

# CT3204

## pMDI Leak Detection System

The CT3204 pMDI Leak Detection and Reject System, primarily used for pharmaceutical applications, provides customers with a step change in capability over existing test methods. Manufacturers of metered dose inhalers are required by the FDA to test every single unit for leakage. The way this is currently handled is to weigh the products, then “quarantine” each unit for between two and four weeks, and then reweigh to determine if there has been any leakage. This is a costly, time consuming, inefficient process.

Cascade’s system can detect R134a and other Freon components in order to measure leakage rates and confirm the structural integrity and safety of the delivery devices. Cascade’s system delivers almost instantaneous analysis responses (~50 mS), while simultaneously providing highly sensitive and accurate results. For example, at one customer site, the system’s high sensitivity can detect leak rates of < 1 mg per day at sample rates of up to 200 cans per minute. As such the CT3204 system has been proven to provide 100 % test and traceability.

## Features and Benefits

### Typical applications

- pMDI filling

### Target components

- R134a, R227, R1234ze

### Complete can testing

- Proprietary sampling method detects leaks from all sides of the can



CT3204 pMDI Leak Detection System

### Online detection

- Continuous measurements
- 20 millisecond analysis time
- Up to 180 cans per minute
- Automated rejection/alarm
- Continuous health monitoring

### High sensitivity

- Sensitive to leaks < 1 mg/day
- Configurable leak rate rejection threshold

### Return on investment

- Eliminate the need for holding quarantined stock
- Identify production faults in real time
- Minimize rework

### Configurable

- Modular design for easy customization
- Simple installation
- Field replaceable parts
- Low maintenance/zero consumables

## Specifications

Table 1 - CT3204 pMDI Leak Detection System

Specifications	
Value	
Application	pMDI leak detection system
Measurement technique	IR Absorption Spectroscopy
Mid IR source	Quantum Cascade Laser
Laser classification	CLASS 1 BS EN 60825-1:2007 Safety of laser products Equipment classification and requirements (identical to IEC 60825-1 2007)
Performance	
Sensitivity	< 1 mg/day
Line speed	Up to 180 CPM
Can dimensions	Up to 25 mm
Response time	20 ms
Environmental	
Temperature range	10–30 °C
Sample gas temperature range	Room temperature
Humidity range	n/a
Protection class	IP54
Hazardous area classification	n/a
Inputs and Outputs	
Analogue signal out	n/a
Analogue signal in	n/a
Digital signal out	3 x normally closed contact
Digital signal out	10/100 Base T Ethernet
Inlet gas port connector	¾ in BSPT
Exhaust gas port connector	¾ in BSPT
Electrical Rating	
Power supply	120 VAC 60 Hz/240 VAC 50 Hz 200 W/A
Dimensions	
Size	1259 x 498 x 2028 mm (H x W x D)
Weight	200 kg
Installation	On production line

**Table 2 - Configuration**

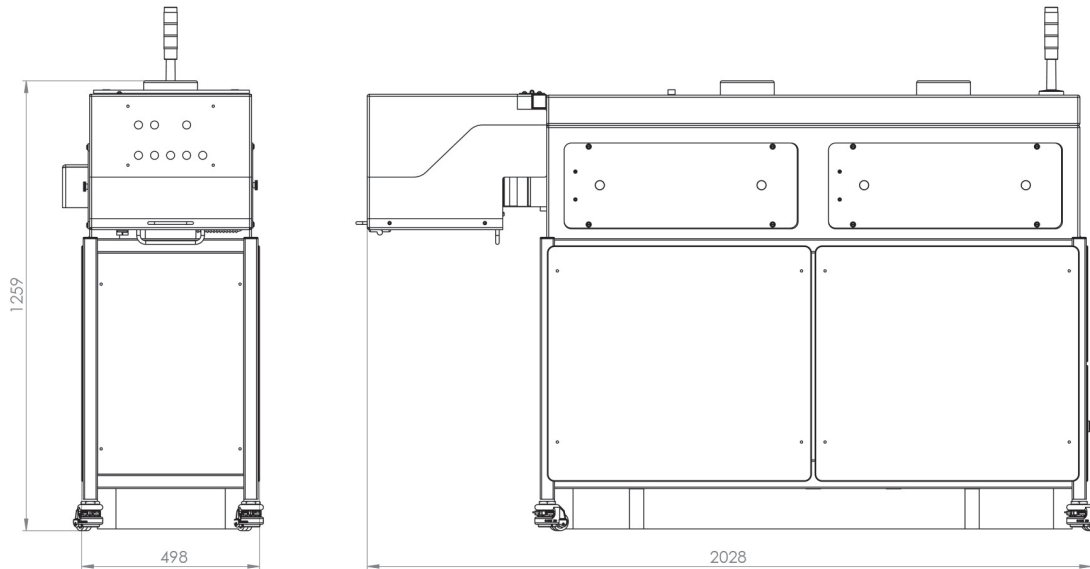
Feature	Included
Line speed (CPM)	Up to 180
<b>Standard Equipment</b>	
Pedestal mounted HMI	•
3 phase line speed controller	•
3 phase side channel blower	•
Factory air pressure monitoring	•
Mechanical rejection	•
Air sampling flow monitoring	•
Color coded status lamps	•
Factory air filtration and drying	•
QC sampling interface	•
Production data logging/reporting	•
Air driven can rejection	•
Customer production line control interface	•
Reject verification	•
Container infeed/outfeed management	•
Automated mirror purge	•
Cabling up to 25 m	•
<b>Performance</b>	
QCL sensor head	< 1 mg/day

Other gases and ranges are available on request. The ranges and detection limits provided indicate typical analyzer performance but may change depending on your application. Please contact Rosemount for more information.



## Recommended Installation



The drawings below represent the minimum recommended installation guidelines for the CT3204 pMDI Leak Detection System. Please consult Rosemount for detailed installation recommendation of your application.

Figure 1 - CT3204 pMDI Leak Detection System



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**Emerson Process Management**  
Cascade Technologies  
Glendevon House  
Castle Business Park  
Stirling, FK9 4TZ  
Scotland  
T + 44 1786 447 721  
F + 44 1786 475 822  
QCL.CSC@Emerson.com

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