Hexatronic Duct Integrity Testing

User Manual

Contents

1. Introduction

This manual provides comprehensive instructions for the safe and efficient operation of the Large Duct Integrity Tester. It covers preparation, setup, operation, and safety procedures to ensure reliable and accurate test results for large-diameter ducts.

1.1 Purpose of the manual

The purpose of this manual is to provide clear operational guidance, safety precautions, and maintenance instructions for the Large Duct Integrity Tester, enabling operators to verify duct integrity with speed and accuracy.

1.2 Intended use

The Large Duct Integrity Tester is intended for testing single ducts between 10–14 mm and 16–20 mm in diameter. It is designed to assess main route viability before blowing fibers, ensuring time and cost savings. The tester also verifies coupler integrity as part of the process.

1.3 Safety precautions

• Ensure the duct is uncapped before initiating airflow.

• Never look directly into the end of the duct during operation.

• Depressurize fully before disconnecting components.

• Use the manual vent switch to safely release pressure.

• Wear suitable PPE, including safety glasses and hearing protection.

• Operate only within the manufacturer’s specified pressure limits.

• Only trained personnel should operate the unit.

2. Equipment overview

The **Large Duct Integrity Tester** is designed for single-line testing of large duct sizes ranging from 10–14 mm and 16–20 mm. It enables rapid verification of main route duct viability before fiber installation, helping save time and costs while preventing damage. The unit tests complete routes, including coupler integrity, and features a large, easy-to-read pressure gauge for accurate monitoring. Two ports with individual line switches allow for flexible testing, while the manual vent switch ensures safe disconnection. An internal safety vent is also built in to prevent overpressurization.

Note: When the switches are turned in the direction of the arrow, they are in the ON position.

3. Preparation before testing

1. Ensure all switches are ‘Off” by turning them to 3 o’clock.
2. With the compressor switched off, connect the claw fitting and whip check.
3. Switch on the compressor.
4. Using the correct reducer connectors, connect the duct to the chosen port, ensuring catchers are fitted to far end.

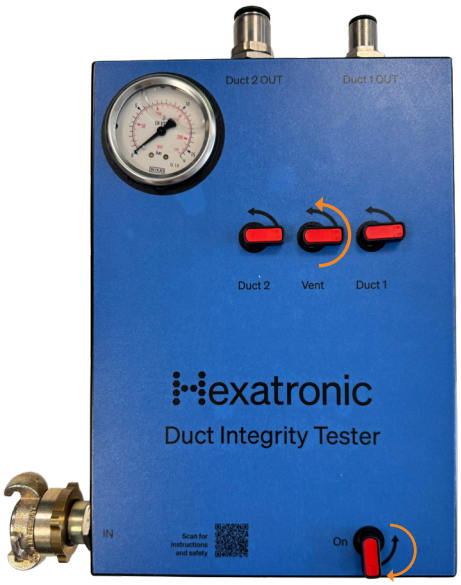
4. Test procedures

4.1 Airflow verification

• Switch on the ‘On’ switch by turning to 3 o’clock. The dial should show inbound air pressure.

• Switch on the ‘Duct’ switch by turning it to 12 o’clock to allow air flow through the duct.

WARNING: Do not look into the end of the duct.



• Once clear passage is verified, leave the ‘Duct’ switch on and switch off the ‘On’ switch by turning it to 6 o’clock, then open the ‘Vent’ switch.

• Once vented, return the ‘Duct’ and ‘Vent switches to the off position.

4.2 Sponge cleaning process

• At the far end of the duct, attach the catcher using the correct reducers and connectors.

Sponge catcheron

• Ensure the dial reads zero, then disconnect the duct and insert a sponge of the relevant size.

• Switch on the ‘On’ switch, then switch on the ‘Duct’ switch to blow the sponge through.

• Once the sponge appears in the catcher. Switch off the ‘On’ switch and open the ‘Vent’ to expel all air.

• Once fully vented, return the ‘Vent’ and ‘Duct’ switches to the off position.
-Repeat until sponges are clean and dry.

NOTE: Do not reuse dirty sponges.

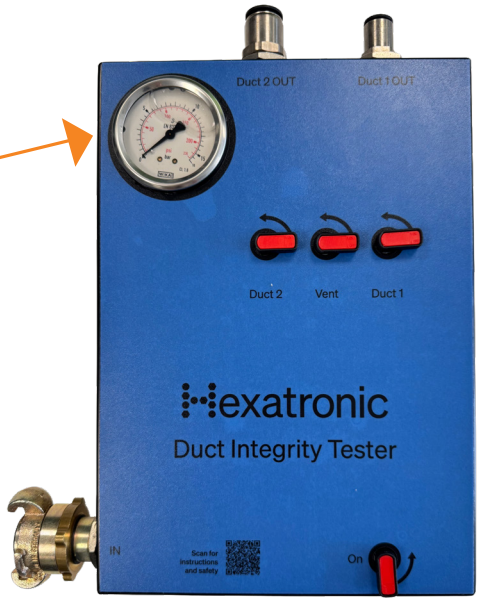
4.4 Pressurization and integrity check

• Remove the catcher and connect the end cap.

• Switch on the ‘On’ switch, then turn the ‘Duct’ switch to 12 o’clock to pressurize the duct.

• Pressurize until the gauge reads approximately 10 bar. Switch off the ‘On’ switch, leaving the ‘Duct’ switch in the on position.

*Wait for the gauge to stabilise - the needle should hold for approximately 2 minutes.

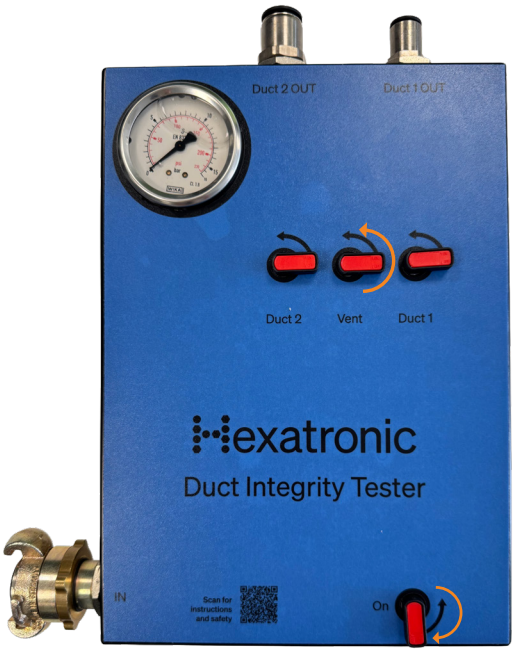


• Switch on the ‘Vent’ switch to release the air.

5. Post-test actions

5.1 Venting the system

• Ensure the ‘On’ switch is turned off before venting.



• Open the ‘Vent’ switch gradually to release all remaining air from the duct.

• Wait until the pressure gauge reads zero before disconnecting.

5.2 Disconnecting equipment

• Disconnect the duct from the tester using the appropriate reducer connectors if fitted.

• If using a compressor, switch it off and depressurize the duct.

• Remove the inbound hose from the tester.

• Remove the claw fitting and whip check.

5.3 Preparing duct for installation

• Once testing is complete and the duct is fully vented, replace protective end caps to prevent contamination.

• Keep tested ducts clean and dry until installation.

• Record the test results for contractual proof and quality assurance records.

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