

Smart Gas Meters



Exclusive Authorized Distributor in Romania
Distribuitor unic autorizat în România
Carpathia HaCeTek SRL

Producer / Producător: ALCANSAR
Brand / Marka: HaCeTek

HACE Smart Gas Meters TECHNOLOGY



Application

This highly advanced Smart Gas Meter is characterized by a high level of functionality, low power consumption, excellent reliability and high flexibility for customized solutions. It offers all the features of a true smart meter and is suitable for both LPG and PNG.

Main Features

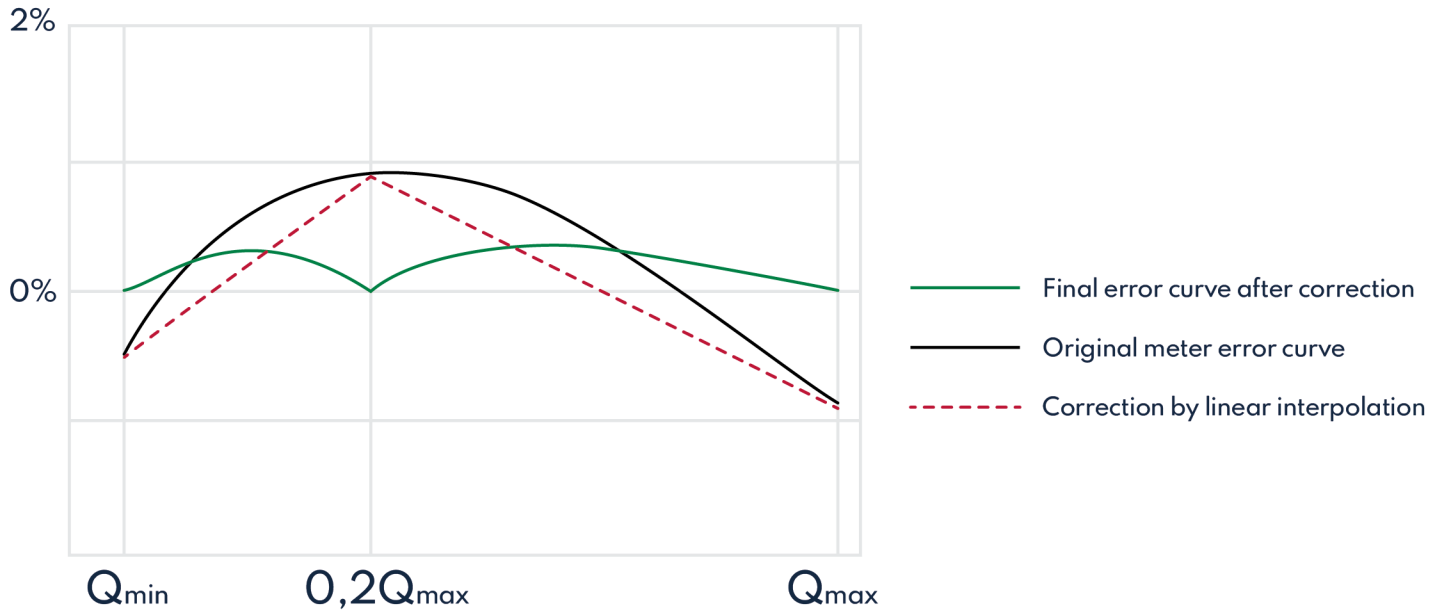
- ⚡ Reliable and tamper safe optical detection of measuring unit with “Gray-Code”
- ⚡ Excellent accuracy, using error curve correction
- ⚡ Built-in valve for remotely closing and safe opening of gas flow
- ⚡ Backlight display, with menu function
- ⚡ Optical interface (IEC 62056-21) for local maintenance (disabled while in the field)
- ⚡ ATEX/Ex approved for zone 2

Smart Functionalities

- ⚡ Optional wM-Bus (868 MHz) EN13757
- ⚡ Optional NB-IoT(LwM2M)
- ⚡ Optional LoRaWAN (M-Bus)
- ⚡ Optional ZigBee (2.4GHz/868 MHz) SE P 1.4
- ⚡ Secure AMR, using AES & ECC encryption
- ⚡ Datalogging of readings, alarms and events
- ⚡ Firmware Upgrade Over The Air (OTA)

Error curve correction

The initial error curve of the diaphragm gas meter is programmed into the micro-processor of the index at three flows: Q_{min} , $0.2 Q_{max}$ and Q_{max} . Flow is calculated with the High Frequency Gray-Code detection and the actual error is corrected by linear interpolation. Final error is corrected to approx. 0.1%.



Time of use

The meter supports TOU with up to 4 tariffs. Energy price is depending on the time of use. Tariff switching is performed with advanced calendar function. For each tariff, consumption will be available as m^3 , kWh and £.

Credit Prepayment

The meter can be switched between Credit mode and Prepayment mode. Switching may be performed immediately or at a predefined time. In prepayment mode the meter supports Emergency Credit, Credit from Head End system and local Credit by input of UTRN code.

Block Tariff

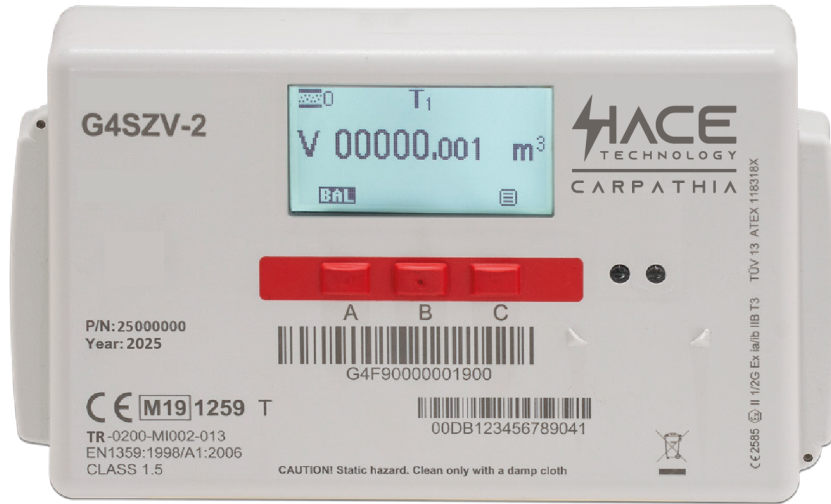
When Block tariff function is activated, the price of energy will be depending on the actual half-hourly consumption. Up to 4 rates are supported.

Logs

The electronic index has an auto diagnostic system, monitoring the conditions of the meter:
Alarm Logs and Alerts.

Index

To activate the main menu () press the C button. To scroll through the menus and select/acknowledge (), activate the arrows displayed at the bottom of the display (   ) by pressing either the A, B or C button, depending on the options available.



Symbols shown at the top of the display when either volume or balance screen is displayed.

Symbol	Meaning	Required Action
	Alarm	Go to the menu, select Alarms + Actual alarms, and you will see the alarm
	Valve open	No action
	Valve busy (opening or closing)	Observe if the gas is disabled
	Valve shut	When the valve is closed, gas is disabled. Contact gas utility, and press the button when the meter requires it
	Low battery	The battery must be exchanged within 30 days
	Emergency Credit Available	Use Menu to accept Emergency Credit to avoid disconnection
	Emergency Credit IN USE	Emergency Credit is being used
	Low Credit	Top up to avoid incurring Debt or being cut off
	Non-Disconnect	The meter is OUT OF CREDIT, and would have disconnected but will remain on supply, because of the Non-Disconnect period
	Message waiting (from Utility)	Go to Menu + Message, and scroll through the incoming messages. Acknowledge with 
	Paired to Communication Hub	All OK. If the symbol is not present, there is no connection to the HAN. The symbol is dynamic and will indicate signal strength, just like a mobile phone
	Information waiting (from gas meter)	Go to Menu + Information, and scroll through the incoming information. Acknowledge by pressing the button below the i symbol
	Firmware download in progress	No action

Specifications

Type	Distance	Vcyc	Boss Type	Valve
G1.6	110	1.2L	G5/4"	Valve
G2.5	110	1.2L	G5/4	Valve
G4	110	1.2L	G5/4"	Valve
G4	152	1.2L	G5/4"	Valve
G4	220	1.2L	3/4" Dutch	-
G4	250	2.2L	G5/4"	-
G6	220	2.2L	3/4" Dutch	-
G6	250	2.2L	G5/4"	-
G10	300	5.6L	G2"	-
G16	280	5.6L	G2"	-
G16	300	5.6L	G2"	-
G25	335	11.2L	DN50	-
G25	335	20L	G2 1/2"	-

Battery Lifetime

Min. 15 years of normal operation (10 w. NB-IoT)

Temperature Range

Tamb: -25...+55°C Tgas: -25...+55°C
Tstor : -30...+60°C RH : < 93%, condensing

Conformity with

EN1359:2017

OMS 4.x

DSMR 4.x/5.x

GBCS 3.x/4.x

EN16314:2013

Directive 2014/34/EU

Display

Graphical display, fixed, 8 digits Resolution:
3 decimals

Approvals

MID

DK-0200-MI002-013

ATEX/Ex

II 3G Ex ic IIA T3 Gc

Enclosure

IP 54 (Pmax ≥500mbar)

Gas Types

Gas Family 1,2 & 3 (EN437)



APPLICATION

This highly advanced Smart Gas Meter is characterized by a high level of functionality, low power consumption, excellent reliability and quick and easy installation and commissioning.

It offers all the features of a true smart G-meter and fulfils the latest version of SMETS2.

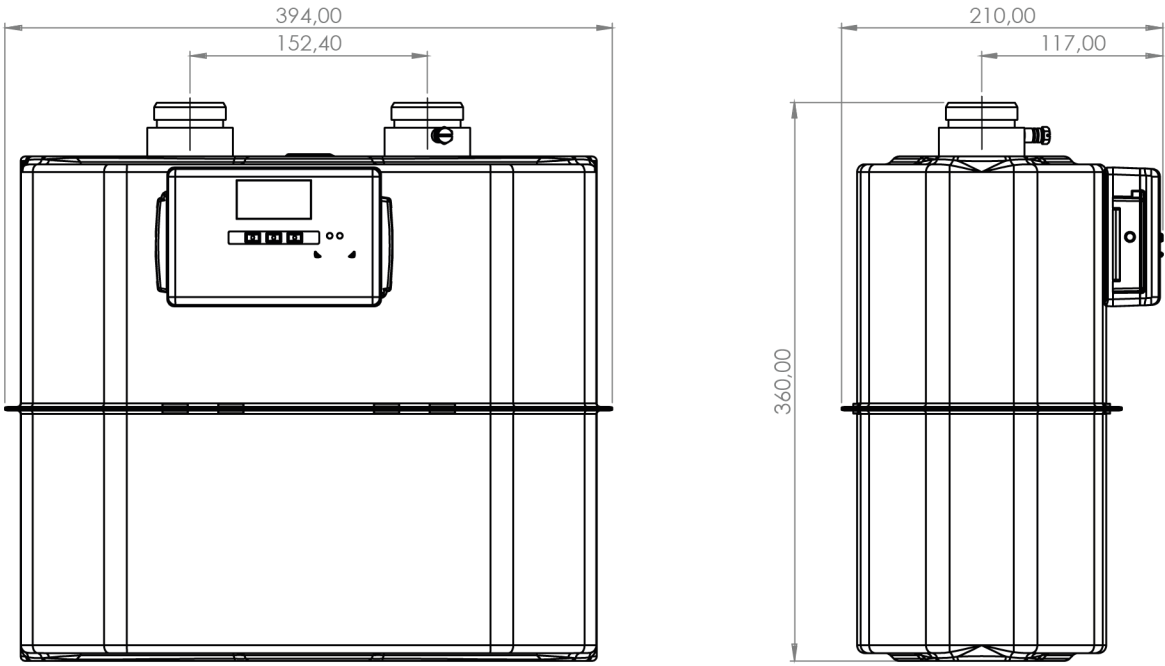
Main Features

- ⚡ Reliable and tamper safe optical detection of measuring unit with "Gray-Code"
- ⚡ Excellent accuracy, using error curve correction
- ⚡ Calculated battery lifetime of minimum 15 years
- ⚡ Backlight display, with menu function
- ⚡ 3 button interface
- ⚡ Optical interface (IEC 62056-21) for local maintenance (disabled while in the field)
- ⚡ ATEX approved for zone 0/1
- ⚡ For use with gasses of 1st, 2nd and 3rd families

Smart Functionalities

- ⚡ Secure AMR, using AES & ECC encryption
- ⚡ Datalogging of readings, alarms and events
- ⚡ Time of use(TOU) registration with up to 4 tariffs
- ⚡ Block tariff registration supported with up to 4 rates
- ⚡ Integrated ZigBee radio, 2.4GHz/868MHz, Dual band (G10SDZ-2)
- ⚡ Communication protocol acc. to ZigBee Smart Energy Profile (SEP 1.4), offering full exchangeability
- ⚡ Firmware Upgrade Over The Air (OTA)

Dimensions



Specifications

Model	Q_{max} m^2/h	Q_{min} m^2/h	Q_{start} dm^3/h	$P_{max}^{1)}$ bar	ΔP_1 mbar	V_{cyc} dm^3
UniFlo G10	16	0.1	13	0,5	<2	5.6

Battery Lifetime

Min. 15 years of normal operation

Display

Graphical display, fixed, 9 digits
3 button user interface
Resolution: 3 decimals
Max reading: 999999.999 m^3

Approvals

MID: DK-0200-MI002-013
CPA: Pending
ATEX: Ex II 1/2G Ex ia/ib IIB T3
EPS 19 ATEX 1124 X

Temperature Range

T_{amb} : -25...+55°C
 T_{stor} : -30...+60°C
 T_{gas} : -25...+55°C
RH: <93%, condensing

Enclosure

IP 54

Thread

BS 5/4

Weight

6,8 kg

Conformity with

OIML - R137
EN1359:1998 + A1:2006
SMETS2(UK)
BS EN 61010 Electrical Safety



Application

SciFlo® is a compact static gas meter based on the ultrasonic measuring principle. SciFlo® is intended for volume measurement in residential buildings where gas is used as energy source. Volume is measured using bidirectional ultrasound, based on the time of flight method

SciFlo® is encased in a nonpainted low-weight steel housing and is operated via 1 or 3 push buttons. A large backlit graph-ical 128 x 64-pixel display ensures easy reading.

Main Features

-  G4/G6 in one meter
-  Patented ultrasound sensors
-  Nonpainted Steel Housing
-  Very compact and low-weight
-  IP67
-  Built-in valve for remotely closing and safe opening of gas flow
-  Both credit and prepayment mode
-  Time of use up to 4 tariffs
-  Exchangeable battery

Smart Functionalities

-  Optional wM-Bus (868 MHz) EN13757
-  Optional NB-IoT (LwM2M)
-  Optional LoRaWAN (wM-Bus)
-  Optional ZigBee (2.4GHz/868 MHz) GBCS
-  AES & ECC encryption
-  Datalogging of readings, alarms and events
-  Firmware Upgrade Over The Air (OTA)

Dimensions

Model	$Q_{\max}$ m ² /h	$Q_{\min}$ m ² /h	$P_{\max}^{1)}$ bar	$\Delta P_{1)}$ mbar
SciFlo	10	0.04	0,5	<2

1) Operational pressure for valve: 0,2 bar

Battery lifetime

1 x D-Cell	NB-IoT	~ 10 years
1 x D-Cell	Radio - wM-Bus	~ 20 years
1 x D-Cell	ZigBee RF	~ 15 years

Temperature Range

T_{amb} : -25...+55°C

T_{gas} : -25...+55°C

T_{storage} : -30...+60°C

Display

Graphical display, menu driven, 9 digits

Resolutions: 0, 3 or 4 decimals

Approvals

MID

ATEX



Conformity with

Directive 2014/32/EU (MID)

EN14236:2018

EN16314:2013 (integrated valve)

SMETS 2 (UK)

OIML D11 (EMC) (electronic index)

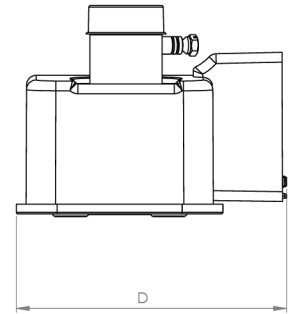
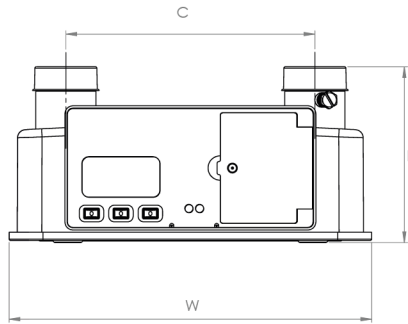
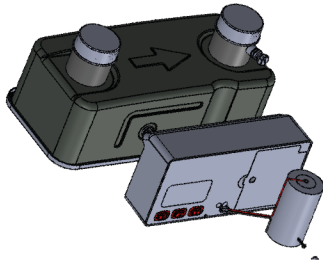
Directive 94/9/EC (ATEX)

OMS 4.02

ZigBee SEP 1.4

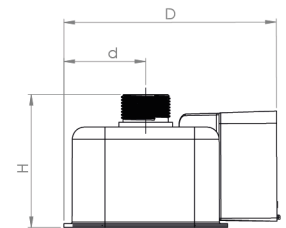
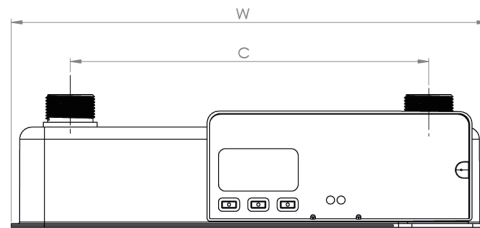
Mechanical Connections

Two-pipe, 6 inch



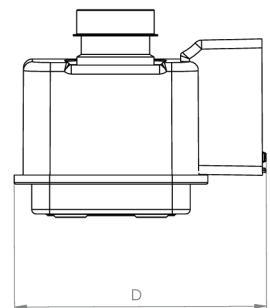
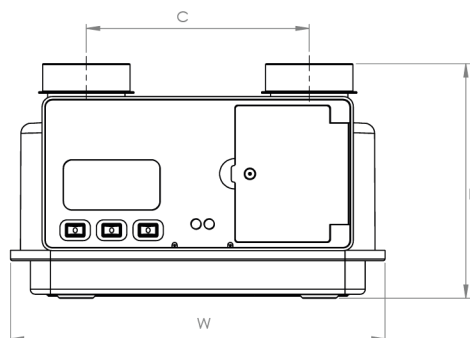
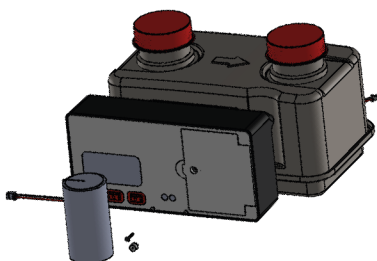
Model	W(mm)	C(mm)	D(mm)	d(mm)	H(mm)	Connections
SciFlo	224	152,5	135	51	103	BS1"

Two-pipe, 220 mm



Model	W(mm)	C(mm)	D(mm)	d(mm)	H(mm)	Connections
SciFlo	295	220	135	53	80	GM3/4"

Two-pipe, 110 mm



Model	W(mm)	C(mm)	D(mm)	d(mm)	H(mm)	Connections
SciFlo	185	110	145	65	116	G5/4"