

# Электромеханические пружинные тормоза серии К

## Инструкция по сборке

По вопросам продаж и поддержки обращайтесь:

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Россия +7(495)268-04-70

Казахстан +(727)345-47-04

Беларусь +(375)257-127-884

Узбекистан +998(71)205-18-59

Киргизия +996(312)96-26-47

## 1- Symbols

Symbol	Meaning	Description
	<b>DANGER!</b>	Danger of personal damage caused by a general source of danger It refers to an imminent danger that could give place to serious personal damage or death if the correspondent measures of protection are not respected.
	<b>RISK OF ELECTROCUTION!</b>	Danger of personal damage caused by high electrical voltage It refers to an imminent danger that could give place to serious personal damage or death if the correspondent measures of protection are not respected.
	<b>STOP!</b>	Danger of property damage It refers to an imminent danger that could give place to property damage, if the correspondent measures of protection are not respected.
	<b>NOTE!</b>	Important note to ensure troublefree operation
	<b>TIP!</b>	Useful tip for simple handling

## 2- General Alerts

	<b>FEEDING VOLTAGE</b>	The brake feeding voltage may vary of a $\pm 6\%$ in observance to the nominal tension signed on the label. The electromagnet requires a tension near the nominal value: an insufficient tension may cause a general bad working of the brake.
	<b>ROOM TEMPERATURE</b>	The room temperature for the brake correct working is between 5°C and 40°C. Contact technical office for different or further requirements

## 3- Toolbox

To follow this manual you need the following tools:



## *Wrench set*



### *Allen key set*



### *Dynamometric key*



### *Thickness gauge set*



Caliper gauge

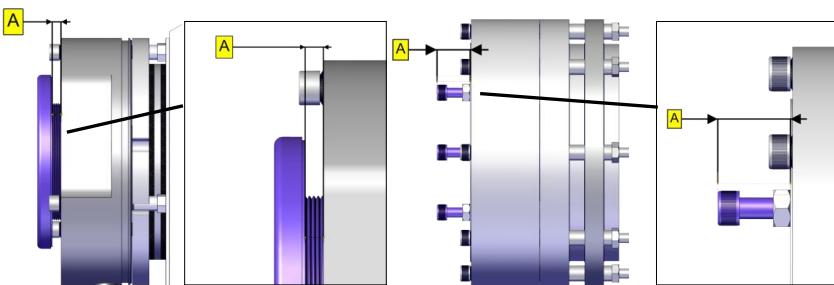
	<b>USE STANDARD KEYS</b>	Use only standard keys, without the use of extensions to obtain a correct one tightening of bolts and nuts.
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## 4- Static torque values

	K01	K02	K03	K04	K05	K06	K07 (K07 / D)	K08 (K08 / D)	K09 (K09 / D)	K10 (K10 / D)	K11 (K11 / D)	K12 (K12 / D)
Nominal static torque [Nm]	4.5	10	16	20	40	60	90 (180)	200 (400)	300 (600)	500÷800 (1000÷1500)	1000÷1500 (2000÷2800)	2250 (4500)

#### 4.1- Braking torque adjustment

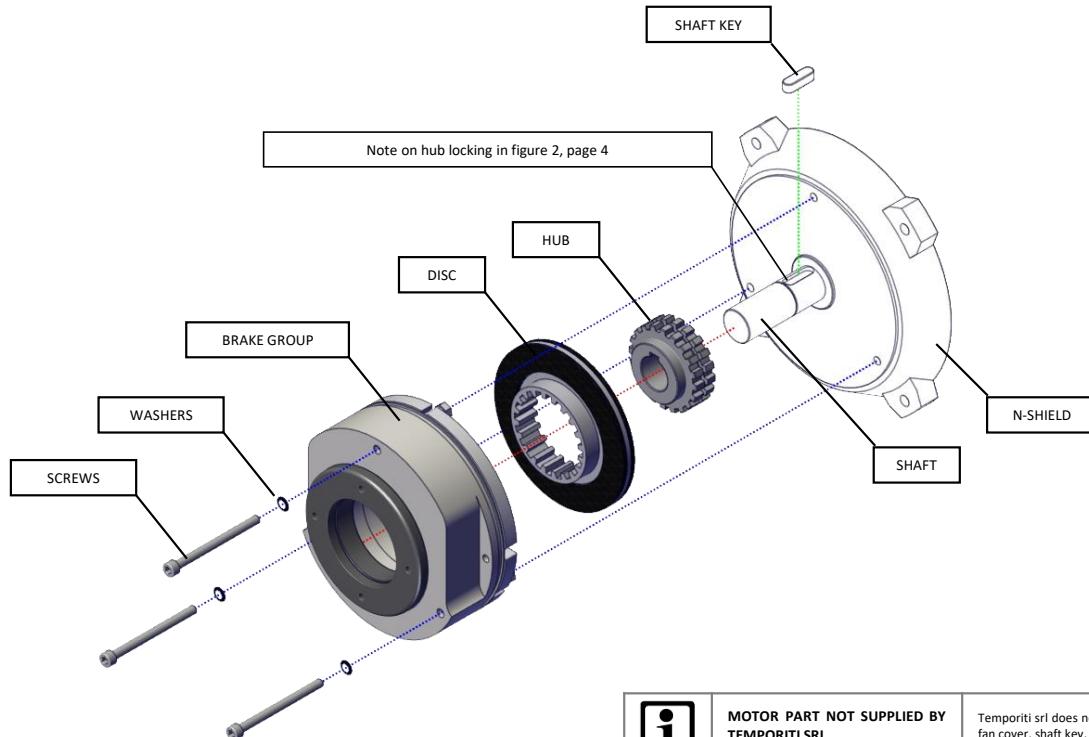
K01		K02		K03		K04		K05		K06		K07 (K07/D)		K08 (K08/D)		K09 (K09/D)		K10 (K10/D)		K11 (K11/D)		K12 (K12/D)	
A [mm]	Nm	A [mm]	Nm	A [mm]	Nm	A [mm]	Nm	A [mm]	Nm	A [mm]	Nm	A [mm]	Nm	A [mm]	Nm	A [mm]	Nm	A [mm]	Nm	A [mm]	Nm		
1.5	5	2.2	12	2.2	16	2.1	20	3.2	40	2.8	60	2.2	90 (180)	2.3	200 (400)	1	300 (600)	F I X E D	800 (1500)	22.4	1500 (2800)	F I X E D	2250 (4500)
2.0	3.75	2.9	9	2.9	12	2.5	15	4.2	30	3.5	45	2.7	67 (134)	2.8	150 (300)	2,5	225 (450)			23.4	1470 (2744)		
2.5	2.5	3.6	6	3.6	8	3.0	10	5.2	20	4.2	30	3.2	45 (90)	3.2	100 (200)	4,5	150 (300)			25.4	1410 (2632)		



	<b>NEVER REMOVE AND NEVER COMPLETELY UNSCREW THE TORQUE SCREWS</b>	Never remove the torque screw: in this case the brake will be able to ensure about the 30% of couple static values
	<b>ADJUSTING THE BRAKING TORQUE LESS THAN 50% OF THE MAXIMUM TORQUE VALUE</b>	Adjustment of the torque braking lower than 50% of maximum torque value is not guaranteed or provided from Temporti srl. For more information, contact the Temporti technical office.
	<b>VALUES AFTER RUNNING-IN</b>	The values in graphic are concerning to the brake runned in
	<b>APPROXIMATE VALUES</b>	The values in table are approximate. The real torque values must be always verified by measurement

## 5- Installation and regulation

	KEEP METICULOUSLY THE INSTRUCTION ON THIS MANUAL	Adjusting operations carried out without following the operations of this manual, lead to a bad brake working.
	DISCONNECT THE BRAKE FROM POWER SUPPLY	Carry out the inspection, servicing and adjusting operations only after the brake electrically disconnection.
	SURFACES CLEANING	Good plane and braking surfaces cleaning, by using de-greasers that do not leave oily wasters, is necessary for good brake performance



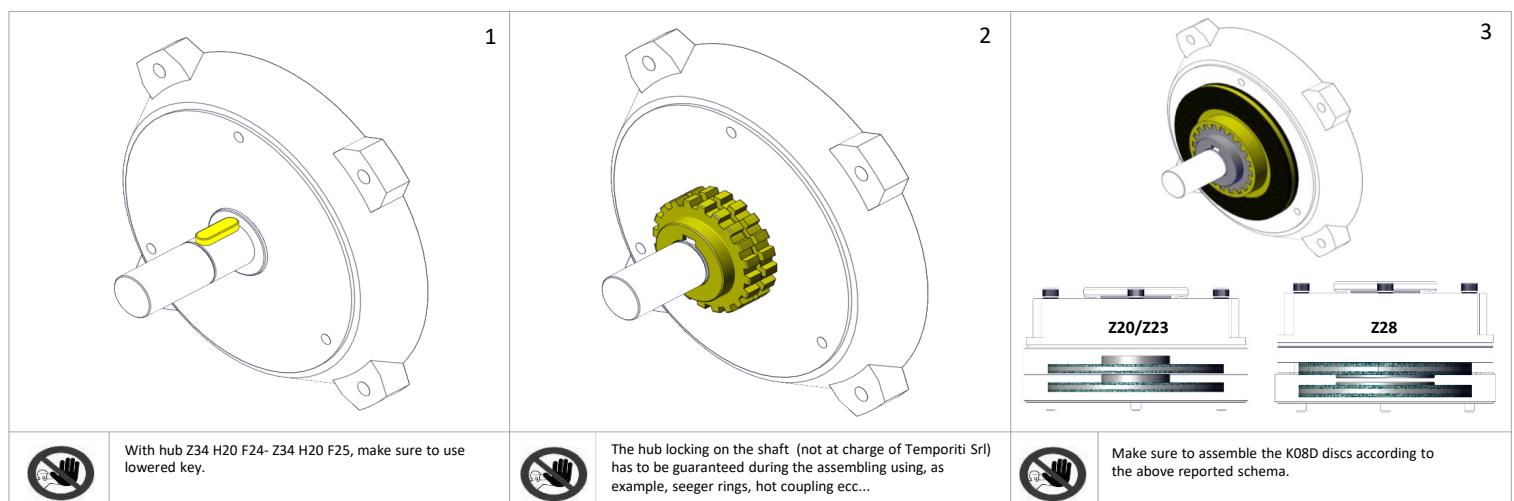
MOTOR PART NOT SUPPLIED BY TEMPORITI SRL

Temporiti srl does not supply motor parts as n-shield, shaft, fan cover, shaft key, hub seeger and sealing ring



INDICATIVE ILLUSTRATION

All illustrations are for illustration only and may not accurately depict the actual brakes



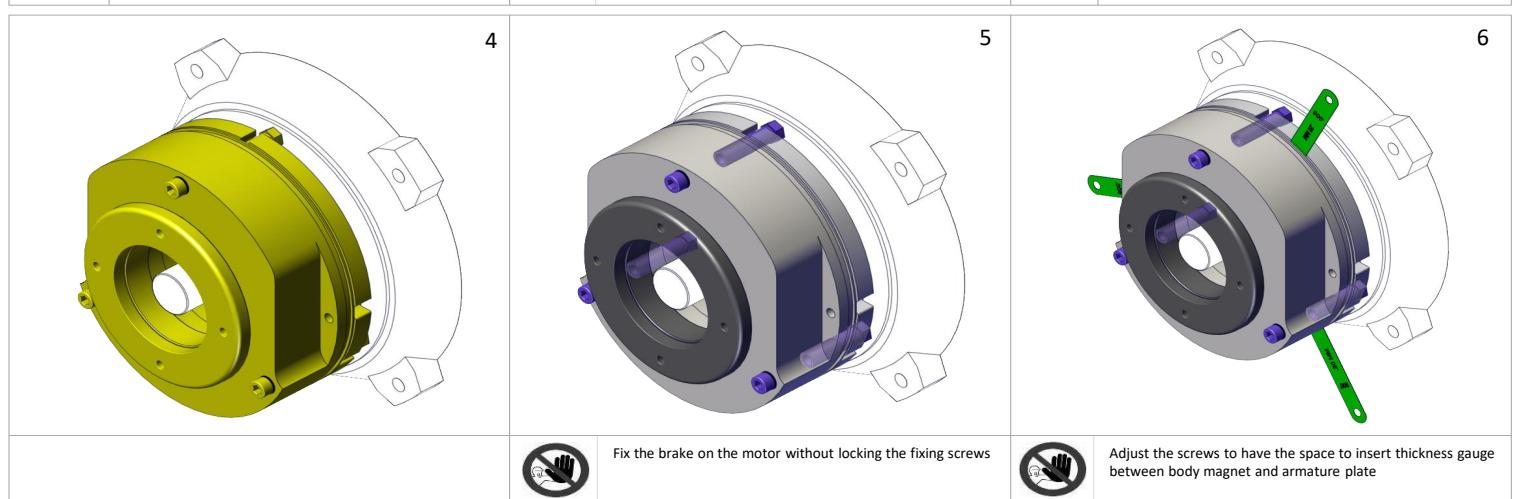
With hub Z34 H20 F24- Z34 H20 F25, make sure to use lowered key.



The hub locking on the shaft (not at charge of Temporiti Srl) has to be guaranteed during the assembling using, as example, seeger rings, hot coupling ecc...



Make sure to assemble the K08D discs according to the above reported schema.



Fix the brake on the motor without locking the fixing screws



Adjust the screws to have the space to insert thickness gauge between body magnet and armature plate

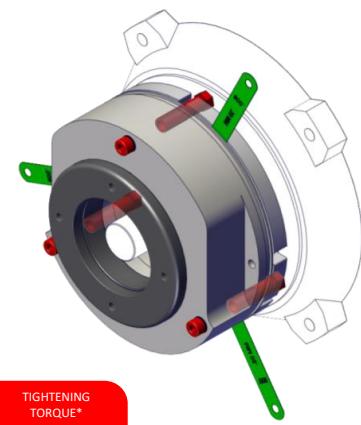
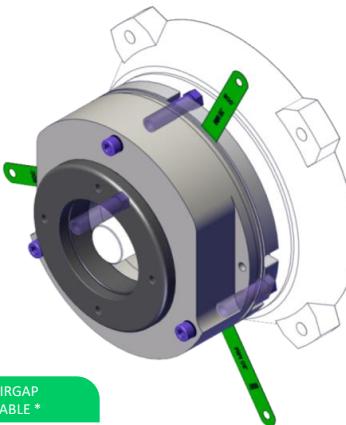
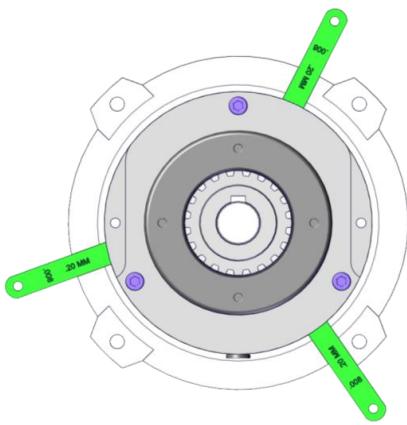
Remove

Install

Adjust

Measure

Torque



AIRGAP TABLE \*

1 TIGHTENING TORQUE\*

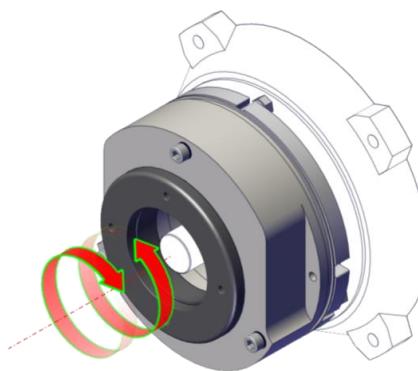
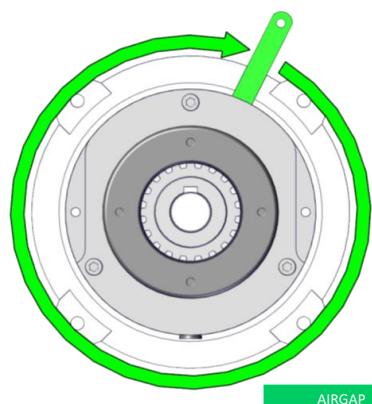


Insert the thickness gauges in correspondence to the fixing screws to be sure of the correct measurement



\*To choose the right thickness gauges dimensions, follow the chart at point 5.2, page 6 and use initial value as thickness gauge dimension for this step

\* For the correct torque value follow the table in point 5.1, page 6



## CONNECT THE BRAKE TO POWER SUPPLY AT MOTOR CONNECTION BOX AND TEST BRAKE FUNCTIONING



\* choose the right thickness gauges dimensions, follow the chart at point 5.2, page 6 and use control airgap value as thickness gauge dimension for this step



If torque test is failed due a higher or lower torque measured value than necessary, adjust the adjusting ring as you can see at point 4.1, page 2



To carry out this operation, follow the connection diagrams in point 5.3, page 6

Remove

Install

Adjust

Measure

Torque

## 5.1- Tightening values

TABLE OF TIGHTENING TORQUE

	K01	K02	K03	K04	K05	K06	K07 K07/D	K08 K08/D	K09 K09/D	K10 K10/D	K11 K11/D	K12 K12/D
Tightening torque [Nm]	3	6	6	10	10	23	23	46	46	46	73	122

## 5.2- Airgap values

AIRGAP TABLE [mm]

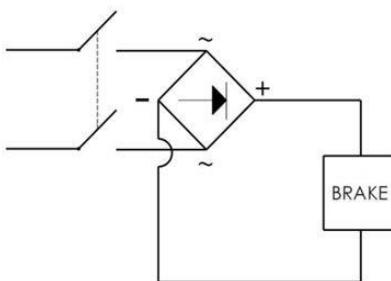
K01		K02		K03		K04		K05		K06		K07 (K07/D)		K08 (K08/D)	
CONTROL		CONTROL		CONTROL											
0,20 GO - 0,30 NO GO		0,20 GO - 0,30 NO GO		0,20 GO - 0,30 NO GO		0,20 GO - 0,30 NO GO		0,20 GO - 0,30 NO GO		0,20 GO - 0,30 NO GO		0,20 GO - 0,30 NO GO (0,50 GO - 0,60 NO GO)		0,20 GO - 0,30 NO GO (0,50 GO - 0,60 NO GO)	
INITIAL	MAX	INITIAL	MAX	INITIAL	MAX										

AIRGAP TABLE [mm]							
K09 (K09/D)		K10 (K10/D)		K11 (K11/D)		K12 (K12/D)	
CONTROL		CONTROL		CONTROL		CONTROL	
0,20 GO - 0,30 NO GO (0,50 GO - 0,60 NO GO)		0,20 GO - 0,30 NO GO (0,50 GO - 0,60 NO GO)		0,30 GO - 0,40 NO GO (0,50 GO - 0,60 NO GO)		0,30 GO - 0,40 NO GO (0,50 GO - 0,60 NO GO)	
INITIAL	MAX	INITIAL	MAX	INITIAL	MAX	INITIAL	MAX
0,20 (0,50)	0,70 (0,90)	0,20 (0,50)	0,70 (0,90)	0,30 (0,50)	0,70 (0,90)	0,30 (0,50)	1,00 (1,00)

	<b>MAX AIRGAP VALUE</b>	Max airgap value is the airgap value for which, once reached, it is compulsory restore to starting airgap value		<b>AIRGAP VALUE WITH MICROSWITCH</b>	In case of brake equipped with microswitch, minimum air gap: Single disc: 0.4mm Double disc: 0.5mm
	<b>THICKNESS GAUGE POSITIONING</b>	For a correct airgap measuring, the thickness gauge has to be positioned in correspondence of the magnet surface and not on the resin			

## 5.3- Electrical connection

Connect the brake to the motor according to the following connection diagram



## 6- Servicing

A frequent brake inspection is necessary for all parts as the wear depends on a series of factors and mainly on the load inertia, the shaft speed and the operation frequency. Verify the main parts of the brake group and, in case, replace them with original spare parts supplied by Temporiti SRL. The principal values that has to be checked are the airgap and the disc thickness.

The brake airgap value has to be lower than max airgap value stated at point 5.2 , page 6.

The disc thickness value has to be higher than the value stated at point 6.1, page 7.

Servicing may be roughly determined according to what is pointed out on the site.

### 6.1- Disc replacement

The disc must be replaced after a consumption of 1,5mm per friction material ring, that is when the minimum total thickness value is reached.

BRAKE SIZE	Disc replacement thickness limit - B [mm]											
	K01	K02	K03	K04	K05	K06	K07 K07/D	K08 K08/D	K09 K09/D	K10 K10/D	K11 K11/D	K12 K12/D
THICKNESS	4.80	5.50	5.50	5.50	6.30	6.30	7.50	8.10	8.3	8.5	14.7	25



## 7-Information on disposal and recycling



Recycle in eco-friendly way the packaging, metals and all the parts of no longer working brakes..

DO NOT THROW USED ELECTRIC BRAKES OR PARTS OF THEM IN THE HOUSEHOLD WASTE!

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