### MK04 Compact Motors

<table>
<thead>
<tr>
<th>Model</th>
<th>A (mm)</th>
<th>B (mm)</th>
<th>C (mm)</th>
<th>D (mm)</th>
<th>E (mm)</th>
<th>F (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK04</td>
<td>175.7</td>
<td>225</td>
<td>265</td>
<td>334</td>
<td>24</td>
<td>291</td>
</tr>
<tr>
<td></td>
<td>[6.92 dia.]</td>
<td>[8.86 dia.]</td>
<td>[10.43 dia.]</td>
<td>[13.15 dia.]</td>
<td>[0.94 dia.]</td>
<td></td>
</tr>
<tr>
<td>MK04</td>
<td>220.7</td>
<td>275</td>
<td>314</td>
<td>334</td>
<td>22</td>
<td>291</td>
</tr>
<tr>
<td></td>
<td>[8.69 dia.]</td>
<td>[10.83 dia.]</td>
<td>[12.36 dia.]</td>
<td>[13.15 dia.]</td>
<td>[0.97 dia.]</td>
<td></td>
</tr>
</tbody>
</table>

**Diagram**

[Diagram of MK04 compact motors]
Methodology:
This document is intended for manufacturers of machines that incorporate Poclain Hydraulics products. It describes the technical characteristics of Poclain Hydraulics products and specifies installation conditions that will ensure optimum operation.
This document includes important comments concerning safety. They are indicated in the following way:

Safety comment.

This document also includes essential operating instructions for the product and general information. These are indicated in the following way:

Essential instructions.
General information .
Information on the model number.Information on the model code.
Weight of component without oil.
Volume of oil.
Units.
Tightening torque.
Screws.
Information intended for Poclain-Hydraulics personnel.

The views in this document are created using metric standards.
The dimensional data is given in mm and in inches (inches are between brackets and italic)
CONTENT

MODEL CODE

CHARACTERISTICS
Dimensions for standard 1-displacement motor
Load curves
Chassis mounting
Hydraulic connections
Immobilisator

OPTIONS

08/01/2013
### Motor Inertia

0.028 kg.m²

<table>
<thead>
<tr>
<th>First displacement</th>
<th>Theoretical torque at 100 bar Nm</th>
<th>at 100 PSI [lb.ft]</th>
<th>Max. power kW [HP]</th>
<th>Max. speed rev/min</th>
<th>Max. pressure bar [PSI]</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>272 [16.6]</td>
<td>432 [220]</td>
<td></td>
<td>120</td>
<td>400 [5800]</td>
</tr>
<tr>
<td>2</td>
<td>408 [24.9]</td>
<td>649 [330]</td>
<td></td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

1 First displacement
MODEL CODE

C MK04

1-Displacement 1

Without fixation 1

ISO 9974-1 Connections 4
ISO 11926-1 Connections A

Without immobiliser A 0 4
Immobiliser K 0 4

A Hollow shaft
2 T4 Speed sensor installed
3 Mechanical brake release
8 Predisposition for speed sensor

Options

Compact motors MK04
POCLAIN HYDRAULICS
CHARACTERISTICS

Compact motors MK04

POCLAIN HYDRAULICS

Dimensions for standard 1-displacement motor

<table>
<thead>
<tr>
<th>30 kg [66 lb]</th>
<th>31 kg [68 lb]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.35 L [21 cu.in]</td>
<td>0.35 L [21 cu.in]</td>
</tr>
</tbody>
</table>

Rotating retaining screws

<table>
<thead>
<tr>
<th>Classe</th>
<th>N.m</th>
<th>[lb ft]</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 x M16 x 2</td>
<td>12.9</td>
<td>355 [262]</td>
</tr>
</tbody>
</table>

(*) The tightening torques are given for the indicated loads.
Load curves

Permissible radial loads

Test conditions:

**Static**: 0 rev/min 0 bar [0 PSI]

**Dynamic**: 0 rev/min, code 2 displacement, without axial load at max. torque

Service life of bearings

Test conditions:

L : Millions B10 revolutions at 150 bars (average pressure), with 25 cSt fluid, code 0 displacement, without axial load.

The service life of the components is influenced by the pressure. You must check that the combination of forces applied (Axial load / Radial load) is compatible with the permissible loads for the components, and that the resulting service lives of these components complies with the application’s specifications. For an accurate calculation, consult your Poclain Hydraulics application engineer.

Efficiency

Overall efficiency

Average values given for guidance for code 2 displacement after 100 hours of operation with HV46 hydraulic fluid at 50°C [122°F].

The starting torque is taken to be approximately 85% of the first value for available pressure. For a precise calculation, consult your Poclain Hydraulics application engineer.
Chassis mounting

Take care over the immediate environment of the connections.

<table>
<thead>
<tr>
<th>( \varnothing M ) (( \varnothing ))</th>
<th>S</th>
<th>Ra V</th>
<th>Class of screw</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm [( \text{in} )]</td>
<td>mm [( \text{in} )]</td>
<td>( \mu \text{m} ) [( \mu \text{in} )]</td>
<td>N.m [( \text{lb} \cdot \text{ft} )]</td>
</tr>
<tr>
<td>204.9 [8.07]</td>
<td>0.2 [0.01]</td>
<td>12.5 [0.49]</td>
<td>12.9</td>
</tr>
</tbody>
</table>

(1) + 0.3 [+0.012]
(2) + 0.2 [+0.008]
(3) + 0.4 [+0.016]
(4) + 0.3 [+0.012]

Hydraulic connections

Do not put either a check valve or a poppet valve on the pilot line.

To find the connections’ tightening torques, see the brochure “Installation guide” N° 801478197L.
You are strongly advised to use the fluids specified in brochure “Installation guide” N° 801478197L.

**Immobilisator**

Principle:
This static brake consists of two toothed parts, one mobile (A), and the other fixed (B). When stationary, with no pressure, a spring (C) pushes the mobile part to mesh with the teeth of the cylinder block to immobilise it.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Model code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking brake torque with 0 bars in the housing (new brake)</td>
<td>MK04</td>
</tr>
<tr>
<td>Minimum brake release pressure</td>
<td>K04</td>
</tr>
<tr>
<td>Maximum brake release pressure</td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td></td>
</tr>
<tr>
<td>Brake release capacity</td>
<td></td>
</tr>
</tbody>
</table>

- Parking brake torque: 3 170 Nm (2 338 lb.ft)
- Minimum brake release pressure: 17 bar (246.6 PSI)
- Maximum brake release pressure: 30 bar (435.1 PSI)
- Capacity: 23 cm³ (1.4 cu.in)
- Brake release capacity: 14 cm³ (0.8 cu.in)
OPTIONS

You can accumulate more than one optional part. Consult your Poclain Hydraulics sales engineer.

2 - 8 - Installed speed sensor or predisposition

Designation

<table>
<thead>
<tr>
<th>T4 Speed sensor installed</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predisposition for speed sensor</td>
<td>8</td>
</tr>
</tbody>
</table>

Max. length \( Y = 12.5 \)

Standard number of pulses per revolution = 64

Look at the "Mobile Electronic" N° A01889D technical catalogue for the sensor specifications and its connection.

To install the sensor, see the "Installation guide" brochure No. 801478197L.
3 - Mechanical brake-release

Refer to the "Installation guide" catalogue, N° 801478197L.

A - Hallow shaft

Mounting bolt for high speed motor

<table>
<thead>
<tr>
<th></th>
<th>Classe</th>
<th>N.m</th>
<th>[lb. ft]</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 x M8 x 1.25</td>
<td>10.9</td>
<td>295</td>
<td>218</td>
</tr>
</tbody>
</table>

(*) The tightening torques are given for the indicated loads.