DAIKIN

Fire-Free Copper Tube Connector

Easy to Fit, Tight Connection

TIGHTFIT

GAS TIGHT JOINT II

Designed for All HVAC Equipment
Compatible with Most Air-conditioning Installation



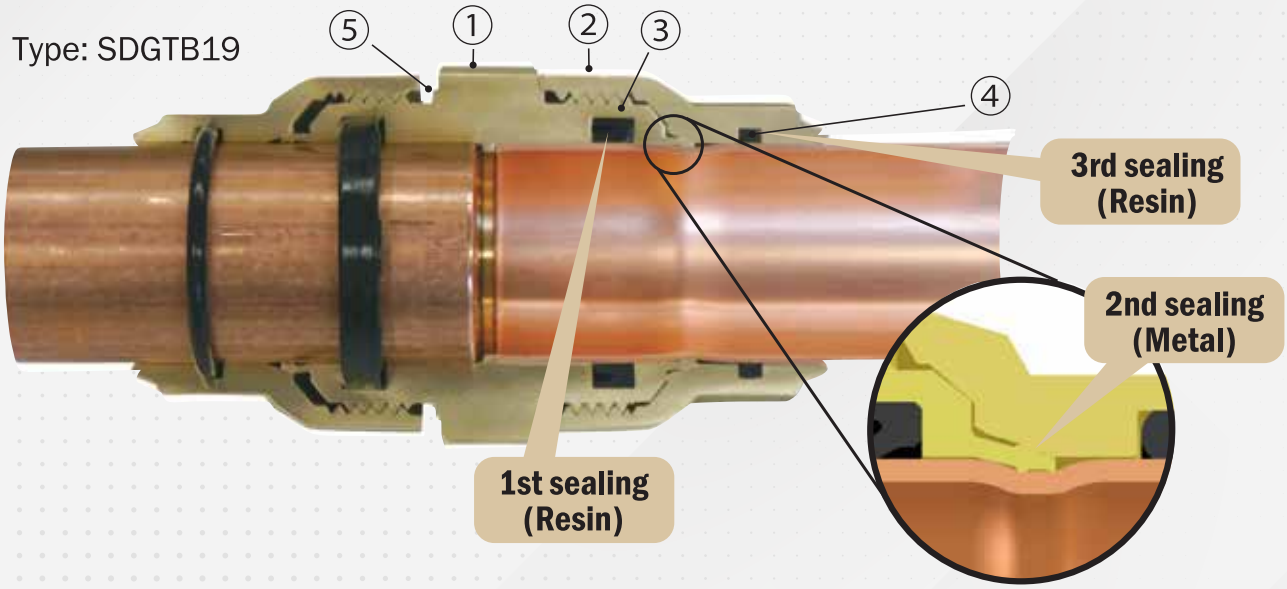
DHOS-TF-PC-2106B

TIGHTFIT

Daikin Tightfit is a non-brazed connection suitable for piping. Pipes can be joined easily and quickly without brazing or using any special tools. It meets stringent safety requirements and provides leak-free tightness among various substantial benefits.

- Double edged claw catches the pipe to form tight mechanical sealing
- 3 types of connectors suitable for most pipe sizes and applications
- Unique mechanical and resin sealings prevent gas leak completely.
  It is durable up to 4 times (17.2MPa) of max. operating pressure

Type: SDGTB19



Legend

Name	Material	Remark
① Main body	C3771	Forged and Machined Brass
② Nut	C3771	Forged and Machined Brass
③ Gasket	IIR	Main sealing
④ O-ring	EPDM	Secondary sealing & moisture stopper
⑤ Indicator	Luminous marker	Green color

Technical specifications

Applications	Refrigeration / Air-conditioning / Heat Pump (Refrigeration side) / VRV
Applicable fluid	
Refrigerant	R410A, R32
Refrigeration oil	Ether oil / Ester oil / Polyalkylene glycol oil
Max. pressure^	4.3 MPa
Min. pressure^	-0.101MPa (-755 mmHg)
Max. Temp.*	130°C
Min. Temp.*	-45°C
Pressure Resistance	17.2MPa x 2 min.
Applicable copper pipe	
ASTM B280-08, B88-09 (Type L), EN12735	
Size	Φ6.4 - Φ41.8
Thickness	0.8mm-2.0mm
Type	O(~Φ15.9) & H(Φ19.1~)
Form	Coiled tube & Straight pipe
Electrical Continuity	Maintains earth continuity without the need for additional earth continuity straps Approved Connection: Copper to Copper

^ Operating Pressure: -0.101MPa(-755mmHg) – 4.3MPa
* Operating Temperature: -45°C – 130°C

Quality & Safety Standards

According to ISO14903	
Type of Joints	Hermetically sealed joints ※ Under size 28 Permanent joints ※ Above size 34
Tightness test	ISO14903-17,7.4 (Level A1) ※ Under size 28
Pressure-temperature vibration tests (PVT)	ISO14903-17,7.6
Operation simulation	ISO14903-17,7.7
Freezing test	ISO14903-17,7.8
Additional pressure test for hermeticsally sealed joints	ISO14903-17,7.9
Vacuum test	ISO14903-17,7.10
Compatibility screening test	ISO14903-17,7.11
Fatigue test for hermetiocally sealed joints	ISO14903-17,7.12
Additional tightness test	
Bending test ①	Pressurized by 0.5MPa air with 15° bending angle
Bending test ②	Pressurized by 3.3MPa N^2 with ±10mm displacement on 1m span
Torsion test	90° torsion angle
Maximum squeeze torque	14~49Nm ※ Under size 28 (according to the size)
Expected life	
The expected life of the O-ring, if used within the product specifications for temperature and pressure, is at least 30 years.	

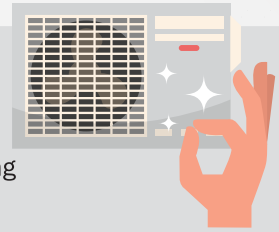
Tightfit is a registered trademark of Daikin in Asia and numerous countries worldwide, and is a product of superior performance and quality.

Quality Assurance



- Guaranteed to be tight and leak-free
- Reliable and secure with no brazing required
- Conforms to ISO14903
  - Tightness test: P=4.3MPa;
    Test medium: 100% Helium, T=22°C
    Max leakage: 7.5 x 10^{-7} Pa·m^3/s or less.
  - Vacuum test: 6.5kPa in absolute

System Reliability



- No risk of copper oxide or soot in pipes due to no brazing
- Prevents early compressor failure and prolongs the lifespan of air-conditioners

Safety First

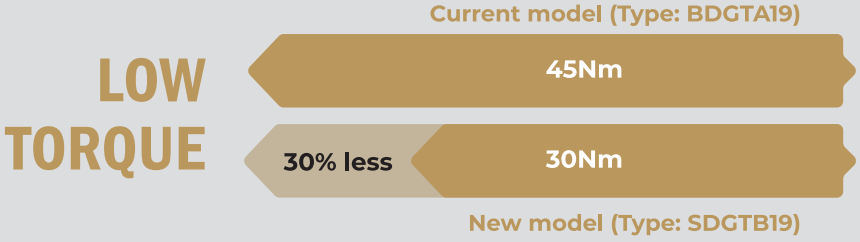


- As no brazing is required, fire hazards are completely eliminated during installation on site
- No risk of handling high pressure and flammable gas

Easy Installation



- No need to prepare heavy and expensive brazing tools or hire specialized technicians
- Easy for anyone to install by using a simple torque tightening method, now made easier with lower torque



Time & Costs Savings

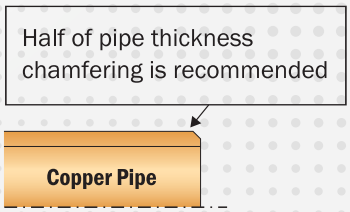


- No need to apply for hot work permit or station fire safety watchers onsite, thus saving time and cost with less administrative work
- Simple installation process also reduces installation time

Simple 4-Step Action

Preparation

Chamfering of the pipe outside and inside

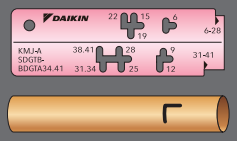


Step 1

Marking the insertion standard line

Marking method : using marking gauge

Mark the insertion “T” or “L” standard line with the marking gauge and marker pen at proper position of each pipe size.

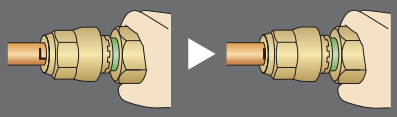


Step 2

Pipe insertion

1) Insert firmly by hand until the pipe stops.
2) Make sure that the insertion standard line is no longer visible.

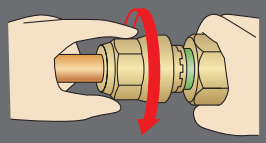
- Do not tighten the nut before pipe insertion.
- When inserting the pipe, do not apply excessive force. The O-ring will be damaged.



Step 3

Manual tightening of nut

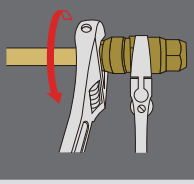
Hold the main body and tighten the nut in the direction of the arrow by hand until it will not turn anymore.



Step 4

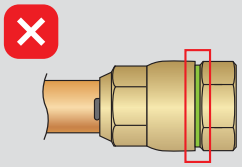
Tightening of nut

Hold the main body and tighten the nut with a monkey wrench in the direction of arrow until the green indicator disappears and the nut comes into contact with the flat face of the body.

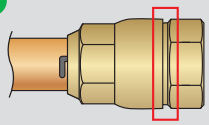


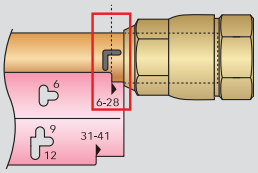
Check

1. Green indicator should be hidden.
2. Place the marking gauge on the end face of the nut and make sure that the “T” or “L” shaped mark falls completely within the notch in the marking gauge.
   The marking gauge contains one notch for measuring the insertion of pipe of Ø28 or less, and another notch for measuring the insertion of pipe of Ø31 or more. Be sure you are using the correct notch when measuring.

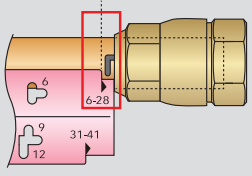


Green indicator is hidden.





“L” shaped mark falls within the notch



If the “T” or “L” shaped mark falls outside the notch in the marking gauge,cut off the joint, replace it with a new joint, and carry out construction again.

Full line-up

Standard Joint	Asymmetry Joint	NEW 90°Bend Joint	NEW Test Plug

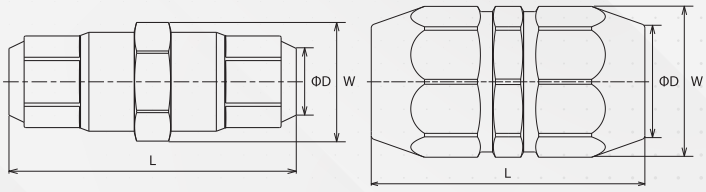





Size	Model name	Size	Model name	Size	Model name	Size	Model name
Φ6.35	SDGTB06	Φ9.52-6.35	SDGTB0906	-	-	Φ6.35	SDGTKB06
Φ9.52	SDGTB09	Φ12.70-9.52	SDGTB1209	-	-	Φ9.52	SDGTKB09
Φ12.70	SDGTB12	Φ15.88-12.70	SDGTB1512	-	-	Φ12.70	SDGTKB12
Φ15.88	SDGTB15	Φ19.05-15.88	SDGTB1915	-	-	Φ15.88	SDGTKB15
Φ19.05	SDGTB19	Φ22.22-19.05	SDGTB2219	-	-	Φ19.05	SDGTKB19
Φ22.22	SDGTB22	Φ25.40-22.22	SDGTB2522	Φ22.22	SDGTLB22	Φ22.22	SDGTKB22
Φ28.58	SDGTB28	Φ28.58-25.40	SDGTB2825	Φ28.58	SDGTLB28	Φ28.58	SDGTKB28
Φ34.92	BDGTA34	Φ34.92-28.58	SDGTB3428	-	-	-	-
Φ41.28	BDGTA41	-	-	-	-	-	-

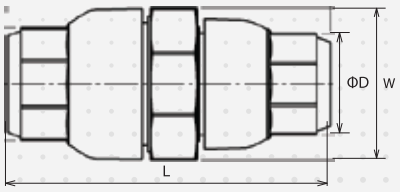
Dimension & Weight

Standard Joint

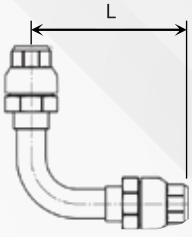


Size	L (mm)	W (mm)	Weight (g)
Φ6.35	50.4	15.0	43.0
Φ9.52	55.0	19.9	79.0
Φ12.70	59.0	23.5	113.0
Φ15.88	74.0	30.0	210.0
Φ19.05	76.8	34.6	273.0
Φ22.22	83.4	40.2	292.0
Φ28.58	88.0	46.7	515.0
Φ34.92	101.5	51.1	686.0
Φ41.28	103.5	58.3	881.0

Asymmetry Joint



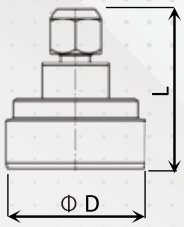
Size	L (mm)	W (mm)	Weight (g)
Φ9.52-Φ6.35	52.7	19.9	67.0
Φ12.70-Φ9.52	57.5	23.5	101.0
Φ15.88-Φ12.70	65.0	30.0	164.0
Φ19.05-Φ15.88	76.8	34.6	244.0
Φ22.22-Φ19.05	81.5	40.2	358.0
Φ25.40-Φ22.22	85.8	43.5	444.0
Φ28.58-Φ25.40	88.1	46.7	505.0
Φ34.92-Φ28.58	101.5	51.1	645.0



NEW 90°Bend Joint

Size	L (mm)	Weight (g)
Φ22.22	120.0	655.7
Φ28.58	145.0	968.4

NEW Test Plug



Size	L (mm)	W (mm)	Weight (g)
Φ6.35	43.0	15.0	53.0
Φ9.52	44.0	20.0	67.6
Φ12.70	46.0	23.0	73.4
Φ15.88	50.0	30.0	96.6
Φ19.05	52.0	34.0	111.7
Φ22.22	54.0	40.0	135.6
Φ28.58	54.0	46.0	146.0

Project References

Suitable for all HVAC equipment, Tightfit is perfect for a variety of applications. Most projects cite cost and time savings as a key benefit to using Tightfit, in addition to a safe and easy installation process.





OFFICES

Nueva Córdova's Building (Chile)
Twin Engine, Pune (India)
Vasanth & Co, Chennai (India)

RESIDENCES

Ruparel Ariana, Mumbai (India)
BW Residential Building (Brazil)
MANSÃO BAHIANA DE TENIS (Brazil)
Residência Samuel Locks (Brazil)
Villa 91 Vinhomes Central Park (Vietnam)
Villa – My Tho (Vietnam)
Vineet Bhatt Residence, Delhi (India)
Trump Tower (Philippines)
Ofcina Laboratorio Casasco (Argentina)

RENOVATION

Concessionaire Toyota Ferro (Argentina)
Toyota Panamericana (Argentina)
Great Eastern Street Hotel (United Kingdom)
INTER-WA HOME OFFICE (Thailand)
Yue Hwa Building (Singapore)
Umeda Center Building (Japan)



HOTELS

St. Regis Bermuda Hotel (Bermuda)





Daikin Holdings Singapore Pte Ltd
Address: 10 Ang Mo Kio Industrial Park 2, Singapore 569501
Tel: +65 6583 8888 Email: dhos.support@daikin.com.sg

Specifications, designs and other content appearing in this catalogue are correct as of June 2021 and subject to change without notice.