

# ***Hakusan (Thailand) Co., Ltd.***

Company profile & Products & Solution

# HAKUSAN THAILAND

- Location : Lamlukka, Pathumthani
- Since Jan. 2016
- Employee : 10
- Main products:
  - Chip conveyor
  - Coolant tank
  - Filter equipment
- Total production : 400set (～May 2020)
- Equipment
  - Laser cut machine x 1
  - Press brake machine x 1
  - Welding machine x 4
  - Roll bender x 1



# GROUP PROFILE

## HAKUSANKIKO



- TOTAL PRODUCTION 100,000SET (~2019)
- EMPLOYEE : 114
- LOCATION : Ishikawa, Japan



## HAKUSAN MACHINERY(Wuxi)



- TOTAL PRODUCTION 10,000SET (~2019)
- EMPLOYEE : 120
- LOCATION : Shanghai, China



## HAKUSAN KOREA



- MAIN PRODUCTS : DELIVERY BOX
- LOCATION :Seoul, Korea

# Main user & Customer

## Machine maker

- |                |                  |                |
|----------------|------------------|----------------|
| ■ Fanuc        | ■ Takamaz        | ■ Komatsu NTC  |
| ■ Brother      | ■ Tsugami        | ■ Howa         |
| ■ Makino       | ■ Takisawa       | ■ Sakurai      |
| ■ Okuma        | ■ Citizen Miyano | ■ Nachi        |
| ■ Mori seiki   | ■ Murata         | ■ Kanzaki      |
| ■ OKK          | ■ Fujikikai      | ■ Nishida      |
| ■ Enshu        | ■ Star           | ■ Miroku       |
| ■ Horkos       | ■ Hasegawa       | ■ Fuji-horning |
| ■ Jtekt        | ■ Amada          | ■ Yasunaga     |
| ■ Yasuda       |                  | ■ First-giken  |
| ■ Mazak        |                  |                |
| ■ Mitsui seiki |                  |                |
| ■ Sugino       |                  |                |

- |   |                                  |
|---|----------------------------------|
| ■ | Machining                        |
| ■ | Lathe                            |
| ■ | Special, Grinding, Gundrill, etc |

## End user (Hopper, Centerized etc)

- Mazda
- Denso
- Suzuki
- Ahresty
- Art
- Aisin AW
- Stanley
- Isuzu

# Main products

- Chip conveyor

- Floor
- Scraper
- Coil



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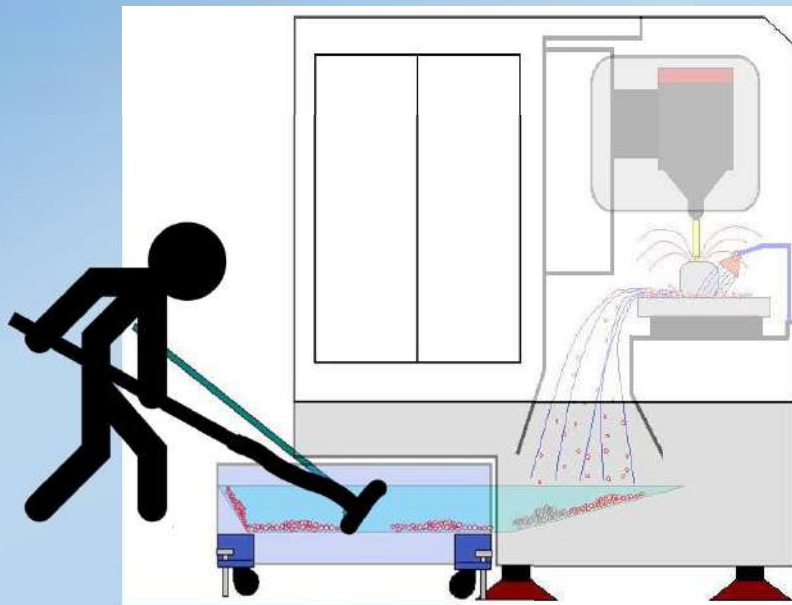
- Coolant system

- Drum filter scraper conveyor
- Coolant tank

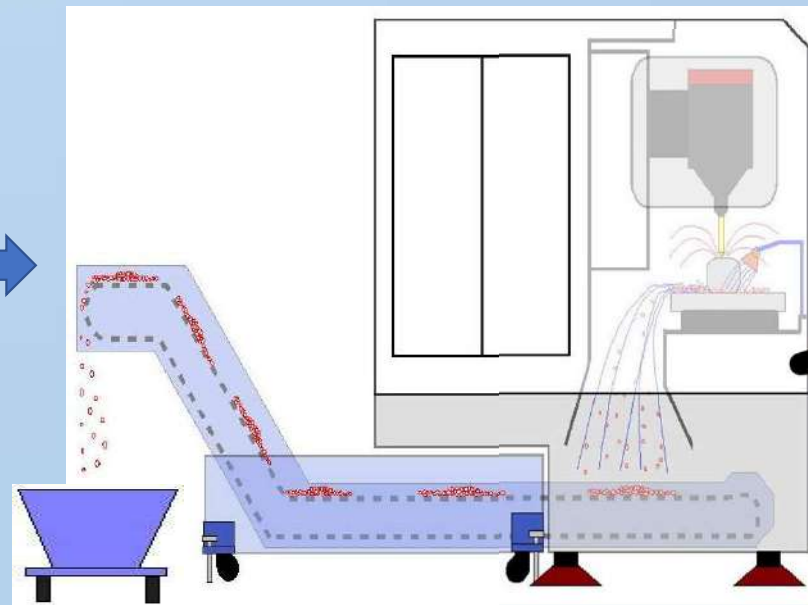


# Purpose of chip conveyor

✓ Transfer chips from inside machine to chip cart automatically.



- ☹ Lose machine operating time
- ☹ Hard, Dangerous, Dirty work



- ☺ Increase machine operating time
- ☺ Good for worker

# Chip conveyor lineup

Catalog P.3,4

over 50mm



Floor conveyor

2024/7/1

under 50mm



iron



Scraper  
conveyor

iron



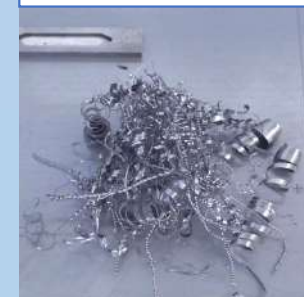
Magnet scraper  
conveyor

aluminum



Drum filter  
scraper conveyor

tangled



Coil conveyor

# Floor conveyor

Catalog P.5,6

- For long chips (over 50mm)
- Conveyor width 250-600mm
- Angle  
0° ,30° ,45° ,60° ,75°
- Conveyor length under 10m
- Two type speed  
0.9m/min or 1.7m/min
- Safety device protect relay or torque limit
- Options:
  - Control box
  - Coolant returner
  - Enhanced hinge
  - Dimple hinge



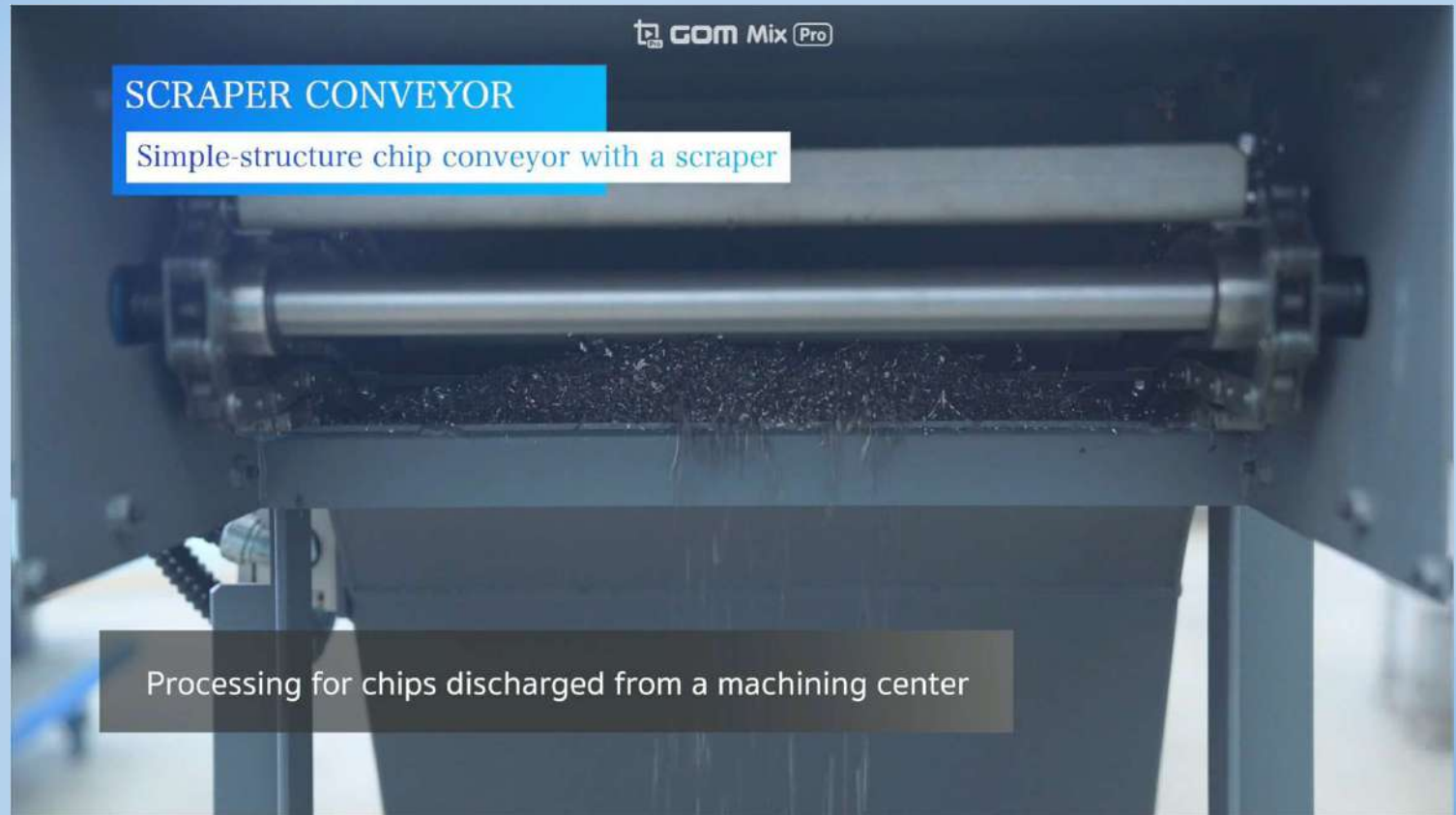
# LATHE MACHINE × FLOOR CONVEYOR



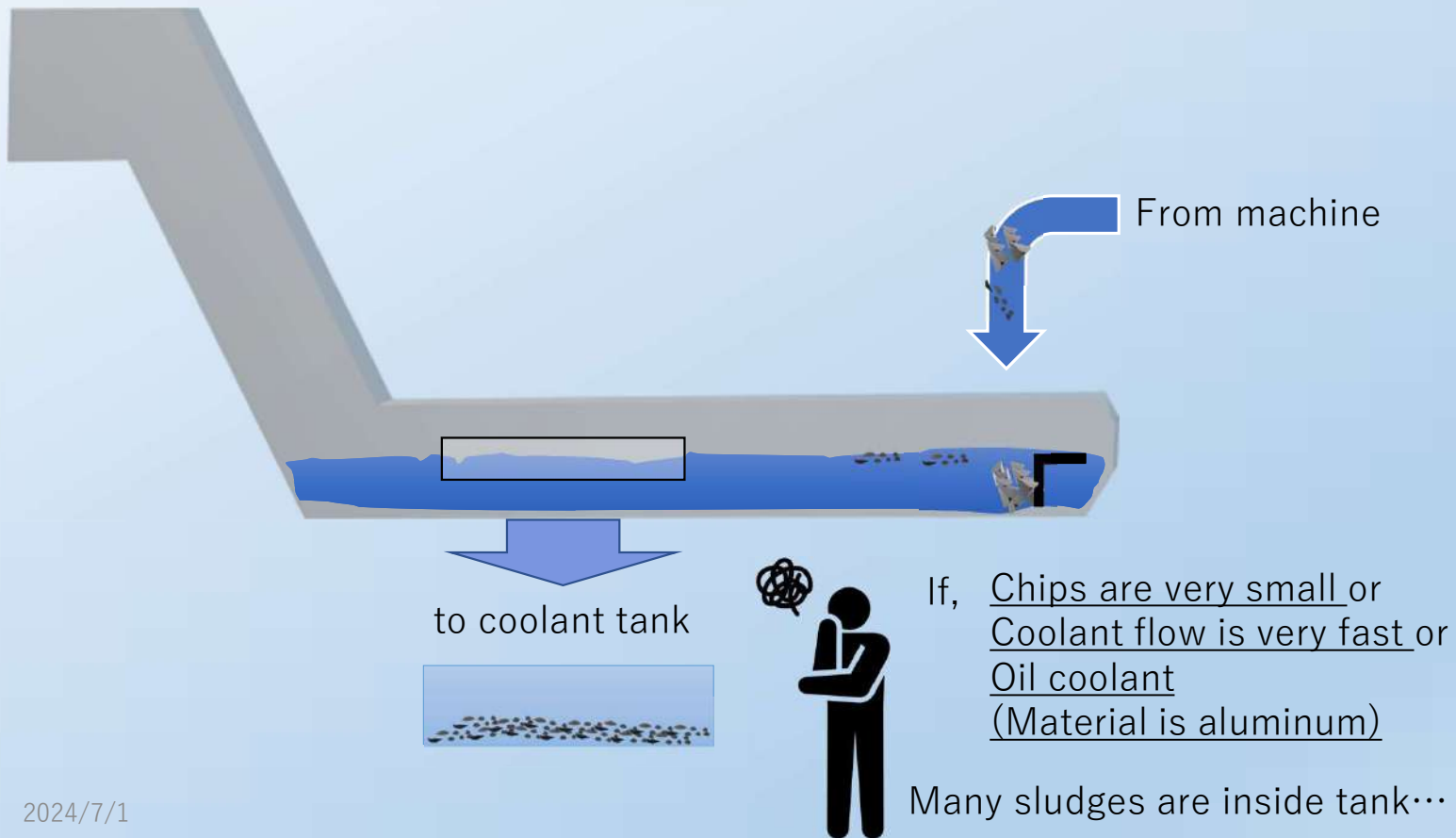
# Scraper conveyor

Catalog P.7,8,9

- For short chips (under 50mm)
- Conveyor width 250-600mm
- Angle  
0° ,30° ,45° ,60° ,75°
- Conveyor length under 15m
- Safety device protect relay or torque limit
- Options:
  - Control box
  - Coolant returner
  - Magnet scraper
  - Wedge wire

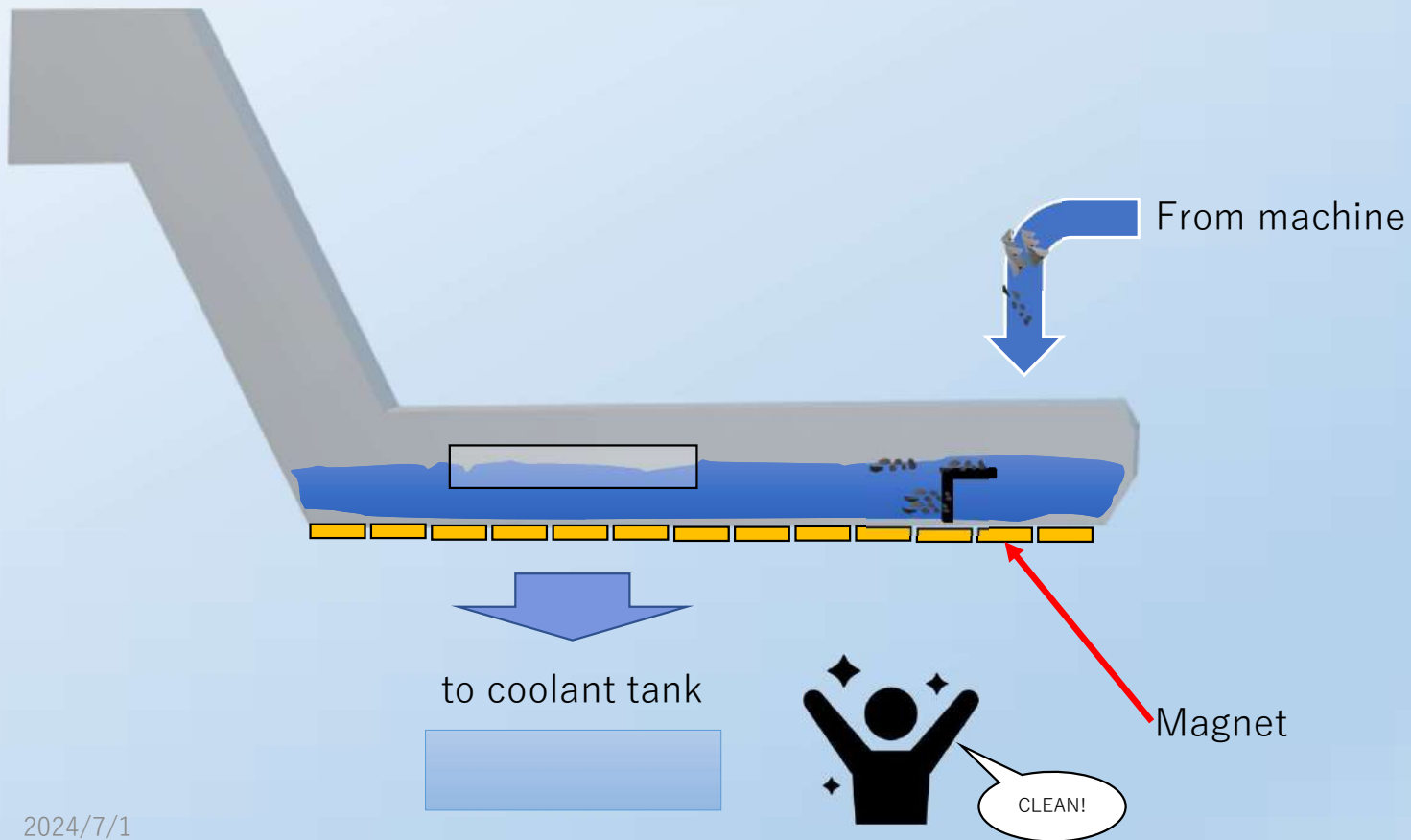


# Normal scraper conveyor



solution1

# Magnet scraper conveyor

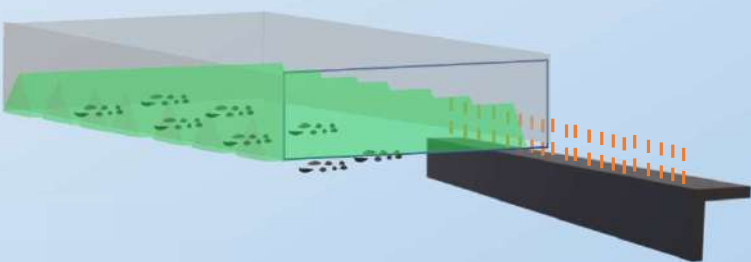
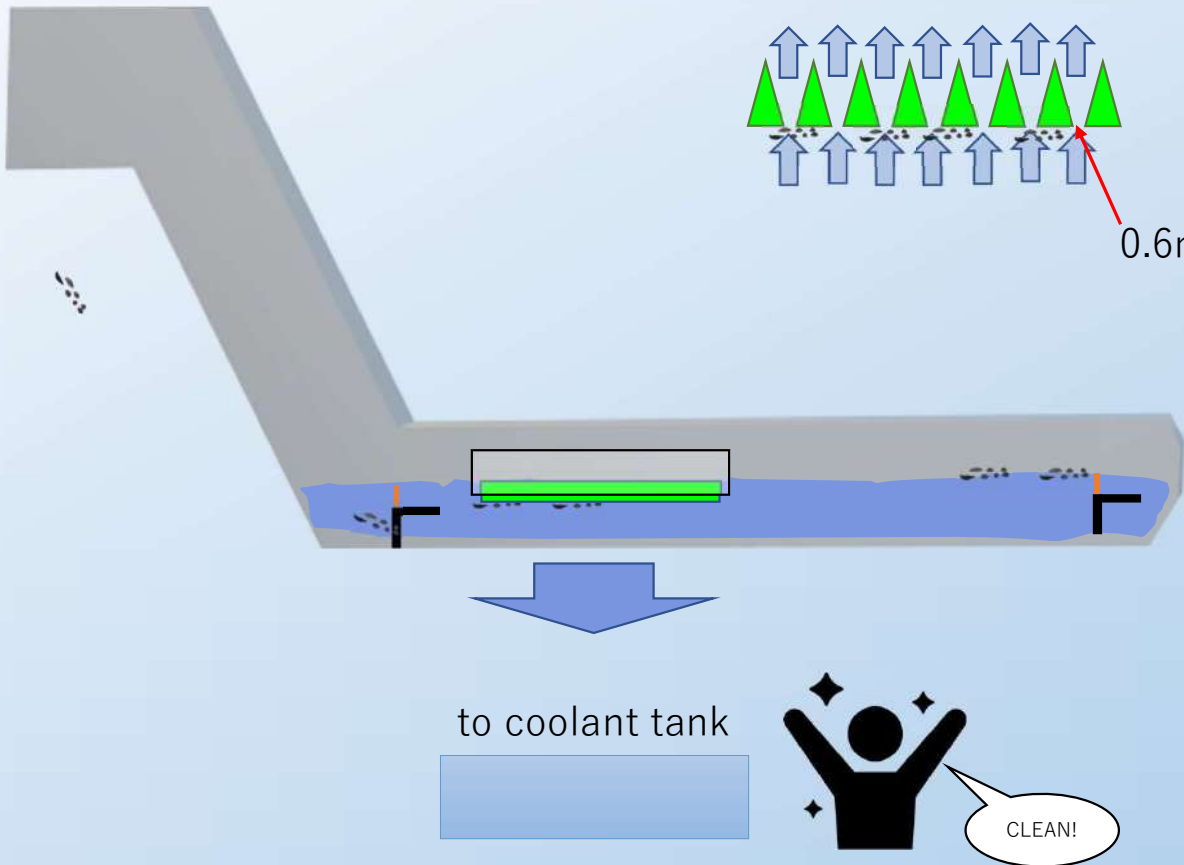


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solution2



# Wedge wire filter scraper conveyor



Wedge wire filter



brush

# ROBODRILL × SCRAPER CONVEYOR



# MACHINING CENTER × MAGNET WEDGE WIRE SCRAPER CONVEYOR



# Coil conveyor

- For tangled chips
- Conveyor width 350-600mm
- Conveyor length under 3m
- Options:
  - Control box
  - Enhanced coil



# LATHE MACHINE × COIL CONVEYOR



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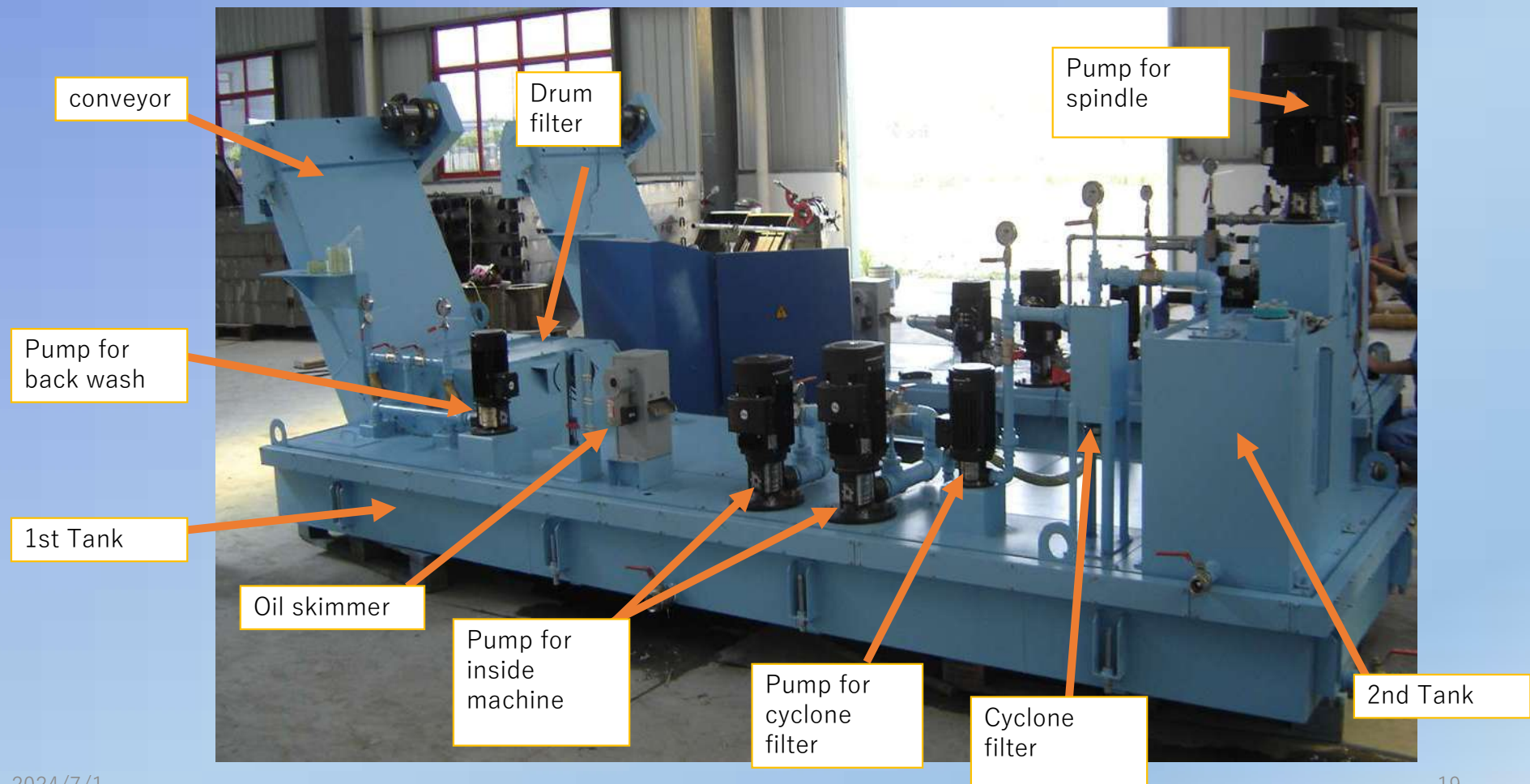
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# Purpose of Coolant system

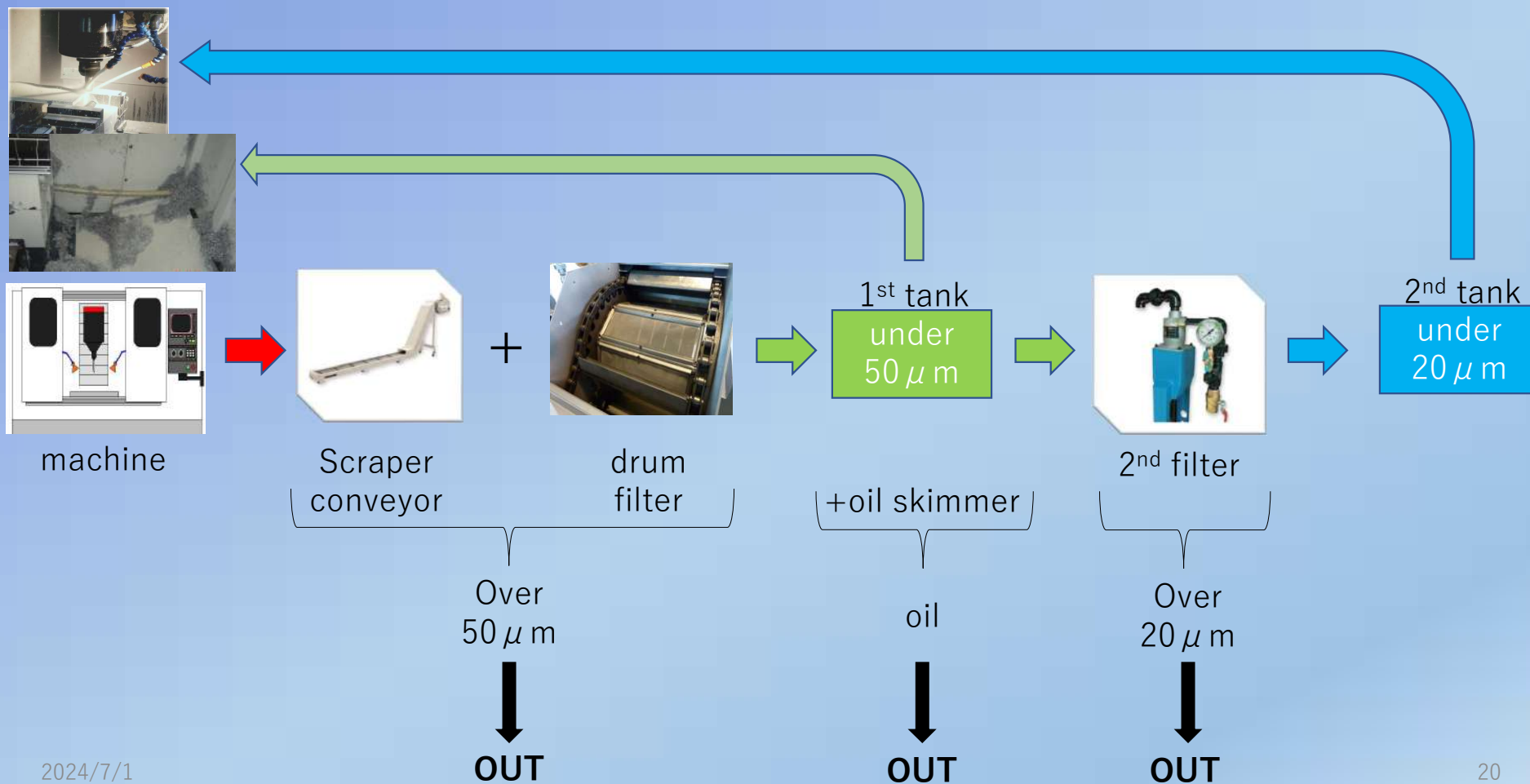
1. Supply coolant to machine.
  - Coolant clean up inside machine.
  - Coolant cool down machine and tooling.
  - Lubrication
2. Filtering chips and sludge by using several filter.



# COOLANT SYSTEM LAYOUT (Example)



# COOLANT FILTERING FLOW(Example)



# Drum filter scraper conveyor

- For short aluminum chips (under 50mm)
- Filter mesh #80 or 200
- Automatic filter cleaning
- Conveyor width 400-800mm
- Angle 60° ,75°
- Safety device protect relay or torque limit
- Options:
  - Control box
  - Coolant returner
  - Pump, level gage, oil skimmer etc.
  - Magnet
  - Notch wire drum

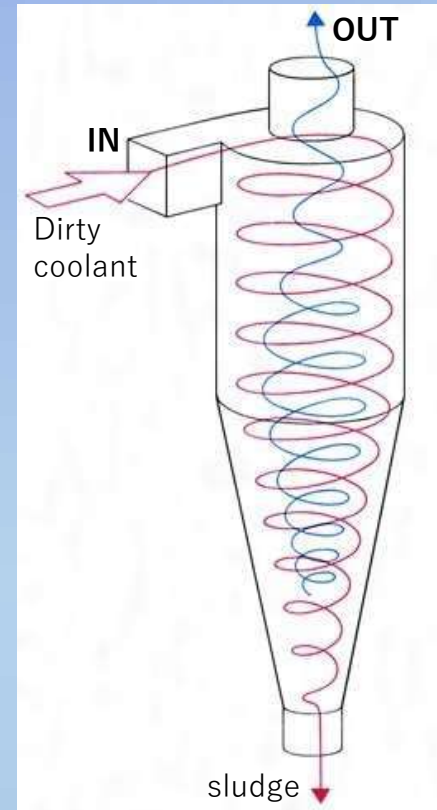
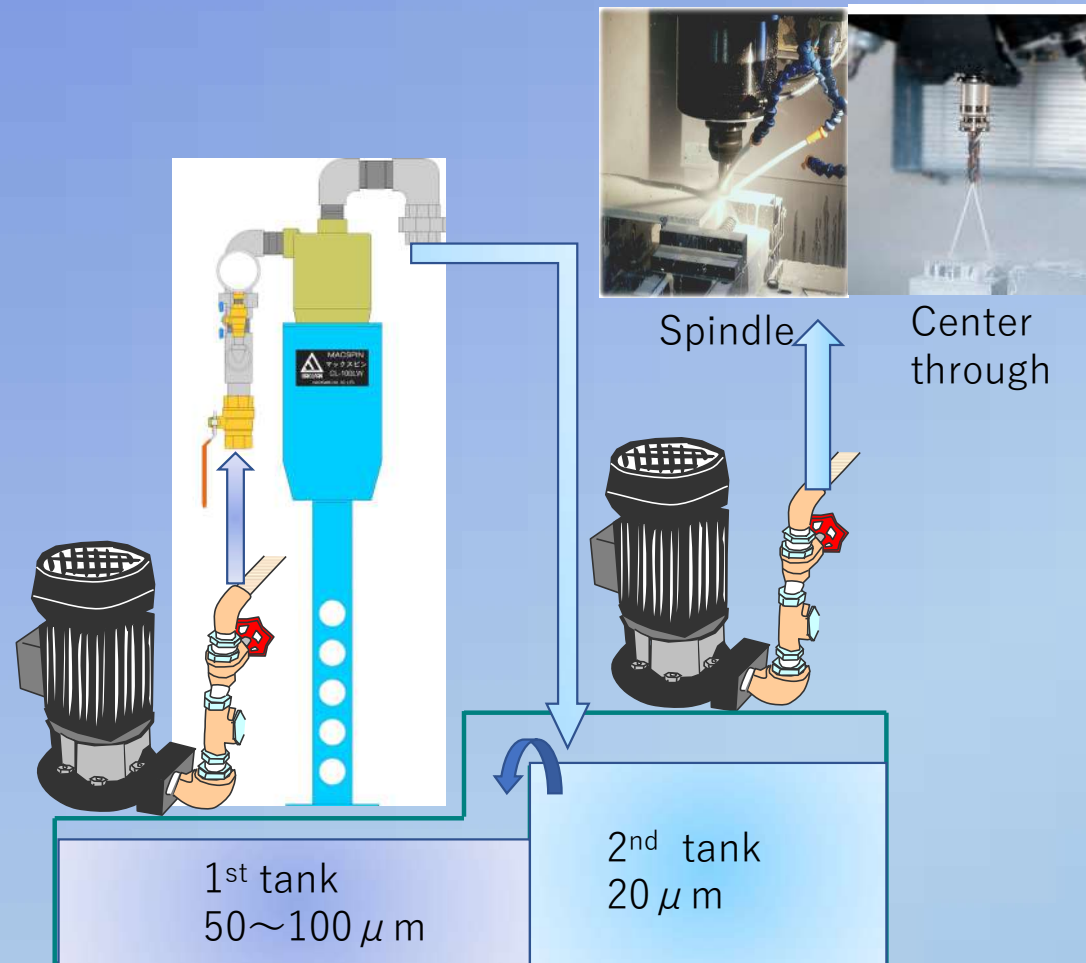


# MACHINING CENTER × DRUM FILTER SCRAPER



# Cyclone filter

Catalog P.16



Flow rate : 22-310L/min  
Accuracy : 20 μm 90%

## Merit

- Maintenance free
- No consumable goods

## Demerit

- Coolant temperature up
- Oil coolant can't use

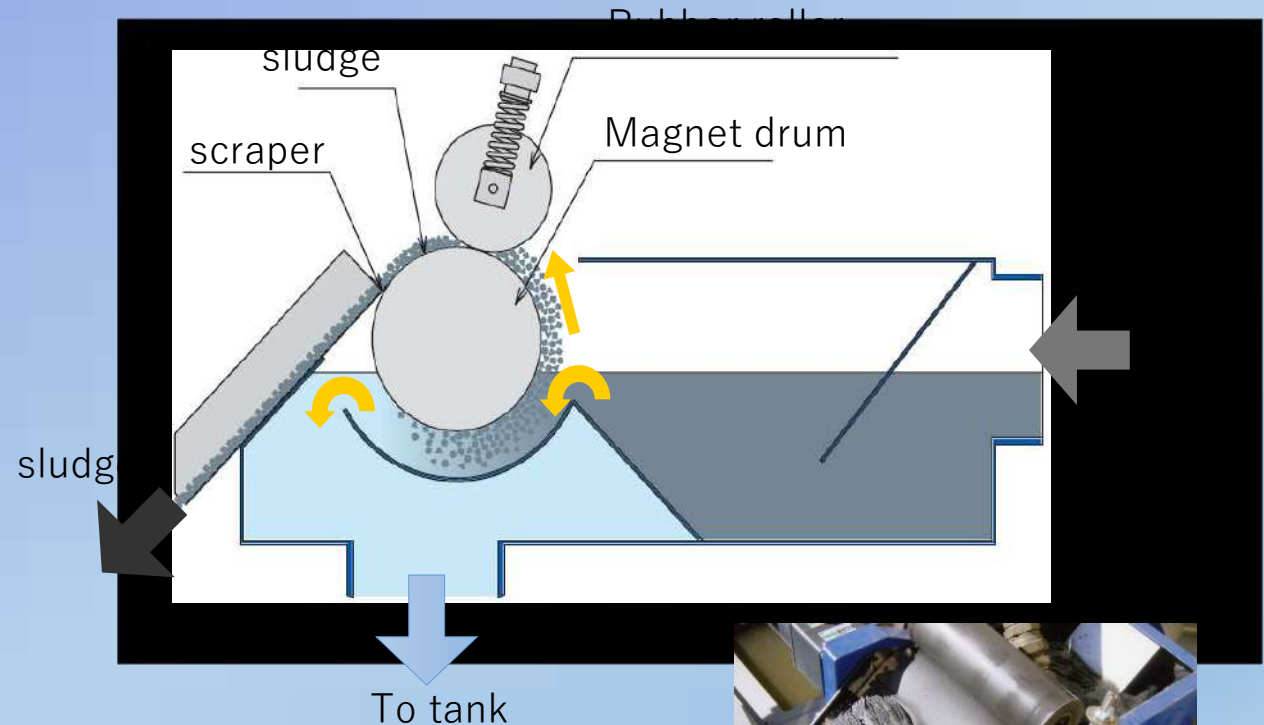
# Magnet separator

Catalog P.15



**Flow rate : 40-240L/min**  
**Accuracy : 7-10  $\mu$ m 99%**  
**Model MHF, MHK**

- Just for magnetic material
- MHF is normal magnet
- MHK is high performance magnet
- Oil coolant can use



# Oil skimmer

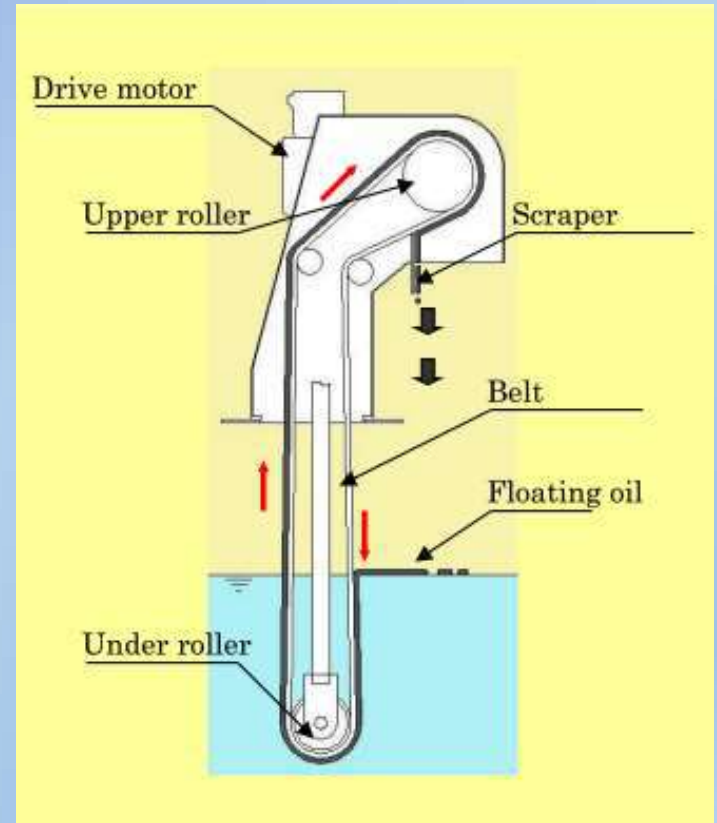
For collect floating oil

## HOS-25

- Belt width 25mm
- Length 165, 250, 350mm
- Capacity 10L/h (max)

## HOS-75

- Belt width 75mm
- Length 300, 600, 900mm
- Capacity 50L/h (max)



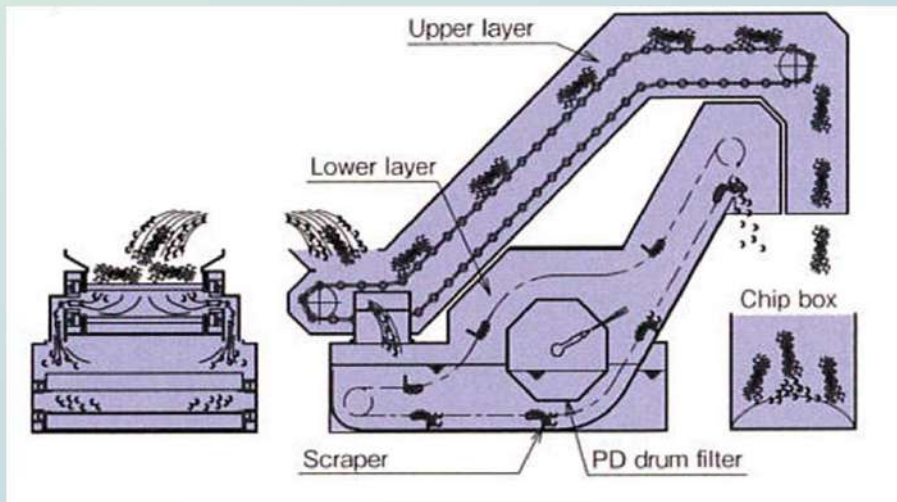
Other chip conveyor & coolant tank

# Twin chip conveyor(PDM II)

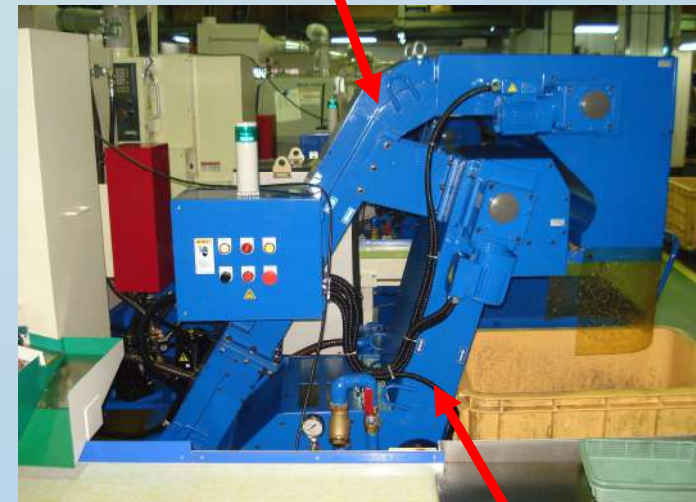
Catalog P.13

For Long and short chips

→Floor + drum filter scraper conveyor



Floor conveyor



Drum filter  
scraper conveyor

Other chip conveyor & coolant tank

# Concentrated conveyor

Catalog P.17



sample

Other chip conveyor & coolant tank

# Pump back system

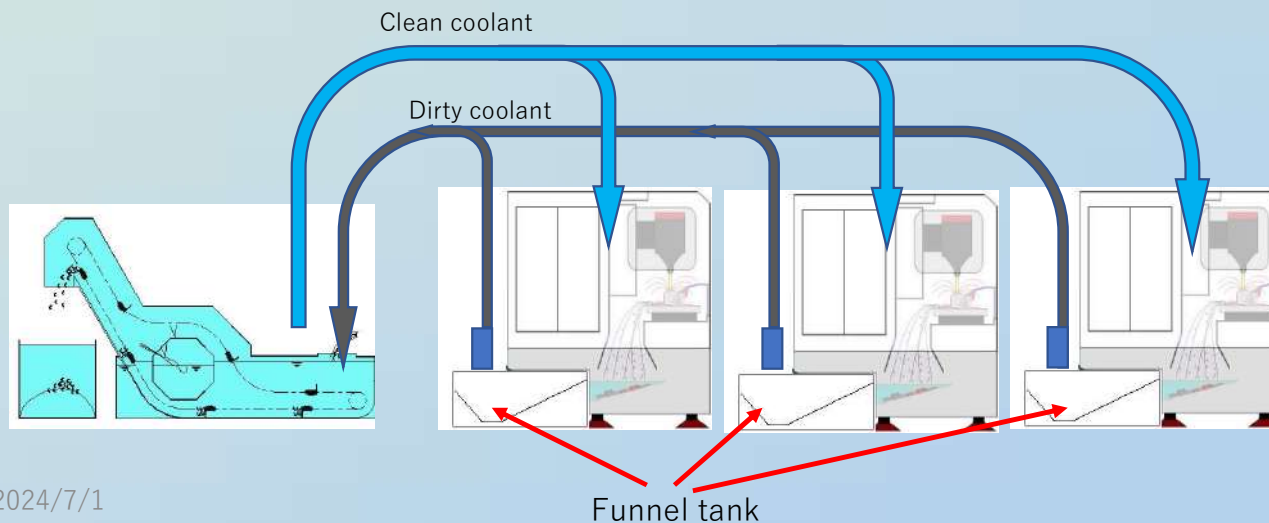
Catalog P.18

- Coolant and chips flow to main coolant tank from **funnel tank** attached by each machine.

## Merit

- ✓ Small machine space
- ✓ Free layout
- ✓ Easy coolant concentration control

sample



Other products

# Suction tower cleaner

- ✓ Portable
- ✓ Air supply only
- ✓ Coolant lifespan up

## Specification

- Capture max : 15L
- Flow rate : 40-50L/min
- Accuracy : 10  $\mu$  m



Other products

## **FILSTER** all-in-one unit

- ✓ Portable
- ✓ Easy to install
- ✓ Coolant lifespan up
- ✓ No consumables

### **FILSTER** Specification

- Flow rate : 15-60L/min
- Accuracy : 10  $\mu$  m
- Power supply : 200V/50Hz

### **TEST unit**

- Flow rate : 15-20L/min
- Accuracy : 10  $\mu$  m
- Power supply: 200V50Hz



Other products

# CHIP CART



Other products

# Lifter & Hopper

Chip collection & disposal system

Catalog P.17




# Repair & Restore service

## Before



## After



- 
- ✓ Many stock parts
  - ✓ Sheet metal parts and machine parts are shorts time delivery.
  - ✓ Re-paint

# Delivery box “AZUKARI-KUN”



- Touch monitor
- QR code



TV CM