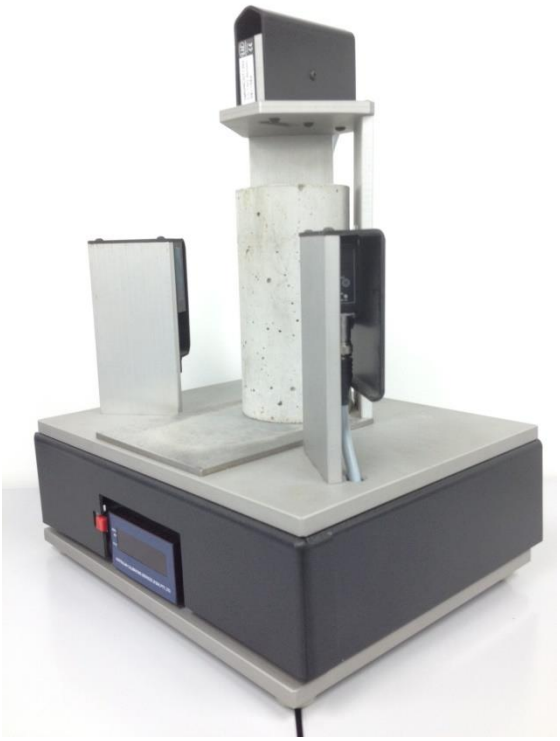
AUSTRALIAN CALIBRATING SERVICES
A Trescal company

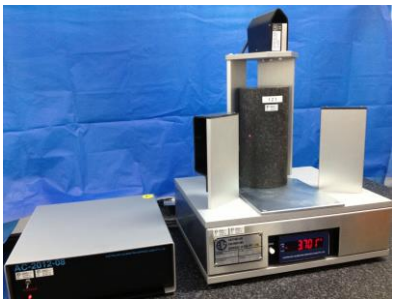
126 Oxford Street, Collingwood
PO Box 1174, Collingwood, Vic 3066, Australia
Tel: +61-3-94175688 Fax: +61-3-94171578
Web: www.auscal.com.au
Email: acs@auscal.com.au
A.B.N. 33 623 153 736

ACS LASER MEASURING JIG

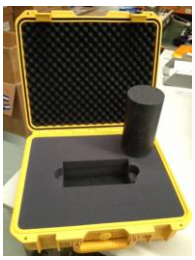
for Concrete Cylinder samples

Measurement of Weight, Height and Diameter Dimensions





Weigh measure jig with Interface box



Optional Calibration cylinder

Picture depicts Measuring jig with integral Weigh and dimension devices and Interface datataker communication device for transmission of Weight and Dimension values to a PC via RS232

Also shown is a calibration cylinder standard in place

Measures Concrete Cylinder Moulds in accordance with Australian Standard 1012.9

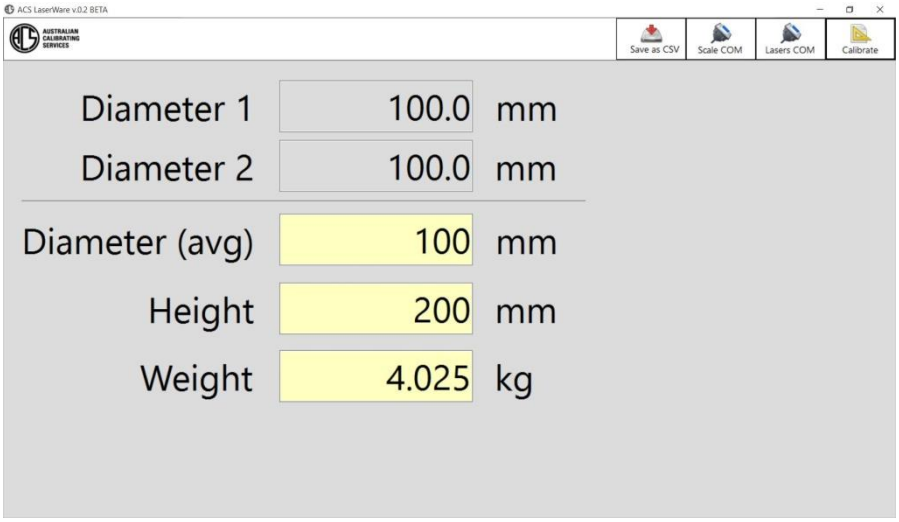
Diameter Measurement (Range 95 - 115 mm) +/- 0.1mm
Height Measurement (Range 190 - 210 mm) +/- 1mm
Weight Measurement +/- 1 gram

System has been adapted for use with Data acquisition software including QestLab

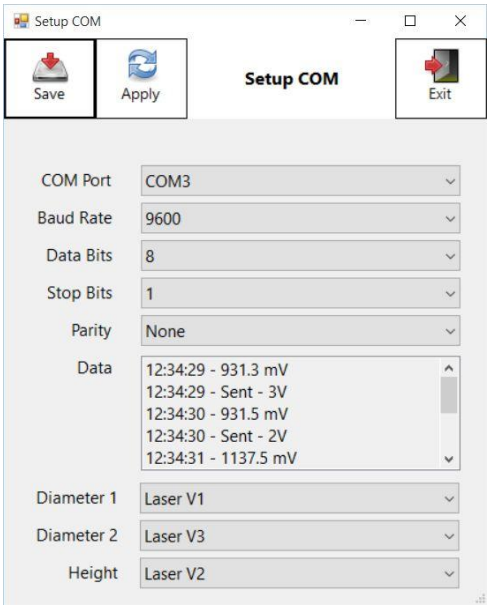
126 Oxford Street, Collingwood
PO Box 1174, Collingwood, Vic 3066, Australia
Tel: +61-3-94175688 Fax: +61-3-94171578
Web: www.auscal.com.au
Email: acs@auscal.com.au
A.B.N. 33 623 153 736

Optional Laserware DA software available for standalone units

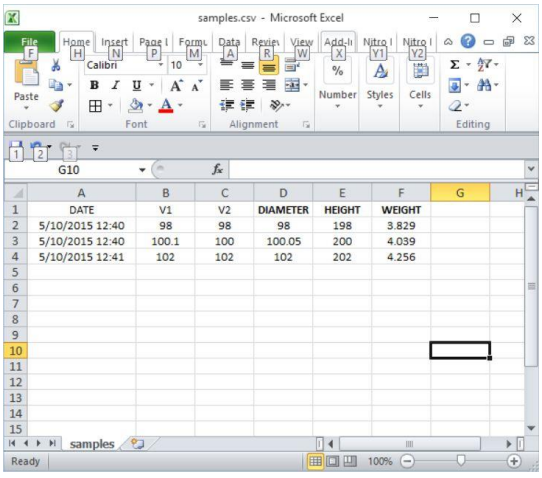
Data Acquisition software to view and save as a raw data csv file the cylinder dimension and weight
Require two (2) available Serial Ports on a PC/Notebook. Laser dimensions and Scale weight
Operating systems from Windows 7 upwards



Screen capture of Laserware DA software



Configure Com Port for dimension and weight



Sample save as csv file of values

AUSTRALIAN CALIBRATING SERVICES
A Trescal company

126 Oxford Street, Collingwood
PO Box 1174, Collingwood, Vic 3066, Australia
Tel: +61-3-94175688 Fax: +61-3-94171578
Web: www.auscal.com.au
Email: acs@auscal.com.au
A.B.N. 33 623 153 736

The communication between the ACS Laser Jig (weight and dimension) and the PC is via two serial, or com ports. One com port is used for the dimensional measurement, the other com port is used for the weight measurement. The com port settings are 9600, n, 8, 1.

To obtain a laser reading you need to poll, or send a command from the PC to the ACS Jig. The commands are 1V (for the left hand side laser), 2V (for the right hand side laser) and 3V (for the top laser).

The response back from the lasers is in the format … "hh:mm:ss - xxxx.x mV". Ignore the engineering unit mV as this is erroneous. Your software should parse the string and extract the value only. The value extracted is an arbitrary number, not an actual dimension in mm. Your software will need a formula to convert these numbers to mm (height and diameter of the cylinder). Typically the values are around 1200 to 1500 but will vary between lasers and ACS Jigs. When we set up a laser jig at ACS we have two standard metal cylinders, the smallest is 98mm (dia) x 198mm (H) and the largest is 102mm (dia) x 202mm (H).

To obtain the weight of the cylinder, the built-in balance continuously streams the weight in grams. Earlier versions of the ACS Laser Jig streamed values continuously, later versions streamed at a rate of 5 readings per second.

For further information please contact Australian Calibrating Services on
Tel: 03 9417 5688 or Emai: acs@auscal.com.au