

Installation manual

SLIMDUCT SD Residential Elevating System

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<u>Table of contents</u>	Page#
1. Precaution	1
2. Installation manual	1
2-1. Example of pipes storage	1
2-2. Example of applications	2
2-3. Installation procedure	3
3. About heat deformation on SLIMDUCT SD	9

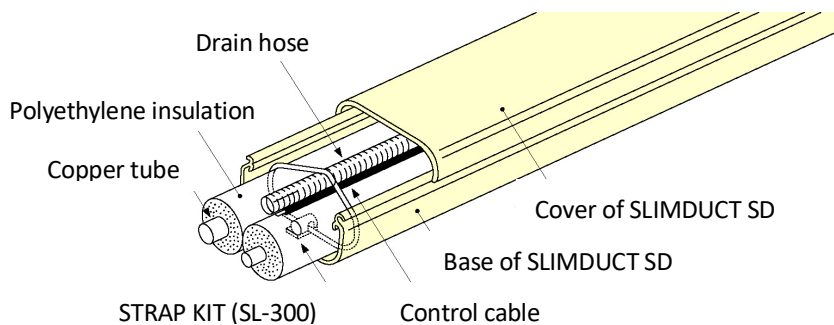
1. Precaution

This product is lineset cover system. Do not use this for other purposes.

- SLIMDUCT SD is not waterproof. There should be waterproof treatment required for the place where there is a possibility of water invasion. Especially at the wall penetration part, please carry out waterproof treatment by such caulking or putty treatment for the place of connection and seam part, penetration part, wall installation part, screw hole, etc. Even at horizontal installation, carry out the similar treatment for the place where there is a possibility of water invasion and for the necessary place of waterproof.
- SLIMDUCT SD is suitable for use and storage within a temperature range of -20°C-60°C (-4°F-140 °F). Deformation by heat may occur at temperatures exceeding 60°C (140°F). For information in details, refer to **3. About heat deformation on SLIMDUCT SD.**
- Wear safety gear such as working clothes, helmet, and gloves whenever installing SLIMDUCT SD. Besides, wear protective goggles or similar gears to prevent eyes from dust when cutting SLIMDUCT SD by hacksaw or else.
- Please use pan head screw with washer faced head. If fixed by flat head or countersunk screw, products might be damaged.
- Pay attention carefully when fixing a screw by impact screwdriver. It may cause damage to products. (Torque screwdriver is recommended for fixing.) Do not use impact screwdriver when fixing especially onto uneven wall surface because of a possibility for damage to products.
- Be sure to fix pipes by saddles such as STRAP KIT SL-300.
- Pay attention not to apply too much stress when tightening a fixing saddle because there might be dew condensation occurred if insulation is damaged. STRAP KIT SL-300 is designed to fix pipes inside of SLIMDUCT SD. Do not use it for fixing exposed linesets outside nor for fixing cables.
- Attach END FITTING (SE/SEN) to prevent the cover of straight duct from sliding.
- In severe winter season, cut straight ducts after making them warm due to a possibility of break.

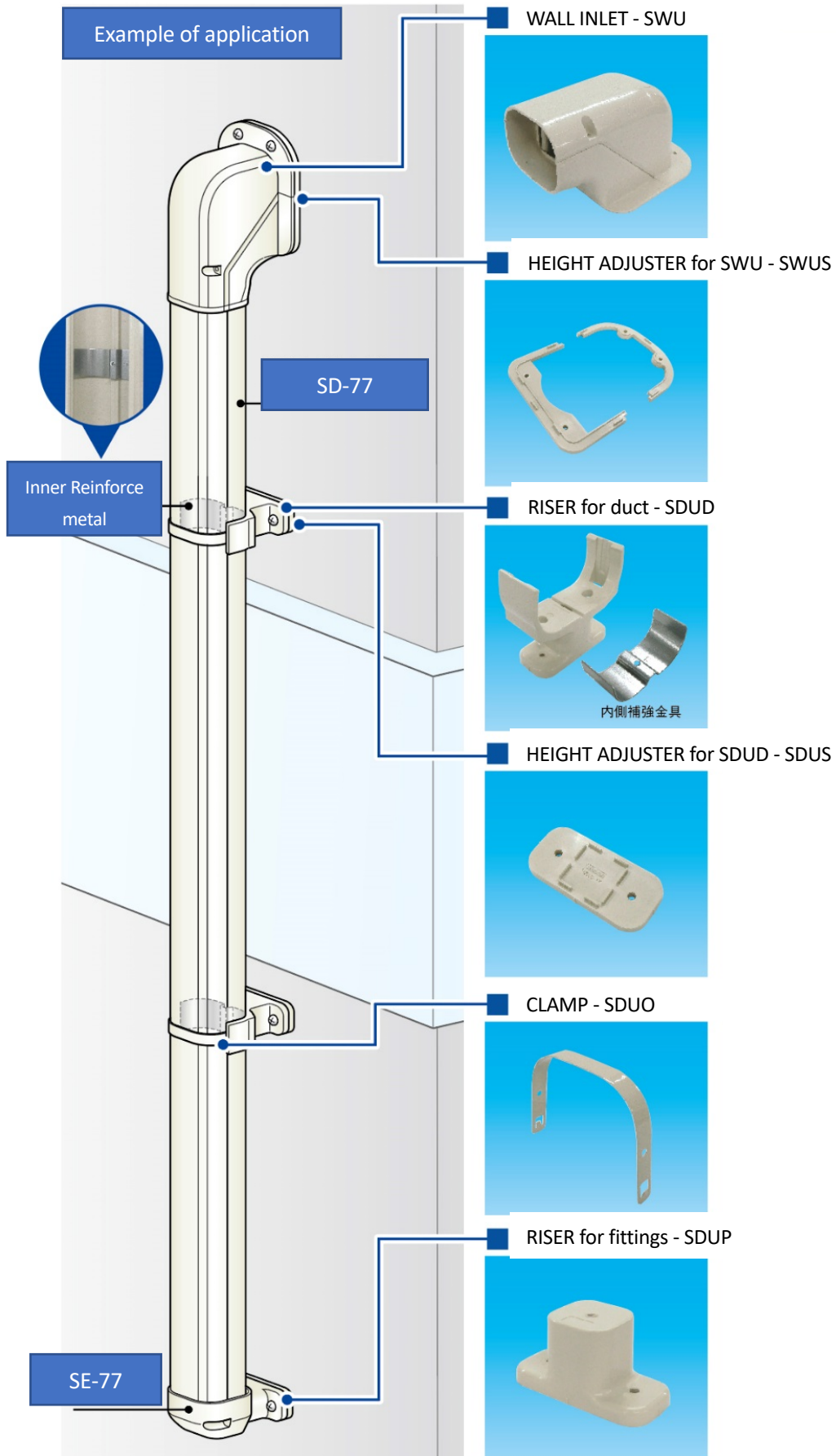
2. Installation manual

2-1. Example of pipes storage



NOTE: Control cable/wire can be accommodated in SLIMDUCT SD.

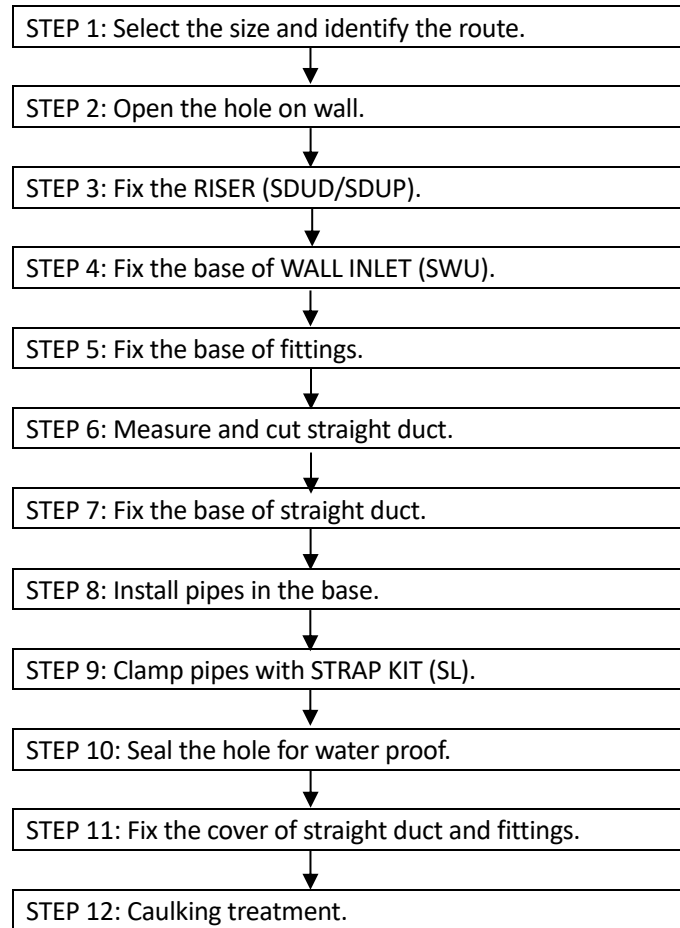
2-2. Example of applications



2-3. Installation procedure

Installation procedure for SLIMDUCT SD Elevation System is shown below.

SLIMDUCT SD is suitable for use and storage within a temperature range of -20°C-60°C (-4°F-140 °F).



STEP 1: Select the size and identify the route.

		Lineset size (Liquid line x Suction line)												
Item #	Insulation thickness	1/4"x 3/8"	1/4"x 1/2"	1/4"x 5/8"	3/8"x 5/8"	3/8"x 3/4"	3/8"x 7/8"	1/2"x 1 1/8"	5/8"x 1 1/8"	5/8"x 1 1/4"	3/4"x 1 1/4"	3/4"x 1 1/2"	7/8"x 1 1/2"	7/8"x 1 5/8"
SD-77	1/2" x 1/2"	1	1	-	-	-	-	-	-	-	-	-	-	-
	3/4" x 3/4"	-	-	-	-	-	-	-	-	-	-	-	-	-

*Includes Drain Hose (O.D. 7/8) and Power/Control Cables.

STEP 2: Open the hole on wall.

To pass pipes through wall, open the hole according to drill diameter.

Diameter of through hole	
Item#	Drill Diameter
SD-77	φ70 or less

STEP 3: Fix the RISER (SDUD/SDUP).

Mark a line where the lineset will run, then fix the riser above the marking line.

- ① Fix the riser (SDUD) 120mm (4-3/4") below the hole.
- ② Fix the riser (SDUDP) where the END FITTING (SE) will come.
- ③ Use necessary amount of risers by making sure the pitch between each risers will be less than 1000mm (39-3/8").

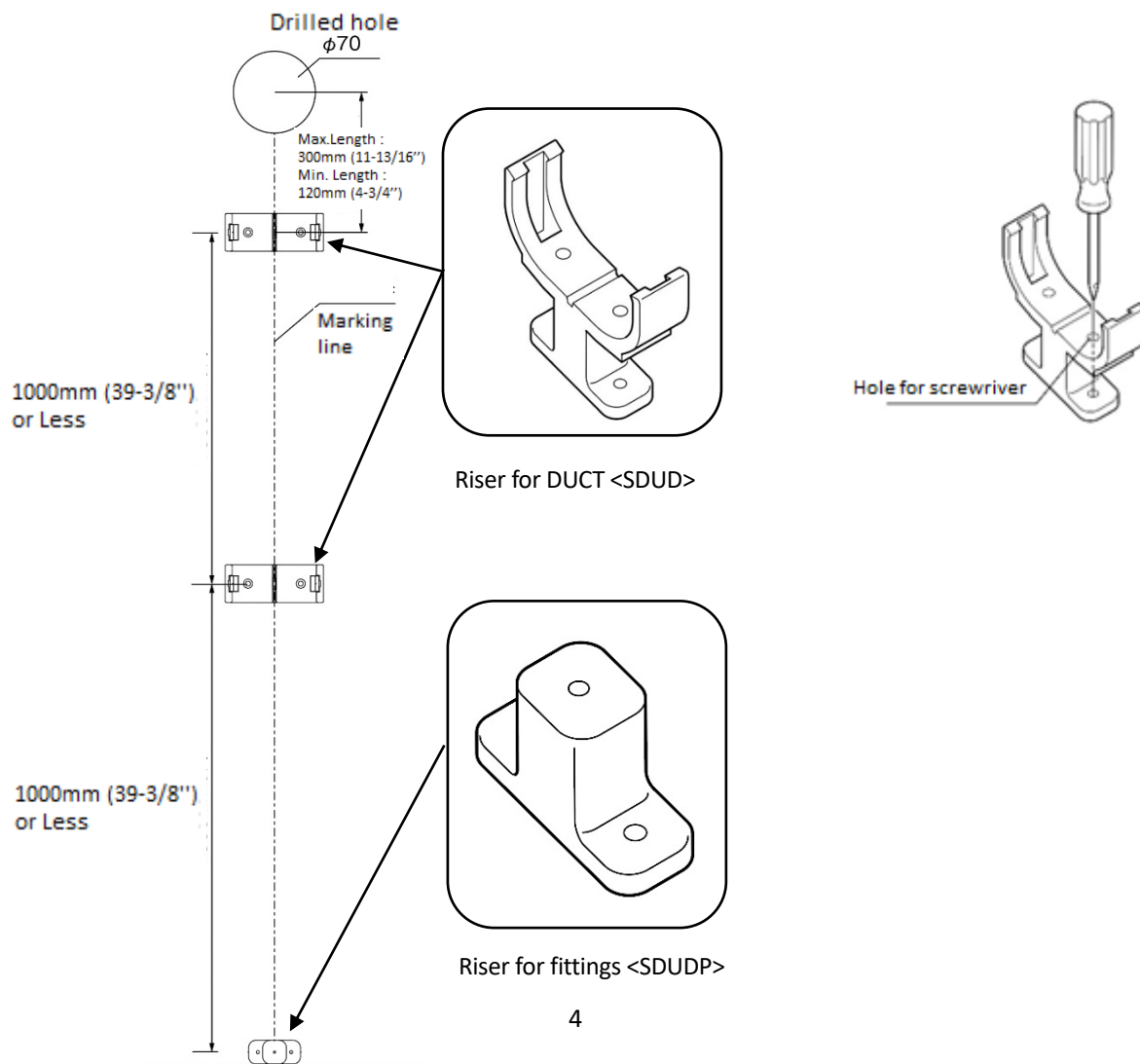
(Caution)

Please use φ3. 5mm or 4mm pan head screw with washe faced head when fixing on the wall.

If fixed by flat head or countersunk screw, products might be damaged.

Pay attention carefully when fixing a screw by impact screwdriver. It may cause damage to products.

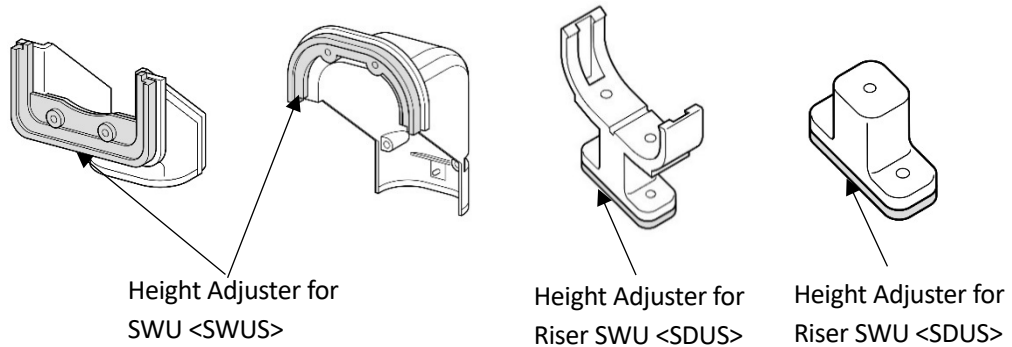
(Torque screwdriver is recommended for fixing.) Do not use impact screwdriver when fixing especially onto uneven wall surface because of a possibility for damage to products.



Instruction of Height Adjuster

- Height Adjuster enables to lift the application 5mm (≠25/128") per piece.
- Fix the height adjuster by screwing after attaching to suitable fittings.
- Piling multiple Height Adjuster may affect the stability of the application according to the site condition.

<Assembled image of Height Adjuster>



STEP 4: Fix the base of WALL INLET (SWU)

Fix the base of WALL INLET (SWU-77) onto the wall above the drilled hole.

At this point, be careful there's no incline.

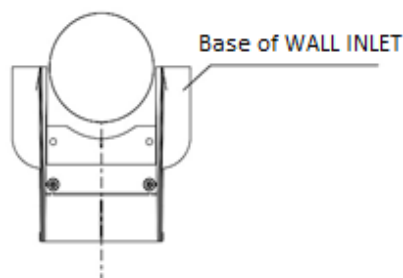
(Caution)

Please use $\phi 3.5$ mm or 4mm pan head screw with washer faced head when fixing on the wall.

If fixed by flat head or countersunk screw, products might be damaged.

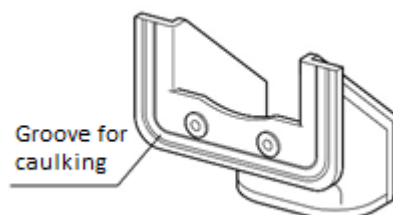
Pay attention carefully when fixing a screw by impact screwdriver. It may cause damage to products.

(Torque screwdriver is recommended for fixing.) Do not use impact screwdriver when fixing especially onto uneven wall surface because of a possibility for damage to products.



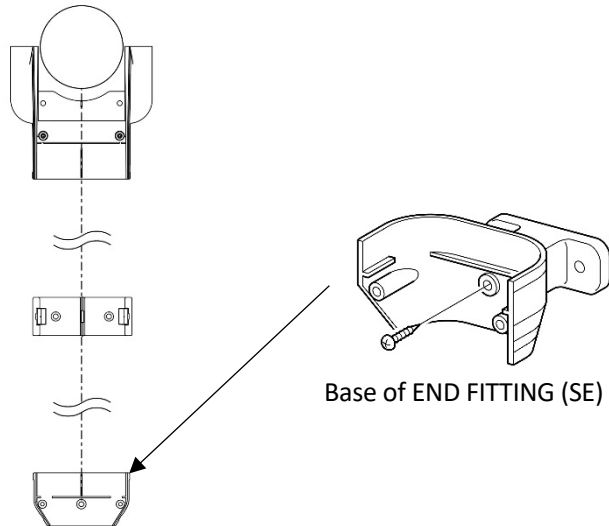
The base of WALL INLET (SWU-77) has a groove for caulking on the back side.

Fix the WALL INLET after caulking.



STEP 5: Fix the base of fittings.

Fix the base of END FITTING (SE) onto the RISER (SDUDP).

**STEP 6: Measure and cut straight duct.**

Identify the piping route and mark the cut point on straight duct, setting the base of straight duct onto the base of WALL INLET (SW). Then, cut the base and the cover of straight duct by saw or our recommended SLIMDUCT cutter.

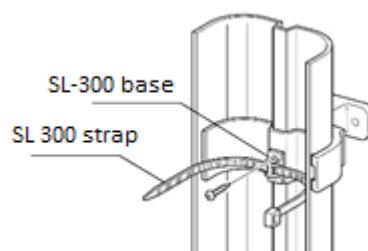
Brand	Product name	Item#
Victor	SLIMDUCT Cutter	VD2100

NOTE: Refer to the manual and precaution before using the cutter.

To prevent ducts from cracking at low temperatures, cut ducts slowly or after heating ducts with hot air.

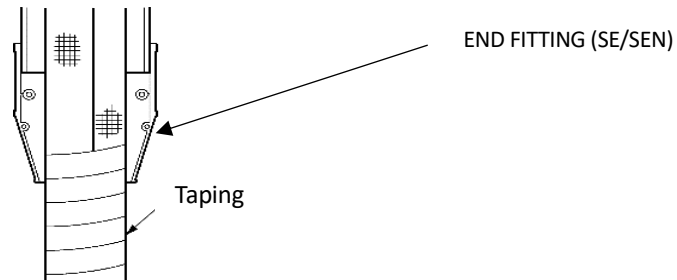
STEP 7: Fix the base of straight duct.

- ① Attach the base of cut straight duct onto the Riser (SDUD).
- ② Attach the reinforce metal inside the duct base. Then fix the base of STRAP KIT (SL-300) by screw.
At this point, fix the reinforce metal after pushing out the the half-opened hole if the hole is located above the riser.
If not, screw it directly on the duct base.
- ③ Insert the STRAP KIT (SL-300) through base of SL-300.

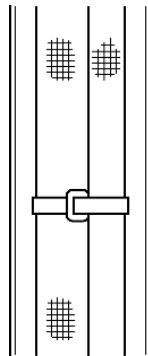


STEP 8: Install pipes in the base.

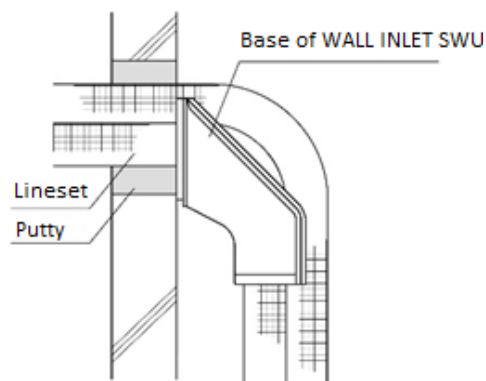
Paying attention not to get twisted, install linesets, drain hose and cables in the base of SLIMDUCT SD. Then, connect pipes to AC outdoor unit after wrapping tape on exposed pipes between END FITTING (SE/SEN) and AC outdoor unit.

**STEP 9: Clamp pipes with STRAP KIT (SL).**

Fix the pipes by clamping pipes with STRAP KIT (SL).

**STEP 10: Seal the hole for water proof.**

Fill up the gap between hole and pipes with putty.



STEP 11: Fix the cover of straight duct and fittings.

After setting the cover of straight duct onto its base, fix the cover of WALL INLET (SW), END FITTING, or other fittings onto the each base and wall surface.

(Caution)

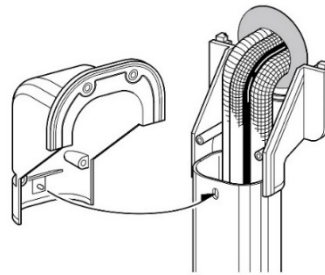
Please use $\phi 3.5$ mm or 4mm pan head screw with washer head when fixing on the wall.

If fixed by flat head or countersunk screw, products might be damaged.

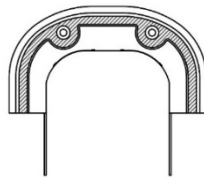
Pay attention carefully when fixing a screw by impact screwdriver. It may cause damage to products.

(Torque screwdriver is recommended for fixing.) Do not use impact screwdriver when fixing especially onto uneven wall surface because of a possibility for damage to products.

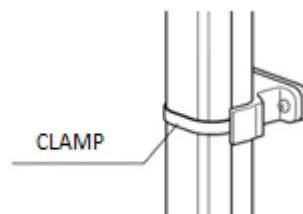
Some fittings have a pin on back side of cover of them for preventing the cover of straight duct from sliding.



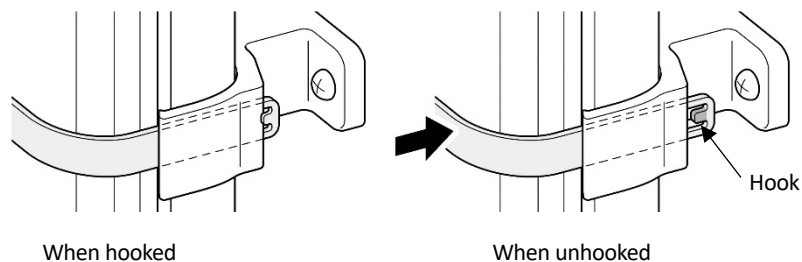
The WALL INLET (SWU-77) has a groove at the cover for caulking treatment. Be sure to attach the cover on the wall after applying caulking on shaded area.



After attaching all covers, fix the clamp to the RISER (SDUD) as shown in the illustration below.

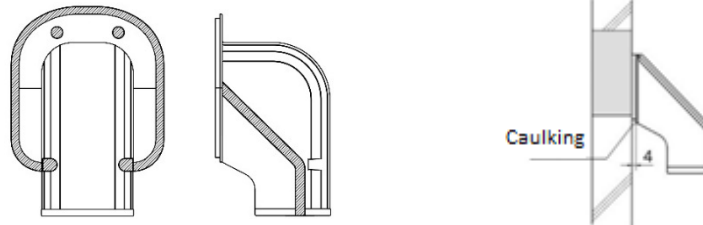


※When detaching the clamp, push the clamp as the arrow below shows. Be sure to take off the clamp after the hook is unhooked. Pulling out without following the instruction may damage the product.



STEP 10: Caulking treatment.

SLIMDUCT SD is not waterproof. There should be waterproof treatment required for the place where there is a possibility of water invasion. Especially if there's a failure on the shaded part below, there's a high risk of water invasion.



3. About heat deformation on SLIMDUCT SD

A few cases of heat deformation on SLIMDUCT SD happen in a year. As there seems a tendency that such heat deformation occurs on the piping installations especially in the horizontal direction, refer to the following precautionary points.

(1) What is heat deformation.

SLIMDUCT SD is made of resin and it would start softening and deformation when temperature on its surface exceeds 60°C (140 °F). Especially in the condition with a load applied, it would sometimes start softening even at the lower temperature than 60°C (140 °F).

(2) Temperature on SLIMDUCT SD

Temperature on SLIMDUCT SD is determined by such as the ambient temperature and the radiant heat by direct sunlight.

Temperature on it would become so much higher, receiving the radiant heat of sunlight especially if there is such a metal hood located around SLIMDUCT SD.

(3) Precautionary points

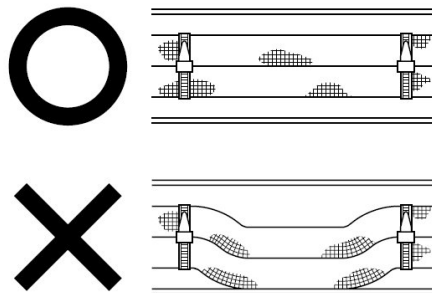
- For storage

Avoid the storage where ambient temperature becomes higher than the softening/deformation temperature of material such as in a car shut tightly under a blazing sun. Besides, do not keep the products in the condition with a load applied.

- For installation

- Horizontal installation

Not to apply the stress to straight duct by deflection and meandering of pipes, fix pipes by STRAP KIT (SL). We recommend to fix at least 2 points for 2 meter (78") length straight duct. Besides, shorten the horizontal piping length outdoor as much as possible.



- General installation

- Avoid an installation where the duct temperature becomes higher by the radiant heat at the edge of eaves finished by metallic materials.
- Avoid an installation on heat storage wall and on wall painted by heat insulation paint where the duct temperature is expected to become higher by radiant heat.
- Avoid an installation in the poorly ventilated narrow space and around the heat generating equipment where the duct temperature is expected to become higher.