

ALPHA EX APPROVED DIESEL PUMP WITH FUEL CONTROL SYSTEM



Applies to the following models **ONLY**:

ALPHA...

50AFC	70AFC	90AFC
50LAFC	70LAFC	90LAFC

Please read carefully **BEFORE** commencing installation.

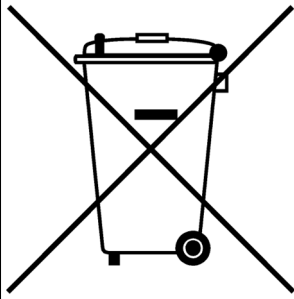
Registered Office: HYTEK (GB) LIMITED,
Delta House, Green Street, Elsenham, Bishop's Stortford,
CM22 6DS UK.

Registered in England No. 1915382

Tel: +44 (0) 1279 815 600

Email: info@hytekgb.com

ENVIRONMENTAL INFORMATION



UK Regulation S1 2013 3113 requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product must be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities.

PRODUCT DESCRIPTION

This pump is ATEX certified to dispense diesel or other liquids classed as category 3 in accordance with European Regulation No. 1272/2008. It bears the following certification marking and number:

MANUFACTURED TO: EN13617-1
CERTIFICATE NO: CML 15ATEX9183



IMPORTANT WARNING NOTES

1. On above ground storage tanks, an angle check valve fitted with the appropriate spring or pressure regulating valve must be fitted at the tank outlet to prevent loss of fuel under gravity in the event of vandalism or accidental damage.
2. This pump must only be used to dispense diesel or other liquids classed as category 3 in accordance with European Regulation No. 1272/2008. It must not be used to dispense petrol or any other liquid with a similar flash point.
3. Installation of this equipment and its associated tank, pipe work and fittings should only be carried out by qualified fuel installation engineers.
4. The installation must be carried out in accordance with the requirements of EN 60079-14 and the latest relevant electrical and local authority regulations and standards.
5. It must not be used with other liquids or for other applications. We will accept no warranty claims or liability if it is used for other liquids or applications.

INSTALLATION INSTRUCTIONS

1. Check you have the following items:
 - 1 off Alpha FC10 pump
 - 1 off delivery hose
 - 2 off front door keys
2. Open the front panel using the key provided.
3. Remove the rear panel, if necessary, and store safely.

MOUNTING

4. Bolt the pump to a firm level foundation by means of the four 14 mm diameter-mounting holes provided.
NB: If the optional drip tray is to be fitted to the pump it must be sealed to its foundation, with a suitable elastomeric substance, to prevent leaked fuel "wicking" back underneath the pump. To maintain the environmental integrity of the drip tray any possible leak path through the pump mounting holes must also be sealed.

PIPEWORK

5. Connect the 1 1/2" diameter pipe from the tank to the suction inlet flexible connector of the pump. The inlet thread of the flexible connector flange is 1 1/2" BSP taper female. Seal the joints with a suitable thread sealing compound. The pipe work must be sealed to the drip tray (if fitted) to ensure no leaking fuel can flow underground. An alternative pipe work entry point, for above ground pipe work, is provided at the rear of the pump base. Push out the plastic cover plate if required.
NB: On above ground tanks an angle check valve fitted with the appropriate spring or an anti-syphon valve must be fitted in the suction line to prevent spillage or leakage in the event of damage.
6. Connect one end of the delivery hose into the outlet elbow. Ensure the hose-sealing washer is in place on the hose end. It should be hand tight plus a quarter turn.
7. Screw the nozzle onto the other end of the hose, again ensuring the washer is in place. No other sealing compound is necessary. Hand tight plus a quarter turn.

ELECTRICAL

8. Remove the cover from the junction box.
9. Connect a constant 220/240V AC 50 Hz supply, fused at 16 amps, to the terminal block in the junction box as shown on the wiring details diagram.
NB: The Alpha pump must have a continual 220/240V AC supply, even when not in use.
10. Ensure all terminal screws are tight and replace the junction box cover.

MAINTENANCE

The Alpha should require minimum maintenance in normal regular use, but as with all mechanical apparatus regular servicing will prolong its life and ensure maximum efficiency & reliability.

The following should be carried out every 12 months or 1 million litres whichever comes first.

- Isolate power supply
- Inspect & clean or replace pump filter
- Inspect & clean or replace nozzle filter
- Inspect & replace if necessary the V-belt
- Check motor pulley grub screw is tight
- Re-calibrate electronic display

USING THE FC10 FUEL CONTROL UNIT

ALPHA PUMP TERMINAL FEATURES

The Alpha Pump Terminal, pictured below is fitted into the front of the Alpha fuel dispenser.



FEATURES:

Display: This shows pump totals as well as user information and instructions. The display is backlit to allow the pump to be used in all light conditions.

Keypad: Used to enter information such as odometer readings and PIN codes.

Data Tag Reader Slot: This is where the Data Tag is inserted by the user to initiate the dispensing of fuel.

THE ALPHA PUMP TERMINAL IN STANDBY MODE

This is when the Alpha Pump Terminal is powered up, with the display illuminated, but not in use.

DISPLAY INFORMATION:

Total Pump 1: This is the number shown in the top left-hand corner of the display screen. It is the total amount of fuel dispensed by pump 1 since installation.

Time and Date: This is shown in the centre at the top of the display screen. It will cycle between the Time & Date and the site name.

Total Pump 2: This is only active if an additional pump is connected to the ALPHA FC10. The pump 2 total is shown in the top right-hand corner of the display screen. It is the total amount of fuel dispensed by pump 2 since installation.

Last Transaction These are shown in the dark coloured box in the centre of the display screen. They include the Data Tag ID number of the last user, the amount of fuel delivered, the time and date the fuel was delivered and vehicle MPG.

Last Amount Dispensed: This is shown in large text at the bottom of the display.

FUELLING FROM THE ALPHA PUMP TERMINAL

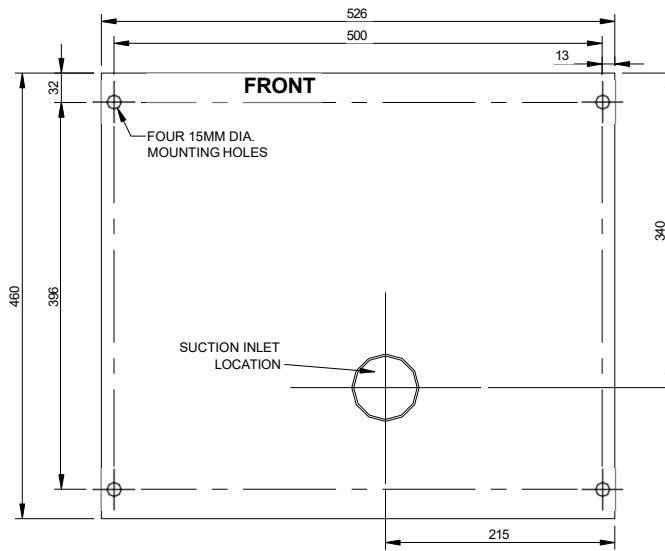
THE FUELLING PROCEDURE:

- a.) Insert Data Tag into the Data Tag Reader Slot. The display will show the Data Tag ID number and the registration number of the vehicle the Data Tag is allocated to.
- b.) If a message for the vehicle user is stored on the system it will be displayed. The "ENT" key on the keypad must be pressed, to acknowledge the message, before fuel can be drawn.
- c.) If entry of the vehicle's odometer reading is required the display will show "PLEASE ENTER CURRENT ODOMETER". The last odometer reading entered for this vehicle will also be shown if this feature has been enabled in the Fuel Manager software. Type the current vehicle odometer reading, on the keypad, followed by pressing the "ENT" key.
- d.) If entry of a driver's identity PIN number is required the display will show "PLEASE ENTER DRIVER ID". Type the identity PIN number of the driver, on the keypad, followed by pressing the "ENT" key.
- e.) If an additional pump is connected to the ALPHA FC10 and all the access protocol entered has been accepted then the display will show "PLEASE SELECT A PUMP.....". Type the number of the pump to be used (1 or 2).
- f.) "REMOVE DATA TAG" will be shown on the display.
- g.) Remove the Data Tag from the Data Tag Reader Slot. The display will now show "PLEASE FUEL AT THE PUMP".
- h.) Remove the nozzle from the pump nozzle holster, place in the vehicle fuel tank filler and draw fuel.
- i.) The amount of fuel dispensed will be shown on the display.
- j.) On completion of the fuel delivery replace the nozzle in the pump nozzle holster.
- k.) The amount of fuel taken will be retained on the display screen until a Data Tag is inserted into the Data Tag Reader Slot.

ALPHA BASE AND SUCTION CONNECTION DIAGRAMS

BASE VIEW FROM ABOVE

ALL DIMENSIONS IN MM



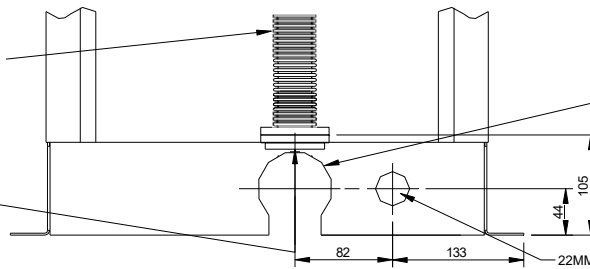
REAR VIEW

1 1/2" STAINLESS STEEL FLEXIBLE CONNECTOR (SUPPLIED AS STANDARD)

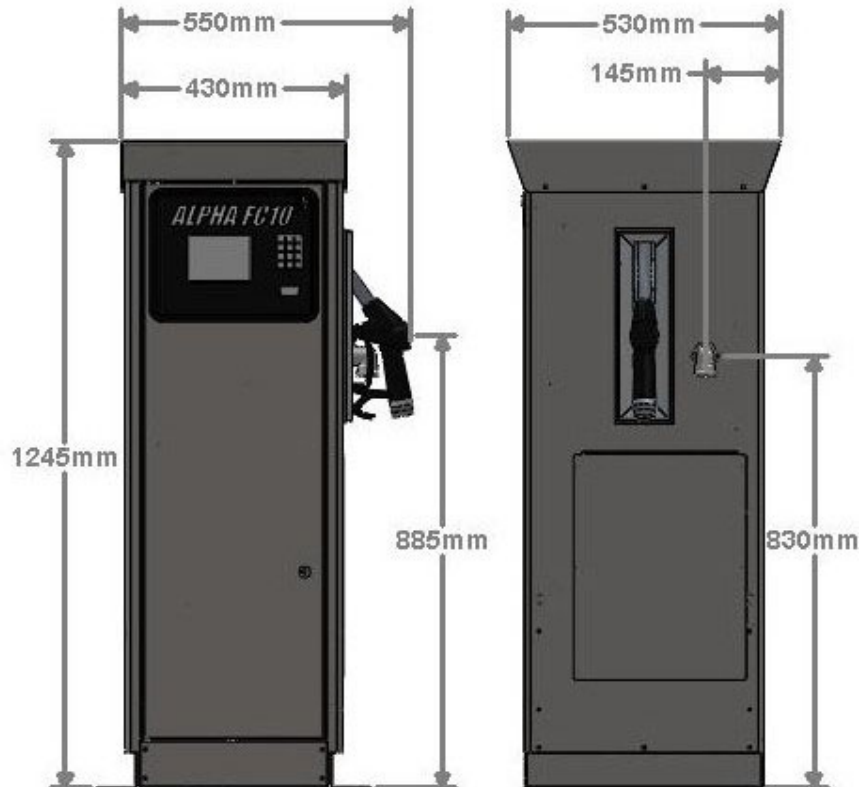
1 1/2" BSP TAPER FEMALE THREADED STANDARD TRIANGULAR SUCTION FLANGE ALIGNED WITH SUCTION HOLE IN BASE

76.5MM DIA. ALTERNATIVE SUCTION HOLE SLOTTED TO BOTTOM OF BASE

22MM DIA. ALTERNATIVE CABLE ENTRY HOLE



ALPHA EXTERNAL DIMENSIONS



ALPHA DISPLAY CONNECTIONS DETAILS

SECOND PUMP CONNECTIONS
TO PUMP 2 JUNCTION BOX
(ONLY USED IF SECOND PUMP
CONNECTED)

INTERNAL WIRING
CONNECTIONS

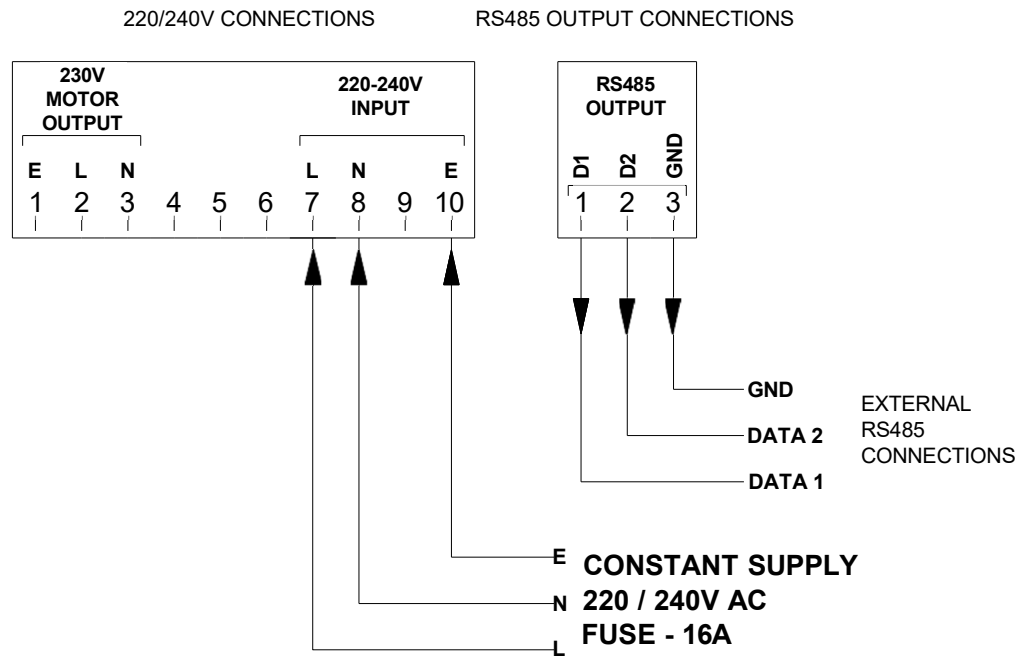
MOTOR RELAY CONNECTIONS	0V - BLUE	1
	12V DC - BROWN	2
PUMP PULSER CONNS (& NOZ SWITCH +12VDC)	12V DC - RED	3
	PULSE - GREEN	4
	0V - BLACK	5
	SCREEN	6
RS485 DATA CONNECTIONS	DATA 1 - BROWN	7
	DATA 2 - BLUE	8
NOZZLE SWITCH INPUT	YELLOW	9
	BLUE	10

240V AC
POWER INPUT
CONNECTOR

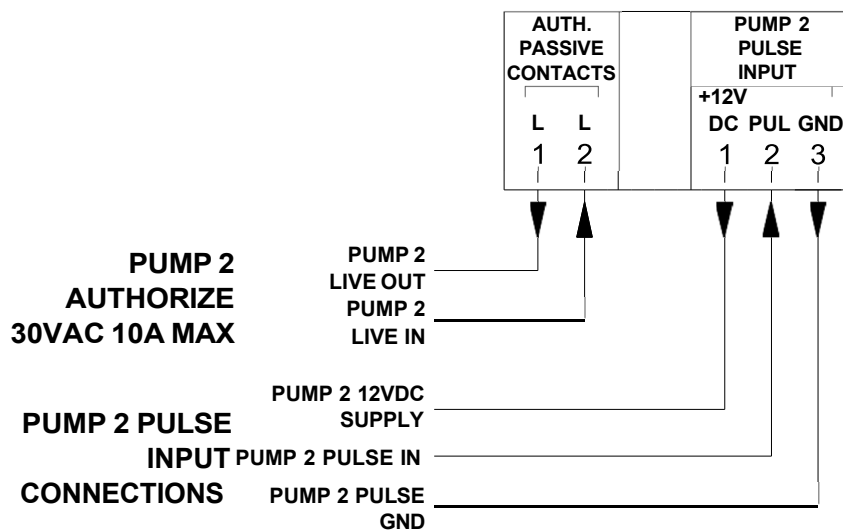
MOTOR RELAY CONNECTIONS	0V - BLUE	1
	12V DC - BROWN	2
PUMP PULSER CONNECTIONS	12V DC - BROWN	3
	PULSE - GREEN	4
	0V - BLUE	5
	SCREEN	6
RS485 DATA CONNECTIONS	DATA 1 - BROWN	7
	DATA 2 - BLUE	8
		9
		10

ALPHA JUNCTION BOX CONNECTION DETAILS

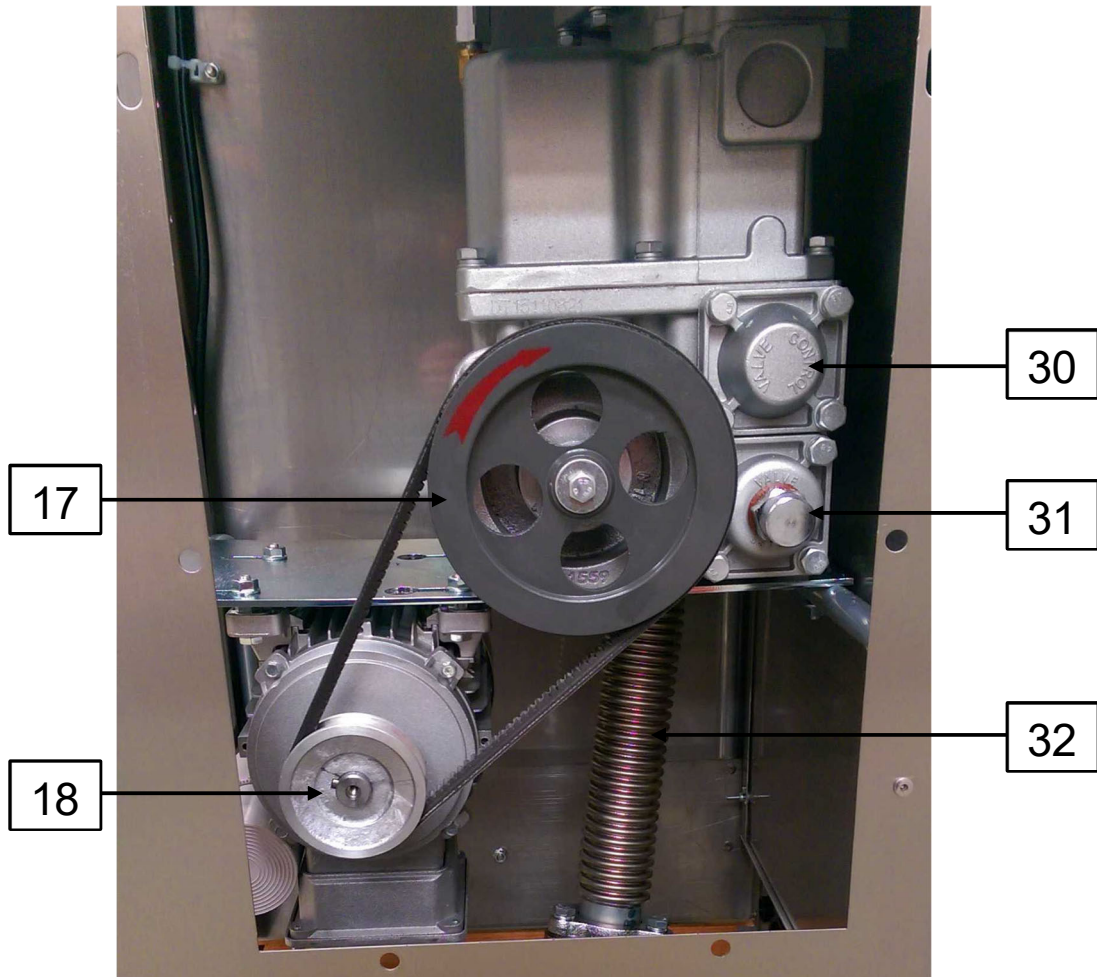
ALPHA FC10 MAIN JUNCTION BOX INSTALLATION WIRING DETAILS



CONNECTIONS IN JUNCTION BOX FOR PUMP 2



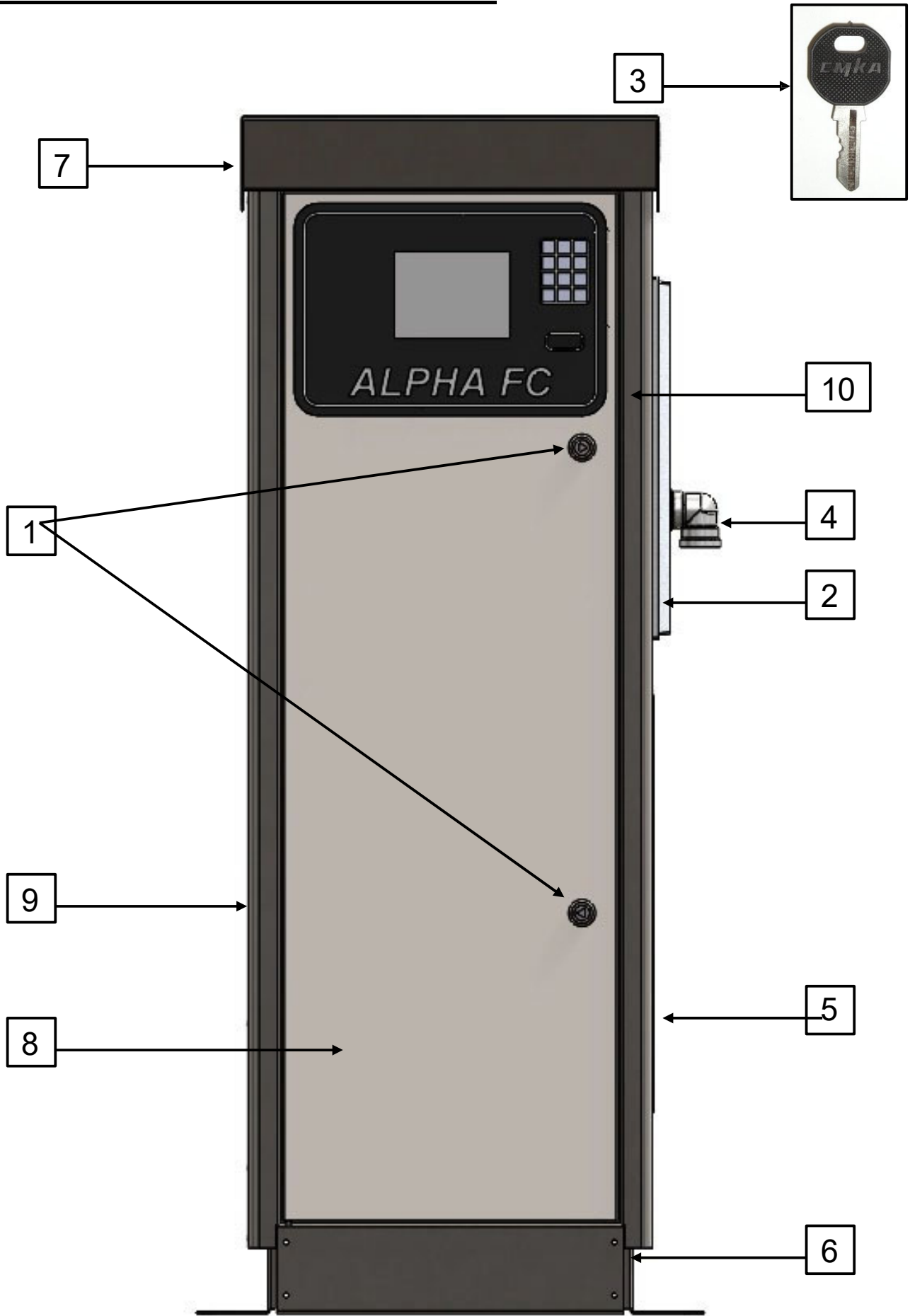
ALPHA SIDE ACCESS PANEL VIEW



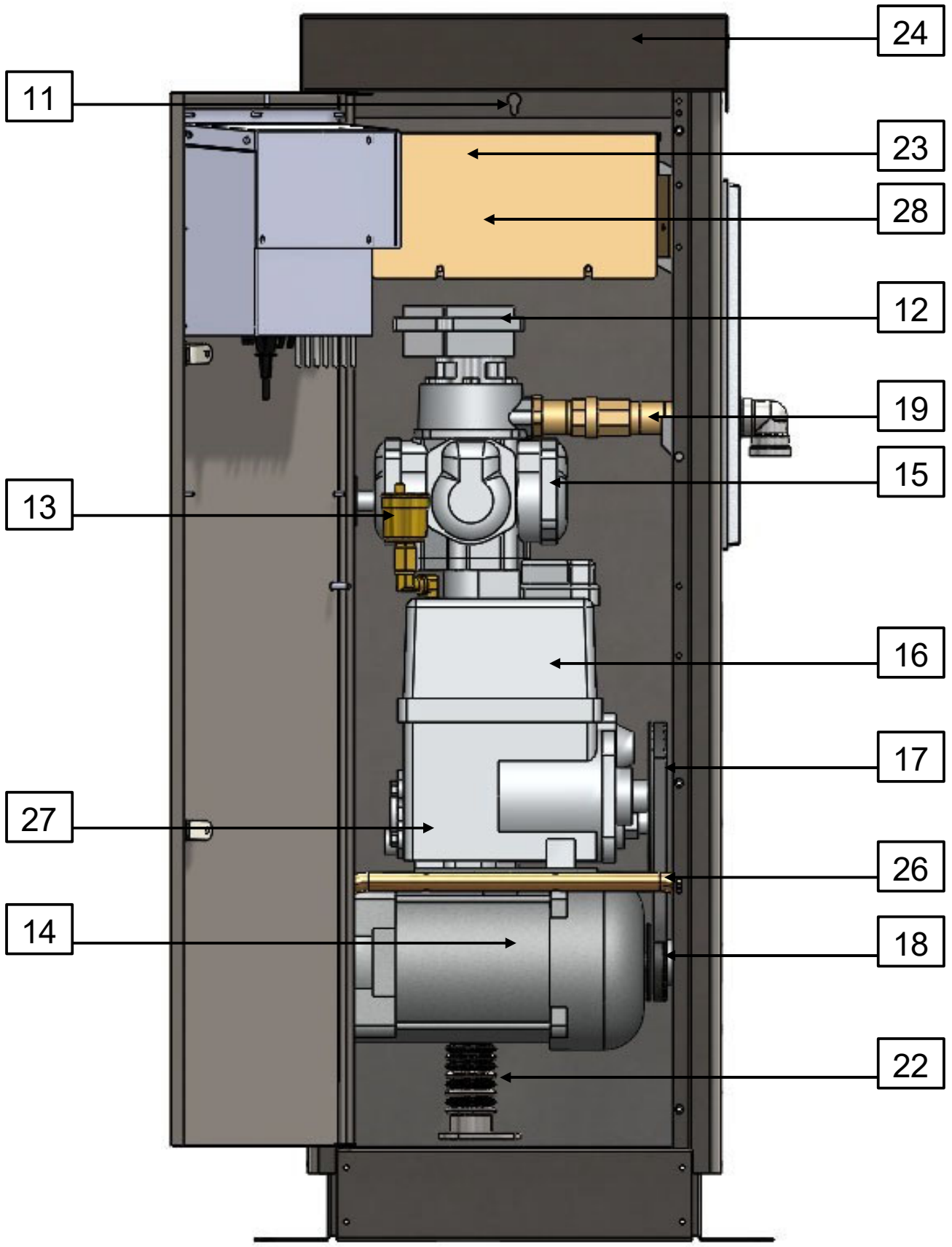
ALPHA PUMP UNIT FILTER LOCATION



ALPHA FC10 EXTERNAL VIEW



ALPHA FC10 INTERNAL VIEW*



ALPHA PARTS LIST

DRG. REF	PART DESCRIPTION	PART NO.
	EXTERNAL COMPONENTS	
1	LOCK (x 2)	ALP.LOCK.FC
2	NOZZLE HOLSTER WITH SWITCH	ALP.NOZBOOT.FC10
3	DOOR KEY	ALP.KEY.FC
4	OUTLET ELBOW	ELB.4FFCR
5	SIDE ACCESS PANEL	ALP.ACCPAN3
6	MOUNTING BASE	ALP.BASE3
7	TOP CAP	ALP.CAP3
8	DOOR	ALP.DOOR.FC3
9	SIDE PANEL	ALP.SPAN.BL3
10	SIDE PANEL WITH HOSE OUTLET	ALP.SPANH3
	INTERNAL COMPONENTS	
11	DOOR STAY	ALP.DSTAY3
12	PULSER	PULS.30A
13	AIR SEPARATOR OUTLET FLOAT CHAMBER	MINIVENT
14	MOTOR	MOT.E75.ATEX
15	4 PISTON METER (2 REV PER LITRE)	209A.METER.REP
16	PUMP UNIT (COMPLETE)	209A.PASSY
17	PULLEY BELT (50 LPM)	VBLT.275
17	PULLEY BELT (70 LPM)	VBLT.28
17	PULLEY BELT (90 LPM)	VBLT.285
18	PULLEY (50 LPM)	PULL.2C
18	PULLEY (70 LPM)	PULL.25C
18	PULLEY (90 LPM)	PULL.3C
19	METER OUTLET PIPE	ALP.OUTPIPE.W
20	INLET FLANGE*	FLNG
21	INLET GASKET*	GSK.TRI
22	FLEXIBLE SUCTION CONNECTOR	TTLB
23	RELAY (INSIDE JUNCTION BOX)*	ALP.FC10.RELAY
24	UPPER PANEL FRONT	ALP.UPAN3
25	UPPER PANEL REAR*	ALP.UPAN3
26	PUMP MOUNTING FRAME (x 2)	ALP.PFRAME3
27	MOTOR MOUNTING PLATE (x 2)	ALP.PPLATE3C
28	JUNCTION BOX	ALP.DBOX.FC103
29	CHECK VALVE*	209EP.21
30	BYPASS VALVE*	209EP.29
31	PUMP UNIT VANES* (X 6)	209EP.38
32	PUMP UNIT FILTER*	209EP.3
33	OUTLET CHECK VALVE*	CHK.1A.DRILL

* Not shown

UK DECLARATION OF CONFORMITY



Company Name: **Hytek (GB) Ltd**

Address: **Delta House, Green Street, Eisenham
Bishop's Stortford, Hertfordshire, CM22 6DS**

Date of Issue: **21st August 2023**

Equipment Details: **Alpha ATEX Fuel Pumps with Fuel Control**
ALPHA/50AFC, ALPHA/50LAFC, ALPHA/70AFC, ALPHA/70LAFC, ALPHA/90AFC,
ALPHA/90LAFC, ALPHA/5050AFC, ALPHA/5070AFC, ALPHA/5090AFC,
ALPHA/7070AFC, ALPHA/7090AFC, ALPHA/9090AFC

Applicable Directives:
& Standards **SI 2016 1091 Electromagnetic Compatibility Regulations
2004/108/EC EMC Directive & 2014/30/EU EMC Directive**
EN 61000-6-3:2007 (+A1)
Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments
EN 61000-6-2:2005
Electromagnetic compatibility (EMC) Part 6-2: Generic standards - Immunity for industrial environments

**SI 2016 1101 Electrical Equipment Safety Regulations
2014/35/EU Low Voltage Directive**

**SI 2008 1597 Supply of Machinery Safety Regulations 2006/42/EC
Machinery Directive**

**SI 2016 1105 Pressure Equipment Safety Regulations 2014/68/EU
Pressure Equipment Directive**

**SI 2013 3113 Waste Electrical & Electronic Equipment Regulations
2012/19/EU Waste Electrical & Electronic Equipment Regulations**

**SI 2012 3032 Restriction of Use of Certain Hazardous Substances Regulations
2011/65/EU Restriction of Hazardous Substances Directive (RoHS2)**

2014/34/EU ATEX Directive

EN 13617-1 & EN 1127-1

EU Type examination Certificate

Number: CML 15ATEX9183

Issued by Notified Body: CML Ltd. Number 2503

Unit 1 Newport Business Park, New Port Road Ellesmere
Port, CH65 4LZ UK

Marking:

Ex II 2 G

EN 13617-1:2012 Ta=

-20°C to +40°C

Notified Body Issuing QA:

CML B.V Number 2776

Notification Certificate

Chamber of Commerce No 6738671

Hoogoorddreef 15, Amsterdam, 1101 BA, The

Netherlands

Declaration Number:

UK126 Issue 7

On behalf of the above-named company, I declare under our sole responsibility that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives.

Clive Wellings, Process Co-ordinator, 21st August 2023, Bishop's Stortford, Herts

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