

Powder Metallurgy Lab



PLANETARY MICRO MILL

Model: PULVERISETTE 7(PREMIUM LINE)

Make: FRITSCH GmbH.

Specifications:

Application	Synthesis of micro, nano particles, mechanical alloying
Working Principle	Impact force
Grinding stations	2 No's
Grinding Bowls-Volume	80 mL, 20 mL
Bowl and Balls-material	Tungsten Carbide
Grinding ball diameter	0.6, 5, 10 mm
Max. feed size	5 mm
Grinding conditions	Dry/wet/inert
RPM	Max. - 1100 Operation - 1000
Attachments	GTM, Wet process emptying device, counterweights, inert gas



PELLET PRESS

Model: PP 25

Make: RETSCH

Specifications:

Application	Pressing pellets from powders
Feed Grain Size	<60 μm or <40 μm
Max. Capacity	25 Ton
Operating capacity	20 Ton
Pressure force	10-250 kN
Die diameter	32 mm
Attachment	Aluminum cups, free pressing



HIGH TEMPERATURE MUFFLE FURNACE

Make: NABERTHERM

Model: LHTC(T) 03/16

Specifications:

Application	Sintering of metals and ceramics
Max. temperature	1600 °C
Working temperature	1500 °C
Heating chamber dimensions	120x210x120 mm
Heating elements	SiC rods
Features	Programable, retrieval of data, fresh air flap, exhaust pipe
Attachments	Rotameter, inert atmosphere



POTENTIOSTAT AND GALVANOSTAT

Make: Princeton Applied research

Model: VersaSTAT 3

Specifications:

Application	Energy Storage, Corrosion & Electrochemistry.
Voltage control (Potentiostat mode)	
Applied voltage range	± 10 V
Applied voltage accuracy	$\pm 0.2\%$ of value ± 2 mV
Current control (Galvanostat mode)	
Applied current range	± 2 A
Minimum current range / resolution	± 200 nA / 60 pA
Impedance (EIS)	
Mode	Potentiostatic / Galvanostatic
Frequency range	1 MHz
Software	VersaStudio
Attachments	Corrosion cell, platinum, calomel, Ag/AgCl reference electrodes.



WEIGHING BALANCE

Model : Quintix 6102 -10IN

Make : Sartorius

Specifications:

Weighing Capacity	6100 g
Readability	10 mg
Repeatability	10 mg
Linearity Deviation	20 mg
Weighing Pan Size	Ø180 mm



MUFFLE FURNACE
(With PID Controller & Digital Timer)

Model : MSI - 73

Make : META Lab

Specifications:

Temp. Range	1200°C
Working Temp.	1150°C
Accuracy	+/- 1% FSD
Power Rating	3.5 K.W
Size	12"X6"X6"



VIBRATORY SIEVE SHAKER

Make : M/s. FRITSCH GmbH

Model: ANALYSETTE 3 PRO

Specifications:

Method of analysis	sieving
Sieving action	two-dimensional
Dry sieving	
Measuring range	20 μm - 63 mm*
Max. sample quantity approx	for sieves < 63mm: upto 2 kg* for sieves < 100 μm : up to 100 g*
Sieving time approx.	3 - 20 min*
Wet sieving	
Measuring range	20 μm - 10 mm
Max. sample quantity approx.	20 - 100 g*
Sieving time approx.	30 - 60 min*
Further details	
Sieve diameters	100 mm, 200 mm or 8"
Max. number of sieves per sieve stack	10 (50 mm height), 16 (25 mm height)
Max. weight of sieve stack	3 kg
Max. height of sieve stack	550 mm
Amplitude	0.1 - 3 mm

