# NL CAMERA

### Saves money and improves energy efficiency

- Pinpoints tiny leaks and shows leak size and cost estimate
- More accurate and faster than other leak detectors and methods

### Data for maintenance, repair plans and ISO 50001-compatible reporting

- The machine learning-powered NL Cloud service offers advanced analytics and reports

### Speeds up audits & requires minimal training

- Scans large areas quickly
- Easy to use
- Fits any stage of your maintenance cycle

The NL Camera is a smart acoustic device for locating leaks in compressed air systems. The NL Camera automatically detects leaks by the sound that they emit, even in loud industrial environments. The device is lightweight and easy to use.

The 124 microphones of the NL Camera allow leak detection in a wide field of view and from an extended range. Leak location is up to 10 times faster than with traditional methods. The NL Camera instantly shows the located leaks on the screen, allowing users to pinpoint and report leaks effortlessly.

The NL Camera analyses leaks in real time, utilising its built-in processing power. Users can upload leak data and images to the included NL Cloud for deeper analysis and reporting. The NL Camera Viewer and NL Camera Viewer Pro offline software are available for those who cannot use WiFi.

# Technical Specifications

## Acoustic Specifications

| | |
|---|---|
| Acoustic measurement | 124 low-noise MEMS microphones, real-time sound visualisation |
| Dynamic range, low limit | Below -15 dB (frequency-dependent) |
| Dynamic range, high limit | 120 dB (frequency-dependent) |
| Bandwidth | 2–65 kHz |
| Measurement distance | From 0.3 m (1.0 ft) up to and above 130 m (430 ft) |
| Leak rate | In typical industrial environment: >0.032 l/min @ 3 bar from 3 m (9.8 ft) >0.05 l/min @ 3 bar from 10 m (32.8 ft) Absolute minimum detection in quiet environment: 0.016 l/min @ 1.2 bar from 0.3 m (1.0 ft) |

## User Interface

| | |
|---|---|
| Display | 5 in, 800 × 480 resistive touchscreen |
| Brightness | 1000 cd/m2 (adjustable) |
| Snapshot resolution | 800 x 480 |
| Frame rate | 25 fps (optical image) / 30 fps (acoustic image) |
| Field of view | 62.2° x 48.8° |
| Zoom | 2x digital zoom |

## Communication and Data Storage

| | |
|---|---|
| Wireless data transfer | IEEE 802.11.b/g/n/ac |
| Storage, internal | 32 GB/999 snapshots |
| Storage, external | 8 GB USB mass storage, 500 snapshots (typical) |

## Environmental

| | |
|---|---|
| Operating temperature | -10°C – +50°C (14°F – 122°F) |
| Storage temperature | -20 °C – +70 °C ( -4 °F – 158 °F) |
| Charging temperature | 0°C – +40°C (32°F – 104°F) |
| Humidity | Recommended 0–90% |
| Ingress Protection | IP51 |

## Physical data

| | |
|---|---|
| Camera size & weight | 273 × 170 × 125 mm (10.7 × 6.7 × 4.9 in) 980 g (2.2 lb) |
| Total weight with Tracer battery | 1.9 kg (4.3 lb) |
| Total weight with RRC2040 battery | 1.2 kg (2.7 lb) |

## NL Analytics & Features

| | |
|---|---|
| Leak localisation & detection | Automatic, real-time leak recognition |
| Leak size & cost estimate | Automatic, real-time, on-device |
| ISO5001-compatible reporting | In the NL Cloud and NL Camera Viewer Pro software |
| Video recording | Up to 5 minutes |
| Audio recording | Up to 5 minutes |
| Video resolution | 1640 x 1232 |
| Video frame rate | 15 fps |

## Power Specifications

| | |
|---|---|
| Camera power input | Nominal input voltage: 12 $V_{DC}$ Max input: 15 $V_{DC}$, 2.5 A |
| Internal battery | Li-Ion 6 Wh (only for backup purposes) |

## Battery Option RRC2040

| | |
|---|---|
| External battery | Li-ion 36.2 Wh, 10.8 $V_{DC}$ Use time over 2 h Max output: 12.6 V, 4.0 A |
| Battery charger | Input: 100–240 $V_{AC}$ ± 10% ~ 50/60 Hz 1.70 A @ 100 $V_{AC}$ |
| | Max output: 19 $V_{DC}$ ± 5%, 3.40 A |
| Battery size & weight | 87 × 65 × 129 mm (3.42 × 2.55 × 5.07 in) 250 g (0.55 lb) |

## Battery Option Tracer

| | |
|---|---|
| External battery | LiFePO$_4$ 84 Wh, 12 $V_{DC}$ Use time up to 7 h, charge time 4–6 h Max output: 13.8 V, 4.0 A |
| Battery charger | Input: 100–240 $V_{AC}$ ~ 50/60 Hz 1.3–1.5 A |
| | Max output: 13.8–14.6 $V_{DC}$, 4 A (depends on the charger provided) |
| Battery size & weight | 90 × 145 × 65 mm (3.5 × 5.7 × 2.6 in) 985 g (2.2 lbs) |

## Supported Languages

Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Thai, Traditional Chinese, Turkish, Vietnamese