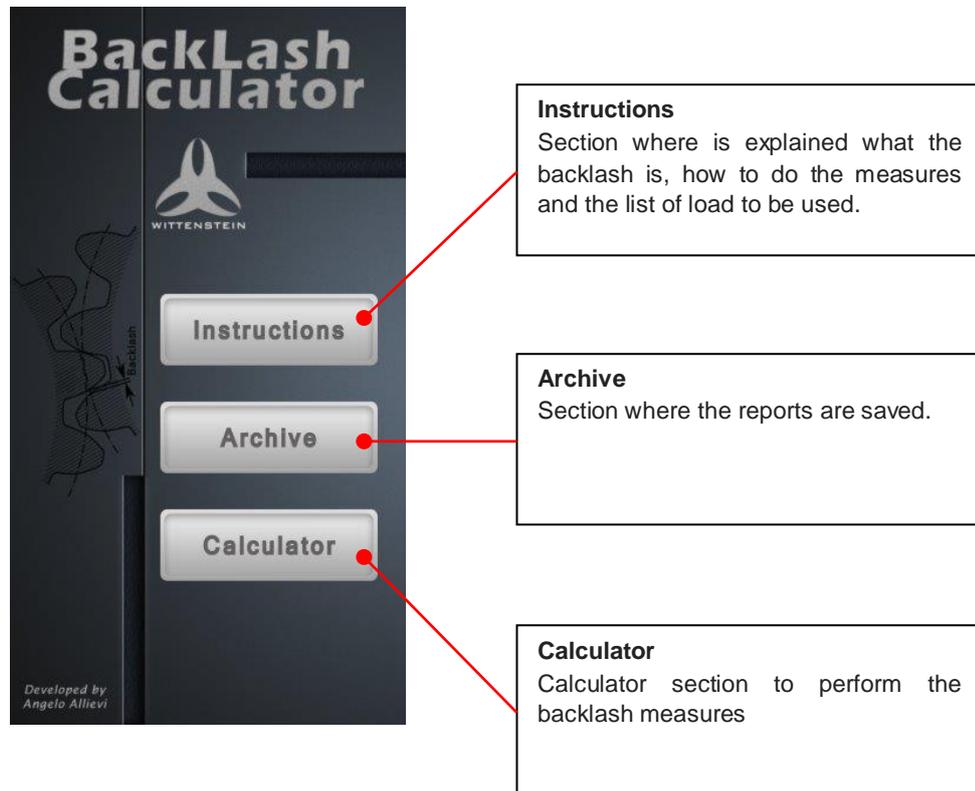


Backlash calculator instruction manual

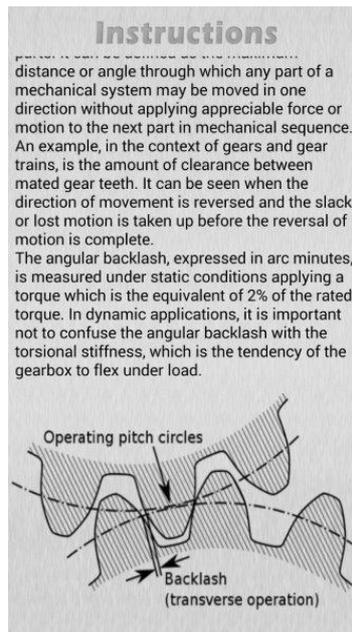
The Backlash calculator app is able to manage the measured backlash of the gearboxes. It provides values to be applied and instruction to perform the measurements, then is possible to store and view each measurement as a graph.

Main page



Touching one of these buttons the user enters the selected section.

In this section is possible to view information about the backlash and all the information in order to perform the measures.



Section

Calculator

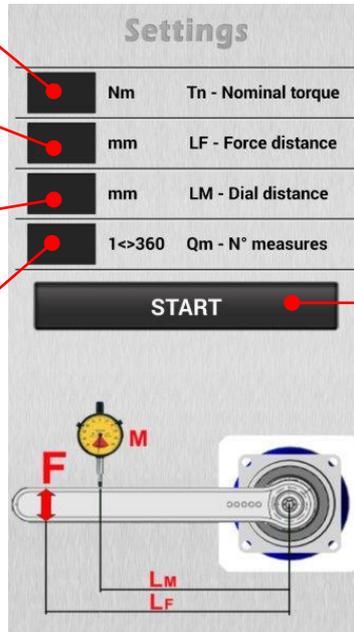
This section is the control panel of the app, where is possible to set the values and perform the test. On the first page of this section (called Settings) the user have to provide the required values. At the bottom there is an example picture.

Tn
Nominal torque.

LF
Distance where the force is applied

LM
Distance where the user places the dial comparator.

Qm
Quantity of measurements to be done.

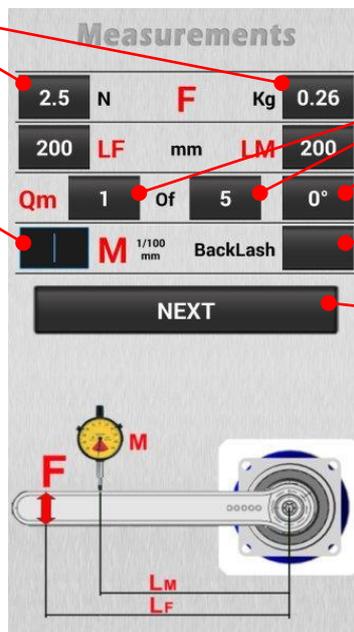


START
Touch this button to continue the session and start the measurements. Each values has to be filled before continue.

After the setting operations pressing the **START** button, the user views the measurement section. On this page, in addition to displaying the values to use, the user have to type the values detected during the measurement (in the **M** box, in 1/100 mm);. In real time is possible to see the backlash. Press **NEXT** button to proceed to the next measurement in sequence- The page with a list of measurements will be opened automatically at the end of the measurements.

F
Value of the force to be applied in N or Kg.

M
Input the measures read on the dial comparator (1/100 mm).



Qm
No. of measurements done, no measurements to be done and corresponding degrees.

Real time display of the backlash

NEXT
button to switch to the next measurement

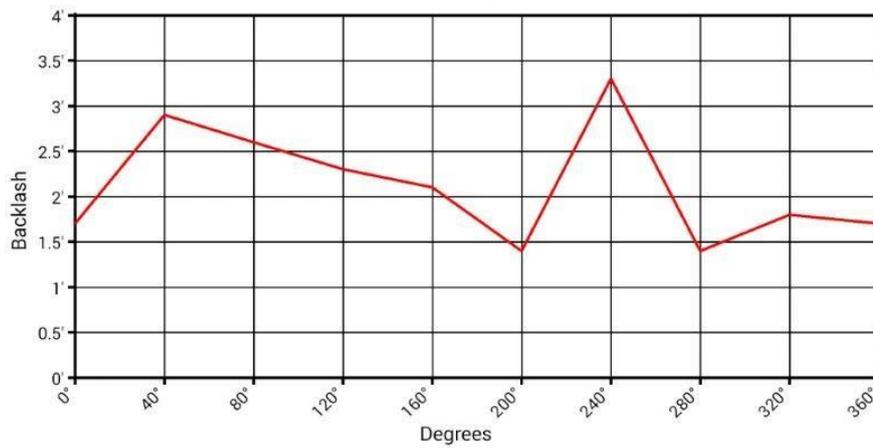
when all measurements are performed, the **Measurements list** will be opened automatically. In this window, the user views all the measured values, the graph of the measured backlash, and is also possible to save the datas.

The screenshot shows a 'Measurement list' window with the following data:

Measurement n°	Angle	Backlash
1	0°	2.1'
2	45°	3.1'
3	90°	1.7'
4	135°	3.6'
5	180°	2.4'
6	225°	1.4'
7	270°	3.3'
8	315°	1.8'
9	360°	1.7'

Below the list are two buttons: 'Backlash chart' and 'Continue'. Callouts identify these elements: 'Measurements list.' points to the list, 'Button to display the graph.' points to 'Backlash chart', and 'Button to save the data.' points to 'Continue'.

By pressing the **Backlash chart** button a graph of the measurements will be displayed.



By pressing the **Continue** button the users will access to the saving session.

In the saving session is possible to store the measurement session with some information about the gearbox and its manufacturer.

The file name is the only information necessary to save the session.

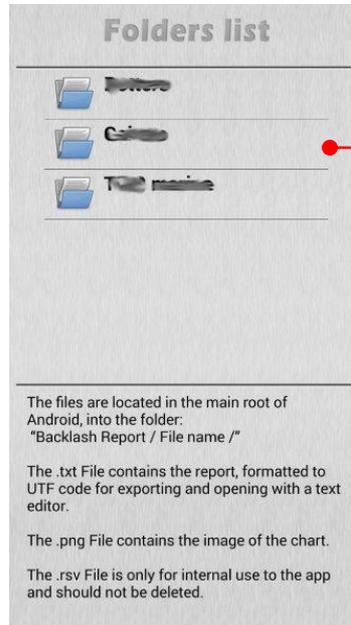
The image shows a mobile application interface titled "Input data report". It features a vertical list of seven text input fields: "File name" (containing "Prova"), "Author", "Gearbox type", "Manufacturer", "Cod n°", "Serial n°", and "Year". A callout box labeled "Data input box." points to the "Manufacturer" field. At the bottom of the form is a black button with the word "Save" in yellow text. A callout box labeled "Button to save all datas." points to this button.

By pressing the **Save** button, all the data and graph are saved in the main root of Android, in subfolders and the app goes back to the home page.

Section

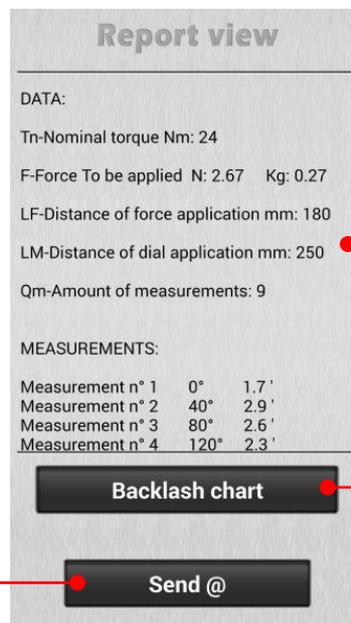


In this section the user accesses the report management with the option to view them and send them by e-mail.



Folder list.

By pressing one of the folders, the user enters the section of **Reports view** where is possible to see graphs and send text files and its graph by email.



Report view.

Button to display the graph.

Button to send the report.

Press the back button to return to the previous page.