Physical Test Solutions

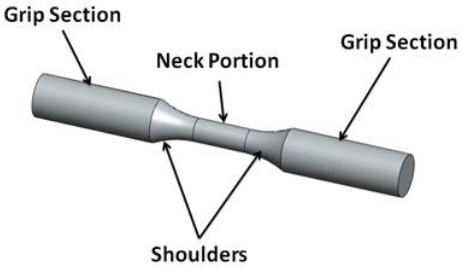
Innovative Solutions in Material Test Equipment

Sample Preparation Equipment for Tensile Tests













Why is Sample Preparation important in Tensile Tests?

Reliable and reproducible tensile test data depends on an accurate testing machine. Nevertheless, the sample must be prepared with strict compliance with the corresponding standard. Consequently, reliable sample preparation is required to achieve accurate results, and of course, the results of the tensile test can only be as accurate as the test specimen allows.

Sample preparation for tensile tests can become a bottleneck in a mechanical testing laboratory, as it many times depends on time availability of the machine tool shop. With that consideration, sample preparation equipment is highly recommended to resolve that obstacle.

With that understanding, we introduce our line of sample preparation equipment for tensile tests.

SPM-1600 Series Hydraulic Sample Punch Press

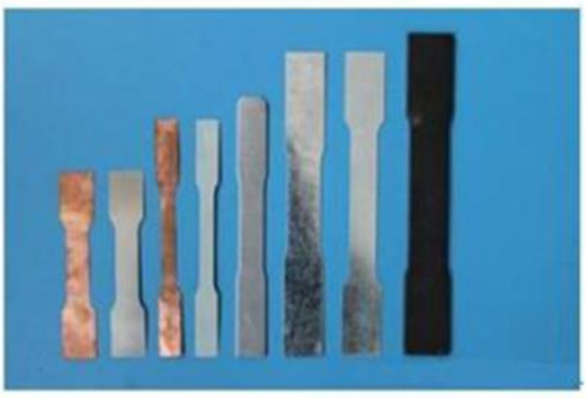
SPM series hydraulic sample punch press is widely used in sample preparation of ferrous metals, nonferrous metals and non-metal plate material etc.; It is an ideal sampling equipment for tensile testing and bending testing in metallurgy, aviation, aerospace, military, quality inspection, universities, automotive, and non-ferrous industry. It features an open structure, high efficiency, no pollution, easy operation, wide application and high performance.

The press complies with the applicable international standards, such as ISO6892, ASTM E8 and ASTM A370. A fine finish is achieved with a grinding machine.



Features:

- 1600 KN Force
- Maximum sample thickness; 4mm, Titanium and SS, 6mm Steel, 8mm Aluminum Copper.
- Samples with gauge length 50 mm, 80 mm, and 100 mm, etc. and proportional sample can be made, and customized samples can also be made upon request.
- Open C-type supporter (sample mounting from three directions, satisfying a variety of shapes sampling requirements, large pieces of sheet can be directly punched without cutting).
- Operation is easy and rapid in the procedure: Sample mounting – press the switch – Punch the sample – Take the sample. T-type ball console, to facilitate the mold replacement; It saves the time of replacement of the mold, just one minute to complete the replacement.
- High accuracy with parallel part of the shape of the tolerance less than 0.02mm and little effect on sample hardening during the punching.
- Operation safety protection: In order to ensure the safety of operating personnel, Anti-finger insert.



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LCT-915 Laser Cutting Machine for Tensile Sample Preparation

The Laser Cutting Machine is ideal for sample preparation of materials for tensile tests, including sheet metal, stainless steel, carbon steel, manganese, galvanized steel and alloy steel.

The system has a software that can program the laser machine to cut any sample type according to ASTM or ISO standards.



When compared to other technologies of sample preparation, the laser cutting machine has the following advantages:

1. There is less scrap, that translates into savings on raw materials.
2. The laser cutter produces less deformation of the sample.
3. More working efficiency.

Specifications:

1. Stroke: 1500x900mm.
2. Power: 3kW
3. Max. moving speed: 100m/min
4. X/Y accuracy: ±0.03mm
5. Power: 380V/400V/50Hz or 220V/240V/60Hz.
6. Maximum thickness of the stainless-steel sheet metal: 10 mm.



TensileCut DMM 500 Digital Milling Machine



The digital milling machine prepares samples in accordance to international standards ASTM A370, ISO 377 and GB2975-2018. It should be noted that blanks have to be cut to size prior to milling. A punch press or laser cutting machine would be a good choice for preparing blanks.

The final specimen size and dimension would be achieved with the milling machine.

The machine features programable software to prepare the sample.

Specifications:

- X axial travel:520mm
- Y axial travel:320mm
- Z axial travel:450mm
- Size of working table:700x300mm
- Max. speed:10000rpm
- Cutting speed:2-3000mm/min
- Power: 3.7kW
- Weight: 1400kg

TGLM Grinder for Tensile Samples

TGLM Edge Grinder for Tensile Samples conforms to ASTM, ISO and GB/T 228.1-2010 Tensile Testing Method for Metals *at Room Temperature*

The grinder is used to grind off the harden area of tensile samples during shearing and pressing. It can also be used to grind off the spur of samples made by other machines. It is designed according the length of samples, and the radius of the support roller is the same with the required sample (less than 20mm). Thus, the accuracy of the finished samples is guaranteed. It is most suitable to be used with press machine.



Features:

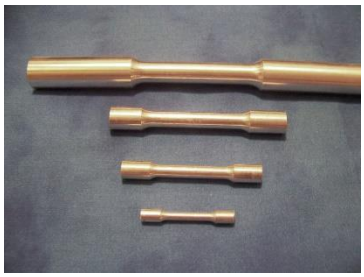
1. Grinds the harden area of the samples produced by pressing
2.Grinder has the shape with the required samples to guarantee the tolerance of parallel and circle arc.
3.Fine adjustment of feed, feed accuracy is 0.05mm;
4.Form tolerance of finished sample is within 0.06mm'
5.Roughness of grinding surface if Ra≤0.4

Specifications:

Model	TGLM-50	TGLM-80	TGLM-100	Proportion samples	TGLM-Z
Shape	Dumbbell				Bar
Gauge Length	50mm	80mm	100mm	5.65 - 11.3	
	Tensile				bending
Clip thickness	≤15mm				
Power	380V/50HZ				
Weight	300kg				
Dimensions	900 × 500 × 1000 mm）				

DLRS – 700 Digital Lathe for Round Samples

The digital lathe is ideal for sample preparation of round samples in accordance to ASTM, ISO, and all major international standards. The lathe is fully programable via a software that that can save sample dimensions, for repeatable and reliable sample preparation.







Specifications:

Max. swim over bed:	Φ 330mm
Max. swim over carriage:	Φ 148mm
Max. length of work piece:	700mm
Width of the bed:	330mm
Size of three-jaw chuck:	250mm
Range of spindle speed:	150-2500rpm
Spindle bore:	Φ 60mm
Taper of spindle bore:	MT4
stations of tool carrier:	4/6/8/
Max. size of tool post:	25×25mm
Min. setting unit of motor):	(Z)Longitudinal 0.001mm
(X) Horizontal 0.001mm	
Moving speed of post:	(Z) Longitudinal 8 m/min,
(X) Horizontal 4 m/min	
Taper of tailstock quill:	MT4
Max. range of tailstock quill:	120mm
Motor power:	5.5KW
Packing size (mm):	2050 mm×1400 mm×1650mm
Net weight:	780kg

Sales Offices

Headquarters

PHYSICAL TEST SOLUTIONS
11952 Lindblade St.
Culver City, CA. 90230
Tel: (310) 736-1901
info@physicaltestsolutions.com
www.physicaltestsolutions.com/

USA

MEASURENOW, St. Louis
Tel: 314-993-2833
service@measurenow.com
http://www.measurenow.com/

Assurance Tech, Chicago
Telephone: (630) 550-5000
kenn@atiquality.com
www.atiquality.com/

Deterco Inc. Houston
Tel: (800) 943-3812
sales@deterco.com
www.deterco.com/

Physical Testing Equipment Services, Johnston, RI
Phone: (401) 944-4760
info@physicaltestingequipsv.com
www.physicaltestingequipsv.com

Measure-All, Inc., Ohio
Tel: 1-800-758-2376
sales@measure-all.com
www.measure-all.com/

México

Alteq de Mexico - Monterrey
Tel: (81) 8383-6129
alteq@alteq.com.mx
www.alteq.com/

Metrología y Pruebas S.A. de C.V.
Tel: (631) 314-6263
ericaud@mypsa.com.mx
www.mypsa.com.mx

Mess - Queretaro
Tel. (442) 196 49 38
omarmorales@prodigy.net.mx

México

Cientec S.A. de C.V.
Tel.(52 33) 38-17-81-22 /23
ventas@cientec.com.mx
www.cientec.com.mx/

Comercializadora Rivasa
Tel: (55) 5577-3067, 5781-9882
comrivasa@yahoo.com.mx
www.rivasa.com.mx

Equiser, Puebla
Tels. (222) 114 2845
victor@equiser.com.mx

Latin America

Argentina

Mess s.a.
Tel. / Fax: (5411) 4334-8592
rcsalazar@messmedicion.com.ar
www.messmedicion.com.ar/

Brazil

Sultrade Com e Importacao
Tel.: 55 11 5182-7522
vendas@sultrade.com.br
http://www.sultrade.com.br/

Skill-tec
Tel :(55)(11) 2957-5888
skill-tec@uol.com.br
www.skilltec-assistencia.com.br

Regmed Ind. Téc. de Precisão
Tel: + 55 11 3601-5700
regmed@regmed.com.br
http://www.regmed.com.br/

Colombia

Arotec Colombiana
Tel: (571) 288-7799
arotec@arotec.net

Chile

Arquimed S.A.
Tel: (56-2) 6346266
jortiz@arquimed.cl

Peru

Sertecsa
Tel: 51-198296708
sertecsa@terra.com.pe

Europe

Italy

ATS FAAR SpA
Tel: +39 02 95360686
atsfaar@atsfaar.it
http://www.atsfaar.it

England

A.J.T. Equipment Limited
Tel: +44 (0) 1384 482 848
admin@ajtequipment.co.uk

France

Sodexim
Tel: 33-(0) 326-0291-11
sodexim@sodexim.org

Tema Concept
Tél: 33-(0)1-39-70-20-50
info@tema-concept.com

Greece

M.I Priniotakis S.A.
30-210-7227719
ikafegidakis@priniotakis.gr

Egypt

Scientific Trading Co.
Tel: : 202-2670-3806
galal_nough@nouh.com.eg

Asia

India

Unitestmac Systems Ltd.
Tel:91-11-25894580 / 25894782
sales@unitestmac.com

Malaysia

Dutech Scientific (M) Sdn. Bhd.
Tel: 6 03-7956 7861
pau@dutechscientific.com

Vietnam

Top Technology JSC
Tel: 84 8 2842405
t-tech@viettel.vn

Pakistan

Glow Pak International
Tel: 92-42-585-2526
glowpak@brain.net.pk