

ergo.lyps



cardio

User

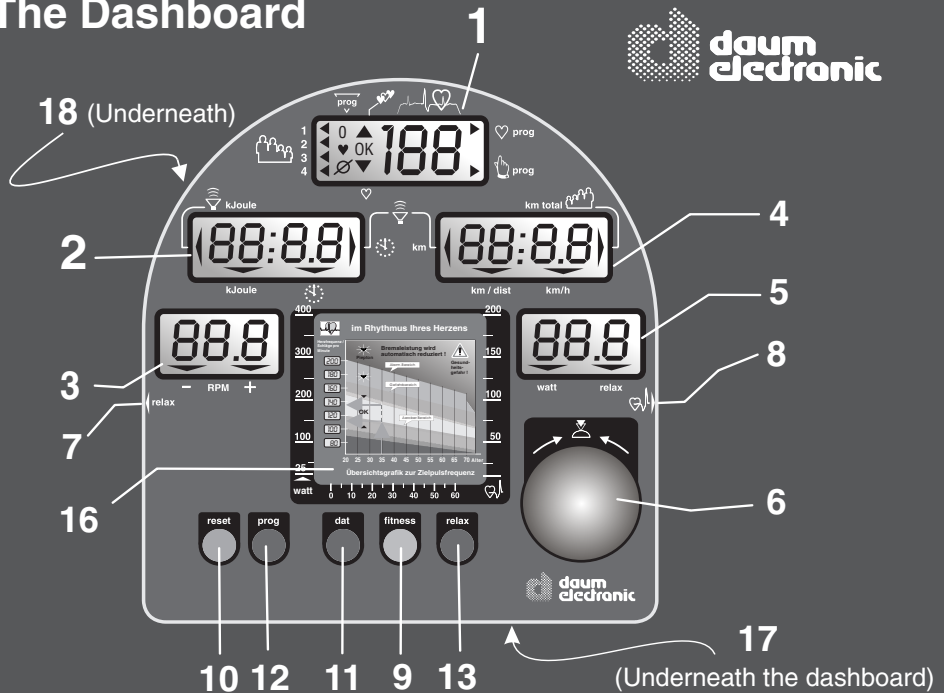
manual



**daum
electronic**

electronic • entwicklung • fertigung

The Dashboard



1. LCD-Display

User
Pulse rate
Pulse status
Program identification number
Program display

2. LCD-Display

Kilojoule burned
Training time
Fitness grade
Limit values for
Kilojoule burned
and training duration

3. LCD-Display

Pedal speed
(RPM)

4. LCD-Display

Distance
Total kilometers
per user
Distance covered
Average speed

5. LCD-Display

Braking power in Watt
Relax status

6. Control button

7. Relax sensor connector
8. Pulse sensor connector /
Ear clip

9. fitness key

10. reset key

11. dat key

12. prog key

13. relax key

16. Heart rate diagram

17. PC Interface connector

18. RESET key (recessed)

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Notes about Software Update

The heart of the dashboard consists of a modern Flash ROM Processor

It allows upgrading all the software related functions, training programs and fitness tests to the latest release, even years from now.

The latest software is available for download at the **ergo_bike** homepage on Internet and can be transferred to the dashboard with the **ergo_win 2002** PC program

You will find the instructions for this operation in the "**read me**" file that comes with the software.

Visit us on Internet!

www.daum-electronic.de

Your password for the service area:
"ergo-service"

The present instruction manual describes the

ergo_lyps model **cardio**

This ergometer is specially designed for health and endurance training. High quality manufacturing, easy to see dashboard, ease of use and maintenance all contribute to make this appliance an ideal training device for sport and fitness purposes. Also note that the complete equipment and the wide performance range should appeal to sport or fitness conscious persons of every age group.

What is an Ellipsis trainer?

The *ergo_lyps cardio* is suitable for therapeutic use **at home**. An important characteristic and an essential feature of an ergometer is the ability to input the **required power load in Watt** beforehand.

This load is then maintained independently of the speed expressed in revolutions per minute (within the RPM ranges shown on the graph on page 9), which means it is possible to train with a load that is considerably independent of the pedaling RPM. This feature prevents an unwitting exposure to incorrect loads while training.

A full electronically controlled, maintenance free, eddy current brake is at the heart of the *ergo_lyps*. It adjusts the load according to the values determined by the computer to fit the strictly personal requirements, and allows a continuous load value selection from 25 to 400 Watt.

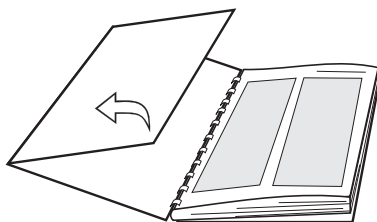
The *ergo_lyps* ergometer is thus more than a “Home Trainer”, since it can be used for both sports and therapeutic objectives.

About this manual

The cover of this manual contains a foldout page. This greatly simplifies the general manipulations and the location of the display and control components on the folded out page.

You will find an explanation of the concepts and expression that are new to you in the **Glossary** in the appendix.

An **appropriate symbol** is used to identify various important information and remarks. Please read them carefully.



Switching On / Off

Please read the **Notes on Safety** (page 19) before switching the *ergo_lyps cardio* on, and follow the **installation and assembly instructions** (pages M1 - M10).

The **On/Off switch (power switch)** is located in the perforated part on top of the device just before the curved part of the metal frame.

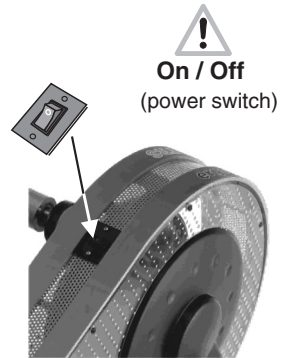
Upon turning on the power switch (On/Off), the five display windows of the dashboard **will display all the symbols and number segments for about two seconds**. This is a self test run by the computer on the entire system.

The *ergo_lyps* switches automatically to **stand by mode** if it is left switched on and **unused for about two hours**. This is signaled by three beep sounds and ten times flashing of all the windows, and by the display of "SLP" in **window number 2**. All other windows are blanked. This mode is terminated by pressing **control button number 6**.

The *ergo_lyps* should be switched off by mean of the **On/Off switch** or by pulling the power cord **plug** from the power outlet.

Always press the Reset key before switching the device off in order to save the distance covered in kilometers.

(This does not apply for the values of the "guest".)



Window No. 2



Display-window
"Stand-By mode" (SLP)

Please note:

The value of the daily kilometer counter (**the wide arrow pointing to Distance**) will always be added to the total kilometer counter (**the arrow pointing to User/Km Total**),

1. if the *ergo_bike* goes in **Stand By mode (SLP-Mode)**.
2. or if the **Reset key** is pressed,
3. or when another person starts a session and **another identification number** is selected.

Control button no. 6 is the central control element of the *ergo_lyps*.

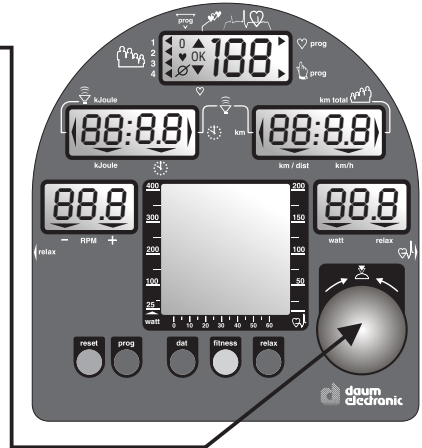
Two functions in one button!

A: Turning the control button:

- Changes the value displayed in the active display window

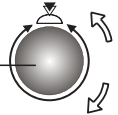
B: Pressing the control button:

- Activates the *ergo_lyps* when in the SLP mode
- Stores the value selected by turning the button
- Changing to the next data to enter
- Changing the display between Time/km/h and KJoule/Distance



Instructions to **turn** the control button are indicated in this manual

by this symbol



Entry / Function A :

Age	in one year increment
Pulse	in one beat increment
Time	in one minute increment
Distance	in one kilometer increment
KJoules	in ten kilojoules increment
Watts	in five watt increment

Instructions to **press** the control button are indicated in this manual

by this symbol



Entry mode / Function B :

when setting personal data

confirming and storing of the data (page 15)

when **switching or selecting** / in general

To change the display from **Time / km/h** to the display of **KJoule / Distance**

while training
(see page 8)

Bedien- bzw. Funktionselemente am Cockpit

1. - 5. LCD Displays

Display windows no. 1 to 5

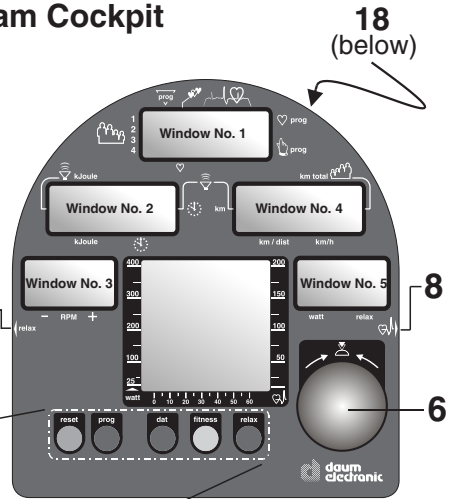
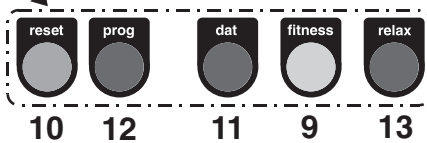
6. Control button

7. Connector of the relax sensor

used to connect the relax sensor.
(see page 23 / "to relax")

8. Connector of the pulse sensor

used to connect the pulse sensor /
earclip (see page 11)



17
(below)

9. fitness - key

(has 2 functions)

1. Recalls a fitness mark

(see page 21)

10. reset - key

2. Recalls the values of the last training session

(see page 22)

Resets the display windows.

11. dat- key

allows the entry of **personal data** that will be used to determine the alarm values to be monitored during training sessions

12. prog - key

This key is used to recall the programmed training sessions. (see page 26)

13. relax - key

Starts the relax program used with the relax sensor (accessory).

17. Connector PC-interface

The PC interface (connector) is located on the underside of the dashboard within the square opening (see page 12)

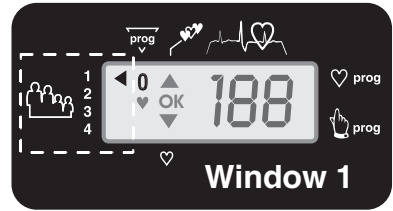
18. RESET - key (recessed) for the dashboard computer

(see page G3 what if...?)*

The RESET key is located on the underside of the dashboard, above the protective plate and is intended to be used in the case of a failure of the internal computer software.*

1. Selecting the user identification number

The **ergo_lyps** computer will record, store and evaluate the training data of up to **four users** separately.



Before using the equipment, you must **assign a user number to every user**.

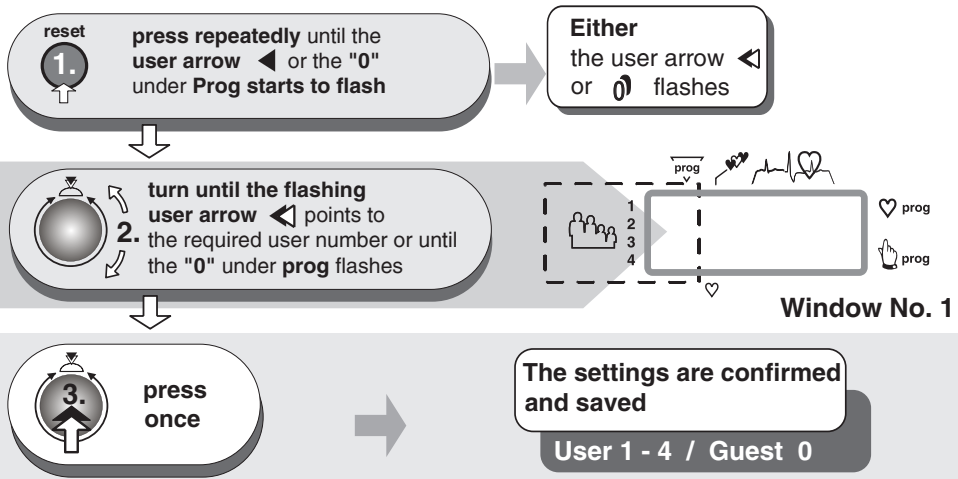
The following is an example of a possible number attribution scheme in a family:

Mother	Father	Daughter	Son
User 1	User 2	User 3	User 4

Guest users, or any persons, whose training data will not be saved, should use **identification number "0"**. When using this ID number the **arrow ◀ pointing to User 1 to 4 will not be displayed**. Instead **the number "0"** is displayed under **prog**.

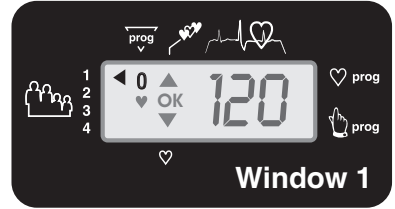
No training data will be saved for the "Guest" user when the ergo_lyps is turned off!

Set up of the User identification number 1 to 4 or Guest 0



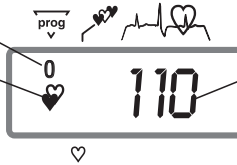
Displaying the pulse rate

The pulse rate or pulse status is only displayed if the **pulse sensor (ear clip)** or the **cardio chest band** is connected or when both hands are holding the pulse sensors (on the U shaped handle).



Selected program

a **blinking heart** indicates that the pulse sensor (ear clip) or the Cardio chest band is correctly connected and functioning, or that both hands are holding the hand pulse sensors.



actual pulse rate

Window No. 1
(simplified representation)

Displaying the aerobic pulse zone

The aerobic zone is a function of the age, it can be determined on the graph "Target pulse frequency" and the table "target zones of heart frequency" (page 7).

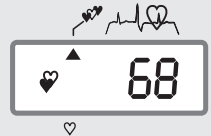
The aerobic pulse zone is only displayed if the user enters his age. (see page 16 / personal data / alarm levels / age entry)

If the user is training within the **aerobic rate zone**, "OK" is displayed in **window No. 1** (beside the blinking heart).



The upward pointing arrow ▲ indicates

that the user is training below the **aerobic zone**. To get to the "OK" zone the user must either train longer and/or increase the braking power in Watt.



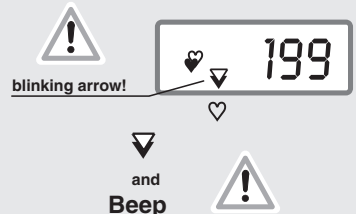
The downward pointing arrow ▼ indicates

that the user is training above the **aerobic pulse rate zone**. To get to the "OK" zone the user must reduce the braking power in Watt.



The downward pointing arrow ▼ starts blinking to indicate that the **aerobic rate zone is exceeded by an excessive margin** (the danger-zone is reached), and the user risks injury by overexercising.

A beep sound combined to the downward blinking arrow indicates that the user has reached the "alarm zone". The *ergo_lyps* starts reducing the braking power automatically at a rate of 5 Watt per second until the pulse rate of the user falls into the "danger-zone".




If the training session is program controlled, and if the training is carried on, the watt setting will automatically be reduced by the same reduction needed to bring the pulse rate to the "danger zone"!



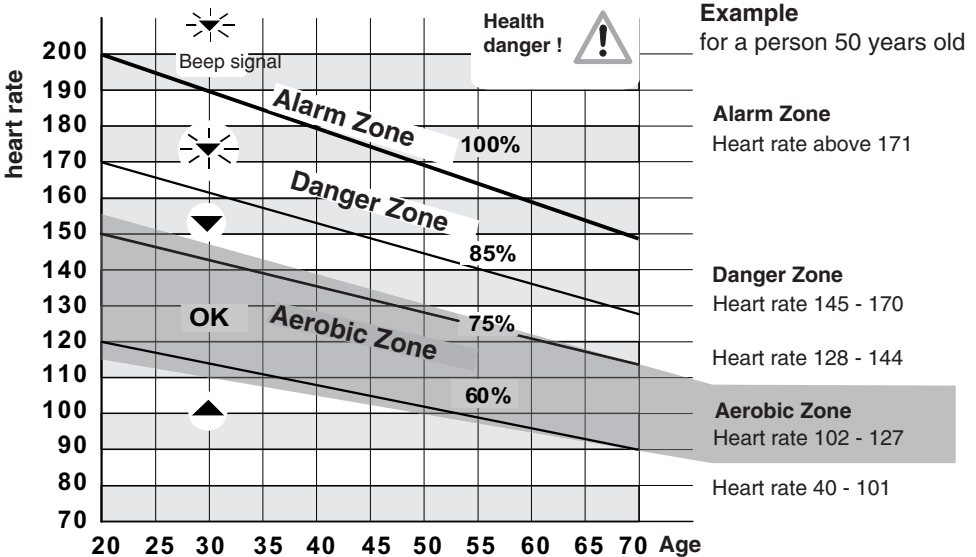
Heart rate frequencies / aerobic zone

Table of target heart rate zone / aerobic zone

Target zone of heart rate frequency to the maximum heart rate

		Aerobic Zone		Danger Zone	Alarm Zone
	▲	OK	▼	⚠	⚠
Age	up to 59%	60%-75%	76%-85%	86%-100%	Beep sound
20	40 - 119	120 - 150	151 - 170	171 - 200	above the Danger Zone  The braking power will automatically be reduced!
25	40 - 116	117 - 146	147 - 165	166 - 195	
30	40 - 113	114 - 142	143 - 161	162 - 190	
35	40 - 110	111 - 138	139 - 157	158 - 185	
40	40 - 107	108 - 135	136 - 153	154 - 180	
45	40 - 104	105 - 131	132 - 148	149 - 175	
50	40 - 101	102 - 127	128 - 144	145 - 170	
55	40 - 98	99 - 123	124 - 140	141 - 165	
60	40 - 95	96 - 120	121 - 136	137 - 160	
65	40 - 92	93 - 116	117 - 131	132 - 155	
70	40 - 90	91 - 113	114 - 127	128 - 150	
75	40 - 86	87 - 109	110 - 123	124 - 145	

Overview diagram of the target heart pulse rate



If the braking power is reduced by, e.g., 50 Watt in the danger zone, and the value set for the next program step is, e.g., 150 Watt, then the training will in fact be carried forward with a load of 100 Watt, as will be shown in the Watt display (window No. 5). The computer makes this adjustment as a safety measure.

Displays :

- the actual training time
- the preselected alarm time
- the reaching of a time limit (time limit arrow)
- the actual kjoule
- the preselected kjoule limit
- the actual clock time

(when the device is turned on and during training breaks / see page 10 for setting the time)



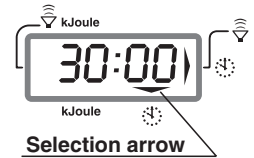
Display example

Training duration of 30 minutes


1. Training time

When the **selection arrow**  is pointing to the clock symbol:

- the elapsed training time is displayed (max. 9 hr 59 min)
(display in minutes/seconds)



1a. Time limit

The **time limit arrow**  is displayed when the preset time limit is reached.

- This arrows indicates that the preset time limit has been reached or exceeded. Additionally the system emits an acoustic signal.



Acoustic signal

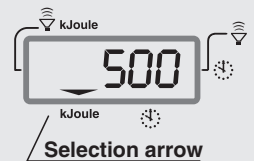


Switching between the time and kJoule display using control button no. 61

2. kJoule

When the **selection arrow**  points to **kJoule** then:

- the energy spend in kJoule
is displayed.



2a. kJoule limit

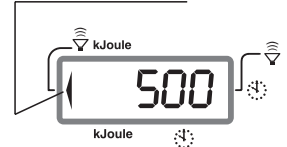
The **kJoule limit arrow**  is displayed when the preset kJoule limit is reached.

- This arrows indicates that the preset kJoule limit has been reached or exceeded. Additionally the system emits an acoustic signal.



Acoustic signal


kJoule limit arrow




(see also pages 14 - 17 / the section on training preparations “personal data / Alarm levels” or entering the preset values and “Settings verification”)

Displays: RPM (Pedals revolutions per minute)

The *ergo_lyps* is independent of the RPM in the RPM ranges shown in the diagram to the right. This means that the user will have to provide an effort corresponding to the displayed Watt-power, within the actual RPM range.

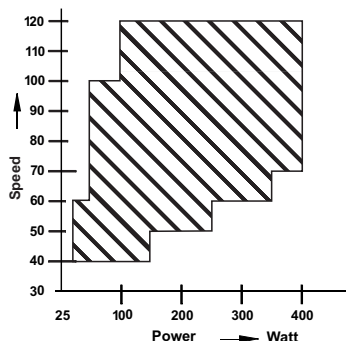
The **arrow**  points to the **minus sign** to indicate that

- **The user is pedaling too fast**
(It is then possible that the displayed power in Watt is not exactly true).

The **arrow**  points to the **plus sign** to indicate that

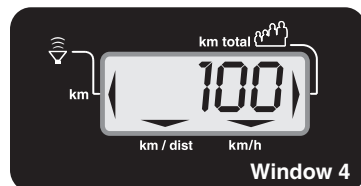
- **The user is pedaling too slow**
(It is then possible that the displayed power in Watt is not exactly true).

The power in watt is indicated to a precision of about $\pm 10\%$ in the RPM ranges delimited by the arrows



Displays:

- km/h
- Users / km total
- Distance
- The reaching of a distance limit

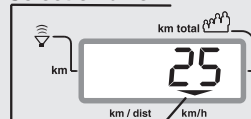


1. km/h

When the **selection arrow**  is pointing to km/h the displays shows:

- **the actual speed**
- **the average speed.**
(when reviewing the values of the last training session)

Selection arrow



2. Users / km total

When the **selection arrow**  is pointing to Users / km total the displays shows:

- **the total number of kilometers covered by the user or under the specified user identification number** (for the whole life of the *ergo_lyps*).



C

The Dashboard

Windows No. 4, No. 5, and No. 2 *Distance/Watt & Relax / Clock Time*

Distance and reaching of a distance limit

Switching between the km/h and distance display using button no. 6



Distance km/h Distance km/h

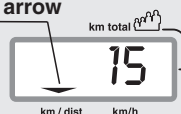


3. Distance

When the **selection arrow**  is pointing to the km/dist:

- the distance in km covered during the present training session is displayed.

Selection arrow

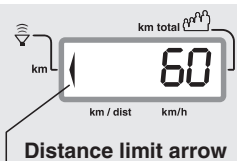


3a. Limit (km)

The **distance limit arrow** is displayed when the preset distance limit is reached.



- This arrows indicates that the preset distance limit has been reached or exceeded. Additionally the system acoustic signal emits an acoustic signal.



Displays:

- the braking power in Watt
- a Relax level



1. Watt

When the **selection arrow**  is pointing to the Watt:

- the breaking power in Watt (25 to 400 Watts) is displayed.



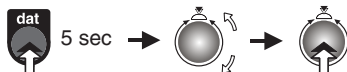
2. Relax

When the **selection arrow**  is pointing to the Relax:

- a Relax level, between 0 and 255 is displayed.



Setting the time



Follow the procedure described below to set the correct clock time:

Switch on the *ergo_lyps* while pressing the **dat key (no. 11)**, and keep the **dat key** pressed for 5 more seconds until numbers are displayed on the LCD windows. Window no. 2 will now display the actual hour setting (and windows no. 3 and no. 5 will display the software version number). Adjust the hour setting to the correct clock hour (in 24h format) by turning the control button (6). When you confirm the hour setting by pressing the control button the system will display the minute value, and the seconds value successively. Each of which can be set to the correct value by turning the control button, and confirmed by pressing the same button (6). As soon as the seconds value is confirmed the clock starts running at the set time in normal operation mode.




Pulse sensors / Cardio sensor chest band

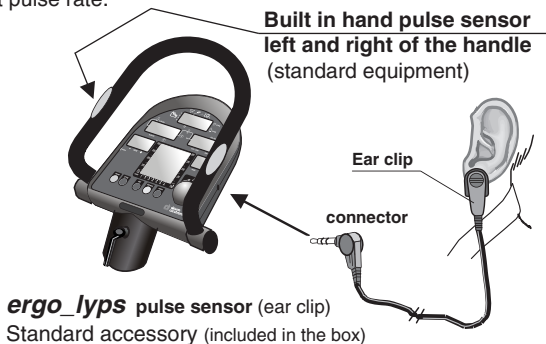


The **pulse sensor (ear clip)** included in the package is an important accessory to the **ergo_lyps**. You should not start any training session without it, or without the **Cardio sensor chest band** available as an option! The **pulse sensors built into the handle** can be used to control or monitor the heart rate over short periods of time.

The ear clip pulse sensor illuminates the ear lobe to measure the pulse rate. Every heart pulse modulates the light passing through the lobe, and can thus be detected by an infrared sensor and displayed as heart pulse rate.

Pulse sensor (ear clip)

1. Insert the connector into the **socket no. 8** on the dashboard marked with .
2. You should rub the ear lobe energetically with your fingers to stimulate blood circulation.
3. Attach the pulse sensor (**ear clip**) to the ear lobe so that the two contact surfaces sit entirely on the skin. The **heart symbol in display window 1** starts **blinking** to indicate that the ear clip is properly attached and functional!



Warning!

Strong light sources, like sunlight, halogen projectors or neon lamps, and also ear piercing or ear rings, and the intake of beta-blocker could affect the measurements!

The wireless **Cardio sensor chest band** (see the figure to the right), available as an **optional accessory** (order number 90 91 015), permits **more precise measurements**. (See page T 1)

You will find a precise description of the display and the meaning of the corresponding display symbols on page 6 (**Displaying pulse status**).

Cardio sensor chest band (with transmitter)



Built-in Cardio pulse receiver



wireless **Cardio sensor chest band**
Order Nr. 90 91 015

ergo_lyps
Special accessory available from:



All **ergo_lyps** ergometers are equipped with a **built-in**, not visible from the outside, **Cardio pulse receiver**. This allows receiving of the pulse rate transmitted by any standard chest band, of the coded and non coded type. You only need a **cardio sensor chest band** (see page T1) to achieve wireless heart rate measurement.

Warning: using two chest bands simultaneously in the same room, either of the coded or non-coded type, to achieve wireless heart rate measurement can lead to the display of a wrong pulse rate on the dashboard of the **ergo_lyps**.

Pulse measurement over the hand surface

The sensors built in the handle are used to control and monitor the pulse rate over short periods of time. To achieve a correct measure you should lay your hands relaxed and loose (not tight) on the electrodes. The electrical resistance of the skin varies as a consequence of blood pressure variations due to heart pulses. These variations are measured by the electrodes and displayed as heart rate on the dashboard.

Advice: If measuring the pulse rate over the hand electrodes gives no results, we recommend using either the ear clip method or the Cardio sensor chest band. The variations of the electrical resistance of the skin are so small for some persons that they cannot be used to acquire any usable results.

ergo_win 2002

(PC-Software for the communication with the *ergo_lyps cardio*)

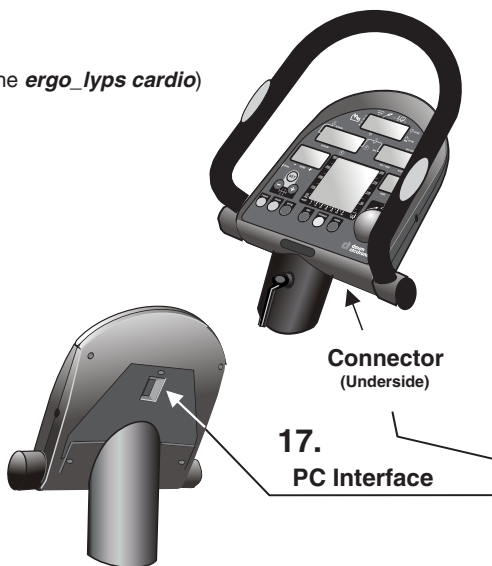
The training support provided by the ***ergo_win 2002*** software was specially developed for the **daum electronic ergometers of the 2002 pc series**.

Comprises:

- CD-Rom
- Interface cable

Hardware requirements (minimal requirements)

- Pentium processor
- 20 MB free hard disk space
- Available serial (Com) port
- CD-ROM drive
- Keyboard
- Operating system: Windows 98 / ME
Windows 2000 / NT



Features highlights:

- **Internet capable.**
- Animated races against oneself, against a computer opponent, against another ergometer or an internet training partner in real time.
- Uncountable number of training programs through exchange and download possibilities over Internet.
- Extremely simplified programming of your own watt and pulse controlled program profiles.
- Tour planing for distance controlled training programs.
- Extended weight and body fat analysis.
- Fully automatic Conconi test / PWC test
- Extended training evaluations
- Possibility to export all the data to other programs, e.g. Excel.
- Extended Coaching functions
- User management with individually configurable user interface.
- Saving, evaluation and archiving of all the training data.
- Provides a wealth of background information on topics of sport medicine and sport physiology.
- Modern user interface.
- Simple operation.

Order Nr. 90 91 012

order from:



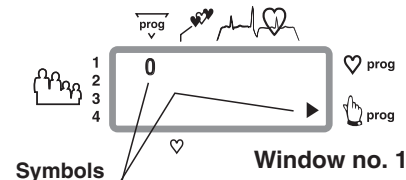
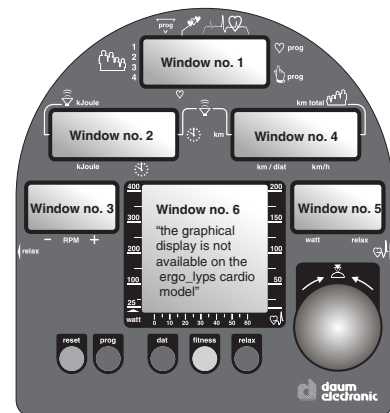
Manual setting “0”

When the *ergo_lyps* is switched on (using the **power switch**), or when the “SLP” state (sleep mode) is canceled using **control button No. 6**, it goes into ready state. You can directly **start training** without the need to do any particular setting!



This symbol means start operating / moving the pedals and oscillating handles

The following symbols/numbers in **display window no. 1** mean that the *ergo_lyps* is set in **manual mode** for the indicated user number, and without the entry of any personal alarm values:



When you start moving the pedals and the oscillating handles **display windows no. 2, 4 and 5 show the actual training values.**

The smallest load value for a training with the *ergo_lyps* is 25 Watts. You can increase or decrease the load in five Watts increments **by turning the control button no. 6.**

The pulse frequency will be displayed in window no. 1 when the pulse sensor (ear clip), or the Cardio Sensor chest band, is connected and functional or when both hands are laid on the hand pulse sensor on the U shaped handle.

Values displayed in the dashboard windows during a training session:

Window no. 1	Heart pulse rate (this value is only displayed if the pulse sensor (ear clip) or the Cardio Sensor chest band is connected and functional)
Window no. 2	the elapsed time since the beginning of the training.
Window no. 3	RPM the actual speed of the pedals in revolutions per min.
Window no. 4	the actual theoretical velocity (km/h)
Window no. 5	the actual load setting (in Watt) and the Relax levels
Window no. 6	graphical representation of the target heart pulse rates

1. User identification allocation

1.1 Selection of the user ID number [User (1 - 4) + Guest]

The computer of the *ergo_lyps* records, saves and evaluates, separately the training data of up to **four users** (user identification number 1 - 4).

Additionally, **guests or other users**, whose training data should not be stored, can train under user **identification number "0"**.

2. Setting up personal data and alarm levels

Training efficiency and control of over and under loading can only be achieved when the personal data are entered.

The computer of the *ergo_lyps* compares these entries with the actual training values and evaluates them accordingly.

Possible entries:

Age	for example 45 years (from 10 to 99)	DF 40
Watt upper limit	max. 400 Watt (from 25 to 400 Watt)	DF 400
Upper limit for heart pulse rate	for example 115 beats (from 100 to 220) (if possible, confirm this figure with your physician and do not exceed it)	DF 220
training duration	for example 25 minutes (from 00:00 to 99:99)	DF 00:00
distance	for example 15 km (from 0 to 99)	DF 0
Kilojoule spent	for example 350 kJoule (from 0 to 1000)	DF 0

About the age entry

Every user should always **enter his age** when training on the *ergo_lyps*, since it is a significant figure for the determination of the load requirement and for the corresponding fitness evaluation.

About the Watt upper limit

If an upper limit for the load in Watt is entered, then the pulse controlled programs will raise the load up to this limit. No further increase of the load will occur when the entered limit is reached, even if the pulse rate did not yet reach the target value. This also applies to all types of programs (watt, speed, manual, RPM, etc.), as the load in watt will not exceed the value entered for the limit.

About the pulse rate

Users should preferably consult a physician to determine the reasonably acceptable personal pulse rate.

(see also page 7 / Table and diagram of the target pulse rate)

Rule of thumb to determine the pulse rate limit:	for burning fat	160 - (minus) age = pulse rate
	for endurance training	200 - (minus) age = pulse rate

The *ergo_lyps* warns you when the limit pulse rate is exceeded and the **danger zone** is reached, by displaying a **blinking arrow** in **window no. 1**, and by an additional beep sound when you enter the **alarm zone**.

(see pages 6 and 7 / aerobic pulse zone and target pulse rate)

Setting up the personal data and alarm levels

2.0 Data entry and alarm levels set up

The dashboard of the *ergo_lyps* permits the entry of **personal alarm levels for pulse rate, upper watt limit, training time, distance and burned KJoule**. When an alarm level is reached during training, a beep signal is sounded and the corresponding **limit arrow** is displayed. If you continue training, the beep signal stops, and only the arrow indicates that the corresponding alarm has been reached.

If the **alarm level of the pulse rate** is reached or exceeded, the *ergo_lyps* reduces automatically the braking power in five watts per second increments until the actual pulse rate falls below the **alarm level**.

The entry of the age is mandatory for the display of the aerobic pulse zone for the user. (see page 6)

The manual program must be selected before the entry of the data or alarm levels, otherwise the entry of the pulse rate level will be skipped.

reset 1. **press repeatedly,** until the **km total arrow** is displayed in **window no. 4** (right side)

dat 2. **Press 1 x**

window no. 4 displays

! **arrow**

0km only the first time the unit is turned on

2.1 Age entry

Turn until the **age** of the user (e.g. 45) is correctly displayed

window no. 4 displays

Press 1 x **The setting is confirmed and saved**
e.g. alarm level for the age 45 years
Default level / DF = 40 years

The set up program goes automatically to the **Watt entry** step

window no. 5 displays

400

watt relax

2.2 Watt entry

Turn until the upper **Watt limit** is correctly displayed **between 25 and 400 Watt max.**

window no. 5 displays

Press 1 x **The setting is confirmed and saved**
e.g. alarm level 200 Watt
Default level / DF = 400 Watt

The set up program goes automatically to the **pulse rate entry** step

window no. 4

200

watt relax

2.3 Pulse rate entry

turn until the alarm level for the **pulse rate** (e. g. 130) is correctly displayed

window no. 4 displays

Press 1 x **The setting is confirmed and saved**
e. g. alarm level 130 beats
Default level / DF = 220 beats

The set up program goes automatically to the **time entry** step

window no. 4

P 130

km / dist km/h

Entering an **alarm level of "0"** deactivates the corresponding "alarm"

Continuation
2.4 Time entry

D

Preparing for training

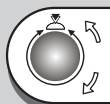
Personal settings

Training

2.4 Time entry



Continued from
2.2 Pulse rate entry



turn, until the required training duration (e.g. 25 min.) is correctly displayed

Window no. 2



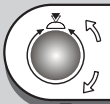
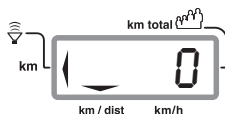
Press
1 x

The setting is confirmed and saved

e. g. Time alarm level 25:00 Min
Default level / DF = 00:00 Min

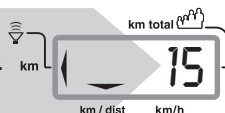
The set up program goes automatically to the **distance entry step**

2.5 Distance entry



turn, until the required length of the training distance (e.g. 15 km) is displayed

Window no. 4



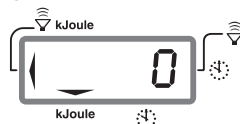
press
1 x

The setting is confirmed and saved

e. g. Distance alarm level 15km
Default level / DF = 0 km

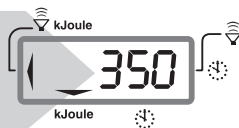
The set up program goes automatically to the **kJoule entry step**

2.6 kJoule entry



Turn until the value of the required value of the kJoule burning (e.g. 350) is displayed

Window no. 2



press
1 x

The setting is confirmed and saved

e. g. alarm level 350 kJoule
Default level / DF = 0 kJoule

➔ **A** Automatic steps to window No. 4 in setting verification mode

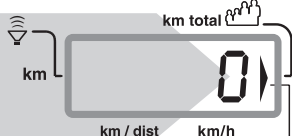
The alarm values entered remains stored when the *ergo_lyps* is turned off. If you should need to change one or more of the alarm values, you can overwrite the corresponding plid alarm value with the new one (using the same procedure described above).

3.0 Settings verification (alarm levels)

reset **press repeatedly,**
1. until the km total arrow is
displayed in window no. 4 (right side)

dat **press**
2. **1 x**


Window no. 4



! Arrow pointing to km total

Window no. 4 displays the last alarm level set up
(corresponding to example 2.1 = 45 years)

A 45



3.1 verifying the age entry

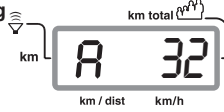
Verify the setting confirm
press **1 x**

or eventually ...? **change**



Alarm level setting made at 2.1


Example of a modification



3.2 verifying the Watt entry

Verify the setting confirm
press **1 x**

or eventually ...? **change**



Alarm level setting made at 2.2

200

watt relax

Window no. 5


3.3 verifying the pulse rate entry

Verify the setting confirm
press **1 x**

or eventually ...? **change**



Alarm level setting made at 2.3




Window no. 4


3.4 verifying the Time entry

Verify the setting confirm
press **1 x**

or eventually ...? **change**



Alarm level setting made at 2.4



Window no. 2

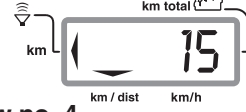
3.5 verifying the Distance entry

Verify the setting confirm
press **1 x**

or eventually ...? **change**



Alarm level setting made at 2.5



Window no. 4


3.6 verifying the kJoule entry

Verify the setting confirm
press **1 x**

or eventually ...? **change**



Alarm level setting made at 2.6



Window no. 2

The set up program returns **A** Automatic to output display mode

Miscellaneous

The **ergo_lyps** makes it possible to define and control the exercise sequence yourself. You can then adapt constantly the training plan to the capacities of the user. This device is not suitable for therapeutic use. It does not meet the requirements of medical and diagnostic usage (in medical clinics).

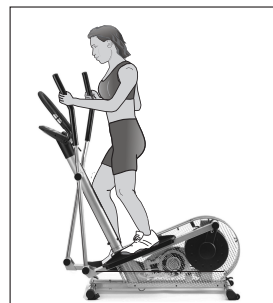
Ergometers are essentially designed for endurance, mobility (flexibility) and physical condition training, and for strengthening the heart and circulation systems and for muscle buildup. The goal of such training is to increase the capacity of the body to absorb oxygen, and to improve its overall flexibility. The inclusion of the pulse rate in the parameters used to control the load helps in keeping the training in the effective aerobic zone.

Training in the aerobic zone means the muscles loading is at the exact level where they can be adequately supplied with oxygen without overproduction of lactic acid (muscles ache). Therefore, the ergometer is also a great value for sports medicine and physical education.

The fact that the training effort can be finely adjusted, gives you the possibility to carry out physical stress tests to get information on your physical condition. Thus you can identify early any heart and blood circulation problems and, with the help of a physician, set up an endurance training plan to treat them.

A relaxed body posture is essential for the efficiency and the benefit of the training with the **ergo_lyps**. You should not be tensed up while training. You should wear loose training garments so that you don't get into sweat too easily and are not constricted by the clothes. **You should only train with sport shoes.** These should not have a very hard or smooth (slippery) sole. We recommend a non slippery sole that is relatively soft and well structured. This type of shoe will give you a good stability on the coarse structure of the step plates, which must be maintained for your own security.

Sport physicians recommend preparing for training with relaxing exercises, which can be followed by some stretching exercises. Any user who does not feel completely fit, considering either the health or physical aptitude aspect, should prepare himself before training with the ergometer, or consult a physician if in doubt.



Stepping on the device / taking the training position

The oscillating poles and the foot rods are supported by double ball bearings and will move at the slightest impact! **When stepping on the device, the step plate on which the user first steps must absolutely be located at the lower point of its movement curve. If the user steps on a step plate located at a higher point there is a risk that the system starts moving to the front or the back out of control and the user may fall down.**



The step plates have a line of holes on their centre line. These holes are intended for the positioning parts supplied, which are used to delimit the shoe position on the plate. Install these parts such that the user may take a favourable position in respect to his/her height and the size of his/her shoes, and that while training his/her knees do not touch the frame (**risk of injury!**).

The ideal standing position on the step plate must be determined for each user before he or she starts training. The front section of the step plate should be used only by users who would not touch the frame because of their leg (calf) length!

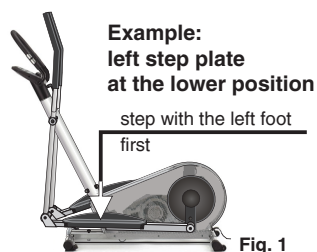


Fig. 1



Since the foot rods with the oscillating poles will move into the area in front of the **ergo_lyps** without any protection, you must make sure that no person or furniture stands in this area. **Young children and animals should not be allowed to stand without supervision around the ergometer during a training session!**

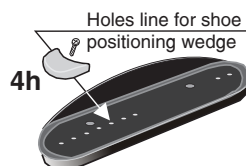


Fig. 2

Safety information

Training properly



Training properly means to **load the body reasonably**, in order to achieve the required **fitness level and to retain it**.

A lower load will not bring the required effect, while overloading can be dangerous!

Training units per week

Generally speaking, training twice a week will help retain your physical condition. To improve your fitness level you must train at least **three or four** times per week.

You should consult a physician before increasing the number of weekly training units, to avoid overloading yourself.

Information about personal safety



The *ergo_lyps* ergometer is intended for use by adults. **It is not a toy. Children** should only be allowed to train with the *ergo_lyps* under adult supervision.

Persons suffering from any of the following diseases should consult their family physician or a specialist before starting training with the *ergo_lyps*.

- Heart disorders like angina pectoris, coronary thrombosis, stenosis and high blood pressure
- Diabetes
- Respiratory disorders like asthma, chronic bronchitis, etc.
- Rheumatism
- Gout
- or any other disease or illness

You should never train when you feel ill or weak (your own body is often the best sensor).

If a user starts feeling ill or weak, he or she must immediately stop the training, relax and consult a physician.

The persons who are not used to exercise, and are not used to providing a physical effort regularly must start with an easy training program, and then increase the load very gradually. Persons with declared health problems must evaluate their personal risks with the help of their family physician.

You should **never use the *ergo_lyps* to find out your maximum degree of physical endurance** by setting the load in Watt and your pulse rate too high.

This can have serious consequences on your health!!!

(The *ergo_lyps* does not meet the requirements for medical diagnosis usage in medical clinics.)

Training conditions

You should pay attention to providing good training conditions, this includes choosing the training room and installation place. Makeshift installation places do not incite to training!

Advice

You will find more information about training for sport and health in the pocket book **“Training with the bike ergometer”** *Improvement of health and fitness as training target.*

Order from: **daum electronic GmbH, Flugplatzstr. 100 D-90768 Fürth**
Fax ++49 (0) 911 75 37 14

Manual training

Miscellaneous about manual training



Under training program "0" (manual) you can adjust the pedaling effort (braking power) between 25 and 400 Watts by turning the **control button No. 6**, and also change it during the training in 5 Watt increment to adjust the load to your personal requirements.

Preparing for training

- **Select the user identification number** (1 to 4) or guest (page 5)
- **Set personal data and alarm levels** (pages 14 to 17)

Where you determine

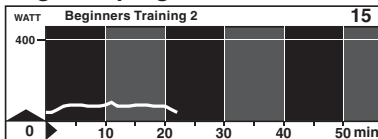
- Timed training** (Enter an exercise duration as alarm level)
- Distance related training** (Enter a training distance / km as alarm level)
- Kilojoules related training** (Enter a KJoule value as alarm level)

Training examples



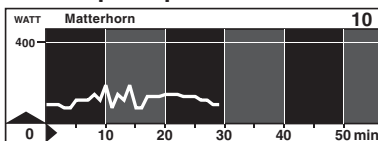
The effort settings in Watt can be freely varied according to the performance diagram selected to "run" and be set according to the represented time intervals.

Beginner program



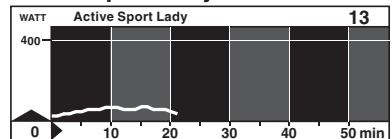
23 min
for untrained men up to 70 years of age

Active sports persons



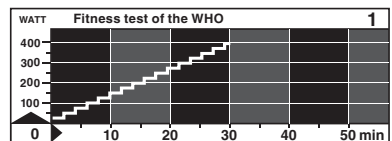
30 min
for trained users

Active Sport Lady



22 min
for untrained women up to 60 years

Fitness test of the WHO



Fitness test 25 Watt / WHO-Standard
32 Min. / 25 - 400 Watt
(increased in 25 Watts increments at two minutes interval)

About the fitness test 25 Watt / WHO-Standard



This exercise takes the user to his/her performance limits. You should only take it after consulting a physician, and you should interrupt the test immediately at the first sign of discomfort or pain!

Fitness mark / fitness evaluation

Fitness mark

The *ergo_lyps* can carry out an evaluation your **fitness**. The measurement principle is based on the fact that the pulse rate falls faster within the first minute following the training session for healthy, well-trained users than for healthy, less trained users.

If the user presses the Fitness key during a training session, the present training will be interrupted and the load will be lowered **to 25 Watt within 3 to 4 sec**. The graphical screen will display the message "Fitness mark evaluation". The drop in pulse rate **within 60sec** will be measured (see window no. 2) and the mark computed according to the following scheme and displayed:

- The fitness mark F1 is awarded for a pulse rate drop of more than 25.0% within 60 sec**
- The fitness mark F2 is awarded for a pulse rate drop of 20.0% to 24.9% within 60 sec**
- The fitness mark F3 is awarded for a pulse rate drop of 16.0% to 19.9% within 60 sec**
- The fitness mark F4 is awarded for a pulse rate drop of 12.0% to 15.9% within 60 sec**
- The fitness mark F5 is awarded for a pulse rate drop of 8.0% to 11.9% within 60 sec**
- The fitness mark F6 is awarded when the pulse rate drop is less than 8% within 60 sec**

The mark of "F0" is awarded if no usable result can be measured.

The training program resumes at the actual position after the evaluation process. The load in Watt is raised within 3 to 4 seconds to its value just before the evaluation and the training can be continued.
A fitness evaluation is not possible after the training session is finished.

Fitness evaluation process

- !** A pulse measuring device (pulse sensor / ear clip or the cardio sensor chest band) must be connected and functional during the whole fitness evaluation process.

The measuring process takes one minute and its progress is displayed.


1. Train at least **15 minutes in the OK-area** (see page 6).
2. Continue pedalling "loosely" at the load of 25 Watt during the 60 sec measurement process.

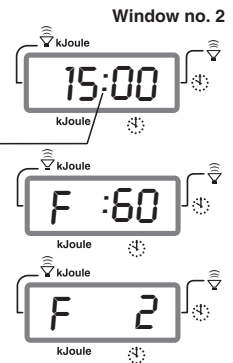
3. Press the fitness key only when the two dots in display **window no. 2** are blinking.



The two dots blink during the training!

4. **Window No. 2** displays an "F", and a timer from **1 to 60** seconds during the measurement process.

5.  **After one minute window no 2** displays the F mark and the system plays a small melody.



Example of the display of fitness mark 2

Recalling the last training values after training

You can recall the values of the last training session with the *ergo_lyps*.

You can do this during actual training or after the training session.

Recalling the training values is not possible when the user is set to "0" (guest user)!

Dashboard displays

	Window 2	Window 3	Window 1	Window 4	Window 5
	kJoule	watt relax	prog 0 1 2 3 4	km total (RPP) km / dist km/h	- RPM +
				no arrow displayed?	
				If in Window no. 4 the arrow is not pointing to Users / km total ... or if the arrow is displayed	
			The display shows:		
1 reset press 1 x			the selected user evtl. a program number evtl. a program arrow	Users / km total	
			press the fitness key only (B)		
2 fitness press 1 x			The display shows:	The display shows:	The display shows:
			the training time	average symbol average pulse rate	the average RPM
3 fitness press 1 x			The display shows:	The display shows:	The display shows:
			kJoule burned	average symbol maximum pulse rate	the average RPM
4 fitness press 1 x			The display shows:	The display shows:	The display shows:
			Fitness mark	the average velocity	the average RPM

If you wish to consult the last values during the training, **skip the step of pressing the Reset key** (Function A).

The display of the values of the last training is terminated when you move the pedals or press the Reset key.

Relaxing

The relaxation function

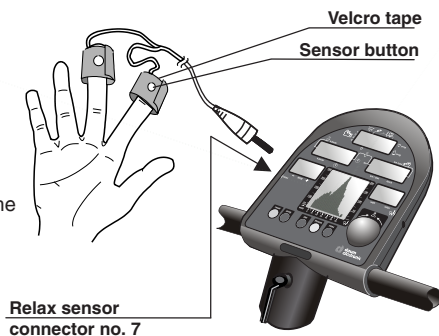
The relaxation function is a **Biofeedback-process** that is carried out by measuring the electrical resistance of the skin. The measured values are indicated by means of optical and audio signals.

Biofeedback is thus the translation into perceptible signals of physiological processes occurring in our body, which our senses can barely, or not at all, perceive.

The relaxation function is the *ergo_lyps*' way of helping you relax and eliminate stress. You should use this option particularly after a physical endurance training.

Connecting the relaxation sensor

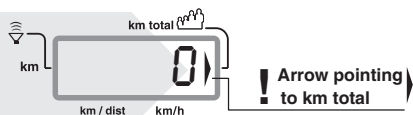
1. Take the velcro bands of the fingers' sensor out of the package and open them.
2. Place the open tape on one of your fingertip (e.g. index finger). Make sure there is good contact between the silver buttons and your skin. The wires from the tape should lead away from the back of your hand.
3. Put down the side of the velcro tape with the sensor button on your finger and wrap the other side around it and press it firmly in place.
4. Wrap the other tape around your middle finger in the same fashion.
5. Plug the connector of the relaxation sensor into the "Relax" input socket no. 7 on the dashboard.



Relaxing

Relax program / process description

reset
1. Press repeatedly, until **Window no. 4** (right side) displays the arrow pointing to **km total**



Window no. 4

relax
2.

The wide down pointing arrow  in **Window no. 5** switches from Watt to Relax. A value is displayed, **which starts at 199**.



Window no. 5

3. personal relaxing process

The displayed value drops gradually as you relax after training.

The **Relax-value** can drop all the way to almost **zero**. The user should therefore contribute to his/her relaxing and avoid any other stress. You can support this process by getting off the device and sit in a relaxed position, or lay down close to the *ergo_lyps* and calm down.









The complete relaxing process is divided into 25 levels. A short beep sound signals when each level is achieved. The successive beeps are each lower in tonality.

F

Training programs

Programs overview by model

The following table lists the programs installed in the *ergo_lyps* "cardio".

The programs are identified by the following symbols in the dashboard display windows.			
Overview / Program types	Arrow	Setting 	Setting 
1. Manual program / 0 (watt controlled)		 prog	0
2. Cardio program / C (pulse controlled)		 prog	C

It is possible to upgrade the system with new training programs. To do this, the dashboard must be removed (see page W5) and sent to **daum electronic gmbh, Fürth**.

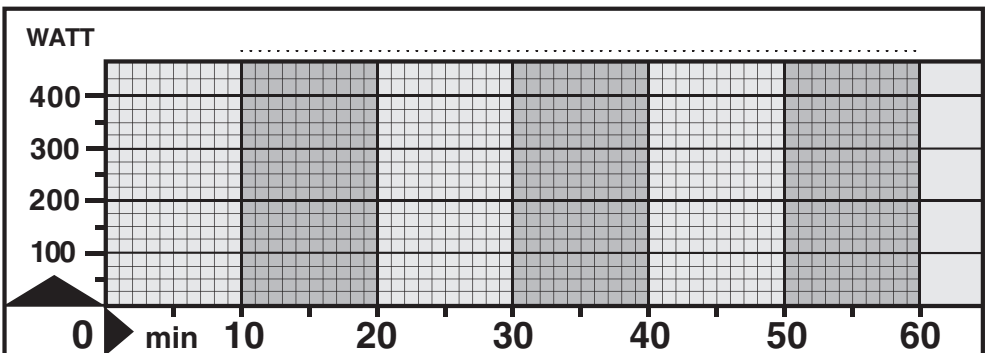
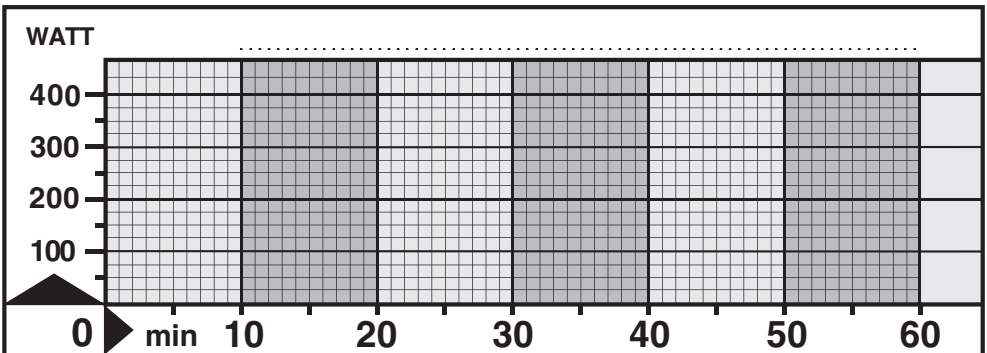
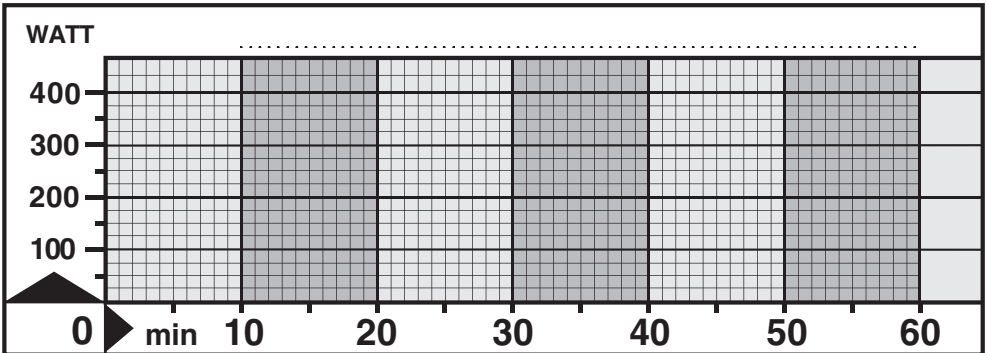
(More detailed information and the upgrade price can be obtained by fax at number 0911 / 9 75 36 28)

Programs overview	<i>ergo_lyps</i> models (comparative)		
<i>ergo_lyps</i> programs	cardio	fitness	8080 TRS
Manual program Manual / 0	●	●	●
Cardio program Cardio / C	●	●	●
Individual / P (IL 60) Watt			●
Individual / P (IL 240) Watt			●
Individual / P (IP 60) Pulse			●
Individual / P (IP 240) Pulse			●
Individual / P (lr 60) km/h			●
Individual / P (lr 240) km/h			●
Intensification prog. / L RPM		●	●
RPM program / A RPM		●	●
Fixed programs watt controlled		No. 1 - 19	No. 1 - 19
Fixed programs pulse controlled			No. 29 - 38
Cool-Down programs			No. 42 - 44
Individual / P (IL 30) Watt		●	

Blank diagrams

The **Watt program** allows the design of personal training sessions in one minute step and 5 Watt levels.

Copy the following blank diagrams and use the copies to represent the individual training sessions in the form of a performance curve. This can then be used for archiving the personal training programs.



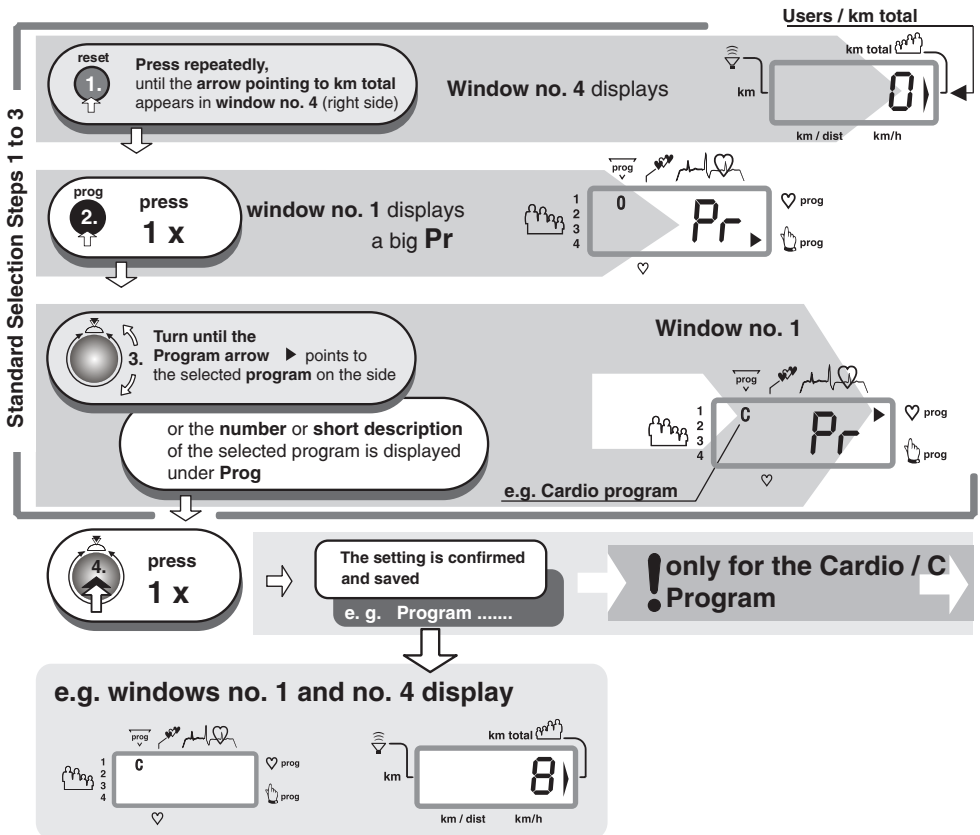
Training Programs selection

Many training programs are stored in the *ergo_lyps* that help automate training sessions.

When running a program, the load will be adjusted, increased or decreased, depending on the distance, pulse rate or even velocity, according to the watt values prescribed by that particular program.

The table on page 24 lists the available programs on each *ergo_lyps* model respectively.

Use only display windows no. 1 to 5 for setting and functions description.



The selected program will be only saved in connection with the user identification numbers 1 to 4 when the device is turned off.

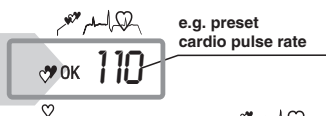
Cardio Program / C

This program is specially developed for efficient **heart and blood circulation** training.

The braking power (Watt) is automatically regulated, so that the pulse rate set by the user remains constant during the whole training session.

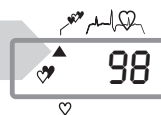
Select the program (see page 26) “Standard selection steps”

The OK display indicates that the pulse rate does not exceed the preselected pulse rate by more than five pulses.

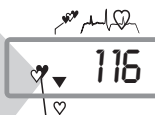


The up pointing arrow indicates that the pulse rate is lower than the preselected cardio rate.

window no. 1



The down pointing arrow indicates that the pulse rate is higher than the preselected pulse rate by more than five pulses. In this case the braking power (Watt) will be reduced by 10 Watt / 15 seconds continually until the preselected cardio pulse rate is again achieved.



The blinking heart indicates that the pulse sensor (ear clip) or the Cardio sensor chest band is installed and operating.

Running the Cardio-Program C

- **Select the user identification number** (see page 5)
- **Put on the pulse sensor** (see page 11)
- **Select the Cardio-Program C** (see page 26)
- **Set the required heart pulse rate**, then press control button No. 6
- **Start pedaling**

The selected heart pulse rate remains stored even after the *ergo_lyps* is switched off.

The braking power (Watt) will be automatically raised until the target heart pulse rate is reached. Well-trained users have the possibility to reduce the time needed to reach the target pulse rate by turning control button No. 6 to raise the braking power (Watt).

Window no. 5 first displays 25 Watt, which are then raised **by five Watts** every **15 seconds** until the **required heart pulse rate** is reached. Then the **braking power (Watt) is automatically regulated to the value that keeps the pulse rate at the selected value.**

Window no. 4 displays a “P” and a number between 80 and 199, the prescribed training pulse rate.

If you want to change this value

Turn until the **target heart pulse rate** required or recommended by a physician is displayed

km total

km / dist km/h

1 x press

Window no. 4 the value is O.K.

The setting is confirmed and stored

e. g. program no. C

We recommend the use of the possibility of entering alarm levels (see pages 15 and 16)! **With the exception of the entry of a pulse rate alarm level** (for heart pulse rate programs).

The heart pulse rate should never be set too high in order to avoid overloads (see page 7). When in doubt you should always consult a physician or therapist.

Installation hints

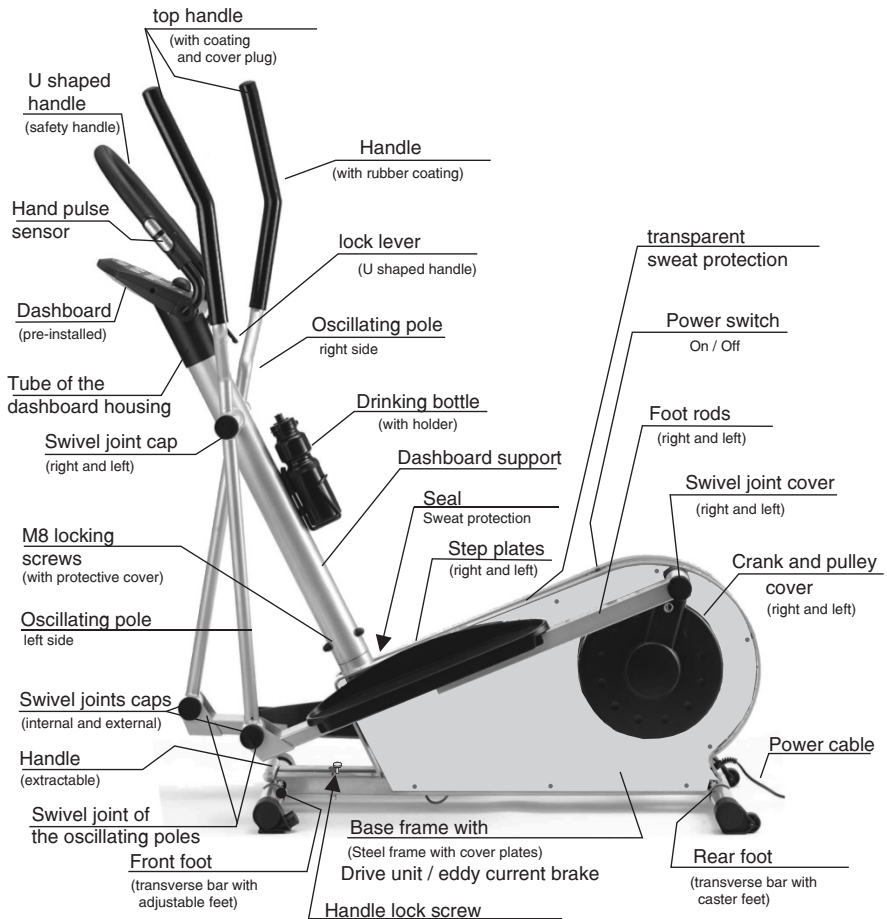
Miscellaneous

Install the **ergo_lyps** on a level floor. The manufacturer will not be held responsible for any damage done to the floor. We thus recommend installing the device on a protective base.

The **ergo_lyps** is not intended for use in damp rooms. Rust could develop, which would damage parts of the device and impair both the operating functions and the safety features.

The **ergo_lyps** uses a mains voltage of 220 to 240 Volt, 50/60 Hz and has a power consumption of 50 Watt. The power supply you wish to use must fulfill these requirements!

Any defect or deficiency of the device that could have an impact on the safety should absolutely be corrected immediately. Defective or broken parts should be replaced immediately (see spare parts list on pages W3/W4). In the case of a defect, the device should not be used until it is completely repaired.



Unpacking / Box Contents

Box Contents

Please make sure no part is missing!

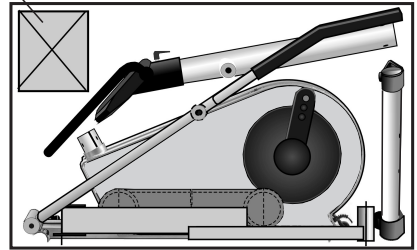
When unpacking the device, make sure you remove the separate parts carefully from the environmentally friendly cardboard box. Not only to avoid personal injuries, but also to avoid any damage or loss of parts.

The box contains:

The device:

- 1 **ergo_lyps** base frame with drive unit
(with installed crank levers and cover plates)
- 1 dashboard stand with dashboard & U shaped handle
- 2 feet set
- 2 Oscillating poles / right and left
- 2 Top handle with coating and caps
- 2 Foot rods / right and left
- 2 Step plates with corresponding screws
- 2 Bearing shafts for the oscillating poles (right and left)
- 2 Bearing shafts / crank lever (right and left)
- 1 Drinking bottle with holder and screws
- 8 Swivel joint caps

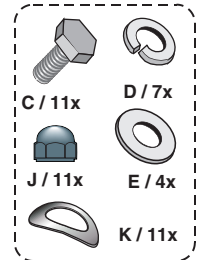
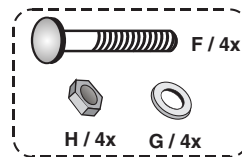
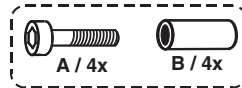
Small parts box



ergo_lyps box contents

Mounting hardware:

- | | |
|------------------------------------|-----|
| 4 Recessed head screws M 8x50 | (A) |
| 4 Spacer sleeves 12 \times 32 mm | (B) |
| 11 Hexagonal head screws M8 x 20 | (C) |
| 7 Spring washers DIN 127 - 8.1 | (D) |
| 4 Washers DIN 9021 8,4 | (E) |
| 4 Flat head screws M5 x 40 | (F) |
| 4 Washers DIN 125 5,3 | (G) |
| 4 Hexagonal nuts M5 | (H) |
| 3 Dome nut f. hex. head screws M8 | (J) |
| 4 Curved spring washers ET3159 | (K) |



Tools

- 1 Wrench 8 mm
- 1 Wrench 13/17 mm
- 1 Allen wrench SW 6



Accessories

- 1 Pulse sensor Ear clip
- 1 Relaxation sensor
- 1 Software-update-cable
- 1 User manual

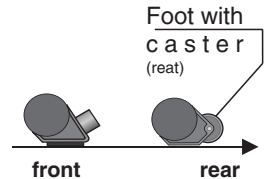
1. Assembling instructions / Installing the feet

Required hardware: 4 x recessed head screws A
4 x spacer sleeves B

Required tool: Included SW6 Allen wrench

1.1 Pull the main device from the package and put it down in an upright position.

- 1.2**
- Install the **Foot with casters** at the rear
(under the U shaped perforated plate)
 - Install the **Foot with adjusting screw** at the front
- The **caster and the adjusting screws must be pointing to the rear!**



Assembly

1.3 Slide each of the **spacer sleeves B** around one of the **4 recessed head screws A** respectively.

1.4 Lift the main device (1) from the rear and to install the rear foot. You could also put the device on a table, a trestle or any other raised surface. The frame's cross bar should protrude from the supporting surface to simplify the manipulation. (We recommend letting a second person help lift and hold the device.)

1.5 Put the foot with casters in the rear crossbar and align the holes to the threads in the crossbar.

1.6 Insert the first **recessed head screw with spacer sleeve** into one of the holes and screw it in lightly.

Do not tighten the screw yet, and do not use force to screw it in!

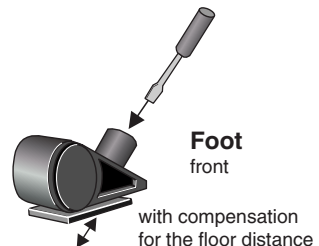
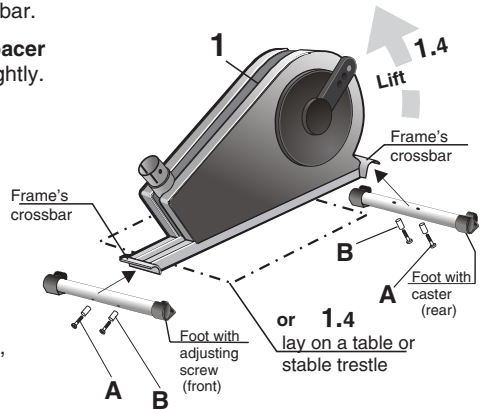
1.7 Repeat this operation with the second **recessed head screw with spacer sleeve** (as described under step 1.6).

1.8 **Tighten the recessed head screws.**

1.9 Lower the device with the attached rear foot, and lift it in the opposite direction (to the rear), or if you are working on a table, let the front crossbar protrude from the table surface.

1.10 Proceed with mounting the front foot in the same sequence described in steps 1.6 / 1.7 and 1.8

1.11 If the *ergo_lyps* is installed on an uneven floor, use a screwdriver to adjust the compensation setting in the front feet to ensure a stable stand.

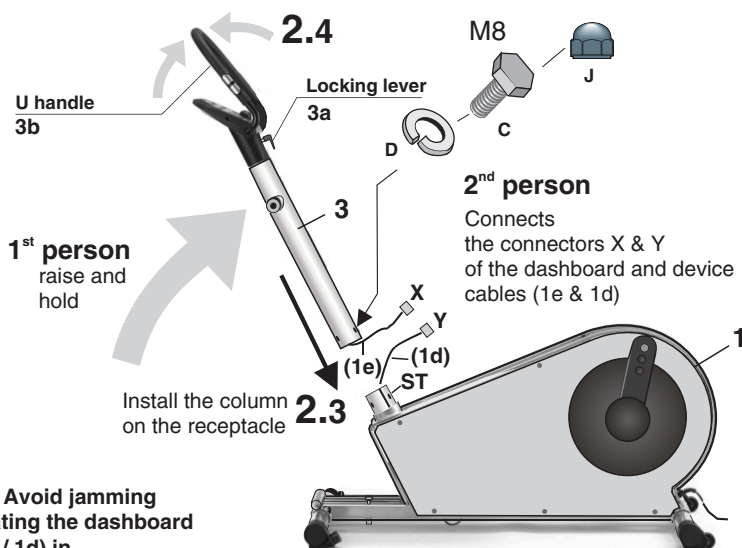


2. Assembling instructions / dashboard support complete

Required hardware: Dashboard support (3) with the cable 1e incl. the pre-installed dashboard, the U shaped handle and the locking lever

Required tool: Wrench 13

- 2.1** When unpacking the unit, lay the dashboard support (3) with the mounted dashboard on a level and clean surface.
- 2.2** The dashboard cable (1e) protruding (sticking out) from the lower end of the support column (3) must be connected to the device cable (in the receptacle of the support / ST) before the dashboard support (3) can be installed on the base frame (1). The connectors (X & Y) must be plugged together. This operation cannot be performed by a single person. Given the relatively important weight of the dashboard support column, a strong person should hold the support column (3) with the dashboard cable (1e) sticking out close to the receptacle on the frame (ST). A second person plugs the connectors (X & Y) together. Then they together install the dashboard support column (3) carefully on the receptacle (ST) of the frame. Take care at this moment not to jam or separate the cables.
- 2.3** After the support column (3) is loosely installed, it must be oriented to align the holes to the threaded holes in the receptacle (ST). Then screw in the three M8 screws (C) with the supplied spring washers (D) without tightening. We recommend tightening the three screws (C) of the support only after all the parts have been installed (particularly the oscillating poles and the foot rods) and adjusted. Then you can cover the heads of the screws with the supplied caps (J).
- 2.4** Then you can adjust the U shaped handle (3b) and put it in the required position. The U shaped handle is hold in position by tightening the locking lever (3a).



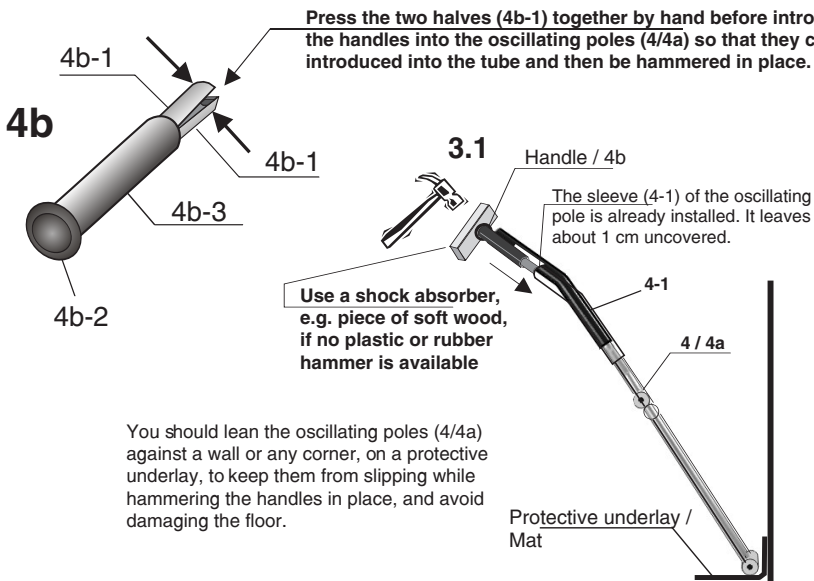
Warning! Avoid jamming or separating the dashboard cable (1e / 1d) in the receptacle (ST)

3. Assembling instructions / Assembling and installing the oscillating poles

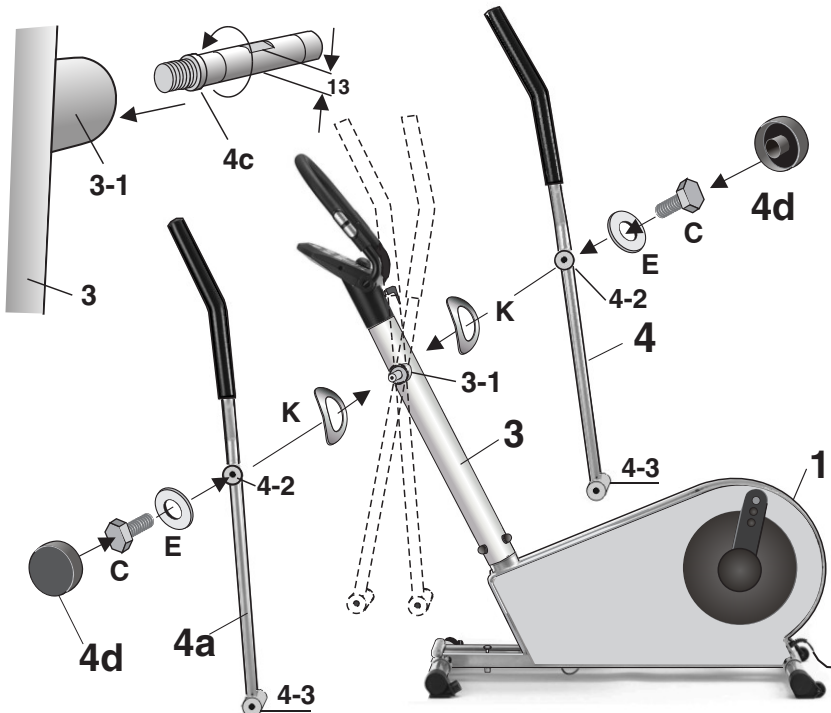
Required hardware: 1 oscillating pole (4 / 4a) right /left with the handle padding (4-1)
 2 Handle extensions (4b)
 2 M8 screws/C, 2 washers/E, 2 spring washers/K

Required tool: Wrench #13

- 3.1** The oscillating poles (4/4a) have special handle extensions (4b) to reduce the packaging. These extensions (4b) must be fitted to the poles (4/4a) before installing them. Since these extensions (4b) are held in place on the poles (4/4a) by friction only, they must be installed by hammering in position with a plastic or rubber hammer, or with a normal hammer with a shock absorber (wood or plastic pad) between the hammer and the handle. The handle padding (4-1) of the oscillating poles (4/4a) must neatly meet that of the handle extensions (4b) and not form a gap between them.
- 3.2** The extensions (4b) are made up of two similar halves (4b-1/4b-1) that are held together by a sheath. A sleeve (4b-3 / an elastic rubber tube) covers the two halves (4b-1). The end caps (4b-2) hold the halves together firmly after they are fitted into the oscillating poles and prevent the opening of the halves.
- 3.3** We recommend following the procedure illustrated below to insert the handles (4b) into the oscillating poles. The best thing would be you find an underlay (a mat or something similar) and lean (press) the lower end of the oscillating pole against a wall to prevent the slipping of the round bearing on the floor and avoid damaging surrounding furniture. Press the two halves together (4b-1) with your hand or by mean of pliers in order to be able to insert them into the tube of the oscillating pole before hammering them. When doing this, you should take care that the longitudinal ribs on the handles do not come into contact with the internal tube seams. You should only start the hammering process after the halves are inserted into the tube. Otherwise, you would only damage the tube of the handle (4b).



- 3.4** Use the wrench (13mm) to screw the two hinge pins (4c) in the threaded holes on the right and left sides of the dashboard support column (3) and tighten them in place. The 13mm wrench adapts to the 13mm recess on the pin shaft.
- 3.5** Each of the oscillating poles (4/4a) is fitted with two bearing brackets. Mount the bearing bracket in the middle (4-2) on the corresponding hinge pin (4c) of the dashboard column (3) as shown in the drawing below. The curved washer (K) supplied in the hardware bag must be fitted on the hinge pin (4c) before the pole. This washer then sits between the welded bearing support (3-1) of the dashboard column (3) and the bearing bracket (4-2) of the oscillating pole.
- 3.6** Attach the oscillating poles (4/4a) to the hinge pins (4c) with the hexagon head screw (C) and the washer (D). At this moment, the screw should be screwed loosely (not tight) using the supplied 13mm wrench (see 4.4 page M8 for the final tightening of the screw).
- 3.7** Put the protective caps (4d) on the M8 screw heads on the right and left sides (see 4.5 / page M8)



Installing the foot rods

4. Assembling instructions / Mounting the foot rods with step plate

Required hardware:

Foot rods (4f / 4e) with welded bearing carrier and bearing retaining plate
 Step plates (4g / left and 4g-1 / right) incl. mounting hardware from the hardware bag and positioning stops (4h)

Required tool:

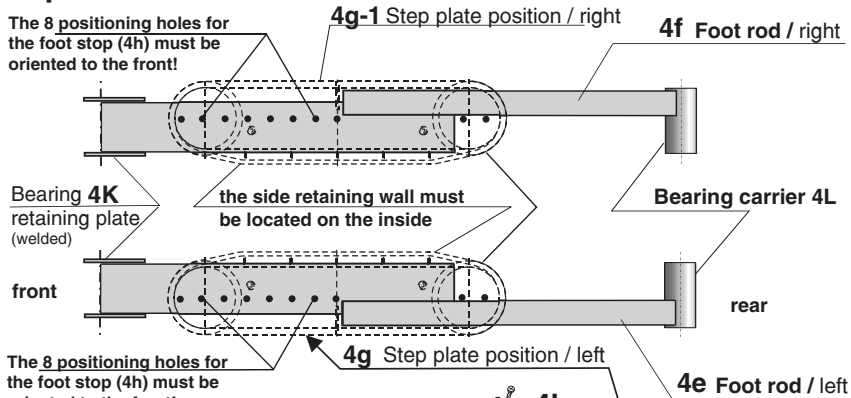
8mm and 13mm wrenches

4.1

The step plates (4g/4g-1) must be screwed in place first before the right and left foot rods (4f/4e) can be mounted. These step plates are **not** identical! They are differentiated by the location of the **8 positioning holes** for the foot stop (4H). The holes must be oriented to the front (see illustration below). After identifying the step plates, mount them on the corresponding left or right foot rod (4f/4e). Insert the flat head M5 screw (F) from above through the step plate (4g/4g-1) and the corresponding holes in the foot rods (4f/4e) and secure (screw) it from underneath with the M5 nuts (H) and the appropriate washers (G). You also have to pay attention that the side retaining wall on the step plates (4g/4g-1) is positioned on the proper side of the foot rods (4f/4e). The side retaining walls must be mounted such as to be close to the device frame, they must not be located outwards.

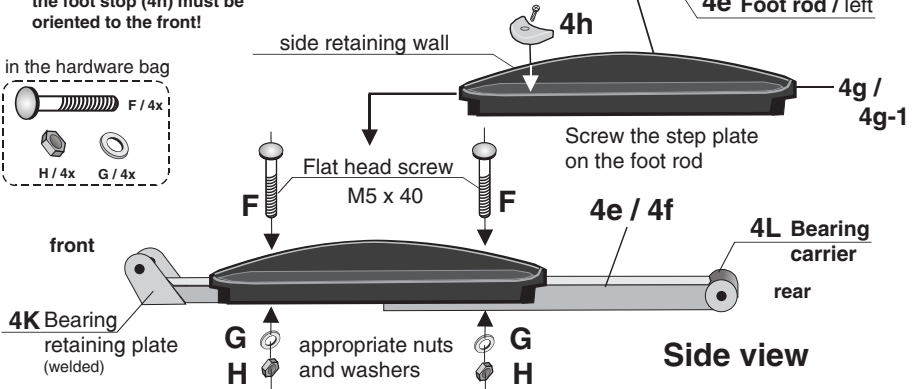
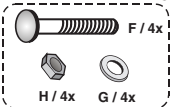
Top view

The 8 positioning holes for the foot stop (4h) must be oriented to the front!

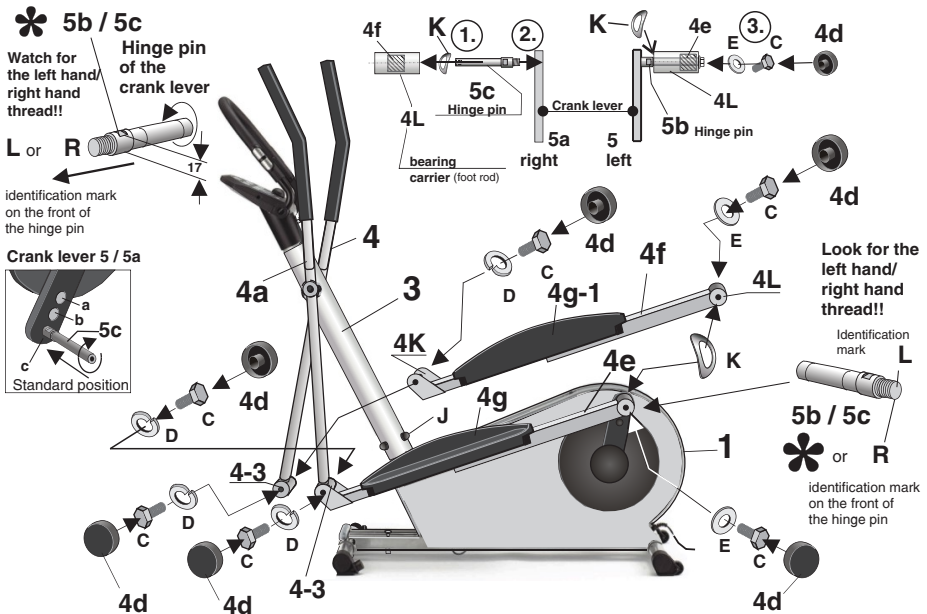


The 8 positioning holes for the foot stop (4h) must be oriented to the front!

in the hardware bag



- 4.2** Insert the hinge pins (5b & 5c, look for the **R** or **L** * **identification mark!**), with the thinner half (the internal thread) in front, in the inner side of the corresponding bearing carrier (4L) on the rear of the right and left foot rods (4f/4e). But before doing this, you must slip the curved spring washer (K) along the thin and longer side of the hinge pins (5b/5c). The spring washer (K) must sit between the bigger collar of the hinge pin and the inner side of the bearing carriers (4L) (1.).
- 4.3** Mount the foot rods (4f/4e) on the lower bearing carriers (brackets) (4-3) of the oscillating poles (4/4a) on the proper side. To do this, simply lift the front of the foot rod and position the front bearing retaining plates (4K) so that you can fit the bearing carriers (brackets) (4-3) of the oscillating poles inside them. Then screw in the corresponding hexagonal head screw (C) with the appropriate spring washers (D) on each side of the bearing brackets (4-3). First, screw in all the four screws (C) without tightening them (leave them loose). (The final tightening of these screws will be done after all the parts are mounted and a movement test is carried out! At this moment you will need a second 13mm wrench, otherwise the screw on the opposite side will turn and you won't be able to stop it)
- 4.4** Screw the hinge pins (5b/5c) that are loosely inserted in the bearing carriers (4L) of the foot rods (4f/4e) into one of the threaded holes (a, b, c) of the crank levers (5/5a) without tightening them (2. **Warning: watch for the left and right thread**). For the standard position, use the provided 17mm wrench to screw the hinge pins (5b/5c) to the outer threaded hole (c). See page M10 for the other optional positions of the crank swivel pin. Then screw the corresponding M8 hexagonal head screw (C) with the appropriate big washers (E) in the internal threading on the front side of the hinge pins (5b/5c), still without tightening them (3.).
- 4.5** At this point in the assembly process it is possible to test the movement of the ellipse trainer and to evaluate the adjustment (fitting) of the parts to one-another. If no visible defect and no unexpected (strange) friction or squeak noise is detected then you should firmly tighten all swivel joints and attachment screws, including those of the hinge pins (5b/5c with the 13mm or 17mm wrench), and double check their seating position.
- 4.6** Once you are sure that all the screws are firmly tightened, you can put on the corresponding swivel joint covers (4d) and the caps (J) of the dashboard column mounting screws.



Mounting the bottle holder

Advice:

If the treaded holes on the dashboard column do not correspond to the holes of the bottle holder, you can adjust the holder to the holes of the column by sliding its adjustable lower part.



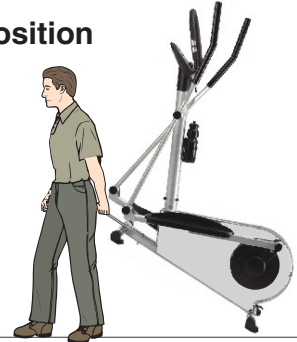
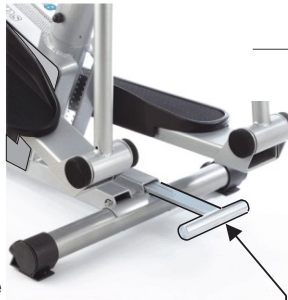
Bringing the lift and carrying handle into position

The ergometer can be moved on its caster roller



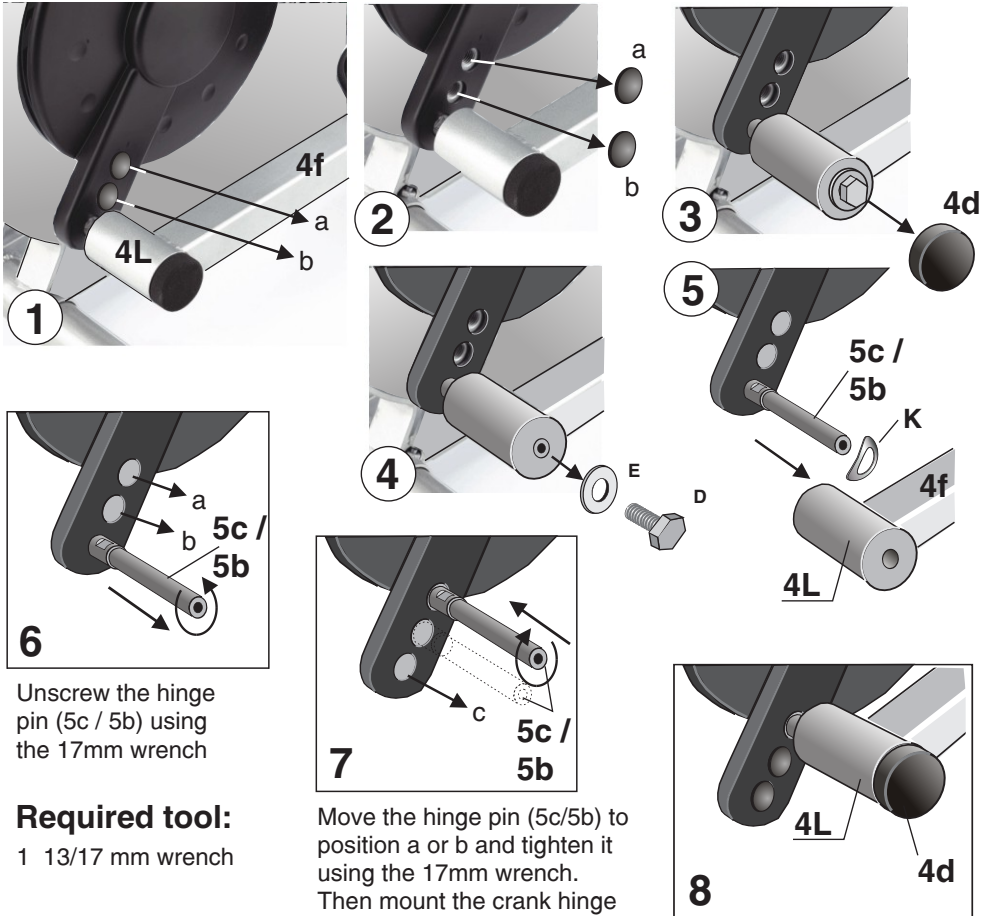
Handle inserted into frame

1. Loosen the locking screw
2. Pull the handle out until it stops.
3. Lift the ergometer by the handle at the front until the roller casters on the rear foot touch the ground.



4. Lift the ergometer until the person lifting it is standing straight and his back is not overloaded.
5. It is then relatively easy to move the ergometer on the roller casters on a flat floor.

Crank hinge position / Alternative positions of the crank hinge (5b)



Unscrew the hinge pin (5c / 5b) using the 17mm wrench

Required tool:

1 13/17 mm wrench

Move the hinge pin (5c/5b) to position a or b and tighten it using the 17mm wrench. Then mount the crank hinge bearing / foot rod (4L) in the reverse sequence.

Crank hinge bearing (4L) in the new position at threaded hole "a"

The crank hinge bearing (4L / right - left) can be set at two alternative positions (a & b) in order to adjust the foot rods to a flatter angle. The consequence of this setting is that the foot rods (4f/4e) and particularly the step plates (4g) move over a flatter ellipse. This alternative movement is particularly intended for older and handicapped persons whose motion capabilities at the knee level is limited.

Pictures 1 to 8 illustrate the steps sequence to unmount and modify the setting.

The covers of the threaded holes are screwed in place and can be unscrewed using a coin.

Cleaning outside surface

Wet a soft cloth with water and use it to clean the *ergo_lyps*. A light soap solution may also be used to wet the cloth.

Wipe the surface applying light pressure. While wiping the dashboard or the perforated plate cover, be careful not to apply too much pressure to prevent water from entering the dashboard or the device.



Do not use any strong or corrosive cleaning solution, or one containing solvent, like, e.g., alcohol, stain remover, petrol, metal polish, etc.

We recommend using a commercial antistatic, either in liquid or spray form, to neutralize the strong static charge generated while cleaning. Specially on the large plastic and transparent side panels of the high end *ergo_lyps* models.

Sweat is an extremely aggressive fluid, which attacks paint as well as metal and electronic parts. Therefore, care should be taken not to let sweat drop on the device, or otherwise it should be carefully removed after training. Damage caused by sweat is not covered by the warranty! The *ergo_lyps* is not completely sealed against sweat infiltrations.

Clean the sheath covering of the oscillating poles and the U-shaped handle carefully with a mild soap solution.

Drive V belt

The *ergo_lyps* is a belt driven ergometer. This means that the force applied to the step plates is transmitted by a V-belt to the drive unit. The advantage of this is that the *ergo_lyps* runs very quietly and smoothly.

V-belts eventually wear out and must be replaced when this is the case. If you feel a slip in the drive while training, the reason could be a worn out V-belt.

Noises

The *ergo_lyps* ergometers are equipped with quality ball bearings and silent belt drive. Still it is unavoidable that you hear a few remaining noises in the range of up to LpA 52 dB (decibel).

Squeaking and cracking noises are generally caused by the loosening of the screws attaching the swivel joints, the oscillating poles / foot rods, the dashboard support column or the feet.



Simple Maintenance and Service Activities

About the V-belt

The driving surfaces of the drive and the V-belt pulley are covered with a rubber layer by the manufacturer.

This favors the development of an optimal fitting of the V-belt into the grooves of the driving pulley during the first 500 - 1000 kilometers.

During this fitting-in process, the belt will lose the excess rubber, which will be visible in the form of black powder deposits. You can remove this deposit using a small brush or a vacuum cleaner (particularly for the transparent *ergo_lyps* models).

The V-belt is easily replaced. This maintenance operation can be performed by users with manual skills.

If you have difficulties obtaining a replacement V-ribbed belt for your *ergo_lyps*, you can order one directly from the manufacturer: **daum electronic GmbH**.

Replacing the V-belt

Required tools:

1 Phillips screwdriver

1 13/17 mm Wrench

Unplug the power cable from the main power supply before opening the device!

Follow the steps described below to replace the V-belt:



Take particular care to avoid damaging the internal parts of your *ergo_lyps* while you are working.

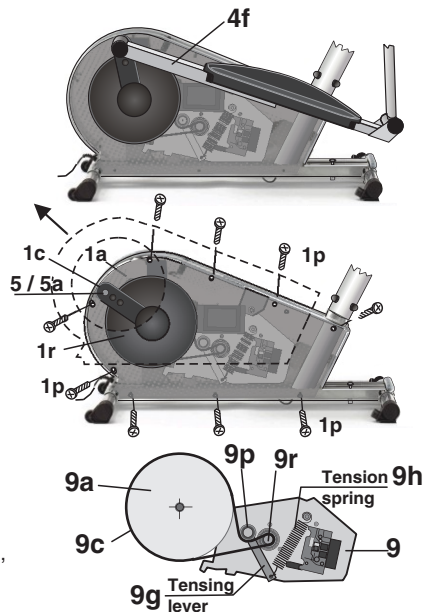
The manufacturer will not be liable for any damages arising as a result of negligence while changing the V-belt!

The drive unit (pulley and driving shaft) is located on the right side of the device (looking forward). You must therefore remove the side cover on the right side.

1. First the right foot rod (4f) and the crank hinge pin (4L) must be removed. This is done by following the mounting instructions on page M8 in the reverse sequence. (see also page M10 / Alternative crank hinge pin positions)
2. Then remove the 9 screws (1p) attaching the side cover. Lift the side cover plate (1m/1n) at the front and turn the crank lever (5/5a) to the rear, then you can carefully remove the side cover over the crank wheel (1r) to the rear.
3. The driving parts on the carrier plate /drive unit (9) are now freely accessible. Press on the belt tensioning roller (9p) against the tension lever (9g) and the tension spring (9h) to loosen the V-belt tension (9c), and then pull the belt from the pulley (9a) and drive shaft (9r).

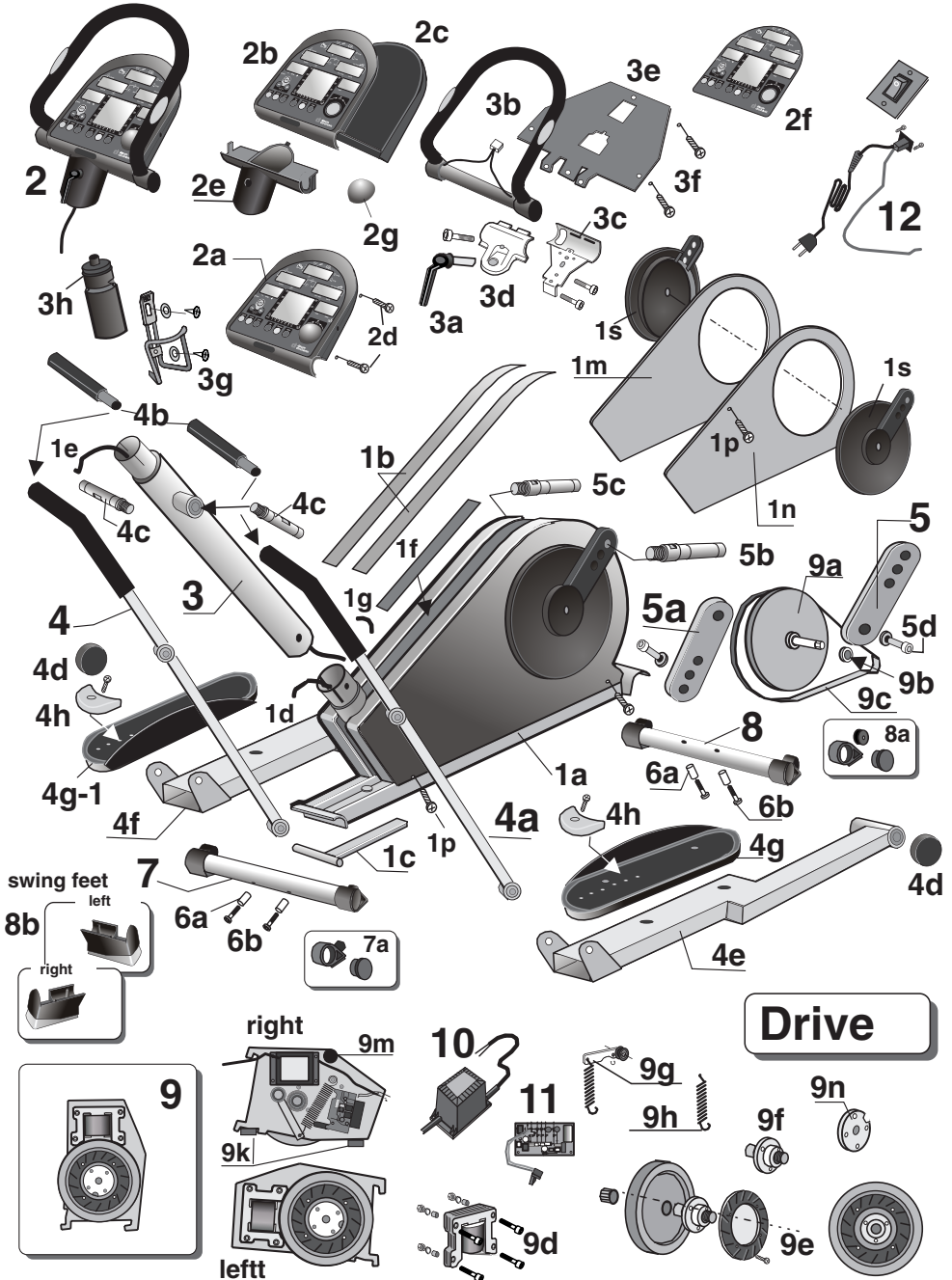
Follow the same steps (1 to 3) as described above in reverse sequence to install the new V-belt.

Before installing the new driving V-belt, you should clean the belt slipping surfaces of the pulley and the drive shaft, as well as the belt itself, with alcohol or cleaning petrol to remove the grease.





Spare parts list



Spare parts list

Listing

No.	Spare part	<i>ergo_lyps cardio</i>	
		Order No.	
1	<i>ergo_lyps</i> complete body	M80 50 182 A	
1a	Frame	00 38 950 A	
1b	Decoration self sticking strips	06 50 947	
1c	Carrying handle	00 37 155	
1d	Frame cable	12 10 801	
1e	Dashboard - frame connection cable	12 10 803	
1f	Sweat transparent protection cover	00 37 351	
1g	Sealing / Sweat protection	07 05 186	
1h	Mounting base for locking strip FTH 15	03 00 035	
1k	Locking strip 2,5 100	07 50 090	
1m	Right side cover	00 38 162	
1n	Left side cover	00 38 161	
1p	Fastening screws for the side cover	00 21 412	
1s	Cover of the crank and pulley	00 37 150	
2	Dashboard unit (Dashboard, U-shaped handle and cable)	M 60 50 182 A	
2a	Dashboard housing including electronic parts	M 70 50 182	
2b	Dashboard upper part	00 17 405	
2c	Dashboard lower part	00 17 404	
2d	Dashboard housing screws	00 21 510	
2e	Dashboard housing tube / Bottom cover	00 37 403	
2f	Dashboard foil	06 50 785	
2g	Control button No. 6	00 17 423	
3	Dashboard column	00 38 160	
3a	Locking lever / Handle positioning	00 17 316	
3b	U-shaped handle complete with hand pulse sensors and connection cable	00 17 394 A	
3c	Handle carrier complete (rear)	00 17 232 A	
3d	Handle clamp (front)	00 17 233 A	
3e	Dashboard protective plate / carrier plate	00 17 136	
3f	Screws for the protective plate / housing	00 24 406	
3g	Drinking bottle holder with fastening screws	01 00 050	
3h	Drinking bottle	01 00 045	
4	Oscillating pole / right side with ball bearing	00 38 105	
4a	Oscillating pole / left side with ball bearing	00 38 100	
4b	Handle set / oscillating poles extensions	M80 50 800 A	
4c	Pin bearing flange	00 37 120	
4d	Set of swivel joint caps	00 37 510	
4e	Foot rod / left	00 38 120	
4f	Foot rod / right	00 38 125	
4g	Step plate left (step plate right no. 00 37 131)	00 37 130 / 00 37 131	
4h	Position stopper	00 07 338	
5	Crank lever / left	00 38 150 A	
5a	Crank lever / right	00 38 155 A	
5b	Shaft / Crank lever / left	00 37 100	
5c	Shaft / Crank lever / right	00 37 105	
5d	Crank lever screw (washer / 00 05 571)	00 30 571	
6	Hardware bag	00 37 461	
6a	Spacer sleeve for fastening the foot	00 09 535	
6b	Screw for fastening the foot	00 21 850	
7	Complete front foot	M 80 90 197	
7a	Foot with adjustable height (front)	00 17 418	
8	Complete rear foot	M 80 90 198	
8a	Foot with roller caster (rear)	00 17 419	
8b	Set SF = "swing feet" upgrade kit	00 17 630	
9	Complete drive unit for the ergo_lyps	M 80 50 000	
9a	Pulley with shaft and ball bearing	M 80 50 200 A	
9b	Ball bearing	00 09 316 A	
9c	Driving belt (V-belt)	00 31 070	
9d	Brake magnet	M 80 50 050	
9e	Flywheel complete	M 80 50 060	
9f	Bearing carrier with pulley shaft and ball bearing	M 80 50 070	
9g	Belt tensing unit complete	M 80 50 080	
9h	Pulley tensing spring	00 09 233	
9k	Rubber pad D 25 x 10	00 07 320	
9m	Rubber pad M6*18 25x30	00 07335	
9n	Sliding joint	M 60 50 100	
10	Power transformer / 230 V,50 - 60 Hz	18 20 150	
11	Power part / Version 2002	E 80 90 025	
12	Power switch	M 80 50 150	
13	Pulse sensor (see page 11)	00 17 900	
14	Relaxation sensor (see page 23)	E 80 90 080	
15	Cardio Sensor chest band (see page 11 & T1)	E 90 91 015	

When ordering parts, please include the device serial number with the part number. You will find the device serial number on the specifications plate on the front left side bottom frame carrier bar.

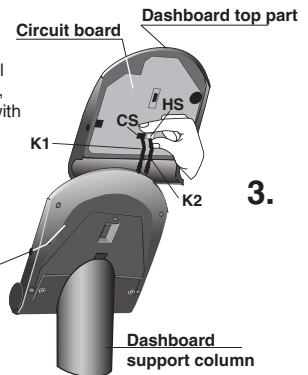
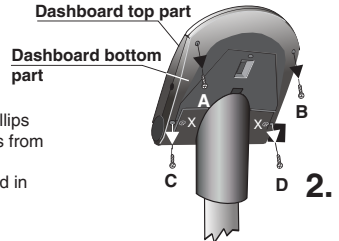


Exchanging the Dashboard / Replacing the Battery

It is possible to replace or disassemble the complete top part of the dashboard, for all *ergo_lyps* models, in the case that the display windows, the membrane switch, the control button, the lead frame located underneath it malfunctions or simply to replace the battery. The disassembly is a relatively easy operation and is done as described below.

Required tools: Phillips screwdriver / Blade 1 x 70 mm

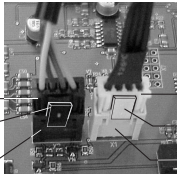
- 1. Unplug the power cord!**
(For your personal safety and to protect the sensitive electronic parts inside the dashboard)
- The top part of the dashboard is secured to the bottom part by mean of 4 Phillips screws (A, B, C, D). Use an appropriate screwdriver to unscrew these screws from underneath the dashboard. (See the figure to the right) Please note that the screws C & D are located toward the outward border and are deeply recessed in the dashboard bottom part. Do not unscrew the nearby located screws (X)!
- Then you can remove the top part of the dashboard very carefully. First open the dashboard housing by raising it from the higher side slightly and grasp (hold) with both hands underneath the top shell of the dashboard. Raise the higher part of the dashboard top shell fruther until the lower side separates from the dashboard support. Be careful to raise the top shell of the dashboard housing only until you feel a slight resistance from the cables (K1 and K2) that are connected from underneath, and until you can reach the connectors (CS black & HS white) on the circuit board with your thumb and index finger.
- You must unplug both connectors (CS and HS). **Never pull on the cables to unplug them!! This would tear them off!** Unlock the connector by pressing on the lock clip and pull it gently from the receptacle. (See figure 4). Sometimes the lock clip will be removed from the connector at the factory.



Hand pulse sensors and dashboard connectors
(location on the circuit board)

Dashboard connector / CS (black)
Lock clip
(with locking tip)

Female connector / CS-2
(attached to the circuit board)

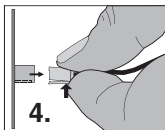


Hand pulse sensors connector / HS (white)
Lock clip
(with locking tip)

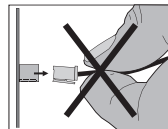
Female connector / HS-2
(attached to the circuit board)



Do not pull the cable under any circumstances! They would tear off!



Be careful when pulling the connector in order to avoid damaging the circuit board and the electronic parts!
The connection is be unlocked by pressing the elastic connector clip.



Follow the same steps in reverse sequence to reassemble the dashboard top part

5. Plug the dashboard connector / CS (black) and the hand pulse connector / HS (white) to the female connector of the corresponding color until they lock in position. Then pull carefully the two cables (K1 and K2) through the opening of the bottom part of the dashboard and the dashboard support and take care not to jam the cables when you reinstall the top part of the dashboard on the bottom part.
6. When reinstalling the top part of the dashboard top shell, first lock the lower end with the dashboard support and then lower it onto the dashboard bottom part.
7. Screw the removed housing screws (A, B, C, D) from underneath the dashboard and tighten them.
8. You can know plug the power cord, turn on the ergometer and test its operation.

Battery replacement (button cell)

The button cell battery is located on the underside of the circuit board of the dashboard, at the lower end to the right (close to the printed circuits). Replace this battery when you notice a loss of time and date on the system clock. Therefore you must disassemble the dashboard top part as described above as described above at steps 1 to 3, separate it from the bottom part of the dashboard, and reassemble them in reverse sequence.

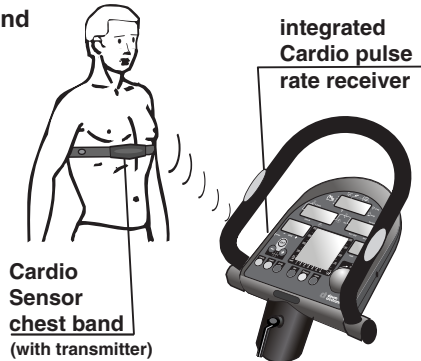
Special Accessories

Special Accessory Cardio Sensor chest band

The **Cardio sensor chest band** measures your pulse rate directly above the heart and transmits the data directly to the integrated wireless cardio pulse receiver. The location of the chest band and transmitter directly above the heart enables very accurate pulse rate measurement. The data is wirelessly transmitted to the computer of the *ergo_lyps*.

Pulse rate measurement using the **Cardio Sensor chest band** is particularly useful when exact values are required. This can be the case if your physician needs the data of your training sessions with the ergometer in the context of a treatment.

All *ergo_lyps* ergometers are equipped with a **built-in Cardio pulse rate receiver**, not visible from the outside. This allows receiving of the pulse rate transmitted by any standard chest band, of the coded and non coded type. You only need a **cardio sensor chest band** to achieve wireless heart pulse rate measurement.



Cardio Sensor chest band (with transmitter)

integrated Cardio pulse rate receiver

What is in the box of a Cardio Sensor chest band

- 1 Skin-friendly Cardio Sensor chest band with integrated pulse sensor and transmitter
- 1 Adjustable elastic band to attach it to your chest

The chest band is available from daum electronic gmbh; Order no. 90 91 015.

Putting on and using the Cardio Sensor chest band

1. Remove your upper body clothing or pull your shirt up to uncover the area of the heart. Your skin should be slightly moist, but not wet. If your skin is too wet, dry it with a towel, if it is too dry, moisten the inside (contact surface) of the chest band slightly.
2. The sensor chest band with the transmitter in the middle has surface recesses at both ends. The elastic band is fitted with round locking toggles at both ends. Insert one of the toggles through one of the square holes in the sensor band. Turn the toggle 90° and press it firmly into the recess.
3. Hold the Cardio sensor chest band over your chest.
4. Pull the elastic band around your back and fasten the other toggle into the opening on the other side of the sensor band.
5. There is a buckle on the elastic band, enabling you to adjust it. To obtain a comfortable fit, hold the buckle firmly and pull out a section of the band.
6. Adjust the pulse sensor band so that the thicker part of the band, which contains the sensor and transmitter, lies on the chest directly above your heart.



Wireless Cardio Sensor Chest Band
Order no. 90 91 015



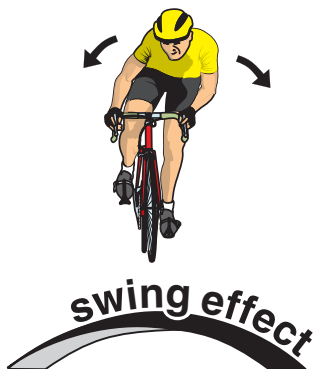
Warning: using two chest bands simultaneously in the same room, either of the coded or non-coded type, to achieve wireless heart rate measurement can lead to the display of a wrong pulse rate on the dashboard of the *ergo_lyps*.

The button type battery should be replaced when you note a loss of battery power. Simply remove the battery cover using a coin and replace the battery with an equivalent new one.

Battery housing



Accessory / "swing feet"



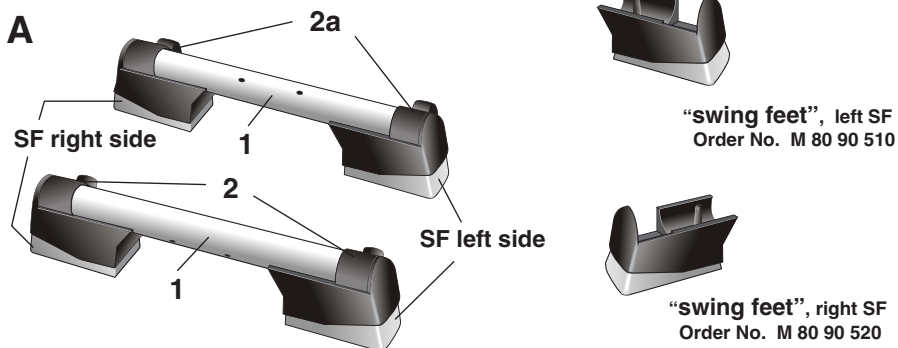
The "swing feet" were developed for the *ergo_bike* ergometers as can be understood from the present description. But since they are compatible with the feet of the *ergo_lyps*, interested owners of *ergo_lyps* ergometers are offered the possibility to order the "swing-feet" as an upgrade set from Fa. daum electronic GmbH. The swing effect is not so significant for *ergo_lyps* training as for bike ergometers. However, the shock absorbing action could be very significant for the floor in which the *ergo_lyps* is installed. Also the "swing feet" will have preventive functions when used with the *ergo_lyps*, like e. g. absorbing the noises and

their transmission through the floor, or the protection of sensitive floor surfaces, like carpets, tiles, or parquet. The elastic pads of the "swing feet" absorb a substantial part of the device's weight, and thus leave only a negligible pressure mark, and frictional wear, particularly on thick carpets.

The following description is partly intended for the *ergo_bike* ergometers. However, it does apply in many aspects to the possibilities of using the "swing feet" with the *ergo_lyps*.

The oscillating movements occurring naturally with biking cannot normally be reproduced when training on an ergometer. These movements include balancing movements or back and forth oscillations. The rigid construction, and the fixed feet used to support the device, prevent any dynamic movement. Also, heavy exercising would eventually lead to overloading the frame and mounting parts. Squeaking noises are a typical consequence of such overloads.

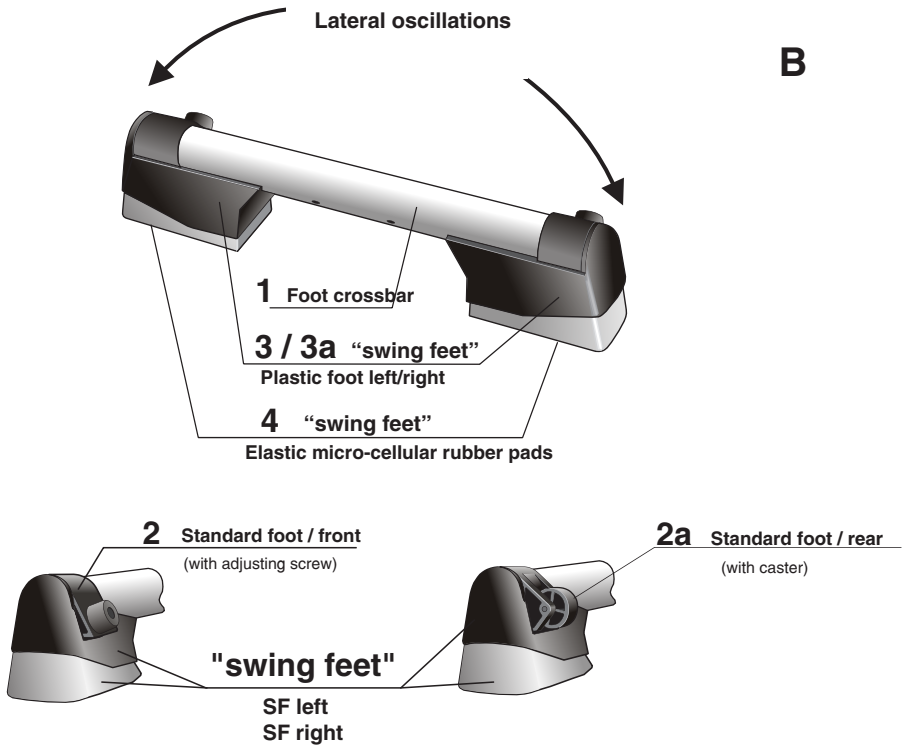
Fig. A: *ergo_bike* foot set with support feet (1), standard feet (2 adjustable/front and 2a with caster/rear) and installed "swing feet" (right SF/left SF).



“Swing effect” Benefits and Features

- **Comfortable suspension**
- **Prevention of muscular tension**
- **Soft swing movements in all directions**
- **Joints protection by the way of reduced pressure and chocks on intervertebral discs, vertebral joints and on the cartilages in the articulations of the feet and knee**
- **Exceptionally silent operation**
- **Optimal training, close to real biking conditions**
- **A totally new training experience, and a decisive step toward optimal training with minimal overloading risk**
- **Frame and drive parts protection**
- **Minimizing the frictional load on the ground (floor)**

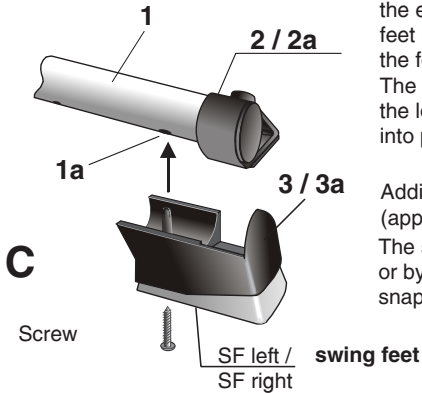
Function and installation of the "swing feet"



It is possible for the elasticity to drop or become insufficient if the swing feet (left SF/ right SF) are used for an extended period, or when an overweight person uses them. If the user is overweight (more than 100 kg), then the bike should be used with the standard feet (2/2a), i. e. without swing feet, or with the optional larger reinforced swing feet.

Therefore we recommend doing an evaluation of the elasticity of the swing feet upon reception and at regular intervals. The plastic feet (3/3a) must never touch the floor while training. If this is not the case, then the micro-cellular rubber pads (4) are worn out and the swing feet must be replaced. If the user is too overweight, then he should exercise only with the standard feet (2/2a), i. e. without the swing feet. The manufacturer is not liable for any damage done to the floor as a consequence of installing the ergometer. The user must carefully choose the location for installing the ergometer such that no damage is inflicted on the floor. If in doubt, we recommend installing an appropriate base (underlay).

Swing Effect Feet / Assembly

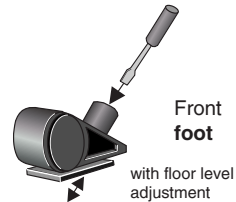


The **swing foot** (right SF and left SF/Fig. C) are attached to the ergometer's feet from underneath. The pins of the plastic foot (3/3a) must engage in the corresponding holes (1a) of the foot's crossbar (1) below the standard feet (2/2a). The adjusting screw of the front standard feet should be set to the lowest position, otherwise, the swing feet cannot snap into place.

Additionally, it is possible to attach the **swing foot** with screws (approx. 4.5x30mm) to improve the stability.

The **swing feet** can be removed by simply pulling them out or by giving them a sharp rap, provided they are only snapped in position.

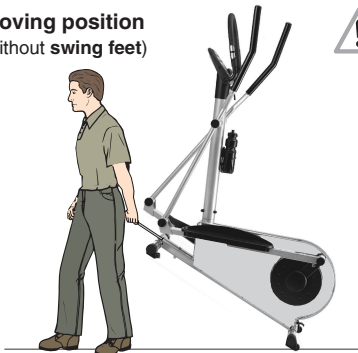
When the **ergo_lyps** is used without the **swing feet** on an uneven floor, use a screw driver to adjust the pin of the front standard feet (see fig C.1) to achieve an even stand.



C.1

The rear standard feet (2a) are equipped with roller casters to ease moving the ergometer. When the "**swing feet**" are installed, (left SF/right SF) the device must be raised to a relatively steep angle (approx. 75°/Fig. D) to bring the roller casters in contact with the floor. Without **swing feet** lifting the frame to an angle of approx. 15° (Fig. D.1) is enough.

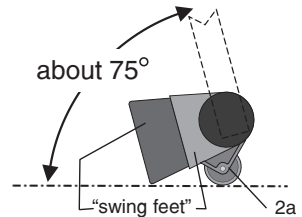
Moving position
(without swing feet)



Frame
(lifted to about 15°)

Moving position Frame (lifted to about 75°)
(with swing feet)

At this point we want to warn you against lifting the **ergo_lyps** too high. This device is very heavy and could fall over. Also, the freely moving oscillating poles could cause damage to surrounding furniture or injury to persons. **Therefore we strongly recommend that the swing feet be removed before the device is moved.**



Specifications**Specifications**

Braking system:	Computer-controlled, full electronic eddy current brake operating in the speed ranges shown in the diagram on page 9.
Load range:	25 to 400 Watt
Speed range:	0 to 199 RPM
Loading levels:	In 5-Watt increments, manually adjustable
Drive:	Single-stage, maintenance-free steel-ribbed belt drive in a spring supported drive unit.
Flywheel:	Machined
Programming system:	Single button programming
Bio Feedback Function:	Bio feedback based on the electrical resistance of the skin, measurement via finger electrodes, approx. 100 KOhm to 3 MOhm, self calibrating, display on LCD Panel in 255 levels and audible time controlled relaxing melody.
Fitness level:	Six age-related fitness levels grading, displayed on LCD panel and through 6 commendation melodies.
Displays:	5 liquid crystal panels for pulse, distance, speed, average speed, load in Watt, kJoule burned, pedal speed (RPM) and training time.
Pulse measurement:	On the ear, measuring range 50 to 199 pulses/min., On the hand (using the electrodes integrated in the U-shaped handle), telemetric using Cardio sensor chest band (optional accessory)
Limit values setting:	Pulse, distance, training time, kJoule, age and maximum load in watt.
Alarm signals:	Acoustic and optical
Crank swivel joint setting:	3 alternative positions available to adjust the elliptical movement.
Weight:	about 75 kg
Dimensions:	W / H / L 55 cm x 155 cm x 105 cm
Power supply:	220 V or 230 V alternating current, 50 Hz, 50 VA
Safety standards:	GS, CE
Safety class:	2

Safety Requirements

Conformity

To The Technical Plant And Equipment Act



daum electronic hereby declares that this product complies with the following provisions regarding electromagnetic compatibility and electrical safety:

- 89 / 336 / EWG of May 3, 1989 including subsequent changes (Recommendation 92 / 31 / EWG of April 28, 1992 and recommendation 93 / 68 / EWG of July 22, 1993)
- 73 / 23 / EWG of February 19, 1973 including subsequent changes (Recommendation 93 / 68 / EWG of August 30, 1993)
- EN 55081-1 (EMC, Generic Emission Standard; Part 1: Residential commercial and light industry)

Technical safety recommendation:

Compare the supply voltage on the nameplate on the housing with your local supply voltage prior to plugging the power cord to the power supply. Contact your dealer if the values are not the same.

The device is completely disconnected from the power supply by pulling out the power cord, therefore it should always be plugged into an easily accessible socket.



Area of application:

The *ergo_lyps cardio* is suitable for therapeutic utilization at home only.

It does not meet the requirements of medical diagnostic applications (clinical use).

The maximum allowed load capacity is **120 kg !**

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Aching muscles

Painful phenomenon of the muscles tissues, occurring when the aerobic zone is exceeded leading to an overproduction of lactic acid. In order to avoid it, the *ergo_lyps* compares measured data, input parameters and statistical values and displays the resulting aerobic zone status.

Aerobic zone

The training phase during which the load on the muscles is enough to keep them supplied with oxygen, but not enough to cause an overproduction of lactic acid (aching muscles). Aerobics also makes use of the aerobic zone.

Bio-Feedback

Acoustic and/or optical feedback on the metabolism and condition of the body.

Calorie (abbrev.: cal)

Energy measurement unit. Officially obsolete, but still in common use. It refers to thermal energy in particular. The conversion factor to the unit in use today (J): 1 cal = 4.1868 J, or the other way around 1 J = 0.2388 cal

Eddy current brake

Uses the fact that electric currents induced in a conductor by a fluctuating magnetic field produce joule-type energy which can be used for an electronically controlled brake.

Energy balance

The balance between energy intake and energy usage. There can only be a balance if intake and output are the same. For example, in Germany every person consumes on average 400 - 500 Kcal more than he or she can use.

Joule (abbrev.: J) 1 KJoule = 1000 Joules

Energy measurement unit, named after the british physicist James Prescott Joule. (see calorie)

LED

Light Emitting Diode: when current is passed through a LED it emits light, either visible or invisible. It is used for indicator lamps or remote controls.

RPM Revolutions per Minute.

Physiology The science of life processes

Self test

When switched on, the *ergo_bike* computer checks the electronic circuits it uses to make sure every thing functions properly.

Virtual Reality

An illusion of reality generated by technical means that is influenced by external impulses or gives impulses to its surrounding. The *ergo_lyps* uses these possibilities through an optional accessory set. This way, you can travel through beautiful landscapes while training, or experience competition circuits.

Watt (abbrev.: W)

WHO World Health Organization

Unit of measure of the work done per unit time:

1 W = 1 J / s = 1 Nm / s = 1 VA



What to do, if ...?

In the case of a failure what to do if...?

All *ergo_lyps* ergometers undergo a detailed test before they are shipped.

Should you, in spite of this, face a functional failure, the following recommendations should tell you what to do.

General procedure to identify the cause of a failure

The *ergo_lyps* ergometers consist essentially of two functional units

- the dashboard and the drive unit.

The drive unit is located inside the device, before the crank/pulley. It contains the power supply, the eddy current brake and the related electronic circuits.

The dashboard contains the electronic circuits used for system control, display and data processing.

The dashboard and the drive unit communicate via a cable, which is routed through the dashboard support column, via a connector in the area of the receptacle of the dashboard support column.

Should the assembled *ergo_lyps* fail to function, the defect would generally be found either on the dashboard, the drive unit or the cable connecting them.

The most frequent cause of complaint turns out to be jamming the connecting cable during the assembly process of the *ergo_lyps*, or not properly plugging the cable connector.

In the event of a failure, check carefully first if

- The cable connector found on the lower end of the dashboard support column is properly connected, and that the cable was not jammed or cut when the dashboard support column was mounted on the frame
To do this you need to disassemble the dashboard support column.
- The cable was not jammed or cut while mounting the dashboard on the support column, or if the cable connector to the circuit board inside the dashboard is loose.
To do this you need to disassemble the dashboard.

Fastening screws

All the fastening screws must be tightened from time to time. We recommend tightening them at least after the first 50 km and then once every 500 km.

Contacting your dealer or the service department of the *ergo_lyps*

If the cause of the failure could not be identified, you should contact your dealer or our repair hotline (telephone number 0190 / 770 383 - a fee of 1.48 Euro per min. applies).

We need the following information:

1. The **device number** (this number is on the plate on the lower frame bar at the front left side).
2. The **dashboard version number** (switch the device on and press the red reset key once, then immediately press the control button. The number is displayed in display window 2 while the control button is pressed).
3. The **proof of purchase and the device reference sheet.**
4. *ergo_lyps* ergometers have a built-in failure diagnostic system, which signals device functionality using a red and a yellow LED. These LEDs are located on the small circuit board located on the drive unit inside the device. You can see this board from above through the metal frame (to the right side looking in the front direction). It is located on the front part of the drive unit before the big tensing spring. With the device switched on, the yellow LED should blink when pedaling or turning the crank wheel slowly, and blink faster when pedaling fast.

With the device switched on, the red LED should light with high intensity when pedaling against a low load, and decrease in intensity as the load increases.

Please inform us of the status of these LEDs for all complaints concerning "the device is not braking" or "the device is not braking properly." This enables us to draw relatively concrete conclusions about the cause of the failure.

If you wish to obtain more information on your device, please visit our service and repair hints web site on Internet at www.daum-electronic.de. By entering the password "**ergo-service**" you gain access to an area reserved to *ergo_lyps* owners where you will find additional detailed service hints. You can also call our service and repair hotline (telephone number 0190 / 770 383 - a fee of 1.48 Euro per min. applies).



General Recommendations

What to do, if ...?

Software Failure / Loss of Dashboard Control

All computer controlled appliances have one undesirable characteristic in common that is that the normal software operation can sometime fail for generally unknown reasons. This situation is generally described by the expression **“the system has frozen”**. Should the dashboard fail and cannot be restored by mean of normal keys functions, then the solution would be to press the recessed RESET key (No. 18) underneath the dashboard with a pointed tool (e.g. a pencil or ball pen).



Please note that all the personal data, and all training data and results will be definitively lost when you press the RESET key!!

Noises

ergo_lyps ergometers are equipped with quality ball bearings and a silent belt drive. However, it cannot be avoided that remaining noises be heard, which are in the range of LpA 52 dB (decibel).

The squeaking or other disturbing noises generally originate from:

- Wear of the V-belt
- Wear of the slipping coupling
- Wear of the bearings

or also

- Loosening of the crank arm fastening screws! (See also page G4)
- The bearings of the oscillating poles.
- The fastening screws of the feet or dashboard support column!

These screws must be tightened every 500 km!!

Notes about the pulse alarm

If you enter the age of the user under **“Age”**, and a pulse limit value that should not be exceeded under **“pulse higher limit”** in the **“Data entry and alarm levels set up”** mode (see pages 14 to 17), then the alarm will always sound whenever

- the aerobic zone corresponding to the age of the user is exceeded (see page 7)
- and
- the value entered under **“pulse higher limit”** is reached (see pages 14 to 17)

If you want the alarm to sound only when the pulse limit value entered under “pulse higher limit” is reached, you should enter zero as the user age under “Age”!!

Drive / Braking unit (eddy current brake)

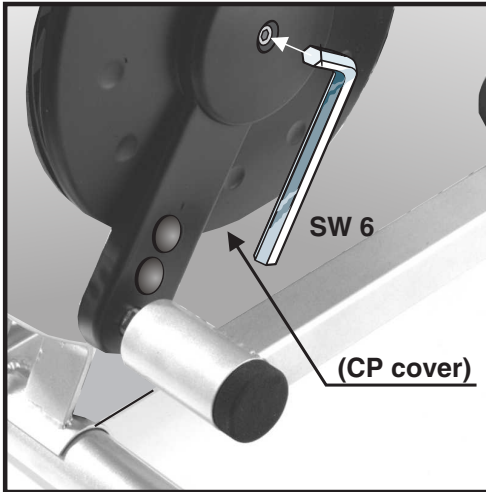
If a major failure is detected on the **drive unit**, it is possible to replace the complete unit. The braking unit, which consists of the flywheel, a transformer, a belt tensioning device and the mounting plate, is mounted with only three screws.

You can order an exchange unit from **daum electronic GmbH**. The defective unit can then be relatively easily replaced with the new one, without requiring any adjustment, by your dealer or a bike mechanic.

The flywheel of the *ergo_lyps* is equipped with two journal bearings. These bearings continue to run for a little while after you stop pedaling. Feeling a light drag on the foot rods is then normal. The journal bearings should be lubricated with Klüberplex BEM 34-132 grease every about 3000km (if the drag on the foot rods increases and becomes uncomfortable), depending on the load.

Tightening of the screws fastening the crank lever

The screws fastening the crank levers are subjected to a very high load and could loosen and cause rubbing and other noises (see also the notes about noises on page G3). An opening is provided in the centre of the crank cover plate to allow re-tightening of the M8 recessed head screws when needed. Use an Allen wrench to tighten or replace the fastening screws as needed.



The M8 screw fastening the crank lever to the shaft is located inside the opening in the centre of the cover plate of the crank and pulley (CP cover).



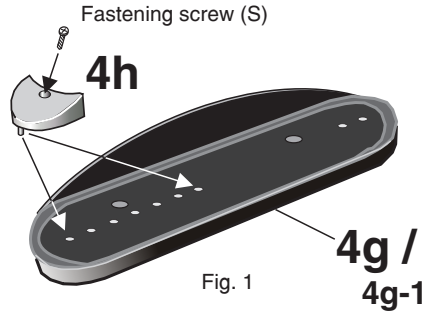
General Recommendations

Utilization Advice / Positioning Parts

The step plates (4g/4g-1) are designed to allow users of different size to use them.

The standing position is delimited by a stop (4h) to the front. This provides a better support and prevents unintentional slipping out of the training position.

(Refer also to the recommendation in the user guide on page 18)



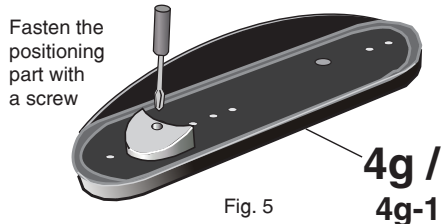
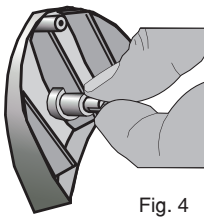
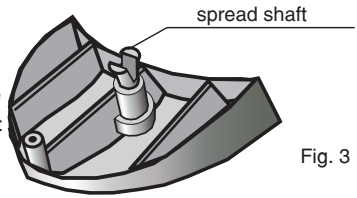
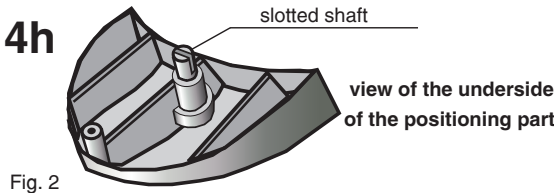
The step plates have a row of holes in their centre. These holes are designed to accommodate the supplied positioning parts (4h / shoe stop). The positioning parts must be installed in the proper position to allow the user to stand comfortably according to his body and shoe size, and to ensure that during the training his knee does not come into contact with the frame (**Danger of injury!**).



Each user must determine his ideal standing position on the step plates before training. The front section of the step plates should only be used by users who, because of their calf length, would not bump into the frame!

After plugging the positioning parts (4h) into the corresponding holes of the step plates (4g/4g-1), they must be fastened by mean of the fastening screws (S). The screws (S) push the slotted shaft into the hole of the step plate and open the shaft end (Fig 3). Remove the screw before moving the part to another stop position and pull the positioning part by hand.

Close the open shaft end by hand to enable it to plug easily into another positioning hole (Fig. 4).



Warranty conditions

Please consult your dealer/retailer in the case of a failure or trouble. The manufacturer **daum electronic GmbH** provides the warranty to your retailer according to the following conditions:

1. We guarantee that our products are free of manufacturing and/or material defects.
2. We will correct any problem pertaining to the above categories, with the exclusion of customer claims not related to those categories through upgrading services provided by us. We reserve the right, upon returning of the product in question, to exchange it with another product of the same type and value or, at our own discretion, to take it back against repayment of the amount paid by the customer (deducting overhead costs).
3. Our warranty covers a period of two years for parts and labor in the case of private utilization of the product, and a period of three months, for parts and labor, in the case of commercial utilization of the product, in both cases starting on the manufacturing date.

We will fulfill this warranty service provided the customer will pay all freight and transport costs, including those for spare parts, and the cost of any packaging material we should possibly need to use.

Returned devices will only be accepted if in the original packaging.

(see illustration on page M2)

Advance replacement of parts under warranty will be invoiced and delivered against payment (COD). The amount paid will be immediately refunded upon reception of the returned old part by us.

4. All other warranty claims, specially claims for the compensation of direct or indirect damages, or damage to a third party, or damages to other objects, as well as of damages due to failure, and of labour costs, are expressly excluded to the extend authorized by law. Should the repair fail within a reasonable delay, the customer has the right to demand a price reduction or the cancellation (modification) of the contract at his discretion.
5. We decline any responsibility for any wear occurring through normal utilization. The warranty will be considered null and void if our instructions for mounting and utilizing the device are not respected, or if the chemical products we recommend and deliver are not used, or if any modification was made to the device without our prior approval.
6. It is the customer's responsibility to check each one of our deliveries immediately upon reception. Any complaints about missing or defective parts must each be immediately transmitted in writing.
7. We do not guarantee that the delivered product will be suitable for the usage intended by our customer. Extended agreements need to be expressly confirmed in writing.
8. Any technical advice provided by us is formulated according to the best of our knowledge and in good faith, based on our own experience and testing. We do not assume any responsibility for this service, unless serious negligence can be proven on our part.

If you wish to obtain more information on your device, you can visit our service and repair hints web site on Internet at (www.daum-electronic.de). By entering the password "**ergo-service**" you will get access to an area reserved to **ergo_bike** owners, where you will find additional detailed service hints. You can also call us on our repair hotline (telephone number **0190 / 770 383 - a fee of 1.48 Euro per min. applies**).



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ergo .lyps

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