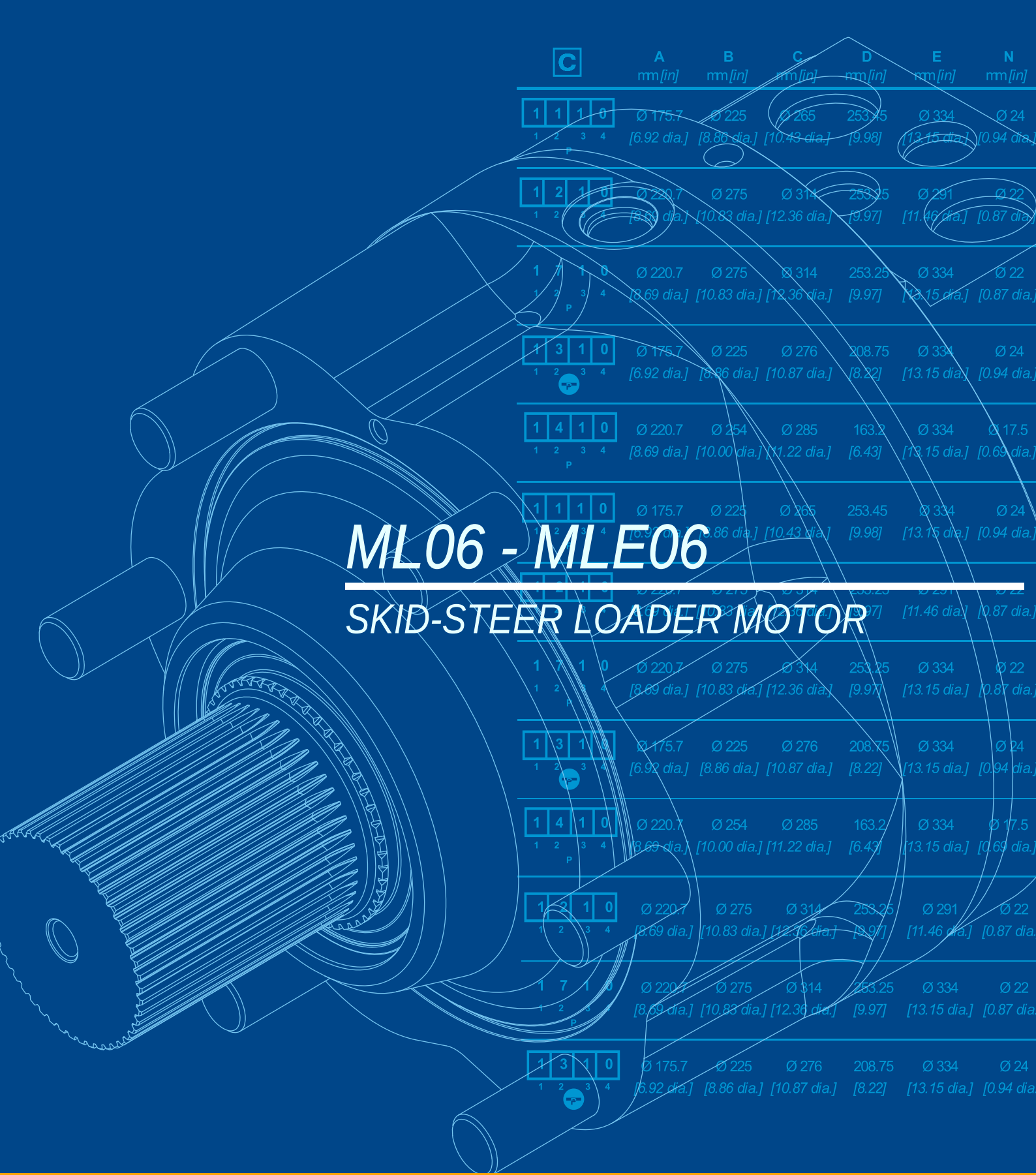


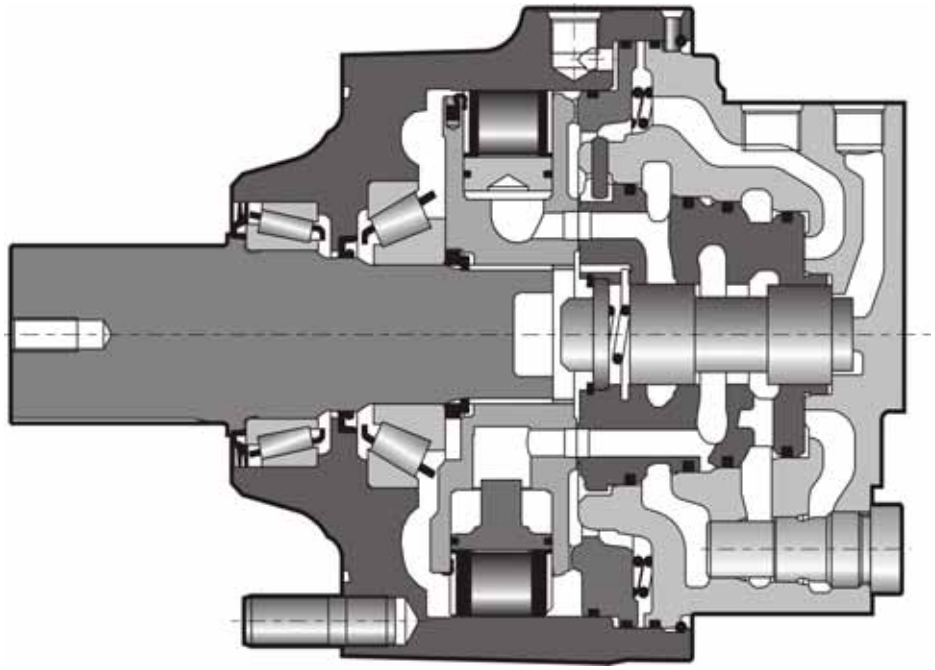
ML06 - MLE06

SKID-STEER LOADER MOTOR

T E C H N I C A L C A T A L O G

POCLAIN HYDRAULICS

Poclain Driving Values for the Future



Single displacement motor

	C	cm³/tr *[cu.in/rev.]*	Theoretical torque at 100 bar Nm	Theoretical torque *at 1000 PSI [lb.ft]*	Max. power kW *[HP]*	Max. speed tr/min *[RPM]*	Max. pressure bar *[PSI]*
ML06	2	630 *[38.4]*	1 002	*[509]*	30 *[40]*	226	381 *[5 526]*
MLE06	2	842 *[51.4]*	1 339	*[681]*		169	

Dual displacement motor

	❶ C	❶ cm³/tr *[cu.in/rev.]*	❷ cm³/tr *[cu.in/rev.]*	Theoretical torque ❶ at 100 bar Nm	Theoretical torque ❶ *at 1000 PSI [lb.ft]*	Max. power ❶ kW *[HP]*	Max. power ❷ preferred kW *[HP]*	Max. power ❷ non-preferred kW *[HP]*	Max. speed ❶ tr/min	Max. speed ❷ *[RPM]*	Max. pressure bar *[PSI]*
ML06	2	630 *[38.4]*	420 *[25.6]*	1 002	*[509]*	30 *[40]*	20 *[27]*	15 *[20]*	226	330	381 *[5 526]*
MLE06	2	842 *[51.4]*	561 *[34.2]*	1 339	*[681]*				169	241	
	C	702 *[42.8]*	421 *[25.7]*	1 116	*[568]*				203	322	

❶ **First displacement**
❷ **Dual displacement**

CONTENT

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) 

MODEL CODE

	C	D		F		P				S					
	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
MLE06			1	A	K	0	5	5	A			H	K				
ML06																	

Single displacement motor

		cm³/tr [cu.in/rev.]
ML06	2	630 [38.4]
MLE06	2	842 [51.4]

Dual displacement motor

		❶ cm³/tr	❶ [cu.in/rev.]	❷ cm³/tr	❷ [cu.in/rev.]
ML06	2	630	[38.4]	420	[25.6]
MLE06	2	842	[51.4]	561	[34.2]
	C	702	[42.8]	421	[25.7]

1-displacement valving (Clockwise and counterclockwise)	**1**
2-displacement valving (Clockwise)	**E** Ratio <2
2-displacement valving (Counterclockwise)	**H** Ratio <2

	Softshift	+	Exchange	
❷	of ❶ towards ❷ and of ❷ towards ❶		2 directions	**1**

❶ **First displacement**
❷ **Dual displacement**

Immobilisator **K05**

ISO 11926-1 Connections	**A**
Flange close to shaft	**5**
Splined shaft	**A**

53 teeth	**10**
49 teeth	**30**

Without Options or Adaptations	**0**
T4 speed sensor (without rotation direction)	**2**
Predisposition for speed sensor	**8**
High performance (*)	**H**
Reinforced shaft (*)	**K**
TD speed sensor (two phase shifted frequencies)	**Q**
TR speed sensor (digital rotation direction)	**S**

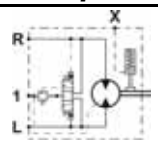
(*) : Origin option, any modification must be validated by your Poclain Hydraulics application engineer.

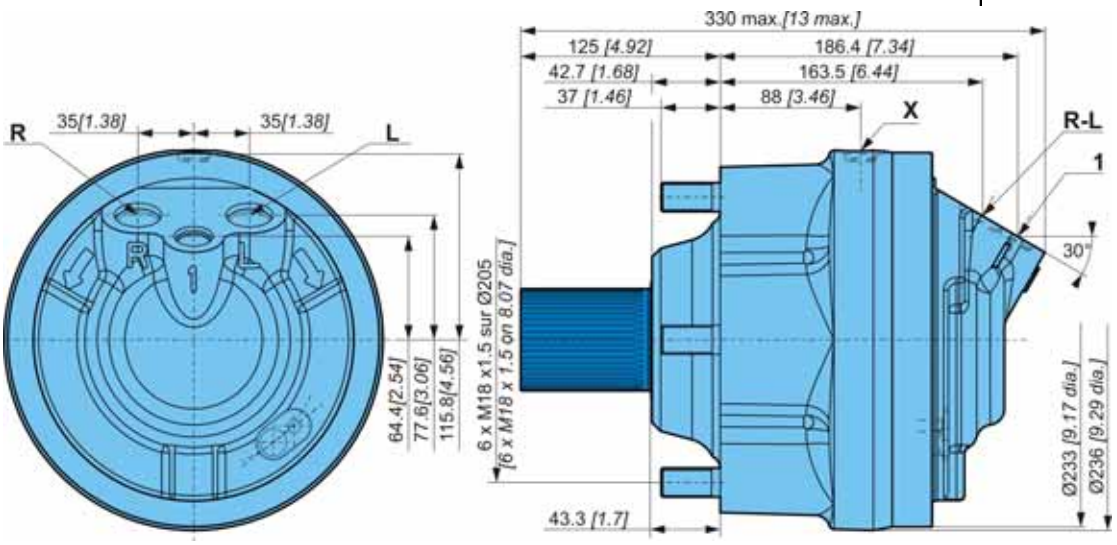
CHARACTERISTICS

Dimensions for 1-displacement motor with built-in exchange

43 kg *[95 lb]*

1.10 L *[66 cu.in]*

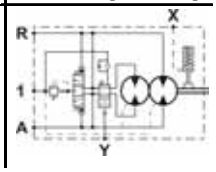


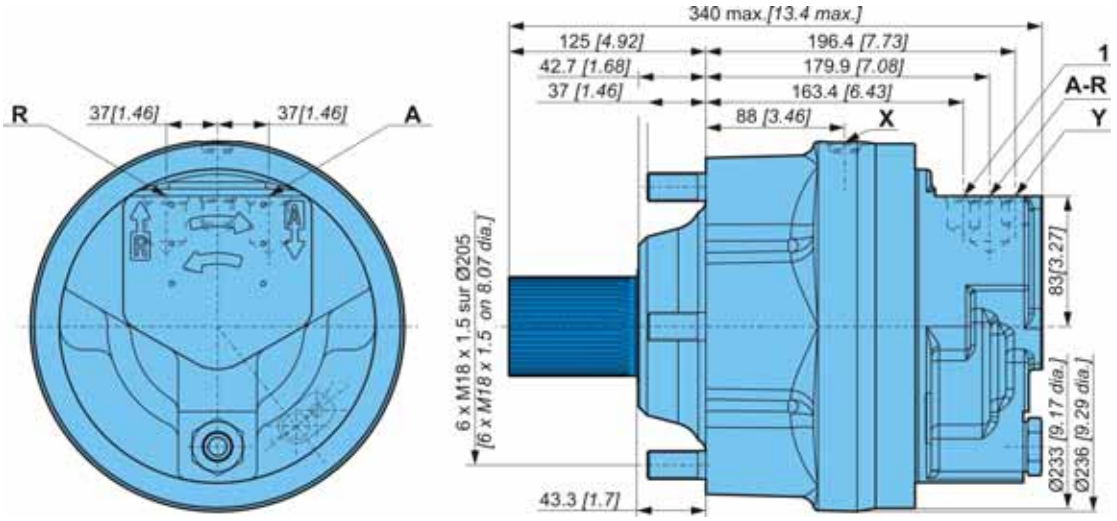


Dimensions for 2-displacement motor with built-in exchange

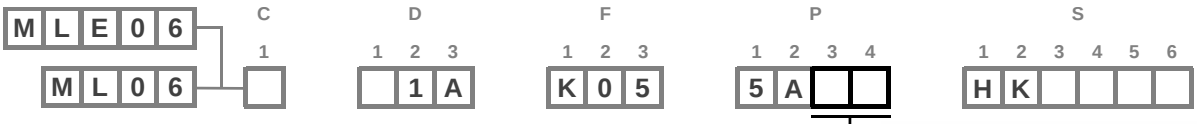
49 kg *[108 lb]*

1.10 L *[66 cu.in]*

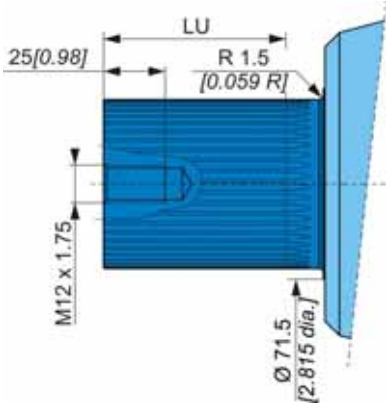




Definition of shaft motor



splines	10	30
Standard	ANSI B92.1-1996	ANSI B92.1-1996
Accuracy class	5	5
Pressure angle	30°	30°
Module.	20/40	20/40
Number of teeth	53	49
LU	67.8	67.8
Outer diameter	68.58	63.5



Consult your Poclain Hydraulics application engineer to check the position of pinions.

Exchange

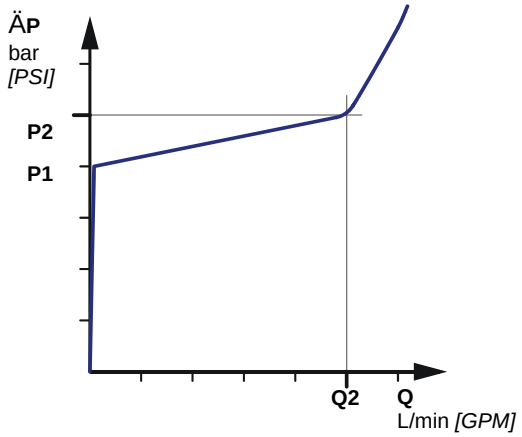
When a coding request is made, you must specify information on the threshold of the selector and the valve.

- Selector spool

Selector threshold bar *[PSI]*	Opening pressure of selector bar *[PSI]*
7 *[101.5]*	7 - 10 *[101.5 - 145]*

- Fitted valve

P1 bar *[PSI]*	Q2 L/min *[GPM]*	P2 bar *[PSI]*
20 *[290]*	12 *[3.17]*	31 *[449.6]*



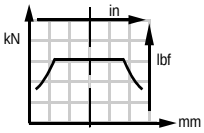
Load curves

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



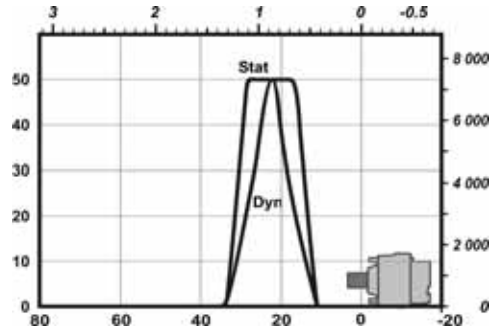
Service life of bearings

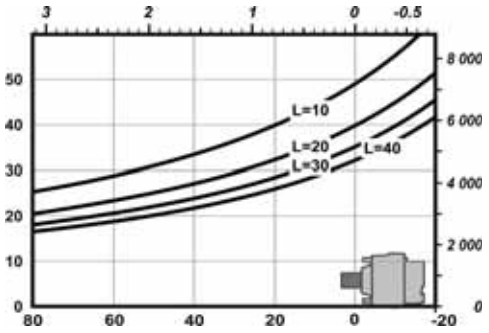
Test conditions :

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

P

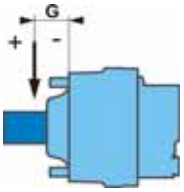
1	2	3	4
5	A		





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.

Load



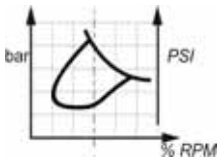
G

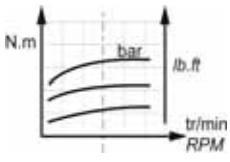
42 [1.65]

Efficiency

Overall efficiency

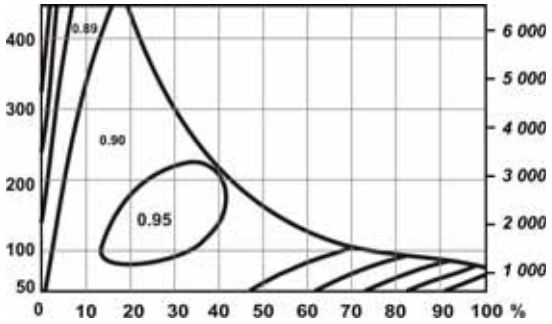
Average values given for guidance for code 2 displacement after 100 hours of operation with HV46 hydraulic fluid at 50°C *[122°F]*.

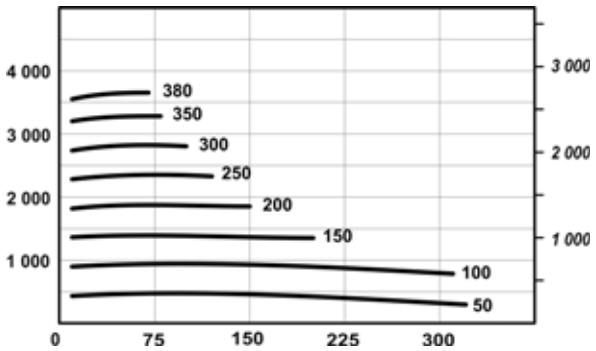




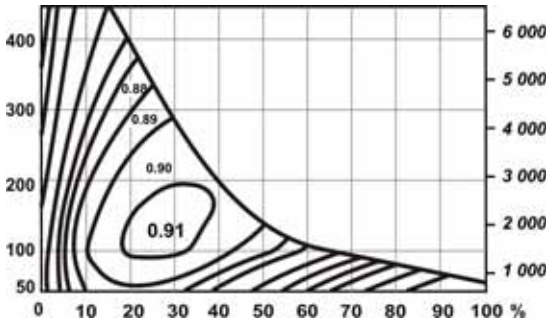
Actual output torque

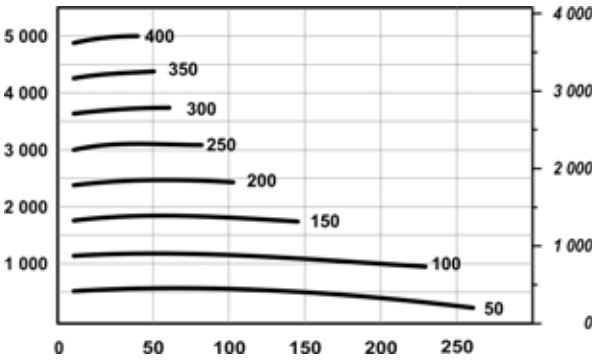
ML06





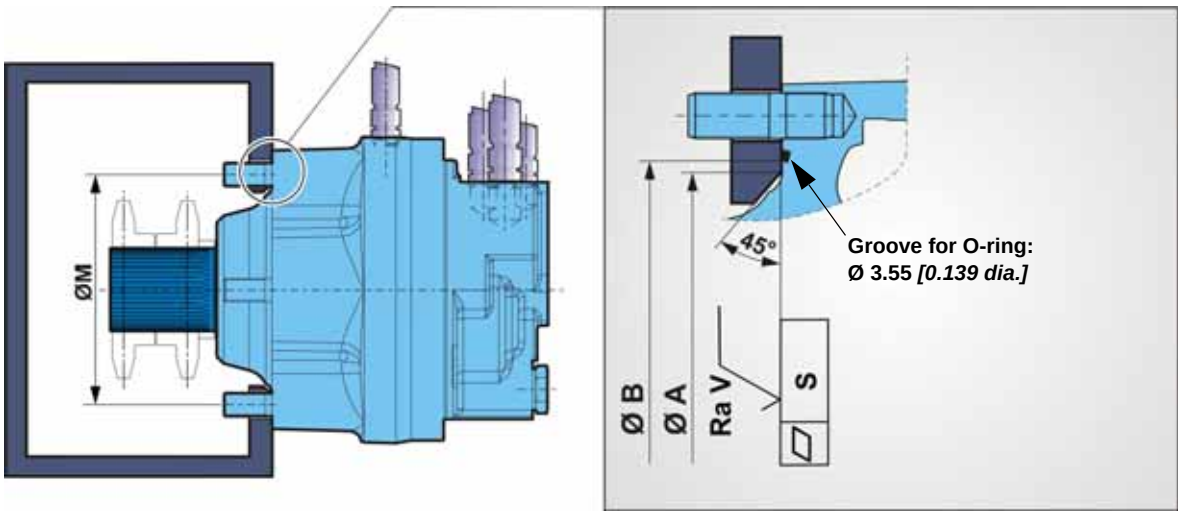
MLE06





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.

Chassis mounting

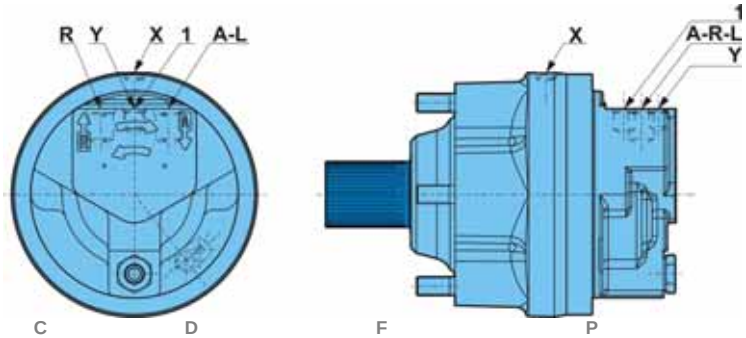
ØM mm *[in]*	**ØU** mm *[in]*	**S** mm *[in]*	**Ra V** µm *[µin]*		**Class of screw**	N.m *[lb.ft]*
205 *[8.07]*	247 *[9.72]*	0.2 *[0.01]*	12.5 *[0.49]*	6 x M18	12.9	550 *[406]*

Installation constraint

To insure optimal operation, the sprocket should be contained in a sealed and self-lubricated housing. see the "Motors Generic installation" brochure No. 801478197L.

Hydraulic connections

Connections



	C	D		F		P		S	
	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
MLE06																	
ML06			1	A	K	0	5	5	A								

	Old standards	Standards	Power supply	2nd displacement	Drainage	Control of brake
			A-R, R-L	Y	1	X
A	SAE J514	ISO 11926-1	1" 1/16 12 UN	3/4" - 16 UNF	7/8" - 14 UNF	3/4" - 16 UNF

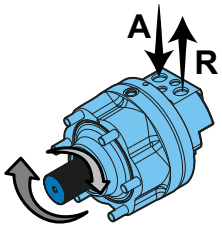
To find the connections' tightening torques, see the brochure "Installation guide" N° 801478197L.

You are strongly advised to use the fluids specified in brochure "Installation guide" N° 801478197L.

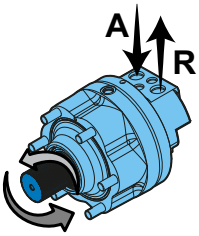
Do not put either a check valve or a poppet valve on the pilot lines (parking brake and displacement change) between the charge pump and the pilot valve. Do not use a piloting valve with integrated check valve.

Specification of the motor's rotation direction

	C	D		F		P		S	
	1	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	6
MLE06																	
ML06			1	A	K	0	5	5	A			H	K				



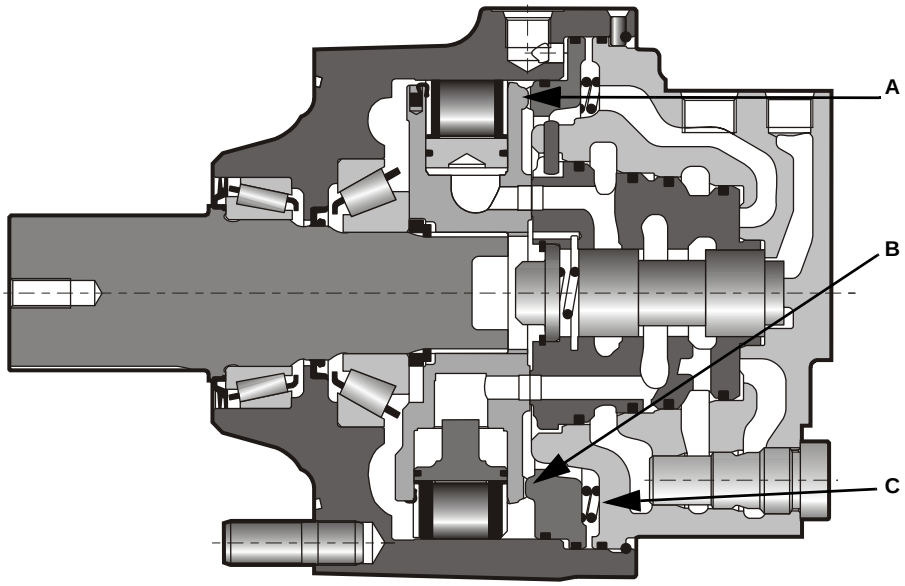
2-displacement valving (Clockwise) — **E**



2-displacement valving (Counterclockwise) — **H**

Immobilisator

	C	D	F	P	S
	1	1 2 3	1 2 3	1 2 3 4	1 2 3 4 5 6
MLE06			K 0 5		
ML06		1 A		5 A	H K



Brake principle
The parking brake consists of two parts, one static (**A**), one rotating (**B**), each borded by a row of teeth. In the absence of pressure, the (**C**) spring maintains part A in contact with the cylinder-block, thus immobilizing it.

	K 0 5
Parking brake torque with 0 bars in the housing (new brake)	4 500 Nm *[3 319 lb.ft]*
Minimum brake release pressure	12 bar *[174 PSI]*
Maximum brake release pressure	32 bar *[464 PSI]*
Capacity	13.5 cm³ *[0.82 cu.in]*
Brake release capacity	23 cm³ *[1.40 cu.in]*

Do not pilot the pump when the brake is engaged.

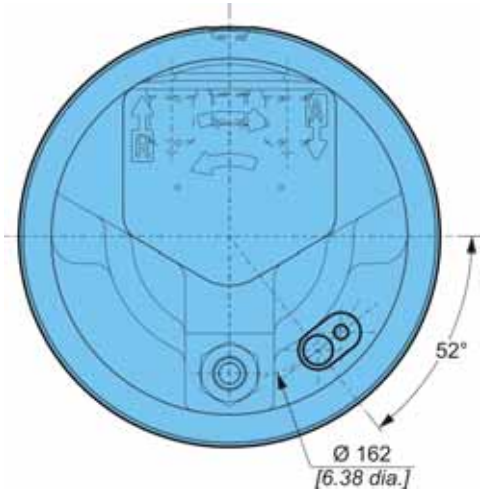
OPTIONS

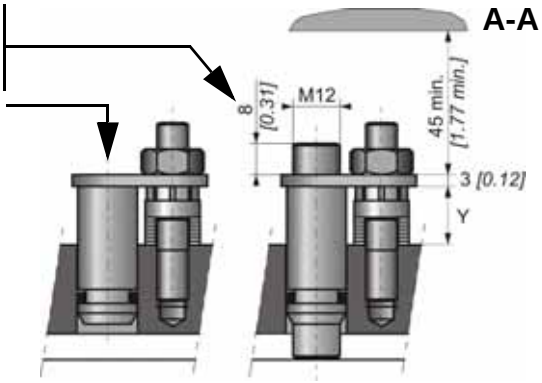
	C	D	F	P	S
	1	1 2 3	1 2 3	1 2 3 4	1 2 3 4 5 6
MLE06					
ML06		1A	K05	5A	HK

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

2 - S - Q - 8 - Installed speed sensor or predisposition

Designation	C
T4 speed sensor (without rotation direction)	2
TR speed sensor (digital rotation direction)	S
TD speed sensor (two phase shifted frequencies)	Q
Predisposition for speed sensor	8





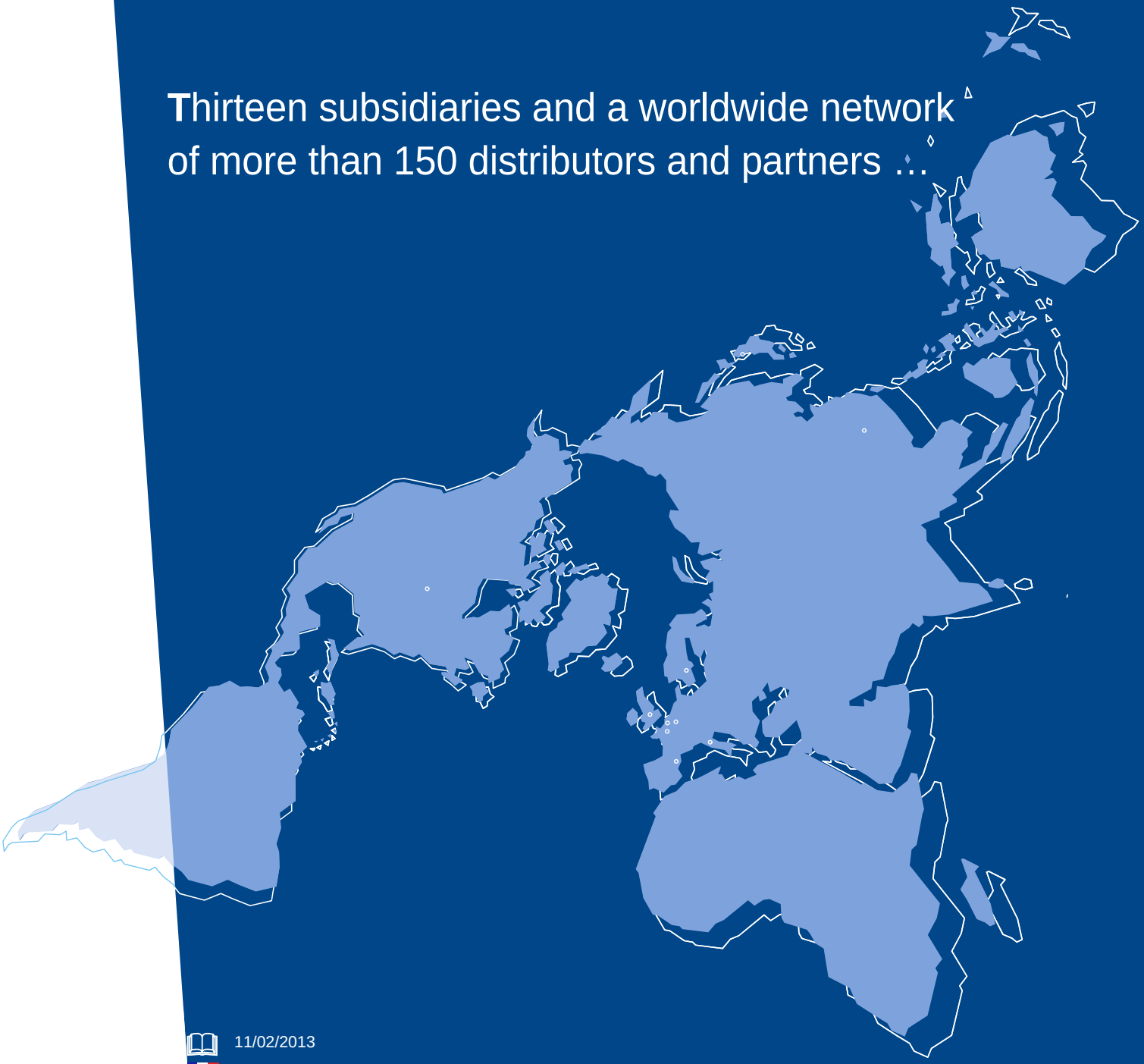
Max. length Y= 13.6

Standard number of pulses per revolution= 62

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.

Thirteen subsidiaries and a worldwide network of more than 150 distributors and partners ...



11/02/2013

A02303D

A02305F

Not available

Not available

Not available

A40103Q

Not available

Not available

POCLAIN HYDRAULICS

Poclain Driving Values for the Future

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www.poclain-hydraulics.com