New piping connection method

Tentative



Flare-less joint

Flare-less joint nut



(At factory shipment)

Same as before

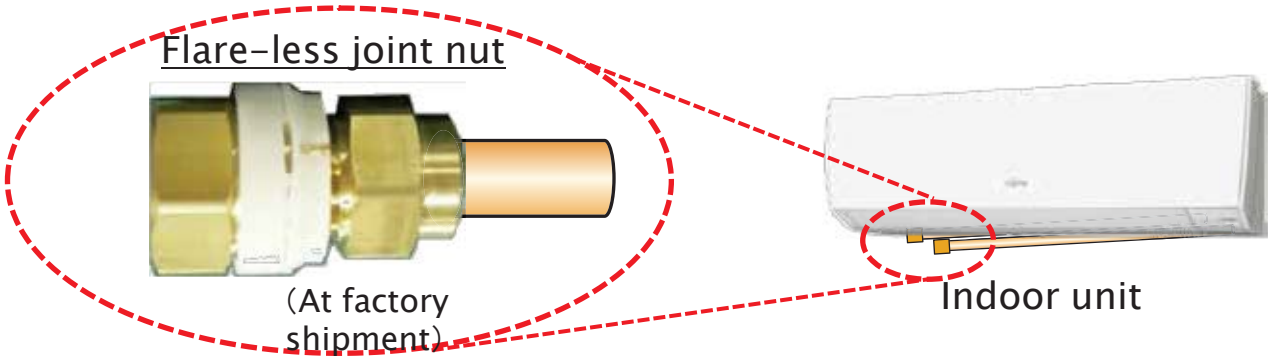
Flare joint

KU Series KM Series CM Series

Tentative

Flare-less joint and Flare-less joint nut removal tool

Flare-less joint nut



Cannot be reused after being used once.

Flare-less joint nut removal tool



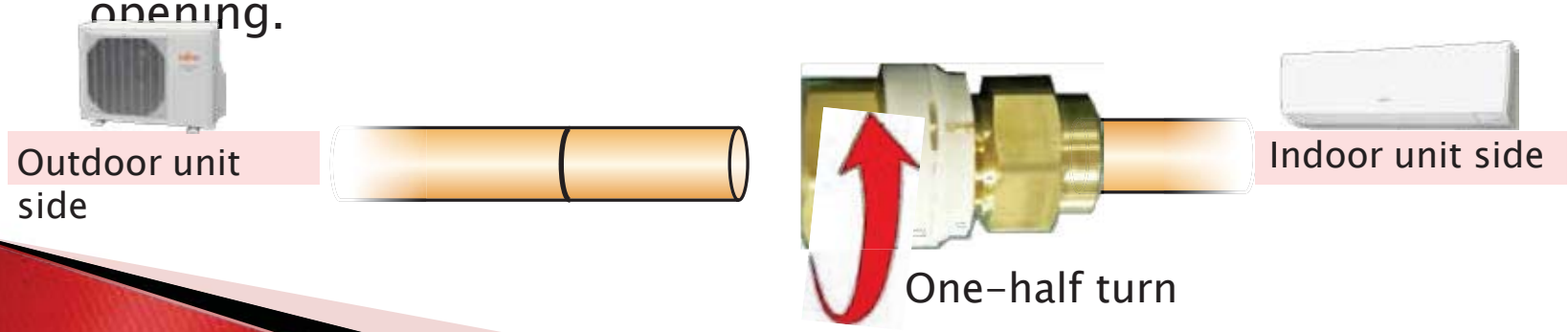
3-1 Connection method using a flare-less joint nut

STEP 1 Draw a line to check the insertion of the pipe to be connected to the indoor unit.



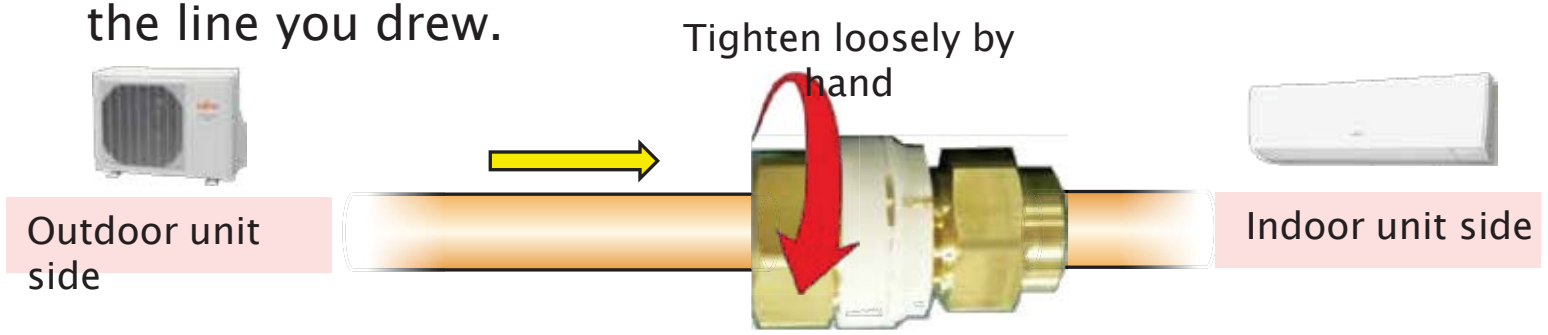
Connection pipe diameter [mm (in.)]	L [mm]
6.35(1/4) dia.	20 to 21
9.52(3/8) dia.	21 to 22
12.70(1/2) dia.	25 to 26

STEP 2 Turn the nut in the arrow direction to open the pipe insertion opening.

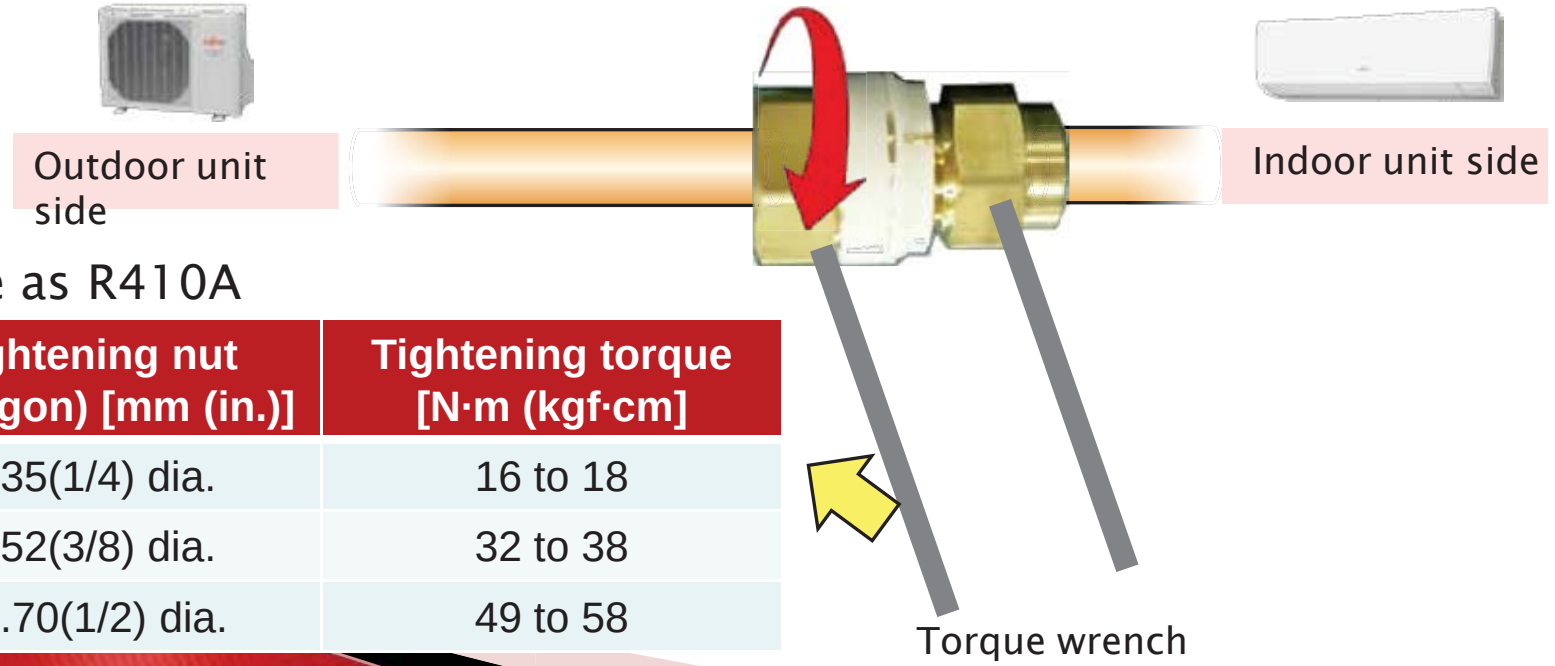


3-1 Connection method using a flare-less joint nut

STEP 3 Insert the pipe into the flare-less joint until you can no longer see the line you drew.



STEP 4 Use a torque wrench to apply torque to the flare-less joint nut.



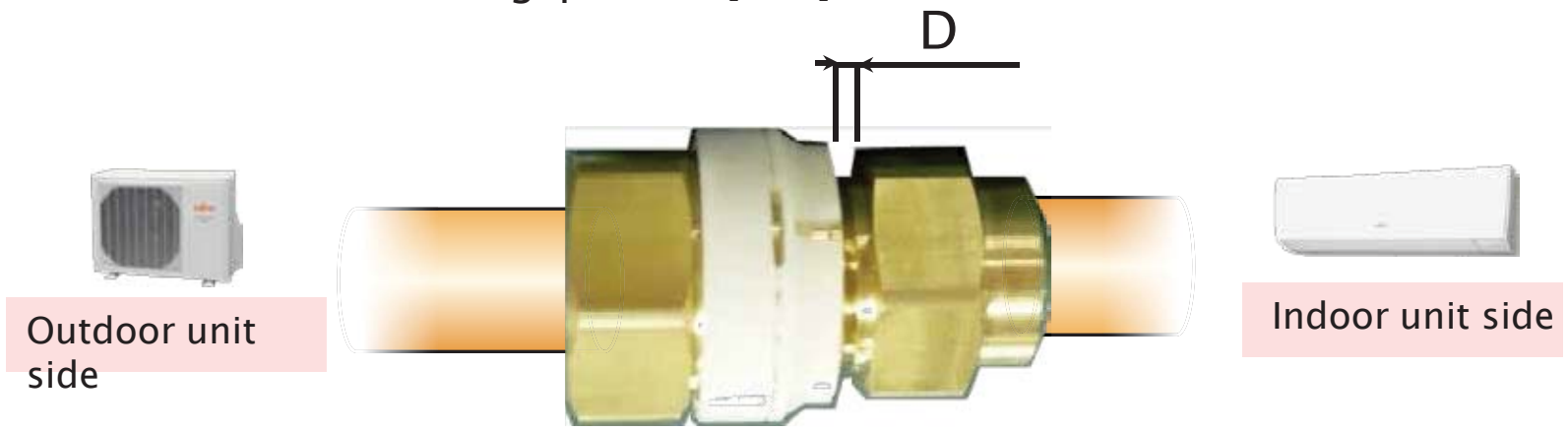
Same as R410A

Tightening nut (hexagon) [mm (in.)]	Tightening torque [N·m (kgf·cm]
6.35(1/4) dia.	16 to 18
9.52(3/8) dia.	32 to 38
12.70(1/2) dia.	49 to 58

3-1 Connection method using a flare-less joint nut

STEP 5 Check the following 2 points to make sure the pipes are connected firmly.

Check 1: Make sure the D gap is 0.5 [mm] or less.

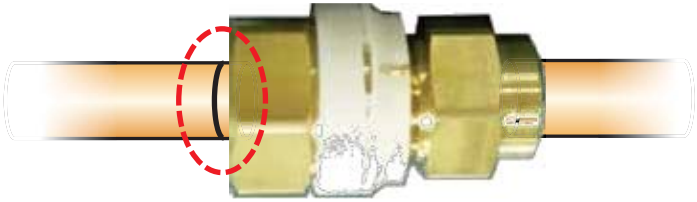


Check 2: Make sure you cannot see the line to confirm how far the pipe is inserted.

OK



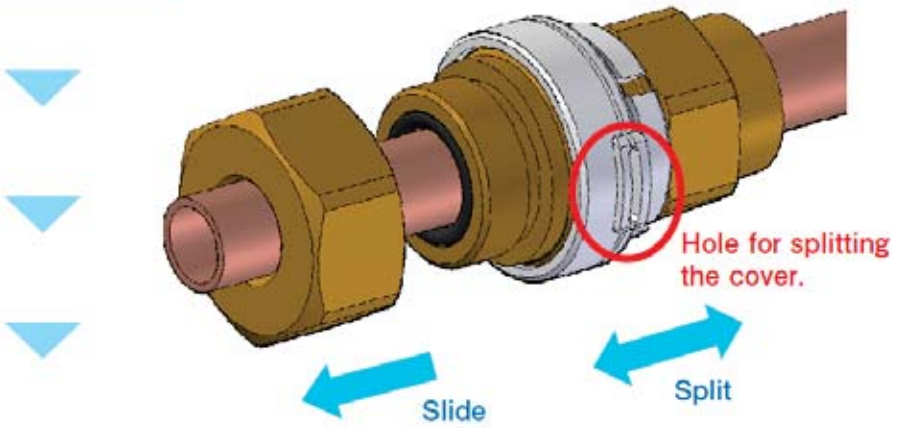
NG



There is a possibility refrigerant will leak out.

3-2 Flare-less joint nut removal method

Procedure 1 After loosening the tightening nut, split the cover.



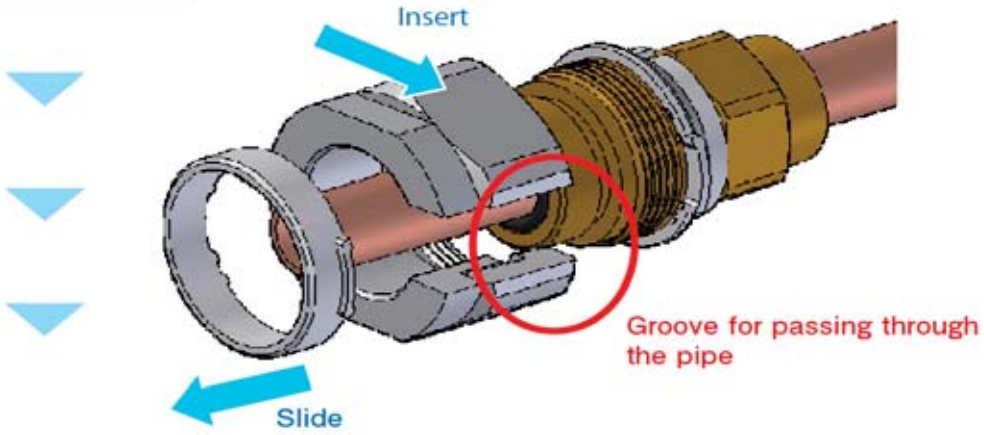
POINT

The fixing nut will not become loose even if the tightening nut is loosened.

POINT

The cover can be split by inserting a flathead screwdriver into the hole on the side and twisting the driver.

Procedure 2 Slide the cover that was split and insert the special tool.



POINT

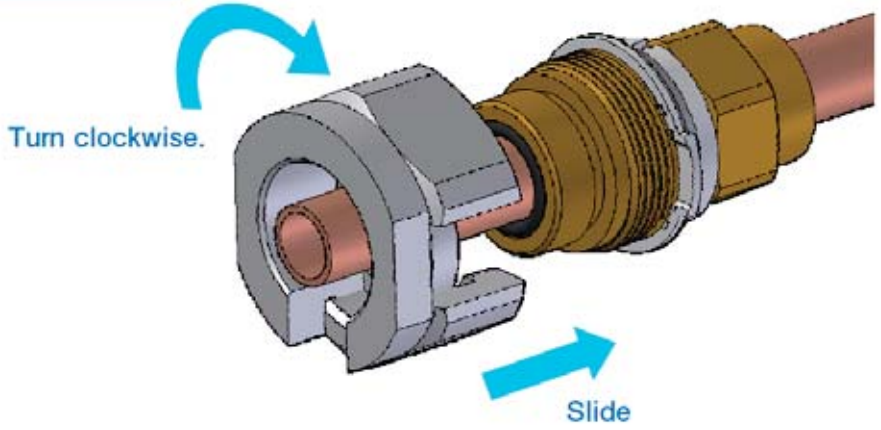
The left screw is processed on the outline of the fixing nut.
(The special tool is to be mounted in this position.)

POINT

The special tool is provided with a groove to pass through a pipe.
(The special tool can be mounted without cutting the pipe.)

3-2 Flare-less joint nut removal method

Procedure 3 Tighten the special tool manually and slide it.



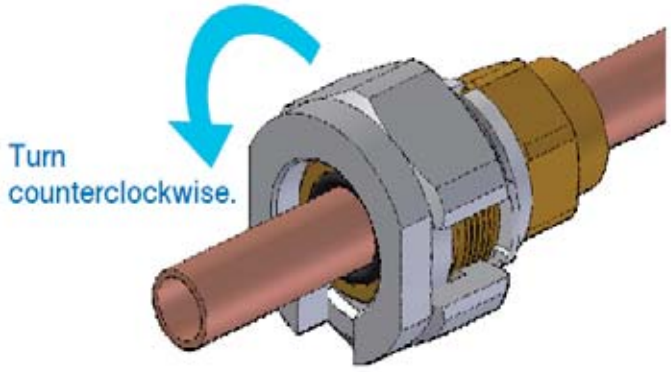
POINT

Even if the tightening nut is loosened, the fixing nut will not become loose.

POINT

Tighten the special tool manually before sliding it.
(The special tool can no longer be removed.)

Procedure 4 Tighten the special tool counterclockwise.

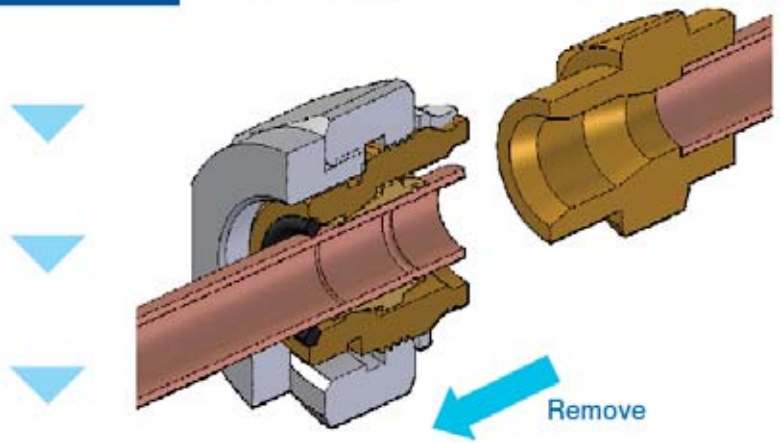


POINT

A left screw is processed on the special tool.

3-2 Flare-less joint nut removal method

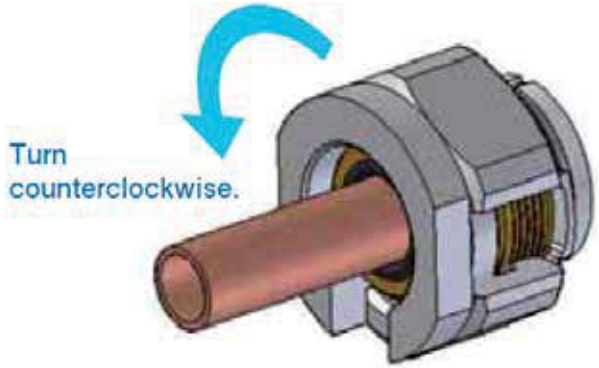
Procedure 5 The fixing nut becomes loose, enabling it to be loosened.



POINT

Since the joint main unit needs a right screw and the special tool needs a left screw, the fixing nut becomes loose when the special tool is tightened.

Procedure 6 Turn both the special tools counterclockwise.

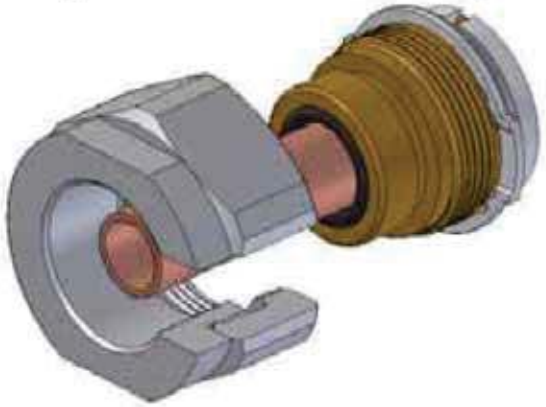


POINT

Both the special tools can be loosened with a spanner.
By loosening the tools, the tightening with the fixing nut is resolved.

3-2 Flare-less joint nut removal method

Procedure 7 The special tool can be separated from the fixing nut.



POINT

The separated special tool can be reused.

Reconnecting pipes

State of the pipe on the indoor side after being loosened



When reusing, use it by fixing a new Flare-less joint nut.



Flare-less joint nut

