

# Freeze Trap VA-250F/500R/800R

**Retrieves solvent evaporated by a centrifugal concentrator. Other than Concentrating promotion it enables to prevent release into the atmosphere and inflow to the vacuum pump.**

Centrifugal Concentrator "Spin Dryer VC-36R/96R" --> P.148



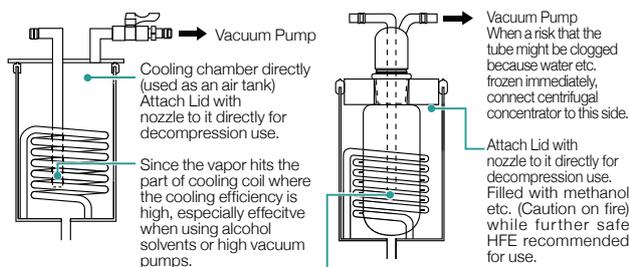
VA-250F

VA-500R

VA-800R

## Traps vapor into Cooling chamber directly or Glass condenser by solvents

Attach Lid with nozzle (sold separately) to Cooling chamber when trapping vapor directly (See left figure below). The advantage of directly trapping is the capacity gets more and the cooling temp almost the same as the trap temp. However, the solvents are limited to water and alcohol as the solvent directly contact the unit. In other solvents, trap by placing it into Glass condenser (sold separately) in the chamber (See right figure).



Cooling chamber inside (VA-800R)

## Features

- Three models with the different cooling temp. and trapping volume.
- Traps vapor into Cooling chamber directly or Glass condenser.
- Equipped with Monitor of temp. inside Cooling chamber [VA-800]

## Applications

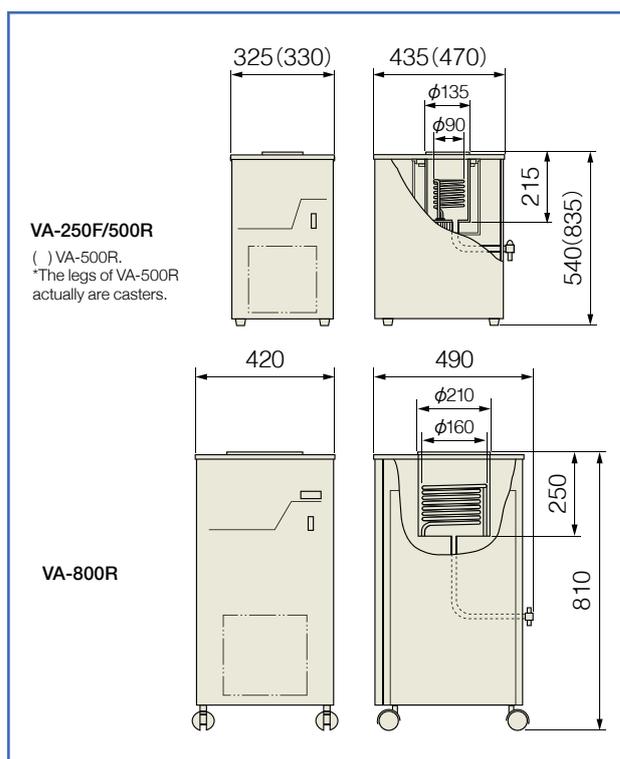
- As a Cold Trap for Centrifugal Concentrator

## Digital Temperature Monitor [VA-800R]

The temp. inside Cooling chamber can be checked in VA-800R (Slight deviations might occur in the displayed temp. depending the usage conditions.).



## Dimensions (Common)



| Model                             | VA-250F                                 | VA-500R           | VA-800R                                   |
|-----------------------------------|---|-------------------|---|
| Cooling temp./range               | -45°C                                   | -75°C             | -70°C                                     |
| Trapping volume (*1)              | Approx. 200mL/time                      |                   | Approx. 1000mL/time                       |
| Cooling chamber inside dimensions | Innerφ135 x H215mm (Volume: Approx. 3L) |                   | Innerφ210 x H250mm (Volume: Approx. 8.6L) |
| Cooling coil inner dia.           | φ90mm                                   |                   | φ160mm                                    |
| Compressor                        | 250W                                    | 2 x 250W          | 2 x 400W                                  |
| Dimensions (W x D x H)            | 325 x 435 x 540mm                       | 330 x 470 x 835mm | 420 x 490 x 810mm                         |
| Weight                            | Approx. 35kg                            | Approx. 75kg      | Approx. 82kg                              |
| Power supply                      | AC100V/6A                               | AC100V/10A        | AC100V/13A                                |

(\*1) The value when Glass condenser used.

● Ask us when used as a preliminary freezing tank or a cool circulating water bath.

# Introduction on Options/Optional parts

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## Lid with nozzles / Glass condenser



| Model  | Applicable models and Trapping volume etc.  |
|--------|---|
| NF-025 | Lid with nozzles for VA-250F/500R (*)<br>Made of stainless steel, Nozzle outer dia.φ13.8mm, Trapping volume Approx. 300mL |
| NF-040 | Lid with nozzles for VA-800R (*)<br>Stainless steel made, Nozzle outer dia.φ13.8mm, Trapping volume Approx.1000mL         |
| GC-035 | Glass condenser for VA-250F/500R<br>Nozzle outer dia.φ13.8mm, Trapping volume Approx. 200mL                               |
| GC-070 | Glass condenser for VA-800R<br>Nozzle outer dia.φ13.8mm, Trapping volume Approx. 1000mL                                   |

(\*)Adapter required when the vapor exceeds 50°C. Ask us for details.

## System Stand



| Product / Model     | Remarks                    | Applicable models |
|---------------------|----------------------------|-------------------|
| System Stand C-type | 405×500×655Hmm             | VA-500R/800R      |
| System Stand D-type | 800×580×600Hmm,with Outlet | VA-250F           |
| System Stand E-type | 450×580×600Hmm,with Outlet | VA-500R/800R      |
| System Stand G-type | 750×500×623Hmm             | VA-250F           |

●Select it according to the applicable model. Each comes with castors.

# Vacuum pump

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## Diaphragm / Dry scroll type Vacuum pumps

(Accessories : Vacuum hose and nozzle port)

| Model    | Chemical resistance (*)                | Displacement | Ultimate pressure                  |
|----------|--|--------------|------------------------------------|
| DTU-20   | Water, Weak acid, Organic solvent etc. | 20L/min      | up to 200Pa (Adjustable by valve)  |
| DTC-60   | Water, Weak acid, Organic solvent etc. | 60L/min      | up to 1000Pa (Adjustable by valve) |
| VU-100   | Water, Alcohols                        | 100L/min     | up to 50Pa (Adjustable by valve)   |
| VU-100HC | Water, Weak acid, Organic solvent etc. | 100L/min     | up to 70Pa (Adjustable by valve)   |

(\*)Pump resistance and Solvent release to the environment are irrelevant. In particular, recommended to use Cold Trap or Chemical filter in order to avoid emissions.

●Vacuum hose as consumable (for connection to VC-36R/96R, inner dia. φ12mm) sold per metric units. Ask us if necessary.

## Oil-sealed Rotary Vacuum pumps

(Comes with Vacuum hose, Nozzle port and Oil mist trap)

| Model     | Chemical resistance (*1) | Displacement | Ultimate pressure (*2) |
|-----------|--------------------------|--------------|------------------------|
| GLD-051   | Water                    | 50L/min      | 0.067Pa                |
| GLD-137CC | Water                    | 135L/min     | 0.067Pa                |
| GCD-051XA | Water, Organic solvent   | 50L/min      | 0.067Pa                |
| GCD-136XA | Water, Organic solvent   | 135L/min     | 0.067Pa                |

(\*1)Pump resistance and either Solvent release to the environment and Oil deterioration are irrelevant. recommended to use Cold Trap or Chemical filter in order to avoid emissions. Oil change required if solvent inhaled.

(\*2)The value when the pump with no load. Decreases due to piping resistance when use.

●Vacuum hose as consumable (for connection to VC-36R/96R/96W, inner dia. φ12mm) sold per metric units. Ask us if necessary.

## Disposable Chemical filters

(Comes with Connection hose and Fixture for Oil-sealed Rotary vacuum pump). Ask us when fixing to DTC-60 or VU-100/100HC.)

| Model    | Adsorbent                 | Main Adsorb-able substances   | Remarks  |
|----------|---------------------------|---|--|
| CT-301SE | Activated carbon          | Ketones, Alcohols, Esters, Organic solvent vapor, Organic acids, Aromatic, Oxides of Hydrocarbons, Chlorinated organic substances, Organochloride | comes with Connection hose and Fixture for Oil-sealed Rotary vacuum pump |
| CT-302SE | Anhydrous calcium sulfate | Water, Acids in Aeration  |  |

● The lead time might takes long depending on timing of receipt of order.

● Filters (model: CT-301, CT-302, CT-303) sold singly.

● Replace 1 to 2 months when used frequently. Replace CT-302 when its color changes from Blue to Pink. The appearance of CT-301/303 not change.

● Protuberances not included in Dimensions. ● Vessels of photo not included.



※Oil-sealed Rotary types required when Lyophilization with VC-36R/96R.

Optiona chemical filters  
installation example

