

PRODUCTS GUIDE

Corrosion Resistant Chemical Pump
Self-priming Filter Pump

Floating oil & Particles Collecting System
Oil Separating System
Oil & Sludge Separating System



Corrosion Resistant Chemical Pump Series:

World Chemical Co., Ltd. always looks into the future and tries to develop products with a pioneering spirit.

For chemical plants and processing

Magnetic Drive Pump

YD-GU Series
YD-GT Series

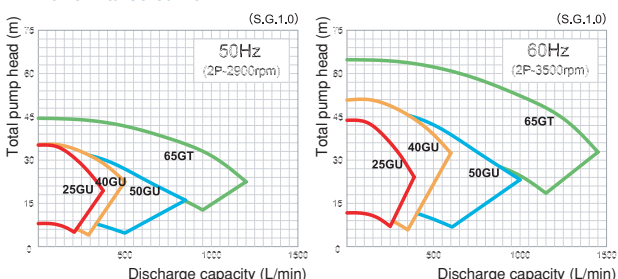


High performance and high efficiency magnet pump.

The use of fluid analysis technologies has realized high pump efficiency and contributed to electrical power saving.

- Highly effective for slurry/sludge. (Original Impeller Wearing Ring Structure GT Type)
- High efficiency and energy conservation. (Original Thrust Balance Structure GT Type)
- The casing structure of complete opening section has realized low NPSHR and high efficiency.

Performance curve



* This is a reference performance for the maximum impeller diameter at the specific gravity of 1.0 (freshwater).

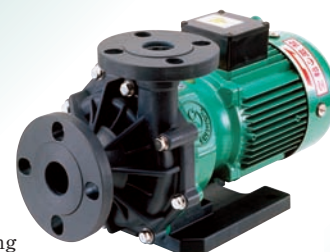
For FPD, printed-circuit board, plating processing

Magnetic Drive Pump,

CHEMIFREE

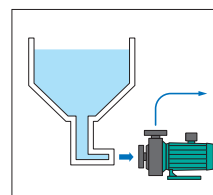
YD-GS Series

YD-GSF Series



Magnet pump which has high temperature resistance and strong construction against dry running, yet changing of consumable parts is possible.

- Special bearing tolerates heat radiation as well as heat insulation, in case of dry running.
- Air-lock free construction
- Adopting loose flange makes it setting free.
- Adopting rare-earth magnet makes it compact.
- It can adjust to the specific gravity of chemical solutions used.
- It can adjust to small flow and high head of pump.
- The terminal box placed on the top part makes wiring easy.



Model	Suction bore A (mm)	Discharge bore A (mm)	Standard performance (m-ℓ/min.)		Motor output (kW)
			50Hz	60Hz	
YD-250GS	25	25	14 - 50	13.5 - 50	0.4
YD-251GS			19 - 80	0.75	
YD-252GS			22 - 100	31 - 100	1.5
YD-253GS			23 - 100	36 - 100	2.2
YD-250GSF	25	25	9 - 50	9 - 50	0.4
YD-251GSF			16.5 - 50	15 - 50	0.75
YD-252GSF			24 - 50	26 - 50	1.5
YD-253GSF			23.5 - 50	33 - 50	2.2
YD-400GS	40	40	11 - 100	0.4	
YD-401GS	15 - 150		0.75		
YD-402GS	19 - 200		1.5		
YD-403GS	50	40	23 - 200	25 - 200	2.2
YD-405GS	25 - 200		34 - 200	3.7	
YD-400GSF	8.5 - 100		9 - 100	0.4	
YD-401GSF	12 - 150	11.5 - 150	0.75		
YD-402GSF	18 - 200	17.5 - 200	1.5		
YD-403GSF	21 - 200	22.5 - 200	2.2		
YD-405GSF	25 - 200	30 - 200	3.7		

* YD-253GS (50Hz) Type is for high specific gravity.

For FPD, printed-circuit board, plating processing

Magnetic Drive Pump,

CHEMIFREE

YD-GS Series

YD-GSF Series



Practical pump with a compact design and light weight, yet has high durability and strong construction against dry running.

- Heat-radiating and heat-insulating bearing (PPS)
- High head. It has a built-in thermal protector.
- The terminal box placed on the top part makes wiring easy.

Model	Suction bore A (mm)	Discharge bore A (mm)	Standard performance (m-ℓ/min.)		Motor output (kW)
			50Hz	60Hz	
YD-16GS	20	16	5 - 50	6.5 - 60	0.18
YD-20GS		20	7 - 60	9.5 - 70	
YD-16GSH		16	12 - 24	17 - 25	0.26
YD-20GSH		20	9.5 - 70	—	
YD-16GSF		16	5 - 60	5 - 60	0.18
YD-20GSF		20	7.5 - 70	8 - 70	0.26
YD-16GSHF	16	12 - 24	14 - 25		

For Chemical Plants

Magnetic Drive Pump,

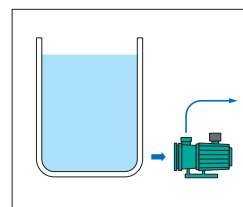
CHEMIFREE

YD-GR Series



Advanced pump which satisfies all the conditions required for chemical pump.

- High durability with special consideration for safety
- Adopting rare-earth magnet
- Most compact and space-saving type in this class
- Simple structure which aims for high durability and easy maintenance



Model	Suction bore A (mm)	Discharge bore A (mm)	Standard performance (m-ℓ/min.)		Motor output (kW)
			50Hz	60Hz	
YD-402GR	50	40	16-240	16-220	1.5
YD-403GR			18-280	2.2	
YD-405GR			20-360	22-400	3.7

For transferring FPD Processing waste water
For Sodium Hypochlorite & Hydrogen Peroxide foaming solution
For earthquake-countermeasure piping

Self-priming Magnetic Drive Pump,

SUPER MAG

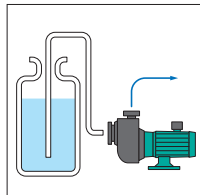
YD-GV Series

YD-GVF Series



Valveless pump with world's highest self-priming capacity (~5 meters)

- Double usage as end suction and self-priming
- It can pump the liquid through piping that has bends going up and down.
- Most compact, space-saving type in this class
- It can be adjusted to the specific gravity of chemical solutions used.



World's fastest speed in per second self-priming capacity.

the "Japan Patent Office Commissioner Award"

Model	Suction bore A (mm)	Discharge bore A (mm)	Standard performance (m-ℓ/min.)		Motor output (kW)
			50Hz	60Hz	
YD-250GV	25	—	8- 80	8- 80	0.4
YD-251GV			—	12-110	0.75
YD-252GV			—	—	1.5
YD-401GV	40	—	11-160	—	0.75
YD-402GV			—	17-200	1.5
YD-403GV			—	—	2.2
YD-502GV	50	—	17-200	—	1.5
YD-503GV			—	—	2.2
YD-505GV			—	—	3.7
YD-251GVF	25	—	8- 80	12-100	0.75
YD-252GVF			—	12-105	1.5
YD-401GVF			—	—	0.75
YD-402GVF	40	—	10-110	—	1.5
YD-403GVF			—	15-200	2.2
YD-502GVF			—	16-200	1.5
YD-503GVF	50	—	15-200	—	2.2
YD-505GVF			—	17-250	2.2
YD-505GVF			—	18-250	23-300

For wastewater treatment facilities

Mechanical Seal Horizontal Type Pump

YD-GSM Series

YD-GVM Series



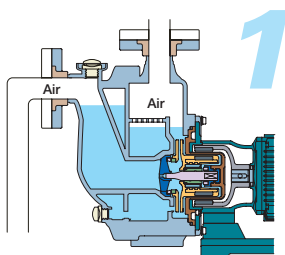
As a successor of the YD-S/SV Type, which was the best-selling pump since the establishment of the company, the YD-GSM/GVM Type has been released with the latest body and highly rated mechanical seal structure.

- Mechanical seal pump adopting open impeller is perfect for transferring wastewater which contains small amounts of slurry.
- Self-priming GVM Type is especially suitable for pumping up from wastewater/low water tank.
- By using molding parts of the GS/GV Type, superior cost performance has been achieved.

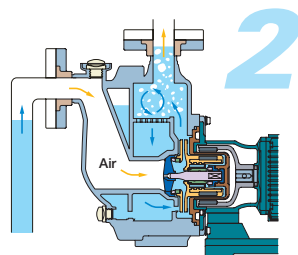
Model		Suction bore A (mm)	Discharge bore A (mm)	Standard performance (m-ℓ/min.)	Motor output (kW)
Non-self-priming type	2500GSM(F)	25	—	8- 60	0.4
	4001GSM(F)	40	—	10-110	0.75
	4002GSM(F)	50	40	10-220	1.5
Self-priming type	2500GVM(F)	25	—	8- 40	0.4
	4001GVM(F)	40	—	8-110	0.75
	5002GVM(F)	50	—	10-200	1.5

Valveless Mechanism of self-priming and remaining water

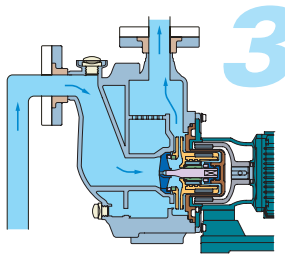
→ Liquid → Air



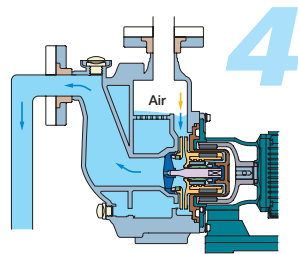
Before starting (stationary state)



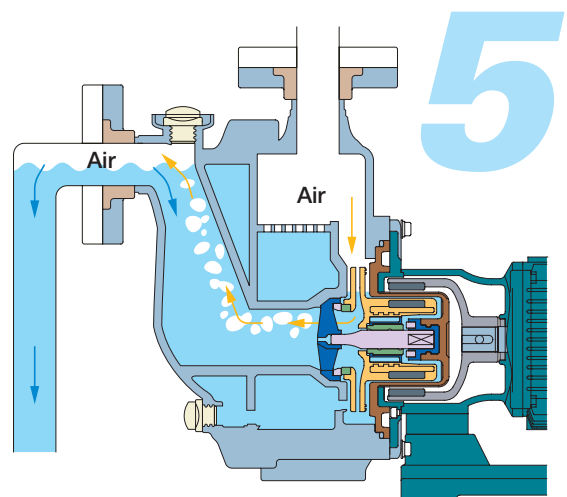
During self-priming



During operation



Stop 1 (backflow state)



Stop 2 Siphon break (water remains)

When the pump is shut down, the unique siphon break intercepts backflow by quickly releasing air, so that priming water remains in the auxiliary tank.

Original Products

For etching

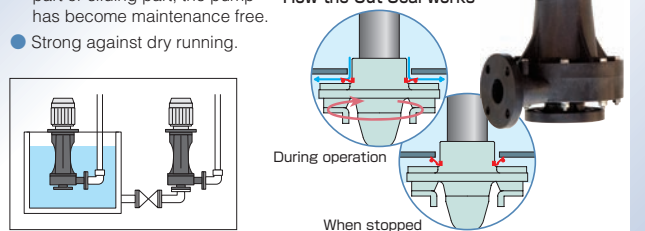
Sealless Circulation Pump,
DRYFREE

YD-VK/VP Series

Adoption of "Cut Seal" prevents liquid leakage. Making pump lighter has further improved the ease of use.

- As there is no need for bearing part or sliding part, the pump has become maintenance free.
- Strong against dry running.

How the Cut Seal works



Model	Suction bore A (mm)	Discharge bore A (mm)	Standard performance (m-ℓ/min.)		Motor output (kW)
			50Hz	60Hz	
YD-41VK-BK15-M	50	40	9-150	—	0.75
YD-42VK-BK25-M			10-300		1.5
YD-50VK-BK35-M	65	50	12-350	—	2.2
YD-65VK-BK55-M			15-550		3.7
YD-65VK-BK7.55-M	80	65	18-700	—	5.5
YD-41VK-BK16-M			8-120		0.75
YD-41VK-BK26-M	50	40	8-300	—	1.5
YD-42VK-BK36-M			12-350		2.2
YD-50VK-BK56-M	65	50	15-550	—	3.7
YD-65VK-BK7.56-M			18-800		5.5
YD-65VK-BK106-M	80	65	25-850	—	7.5
YD-2500VK			8-80		8-80



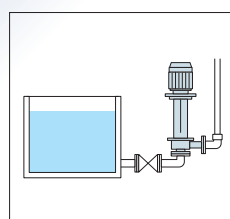
For electroless nickel & desmear process

Sealless Circulation Pump
DRYFREE-S

YD-LON-SU Series

Stainless Vertical Pump

- Adopting SCS16 (SUS316 equivalent)
- Strong against dry running
- Maintenance free



Model	Suction bore A (mm)	Discharge bore A (mm)	Standard performance (m-ℓ/min.)		Motor output (kW)
			50Hz	60Hz	
YD-4001LON-SU	50	40	10-120	8-100	0.75
YD-4002LON-SU			13-200	13-200	1.5
YD-4003LON-SU			—	14-350	2.2
YD-5003LON-SU	65	50	14-350	—	2.2
YD-5005LON-SU			18-500	18-500	3.7

For CMP abrasive

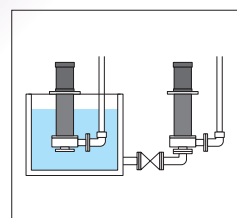
Special order product

Sealless Circulation Pump
DRYFREE-U

YD-LO-PU Series

Adoption of abrasion-resistance resin

- Effective against slurry and dry running is OK.
- High abrasion resistance.
- Superior chemical resistance



Model	Suction bore A (mm)	Discharge bore A (mm)	Standard performance (m-ℓ/min.)		Motor output (kW)
			50Hz	60Hz	
YD-16LO-PU	20	16	5-25		0.15
YD-20LO-PU	25	20	8-40		0.2
YD-25LO-PU	40	25	8-70		0.4
YD-25LO-PU			—	36-100	3.7

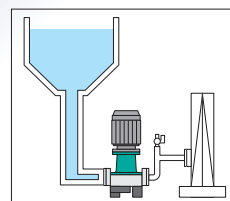
For wastewater contained slurry

Chemical slurry

MAGIC PUMP YD-LR-PP Series

It can completely extract chemical solution which contains crystal slurry.

- Pumping up the chemical liquid contained crystal slurry is OK.
- External cooling water is not required.
- No deposits of electroless plating in sliding parts
- There are no consumable items such as mechanical seal or gland packing etc.



The 29th "Excellent Energy Conservation Equipment, Japan Machinery Federation Chairman Award"

The "Industrial Technology Development Incentive Award" from the Ibaraki Corporation for Small and Medium Enterprise Promotion.

Model	Suction bore A (mm)	Discharge bore A (mm)	Standard performance (m-ℓ/min.)		Motor output (kW)
			50Hz	60Hz	
YD-2501LR-PP	40	25	10-60	9-60	0.75
YD-2502LR-PP			—	13-100	1.5
YD-4002LR-PP	50	40	13-100	—	1.5
YD-4003LR-PP			15-150	16-150	2.2
YD-4005LR-PP			17-250	19-250	3.7

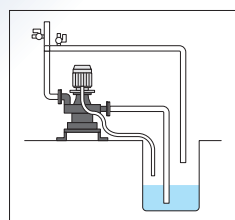
For pumping up wastewater

Sealless Self-priming Pump

SELFREE
YD-NSF Series

No valve, Sealless Self-priming Pump that is free from troubles of burning out and wearing out, which are caused by dry running.

- Strong against dry running
- Maintenance free



Model	Suction bore A (mm)	Discharge bore A (mm)	Standard performance (m-ℓ/min.)		Motor output (kW)
			50Hz	60Hz	
YD-25NSF-P	25		7- 60	8- 90	0.4 ~0.75
YD-40NSF-P	40		8-100	10-150	0.75~1.5
YD-50NSF-P	50		10-200	12-240	1.5 ~2.2
YD-80SF-E	80		12-500	15-550	3.7 ~5.5
YD-100SF-E	100		12-700	18-700	5.5 ~7.5

For tank yard sump

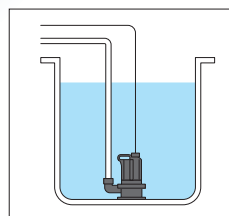
Submersible Magnetic Drive Pump

SUBMERSE
YD-GWN Series

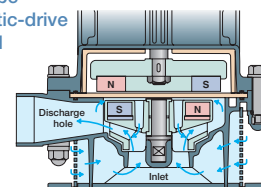
Completely non-corrosive submersible pump, which can be used for strong acid as well as strong alkali.

- It can be used against strongly acid or alkaline liquid.
- There is no leakage of liquid into the motor area thanks to its magnetic-drive method.
- Easy operation and maintenance.

Only One in the World



Disc type Magnetic-drive method



Model	Frequency	Discharge bore A (mm)	Standard performance (m-ℓ/min.)	Motor output (kW)
YD-5002GWN	50Hz	50mm	8.3-200	1.1
YD-5002GWN	60Hz		8.3-200	
YD-5002GWN-HP	60Hz		11.9-100	

For chemical clarification, experimental installation in field of research and development.

Self-priming Filter Pump

CHEMIFINE
YD-CT Series

Filtration device is added to the pump!

Five merits of CHEMIFINE

- 1 It doesn't (easily) break.** Priming water always remains inside the pump so there will be no dry running.
- 2 Free layout** As it is a self-priming pump, the installation layout is flexible and can be freely arranged.
- 3 Compact** It is an integrated unit made up of a filtration device, self-priming tank and pump, and yet remains very compact.
- 4 Easy maintenance** The unit has a simple structure because of the use of magnetic pump. Maintenance of the unit can be done by simply removing eight bolts.
- 5 Two different uses** It can be used as a chemical transport pump as well as a circulation filter pump.



Patents obtained:
Japan, Taiwan, U.S.A.,
China, Korea, EU

Model	Capacity of Filtration	Motor output (kW)	Power source	Bore	Maximum specific gravity
YD-20Y6CT	600~2400 ℓ / h	0.26	Three-phase 200V	20A	1.2
YD-2000CT		0.4	Three-phase 200V		1.6
YD-20A6CT		0.26	Single-phase 100V		1.2
YD-20A0CT		0.4	Single-phase 100V		1.6
YD-4000CT	3000~6000 ℓ / h	0.4	Three-phase 200V	40A	1.2

For collecting slurry

Slurry Collecting System

DOUBLE CYCLONE
YD-20DC

The only fluid-cyclone vacuum cleaner that can safely collect slurry!

- The collecting slurry system, by combining "self-priming pump" with "fluid cyclone collection unit".
- The cyclone part is placed at the suction inlet of self-priming pump, so that any slurry-containing fluid will not directly enter the pump, which prevents the pump from being damaged or worn out.
- The cyclone part has two-stage functions.
The first stage (STAGE 1): Centrifuge heavy solid slurry
The second stage (STAGE 2): Centrifuge light solid slurry
- Slurry centrifuged in both stages will be collected in the bag filters placed at the bottom of the unit.

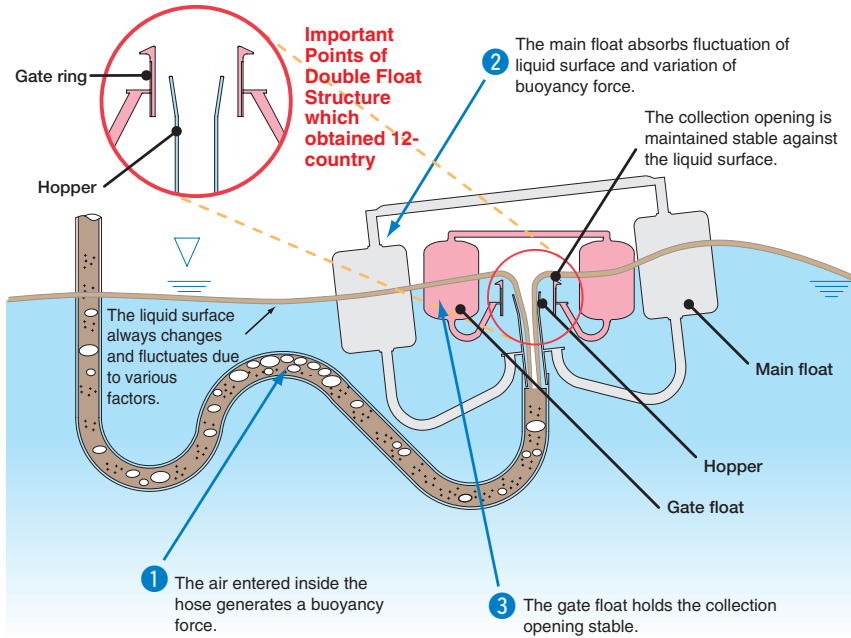


Floating Oil & Particles Collecting System / Oil Separating System

World Chemical Co, Ltd. is contributing to the environment by using the technologies of fluid transferring from factories and kitchens to the ocean and rivers.

Unique water surfacing adjusting structure, DOUBLE FLOAT

* Applicable model: YD-GYP Type, YD-GC Type, YD-FO Type



In order for Skimmer to securely absorb floating oil on water surface, it is necessary to vacuum oil together with air on the water surface.

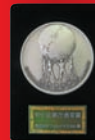
But the air generates an excessive buoyancy force ① which brings the hose, floats, and collection opening higher up and prevents the unit from secure collection. Our company's floats have a "Double Float Structure" which prevents the influence of buoyancy fluctuation caused by air.

The main floats ② hold the main body and hose stable, while the gate floats ③ hold the collection opening secure and stable. In this way, the hose and the collection opening move independently and smoothly without influence by other parts. The Double Float Structure also smoothly adjusts to changes on liquid surface and fluctuations of waves.

Global patent Double Float

12 country patents obtained:

Japan, U.S.A., Canada, Korea, Taiwan, Germany, France, England, Holland, Italy, Sweden, Denmark



Award winning the 35th
 "Small and Medium Enterprise Agency, Chairman Award for Excellent Environmental Equipment"

the "Good Design Award" in 1995 and 2001



the "Vaaler Award" in 2003



Floating Oil & Particles Collecting System is up to multiple locations for Double Float Structure.

GYROSKIMMER YD-GYP Series

Floating pump for collecting or transferring oil.

Suitable for collecting high-viscosity scum, sludge containing oil or floating oil in various kinds of wastewater by using a scraper. Also effective to collect floating oil in a coolant tank.

For wastewater pit



YD-800GYP

Model	Discharge bore (mm)	Head (m)	Oil collection volume (ℓ/min)	Motor output (kW)
YD-600GYP	25	4	15	0.15
YD-800GYP	38	4	40	0.25
YD-1000GYP		7	50	0.4
YD-1200GYP	50		100	0.75



Special specifications

Heavy Duty Type YD-810GYP

For collecting and transferring floating oil contained swarf in a coolant tank or mud and sand to improve the quality of contaminated soil.

<Performance> Head : 4 m x 40 ℓ /min.
 <Motor output> 0.25 kW



High Head Type YD-1600PS-T

For collecting and transferring floating oil in a scale pit, a deep pit where self-priming is not possible or lots of slurry.

Head: 15 m x 100 ℓ/min. <Motor output> 1.5 kW



/ Oil & Sludge Separating System

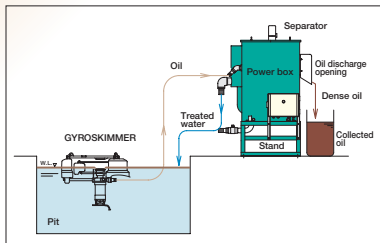
Oil Separating System is enable to use without regard for the viscosity change or contained foreign materials and up to conserve space.

GYRO SYSTEM

YD-GYP-FO Series with submersible pump

With a large separator to isolate oil collected by GYROSKIMMER.

- For coolant tank
- For deep tank
- System comes with scraper for forced discharging



Model	GYRO SKIMMER	Submersible pump			Separator				
		Head (m)	Oil collection volume (T/h)	Motor output (kW)	Capacity (ℓ)	Water intake bore (mm)	Water discharge bore (mm)	Oil discharge bore (mm)	Scraper power output (kW)
YD-600GYP-200FO	600GYP	4	0.9	0.15	approx. 200	φ25	φ38	φ50	0.04
YD-□GYP-400FO	800, 810, 1000, 1200GYP	4~7	2.4~6	0.25~0.75	approx. 400	φ38	φ65	φ65	0.06

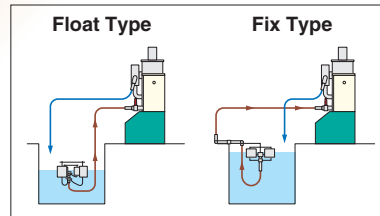
* Inside the above □, GYRO SKIMMER 800, 810, 1000, 1200GYP can be applied.

GREASECOMING FO

YD-FO Series

Supper effective even for collecting floating particles contained foreign materials and floating oil with high viscosity.

- For collection and separation of mineral oil, animal and vegetable oil, floating scum
- For temporary collection and treatment of wastewater



Model	Float		Pump		Separator		
	Collection opening bore (mm)	Transferring hose (mm)	Head (m)	Oil collection volume (ℓ/h)	Motor output (kW)	Capacity (ℓ)	Treatment performance (m³)
YD-300FO Series	35						
YD-40FO Series	40	19	-3	480	0.4	35	38

Saver Series for Machine tools can be installed easily in a limited space.

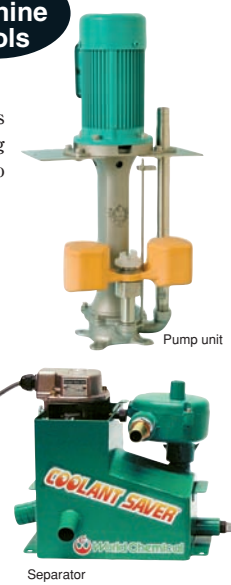
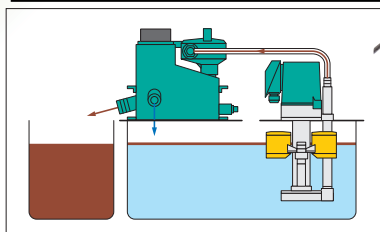
COOLANT SAVER YD-15CSN

For Machine tools

Specialized for machine tools, it collects floating oil in a coolant tank. It is strong against dry running and swarf, and also very effective for preserving coolant fluid.

- For machine tools (cutting tools)
- For coolant fluid
- Collection of floating oil

Production stoppage "YD-15CSN"



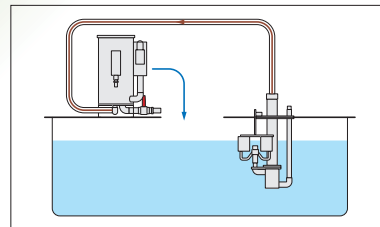
Model	Pump				Separator			
	Discharge bore (mm)	Head (m)	Oil collection volume (ℓ/h)	Motor output (kW)	Capacity (ℓ)	Transferring hose (mm)	Water discharge hose (mm)	Oil discharge hose (mm)
YD-15CSN	19	0.9	150	0.06	5	19	25	32

COOLANT SAVER YD-25CS Series

For washer machine

Specialized for cleaning machine, this compact-design collection unit has a specialized screw pump and patented float gate, which make high-speed collection possible.

- For collecting floating oil in cleaning process of coating work and processing work.
- High temperature of 95°C is possible.



Model	Pump			
	Discharge bore (mm)	Head (m)	Oil collection volume (ℓ/h)	Motor output (kW)
YD-25CS600N-150F	25	1.5	300	0.09
YD-25CS800N-200F				



Tsukuba Factory



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Challenging the Liquid Transfer Technology,

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