


## 2. DREHBAUGRUPPE

### 2.1. TECHNISCHE KENNDATEN DER STANDARD-VORRICHTUNG

<p><b>DREHMOTOR:</b></p> <ul style="list-style-type: none"> <li>• Hersteller: Besozzi</li> <li>• Modell: MCFA 132</li> <li>• Nennmotorleistung: 7.5 KW</li> <li>• 1500 U/min. bei 50 Hz.</li> <li>• Nennspannung 400 V</li> <li>• Nennstrom 16.5 A</li> <li>• Schutzklasse IP55</li> </ul>	<p><b>DREHWEG-UNTERSETZUNGSGETRIEBE</b></p> <ul style="list-style-type: none"> <li>• Hersteller: Brevini</li> <li>• Modell: RPR 3065T</li> <li>• Untersetzung 180</li> </ul>
	<p><b>DREHKRANZ:</b></p> <ul style="list-style-type: none"> <li>• Verzahnung innen.</li> <li>• Modul 12.</li> <li>• Anz. Zähne 117.</li> </ul>

Die Drehgeschwindigkeit ist in der folgenden Tabelle dargestellt.

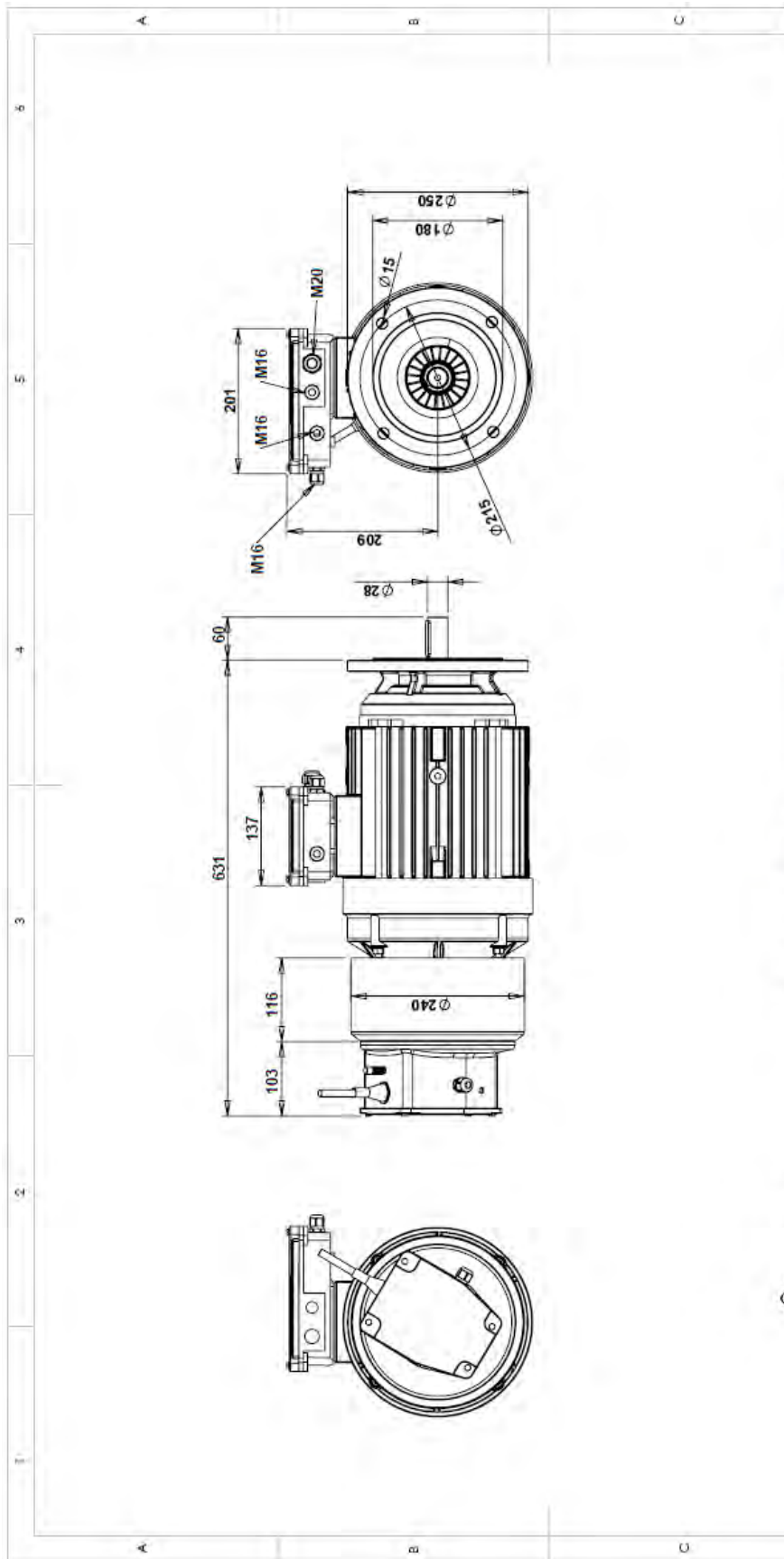
	v.	0,3 / 0,6 / 0,9 r.p.m.	0,3 / 0,6 / 0,9 r.p.m.
	Nm	2 x 65	2 x 65

### 2.2. DETAILPLAN DER DREHVORRICHTUNG

Der Detailplan der Drehvorrichtung ist dargestellt in **Kapitel 7 MONTAGE DER DREHVORRICHTUNG**, Abschnitt 6.2.1

### 2.3. DETAILPLAN DES DREHMOTORS

POTENZA NOMINALE/POWER	[kW]	7,5	ALIMENTAZIONE /VOLTAGE	[V Hz]	230/400 50
VEL. DI SINCRONISMO/SPEED	[rpm]	1500	CLASSE DI ISOLAMENTO/INS.CLASS		F
COLLEGAMENTO/CONNECTION		$\Delta Y$	SERVIZIO/SERVICE		S3
COPPIA NOMINALE NOMINAL TORQUE (T)	[Nm]	52	FATTORE DI MARCIA/DUTY CYCLE	[%]	60
CORRENTE NOM.(400V) NOMINAL CURRENT	[A]	16,5	INERZIA/INERTIA (PD <sup>2</sup> )	[kgm <sup>2</sup> ]	0,1558
VELOCITÀ NOMINALE NOMINAL SPEED	[rpm]	1467	PESO DEL MOTORE/WEIGHT	[kg]	82
COS $\phi$ /POWER FACTOR		0,80	VENTILAZIONE/VENTILATION		SELF
RENDIMENTO/EFFICIENCY		0,82	PROTEZIONE/IP ENCLOSURE		IP55
I <sub>AVV</sub> /I <sub>NOM</sub>		5,45	RESISTENZA DI UNA FASE DEL MOTORE RESISTANCE OF A PHASE OF MOTOR (20°C)	[ $\Omega$ ]	0,48
CAVV/CNON		1,92	POSIZIONE DI MONTAGGIO MOUNTING POSITION		IM3001 (V1)
FRENO TIPO/BRAKE		GR7	ALIMENTAZIONE/TENSION	[V-Hz]	24Vdc (1)
COPPIA MASSIMA MAX TORQUE	[Nm]	85	REGOLAZIONE/REGULATION	[Nm]	54
N° MOLLE/N° SPRINGS		6	N° MOLLE/N° SPRINGS		4
TRAFERRO AIR-GAP	[mm]	0,60	RESISTENZA DEL FRENO RESISTANCE OF BRAKE(20°C)	[ $\Omega$ ]	7,8
GEARBOX	TYPE		OIL	TYPE	
RATIO	i			KG	



**Technical Drawing Details:**

- Front View Dimensions:** Total length 631, base length 103, motor body length 116, mounting bracket length 137, mounting hole offset 60.
- Side View Dimensions:** Total width 201, mounting hole offset 209, mounting hole diameter  $\varnothing 15$ , mounting hole diameter  $\varnothing 215$ , motor body diameter  $\varnothing 180$ , total diameter  $\varnothing 250$ .
- Detail View:** Shows mounting holes with M16 threads and M20 mounting holes.
- Isometric View:** Shows motor body diameter  $\varnothing 240$  and shaft diameter  $\varnothing 28$ .

**Product Information:**

**Besozzi elettromeccanica**  
**MOTORE MCFA132C-KW7.5**  
**230/400V-50HZ-IP55**

**Technical Specifications:**

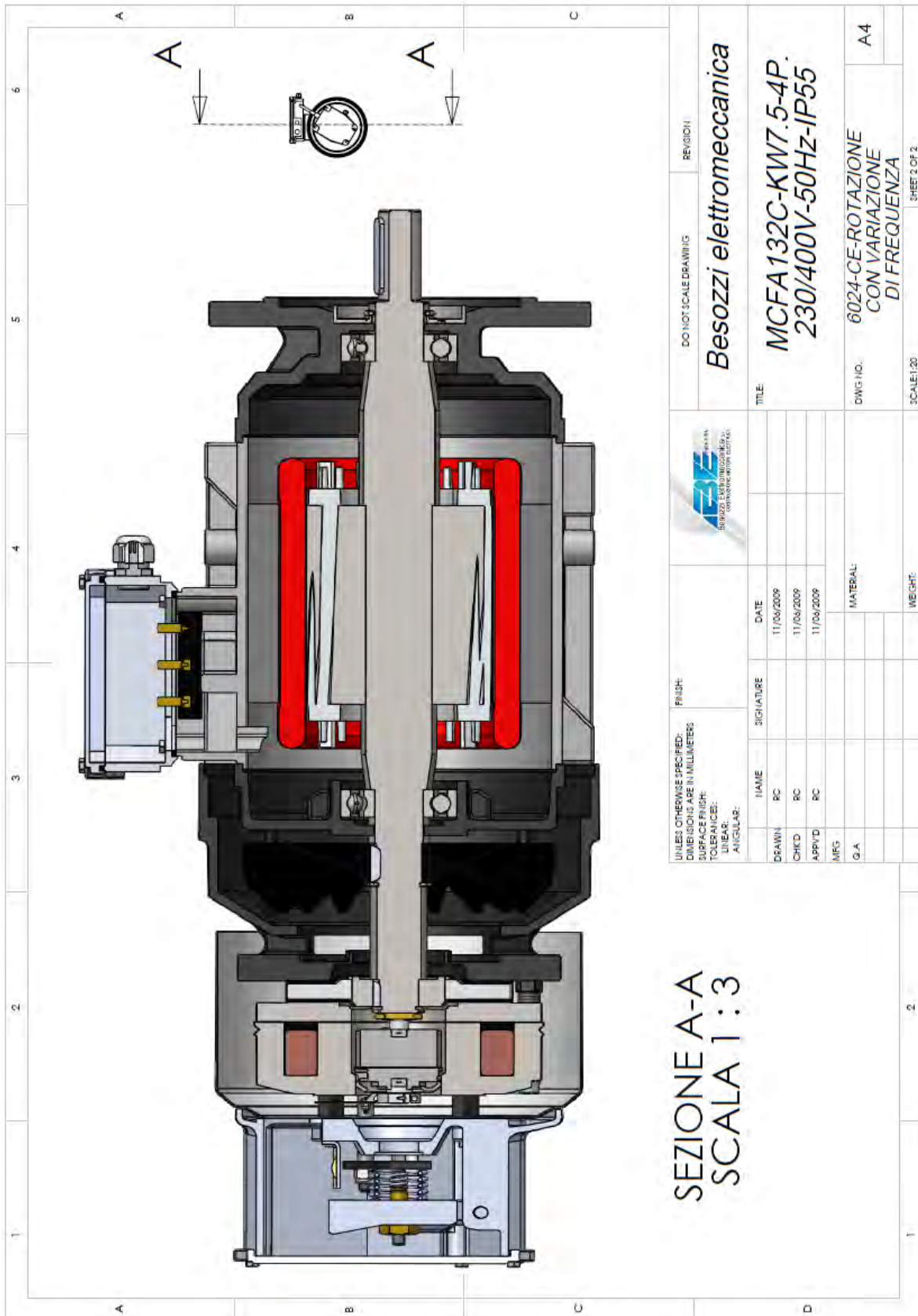
- DWG NO.: 6024-CE-ROTAZIONE CON VARIAZIONE DI FREQUENZA+ENCODER
- SHEET 1 OF 2
- SCALE: 1:20

**Approval Table:**

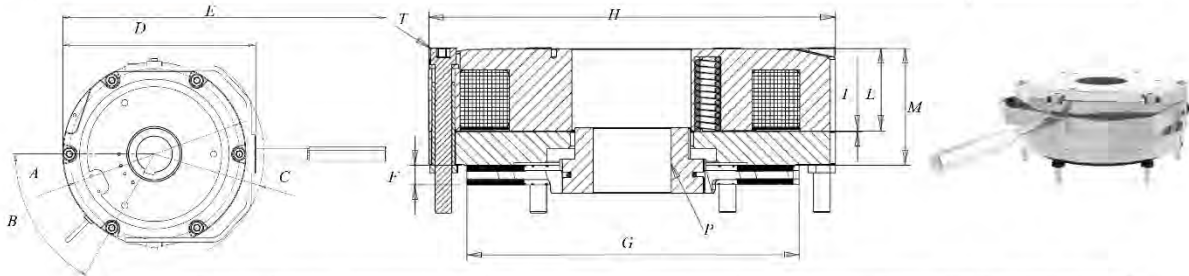
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH	NAME	SIGNATURE	DATE
DRAWN	RC				11/04/2009
CHK'D	RC				11/04/2009
APP'D	RC				11/04/2009
MFG					
G.A.					
MATERIAL:					
WEIGHT:					

**Company Logo:** BE Besozzi Elettromeccanica

**Additional View:** A perspective view of the motor showing its cylindrical body and mounting feet.



**GR Brake type characteristics**



TYPE	POWER [W]	STATIC TORQUE [Nm]	FIXING SCREWS (F)		P (P) $\alpha=20^\circ \text{mod}=3$			$\varnothing A$	B	$\varnothing C$	D	E	F	$\varnothing G$	$\varnothing H$	I	L	M
			N°	Type	Z teeth	$\varnothing \text{min}$	$\varnothing \text{max}$											
GR5	30	40	3	M6 X 80	20	22	34	132	120	-	-	-	12	107	147	0.3	38	48
GR6	45	55	3	M8 X 70	20	24	34	145	120	-	-	-	12	115	160	0.3	46	57
GR7	50	90	3	M8 X 85	20	24	34	170	120	-	-	-	14	149	187	0.3	48	62
GR8	95	150	6	M10 X 90	23	42		196	60	103	240	354	12	175	215	0.3	56.5	72.5
GR8-D	95	300	6	M10 X 120	28	42		196	60	-	-	-	12	175	215	0.45	56.5	94
GR9	135	280	6	M10 X 90	28	42	48	230	60	256	261	438	12	202	248	0.3	50	71
GR9-D	135	550	6	M10 X 120	28	48		230	60	-	-	-	12	202	248	0.45	50	98
GR9-H	150	370	6	M10 X 130	28	48		230	60	256	261	438	12	202	248	0.3	68	83.5
GR10	150	600	6	M10 X 20	28	48		278	60	-	-	-	11.7	248	304	0.3	70	89

\*Dimensions in mm - Standard voltage 20/100/180 Vdc - CL "F"

The slewing brake is model GR7, with a regulated torque of 47 Nm and a gap "I" of 0.7mm.

Assembly brake GR model:

### GENERAL CHARACTERISTICS

GR series brakes made by Besozzi Electromeccanica are spring brakes. They are supplied by DC voltage.

Distinctive features of these products are:

- Strong structure
- Noiseless during operations
- Economy due to simple assembly process of the brake
- Excellent heat dissipation also helped by the fan motor and / or by motor cover
- The coil is fully cemented with epoxy resin and mechanical parts are protected by galvanic treatment
- Insulation is Class F (*the design of the brake allows the use in continuous service*)
- The possibility to assembly a manual release system and other accessories to each brake



Electromagnets and mobile plates are made directly from rough steel bars C10 by CNC machines



### HOW THEY WORK

The excitation coil is put inside the electromagnet [C] and then it is properly cemented with epoxy to ensure electrical isolation and mechanical strength. Torque springs [E] are inserted inside appropriate slots on the electromagnet [C]. Without power, the current does not circulate inside the excitation coil. In this condition, as generated FMM is zero, the torque springs [E] push the mobile plate [F] against the brake disc [H] which is connected to the motor's shaft by a pinion [I]. The shaft is then braked and the brake is called **closed**. Supplying the excitation coil, it is generated a magnetic field whose effect is to produce the FMM necessary to overcome the springs' elastic force and attract the mobile plate [F] towards the electromagnet [C]. In this condition, the springs are loaded, motor's shaft is free to rotate and the brake is called **open**.



Item	Description
A	Hallen bolt fixing screws
B	Washers
C	Electromagnet / coil
D	Hand release
E	Coil springs
F	Armature plate
G	Air gap setting screw
H	Brake disc
I	Pinion

### COMPONENTS' CHARACTERISTICS



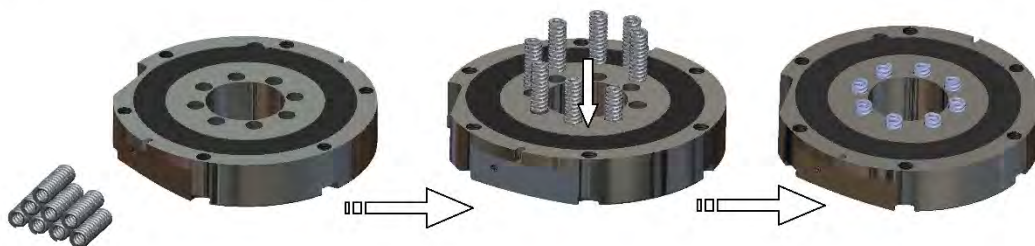
1. The electromagnet and the mobile plate are made by UNI C10 steel and subjected to a galvanizing process.
2. The adjusting nuts are subjected to surface induction hardening process to prevent them from any possible damage during maintenance operations and to protect them by the external environment
3. Brake disk ring is made by UNI C50 steel or, alternatively, by Aluminium. Friction linings are glued on it.
4. Pinion is made by UNI C50 steel and includes O-rings to ensure correct positioning of the disc brake without sliding on mobile plate or on the shield of the motor.
5. Friction linings do not contain any ferrous materials in order to not create any rust. Furthermore, the mobile plate has a galvanizing treatment therefore, even after a long period of inactivity, the disc does not stick to the shield of the motor
6. On request, each disc can be grinded, dynamically balanced and runned to ensure top performances.



### ASSEMBLY PROCESS

The brake unit is supplied already pre-assembled. However, if for any reason customer wants to access to the inner components, the procedure to reassemble the brake unit is as follow:

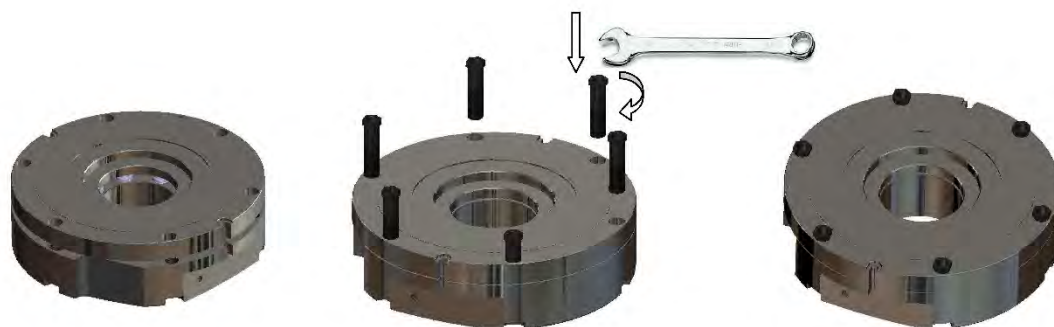
1. To put the pressure springs inside the holes on the magnet



2. To place the mobile plate on the springs so that all its holes are aligned with the corresponding on the electromagnet



3. To fix the mobile plate on the electromagnet use the adjusting nuts





4. To assembly the hand release's components placing and securing them on the brake as shown. To regulate the hand release, refer to operating and maintenance instructions supplied with the product.



5. To place the disc brake on the shield of the motor. Then fix the brake unit tightening the screws.



6. Adjust the air gap (the red coloured area) to the value shown in the specification working on the fixing screws and the adjusting nuts as follows:

- Select on the gauge the item corresponding to the desired air gap and insert it between the electromagnet and the mobile plate.
- Tighten the fixing screws till the gauge's element is locked
- Tighten the adjust nuts against the motor's shield up to allow the extraction of the gauge's item
- Perform this procedure for all the screws/nuts
- Check the value of air gap and, if necessary, repeat the above described procedure

