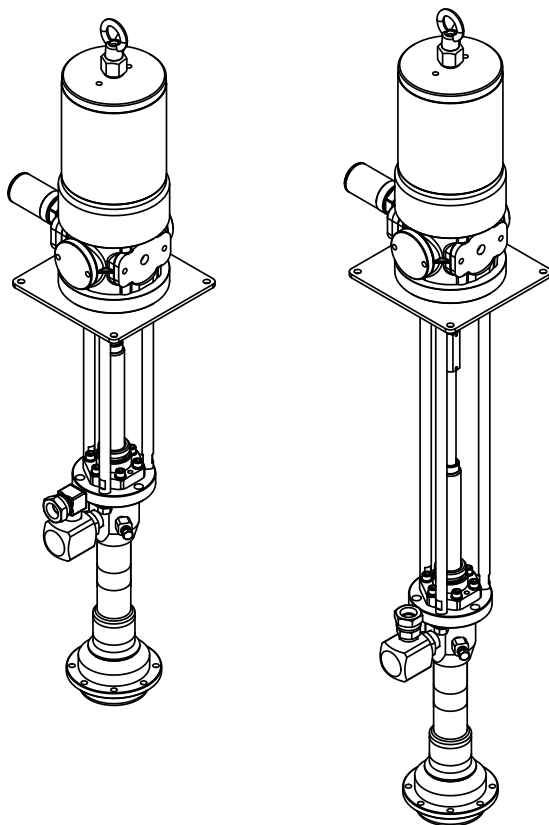


INSTRUCTION

High Viscosity Material Supply Pump 140 type series

SR140P25-P	MODEL No.854557 (25 × 1)
SR140P38-P	MODEL No.854558 (38 × 1)
SR140P50-P	MODEL No.854559 (50 × 1)
SR140P25-D	MODEL No.854560 (25 × 1)
SR140P38-D	MODEL No.854561 (38 × 1)
SR140P50-D	MODEL No.854562 (50 × 1)



WARNING

Prior to operating this pump, be sure to read this operation manual for safety. After reading the manual, please keep it at hand any time for your quick reference.

- Preface

Thank you very much for purchasing Yamada Pump.

SR140 series pumps are powered by air and designed for pumping low viscosity grease efficiently as well as high viscosity. The pump can be mounted on a variety of lift units depending on the intended use.

The pump, if used with a lift and an inductor plate, will work more effectively as a complete unit. The pump unit is able to pump material from a container efficiently, wiping off the material on the inner wall of a container. Due to this function, you can save the effort of replacing or filling a container.

- For Safe Operation

This document describes the items that are important for the user to operate this product safely, correctly, and efficiently. Before operating this product, read this manual thoroughly, in particular, "Warnings and Cautions" at the beginning of this manual, with a good understanding of its contents. Keep this manual carefully in an easy-to-access place so that the user may refer to it whenever necessary.

- Warnings and Cautions

To use this product safely, be sure to observe the contents of the following description. In this manual, warnings and cautions are indicated by using symbols. These symbols are intended to prevent death or serious injury that may be caused to the operator or those who are around the product and damage that may be caused to the articles that are around the product, as well as to use the product safely and correctly. Each symbol is indicated and has a meaning as shown below. Read the description with a good understanding of its contents.



WARNING : This indicates the existence of potential hazard which, if not avoided, will result in death or serious injury.



CAUTION : This indicates the existence of potential hazard which, if not avoided, may result in bodily injury or in physical damage.

To indicate the contents of danger and damage, the following symbols are used together with the above indications.



This symbol indicates an act that is prohibited (prohibition). The concrete contents of prohibition are indicated by the side of the indication.



This symbol indicates the contents that must be observed. The concrete contents of observance are indicated by the side of the indication.

- Precautions on Use

The following warnings and cautions are very important. Be sure to observe them.

WARNING

[Operating condition]



- Read this manual thoroughly before use.
For your safety, read and understand all information provided in this manual.
If you have lost or damaged your instruction manual, please contact us or our distributor to place an order.



- Restriction on handling
Never let anyone operate this unit without understanding this manual.

[Operating method]



- Understand this manual completely before operating the machine.
Operators and maintenance personnel are required to read this manual thoroughly before operating or servicing. Do not handle this machine without understanding the instructions.



- Do not use inappropriately.
Use of the product for any purpose other than those specified in this manual may result in personal injury or property damage. Be sure to use the unit in accordance with the specifications described in "7. Specifications" in this manual.

[Disassembly, maintenance and inspection]



- Shut off air supply.
Performing these tasks when air supply is on may cause a sudden movement of the lift or an unexpected discharge of material. Be sure to shut off the air source to stop the machine before servicing.



- No alternation is permitted.
Alternating the unit may result in personal injury or product malfunction. Please do not try to alter, modify, or change the machine.



- Some materials can be detrimental to the environment.
Be sure to discharge to a container. Never discharge directly to the ground.



- Replacement time for consumables
The life of consumables varies depending on operating conditions. Replace a degraded part with a new one.

CAUTION

[Installation and piping]



- Install an emergency stop valve.
Attach an emergency stop valve to the air piping (somewhere accessible between the air source and unit) and close this valve in case of emergency.



- Stop operation.
If any abnormality is found during operation, immediately stop the machine. Do not restart until the cause has been identified and corrected.



- Shut off air supply.
Shut off the air source BEFORE installation and piping.



- Install properly.
Install the unit properly according to the requirements for location and material, pressure resistance, and size of hoses and other device, avoiding lift operation failure and pipe leakage or breakage.



- Do not plumb directly.
Do not connect the material outlet and piping directly. Attach a flexible tube like a hose to connect the pump to the piping. The pump, if connected directly to the piping, may cause many problems (e.g., noise caused by vibration, damage to the piping, operation failure of the lift, and failure of maintenance).

[Handling]



- In case of emergency
Close the emergency stop valve.



- Air pressure to the pump
Set the pump air regulator to 0.7MPa or less.

[Shutdown and storage]



- When left unused for a long time (an hour or more) or shutdown
In such case, close the air source and open the bleeder valve to release residual pressure inside the pump. (Close the bleeder valve after the residual air and material is removed.)
If a drum is not mounted, move the lift to the lower limit and put a plastic bag over the inductor plate to prevent dust.

Table of Contents

- Preface	
- For Safe Operation	
- Warnings and Cautions	
- Precautions on Use	
- Table of Contents	
1. Part Names	
1.1 Part names	1
1.2 Contents of a package	1
2. Operating principle	1
3. Preparation of Installation and Operation	
3.1 Pump installation	2
3.2 Installation of silencer	3
3.3 Connecting suction piping	3
3.4 Connecting suction piping	3
3.5 Discharge piping	4
3.6 Air piping	4
3.7 Preparation for use	4
4. Operating Method	
4.1 Description of valve	5
4.2 Filling delivery piping with material	5
4.3 Operation	5
4.4 After work	6
5. Maintenance and Inspection	
5.1 Maintenance and inspection	7
5.2 Troubleshooting	8
5.3 Consumables	9
5.4 Design standard use period	9
6. Parts Disassembly Drawing and Parts List	10
7. Specifications	
7.1 Specifications	13
7.2 Dimensions	13
7.3 Performance curve	14
8. Trouble Information Fax Form	15
9. Limited Warranty	16

1. Part Names

1.1 Part names

Fig. 1 shows the names of each part used in the instructions in this manual. Use them as a reference.

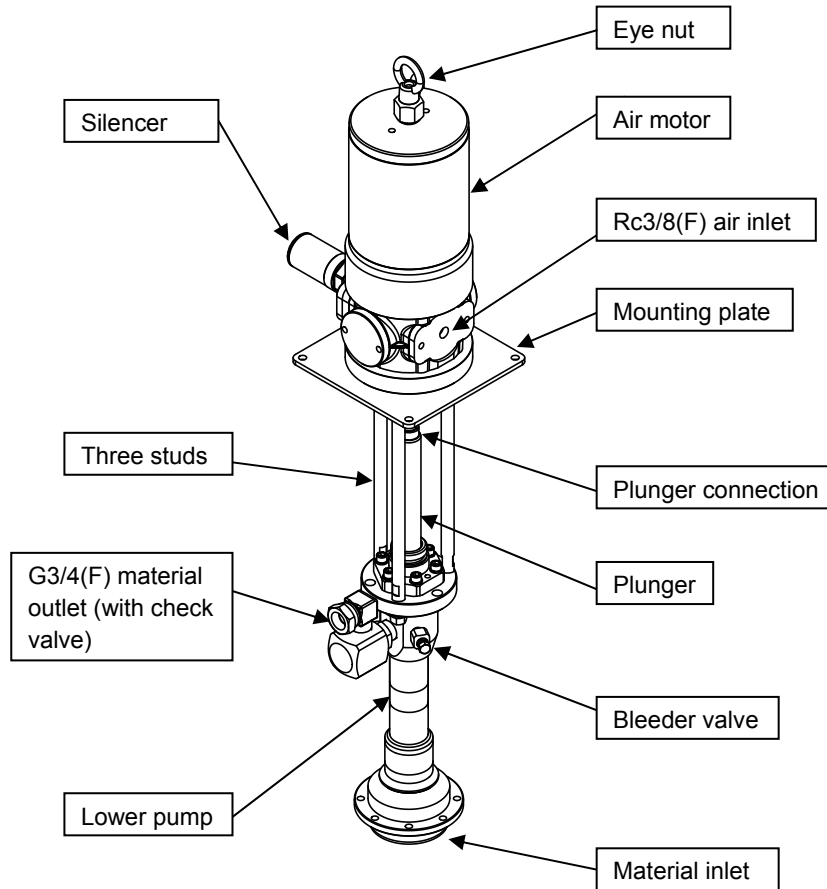


Fig. 1 Part names

1.2 Contents of a package

The unit is packed in a wooden box.

Open the box and inspect the product to make sure there is no part damaged or loosened due to vibration during transport.

2. Operating principle

Yamada's air-powered pumps employ reciprocating motion system driven by compressed air.

It is comprised of two sections as illustrated at right; air motor section which drives the pump and lower pump section which pump up material.

When compressed air, generated by the compressor, is fed into the air motor, the air switching mechanism built in the air piston actuates vertical reciprocating motions. The connecting rod, joining the air piston inside the air motor and the piston inside the lower pump, transmits the movement to the piston inside the lower pump, giving vertical reciprocating strokes.

Vertical reciprocating motions, generated by the lower pumps, feed material into the lower pump. Then, it is pumped out of the discharge port.

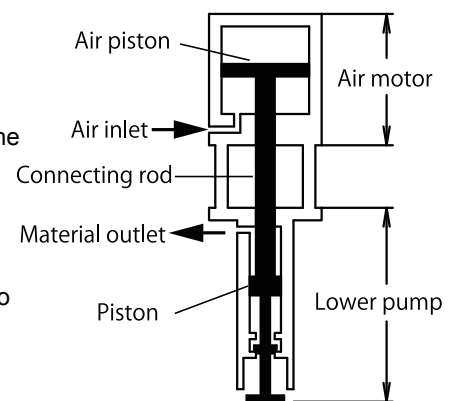


Fig. 2

3. Preparation of Installation and Operation

<NOTE>

If you have purchased a complete pump unit, refer to the instruction manual for the unit for installation, operating method, and other instructions.

CAUTION

- The pump weighs about 30kg. Be careful not to let the pump fall over or get crushing injury during installation.
- Do not put your hand between the pump body and shovel. Hand injury may be caused by a sudden movement. (Fig. 3)

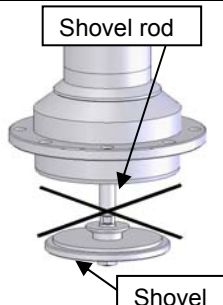


Fig. 3 Shovel part

CAUTION

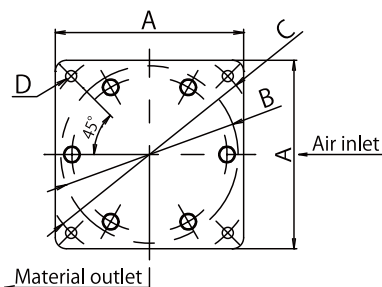
- Consider nearby equipment when installing the unit.
- Fall prevention measures
When using the pump individually, install it on either of the following types of mount in accordance with the instructions below.

A stationary mount---- Secure a mount to a flat floor using anchor bolts or the like to prevent the pump from falling.

A movable mount----- Be sure to maintain balance of the pump to prevent a fall due to vibration. Use a stopper, caster wheel with a brake, or other locking device to prevent a mount from moving due to reciprocating pump vibration.
- Before installing the pump, verify that the shovel at the bottom is NOT sticking out. Failure to follow this instruction may result in damage to the shovel rod causing a pump failure. (Fig. 3)
- Set each air regulator to 0MPa BEFORE connecting an air hose to the pump.
- The packings and O rings used in the pump are made of NBR or Urethane. Do not use any solvents that are incompatible with these materials for cleaning.

3.1 Pump installation

- 1) Refer to Fig. 4 for mounting dimensions of the pump. Make sure the environment to install the pump satisfies the following conditions:
 - A flat surface indoor (area where exhaust from the pump does not affect peripheral equipment)
 - Enough space to perform maintenance



		SR140P25.38.50-P	SR140P25.38.50-D
A (Dimension of mounting plate)		170	210
B (Mounting diameter of pump)		φ160	φ160
Bolt hole	C	P.C.D.200	P.C.D.265
	D (mounting hole)	4-φ10	4-φ10

Fig. 4 Pump mounting dimension

- Lift the pump using the eye nut on the top. Put the mounting plate on a mount. Align the holes on the mounting plate with the screw holes on the mount and secure it using four bolts with wave spring washers.

<Installing on a stationary mount>

Secure a mount to the floor using anchor bolts to prevent a fall due to pump vibration.

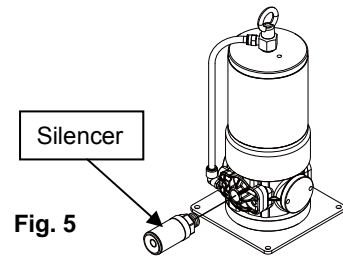
<Installing on a movable mount>

Keep the pump from moving or falling due to pump vibration by securing a mount with a locking device like a stopper.

3.2 Installation of silencer

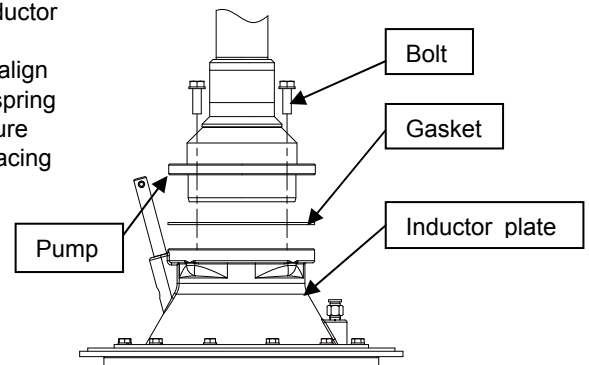
⚠ CAUTION	
!	- Each connection is capped. Remove the caps all.
!	- Wrap sealing tape around the silencer thread to prevent leakage.

Attach the silencer to the pump and secure it using a tool. (Fig. 5)
Wrap sealing tape around the silencer thread to prevent leakage.



3.3 Connecting suction piping (connecting pump to inductor plate)

- Insert the lower part of the pump through the gasket into the inductor plate.
- Rotate the holes in the gasket and flanged part of the pump to align with the bolt holes in the inductor plate. Insert bolts with wave spring washers through each hole and tighten them securely. Make sure the air release plug is positioned in the front side of the pump facing away from the bleeder valve.



3.4 Connecting suction piping (connecting piping except inductor plate)

As the pump start operation, the shovel in the suction port starts reciprocating. Do not place any piping equipment in the operating range of the shovel.

Refer to Fig. 7 for the operating range of the shovel and mounting dimension for piping.

Apply leak prevention, putting a gasket, for example, to the connection between the flange section of the material inlet of the pump and piping.

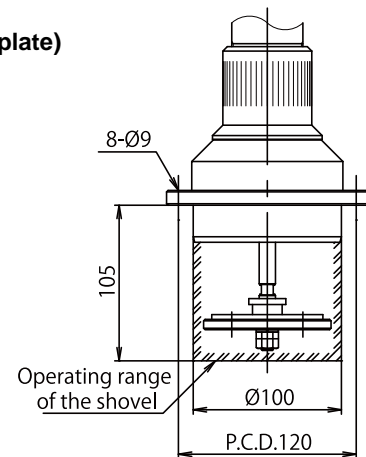


Fig. 7 Operating range of the shovel and mounting dimension for piping

3.5 Discharge piping

- 1) Connect a discharge hose to the pump outlet. Make sure the hose satisfies the following requirements:
 - Resistant to material being pumped and unaffected by environment
 - Satisfying the following normal operation pressure:
 - 25×1 ratio pump: 18MPa or more
 - 38×1 ratio pump: 27MPa or more
 - 50×1 ratio pump: 35MPa or more
 - Recommended size: 3/4 inch or more
 - When mounting the pump on an elevating machine like a lift, be sure to use a flexible hose with an adequate length in order not to be affected by up-and-down movement.
 - Hose fitting or joint: Connectable to G3/4(F) material outlet, hose union with a 30 degree male seat.
- 2) Connect the other end of the hose to a delivery pipeline. Attach a valve at the connection between the hose and the piping for maintenance and keep it closed until unit installation is completed.

3.6 Air piping

- 1) Connect air piping equipment such as an air valve and air regulator to the air inlet of the pump. Attach an emergency stop valve to the air pipe (somewhere accessible between the air source and unit).
- 2) Select an air supply hose, fitting, and air equipment that satisfy the following requirements. With these devices, connect an air piping and the air inlet of the lift. Be careful not to let the hose get caught on peripheral equipment.
 - Designed for use with air and unaffected by environment
 - Normal operation pressure: 0.7MPa or more
 - Recommended size: 3/8 inch or more
 - Hose fitting or joint: Connectable to Rc3/8 air inlet
 - Comfortable hose length for up/down movement of the lift
 - Flow rate: 1300L/min (ANR) or more








<NOTE>

The air regulator controls supply air pressure to the pump. Accordingly, the pump operates efficiently without unnecessary movement and thus the life of the pump can be extended.

3.7 Preparation for use

The pump has been tested using mineral oil before delivery. Please wash inside the pump with appropriate solvent for the material being pumped.

4. Operating Method

 CAUTION	
	- Keep your face away from the bleeder valve. Material may spurt out together with compressed air.
	- Do not exceed the maximum operating pressure of the pump (0.7MPa). Overpressure may cause a product failure resulting in serious personal injury and/or property damage.
	- Keep your hand away from the three studs connecting the air motor and lower pump. Fingers can get caught in the reciprocating plunger.
	- Keep your face away from the silencer. Compressed air is exhausted at high pressure, causing moisture to freeze leading cause of injuries.
	- In case of a pump malfunction or shutdown, refer to “5.2 Troubleshooting” to judge the situation thoroughly and disassemble the pump only as necessary.
	- Avoid allowing the pump to run dry as much as possible. The life expectancy of packings will be reduced. The pump runs dry when a container becomes empty. Stop the pump immediately after the material in a container is all gone.

4.1 Description of valve

- Pump Air Regulator (sold separately)

Function : Controlling air pressure for pump operation.

To operate : Clockwise turn will increase pressure. Counterclockwise turn will decrease pressure.

(It can be locked by pushing the knob in.)

Note : The maximum allowable operating pressure of the pump is 0.7MPa. DO NOT exceed this limit.

Remark : Discharge pressure can be calculated by multiplying the air pressure by the pump ratio.

- Air Valve, Pump (sold separately)

Function : Starting/Stopping the pump.

To operate: When the lever is parallel to the pipe, the valve is open. If the lever is perpendicular to the pipe, the valve is closed.

Note : In case of emergency, close the emergency stop valve attached to the air piping instead of this valve.

4.2 Filling delivery piping with material

- 1) Open the bleeder valve by turning it 2-3 times for releasing air.
- 2) Open the air valve for the pump and increase air pressure gradually with the pump air regulator. The pump will start operating at approx. 0.05MPa. Adjust the pump air regulator to set pump speed to 5-8 seconds per cycle.
- 3) Air-containing material will be discharged from the bleeder valve. Put a plastic bag over the valve to receive discharged material. Keep the pump operating until the air inside material is released completely. Then close the bleeder valve by securely tightening it.
- 4) Close the air valve for the pump and set the pump air regulator to 0MPa.

4.3 Operation

- 1) When filling the delivery piping with material for the first time, the air inside the piping will blow out. Please follow the following procedure.
 - ①Put a plastic bag over the material outlet to receive discharged material.
 - ②Open the valve on the delivery piping.
 - ③Open the air valve for the pump and set the pump air regulator for minimum operating pressure.
 - ④The pump will start discharging material from the outlet. Once the air in the piping is released completely, close the air valve for the pump and set the pump air regulator to 0MPa.
 - ⑤The pump is now ready for operation.
- 2) Adjust the pump air regulator to set to the desirable operating pressure. An estimate of the material discharge pressure to the supply air pressure is calculated by “supply air pressure × pump ratio”.
(e.g. When operating a 38:1 ratio pump at 0.7MPa supply air pressure, material will be discharged at approx. 26.6MPa.)

<NOTE>

Material viscosity changes with seasons. It is recommended to make a note of appropriate pressure for each season.

4.4 After work





 **CAUTION**



- After work or when shutting down the unit for a long period, be sure to turn off the air supply source to disconnect air supply to the pump, and open the valves on the material outlet or gun to release residual pressure inside the pump and piping. Failure to shut off air may cause damage to the hoses and pipes and/or leak in the valves and gun. Any secondary accidents caused by the failure mentioned above are the responsibility of the users.

- 1) Close the air valve for the pump and set the pump air regulator to 0MPa.
- 2) Open the valve on the discharge port to release residual pressure on air and material inside the pump and piping.

5. Maintenance and Inspection

 CAUTION	
	- Be careful not to allow the pump and lift to accidentally operate during maintenance and inspection.
	- When performing maintenance or inspection, notify workers by hanging a sign or other method to keep them from touching the unit.
	- Gasoline is a high volatile fuel. Never use it for cleaning of the unit. Risk of fire or explosion may exist.

5.1 Maintenance and inspection

INTERVAL	ACTION
Daily	①Inspect operation of pump.
Weekly	②Lubricate pump. (turbine oil, class#1, additive-free: ISO V 32)
Annually	③Check for loose bolts and nuts.
Triennially	④Overhaul pump.

①Inspect operation of pump

Inspect pump to ensure the following:

- The pump operates normally and smoothly,
- There is no air/material leak in each part of the pump or air/material piping,
- There is no abnormal noise during pump operation, and
- There is no abrasion or deterioration apparently in each part of the pump.

②Lubricate pump

Lubricate pump according to the following procedure:

- Close the air valve for the pump and set the pump air regulator knob to 0MPa.

(With a lubricator)

- Disconnect the air piping from the air inlet of the pump and apply a few drops (approx. 0.5mL) of lubricant directly to the pump.

(Without a lubricator)

- Check the amount of oil remaining in the lubricator and fill it with lubricant if needed.

③Check for loose bolts and nuts

Check bolts and nuts according to the following procedures:

- Completely shut down the pump and lift by disconnecting from the air source, for example.
- Ensure that all visible bolts and nuts on the pump and lift cannot be loosened by hand.

④Overhaul pump

Pump needs to be overhauled triennially. Please contact the retail store where you purchased your pump or our business office for overhaul. Earlier overhaul is recommended depending on use frequency and deterioration degree.

5.2 Troubleshooting

If you suspect that you have a problem with your product, consult the table below for some common problems and their solutions. Contact the retail store where you purchased your product or our business office if all else fails.

PROBLEM	POSSIBLE CAUSE	REMEDY
Pump doesn't run	Compressor is off.	Turn on compressor.
	Valve on air piping is closed.	Open valve.
	Air pressure setting is under 0.2MPa.	Set air pressure to 0.2MPa or above.
	Valve on material outlet is closed.	Open valve.
	Frost occurs inside silencer.	Use dry air.
	O ring on sliding part of air piston is worn out. (Air leak occurs from silencer.)	Replace worn out or damaged part.
	Block (773065) and ball (686271) in valve body (804815) are worn out. Any parts (e.g. spring, pin) used in switching system in valve body (804815) or air motor (804814) are damaged.	
Air leak from air motor	- Fasteners are loose. - O rings and packings are worn out.	- Retighten loose parts. - Replace worn part.
Air leak from silencer during shutdown	- Foreign object is caught between block (773065) and valve seat (716246) in valve body (804815). - Seating part is worn out.	- Remove foreign object. - Replace worn part.
Pump doesn't run and air leaks from silencer	- Foreign object is caught between spindle (716299) and valve switcher (832996) in air motor (804814). - There exists damage that prevents sliding movement of parts below.	- Remove foreign object. - Replace damaged part.
Pump doesn't draw material at first time of operation	Pump operating speed is so fast that lower pump suction cannot keep up with pump movement. (Valve inside lower pump is not working well.)	Set pump speed to 5-8 sec. per cycle until material is pumped out.
Material cannot be pumped out	If upward movement of plunger is faster, - seat surface of piston valve is defective (wear of seat surface, inclusion of foreign material) or, - packings are damaged.	- Remove foreign object. - Replace damaged part.
	If downward movement of plunger is faster, - seat surface of foot valve is defective (wear of seat surface, inclusion of foreign material), - packings are damaged, or - shovel rod is bent.	
	If downward movement of plunger is faster, operating speed is so fast that lower pump suction cannot keep up with pump movement. (Vacuum is caused inside lower pump.)	Decrease air pressure until material comes out. (This pressure is the upper limit of normal operating pressure.)
	Connecting rod connecting air motor and lower pump is completely separated from air motor. (In this case, parts inside of lower pump may be damaged.)	Inspect inside lower pump first, then replace damaged part, and retighten each part.
Pump doesn't stop	Leak occurs in delivery pipe.	- Retighten loose parts. - Replace damaged part.
	Leak occurs in lower pump (connections are loosened or o ring, backup ring, or packing is damaged).	
Material leak from lower pump	- Fasteners are loose. - O ring, backup ring or packing is damaged.	- Retighten loosened parts. - Replace damaged part.
Material contains air bubbles even after bleeding	- Fasteners are loosened. - O ring or backup ring is damaged.	- Retighten loosened parts. - Replace damaged part.

5.3 Consumables

Refer to chart under for replacement time for consumables used in the pump. The replacement time should be used only as a guide. Consumption varies depending on use conditions. Also, be sure to replace a part when you find any defect like a leak during operation.

Part No.			Description	Q'ty	Times of replacement
854557 854560 (SR140P25)	854558 854561 (SR140P38)	854559 854562 (SR140P50)			
<804815>			Valve body assembly		
716246			Valve seat	1 per unit	10 million cycles
773065			Block	1 per unit	10 million cycles
706612			Spring	1 per unit	10 million cycles
686271			Ball	1 per unit	10 million cycles
<804814>			Air motor Assembly		
640075			O ring	1 per unit	5 million cycles
640033			O ring	1 per unit	5 million cycles
570145			Tube	1 per unit	6 years
<804816>	<804817>	<804818>	Lower pump assembly		
685616	685782	685791	U packing	1 per unit	5 million cycles
772811	685781	685790	Backup ring	1 per unit	5 million cycles
685618	685787	685792	U packing	2 per unit	5 million cycles
685619	685788	685793	Backup ring	2 per unit	5 million cycles
772812	772895	772897	Wear ring	1 per unit	5 million cycles
685546	—	—	Packing	1 per unit	5 million cycles
—	685650		O ring	1 per unit	5 million cycles
643669			Backup ring	2 per unit	5 million cycles

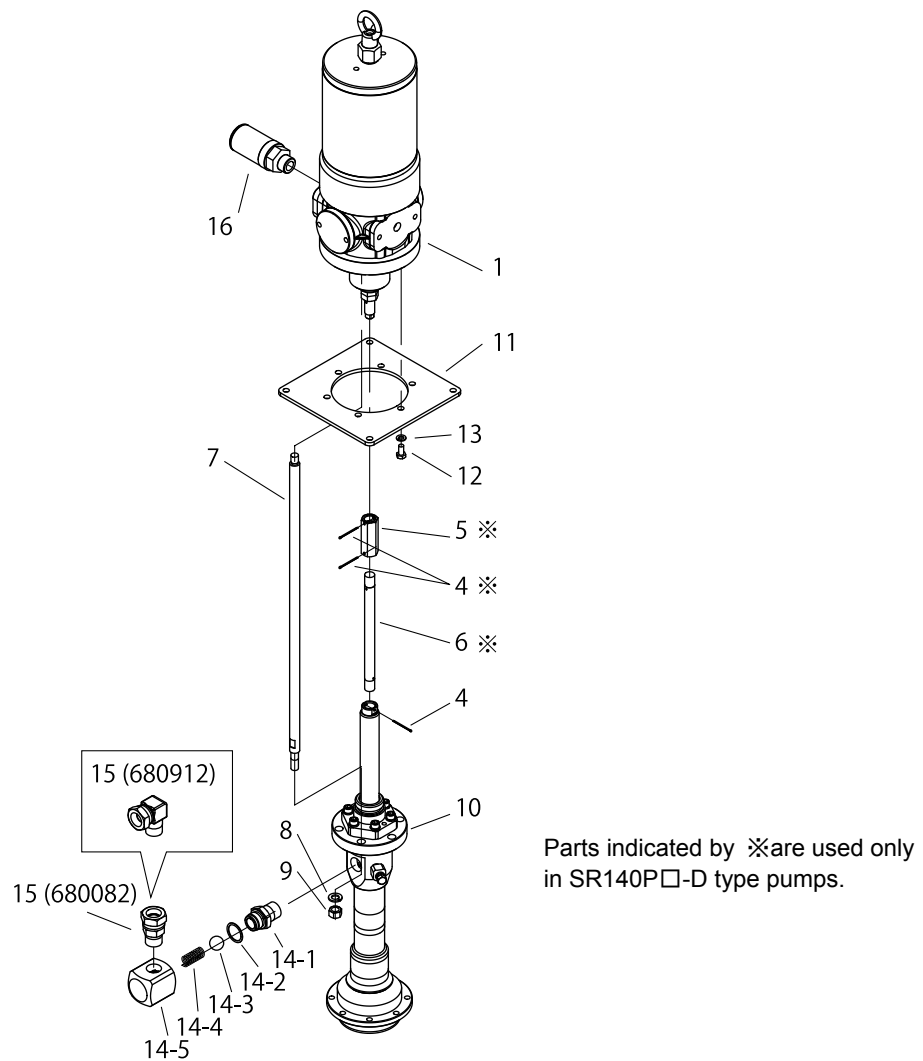
5.4 Design standard use period

Design standard use period is established for the product. (See the table below.)
Use of the product beyond this period may result in personal injury or property damage.

- Pump---10 years

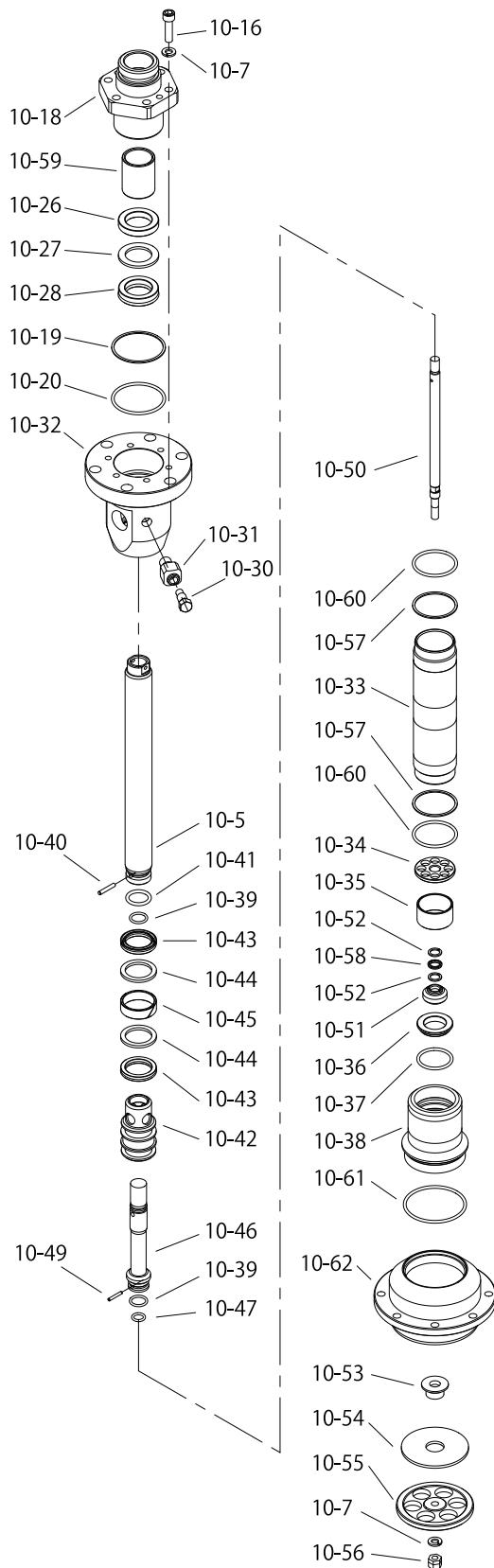
Standard Conditions of Use	SR140P25	SR140P38	SR140P50
Application	Pumping grease		
Season	Spring and Fall		
Temperature	20°C		
Material being pumped	Lithium Soap Grease: No.1		
Supply air pressure	0.5MPa		
Daily Amount of Material being pumped (Discharge volume)	447L	292L	235L
Operating Days per year	260 days (5 days a week)		

6. Parts Disassembly Drawing and Parts List



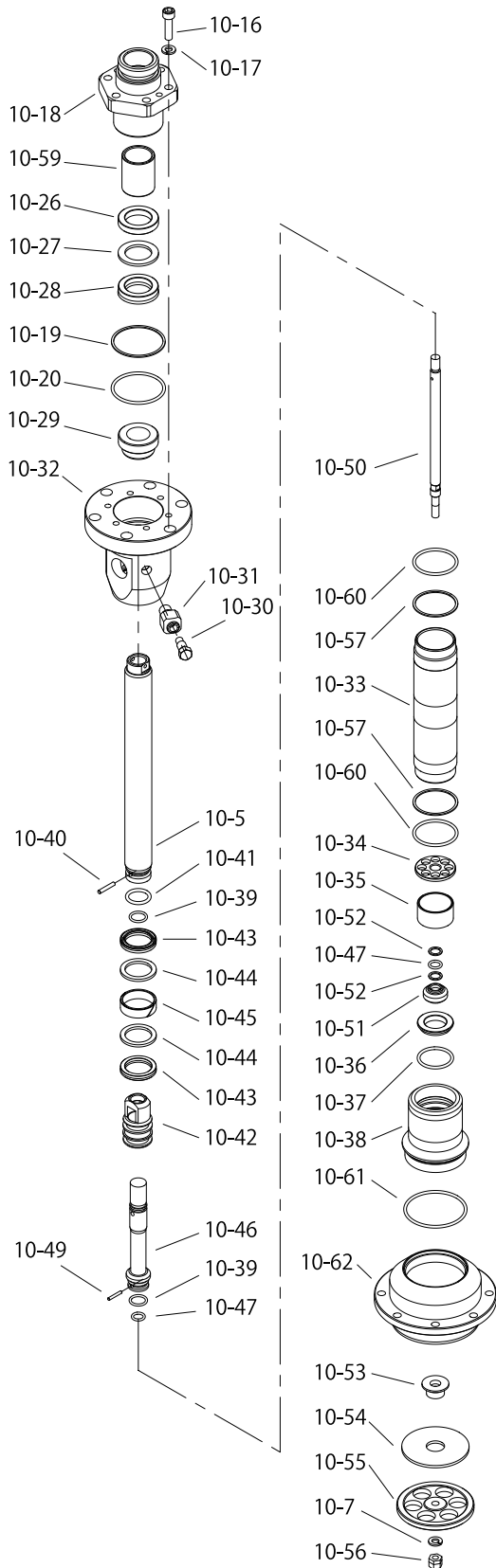
No.	Part No.						Description	Qty
	SR140P25-P <854557>	SR140P38-P <854558>	SR140P50-P <854559>	SR140P25-D <854560>	SR140P38-D <854561>	SR140P50-D <854562>		
1	804814	←	←	←	←	←	Air motor assembly	1
4	632059 (1)	←	←	632059 (3)	←	←	Slit pin	()
5				716288	←	←	Joint	1
6				716289	←	←	Connecting rod	1
7	716286	←	←	716290	←	←	Stud	3
8	631918	←	←	←	←	←	Wave spring washer	3
9	627045	←	←	←	←	←	Nut	3
10	804816	804817	804818	804816	804817	804818	Lower pump assembly	1
11	716287	←	←	716291	←	←	Plate	1
12	611145	←	←	←	←	←	Bolt	6
13	631916	←	←	←	←	←	Wave spring washer	6
14	(804939)	←	←	←	←	←	Valve assembly	—
14-1	716304	←	←	←	←	←	Valve seat	1
14-2	701014	←	←	←	←	←	Washer	1
14-3	630334	←	←	←	←	←	Ball	1
14-4	701015	←	←	←	←	←	Spring	1
14-5	716305	←	←	←	←	←	Valve body	1
15	680912	←	←	680082	←	←	Union adapter	1
16	804697	←	←	←	←	←	Silencer	1

■804816 Lower pump assembly



No.	Part No.	Description	Qty
10-5	716302	Plunger	1
10-7	631916	Wave spring washer	7
10-16	619151	Bolt	6
10-18	716303	Gland retainer	1
10-19	685115	Backup ring	1
10-20	640136	O ring	1
10-26	715253	Packing gland	1
10-27	772811	Backup ring	1
10-28	685616	U packing	1
10-30	716329	Valve shaft	1
10-31	701023	Valve body	1
10-32	716306	Body	1
10-33	716307	Suction tube	1
10-34	715256	Valve stopper	1
10-35	716308	Spacer	1
10-36	715258	Valve seat	1
10-37	640132	O ring	1
10-38	716309	Foot valve housing	1
10-39	640015	O ring	2
10-40	685617	Pin	1
10-41	640020	O ring	1
10-42	715260	Piston body	1
10-43	685618	U packing	2
10-44	685619	Backup ring	2
10-45	772812	Wear ring	1
10-46	715261	Piston valve	1
10-47	640009	O ring	1
10-49	632544	Pin	1
10-50	715557	Shovel rod	1
10-51	715262	Foot valve	1
10-52	643669	Backup ring	2
10-53	713551	Valve guide	1
10-54	713552	Valve plate	1
10-55	713553	Shovel	1
10-56	681886	Lock nut	1
10-57	685114	Backup ring	2
10-58	685546	Oacking	1
10-59	772810	Throat bearing	1
10-60	640134	O ring	2
10-61	640138	O ring	1
10-62	716310	Shovel housing	1

■804817 • 804818 Lower pump assembly



No.	Part No.		Description	Qty
	<804817>	<804818>		
10-5	716311	716317	Plunger	1
10-7	631916	←	Wave spring washer	1
10-16	619175	←	Bolt	6
10-17	631917	←	Wave spring washer	6
10-18	716312	716318	Gland retainer	1
10-19	685114	←	Backup ring	1
10-20	685775	←	O ring	1
10-26	715562	715572	Packing gland	1
10-27	685781	685790	Backup ring	1
10-28	685782	685791	U packing	1
10-29	716330	716331	Spacer	1
10-30	716329	←	Valve shaft	1
10-31	701023	←	Valve body	1
10-32	716313	←	Body	1
10-33	716314	716320	Suction tube	1
10-34	716315	←	Valve stopper	1
10-35	716308	←	Spacer	1
10-36	715258	←	Valve seat	1
10-37	640132	←	O ring	1
10-38	716316	←	Foot valve housing	1
10-39	686305	←	O ring	2
10-40	632544	632543	Pin	1
10-41	640016	640015	O ring	1
10-42	715568	715576	Piston body	1
10-43	685787	685792	U packing	2
10-44	685788	685793	Backup ring	2
10-45	772895	772897	Wear ring	1
10-46	715569	715577	Piston valve	1
10-47	685650	←	O ring	2
10-49	632542	685789	Pin	1
10-50	715557	←	Shovel rod	1
10-51	715262	←	Foot valve	1
10-52	643669	←	Backup ring	2
10-53	713551	←	Valve guide	1
10-54	713552	←	Valve plate	1
10-55	713553	←	Shovel	1
10-56	681886	←	Lock nut	1
10-57	685357	←	Backup ring	2
10-59	772257	772896	Throat bearing	1
10-60	685783	←	O ring	2
10-61	640138	←	O ring	1
10-62	716310	←	Shovel housing	1

7. Specifications

7.1 Specifications

Model No.		854557	854560	854558	854561	854559	854562
Type ^{*2}		SR140P25-P	SR140P25-D	SR140P38-P	SR140P38-D	SR140P50-P	SR140P50-D
Pump Ratio (Nominal)		25×1		38×1		50×1	
Material Connection	Suction port	Equipped with a mounting flange for a dedicated inductor plate					
	Discharge Port	G3/4(F)					
Air Connection	Supply Port	Rc3/8					
Operating Air Pressure		0.2~0.7 MPa					
A-weighted Sound Pressure Level ^{*3}		80.9 dB					
A-weighted Sound Power Level ^{*4}		89.0 dB					
Amb. Temp. Range	Env. Temperature	0 ~ 60 °C					
	Material Temp.	0 ~ 80 °C					
Discharge Volume per Cycle ^{*1}		116.2 mL		76.0 mL		61.2 mL	
Maximum Discharge Pressure	Supply air pressure at 0.7MPa	17.5 MPa		26.6 MPa		35.0 MPa	
Weight		27kg	29kg	27kg	29kg	27kg	29kg

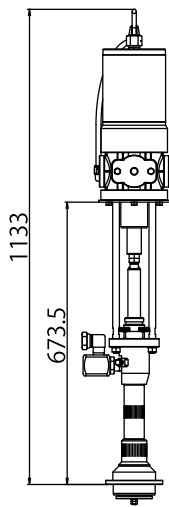
*1 Discharge volume (per cycle) varies according to use conditions.

*2 "-P" and "-D" at the end of each model indicate "pail pump" and "drum pump" respectively.

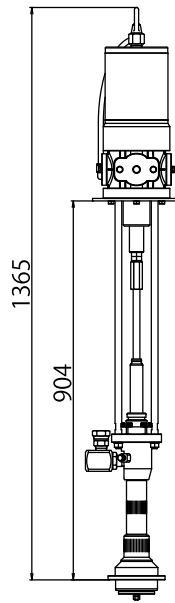
*3 Measurement method of A-weighted sound pressure level is based on ISO 1996.

*4 Measurement method of A-weighted sound power level is based on ISO 3744.

7.2 Dimensions



<SR140P25·38·50-P>



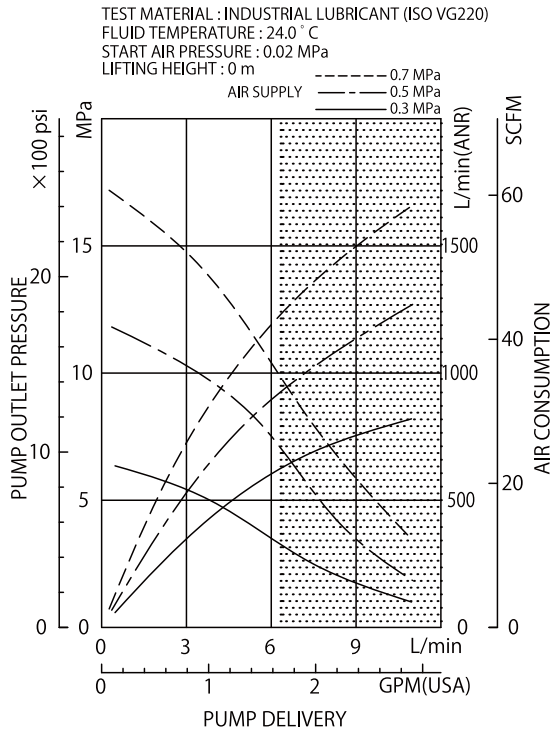
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7.3 Performance curve

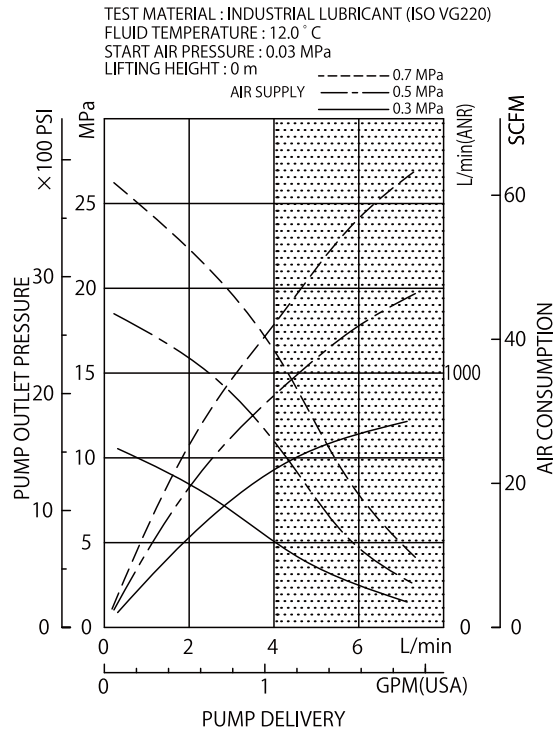
<NOTE>

Avoid continuous operation if a desired discharge volume is in the shaded area in the right side of each figure.

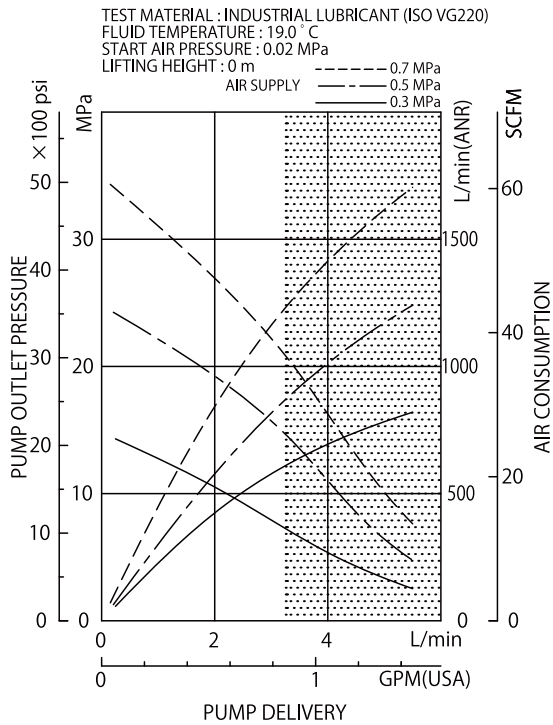
①SR140P25 Performance curve



②SR140P38 Performance curve



③SR140P50 Performance curve



8. Trouble Information Fax Form

Complete necessary information in the following fax form since your information is necessary to find the cause of the trouble or failure and it enriches our repair services. After filling it, send it to us.

Trouble Information Fax Form	
Company name _____	Name _____
Address _____ _____	Department name _____
	Contact information Tel. () _____ - _____ Fax. () _____ - _____
Product name	Model
Duration of use 20__year__month to _____year__month	SERIAL No. (LOT No.)
Operation frequency <input type="checkbox"/> Continuous <input type="checkbox"/> Intermittent _____hour/day/week/month	Purchase date _____ Sales outlet _____
Machine conditions (descriptions of the trouble)	

9. Limited Warranty

If an abnormality occurs during normal operation in accordance with the operating instructions and other operating cautions within the warranty period (12 months after date of purchase) that can be attributed to a manufacturing defect, the defective parts of this product will be serviced or the product will be replaced free of charge. However, this warranty will not cover compensation for incidental damage or any malfunction listed below.

1. Warranty period

This warranty will be valid for a period of 12 months after the date of purchase.

2. Warranty

If, during the warranty period, any of the material of the genuine parts of this product or the workmanship of this product is found defective, and is so verified by our company, the servicing cost will be fully born by our company.

3. Exclusion

Even during the warranty period, this warranty does not cover the following:

- 1) Malfunction arising from use of parts other than manufacturer-specified genuine parts
- 2) Malfunction arising from misuse or operating errors, or lack of storage or maintenance care
- 3) Malfunction arising from use with a fluid that may cause corrosion, inflation or dissolution of the component parts of the product
- 4) Irregularity arising from repair made by other than by our firm, our regional office, dealer or authorized service personnel
- 5) Malfunction arising from modification of the product by other than authorized service personnel
- 6) Wear and tear of parts that must be regularly replaced in the course of normal operation, such as packings, O-rings
- 7) Malfunction and/or damage due to transportation, moving or droppage of the product after purchase
- 8) Malfunction and/or damage due to fire, earthquake, flood or other force majeure
- 9) Malfunction arising from use of compressed air that contains impurities or excessive moisture, or use of gases or fluids other than the specified compressed air
- 10) Malfunction arising from use with a fluid that causes excessive abrasion or use of lubricating oil other than that specified for this product

Furthermore, this warranty does not cover the rubber parts, or other parts that are subject to wear in normal operation, used in this product and its accessories.

4. Parts

Parts for this product will be kept available for 5 years after discontinuation of production. Once 5 years have elapsed after close of production, availability of parts for this product cannot be guaranteed.

Manufactured by

YAMADA CORPORATION

INTERNATIONAL DEPARTMENT

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