Installation manual

Lineset Cover System SLIMDUCT PD

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Research & development division

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1. Precautions :

• Please read SLIMDUCT PD SPECIFICATIONS carefully before use.

• All dimensions mentioned in INCH(") on this manual are just for reference. The system is originally engineered in metric.

• SLIMDUCT PD is not waterproof. Please be sure to conduct water-proofing by caulking treatment or fill of putty such as at wall penetration points where there is a risk of water invasion.

 \bullet Please use under the circumstances within the temperature range of -20 \sim 60 $^{\circ}{\rm C}$ on the surface of product.

 \bullet Please use under the circumstances within the temperature range of -20 \sim 60°C on the surface of product.

• Wear safety gear such as working clothes, helmet, and gloves whenever installing SLIMDUCT PD. Besides, wear protective goggles or similar gears to prevent eyes from dust when cutting SLIMDUCT PD by hacksaw or else.

• 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.

• Please pay attention that even stainless steel becomes rusty in salt damage area, by a contact with different metal or under the strong acid circumstances although stainless steel is resistant to rusting.

• In severe winter season, cut straight ducts after making them warm due to a possibility of break.

■Heat Deformation of SLIMDUCT PD

1. What is heat deformation?

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

2. Duct Temperature:

Duct temperature is determined by such as the ambient temperature and the radiant heat by direct sunlight.

Duct temperature would become high receiving the radiant heat of sunlight especially if there is such a metal hood located around the duct.

3. Precautionary Points:

• Precaution for storage

Please avoid the storage where ambient temperature becomes higher than the softening 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.

• Precaution for installation site

* Please avoid an installation where the duct temperature becomes high by the radiant heat at the edge of eaves finished by metallic materials.

* Please avoid an installation on the heat storage wall and on the wall painted by heat insulation paint where the duct temperature is expected to become high by radiant heat.

* Please avoid an installation in the poorly ventilated narrow space and around the heat generating equipment where the duct temperature is expected to become high.

It would be difficult for us to owe a responsibility for any heat deformation troubles which will be occurred not conforming to above precautions. We appreciate kind understanding for it in advance.

2. Installation basis of PD system

2-1. Estimation for Containable Capacity and pitch among brackets

(1) <Premise of PD size and pipe clamp>*

PD-90 : Applicable to pipe clamp ϕ 89.1mm (3-1/2") or less. (Referred to as **80A**) PD-120 : Applicable to pipe clamp ϕ 114.3mm (4-1/2")or less. (Referred to as **100A**) PD-140 : Applicable to pipe clamp ϕ 139.8.mm (5-1/2")or less. (Referred to as **125A**)

	Cuitable		Сорр	er size (Suction × Gas)	
Duct Size	Suitable Pipe Clamp	Insulation wall 10mm×10mm	Insulation wall 10mm×20mm	Insulation wall 1/2×1/2	Insulation wall 3⁄4×3⁄4
PD-90	80A or less	5/8×1-1/8	3/8×3/4	3/8×3/4	_
PD-120	100A or less	3/4×1-1/2	3⁄4×31.75	7/8×1-1/2	3/8×3/4
PD-140	125A or less	1×2-1/8 3/4×1-1/4 (2 lines)	22.22×44.45	7/8×1-5/8	3/4×1-1/2

Table-1. Duct size and capacity of linesets

*Refer to Page 11 in case of use with **REINFORCEMENT ACCESSORY FOR NOTCH (PDK)** and to Page 14 in case of use with **SUPPORTER BAND (PDY)**.

(2)Interval between pipe supports

Table-2. Method of PD installation and interval between pipe supports			
	Vertical	Horizontal	Suspension
	Piping	Piping	Piping
When using Mounting Coupler (DDD N)	1500mm	1000mm	1000mm
When using Mounting Coupler (PDB-N)	(59-1/16'')	(39-3/8")	(39-3/8'')
When using Mounting Coupler (DDDK)	1500mm	1500mm	
When using Mounting Coupler (PDBK)	(59-1/16'')	(59-1/16'')	_
When using Supporter Dand (DDV)	1500mm	1000mm	1000mm
When using Supporter Band (PDY)	(59-1/16'')	(39-3/8")	(39-3/8'')
When using PD Duct Fixing Saddle(PDU)*		1000mm	
When using PD Duct Fixing Saddle(PDO)*	_	(39-3/8'')	_

Table-2. Method of PD installation and interval between pipe supports

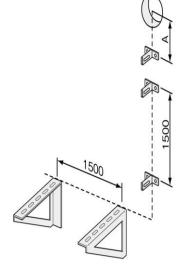
*At least 2 or more pipe support is needed.

2-2. Installation procedure of PD system

(1) Install Pipe Clamp Brackets According to the piping line, install tee brackets with interval between brackets shown in Table-3.

Table-3 Interval between brackets		
Vertical Piping	1500mm (59-1/16")	
Horizontal Piping	1500mm (59-1/16")	

	PD-90	112mm (4-13/32")
A [*]	PD-120	128mm (5-11/32'')
	PD-140	147mm(5-25/32")



XIn case with PDE+PDH+PWP-N used. ₿

Caution:

• In case of use with Supporter Band (PDY), please be sure to follow "2-6. Installation Procedure for SUPPORTER BAND (PDY)" in page 14.

• In case of use with Duct Fixing Saddle (PDU), please be sure to follow "2-7. Installation Procedure for Duct Fixing Saddle (PDU)" in page 15.

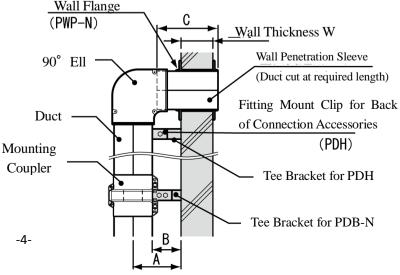
◎ Selection Guideline for Pipe Support Fittings

Please select tee bracket from Table-4 according to the distance between Duct and wall surface.

Combir Pipe Clamp	nation of Pipe Su Tee Bracket for PDB	pport Fittings Tee Bracket for PDH	Height from Duct Center A	Distance between Duct and Wall B	Sleeve Length C
	60mm (2-23/64'')	50mm (1-61/64")	106mm (4-11/64")	60mm (2-23/64")	64mm (2-33/64")+ Wall thickness W
80A	80mm (3-9/64'')	60mm (2-23/64")	126mm (4-61/64")	80mm (3-9/64'')	84mm(3-19/64'')+ Wall thickness W
	100mm (3-59/64")	80mm (3-9/64'')	146mm (5-47/64")	100mm (3-59/64")	104mm (4-3/32")+ Wall thickness W
	60mm (2-23/64")	50mm (1-61/64")	120mm (4-23/32')	60mm (2-23/64")	61mm (2-25/64")+ Wall thickness W
100A	80mm (3-9/64'')	60mm (2-23/64")	140mm (5-1/2'')	80mm (3-9/64'')	81mm (3-3/16")+ Wall thickness W
	100mm (3-59/64")	80mm (3-9/64'')	160mm (6-19/64")	100mm (3-59/64")	101mm (3-31/32")+ Wall thickness W
	60mm (2-23/64")	50mm (1-61/64")	131mm (5-5/32")	60mm (2-23/64")	59mm (2-5/16")+ Wall thickness W
125A	80mm (3-9/64'')	60mm (2-23/64")	151mm (5-15/16")	80mm (3-9/64'')	79mm (3-7/64")+ Wall thickness W
	100mm (3-59/64")	80mm (3-9/64'')	171 (6-23/32")	100mm (3-59/64")	99mm (3-57/64")+ Wall thickness W

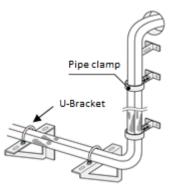
Table-4 Selection Guide for Tee Bracket

Caution: In case of use with Wall Flange (PSP), please be sure to follow "2-5. Installation procedure for WALL FLANGE (PSP)" in page 13. Wall Flange



(2) Install Lineset

Set up linesets by supporting with pipe clamp. *Do not install Fitting Mount Clip (PDL) / Fitting Mount Clip for Back of Connection Accessories (PDH) at this point yet. *For installation of U-Bracket, please be sure to follow "2-10. Installation procedure for Mounting Coupler for U-Bracket (PDBK) in page 18.

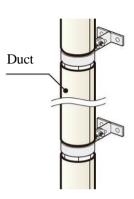


(3) Fix Duct onto LinesetSelect Duct to fit to pipe clamp (Table-5) and fixDuct of suitable length for bracket interval(referring to Table-6, please cut Duct at requiredlength by such as a hand saw if necessary).

(Please refer to Table-7 for Duct length for the use between Fittings of SLIMDUCT PD.)

Table-5 Selection Table for Duct Size

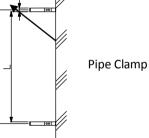
Pipe Clamp Size	Duct Size
80A	PD-90
100A	PD-120
125A	PD-140



Caution : Please be sure to follow Page 11 in case of use with Reinforcement Accessory for Notch (PDK) and Page 14 in case of use with Supporter Band (PDY).

		0			
	(in case of use	e with Pipe Clamp)			
Supporting		Duct Length L			
Interval	Pipe Clamp Width	Pipe Clamp Width	Pipe Clamp Width		
Р	W=25mm(63/64")	W=32mm(1-1/4")	W=38mm(1-31/64'')		
4000	965-975mm	958-968mm	952-962mm		
1000mm(39-3/8'')	(37-63/64"-38-25/64")	(37-23/32"-38-7/64")	(37-23/32"-38-7/64")		
1500	1465-1475mm	1458-1468mm	1452-1462mm		
1500mm(59-1/16")	(57-43/64"-58-5/64")	(57-13/32"-57-51/64")	(57-11/64"-57-9/16")		

Table-6 Example of Duct Length after cut



Ω

Table-7 Example of Duct Length after cut (in case of use with Fittings of SLIMDUCT PD)

Supporting	Duct Length L			
Interval	Duct Size	Duct Size	Duct Size	
Р	PD-90	PD-120	PD-140	
1000	874-884mm	840-850mm	818-828mm	
1000mm(39-3/8'')	(34-13/32''-34-51/64'')	(33-5/64"-33-15/32")	(32-13/64"-32-19/32")	
1500	1374-1384mm	1340-1350mm	1318-1328mm	
1500mm(59-1/16")	(54-3/32"-54-31/64")	(52-3/4"-53-5/32")	(51-57/64''-52-9/32'')	
Duct Length L (F	Duct Length L (PD-90) = Supporting Interval P—(minus) 126-116mm(4-61/64"-4-9/16			

 Duct Length L (PD-90)
 =
 Supporting Interval P-- (minus) 126-116mm(4-61/64''-4-9/16'')

 Duct Length L (PD-120)
 =
 Supporting Interval P-- (minus) 160-150mm(6-19/64''-5-57/64'')

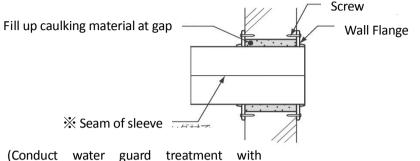
 Duct Length L (PD-140)
 =
 Supporting Interval P-- (minus) 182-172mm(7-5/32''-6-49/64'')



(4) Install Sleeve on wall, Conduct Water Guard Treatment and Fix Wall Flanges

Set sleeve (Duct cut at stipulated length) through wall penetration hole, fill up caulking material at gap and conduct water guard treatment simultaneously fixing sleeve through the wall.

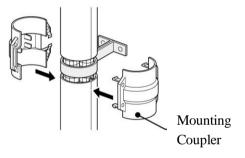
If there is a risk of water invasion from the seam of sleeve (X), conduct water guard treatment with caulking material also at the seam of sleeve. Fix Wall Flanges on both ends of wall with screws before caulking material become hardened.



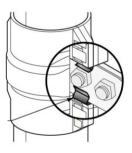
caulking material also at the seam of sleeve)

(5) Install Mounting Coupler

 Install Mounting Coupler onto pipe clamp. Mounting Coupler has tentatively fastened construction between base and cover part.



(2) Set the Metal Positioning Clip of Mounting Coupler at the center position of pipe clamp not to touch with bolts nor nuts of pipe clamp.



Metal Positioning Clip

 ③ Fix Duct firmly by tightening enclosed screws (※).
 ※Enclosed screw : M3.5×20 (temporarily attached on cover part)

Caution: Please tighten screws at wall side at first. Thread ridge of screws on wall side might be broken if opposite side of screws are tightened first. wall side at first.

Tighten screws at

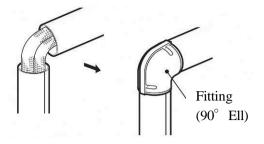
Enclosed screws

(6) Install Mounting Coupler for U-Bracket (PDBK)

For installation of U-Bracket, please be sure to follow "2-10. Installation procedure for Mounting Coupler for U-Bracket (PDBK) in page 18.

RD-PD-MAN-001-1

(7) Install Fittings
Install fittings onto Duct.
Fix Duct firmly by tightening screws
enclosed (※).
※Enclosed screw : M3.5×20
(temporally attached on cover part)



(8) Install Fitting Mount Clip for Back of Connection Accessories Insert Fitting Mount Clip for Back of Connection Accessories (PDH) into the gap between fitting and Duct. Insert Fitting Mount Clip for Back of Connection Accessories (PDH) firmly until the end point not to be come off.

Then, mount onto the wall surface fixing to such as tee bracket etc. installed beforehand.

Tee Bracket Fitting Mount Clip for Back of Connection Accessories

(9) Conduct Caulking TreatmentSLIMDUCT PD is not waterproof.Please be sure to conduct caulking treatment at connection and fitting points where there is a risk of water invasion.

Please notice that it would be a cause of water invasion into the room if caulking treatment is missed especially at the places marked in the right drawing.



<Reference> Finish Dimensions for Ell Combination

Finish dimensions for 2pcs. combination of 45°Ell and 90°Ell are shown in Table-8.

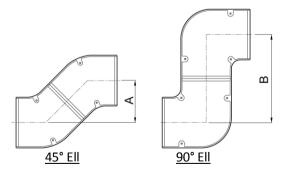


Table-8 Finish Dimensions for Ell

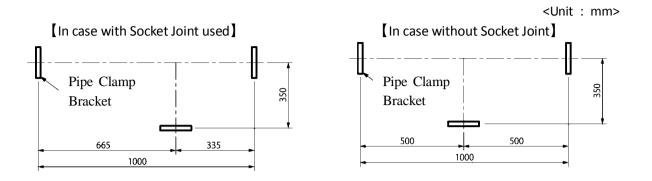
Size	45° Ell (Dimension A)	90° Ell (Dimension B)
90	86mm (3-3/8'')	180mm (7-5/64")
120	93mm (3-21/32")	213mm(8-3/8'')
140	112mm (4-13/32")	251mm(9-7/8'')

XIn case of installation, Duct cut shortly shall be set between ells.

2-3. Installation procedure of T-Branch (PDJTN)

(1) Set up Pipe Clamp Brackets

It can be installed without Socket Joint depending on the length of branching connection.

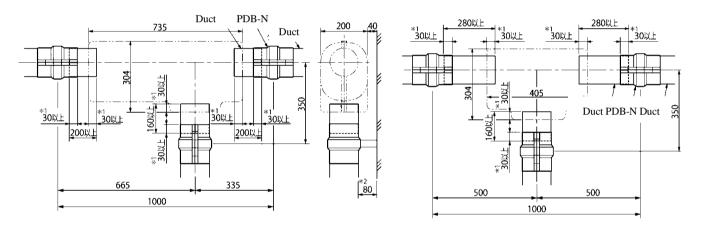


(2) Install Duct

[In case with Socket Joint used]

< Unit : mm / "以上" = or more >

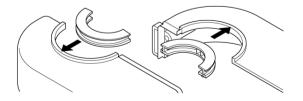
[In case without Socket Joint]



Caution: %1 Insertion length of Duct into fitting shall be <u>30mm or more</u>. %2 Rising height of Duct from the wall surface shall be <u>80mm or more</u>. If the rising distance is too close, installation of T-Branch might not be possible.

(3) Set up Adapter

In case of connection to PD-90 / 120, set up the enclosed adapter to the mouth part.



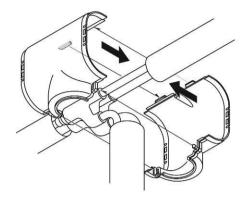
Caution:

* Fit the claw of adapter.

* Adapter is not necessary in case of connection to PD-140.

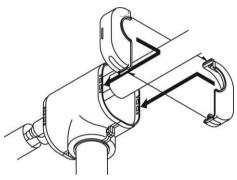
(4) Install Tee

Fix the base and the cover of Tee part tentatively (4 points).



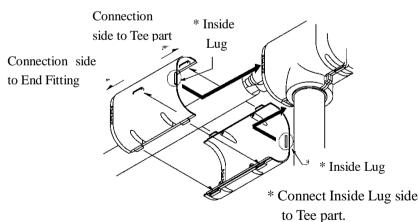
(5) Mount End Fitting

Fix the base and the cover of End Fitting tentatively (2 points). Mount End Fitting sliding to Tee part.



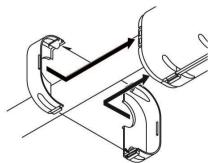
(6) Fix Socket Joint

Fix the base and the cover of Socket Joint tentatively (4 points) Mount Socket Joint sliding to Tee part.



(7) Mount End Fitting

Same as above (5), fix End Fitting tentatively (2 points). Mount End Fitting sliding to Socket Joint.



RD-PD-MAN-001-1

(8) Fix screws

Please be sure to fix screws to prevent falling down.

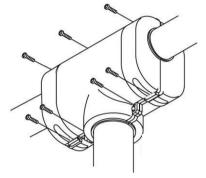
Please pay attention not to tighten screws too strongly. Thread ridge of screws might be broken if screws are tightened too strongly.

[In case with Socket Joint used]

(Screw fixing at 11 points)

[In case without Socket Joint]

Installation is possible without using Socket Joint. (Please use Socket Joint depending on the length of branching connection.)



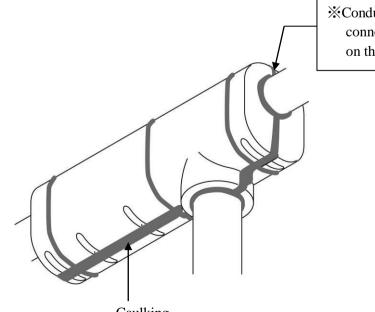
(Screw fixing at 7 points)

(9) Conduct Caulking Treatment

T-Branch for SLIMDUCT PD is not waterproof.

Please be sure to conduct caulking treatment at connection and fitting points where there is a risk of water invasion.

Please notice that it would be a cause of water invasion into the room if caulking treatment is missed especially at the places marked in the drawing below; **



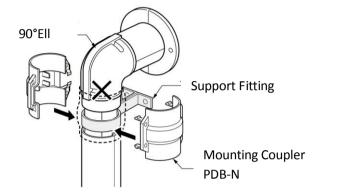
*Conduct caulking treatment at connection and fitting points also on the upper side, too.

Caulking

2-4. Installation procedure of Reinforcement Accessory for Notch (PDK)

< Application >

Please use Reinforcement Accessory for Notch (PDK) in case that Mounting Coupler (PDB-N) can not be used due to a support fitting is too close to Ell. Please install using with Mounting Coupler (PDB-N) in other cases.



Example: Because the upper part of Mounting Coupler interferes with Ell, Mounting Coupler (PDB-N) cannot be used.

(1) Selection for Pipe Clamp

Please use suitable Pipe Clamp shown below in case Reinforcement Accessory for Notch (PDK) is used.

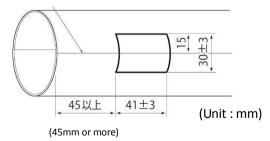
	Suitable Pipe Clamp a	nd Estimation for Containable	e Sizes of Lineset	S
		Max. Size of Copp	er Pipe (Suction x	Gas)
Duct Size	Suitable Pipe Clamp	Insulation Wall Thickness		
		10×10	10×20	20×20
DD 00	50A (φ52.9mm≠	3/8×5/8		
PD-90	2-5/64") or less			
PD-120	80A or less	5/8×1-1/8	3/8×3/4	—
PD-140	100A or less	3/4×1-1/2	3/4×1-1/4	3/8×3/4

Table-9

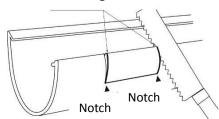
(2) Draw Cutting Line on Duct

Please draw cutting line on the Duct for notch work.

Seam of Duct



Vertical Cutting Line

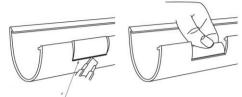


(3) Cut Notches

Cut notches by a saw according to the vertical cutting line. (Both the base and the cover of Duct)

(Caution) Centering the seam of Duct, draw the line keeping the indicated dimensions.

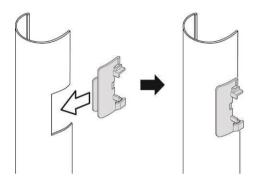
(4) Snap offDraw a line by a cutter knifeaccording to the horizontal cuttingline and snap off the cutting part.



Horizontal Cutting Line

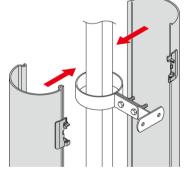
(Caution) Pay attention not to be injured by a cutter knife.

(5) Set up Reinforcement Accessory for NotchSet up Reinforcement Accessory for Notch inserting to the cut part on Duct.(Both the base and the cover of Duct)

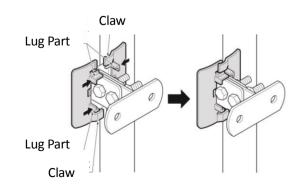


(6) Mount Duct

Mount the base and the cover of Duct holding Pipe Clamp inside.



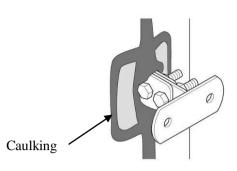
(7) Fit Claw of Reinforcement Accessory for NotchPush the lug part from both sides and fit the claw ofReinforcement Accessory for Notch.



(8) Conduct Caulking Treatment

Reinforcement Accessory for Notch is not waterproof. <u>Please be sure to conduct caulking treatment at</u> <u>connection and fitting points where there is a risk of</u> <u>water invasion.</u>

Please notice that it would be a cause of water invasion into the room if caulking treatment is missed especially at the places marked in the right drawing.

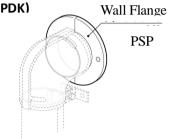


2-5. Installation procedure of Reinforcement Accessory for Notch (PDK)

 $<\!$ Application >

Fittings of SLIMDUCT PD can be fixed directly to Wall Flange (PSP).

Lower rising height from the wall surface is possible than Wall Flange PWP-N.



$\ensuremath{\textcircled{O}}$ Selection Guideline for Pipe Support Fittings

Please select tee bracket according to the distance between Duct and wall surface.

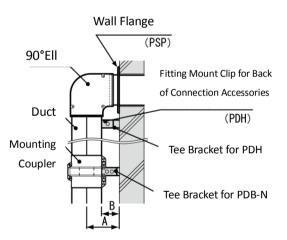


Table-10
Selection Guide for Tee Bracket

	Combination of Pipe Support Fittings		Height from Duct Center	Distance between Duct and
Pipe Clamp	Tee Bracket for PDB	Tee Bracket for PDH	A	Wall B
	50mm (1-61/64'')	30mm (1-11/64'')	98mm (3-27/32")	52mm (2-3/64")
80A	60mm (2-23/64'')	40mm (1-9/16'')	110mm (4-21/64'')	64mm (2-33/64')
	70mm (2-3/4'')	50mm (1-61/64'')	120mm (4-23/32'')	74mm (2-29/32'')
	50mm (1-61/64'')	30mm (1-11/64'')	115mm (4-33/64'')	54mm (2-1/8'')
100A	60mm (2-23/64'')	40mm (1-9/16'')	127mm (5")	66mm (2-19/32'')
	70mm (2-3/4'')	50mm (1-61/64'')	137mm (5-25/64'')	76mm (2-63/64'')

PSP

Caulking

Tee Bracket

(available in market)

(Caution)

X1 Please be sure to fix fittings, which is to be fitted to Wall Flange (PSP), firmly by Fitting Mount Clip for Back of Connection Accessories PDH or Fitting Mount Clip PDL.

※2 SLIMDUCT PD is not waterproof.

Please be sure to conduct caulking treatment at connection and fitting points where there is a risk of water invasion.

Please notice that it would be a cause of water invasion into the room if caulking treatment is missed especially at the places marked in the right drawing.

2-6. Installation procedure for SUPPORTER BAND (PDY)

< Application >

Winding to SLIMDUCT PD, Supporter Band PDY supports the Duct from outside. It can be fastened even after the completion of ducting work.

(1) Install Pipe Clamp Brackets

According to the piping line, install tee brackets with interval between brackets shown in the table below;

Table-11

Interval between brackets			
Vertical Piping	1500mm (59-1/16")		
Horizontal Piping	1000mm (39-3/8")		
Suspension Piping	1000mm (39-3/8'')		

	PD-90	112mm (4-13/32")
A [₩]	PD-120	128mm (5-11/32'')
	PD-140	147mm (5-25⁄32'')

※In case with PDE+PDH+PWP-N used.

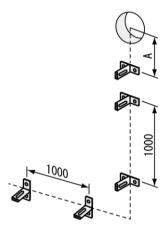
Caution: In case of use with Supporter Band (PDY), please be sure to use 2pcs. PDY per one piece of SLIMDUCT PD.

(2) Selection for Pipe Clamp

Please use suitable Pipe Clamp shown below in case Supporter Band (PDY) is used.

Suitable Tipe clamp and Estimation for Containable Sizes of Emesets				
		Max. Size of Copper Pipe (Suction x Gas)		
Duct Size	Suitable Pipe Clamp	Insulation Wall Thickness		
		10×10	10×20	20×20
PD-90	50A or less	3/8×5/8	—	—
PD-120	80A or less	5/8×1-1/8	3/8×3/4	—
PD-140	100A or less	3/4×1-1/2	3/4×1-1/4	3/8×3/4

Table-12 Suitable Pipe Clamp and Estimation for Containable Sizes of Linesets



00

(3) Mount Duct

After piping, mount Duct which is notched according to the pipe clamp used.

(4) Fix Supporter Band (PDY)

Wind Support Band (PDY) onto Duct and fix by hexagon head bolt enclosed.

(Caution) To support Duct, please be sure to use 2pcs. PDY per one piece of SLIMDUCT PD.

2-7. Installation procedure for Duct Fixing Saddle (PDU)

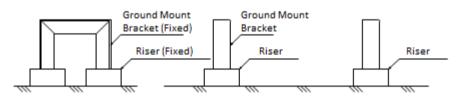
< Application >

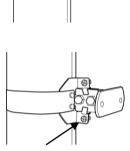
Fixing SLIMDUCT PD to ground mount bracket.

*Cannot be used for horizontal wall mount installation.

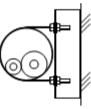
(1)Set the ground mount bracket

Set the ground mount bracket in accordance with the designated interval. Fix the bracket firmly on the ground.



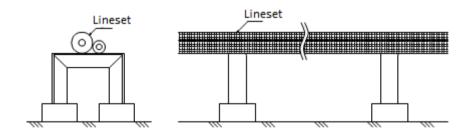


Hexagon Head Bolt (enclosed)



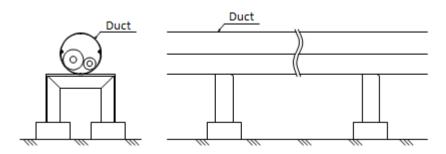
Forbidden Installation

(2) Install linesets

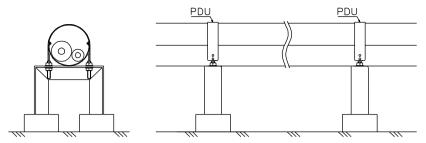


(3) Install duct

Install the duct by being sure to support two points per length.



(4) Install Duct Fixing Saddle (PDU)



Caution) • Be sure to fix PDU at two points.

• Do not tighten the saddle too tight since it may result in deformation.

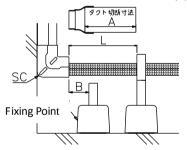
2-8. Installation procedure for PD-SD COUPLER (PSDR)

< Application >

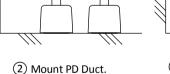
To be used for the connection of SLIMDUCT PD and SLIMDUCT SD. And it also connects PD Duct and fittings of SLIMDUCT SD. Conversion size is shown in below;

Item No.	SLIMDUCT PD Side	SLIMDUCT SD Side
PSDR-90-100	PD-90 Duct	Fitting of SD-100
PSDR-120-140	PD-120 Duct	Fitting of SD-140

• In case of connection with SC Fitting ;



Cut dimension for PD Duct (A)



 Cut PD Duct according to the distance from SC Fitting to Pipe Clamp.

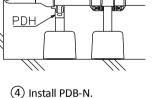
Fix Tee Bracket for PDH.

③ Insert to SC Fitting after PSDR is fixed to PD Duct by screw.

PSDR/

 $\overline{\prime}$

Insert



PDB-N

Insert PDH between PSDR and PD Duct and then fix to Tee Bracket etc. • In case of connection with SCF Fitting ;

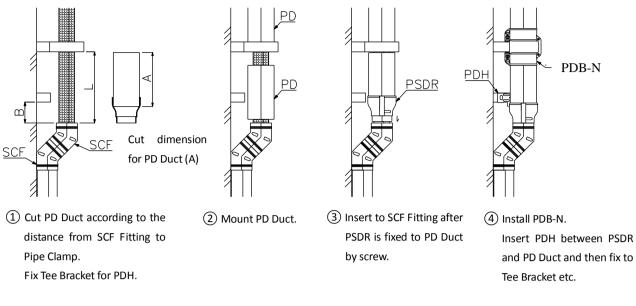


Table-13
Cut Dimension for PD Duct and Positioning Dimension for Tee Bracket

	5	
Item No.	Cut Dimension for PD Duct A	Positioning Dimension for Tee Bracket B
PSDR-90-100	L length—(minus) 63mm(2-15⁄32'')	73mm (2-55⁄64'')
PSDR-120-140	L length—(minus) 68mm(2-43/64'')	78mm (3-1/16'')

[Caution] Please fix PSDR with using Fitting Mount Clip for Back of Connection Accessories PDH.

2-9. Installation procedure for REDUCER (PDI)

PDI is a Reducer fitting to reduce Duct size for 120→90 and 140→120 at fitting connection part.Applicable FittingsPDJ, PDE, PDF, PDIX (enclosed with PDT)Not applicable Fittings: PDB-N, PDJT

%In case of reduction from 140 to 90 size, conversion is possible by using both PDI-140-120 and PDI-120-90 to be connected to the fitting.

2-10. Installation procedure for Mounting Coupler for U-Clamp (PDBK)

< Application >

To be used when fixing SLIMDUCT PD on mounting bracket.

(1) Install Duct Fixing Saddle (PDU)

Fix the lineset on the mounting bracket by using U-Clamp.

Caution) • Be sure to tighten the bolt of U-Clamp to the top. Otherwise the mounting coupler will not fit.

• Be sure to use washer and bolt nut when fixing U-clamp.

Without washer, mounting coupler will not become unfirm.

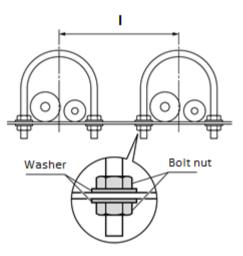
• Be sure to follow the designated interval when installing 2 clamps side to side.

Table-14

Interval between L	J-clamp
--------------------	---------

Item No.	I
PDBK-90	175mm (6-7⁄8'')
PDBK-120	213mm (8-3/8'')

*Please use M10 washer (φ22mm <55/64">) or W3/8 size (φ25mm <31/32">).

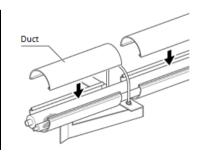


(2) Install Duct Install the duct after cutting in accordance with the length of clamp interval and dimension of the clamp.

Use hack saw if needed.

Table-15 Cutting length of duct

	Duct Length		
Interval	When using U-clamp	When using U-clamp	
		Width 25mm (31/32'')	
1000mm	975-985mm	965-975mm	
(39-3/8'')	(38-25/64'' - 38-25/32'')	(37-63/64" - 38-25/64")	
1500mm	1475-1485mm	1465-1475mm	
(59-1/16'')	(58-5⁄64'' - 58-15⁄32'')	(57-43⁄64'' - 58-5⁄64'')	



*The duct may fall out if the cutting length is insufficient.

Hook

Tips for horizontal installation If you put the end of the duct above the bracket, it will ease the installation.

(3) Install Mounting Coupler

1 Loose the bolt nut and slide in the bottom of the mounting coupler below the washer. Install the mounting coupler by engaging the hook.

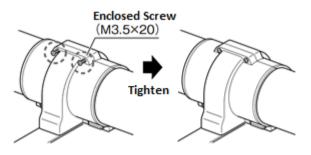
Caution) • If the mounting coupler slides in above the washer, the coupler could float above the bracket, or could be unfirm.

• Mounting coupler cannot be installed if the duct is inside the clamp.

(2) Tighten the bolt nut of the clamp, after making sure the coupler is engaged.

 ${\rm Caution})\, \cdot\, {\rm If}$ the bolt nut is tighten when the hook is Cautionngaged, the coupler won't support the duct stably.

③ Securely tighten the enclosed screw (M3.5×20).

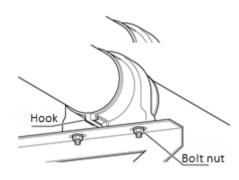


Caution)

• Be sure to support the weight of lineset by bracket .

If load applies directly on duct or U-clamp, it could result in deformation.

• Be sure to fix washer when using U-clamp to support lineset.



• Be sure the washer will come above the mounting coupler. If the mounting coupler slides in above the washer, the coupler could float above the bracket, or could be unfirm.

• When installing U-clamp side to side, be sure to follow the designated interval between the clamps. Otherwise, the mounting coupler cannot be fixed appropriately.

• When bending the lineset, be sure to install mounting coupler nearby. If there's no space to install the coupler, fix the fitting by using mounting clip for fittings. Duct and fitting could fall out if there's a distance between the bended lineset and supporting point.

• Cut the duct at the suitable length according to the interval of each supports. The duct may fall out if the cutting length is insufficient.

• It may result in deformation or crack if the screws are tighten excessively.