
ITALGROUP SRL
IAC SERIES - IAC H7
GENERAL CATALOGUE

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IAC 4600 H7 - TECHNICAL DATA

IAC 4600 H7

Displacement (*)	[cc]	4617	4177	3650	3280	2950	2620	2290	1970
Th. specific torque	[Nm/bar]	73,5	66,5	58,1	52,2	47	41,7	36,5	31,4
Continuous speed	[rpm]	150	158	168	175	210	235	275	305
Peak speed	[rpm]	170	185	210	230	255	280	330	380
Minimum speed	[rpm]	1	1	1	1	1	1	1	1
Mechanical efficiency	[%]	95,3	95,1	94,5	94,4	93,3	92,4	91,5	90,1
Starting efficiency	[%]	85,1	84	83,3	82,5	81,2	80,1	78	75,2
Continuous power (***)	[kW]	195	190	175	155	145	135	120	110
Cont. power with flushing	[kW]	290	270	250	235	215	200	180	165
Continuous pressure	[bar]	270	270	270	270	270	270	270	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]	12	12	12	12	12	12	12	12
Dry weight	[kg]	405	405	405	405	405	405	405	405

Displacement (*)	[cc]	1640	1310	980	655	492	328	164	82	0
Th. specific torque	[Nm/bar]	26,1	20,9	15,6	10,4	7,8	5,2	2,6	0	0
Continuous speed	[rpm]	380	435	460	495	520	550	600	1000	1000
Peak speed	[rpm]	470	530	550	600	600	650	700	1200	1500
Minimum speed	[rpm]	1	1	1	2	2	3	6	-	-
Mechanical efficiency	[%]	86,5	83	78,4	76,2	66	46,4	25	0	0
Starting efficiency	[%]	72,4	67,2	58	41	23,7	0	0	0	0
Continuous power (***)	[kW]	110	95	75	50	45	25	10	0	0
Cont. power with flushing	[kW]	165	140	112	80	65	32	10	0	0
Continuous pressure	[bar]	250	250	250	250	250	250	250	17(**)	17(**)
Intermittent pressure	[bar]	310	310	310	310	310	310	310	17(**)	17(**)
Peak pressure	[bar]	350	350	350	350	350	350	350	17(**)	17(**)
Flushing flow	[l/min]	12	12	12	12	12	12	12	15	15
Dry weight	[kg]	405	405	405	405	405	405	405	405	405

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

(**) Pressure limits at 1000 rpm. For lower speeds the values can be increased. Contact ItalgrouP 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 160 kW and starting efficiency is 85,1%, estimated required power is $160/0.851 = 188$ kW.

Hydrostatic pressure test: 420 bar.

Temperature range: -30 / 70 °C.

IAC 5400 H7 - TECHNICAL DATA



IAC 5400 H7

Displacement (*)	[cc]	5326	5080	4915	4588	4097	3650	3280	2950	2620
Th. specific torque	[Nm/bar]	84,8	80,9	78,2	73	65,2	58,1	52,2	47	41,7
Continuous speed	[rpm]	130	135	140	150	160	170	190	215	230
Peak speed	[rpm]	145	150	155	165	185	210	235	260	290
Minimum speed	[rpm]	1	1	1	1	1	1	1	1	1
Mechanical efficiency	[%]	95,2	95	95	95	95	94,4	94,3	93,2	92
Starting efficiency	[%]	86	85,8	85,8	85,4	85,2	83	82,2	82	79,8
Continuous power (***)	[kW]	195	195	195	190	180	165	155	145	135
Cont. power with flushing	[kW]	265	260	260	255	245	230	230	215	200
Continuous pressure	[bar]	250	250	250	250	250	250	250	250	250
Intermittent pressure	[bar]	310	310	310	310	310	310	310	310	310
Peak pressure	[bar]	350	350	350	350	350	350	350	350	350
Flushing flow	[l/min]	12	12	12	12	12	12	12	12	12
Dry weight	[kg]	405	405	405	405	405	405	405	405	405

Displacement (*)	[cc]	2295	1640	1311	980	655	492	328	164	0
Th. specific torque	[Nm/bar]	36,5	26,1	20,9	15,6	10,4	7,8	5,2	1,6	0
Continuous speed	[rpm]	280	375	445	470	500	520	550	1000	1000
Peak speed	[rpm]	335	450	530	550	600	600	650	1200	1500
Minimum speed	[rpm]	1	1	1	1	2	2	3	-	-
Mechanical efficiency	[%]	91,5	86	82,3	78,3	76,2	66,2	46,5	0	0
Starting efficiency	[%]	77,7	72,1	67	58	41	24	0	0	0
Continuous power (***)	[kW]	125	125	95	95	60	40	28	0	0
Cont. power with flushing	[kW]	185	185	135	135	80	60	32	0	0
Continuous pressure	[bar]	250	250	250	250	250	250	250	17(**)	17(**)
Intermittent pressure	[bar]	310	310	310	310	310	310	310	17(**)	17(**)
Peak pressure	[bar]	350	350	350	350	350	350	350	17(**)	17(**)
Flushing flow	[l/min]	12	12	12	12	12	12	12	15	15
Dry weight	[kg]	405	405	405	405	405	405	405	405	405

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

(**) Pressure limits at 1000 rpm. For lower speeds the values can be increased. Contact ItalgrouP 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 160 kW and starting efficiency is 86%, estimated required power is $160/0.86 = 186$ kW.

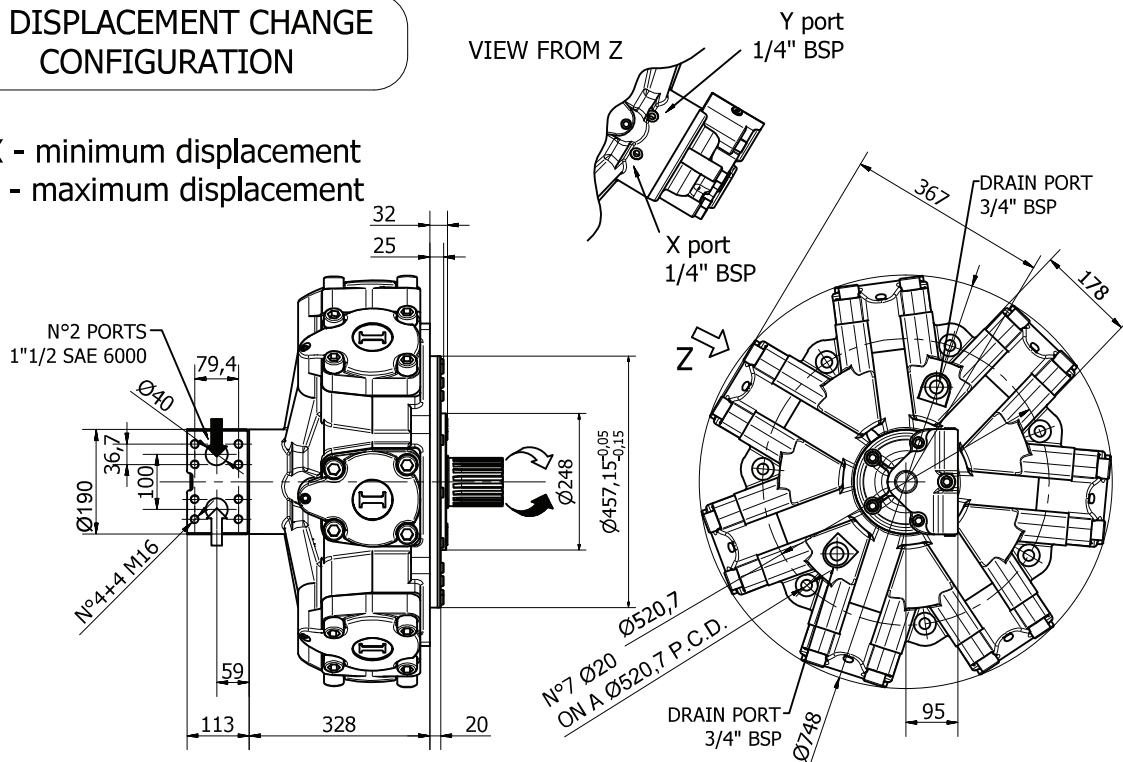
Hydrostatic pressure test: 420 bar.

Temperature range: -30 / 70 °C.

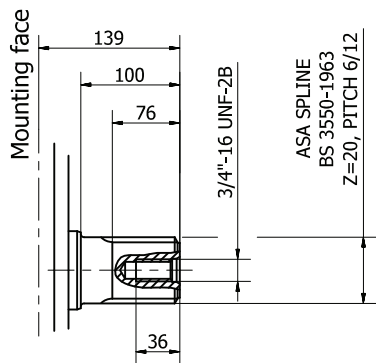
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XY DISPLACEMENT CHANGE CONFIGURATION

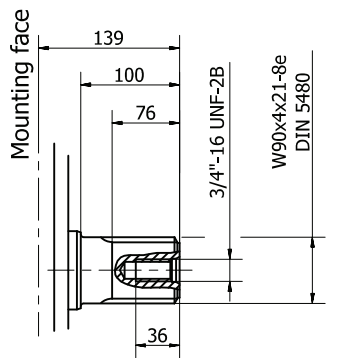
X - minimum displacement
Y - maximum displacement



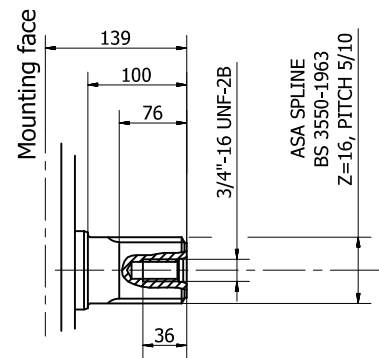
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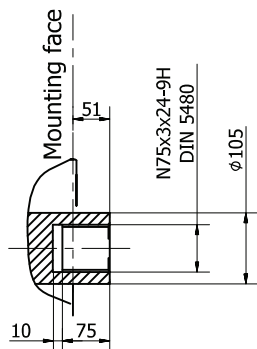
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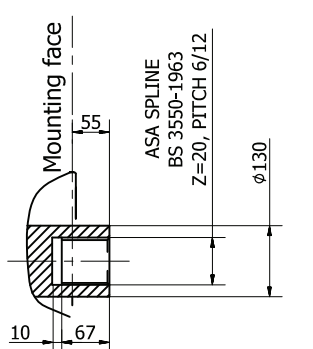
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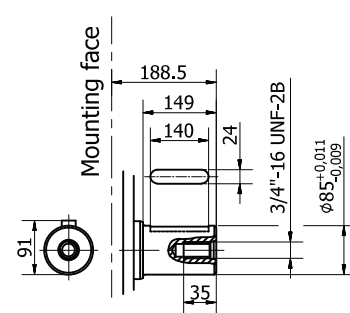
SHAFT TYPE: A31



SHAFT TYPE: A3



SHAFT TYPE: A2



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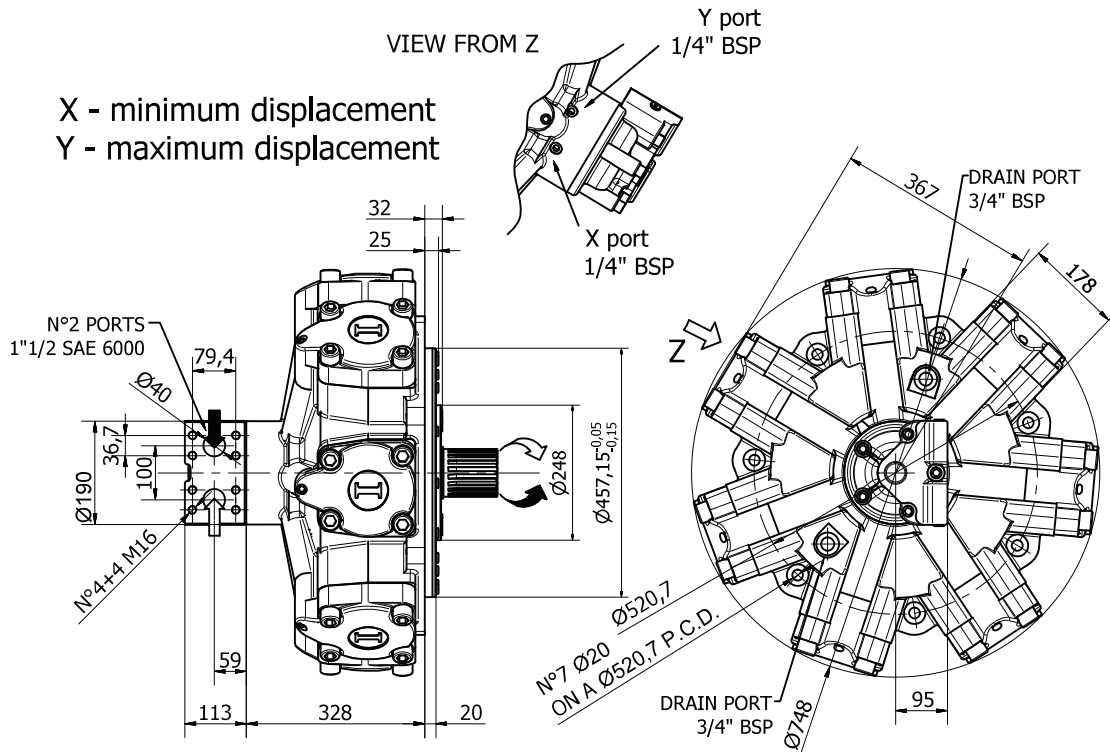
IAC 4600-5400/MRH H7 - INSTALLATION DRAWING



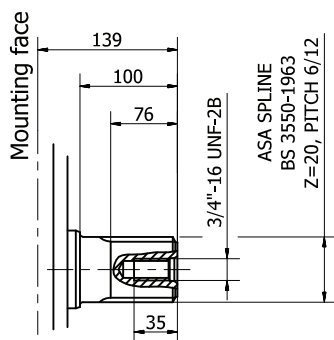
HYDRAULIC MOTORS
ITALY

XY DISPLACEMENT CHANGE CONFIGURATION

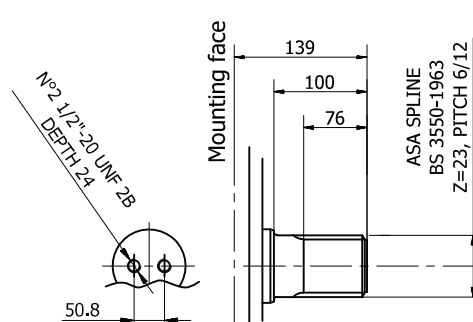
X - minimum displacement
Y - maximum displacement



SHAFT TYPE: A1

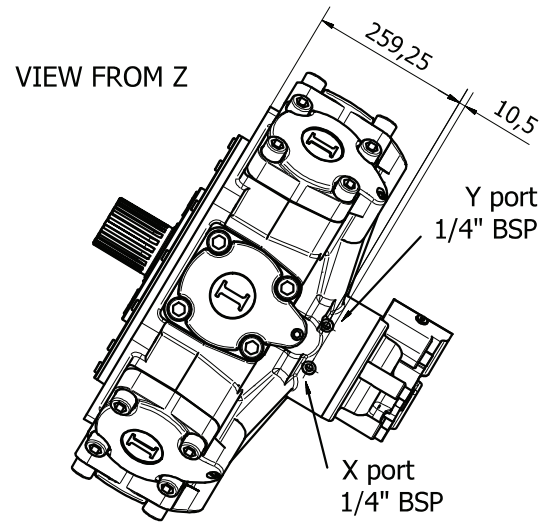
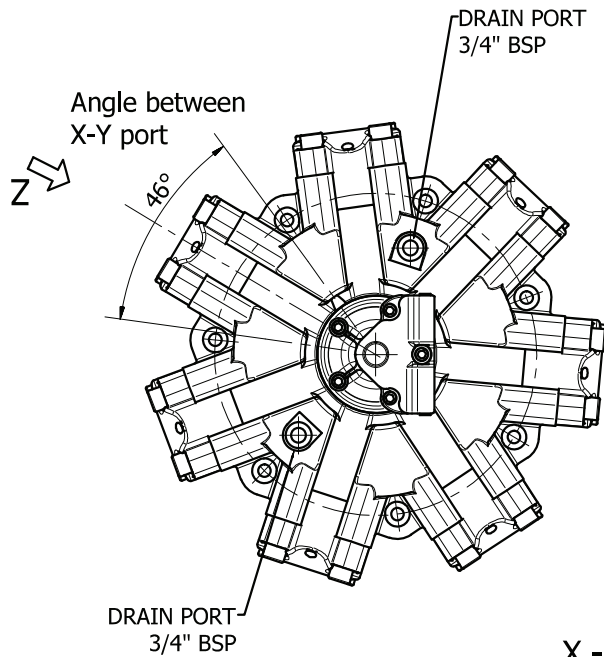


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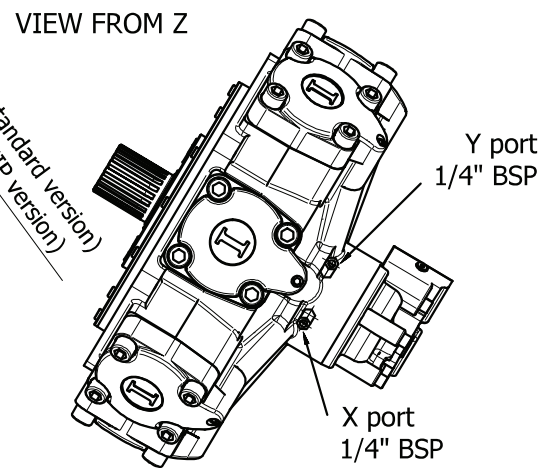
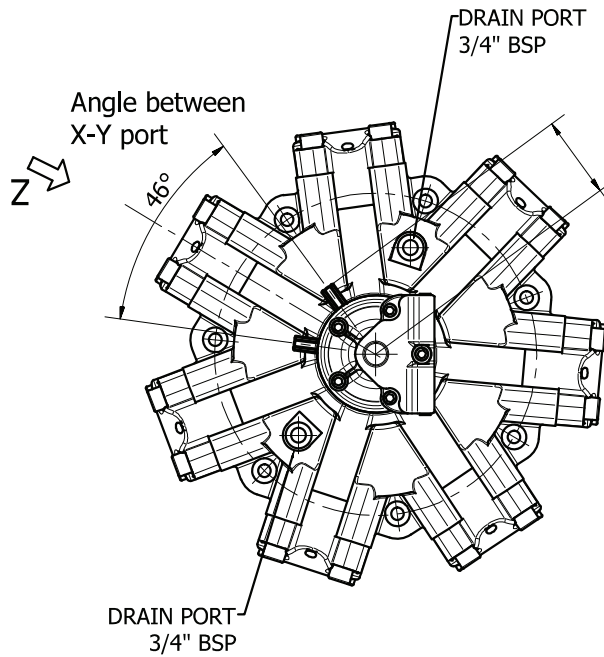


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XY DISPLACEMENT CHANGE CONFIGURATION



X - minimum displacement
 Y - maximum displacement

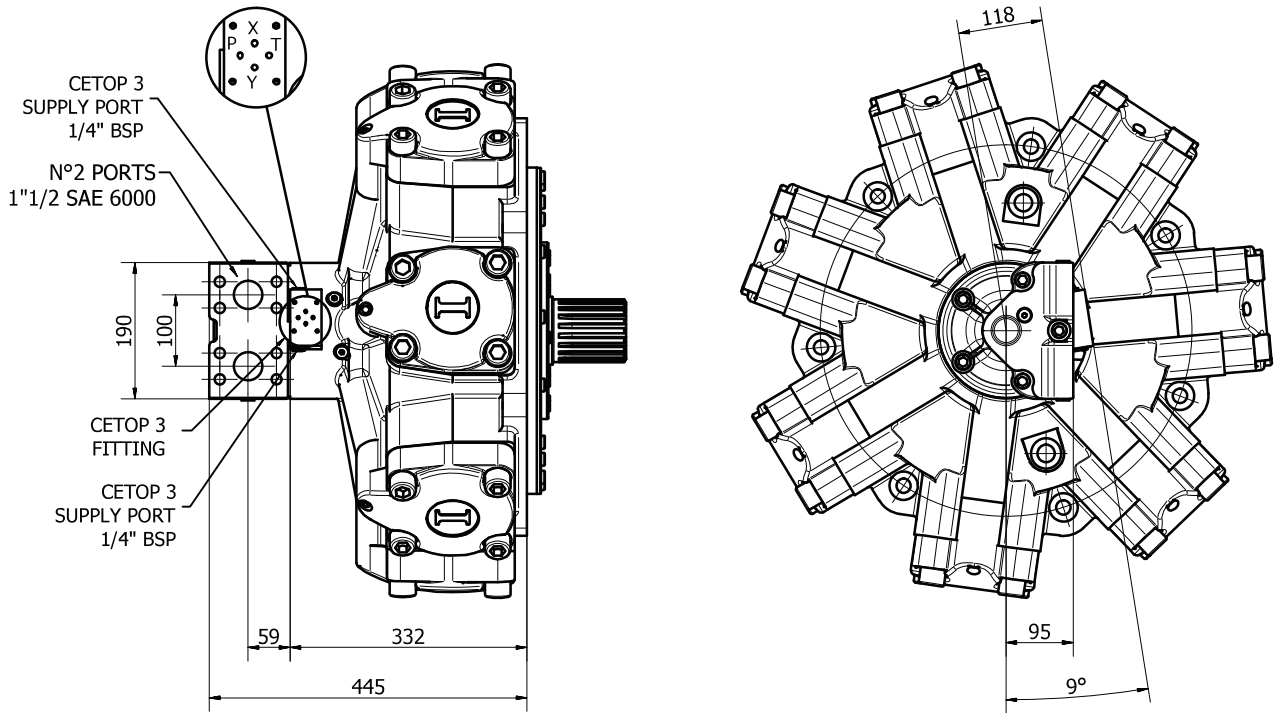


93 (standard version)
 133 (NIP version)

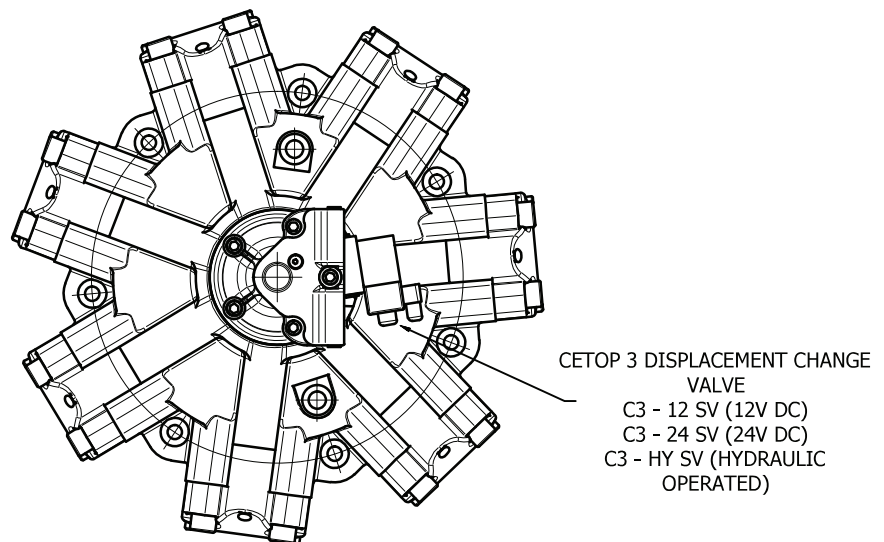
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IAC 4600-5400 H7 - CETOP 3 FITTING

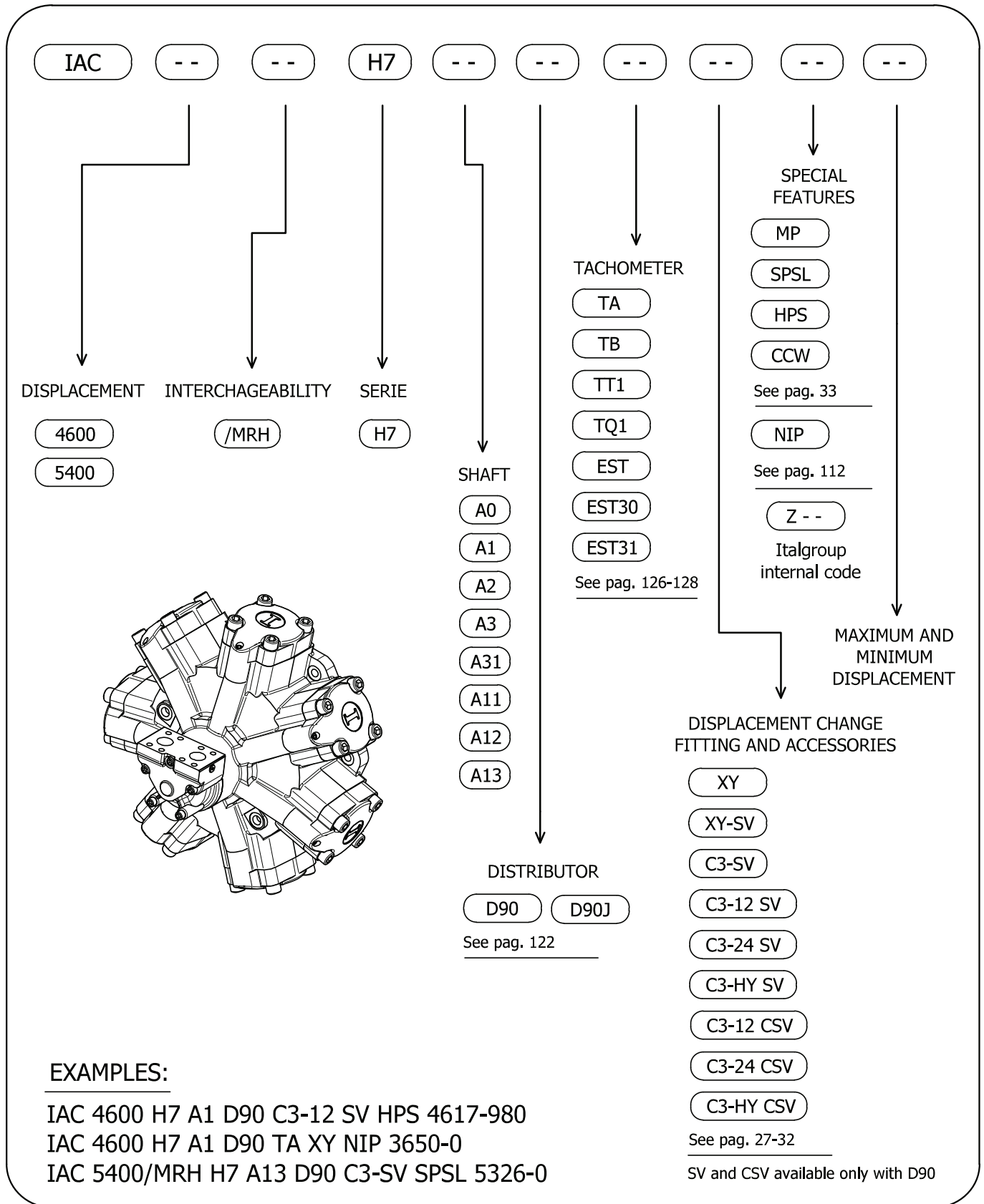
CETOP 3 DISPLACEMENT CHANGE CONFIGURATION



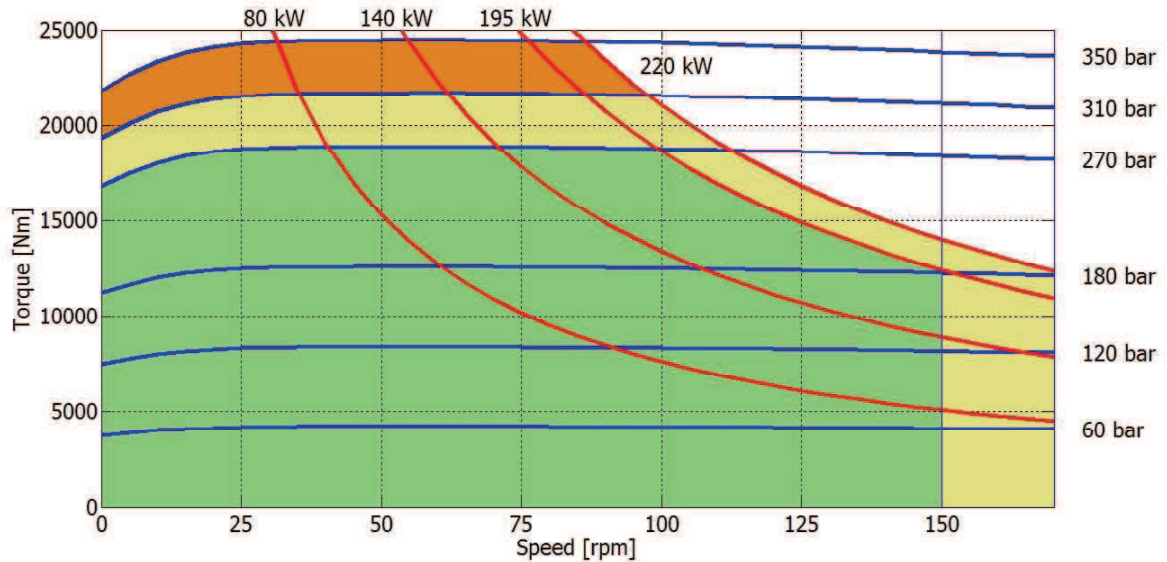
X - minimum displacement
Y - maximum displacement



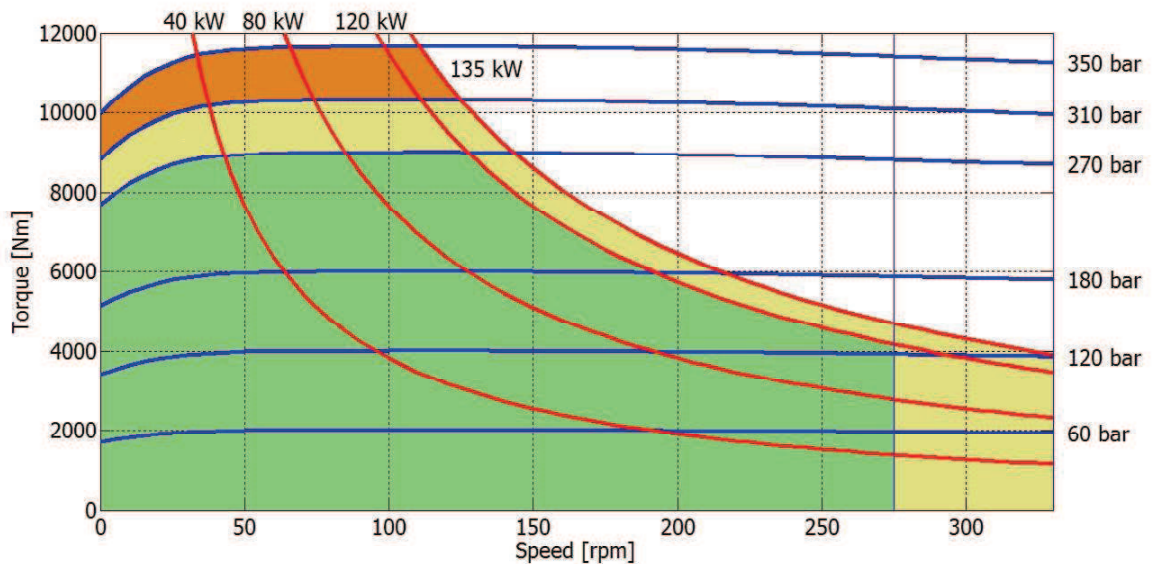
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4617 cc - WITHOUT FLUSHING



2290 cc - WITHOUT FLUSHING

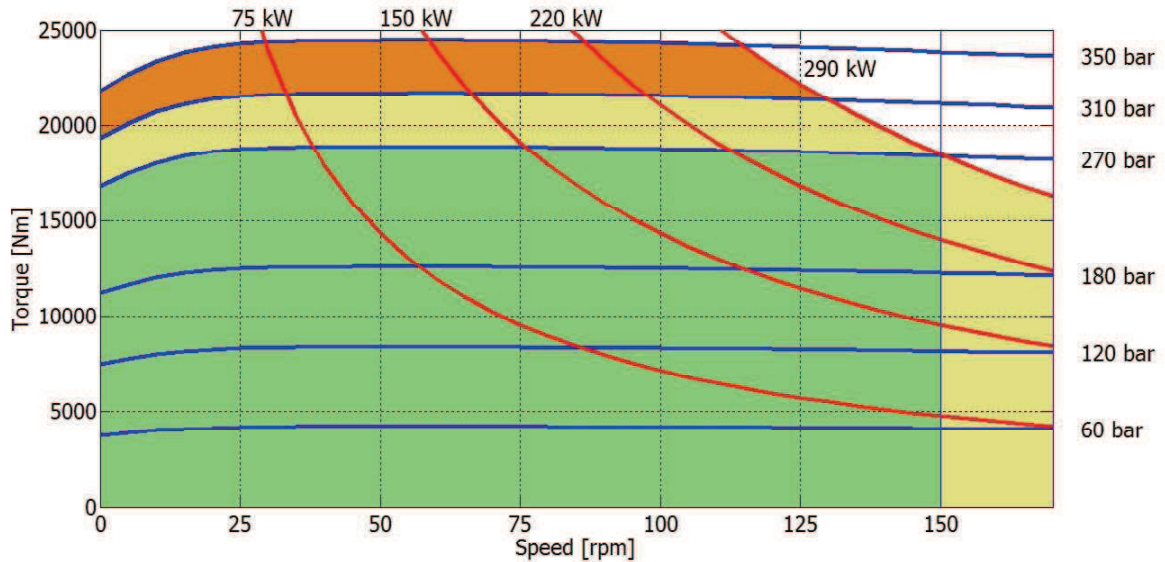


-  Continuous operation
-  Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period.
-  Peak operation: permitted for very short periods (3-5 seconds every 10-15 minutes).

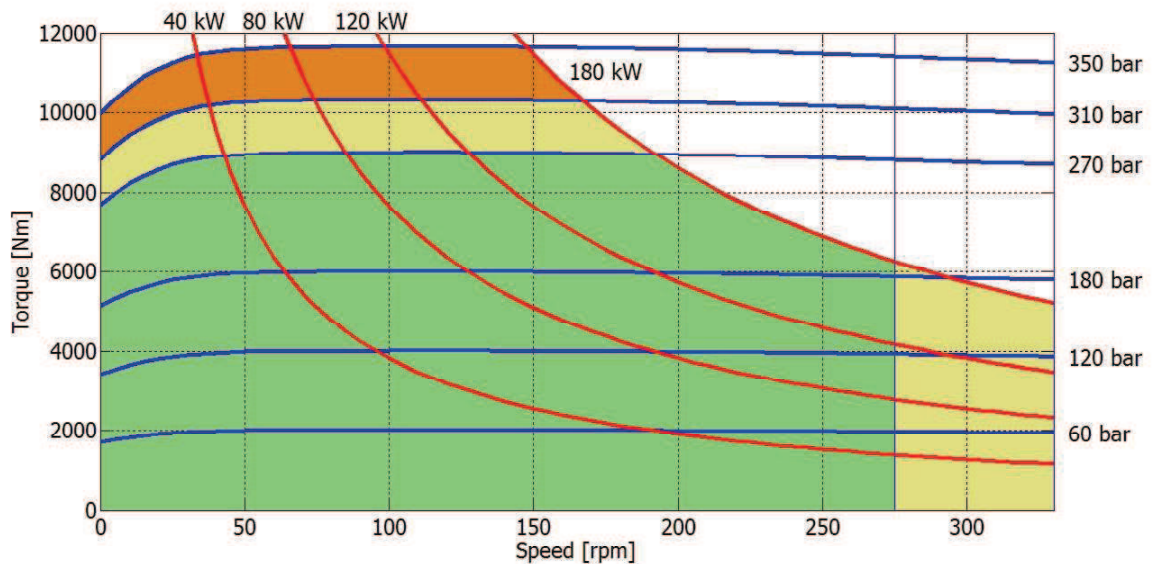
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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

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4617 cc - WITH FLUSHING



2290 cc - WITH FLUSHING

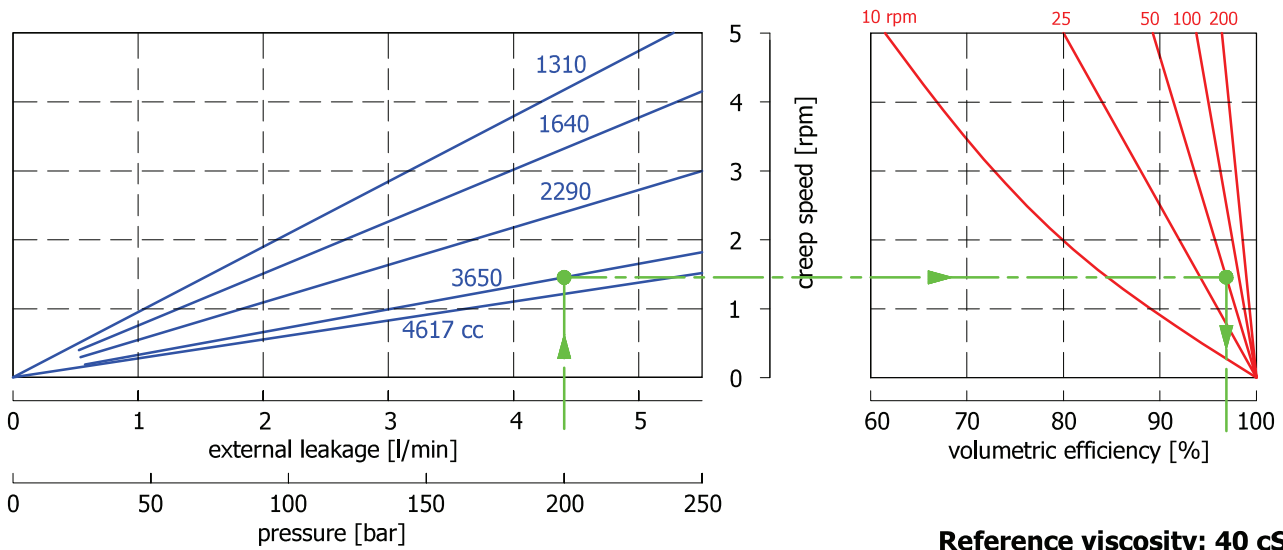


- Continuous operation
- Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period.
- Peak operation: permitted for very short periods (3-5 seconds every 10-15 minutes).

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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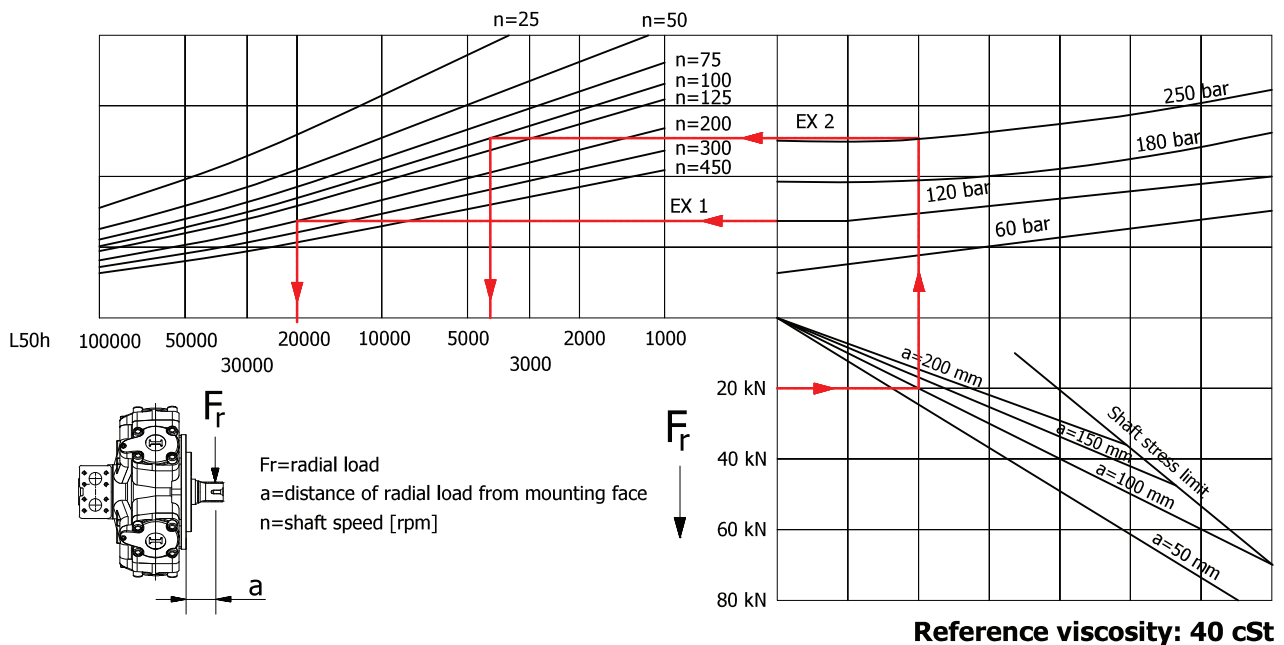
CREEP SPEED - VOLUMETRIC EFFICIENCY



Example:

We suppose (3650 cc): $p=200$ [bar], we obtain: external leakage 4,3 [l/min], shaft creep speed 1,5 [rpm].
 If we suppose (3650 cc): $p=200$ [bar] and $n=50$ [rpm] we obtain a volumetric efficiency of 97,5%;

BEARING LIFE

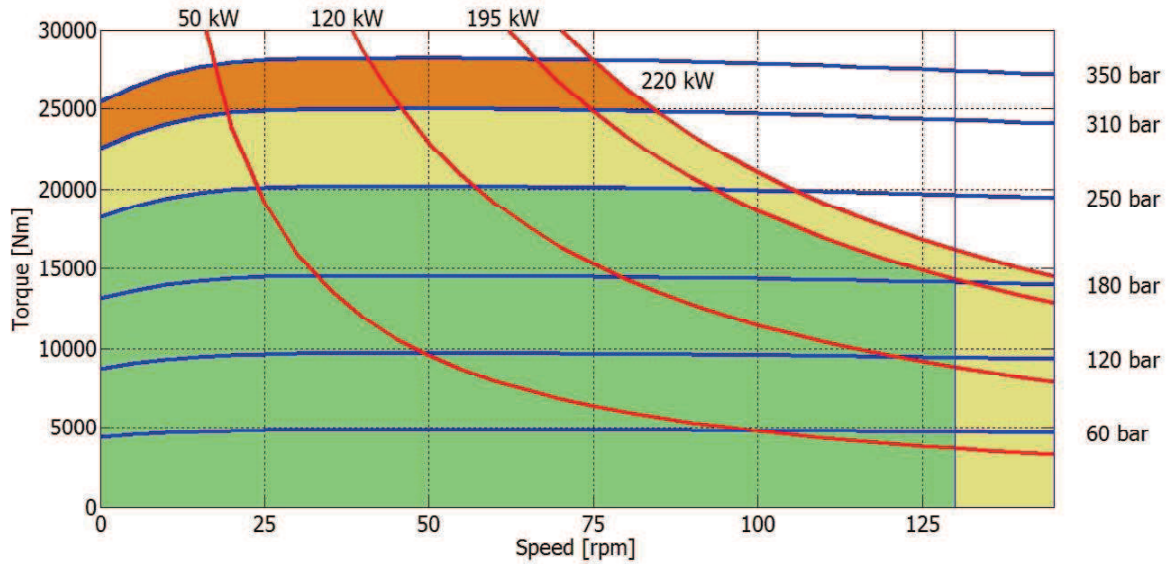


Example:

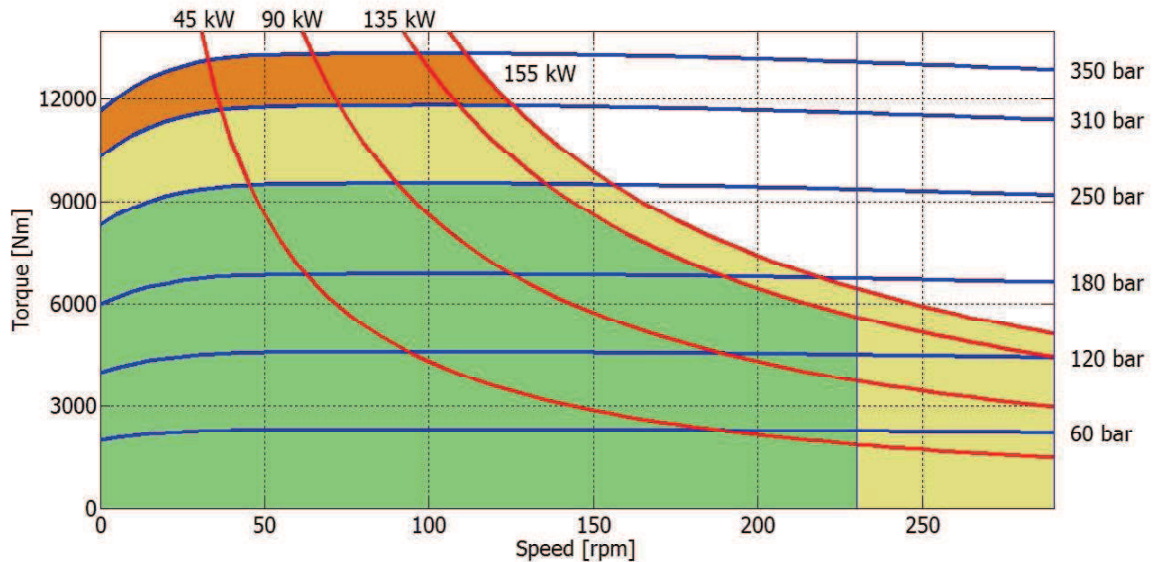
We suppose (EX1): $p=120$ [bar], $n=200$ [rpm]; we obtain an average lifetime of 25000 [h].
 If we suppose (EX2): $F_r=20$ [kN], $a=100$ [mm], $n=50$ [rpm] and $p=250$ [bar] we obtain an average lifetime of 6500 [h].

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5326 cc - WITHOUT FLUSHING



2620 cc - WITHOUT FLUSHING



Continuous operation

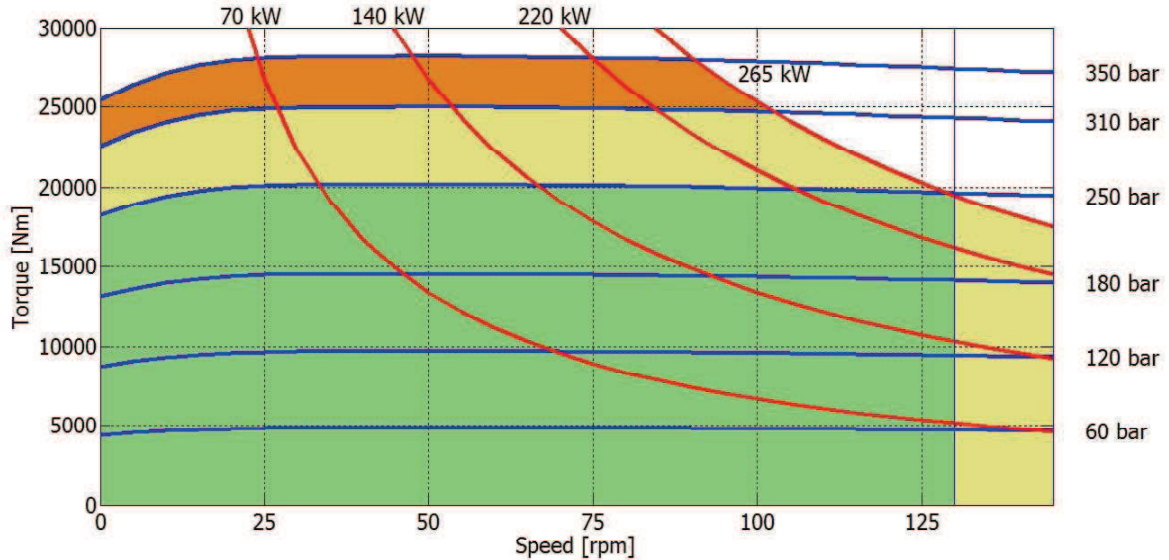
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period.

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

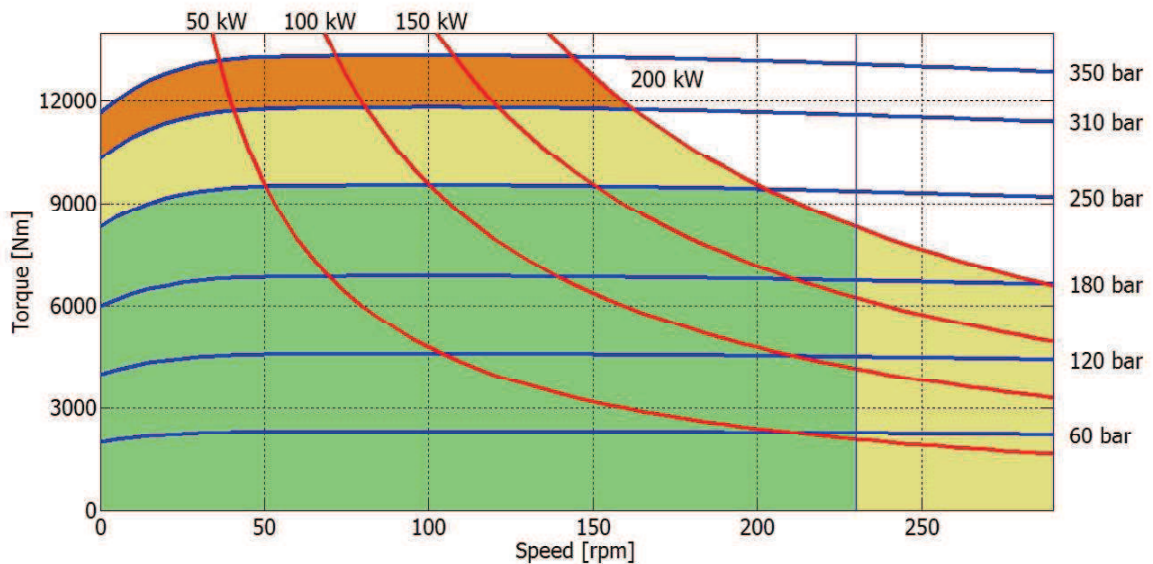
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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




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5326 cc - WITH FLUSHING



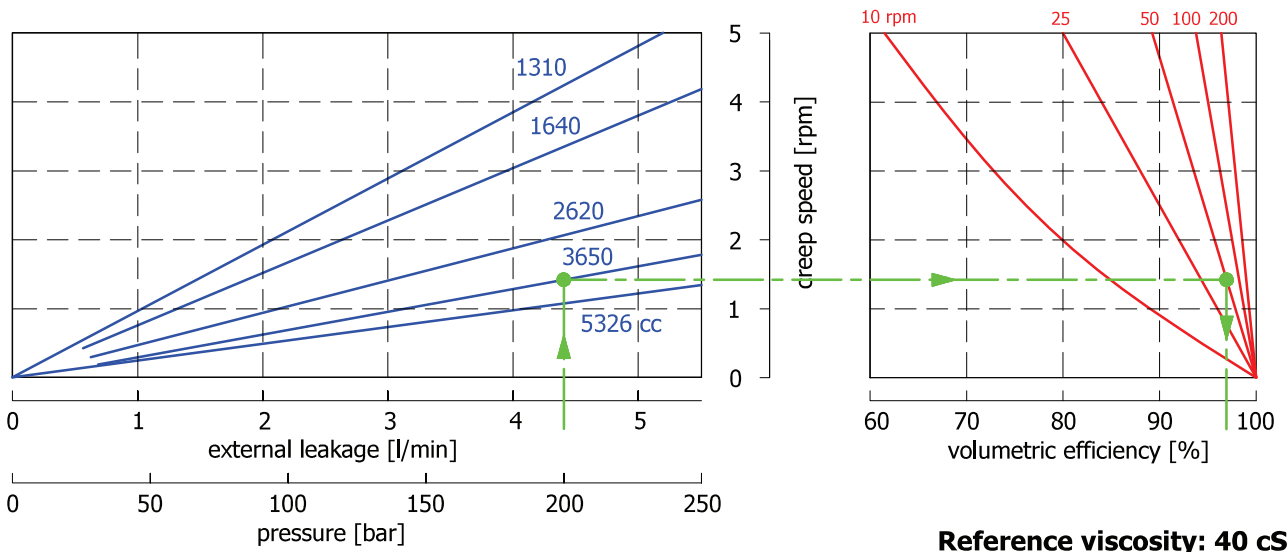
2620 cc - WITH FLUSHING



-  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.

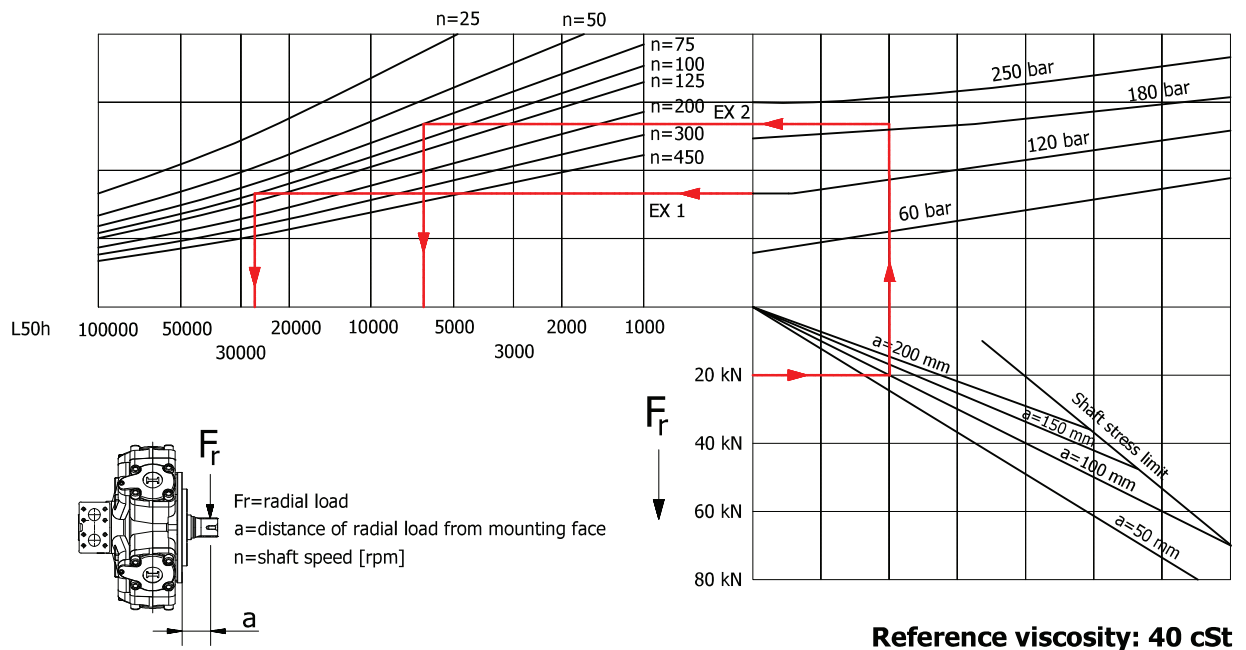
CREEP SPEED - VOLUMETRIC EFFICIENCY



Example:

We suppose (3650 cc): $p=200$ [bar], we obtain: external leakage 4,3 [l/min], shaft creep speed 1,5 [rpm].
If we suppose (3650 cc): $p=200$ [bar] and $n=50$ [rpm] we obtain a volumetric efficiency of 97,5%;

BEARING LIFE



Example:

We suppose (EX1): $p=120$ [bar], $n=100$ [rpm]; we obtain an average lifetime of 31000 [h].

If we suppose (EX2): $F_r=20$ [kN], $a=100$ [mm], $n=75$ [rpm] and $p=180$ [bar] we obtain an average lifetime of 6000 [h].

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