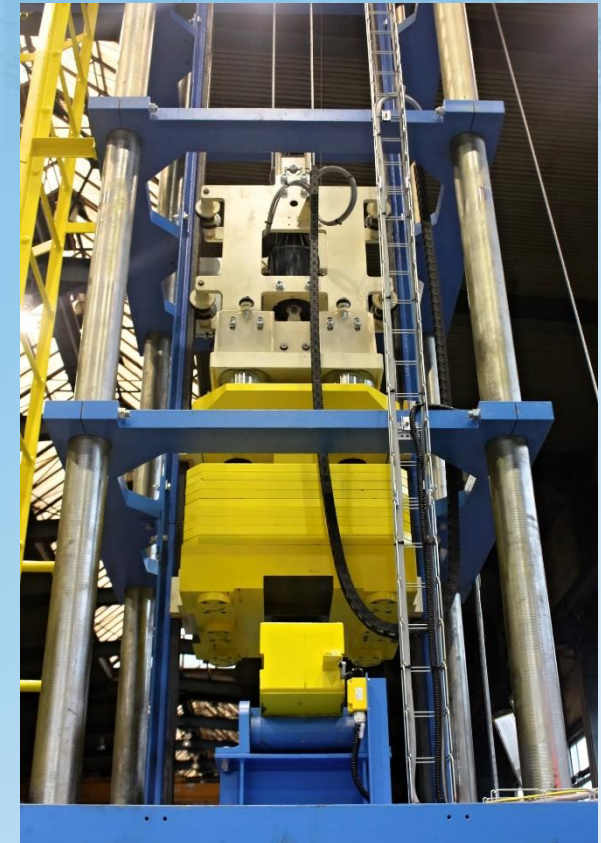


... from development to  
implementation



## Production of materials testing equipment and automation

Drop weight testers series  
DP.3 - DPFest up to 120 000J



Made in Czech Republic



Production of materials testing  
equipment and automation

Drop weight testers  
series up to 120 000J  
DP.3 DPFest

... from development to  
implementation

## Basic description

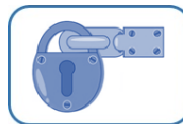
The low-capacity drop weight testers LABORTECH are designed to test and evaluate the fracture surfaces of ferritic steels by falling weights. The test method is described as a drop weight tear test in the following standards: API-RP 5L3, DIN EN 10274 a ASTM-E 436.

## Main advantages, functions, properties

- Robust vertical test frame with high stiffness, durability, good ergonomic design and maintenance-free operation.
- Modular system with various machine modifications.
- The unique combination of magnetic protection system in cooperation with ELHY electro-hydraulic equipment allows optimization of the pendulum bounce.
- Infinitely adjustable fall height with automatic lift by AC motor and inverter.
- Continuous checking of the correct weight of the impact weight.
- 6 high-efficiency shock absorbers for safe and reliable elimination of residual energy.
- Securing the working area with a safety girder with automatic unlocking during the test.
- Protective safety cover with electrical protection. High safety according to EN ISO 13849/2.
- Automatic sample loading system with pneumatic manipulator into the test zone with sample breakage within 10 sec.
- Flexible, quick and easy adjustment of the support to the tested specimen including centering.
- The quick-change blade system ensures simple and convenient operation for the user in harsh industrial environments.
- Detection of operating errors and their display in the program.
- Preparation for use of various test supports and cutting edges.
- Integrated electric transport for collection of broken samples with efficiency up to 95% for further use (metallographic analysis etc.).

## Machine control

- Centrally positioned controls for easy control and testing on the test system.
- Electronics and machine control integrated in the Rittal central enclosure, which is part of the machine with the DROPTest-S-xxx safety software installed in the Simatic S7 safety PLC with electromechanical interlocking and the possibility of using individual modules.
- Touchscreen control with electronic display of fall height, decreasing energy, weight of fall and impact speed.



## Security and Update Requirements

- LABORTECH high-impact machines, based on their design and structure, comply with the safety of the European Machinery Directive (89/392 / EEC and 91/368 / EEC - Machinery Safety).
- Certified TÜV safety circuit system with safety control and monitoring.
- High safety in accordance with EN ISO 13849-1/2
- All safety systems are double fused.
- Continuous inspection of safety guards and doors in accordance with new safety features.

## Extension of machines

- The possibility of expanding the drop weight tester with **instrumentation** with force measurement and impact trajectory on Electronics with 4 MHz measurement speed, digital control and measuring unit SPEED and powerful IMPACTTest – BASIS software with appropriate modules.
- Expansion of drop weight testers with **cooling systems** with maximum cooling temperature up to 90 °C.
- Expansion of machines with **robotic systems** with the possibility of autonomous control of the whole system without human intervention.

## Features of software DROPTest - BASIS

DROPTest is an integral part of all vertical impact machines type LabTest DP supplied by LABORTECH. This software will help you increase the productivity and quality of testing in your test rooms and test laboratories. You can streamline, refine and accelerate your testing and customize your testing environment to make it easy for operators to measure the mechanical properties of materials by the free falling weight method, regardless of their skills. Below you will find basic features in several points:



- Software designed for falling weight test.
- Editable sample types and test standards including item's name modification.
- Graphical evidence of preparations for individual standards and work procedures.
- Digital display all of actual values.
- Storage of measured data into database with possibility of filtering according to definition, order, date etc.
- Extensive calibration mode as standard.
- Automatic cooling timing prior to testing EN ISO 148-1 and ASTM E23.
- Data transmission from temperature chamber, thermometer etc.
- Multilanguage versions (English, Polish, Russian etc.).
- Print the report in PDF format.
- Export data to CSV - BASIS, or to MY SQL and MS SQL
- Unlimited license.
- Installation on any computer without license, etc.

## Warranty and post warranty service

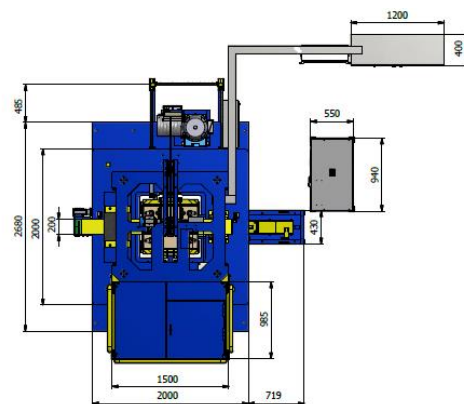
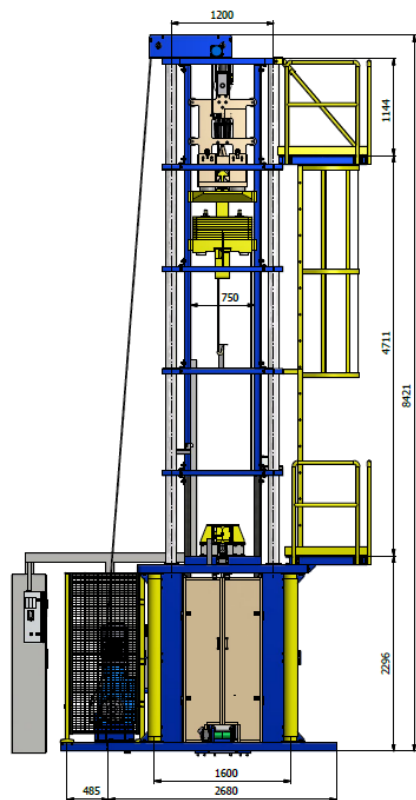
- We guarantee warranty and post-warranty service for each of our drop weight tester supplied by us. **EXPERTISE, ACCURACY and SPEED** are our priorities.
- Each customer can choose: Standard Service, Service 24 or LABWEBservice 24.

**Labor Tech**

Production of materials testing equipment and automation

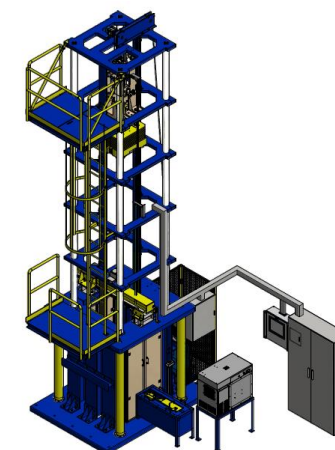
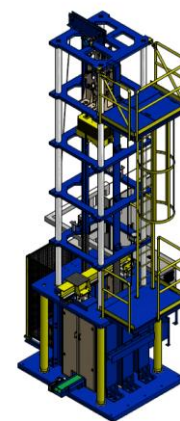
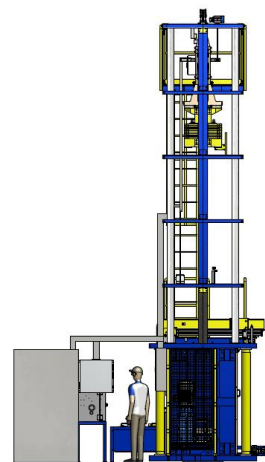
## Drop weight testers series up to 120 000J DP.3 DPFest

... from development to implementation



Technical data	Units	DPFest 20k	DPFest 40k	DPFest 60k	DPFest 80k	DPFest 100k	DPFest 120k
Energy range	J	118 – 20 000	118 – 40 000	118 – 60 000	294 – 80 000	294 – 100 000	294 – 120 000
Impact speed	m/s	1,98 – 7,03	1,98 – 9,01	1,98 – 9,87	2,42 – 9,87	2,42 – 9,87	2,42 – 9,87
Fall height range	mm	200 – 2500	200 – 4150	200 – 4970	300 – 4970	300 – 4970	300 – 4970
Position accuracy	mm	1					
Dimensions for weights	kg	60 – 810	60 – 990	60 – 1230	100 – 1640	100 – 2060	100 – 2460
Weight <sup>1</sup>	kg	6120	6840	10800	14200	16200	18800
Color finish	RAL	1015, 5015, 1021					
<b>Dimensions</b>							
Height of the Machine (A)	mm	4860	6950	8560	8560	8560	8560
Width of the Machine (B)	mm	1200	1200	1800	1800	1800	1800
Depth of the Machine (C)	mm	1230	1230	1800	1800	1800	1800
<b>Environmental conditions</b>							
Operating temperature	°C	10 to 35					
Storage temperature	°C	-35 to 55					
Working space humidity	%	< 90					
Noise level <sup>2</sup>	dB	< 65					
<b>Electrical connection</b>							
Supply voltage	V	3x400/50Hz					
Fuse	A	16	16	25	25	25	25
Power rating (without accessories)	kVA	8,5			12		

<sup>1</sup> Without accessories. <sup>2</sup> Measured at distance of 1 m from the machine.



## LABORTECH in the world



### Contact:

#### **LABORTECH s.r.o.**

Rolnická 130a, 747 05 Opava, Česká republika

Tel: +420 553 731 956, +420 553 668 648

E-mail: [info@labortech.cz](mailto:info@labortech.cz)

Web: [www.labortech.cz](http://www.labortech.cz)

GPS: 49°57'05.1"N

17°54'04.4"E

#### **LABORTECH TRADING s.r.o.**

Areál VVÚD Praha, Na Florenci 1686/9, 111 71 PRAHA 1, Česká republika

Tel: +420 731 656 723, +420 724 020 052

E-mail: [trading@labortech.cz](mailto:trading@labortech.cz)

Web: [www.labortech.eu](http://www.labortech.eu)

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