100 LK | 1.5 | 955 | 15 | 3.5 | 0.78 | 78.3 | 6.3 | 41 |
| FLS 112 M | 2.2 | 960 | 22 | 5.2 | 0.77 | 80 | 5.5 | 45 |
| FLS 132 S | 3 | 953 | 30 | 6.9 | 0.76 | 81.9 | 5.3 | 71 |
| FLS 132 M | 4 | 970 | 40 | 9 | 0.78 | 82.1 | 6.7 | 76 |
| FLS 132 MR | 5.5 | 970 | 54 | 12.2 | 0.79 | 82.1 | 7.1 | 88 |
| FLS 160 M | 7.5 | 968 | 74 | 16 | 0.8 | 86 | 5 | 100 |
| FLS 160 L | 11 | 966 | 109 | 23 | 0.81 | 87 | 5 | 128 |
| FLS 180 L | 15 | 974 | 147 | 30 | 0.82 | 89.5 | 7.1 | 170 |
| FLS 200 LA | 18.5 | 975 | 181 | 36 | 0.83 | 90.7 | 7 | 240 |
| FLS 200 LB | 22 | 973 | 216 | 43 | 0.81 | 91.5 | 7 | 260 |
| FLS 225 M | 30 | 978 | 293 | 59 | 0.8 | 92 | 6 | 392 |
| FLS 250 M | 37 | 977 | 362 | 73 | 0.8 | 92.5 | 6.2 | 394 |
| FLS 280 S | 45 | 971 | 440 | 84 | 0.84 | 93 | 6 | 455 |
| FLS 280 M | 55 | 977 | 538 | 109 | 0.79 | 93 | 6.9 | 532 |
| FLS 315 ST | 75 | 987 | 731 | 133 | 0.86 | 94.8 | 6.5 | 850 |
| FLS 315 M | 90 | 987 | 875 | 161 | 0.85 | 95.6 | 6.7 | 1000 |

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

Selection

CATEGORY 3
ZONE 22
Non conductive dust

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1
II - 3D - T 125 °C



6
poles
1000 min⁻¹



| Type | Rated power at 50 Hz P_N kW | IM 1001 (IM B3) | | IM 3001 (IM B5) | |
|------------|-------------------------------------|--------------------|-----|--------------------|-----|
| | | Code | Qty | Code | Qty |
| FLS 80 L | 0.25 | | - | | - |
| FLS 80 L | 0.37 | | - | | - |
| FLS 80 L | 0.55 | | - | | - |
| FLS 90 S | 0.75 | | - | | - |
| FLS 90 L | 1.1 | | - | | - |
| FLS 100 LK | 1.5 | | - | | - |
| FLS 112 M | 2.2 | | - | | - |
| FLS 132 S | 3 | | - | | - |
| FLS 132 M | 4 | | - | | - |
| FLS 132 MR | 5.5 | | - | | - |
| FLS 160 M | 7.5 | | - | | - |
| FLS 160 L | 11 | | - | | - |
| FLS 180 L | 15 | | - | | - |
| FLS 200 LA | 18.5 | | - | | - |
| FLS 200 LB | 22 | | - | | - |
| FLS 225 M | 30 | | - | | - |
| FLS 250 M | 37 | | - | | - |
| FLS 280 S | 45 | | - | | - |
| FLS 280 M | 55 | | - | | - |
| FLS 315 ST | 75 | | - | | - |
| FLS 315 M | 90 | | - | | - |

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

CATEGORY 3
ZONE 22
Non conductive dust

Selection

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1
II - 3D - T 125 °C



8
poles
750 min⁻¹

A

| Type | Rated power at 50 Hz | Rated speed | Rated moment | Rated current | Power factor | Efficiency | Starting torque / Rated torque | Weight |
|------------|----------------------|-------------------------|--------------|-----------------|----------------------|--------------|--------------------------------|----------|
| | P_N kW | N_N min ⁻¹ | M_N N.m | I_N (400 V) A | $\cos \varphi$ 100 % | η 100 % | I_D / I_N | IM B3 kg |
| FLS 80 L | 0.18 | 710 | 2.5 | 0.8 | 0.64 | 52.3 | 3.0 | 14 |
| FLS 80 L | 0.25 | 720 | 3.4 | 1.1 | 0.60 | 54.5 | 3.2 | 16 |
| FLS 90 S | 0.37 | 685 | 5.0 | 1.2 | 0.71 | 64.0 | 3.5 | 21 |
| FLS 90 L | 0.55 | 695 | 7.5 | 1.7 | 0.72 | 63.0 | 3.3 | 23 |
| FLS 100 LK | 0.75 | 720 | 10 | 2.3 | 0.68 | 70.9 | 4.1 | 41 |
| FLS 100 LK | 1.1 | 720 | 15 | 3.8 | 0.62 | 68.0 | 4.1 | 43 |
| FLS 112 M | 1.5 | 725 | 20 | 4.8 | 0.63 | 72.5 | 4.0 | 45 |
| FLS 132 S | 2.2 | 715 | 30 | 7.2 | 0.60 | 74.0 | 3.2 | 71 |
| FLS 132 M | 3 | 705 | 40 | 9.1 | 0.63 | 76.0 | 3.1 | 81 |
| FLS 160 MA | 4 | 710 | 54 | 11.3 | 0.63 | 81.5 | 3.8 | 105 |
| FLS 160 MB | 5.5 | 710 | 74 | 15 | 0.65 | 82.0 | 3.8 | 111 |
| FLS 160 L | 7.5 | 715 | 100 | 20 | 0.65 | 83.0 | 3.8 | 128 |
| FLS 180 L | 11 | 724 | 147 | 27 | 0.70 | 85.1 | 3.9 | 175 |
| FLS 200 L | 15 | 729 | 196 | 34 | 0.72 | 88.1 | 5.0 | 265 |
| FLS 225 ST | 18.5 | 727 | 242 | 41 | 0.73 | 89.0 | 5.0 | 285 |
| FLS 225 M | 22 | 732 | 288 | 48 | 0.72 | 92.1 | 5.9 | 388 |
| FLS 250 M | 30 | 729 | 393 | 61 | 0.78 | 91.2 | 6.2 | 393 |
| FLS 280 S | 37 | 723 | 487 | 75 | 0.78 | 92.0 | 4.5 | 472 |
| FLS 280 M | 45 | 730 | 592 | 102 | 0.70 | 91.7 | 6.0 | 563 |
| FLS 315 ST | 55 | 738 | 715 | 102 | 0.83 | 94.2 | 7.4 | 850 |
| FLS 315 M | 75 | 743 | 972 | 147 | 0.78 | 94.8 | 7.4 | 1000 |

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

Selection

CATEGORY 3
ZONE 22
Non conductive dust

IP 55 - 50 Hz - Class F - Δ T 80 K - 230 V Δ / 400 V Y or 400 V Δ - S1
II - 3D - T 125 °C



8
poles
750 min⁻¹

A

| Type | Rated power at 50 Hz | IM 1001 (IM B3) | | IM 3001 (IM B5) | |
|------------|----------------------|-----------------|-----|-----------------|-----|
| | P_N kW | Code | Qty | Code | Qty |
| FLS 80 L | 0.18 | | - | | - |
| FLS 80 L | 0.25 | | - | | - |
| FLS 90 S | 0.37 | | - | | - |
| FLS 90 L | 0.55 | | - | | - |
| FLS 100 LK | 0.75 | | - | | - |
| FLS 100 LK | 1.1 | | - | | - |
| FLS 112 M | 1.5 | | - | | - |
| FLS 132 S | 2.2 | | - | | - |
| FLS 132 M | 3 | | - | | - |
| FLS 160 MA | 4 | | - | | - |
| FLS 160 MB | 5.5 | | - | | - |
| FLS 160 L | 7.5 | | - | | - |
| FLS 180 L | 11 | | - | | - |
| FLS 200 L | 15 | | - | | - |
| FLS 225 ST | 18.5 | | - | | - |
| FLS 225 M | 22 | | - | | - |
| FLS 250 M | 30 | | - | | - |
| FLS 280 S | 37 | | - | | - |
| FLS 280 M | 45 | | - | | - |
| FLS 315 ST | 55 | | - | | - |
| FLS 315 M | 75 | | - | | - |

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

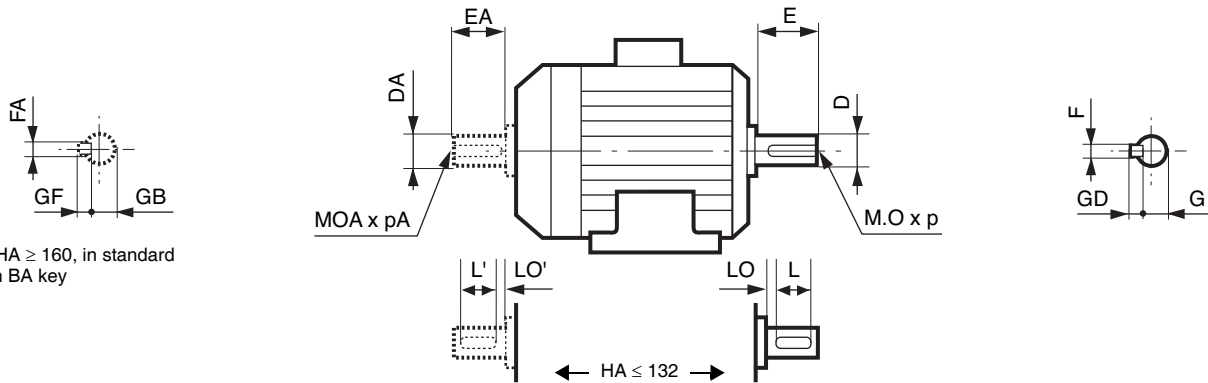
CATEGORY 3
ZONE 22
Non conductive dust

Dimensions

Dimensions of the FLS totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

- shaft end



Main shaft end

| Type | 4, 6 and 8 poles | | | | | | | | | 2 poles | | | | | | | | |
|-----------------|------------------|----|-------|------|-----|----|----|----|----|---------|----|------|------|-----|----|----|----|----|
| | F | GD | D | G | E | O | p | L | LO | F | GD | D | G | E | O | p | L | LO |
| FLS 80 L | 6 | 6 | 19j6 | 15.5 | 40 | 6 | 16 | 30 | 6 | 6 | 6 | 19j6 | 15.5 | 40 | 6 | 16 | 30 | 6 |
| FLS 90 S/L | 8 | 7 | 24j6 | 20 | 50 | 8 | 19 | 40 | 6 | 8 | 7 | 24j6 | 20 | 50 | 8 | 19 | 40 | 6 |
| FLS 100 LK | 8 | 7 | 28j6 | 24 | 60 | 10 | 22 | 50 | 6 | 8 | 7 | 28j6 | 24 | 60 | 10 | 22 | 50 | 6 |
| FLS 112 M/MR | 8 | 7 | 28j6 | 24 | 60 | 10 | 22 | 50 | 6 | 8 | 7 | 28j6 | 24 | 60 | 10 | 22 | 50 | 6 |
| FLS 132 S/M/MR | 10 | 8 | 38k6 | 33 | 80 | 12 | 28 | 63 | 10 | 10 | 8 | 38k6 | 33 | 80 | 12 | 28 | 63 | 10 |
| FLS 160 M/L | 12 | 8 | 42k6 | 37 | 110 | 16 | 36 | - | - | 12 | 8 | 42k6 | 37 | 110 | 16 | 36 | - | - |
| FLS 180 MR/L | 14 | 9 | 48k6 | 42.5 | 110 | 16 | 36 | - | - | 14 | 9 | 48k6 | 42.5 | 110 | 16 | 36 | - | - |
| FLS 200 L | 16 | 10 | 55m6 | 49 | 110 | 20 | 42 | - | - | 16 | 10 | 55m6 | 49 | 110 | 20 | 42 | - | - |
| FLS 225 ST/MT/M | 18 | 11 | 60m6 | 53 | 140 | 20 | 42 | - | - | 16 | 10 | 55m6 | 49 | 110 | 20 | 42 | - | - |
| FLS 250 M | 18 | 11 | 65m6 | 58 | 140 | 20 | 42 | - | - | 18 | 11 | 60m6 | 53 | 140 | 20 | 42 | - | - |
| FLS 280 S/M | 20 | 12 | 75m6 | 67.5 | 140 | 20 | 42 | - | - | 18 | 11 | 65m6 | 58 | 140 | 20 | 42 | - | - |
| FLS 315 ST | 22 | 14 | 80m6 | 71 | 170 | 20 | 42 | - | - | 18 | 11 | 65m6 | 58 | 140 | 20 | 42 | - | - |
| FLS 315 M | 22 | 14 | 80m6 | 71 | 170 | 20 | 42 | - | - | 18 | 11 | 65m6 | 58 | 140 | 20 | 42 | - | - |
| FLS 315 L | 25 | 14 | 90m6 | 81 | 170 | 24 | 50 | - | - | 20 | 12 | 70m6 | 62.5 | 140 | 20 | 42 | - | - |
| FLS 355 L/LK | 28 | 16 | 100m6 | 90 | 210 | 24 | 50 | - | - | 22 | 14 | 80m6 | 71 | 170 | 20 | 42 | - | - |
| FLS 400 L/LK/LV | 28 | 16 | 110m6 | 100 | 210 | 24 | 50 | - | - | - | - | - | - | - | - | - | - | - |
| FLS 450 L/LV | 32 | 18 | 120m6 | 109 | 210 | 24 | 50 | - | - | - | - | - | - | - | - | - | - | - |

Secondary shaft end

| Type | 4, 6 and 8 poles | | | | | | | | | 2 poles | | | | | | | | |
|-----------------|------------------|----|-------|------|-----|----|----|----|-----|---------|----|------|------|-----|----|----|----|-----|
| | FA | GF | DA | GB | EA | OA | pA | L' | LO' | FA | GF | DA | GB | EA | OA | pA | L' | LO' |
| FLS 80 L | 5 | 5 | 14j6 | 11 | 30 | 5 | 15 | 25 | 3.5 | 5 | 5 | 14j6 | 11 | 30 | 5 | 15 | 25 | 3.5 |
| FLS 90 S/L | 6 | 6 | 19j6 | 15.5 | 40 | 6 | 16 | 30 | 6 | 6 | 6 | 19j6 | 15.5 | 40 | 6 | 16 | 30 | 6 |
| FLS 100 LK | 8 | 7 | 24j6 | 20 | 50 | 8 | 19 | 40 | 6 | 8 | 7 | 24j6 | 20 | 50 | 8 | 19 | 40 | 6 |
| FLS 112 M/MR | 8 | 7 | 24j6 | 20 | 50 | 8 | 19 | 40 | 6 | 8 | 7 | 24j6 | 20 | 50 | 8 | 19 | 40 | 6 |
| FLS 132 S/M/MR | 8 | 7 | 28j6 | 24 | 60 | 10 | 22 | 50 | 6 | 8 | 7 | 28j6 | 24 | 60 | 10 | 22 | 50 | 6 |
| FLS 160 M/L | 12 | 8 | 42k6 | 37 | 110 | 16 | 36 | - | - | 12 | 8 | 42k6 | 37 | 110 | 16 | 36 | - | - |
| FLS 180 MR/L | 14 | 9 | 48k6 | 42.5 | 110 | 16 | 36 | - | - | 14 | 9 | 48k6 | 42.5 | 110 | 16 | 36 | - | - |
| FLS 200 L | 16 | 10 | 55m6 | 49 | 110 | 20 | 42 | - | - | 16 | 10 | 55m6 | 49 | 110 | 20 | 42 | - | - |
| FLS 225 ST/MT/M | 18 | 11 | 60m6 | 53 | 140 | 20 | 42 | - | - | 16 | 10 | 55m6 | 49 | 110 | 20 | 42 | - | - |
| FLS 250 M | 18 | 11 | 60m6 | 53 | 140 | 20 | 42 | - | - | 18 | 11 | 60m6 | 53 | 140 | 20 | 42 | - | - |
| FLS 280 S/M | 20 | 12 | 60m6 | 53 | 140 | 20 | 42 | - | - | 18 | 11 | 60m6 | 53 | 140 | 20 | 42 | - | - |
| FLS 315 ST | 22 | 14 | 80m6 | 71 | 170 | 20 | 42 | - | - | 18 | 11 | 65m6 | 58 | 140 | 20 | 42 | - | - |
| FLS 315 M | 22 | 14 | 80m6 | 71 | 170 | 20 | 42 | - | - | 18 | 11 | 65m6 | 58 | 140 | 20 | 42 | - | - |
| FLS 315 L | 25 | 14 | 90m6 | 81 | 170 | 24 | 50 | - | - | 20 | 12 | 70m6 | 62.5 | 140 | 20 | 42 | - | - |
| FLS 355 L/LK | 28 | 16 | 100m6 | 90 | 210 | 24 | 50 | - | - | 22 | 14 | 80m6 | 71 | 170 | 20 | 42 | - | - |
| FLS 400 L/LK/LV | 28 | 16 | 110m6 | 100 | 210 | 24 | 50 | - | - | - | - | - | - | - | - | - | - | - |
| FLS 450 L/LV | 32 | 18 | 120m6 | 109 | 210 | 24 | 50 | - | - | - | - | - | - | - | - | - | - | - |

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

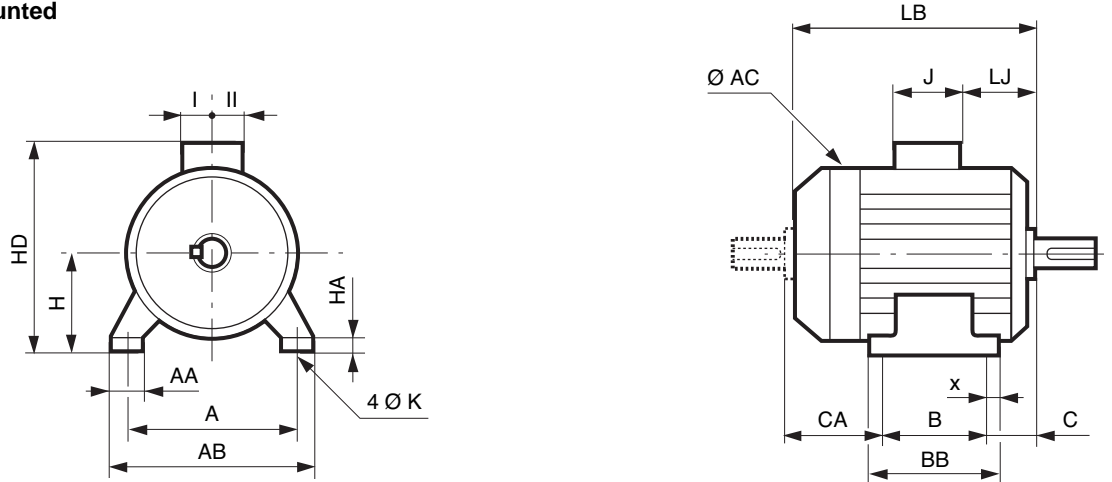
CATEGORY 3
ZONE 22
Non conductive dust

Dimensions

Dimensions of the FLS totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

– foot mounted



| Type | Main dimensions | | | | | | | | | | | | | | | | | | |
|-----------------|-----------------|-----|-----|-----|-----|----|-----|----|----|-----|-----|------|------|------------------|----|-----|-----|-----|-----|
| | A | AB | B | BB | C | x | AA | K | HA | H | AC | HD | LB | LB1 ¹ | LJ | J | I | II | CA |
| FLS 80 L | 125 | 157 | 100 | 130 | 50 | 20 | 32 | 9 | 10 | 80 | 160 | 222 | 214 | 178 | 33 | 114 | 57 | 57 | 68 |
| FLS 90 S | 140 | 172 | 100 | 160 | 56 | 22 | 34 | 9 | 11 | 90 | 185 | 247 | 243 | 204 | 28 | 114 | 57 | 57 | 93 |
| FLS 90 L | 140 | 172 | 125 | 160 | 56 | 22 | 34 | 9 | 11 | 90 | 185 | 247 | 243 | 204 | 28 | 114 | 57 | 57 | 68 |
| FLS 100 LK | 160 | 200 | 140 | 174 | 63 | 22 | 42 | 12 | 12 | 100 | 226 | 276 | 323 | 276 | 55 | 114 | 57 | 57 | 125 |
| FLS 112 M | 190 | 230 | 140 | 174 | 70 | 22 | 45 | 12 | 12 | 112 | 226 | 288 | 323 | 276 | 55 | 114 | 57 | 57 | 119 |
| FLS 132 S | 216 | 255 | 140 | 223 | 89 | 31 | 58 | 12 | 15 | 132 | 264 | 323 | 387 | 328 | 46 | 114 | 57 | 57 | 164 |
| FLS 132 M | 216 | 255 | 178 | 223 | 89 | 31 | 58 | 12 | 15 | 132 | 264 | 323 | 387 | 328 | 46 | 114 | 57 | 57 | 126 |
| FLS 132 MU | 216 | 255 | 178 | 223 | 89 | 31 | 58 | 12 | 15 | 132 | 264 | 323 | 410 | 352 | 46 | 114 | 57 | 57 | 149 |
| FLS 160 M | 254 | 294 | 210 | 294 | 108 | 20 | 65 | 14 | 20 | 160 | 310 | 385 | 495 | 435 | 50 | 160 | 80 | 80 | 182 |
| FLS 160 L | 254 | 294 | 254 | 294 | 108 | 20 | 65 | 14 | 20 | 160 | 310 | 385 | 495 | 435 | 50 | 160 | 80 | 80 | 138 |
| FLS 180 MR | 279 | 324 | 241 | 295 | 121 | 25 | 80 | 14 | 25 | 180 | 310 | 405 | 515 | 450 | 50 | 160 | 80 | 80 | 158 |
| FLS 180 L | 279 | 330 | 279 | 335 | 121 | 28 | 70 | 14 | 28 | 180 | 350 | 468 | 555 | 480 | 55 | 220 | 128 | 128 | 160 |
| FLS 200 L | 318 | 374 | 305 | 361 | 133 | 28 | 80 | 18 | 44 | 200 | 394 | 515 | 681 | 595 | 65 | 220 | 128 | 128 | 248 |
| FLS 225 ST | 356 | 420 | 286 | 367 | 149 | 28 | 100 | 18 | 35 | 225 | 394 | 540 | 681 | 595 | 65 | 220 | 128 | 128 | 251 |
| FLS 225 MT | 356 | 420 | 311 | 367 | 149 | 28 | 100 | 18 | 35 | 225 | 394 | 540 | 681 | 595 | 65 | 220 | 128 | 128 | 226 |
| FLS 225 M | 356 | 426 | 311 | 375 | 149 | 32 | 80 | 18 | 27 | 225 | 540 | 656 | 780 | 630 | 70 | 352 | 173 | 210 | 326 |
| FLS 250 M | 406 | 476 | 349 | 413 | 168 | 32 | 80 | 22 | 27 | 250 | 540 | 681 | 780 | 630 | 70 | 352 | 173 | 210 | 269 |
| FLS 280 S | 457 | 527 | 368 | 432 | 190 | 32 | 80 | 22 | 27 | 280 | 540 | 711 | 860 | 710 | 70 | 352 | 173 | 210 | 302 |
| FLS 280 M | 457 | 527 | 419 | 483 | 190 | 32 | 80 | 22 | 27 | 280 | 540 | 711 | 960 | 810 | 70 | 352 | 173 | 210 | 357 |
| FLS 315 ST | 508 | 598 | 406 | 547 | 216 | 45 | 90 | 27 | 45 | 315 | 556 | 761 | 1068 | 910 | 68 | 352 | 173 | 210 | 452 |
| FLS 315 M | 508 | 600 | 457 | 598 | 216 | 45 | 100 | 27 | 45 | 315 | 624 | 835 | 1203 | 1030 | 70 | 452 | 217 | 269 | 536 |
| FLS 315 L | 508 | 600 | 508 | 598 | 216 | 45 | 100 | 27 | 45 | 315 | 632 | 835 | 1203 | 1030 | 70 | 452 | 217 | 269 | 485 |
| FLS 355 LA/LB | 610 | 710 | 630 | 710 | 254 | 40 | 110 | 27 | 35 | 355 | 700 | 910 | 1305 | 1118 | 61 | 452 | 217 | 269 | 427 |
| FLS 355 LC/LD | 610 | 710 | 630 | 710 | 254 | 40 | 110 | 27 | 35 | 355 | 700 | 910 | 1430 | 1242 | 61 | 452 | 217 | 269 | 552 |
| FLS 355 LK | 610 | 750 | 630 | 815 | 254 | 40 | 128 | 27 | 45 | 355 | 787 | 1117 | 1687 | 1430 | 52 | 700 | 224 | 396 | 813 |
| FLS 400 L/LV | 686 | 800 | 710 | 815 | 280 | 65 | 128 | 35 | 45 | 400 | 787 | 1162 | 1687 | 1430 | 52 | 700 | 224 | 396 | 707 |
| FLS 400 LKA/LKB | 686 | 824 | 800 | 950 | 280 | 59 | 140 | 35 | 45 | 400 | 877 | 1210 | 1835 | 1550 | 68 | 700 | 224 | 396 | 765 |
| FLS 450 L/LV | 750 | 890 | 800 | 950 | 315 | 94 | 140 | 35 | 45 | 450 | 877 | 1260 | 1835 | 1550 | 68 | 700 | 224 | 396 | 730 |

1. LB1 : non ventilated motor.

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

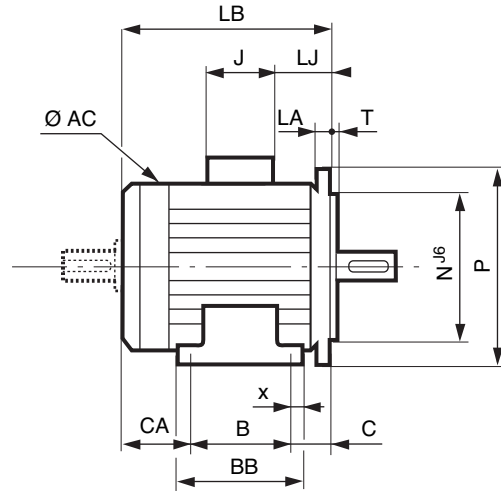
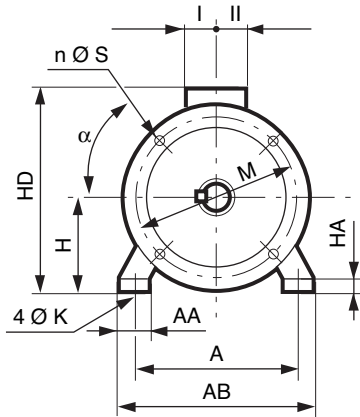
CATEGORY 3
ZONE 22
Non conductive dust

Dimensions

Dimensions of the FLS totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

– (FF) foot and plain hole flange mounted



Main dimensions

| Type | A | AB | B | BB | C | x | AA | K | HA | H | AC | HD | LB | LB1' | LJ | J | I | II | Sym. |
|-----------------|-----|-----|-----|-----|-----|----|-----|----|----|-----|-----|------|------|------|----|-----|-----|-----|---------|
| FLS 80 L | 125 | 157 | 100 | 130 | 50 | 20 | 32 | 9 | 10 | 80 | 160 | 222 | 214 | 178 | 33 | 114 | 57 | 57 | FF 165 |
| FLS 90 S | 140 | 172 | 100 | 160 | 76 | 22 | 34 | 9 | 11 | 90 | 185 | 247 | 263 | 224 | 48 | 114 | 57 | 57 | FF 165 |
| FLS 90 L | 140 | 172 | 125 | 160 | 76 | 22 | 34 | 9 | 11 | 90 | 185 | 247 | 263 | 224 | 48 | 114 | 57 | 57 | FF 165 |
| FLS 100 LK | 160 | 200 | 140 | 174 | 63 | 22 | 42 | 12 | 12 | 100 | 226 | 276 | 323 | 276 | 55 | 114 | 57 | 57 | FF 215 |
| FLS 112 M | 190 | 230 | 140 | 174 | 70 | 22 | 45 | 12 | 12 | 112 | 226 | 288 | 323 | 276 | 55 | 114 | 57 | 57 | FF 215 |
| FLS 132 S | 216 | 255 | 140 | 223 | 89 | 31 | 58 | 12 | 15 | 132 | 264 | 323 | 387 | 328 | 46 | 114 | 57 | 57 | FF 265 |
| FLS 132 M | 216 | 255 | 178 | 223 | 89 | 31 | 58 | 12 | 15 | 132 | 264 | 323 | 387 | 328 | 46 | 114 | 57 | 57 | FF 265 |
| FLS 132 MU | 216 | 255 | 178 | 223 | 89 | 31 | 58 | 12 | 15 | 132 | 264 | 323 | 410 | 352 | 46 | 114 | 57 | 57 | FF 265 |
| FLS 160 M | 254 | 294 | 210 | 294 | 108 | 20 | 65 | 14 | 20 | 160 | 310 | 385 | 495 | 435 | 50 | 160 | 80 | 80 | FF 300 |
| FLS 160 L | 254 | 294 | 254 | 294 | 108 | 20 | 65 | 14 | 20 | 160 | 310 | 385 | 495 | 435 | 50 | 160 | 80 | 80 | FF 300 |
| FLS 180 MR | 279 | 324 | 241 | 295 | 121 | 25 | 80 | 14 | 25 | 180 | 310 | 405 | 515 | 450 | 50 | 160 | 80 | 80 | FF 300 |
| FLS 180 L | 279 | 330 | 279 | 335 | 121 | 28 | 70 | 14 | 28 | 180 | 350 | 468 | 555 | 480 | 55 | 220 | 128 | 128 | FF 300 |
| FLS 200 L | 318 | 374 | 305 | 361 | 133 | 28 | 80 | 18 | 44 | 200 | 394 | 515 | 681 | 595 | 65 | 220 | 128 | 128 | FF 350 |
| FLS 225 ST | 356 | 420 | 286 | 367 | 149 | 28 | 100 | 18 | 35 | 225 | 394 | 540 | 681 | 595 | 65 | 220 | 128 | 128 | FF 400 |
| FLS 225 MT | 356 | 420 | 311 | 367 | 149 | 28 | 100 | 18 | 35 | 225 | 394 | 540 | 681 | 595 | 65 | 220 | 128 | 128 | FF 400 |
| FLS 225 M | 356 | 426 | 311 | 375 | 149 | 32 | 80 | 18 | 27 | 225 | 540 | 656 | 780 | 630 | 70 | 352 | 173 | 210 | FF 400 |
| FLS 250 M | 406 | 476 | 349 | 413 | 168 | 32 | 80 | 22 | 27 | 250 | 540 | 681 | 780 | 630 | 70 | 352 | 173 | 210 | FF 500 |
| FLS 280 S | 457 | 527 | 368 | 432 | 190 | 32 | 80 | 22 | 27 | 280 | 540 | 711 | 860 | 710 | 70 | 352 | 173 | 210 | FF 500 |
| FLS 280 M | 457 | 527 | 419 | 483 | 190 | 32 | 80 | 22 | 27 | 280 | 540 | 711 | 960 | 810 | 70 | 352 | 173 | 210 | FF 500 |
| FLS 315 ST | 508 | 598 | 406 | 547 | 216 | 45 | 90 | 27 | 45 | 315 | 556 | 761 | 1068 | 910 | 68 | 352 | 173 | 210 | FF 600 |
| FLS 315 M | 508 | 600 | 457 | 598 | 216 | 45 | 100 | 27 | 45 | 315 | 624 | 835 | 1203 | 1030 | 70 | 452 | 217 | 269 | FF 600 |
| FLS 315 L | 508 | 600 | 508 | 598 | 216 | 45 | 100 | 27 | 45 | 315 | 632 | 835 | 1203 | 1030 | 70 | 452 | 217 | 269 | FF 600 |
| FLS 355 LA/LB | 610 | 710 | 630 | 710 | 254 | 40 | 110 | 27 | 35 | 355 | 700 | 910 | 1305 | 1118 | 61 | 452 | 217 | 269 | FF 740 |
| FLS 355 LC/LD | 610 | 710 | 630 | 710 | 254 | 40 | 110 | 27 | 35 | 355 | 700 | 910 | 1430 | 1242 | 61 | 452 | 217 | 269 | FF 740 |
| FLS 355 LK | 610 | 750 | 630 | 815 | 254 | 40 | 128 | 27 | 45 | 355 | 787 | 1117 | 1687 | 1430 | 52 | 700 | 224 | 396 | FF 740 |
| FLS 400 L/LV | 686 | 800 | 710 | 815 | 280 | 65 | 128 | 35 | 45 | 400 | 787 | 1162 | 1687 | 1430 | 52 | 700 | 224 | 396 | FF 940 |
| FLS 400 LKA/LKB | 686 | 824 | 800 | 950 | 280 | 59 | 140 | 35 | 45 | 400 | 877 | 1210 | 1835 | 1550 | 68 | 700 | 224 | 396 | FF 940 |
| FLS 450 LA | 750 | 890 | 800 | 950 | 315 | 94 | 140 | 35 | 45 | 450 | 877 | 1260 | 1835 | 1550 | 68 | 700 | 224 | 396 | FF 1080 |

1. LB1' : non ventilated motor.

CA dimension and shaft end dimensions identical to those of foot mounted motors.

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

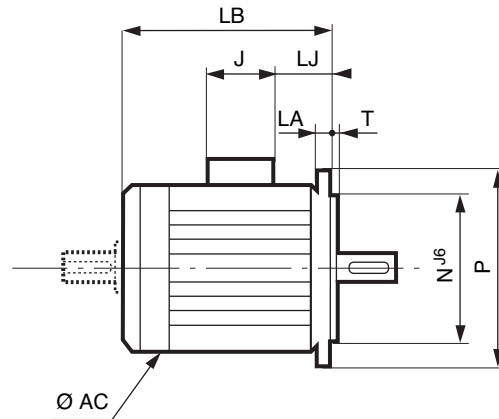
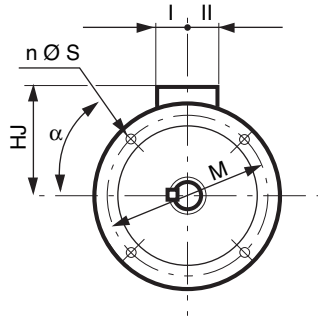
CATEGORY 3
ZONE 22
Non conductive dust

Dimensions

Dimensions of the FLS totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

– (FF) plain hole flange mounted



| IEC symbol | Flange dimensions | | | | | | |
|------------|-------------------|------|------|-----|---|------|----|
| | M | N | P | T | n | S | LA |
| FF 165 | 165 | 130 | 200 | 3.5 | 4 | 12 | 10 |
| FF 165 | 165 | 130 | 200 | 3.5 | 4 | 12 | 10 |
| FF 165 | 165 | 130 | 200 | 3.5 | 4 | 12 | 10 |
| FF 215 | 215 | 180 | 250 | 4 | 4 | 15 | 12 |
| FF 215 | 215 | 180 | 250 | 4 | 4 | 15 | 12 |
| FF 265 | 265 | 230 | 300 | 4 | 4 | 14.5 | 14 |
| FF 265 | 265 | 230 | 300 | 4 | 4 | 14.5 | 14 |
| FF 265 | 265 | 230 | 300 | 4 | 4 | 14.5 | 14 |
| FF 300 | 300 | 250 | 350 | 5 | 4 | 18.5 | 15 |
| FF 300 | 300 | 250 | 350 | 5 | 4 | 18.5 | 15 |
| FF 300 | 300 | 250 | 350 | 5 | 4 | 18.5 | 15 |
| FF 300 | 300 | 250 | 350 | 5 | 4 | 18.5 | 15 |
| FF 350 | 350 | 300 | 400 | 5 | 4 | 18 | 15 |
| FF 400 | 400 | 350 | 450 | 5 | 8 | 18 | 16 |
| FF 400 | 400 | 350 | 450 | 5 | 8 | 18 | 16 |
| FF 400 | 400 | 350 | 450 | 5 | 8 | 18 | 16 |
| FF 500 | 500 | 450 | 550 | 5 | 8 | 18 | 18 |
| FF 500 | 500 | 450 | 550 | 5 | 8 | 18 | 18 |
| FF 500 | 500 | 450 | 550 | 5 | 8 | 18 | 18 |
| FF 600 | 600 | 550 | 660 | 6 | 8 | 22 | 25 |
| FF 600 | 600 | 550 | 660 | 6 | 8 | 22 | 25 |
| FF 600 | 600 | 550 | 660 | 6 | 8 | 22 | 25 |
| FF 740 | 740 | 680 | 800 | 6 | 8 | 22 | 25 |
| FF 740 | 740 | 680 | 800 | 6 | 8 | 22 | 25 |
| FF 740 | 740 | 680 | 800 | 6 | 8 | 22 | 25 |
| FF 940 | 940 | 880 | 1000 | 6 | 8 | 28 | 28 |
| FF 940 | 940 | 880 | 1000 | 6 | 8 | 28 | 28 |
| FF 1080 | 1080 | 1000 | 1150 | 6 | 8 | 28 | 30 |

| Type | Main dimensions | | | | | | | |
|-----------------|-----------------|------|------------------|-----|----|-----|-----|-----|
| | AC | LB | LB1 ¹ | HJ | LJ | J | I | II |
| FLS 80 L | 160 | 214 | 178 | 142 | 33 | 114 | 57 | 57 |
| FLS 90 S | 185 | 263 | 224 | 153 | 48 | 114 | 57 | 57 |
| FLS 90 L | 185 | 263 | 224 | 153 | 48 | 114 | 57 | 57 |
| FLS 100 LK | 226 | 323 | 276 | 176 | 55 | 114 | 57 | 57 |
| FLS 112 M | 226 | 323 | 276 | 176 | 55 | 114 | 57 | 57 |
| FLS 132 S | 264 | 387 | 328 | 195 | 46 | 114 | 57 | 57 |
| FLS 132 M | 264 | 387 | 328 | 195 | 46 | 114 | 57 | 57 |
| FLS 132 MU | 264 | 410 | 352 | 195 | 46 | 114 | 57 | 57 |
| FLS 160 M | 310 | 495 | 435 | 225 | 50 | 160 | 80 | 80 |
| FLS 160 L | 310 | 495 | 435 | 225 | 50 | 160 | 80 | 80 |
| FLS 180 MR | 310 | 515 | 450 | 225 | 50 | 160 | 80 | 80 |
| FLS 180 L | 350 | 555 | 480 | 280 | 55 | 220 | 128 | 128 |
| FLS 200 L | 394 | 681 | 595 | 315 | 65 | 220 | 128 | 128 |
| FLS 225 ST | 394 | 681 | 595 | 315 | 65 | 220 | 128 | 128 |
| FLS 225 MT | 394 | 681 | 595 | 315 | 65 | 220 | 128 | 128 |
| FLS 225 M | 540 | 780 | 630 | 431 | 70 | 352 | 173 | 210 |
| FLS 250 M | 540 | 780 | 630 | 431 | 70 | 352 | 173 | 210 |
| FLS 280 S | 540 | 860 | 710 | 431 | 70 | 352 | 173 | 210 |
| FLS 280 M | 540 | 960 | 810 | 431 | 70 | 352 | 173 | 210 |
| FLS 315 ST | 556 | 1068 | 910 | 446 | 68 | 352 | 173 | 210 |
| FLS 315 M | 624 | 1203 | 1030 | 520 | 70 | 452 | 217 | 269 |
| FLS 315 L | 632 | 1203 | 1030 | 520 | 70 | 452 | 217 | 269 |
| FLS 355 LA/LB | 700 | 1305 | 1118 | 555 | 61 | 452 | 217 | 269 |
| FLS 355 LC/LD | 700 | 1305 | 1242 | 555 | 61 | 452 | 217 | 269 |
| FLS 355 LK | 787 | 1687 | 1430 | 762 | 52 | 700 | 224 | 396 |
| FLS 400 L/LV | 787 | 1687 | 1430 | 762 | 52 | 700 | 224 | 396 |
| FLS 400 LKA/LKB | 877 | 1835 | 1550 | 810 | 68 | 700 | 224 | 396 |
| FLS 450 L/LV | 877 | 1835 | 1550 | 810 | 68 | 700 | 224 | 396 |

1. LB1 : non ventilated motor.
FF flange mounted motors, in position IM 3001 (IM B5), are only available up to frame size 225.

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

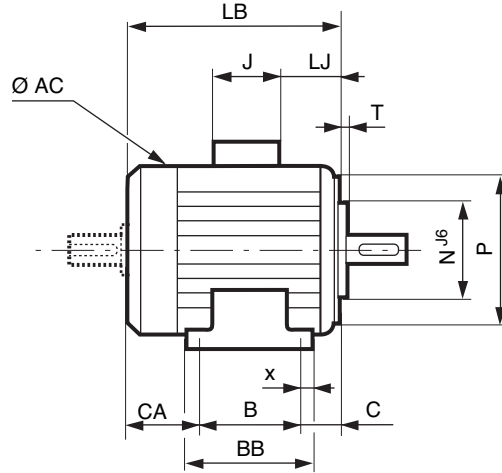
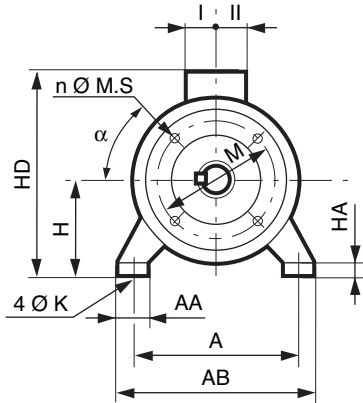
CATEGORY 3
ZONE 22
Non conductive dust

Dimensions

Dimensions of the FLS totally enclosed three-phase asynchronous motors - IP 55
Cage rotor

Dimensions in millimetres

– (FT) foot and tapped hole flange mounted



| Type | Main dimensions | | | | | | | | | | | | | | | | | | Sym. |
|------------|-----------------|-----|-----|-----|----|----|----|----|----|-----|-----|-----|-----|----|-----|----|----|-----|--------|
| | A | AB | B | BB | C | x | AA | K | HA | H | AC | HD | LB | LJ | J | I | II | CA | |
| FLS 80 L | 125 | 157 | 100 | 130 | 50 | 20 | 32 | 9 | 10 | 80 | 160 | 222 | 214 | 33 | 114 | 57 | 57 | 68 | FT 100 |
| FLS 90 S | 140 | 172 | 100 | 160 | 56 | 22 | 34 | 10 | 11 | 90 | 185 | 247 | 243 | 28 | 114 | 57 | 57 | 93 | FT 115 |
| FLS 90 L | 140 | 172 | 125 | 160 | 56 | 22 | 34 | 10 | 11 | 90 | 185 | 247 | 243 | 28 | 114 | 57 | 57 | 68 | FT 115 |
| FLS 100 LK | 160 | 200 | 140 | 174 | 63 | 22 | 42 | 12 | 12 | 100 | 226 | 276 | 323 | 55 | 114 | 57 | 57 | 125 | FT 130 |
| FLS 112 M | 190 | 230 | 140 | 174 | 70 | 22 | 45 | 12 | 12 | 112 | 226 | 288 | 323 | 55 | 114 | 57 | 57 | 119 | FT 130 |
| FLS 112 MR | 190 | 230 | 140 | 174 | 70 | 22 | 45 | 12 | 12 | 112 | 226 | 288 | 345 | 28 | 114 | 57 | 57 | 142 | FT 130 |
| FLS 132 M | 216 | 255 | 178 | 223 | 89 | 31 | 58 | 12 | 15 | 132 | 264 | 323 | 387 | 46 | 114 | 57 | 57 | 126 | FT 215 |
| FLS 132 MR | 216 | 255 | 178 | 223 | 89 | 31 | 58 | 12 | 15 | 132 | 264 | 323 | 387 | 46 | 114 | 57 | 57 | 126 | FT 215 |

CA dimension and shaft end dimensions identical to those of foot mounted motors.

FLS

Atmospheres containing explosive dust



totally enclosed three-phase asynchronous motors

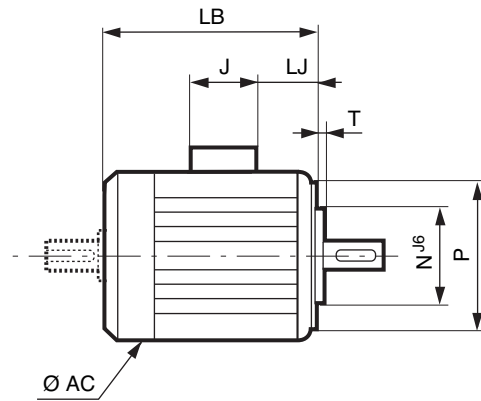
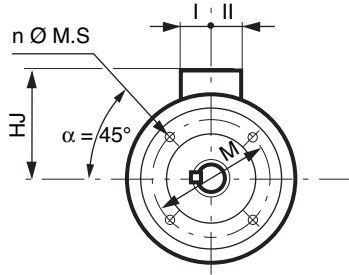
CATEGORY 3
ZONE 22
Non conductive dust

Dimensions

Dimensions of the FLS totally enclosed three-phase asynchronous motors - IP 55 Cage rotor

Dimensions in millimetres

– (FT) tapped hole flange mounted



| IEC symbol | Flange dimensions | | | | | |
|---------------|-------------------|-----|-----|-----|---|-----|
| | M | N | P | T | n | MS |
| FT 100 | 100 | 80 | 120 | 3 | 4 | M6 |
| FT 115 | 115 | 95 | 140 | 3 | 4 | M8 |
| FT 115 | 115 | 95 | 140 | 3 | 4 | M8 |
| FT 130 | 130 | 110 | 160 | 3.5 | 4 | M8 |
| FT 130 | 130 | 110 | 160 | 3.5 | 4 | M8 |
| FT 130 | 130 | 110 | 160 | 3.5 | 4 | M8 |
| FT 215 | 215 | 180 | 250 | 4 | 4 | M12 |
| FT 215 | 215 | 180 | 250 | 4 | 4 | M12 |
| FT 215 | 215 | 180 | 250 | 4 | 4 | M12 |

| Type | Main dimensions | | | | | | |
|-------------------|-----------------|-----|-----|----|-----|----|----|
| | AC | LB | HJ | LJ | J | I | II |
| FLS 80 L | 160 | 214 | 142 | 33 | 114 | 57 | 57 |
| FLS 90 L | 185 | 243 | 157 | 28 | 114 | 57 | 57 |
| FLS 90 S | 185 | 243 | 157 | 28 | 114 | 57 | 57 |
| FLS 100 LK | 226 | 323 | 176 | 55 | 114 | 57 | 57 |
| FLS 112 M | 226 | 323 | 176 | 55 | 114 | 57 | 57 |
| FLS 112 MR | 226 | 345 | 176 | 28 | 114 | 57 | 57 |
| FLS 132 M | 264 | 387 | 191 | 46 | 114 | 57 | 57 |
| FLS 132 MR | 264 | 387 | 191 | 46 | 114 | 57 | 57 |
| FLS 132 S | 264 | 387 | 191 | 46 | 114 | 57 | 57 |

