

Customer**Supplier**

Company name
Editor
Phone number
E-mail

Fields of Application

Water supply and booster stations
Irrigation, overhead irrigation and draining
Filling and emptying of tanks and containers
Circulating of hot and cold water in HVAC systems
Pumping of condensate
Water circulating for swimming pools
Sanitary and cleaning installations
For industrial applications and public services
Fresh water supply on ships

**Design Specification**

Single-stage, end suction, centrifugal volute pump.

Main dimensions according to EN 733.

Single entry, closed impeller is hydraulically thrust compensated and dynamically balanced.

Pump and motor are separate components, connected to each other via a flexible coupling and mounted on a common base plate.

Maintenance is very much easier, the impeller shaft and other rotating parts being removable with no need to disconnect the suction and delivery pipes.

In fact the use of one extension coupling enables a pump to be dismantled without moving either the driver or the pump casing.

Maximum interchangeability of components, identical parts can be used with various sizes of a pump, which greatly simplifies and reduces stock of spare parts.

Technical Data

| | |
|--------------------|------------------------------|
| Suction Flange | : DN50 - DN400 |
| Discharge Flange | : DN32 - DN350 |
| Operating Pressure | : 10 bar |
| Temperature Range | : Up to 140 °C |
| Speed Range | : 1000 - 3500 rpm |
| Flow Range | : 5 - 3500 m ³ /h |
| Head Range | : 4 - 105 m |

Bearings

The pump has sturdy maintenance-free antifriction bearings, which are greased for life with high-temperature grease. A deflector on the shaft prevents leakage fluid from getting into bracket.

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Operating data specification

| | | | | |
|-----------------------------|-------|--------------------------|-----|-------------------|
| Pumped fluid | Water | Rated flow | 157 | m ³ /h |
| Solids | | Rated head | 26 | m |
| Kind | | Geodetic head | 0 | m |
| Percentage of solid content | 0 | Available system NPSH | | m |
| pH value | | Inlet pressure (pin) | 0 | kPa |
| Temperature | 20 | Altitude above sea level | 100 | m |
| Density | 998.3 | Max. operating pressure | 340 | kPa |
| Kin. viscosity | 1.005 | Max. diff. pressure | 340 | kPa |
| Vapour pressure | 2.34 | | | |

Pump

| | | | | |
|------------------------|----------------------------------------|-----------------------|------------|-------------------|
| Make | MAS DAF | Impeller type | | |
| Pump type | NM 100-315 | Impeller construction | | |
| Frame size | 100-315 | Impeller Ø | | |
| Design | End Suction | Max. | 328 | mm |
| Self priming | <input checked="" type="checkbox"/> No | designed | 300 | mm |
| Speed | 1455 | rpm | 263 | mm |
| Stages | 1 | Flow | | |
| Suction port | | Nominal | 203 | m ³ /h |
| Pressure rating | PN16 | Max. | 290 | m ³ /h |
| Nominal pipe size | DN125 | Min. | 0 | m ³ /h |
| Standard | DIN | Head | | |
| Discharge port | | Nominal | 27.8 | m |
| Pressure rating | PN16 | Min. | 17.8 | m |
| Nominal pipe size | DN100 | Max. | 34.7 | m |
| Standard | DIN | Shut off head | 34.7 | m |
| Shaft power | 18.3 | kW | NPSH3 | 2.98 |
| Shaft power P2(Q=max.) | 22 | kW | Efficiency | 76.4 |

Motor

| | |
|----------------------|----------------------------|
| Make/Type | 22 KW-1500 RPM / 180L |
| Specific design | IE3 / 50 Hz / Pole pairs 2 |
| Rated power | 22 kW |
| Electric voltage | 3~ 400 V |
| Speed | 1470 rpm |
| Electric current | 42.5 A |
| Frame size | 180L |
| Degree of protection | IP 55 |
| Type of protection | |
| Explosion protection | |

Coupling

| | |
|---------------|----|
| Make/Type | |
| Series | |
| Spacer length | mm |
| Frame size | |

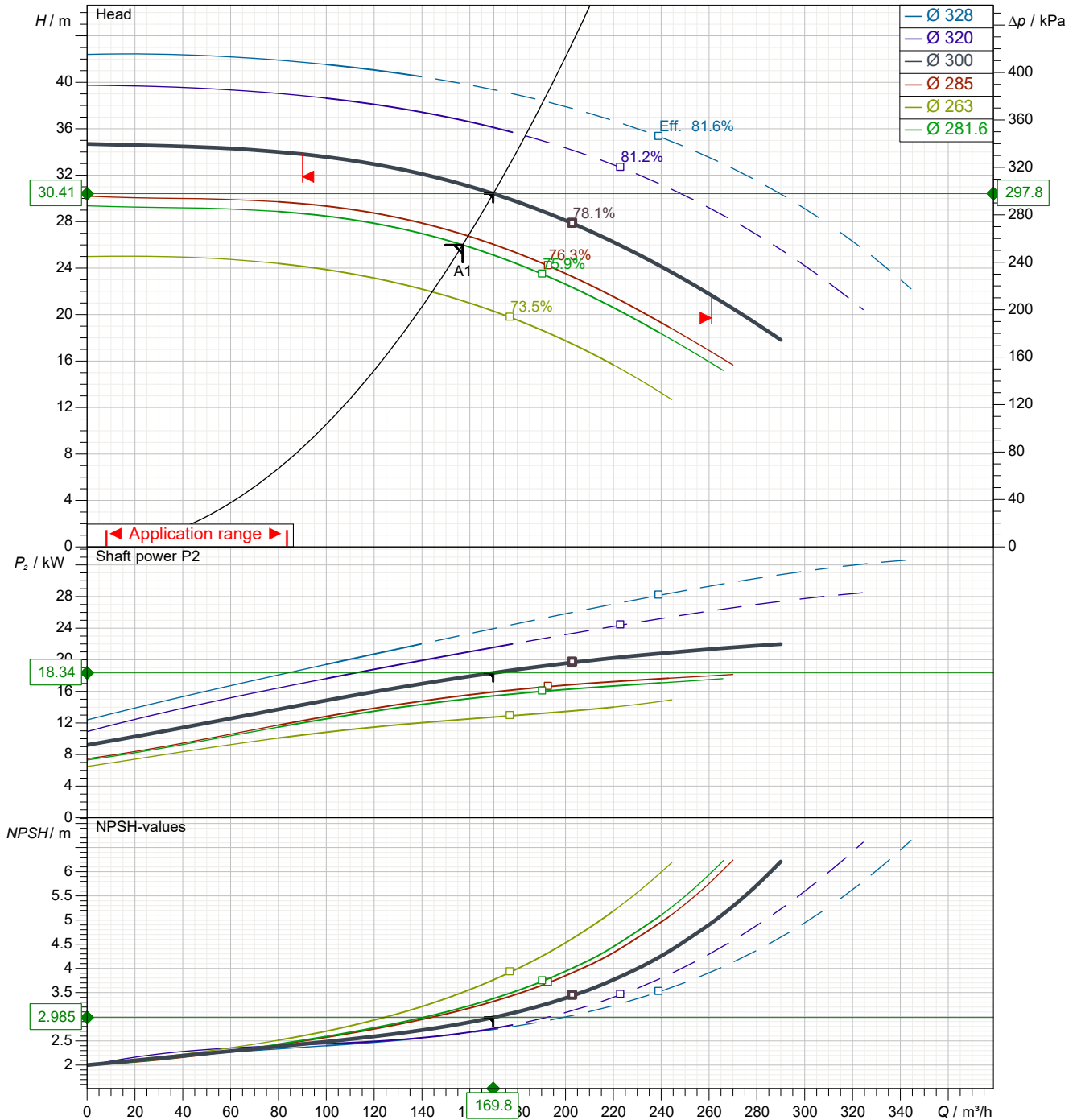
Materials

| | | | |
|-----------------|--------------------------|---------------|--------------|
| Pump | | Shaft seal | Soft Packing |
| Pump Casing | GJL-250 (GG25) | Material code | |
| Impeller | GJL-250 (GG25) | | |
| Shaft | A 276 Type 420 (X20Cr13) | | |
| Bearing Housing | GJL-250 (GG25) | | |

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 Power data referred to: Water; 20°C; 998.3kg/m³; 1.005mm²/s Sense of rotation Clockwise from the drive end


Pump curves in accordance with ISO 9906 2B

| | | | | |
|-----------------|--------------------------|-------------------|------|-------------------|
| Pumped fluid | Water | Rated flow | 157 | m ³ /h |
| Temperature | 20 °C | Rated head | 26 | m |
| Density | 998.3 kg/m ³ | Shaft power | 18.3 | kW |
| Kin. viscosity | 1.005 mm ² /s | Speed | 1455 | rpm |
| Vapour pressure | 2.34 kPa | NPSH ₃ | 2.98 | m |
| Impeller Ø | 300 mm | Efficiency | 76.4 | % |

Subject to change

Projec

Issue date

Last update

2023-07-29

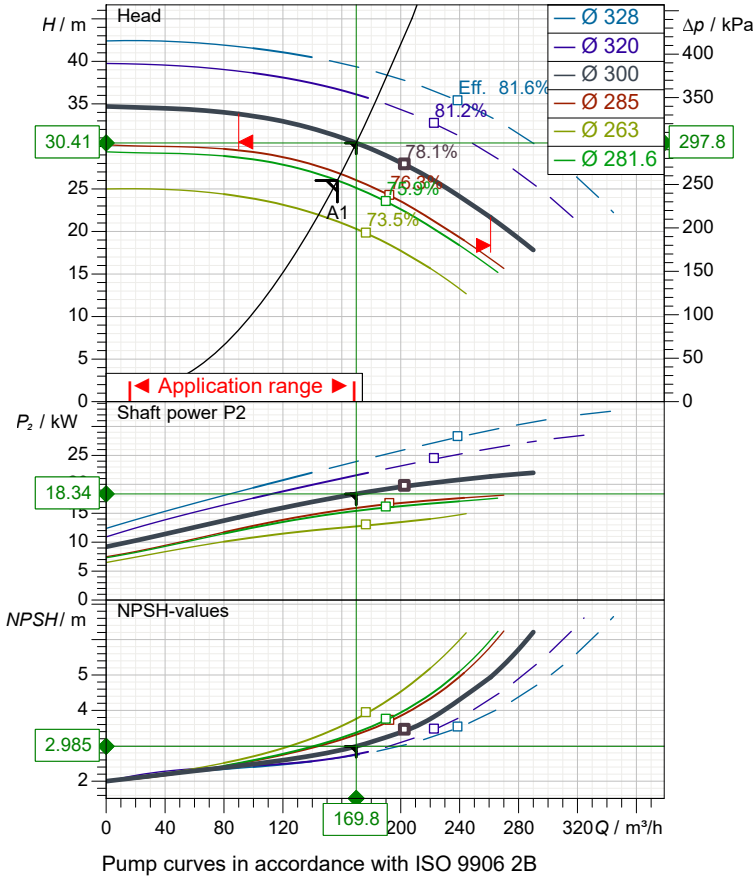
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Performance curves



Pump

| | |
|-------------------|-------------|
| Make | MAS DAF |
| Pump type | NM 100-315 |
| Design | End Suction |
| Suction port | |
| Pressure rating | PN16 |
| Nominal pipe size | DN125 |
| Standard | DIN |
| Discharge port | |
| Pressure rating | PN16 |
| Nominal pipe size | DN100 |
| Standard | DIN |

Operating data specification

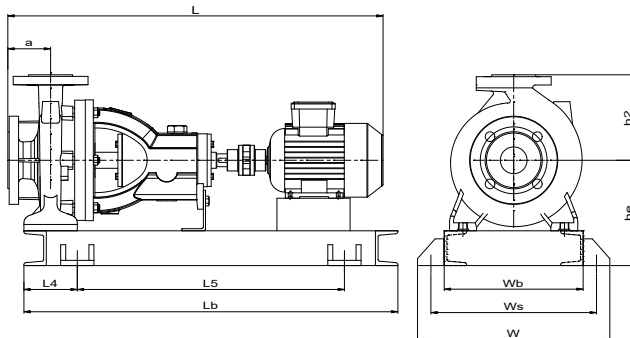
| | | |
|-----------------|-------|--------------------|
| Pumped fluid | Water | |
| Temperature | 20 | °C |
| Density | 998.3 | kg/m ³ |
| Kin. viscosity | 1.005 | mm ² /s |
| Vapour pressure | 2.34 | kPa |
| Rated flow | 157 | m ³ /h |
| Rated head | 26 | m |
| Shaft power | 18.3 | kW |
| Speed | 1455 | rpm |
| NPSH3 | 2.98 | m |
| Efficiency | 76.4 | % |
| Impeller Ø | 300 | mm |

Motor

| | |
|----------------------|----------------------------|
| Make/Type | 22 KW-1500 RPM / 180L |
| Specific design | IE3 / 50 Hz / Pole pairs 2 |
| Rated power | 22 kW |
| Speed | 1470 rpm |
| Electric voltage | 3~ 400 V |
| Electric current | 42.5 A |
| Degree of protection | IP 55 |

Materials

| | |
|---------------|--------------|
| Shaft seal | Soft Packing |
| Material code | |



Dimensions

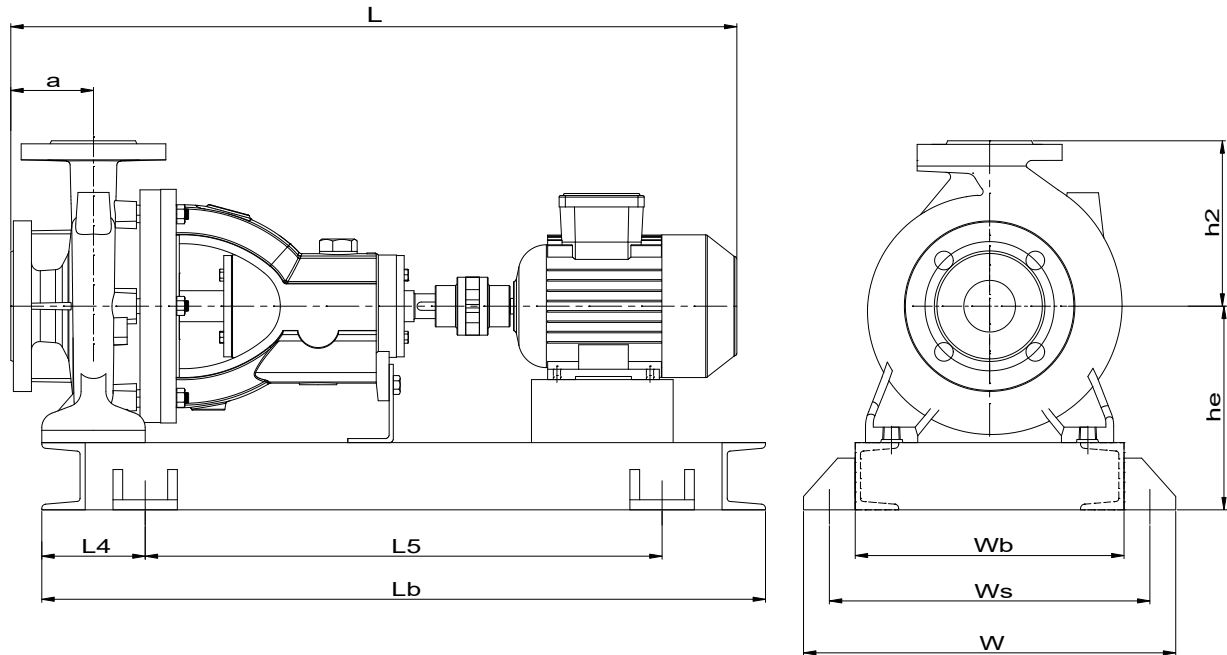
| | mm |
|----|------|
| a | 140 |
| h2 | 315 |
| he | 350 |
| L | 1304 |
| L4 | 150 |
| L5 | 900 |
| Lb | 1200 |
| w | 520 |
| wb | 420 |
| ws | 470 |

| | |
|-----------------|--------------------------|
| Pump Casing | GJL-250 (GG25) |
| Impeller | GJL-250 (GG25) |
| Shaft | A 276 Type 420 (X20Cr13) |
| Bearing Housing | GJL-250 (GG25) |

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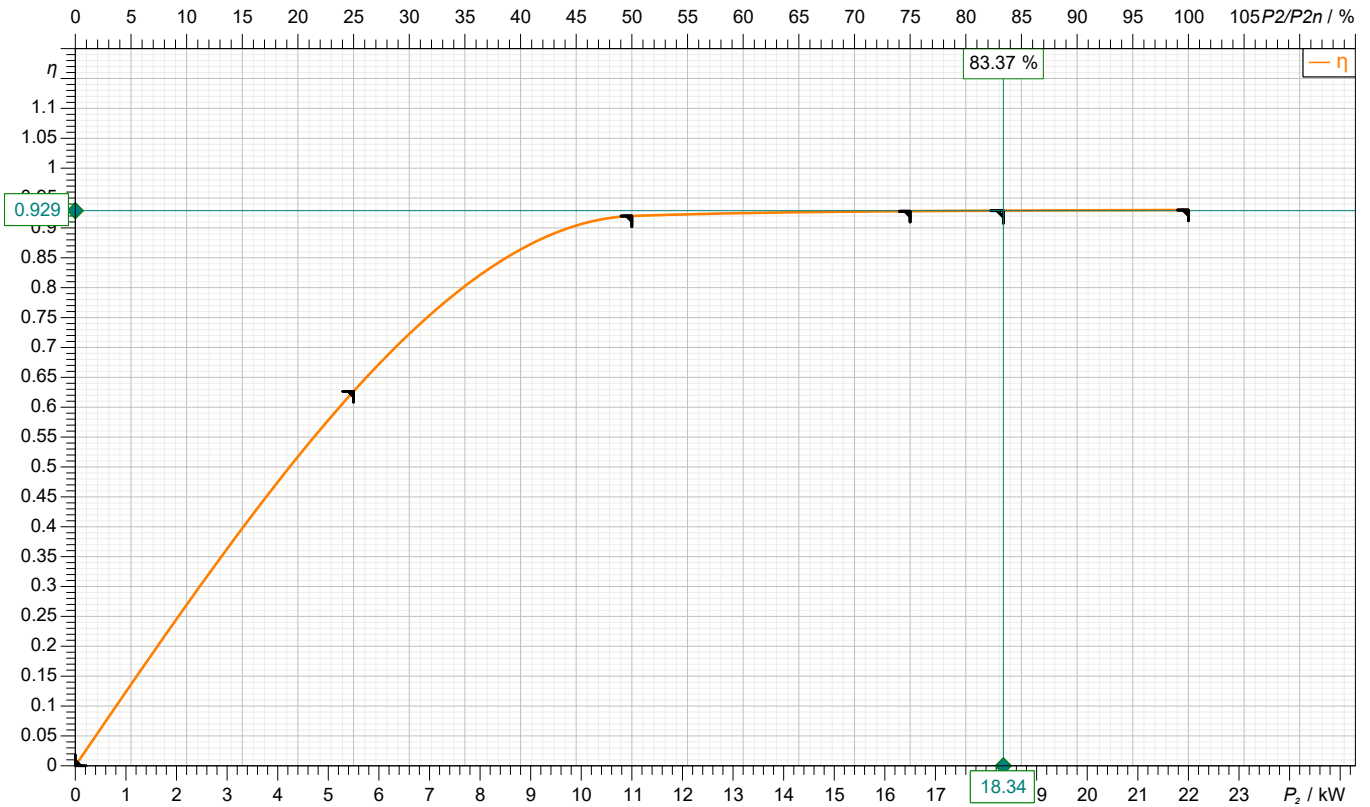
| Dimensions | mm | Inlet / outlet | |
|------------|------|----------------|----------------|
| a | 140 | Suction port | Discharge port |
| h2 | 315 | DN125 | DN100 |
| he | 350 | PN16 | PN16 |
| L | 1304 | | |
| L4 | 150 | | |
| L5 | 900 | | |
| Lb | 1200 | | |
| w | 520 | | |
| wb | 420 | | |
| ws | 470 | | |

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motor data



| Symbol | No load | 25 % | 50 % | 75 % | 100 % | 125 % |
|------------|---------|-------|-------|-------|-------|-------|
| P_2 / kW | 0 | 5.5 | 11 | 16.5 | 22 | |
| P_1 / kW | | 8.776 | 11.96 | 17.78 | 23.66 | |
| η / % | 0 | 62.66 | 92 | 92.8 | 93 | |

Motor

| | | | |
|------------------|----------------------------|----------------------|-----------|
| Make/Type | 22 KW-1500 RPM / 180L | Degree of protection | IP 55 |
| Specific design | IE3 / 50 Hz / Pole pairs 2 | Type of protection | |
| Rated power | 22 kW | Explosion protection | |
| Electric voltage | 3~ 400 V | Service factor | 1.15 |
| Number of poles | 4 | Starting current | |
| Speed | 1470 rpm | Starting torque | |
| Electric current | 42.5 A | Moment of inertia | |
| Power factor | 0.8 | No. starts per hour | |
| Frame size | 180L | Rated torque | 143 Nm |
| Efficiency class | IE3 | Insulation class | F (155C°) |

Subject to change

Projec

Issue date

Last update

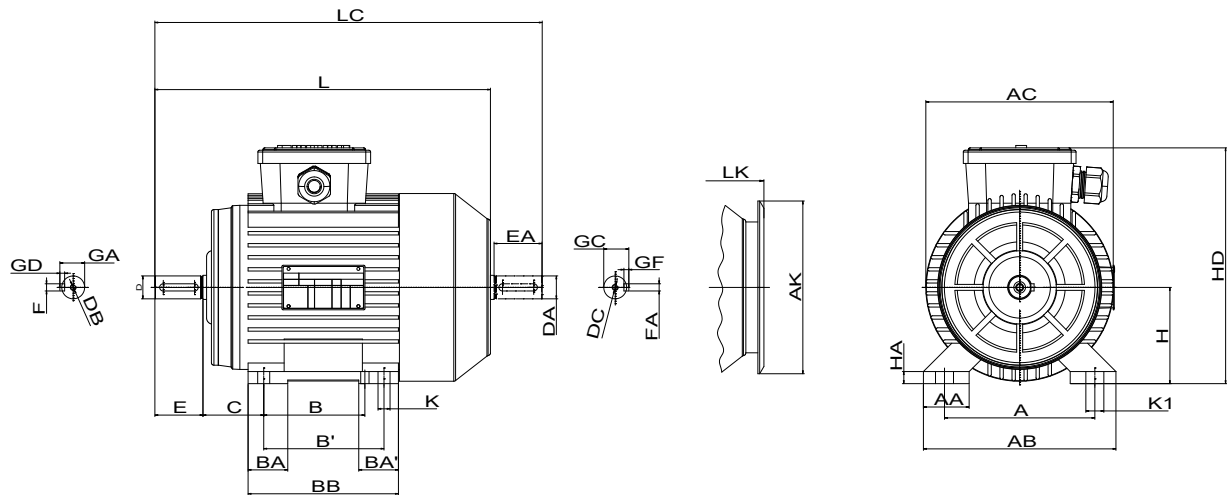
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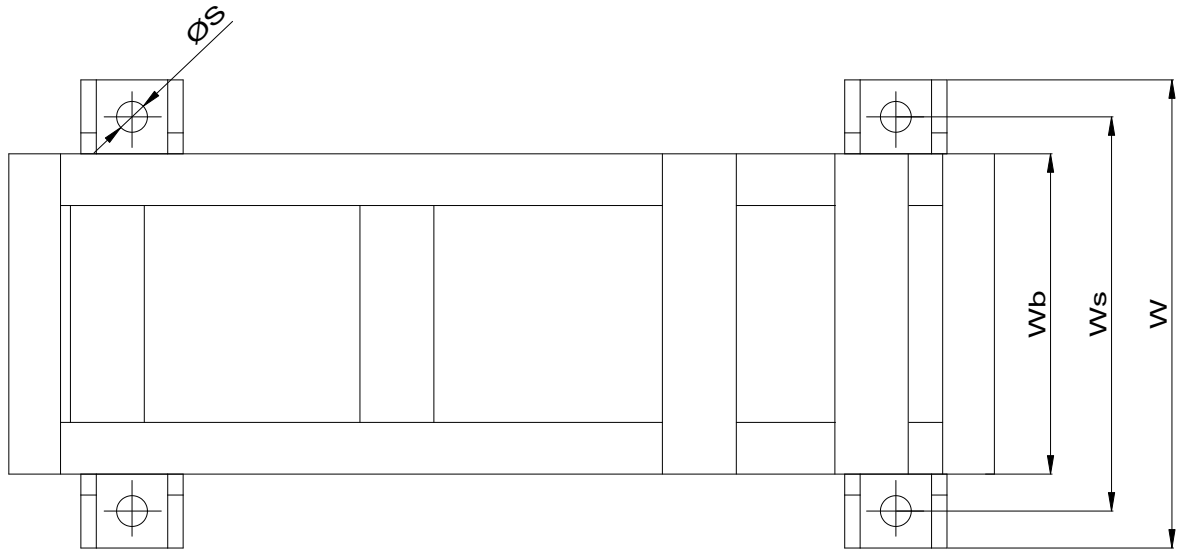


| Dimensions | mm | | |
|------------|-----|------|-------|
| A | 279 | EA | 110 |
| AA | 68 | FxGF | 14X10 |
| AB | 354 | FxGD | 14X10 |
| AC | 348 | GA | 51.5 |
| AK | 303 | GC | 51.5 |
| B | 279 | H | 180 |
| B' | - | HA | 24 |
| BA' | - | HD | 421 |
| BB | 329 | K | 15 |
| C | 121 | L | 695 |
| D | 48 | LC | 811 |
| DA | 48 | LK | 752 |
| DB | M16 | | |
| DC | M16 | | |
| E | 110 | | |

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| Dimensions | mm |
|------------|------|
| hb | 100 |
| L4 | 150 |
| L5 | 900 |
| Lb | 1200 |
| S | 19 |
| w | 520 |
| wb | 420 |
| ws | 470 |



Spare part list
NM 100-315

Revision number

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Spare part list
NM 100-315

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