Via Lenin N°37 41012 Carpi (MO)

Tel.: 059-690055 Fax: 059-641469

www.amre.it

2011/2012

GENERAL CATALOGUE AC MOTORS

Via Lenin 37 41012 Carpi (Modena)
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Over 50 years of experience

Amre was established in 1954 as a motor workshop for electrical and windings repair. Independent in house production began in 1960 that makes Amre one of the first active Italian electric motor manufacturers with complete motors following the developments of the market, moving from AC motors, single-phase motors, engines for milking machines, dynamos and whatever the market was requiring.In 1970, production moved entirely to low voltage motors (12/96V) for forklifts and for electrical machinery in general, always updated and improved which today allows us to offer more than 1500 different models. Throughout it's history, Amre has always exhibited on the main fairs of the sector in Italy, and abroad, in collaboration with other companies, each fair presenting new event, we have moved from Verona, Padova, and now Movint, first in Milan, then in Bologna, in which we have always been exhibiting.

The main countries in which we are dealing are those of the Euro zone, but we export all over the world, USA, Brazil, Taiwan, India and so forth. Over the past five years we have further developed and improved AC technology designing a new range of asynchronous motors to low voltage powered through inverter for which we are recording a remarkable success.

Since many years AMRE regularly cooperates with some of the main inverter and axels producers and for this reason we can give the customers the possibility to get a "complete package", including electric motor, inverter and gear-box. We also allow customer to have special solutions with electric motor and drive wheel.

Noteworthy are also the most recent projects of AMRE, especially those which are leading to the development of the "brushless" technology (whose demand has shown a significant increase in recent years) and to the development of an electric generator in cooperation with the University of Bologna.

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ENGINES GROUP 106

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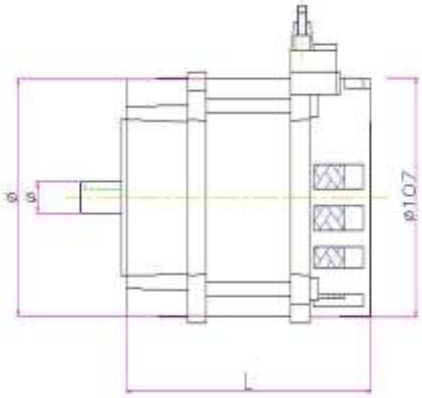
TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 106



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
106	**Traction Motor**	**158**	**400**	**2600**	**12/24**	**60 min**	**48 imp/rev** **KTY 84-130** **PTC 130 /140**	**Cil. Ø14** **Cil. Ø19**

With regard to the size of the motor see reference dimensions shown in the figure above

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ENGINES GROUP 135

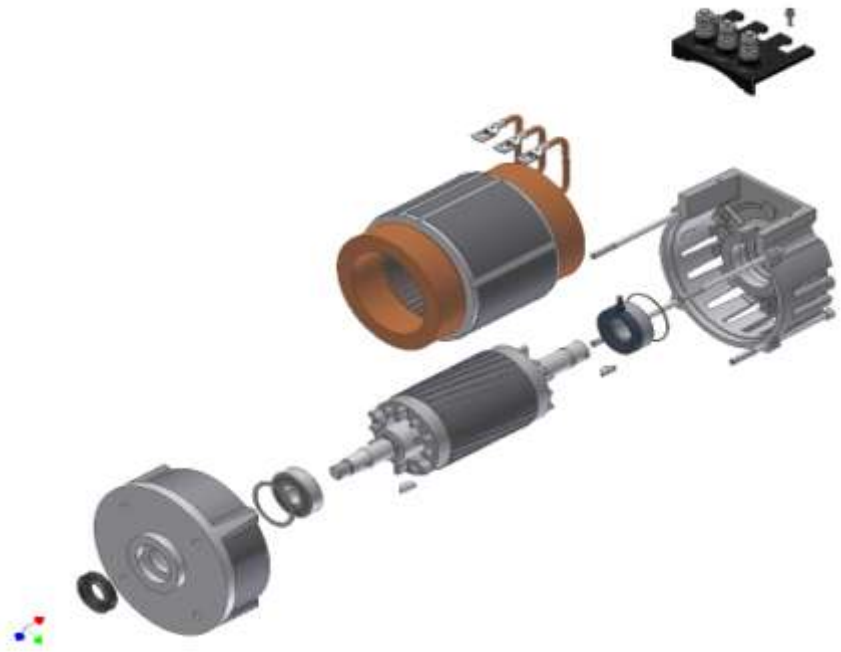

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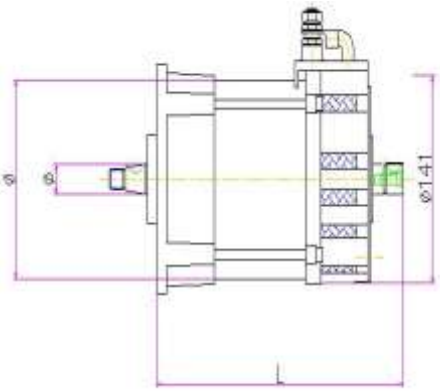
TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 135



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
135	Traction Motor	210	1000	1500	12/24/48/80	60 min	48 imp/rev KTY 84-130 PTC 130/140	Cil Ø 19 Con. Ø 20 1:5
135	Traction Motor	210	1500	1800	12/24/48/80	60 min	48 imp/rev KTY 84-130 PTC 130/140	Cil Ø 19 Con. Ø 20 1:5
135	Traction Motor	230	2000	2500	12/24/48/80	60 min	48 imp/rev KTY 84-130 PTC 130/140	Cil Ø 19 Con. Ø 20 1:5
135	Electric Pump	230	1500	2000	12/24/48/80	60 min	48 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 1
135	Electric Pump	230	3000	2000	12/24/48/80	10 min	48 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 1

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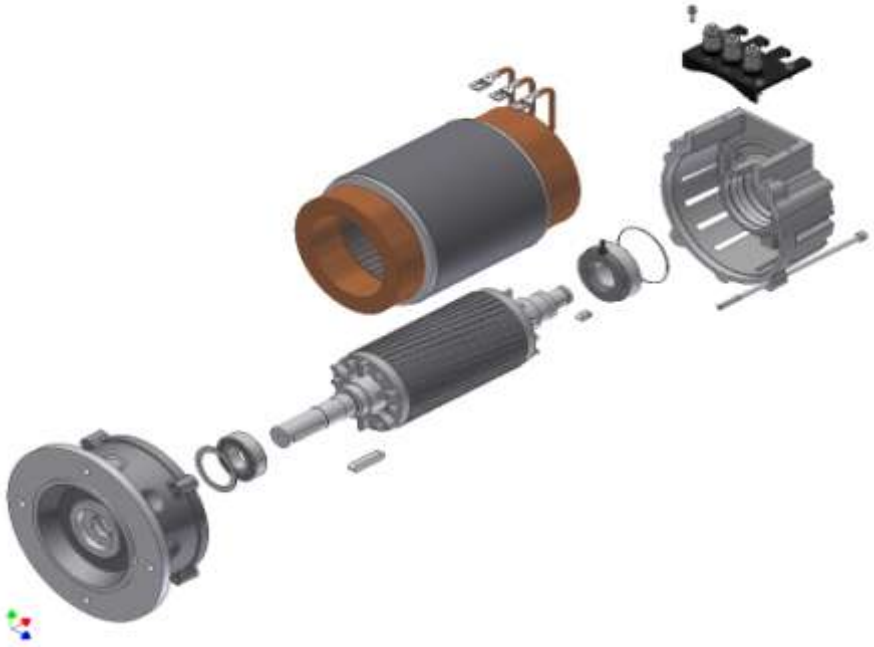

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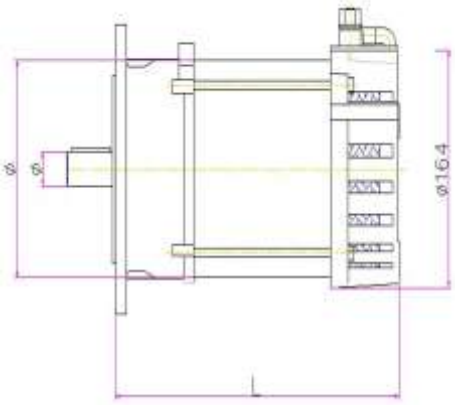
TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 150



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
150	Traction Motor	260	2200	2600	24/48/80	60 min	64 imp/rev KTY 84-130 PTC 130/140	Cil Ø19 Cil Ø24 Con. Ø 20 1:5
150	Traction Motor	260	4000	4500	24/48/80	60 min	64 im/rev KTY 84-130 PTC 130/140	Cil Ø19 Cil Ø24 Con. Ø 20 1:5
150	Traction Motor	290	6000	1500	24/48/80	10 min	64 im/rev KTY 84-130 PTC 130/140	Cil Ø19 Cil Ø24 Con. Ø 20 1:5
150	Electric Pump	260	1200	1500	24/48/80	60 min	64 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 2
150	Electric Pump	290	4000	2000	24/48/80	30 min	64 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 2

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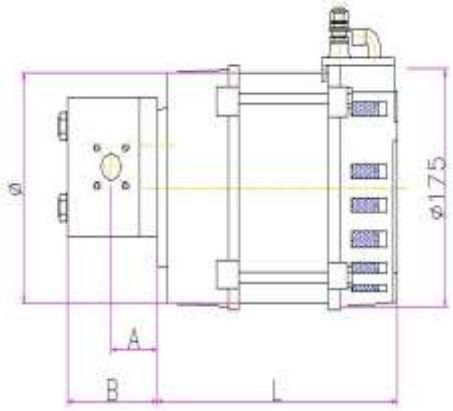
TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 170



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
170	Traction Motor	228	4000	2300	48/80	60	64 imp/rev KTY 84-130 PTC 130 /140	Con.Ø 24.2 1:10 Con.Ø 25 1:5
170	Traction Motor	268	5300	2300	48/80	60	64 imp/rev KTY 84-130 PTC 130 /140	Con.Ø 24.2 1:10 Con.Ø 25 1:5
170	Electric Pump	228	4000	2000	48/80	60	64 imp/rev KTY 84-130 PTC 130 /140	Attacco bosch Gr 2
170	Electric Pump	228	6000	2000	48/80	20	64 imp/rev KTY 84-130 PTC 130 /140	Attacco bosch Gr 2
170	Electric Pump	268	8000	2000	48/80	15	64 imp/rev KTY 84-130 PTC 130 /140	Attacco bosch Gr 2

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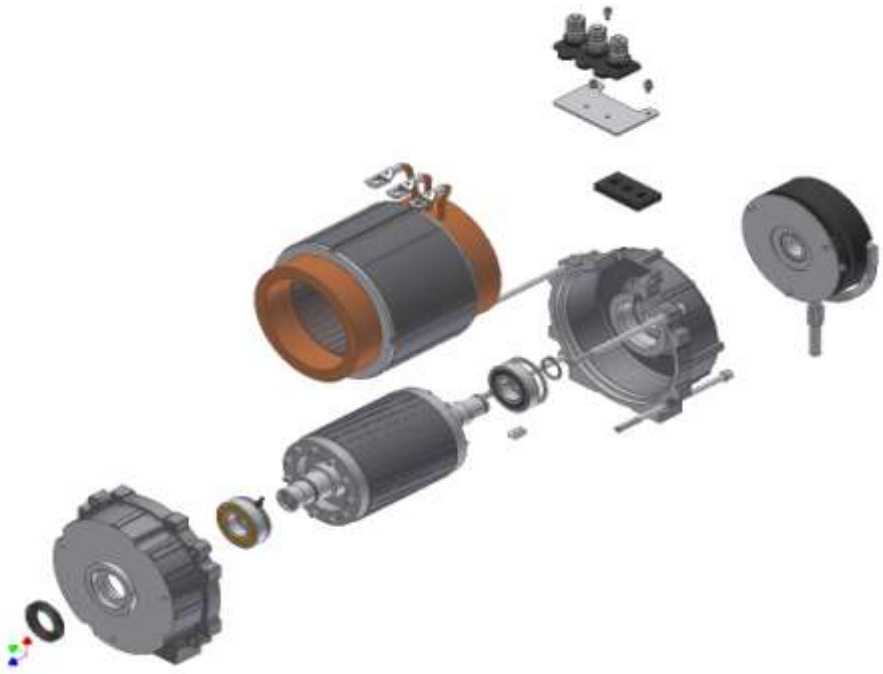

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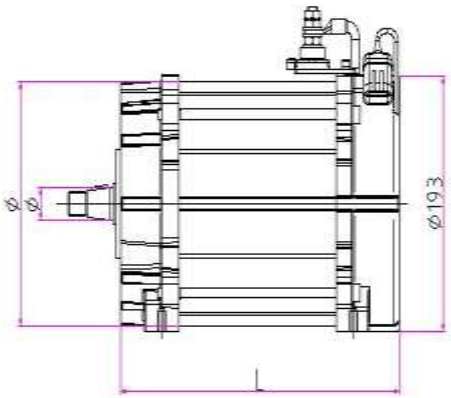

TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 184

Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
184	Traction Motor	215	3500	2300	24/48/80	60	64 imp/rev KTY 84-130 PTC 130/140	Con Ø20 1:5 Cil. Ø 24
184	Traction Motor	250	5000	2000	48/80	60	64 imp/rev KTY 84-130 PTC 130/140	Con Ø20 1:5 Cil. Ø 24 Cil. Ø 28 Cal. Femmina 20x1
184	Traction Motor	305	7500	2500	48/80	60	64 imp/rev KTY 84-130 PTC 130/140	Con Ø25 1:5 Cil. Ø 24 Cil. Ø 28
184	Traction Motor	345	9000	2500	48/80	60	64 imp/rev KTY 84-130 PTC 130/140	Con Ø 25 1:5 Cil. Ø 24 Cil. Ø 28
184	Electric Pump	215	4000	2500	24/48/80	60	64 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 2
184	Electric Pump	215	6000	2500	24/48/80	15	64 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 2

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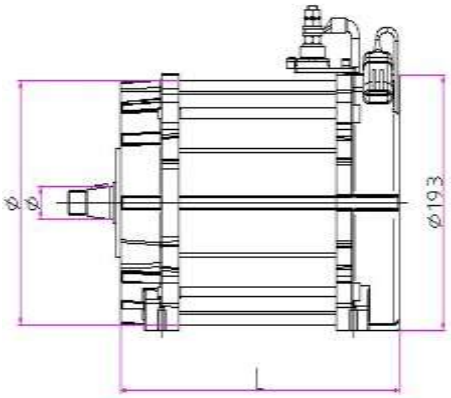
TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 184



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
184	Electric Pump	250	7000	2500	48/40	20	64 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 2
184	Electric Pump	305	9000	2500	48/40	20	64 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 2
184	Electric Pump	345	12000	2500	48/40	20	64 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 2

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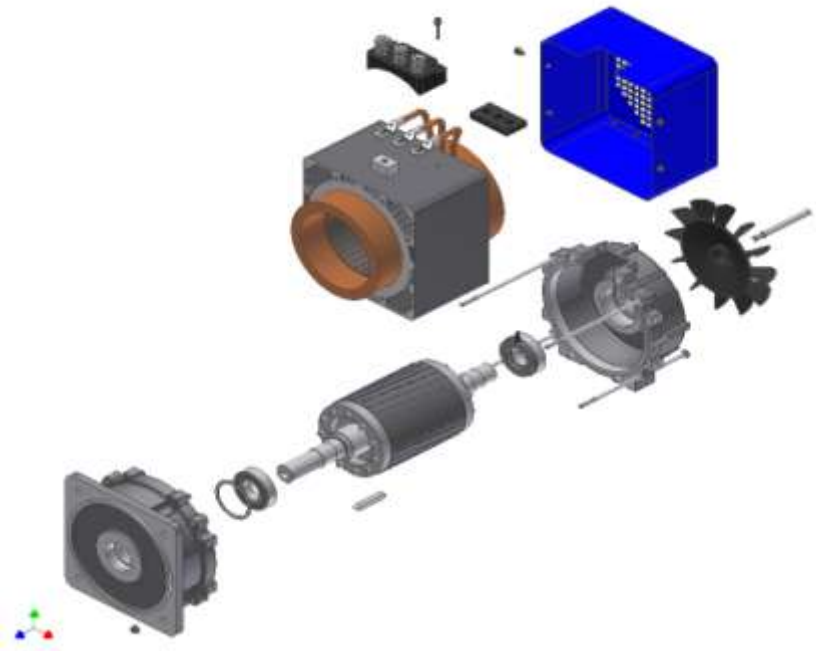
ENGINES GROUP 197x197



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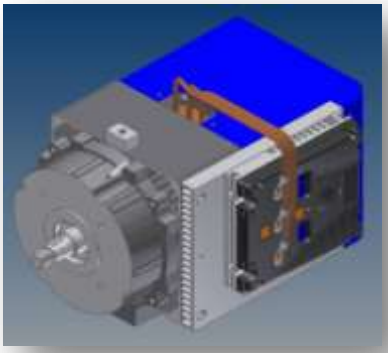
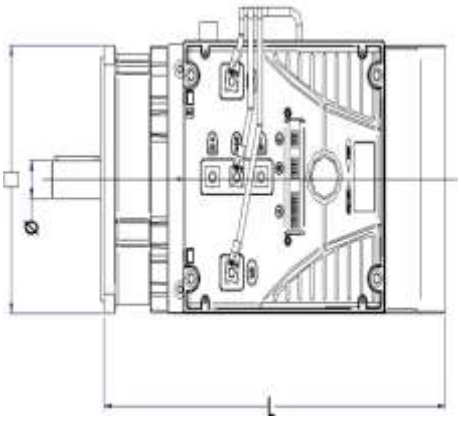


TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 197x197



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
197x197	Traction Motor	285	4000	2500	48/80	60	64 imp/rev KTY 84-130 PTC 130/140	Con Ø25 1:5 Cil. Ø 24 Cil. Ø 28
197x197	Traction Motor	318	6000	2000	48/80	60	64 imp/rev KTY 84-130 PTC 130/140	Con Ø25 1:5 Cil. Ø 24 Cil. Ø 28
197x197	Traction Motor	318	7500	3000	48/80	S1	64 imp/rev KTY 84-130 PTC 130/140	Con Ø25 1:5 Cil. Ø 24 Cil. Ø 28
197x197	Traction Motor	368	8000	2000	48/80	60	64 imp/rev KTY 84-130 PTC 130/140	Con Ø25 1:5 Cil. Ø 24 Cil. Ø 28 Cal. 30x27 DIN5482
197x197	Traction Motor	368	9000	2500	48/80	60	64 imp/rev KTY 84-130 PTC 130/140	Con Ø25 1:5 Cil. Ø 28 Cal. 30x27 DIN5482

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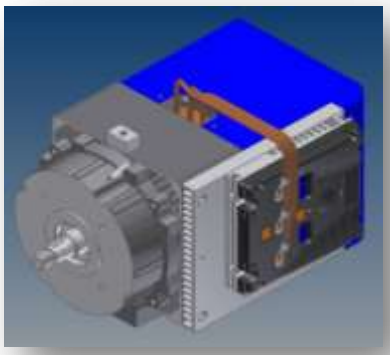
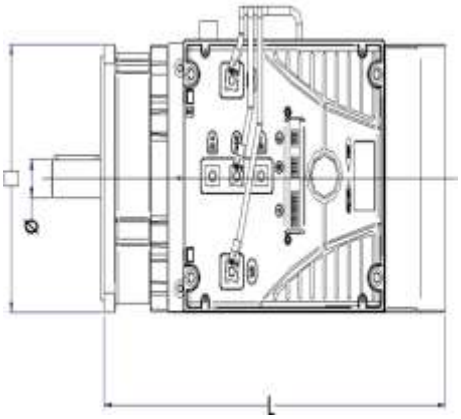


TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 197x197



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
197x197	Traction Motor	408	10000	2000	48/80	60	64 imp/rev KTY 84-130 PTC 130/140	Con Ø 25 1:5 Cil. Ø 28 Cal.30x27 DIN5482
197x197	Traction Motor	408	12000	2500	80/96	60	64 imp/rev KTY 84-130 PTC 130/140	Con Ø 25 1:5 Cil. Ø 28 Cal.30x27 DIN5482

With regard to the size of the motor see reference dimensions shown in the figure above

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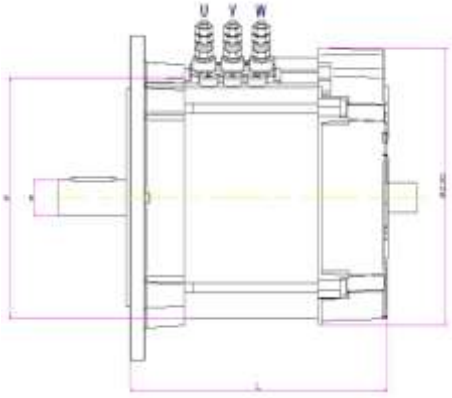
TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 200



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
200	Traction Motor	255	5000	2350	48/80	60 min	64 imp/rev KTY 84-130 PTC 130/140	Cal. 30x27 DIN5482 Cal. 25x22 DIN5482 Cil. 28 mm B5 Con.25mm 1:5
200	Traction Motor	270	6000	1950	48/80	60 min	64 imp/rev KTY 84-130 PTC 130/140	Cil. 28 mm B5 Con.Ø25mm 1:5 Con.Ø24.2 1:10
200	Traction Motor	290	6800	1650	48/80	60 min	64 imp/rev KTY 84-130 PTC 130/140	Cil. 28 mm B5 Con.Ø25mm 1:5 Con. Ø24.2 1:10 Cal.30x27DIN 5482
200	Traction Motor	290	8000	2500	48/80	60 min	64 imp/rev KTY 84-130 PTC 130/140	Cil. 28 mm B5 Con.Ø25mm 1:5 Con.Ø24.2 1:10 Cal.30x27DIN 5482

With regard to the size of the motor see reference dimensions shown in the figure above

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ENGINES GROUP 240

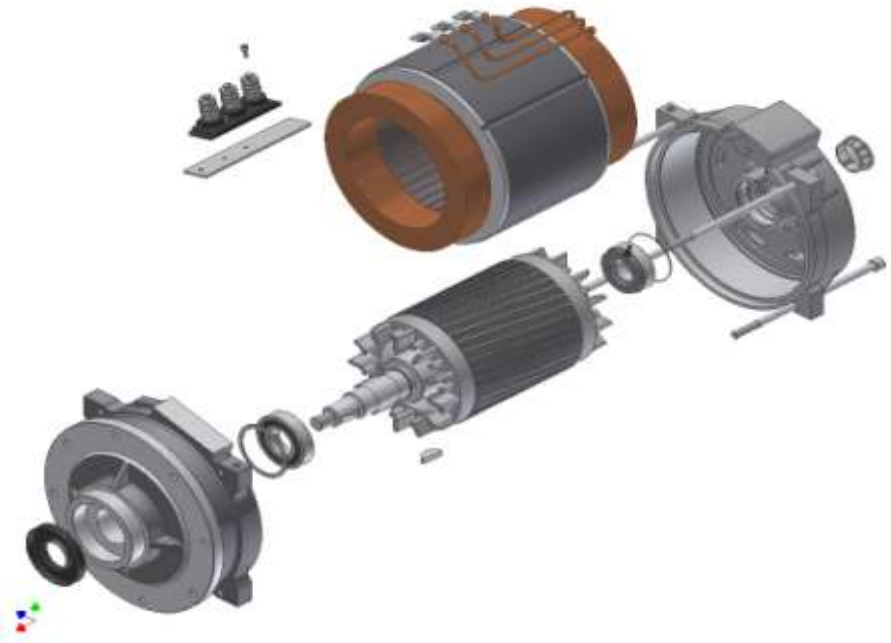

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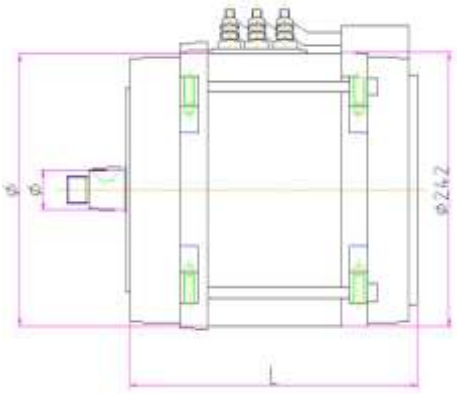
TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 240



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
240	Traction Motor	291	7000	1600	48/80	60 min	64 imp/rev KTY 84-130 PTC 130/140	CilØ28mm B5 Cal.30x27 DIN5482
240	Traction Motor	320	10000	1700	48/80	60 min	64 imp/rev KTY 84-130 PTC 130/140	CilØ28mm B5 Cal.30x27 DIN5482
240	Traction Motor	355	12000	1700	80	60 min	64 imp/rev KTY 84-130 PTC 130/140	CilØ28mm B5 Cal.30x27 DIN5482
240	Electric Pump	308	12000	1900	80	20 min	64 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 3
240	Electric Pump	348	18000	1900	80	20 min	64 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 3

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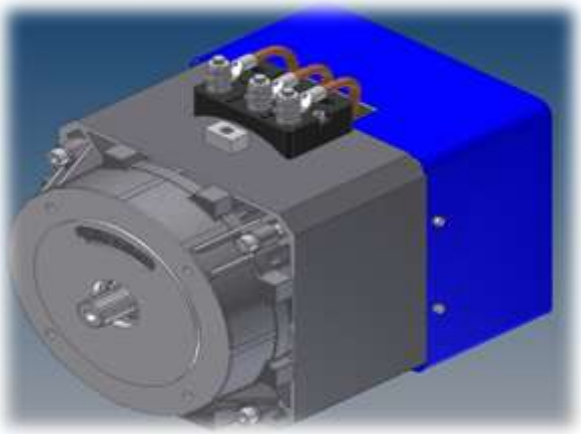
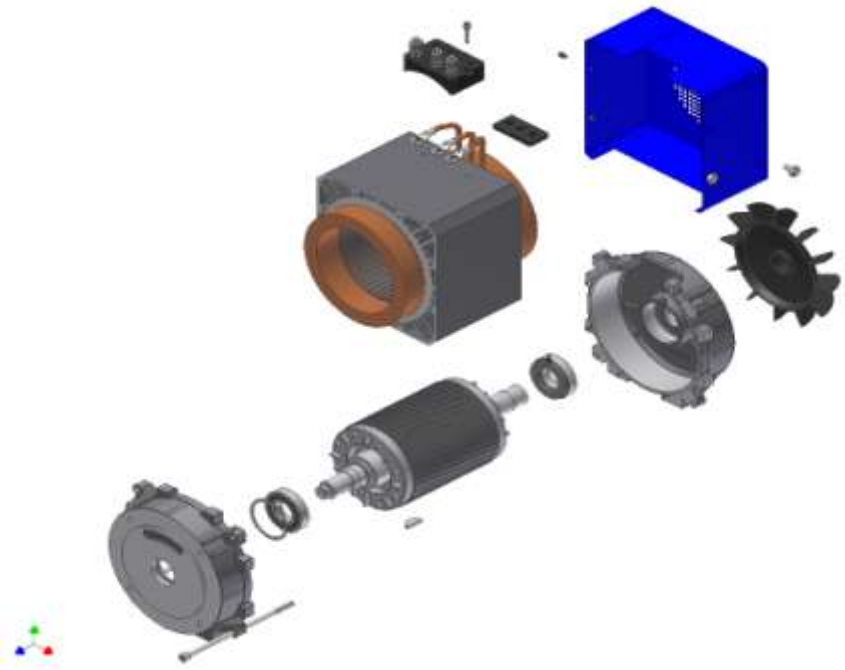
ENGINES GROUP 262x262





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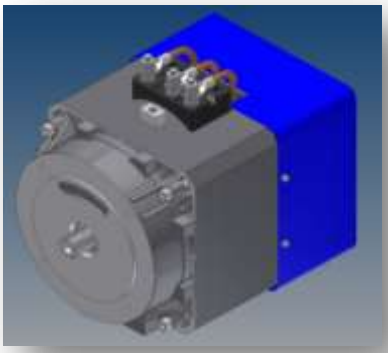
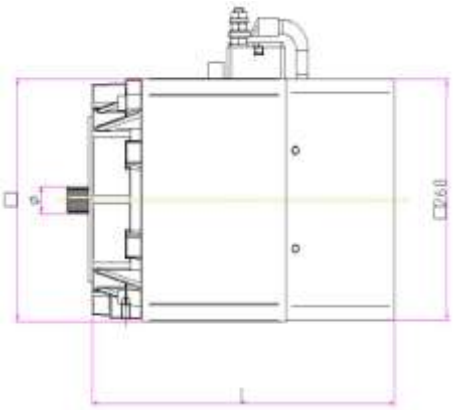


TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 262x262



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
262x262	Traction Motor	350	10000	1700	48	60 min	80 imp/rev KTY 84-130 PTC 130/140	Cal. 30x27 DIN5482 Cal. 38x34 DIN5482 Con.38mm1:20
262x262	Traction Motor	350	14000	1700	80	60 min	80 imp/rev KTY 84-130 PTC 130/140	Cal. 30x27 DIN5482 Cal. 38x34 DIN5482 Con.38mm1:20
262x262	Traction Motor	390	17000	1700	80	60 min	80 imp/rev KTY 84-130 PTC 130/140	Cal. 30x27 DIN5482 Cal. 38x34 DIN5482 Con.38mm 1:20
262x262	Traction Motor	425	20000	1500	80	60 min	80 imp/rev KTY 84-130 PTC 130/140	Cal.38x34 DIN5482 Con.38mm 1:20

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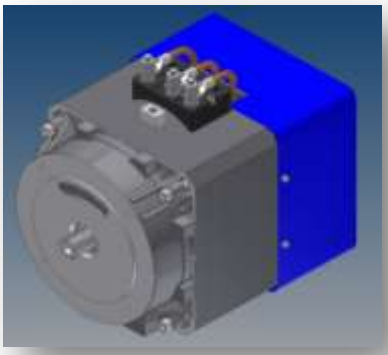
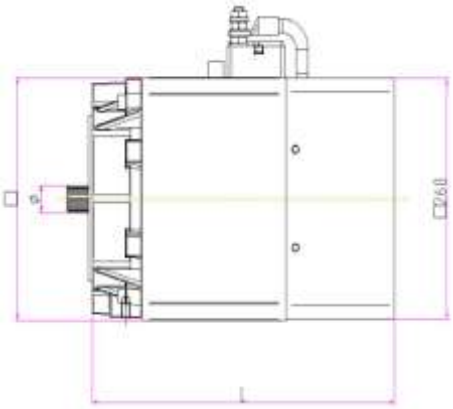


TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 262x262



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
262x262	Electric Pump	428	17000	1700	48/80	60 min	80 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 3
262x262	Electric Pump	463	20000	1500	48/80	60 min	80 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 3
262x262	Electric Pump	463	30000	1500	80	15 min	80 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 3

With regard to the size of the motor see reference dimensions shown in the figure above

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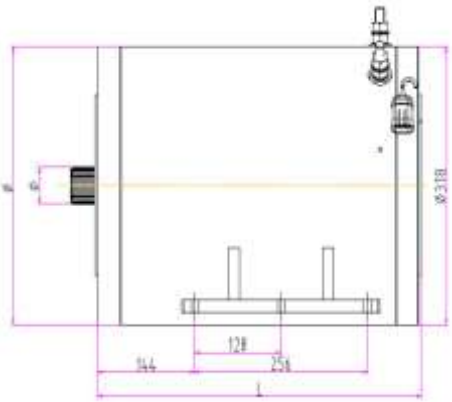
TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 270



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
270	Traction Motor	485	23000	3000	80	60 min	64 imp/rev KTY 84-130 PTC 130/140	Cal.38x34 DIN5482 Cal.42x38 DIN5482
270	Electric Pump	485	39000	3000	80	15 min	64 imp/rev KTY 84-130 PTC 130/140	Attacco bosch Gr 3 Attacco tipo SAE

With regard to the size of the motor see reference dimensions shown in the figure above

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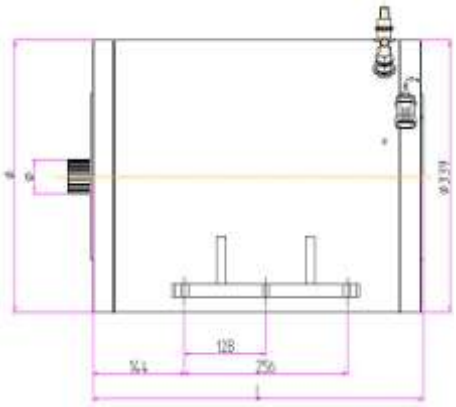
TABLE WITH TECHNICAL AND MECHANICAL PROPERTIES OF THE A. C. MOTOR

GROUP 300



Diameter Diametro Ø (mm)	Description Descrizione	Length Lunghezza L (mm)	Power Potenza (Watt)	RPM Giri	Voltage Alimentazione (Volt)	Duty service Tempi di servizio (minuti)	Encoder Thermal sensor Sensore termico	Shaft exit Uscita albero
300	Traction Motor	520	30000	3000	80	60 min	64 imp/rev KTY 84-130 PTC 130/140	Cal. 38x34 DIN5482 Cal. 42x38 DIN5482
300	Traction Motor	520	36000	3000	96	60 min	64 imp/rev KTY 84-130 PTC 130/140	Cal. 38x34 DIN5482 Cal. 42x38 DIN5482

With regard to the size of the motor see reference dimensions shown in the figure above

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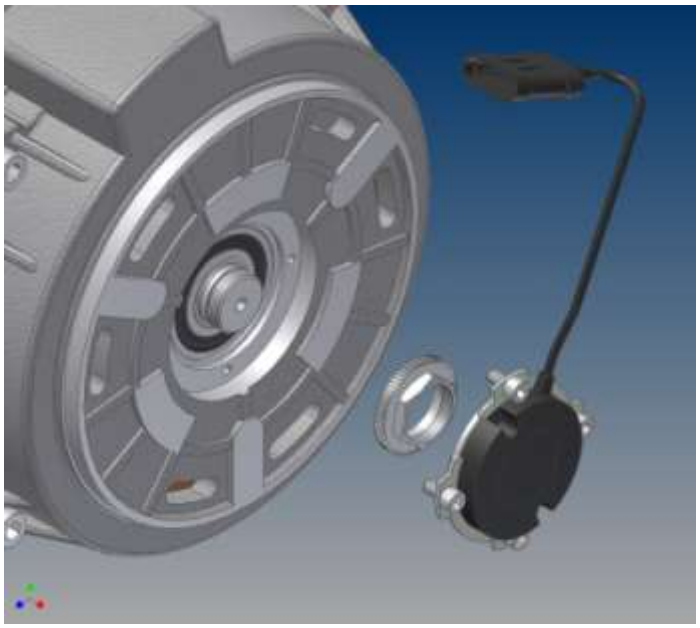
External encoder

Simple installation and maintenance, reliability of use



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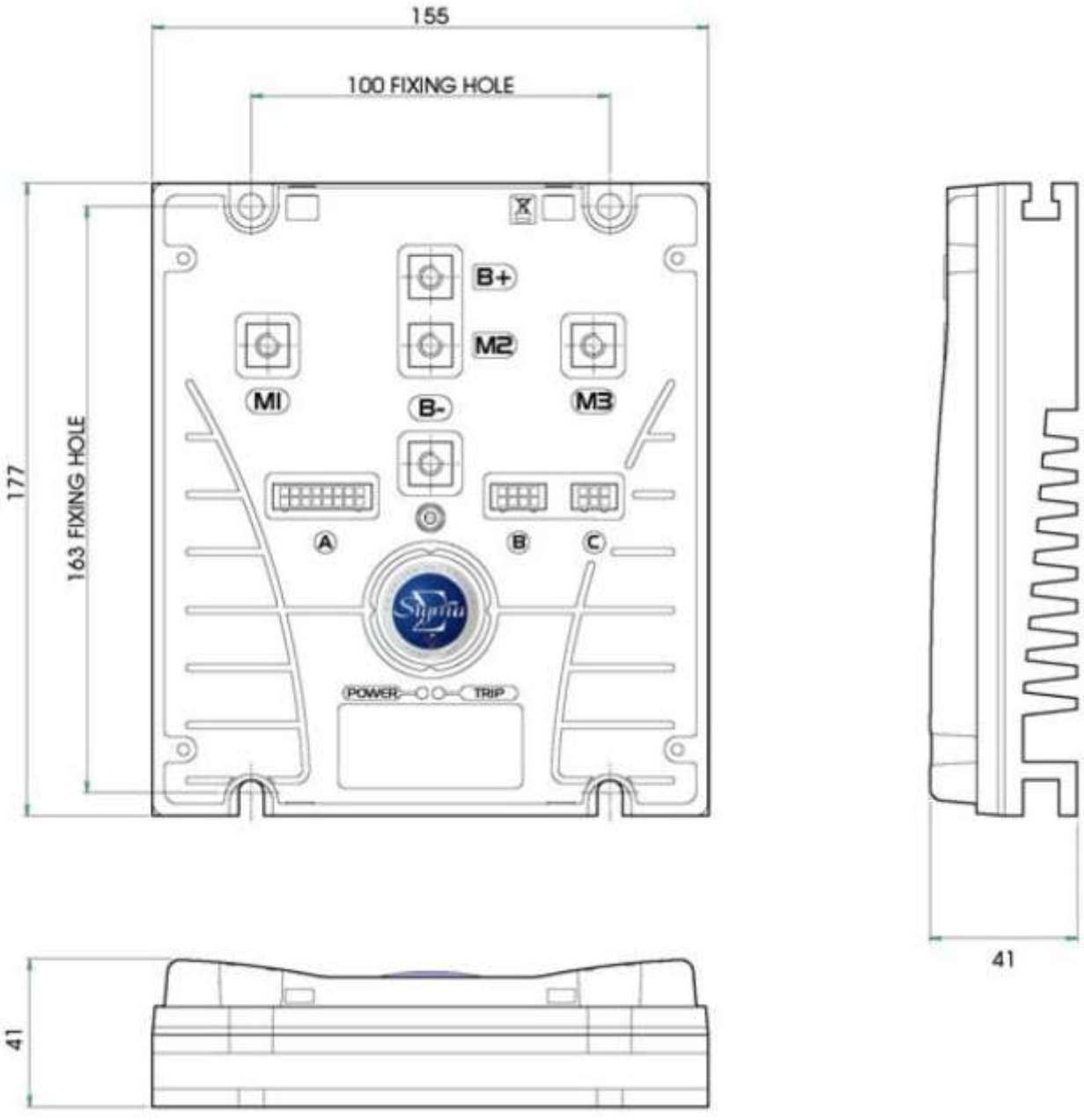
THREE PHASES INVERTERS FOR AMRE AC MOTORS

SIGMADRIVE® asynchronous inverter family are suitable with AMRE AC induction motor; rated voltage from 24V_{DC} to 80V_{DC}, current from 125A_{RMS} to 460A_{RMS}.

With the inverters we can also supply a LCD display, Hand-held programmer and connector kits for light wire connections.

Please contact us for more details and specifications

SMALL FRAME INVERTER



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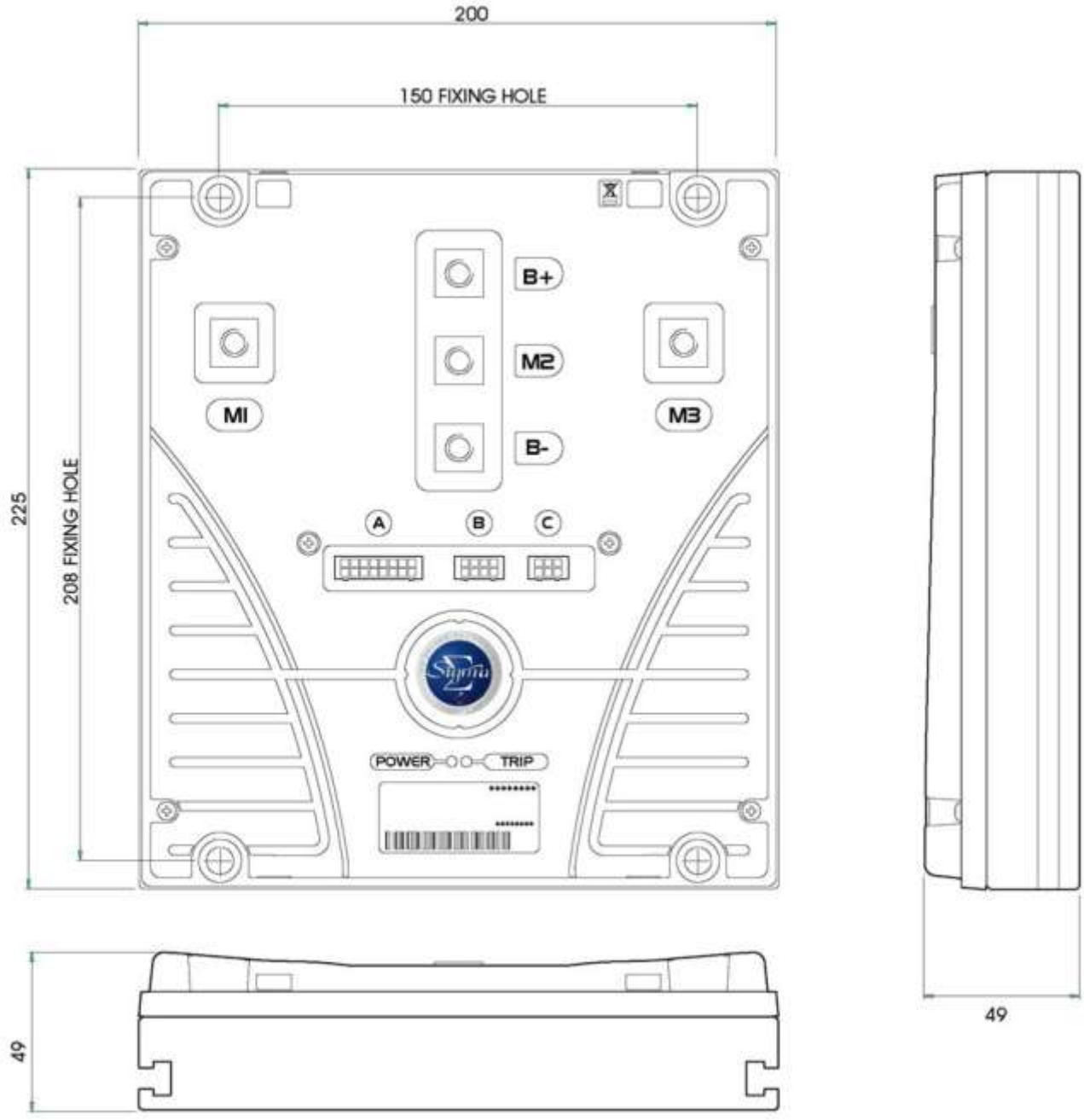
MEDIUM FRAME INVERTER



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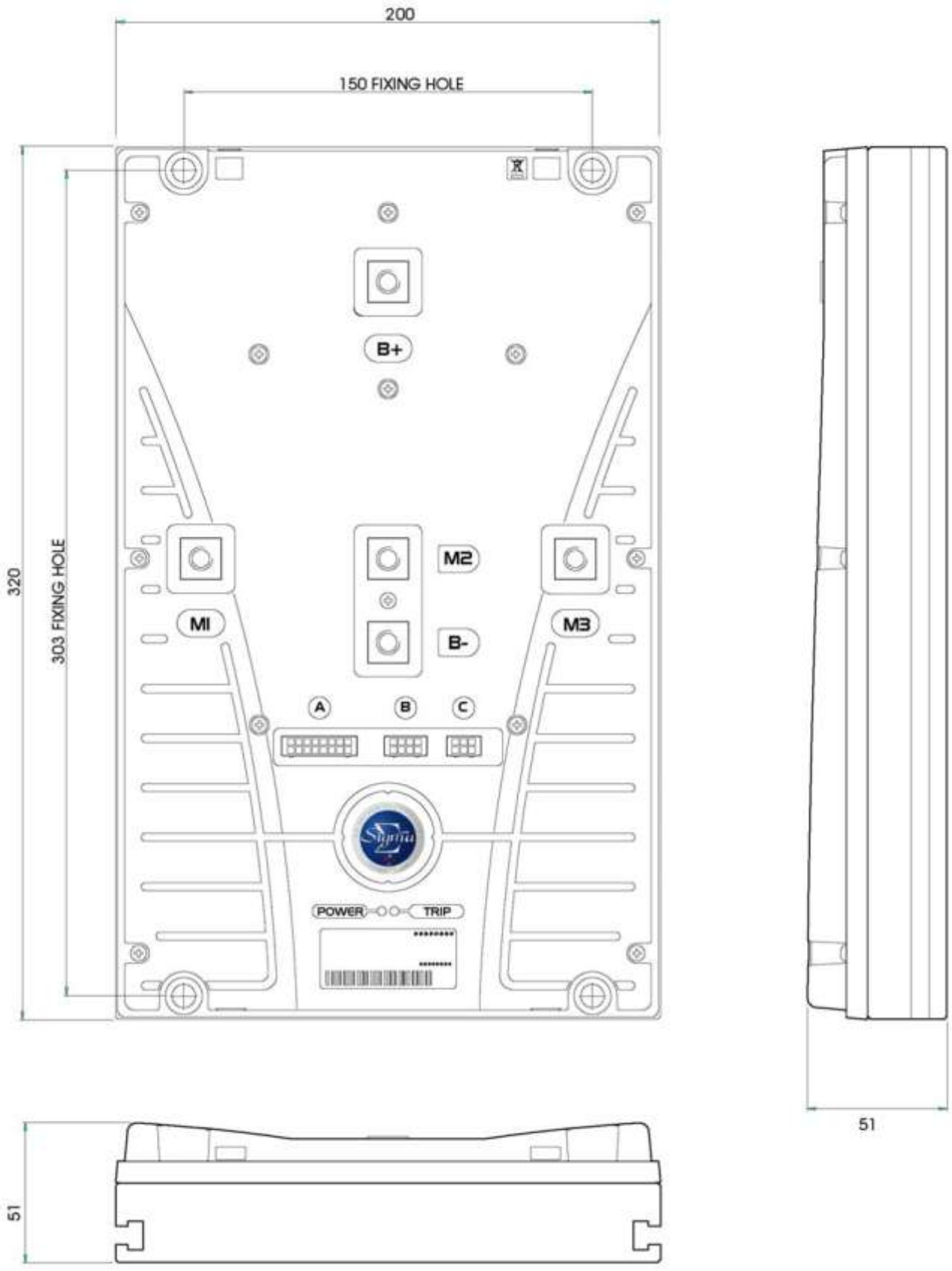
LARGE FRAME INVERTER



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CLASSES OF MOTOR INSULATION

To prevent current dispersion between lead-lead and lead-earth, insulating materials will have to be placed between all the electrical components of the motor.

Regulations split insulating materials into insulation classes according to the capacity these have of maintaining their insulating characteristics when operating temperatures increase. Classification is made according to maximum acceptable running temperatures for the specific materials.

Operating limit temperature is indicated as maximum overheating with respect to the ambient temperature considering a safety margin of 15°C. The ambient temperature, and therefore also the temperature of any cooling fluid, is conventionally considered as a maximum 40°C.

Electric motors are usually insulated in the following classes: E, B, F, H; of these, the highest is “H” with maximum acceptable insulation temperature of 180°C (40+125+15). This class provides motors with longer service times and durability, operating conditions being equal.

All A.M.R.E motors are class H.

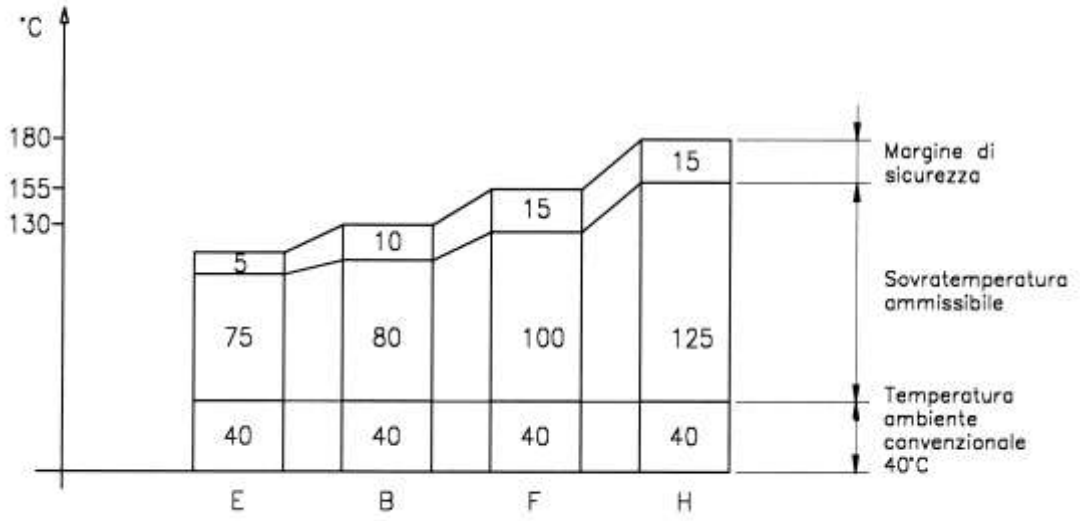

Diagram of the maximum allowable temperature

Important: the temperatures relate to insulating materials only. Applicable regulations (CEI 2-3 file 355 and subsequent updates) prescribe maximum operating temperatures for electric motor windings below those shown in the illustration.

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MOTOR TEST DIAGRAMS

AMRE has a modern electronic test bench for electric motors capable of evaluating the performance of motors with powers between 200W and 50kW and torques from 0.1 to 50 Kgm.

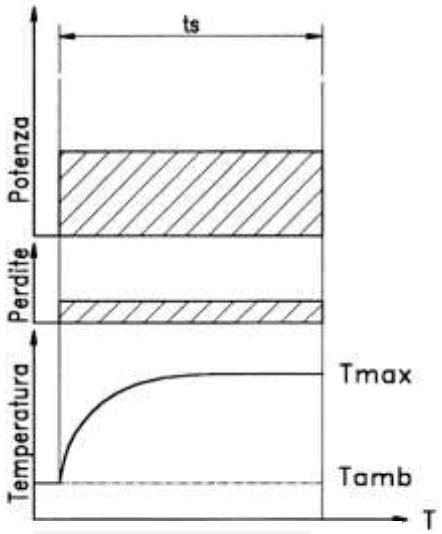
On request, each motor is equipped with a graph showing the characteristic curves obtained in compliance with applicable Italian and European standards. The following, in particular, are shown:

Power curve	UDM	kW	Absorption curve	UDM	Amp
Velocity curve	UDM	rpm	Performance curve	UDM	%
Drive torque curve	UDM	Kgm	Service time curve S2	UDM	min
Service time curve S3	UDM	%	Voltage curve	UDM	Volt

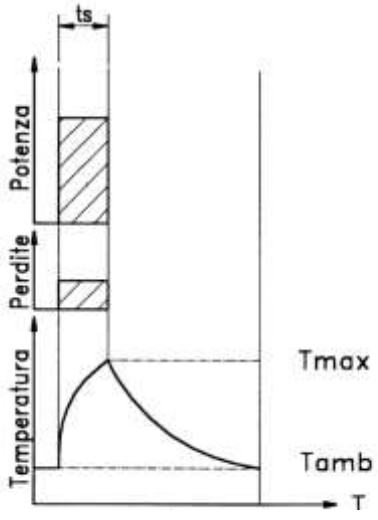
The service time curves S2, S3 are determined in conformity with table No.1 file 1778 V C.E.I. standards 2-3 v1 ED. 1992.

Please also remember that such service times refer to our test bench at an altitude below 1000 metres and at average European temperature.

The graphs below provide details of the S1, S2 and S3 service time concepts normally used for **AMRE** motors.



Continuous Service S1



Limited duty Service S2

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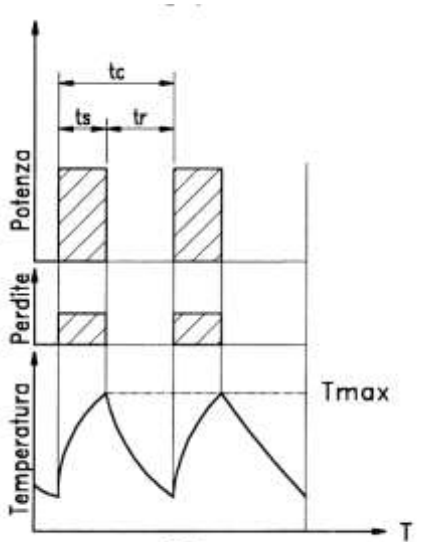

Intermittent periodic Service S3

$$S3 = \frac{ts}{ts + tr} * 100$$

Tc Duration of a cycle (10 minutes)
Ts Operating time and costant power
Tr Quiescent time
Tmax Max temperature reached
Tamb Ambient temperature

PROTECTION STANDARDS

The protection standard of a motor indicates the level of protection of the motor against solid bodies and water. It is indicated by two decimal figures:

1st CHARACTERISTIC FIGURE

The first characteristic figure indicates the insulation standard of the casing with respect to both persons and materials.

0 not protected

1 protected against solid bodies over 50 mm in size

2 protected against solid bodies over 12 mm in size

3 protected against solid bodies over 2.5 mm in size

4 protected against solid bodies over 1 mm in size

5 protected against dust

6 totally protected against dust

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2nd CHARACTERISTIC FIGURE

The second characteristic figure indicates the protection standard of the casing against the penetration of water (see illustrations on next page).

0 not protected

1 protected against the vertical fall of water drops

2 protected against the fall of water drops with a max gradient of 15°

3 protected against rain

4 protected against spray

5 protected against jets of water

6 protected against waves

7 protected against the effects of immersion

8 protected against the effects of submersion

Important: the figures indicated are simply a summary of those shown in the “CEI 2-16” regulation on protection standard. Please refer to this for more detailed information.

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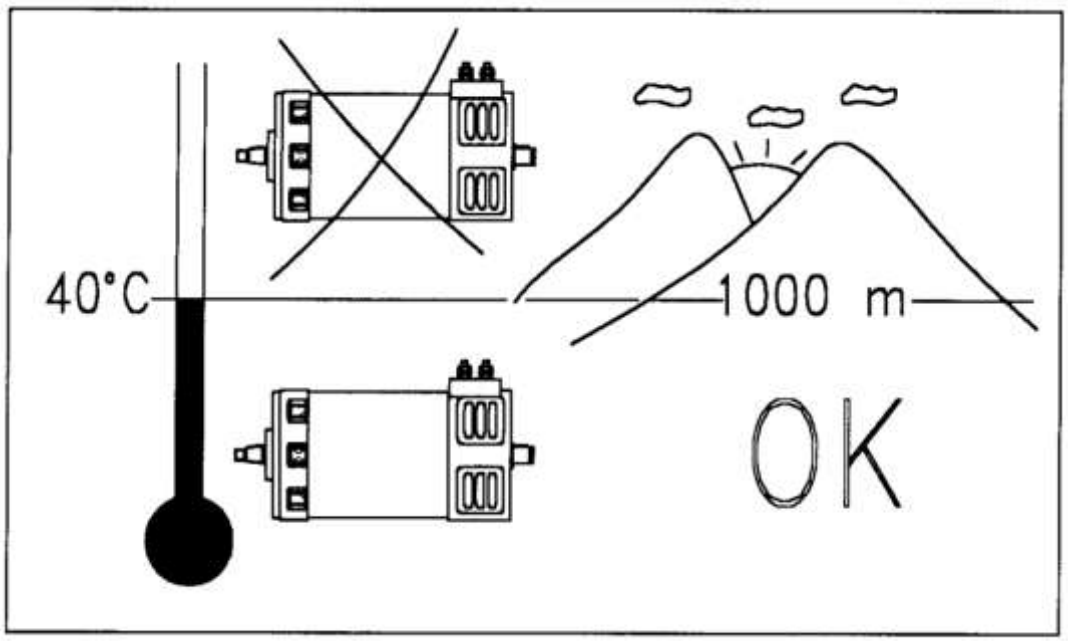
MOTORS OPERATING IN SEVERE ENVIRONMENTAL CONDITIONS

The rated motor figures on the technical sheets refer to operation in climates with max. environmental temperatures of 40°C at altitudes up to 1000 metres. In the case of higher environmental temperatures and altitudes, rated powers must be reduced by a coefficient K obtained from the table below.

For lower ambient temperature to -40 ° C, contact the technical department of AMRE srl.



DEGREES	K	ALTITUDE	K
45	0.95	1500	0.95
50	0.90	2000	0.90
55	0.80	3000	0.80
60	0.70	4000	0.70

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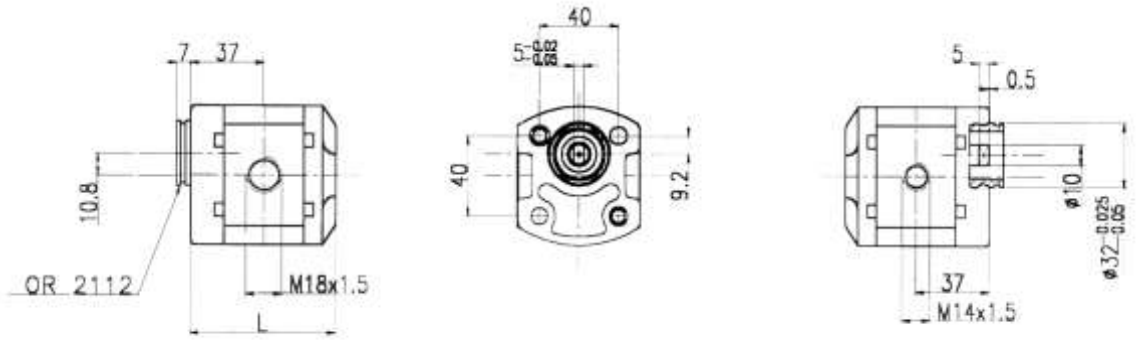
GEAR PUMPS

AMRE motor-driven pumps feature gear pumps in groups 1, 2 or 3 depending on motor category.
Below are the technical and mechanical specifications of the various pumps used besides a series of indications for correct installation in the hydraulic circuit.

PUMP GROUP 1



DISPLACEMENT cm³/rev	AMRE CODE	Bar Pressure Bar Max Pressures			SPEED rpm	
		P1	P2	P0	MIN	MAX
1.1	A1	210	250	-	600	6000
2.1	C	210	250	-	600	6000
3.2	D	200	240	-	600	5000

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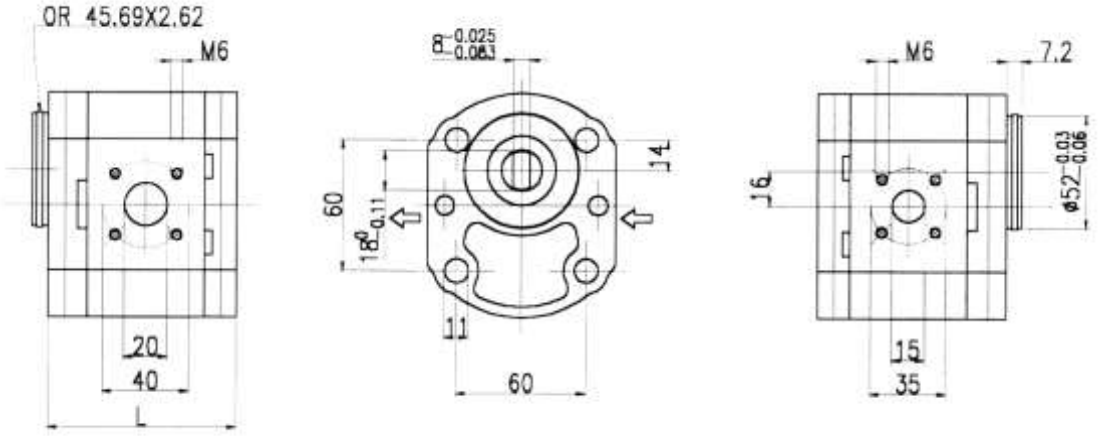
PUMP GROUP 2



DISPLACEMENT cm³/giro	AMRE CODE	BAR PRESSURE Bar Max Pressures			SPEED rpm	
		P1	P2	P0	MIN	MAX
4	E	250	280	-	800	4000
6	F	250	280	-	800	4000
8	G	250	280	-	800	4000
11	H	250	280	-	800	4000
14	S	250	280	-	800	4000
17	I	250	280	-	800	4000
19	O	210	230	-	800	4000
25	M2	160	200	-	800	4000

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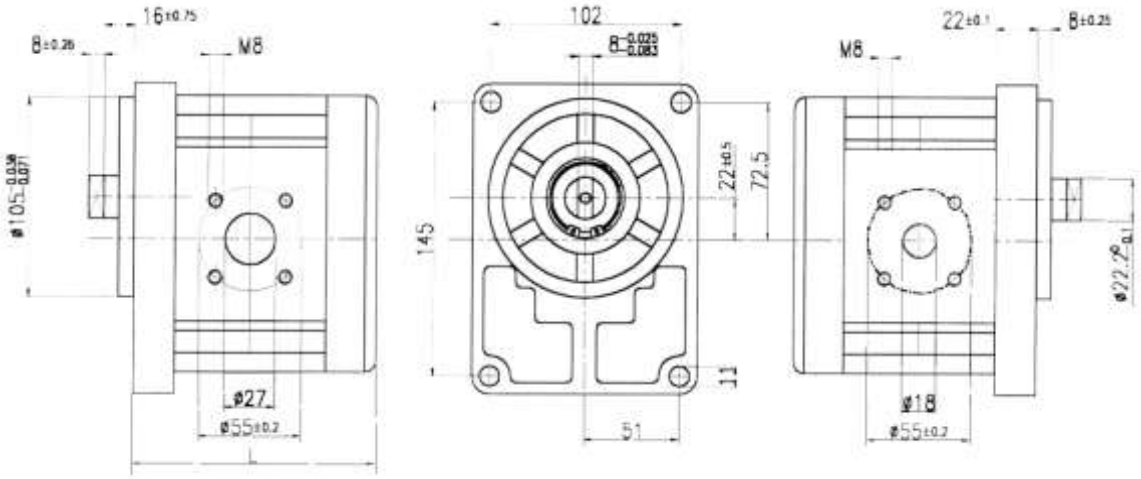
PUMP GROUP 3



DISPLACEMENT cm³/giro	AMRE CODE	BAR PRESSURE Bar Max Pressures			SPEED rpm	
		P1	P2	P0	MIN	MAX
22	L	180	220	-	800	2500
26	M	180	220	-	800	2500
33	N	180	220	-	800	2500
38	P	150	180	-	800	2500
44	R	150	180	-	800	2500

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