

USER'S GUIDE & SAFETY MANUAL

Gulfstream™ 300QC Micro Fiber Blower



ISO 9001:2008
CERTIFIED



Important Safety Notice

Read and understand all procedures and safety instructions before using the Gulfstream 300QC Micro Fiber Blower. Observe all safety information on this page and note specific safety requirements as explained by procedures in this manual. Failure to follow these instructions could result in serious personal injury or death.

ADVERTENCIA:

Favor de leer y comprender todas las instrucciones de operación y seguridad antes de usar la máquina. Si Ud. no comprende las instrucciones favor de consultarle a su jefe.



 !Caution: Noise will exceed 70db

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If you have questions on:

SAFETY - OPERATIONS - APPLICATIONS

CALL 1-800-533-2077

EC Declaration of Conformity



Manufacturers Name: Condux International, Inc
Manufacturers' Address: 145 Kingswood Drive
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Declare that the machinery described below conforms to applicable health and safety requirements of Parts 1 and 2.2 of Annex I of Machinery Directive 2006/42/EC. Confidential technical documentation has been compiled as described in Annex VII Part A of Machinery Directive 2006/42/EC and is available to European national authorities on written request. If a request is received documentation will be transmitted either electronically or by post.


Description: Gulfstream 150/200/250/300 Micro Fibre Blower
Model Type: Premium
Sizes: Cable size and operating speed range
Serial Number: (As applicable)

The following standards have either been complied with in part or in full or used for reference as relevant:

EN ISO 12100: 2006	Safety of machinery	- Safety of machinery - General principles for design - Risk assessment and risk reduction
EN 60204-1:2006	Safety of machinery	- Electrical equipment of machines - Part 1: General requirements
EN ISO 13849-1:2008	Safety of machinery	- Safety Related Parts of Control Systems - Part 1 General Principals for Design
EN 614-1:2006+A1:2009	Safety of machinery	- Ergonomic design principles - Part 1: Terminology and general principles
EN 614-2:2000+A1:2008	Safety of machinery	- Ergonomic design principles - Part 2: Interactions between the design of machinery and work tasks
EN 953:1997+A1:2009	Safety of machinery	- General requirements for the design and construction of guards.
ENISO 11202/A1 1997	Noise	- Measurement of emission sound pressure levels at a workstation and at other specified positions - Survey method in situ.
EN 61000-6-4:2007	EMC	- Generic standards - Emission standard for industrial environments.

Full Name of responsible person and place of signing

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Signature 

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General Information

1.

The Gulfstream 300QC is a unique device for installing fiber optic cable directly into conduit. The Gulfstream 300QC is comprised of an air block and a tractor drive that, when combined with an air compressor and a power supply, will propel fiber optic cable into an unobstructed, unoccupied, airtight conduit run at speeds of up to 150 ft/min (0-45m/min). While not required, a cable carrier or cable tip may be placed at the front end of the cable (Not Supplied).

The Gulfstream 300QC greatly reduces pulling stress on the cable. The adjustable push force of the tractor drive will stall the motor if the cable hits an obstruction.

The Gulfstream 300QC comes standard with a Digital LCD Meter Display, Power Supply, Duct Packs, Seal Kits in a hard side foam filled case with a tripod that is packaged separately.

These operating instructions contain a full description of the Gulfstream 300QC, which has been designed for the purpose of feeding fiber cable through conduits of uniform cross section. The conduit must have previously been installed underground or overhead to receive the fiber optic cable and must be of sufficient length on exit to be received by the machine. The conduit must be of material with sufficient compression strength for it to be adequately sealed in the duct clamps of the machine. The conduit must be airtight up to a pressure of 205psi (15bar). For this purpose compression type couplers must be used. Conduit(s) sizes range from 5mm-18mm. While fiber optic cable(s) range from 2.5mm-8mm for the GS300QC.

The Gulfstream 300QC consists of an air block that is made in two halves that clamp together around the duct. The duct clamps hold a seal that the fiber optic cable is fed through before entering the duct. The duct clamps and cable seals can be interchanged to accommodate different conduit and cable sizes. The conduit is mechanically clamped between the duct clamps at the exit of the air block, preventing movement in any direction. Seals conform around the conduit when clamped.

The fiber optic cable is fed through the duct by a combined pulling/pushing force. The pulling force is achieved when pressurized air is fed into the air block and forced into the duct, generating drag on the fiber cable from airflow passing over it. The pushing force is created by engaging the tractor drive system. As the tractor drive feeds fiber cable into the duct, drag force is created by the airflow. The fiber optic cable floats in the conduit, minimizing any resistance to being pushed in by the tractor drive.

The use of the Gulfstream 300QC for operations other than those described in this manual are considered dangerous and are discouraged. Use of this machine for work other than what is intended, relieves the manufacturer from any responsibility, civil or penal. The manufacturer's responsibility ceases and the warranty is voided when one of the following occurs:

- a. When Gulfstream 300QC is used for purposes other than what is detailed in this manual.
- b. Tampering and/or modifications carried out without written approval of the manufacturer.
- c. Not using original manufactured replacement parts.
- d. Poor maintenance.
- e. Not using supplied safety devices or equipment.
- f. Connection of this unit to machines and/or parts not produced or authorized in writing by the manufacturer.
- g. The Gulfstream 300QC should not be used to install any cable other than fiber optic cable specified within the range outlined in this instruction manual.

Condux is not responsible for injuries incurred as a result of improper use of the Gulfstream 300QC.

2.

Gulfstream 300QC

A. CONDITION OF USE:

1. Temperature from 21° F (-6° C) to 110° F (+43° C)
2. Humidity from 25% to 95%
3. Weather conditions relevant to working conditions
4. Natural and/or artificial lighting of the work site, minimum 200 lux.

B. AIR COMPRESSOR REQUIREMENTS

1. Pneumatic Pressure: 205 psi (15 bar) Maximum
2. Required Air Flow: 15 - 50 CFM (.42 - 1.42m³/min)
3. Air Hose fittings: 3/8" Industrial Quick Connect
4. Air Hose fittings: 3/8" European Quick Connect

C. OPERATIONAL CAPACITIES

1. Pushing Force: 30lbs (134N) Max
2. Pushing Speed: 150 ft/min (45m/min) Maximum
3. Cable Sizes: 2.5mm to 8mm
4. Conduit Sizes: 5mm, 6mm, 7mm, 8mm, 8.5mm, 10mm, 12mm, 12.7mm (1/2"), 14mm, 16mm, 18mm

D. ELECTRICAL REQUIREMENTS:

1. Power Requirements: 48Volt DC @ amp Max
2. Power Consumption: 180 Watts Maximum
3. Power Connection: AC Power Supply
4. Optional Battery Clip

E. PHYSICAL SPECIFICATIONS

1. Height 5.74" (145.8 mm)
2. Length 11.17" (283.7 mm)
3. Width 8" (203.2 mm)
4. Weight 8.9lbs. (4.0 Kg)

F. TRACTOR DRIVE SPECIFICATIONS

1. Pushing Force: 30lbs (134N) Max Push Force
2. Pushing Speed: 150 ft/min (45 m/min) Maximum
3. Maximum Clamping Force: <12lbf/in (2.1 N/mm)
4. Constant cable center line design
5. Forward, Reverse, E-stop
6. Drive belts with molded urethane cover profiled for cable 2.5mm to 8mm
7. Slide guards

G. CONDUIT COUPLING REQUIREMENTS

1. Must withstand maximum air pressure of 205 psi (15bar)
2. Must withstand axial loading and vibration
3. Must be a compression type coupler
4. Conduit ends must be cut off squarely and deburred
5. Conduit must be fully seated into the coupler
6. Couplers should be installed in a straight section of conduit
7. Must be same size conduit

Safe Operating Practices

3.

Read and understand all procedures and safety instructions before using the Gulfstream 300QC. Observe all safety information on this page and note specific safety requirements as explained by procedures called out in this manual. Failure to follow these instructions could result in serious personal injury, property damage or death.

A. WORK AREA SAFETY

1. Wear personal protective equipment: hard hat, safety glasses, safety shoes, and light leather work gloves. (OSHA approved or personal protective equipment directive 89/686/EEC compliant)
2. Wear close fitting clothing to avoid clothing getting trapped in tractor drive.
3. Keep long hair tucked back and refrain from wearing any jewelry.
4. The safe operation of this equipment requires that the operators be on stable footing.
5. Stay clear of cables or lines under tension.
6. Stay clear of pressurized line and conduit.
7. Use the blower only for its intended purpose.
8. Do not place cable reel too close to unit. Place the reel far enough away from the unit to ensure proper control.
9. Keep hands away from tractor drive while blower is in operation.

B. PNEUMATIC DEVICES

The Gulfstream 300QC is a pneumatic device, using pressurized air to project cable at high velocities. Please observe the following precautions when operating the blower:

1. Forced air creates flying debris. Always wear personal protective equipment. Severe personal injury could result.
2. Ensure no personnel are in the destination access vault during the blowing operation. Severe personal injury could result.

C. ELECTRICAL DEVICES

The motor, controller, and digital display are electrical devices. Electrical shock hazards exist that could result in severe personal injury or death. Observe the following precautions to avoid electrical hazards:

- 1. Do not operate in or near water. This includes setting the unit on a wet surface or exposing to rain.**
2. Do not operate when there is lightning or extreme weather. An earth stake driven into the ground as added protection is recommended if there is any chance of extreme weather developing.
3. Do not remove the digital display cover. There are no user-serviceable parts inside. Refer servicing to qualified service personnel.
4. The drive switch should be in the neutral "center" position before connecting or disconnecting any cords.

D. WORKING AT NIGHT REQUIREMENTS

1. Operator must provide portable lighting that achieves a light intensity of at least 200 Lux (Lumens/m²)

Misuse will void warranty

Unpacking the Box

4.

Gulfstream 300QC

A. BLOWER COMPONENTS

Each Gulfstream 300QC STD Kit contains the following items:

GS300QC Micro Fiber Blower

Power Supply

Tripod

Tripod Adapter

Hose Assembly

O-ring Kit

Hex Key Set

Extra Flat Belt

Large Groove Orange Belt

Duct Clamp Insert Assemblies:

(5mm; 6mm; 7mm; 8mm; 8.5mm; 10mm; 12mm; 12.7mm; 14mm; 16mm; 18mm)

Cable Seals Kit:

(2.5mm; 3.0mm; 3.5mm; 4.0mm; 4.5mm; 5.0mm; 5.5mm; 6.0mm; 6.5mm; 7.0mm;
7.5mm; 8.0mm; Blank seal)

Cable Guide:

(3-4mm)

(4-7mm)

(7-10mm)

NOTE: If any parts are missing: please contact your Condux representative or call Condux International at 1-800-533-2077 (USA or CANADA), or 1-507-387-6576.

Set Up the Blower

5.

This manual contains setup and operating instructions for the Gulfstream 300QC micro fiber blower.

⚠ WARNING: DO NOT CONNECT POWER SUPPLY UNTIL SETUP IS COMPLETE.

A. DETERMINE FIBER SIZE

Determine fiber size to be installed. Utilize the flat orange belt and the large groove orange belt (that are supplied with the machine) for fiber sizes ranging from 2.5mm - 8mm. For lubricated or wet fiber, use 08783878 (Fat large groove orange belts), which must be ordered separately.

B. SELECT CABLE SEAL & DUCT PACK

View parts manual for Cable Seals and Duct Packs.

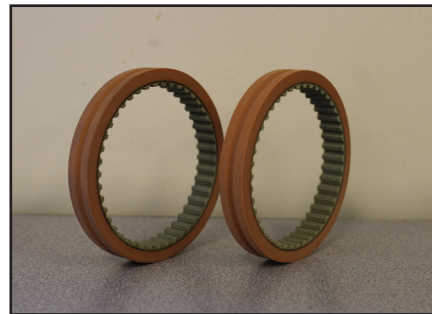
Note: The bottom half of the duct pack is designated by a small hole on the outside of the unit.

C. DETERMINE IF SPECIALTY BELTS ARE NEEDED

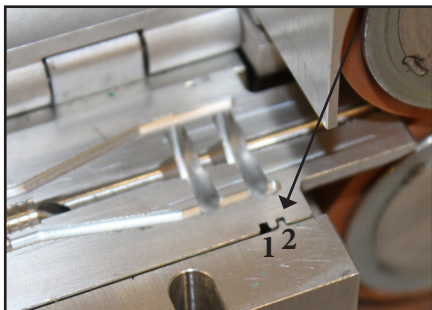
- If lubrication has been used, or if fiber is wet, specialty belts will be needed for application
- Specialty belts are optional and are NOT included in the kits

Part Number:

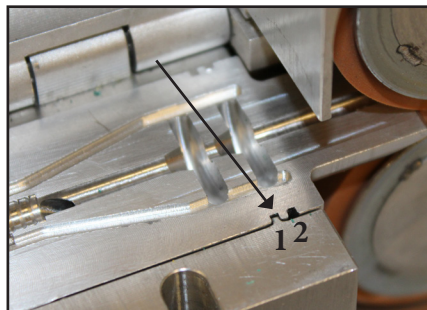
1. 08783878 - Wet Fat Belt with Groove (Orange)
Qty Two Required



When using thick belts, duct packs need to be placed in the second groove (pictured below).



When using regular belts, duct packs need to be placed in the first groove (pictured below).



Choose the correct cable seal and duct pack for the particular application according to duct and cable size.

D. INSTALL CABLE SEAL AND MICROFIBER INTO MICRODUCT

- Place cable seal over the micro fiber. (See Figure 1)
- Place O-rings around duct (See figure 2)
- Position the micro duct properly into the bottom half of the duct pack. Ensure that O-Rings are seated into the grooves provided in the duct pack. (See figure 3)

Note: The bottom half of the duct pack is designated by a small hole on the outside of the unit.

- Ensure there is adequate length of micro duct available to avoid unnecessary strain on the duct.
- Place cable and seal into duct pack, then push cable into duct. (See figure 4)
- Once the micro duct is in place, secure the configuration by installing the top half of the duct pack and pressing firmly together. (See Figure 5)

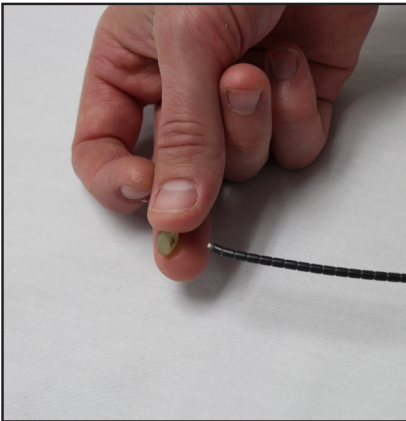


Figure 1. Install Micro Fiber into Cable Seal

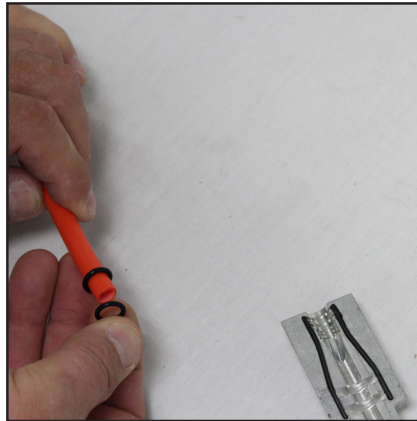


Figure 2. Install O-rings Around the Micro Duct

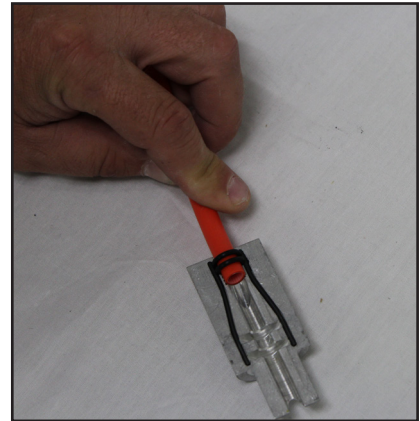


Figure 3. Place Duct in the Bottom Half of the Duct Pack

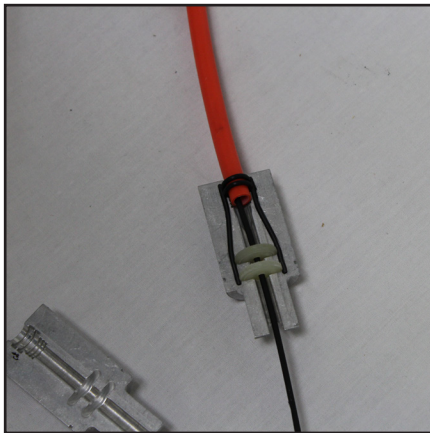


Figure 4. Position Micro Duct Properly in Duct Pack

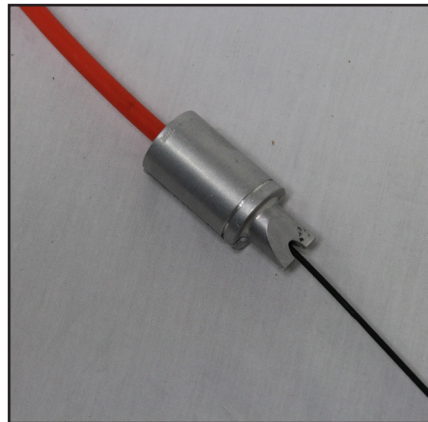


Figure 5. Install Top Half of Duct Pack and Press Together

E. INSTALL DUCT & FIBER IN BLOWER

Loosen the knob on the Air Block assembly. Open the air block cover. Insert the duct pack assembly into the air block as shown. (See figure 6). Close air block cover and hand tighten knob to secure. (See figure 7).

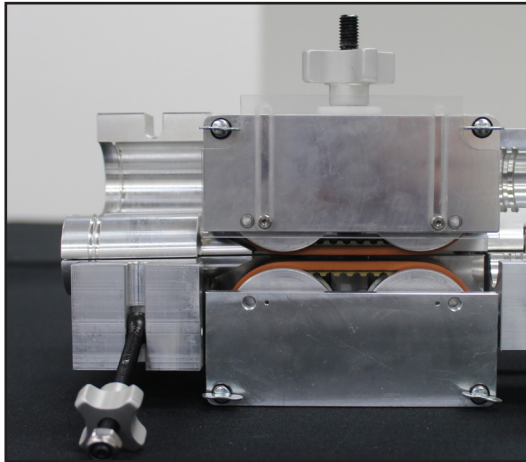


Figure 6. Insert Duct Pack Assembly into Air Block

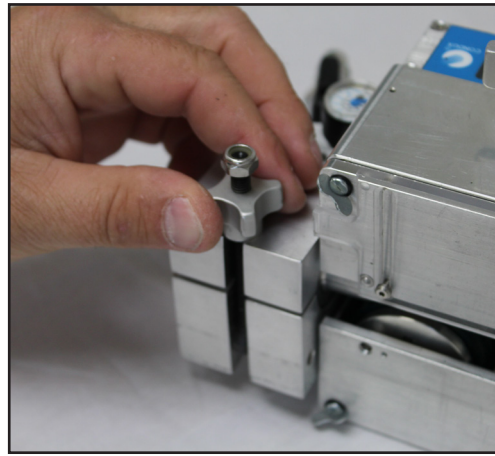


Figure 7. Tighten Knob

*ENSURE THAT FIBER CAN BE MOVED THROUGH SEALS AFTER TIGHTENING THE KNOB.
IF FIBER DOES NOT MOVE EASILY, INCREASE SEAL SIZE

F. INSTALL GUIDE TUBE

Select proper cable Guide Tube for entry of fiber.

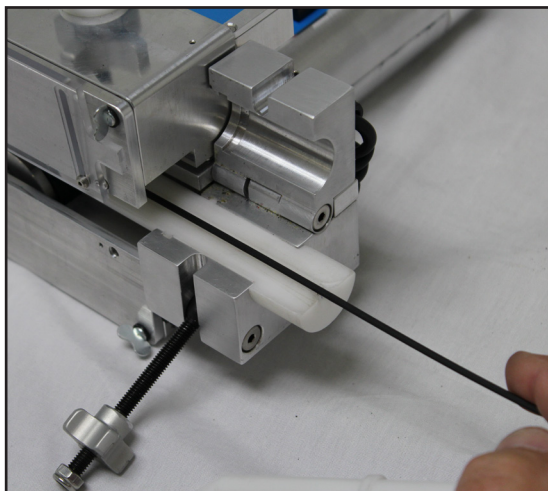


Figure 8. Insert lower half of Guide Tube

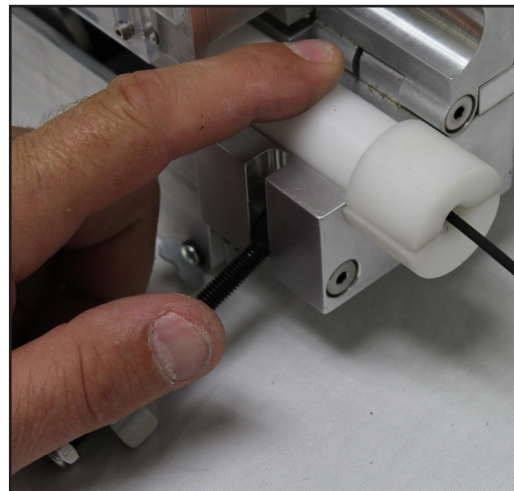


Figure 9. Insert upper half of Guide Tube

Close and tighten knob. Ensure fiber moves through guides without interference before beginning to blow fiber.

G. TIGHTEN TRACTOR DRIVE

Feed the micro fiber between tractor drive and through the rear fiber guide. (See figure 8). Tighten tractor drive using the down screw knob to ensure even pressure on the micro fiber. Tighten down so that the belts no longer slip at the push force setting determined in the crash test procedure (see Chapter 6). Do not over tighten.

Note the incremental shaft value for future reference of the specific fiber and duct clamp setting (see figure 10).

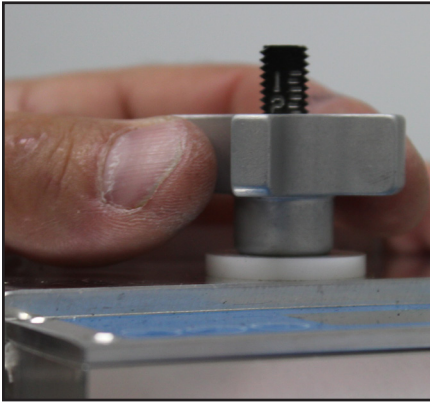


Figure 10. Tighten Tractor Drive

H. CONNECT POWER TO BLOWER

If using the AC power supply that comes with the GS300QC kit (Figure 12), the correct country plug will need to be installed prior to use (Figure 13). A 1000w generator or wall outlet will also be necessary.

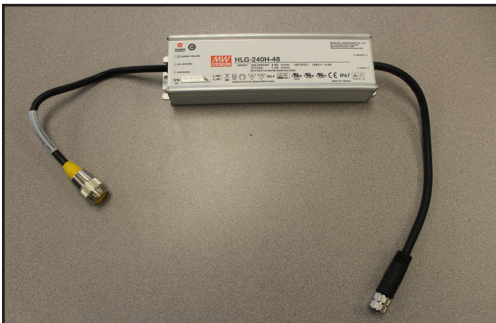


Figure 12. AC Power Supply

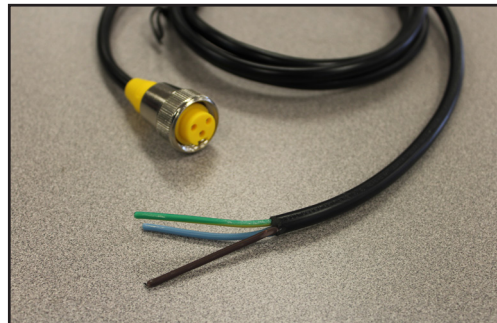


Figure 13. Connect Correct Plug

Note: If choosing the optional battery adapter, part number 08783670 (Figures 14-16), follow the instructions below:

NOTE: batteries and chargers need to be supplied by the user, requirements below

Batteries:

US - DeWalt DL9360

INTL - DeWalt DCB360

Charger:

US - DeWalt DC9000

INTL - DeWalt DE9000



Figure 14. Attach Battery Pack Cable to Blower Unit



Figure 15. Connect to battery adapter



Figure 16. Connect Battery

I. CONNECT AIR COMPRESSOR

NOTE: Ensure the air control valve is off before connecting the air hose.

Attach the air compressor hose to the air compressor. Then connect the compressor hose to the blower unit (See figure 17). The unit uses a standard quick connect air compressor coupling or (EU coupling).

NOTE: Route all hoses properly to prevent tripping hazard (See figure 17A).

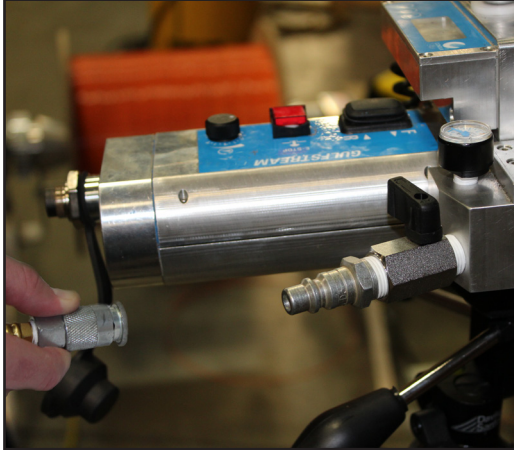


Figure 17. Connect Air Compressor Hose

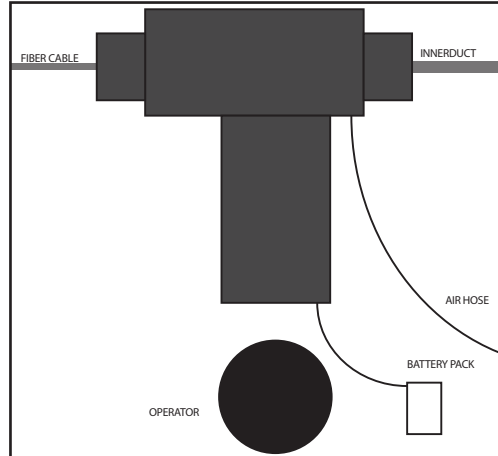


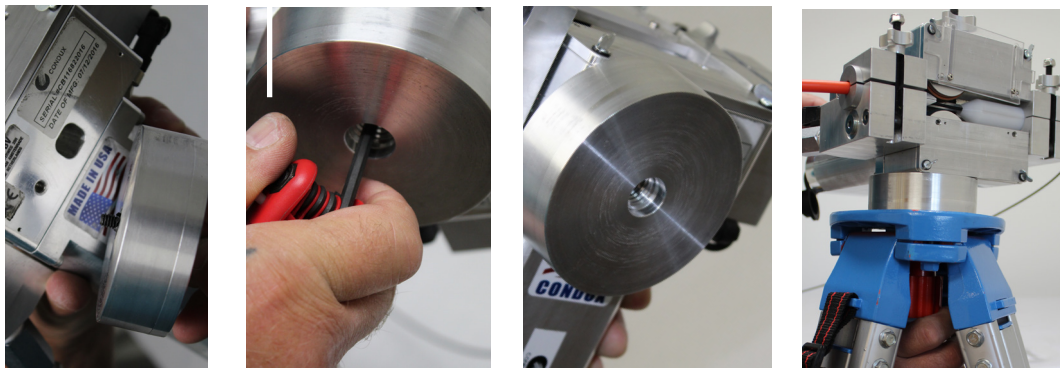
Figure 17A. Typical Setup

⚠ !WARNING: To avoid creating a trip hazard, make sure the air hose is out of the way and secured to a stable object.

The fiber cable reel should be placed 6ft (2m) or more from the Gulfstream 300QC. The Gulfstream 300QC must be positioned in-line between the fiber cable to be installed and the micro duct. The fiber should not enter the Gulfstream 300QC at an angle of more than 10 degrees from the intended axis of travel.

J. MOUNTING THE GULFSTREAM 300QC

1. Mount the Gulfstream 300QC to the included tripod as shown below (Figures 18-21).
2. If utilization of the included tripod is not desired, the Gulfstream 300QC must be placed on a flat surface capable of supporting the weight of the Gulfstream and at a working height of 28 to 37 inches (71 to 94 cm) and close to the height of the fiber to be installed into the conduit. The mounting surface should not exceed 10 degrees off the horizontal plane. Continuous handheld operation is not recommended.



Figures 18-21: Attaching GS300QC to the stand

K. PANEL LAYOUT (Figure 22)

1. Button Descriptions

- a. SEL/RES: Select and Reset
- b. Units: Toggles between Imperial and Metric Units
- c. TC: Torque Control

2. Display

- a. Screen will display distance when powered on. Hold SEL/RES button for 2-3 seconds to reset the counter when distance is displayed.
- b. Press SEL/RES to display speed.
- c. Press SEL/RES again to toggle between speed and distance.
- d. Press SEL/RES again to see life distance counter (will never restart at 0).
- e. Press SEL/RES again for torque. Use the "Units" and "TC" buttons to increase or decrease torque as needed.

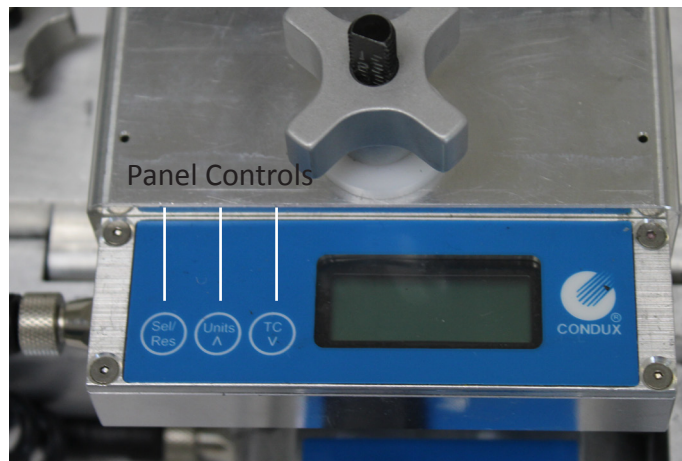


Figure 22. Panel Layout

Crash Test

6.

Cable Crash Testing is a very quick and easy step to be completed before attempting the installation of cable with the Gulfstream 300QC. This test is necessary to set the electronic push force control (torque) of the motor below the point that the Gulfstream 300QC may cause cable damage as a result of over pushing or encountering an obstruction in the sub-duct system.

Every cable has different pushing values and these values vary depending on duct I.D and the make up of the fiber optic cable.

 **!WARNING: Always wear protective equipment: hard hat, safety glasses, safety shoes and work gloves.**



NOTE: The electronic push force adjustment may have an effect on the installation speed of the blowing unit on smaller cable sizes, dependent on the stiffness of the fiber. This is an adjustment to prevent damage to the cable that can be caused by excessive pushing force.

IMPORTANT: For the Crash Test to work properly, use the same size cable and duct that will be used for the job.

Crash Test 1: For rigid fiber where push force can be set within the existing limits of the Gulfstream 300QC.

Set the electronic push force adjustment on the Gulfstream 300QC using the following procedure:

- a. Attach 12' (4 m) of duct to the Gulfstream 300QC with 15' (5 m) of fiber optic cable using the appropriate duct pack and cable seal.
- b. Set the adjustable push force to about half way of the maximum (15lbs or 67N).
- c. Block the end of the test length of duct.
- d. Install cable slowly by hand until it reaches the end of the duct
- e. Place a mark on the Cable about 1" (25 mm) behind the **Rear Guide**.
- f. From the **Rear Guide**, pull out approximately 8' (2.4 m) of cable from the blower.
- g. Lower the **Tractor Drive**. ***DO NOT OVER TIGHTEN**
- h. Turn on the Tractor Drive in the Forward Direction and allow cable to move at full speed until it stops. Note the push force setting and down pressure setting.
- i. If the motor stalls without fiber folding Increase push force slightly using the torque setting on the display board.
- j. Repeat steps "F" through "I" until the cable folds over or force settings reach maximum push. If the tractor drive belt is slipping on the cable, tighten the tractor drive down screw and repeat steps "F" through "I". You will notice cable fold-over because the line drawn on the cable will disappear inside the machine or duct.
- k. Reduce push force slightly if cable fold-over has occurred and test once more to ensure no fiber fold-over or damage occurs at this setting. This will be maximum push force setting and down force setting for this application.
- l. Reset the speed to the minimum and remove test fiber and duct.
- m. Test complete.

Crash Test 2: For non-rigid fiber where push force cannot be set low enough to protect fiber and/or obtain adequate installation speed.

- a. Set push force to the lowest possible setting that will allow for a desirable installation speed (if push force set to 0, there is no speed – adequate push force is required to reach max speed of the motor).
- b. Insert the fiber and seal inside the duct pack as it would be for the actual installation.
- c. Install a 4m (2') test length of duct into the Gulfstream 300QC duct clamp and insert duct clamp into the air block with 5m (15') of fiber optic cable using the appropriate duct pack and cable seal.
- d. Block the end of the test length of duct.
- e. Tighten down wheels on to the fiber with the Tractor Drive engaged in the forward direction until the fiber starts to install.
- f. Ram the fiber into the blocked end of the duct.
- g. Wheel slippage should occur on the fiber before the fiber folds over.
- h. Tighten down wheels on the fiber a half turn.
- i. Repeat step "f" through "h" until the fiber folds. This is your push force slip limit.
- j. Loosen up the wheels on the fiber a quarter turn and perform test once more to confirm no fold over has occurred. **KEEP THIS SETTING APPLIED TO THE FIBER FOR ACTUAL INSTALLATION!**
- k. Swap out test length of duct with actual installation duct and proceed to operating the Gulfstream™ 300QC.
- l. Test Complete

Blower Operations

A. Verify Adjustable Push Force – Verify adjustable push force is set to the established crash test value and the speed is at minimum.

B. Engage Tractor Drive – The tractor drive can be operated in forward and reverse. For installation, engage the tractor drive in forward by depressing the tractor drive control switch to the “F” position as shown. (See figure 23). Install the fiber into the duct using push only until the installation speed has slowed.

C. Engage Air – Slowly open the air control valve to allow air flow to the air block by turning the control valve knob counterclockwise (.5 - 1 bar). Do not apply maximum air pressure and flow at initial air engagement. Do not open air supply before adequate fiber has been pushed in or speed has slowed. Increase air only as speed slows, 1 bar at a time.

IMPORTANT: Do not exceed 205 PSI (15 bar) when operating the unit.

!WARNING: Forced air creates flying debris. Always wear personal protective equipment.

D. Adjust Speed – Use the Speed control knob to adjust the tractor drive speed to ensure smooth installation and match the amount of air pressure being used so that the forces are working together, not against one another. (See figure 24). Counterclockwise increases speed and clockwise decreases speed.

E. Install Fiber – It may be helpful to guide the fiber using your hand at the cable entrance of the machine to maintain control over the fiber.

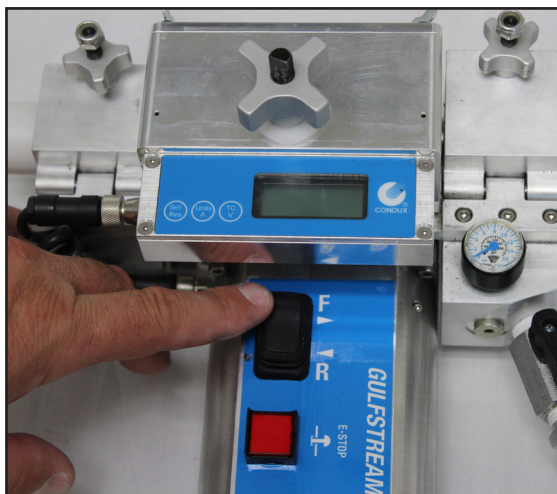


Figure 23. Tractor Drive Forward

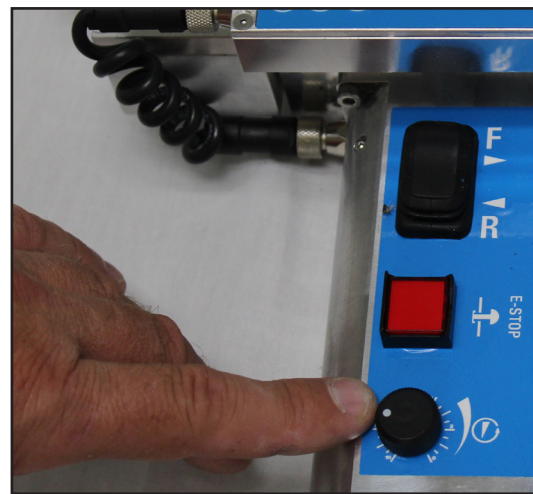


Figure 24. Adjust Speed Control

F. Tractor drive engages forward when the switch is in the 'F' position, reverse in the 'R' position, and neutral in the center position.

Tear Down Procedures

8.

⚠ !WARNING: Air Block Assembly contains compressed air when blower is operated. Opening Air Block while under pressure may cause serious personal injury. Ensure blower is depressurized before removing Air Block cover. Allow gauge to decrease to 0.

A. REMOVE POWER FROM UNIT

1. Stop air by turning the Air Control Valve Clockwise (See Figure 25).
2. Remove Air Hose from GS300QC (See Figure 26).
3. Depressurize Air Block by turning Air Control Valve to the "ON" position.
4. Disconnect Power Supply

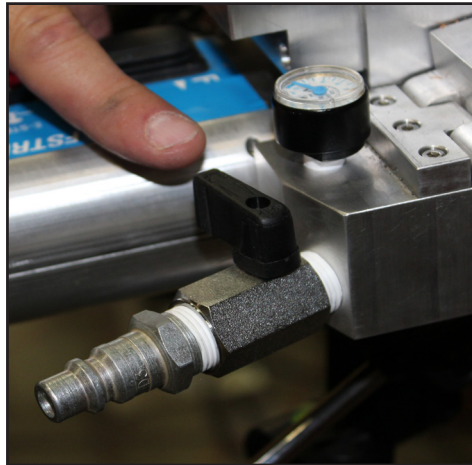


Figure 25. Turn Off Air

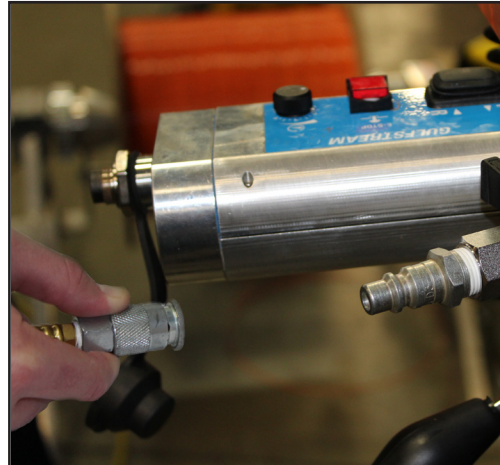


Figure 26. Depressurize Air Block

B. REMOVE FIBER FROM BLOWER

1. Raise tractor drive by loosening tractor drive down knob (See figure 27).
2. Loosen the knob on the Air Block assembly and open the air block (See figure 28).
3. Remove duct pack assembly.
4. Open duct pack assembly and remove the conduit.
5. Store the Gulfstream 300QC in the horizontal or upright position.

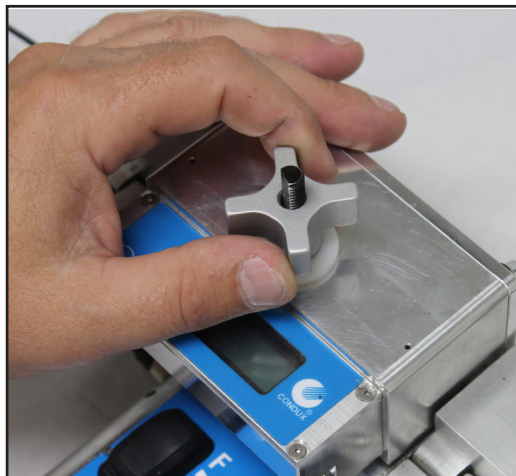


Figure 27. Raise Tractor Drive

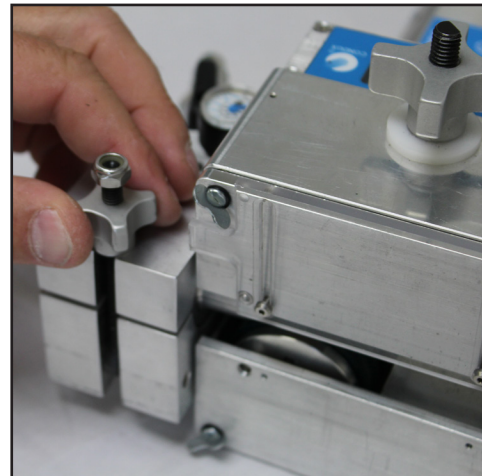


Figure 28. Loosen Knob

Maintenance

9.

Procedure	Daily	Weekly	Monthly	60 Days	90 Days
Clean all assemblies and components thoroughly with dry cloth.		X	X		
Inspect fasteners and screws.	X				
Check Belts. Replace if excess wear has occurred. Excessive wear has occurred when the belts are no longer able to effectively grip the fiber optic cable.	X				
Grease spine shaft with 6040/150 grease or equivalent (Figure 29).			X		
Duct Pack Seal Replacement (or excessive wear)	When Needed				X
Belts Replacement	Every 50Km unless excessive wear is occurring				
Seals Replacement	Every 10km unless excessive wear is occurring				



Figure 29. Spine Shaft

⚠ !WARNING: AVOID HANDLING LEAKING COUPLINGS, VALVE SEAL OR INADEQUATELY SEALED CONDUIT IN AIR BLOCK.

⚠ DANGER: RISK OF AIR UNDER PRESSURE PENETRATING SKIN

⚠ !WARNING: DISCONNECT POWER SUPPLY AND EXHAUST ANY AIR PRESSURE BEFORE SERVICING ANY COMPONENT ON THE GULFSTREAM™ 300QC.

A. TRACK CLEANING AND TIGHTENING

1. Inspect belt before and after each use.
2. Clean after each use, or when necessary. Remove the top assembly to clean thoroughly by:
 - a. Unscrewing tractor down screw all the way.
 - b. Separating the two halves – note parts being disassembled to ease reassembly. Used compressed air to blow out debris.

B. REPLACEMENT OF THE BELT

The drive belt needs to be replaced when the machine is unable to push the specified range of cable diameters. Only Condux supplied, original equipment should be used; otherwise, the machine may be unsafe and void warranty.

- a. Remove cover plates from the GS300QC (Figure 30) using the quick attach 1/4" turn screws.
- b. Loosen tightening screw (Figure 31).
- c. Push wheels back evenly and turn cross shaft to opening (Figure 32).
- d. Remove plate (Figure 33)
- e. Remove belt and replace (Figure 34).
- f. Reverse procedure to reinstall belt and plates.

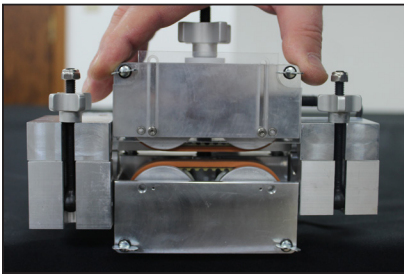


Figure 30. Remove Top and Bottom Front Cover Plate

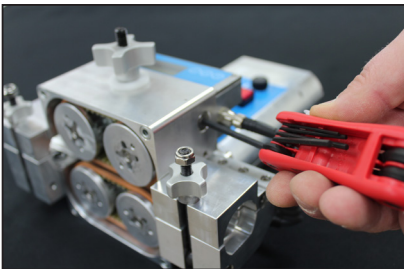
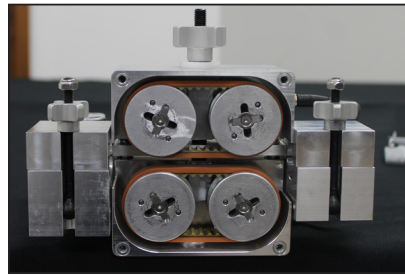


Figure 31.

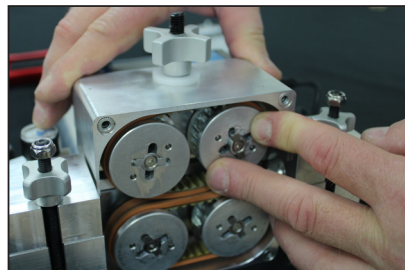


Figure 32.

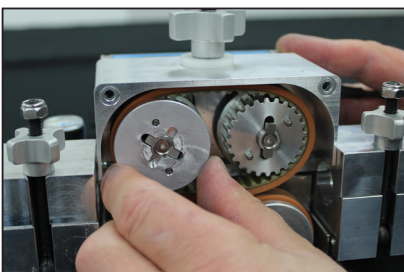


Figure 33.

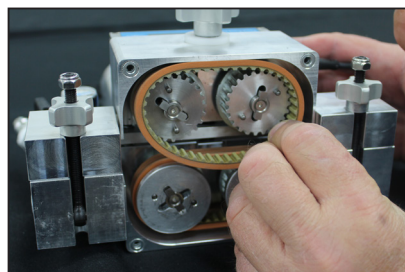


Figure 34.

Troubleshooting Guide

10.

Problem	Solution
Cable becomes jammed in the conduit system or pushes out the side.	<ol style="list-style-type: none"> 1. Inform the people at the other end of the conduit that a problem has been experienced and the operator is going to shut down the system. 2. Shut off the pneumatic air supply with the Air Control Valve, allowing the air pressure to be depressurized from the conduit and the air block. 3. Using the counter or the measurement on the cable, determine where the blockage might be located. 4. Notify supervisor about problem and determine a solution accordingly. <p>(Too much push force is being applied and crash test was not performed properly)</p>
Tractor Feed does not pull the cable off the reel.	This machine is not intended to pull fiber off the reel.
The cable run is hard to restart after having stopped.	Put air to the system with the tractor drive tightened down and turned off. The tractor feed can be restarted after the air pressure has increased and stabilized. You may be at the maximum distance you are able to achieve.
Tractor feed doesn't start.	<ol style="list-style-type: none"> 1. Tractor Drive switch is in the neutral "center" position. Select forward or reverse. 2. Estop may still be engaged. Press the Estop button and set switch to forward or reverse. 3. Batteries are dead or power supply was interrupted.
Speed is slow.	Torque value may be too low to achieve maximum speed. Too much down pressure is being applied.
Power Failure.	Place switch in neutral position. Check that the battery pack or power supply is properly connected. Recharge battery. Normal startup can be performed after power failure/malfunction has been resolved. Disconnect battery; you may have had a static charge.

Once any mechanical issues have been resolved, confirm that the Gulfstream 300QC is operating properly by verifying tractor drive speed and direction, as well as, air block pressure sustainability.



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