



## Automatic Coolant Filtration System



It is an ultra-fine filter device that filters 1 ~ 3 Micron particles.

Can be used in grinding, discharging, cutting equipment, etc.

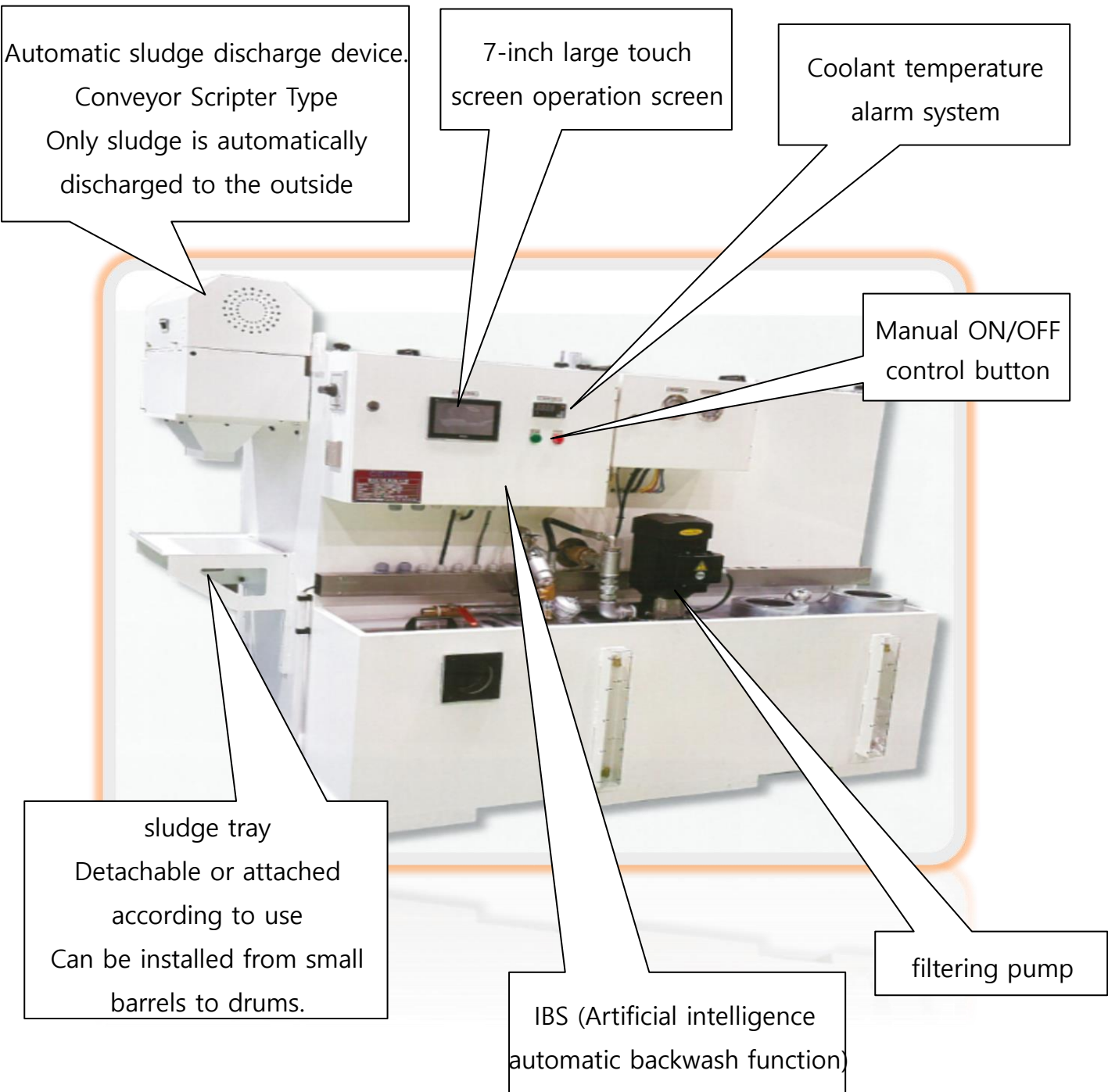
State-of-the-art filtration devices.

**CENTRAL SYSTEM**  
센트랄시스템

(10071) #728 D|ONE CITY, 127, Gimpohangang 10-ro 133beon-gil, Gimpo-si, Gyeonggi-do,  
Republic of Korea

Tel: 031-992-8920 / Fax: 031-992-8924

e-mail: cenfis@naver.com



#### ■ Product Features and Benefits

- 1. Automatic discharge of sludge to the outside**
- 2. Adoption of large touch screen makes operation easy and operation status can be seen at a glance**
- 3. Automatically turns on/off the equipment. (automatic execution time setting)**
- 4. Automatic filter cleaning by artificial intelligence (IBS)**
- 5. Coolant temperature alarm function (temperature setting)**
- 6. Checks the filtering operation status and informs the user**

▣ **Features and Functions**

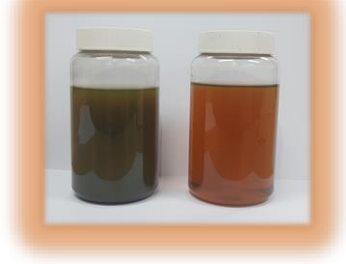
- Excellent filtering ability 1 Micron
- Reducing the amount of cutting oil and extending the life of the grinding wheel
- Improved roughness and quality of workpieces
- Automatic discharge of only sludge to the outside (conveyor type)
- There is a water-insoluble (for oil) device and a water-soluble (for water) filtering device.
- Automatically cleans the filter with artificial intelligence regardless of the set time (IBS)
- Checks the operation status by itself and informs whether it is normal or not
- Automatically turns on/off the equipment. (automatic execution time setting)
- Cutting oil temperature alarm function (temperature setting)
- Adoption of large touch screen makes operation easy and operation status can be seen at a glance
- Minimize sludge mixed with state-of-the-art tank structure
- Prompt A/S and follow-up management
- Possible to make orders optimized for user needs
- Eco-friendly energy saving solution
- Purely domestically produced filter (fast response according to work environment)



■ Composition

- Candle filter made of special paper
- Water-insoluble filter type
- Water-soluble filter type (※candle filter only product)
- Outstanding durability with 61 candles
- Long filter life (normal use conditions)
  - Usage environment: refer to the appendix

before/after filtering



■ Applied Equipment

- Widely used for all grinding and cutting equipment such as carbide, HSS, and steel
- electrical discharge machining equipment
- Applicable to all equipment such as WALTER, ANCA, Rollematic, Vollmer, etc.



### Operation screen composition

- 1) Automatic mode
- 2) Manual mode
- 3) Setting mode
- 4) Alarm window (save error history)

It consists of 4 screens.

Anyone can easily operate it.

★ Like the screen on the right

Anyone can operate it easily with the large touch screen.

and the current progress is displayed on the screen.

You can see the current status of the filtering device at a glance.

In addition, by manipulating the setting contents to suit the work environment,

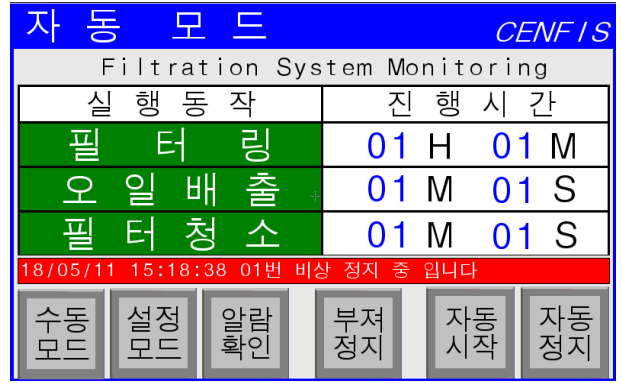
Available under optimal conditions.

The history of the equipment is saved in the alarm window.

Check the status on the screen and take action

you can know

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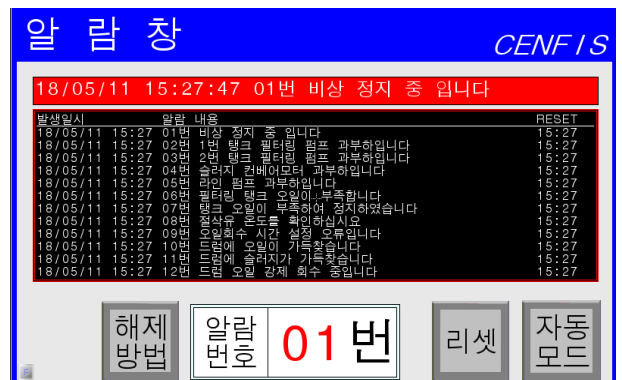
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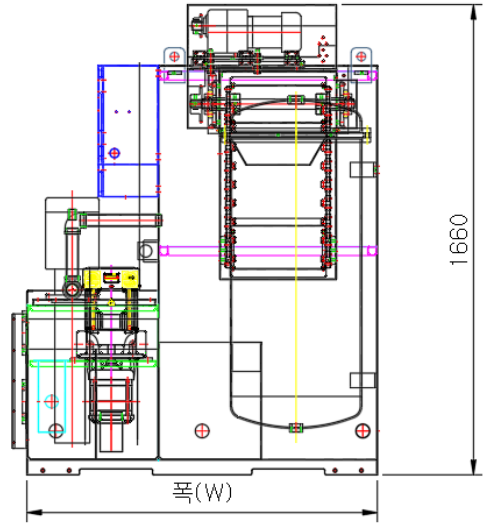
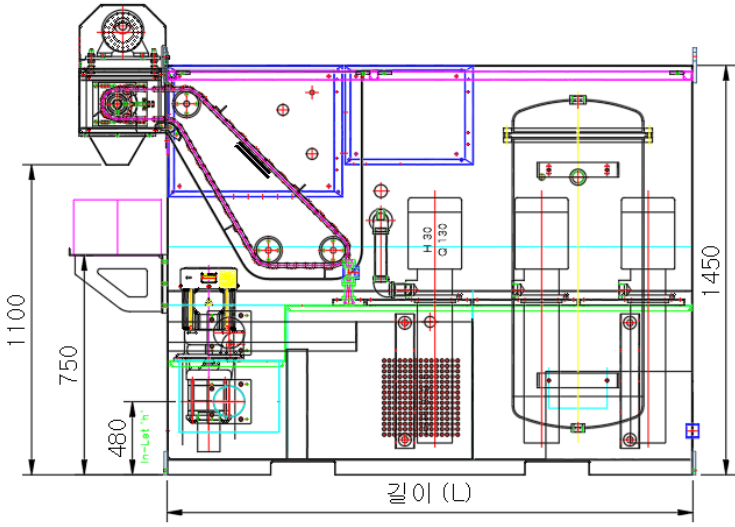
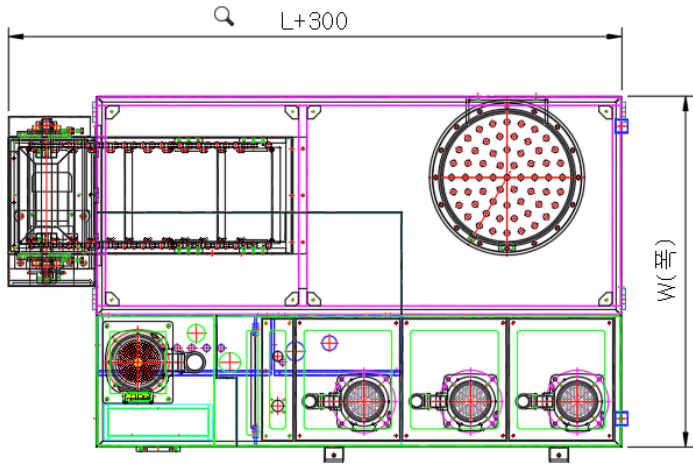


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### filtering unit LAY-OUT



#### Configuration of CENFIS filtering device (CFO Model)

| Model       | device size (cm) |      |      | oil tank capacity | Used oil inlet | throughput per minute | filter tank | sludge device |
|-------------|------------------|------|------|-------------------|----------------|-----------------------|-------------|---------------|
|             | L                | W    | H    | l                 | h              | l/min                 | EA          | O / X         |
| 1TK06H01-CV | 1500             | 1100 | 1450 | 600               | 480            | 60                    | 1           | O             |
| 1TK08H02-CV | 1800             | 1100 | 1450 | 800               | 480            | 120                   | 1           | O             |
| 2TK13H04-CV | 2800             | 1200 | 1450 | 1300              | 480            | 240                   | 2           | O             |
| 3TK18H05-CV | 3400             | 1400 | 1450 | 1800              | 480            | 360                   | 3           | O             |

CFx-xTKxxx-CV Order production optimized for user needs (large capacity and method, etc.)

#### Sludge device composition

|        |     |     |      |   |
|--------|-----|-----|------|---|
| DM-200 | 630 | 810 | 1740 | drum type sludge device   |
| CV-STD | 300 | 505 | 580  | Sludge external automatic discharge device (free use of drum and general box) |
| OEM    |     |     |      | Manufactured to your needs  |

## Appendix - Candle filter usage environment and precautions

- 1) The moisture content of the grinding oil used must be less than 0.01%.
- 2) Supply air must not contain moisture (used when cleaning the filter)
- 3) When cleaning the filter, keep the air pressure supplied at least 4 bar or higher. (used 3-5 minutes)
- 4) The size of sludge should be over 1 micron.  
(In the case of nano particles, depending on the content, the filter may be clogged or its lifespan may be shortened )
- 5) Grinding oil viscosity 5 ~ 9% (the higher the viscosity, the lower the flow rate)
- 6) Use clean oil for initial equipment installation  
(In the case of equipment that has been used, it is necessary to clean the sludge that was previously used)
- 7) There must be no other foreign substances  
(Contains unknown foreign substances, etc.  
The viscosity of the sludge makes it sticky, making it impossible to clean the filter)

\* When using the device, the above must be satisfied. In general, shortening the lifespan of the filter has the greatest effect on the following and serves to damage the filter.

- see below -

- 1) Moisture (grinding oil / supply air)  
- In case of inflow of moisture, it compresses the filter and damages it. (The flow rate cannot be secured due to the increase in filter pressure)

2) Sludge size (Nano size):

- When the size of the sludge is nano size (below 1 Micron) mainly appear. (Filter pressure rises and flow rate is not secured)

- In the case of nano size, sludge gets stuck in the gap of the filter when cleaning

The sludge does not come off, resulting in clogging.

3) Maintain 4 ~ 5.5 bar of air pressure when cleaning the filter



Water Chiller

공냉식 CHILLER (일체형)



특징

- 실외기, 실내기가 일체로 구성된 제품으로 콤팩트함.
- Caster가 장착되어 장소 이동이 편리함.
- 고성능, 저소음의 컴프레샤 내장으로 탁월한 냉동기능 발휘.
- 디지털 온도제어장치를 채택하여 정확한 온도 유지가 가능.
- 사용온도 범위를 폭넓게 조정.
- 누전차단기 보호용 연동회로를 장착하여 고장발생을 사전에 예방하고, 높은 안정성 유지.

Feature

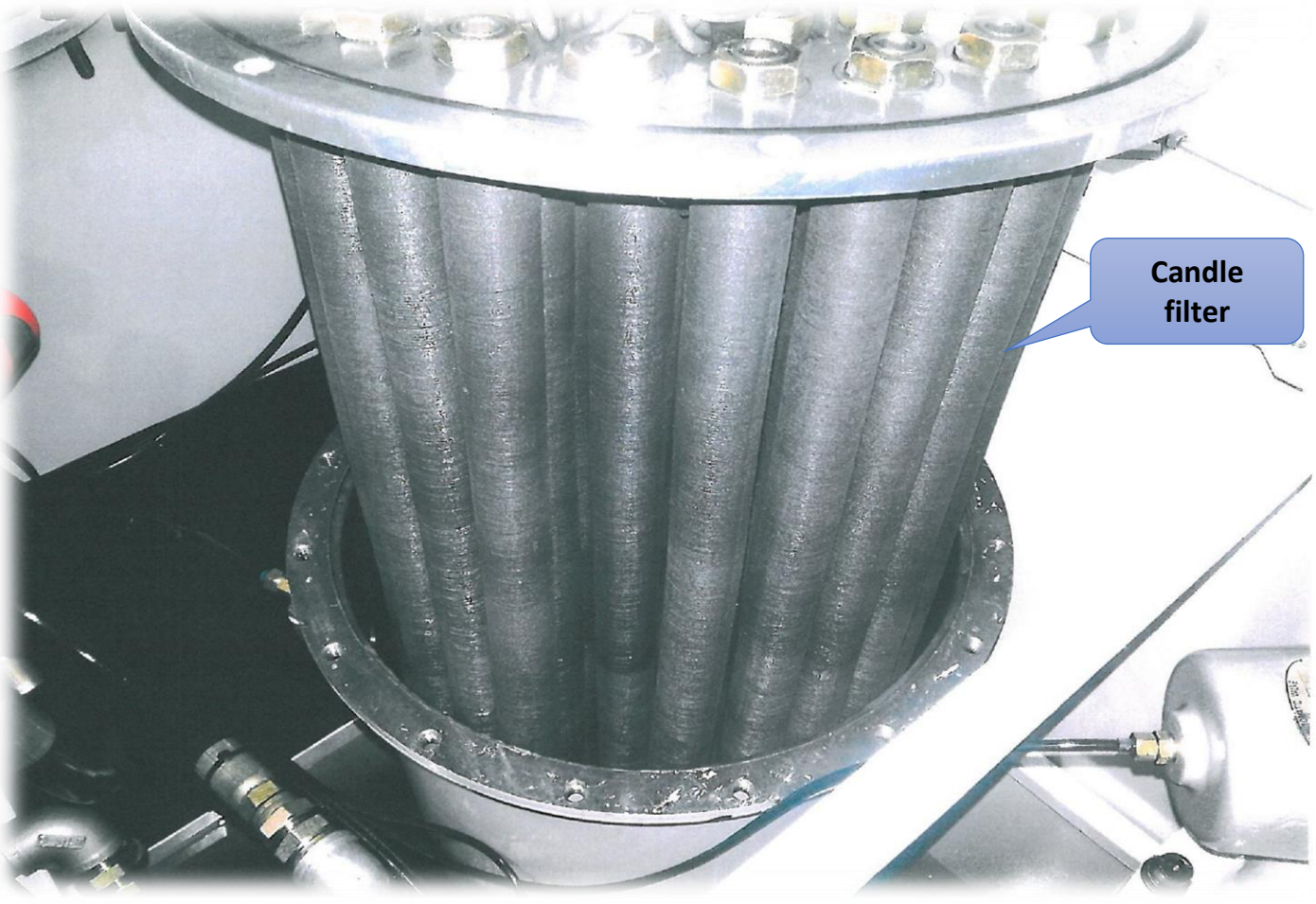
- Compact product whose outdoor unit and indoor unit consisted as single.
- Convenient to move location with a built-in Caster
- Exerting excellent freezing function since a compressor of high performance, low noise is built-in
- Maintaining accurate temperature by adopting digital thermostat and capable of widely adjusting scope of temperature used.
- Previously preventing occurrence of failure and maintaining high stability with built-in of interface circuit for protecting electrical leakage.

- ◆ 1RT, 2RT는 DIMENSION이 작아질 수 있습니다.
- ◆ 7.5RT이상은 현장조건에 따라 임출구 구경과 PUMP 사양이 변경될 수 있습니다.
- ◆ 본 사양 이외에도 특별 주문제작이 가능합니다.
- ◆ 상기 사양은 품질 개선을 위하여 예고없이 변경될 수 있습니다.

공냉식 CHILLER 사양 (일체형)

| MODEL   | HYS-1AU                                    | HYS-3AU       | HYS-5AU       | HYS-7.5AU     | HYS-10AU      | HYS-15AU       | HYS-20AU       | HYS-30AU       | HYS-40AU       |
|---|--|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|
| Cooling Capacity (Kcal/hr)                                | 3,000                                      | 9,000         | 15,000        | 24,000        | 30,000        | 45,000         | 60,000         | 90,000         | 120,000        |
| Temperature Range (°C)                                    |  |               | 5~36°C        |               |               |                |                |                |                |
| Ambient Temperature Range(°C)                             |  |               | 5~38°C        |               |               |                |                |                |                |
| Cooling water Pressure Range(kgf/cm <sup>2</sup> )*A type | 0.5~1.5                                    | 1.8~3.8       | 1.8~3.8       | 1.8~3.8       | 1.8~3.8       | 2.5~4.2        | 2.5~4.2        | 3.4~5.5        | 3~5.5          |
| Cooling Water Circulation Volume range(LPM)               | 5~20                                       | 16~66         | 16~66         | 33~133        | 33~133        | 100~216        | 100~216        | 100~216        | 100~433        |
| Cooling Water Tank Capacity (ℓ)                           | 32   | 66            | 80            | 80            | 160           | 225            | 300            | 450            | 600            |
| Cooling Water Link Pipe (A)                               | 15   | 20            | 25            | 32            | 32            | 40             | 50             | 50             | 50             |
| Refrigerant   | R-22, R-134a, R-404C, R-407C               |               |               |               |               |                |                |                |                |
| Comp Capacity (Kw)  | 0.75                                       | 2.25          | 3.75          | 5.63          | 7.5           | 11.25          | 15             | 22.5           | 30             |
| Circulation Pump Capacity (Kw)                            | 0.45                                       | 0.75          | 0.75          | 1.1           | 1.1           | 2.2            | 2.2            | 3              | 4              |
| Cooling Fan Motor Capacity (Kw)                           | 0.1  | 0.2           | 0.4           | 0.2×2         | 0.4×2         | 0.4×2          | 0.75×2         | 0.75×2         | 0.75×2         |
| Power Consumption (Kw)                                    | 1.3  | 3.2           | 4.9           | 7.13          | 9.14          | 14.25          | 19.5           | 27             | 35.5           |
| Power Specification                                       | AC 1Ø 220, 3Ø 220, 3Ø 380, 3Ø 440V 50-60Hz |               |               |               |               |                |                |                |                |
| Control Circuit Power                                     | AC 1Ø 220V                                 |               |               |               |               |                |                |                |                |
| External Dimension (W×L×H)                                | 530×800×1080                               | 600×1100×1260 | 680×1200×1410 | 750×1450×1635 | 800×1700×1685 | 1000×1800×1980 | 1100×2200×2080 | 1000×2550×2280 | 3480×1030×1872 |
| Weight (Kg)   | 90   | 140           | 250           | 450           | 550           | 850            | 1,000          | 1,500          | 1,560          |

Picture of the inside of the filter tank



- **Candle filter structure**

- filter arbor  
- Before filter assembly



Made in Korea filter



Assembled with special paper



# Automatic sludge discharge device

- The stand is detachable.
- Several types of sludge bins are available.



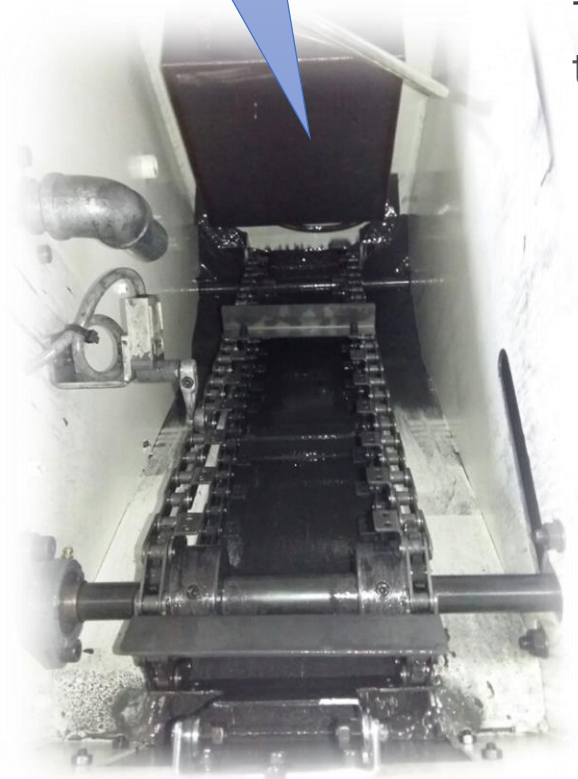
Sludge basket  
Pedestal

Automatic  
sludge  
discharge  
device



Inside the  
automatic  
ejection system

The shape of the sludge discharged from the automatic sludge discharge device









# Natural drainage aid for equipment with a low drain height for used oil



**Natural  
drainage unit**



For equipment with very low outlet height



line pump

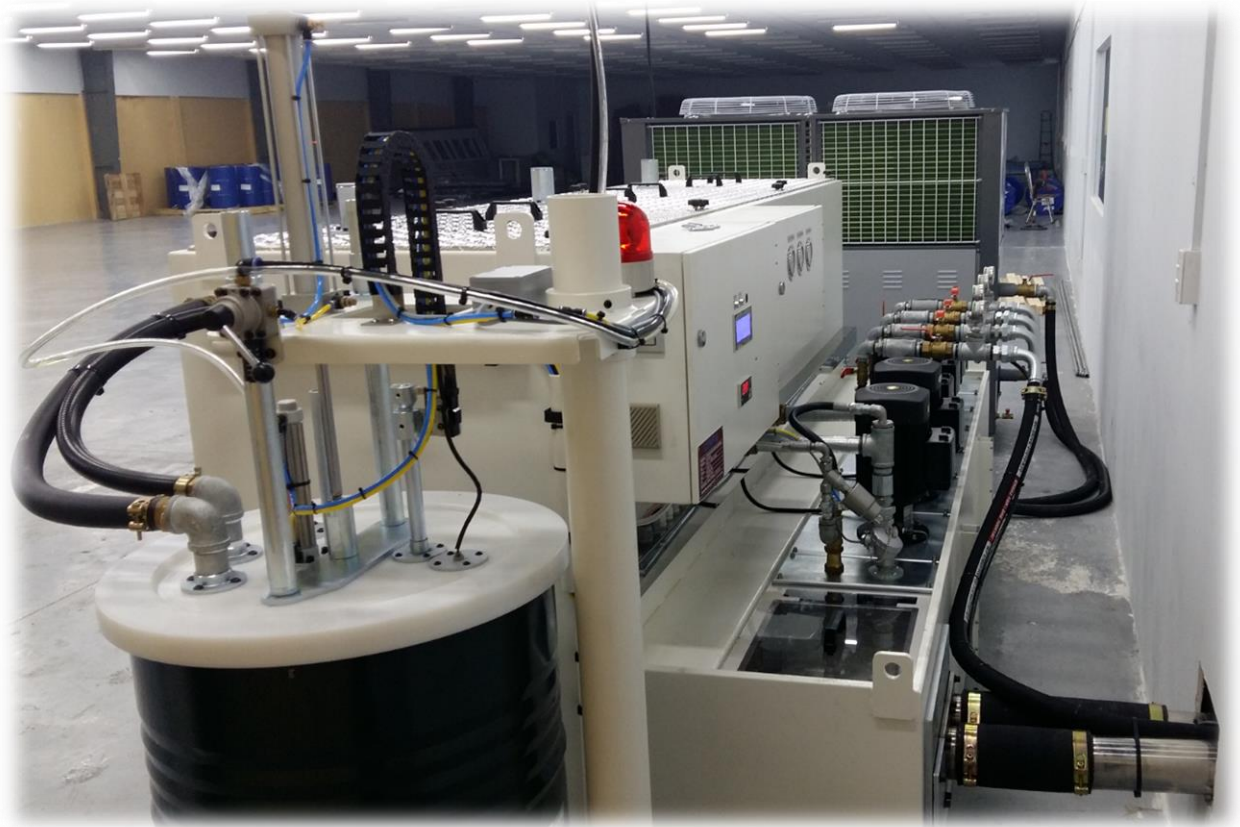


## Piping installation using a line pump

The position of the outlet where the used oil is discharged is low  
Auxiliary tank is not available.









Multi-valve products



drainage auxiliary tank





# Installation example of natural drainage method

