

Cutting oil collecting unit Model HK-400

For water-soluble oils only

Improve the environment around Machine Tools with HK-400

Install on the side of machines with a magnet.

No air piping required.

Save energy by switching from vacuum ejectors.

Comes with a strainer to prevent suction of cutting chips.

Capable of suction of gas & liquid mixture, no worry of motor burns even when idling.

24 V DC driven.

Installation with a magnet

Main Body



The HK-400 collects small amounts of cutting oil* that spill from machine tools

*For water-soluble oils only

Model HK-400



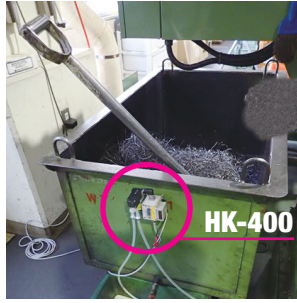
Strainer Unit



Proposal for improvement

1

Save labor and power by eliminating collection jobs using shovels and cloth



Advantage

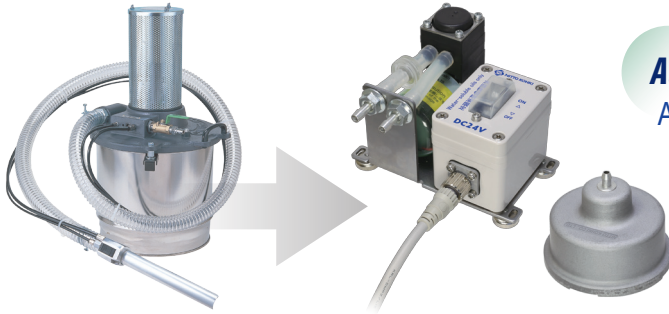
Eliminate unnecessary jobs such as using shovels or cloth by using HK-400.

Collects cutting oils automatically by just installing HK-400.
The cutting chips are separated.

Proposal for improvement

2

Downsize by switching from air vacuum cleaners



Advantage

Also saves space by switching to HK-400.

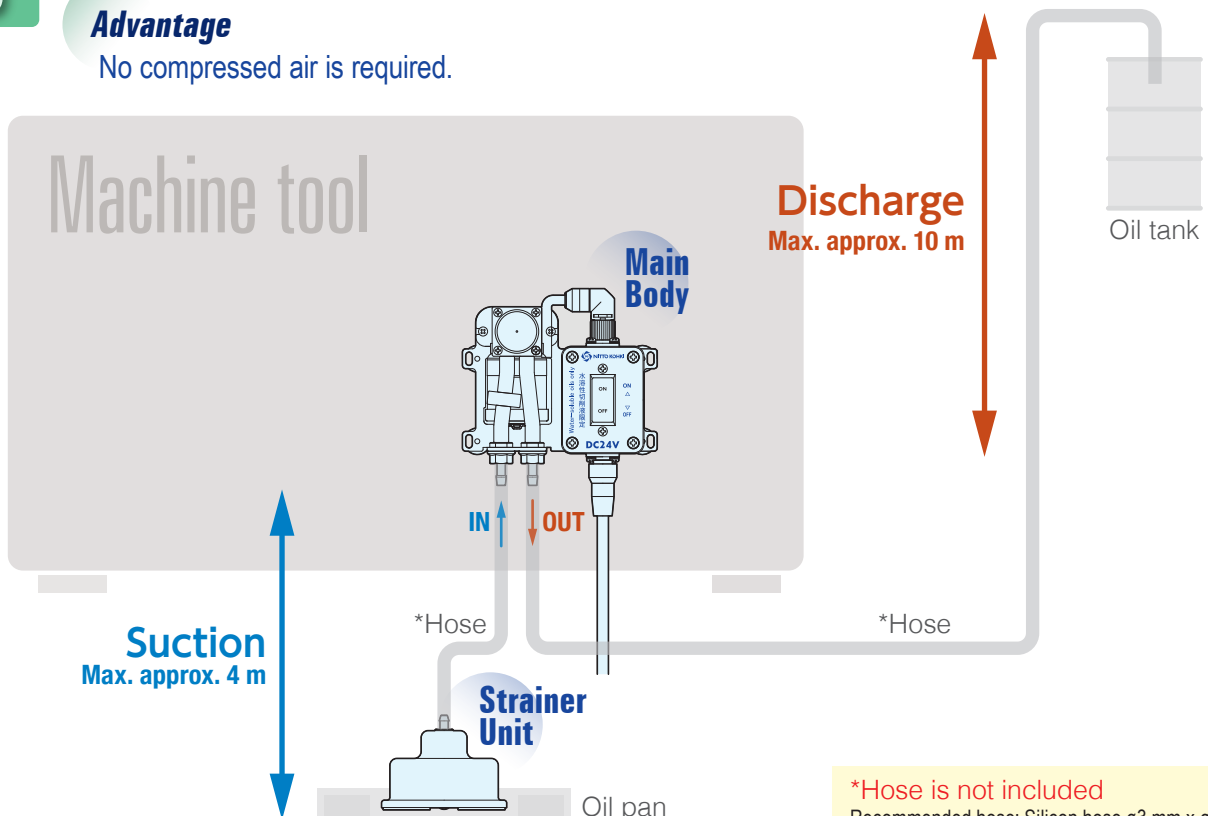
Proposal for improvement

3

Save energy by switching from process pumps and ejectors

Advantage

No compressed air is required.

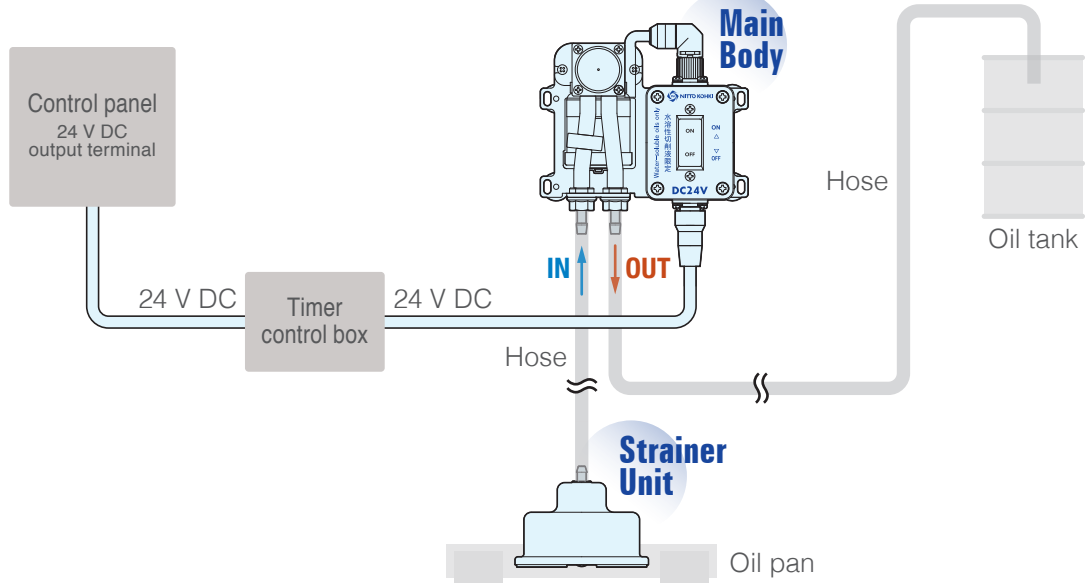


*Hose is not included
Recommended hose: Silicon hose $\phi 3$ mm x $\phi 9$ mm

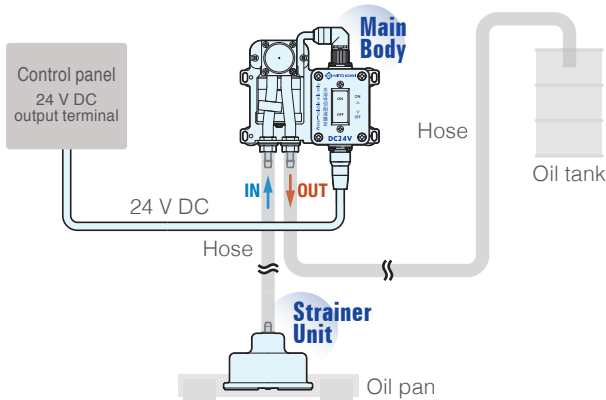
Installation examples

Install HK-400 under the guidance of a chief electricity engineer after reading the instruction manual.

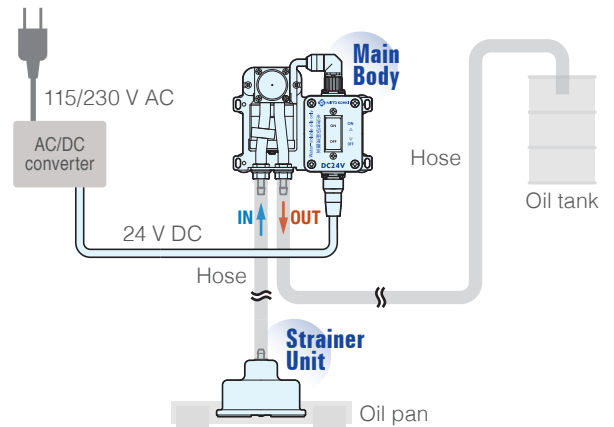
1 When adjusting the operating time using a timer.



2 When connecting with a direct current (DC) power supply and operating with an ON/OFF switch.



3 When connecting with an alternating current (AC) power supply and operating with an ON/OFF switch.



Maintenance procedures

- ① Turn off the power of the HK-400 Main Body.
- ② Disassemble the Strainer Unit.
- ③ Clean the Filter Unit and Wire Mesh.
- ④ Clean the inside of the Strainer with a brush.
- ⑤ Reassemble the Strainer Unit.

Reference data

Chip image

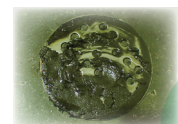


For cutting chips (0.1 mm or greater)
About once a week



When the wire mesh inside is dirty

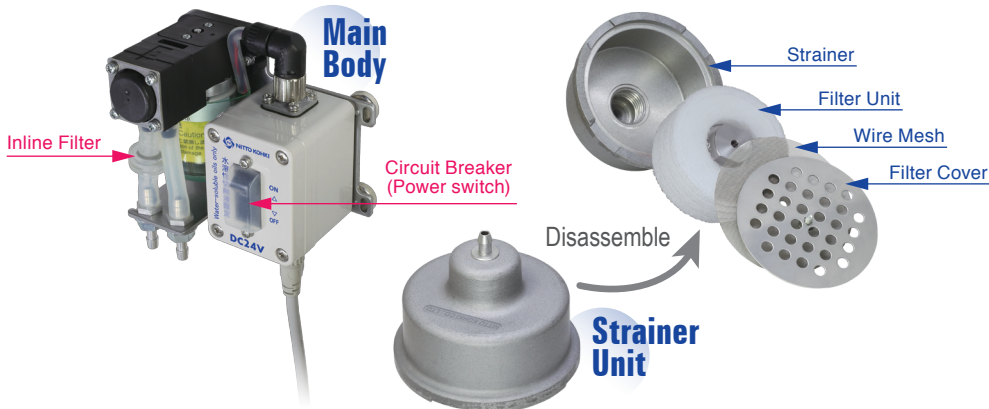
Inline Filter replacement timing (guideline)



For sludge (mud water)

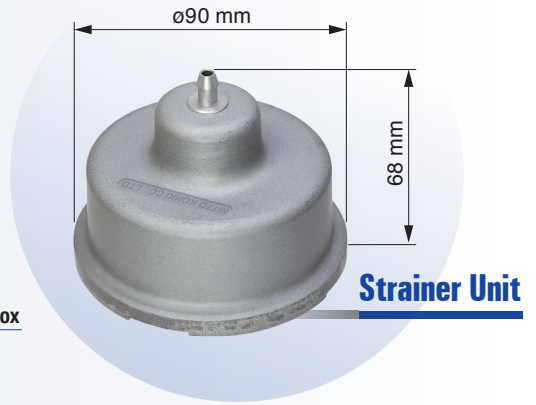
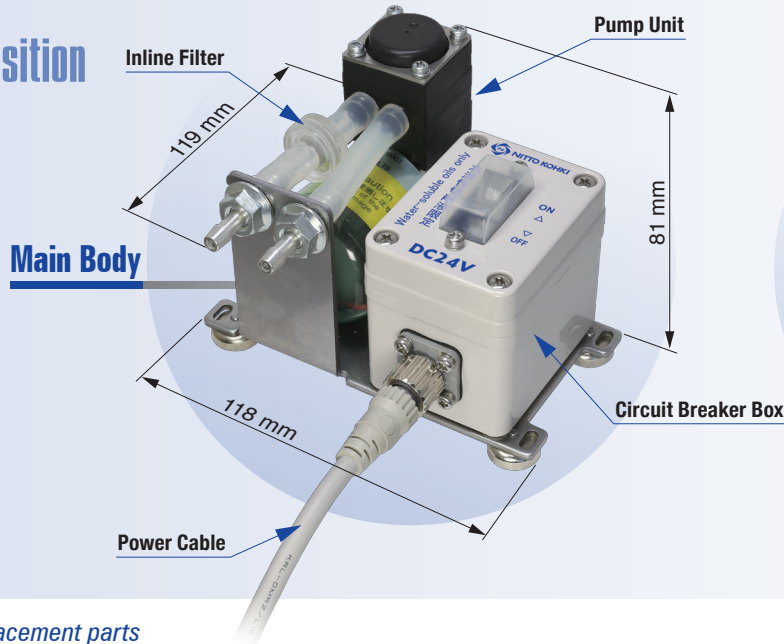
Once or more a day
Because clogging is likely as the particles are fine.

Filter cleaning timing (guideline)



Maintenance cycle differs depending on the viscosity of the oil and size of the chips. - Allowable water-soluble oil viscosity: 2 mPa·s

Composition



List of replacement parts

Part Name	Part No.		Part Name	Part No.	
Pump Unit	LB09133		Strainer Unit (Composition) Strainer, Filter Unit, Wire Mesh, Filter Cover, Screw	LB09134	
Circuit Breaker Box	LB09136		Filter Unit	LB09141	
Inline Filter	LB09137		Wire Mesh	LB09138	
Power Cable (5 m)	LB09140		Filter Cover (Composition) Filter Cover, Screw	LB09139	

Optional accessory

Part Name	Part No.	
Silicone Hose ($\phi 3 \times \phi 9 \times 4000$ mm)	LB09135	

Specification

Rated voltage	24 V DC	
Maximum current	450 mA	
Flow rate	400 mL/min	
Operating pressure range	0 to 100 kPa	
Self-priming pressure	40 kPa	
Duty cycle	Continuous	
Rated performance	6000 hours (MTTF)	
Circuit breaker rated current	1 A	
Circuit Breaker Box protection grade	IP65	
Allowable fluid viscosity	2 mPa·s	
External dimensions	119 mm (L)×118 mm (W)×81 mm (H)	
Mass	Main Body (Pump Unit, Circuit Breaker Box)	0.6 kg
	Power Cable	0.3 kg
	Strainer Unit	0.3 kg

⚠ Precautions for use

- This unit is not explosionproof. Do not use this unit in hazardous areas stipulated by laws/regulations.
- The specifications are those when using our strainer. Using a strainer from another company may reduce the performance and product life.
- The unit will fail if the polarity is connected erroneously. Make sure to connect the brown lead wire of the power cable to the + terminal of the power supply and the blue lead wire of the power cable to the GND terminal of the power supply.
- This unit is a collecting unit for water-soluble oils only. Collecting oil-based cutting oils, lubricants, fuel oils, corrosive liquids and solvents may reduce the performance and product life.
- The liquid resistance of this unit is affected by the temperature, operating pressure (lifting height), additives and water-soluble cutting oil concentration. Therefore, check under the actual operating conditions before use.
- If cutting oil containing fine granulated or muddy chips is collected, the filter will clog quickly. This may reduce the performance and product life. Clean the strainer frequently. *Minimum allowable size of chips: 0.1 mm.
- The magnet of this unit has a strong magnetic force. Keep the magnet away from information equipment, watches, magnetic cards and magnetic tape. Doing otherwise may disturb the device or destroy the stored information.
- If the pump is to be stopped for a long period of time, circulate ethanol and clean the strainer as flushing work, and then perform no-load air circulation operation for about 1 hour to dry the inside of the pump. If water or cutting fluid dries in the pump by not flushing, the valve may stick and the collecting flow rate may decrease.
- Observe the precautions for operation and maintenance, and carry out daily and regular inspections.
- Do not install or store this product in a place where it may be exposed to liquids such as cutting fluid.
- Do not install in a location with vibration. Doing so may lead the unit to fall off.
- Do not install this unit in a sealed box or case, etc.
- This unit is for indoor use only.

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