

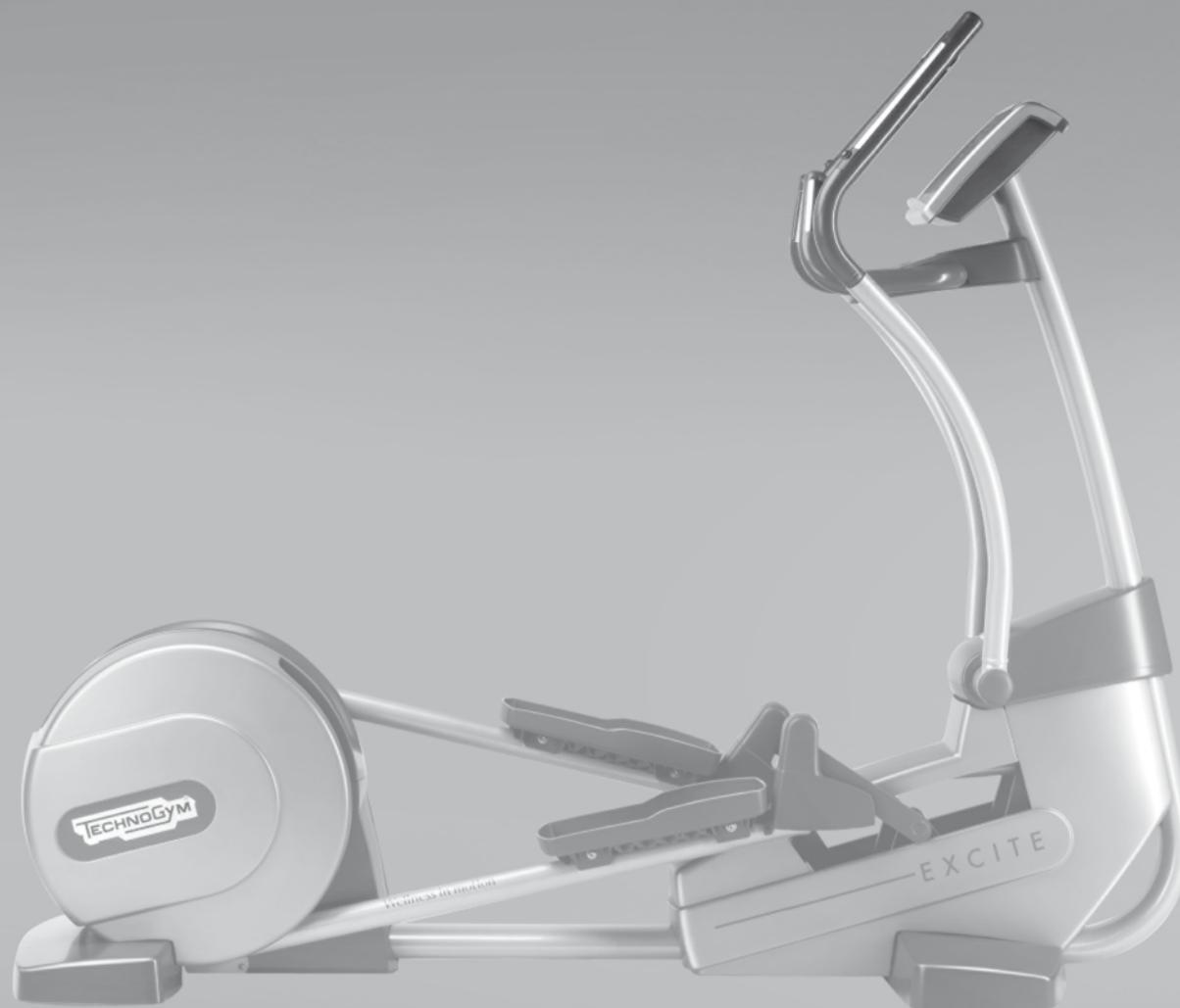


SYNCHRO

Technical
information

700 version
software

500 version
software

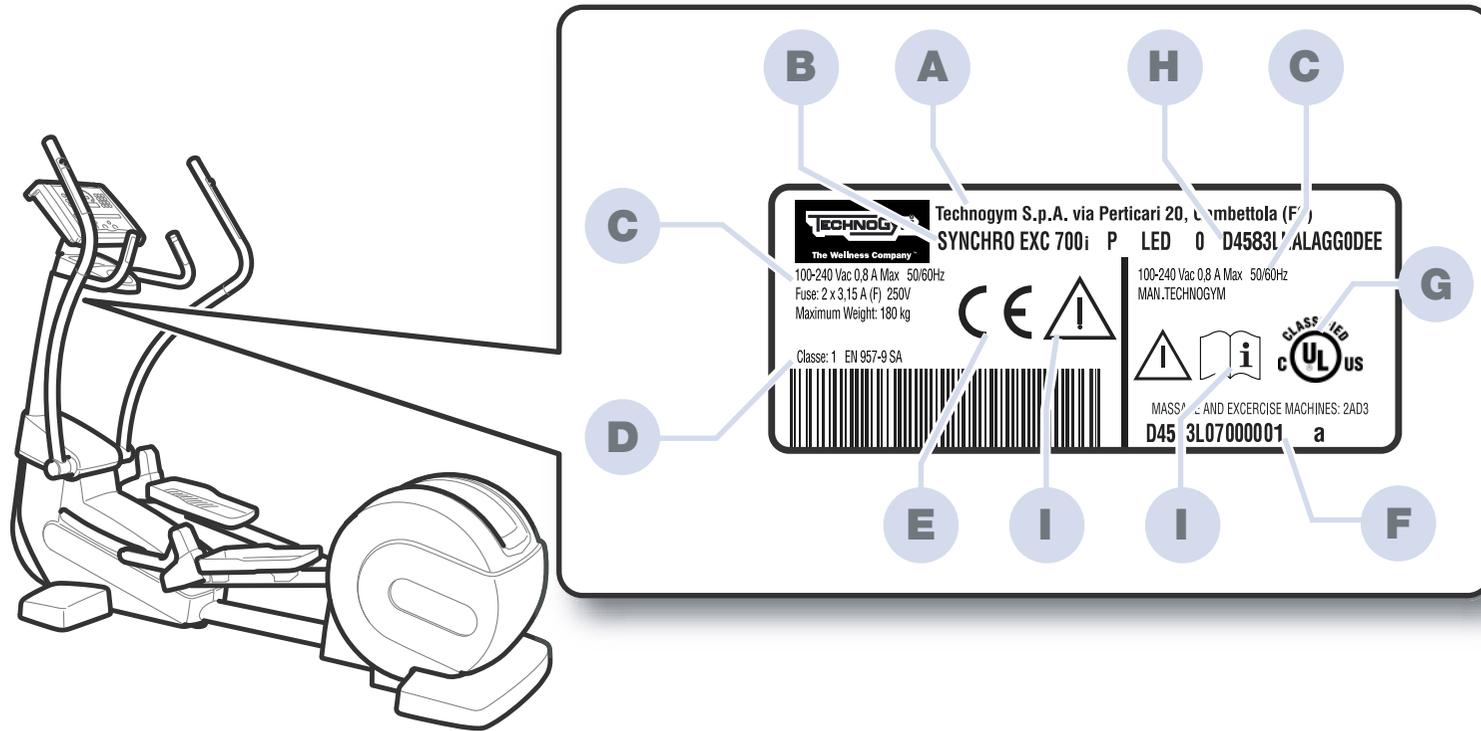


User manual

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Manufacturer and equipment identification



- A** - Manufacturer's name and address
- B** - Description of product
- C** - Electrical specifications and type of fuses (700 and 500 versions)
- D** - Equipment classification
- E** - CE Mark

- F** - Serial number and date of manufacture
- G** - Certification mark for the USA and Canada
- H** - Product code
- I** - Tells you to consult the User manual

The values stated in the illustration are purely indicative; refer to the label attached to the equipment or the data in *Technical data* section for the correct information.

Manufacturer and equipment identification

Equipment with codes DA52M..., DA53M..., DA58M..., DA59M... are intended for medical use and have been designed and built for use in outpatient clinics, hospitals, clinics and sport centres, for muscular therapy and rehabilitation.

Equipment with codes DA52M..., DA53M..., DA58M..., DA59M... can be used by or close to children, invalids, disabled persons or people with evident physical problems only under close supervision of a doctor or a qualified professional.

Description of the equipment

✓ Control panel

[Levers](#)

[Fast Track Control](#)

[Sensors](#)

[Fixed handles](#)

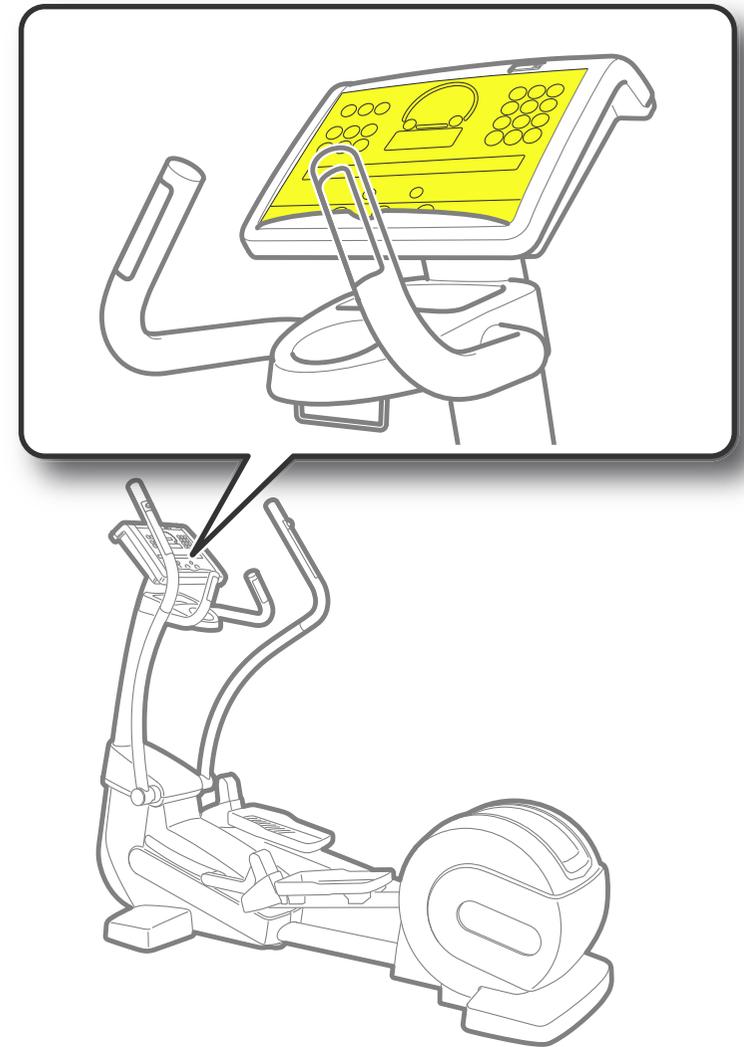
[Pedals](#)

[Bases](#)

[Reading stand](#)

[Tray](#)

[TGS key reader](#)



Control panel: controls all available functions, from setting up workout programs to viewing messages and related workout information.

Description of the equipment

[Control panel](#)

✓ [Levers](#)

[Fast Track Control](#)

[Sensors](#)

[Fixed handles](#)

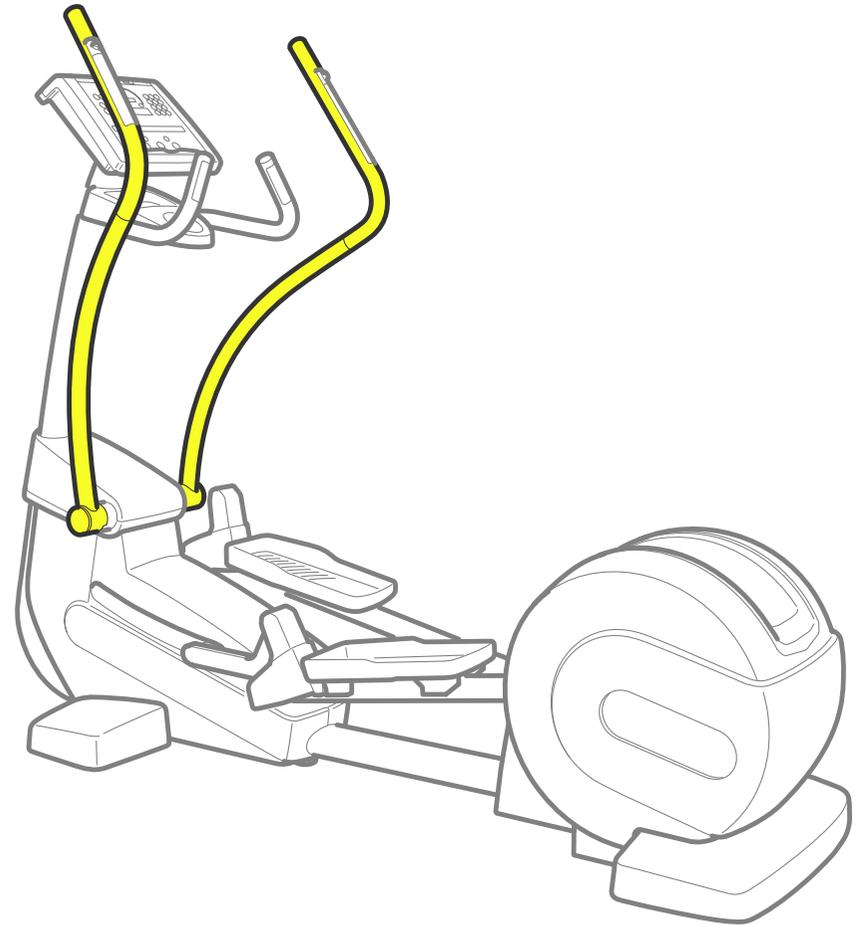
[Pedals](#)

[Bases](#)

[Reading stand](#)

[Tray](#)

[TGS key reader](#)



Levers: these can be grasped by the user to perform the exercise with arm movements. The 700 and 700 SP versions have **sensors** for monitoring the heart rate (hand sensor) and the **Fast Track Control** to change the effort level.

Description of the equipment

[Control panel](#)

[Levers](#)

✓ Fast Track Control

[Sensors](#)

[Fixed handles](#)

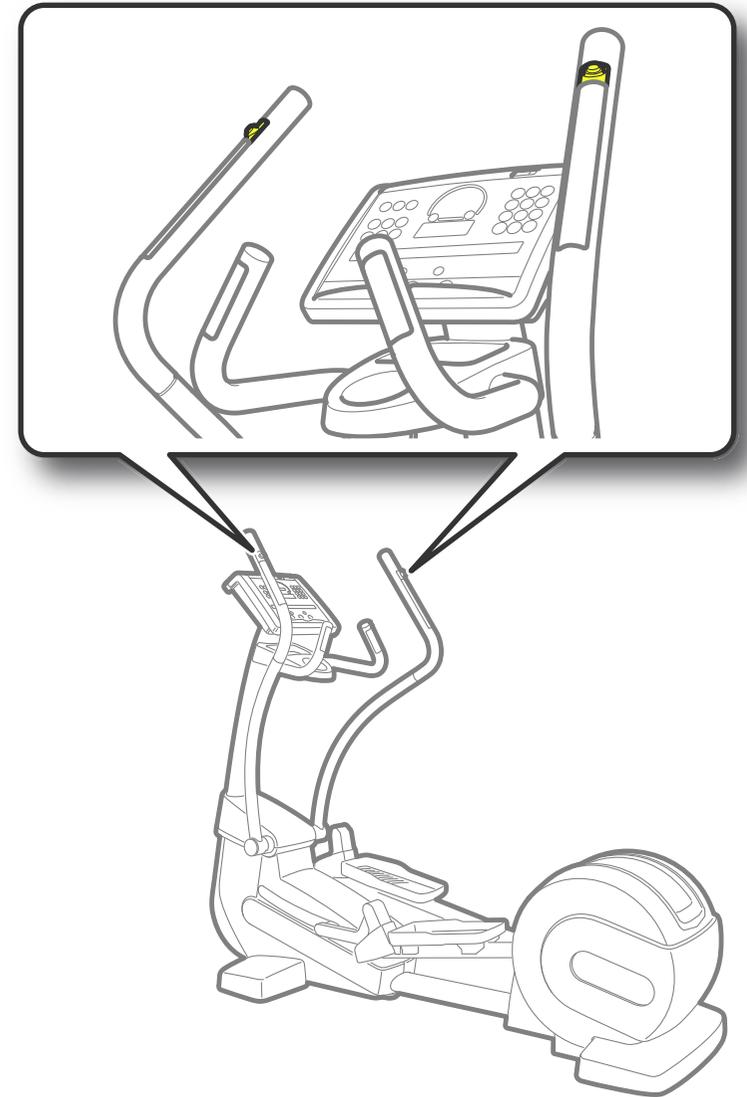
[Pedals](#)

[Bases](#)

[Reading stand](#)

[Tray](#)

[TGS key reader](#)



Levers: these can be grasped by the user to perform the exercise with arm movements. The 700 and 700 SP versions have **sensors** for monitoring the heart rate (hand sensor) and the **Fast Track Control** to change the effort level.

Description of the equipment

[Control panel](#)

[Levers](#)

[Fast Track Control](#)

✓ [Sensors](#)

[Fixed handles](#)

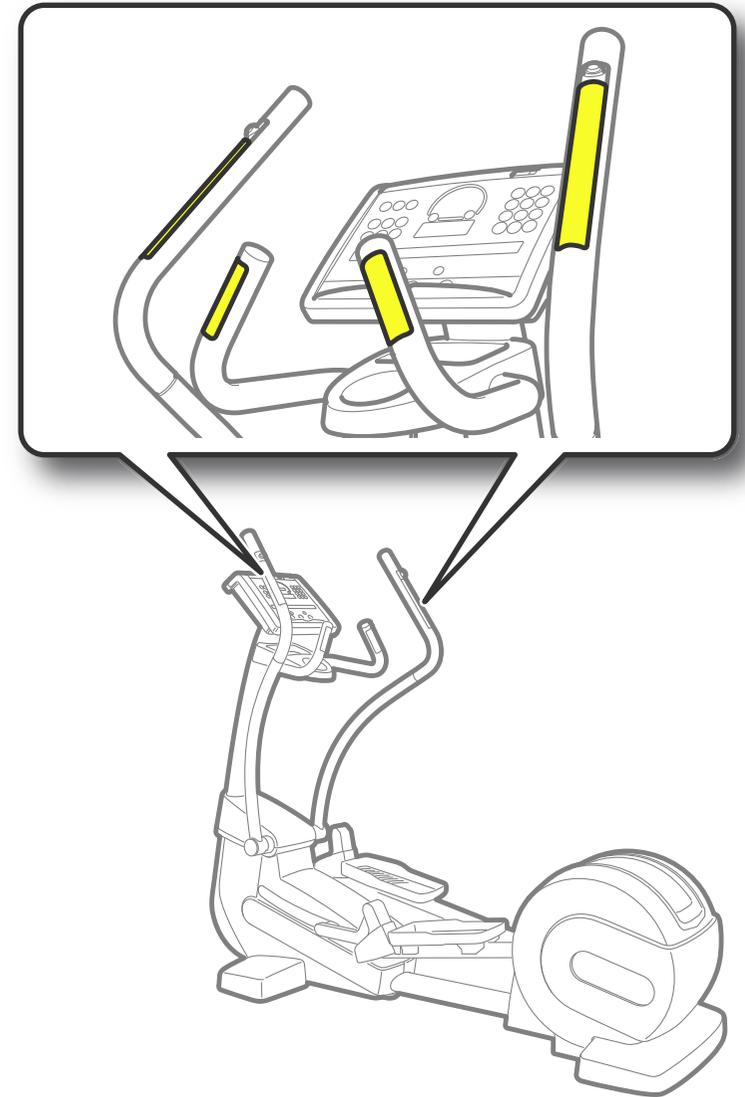
[Pedals](#)

[Bases](#)

[Reading stand](#)

[Tray](#)

[TGS key reader](#)



Sensors: **levers** and **fixed handles** have sensors for monitoring the heart rate (hand sensor), in the 700 and 700 SP versions of the equipment.

Description of the equipment

[Control panel](#)

[Levers](#)

[Fast Track Control](#)

[Sensors](#)

✓ Fixed handles

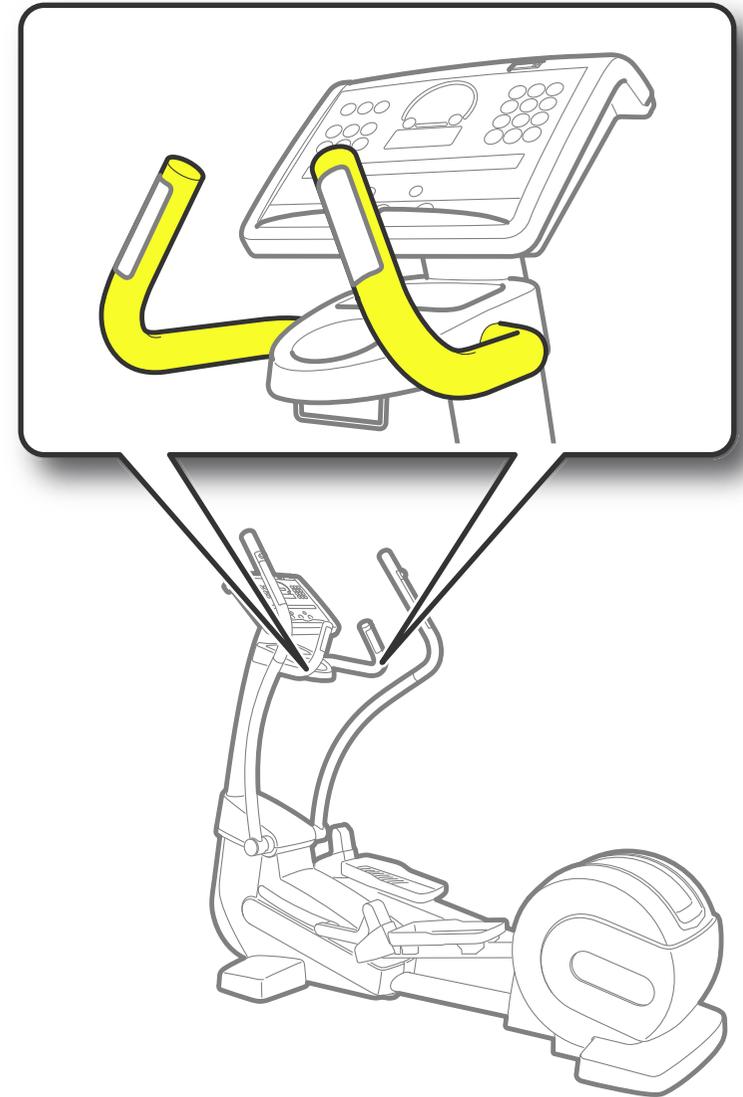
[Pedals](#)

[Bases](#)

[Reading stand](#)

[Tray](#)

[TGS key reader](#)



Fixed handles: these can be grasped by the user during the workout. The 700 and 700 SP versions have **sensors** for monitoring the heart rate (hand sensor).

Description of the equipment

[Control panel](#)

[Levers](#)

[Fast Track Control](#)

[Sensors](#)

[Fixed handles](#)

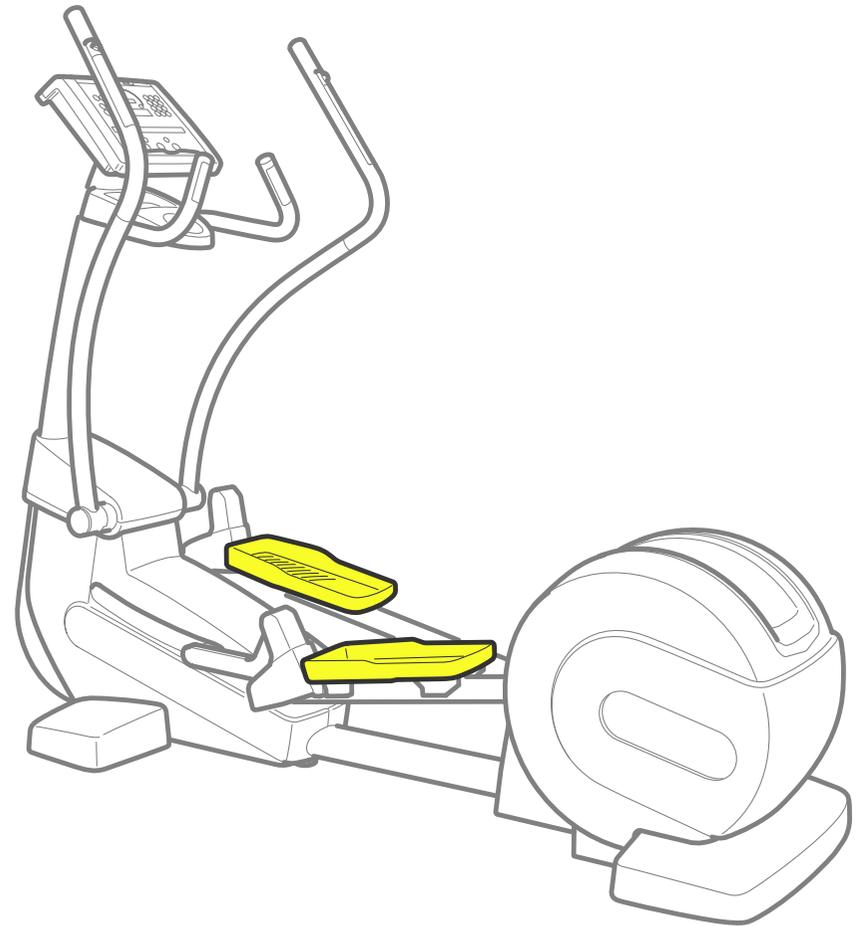
✓ [Pedals](#)

[Bases](#)

[Reading stand](#)

[Tray](#)

[TGS key reader](#)



Pedals: the special configuration of the pedals permit the ankles to work under optimum conditions.

Description of the equipment

[Control panel](#)

[Levers](#)

[Fast Track Control](#)

[Sensors](#)

[Fixed handles](#)

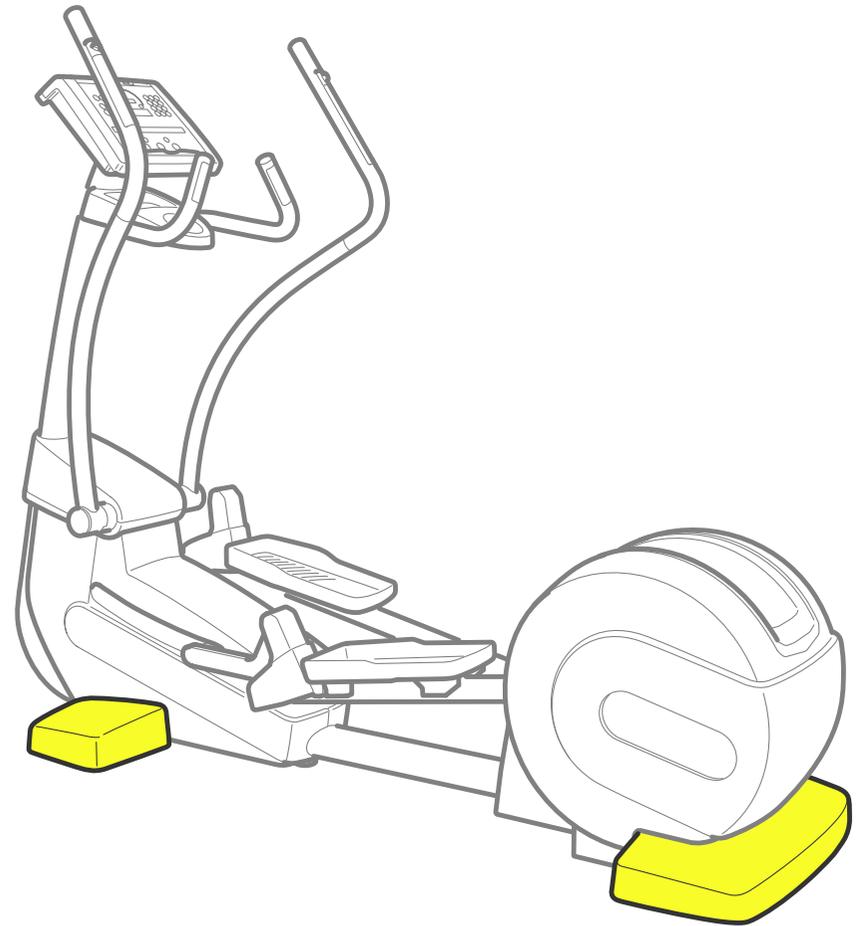
[Pedals](#)

✓ [Bases](#)

[Reading stand](#)

[Tray](#)

[TGS key reader](#)



Bases: support the equipment frame and components.

Description of the equipment

[Control panel](#)

[Levers](#)

[Fast Track Control](#)

[Sensors](#)

[Fixed handles](#)

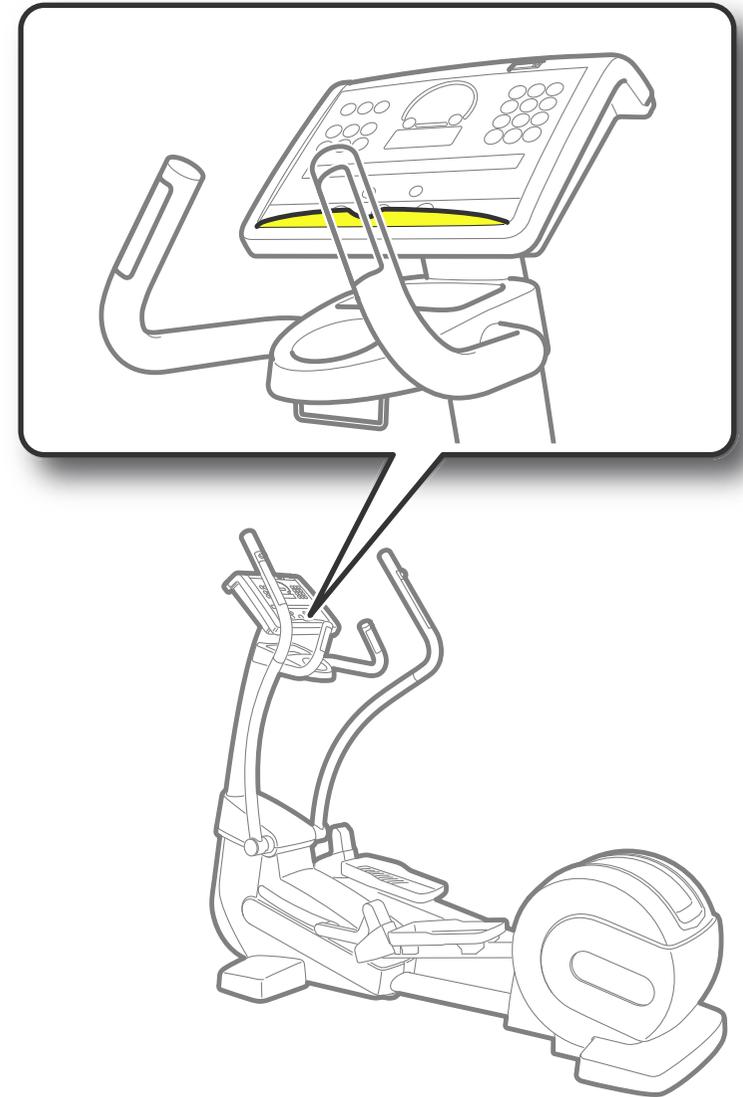
[Pedals](#)

[Bases](#)

✓ Reading stand

[Tray](#)

[TGS key reader](#)



Reading stand: for standing magazines or books on.

Description of the equipment

[Control panel](#)

[Levers](#)

[Fast Track Control](#)

[Sensors](#)

[Fixed handles](#)

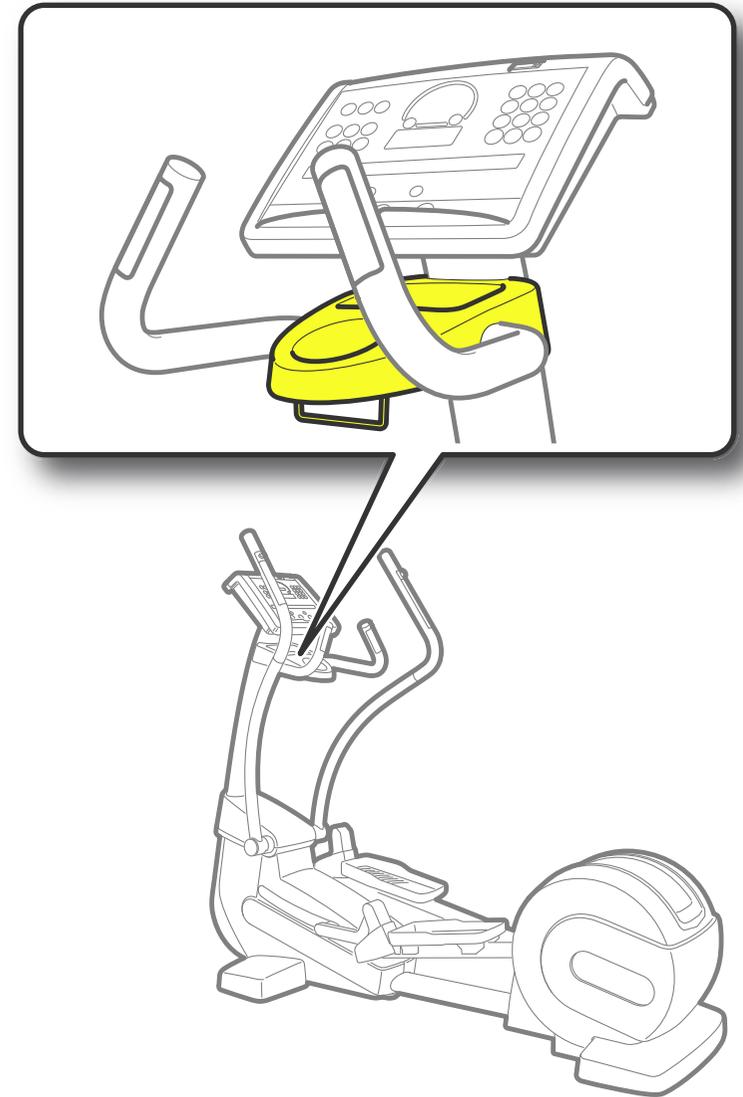
[Pedals](#)

[Bases](#)

[Reading stand](#)

✓ Tray

[TGS key reader](#)



Tray: for standing the water bottle or other useful items on during the workout.

Description of the equipment

[Control panel](#)

[Levers](#)

[Fast Track Control](#)

[Sensors](#)

[Fixed handles](#)

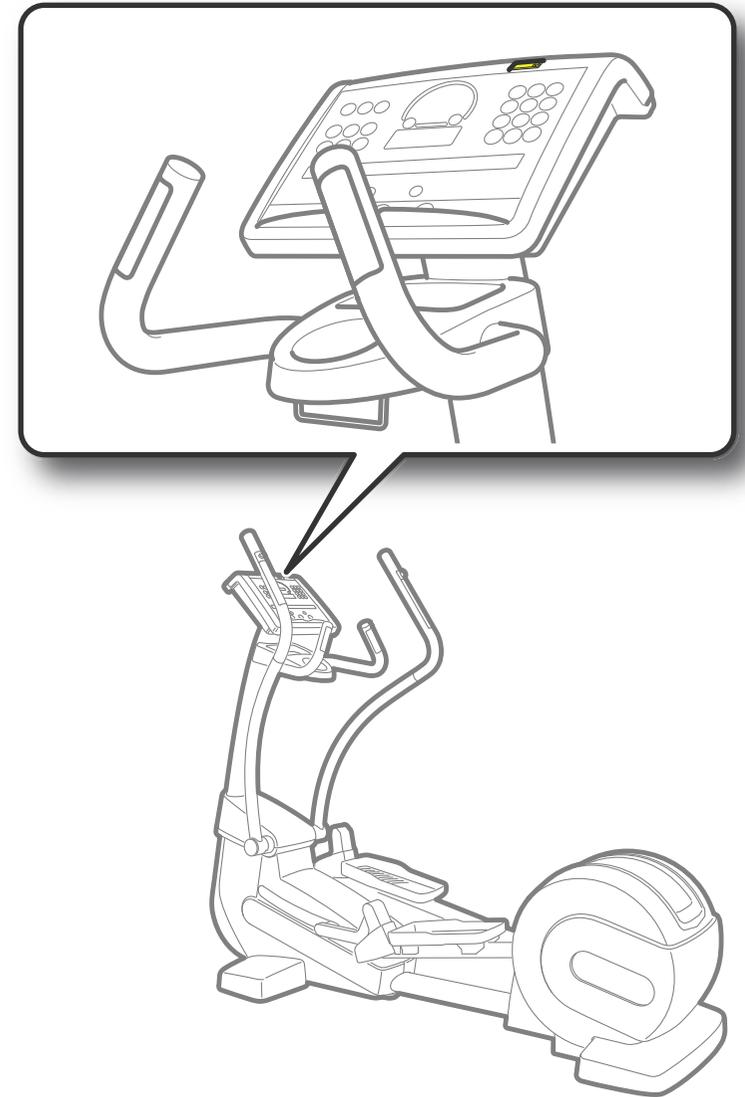
[Pedals](#)

[Bases](#)

[Reading stand](#)

[Tray](#)

✓ TGS key reader



TGS key reader: for the TGS key (optional).

Technical data

Synchro 700 and 500

Power supply	100÷240 Vac ±10% 50/60 Hz
Maximum braking power	500 W at 120 spm
Minimum braking power	20 W at 60 spm
Mains power input	65 VA max (160 VA max with Visio)
Fuses	2 x 3.15A (F)
Weight of equipment	148 kg (326 lb)
Maximum user weight	180 kg (397 lb)
User height for which performance indicated is guaranteed	155 cm÷205 cm (6"÷8")
Time	0÷999 min ± 1%
Distance	0÷99.99 km ± 5% (0÷99.99 mls ± 5%)
Protection grade	IP 20
Electric isolation class	Class I
Marks and Certificates	CE - UL ^(*)

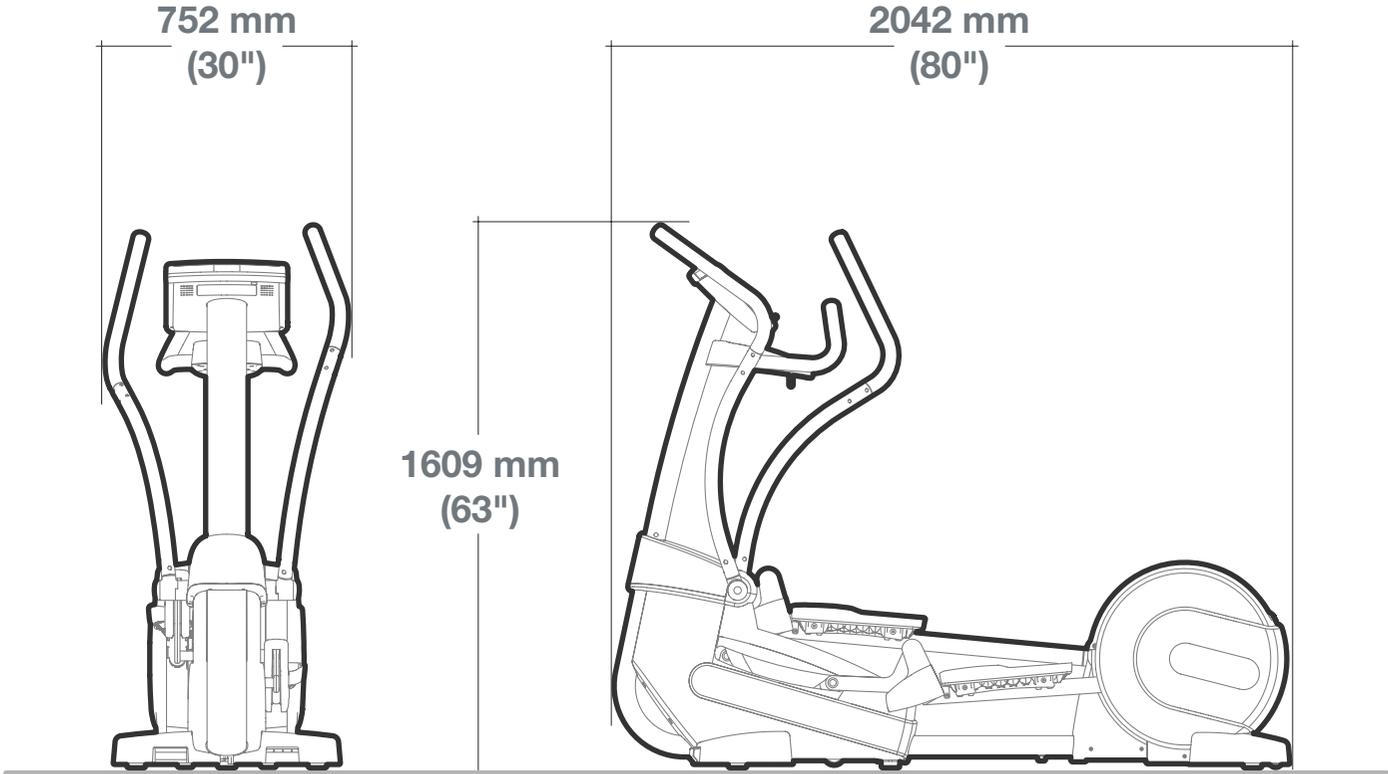
(*) Only if the symbol is present on the equipment identification label.

Technical data

Synchro 700 SP and 500 SP

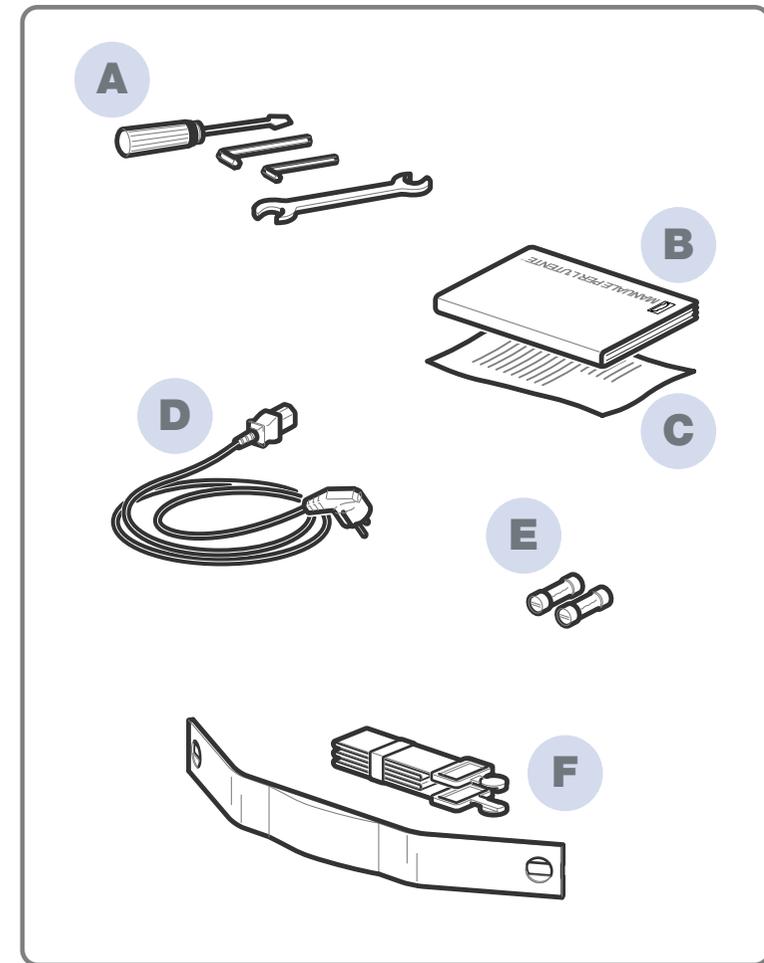
Maximum braking power	500 W at 120 spm
Minimum braking power	45 W at 60 spm
Weight of equipment	150 kg (331 lb)
Maximum user weight	180 kg (397 lb)
User height for which performance indicated is guaranteed	155 cm ÷ 205 cm (6" ÷ 8")
Time	0 ÷ 999 min ± 1%
Distance	0 ÷ 99.99 km ± 5% (0 ÷ 99.99 mls ± 5%)
Protection grade	IP 20
Electric isolation class	Class II
Marks and Certificates	CE - UL ^(*)

(*) Only if the symbol is present on the equipment identification label.

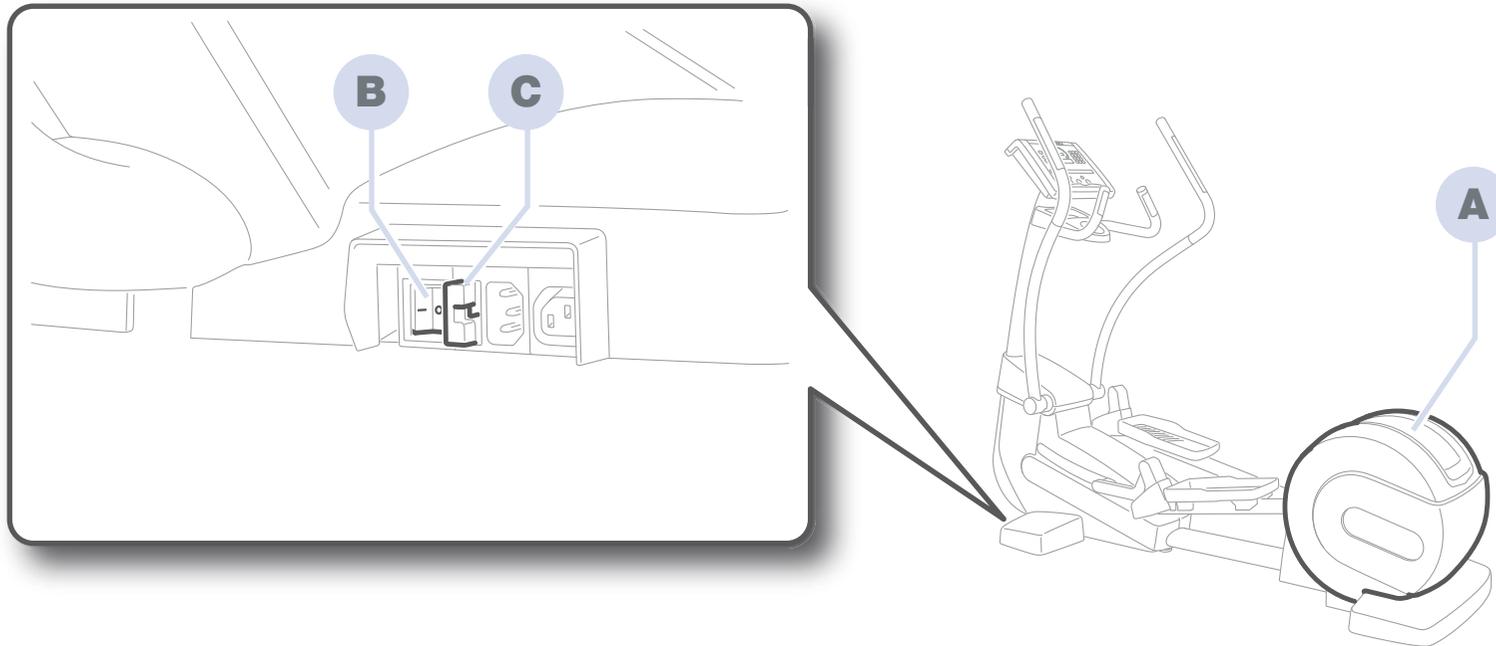


Accessories

- A** Set of wrenches
- B** User manual
- C** Warranty certificate
- D** CEE Power Supply cable with SH socket (700 and 500 versions)
- E** Two replacement fuses (3.15A (F) (700 and 500 versions)
- F** Chest band with transmitter for heart rate monitor (700 and 700 SP versions)



Safety devices and notices



- A Fixed guard:** guards against access to the inside of the equipment.
- B Main switch:** turns the equipment's power on and off (700 and 500 versions).
- C Fuses:** they protect the equipment's electrical parts (700 and 500 versions). When the current reaches an excessive value, the fuses melt thus protecting the internal electronics.

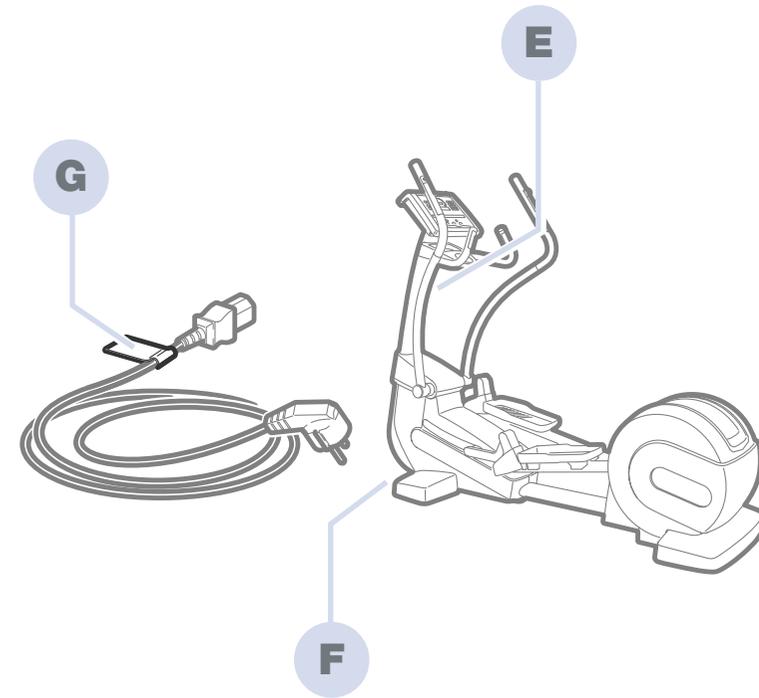


WARNING

Please read the adhesive labels on the equipment, which provide information about possible risks and hazards.

In the 700 and 500 versions:

- E** The label affixed to the frame under the control panel states the electrical specifications.
- F** The label, which can be affixed close to the main switch, states safety indications.
- G** The label which can be affixed to the power supply cable states the electrical specifications for the cable.



CAUTION: do not connect a device with load exceeding 7 A

CAUTION: do not connect to a circuit operating at more than 150V to ground

CAUTION: risk of electric shock. Do not disconnect under load

Place of installation

To ensure that exercising with Synchro is easy, safe and effective, the place where it is used should comply with certain specific requirements; in particular, before choosing the place where the equipment will be installed, please ensure that the following conditions are satisfied:

- the **temperature** is between +10°C and +25°C;
- enough air is circulating to keep **humidity** during exercise to between 20% and 90%;
- the **lighting** is good enough to make the area safe and relaxing place to exercise in;
- plenty of **free space** around each item of equipment;
- that the floor is flat, stable and vibration-free, and strong enough to bear the weight of the equipment plus user.

The place of installation must comply with all the suitability requirements laid down in current legislation on this matter.

Equipment not suitable for use in the presence of anaesthetic mixtures inflammable in air, oxygen or nitrous oxide.

In order to guarantee the performance indicated by the manufacturer, you are advised against using the equipment in zones with high short-wave presence or similar.

Unpacking

Depending on the country of destination, Synchro can either come partially assembled in a cardboard pack attached to a pallet, or fully assembled, wrapped in a transparent plastic sheet and attached to a pallet.

The packed material can be **lifted and carried** with normal lifting equipment. The instructions are printed directly on the pack.

In order to ensure the safety of persons and property, you should think carefully about what lifting and transport equipment to use, in relation to the equipment's place of destination.

As stated in the instructions on the pack, **to unpack** equipment delivered in a cardboard pack, remove the staples that attach the external packaging to the pallet, and then lift up the pack.

Check the pack visually to make sure it is in a good, complete state.

Remove the fasteners and place the contents of the pack on the ground.

The *Assembly instructions* are enclosed with this guide.



WARNING

Observe the legally stated urban waste disposal procedures when disposing of the packaging material.

Moving the equipment

The equipment has two fixed rear wheels. To move the equipment, lift it up slightly, as shown in the illustration, and push it forwards and backwards.

Given the weight of the equipment, we recommend that more than one person be involved in lifting it.

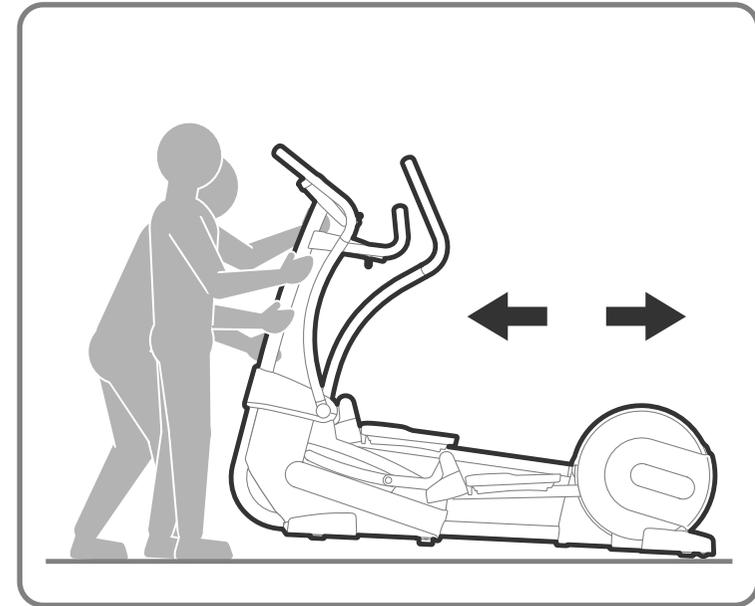
If wheels cannot be used on the floor, move the equipment with normal lifting and transport methods.



WARNING

Lift the equipment by holding onto the frame and not the levers or the control panel.

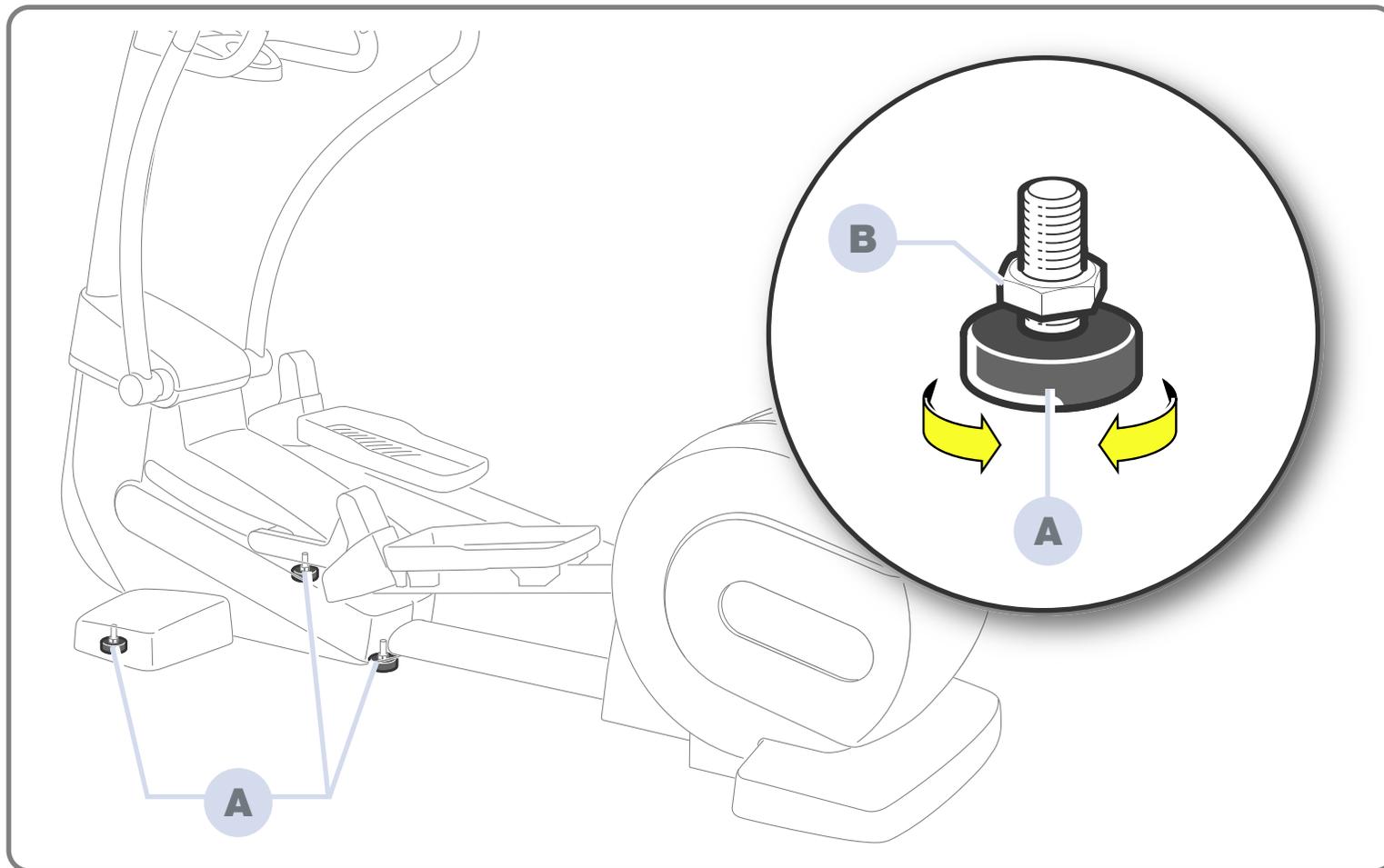
Take great care when moving the equipment and positioning it on the ground, as it may overbalance.



Levelling

The equipment is levelled by adjusting the two front feet and the central foot:

- loosen the lock nut (**B**) and screw the front feet (**A**) in or out until the frame is in a stable position;
- tighten up the lock nut (**B**) after adjusting.



Electrical connection (700 and 500 versions)

Before connecting the equipment to the mains power supply, ensure that the electrical system specifications comply to binding regulations. Check the mains power supply specifications on the label applied to the frame under the control panel.

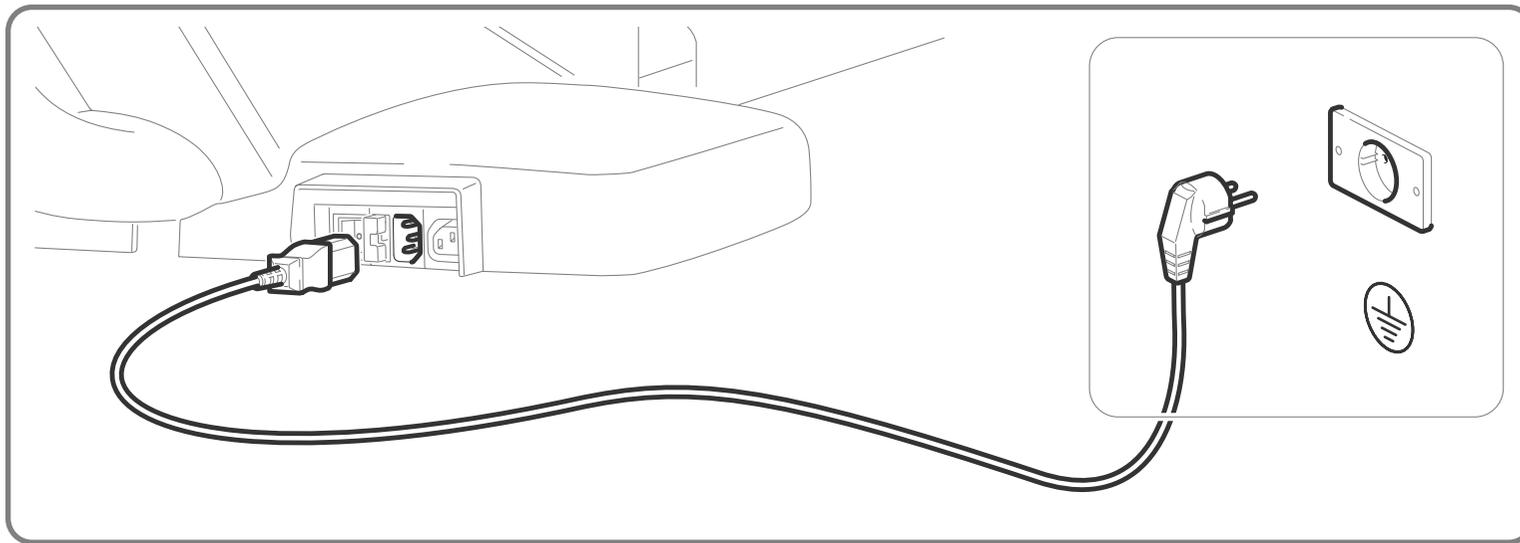


DANGER

The wall socket must be located in a place where the plugging and unplugging can be done easily and safely.

When plugging in, the switch on the equipment must be in the 0 position (i.e. the equipment must be switched off).

Plug the power cable first into the equipment socket and then into the wall socket.



WARNING

Check the state of the power supply cable periodically.



DANGER

The power supply socket must be grounded . If not, a ground connection must be installed by a qualified electrician before connecting the equipment to the electricity mains.

The product must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. The product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.



DANGER

Improper connection of the equipment-grounding conductor can result in a risk of electrical shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product; if it will not fit in the outlet, have a proper outlet installed by a qualified electrician.

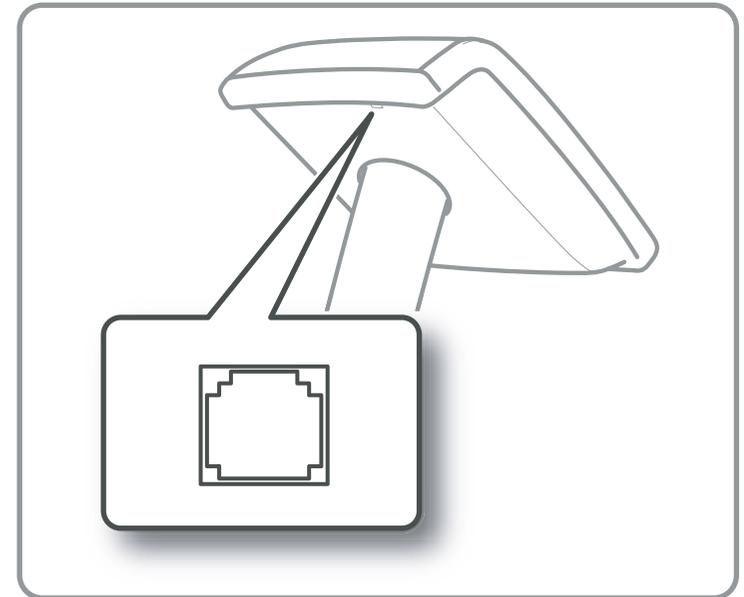
Connection to another device

The equipment can be connected to an audio/video reception device such as the **Cardio Theater**. Besides, if the equipment has not TV, it can be connected to a network of devices conforming to the CSAFE protocol.



WARNING

The devices connected must comply with international standards.



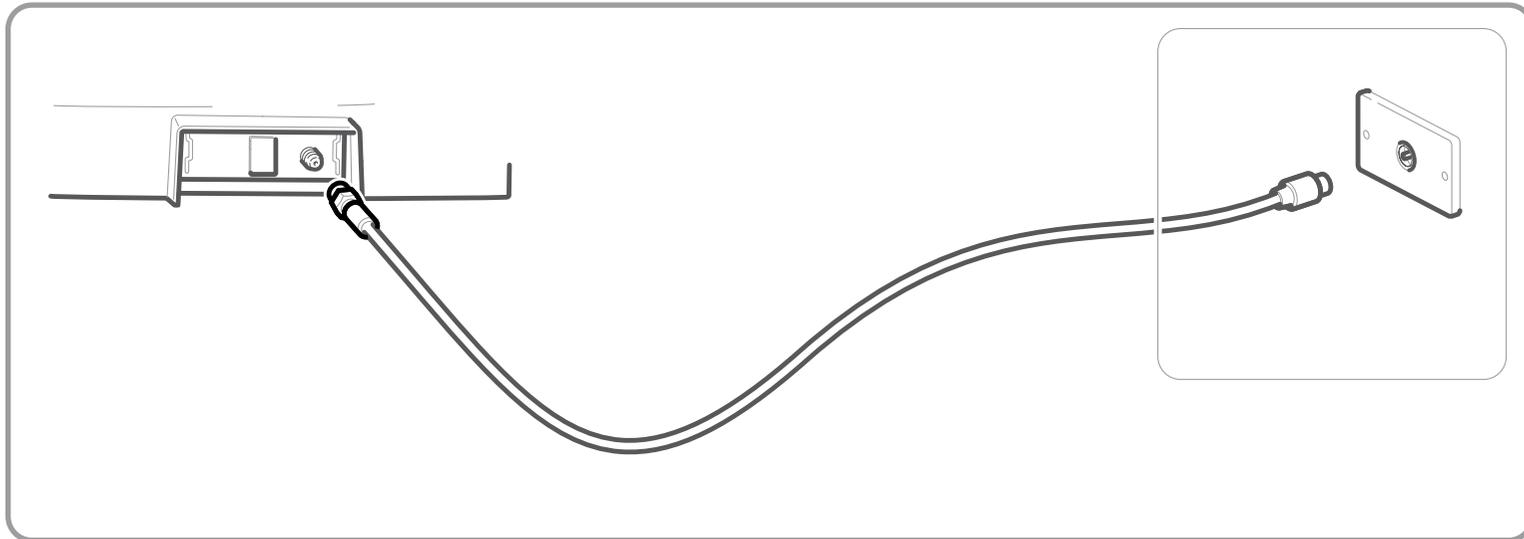
Equipment with codes DA52M..., DA53M..., DA58M..., DA59M... can be connected to devices conforming to the CSAFE protocol only for setting and maintenance functions. Additional devices connected to the digital interface must conform to the respective IEC standards (that is IEC 60950 for information technology equipment and IEC 60601-1 for medical electrical equipment). Whoever connects additional equipment to the input or output signal ports, configures a medical system and therefore is responsible for the system's conformity to the IEC 60601-1 standard about systems. Consult the technical support department or your local representative if you have any doubts.

Connection to another device

If the equipment has the TV, connect the aerial cable to the equipment and to the wall socket. Use an RF coaxial cable for the connection with an F type of connector for the equipment.

The wall socket of the aerial cable must be positioned so that the plug can be easily inserted and removed.

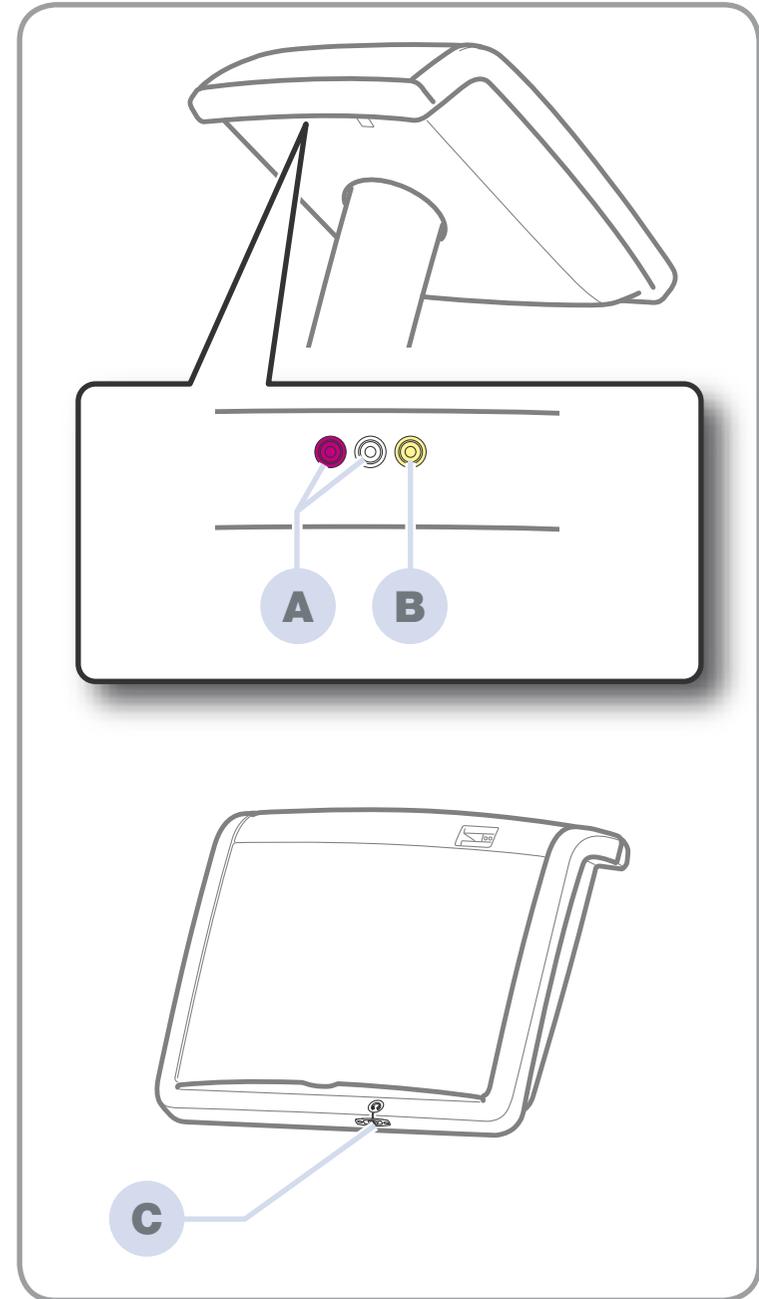
A network socket can be found next to the aerial socket for the Ethernet connection.



Connection to another device

Each TV can be connected to many compatible audio/video equipment (e.g. DVD, Playstation, VCR and earphones):

- A** RCA audio inputs (red connector for the right input and white connector for the left input)
- B** RCA video input (yellow connector)
- C** earphones jack.



Routine maintenance

As the equipment is used in a sports centre by more than one person, it should always be kept clean and free of dust, in accordance with normal hygiene and sanitary rules.

To clean the **control panel**, proceed as follows:

- turn the equipment off by switching the switch to the **0** position (700 and 500 versions);
- unplug the equipment power cable from the wall socket (700 and 500 versions);
- clean the control panel with a damp, but not wet, cloth.

Every week, clean **the equipment completely**:

- with the equipment turned off, clean the external parts with a damp sponge;
- move the equipment to one side so that you can vacuum clean underneath it.

Do not use chemical products or solvents.



WARNING

Do not rub too hard on the control panel and diagrams, or on the written instructions on the stickers.

The safety of the equipment is assured only on the condition that it is carefully inspected every two weeks for any signs of damage and/or wear.

For maintenance actions not described in this manual, call in the Technogym Technical Service.



DANGER

The routine maintenance, adjustment and lubrication jobs must be performed by the Technogym Technical Support Service.

Before starting any job, turn the equipment off by switching the switch to the 0 position and unplug the power cable from the wall socket.

Changing the fuses (700 and 500 versions)



WARNING

The fuses must be changed by the Technogym Technical Support Service.



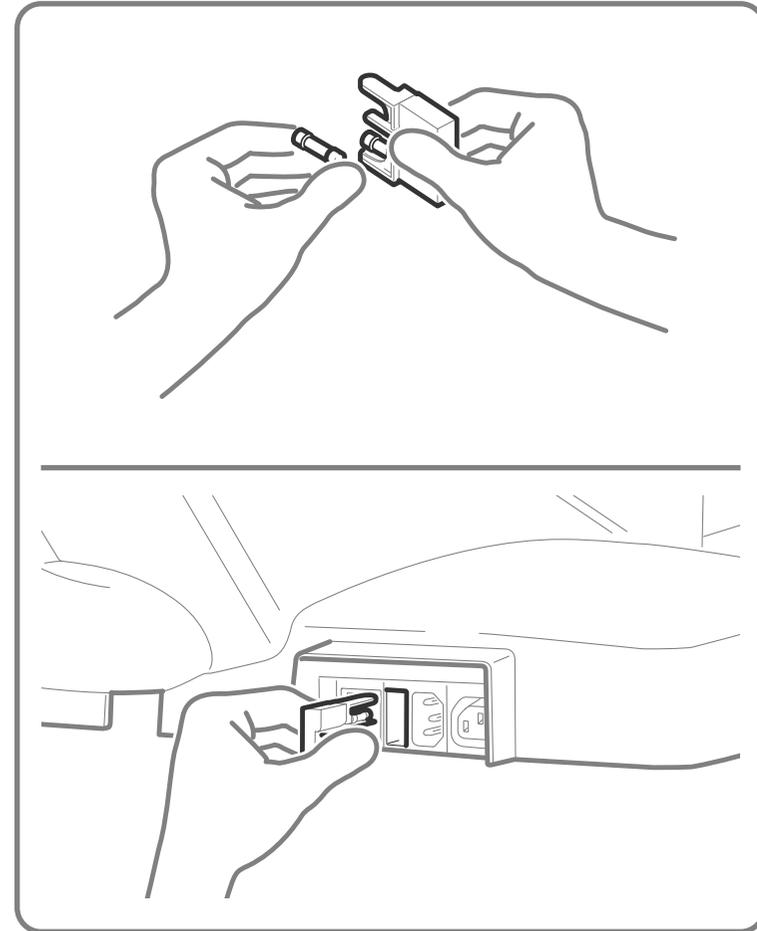
DANGER

Before changing the fuses, switch the equipment off by switching the switch to 0 and unplug the power cable plug from the wall socket.

Remove the fuse holder, to the right of the switch, by pushing the lever.

Replace the blown fuse with a new one as supplied (3.15A (F)).

Fit the fuse holder back into its housing, making sure it clicks in properly.



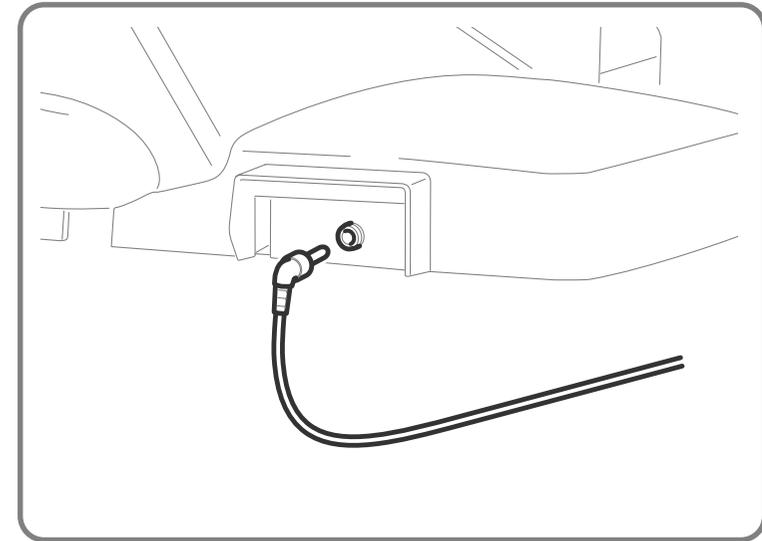
DANGER

If no more of the supplied fuses are available, use certified fuses with identical electrical specifications (3.15A (F) for the replacement).

Recharging the battery (700 SP and 500 SP versions)

The 700 SP and 500 SP versions have to be kept moving to keep them turned on. If, when you stop moving, the control panel switches off without warning, the battery will have to be recharged.

If, 30 seconds after starting movement, the resistance of the equipment is exceptionally high even at effort level 1, recharge the battery with the charger.



WARNING

Do not use the equipment while the battery is recharging.

Charger electrical specifications:

Input 100÷240 Vac 0,8 A 50/60 Hz

Output 15 V dc 24W 

Class II



WARNING

Only use devices that comply with applicable standards.

Troubleshooting

Below is a list of problems that may arise during normal use of the equipment. If the described remedies do not solve the problem, contact the Technical Support Service.

Problem	Cause Remedy
Equipment doesn't switch on	<p>Mains power failure (700 and 500 versions). Check the power supply at the wall socket used by the equipment by plugging in an appliance that definitely works.</p> <p>Power supply cable damaged (700 and 500 versions). Contact the Technogym Technical Support Service.</p> <p>Installation problems with the power supply cable (700 and 500 versions). Check the connection.</p> <p>Burnt-out fuses (700 and 500 versions). To replace the blown fuse with a spare (3.15A (F) contact Technogym Technical Support Service.</p> <p>The control panel connector has been accidentally disconnected. Contact the Technogym Technical Support Service.</p>

Problem	Cause Remedy
Too noisy	<p>Equipment not properly levelled. Check the position and level the adjustment feet.</p> <p>Damaged bearings. Contact the Technogym Technical Support Service.</p> <p>Worn belt. Contact the Technogym Technical Support Service.</p>
Data incorrect or unreliable with equipment running	<p>Blocked key on keypad. If the problem persists, contact the Technogym Technical Support Service.</p> <p>Equipment next to source of radio interference (e.g. electrical domestic appliances). Move the equipment to another place or move the domestic appliances.</p> <p>An internal connector has become accidentally disconnected. Contact the Technogym Technical Support Service.</p> <p>Internal contact in control panel. Contact the Technogym Technical Support Service.</p>

Problem	Cause Remedy
Problems in monitoring heart rate with the chest band	Other transmitters situated nearby. Move the equipment far enough away to stop signal interference (minimum distance between two units 80 cm).
	Strong interference sources nearby. Find the interference source (e.g. an electrical domestic appliance) and move it away, or move the equipment.
	Worn heart rate monitor chest band. Change the chest band.
	Chest band transmitter not making proper skin contact. Dampen the inside of the chest band with water.
	Control panel not working properly. Contact the Technogym Technical Support Service.
	Damaged transmitter. Change the chest band.

Technical assistance

The Technogym Technical Support Service provides:

- telephone consultation
- information about which services are covered by the warranty and which must be paid for
- on-site servicing
- supply of original spare parts.

Technogym Technical Support Service

tel: 0547 650650

fax: 0547 650150

email: service@technogym.com

When you contact the Technogym Technical Support Service you must give the following information:

- model,
- date of purchase,
- serial number,
- precise description of the problem.



WARNING

Work on the equipment by persons unauthorised by Technogym invalidates the warranty.

Technogym supplies the electrical and wiring diagrams to companies with technical support.

Storage

If a long period of non-use is expected, you are advised to store the equipment in the following way:

- in a clean dry place, with a dust cover;
- at a room temperature between -10°C and 70°C and relative humidity between 20% and 90%.

For better storage, use the **original packing** materials.

Disposing of the equipment

Always make sure that the equipment cannot become a hazard in any way, and do not leave it in places where children play. As a precaution, when the equipment is unused for a long time or when you want to dispose of it, unplug it from the mains.

Disposing of the equipment on open ground, in public areas, or in private areas used by the public is prohibited.

The equipment is made from recyclable materials such as steel, aluminium and plastic, which must be disposed of in the manner prescribed by the urban refuse collection regulations in force, by specialist environmental firms.

Disposing of the battery

The battery is made of non-recyclable materials: do not discard it in the environment.

Contact specialist urban and environmental cleansing agencies for disposing of the battery.

Disposing of the chest band

The chest band, which transmits heart rate data, is not made of recyclable materials and therefore must not be disposed of on open ground.

Contact a company specialized in urban and environmental sanitation.

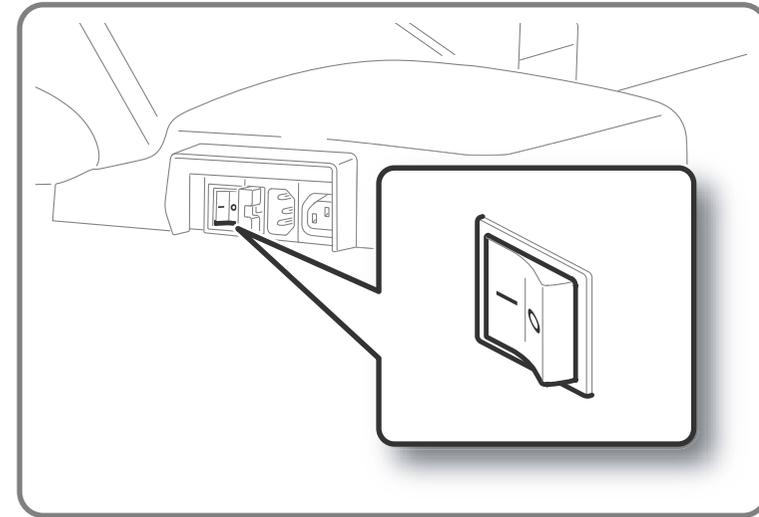
Switching on and off

To turn 700 and 500 versions of the equipment on, switch the switch to “I” position.

To turn the 700 SP and 500 SP versions on, begin moving.

When switched on, a beep sounds and all the control panel LEDs light up.

After a quick system check (reset), the equipment is ready for use.



choose training

The message does not appear if the keys are disabled (see the *Configuration Menu* section in the software part) so that exercises can be started only with the TGS key

insert the TGS key

The message does not appear if the TGS key reader is not installed or if the use of the TGS key is disabled (see the *Configuration Menu* section in the software part) so that exercises can be started only with the control panel keys.

In this mode, the following functions are enabled:

- calculation of heart rate, if measured;
- reading of access codes for configuration menu (see the *Configuration Menu* section in the software part).

Switching on and off

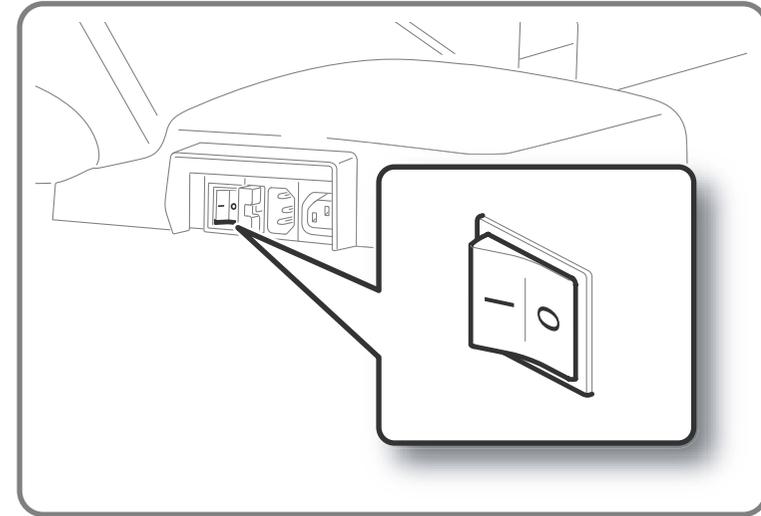
To turn 700 and 500 versions of the equipment off, switch the main switch to the “0” position.

If the equipment isn't going to be used for a long time, as well as turning it off you should also pull the plug out of the wall socket.



WARNING

The switch is for turning the equipment on and off but does not isolate it completely from the mains voltage, even in the “0” position (off). For complete isolation you must unplug the power supply plug.



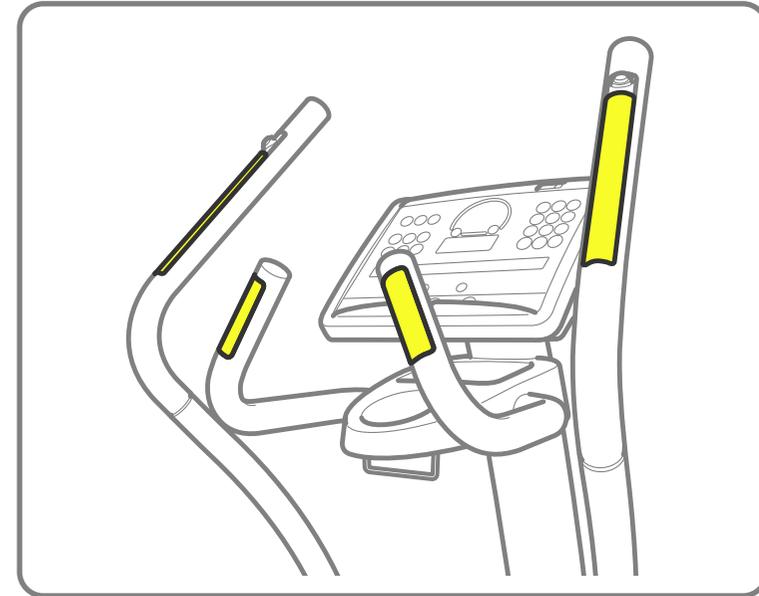
To turn the 700 SP and 500 SP versions off, simply stop moving.

The equipment must be switched off only at the end of the exercise, when in standby.

Monitoring the heart rate

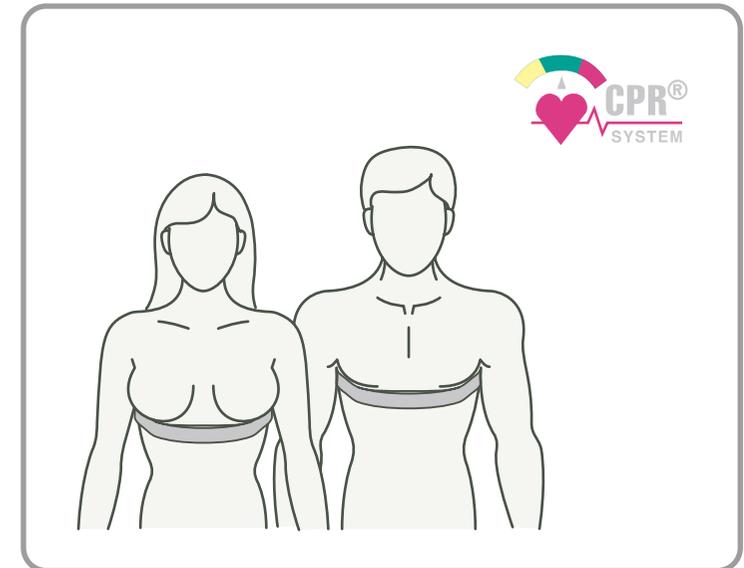
The equipment is able to measure heart rate trends, in two different ways:

- with a device applied to the fixed handle or to the levers (hand sensor), that switches on when you grip the handles or levers in the sensor region (in 700 and 700 SP versions);



- with a chest band with a heart rate transmitter (Polar T31).

There must be no more than one transmitter in the reception range: otherwise the receiver may receive different signals at the same time and give incorrect heart readings. If there are several equipment units with heart rate receivers in the same area, the recommended minimum distance between them is 80 cm.

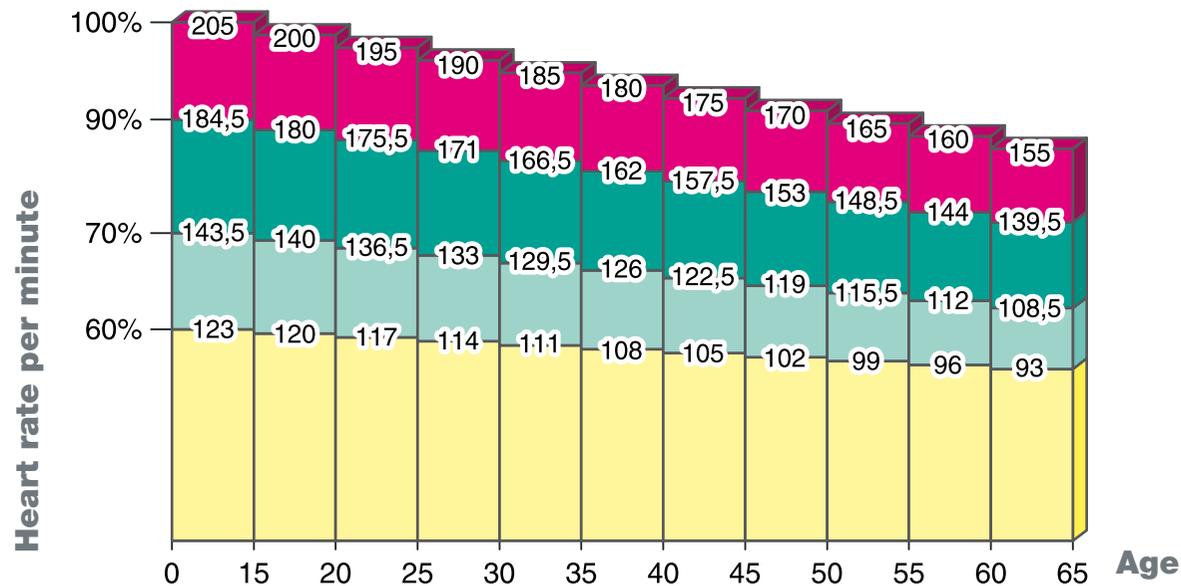


Monitoring the heart rate

Heart rate readings will not be accurate near electromagnetic radiation sources (TVs, cellphones, etc.).

Should you have any doubts about the accuracy of the readings, contact the Technical Support Service.

The following table shows the optimum heart rate levels in relation to age and the goal to be achieved. Theoretical maximum heart rate (100%) is calculated on the basis of age using the formula: $220 - \text{age}$.



- Area reserved for competitive athlete's workouts (requiring a doctor's certificate)
- Aerobic zone with a primarily cardio-circulatory component (keep heart rate between 70% and 90%)
- Aerobic zone primarily using fats as energy source (keep heart rate between 60% and 70%)
- Zone of little training interest

Monitoring the heart rate

To read the graph, simply find your age on the horizontal axis and scan up the vertical until you reach the 60%, 70% and 90% values.

Aerobic exercise performed at a heart rate **between 60% and 70%** mainly burns fat as an energy source.

When doing aerobic exercise at a heart rate of **70% to 90%** the cardiocirculatory component prevails.

For example, if someone **aged 30** wants to burn off fat, the heart rate during exercise should be kept to between 114 (60%) and 133 (70%); if he or she wants to improve cardio-respiratory capacity, the heart rate should be kept to between 133 (70%) and 171 (90%).



DANGER

During a workout it is very important that your heart rate never goes above 90% of your maximum rate (unless you are an athlete engaged in competitive sport).



WARNING

The sole function of the heart rate monitor is to display the heart rate during exercise and cannot be used for medical cardiac diagnoses of any kind. The heart rate shown on the display is purely indicative and cannot be considered absolutely certain.

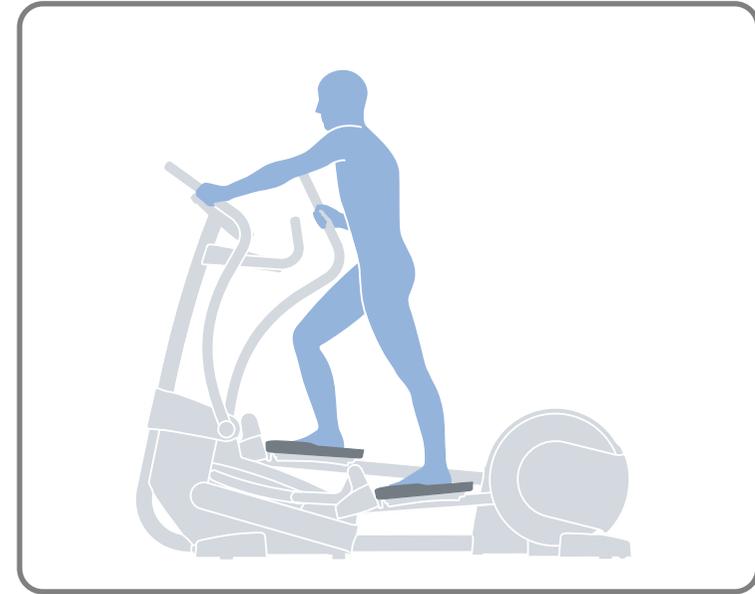
For information on displaying the heart rate percentage on the control panel see the *Heart rate LEDs* section in the software part.

Ergonomic positioning on the equipment

Step onto the equipment from one side and put one foot on each pedal. Grasp a fixed handle with one hand and set the program with the other on the control panel.

To perform the movement with your lower limbs only, hold the fixed handles. To perform the movement with your upper limbs as well, hold the levers.

At the beginning move slowly until you become familiar with the equipment and acquire balance. It is important that you get used to the movement without leaning forward and assuming unnatural positions.



Once you become more confident, gradually increase the effort level.

Constantly check your position: head held high, shoulders in line with the hips, abdomen sucked in and trunk erect. To maintain correct posture you must keep legs and feet parallel and gaze straight ahead.



WARNING

Any distractions in the area around the equipment may cause the user to lose his/her balance.

Synchro is to be used solely for its intended purpose, i.e. for aerobic exercise of the legs and arms. Any other use of the equipment is to be considered improper and therefore dangerous.