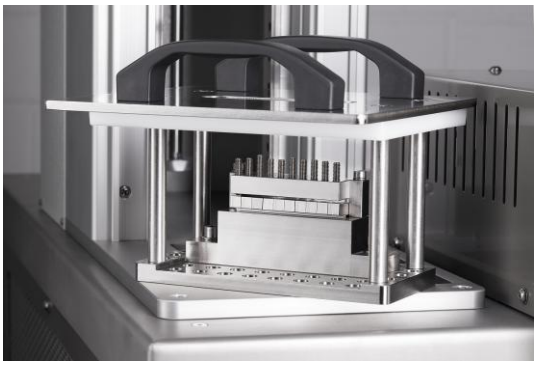
24-901-100 Brittleness Temperature Tester

Standards

ISO 812, ISO 974, ASTM D746, ASTM D2137



Application

Determination of the temperature at which plastics, which are not rigid at normal ambient temperature, exhibit brittle failure under specified impact conditions

Features

The machine consists of two components: The drop tower and the cooling unit.
Temperature is set directly on the front-panel of the cooling unit. The unit works with a continuous running, ozone friendly compressor and an electrical heater, which controls the temperature.
The input module holding the sample fixture is equipped with a floating guard and is inserted into the cooling bath. Via mechanical trigger the impactor is released to free fall accelerating to a drop speed of 2 m/s. The drop mass of 15 kg and thus energy of about 30 Joules assures that the drop speed will remain constant throughout the impact process.

Technical Data

Drop Height	up to 240 mm
Drop Speed	2 m/s
Sample Holder	exchangeable
Temperature	-85°C to +20°C
Cooling Time	approx. 120 min (+20°C to – 80°C)
Temp. Set Accuracy	0.1 K
Temp. Control Accuracy	+/- 0.05 K
Cooling Media	e.g. Methanol
Capacity	11 l
Coolant	CFK/ HCFK free

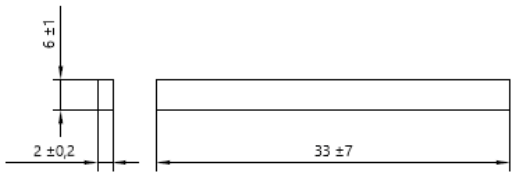
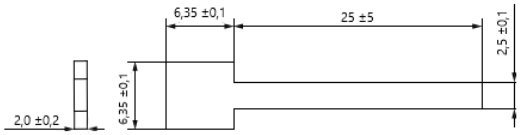
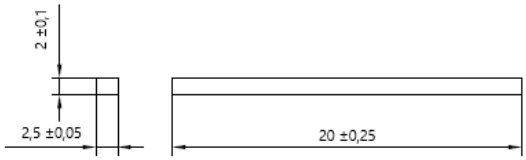
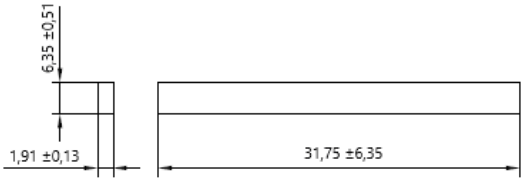
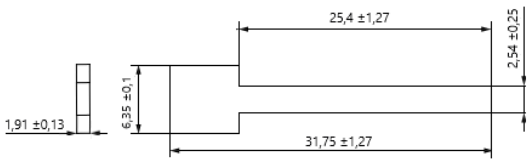
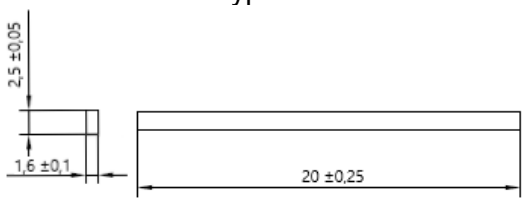
Dimensions and Connection

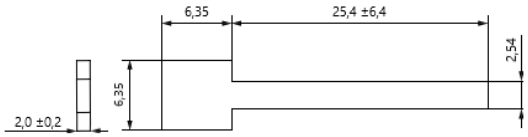
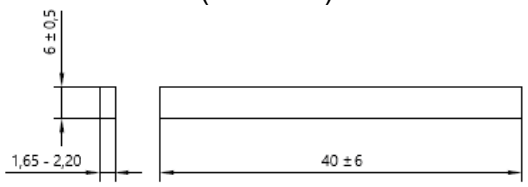
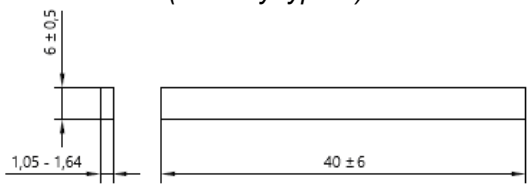
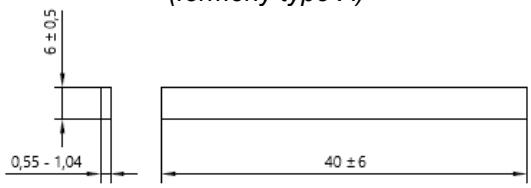
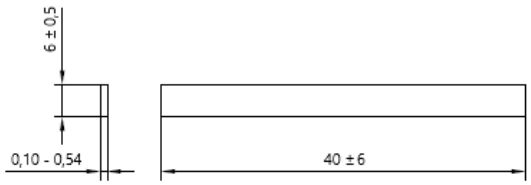
Dimension (HxWxD)	approx. 1,470 x 380 x 780 mm
Weight	approx. 120 kg
Mains	230 V / 50 Hz (optional: 230 V / 60 Hz)
Power	2,600 Watt
Air	6 bar

Accessories

Item no.	Description
9-915-847	Clamping Fixture type A without stop *ASTM D746*
9-915-849	Clamping Fixture type A with stop *ASTM D2137 & ISO 812*
9-915-850	Clamping Fixture type A, 5.7 mm *ASTM D2137 for specimen thickness 1.05 to 1.64 mm*
9-915-851	Clamping Fixture type A, 5.2 mm *ASTM D2137 for specimen thickness 0.55 to 1.04 mm*
9-915-852	Clamping Fixture type A, 4.8 mm *ASTM D2137 for specimen thickness 0.10 to 0.54 mm*
9-915-196	Clamping Fixture type A, for 10 specimens *ASTM D 746*
9-915-846	Clamping Fixture type B for 15 specimens *ASTM D 746 & ISO 974*

Configuration

Standard	Specimen	Fixture
ISO 812	Type A 	Type A, 5 specimens 9-915-849
	Type B 	Type A, 5 specimens 9-915-849
ISO 974		Type B, 15 specimens 9-915-846
ASTM D746	Type I 	Type A, 5 specimens 9-915-847 Type A, 10 specimens 9-915-196
	Type II 	Type A, 5 specimens 9-915-847 Type A, 10 specimens 9-915-196
	Type III 	Type B, 15 specimens 9-915-846

Standard	Specimen	Fixture
ASTM D2137	Type A *(formerly type B)* 	Type A, 5 specimens 9-915-849 Type A, 10 specimens *(possible with method C)* 9-915-196
	Type B, 1.65 - 2.20 mm *(formerly type A)* (standard) 	Type A, 5 specimens 9-915-849
	Type B, 1.05 - 1.64 mm *(formerly type A)* 	Type A, 5 specimens 9-915-850
	Type B, 0.55 - 1.04 mm *(formerly type A)* 	Type A, 5 specimens 9-915-851
	Type B, 0.10 - 0.54 mm *(formerly type A)* 	Type A, 5 specimens 9-915-852