

User Manual

Air Blown Fibre Installation Tool



User Manual

Air Blown Fibre Installation Tool

Content

ABF Installation Tool Safety Instructions

- 1 Description**
- 2 Tool Set Contents**
 - 2.1 Large Case
 - 2.2 Tool and spare parts case
- 3 Main Components of tool**
 - 3.1 Display
 - 3.2 Compressed air supply
 - 3.2.1 Compressed air supply connection
 - 3.3 Charger and battery
- 4 Regular use maintenance**
 - 4.1 Fibre feed force - setting
 - 4.2 Reel arm and holder
 - 4.3 Reel Brake
 - 4.4 Fibre Guides
 - 4.5 Lower fibre guide - replacement
 - 4.6 Upper fibre guide - replacement
 - 4.7 Nozzles
 - 4.8 Lower rubber ring - replacement
 - 4.9 Upper rubber ring - replacement
 - 4.10 Maintenance
 - 4.10.1 Daily cleaning
 - 4.10.2 Major cleaning and maintenance
 - 4.10.3 Authorised service and repair centres
- 5 Spare Parts**

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 Fibre 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 adaptor 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 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 tripod before mounting the tool.** Proper assembly is important to prevent risk of collapse.
- **Securely fasten the power tool to the tripod before use.** Power tool movement on the tripod can cause loss of control.
- **Place the tripod on a solid, surface and level it using the leg adjustments.** When the tripod can shift or rock, the power tool or work piece cannot be safely controlled.

1. Description

The installation tool consists of a body that guides and feeds ABF (Air Blown Fibre) units into microducts, using compressed air and a feeder motor.

The upper part of the tool body opens with a clamp to hold the duct and to remove the fibre once it has finished feeding into the duct. The battery pack is fitted in the handle. The compressed air is connected by a ¼" standard (CEJN 320) quick connector via a filter assembly. 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.

The distance the Air Blown Fibre has been fed and the current installation speed is monitored on an OLED-display to 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 fibre guides and nozzles are replaceable for different duct sizes and fibre types or when worn out.

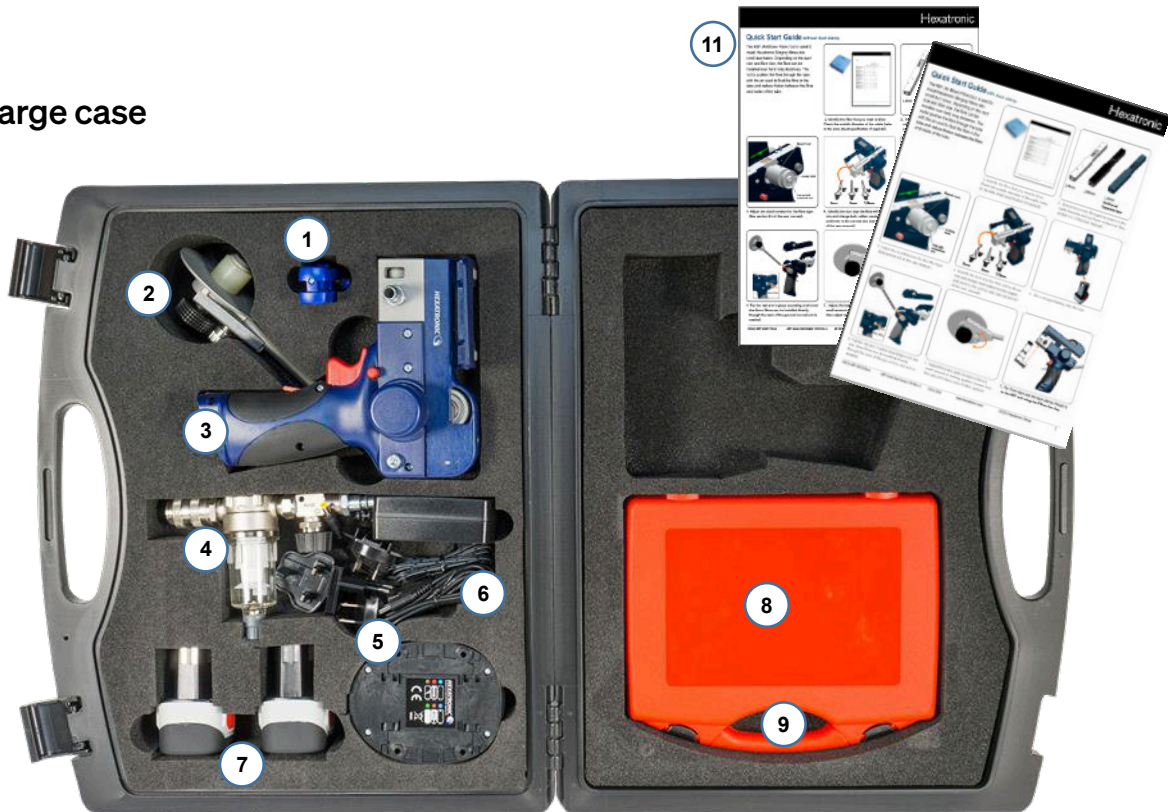
ABF-units are available pre-connected on reels or unconnected in a pan.



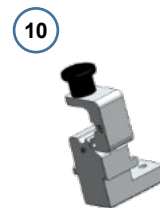
The tripod and ball joint are accessories which may differ from the image shown.

2. Tool set contents

2.1 Large case

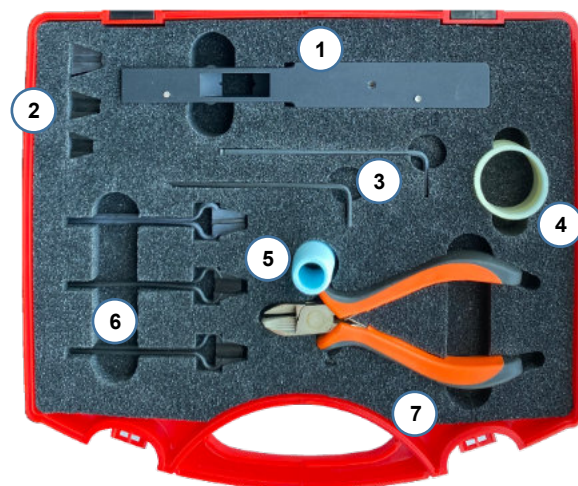


1. Microduct Cutter
2. Reel Arm (snap in)
3. ABF Installation Tool
4. Air Filter and Valve Assembly
5. Battery charger AC adaptor (including EU, UK, US and AUS adaptors).
6. Car Charge adapter
7. Two batteries
8. Tool and spare part accessory case
9. Instructions (under case)
10. For kit FOTA-ABF-LTT1792040/7 - 7mm Duct Clamp
11. Quick Start Guide 1 / plus Quick Start Guide 2 for kit FOTA-ABF-LTT1792040/7

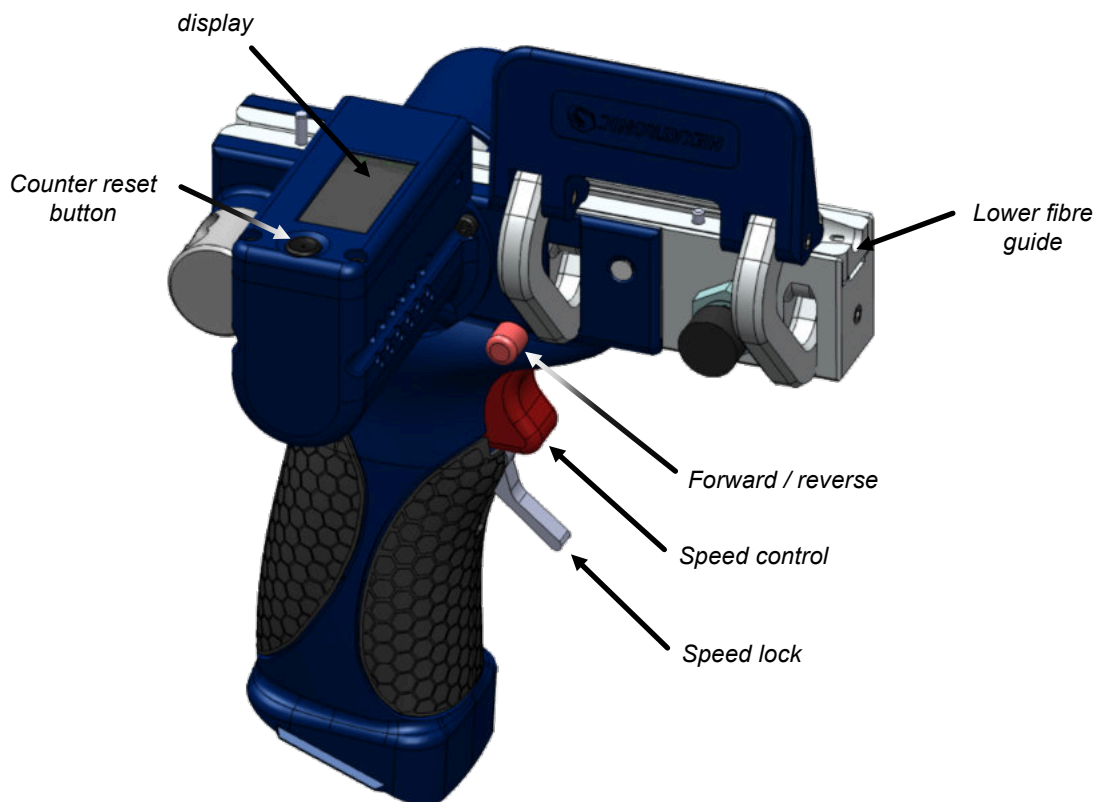
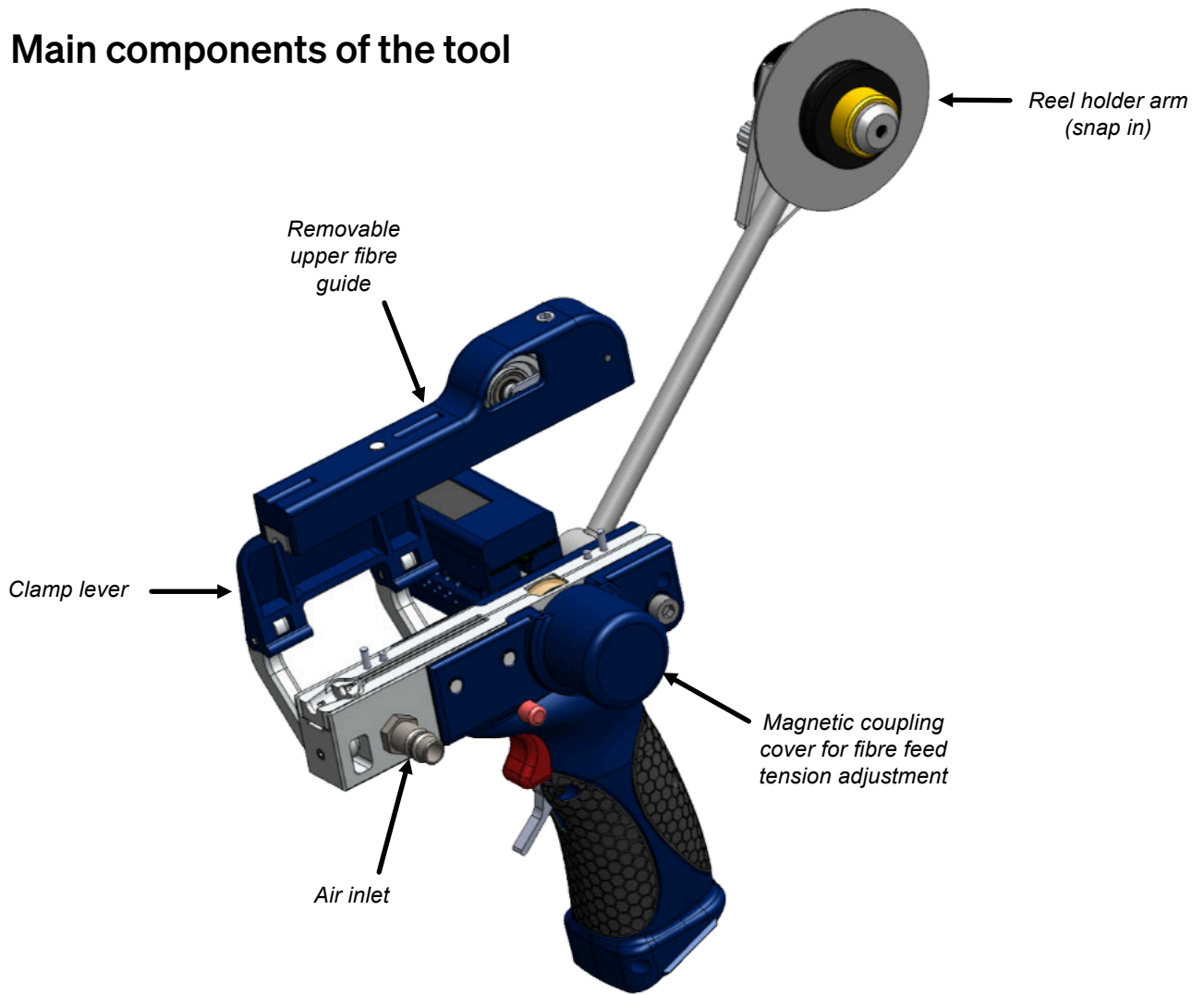


2.2 Tool and spare parts case

1. Fibre guides (black) for 12 fibre units
2. Nozzles for 3, 5 and 7mm ducts
3. Hexagon Keys 2mm and 2.5mm
4. Spare drive rings (rubber)
5. Spare air filter cartridge
6. Rubber Fibre Guides
7. Side Cutters

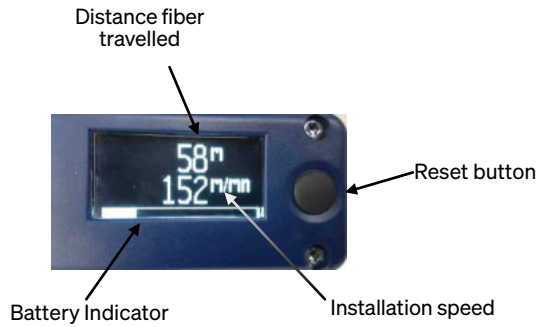


3. Main components of the tool



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, distance and battery status.



Message displayed when distance is reset

Reset Button Function

Short push - display intensity change
Long push - distance reset

3.2 Compressed air supply

Note: Always supply dry, oil free and clean compressed air, max 1 Mpa (10 Bar) using the supplied air filter and valve assembly

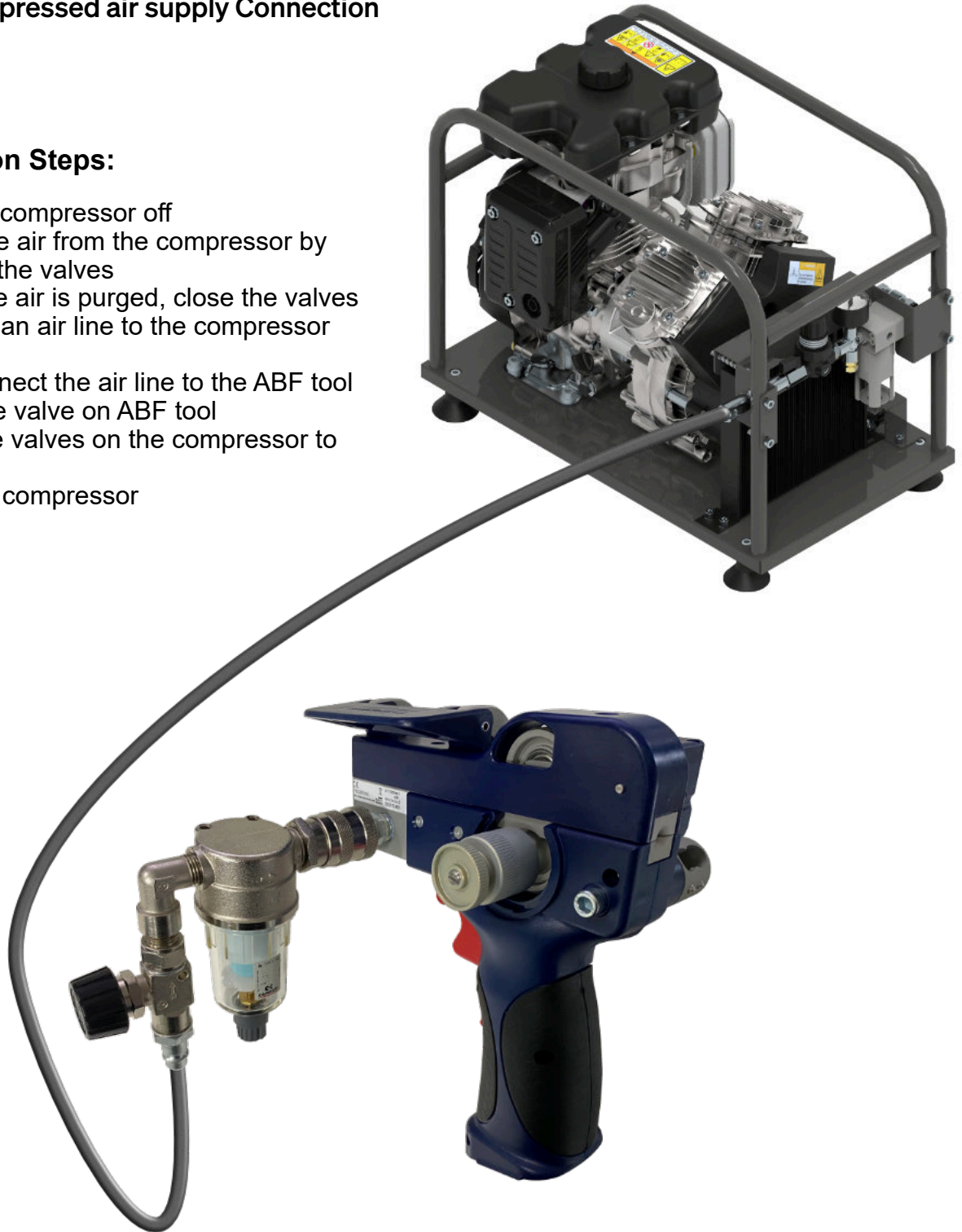
The compressed air consumption varies with microduct inner size and installation length. For the longest installation distances a pressure of 1 MPa (10 Bar) is needed. A compressor capable of supplying 30L/min at 0,8MPa (8 Bar) is sufficient for most normal installations. For shorter distances the applied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



3.2.1 Compressed air supply Connection

Connection Steps:

- Turn the compressor off
- Purge the air from the compressor by opening the valves
- When the air is purged, close the valves
- Connect an air line to the compressor first
- Now connect the air line to the ABF tool
- Close the valve on ABF tool
- Open the valves on the compressor to start it.
- Start the compressor



Disconnection Steps:

- Turn the compressor off
- Purge the air from the compressor by opening the valves
- Disconnect the air line
- Close the valves

3.3 Charger and battery

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

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



LED indicator

Static **Blue**

Flashing **Blue/Red**

Static **Red**

Flickering **Red**

Static **Green**

Meaning

Idle, insert battery

Charging, almost empty

Charging

Charging, almost full

Battery fully charged

Fault codes

Flashing **Red / Green**

Flashing **Blue**

Flashing **Red**

Flashing **Green**

Flashing **Red / Blue**

Battery voltage out of range (overcharged?)

Supply voltage out of range

Charger will retry in 5 seconds

Unstable supply

Charger will retry in 60 seconds

Contact Service

Contact Service

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

Note 2: The batteries will not be charged at temperatures below freezing!

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 for the fibre feed force and the reel friction brake. The feeding wheel in the upper fibre guide housing is preset to 7N of pressure and does not normally need changing.

4.1 Fibre feed force - setting



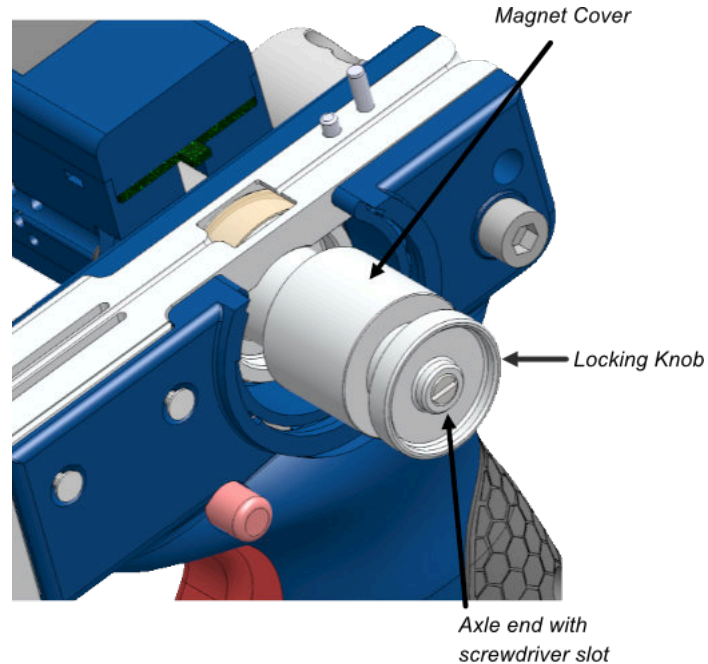
The maximum allowable feeding force changes for different fibre types. The tool has an adjustable magnetic coupling to protect the fibre, which is adjustable between 2 and 5.5N, by moving the magnet cover versus the axle.

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

To adjust the feeding force, hold the magnet cover and turn the locking knob anticlockwise until it just becomes loose. Continue holding the magnet cover and turn the axle using the screwdriver slot in the end. Anticlockwise increases the extension amount and the tension.

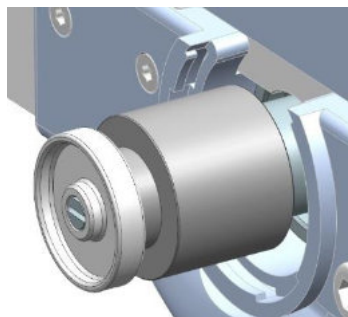
For each mm movement of cover on axle, the force is changed by 0.5N.

Lock by tightening the locking knob and magnet cover against each other by hand.

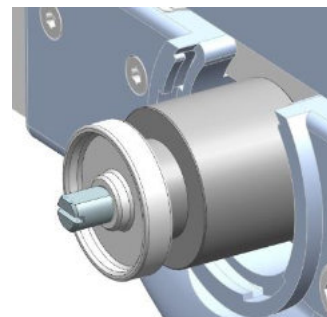


Required feeding force for Hexatronic 2-4 fibre ABF - 2.5 N
Required feeding force for Hexatronic12 fibre ABF - 4 N

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

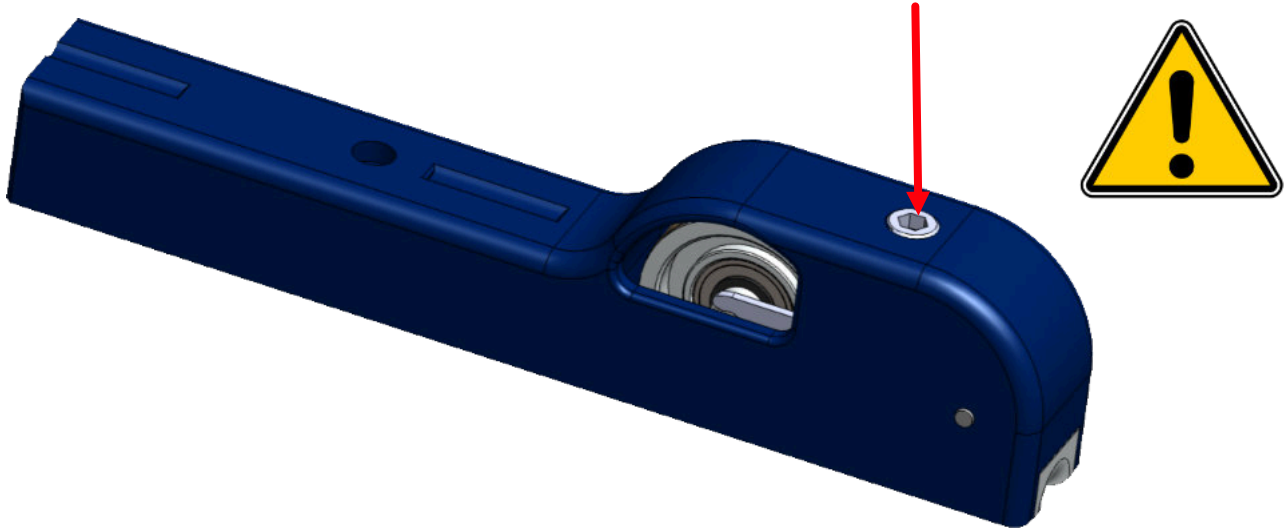


Setting for 2N force



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

DO NOT ADJUST
This is factory set to provide a
set pressure on the top wheel



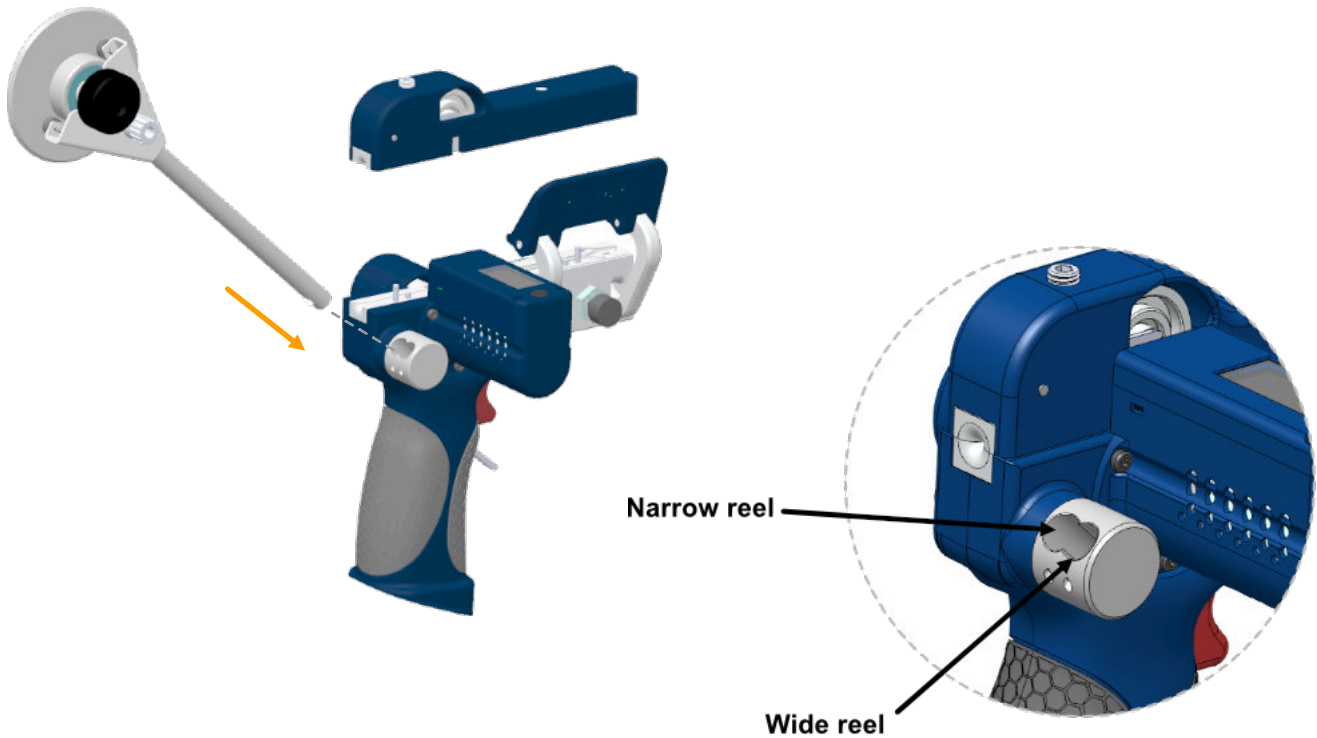
The feed force for the fibre type is adjusted using the 'Clutch'.
See the table and instructions above in section 4.1 to set the tool for the
fibre type

NOTE:

**Do not etch/engrave serial numbers onto the top body
as they can be accidentally swapped between tools
causing administrative problems with tool
maintenance and servicing.**

4.2 Reel arm and holder

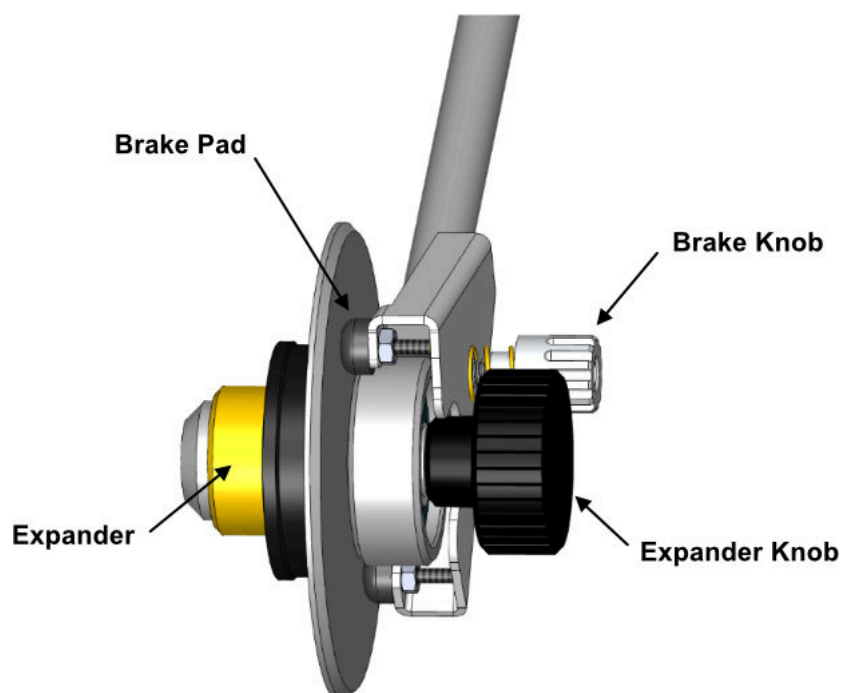
The reel arm is easily attached to the installation tool with a snap-in function. The reel arm offset can be changed between two positions in the arm hub, to suit different reel widths.



4.3 Reel brake

For the most precise reel control, manual braking by hand is recommended.

Note: Excessive brake setting will decrease blowing speed



4.4 Fibre guides

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

4.5 Lower fibre guide - replacement

Undo the hex screw to release the lower fibre guide (fig. 4.5.1). When removing the fibre guide be careful not to lose the springs and O-ring in the base (fig. 4.5.2). The guide pins and spring pins stay in the fibre guide (fig. 4.5.3).

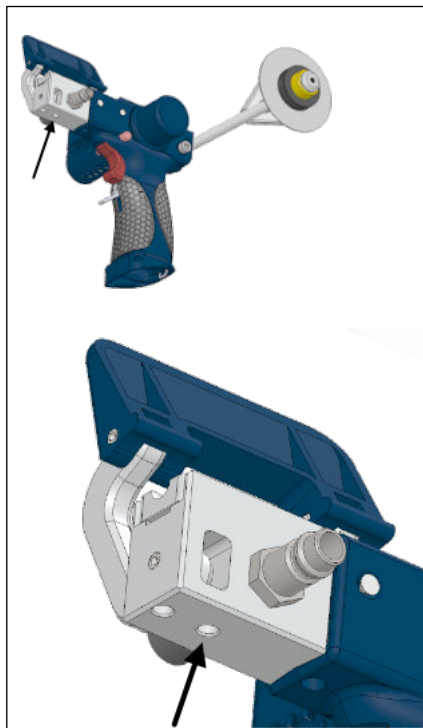


Fig. 4.5.1

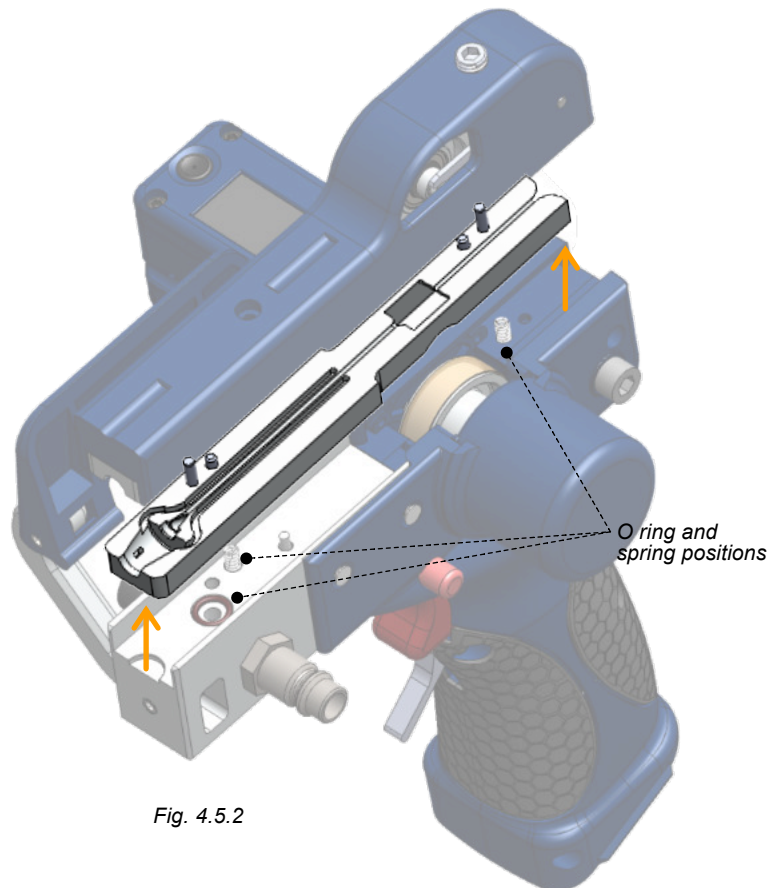


Fig. 4.5.2

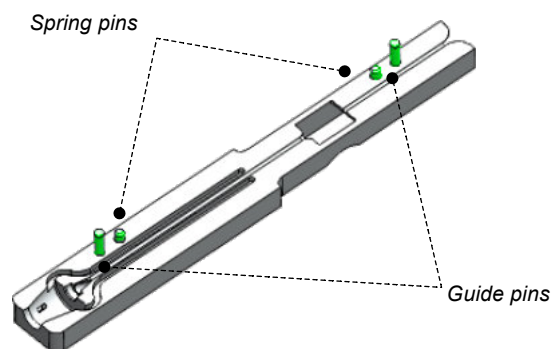
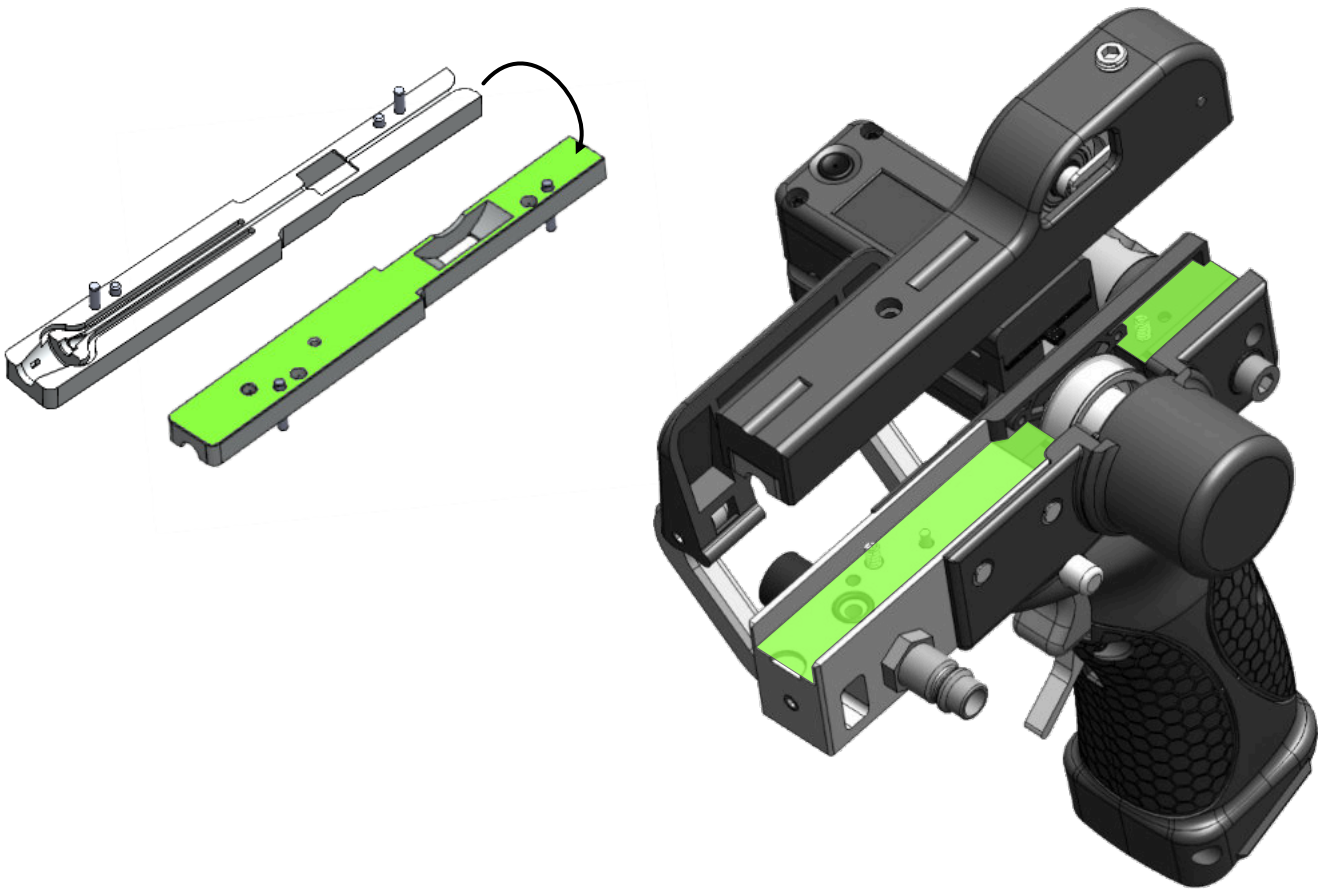
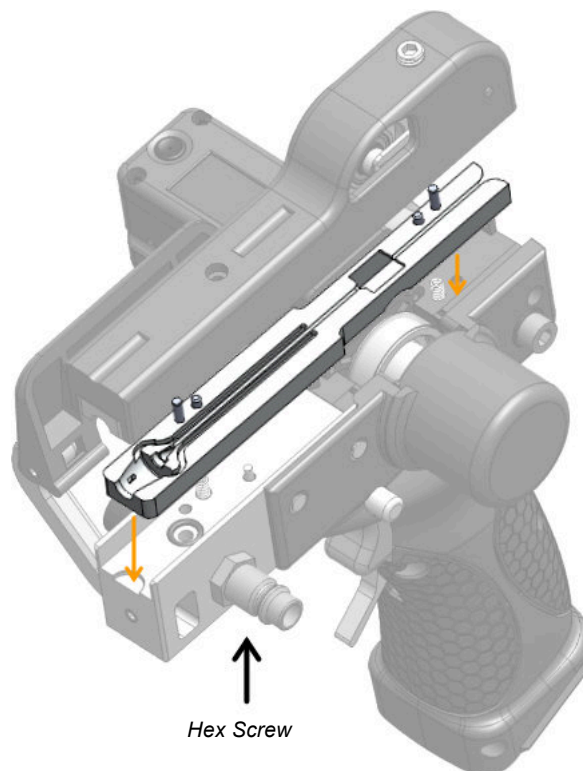


Fig. 4.5.3

Make sure mating surfaces (highlighted in green) are completely clean so the fibre guide sits correctly.

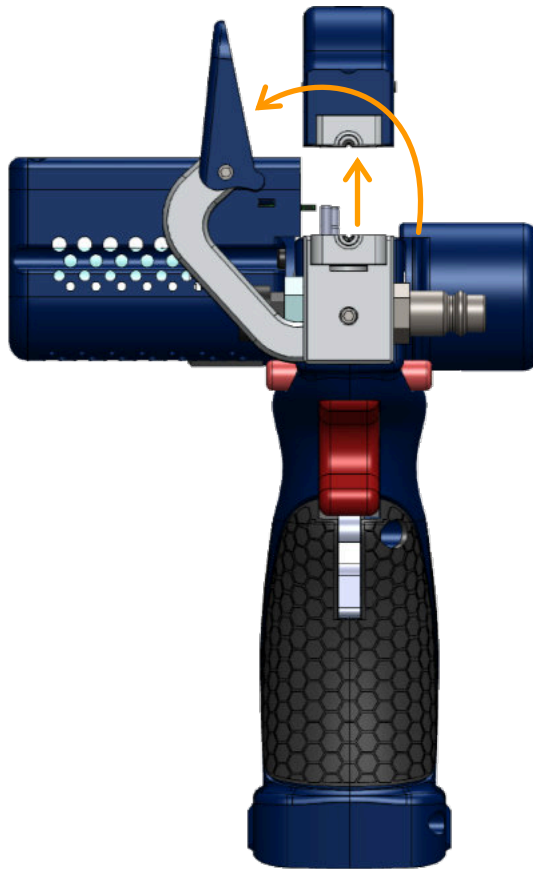


Place the new fibre guide onto the tool body and refit the hex screw (fig 4.5.1). Do not over-tighten.

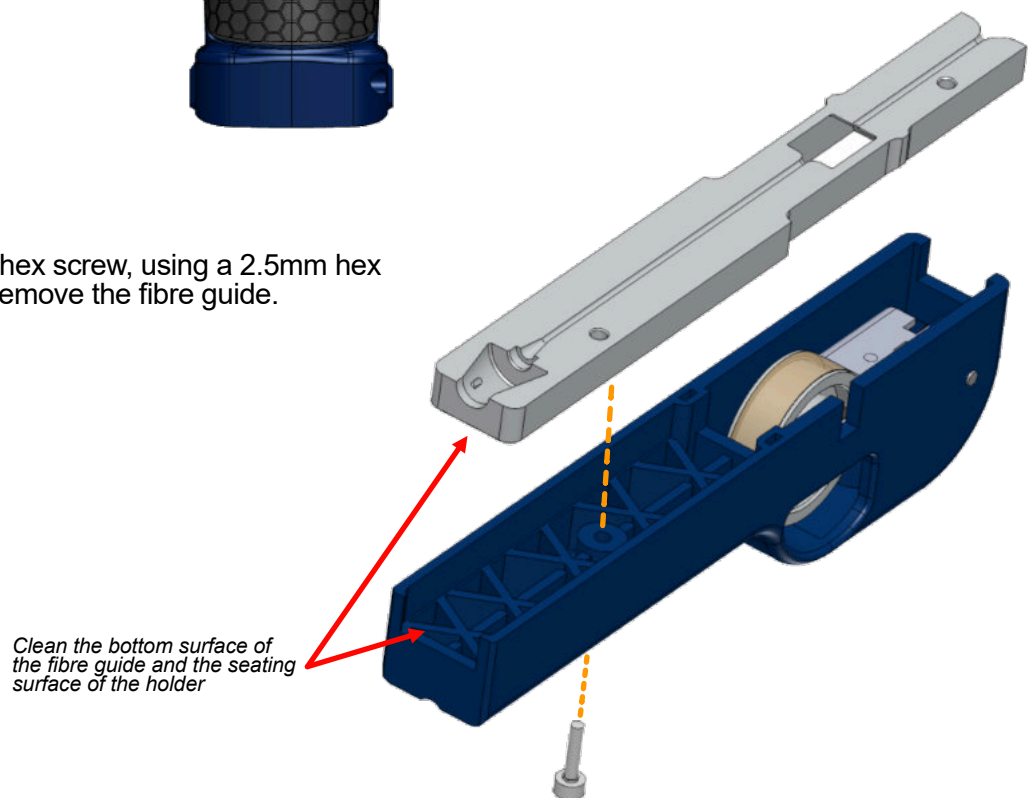


4.6 Upper fibre guide - Replacement

Release the clamp and lift the upper fibre guide assembly from the tool body



Undo the hex screw, using a 2.5mm hex key, and remove the fibre guide.



Make sure that both surfaces: the bottom of the replacement fibre guide and where the fibre guide sits on the housing are clean, so the fibre guide will be correctly aligned. Do not over tighten the fastening screw, its purpose is only to keep the fibre guide in place.

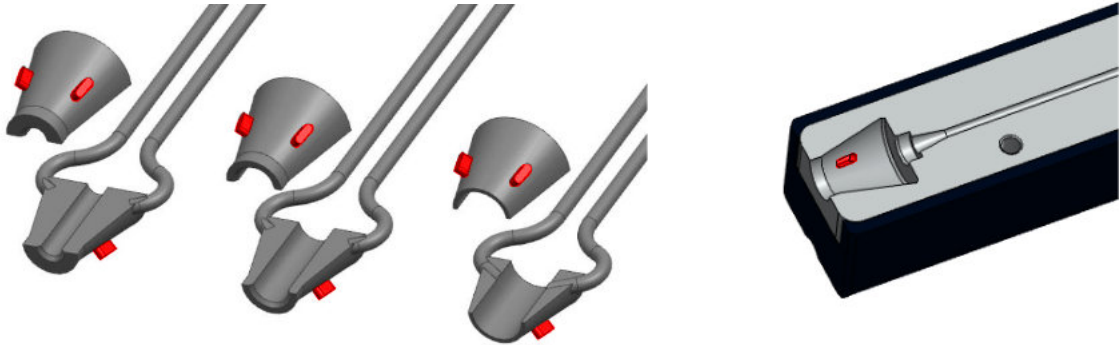
Refit the fibre guide to the tool and close the clamp.

4.7 Nozzles

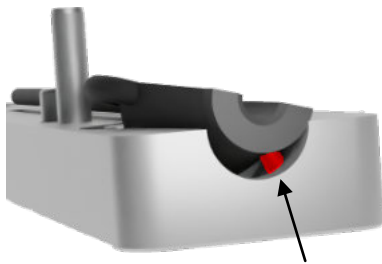
The nozzles hold the duct and provide a seal to keep the compressed air in the system.

Three sets are supplied for 3, 5 and 7mm duct diameters, with the 5mm installed on the tool.

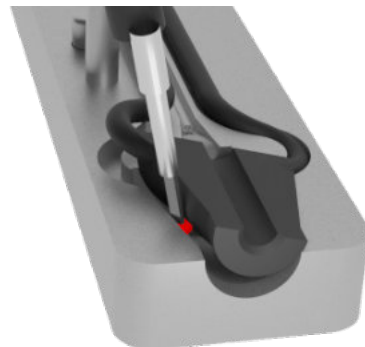
The nozzles can be changed by hand and should be replaced when they are visibly worn or when changing duct sizes.



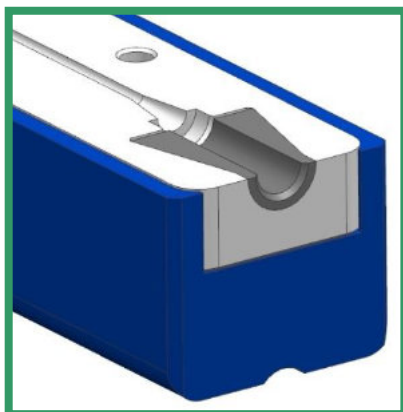
Make sure both “ears” of the nozzles (highlighted in red) enter the holes in fibre guides.



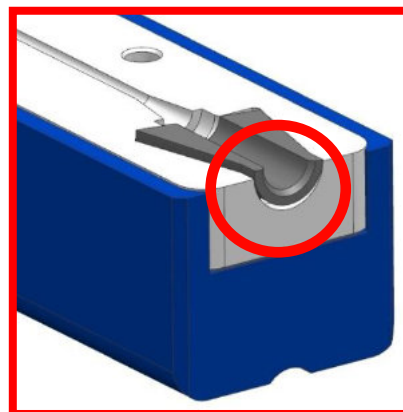
Tuck the first nozzle ear into the slot



Use a small (2 to 3mm flat blade screwdriver) to tuck the other nozzle ear into the slot.

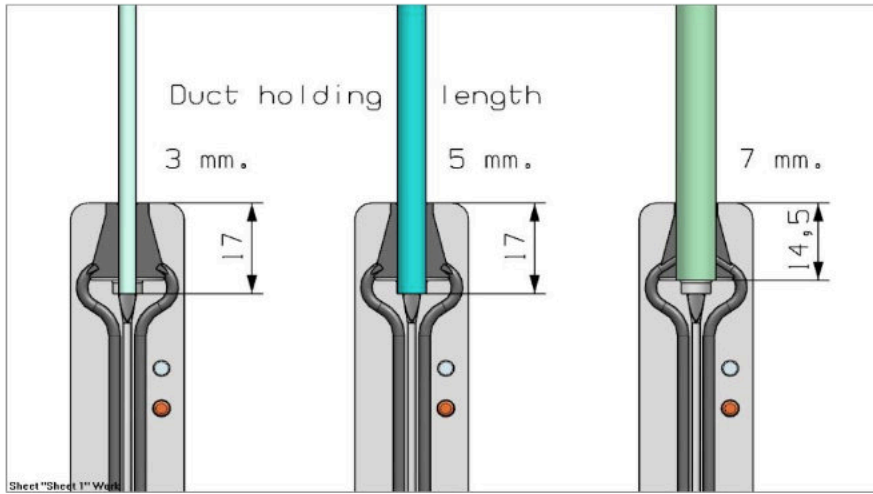


Correctly seated

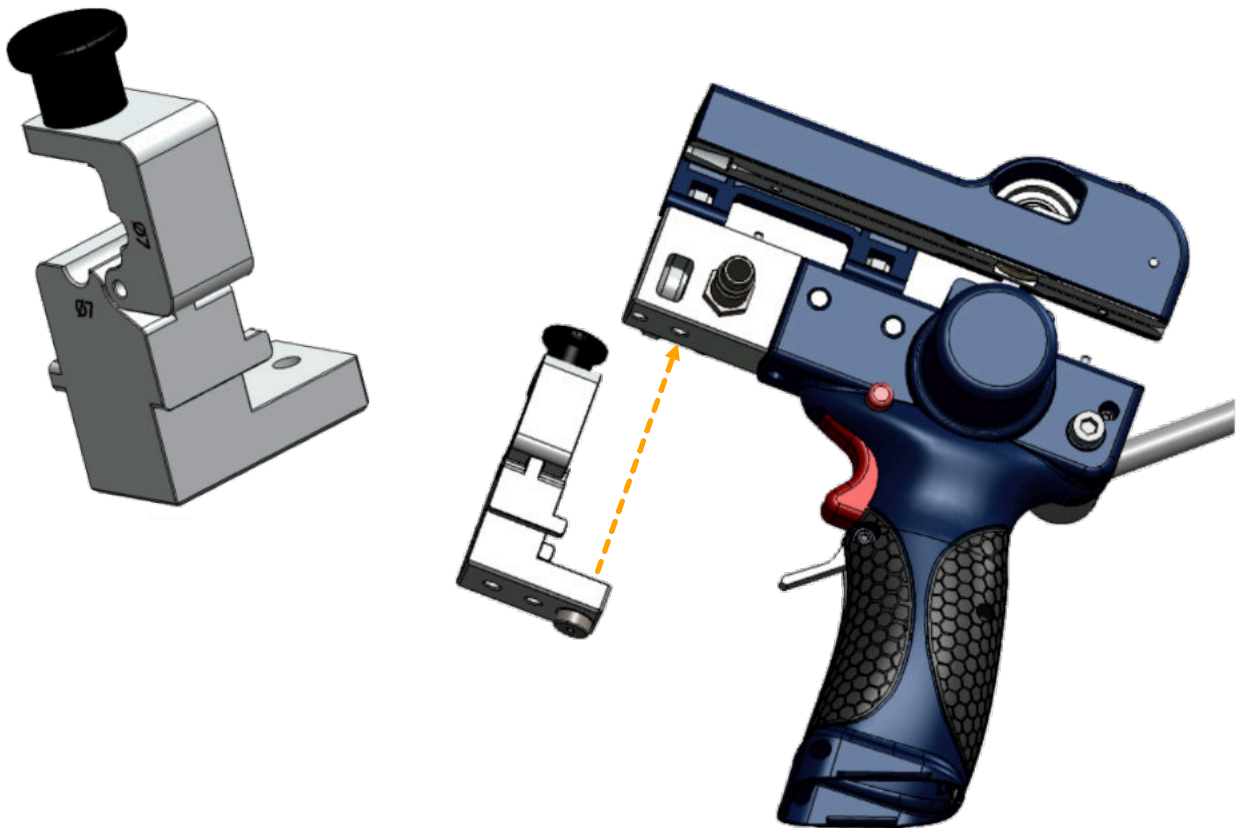


Incorrectly seated

The different nozzle sizes accommodate the different duct sizes and clamp down to hold the duct.



Depending on the kit type purchased an additional clamp may also be available to use, which provides additional clamping force for 7mm duct (FOTA-ABF-LTT1792040/7).



4.8 Lower rubber ring - replacement

1. Release the clamp and remove the upper body - section 4.6
2. Remove the lower fibre guide, section 4.5
3. Remove the spindle cover with a 1/8 anticlockwise turn fig 4.8.1
4. Remove coupling by loosening the hex screw, 2.0mm hex key fig 4.8.2
5. Slide the tensioner assembly off the spindle.
5. Replace rubber ring by hand, ease it off and then slip a new one in place fig 4.8.3
6. Refit in reverse order.

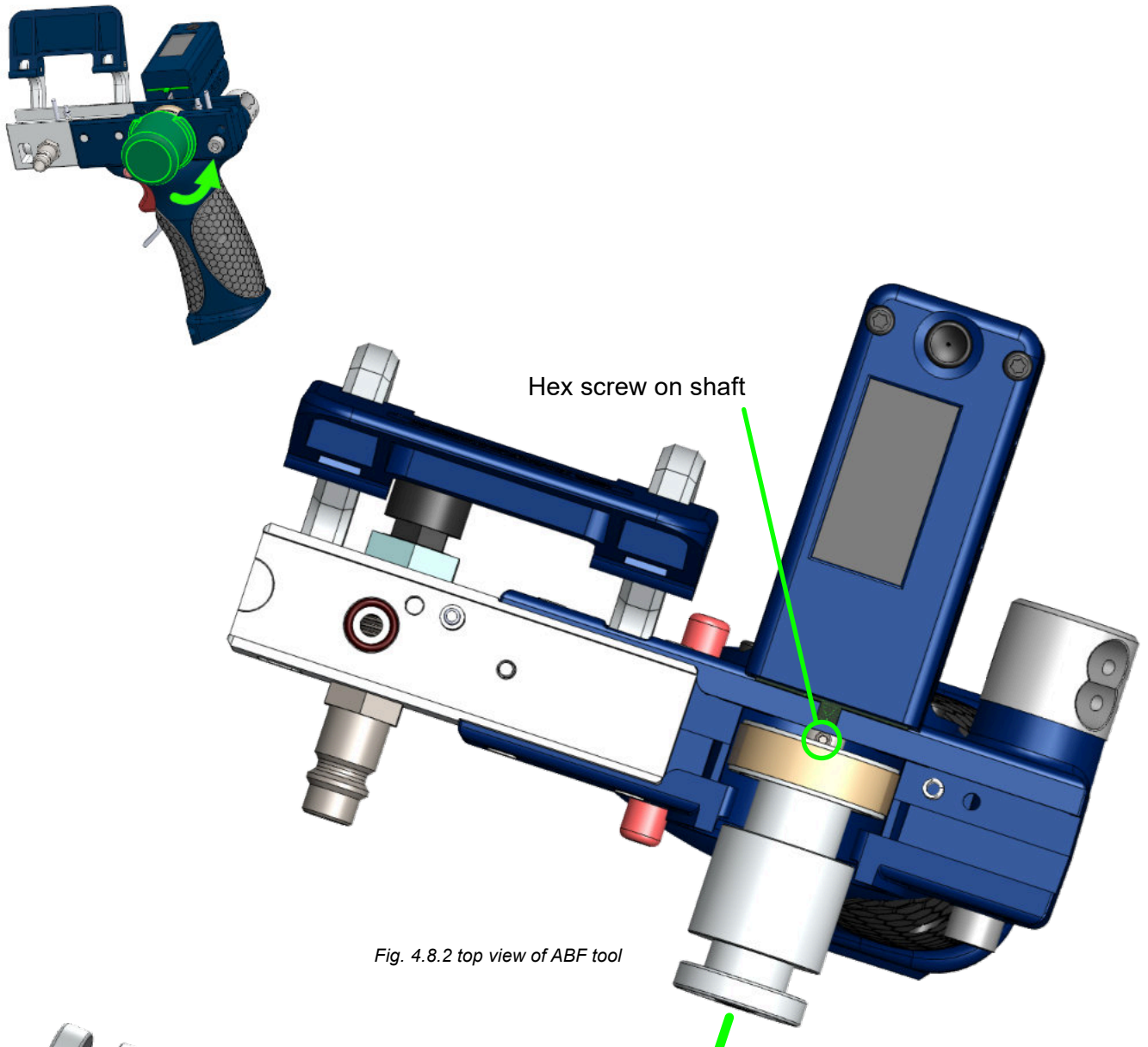


Fig. 4.8.2 top view of ABF tool

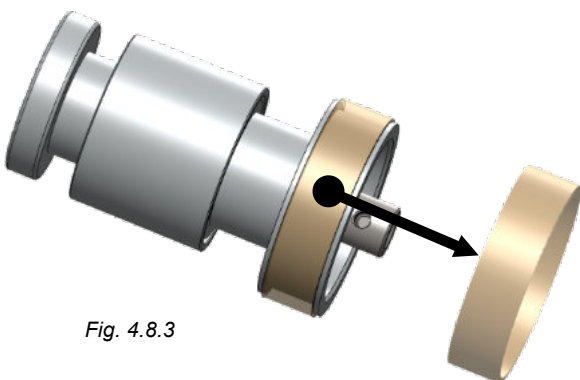
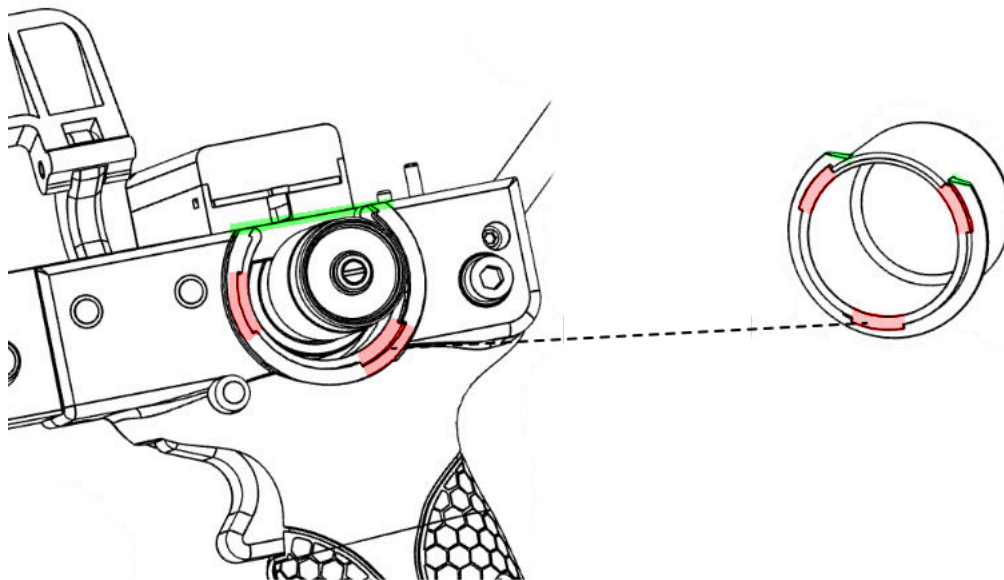


Fig. 4.8.3

Replacing the spindle cover

Align the notches in the cap with the cutouts on the tool casing (coloured red). Ensure the flat section of the outer rim aligns with the top of the tool body, fibre guide (coloured green).



4.9 Upper rubber ring - replacement

1. Release the clamp and remove the upper body. Section 4.6
2. Remove the upper fibre guide. Section 4.6
3. The wheel will swing up out of the body fig 4.9.1

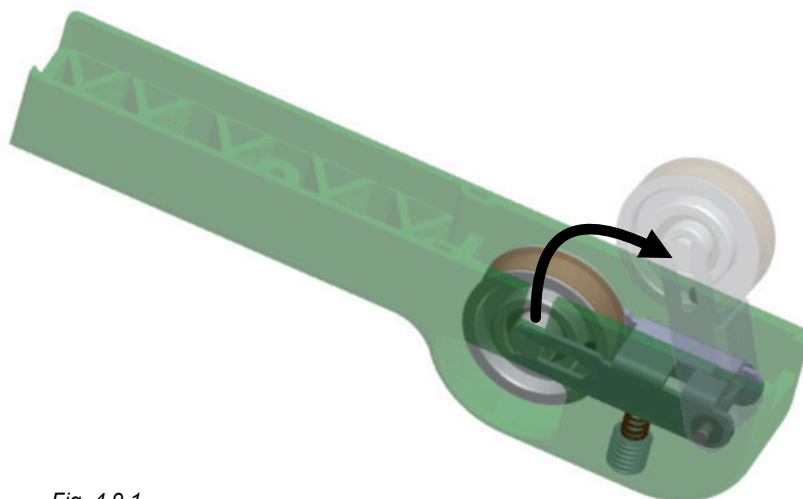


Fig. 4.9.1

4. Pull the wheel out of the holder fig 4.9.2
5. Replace the rubber ring by hand.

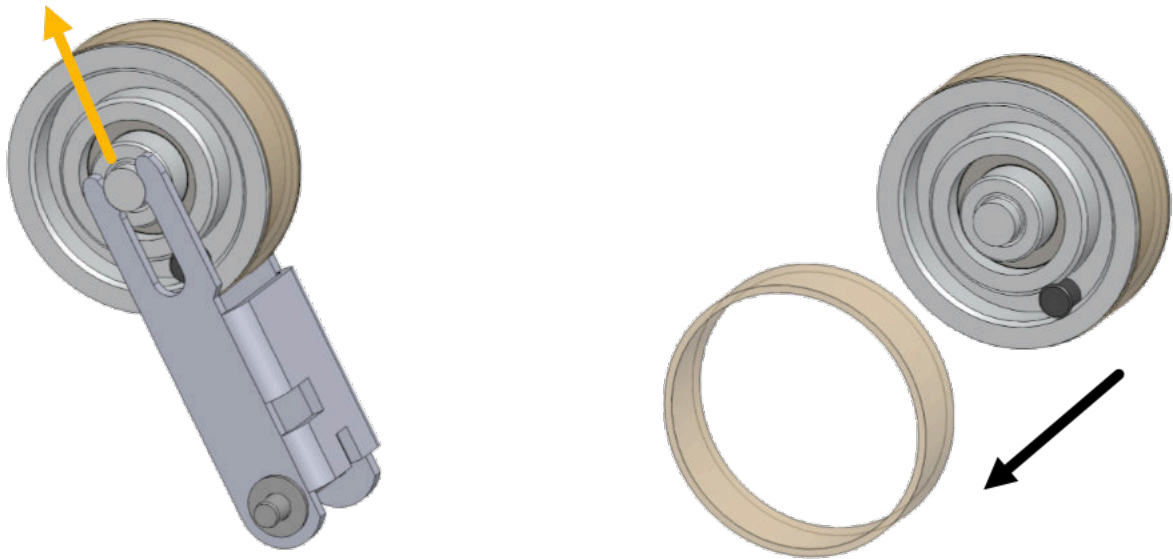


Fig. 4.9.2

6. Refit the rubber ring and mount the wheel into the holder, ensure the wheel is on the correct side of the upper body with magnet aligned as shown in fig. 4.9.3 (If the meter counter does not work, then check the wheel/magnet is fitted the correct way round).

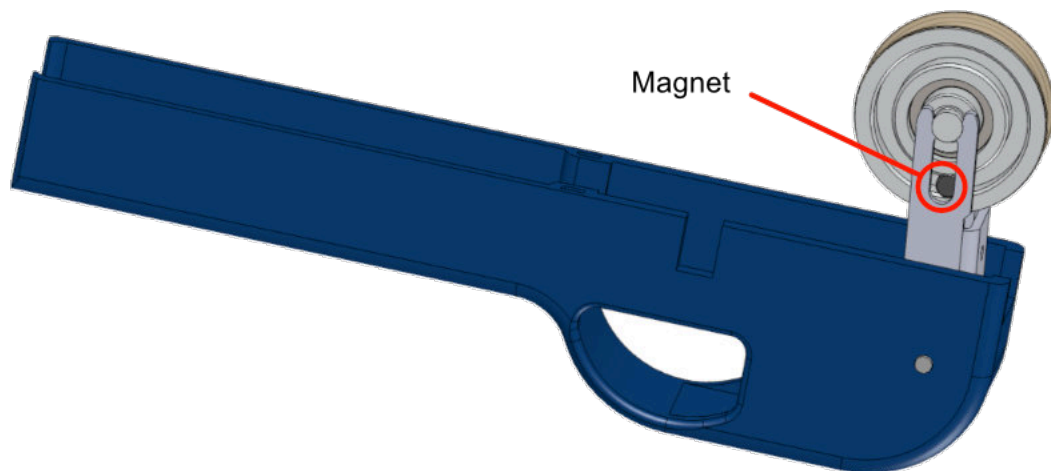


Fig. 4.9.3

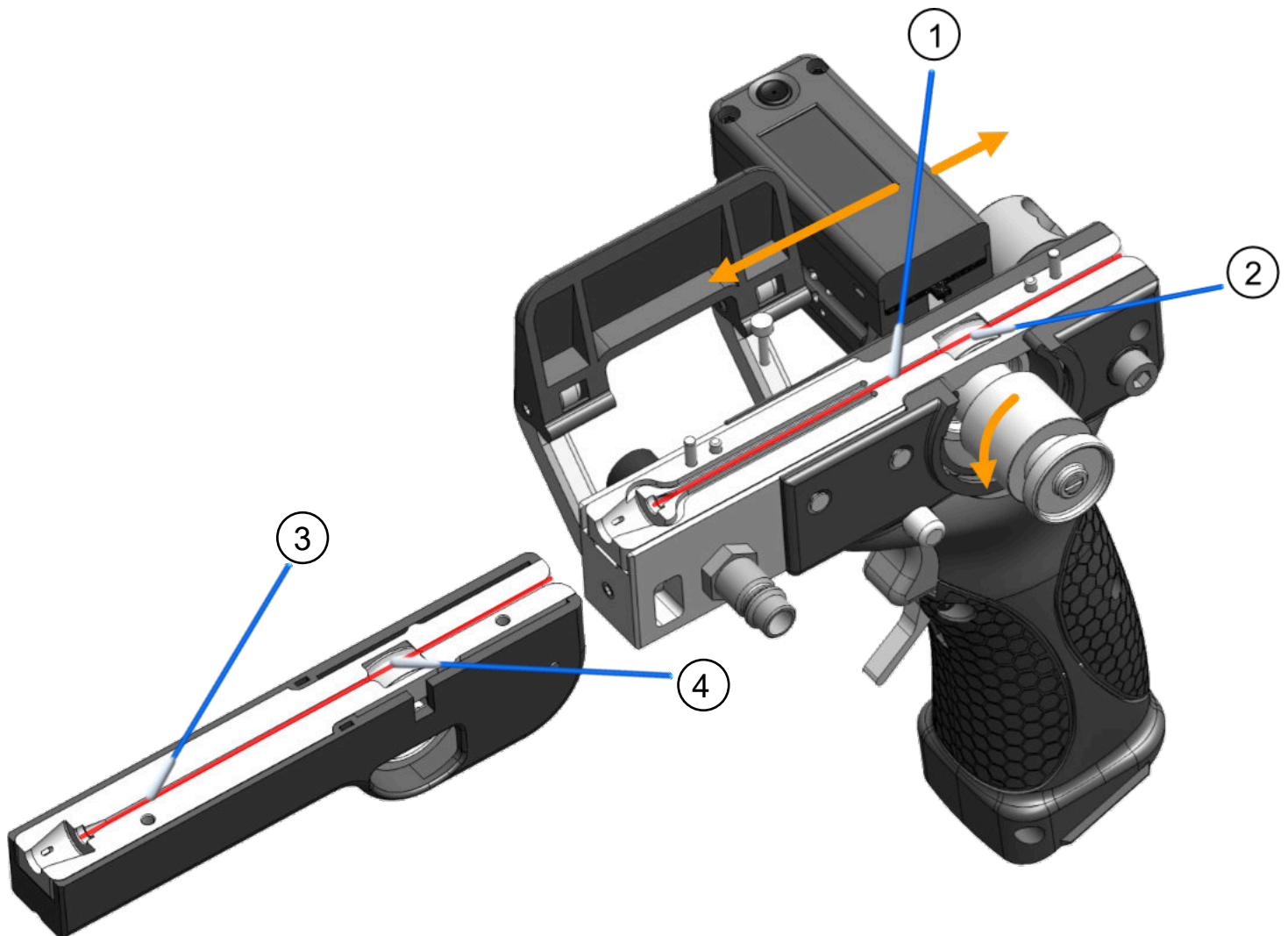
4.10 Maintenance

This installation tool is a precision tool. To ensure a well-functioning tool with a long lifetime, cleaning and maintenance should be performed regularly.

4.10.1 Daily cleaning

It is recommended the tool is cleaned after each day of use. Use cleaning swabs dipped in ethanol to clean the grooves in the upper and lower fibre guides (shown in red).

Also clean the surface of the rubber rings. Turn the wheel by hand on the upper fibre guide. Turn the spindle wheel to rotate the lower rubber ring. Ensure the entire circumference is cleaned.



4.10.2 Major cleaning and maintenance

Depending on how intensively the tool is used, a more thorough cleaning and check on the condition is recommended every second week to once a month.

Remove the fibre guides and the wheels including magnetic coupling. The procedure is the same as described in earlier sections. Clean all the surfaces thoroughly with cleaning swabs dipped in ethanol. Check parts, especially the rubber parts, for wear and renew if necessary.

The service centres can do the maintenance clean, assess the tool for wear and if necessary detail any components that may need replacement on a quotation. Following acceptance of a repair quotation the service centre can repair the tool and return it.

4.10.3 Authorised service and repair centres

Please contact your regional repair centre for tools that need repair or extended service.

The repair centre will ascertain the nature of the fault and extent of damage with you in order to provide an estimate of the repair cost. Once you are happy to proceed the tool can be sent to the service centre for full assessment and quotation.

External damage to the tool can result in internal damage that cannot be seen when the estimates are made. Once the tool is received it can be fully assessed and a firm quotation can be made before you give authorisation to continue.

A document with the estimate will be provided to you which must be attached to the tool when it is sent to the service centre.

If the tool was purchased through a separate sales channel, then return the item to the distributor in the first instance.

Different processes apply, depending on the service centre - check with your local centre before sending the tool.

Europe

Sweden

Maskingatan 16
70286, Örebro
Sweden

Kabelvagen 1
SE-824 82 Hudiksvall
Sweden

Sweden Service Booking link:

<https://www.hexatronic.com/sv/service>

Germany

Opturnus GmbH
Bahnhofstraße 5,
22941 Bargteheide
Germany
+49 (0) 4532 2044-109

United Kingdom

Hexatronic Service Centre
Quay Lane
Gosport
Hampshire
+44 (0) 2392 580 555
Email: servicing@hexatronic.co.uk

Norway

Jonsvannsveien 140
7048 Trondheim
Norway
Email: info@hexatronic.no
Tel. +47 902 46 666

Americas

East Coast

Hexatronic Service Centre
 8777 Torrington Road
 Clinton, SC 29325
 email: nasales@hexatronic.com

West Coast

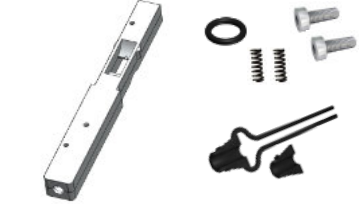

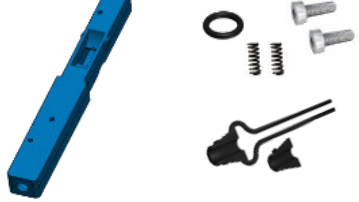

Light Brigade
 835 Central Ave N. Suite D-132
 Kent, WA 98032

 (206) 575-0404
 email: sales@lightbrigade.com







Australasia

Loop Technologies
 35 Bryant Road
 PO Box 10417, Te Rapa
 Hamilton 3241, New Zealand
 Service Request: <http://portal.looptechnologies.com>

5. Spare parts

FOTX-NTB101083/1	ABF Pro 2f includes 1.4mm fibre guides with 5mm nozzle, springs, O Ring and fixing screws	
FOTX-NTB101083/2	ABF Pro 12f includes 1.65mm fibre guides with 5mm nozzle, springs, O Ring and fixing screws	
FOTX-NTB101083/3	ABF Pro 24f includes 1.8mm fibre guides with 5mm nozzle, springs, O Ring and fixing screws	
FOTX-ABF-NOZKIT-01	3, 5, 7mm Nozzles (Set 1)	

New style fibre guides - Improved fibre guides and duct clamps provide better duct clamping. The new duct clamp must be used with the new fibre guides which are longer than the standard versions.

<p>FOTA-ABFPRO-2F-BP</p>	<p>ABF Pro 2f includes 1.4mm fibre guides with 3, 5, 7 & 8mm ducts.</p>	
<p>FOTA-ABFPRO-12F-BP</p>	<p>ABF Pro 12f includes 1.65mm fibre guides with 3, 5, 7 & 8mm nozzles.</p>	
<p>FOTA-ABFPRO-24F-BP</p>	<p>ABF Pro 24f includes 1.9mm fibre guides with 3, 5, 7 & 8mm nozzles.</p>	
<p>FOTA-ABFPRO-DC-KIT</p>	<p>ABF Pro Duct Clamp Kit includes inserts for 3, 5, 7 & 8mm ducts.</p>	
<p>FOTA-ABFPRO-2F-24F-KIT</p>	<p>Complete kit for all Stingray fibre types with 1.4mm/1.6mm/1.9mm fibre guides, duct clamp and inserts for 3, 5, 7, 8mm duct. Nozzles for 3, 5, 7 and 8mm duct.</p>	
<p>FOTX-ABF-NOZKIT-02</p>	<p>3, 5, 7 and 8mm Nozzles (Set 2)</p>	

FOTX-ABF-BRKKIT-01	Brake Plate kit	
FOTX-ABF-BRKKIT-02	Brake Pads (Pack of 10)	
FOTA-SXA1136161	Reel Expander	
FOTX-HSXA136136	Cardboard Reel Locking Ring	
FOTX-SXA1136247	Rubber Ring	
FOTA-HKFU901073/3	Air Filter 5µm	
FOTX-SXA1139498/1	Clutch Cover	
FOTX-78/SBA166030/012	Fibre Guide Screw	

<p>FOTX-ABF-FGKIT-01</p>	<p>Fibre Guide Springs and O Ring Set</p>	 <p>x10 x5</p>
<p>FOTA-LTT-BKB90278</p>	<p>Replacement Battery</p>	
<p>FOTX-BML901295</p>	<p>Battery Charger & Accessories</p>	

We, the undersigned, on behalf of Hexatronic UK Ltd, hereby declare that the product listed below conform to the REACH regulations EC 1907/2006, as well as pertinent clauses of the references mentioned herein. Based on the information available to us from our raw material suppliers, and our knowledge of the products' compositions the products listed below do not contain any substances mentioned in EU Directive 2011/65/EU. Based on the material content certifications provided by our suppliers, none of the substances restricted by the candidate list or RoHS-directive are present in materials we use in our products.

The products listed below comply to EMC Test (electrical disturbances) according
EN 61 000-6-2 (2005), EN 61 000-6-3 (2007) + A1 (2011).

FOTA-ABF-LTT1792040 / FOTA-ABF-LTT1792040/7



Manufacturer: Hexatronic UK Ltd
Unit B, Quay West,
Hardway, Gosport PO12 4LJ
Hampshire, United Kingdom
Registered in the UK: 06329180

Kieran Stone
CEO, Hexatronic UK

03 May 2024

Robert Beecher
COO, Hexatronic UK



Copyright

© 2024 Hexatronic UK Ltd. All rights reserved. No part of this document may be reproduced in any form without the written permission of the copyright owner.

Disclaimer

The contents of this document are subject to revision without notice due to continued progress in methodology, design, and manufacturing. Hexatronic shall have no liability for any error or damages of any kind resulting from the use of this document.