Competence creates Confidence.

Model no. 1713

FALLING WEIGHT TESTER

ISO 11173
ISO 3127
ASTM D 2444

Strong arguments

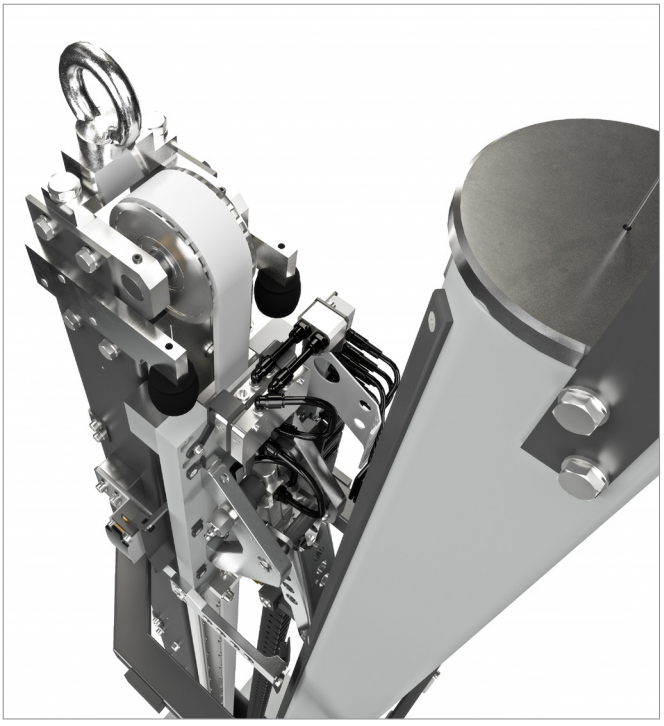
The falling weight tester is used to determine the external impact resistance of thermoplastic pipes using the staircase or round-the-clock method.

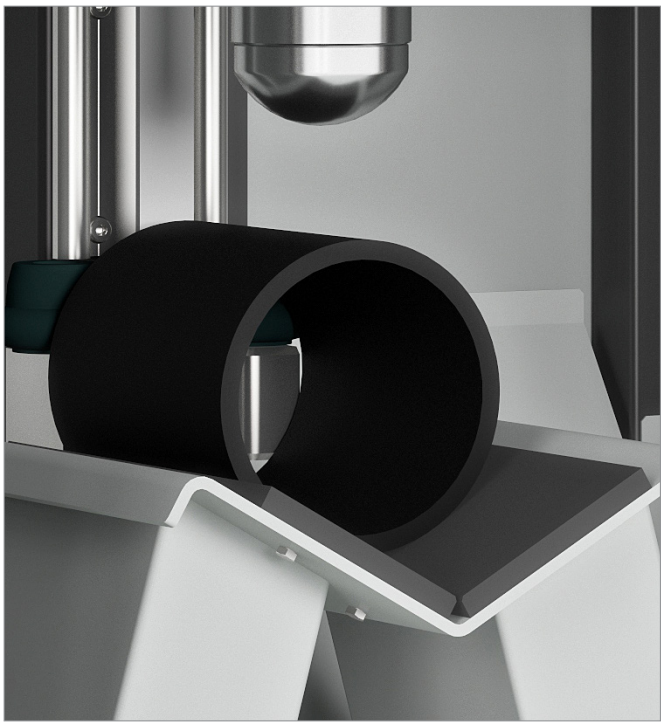
The falling weight tester is designed for automated material testing of thermoplastic sections of piping of varying circular cross sections in terms of their resistance to external impact forces. The tester has an adjustable drop height and can be used with a variety of drop weights. The testing procedure is measured and logged electronically.

Edition 03/2026

A round of testing

- The drop weight is transported to the height required for the test in question (impact) by a lifter and then dropped. The lifter moves back down as the weight drops.
- Once the drop weight has hit the sample, the catching mechanism places the weight back on the lifter. The falling weight tester is then prepared for the next test (using the same drop weight).
- For each stroke, the drop height (offset) can be increased or decreased at the touch of a button. The value is stored centrally and can be changed at any time.
- A screen dialogue allows an individually adjustable comment in text form to be added to each stroke.
- If a USB mass storage device is connected, it is possible to save up to 250 impacts per test cycle (data set).
- The testing device has been developed for the following test procedures:
  - Determination of resistance to external blows using the staircase method.
  - Test method for resistance to external blows using the round-the-clock method.
  - Determination of resistance to external blows round-the-clock method.
  - Test of impact resistance of thermoplastic pipes and fittings made of plastic by means of a drop weight.





Standard features

- Drop test attachment with drop pipe
- Sample holder
- Operator terminal with control cabinet
- Convenient operation and clear visualisation via integrated touch display
- Two-hand operation when activating the test procedure to protect the operating personnel
- Test can only be carried out when the test chamber is closed
- Precise weight positioning thanks to servo motor
- Automatic measurement and saving of falling speed on impact
- Evaluation of measurement results based on H50 value or TIR
- High impact frequency of up to 25 impacts within 60 s (at a drop height of 2 m)
- State-of-the-art PLC
- Interface to IPTDataLogging®
- CE conformity
- Swing doors
- Data input and evaluation of results via user interface (PC)

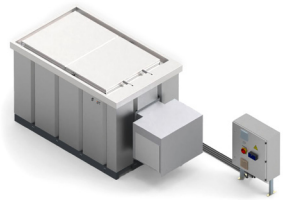
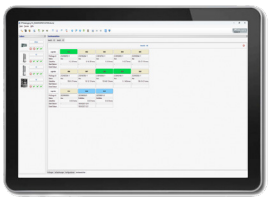
Options

- Sliding doors
- Data input, evaluation and archiving of testing data via IPTDataLogging software (PC)
- Cooling cells

Design of FALLING WEIGHT TESTER		V1713-0060	V1713-0061	V1713-0062	V1713-0070	V1713-0071	V1713-0072
Max. sample diameter	mm	710	1000	1600	710	1000	1600
Min. sample diameter	mm	20					
Permissible ambient temperature	°C	+5 to +30					
Permissible relative humidity	%	Max. 70					
Noise emission	dB(A)	< 70 at rest (noise generated on impact of the falling weight depending on the sample)					
Width of tester	mm	1650	2250	3860	980	1280	2000
Depth of tester	mm	730	730	825	670	710	800
Height of tester – drop height 2 m	mm	4140	4280	4980	4140	4280	4980
Height of tester – drop height 3.1 m	mm	5240	5380	6080	5240	5380	6080
Height of tester – drop height 4 m	mm	6140	6280	6980	6140	6280	6980
Width of control cabinet	mm	640					
Depth of control cabinet	mm	460					
Height of control cabinet	mm	1030					
Voltage data		230/400 V 50/60 Hz special voltage on request					

Design of FALLING WEIGHT ATTACHMENT		V1713-0080	V1713-0081	V1713-0082
Max. drop height	m	2	3.1	4
Max. impact frequency (dependent on operator)	1/min	25	19	16
Accuracy of drop height adjustment	mm	±10		
Drop weights	kg	max. 16		
Nose design		Depending on the applicable standard		
Lowest drop height without double impact (typical)	m	0.5 (dependent on sample)		
Speed error margin (typical)		< 5% of the theoretical falling speed		

Accessories for FALLING WEIGHT TESTER

Product	Description	Model no.
	Zero Degree Tank/cooling cabinet	1763 H3026
	Testing data management software IPTDataLogging®	1780