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OPERATING MANUAL

C–1850

STORM

FIBRE BLOWING MACHINE

REVISION HISTORY:

Rev.no	Date	Details	Author
01	19/01/26	Original publication	L. Brown

Contents

1. SAFETY INSTRUCTIONS

THIS EQUIPMENT SHOULD BE USED ONLY BY PERSONNEL WHO HAVE BEEN GIVEN THE APPROPRIATE TRAINING AND WHO ARE COMPETENT TO USE IT.

THESE INSTRUCTIONS ARE TO BE MADE AVAILABLE TO OPERATORS OF THIS EQUIPMENT AT ALL TIMES, FAILURE TO OBSERVE THESE SAFETY INSTRUCTIONS COULD RESULT IN SERIOUS PERSONAL INJURY AND/OR PROPERTY DAMAGE.

BEFORE USING ANY PART OF THIS MACHINE OR ITS ACCESSORIES, YOU MUST READ AND FULLY UNDERSTAND THIS MANUAL AND THE SUPPLIED DEWALT® DCB118 *MANUAL.*

WORK AREA AND GENERAL SAFETY

- Read and understand the operation and maintenance manual supplied with this equipment. Keep it in a convenient place for future reference.
- This manual, together with all other manuals supplied within the kit, must be adhered to for proper and safe operation
- Keep children and untrained personnel away from this equipment whilst in operation.
- Keep all guards and safety devices in place. Do not operate this equipment with guards removed or damaged.
- Keep hands, feet and loose clothing away from moving parts.
- Always stop the machine and isolate compressed air and electrical services to carry out servicing.

- Check machine before starting for worn or damaged parts. Check for signs of loose nuts and bolts etc.
- If machine is left unattended, ensure that unauthorised use is prevented.
- Never leave the machine unattended whilst in use.
- Consider the use of safety barriers, especially when used in public places, observe all statutory requirements for working environments.
- Beware of pinch points involved with rotating components,
- Beware of hot surfaces, machine uses compressed air.
- When operating machine always wear appropriate safety clothing, ear defenders, eye protection, hard hat, safety shoes and leather gloves, machine operates with compressed air at up to 15 Bar (220 PSI).
- Prior to installation ensure the tube route is connected properly.
- Beware of exposed electrical contacts. Do not touch or allow metal objects to come into contact.
- Machine may cause additional fire hazard if involved in an existing fire due to compressed air, and lithium batteries.
- The machine must be operated on firm ground.
- Stay clear of pressurised airline and tube.
- Only use the machine for its intended purpose, to retrieve fibre blow air in the far end.
- The compressed air supply must not be allowed to enter the air chamber before the lid has been securely tightened.

- If blowing fibre from a pan, ensure the fibre exits easily from the pan, place the pan a sufficient distance to allow the operator time to react should the fibre become tangled.
- If blowing fibre from a reel, ensure the Fibre reel is correctly fitted to the reel holder, using the supplied reel spacer if required.
- Fibre should be oriented to line up with the entry side of the fibre guide.
- The cable should enter the machine in a clean and dry condition.

FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY OR DAMAGE TO THE BLOWN FIBRE.

GENERAL PNEUMATIC SAFETY INSTRUCTIONS

The CBS Storm Blown Fibre Blowing Machine is a pneumatic device, using pressurised air to project fibre at high velocities. Please observe the following precautions when operating the Blowing Machine: -

Compressed air can cause flying debris. This could cause personal injury. Always wear personal protective equipment.

Ensure no personnel are in the manhole at the far end of the fibre run. Severe personal injury may result.

Never open the machine when pressurised.

Only authorised, fully trained personnel should operate the air compressor.

GENERAL ELECTRICAL SAFETY INSTRUCTIONS

The machine and accessories have electronic and electrical power and control circuits. Electric shock hazards may exist that could result in severe personal injury. Observe the following precautions to avoid electrical hazards:

Do not operate in water. Do not expose the machine or any accessories to rain.

Do not disassemble the machine or any supplied accessories. There are no user serviceable parts inside. Refer servicing to qualified service personnel.

2. CRITICAL POINTS THAT DRAMATICALLY AFFECT THE OPERATION OF THE BLOWN FIBRE BLOWING MACHINE

- Duct seal in air chamber correctly fitted to provide good sealing.
- Correct fibre cable guide fitted.
- Tube fully connected and pressure tested.
- Tube connecting fittings are suitable for operating at compressor supply pressure.
- Airbox lid securely tightened.
- Compressor capacity is suitable for size of tube being used.
- Fibre pan must be close to the machine; the fibre should leave the pan freely and enter the machine horizontally.
- Air chamber, drive wheels and blown fibre must be clean and free from debris, glass beads, sludge, dirt, water and lubricant.
- The fibre must be hand guided into the machine.
- Ensure the compressed air supply is not applied to the fibre until approximately 30 metres of fibre has been installed or the machine begins to slow down.
- The compressed air moisture content needs to be carefully controlled; it should be dry enough to prevent moisture forming in the tubes yet not so dry to cause a static build up – CBS Products recommend the use of an air dryer with a bypass.

DISCLAIMER

CBS Products (KT) Ltd takes care in the design of its products to ensure that the cable is protected during installation. Due to the variety and different methods of fibre manufacture the responsibility of checking the fibre compatibility with the equipment lies with the operator. Therefore, CBS products cannot accept liability for any damage to the fibre.

3. GENERAL DESCRIPTION

The C-1850 Storm has been developed to provide a simple to use and reliable fibre blowing solution. The Storm is designed to fit a fibre up to 3mm diameter, thereby providing the complete range of blown fibre installation solutions from one machine.

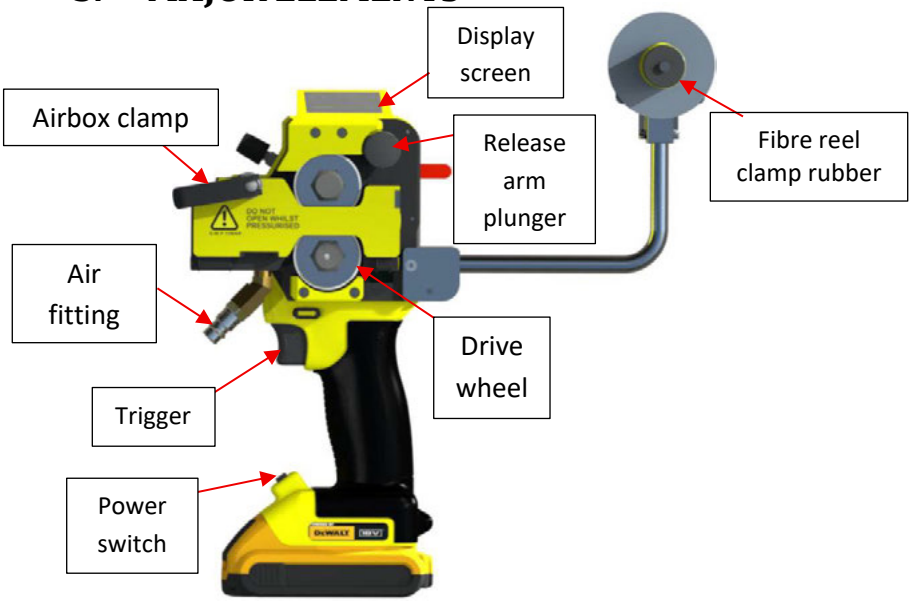
The Storm is a compact handheld integrated fibre blowing machine benefiting from automation and fibre management; electronic torque control is implemented to ensure the fibre mechanical and optical integrity is maintained. The machine only requires a single 18V D.C. DEWALT® battery and compressed air to operate.

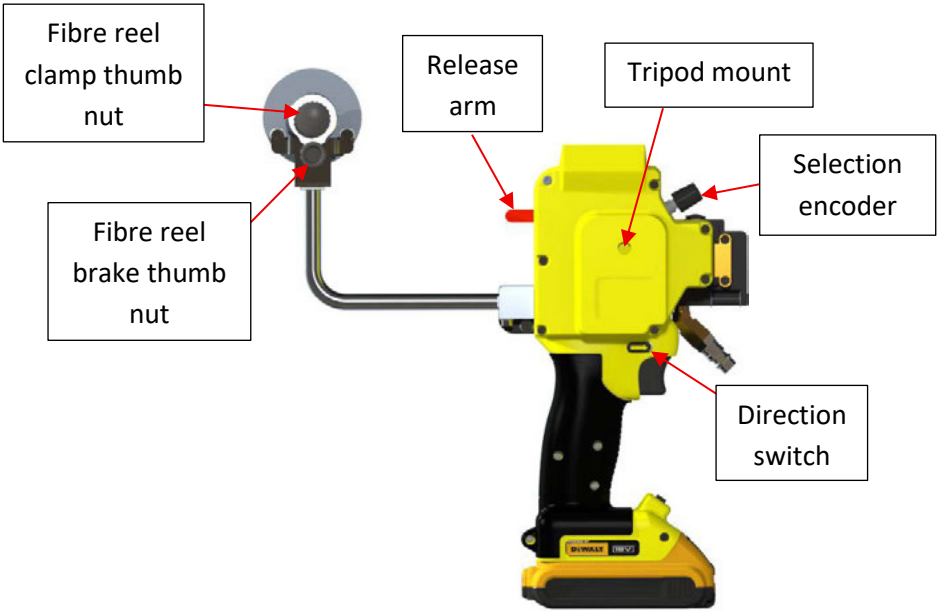
CBS Products Ltd has designed a range of accessories aimed at providing the complete solution to blown fibre installation.

4. SPECIFICATION

Fibre Compatibility:	up to 3mm
Blowing Speed:	Up to 100 m/min
Compatible Tubes:	5mm, 7mm, 8mm
Automation:	Cruise controlled speed
Air Supply:	15 Bar max working pressure complete with suitable air conditioning (drying)
Electrical Supply:	2x DEWALT® 2AH Battery packs and battery charger supplied as standard.
Control:	manual trigger operated speed control, speed and torque limit settable
Machine size:	H: 290mm D: 110mm x 155mm (300mm including reel holder) 1.8kg with supplied battery installed
Case size:	H: 206mm D: 428mm x 524mm.
Environment:	0°C to +50°C (Usage) -10°C to +70°C (Storage)

5. MAJOR ELEMENTS





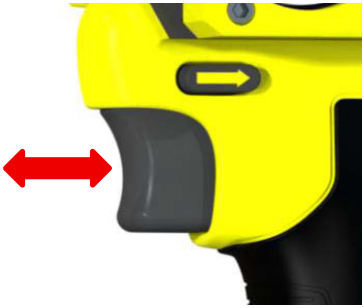
CONTROLS

On/Off switch, slide right to power unit on. Unit should be powered off when not in use or stored to prevent battery drain.

Selection Encoder knob, whilst unit is idle, turn clockwise/anticlockwise to adjust setting, short press to cycle between settings, long press to reset meter counter.

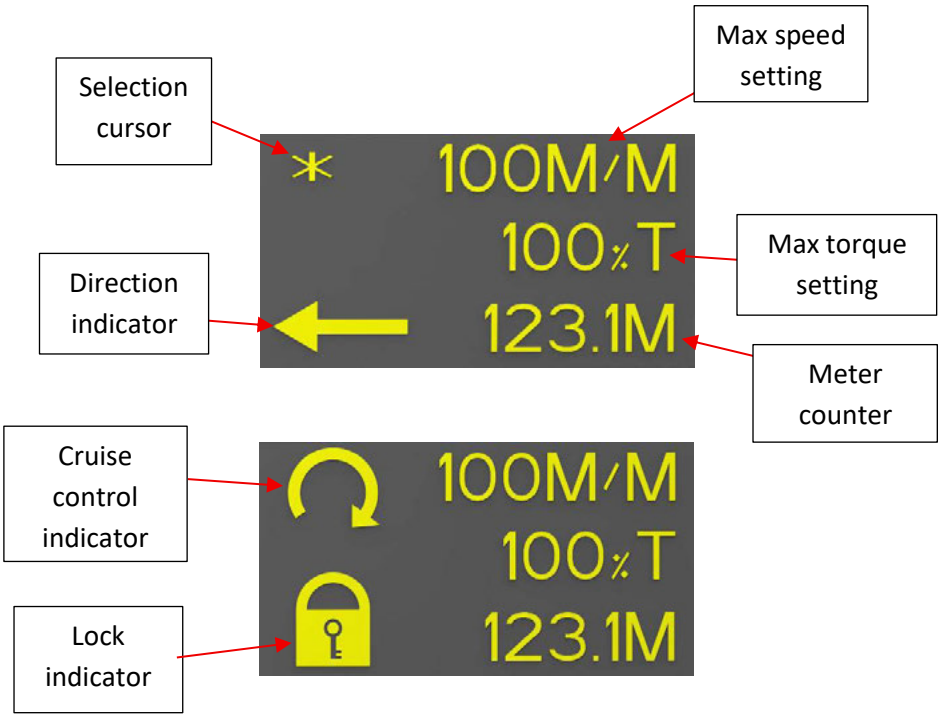
Whilst unit is running press to engage cruise control, release trigger, the unit will run at the set speed until it receives an input from the user either by pressing the encoder knob again or actuating the trigger.

Trigger, press to increase speed up to preset speed limit.



Direction selection switch, press to select machine pushing direction. Switch centre position will lock the trigger and stop the unit from operating the drive wheels.

DISPLAY SCREEN



CARRY CASE LAYOUT

6. OPERATING PROCEDURE

IT IS IMPERATIVE THAT ALL PERSONS USING, OPERATING OR MAINTAINING THIS FIBRE BLOWING MACHINE:

- *HAVE RECEIVED COMPREHENSIVE TRAINING IN THE USE OF THIS MACHINE*
- *ARE COMPETENT TO USE IT,*
- *AUTHORISED TO USE IT AND*
- *HAVE READ AND UNDERSTOOD THIS MANUAL*

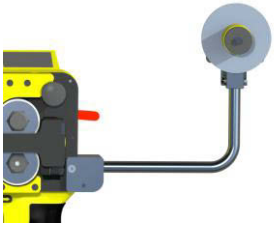
CBS PRODUCTS LTD. CANNOT BE HELD RESPONSIBLE FOR MISUSE OF THIS EQUIPMENT.

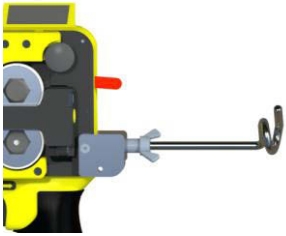
SETTING UP THE TUBE AND FIBRE

To begin an installation first we must connect the tube and fit the fibre through the machine. A selection of changeable parts is available to suit different sized fibre. Please consult section 17 for a list of available parts.

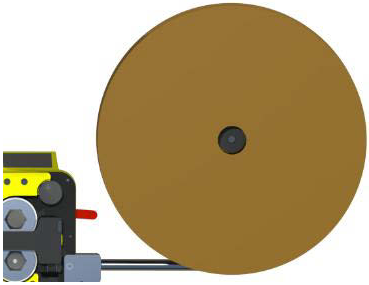
Firstly, it is beneficial and recommended to install a fibre blowing bead onto the end of the fibre. Place the bead over the end of the fibre and use a small set of pliers to gently crimp it in place. Try to deform the bead as little as possible whilst holding it in place.

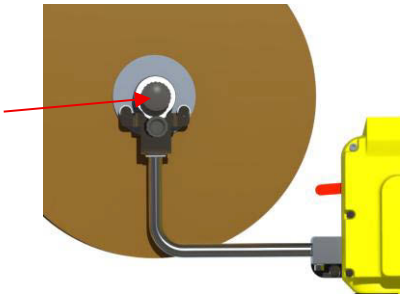
Fit either the reel holder or the pigtail to the machine depending on whether you are using fibre from a reel or a pan.



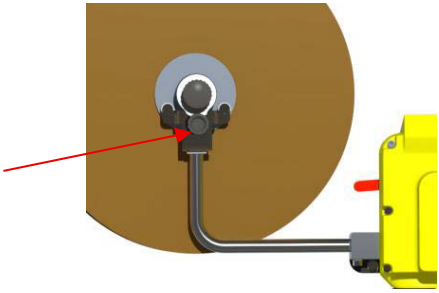


If the reel holder is being used, ensure the fibre reel is fitted tightly over the clamp rubber and the clamping screw is tightened via the thumb nut, if necessary, use the provided reel spacer on the inside of the reel to ensure a good fit.



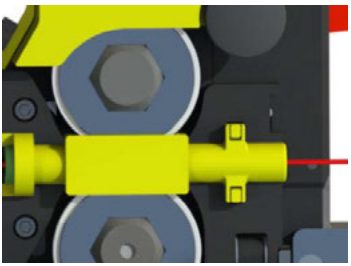


Reel back-tension can be adjusted using the fibre reel brake thumb screw on the reel holder, it should be set just tight enough to stop the reel over-running when the drive wheels stop.

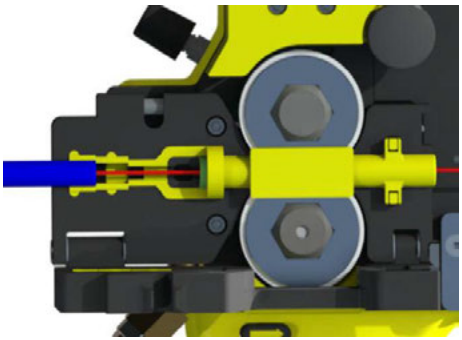


Select the appropriate size of fibre seal and fibre guide, the fibre should fit with very little resistance, fit the seal to the fibre and insert into rear fibre guide, fit the fibre guide halves together ensuring fibre moves freely through guide.

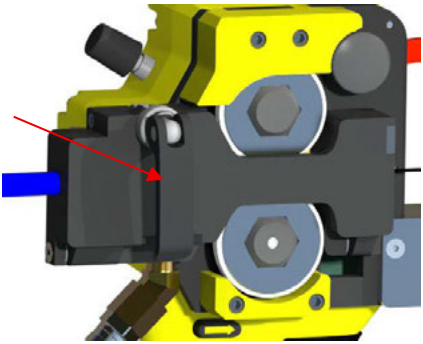
Ensure the drive wheels are in the open position by lifting the release arm upwards until the plunger clicks into place, insert the fibre guide into the airbox.



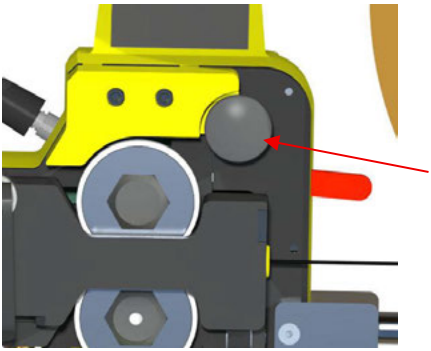
Locate the tube into the clamping teeth and seal, the Storm airbox has 3 tube OD sizes available, 8mm, 7mm, 5mm. push a short amount of fibre into tube end before closing the airbox.



Close the airbox and clamp securely using the quick release lever pictured.



Lift the clamping lever and pull the release plunger pictured, lower the lever gently to clamp the tyres onto the fibre.



When preforming an installation of a fibre cable it is important to always ensure the integrity of the fibre during the installation, it is crucial a crash test is performed. This test will provide the installer with the maximum torque setting for the machine such that if the fibre hits a blockage at speed, the fibre will not be damaged.

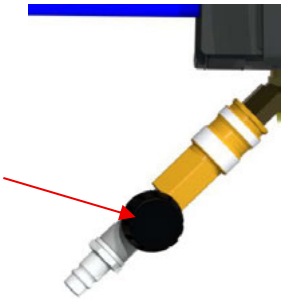
DETERMINING MAXIMUM TORQUE SETTING

- Set the machine up as per above.
- Instead of attaching to the installation route use a 5m length of the same tube. Use a stop end kit to block the end of the tube.
- Set the speed to the maximum installation speed to be used.
- Set the torque to c.10%.
- Press and hold the trigger the machine will now accelerate to the speed setting.
- When the fibre hits the end stop the machine will either stop and leave the fibre undamaged or continue to install and break the fibre, in either case release the trigger to prevent the machine from trying to continue the install. Reduce or increase the torque setting as appropriate for the outcome of the previous test and perform the test again, through several iterations a torque setting just below the value which would break the fibre should become apparent.

FIBRE INSTALLATION

Once the machine is setup following the procedure outlined perviously, turn the machine on using the power switch located on the battery housing.

Attach needle valve Assy to air fitting and Air hose to needle valve Assy.



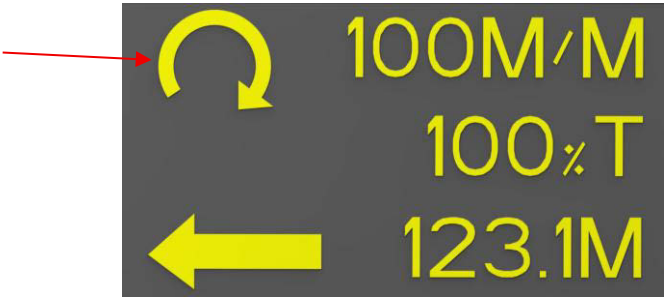
select the maximum Speed and Torque settings appropriate for the fibre being installed. Select direction with direction selection switch.

Start the installation by slowly pulling the trigger to build up speed, do not introduce air until at least 15-20m of fibre has entered the tube, as resistance increases it will be necessary to introduce airflow in to the tube, slowly introduce an amount of air using the knob located on the needle valve Assy until the fibre install speed is fairly consistent.

Air should be added in stages, using to much air to quickly will likely reduce blowing efficiency and decrease maximum distance achievable. Once the speed starts to slow or the machine sounds laboured introduce more air and repeat.

DO NOT EXCEED THE MAXIMUM SYSTEM PRESSURE OF 15 BAR OR OPEN THE MACHINE WHEN UNDER PRESSURE, SERIOUS INJURY MAY RESULT.

Cruise control may be used to take over the trigger control from the operator, pull the trigger and hold at the desired speed, a short press on the trigger will engage cruise control which will be indicated by the symbol on the display screen being present.



The operator may now release the trigger, and the machine will carry on operating at the same preset. To disengage cruise control, the operator may press the encoder button, and the machine will slow to a stop, alternatively the operator can pull the trigger and take back control of the speed.

7. MAINTENANCE

The CBS Storm Blown Fibre Blowing Machine has been designed to give reliable, trouble free service over long periods. The machine requires no sophisticated maintenance procedures; simple common-sense checks and precautions are all that are needed.
The main source of breakdown and/or malfunction of a machine being used outdoors is contamination by the elements, this contamination may be introduced into the machine in a number of different ways.

The most likely may be mud, dust or other contaminants carried into the machine on the fibre. However, glass beads from EPFU fibre may also contaminate the machine.

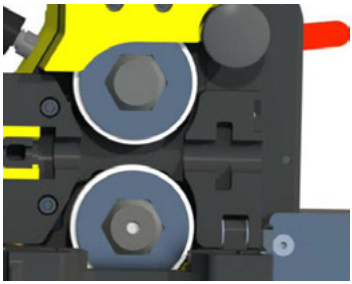
The machine may be set down on a muddy surface or be splashed by road going vehicles when it is being used by the roadside.

The machine should be returned to the manufacturer if within the UK (or an approved service agent outside of the UK, please see website for additional details) after every 100 kilometres use (or at intervals of 12 months) for a major service. The service will include the following.

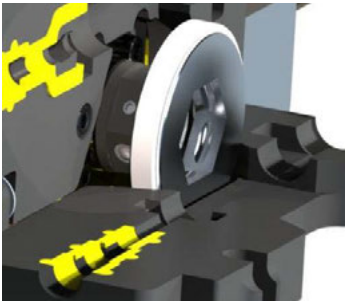
- Strip down the machine.
- Clean and inspect all parts for damage, replace as necessary.
- Check all screws and fixings for damage, replace as necessary.
- Check all bearings for smooth running, replace as necessary.
- Check all electrical connections for continuity and damage, remake connections and/or replace connectors as necessary.
- Rebuild the machine, to current build standard.
- Test.

8. PROCEDURE FOR REPLACING TYRES

The storm machine has been designed to be toolless for everyday maintenance and operation.



to replace the drive tyres, remove the drive wheels from the hubs by pulling the wheel outwards away from the main unit.



once removed from the unit gently stretch the tyres off the outer edge of the hub to replace. The wheels can be refitted either way round and to either hub.

9. TROUBLESHOOTING GUIDE

- Air loss from the Storm machine is greater than normal:
    - Ensure the correct changeable parts are fitted for the fibre being used.
    - Check airbox duct seal; replace if necessary.

- Little or no airflow is exiting the tube:
    - Check compressor output (refer to manufacturers handbook)
    - Installation route may be too complex for installation.
    - Route length is too long.
    - There may be a partial blockage in the tube.
    - The tube may be crushed somewhere along the route.

- Fibre 'rides' out from between the drive wheels:
    - Different sized tyres may be needed for improved guidance – follow section 10 for details on changing tyres.
    - Incorrect fibre guide fitted
    - Incorrect seal fitted

- Fibre installation speed is very slow:
    - Static build up – switch the compressor from dry air to by-pass mode (if available).
    - Moisture build up – ensure compressor is running in dry air mode or check dryer operation.

- Fibre buckles often:
    - Installation route may be too complex for installation.
    - The tube route may be damaged/blocked.
    - Increase air pressure if possible.
    - Manually slow the installation speed slightly.

- Machine won't run:
    - Check battery charge state.

- No drive/Drive wheel slipping:
    - Different tyres may be needed for improved grip – follow section 8 for details on changing tyres.
    - Tyres may be excessively worn – install new tyres.

10. MONTHLY SERVICE – CHECK LIST

This section is included in the manual for your convenience, there follows a list of suggested checks, it is recommended that these checks be carried out on a regular basis, depending on use. Monthly checks are convenient; a few minutes can be set aside on the same day of each month to complete these simple checks.

- Check the carry case, ensure all tools and interchangeable parts are present, clean and ready for use.
- Clean the outside of the machine; take care not to damage the display screen, buttons, dials.
- Inspect air and electrical connections for damage.
- Inspect drive tyres for wear; replace if necessary.
- Check quantities of consumable items such as blowing beads, fibre guides, and cable seals.

11. SERVICE HISTORY RECORD

Service no	Date	Carried out by	Record of service/repair

12. CHANGEABLE PARTS AND ACCESSORIES

CHANGEABLE PARTS

Description	Order Code
Cable Guide X Sizes	C-1850-AS1015-XX
Cable seals X Sizes	C-1850-CS-XX

There are various sizes of fibre guide and seals available, please ask your local sales rep for details.

ACCESSORIES

Description	Order Code
5mm Clear Tube Connector (Pack of 10)	C-CON-NC621
Air Stop End Kit	C-1400-ASEK
Blown Fibre Beads Large (8/12 Fibre) (Pack of 25)	C-1400-BFB-12-F
Blown Fibre Beads Small (2/4 Fibre) (Pack of 25)	C-1400-BFB-4-F

Other sizes of clear tube connector are available. Air flow meter can be used to check route integrity. Please contact the CBS Products sales office to order or enquire about parts not listed; always quoting the machine type and serial number.

Air Stop End Kit

Blown Fibre Beads

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E-Mail: sales@cbsproducts.com
Website: www.cbsproducts.com

DECLARATION OF CONFORMITY

UKCA – Declaration of Conformity according to;

Supply of Machinery Safety Regulations 2008
Electromagnetic Compatibility Regulations 2016
Restriction of Hazardous Substances Regulations 2012

We, **CBS Products (KT) Ltd**, located at **Pillings Road, Rutland, LE15 6QF, United Kingdom**, declare in exclusive responsibility that the **C-1850** meets the essential health and safety requirements of the above mentioned regulations.
To ensure presumption of conformity, the product has been assessed for compliance with the following directives and standards either in part or in full.

Regulation	Requirements and / or Standards applied
Supply of machinery regulations 2008	EN 60204-1: 2018, EN ISO 12100: 2010
Electromagnetic Compatibility regulations 2016	EN 61326-1: 2021, EN 61000-3-2: 2019, EN 61000-3-3: 2013
RoHS regulations 2012	EN 63000: 2018

TCF reference no. : C-1850-TF

Name: Andrew Sibun

Title: Technical Manager

Date: 17/02/2026

Signature:

DECLARATION OF CONFORMITY

EC – Declaration of Conformity according to;

Machinery Directive 2006/42/EC
Electromagnetic Compatibility Directive 2014/30/EU
Restriction of Hazardous Substances Directive 2011 / 65 / EU

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Machinery Directive 2006/42/EC	EN 60204-1: 2018, EN ISO 12100: 2010
Electromagnetic Compatibility Directive 2014/30/EU	EN 61326-1: 2021, EN 61000-3-2: 2019, EN 61000-3-3: 2013
RoHS Directive 2011/65/EU	EN 63000: 2018

TCF reference no. : C-1850-TF

Name: Andrew Sibun

Title: Technical Manager

Date: 17/02/2026

Signature:

CE