

UNIST 3D프린팅융합기술센터 장비 현황



**POST PROCESS
MEASUREMENT**

Post Process

- QIH 32
(Hot Isostatic Pressure Machine)
- DLyte 10,000L
(Dry Process Electropolishing Machine)
- LH120/13 , LH216/13
(Chamber Furnace)
- AD60MA
(Wire Cutting Machine)
- PostPro3D
(Chemical Vapor Smoothing)

Measurement

- Handyscan Black Elite
(3D Scanner)
- ATOS Q 12M
(3D Scanner)
- Z250 SH
(High Temp Universal Materials Testing Machine)
- Axio Vert A1
(Optical Microscope)
- Rockwell 574
(Hardness Tester)

» QIH 32 (Hot Isostatic Pressure Machine)

TECHNICAL DATA

Manufacturer	Quintus Technologies
Furnace Type	Molybdenum
Max. Operating Temperature	1,400 °C
Max. Workload	Φ300 x 890 mm
Max. Weight	350 kg
Max. Operating Pressure	207 MPa



» DLyte 10,000L (Dry Process Electropolishing Machine)

TECHNICAL DATA

Manufacturer	GPAInnova
Working Capacity	750 x 500 x 500 mm
Chamber Size	Φ1,330 x H850 mm
Improved Surface Roughness	Not more than 1.0 μm
Maximum Working Weight	100 kg
Material that can be processed	Ti, CoCr, Stainless Steel, Copper, Nickel Alloy, Tool Steel
Material	Steel group abrasive



» LH120/13 , LH216/13 (Chamber Furnace)

▪ LH120/13

TECHNICAL DATA

Manufacturer	Nabertherm
Max. Temperature	1,300 °C
Inner Dimension (W x D x H)	500 x 500 x 500 mm

▪ LH216/13

TECHNICAL DATA

Manufacturer	Nabertherm
Max. Temperature	1,300 °C
Inner Dimension (W x D x H)	600 x 600 x 600 mm



» AD60MA (Wire Cutting Machine)

TECHNICAL DATA

Manufacturer	희성정기
Maximum Craft Size	920 x 600 mm
Processing Area	650 x 500 x 450 mm
Maximum Loading Capacity	1,200 kg
Transfer Distance U/V	36 x 36 mm
Maximum Craft Height	500 mm
Maximum Angle	±6° / 50 mm



» PostPro3D (Chemical Vapor Smoothing)

TECHNICAL DATA

Manufacturer	AMT
Dimensions (W x D x H)	410 x 610 x 400 mm
Dimensional Variation	Not more than 0.4 %
Surface Roughness (Ra)	0.5 - 2.0 μm
Nominal Chamber Temperature	Maximum 70 °C
Operation time	About 2 hour

Post-Processable MATERIALS

PA12 (Nylon), TPU, TPA, TPE, ABS



» Handyscan Black Elite (3D Scanner)

TECHNICAL DATA

Manufacturer	Creaform
Maximum Accuracy	0.025 mm
Maximum Resolution	0.1 mm
Light Source	22 Blue Laser
Data Acquisition Rate	1.3×10^6 m/s
Operation Distance	300 mm
Scan Range	310 x 350 mm



» ATOS Q 12M (3D Scanner)

TECHNICAL DATA

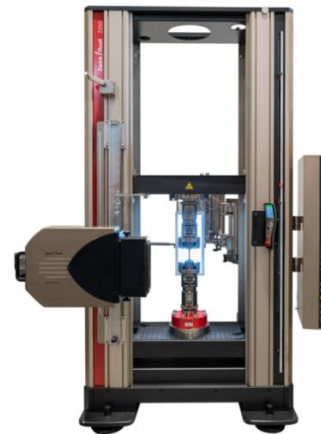
Manufacturer	Zeiss
Purpose	Measurement
Light Source	LED
Point per Scan	12 million
Measuring Area	100 x 70 mm ² - 500 x 370 mm ²
Working Distance	490 mm



» Z250 SH (High Temp Universal Materials Testing Machine)

TECHNICAL DATA

Manufacturer	ZwickRoell
Nominal Force	250 kN
Max. Temp	1,200 °C
Test Area (W x H)	640 x 2,260 mm
High Test Speed	0.00005 - 600 mm/min
Very High Return Speed	1,000 mm/min
Work Environment Temperature	10 - 35 °C
Storage Temperature	35 - 55 °C
Humidity Range	< 90 %
Noise Level	< 63 dB



» Axio Vert A1 (Optical Microscope)

TECHNICAL DATA

Manufacturer	Zeiss
Dimensions (W x D x H)	220 x 560 x 355 mm
Objective Magnification	x 50, x 100, x 200, x 500



» Rockwell 574 (Hardness Tester)

TECHNICAL DATA

Manufacturer	Buehler
Dimensions (W x D x H)	292 x 566 x 934 mm
Maximum Measurement Height	289 mm
Maximum Measurement Diameter	175 mm
Rockwell Scale	C
Initial/Maximum Load	3, 10 kgf / 60, 100, 150 kgf

