

SIROCCO TUBE INTEGRITY & LENGTH TESTER (STILT)

Description

- Provides a method for determining the length of a blown fibre tube.
 - Provides a method for pressure testing a length of blown fibre tubing.
- The determination of the route length must be undertaken prior to the pressure testing of the route unless a period of 15 minutes has elapsed between the tests.**
- Provides a method for checking for and clearing water from a blown fibre tube.
 - Provides a method for checking for blockages within a blown fibre tube.
 - All operators must comply with any local statutory Health & Safety regulations.**
 - Working with Compressed Air is potentially dangerous and any operator following these procedures must have successfully completed a Prysmian Cables & Systems UK Ltd approved training course.**

Equipment Required

Equipment Required:	Part No.
Sirocco Compressor (Petrol) or 220/240v DC (Electric)	XBFSC00002
	XBFSC00013
STILT	XBFSC00030
Tube End Stop	XBFSC00076
Tube Cutter (part of kit 820/5) or Individually	XBFSC00011
	XBFSC00078
Air stone (part of kit 820/5) or Individually	XBFSC00011
	XBFSC00052
5 – 5mm Tube Connector	XBFSC00075

Equipment

STILT Qty 1	Compressor Qty 1
	

Ancillary Equipment

Tube End Stop Qty 1 	Tube Cutter Qty 1 
Air Stone Qty 1 	5 - 5mm Tube Connector Qty 1 

Measurement of the Length of a Blown Fibre Tube

Step 1



- Identify the tube to be tested and ensure that the ends of the tube are cut cleanly.

Step 2



- Place a Tube Sealing Cap onto the tube at the remote end of the route. Ensure that the sealing cap is tightened fully.

Step 3



- Connect the compressor hose to the STILT.

Step 4



- Close the inlet valve.

Step 5



- Close the outlet valve.

Step 6



- Start the compressor

Step 7



- Open the compressor valve.

Step 8



- Open the inlet valve.

Step 9



- Fill the reservoir with compressed air. This will take approx. 2 minutes.

Step 10



- Close the inlet valve. If the air pressure indicated on the gauge, drops below 10 bars open the inlet valve and continue to fill the reservoir.

Step 11



- Using the system vent valve regulate the gauge needle to lie on the start line.

Step 12



- During the adjustment process if the air pressure drops below 10 bars open the inlet valve to increase the air pressure within the reservoir. **Repeat Step 12**

Step 13



- Close the compressor valve.

Step 14



- Switch off the compressor.

Step 15



- Connect the tube to the STILT using the correct connector. An extension piece of tubing can be used if required.

Step 16



- Open the outlet valve

Step 17



- The pressure gauge will indicate a pressure drop. Wait until the gauge needle stops falling.

This will take up to 10 minutes.

Step 18



- When the gauge needle has stopped falling the length of the route can be read from the gauge.

If the gauge needle falls to 0 this indicates that there is an air leak in the tube.

Ensure that the reading is taken from the appropriate scale that corresponds to the tube size.

Step 19



- Open the system vent valve and allow the air pressure to decrease to 0.

Pressure Testing of a Blown Fibre Tube
Following On From Step 19

Step 20



- Close the inlet valve.

Step 21



- Close the outlet valve.

Step 22



- Start the compressor.

Step 23



- Open the compressor valve.

Step 24



- Open the inlet valve.

Step 25



- Open the outlet valve.

Step 26



- Allow the route to become pressurised to above 10 bars.
This may take up to 10 minutes.

Step 27



- Close the inlet valve.

Step 28



- Shut the compressor valve.

Step 29



- Switch off the compressor.

Step 30



- Note the pressure at which the route is fully pressurised.

Step 31



- If the air pressure drops below this figure and continues to drop to 0 it indicates that there is a leak in the route.

Step 32



- Under no circumstances should the installation of the blown fibre commence until the cause of the leak has been identified and repaired.

Step 33



- Open the vent valve and allow the air pressure to decrease to 0.

Test Procedure (Checking for Water) Following On From Step 33

Step 34



- Remove the tube end stop at the remote end of the route and connect a short section of blown fibre tube to the route end.
- During the test a person should hold this extra section of tube to ensure that it is not pointing at anyone and that anything being blown out of the blown fibre tube is not a hazard to anyone.**

Step 35



- Remove the blown fibre tube at the output side of the STILT.

Step 36



- Insert a small piece of sponge (10mm long x 5mm dia) into the blown fibre tube.

Step 37



- Push the sponge into the tube.

Step 38



- Connect the blown fibre tube to the STILT.

Step 39



- Close the outlet valve on the STILT.

Step 37



- Start the Compressor and open the outlet valve on the compressor.

Step 38



- Open the Inlet valve on the STILT.

Step 39



- Allow the pressure within the STILT to build-up to 10 bar.

Step 40



- Open the outlet valve on the STILT.

Step 41



- The sponge will be blown through the route removing any water that is trapped in the blown fibre tube.

Step 42



- If water is seen to be removed from the route repeat steps 27 to 34 again.
Do not attempt to disconnect any of the blown fibre tube until the entire route is at atmospheric pressure.

Step 43



- Close the outlet valve on the compressor and switch it off in the recommended manner.

Step 44



- Using the vent valve on the STILT vent the air within the blown fibre route to atmospheric pressure.
Do not attempt to disconnect any of the blown fibre tube until the entire route is at atmospheric pressure.

Test Procedure (Checking For Blockages)

Following On From Step 44

Step 45



- At the remote end fit a ceramic stone.

Step 46



- Remove the blown fibre tube at the output side of the STILT.

Step 47



- Cut off a sample of 4 fibre unit between 150 – 200mm long.

Step 47



- Using a pair of pliers crimp a Blown Fibre Bead onto both ends of the fibre unit.

Step 48



- Gently shake the fibre unit to ensure that the Blown Fibre beads are fixed to the fibre unit. If any fall off fit a new Blown Fibre Bead.

Step 49



- Insert the 100mm long piece of fibre unit into the blown fibre tube.

Step 50



- Connect the blown fibre tube to the STILT.

Step 51



- Close the outlet valve on the STILT.

Step 52



- Start the Compressor and open the outlet valve on the compressor.

Step 53



- Open the Inlet valve on the STILT.

Step 54



- Allow the pressure within the STILT to build-up to 10 bar.

Step 55



- Open the outlet valve on the STILT.

Step 56

No Picture

- The fibre sample will be blown through the route at very high speed.

Step 57



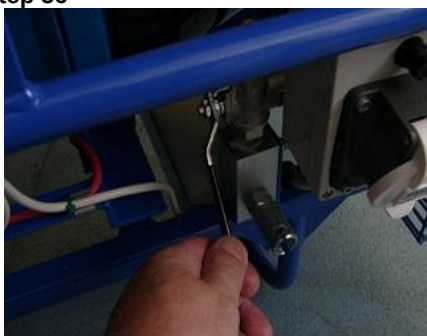
- In the event of there being no kinks or blockages in the blown fibre tube the sample will be caught in the ceramic stone.

Step 58



- If after a period of 20 minutes the fibre has not arrived at the air stone then this indicates that there is a blockage in the route.

Step 56



- Close the outlet valve on the compressor and switch it off in the recommended manner.

Step 57



- Using the vent valve on the STILT, vent the air within the blown fibre route to atmospheric pressure.

Do not attempt to disconnect any of the blown fibre tube until the entire route is at atmospheric pressure.