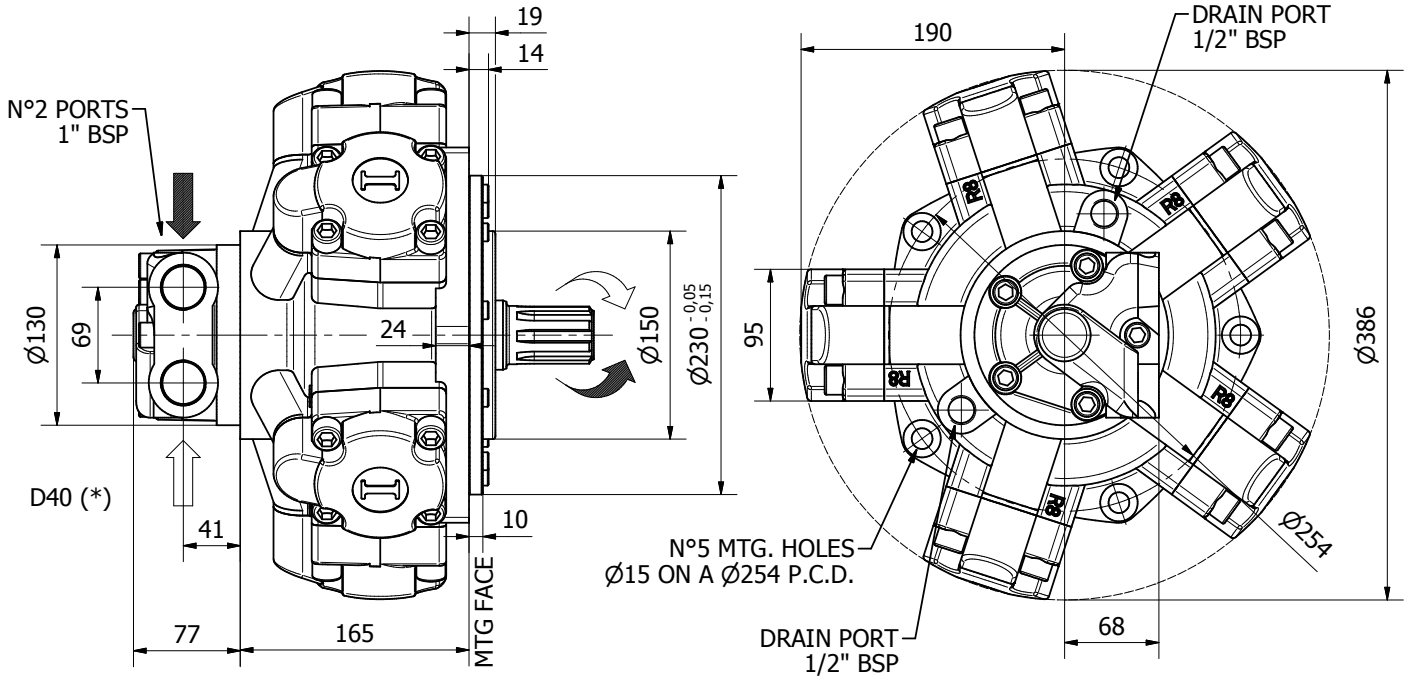
# R8M H3


| | |
|---|---|
| R8M H3 | Pag. 72 - 73 |
| R8M H3/C | Pag. 74 - 75 |
| R8M H3/B30 | Pag. 76 - 77 |
| R8M 800 H3 | Pag. 78 - 79 |
| R8M 800/N H3 | Pag. 80 - 81 |
| R8M H3/GM3 | Pag. 82 - 83 |
| R8M H3/S | Pag. 84 - 85 |
| R8M H3 - PERFORMANCE CURVES | Pag. 86 - 90 |
| R8M H3 - ORDERING CODE | Pag. 91 |


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# R8M H3

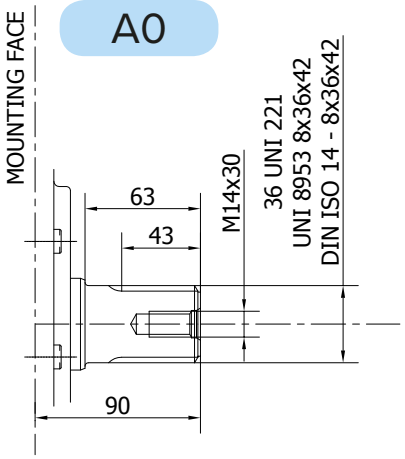



# TECHNICAL DATA

| | | 350 | 400 | 450 | 500 | 600 | 650 | 700 |
|---|---|---|---|---|---|---|---|---|
| DISPLACEMENT | [cc] | 349 | 397 | 452 | 491 | 594 | 660 | 707 |
| SPECIFIC TORQUE | [Nm/bar] | 5.6 | 6.3 | 7.2 | 7.8 | 9.4 | 10.5 | 11.2 |
| MAX. CONT. PRESSURE | [bar] | 270 | 270 | 270 | 270 | 270 | 250 | 250 |
| HYDROSTATIC TEST PRESSURE | [bar] | 420 | 420 | 420 | 420 | 420 | 420 | 420 |
| MAX. CONT. SPEED | [rpm] | 630 | 600 | 600 | 600 | 550 | 500 | 450 |
| PEAK SPEED (***) | [rpm] | 700 | 680 | 680 | 680 | 630 | 580 | 500 |
| MAX. CONT. POWER (****) | [kW] | 47 | 47 | 47 | 47 | 47 | 47 | 47 |
| MAX. POWER | [kW] | 70 | 70 | 70 | 70 | 70 | 70 | 70 |
| MAX. CASE PRESSURE | [bar] | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| DRY WEIGHT | [kg] | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| TEMPERATURE RANGE (**) | [°C] | -30÷70 | -30÷70 | -30÷70 | -30÷70 | -30÷70 | -30÷70 | -30÷70 |

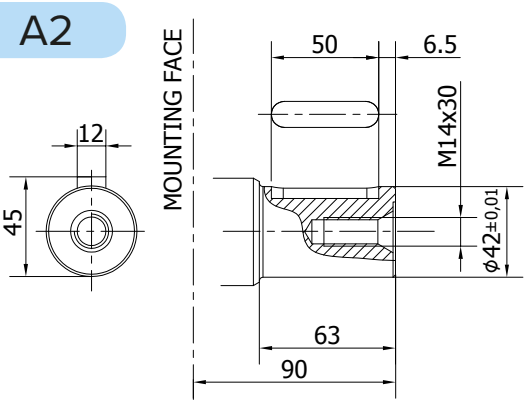
- (*) The standard distributor (D40) is shown. Please refer to distributors section (pag. 178-179) for differents distributor interfaces.
- (**) Please refer to the hydraulic fluid recommendations (pag. 10-11).
- (***) Do not exceed maximum power.
- (****) For motor operation with a continuous duty cycle at maximum continuous power the flushing is usually required (see pag. 13). For more information please contact our technical department.

## A0



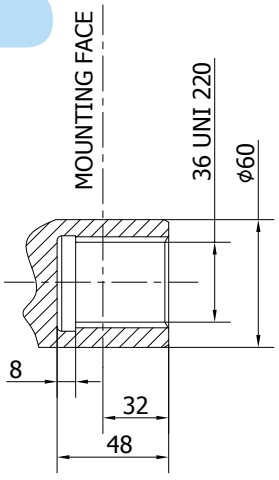

Available spline billet: SB3

## A2




NOT AVAILABLE FOR 350 cc

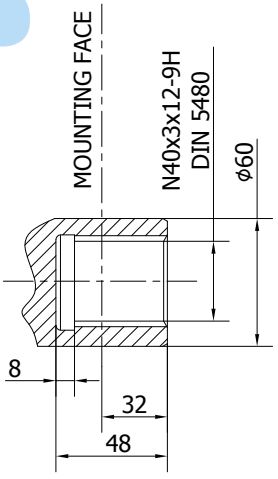
## A3




Available spline bar: B8078

NOT AVAILABLE FOR 350 cc

## A31

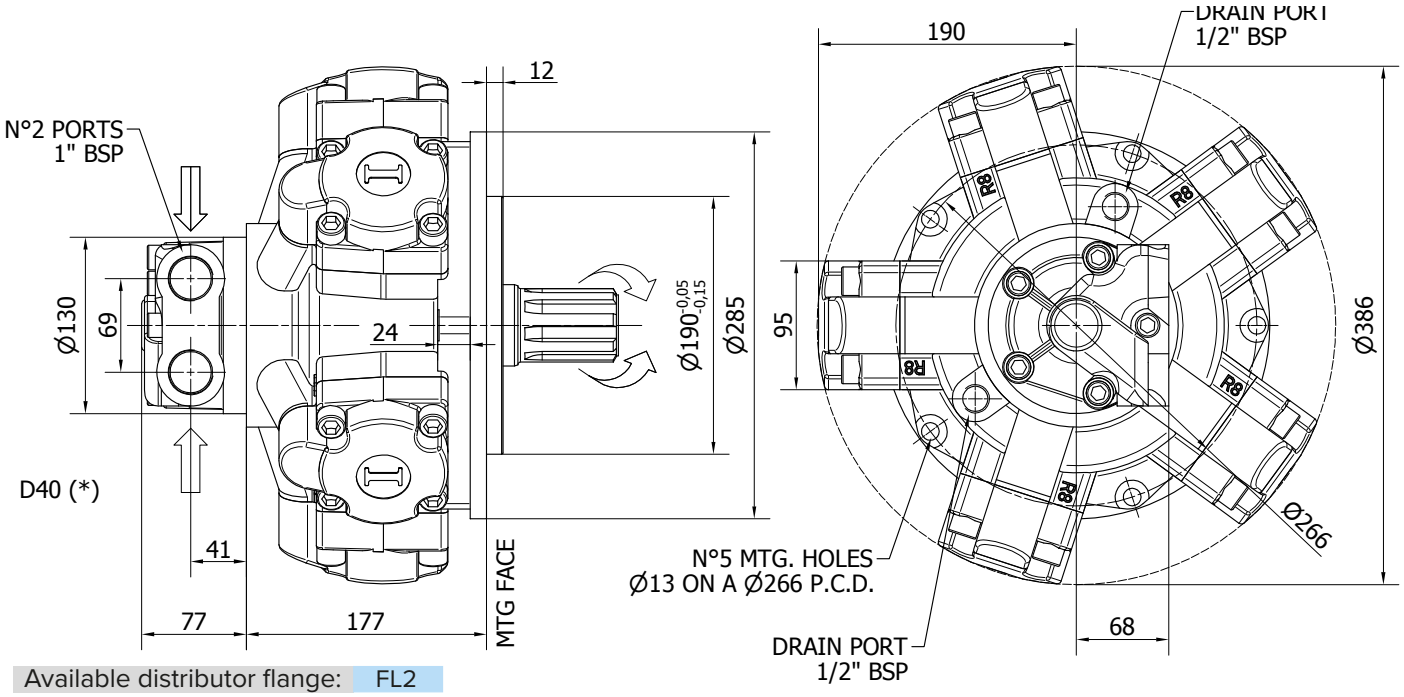



Available spline bar: B8076

NOT AVAILABLE FOR 350 cc

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# R8M H3/C




Available distributor flange: FL2

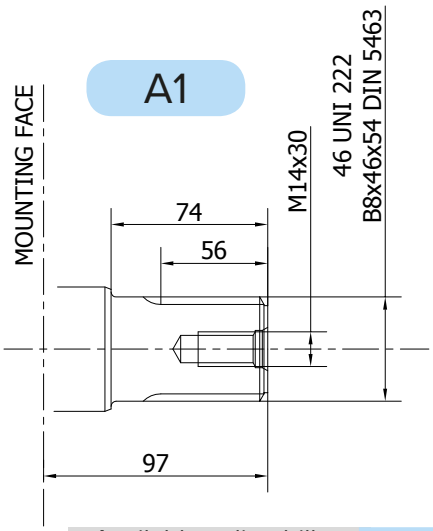
Refer to page 190-191
(distributor fitting D47)

# TECHNICAL DATA

| | | 400 | 450 | 500 | 600 | 650 | 700 |
|---|---|---|---|---|---|---|---|
| DISPLACEMENT | [cc] | 397 | 452 | 491 | 594 | 660 | 707 |
| SPECIFIC TORQUE | [Nm/bar] | 6.3 | 7.2 | 7.8 | 9.4 | 10.5 | 11.2 |
| MAX. CONT. PRESSURE | [bar] | 270 | 270 | 270 | 270 | 250 | 250 |
| HYDROSTATIC TEST PRESSURE | [bar] | 420 | 420 | 420 | 420 | 420 | 420 |
| MAX. CONT. SPEED | [rpm] | 600 | 600 | 600 | 550 | 500 | 450 |
| PEAK SPEED (***) | [rpm] | 680 | 680 | 680 | 630 | 580 | 500 |
| MAX. CONT. POWER (****) | [kW] | 47 | 47 | 47 | 47 | 47 | 47 |
| MAX. POWER | [kW] | 70 | 70 | 70 | 70 | 70 | 70 |
| MAX. CASE PRESSURE | [bar] | 6 | 6 | 6 | 6 | 6 | 6 |
| DRY WEIGHT | [kg] | 68 | 68 | 68 | 68 | 68 | 68 |
| TEMPERATURE RANGE (**) | [°C] | -30÷70 | -30÷70 | -30÷70 | -30÷70 | -30÷70 | -30÷70 |

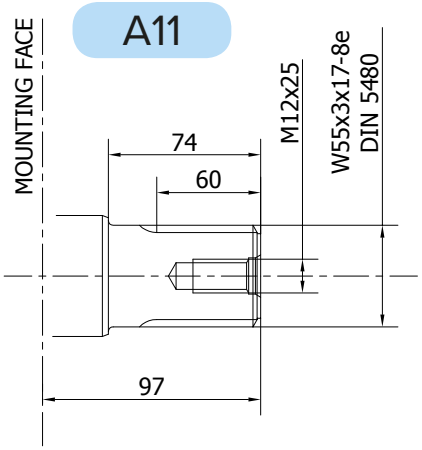
- (*) The standard distributor (D40) is shown. Please refer to distributors section (pag. 178-179) for differents distributor interfaces.
- (**) Please refer to the hydraulic fluid recommendations (pag. 10-11).
- (***) Do not exceed maximum power.
- (****) For motor operation with a continuous duty cycle at maximum continuous power the flushing is usually required (see pag. 13). For more information please contact our technical department.

## A1



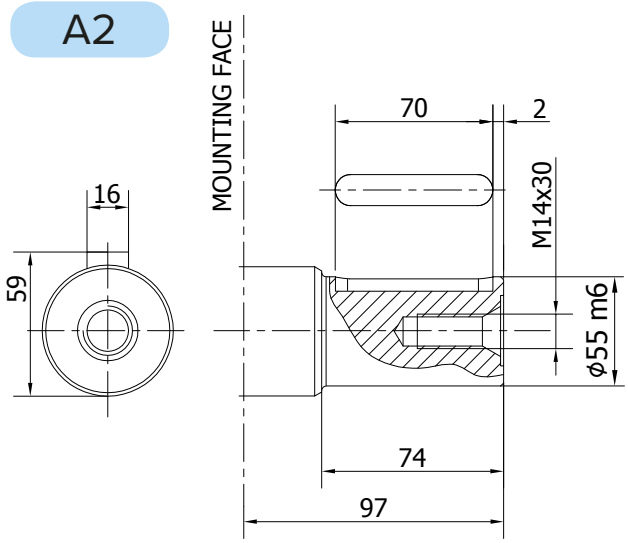

Available spline billet: SB5

## A11



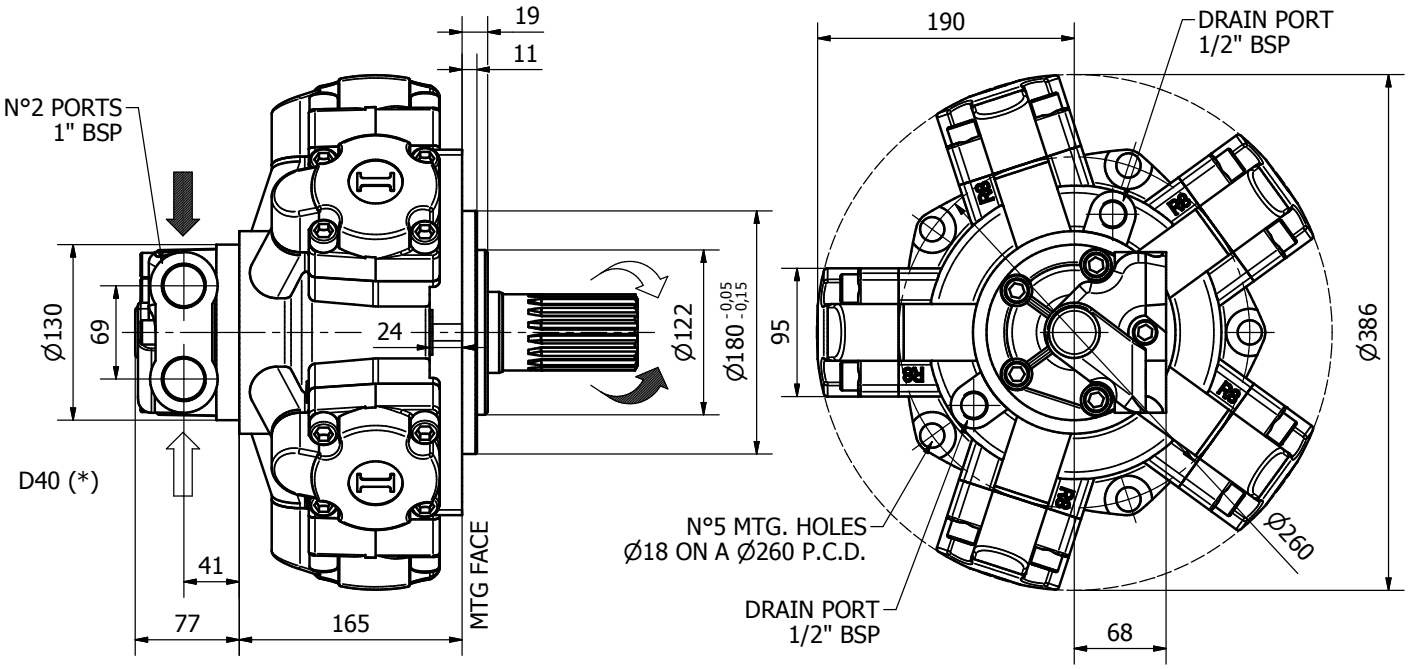

Available spline billet: SB30

## A2




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# R8M H3/B30



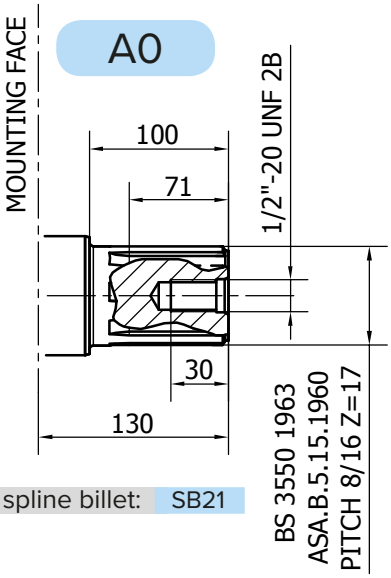

# TECHNICAL DATA

| | | 400 | 450 | 500 | 600 | 650 | 700 |
|---|---|---|---|---|---|---|---|
| DISPLACEMENT | [cc] | 397 | 452 | 491 | 594 | 660 | 707 |
| SPECIFIC TORQUE | [Nm/bar] | 6.3 | 7.2 | 7.8 | 9.4 | 10.5 | 11.2 |
| MAX. CONT. PRESSURE | [bar] | 270 | 270 | 270 | 270 | 250 | 250 |
| HYDROSTATIC TEST PRESSURE | [bar] | 420 | 420 | 420 | 420 | 420 | 420 |
| MAX. CONT. SPEED | [rpm] | 600 | 600 | 600 | 550 | 500 | 450 |
| PEAK SPEED (***) | [rpm] | 680 | 680 | 680 | 630 | 580 | 500 |
| MAX. CONT. POWER (****) | [kW] | 47 | 47 | 47 | 47 | 47 | 47 |
| MAX. POWER | [kW] | 70 | 70 | 70 | 70 | 70 | 70 |
| MAX. CASE PRESSURE | [bar] | 6 | 6 | 6 | 6 | 6 | 6 |
| DRY WEIGHT | [kg] | 68 | 68 | 68 | 68 | 68 | 68 |
| TEMPERATURE RANGE (**) | [°C] | -30÷70 | -30÷70 | -30÷70 | -30÷70 | -30÷70 | -30÷70 |

- (*) The standard distributor (D40) is shown. Please refer to distributors section (pag. 178-179) for differents distributor interfaces.
- (**) Please refer to the hydraulic fluid recommendations (pag. 10-11).
- (***) Do not exceed maximum power.
- (****) For motor operation with a continuous duty cycle at maximum continuous power the flushing is usually required (see pag. 13). For more information please contact our technical department.

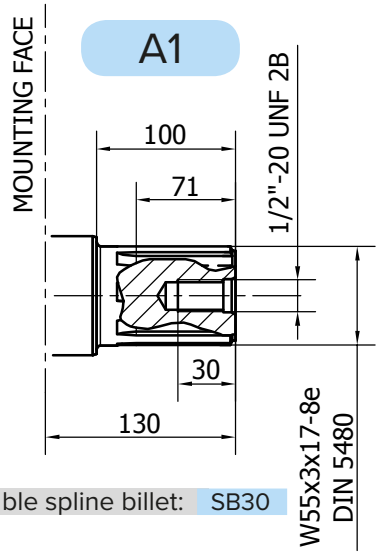
# SHAFTS

## A0



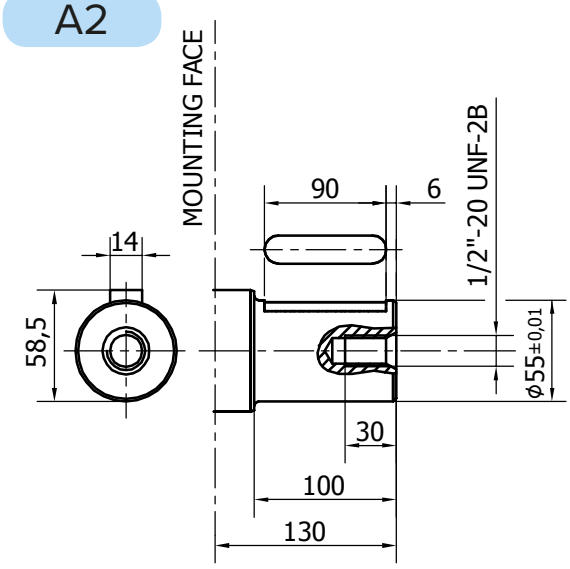

Available spline billet: SB21

## A1

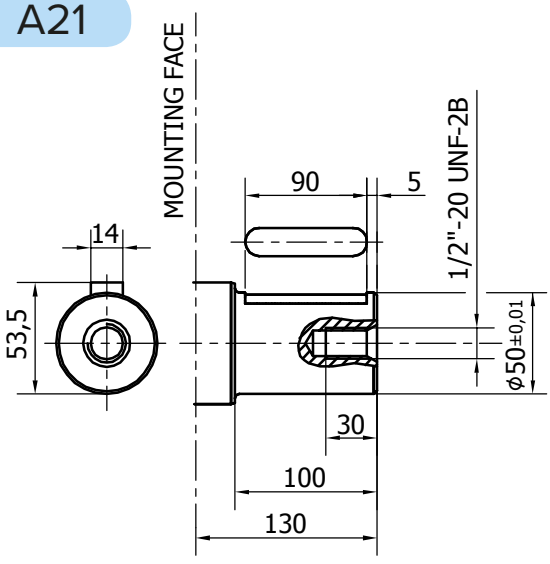



Available spline billet: SB30

## A2

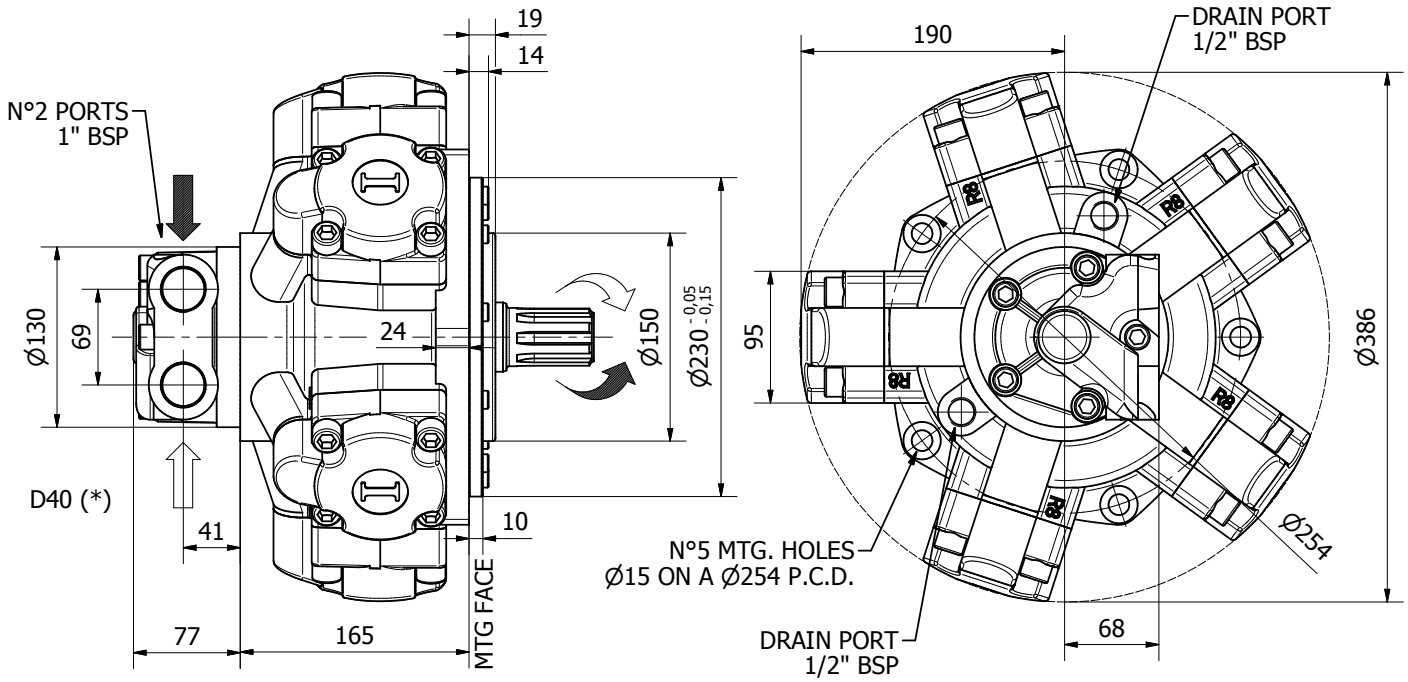



## A21




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# R8M 800 H3



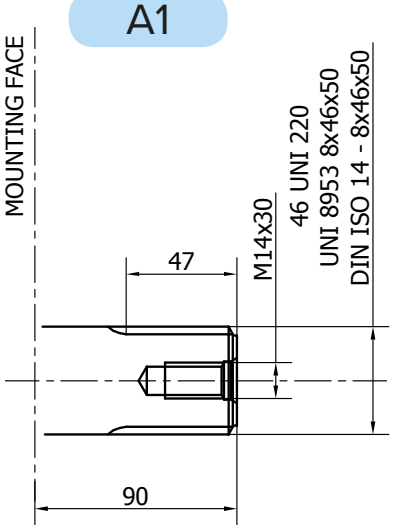

# TECHNICAL DATA

| | | 800 |
|---|---|---|
| DISPLACEMENT | [cc] | 791 |
| SPECIFIC TORQUE | [Nm/bar] | 12.6 |
| MAX. CONT. PRESSURE | [bar] | 250 |
| HYDROSTATIC TEST PRESSURE | [bar] | 420 |
| MAX. CONT. SPEED | [rpm] | 400 |
| PEAK SPEED (***) | [rpm] | 450 |
| MAX. CONT. POWER (****) | [kW] | 47 |
| MAX. POWER | [kW] | 70 |
| MAX. CASE PRESSURE | [bar] | 6 |
| DRY WEIGHT | [kg] | 68 |
| TEMPERATURE RANGE (**) | [°C] | -30÷70 |

- (*) The standard distributor (D40) is shown. Please refer to distributors section (pag. 178-179) for differents distributor interfaces.
- (**) Please refer to the hydraulic fluid recommendations (pag. 10-11).
- (***) Do not exceed maximum power.
- (****) For motor operation with a continuous duty cycle at maximum continuous power the flushing is usually required (see pag. 13). For more information please contact our technical department.

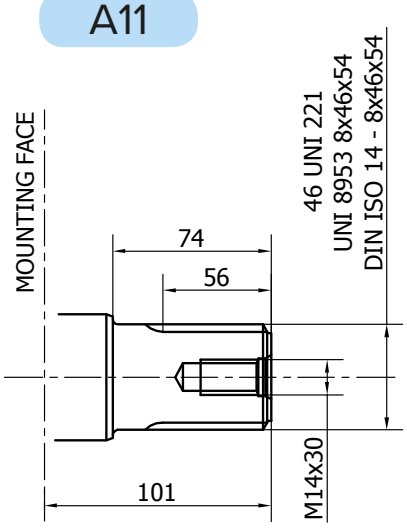
# SHAFTS

## A1



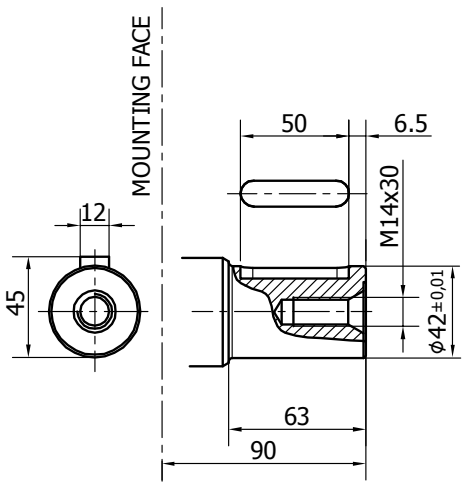

Available spline billet: SB4

## A11

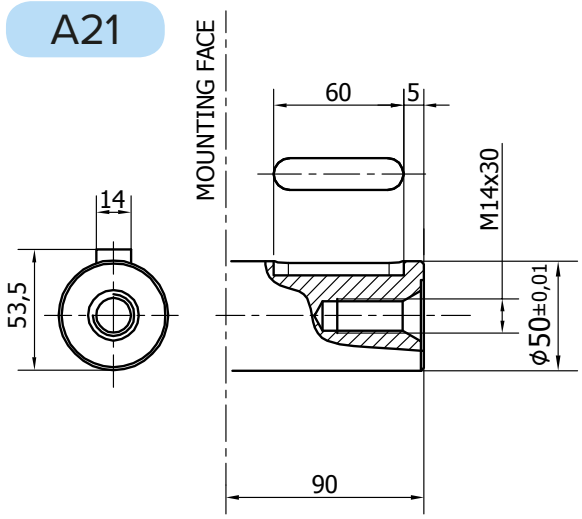



Available spline billet: SB5

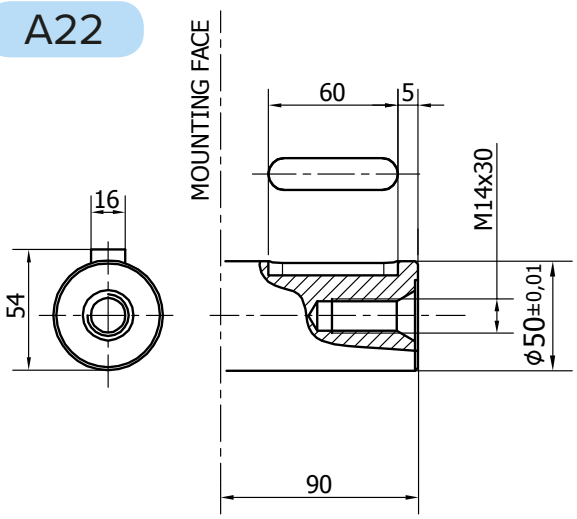
## A2




## A21

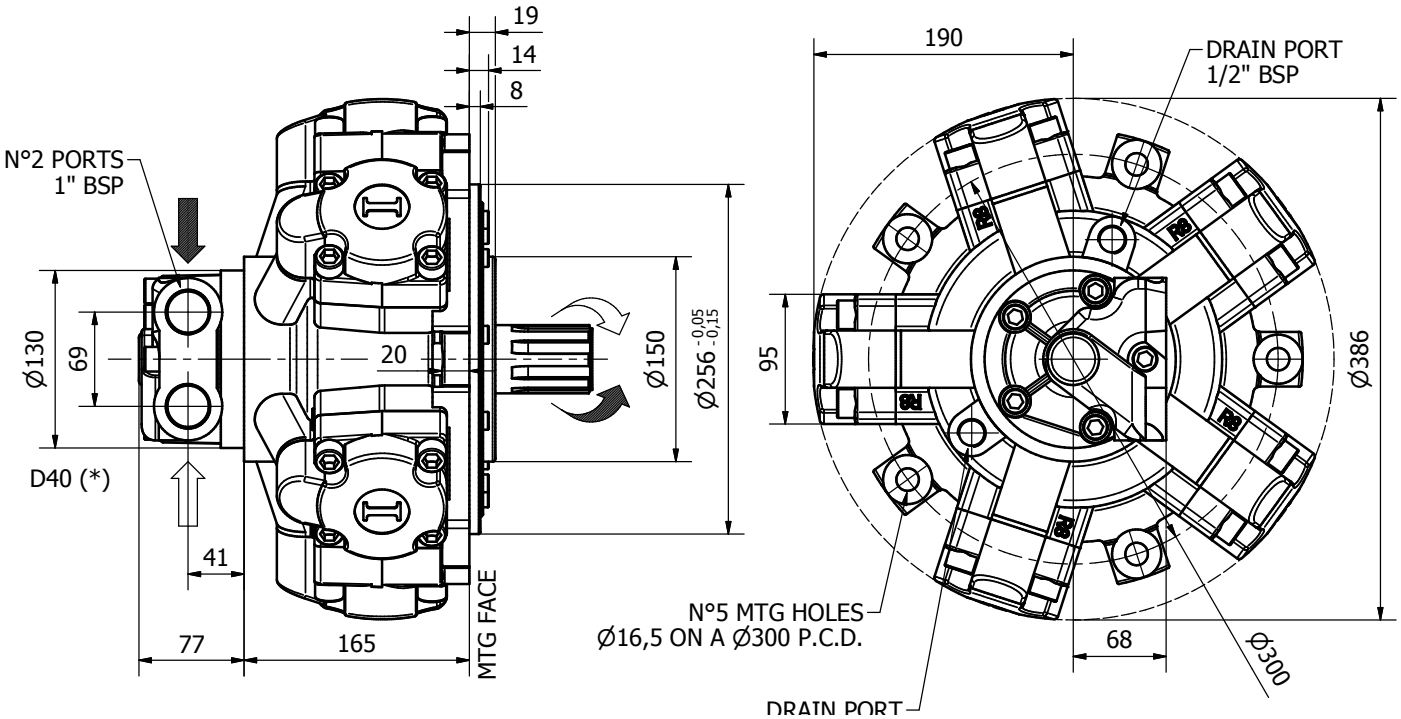



## A22




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# R8M 800/N H3

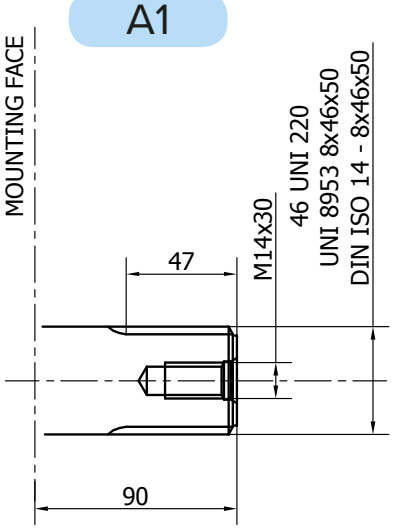



# TECHNICAL DATA

| | | 800 |
|---|---|---|
| DISPLACEMENT | [cc] | 791 |
| SPECIFIC TORQUE | [Nm/bar] | 12.6 |
| MAX. CONT. PRESSURE | [bar] | 250 |
| HYDROSTATIC TEST PRESSURE | [bar] | 420 |
| MAX. CONT. SPEED | [rpm] | 400 |
| PEAK SPEED (***) | [rpm] | 450 |
| MAX. CONT. POWER (****) | [kW] | 47 |
| MAX. POWER | [kW] | 70 |
| MAX. CASE PRESSURE | [bar] | 6 |
| DRY WEIGHT | [kg] | 68 |
| TEMPERATURE RANGE (**) | [°C] | -30÷70 |

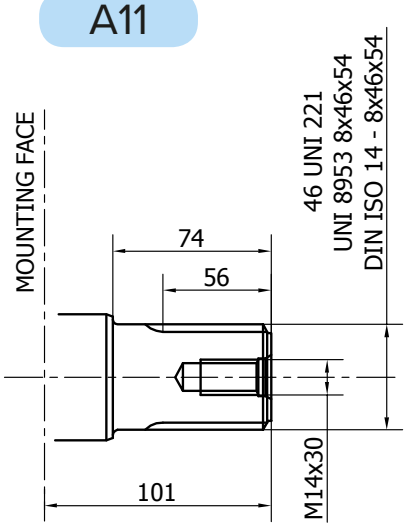
- (*) The standard distributor (D40) is shown. Please refer to distributors section (pag. 178-179) for differents distributor interfaces.
- (**) Please refer to the hydraulic fluid recommendations (pag. 10-11).
- (***) Do not exceed maximum power.
- (****) For motor operation with a continuous duty cycle at maximum continuous power the flushing is usually required (see pag. 13). For more information please contact our technical department.

## A1



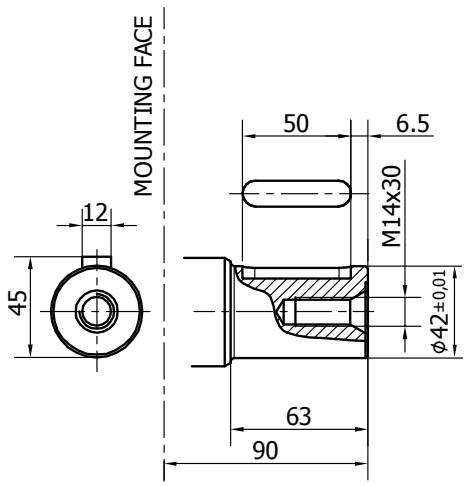

Available spline billet: SB4

## A11

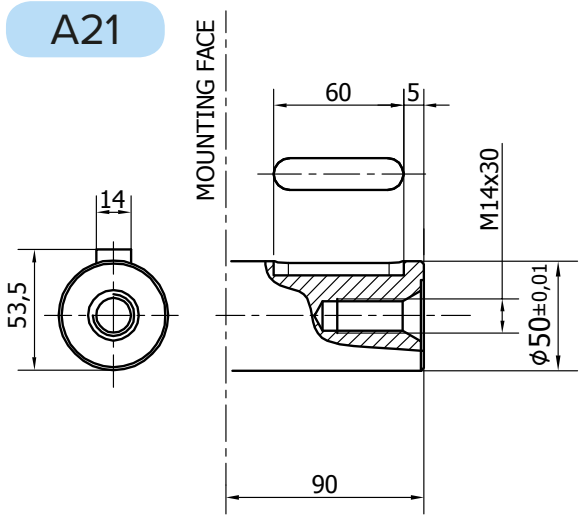



Available spline billet: SB5

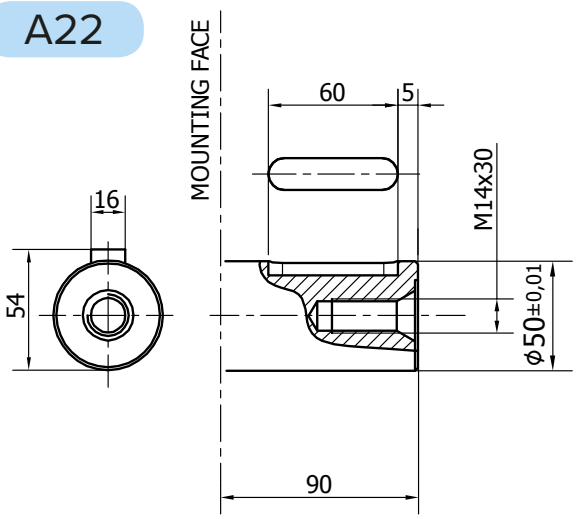
## A2




## A21

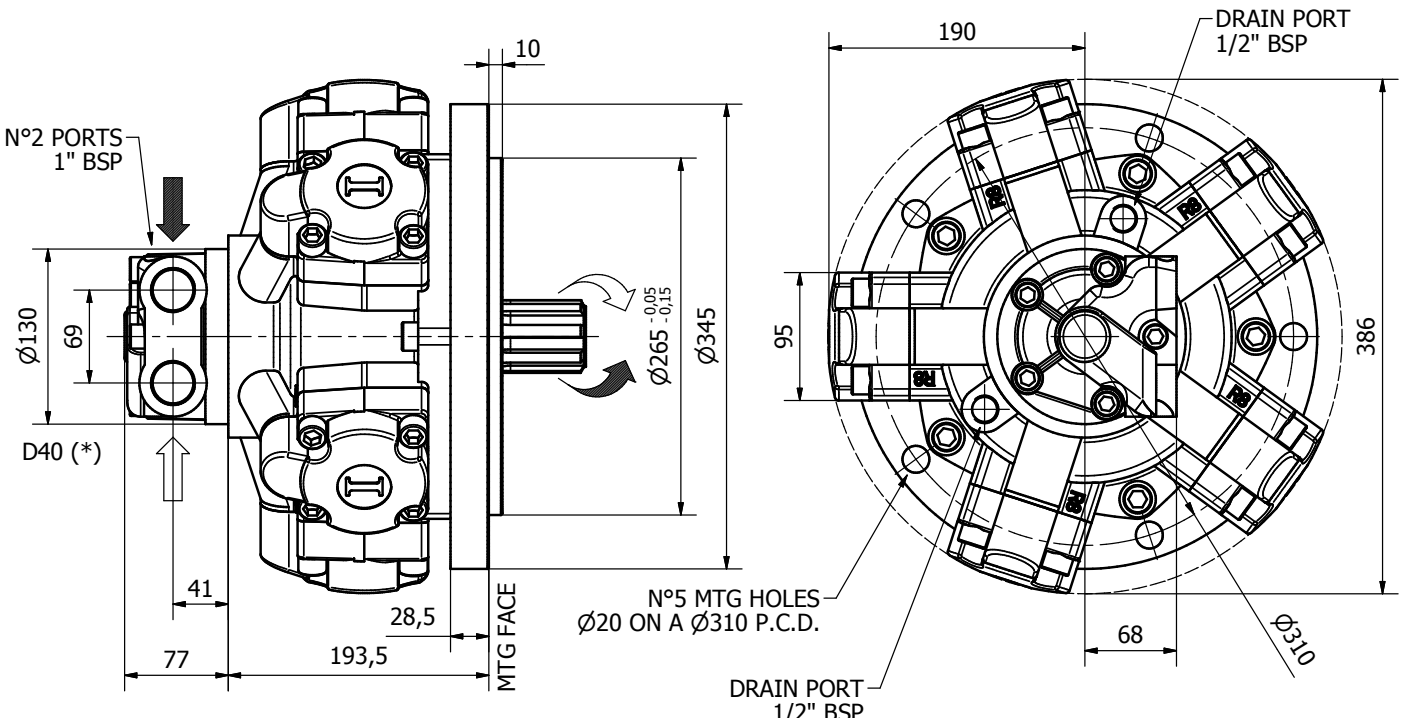



## A22




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# R8M H3/GM3

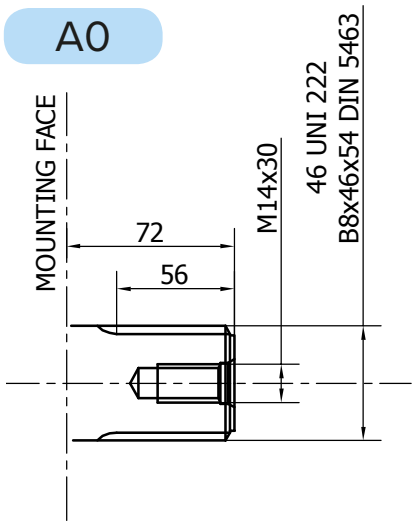



# TECHNICAL DATA

| | | 400 | 450 | 500 | 600 | 650 | 700 |
|---|---|---|---|---|---|---|---|
| DISPLACEMENT | [cc] | 397 | 452 | 491 | 594 | 660 | 707 |
| SPECIFIC TORQUE | [Nm/bar] | 6.3 | 7.2 | 7.8 | 9.4 | 10.5 | 11.2 |
| MAX. CONT. PRESSURE | [bar] | 270 | 270 | 270 | 270 | 250 | 250 |
| HYDROSTATIC TEST PRESSURE | [bar] | 420 | 420 | 420 | 420 | 420 | 420 |
| MAX. CONT. SPEED | [rpm] | 600 | 600 | 600 | 550 | 500 | 450 |
| PEAK SPEED (***) | [rpm] | 680 | 680 | 680 | 630 | 580 | 500 |
| MAX. CONT. POWER (****) | [kW] | 47 | 47 | 47 | 47 | 47 | 47 |
| MAX. POWER | [kW] | 70 | 70 | 70 | 70 | 70 | 70 |
| MAX. CASE PRESSURE | [bar] | 6 | 6 | 6 | 6 | 6 | 6 |
| DRY WEIGHT | [kg] | 68 | 68 | 68 | 68 | 68 | 68 |
| TEMPERATURE RANGE (**) | [°C] | -30÷70 | -30÷70 | -30÷70 | -30÷70 | -30÷70 | -30÷70 |

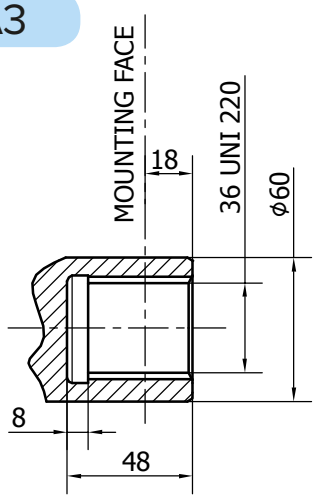
- (*) The standard distributor (D40) is shown. Please refer to distributors section (pag. 178-179) for differents distributor interfaces.
- (**) Please refer to the hydraulic fluid recommendations (pag. 10-11).
- (***) Do not exceed maximum power.
- (****) For motor operation with a continuous duty cycle at maximum continuous power the flushing is usually required (see pag. 13). For more information please contact our technical department.

## A0



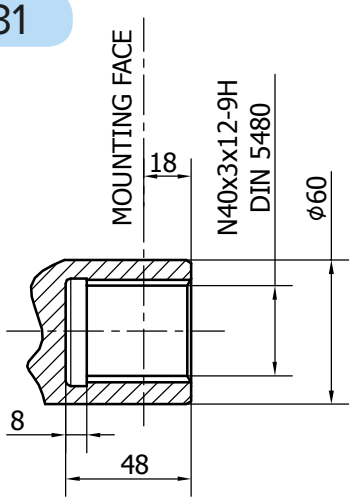

Available spline billet: SB5

## A3




Available spline bar: B8078

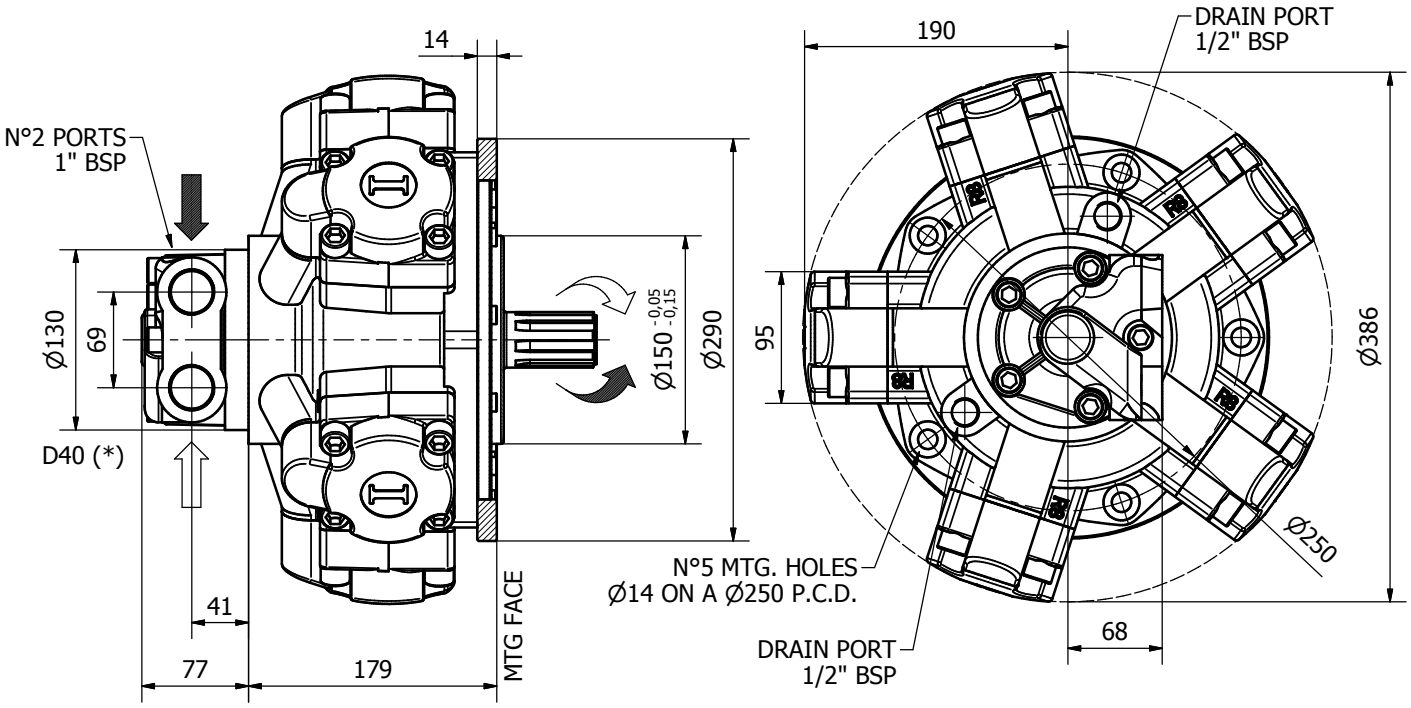
## A31




Available spline bar: B8076

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# R8M H3/S

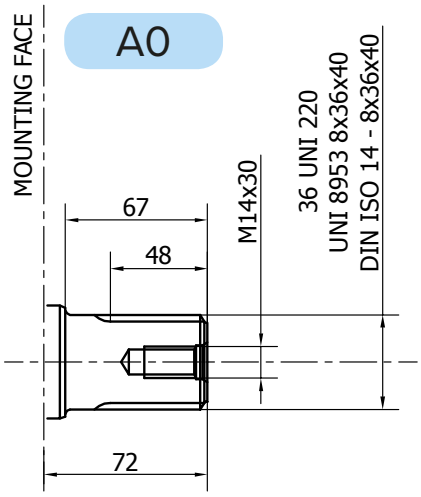



# TECHNICAL DATA

| | | 400 | 450 | 500 | 600 | 650 | 700 |
|---|---|---|---|---|---|---|---|
| DISPLACEMENT | [cc] | 397 | 452 | 491 | 594 | 660 | 707 |
| SPECIFIC TORQUE | [Nm/bar] | 6.3 | 7.2 | 7.8 | 9.4 | 10.5 | 11.2 |
| MAX. CONT. PRESSURE | [bar] | 270 | 270 | 270 | 270 | 250 | 250 |
| HYDROSTATIC TEST PRESSURE | [bar] | 420 | 420 | 420 | 420 | 420 | 420 |
| MAX. CONT. SPEED | [rpm] | 600 | 600 | 600 | 550 | 500 | 450 |
| PEAK SPEED (***) | [rpm] | 680 | 680 | 680 | 630 | 580 | 500 |
| MAX. CONT. POWER (****) | [kW] | 47 | 47 | 47 | 47 | 47 | 47 |
| MAX. POWER | [kW] | 70 | 70 | 70 | 70 | 70 | 70 |
| MAX. CASE PRESSURE | [bar] | 6 | 6 | 6 | 6 | 6 | 6 |
| DRY WEIGHT | [kg] | 68 | 68 | 68 | 68 | 68 | 68 |
| TEMPERATURE RANGE (**) | [°C] | -30÷70 | -30÷70 | -30÷70 | -30÷70 | -30÷70 | -30÷70 |

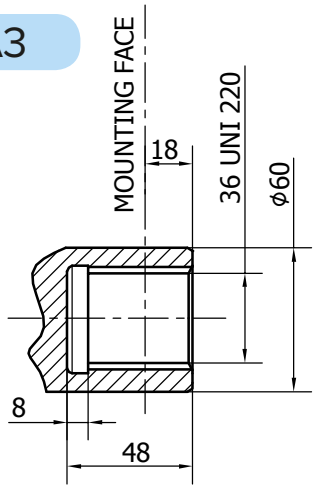
- (*) The standard distributor (D40) is shown. Please refer to distributors section (pag. 178-179) for differents distributor interfaces.
- (**) Please refer to the hydraulic fluid recommendations (pag. 10-11).
- (***) Do not exceed maximum power.
- (****) For motor operation with a continuous duty cycle at maximum continuous power the flushing is usually required (see pag. 13). For more information please contact our technical department.

## A0



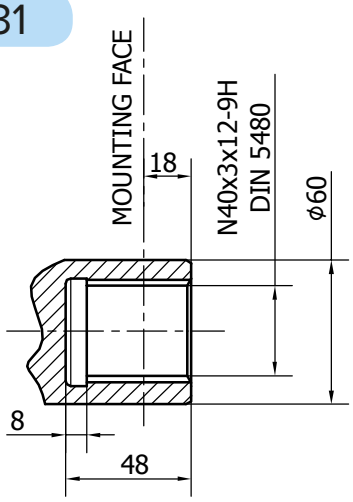

Available spline billet: SB3

## A3




Available spline bar: B8078

## A31

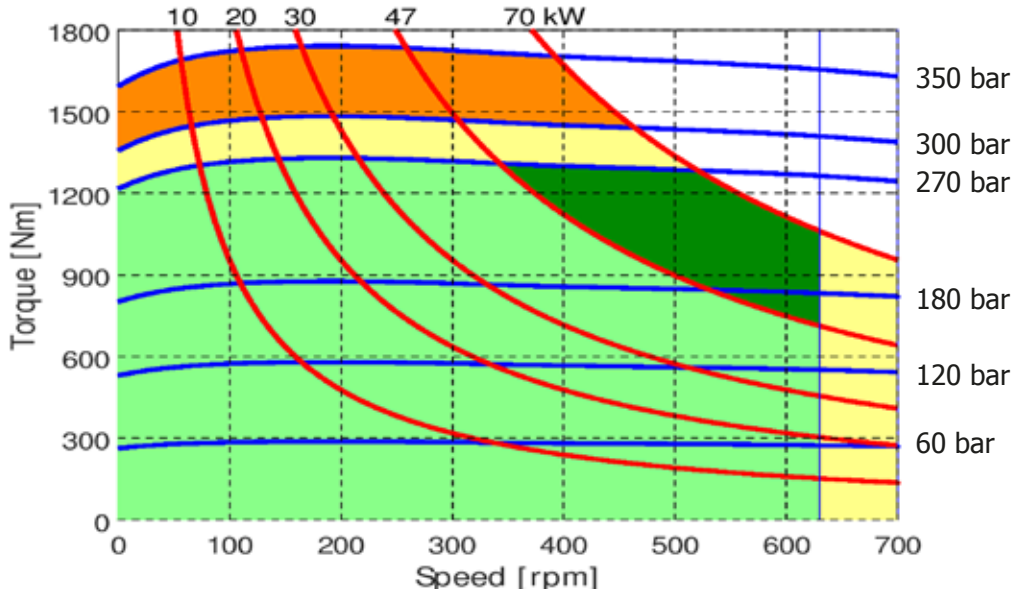



Available spline bar: B8076

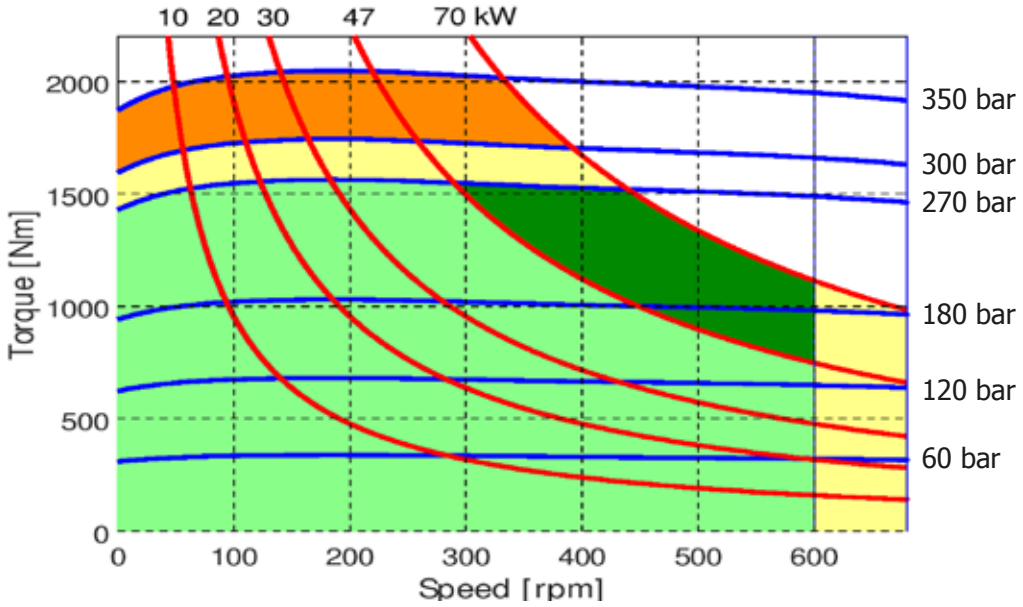
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# R8M H3 - PERFORMANCE CURVES

## R8M 350 H3




## R8M 400 H3




Continuous operation

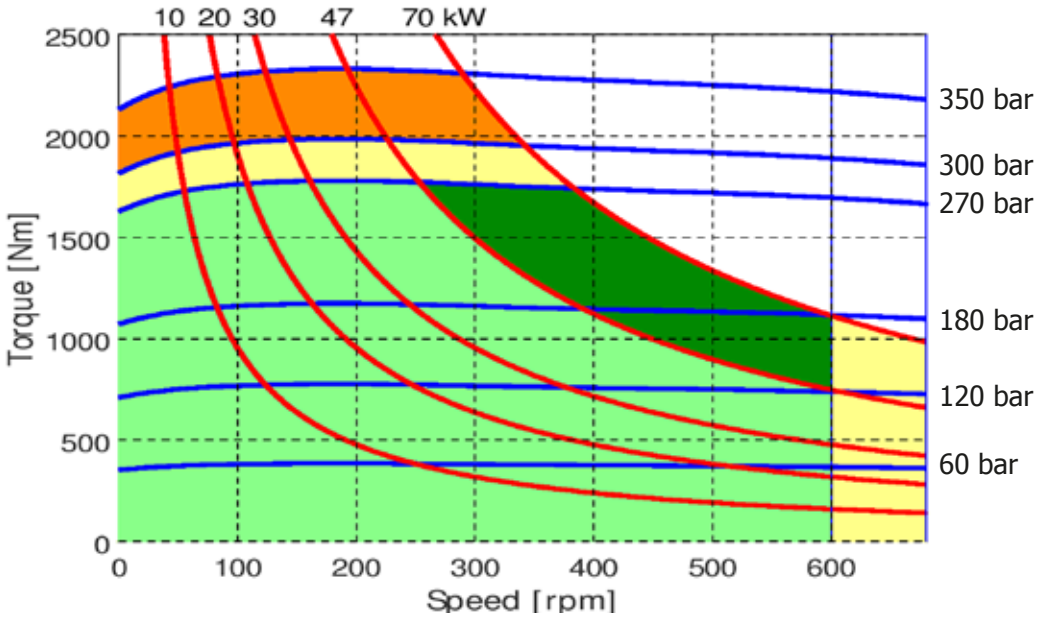
Continuous operation with flushing or intermittent operation (see below for intermittent operation)

Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

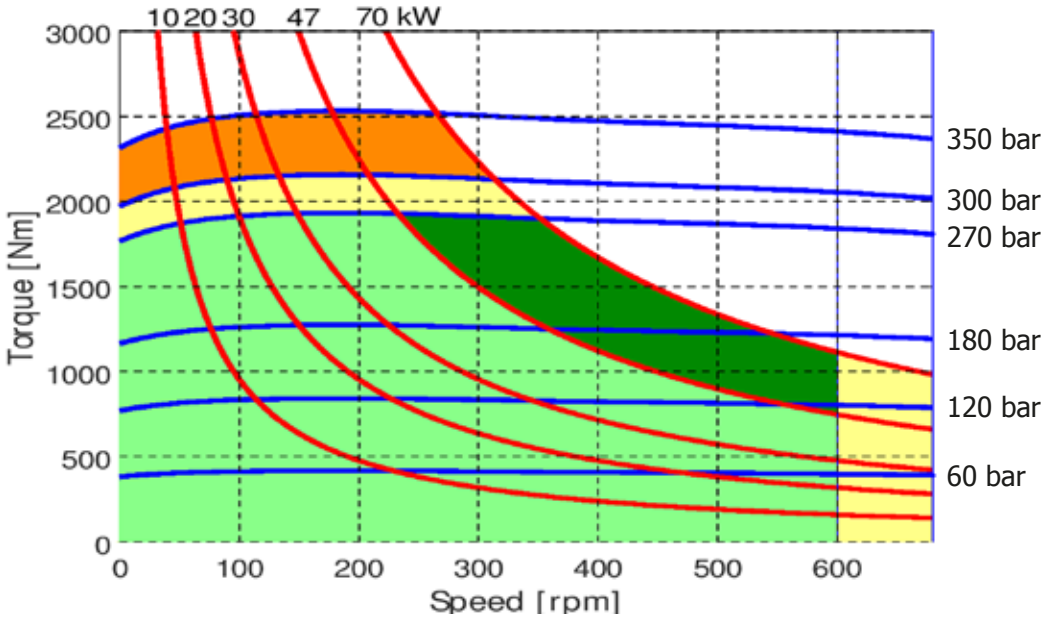
Peak operation: permitted for very short periods (3-5 seconds every 10-15 minutes)

**The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt).** In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must be changed. The working temperature must not overcome 70 °C.

## R8M 450 H3




## R8M 500 H3




Continuous operation

Continuous operation with flushing or intermittent operation (see below for intermittent operation)

Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

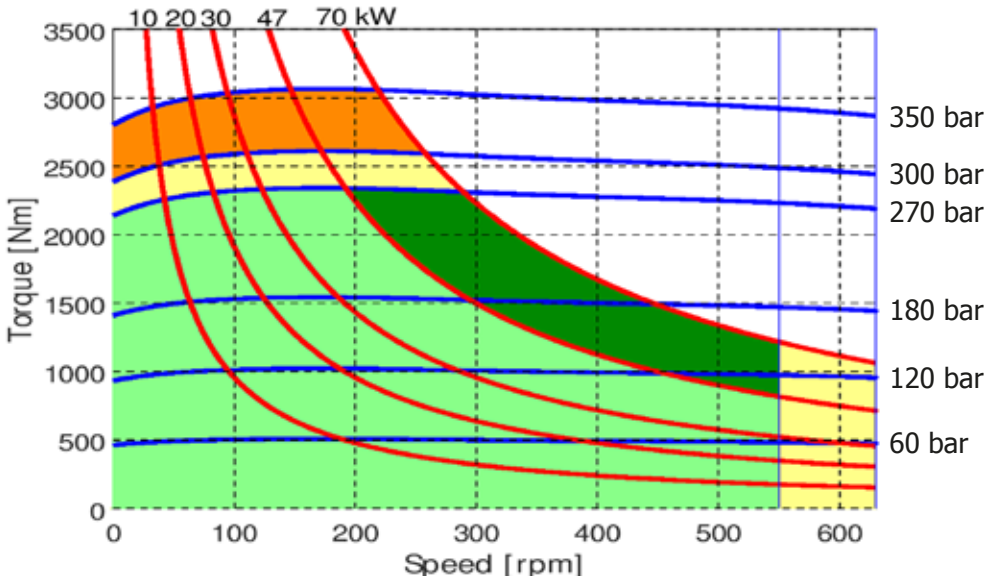
Peak operation: permitted for very short periods (3-5 seconds every 10-15 minutes)

**The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt).** In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must be changed. The working temperature must not overcome 70 °C.

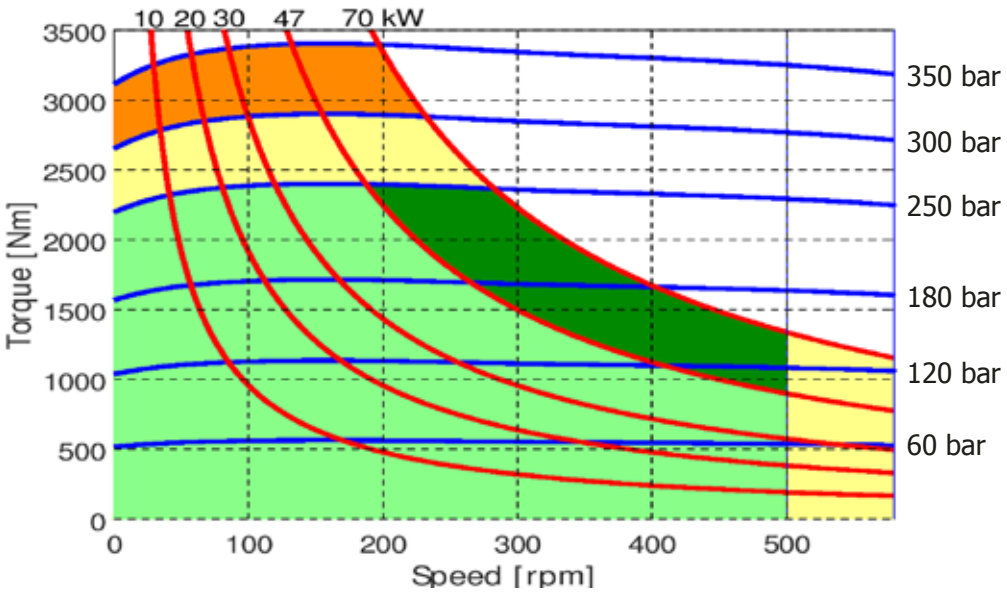
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# R8M H3 - PERFORMANCE CURVES

## R8M 600 H3




## R8M 650 H3




Continuous operation

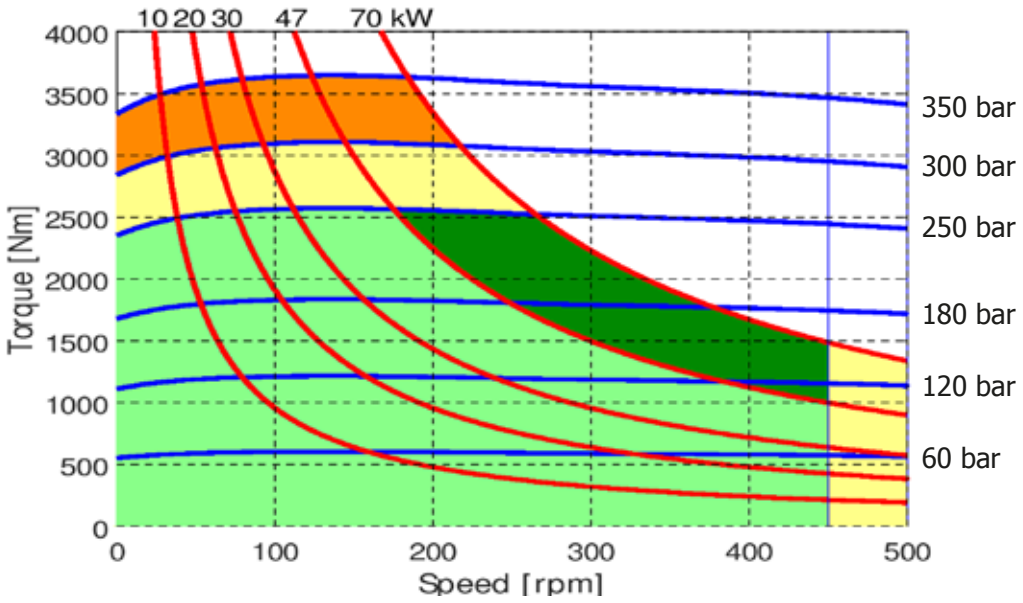
Continuous operation with flushing or intermittent operation (see below for intermittent operation)

Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

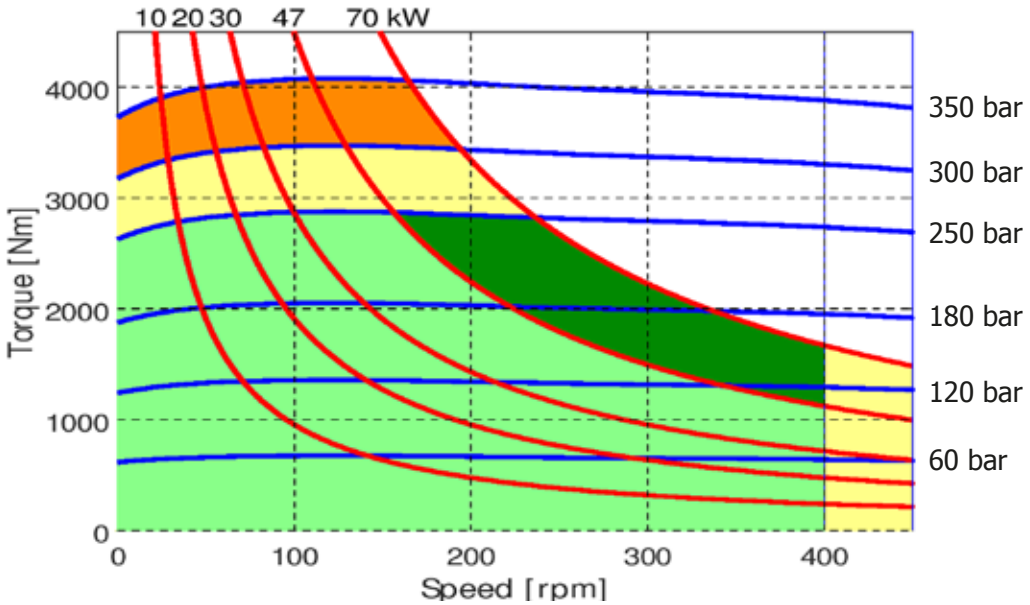
Peak operation: permitted for very short periods (3-5 seconds every 10-15 minutes)

**The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt).** In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must be changed. The working temperature must not overcome 70 °C.

## R8M 700 H3




## R8M 800 H3




Continuous operation

Continuous operation with flushing or intermittent operation (see below for intermittent operation)

Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

Peak operation: permitted for very short periods (3-5 seconds every 10-15 minutes)

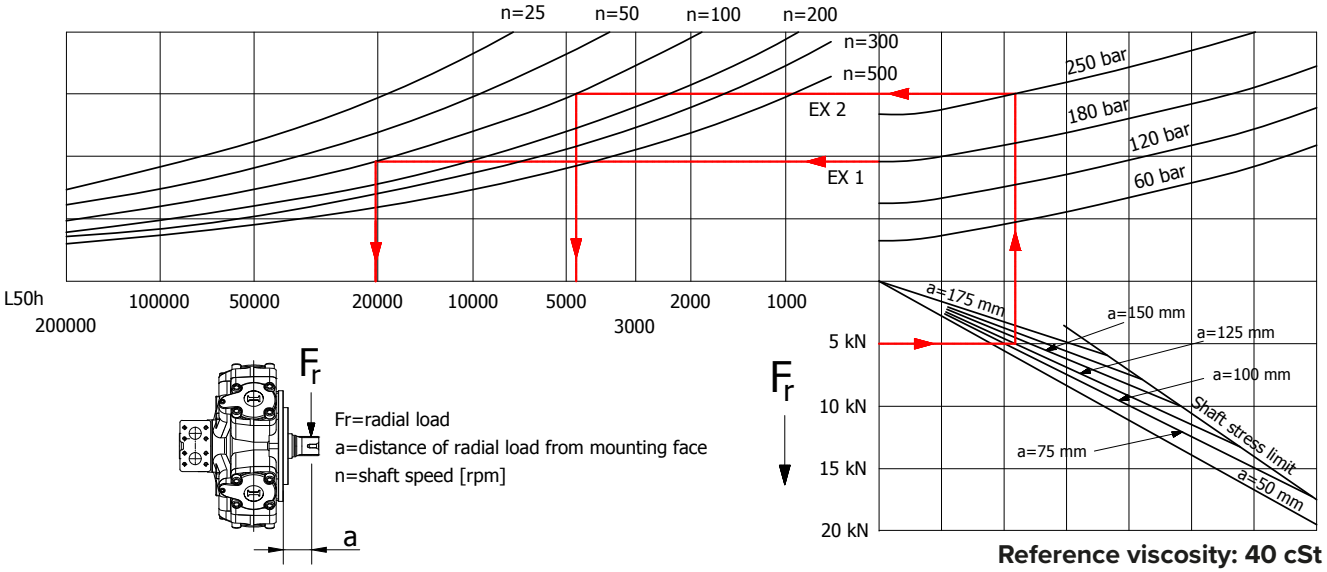
**The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt).** In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must be changed. The working temperature must not overcome 70 °C.

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# R8M H3 - PERFORMANCE CURVES

## BEARING LIFE

**Reference displacement 500 cc**




**Reference viscosity: 40 cSt**

***Example:***

We suppose (EX1): p=120 [bar], n=400 [rpm]; we obtain an average lifetime of 53000 [h].

If we suppose (EX2): $F_r$=9 [kN], a=75 [mm], n=100 [rpm] and p=180 [bar] we obtain an average lifetime of 42000 [h].

**The above data are referring to the R8M H3 series motors, displacement 500 cc.**

# R8M H3 - ORDERING CODE

R8M | - - | - - | H3 | - - | - - | - - | - - | SB -

**DISPLACEMENT**
- 350
- 400
- 450
- 500
- 600
- 650
- 700
- 800

**INTERCHANGEABILITY**
- /C
- /B30
- /N
- /GM3
- /S

**SERIE**
- H3

**SHAFT**
- A0
- A1
- A11
- A2
- A21
- A22
- A3
- A31

**DISTRIBUTOR**
- D31B
- D31BJ
- D36B
- D36BJ
- D310B
- D310BJ
- D40
- D40J
- D47
- D47J
- D416
- D416J

See pag. 178-179

**TACHOMETER**
- TA
- TB
- TT1
- TQ1
- EST
- EST30
- EST31
- EST32
- EST33

See pag. 180-184

**SPECIAL FEATURES**
- MP
- SPSL
- HPS
- CCW

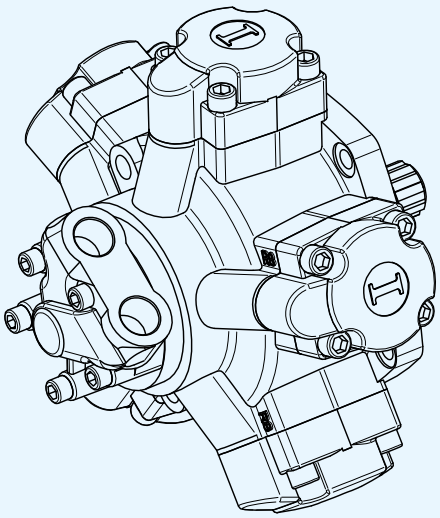
See pag. 23

- Z - -

Italgroup internal code

**SPLINE BILLET**
- SB3
- SB4
- SB4
- SB21

See pag. 185-188



***EXAMPLES:***

R8M 600 H3 A2 D416
R8M 450/C H3 A1 D40 CCW SB5
R8M 400/GM3 H3 A0 D47

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