

# Smartfill CTU SF6 Leak Management System

**emt**  
Experts in ultrafast SF6  
gas analysis and handling



Smartfill CTU is a unique SF6 “live top up” device designed for managing SF6 leaks to ensure critical assets remain operational.

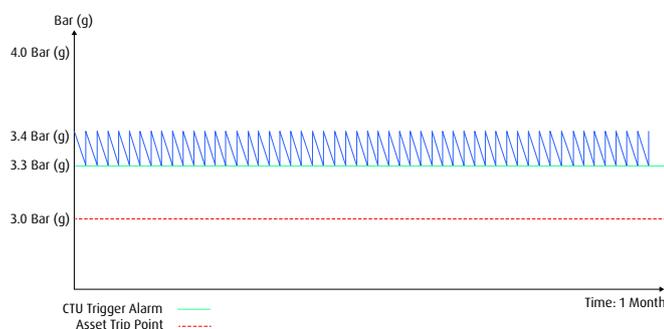
SF6 leak management presents an ongoing, complex issue for utilities globally.

Availability of skilled engineers, travel, training and increased gas usage results in higher secondary costs to the utility.

The goal is to ensure assets never fail and to keep the network operational, whilst keeping logistics and costs to a minimum.

The EMT Smartfill CTU achieves this goal via intelligently managed automated top-ups.

The Smartfill CTU is attached to the asset and manages the gas pressure within a small pressure range (e.g., 3.3 to 3.4 Bar).



The unit will “auto top-up” when pre-set lower limit pressure levels are reached, ensuring the asset never reaches the asset trip/alarm point.

## Features

- 24/7 leak management system - no down time
- Reduces SF6 usage, costs and inventory
- Intelligent control system doses gas as required
- SMS capability alerts operators to low gas, issues with the unit, on/off time, and daily “heartbeat” update
- Portable, easy to use and fully automated operation
- Accurate top-ups utilising mass flow controller technology
- Automatic datalogging for usage transparency and audit
- Wi-Fi connectivity for safe distance/remote operation

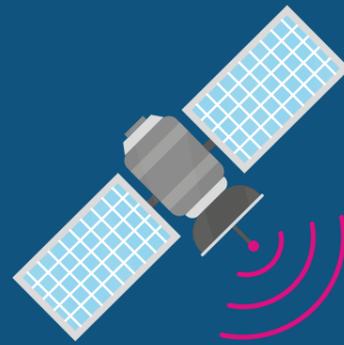
For more information or a demonstration contact  
[sales@emt.global](mailto:sales@emt.global) or visit [www.emt.global](http://www.emt.global)



The EMT Smartfill CTU can connect to any standard SF6 gas cylinder utilising quick connect adaptors



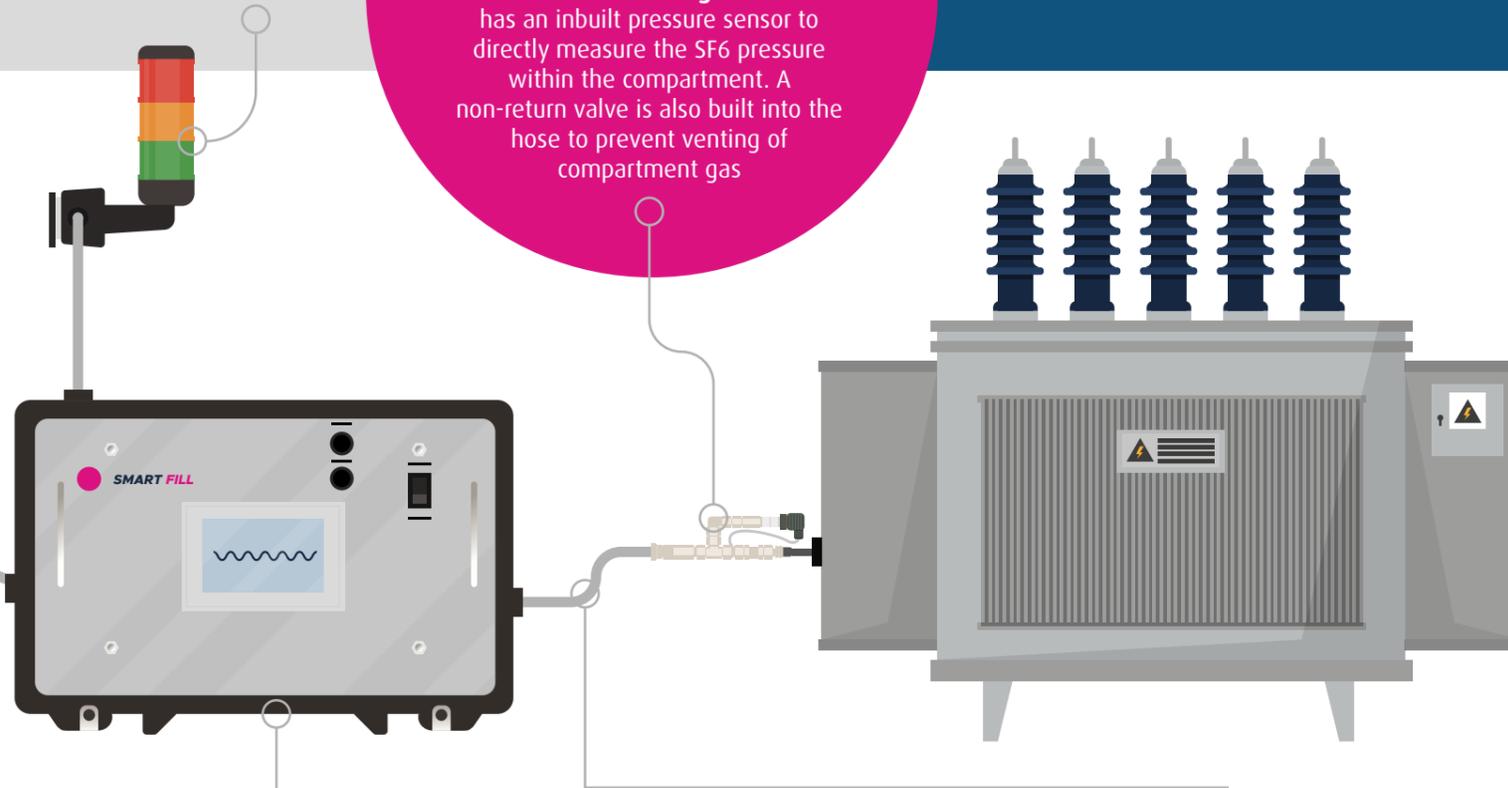
The CTU comes with a traffic light style alert beacon designed to give a visual understanding of the processes occurring in the CTU; Green: CTU is on standby awaiting a top-up requirement, Amber: CTU is performing a top-up process, Red: CTU has an issue and has stopped operations safely.



The Smartfill CTU has an optional comms pack for alerting remote engineers to what's happening onsite with the system, such as top-ups being performed, low cylinder pressure or power failures; reducing engineer interaction time and saving costs associated with engineers and travelling to site.



The Smartfill CTU filling outlet hose has an inbuilt pressure sensor to directly measure the SF6 pressure within the compartment. A non-return valve is also built into the hose to prevent venting of compartment gas



Optional cylinder heater blanket ensures maximum extraction of SF6 gas from the cylinder reducing residual gas remaining in the cylinder and waste.



The EMT Smartfill CTU is designed to manage leaks from SF6 compartments to ensure critical assets remain operational at all times. Easy to use, robust and weatherproof, the Smartfill CTU is built to survive harsh environments for extended periods of time.



The Smartfill CTU is supplied with stainless steel braided hoses to prevent punctures or damage to hoses during operation.

1.

## Connect

Connect the CTU to an SF6 gas cylinder and to the leaking compartment

2.

## Setup

Set a target minimum pressure for the Smartfill CTU to maintain, i.e. 1 Bar (15PSI) above the compartment alarm point

3.

## Start

Press start to activate the system

4.

## Monitor

The CTU enters monitoring mode, continuously measuring the pressure in the gas compartment to ensure it is above the pre-set gas limit

5.

## Critical Pressure

As the compartment continues to leak over time, eventually the gas pressure will reach the pre-set CTU pressure limit

6.

## Activation & Top-Up

The Smartfill CTU detects the pressure has reduced sufficiently to reach the lower pressure limit, the system activates, delivering SF6 from the cylinder into the gas compartment

7.

## Pressure Stabilised

The CTU detects that the gas pressure in the compartment has reached the ideal pressure limit and deactivates; ensuring the asset being topped up has not failed

8.

## Monitor

The CTU returns to monitoring mode measuring and awaiting a decrease in pressure to activate again

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## Technical Specification

<b>Operation</b>	Max flow rate: 18kg/hr
	Maximum outlet pressure: 10 Bar
	System activation limit: 0.1 Bar

<b>Accuracy</b>	MFC 1% of FS
	Pressure sensors 0.5% FS
	Max inlet pressure: 10 Barg
	Min inlet pressure: 2 Barg

<b>Remote Control</b>	Remote "take over" capability using in built VNC connection
	SMS option for daily top-up updates, system warnings, pressure issues and on/off status

<b>Safety</b>	"Traffic light" indicator to advise when filling up or safe to approach
	Safety pressure relief valve

<b>Hoses</b>	2x 6m Swagelok valved Stainless Steel braided hoses
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<b>Certifications</b>	Leak test certificate (He leak test 10 -4 SCS)
	Calibration certificate pressure sensors )+ MFC
	Pressure test certificate (10 Barg)

<b>Power Supply</b>	AC power 110/230VAC 50/60Hz
	Backup battery, 1h

<b>Enclosure/ Case</b>	IP65 rated Peli-case
	Weight: 23kg
	Dimensions: 60cm x 49cm x 27cm

### Optional accessory kit includes

- 30m (2x15m) IP67 power cable
- Smartfill CTU all weather pouch
- Space for CTU hoses, traffic light, temperature sensor and weighing scales

For details of your local EMT distributor, for further information on our products or to request a demonstration please contact us: