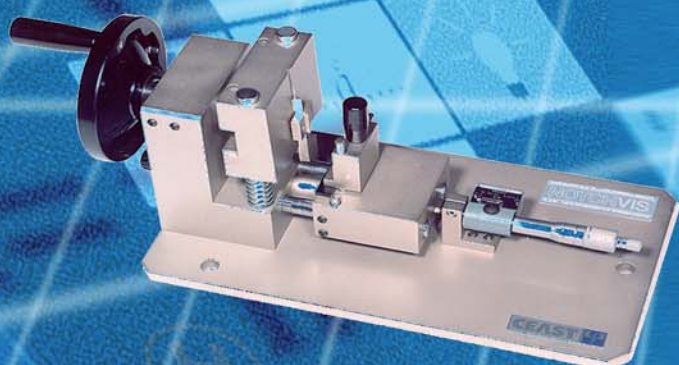


CEAST



progress in testing

NOTCHVIS MACHINES

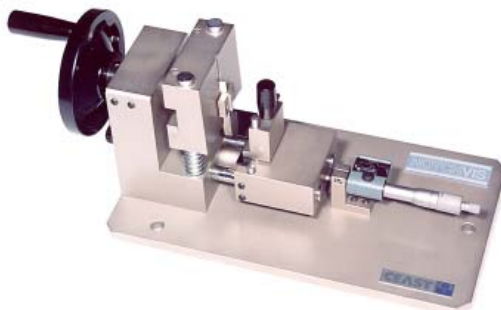


Notchvis Machines

code 6816.000 - 6955.000 - 6951.000 - 6950.000 - 6964.000



Motorized Notchvis - code 6951.000



Manual Notchvis - code 6955.000

Scope

These linear Notching Machines are designed to prepare, rapidly and accurately, notched specimens for impact resilience determinations according to Izod, Charpy and Tensile Impact methods.

These are therefore indispensable ancillary equipment to be used in conjunction with impact Pendulums such as our Resil Family:

- Impactor II codes 7605.000, 7610.000, 7611.000, 7612.000, 7613.000
- Resil 5.5 code 6844.000
- Resil Impactor codes 6967.000, 6956.000, 6957.000, 6958.000, 6959.000, 6960.000
- Resil Impactor Junior code 6963.000

These machines use interchangeable knives designed with a “constant profile” to notch the specimen with the correct angle and depth as prescribed by the specifications.

The machines are fitted with two separate motion systems; one to move the specimens and the other to move the knife.

The latter has adjustable speed, within the limits prescribed by the various standards.

Standards

Designed and built to meet the following standards:

- ISO 179, ISO 180, ISO 8256
- ASTM D256
- DIN 53435 Dynstat, DIN 53453
- BS 2782 - 350, BS 2782 - 359
- JIS K7110, JIS K7111

and other equivalent.

Linear cutting motion

These instruments belong to the category of “Planing machines” according to the standard ISO 2818 “Plastics - Preparation of test specimens by machining”. A clean and uniform notch is obtained by moving the specimens into the linear cutting path of the knife.

Overheating and consequent stresses, very common to other notching systems, are thus avoided. See our monography “Some observations on the criticality of the notch in impact testing” by G. Locati and S. Poggio.

Constant profile knives

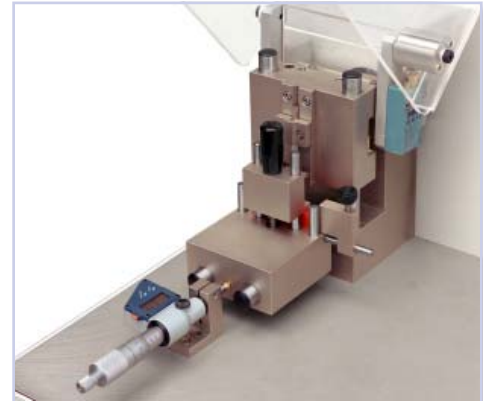
The constant profile knife allows a perfect reproducibility of the notches. The re-sharpening of the knife is quick and very easy as it is necessary to re-sharpen only the work surface with the appropriate work angle. This gives a long working life to each knife.

Notching for Fracture Mechanics procedure

The instrument can be easily equipped with a special support (code 6951.010 for Motorized Notchvis and code 6816.010 for Manual Notchvis) to notch specimens according to the requirements of the Fracture Mechanics procedure.

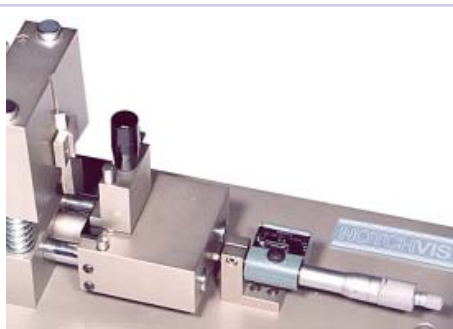
Technical characteristics of Motorized Nochvis code 6951.000 - 6950.000 - 6964.000

- | | |
|--|---|
| <ul style="list-style-type: none"> • Knife motion • Interchangeable constant profile knife • Cutting speed • Speed variation • Specimen feed • Feed measurement
 • Number of specimens
 • Specimen section • Safety | <p>motorized linear cutting path</p> <p>single blade</p> <p>12÷42 m/min approx. and adjustable by stepless system</p> <p>manually controlled</p> <p>through micrometric head 0.01 mm divisions. Optional micrometric head with digital display and zeroing button code 0700.556 (supplied in place of standard micrometric head)</p> <p>one or more up to a maximum working thickness of 25 mm</p> <p>width 15 mm, thickness up to 25 mm</p> <p>working area protected with mobile cover and microswitch. Emergency pushbutton and start-stop switches, according to CE safety regulations.</p> |
|--|---|



Motorized Notchvis working area

Technical characteristics of Manual Nochvis code 6816.000 - 6955.000



Manual Notchvis working area

- | | |
|--|--|
| <ul style="list-style-type: none"> • Knife motion • Interchangeable constant profile knife • Cutting speed • Speed variation • Specimen feed • Feed measurement
 • Number of specimens
 • Specimen section | <p>manual linear cutting path</p> <p>single blade</p> <p>up to 18 m/min approx.</p> <p>manually controlled</p> <p>manually controlled</p> <p>Manual Notchvis code 6816.000: through micrometric head with 0.01 divisions. Manual Notchvis code 6955.000: through micrometric head with digital display and zeroing button.</p> <p>one or more up to a maximum working thickness of 15 mm</p> <p>width 15 mm, thickness up to 15 mm approx.</p> |
|--|--|

Notching Quality



Shows a well made "V" notch, cut with a CEAST Notching Machine and using a sharp knife, a correct cutting speed and a linear cutting motion.

Example of notched Polycarbonate specimen, taken from the CEAST monography:
"Some observations on the criticality of the notch in impact testing".
[G. Locati and S. Poggio]



The edges of the notch are melted by heat generated from a knife which is not well sharpened, and/or by an incorrect cutting speed.

Constant profile knives for Motorized Notchvis and Manual Notchvis

Standards	Characteristics of the notch (according to standards)	Cobalt steel knives code	Tungsten carbide knives code
ISO 179 Type B ISO 180 Type B ASTM D 256 Method D BS 2782-350 Type B BS 2782-359 Type B JIS K7110 Type B JIS K7111 Type B and other equivalent	V notch $45^\circ \pm 1^\circ$ $r = (1 \pm 0.05)$ mm	6530.043	
ISO 8256 Type 1 DIN 53448 Tab. 2 and other equivalent	V notch $45^\circ \pm 1^\circ$ $r = (1 \pm 0.02)$ mm	6530.062	
ASTM D 256 Method D	V notch $45^\circ \pm 1^\circ$ $r = (0.5 \pm 0.05)$ mm	6530.062	6530.061
ISO 179 Type A ISO 180 Type A ASTM D 256 fig. 5 BS 2782-350 Type A and other equivalent	V notch $45^\circ \pm 1^\circ$ $r = (0.25 \pm 0.05)$ mm	6530.042	6530.045
ISO 179 Type C DIN 53753 Tab. 3 and other equivalent	V notch $45^\circ \pm 1^\circ$ $r = (0.1 \pm 0.02)$ mm	6530.055	
BS 2782-359 Type C DIN 53453 fig. 1 JIS K7111 Type C and other equivalent	Parallel flat sides (2 ± 0.2) mm	6530.041	6530.049
BS 2782-359 Type C DIN 53435 Dynstat DIN 53453 fig. 2 JIS K7111 Type C and other equivalent	Parallel flat sides (0.8 ± 0.1) mm	6530.040	

Technical Data

Model	Motorized Notchvis			Manual Notchvis	
Code	6951.000	6950.000	6964.000	6816.000	6955.000
Overall dimensions (LxDxH) (mm) Instruments	540 x 480 x 450			470 x 210 x 210	
Weight (kg) Instrument	43			15	
Supply	230 V - 50 Hz Singlephase	110 V - 60 Hz Singlephase	230 V - 60 Hz Singlephase	-	
Power (W)	300			-	
Paint	fuchsia RAL 4006 - gray RAL 7035			Sandblasted and Nickel-plated	

"Due to the continuous development policy of CEAST's Research and Development Department, changes may be introduced without notice"

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