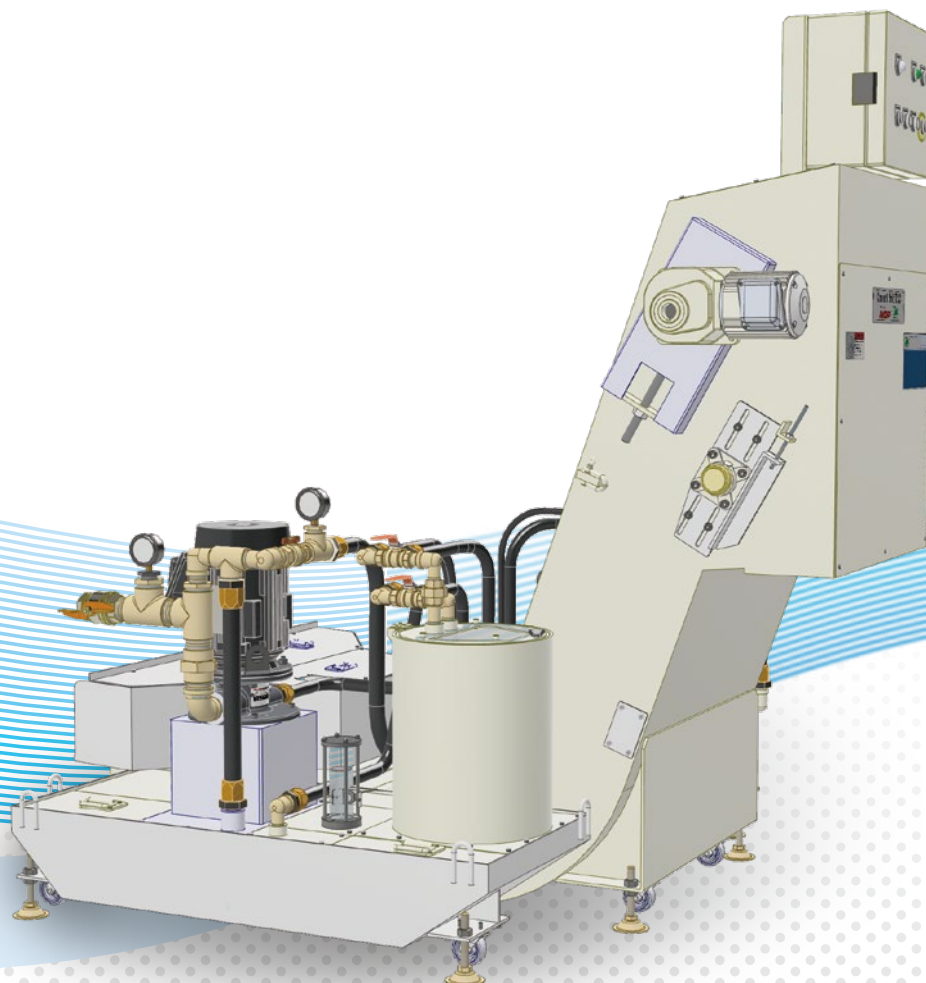


equipped with **NOP FILTER PUMP**

Coolant Unit TNC



Coolant unit dedicated to BT30 machining center

Space and Resource savings

Compact design with a tank capacity of 143 L circulating in a small tank, which takes less space than conventional drum-type units.

Minimized, Filtrated and flushed coolant fluid keeps the tank clean, no sludge accumulation, no bacteria propagated and reduces coolant deterioration.

Reduced tank maintenance and Improved work efficiency

A double-decker scraper conveyor and NOP FILTER PUMP filter all coolant and transfer it in circulation.

The tank is designed to prevent sludge accumulation inside the tank. Maintenance such as tank cleaning is reduced and workability is improved.

Low processing defect and Upward processing accuracy

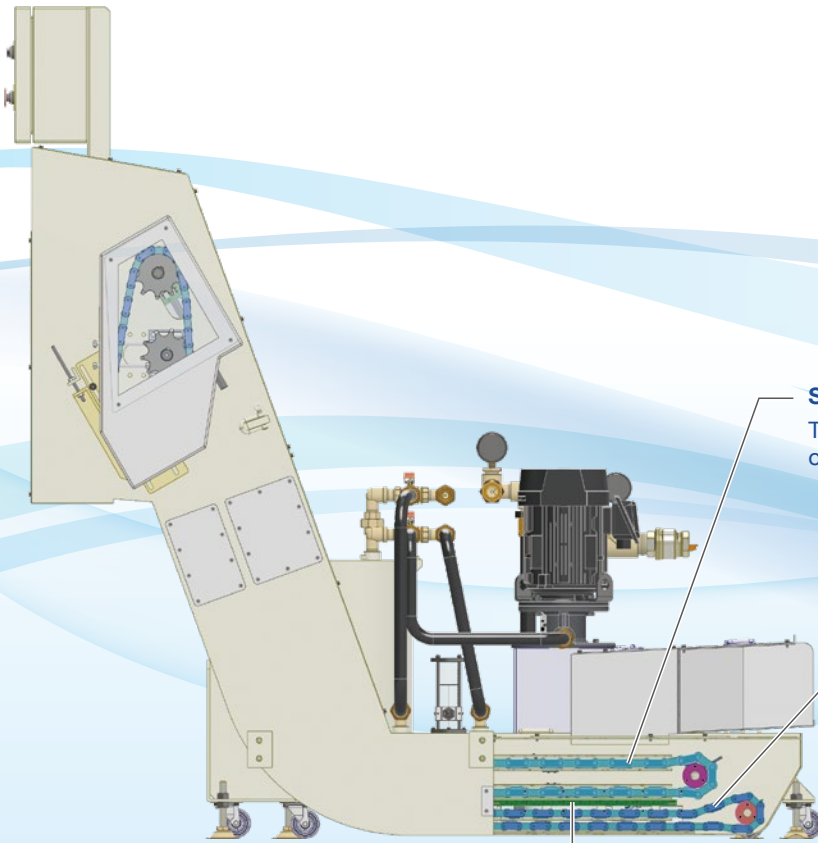
All coolant transferred to the machine is filtered by NOP FILTER PUMP to supply clean liquid.

Prevents seating errors, chock stops, and workpiece scratches caused by chips.

NOP

Nippon Oil Pump Co., Ltd.

MECHANISM OVERVIEW



Scraper Conveyor (upper row)

Treats large chips accumulated on the primary filter.

Scraper Conveyor (lower row)

Treats fine chips accumulated on the tank floor.

Primary Filter (1.0 mm punched metal)

Sludge collection wire mesh bucket (mesh size 250/500 μm)

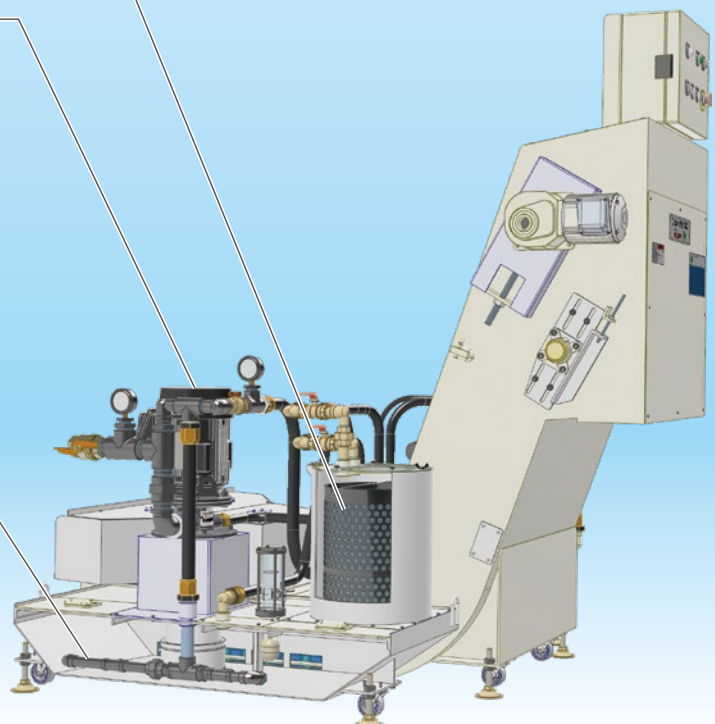
Dirty liquid with chips removed by the NOP FILTER PUMP is collected on the Sludge collection wire mesh bucket.

NOP FILTER PUMP (TOP-YTH2200AN-I252CSJE (W)) (Filtration performance 100 μm /99.9%)


The cyclone filter agitates the siphoned coolant and separates clean liquid from dirty liquid with chips. Clean liquid is supplied to the machine and Diffusion nozzle to prevent sludge accumulation in tank. Dirty liquid with chips is transferred to the Sludge collection wire mesh bucket.

Diffusion nozzle to prevent sludge accumulation in tank

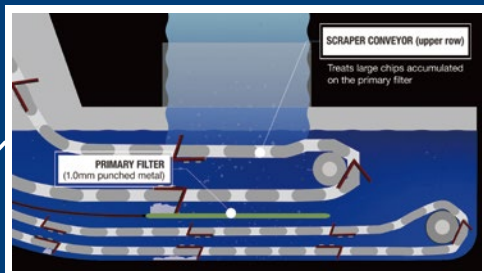
Clean liquid filtered by NOP FILTER PUMP is sprayed through the nozzle into the tank, causing agitation and prevents chips accumulate on the tank floor.



● Contrivance of coolant unit TNC

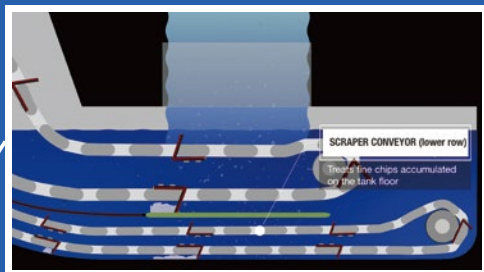
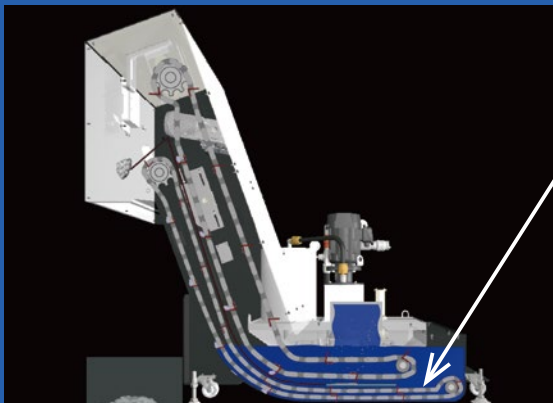
State of sludge collection (video) **Check now !** with your mobile device 

1



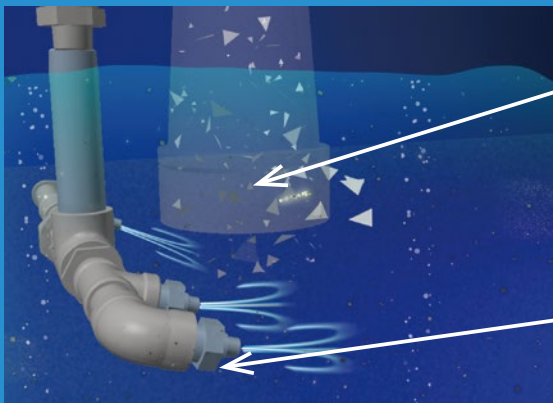
Large chips discharged from the machine tool are discharged out of the tank by the upper row scraper conveyor.

2



Fine chips that passed through the 1.0 mm punched metal filter are also discharged by the lower row conveyor.

3



NOP FILTER PUMP
The sludge that has passed through the lower row scraper conveyor is sucked, filtered, and separated by the NOP FILTER PUMP.

Diffusion nozzle to prevent sludge accumulation in tank
A portion of the clean liquid filtered by the NOP FILTER PUMP is sprayed through the nozzle into the tank, causing agitation and prevents chips accumulating on the tank floor.

4



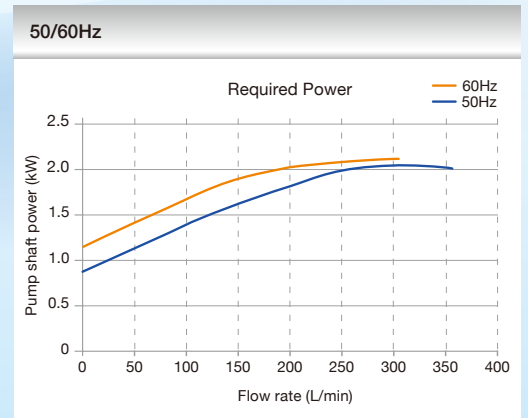
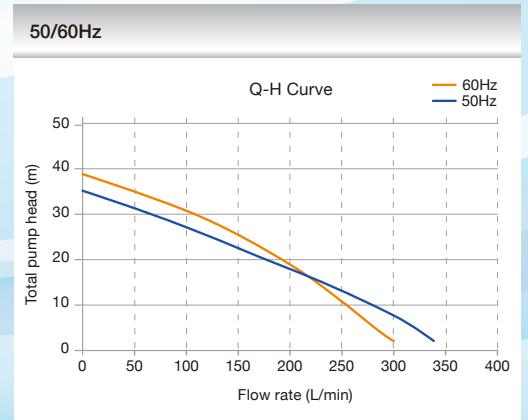
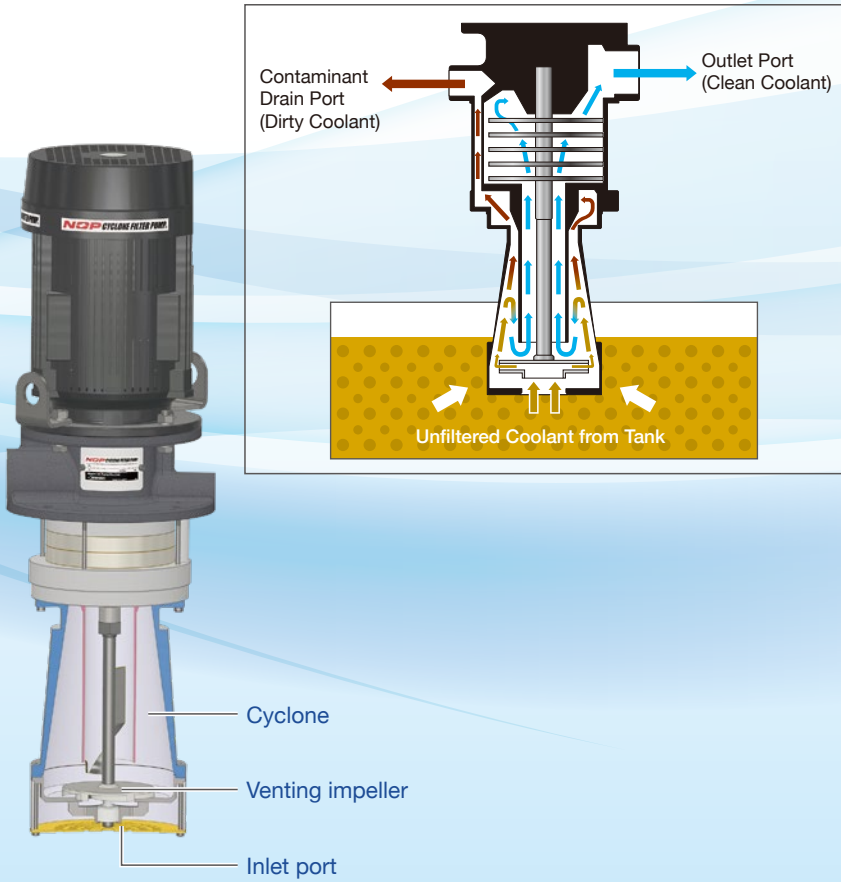
NOP FILTER PUMP (TOP-YTH2200AN-I252CSJE (W))

Sludge collection wire mesh bucket (mesh size 250/500 μm)

The cyclone filter agitates the siphoned coolant and separates clean liquid from dirty liquid with chips. Clean liquid is supplied to the machine and Diffusion nozzle to prevent sludge accumulation in tank. Dirty liquid with chips is transferred to the Sludge collection wire mesh bucket.

● NOP FILTER PUMP

This unique reversed cyclone system can separate clean coolant and dirty coolant inside the pump for 100 $\mu\text{m}/99.9\%$. Dirty coolant is pushed up through the side surface of cyclone filter by centrifugal force and discharged with sludge. Filtered clean coolant is collected to the center of cyclone filter and boosted up by multiple-stage impellers.



<Conveyor post-loading specification>

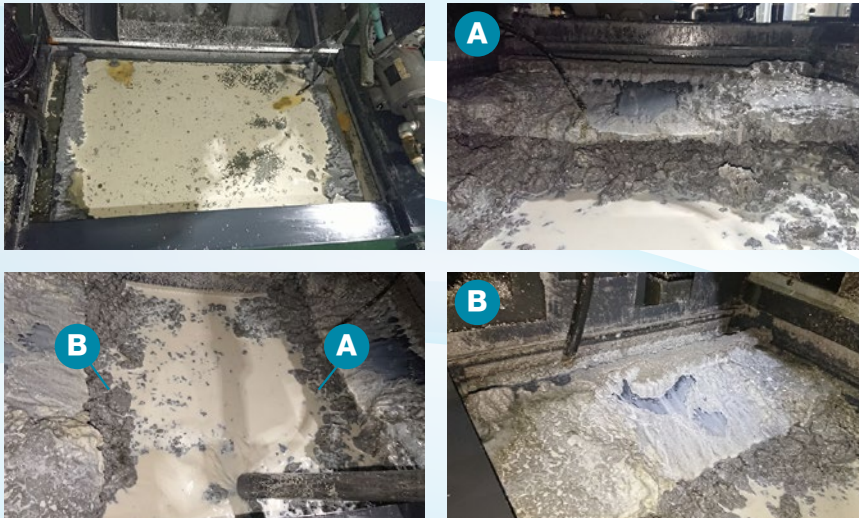


<Conveyor left with CTS specification>



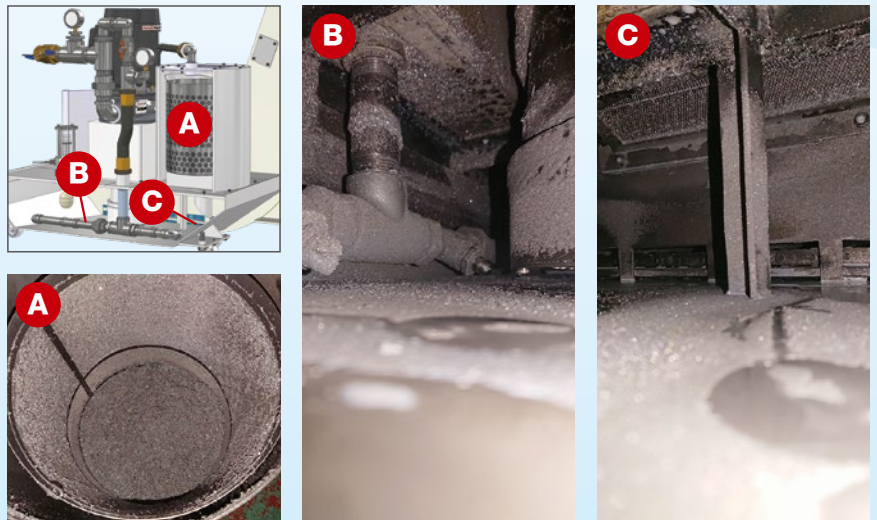
**Tank condition after 12 months of use
(Introduction example of aluminum processing machine)**

Conventional tank Tank condition after 6 months of use
(2,000 kg of chips discharged from the processing machine)



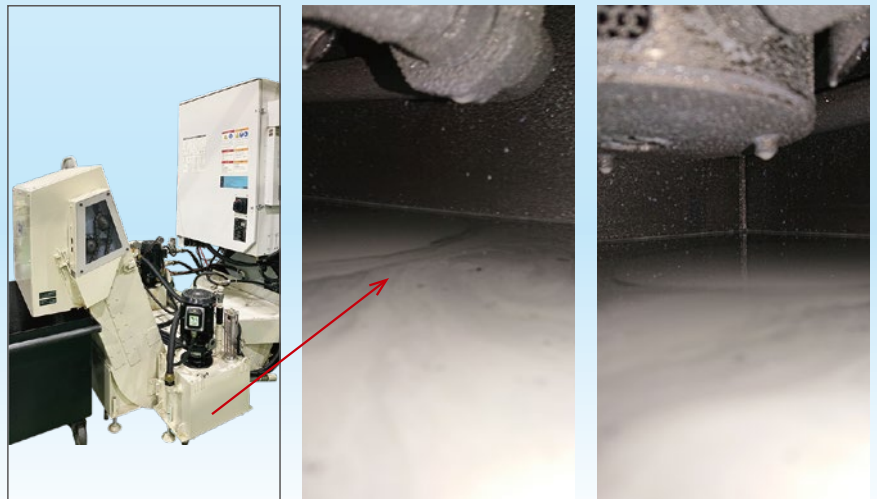
Coolant Unit "TNC" Tank condition after 12 months of use
(4,000 kg of chips discharged from the processing machine)

The inside of the primary tank after draining



Tank equipped with pump for CTS/through spindle

The inside of the secondary tank after drainage

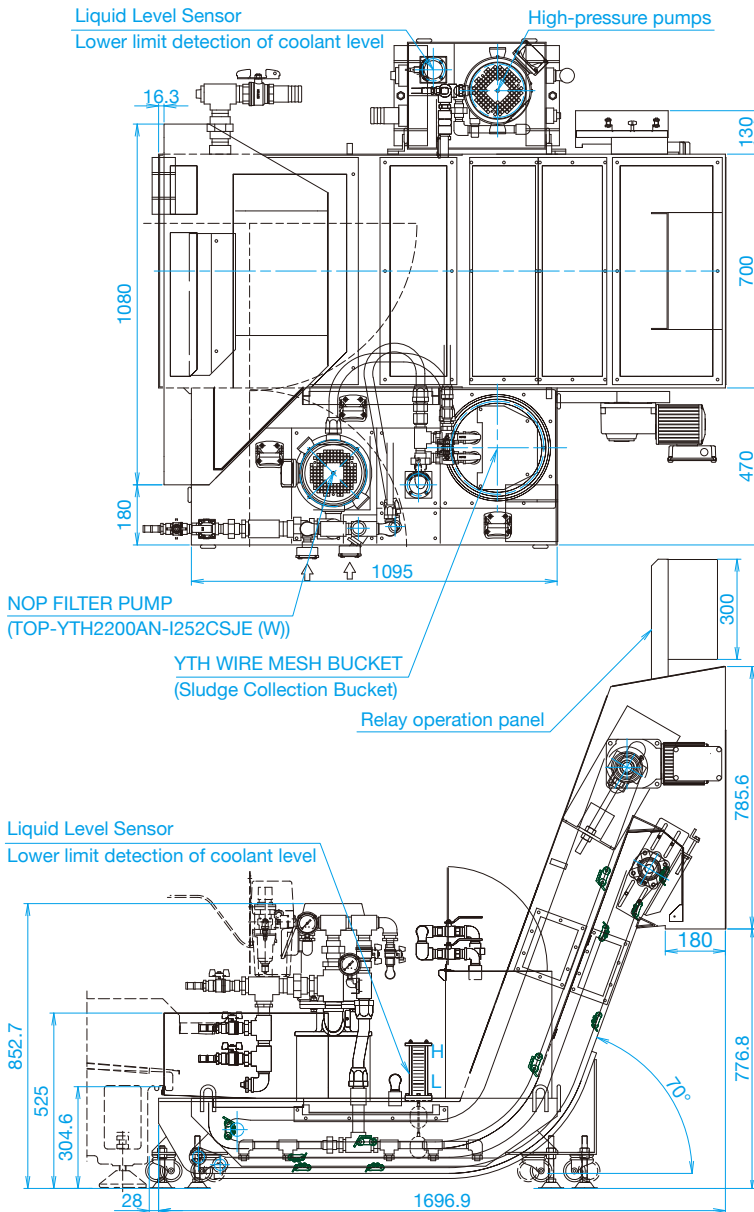


Examples of other installations
(processing material: casting)

Check now !
with your mobile device



DIMENSIONS (Typical Drawing)



Conveyor specifications (Scraper)	
Conveyor speed	2.4 m/min (50 Hz) 2.9 m/min (60 Hz)
Conveyor chain	RF2050R4LA2: With scraper every 8 links
	RF2060R4LA2: With scraper every 8 links
Safety device	Current Relay
Coolant capacity	Primary tank 143 L (effective capacity 84 L): 94 L in conveyor (effective capacity 54 L) 49 L in tank (effective capacity 30 L)
	Secondary tank 23 L: Total primary and secondary capacity 166 L
Power Supply	AC200/200 V 50/60 Hz
Electrical component	Up to relay operation panel
Coating	Our standard color (Munsell 5Y8/1.5 with luster) Urethane coating
Conveyor Motor Specifications/Reduction Gear	
Motor model Number and Specifications	TMHF-02-240-001 0.2 kW 1/240 With load detection (current relay)
Rotational Speed	6.3/7.5 rpm (50/60 Hz)
Current	1.24/1.1/1.11 A (200/200/220 V) (50/60/60 Hz)
NOP FILTER PUMP (TOP-YTH2200AN-I252CSJE (W)) Motor Specifications	
Pump model	NOP FILTER PUMP (TOP-YTH2200AN-I252CSJE (W))
Motor model Number and Specifications	IKH3-FCKLA21E (2.2 kW/2P)
Flow Rate	250 L/min (Contaminant Drain Port 30-60 L/min)
Current	8.6/8.4/7.6 A (200/200/220 V) (50/60/60 Hz)
Filtration Rating (Nominal)	100 μm/99.9% (50 μm/90% or more)
Medium pressure pump, motor Specifications (option with CTS)	
Pump model	YTH1500A3-S216EVD20C or S216CVD20
Motor model Number and Specifications	IKH3-FCKLA21E (1.5 kW/4P)
Maximum Pressure	2.0 MPa
Flow Rate	24.0/28.8 L/min (50/60 Hz)
Current	6.8/6.4/6.0 A (200/200/220 V) (50/60/60 Hz)
YTH WIRE MESH BUCKET (Sludge Collection Bucket)	
Specifications	External dimensions: φ250 × 300 mm Wire mesh (Lower layer/Upper layer): 250/500 μm

- A lineup is available to meet your needs, such as conveyor discharge direction, medium to high pressure through-pump, etc.

NOP FILTER PUMP

HP: **NOP FILTER PUMP** <https://filter-pump.nopgroup.com/eng/>



Safety notice: For your safe operation, please read the User's Instruction Manual provided with the product before use.

NOP Nippon Oil Pump Co., Ltd.