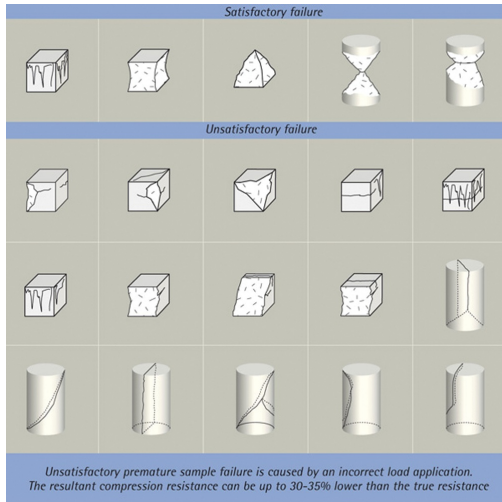


DATA SHEET

Strain Gauged Column and Tester for Load Transfer Verification



General description

Introduction

The verification of force transfer includes:

- Accuracy of force indication
- Self alignment of the upper machine plate
- Alignment of the upper machine plate
- Restraint of movement of the upper plate

These verifications can be performed using the 82-E0105/1 strain gauged cell, connected to the 82-P0804/E tester. The processing of data can be automatically performed with a PC with the testing software 82-P0804/E1, E2, E3 and E4 (see accessories).

Description of 82-E0105/1 cell

The device consists of a 3000 kN cap. strain gauged column, 100 mm dia., 200 mm high with hardness and tolerances conforming to standards. The column is gauged with matched temperature compensated electrical resistance strain gauges. Four complete bridges, each centred at one of the ends of a pair of orthogonal diameters half-way up the cylinder are applied. Each bridge consists of two elements measuring axial strain and two measuring circumferential strain.

The column is supplied complete with auxiliary platen and spacers for easy and precise placing of the column either centrally or 6 mm displaced from the centre. The column can also be used as a standard load cell to test the accuracy of force indication.

It has to be used with dedicated strain measuring apparatus as, for example, our model 82-P0804/E.

Description of 82-P0804/E

This tester, when connected to the 82-E0105/1 column, to a PC and printer using the specific software 82-P0804/E1 and 82-P0804/E2, provides completely automatic data acquisition, processing and print of the verification test certificates concerning either the accuracy of force indication or the other force transfer verifications. During operation, acquired data are displayed on the graphic screen and then downloaded by the serial port to PC and printer. The system can also be used directly connected to a simple 24 column serial printer (e.g. our model 82-P0172) or to download the test results for further processing using programs developed by the user.

Supplied complete with carrying case.

Main features

- One cell only, 3000 kN cap., to test either the force accuracy and force transfer
- Digital tester also connectable to other cells
- Tester and column can be supplied with official calibration certificate issued by a European accreditation laboratory
- Suitable for calibration of Class 1 compression testers

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Standards

- EN 12390-4

Specifications

82-E0105/1 strain gauged column

Non linearity and hysteresis: $\pm 0.1\%$ FS

Repeatability: 0.03

Uncertainty: 0.05%

Dimensions: 100 mm dia x 200 mm high

Weight approx.: 17.5 kg

82-P0804/E Force transfer tester

Four channels

Resolution:

1/128.000 used with 82-E0105/1 column

1/256.000 used with load cells

Large permanent memory to store data and test results

Graphic display 240x128 pixel

Bridge impedance: 350 ohm

Dimensions: 250x220x150 mm

Weight approx.: 2 kg



82-P0804/E digital tester and 82-P0172/M serial printer

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82-P0804/E

Force transfer digital tester. 230V, 50-60Hz, 1ph.

Accessories and consumables

82-P0172/M

24 columns serial printer. 110-230V/50-60Hz/1ph

82-Q0800/3

Serial cable RS232 and RS232-USB adapter for PC connection

82-E0100/ACC4

Official ACCREDIA (EAL) calibration certificate for the load cell connected to suitable digital tester for force verification. Calibration to EN ISO 376, 10 points, 4 cycles. (increasing forces only). Suitable for load cells from >1000 to 5000 kN.

82-E0100/TRC

Traceable calibration certificate for the load cell connected to suitable digital tester for force verification. Compatible with 5 kN up to 5000 kN capacity load cells.

82-P0172/1

Serial cable for printer connection.

82-P0804/E2

Testing software for the automatic data acquisition and processing of force measurements for the calibration verification of compression testers

82-P0804/E1

Testing software for the automatic data acquisition and processing of the plate self-alignment, alignment and restraint of movement verification (stability) of compression testers