

BENT AXIS PISTON MOTORS SERIES "HPM"

BENT AXIS PISTON MOTORS SERIES "HPM" FLANGE ISO 3019-2



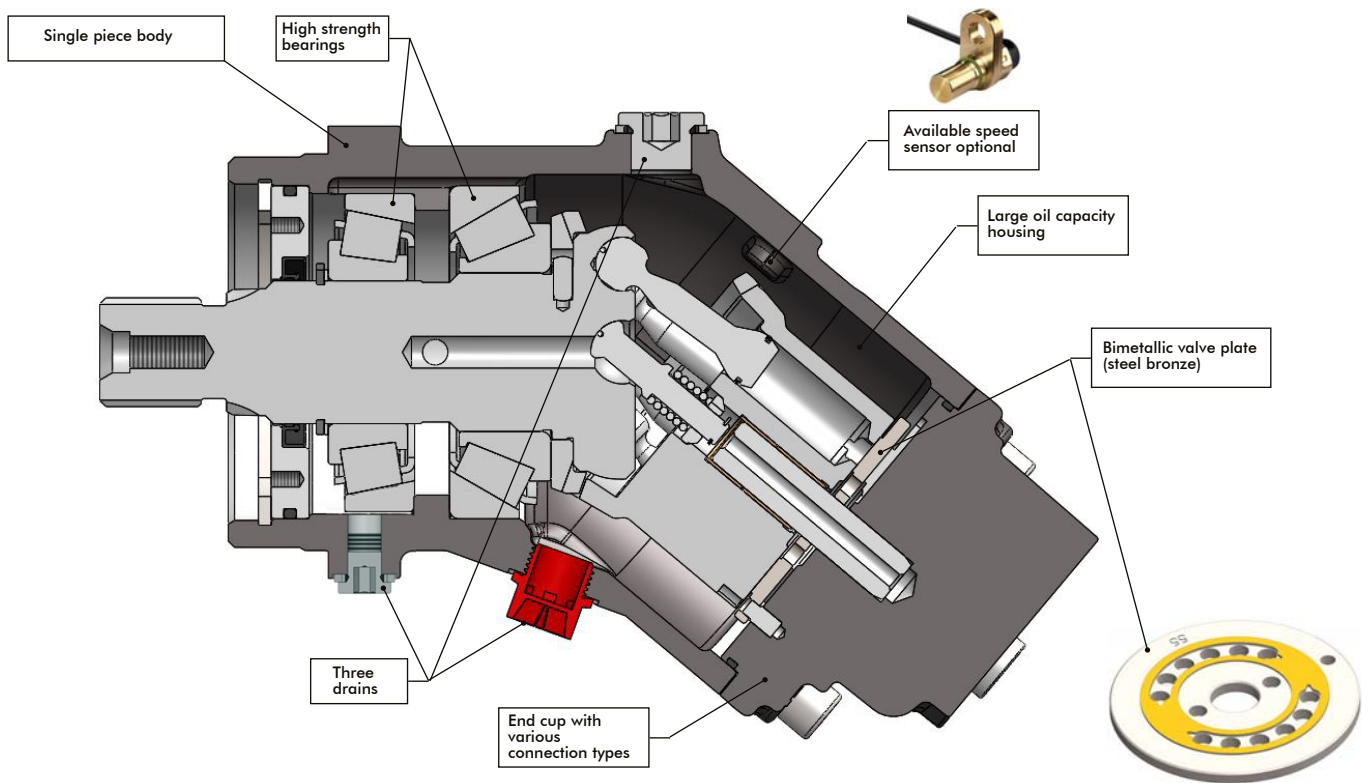
BENT AXIS PISTON MOTORS SERIES "HPM" FLANGE ISO 3019-1 / SAE B - 2 HOLES



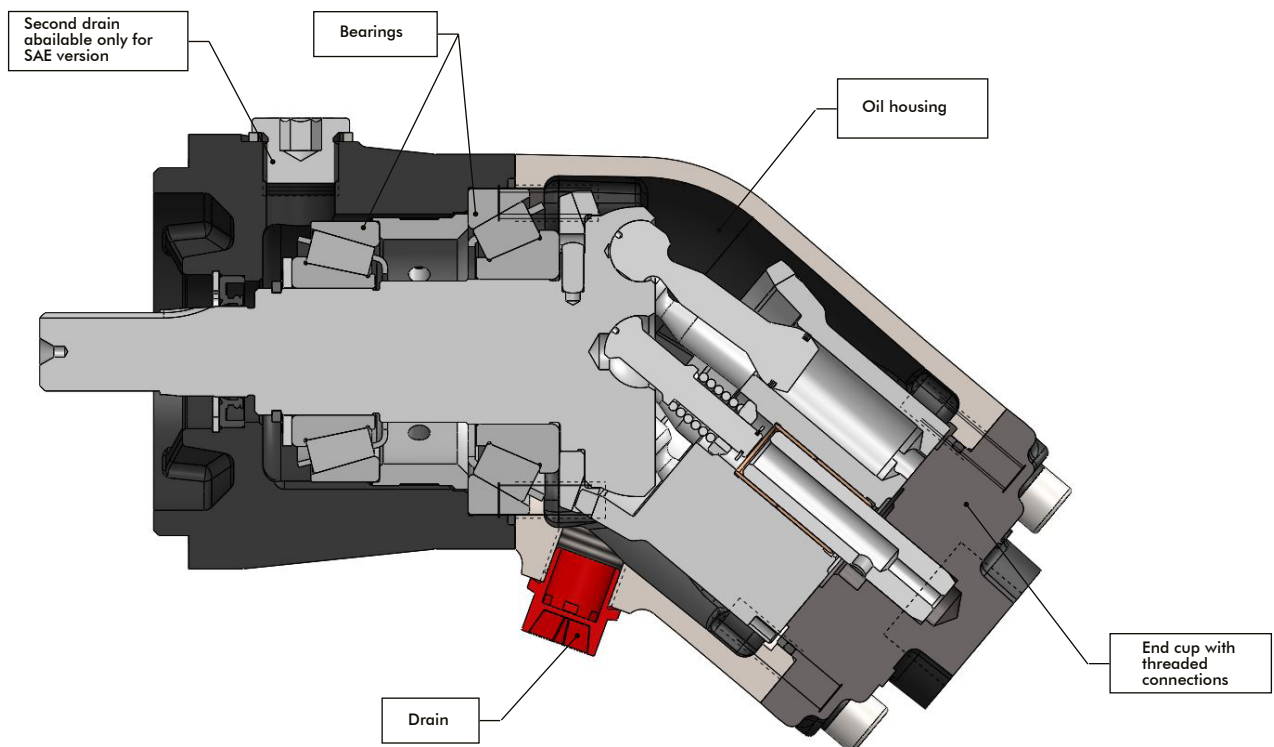
BENT AXIS PISTON MOTORS SERIES "HPM" FLANGE ISO 3019-1 / SAE C - 4 HOLES



HPM MOTORS - 2 PARTS



HPM MOTORS - 3 PARTS



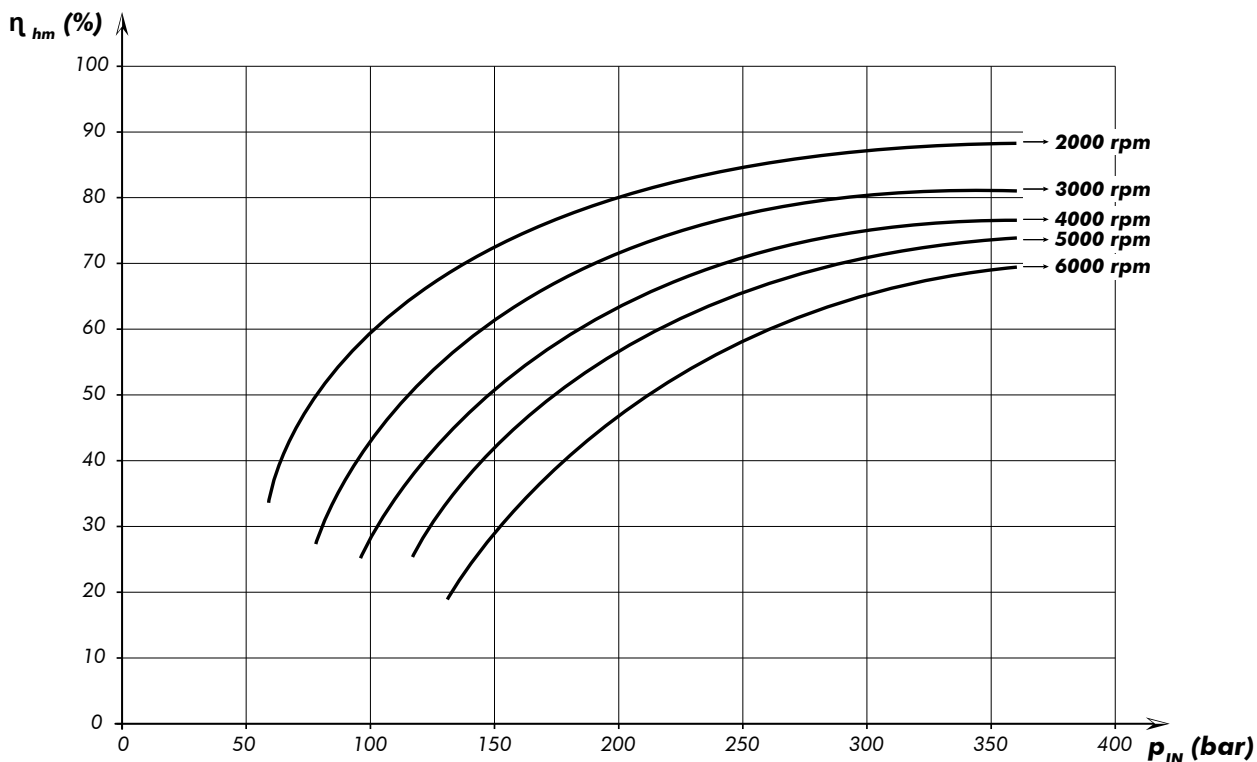
Codice fascicolo:997-400-24411

Data: Martedì 11 febbraio 2020

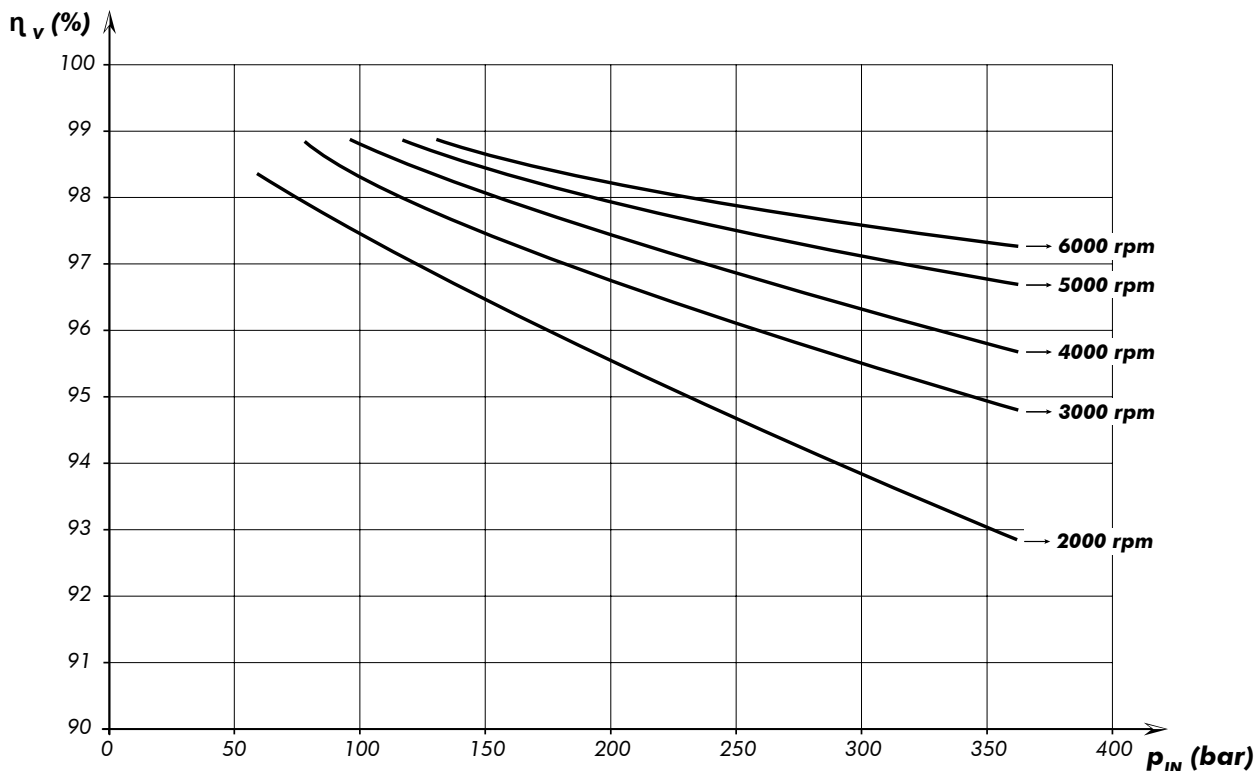
Rev: AR

Codice foglio:997-244-00011

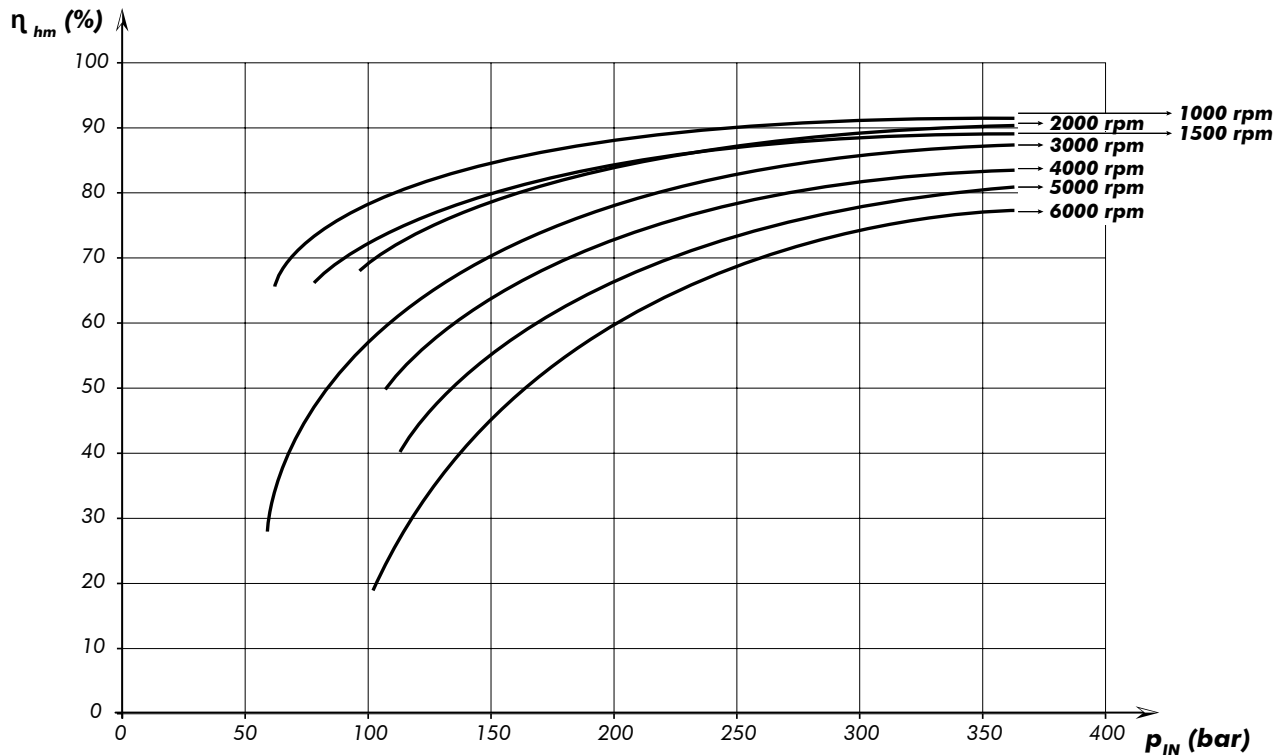
HPM 12cc - MECHANICAL EFFICIENCY



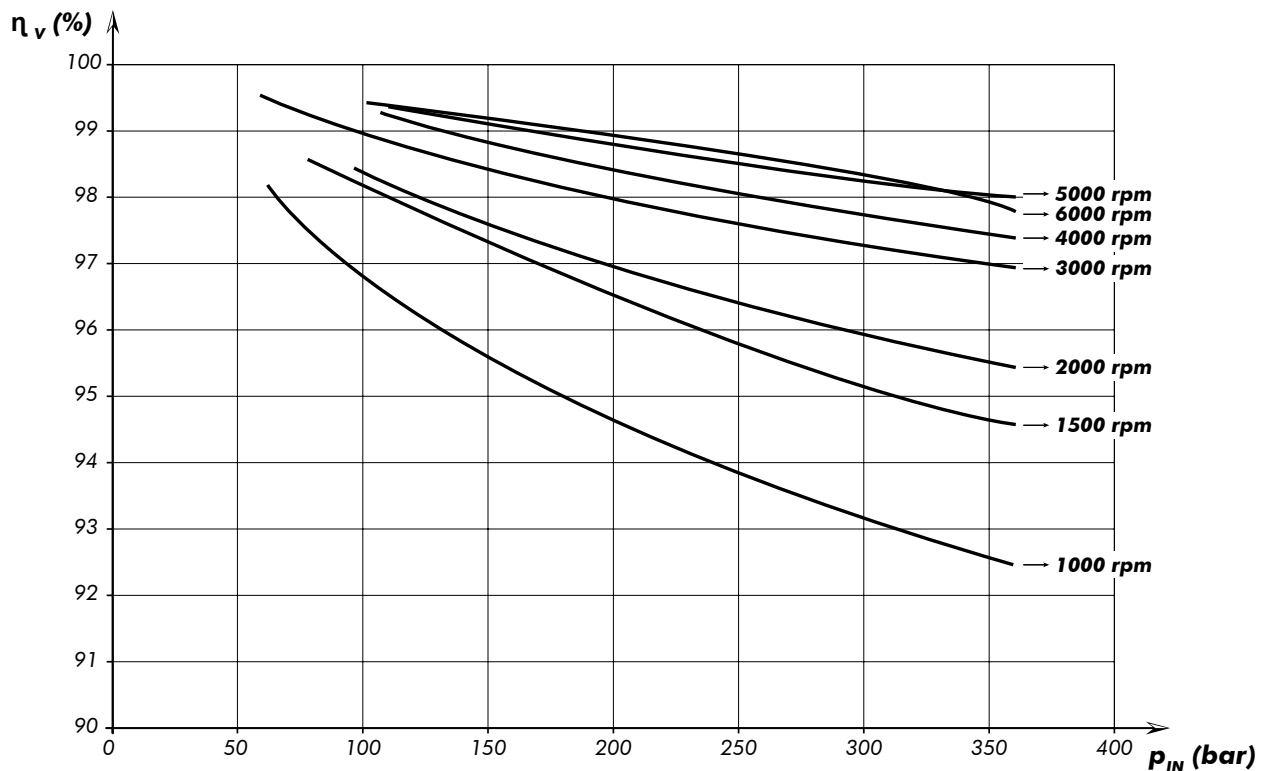
HPM 12cc - VOLUMETRIC EFFICIENCY



HPM 17cc - MECHANICAL EFFICIENCY



HPM 17cc - VOLUMETRIC EFFICIENCY



Codice fascicolo:997-400-24411

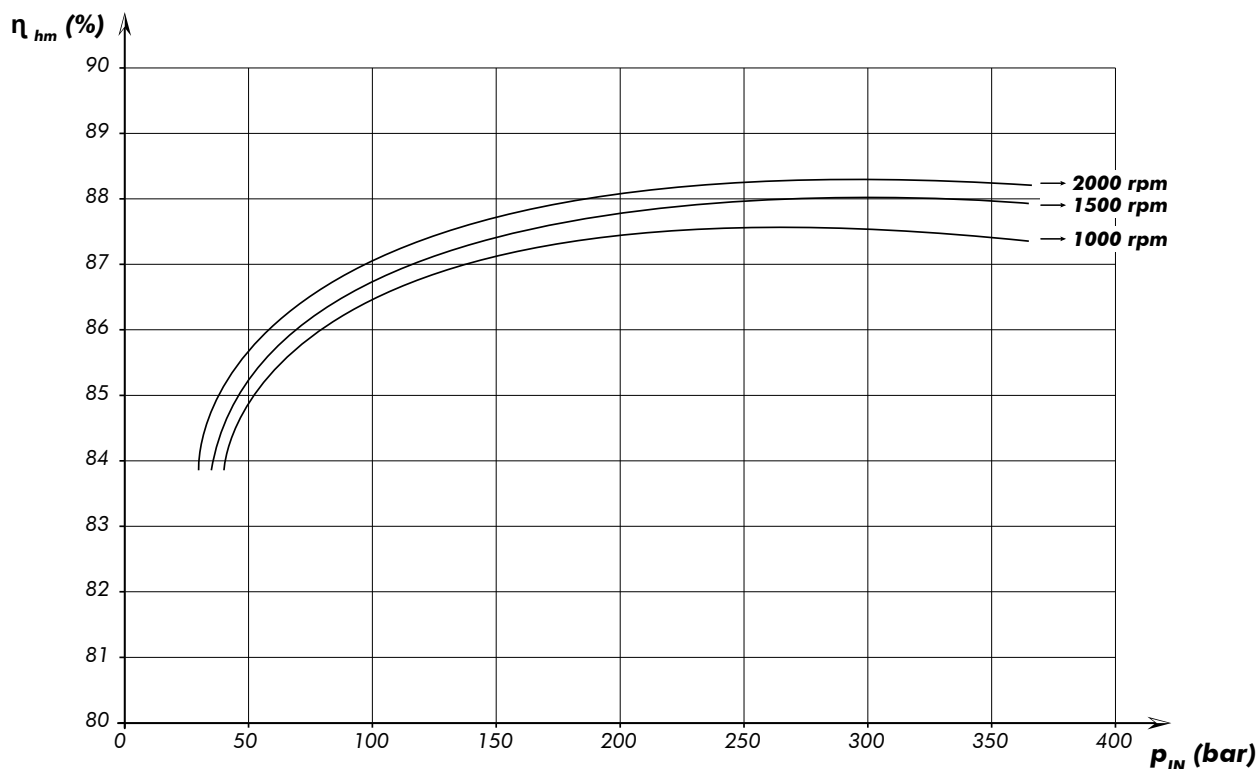
Data: Martedì 11 febbraio 2020

Rev: AR

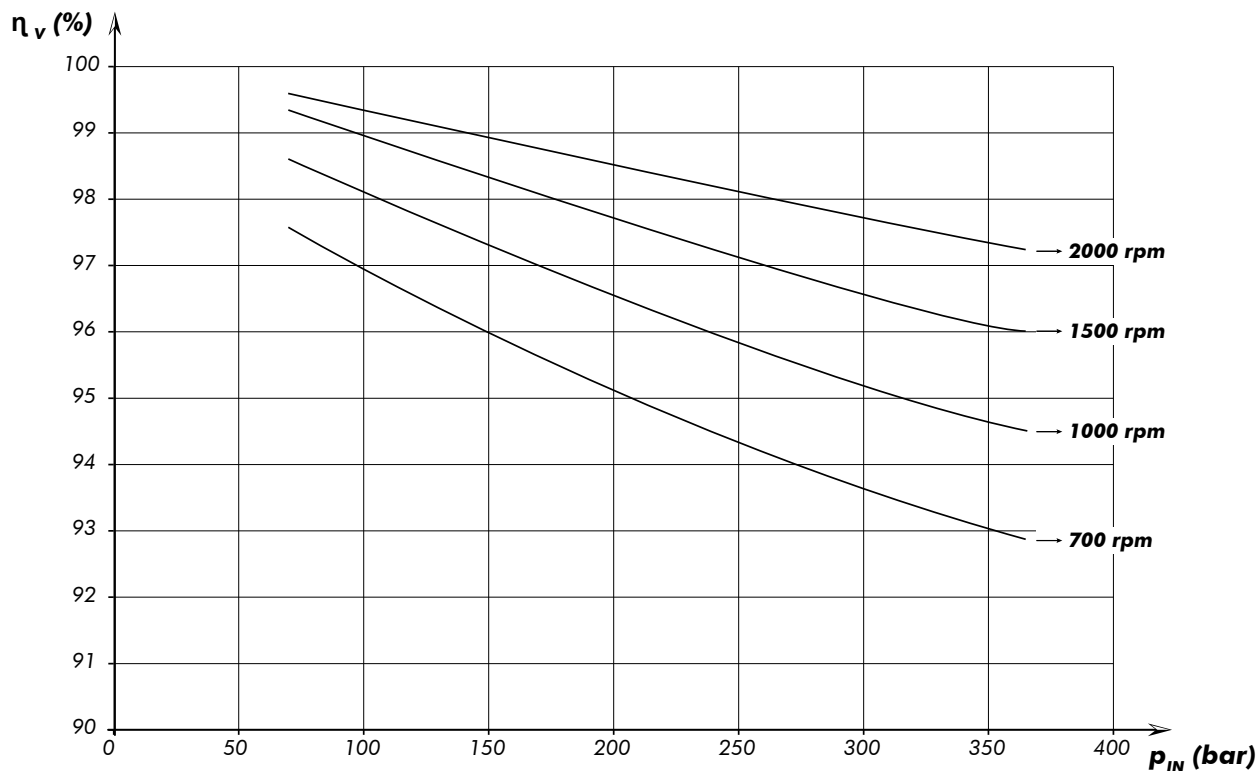
Codice foglio:997-244-00011

DIAGRAMS

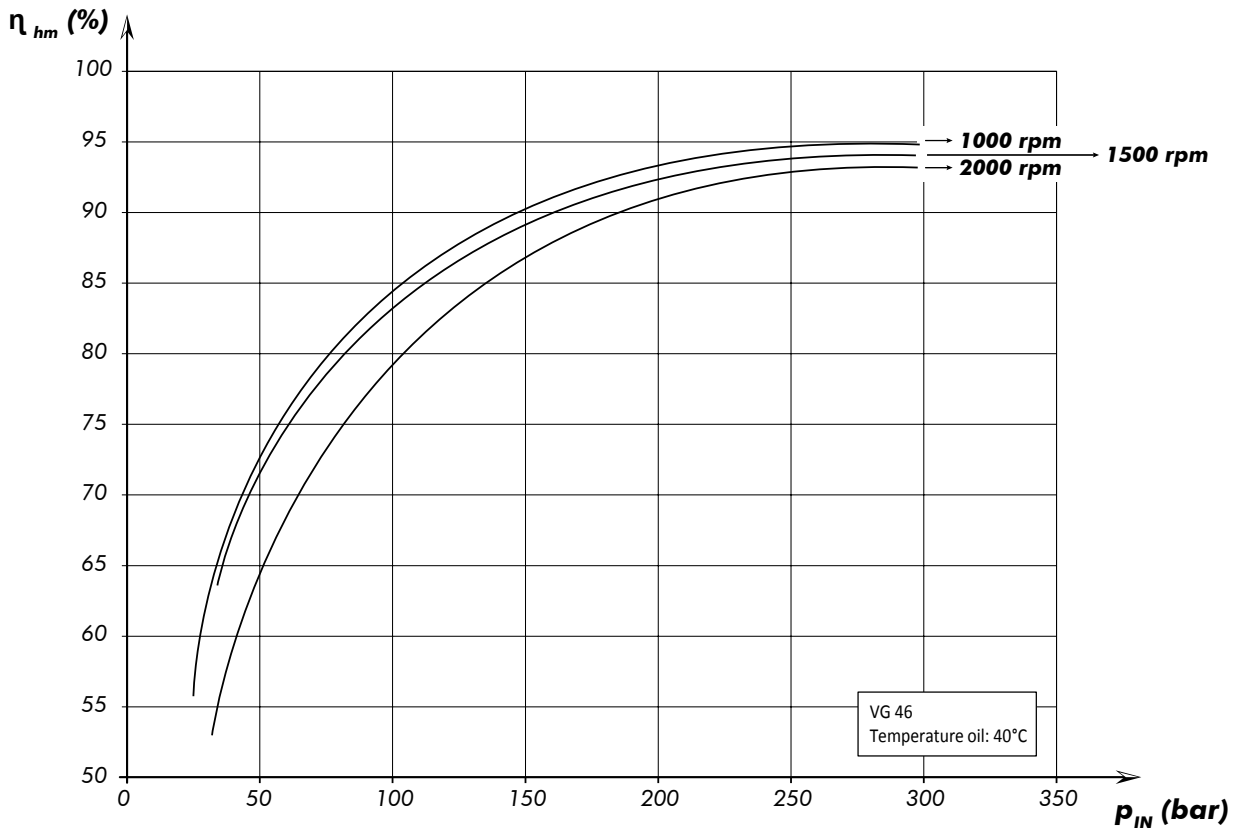
HPM 34cc - MECHANICAL EFFICIENCY



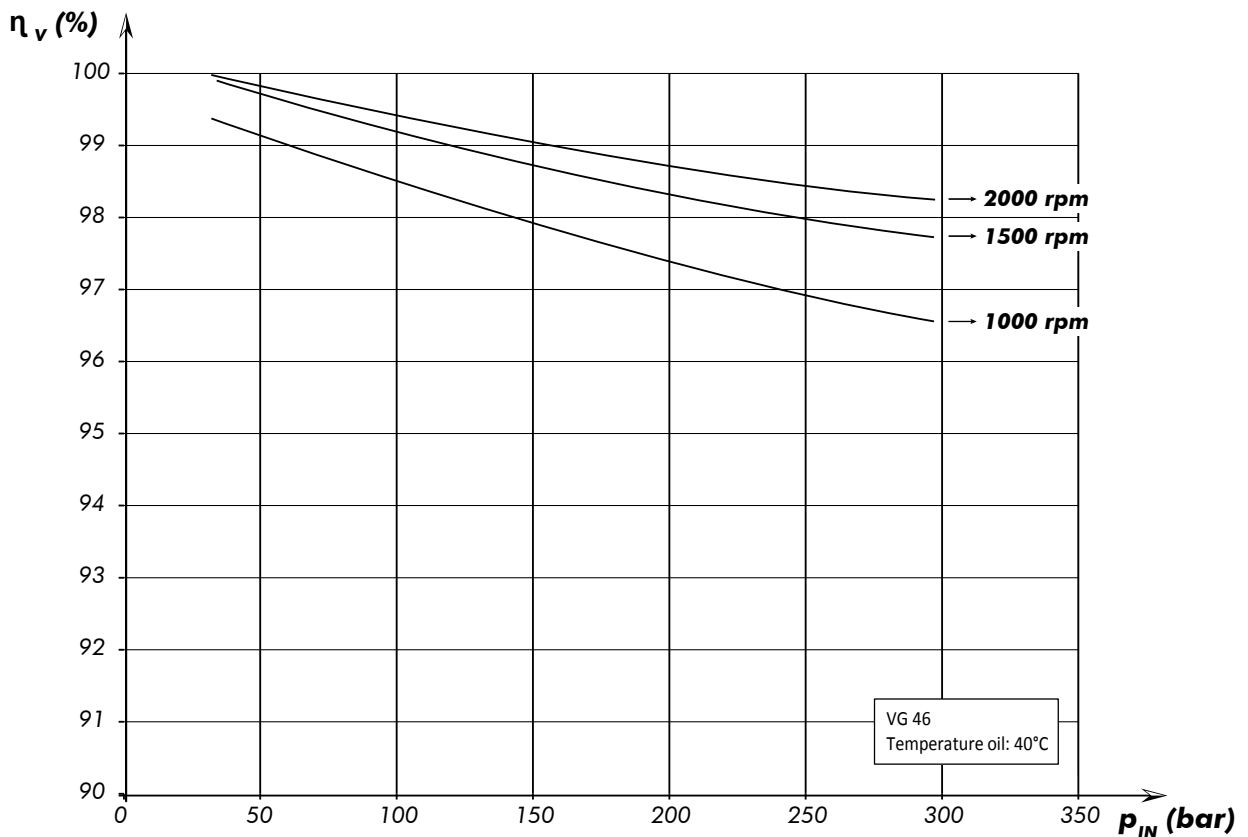
HPM 34cc - VOLUMETRIC EFFICIENCY



HPM 40cc - MECHANICAL EFFICIENCY



HPM 40cc - VOLUMETRIC EFFICIENCY



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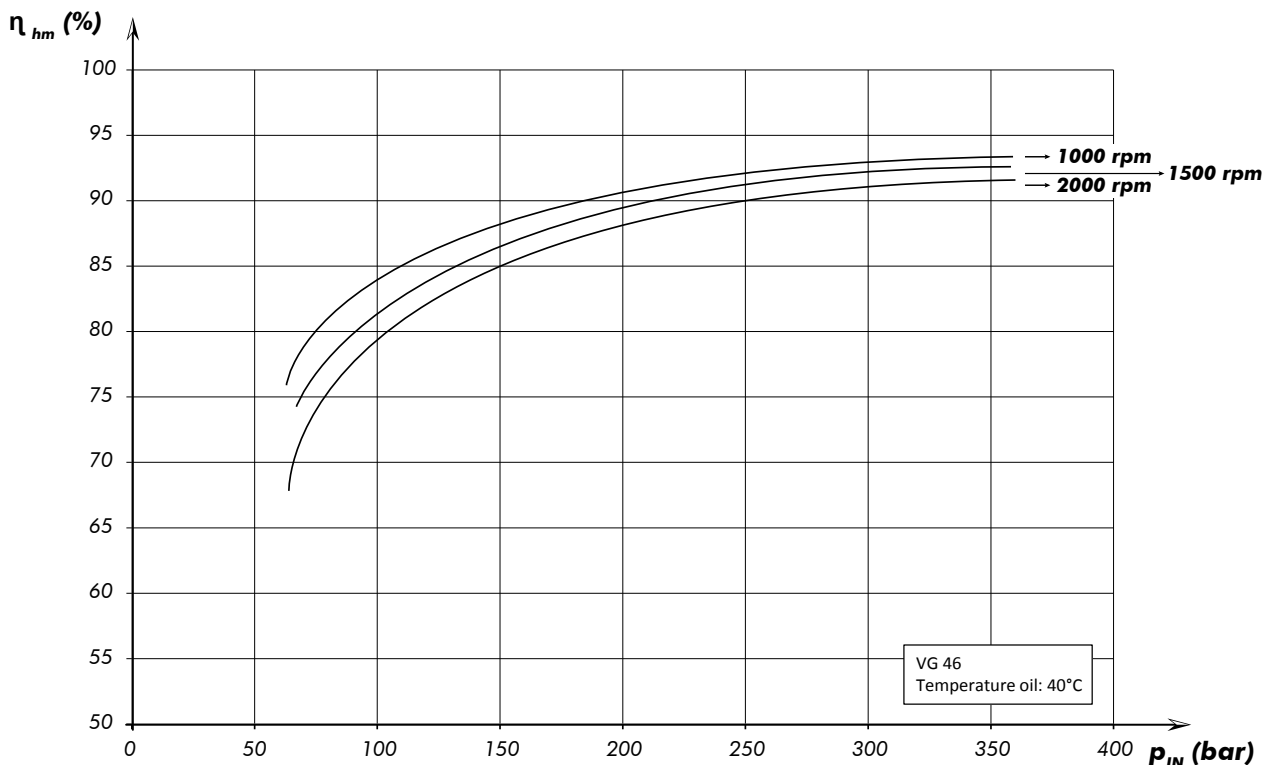
Data: Martedì 11 febbraio 2020

Rev: AR

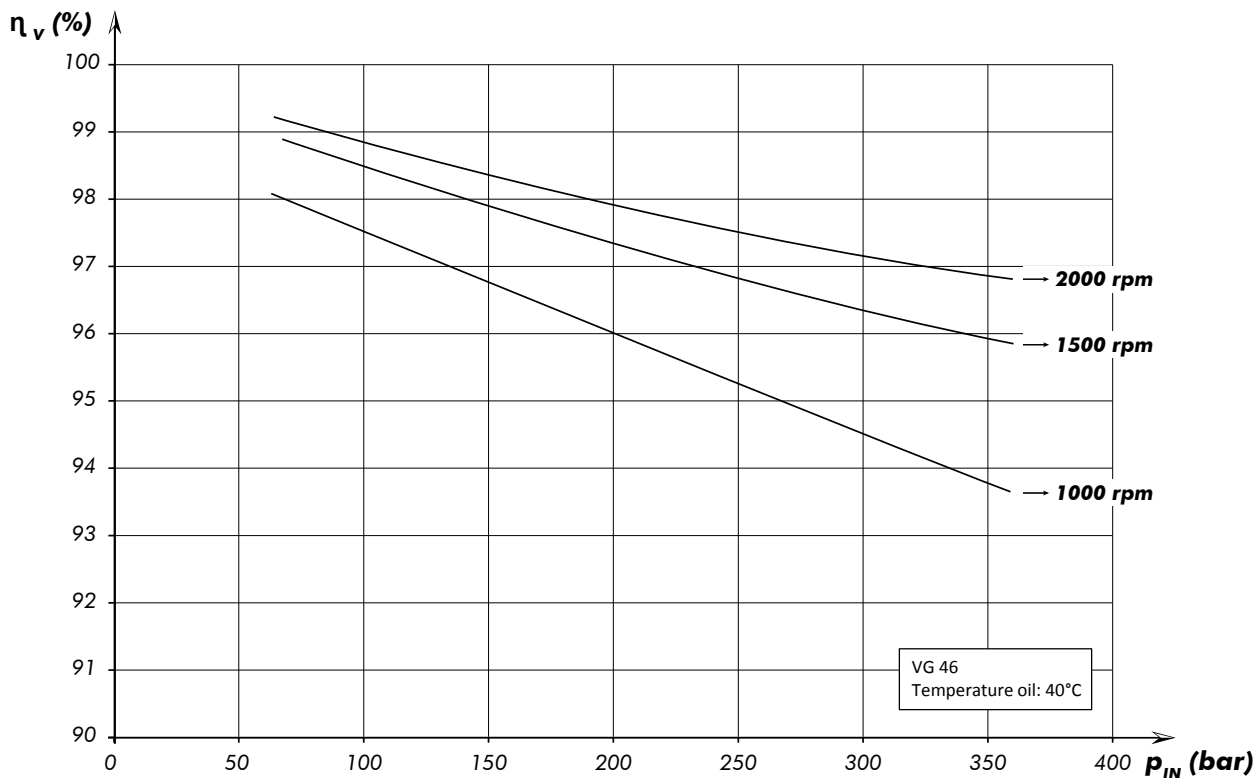
Codice foglio:997-244-00011

DIAGRAMS

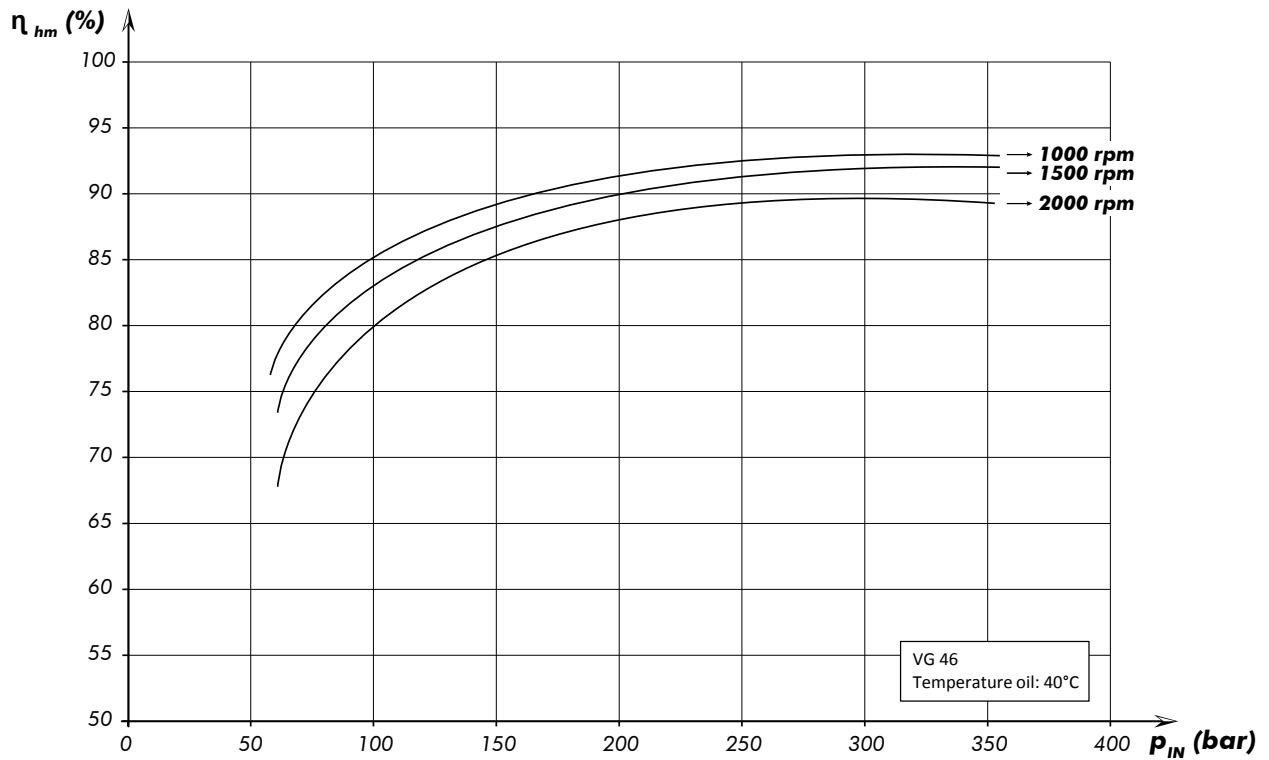
HPM 47cc - MECHANICAL EFFICIENCY



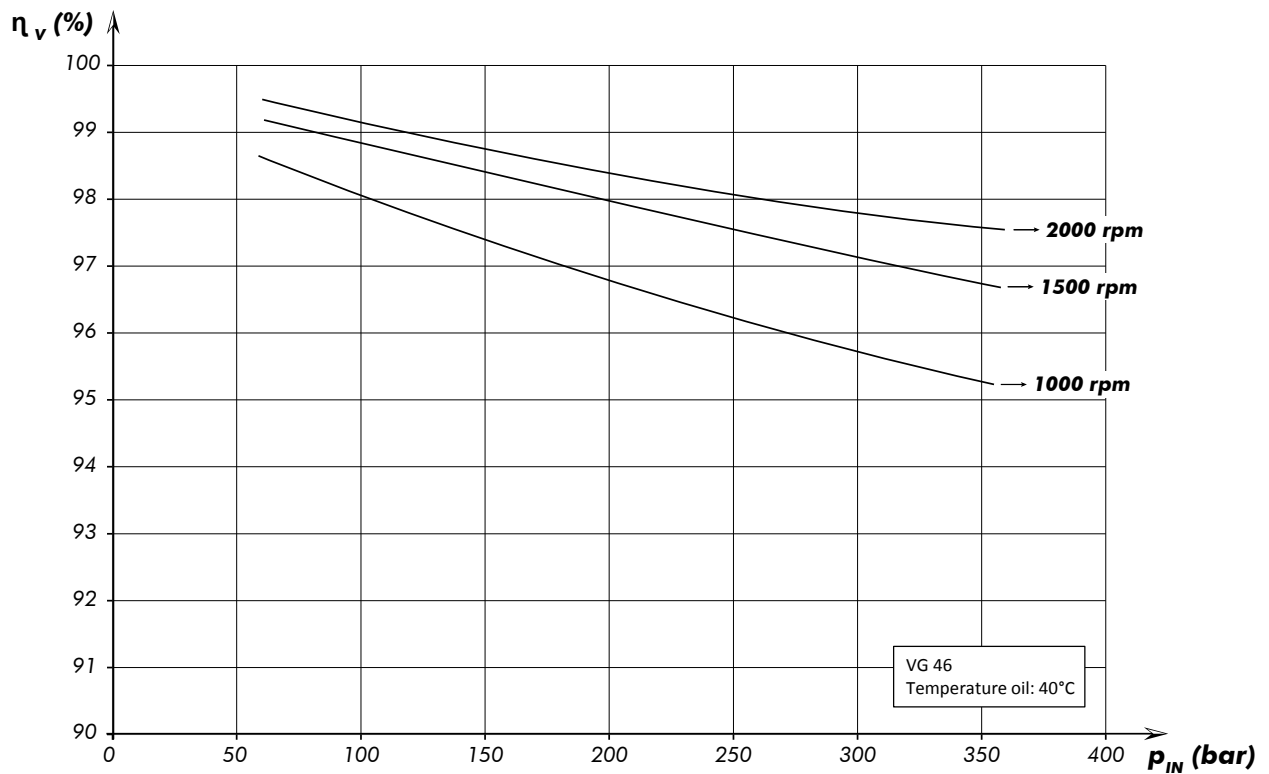
HPM 47cc - VOLUMETRIC EFFICIENCY



HPM 55cc - MECHANICAL EFFICIENCY



HPM 55cc - VOLUMETRIC EFFICIENCY



Codice fascicolo:997-400-24411

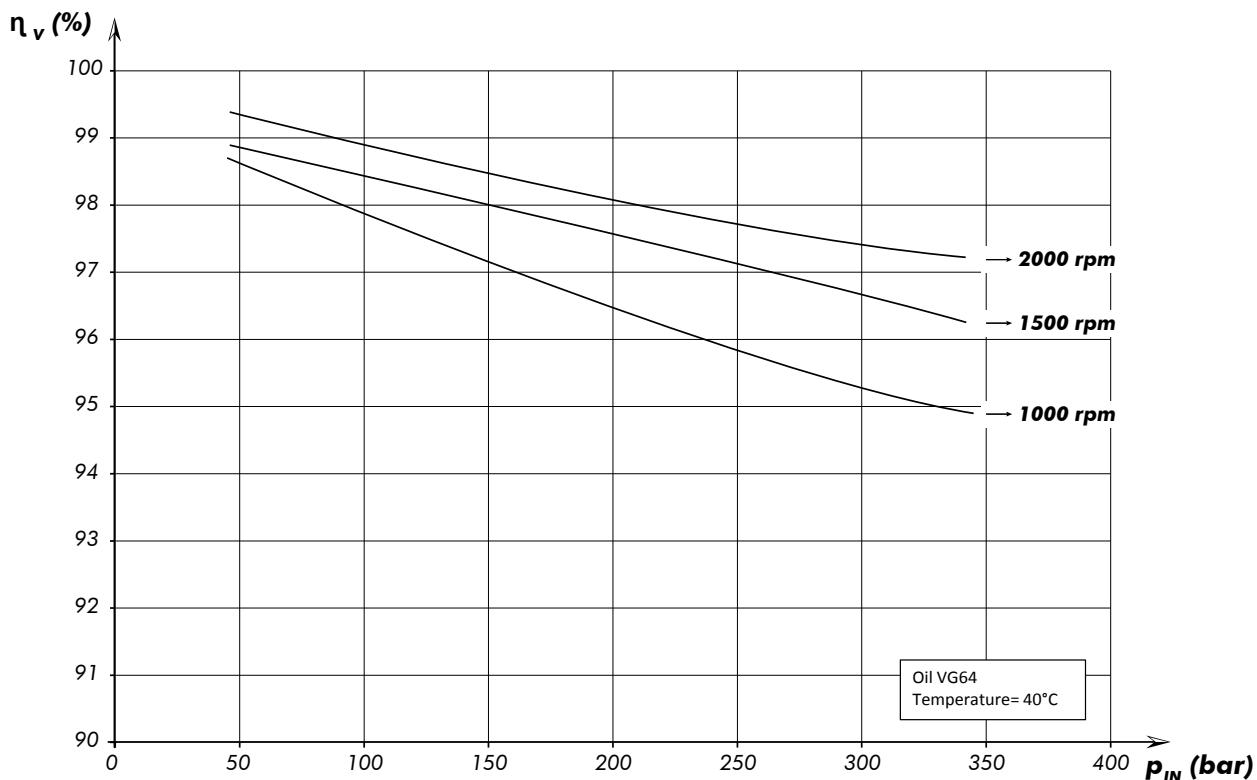
Data: Martedì 11 febbraio 2020

Rev: AR

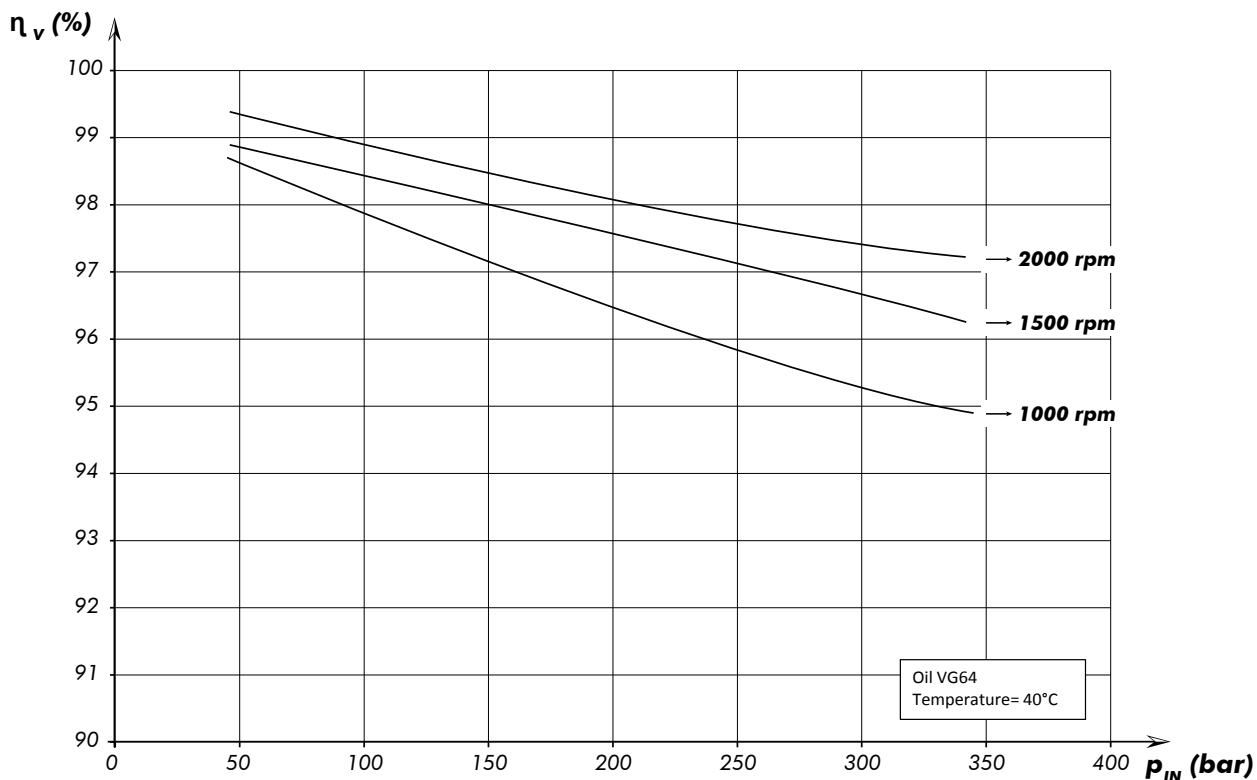
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DIAGRAMS

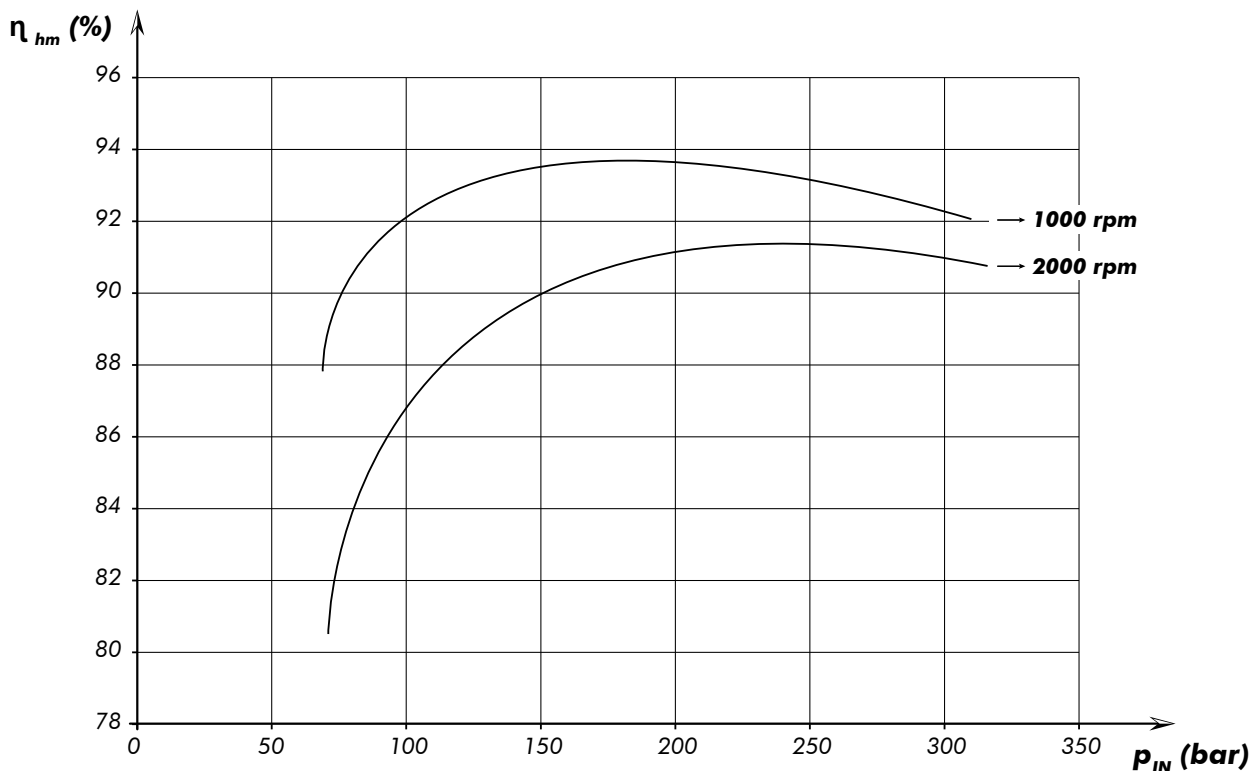
HPM 64cc - MECHANICAL EFFICIENCY



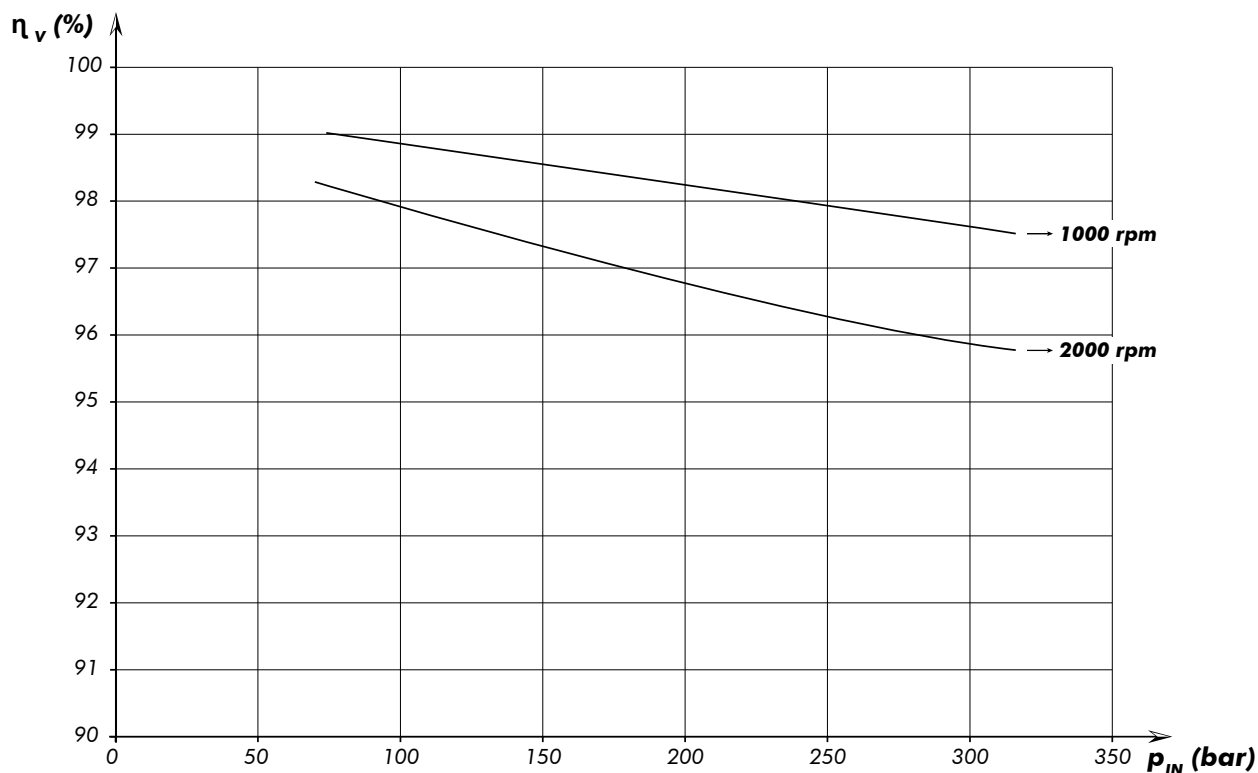
HPM 64cc - VOLUMETRIC EFFICIENCY



HPM 80cc - MECHANICAL EFFICIENCY



HPM 80cc - VOLUMETRIC EFFICIENCY



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TECHNICAL FEATURES

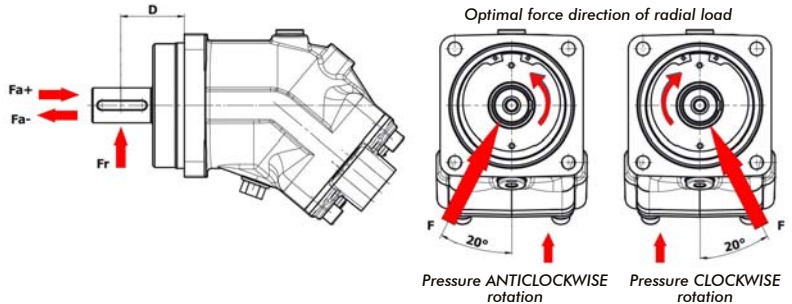
BENT AXIS PISTON MOTORS HPM FLANGE ISO 3019-2 / ISO 3019-1 (SAE B-2 holes e SAE C-4 holes)

		TECHNICAL FEATURES												
Displacement	cm ³ /rev	12	17	25	34	40	47	55	64	80	91	108	130	
Working pressure	bar	Max. intermittent											400	
		Max. continuous											350	
Rotation speed	rpm	Max. intermittent					5500			4500				
		Max. continuous					5000			4000				
		Min. continuous												
Power	kW	Max. intermittent											390	
		Max. continuous											130	
Torque	Nm/bar	0,26	0,33	0,43	0,56	0,63	0,7	0,83	0,97	1,3	1,43	1,6	1,8	
Mass inertial moment (x 10 ⁻⁴)	kg m ²	11,5					12,5			35,5				
Weight (ISO 3019-2 flange)	kg	8,5					11.5			20				
Weight (ISO 3019-1 SAE B flange)		10					12			---				
Weight (ISO 3019-1 SAE C flange)		---					---			20				

ATTENTION ! in some cases Working Pressure is limited by shaft's dimensions. Check on each motor's dedicated data sheet, in the section dedicated to shafts, if a table with modified working pressure values is indicated. If not, consider values shown above.

SHAFT LOADS

The lifetime of the motor depends on how the bearings are working. Operational parameters such as speed, pressure, oil viscosity and grade of cleanness when are dimensioned and applied correctly can guarantee a longer lifetime to the motor along with higher performances and reduced noise level. Also external factors such as dimensions, weight and position of the external load on the shaft can influence the lifetime of the bearings. For different conditions and/or check of your working conditions please contact our technical/sales department.



HPM MOTORS FLANGE ISO 3019-2 (Fam. 240-242-244-246-248)		DISPLACEMENT													
MAX RECOMMENDED SHAFT LOADS		12	17	25	34	40	47	55	64	80	91	108	130		
Fr (radial) max	kN	7	5	7	6	9			14,5		12	14,5		12	
Distance D (to point of force)	mm	40			50			62			67		80		
Fa (axial) + (at standstill/ 0 bar pressure) max	kN	3			3			4			5		5		
Fa (axial) - (at standstill/ 0 bar pressure) max	kN	4	5	7			7	10	11	13	14	16	19		
Fa (axial) + (at 350 bar pressure) max *	kN	6	8	10,8	12	16	20	13	14	16	19				
Fa (axial) - (at 350 bar pressure) max *	kN	1,2	2,08			2,8	3,5	4	4,5	4,5	5,5				

HPM MOTORS FLANGE ISO 3019-1 (Fam. 221-224)		DISPLACEMENT											
MAX RECOMMENDED SHAFT LOADS		12	17	25	34	40	47	55	64	80	91	108	
Fr (radial) max	kN	7	5	7	6	9							
Distance D (to point of force)	mm	28			32			38					
Fa (axial) + (at standstill/ 0 bar pressure) max	kN	3			3			4					
Fa (axial) - (at standstill/ 0 bar pressure) max	kN	4	5	7			7	10	11				
Fa (axial) + (at 350 bar pressure) max *	kN	6	8	10,8	12	16	20						
Fa (axial) - (at 350 bar pressure) max *	kN	1,2	2,08			2,8	3,5						

* Fa (axial) + Will increase bearing life

* Fa (axial) - Will decrease bearing life

HOSE SIZING

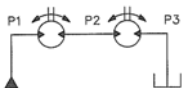
The recommended flow of the delivery hose should not exceed a fluid maximum speed of 5m/s.

FILTRATION

We recommend a cleanness grade according to ISO 4406-1999

- code 19/17/14 up to 140 bar.
- code 18/16/13 from 140 bar to 200 bar.
- code 17/15/12 over 200 bar.

SERIES CONNECTION OF HPM MOTORS



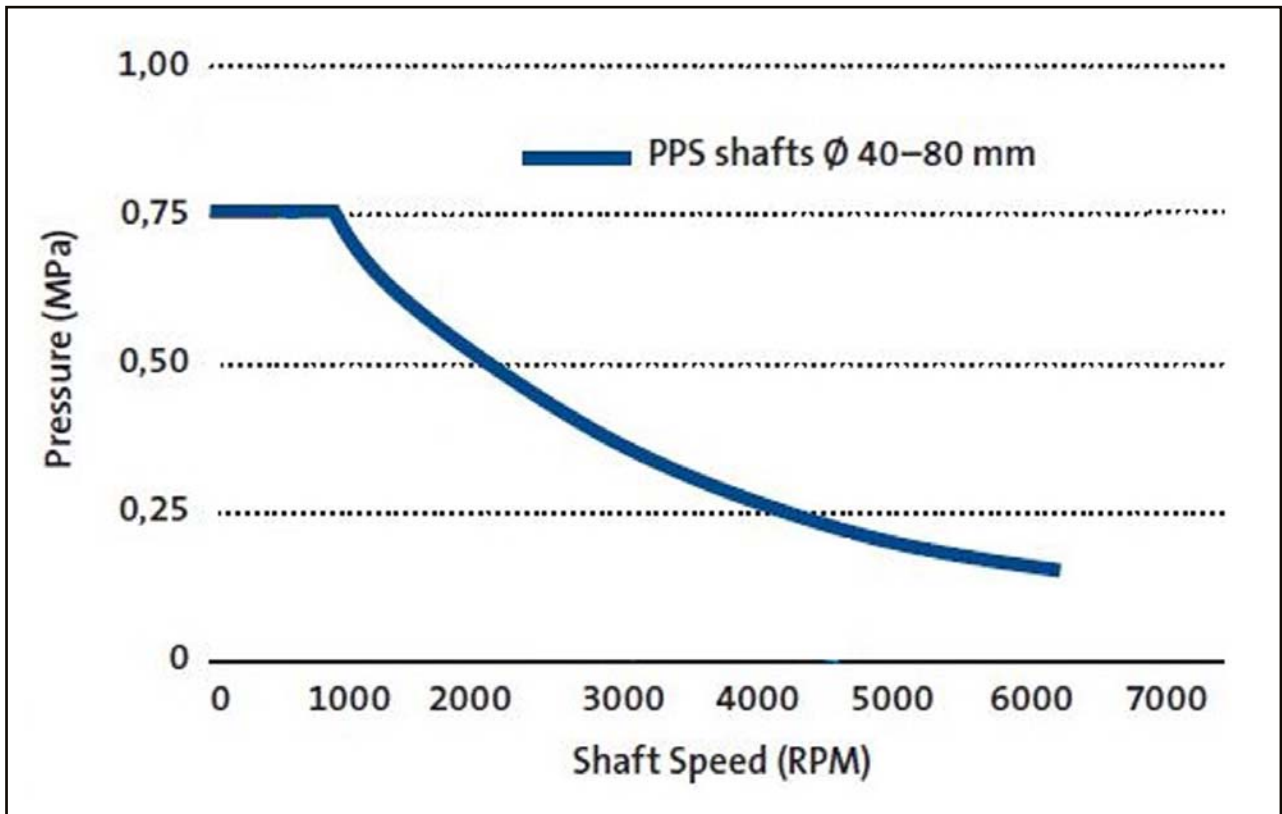
The maximum allowed pressure on the ports is 350 bar continuous and 400 bar intermittent. In case of series connection we recommend to limit the total working pressure P1+P2 always to 350 bar continuous and 400 bar intermittent.

MAX. PRESSURE IN THE HOUSING

Average rating with backup support:

- Static pressure spikes up to 100 bar.
- Pulse pressure up to 25 bar (depending on the frequency).
- Average dynamic pressure up to 5 bar (short term, 10 bar).
- PV (m * bar / s) = 40 (short term).

Seal type	Pressure ave. bar	Pulse Pressure max. bar	Velocity max. m/s	PV max. m*bar/s	Preferred material
PPS	5	25	15	40	FKM



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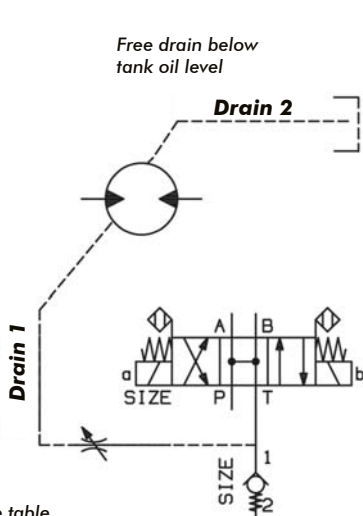
TECHNICAL FEATURES

TEMPERATURE/COOLING OF MOTOR CASING

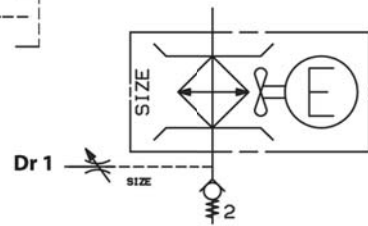
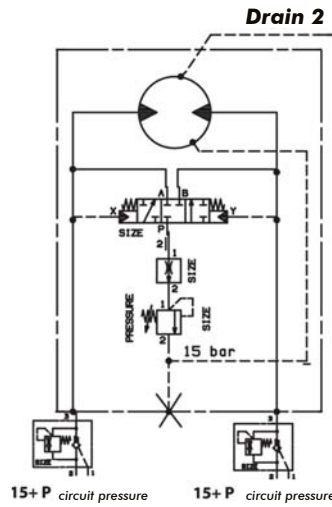
High oil temperature reduces the lifetime of shaft oil seal and can lower the oil viscosity below the recommended level- The temperature of the system shall not exceed 60°C while temperature of return line shall not exceed 90°C.

Cooling/flushing of motor casing might be necessary to keep return temperature within the recommended level.

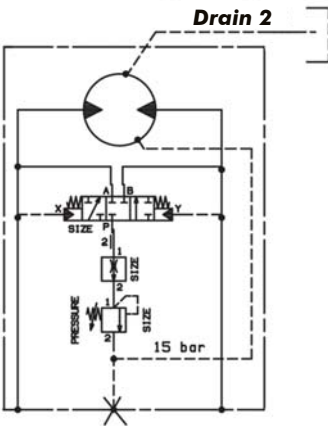
The motor casing flushing can be achieved by means of a flushing valve or directly from the return hose. Too low return pressure must be compensated by a back-pressure valve. The tank hose must be connected into the highest point as shown in the picture.



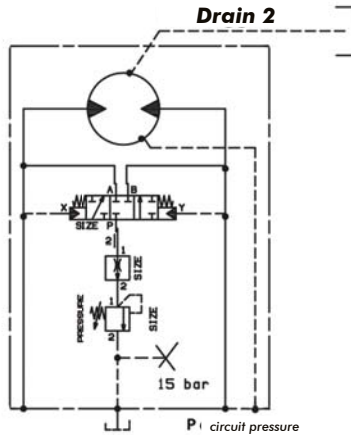
Q= see table
P= Pressure required for oil circulation between drain 1 and drain 2 port



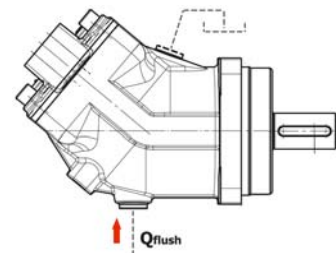
Q= see table
P= Pressure required for oil circulation between drain 1 and drain 2 port



CLOSE CIRCUIT INNER DRAIN



CLOSE CIRCUIT OUTER DRAIN



Reference value for motor casing flushing.

	MOTOR	FLUSHING	CONT.
Q	12-34	2-8 l/min.	≥ 2800 rev/min.
	40-64	4-10 l/min.	≥ 2500 rev/min.
	80-130	6-12 l/min.	≥ 2000 rev/min.

TYPES OF FLUID

The table below shows the main types of hydraulic fluid as set out in ISO 6743-4 standard.

- HL RECOMMENDED

(For other type of fluid please contact our sales/technical dept).

Mineral oil-based fluids	
HH	Additive-free
HL	Anticorrosive, antioxidant (RECOMMENDED)
HM	HL and anti-wear additives
HV	HM additives and viscosity controls
Flame-resitant fluids	
HFA	Oil-based emulsion in water (water > 90%)
HFB	Water-based emulsion in oil (water > 40%)
HFC	Water in glycol solution (polyhydrate alcohols)
HFD	Water-free synthetic fluids (phosphoric esters)
Organic fluids	
HETG	Vegetable-based fluids
HEPG	Synthetic polyglycol-based fluids
HEE	Synthetic ester-based fluids

VISCOSITY INDEX

The optimum viscosity of the fluid V_{opt} at the operating temperature (temperature of the tank for open circuits or temperature of the circuit for closed circuits) must fall between the minimum and maximum values shown in the table below. The minimum viscosity V_{min} shown in the table is permitted in extreme conditions and for short periods. This value refers to a maximum fluid temperature of 90°C (temperature of drainage fluid). The maximum viscosity V_{max} for short intervals and during cold starts is shown in the table below. The temperature of the fluid must never exceed a maximum of +90°C and a minimum of -25°C.

	V_{opt} (cSt)	V_{min} (cSt)	V_{max} (cSt)
HPM	15+40	10	800

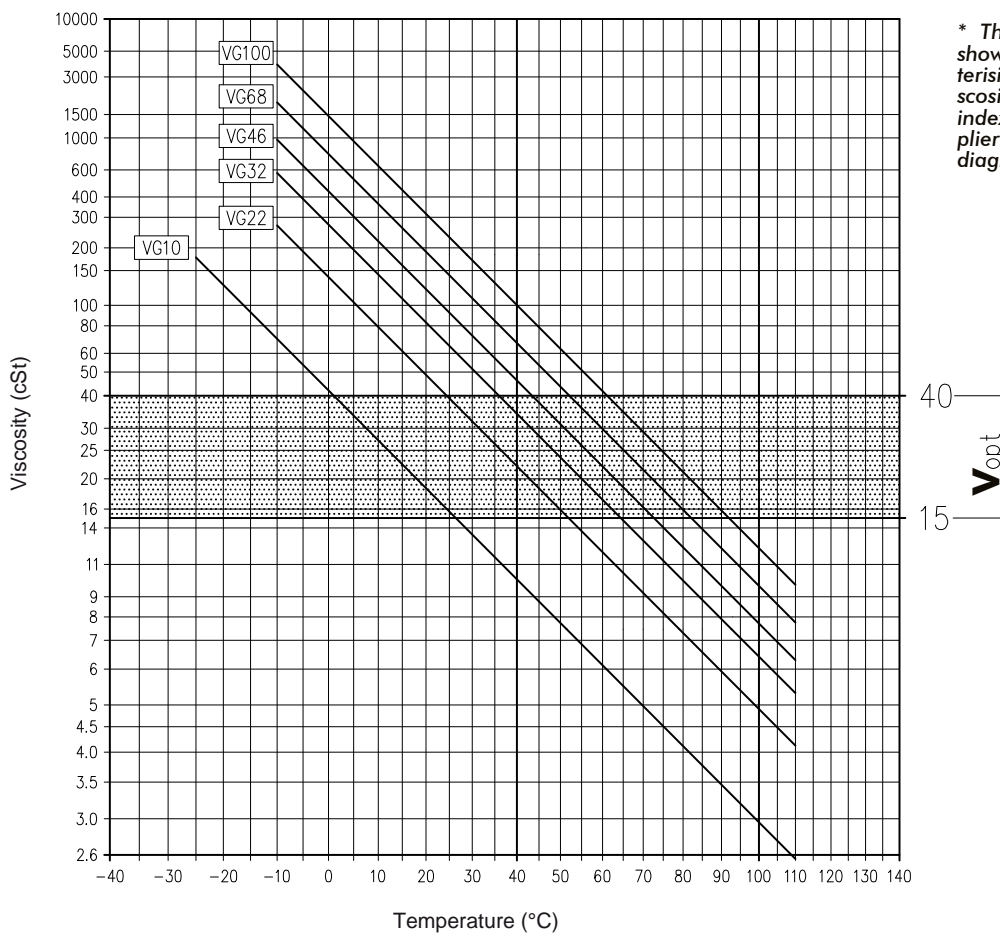
VISCOSITY GRADES

Under the ISO standard, hydraulic fluids are divided into 6 grades of viscosity (see table below). Viscosity grades are shown by the letters VG followed by the viscosity of the fluid in cSt at a temperature of 40 °C.

VISCOSITY GRADES ISO	V (40°) (cSt)
VG 10	9÷11
VG 22	19.8÷24.2
VG 32	28.8÷35.2
VG 46	41.4÷50.6
VG 68	61.2÷71.5
VG 188	90÷110

In order to choose the correct type of fluid, it is essential to know the operating temperature of the fluid (temperature of the tank for open circuits or temperature of the circuit for closed circuits) and its viscosity index. At the operating temperature, the viscosity of the fluid must fall within the optimum viscosity values (V_{opt}). The diagram below shows the variations of viscosity at various temperatures of a class of fluids sharing the same viscosity index.

Viscosity - temperature diagram*



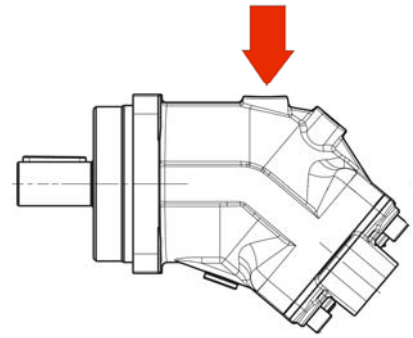
* The diagram is only an example. It shows the viscosity temperature characteristics of typical fluids with different viscosities but sharing the same viscosity index. Ask to your hydraulic fluid supplier for the real viscosity-temperature diagram of the fluid used in your system.

TECHNICAL FEATURES

PRELIMINARY OPERATION

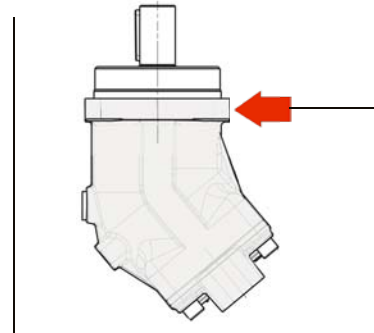
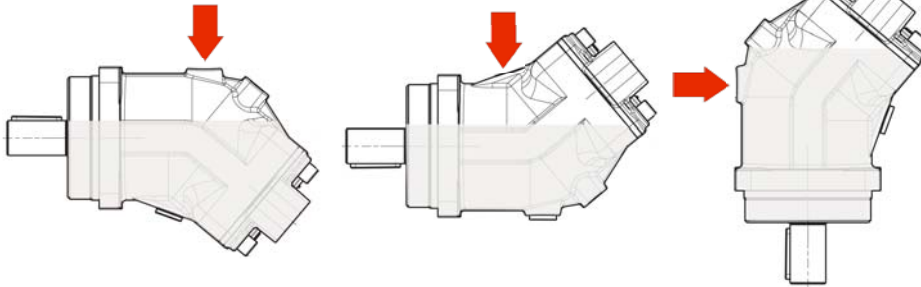


Before to start up the motor please fill-up the the casing with oil.
We recommend the highest level of cleanness during the operations of oil filling-up and change.
Plugs tightening torque: 20-25 Nm



Connect the drain line before using the motor.

Use always the upper drain port according to the motor position and in any case always use the drain port that can ensure the casing being filled-up.

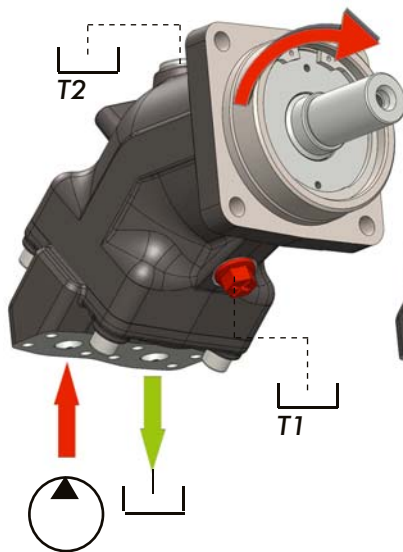


For vertical mounting position as shown in the picture, we suggest to use the 3rd drain port to ensure proper lubrication to the bearings and to facilitate air bleed.

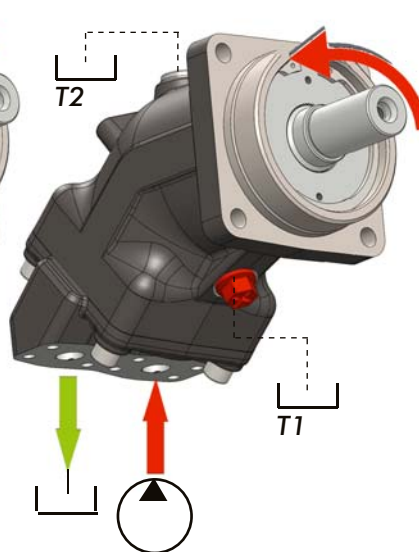
For other installations, contact manufacturer.

The direction of rotation of the motor depends from direction of delivery oil as shown in the picture below. Make sure about the correct sizing and positioning of the oil hoses. Insufficient diameter, kinks and/or tight elbows may lead to cavitation and consequently further damages and high noise level.

CLOCKWISE rotation



ANTICLOCKWISE rotation



It is essential to drain the motor (T1 or T2) to relief the shaft seal from excessive pressure. The maximum internal pressure allowed depends on the rotating speed of the motor. However, we can take into consideration the following values:

- Max internal pressure independent from the rotating speed (continue): 4 bar.
- Max internal pressure independent from the rotating speed (peak): 5.5 bar.

FORMULAS FOR MOTORS

INPUT HYDRAULIC POWER

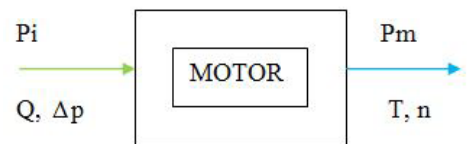
In a motor the input hydraulic power is proportional to the pressure difference between the ports and to the flow according to the ratio where

P_i is the hydraulic power in kW

Q is the flow in l/min

Δp is the pressure difference in bar between the ports

$$P_i = \frac{Q \cdot \Delta p}{600}$$



MECHANICAL POWER TO THE SHAFT

In a motor the mechanical power available is proportional to the torque at the shaft and to the angular speed of the shaft according to the ratio where

P_m is the mechanical power in kW

T is the torque in Nm

n is the rpm

$$P_m = \frac{T \cdot n}{9550}$$

INPUT FLOW FOR ROTATING THE SHAFT AT SPEED n

where:

Q is the flow in l/min

n is the rpm

c is the displacement of the motor in cc/rev

η_v is the volumetric efficiency of the motor

$$Q = \frac{n \cdot c}{1000 \cdot \eta_v}$$

MOTOR SPEED WHEN IN INPUT YOU HAVE FLOW Q

where

Q is the flow in l/min

n is the rpm

c is the displacement of the motor in cc/rev

η_v is the volumetric efficiency of the motor

$$n = 1000 \cdot \frac{Q}{c} \cdot \eta_v$$

TORQUE TO THE SHAFT WITH A PRESSURE DIFFERENCE p BETWEEN THE PORTS

where

T is the torque in Nm

c is the displacement of the motor in cc/rev

Δp is the pressure difference in bar between the ports

η_m is the mechanical efficiency of the motor

$$T = \frac{c \cdot \Delta p}{62.8} \eta_m$$

PRESSURE DIFFERENCE REQUIRED BETWEEN INPUT PORTS TO OBTAIN TORQUE T AT THE SHAFT

where

Δp is the pressure difference in bar between the ports

T is the torque in Nm

c is the displacement of the motor in cc/rev

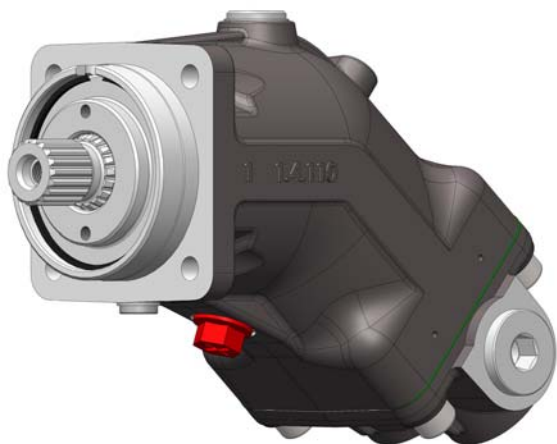
η_m is the mechanical efficiency of the motor

$$\Delta p = 62.8 \cdot \frac{T}{c \cdot \eta_m}$$

BENT AXIS PISTON MOTORS SERIES "HPM" FLANGE ISO 3019-2

FLANGE Ø 80

HPM 012-017cc



ISO FLANGE mm	DISPLACEMENT cm ³	VALVES OFFSET mm	Z (THEET) n°	SENSOR DEPTH mm
Ø80	012-017	42	27	18,4

	P	Motor with speed sensor option
Motor complete with selected speed sensor already mounted	M01	318-000-00186 Speed sensor 2CH PWM 1mt. cable L=18,4
	M02	318-001-00185 Speed sensor 1CH 1mt. cable L=18,4
	M03	318-002-01183 Speed sensor 2CH (2FREQ)1mt. DEUT. L=18,4
	M04	318-002-01325 Speed sensor 2CH (2FREQ)1mt. DEUT. L=32
	M05	318-003-01182 Speed sensor 2CH (1F+1D)1mt. DEUT. L=18,4
	M06	318-003-01324 Speed sensor 2CH (1F+1D)1mt. DEUT. L=32

(see page 53)

VERSIONS CODING

FLANGE TYPE

SHAFT

REAR COVER & PORTINGS

DISPLACEMENT

VARIANTS

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Flange type	OMFB code
ISO 3019-2 4H ø 80 LONG	240
ISO 3019-2 4H ø100 LONG	242
ISO 3019-2 4H ø125 LONG	244
ISO 3019-2 4H ø140 LONG	246
ISO 3019-2 4H ø160 LONG	248

Shaft type	OMFB code
DIN 5480 W20x1,25x14x9g	008
DIN 5480 W25x1,25x18x9g	011
DIN 5480 W30x2x14x9g	014
DIN 5480 W32x2x14x9g	017
DIN 5480 W35x2x16x9g	020
DIN 5480 W40x2x18x9g	023
DIN 5480 W45x2x21x9g	026

DIN 6885 K20 - ø20 k6	041
DIN 6885 K25 - ø25 k6	044
DIN 6885 K30 - ø30 k6	047
DIN 6885 K35 - ø35 k6	050
DIN 6885 K40 - ø40 k6	053
DIN 6885 K45 - ø45 k6	056

GOST 6033 20xf7x1,5x9g	101
GOST 6033 25xf7x1,5x9g	104
GOST 6033 35xf7x2x9g	107
GOST 6033 40xf7x2x9g	110
GOST 6033 45xh8x2x9g	113

Rear cover and portings	OMFB code
BSPP (GAS) 40°	01
BSPP (GAS) 90° + LATERAL	02
BSPP (GAS) 40° + LATERAL	04
UN 40°	05
SAE 6000 - 40° METRIC SCREWS VERTICAL	10
SAE 6000 - 40° METRIC SCREWS HORIZONTAL	11
SAE 6000 - 90° METRIC SCREWS VERTICAL	12
SAE 6000 - 90° METRIC SCREWS HORIZONTAL	13
SAE 6000 - METRIC SCREWS LATERAL	14
SAE 6000 - METRIC SCREWS LATERAL+PANEL	15
SAE 6000 - 40° UNC SCREWS VERTICAL	20
SAE 6000 - 40° UNC SCREWS HORIZONTAL	21

012
017
025
034
040
047
055
064
080
091
108
130

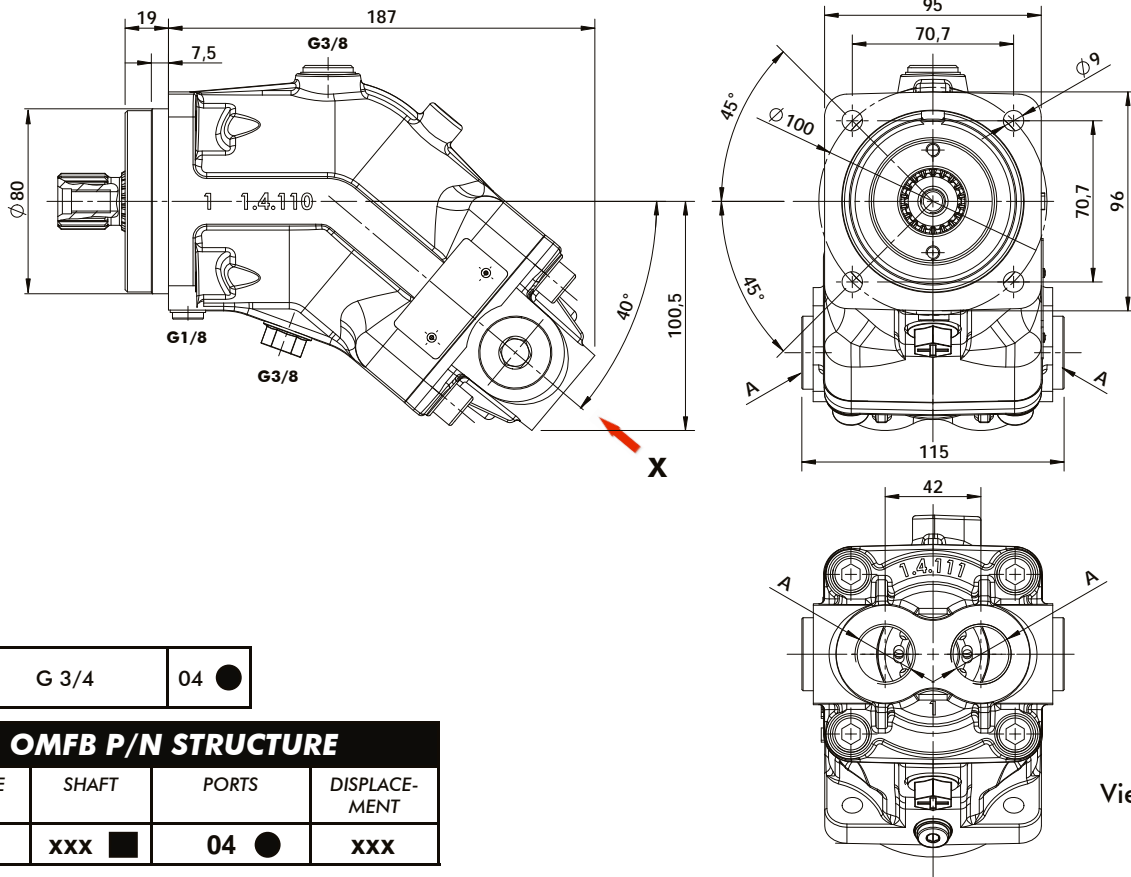
HPM code	Description	
24001104012	Flange	ISO 3019-2 4H ø80 LONG
	Shaft	DIN 5480 W25x1,25x18x9g
	Portings	BSPP (GAS) 40° + LATERAL
	Displacement	012 cc

CODING EXAMPLE

pag.21

OVERALL MOTORS DIMENSIONS

OVERALL MOTOR DIMENSION WITH 40° REAR COVER

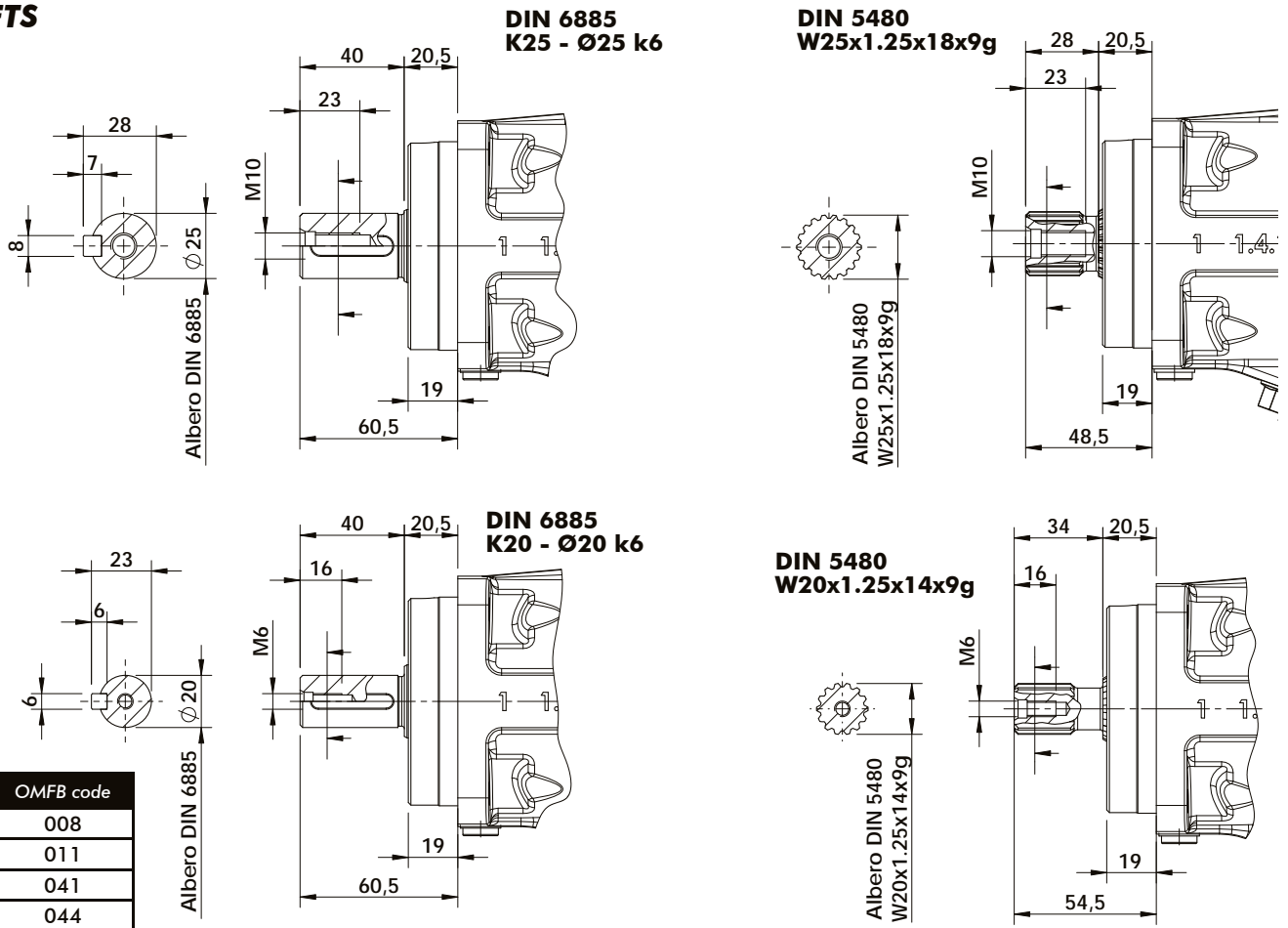


A	G 3/4	04 ●
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OMFB P/N STRUCTURE

FLANGE	SHAFT	PORTS	DISPLACEMENT
240	xxx ■	04 ●	xxx

SHAFTS

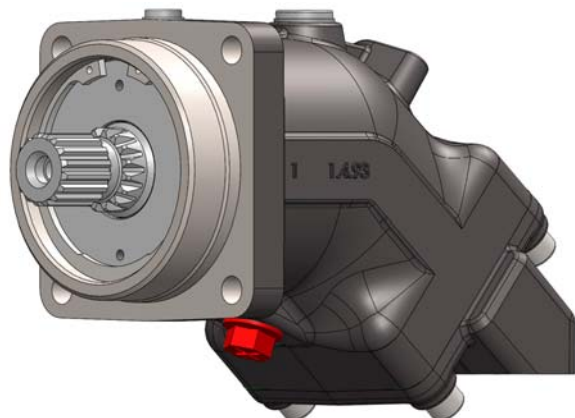


SHAFT	OMFB code
W20	008
W25	011
K20	041
K25	044

BENT AXIS PISTON MOTORS SERIES "HPM" FLANGE ISO 3019-2

FLANGE Ø 100

HPM 025-034cc



ISO FLANGE mm	DISPLACEMENT cm ³	VALVES OFFSET mm	Z (THEET) n°	SENSOR DEPTH mm
Ø100	025-034	59	27	18,4

	P	Motor with speed sensor option
Motor complete with selected speed sensor already mounted	M01	318-000-00186 Speed sensor 2CH PWM 1mt. cable L=18,4
	M02	318-001-00185 Speed sensor 1CH 1mt. cable L=18,4
	M03	318-002-01183 Speed sensor 2CH (2FREQ)1mt. DEUT. L=18,4
	M04	318-002-01325 Speed sensor 2CH (2FREQ)1mt. DEUT. L=32
	M05	318-003-01182 Speed sensor 2CH (1F+1D)1mt. DEUT. L=18,4
	M06	318-003-01324 Speed sensor 2CH (1F+1D)1mt. DEUT. L=32

(see page 53)

VERSIONS CODING

FLANGE TYPE

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SHAFT

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REAR COVER & PORTINGS

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DISPLACEMENT

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VARIANTS

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Flange type	OMFB code	Shaft type	OMFB code	Rear cover and portings	OMFB code	
ISO 3019-2 4H ø 80 LONG	240	DIN 5480 W20x1,25x14x9g	008	BSPP (GAS) 40°	01	012
ISO 3019-2 4H ø100 LONG	242	DIN 5480 W25x1,25x18x9g	011	BSPP (GAS) 90° + LATERAL	02	017
ISO 3019-2 4H ø125 LONG	244	DIN 5480 W30x2x14x9g	014	BSPP (GAS) LATERAL	03	025
ISO 3019-2 4H ø140 LONG	246	DIN 5480 W32x2x14x9g	017	UN 40°	05	034
ISO 3019-2 4H ø160 LONG	248	DIN 5480 W35x2x16x9g	020	SAE 6000 - 40° METRIC SCREWS VERTICAL	10	040
		DIN 5480 W40x2x18x9g	023	SAE 6000 - 40° METRIC SCREWS HORIZONTAL	11	047
		DIN 5480 W45x2x21x9g	026	SAE 6000 - 90° METRIC SCREWS VERTICAL	12	055
		DIN 6885 K20 - ø20 k6	041	SAE 6000 - 90° METRIC SCREWS HORIZONTAL	13	064
		DIN 6885 K25 - ø25 k6	044	SAE 6000 - METRIC SCREWS LATERAL	14	080
		DIN 6885 K30 - ø30 k6	047	SAE 6000 - METRIC SCREWS LATERAL+PANEL	15	091
		DIN 6885 K35 - ø35 k6	050	SAE 6000 - 40° UNC SCREWS VERTICAL	20	108
		DIN 6885 K40 - ø40 k6	053	SAE 6000 - 40° UNC SCREWS HORIZONTAL	21	130
		DIN 6885 K45 - ø45 k6	056			
		GOST 6033 20xf7x1,5x9g	101			
		GOST 6033 25xf7x1,5x9g	104			
		GOST 6033 35xf7x2x9g	107			
		GOST 6033 40xf7x2x9g	110			
		GOST 6033 45xh8x2x9g	113			

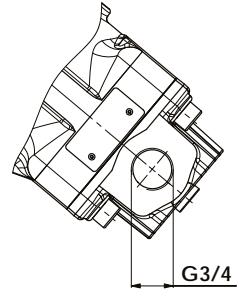
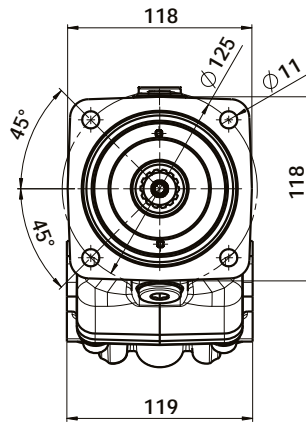
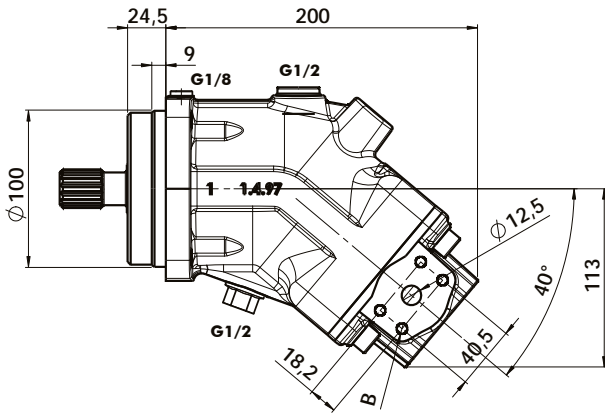
HPM code	Description	
24201101025	Flange	ISO 3019-2 4H ø100 LONG
	Shaft	DIN 5480 W25x1,25x18x9g
	Portings	BSPP (GAS) 40°
	Displacement	025 cc

CODING EXAMPLE

pag.23

OVERALL MOTORS DIMENSIONS

OVERALL MOTOR DIMENSION WITH REAR LATERAL COVER



PORTINGS SAE J518-1/2" 6000psi (41,4 MPa) lateral		OMFB code
B	M 8	14 ●

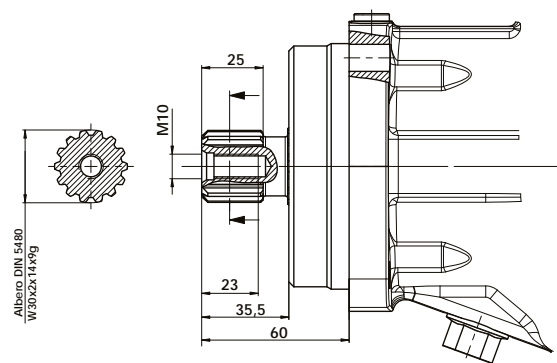
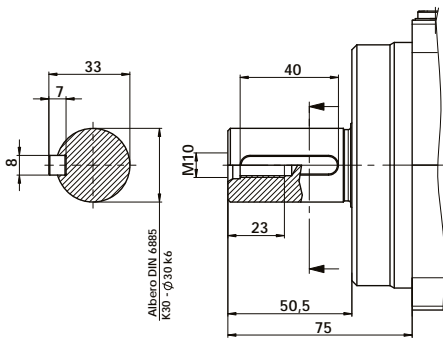
PORTINGS ONLY LATERAL		OMFB code
G 3/4		03 ●

SHAFTS

**DIN 6885
K30 - Ø30 k6**

**DIN 5480
W30x2x14x9g**

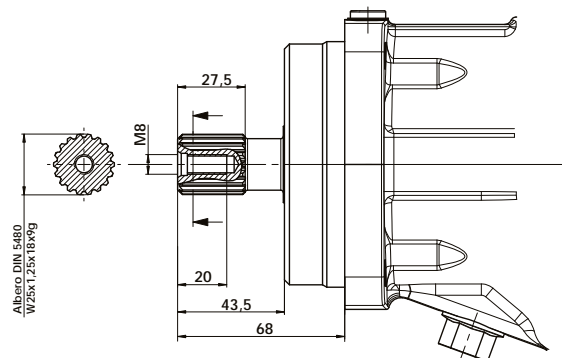
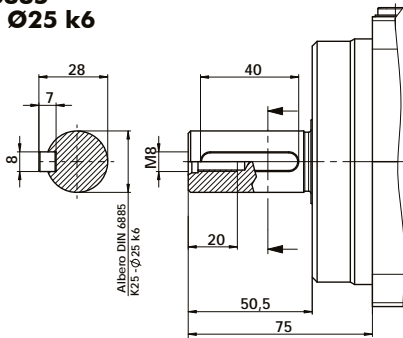
SHAFT	OMFB code
K25	044
K30	047
W25	011
W30	014



Data: Martedì 11 febbraio 2020

**DIN 6885
K25 - Ø25 k6**

**DIN 5480
W25x1.25x18x9g**



Codice foglio: 997-244-00011 Rev: AR

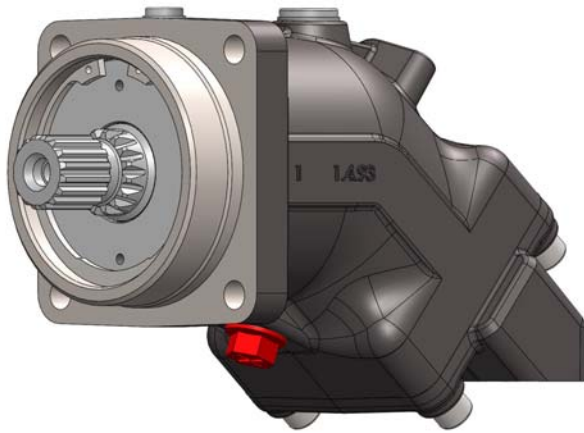
Displacement	cm ³ /rev	34
Working pressure	Max. intermittent	370 bar
	Max. continuous	320 bar



BENT AXIS PISTON MOTORS SERIES "HPM" FLANGE ISO 3019-2

FLANGE Ø 125

HPM 040-047cc
055-064cc



ISO FLANGE mm	DISPLACEMENT cm ³	VALVES OFFSET mm	Z (THEET) n°	SENSOR DEPTH mm
Ø125	040-047 055-064	75	32	18,4

	P	Motor with speed sensor option
Motor complete with selected speed sensor already mounted	M01	318-000-00186 Speed sensor 2CH PWM 1mt. cable L=18,4
	M02	318-001-00185 Speed sensor 1CH 1mt. cable L=18,4
	M03	318-002-01183 Speed sensor 2CH (2FREQ)1mt. DEUT. L=18,4
	M04	318-002-01325 Speed sensor 2CH (2FREQ)1mt. DEUT. L=32
	M05	318-003-01182 Speed sensor 2CH (1F+1D)1mt. DEUT. L=18,4
	M06	318-003-01324 Speed sensor 2CH (1F+1D)1mt. DEUT. L=32

(see page 53)

VERSIONS CODING

FLANGE TYPE

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SHAFT

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REAR COVER & PORTINGS

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DISPLACEMENT

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VARIANTS

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Flange type	OMFB code
ISO 3019-2 4H ø 80 LONG	240
ISO 3019-2 4H ø100 LONG	242
ISO 3019-2 4H ø125 LONG	244
ISO 3019-2 4H ø140 LONG	246
ISO 3019-2 4H ø160 LONG	248

Shaft type	OMFB code
DIN 5480 W20x1,25x14x9g	008
DIN 5480 W25x1,25x18x9g	011
DIN 5480 W30x2x14x9g	014
DIN 5480 W32x2x14x9g	017
DIN 5480 W35x2x16x9g	020
DIN 5480 W40x2x18x9g	023
DIN 5480 W45x2x21x9g	026

DIN 6885 K20 - ø20 k6	041
DIN 6885 K25 - ø25 k6	044
DIN 6885 K30 - ø30 k6	047
DIN 6885 K35 - ø35 k6	050
DIN 6885 K40 - ø40 k6	053
DIN 6885 K45 - ø45 k6	056

GOST 6033 20xf7x1,5x9g	101
GOST 6033 25xf7x1,5x9g	104
GOST 6033 35xf7x2x9g	107
GOST 6033 40xf7x2x9g	110
GOST 6033 45xh8x2x9g	113

Rear cover and portings	OMFB code
BSPP (GAS) 40°	01
BSPP (GAS) 90° + LATERAL	02
UN 40°	05
SAE 6000 - 40° METRIC SCREWS VERTICAL	10
SAE 6000 - 40° METRIC SCREWS HORIZONTAL	11
SAE 6000 - 90° METRIC SCREWS VERTICAL	12
SAE 6000 - 90° METRIC SCREWS HORIZONTAL	13
SAE 6000 - METRIC SCREWS LATERAL	14
SAE 6000 - METRIC SCREWS LATERAL + PANEL	15
SAE 6000 - 40° UNC SCREWS VERTICAL	20
SAE 6000 - 40° UNC SCREWS HORIZONTAL	21

012
017
025
034
040
047
055
064
080
091
108
130

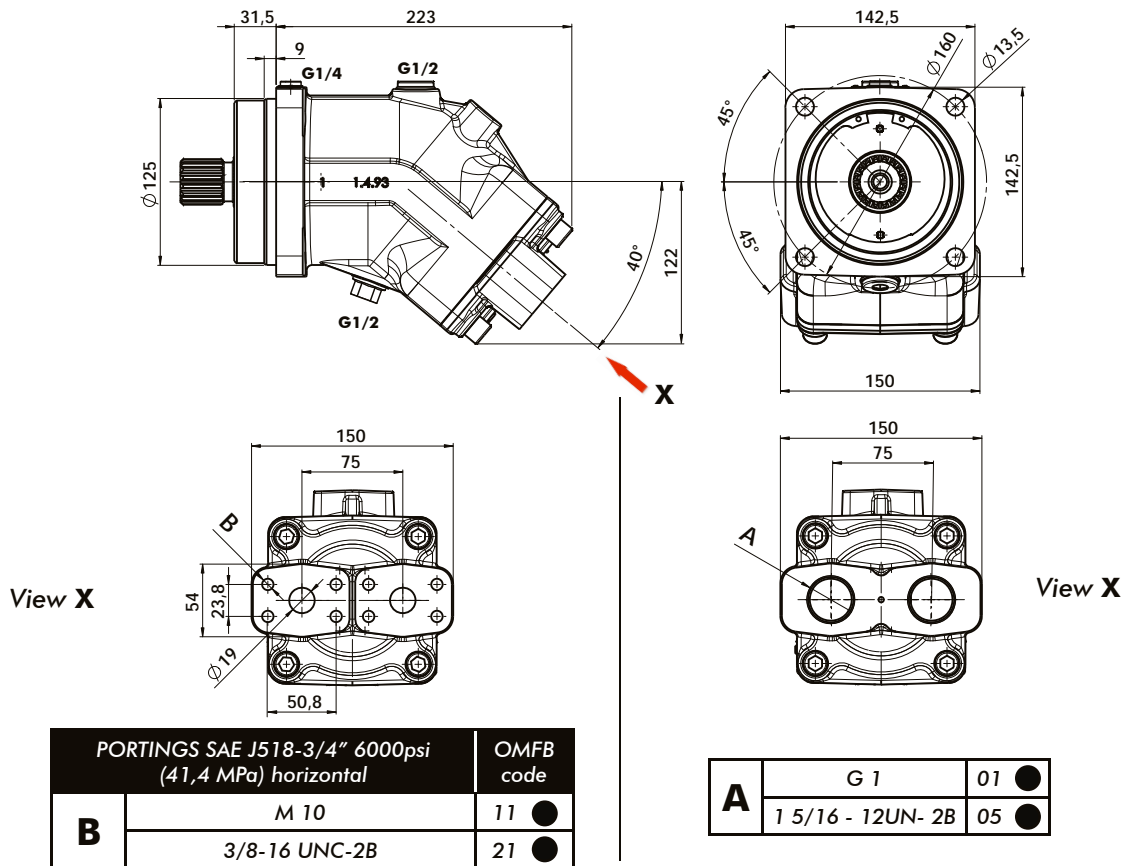
HPM code	Description	
24402001064	Flange	ISO 3019-2 4H ø125 LONG
	Shaft	DIN 5480 W35x2x16x9g
	Portings	BSPP (GAS) 40°
	Displacement	064 cc

CODING EXAMPLE

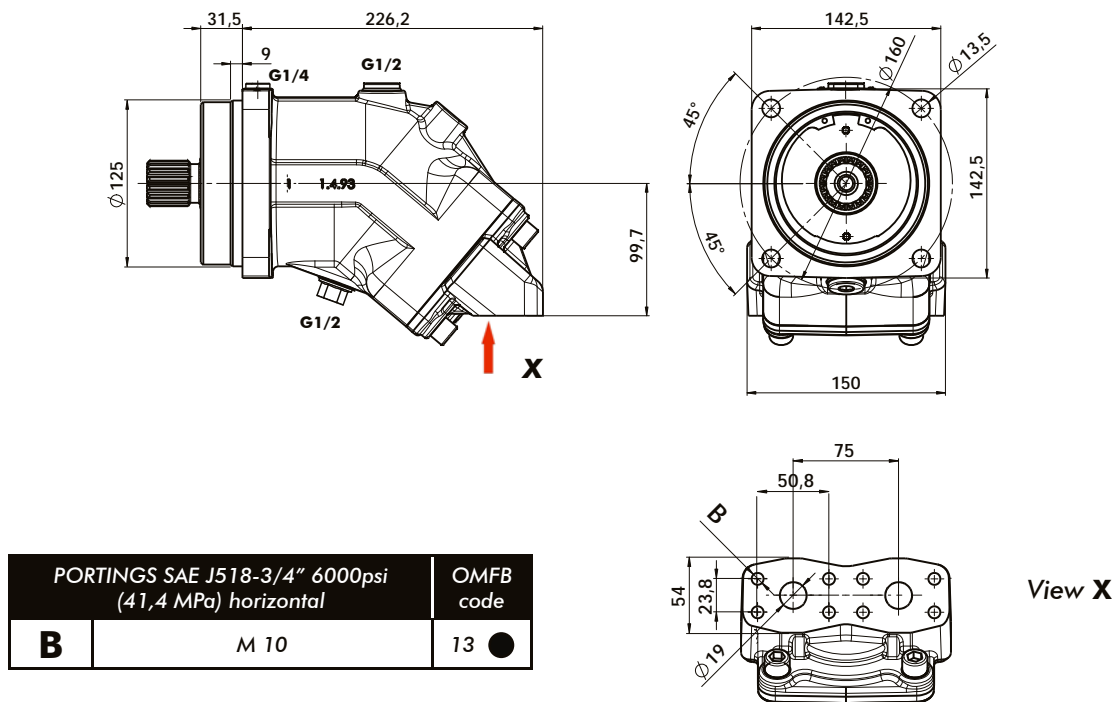
pag.27

OVERALL MOTORS DIMENSIONS

OVERALL MOTOR DIMENSION WITH 40° REAR COVER



OVERALL MOTOR DIMENSION WITH 90° REAR COVER



OMFB P/N STRUCTURE

FLANGE	SHAFT	PORTS	DISPLACEMENT
242	xxx ■	xx ●	xxx

BENT AXIS PISTON MOTORS SERIES "HPM" FLANGE ISO 3019-2

FLANGE Ø 140

HPM 080-091 cc



ISO FLANGE mm	DISPLACEMENT cm ³	VALVES OFFSET mm	Z (THEET) n°	SENSOR DEPTH mm
Ø140	080-091	84	38	18,4

	P	Motor with speed sensor option
Motor complete with selected speed sensor already mounted	M01	318-000-00186 Speed sensor 2CH PWM 1mt. cable L=18,4
	M02	318-001-00185 Speed sensor 1CH 1mt. cable L=18,4
	M03	318-002-01183 Speed sensor 2CH (2FREQ)1mt. DEUT. L=18,4
	M04	318-002-01325 Speed sensor 2CH (2FREQ)1mt. DEUT. L=32
	M05	318-003-01182 Speed sensor 2CH (1F+1D)1mt. DEUT. L=18,4
	M06	318-003-01324 Speed sensor 2CH (1F+1D)1mt. DEUT. L=32

(see page 53)

VERSIONS CODING

FLANGE TYPE

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SHAFT

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REAR COVER & PORTINGS

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DISPLACEMENT

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VARIANTS

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Flange type	OMFB code
ISO 3019-2 4H ø 80 LONG	240
ISO 3019-2 4H ø100 LONG	242
ISO 3019-2 4H ø125 LONG	244
ISO 3019-2 4H ø140 LONG	246
ISO 3019-2 4H ø160 LONG	248

Shaft type	OMFB code
DIN 5480 W20x1,25x14x9g	008
DIN 5480 W25x1,25x18x9g	011
DIN 5480 W30x2x14x9g	014
DIN 5480 W32x2x14x9g	017
DIN 5480 W35x2x16x9g	020
DIN 5480 W40x2x18x9g	023
DIN 5480 W45x2x21x9g	026

only for 80cc

DIN 6885 K20 - ø20 k6	041
DIN 6885 K25 - ø25 k6	044
DIN 6885 K30 - ø30 k6	047
DIN 6885 K35 - ø35 k6	050
DIN 6885 K40 - ø40 k6	053
DIN 6885 K45 - ø45 k6	056

GOST 6033 20xf7x1,5x9g	101
GOST 6033 25xf7x1,5x9g	104
GOST 6033 35xf7x2x9g	107
GOST 6033 40xf7x2x9g	110
GOST 6033 45xh8x2x9g	113

Rear cover and portings	OMFB code
BSPP (GAS) 40°	01
BSPP (GAS) 90° + LATERAL	02
UN 40°	05
SAE 6000 - 40° METRIC SCREWS VERTICAL	10
SAE 6000 - 40° METRIC SCREWS HORIZONTAL	11
SAE 6000 - 90° METRIC SCREWS VERTICAL	12
SAE 6000 - 90° METRIC SCREWS HORIZONTAL	13
SAE 6000 - METRIC SCREWS LATERAL	14
SAE 6000 - METRIC SCREWS LATERAL + PANEL	15
SAE 6000 - 40° UNC SCREWS VERTICAL	20
SAE 6000 - 40° UNC SCREWS HORIZONTAL	21

012
017
025
034
040
047
055
064
080
091
108
130

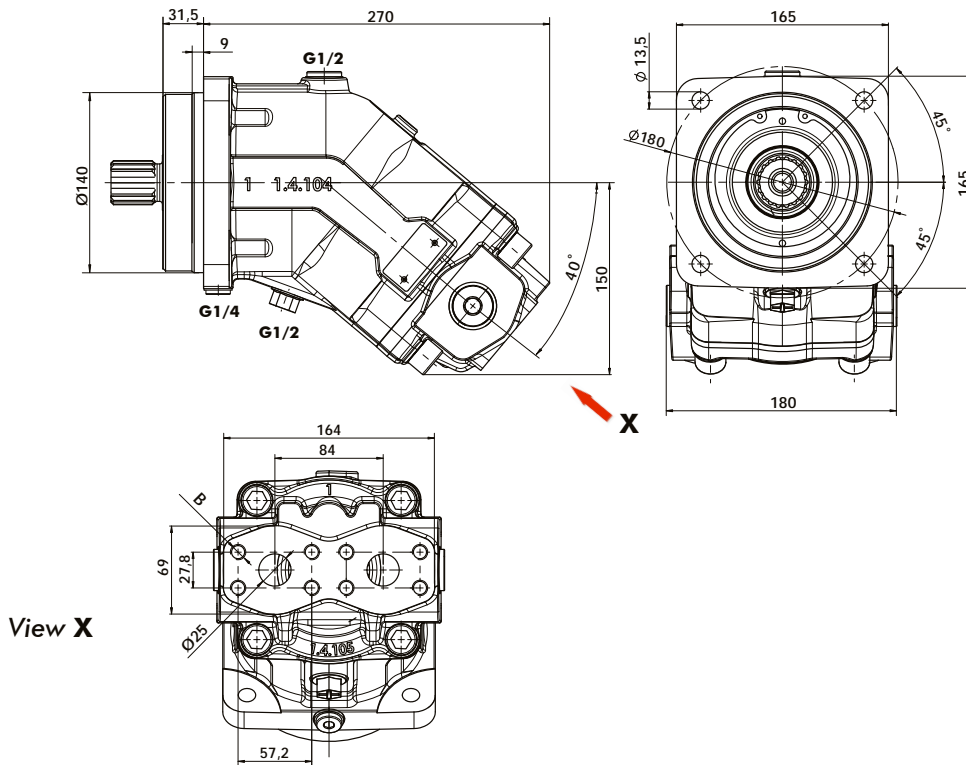
HPM code	Description	
24602314080	Flange	ISO 3019-2 4H ø140 LONG
	Shaft	DIN 5480 W40x2x18x9g
	Portings	SAE 6000 - METRIC SCREWS LATERAL
	Displacement	080 cc

CODING EXAMPLE

pag.31

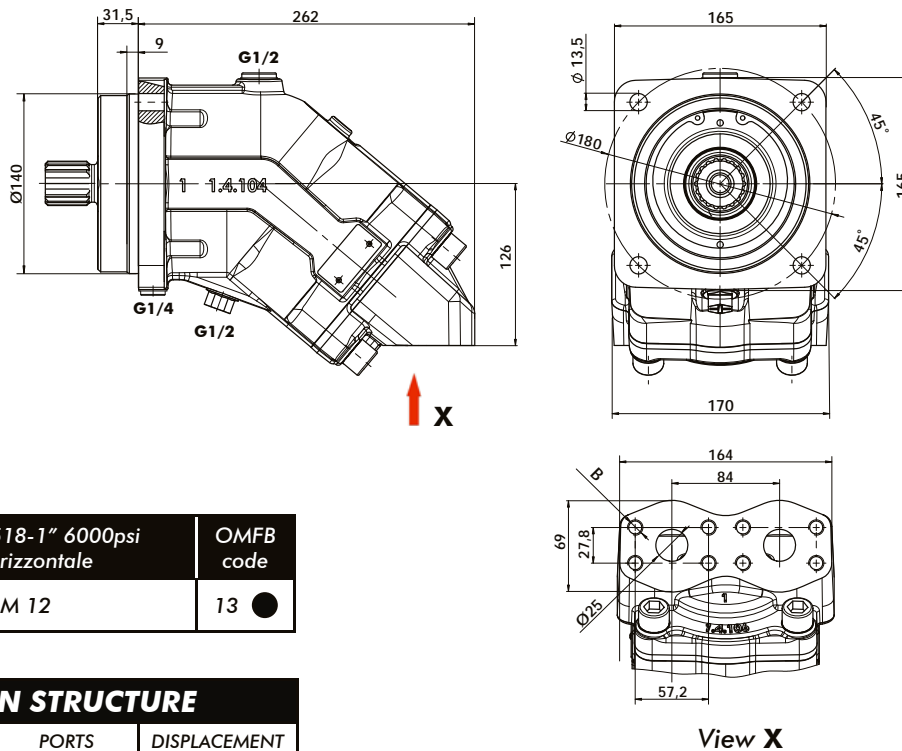
OVERALL MOTORS DIMENSIONS

OVERALL MOTOR DIMENSION WITH 40° REAR COVER



PORTINGS SAE J518-1" 6000psi (41,4 MPa) orizzontale		OMFB code
B	M 12	11 ●

OVERALL MOTOR DIMENSION WITH 90° REAR COVER

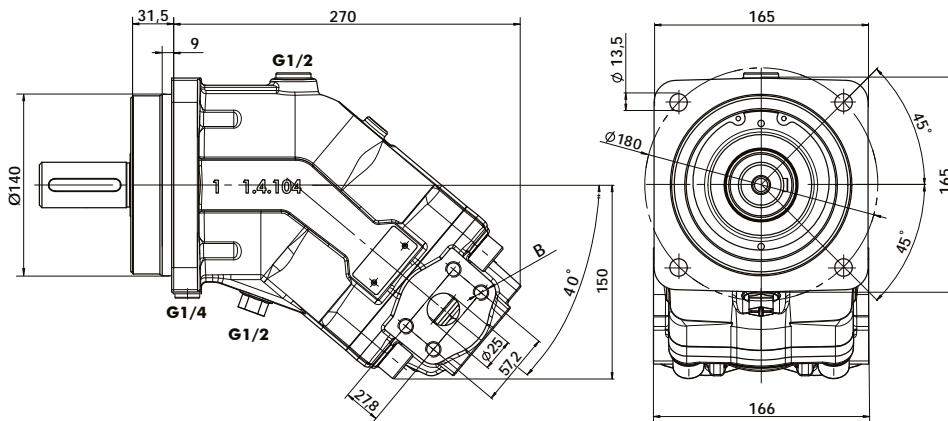


PORTINGS SAE J518-1" 6000psi (41,4 MPa) orizzontale		OMFB code
B	M 12	13 ●

OMFB P/N STRUCTURE			
FLANGE	SHAFT	PORTS	DISPLACEMENT
246	xxx ■	xx ●	xxx

OVERALL MOTORS DIMENSIONS

OVERALL MOTOR DIMENSION WITH REAR LATERAL COVER + PANEL

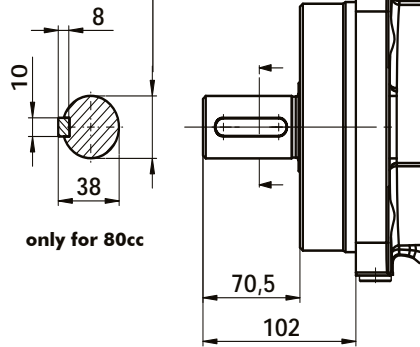


PORTINGS SAE J518-1" 6000psi (41,4 MPa) laterale		OMFB code
B	M 12	14 ●

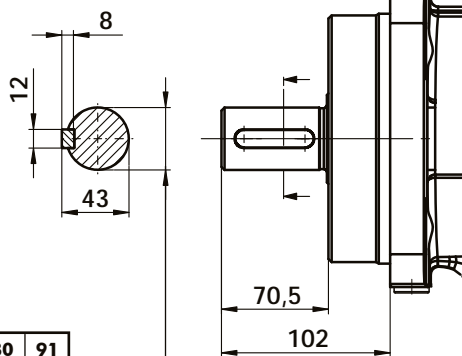
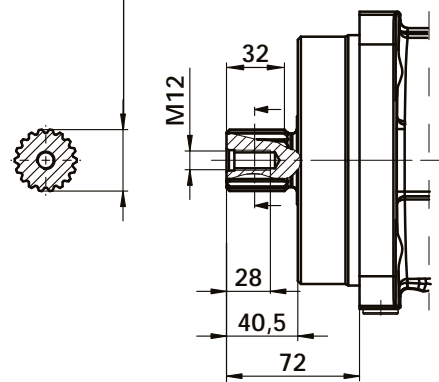
SHAFTS

SHAFT	OMFB code
K35	050
K40	053
W35	020
W40	023

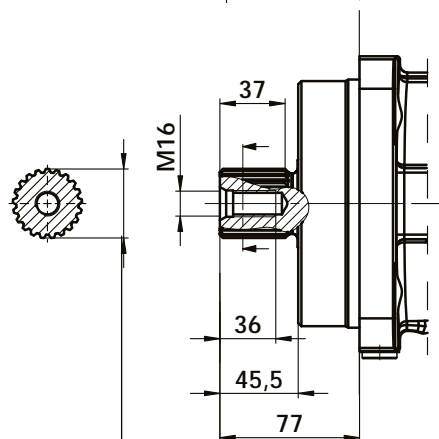
**DIN 6885
K35 - Ø35 k6**



**DIN 5480
W35x2x16x9g**



**DIN 6885
K40 - Ø40 k6**



**DIN 5480
W40x2x18x9g**

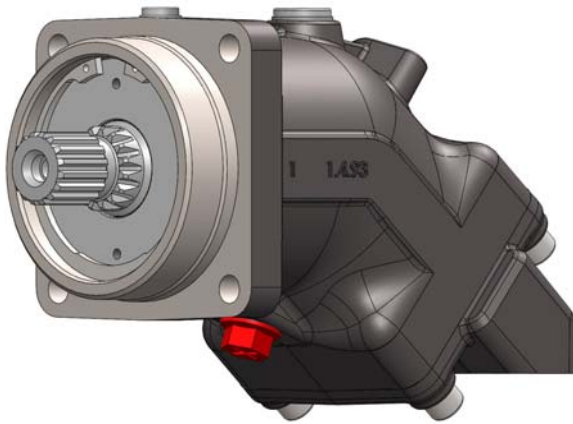
Displacement	cm ³ /rev	80	91
		Max. intermittent	380
Working pressure bar	Max. continuous	330	290



BENT AXIS PISTON MOTORS SERIES "HPM" FLANGE ISO 3019-2

FLANGE Ø 160

HPM 108-130cc



ISO FLANGE mm	DISPLACEMENT cm ³	VALVES OFFSET mm	Z (THEET) n°	SENSOR DEPTH mm
Ø160	108-130	99	38	32

	P	Motor with speed sensor option
Motor complete with selected speed sensor already mounted	M01	318-000-00186 Speed sensor 2CH PWM 1mt. cable L=18,4
	M02	318-001-00185 Speed sensor 1CH 1mt. cable L=18,4
	M03	318-002-01183 Speed sensor 2CH (2FREQ)1mt. DEUT. L=18,4
	M04	318-002-01325 Speed sensor 2CH (2FREQ)1mt. DEUT. L=32
	M05	318-003-01182 Speed sensor 2CH (1F+1D)1mt. DEUT. L=18,4
	M06	318-003-01324 Speed sensor 2CH (1F+1D)1mt. DEUT. L=32

(see page 53)

VERSIONS CODING

FLANGE
TYPE

SHAFT

REAR COVER
& PORTINGS

DISPLACEMENT

VARIANTS

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Flange type	OMFB code
ISO 3019-2 4H ø 80 LONG	240
ISO 3019-2 4H ø100 LONG	242
ISO 3019-2 4H ø125 LONG	244
ISO 3019-2 4H ø140 LONG	246
ISO 3019-2 4H ø160 LONG	248

Shaft type	OMFB code
DIN 5480 W20x1,25x14x9g	008
DIN 5480 W25x1,25x18x9g	011
DIN 5480 W30x2x14x9g	014
DIN 5480 W32x2x14x9g	017
DIN 5480 W35x2x16x9g	020
DIN 5480 W40x2x18x9g	023
DIN 5480 W45x2x21x9g	026

DIN 6885 K20 - ø20 k6	041
DIN 6885 K25 - ø25 k6	044
DIN 6885 K30 - ø30 k6	047
DIN 6885 K35 - ø35 k6	050
DIN 6885 K40 - ø40 k6	053
DIN 6885 K45 - ø45 k6	056

GOST 6033 20xf7x1,5x9g	101
GOST 6033 25xf7x1,5x9g	104
GOST 6033 35xf7x2x9g	107
GOST 6033 40xf7x2x9g	110
GOST 6033 45xh8x2x9g	113

Rear cover and portings	OMFB code
BSPP (GAS) 40°	01
BSPP (GAS) 90° + LATERAL	02
UN 40°	05
SAE 6000 - 40° METRIC SCREWS VERTICAL	10
SAE 6000 - 40° METRIC SCREWS HORIZONTAL	11
SAE 6000 - 90° METRIC SCREWS VERTICAL	12
SAE 6000 - 90° METRIC SCREWS HORIZONTAL	13
SAE 6000 - METRIC SCREWS LATERAL	14
SAE 6000 - METRIC SCREWS LATERAL + PANEL	15
SAE 6000 - 40° UNC SCREWS VERTICAL	20
SAE 6000 - 40° UNC SCREWS HORIZONTAL	21

012
017
025
034
040
047
055
064
080
090
108
130

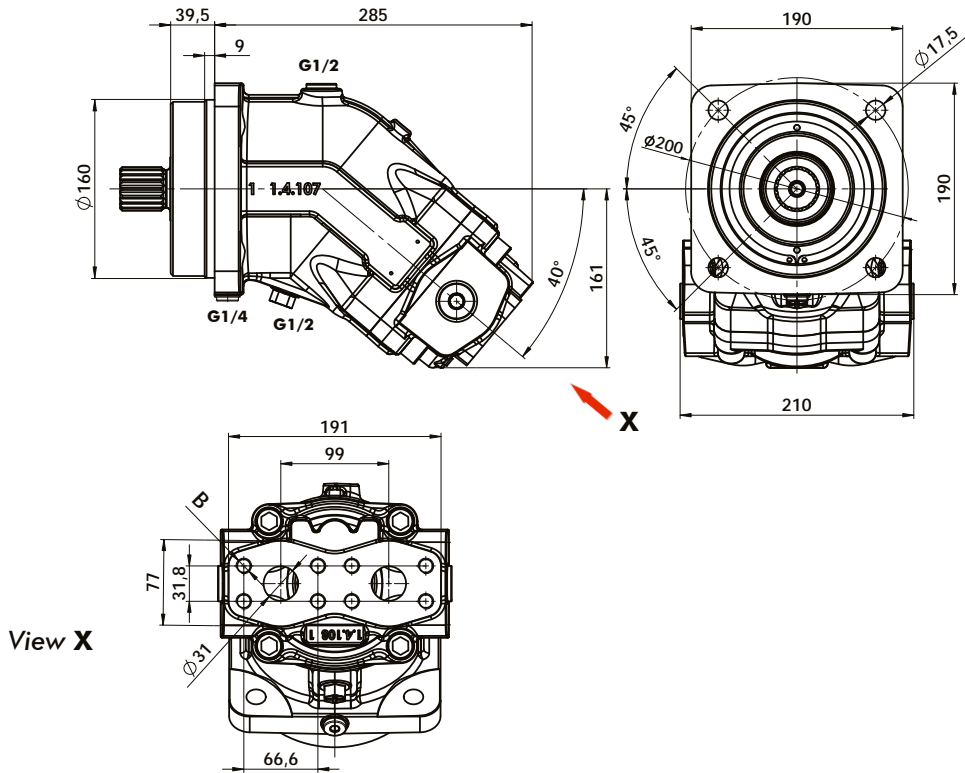
HPM code	Description	
24802314108	Flange	ISO 3019-2 4H ø160 LONG
	Shaft	DIN 5480 W40x2x18x9g
	Portings	SAE 6000 - METRIC SCREWS LATERAL
	Displacement	108 cc

CODING EXAMPLE

pag.35

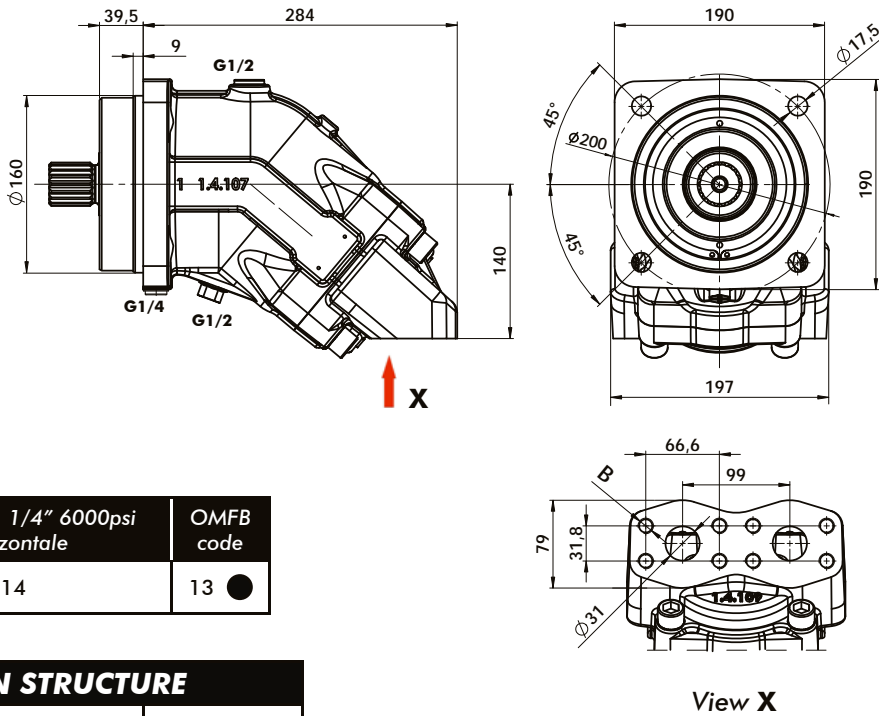
OVERALL MOTORS DIMENSIONS

OVERALL MOTOR DIMENSION WITH 40° REAR COVER



PORTINGS SAE J518-1 1/4" 6000psi (41,4 MPa) orizzontale		OMFB code
B	M 14	11 ●

OVERALL MOTOR DIMENSION WITH 90° REAR COVER

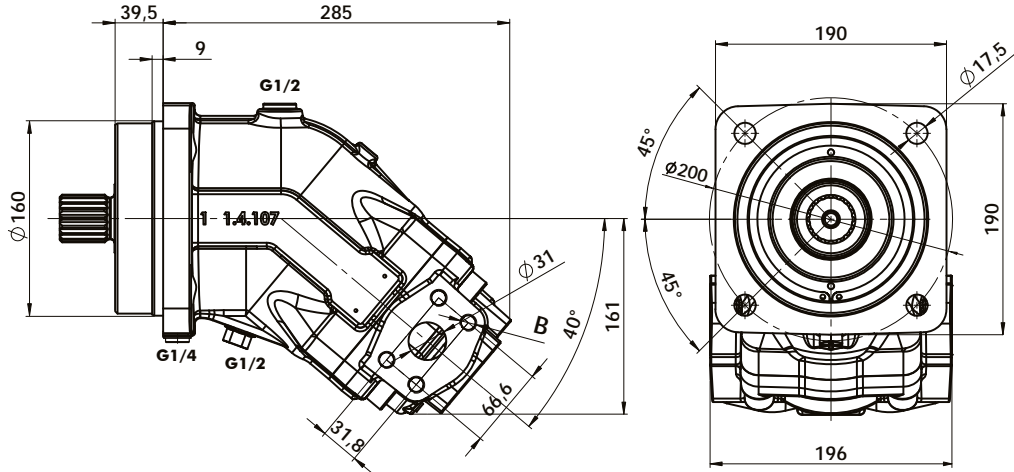


PORTINGS SAE J518-1 1/4" 6000psi (41,4 MPa) orizzontale		OMFB code
B	M 14	13 ●

OMFB P/N STRUCTURE			
FLANGE	SHAFT	PORTS	DISPLACEMENT
248	xxx ■	xx ●	xxx

OVERALL MOTORS DIMENSIONS

OVERALL MOTOR DIMENSION WITH REAR LATERAL COVER



PORTINGS SAE J518-1 1/4" 6000psi (41,4 MPa) laterale		OMFB code
B	M 14	14 ●

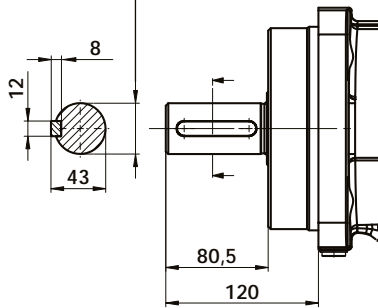
SHAFTS

Displacement	cm ³ /rev	108
Working pressure	bar	
	Max. intermittent	310
	Max. continuous	260

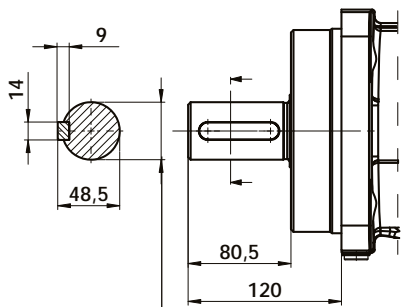
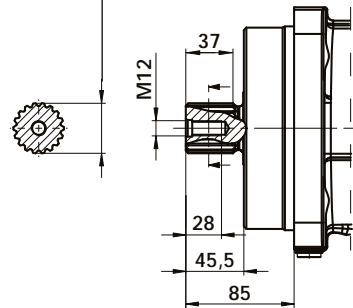


SHAFT	OMFB code
K40	053
K45	056
W40	023
W45	026

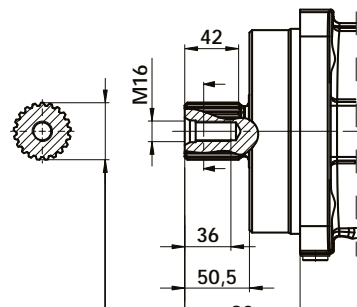
**DIN 6885
K40 - Ø40 k6**



**DIN 5480
W40x2x18x9g**



**DIN 6885
K45 - Ø45 k6**



**DIN 5480
W45x2x21x9g**

Displacement	cm ³ /rev	108	130
Working pressure	bar		
	Max. intermittent	390	320
	Max. continuous	130	270



BENT AXIS PISTON MOTORS SERIES "HPM" FLANGE ISO 3019-1 SAE B 2 HOLES

Ø 101,6

HPM 012-017cc



SAE FLANGE	DISPLACEMENT cm ³	VALVES OFFSET mm	Z (THEET) n°	SENSOR DEPTH mm
SAE B	012-017	42	27	18,4

	P	Motor with speed sensor option
Motor complete with selected speed sensor already mounted	M01	318-000-00186 Speed sensor 2CH PWM 1mt. cable L=18,4
	M02	318-001-00185 Speed sensor 1CH 1mt. cable L=18,4
	M03	318-002-01183 Speed sensor 2CH (2FREQ) 1mt. DEUT. L=18,4
	M04	318-002-01325 Speed sensor 2CH (2FREQ) 1mt. DEUT. L=32
	M05	318-003-01182 Speed sensor 2CH (1F+1D) 1mt. DEUT. L=18,4
	M06	318-003-01324 Speed sensor 2CH (1F+1D) 1mt. DEUT. L=32

(see page 53)

VERSIONS CODING

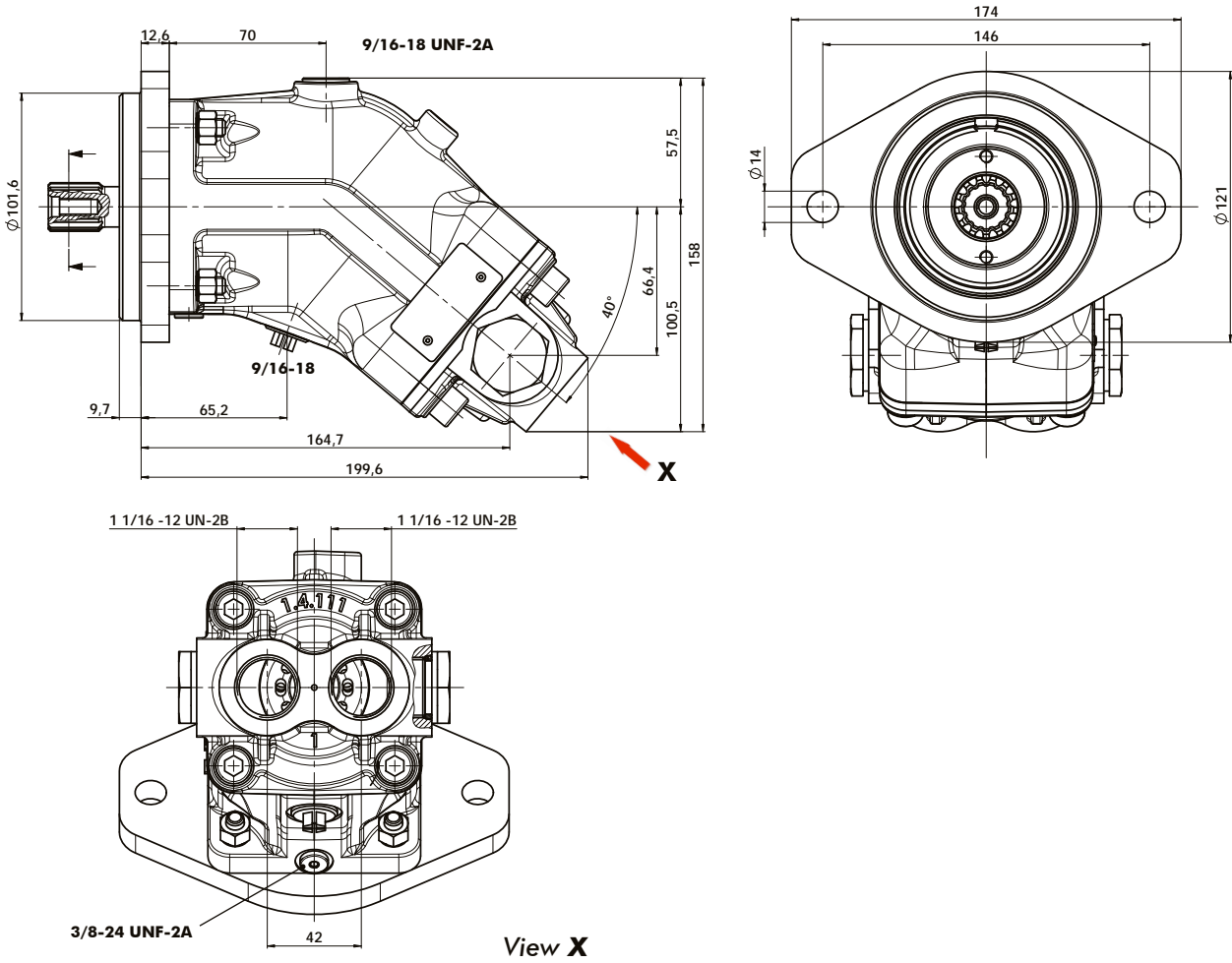
FLANGE TYPE		SHAFT		REAR COVER & PORTINGS		DISPLACEMENT		VARIANTS	
[] [] []		[] [] []		[] []		[] [] []		[] [] []	
Flange type	OMFB code	Shaft type	OMFB code	Rear cover and portings	OMFB code				
SAE B ISO 3019-1 (SAE J744) 2 HOLES	221	SAE B 13 T	074	40° SAE standard ISO 11926	06	012			
		SAE J744 Ø25,4	091			017			

HPM code	Description	
22107406012	Flange	SAE B ISO 3019-1 (SAE J744) 2 HOLES
	Shaft	SAE B 13 T
	Portings	40° SAE standard ISO 11926
	Displacement	012 cc

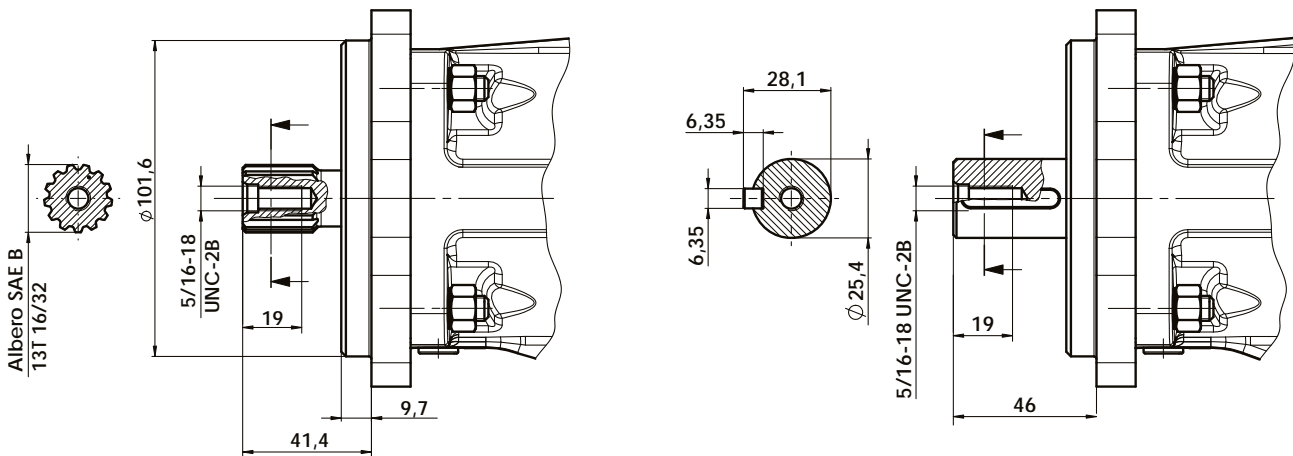
**CODING
EXAMPLE**

OVERALL MOTORS DIMENSIONS

OVERALL MOTOR DIMENSION WITH 40° REAR COVER



SHAFTS



SAE B
13T 16/32DP 7/8"

BENT AXIS PISTON MOTORS SERIES "HPM" FLANGE ISO 3019-1 SAE B 2 HOLES

Ø 101,6

HPM 025-034cc



SAE FLANGE	DISPLACEMENT cm ³	VALVES OFFSET mm	Z (THEET) n°	SENSOR DEPTH mm
SAE B	025-034	59	27	18,4

	P	Motor with speed sensor option
Motor complete with selected speed sensor already mounted	M01	318-000-00186 Speed sensor 2CH PWM 1mt. cable L=18,4
	M02	318-001-00185 Speed sensor 1CH 1mt. cable L=18,4
	M03	318-002-01183 Speed sensor 2CH (2FREQ)1mt. DEUT. L=18,4
	M04	318-002-01325 Speed sensor 2CH (2FREQ)1mt. DEUT. L=32
	M05	318-003-01182 Speed sensor 2CH (1F+1D)1mt. DEUT. L=18,4
	M06	318-003-01324 Speed sensor 2CH (1F+1D)1mt. DEUT. L=32

(see page 53)

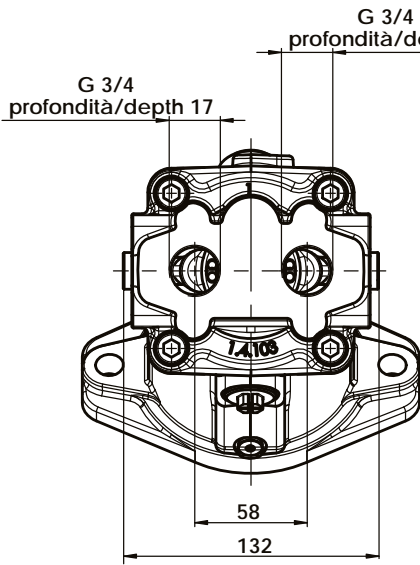
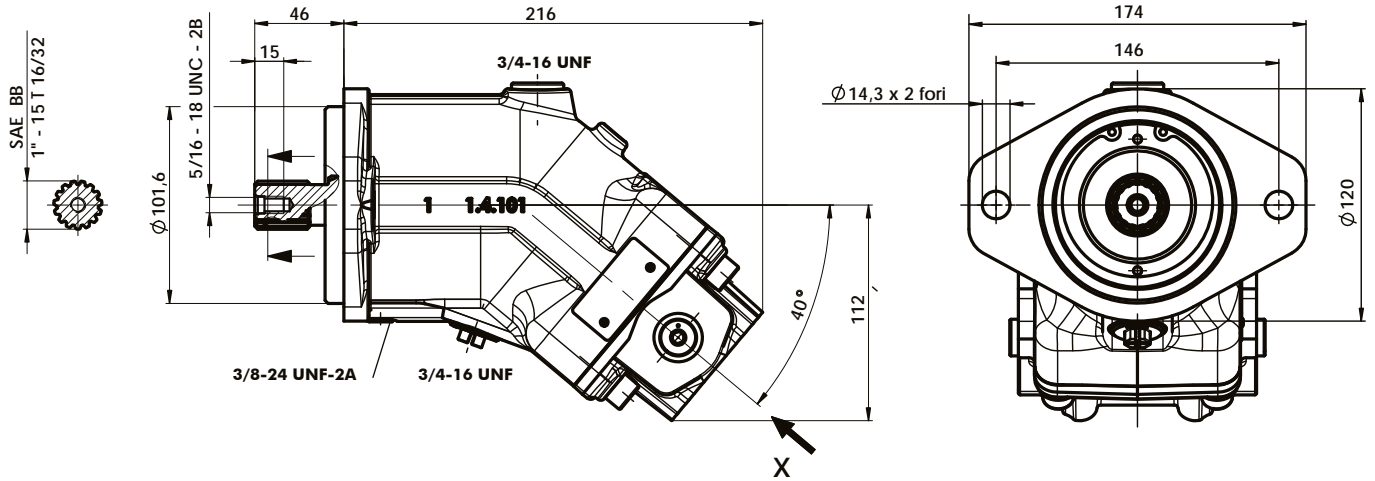
VERSIONS CODING

FLANGE TYPE		SHAFT		REAR COVER & PORTINGS		DISPLACEMENT		VARIANTS	
[] [] []		[] [] []		[] []		[] [] []		[] [] []	
Flange type	OMFB code	Shaft type	OMFB code	Rear cover and portings	OMFB code				
SAE B ISO 3019-1 (SAE J744) 2 HOLES	221	SAE BB - 15T 16/32	077	BSPP (GAS) 40°	01	025			
				BSPP (GAS) LATERAL	03	034			
				UNF 40°	05				
				UNF 40° L VLC	07				
				SAE 6000 - 40° METRIC SCREWS HORIZONTAL	11				
				SAE 6000 - 90° METRIC SCREWS HORIZONTAL	13				
				SAE 6000 - METRIC SCREWS LATERAL	14				
				SAE L-U VLC	24				

HPM code	Description	
22107701025	Flange	SAE B ISO 3019-1 (SAE J744) 2 HOLES
	Shaft	SAE BB - 15T 16/32
	Portings	BSPP (GAS) 40°
	Displacement	025 cc

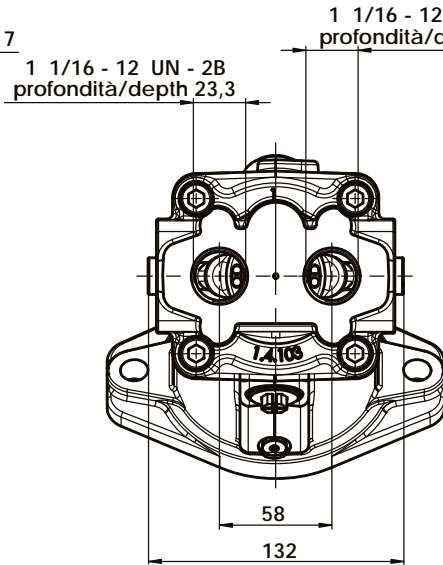
**CODING
EXAMPLE**

OVERALL MOTORS DIMENSIONS



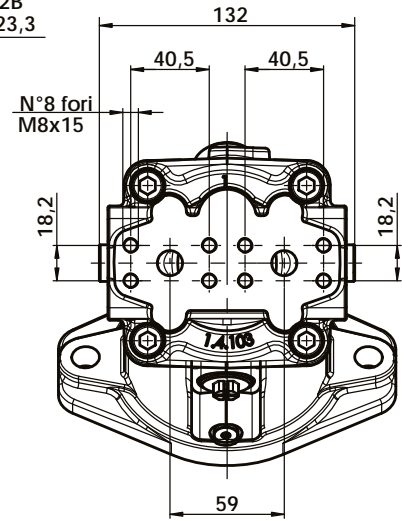
View X
Ports 40° BSP
standard ISO 228

OMFB
Code
01 ●



View X
Ports 40° SAE
standard ISO 11926

OMFB
Code
05 ●



View X
Ports 40°
SAE 6000 psi - 1/2"
standard SAE J518

OMFB
Code
11 ●

OMFB P/N STRUCTURE

FLANGE	SHAFT	PORTS	DISPLACEMENT
221	077	XX ●	XXX

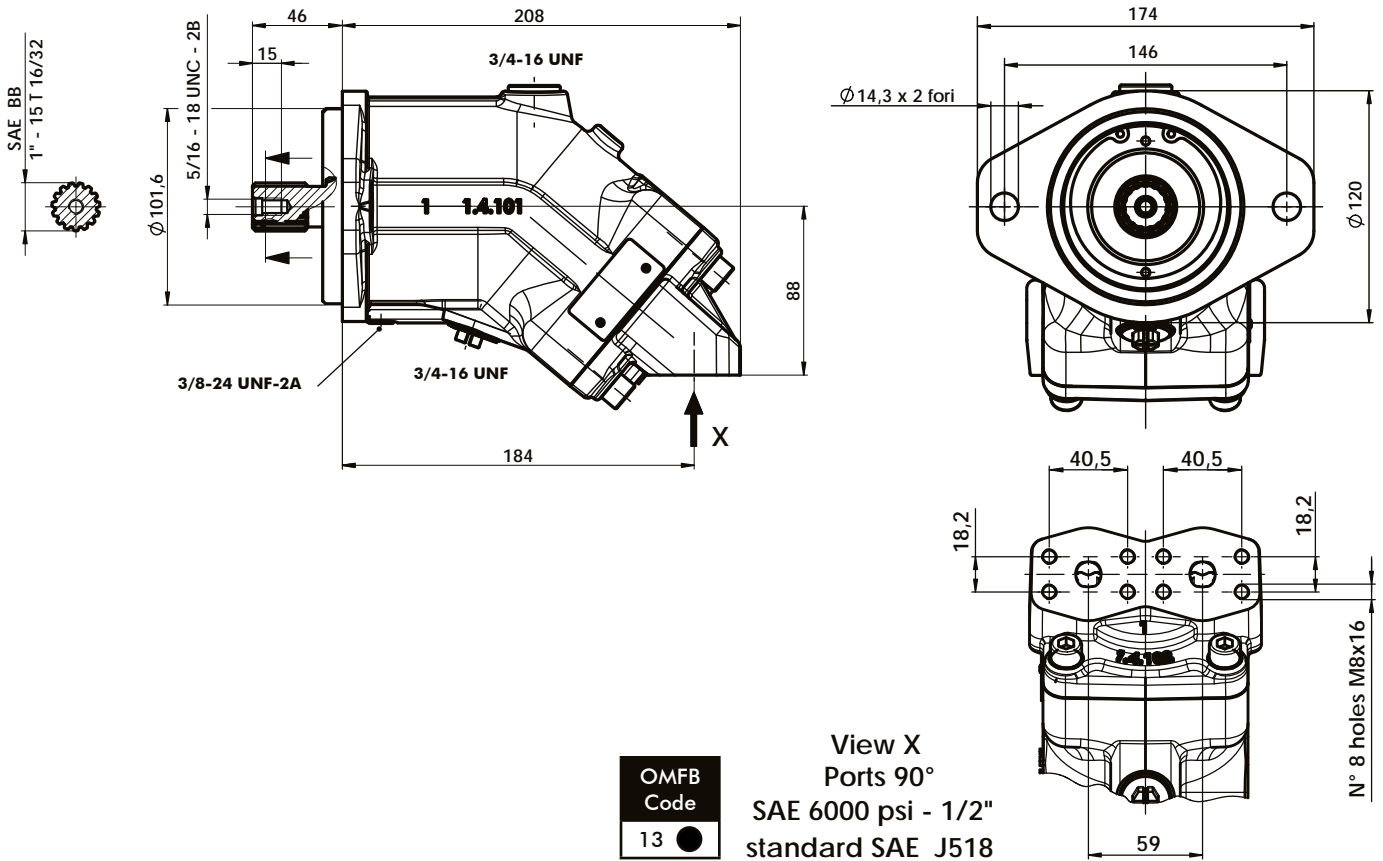
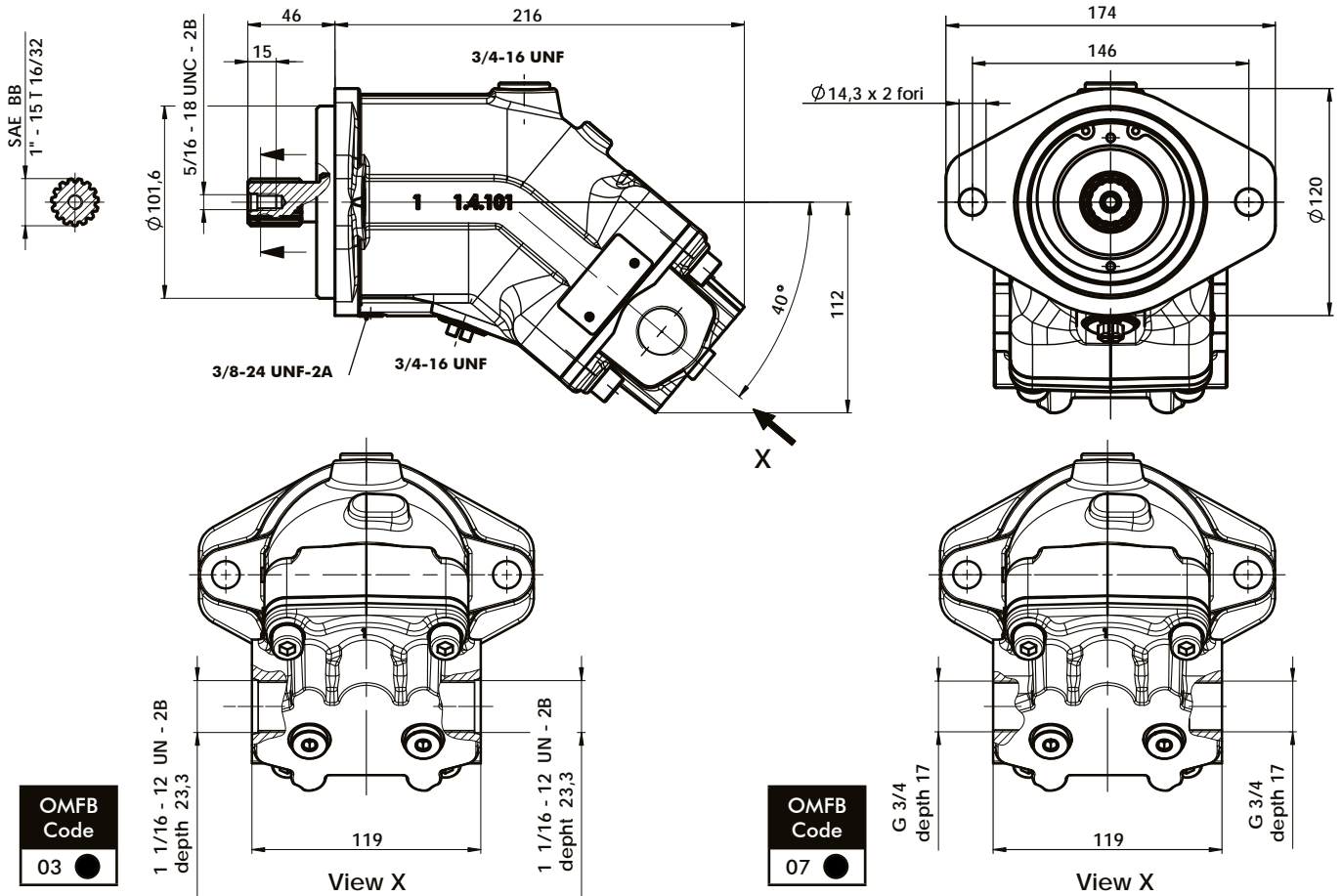
OVERALL MOTORS DIMENSIONS

Codice fascicolo: 997-400-24411

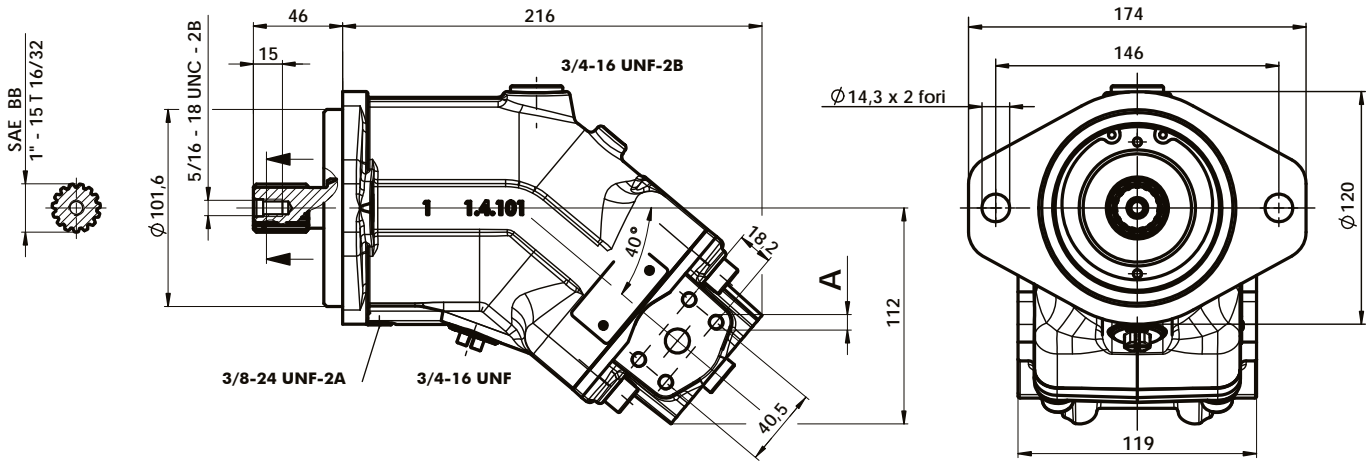
Data: Martedì 11 febbraio 2020

Rev: AR

Codice foglio: 997-244-00011



OVERALL MOTORS DIMENSIONS



PORTINGS SAE J518-3/4" 6000psi (41,4 MPa) lateral		OMFB code
A	M 8 x15	14 ●
	5/16" UNC	24 ●

Codice fascicolo:997-400-24411

Data: Martedì 11 febbraio 2020

Rev: AR

Codice foglio:997-244-00011

BENT AXIS PISTON MOTORS SERIES "HPM" SAE C 4 H. FLANGE ISO 3019-1

FLANGE Ø 127

HPM 040-047-055-064cc
080-091-108cc



SAE FLANGE	DISPLACEMENT cm³	VALVES OFFSET mm	Z (THEET) n°	SENSOR DEPTH mm
SAE C	040-047 055-04	75	32	18,4
	080-091 108	84	38	

	P	Motor with speed sensor option
Motor complete with selected speed sensor already mounted	M01	318-000-00186 Speed sensor 2CH PWM 1mt. cable L=18,4
	M02	318-001-00185 Speed sensor 1CH 1mt. cable L=18,4
	M03	318-002-01183 Speed sensor 2CH (2FREQ)1mt. DEUT. L=18,4
	M04	318-002-01325 Speed sensor 2CH (2FREQ)1mt. DEUT. L=32
	M05	318-003-01182 Speed sensor 2CH (1F+1D)1mt. DEUT. L=18,4
	M06	318-003-01324 Speed sensor 2CH (1F+1D)1mt. DEUT. L=32

(see page 53)

VERSIONS CODING

FLANGE TYPE		SHAFT		REAR COVER & PORTINGS		DISPLACEMENT		VARIANTS	
[] [] []		[] [] []		[] []		[] [] []		[] [] []	
Flange type	OMFB code	Shaft type	OMFB code	Rear cover and portings	OMFB code				
SAE C 4H ø127	224	DIN 6885 K30 - ø30 k6	047	BSPP (GAS) 40°	01	040			
		DIN 6885 K35 - ø35 k6	050	SAE 6000 - 40° METRIC SCREWS HORIZONTAL	11	047			
		14T 12/24	080	SAE 6000 - 90° METRIC SCREWS HORIZONTAL	13	055			
				SAE 6000 - METRIC SCREWS LATERAL	14	064			
						080			
						091			
						108			
		SAE J744 Ø31,7	094	SAE 6000 - 40° UNC SCREWS HORIZONTAL	21				
				SAE L-U VLC	24				

HPM code	Description	
22404701064	Flange	SAE C 4H ø127
	Shaft	DIN 6885 K30 - ø30 k6
	Portings	BSPP (GAS) 40°
	Displacement	064 cc

CODING EXAMPLE

pag.45



O.M.F.B. S.p.A. Hydraulic Components
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Fax: +39.030.9839207-208 Internet:www.omfb.it e-mail:contatti@omfb.it

Codice fascicolo:997-400-24411

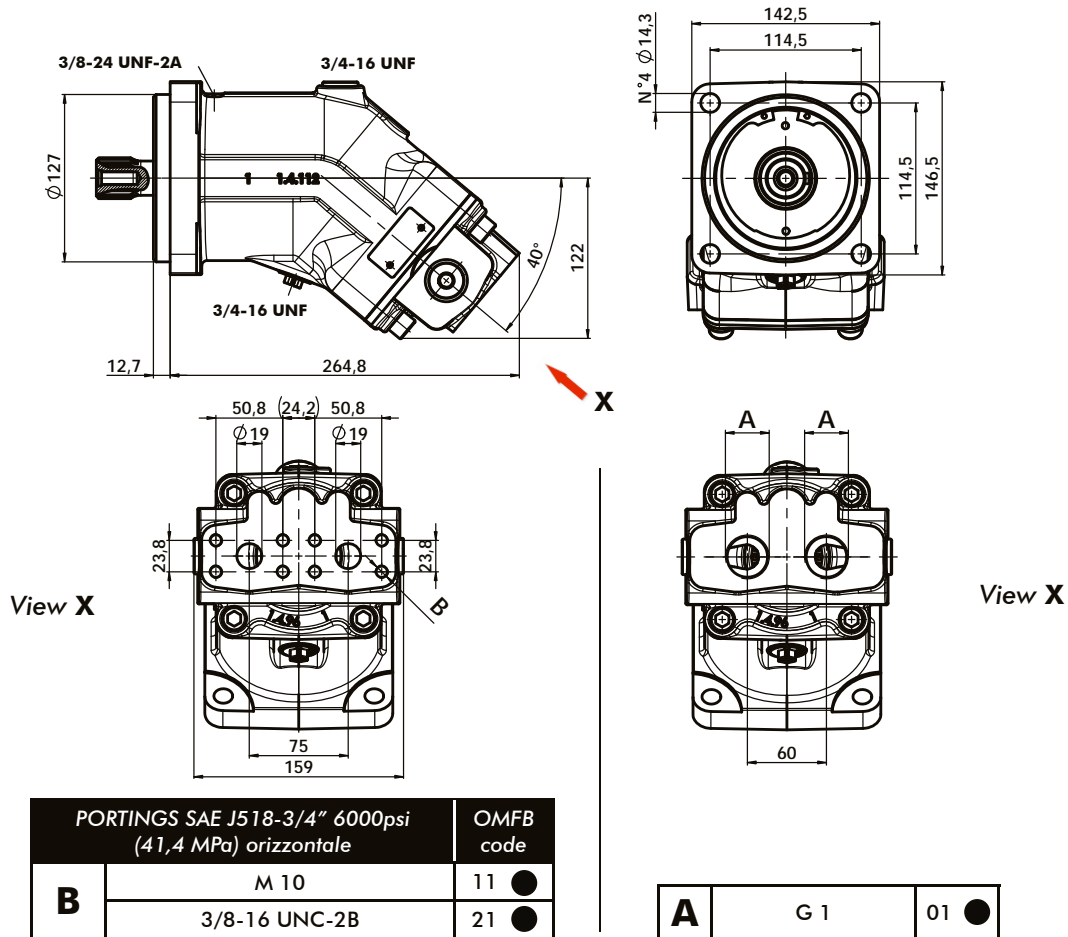
Data: Martedì 11 febbraio 2020

Rev: AR

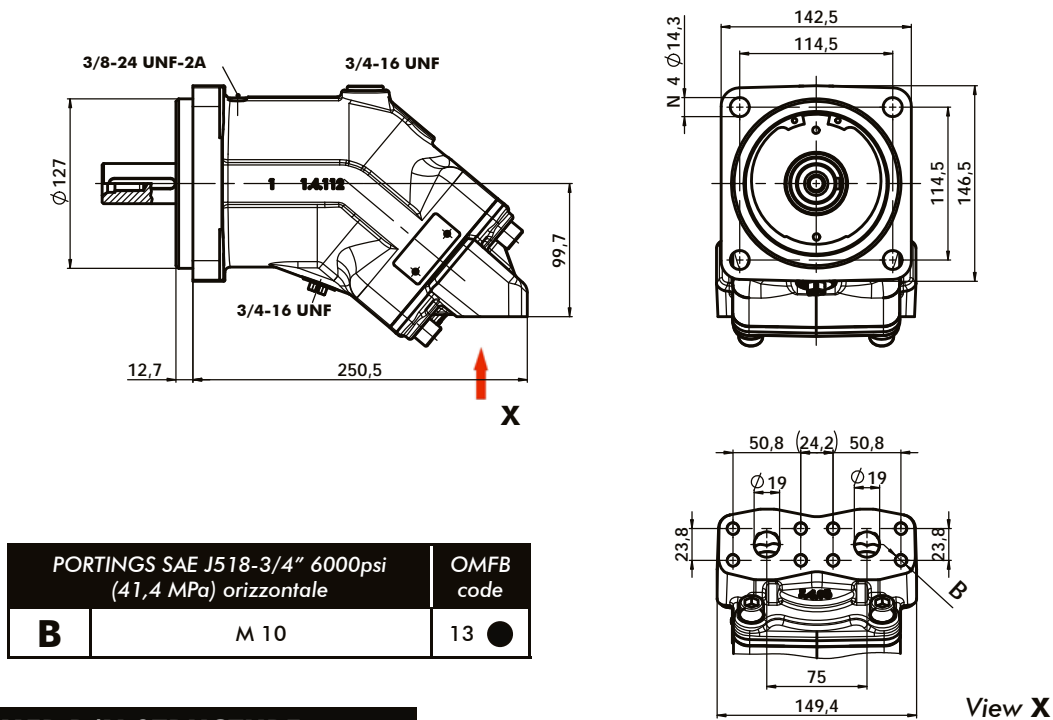
Codice foglio:997-244-00011

OVERALL MOTORS DIMENSIONS 40-47-55-64

OVERALL MOTOR DIMENSION WITH 40° REAR COVER



OVERALL MOTOR DIMENSION WITH 90° REAR COVER

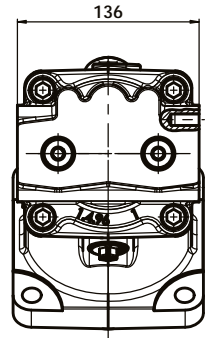
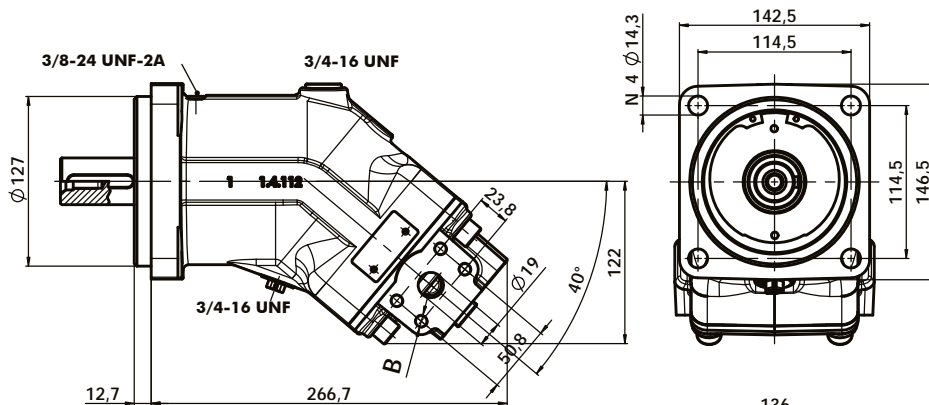


OMFB P/N STRUCTURE

FLANGE	SHAFT	PORTS	DISPLACEMENT
224	xxx ■	xx ●	xxx

OVERALL MOTORS DIMENSIONS 40-47-55-64

OVERALL MOTOR DIMENSION WITH REAR LATERAL COVER+PANEL



View X

PORTINGS SAE J518-3/4" 6000psi (41,4 MPa) orizzontale		OMFB code
B	M 10	14 ●

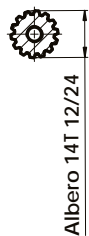
SHAFT	OMFB code
K30	047
K35	050
14T 12/24	080
SAE J744 Ø31,7	094

SHAFTS 40-47-55-64cc

Displacement	cm ³ /rev		55	64
	Working pressure bar	Max.intermittent		380
Max.continuous			330	280

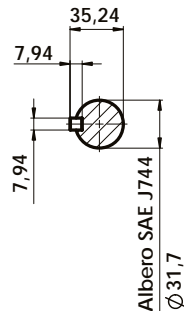
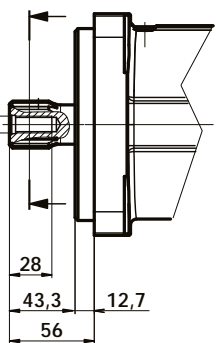


14T 12/24



Albero 14T 12/24

7/16 - 14 UNC - 2B

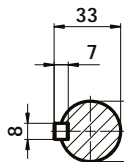


Albero SAE J744 Ø31,7

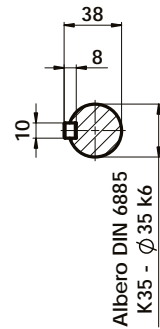
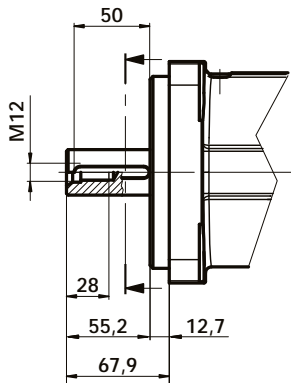
3/8-24 UNF-2B

SAE J744 Ø31,7

DIN 6885 K30 - Ø30 k6



Albero DIN 6885 K30 - Ø30 k6



Albero DIN 6885 K35 - Ø35 k6

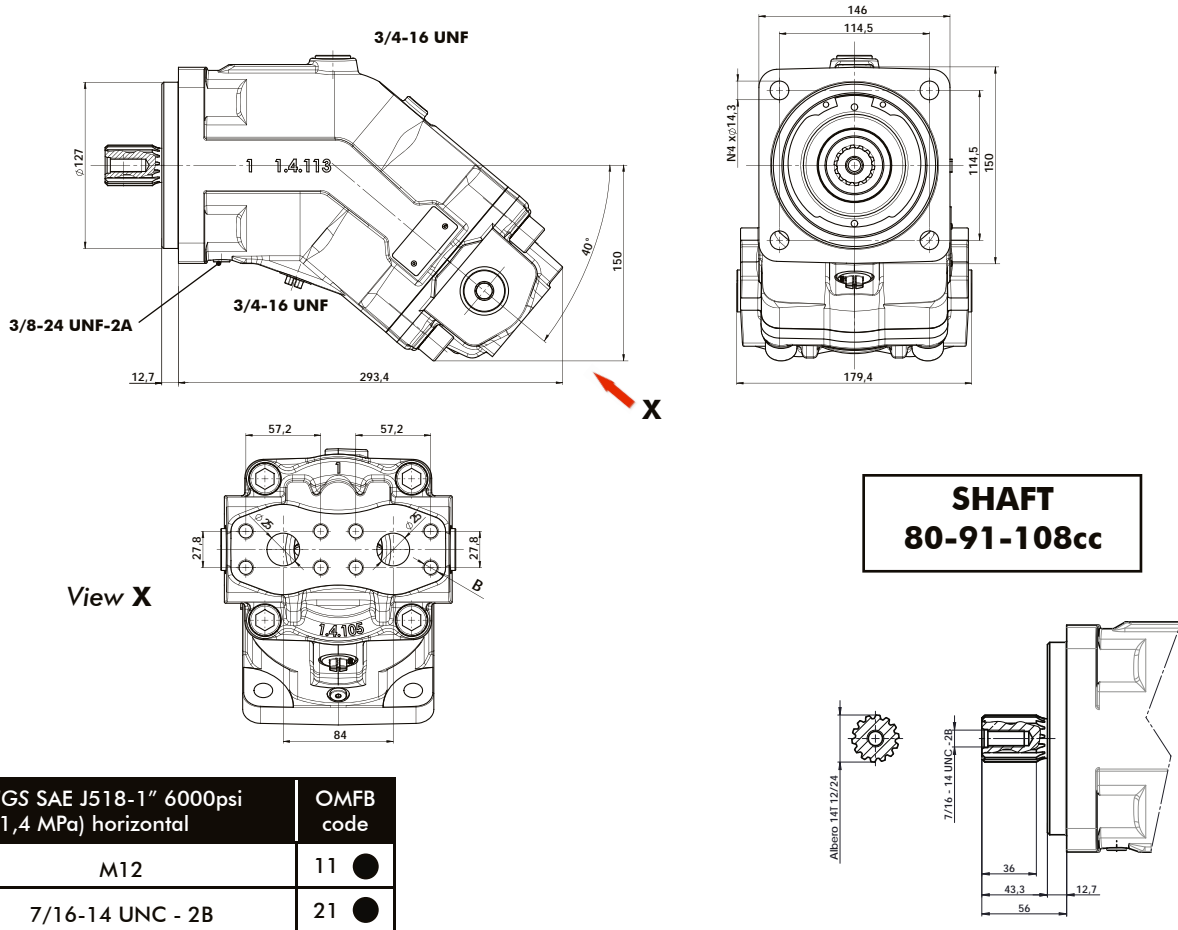
DIN 6885 K35 - Ø35 k6

Displacement	cm ³ /rev		55	64
	Working pressure bar	Max.intermittent		370
Max.continuous			320	270

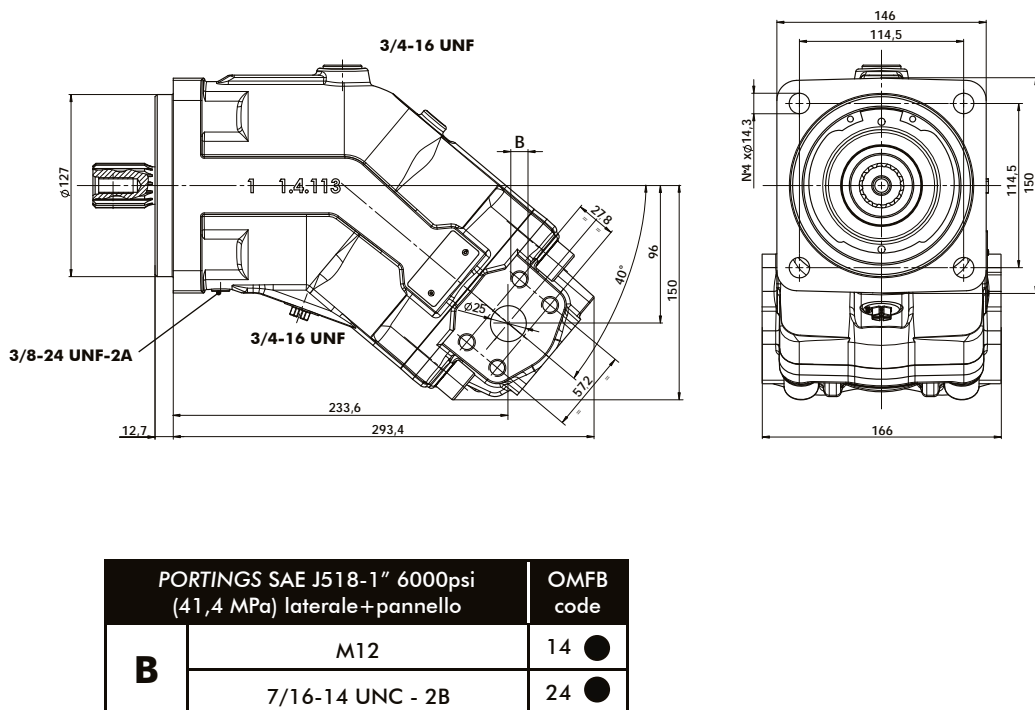


OVERALL MOTORS DIMENSIONS 80-91-108

OVERALL MOTOR DIMENSION WITH 40° REAR COVER



OVERALL MOTOR DIMENSION WITH REAR LATERAL COVER



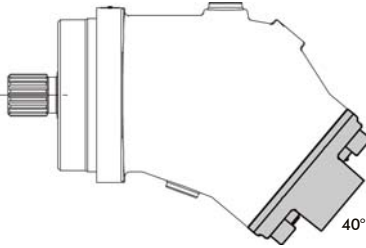
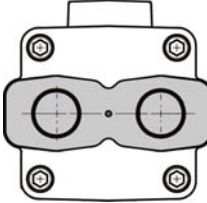
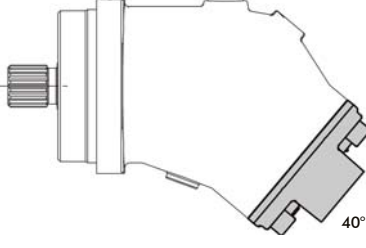
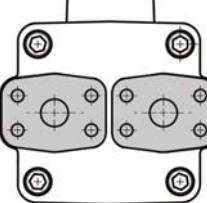
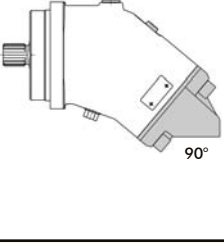
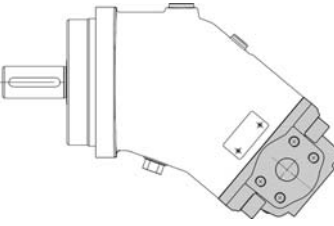
BACK COVER ASSEMBLIES FOR HPM MOTORS

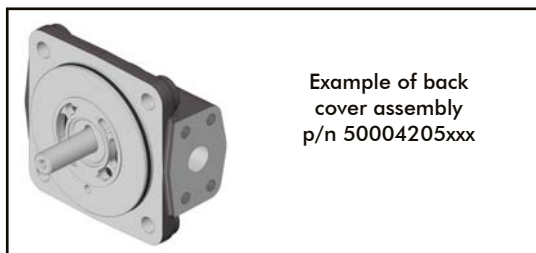
Codice fascicolo:997-400-24411

Data: Martedì 11 febbraio 2020

Rev: AR

Codice foglio:997-244-00011

	CODE	DESCRIPTION	
	5000420012	Back cover assemblies for HPM 12cc BSPP (GAS) 40°	Rear cover and portings OMF code 01
	5000420017	Back cover assemblies for HPM 17cc BSPP (GAS) 40°	
	5000420025	Back cover assemblies for HPM 25cc BSPP (GAS) 40°	
	5000420034	Back cover assemblies for HPM 34cc BSPP (GAS) 40°	
	5000420040	Back cover assemblies for HPM 40cc BSPP (GAS) 40°	
	5000420047	Back cover assemblies for HPM 47cc BSPP (GAS) 40°	
	5000420055	Back cover assemblies for HPM 55cc BSPP (GAS) 40°	
	5000420064	Back cover assemblies for HPM 64cc BSPP (GAS) 40°	
	5000420102	Back cover assemblies for HPM 12cc UN 40°	Rear cover and portings OMF code 05
	5000420107	Back cover assemblies for HPM 17cc UN 40°	
	50004201025	Back cover assemblies for HPM 25cc UN 40°	
	50004201034	Back cover assemblies for HPM 34cc UN 40°	
	50004201040	Back cover assemblies for HPM 40cc UN 40°	
	50004201047	Back cover assemblies for HPM 47cc UN 40°	
	50004201055	Back cover assemblies for HPM 55cc UN 40°	
	50004201064	Back cover assemblies for HPM 64cc UN 40°	
	50004202025	Back cover assemblies for HPM 25cc Flange SAE 6000 40° Horizontal-Metric	Rear cover and portings OMF code 11
	50004202034	Back cover assemblies for HPM 34cc Flange SAE 6000 40° Horizontal-Metric	
	50004202040	Back cover assemblies for HPM 40cc Flange SAE 6000 40° Horizontal-Metric	
	50004202047	Back cover assemblies for HPM 47cc Flange SAE 6000 40° Horizontal-Metric	
	50004202055	Back cover assemblies for HPM 55cc Flange SAE 6000 40° Horizontal-Metric	
	50004202064	Back cover assemblies for HPM 64cc Flange SAE 6000 40° Horizontal-Metric	
	50004202080	Back cover assemblies for HPM 80cc Flange SAE 6000 40° Horizontal-Metric	
	50004202091	Back cover assemblies for HPM 91cc Flange SAE 6000 40° Horizontal-Metric	
	50004203025	Back cover assemblies for HPM 25cc Flange SAE 6000 40° Horizontal-UNC	Rear cover and portings OMF code 21
	50004203034	Back cover assemblies for HPM 34cc Flange SAE 6000 40° Horizontal-UNC	
	50004203040	Back cover assemblies for HPM 40cc Flange SAE 6000 40° Horizontal-UNC	
	50004203047	Back cover assemblies for HPM 47cc Flange SAE 6000 40° Horizontal-UNC	
	50004203055	Back cover assemblies for HPM 55cc Flange SAE 6000 40° Horizontal-UNC	
	50004203064	Back cover assemblies for HPM 64cc Flange SAE 6000 40° Horizontal-UNC	
	50004203080	Back cover assemblies for HPM 80cc Flange SAE 6000 40° Horizontal-UNC	
	50004203091	Back cover assemblies for HPM 91cc Flange SAE 6000 40° Horizontal-UNC	
	50004204025	Back cover assemblies for HPM 25cc Flange SAE 6000 90° Horizontal-Metric	Rear cover and portings OMF code 13
	50004204034	Back cover assemblies for HPM 34cc Flange SAE 6000 90° Horizontal-Metric	
	50004204040	Back cover assemblies for HPM 40cc Flange SAE 6000 90° Horizontal-Metric	
	50004204047	Back cover assemblies for HPM 47cc Flange SAE 6000 90° Horizontal-Metric	
	50004204055	Back cover assemblies for HPM 55cc Flange SAE 6000 90° Horizontal-Metric	
	50004204064	Back cover assemblies for HPM 64cc Flange SAE 6000 90° Horizontal-Metric	
	50004204080	Back cover assemblies for HPM 80cc Flange SAE 6000 90° Horizontal-Metric	
	50004204091	Back cover assemblies for HPM 91cc Flange SAE 6000 90° Horizontal-Metric	
	50004205025	Back cover assemblies for HPM 25cc Flange SAE 6000 Lateral-Metric	Rear cover and portings OMF code 14
	50004205034	Back cover assemblies for HPM 34cc Flange SAE 6000 Lateral-Metric	
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	50004205047	Back cover assemblies for HPM 47cc Flange SAE 6000 Lateral-Metric	
	50004205055	Back cover assemblies for HPM 55cc Flange SAE 6000 Lateral-Metric	
	50004205064	Back cover assemblies for HPM 64cc Flange SAE 6000 Lateral-Metric	
	50004205080	Back cover assemblies for HPM 80cc Flange SAE 6000 Lateral-Metric	
	50004205091	Back cover assemblies for HPM 91cc Flange SAE 6000 Lateral-Metric	



BENT AXIS PISTON MOTORS SERIES HPM SPARE PARTS

Starting from March 2019 we have been introducing new oil seals guaranteeing higher performances to our range of piston motors.

This new feature requires a new oil seal back-up ring in the front flange.

In case of spare parts please refer to the colour of oil seal, as follows:

- **Black Oil Seal:** **Old Version**
- **Brown Oil Seal:** **New Version PPS (Premium Pressure Seal)**

In the following table you can find the part numbers of oil seal kits according to the different versions. For some motors you can change to the new PPS oil seals without any modifications required while for other units it is necessary to change also the flange, as per following information:

GASKET KIT			
CODE	GASKET TYPE	DESCRIPTION	NEW FLANGE
22190000011	1st VERSION	HPM motors gaskets kit - Flange 221 Shaft 074/091 - Displacements 12/34	528-003-00464
22190000020	2nd VERSION		
22490000015	1st VERSION	HPM motors gaskets kit - Flange 224 - Shaft 047/050/080/094 - Displacements 40/47/55/64	528-003-00482
22490000033	2nd VERSION		
22490000024	1st VERSION	HPM motors gaskets kit - Flange 224 Shaft 080 - Displacements 80/90/108	
22490000042	2nd VERSION		
24090000011	1st VERSION	HPM motors gaskets kit - Flange 240 Shaft 008/011/041/044 - Displacements 12/17	528-003-00464
24090000020	2nd VERSION		
24290000017	1st VERSION	HPM motors gaskets kit - Flange 242 Shaft 011/014/044/047- Displacements 25/34	528-003-00473
24290000026	2nd VERSION		
24490000013	1st VERSION	HPM motors gaskets kit - Flange 244 - Shaft 014/020/047/050 - Displacements 40/46/55/64	528-003-00482
24490000022	2nd VERSION		
24690000019	1st VERSION	HPM motors gaskets kit - Flange 246 - Shaft 020/023/050/053 - Displacements 80/91	
24690000028	2nd VERSION		
24890000015	1st VERSION	HPM motors gaskets kit - Flange 248 Shaft 023/026/053/056 - Displacements 108/130	
24890000024	2nd VERSION		

Codice fascicolo:997-400-24411

Data: Martedì 11 febbraio 2020

Rev: AR

Codice foglio:997-244-00011