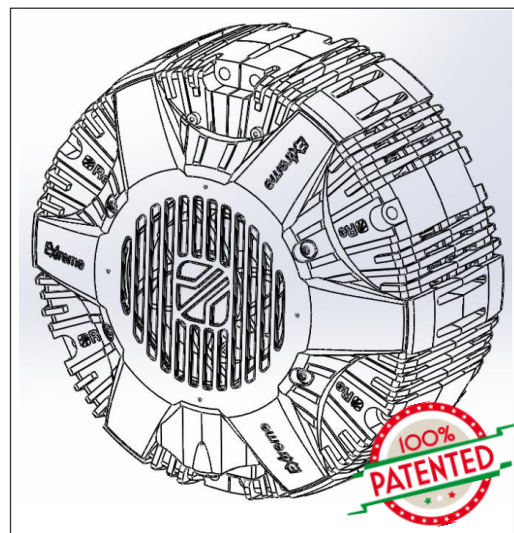


EXTREME

Pneumatic brake



USER'S MANUAL



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Warnings

The present manual is for device fitters and operators. It provides indications on the intended use of the device, technical specifications and instructions for installation, adjustment and use.

This manual is an integral part of the device and must be kept until the device is decommissioned. It reflects the technical state of the device at the time of its sale.

The plant builder may include the present manual in the documentation for plant use.

Re S.p.A. reserves the right to update its production and/or manuals without updating products already sold and previous manuals.

Since the device forms part of a plant, the plant builder is responsible for ensuring that all parts comply with the laws in force in the country in which it is installed.

The device must be fitted and adjusted by qualified technical personnel.

It may be moved manually.

Description

The patented EXTREME brake features state of the art technology to deliver the most compact brake in its category which is also ecological and able to deliver high level performance to meet the requirements of the most demanding clients.

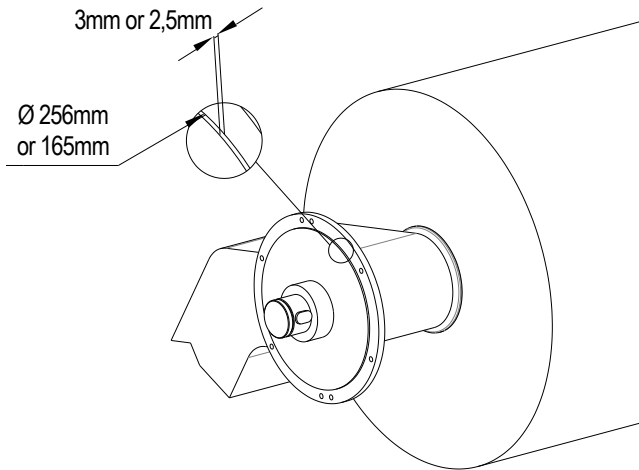
The brake features a simple design which makes it very easy to disassemble for routine maintenance.

To maintain the brake in optimum operating conditions, proceed as follows:

- **check the correct application of the brake;**
- **check the degree of wear of the pads and replace them when necessary** (see page 12-14);
- **check the degree of wear of the self-ventilated disc and replace it when necessary** (see page 19-20);
- **check that the surfaces of the disc are sufficiently smooth, if they are not grind both sides of the disc, making sure to keep a sufficient thickness for the use** (see page 19);
- **keep the caliper unit clean** (see page 17-18);
- **check that the fan is clean and if it is dirty clean it** (see page 22);
- **feed the calipers with “dry” compressed air, without any type of lubrication;**
- **make sure that the calipers air supply pressure does not exceed 6 bar.** For applications that require greater pressure, contact our technical support service.

Assembly of the EXTREME brake on your machine

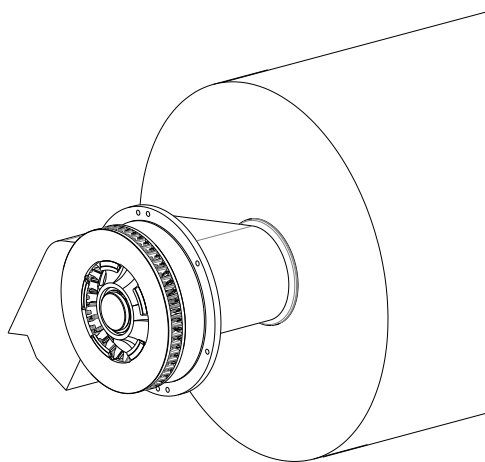
A



Before proceeding with the brake assembly make sure that the flange centring diameter is 256mm with a depth NO greater than 3mm for XT.10 brake or 165mm with depth NO greater than 2,5mm for XT.7 brake.

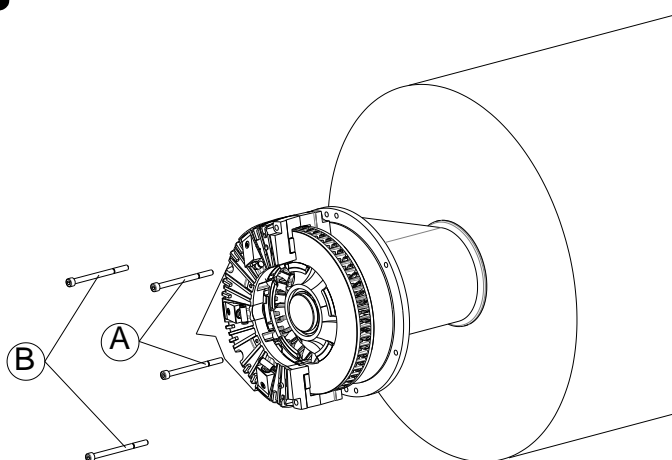
If the depth, in the case of XT.10 brake, is greater than 3mm use a sufficient number of the shims supplied in the package to compensate the thickness

B



Fit the brake disc on the shaft of your machine, without blocking it.

C



Fit the first half-housing, securing it to the flange of the machine.

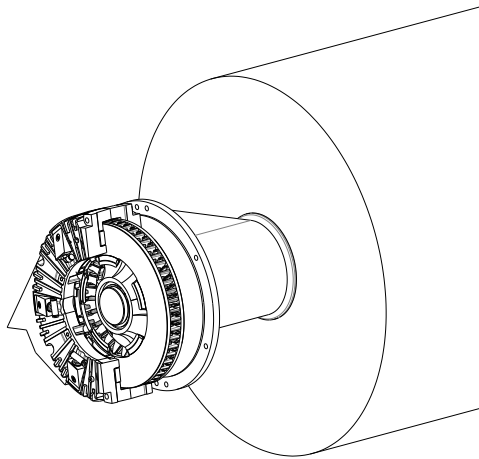
Firstly tighten the 2 screws "A".

Then tighten the 2 screws "B".

Attention: follow this sequence!

All 4 screws must be tightened with a torque of 2.2 DaNm

D

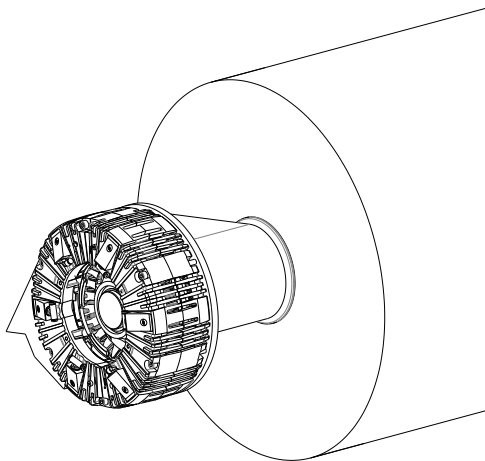


Centre the disc between the two planes of the pads, with callipers or calibrated shims, then fix it.

Manually rotate the disc and check that there is no parallelism error between the disc and the flange.

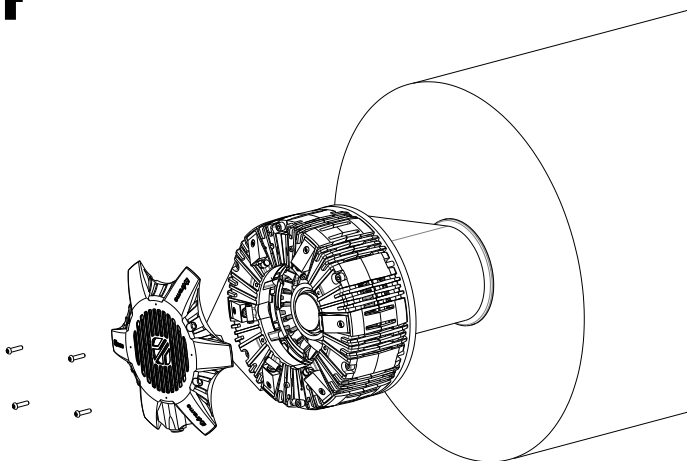
The maximum error allowed is $\pm 0.1\text{mm}$.

E



Fit the second half-housing, by following the indications set out in item C.

F



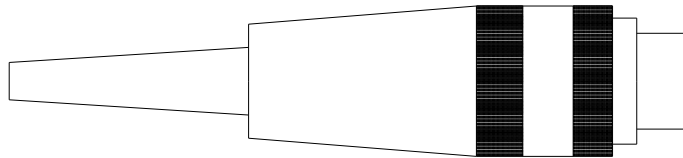
Fix the cover with the 4 screws in the package.

Fan power supply connection

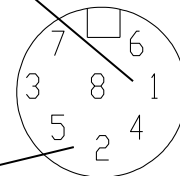
XT.10 with fan 24Vdc or 110/220Vac

After having secured the cover on the brake with the 4 screws in the package, proceed with the electrical connection of the connector supplied:

- with a **24Vdc fan**:
connect the positive wire “+” to PIN1 of the connector and the negative wire “-” to PIN2.
- with a **110/220Vac fan**:
connect a wire (phase or neutral wire) to the PIN1 of the connector and other wire (phase or neutral wire) to the PIN2.



PIN1: with **24Vdc fan**: connect the positive wire “+”
with **110/220Vac fan**: connect the phase or neutral wire



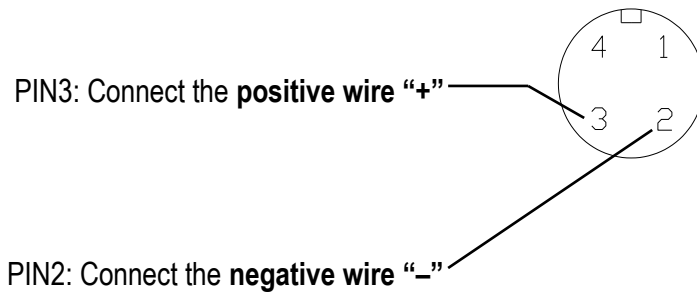
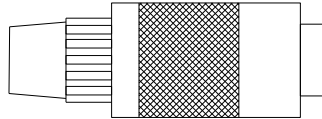
PIN2: with **24Vdc fan**: connect the negative wire “-”
with **110/220Vac fan**: connect the phase or neutral wire

Connector pin	Wire colour	Electrical characteristics with Fan 24Vdc fan		Electrical characteristics with 110/220Vac fan	
				(PHASE and NEUTRAL)	
1	Red	FAN POWER SUPPLY +	24Vdc	FAN POWER SUPPLY (PHASE and NEUTRAL)	110/220Vac
2	Black	FAN POWER SUPPLY -	0Vdc		
3	Red	SENS. ALIGN. +	24Vdc	SENS. ALIGN. +	24Vdc
4	Red / Black	PROX. -	0Vdc	PROX. -	0Vdc
5	White	SENS. ALIGN. -	0Vdc	SENS. ALIGN. -	0Vdc
6	White / Black	PROX. +	24Vdc	PROX. +	24Vdc
7	White / Violet	SENS. ALIGN. SIGNAL	NO/NC	SENS. ALIGN. SIGNAL	NO/NC
8	Violet	PROX. SIGNAL	NO/NC	PROX. SIGNAL	NO/NC

XT.7 with fan 24Vdc

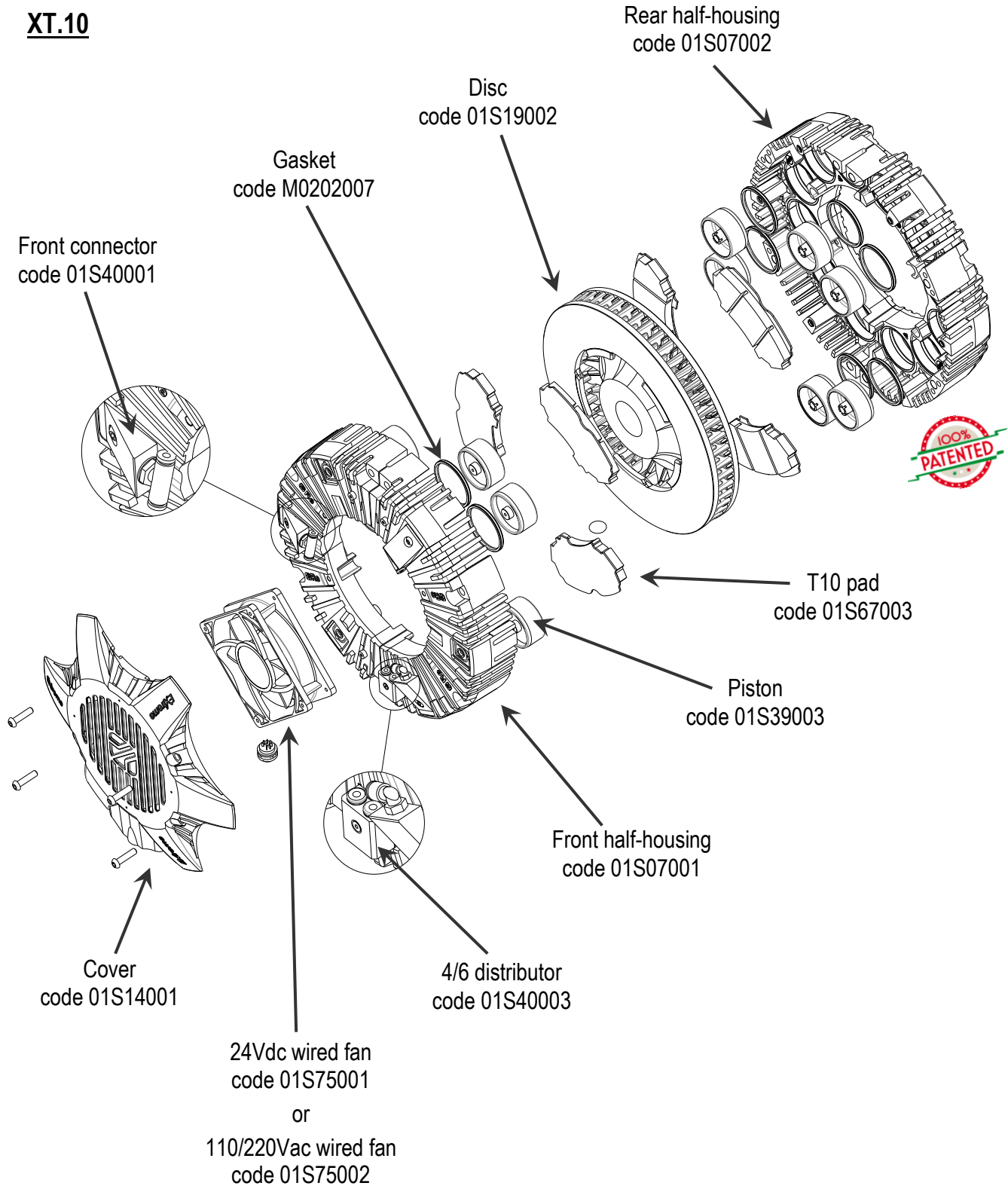
After having secured the cover on the brake with the 2 screws in the package, proceed with the electrical connection of the connector supplied.

Connect the positive wire “+” to PIN3 of the connector and the negative wire “-” to PIN2.

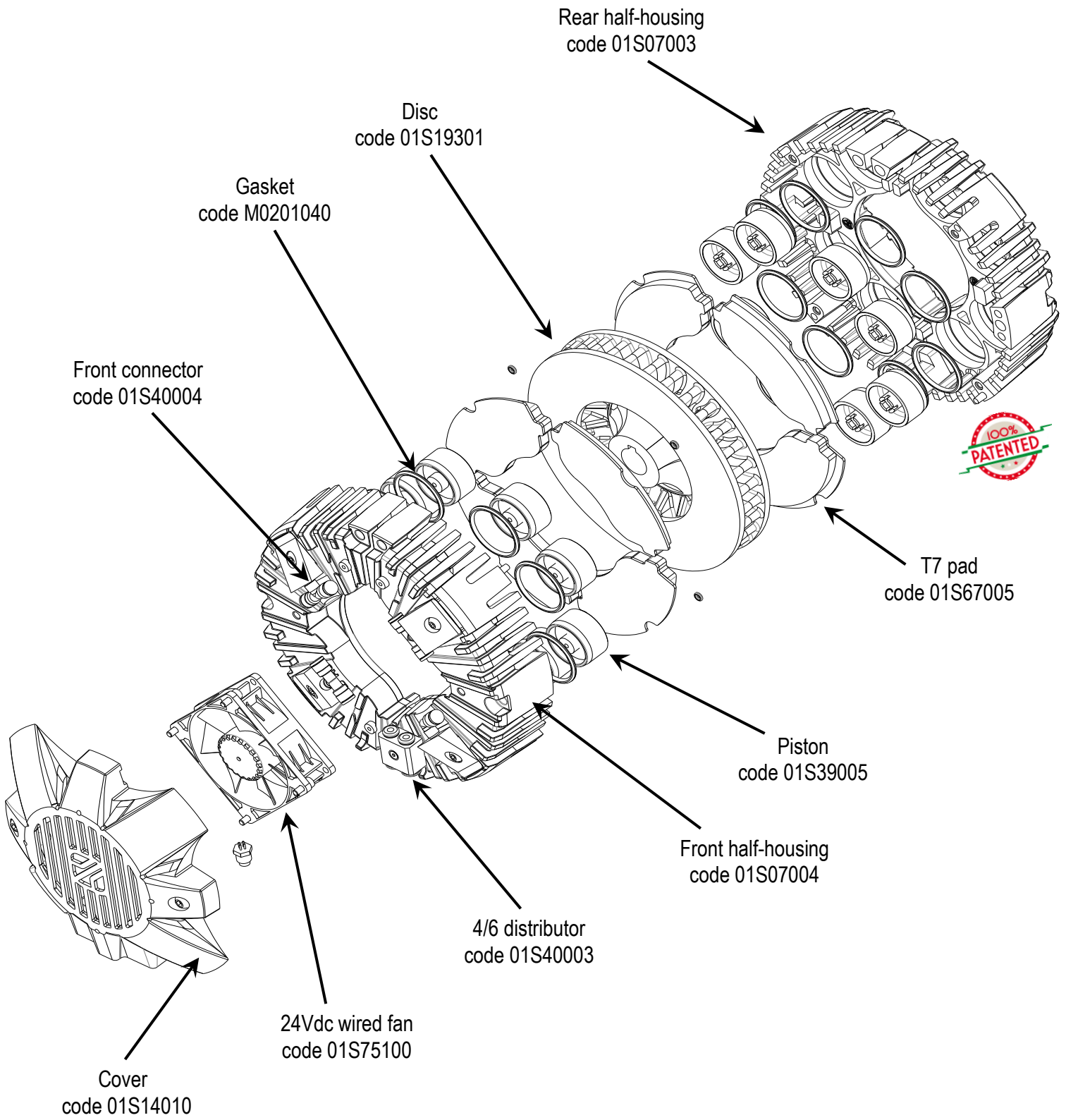


Connector pin	Wire colour	Description	Electrical characteristics
1	Blue	-	-
2	Black	FAN POWER SUPPLY -	0Vdc
3	White	FAN POWER SUPPLY +	24Vdc
4	Brown	-	-

EXTREME brake exploded diagram

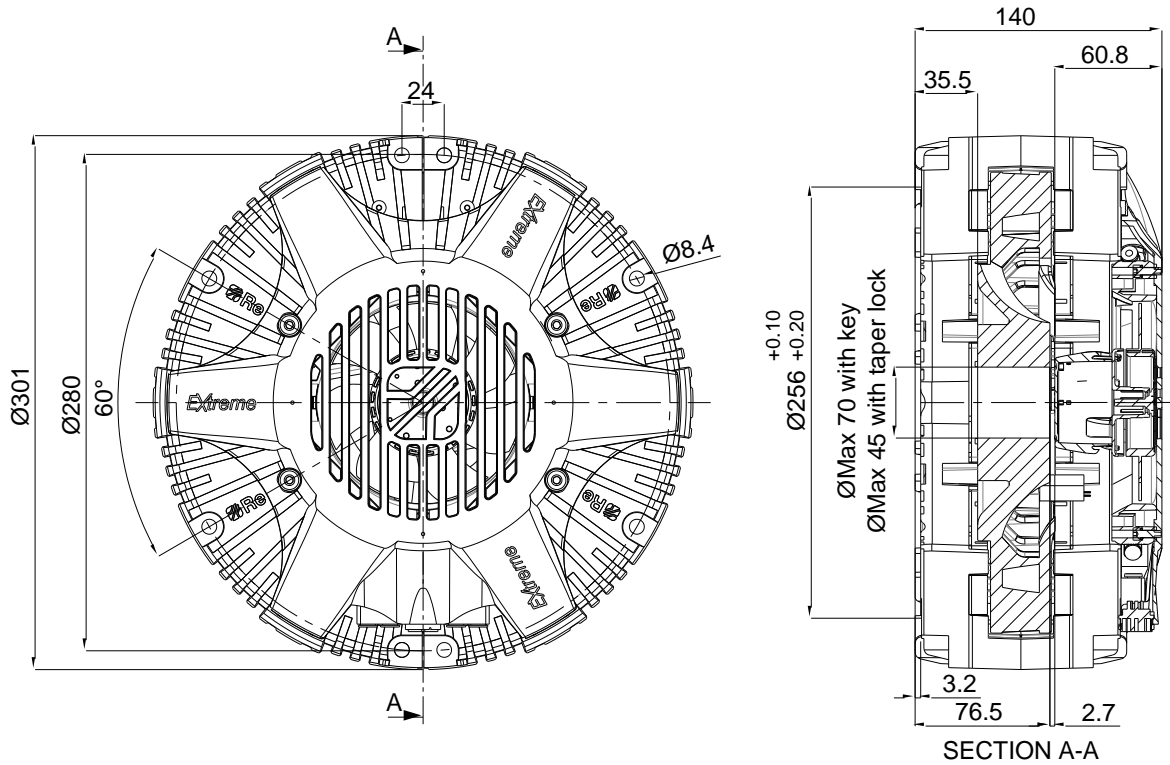


XT.7



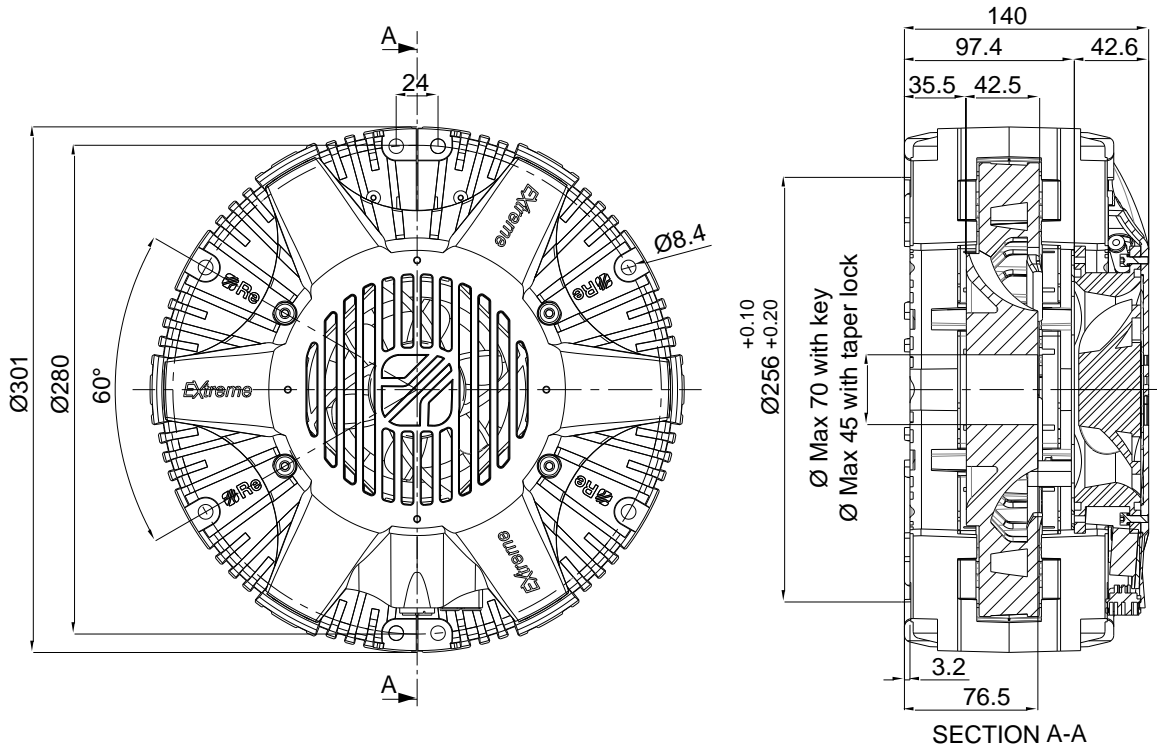
EXTREME brake dimensions and technical specifications

XT.10 with 110/220Vac fan



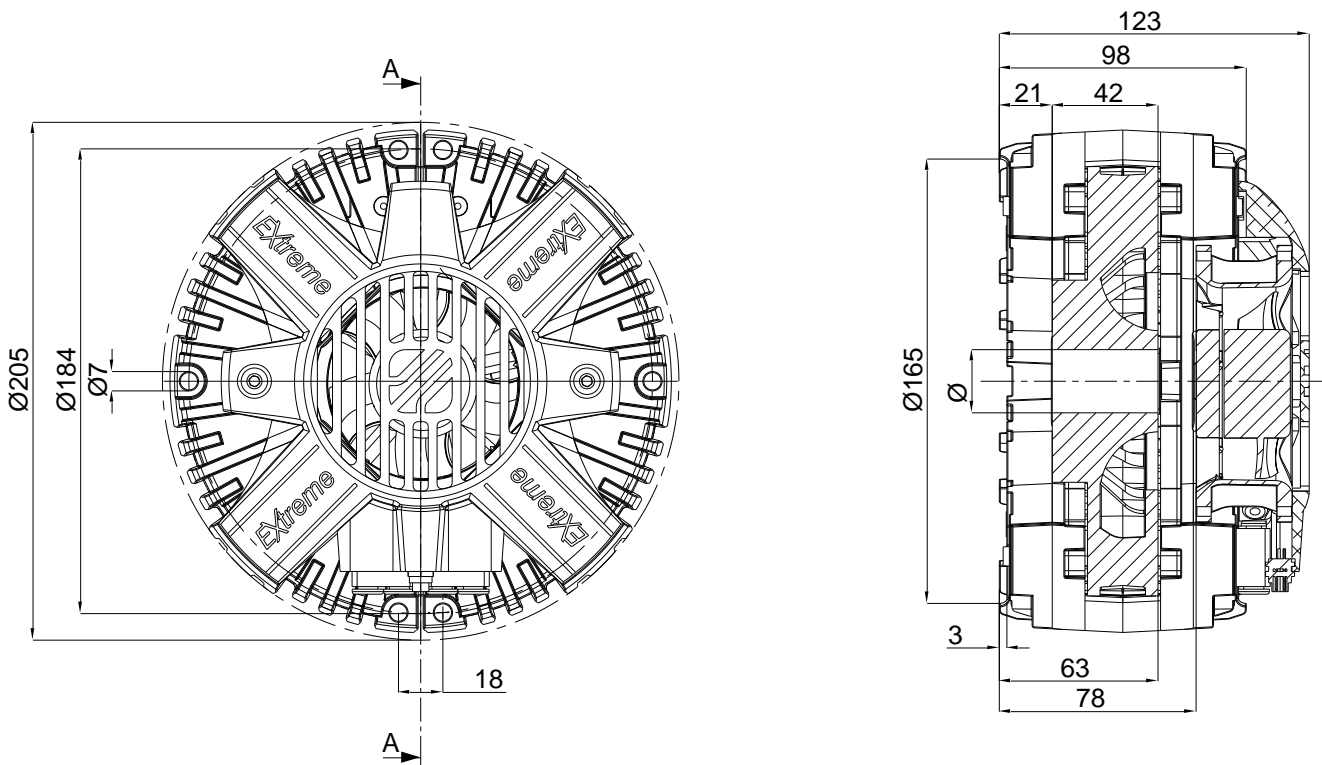
Technical specifications	
1 caliper nominal torque	230 Nm
Min-max pressure	0.1 – 6 bar
Heat dissipation	2 Kw
Heat dissipation with 110/220Vac fan	4.5 Kw
Fan power supply	110/220 Vac
Fan draw	0.06 A
Fan consumption	12 W
Max RPM	2500
Total weight	19 Kg

XT.10 with 24Vdc fan



Technical specifications	
1 caliper nominal torque	250 Nm
Min-max pressure	0.1 – 6 bar
Heat dissipation	2 Kw
Heat dissipation with 24Vdc fan	6 Kw
Fan power supply	24 Vdc
Fan draw	1.9 A
Fan consumption	45 W
Max RPM	2500
Total weight	19 Kg

XT.7 with 24Vdc fan



Technical specifications	
1 caliper nominal torque	88 Nm
Min-max pressure	0,1 – 6 bar
Heat dissipation	0,6 KW
Heat dissipation with 24Vdc fan	2 KW
Fan power supply	24 Vdc
Fan draw	0.38 A
Fan consumption	9,12 W
Max RPM	3000
Total weight	6.5 Kg

Pads



The EXTREME XT.10 brake is fitted with the patented T10 pads (code 01S67003) and the EXTREME XT.7 brake with the patented T7 pads (code 01S67005), that guarantee high performance levels.

The compound of the brake lining is designed to achieve **greater efficiency in the performance/life ratio**.

The pad is fitted with a **patented anti-noise sheet** that uses a new noise reduction system.

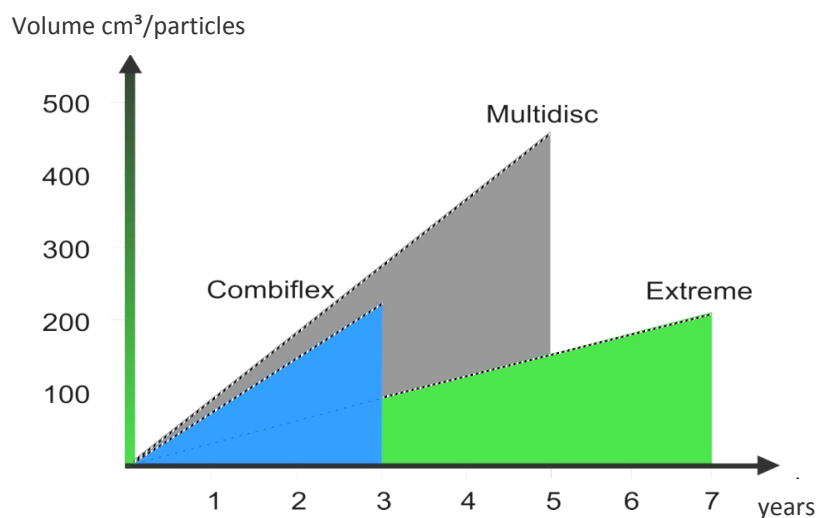
No asbestos is used in the production of the pads, in compliance with the RoHS directive, as well as any of the following components: lead, mercury, cadmium, hexavalent chromium (chromium VI), polybrominated biphenyls (PBB), polybrominated diphenyl ether (PBDE).

Pads specifications

- Asbestos free
- Comply with the RoHS directive
- Anti-rotation
- Noise free
- Excellent water impermeability
- Excellent performance at operating temperature
- Duration between 40,000 and 120,000 hours
- Dust emission significantly limited

Analysis of the duration and dust emissions

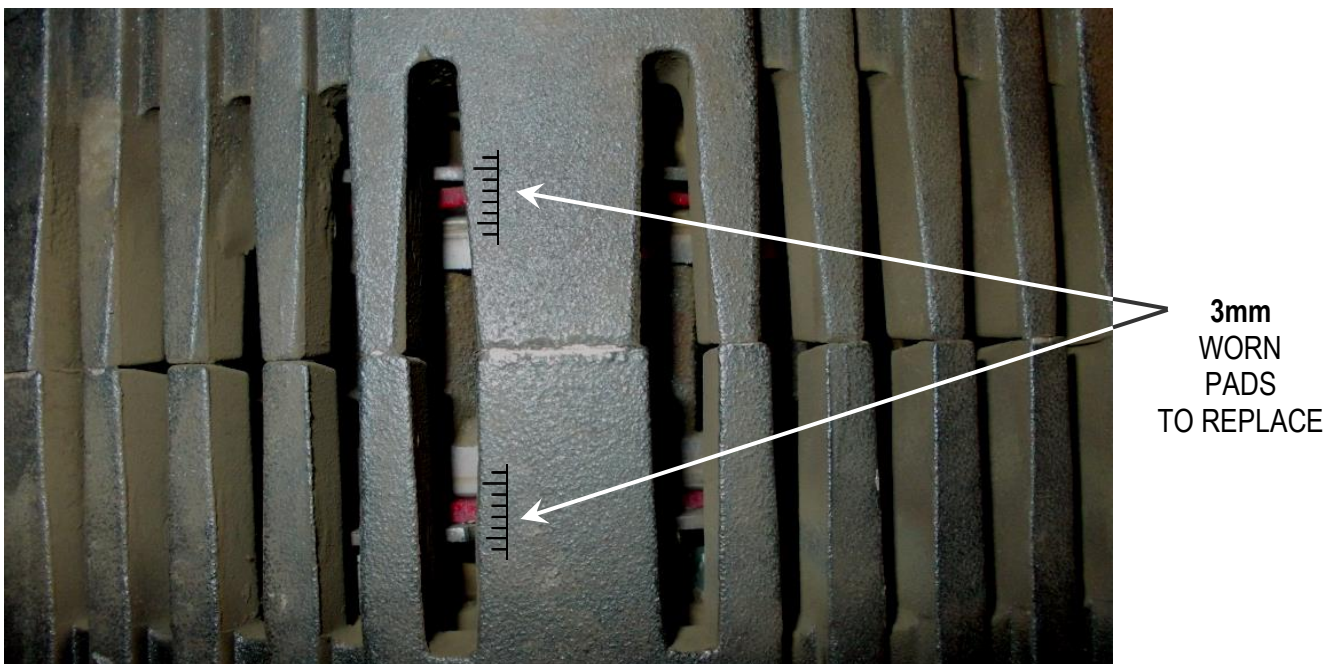
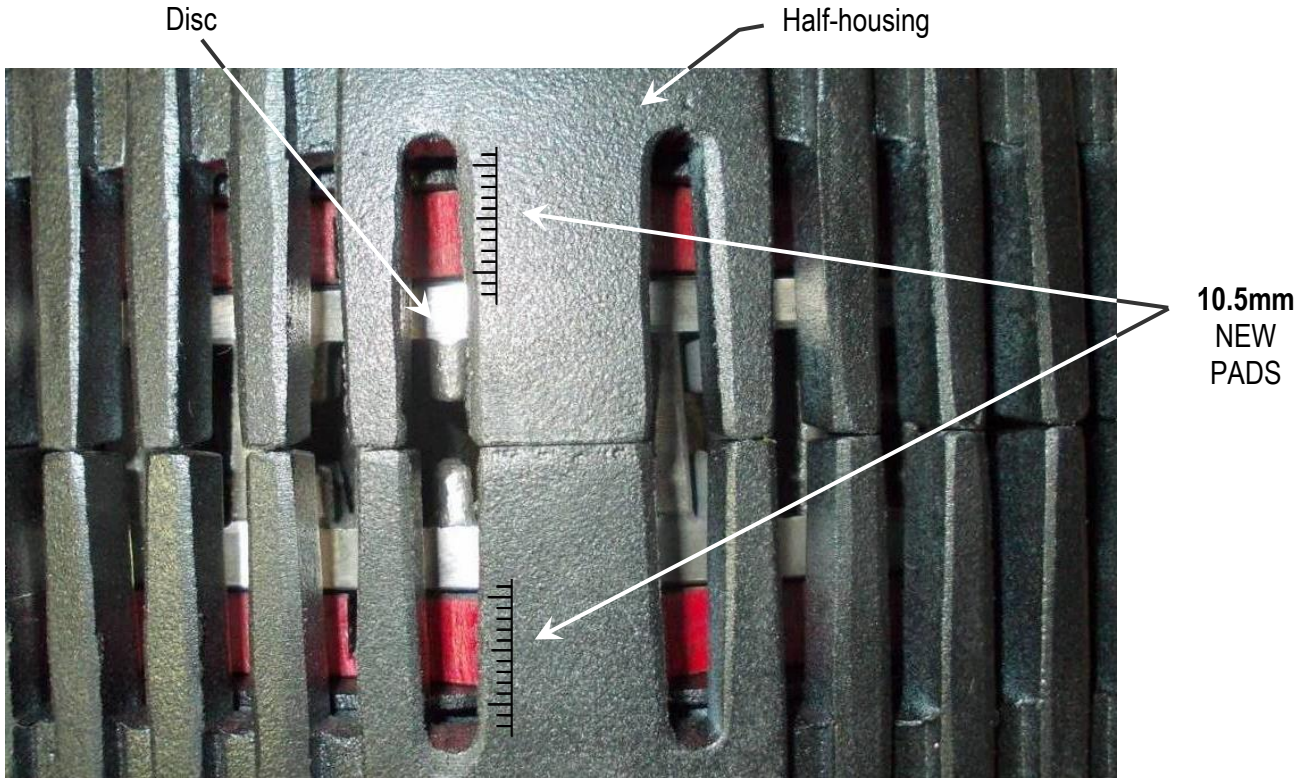
COMPARISON BETWEEN EXTREME BRAKE, CX250 STANDARD BRAKE AND MULTIDISC BRAKE



Checking the conditions of the pads

If used correctly the T10 and T7 pads have a life that varies between 40,000 and 120,000 hours. The life of the pads can be considerably reduced due to high operating temperatures. **Therefore check the correct application of the brake.**

We also recommend **checking the thickness of the pads regularly: the brakes do not have to be disassembled** to check the thickness, simply check the calipers through the holes of the half-housings, as shown in the images below.



When the pad is completely worn (2mm thickness) a **patented mechanical system is triggered automatically to lower the torque gradually**, until it reaches 30% of the maximum braking torque.



Attention! The continuous use of this system could **damage the brake seal gasket**. We therefore recommend working with the safety system only when actually necessary.

To prevent the engagement of the safety system and guarantee the correct operation of the brake, **replace the pads when they are 3 mm thick (including the steel plate) or as soon as there is the first drop in the pressure/torque.**

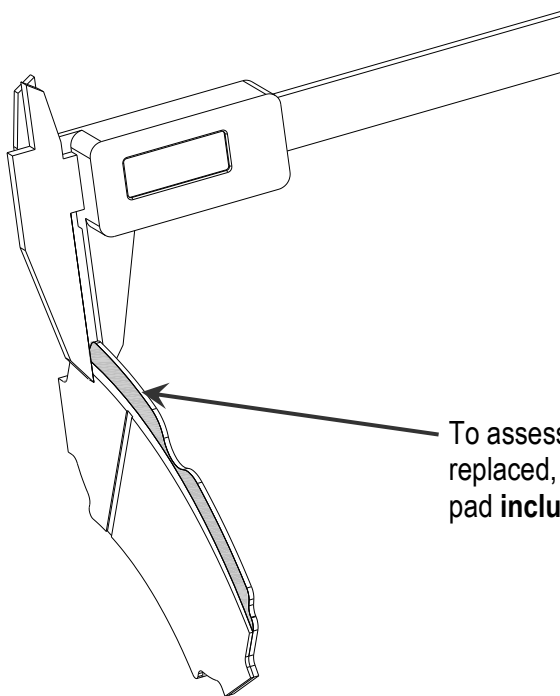


Attention! Sometimes the pads may wear down irregularly in terms of thickness. In such cases measure the greater thickness: **replace the pad when the greater thickness reaches 5.5 mm (including the steel plate).**



NEW PAD
(thickness 10.5mm)

WORN PAD TO REPLACE
(uniform thickness of 3mm
or irregular thickness, max 5.5mm)

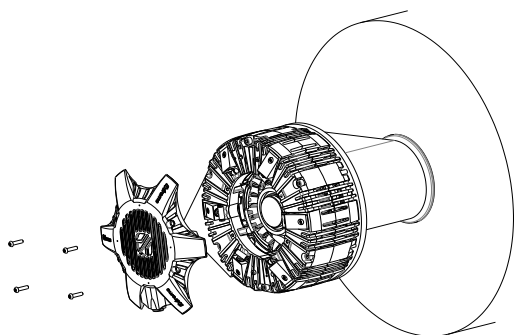


To assess whether they need to be replaced, measure the thickness of the pad **including the steel plate.**

Pads replacement procedure

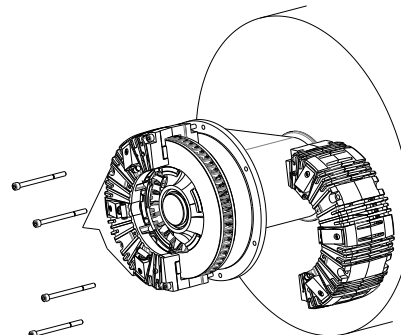
The replacement of the pads is very simple and tool-free thanks to the innovative patented hook.

A



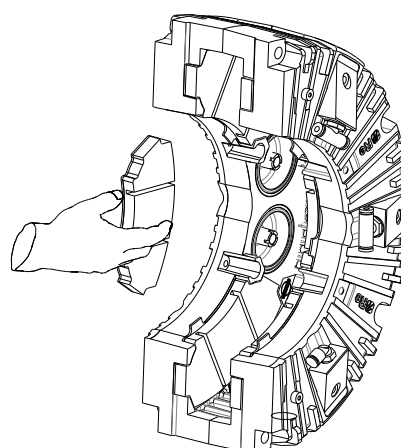
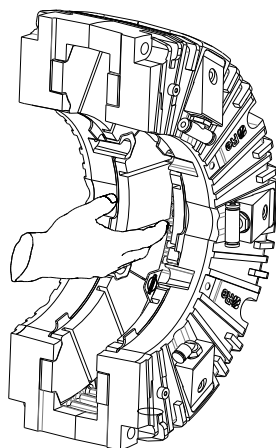
Remove the cover.

B



Remove the first half-housing and then the second one.

C



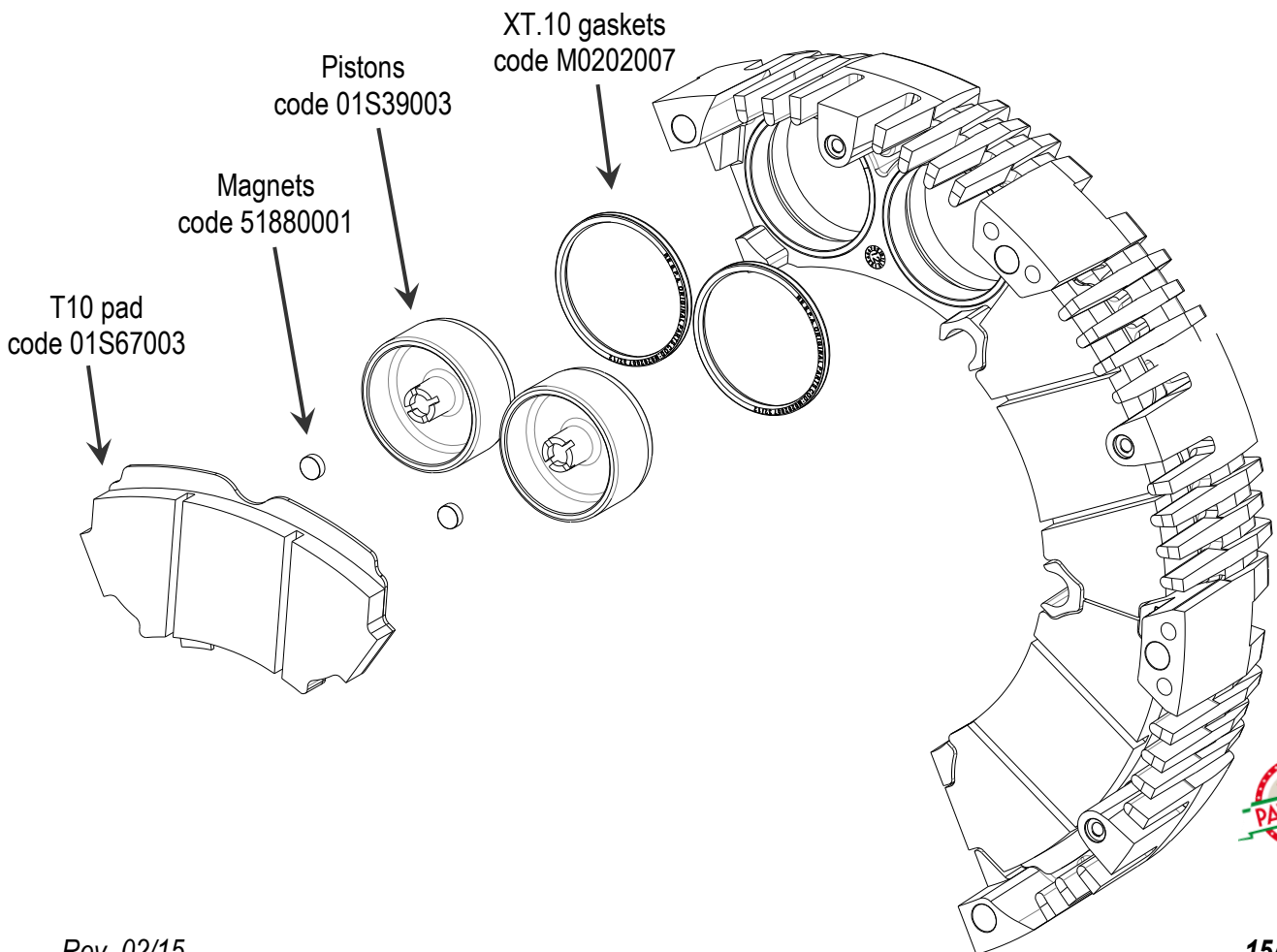
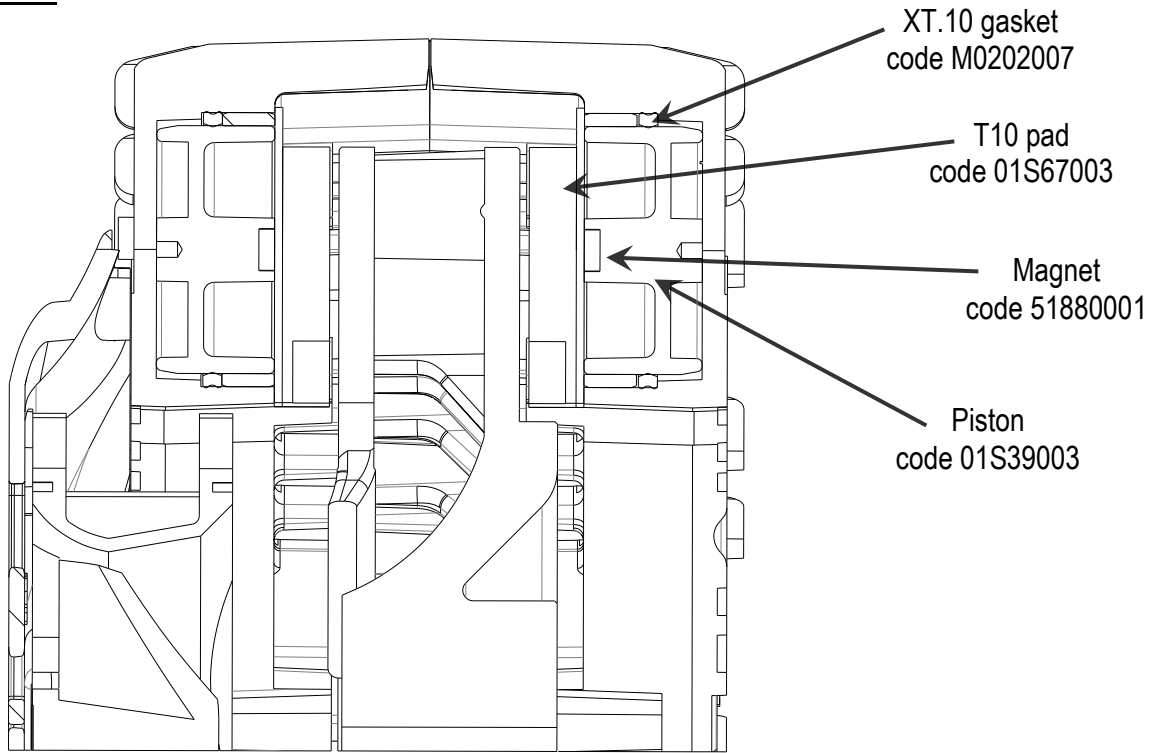
Remove the pads by pressing lightly inwards (no tool is required). Insert the new pads in the seatings.

D

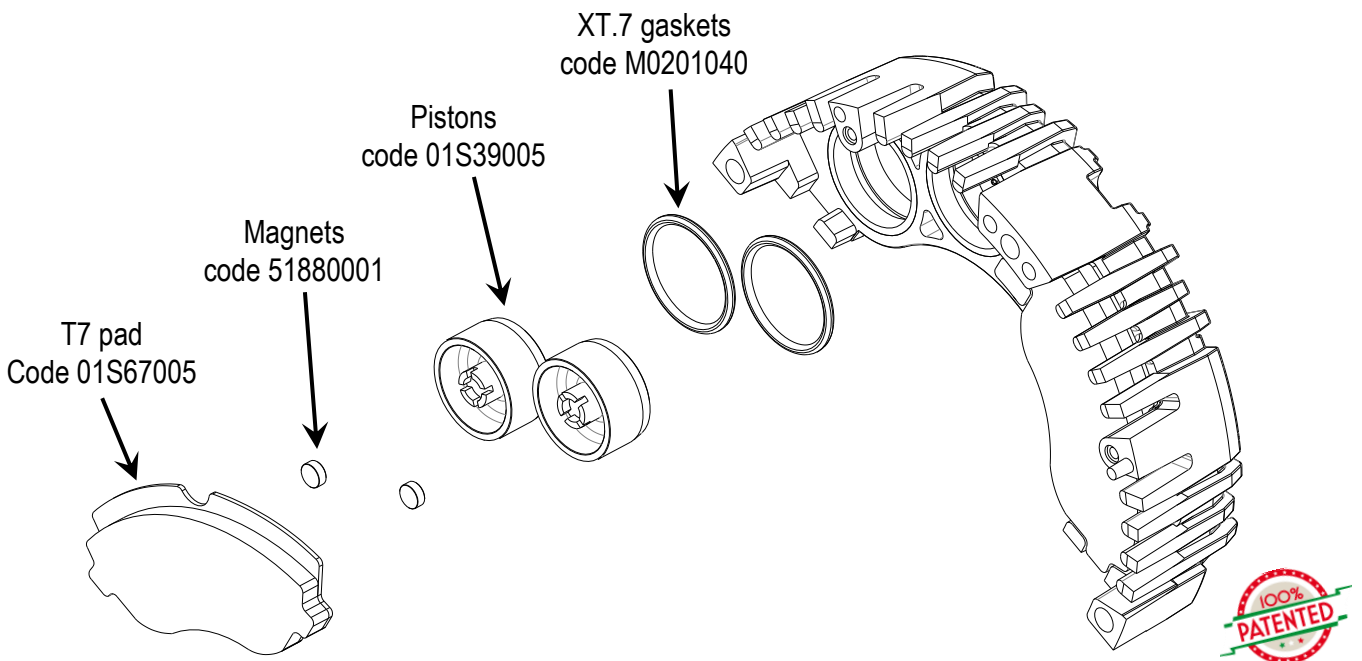
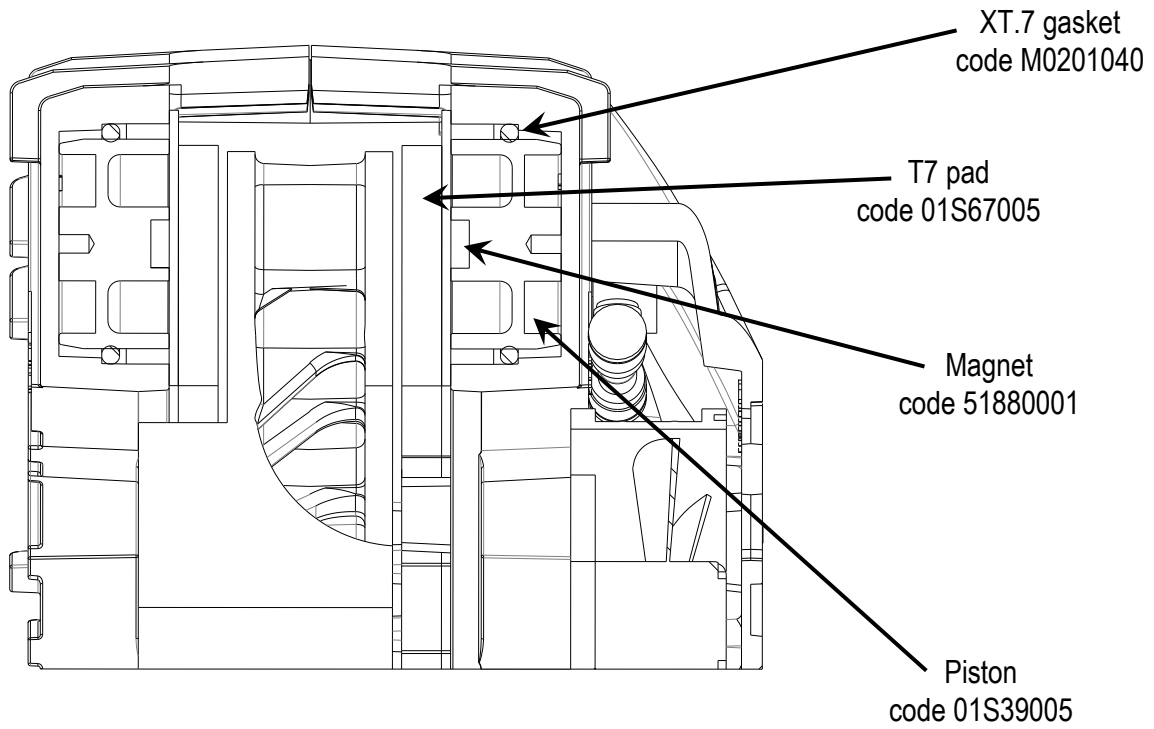
Firstly assemble the two half-housings and then the cover, by following the procedure described in page 2 (*Assembly of the EXTREME brake on your machine*).

Caliper unit

XT.10



XT.7



Caliper unit cleaning

To guarantee optimum brake operation we recommend keeping the caliper unit clean.

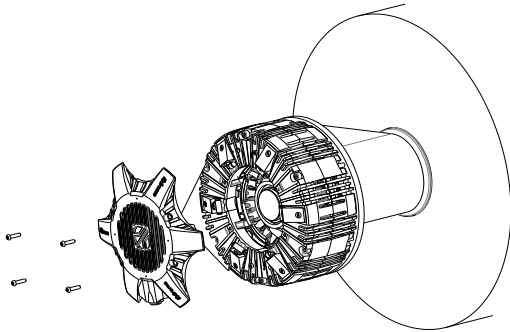
Due to the elevated quantity of dirt often found in industrial environments, the calipers could remain blocked or loose efficiency and reactivity.

The cleaning operation of the pistons and their seatings is simple and does not require the replacement of any components (if can be performed at the same time as the pads are replaced).

The pistons and gaskets must be replaced only if seriously damaged or in case of air loss.

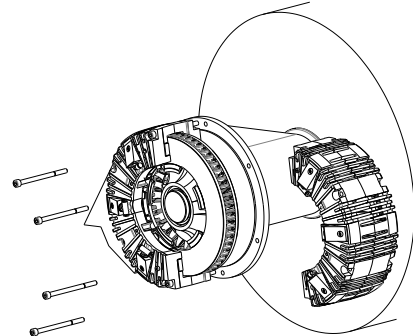
Caliper unit cleaning procedure WITH BRAKE DISASSEMBLY

A



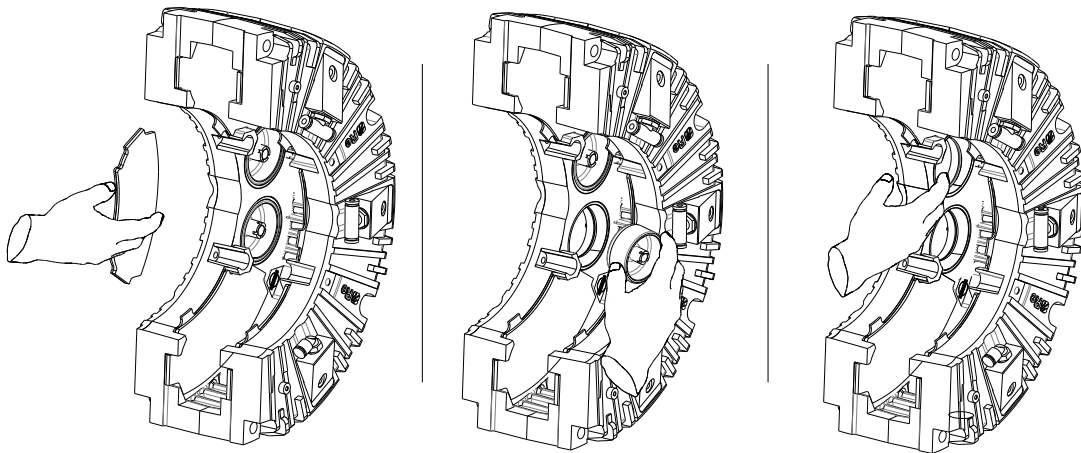
Remove the cover.

B



Remove the first half-housing and then the second one.

C



Remove the pads from the half-housings by pressing lightly inwards and remove the pistons.

Clean the pistons and the seatings with a cloth.

Lubricate the gaskets with the Re special high temperature grease.

Attention! Use just the Re original grease, otherwise the gaskets could be damaged.

Reassemble the pistons and the pads.

D

Firstly assemble the two half-housings and then the cover, by following the procedure described in page 2 (*Assembly of the EXTREME brake on your machine*)

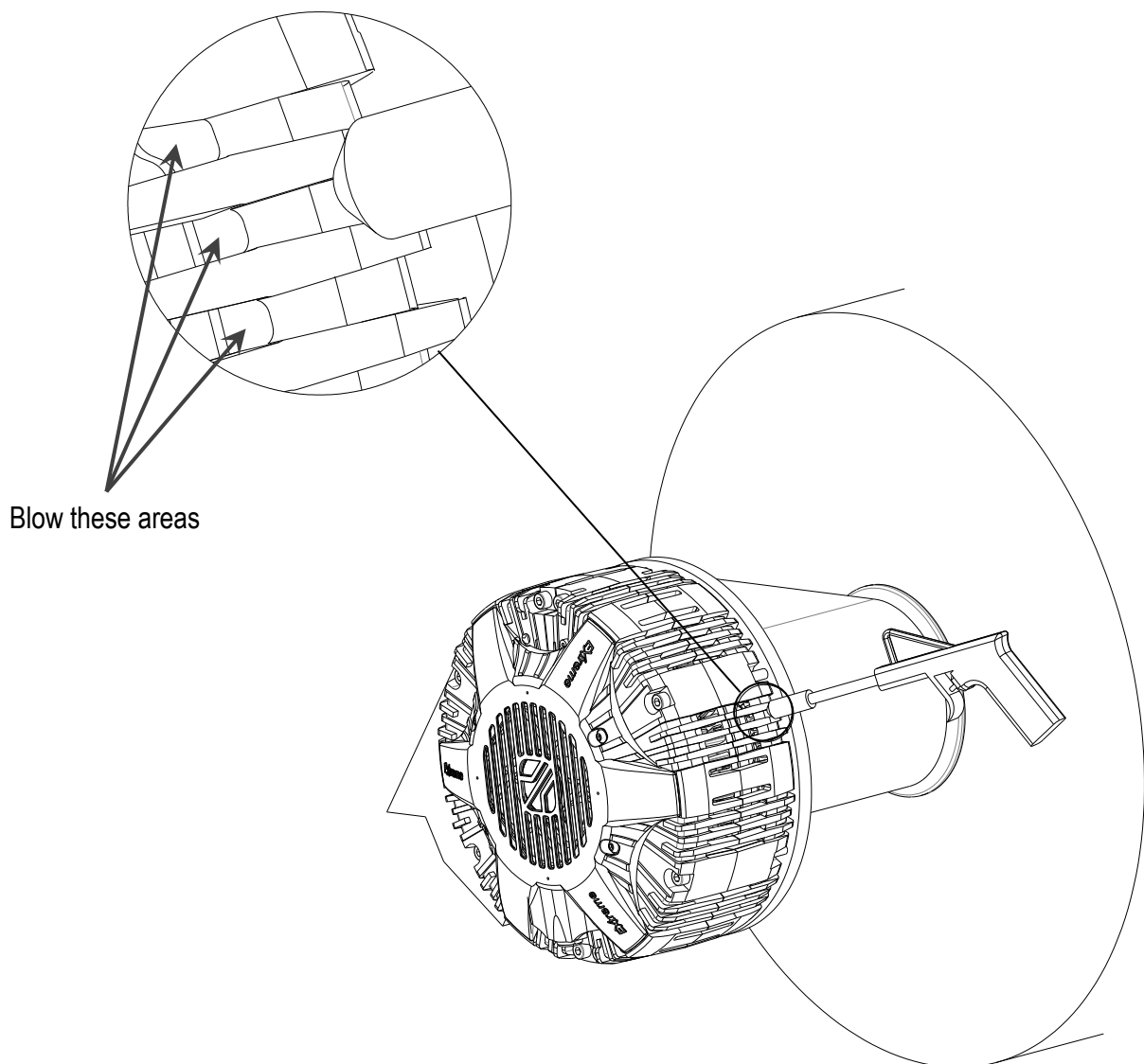
Caliper unit cleaning procedure WITHOUT BRAKE DISASSEMBLY

This cleaning procedure requires only a few minutes, so we recommend to perform it every week.

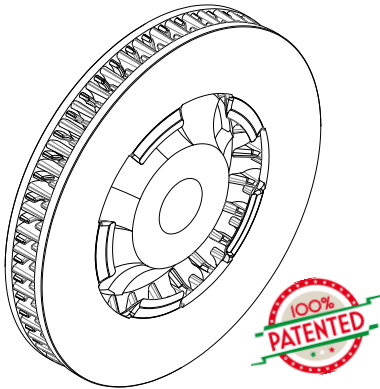
Take an air pistol. Point the air pistol between the steel plate and the brake, and blow.

Attention! Use only not lubricate air.

Repeat the procedure for each caliper.

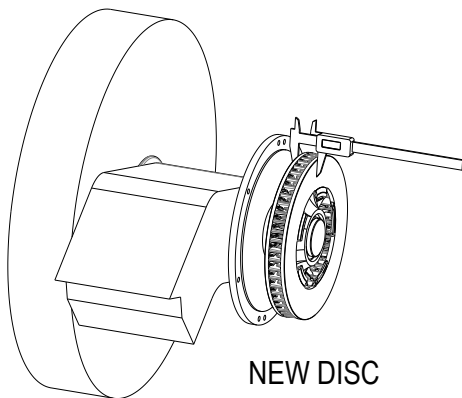


Self-ventilated disc

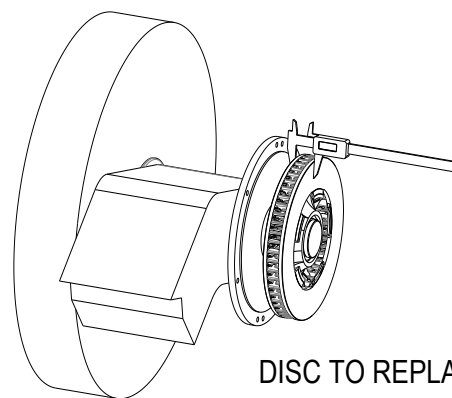


The innovative patented self-ventilated disc allows us to achieve extremely efficient performance. The cast iron construction, with a high content of carbon, reduces noise level and improves heat transfer.

The disc does not require specific controls, however we recommend checking its thickness regularly (easily done when changing the pads and the brake is already disassembled): **if the thickness reaches 33mm for XT.10 brake and 25mm for XT.7 brake, the disc must be replaced.**



NEW DISC
(thickness for XT.10: **34.5mm**)
(thickness for XT.7: **27mm**)



DISC TO REPLACE
(thickness for XT.10: **33mm**)
(thickness for XT.7: **25mm**)

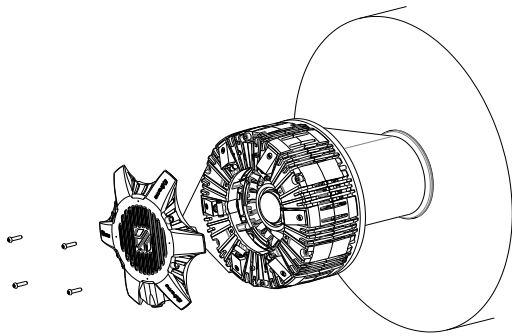
If the surfaces of the disc are not sufficiently smooth, grind both sides of the disc. Make sure that the thickness does not reach 33mm for XT.10 brake and 25mm for XT.7 brake.

The minimum thickness is also marked on the disc, as shown in the image below.



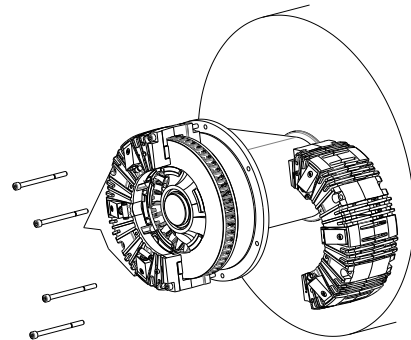
Disc replacement procedure

A



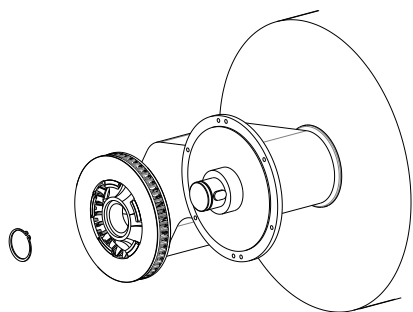
Remove the cover.

B



Remove the first half-housing and then the second one.

C

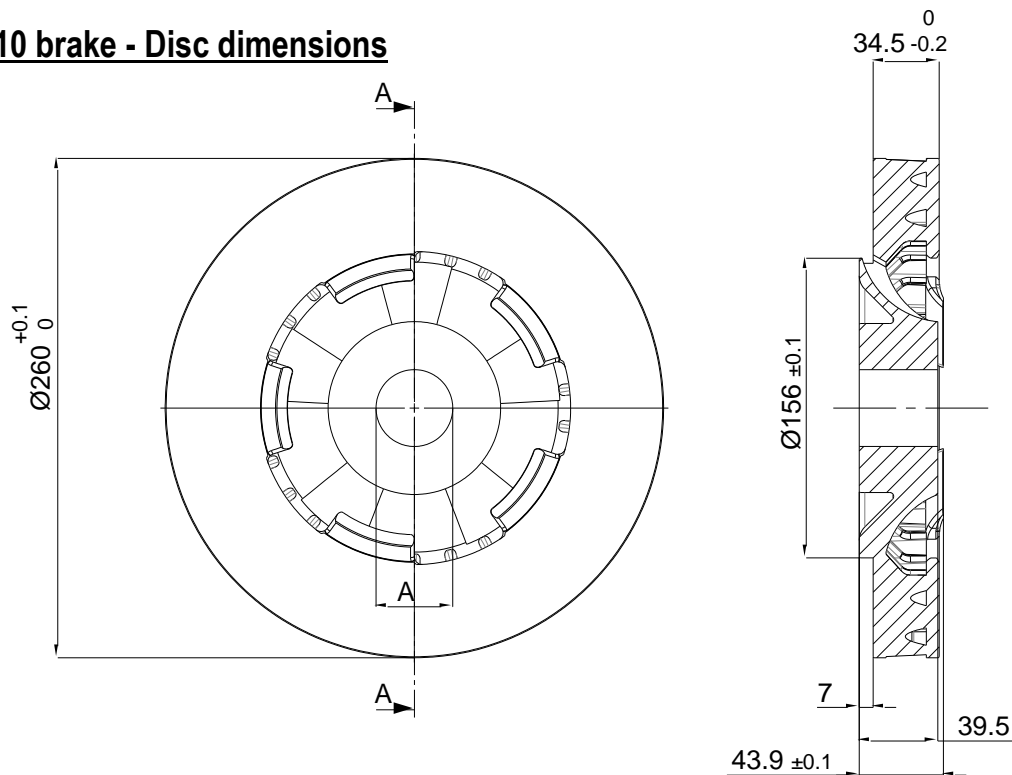


Disassemble the brake disc from the shaft.
Then fit the new disc.

D

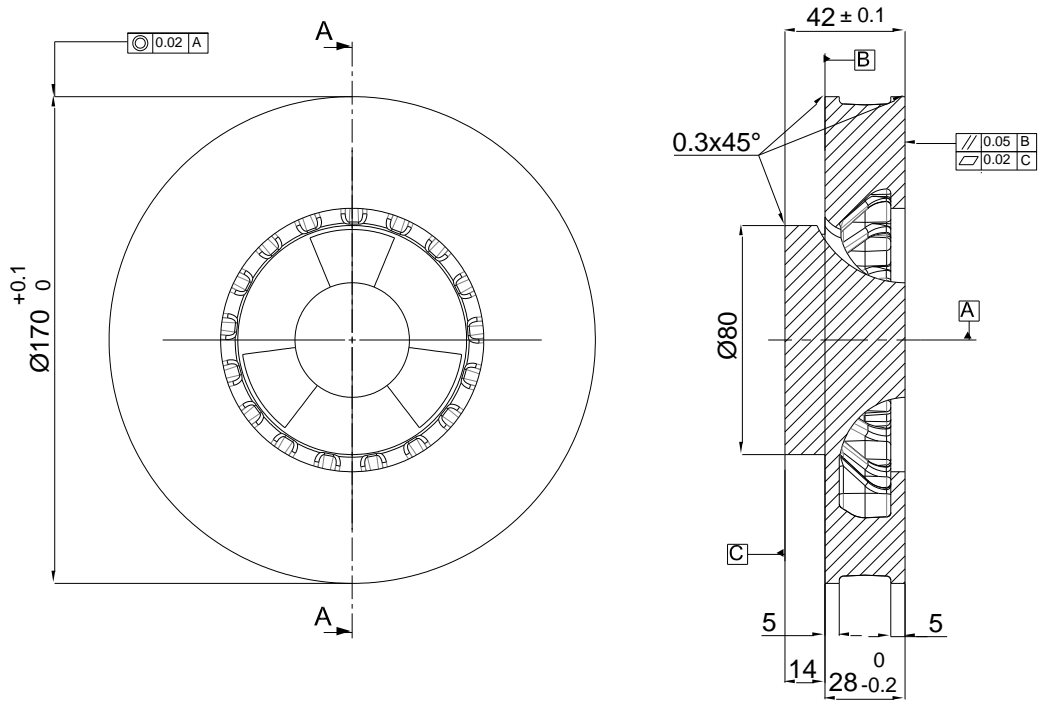
Firstly assemble the two half-housings and then the cover, by following the procedure described in page 2 (*Assembly of the EXTREME brake on your machine*)

XT.10 brake - Disc dimensions



Dimension $\text{Ø}A$ subject to changes based on the client's requests: Min. 35mm - Max. 70mm with key
With taper lock, Ø shaft max. 45mm

XT.7 brake - Disc dimensions



The disc of the **EXTREME XT.7** brake, in rough version, has **NO** holes therefore it's possible to make diameters, starting from 10mm up to 40mm max. Regarding to holes with keys, the diameters is 35mm max.

Fan

The EXTREME brake is fitted with a fan

There are two types of ventilation:

- Power supply 24Vdc, Current draw 1.9A, Power 45W (code 01S75001)
- Power supply 110/220Vac, Current draw 0.06A, Power 12W (code 01S75002)

The fan must be kept clean to ensure its operational efficiency.

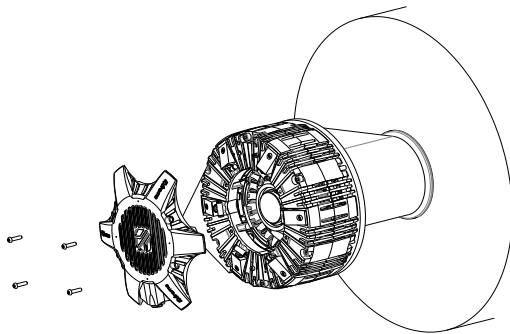
The cleaning operation is very simple and quick. It must be performed at least once a year.

Fan cleaning procedure



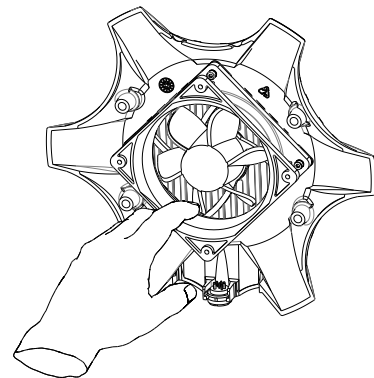
Attention! Before cleaning the fan cut off its power supply!

A



Remove the cover.

B



Remove the incrustations that may have formed between the fan and the stator with a finger.
Blow with a compressed air jet.

C

Reassemble the cover on the brake and reconnect the fan to the power supply.

Guarantee

Re S.p.A. guarantees this device against all defects relative to the materials and manufacturing for a period of 12 months from the date of delivery.

Should your device develop operating faults during the guarantee period, please contact the Company's agent in your country, or, if this is not possible, contact Re S.p.A. directly.

The guarantee includes spare parts and labour. It does not include shipment costs for device delivery or recall.

The guarantee is invalidated by:

- improper use of the device
- incorrect installation
- lack of maintenance
- changes or work involving non-original components or carried out by persons without Re S.p.A. authorisation
- complete or partial failure to observe the instructions
- exceptional events.

At the end of the guarantee period, support will be provided by the support network, which will carry out repairs at the current rates.

Re S.p.A. Controlli Industriali

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