

Vacuum Cleaning & Drying Equipment

~ 10 Merits ~

1st Merit

To use this equipment, no disposal-contaminated water is produced, so that no necessities to install any waste water treatment equipment for this equipment.

In case of a water degreasing process, wastewater treatment equipment is necessary, but as aforementioned, our Vacuum cleaning & Drying Equipment does not produce any disposal-contaminated water at all. So that water treatment equipment is not necessary to install.

We have solved customers' problems such as: -

- 1) Installation space of water treatment equipment.
- 2) The cost of water treatment equipment and it's maintenance.
- 3) Disposal of it's residues and so forth.

**Vacuum Cleaning & Drying Equipment
with oscillation movement mechanism in washing
(Full Automatic 2 tanks using Hydrocarbon System Solvent)**



**Nylon coated Basket
Size : 600 x 400 x 450H**



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Vacuum Cleaning & Drying Equipment *~ 10 Merits ~*

2nd Merit

To use this equipment, no necessary to full change of solvent but only to top up.

A multi-stage vacuum distillation-recycling device is built in this equipment. Dump oil is continuously eliminated using different boiling points so as to circulate newly recycled Hydrocarbon System Solvent in the degreasing area all the time.

Analyzing by Gas-chromatogram of the recycled cleaning agent after used 2,000 hours, it still kept on 99.9% in purity.

As of today, it has been no problems at all in spite of using consecutive 30,000 hours.



Multi-Stage Vacuum Distillation Device

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3rd Merit

Disposal solvent does not produce at most. On top of that, disposal expense of contaminated solvent does not cost because the disposal solvent can be reused as liquid propellant.

As for our Multi-Stage Vacuum Distillation Device, the contaminated solvent is condensed after boiling-out process and taken out. So that, disposal solvent is produced at most as compared with conventional way using ethane, trichlene and methylene chloride. As aforementioned, this condensed disposal solvent can be reused as liquid propellant. Thus, disposal expense does not cost which means it's expense will result in NONE!!

Full Automatic Single Tank Vacuum Cleaning & Drying Equipment Using Hydrocarbon system solvent



Basket Size
ø 850 x 1100 H



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4th Merit

Since it is the closed structure which means processes make through in the vacuum atmosphere, even the exhausted air is collected and reused.

The solvent vapor that exhausted by the vacuum pump is collected by the Exhaust Collect Tank (ET). It is a great collecting efficiency through Hydrocarbon at less than 38° C. Moreover, it has already fulfilled the Prevention of Global Warming because the air exhaust temperature of this equipment is also less than 38° C.

Our competitors' recycling efficiencies are inadequate because they are still using other solvents other than water and hydrocarbon system solvent.

Semi-automatic Single Tank Vacuum Cleaning & Drying Equipment Using Hydrocarbon system Solvent



Basket Size 1400 x 580 x 500 H

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5th Merit

- (1) Even in such cases of short size, lead frame materials, blind holed products, pipes etc. that lubricants are deposited and stuck approximately 0.15mm thickness, the Flash Effect of ultra-sonic wave, oscillation and vacuuming can perform the Perfect Cleaning Effect in short time. The strongest cavitation can be given when ultrasonic wave is applied in the vacuumed atmosphere.
- (2) Cavitation is decreased a lot in the air. There are approximately 2% of oxygen in water, as compared with water, it contents 14% of oxygen in Hydrocarbon. Thus, ultrasonic effect is decreased in the air than using under water system cleaning.

Our ultrasonic device is improved to be usable both in the vacuum and the normal atmospheric pressure. Because normal ultrasonic device lasts only for 6 ~ 9 months time only.



Oscillating Device



Oscillator

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6th Merit

The feature of the Vacuum Drying

- (1) Rinsing with solvent vapor is done before vacuum drying.
- (2) After the above process, the works are made into high vacuum at a stroke, thus flash effect enables to perform a high speed drying. This flash effect can be amazingly shortened the drying cycle time.
- (3) Oxidation and/or Change Color on works never occur because of the drying temperature approximately 80 ~ 100° C. This is significantly different from conventional heat wind drying. Because of the above, your defect rates can also be significantly descended. So that defect rates of Plating, ED coating, Phosphoric Acid membrane Treatment etc. can be positively descended.

Vacuum 3 tanks, Full Automatic (Type 2) Using Hydrocarbon system Solvent



7th Merit

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Hydrocarbon Based Solvent

Hydrocarbon system solvents (No.2-petroleum or No.3-petroleum) are used for this Vacuum Cleaning & Drying Equipment. Either Normal Paraffin Based Solvent or Glycol Ethereal Based Solvent (added coupling agent and alcohol into Normal Paraffin Based Solvent) is selected depending on which one is being used for either neat machining lubricant or water-soluble coolant.

Select of the cleaning solvent is important point for efficient degreasing.



Hydrocarbon Based Solvent

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8th Merit

Counter Measures for Preventive Maintenance and Trouble by the Self-Check Function Device.

Periodic full change and top-up of Vacuum Pump's gear oil, grease, heat transfer oil and so on are sequence programmed, so that time of periodic full change and top-up are indicated on the touch panel with warning sound.

Moreover, in case of machine trouble, the sequence programmed self-check function lets you know the palace and it's counter measures of trouble on the touch panel.

Touch Panel



Full Color is Option

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9th Merit

SAFEGUARD

In case of fire emergency, the under mentioned process is performed together with automatic fire extinguisher balls.

(1) Hatch of washing tank and hatch of final drying tank are automatically closed.

(2) Primary Air is automatically closed.

(3) Exhaust Damper is automatically closed.

(4) Electric Power Supply is automatically closed.

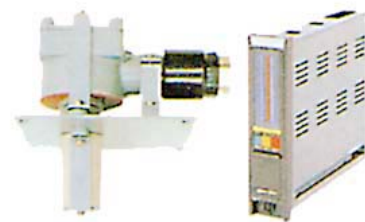
*The above mentioned Automatic Extinction System is performed by Sequence Program.

This Equipment has been recognized by the most severe fire department Kure City's Fire Department (there are many firework factories in their territory) and Kobe City's Fire Department (they experienced a strong earthquake recently). This Equipment has been passed the leading regulations of every fire department.

Automatic fire extinguisher ball



Gas Density Detecting System



CO2 automatic fire extinguisher

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10th Merit

This Equipment is always in our Laboratory for you to solve your degreasing problem.

Feel free to send us your work pieces. We are pleased to degrease and analyze on behalf of you. We are willing to inform you about the outcome and the evaluation as soon as possible.



Square Basket
Size: 300 x 250 x 250H



Round Basket
Size: ϕ 250 x 300L

Full Automatic 2 tanks
Vacuum Cleaning & Drying Equipment
for testing and experiment



Basket Size: 7000L x 300 x 200H

Semi-Automatic Single Tank
Vacuum Cleaning & Drying Equipment
for testing and experiment

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