User Manual
Air Blown Fiber Installation Tool

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This product is covered by the producer responsibility for electrical and electronic products. Electrical waste must be sorted out from and handled separately from other waste to facilitate recycling opportunities. Worn out Air Blown Fiber Tools can be returned to Hexatronic for disposal and recycling. Hexatronic is registered in the Environmental Protection Agency's EE and Battery Register and the registration number is 3476.

ABF Installation Tool Safety Instruction

WARNING Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.
The term "power tool" in the warnings refers to your battery-operated (cordless) power tool.

Work area safety

– **Keep work area clean and well lit**. Cluttered or dark areas invite accidents.

– **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.

– **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Personal safety

– **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.

– **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

– **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

– **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.

– **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.

Power tool use and care

- **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.**

- **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

- **Use the power tool and accessories in accordance with these instructions, taking into account the working conditions and the work to be performed**. Use of the power tool for operations different from those intended could result in a hazardous situation.

Battery tool use and care

- **Recharge only with the charger specified by the manufacturer**. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

- **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.

- **Never recharge a battery with temperature below freezing.** The battery may be permanently damaged.

- **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another**. Shorting the battery terminals together may cause burns or a fire.

- **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help**. Liquid ejected from the battery may cause irritation or burns.

Electrical safety

– **Power tool charger plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.

– **Do not expose charger to rain or wet conditions.** Water entering a charger will increase the risk of electric shock.

– **If recharging a battery in a damp location is unavoidable, use a residual current device (RCD) protected AC supply.** Use of an RCD reduces the risk of electric shock.

Service

– **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

General workings stand safety warnings

– **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments or changing accessories.** Accidental starting of the power tool is a cause of some accidents.

– **Properly assemble the working stand before mounting the tool.** Proper assembly is important to prevent risk of collapse.

– **Securely fasten the power tool to the working stand before use.** Power tool shifting on the working stand can cause loss of control.

– **Place the working stand on a solid, flat and level surface.** When the working stand can shift or rock, the power tool or workpiece cannot be steadily and safely controlled.

1 Description

The installation tool consists of a body that guides and feeds ABF (Air Blown Fiber) units into microducts, using compressed air and a feeder motor. The upper part of the tool body opens with a clamp to allow for duct holding and removing of fiber once finished feeding. The battery pack is fitted in the handle. The compressed air is connected by a ¼" standard (CEJN) quick connector. The airflow is regulated by a valve on the filter assembly.

The tool has an adjustable magnetic coupling for limiting feeding force on the ABF-unit to avoid damage.

Fed distance and current installation speed is monitored on an OLED-display at the right side of the tool. The monitor has a non-volatile memory for distance, a reset function and a sleep function to save battery power.

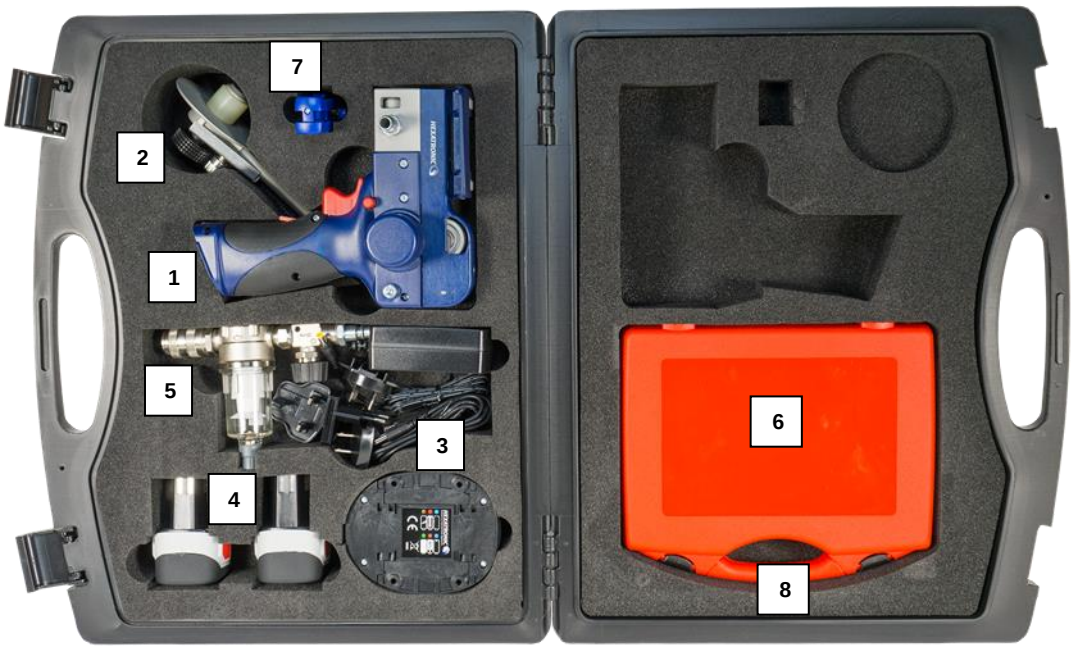
The fiber guides and nozzles are replaceable for different duct sizes and fiber types or when worn out.

ABF-units are available as pre-connected on reels or unconnected in pan.

The tripod and ball joint are accessories

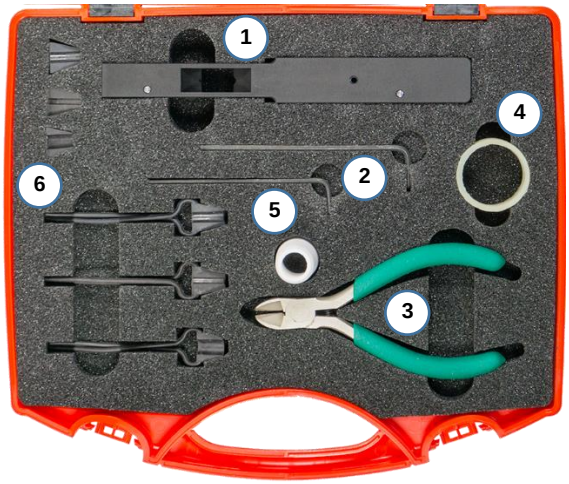
2 Tool set contents

2.1 Large case



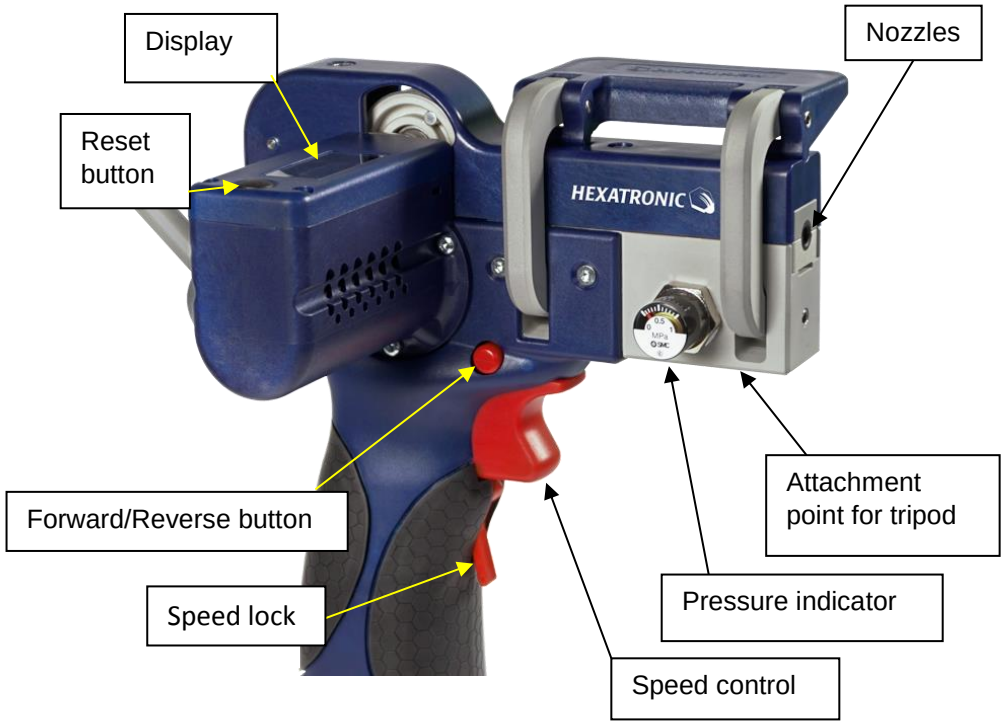
1. Installation Tool
2. Snap-in reel arm
3. Battery charger with AC adapter (incl. EU, UK, US and AUS plugs) and car charging adapter
4. Two batteries
5. Air filter and valve assembly
6. Tool and spare parts case
7. Microduct cutter
8. Instruction, placed underneath case, pos.5

2.2 Tool and spare parts case



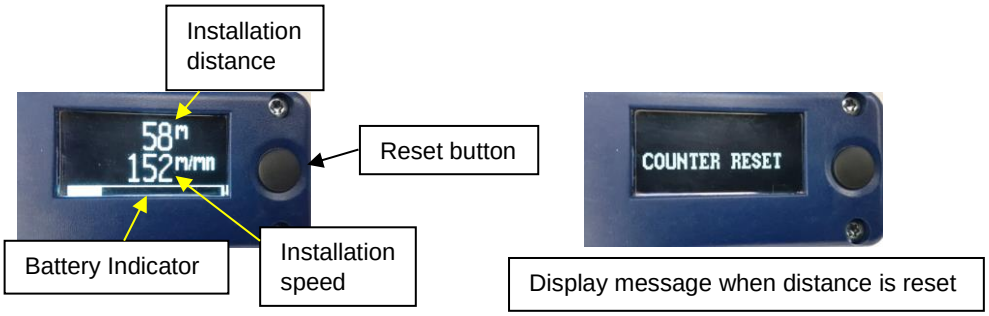
1. Fiber guides (black) for 12f units
2. Hexagon keys 2,0 and 2,5 mm
3. Side cutting pliers
4. Spare driving rubber rings
5. Spare air filter cartridge
6. Nozzles for ducts 3, 5 and 7 mm

3 Main components of tool



3.1 Display

The installation tool is equipped with an OLED-display that starts automatically as soon as the speed control is pressed. The display shows the installation speed, installation distance and the battery status.

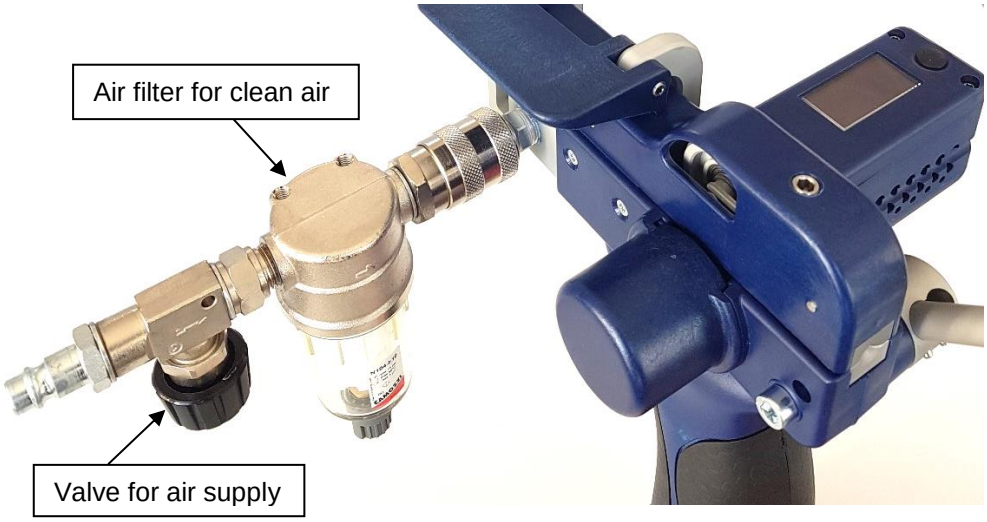


Reset button functions:
- One short push on the button changes the display intensity.
- One long push on the button resets the distance. For a moment the display shows; “COUNTER RESET”.

3.2 Compressed air supply

Note: Always supply dry, oil free and clean compressed air, max 1 MPa.
The supplied air filter and valve assembly shall always be used.

The compressed air consumption varies with microduct inner size and installation length. For longest installation distances a pressure of 1 MPa (10 Bar) is needed. A compressor capable of supplying 30L/min at 0,8MPa is sufficient for most normal installations. For shorter distances the applied pressure can be greatly reduced. For up to 50m air may not be needed at all.



3.3 Charger and battery

The batteries are of Li-Ion type. The charger unit consists of an AC plug-in adapter unit and a charger station. The adapter has four exchangeable AC plugs (EU, UK, US and AUS). A car charging adapter unit is also included. The battery is fully charged in 3 to 3.5 hours depending on charging source.

The charging station has a LED-indicator showing the status during charging:

LED indicator	***Meaning***
Static Blue	Idle, insert battery
Flashing Blue/Red	Charging, almost empty
Static Red	Charging
Flickering Red	Charging, almost full
Static Green	Battery fully charged

Fault codes

Flashing Red / Green	Battery voltage out of range (overcharged?)
Flashing Blue	Supply voltage out of range Charger will retry in 5 seconds
Flashing Red	Unstable supply Charger will retry in 60 seconds
Flashing Green	Contact Service
Flashing Red / Blue	Contact Service

Note 1: <u>The charger is for indoor use only. Input 100-240V 50/60 Hz AC.</u>

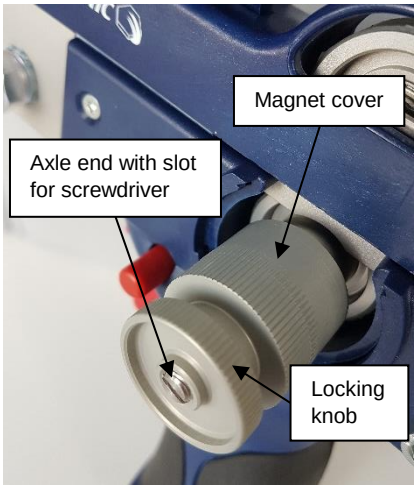
Note 2: <u>The batteries will not be charged at temperatures below freezing!</u>
The charger unit is equipped with a temperature sensor that controls the charge circuit in the battery. If the battery is outside the specified temperature the charge circuit will not accept the current from the charger. Once the temperature is back within specified values the charging will start again.

4 Regular use maintenance

There are two parts on the tool that are adjusted regularly; the magnetic coupling and the reel friction brake. The feeding wheel pressure is preset to 7N and does not normally need changing.

4.1 Magnetic coupling, setting

As the maximum allowable feeding force differs for different fiber types the tool has an adjustable magnetic coupling for fiber protection. It is adjustable between 2 and 5.5N by moving cover versus axle.



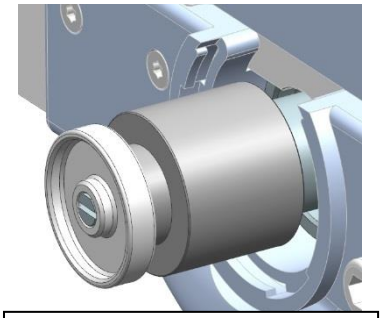
When outer locking knob is flush with end of the axle, the coupling is at lowest setting which gives 2N feeding force before slip.

For adjustment, release the knob and cover from each other and use a small flat screwdriver to turn axle while holding cover and knob.

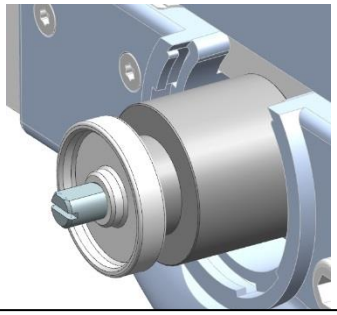
For each mm movement of cover on axle, the force is changed by 0.5N.
Lock by tightening knob and cover against each other by hand.

Required feeding force for Hexatronic 2-4 fiber ABF - 2.5 N
Required feeding force for Hexatronic12 fiber ABF - 4 N

Force	**2 N**	**2.5 N**	**3 N**	**3.5 N**	**4 N**	**4.5 N**	**5 N**	**5.5 N**
Extension	0 mm	1 mm	2 mm	3 mm	4 mm	5 mm	6 mm	6.5 mm



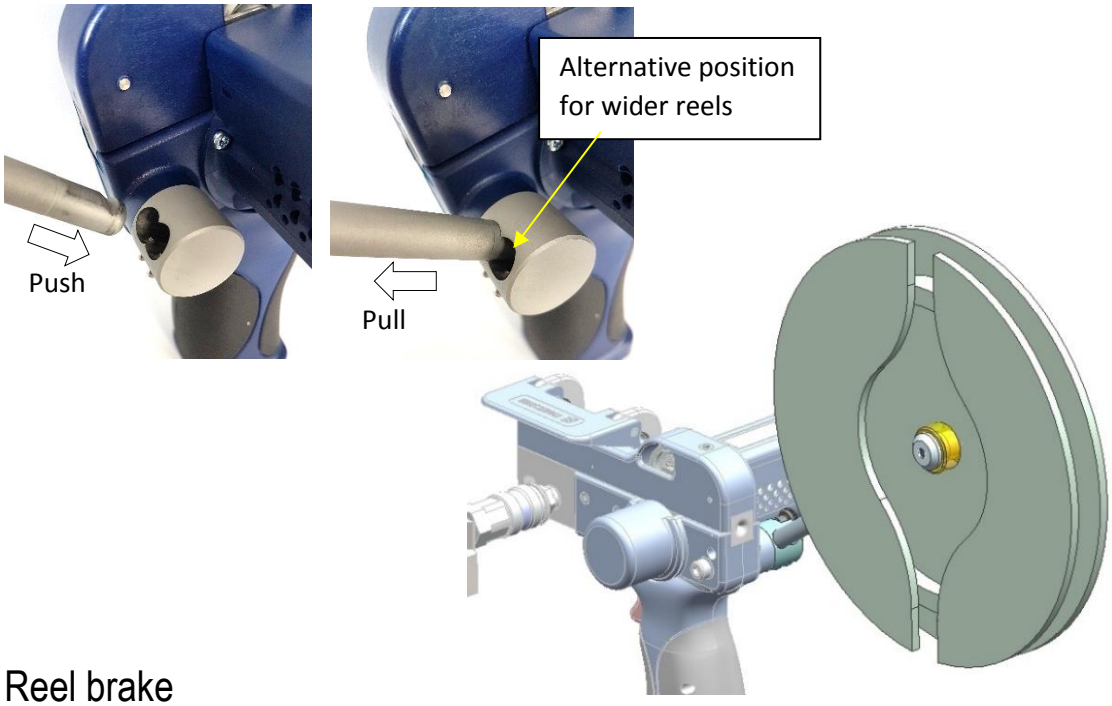
Setting for 2N force



Setting for 5N force,
8 turns of axle from flush position, 6mm extension.

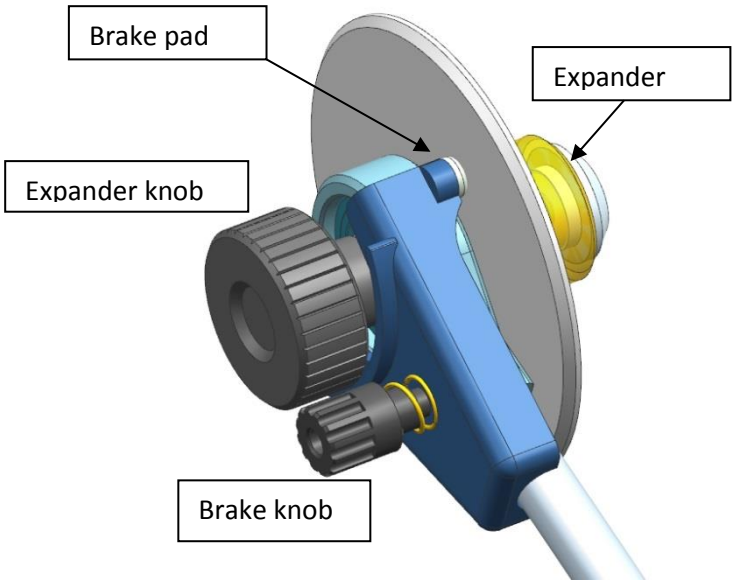
4.2 Reel arm and holder

The reel arm is easily attached to the installation tool with a snap-in function.
The reel arm offset can be changed between two positions in the arm hub, depending on the reel width.



4.3 Reel brake

For most precise reel control manual braking by hand is recommended.
Note: Excessive brake setting will decrease blowing speed



4.4 Fiber guides

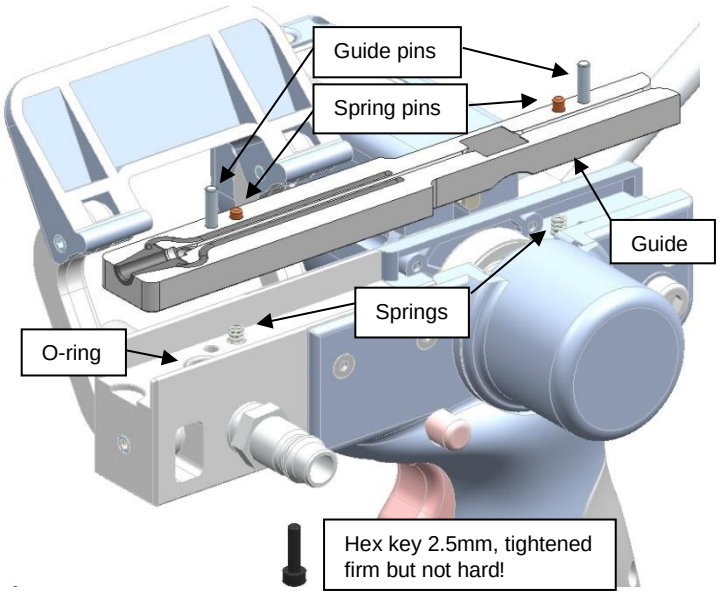
Two sets of fiber guides are supplied with the tool where the uncolored set is intended for 2-4f fiber units up to 1.3mm in diameter. The black set has a little wider slot for use with 8-12f fiber units up to 1.5mm. The lower fiber guide includes spring pins and guide pins. The guide sets are available as spare parts with springs and O-ring.

When do they need to be replaced or demounted?
Answer: For adaptation between different size fibers and for changing worn driving rubber rings.

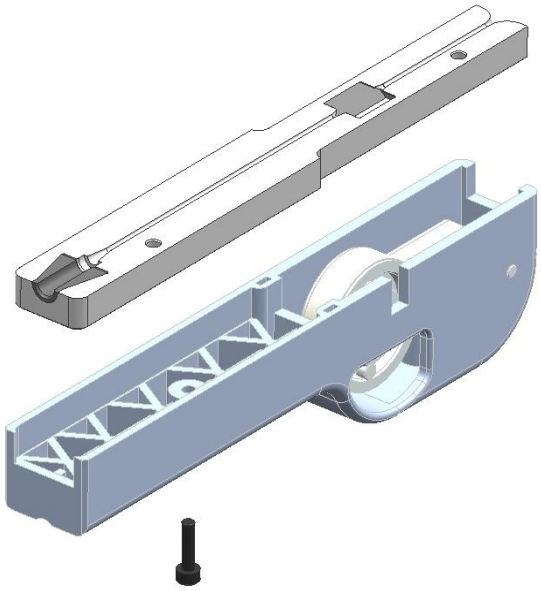
4.5 Replacing lower fiber guide

The springs stay in main body but the pins are part of the guide assembly.
Note: Take care so you do not loose springs or O-ring!

Make sure mating surfaces are clean so the fiber guide settles correctly.



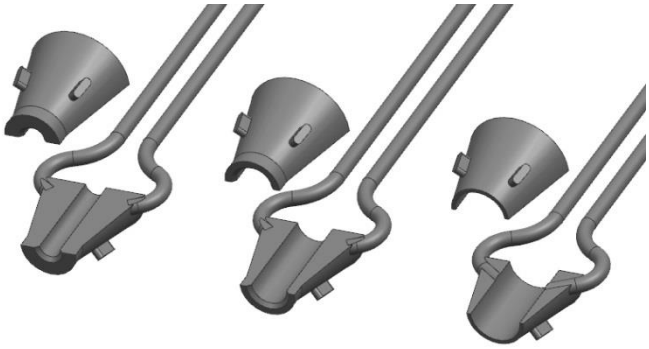
4.6 Replacing upper fiber guide



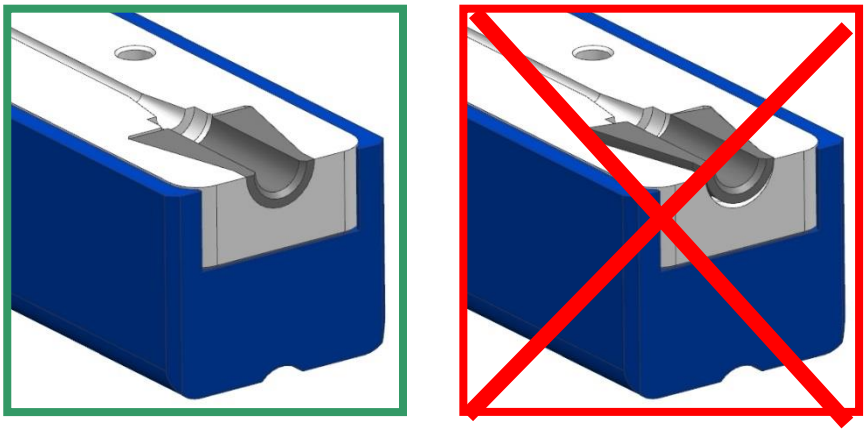
Make sure that the surface where the fiber guide settles is clean so it will not balance on any debris. Do not over tighten fastening screw. Its purpose is only to keep the fiber guide in place. Use hex key 2.5mm.

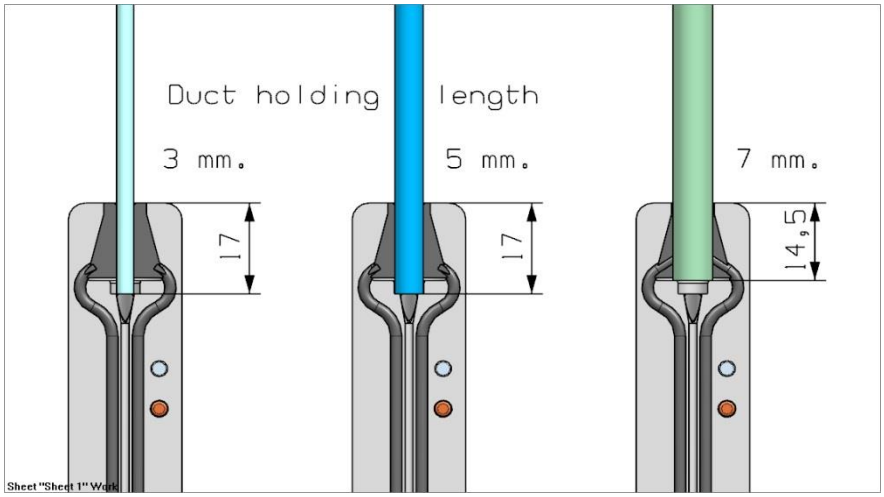
4.7 Nozzles

The nozzles hold the duct and seal compressed air. Three sets are supplied for 3, 5 and 7mm duct diameters, and the tool comes with 5mm installed.
Change is done by hand, perhaps with help of a small flat screwdriver.
Replace when visible worn, spare part set NTB 101 228



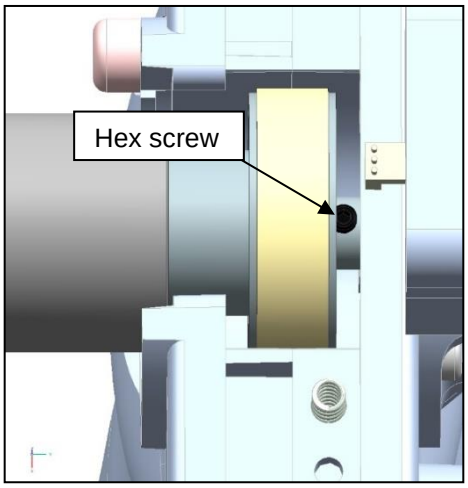
Make sure both “ears” of the nozzles enters holes in fiber guide.

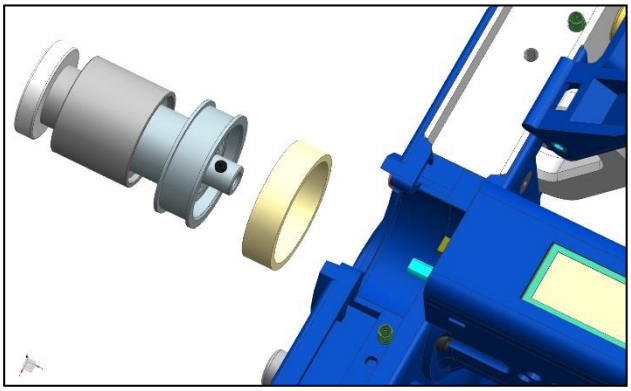




4.8 Replacing lower rubber ring

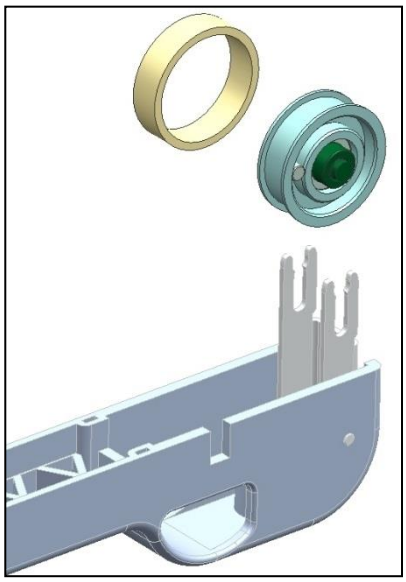
1. Remove the lower fiber guide.
2. Remove coupling by loosening hex screw, key 2.0mm.
3. Replace rubber ring by hand.
4. Refit in reversal order.

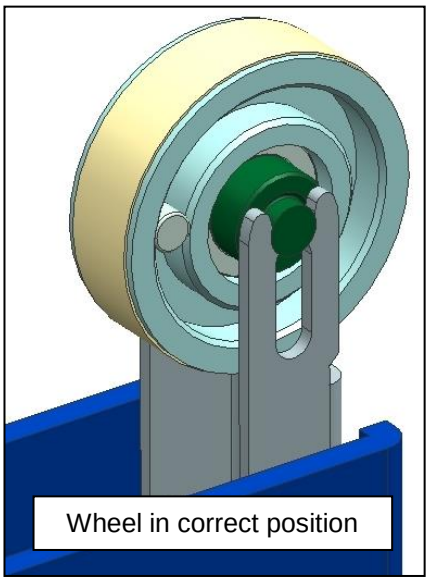




4.9 Replacing upper rubber ring

1. Remove the upper fiber guide.
2. Remove the wheel, it is snapped in place.
3. Replace rubber ring by hand.
4. Refit and mount wheel with magnet towards clearance for display sensor.



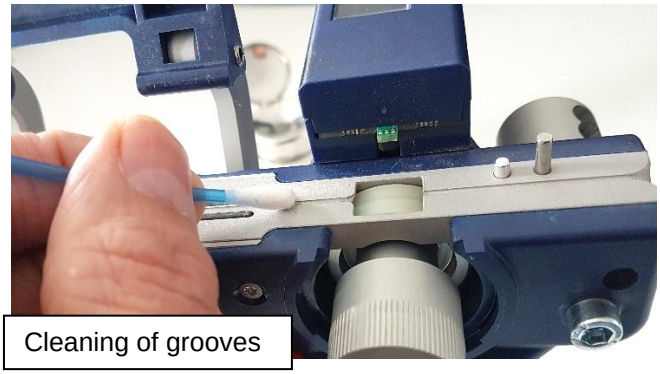


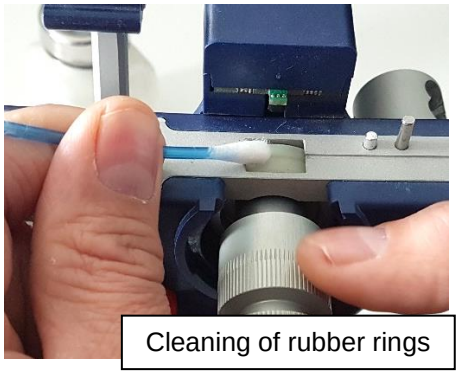
4.10 Maintenance

This installation tool is a precision tool. To insure a well-functioning tool with a long lifetime it has to be treated as such. Cleaning and maintenance should be performed regularly.

4.10.1 Daily cleaning

It's recommended to clean the tool daily after use. Use cleaning swabs wetted in ethanol to clean the grooves in the fiber guides (lower and upper). Clean also the surface of the rubber rings with the swabs. Rotate the wheels to clean the whole circumference. Finally, wipe off the whole tool with a clean cloth.


Cleaning of grooves


Cleaning of rubber rings

4.10.2 Major cleaning and maintenance

Depending on how intensively the tool is used, a more thorough cleaning and check of state is recommended every second week to once a month. Some disassembly of the tool shall then be done. Remove the fiber guides and the wheels including magnetic coupling. The procedure for that is described in earlier sections. Be careful not to lose any parts. Clean all the surfaces thoroughly with cleaning swabs wetted in ethanol. Check parts, especially the rubber parts, for wear and renew if necessary.

Thorough cleaning of tool

4.10.3 Service and repairs

Hextronic is pleased to assist in case the installation tool is in need of repairs or extended service. However, before the tool is sent in, it's very important to first contact the support department at Hexatronic to receive a quote.

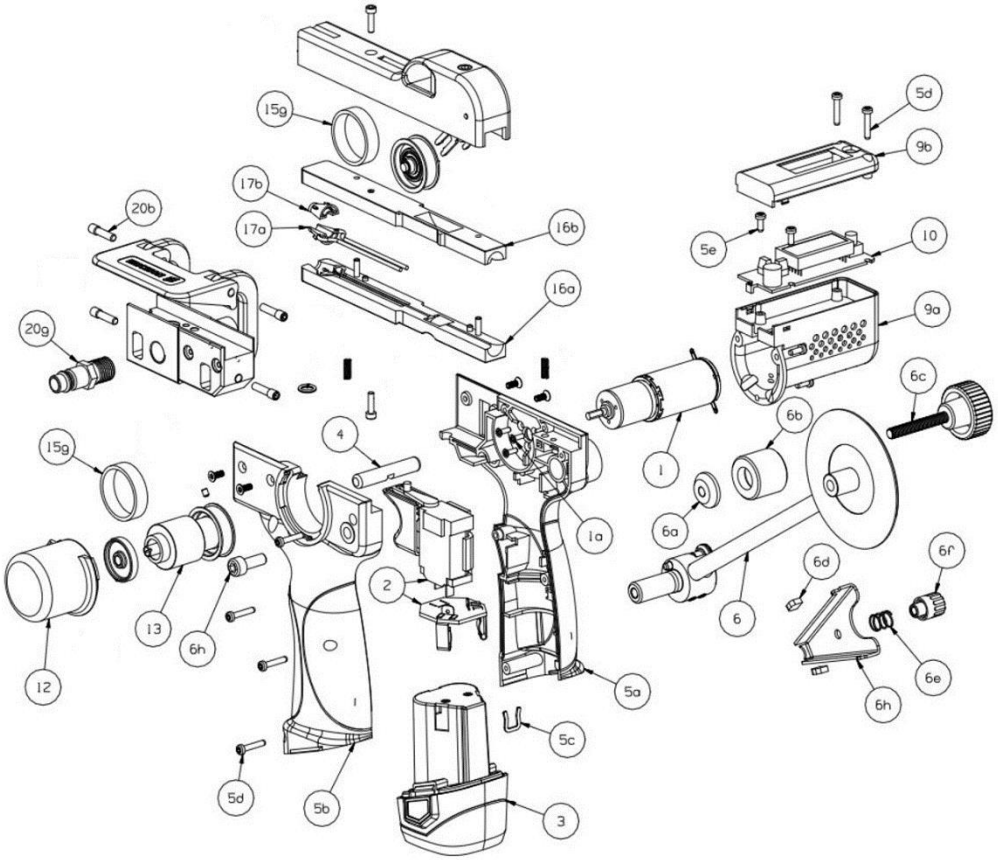
Contact details;
Mail address: order@hexatronic.com
Phone number: +46 10 45 30207

Once the quote is accepted, Hexatronic will supply a document that must be attached to the tool when returned. The document has to be filled in with information on what problem is and what needs to be done.

If the tool has been bought through a separate sales channel the return should be made through that channel.

Tools without the above mentioned information (document) cannot not be serviced or repaired.

5 Spare parts



Pos	Description	Product No.	Qty
1+1a	Motor w screws	BKE 903 50	1
2	Switch assembly	HSXA 136 113	1
3	Battery	BKB 902 78	1
4	Selector	SXA 113 9496	1
5a	Handle right	SXA1139489/1	1
5b	Handle left	SXA1139488/1	1
5c	C-clip	SXA1139505	1
5d	Screws	SXA1139508/0160	4
6a	Special nut	SXA 113 6162	*
6b	Expanding body	SXA 113 6161	*
6c	Screw for reel	SXA 113 9501	*
6d	Brake pad	SXA 113 9506	*
6e	Brake spring	SKB 901 82/2	*
6f	Brake knob	SXA 113 9510	*
6g	Brake plate	SXA 113 9507	1
6h	Screw M6	78/SBA 166 060/0160	1
9a	Motor cover	SXA 113 9497/1	1
9b	Display cover	SXA 113 9503/3	1
10	Display board	HROA 128 5152	1
12	Cover	SXA 113 9498/1	1
13	Torque limiter	SXK 120 016/2	1
15g	Rubber ring	SXA 113 6247	1

Pos	Description	Product No.	Qty
16a-	Fiber guide set 4f	NTB 101 083/1	1
16a-	Fiber guide set 12f	NTB 101 083/2	1
17a	Nozzle upper 5mm	SXA 113 9434/1	1
	Nozzle upper 3mm	SXA 113 9434/3	1
	Nozzle upper 7mm	SXA 113 9434/5	1
17b	Nozzle lower 5mm	SXA 113 9434/2	1
	Nozzle lower 3mm	SXA 113 9434/4	1
	Nozzle lower 7mm	SXA 113 9434/6	1
20b	Screw	SXA 113 9499	4
20d	Pressure indicator	NVB 351 02	1
20g	Air connector	SRS 106 20/1	1
-	Tool Service Kit #	NTB 101 082	1
-	Tripod and ball joint	NTB 101 116	1
-	Filter and valve	HSXK 120 013/1	1
-	Air filter cartridge	HKFU 901 073/3	1