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**ITALGROUP SRL**  
**IAC SERIES - IAC H1**

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**GENERAL CATALOGUE**

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## IAC 195 H1 - IAC 250 H1 - TECHNICAL DATA

### IAC 195 H1

Displacement (*)	[cc]	<b>195</b>	<b>175</b>	<b>150</b>	<b>125</b>	<b>100</b>	<b>95</b>	<b>75</b>	<b>69</b>
Th. specific torque	[Nm/bar]	3,1	2,8	2,4	2	1,6	1,5	1,2	1,1
Continuous speed	[rpm]	850	850	1000	1000	1050	1050	1100	1100
Peak speed	[rpm]	950	1050	1150	1150	1200	1200	1250	1250
Minimum speed	[rpm]	3	3	3	4	4	4	5	5
Mechanical efficiency	[%]	89,5	89,2	89	88,5	88	87,8	87	85,5
Starting efficiency	[%]	84,5	84,2	84	83,5	83	82	80	77
Continuous power (**)	[kW]	36	34	32	30	28	26	20	18
Cont. power with flushing	[kW]	45	42	38	36	35	32	26	24
Continuous pressure	[bar]	270	270	270	270	250	250	250	250
Intermittent pressure	[bar]	310	310	310	310	310	310	310	310
Peak pressure	[bar]	350	350	350	350	350	350	350	350
Flushing flow	[l/min]	6	6	6	6	6	6	6	6
Dry weight	[kg]	26	26	26	26	26	26	26	26

### IAC 250 H1

Displacement (*)	[cc]	<b>257</b>	<b>232</b>	<b>195</b>	<b>175</b>	<b>150</b>	<b>125</b>	<b>100</b>	<b>95</b>
Th. specific torque	[Nm/bar]	4,1	3,7	3,1	2,8	2,4	2	1,6	1,5
Continuous speed	[rpm]	810	810	850	850	1000	1000	1050	1050
Peak speed	[rpm]	920	920	950	1050	1150	1150	1200	1200
Minimum speed	[rpm]	3	3	3	3	3	4	4	5
Mechanical efficiency	[%]	88,5	88,2	88	87,5	87	86,8	86	84,5
Starting efficiency	[%]	83,5	83,2	83	82,5	82	81	79	76
Continuous power (**)	[kW]	38	37	36	34	32	30	28	28
Cont. power with flushing	[kW]	48	46	45	43	40	38	34	32
Continuous pressure	[bar]	250	250	250	250	250	250	250	250
Intermittent pressure	[bar]	310	310	310	310	310	310	310	310
Peak pressure	[bar]	350	350	350	350	350	350	350	350
Flushing flow	[l/min]	6	6	6	6	6	6	6	6
Dry weight	[kg]	26	26	26	26	26	26	26	26

(\*) Different displacements can be available on request. Please contact Italgroup S.r.l. for more information.

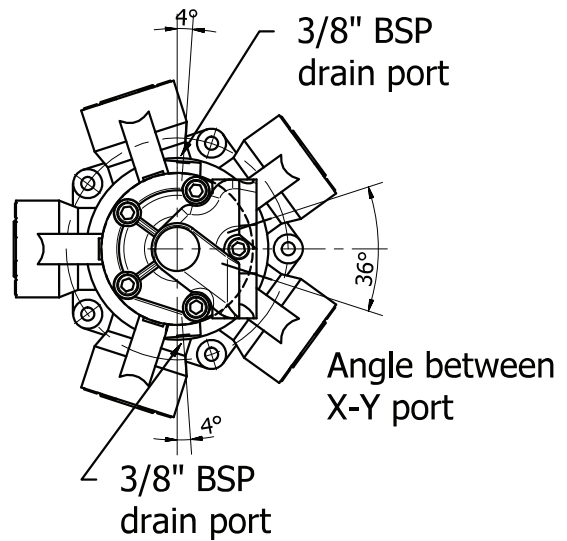
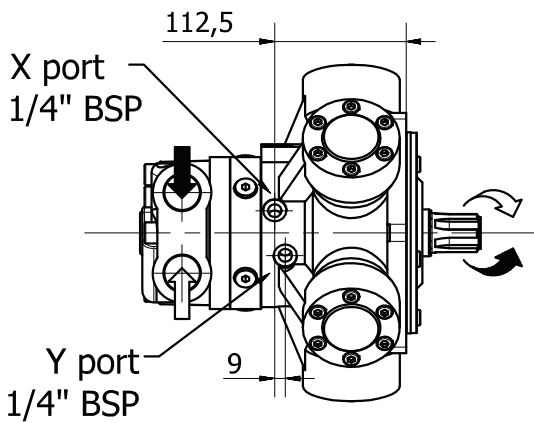
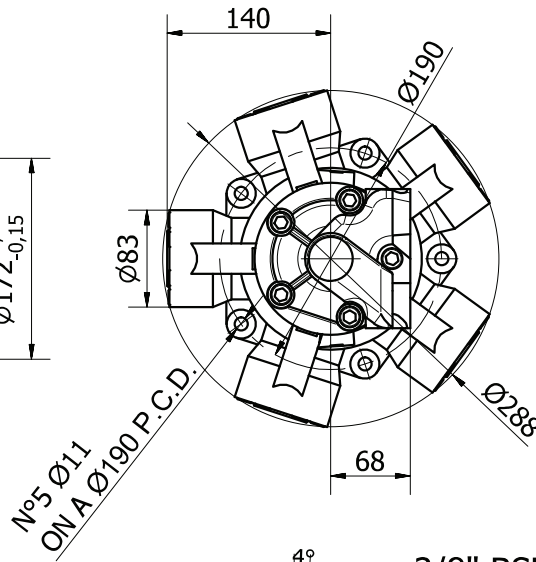
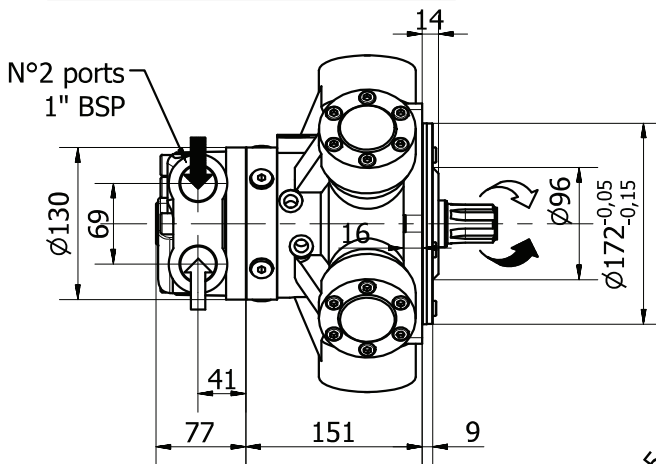
(\*\*) The continuous power and the continuous power with flushing are the output maximum power. To estimate the input power divide the output power by the mechanical efficiency. For example: if required output power is 40 kW and starting efficiency is 90%, estimated required power is  $40/0.9 = 44,44$  kW.

Hydrostatic pressure test: 420 bar.

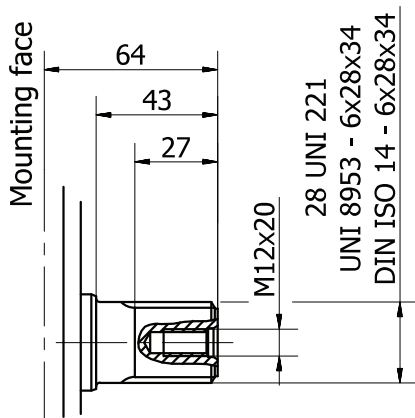
Temperature range: -30 / 70 °C.

# IAC 195-250 H1 - INSTALLATION DRAWING

## XY DISPLACEMENT CHANGE CONFIGURATION



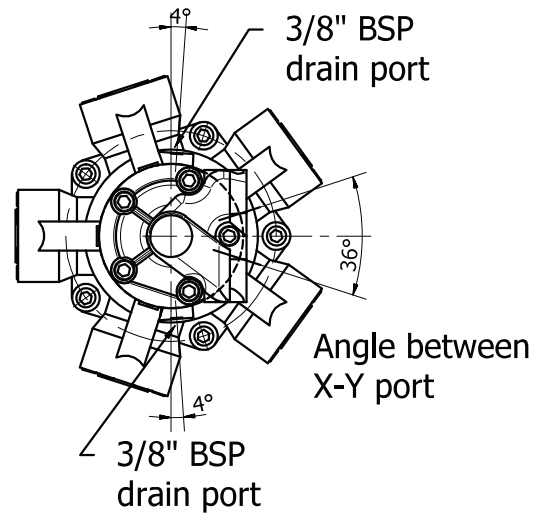
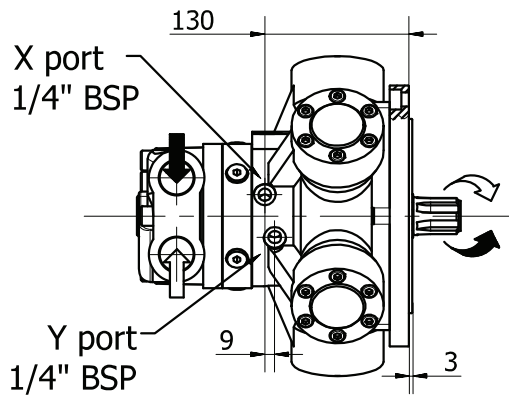
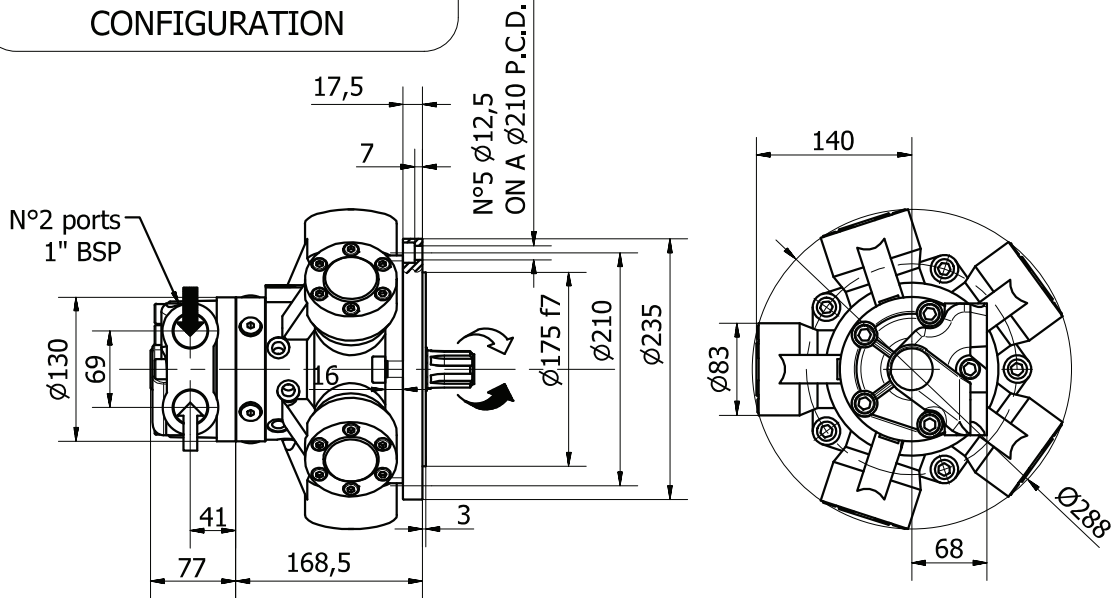
## SHAFT TYPE: A0



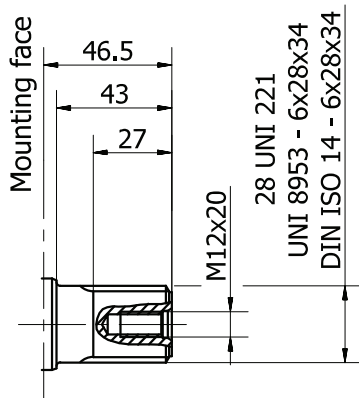
X - minimum displacement  
Y - maximum displacement

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**XY DISPLACEMENT CHANGE CONFIGURATION**



**SHAFT TYPE: A0**

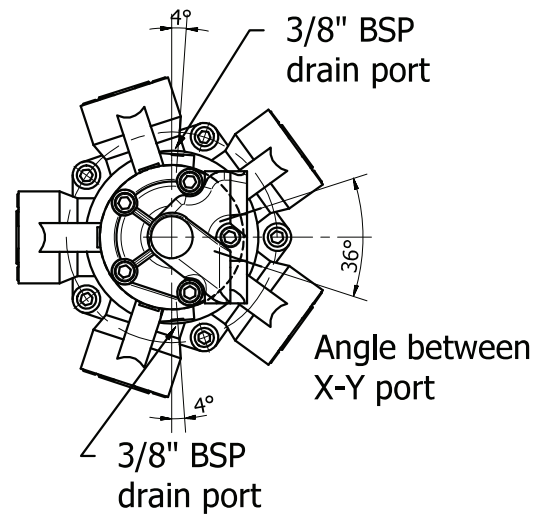
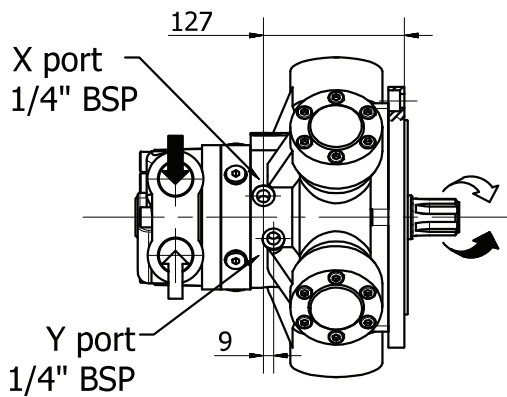
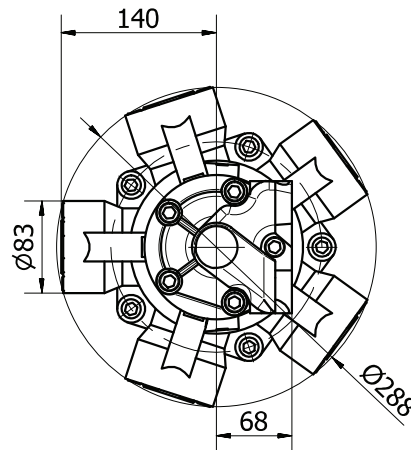
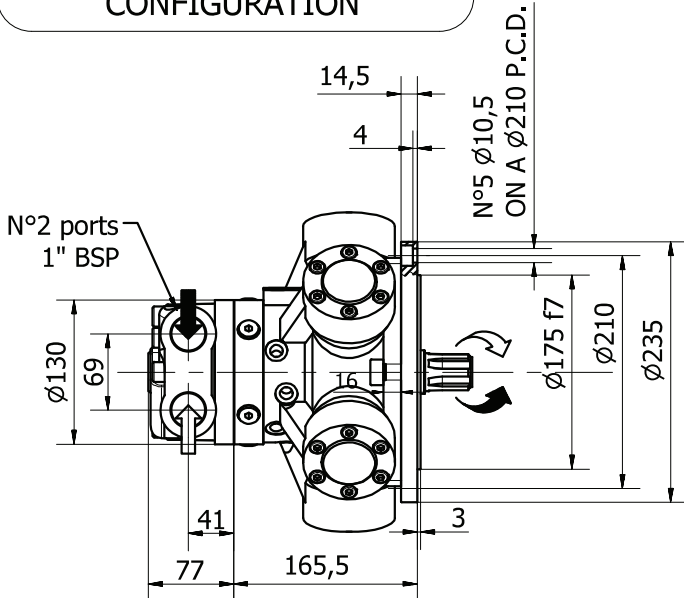


X - minimum displacement  
Y - maximum displacement

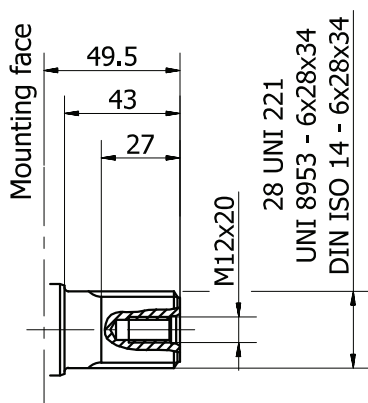
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# IAC 195-250/BH H1 - INSTALLATION DRAWING

## XY DISPLACEMENT CHANGE CONFIGURATION

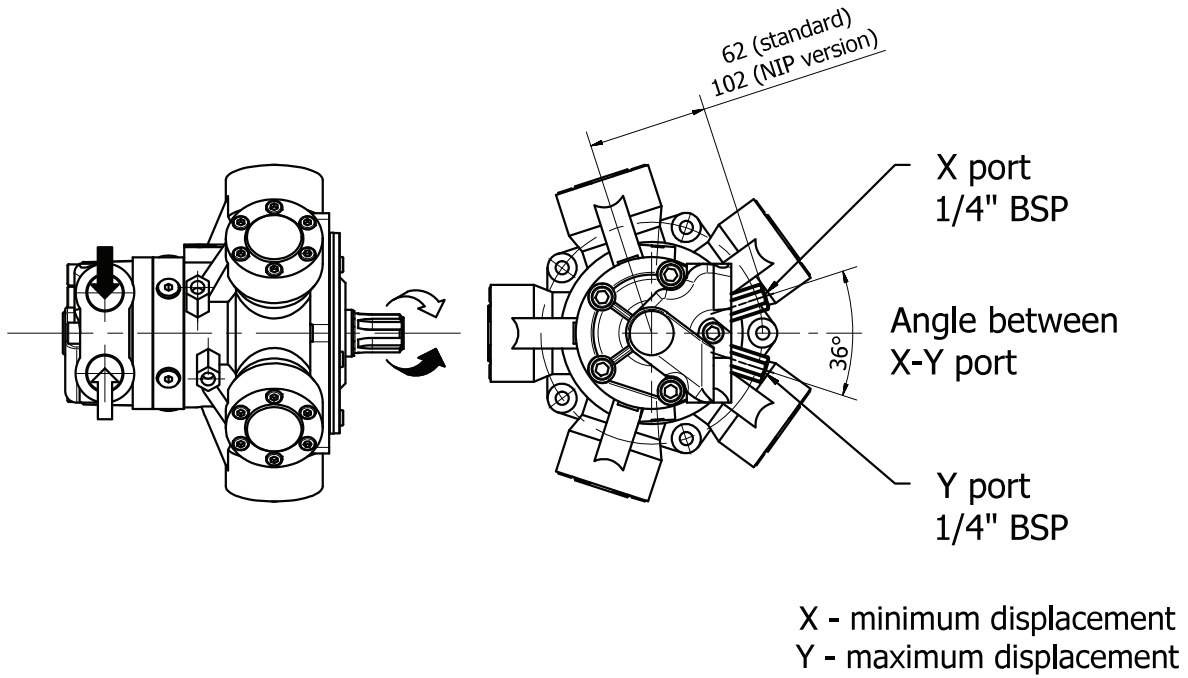


## SHAFT TYPE: A0



X - minimum displacement  
Y - maximum displacement

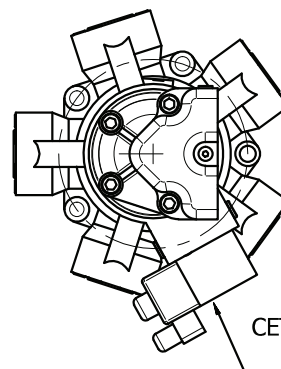
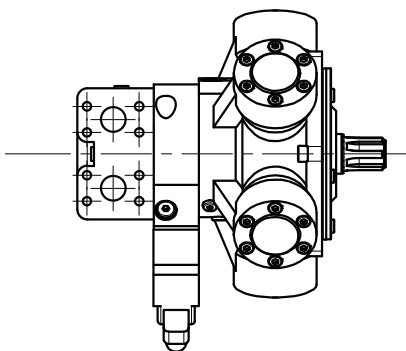
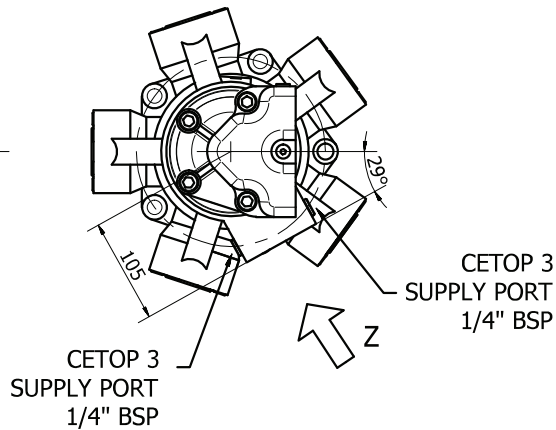
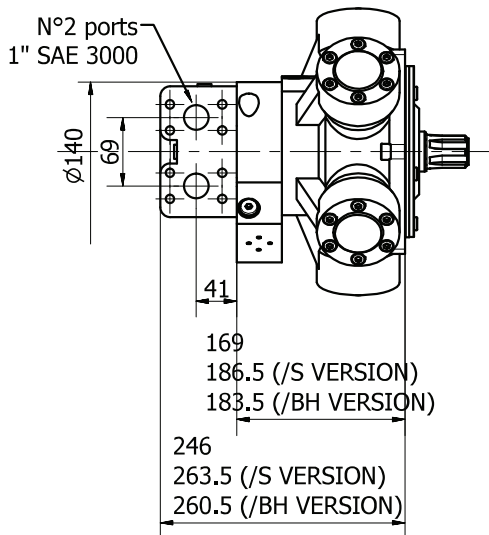
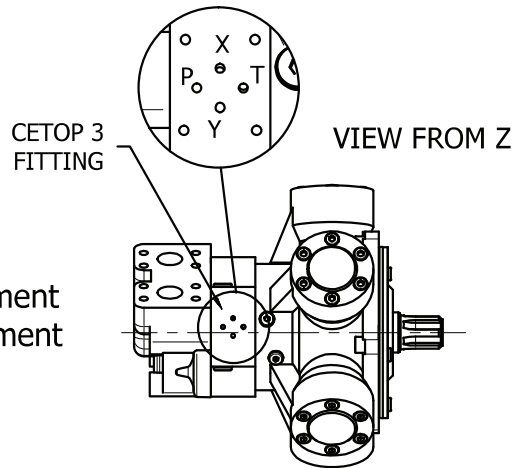
**XY DISPLACEMENT CHANGE  
CONFIGURATION**



# IAC H1 - CETOP 3 FITTING

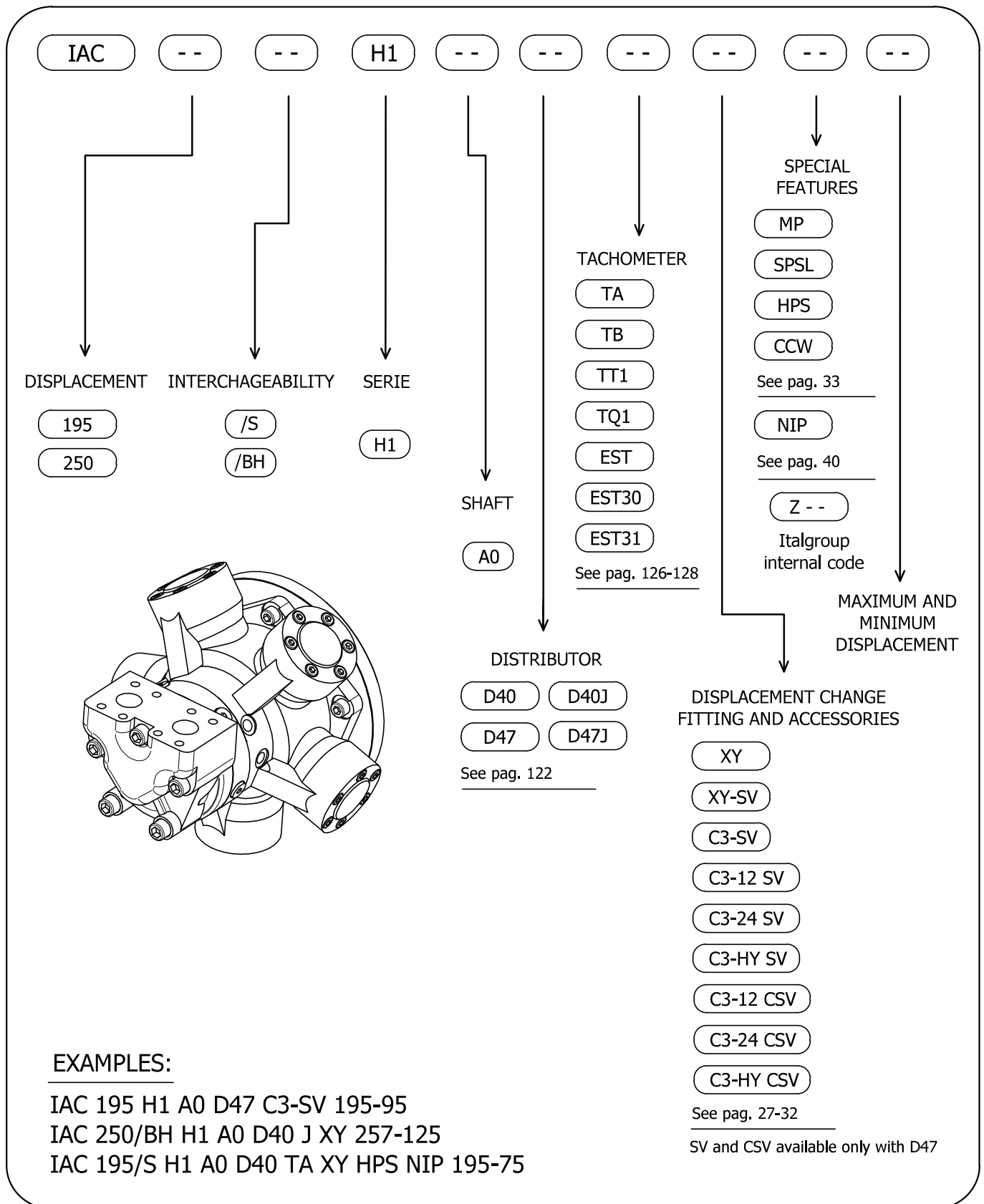
## CETOP 3 DISPLACEMENT CHANGE CONFIGURATION

X - minimum displacement  
Y - maximum displacement



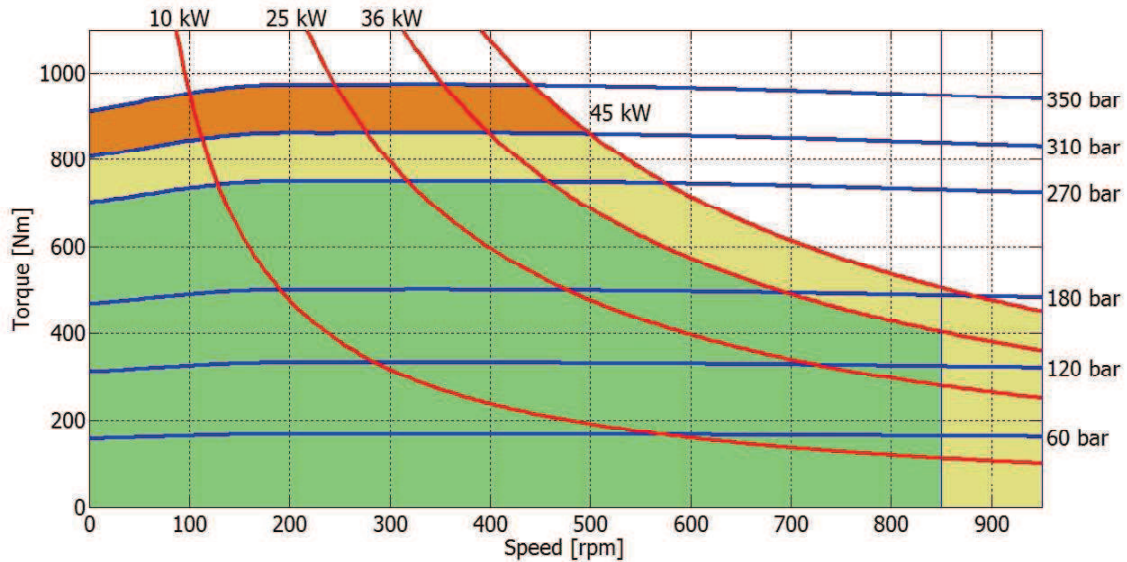
CETOP 3 DISPLACEMENT CHANGE VALVE  
C3 - 12 SV (12V DC)  
C3 - 24 SV (24V DC)  
C3 - HY SV (HYDRAULIC OPERATED)

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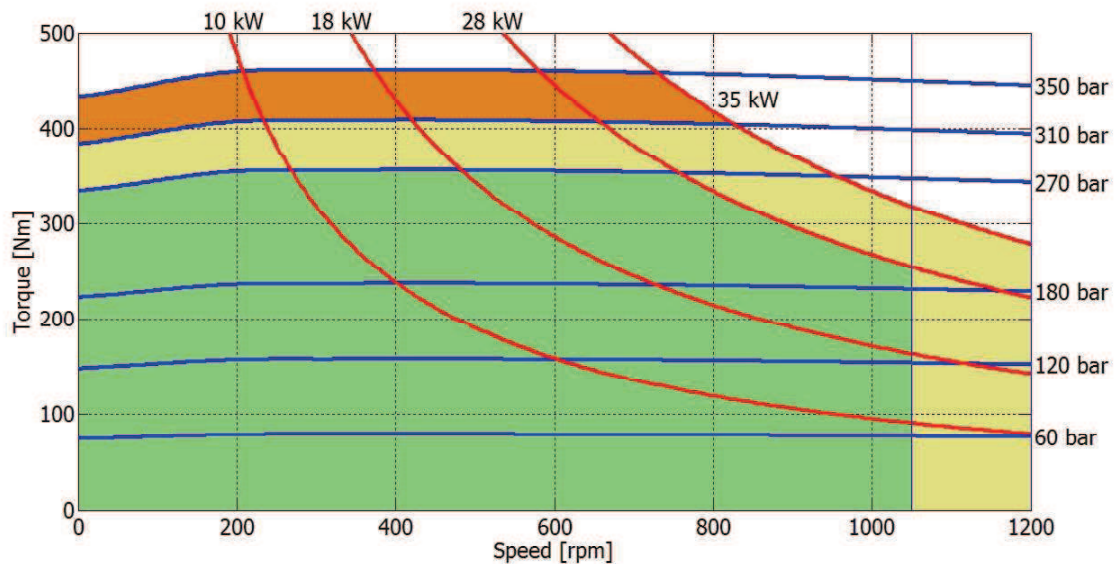







## 195 cc - WITHOUT FLUSHING



## 95 cc - WITHOUT FLUSHING

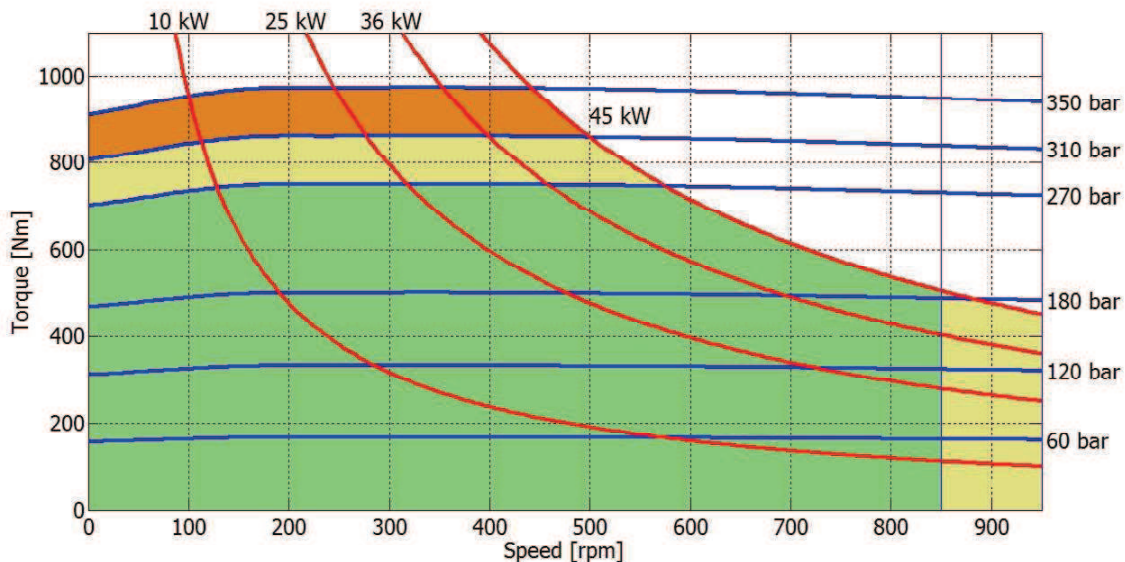


-  Continuous operation
-  Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period.
-  Peak operation: permitted for very short periods (3-5 seconds every 10-15 minutes).

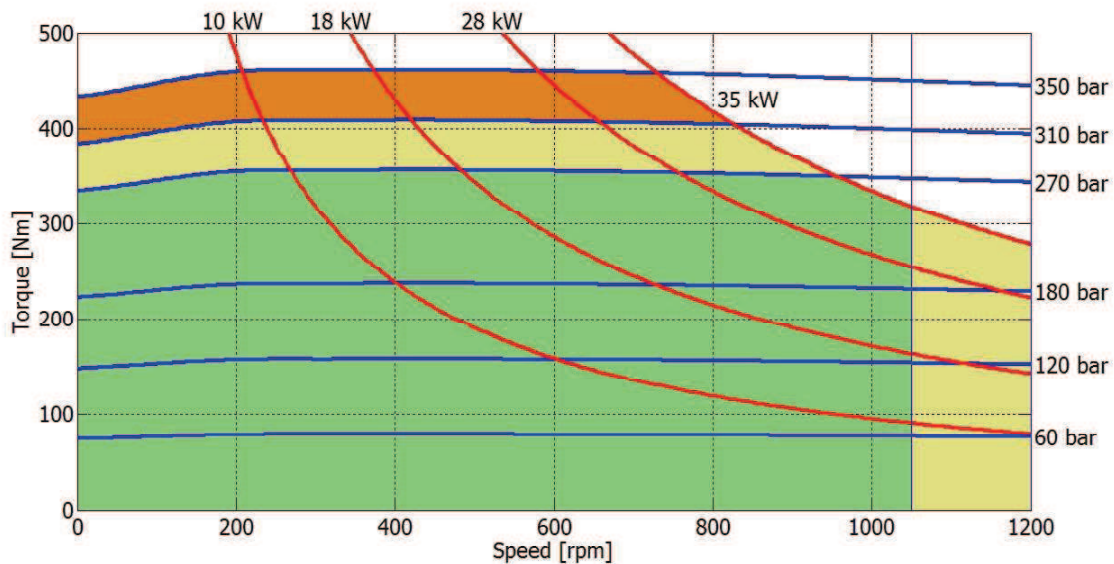
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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

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**195 cc - WITH FLUSHING**



**95 cc - WITH FLUSHING**

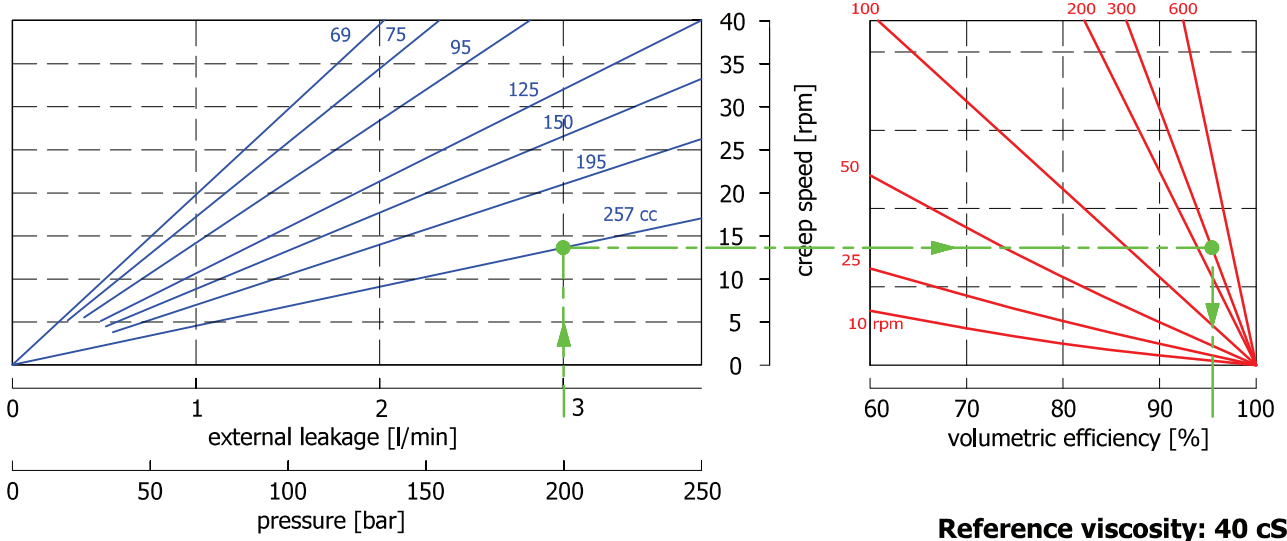


- Continuous operation
- Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period.
- Peak operation: permitted for very short periods (3-5 seconds every 10-15 minutes).

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 optimized or ISO oil grade must be changed. The working temperature must not overcome 70 °C.

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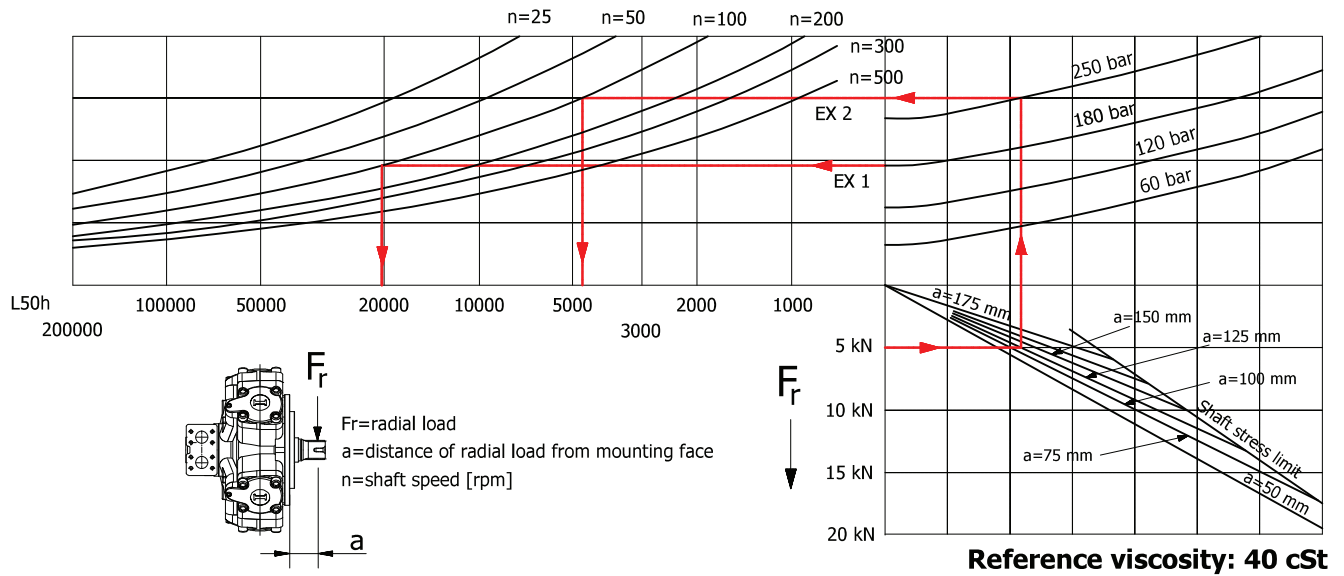
## CREEP SPEED - VOLUMETRIC EFFICIENCY



**Example:**

We suppose (257 cc):  $p=200$  [bar], we obtain: external leakage 2,9 [l/min], shaft creep speed 13,5 [rpm].  
 If we suppose (257 cc):  $p=200$  [bar] and  $n=300$  [rpm] we obtain a volumetric efficiency of 96%;

## BEARING LIFE



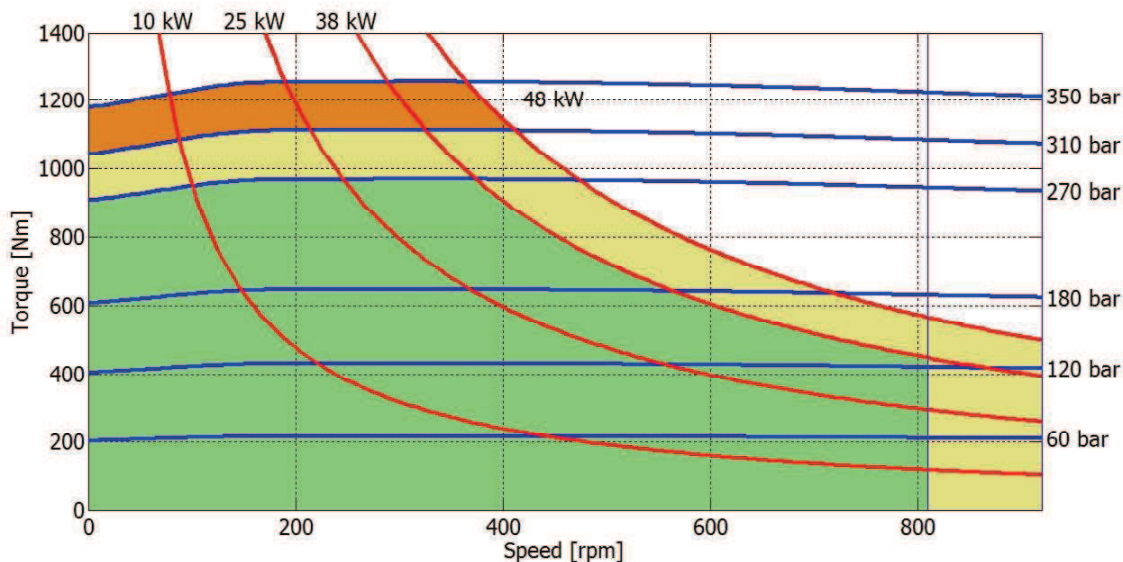
**Example:**

We suppose (EX1):  $p=180$  [bar],  $n=100$  [rpm]; we obtain an average lifetime of 20000 [h].  
 If we suppose (EX2):  $F_r=5$  [kN],  $a=125$  [mm],  $p=250$  [bar] and  $n=100$  [rpm], we obtain an average lifetime of 4500 [h].

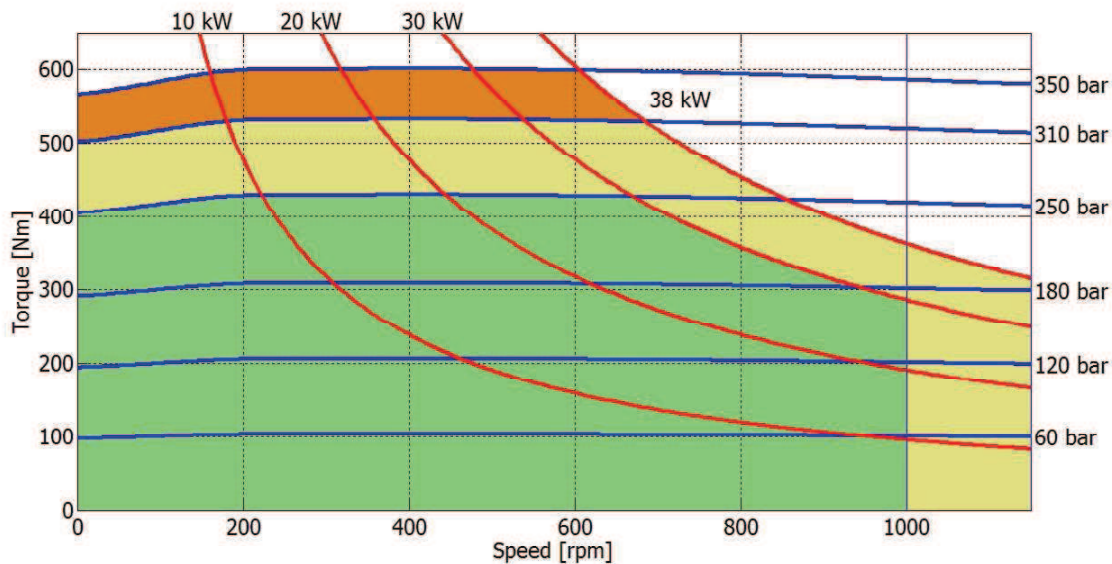
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**257 cc - WITHOUT FLUSHING**



**125 cc - WITHOUT FLUSHING**

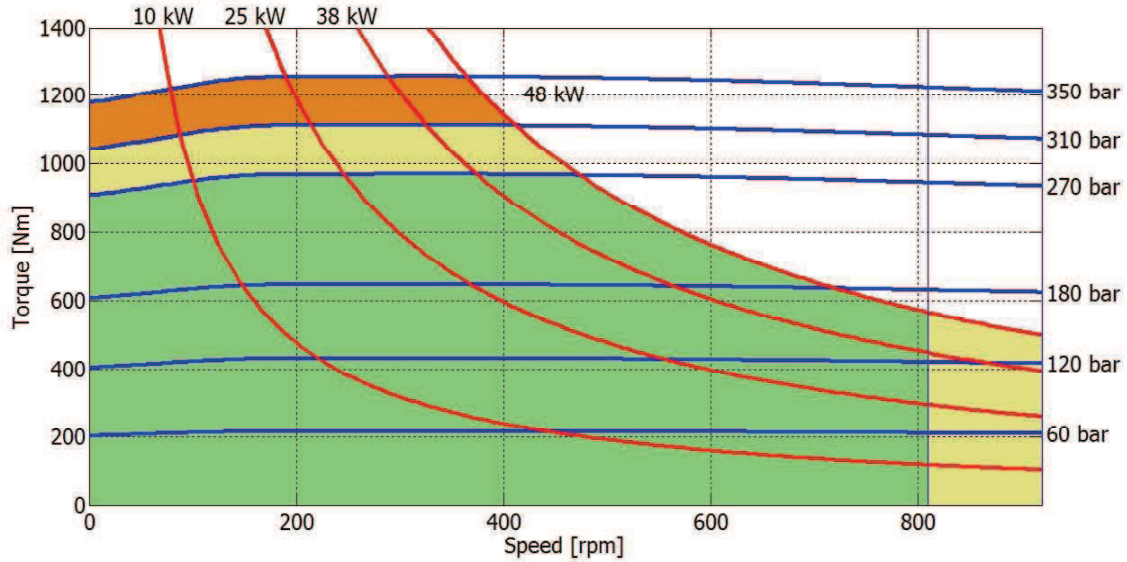


- Continuous operation
- Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period.
- Peak operation: permitted for very short periods (3-5 seconds every 10-15 minutes).

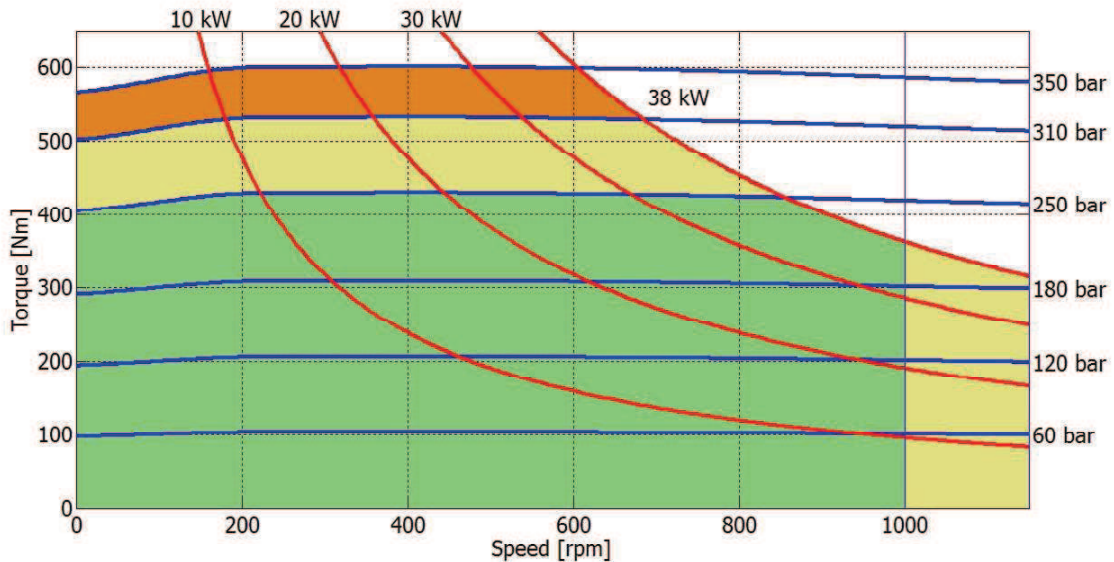
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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




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## 250 cc - WITH FLUSHING



## 125 cc - WITH FLUSHING

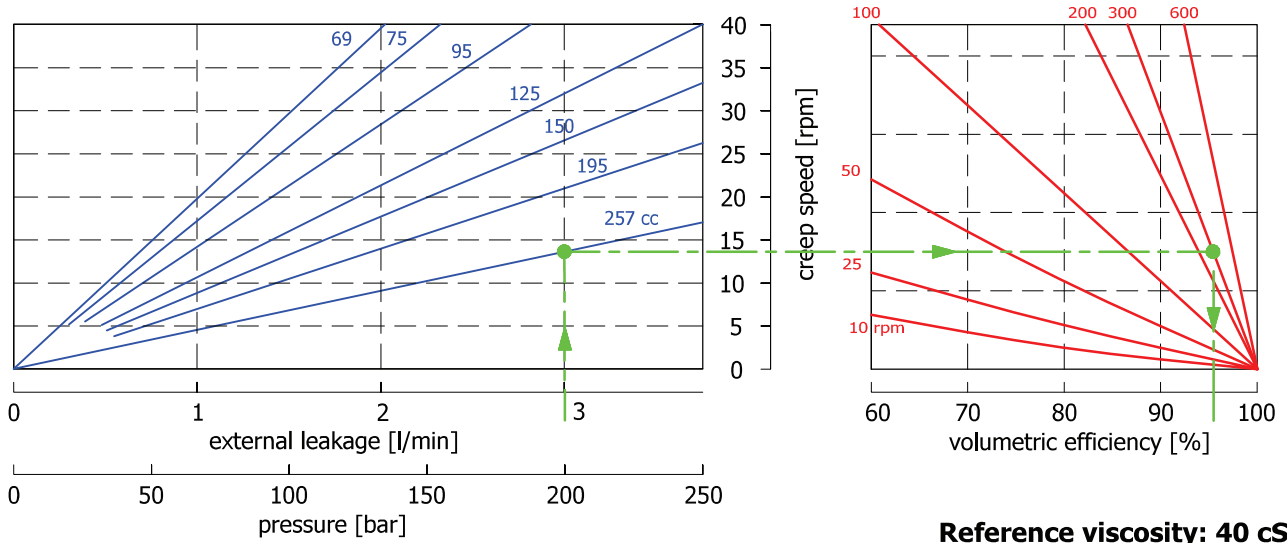


-  Continuous operation
-  Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period.
-  Peak operation: permitted for very short periods (3-5 seconds every 10-15 minutes).

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 optimized or ISO oil grade must be changed. The working temperature must not overcome 70 °C.

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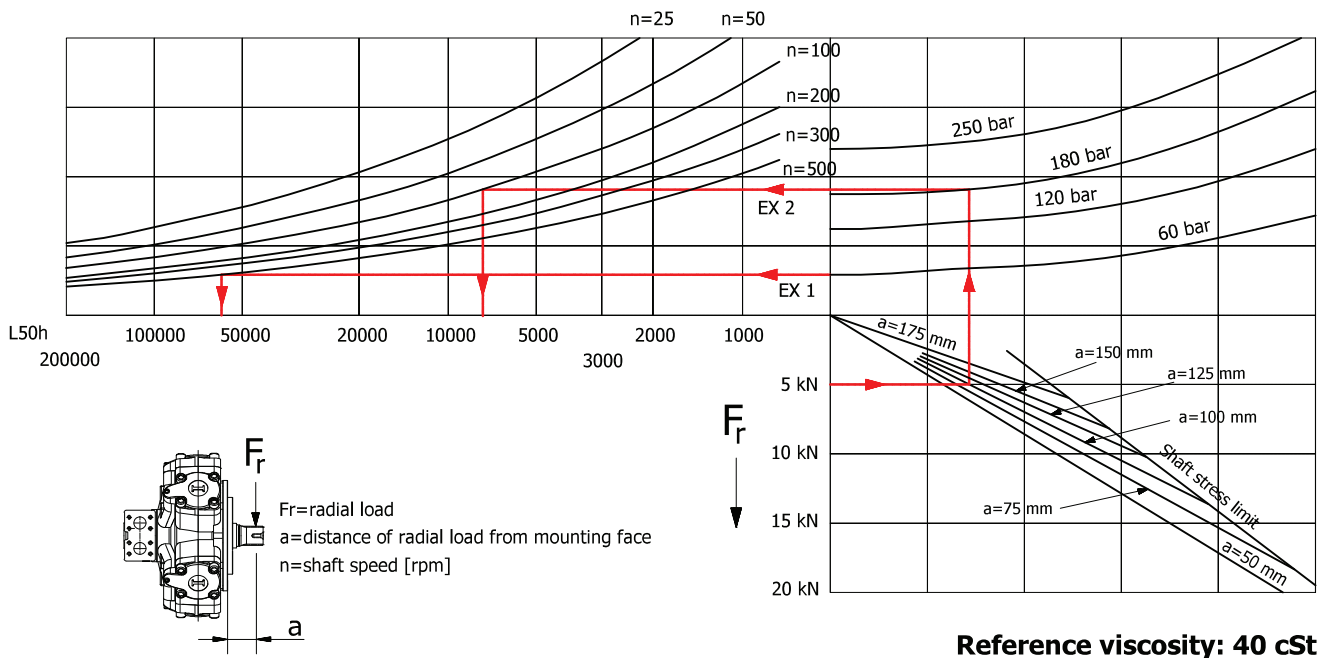
**CREEP SPEED - VOLUMETRIC EFFICIENCY**



*Example:*

We suppose (257 cc):  $p=200$  [bar], we obtain: external leakage 3 [l/min], shaft creep speed 13,5 [rpm].  
If we suppose (257 cc):  $p=200$  [bar] and  $n=300$  [rpm] we obtain a volumetric efficiency of 96%;

**BEARING LIFE**



*Example:*

We suppose (EX1):  $p=60$  [bar],  $n=500$  [rpm]; we obtain an average lifetime of 55000 [h].

If we suppose (EX2):  $F_r=5$  [kN],  $a=100$  [mm],  $p=180$  [bar] and  $n=100$  [rpm], we obtain an average lifetime of 7500 [h].

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