

The world's only one, the best performance ever  
High precision gas/vapor adsorption measurement instrument

# BELSORP-max II

Specific surface area :  $0.0005\text{m}^2/\text{g}\sim$

Pore size distribution (Diameter) :  $0.35\sim 500\text{nm}$

A variety of gas/vapor adsorption measurement.

## Function

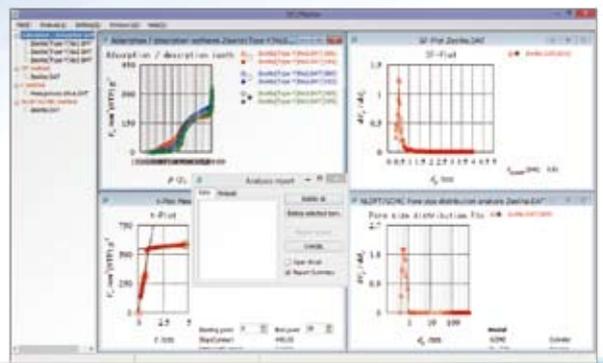
- The highest throughput instrument with simultaneous measurement of up to 4 samples.
- New advanced function "GDO (Gas Dosing Optimization)".  
The best suitable measurement conditions are automatically set using saved customer's adsorption isotherm data.
- An advanced system of direct evacuating and intelligent valve control reduces the measurement time significantly.
- High precision vapor adsorption measurement under the strict temperature control.
- High precision measurement by Advanced Free Space Measurement (AFSM™)
- Fully automatic process control from pretreatment (liquid nitrogen injection) enables seamless measurement (option).
- The advanced GCMC method is featured, which enables to perform more precise and higher resolution PSD analysis considering the interaction of actual material surface and adsorbate molecules than the conventional NLDFT (approx. calculation) method.
- Remote data monitoring after completion of measurement using E-mail system is available.



## Measurement Software



## Measurement Examples



Specialists in Adsorption

## Specifications

Measurement principle	Volumetric method + AFSM™				
Adsorption gas/vapor*	N <sub>2</sub> , Ar, Kr, CO <sub>2</sub> , H <sub>2</sub> , O <sub>2</sub> , CH <sub>4</sub> , NH <sub>3</sub> , other non-corrosive gas H <sub>2</sub> O, MeOH, EtOH, C <sub>6</sub> H <sub>6</sub> , other non-corrosive vapor				
Multi sample measurement	Max 4 ports simultaneously				
Measurement range	Specific surface area: 0.01m <sup>2</sup> /g or more (N <sub>2</sub> ), 0.0005m <sup>2</sup> /g or more (Kr) Pore size distribution (Diameter): 0.35~500nm				
Pressure transducer*	133kPa (1000Torr) × 6 units 1.33kPa (10Torr) × 4 units 0.0133kPa (0.1Torr) × 3 units				
Thermostatic air oven	50°C				
Gas port*	2 (Available to add up to 12 ports)				
Vapor port	1				
Vacuum pump	Rotary pump + turbo-molecular pump (Option: Diaphragm pump)				
Pretreatment heater*	50~550°C (4 ports)				
Full automatic measurement heater*	50~450°C (3 ports)				
Water bath*	5~70°C (4 ports)				
Dimensions, weight	650(W) × 1020(H) × 680(D) mm, 120kg				
Utility	<table border="0"> <tr> <td>Gas</td> <td>He, Adsorption gas: 0.1±0.02MPa Joint: 1/8" Swagelok connection Valve driving gas: 0.45-0.55MPa Joint: 1/4" one-touch connection</td> </tr> <tr> <td>Power</td> <td>AC110/220V 1500W (Main unit including rotary pump) AC110/220V 900W (Heater)</td> </tr> </table>	Gas	He, Adsorption gas: 0.1±0.02MPa Joint: 1/8" Swagelok connection Valve driving gas: 0.45-0.55MPa Joint: 1/4" one-touch connection	Power	AC110/220V 1500W (Main unit including rotary pump) AC110/220V 900W (Heater)
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\*Can be changed according to the specifications.

## Pretreatment Instruments

	BELPREP-flowII	BELPREP-vacII	BELPREP-vacIII								
Flow/Heat degassing	✓	Options	Options								
Vacuum/heat degassing	—	✓	✓								
Pretreatment degassing		3	6								
Temperature range (Max)		430°C	450°C								
Temperature accuracy		±5°C									
Dimensions, Weight	321(W) × 158(H) × 363(D)mm, 11kg	321(W) × 158(H) × 363(D)mm, 15kg	400(W) × 317(H) × 383(D)mm, 15kg								
Utility	<table border="0"> <tr> <td>Gas</td> <td colspan="3">N<sub>2</sub>: 0.1±0.02MPa Joint: 1/8" Swagelok connection</td> </tr> <tr> <td>Power</td> <td>AC110/220V 400W</td> <td>AC110/220V 1000W (including rotary pump)</td> <td>AC110/220V 1100W (including rotary pump)</td> </tr> </table>			Gas	N <sub>2</sub> : 0.1±0.02MPa Joint: 1/8" Swagelok connection			Power	AC110/220V 400W	AC110/220V 1000W (including rotary pump)	AC110/220V 1100W (including rotary pump)
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BELPREP-flowII



BELPREP-vacII



BELPREP-vacIII

\*Specifications and appearance of the products listed are subject to change without notice.

\*Products (goods and services) described in the catalog, depending on the destination and application, might be applicable to export regulations, etc. by the "Foreign Exchange and Foreign Trade Control Law".

In response to the review of the Japanese government regarding the export of products (goods and services), permission and approval, and the like, must be obtained according to the regulations.

 **MicrotracBEL Corp.**

8-2-52 Nanko-Higashi, Suminoe-ku, Osaka, 559-0031, Japan

TEL : +81-6-7166-2162

FAX : +81-6-4703-8901

<http://www.microtrac-bel.com/en/>

E-mail : international@microtrac-bel.com

● Distributor

 **NIKKISO Group**

