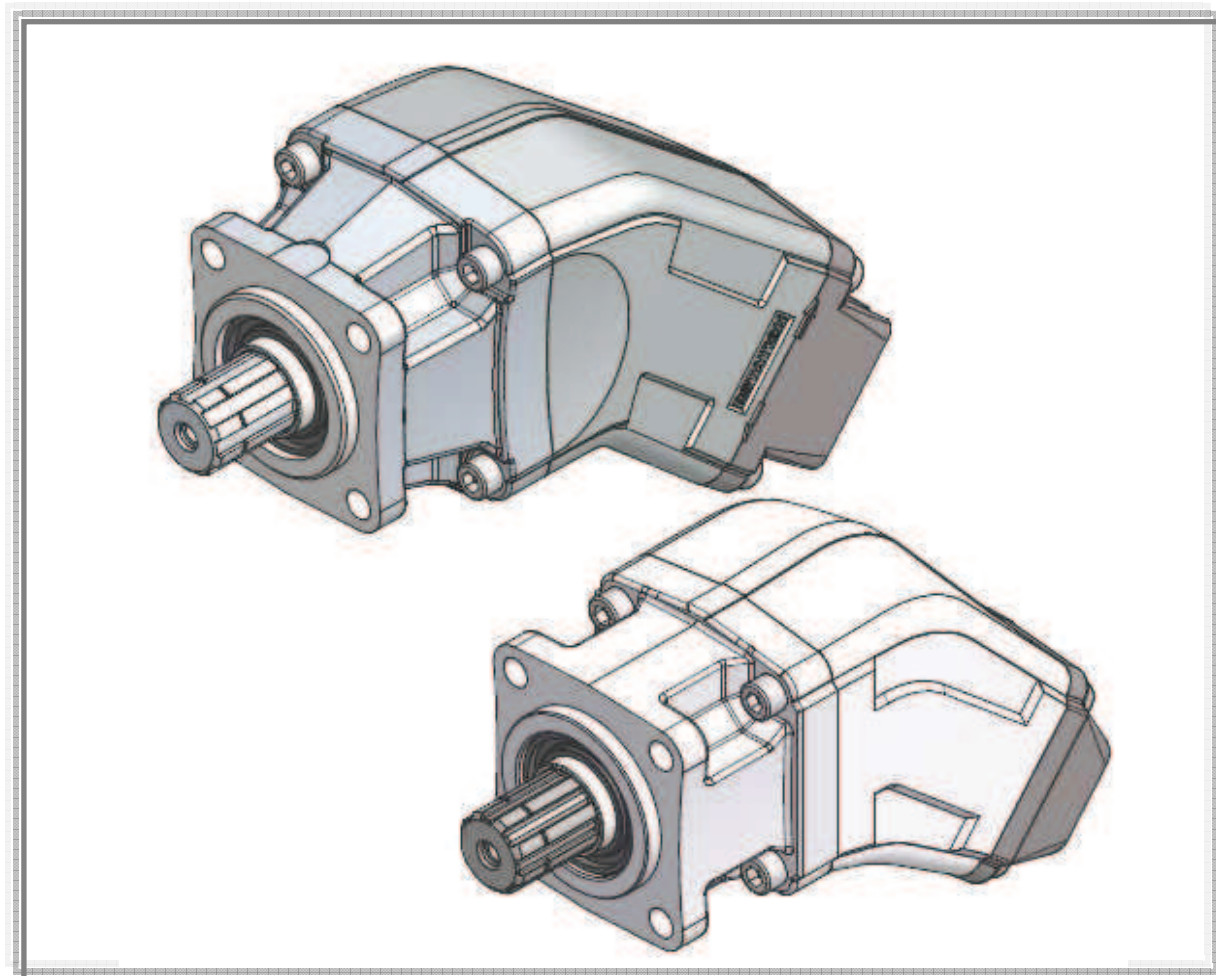




BENT MOTOR AXIAL PISTONS (EN) RECOMMENDATIONS BEFORE START-UP



Attention: The assembly of the motors must follow all the instructions hereby mentioned in order to assure a long life of the product and preserve the warranty of the mark. If there should happen any malfunctioning, it is strictly forbidden the disassembly of the product except if it is being made by a qualified technician of the mark or if there is a special authorization to do that. If this specification should not be followed, all warranties might be lost.

General information:

BI motors are axial piston motors with fixed flow and high precision. They are available from 32 to 110 cm³/rot. and with a maximum pressure of 350bar. Their dimensions are very small, and they are very light and robust. When at work these motors show a good performance, with very low noise. These motors are equipped with seals that bear environmental temperatures up to -40°C.

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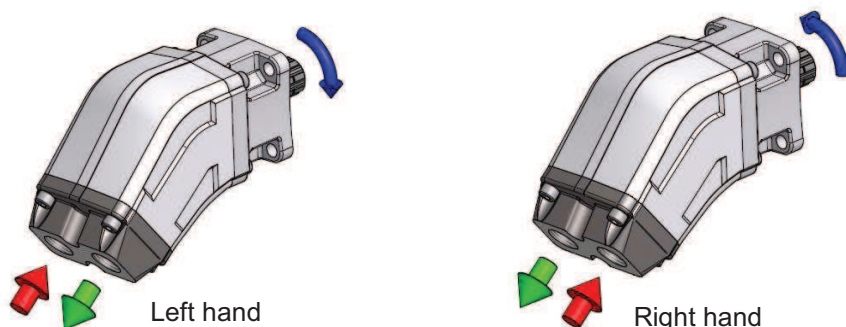
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BENT MOTOR AXIAL PISTONS (EN) RECOMMENDATIONS BEFORE START-UP

Assembly:

1- Verify the rotation way of the motor, right or left hand.

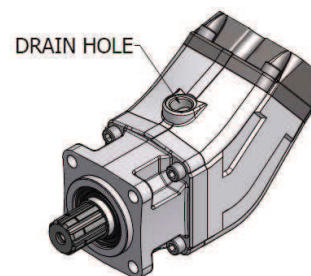


2- Connect the motor to the application. It is not advisable high efforts or shocks during the assembly. The motor must be connected without making use of any type of tool that forces its assembly;

3- Remove all protection covers from the threaded bolts (inlet/outlet). Apply the inlet and outlet accessories into the motor. Connect the outlet and the inlet pipes to the accessories (always respect the pipes and thread dimensions). Be sure that all connections are robust and well sealed.

4- Connect the drain to the oil tank; the connection to the oil tank must be done slightly below the oil level line and far from the pumps inlet suction line. The drain line must not be strangled along its length.

5- Before start-up, the housing must be filled with hydraulic fluid.



Fluids:

For MBI motors range, ABER recommends the use of high quality mineral oils type ISO HM or DIN 51524-2 HLP, with viscosities from 20 to 40 cSt at working temperature. The working viscosity limits stay between minimum 10cSt and maximum 400 cSt. In situations, when the viscosities stay between 400 cSt and 1500 cSt, the system can be turned on, but cannot be loaded. It can only work when empty. It is possible to use other oils with the same characteristics, but only after consulting and getting authorization from ABER.

When choosing the oil it is necessary to be aware of the low viscosity with the increase of the temperature and to know that the unity of the viscosity cSt (mm^2/s) is defined at the temperature of 40 °C; Therefore, we recommend you that when you want to work above that temperature, you should choose an oil with more viscosity (thicker) in order to compensate the reduction of viscosity when the temperature increases.

The maximum temperature allowed in the circuit is 75°C. We advise you to use an oil cooler when you verify that the system's temperature is about or higher than these values.

The oil must be replaced after 1000 working hours or at least once a year.

Filtration:

The filtration is extremely important and may influence or even determine the life of the equipment.

ABER recommends the use of a return filter and an air filter with an absolute filtration degree of 10 μm , as according to the ISO 4406 class 18/13.

The first filter to be applied into the system must be replaced as soon as it reaches the 50 working hours; after the first replacement, it must be replaced along with the oil or when pressures out of the common are verified in the return.

N.B.: Be sure that the whole system is perfectly cleaned before filling it with Hydraulic fluid (a.m. recommended).

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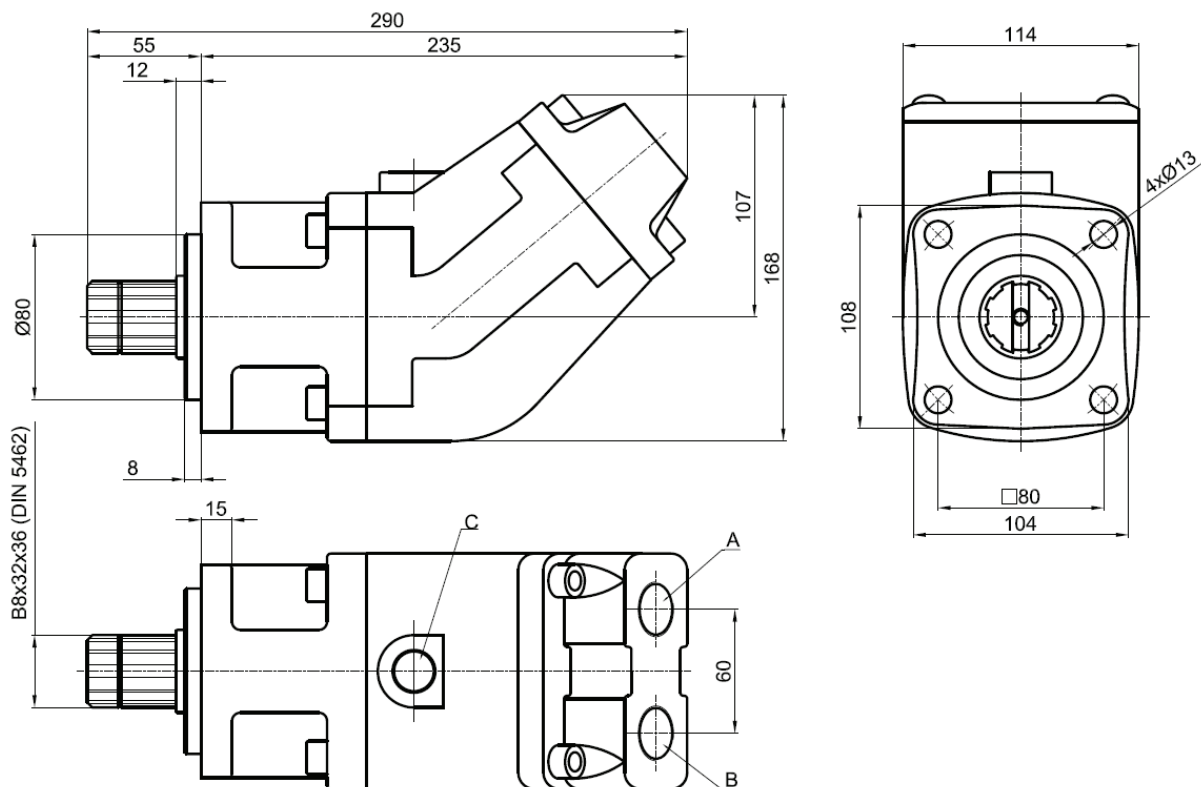
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OII-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI M

Main Dimensions



(Dimensions in mm)

Main Data

| Motors MBI | 30M | 40M | 50M |
|---|--------------------------------------|--------------|--------------|
| Cylinder capacity (cm ³ /rot.) | 32 | 42 | 50 |
| Rotation (rpm) | max. intermittent max. continuous | 2200 1800 | 2000 1500 |
| Pressure (bar) | max. intermittent max. continuous | 350 300 | 350 300 |
| Max torque – theoretical value (Nm) | 175 | 230 | 275 |
| Weight (kg) | 10 | 10 | 10 |
| Pistons quantity | 5 | 5 | 5 |
| A-Oil port (mm) | 3/4" BSP | 3/4" BSP | 3/4" BSP |
| B-Oil port (mm) | 3/4" BSP | 3/4" BSP | 3/4" BSP |
| C-Drain hole | M22x1.5 | M22x1.5 | M22x1.5 |

How to order:

Example: Motor 30cm³/rot.; pressures 350/300 bar; rotation 2200/1800; ref. MBI M → MBI30M

Important notes:

-To install one of these motors, please consult and respect the instruction "BI motors recommendations before start-up".

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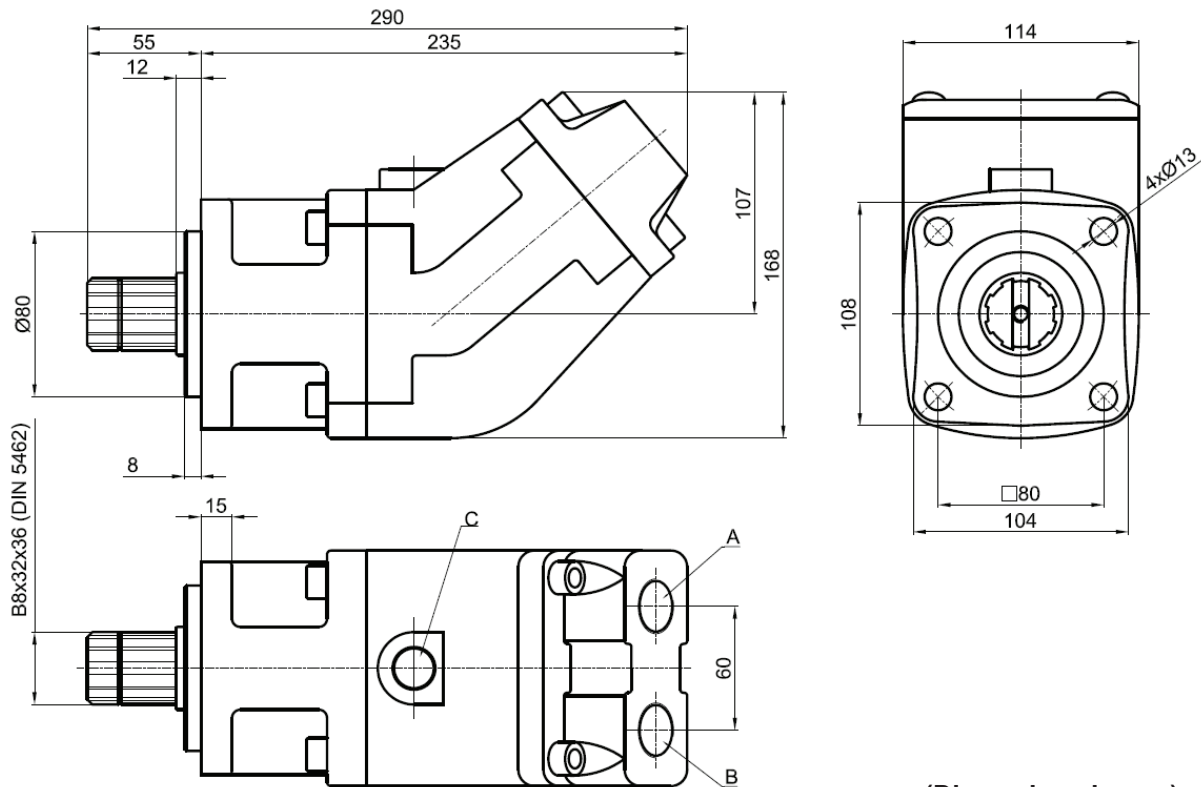
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OII-HYDRAULIC BENT MOTOR AXIAL PISTONS

Ref.
MBI M7

Main Dimensions



Main Data

| Motors MBI | 60M7 | 80M7 |
|---|----------|---------|
| Cylinder capacity (cm ³ /rot.) | 60 | 81 |
| Rotation (rpm) | 2000 | 1800 |
| max. intermittent | 1500 | 1300 |
| max. continuous | | |
| Pressure (bar) | 350 | 300 |
| max. intermittent | 300 | 250 |
| max. continuous | | |
| Max torque – theoretical value (Nm) | 330 | 385 |
| Weight (kg) | 10.5 | 10.5 |
| Pistons quantity | 7 | 7 |
| A-Oil port (mm) | 3/4" BSP | 1" BSP |
| B-Oil port (mm) | 3/4" BSP | 1" BSP |
| C-Drain hole | M22x1.5 | M22x1.5 |

How to order:

Example: Motor 60cm³/rot.; pressures 350/300 bar; rotation 2000/1500; ref. MBI M7 → MBI60M7

Important notes:

-To install one of these motors, please consult and respect the instruction "BI motors recommendations before start-up".

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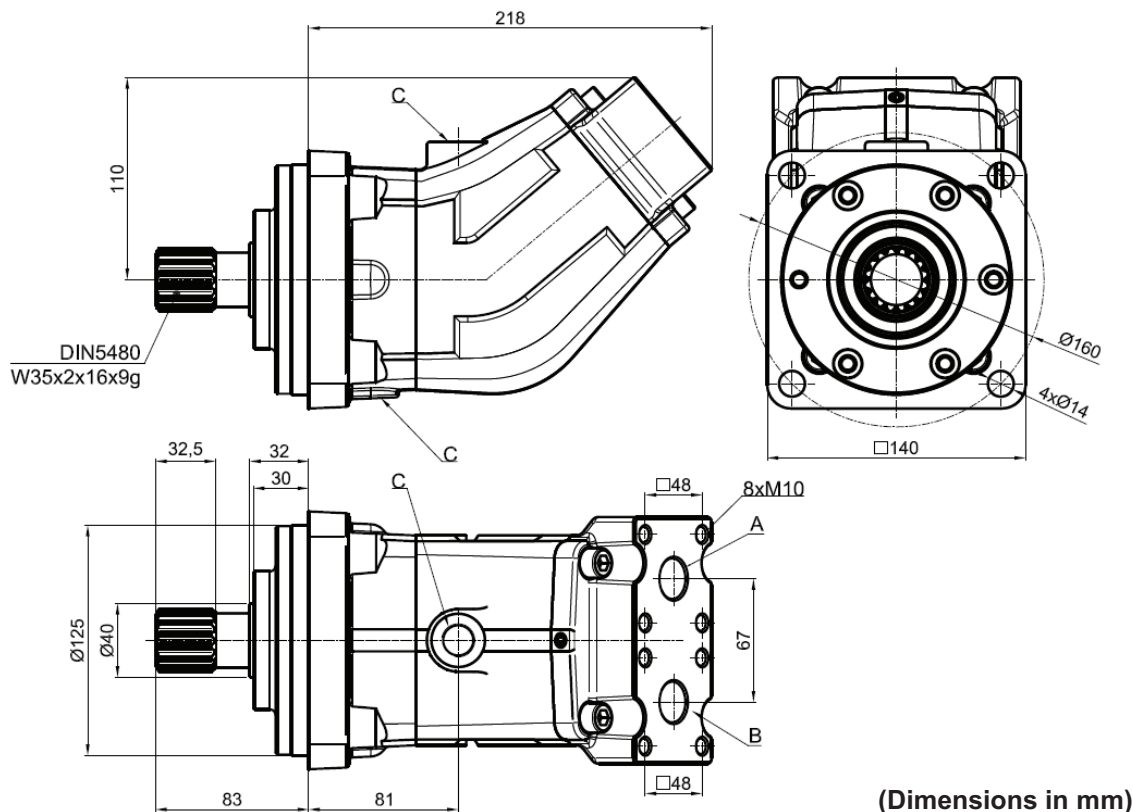
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OII-HYDRAULIC BENT MOTOR
AXIAL PISTONS

Ref.
MBI M IA1

Main Dimensions



(Dimensions in mm)

Main Data

| Motors MBI | 50M5IA1 | 60M7IA1 |
|---|---------|---------|
| Cylinder capacity (cm ³ /rot.) | 50 | 60 |
| Rotation (rpm) | 2000 | 2000 |
| max. intermittent | 1500 | 1500 |
| max. continuous | | |
| Pressure (bar) | 350 | 350 |
| max. intermittent | 300 | 300 |
| max. continuous | | |
| Max torque – theoretical value (Nm) | 275 | 330 |
| Weight (kg) | 12 | 12 |
| Pistons quantity | 5 | 7 |
| A-Oil port (mm) | ø22 | ø22 |
| B-Oil port (mm) | ø22 | ø22 |
| C-Drain hole | M22x1.5 | M22x1.5 |

How to order:

Example: Motor 60cm³/rot.; pressures 350/300 bar; rotation 2000/1500; ref. M BI M IA1 → MBI60M7IA1

Important notes:

-To install one of these motors, please consult and respect the instruction “BI motors recommendations before start-up”.

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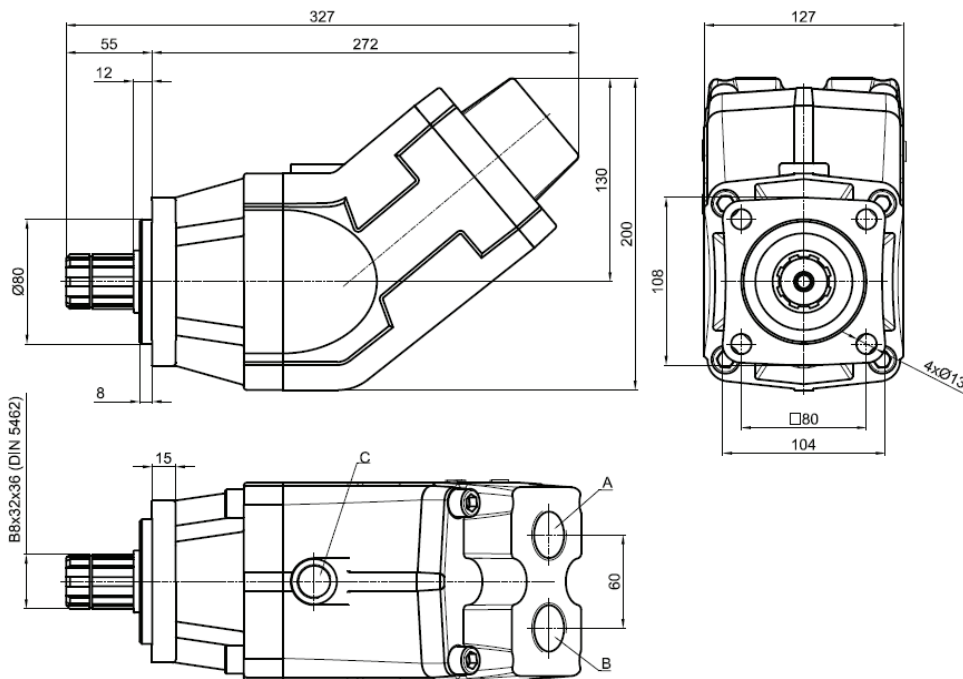
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OII-HYDRAULIC BENT MOTOR
AXIAL PISTONS

Ref.
MBI P7

Main Dimensions



(Dimensions in mm)

Main Data

| Motors MBI | 80P7 | 110P7 |
|---|--------------------------------------|--------------|
| Cylinder capacity (cm ³ /rot.) | 80 | 108 |
| Rotation (rpm) | max. intermittent max. continuous | 1800 1300 |
| Pressure (bar) | max. intermittent max. continuous | 350 300 |
| Max torque – theoretical value (Nm) | 440 | 600 |
| Weight (kg) | 13 | 13.4 |
| Pistons quantity | 7 | 7 |
| A-Oil port (mm) | 1" BSP | 1" BSP |
| B-Oil port (mm) | 1" BSP | 1" BSP |
| C-Drain hole | M22x1.5 | M22x1.5 |

How to order:

Example: Motor 80cm³/rot.; pressures 350/300 bar; rotation 1800/1300; ref. MBI P7 → MBI80P7

Important notes:

-To install one of these motors, please consult and respect the instruction "BI motors recommendations before start-up".

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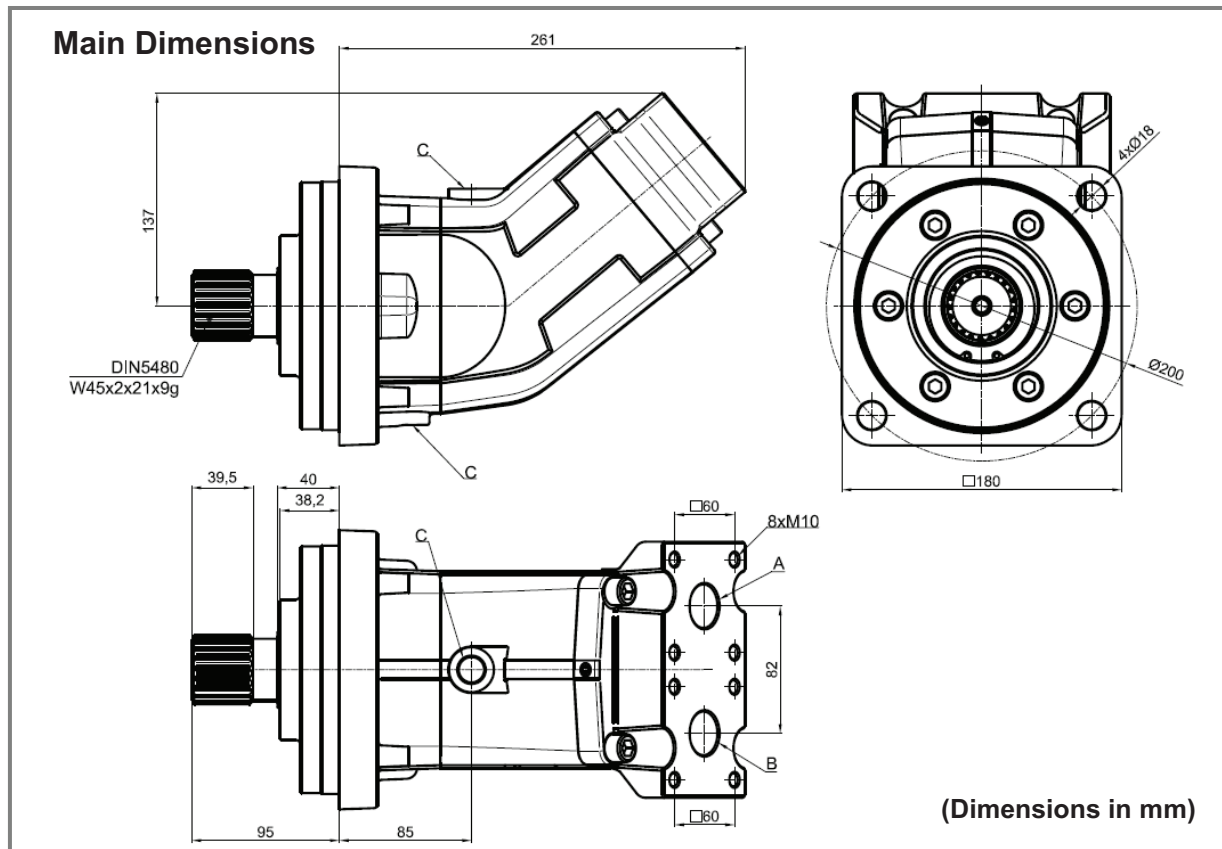
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OII-HYDRAULIC BENT MOTOR
AXIAL PISTONS

Ref.
MBI P IA1



Main Data

| Motors MBI | 80P7IA1 | 110P7IA1 |
|---|---------|----------|
| Cylinder capacity (cm ³ /rot.) | 80 | 108 |
| Rotation (rpm) | | |
| max. intermittent | 1800 | 1600 |
| max. continuous | 1300 | 1300 |
| Pressure (bar) | | |
| max. intermittent | 350 | 350 |
| max. continuous | 300 | 300 |
| Max torque – theoretical value (Nm) | 440 | 600 |
| Weight (kg) | 14 | 14 |
| Pistons quantity | 7 | 7 |
| A-Oil port (mm) | ø28 | ø28 |
| B-Oil port (mm) | ø28 | ø28 |
| C-Drain hole | M22x1.5 | M22x1.5 |

How to order:

Example: Motor 80cm³/rot.; pressures 350/300 bar; rotation 1800/1300; ref. MBI P IA1 → MBI80P7IA1

Important notes:

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