

<https://nippon.nt-rt.ru> || nop@nt-rt.ru

Агрегат среднего давления типа YTH-ES

Trochoid на 1,5–2,0 МПа

YTH-ES

Received the “2015 JSME Excellent Product Award”

Trochoid™ Type Medium Pressure

Unit Turbulence™ Filter
Special turbulence cleans the filter automatically, rendering the filter clog free.



Trochoid™ pump/2.0 MPa, 1.5 MPa
A rotor turning in a trochoidal curve generates pressure to suck and discharge fluid. This is an extremely efficient self-priming pump.

Compatible with the TAZUNA™ fluid control system (software)
TAZUNA reduces the electric power cost further by approximately 20%. The pressure and flow rate are automatically adjusted.

MODEL NUMBERING SYSTEM

TOP—YTH ① ② - ③ E VD ④ ⑤

①Motor Capacity	②Motor Type*1	③Pump Capacity (Trochoid™ pump)	E: Filtering Method	VD: Relief Valve	④Relief Pressure Setting*2	⑤Filter Rating
750: 0.75 kW 1500: 1.5 kW	[Standard Motor] A3: AC 200/200/220/230 V 50/60/60/60 Hz 3 phase electric induction motor (IE3) with CE marking [Local Motor] AE: supplied by NOP Germany AF: supplied by NOP Taiwan AJ: supplied by NOP Asia (China) AK: supplied by NOP India AU/AV: supplied by NOP North America (USA)	S208: 8 cc/rev S216: 16 cc/rev	Turbulence™ filter	External return type	20: 2.0 MPa 15: 1.5 MPa	B: 50 μm C: 20 μm*3

*1 For further details about the local motors, please contact our overseas branch or subsidiaries.
*2 See P.45 to select a model that satisfies your desired relief valve set pressure.
*3 20 μm filter can not be applied to non-water soluble coolant.

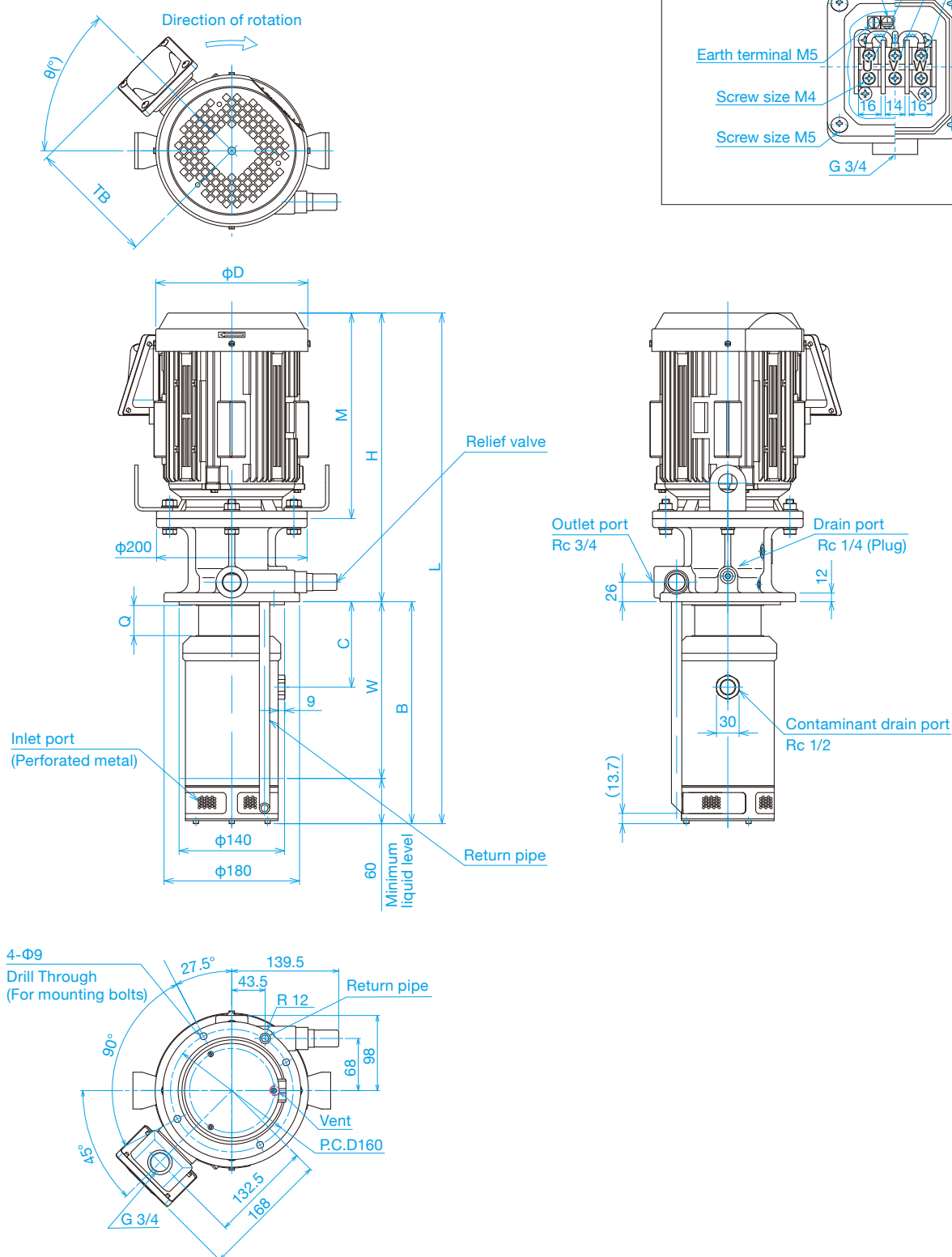
SPECIFICATIONS

Model	Motor Capacity (kW)	Flow Rate (L/min) 50 Hz/60 Hz	Maximum Pressure (MPa) 50 Hz/60 Hz	Approximate Weight (kg)
YTH750A3-S208EVD15*	0.75	12.0/14.4	1.5/1.5	34
YTH1500A3-S216EVD**	1.5	24.0/28.8	2.0/2.0	39

*Suffix of the model number “**” each indicates ④Relief Pressure Setting and ⑤Filter Rating.

DIMENSIONS

(Typical/Motor Type: A3)



(mm)

Model	L	B	C	W	Q	H	M	ϕD	$\theta(^{\circ})$	TB
YTH750A3-S208EVD15*	638.8	274.8	93.5	214.8	20	364	253.5	170	30	151
YTH1500A3-S216EVD**	678.3	294.8	113.5	234.8	40	383.5	273	202	45	168

FEATURES OF YTH-ES

An All-in-one, Medium Pressure Coolant Unit

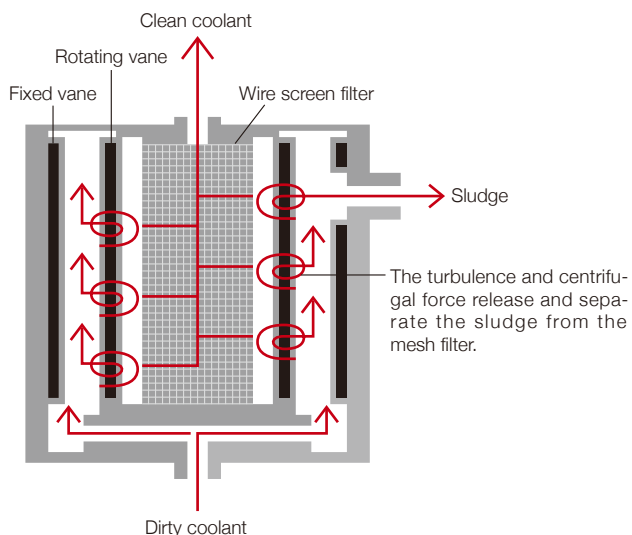
All components of a coolant system are consolidated into a single pump. No inline and suction filters are required. The saved space expands the available plant space, resulting in a higher production efficiency.

- Maximum operating pressure: 2.0 MPa.
- Maximum flow rate: 28.8 liters/min.
- No suction filter is required.
- No inline filter is required.
- No plumbing is required to interconnect various components.



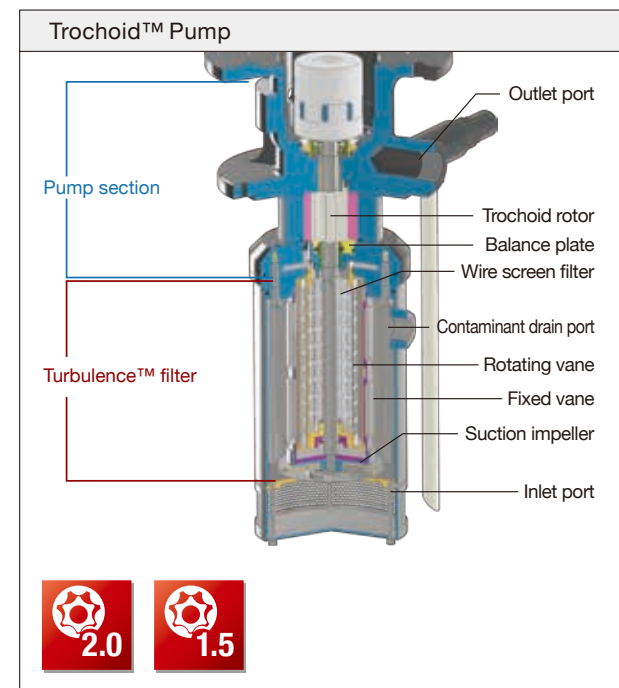
Turbulence™ Filter

Our special Turbulence™ design generates turbulence around the surface of the filter with 2 wing-shaped vanes rotating around the filter and can wash away sludge from the filter surface continuously.



High Efficiency Trochoid™ Pump

- Compatible fluid type
 - Water soluble coolant, non-water soluble coolant.
 - Incompatible with lubricant oils, fuel oils.
 - Incompatible with clear water, demineralized water, aqueous solutions and viscous fluids without rust-preventive property, corrosive fluids, solvents, oil-based materials.
- Relief valve is built into the pump.



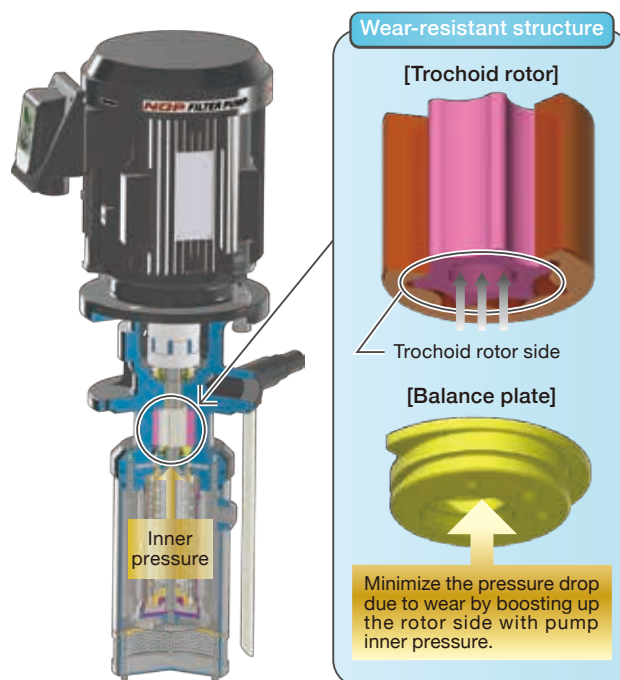
Filter Rating (Nominal value)

Suction strainer	3 mm (Solids larger than this must be removed from the tank.)
Filter	20 µm, 50 µm

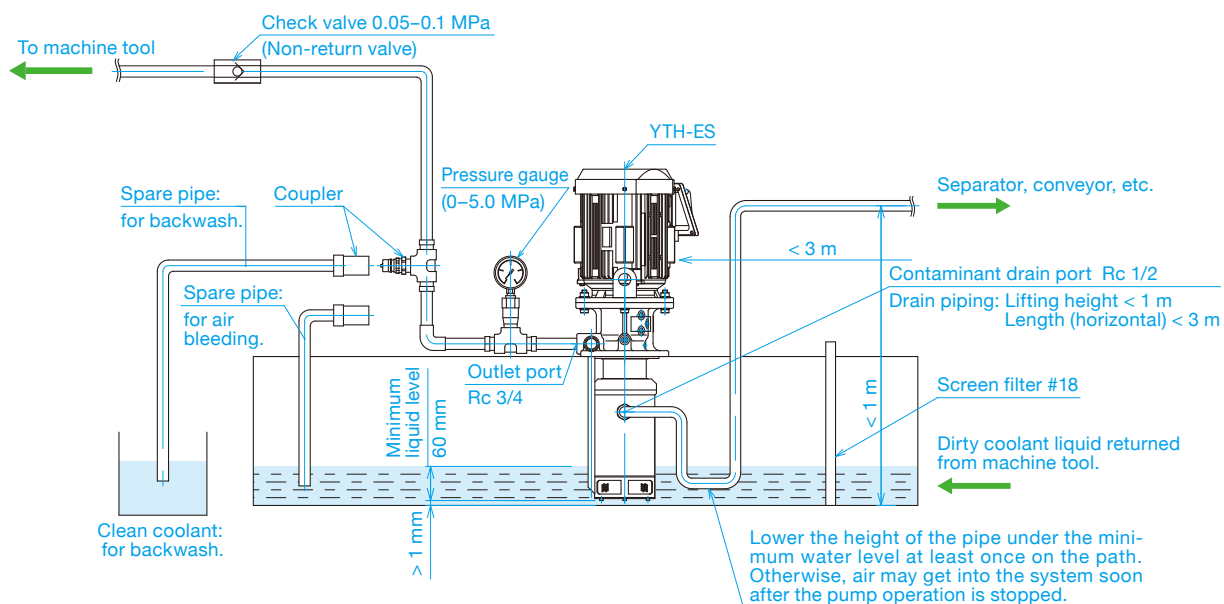
YTH-ES Type (Wear-resistant Model)

For its special wear resistant structure, YTH-ES can be installed on coolant tanks of machines that generate hard and abrasive swarf.

- Balance Plate
 - Pump generates inner pressure to press the balance plate toward the Trochoid rotor side, which helps in reducing the clearance created by wear on rotor side and thereby minimize the pressure drop, ensuring desired performance for a longer time.
- Shaft and Bearing Reinforcement
 - Improved wear resistance by employing sprayed ceramic on shaft bearing area and use of ceramic bearing.
- Double Seal & Cartridge System
 - Seal area is reinforced to prevent leakage and cartridge system ensures ease of replacement.



SAMPLE SYSTEM LAYOUT



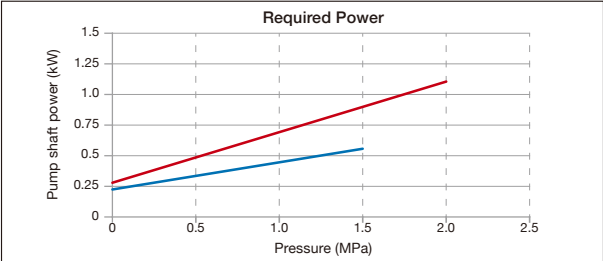
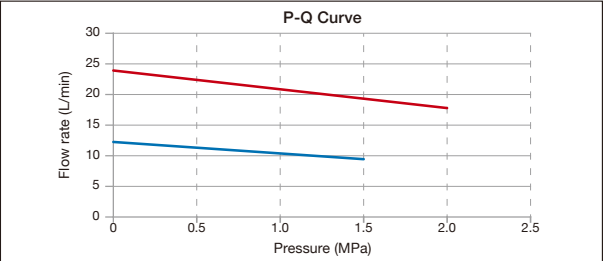
PERFORMANCE CURVES

Water Soluble Coolant [General Performance]

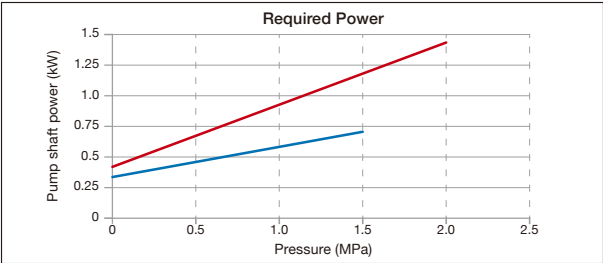
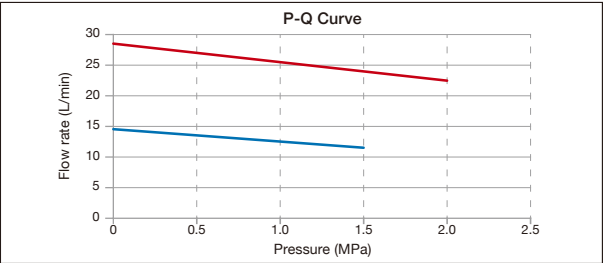
Test oil: JIS K2241 A3 solution containing 2% Water soluble cutting fluid.

YTH-ES208
YTH-ES216

50 Hz



60 Hz

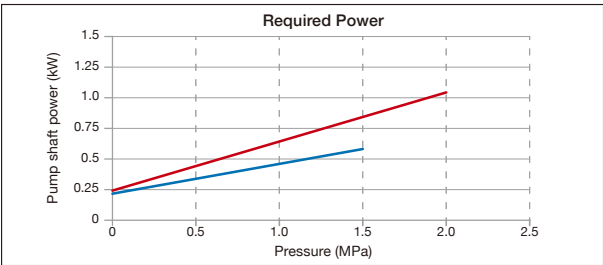
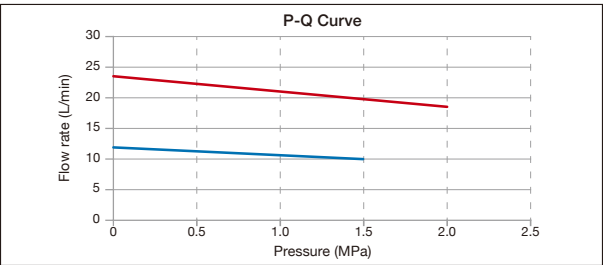


Spindle Oil [General Performance]

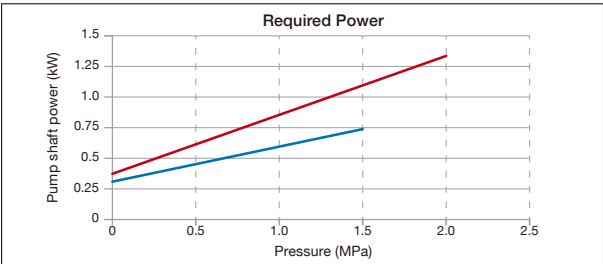
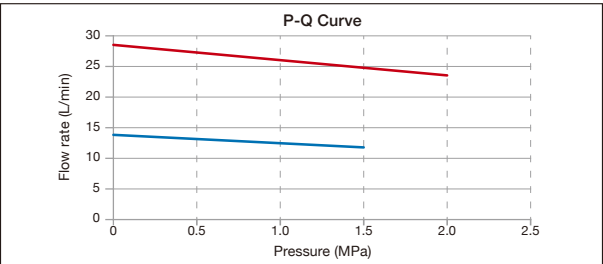
Test oil: ISO VG2 equivalent.

YTH-ES208
YTH-ES216

50 Hz



60 Hz



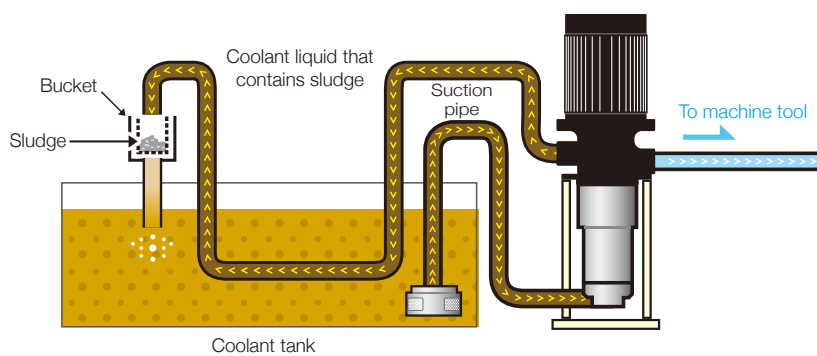
FEATURES OF YTH-ES LINE TYPE

*The model number of Line type ends with capital letter "L." The pump specification is the same as YTH-ES.

NOP Filter Pump External Type

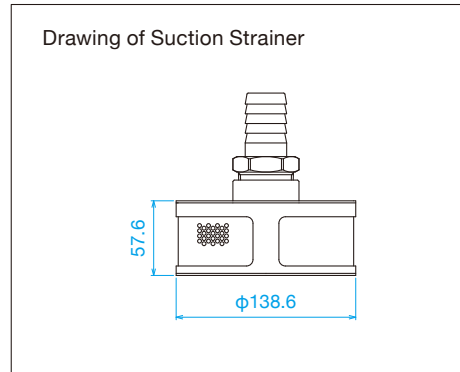
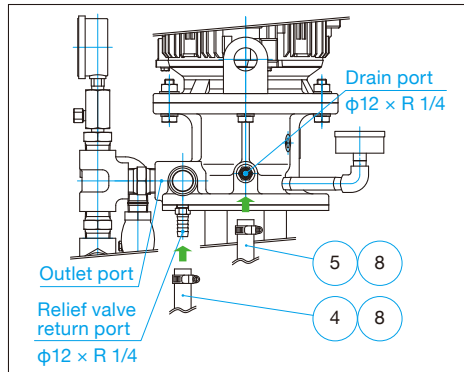
Unlike normal type which can only be installed upon a coolant tank, this external type can be installed independently in a distant place with an extension pipe.

Alteration of tank cover is no longer necessary, allowing quick and easy retrofitting.

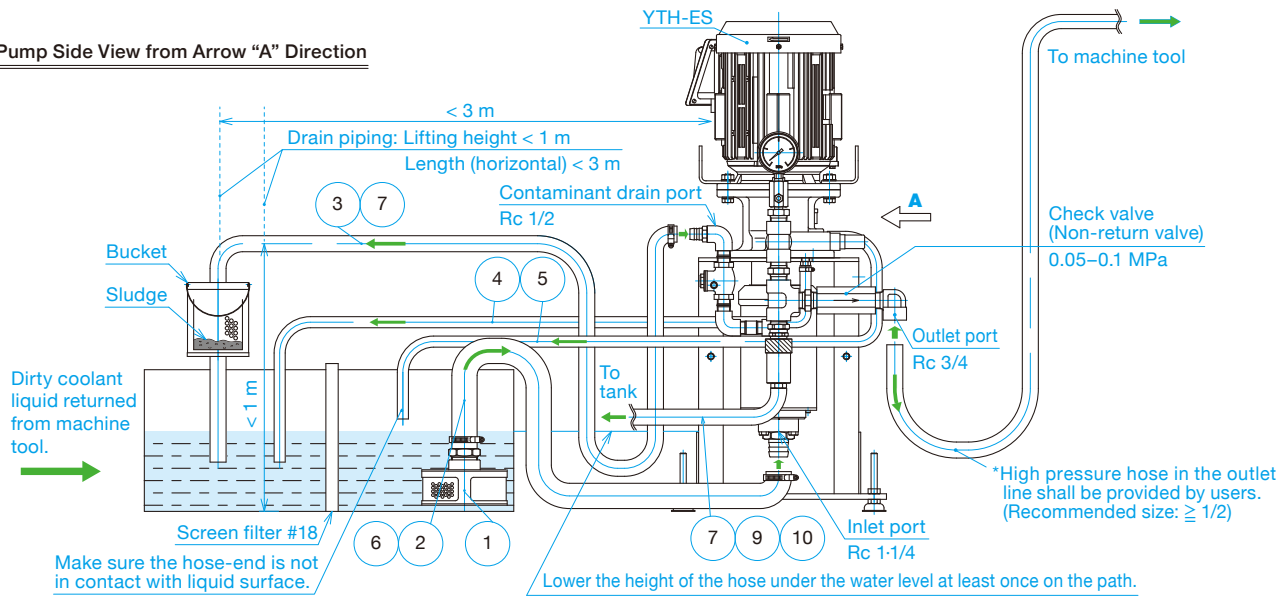


*The photo is for illustration purposes only.
For the actual appearance, please refer
to the drawing on P.22.

SAMPLE SYSTEM LAYOUT



Pump Side View from Arrow "A" Direction



*The accessories included in the models for overseas may be different. Please contact our local distributor for further details.

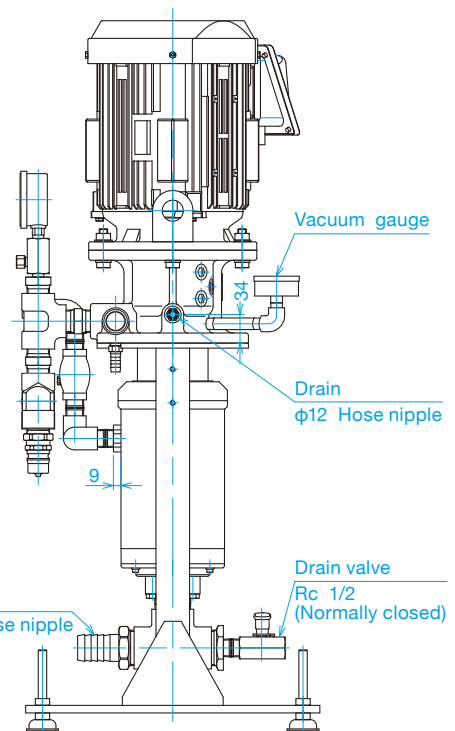
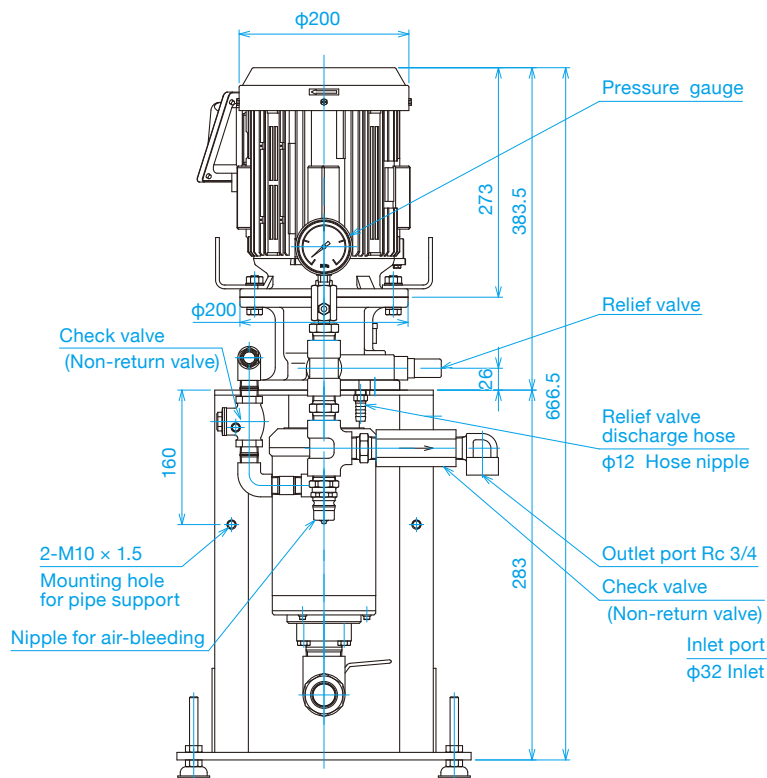
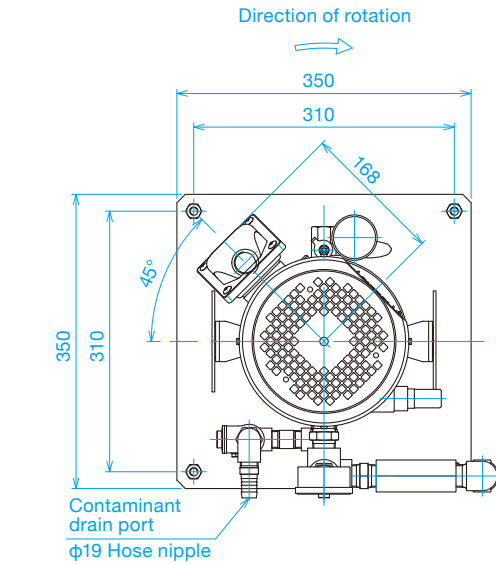
Parts List

Item No.	Description	Qty.	Hose size (ID × OD)	Hose nipple	Note
①	Suction strainer (ASSY)	1	—	φ32 × R 1-1/4	Insert a screen filter to ensure that pump doesn't directly suck foreign objects larger than the size of strainer perforations. Secure the strainer to the tank to prevent air suction.
②	Suction hose (3m)	1	φ32 × φ41	(φ32 × R 1-1/4)	The hose should be as short as possible with minimum number of bends.
③	Contaminant drain hose (3m)	1	φ19 × φ26	(φ19 × R 1/2)	Lower the height of the hose under the water level at least once on the path as illustrated below to prevent air from flowing back into the system. Do not restrict the flow to 20 L/ min or lower.
④	Relief valve discharge hose (3m)	1	φ12 × φ18	(φ12 × R 1/4)	To prevent foam generation, make sure that the hose-end is secured underwater and as far as possible from pump suction area.
⑤	Drain hose (3m)	1	φ12 × φ18	(φ12 × R 1/4)	Release the liquid from contaminant drain port in open atmosphere. (Make sure that the hose-end does not touch the liquid surface.) The liquid from the drain hose will drop with its own weight, so the hose should be as short as possible with minimum number of bends.
⑥	Hose clamp (φ32)	2	—	—	Tighten the hose clamp securely to prevent leaks.
⑦	Hose clamp (φ19)	2	—	—	Tighten the hose clamp securely to prevent leaks.
⑧	Hose clamp (φ12)	1	—	—	Tighten the hose clamp securely to prevent leaks.
⑨	Spare hose for air bleeding (3m)	1	φ19 × φ26	(φ19 × R 1/2)	Use this only when performing air-bleeding on the first run. (It will become unnecessary once the pump has primed.)
⑩	Spare coupler for air bleeding (ASSY)	1	—	φ19 × R 1/2	Use this only when performing air-bleeding on the first run. (It will become unnecessary once the pump has primed.)

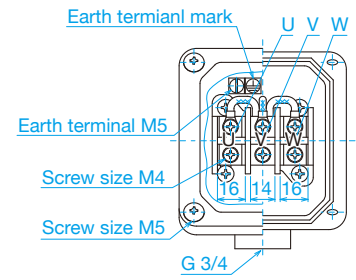
YTH-ES LINE TYPE

DIMENSIONS

(Typical/Motor Type: A3)



- Terminal Box Detail View



(mm)

Model	L	B	H	M	φD	θ(°)	TB
YTH750A3-S208EVD15*L	756	392	364	253.5	170	30	151
YTH1500A3-S216EVD**L	823.5	440	383.5	273	202	45	168

*Drawings in PDF format can be downloaded from NOP filter pump website.

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922) 49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89

Ижевск (3412)26-03-58
Иваново (4932)77-34-06
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81

Киргизия (996)312-96-26-47

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Ноябрьск (3496)41-32-12
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37

Россия (495)268-04-70

Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сыктывкар (8212)25-95-17
Сургут (3462)77-98-35
Тамбов (4752)50-40-97

Казахстан (772)734-952-31

Тверь (4822)63-31-35
Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Улан-Удэ (3012)59-97-51
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93

<https://nippon.nt-rt.ru> || nop@nt-rt.ru