PLASTIC AND RUBBER TESTING

CHARACTERIZATION OF RAW MATERIALS
THERMAL PROPERTIES
DEGRADATION TESTS

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01 ENGLISH

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ADVANCED TESTING SOLUTIONS

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NOSELAB ATS, forty years of experience in the field of instrumentation. We have had the opportunity to develop a range of instruments that represents the starting point of laboratories in worldwide industrial companies which deals with the production of plastic materials and composites.

Technology

New technological solutions developed according to experiences and methods suggested by international standards such as: ASTM, ISO, DIN, UNI.
Thus, we are prepared to offer the best solutions in order to support the technicians of industrial laboratories.
Our technology allows to study the intrinsic properties of products, with the aim of keeping an high level of instrumentation management to support also the requests of 4.0 Industry.

Certification and Quality

We perform certification on instruments following methods in compliance with ISO 17025, by means of comparison with primary instruments, periodically tested and certified by ACCREDIA institutes.

Technical consultancy

A consultancy to laboratory technicians, necessary to guarantee the best solution and aimed at identifying the appropriate test methods for any material.

Web Catalogue

The equipment shown in our Catalogues. no.1 and no.2, are grouped into functional sections for the various tests. Further information on the website is available, in addition to news and calendars of trade fairs.

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MELT INDEX

Extrusion Plastometer which uses the gravimetric method, or rather the quantity in grams of extruded in 10 minutes.
The heated material is extruded, cut manually at regular intervals and weighed with a precision balance.

- **10002013 MELT INDEX manual cutting device**
- **10002017 MELT INDEX manual cutting device - Hastelloy**

Plastometers for non-corrosive and corrosive thermoplastics

Range of Plastometers for the determination of the fluidity index of plastic materials - defined and known as Melt Flow Rate (M.F.R.) - for the acceptance and study of polymeric grain both in quality and in research and development.
The execution of these tests allows to obtain information on the behavior of the material, including thermal stability, whose knowledge is necessary in the processing stages such as molding or extrusion.

The Melt Index is a value related to the fluid state that allows an estimate of the average molecular weight.

Measurement methods:
A Gravimetric / MFR (Melt Flow Rate)
B Volumetric / MVR (Melt Volume Rate)

Hastelloy versions are available for tests on highly corrosive thermoplastics such as PTFE, PVC, PVDC etc. Made with this steel all the parts in contact with polymers: test chamber, piston and nozzle are made of Hastelloy, keeping the same general characteristics.
According to ASTM D 3364 it is necessary to use the optional nozzle (hole 2,095 mm height 25.43 mm) and a stress of 20 Kg.

Standard	
ASTM	D 1238 Method A, D 2116, D 3159
ISO	1133
UNI	5640

Technical features:
- Equipped with mechanical device for manual cutting of the extrusion
- Electronic thermoregulation system, microprocessor with 5 "TOUCH Screen TFT color (resolution 0.1 ° C) for setting and temperature control
- Heating system: 2 heating elements
- Working temperature: 50 ° + 400 ° C (0.2 ° C)
- Thermal stability: 0.2 ° C in the test area

Size and material: Nozzle - Matrix - Piston
Matrix: int. 9.55 mm, made of steel (52/55 HRC)
Piston: 9.474 mm diam. height of the base pressure 6.35 mm, steel (45/50 HRC), weight 325 g, complete with head weight
Nozzle: 2.095 mm hole, height 8 mm, steel (60/65 HRC)

Mass (Kg.)	Description Weight	Code
0.325	Steel piston with head weight	Included in the configuration
1.000	Weight g. 675	10002034
1.050	Weight g. 725	10002033
1.200	Weight g. 875	10002032
2.160	Weight g. 1835	10002031
3.800	Weight g. 3475	10002030
5.000	Weight g. 4675	10002029
10.00	Weight 10002029 + g. 5000	10002029 + 10002092
12.500	Weight 10002029 + g. 5000 + g. 2500	10002029 + 10002092 + 10002091
21.600	Weight 10002029 + 3 x g. 5000 + g. 1600	10002029 + 3 x 10002092 + 10002090

A MELT AUTOMATIC

Extrusion Plastometer with automatic cutting for the determination of the hot fluidity index of thermoplastic materials.
The instrument in addition to the gravimetric procedure (MFR) also performs the volumetric procedure (MVI) and uses a linear system to detect the displacement of the piston, hence the volume of the extruded material in a known time.
The microprocessor acquires data and processes it by automatically calculating up to 12 MFR values, the values and their mean are shown on the display.

- **10002410 A MELT automatic cutting device**
- **10002412 A MELT automatic cutting device– Hastelloy**

Dimensions: 420x300x530h mm
Weight: 30 Kg about

In addition to the common characteristics with the Melt Index
- Electromechanical device for automatic cutting of the extrusion, according to the times established by the ASTM D 1238 standard
- Linear system for measuring the displacement of the piston
- USB interface for PC connection

Accessories

A MEP Link Software with cable	Code 00100107
Go-no- Go gauge for checking the inside diameter of the die	Code 10002074
Air bubble level	Code 10002066

MEP
AUTO INDEX

Automatic extrusion plastometer - is a highly reliable instrument that can meet the most sophisticated laboratory requirements for production quality control, determines with automated procedures the hot fluidity index - Melt Flow Rate, a fundamental test for the characterization of thermoplastic materials, in accordance with various international standards.
The weight load is manual. Predefined masses 2.16 - 5 - 10 - 21.6 kg, other weights can be included on request.
The instrument is equipped with an extruded material cutting device consisting of an electronic timer that automatically operates the blade according to the intervals set by the program, or manually and at any time, by pressing a button.

- **10002216 MEP automatic**
- **10002218 MEP automatic Hastelloy**

Dimensions: 600x330x530 h mm
Weight: 35 Kg about

Technical feauters:
- Touch-screen interface, color LCD
- Integrated microprocessor for test management
- Electronic thermoregulation system with PID, digital and microprocessor action - resolution 0.1 ° C, operating temperature: 80° ÷ 400° C
- Configuration of the test parameters (temperature, preheating time, acquisition space, material density, applied weight) that can be stored: 28 pre-set configurations
- Measurement sampling from 10 to 50 determinations
- Preheating with or without weight
- Repeatability of the starting position of the test
- Thermal stability: ± 0,2 ° C in the test area
- Equipped with an extruded material cutting device, an electronic timer that automatically operates the blade according to the set intervals, or manually and at any time, by pressing a button
- Cutting intervals according to ASTM D 1238: 15 - 30 - 60 - 120 - 180 - 360“
- Forward tipping test chamber, to facilitate cleaning
- USB port for PC connection

Standard

ASTM	D 1238 Method A & B, D 2116, D 3159
ISO	1133
UNI	5640

The heating chamber in both models can be tilted frontally, allowing a better execution by the operator who must clean the test chamber after each test.

Size and material: Nozzle - Matrix - Piston
Matrix: int. 9.55 mm, made of steel (52/55 HRC)
Piston: 9.474 mm diam. height of the base pressure 6.35 mm, steel (45/50 HRC), weight 325 g, complete with head weight
Nozzle: 2.095 mm hole, height 8 mm, steel (60/65 HRC)

Optional
Software Mep Link Standard: graphical display of data, printing of graphs, archiving and recall of tests, printing of determinations made and / or archived, with indication of average and standard deviation, comparison between 2 tests.
Code 00100105

A-MEP
AUTO INDEX MULTI WEIGHT

Automatic extrusion plastometer - it is ideal to meet the needs of the major laboratories both for Quality Control and for Research and Development.
A-MeP makes it possible to determine, using automated procedures, the Hot Fluidity Index - Melt Flow Rate, a fundamental test for the characterization of thermoplastic materials, in accordance with various international standards, having the possibility to preload the masses and select them.
The automatic weight lifter (4 masses) directly linked to the control electronics facilitates the material compaction operations, the preheating takes place with or without or weight.
The instrument is equipped with an extruded material cutting device consisting of an electronic timer that automatically activates the blade according to the intervals set by the program.

- **10002215 A-MEP automatic multi weight**
- **10002217 A-MEP automatic multi weight Hastelloy**

Dimensions: 600x330x1000 h mm
Weight: 80 Kg about

Technical feauters:
- Touch-screen interface, color LCD
- Integrated microprocessor for test management
- Electronic thermoregulation system with PID, digital and microprocessor action - resolution 0.1 ° C, operating temperature: 80° ÷ 400° C
- Thermal stability: ± 0,2 ° C in the test area
- Preheating with or without weight
- Configuration of the test parameters (temperature, preheating time, acquisition space, material density, applied weight) that can be stored: 28 pre-set configurations
- Default masses 2.16 - 5 - 10 - 21.6 kg (different weights available on request)
- Equipped with an extruded material cutting device, an electronic timer that automatically operates the blade according to the set intervals, or manually and at any time, by pressing a button.
- Cutting intervals according to ASTM D 1238: 15 - 30 - 60 - 120 - 180 - 360“
- Measurement sampling from 10 to 50 determinations
- USB port for PC connection

Standard

ASTM	D 1238 Method A & B, D 2116, D 3159
ISO	1133
UNI	5640

	MELT INDEX	A MELT	MEP	A MEP
Temperature range	50° a 400°C		80° a 400°C	
Temperature control accuracy	±0.2° C			
Temperature resolution	0.1° C			
Heating time	< 30 min			
Automatic cutting system		•	•	•
Linear positioning system		•	•	•
Motorized lift				•
High resolution touch screen	5” TFT	5” TFT	LCD	LCD
Gravimetric test	•	•	•	•
Volumetric Test		•	•	•
Masses kg	See codes		2,16/5/10/21,6	
Consumption	400W	400W	420W	570W
Dimensions (mm)	420x300x530	420x300x530	600x330x530	600x330x1000
Weight	30 Kg	30 Kg	35 Kg	80 Kg

MELTING POINT

Detects the point at which the pulverized thermoplastics melt. The pulverized material is sealed between two slides and heated according to the Fisher Johns method. The passage of state of the material under examination is observed under an illuminated magnifying glass which offers to observe the phenomenon.

▫ **10002500 MELTING POINT**

Dimensions: 310x230x220 h mm
Weight: 5 Kg about

Standard	
ASTM	D 2117
ASTM	D 789

Technical feauters:
- ▫ Measuring range from +30 to 300° C
- ▫ Accuracy: ± 0.1 ° C
- ▫ TFT color display, microprocessor with digital temperature indicator
- ▫ Illuminated magnifying glass
- ▫ The instrument is supplied with 1 box of slides diam. 18 mm thick 0.1 mm (100 PCs)

CURE TIME

Measure the curing time of two-component resins, epoxy or polyester resins.
The presence of four cavities allows to perform more tests, reserving one of the cavities for a test conducted on resin alone.

▫ **10077000 CURE TIME**

Dimensions: 260x260x260 h mm
Weight: 8 Kg about

Standard	
ISO	8987
DIN	16916 02 OC

Technical feauters:
- ▫ Upper plate in AISI 304 stainless steel, provided with 4 ø 20 mm copper semi-spherical seats complete with 4 separate heaters, connected to the thermoregulator, insulated with refractory material
- ▫ Digital microprocessor PID electronic thermoregulator with 4-digit liquid crystal display
- ▫ Membrane keys to set the temperatures and lights with LEDs to indicate that thermoregulation is in progress
- ▫ Scale from 0 to 300° C
- ▫ Accuracy ± 0.1 ° C
- ▫ Protection and safety cover

DENSITY GRADIENT

Density gradient with two or three columns
It allows the determination of the density of solid materials at a temperature of 23 ° C according to the density gradient method.In a measuring range between 0.84 ÷ 2.6 g / cm³ based on the use of spheres with a known density.

Small glass spheres (marker float) of known density are lowered into the column and stop when their density coincides with the density of the solution in which they are immersed. To determine the density of a sample it is necessary to immerse it in the same column and wait until it has stopped, having reached the equilibrium between its density and that of the solution. The instrument is equipped with a motor device for the recovery of spheres and samples without altering the gradient.

- ▫ **10006000 Density gradient -2 columns**
- ▫ **10006010 Density gradient - 3 columns**
- ▫ **10006012 Gravity filling system**

Standard			
ASTM	D 1505	BS	2782 65 Meth. 509
DIN	53479	ISO	823 Meth. D, 1183

Dimensions: 310x310x1080 h mm
Weight: 10 Kg about (empty)

Technical feauters:
- ▫ Bath capacity: 45 liters
- ▫ Available from 2 or 3 columns 850 mm/55 diam. Thermostated and graduated for 700 mm, Division 1 mm
- ▫ Measurement range: 0.8 ÷ 3.3 g/cm³ (precision 0.0001 g/cm³ at 23° C)
- ▫ Thermostat unit at 23° C (± 0.1° C) - cooling coil to be connected to water supply
- ▫ Motorized system for recovery of density spheres and samples

Accessories
GRAVITY FILLING SYSTEM
Floor system for liquid filling of density columns.
Composed of 2 ml conical flasks with fittings and faucets, capillary connection and interception tube, spherical ground joints to be applied to the floor support, built-in magnetic stirrer.
They are necessary to prepare the solution bidistilled water and anhydrous ethyl alcohol or other liquids appropriate to the gradient.

Set of 8 certified density marker floats - range 0.84xx ÷ 1.49xx g./cm³	Code 10006001
Single density marker float, range 0,84xx ÷ 1,49xx g./cm³	Code 10006005
Single density marker float, range 1.50xx ÷ 2.30xx g./cm³	Code 10006007

BULK DENSITY

Bulk density apparatus for the measurement of the apparent density and fluidity of plastics.

The apparatus allows the determination of the apparent density of the granular plastic materials and flowing powders through a hole of normalized dimensions.
Container with a 9.5 mm diameter hole; equipped with lower closure, carrier support and collection cup of the material drained having capacity of 100 ± 0.5 cm³ according to ASTM D 1895 met. A - ISO 618660

For the determination of the apparent density of the molding materials consisting of a conical truncated funnel with a total height of 115 mm, a funnel holder and a collecting cup, capacity 100 ± 0.5 ml and internal diameter 33 mm according to ISO 60.

- ▫ **10016000 BULK DENSITY ASTM D 1895 Method A**
- ▫ **10016001 BULK DENSITY ISO 60**
- ▫ **10016002 BULK DENSITY ASTM D 1895 Method B**
- ▫ **10016003 BULK DENSITY ASTM D 1895 Method C**

DENSIMETER

Densimeter H-300 S is an efficient instrument for calculating specific weight with a resolution higher than 0.001. The system is suitable for plastics, rubber, films, liquids, sintered metals, ceramics, glass and other non-metallic materials. The value is automatically displayed after the elapsed time.

▫ **40222030 ANALITICAL BALANCE FOR DENSITY**

Technical feauters:
- ▫ Resolution Density 0,001 g./cm³
- ▫ Range: 0.01 ... 300 g.
- ▫ Automatic density calculation
- ▫ Water temperature compensation
- ▫ Able to measure the floating sample in water
- ▫ Measure the volume of the solid sample

Accessories

Software HiMeasure (Windows7) with cable	Code 40222032
Kit Liquid of density	Code 40222031

Dimensions: 190x218x170 h mm
Weight: 1,50 Kg

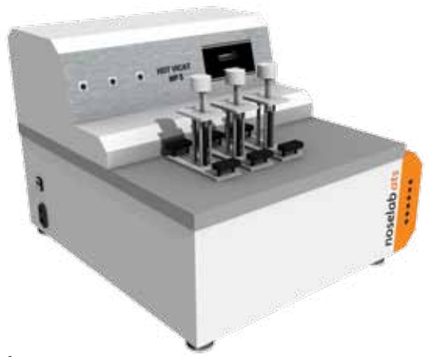
HDT VICAT

Apparatus for determining heat deflection temperature HDT test and temperature. Softening VICAT test.
Thermostated cell with diathermic liquid with precision ± 0.2 ° C
While the refrigeration of the test tank is obtained by forced circulation of water in the gap. Detection of deformation by linear transducers with accuracy of 0.01 mm
Start of the test and preparation of the thermal ascent using the TFT color touch screen keyboard to display the flexion or penetration values of each specimen and bath temperature.

- **10001002 HDT Vicat MP3**
- **10001040 HDT Vicat MP6**
- **10001019 Vicat MP3**

The standard configuration includes:
- 3 heads for each VICAT and HDT test or 6 heads
- HDT head centering device
- Weights for VICAT tests, 2 weights from 910 and 4000 g
- Binary weights for HDT tests, 12 weights of 1, 2, 4, 8, 16, 32, 64, 128, 256, 512.1024 and 2048 g

Technical feauters:
- Operating temperature + 20° C + 300° C
- Taking the initial deformation of the specimen
- Predisposition of the deformation or penetration stroke
- Stabilization of the bath temperature with a capacity of approximately 7.75 liters
- Data storage until the device is switched off
- Automatic return to the initial temperature at the end of the test



MP3
Dimensions: 600x710x540 h mm
Weight: 80 Kg

MP6
Dimensions: 730x710x540 h mm
Weight: 135 Kg

Standard

Vicat Softening Temperature (VST):	
ASTM	D 1525
DIN	53460
UNI EN ISO	306
HDT (Heat Deflection Temperature):	
ASTM	D 648
ISO	75-2
DIN	53461

Optionals

Silicon Oil 350 (5 Kg)	Code 10201903
TEMPERATURE CONTROL OPTION FOR HDT / Vicat MP3 for each crew Allows temperature control for a single test station by 3 separate PT100 probes	Code 10001016
ADAPTER for FLAT WISE tests 64 mm, complies to ISO 75-2 for each test station	Code 10001081
Software HDT Vicat series MP	Code 00100106

OZONE CHAMBER

AUTOMATIC APPARATUS FOR THE DETERMINATION OF THE OZONE RESISTANCE
It allows the evaluation of the resistance to the action of an ozone air concentration opposite to the rubbers and elastomers in general.
Ozone concentration variable from 0 to 500 parts per hundred million pphm air, detected by an analyzer that allows continuous analysis of the amount of ozone in gaseous mixtures, electronically controlled and fully automatic, measures with extreme precision ozone content in the interval 0- 500 pphm determining the absorption due to the present ozone detected at a wavelength of 254 nm. The results are presented as a pphm on a digital display and are free of interference due to the presence of other gases or moisture.

- **10047005 Ozone Test Chamber 100 lt**
- **10047010 Ozone Test Chamber with humidity control 250 lt**

Technical feauters:
- Temperature controlled by a thermoregulator that guarantees a uniformity of ± 2° C throughout the test cell in the range +10 +60° C.
- Cooling group
- Ozone generator consisting of: silent discharge generator.
- Ozone concentration is detected by U.V. in the range 0-500 pphm
- Spare parts from 1/3 spare parts / minute
- Continuous cycle filtration system with activated carbon
- Rotational Planetary Support for the Test Device
- Rotational speed 1/10 up to 1 rotation / min
- PLC Controller Touch screen: program 100 groups 120 sections
- Various safety functions and protection from over-current and over-temperature
- RS 232 communication port

100 lt
Test chamber dimensions: 450x450x500 h mm
External dimensions: 1200x800x1600 h mm
Weight: 150 Kg

250 lt
Test chamber dimensions: 600x500x750 h mm
External dimensions: 1200x1120x1810 h mm
Weight: 210 Kg

Carrier" rotating device for static test with 12 tensioners according to ISO 1431-1
Other solutions available to perform dynamic testing according to ASTM D 3395.
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Standard

ASTM	D 1149
ASTM	B 117
ASTM	B 268
ISO	1431

Optionals

"Carrier" static rotary device, complete with 12 tensioners for single specimens	Code10047025
Tensioner for single specimen (additional)	Code 10047022
Dynamic device according to ASTM D 3395	Code 10047021

CONTENTS OF CARBON BLACK

System for determining the content of Carbon Black in olefins: polyethylene, polypropylene, etc.
The method is based on the pyrolytic decomposition of the material in an inert gas stream (nitrogen), the remaining quantity is again burnt under forced ventilation and the carbon black content determined by weight difference.
The tubular electric oven for the combustion of the material reaches the maximum temperature of 1200° C.

- **11000015 CARBON BLACK 1200**

External dimensions of the oven only: mm 450x375x430 h
Heated length of the tube: 400 mm
± 5°C of uniformity of the temperature in 196 mm of length
Weight: 22 Kg about

Standard	
ASTM	D 1603

Technical feauters:
- Inner dimension of the tubular chamber length 450 mm internal diameter 60 mm
- Oven accuracy over 100° C = 1° C
- Test tube in quartz diam. 29 mm with rubber caps
- Set of combustion boats mm 96x12x10 with ring
- Nitrogen flowmeter with regulation valve
- Glassware kit for nitrogen purification and filtration bottles

Accessories

Nitrogen purification kit 1 bott. (250 ml)	Code 11000011
Filtration kit for 2 Bott. (250ml) dry ice bath 2000 ml	Code 11000012
Glass dryer diam. 200 with lid and knob	Code 40991074
Perforated porcelain plate for dryer c.s.	Code 40991058
Granular silica gel with indicator 1000 g	Code 40990059
Quartz tube diam. 29 mm, length 570 mm	Code 40991075

Chemical products to be used with optional accessories: Pyrogallic acid, potassium hydroxide, trichlorethylene.

BRITTLENESS -TR TESTER

System to perform two of the most important tests for rubber and elastomers: low temperature retraction (TR) and Brittleness Point for tests at a stabilized temperature both for the effects of crystallization and the elastic return of the specimens.
Equipped with an incremental temperature electronic programmer, the chiller unit allows to reach temperatures of -75° C, the test tank has a capacity of 20 liters
To implement the impact of the Brittleness Point, the instrument uses a pendular hammer rotating around the constrained end hits the specimen. Repeatability and constancy are ensured by an automatic release system of the hammer.

- **10012006 BRITTLENESS Refrigerated**
- **10012010 BRITTLENESS-+ TR TESTER Refrigerated**
- **10012014 BRITTLENESS-+ TR TESTER Refrigerated and instrumented**
- **10029005 TR TESTER Refrigerated**
- **10029006 TR TESTER Refrigerated and instrumented**

Dimensions: 1300x810x1530 h mm
Weight: 250 Kg

Standard	
ASTM	D1329, D 2137 Meth. A e B
ISO	2921, 974, 812
DIN	53546

TR TEST
ISO 2921 - ASTM D 1329
With this device you can evaluate both the effects of crystallization that the elastic return of the specimens.

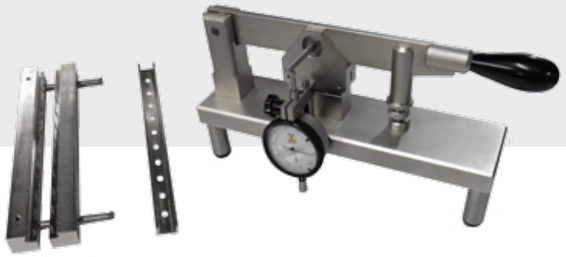
BRITTLENESS TESTER
ISO 974 – ISO 812 - ASTM D 2137 met. A e B - DIN 53546
Allows the determination of the temperature, at which 50% of the specimens examined breaks at the prescribed conditions, or presents superficial cracks.

INTEGRATED ELECTRONIC DETECTION SYSTEM
Signals originating from the TR tester and the Brittleness Tester transducers are sent to the interfaced Personal Computer.
The provided program allows to show and print the data and/or transfer them to an external system.

ENVIRONMENTAL STRESS CRACK APPARATUS

It allows the determination of the "stress cracking" of ethylene plastics: typical application in the field of ethylene plastics in which it is necessary to determine whether under certain stresses in the presence of liquids (oils, soaps, solvents, etc.) a cracking process is favored or breaking.

- **10036000 ESCR STRESS CRACKING**

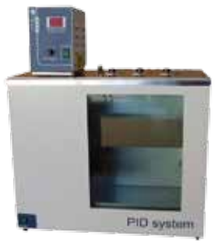


Standard	
ASTM	D 1693

The standard configuration includes:
- Device for carving 19 mm at variable depth on the specimen (38x 13 mm) complete with blades
- Tool for simultaneous bending of 10 specimens and clamp for extraction of 10 specimens from the bending device and for their introduction into containment support
- 2 supports each containing 10 specimens, made of stainless materials, suitable to be introduced into the glass tubes
- 2 test tubes in Pyrex glass, diameter mm 32 x 200 mm, for the containment of the reagent and the supports

Accessories

THERMOSTATIC BATH FOR VISCOMETRY



Thermostatic bath to accommodate 5 viscosimeters for the determination of "Stress Cracking". It is equipped with a thermostatic unit with pressure pump, to maintain the stability of the set temperature and displayed on the digital display, temperature range: from + 5° C above the environment to 99.9° C
Equipped with interior lighting and tempered glass window
Dimensions: 475x265x560 h mm
Power: 230V, 50Hz, 1,2 kVA

ESCR device	Code 10036000
Comparator	Code 10036005
Support for loading 10 specimens.	Code 10036001
Pyrex test tube complete with stopper, External Ø mm. 32, height mm. 200	Code 10036002
Pack of blades for carving the specimen (5 pcs)	Code 10036003
Thermostatic bath 5-opening	Code 40310600
Thermostatic bath 3-opening	Code 40310601
Rubber rings Ø mm. 30/54	Code 17075402

COMPRESSION SET METHOD B

For applications where rubber is stressed in compression in air or liquid. Method B with constant deflection in the air
The test measures the ability of rubber compounds to maintain the elastic properties after a prolonged compressive stress action. These tests apply to conditions of use involving static stresses, and are normally performed at elevated temperatures.
It allows compressive stress, with the constant deflection method, of specimens having an outer diameter of 29.0 mm (± 0.5 mm), or mm 13.0 (± 0.2 mm), with thicknesses of 12 mm, respectively. 5 ± 0.5 and mm 6 ± 0.2.
The assembly with the assembled specimens is conditioned in a climatic cell and, once the cycle has been completed, the constant deflection of the above specimens can be controlled.

The choice between methods is optional, however method B is required unless otherwise specified. Method B is not suitable for vulcanized rubbers with a hardness value higher than 90 IRHD.

- **10007000 COMPRESSION SET ASTM D395 Method B**

Standard	
ASTM	D 395 Meth B

Technical feauters:
- Set of 3 carbon steel plates, with precision ground surfaces, with roughness less than 0.2 microns and nickel-plated in thickness
- Series of thicknesses for the execution of the test, consisting of 6 precision ground bars with thicknesses of 9,38 ± 0,01 mm and n. 6 bars, as above, with thicknesses of 4.5 ± 0.01 mm (other thicknesses on request)

noselab ats
ADVANCED TESTING SOLUTIONS

NOSELAB ATS s.r.l.
Via Garibaldi, 144
20834 Nova Milanese - ITALY
Ph. +39 0362 367454 | +39 0362 450612
Fax +39 0362 41357
info@noselab-ats.com
www.noselab-ats.com

comimm.it