

Operation and Maintenance Manual

Sealed stainless tank
(For curing agent)

HST10



This manual contains important information on warnings and cautions. Read the manual thoroughly before starting to operate this equipment, and follow the instructions.

If your manual is lost or worn badly, do not hesitate to contact Asahi Sunac Corporation and ask us to send you a new one.

Introduction

Thank you for buying our product, the sealed stainless tank (for curing agent) <HST10>.

Please read this manual carefully before starting to operate the equipment so that you can benefit the equipment in the best condition for a long time. Above all, the specifications, warnings and prohibitory or cautionary instructions shown herein shall be fully understood and observed during the use of the equipment.

The equipment described in the instruction manual is designed for coating operations. Use of the equipment should, therefore, be limited to those who have acquired operation and application skills through an authorized training course.

Should you have any questions about the manual, please get in touch with us at the addresses, phone and fax numbers as shown on the back of this manual. In order for us to give you an answer that's relevant to your particular needs, don't forget to give us the "model" and "serial number" of your equipment at that time.

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1

For Your Safety



Please read and fully understand the contents of the instruction manual and thoroughly observe the technical and safety instructions.

Failure to do so may result in personal injury and/or property damage.

While all the safety precautions in the manual are very important, they are nothing but minimum requirements and other types of safety precautions may also be necessary. All requirements provided by laws and legislations as well as rules and guidelines laid by your company or office shall be observed.

Shown below and in the pages that follow are the basic minimum safety precautions in connection with use of our product.

- Cautionary instructions are shown in three levels as defined below.

	WARNING	Alerts a hazardous situation which may result in personal injury, along with hazard avoidance measures.
	CAUTION	Alerts a hazardous situation which may result in equipment damage or breakage, along with hazard avoidance measures.
	NOTE	Indicates important methods and practical information.

- * Please remember that the situation mentioned under CAUTION may also lead to a serious disaster under certain circumstances.

To ensure your own safety and prevent equipment failure, always observe the safety precautions and follow the hazard avoidance measures.

WARNING

Suitable use of the equipment

- The sealed stainless tank (for curing agent) is used to simply store the curing agent containing isocyanates, while replacing the air in the tank by nitrogen gas. This is not the paint tank that pressure feeds the liquid.
- The sealed stainless tank is not the class-1 or the class-2 pressure vessel. Be sure to abide by the allowable working pressure, and never make the tank pressurized to 0.2 MPa or higher.
- Never use it to steam or the liquid that can generate vapor by heating/chemical reaction.
- Supply such nitrogen gas (or dry air) as specified in the specifications, for the replacement of the air in the tank.
- Because of the possible personal injuries by the tank damage or explosion, never loosen the clamps that fasten the cover, when the tank is pressurized.
- The lower level sensor (intrinsic safety explosion-proof specification) is installed as explosion-proof equipment.
Do not use the one other than the specified sensor in the dangerous area.
- Never use the acidic or oxidizing materials or the halogenated hydrocarbon solvent.
- If you have any doubt about the intended use of the product and the paint used, please consult us.
- The use under conditions other than specified above is considered misuse unless specially approved by us and may lead to an unexpected accident.

<<General safety notes>>

- In the coating system using this tank, never apply the pressure equal to or higher than the maximum liquid pressure or the maximum air pressure. Also, use all the component parts or accessories that are durable for the above mentioned maximum working pressure.
- Never use it to steam or the liquid that can generate vapor by heating/chemical reaction.
- Inspect the tank every day. When problems are found, conduct the necessary repair or replacement of the parts, when it is in the specified maintenance work scope. When problems are found in the range out of the specified maintenance work scope, please ask for the repair to the distributor or to us.
- To operate the system safely, work should be done only by the workers who have read and understand this instruction manual and the labels on equipment, and who have received the proper training.
- Work should be done while abiding by the laws and regulations of the national and local government, and those concerning the firefighting, electricity and safety.

WARNING

Danger of fire/explosion

<<Sources of ignition>>

When the curing agent is replenished or flows through the pipes, static electricity may be charged.

If parts of the tank are not appropriately grounded, static electricity may cause sparks.

These sparks may ignite the volatile component of a solvent, paint mist, suspending debris or other combustible substance, and may cause fire or explosion, possibly resulting in serious personal injury or damage to the machine.

- Confirm that the tank and all the electric conductive materials around it are properly grounded.
- Never put the main agent (the liquid which reacts with the curing agent) into the tank.
When the main agent is mistakenly put into the tank filled with the curing agent, it reacts violently and can heat the tank to high temperature. Also, carbon dioxide gas is vigorously generated, so stop the work immediately and evacuate to a safe place, while keeping the tank cover opened.
- Do not conduct the work in a place with fire, pilot lamps, driving gears such as electric motors and engines, and other possible ignition sources.
- Never smoke in the place where the tank is installed and near there, and the place with solvent atmosphere.
- In the place where the tank is installed, conduct sufficient ventilation to prevent the place from being filled up with the combustible atmosphere (solvent atmosphere).
- An extinguisher with a sufficient capacity must be provided at the area where the tank is installed.
- If you feel electric shock even slightly during handling of the tank, immediately stop the work and check the grounding condition of each parts. Until the cause becomes clear and the countermeasures are taken, never resume the work.
- The lower level sensor (intrinsic safety explosion-proof specification) is installed as explosion-proof equipment, as an option.
Do not install and use the one other than the specified sensor in the dangerous area.
- Before inspecting the tank, be sure to make the source pressure of the nitrogen gas and dry air, which are supplied for replacement, and the tank inner pressure zero. Also, when a lower level sensor is installed, start work after turning off the sensor power.
- Never disassemble the lower level sensor and never modify it.

WARNING

<<Grounding (Earth)>>

For the sealed stainless tank, be sure to implement Class D grounding (maintaining electric resistance of 100 Ω or lower).

To prevent hazards from the static electricity, completely ground the pump and all other coating machines (during use or the one near it). When a proper grounding rod is not provided, implement grounding work (Class D grounding) according to the grounding method specified in the electrical equipment technical standards.

The methods for grounding the coating machine are as described below.

(1) Grounding of the pumps

- For the pump which is connected from the tank with the paint hose, attach the grounding wire to the grounding terminal installed on the pump itself and on the trolley, and connect the other side to the Class D grounding rod.
Be sure to implement grounding work after reading the pump instruction manual carefully.

(2) Grounding of the hoses

- To ground the total coating system, be sure to ground the high pressure hoses.
When extending the hoses by connecting, confirm grounding of all the hoses.
- Check the electric resistance of the paint hose to be used once a week.
It must be 100 Ω or lower equivalent to Class D grounding. When the maximum electric resistance value is not described on the hose, consult with the hose distributor or the hose manufacturer.
Connect the electric resistance meter to the proper parts of the hose and measure the resistance, and when the resistance value exceeds the maximum allowable limit, immediately change it to the other hose.

(3) Grounding of the curing agent (paint) container

- The container shall be made of electrically conductive metal, and place the container on a grounded floor or table.
- When earth clips are used for grounding the container, always remove the dirt on the earth clip, and, always keep the conductive (grounding) condition.

(4) Grounding of the container of solvent used for cleaning

- The container shall be made of electrically conductive metal, and place the container on a grounded floor or table.
Never put the container on a non-conductive sheet such as a paper, corrugated cardboard or resin sheet.
- When earth clips are used for grounding the container, always remove the dirt on the earth clip, and, always keep the conductive (grounding) condition.

<<Safe cleaning>>

- Before starting the cleaning of the tank, confirm that the tank, the entire coating equipment, and curing agent (paint) containers (cans) are surely and correctly grounded.
- Conduct sufficient ventilation to prevent the place from being filled-up with the combustible atmosphere (solvent atmosphere).

WARNING

Hazards by the toxic substances

<<Solvents>>

The halogenated hydrocarbon-based solvent may explode if it is brought into contact with an aluminum or plated part in a pressure vessel (e.g. pump, heater, filter, valve or gun).

This explosion may cause fatal personal injury. Never use the halogenated hydrocarbon solvents.

[Examples of halogenated hydrocarbon solvents]

Chlorines	Trichloroethylene, Tetrachloroethylene, Ethylene chloride
Bromines	n-Propyl Bromide
Carbon-fluorines	HCFC-225, HFC-43-10mee, HFE-449s1 (HFE-7100)

(Shown above are typical examples and there are, of course, other kinds of halogenated hydrocarbon solvents in the marketplace. Please check with your paint distributors or manufactures for further details.)

<<Influence to human body>>

When the toxic substances enter the human body, such as when the solvent and its atmosphere get into eyes or mouth or when they are inhaled or swallowed, they can destroy the nerve system and can cause the serious results of the lifelong functional damage.

Immediately receive proper treatment.

<<Necessity of treatment>>

Do not undergo home treatment but immediately see a medical specialist such as orthopedist. In this case, it is necessary to notify him or her of the correct type of the curing agent (paint) used.

- The curing agent mist or solvent atmosphere may cause dyspnea or organic solvent poisoning. Do not use the product indoors, in a tunnel, tank or other poorly ventilated place. Take enough care of not only you (the user) but also the surrounding people, animals and plants.
- The curing agent, isocyanate, can cause erosion of nose and throat mucosa. Please use them after well understand the contents of the curing agent to be handled, solvent and other volatile substances. Please consult with the paint/solvent manufacturers about the unclear points.
- When performing the work, always wear the safety goggles, working clothes and mask recommended by the paint and solvent manufacturers. Depending on the paint components and the ventilation conditions, there are cases where other protective equipment is required. Please consult with the paint/solvent manufacturers about the matter.

WARNING

Danger by the pressure

Because the tank is used at the atmospheric pressure or higher, the route to the pump becomes the pressurized condition.

If the pressurized curing agent (paint) leaks and directly hits the human body at a point-blank range, it hurts the body and the significant amount of toxic substance gets into the body. If not properly treated promptly, it can destroy the nerve system and may cause a fatal injury such as a lifelong functional damage or a resection of the damaged part. Even a splash to eyes or skin may lead to serious injuries.

<<Necessity of treatment>>

If you are shot by the curing agent or paint spray, do not undergo home treatment but immediately see a medical specialist such as orthopedist. In this case, it is necessary to notify him or her of the correct type of the curing agent or paint used.

- The sealed stainless tank is not the class-1 or the class-2 pressure vessel. Be sure to abide by the allowable working pressure, and never make the tank pressurized to 0.2 MPa or higher.
- Never use it to steam or the liquid that can generate vapor by heating/chemical reaction.
- Each time the equipment is used, fasten the hose joint and the connecting parts of the paint route. Especially, firmly fasten the connection of the moving parts of the hose.
- Do not use the tank and the coating system until you fully understand the procedures for operating them.
- The inside of the nitrogen gas cylinder becomes high-pressure condition. Be sure to read the cylinder instruction manual carefully, and conduct the handling and management according to the High Pressure Gas Safety Law. We do not take any responsibility for the damages, personal injuries and accidents caused by the improper handling, misoperation and improper management of the cylinder.

<<Safety valve of the tank>>

- The tank is provided with a safety valve.
Each time of use, be sure to confirm that all the safety equipment works correctly, in advance.
- Never remodel the parts, and never use them at the removed condition. It may cause a glitch or an injury.

<<Liquid replenishment and tank cleaning>>

- Never put the main agent (the liquid which reacts with the curing agent) into the tank. When the main agent is mistakenly put into the tank filled with the curing agent, it reacts violently and can heat the tank to high temperature. Also, carbon dioxide gas is vigorously generated, so stop the work immediately and evacuate to a safe place, while keeping the tank cover opened.
- Because of the possible personal injuries by the tank damage or explosion, never loosen the clamps that fasten the cover, when the tank is pressurized.
- When cleaning the tank inside or replenishing the curing agent (paint), be sure to make zero the pressure of the nitrogen gas or dry air that replaces the air, and, then remove the clamps. Never work at the conditions where the pressure is not completely reduced, because it is dangerous.

WARNING

<<Safety of the hose>>

- Handle the hoses carefully.
Be careful not cause the entanglement and stretch of the hose, and the contact to a sharp angle parts.
- Each time the equipment is used, fasten the hose joint and the connecting parts of the paint. Especially, firmly fasten the connection of the moving parts of the hose.
- Never pull the equipment by the hose.
- Never use the damaged hose.
Check whether there are cut, leak, wear, bulge, damage, or loosened clasp for the total length of the hose. If even one of these problems is found, immediately stop its use and replace it.
- When the paint leak occurs, be sure to replace the hose by a new one.
Use the hose specified by our specification.

<<Danger of the equipment misuse>>

- Do not move the tank in the pressurized condition.
- In the coating system using this tank, never apply the pressure equal to or higher than the maximum liquid pressure or the maximum air pressure. Also, use all the component parts or accessories that are durable for the above mentioned maximum working pressure.
- To operate the system safely, work should be done only by the workers who have read and understand this instruction manual and the labels on equipment, and who have received the proper training.
- Work should be done while abiding by the laws and regulations of the national and local governments, and those concerning the firefighting, electricity and safety.

[1] Outlines

The sealed stainless tank is used to manage the nitrogen gas in the sealable condition for the liquid which hardens when coming into contact with the moisture in the air.

Isocyanate curing agent generates the invisible substances (crystal dusts) when contacting with the moisture (OH group) contained in the air or in other liquid. When the crystal dusts attach to and accumulate on the tank inside and the route and are left as it is, the entire curing agent will be cured. Therefore, the air in the tank shall be replaced by nitrogen gas.

At the management using other than nitrogen gas, we shall not guarantee the troubles such as equipment damages and clogging of the route caused by the generation of crystal dusts and the hardener gas. When nitrogen gas cannot be prepared, there is an alternative method where almost completely dry air, which is prepared by passing the compressor air through the air dryer [heat-after-cool system], next by passing through the silica-gel-packed air filter, is used. In such a case, please conduct it by your own management.

Use the stainless pipes, which poorly absorb the moisture and air, for the curing agent piping and use Teflon for the hoses. In the case of using highly hygroscopic nylon hoses and oxidative steel pipes, even the curing agent in the route that is considered to be completely sealed causes curing reaction and hardens within a day especially in the seasons with high temperature and high humidity. Therefore, never use these materials.

 **CAUTION**

Causes the equipment troubles, malfunction, and curing troubles.

- Manage the curing agent not to touch the air.
- Manage the curing agent with the tank inside replaced with nitrogen gas.

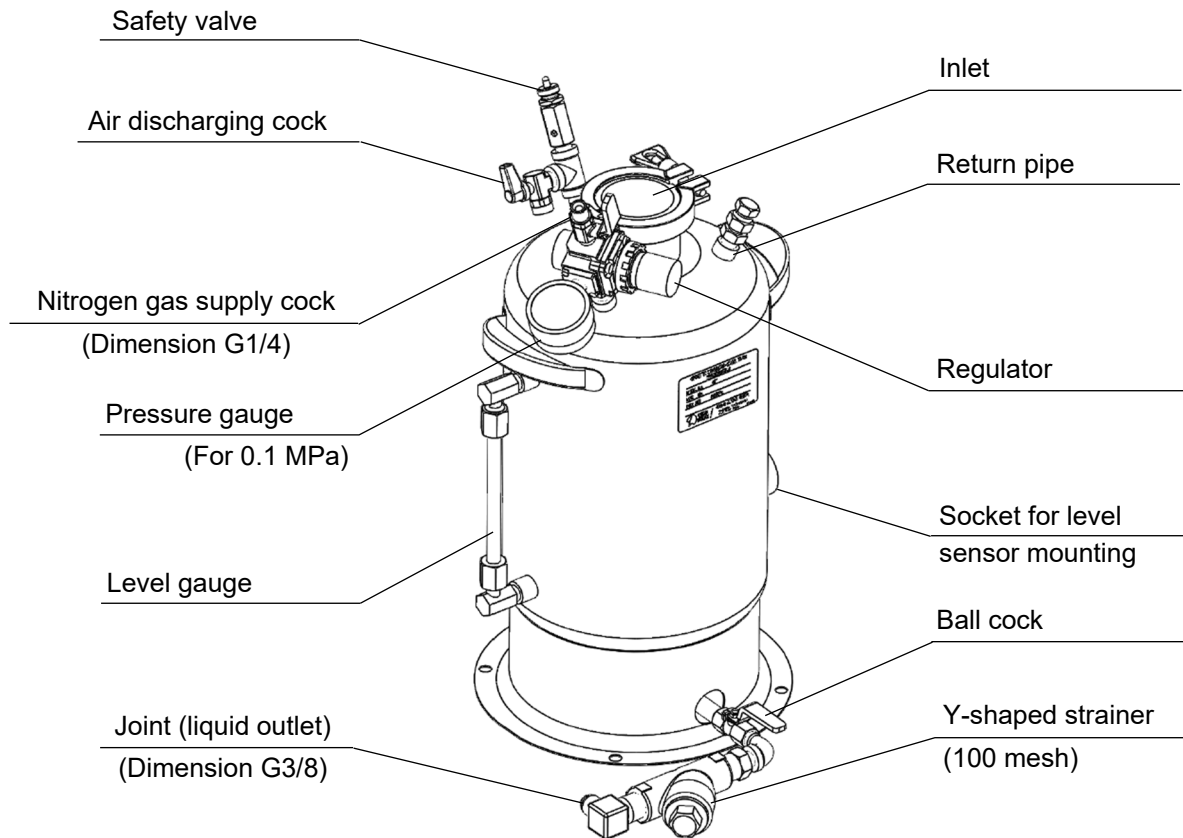
[2] Specifications

Name	Sealed stainless tank (for curing agent)
Corresponding viscosity	25 to 300 MPa·s
Maximum supply nitrogen gas pressure	Lower than 0.2 MPa
Liquid contacting parts material	Stainless, Teflon
Applicable paints	Two-component curing agent for topcoat urethane
Intrinsic safety explosion-proof	Lower level sensor (option)

Model	HST10
Part No.	5414-3
Content volume	10L
Upper limit volume (level gauge upper limit)	7L
Lower limit volume (level gauge lower limit)	2.5L
Lower limit volume (level sensor detection)	2.0L
Dimensions	W350×D300×H520
Dimensions (With level sensor)	W465×D300×H520
Mass	6.2kg
Mass (With level sensor)	8kg

3

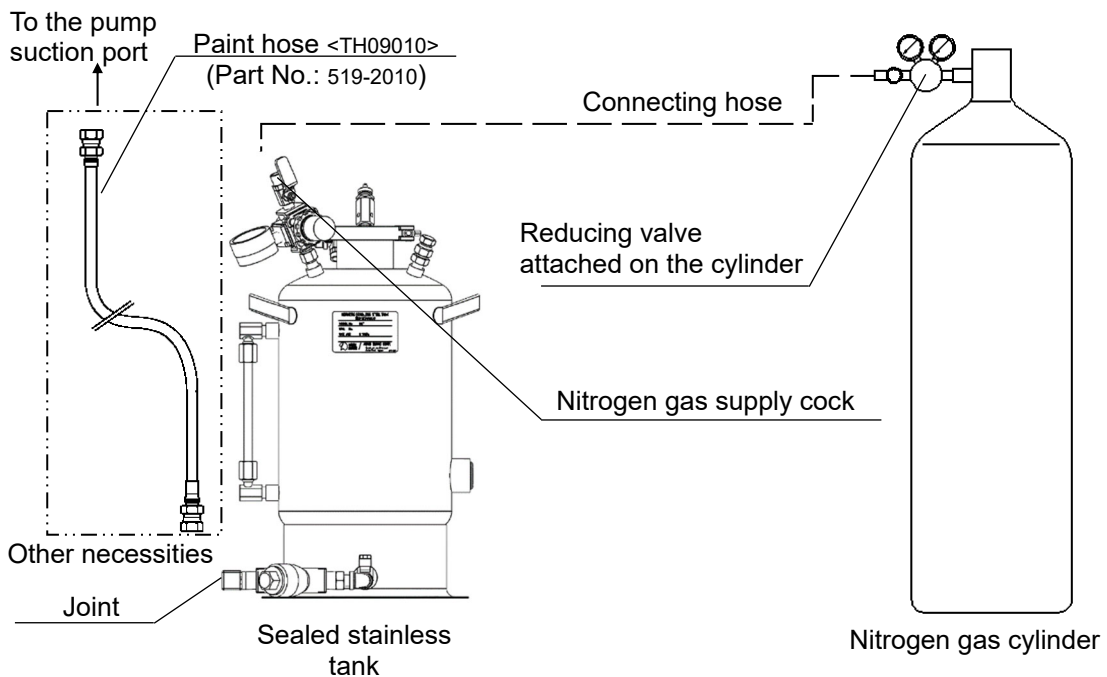
Name of the Basic Parts



4

Structure Examples

Shows the connection example with the paint hose and nitrogen gas (N₂ gas).



5

Unpacking and Installation/Setting

The tank is 100% inspected at the factory. However, because the parts damage/loss may occur during transportation, check it carefully after unpacking. If deficient parts or damaged parts are found, please contact with the distributor or us about the matter.

[1] Cautions at unpacking

- (1) Confirm that there is no strike mark and dent on the whole circumference.
- (2) In the case that the loosening of the bolts or nuts of each part or the joint parts occurs, retighten them.
- (3) Confirm that there is no damage of the pressure gauge, and replace it if damaged.

[2] Cautions for equipment installation place and installation

- (1) Implement the Class D grounding work for the sealed stainless tank. Utilizing the mounting hole, ground the tank.
- (2) When equipped with an intrinsic safety explosion-proof lower level sensor (option), the sealed stainless tank can be installed in the area other than the Class 0 hazardous place.
- (3) Considering the arrangement of the paint hoses and air tubes, make a space around the tank for easy maintenance, and fix it horizontally with the anchor bolts.

[3] Work at the dangerous place (Combustible/explosive atmosphere)

When installing the tank in the dangerous place like in a booth, take care according to the followings.

The difference between the explosion-proof equipment and the general equipment is that, in the case of “explosion-proof equipment”, the “safety confirmation” before use is important.

WARNING

There is a possibility of injury.

- The remodeling of equipment and the use in the non-specified combination are strictly prohibited. When remodeling and specification change are required, consult with our person in charge.

There is a possibility of fire or explosion.

- Check that all the equipment is surely grounded.
- Conduct sufficient ventilation to prevent the place from being filled-up with the combustible atmosphere (solvent atmosphere).

[3]-1 Concerning the work

- (1) In the “dangerous place” such as a place with combustible (explosive) atmosphere, ground not only the grounded equipment but also all the electric equipment used in the dangerous area including the one for operation, maintenance or repair according to the “Factory Electric Equipment Explosion-proof guideline” or other relevant guidelines.
- (2) When working in a place with combustible (explosive) atmosphere, all the workers shall have enough knowledge about the explosion-proof and electric work and confirm that all the safety from the use equipment and tools to working clothes (antistatic) is ensured.

[3]-2 Concerning the work equipment

- (1) For the equipment like electric drill and lighting, which connects to power through the electric outlet, be sure to conduct safety check before operation.
Check items about deformation including “damages, thinning (elongation) or bulges or cables” are imperative.
- (2) The continuity test between the “metal parts of the equipment main-body and grounding terminals” and the “supplying power cable terminals” shall be done with an ohmmeter, and the grounding connection shall be done before use.
- (3) The “outlet” used in a dangerous place shall have an interlock with open/close function of the delay mechanism. This means that, during inserting-in or drawing-out of the plug, it has the function of making the electric circuit completely energized or open condition, which is the condition of explosion-proof standards.
- (4) Because open/shut of the equipment power can be an ignition source, work should be done, while maintaining the human-error prevention function and the strict execution of correct operation procedures.

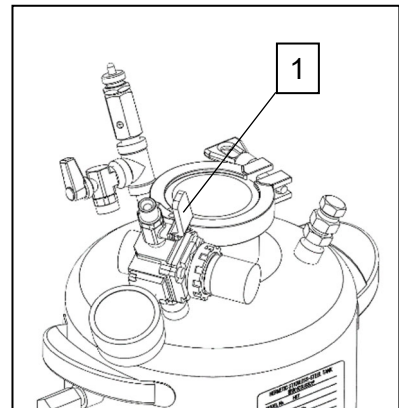
[3]-3 Concerning the grounding

When installing the sealed stainless tank in a dangerous place, ground it according to the “Factory Electric Equipment Explosion-proof Guideline” or other relevant guidelines.

- (1) Conduct the continuity test between the sealed stainless tank and the grounding wire terminal, and confirm that it has enough conductivity that satisfies the Class D Grounding Work Standards.
- (2) Read carefully the item of “Grounding (Earth)” in the [1. For Your Safety] before start working.

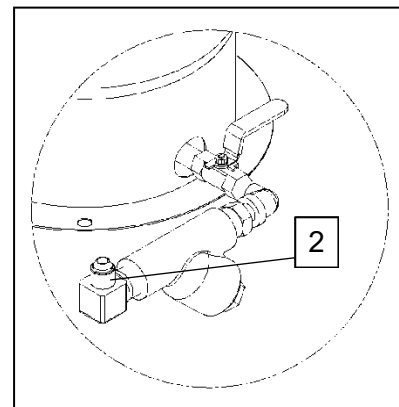
[4] Connection of the nitrogen gas hose

- (1) Clean the connecting hose to be oil-free and dust-free conditions.
- (2) Confirm that the outlet pressure gauge of the nitrogen gas cylinder is zero, and connect the pressure regulating valve (outlet) of the cylinder to the nitrogen supplying cock (G1/4 dimension) 1.
- (3) Use the solvent-resistant and non-hygroscopic hose. Refer to [4. Structure Examples].



[5] Connection of the paint hose

- (1) Connect the joint at the lower part of the tank and the paint suction port of each pump (supplying equipment).
- (2) For the lower part of the tank, the joint 2 with G3/8 dimension is used; connect it to the pump by a stainless steel hose <type: TH09010> with a pipe sleeve of G3/8.
Be sure to use the Tefron type hose with a SUS pipe sleeve.
- (3) Install the hose after replacing the suction port of the pump side into the bushing and the hose joint of dimension G3/8.



6

Flushing (Tank Cleaning Method)

After determination of the installation place and completion of the connection of each hose and tube, perform flushing (circulation of cleaning liquid). Periodical tank cleaning shall be done according to this section.

WARNING

There is a risk of breathing disorder and solvent poisoning.

- During working, wear gas mask for organic solvent, safety glasses, and protective clothing.
- Conduct sufficient ventilation to prevent the place from being filled-up with the combustible atmosphere (solvent atmosphere).

There is a possibility of fire or explosion.

- Check that all the equipment is surely grounded.
- Conduct sufficient ventilation to prevent the place from being filled-up with the combustible atmosphere (solvent atmosphere).

CAUTION

Causes the equipment troubles, malfunction, and curing troubles.

- Without flushing, dusts may flow out, resulting in equipment malfunction and paint back flow caused by the defective seal of the valves. Be sure to conduct the flushing.
- Do not use lacquer or alcoholic solvent for cleaning the equipment.
It reacts with the curing agent and accumulates on the route of paint like cholesterol, and causes the equipment trouble and the gelation inside the route. Be sure to use the paint manufacturer recommended exclusive use cleaning liquid.
- Do not use the recovered and recycled solvent for cleaning the equipment.

- [1] Tightly close the main valve of the nitrogen gas cylinder, and close the pressure reducing valve of the cylinder.
- [2] Close the nitrogen supply cock at the upper part of the tank, open the air discharging cock, and discharge the nitrogen gas to make the inner pressure of the tank 0 MPa.
- [3] Discharge the curing agent remained in the tank from the return or drain by using the connected pump.
- [4] Using the attached funnel, fill the cleaning liquid to the upper limit.
- [5] Suck the pump cleaning liquid by the pump and keep it circulate for a moment.
- [6] Discharge the cleaning liquid from the return or drain of the pump, and empty the tank inside.
- [7] Fill again the new cleaning liquid into the tank, and suck the cleaning liquid by the pump and circulate it for cleaning.
Empty the tank by discharging the cleaning liquid from the return or drain.
- [8] Disassemble and clean the filters such as a paint filter and Y-shaped strainer.
- [9] Confirm that there is no leakage from the connectors of the hose, joint and pipes, and, if leakage occurs, retighten or replace it.
- [10] When coating is not scheduled for a certain time (about one week), put the new cleaning liquid into the tank, and fill the pump and the route with the cleaning liquid. In this case, there is no need to supply nitrogen gas.

*Refer to [3. Name of the Basic Parts] or [8. Disassembly Drawing] for the above names.

 **WARNING**
There is a risk of breathing disorder and solvent poisoning.

- During working, wear gas mask for organic solvent, safety glasses, and protective clothing. The curing agent isocyanate may cause the erosion of nose or throat mucosa.
- During working, wear gas mask for organic solvent. Depending on the paint components and ventilation conditions, other protective equipment is possibly required. Therefore, consult with the paint manufacturer about the matter.
- Conduct sufficient ventilation to prevent the place from being filled-up with the combustible atmosphere (solvent atmosphere).

There is a possibility of fire or explosion.

- Check that all the equipment is surely grounded.
- Conduct sufficient ventilation to prevent the place from being filled-up with the combustible atmosphere (solvent atmosphere).

[1] Supply of the curing agent

- (1) Fill in the curing agent, in such a way not to make the curing agent attaches around the tank filling-in port and on the gasket, by using the attached funnel. When it attaches, immediately wipe it off with a waste clothes dampened with the cleaning liquid.
- (2) Put the curing agent in such a way not to make it overflow, while confirming the liquid level meter on the side of the tank.
Because the diameter of the funnel is small, when much curing agent is poured into the funnel at a time, it may overflow. Be careful for this. After supplying the curing agent, clean the funnel and store it under a clean condition.
- (3) Set the gasket, and tightly mount the blind cap (cover) of the tank.
- (4) Open the main valve of the nitrogen gas cylinder, and slightly open the pressure reducing valve of the cylinder. (Slightly open the pressure reducing valve to the degree where the pressure gauge needle leaves from the pin.)
- (5) Close the air discharging cock at the upper part of the tank. Next, open the nitrogen supplying cock to supply nitrogen gas, and regulate the pressure at 0.01 to 0.02 MPa. To discharge the air in the tank, open the air discharging cock, and after 10 seconds, close it to replace with nitrogen gas.
- (6) Start the pump and make the curing agent sucked. Operate according to the pump instruction manual.
- (7) In the leakage test, nitrogen gas is filled in (0.01 to 0.02 MPa) and the nitrogen gas supplying cock is "closed"; if the pressure drops to about 3/4 after about two hours, it indicates the existence of gas leakage. Clean the packing of the filling-in nozzle, and, if damages are found, replace it.

*Refer to [3. Name of the Basic Parts] or [8. Disassembly Drawing] for the above names.

[2] Concerning the tank use

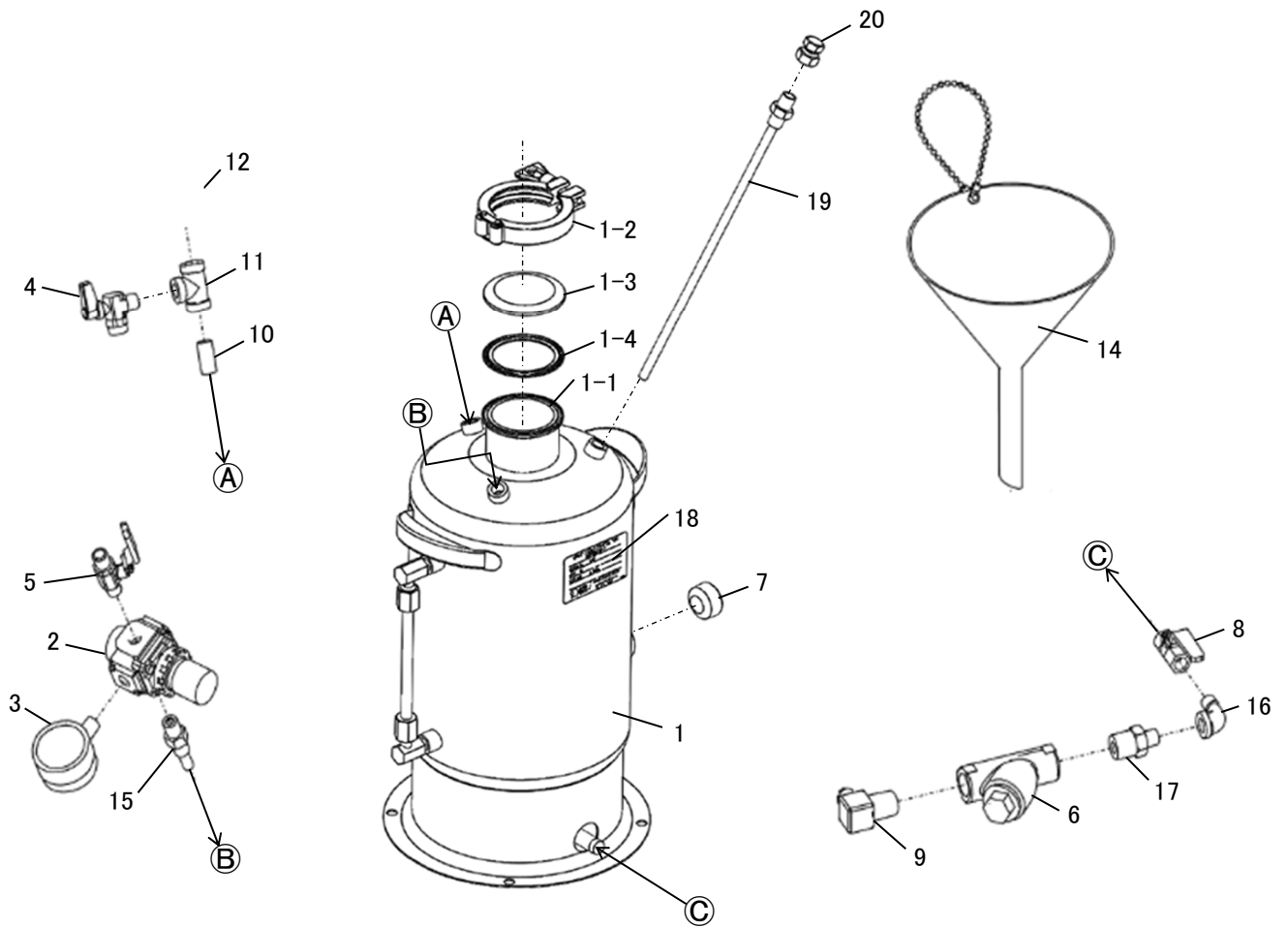
- (1) Before the start of the work, be sure to confirm that the sufficient amount of curing agent for coating is supplied in the tank. If the curing agent decreases and air is sucked once, the laminated curing agent scum may flow in and cause the equipment trouble and malfunction.
- (2) The sealed stainless tank may be provided with a lower level detection sensor as an option. Refer to the level sensor instruction manual when mounting an intrinsic safety explosion-proof lower level sensor.

 **CAUTION**
Causes the equipment troubles, malfunction, and curing troubles.

- When nitrogen gas leaks from the tank, in the case of quick leakage, the nitrogen cylinder becomes empty in a day.
Such a condition is equal to the condition without replacement by nitrogen gas, and causes occurrence of crystal dust and hardener scum, and, if left as it is, it causes the curing in the tank. Confirm the leakage and the nitrogen gas pressure condition periodically, and, if leakage occurs, immediately repair it.

8

Disassembly Drawing



Sealed stainless tank 10L<5414-3>

No.	Part No.	Part name	Qty.	Remarks
1	5414-201	Stainless tank	1	
1-1	5414-201-1	Ferule	1	
1-2	360-0083	Clamp band	1	
1-3	360-0084	Blind cap	1	
1-4	360-0085	Gasket	1	
2	301-0025	Air regulator	1	
3	305-0025	Pressure gauge	1	
4	325-0043	Ball cock	1	
5	325-0003	Ball cock	1	
6	320-4004-5	Y-shaped strainer	1	
7	244-4010	Hexagon socket head plug	1	
8	325-0024	Ball cock	1	

No.	Part No.	Part name	Qty.	Remarks
9	295-4403	L-shaped hose nipple	1	
10	242-1002	Barrel nipple	1	
11	205-3002	Tee	1	
12	310-0008	Safety valve	1	
13	Nil			
14	5414-014	Funnel	1	
15	5414-215	N2 nozzle	1	
16	203-4002	Male/female elbow	1	
17	288-4002	High-pressure reducing nipple	1	
18	5254-043	Model name plate(HST)	1	
19	5414-018	Return pipe	1	
20	278-4002	Plug	1	

CAUTION: Due to continuous improvements and modifications, the configurations specified herein are subject to change without prior notice.

9

List for Consumables

The durable period varies depending on the use curing agent (liquid) and liquid replacement frequency; therefore, take it as a reference.

Part number	Name	Qty.	Durable period	Note
360-0085	Gasket	1	6 months	Replace every 6 months
320-4004-05	Screen	1	12 months	#100 for Y-shaped strainer
5414-014	Funnel	1	12 months	
301-0025	Air regulator	1	24 months	
305-0025	Pressure gauge	1	24 months	
310-0008	Safety valve	1	24 months	

10

Check Items

[1] Inspection before start-up

Check the following items before everyday start-up.

Maintenance items	Check	Judgment	Troubleshooting
Liquid leakage from the pipes at the tank lower part	Visual	No leakage	<ul style="list-style-type: none"> Retighten the piping.
Liquid leakage from Y-shaped strainer	Visual	No leakage	<ul style="list-style-type: none"> Wash the gasket of the Y-shaped strainer.
Residual quantity of the curing agent	Visual	Enough residual quantity	<ul style="list-style-type: none"> Replenish the curing agent.
Leakage of nitrogen gas	Stop nitrogen gas, check pressure change	No leakage No change of pressure gauge	<ul style="list-style-type: none"> Replace the gasket of the supplying port. Replace the air apparatuses at the upper part.
Residual quantity of the nitrogen gas	Pressure gauge Visual	Enough residual quantity	<ul style="list-style-type: none"> Replace the gas cylinder. *Replace it before it becomes empty.
Air quality of the dry air supplying equipment			<ul style="list-style-type: none"> Conduct the treatment according to the equipment instruction manual. *Replace the air at the time of silica gel replacement for the drying equipment like silica gel.

*Refer to the [8. Disassembly Drawing] for the above names.

[2] Periodical inspection (monthly)

Check the following items every month to every several months.

Maintenance items	Check	Judgment	Troubleshooting
Clogging of the Y-shaped strainer	Visual	No filter clogging, no smudge	<ul style="list-style-type: none"> Wash or replace the screen <320-4004-05> (#100).

ASAHI SUNAC CORPORATION (the "Company") shall provide the original purchaser (the "Purchaser") with warranty service for a period of 6 months from the date of purchase of the product, as follows:

- Should you find defects in design or workmanship with regard to parts, ship them back to the Company with freight prepaid. The Company shall repair or replace the parts free of charge and reimburse the freight charges, provided that, as a result of an inspection and investigation of the parts conducted by the Company, the defects are deemed to be attributable to the factors within the Company's responsibility.
- In the following cases, our free after-sales service is not provided.
 1. Failure resulting from an inappropriate method of installing this equipment.
 2. Failure resulting from a use method not conforming to this instruction manual or mishandling.
 3. Failure resulting from insufficient maintenance management of this equipment and incorrect handling such as non-conformance to the procedures specified in this instruction manual.
 4. Failure resulting from unauthorized alteration or structure change of this equipment without the Company's consent.
 5. Failure due to force majeure such as earthquake, disaster, flood disaster or lightning.
 6. Warranty for consumables worn or deteriorated even in the case where this equipment is used correctly.
 7. Repair after the machine has been used outside Japan, and shipping cost.
 8. In addition to the above, failure due to circumstances beyond our control.
- As for items such as parts purchased by the Company from another manufacturer, the warranty of that manufacturer shall apply.
- As for any parts deemed to be defective, the Company shall not be held liable for any expenses beyond the provision of repair or replacement parts free of charge.
- The Company shall not be held liable for any damage to the Purchaser caused by factors not attributable to the Company, such as misuse of product, etc.

[MEMO]

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- When transferring this machine to another owner, attach the instruction manual to the machine.
 - This machine has been manufactured according to the laws and legislations of Japan and may only be used in Japan.

When using the machine in another country, it is necessary to observe the safety standards in that country.

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