

Testing Software for Building Materials PROTEUS-MT

We offer flexible and powerful building materials testing software. Available are different software packages in accordance with the relevant international standards.

The packages offers fully automatic control of the test procedure and data collection of results including analysis and reporting.

Control and evaluation has never been as user-friendly as it is now when using these application packages.

These packages offers you both, rapid and productive testing but also specialized applications for advanced testing requirements.

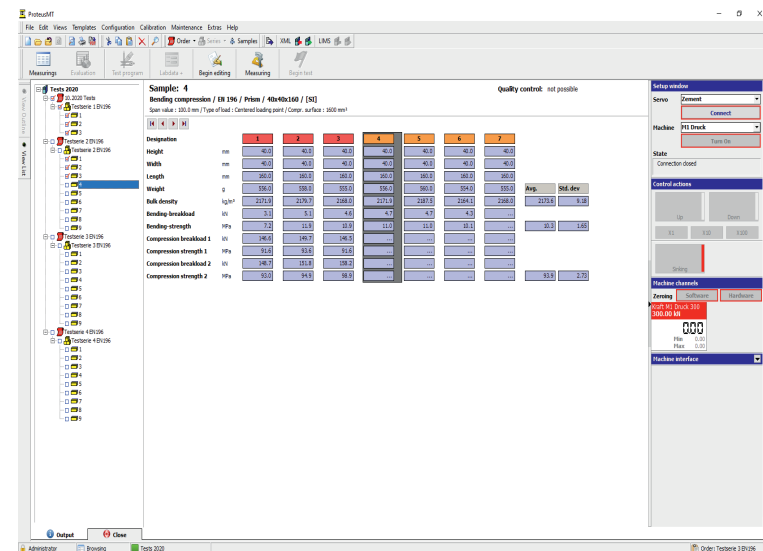
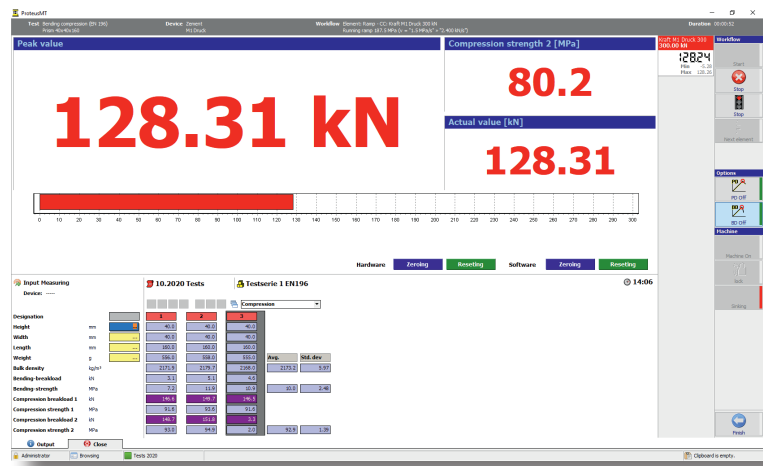


Testing Software for Building Materials PROTEUS-MT

PROTEUS-MT offers many advantages in the field of building materials testing. Test control, data collection and evaluation and reporting capabilities have never been as user-friendly. PROTEUS-MT offers both, rapid and productive testing but also specialised applications for advanced testing.

Features

- The high degree of flexibility brought by template generation and by the test editor allows configuring the program according to the exact specifications needed.
- PROTEUS-MT is not only used in cement and ready-mix plants, building material test laboratories, but also for R&D in technical universities.
- Standard test types according to current standards, can be expanded in a modular way.
Option: test editor, to define custom-specific test sequences
- Supports all widely used sample bodies with no dimensional limitations.
- Standard tests and special tests defined and stored as test templates. (Parameters set automatically according to the Standard used.)
- Custom test templates can be scaled according to the number of measurements, of decimal places, etc.
- Keying in an order and testing as separate activities.
- Mixed tests within a single test order (e.g. Elasticity Modulus and Pressure Test, etc.)
- Log output (including charts) according to type of test and of sample.
Option: form designer for custom adaptation of log.
- Structured Database (SQL) with additional custom data that can be defined at every level (Order-Series-Sample), Object-Oriented, Modular and Network-Ready
- Data export in ASCII-format.
Option: additional processing in external software such as your Laboratory Information Management System.
- Supports measuring devices such as measuring station, scales and slide gauges.
- Password protection for sensitive functions (H/W configuration, templates, etc.)



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Templates Make Testing

Fast and Easy

Test templates contain all parameters needed for testing, such as Type of Sample, Type of Test, Test Standard, Quality Control, Graphical Representation and more. Several tests within a single order performed by assigning a test template to the series. Custom-made additional test templates can be defined in addition to the standard ones.

Simple to Operate

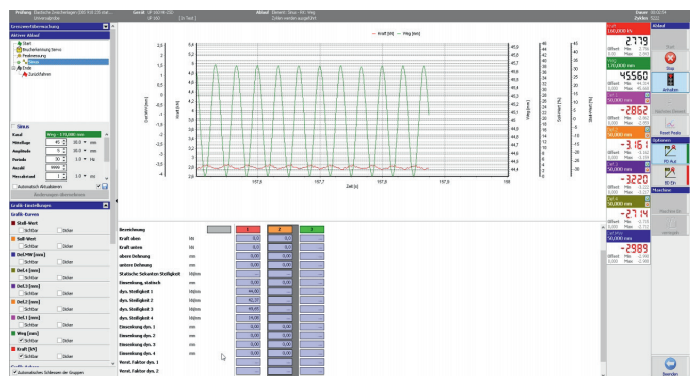
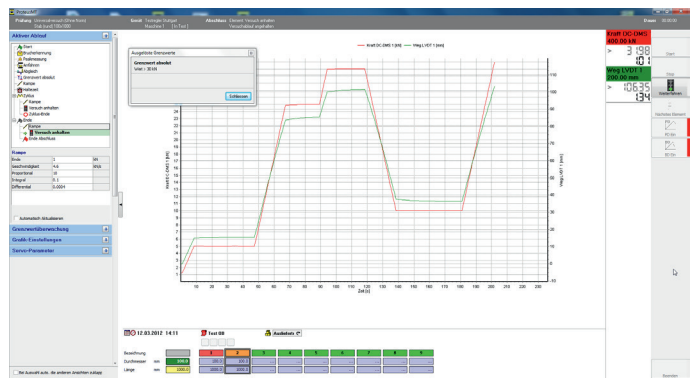
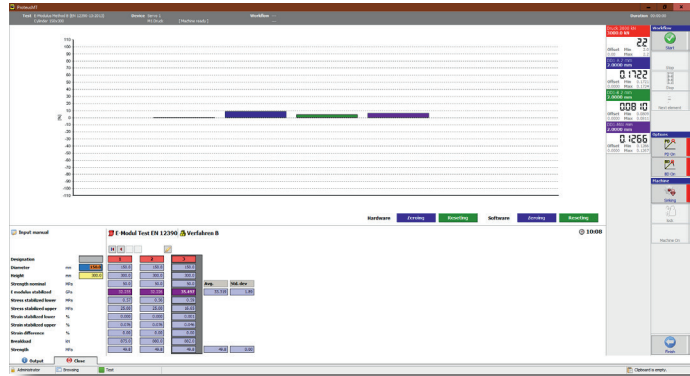
- All program functions can be selected with the mouse. The main functions may also be called with a combination of keys. Powerful object-specific functions called directly with the right mouse button to speed up operations: Copy, Paste, Clear
- Test classification in a relational database
- Database Structure: Databases can be structured according to any suitable folder hierarchy. Thus, tests can be sorted according to individual criteria, e.g. according to customers or suppliers, materials, type of test, time scales, test bodies. Each database contains any number of orders and series. A series contains at most 99 samples. Example: An order contains 3 series (Age 2, 7 and 28 days), each one with 3 samples.
- Data Export for Additional Processing: The data export function provides an interface with other external programs and stores the data in standard ASCII format. Option: Customer-specific ASCII formats.
- Logging: All series in an order can be printed out. The type of form is correctly handled by the Logging Manager, based on the test template. Option: Form Designer for custom-specific adaptation of forms.

Standard Sample Bodies

Depending on the type of test and the standard, the following approved sample bodies are available:

- Cubes:
 - 10, 15, 20 cm, 4, 6 inch
- Cylinders:
 - 10 x 20, 12 x 36, 15 x 15, 15 x 30,
 - 16 x 32, 20 x 20, 20 x 40 cm
- Drilling Cores:
 - 50 x 50, 50 x 100, 80 x 80, 80 x 160 mm
- Prisms:
 - 40 x 40 x 160 mm
- Bars:
 - 10 x 15 x 70, 12 x 12 x 36,
 - 15 x 15 x 70, 20 x 20 x 90 cm
- Plates:
 - 60 x 60 x 10 cm

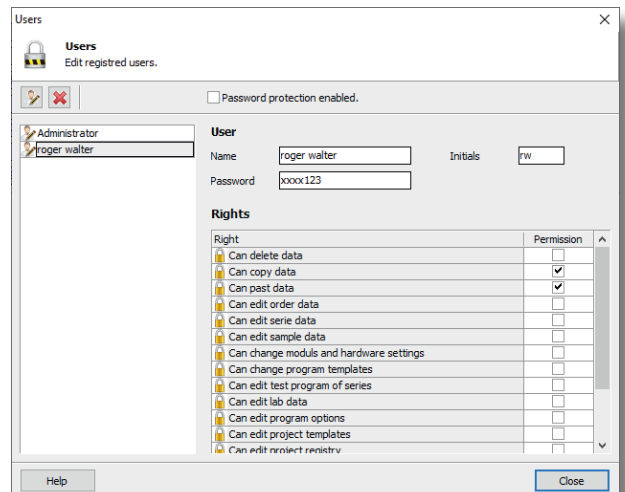
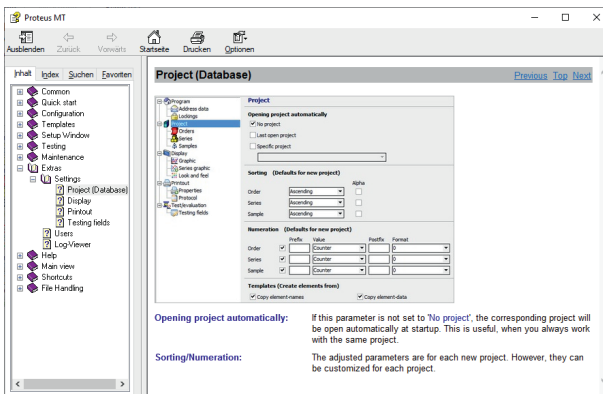
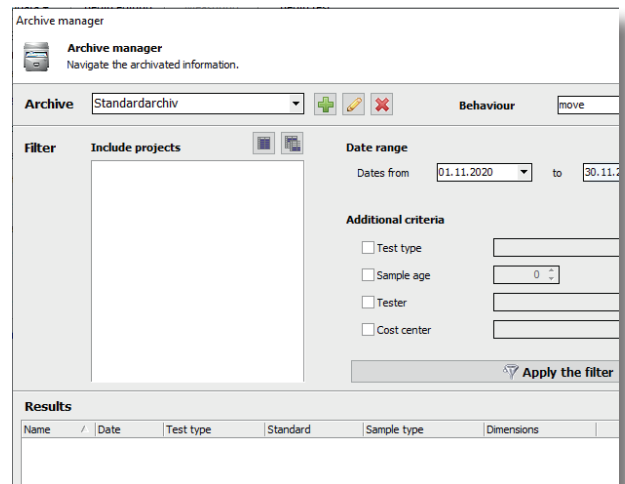
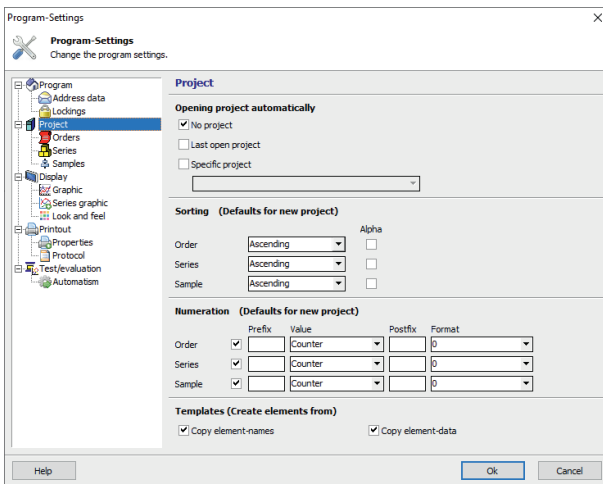
Dimensions to be selected without limitations.



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PROTEUS-MT Basis Module

- Data base contains a sample administration.
- Actual test and printer list with calendar make the daily work easier
- Connection of several controllers or measurements with up to 4 machines each
- is possible.
- For the combination bending-compression test 2 controllers are simultaneously in operation.
- Works with sliding gauge, balance, dial gauge and digital measuring station.
- Templates simplify the tests fundamentally. They are made with help of an assistant.
- Universal and special tests can be arranged on a graphically surface.
- Automated routine tests are easily created
- Password protection for the laboratory head for templates and hardware adjustments
- Standard export of the results in the ASCII-format for further processing in other programs
- Standard protocols for all tests, optional with or without graphic.
- Number of digits and rounding of the results can be indicated in the templates.
- Laboratory data base for further data fields in the order or series with choice of data, text and numeric fields with description and sorting
- Program for the calibration of the machine with DIGICON 4000



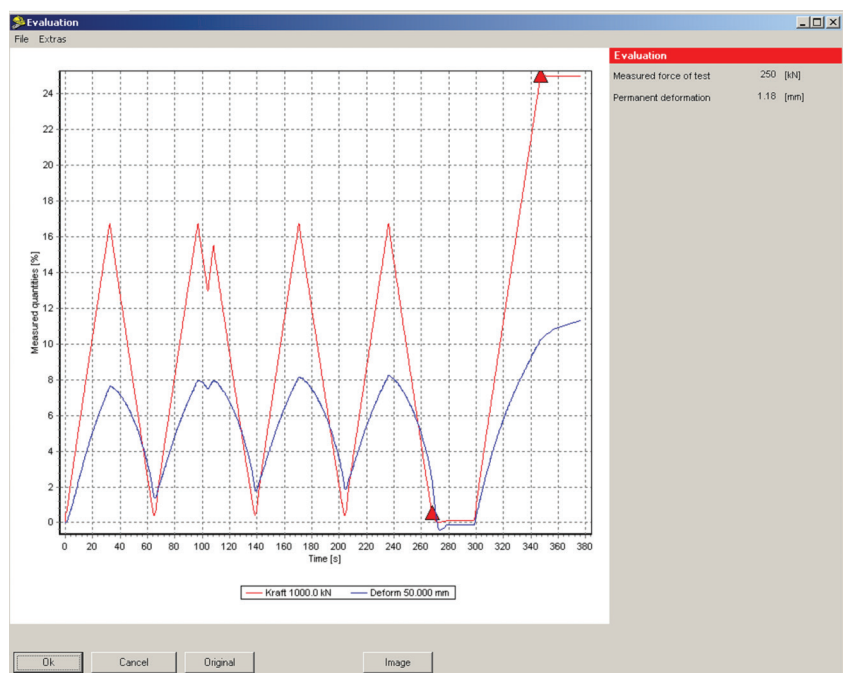
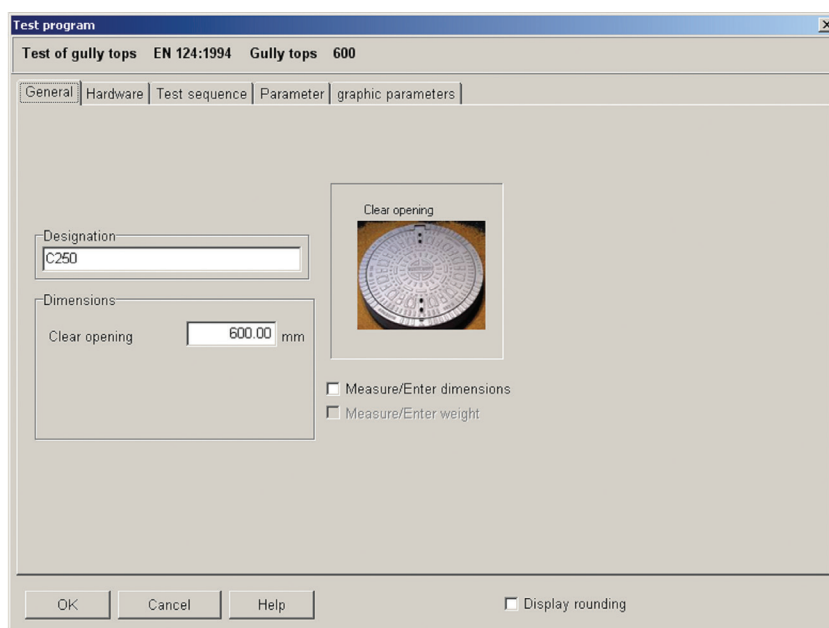
Gully Tops and Manhole Tops Testing EN 124

Proteus's library of standards-compliant test methods includes the module for testing of gully tops and manhole tops for vehicular and pedestrian areas according to EN 124-1 to 6 made from related materials.

This test method covers the permanent set test as well as the load bearing capacity test. The template offers fast and easy operation and automatic test control, data collection, evaluation, and reporting capabilities.

The template contains all parameters needed for testing, such as type of sample, type of test, test standard, quality control, graphical representation and more. Analysis including mean value and standard deviation of a series or group of tests. Custom-made additional test templates can be defined in addition to the standard ones.

Entering of definable laboratory information data as production data, production place, delivery date and so on as well as integral calibration and linearisation.



Creep Testing Software

This application software is available for data sampling, visualization and evaluation of up to 8 creep testing machines. The package offers you both, rapid and productive testing but also specialised applications for advanced testing requirements. The creep testing software and hardware package scans each test machine regularly to read load and if equipped with electronic extensometer also the deformation. It provides graph (force against time with additional deformation in combination with electronic extensometer) and test report print out. All measuring values are permanent available with real-time graph.

The screenshot displays three overlapping windows from the Creep Testing Software:

- Test Description for Machine 10 T48-22:** A configuration window with sections for Test Type (Creep Testing, Stress Rupture, Stress Relaxation), Thermocouples (Top, Middle, Bottom), Specimen Type (Round, Rectangular), and various input fields for Test Temperature (550 °C), Temperature Tolerance (2 °C), Minimum Soak Time (1 hour), Specimen No (T0040), Material (Steel B-L 12Cr), Specimen Id (SS Welded), Test Conditions (HS Creep), Working No (T05301), Estimated Life (1 Khrs), and Comment.
- Set Sampling Interval for Machine T48-22:** A table defining sampling intervals in hours, minutes, and seconds, along with the number of readings and total readings for each step.
- Creep Test Data Logger Ver 2.2 Sep 2003:** A data logger window for Machine No. T48-17. It includes input fields for A-Side, B-Side, (a+b)/2, and ASL No. (all 0 mm), and Top, Middle, and Bottom temperatures (all 0.0 °C). Run Time is 0853.06 hours. It features a graph of Temperature (°C) vs. Time (hours) showing a curve that levels off around 625°C. A sidebar on the right contains buttons for Description, Refresh, Modulus, Sample Rate, Heat Start, Test Start, Terminate, Exit, Enable Scan, Reference, Calibrate, Archive All, Re-Plot, and Exit.

Step	Store every (hour)	(minute)	(second)	Up to (hour)	No of Readings	Total No of Readings
1	0.01	0.6	36	0.5	50	50
2	0.02	1.2	72	1	25	75
3	0.05	3	180	2	20	95
4	0.1	6	360	5	30	125
5	0.2	12	720	10	25	150
6	0.5	30	1800	24	28	178
7	1	60	3600	48	24	202
8	2	120	7200	120	36	238
9	5	300	18000	240	24	262
10	10	600	36000	600	36	298
11	20	1200	72000	1200	30	328
12	50	3000	180000	2400	24	352
13	100	6000	360000	6000	36	388
14						
15						
16						
17						
18						
19						
20						

M/A	Machine Identity	Machine Status	Specimen No	Trans: A mm	Trans: B mm	(A+B)/2 mm	Top °C	Middle °C	Bottom °C	Start Date	Running Time	Last Readout
1	T48-13	Running	R0354	0	0	0	0	0	0	29/04/2003 14:16:32	0852:00	11:20:38
2	T48-14	Newly Defined	S6723									
3	T48-15	Available										
4	T48-16	Available										
5	T48-17	Running	R0341	1.0896	1.0679	1.07875	625.3	624.8	624.4	11/06/2003 11:42:30	7223:20	11:22:51
6	T48-18	Soaking	R0359	57804	66439	62122	201.5	210.3	192.2	29/04/2003 07:48:02	1:00	11:21:40
7	T48-19	Available										
8	T48-20	READY	T0038	1.26721	1.14009	1.20365	550.7	550.7	550.5	28/04/2003 15:09:30	354:96	11:18:28