TGO Green Energy Range

the great outdoor gym company
www.tgogc.com

Pilot sites

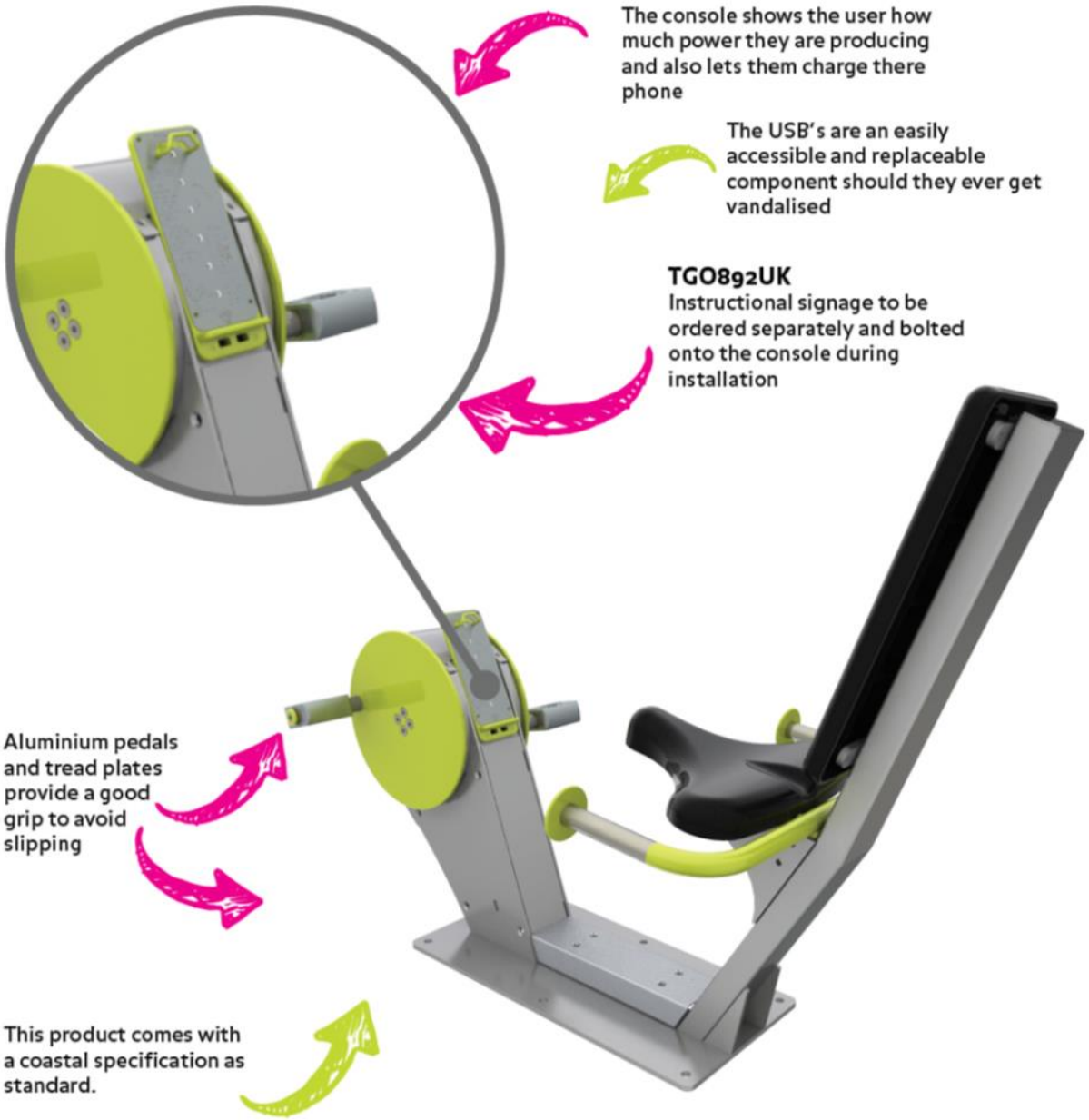
The Green Heart, Hull – Glow Gym

Sir George Monoux College – Flow Gym

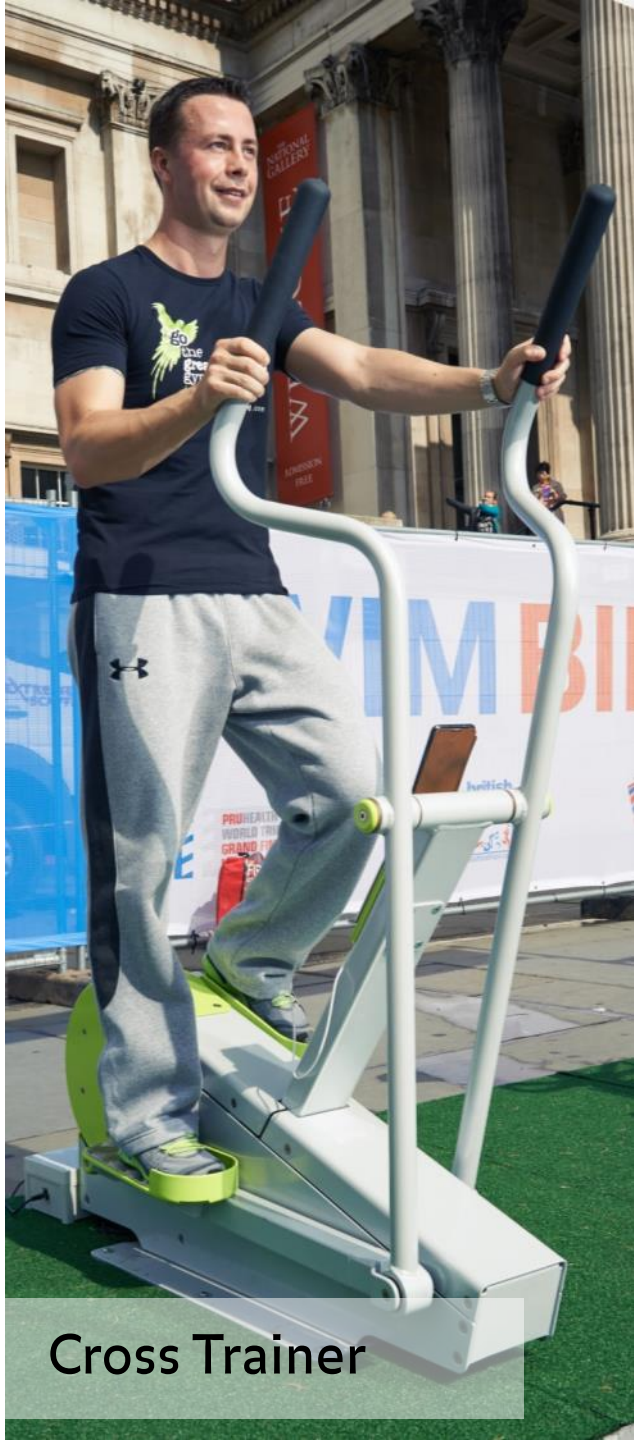
Energy products

TGO971 – Energy Spinning Bike

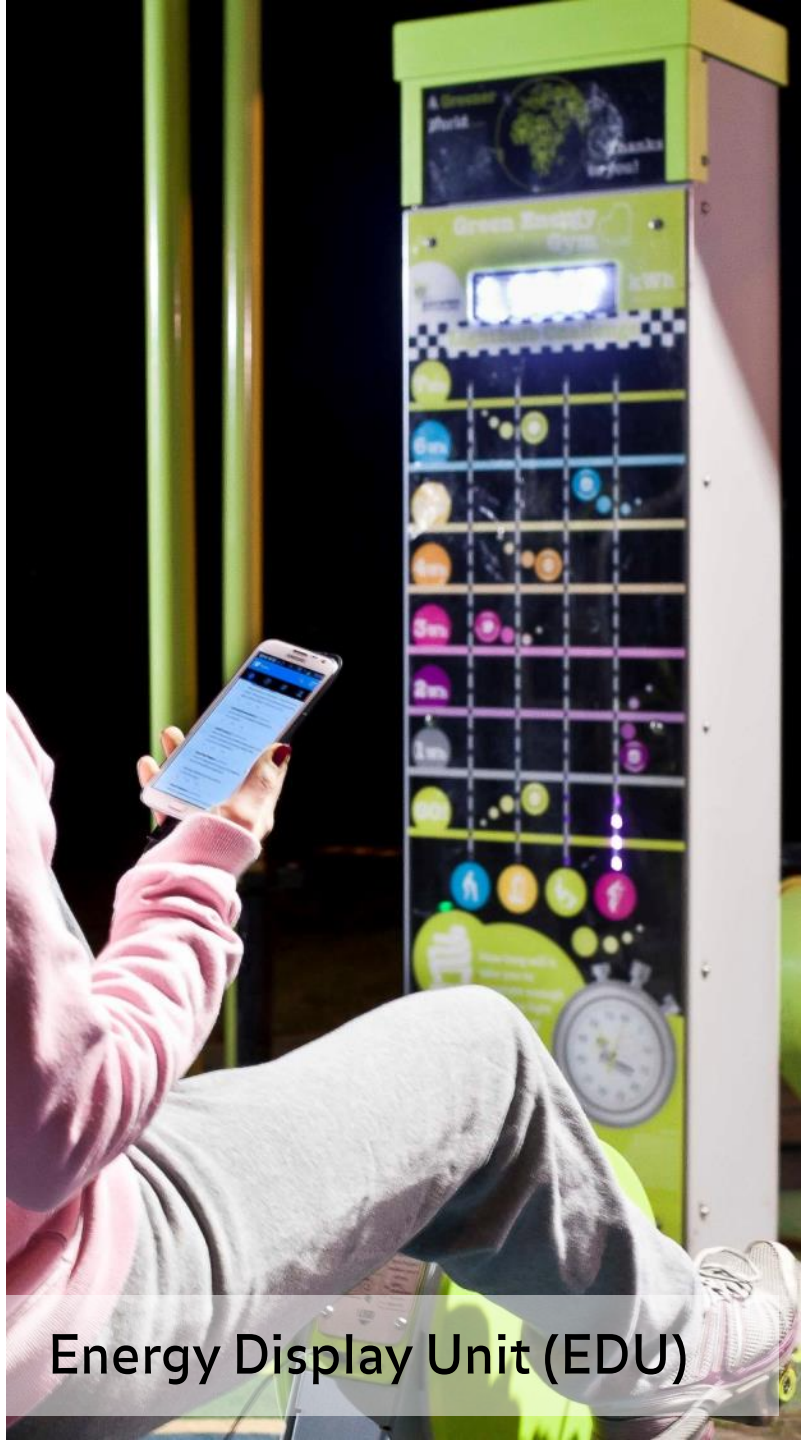
TGO892 – Energy Recumbent Bike



Hand Bike

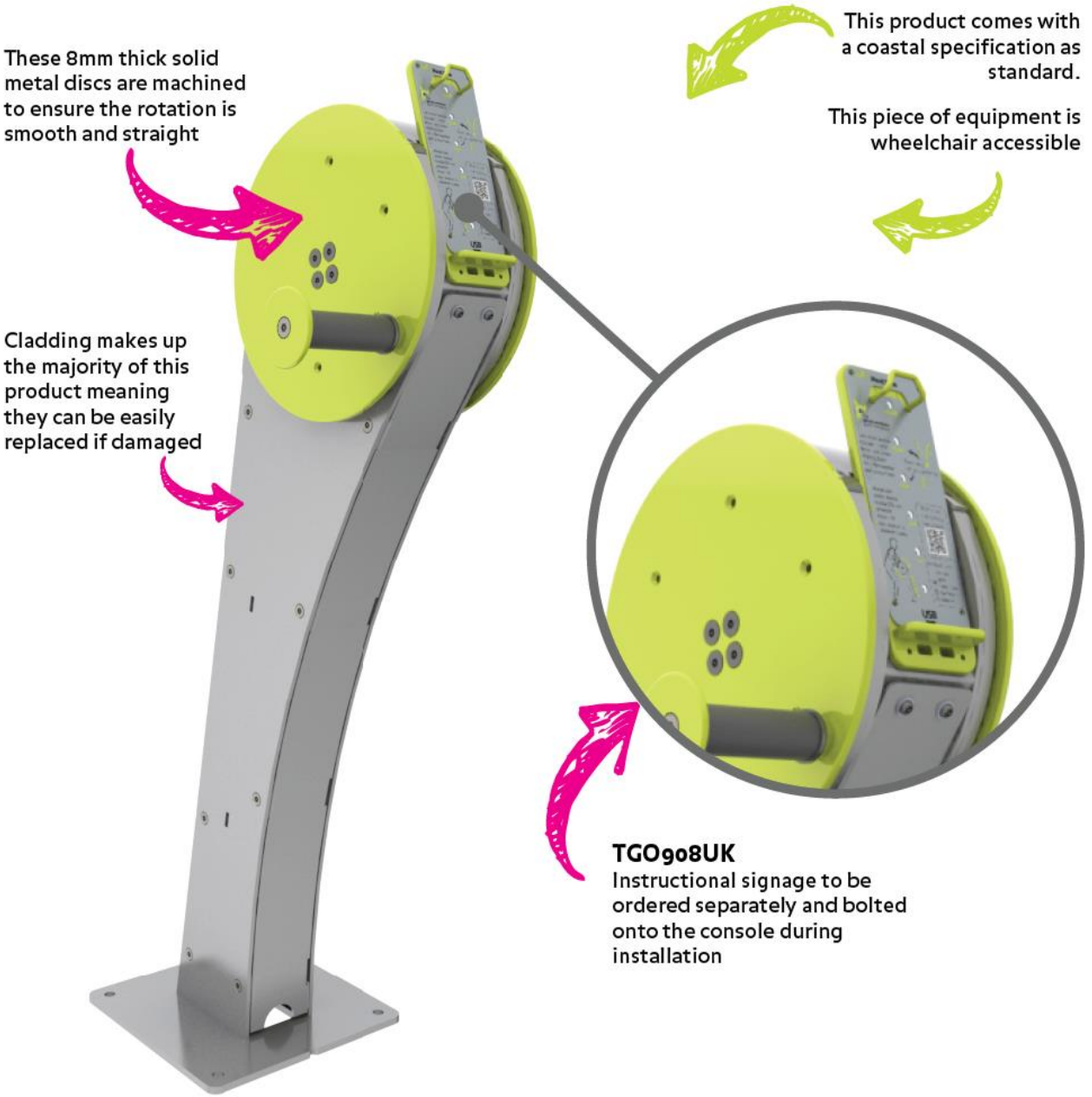


Cross Trainer

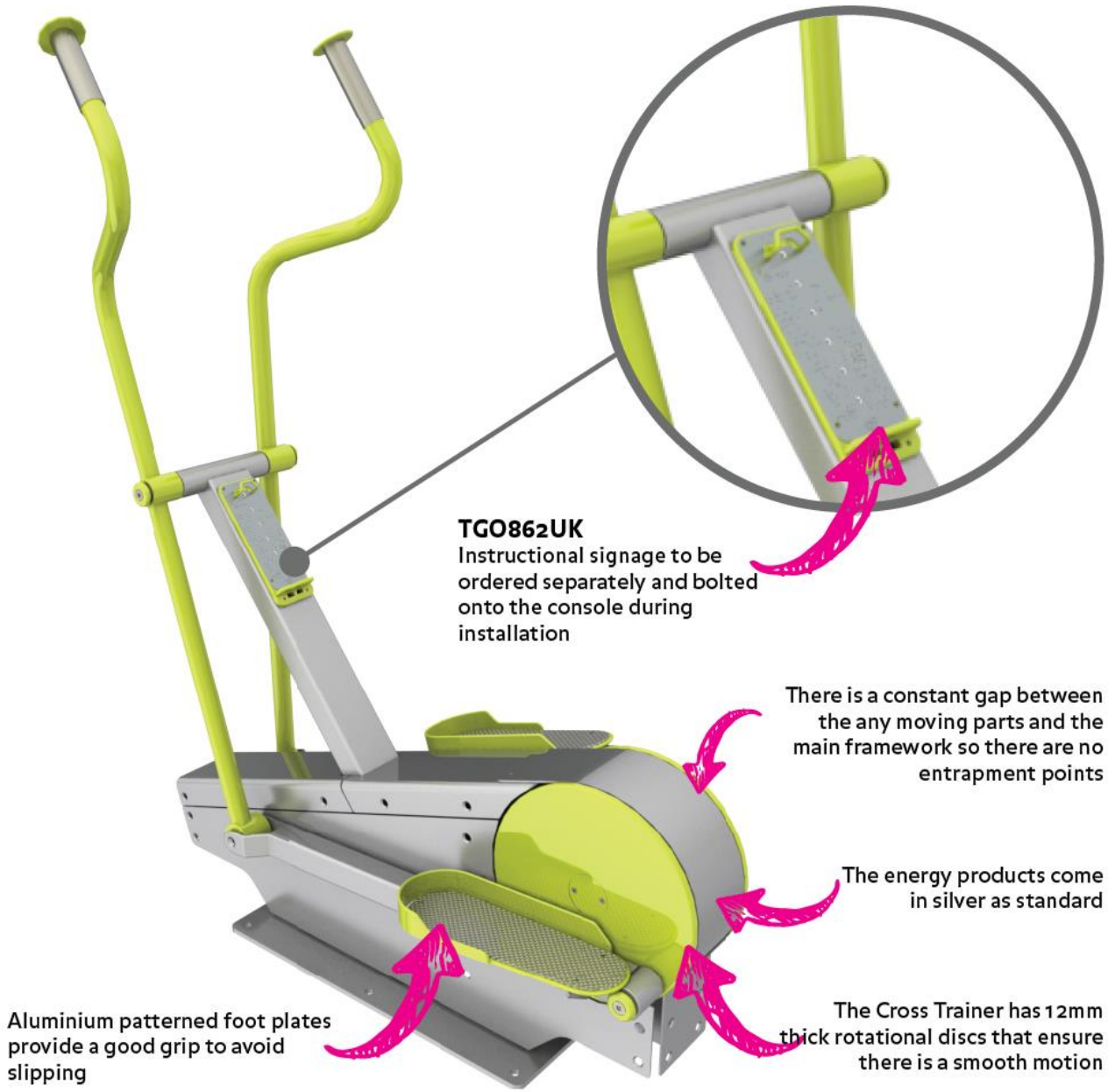


Energy Display Unit (EDU)

TGO908 – Energy Hand Bike



TGO862 – Energy Cross Trainer



TGO100/101 – Energy Display Unit (EDU)

An educational tool about awareness of electrical consumption, through means of keeping fit.

IP55 interactive electrical cabinet

Watt hour display

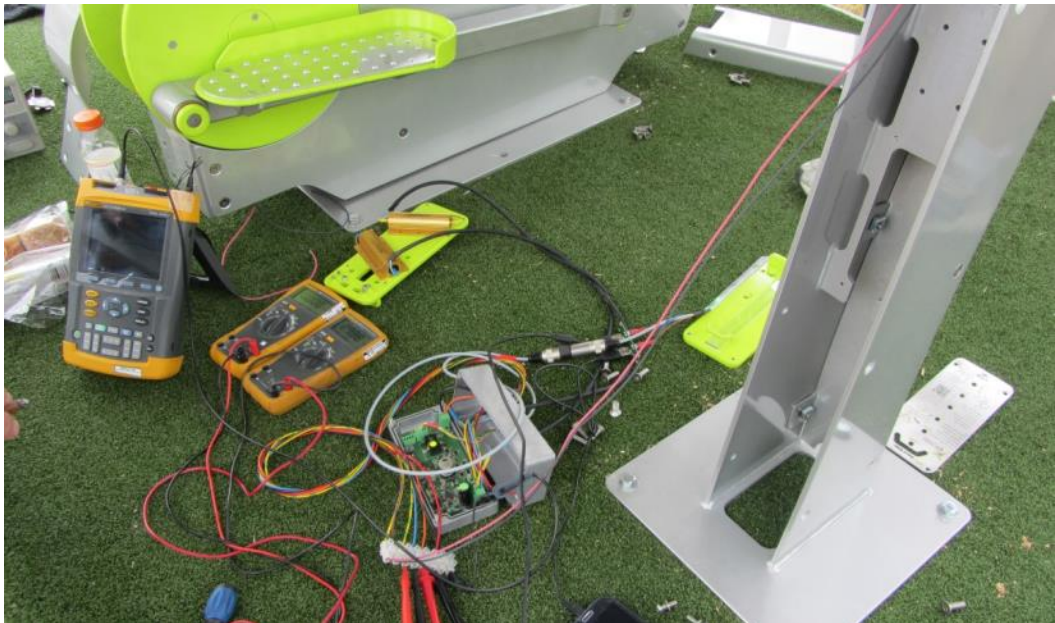
Power meter display, running vertically up the centre of the interactive display. A series of clearly visible lights that replicate the average combined effort from all active gym pieces

Essential component required to enable the 'Energy Glow' and 'Energy Flow' systems to function

Fitted with signage plates on either side, it plays the role of a Welcome sign and an interactive energy educational tool

The heart of these energy systems, safely and securely holding the electronics and power store within its protected steel shell

Energy Testing



Energy generation – Different people generate different amounts

Young boy - 30 watts

An average person - 50 watts

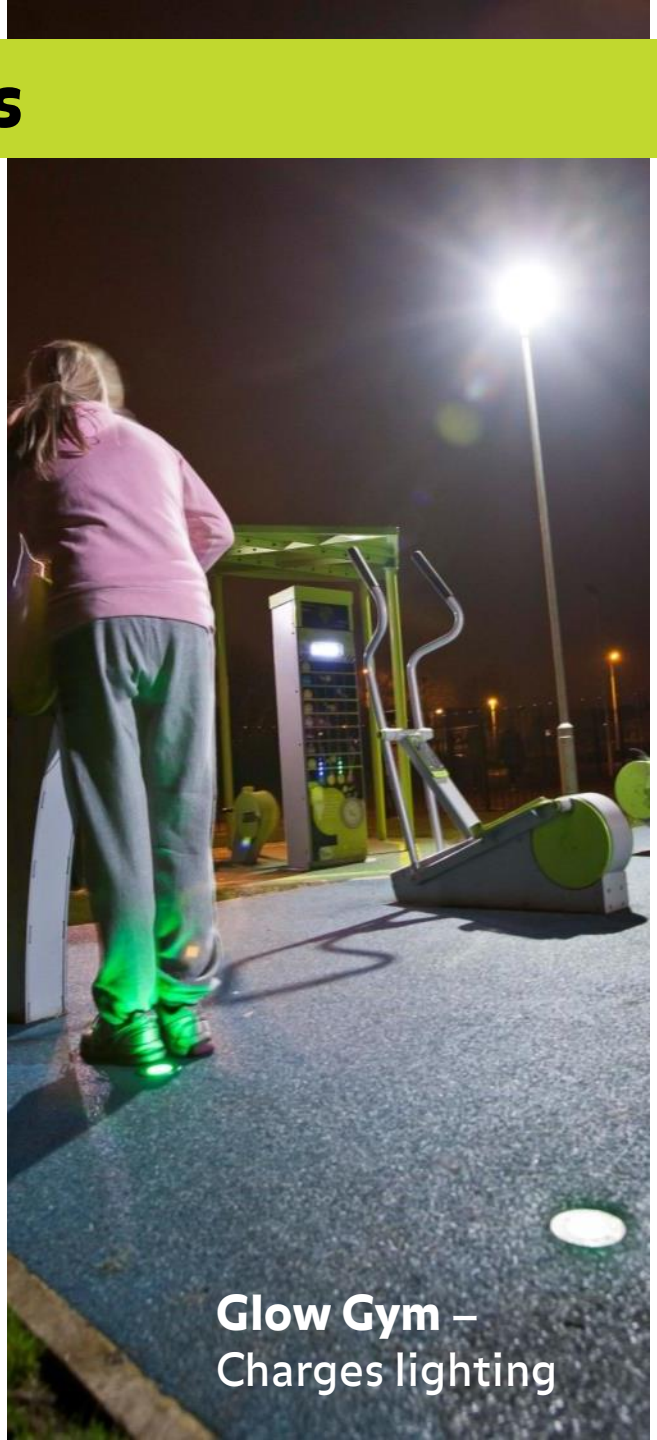
An athletic person - 70 watts

Phone Charging (5-10 Watts) – 1 USB offers similar volts to a UK mains phone USB charger i.e. A Samsung Galaxy S3 will charge, with all utilities switched off (WIFI, 4G, etc) at around 1% every 2 minutes to 3 minutes.

Efficiency - The glow and flow systems are designed to be 75% efficient at converting human energy to reusable electricity for lighting or grid tie.

Energy packages

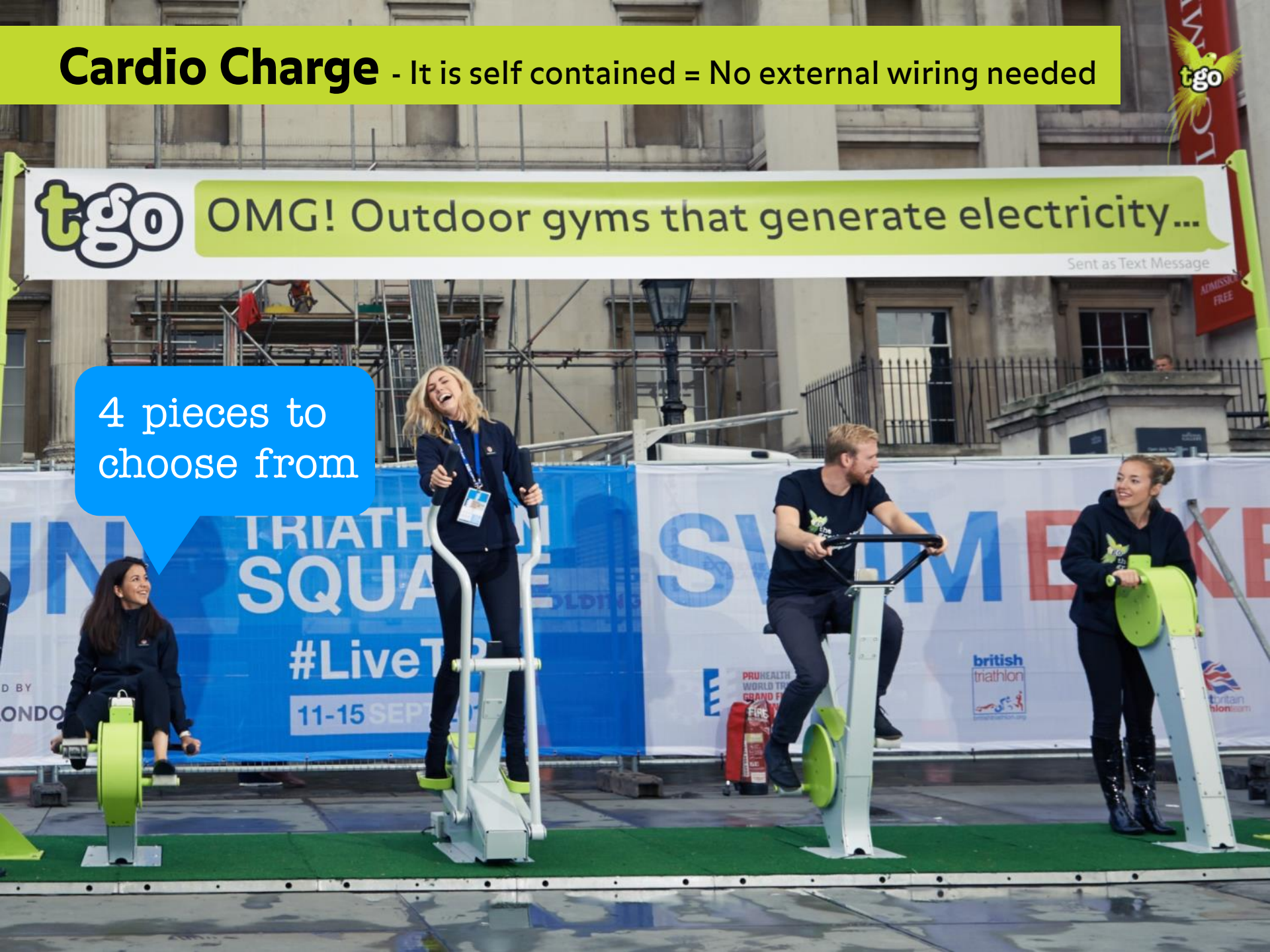
Cardio Charge –
Charges your phone



Glow Gym –
Charges lighting

Flow Gym –
Charge tied back into mains

Cardio Charge - It is self contained = No external wiring needed



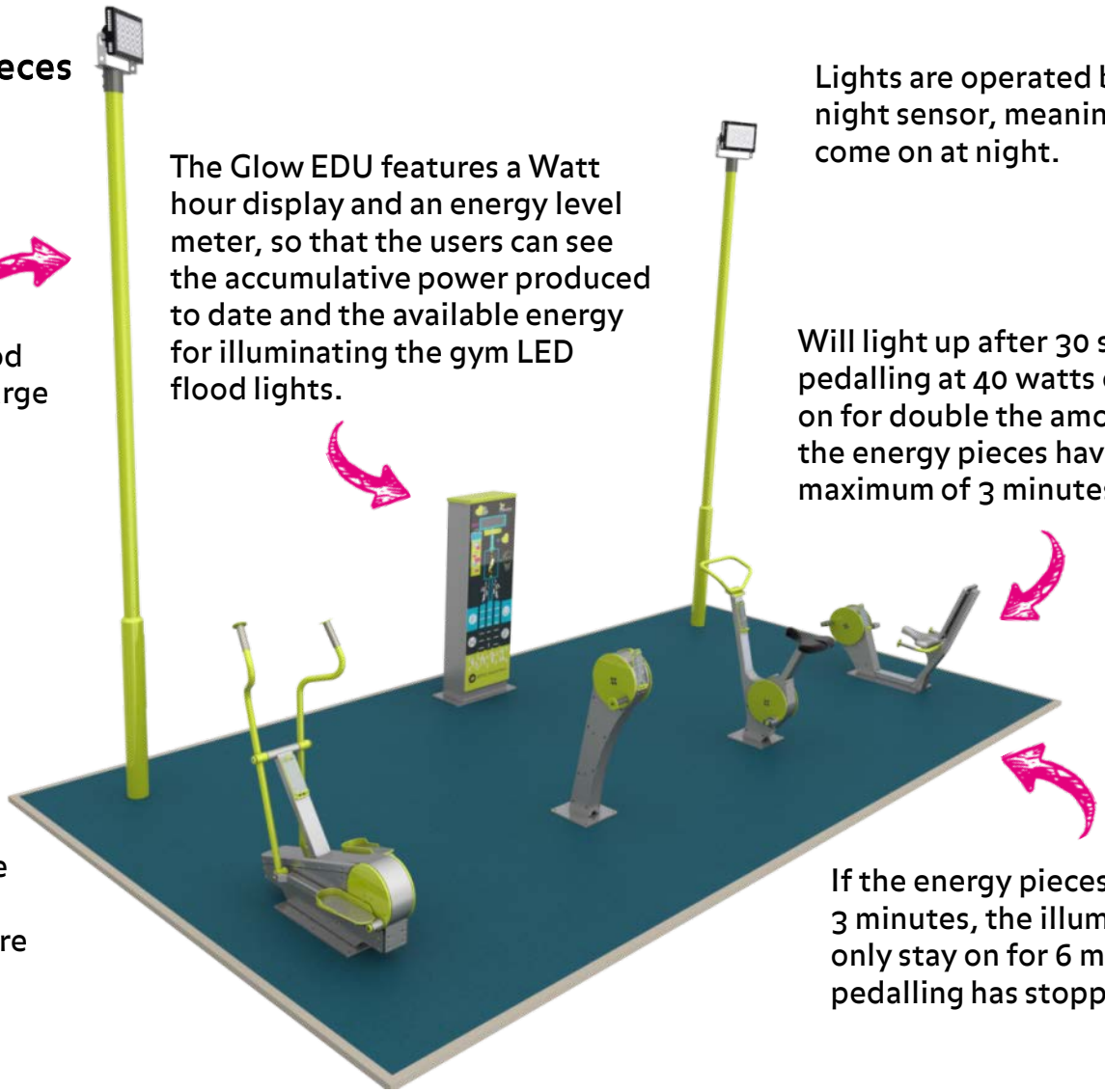
Glow Gyms – Available from January 2015

Glow gym - self illuminating gym

Includes:
4, 6, or 8 energy pieces
1 x EDU (Glow)
2 x flood lights

Up to two flood LED flood lights can light up to a Large gym (12m x 8m area).

The Glow EDU features a Watt hour display and an energy level meter, so that the users can see the accumulative power produced to date and the available energy for illuminating the gym LED flood lights.



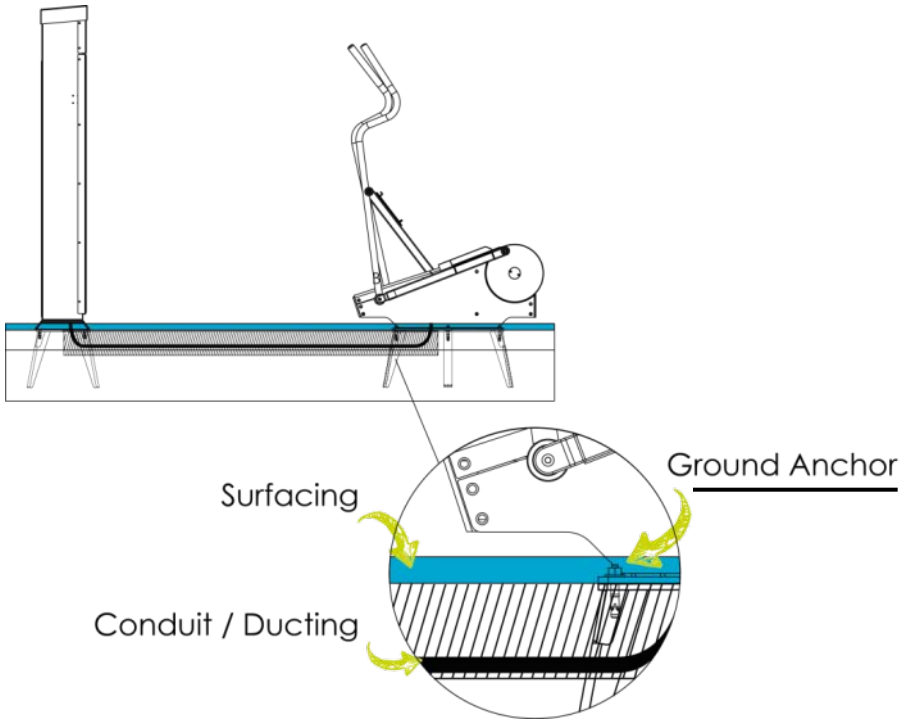
Lights are operated by a day and night sensor, meaning they will only come on at night.

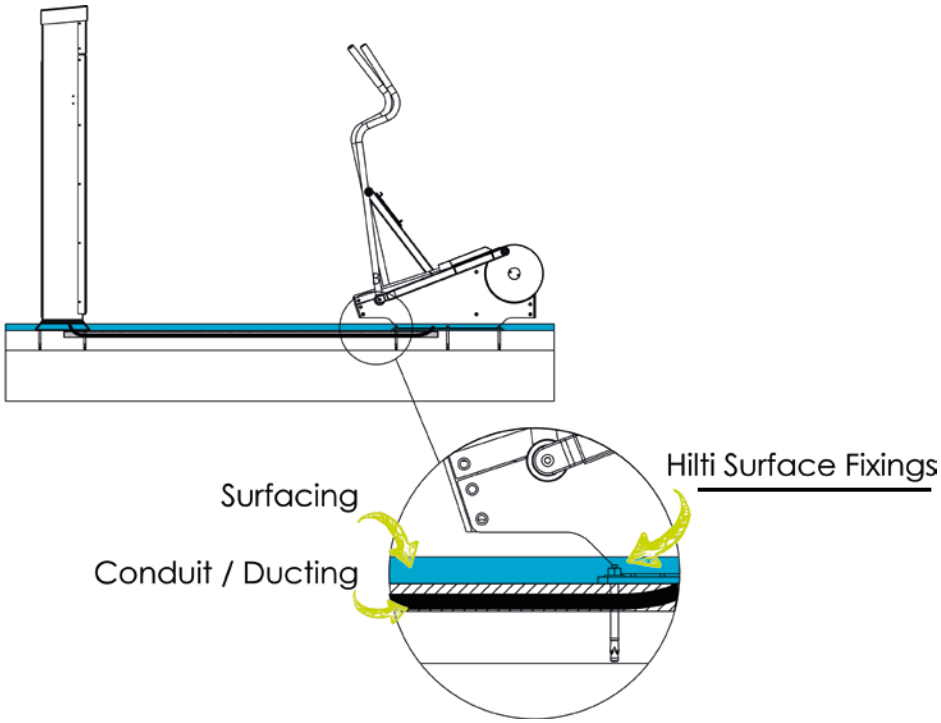
Will light up after 30 seconds of consistent pedalling at 40 watts or greater and stay on for double the amount of time of which the energy pieces have been used, up to a maximum of 3 minutes.

This system works the same no matter how many energy pieces are active at the time.

If the energy pieces were used above 3 minutes, the illumination will still only stay on for 6 minutes after all pedalling has stopped.

Glow Gyms – Installation & Cabling





Between the equipment and the EDU, you will need a 10 AWG (American Wire Gauge) cable. This is a 'one pair cable (2 cables in one sleeve), capable of delivery 6A and a DC (Direct current) voltage of 30V.

Conduit requirements to be confirmed.

The LED flood lights, also use a 10 AWG cable. This is capable of taking a max 2A (per light) at 24V DC.


Partners to supply their own conduit and cabling
tgo

Flow Gyms – Available from January 2015

Flow Gym - converts human kinetic energy into electrical energy that can be used by the grid

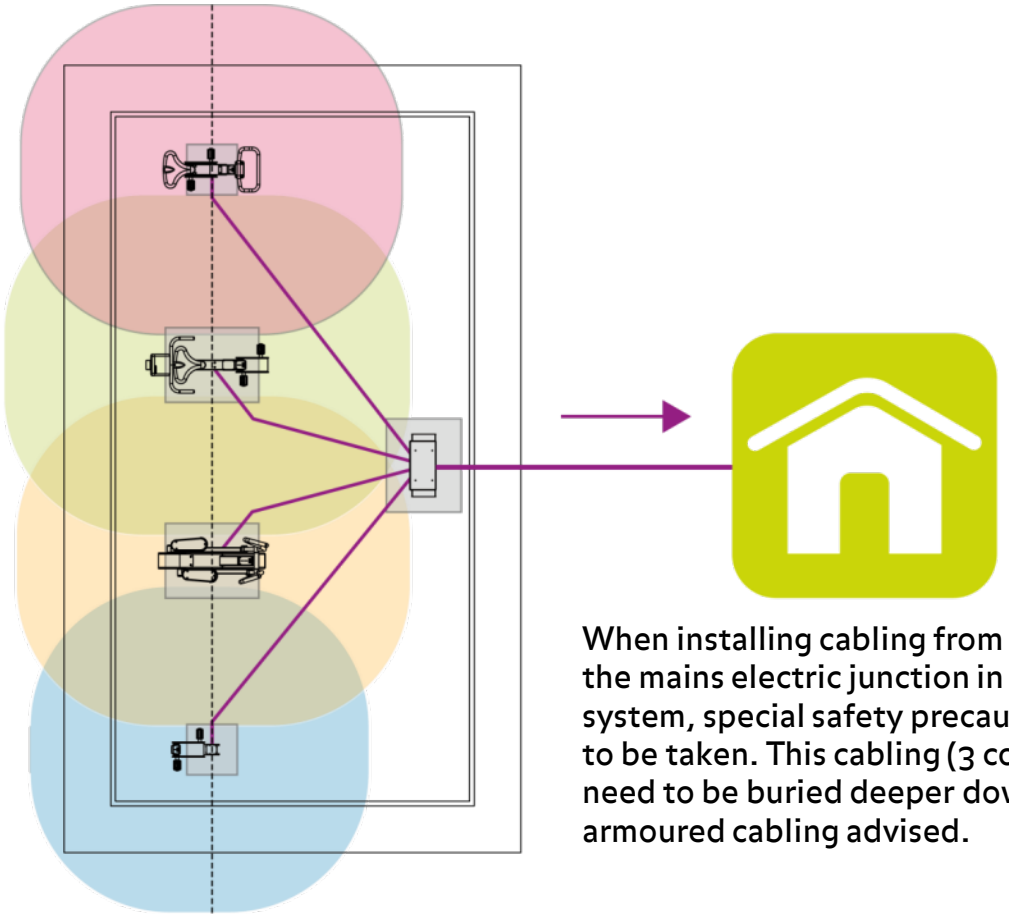
Includes:
4, 6 or 8 energy pieces
1 x EDU (Flow)
Built in with Enphase Micro inverters ready for connection

Electricity produced is a low Voltage Direct current (DC). To be accepted into the mains, the Flow EDU has to concert this energy into Alternating Current (AC) and increase the voltage to the equivalent of the local Live mains cabling. It does this through the Enphase inverters in the EDU.

Pilot site - Sir George Monoux College, London

Flow Gyms – Installation & Cabling

The Flow system can be installed like the Glow system between the TGO energy equipment and Energy Display Unit (EDU). Due to the very low voltages (below 50V) that pass through the cabling, the cabling and conduit needs not be installed too deeply underground.



When installing cabling from the EDU to the mains electric junction in a Flow system, special safety precautions need to be taken. This cabling (3 core cable) will need to be buried deeper down and armoured cabling advised.

Between the EDU and mains supply, there will a requirement for a 230V AC (alternating current), capable of supplying 6A. This will require a 3 Core, (Live, Neutral and Earth) cable. This is based on British standards and should be checked against local legislation, prior to installation.

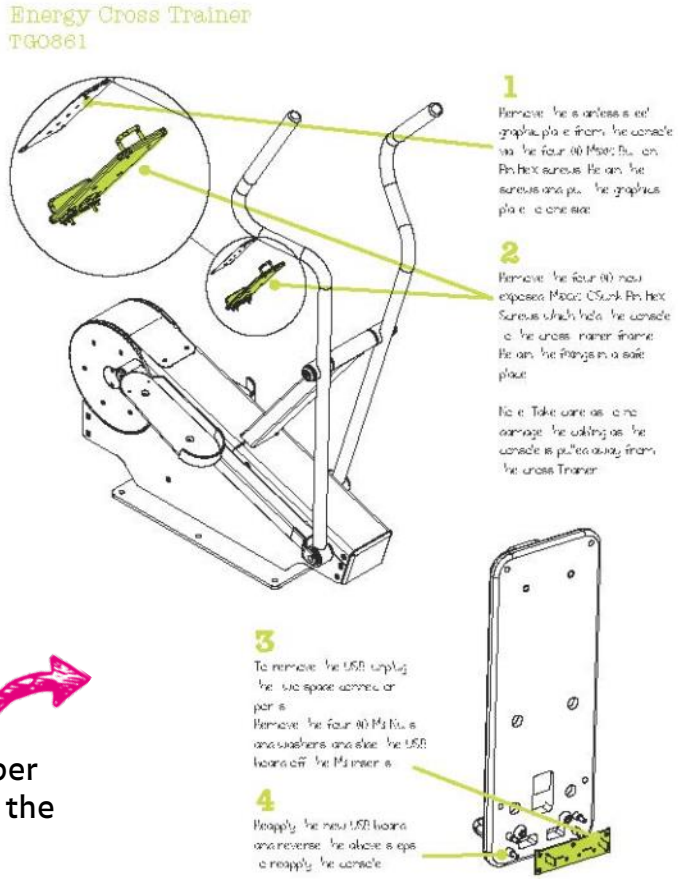
The electrical connection into the grid must be performed by an experience, qualified electrician. TGO recommend a MCS (Microgeneration Certification Scheme) qualified electrician. It also enables this renewable energy source to access the Feed-InTariff (FiTs) and profit from the green energy being produced.

Maintenance

The energy systems, have what TGO like to call consumable components as their life can be impacted by too many uncontrollable factors. These components are not covered under warrantee but have been designed to be very cost effective to replace. The components that fall under consumable parts include the USB ports / Boards, found in the energy consoles, and batteries which can be found in the EDU Glow and EDU Flow cabinets.

Examples of checks:

- Check the gear meshing and that there is no significant amount of filings, familiar with accelerated wear on the gears.
- Turn the crank in both directions, loaded and unloaded, and note any noise or stiffness.
- Check the USB ports are free from obstruction.



Full step by step guide per product can be found in the maintenance manual.

Thank you

Any questions?

info@tgoc.com

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