

SOFTWARE PACKAGE FOR COMPUTATION OF PRESSURE MEASUREMENT AND ESTIMATION OF MEASUREMENT UNCERTAINTY USING DEAD WEIGHT TESTER

INTRODUCTION

This software, available in executable mode for commercial use, is a complete package developed in MSDOS QBASIC environment for the calibration of both hydraulic and pneumatic pressure measuring instruments using simple / reentrant type dead weight testers as pressure standards. This package can be used for the; computation of pressure generated / measured by a simple / reentrant type dead weight testers, after applying all possible correction factors as per well established theory of pressure balances; calibration of pressure dial gauges, simple / reentrant type dead weight testers and pressure transducers / Transmitters; characterization of dead weight testers for the computation of metrological characteristics i.e. zero pressure effective area, effective area as a function of applied pressure and distortion coefficient; conversion of different user friendly pressure units viz. Pa, kPa, MPa, bar, kg/cm², mbar, torr, mmHg, mmWC, inWC, and psi; estimation of measurement uncertainties associated with pressure and effective area measurements as per ISO and NABL Guidelines.

TARGET GROUP / USERS

- The NABL approved accredited pressure calibration laboratories.
- The industries directly or indirectly using pressure measuring instruments or are involved in pressure metrology.
- Any R & D Institute / laboratory, College and University involved in pressure metrology.

[Procedure for Technology Transfer](#)

[Technology Request Form](#)

Contact:

Head, Industrial Liaison Group (ILG)
Room No. 46-A, Main Building
CSIR-National Physical Laboratory
Dr. K.S. Krishnan Marg
New Delhi 110012, INDIA.

Email: headilg@nplindia.org

Tel: +91-11-4560-8247/9385

Fax: +91-11-4560-9310