OIML Member State United Kingdom of Great Britain and Northern Ireland	**OIML Certificate No.** **R117/2007-B-GB1-19.02**

OIML CERTIFICATE ISSUED UNDER SCHEME B

OIML Issuing Authority	**NMO** **Stanton Avenue** **Teddington** **TW11 0JZ** **United Kingdom**
Person responsible:	**Mannie Panesar – Head of Technical Services**
Applicant	**Hytek (GB) Ltd** **Delta House, Green Street** **Elsenham,** **Bishops Stortford,** **Herts,** **CM22 6DS** **United Kingdom**
Manufacturer	**The applicant**
Identification of the certified type	**Alpha FC10, with an integrated Self-Service Device and remote fuel management system and data storage device** *(the detailed characteristics are defined in the Descriptive Annex)*

This OIML Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML type evaluation report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 117-1, Edition: 2007

For accuracy class: 0.5

Issue date: 02 May 2019

The OIML Issuing Authority

Grégory Glas
Lead Technical Manager
For and on behalf of the Head of Technical Services

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NMO is part of the Office for Product Safety and Standards within the Department for Business, Energy & Industrial Strategy

This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

This OIML Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated OIML type evaluation report:

No. P02336-02 dated 02 May 2019 that includes 62 pages

The technical documentation relating to the identified type is contained in documentation file:

No. P02336-02-D dated 02 May 2019

OIML Certificate History

Revision No.	Date	Description of the modification
0	02 May 2019	OIML Certificate first issued.
-	-	-

No revisions have been issued.

Important note:
Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate is issued, partial quotation of the Certificate and of the associated OIML type evaluation report(s) is not permitted, although either may be reproduced in full.

DESCRIPTIVE ANNEX

The Hytek Alpha FC10 fuel dispenser is an interruptible meter measuring system and integrated fuel management system. The Self-Service Device (SSD) can have various user access methods including, but not limited to, RFID Tag Reader \ Swipe Card Reader \ Data Disk Reader \ Identitag reader.

The integrated dispenser housing comprises a hydraulics enclosure with an electronics enclosure above it.

Characteristics of the instrument:

Accuracy Class:	0.5
Mechanical Class:	M1
Electromagnetic Environment Class:	E1
Climatic environment:	H3
Temperature Range Ambient:	-25 °C to +40 °C
V_{min}:	2 litres
Liquids:	≤ 3.17 mPa.s
Q_{min}:	5 l/min
Q_{max}:	80 l/min
P_{max}:	3.5 bar
Power supply	230 VAC

Construction:

The base and internal dispenser frame is constructed from riveted angled stainless steel and stainless-steel panel work. The frame is clad with stainless steel panels and the hinged front doors are secured with two key locks one lower one upper.
The dispenser enclosure may be constructed of steel, aluminium, GRP or a combination of these materials.
The graphics display and logic board which form the calculator is mounted in the upper head. The display can be viewed through a clear window in the front panel.
The pump unit and meter are supported on the internal dispenser frame.
The nozzle holster is made from cast aluminium and is mounted on the dispenser's side panel.

Essential parts:

Part	Manufacturer	Type
Meter	Shanghai Aile Manufacturing Company	SB-100
Encoder	Eltomatic A/S	01-08
Gas Separator	Bennett	T75
Calculator/SSD	Hytek (GB) Ltd	FC10

Non-essential parts:

The following items may be included within the hydraulic circuits:

- Shear valves for use on dispensers
- Non-return valves separate from the pump and gas separator
- Swivels and or safety breaks in the hose assembly circuit

Software:

Calculator and SSD
Software is downloaded remotely into the memory module which is soldered to the main circuit board. The circuit board is secured by wire and seal. The legally relevant software (LRS) software version number and CRC checksum are periodically displayed during normal operation on the top line of the LCD display and when the system is powered up. The identification and CRC number for the printer software code are printed on each transaction receipt. The event logger records the date and time of legally relevant software downloads and is displayed by entering CLR 459 on the keypad.

Calculator/SSD
S/W Version LRS number: MID01

CRC number: 0x3AF8

Printer
S/W Version LRS number: MID01
CRC number: 0x032C

Data storage device (FC Online)
FC Online is an online transaction viewer. User's login to FC Online to view their online fuelling transaction information.

FC (Fuel Control) & Autocomms deals with communications from the SSD and the subsequent storage of fuelling transitions into tables, these tables are then accessed by FC Online. Fuel manager and FC (Fuel Control) & Autocomms share the same source code.

The version number and generated CRC checksum are viewable via FC Online on the system information popup window. This information can be accessed on site at the address on page 1 or can be accessed re-motely by http://fmo.hytekgb.com. The "Version history" link provides access to the MID event logger which records the date and time of legally relevant software downloads.

FC Online

S/W Version number: MID01

CRC number: sINIq2vcnVAQeCIu3NCO5Q

Fuel Manager & Autocomms

S/W Version number: MID01

CRC number: NHwGNsP6RmWpmLu+OcE99Q

Interfaces:

- RS485
- RS232

Sealing and verification marks:

The data plate is located on the dispenser enclosure and is secured by being of a form such that it is destroyed when removed.
The meter, encoder, gas separator and calculator are secured with a wire and seal. Alternatively, the dispenser may be calibrated electronically by removing the security seal wire and removing the blanking keypad connector and then connecting a keypad.

Refer to documentation file No. P02336-02-D.