



CYCCCESS[®]

Manual

Version 2.0.6

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01 Software installation

SYSTEM REQUIREMENTS

Operating system: Windows 10

Installation of Net.Framework 4.71

Ideal screen resolution: Full HD

INSTALLATION

Download the latest CYCCESS software from:

<https://spsport.at/CYCCESS/update/CYCCESS-Setup-Current.exe>

The driver for the measuring plates will be automatically installed.

LICENCING

Once the software has been installed for the first time, it can be used as a test version for 30 days without limitation. It is necessary to activate the software after this period.

There are two options for activating the software:

1. Using an activation code (CYC_ID). This code must only be entered once. An Internet connection is required to complete the activation process. An Internet connection is no longer required after the software has been activated.
An individual CYC_ID is issued to each customer. An ID is valid for the number of activations that was agreed in the order.
2. Using a personalised licence file that is copied to the installation directory. This option is designed for larger institutions who manage the authorised use of the software themselves.

Entering the CYC_ID: Click on “Licenz” in the start window and enter the CYC_ID in the next window that appears.



02 Starting the software

ADDING PERSONS



Opens the new person window – all of the fields marked in red must be completed



Edit an existing person

Important: Please observe the instructions under “Your training – configuration” for the settings relating to “Target” and “Value unit specification”!

IMPORTING PERSONS



Opens the import window – click on an import file (*.cyc) to import it

MANAGING GROUPS



Opens the group editor – every person is assigned to a group and a subgroup.

SELECTING A PERSON



Open an individual person



Open all persons in the selected group

03 Your tests

LOADED JUMP / SINGLE JUMP

For the “Loaded Jump” test, elastodynamic and statodynamic jumps are carried out firstly without and then with an additional load. The weight of the additional load is selected in 20% gradations of the person’s bodyweight. For the “Single Jump” test, single leg elastodynamic jumps are carried out instead of loaded jumps.

TEST VIEW

The screenshot displays the 'DEINE TESTS' (My Tests) section with a table of test results. A callout box labeled 'Action table' points to the table. The table includes columns for 'Gültig', 'Aktionsform', 'Last [kg]', 'Streckweg [cm]', 'Sprunghöhe [cm]', 'Endleistung rel. [W/kg]', and 'Startkraft [N]'. Below the table is a 'Kraft-Zeitverlauf' (Force-time curve) graph showing 'Gesamtkraft [N]' over 'Gesamtzeit 1300ms', with a callout box labeled 'Force-time curve'. To the right, the 'PROFIL' (Profile) section shows a 'Gesamtleistung rel. [W/k]' bar chart over time, with a callout box labeled 'Profile analysis'. The 'INFO' section on the right contains 'statodynamisch 0kg', 'Streckweg +/-0cm', and 'Gesamtleistung rel.', with a callout box labeled 'Assistant'.

Action table, Force-time curve, Profile analysis, Assistant

NEW TEST

Select type of test



Select “Loaded Jump” or “Single Jump” to start a new test!

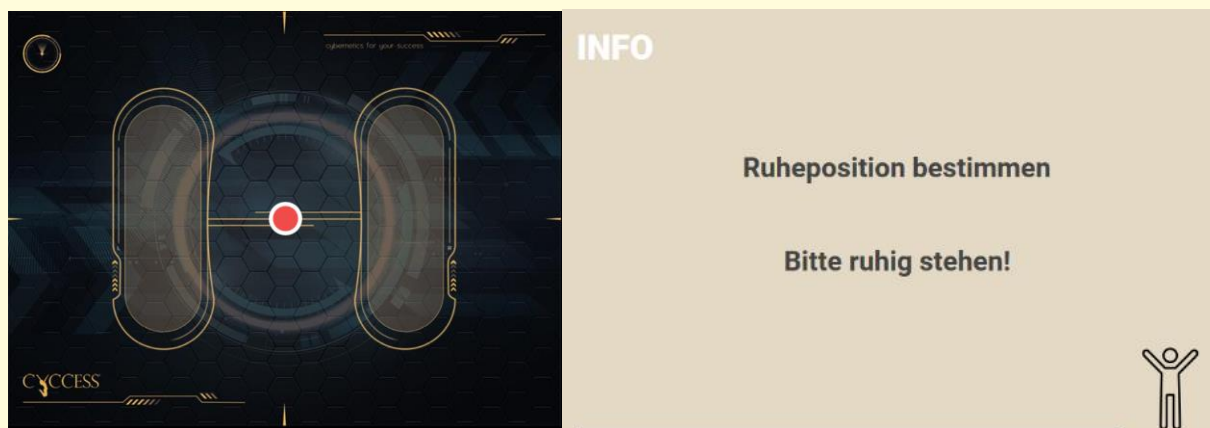
Initialising the measuring plate(s)



If the calibration of the measuring plates at the start of the test failed or to recalibrate manually!

Weight measurement

A weight measurement must be carried out at the start of every test.



The dot on the measuring plate graphic shows the position on the measuring plate and the weight fluctuations.

Simply stand still until the dot turns green!

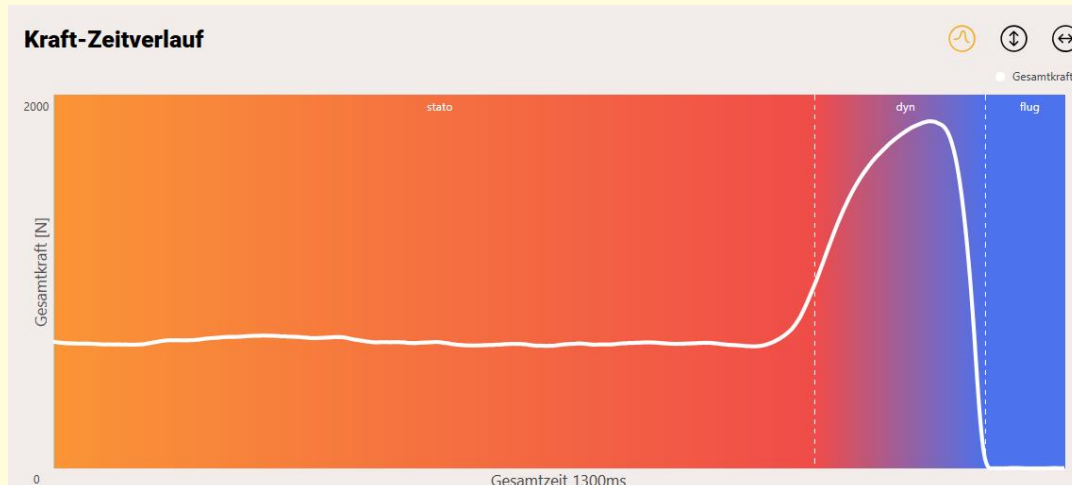
Test instructions



If necessary, please open the video containing the test instructions!

TYPES OF ACTION

Stato100%



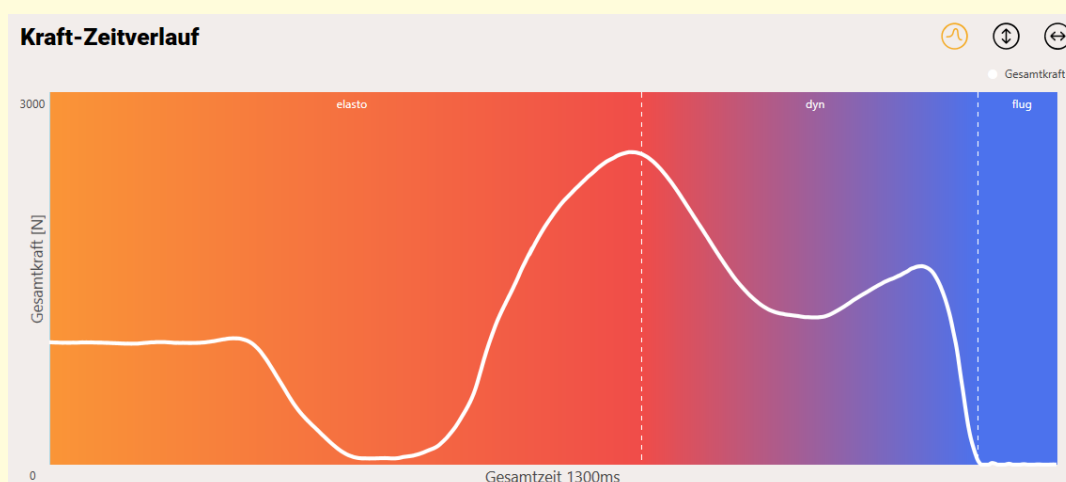
The statodynamic action starts with a static tensioning phase, followed by a concentric acceleration phase that is as explosive as possible.

The test person is asked to take the specified starting position (e.g. 90° knee angle), to maintain this position for at least 0.5 s and then to jump as explosively as possible. The test is only considered to be a statodynamic action if it is started from a stable position without any countermovement. The tolerance limit for the braking power is -1 W/kg .

INSTRUCTIONS:

“SQUAT SLOWLY – STAND STILL FOR 1S – JUMP AS EXPLOSIVELY AS POSSIBLE“

Elasto100%



The elastodynamic action is defined as an eccentric-concentric movement carried out in one continuous sequence.

The test is only considered to be elastodynamic if the countermovement results in a braking power of at least -6 W/kg. If the braking power is between -1 und -6 W/kg, the test is categorised as undefined due to insufficient stretching of the muscles.

INSTRUCTIONS:

“SQUAT QUICKLY AND IMMEDIATELY JUMP AS EXPLOSIVELY AS POSSIBLE”

Stato load

This test is carried out in the same way as for Stato100% but the load is also monitored by the assistant and a corresponding note is made in the event of a deviation!

Elasto load

This test is carried out in the same way as for Elasto100% but the load is also monitored by the assistant and a corresponding note is made in the event of a deviation!

Single jump

The single leg jump is carried out with the person's hands on their hips as an elastodynamic jump, whereby the acceleration distance should correspond to the distance for Elasto100%.

INSTRUCTIONS:

“FOR THE LOAD MEASUREMENT, STAND ON BOTH LEGS UNTIL READY FOR THE MEASUREMENT – THEN LIFT UP ONE LEG, QUICKLY SQUAT ON YOUR STANDING LEG AND IMMEDIATELY JUMP AS EXPLOSIVELY AS POSSIBLE”

Automatic recognition of the type of action

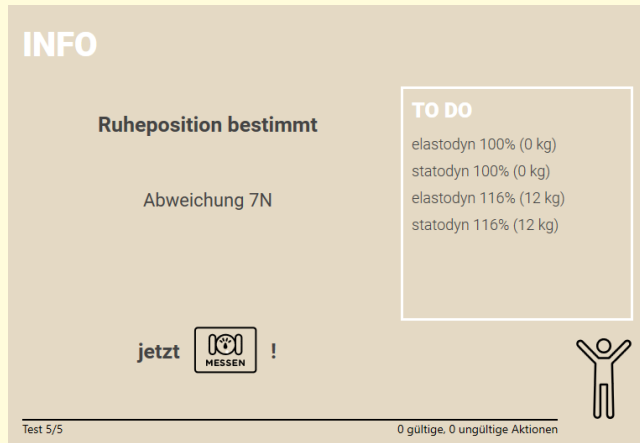
INFO

statodynamisch 0kg
!!nicht vergleichbar!!
Sprung wiederholen!
->tiefer gehen!
Streckweg -13cm


The type of action being performed will be automatically recognised. In addition, control parameters are integrated into the process for every test in order to check the comparability of the test series. These parameters ensure that the tests have a high level of reliability. The concentric acceleration distance (stretch path) should be as consistent as possible during the jump to ensure that the same starting position is adopted each time.

MEASUREMENTS

Starting the measurements



After successfully measuring the person’s weight, the system is ready to take measurements

–  starts the measurement process.

A load measurement (similar to the weight measurement) is carried out and then the message “Ready for jump” appears.

(Measurements without time pressure: Recording of the measurement values is triggered by the force of the jump, the test person can thus choose when to carry out the action themselves!)

To-do list

The to-do list shows the load level used for the last test or all of the load levels if it is the 1st test.



Opens the to-do list

Reference jump

“Confirm action as reference jump” during the 1st test – this action will then act as a reference value for subsequent tests!

ACTION TABLE

Gültig	Aktionsform	Last [kg]	Streckweg [cm]	Bremsleistung rel. [W/kg]	Gesamtleistung rel. [W/kg]	Startleistung rel. [W/kg]	Sprunghöhe [cm]	Endleistung rel. [W/kg]	Startkraft [N]
<input checked="" type="checkbox"/>	elastodyn	100% (0 kg)	26,4 (-3) ↘	-17,1	41,0 (100%) ↑	17,3 (94%) ↗	42,0 (99%)	58,3 (100%) ↗	2055 (97%) ↑
<input checked="" type="checkbox"/>	statodyn	100% (0 kg)	26,1	-0,3	30,6 (97%)	6,8 (72%) ↓	37,2 (94%) ↗	53,7 (100%)	1005 (81%) ↓
<input checked="" type="checkbox"/>	elastodyn	144% (30 kg)	26,6	-17,5	33,0 (100%) ↗	14,0 (100%) ↑	24,3 (94%)	48,9 (98%) ↘	2160 (100%...)
<input checked="" type="checkbox"/>	elastodyn	144% (30 kg)	25,7 (-2) ↘	-16,8	32,7 (99%) ↗	13,9 (99%) ↑	23,9 (92%) ↘	49,5 (99%)	2151 (100%...)
<input checked="" type="checkbox"/>	statodyn	144% (30 kg)	24,4 (-5) ↘	-1,0	28,0 (100%) ↑	7,6 (94%) ↘	22,6 (91%)	48,4 (100%) ↑	1461 (100%...)
<input type="checkbox"/>	elastodyn	100% (0 kg)	27,9 (-2) ↘	-18,5	39,5 (96%) ↗	16,6 (91%)	42,3 (100%)	57,6 (99%) ↗	1945 (91%) ↗
<input type="checkbox"/>	statodyn	100% (0 kg)	24,9	-1,0	33,6 (100%)	6,0 (73%)	36,6 (94%)	54,0 (100%)	1371 (74%)

Every line in the table corresponds to one jump. For loaded jumps, the best jump for each load level and type of action (evaluated based on the total power) is automatically marked as valid. For single jumps, all correctly completed jumps are marked as valid.

The values in percent are based on the best value for the individual test person.

The force-time curve for the highlighted line is displayed in the graphic.

The parameter in the highlighted column is used for the display in the development profile.

PROFILE - GRAPHICS

Development profile



The individual development profile shows the development of the parameter selected in the table for all of the types of action completed. All values are displayed in percent based on the best value (for each type of action) for the individual person. If the column "Load" is selected, the development of bodyweight is displayed in absolute terms.

Peak power curve



The peak power curve shows the total power relative to the bodyweight (Peak power rel) across the load levels. The drop in the curve (shown like a road gradient) and the difference between the elastodynamic and statodynamic actions form the basis for calculating the fitness factors.

To analyse dynamic force or energy deficits (in the sense of development potential), the peak power curve is used to compare muscle power over several load levels and types of action. If you look at the muscle power curve in general, without focussing on a particular competition-specific load range, it is possible to interpret the curve ambiguously in each case:

- A flat curve (5-10% drop in the curve) could be interpreted as both a speed strength deficit and also a (at low loads, unused) peak force potential. It is possible to generally conclude that there is inefficient muscle activation. With increasing load, the same or only slightly lower muscle performance is achieved. However, higher forces need to be exerted as the load increases to compensate for the loss in velocity. This means that there is additional force potential that can be activated.
- A sharply falling curve (drop in the curve >16%) could at the same time be interpreted as good speed strength and a peak force deficit – the muscle activation is generally efficient. With increasing load, hardly any additional muscle potential can be activated, although almost the entire potential can already be used at a low load.

Comparing the muscle performance during different types of action provides clues to the causes of a recognised deficit. For this purpose, the elasto/stato-dynamic difference is calculated by deducting the statodynamic value from the elastodynamic value. The difference is given in percent. Differences smaller than 10% can be explained by a well pronounced ability to arbitrarily activate the muscles or could indicate poor sensory activation in the negative elastodynamic phase, during which only a low level of stretching energy is built up. Accordingly, it can be assumed that larger elasto/statodynamic differences are caused by an arbitrary activation deficit or conversely by a very well pronounced sensory activation or a high recruitment potential, which allows a high level of stretching energy to be built up.

The bilateral deficit calculated for the single jump test is the ratio of the two leg elastodynamic jump divided by the sum of the single leg jumps for the left and right legs over the relative peak power (P_{max_rel}). The effect of a prestretch is calculated from the height of the jump $(elasto - stato) / stato * 100$.

ENDING THE TEST

Test comments



Opens a window to enter comments on the active test.

Save



Ends the active test, no further actions can now be added.
Every test is automatically closed 2 hours after the last action.

REPORT



Opens the report window.
An individual logo can be set for both the header and footer.

04 Your fitness

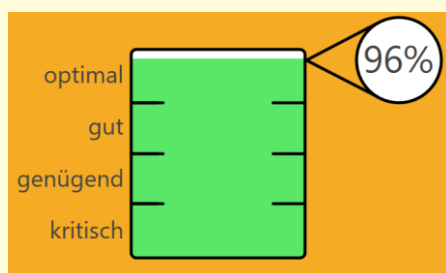
Personal training specifications are calculated exclusively based on the individual data for the test person from the measurements and their course of development. The system is designed in such a way that it does not need to be based on general standard values. This means that it is possible to calculate precise individual training specifications for each person irrespective of their starting level. This type of analysis that does not need to use standard values is necessary and indispensable for developing high performance in top-class sport just as it is for high quality fitness training.

Our method for determining training capacity is based on complex and complete data. We measure maximum power (power is the physical variable that best describes the dynamics of movement in sport) in a natural, complex movement – the jump – in different resistance ranges and using different types of muscle action (see “Your tests”). This allows us to determine a very broad load range for the neuromuscular system. We isolate individual parameters from this measurement data using an automated analysis process, which are summarised in 3 basic neuromuscular characteristics: force potential, stiffness and muscle activation. Depending on how they change during the series of tests, these variables are used to calculate one resulting factor – **training capacity**.

TRAINING CAPACITY

Training capacity describes the current development resources in a person’s biological system that can adaptively respond to training stimulus. If there are insufficient training resources, sporting activity will not deliver the results desired from the training (e.g. improving endurance or strength).

It could even have a negative effect in the form of overloading, which aside from reduced performance could also pose health risks. The training capacity (**how much should or can a person train?**) is thus an indispensable prerequisite for all types of sport training and also for therapeutic training.



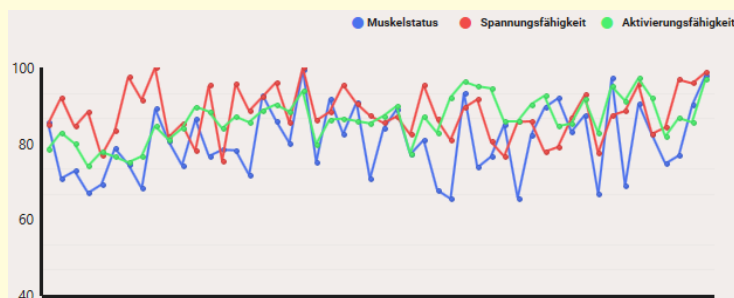
To calculate the training capacity, the 3 basic neuromuscular characteristics of force potential, stiffness and muscle activation are used to calculate the total factor and observed over the course of a series of tests. The significance of the value for the training capacity is relative to the maximum level for the individual test person. A fall in the training capacity means that the person has less biological development resources available and the training load should be

reduced, while in turn an increase in the training capacity also means that the training load can be increased.

Important! The value for the training capacity indicates whether your training should be increased or reduced.

If it is in the optimal range, you can take on a full training load. In the good and sufficient ranges, it is still possible to engage in development training but with limitations. In the critical range, any further load will increase the risk of injury! Targeted regeneration measures are required.

Details



The detailed graphic shows the development of the 3 basic neuromuscular parameters in percent over the observation period.

Info

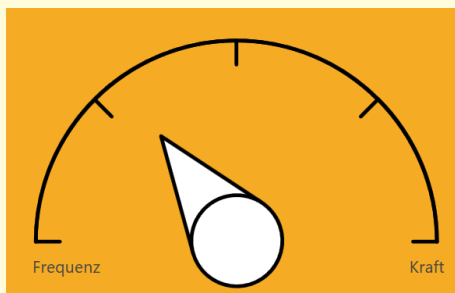
Muskelstatus:	(=) gleich
Spannungsfähigkeit:	(+) erhöht
Aktivierungsfähigkeit:	(=) gleich

Information on the 3 basic parameters is provided in the info area.

- Force potential describes the available physiological potential (number of recruitable motor units) and the energetic state of the muscles (catabolic or anabolic metabolism). A fall in the force potential indicates muscle tiredness (catabolic state) or a reduction in the physiological recruitable motor units. An improvement in the force potential indicates an increase in strength or an anabolic state (more growth processes).
- Muscle activation describes the ability to activate the muscles via the nervous system – the recruitment and firing of motor units. Muscle activation is an important stress indicator. Stress reduces muscle activation and prolongs the regeneration period. Based on the muscle activation, it is possible e.g. to differentiate whether the training load was too high or the regeneration period or regeneration quality was insufficient.
- Stiffness describes the ability of the muscle/tendon system to absorb elastic energy. This is highly dependent on the overall state of recovery. The stiffness will drop if the amount of training is excessive or if using an incorrect load rhythm – this is a protective mechanism to protect the muscles against injury.

LOAD RANGE

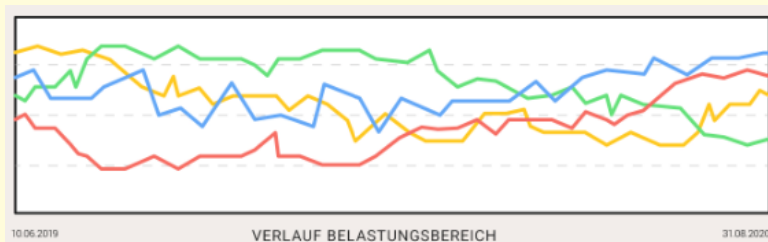
Training resources are not available as a global variable but can have very different characteristics depending on the current state of the biological system. For example, it is possible to have a high training capacity in the speed strength range and a low training capacity in the intensive endurance range. As well as the question of how much training, there is also the second question of **“What should be trained?”**. For this purpose, the optimal load range is calculated based on the measured performance profiles and illustrated on a load scale.



The calculated angle indicates the focus of the training and the main load range. The training compass displays training areas according to resistance and intensity criteria and can be used for general training categories such as endurance, strength and strength endurance or for specific categories such as e.g. swimming, etc. For strength training, for example, the training compass starts on the left with the lowest resistance range for speed strength training and then moves further right over the

explosive strength and hypertrophy range through to the peak force range. For endurance training, the compass starts on the left in the basic endurance range and then moves to the right over the transitional and threshold endurance ranges through to the intensive range on the far right (180°).

Details



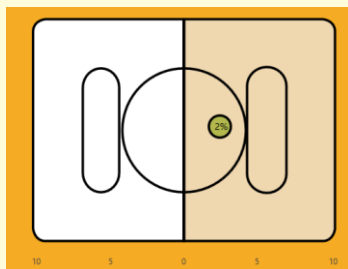
The detailed graphic displays the calculated training distribution in percent for 4 load ranges over the observation period relative to one another.

Info

The recommendation for subsequent training is included in the training calculation (see Training – Autoplan), which is based on the training distribution shown in the detail area.

BALANCE

At the same time as the dynamic measurement, every jump is also analysed based on qualitative movement criteria. The most important quality criterion from a preventative perspective is even loading of the body axes. One-sided loads could occur simply due to coordination issues or slight inflammation because of overloading or could be the result of malposition or injury. If these types of incorrect load are not detected, susceptibility to injury will increase and could result in subsequent damage.



Normal range for lateral deviation within a 5% limit.

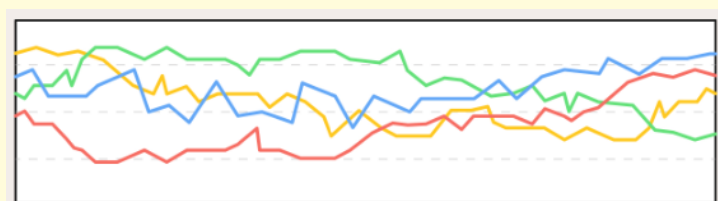
Lateral differences of between 5% and 10% should be investigated.

Lateral imbalances larger than 10% need medical clarification of the issue.

Important! The measurement of lateral deviations in load does not only have a preventative function but can in fact also be used to monitor the rehabilitation process after injury.

The maximum load and the possible velocity and amplitude of movement can be precisely determined and continuously adapted following, for example, a knee injury.

Details



The detailed graphic shows the left-right distribution of the impulse difference and the peak force in percent over the course of the observation period relative to one another.

Info

Typical patterns of deviation are automatically recognised by the system and give clues to possible causes.

05 Your training – Autoplan

AUTOPLAN



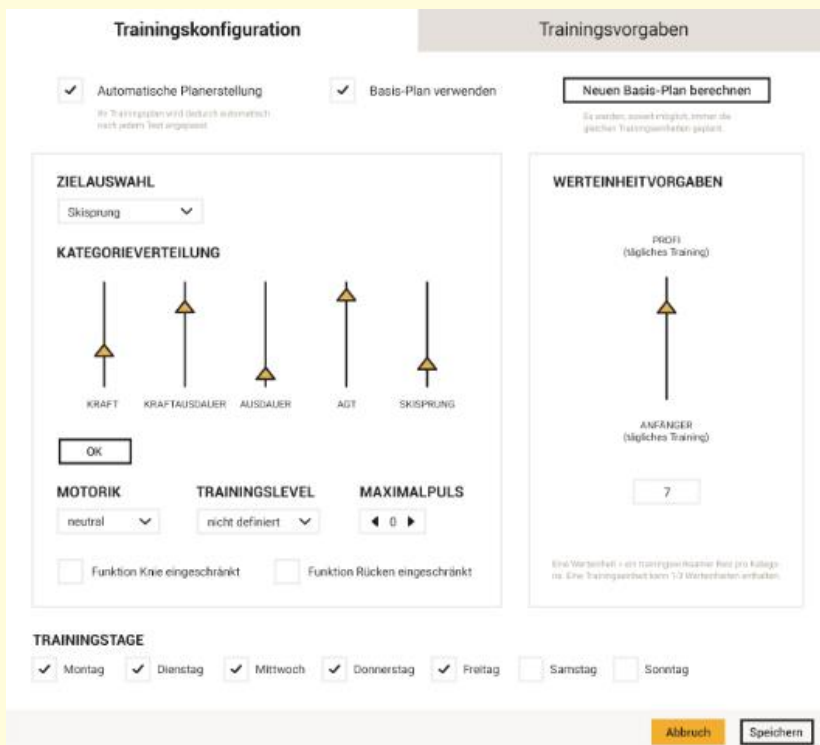
The simplest method for creating a training plan is using the Autoplan function. The prerequisite for Autoplan is a valid loaded or single jump test that is not more than 4 weeks old.

Autoplan will calculate a plan for the selected week in week view and a plan for 4 weeks starting from the test date in month view. The Autoplan calculation is dependent on the measured test result and the selected configuration.

CONFIGURATION



The training configuration can be opened via “Settings”.



Selecting a target will set the category distribution and select a training catalogue for all calculations. The total load is set to start with by the value unit specification. One value unit stands for one effective training unit, meaning that the slider should be set to 5 if the person usually trains for 5 training units per week. After carrying out the test multiple times, the load will be automatically adjusted by the load algorithm.

Important! Please set and check the target and value unit specification either in the start window under personal details or in the settings window!

CALENDAR

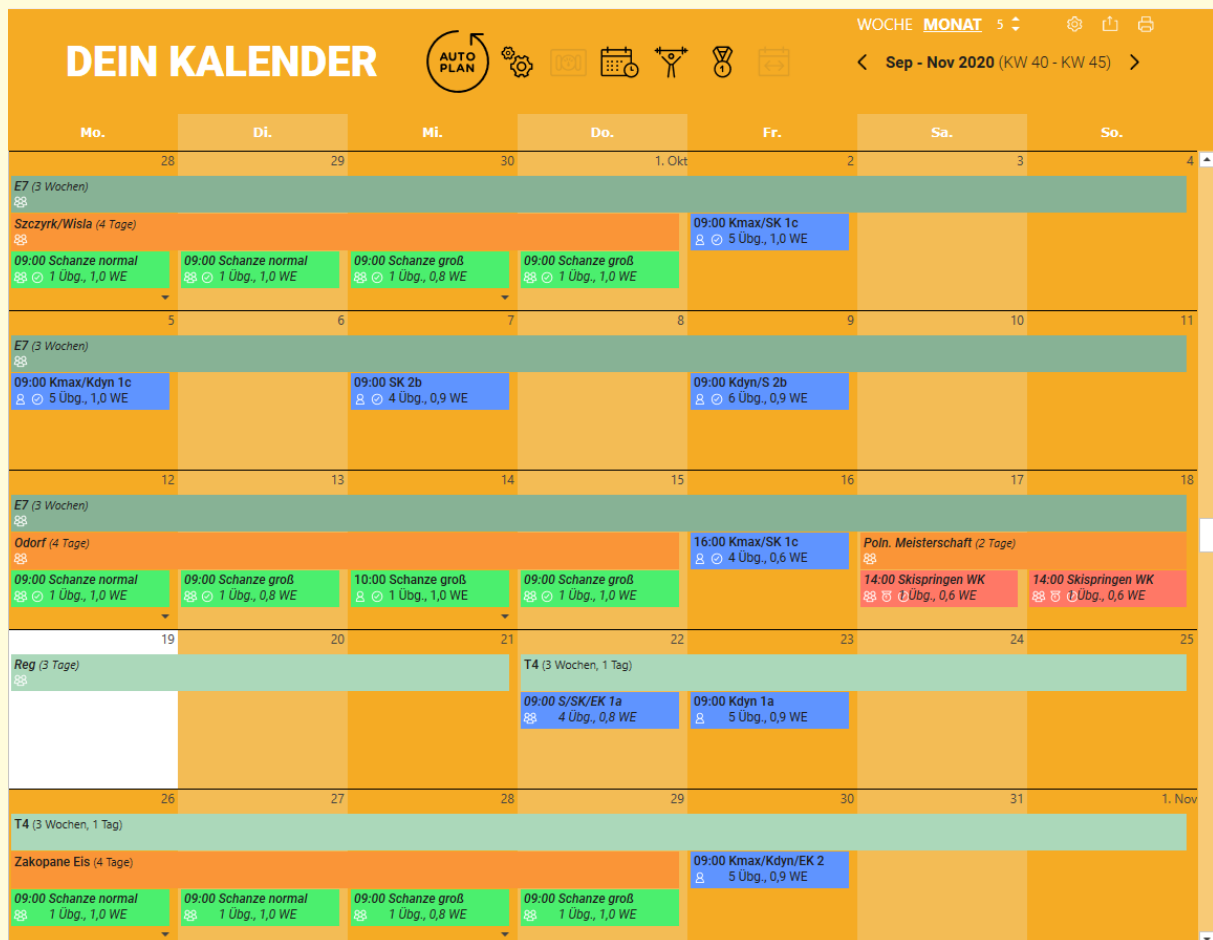
Week view

The screenshot shows the 'DEIN KALENDER' interface. At the top, it says 'WOCHE MONAT' and 'Oktober 2020 (KW42)'. The calendar grid shows days from Mo. (12) to So. (18). The current date is Wednesday, 14. Below the grid, there is a detailed view for 'MITTWOCH, 14'. It shows a timeline from 09:00 to 18:00. A green bar represents the '10:00 Schanze groß' event (1.0 WE). A blue bar represents the '15:00 SK 3a Hürden' event (0.6 WE). The interface also shows other events for the week, such as '09:00 Schanze normal' (1.0 WE), '09:00 Schanze groß' (0.8 WE), '15:20 Aktiv. EK/SK/S 3' (0.7 WE), '15:51 Test' (Startzeit 15:51 Test N), '16:00 Kmax/SK 1c' (4 Übg., 0,6 WE), and '14:00 Skispringen WK' (0,6 WE).

You can navigate through time using the arrows, scrollbar or mouse wheel. If you click on the date display between the navigation arrows, the calendar will jump back to “Today”.

The detail area under the calendar displays detailed information or an editor for the type of event shown in the calendar – using a single click system.

Month view



You can navigate through time using the arrows, scrollbar or mouse wheel. If you click on the date display between the navigation arrows, the calendar will jump back to “Today”.

Double-clicking on an entry in the calendar will open a window showing detailed information, which can be freely positioned on the screen. The single click system found in week view also works in the open details window.

Symbols



The training unit was calculated by Autoplan



The training unit was planned manually by the user



The training unit was added to the group plan – any changes will individualise the training unit

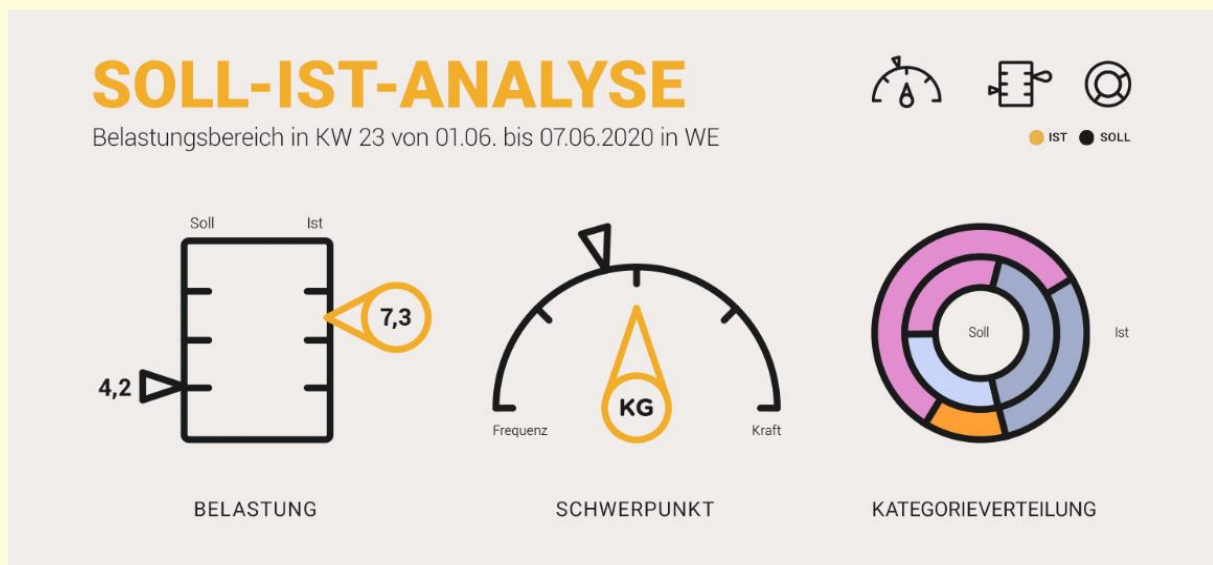


Training units in the past are marked as completed

TARGET-ACTUAL ANALYSIS

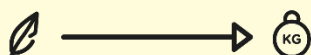
All of the variables in the target-actual analysis are displayed in value units.

The target values are based on the value unit specification and the test evaluation. The actual values refer to the time period currently displayed on the calendar.

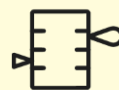


Load range analysis

This shows the deviation from the load focus and the calculated 4-level load distribution on a resistance axis from low resistance



up to the maximum resistance.



Total load analysis

This shows the value units for the displayed period and the load rhythm across all days of the week (week view) and across weeks (month view).



Category distribution analysis This shows a comparison of the target (inner circle) and actual category distribution.

Important! To return to the overview graphic, all of the detail icons have to be deselected (by pressing the icon again).

INFO

The info area in the lower right quadrant displays detailed information on the currently selected main section.

If the focus is placed on the calendar, information is displayed on the current week in week view:

12. - 18. Oktober 2020

6,9 WE - hohe Belastung
7 TE, 2 WK, 1 Test
(16 Übg., 25 Sprünge, 28 Serie(n))

! große Belastungsdiff. von +25% (+1,4 WE) !

Kategorieabweichung !

Belastungsschwerpunkt weicht ab!

Hinweis:

Keine automatische Planung möglich, bereits zu viele WE vorhanden - bitte manuell reduzieren!

The history of the active athlete is shown within a training unit:

Info - Trainingseinheit
"Kdyn/S 2b" - Kraft 0,9 WE

3x verwendet
zuletzt am 25.09.2020

Belastungsbereiche:
6 Übg(en) Kraft - ges. 13 Serie(n) 21 WH

Vorlagenabweichung 25%

If the focus is placed on an exercise, the details and process for the selected exercise are shown:

Info - Übung

"Kniebeuge beidb. gefedert"

7x verwendet

zuletzt am 20.08.2020 mit 2 Serie(n) 3 WH Last: 90

Belastungsbereich:

K_dyn - 3 Serie(n) 3 WH Last: 90

Motorik: Beine-Komplex

Ausführung:

nach unten fallen lassen - explosiv stoppen und so schnell wie möglich wieder strecken

06 Training plans - advanced

MANUAL PLANNING

Training units



Opens the training unit catalogue with the selected target setting.

Name	Hauptkategorie	Ziel	innerhalb der letzten 6 Monate verwendet	Trainingsphase	34 Trainingseinheiten
	alle	Athletik	<input type="checkbox"/> nur eigene <input checked="" type="checkbox"/> nein <input type="checkbox"/> ja, Vorlage <input type="checkbox"/> ja, Kalender	<input checked="" type="checkbox"/> Effektivierung <input checked="" type="checkbox"/> Entwicklung	

In the default setting, the list shows all training units that were not used within the last 6 months.

- “only my own” hides the system templates
- “yes, templates” also shows those templates that were used within the last 6 months
- “yes, calendar” also shows all of the training units already assigned to the calendar
- “Improvement/Development” filters the list according to the selected option



Add a training unit on the highlighted day



Or double-clicking opens the detailed information view for the training unit with all exercises

Important! You are only permitted to edit “my own” training unit templates and not the system templates (see “New training unit”). Training units that have already been assigned to the calendar can be changed as you wish!

Phases



Adds a new phase for the highlighted time period.

This function is only active if a phase has not yet been defined for the highlighted time period. Already existing phases can be edited by clicking on the phase.

Typ:

4 phase types can be set in the phase editor. These phase types have the following effects on the calculation of the training recommendation:

1. The aim of the **development phase** is to develop the load range towards the load focus determined from the performance profile. A broad unimodal distribution is calculated as the basis (and is then adapted to the current test values)!
2. The aim of the **transfer phase** is to transfer the developed potential into a competition-specific area or for general improvement. An even bimodal distribution is calculated as the basis (and is then adapted to the current test values)!
3. The aim of the **competition phase** is to unlock as much developed and improved potential as possible. An uneven bimodal load distribution with the main focus in the competition-specific range is calculated as the basis (and is then adapted to the current test values)!
4. **Training-free** phases should be designed based on your individual experience to allow for the best possible physical and mental regeneration!

Events



Adds a new event for the highlighted day or the highlighted time period and opens the event editor.

Tests



(Only active in the future) Adds a planned test on the selected day and opens the test editor to set the type of test.

Competitions




Opens the competition unit catalogue to add competition units to the calendar. Competition units are training units for which the “competition flag” has been selected. They are handled in the same way as training units but are highlighted on the calendar.

HYBRID PLANNING

CYCCESS also allows you to combine manual planning with the automated calculation of a training plan.

For example, it is possible to manually add certain training or competition units (which are

mandatory or desired) to the plan (see “Manual planning”) and then to use  to complete the training plan.

This function is preferable above all for planning teaching courses or competition phases. It may also be necessary to adapt the weekly target specifications when using this function!

Important! Assuming that the Autoplan function is still active – this is the case when enough free value units are available and a current test exists!


WEEKLY TARGET SPECIFICATIONS



Opens the editor for editing the weekly target specifications.

The default settings for the weekly target specifications correspond to the settings in the training configuration. If necessary, the total load can be changed for the current week by setting the value units, category distribution and the desired training days.

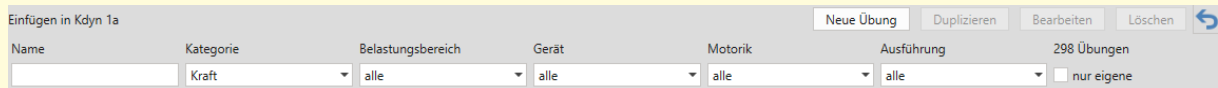
The correction from the current test result in % is also displayed for the value units.

The default settings can be restored with .

NEW/EDIT EXERCISE



Opens the exercise catalogue.



The filter block allows you to directly search according to the name of an exercise or to select a category, load range, device, motor function and execution.



Adds an exercise to an active training unit.

To move exercises within a training unit, simply click on the exercise and drag it with the mouse to the desired location.



Opens the editor to create a new exercise.

NEW/EDIT TRAINING UNIT



This symbol indicates that you can edit the training unit, system templates cannot be edited (first copy them or create a new one).



Duplicates the highlighted training unit





Opens the training unit editor (only active for your own units)



Opens the editor to create a new training unit



Deletes the highlighted training unit (after a confirmation prompt)

To create a new training unit, either select  or first duplicate a system template and then edit it in the editor . To add or edit exercises, see “New exercise”.

NEW TARGET

New target opens the window to define new targets.

It is mandatory to give the target a name. The default category distribution can then be set in percent. Deviations from the percent distribution are automatically corrected to make 100% in total.

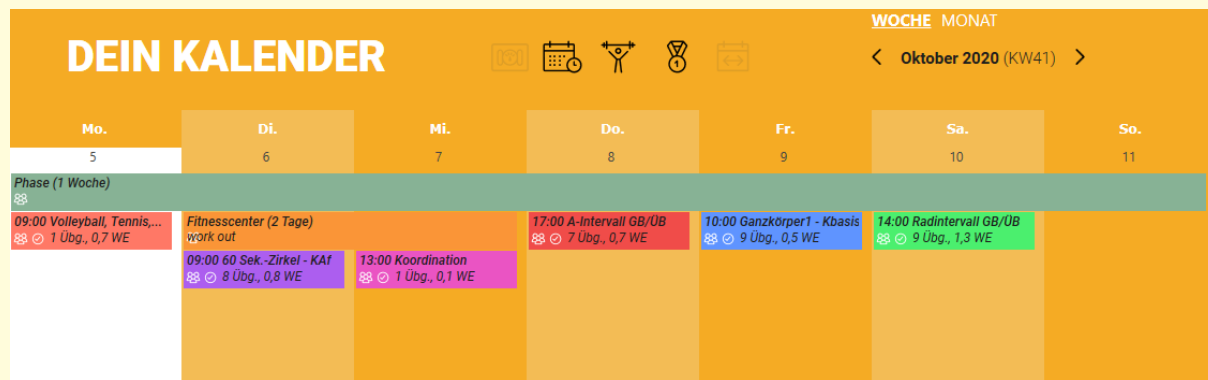
Extra categories are sport-specific categories that can be added to the distribution if desired.

Important! All settings for each user can still be modified in the training configuration.


GROUP PLANNING



Opens the training plan for the active subgroup.



The Autoplan function is not available for groups but otherwise all of the same functions are available as for individual users.


Important! All entries (training units, phases, events, test plans, competitions) added to the group calendar are automatically assigned to all athletes in the group and shown in their calendars with the group symbol . Changes to the group calendar are made for all athletes as long as the group symbol is displayed. If an entry is changed for a single athlete, the group symbol and thus the group link for this entry is removed and it is saved as an individual entry for this athlete.

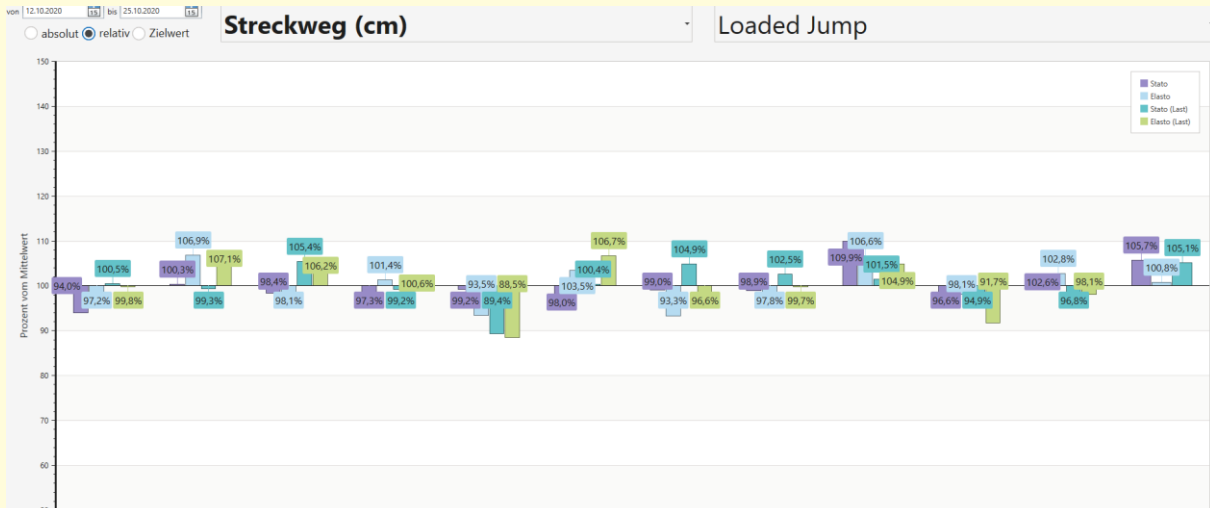
07 Group analysis



Opens the group analysis for the selected subgroup.

PROFILE

The group profile graphic has the same content as the individual development profile  on the test page with the exception that it shows a comparison for all persons in a group instead of an individual person.



The latest test for the set time period is displayed in each case. The parameters and type of test can be freely selected.



Shows the absolute values for the parameter selected



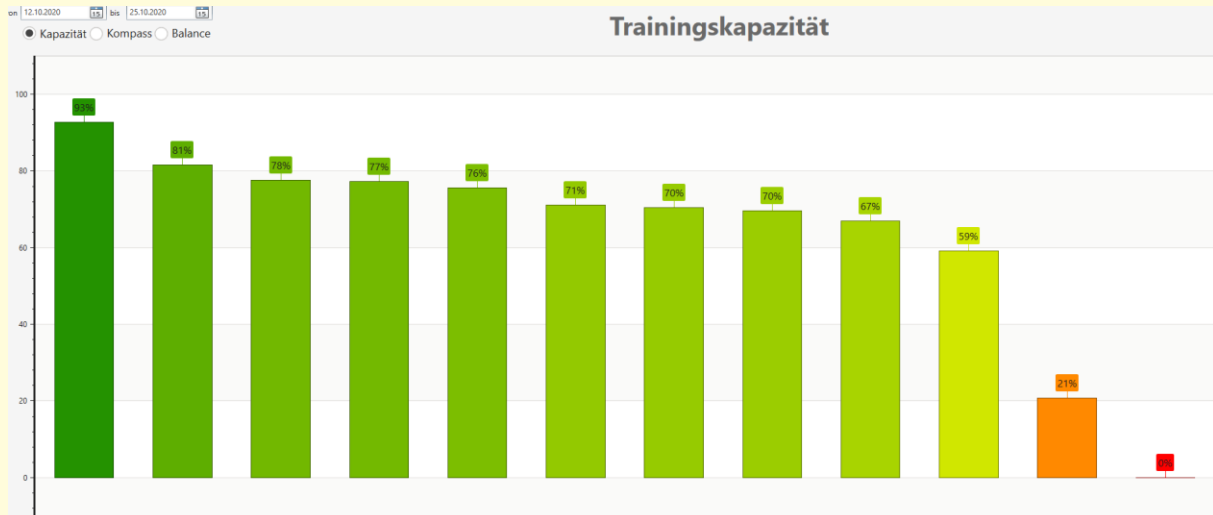
Shows the percentage value relative to the group average



Shows the percentage value relative to the target value for the parameter selected

FITNESS

Group fitness view has the same contents as the personal fitness view with the exception that it shows a comparison for all persons in a group instead of an individual person.



The latest test for the set time period is displayed in each case.



Shows the group comparison for the training capacity.



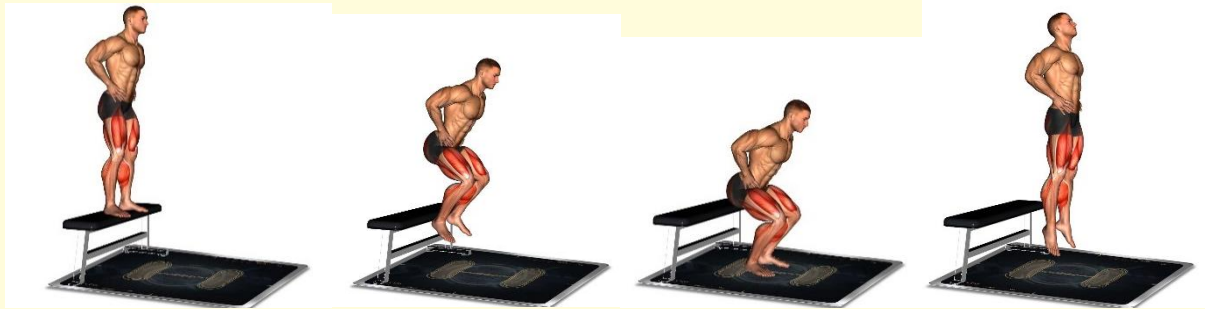
Shows the group comparison for the calculated load distribution.



Shows the group comparison for the balance values.


08 Additional test modules

REACTIVE JUMP



Select reactive jump to start a new test with the weight measurement.

Place the jumping platform (with a height of 20, 40 or 60cm) onto the measuring plate and

carry out a reset . Then stand still on the jumping platform and start the measurement



. Once the load measurement has been completed, the system is ready to take measurements.

For a reactive jump, it is important to try to achieve an optimal jumping height with the shortest contact time possible. A hurdle that must be jumped over can be placed in front of the measuring plate as an aid (height = around half a thigh length). You can land outside of the measuring plate!

Important: The test person must simply let themselves drop from the jumping platform – if the person jumps up from the jumping platform, the system will detect a statodynamic jump and not a reactive action!

The drop height is calculated by the system and every jump is automatically assigned as a “reactive 20cm”, “reactive 40cm” or “reactive 60cm” action.

The reactive force is evaluated based on the two relative indices:

1. Reactive index 1 = Height of jump divided by contact time
2. Reactive index 2 = Braking power divided by acceleration power

ISOMETRICS



iso70°



iso100°



Single leg



Select isometrics to start a new test with the weight measurement.

The measuring plate should be positioned under a weightlifting frame with a fixing mechanism. The weightlifting bar is fixed so that the knee angle is 70° or 100° depending on the type of action, the centre of the foot should be placed directly under the weightlifting bar.

Then start the measurement



. The system will immediately start the maximum strength measurement.

The test person pushes for 2-3 seconds at full strength against the fixed weightlifting bar – the system continuously analyses the force curve, automatically saves the peak force value and then ends the measurement process!

Important: It is essential that the type of action is set in the table at the end of the measurement – click on “Please select” and then set the type of action that was completed!

The isometric peak force is evaluated based on relative and absolute force values. The peak force values for the left/right side are also given for two-legged actions.

09 Settings

General setting functions are available at the top right of the start page above the menu bar.

DATABASE



Opens the submenu for database management.

Important: This function is only active when no athletes are open!

Change DB

The editor can be used to select another local database or to set up a connection to a central database.

Import MLD6 DB

For importing old MLD6 databases – all of the persons and test data are imported but not the training data!

Backup DB

Opens a window to select a backup location.

Synchronise DB

Opens a window to synchronise 2 databases.

The currently active database is shown in the left column, while a local or central database can be opened in the right column. Time limits for the synchronisation and group filters can be set in the filter block at the top. The option “Overwrite existing template” applies to training units that are already in the target database.

After selecting the persons, the connection arrows can be used to define the synchronisation direction and start the synchronisation.

Update DB

This function is only active when using a central database and updates all of the training units and exercise templates.

Clear local DB

Deletes all of the data that is no longer required and compresses the data on the local database.

New DB

A new local DB can be created using this function.

TRAINING CATALOGUE



Opens the submenu for all training settings.

Training units

See “New/edit training unit”

Exercises

See “New/edit exercise”

Targets

See “New target”

Export templates

The export templates function allows you to export all templates (training units including exercises) for a target to a file. This export also contains all of the attachments for exercises such as images or videos. This enables you to synchronise edited templates within a user group.

Import templates

The editor can be used to select, open and then import an export file!

Important! If the option “Overwrite existing” is selected, any already available template catalogue for the displayed target will be completely replaced!

Update videos

The “Update” function creates a link to the server and checks whether new or not yet installed videos are available and starts the installation process. The process can be interrupted and restarted at any time.

USER ADMINISTRATION



Opens the user administration editor.

User administration is not active when you start the CYCCESS software for the first time. All of the added users are displayed on the start page.


To activate the user administration, open the editor and select “Activate user administration”.


Restart CYCCESS and add an administrator in the subsequent start screen:

Enter a username and password.

If you click on user administration again on the start page after activating the user administration, the editor for adding new users appears. The administrator can assign 3 roles to the users:

1. Customer – access to their own data
2. Trainer – access to all assigned groups and users
3. Administrator – full access

If CYCCESS is started by a customer or trainer, the user administration editor  can be used to change the password.

Only the administrator is authorised to deactivate the user administration. This is done by clicking on the corresponding button in the user administration editor  .

LICENCE ADMINISTRATION/INFO



Opens the submenu for licence administration and information

Licence administration

The licence administration window shows the active licence (CYC-ID) and allows you to change or deactivate it.

- “Change CYC-ID” deactivates the current licence and activates a new licence (if available).
- “Deactivate licence” deletes the current licence – this function is primarily used when you want to be able to continue using the existing licence on another computer!

Manual

Opens the manual for the currently active language setting in PDF format!

Info

Shows the version number of the software and the licence information for the open source components being used.

10 Abbreviations and conventions

Variables

P	Power
F	Force
v	Velocity
s	Distance
t	Time

Abbreviations

KG	Bodyweight
TK	Training capacity
rel	relative – measurement value/bodyweight
pos	positive phase, understood as the movement phase with positive velocity (upwards)
neg	negative phase, understood as the movement phase with negative velocity (downwards)
KV	Force distribution

Definitions

- Reversal point = lowest position reached while carrying out the jump. The direction of movement changes.
- Take-off = Time at which the force becomes less than the weight.
- Leaving the plate = force falls to less than 20N

Function keys

F5 – Start page

F6 – Test page

F7 – Fitness page

F8 – Training page

Space – Measure (on test page, if no details window is open)

11 Measurement parameters

PARAMETER	UNIT	DESCRIPTION
Valid	yes/no	Defines whether a jump should be taken into account in the evaluation
Load	%	Additional weight on top of the bodyweight for the jump, bodyweight = 100%
Stretch path	cm	Distance from the reversal point or the lowest position until take-off
Braking power rel.	W/kg	Average power 200ms before the start of take-off when squatting for an elastodynamic jump or during the countermovement for a statodynamic jump
Peak power rel.	W/kg	Peak power measured during the jump, relative to bodyweight
Height of jump	cm	Height of the centre of gravity above the starting position
Fv0 abs.	N	Force at reversal point
Total power rel.	W/kg	Average power in the positive movement phase relative to bodyweight
Starting power rel.	W/kg	Average power in the first third of the positive movement phase relative to bodyweight
Finishing power rel.	W/kg	Average power in the last third of the positive movement phase relative to bodyweight
Starting force	N	Force at the start of the movement
Maximum force	N	Maximum force measured during the jump (negative and positive phase)
Maximum velocity	m/s	Highest positive velocity of the centre of gravity during the jump
Total power abs.	W	Average power in the positive movement phase
Starting power abs.	W	Average power in first third of the positive movement phase
Peak power abs.	w	Peak power measured during the jump
Reak: P-*P+	W	Reactive force parameter: Power negative*positive phase absolute
Reak: P-*P+ rel	W/kg	Reactive force parameter: Power negative*positive phase relative

Reak: s_{max}/t	cm/s*10	Reactive force parameter: Height of jump divided by acceleration time
tacc	s	Acceleration time total
tneg	s	Acceleration time negative
tpos	s	Acceleration time positive
KV-Fmax	%	Force difference between plates 1 and 2 at time of Fmax
KV-Fneg	%	Force difference between plates 1 and 2 negative phase
KV-Fpos	%	Force difference between plates 1 and 2 positive phase
KV-I02_Vmax	%	Impulse difference between plates 1 and 2 in first 20ms positive phase
KV-Ipos_Vmax	%	Impulse difference between plates 1 and 2 total positive phase