

Product offer for drain-up piping
Product : DSH-UP



Drain-up piping.

- When an indoor AC unit of light commercial is installed under the condition that there is no space to make a drain piping sloped to drain water from the unit, a drain-up piping looks like a trap shall be made in close distance from the unit.



Traditional installation for drain-up piping.

➤ Material required;

- ✓ PVC pipes and fittings
- ✓ PVC cutter
- ✓ Cement
- ✓ Insulation
- ✓ Adhesive Tape
- ✓ Hangers



➤ Additional installation procedure;

1. Measure the length for 4 PVC pipes.
2. Cut PVC pipe into each 4 length.
3. Apply cement on 2 points of each elbow. (total 8 points)
4. Attach insulation on 4 PVC pipes and 4 elbows.
5. Wrap the adhesive tape at each connection point of insulation. (8 points)



➤ Issues;

- Takes time and labor on-site.
- Risks of **dew condensation** due to insulation attachment failures.
- Risks of **water leakage** due to cement application failures.
- Risks of **cracks** on piping due to less flexibility.
- Difficult to perform maintenance after installation due to fixed cement.

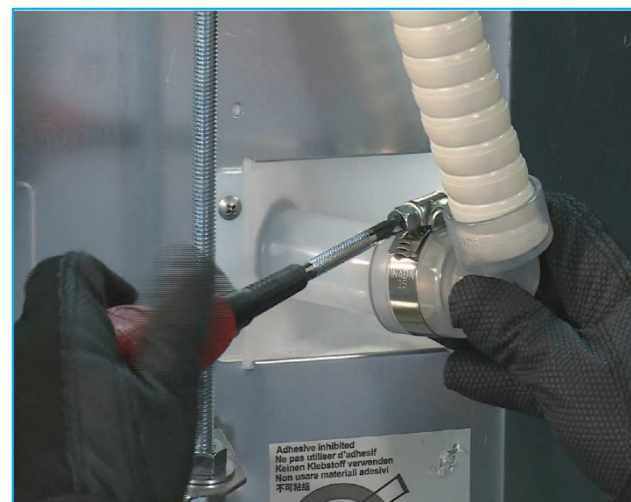
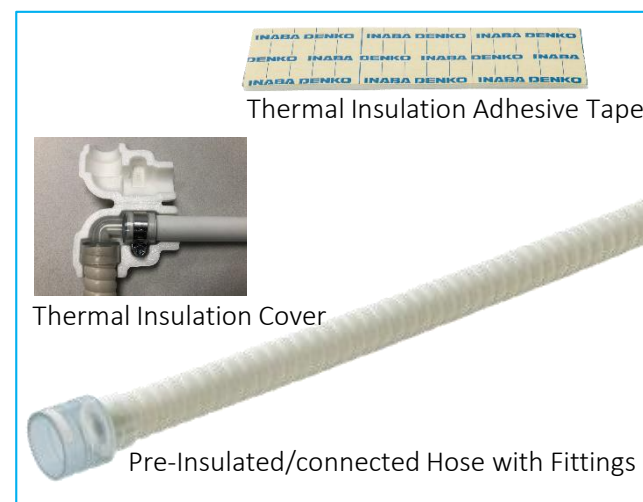
Innovative installation with DSH-UP

- ❑ DSH-UP is a drain-up hose kit for indoor AC unit in the field of light commercial including VRF.



➤ Advantages;

- **Pre-insulated hose / Exclusive insulation technology**
Decrease on-site insulation work and reduce risks of condensation after installation.
- **Pre-connected hose with fittings / No cement or adhesives needed**
Connect fittings to PVC with just a hose band to reduce installation time and avoid the risk of leaking from cement application failures, and easily perform maintenance.
- **Transparent fittings**
Connections to PVC pipes are visible to insure a secure fit and water-flow check.
- **Water leakage check sheet**
Easily identify leaks when they occur under the water leakage test.

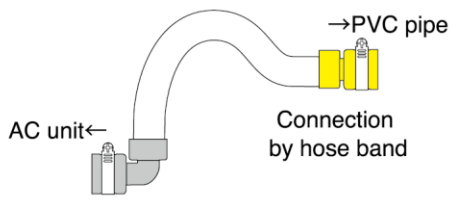


DSH-UP Kit details and Material

➤ Line-up;

S

Straight type

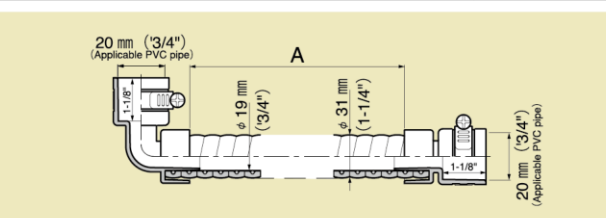


AC unit←

→PVC pipe

Connection by hose band

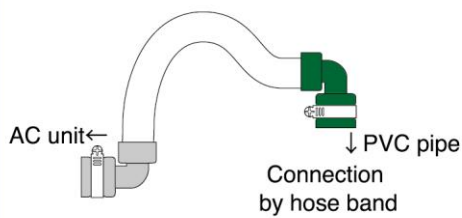
Code No.	Item No.	A	Pcs/Pkg
ç 08360	DSH-UP20E20S-07	700mm (27-5/8")	10
ç 08370	DSH-UP20E20S-10	1,000mm (39-3/8")	10



Thermal Insulation Cover
for Straight
G
95 mm
(3-3/4")

E

Elbow type

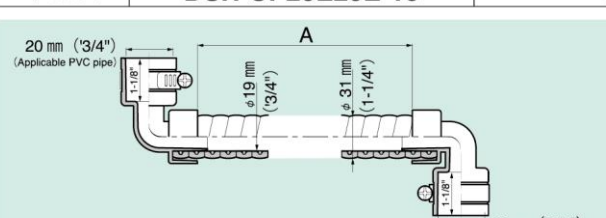


AC unit←

↓ PVC pipe

Connection by hose band

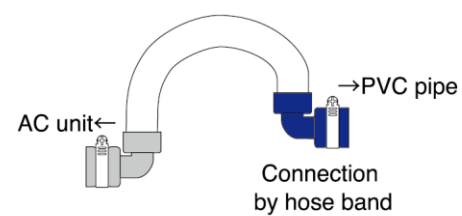
Code No.	Item No.	A	Pcs/Pkg
ç 08364	DSH-UP20E20E-07	700mm (27-5/8")	10
ç 08374	DSH-UP20E20E-10	1,000mm (39-3/8")	10



Thermal Insulation Cover
for Elbow
F (F')
97 mm
(3-7/8")

ER

Elbow type

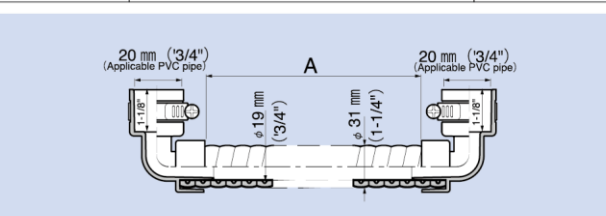


AC unit←

→PVC pipe

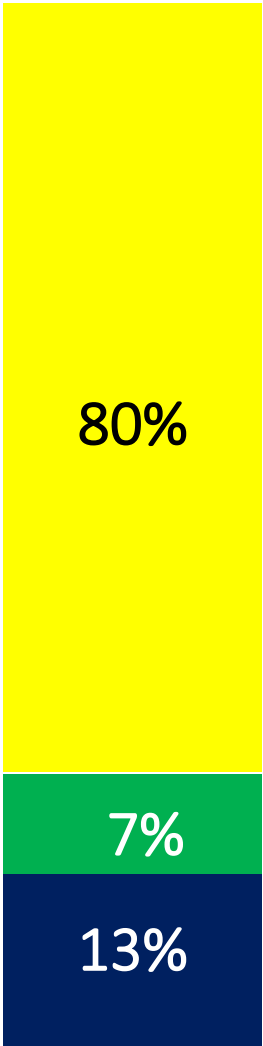
Connection by hose band

Code No.	Item No.	A	Pcs/Pkg
ç 08367	DSH-UP20E20R-07	700mm (27-5/8")	10
ç 08377	DSH-UP20E20R-10	1,000mm (39-3/8")	10



Thermal Insulation Cover
for Elbow
F (F')
97 mm
(3-7/8")

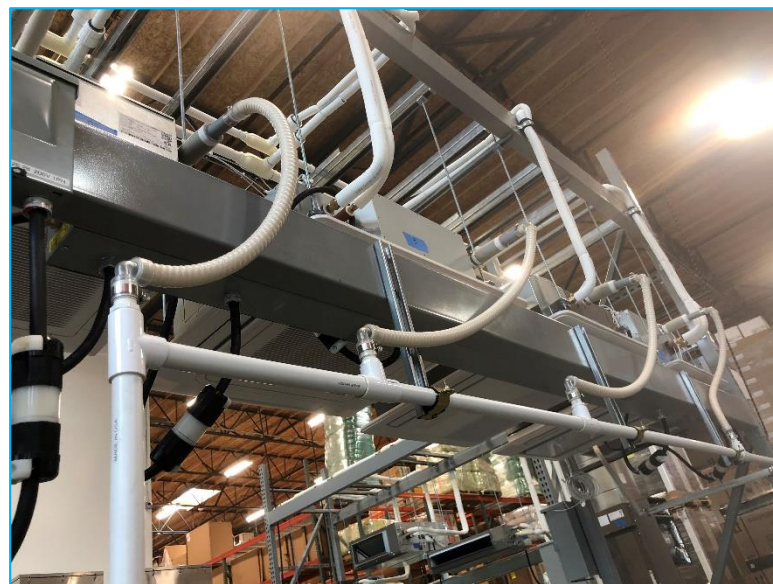
Sales composition by type in FY2019



➤ Kit details and Material;

Kit Details			Material	
	Elbow & Straight S	Elbow & Elbow E / ER		
Thermal insulated drain hose with coupling joint	1 pc	1 pc	Thermal insulated drain hose (Insulation)	PVC (Foamed PE)
Hose band	2 pcs	2 pcs	Coupling joint	PVC
Thermal insulation cover - Straight Type	1 pc	—	Hose band	SUS
Thermal insulation cover - Elbow Type	1 pc	2 pcs	Thermal insulation cover	Foamed PE
Thermal insulation adhesive tape	1 pc	1 pc	Thermal insulation adhesive tape (W50 mm × L150 mm) W2" × L6"	Foamed PE
Water leakage check sheet	2 pcs	2 pcs		

DSH-UP Job Reference



Training room in Johnstone Supply Racey branch.

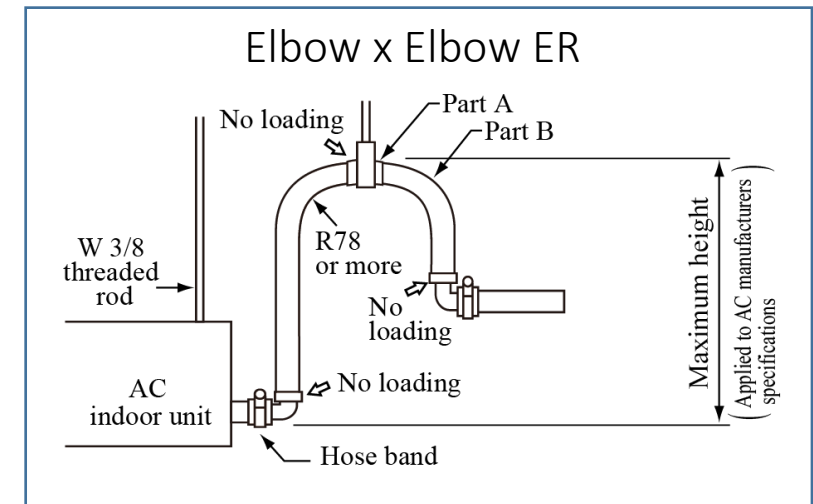
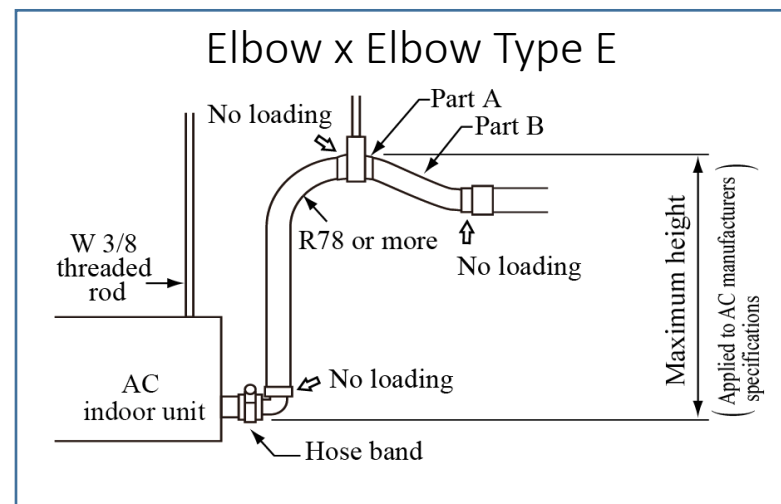
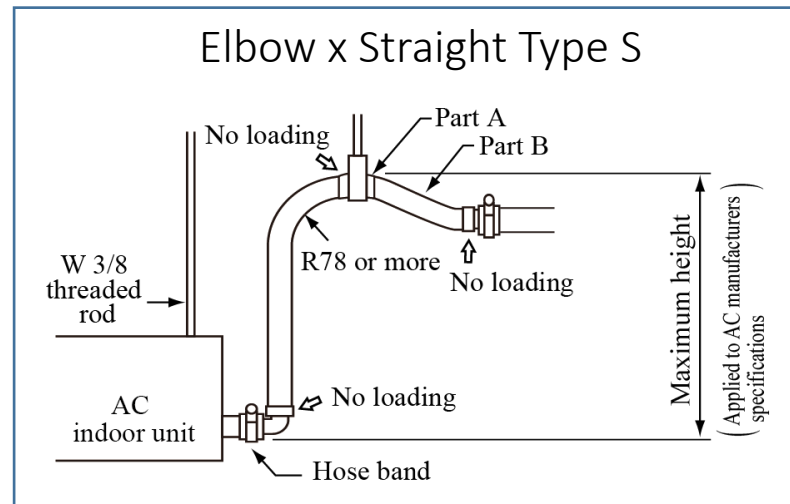


DSH-UP Installation Procedure

1. Confirm pipe and hose route

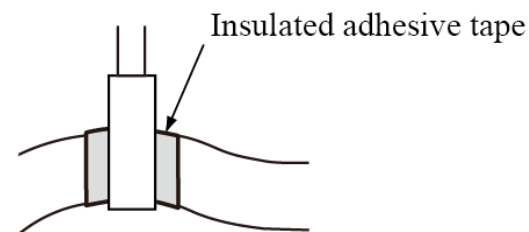
Make the bend radius of hose R78 (=inner bending) not to load on the hose and couplers.

Be sure there is not an adverse slope after the maximum stand-up point.



Hose supporting Part (A)

Wrap an insulated adhesive tape included on the surface of hose at the hanging point to prevent dew condensation because of hose insulation deformation.



Hose Slope (B)



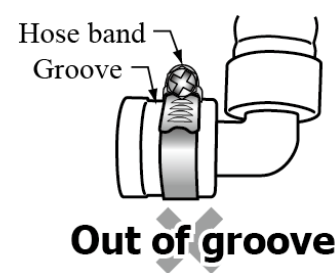
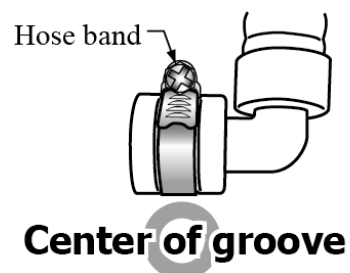
2. Connect coupler to PVC pipe

(1) Attach a hose band to the center of groove on a coupler.

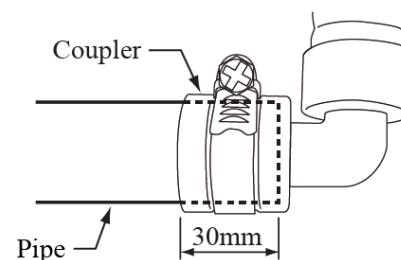
(2) Insert a PVC pipe into deep of a coupler. (30mm=1-1/8")

(3) Tighten a hose band by screwdriver or wrench after finishing inserting a pipe until only one hole on the hose band left. (Standard torque 400N · cm = 35.4 lbf · in)

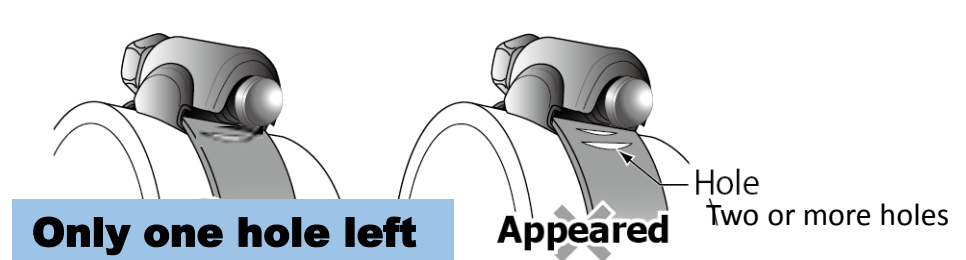
(1)



(2)



(3)



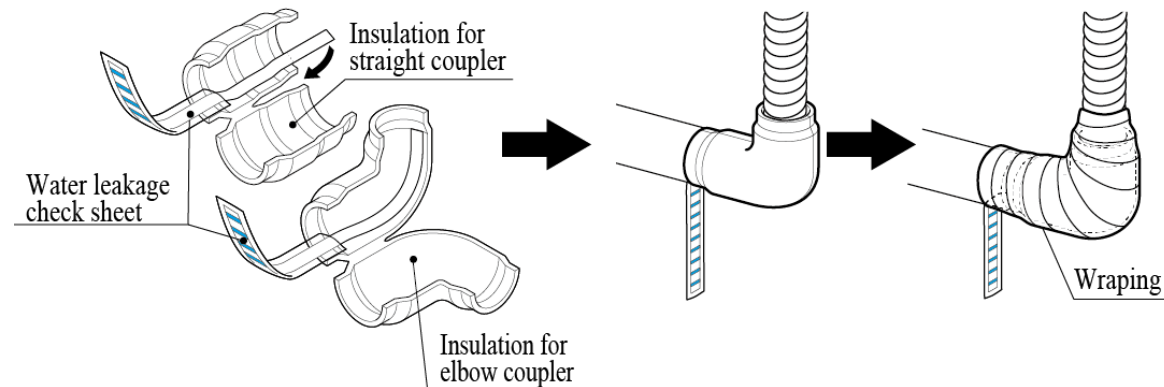
NOTE: When using ASTM D1785. Otherwise, contact us.

DSH-UP Installation Procedure

3. Install a water leakage check sheet and insulation for couplers

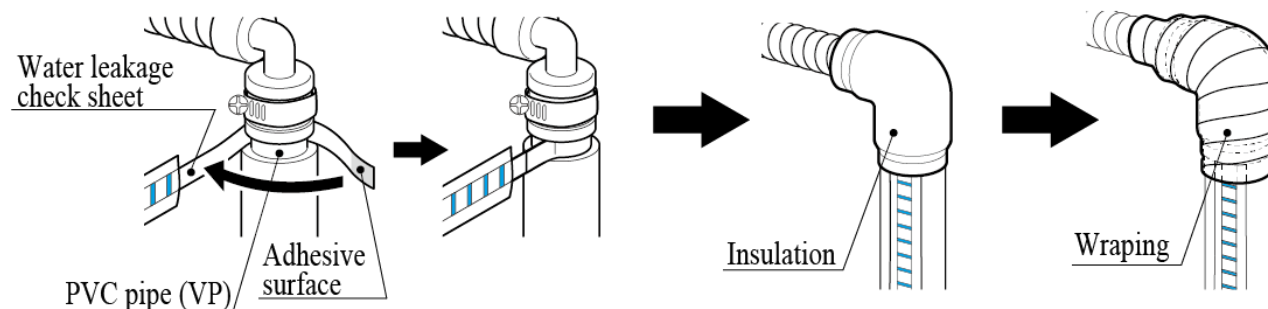
a. Installation for indoor AC unit pipe or horizontal piping

Attach insulation with a water leakage check sheet, and wrap an adhesive tape on it.



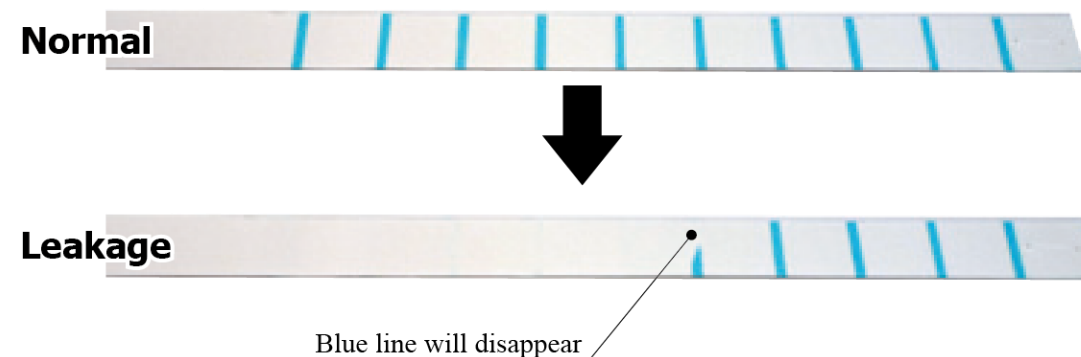
b. Installation for vertical piping

Attach a water leakage check sheet on PVC pipe and insulation for coupler, and wrap an adhesive tape.



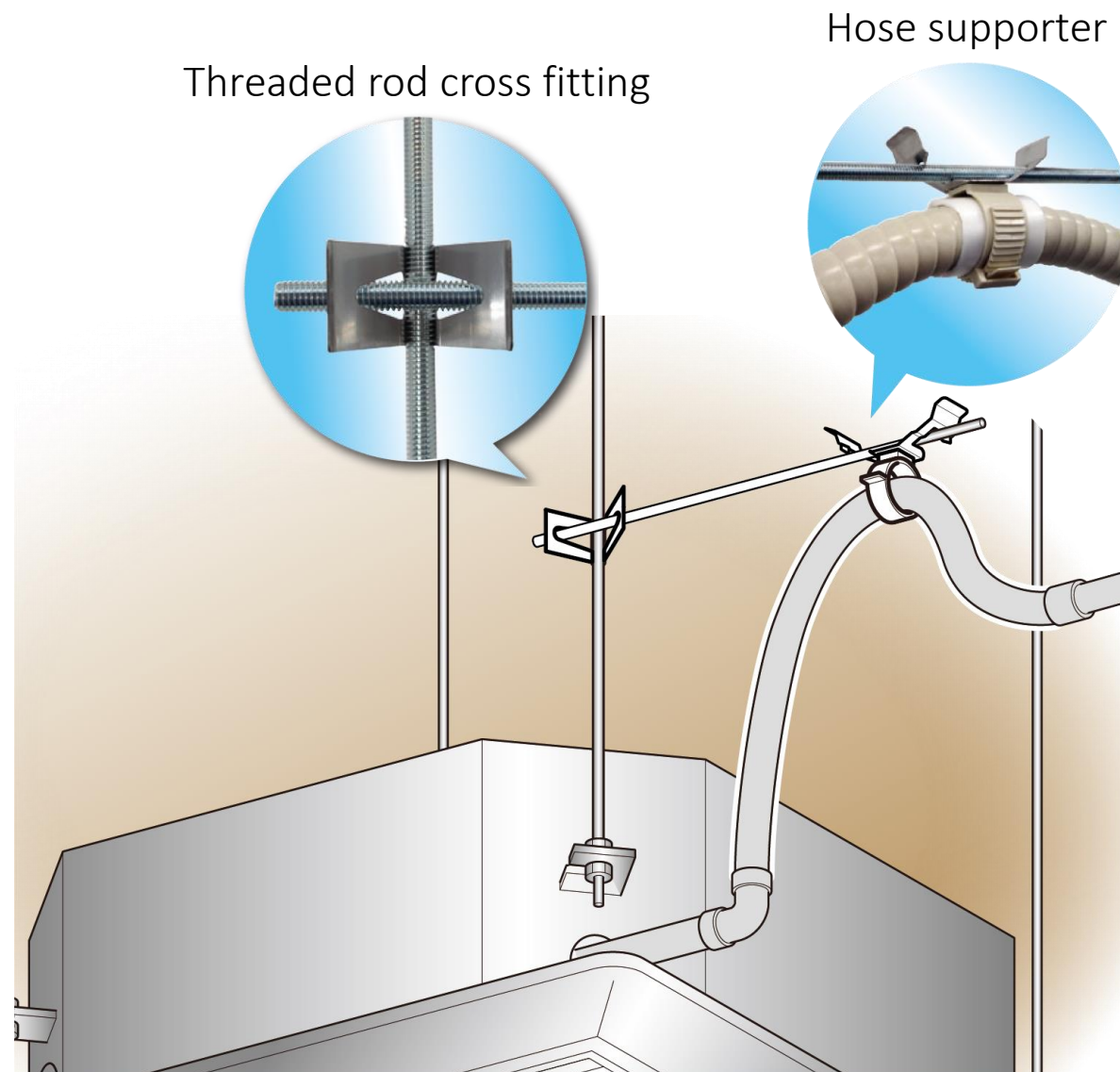
* Water leakage check method

Blue lines on the check sheet will disappear when water leakage occurs when water flow test.

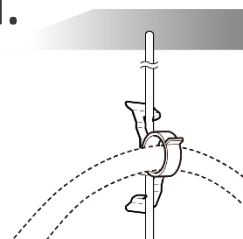


DSH-UP Optional Accessories

➤ Supporters for DSH-U piping.

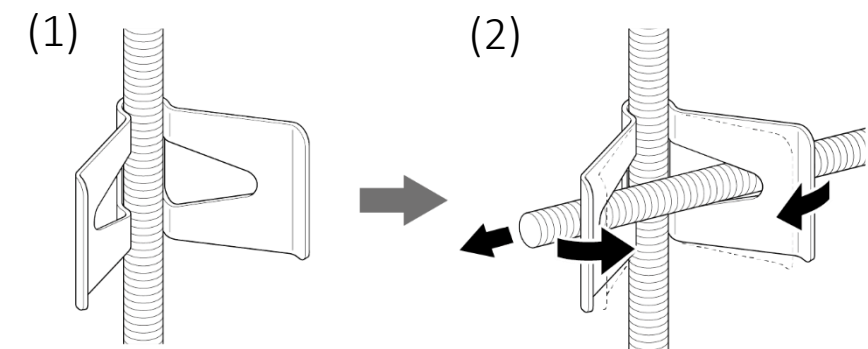


- No tool necessary; one-touch application.
- No additional rod necessary to be installed on ceiling, or attached hanged rod.

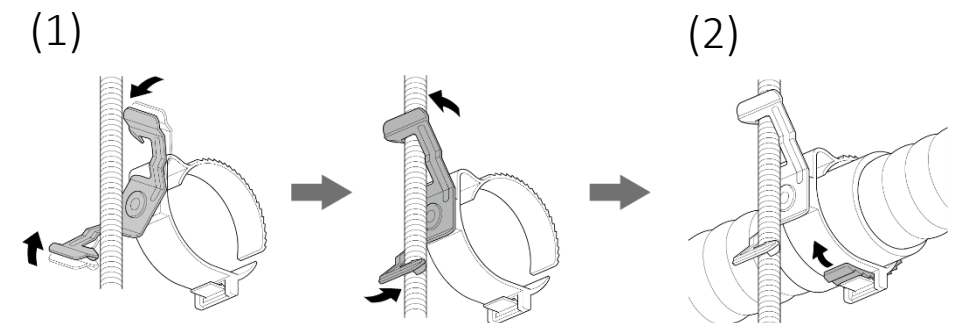


Installation

- Threaded rod cross fitting : ZB-VF
 - (1) Attach onto a vertical threaded rod.
 - (2) Insert a horizontal threaded rod, pushing ZB-VF inward.

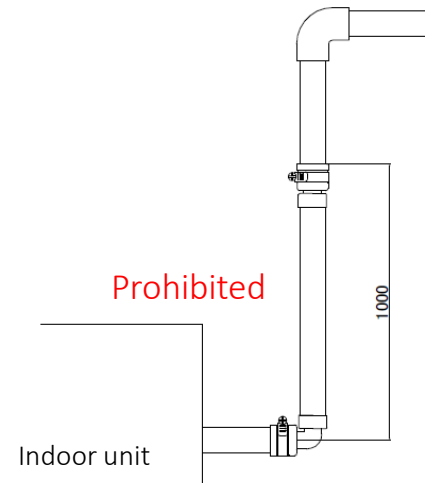


- Hose supporter : ZB-HSB
 - (1) Attach onto a threaded rod and turn it, pushing a metal part of ZB-HSB.
 - (2) After hose installation, tighten a band .

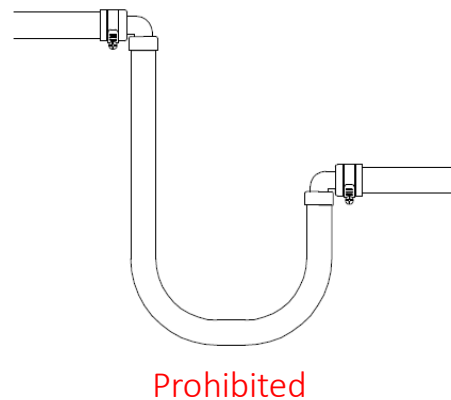


DSH-UP Precaution

- Stand-up height of the hose shall be no longer than 1,000mm. And its maximum height has to be designated by AC manufacturers.



- Don't make an adverse slope after the maximum stand-up point of hose. An adverse slope will result in flowing backward of drain water.
- Install this hose kit without excessive load on the hose and couplers. This load expects damage on the hose and deformation on couplers.
- Make bend radius of hose R78 (=inner bending).
- Usage like below piping shall be prohibited because the piping could be filled by water and get downward tension, or be stuck.



- Attach a hose band to the center of groove on the coupler. Insert the PVC pipe into deep of coupler. (30mm=1-1/8")
- Tighten the hose band by screwdriver or wrench after finishing inserting the pipe until only one hole on the band left. (Standard torque 400N • cm)
Insufficient tightening will result in water leakage.
- Be sure to use an exclusive hose band attached when installing this hose kit.
- Attach insulation to couplers. There is a possibility of dew condensation, depending on the installation environment.
- Wrap an insulated adhesive tape included on the surface of hose at the hanging point to prevent dew condensation because of hose insulation deformation.
- This hose kit is exclusively for indoor use only. Don't use for outdoor installation.

For the more detailed information, please see our installation manual.

Inaba Denko America

HVAC div. of PATLITE (U.S.A.) Corporation

20130 S. Western Avenue Torrance, CA 90501

Tel: 310-328-3222

Fax: 310-328-2676

E-mail: inaba-sales@patlite.com

Web : inabadenko-america.com