QUICK TIPS

Fixturlaser SMC BALANCER

Fixturlaser

ACOEM Group

Products

FIXTURLASER SMC DU

Fixturlaser SMC Trap

For connectors (USB, power supply, Ethernet...)

USB cable for connecting the Fixturlaser SMC to a computer (reports)

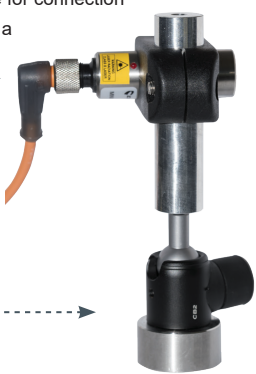
ACCELEROMETERS

2 ASH accelerometers

2 straight cables for ASH

2 high-power magnets for ASH

Laser tachometer with cable for connection on channel C, supplied with a 5m extension cable.



Magnet holder

LICENSING
Balancing option

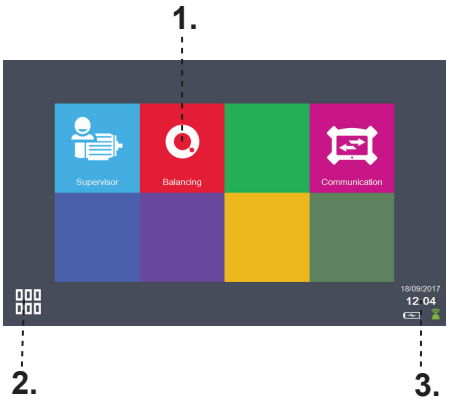
To input your license including the balancing option (if ordered), please proceed as follows:

1. Go into the shortcuts and select « Settings »

2. Go to the « About » section

3. Type on the license number to replace it by your final license. All letters must be typed in capital letters. You also need to type manually the « - » indicated in the license number.

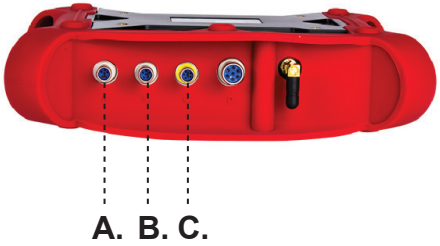
USER Interface



1. **Access to the BALANCING module**

2. **Access to shortcuts** (settings, help, etc.). At any step of the procedure, you can access the built-in camera to take pictures that will be automatically printed in the reports

3. **Access to status side panel**



Accelerometers:

Connector A: Channel 1
Connector B: Channel 2

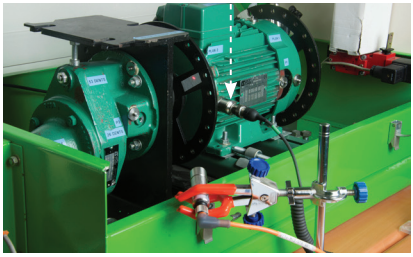
Tachometer:

Connector C

STEP 0 - Balancing Setup

Mount the sensors

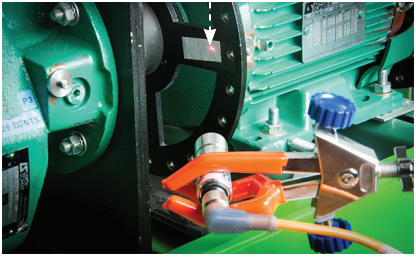
1.



To know where should the weight be positioned to fix the unbalance, you need to measure the vibration of the machine (vibration sensor) and to know its angular position (tachometer)

1. Attach the accelerometer onto the machine (with a cementing screw, stud or a magnet) at the closest place possible to the bearing of the plane to be balanced

2.

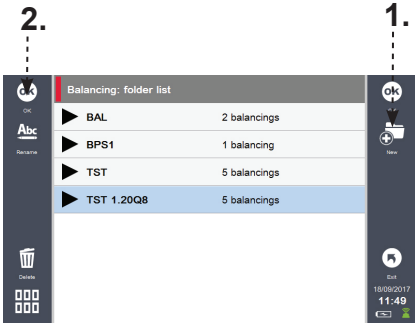


2. Attach the tachometer with the holding support, and point the laser to a reflective tape

DO NOT CHANGE THE POSITION OF THE SENSORS DURING THE WHOLE BALANCING PROCESS

STEP 0 - Balancing Setup

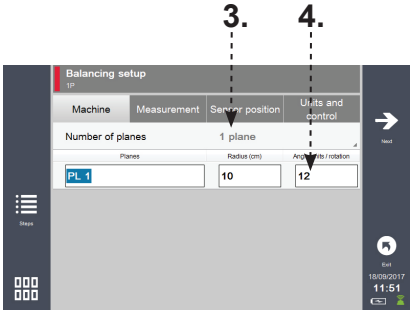
Define the machine



On the Fixturlaser SMC device go into the balancing module, create or select a folder!

1. Create a new machine

2. Type on OK to enter into the machine

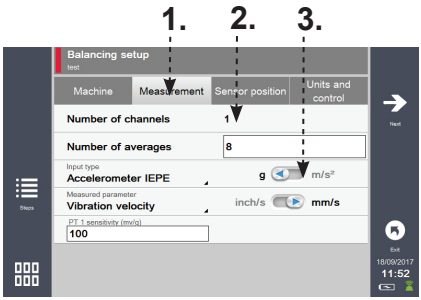


3. . Define the number of planes to balance (this manual shows a 1-plane balancing)

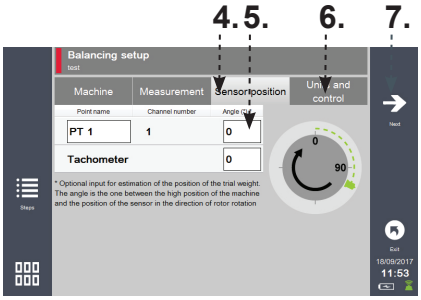
4. Define the angle unit used to determine visually the position of the additional weights (angular, number of blades, number of holes…). Mark the reference (angle, blade, hole, reflective tape…)

STEP 0 - Balancing Setup

Define the measurement setup



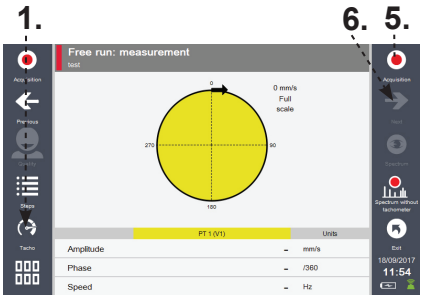
1. Go to the measurement tab in the balancing setup
2. Define the number of vibration sensors used at the same time (1 or 2)
3. If necessary, change the display units

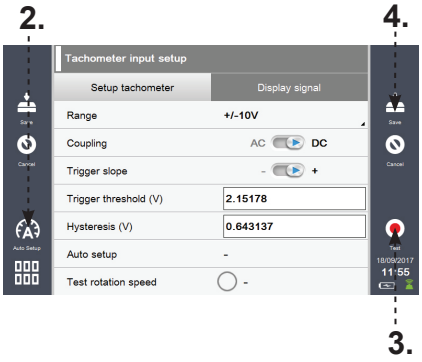


4. Go to the sensor position tab
5. Optional: Define the accelerometer and tachometer angular position
6. Optional: Adjust ISO automatic comparison properties in the « Units & control » tab
7. Click on NEXT to start the procedure

STEP 1 - Free Run

Do a reference measurement



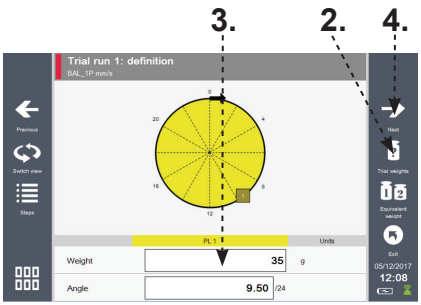


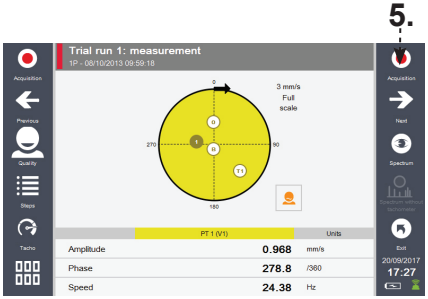
The free run is the first step, required to have a vibration reference for the machine, before adding weights. START THE MACHINE.

1. Check the tachometer setup using the shortcut on the left side of the screen
2. Use the automatic setup tool for a quick setup
3. Test the rotation speed to check that the value is conform to what is expected, adjust manually if necessary
4. Save the tacho setup
5. Start the acquisition of the free run
6. STOP THE MACHINE and go to the next step

STEP 2 - Trial Run

Definition & measurement





The first trial run consists in measuring the vibration of the machine after adding a known weight at a know position.

1. Add a known weight on the machine and note its position: e.g., screw and bolt on the 3rd blade of a fan, welded material at 90°...

2. Optional: if you don't know which weight to add, use the trial weight automatic estimation

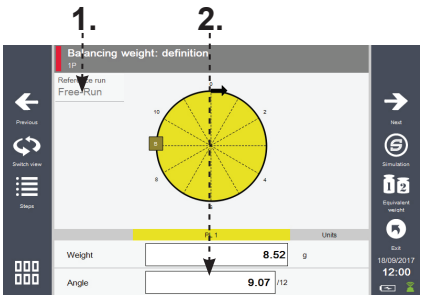
3. Define the weight and angle. Note that the angle depends on the angle/units criteria defined in the machine setup (e.g., number of blades)

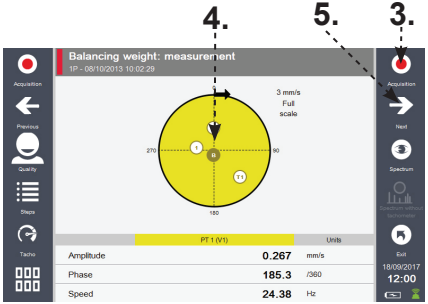
4. Type on NEXT

5. Start the machine, wait for stabilisation and launch the acquisition of the trial run. Stop the machine once acquisition completed

STEP 3 - Balancing Run

Definition & measurement





The balancing run consists in adding a weight supposed to fix the unbalance.

1. Select the run from which you want to add the balancing weight

2. Add the recommended mass at the recommended location. Note that if you cannot find the exact mass and location suggested, you can adjust the values manually

3. Start the acquisistion of the balancing run, and check the result

4. If the improvement is sufficient (relative to the initial measurement, or compared to the ISO standard), you're done!

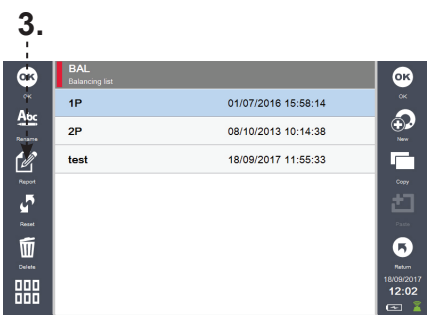
5. If not, repeat steps 2 & 3 through the next Trim run screens

STEP 4 - Automatic Reporting

1. Open the trap and connect a USB key to the Fixturlaser SMC

2. Go back to the list of machines created to access the report function

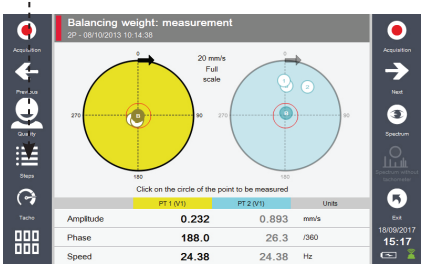
3. Type on the report icon to save it on the USB key



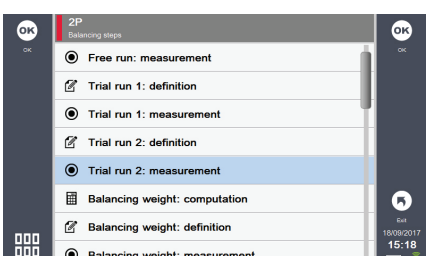
4. Go back to your computer to edit, print the report or send it by email.
Note: If you don't have a USB key, connect your Fixturlaser SMC directly to the computer and go into the Export folder to get your report.

Fixturlaser SMC - A real guide

1.



1. At any step of the procedure, you can access the step by step wizzard using the shortcut on the left side of the screen



Fixturlaser SMC positions the user automatically at the step where he/she is in the procedure.
It is also possible to very quickly jump from one step to another previous step (already realized) through this screen.

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- Increase the productivity and reliability of industrial machinery
- Contribute to the development of effective, robust & noiseless products
- Protect soldiers, sites and vehicles in military theaters of operation

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