COLTRACO
Ultrasonics | since 1987

ULTRASONIC ROOM / COMPARTMENT INTEGRITY TESTER

PORTASCANNER® 520

TECHNICAL BROCHURE

Introducing Portascanner® 520

Portascanner® 520 is a powerful portable ultrasonic room integrity indicator to use alongside door fan testing, for pre-survey inspections and when installing clean agent fire suppression systems.

- **Type** – Ultrasonic Room Integrity Tester
- **Function** – To test the integrity of sealed compartments; paired with Door Fan Testing as per NFPA 2001 and ISO14520 standards before installing a clean agent fire system
- **Part Number** – 509004-0311
- **NSN** – 6625-99-257-8336
- **IMPA** – 652778

CUSTOMER TESTIMONIAL

"We are finding the Portascanner® 520 extremely useful and time saving in finding leakage during Room Integrity Testing. The unit is a bit more convenient than using smoke machines to determine leaks." ***- Nick, Fire & Security Techniques, South Africa, 2019***

Portascanner® 520 is ideal for you

Computer Rooms | Telecommunication Centres | Data Centres | Laboratories | Clean Rooms | Control Rooms | Manufacturing | Robotics | Storage | Collections



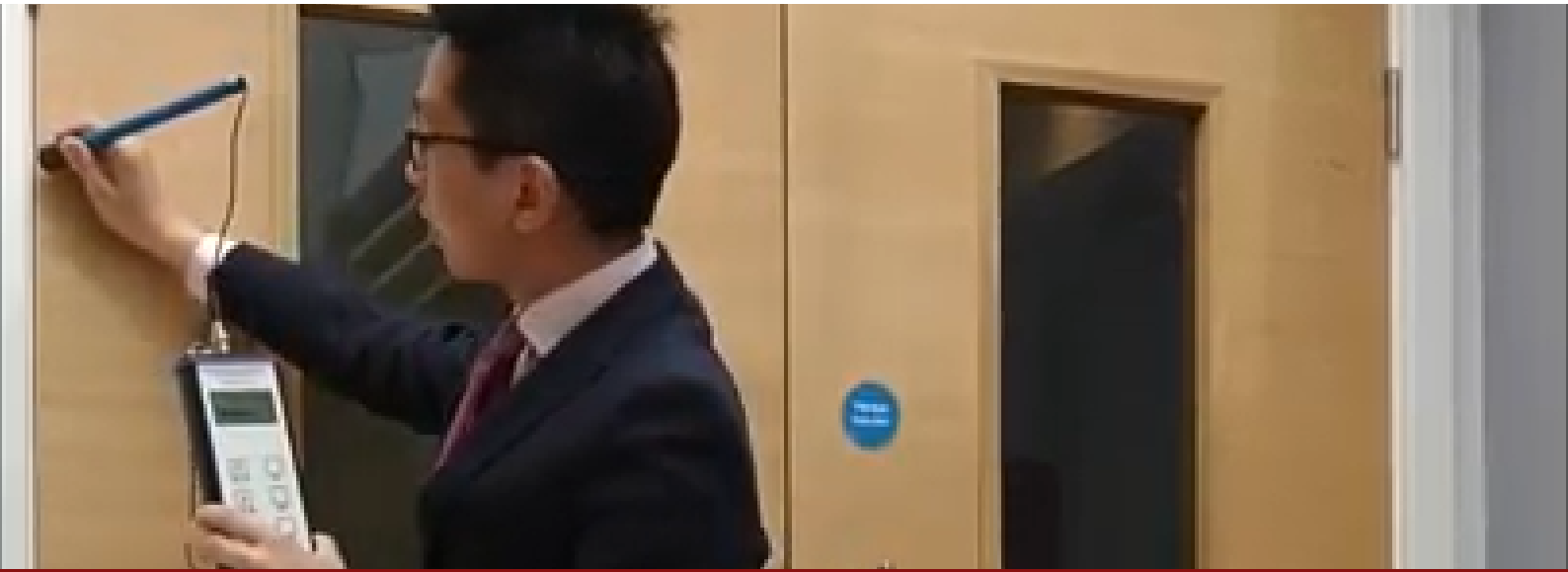
- Compartmentation helps enable fire stopping e.g. walls and floors
- Every 7 seconds, a fire breaks out, worldwide
- 700 fatalities caused by fire in the UK
- £7bn is the cost of fire to the UK economy according to GovUK: every day £3.4m in costs by business disruption caused by fire – £1.3bn p.a.
- 44% of all insurance claims are caused by fire
- SOURCE: Aviva Insurance, 2012

FASTER BETTER CHEAPER

REGULATION COMPLIANT
ISO 14520-1:2015 (E) and in the UK Approved Document B, Fire Safety, Volume 2, Buildings other than dwelling houses.

EASY TO USE
Suitable for any operator with free training; no need for time consuming, expensive courses

POWERFUL & MULTI-USE
Useful for before, during and after installation of fire systems



Advantages

PRECISE
Detect leaks as small as 0.06mm

HOLISTIC FIRE SAFETY
A clean method of testing that does not violate any environmental codes.

RESULT OUTPUTS
Readings provided in dB for regulation compliance or mathematical linear for ease of use

LIGHTWEIGHT
Handheld and portable. Generator is less than 500 grams.

SIMPLE
Easy to use by all:
fire engineers, servicing and inspectors alike

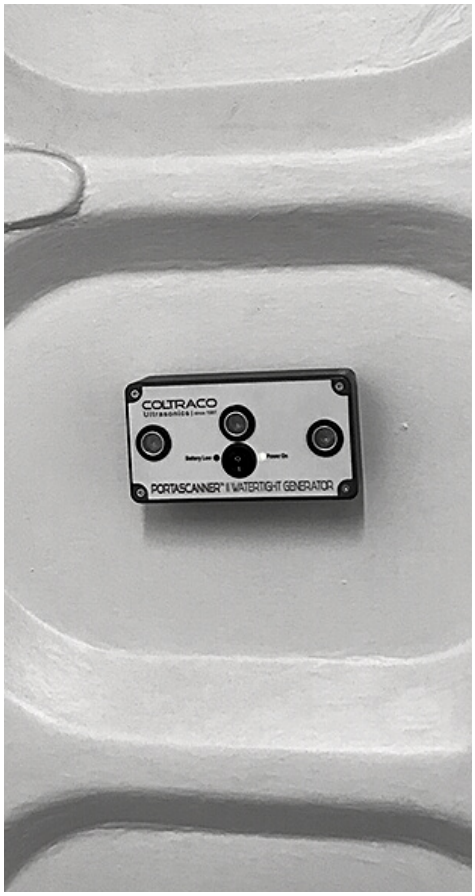
BATTERY
12 hours continuous battery life

When to Use Portascanner® 520

PRE - DOOR FAN TEST:
(i) early anticipation of issues (ii) add to range of services you can offer (iii) more accurate service quotes

DURING INTEGRITY TEST FIRE SUPPRESSION:
(iv) exact leak location

POST COMPARTMENTATION SURVEY:
(v) regulation compliance
(vi) no disruption



COMPARTMENTATION
Before installing clean agent fire suppression systems the integrity of the building structure commonly undergoes "door fan testing". This determines the peak pressure and agent hold time necessary for ensuring the effectiveness of these fire systems. As required by NFPA 2001 and ISO14520 standards to calaulate the overall leakage of a room.

Regulation Compliance

APPROVED DOCUMENT B, FIRE SAFETY, VOLUME 2

ADB B3-4 *"The building shall be designed... so that the unseen spread of fire and smoke...is inhibited"*

Appendix B: Breaching fire separation *"to ensure effective protection again fire, walls and floors providing fire separation must form a complete barrier, with an equivalent level of fire resistance provided to any openings such as doors, ventilation ducts, pipe passages or refuge chutes."*

ISO14520-1:2015(E)

9.2.4.1 *At least every 12 months it shall be determined whether boundary penetration or other changes to the protected enclosure have occurred that could affect leakage and extinguishant performance. If this cannot be visually determined, it shall be positively established by repeating the test for enclosure integrity in accordance with Annex E.*

9.2.4.2 *Where the integrity test reveals increased leakage that would result in an inability to retain the extinguishant for the required period, remedial action shall be carried out.*

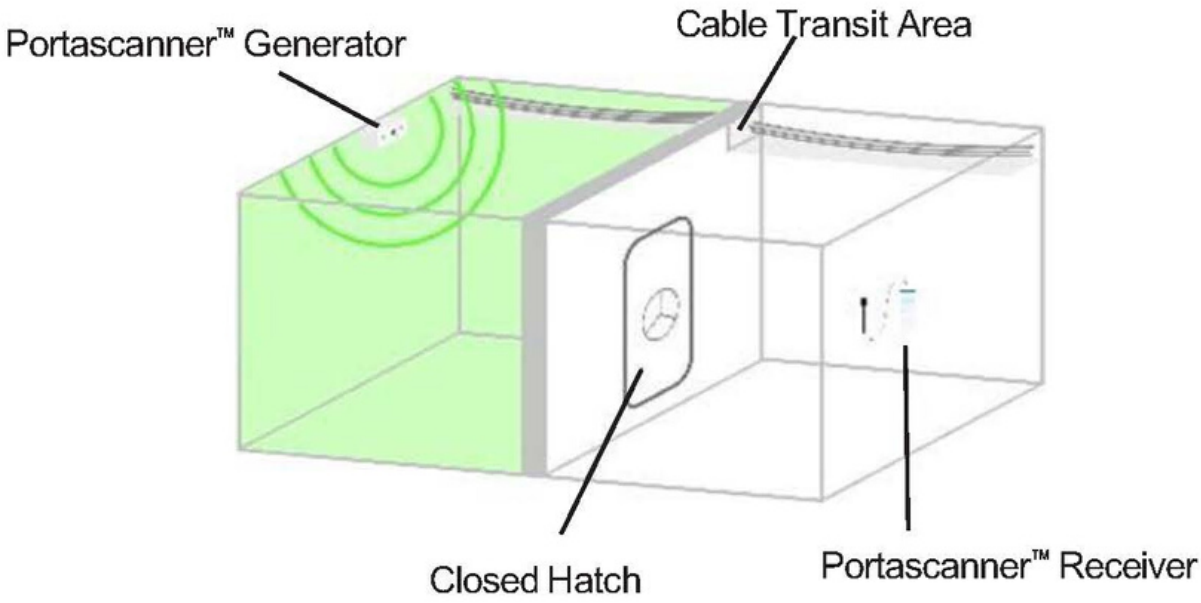
Annex F – *b) Every 6 months: Perform the following checks and inspections: 5) for liquefied gases, check weigh or use a liquid level indicator to verify correct content of containers; replace or refill any showing a loss of more than 5 %;*

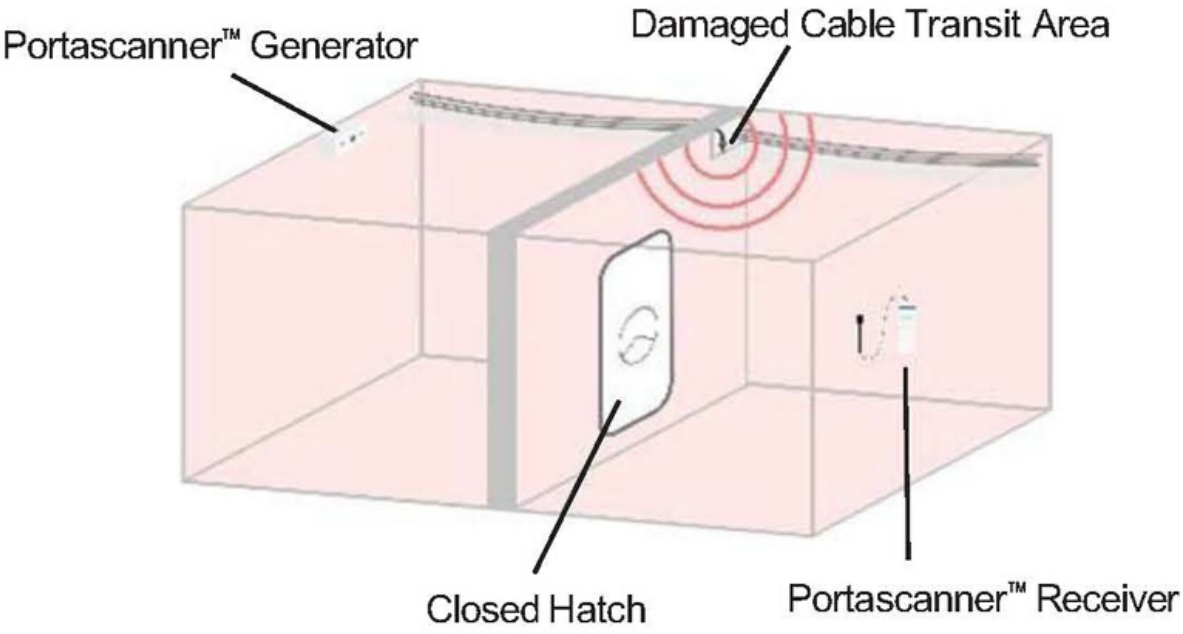
Annex F 6.2.4.2 *Means shall be provided to indicate that each container is correctly charged.*

How it works

1. Connect Rod and Headphones to Receiver. Switch Generator "on" and place into the compartment to be tested. Obtain Open Compartment Value.
2. Close compartment. Point the sensor to the area of interest.
3. Move sensor around the seal. Where signal is strongest, that is your leak site.

Training
Available in Operating Instructions, by phone, email, YouTube Channel: Coltraco Ultrasonics: www.youtube.com/watch?v=O0YUOLb2MMg&t=122s





Package

Durable Carrying Case

Calibration Certificate & Operating Instructions

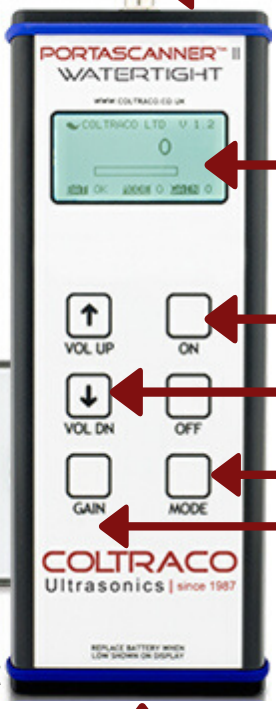
Headphone Set

Portascanner® Generator

Sensor "Wand"

Portascanner® Receiver

Receiver



Rod Connector

LCD Screen

Generator

On/Off Keys

Volume Up/Down Keys

Transducer

On/Off Switch

Mode Key to change the readings from linear to decibel

Gain Key to increase power if required for large spaces

Battery Compartment

Headphone Connectors

Technical Specifications

Portascanner® Receiver

Output	Visual (via LCD display and graph) and audible signal (via calibrated headphones)
Size	21.5cm L x 8.5cm W x 3.5cm H
Weight	419 Grams
Indication	Results shown in Decibel and Linear
Battery Life	12 hours continuous use minimum
Enclosure	Aluminium IP65 Waterproof
Powered By	1 x 9V PP3 batteries with low battery indication

Portascanner® Generator (standard)

Output	3 multidirectional transducers (40kHz)
Mounting Arrangements	Permanent Magnet
Size	15cm L x 9cm W x 5cm H
Weight	431 Grams
Powered By	2 x 9V PP3 Batteries
Enclosure	ABS Plastic Material
Battery Life	12 hours continuous use

Optional XL Generator

PORTASCANNER® SONIC POWER

To inspect compartmentation integrity of extra large room sizes.

16+

sensors for full coverage

>12,000 m3

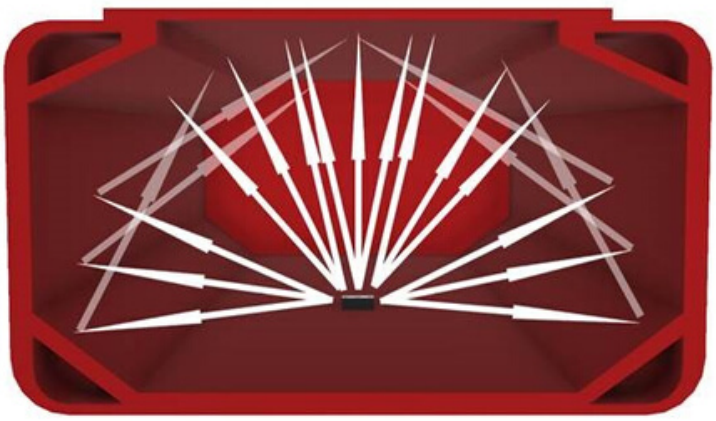
extra large rooms

How It Works

Turn on and either place on the base of the room centre or use in-built magnets to attach to side. Then begin testing as usual with the Portascanner® 520.

Technical Specifications

Batteries	12 x 1.5V C-cells (included)
Size	25cm x 25cm x 8cm
Weight	2kg approx.
Output	16 multidirectional transducers



Customer Care Commitment

Through-life Support for life time of the equipment via telephone/email.
Local Support in our ODA service centres strategically placed globally to support you.
Warranty: 3 year for main unit; 1 year for sensor.
Guaranteed: against defects in materials & workmanship. Terms and conditions for details.

Since 1987 Coltraco Ultrasonics have been designing and manufacturing ultrasonic instrumentation for safety and servicing. All our products undergo rigorous quality testing to ensure they meet the high standards expected by our customers to provide long term reliability.

Customer Reviews

CASE STUDY: SURVEYOR, UK - TESTING ALONGSIDE OXYGEN REDUCTION SYSTEMS

To ensure an Oxygen Reduction System the system works safely and efficiently is of utmost important for two reasons: *(1) A properly sealed room will contain the Nitrogen for a longer period of time, therefore putting less work on the air compressor in order to save energy. (2) If Nitrogen starts to leak from the Server Room, there are safety concerns over where this Nitrogen would leak to as it has the potential to harm occupants in other rooms if the Nitrogen leaks into their room and the oxygen levels were unmonitored.*

Testing Enclosures: *The Server Room had an area of about 91 metres square. Several areas were tested with the Portascanner® 520 where leakage was probable, and the readings were noted on the drawings. These were the doors, vents, cable penetrations and sections of the wall where gaps were visible.*

Results: *The Portascanner® 520 used in the room integrity test, identified the main source of leaks for the room, the doors, where full readings were clearly detected. Multiple air vents in the room were also improperly sealed and some leakage was found into the external room. Cable penetrations leading to the area outside the Server Room were also found to be leaking.*

Conclusions: *Once the required maintenance was conducted, the room retains its integrity, thus comply and exceed current ISO 14520 regulations.*

NICK, FIRE & SECURITY TECHNIQUES, SOUTH AFRICA, 2019

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TALK TO OUR EXPERTS:

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Discover www.coltraco.com

PROUD TO SUPPORT GREAT BRITAIN & NORTHERN IRELAND

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WWW.COLTRACO.COM/PORTASCANNER-520