

# Technical Specifications for Linktra® Smart Cylinders

The Linktra® Smart Cylinder is our “Internet of Things” (IoT) offer that enables the connection of our cylinders to consumers’ mobile phones, as well as to the IT systems of LPG distributors. This next generation of cylinders speaks to the users and lets them know how much LPG is left and when they will need to refill.



## Linktra Smart cylinders

	18,2 L	24,5 L	26,2 L	27,4 L
Water Capacity (Litre)	18,2 L	24,5 L	26,2 L	27,4 L
Propane Capacity (kg)	7,5	10,0	11,0	11,5
Butane Capacity (kg)	9,0	12,0	13,0	13,5
Empty weight † (kg)	4,1	5,0	5,1	5,3
Height (mm)	468	571	595	622
Diameter (mm)	305	305	305	305

## We bring LPG technology to the digital age

The Linktra® Smart Cylinder is a composite cylinder with a capacitive level sensor attached to valve. The level sensor is an electrical circuit measuring the change in LPG level and transmits the measured level through a connected App or gateway.

Being fully internal to the cylinder, no external wires or connections are required to operate the sensor. Key characteristics include:

- Measured data is broadcast from the sensor every 5 seconds.
- The sensor operates in transmit mode (Tx) only.
- The sensor utilizes low power design techniques to achieve a battery life of minimum 10 years.



Function	Value
Response time (s)	5
Accuracy (%)	±3
Reported levels	100
Communications	Wireless
Transmission distance (m)	8
Battery lifetime in application (years)	10
Operating temperature (°C)	-40 ≤ To ≤ +65
Certified EX product	Yes

## Linktra® Smart Cylinder regulatory compliance and certifications

The Linktra® Smart Cylinder, together with the Linktra Smart sensor inside, is compliant with the following standards and directives:

### List of EU Directives

- 2014/34/EU The ATEX Directive
- 2014/30/EU The EMC Directive
- 2014/53/EU The Radio Directive
- 2012/19/EU WEEE Directive
- 2011/65/EU RoHS Directive

### Relevant standards for the Smart Cylinder

- ISO 11119-3
- EN 12245
- EN 14427

### Relevant standards for the Linktra® Smart sensor

- ATEX, IECEx, UKEX
- EN IEC 60079-0:2018
- EN 60079-11:2012

### Radio and EMC

- IEC 61326-1:2020
- EN 300328:2019
- ETSI EN 301489-17:2020
- ETSI EN 301489-1:2019

### Relevant production standards

- ISO IEC 80079-34:2020
- ISO 9001

## Linktra® Smart sensor test overview

The Linktra® Smart sensor is expected to go through the same test regime as the conventional composite cylinder and have additional tests to ensure the functionality of the electronics and integrity of the encapsulation material and encapsulation fixation unit during use, handling and transportation.

Linktra® Smart sensor tests		
Test name	Test Category	Relevant Standards
Drop test	Robustness	EN-12245
Fire test	Robustness, Safety	EN 14427 (2014) 5.2.13 Test No. 13 EN 12245:2009+A1:2022 Test 5.2.12 ISO11119-3-2013 Test 8.5.11
Splash test	Robustness	None
Vibration testing	Robustness, Transport	None
Loose cargo test	Robustness, Transport	MIL-std AECTP-400 ED3 Annex B406 (transportation) [Military Standard]
Sensor Accuracy Test	Performance	None
Sensor transmission test	Performance	None

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