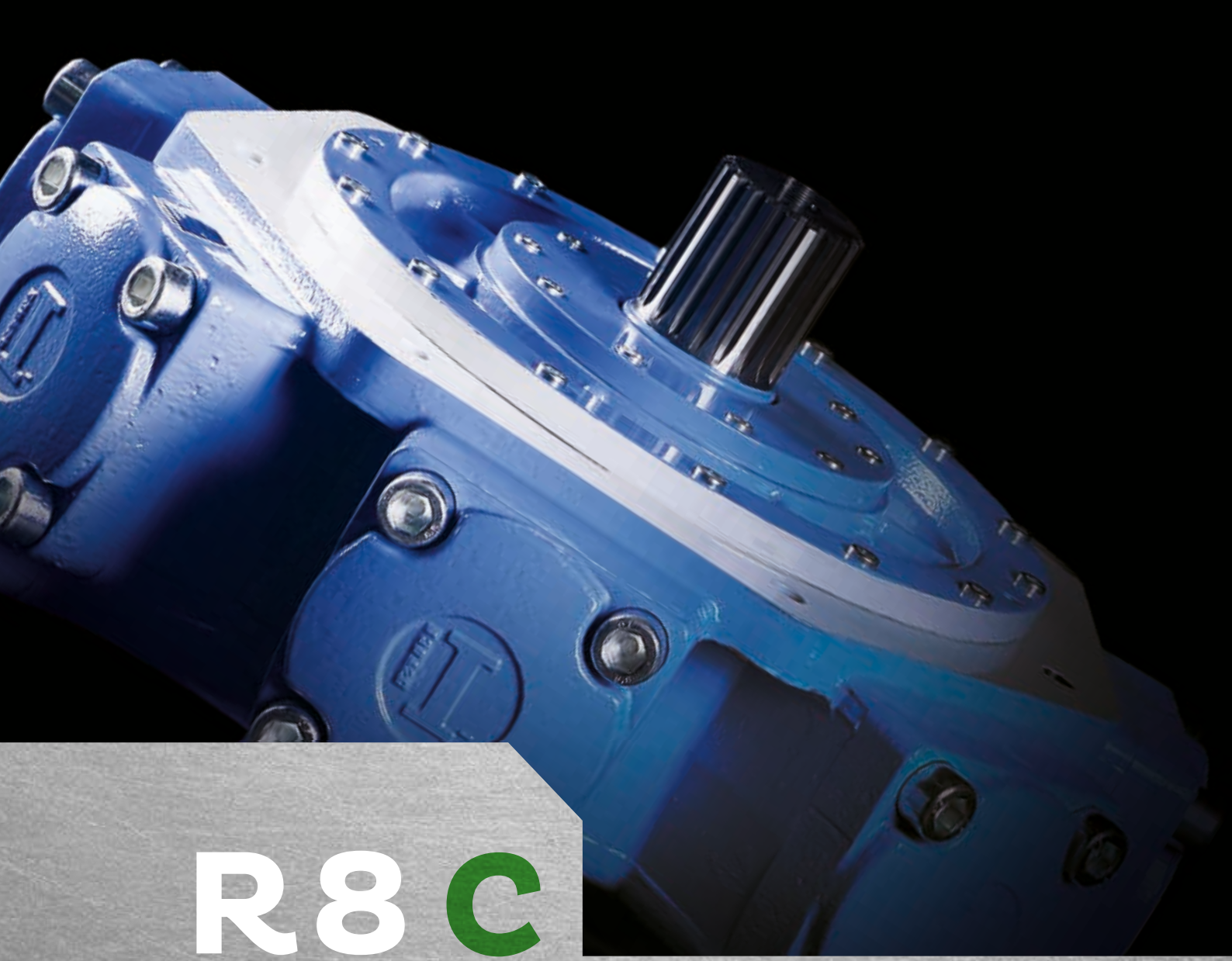


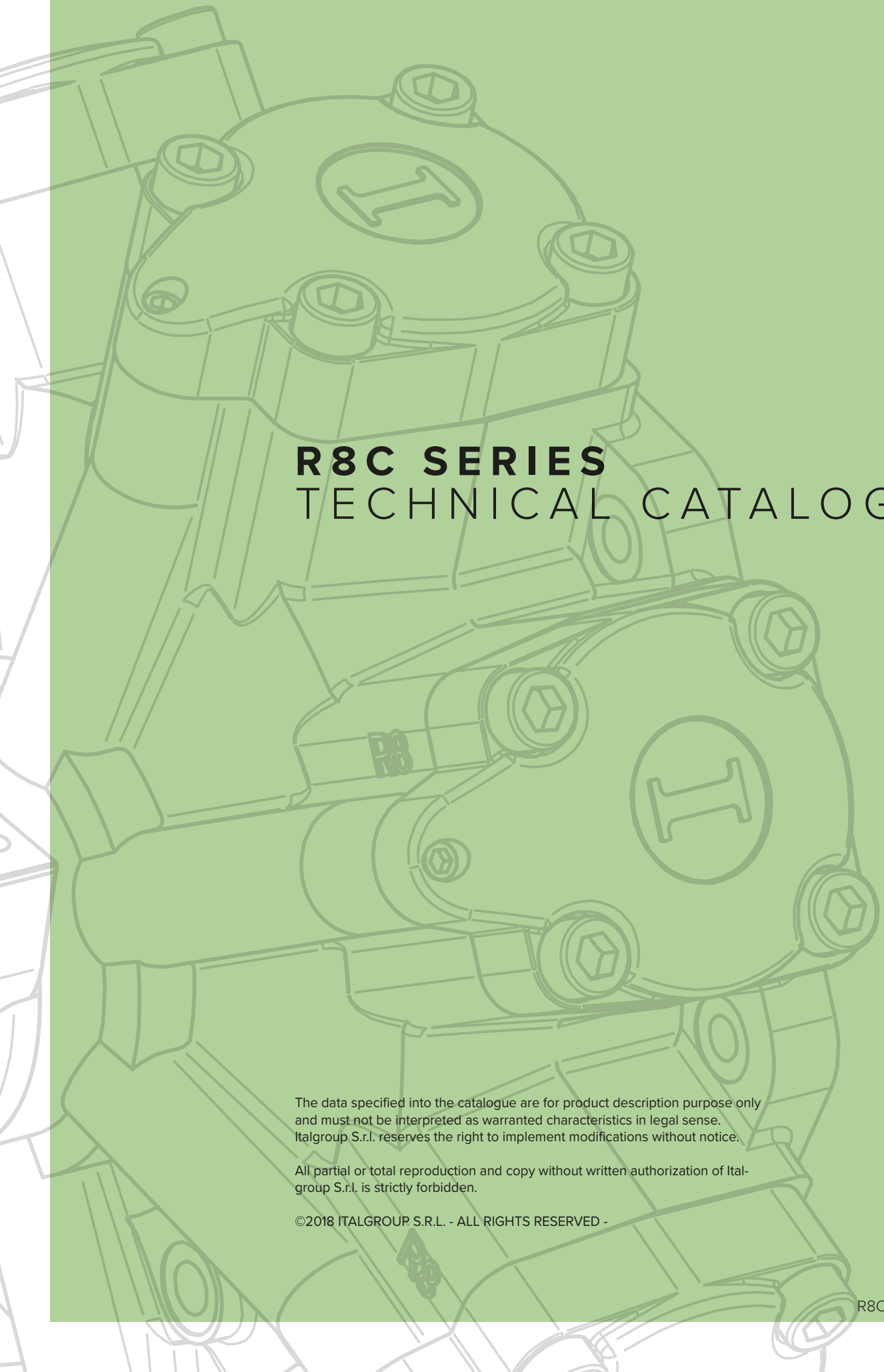
R8 COUPLE 2 DISPLACEMENT

Italgroup®

HYDRAULIC MOTORS

ITALY

DUAL DISPLACEMENT HYDRAULIC MOTOR



R8C SERIES
TECHNICAL CATALOGUE

R8C rev.01 - Jan. 2019

GENERAL INDEX

GENERAL INDEX

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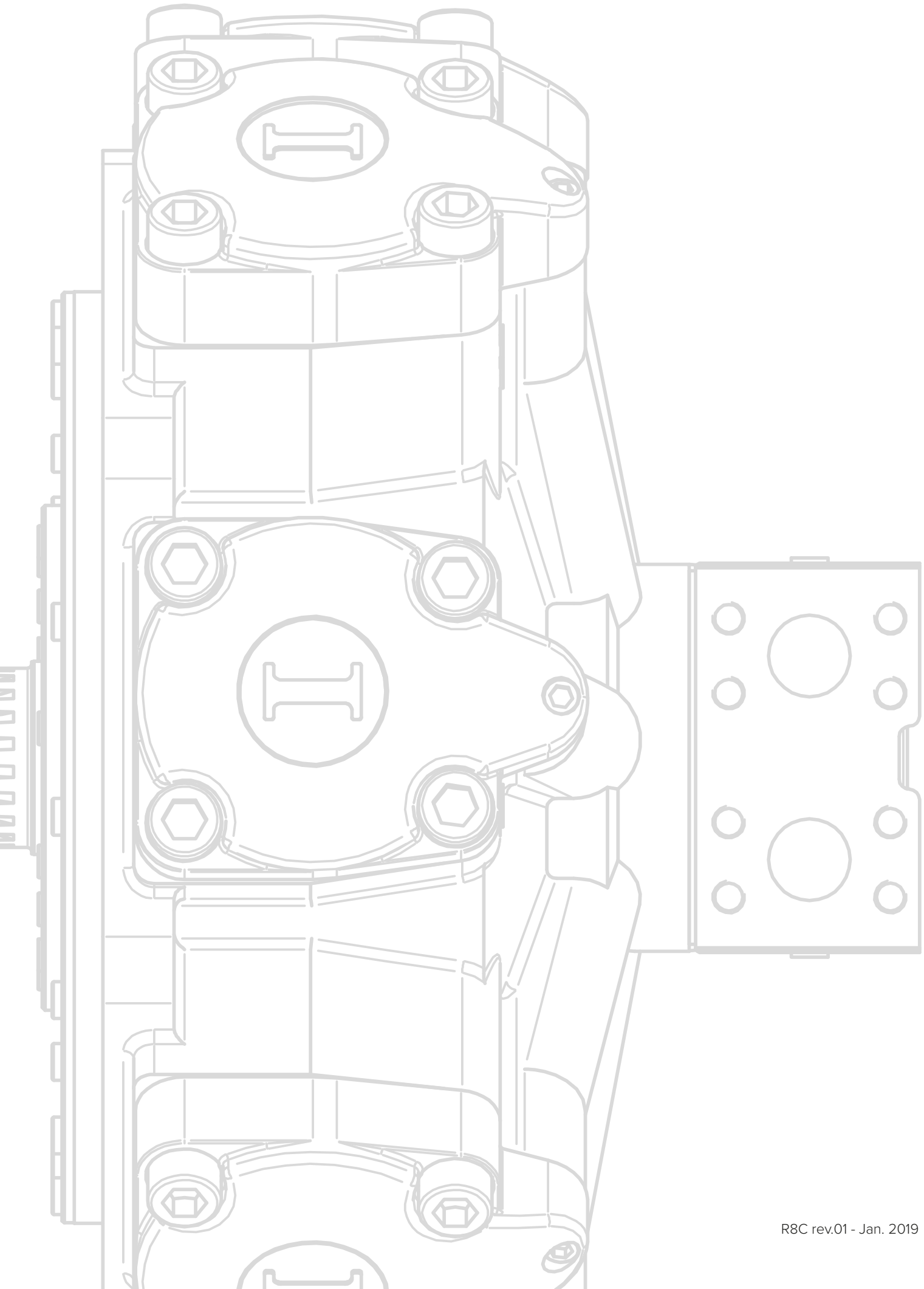


R8C rev.01 - Jan. 2019

FORMULAS

Torque [Nm] = Specific torque [Nm/bar] * Pressure [bar]

Torque [Nm] = $\frac{\text{Displacement [cc/Rev]} * \text{Pressure [bar]}}{\mathbf{62.8}}$

Power [kW] = $\frac{\text{Torque [Nm]} * \text{Speed [rpm]}}{\mathbf{9549}}$

Power [CV] = $\frac{\text{Torque [Nm]} * \text{Speed [rpm]}}{\mathbf{7023}}$

Speed [rpm] = $\frac{\text{Flow [l/min]} * 1000}{\mathbf{\text{Displacement [cc/Rev]}}}$

Displacement [cc/Rev] = $\frac{\text{Torque [Nm]} * 62{,}8}{\mathbf{\text{Pressure [bar]}}}$

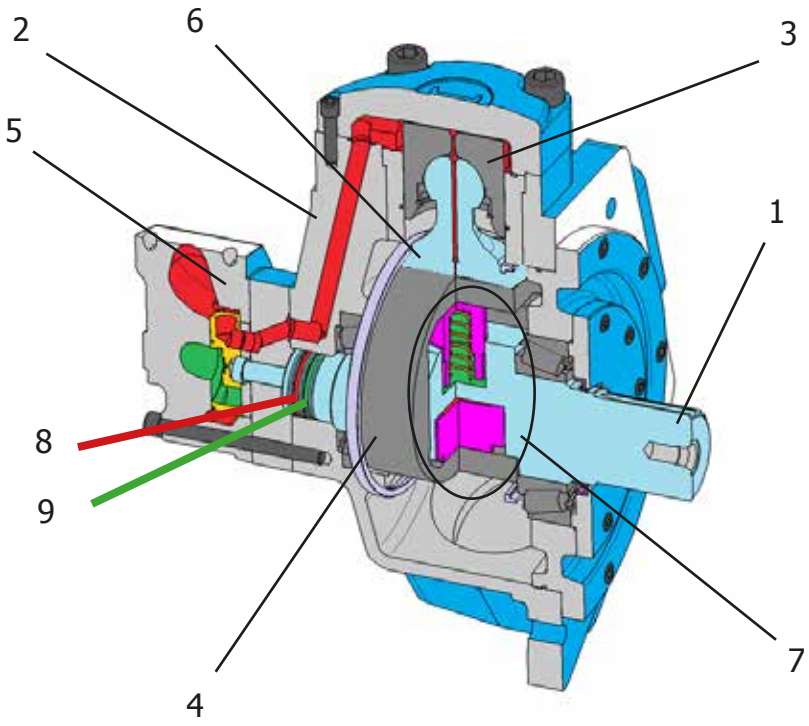
Flow [l/min] = $\frac{\text{Displacement [cc/Rev]} * \text{Speed [rpm]}}{\mathbf{1000}}$

INTRODUCTION GENERAL INFORMATION

Carefully read the use and maintenance manual before start-up the motor. The use and maintenance manual must be placed near to motor installation location in order to guarantee operators easy access to the instruction manual. For further information please contact Italgroup.

MOTOR DESCRIPTION

IAC series motors are dual displacement radial piston hydraulic motors (generally indicated as LSHT motors, low speed high torque motors) with a rotating shaft (1) and a stationary housing (2) . The pistons (3) are located radially and the working fluid provide the mechanical force that push the pistons against the eccentric cam (4), providing the shaft ouput torque. The inlet and outlet flow to and from the pistons is regulated by a distributor (5) that provides the oil distribution correct timing. The pistons transfer the forces to the eccentric shaft through a connecting rod (6). Acting in the adequate way (increasing or reducing the oil flow coming from the pump) the motor rotational speed can be increased or reduced. In addition, there is an hydraulic mechanism (7) that control the motor displacement.



R8C SERIES

Hydraulic motors of the R8C series are single displacement crankshaft radial piston motors. Thanks to great variety of accessories R8C series can be used in a wide range of applications such as:

- MARINE EQUIPMENTS
- WINCHES
- OFFSHORE EQUIPMENTS
- CONVEYORS
- INJECTION MOULDING MACHINES
- STEEL BENDING MACHINES
- FORK LIFTS TRUCKS
- SKID STEER LOADERS
- DUMPERS
- AGRICULTURAL AND FORESTRY MACHINES
- MUNICIPAL VEHICLES
- AIRPORT MACHINERY

PRODUCT FEATURES:

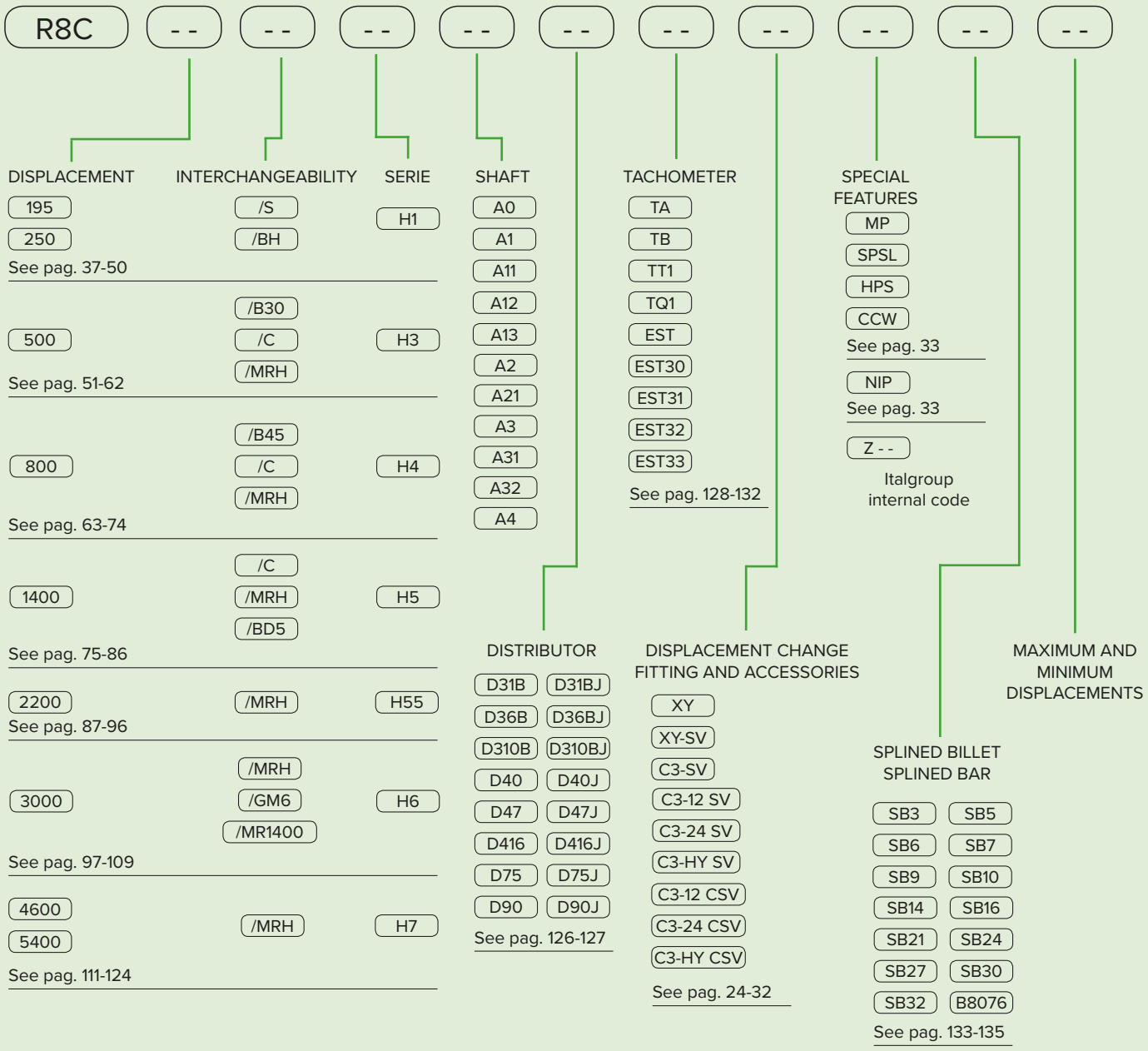
- High volumetric and mechanical efficiencies
- Very smooth running at low speeds
- High starting torque / constant torque
- Wide speed range
- Compact Design
- Low maintenance and high reliability
- Bi-directional
- High radial and axial force allowed
- Speed sensor available
- Built-in valves available

INTRODUCTION - GENERAL INFORMATION

Motor	Max torque @275 bar [Nm]	Continuous power with flushing [kW]	Continuous power without flushing [kW]
		[cc]	[Nm/bar]
IAC 195 H1	765	45	36
IAC 250 H1	995	48	38
IAC 500 H3	1885	78	65
IAC 800 H4	3150	125	105
IAC 1600 H5	6350	172	142
IAC 2200 H55	8880	170	140
IAC 3000 H6	12800	270	180
IAC 4600 H7	19300	290	195
IAC 5400 H7	22200	265	195

Italgroup motor code	Cross reference motor code
R8C 500/B30 H3	HMC 30
R8C 800/B45 H4	HMC 45
R8C 1400 H5	HMC 80
R8C 2200 H55	HMC 125
R8C 3000 H6	HMC 200
R8C 4600 H7	HMC 270
R8C 5400 H7	HMC 325
R8C 500/C H3	MRD 450 - MRDE 500
R8C 800/C H4	MRD 700 - MRDE 800
R8C 1400/C H5	MRD 1100 - MRDE 1400
R8C 3000/C H6	MRD 2800 - MRDE 3100
R8C 800/MRH H4	MRH2-45
R8C 1400/MRH H5	MRH2-95
R8C 3000/MRH H6	MRH2-190
R8C 4600/MRH H7	MRH2-270
R8C 195-250/S H1	GM1 / M1

R8C - ORDERING CODE



R8C H1 TECHNICAL DATA

R8C 195 H1

Displacement (*)	**[cc]**	**195**	**175**	**150**	**125**	**100**	**95**	**75**	**69**
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]	37	35	33	31	30	28	21	19
Cont. power with flushing	[kW]	46	43	39	37	36	33	27	25
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

R8C 250 H1

Displacement (*)	**[cc]**	**257**	**232**	**195**	**175**	**150**	**125**	**100**	**95**
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]	39	38	37	35	33	31	29	29
Cont. power with flushing	[kW]	50	47	46	44	41	39	35	33
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.

R8C H3 TECHNICAL DATA

R8C 500 H3

Displacement (*)	[cc]	492	442	393	344	292
Th. specific torque	[Nm/bar]	7,8	7	6,3	5,5	4,7
Continuous speed	[rpm]	500	550	600	630	630
Peak speed	[rpm]	600	650	680	700	700
Minimum speed	[rpm]	2	2	2	2	2
Mechanical efficiency	[%]	87,5	86	85	83,6	82,4
Starting efficiency	[%]	82,5	81	80	77,2	74,3
Continuous power (**)	[kW]	67	67	67	62	52
Cont. power with flushing	[kW]	80	80	80	72	62
Continuous pressure	[bar]	270	270	270	270	270
Intermittent pressure	[bar]	310	310	310	310	310
Peak pressure	[bar]	350	350	350	350	350
Flushing flow	[l/min]	8	8	8	8	8
Dry weight	[kg]	68	68	68	68	68

Displacement (*)	[cc]	255	197	147	98
Th. specific torque	[Nm/bar]	4,1	3,1	2,3	1,6
Continuous speed	[rpm]	650	700	700	700
Peak speed	[rpm]	750	800	900	1000
Minimum speed	[rpm]	3	3	3	4
Mechanical efficiency	[%]	82	80	78	73,4
Starting efficiency	[%]	69,6	62,1	52	30
Continuous power (**)	[kW]	49	39	25	16
Cont. power with flushing	[kW]	56	42	29	19
Continuous pressure	[bar]	270	250	250	250
Intermittent pressure	[bar]	310	310	310	310
Peak pressure	[bar]	350	350	350	350
Flushing flow	[l/min]	8	8	8	8
Dry weight	[kg]	68	68	68	68

(*) 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.

R8C H4 TECHNICAL DATA

R8C 800 H4

Displacement (*)	**[cc]**	**792**	**660**	**575**	**493**	**410**
Th. specific torque	[Nm/bar]	12,6	10,5	9,2	7,8	6,5
Continuous speed	[rpm]	450	550	620	650	650
Peak speed	[rpm]	550	700	720	750	800
Minimum speed	[rpm]	2	2	2	2	2
Mechanical efficiency	[%]	90,8	90,4	88,5	88	87,4
Starting efficiency	[%]	84,8	84,4	82,6	79	75
Continuous power (**)	[kW]	108	94	84	72	55
Cont. power with flushing	[kW]	128	112	100	86	66
Continuous pressure	[bar]	270	270	270	270	270
Intermittent pressure	[bar]	310	310	310	310	310
Peak pressure	[bar]	350	350	350	350	350
Flushing flow	[l/min]	10	10	10	10	10
Dry weight	[kg]	92	92	92	92	92

Displacement (*)	**[cc]**	**328**	**273**	**245**	**165**
Th. specific torque	[Nm/bar]	5,2	4,3	3,9	2,6
Continuous speed	[rpm]	700	700	700	700
Peak speed	[rpm]	800	850	850	900
Minimum speed	[rpm]	2	2	3	3
Mechanical efficiency	[%]	84,5	82,4	82	60,2
Starting efficiency	[%]	70,2	68,3	60,8	43,3
Continuous power (**)	[kW]	55	43	41	19
Cont. power with flushing	[kW]	66	51	49	25
Continuous pressure	[bar]	250	250	250	250
Intermittent pressure	[bar]	310	310	310	310
Peak pressure	[bar]	350	350	350	350
Flushing flow	[l/min]	10	10	10	10
Dry weight	[kg]	92	92	92	92

(*) 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.

R8C H5 TECHNICAL DATA

R8C 1400 H5

Displacement (*)	[cc]	1600	1499	1393	1313	1235	1150	1070	980	900	820
Th. specific torque	[Nm/bar]	24,5	23,9	22,2	20,9	19,7	18,3	17	15,6	14,3	13
Continuous speed	[rpm]	370	400	410	435	440	460	480	490	495	520
Peak speed	[rpm]	450	500	500	500	550	550	575	600	600	600
Minimum speed	[rpm]	1	1	1	1	1	1	1	1	1	2
Mechanical efficiency	[%]	94,2	94	93,9	93,7	93,5	93,4	93,2	93	92,6	92,3
Starting efficiency	[%]	88,2	88	86,5	85,3	85,1	82,6	81,3	79,8	77,9	76
Continuous power (***)	[kW]	145	142	137	132	132	127	122	116	111	106
Cont. power with flushing	[kW]	174	172	167	157	157	152	147	139	133	127
Continuous pressure	[bar]	270	270	270	270	270	270	270	270	270	270
Intermittent pressure	[bar]	310	310	310	310	310	310	310	310	310	310
Peak pressure	[bar]	350	350	350	350	350	350	350	350	350	350
Flushing flow	[l/min]	12	12	12	12	12	12	12	12	12	12
Dry weight	[kg]	173	173	173	173	173	173	173	173	173	173

Displacement (*)	[cc]	737	655	574	492	410	328	246	164	82	0
Th. specific torque	[Nm/bar]	11,7	10,4	9,1	7,8	6,5	5,2	3,9	2,6	1,3	0
Continuous speed	[rpm]	545	600	600	600	600	600	600	600	1000	1000
Peak speed	[rpm]	650	700	700	700	800	800	800	800	1200	1500
Minimum speed	[rpm]	2	2	2	2	2	3	3	3	-	-
Mechanical efficiency	[%]	91	89,3	87	83	81,7	75,5	65,7	60,5	0	0
Starting efficiency	[%]	72,9	83,2	65	59,2	51	39	18	0	0	0
Continuous power (***)	[kW]	106	106	96	71	56	41	26	19	0	0
Cont. power with flushing	[kW]	127	127	111	91	76	56	36	23	0	0
Continuous pressure	[bar]	250	250	250	250	250	250	250	250	17(**)	17(**)
Intermittent pressure	[bar]	310	310	310	310	310	310	310	310	17(**)	17(**)
Peak pressure	[bar]	350	350	350	350	350	350	350	350	17(**)	17(**)
Flushing flow	[l/min]	12	12	12	12	12	12	12	12	15	15
Dry weight	[kg]	173	173	173	173	173	173	173	173	173	173

(*) 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 120 kW and starting efficiency is 88,2%, estimated required power is 120/0.882 = 136 kW.
Hydrostatic pressure test: 420 bar.
Temperature range: -30 / 70 °C.

R8C H55 TECHNICAL DATA

R8C 2200 H55

Displacement (*)	**[cc]**	**2200**	**2049**	**1970**	**1800**	**1640**	**1470**	**1310**	**1150**
Th. specific torque	[Nm/bar]	35	32,6	31,3	28,6	26,1	23,4	20,9	18,3
Continuous speed	[rpm]	280	305	320	350	380	410	440	470
Peak speed	[rpm]	320	340	360	400	430	470	500	540
Minimum speed	[rpm]	1	1	1	1	1	1	1	1
Mechanical efficiency	[%]	92,2	92,2	92,2	92,2	91	90	88	86,5
Starting efficiency	[%]	81	80,6	79,6	77,5	74,6	71,5	67,5	62,2
Continuous power (***)	[kW]	140	140	135	125	116	108	100	90
Cont. power with flushing	[kW]	170	170	165	155	145	135	127	110
Continuous pressure	[bar]	270	270	270	270	270	270	270	270
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]	10	10	10	10	10	10	10	10
Dry weight	[kg]	210	210	210	210	210	210	210	210

Displacement (*)	**[cc]**	**980**	**820**	**655**	**490**	**330**	**160**	**82**	**0**
Th. specific torque	[Nm/bar]	15,6	13,1	10,4	7,8	5,3	2,5	1,3	0
Continuous speed	[rpm]	610	620	620	640	640	640	1000	1000
Peak speed	[rpm]	700	700	720	720	800	800	1200	1500
Minimum speed	[rpm]	1	2	2	2	3	5	-	-
Mechanical efficiency	[%]	82,2	81,8	78,2	76	73	26	0	0
Starting efficiency	[%]	55,3	45,8	31,5	0	0	0	0	0
Continuous power (***)	[kW]	83	75	65	50	25	5	0	0
Cont. power with flushing	[kW]	105	90	80	65	40	10	0	0
Continuous pressure	[bar]	270	250	250	250	250	250	17(**)	17(**)
Intermittent pressure	[bar]	310	310	310	310	310	310	17(**)	17(**)
Peak pressure	[bar]	350	350	350	350	350	350	17(**)	17(**)
Flushing flow	[l/min]	10	10	10	10	10	12	15	15
Dry weight	[kg]	210	210	210	210	210	210	210	210

(*) 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 150 kW and starting efficiency is 86%, estimated required power is 150/0.86 = 174,4 kW.
Hydrostatic pressure test: 420 bar.
Temperature range: -30 / 70 °C.

R8C H6 TECHNICAL DATA

R8C 3000 H6

Displacement (*)	[cc]	3085	2950	2790	2620	2460	2290	2130	1970	1800	1640
Th. specific torque	[Nm/bar]	49,1	47	44,4	41,7	39,2	36,5	33,9	31,4	28,7	26,1
Continuous speed	[rpm]	235	240	245	250	250	265	285	305	340	370
Peak speed	[rpm]	280	280	300	300	300	320	340	350	400	420
Minimum speed	[rpm]	1	1	1	1	1	1	1	1	1	1
Mechanical efficiency	[%]	95	94,5	94,2	94	93,7	93,5	92,8	92,3	92	91
Starting efficiency	[%]	86	85,4	84,4	83,6	82,4	82	80,2	78	76	73
Continuous power (***)	[kW]	182	182	182	170	160	155	145	133	123	116
Cont. power with flushing	[kW]	272	272	272	255	240	230	214	197	186	176
Continuous pressure	[bar]	270	270	270	270	270	270	270	270	270	270
Intermittent pressure	[bar]	310	310	310	310	310	310	310	310	310	310
Peak pressure	[bar]	350	350	350	350	350	350	350	350	350	350
Flushing flow	[l/min]	12	12	12	12	12	12	12	12	12	12
Dry weight	[kg]	308	308	308	308	308	308	308	308	308	308

Displacement (*)	[cc]	1470	1310	1150	980	820	670	490	330	160	82	0
Th. specific torque	[Nm/bar]	23,4	20,9	18,3	15,6	13,1	10,7	7,8	5,2	2,5	1,3	0
Continuous speed	[rpm]	400	425	455	490	520	600	600	600	600	1000	1000
Peak speed	[rpm]	450	475	500	540	580	700	700	800	800	1200	1500
Minimum speed	[rpm]	1	1	1	1	2	2	2	3	5	-	-
Mechanical efficiency	[%]	90,5	88	86,2	82,3	81,7	78	76	73,2	25	0	0
Starting efficiency	[%]	70	66,4	62	55,4	46,3	33	0	0	0	0	0
Continuous power (***)	[kW]	107	100	100	100	90	80	70	40	8	0	0
Cont. power with flushing	[kW]	161	150	150	150	135	96	90	60	11	0	0
Continuous pressure	[bar]	270	250	250	250	250	250	250	250	250	17(**)	17(**)
Intermittent pressure	[bar]	310	310	310	310	310	310	310	310	310	17(**)	17(**)
Peak pressure	[bar]	350	350	350	350	350	350	350	350	350	17(**)	17(**)
Flushing flow	[l/min]	12	12	12	12	12	12	12	12	12	15	15
Dry weight	[kg]	308	308	308	308	308	308	308	308	308	308	308

(*) 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 120 kW and starting efficiency is 88,2%, estimated required power is 120/0.882 = 136 kW.
Hydrostatic pressure test: 420 bar.
Temperature range: -30 / 70 °C.

R8C 4600 H7 TECHNICAL DATA

R8C 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]	197	192	177	157	147	136	120	110
Cont. power with flushing	[kW]	292	272	252	237	216	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.

R8C 5400 H7 TECHNICAL DATA

R8C 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]	197	197	197	192	180	165	155	145	135
Cont. power with flushing	[kW]	265	262	262	256	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.

HYDRAULIC FLUID RECOMMENDATIONS

Fluid selection

In general, we recommend the use of hydraulic oils with minimum viscosity index of 95, with anti-wear additives (ISO HM and HV). Once normal working temperature is reached, the drain oil viscosity must be at least 35-40 cSt, preferably in the range from 40 to 60 cSt.
HE oils (ecological fluids) are allowed, but must be used with particular attention, because them can influence the motor seals compatibility, and can reduce motor performances and life. Please contact us in case of HE oils usage.

Optimal viscosity selection

Referring the first approximated selection to the room temperature, we advice the following:

Room temperature	Oil
-20°C/0°C	BP ENERGOL HLP – HM 22
-15°C/+5°C	BP ENERGOL HLP – HM 32
-8°C/+15°C	BP ENERGOL HLP – HM 46
0°C/+22°C	BP ENERGOL HLP – HM 68
+8°C/+30°C	BP ENERGOL HLP – HM 100
-20°C/+5°C	BP BARTRAN HV 32
-15°C/+22°C	BP BARTRAN HV 46
0°C/+30°C	BP BARTRAN HV 68

ATF (automatic transmission fluid) oils, SAE 10-20-30 W oils, multigrade motor oils (SAE 15 W 40, 10 W 40), universal oils, can also be used. Always fill the motor (please refer to the “DRAIN RECOMMENDATIONS” section) with the selected hydraulic fluid before motor start-up. During cold start-up avoid high-speed operation until the system reach the working temperature, in order to provide an adequate lubrication. Every 5-8 °C of increase respect to the optimal working temperature for the selected oil, the hydraulic fluid life decrease of about 40-50% (refer to “OXIDATION” section). Consequently, the motor lifetime will be affected by the working temperature increase respect to the optimal working temperature of the selected oil. The maximum continuous working temperature is 70 °C, the temperature must be measured from motor drain line. If the motor doesn’t have a drain line, the temperature must be evaluated at the return line port.

Fire resistant oil limitations

	Max cont. Pressure [bar]	Max int. Pressure [bar]	Max Speed [rpm]
HFA, 5-95% oil-water	103	138	50%
HFB, 60-40% oil-water	138	172	100%
HFC, water-glycol	103	138	50%
HFD, ester phosphate	250	293	100%

Filtration

Hydraulic systems oil must always be filtered.
The choice of filtration grade derives from needs of service life and money spent. In order to obtain stated service life it is important to follow our recommendations concerning filtration grade.
When choosing the filter it is important to consider the amount of dirt particles that filter can absorb and still operate satisfactorily. For that reason we recommend filters showing when you need to substitute filtering cartridge.

- 25 µm filtration required in most applications
- 10 µm filtration in closed circuit applications

Oxidation

Hydraulic oil oxidizes with time of use and temperature. Oxidation causes changes in colour and smell, acidity increase or sludge formation in the tank. Oxidation rate increases rapidly at surface temperatures above 60°C, in these situations oil should be checked more often.
The oxidation process increases the acidity of the fluid; the acidity is stated in terms of the “neutralization number”. Oxidation is usually slow at the beginning and then it increases rapidly.
A sharp increase (by a factor of 2 to 3) in neutralization number between inspections shows that oil has oxidized too much and should be replaced immediately.

Water content

Oil contamination by water can be detected by sampling from the bottom of the tank. Most hydraulic oils repel the water, which then collects at the bottom of the tank. This water must be drained off at regular intervals. Certain types of transmission oils and engine oils emulsify the water; this can be detected by coatings on filter cartridges or a change in the colour of the oil. In such cases, obtain your oil supplier advice.

Degree of contamination

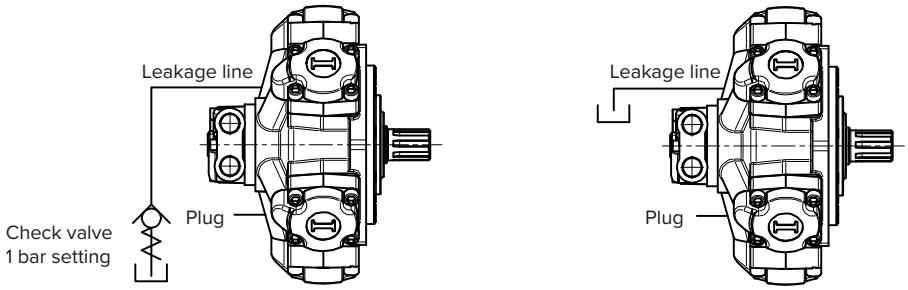
Heavy contamination of the oil causes wear rising in hydraulic system components. Contamination causes must be immediately investigated and remedied.

Analysis

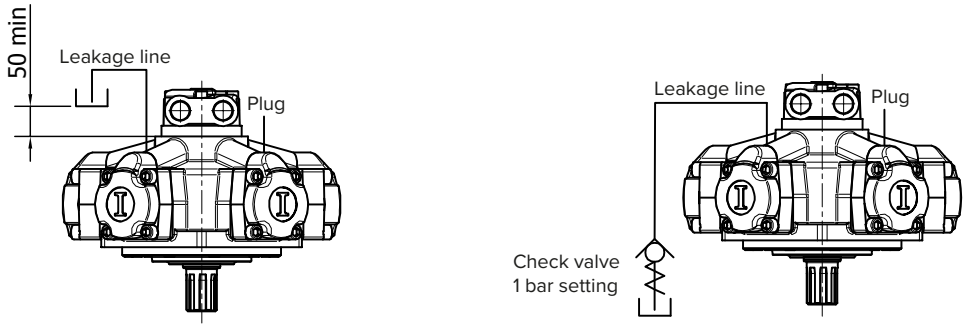
It is recommended oil being analyzed every 6 months. The analysis should cover viscosity, oxidation, water content, additives and contamination. Most oil suppliers are equipped to analyze oil state and to recommend appropriate action. Oil must be immediately replaced if the analysis shows that it is exhausted.

DRAIN RECOMMENDATIONS

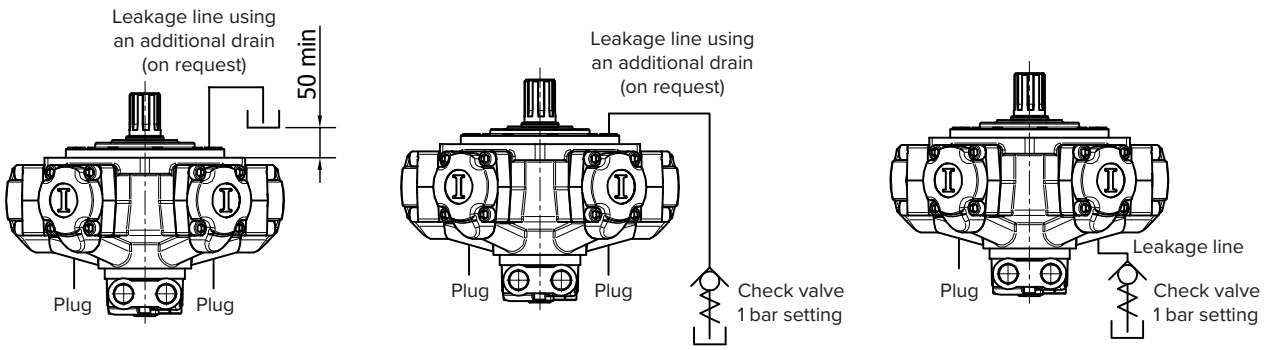
MOTOR AXIS HORIZONTAL



MOTOR AXIS VERTICAL, SHAFT DOWN



MOTOR AXIS VERTICAL, SHAFT UP



LEAKAGE LINE CONNECTION

Always fill the motor with hydraulic fluid before start-up. Arrange piping in a way that the motor cannot drain off and cannot generates air bubbles into the motor case. Under certain conditions may be is necessary to arrange a check valve in order to help avoiding the motor drain off. Always check carefully that the leakage line pressure doesn't overcome 10 bar pressure: therefore leakage lines must be shorter as possible and with a minimum flow resistance.

FLUSHING

Motor	Flushing flow [l/min]
R8C H1	6
R8C H3	8
R8C H4	10
R8C H5	12 - 15 (*)
R8C H55 - R8C H6	12 - 15 (*)
R8C H7	12 - 15 (*)

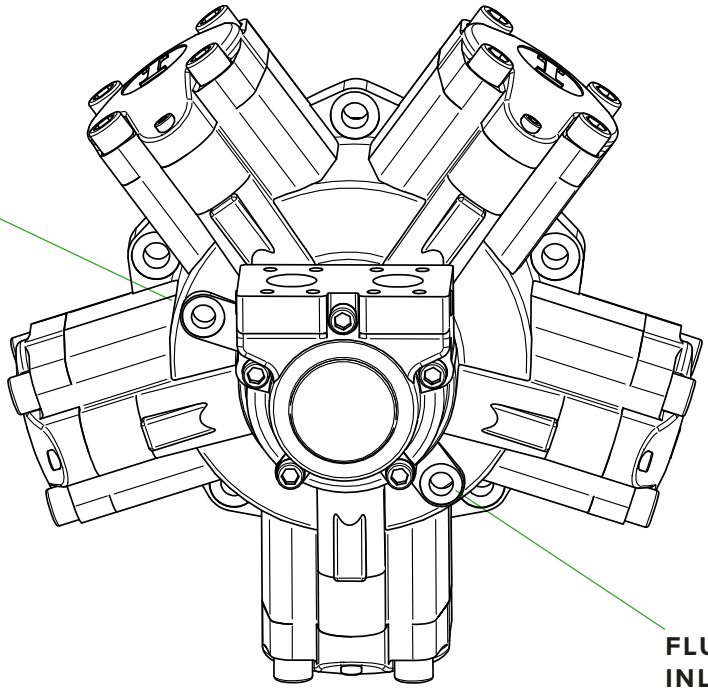
Important note: the above value are approximated. The correct way to operate is the following: the flushing flow is adequate if during the motor operation the drain oil viscosity be at least 35-40 cSt, preferably in the range from 40 to 60 cSt.

Maximum continuous case pressure 6 bar (10 bar peak pressure). Special seals for 20-25 bar continuous case pressure are available upon request (ordering code: HPS).

(*) The flushing flow for lower displacements that are used for freewheeling at 1000 rpm, must be higher than flushing flow for normal working conditions, and around 15 l/min.

FLUSHING OUTLET PORT

Please note: the flushing outlet port must always be located in the highest possible position.



MAXIMUM CASE PRESSURE

6 bar continuous
10 bar peak

For standard R8C motors

STANDARD SHAFT SEAL FEATURES

Features

Type: BABSL
Form: AS DIN 3760
Material: SIMRIT® 72 NBR 902
SIMRIT® 75 FKM 595

Material

SIMMERRING® radial shaft seal with rubber covered O.D., short, flexibility suspensed, spring loaded sealing lip and additional dust lip:
see Part B/SIMMERRING®, sections 1.1 and 2.

Application

Sealing lip and O.D.:

– Acrylonitrile-butadiene rubber with 72 Shore A hardness (designation: SIMRIT® 72 NBR 902)
– Fluoro rubber with 75 Shore A hardness (designation: SIMRIT®75 FKM 595)

Metal insert:
– Plain steel DIN 1624

Spring:
– Spring steel DIN 17223

Operating conditions

See Part B/ SIMMERRING®, sections 2. 4.

Media: mineral oils, synthetic oils

Temperature:
-40°C to +100°C (SIMRIT® 72 NBR 902)
-40°C to +160°C (SIMRIT® 75 FKM 595)

Surface speed: up to 5 m/s

Working pressure: see diagram on next page, pressure is function of surface speed (i.e. of rotating speed and shaft diameter)

Housing and machining criteria

See Part B/ SIMMERRING®, sections 2.

Shaft:

Tolerance:	ISO h11
Concentricity:	IT 8
Roughness:	Ra=0.2-0.8 µm
	Rz=1-4 µm
	Rmax=6 µm
Hardness:	45-60 HRc
Roughness:	non oriented; preferably by plunge grinding

Housing:

Tolerance:	ISO H8
Roughness:	Rmax<25 µm

Pressure diagram

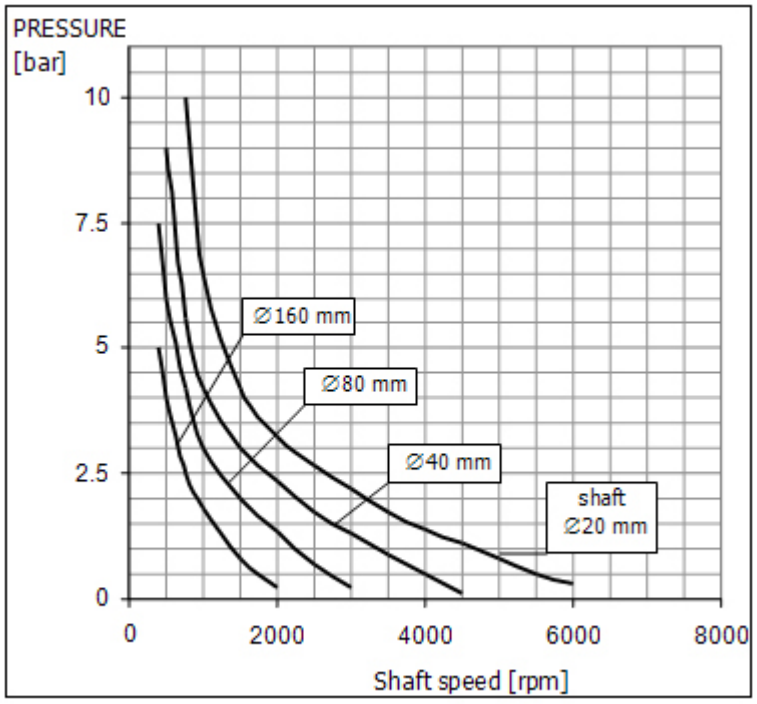


Diagram 1: Pressure Loading Limits

Special seals for 20-25 bar continuous case pressure are available upon request (ordering code: HPS). Refer to page 23 for more information.

MOTOR HANDLING AND STORAGE

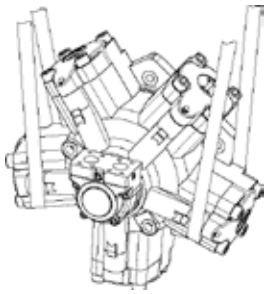
Motor handling

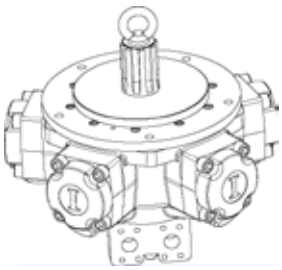
The motor must be correctly packed during transport and correctly stored into the warehouse in order to avoid eventual damages that can make the motor functioning not adequate.

During handling operations, make sure that the motor shaft and tachometer shaft (if present) don't receive any hit, in order to avoid motor damage.

During all operations of lifting and handling, never movimentate motors by hand but use adequate tools. In order to avoid that motor can falls, creating danger for authorized working persons in the nearings, use one of following methods:
- use lifting slings of adequate capacity;
- use adequate eyebolt using the thread hole in the shaft end.

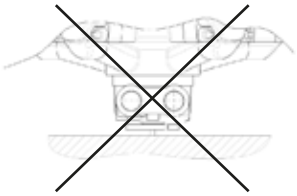
Refer to the following pictures.

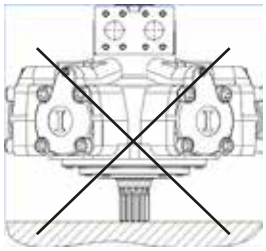




Storage

Storage must be carefully made using adequate storing tools (for example boxes, pallets, etc...) that can guarantee that the motor is stable and cannot move without control, in order to avoid damage problems. Make sure that the weight of the motor doesn't be substained by the motor shaft or by the tachometer shaft (if present).





R8C series motors are supplied together with plastic plugs, that keep the hydraulic oil (that was used during final test in Italgroup testing workbench) inside the motor. A thin oil film is present on the internal motor parts, whereas the external parts are covered with antirust oil that prevents damage from oxidation and corrosion.

Therefore the motors can be safely stored into the customer warehouse without performance losses for long periods (up to 4-6 months).
The storing location must has some important characteristics:
- room temperature comprised between -15°C and +55°C without fast and/or excessives temperature excursions;
- low relative humidity;
- absence of aggressive and corrosive medias in the motor nearings.

MAINTENANCE OPERATIONS

In particular, if motor should be motionless for more than 4-6 months, it must be protected against internal rust. Proceed as follows:
- fill the motor case with hydraulic oil. After that the motor case is full of oil, close it with a screw plug;
- fill the motor also from inlet or outlet port. Turn the shaft by hand (the shaft must make about one revolution) and finally close the inlet and outlet ports.

Please note that the plastic plugs are necessary not only to keep the hydraulic oil inside the motor, but even to avoid that dirt and other fluids (like water for example) can enter into the motor and create damage during storing or during motor start-up. Therefore make sure all drain ports, supply ports and discharge ports are closed during motor handling and storing. If plugs are missing, use plastic plugs or adequate systems in order to guarantee that the motor is well protected by dirt and other fluids.

Maintenance operations

All the assembly and maintenance works must be performed when the motor is stopped and not connected to any power source, in order to avoid an accidental start-up. In addition the pressure inside the motor must be set to zero (the motor must be depressurized) before to perform maintenance operations. The motor maintenance must be performed by instructed and experienced personnel only, following carefully Italgroup advices and procedures.

R8C series motors are internally lubricated by the operating fluid, if the motors are used according to the technical data reported into the R8C catalogue, they need very limited maintenance operations. In order to achieve good performances, long bearings lifetime and safe working, the working fluid must be carefully selected in function of the operating parameters (a fundamental parameter is the ambient temperature range). In case of fire resistence fluid usage , some limitation on pressure and speed can be required. Refer to hydraulic fluid recommendations section for more information. If required please contact Italgroup technical department for further information.

Motor parts	Material
Motor shaft, cam ring, rollers, pins, screws, distributor bush, rotating distributor, distributor joint, pistons, connecting rod, ring for rod	Steel
Motor case, cylinders, motor flange, distributor body	Cast iron
Distributor disk, piston shoes	Bronze
Slippers	Charged PTFE, PTFE
O-Rings	Elastomer
Radial shaft seal rings	Elastomer / charged PTFE

MOTOR INSTALLATION AND STARTUP

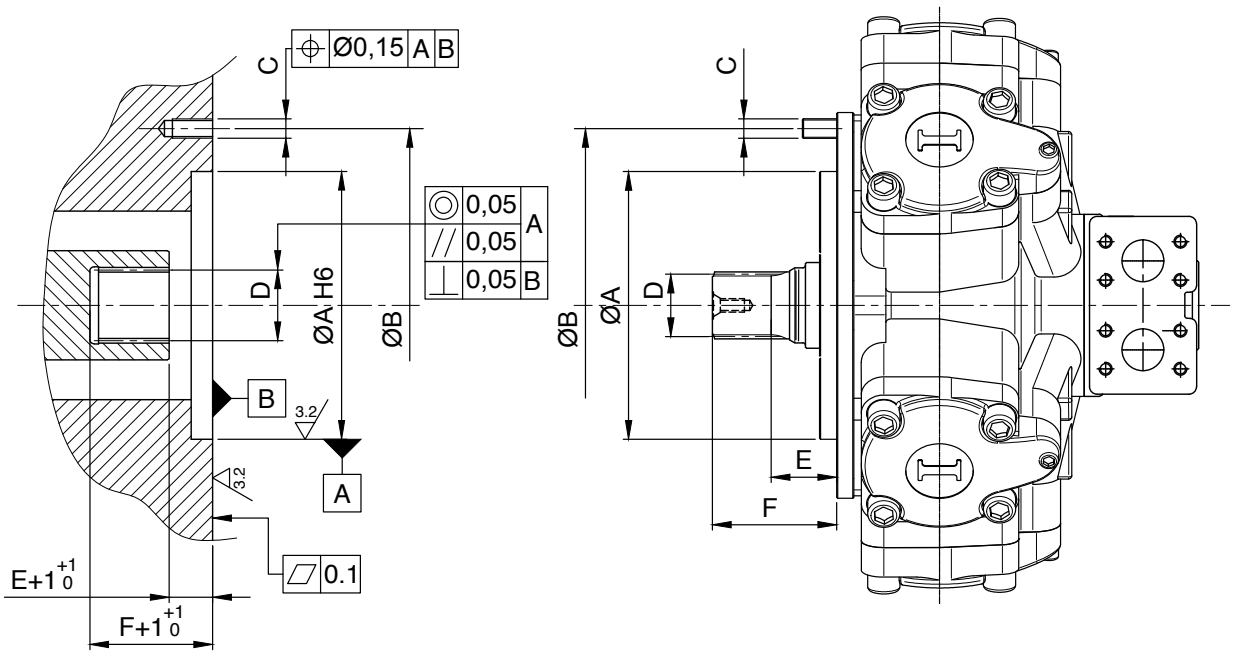
Motor installation and start-up

The motor, after testing, it's packed in different ways that depends by customer and/or logistic requirements. The motor must be carefully moved from his box or pallet, with the assistance of correctly sized movimentation tools, like eyebolts (all the motors has a thread hole in the shaft end, please refer to the R8C general catalogue, shafts section) or lifting slings.

When the motor is moved from one place to another always be very careful and act in a way that the motor is stable and under control during movimentation (refer to handling and storage section for more details).

Before mount the motor, check carefully the absence of damage happened for example during transportation and/or storing.

For mounting dimensions please refer to the R8C installation drawings. The motor must be installed using the correct screws size (we recommends the use of 10.9 and 12.9 class resistance fixing screws) and must be placed on a structure that is capable to correctly support the motor during functioning: for this reason the structure must not only be able to support the motor weight but must also assure the absence of vibration during operation and must win the reaction forces that are generated by the working torque. Regarding the motor fitting design, the concentricity between the centering diameter (spigot) and shaft (both splined or parallel) must be assured with a strict tolerance (please refer to the following general indication). If the concentricity between the shaft and the centering diameter and/or fixing holes is not respected, in the worst case the motor can have an unusual failure or can work only with low performances. Splined adaptors (splined billets) are available upon request.



Hoses and piping must be clean and free from contamination. Use proper hoses for oil connection, both for inlet and outlet main ports, and for drain line. Refer to hoses and fitting constructors in order to correctly size and select hoses and fittings. In order to keep control on the oil compressibility keep hoses to the minimum recommended size and select pipelines most rigid as possible.

The motor can be mounted in any position (refer also to drain recommendations section). In run-away conditions you must use counterbalance valves. When the motor is installed vertically with shaft pointing upwards, consult our technical department. If the motor is connected to high inertial loads, the hydraulic system must be designed to prevent peaks of pressure and cavitation. Consider the use of relief valves, possibly directly mounted on motor distributor in case the application can generates pressure peaks at the motor ports: the relief valve should be able to discharge all the flow (or at least a good part of it) with a limited pressure increase. Italgroup can provide differents valve types that can be placed directly on the motor distributor (please refer to Italgroup valves technical catalogue).

Motor case and pistons must be completely filled with oil before starting.
Do not load motor to maximum working pressure instantly. During cold start-up avoid high-speed operation until the system reach the working temperature. Connect the case drain directly to tank, and avoid excessive drain line pressure losses (the case drain pressure must not exceed 10 bar continuous pressure for R8C serie standard motors). The case drain port on the motor must be located on the highest point of the installation to ensure that the motor will always be full of oil. (See drain recommendations page for more details)

Maximum oil temperature must not exceed 70°C. Heath exchangers must be used with higher temperatures. The operating fluid viscosity must always be higher than a certain minimum value (see “fluid recommendation” section) in order to guarantee an optimal motor internal lubrication. When the working conditions cause the motor case overheating above a critical value, the motor flushing is required. Flushing consists in the introduction of fresh oil (taken from the hydraulic circuit) into the motor case. Oil must be taken from the return line to avoid internal motor damage (the continuous motor case pressure must be maximum 6 bar). Flushing is an important operation that can be very effective to improve motor lifetime with heavy duty working conditions and improve the motor mechanical efficiency.
The motor flushing, if the motor works in one direction only, can be easily performed connecting the motor return line to the lowest motor drain port. The highest motor drain port must be connected to the tank. For D75 and D90 flow distributors, the side 1/4” metallic plugs can be used for flushing circuit installation: infact the plug (corresponding to the return line port) can be removed and the connection between motor low pressure port and motor case can be correctly realized.

MOTOR INSTALLATION AND STARTUP

If the motor axis is not horizontal and/or the motor works in bidirectional operation, please contact Italgroup technical department, that can assist you to advice how to perform the desired operation in the best way. Just for your reference, Italgroup can provide you flushing valves in order to perform an effective flushing circuit.

Minimum speed is very low and can reach values near to 1-2 rpm (depending on motor displacement). In case of low speed vibration a reasonable back pressure can eliminate or minimize the vibration and noise level (a general guideline value can be defined by 5-8 bar back pressure). For more information please contact our technical department.

Back pressure limit for R8C series motors is 70-80 bar (back pressure occurs for example when hydraulic motors are installed in series circuit). High back pressure values are often responsible of motor overheating, so if drain temperature reach values that bring the oil viscosity under the recommended limit (refer to fluid recommendations section), perform appropriate motor flushing and/or reduce the back pressure.

During start-up and in the period immediately after it, any hydraulic installation must be regurarly and carefully checked at frequent intervals. The working pressure must be checked in order to understand that it agrees with the design values. The drain line pressure for standard motors must not overcome 10 bar continuous. If leakage occurs, check the reason, correct it and carry out new measurements. Check all lines, connections, screws, etc, and tighten if necessary. Replace contaminated fluid immediately.

The motor installation and start-up must be performed by instructed and experienced personnel only.

Please contact us freely to obtain further information.

Displacement change

The displacement change can be performed in different ways. The user can use an internal or esternal pilot. In addition Italgroup can supply a cetop 3 fitting with or without Cetop 3 displacement change valve (with electric or hydraulic control).

When the displacement change ports are not feeded with pressure, the motor remains at the maximum displacement: to perform the displacement change, the pilot pressure must be at least 2/3 of the motor working pressure.
A minimum pressure of around 3,5 bar (the value is approximate and can have variations in function of the operating parameters) is needed in order to activate the displacement change mechanism.

Please note that in freewheeling operation it is necessary supply the displacement control mechanism with an external supply pressure/flow source. This external supply source will assure that the motor displacement during the freewheeling operation remains fixed at the minimum value, avoiding IAC motor damage.

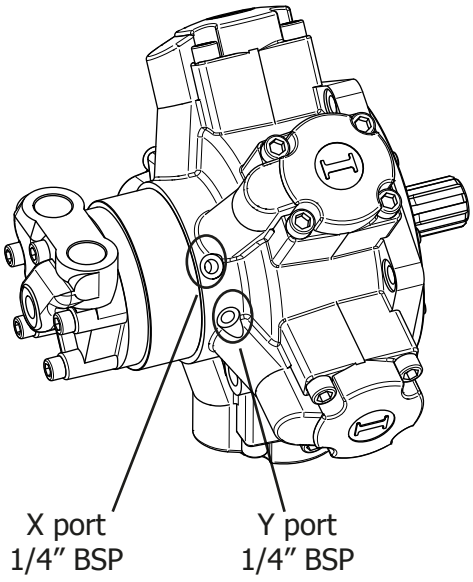
The oil flow rate required to perform the displacement change can be estimated in function of many different parameters; the most important factor that determinate the required flow rate is the motor case internal leakage. The flow rate that is shown in the next table must be considered as an indicative value that depends by many system parameters and working conditions.

Motor	Required flow	Displacement change delay
IAC H1	8 l/min	0,2 s
IAC H3	12 l/min	0,2 s
IAC H4	15 l/min	0,25 s
IAC H5	15 l/min	0,5 s
IAC H6	15 l/min	0,5 s
IAC H7	20 l/min	1 s

The system components (pumps, motors...) present tear and wear phenomenons that are clearly variables during the system life, so the required flow rate is variable during the motor life, this variation is very difficult to estimate: for this reason the values reported must be considered as approximated and indicative values.

Displacement change port configuration

"XY" displacement change port configuration:
when Y port is connected to the supply source (refer to displacement change section) the maximum displacement is activated.
When the X port is connected to the supply source, the minimum displacement is activated.
Please refer to the "displacement change hydraulic circuit" section for more details.

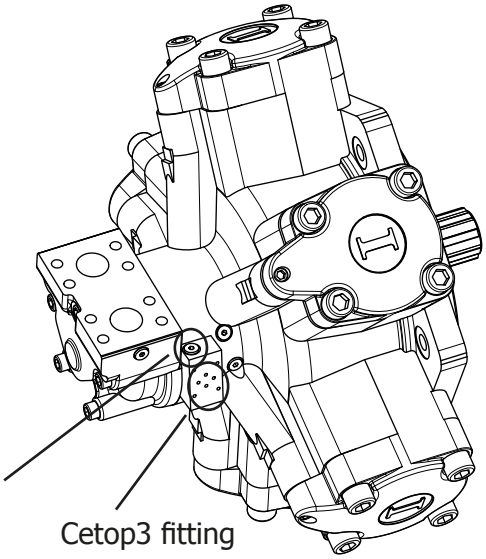


MOTOR INSTALLATION AND STARTUP

"C3-SV" displacement change port configuration:
there is a cetop 3 standard fitting that can be used to fit a cetop 3 displacement change valve (solenoid or hydraulic operated).

In addition a shuttle valve SV is integrated inside the motor distributor.

Please refer to the "displacement change hydraulic circuit" section for more details.

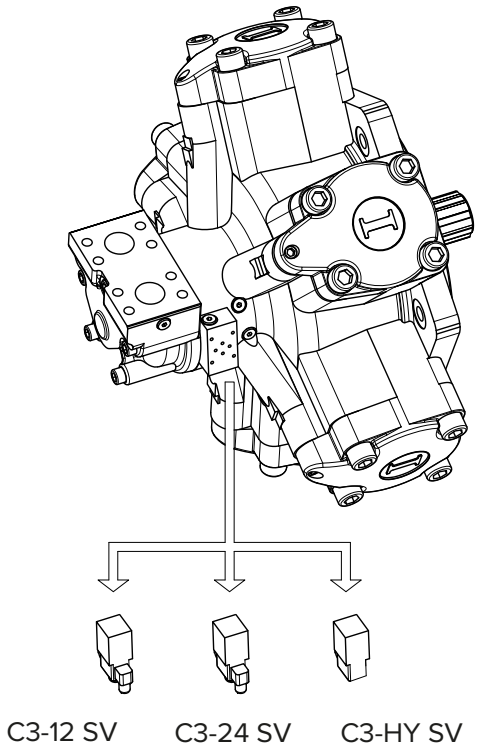


"C3-12 SV" displacement change port configuration:
the displacement change valve is solenoid operated, 12 V DC.

"C3-24 SV" displacement change port configuration:
the displacement change valve is solenoid operated, 24 V DC.

"C3-HY SV" displacement change port configuration:
the displacement change valve is hydraulic operated.

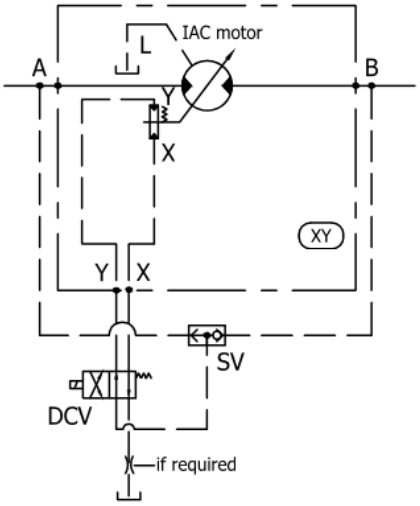
Please refer to the "displacement change hydraulic circuit" section for more details.



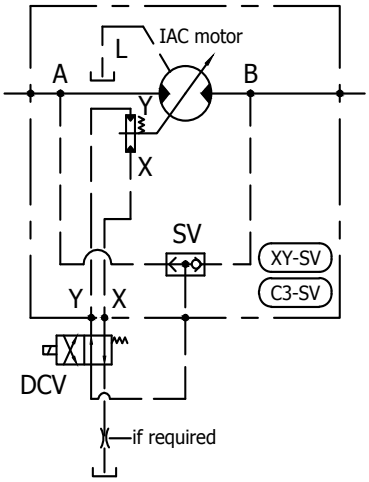
Basic displacement change hydraulic circuits

In all circuits, A and B identify the motor inlet/outlet port (the motor is fully reversible, can work with same behavior in both directions), whereas L identify the motor drain port.

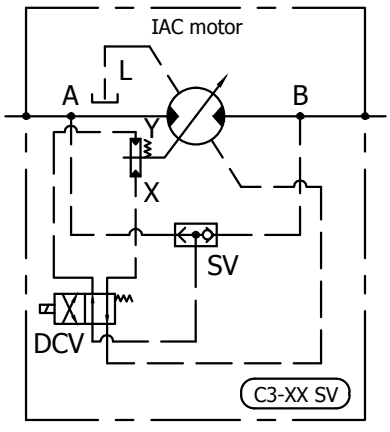
The typical displacement change circuit is shown on the right; the displacement change pressure is taken from the higher pressure motor port (if motor works in a bidirectional way a shuttle valve, SV, is needed to make the selection between the higher and lower pressure port). To order the shown motor assembly the ordering code is “XY” (the displacement change port fittings are 1/4” BSP female thread).



Italgroup can provide a special motor distributor with integrated shuttle valve (SV). The ordering code is “XY-SV” for displacement change fitting 1/4” BSP (female threads) or “C3-SV” for cetop 3 displacement change valve fitting.



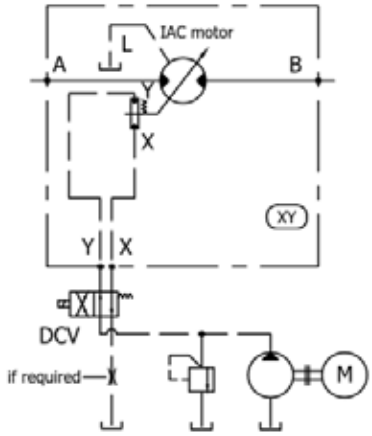
Italgroup can supply solenoid or hydraulic operated displacement change valves, directly fitted on the motor (please refer to ordering code section and dimensional drawings for more information). The circuit on the right shows a complete assembly with displacement change valve and shuttle valve, included in the motor assembly. The ordering code in this case is “C3-12 SV” or “C3-24 SV”, in case the DCV is solenoid operated, or “C3-HY SV” if is hydraulic operated.



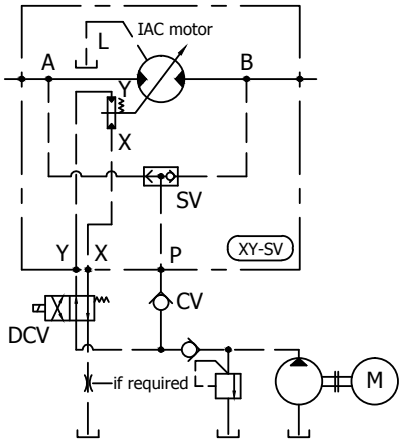
MOTOR INSTALLATION AND STARTUP

Advanced displacement change hydraulic circuits (with external supply source)

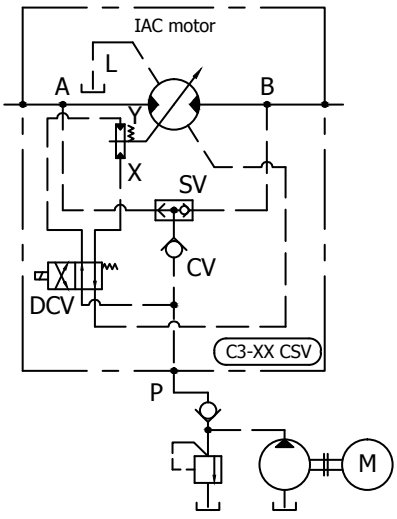
When the working pressure can reach very low values, lower than the minimum pressure that is required for displacement change (approximatively 3,5 bar in normal conditions), an external displacement change pilot supply source is required. Please refer to the circuit on the right.



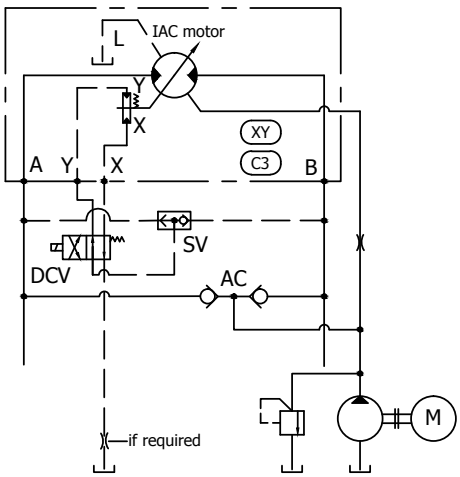
The circuit on the right shows an integrated SV valve with external pilot supply: when the motor working pressure is lower than the external supply relief valve setting, the displacement change pressure is taken from the external supply source. When motor working pressure is higher than the external supply relief valve setting the displacement change pressure is taken from the motor ports. The circuit refer to the “XY” displacement change port configuration.



The complete assembly with motor, displacement change valve DCV and integrated shuttle valve SV can be equipped with an external pressure supply source. Please refer to the circuit shown on the right. The ordering code in this case is “C3-12 CSV” or “C3-24 CSV” in case the displacement change valve is solenoid operated, or “C3-HY CSV” in case the displacement change valve is hydraulic operated (please refer to ordering code section and dimensional drawings for more information).



Small displacement / freewheeling circuit



Selecting a zero displacement IAC motor, the motor can run without load at high speed, resulting in a minimum motor torque requirement. The maximum working pressure shown in the motor technical data or the zero displacement code are relatives to a 1000 rpm shaft speed.

If the output shaft speed is less then 1000 rpm the maximum working pressure can be slightly increased. Consult Italgroup technical departement to obtain more details. For output shaft speed higher than 1000 rpm the application duty cycle must be considered by Italgroup. When the motor is running at high speed, a minimum pressure must exists at the motor ports (see boost pressure paragraph), but in all cases this pressure must not exceed the maximum working pressure reported in the zero displacement code motor technical data.

To perform the boost circuit, an anticavitation valve (AC valve, referring to the diagram on the previous page) must be present, in order to avoid cavitation.

A crankcase flushing flow is highly recommendend in freewheeling operation, to control and reduce the motor temperature rise during the freewheeling. If the motor running speed is between 1000 and 1500 rpm, a 15 l/min (indicative value) flushing flow is compulsory.

Bearings

The bearing life depends by different factors, like bearing type, motor speed, working pressure, external loads, duty cycle, fluid viscosity, oil cleanliness, type and temperature.

Lifetime is measured by L_{10} which is called “theoretic lifetime”. It represents the number of cycles that 90% of identical bearings can effort at the same load without showing wear and tear.

Please refer to bearing lifetime diagrams reported in the following pages to obtain the theoretical bearing lifetime. **The lifetimes diagrams shown the L_{50}, median or average lifetime, that can be considered as 5 times L_{10}.**

Please note that the theoretical lifetime can be different from the real lifetime, especially in case of heavy duty applications with continuous work cycle.

Please contact Italgroup S.r.l. for more information.

MOTOR INSTALLATION AND STARTUP

Motor creep speed

The hydraulic motor is able to hold the load acting as a brake (if proper valves or circuit are considered and installed), but a certain creep speed is always present: this is typical of all brands hydraulic motors.

The motor creep speed depends by many factors, like operating conditions (motor displacement and type, pressure load on the shaft, oil viscosity, type and temperature) and are represented in the creep speed diagrams (see performance diagrams for each motor size). ***The creep speed diagrams are shown for an hydraulic oil at reference conditions of 40 cSt.***

If creep speed is higher than desired value a negative brake can be considered: Italgroup can supply negative brakes that can be fitted to the hydraulic motor.

Please contact Italgroup S.r.l. for more information.

Boost pressure

When the motor runs at a speed that can cause pumping effects, a positive pressure it is needed at the motor ports.The minimum required pressure at the motor ports can be estimated basing on different parameters, using the following formula:

$$p = 1 + p_C + C_H n^2 V^2$$

Where p is the boost pressure, p_C the case pressure, n the rotation speed, V the motor displacement, and C_H is a constant, depending by the motor serie.

Motor	C_H
R8C H1	$0{,}25 * 10^{-9}$
R8C H3	$0{,}25 * 10^{-9}$
R8C H4	$0{,}5 * 10^{-10}$
R8C H5	$0{,}5 * 10^{-10}$
R8C H55	$0{,}4 * 10^{-10}$
R8C H6	$0{,}4 * 10^{-10}$
R8C H7	$0{,}25 * 10^{-10}$

Example:
We suppose (IAC H4 motor): n=400 [rpm], p_C=3 [bar], V=800 [cm^3];
We can calculate the boost pressure as follows:
$p = 1 + 3 + 0{,}5 * 10^{-10} * 400^2 * 800^2 = 1 + 3 + 5{,}12 = 9{,}12$ [bar]

SPECIAL FEATURES

Special features

Marine painting

If needed, special painting or primers are available in order to guarantee optimal protection against normal corrosion and marine environment corrosion. The ordering code is MP. Please contact Italgroup S.r.l. for more information.

Speedy-sleeve

A special inox sleeve is available upon request. In case the motor is used in aggressive medias or environments, this can be very useful in order to protect the motor shaft surface located in proximity of the motor shaft seal. This improves the shaft and seal endurance respect to wear and corrosion. The ordering code is SPSL. Please contact Italgroup S.r.l. for more information.

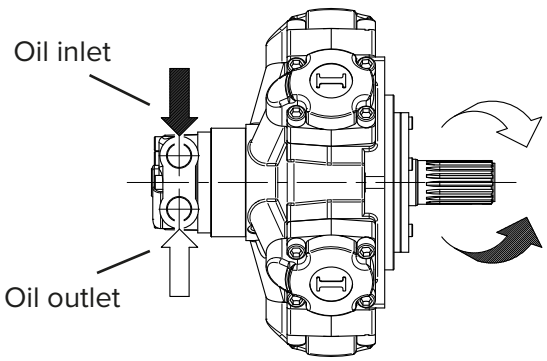
High pressure shaft seal

Standard R8C motors are supplied with high pressure shaft seals, the continuous drain pressure must be maximum 6 bar, whereas the peak drain pressure must be maximum 10 bar. In case the drain line can or must has a higher pressure, special shaft seals are available upon request. The ordering code is HPS. The drain pressure with HPS shaft seal can reach 20-25 bar continuous pressure and 30 bar peak pressure. The HPS shaft seal is bi-directional also, so it can be used for example in underwater applications. Please contact Italgroup S.r.l. for more information.

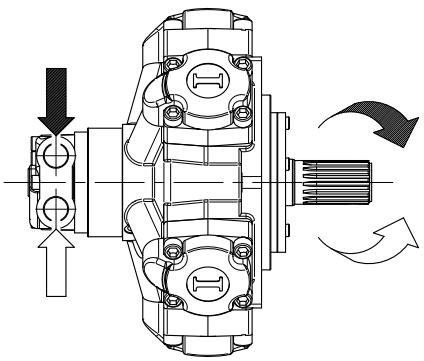
Counterclockwise rotation

Standard R8C motors are supplied with clockwise distributor timing. Please refer to the installation drawings of each section for more information. With ordering code CCW the motor is supplied with counterclockwise rotation timing. Contact Italgroup for more information.

Standard timing



CCW timing



TROUBLESHOOTING

Problem	Possible cause	Solution
Excessive noises	Cavitation	Adopt an anti-cavitation system
	Mechanical vibrations	Check and fix damaged components
	Unstable motor displacement	Check the displacement change circuit
	Irregular pressure or flow	Check other components (pump, valves, accumulators) and check drain flow
	Air bubbles in the circuit	Bleed circuit
Unit overheating	Overflow	Check max allowed flow
	Overpressure	Check relief valve pressure setting
	Oil viscosity too low	Choose the appropriate oil according to the temperature
	Undersized cooling system	Improve cooling system
	Working without oil in the case	Overhaul the unit, fill with oil before start-up
Anomalous drainage flow	Worn motor internal components	Overhaul the motor
	Motor internal seals worn	Overhaul the motor
	Excessive pressure in the motor case	Check drain port size, pressure and flow, check piping connections
Insufficient torque	Pressure relief valve set incorrectly	Check relief valve pressure setting
	Undersized motor displacement	Replace with bigger displ. motor
	Motor is in low displacement	Check the displacement change circuit
	Pump not able to reach the design pressure	Check pump integrity
Insufficient speed	Oversized motor displacement	Replace with smaller displ. motor
	Motor is in high displacement	Check the displacement change circuit
	Pump not able to reach the design flow	Check pump integrity
	Undersized pump	Improve pump output flow
	Excessive drain flow	Overhaul the motor

Problem	Possible cause	Solution
Output shaft cannot rotate	Seized motor flow distributor	Overhaul the flow distributor
	Motor internal seizure	Overhaul the motor
	Motor internal seals worn	Check drain flow, overhaul the motor
	Air in the circuit	Bleed the circuit
	Undersized motor selection	Replace with bigger size motor
	Insufficient inlet pressure	Check pump and circuit relief valves
	Negative or positive brake is activate	Deactivate the brake
Oil leakage	Worn seals	Replace seals
	Excessive pressure in the motor case	Check drain port size, pressure and flow, check piping connections
	Burst motor shaft seal	Check drain port size, pressure and flow, check piping connections
Incorrecte sense of rotation	Pipes incorrectly connected	Check pipe connections
	Incorrect rotating distributor timing	Change rotating distributor timing

UNIT CONVERSIONS

LENGHT	1 m	= 39,3701 in
		= 3,2808 ft
		= 1,0936 yd
		= 1000 mm
	1 in	= 0,0833 ft
		= 25,4 mm
	1 ft	= 0,3048 m
		= 0,3333 yd
		= 12 in
	1 yd	= 0,9144 m
		= 3 ft
		= 36 in
	1 km	= 1000 m
		= 1093,6 yd
		= 0,6214 mile
	1 mile	= 1,609 km
		= 1760 yd
SPEED	1 m/s	= 3,6 km/h
		= 2,237 mph
		= 3,2808 ft/s
	1 km/h	= 0,2778 m/s
		= 0,6214 mph
		= 0,9113 ft/s
	1 mph	= 1,609 km/h
		= 0,447 m/s
		= 1,467 ft/s
	1 ft/s	= 0,3048 m/s
		= 1,0973 km/h
		= 0,6818 mph

MASS	1 kg	= 2,2046 lb
FORCE	1 N	= 0,102 kgf
		= 0,2248 lbf
	1 kgf	= 2,205 lbf
		= 9,806 N
	1 lbf	= 0,4536 kgf
		= 4,448 N
PRESSURE	1 bar	= 14,223 psi
		= 0,99 atm
		= 1,02 ata
		= 100000 Pa
		= 100 kPa
		= 0,1 MPa
	1 psi	= 0,0703 bar
FLOW	1 l/min	= 0,264 gpm
		= 1000 cc/Rev
	1 gpm	= 3,785 l/min
		= 3785 cc/min
	1 m^3/s	= 60000 l/min
		= 15852 gpm

POWER	1 kW	= 1,341 HP
		= 1,3596 CV
	1 HP	= 0,7457 kW
		= 1,0139 CV
VOLUME	1 m^3	= 1000 l
	1 l	= 61,023 in^3
		= 0,264 galUS
	1 in^3	= 0,01639 l
		= 16,39 cm^3
		= 0,004326 galUS
	1 galUS	= 3,7879 l
		=231,15 in^3
TORQUE	1 Nm	= 0,102 kgm
		= 0,7376 lbf ft
	1 kgm	= 9,806 Nm
		= 7,2325 lbf ft
	1 lbf ft	= 0,1383 kgm
		= 1,3558 Nm

R8C H1

TECHNICAL DATA	Pag. 38
IAC 195-250 H1 - INSTALLATION DRAWING	Pag. 39
IAC 195-250/S H1 - INSTALLATION DRAWING	Pag. 40
IAC 195-250/BH H1 - INSTALLATION DRAWING	Pag. 41
R8C H1 - NIP OPTION	Pag. 42
R8C H1 - CETOP 3 FITTING	Pag. 43
R8C 195 H1 - PERFORMANCE CURVES	Pag. 44 - 46
R8C 250 H1 - PERFORMANCE CURVES	Pag. 47 - 49
R8C H1 - ORDERING CODE	Pag. 50

R8C H1 TECHNICAL DATA

R8C 195 H1

Displacement (*)	**[cc]**	**195**	**175**	**150**	**125**	**100**	**95**	**75**	**69**
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]	37	35	33	31	30	28	21	19
Cont. power with flushing	[kW]	46	43	39	37	36	33	27	25
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

R8C 250 H1

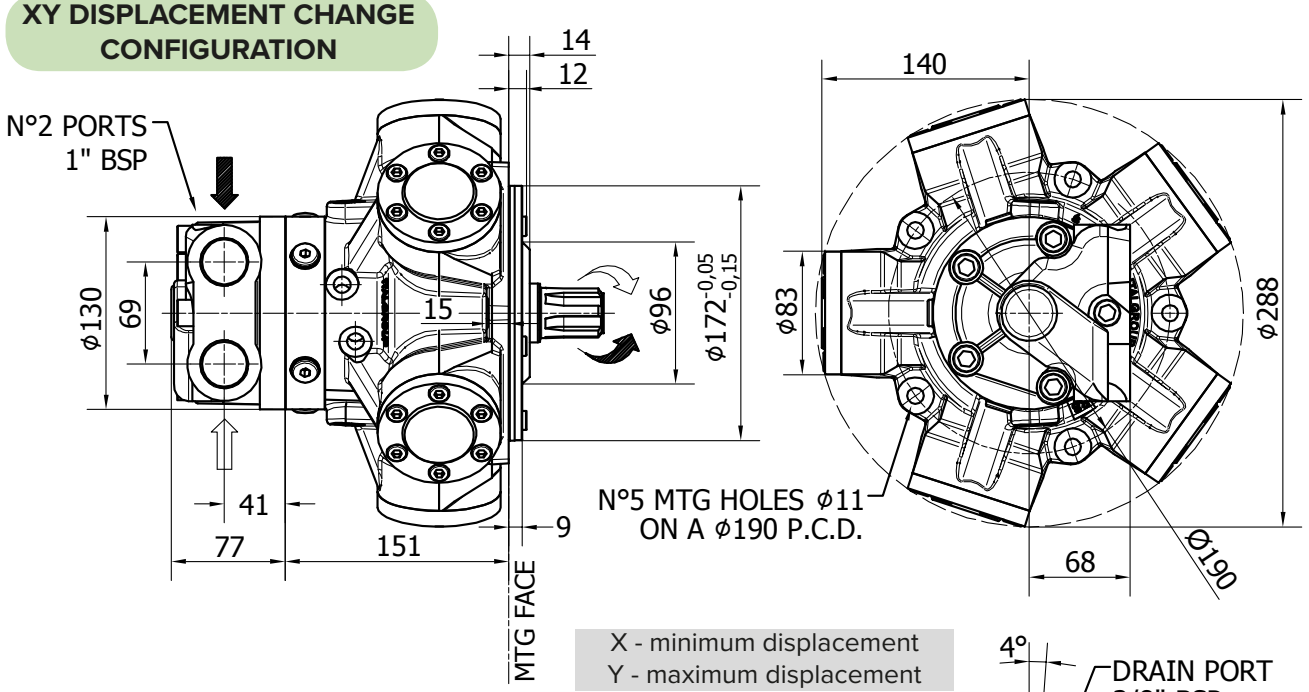
Displacement (*)	**[cc]**	**257**	**232**	**195**	**175**	**150**	**125**	**100**	**95**
Th. specific torque	[Nm/bar]	4,1	3,7	3,1	2,8	2,4	2	1,6	1,5
Continuous speed	[rpm]	810	810	850	850	1000	1000	1050	1050
Peak speed	[rpm]	920	920	950	1050	1150	1150	1200	1200
Minimum speed	[rpm]	3	3	3	3	3	4	4	5
Mechanical 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]	39	38	37	35	33	31	29	29
Cont. power with flushing	[kW]	50	47	46	44	41	39	35	33
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.

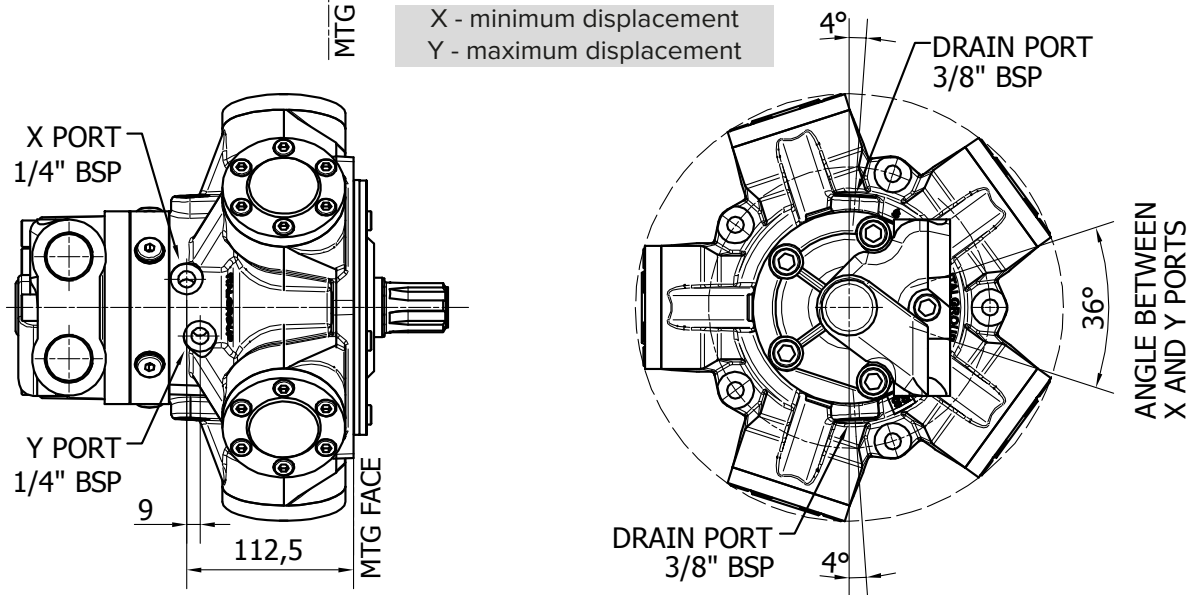
Hydrostatic pressure test: 420 bar.
Temperature range: -30 / 70 °C.

R8C 195-250 H1

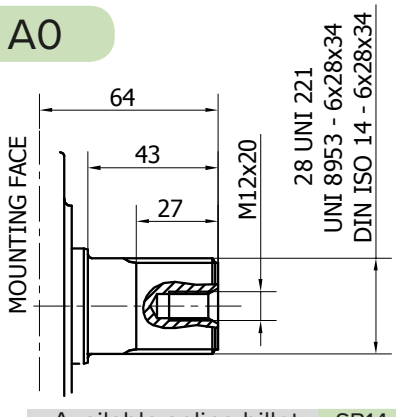
XY DISPLACEMENT CHANGE CONFIGURATION



X - minimum displacement
Y - maximum displacement

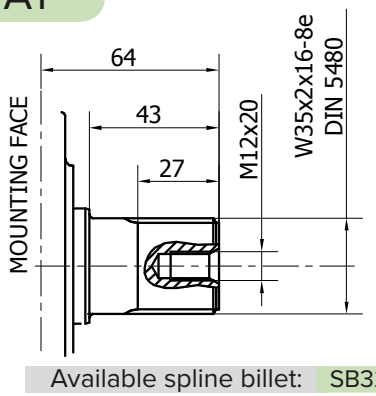


A0



Available spline billet: SB14

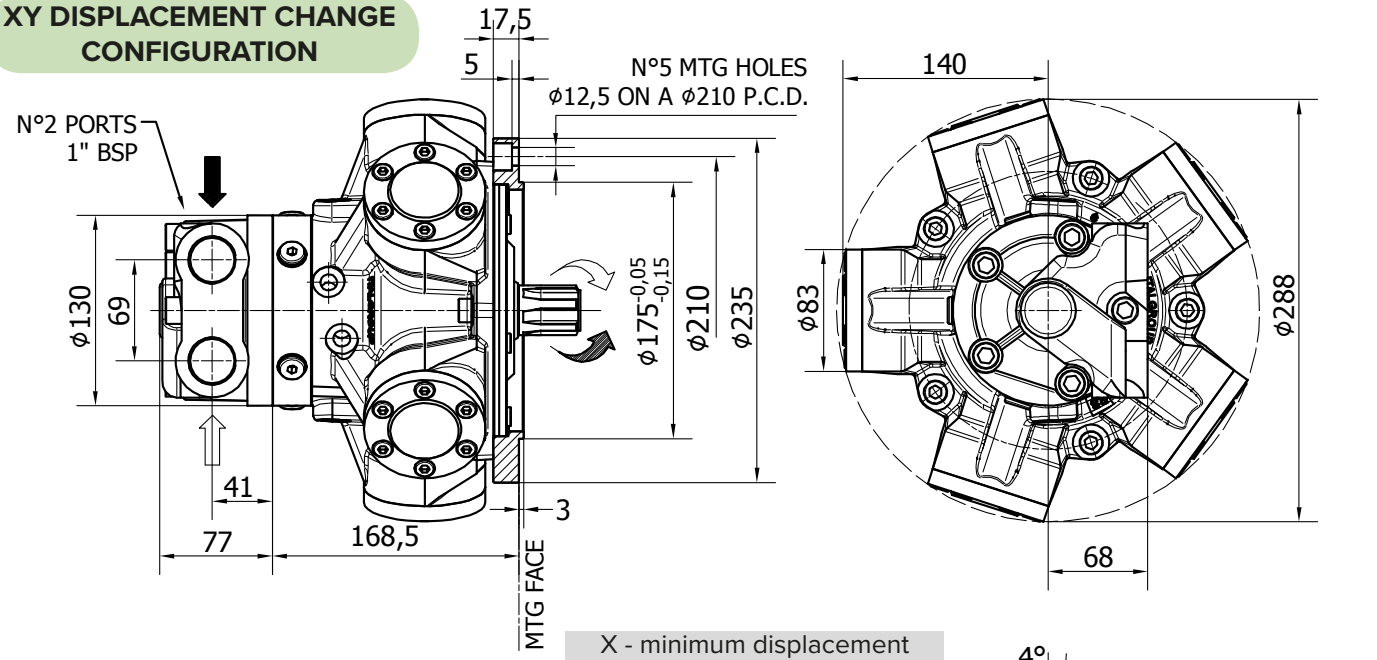
A1



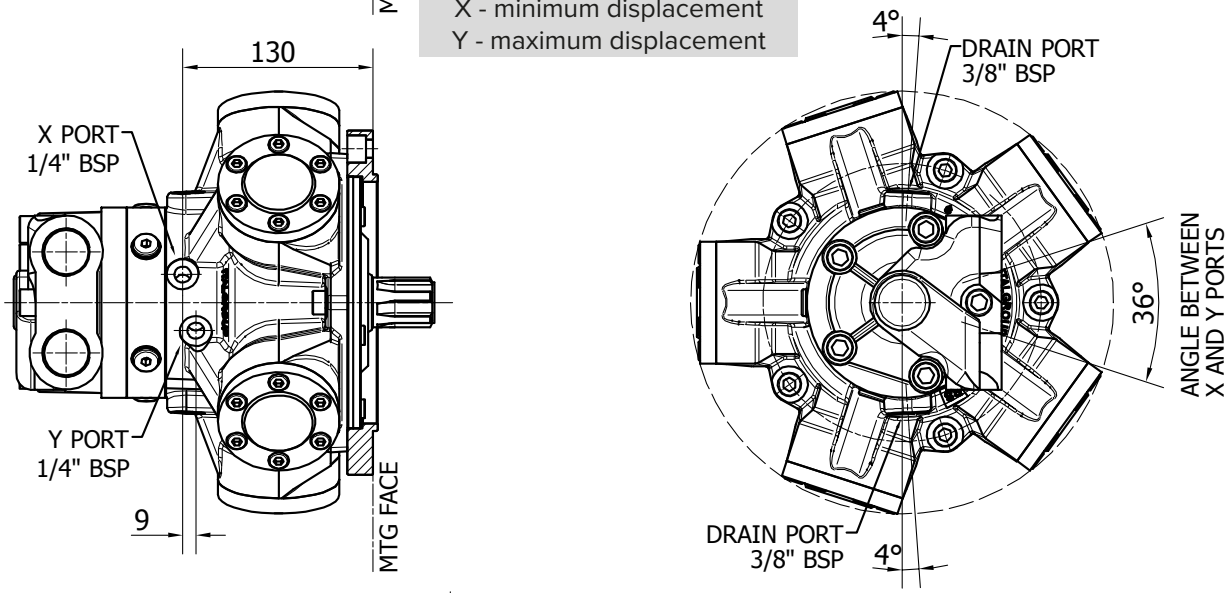
Available spline billet: SB32

R8C 195-250/S H1

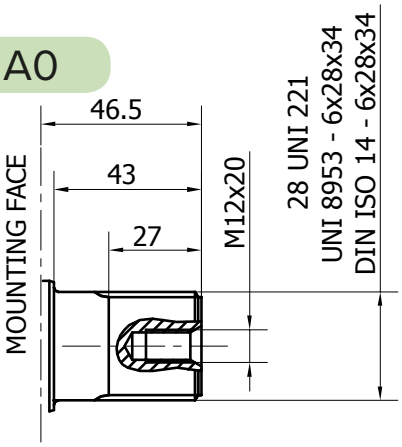
XY DISPLACEMENT CHANGE CONFIGURATION



X - minimum displacement
Y - maximum displacement

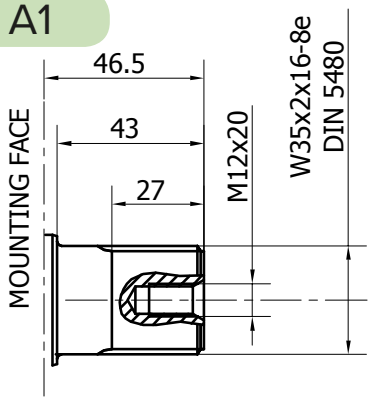


A0



Available spline billet: SB14

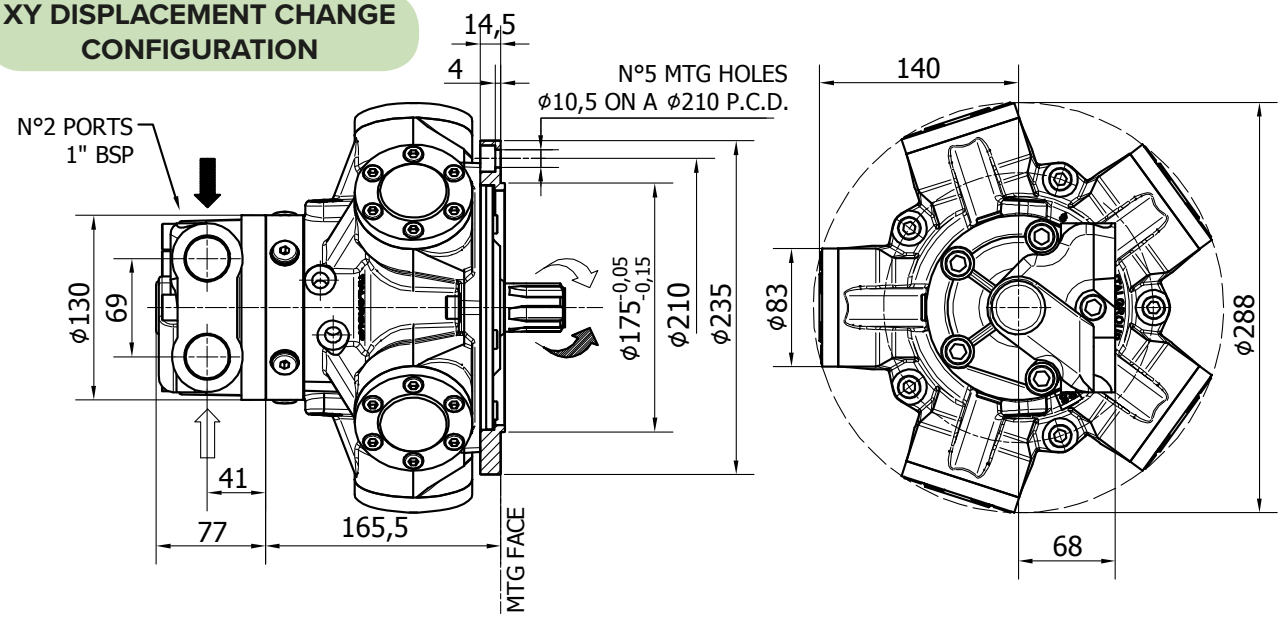
A1



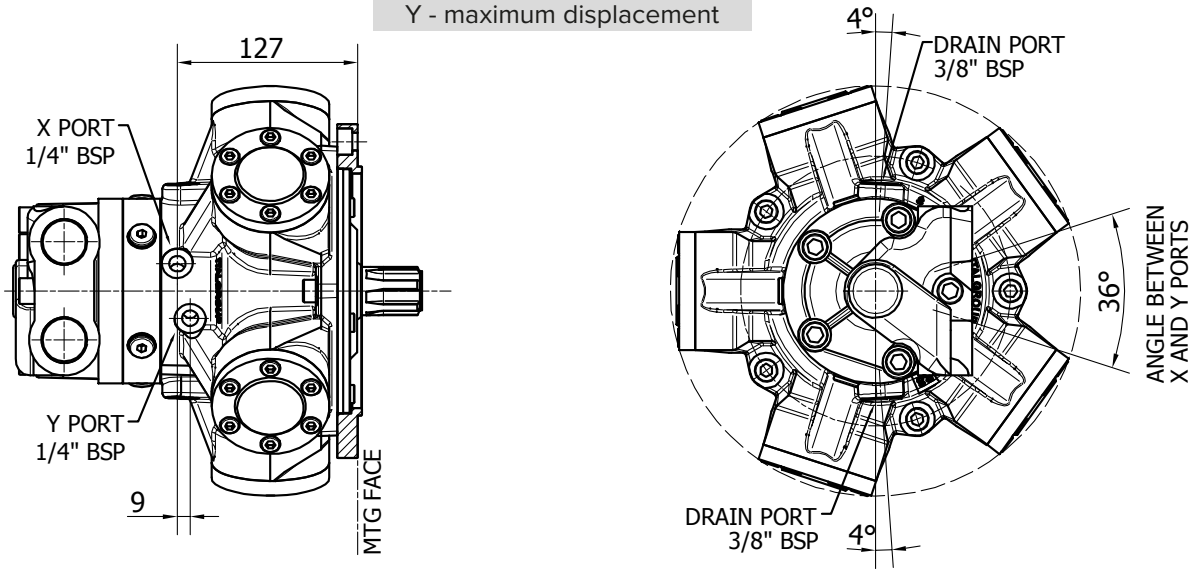
Available spline billet: SB32

R8C 195-250/BH H1

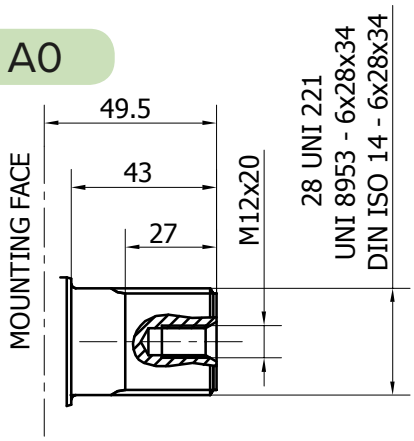
XY DISPLACEMENT CHANGE CONFIGURATION



X - minimum displacement
Y - maximum displacement

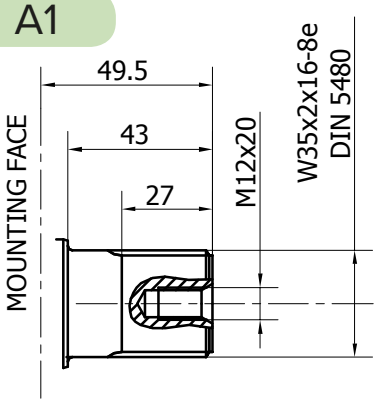


A0



Available spline billet: SB14

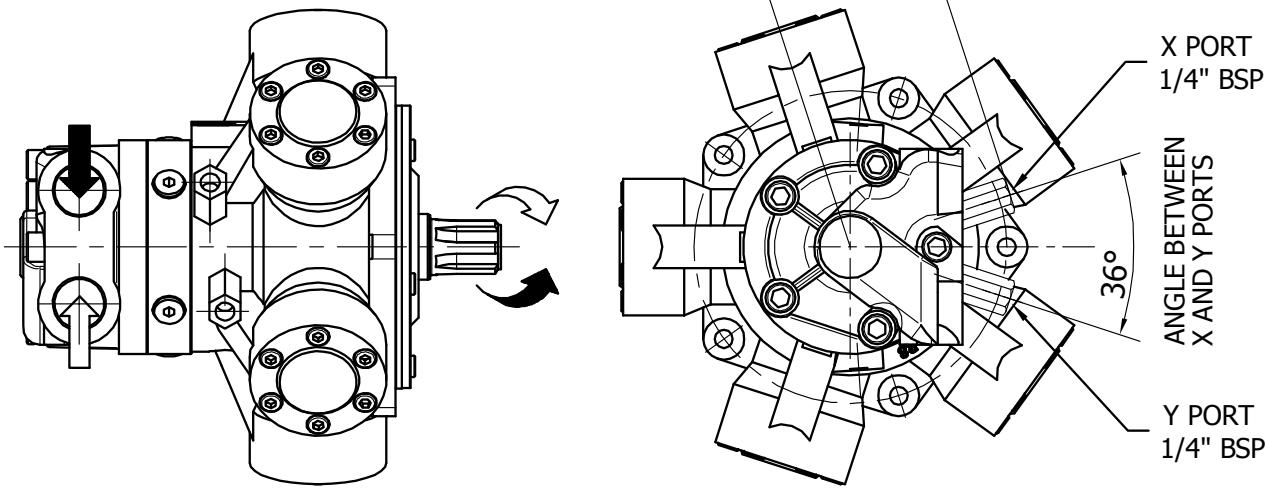
A1



Available spline billet: SB32

R8C H1 - NIP OPTION

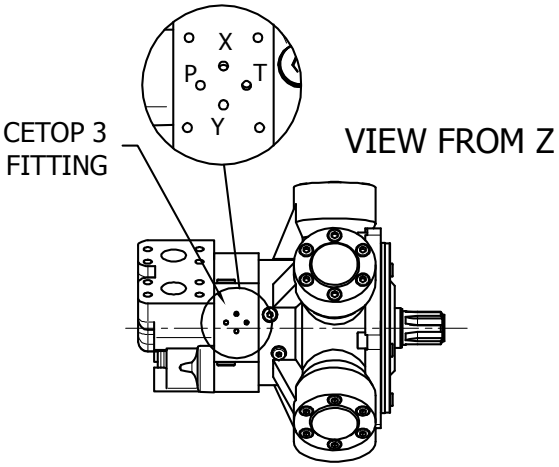
XY DISPLACEMENT CHANGE CONFIGURATION



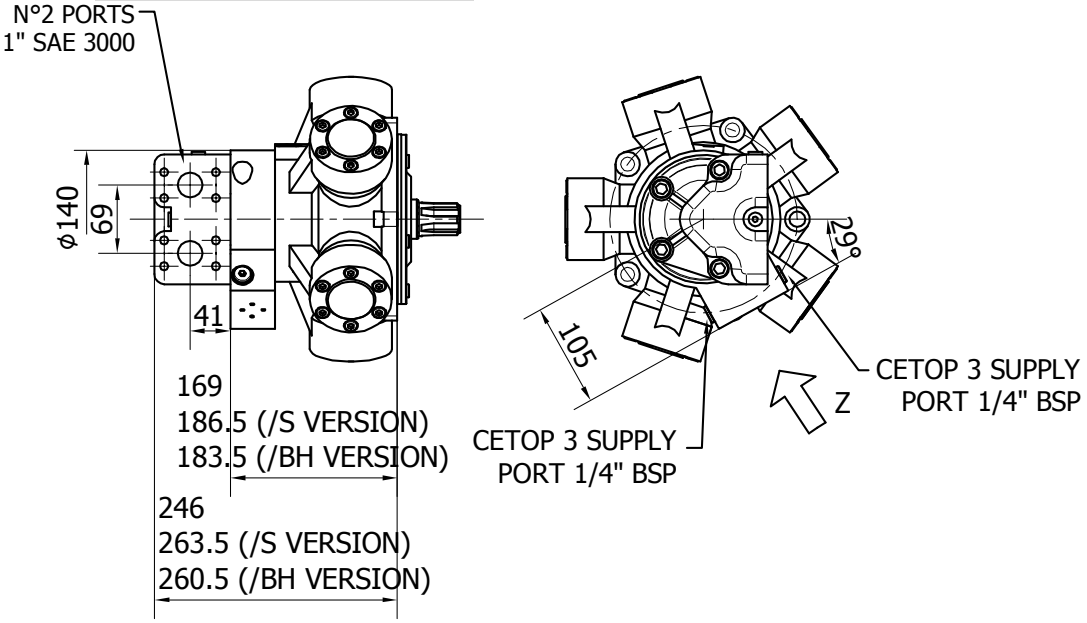
X - minimum displacement
Y - maximum displacement

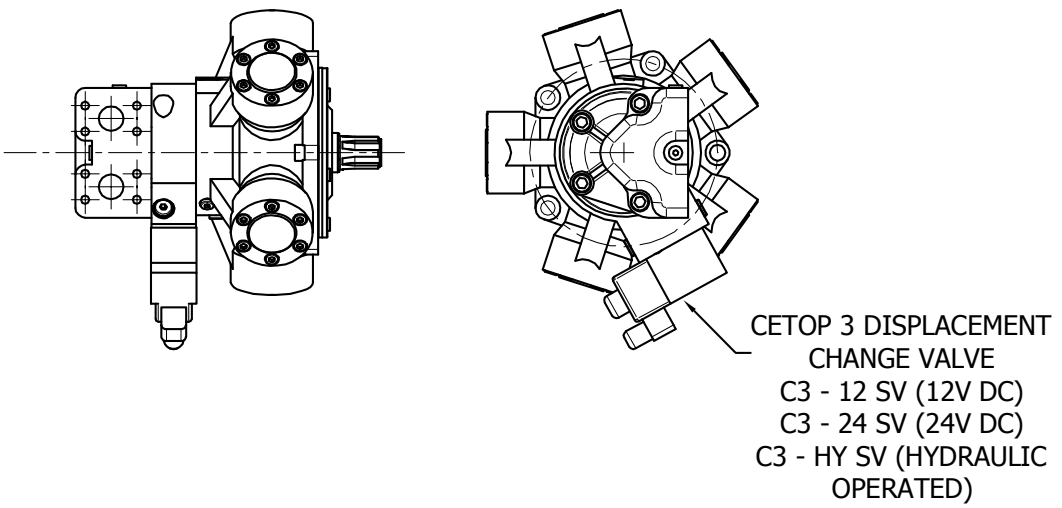
R8C H1 - CETOP 3 FITTING

CETOP 3 DISPLACEMENT CHANGE CONFIGURATION



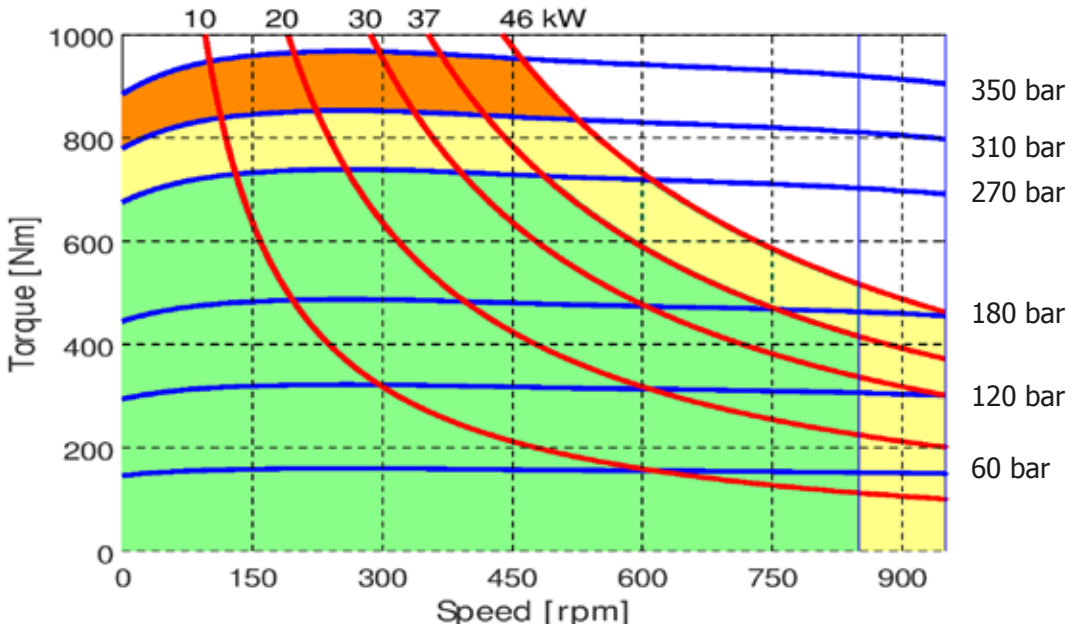
X - minimum displacement
Y - maximum displacement



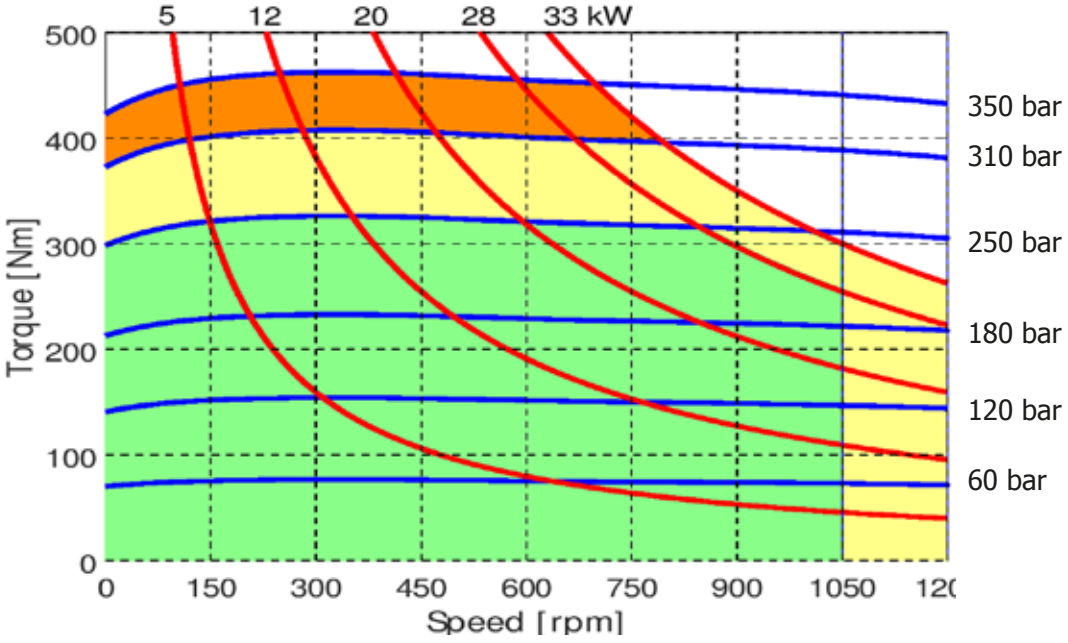


R8C 195 H1 - PERFORMANCE CURVES

195 cc - WITHOUT FLUSHING



95 cc - WITHOUT FLUSHING



Continuous operation

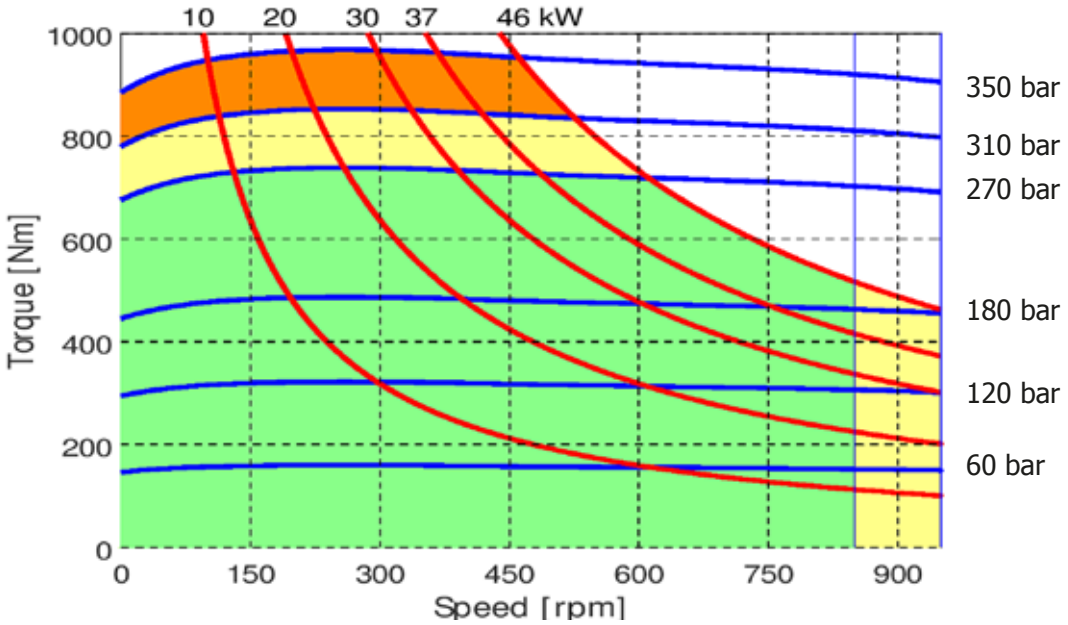
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

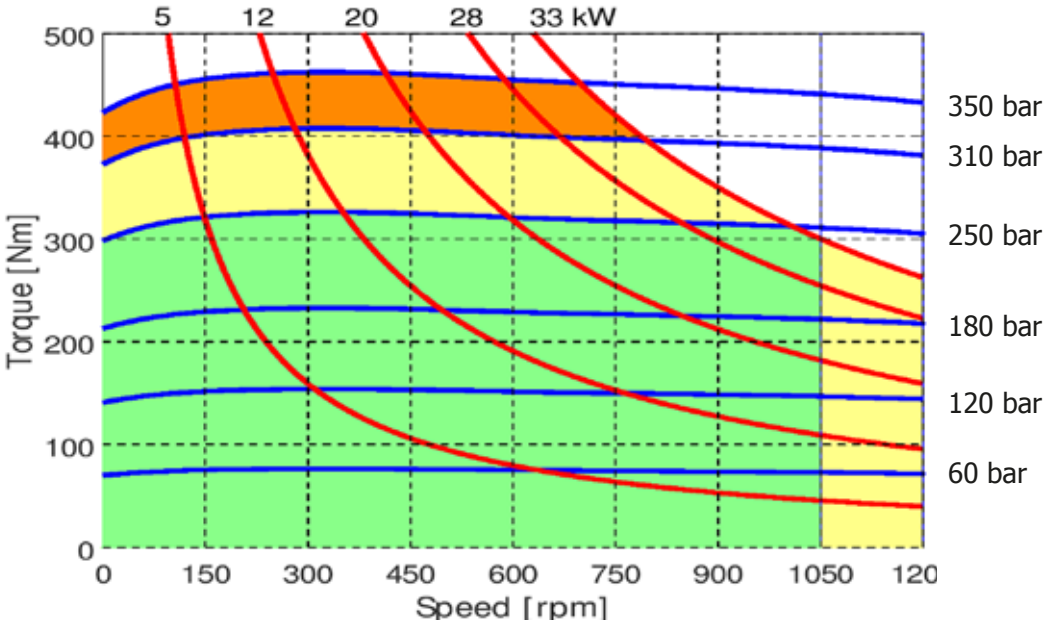
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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

R8C 195 H1 - PERFORMANCE CURVES

195 cc - WITH FLUSHING



95 cc - WITH FLUSHING



Continuous operation

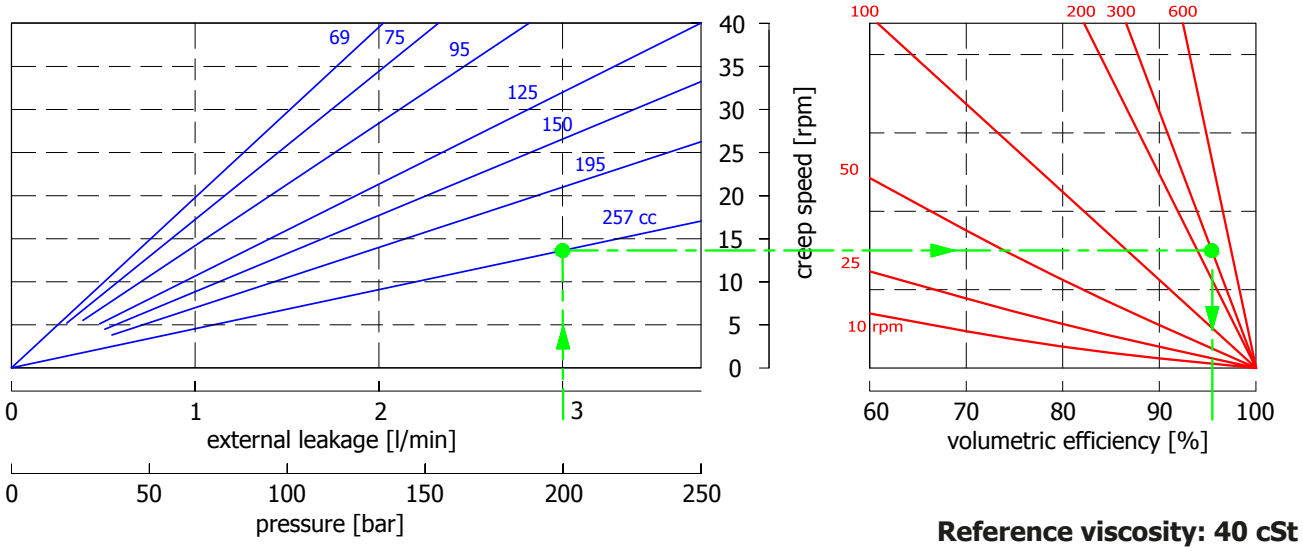
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

R8C 195 H1 - PERFORMANCE CURVES

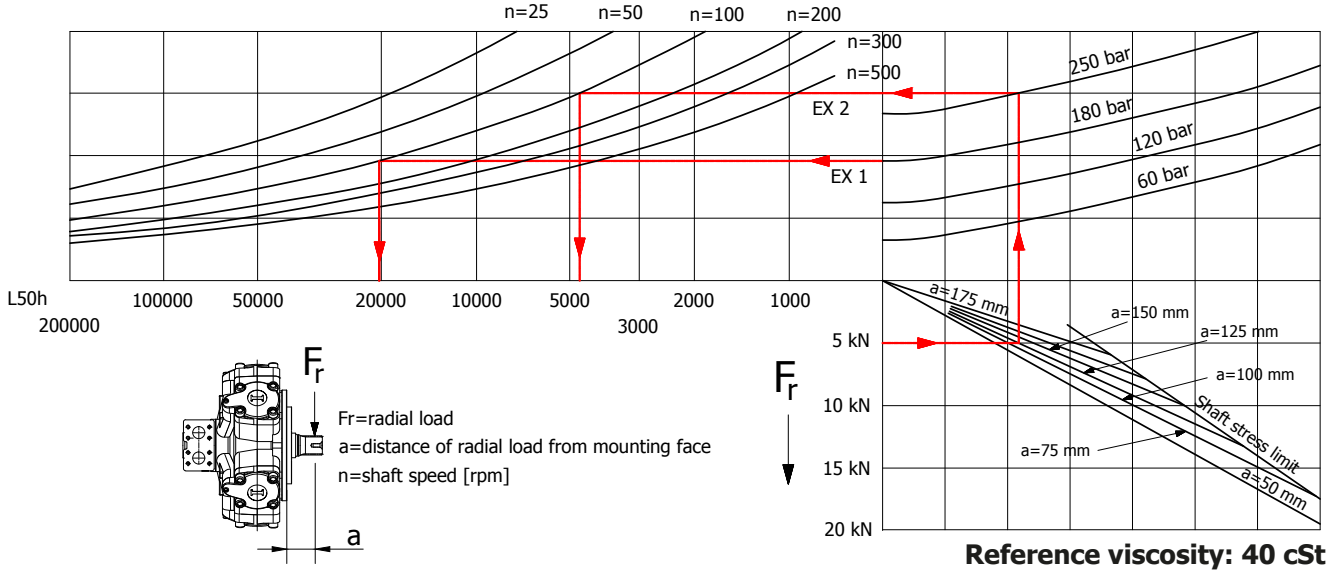
CREEP SPEED - VOLUMETRIC EFFICIENCY



Reference viscosity: 40 cSt

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

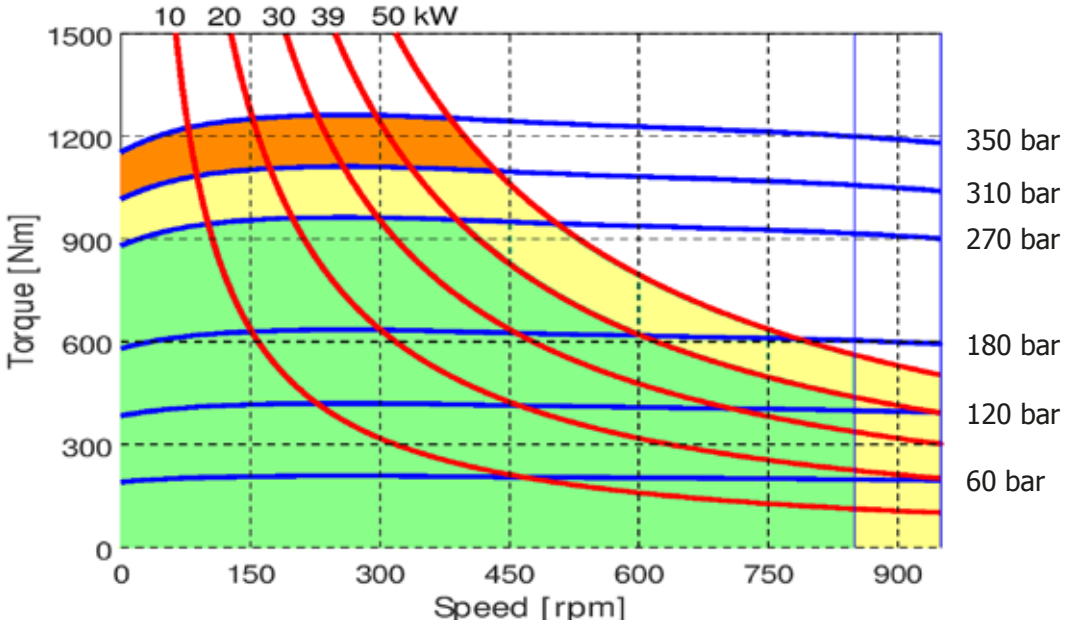


Reference viscosity: 40 cSt

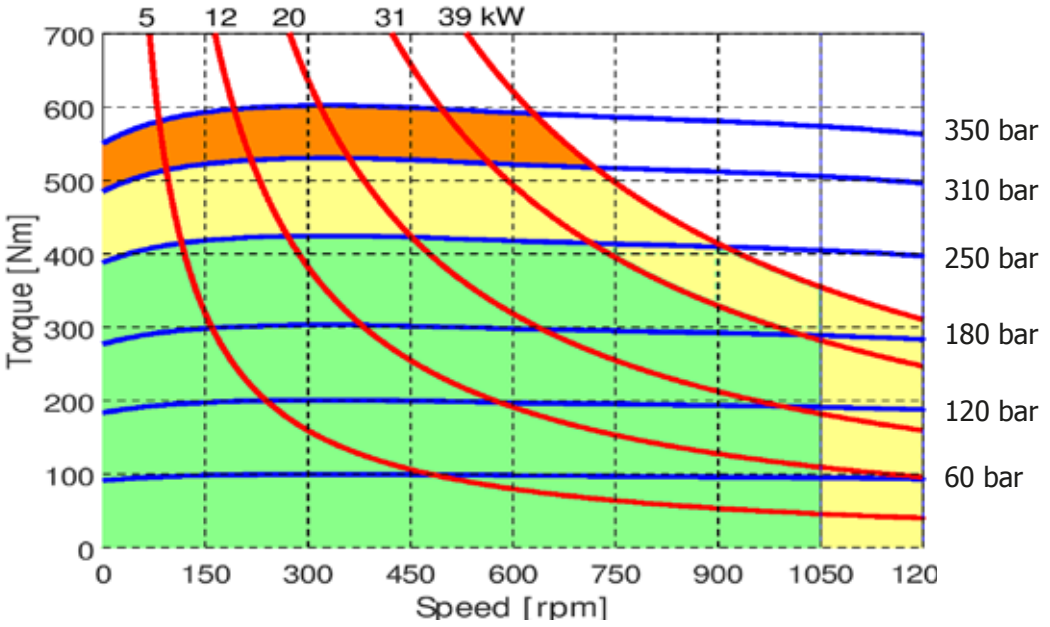
Example:
We suppose (EX1): p=180 [bar], n=100 [rpm]; we obtain an average lifetime of 20000 [h].
If we suppose (EX2): F_r=5 [kN], a=125 [mm], p=250 [bar] and n=100 [rpm], we obtain an average lifetime of 4500 [h].

R8C 250 H1 - PERFORMANCE CURVES

257 cc - WITHOUT FLUSHING



125 cc - WITHOUT FLUSHING



Continuous operation

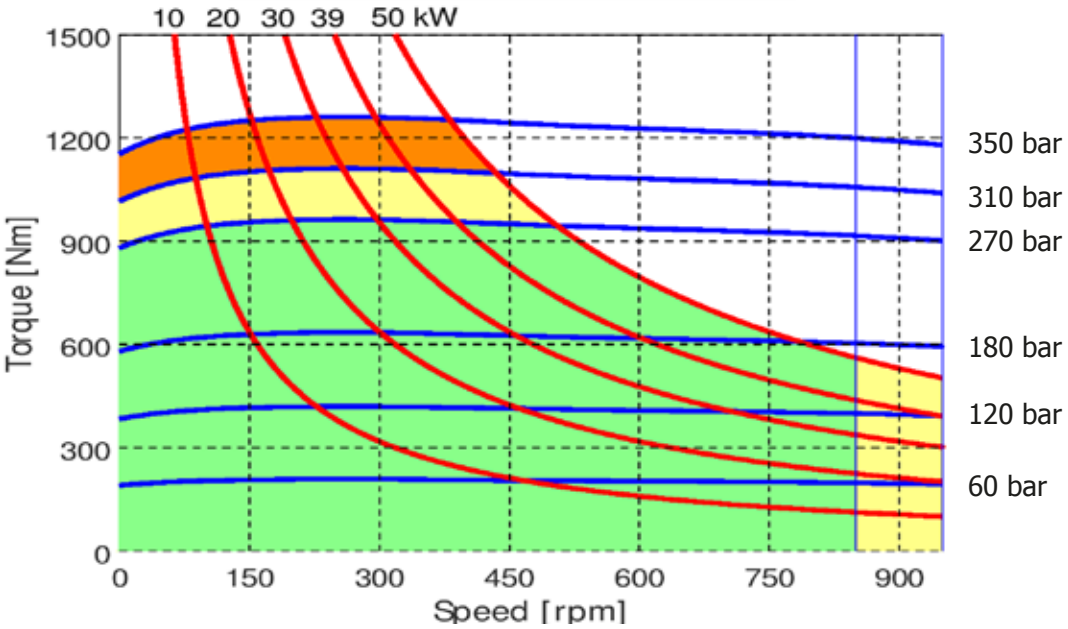
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

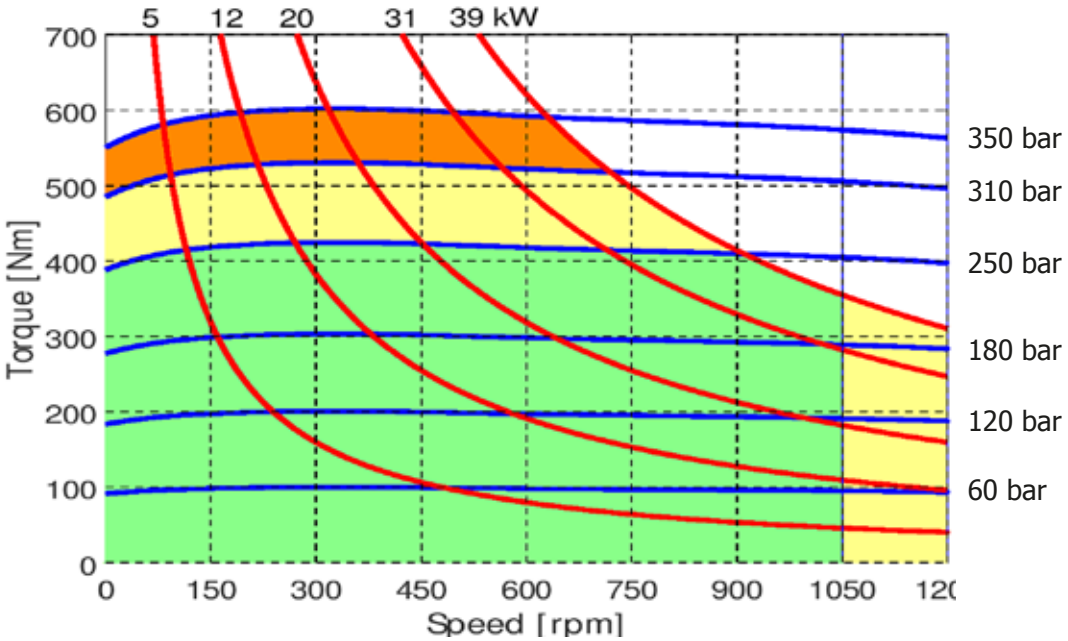
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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

R8C 250 H1 - PERFORMANCE CURVES

257 cc - WITH FLUSHING



125 cc - WITH FLUSHING



Continuous operation

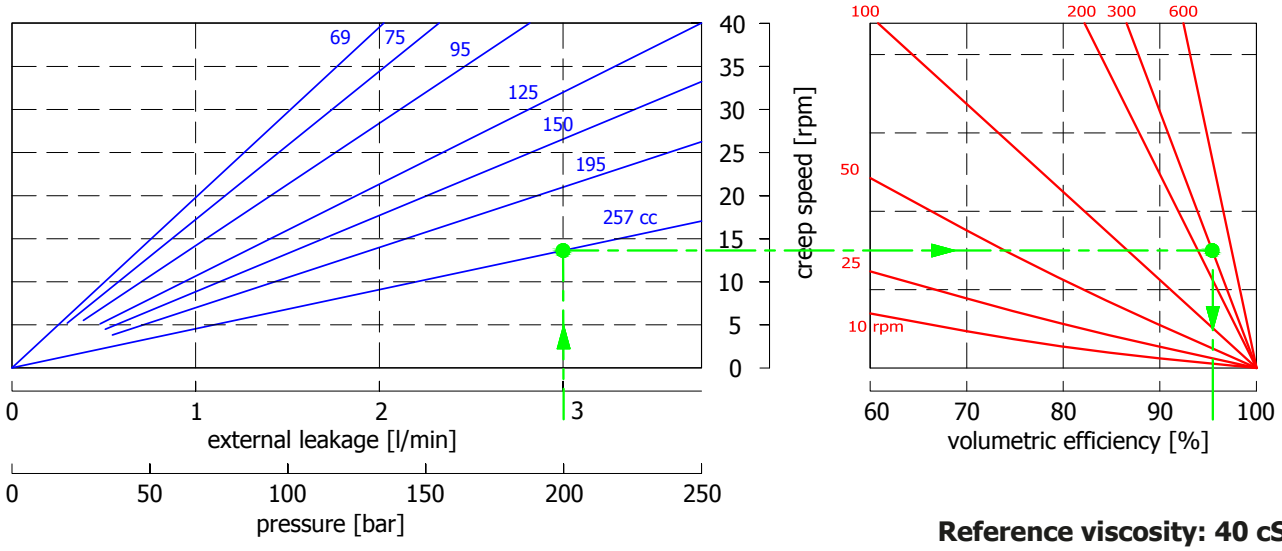
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

R8C 250 H1 - PERFORMANCE CURVES

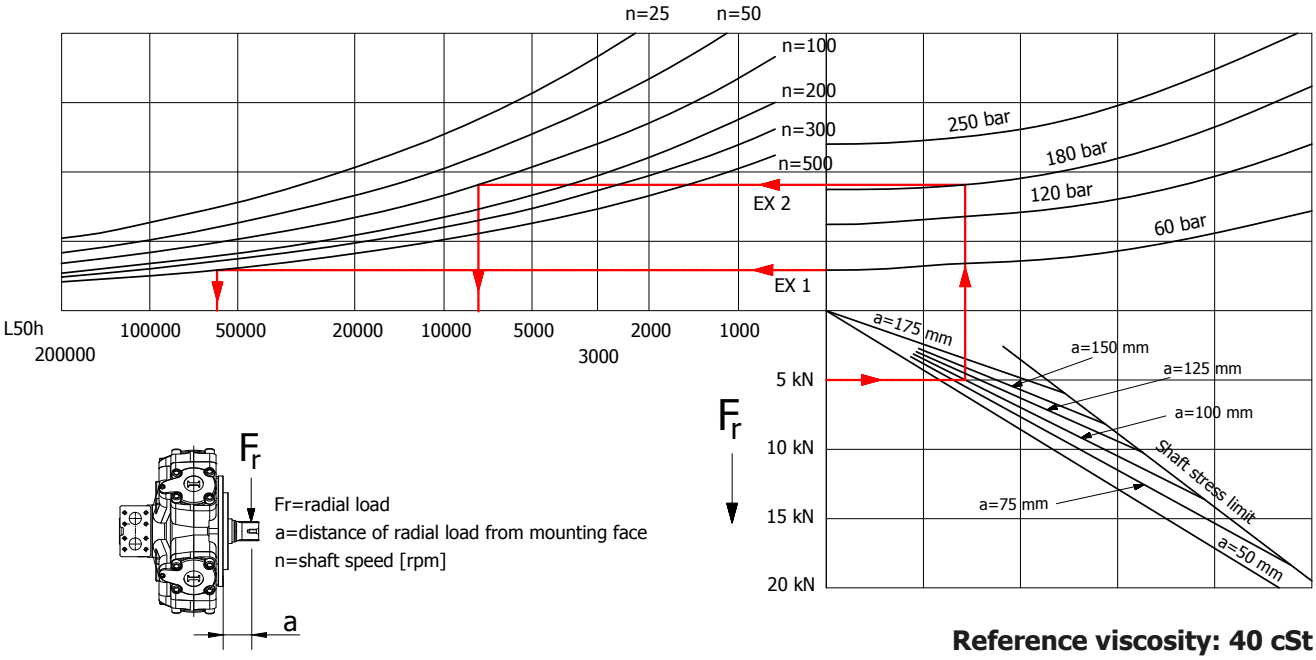
CREEP SPEED - VOLUMETRIC EFFICIENCY



Reference viscosity: 40 cSt

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



Fr=radial load
a=distance of radial load from mounting face
n=shaft speed [rpm]

Reference viscosity: 40 cSt

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].

R8C H1 - ORDERING CODE

R8C | - - | - - | H1 | - - | - - | - - | - - | - - | - - | - -

DISPLACEMENT
- 195
- 250

INTERCHANGEABILITY
- /S
- /BH

SERIE
- H1

SHAFT
- A0
- A1

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

See pag. 128-132

SPECIAL FEATURES
- MP
- SPSL
- HPS
- CCW

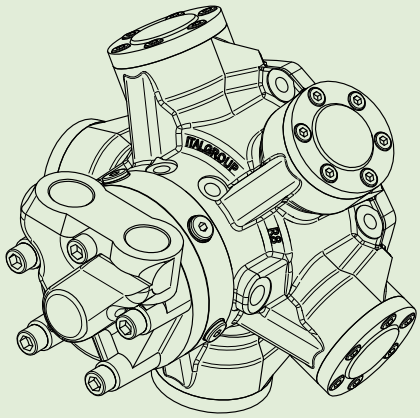
See pag. 33

- NIP

See pag. 33

- Z - -

Italgroup internal code



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

See pag. 126-127

DISPLACEMENT CHANGE FITTING AND ACCESSORIES
- XY
- XY-SV
- C3-SV
- C3-12 SV
- C3-24 SV
- C3-HY SV
- C3-12 CSV
- C3-24 CSV
- C3-HY CSV

See pag. 24-32

SPLINED BILLET SPLINED BAR
- SB14
- SB32

See pag. 133-135

MAXIMUM AND MINIMUM DISPLACEMENTS

EXAMPLES:

R8C 195/S H1 A0 D40 (195-95)
R8C 250 H1 A1 D47 C3-SV (257-125)
R8C 195 H1 A0 D40 J CCW (195-75)

R8C H3

TECHNICAL DATA	Pag. 52
R8C 500 H3 - INSTALLATION DRAWING	Pag. 53
R8C 500/B30 H3 - INSTALLATION DRAWING	Pag. 54
R8C 500/C H3 - INSTALLATION DRAWING	Pag. 55
R8C 500/MRH H3 - INSTALLATION DRAWING	Pag. 56
R8C H3 - NIP OPTION	Pag. 57
R8C H3 - CETOP 3 FITTING	Pag. 58
R8C 500 H3 - PERFORMANCE CURVES	Pag. 59 - 61
R8C H3 - ORDERING CODE	Pag. 62

R8C H3 TECHNICAL DATA

		R8C 500 H3				
Displacement (*)	**[cc]**	**492**	**442**	**393**	**344**	**292**
Th. specific torque	[Nm/bar]	7,8	7	6,3	5,5	4,7
Continuous speed	[rpm]	500	550	600	630	630
Peak speed	[rpm]	600	650	680	700	700
Minimum speed	[rpm]	2	2	2	2	2
Mechanical efficiency	[%]	87,5	86	85	83,6	82,4
Starting efficiency	[%]	82,5	81	80	77,2	74,3
Continuous power (**)	[kW]	67	67	67	62	52
Cont. power with flushing	[kW]	80	80	80	72	62
Continuous pressure	[bar]	270	270	270	270	270
Intermittent pressure	[bar]	310	310	310	310	310
Peak pressure	[bar]	350	350	350	350	350
Flushing flow	[l/min]	8	8	8	8	8
Dry weight	[kg]	68	68	68	68	68

Displacement (*)	**[cc]**	**255**	**197**	**147**	**98**
Th. specific torque	[Nm/bar]	4,1	3,1	2,3	1,6
Continuous speed	[rpm]	650	700	700	700
Peak speed	[rpm]	750	800	900	1000
Minimum speed	[rpm]	3	3	3	4
Mechanical efficiency	[%]	82	80	78	73,4
Starting efficiency	[%]	69,6	62,1	52	30
Continuous power (**)	[kW]	49	39	25	16
Cont. power with flushing	[kW]	56	42	29	19
Continuous pressure	[bar]	270	250	250	250
Intermittent pressure	[bar]	310	310	310	310
Peak pressure	[bar]	350	350	350	350
Flushing flow	[l/min]	8	8	8	8
Dry weight	[kg]	68	68	68	68

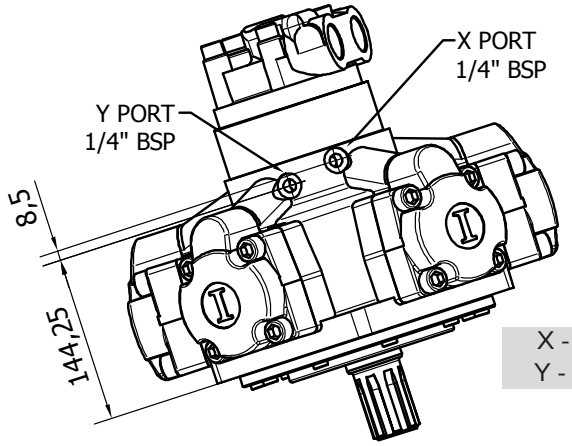
(*) Different displacements can be available on request. Please contact Italgroup S.r.l. for more information.
(**) The continuous power and the continuous power with flushing are the output maximum power. To estimate the input power divide the output power by the mechanical efficiency. For example: 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.

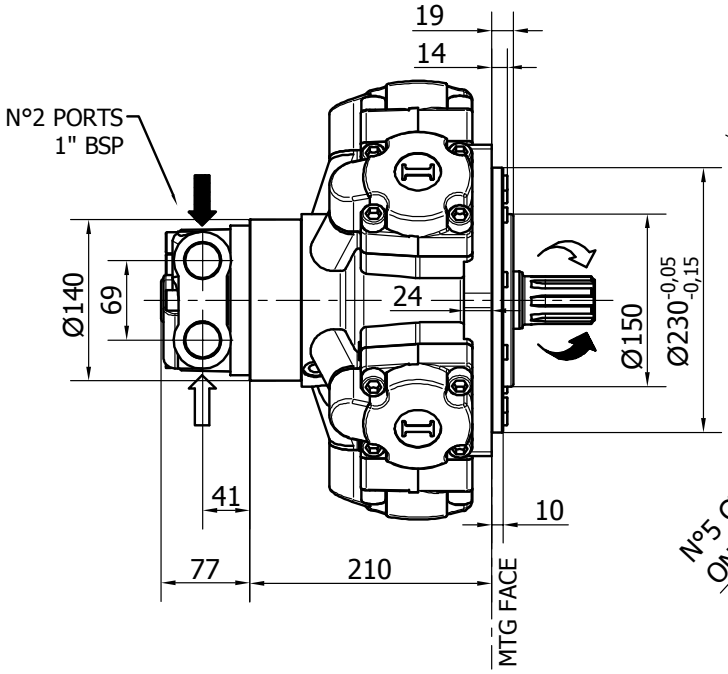
R8C 500 H3

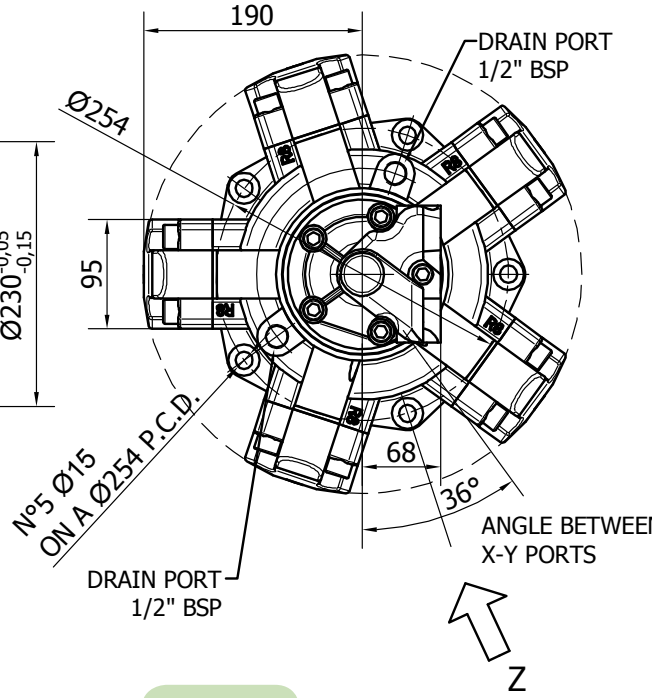
XY DISPLACEMENT CHANGE CONFIGURATION

VIEW FROM Z

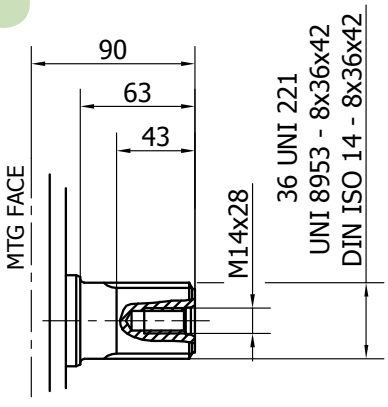


X - minimum displacement
Y - maximum displacement



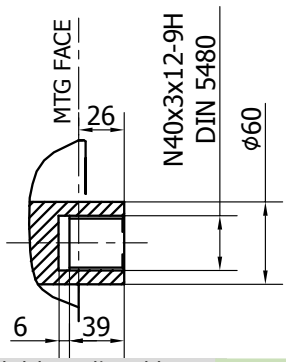


A0



Available spline billet: SB3

A3

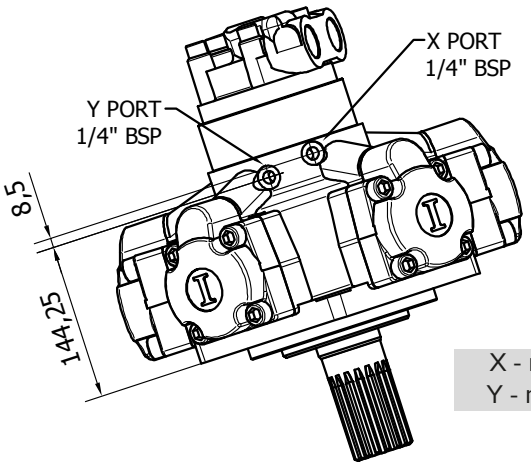


Available splined bar: B8076

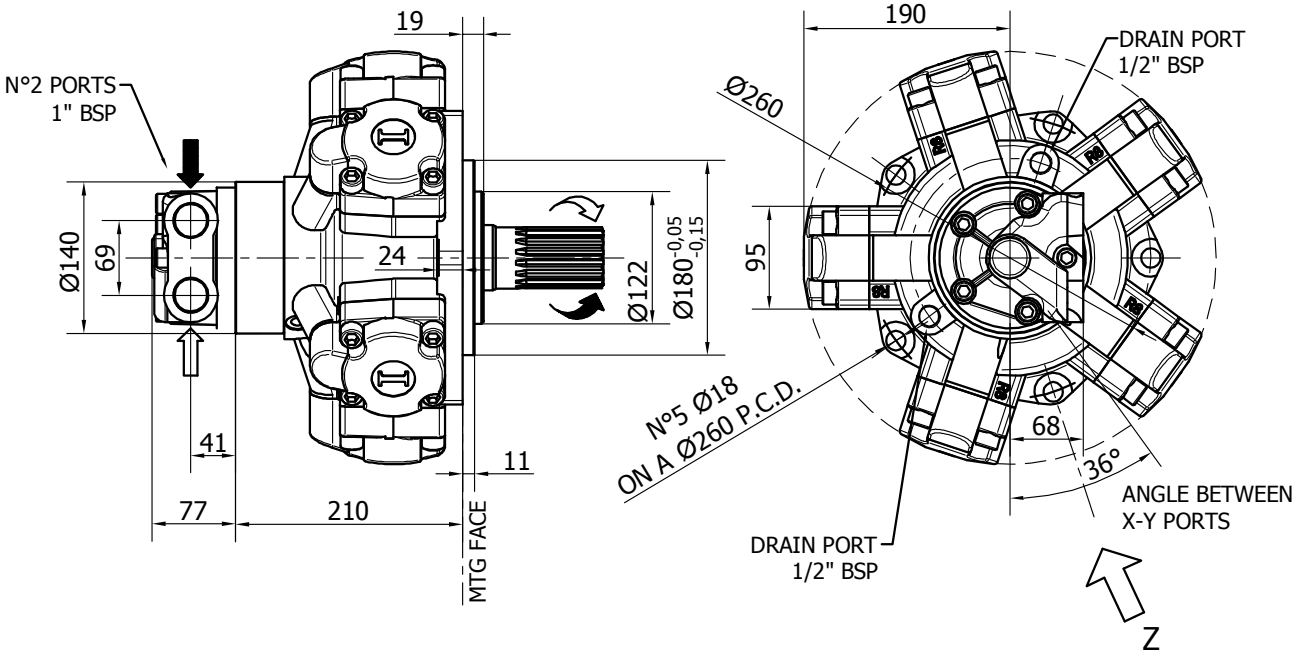
R8C 500/B30 H3

XY DISPLACEMENT CHANGE CONFIGURATION

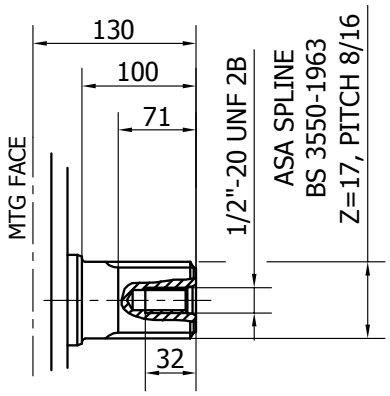
VIEW FROM Z



X - minimum displacement
Y - maximum displacement

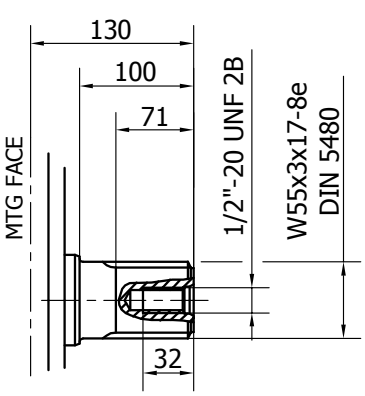


A1



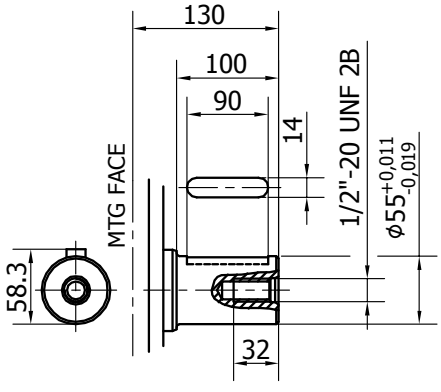
Available spline billet: SB21

A11



Available spline billet: SB30

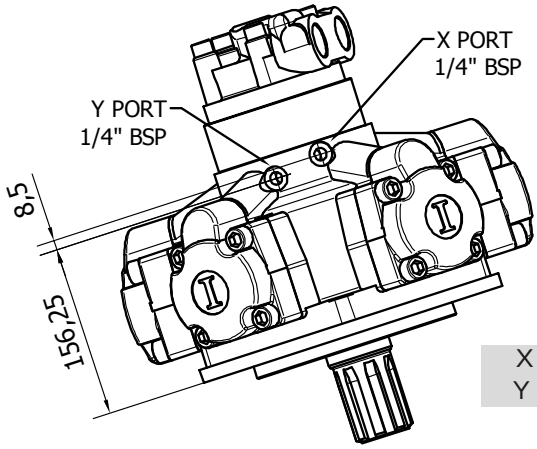
A2



R8C 500/C H3

XY DISPLACEMENT CHANGE CONFIGURATION

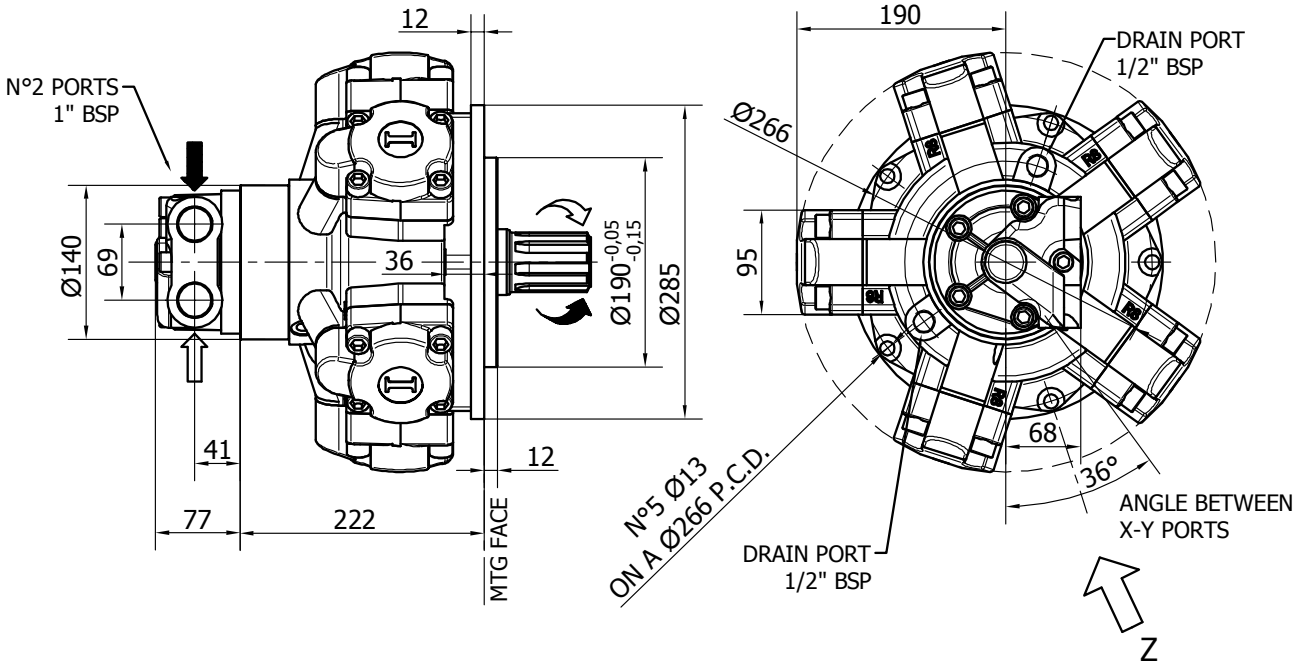
VIEW FROM Z



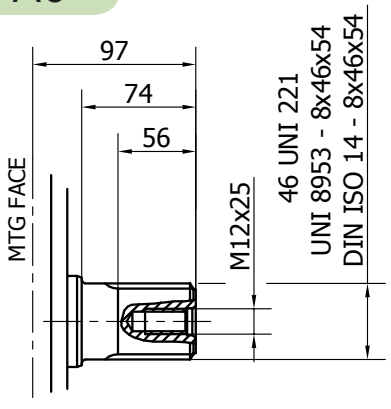
Available distributor flange: FL2

Refer to page 136-137
(distributor fitting D47)

X - minimum displacement
Y - maximum displacement

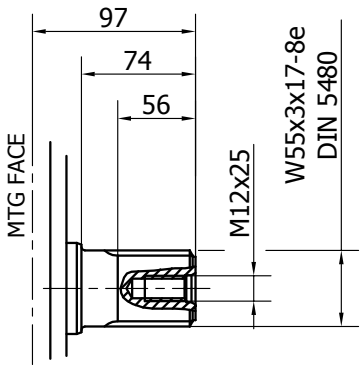


A0



Available spline billet: SB5

A11

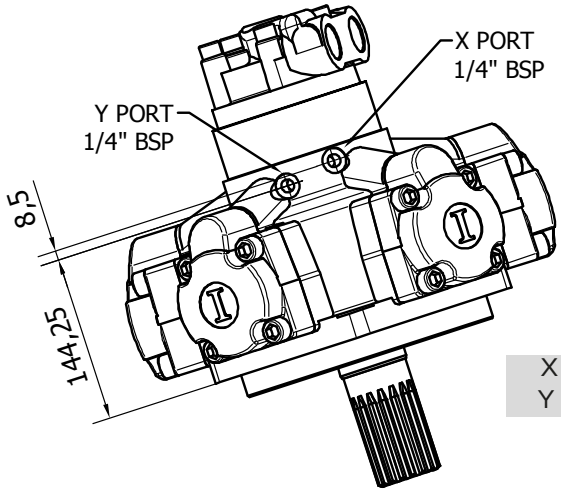


Available spline billet: SB30

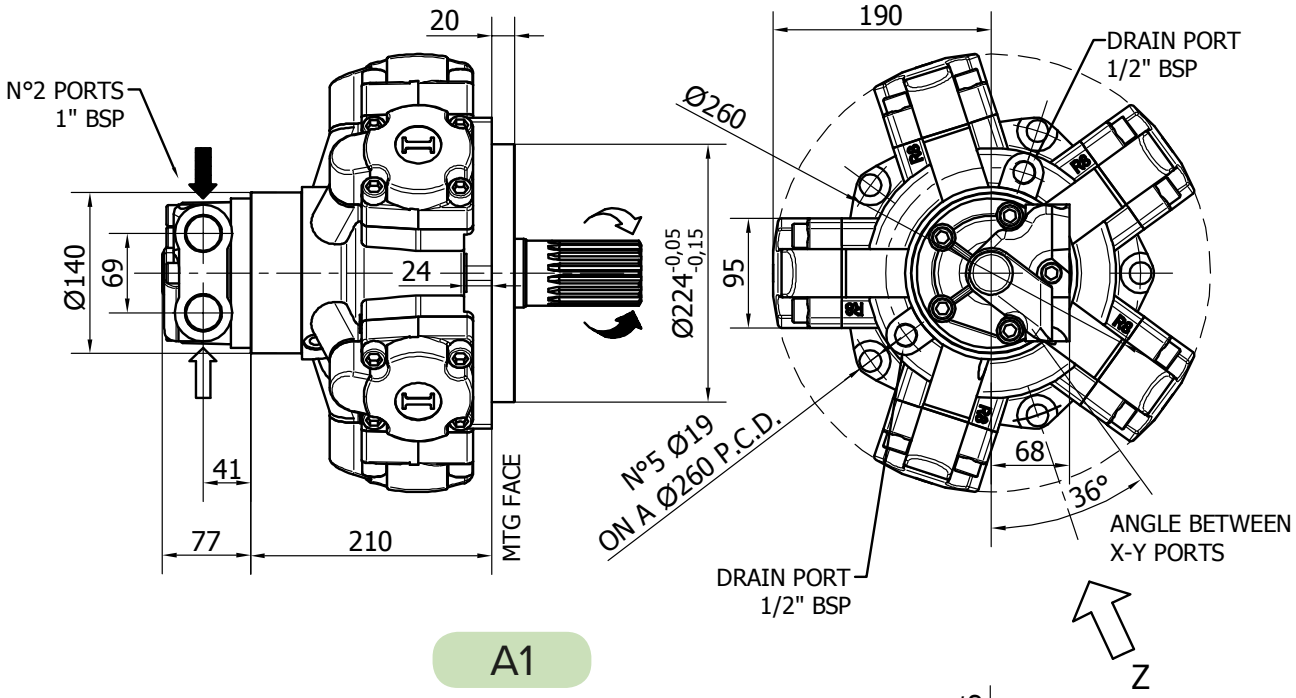
R8C 500/MRH H3

XY DISPLACEMENT CHANGE CONFIGURATION

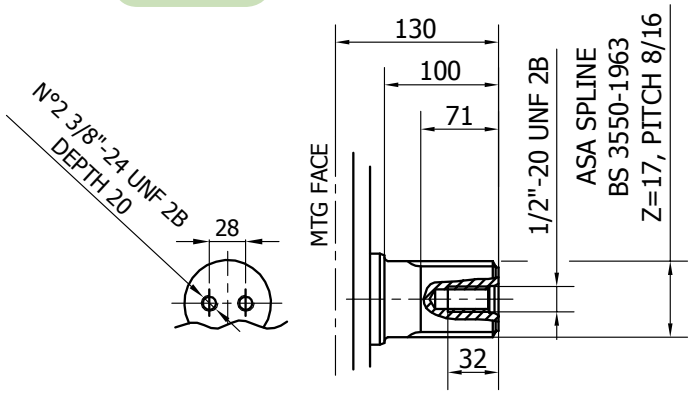
VIEW FROM Z



X - minimum displacement
Y - maximum displacement



A1

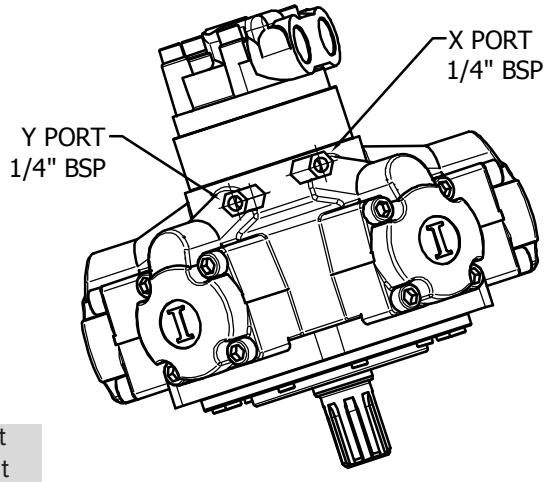


Available spline billet: SB30

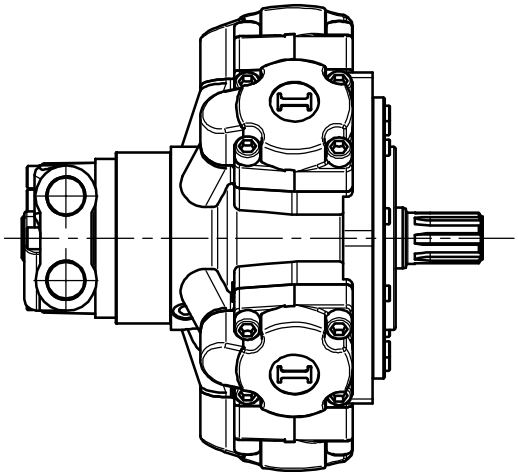
R8C H3 - NIP OPTION

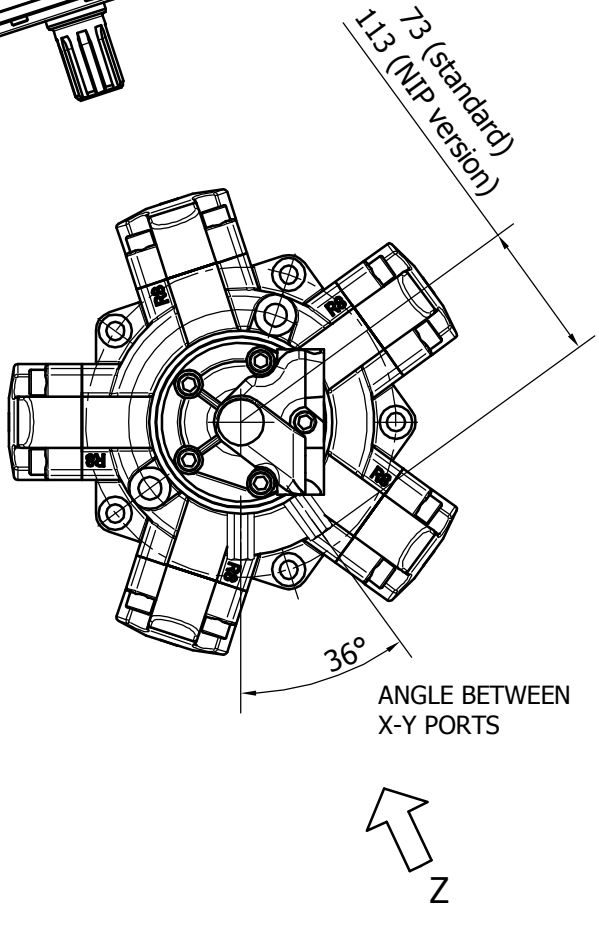
XY DISPLACEMENT CHANGE CONFIGURATION

VIEW FROM Z



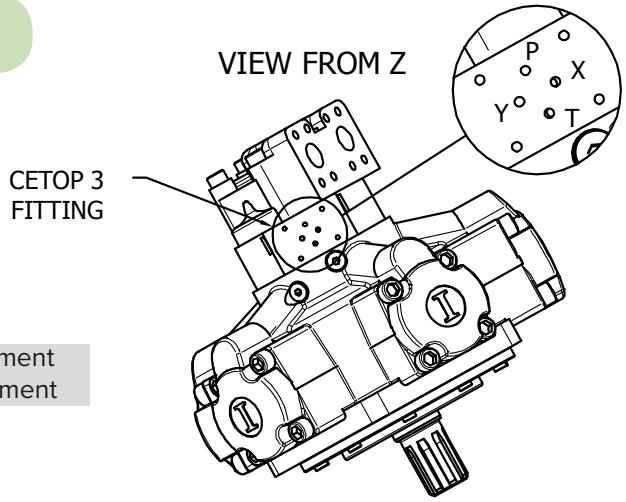
X - minimum displacement
Y - maximum displacement



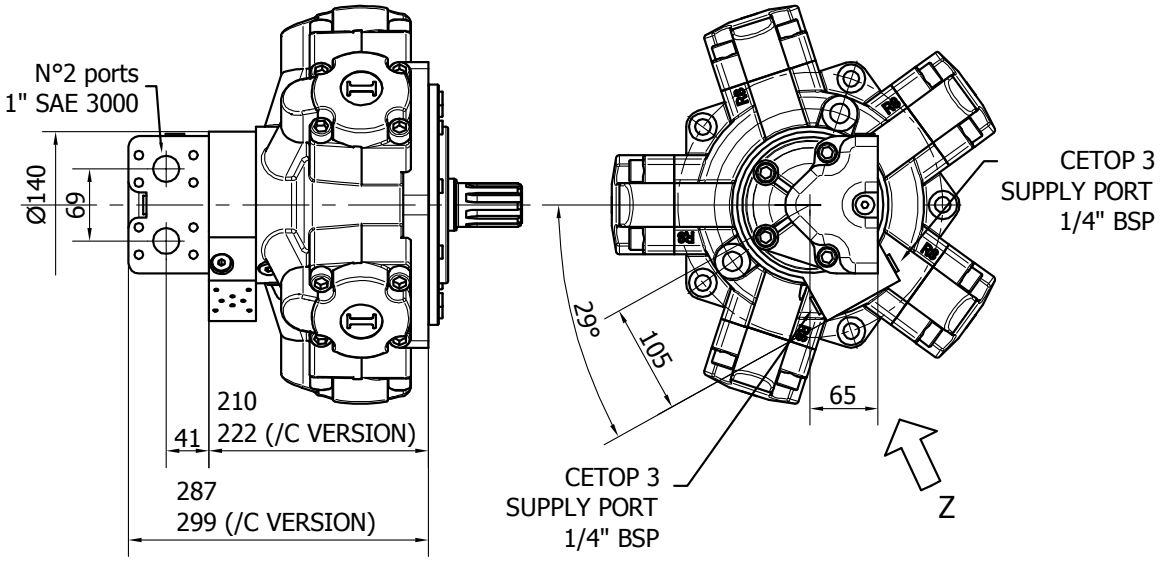


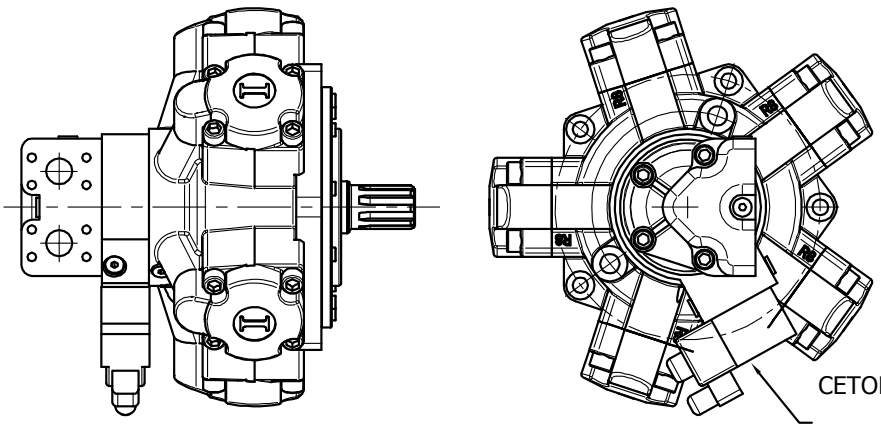
R8C H3 - CETOP 3 FITTING

CETOP 3 DISPLACEMENT CHANGE CONFIGURATION



X - minimum displacement
Y - maximum displacement

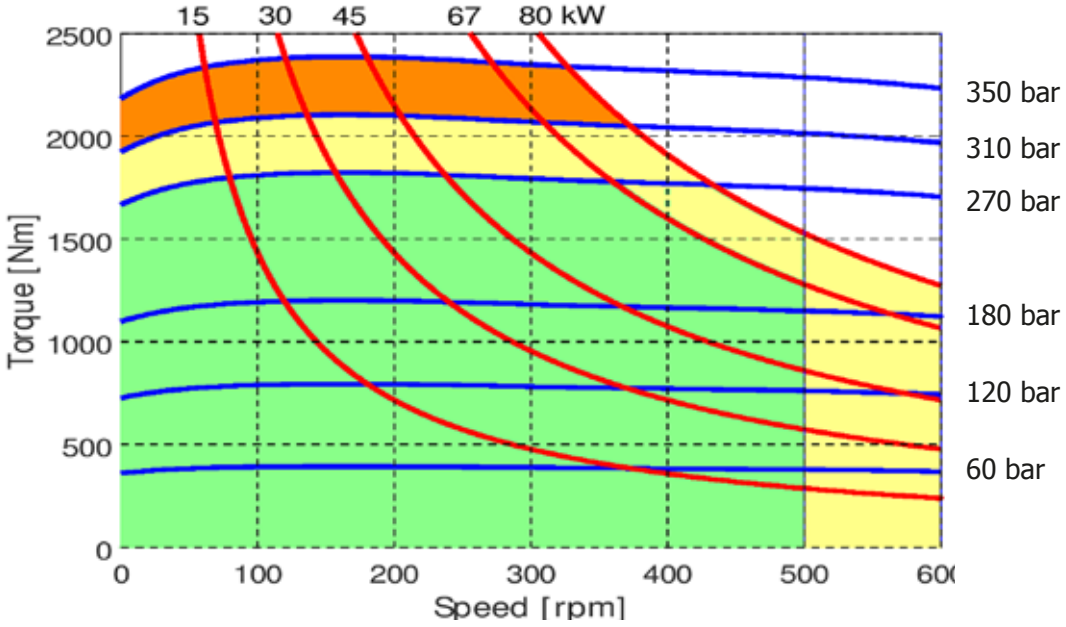




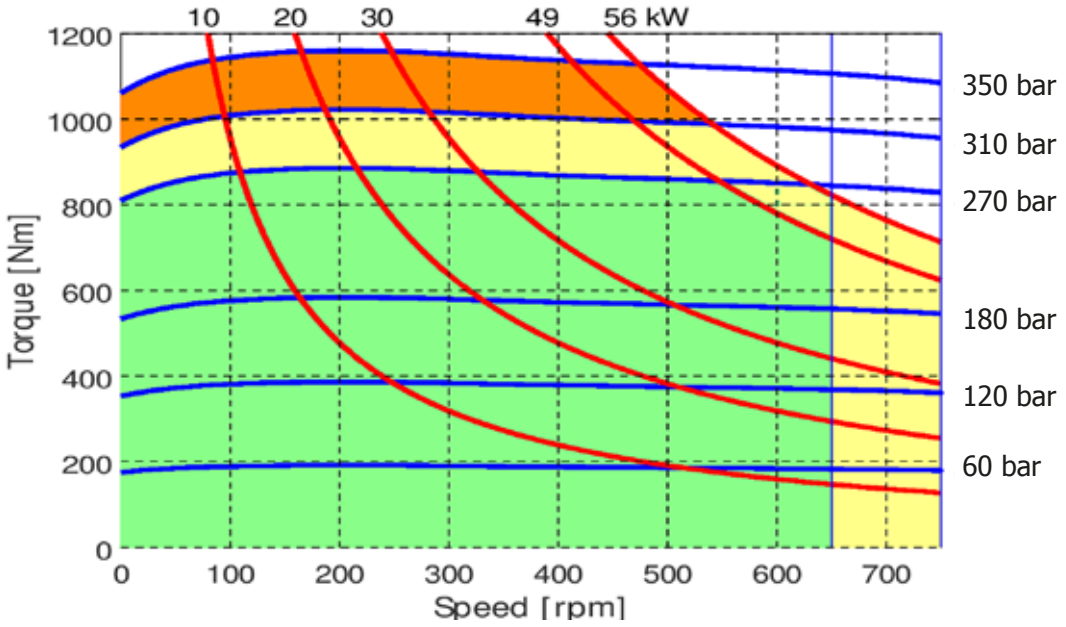
CETOP 3 DISPLACEMENT CHANGE VALVE
C3 - 12 SV (12V DC)
C3 - 24 SV (24V DC)
C3 - HY SV (HYDRAULIC OPERATED)

R8C H3 - PERFORMANCE CURVES

492 cc - WITHOUT FLUSHING



255 cc - WITHOUT FLUSHING



Continuous operation

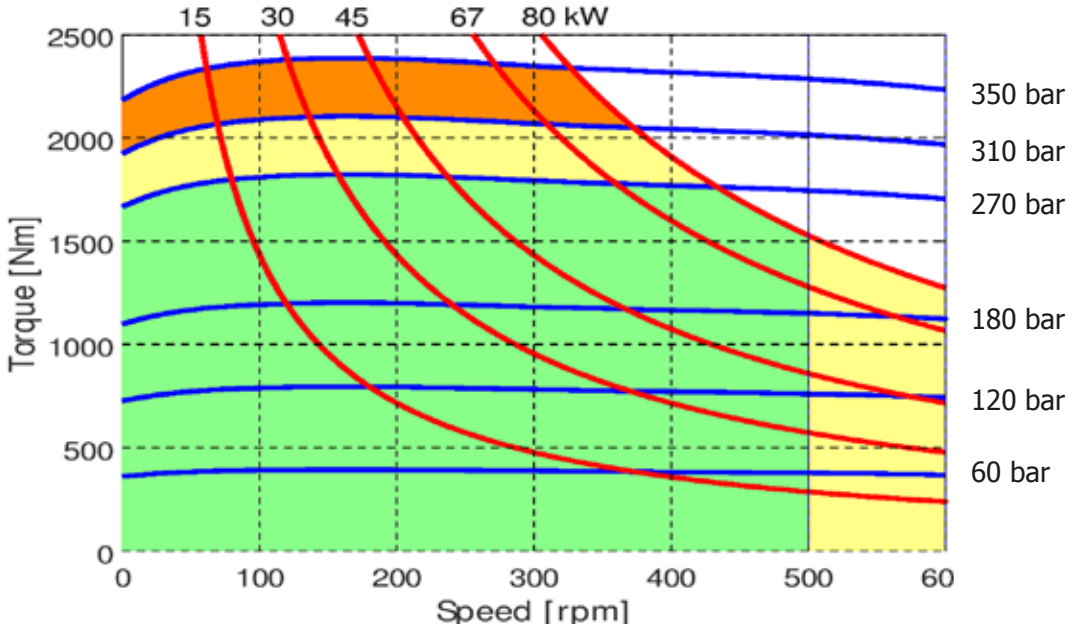
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

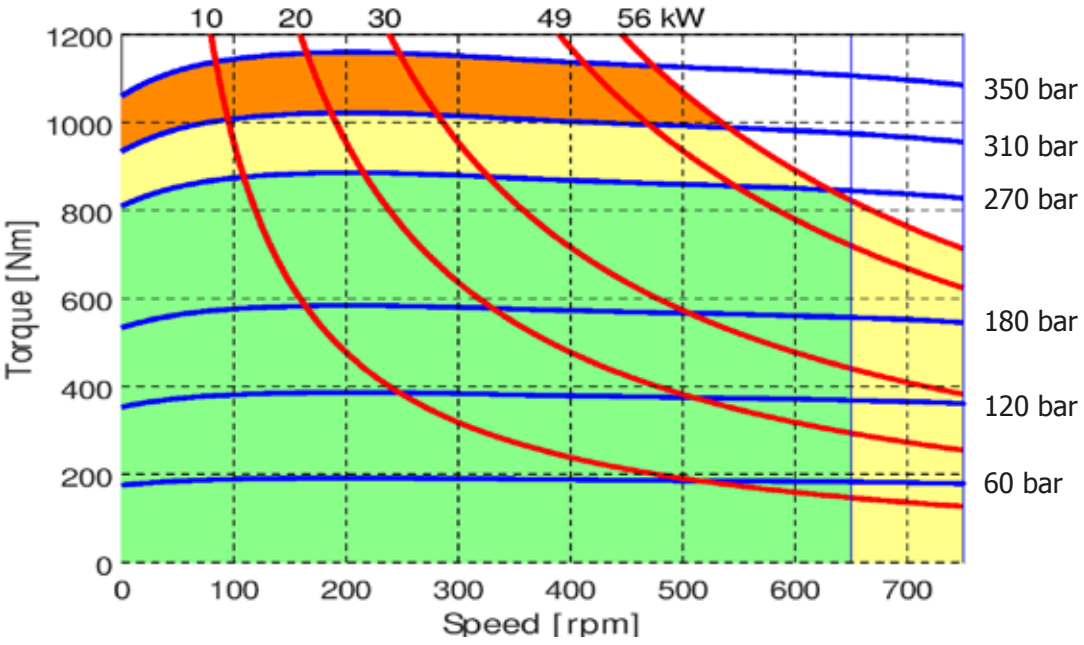
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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

R8C H3 - PERFORMANCE CURVES

492 cc - WITH FLUSHING



255 cc - WITH FLUSHING



Continuous operation

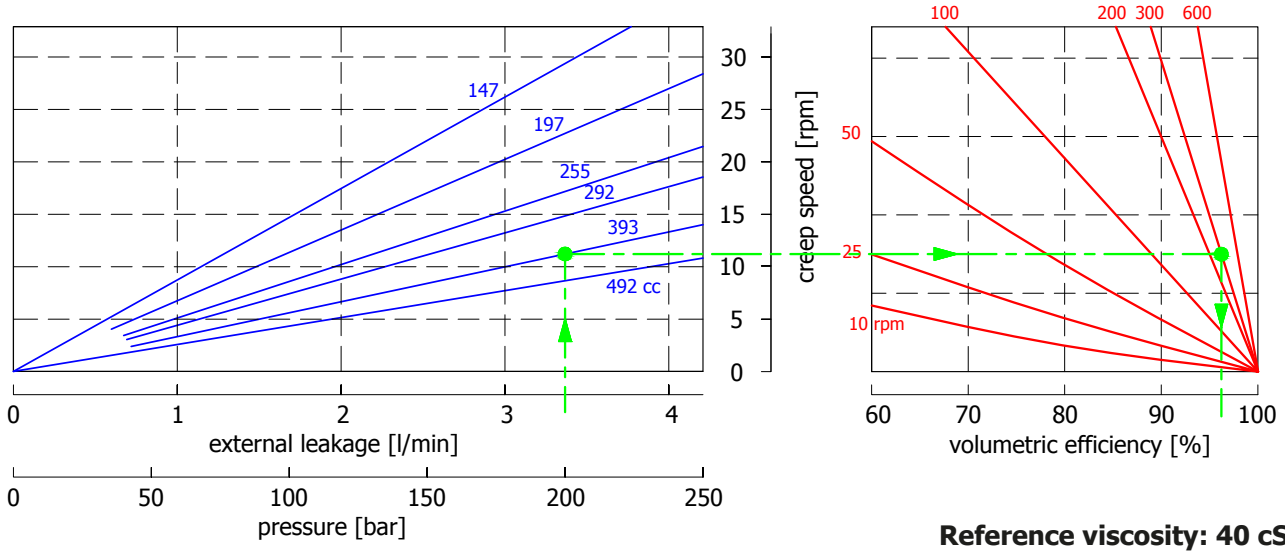
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

R8C H3 - PERFORMANCE CURVES

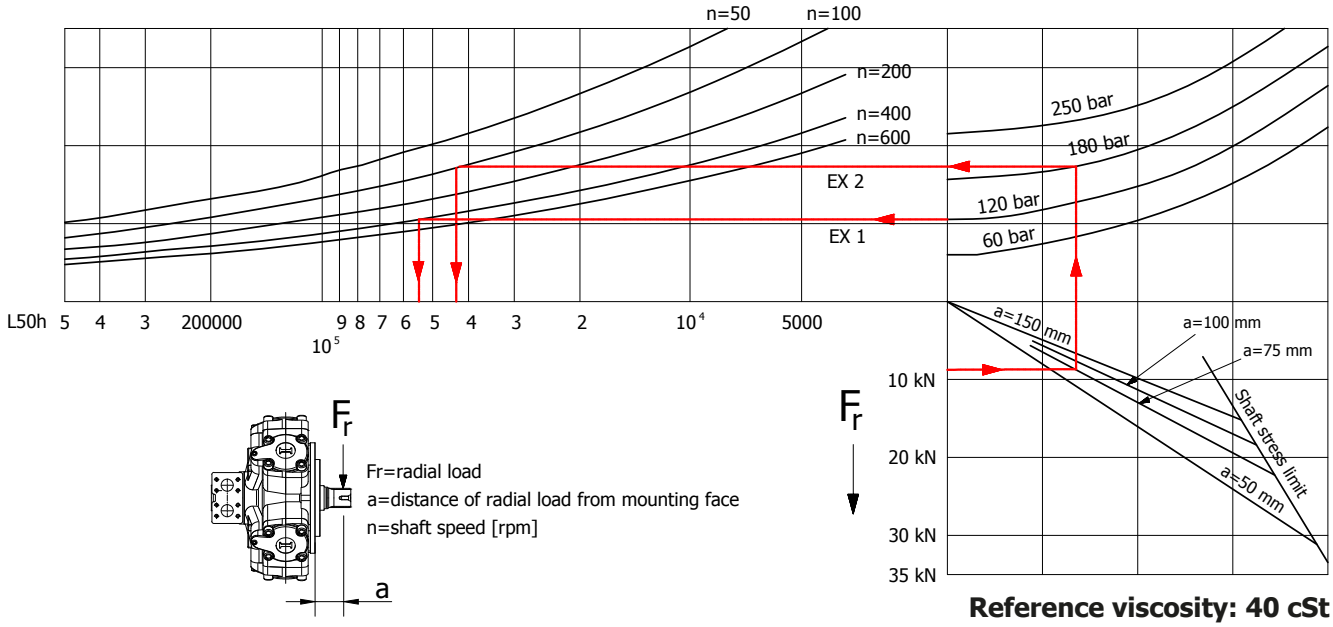
CREEP SPEED - VOLUMETRIC EFFICIENCY



Reference viscosity: 40 cSt

Example:
We suppose (393 cc): p=200 [bar], we obtain: external leakage 3,3 [l/min], shaft creep speed 11.5 [rpm].
If we suppose (393 cc): p=200 [bar] and n=300 [rpm] we obtain a volumetric efficiency of 97%;

BEARING LIFE



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], p=180 [bar] and n=100 [rpm], we obtain an average lifetime of 42000 [h].

R8C H3 - ORDERING CODE

R8C | - - | - - | H3 | - - | - - | - - | - - | - - | - - | - -

DISPLACEMENT
- 500

INTERCHANGEABILITY
- /S
- /BH
- /MRH

SERIE
- H3

SHAFT
- A0
- A1
- A11
- A2
- A3

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

See pag. 128-132

SPECIAL FEATURES
- MP
- SPSL
- HPS
- CCW

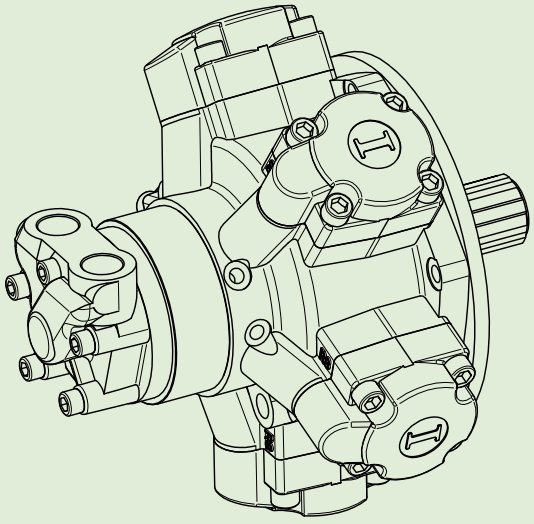
See pag. 33

- NIP

See pag. 33

- Z - -

Italgroup internal code



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

See pag. 126-127

DISPLACEMENT CHANGE FITTING AND ACCESSORIES
- XY
- XY-SV
- C3-SV
- C3-12 SV
- C3-24 SV
- C3-HY SV
- C3-12 CSV
- C3-24 CSV
- C3-HY CSV

See pag. 24-32

SPLINED BILLET SPLINED BAR
- SB3
- SB5
- SB21
- SB30
- B8076

See pag. 133-135

MAXIMUM AND MINIMUM DISPLACEMENTS

EXAMPLES:

R8C 500/B30 H3 A1 D47 (492-255)
R8C 500/MRH H3 A1 D40 CCW (492-292)
R8C 500/C H3 A0 D47 FL2 EST31 (492-255)

R8C H4

TECHNICAL DATA	Pag. 64
R8C 800 H4 - INSTALLATION DRAWING	Pag. 65
R8C 800/B45 H4 - INSTALLATION DRAWING	Pag. 66
R8C 800/C H4 - INSTALLATION DRAWING	Pag. 67
R8C 800/MRH H4 - INSTALLATION DRAWING	Pag. 68
R8C H4 - NIP OPTION	Pag. 69
R8C H4 - CETOP 3 FITTING	Pag. 70
R8C 800 H4 - PERFORMANCE CURVES	Pag. 71 - 73
R8C H4 - ORDERING CODE	Pag. 74

R8C H4 TECHNICAL DATA

R8C 800 H4

Displacement (*)	**[cc]**	**792**	**660**	**575**	**493**	**410**
Th. specific torque	[Nm/bar]	12,6	10,5	9,2	7,8	6,5
Continuous speed	[rpm]	450	550	620	650	650
Peak speed	[rpm]	550	700	720	750	800
Minimum speed	[rpm]	2	2	2	2	2
Mechanical efficiency	[%]	90,8	90,4	88,5	88	87,4
Starting efficiency	[%]	84,8	84,4	82,6	79	75
Continuous power (**)	[kW]	108	94	84	72	55
Cont. power with flushing	[kW]	128	112	100	86	66
Continuous pressure	[bar]	270	270	270	270	270
Intermittent pressure	[bar]	310	310	310	310	310
Peak pressure	[bar]	350	350	350	350	350
Flushing flow	[l/min]	10	10	10	10	10
Dry weight	[kg]	92	92	92	92	92

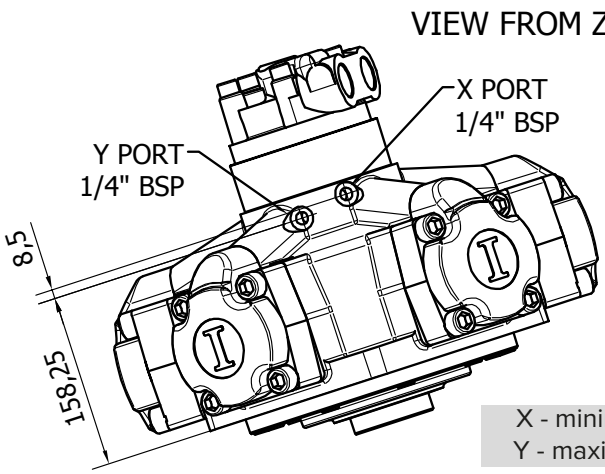
Displacement (*)	**[cc]**	**328**	**273**	**245**	**165**
Th. specific torque	[Nm/bar]	5,2	4,3	3,9	2,6
Continuous speed	[rpm]	700	700	700	700
Peak speed	[rpm]	800	850	850	900
Minimum speed	[rpm]	2	2	3	3
Mechanical efficiency	[%]	84,5	82,4	82	60,2
Starting efficiency	[%]	70,2	68,3	60,8	43,3
Continuous power (**)	[kW]	55	43	41	19
Cont. power with flushing	[kW]	66	51	49	25
Continuous pressure	[bar]	250	250	250	250
Intermittent pressure	[bar]	310	310	310	310
Peak pressure	[bar]	350	350	350	350
Flushing flow	[l/min]	10	10	10	10
Dry weight	[kg]	92	92	92	92

(*) 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.

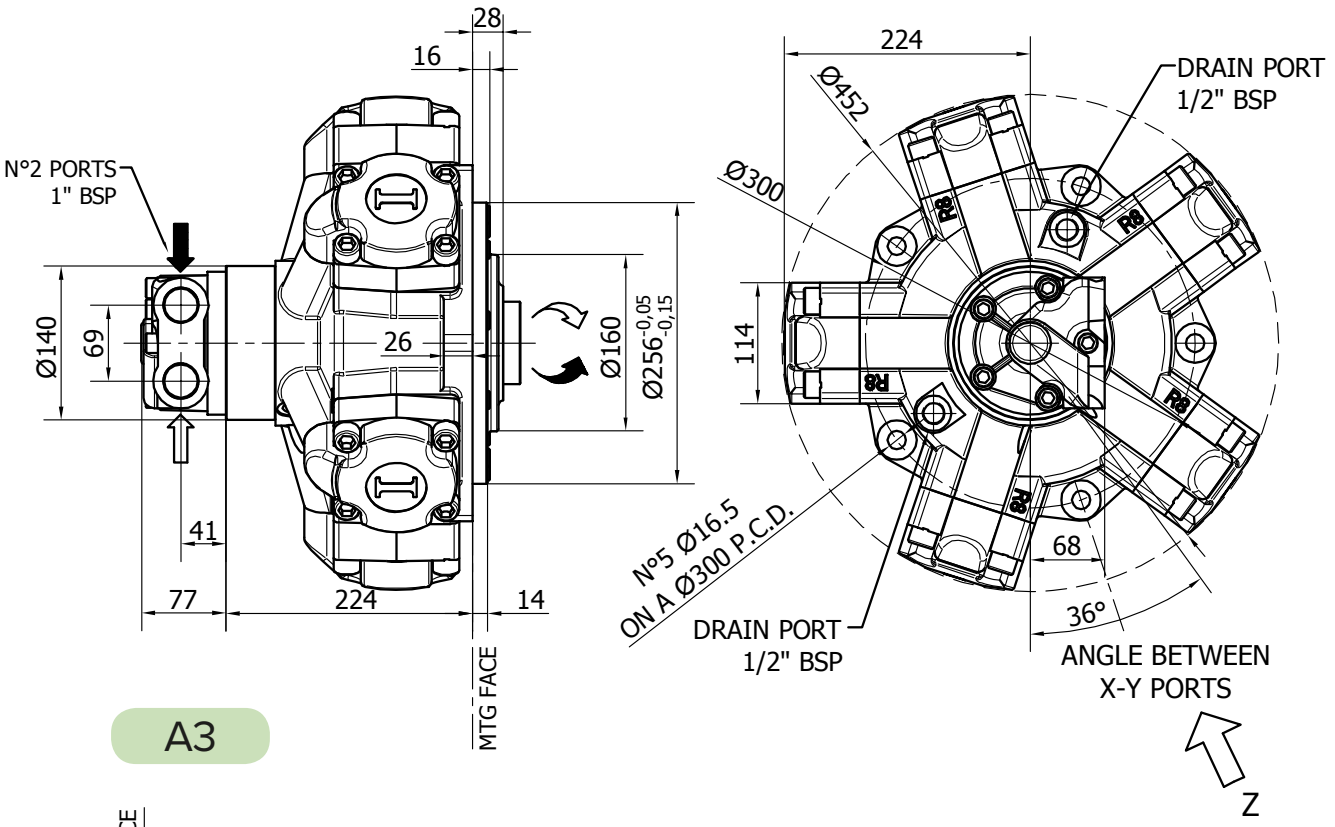
Hydrostatic pressure test: 420 bar.
Temperature range: -30 / 70 °C.

R8C 800 H4

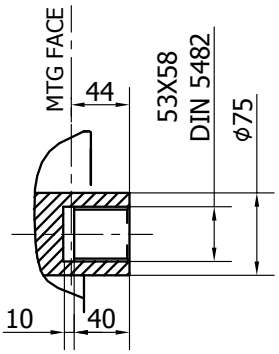
XY DISPLACEMENT CHANGE CONFIGURATION



X - minimum displacement
Y - maximum displacement

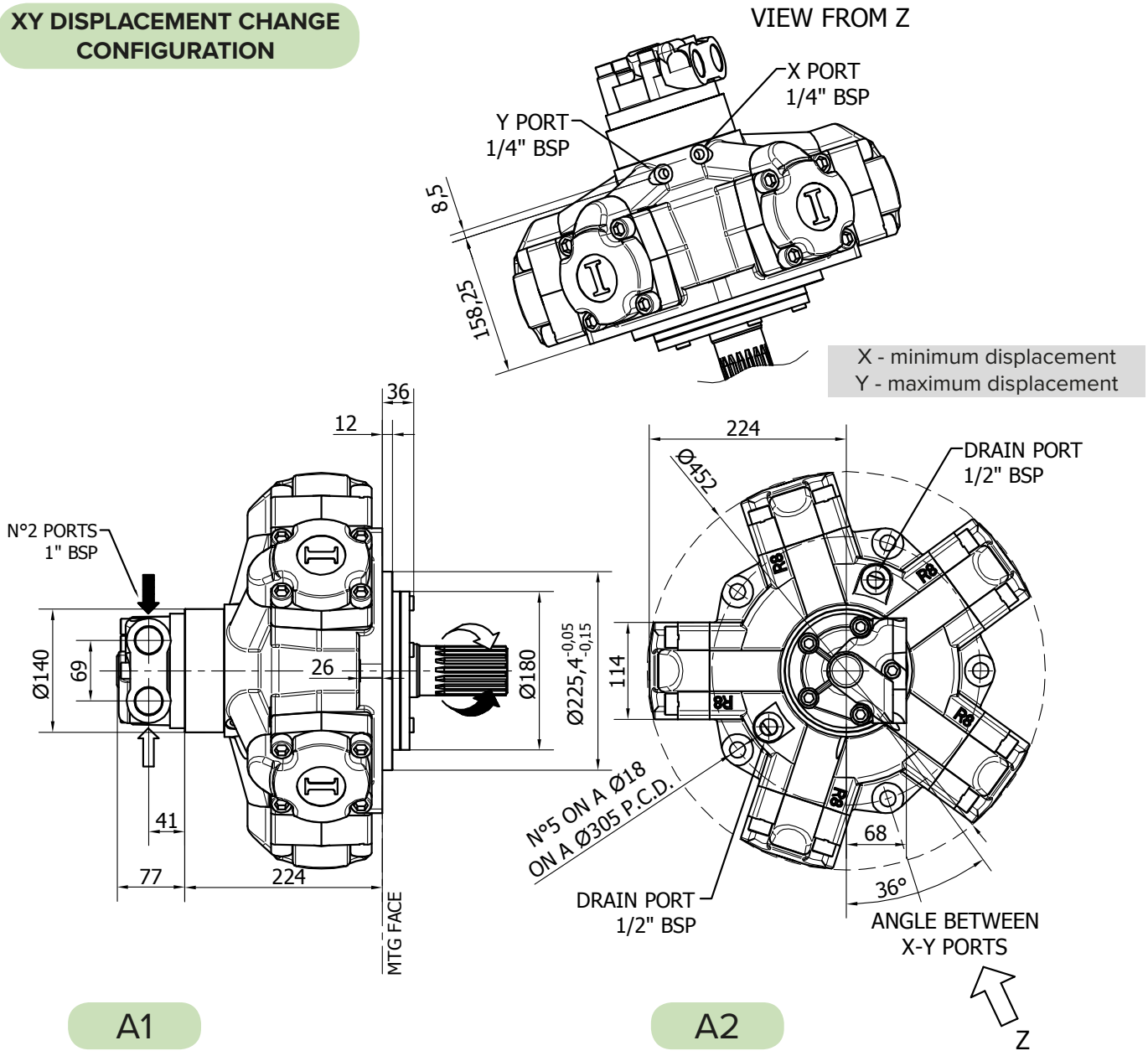


A3

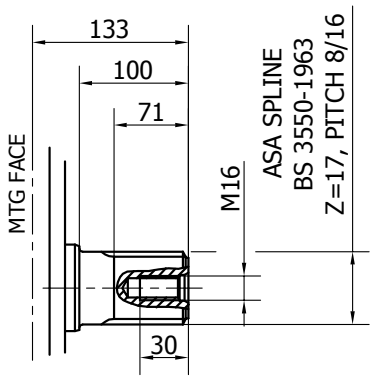


R8C 800/B45 H4

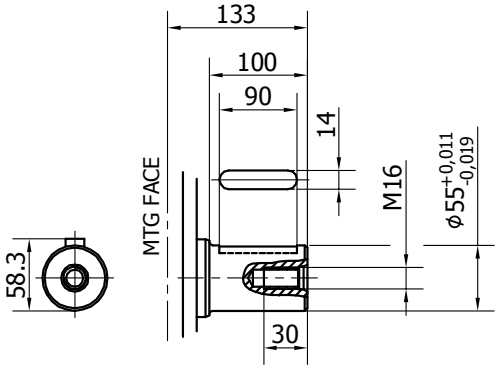
XY DISPLACEMENT CHANGE CONFIGURATION



A1



A2

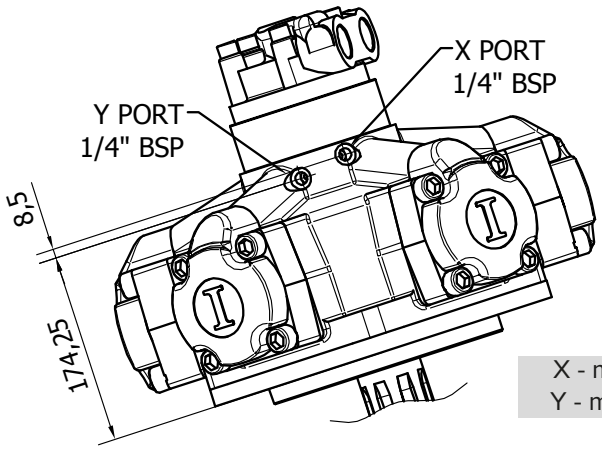


Available spline billet: SB21

R8C 800/C H4

XY DISPLACEMENT CHANGE CONFIGURATION

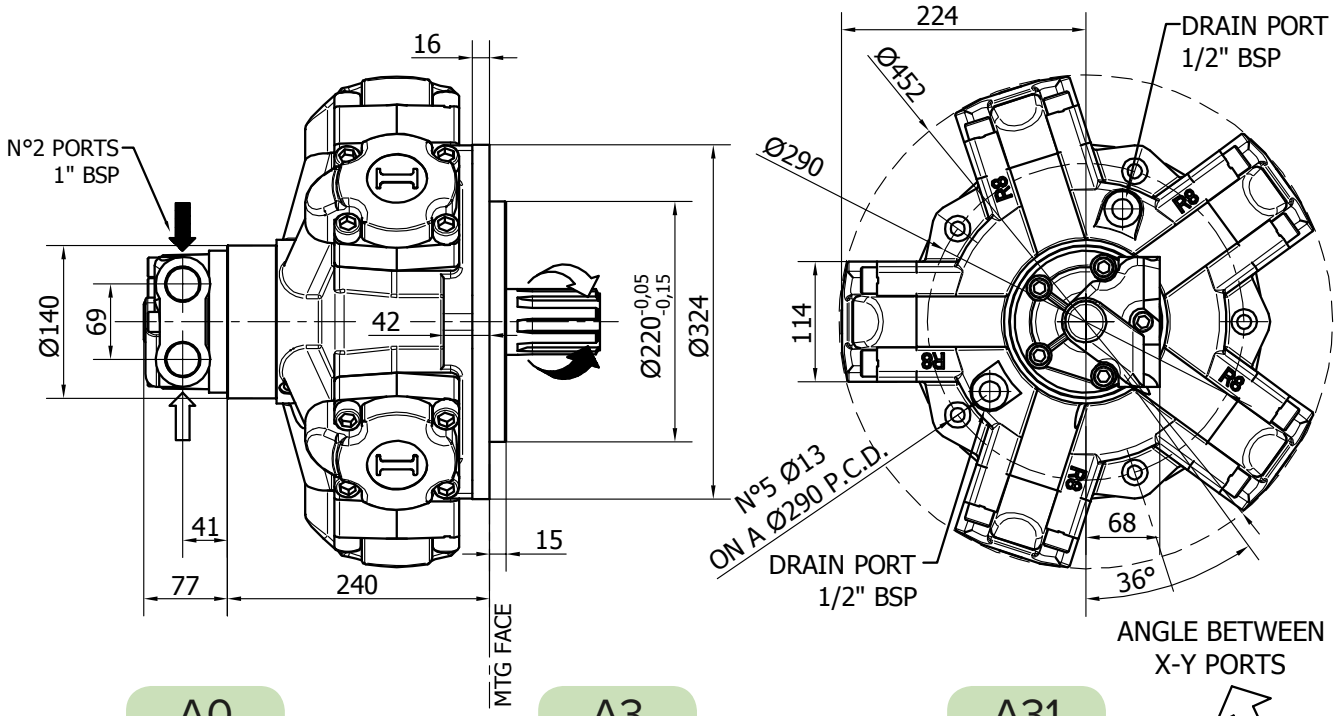
VIEW FROM Z



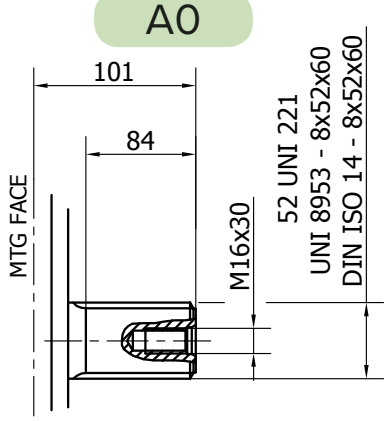
Available distributor flange: FL2

Refer to page 136-137
(distributor fitting D47)

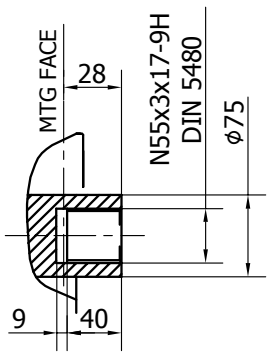
X - minimum displacement
Y - maximum displacement



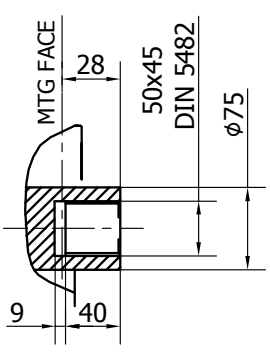
A0



A3



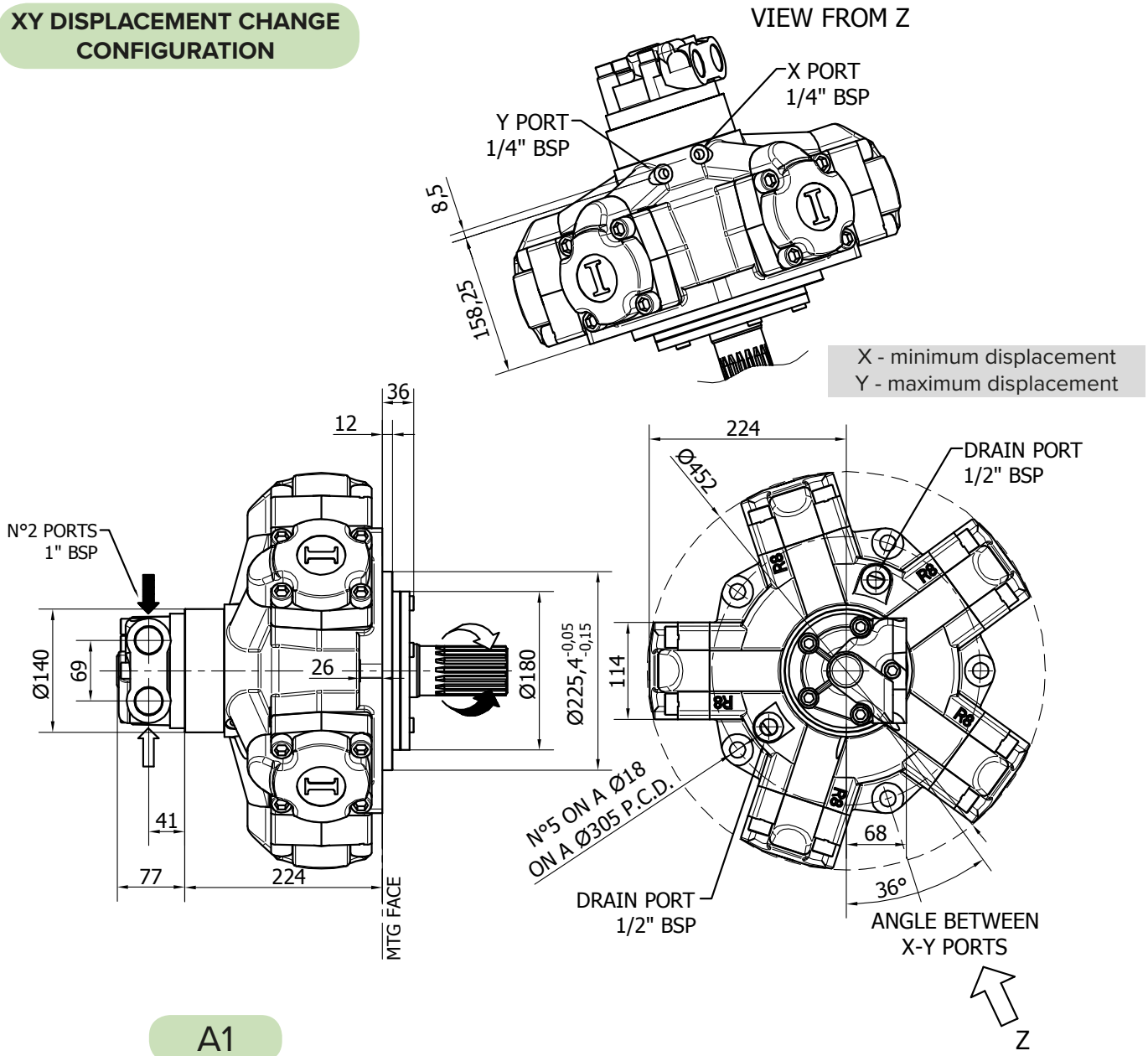
A31



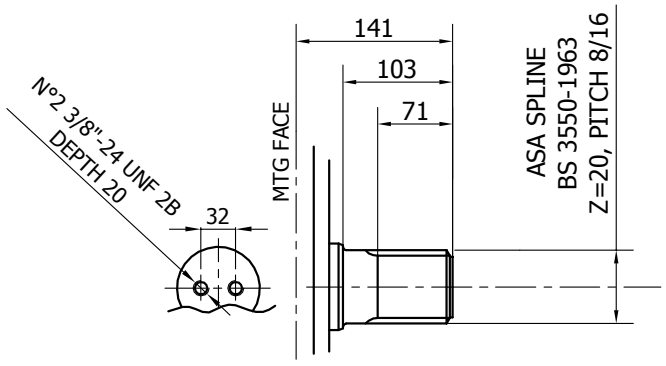
Available spline billet: SB16

R8C 800/MRH H4

XY DISPLACEMENT CHANGE CONFIGURATION



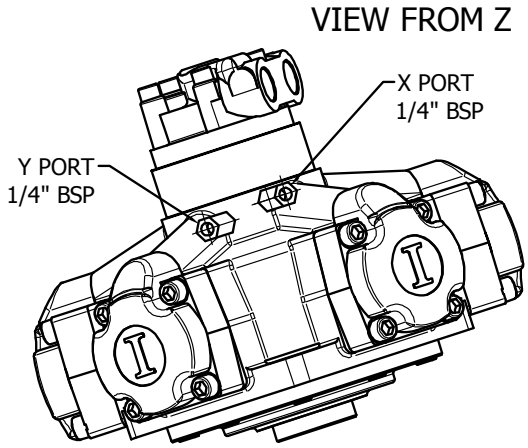
A1



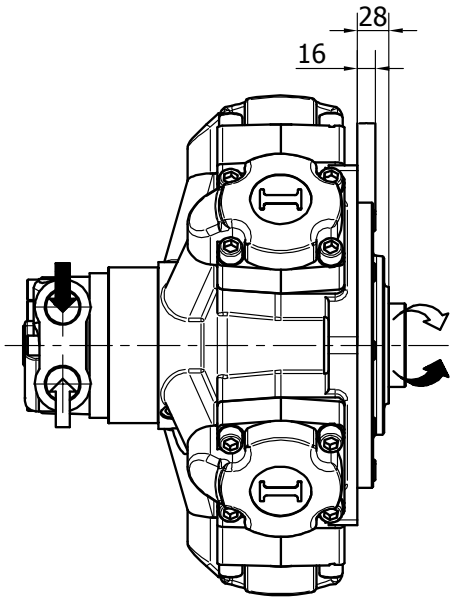
Available spline billet: SB21

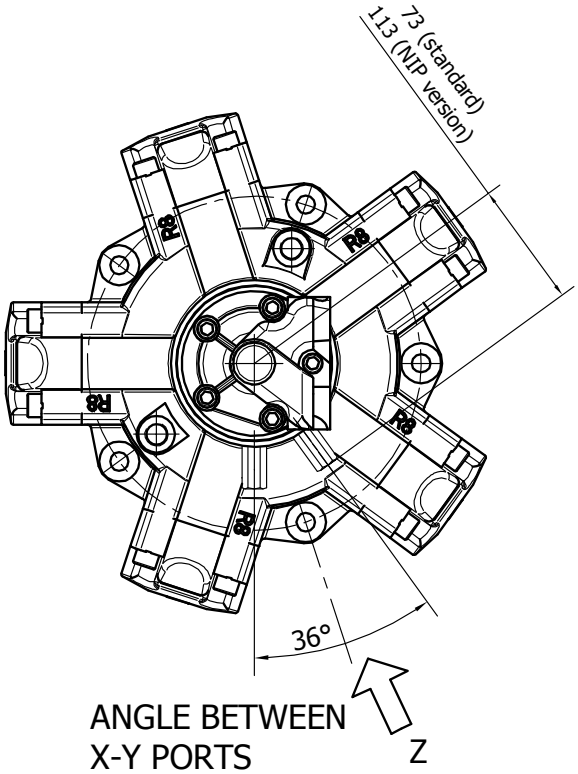
R8C H4 - NIP OPTION

XY DISPLACEMENT CHANGE CONFIGURATION



X - minimum displacement
Y - maximum displacement

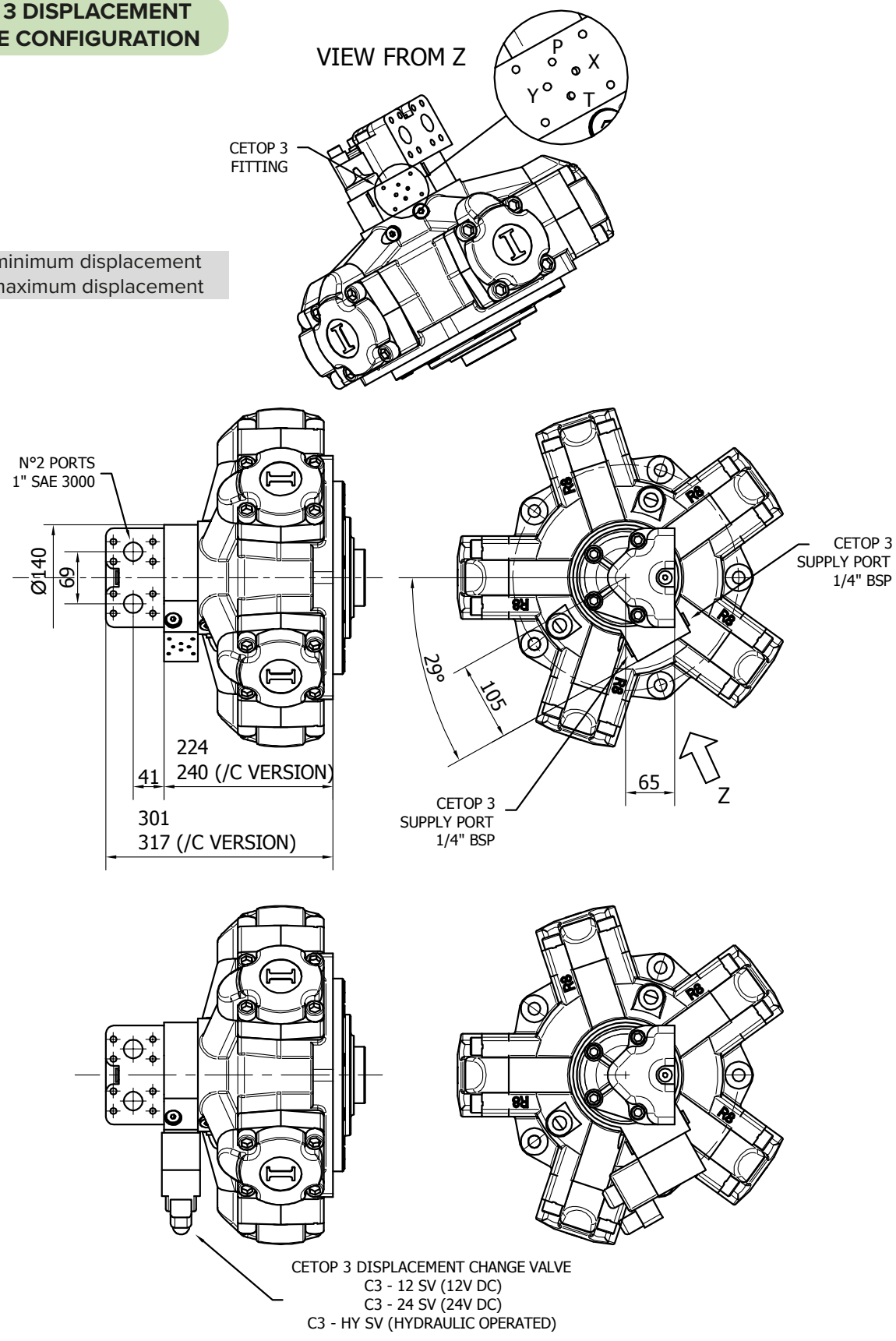




R8C H4 - CETOP 3 FITTING

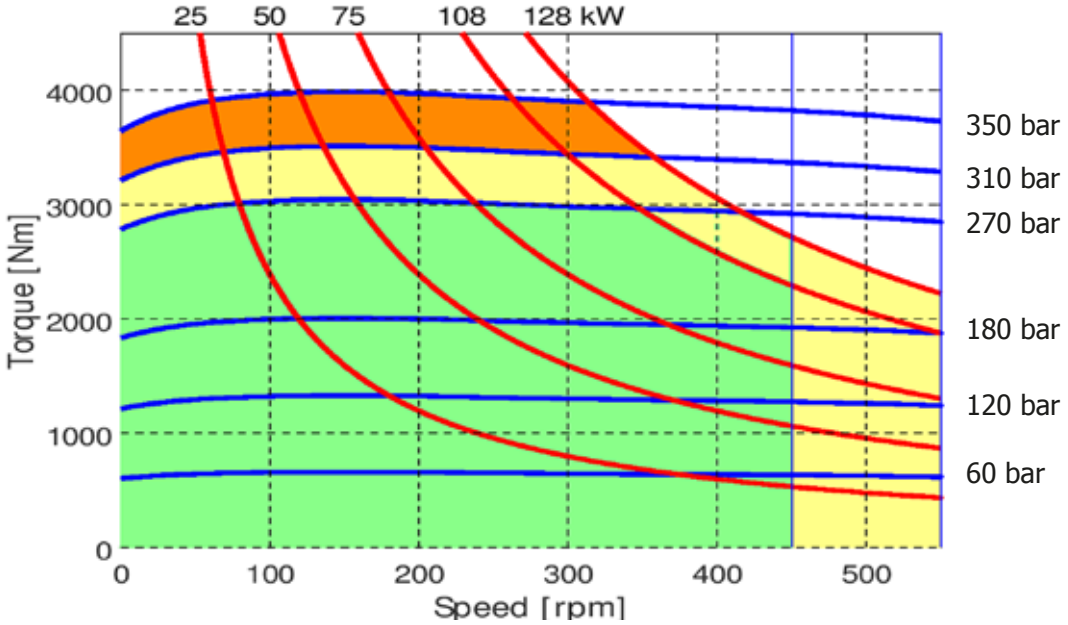
CETOP 3 DISPLACEMENT CHANGE CONFIGURATION

X - minimum displacement
Y - maximum displacement

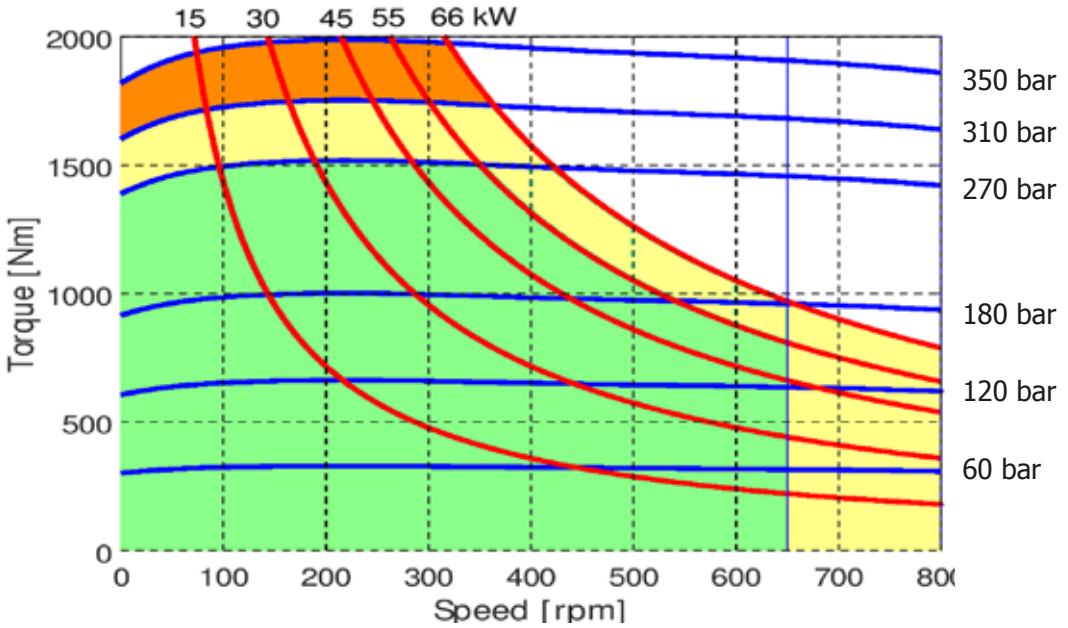


R8C H4 - PERFORMANCE CURVES

792 cc - WITHOUT FLUSHING



410 cc - WITHOUT FLUSHING



Continuous operation

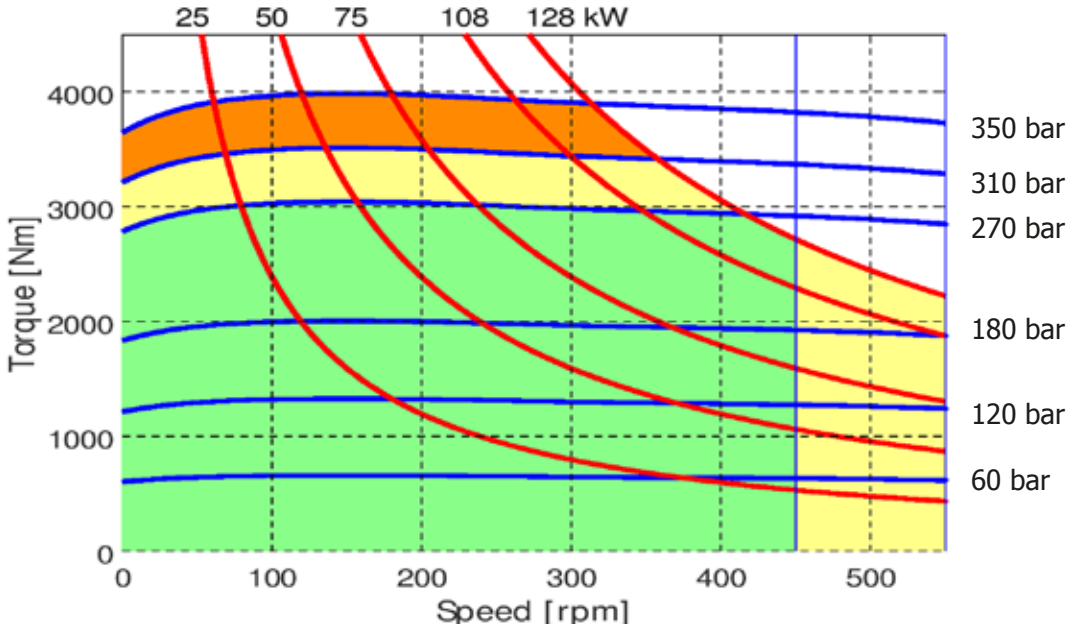
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

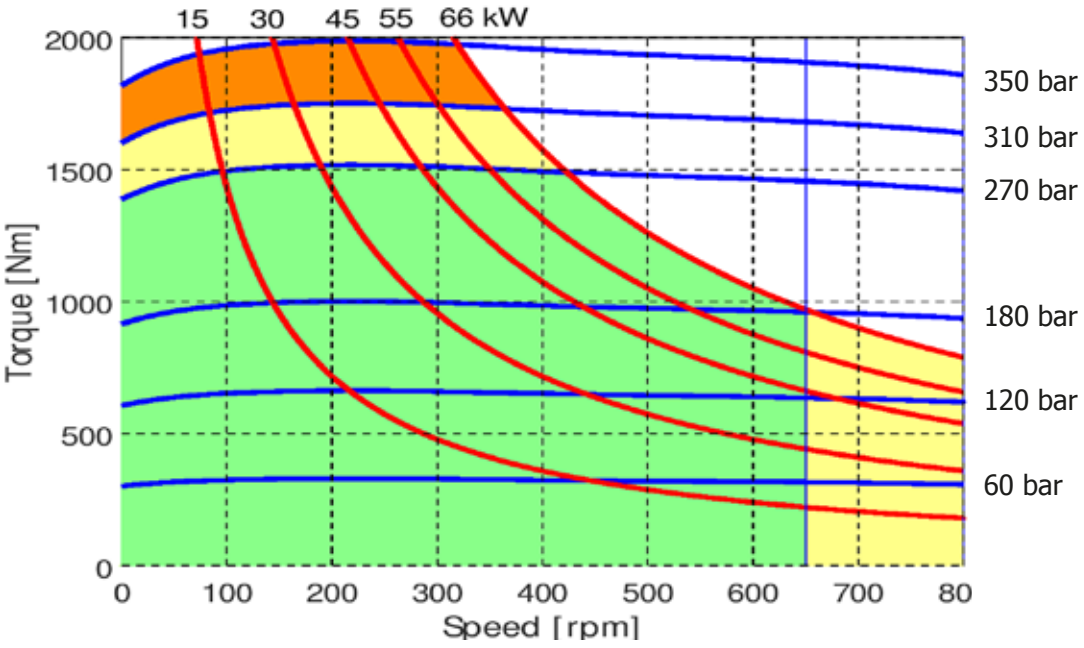
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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

R8C H4 - PERFORMANCE CURVES

792 cc - WITH FLUSHING



410 cc - WITH FLUSHING



Continuous operation

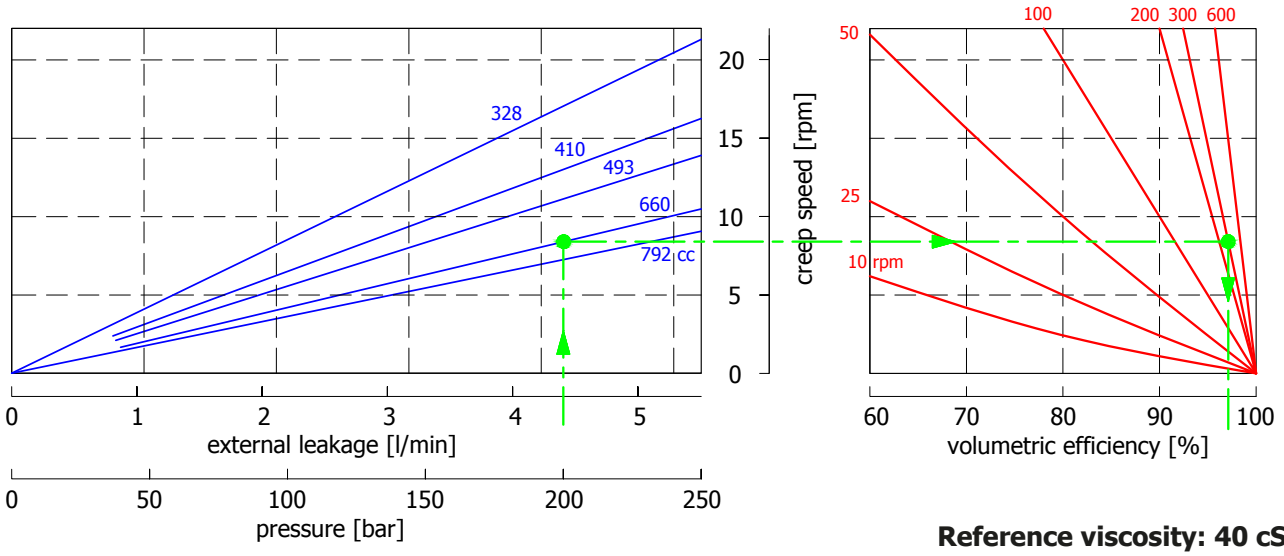
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

R8C H4 - PERFORMANCE CURVES

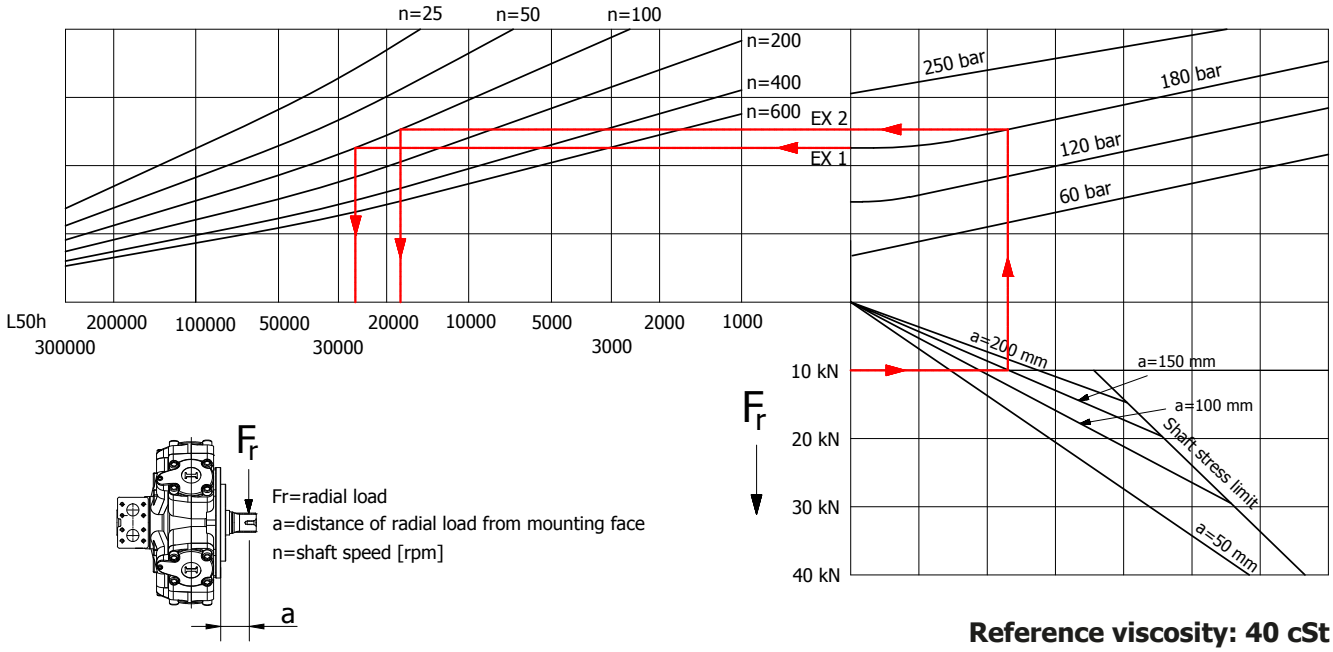
CREEP SPEED - VOLUMETRIC EFFICIENCY



Reference viscosity: 40 cSt

Example:
We suppose (660 cc): p=200 [bar], we obtain: external leakage 4,3 [l/min], shaft creep speed 8 [rpm].
If we suppose (660 cc): p=200 [bar] and n=300 [rpm] we obtain a volumetric efficiency of 97%;

BEARING LIFE



Reference viscosity: 40 cSt

Example:
We suppose (EX1): p=180 [bar], n=100 [rpm]; we obtain an average lifetime of 33000 [h].
If we suppose (EX2): F_r=10 [kN], a=150 [mm] and p=180 [bar] we obtain an average lifetime of 18000 [h].

R8C H4 - ORDERING CODE

R8C | - - | - - | H4 | - - | - - | - - | - - | - - | - - | - -

DISPLACEMENT
- 800

INTERCHANGEABILITY
- /B45
- /C
- /MRH

SERIE
- H4

SHAFT
- A0
- A1
- A2
- A3
- A31

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

See pag. 128-132

SPECIAL FEATURES
- MP
- SPSL
- HPS
- CCW

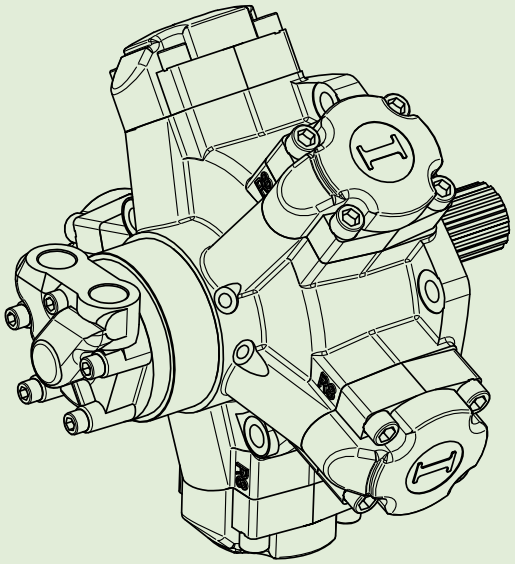
See pag. 33

- NIP

See pag. 33

- Z - -

Italgroup internal code



DISTRIBUTOR
- D31B / D31BJ
- D36B / D36BJ
- D310B / D310BJ
- D40 / D40J
- D47 / D47J
- D416 / D416J
- D75 / D75J
- D90 / D90J

See pag. 126-127

DISPLACEMENT CHANGE FITTING AND ACCESSORIES
- XY
- XY-SV
- C3-SV
- C3-12 SV
- C3-24 SV
- C3-HY SV
- C3-12 CSV
- C3-24 CSV
- C3-HY CSV

See pag. 24-32

SPLINED BILLET SPLINED BAR
- SB16
- SB21

See pag. 133-135

MAXIMUM AND MINIMUM DISPLACEMENTS

EXAMPLES:

R8C 800 H4 A3 D40 (792-492)
R8C 800/C H4 A0 D47 J C3-SV (660-328)
R8C 800/MRH H4 A1 D47 SB21 (792-245)

R8C H5

TECHNICAL DATA	Pag. 76
R8C 1400 H5 - INSTALLATION DRAWING	Pag. 77
R8C 1400/C H5 - INSTALLATION DRAWING	Pag. 78
R8C 1400/MRH H5 - INSTALLATION DRAWING	Pag. 79
R8C 1400/BD5 H5 - INSTALLATION DRAWING	Pag. 80
R8C H5 - NIP OPTION	Pag. 81
R8C H5 - CETOP 3 FITTING	Pag. 82
R8C 1400 H5 - PERFORMANCE CURVES	Pag. 83 - 85
R8C H5 - ORDERING CODE	Pag. 86

R8C H5 TECHNICAL DATA

R8C 1400 H5

Displacement (*)	**[cc]**	**1600**	**1499**	**1393**	**1313**	**1235**	**1150**	**1070**	**980**	**900**	**820**
Th. specific torque	[Nm/bar]	24,5	23,9	22,2	20,9	19,7	18,3	17	15,6	14,3	13
Continuous speed	[rpm]	370	400	410	435	440	460	480	490	495	520
Peak speed	[rpm]	450	500	500	500	550	550	575	600	600	600
Minimum speed	[rpm]	1	1	1	1	1	1	1	1	1	2
Mechanical efficiency	[%]	94,2	94	93,9	93,7	93,5	93,4	93,2	93	92,6	92,3
Starting efficiency	[%]	88,2	88	86,5	85,3	85,1	82,6	81,3	79,8	77,9	76
Continuous power (***)	[kW]	145	142	137	132	132	127	122	116	111	106
Cont. power with flushing	[kW]	174	172	167	157	157	152	147	139	133	127
Continuous pressure	[bar]	270	270	270	270	270	270	270	270	270	270
Intermittent pressure	[bar]	310	310	310	310	310	310	310	310	310	310
Peak pressure	[bar]	350	350	350	350	350	350	350	350	350	350
Flushing flow	[l/min]	12	12	12	12	12	12	12	12	12	12
Dry weight	[kg]	173	173	173	173	173	173	173	173	173	173

Displacement (*)	**[cc]**	**737**	**655**	**574**	**492**	**410**	**328**	**246**	**164**	**82**	**0**
Th. specific torque	[Nm/bar]	11,7	10,4	9,1	7,8	6,5	5,2	3,9	2,6	1,3	0
Continuous speed	[rpm]	545	600	600	600	600	600	600	600	1000	1000
Peak speed	[rpm]	650	700	700	700	800	800	800	800	1200	1500
Minimum speed	[rpm]	2	2	2	2	2	3	3	3	-	-
Mechanical efficiency	[%]	91	89,3	87	83	81,7	75,5	65,7	60,5	0	0
Starting efficiency	[%]	72,9	83,2	65	59,2	51	39	18	0	0	0
Continuous power (***)	[kW]	106	106	96	71	56	41	26	19	0	0
Cont. power with flushing	[kW]	127	127	111	91	76	56	36	23	0	0
Continuous pressure	[bar]	250	250	250	250	250	250	250	250	17(**)	17(**)
Intermittent pressure	[bar]	310	310	310	310	310	310	310	310	17(**)	17(**)
Peak pressure	[bar]	350	350	350	350	350	350	350	350	17(**)	17(**)
Flushing flow	[l/min]	12	12	12	12	12	12	12	12	15	15
Dry weight	[kg]	173	173	173	173	173	173	173	173	173	173

(*) 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 120 kW and starting efficiency is 88,2%, estimated required power is 120/0.882 = 136 kW.
Hydrostatic pressure test: 420 bar.
Temperature range: -30 / 70 °C.

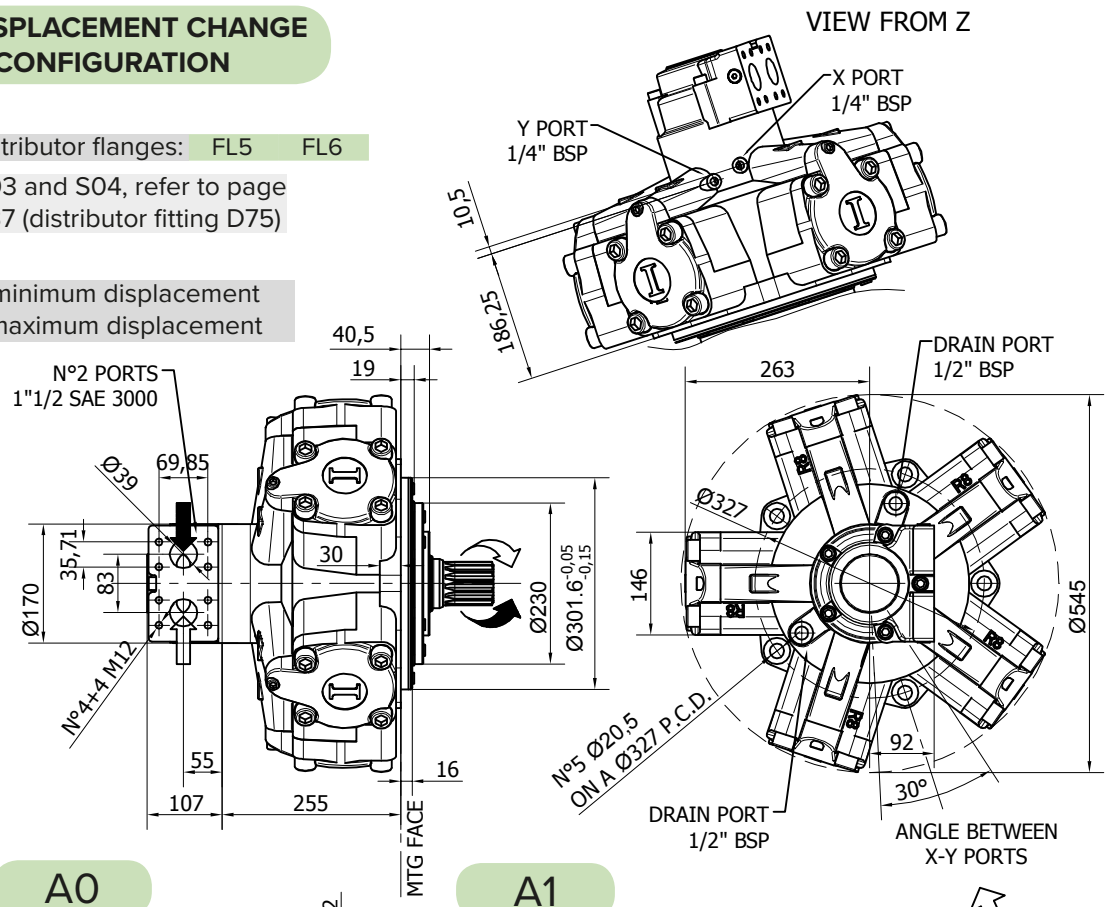
R8C 1400 H5

XY DISPLACEMENT CHANGE CONFIGURATION

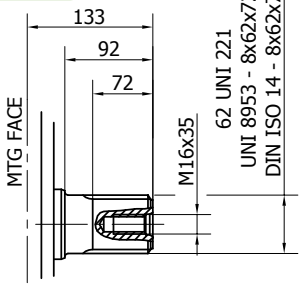
Available distributor flanges: FL5 FL6

For S03 and S04, refer to page 136-137 (distributor fitting D75)

X - minimum displacement
Y - maximum displacement

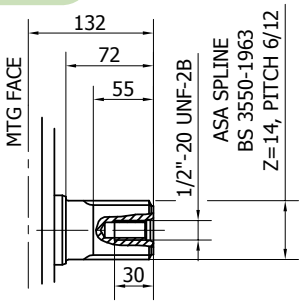


A0



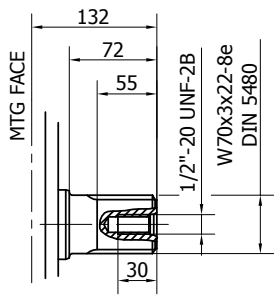
Available spline billet: SB6

A1

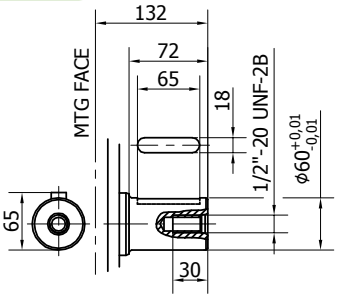


Available spline billet: SB7

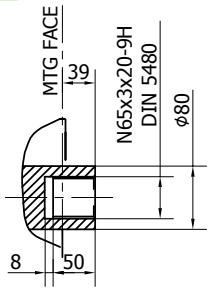
A11



A2



A3



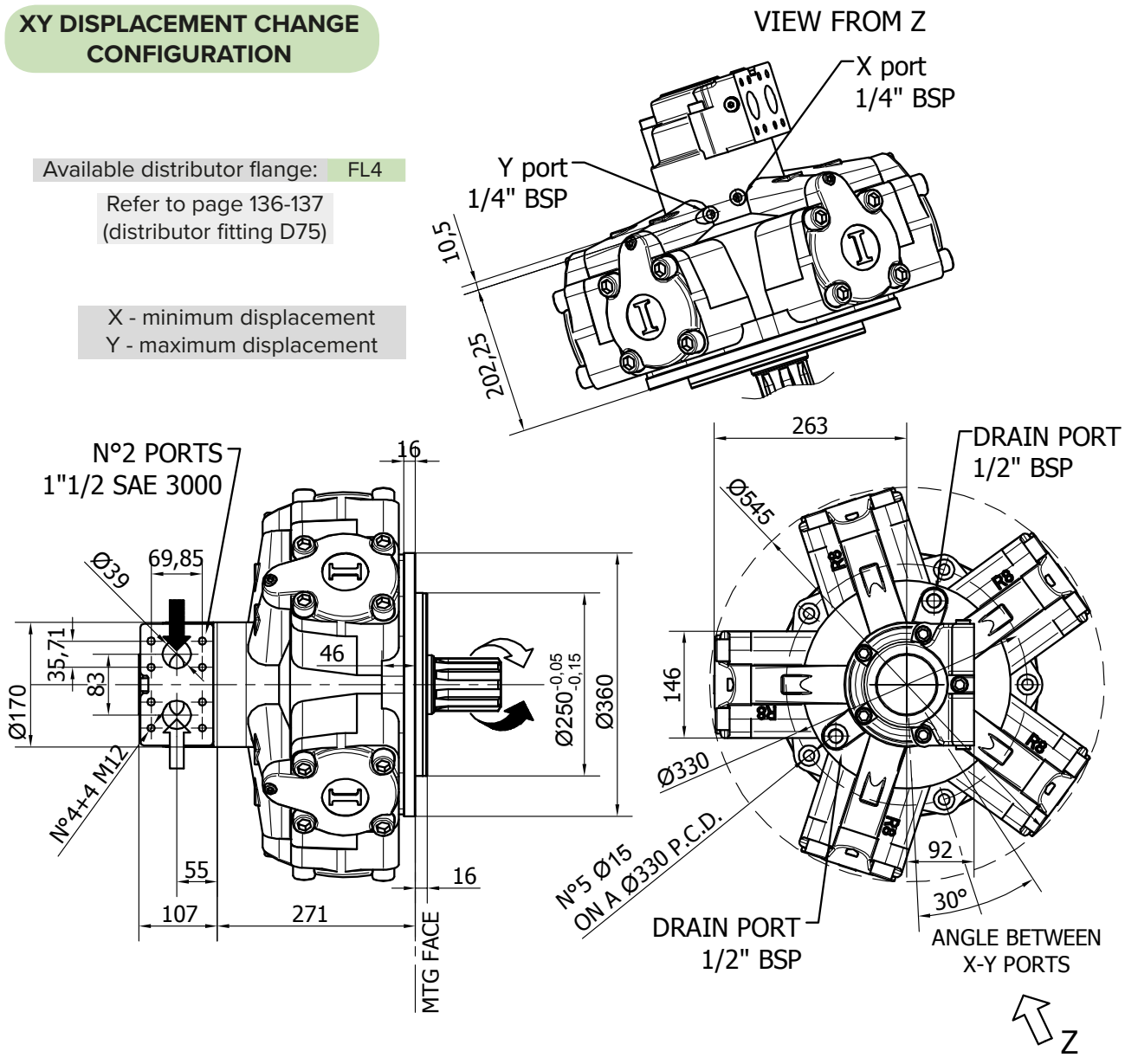
R8C 1400/C H5

XY DISPLACEMENT CHANGE CONFIGURATION

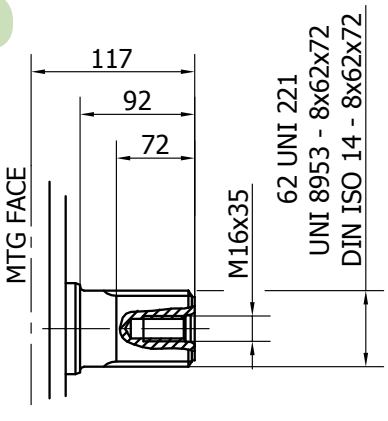
Available distributor flange: FL4

Refer to page 136-137 (distributor fitting D75)

X - minimum displacement
Y - maximum displacement

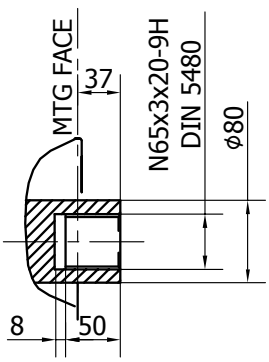


A0



Available spline billet: SB6

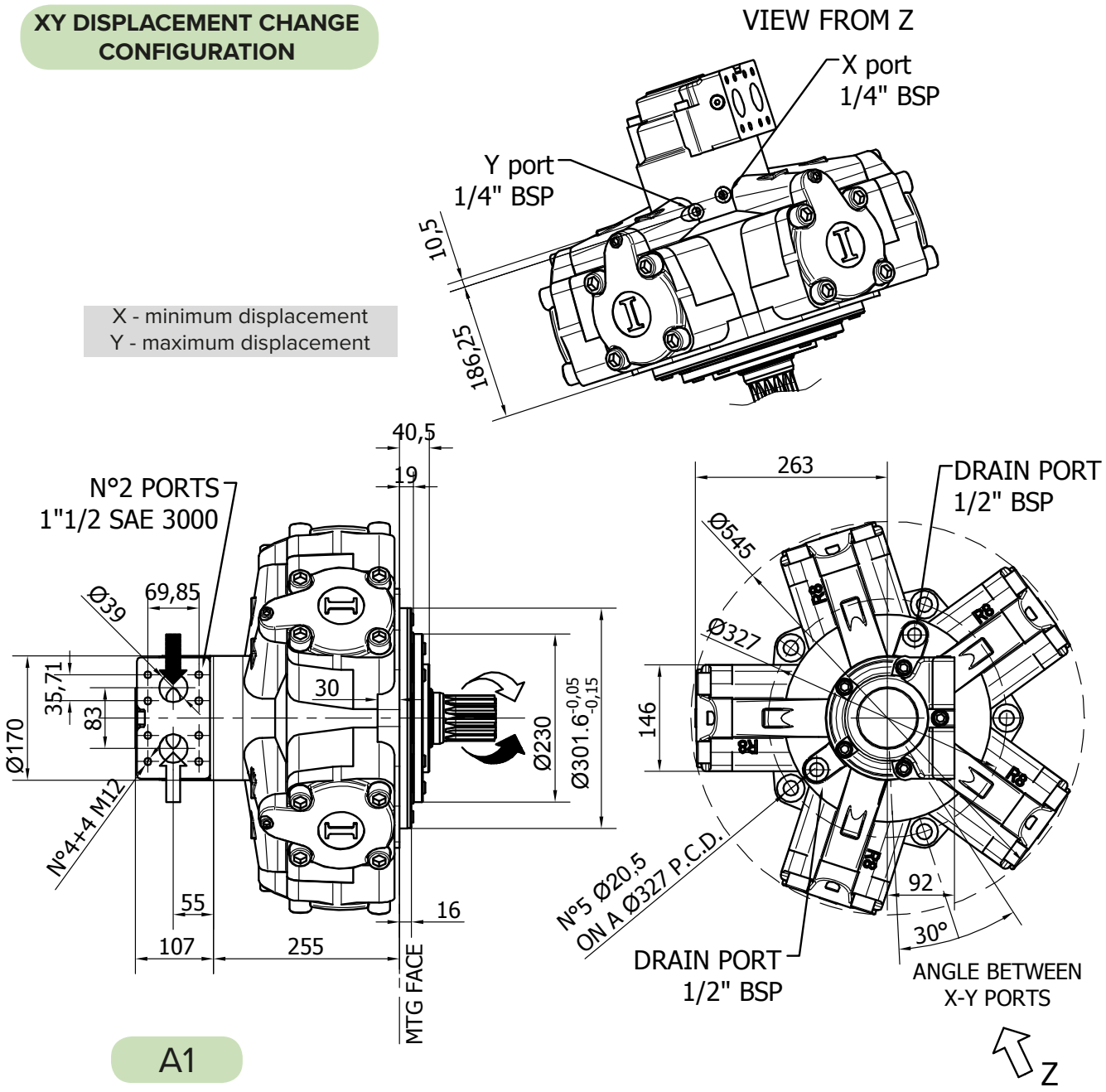
A3



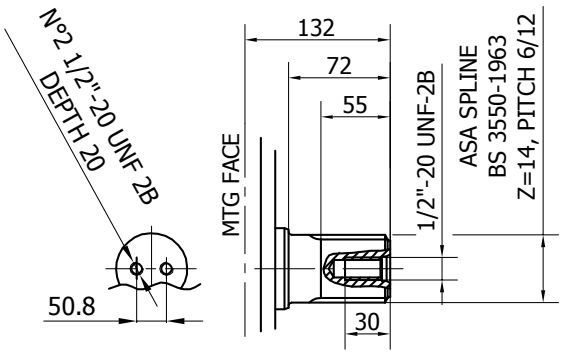
R8C 1400/MRH H5

XY DISPLACEMENT CHANGE CONFIGURATION

X - minimum displacement
Y - maximum displacement



A1

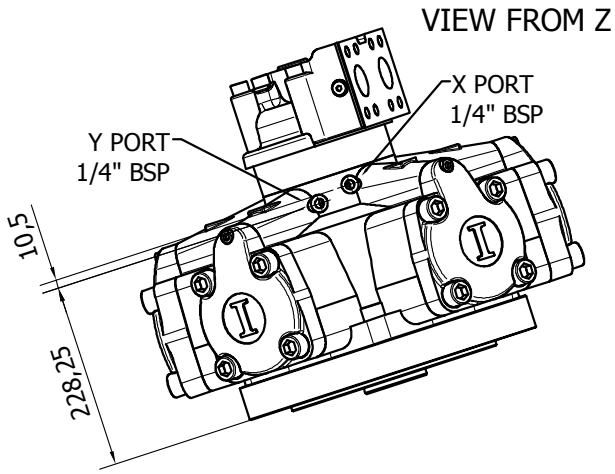


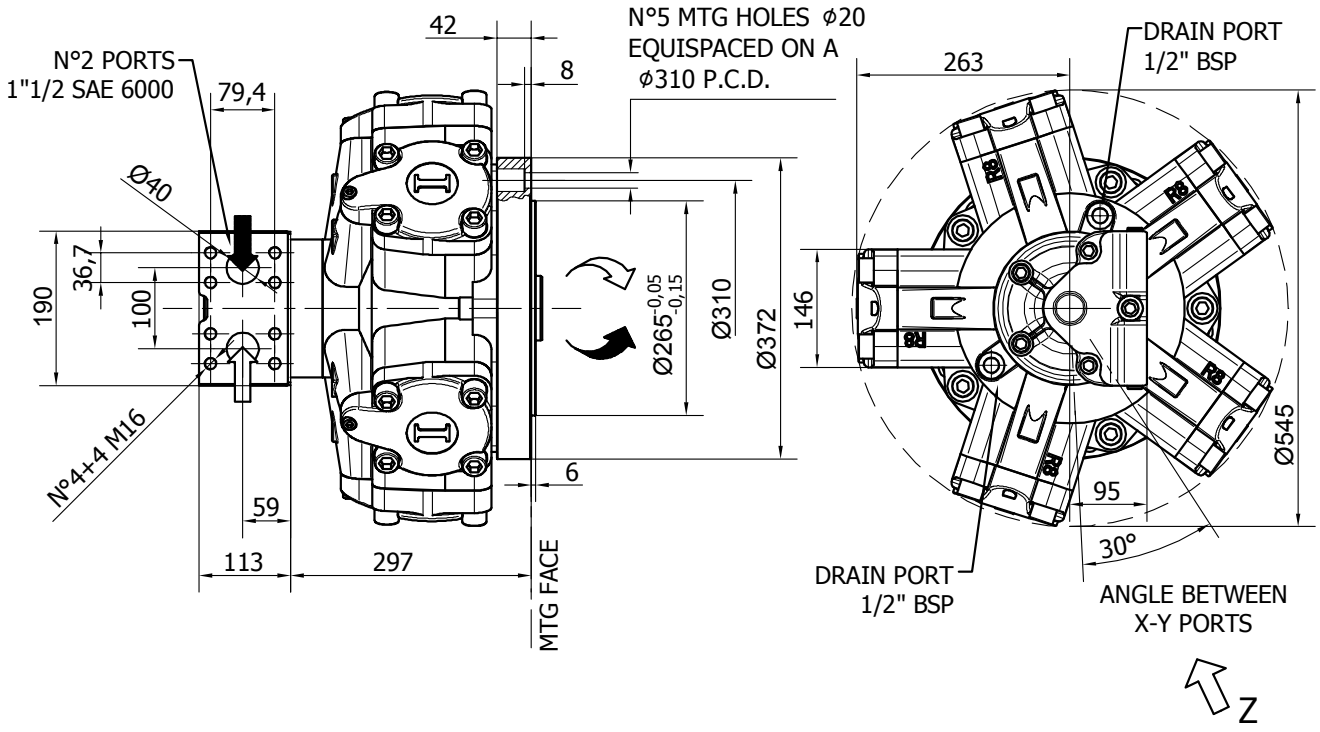
Available spline billet: SB7

R8C 1400/BD5 H5

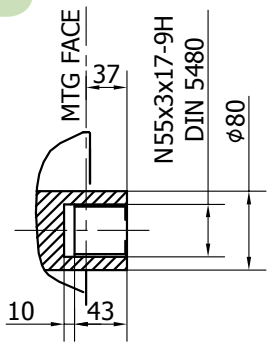
XY DISPLACEMENT CHANGE CONFIGURATION

X - minimum displacement
Y - maximum displacement





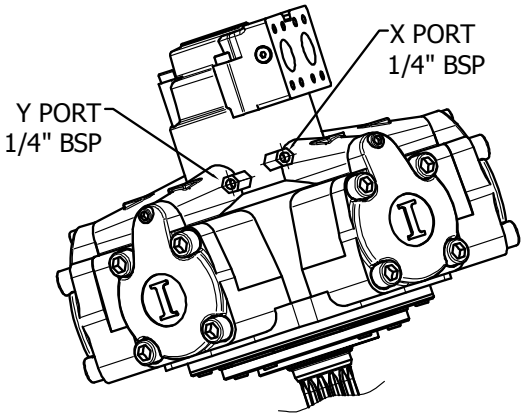
A3



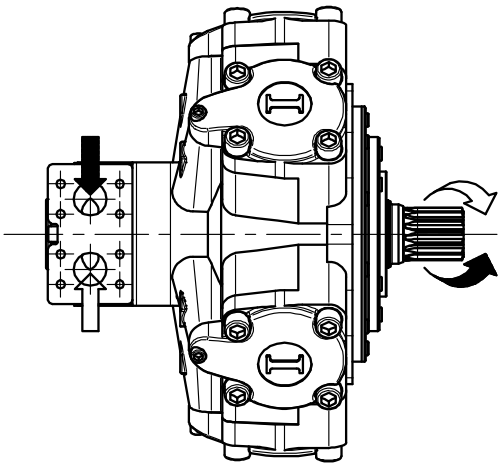
R8C H5 - NIP OPTION

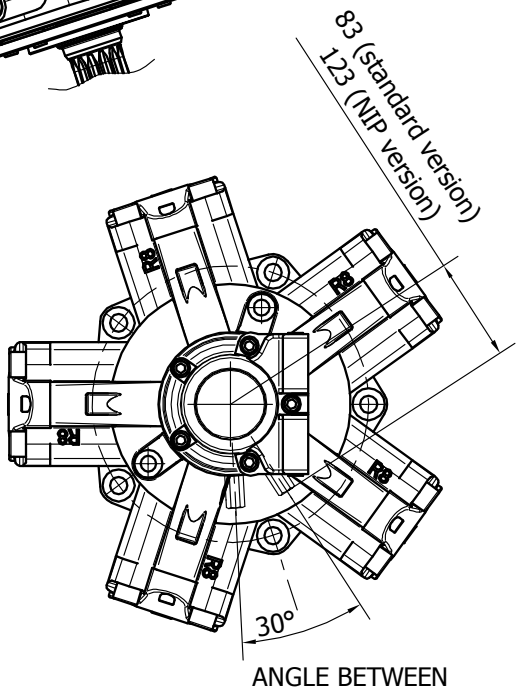
XY DISPLACEMENT CHANGE CONFIGURATION

VIEW FROM Z



X - minimum displacement
Y - maximum displacement



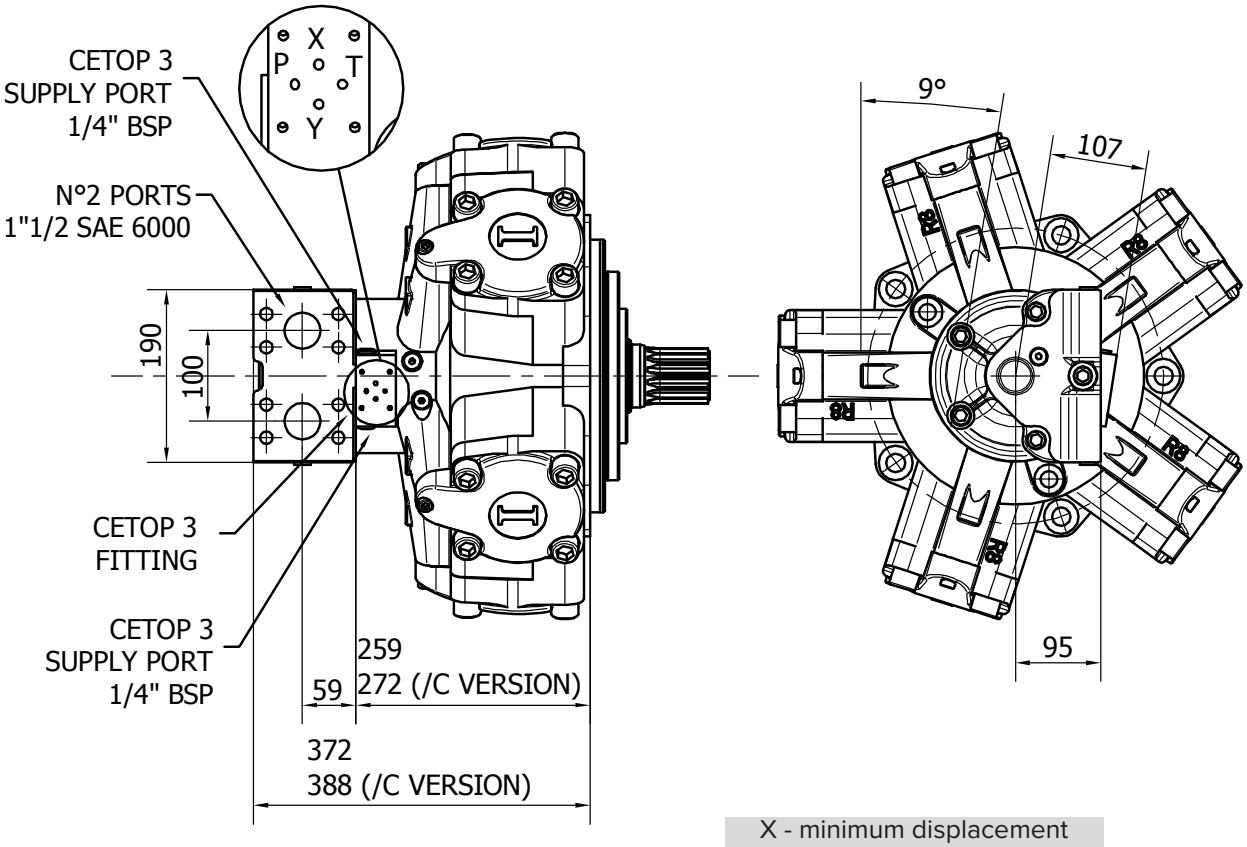


ANGLE BETWEEN
X-Y PORTS

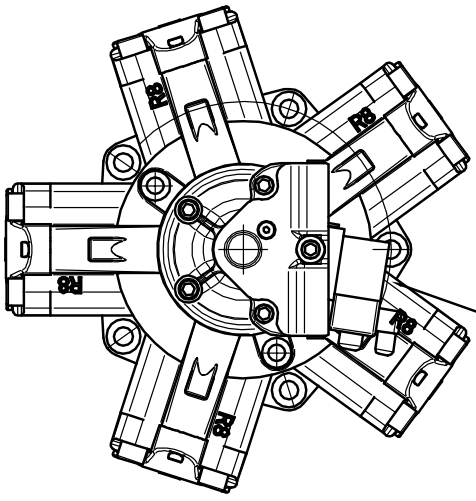
Z

R8C H5 - CETOP 3 FITTING

CETOP 3 DISPLACEMENT CHANGE CONFIGURATION



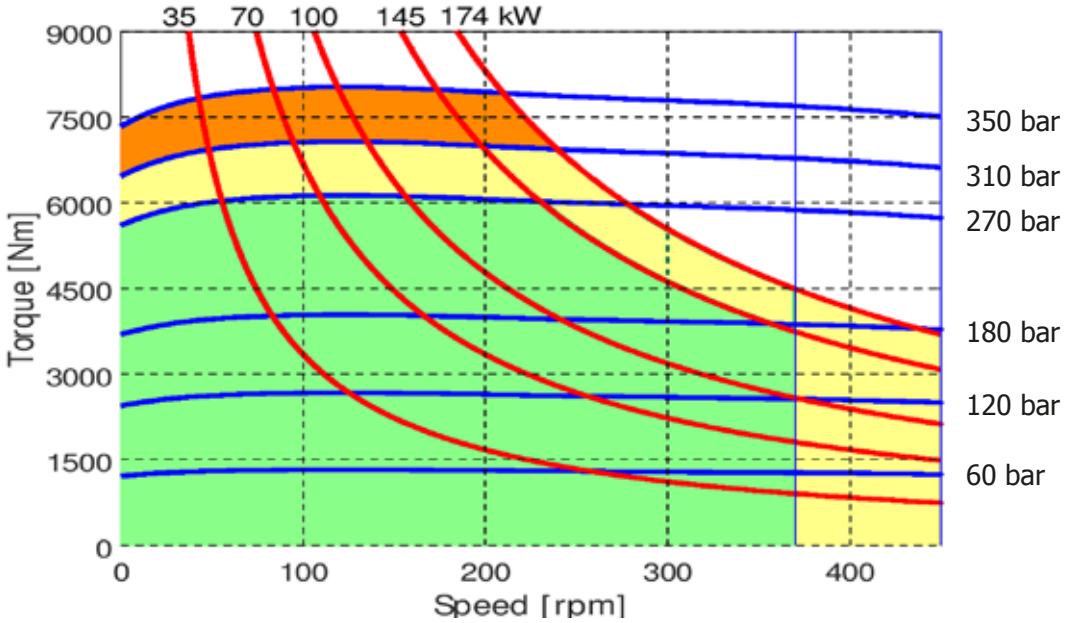
X - minimum displacement
Y - maximum displacement



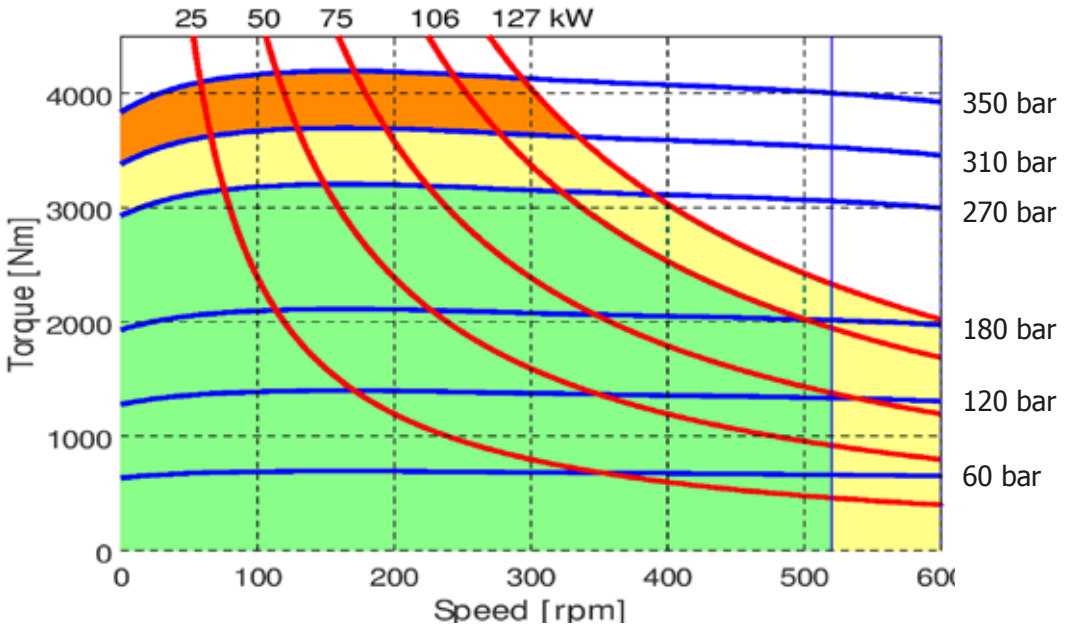
CETOP 3 DISPLACEMENT CHANGE VALVE
C3 - 12 SV (12V DC)
C3 - 24 SV (24V DC)
C3 - HY SV (HYDRAULIC OPERATED)

R8C H5 - PERFORMANCE CURVES

1600 cc - WITHOUT FLUSHING



820 cc - WITHOUT FLUSHING



Continuous operation

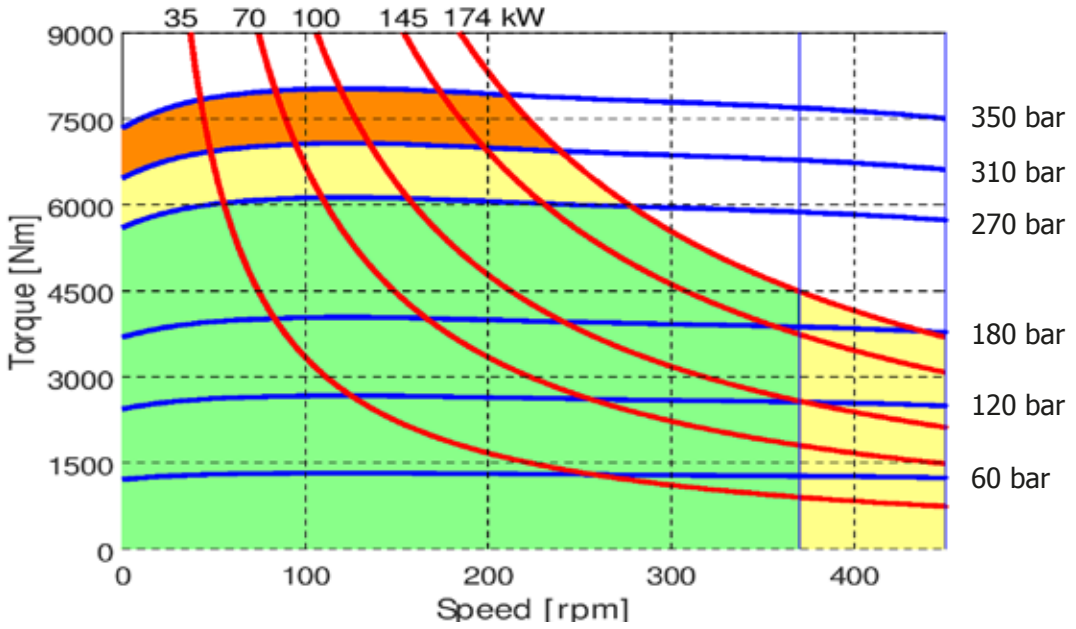
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

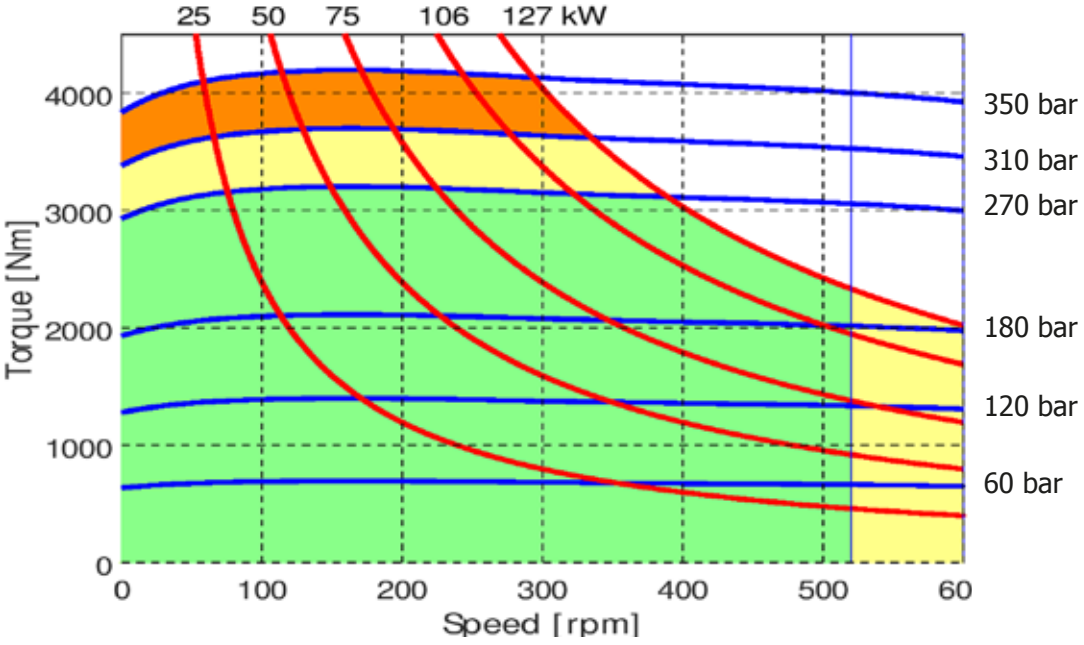
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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

R8C H5 - PERFORMANCE CURVES

1600 cc - WITH FLUSHING



820 cc - WITH FLUSHING



Continuous operation

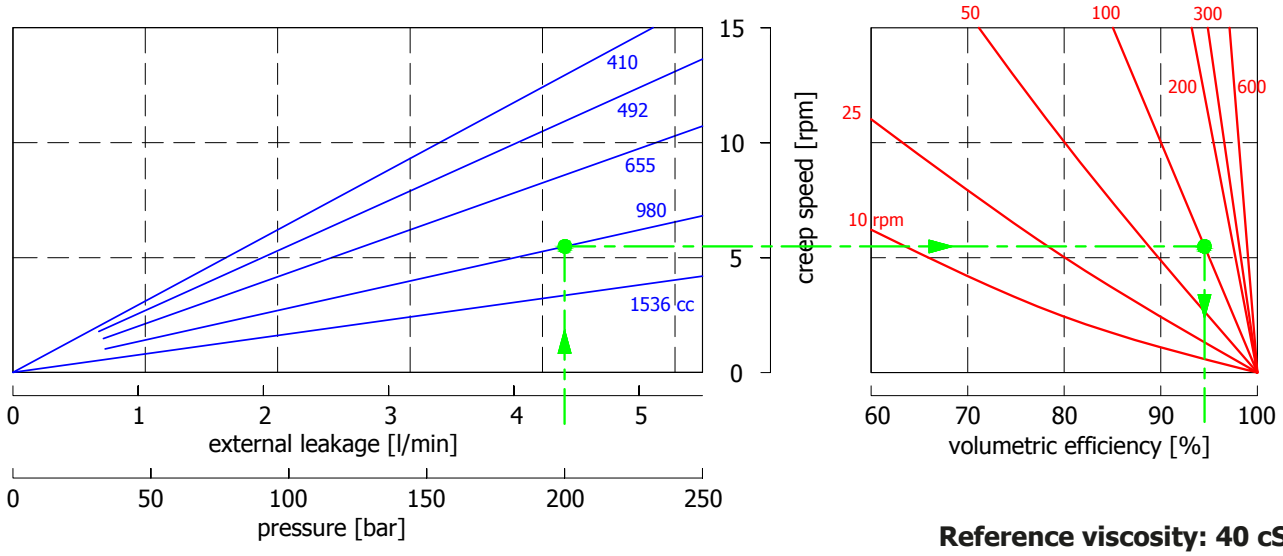
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

R8C H5 - PERFORMANCE CURVES

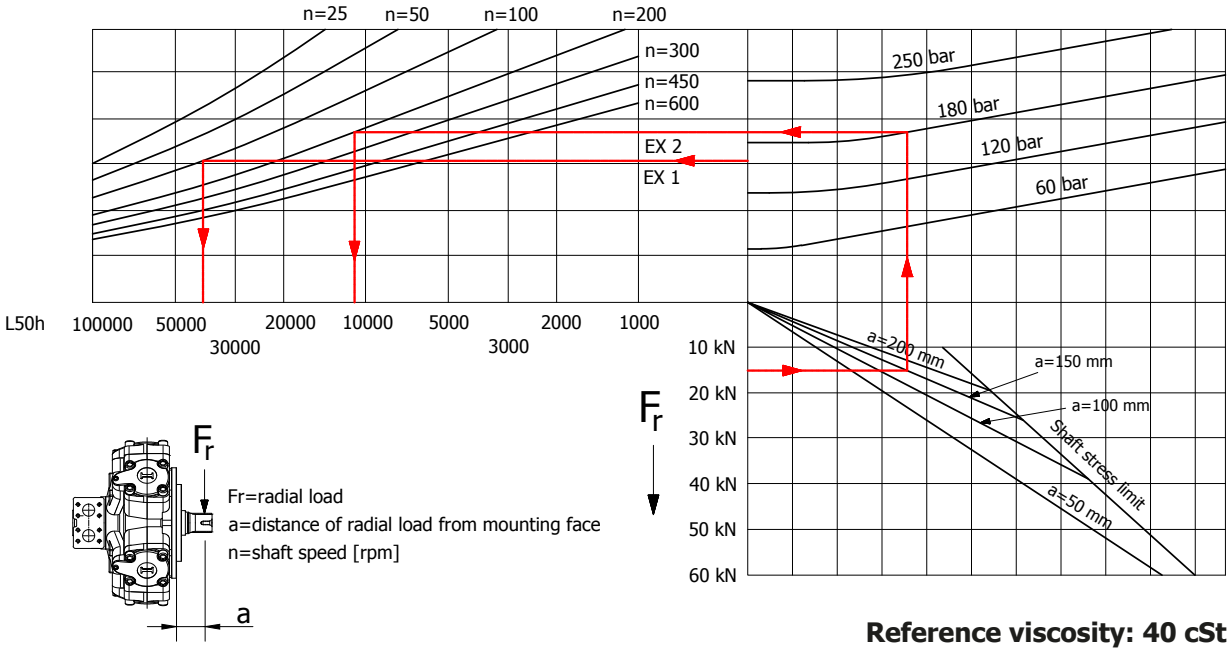
CREEP SPEED - VOLUMETRIC EFFICIENCY



Reference viscosity: 40 cSt

Example:
We suppose (980 cc): p=200 [bar], we obtain: external leakage 4,3 [l/min], shaft creep speed 5,5 [rpm].
If we suppose (980 cc): p=200 [bar] and n=100 [rpm] we obtain a volumetric efficiency of 94,5%;

BEARING LIFE



Reference viscosity: 40 cSt

Example:
We suppose (EX1): p=180 [bar], n=100 [rpm]; we obtain an average lifetime of 40000 [h].
If we suppose (EX2): F_r=15 [kN], a=150 [mm], n=200 [rpm] and p=180 [bar] we obtain an average lifetime of 11000 [h].

R8C H5 - ORDERING CODE

R8C | - - | - - | H5 | - - | - - | - - | - - | - - | - - | - -

DISPLACEMENT
- 1400

INTERCHANGEABILITY
- /C
- /MRH
- /BD5

SERIE
- H5

SHAFT
- A0
- A1
- A11
- A12
- A2
- A31

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

See pag. 128-132

SPECIAL FEATURES
- MP
- SPSL
- HPS
- CCW

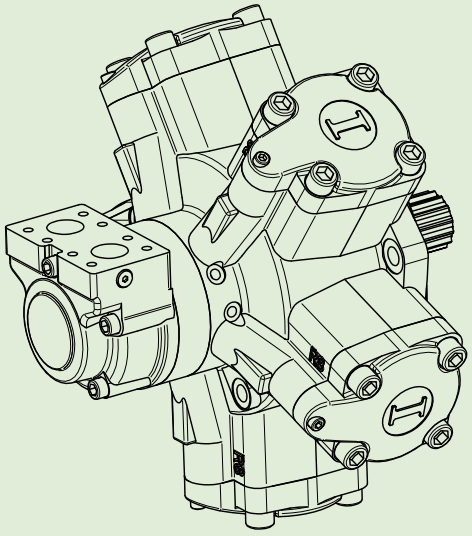
See pag. 33

- NIP

See pag. 33

- Z - -

Italgroup internal code



DISTRIBUTOR
- D31B / D31BJ
- D36B / D36BJ
- D310B / D310BJ
- D40 / D40J
- D47 / D47J
- D416 / D416J
- D75 / D75J
- D90 / D90J

See pag. 126-127

DISPLACEMENT CHANGE FITTING AND ACCESSORIES
- XY
- XY-SV
- C3-SV
- C3-12 SV
- C3-24 SV
- C3-HY SV
- C3-12 CSV
- C3-24 CSV
- C3-HY CSV

See pag. 24-32

SPLINED BILLET SPLINED BAR
- SB6
- SB7

See pag. 133-135

MAXIMUM AND MINIMUM DISPLACEMENTS

EXAMPLES:

R8C 1400 H5 A1 D75 SB7 (1499-737)
R8C 1400/C H5 A0 D75 FL4 (1600-820)
R8C 1400/BD5 H5 A3 D90 CCW C3-SV (1070-492)

R8C H55

TECHNICAL DATA	Pag. 88
R8C 2200 H55 - INSTALLATION DRAWING	Pag. 89
R8C 2200/MRH H55 - INSTALLATION DRAWING	Pag. 90
R8C H55 - NIP OPTION	Pag. 91
R8C H55 - CETOP 3 FITTING	Pag. 92
R8C 2200 H55 - PERFORMANCE CURVES	Pag. 93 - 95
R8C H55 - ORDERING CODE	Pag. 96

R8C H55 TECHNICAL DATA

R8C 2200 H55

Displacement (*)	[cc]	2200	2049	1970	1800	1640	1470	1310	1150
Th. specific torque	[Nm/bar]	35	32,6	31,3	28,6	26,1	23,4	20,9	18,3
Continuous speed	[rpm]	280	305	320	350	380	410	440	470
Peak speed	[rpm]	320	340	360	400	430	470	500	540
Minimum speed	[rpm]	1	1	1	1	1	1	1	1
Mechanical efficiency	[%]	92,2	92,2	92,2	92,2	91	90	88	86,5
Starting efficiency	[%]	81	80,6	79,6	77,5	74,6	71,5	67,5	62,2
Continuous power (***)	[kW]	140	140	135	125	116	108	100	90
Cont. power with flushing	[kW]	170	170	165	155	145	135	127	110
Continuous pressure	[bar]	270	270	270	270	270	270	270	270
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]	10	10	10	10	10	10	10	10
Dry weight	[kg]	210	210	210	210	210	210	210	210

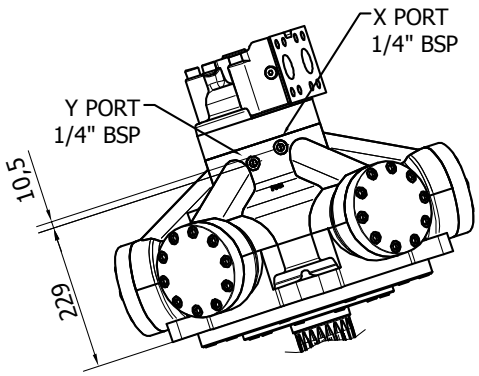
Displacement (*)	[cc]	980	820	655	490	330	160	82	0
Th. specific torque	[Nm/bar]	15,6	13,1	10,4	7,8	5,3	2,5	1,3	0
Continuous speed	[rpm]	610	620	620	640	640	640	1000	1000
Peak speed	[rpm]	700	700	720	720	800	800	1200	1500
Minimum speed	[rpm]	1	2	2	2	3	5	-	-
Mechanical efficiency	[%]	82,2	81,8	78,2	76	73	26	0	0
Starting efficiency	[%]	55,3	45,8	31,5	0	0	0	0	0
Continuous power (***)	[kW]	83	75	65	50	25	5	0	0
Cont. power with flushing	[kW]	105	90	80	65	40	10	0	0
Continuous pressure	[bar]	270	250	250	250	250	250	17(**)	17(**)
Intermittent pressure	[bar]	310	310	310	310	310	310	17(**)	17(**)
Peak pressure	[bar]	350	350	350	350	350	350	17(**)	17(**)
Flushing flow	[l/min]	10	10	10	10	10	12	15	15
Dry weight	[kg]	210	210	210	210	210	210	210	210

(*) 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 150 kW and starting efficiency is 86%, estimated required power is 150/0.86 = 174,4 kW.
Hydrostatic pressure test: 420 bar.
Temperature range: -30 / 70 °C.

R8C 2200 H55

XY DISPLACEMENT CHANGE CONFIGURATION

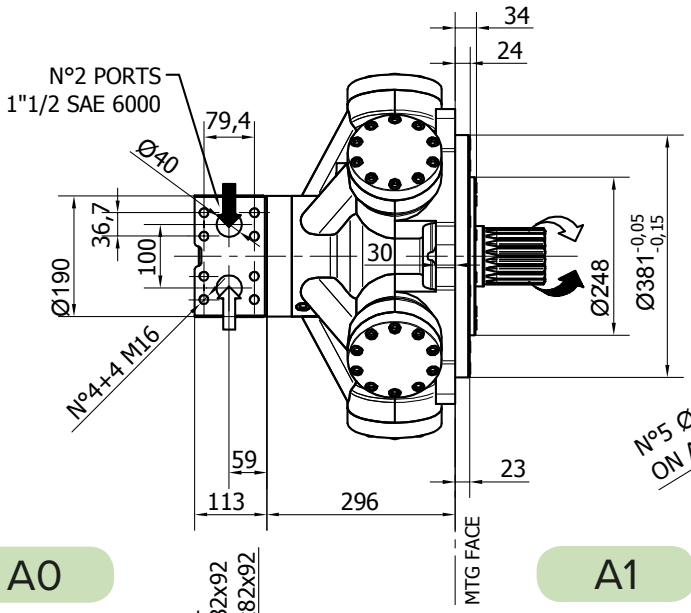
VIEW FROM Z

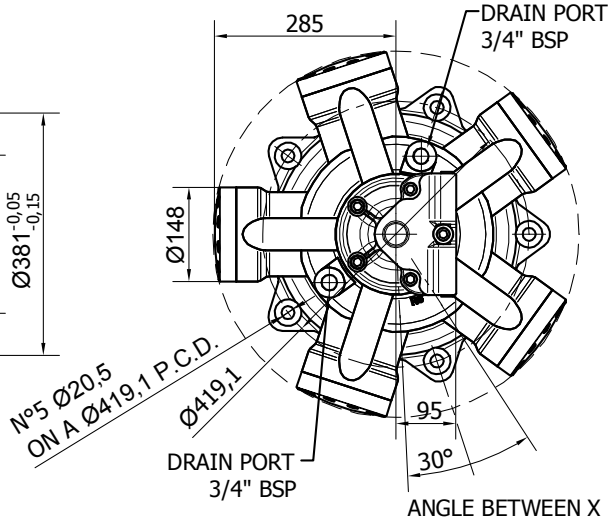


Available distributor flange: FL7

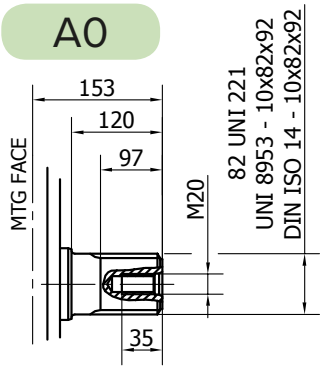
For S04, refer to page 136-137 (distributor fitting D90)

X - minimum displacement
Y - maximum displacement



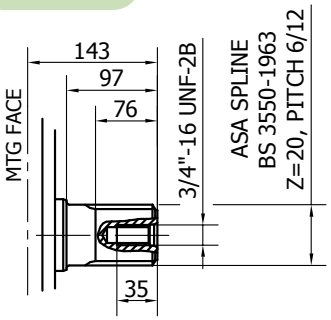


A0



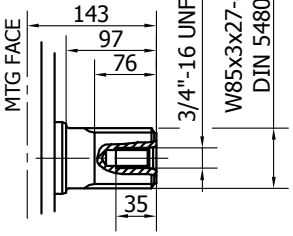
Available spline billet: SB9

A1

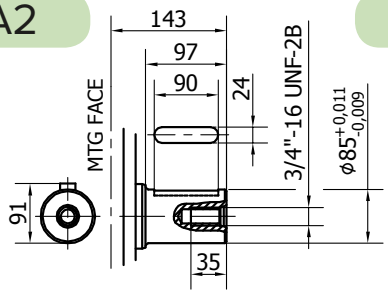


Available spline billet: SB10

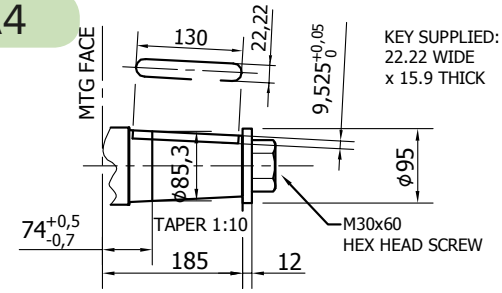
A11



A2



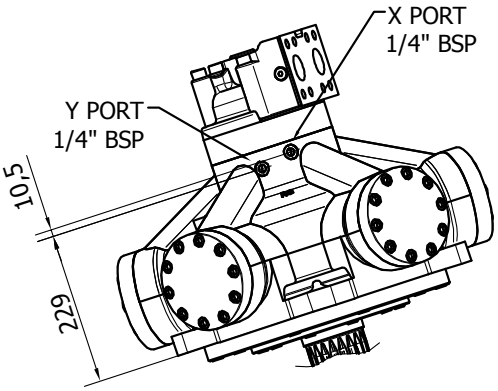
A4



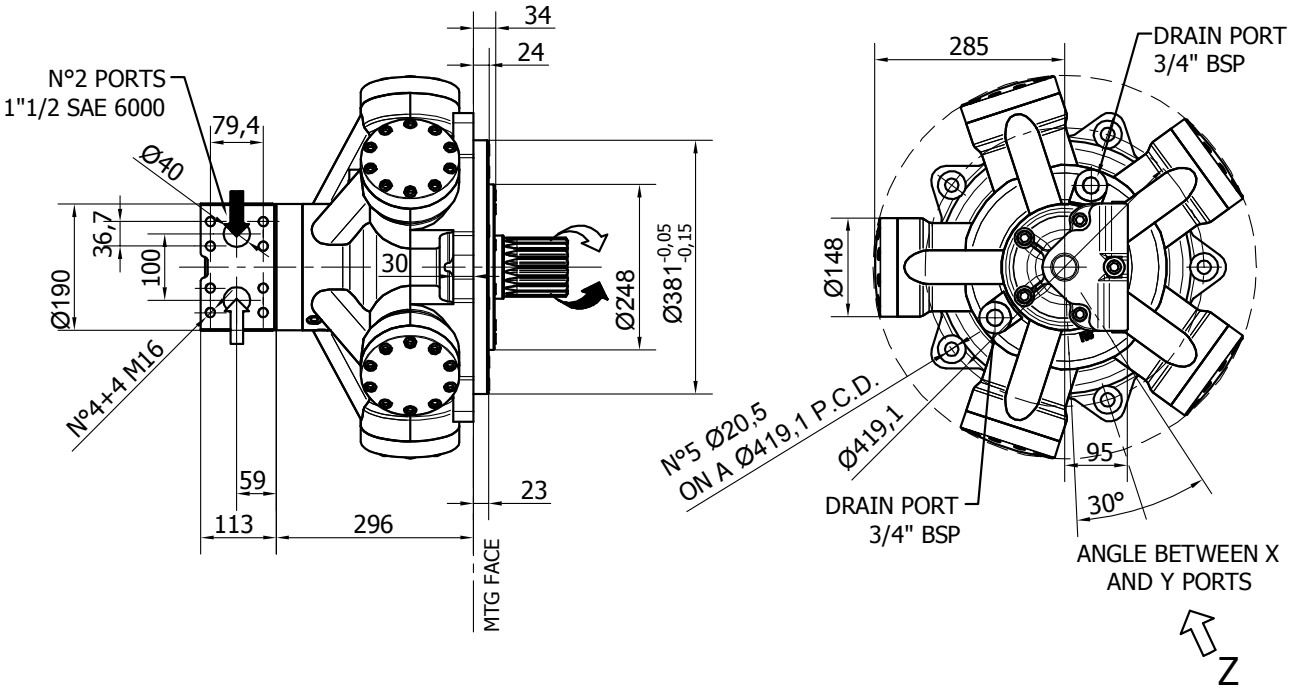
R8C 2200/MRH H55

XY DISPLACEMENT CHANGE CONFIGURATION

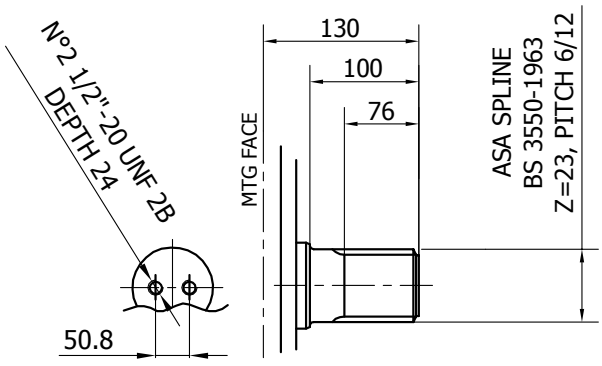
VIEW FROM Z



X - minimum displacement
Y - maximum displacement

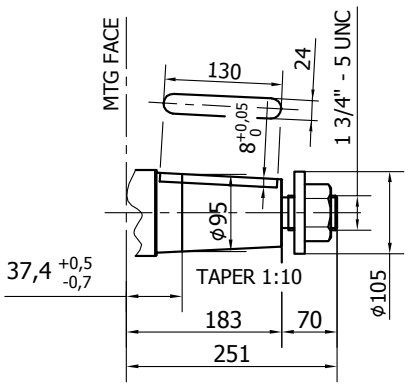


A1



Available spline billet: SB10

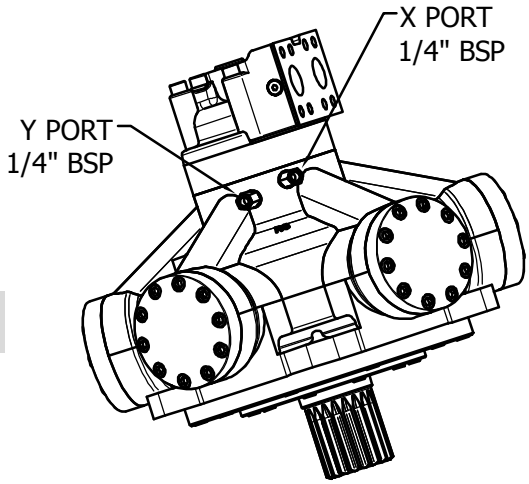
A4



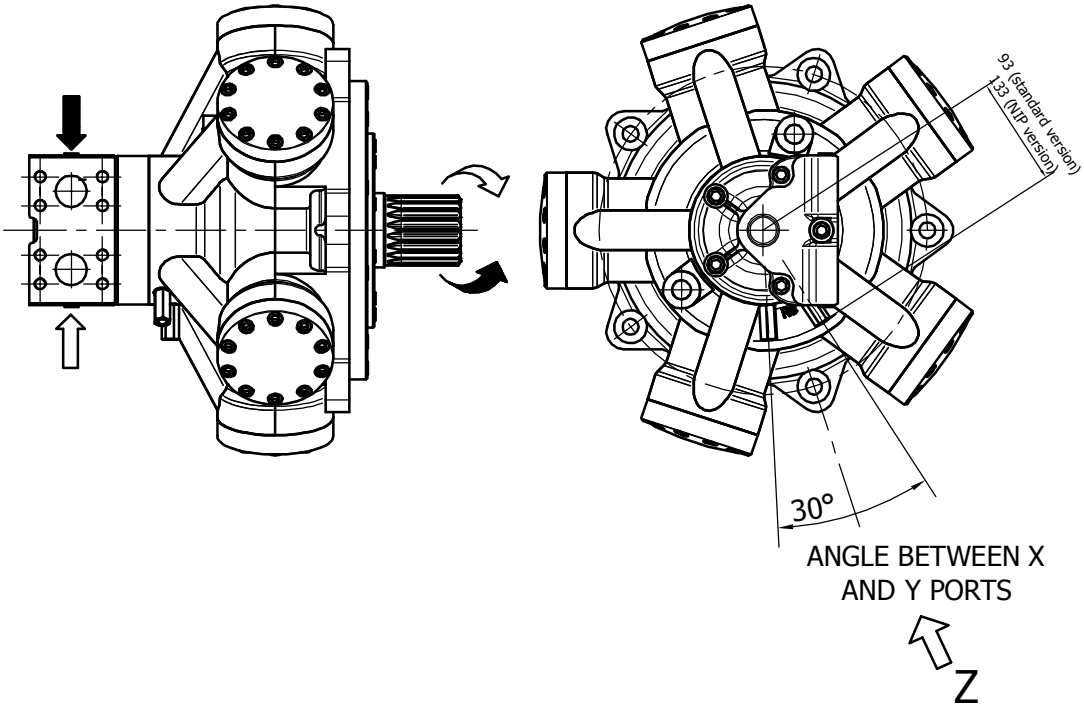
R8C H55 - NIP OPTION

XY DISPLACEMENT CHANGE CONFIGURATION

VIEW FROM Z

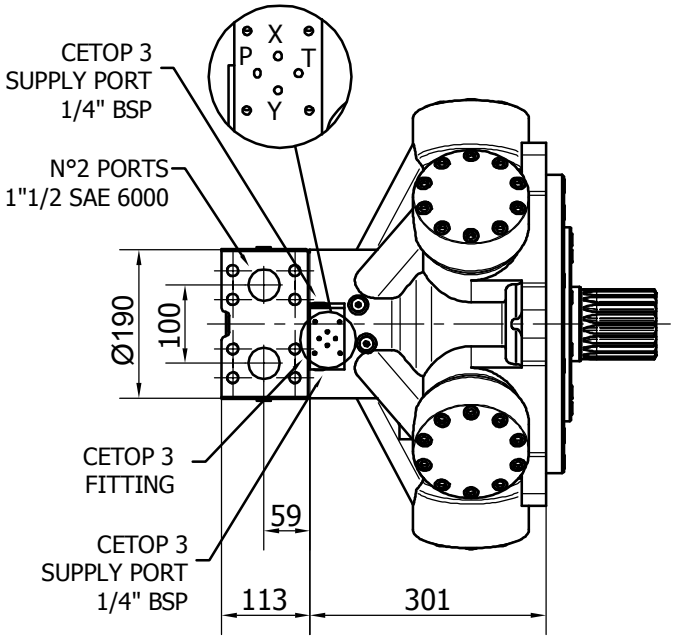


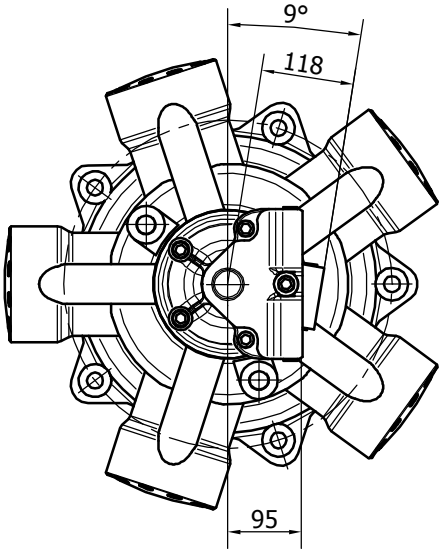
X - minimum displacement
Y - maximum displacement



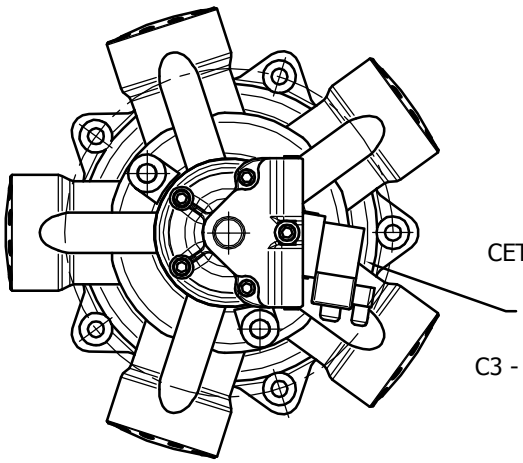
R8C H55 - CETOP 3 FITTING

CETOP 3 DISPLACEMENT CHANGE CONFIGURATION





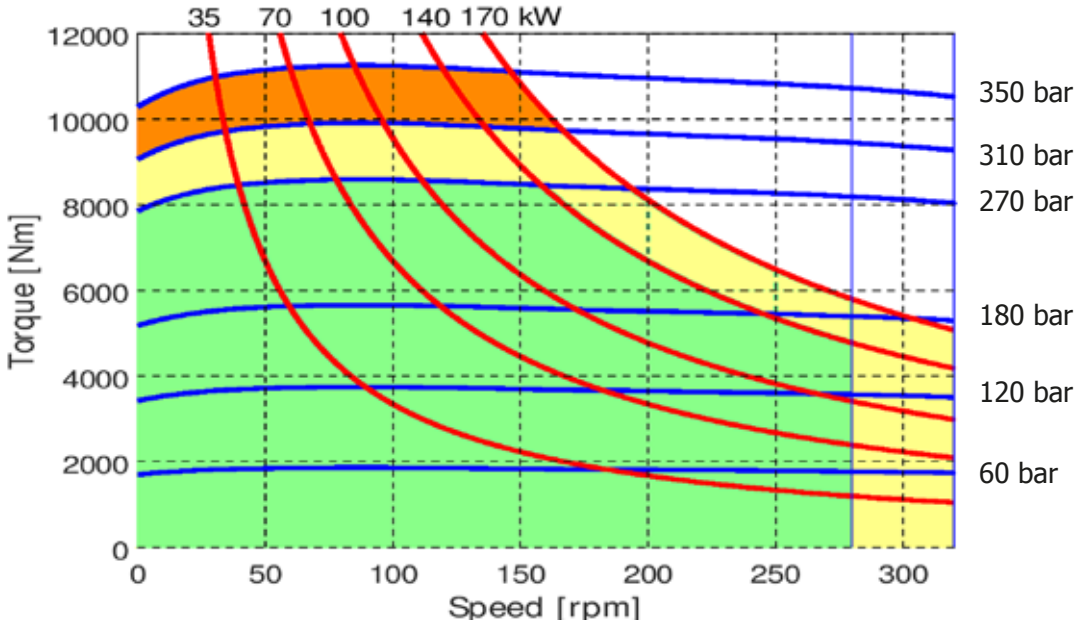
X - minimum displacement
Y - maximum displacement



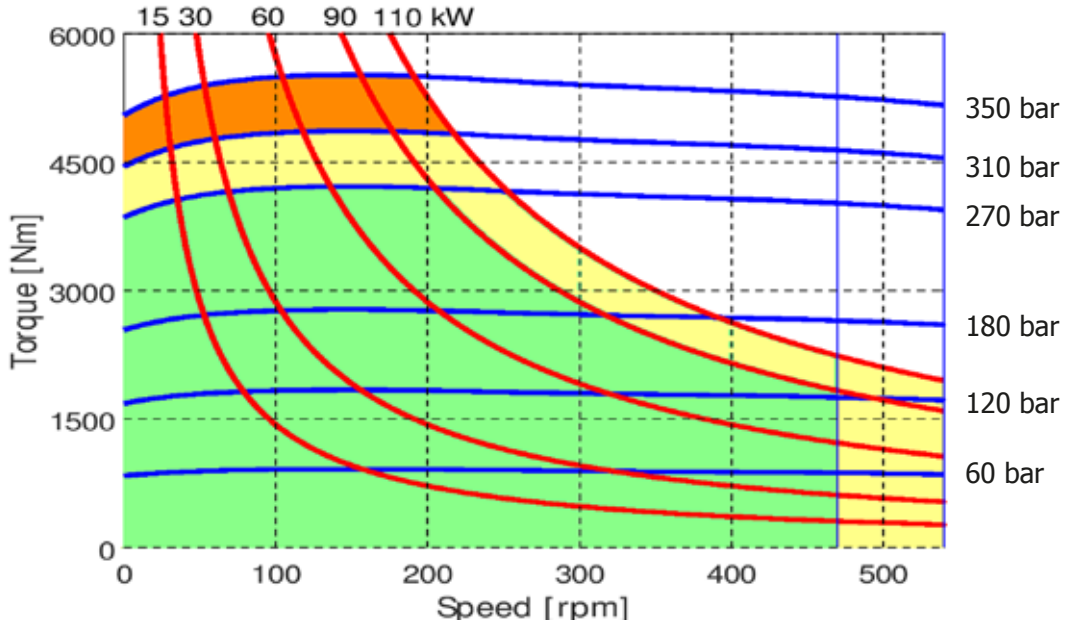
CETOP 3 DISPLACEMENT CHANGE VALVE
C3 - 12 SV (12V DC)
C3 - 24 SV (24V DC)
C3 - HY SV (HYDRAULIC OPERATED)

R8C H55 - PERFORMANCE CURVES

2200 cc - WITHOUT FLUSHING



1150 cc - WITHOUT FLUSHING



Continuous operation

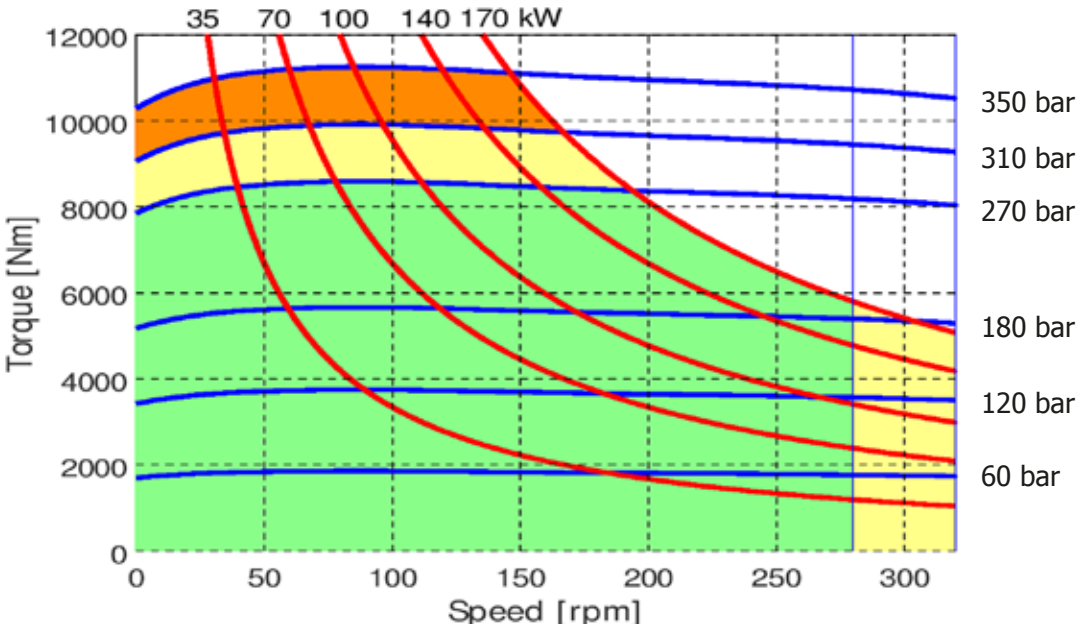
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

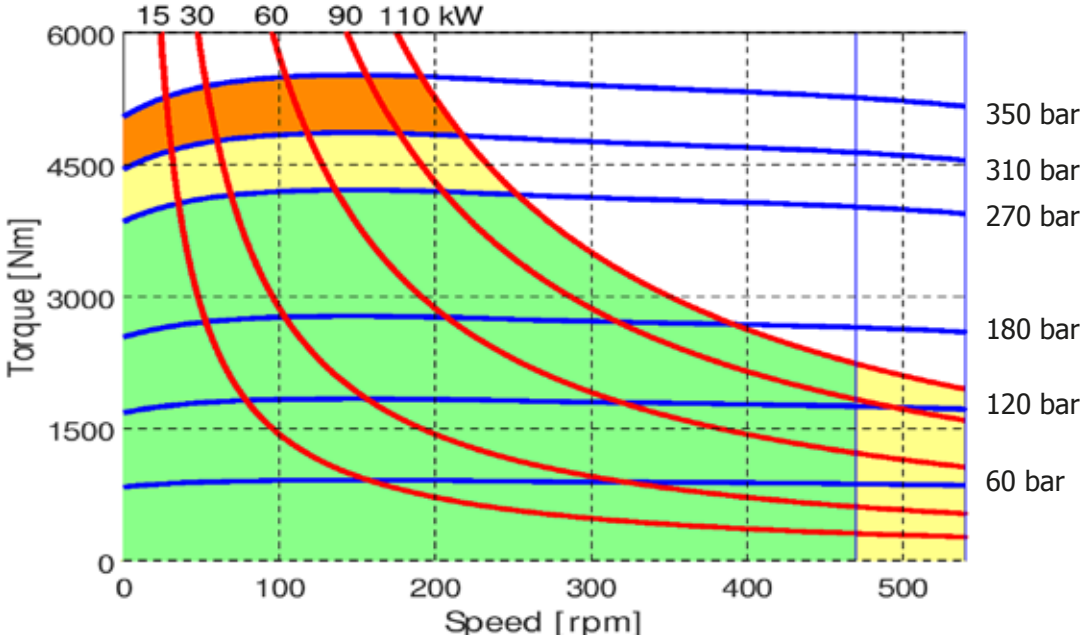
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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

R8C H55 - PERFORMANCE CURVES

2200 cc - WITH FLUSHING



1150 cc - WITH FLUSHING



Continuous operation

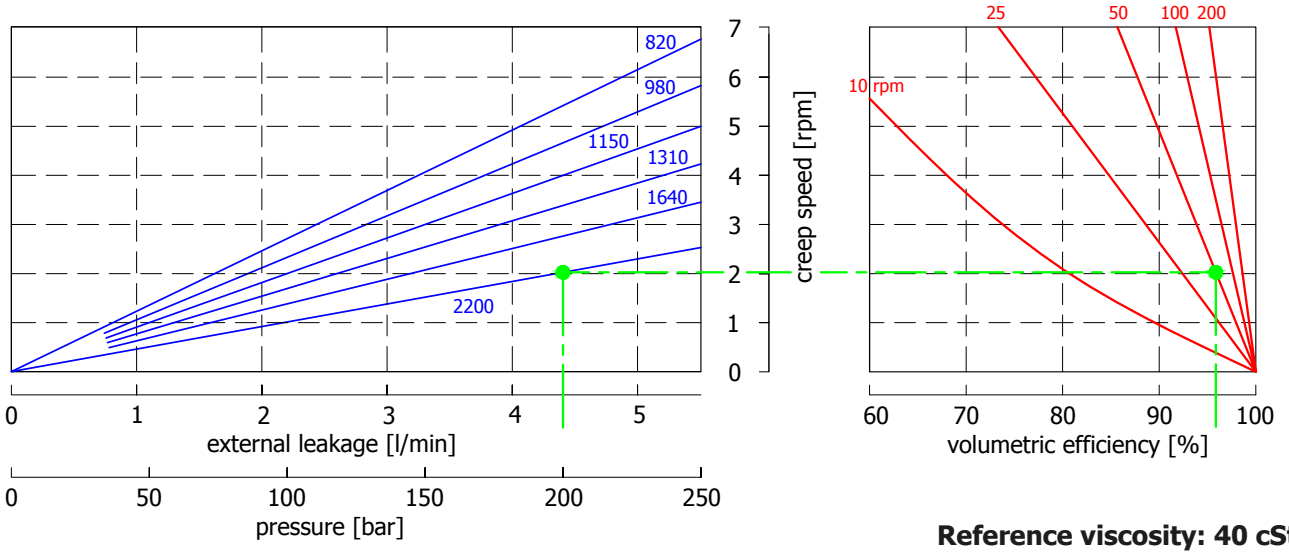
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

R8C H55 - PERFORMANCE CURVES

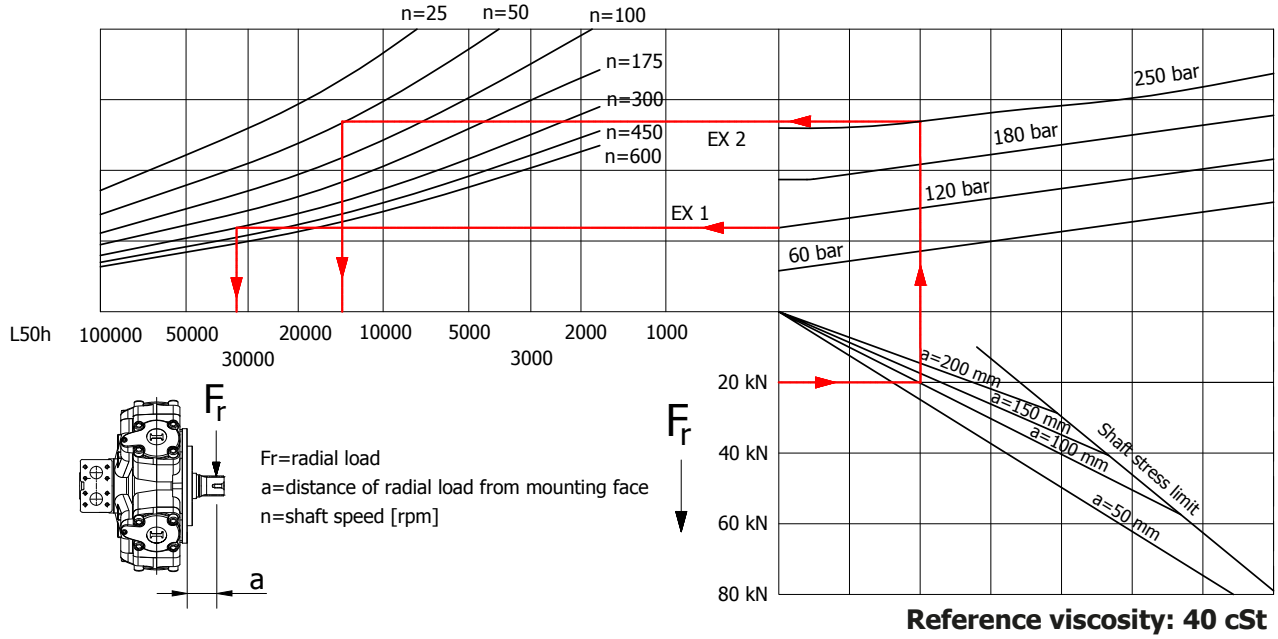
CREEP SPEED - VOLUMETRIC EFFICIENCY



Reference viscosity: 40 cSt

Example:
We suppose (2200 cc): p=200 [bar], we obtain: external leakage 4,3 [l/min], shaft creep speed 2 [rpm].
If we suppose (2200 cc): p=200 [bar] and n=50 [rpm] we obtain a volumetric efficiency of 96%;

BEARING LIFE



Reference viscosity: 40 cSt

Example:
We suppose (EX1): p=120 [bar], n=300 [rpm]; we obtain an average lifetime of 34000 [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 12000 [h].

R8C H55 - ORDERING CODE

R8C | - - | - - | H55 | - - | - - | - - | - - | - - | - - | - -

DISPLACEMENT
- 2200

INTERCHANGEABILITY
- /MRH

SERIE
- H55

SHAFT
- A0
- A1
- A11
- A2
- A4

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

See pag. 128-132

SPECIAL FEATURES
- MP
- SPSL
- HPS
- CCW

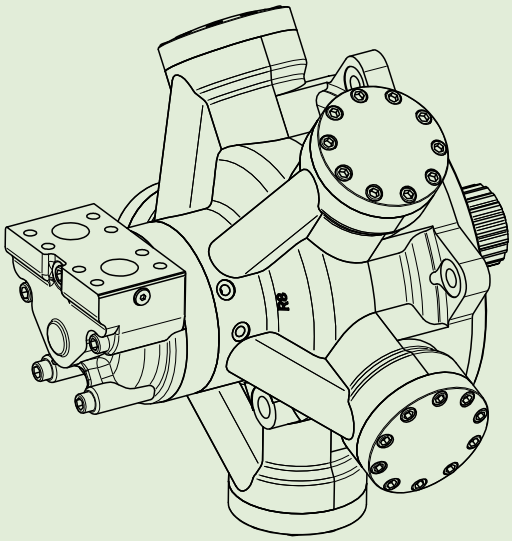
See pag. 33

- NIP

See pag. 33

- Z - -

Italgroup internal code



DISTRIBUTOR
- D31B / D31BJ
- D36B / D36BJ
- D310B / D310BJ
- D40 / D40J
- D47 / D47J
- D416 / D416J
- D75 / D75J
- D90 / D90J

See pag. 126-127

DISPLACEMENT CHANGE FITTING AND ACCESSORIES
- XY
- XY-SV
- C3-SV
- C3-12 SV
- C3-24 SV
- C3-HY SV
- C3-12 CSV
- C3-24 CSV
- C3-HY CSV

See pag. 24-32

SPLINED BILLET SPLINED BAR
- SB9
- SB10

See pag. 133-135

MAXIMUM AND MINIMUM DISPLACEMENTS

EXAMPLES:

R8C 2200 H55 A1 D90 SB10 (2200-1150)
R8C 2200 H55 A1 D90 C3-24 SV (2049-820)
R8C 2200/MRH H55 A4 D90 C3-SV (2049-0)

R8C H6

TECHNICAL DATA	Pag. 98
R8C 3000 H6 - INSTALLATION DRAWING	Pag. 99
R8C 3000/C H6 - INSTALLATION DRAWING	Pag. 100
R8C 3000/MRH H6 - INSTALLATION DRAWING	Pag. 101
R8C 3000/GM6 H6 - INSTALLATION DRAWING	Pag. 102
R8C 3000/MR1400 H6 - INSTALLATION DRAWING	Pag. 103
R8C H6 - NIP OPTION	Pag. 104
R8C H6 - CETOP 3 FITTING	Pag. 105
R8C 3000 H6 - PERFORMANCE CURVES	Pag. 106 - 108
R8C H6 - ORDERING CODE	Pag. 109

R8C H6 TECHNICAL DATA

R8C 3000 H6

Displacement (*)	[cc]	**3085**	**2950**	**2790**	**2620**	**2460**	**2290**	**2130**	**1970**	**1800**	**1640**
Th. specific torque	[Nm/bar]	49,1	47	44,4	41,7	39,2	36,5	33,9	31,4	28,7	26,1
Continuous speed	[rpm]	235	240	245	250	250	265	285	305	340	370
Peak speed	[rpm]	280	280	300	300	300	320	340	350	400	420
Minimum speed	[rpm]	1	1	1	1	1	1	1	1	1	1
Mechanical efficiency	[%]	95	94,5	94,2	94	93,7	93,5	92,8	92,3	92	91
Starting efficiency	[%]	86	85,4	84,4	83,6	82,4	82	80,2	78	76	73
Continuous power (***)	[kW]	182	182	182	170	160	155	145	133	123	116
Cont. power with flushing	[kW]	272	272	272	255	240	230	214	197	186	176
Continuous pressure	[bar]	270	270	270	270	270	270	270	270	270	270
Intermittent pressure	[bar]	310	310	310	310	310	310	310	310	310	310
Peak pressure	[bar]	350	350	350	350	350	350	350	350	350	350
Flushing flow	[l/min]	12	12	12	12	12	12	12	12	12	12
Dry weight	[kg]	308	308	308	308	308	308	308	308	308	308

Displacement (*)	[cc]	**1470**	**1310**	**1150**	**980**	**820**	**670**	**490**	**330**	**160**	**82**	**0**
Th. specific torque	[Nm/bar]	23,4	20,9	18,3	15,6	13,1	10,7	7,8	5,2	2,5	1,3	0
Continuous speed	[rpm]	400	425	455	490	520	600	600	600	600	1000	1000
Peak speed	[rpm]	450	475	500	540	580	700	700	800	800	1200	1500
Minimum speed	[rpm]	1	1	1	1	2	2	2	3	5	-	-
Mechanical efficiency	[%]	90,5	88	86,2	82,3	81,7	78	76	73,2	25	0	0
Starting efficiency	[%]	70	66,4	62	55,4	46,3	33	0	0	0	0	0
Continuous power (***)	[kW]	107	100	100	100	90	80	70	40	8	0	0
Cont. power with flushing	[kW]	161	150	150	150	135	96	90	60	11	0	0
Continuous pressure	[bar]	270	250	250	250	250	250	250	250	250	17(**)	17(**)
Intermittent pressure	[bar]	310	310	310	310	310	310	310	310	310	17(**)	17(**)
Peak pressure	[bar]	350	350	350	350	350	350	350	350	350	17(**)	17(**)
Flushing flow	[l/min]	12	12	12	12	12	12	12	12	12	15	15
Dry weight	[kg]	308	308	308	308	308	308	308	308	308	308	308

(*) 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 120 kW and starting efficiency is 88,2%, estimated required power is 120/0.882 = 136 kW.
Hydrostatic pressure test: 420 bar.
Temperature range: -30 / 70 °C.

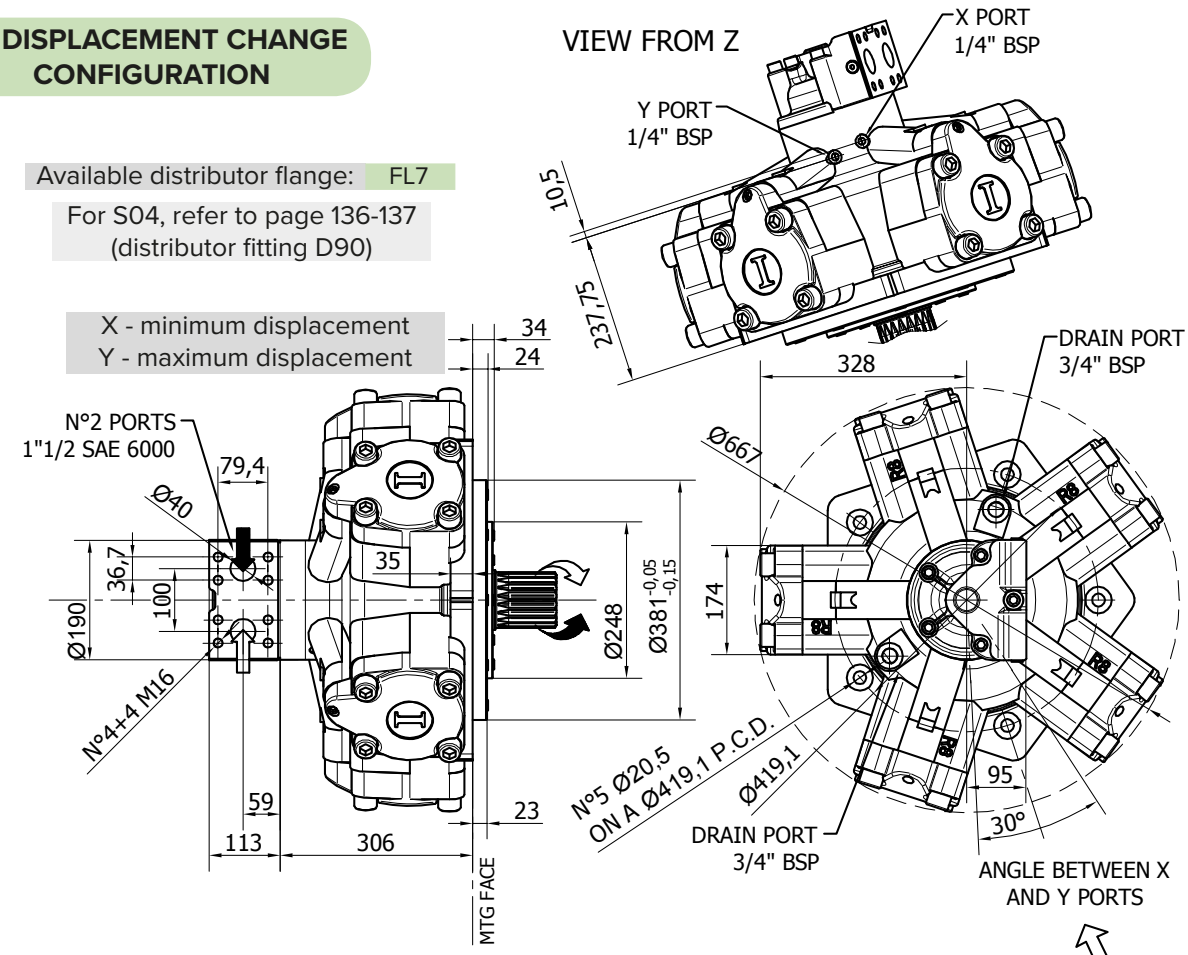
R8C 3000 H6

XY DISPLACEMENT CHANGE CONFIGURATION

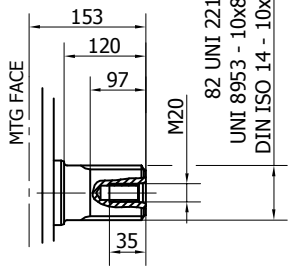
Available distributor flange: FL7

For S04, refer to page 136-137 (distributor fitting D90)

X - minimum displacement
Y - maximum displacement

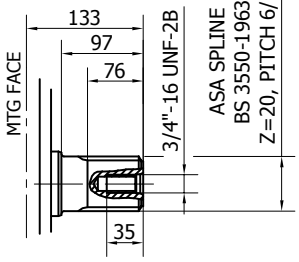


A0



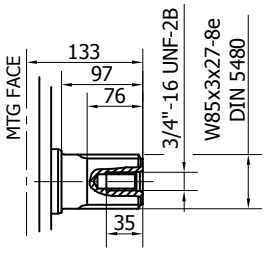
Available spline billet: SB9

A1

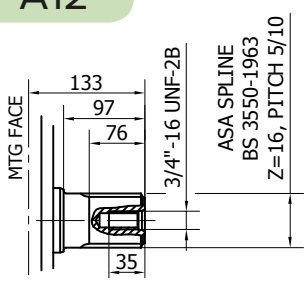


Available spline billet: SB10

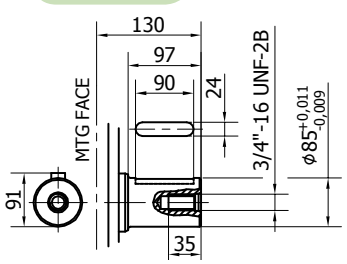
A11



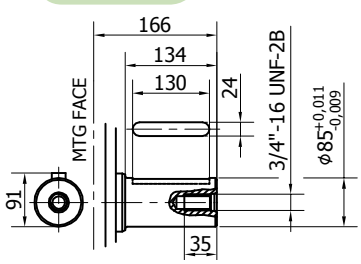
A12



A2



A21



Available spline billet: SB27

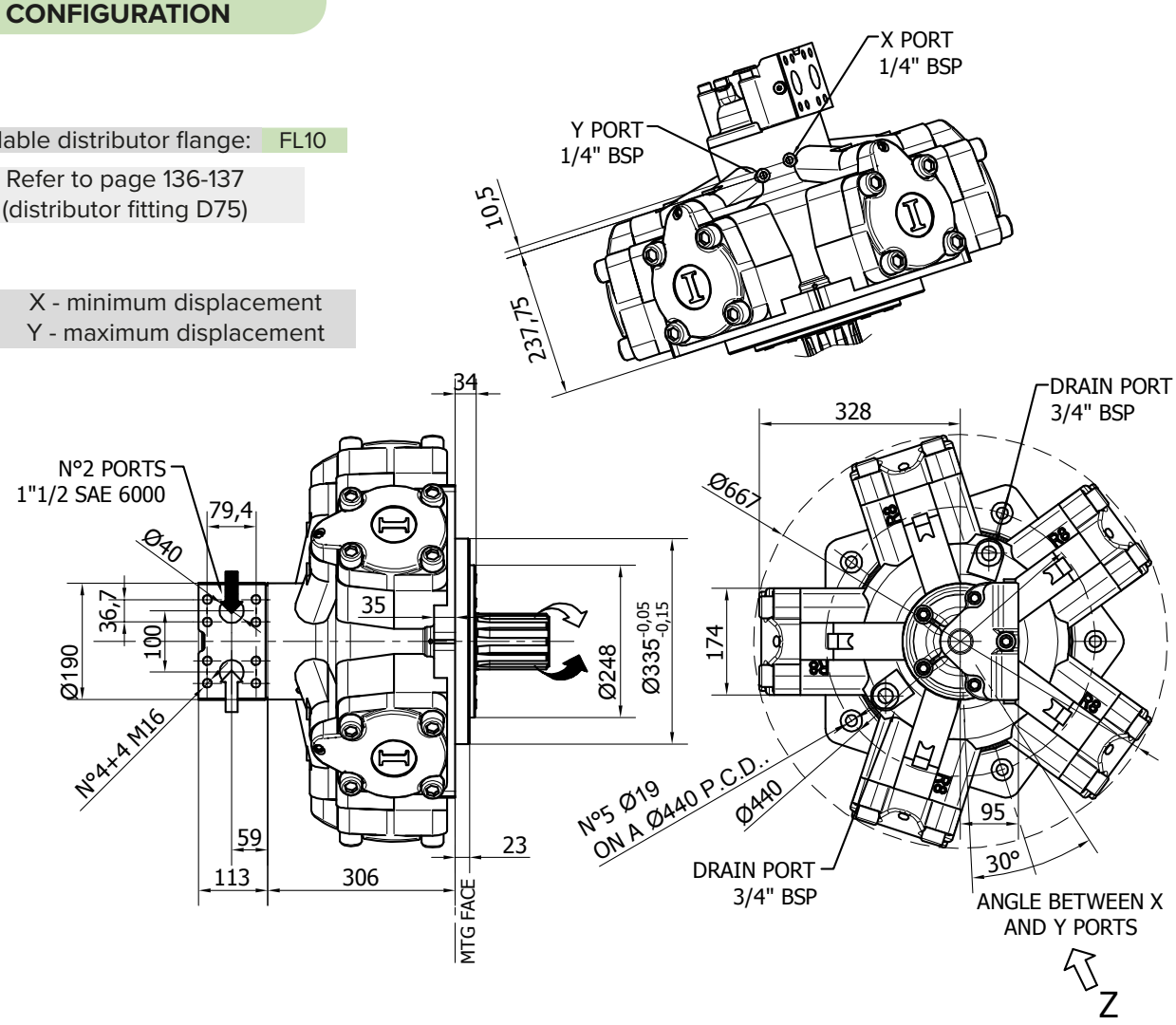
R8C 3000/C H6

XY DISPLACEMENT CHANGE CONFIGURATION

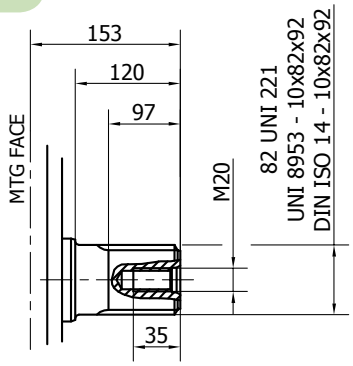
Available distributor flange: FL10

Refer to page 136-137
(distributor fitting D75)

X - minimum displacement
Y - maximum displacement



A0

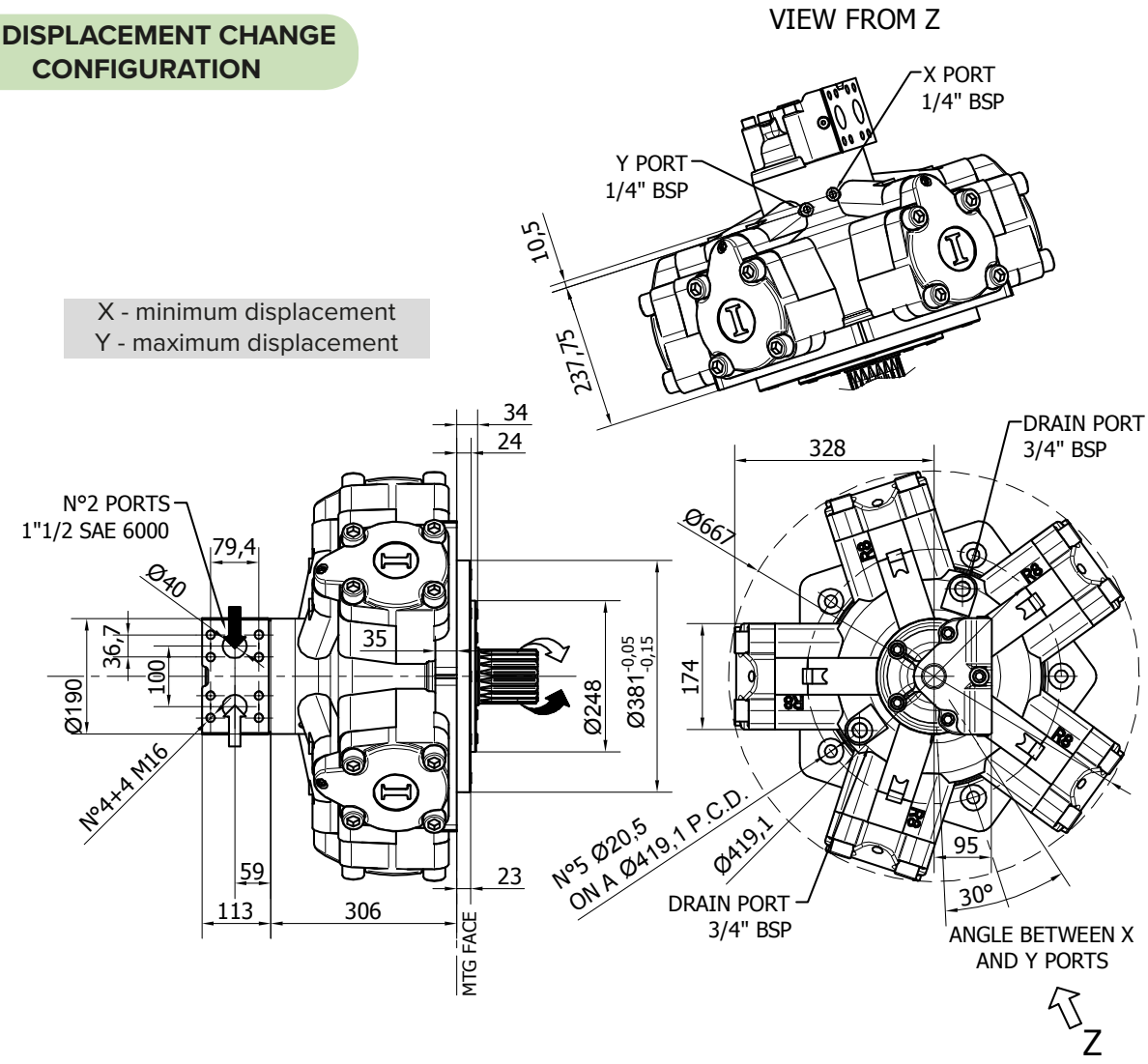


Available spline billet: SB9

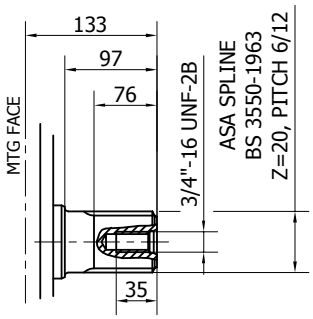
R8C 3000/MRH H6

XY DISPLACEMENT CHANGE CONFIGURATION

X - minimum displacement
Y - maximum displacement

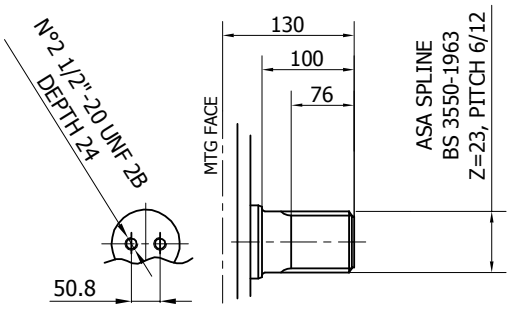


A0



Available spline billet: SB10

A13



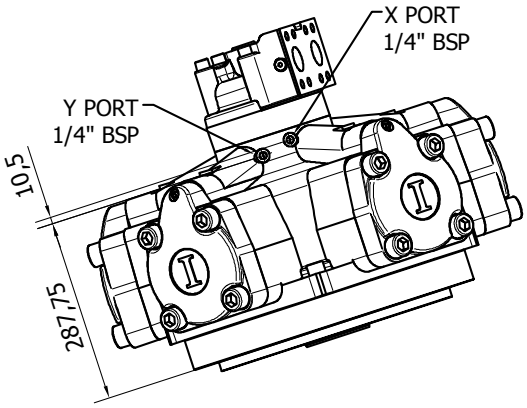
Available spline billet: SB24

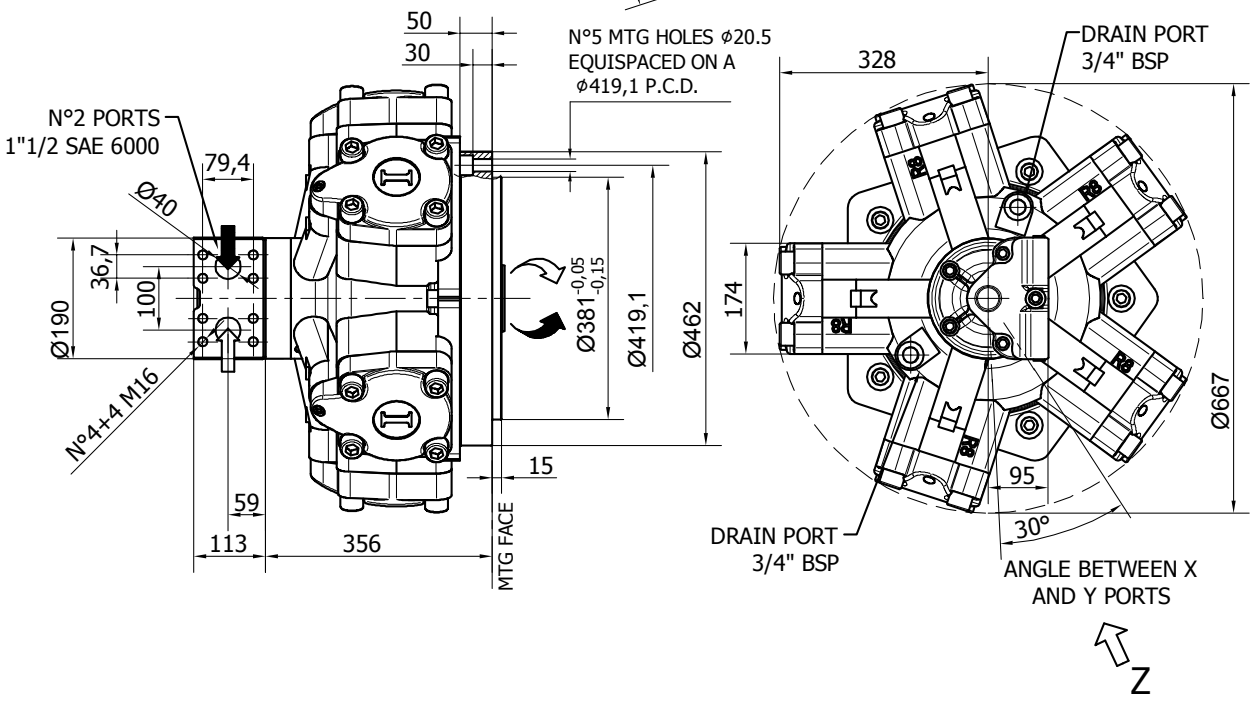
R8C 3000/GM6 H6

XY DISPLACEMENT CHANGE CONFIGURATION

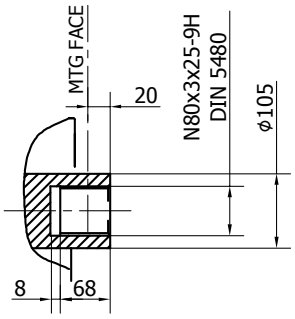
X - minimum displacement
Y - maximum displacement

VIEW FROM Z





A32

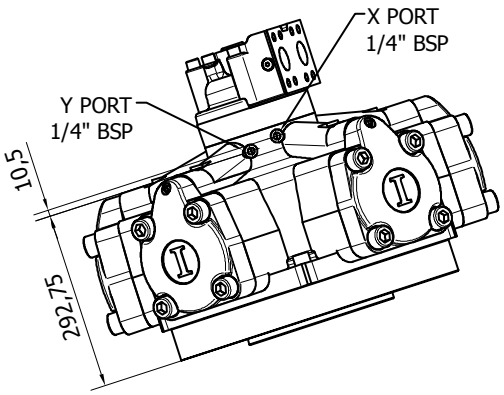


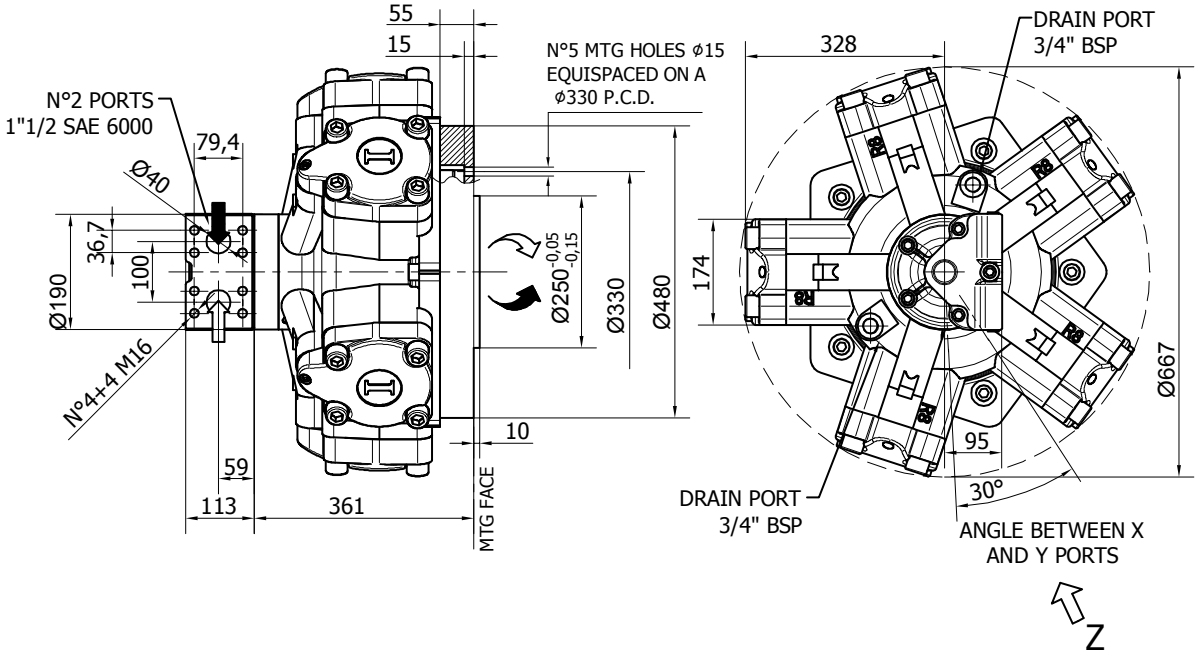
R8C 3000/MR1400 H6

XY DISPLACEMENT CHANGE CONFIGURATION

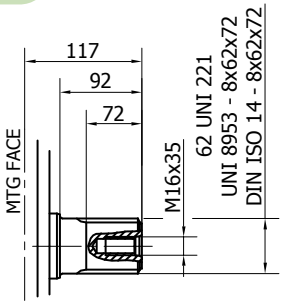
X - minimum displacement
Y - maximum displacement

VIEW FROM Z





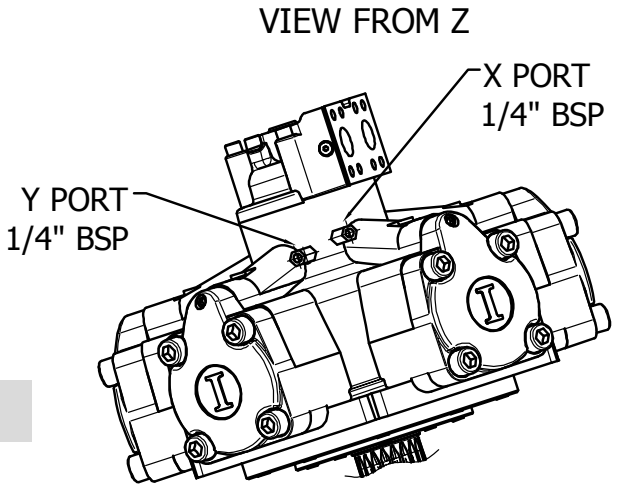
A0



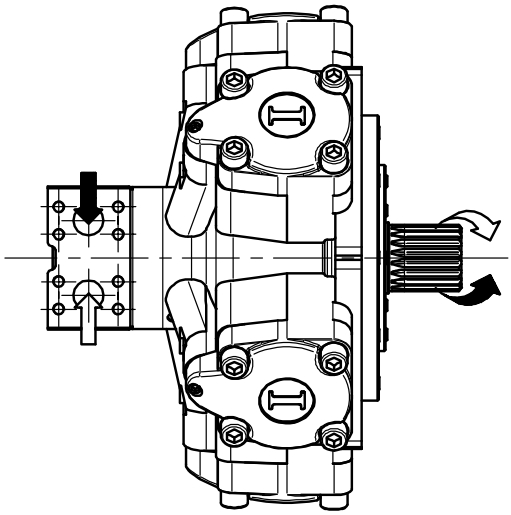
Available spline billet: SB6

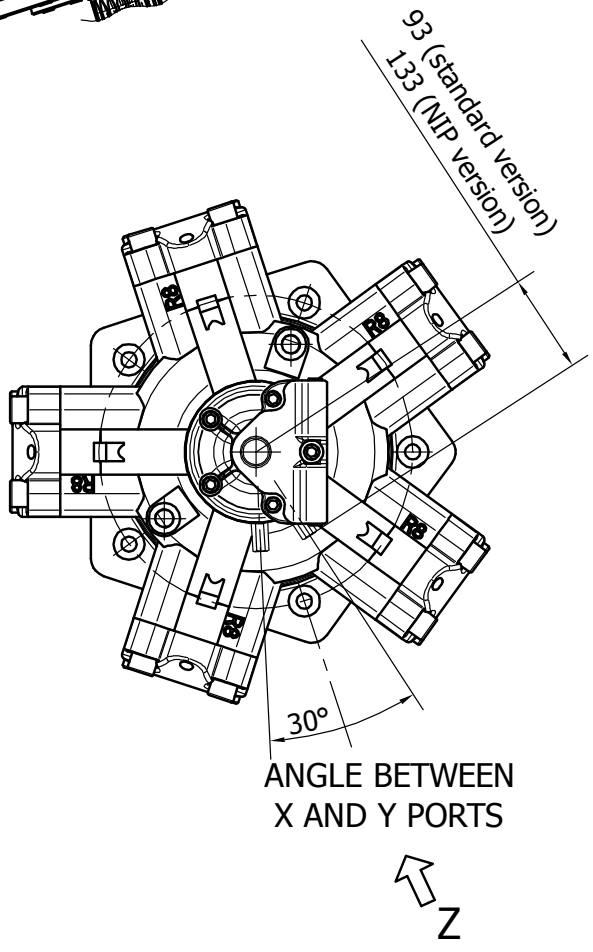
R8C H6 - NIP OPTION

XY DISPLACEMENT CHANGE CONFIGURATION



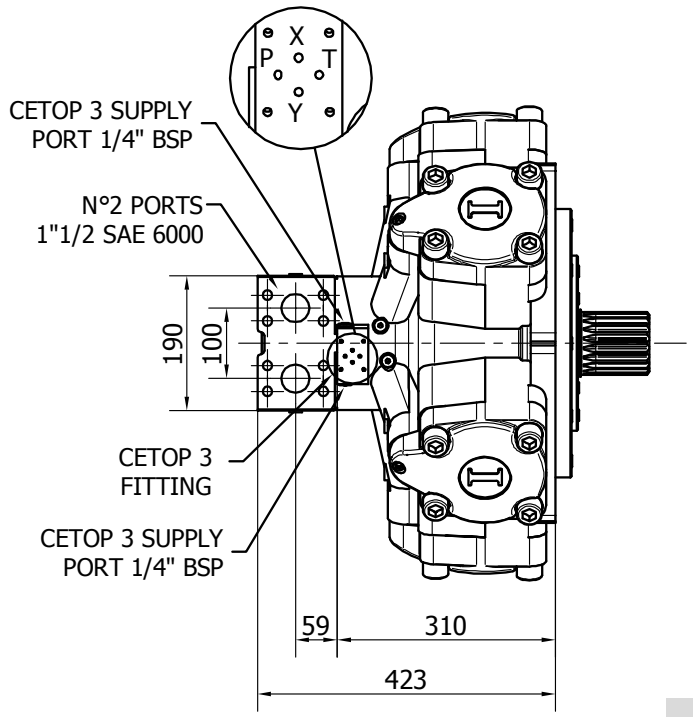
X - minimum displacement
Y - maximum displacement

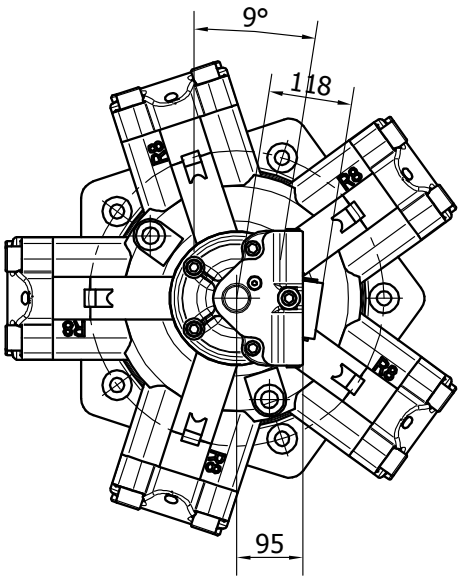




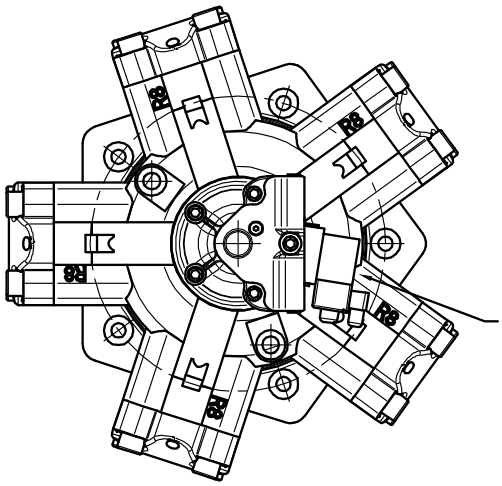
R8C H6 - CETOP 3 FITTING

CETOP 3 DISPLACEMENT CHANGE CONFIGURATION





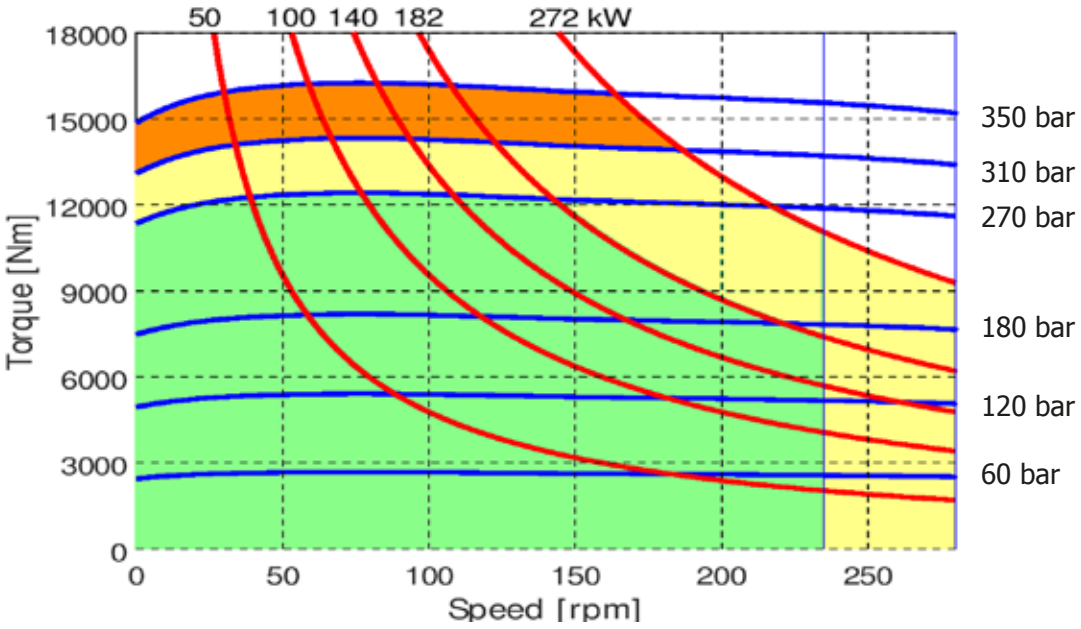
X - minimum displacement
Y - maximum displacement



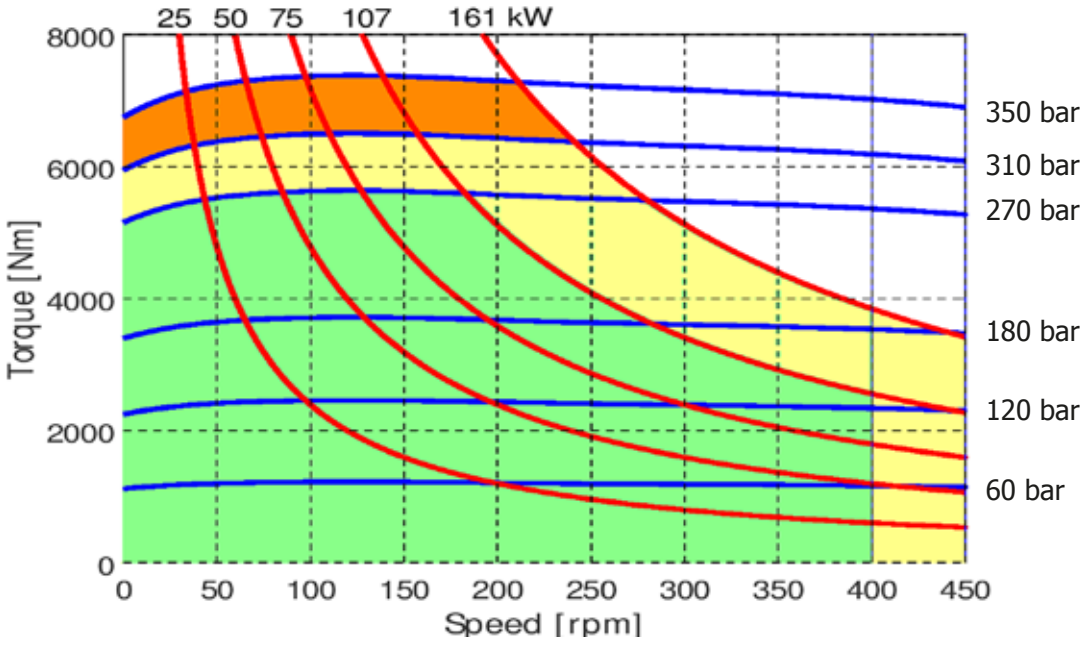
CETOP 3 DISPLACEMENT CHANGE VALVE
C3 - 12 SV (12V DC)
C3 - 24 SV (24V DC)
C3 - HY SV (HYDRAULIC OPERATED)

R8C H6 - PERFORMANCE CURVES

3085 cc - WITHOUT FLUSHING



1470 cc - WITHOUT FLUSHING



Continuous operation

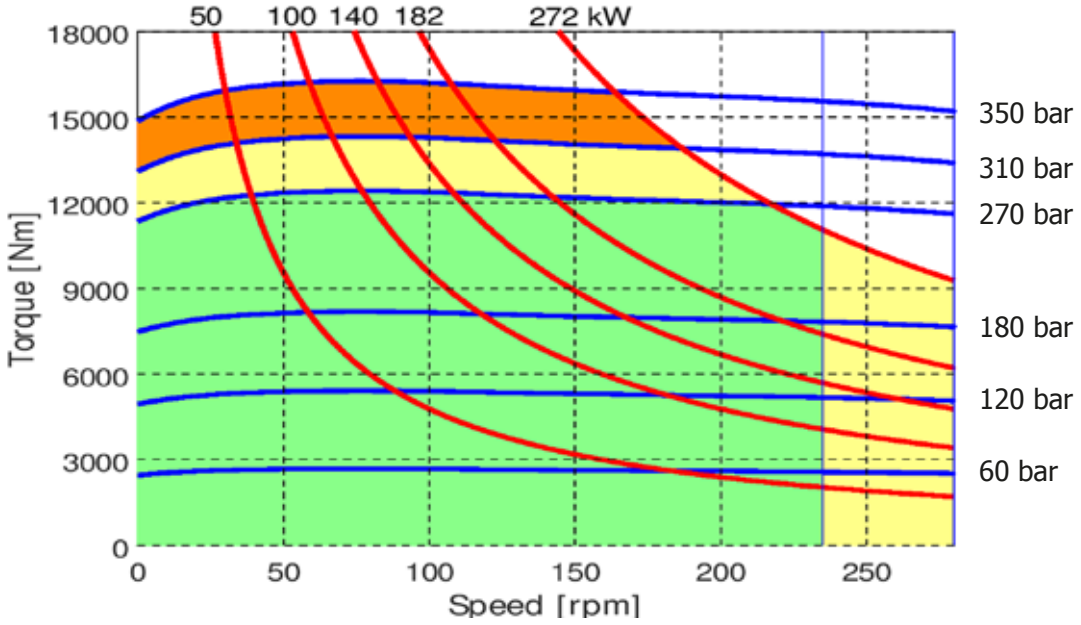
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

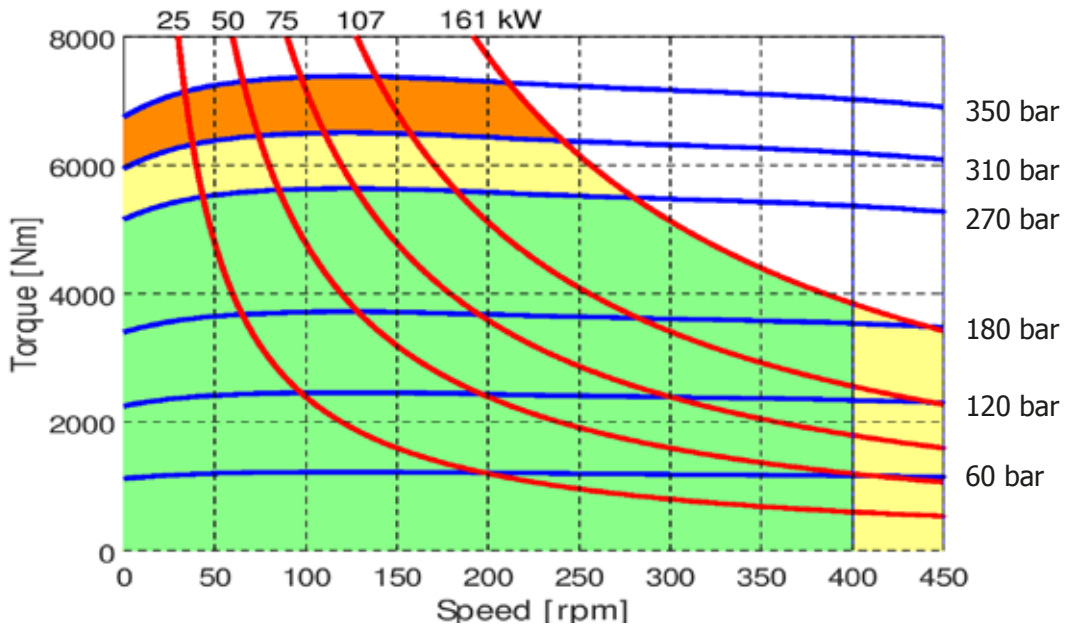
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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

R8C H6 - PERFORMANCE CURVES

3085 cc - WITH FLUSHING



1470 cc - WITH FLUSHING



Continuous operation

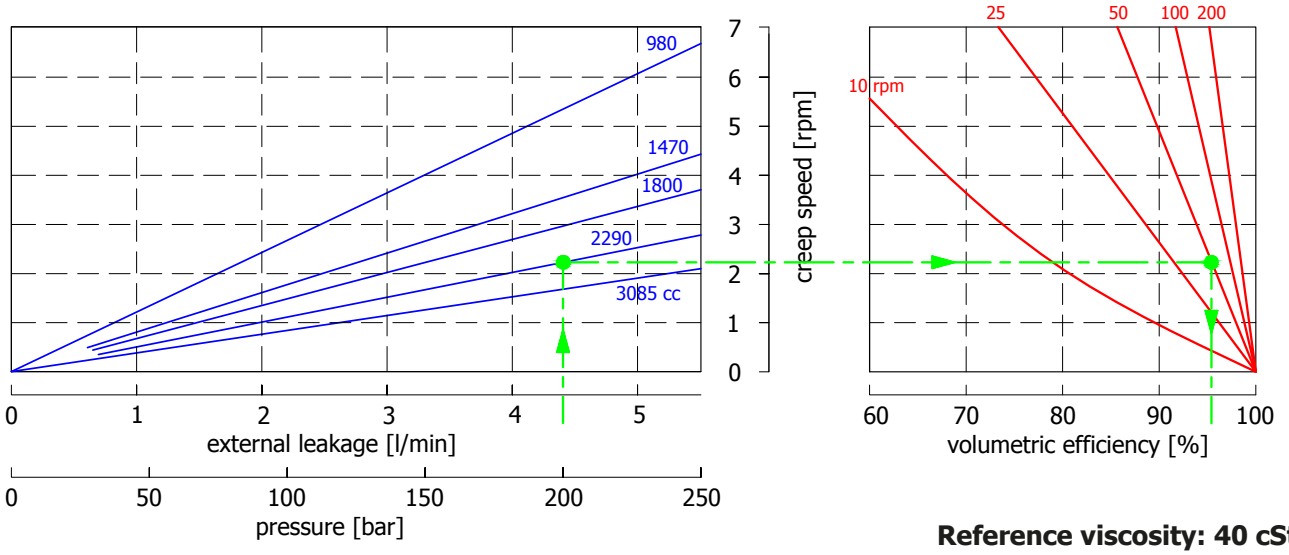
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

R8C H6 - PERFORMANCE CURVES

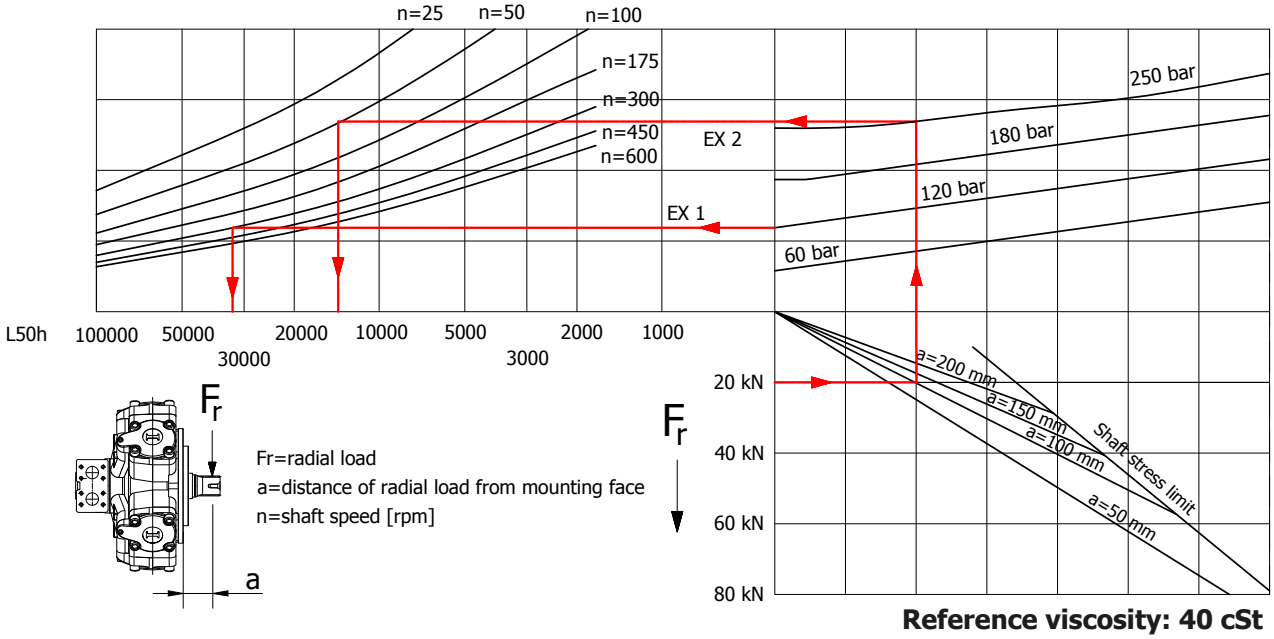
CREEP SPEED - VOLUMETRIC EFFICIENCY



Reference viscosity: 40 cSt

Example:
We suppose (2290 cc): p=200 [bar], we obtain: external leakage 4,3 [l/min], shaft creep speed 2,2 [rpm].
If we suppose (2290 cc): p=200 [bar] and n=50 [rpm] we obtain a volumetric efficiency of 96%;

BEARING LIFE



Reference viscosity: 40 cSt

Example:
We suppose (EX1): p=120 [bar], n=300 [rpm]; we obtain an average lifetime of 34000 [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 12000 [h].

R8C H6 - ORDERING CODE

R8C | - - | - - | H6 | - - | - - | - - | - - | - - | - - | - -

DISPLACEMENT
- 3000

INTERCHANGEABILITY
- /MRH
- /GM6
- /MR1400

SERIE
- H6

SHAFT
- A0
- A1
- A11
- A12
- A13
- A2
- A21
- A32

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

See pag. 128-132

SPECIAL FEATURES
- MP
- SPSL
- HPS
- CCW

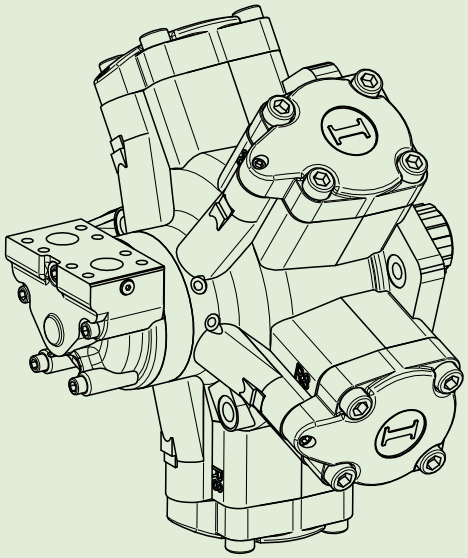
See pag. 33

- NIP

See pag. 33

- Z - -

Italgroup internal code



DISTRIBUTOR
- D31B / D31BJ
- D36B / D36BJ
- D310B / D310BJ
- D40 / D40J
- D47 / D47J
- D416 / D416J
- D75 / D75J
- D90 / D90J

See pag. 126-127

DISPLACEMENT CHANGE FITTING AND ACCESSORIES
- XY
- XY-SV
- C3-SV
- C3-12 SV
- C3-24 SV
- C3-HY SV
- C3-12 CSV
- C3-24 CSV
- C3-HY CSV

See pag. 24-32

SPLINED BILLET SPLINED BAR
- SB6 / SB9
- SB10 / SB24
- SB27

See pag. 133-135

MAXIMUM AND MINIMUM DISPLACEMENTS

EXAMPLES:

R8C 3000 H6 A1 D90 (3085-1470)
R8C 3000/C H6 A0 D90J C3-12 SV (2620-980)
R8C 3000/GM6 H6 A32 D90 CCW (2620-0)

R8C H7

TECHNICAL DATA	Pag. 112 - 113
R8C 4600-5400 H7 - INSTALLATION DRAWING	Pag. 114
R8C 4600-5400/MRH H7 - INSTALLATION DRAWING	Pag. 115
R8C H7 - NIP OPTION	Pag. 116
R8C H7 - CETOP 3 FITTING	Pag. 117
R8C 4600 H7 - PERFORMANCE CURVES	Pag. 118 - 120
R8C 4600 H7 - PERFORMANCE CURVES	Pag. 121 - 123
R8C H7 - ORDERING CODE	Pag. 124

R8C H7 TECHNICAL DATA

R8C 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]	197	192	177	157	147	136	120	110
Cont. power with flushing	[kW]	292	272	252	237	216	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.

R8C H7 TECHNICAL DATA

R8C 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]	197	197	197	192	180	165	155	145	135
Cont. power with flushing	[kW]	265	262	262	256	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.

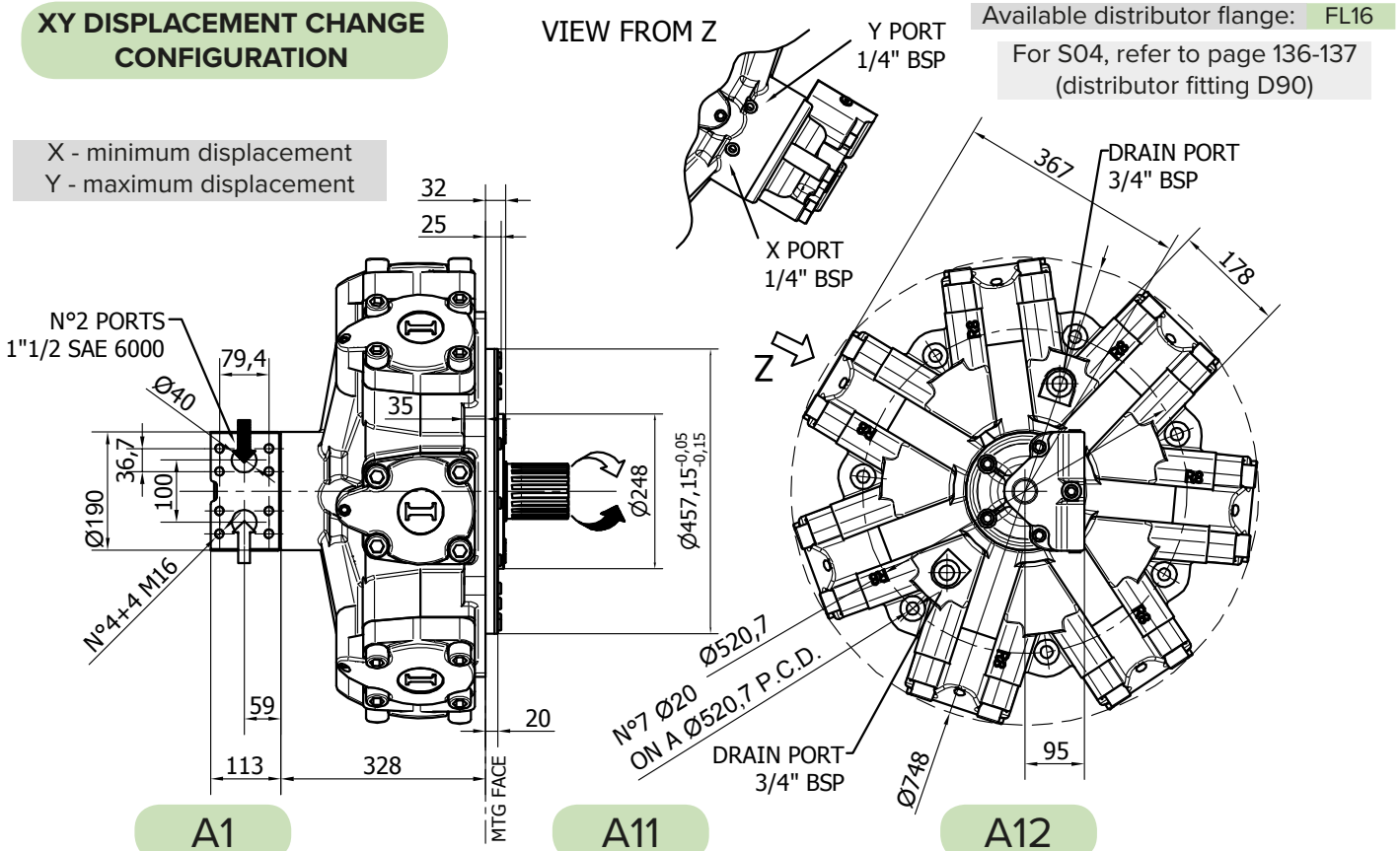
R8C 4600-5400 H7

XY DISPLACEMENT CHANGE CONFIGURATION

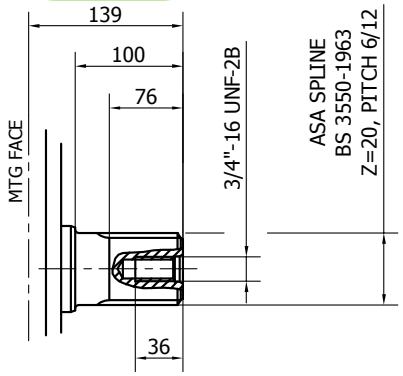
X - minimum displacement
Y - maximum displacement

Available distributor flange: FL16

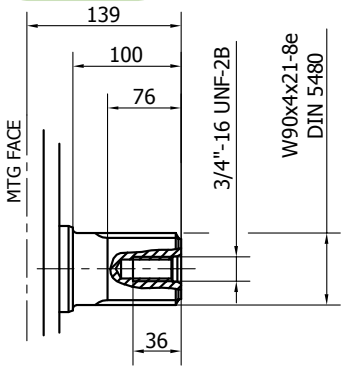
For S04, refer to page 136-137 (distributor fitting D90)



A1



A11



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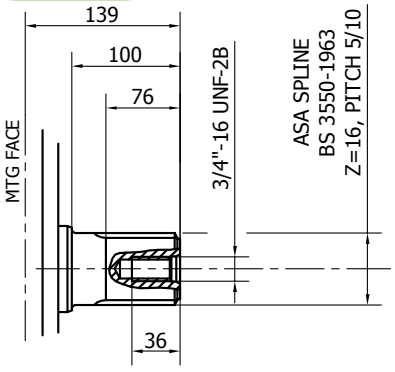
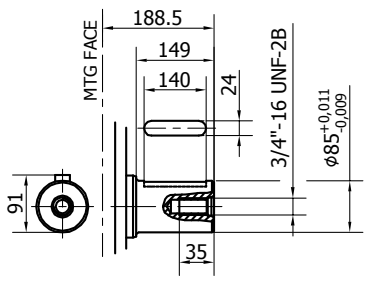


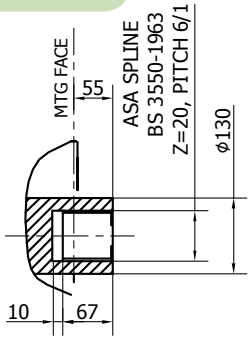
Available spline billet: SB10

Available spline billet: SB27

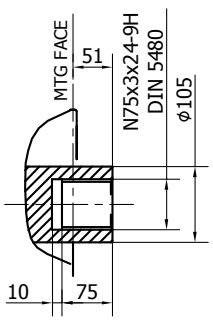
A2



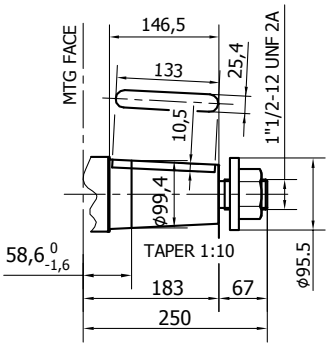
A3



A31



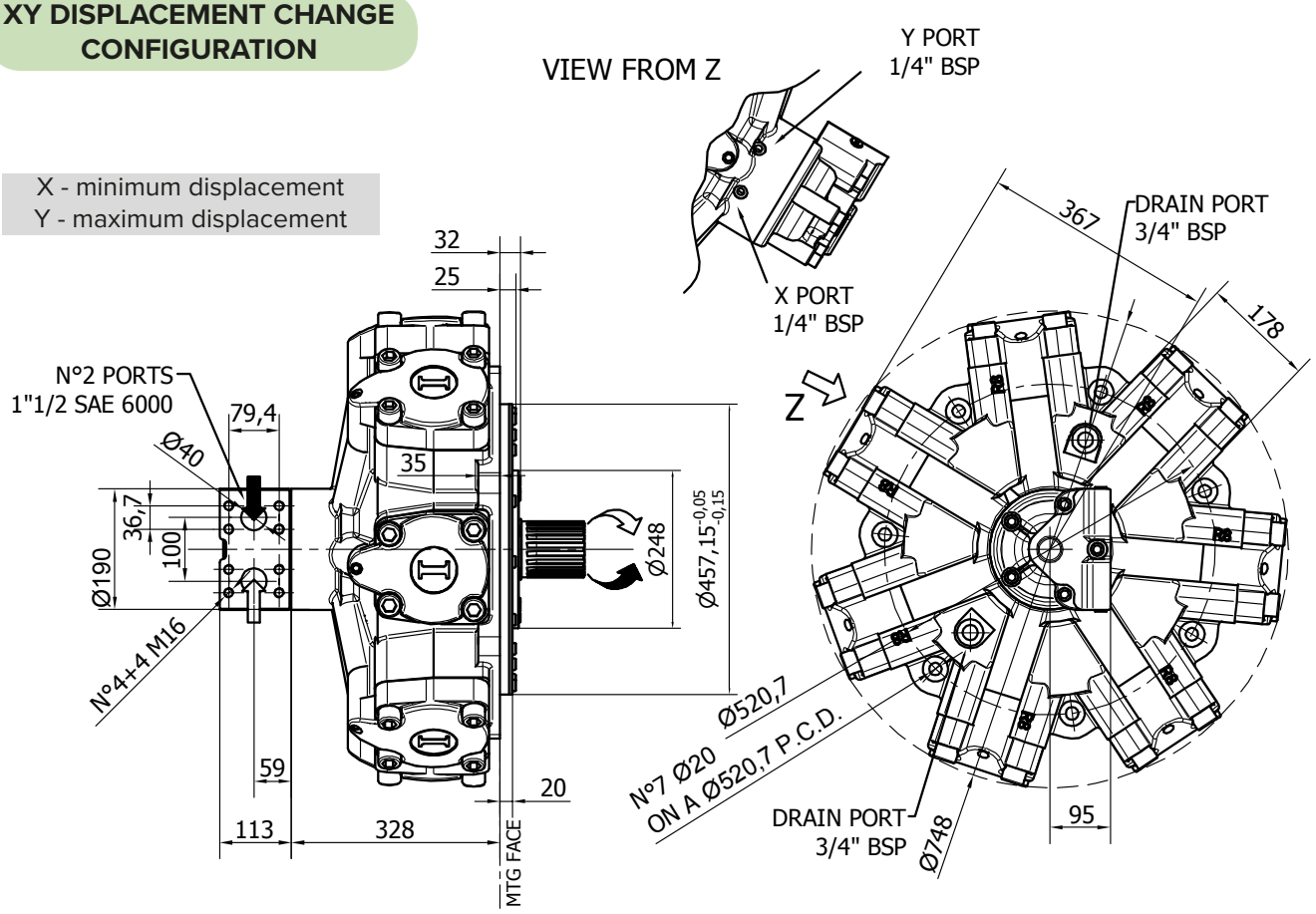
A4



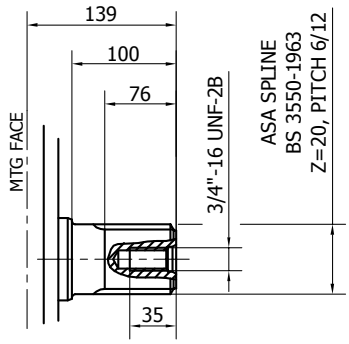
R8C 4600-5400/MRH H7

XY DISPLACEMENT CHANGE CONFIGURATION

X - minimum displacement
Y - maximum displacement

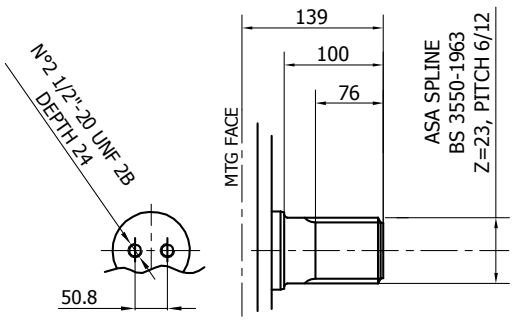


A1



Available spline billet: SB10

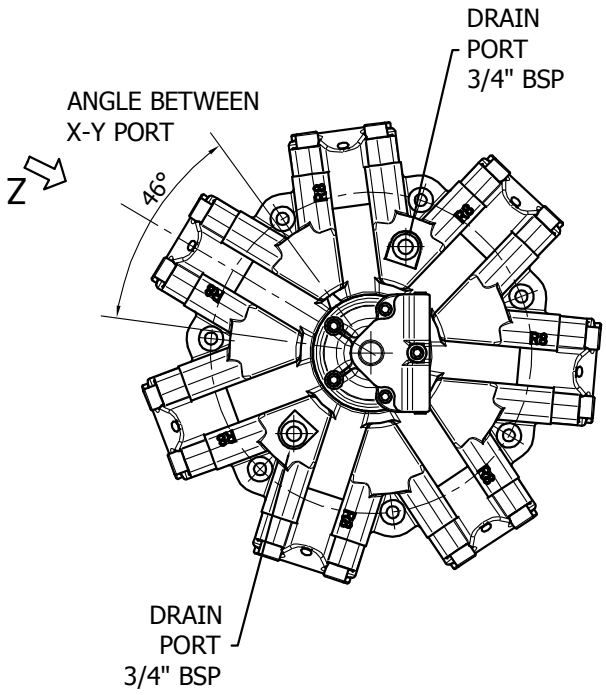
A13

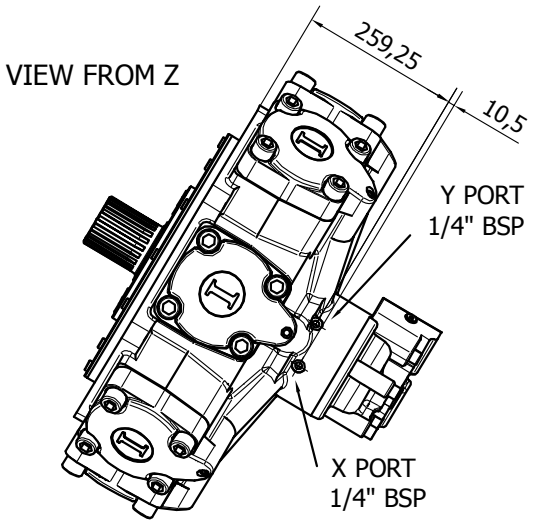


Available spline billet: SB24

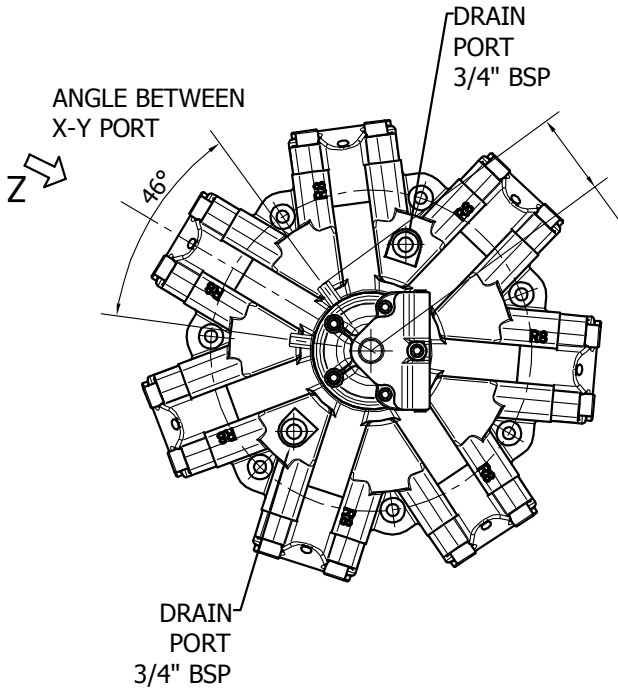
R8C H7 - NIP OPTION

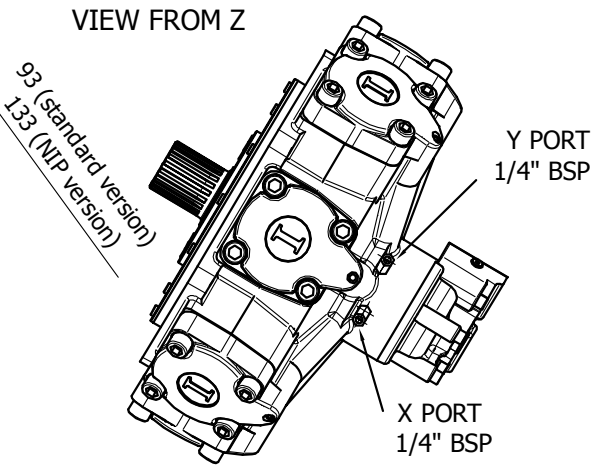
XY DISPLACEMENT CHANGE CONFIGURATION





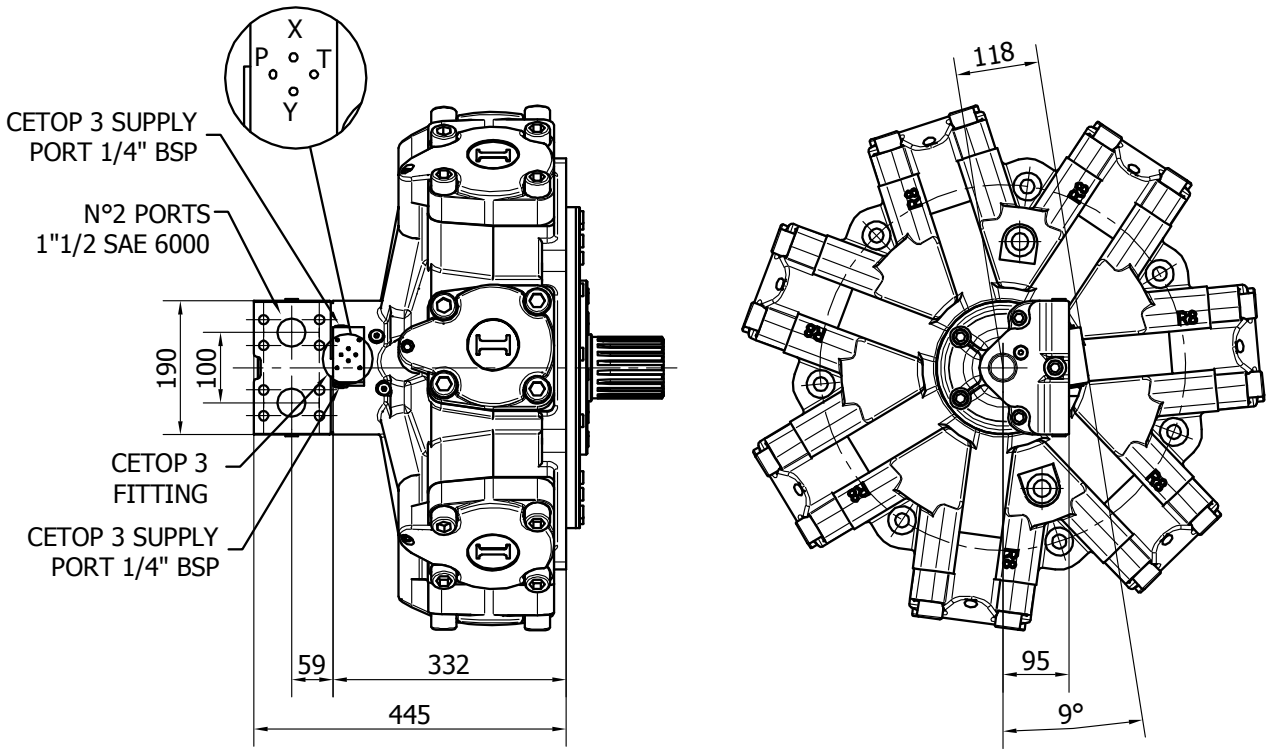
X - minimum displacement
Y - maximum displacement



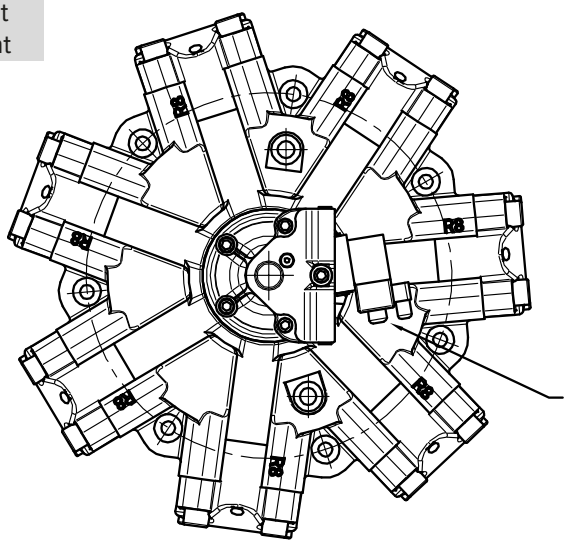


R8C H7 - CETOP 3 FITTING

CETOP 3 DISPLACEMENT CHANGE CONFIGURATION



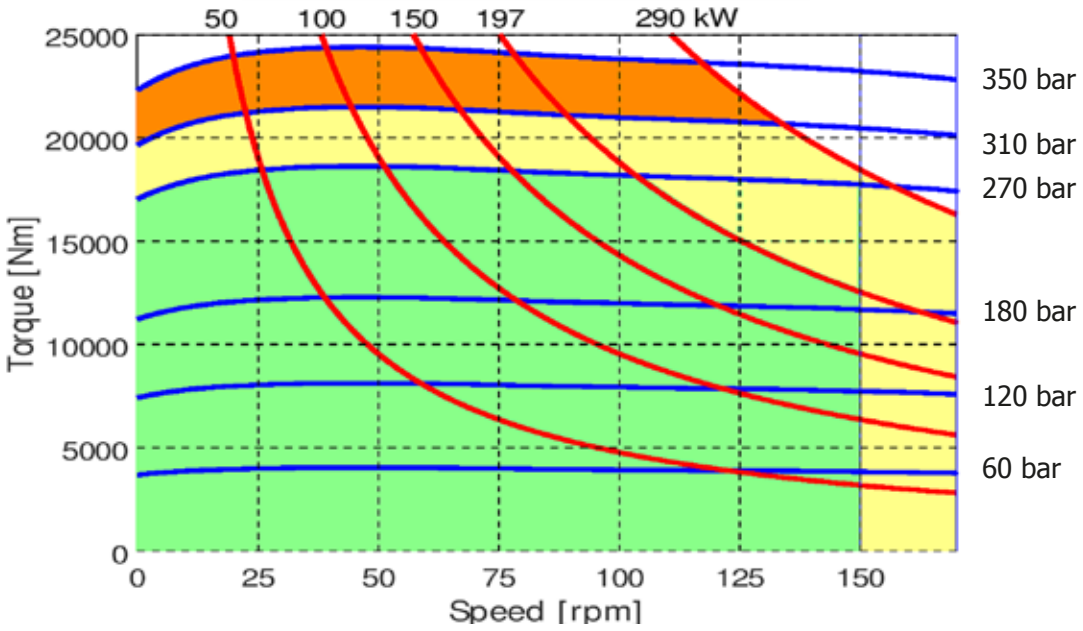
X - minimum displacement
Y - maximum displacement



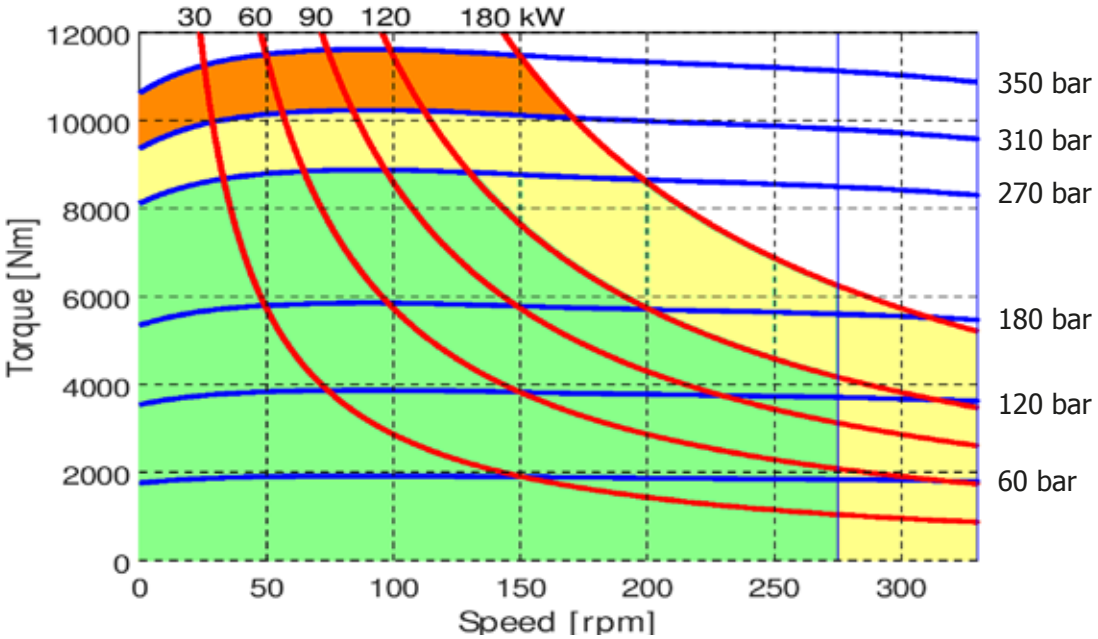
CETOP 3 DISPLACEMENT CHANGE VALVE
C3 - 12 SV (12V DC)
C3 - 24 SV (24V DC)
C3 - HY SV (HYDRAULIC OPERATED)

R8C 4600 H7 - PERFORMANCE CURVES

4617 cc - WITHOUT FLUSHING



2290 cc - WITHOUT FLUSHING



Continuous operation

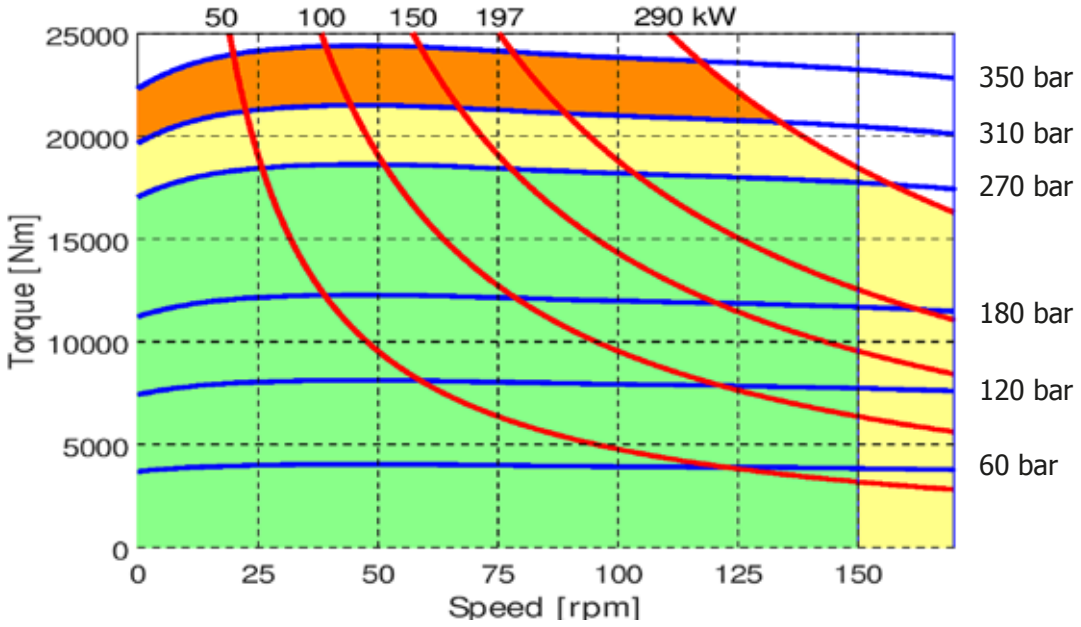
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

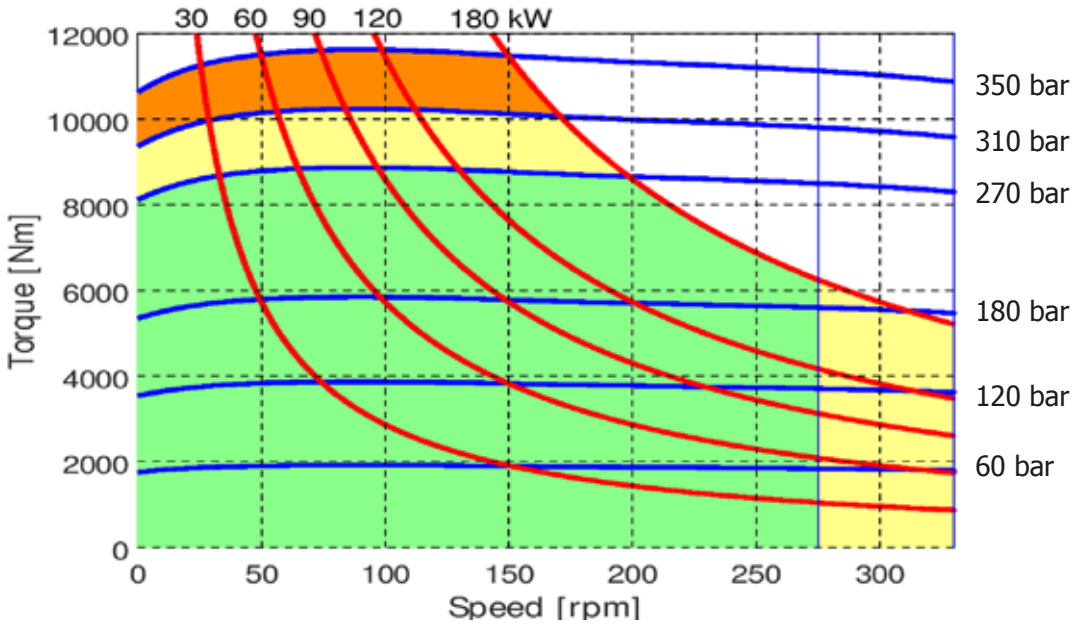
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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

R8C 4600 H7 - PERFORMANCE CURVES

4617 cc - WITH FLUSHING



2290 cc - WITH FLUSHING



Continuous operation

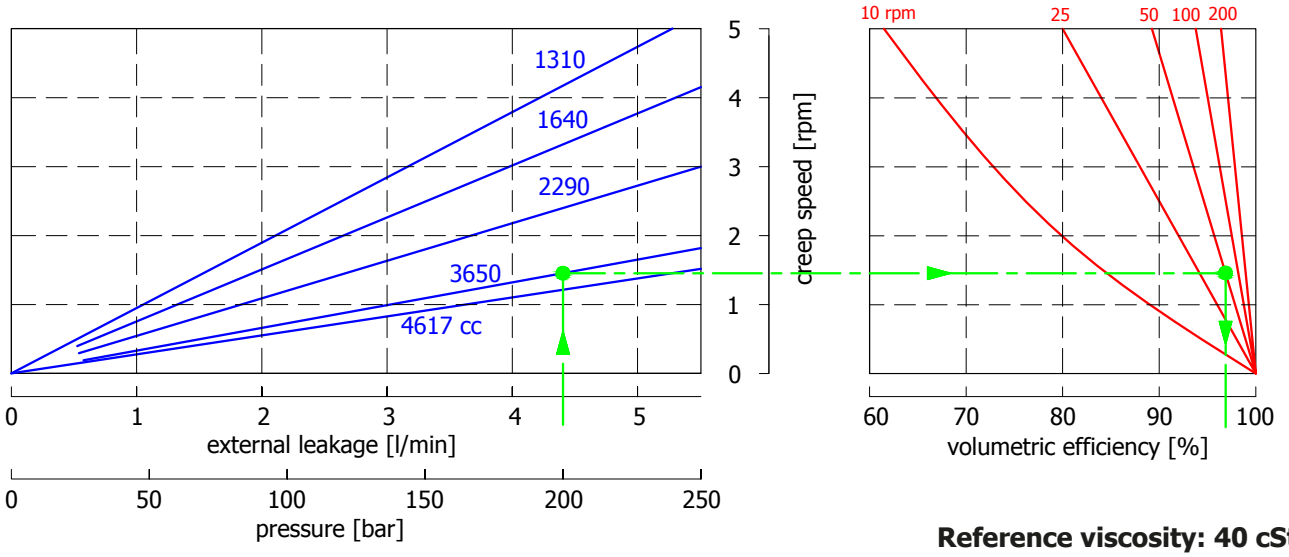
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

R8C 4600 H7 - PERFORMANCE CURVES

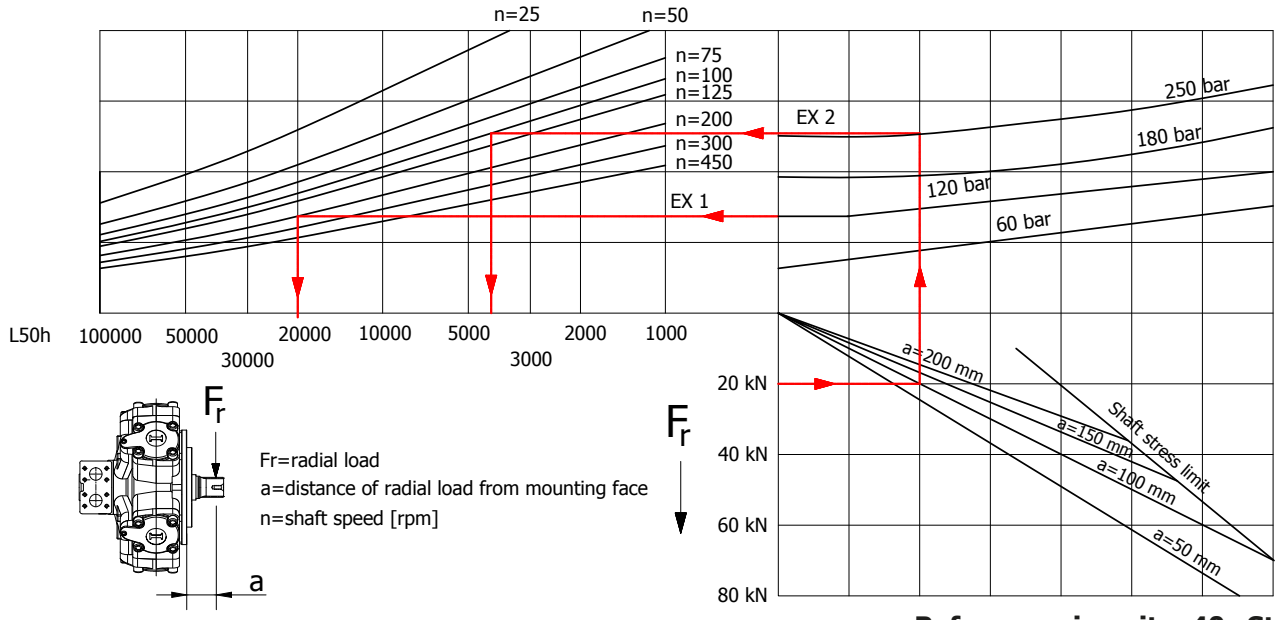
CREEP SPEED - VOLUMETRIC EFFICIENCY



Reference viscosity: 40 cSt

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

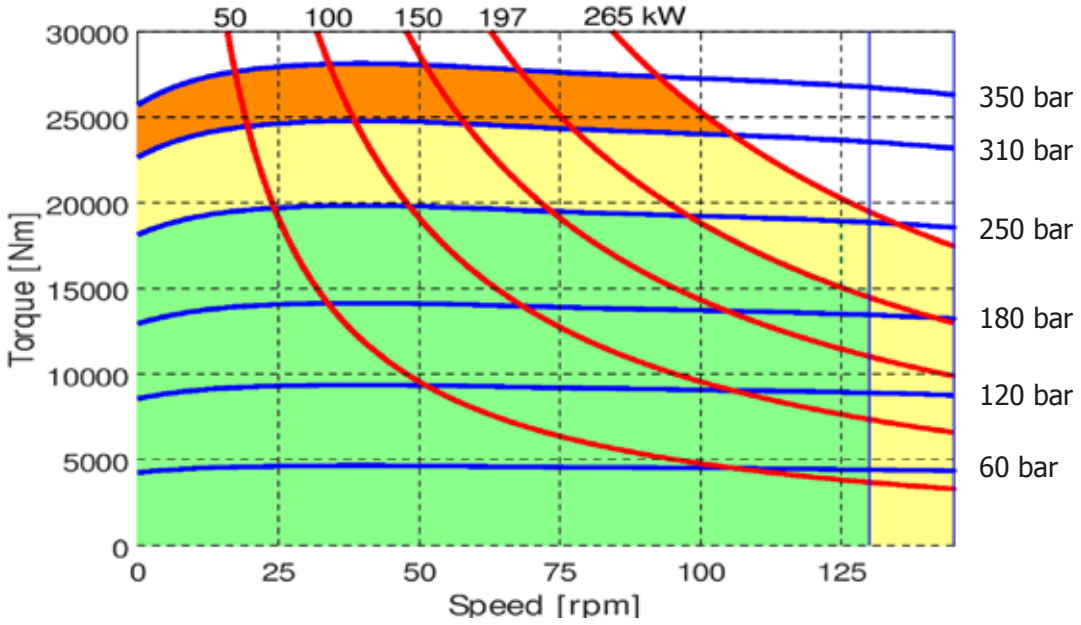


Reference viscosity: 40 cSt

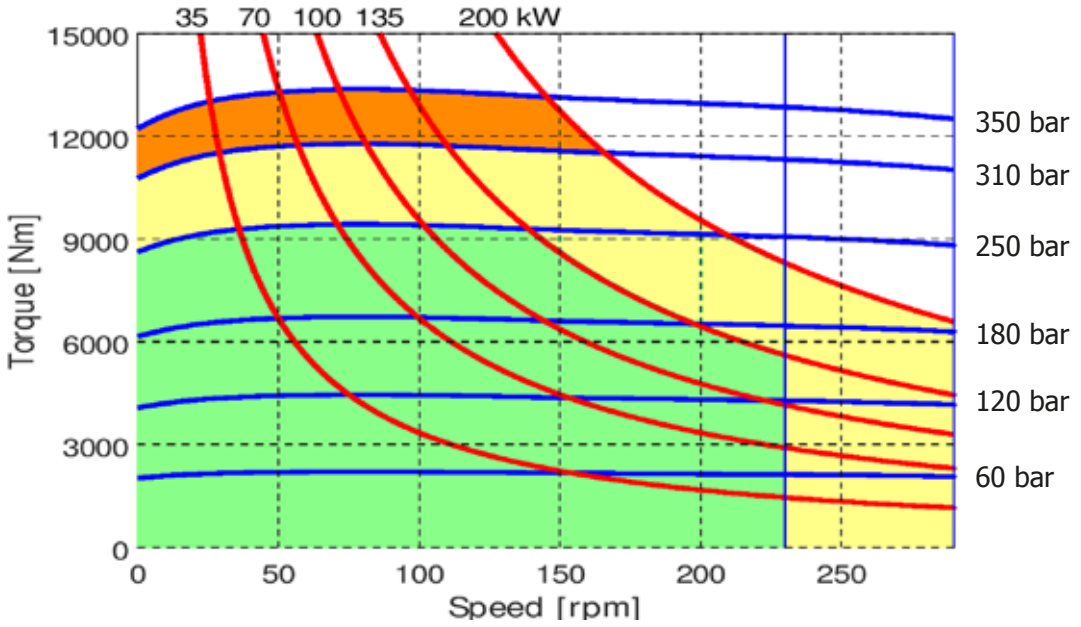
Example:
We suppose (EX1): p=120 [bar], n=200 [rpm]; we obtain an average lifetime of 25000 [h].
If we suppose (EX2): F_r=20 [kN], a=100 [mm], n=50 [rpm] and p=250 [bar] we obtain an average lifetime of 6500 [h].

R8C 5400 H7 - PERFORMANCE CURVES

5326 cc - WITHOUT FLUSHING



2620 cc - WITHOUT FLUSHING



Continuous operation

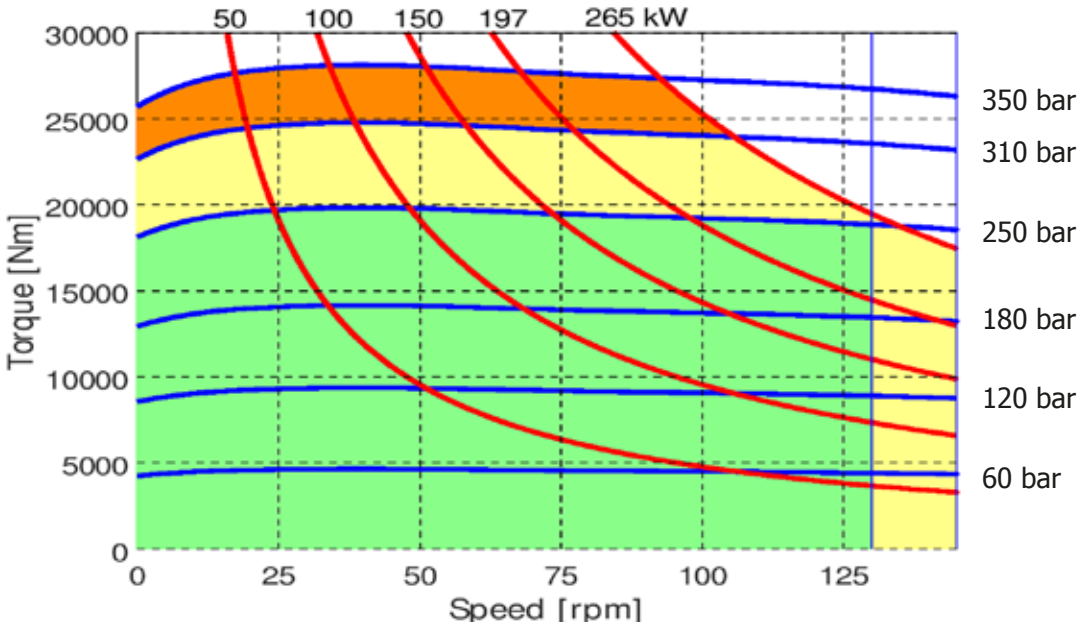
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

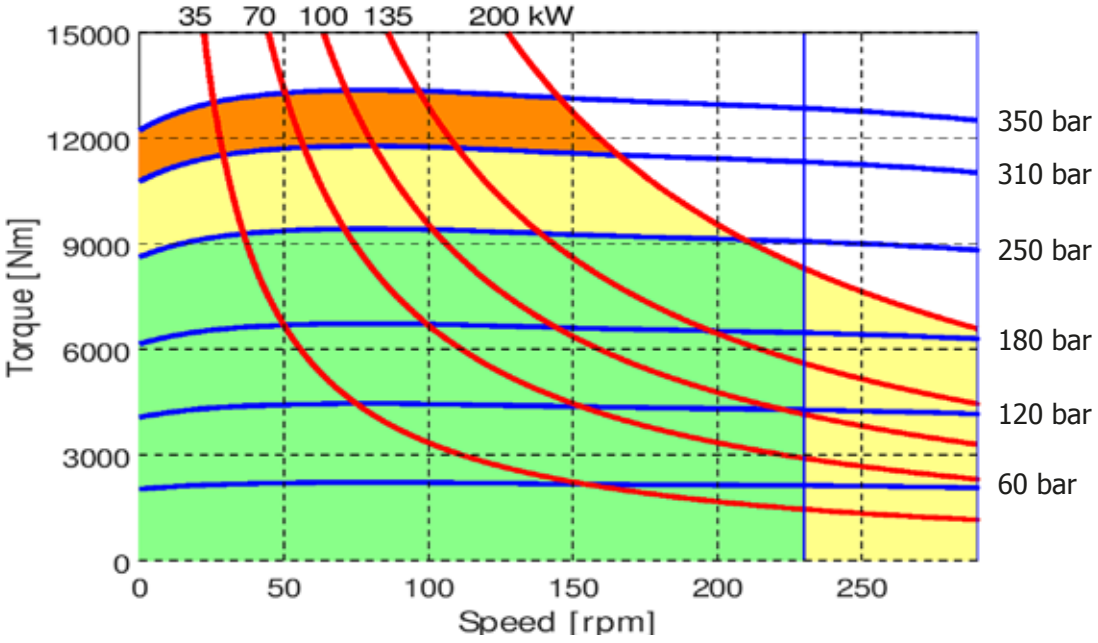
The above diagrams are referring to the hydraulic motor working with a fluid in ideal conditions (viscosity at 40 cSt). In case the working temperature increases and viscosity reach values under the recommended values (see hydraulic fluid recommendations) flushing must be performed or ISO oil grade must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

R8C 5400 H7 - PERFORMANCE CURVES

5326 cc - WITH FLUSHING



2620 cc - WITH FLUSHING



Continuous operation

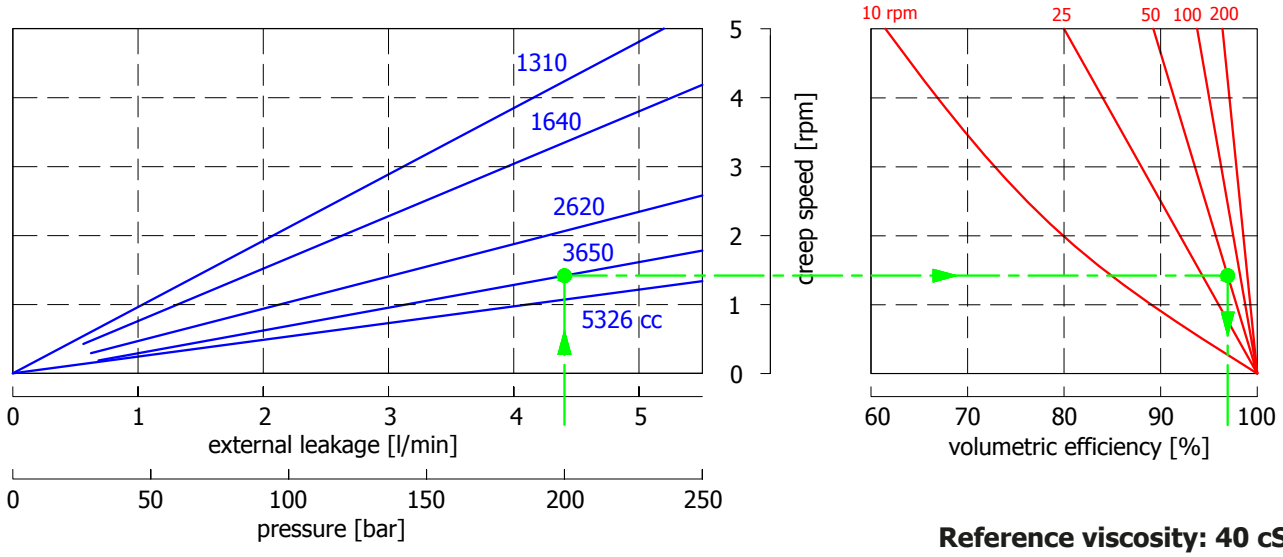
Intermittent operation: permitted for a 15% of duty cycle, for 3 minutes maximum period

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

R8C 5400 H7 - PERFORMANCE CURVES

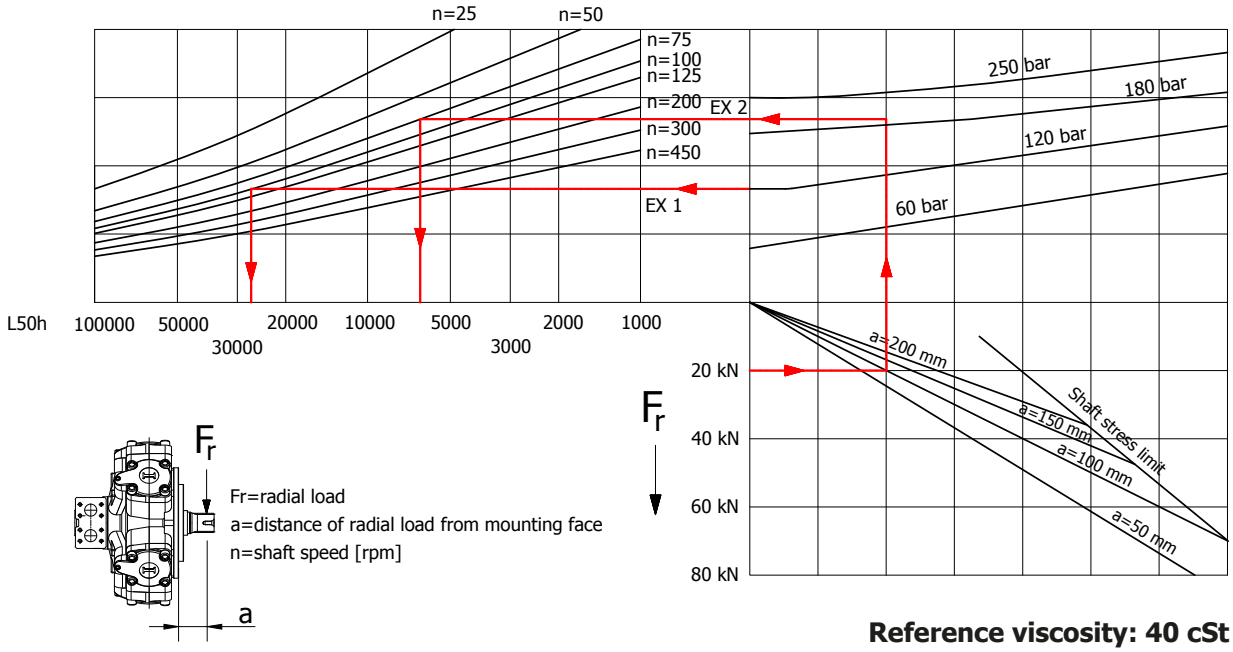
CREEP SPEED - VOLUMETRIC EFFICIENCY



Reference viscosity: 40 cSt

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



Reference viscosity: 40 cSt

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].

R8C H7 - ORDERING CODE

R8C | - - | - - | H7 | - - | - - | - - | - - | - - | - - | - -

DISPLACEMENT
- 4600
- 5400

INTERCHANGEABILITY
- /MRH

SERIE
- H7

SHAFT
- A1
- A11
- A12
- A13
- A2
- A3
- A31
- A4

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

See pag. 128-132

SPECIAL FEATURES
- MP
- SPSL
- HPS
- CCW

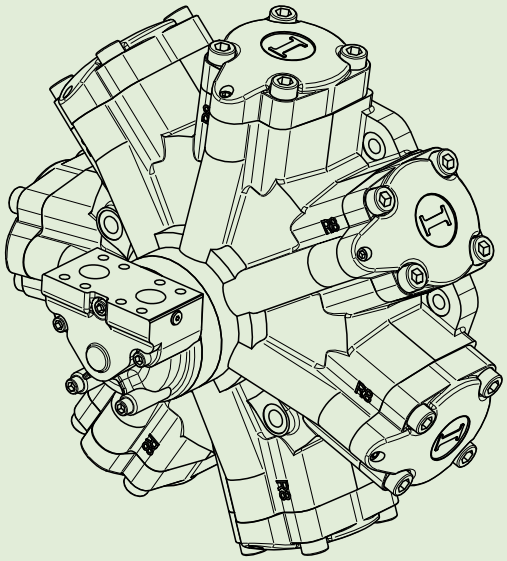
See pag. 33

- NIP

See pag. 33

- Z - -

Italgroup internal code



DISTRIBUTOR
- D31B / D31BJ
- D36B / D36BJ
- D310B / D310BJ
- D40 / D40J
- D47 / D47J
- D416 / D416J
- D75 / D75J
- D90 / D90J

See pag. 126-127

DISPLACEMENT CHANGE FITTING AND ACCESSORIES
- XY
- XY-SV
- C3-SV
- C3-12 SV
- C3-24 SV
- C3-HY SV
- C3-12 CSV
- C3-24 CSV
- C3-HY CSV

See pag. 24-32

SPLINED BILLET SPLINED BAR
- SB10
- SB24
- SB27

See pag. 133-135

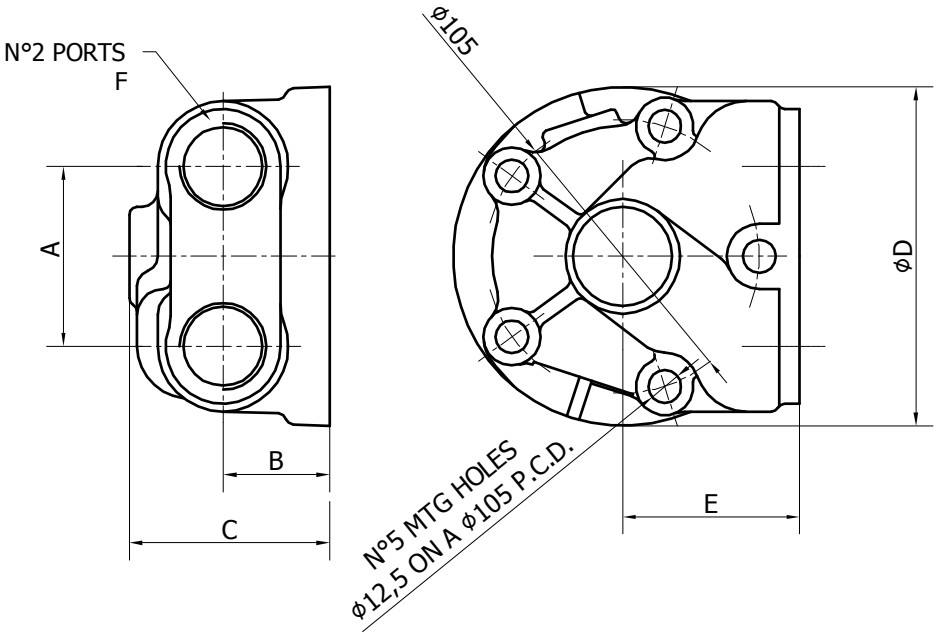
MAXIMUM AND MINIMUM DISPLACEMENTS

EXAMPLES:

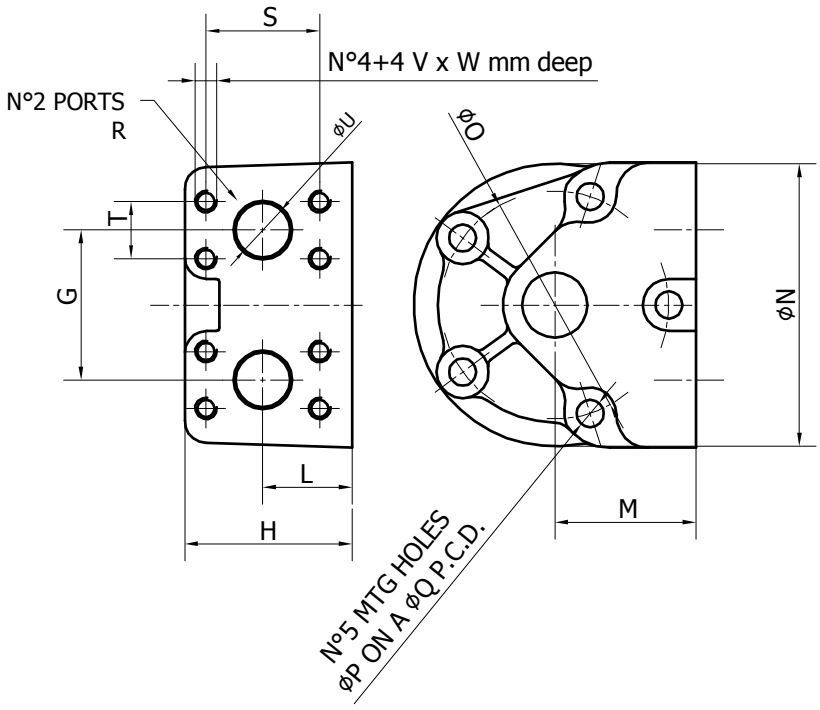
R8C 5400 H7 A1 D90 SB10 (5326-0)
R8C 4600/MRH H7 A13 D90 SB24 (4617-2290)
R8C 4600 H7 A12 D90 C3-12 SV (4177-655)

MOTOR DISTRIBUTORS

D40-D416-D31B-D310B-D36B-D316B



D47-D75-D90



MOTOR DISTRIBUTORS

		D40	D416	D31B	D310B	D36B	D316B	D47	D75	D90
A	[mm]	69	69	56	56	56	56			
B	[mm]	41	41	39	39	39	39			
C	[mm]	77	77	67	67	67	67			
D	[mm]	130	130	125	125	125	125			
E	[mm]	68	68	65	65	65	65			
F	[]	1" BSP	1" SAE	3/4" BSP	1" BSP	3/4" SAE	1" SAE			
G	[mm]							69	83	100
H	[mm]							77	107	113
L	[mm]							41	55	59
M	[mm]							65	92	95
N	[mm]							130	170	190
O	[mm]							105	145	149
P	[mm]							12,5	14,5	14,5
Q										
R	[]							1" SAE 3000	1"1/2 SAE 3000	1"1/2 SAE 6000
S	[mm]							52,4	69,85	79,4
T	[mm]							26,2	35,7	36,7
U	[mm]							25	39	40
V	[mm]							M10	M12	M16
W	[mm]							19	22	22

		D31B	D310B	D36B	D40	D416	D47	D75	D90
MAX. CONT. FLOW	[l/min]	200	300	200	300	300	300	600	700
MAX. FLOW	[l/min]	400	400	400	400	400	400	1000	1200
MAX. CONT. PRESSURE	[bar]	300	300	300	300	300	300	300	300
PEAK PRESSURE	[bar]	500	500	500	500	500	500	500	500
R8C H1		●	●	●	●	●	●		
R8C H3		●	●	●	●	●	●		
R8C H4		●	●	●	●	●	●	◒	◒
R8C H5		◒	◒	◒	◒	◒	◒	●	●
R8C H55		◒	◒	◒	◒	◒	◒	●	●
R8C H6		◒	◒	◒	◒	◒	◒	●	●
R8C H7		◒	◒	◒	◒	◒	◒		●

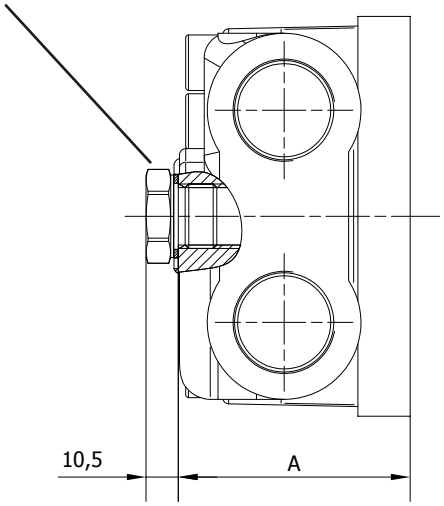
● Standard version

◒ Special version: available on request. Please contact Italgroup for more details

TACHOMETERS

J

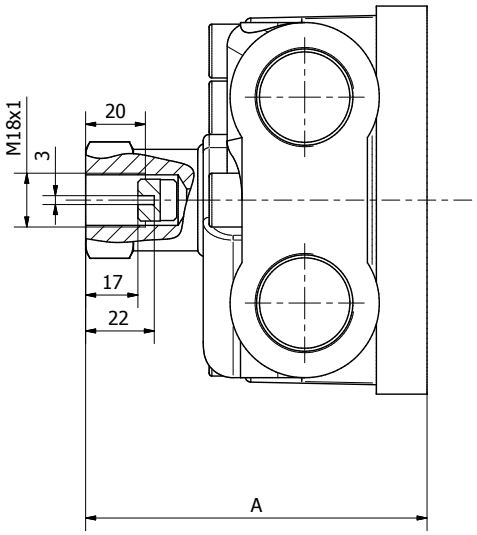
Tacho drive plug 1/2” BSP



DISTRIBUTOR TYPE	A
D40/D416/D47	75,5
D31B/D310B/D36B/D316B	63,5
D75	101
D90	107

Tachometer predisposition **ONLY**

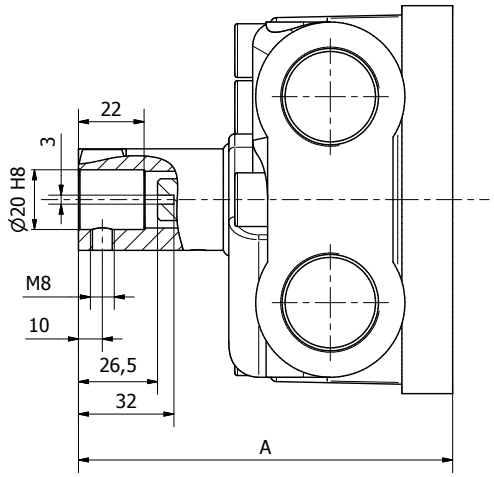
TA



DISTRIBUTOR TYPE	A
D40/D416/D47	114,5
D31B/D310B/D36B/D316B	102,5
D75	140
D90	146

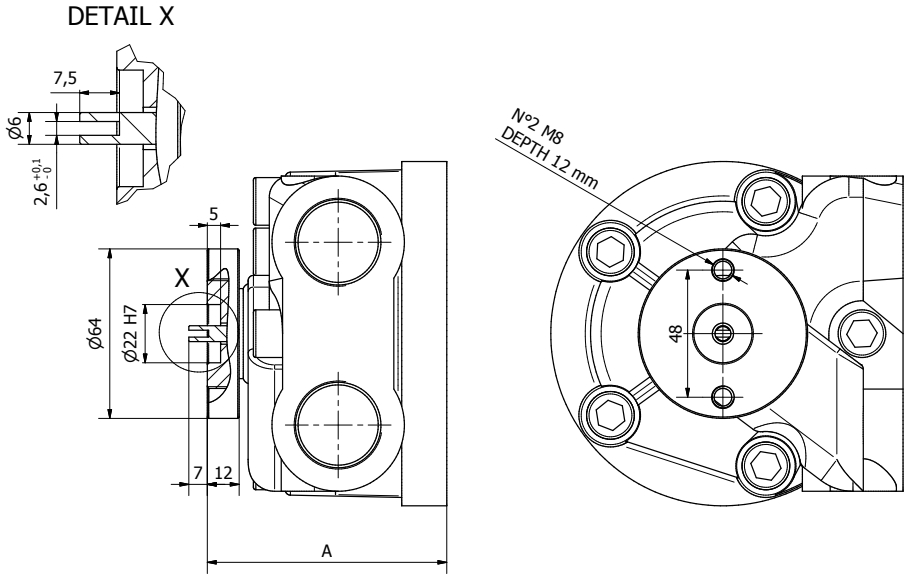
TACHOMETERS

TB



DISTRIBUTOR TYPE	A
D40/D416/D47	125,5
D31B/D310B/D36B/D316B	113,5
D75	151
D90	157

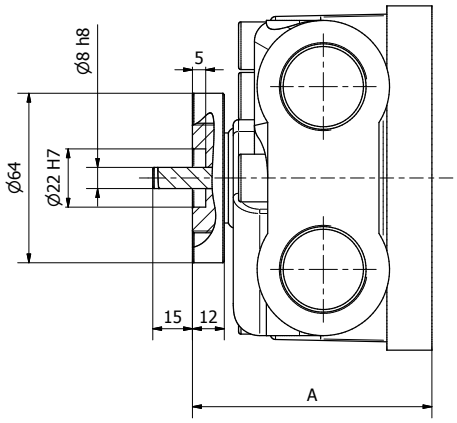
TT1

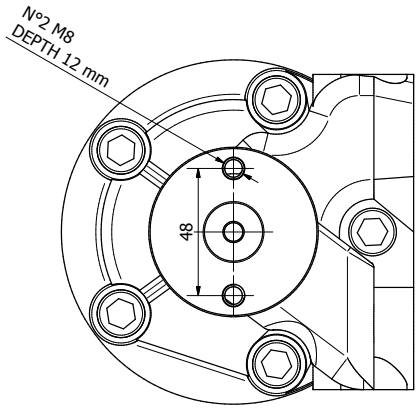


DISTRIBUTOR TYPE	A
D40/D416/D47	90,5
D31B/D310B/D36B/D316B	78,5
D75	116
D90	122

TACHOMETERS

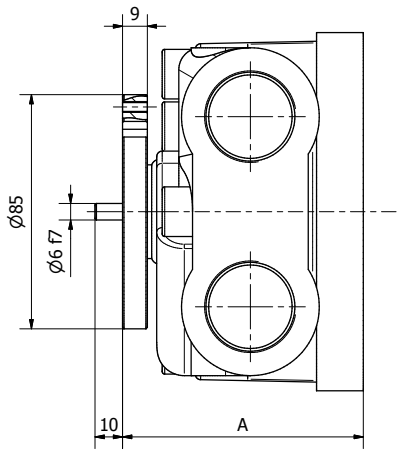
TQ1

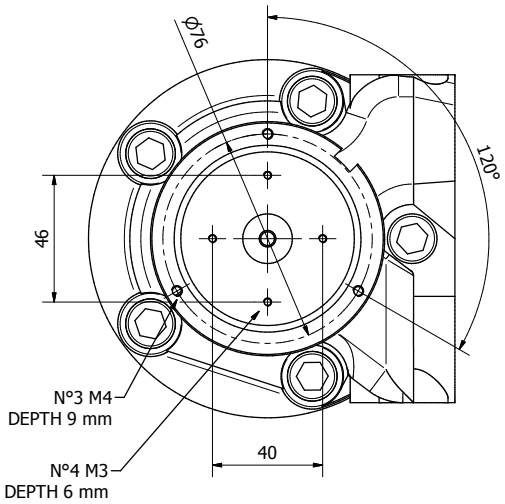




DISTRIBUTOR TYPE	A
D40/D416/D47	90,5
D31B/D310B/D36B/D316B	78,5
D75	116
D90	122

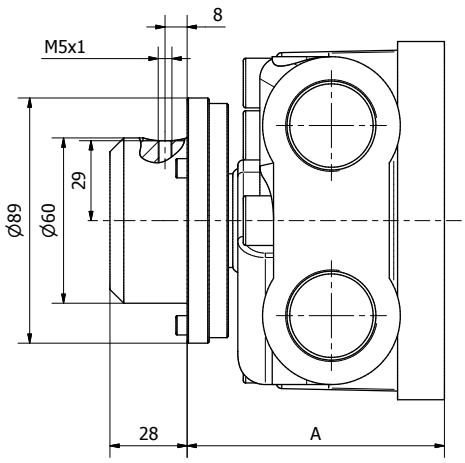
EST





DISTRIBUTOR TYPE	A
D40/D416/D47	87,5
D31B/D310B/D36B/D316B	75,5
D75	113
D90	119

EST 30

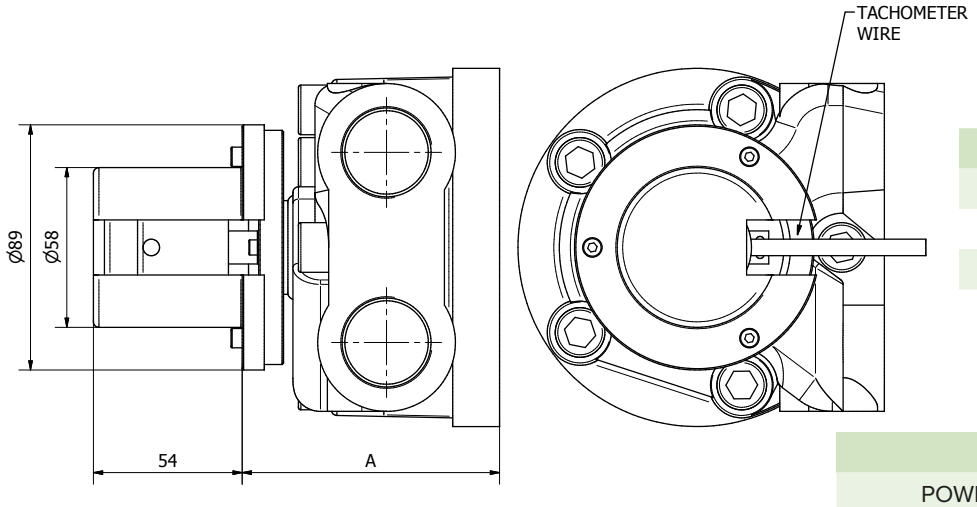


DISTRIBUTOR TYPE	A
D40/D416/D47	93,5
D31B/D310B/D36B/D316B	81,5
D75	119
D90	125

EST 30 ELECTRIC DATA	
POWER SUPPLY	10 - 30 VDC
IMPULSE / RPM	30
PROTECTION DEGREE	IP67
OUTPUT	NPN / PNP (*)

(*) Customer has to select it at the order stage. In case of non-indication by customer, NPN version will be supplied as standard.

EST 31

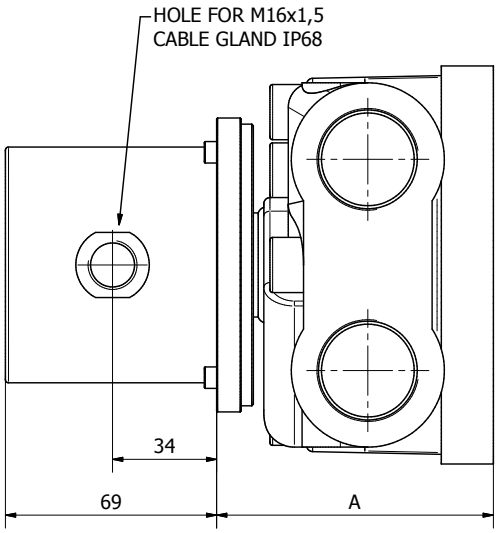


DISTRIBUTOR TYPE	A
D40/D416/D47	93,5
D31B/D310B/D36B/D316B	81,5
D75	119
D90	125

EST 31 ELECTRIC DATA	
POWER SUPPLY	8 - 24 VDC
IMPULSE / RPM	500
PROTECTION DEGREE	IP65
OUTPUT	PUSH-PULL

TACHOMETERS

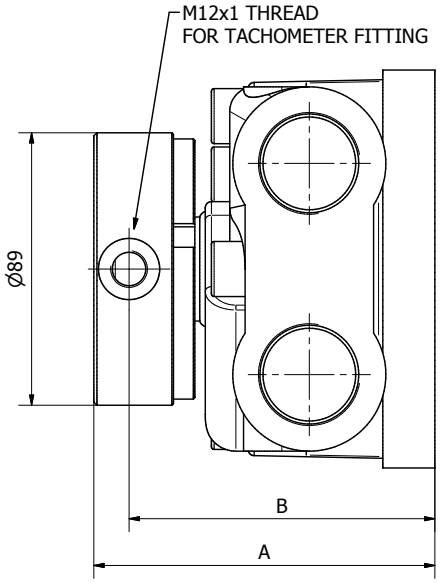
EST 32



DISTRIBUTOR TYPE	A
D40/D416/D47	93,5
D31B/D310B/D36B/D316B	81,5
D75	119
D90	125

EST 32 ELECTRIC DATA	
POWER SUPPLY	8 - 24 VDC
IMPULSE / RPM	4096
PROTECTION DEGREE	IP67
OUTPUT	SSI interface

EST 33

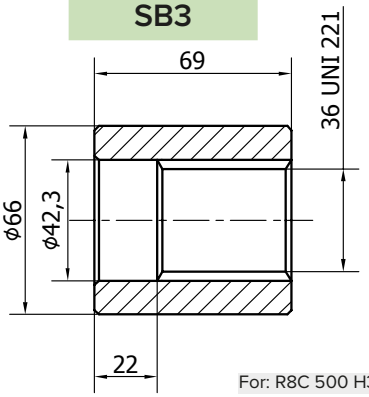


DISTRIBUTOR TYPE	A	B
D40/D416/D47	99,5	88
D31B/D310B/D36B/D316B	87,5	76
D75	125	113,5
D90	131	119,5

SENSOR **NOT INCLUDED**

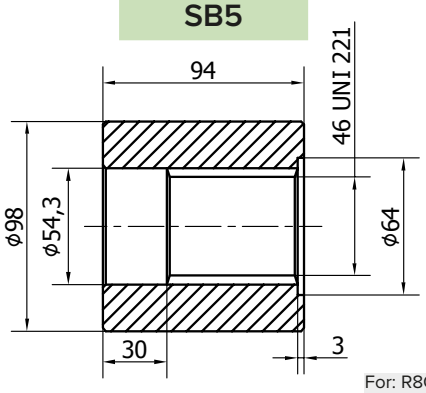
SPLINED BILLETS

SB3



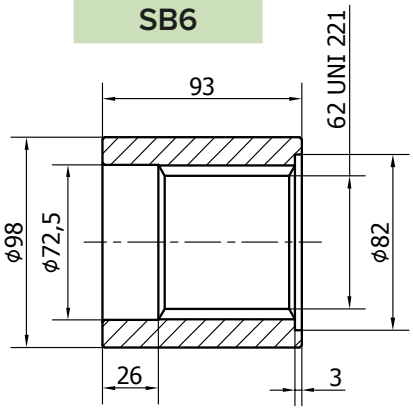
For: R8C 500 H3 A0

SB5



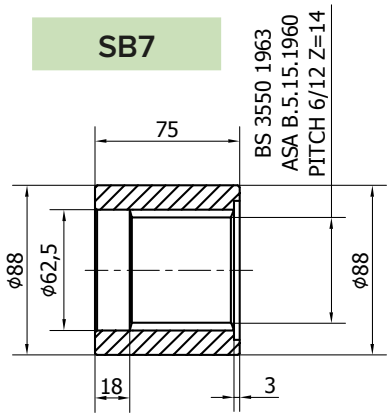
For: R8C 500/C H3 A0

SB6



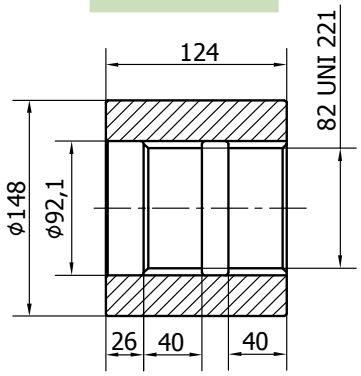
For: R8C 1400 H5 A0
R8C 3000/MR1400 H6 A0

SB7



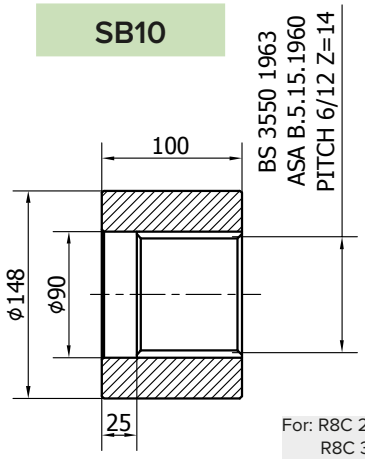
For: R8C 1400 H5 A1

SB9



For: R8C 2200 H55 A0
R8C 3000 H6 A0

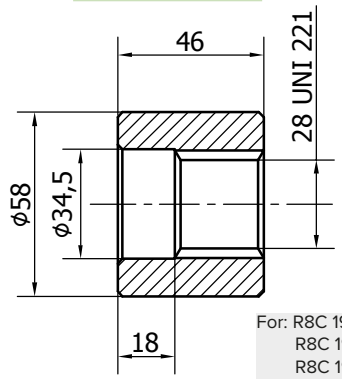
SB10



For: R8C 2200 H55 A1
R8C 3000 H6 A1
R8C 4600 H7 A1
R8C 5400 H7 A1
R8C 2200/MRH H55 A1
R8C 4600/MRH H7 A1
R8C 5400/MRH H7 A1

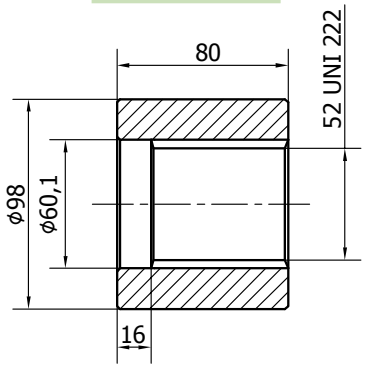
SPLINED BILLETS

SB14



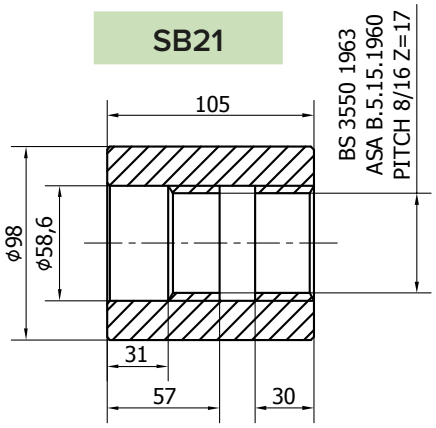
For: R8C 195 H1 A0
R8C 195/S H1 A0
R8C 195/BH H1 A0
R8C 250 H1 A0
R8C 250/S H1 A0
R8C 250/BH H1 A0

SB16



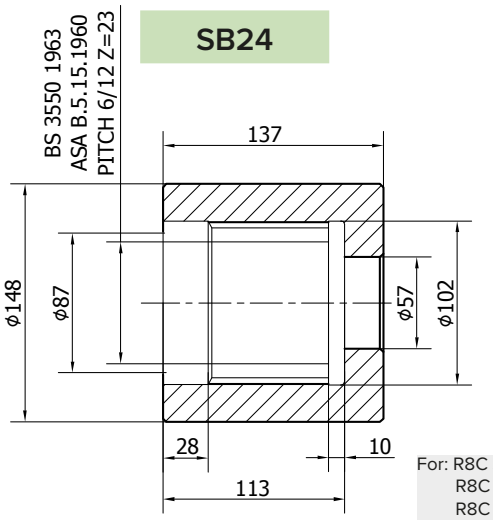
For: R8C 800/C H4 A0

SB21



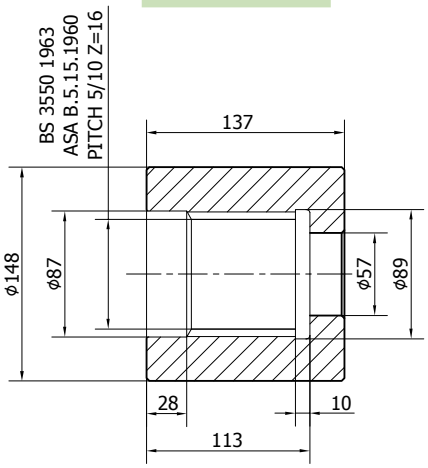
For: R8C 500/B30 H3 A1
R8C 800/B45 H4 A1
R8C 800/MRH H4 A1

SB24



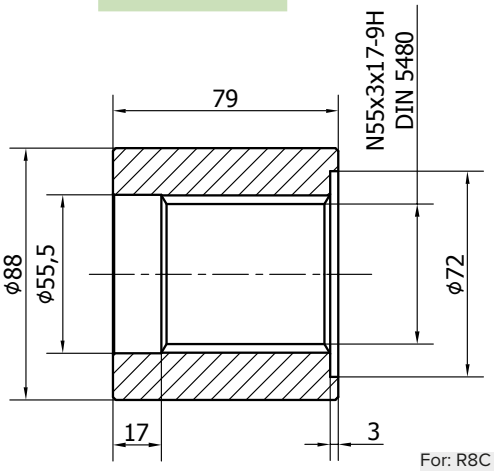
For: R8C 3000/MRH H6 A13
R8C 4600/MRH H7 A13
R8C 5400/MRH H7 A13

SB27



For: R8C 3000 H6 A12
R8C 4600 H7 A12
R8C 5400 H7 A12

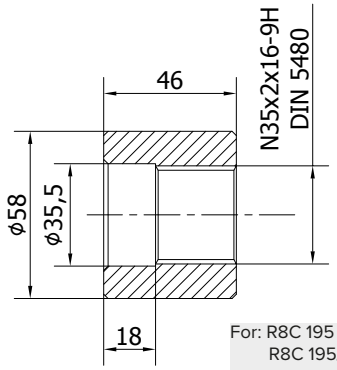
SB30



For: R8C 500/B30 A11
R8C 500/C A11

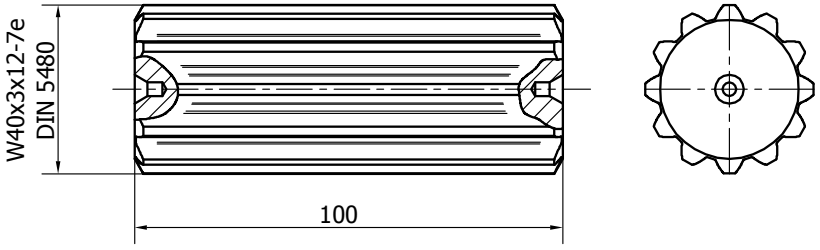
SPLINED BILLETS - SPLINED BARS

SB32



For: R8C 195 H1 A1
R8C 195/S H1 A1
R8C 195/BH H1 A1
R8C 250 H1 A1
R8C 250/S H1 A1
R8C 250/BH H1 A1

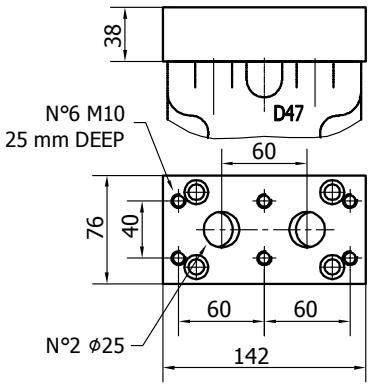
B8076



For: R8C 500 H3 A3

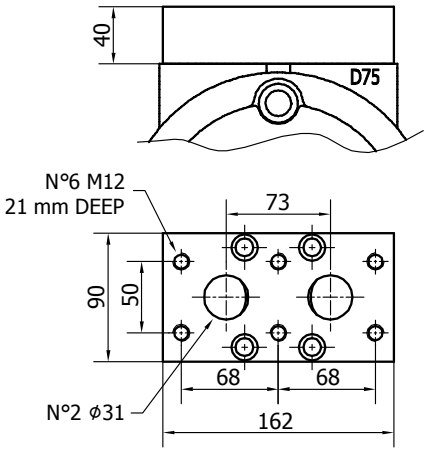
ADAPTOR FLANGES

FL2



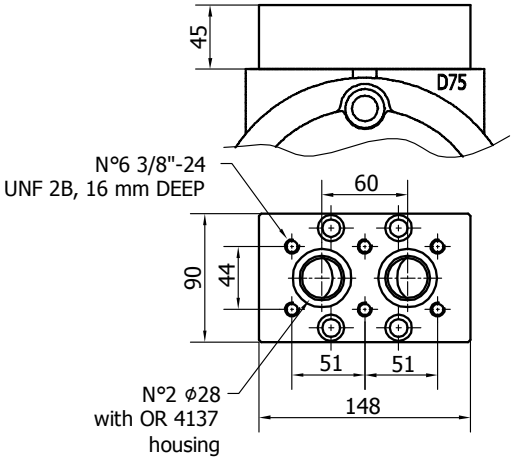
Connection block, fitting D47 distributor, for motor MR350/450/500/600/700/800

FL4



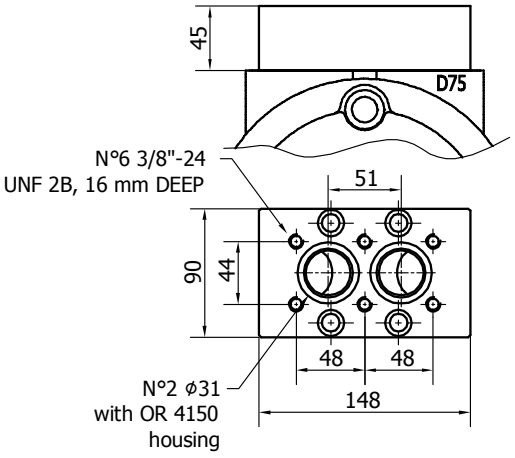
Connection block, fitting D75 distributor, for motor MR1100/1400/1600/1800/2100

FL5



Connection block, fitting D75 distributor, for motor HMB 60/80/100 - S03

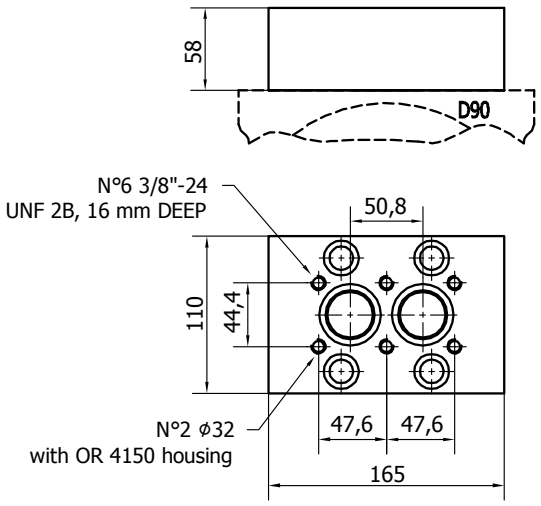
FL6



Connection block, fitting D75 distributor, for motor HMB 60/80/100 - S04

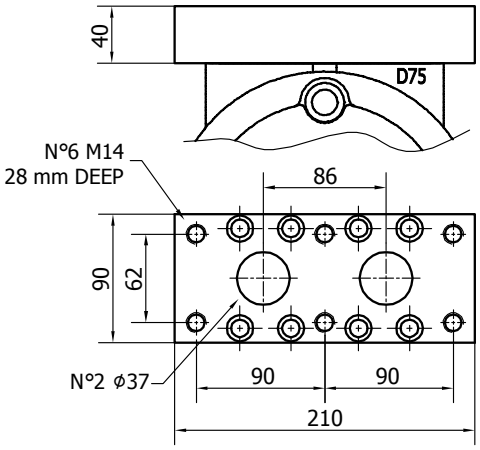
ADAPTOR FLANGES

FL7



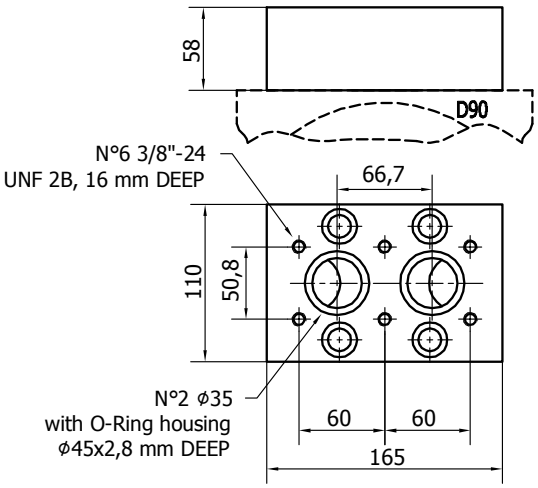
Connection block, fitting D90 distributor, for motor HMB 125/150/200 - S04

FL10



Connection block, fitting D75 distributor, for motor MR 2400/2800, MRE 3100

FL16



Connection block, fitting D90 distributor, for motor HMB 270/325 - S04

R8C - VALVES

SINGLE OVERCENTER - OVSA 160	Pag. 140
DOUBLE OVERCENTER - OVDA 160	Pag. 141
FLUSHING - AP 40	Pag. 142
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ANTICAVITATION - AC 80	Pag. 144
DOUBLE RELIEF AND ANTICAVITATION - RVDAC 80	Pag. 145
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SINGLE RELIEF AND OVERCENTER - ORVSA 200	Pag. 150
DOUBLE RELIEF AND SINGLE OVERCENTER - DRVSO200EP	Pag. 151
DOUBLE OVERCENTER - OVDA 480	Pag. 152
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SINGLE RELIEF AND OVERCENTER - ORVSA 480	Pag. 154
DOUBLE RELIEF AND FLUSHING - RVDAP 90	Pag. 155
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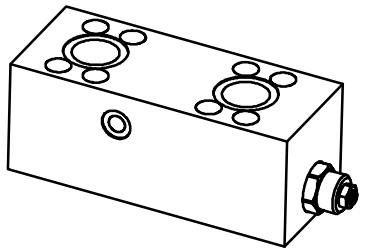
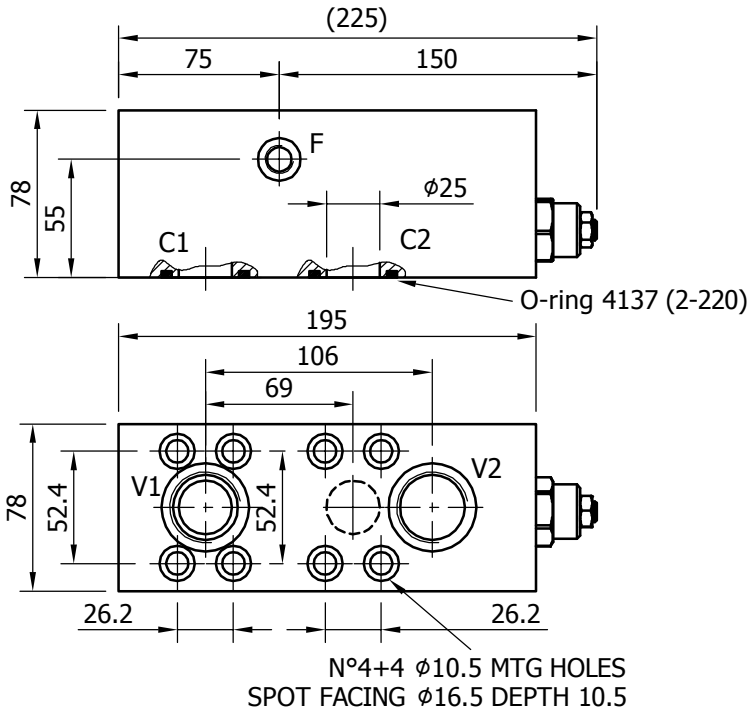
SINGLE OVERCENTER - OVSA 160



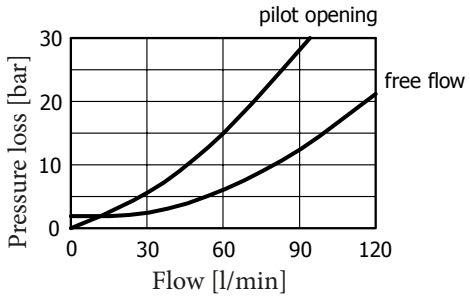


PORTS DIMENSION	
V1, V2	1" BSP
F	1/4" BSP
C1, C2	O-Ring 4137 Parker code 2-220

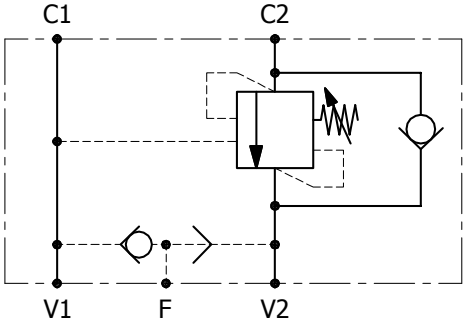
TECHNICAL DATA

		OVSA.160.1.D47	OVSA.160.2.D47	OVSA.160.3.D47
NOMINAL FLOW	[l/min]	120	120	120
MAXIMUM FLOW	[l/min]	160	160	160
MAXIMUM PRESSURE	[bar]	350	350	350
PILOT RATIO	[]	1 (3:1)	2 (4.5:1)	3 (10:1)
RELIEF VALVE SETTING RANGE	[bar]	70-280	140-350	140-350
STANDARD RELIEF SETTING	[bar]	210	210	210
BLOCK MATERIAL	[]	steel	steel	steel
DISTRIBUTOR FITTING	[]	D47	D47	D47

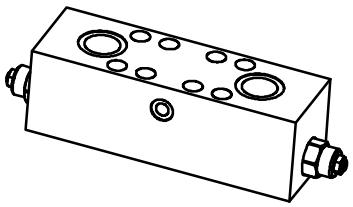
Cartridge characteristic



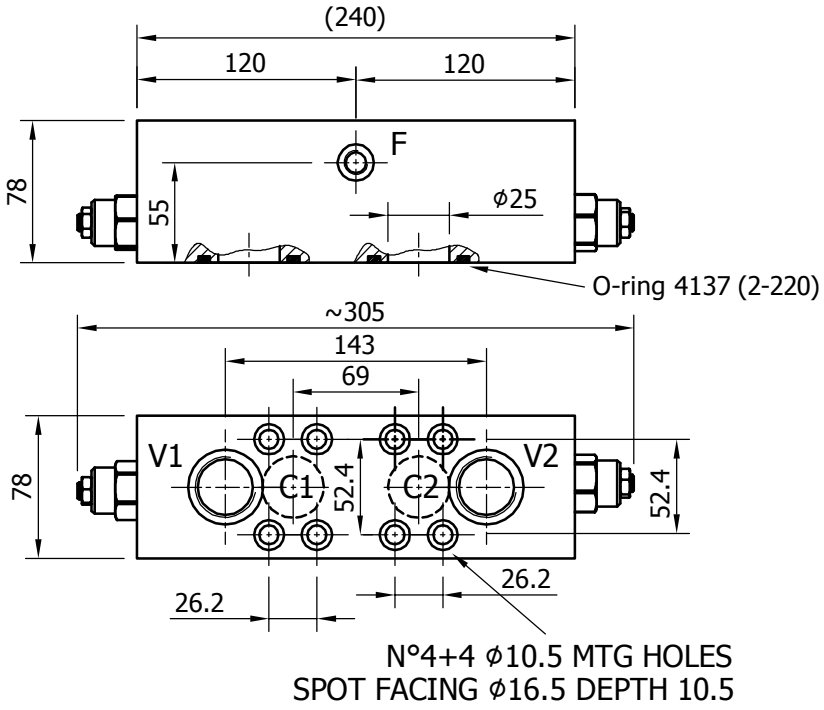
Hydraulic circuit



DOUBLE OVERCENTER - OVDA 160



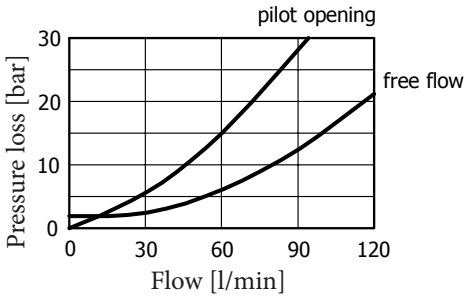
PORTS DIMENSION	
V1, V2	1” BSP
F	1/4” BSP
C1, C2	O-Ring 4137 Parker code 2-220



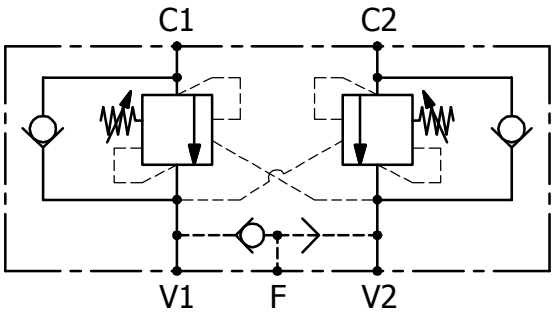
TECHNICAL DATA

		OVDA.160.1.D47	OVDA.160.2.D47	OVDA.160.3.D47
NOMINAL FLOW	[l/min]	120	120	120
MAXIMUM FLOW	[l/min]	160	160	160
MAXIMUM PRESSURE	[bar]	350	350	350
PILOT RATIO	[]	1 (3:1)	2 (4.5:1)	3 (10:1)
RELIEF VALVE SETTING RANGE	[bar]	70-280	40-350	140-350
STANDARD RELIEF SETTING	[bar]	210	210	210
BLOCK MATERIAL	[]	steel	steel	steel
DISTRIBUTOR FITTING	[]	D47	D47	D47

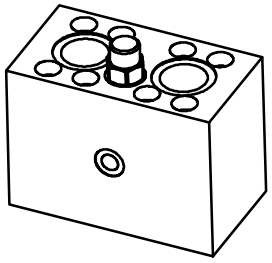
Cartridge characteristic

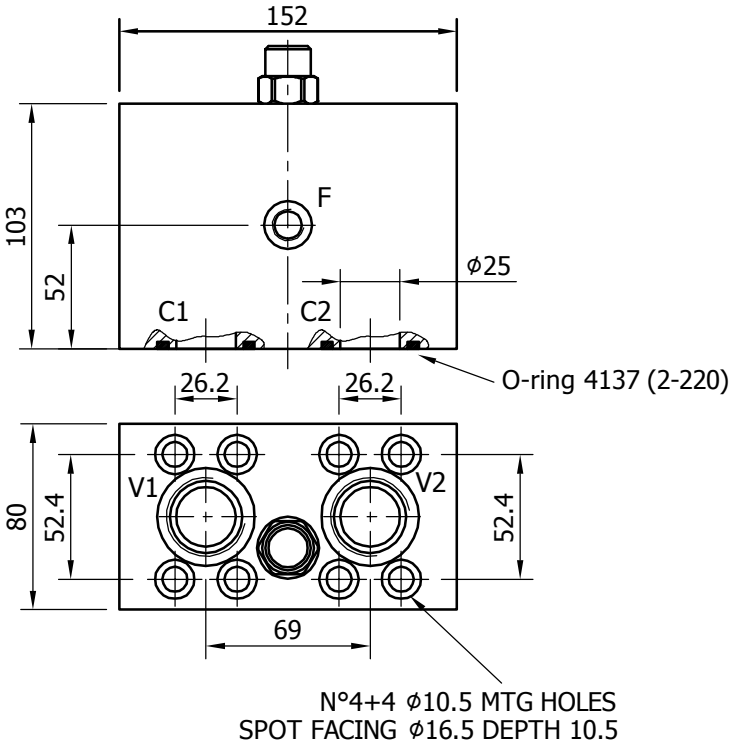


Hydraulic circuit



FLUSHING - AP 40



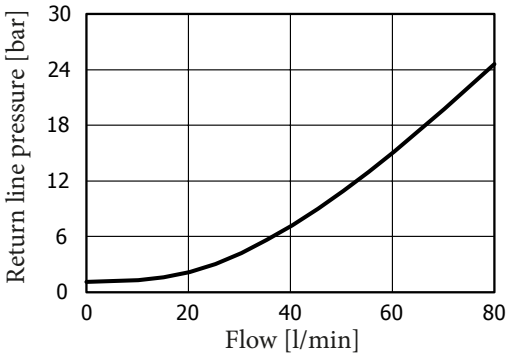


PORTS DIMENSION	
V1, V2	1" BSP
F	1/4" BSP
C1, C2	O-Ring 4137 Parker code 2-220

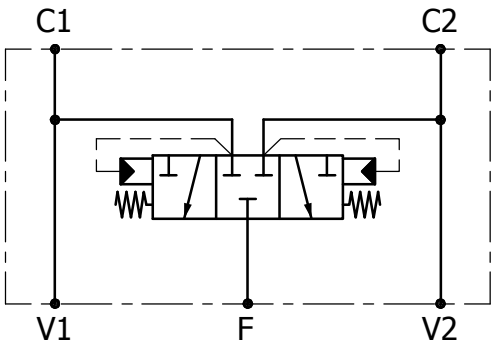
TECHNICAL DATA

		AP40.D47
MAXIMUM FLUSHING FLOW	[l/min]	80
MAXIMUM PRESSURE	[bar]	350
BLOCK MATERIAL	[]	steel
DISTRIBUTOR FITTING	[]	D47

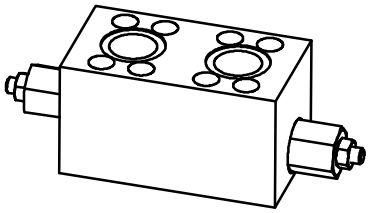
Cartridge characteristic

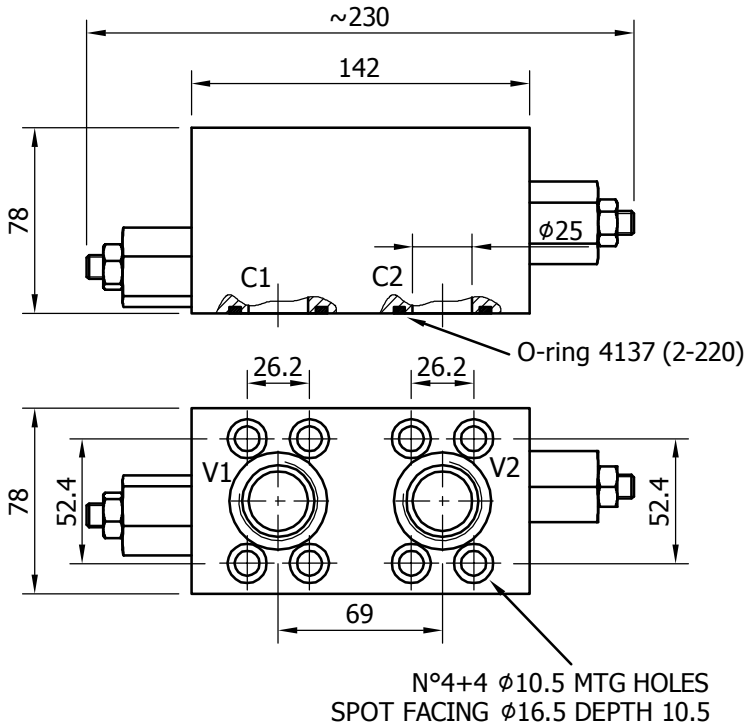


Hydraulic circuit



DOUBLE RELIEF - RVDA 80



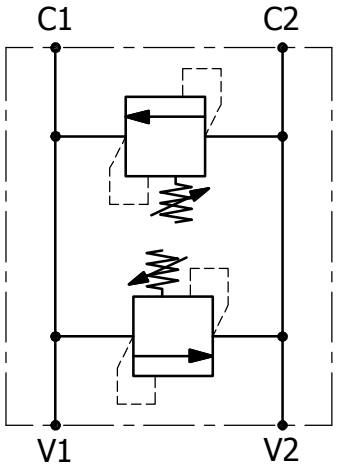


PORTS DIMENSION	
V1, V2	1" BSP
C1, C2	O-Ring 4137 Parker code 2-220

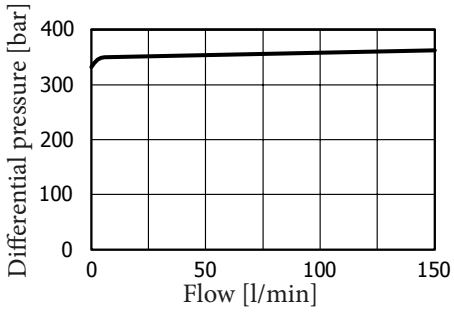
TECHNICAL DATA

		RVDA.80.C.D47
NOMINAL FLOW	[l/min]	150
MAXIMUM FLOW	[l/min]	200
MAXIMUM PRESSURE	[bar]	350
RELIEF VALVE SETTING RANGE	[bar]	C (20-350)
STANDARD RELIEF SETTING	[bar]	20
BLOCK MATERIAL	[]	steel
DISTRIBUTOR FITTING	[]	D47

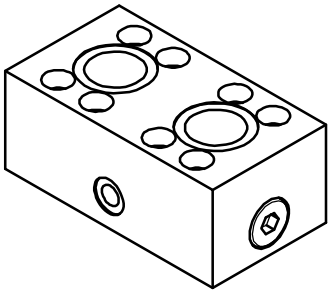
Hydraulic circuit

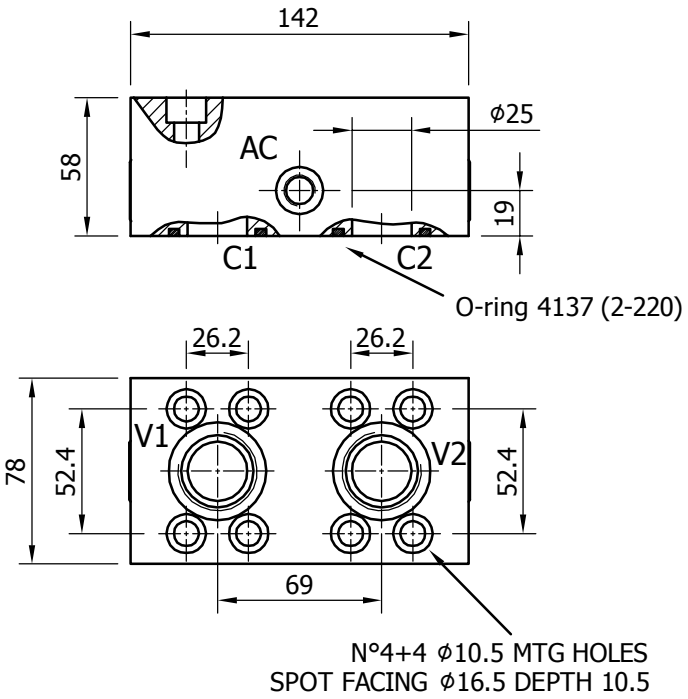


Cartridge typical pressure rise



ANTICAVITATION - AC 80



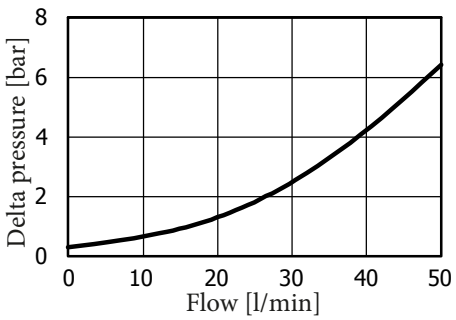


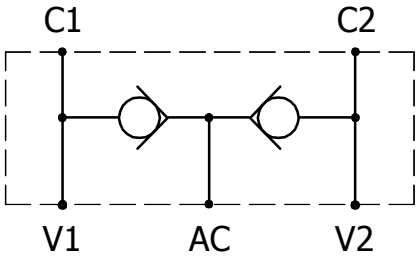
PORTS DIMENSION	
V1, V2	1" BSP
AC	1/4" BSP
C1, C2	O-Ring 4137 Parker code 2-220

TECHNICAL DATA

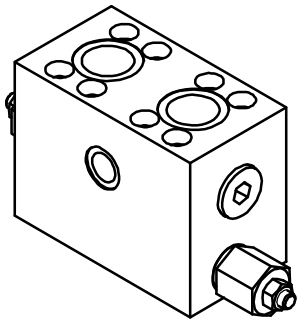
		AC80.D47
NOMINAL FLOW	[l/min]	150
MAXIMUM FLOW	[l/min]	200
MAXIMUM PRESSURE	[bar]	350
MAXIMUM ANTICAVITATION FLOW (FROM AC TO C1 OR C2)	[l/min]	50
BLOCK MATERIAL	[]	steel
DISTRIBUTOR FITTING	[]	D47

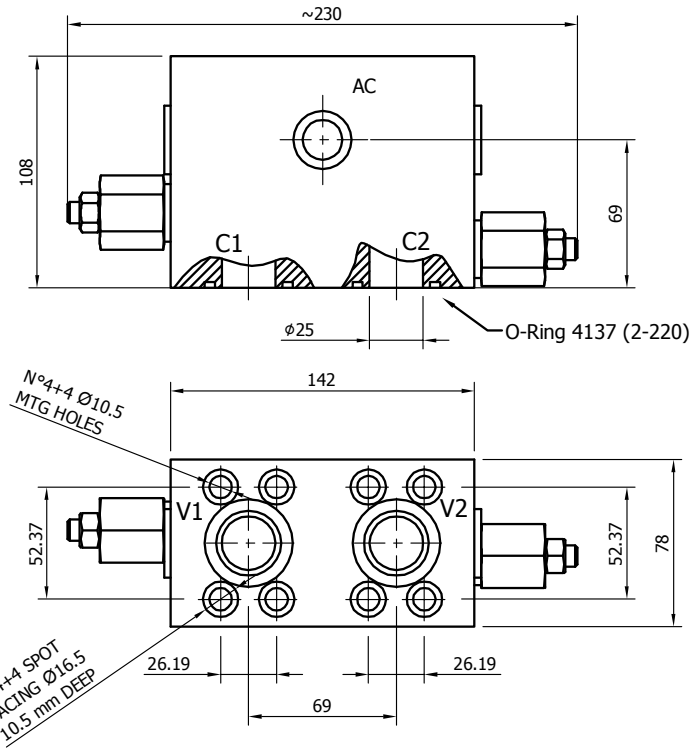
Check valve flow/pressure curve





RELIEF & ANTICAVITATION - RVDAC80

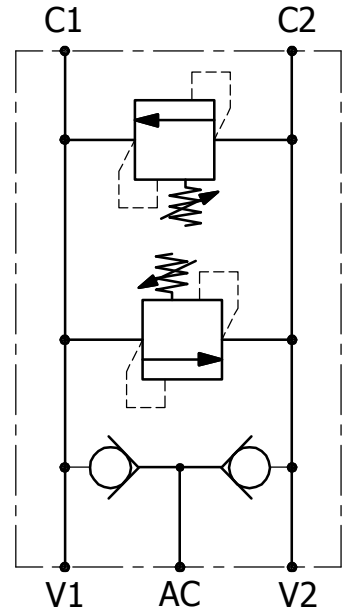




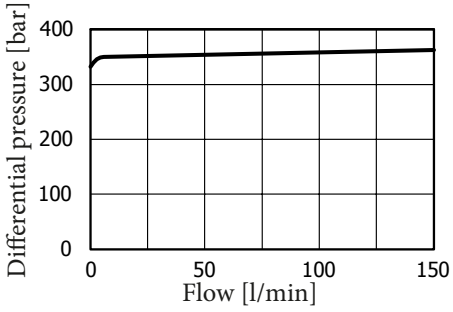
PORTS DIMENSION	
V1, V2	1" BSP
AC	1/4" BSP
C1, C2	O-Ring 4137 Parker code 2-220

TECHNICAL DATA

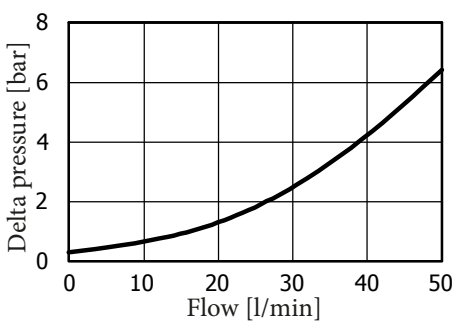
		RVDAC80.C.D47
NOMINAL FLOW	[l/min]	150
MAXIMUM FLOW	[l/min]	200
MAXIMUM PRESSURE	[bar]	350
RELIEF VALVE SETTING RANGE	[bar]	C (20-350)
STANDARD RELIEF SETTING	[bar]	20
MAXIMUM ANTICAVITATION FLOW (FROM AC TO C1 OR C2)	[l/min]	50
BLOCK MATERIAL	[]	steel
DISTRIBUTOR FITTING	[]	D47



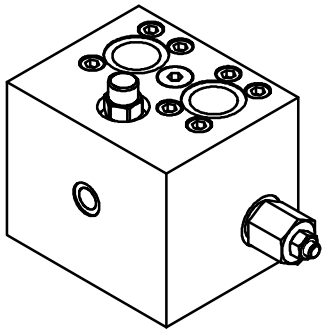
Relief cartridge typical pressure rise

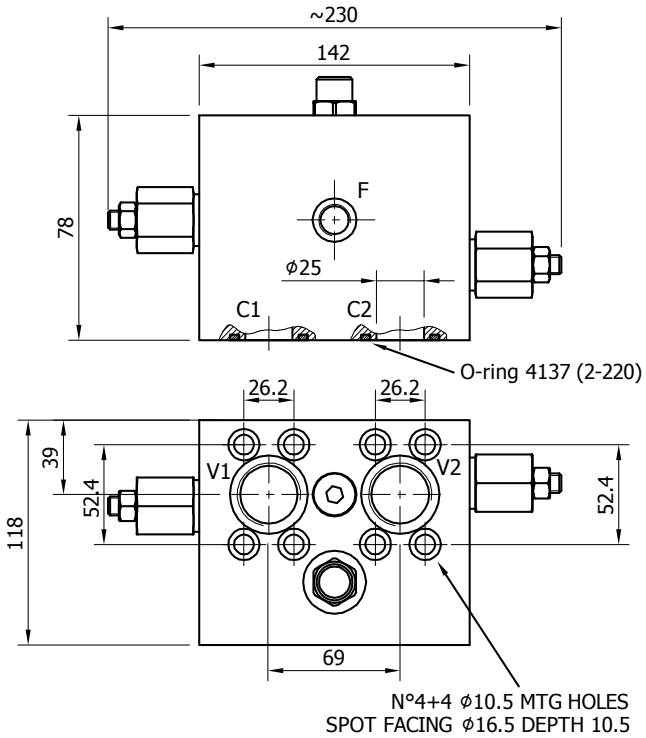


Check valve flow/pressure curve



RELIEF & FLUSHING - RVDAP80



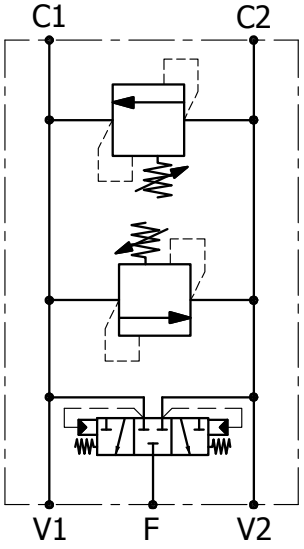


PORTS DIMENSION	
V1, V2	1" BSP
F	1/4" BSP
C1, C2	O-Ring 4137 Parker code 2-220

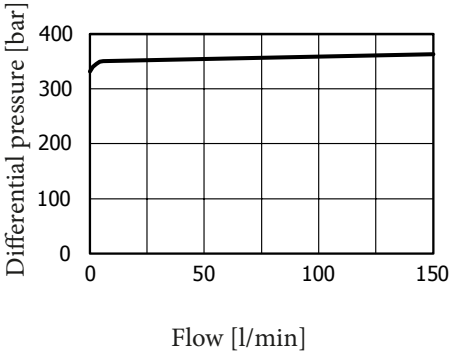
TECHNICAL DATA

		RVDAP80.C.D47
RELIEF VALVE MAXIMUM FLOW	[l/min]	200
RELIEF VALVE SETTING RANGE	[bar]	C (20-350)
STANDARD RELIEF SETTING	[bar]	70
MAXIMUM FLUSHING FLOW	[l/min]	80
MAXIMUM PRESSURE	[bar]	350
BLOCK MATERIAL	[]	steel
DISTRIBUTOR FITTING	[]	D47

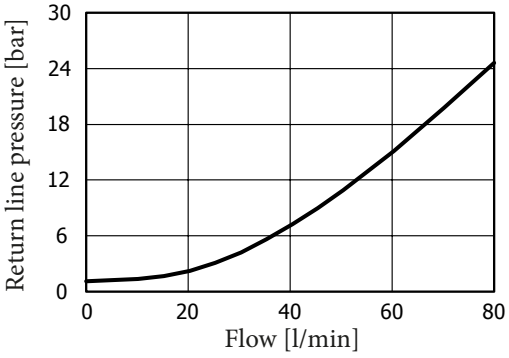
Hydraulic circuit



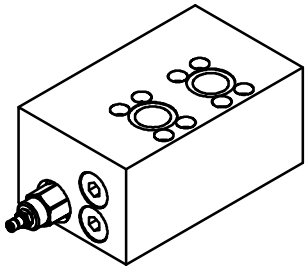
Relief cartridge typical pressure rise

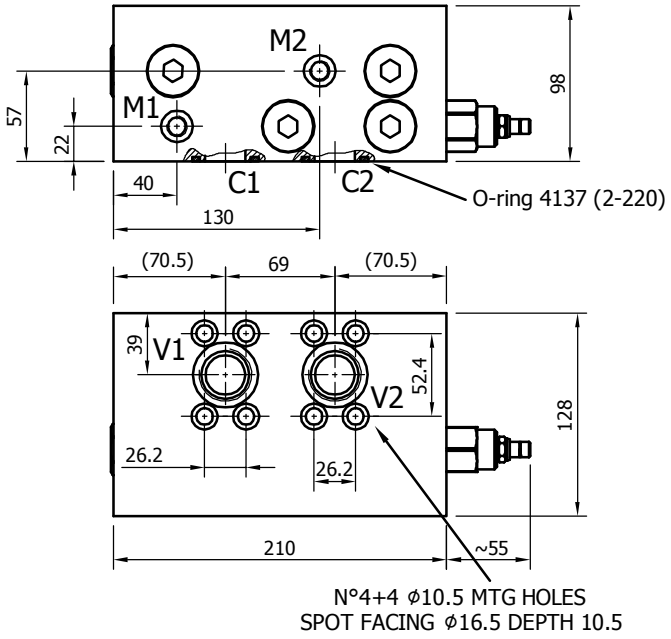


Flushing valve characteristic



RELIEF & ANTICAVITATION - RVSAC200



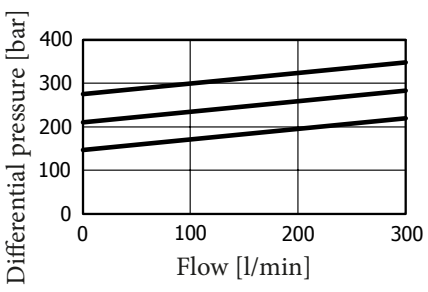


PORTS DIMENSION	
V1, V2	1" BSP
M1, M2	1/4" BSP
C1, C2	O-Ring 4137 Parker code 2-220

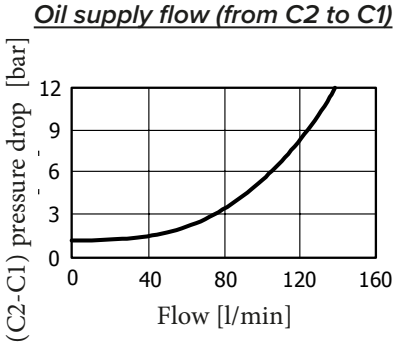
TECHNICAL DATA

		RVSAC200.C.D47
RELIEF VALVE MAXIMUM FLOW	[l/min]	200
MAXIMUM PRESSURE	[bar]	350
RELIEF VALVE SETTING RANGE	[bar]	C (70-420)
STANDARD RELIEF SETTING	[bar]	70
CHECK VALVE MAXIMUM FLOW	[l/min]	160
BLOCK MATERIAL	[]	steel
DISTRIBUTOR FITTING	[]	D47

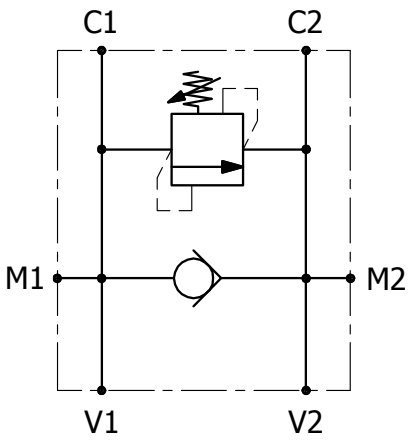
Relief cartridge typical pressure rise



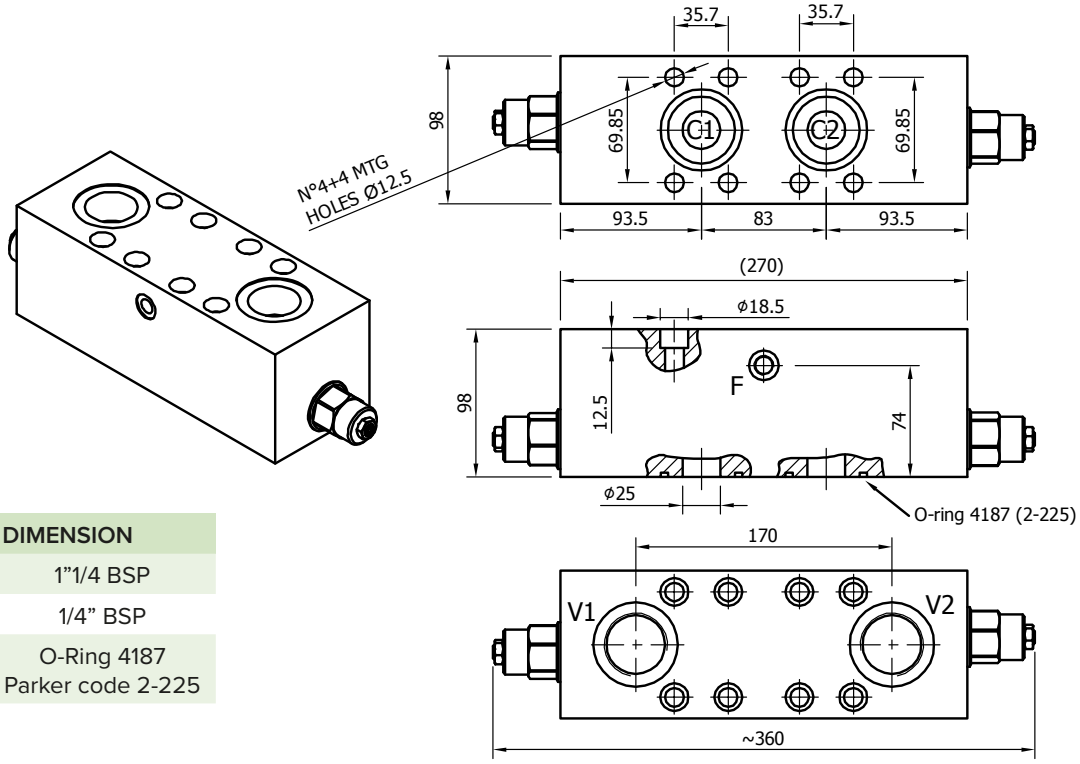
Oil supply flow (from C2 to C1)



Hydraulic circuit



DOUBLE OVERCENTER - OVDA 300

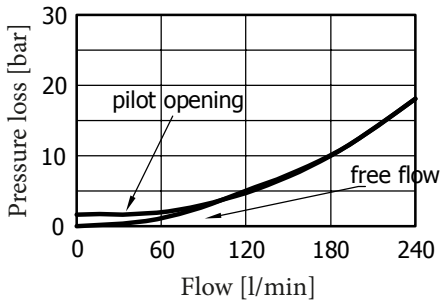


PORTS DIMENSION	
V1, V2	1"1/4 BSP
F	1/4" BSP
C1, C2	O-Ring 4187 Parker code 2-225

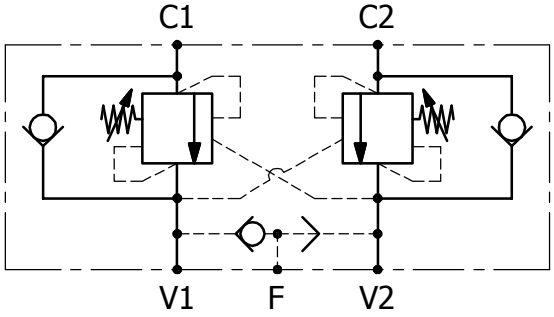
TECHNICAL DATA

		OVDA.300.1.D75	OVDA.300.4.D75	OVDA.300.2.D75
NOMINAL FLOW	[l/min]	240	240	240
MAXIMUM FLOW	[l/min]	300	300	300
MAXIMUM PRESSURE	[bar]	350	350	350
PILOT RATIO	[]	1 (3:1)	4 (10:1)	2 (4.5:1)
RELIEF VALVE SETTING RANGE	[bar]	70-280	140-350	140-350
STANDARD RELIEF SETTING	[bar]	210	210	210
BLOCK MATERIAL	[]	steel	steel	steel
DISTRIBUTOR FITTING	[]	D75	D75	D75

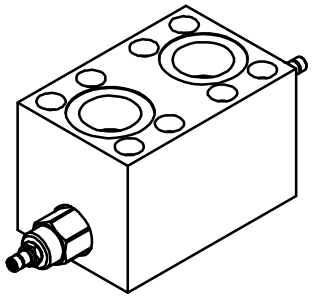
Cartridge characteristic

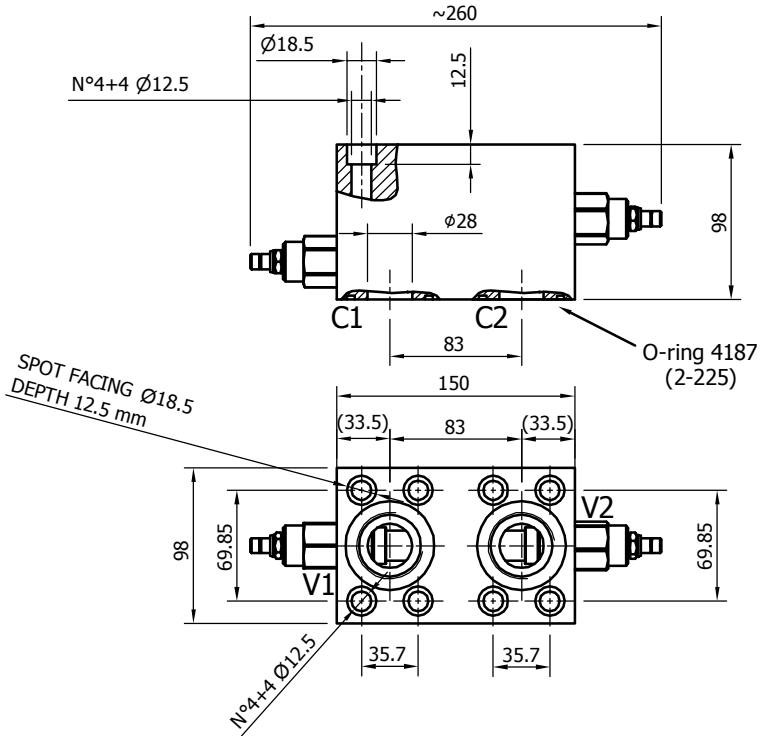


Hydraulic circuit



DOUBLE RELIEF - RVDA 200



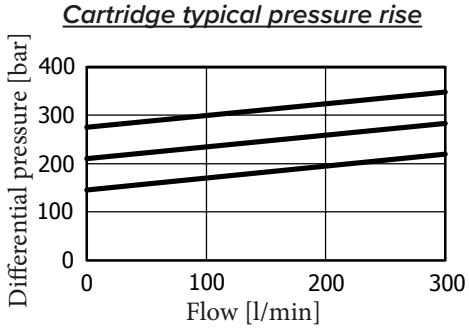


PORTS DIMENSION	
V1, V2	1"1/4 BSP
C1, C2	O-Ring 4187 Parker code 2-225

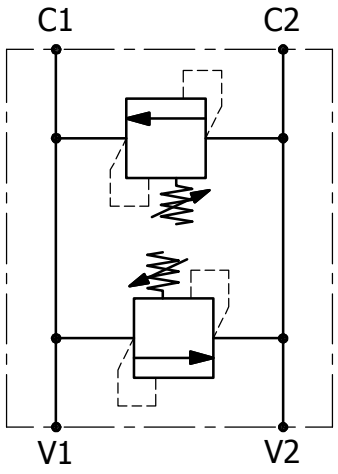
TECHNICAL DATA

		RVDA.200.C.D75
RELIEF VALVE MAXIMUM FLOW	[l/min]	200
MAXIMUM PRESSURE	[bar]	350
RELIEF VALVE SETTING RANGE	[bar]	C (70-420)
STANDARD RELIEF SETTING	[bar]	70
BLOCK MATERIAL	[]	steel
DISTRIBUTOR FITTING	[]	D75

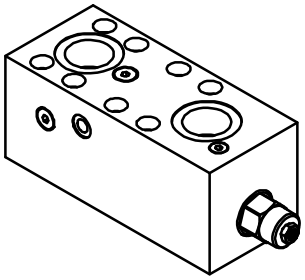
Cartridge typical pressure rise

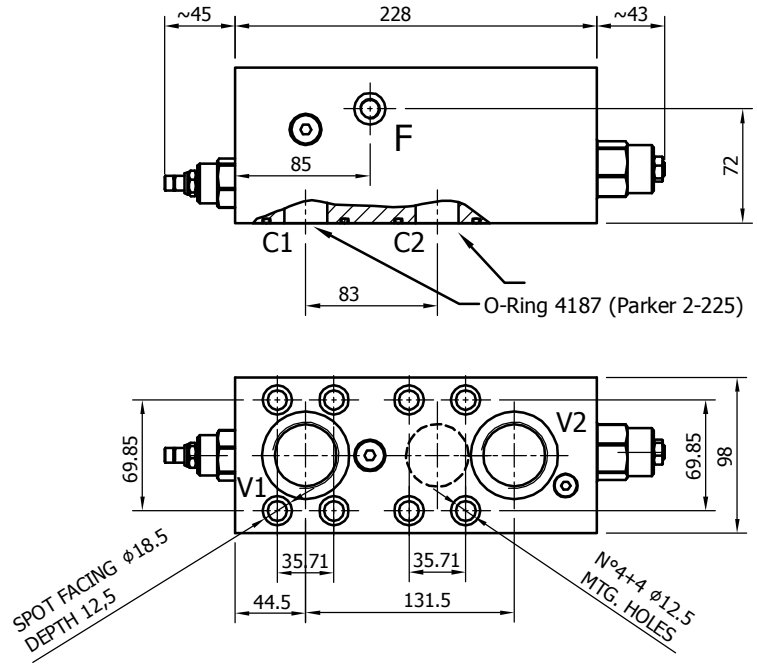


Hydraulic circuit



RELIEF & OVERCENTER - ORVSA 200



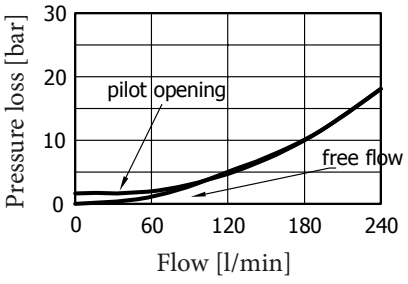


PORTS DIMENSION	
V1, V2	1"1/4 BSP
F	1/4" BSP
C1, C2	O-Ring 4187 Parker code 2-225

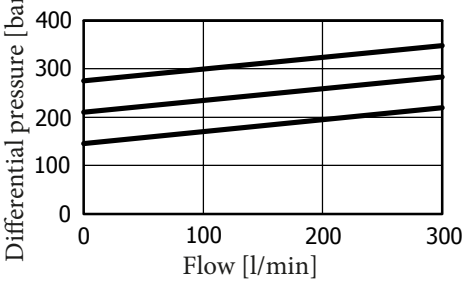
TECHNICAL DATA

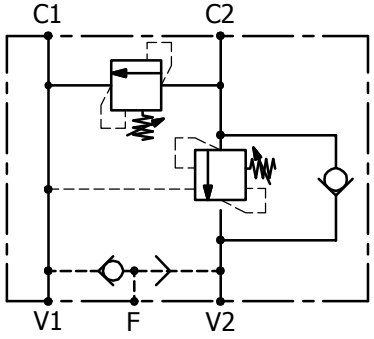
		ORVSA.200.1.C.D75	ORVSA.200.4.C.D75	ORVSA.200.2.C.D75
NOMINAL FLOW	[l/min]	240	240	240
MAXIMUM FLOW	[l/min]	300	300	300
MAXIMUM PRESSURE	[bar]	350	350	350
PILOT RATIO	[]	1 (3:1)	4 (10:1)	2 (4.5:1)
OVC RELIEF VALVE SETTING RANGE	[bar]	70-280	140-350	140-350
OVC STANDARD RELIEF SETTING	[bar]	210	210	210
RELIEF VALVE SETTING RANGE	[bar]	C (70-420)	C (70-420)	C (70-420)
RELIEF STANDARD SETTING	[bar]	70	70	70
BLOCK MATERIAL	[]	steel	steel	steel
DISTRIBUTOR FITTING	[]	D75	D75	D75

OVC cartridge characteristic

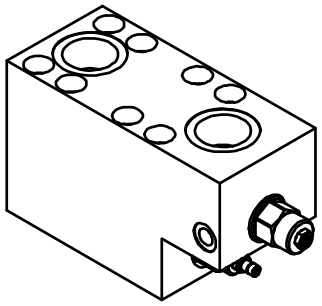


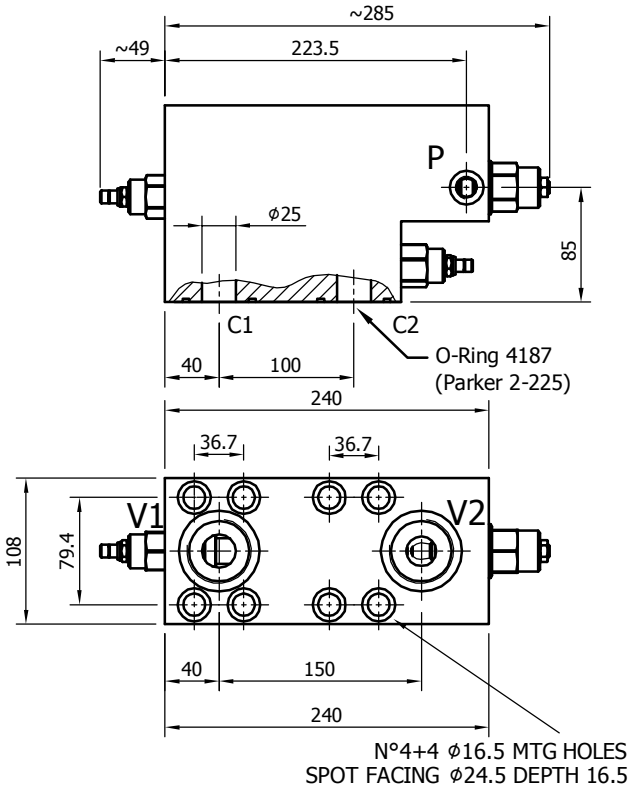
Relief cartridge typical pressure rise





RELIEF & OVERCENTER - DRVSO200EP



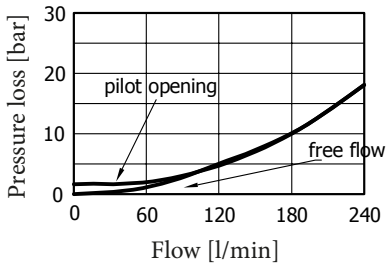


PORTS DIMENSION	
V1, V2	1"1/4 BSP
P	1/4" BSP
C1, C2	O-Ring 4137 Parker code 2-220

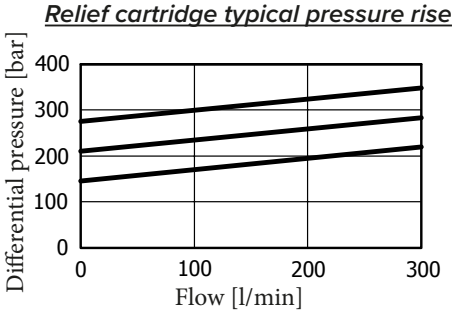
TECHNICAL DATA

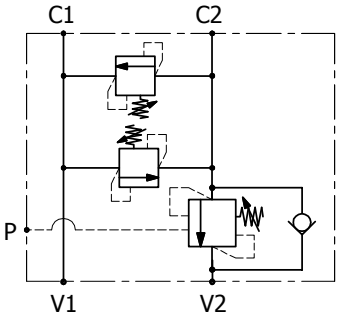
		DRVSO200EP.1.C.D75	DRVSO200EP.4.C.D75	DRVSO200EP.2.C.D75
NOMINAL FLOW	[l/min]	240	240	240
MAXIMUM FLOW	[l/min]	300	300	300
MAXIMUM PRESSURE	[bar]	350	350	350
PILOT RATIO	[]	1 (3:1)	4 (10:1)	2 (4.5:1)
OVC RELIEF VALVE SETTING RANGE	[bar]	70-280	140-350	140-350
OVC STANDARD RELIEF SETTING	[bar]	210	210	210
RELIEF VALVE SETTING RANGE	[bar]	C (70-420)	C (70-420)	C (70-420)
RELIEF STANDARD SETTING	[bar]	70	70	70
BLOCK MATERIAL	[]	steel	steel	steel
DISTRIBUTOR FITTING	[]	D75	D75	D75

OVC cartridge characteristic

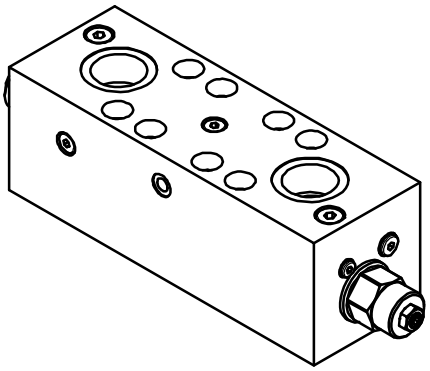


Relief cartridge typical pressure rise

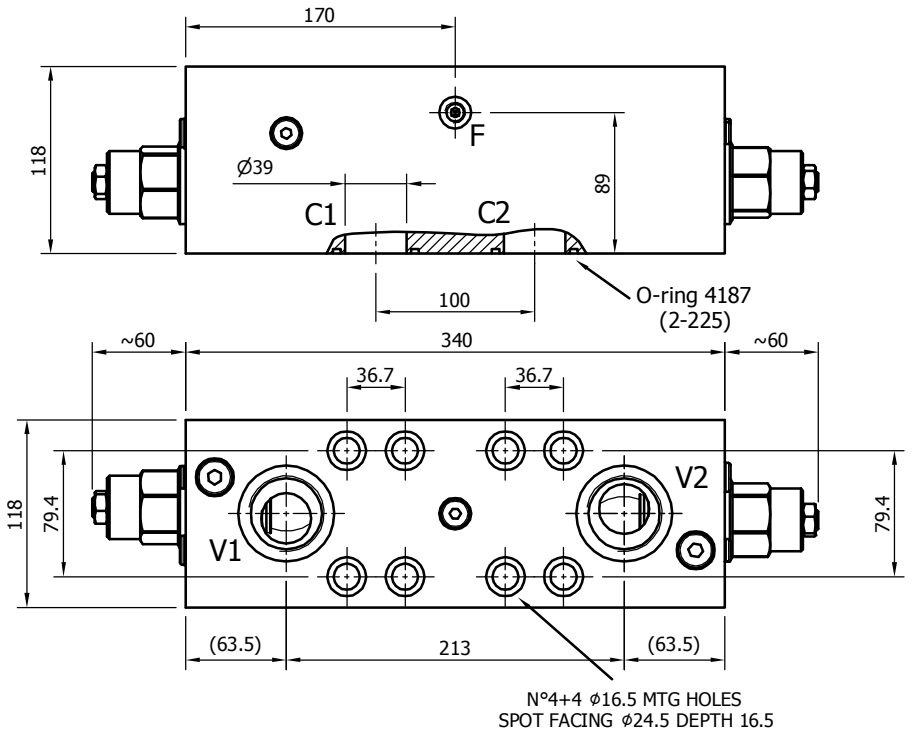




DOUBLE OVERCENTER - OVDA 480



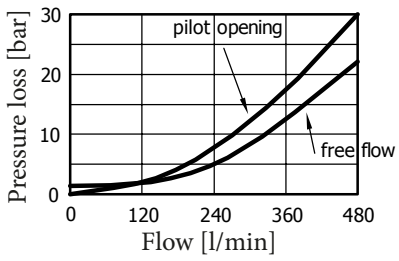
PORTS DIMENSION	
V1, V2	1"1/2 BSP
F	1/4" BSP
C1, C2	O-Ring 4187 Parker code 2-225



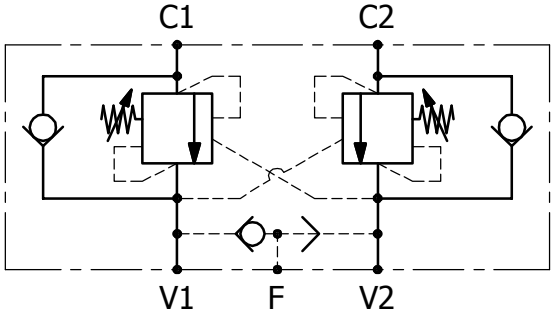
TECHNICAL DATA

		OVDA.480.1.D90	OVDA.480.4.D90	OVDA.480.2.D90
NOMINAL FLOW	[l/min]	480	480	480
MAXIMUM FLOW	[l/min]	600	600	600
MAXIMUM PRESSURE	[bar]	350	350	350
PILOT RATIO	[]	1 (3:1)	4 (10:1)	2 (4.5:1)
RELIEF VALVE SETTING RANGE	[bar]	70-280	140-350	140-350
STANDARD RELIEF SETTING	[bar]	210	210	210
BLOCK MATERIAL	[]	steel	steel	steel
DISTRIBUTOR FITTING	[]	D90	D90	D90

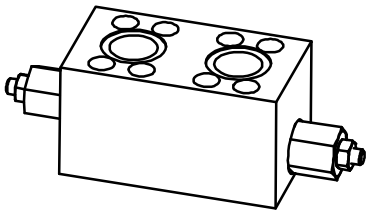
Cartridge characteristic

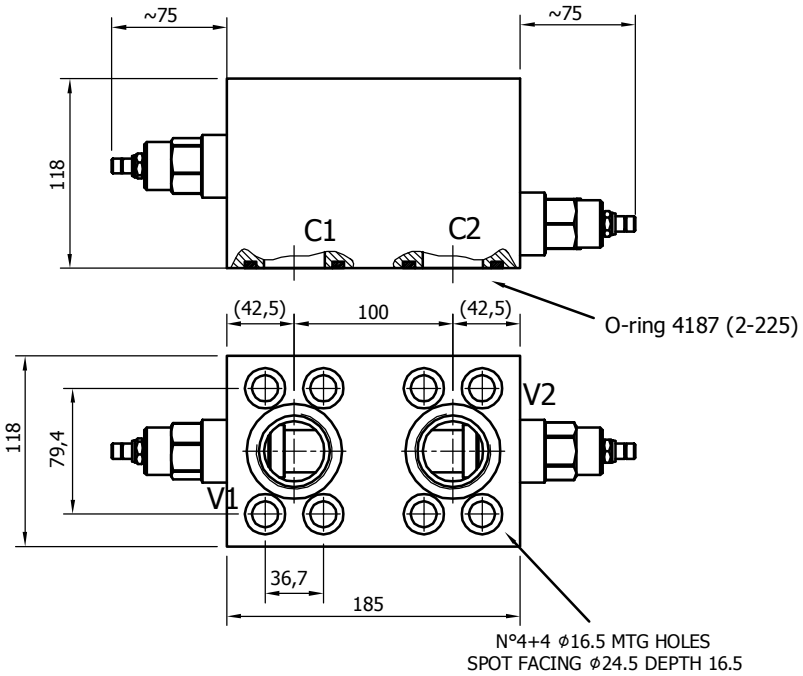


Hydraulic circuit



DOUBLE RELIEF - RVDA 380



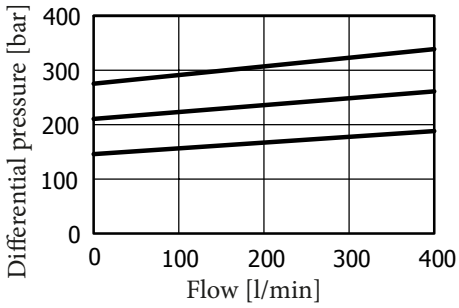


PORTS DIMENSION	
V1, V2	1"1/2 BSP
C1, C2	O-Ring 4187 Parker code 2-225

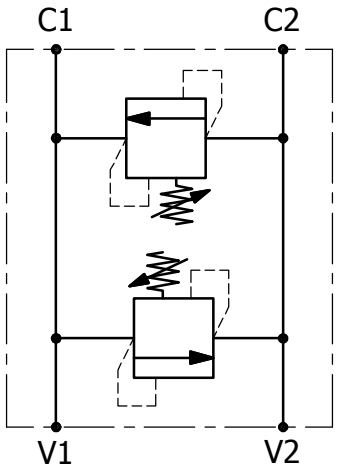
TECHNICAL DATA

		RVDA.380.C.D90
RELIEF VALVE MAXIMUM FLOW	[l/min]	380
MAXIMUM PRESSURE	[bar]	350
RELIEF VALVE SETTING RANGE	[bar]	C (70-420)
STANDARD RELIEF SETTING	[bar]	70
BLOCK MATERIAL	[]	steel
DISTRIBUTOR FITTING	[]	D90

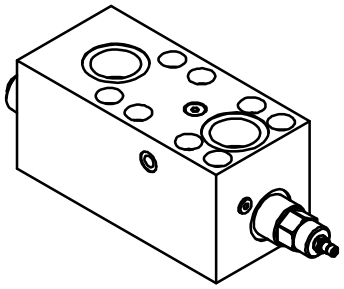
Cartridge typical pressure rise

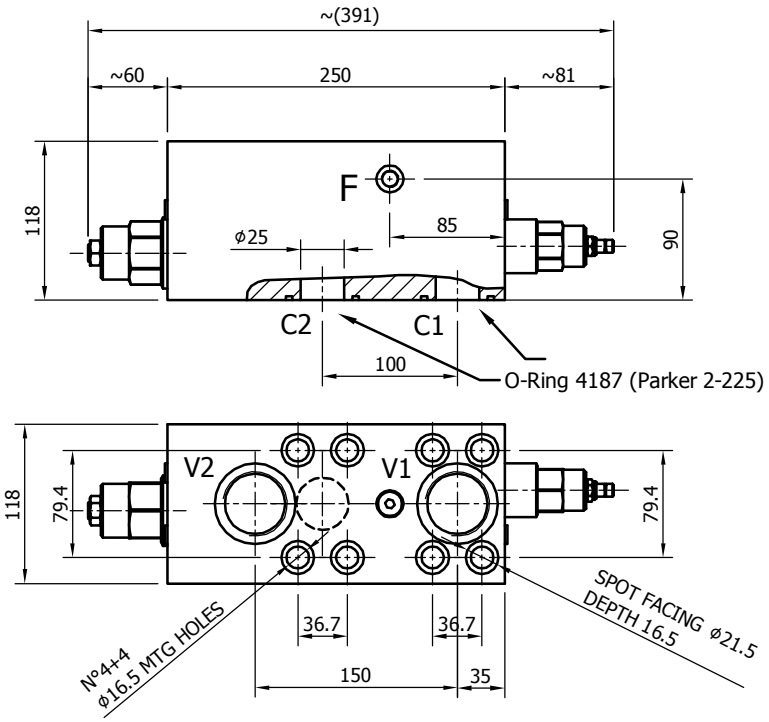


Hydraulic circuit



RELIEF & OVERCENTER - ORVSA 480



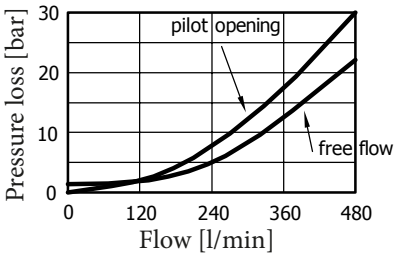


PORTS DIMENSION	
V1, V2	1"1/2 BSP
F	1/4" BSP
C1, C2	O-Ring 4187 Parker code 2-225

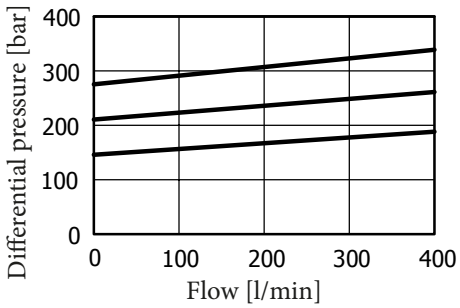
TECHNICAL DATA

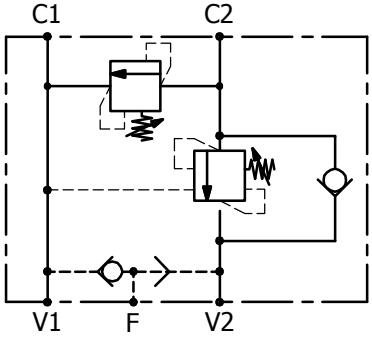
		ORVSA.480.1.D90	ORVSA.480.4.D90	ORVSA.480.2.D90
NOMINAL FLOW	[l/min]	480	480	480
MAXIMUM FLOW	[l/min]	600	600	600
MAXIMUM PRESSURE	[bar]	350	350	350
PILOT RATIO	[]	1 (3:1)	4 (10:1)	2 (4.5:1)
OVC RELIEF VALVE SETTING RANGE	[bar]	70-280	140-350	140-350
OVC STANDARD RELIEF SETTING	[bar]	210	210	210
RELIEF VALVE SETTING RANGE	[bar]	C (70-420)	C (70-420)	C (70-420)
RELIEF STANDARD SETTING	[bar]	70	70	70
BLOCK MATERIAL	[]	steel	steel	steel
DISTRIBUTOR FITTING	[]	D90	D90	D90

OVC cartridge characteristic

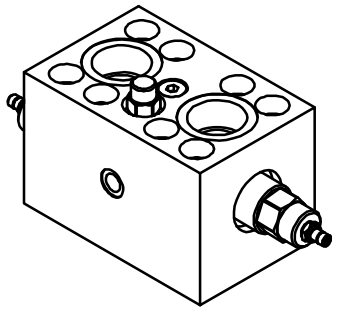


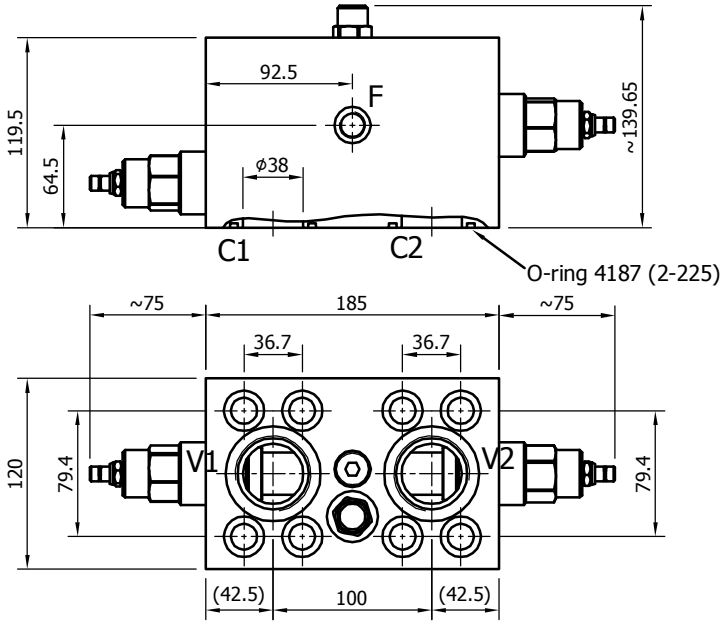
Relief cartridge typical pressure rise





RELIEF & FLUSHING - RVDAP 90



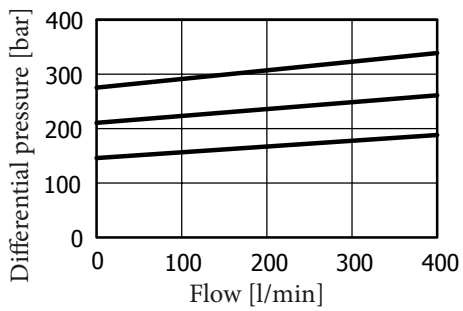


PORTS DIMENSION	
V1, V2	1" BSP
F	3/8" BSP
C1, C2	O-Ring 4187 Parker code 2-225

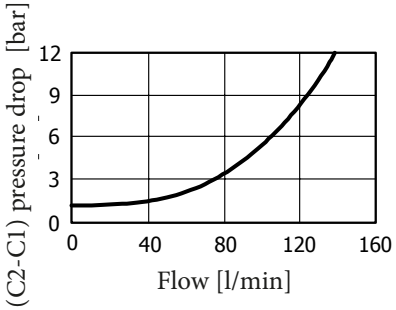
TECHNICAL DATA

		RVDAP90.C.D90
RELIEF VALVE MAXIMUM FLOW	[l/min]	380
RELIEF VALVE SETTING RANGE	[bar]	C (70-420)
STANDARD RELIEF SETTING	[bar]	70
MAXIMUM FLUSHING FLOW	[l/min]	80
MAXIMUM PRESSURE	[bar]	350
BLOCK MATERIAL	[]	steel
DISTRIBUTOR FITTING	[]	D90

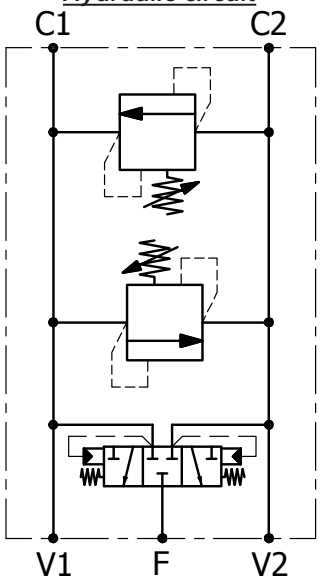
Relief cartridge typical pressure rise



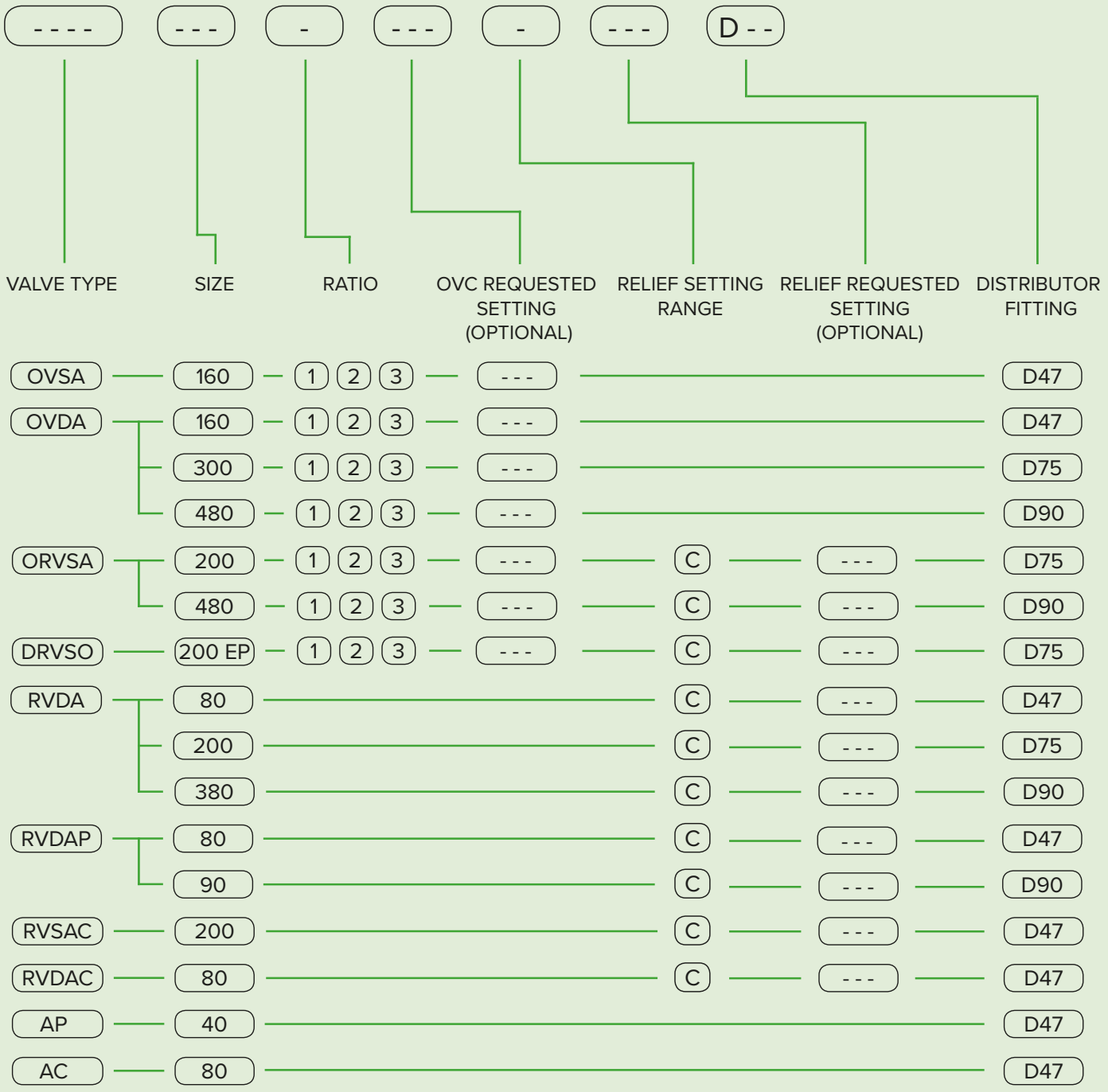
Oil supply flow (from C2 to C1)



Hydraulic circuit



VALVES - ORDERING CODE



EXAMPLES:

OVDA 160 1 200 D47
AP 40 D47
ORVSA 480 3 250 C 200 D90
ORVSA 200 1 C D75

CONTACT US

CONTACT US

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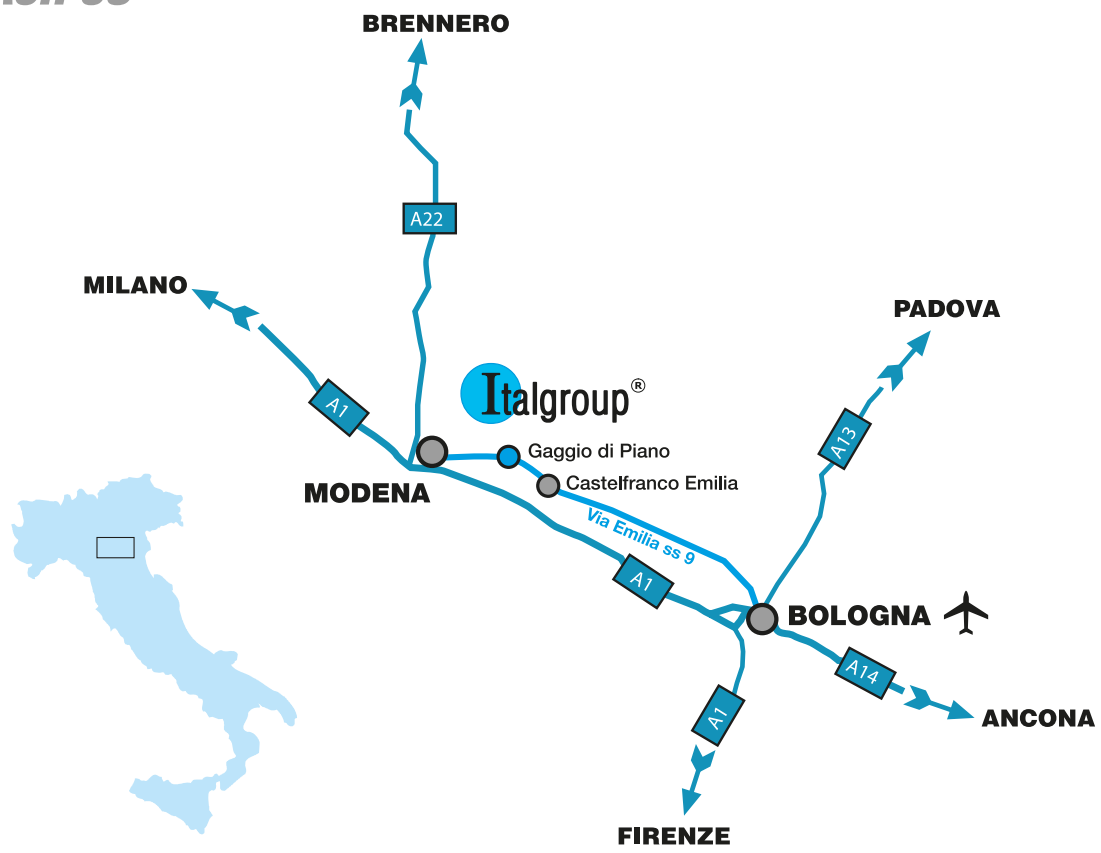
REACH US



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