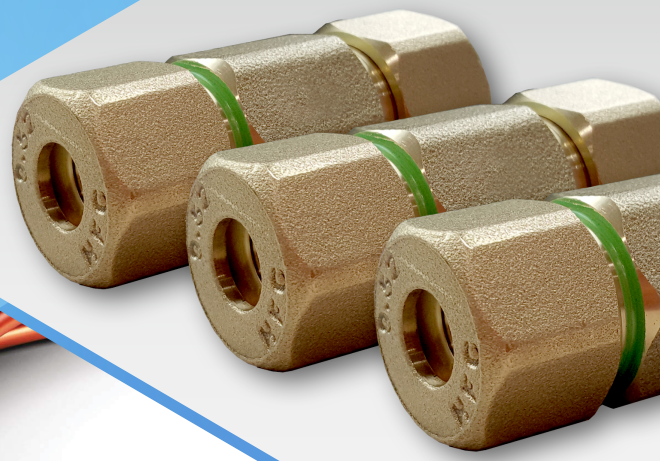
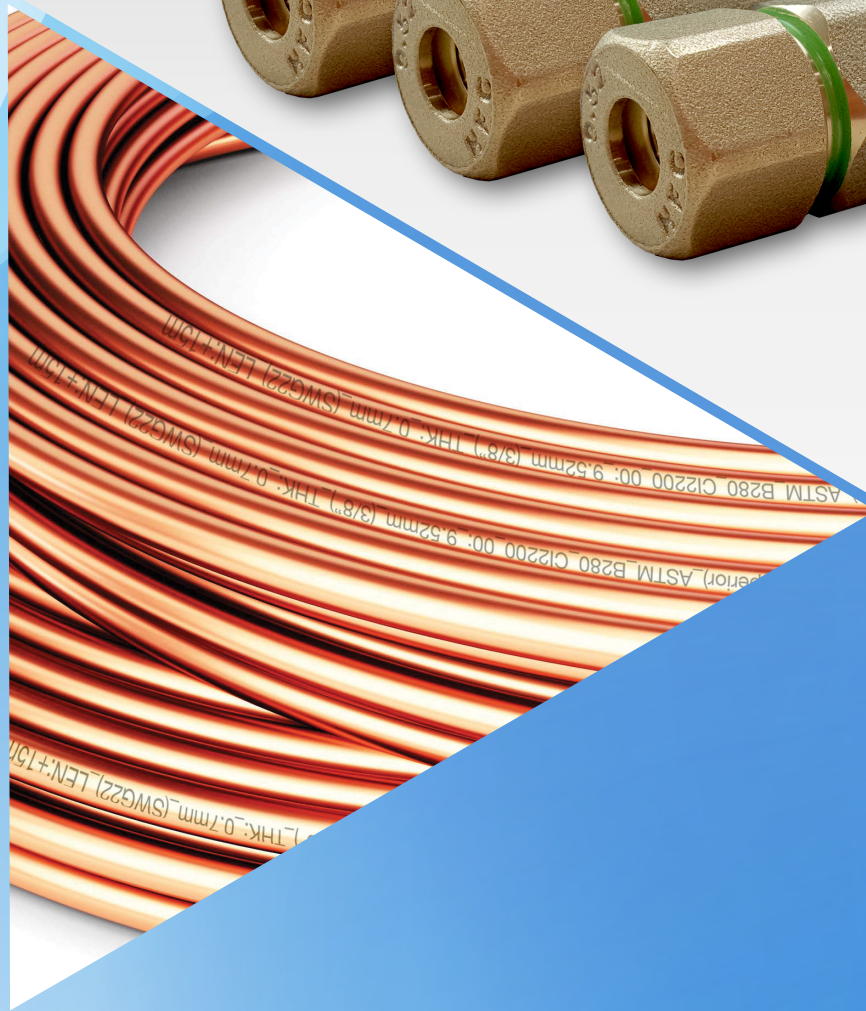




HVAC INSTALLATION MATERIALS



DAIKIN GAS TIGHT JOINT (DGT)

Daikin Gas Tight Joint (DGT) is a non-brazed connection for refrigerant piping. Pipes can be joined easily and quickly without brazing or using any special tools. It meets the stringent requirements in terms of safety and leak tightness while providing substantial benefits.



ADVANTAGES



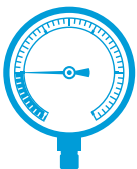
Excellent Performance

By the unique double sealing method, the sealing performance is secured over a long period even under severe conditions such as pressure of 4.3MPa during temperature of -45°C through 130°C .



Fire Free Connection (Safety First)

Neither nitrogen gas replacement nor fire prevention cure is required. The time for installation is shortened and the total cost is reduced. The installation quality is much more stable compared with a brazing method.



Durable for high pressure

By leverage method, the pull-out resistance is more than 4 times (17.2MPa) of the max. operating pressure.



Leak-Free

With double sealing, made up of O-ring and V-seal, it prevents refrigerant from escaping. This eliminates the hassle of brazing at job site with labour intensive requirements.



Easy Installation

The installation is completed using low torque tightening method with just one or two turns of the nut. Regular wrenches or spanners are used without any special tools required, making installation easy even when operating space is limited.



Reduce Condensation Concerns

A combination of rubber packing and screwed metal body offers gas-tight and rigid connection without brazing.

	Daikin DGT	Other Brands
Fitting	✓ Only needs 1 Joint for Tight seal	Requires additional accessories (i.e. inserts and joints) for stable fit
Special Tools	✓ Not required, no hidden costs	Require specialised crimping tools require specialised crimping tools
Sealing Method	<ul style="list-style-type: none"> ✓ Double Protection with V-seal and Dual O-Ring to effectively minimise leakage. ✓ Ensures tight seal and prevents condensation forming inside 	Single O-Ring only
Precision Piping Method (PPM)	✓ Enhanced productivity with prefabrication of piping into modular form for easy connection	No such service

*Installation with DSP Materials only

Mechanism

	Item	Name	Materials	Remark
	1	O-ring	EPDM or NBR	Prevent condensation from entering the joint
	2	Nut	C37700	High quality forged brass nut for tightening
	3	Leverage corn	SUS410	Corn shape grip on Copper pipe
	4	Leverage ring	PE-RT	Support for Leverage corns (Item 3)
	5	O-ring	EPDM	Secondary seal
	6	V-seal	IIR	Primary seal (Main seal)
	7	Main body	C37700	High quality forged brass chassis
	8	Indicator	Luminous marking	Fluorescent coating to ensure optimum tightness
	9	C-shaped ring	SUS304-WPB	Tempering treatment

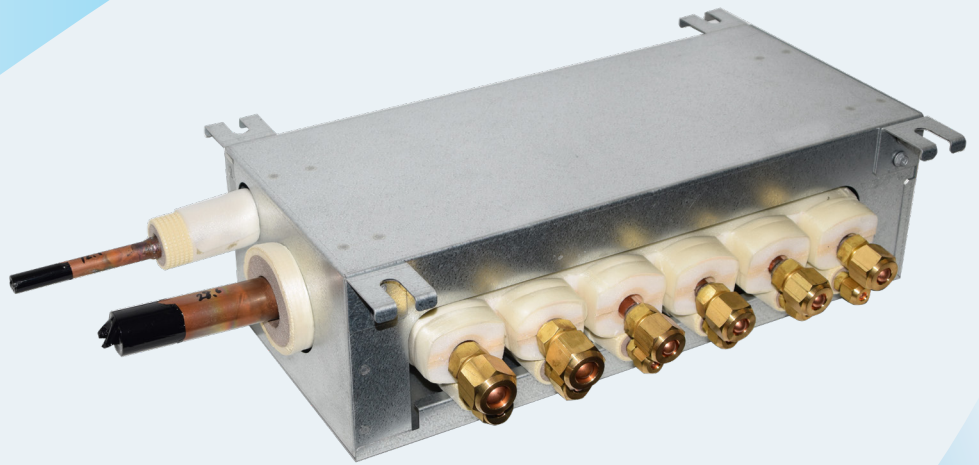
Specifications

	Daikin Gas Tight Joint (DGT)
Applicable Refrigerant	R32, R410A, R407C, Other HFC refrigerant
Applicable Refrigerant Oil	Ether oil, Ester oil, Polyol ester oil, Polyalkylene glycol oil
Maximum Pressure	4.3MPa
Minimum Pressure	-755mmHg
Maximum Temperature	130°C
Minimum Temperature	-45°C
Standard	ISO14903

Product Lineup

	Model Name	Size (mm)
	BDGTA06	ø 6.4
	BDGTA09	ø 9.5
	BDGTA12	ø 12.7
	BDGTA15	ø 15.9
	BDGTA19	ø 19.1
	BDGTA22	ø 22.2
	BDGTA28	ø 28.6
	BDGTA34	ø 34.9
	BDGTA41	ø 41.3
	BDGTA1209	ø 12.7 - ø 9.5
	BDGTA1512	ø 15.9 - ø 12.7
	BDGTA2219	ø 22.2 - ø 19.1
	BDGTA2825	ø 28.6 - ø 25.4

HEADER PACK



Header Pack allows an easier and economical method of connecting multiple indoor aircon units, providing a compact, quick and easy installation solution. It is suitable for all VRV piping installation and helps to save time and costs.

ADVANTAGES



**Easy to Install with
No Brazing Required**



**Save more than 60%
installation time**

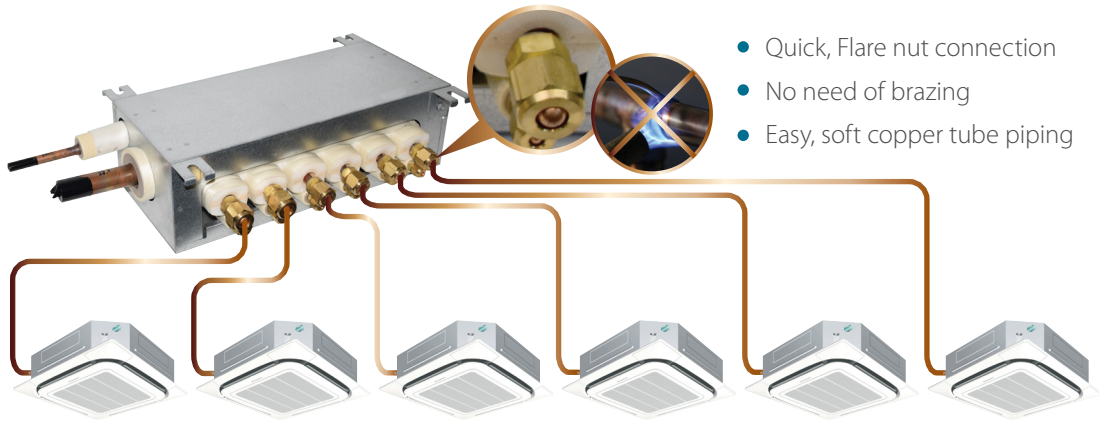


**Safe to Use with no fire hazard
danger in the building**



**Space Saving with attic
height reduced by 300mm**

Connect up to 6 Indoor Units

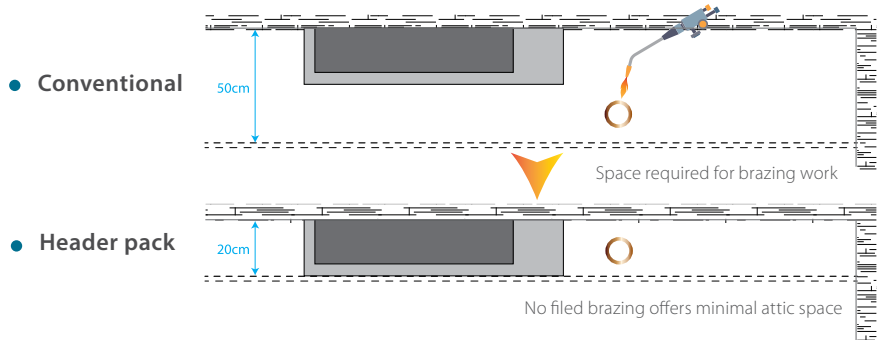


- Quick, Flare nut connection
- No need of brazing
- Easy, soft copper tube piping

Compact design to fit into narrow attic space

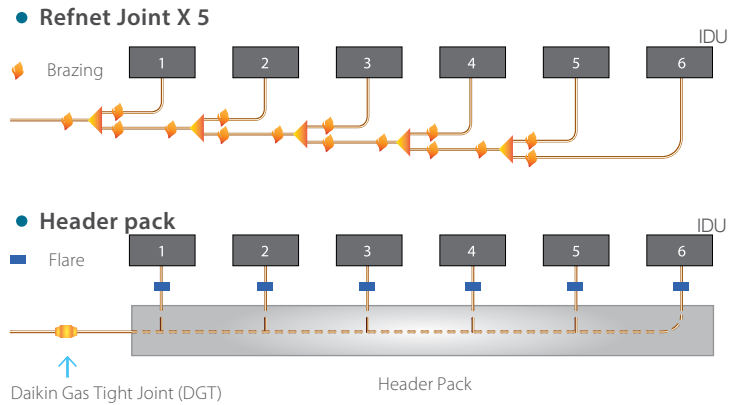
Light weight and the compact body gives minimum damage on the building structure.

Higher ceiling offers luxurious and comfortable room.



Refnet Connection vs Header Pack (New)

Item		Refnet Joint	Header Pack
Optional Kit	Refnet Joint	5	0
	Header Pack	0	1
Auxiliaries	Gas	Yes	No
	Brazing Iod	Yes	No
	Elbow	Yes	No



Product Lineup

Header Pack Model	Outdoor Unit Side	Indoor Unit Total Capacity Index	Dimension (mm)			Indoor Unit Side (Flare)	
	Liquid / Gas (mm)		H	D	W	Port	Liquid / Gas (mm)
BHF6RHP6Z	9.5 / 15.9 (Flare)	<150	135	143	559	4	(Ø 9.5 / Ø 15.9) x 1 (Ø 6.4 / Ø 12.7) x 3
BHF6ARHP6Z	9.5 / 15.9 (Flare)	<150	135	143	623	6	(Ø 9.5 / Ø 15.9) x 2 (Ø 6.4 / Ø 12.7) x 4
BHF8RHP6Z	9.5 / 19.1 (DGT)	<200	135	143	623	6	(Ø 9.5 / Ø 15.9) x 3 (Ø 6.4 / Ø 12.7) x 3
BHF10RHP6Z	9.5 / 22.2 (DGT)	<290	135	143	623	6	(Ø 9.5 / Ø 15.9) x 3 (Ø 6.4 / Ø 12.7) x 3
BHF16RHP6Z	12.7 / 28.6 (DGT)	<420	135	143	623	6	(Ø 9.5 / Ø 15.9) x 3 (Ø 6.4 / Ø 12.7) x 3



COPPER PANCAKE COIL & STRAIGHT PIPE

DSP Copper Pancake Coil and Straight Copper Pipes are manufactured to stringent quality standards. These seamless copper tubes are manufactured according to ASTM B280 – *Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service* – and intended for use in the connection, repairs or alternations of air conditioning or refrigeration units in the field.

To ensure excellent performance, the highest quality cathode copper with 99.9% Cu is used. The product line-up offers a wide selection of choices to meet the needs of various air-conditioning and refrigeration applications.



Standard Length Per Coil/Pipe

Type	Temper	Length (m)
Copper Pancake Coil	Annealed	15
Straight Copper Pipes	Hard Drawn	5.8

Chemical Properties

Standard	Grade	Chemical Properties	
		Copper, Cu (%)	Phosphorus, P (%)
ASTM B280	C12200	99.9	0.015 - 0.04

Mechanical Properties

Mechanical Properties			
Temper	Tensile Strength (Mpa)	Elongation (%)	Average Grain Size (mm)
H80	min 250	-	-
O60	min 205	min 40	min 0.04



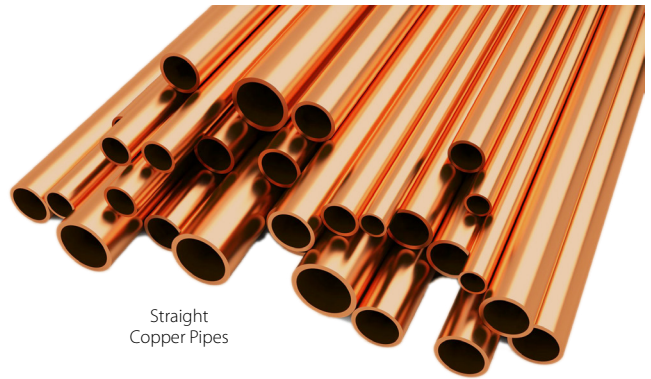
ASTM B280-16

Product Lineup

Product	Model Number	Diameter (inch)	Length (m)	Thickness (mm)
Copper Pancake Coil	PCC-1/4-ASTM	1/4	15	0.76
	PCC-3/8-ASTM	3/8	15	0.81
	PCC-1/2-ASTM	1/2	15	0.81
	PCC-5/8-ASTM	5/8	15	0.89
	PCC-3/4-ASTM	3/4	15	0.89
Straight Copper Pipes	SCP-7/8-ASTM	7/8	5.8	1.14
	SCP-1-ASTM	1	5.8	1.21
	SCP-1 1/8-ASTM	1 1/8	5.8	1.27
	SCP-1 3/8-ASTM	1 3/8	5.8	1.40
	SCP-1 5/8-ASTM	1 5/8	5.8	1.52



Copper Pancake Coil



Straight Copper Pipes

Safe Internal Working Pressure

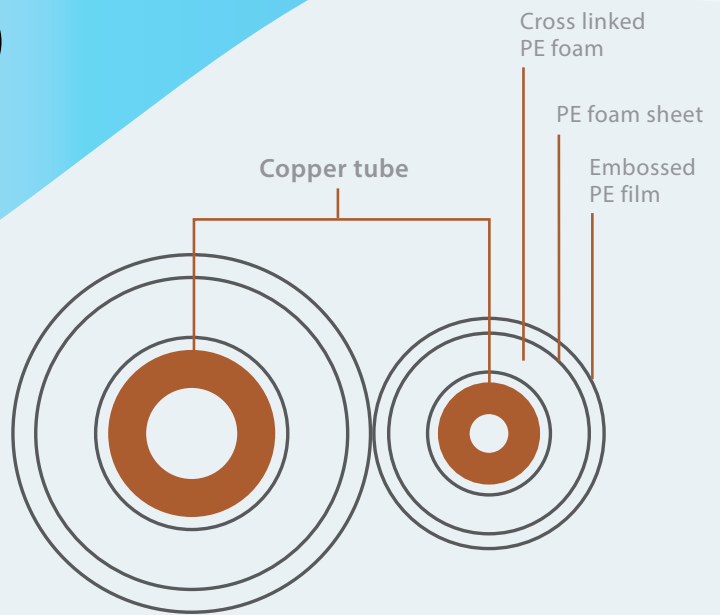
Copper Pancake Coil							
Nominal / Standard Size (inches)	Annealed						
	Coils						
	S= 6000 psi 100F	S= 5100 psi 150F	S= 4900 psi 200F	S= 4800 psi 250F	S= 4700 psi 250F	S= 4000 psi 300F	S= 3000 psi 400F
1/4	1406	1195	1148	1125	1102	938	703
3/8	984	836	803	787	770	656	492
1/2	727	618	594	581	569	485	363
5/8	618	525	504	494	400	341	256
3/4	511	435	417	409	400	341	256
7/8	582	495	475	466	456	388	291

Straight Copper Pipes							
Nominal / Standard Size (inches)	Annealed						
	Coils						
	S= 6000 psi 100F	S= 5100 psi 150F	S= 4900 psi 200F	S= 4800 psi 250F	S= 4700 psi 300F	S= 4000 psi 350F	S= 3000 psi 400F
7/8	583	496	477	467	457	389	292
1 1/8	495	421	404	396	388	330	248
1 3/8	440	374	359	352	344	293	220
1 5/8	409	348	334	327	320	273	205

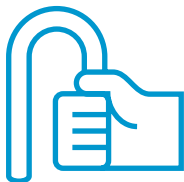


INSULATED PAIR COIL

DSP Insulated Pair Coil is made with ASTM B280 grade copper encased in high quality closed cell polyethylene foam, ensuring quality and safety. The insulated coating is durable and more resistant to abrasions than traditional materials. It is easier to install in tight spaces and reduces installation time as the insulation does not need to be measured, cut, and threaded on as a separate job.

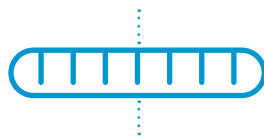


ADVANTAGES



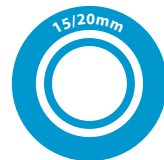
Improved Installation Efficiency

Easy to bend and cut.
Pair Coil can easily be separated by hand.
No tools or cutting are necessary.



Length Markings

Consecutively numbered length markings are clearly printed on insulation surface at 1 meter intervals to indicate remaining length.



Concealed Installation

For concealed pipe installation, thicker insulation types (15 & 20mm) are available to further reduce sweating.

Product Lineup

Product	Model Number	Diameter (inch)	Length (m)	Thickness (mm)	
				Pipe	Insulation
Pair Coil	IPC-23-ASTM	1/4 - 3/8	Up to 30	0.76 - 0.81	8 - 8
	IPC-24-ASTM	1/4 - 1/2	Up to 30	0.76 - 0.81	8 - 10
	IPC-25-ASTM	1/4 - 5/8	Up to 30	0.76 - 0.89	8 - 10
	IPC-35-ASTM	3/8 - 5/8	Up to 30	0.81 - 0.89	8 - 10
	IPC-36-ASTM	3/8 - 3/4	Up to 30	0.81 - 0.89	8 - 10

Safety Compliance

Copper Tube Safeworking Pressure (kPa)			
Copper Tube Dimentions Metric (mm)	@50°C	SWP (kPa) @65°C	@75°C
6.35 x 0.81	10,635	9,545	8,820
9.52 x 0.81	6,800	6,105	5,640
12.70 x 0.81	4,995	4,480	4,140
15.88 x 1.02	5,030	4,515	4,170
19.05 x 1.14	4,697	4,181	3,895

Insulation Properties	
Material	Highly flexible paired, cross linked, closed cell polyethylene
Thermal Conductivity	0.037 W/(m•K) at 20°C
Tensile Strength	34.2 (3.49)min N/cm ² (kgf/cm ²)
Water Absorption	0.0076 max g/100cm ²
Thickness Shrinkage	5% max @ (120 ± 5°C)
Coefficient of Moisture Permeability	10 (0.005) max (per 25mm in thickness) ng/m ² •s•Pa (g/m ² •h•mmHg)
Working Temperature	Up to 120°C

	Item	Unit	Result	
1	Fire Retardant	-	B-S1, d0, EU standard	
		-	B1, EU/Germany standard	
		-	M1, EU/France standard	
		-	-	
		-	Class A (Highest Class)	
2	Appearance Density	g/cm ³	Inner tube: 0.028	Surface tube: 0.030
3	Tensile Strength	N/cm ²	Inner tube: 55.8	Surface tube: 26.0
4	Elongation	%	Inner tube: 65	Surface tube: 88
5	Water Absorbtion	%	Inner tube: 0.15	Surface tube: 0.13
6	Water Vapour Permeance	g/m ² •s•Pa	8.6 x 10 ⁻¹¹	
7	Thermal Conductivity	W/m•K	0.035 (0°C)	
8	Thermal Resistance	m ² •K/W	0.23 (23°C)	
9	ROHS (Restriction of Hazardous Substances)	-	Pass	
10	UV Resistance	-	Pass	



TRUNKING & uPVC DRAINAGE PIPE

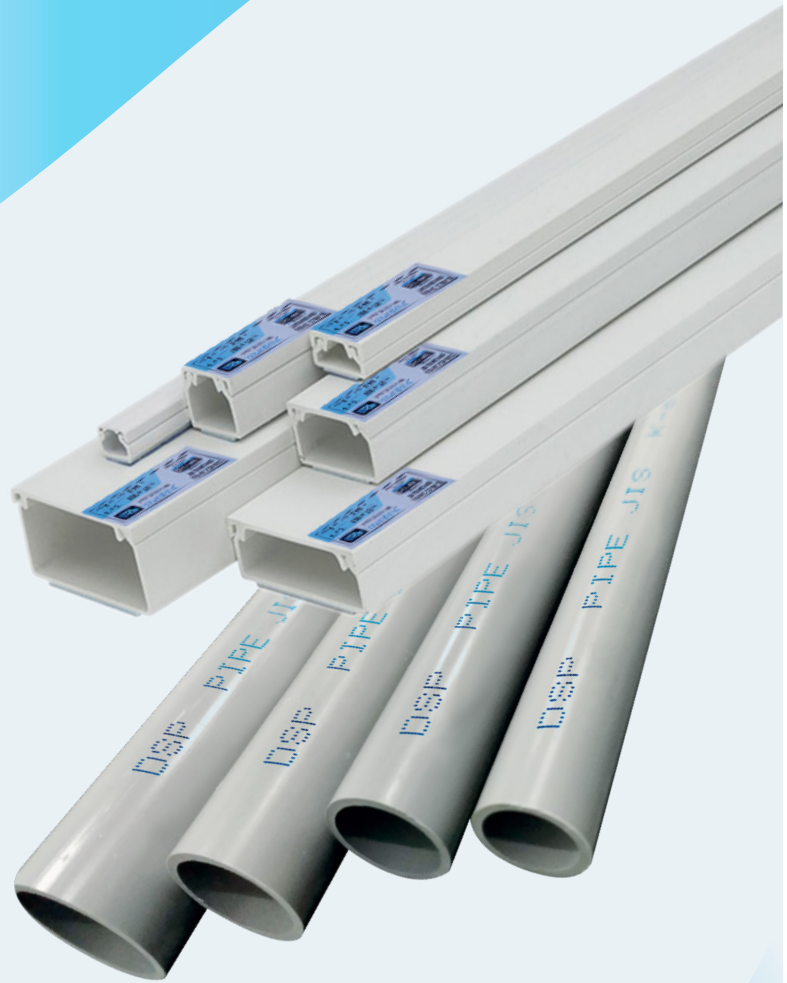
DSP Trunking and uPVC Drainage Pipe offer a range of unique characteristics that make them versatile in their field of application.

These light grey pipes are commonly used as cable ducting, flush pipes and air-conditioning water discharge outlets.

There is an ease in handling due to the pipe's light weight. This makes transportation and unloading easier and thus minimise operation cost.

The smooth bore provides greater hydraulic capacity and minimises deposit build-up or roughening of the pipe walls.

The pipes can also be readily joined by solvent welding, which provides versatility and minimises the flow of obstructions.




Standard Length Per Piece


Type	Length (ft)	Length (m)
Trunking	8	2.44
uPVC Drainage	9.5	2.9







Comply: 315 SS275:1999

Product Specifications

uPVC Trunking (White)		
	Length	Size (Inch)
	8 ft / length	2" x 1.5"
		2" x 2"
		3" x 2"
		3" x 2.5"
		4" x 2.5"
		4" x 3"
		4" x 4"
		5" x 4"
		6" x 4"
8" x 4"		

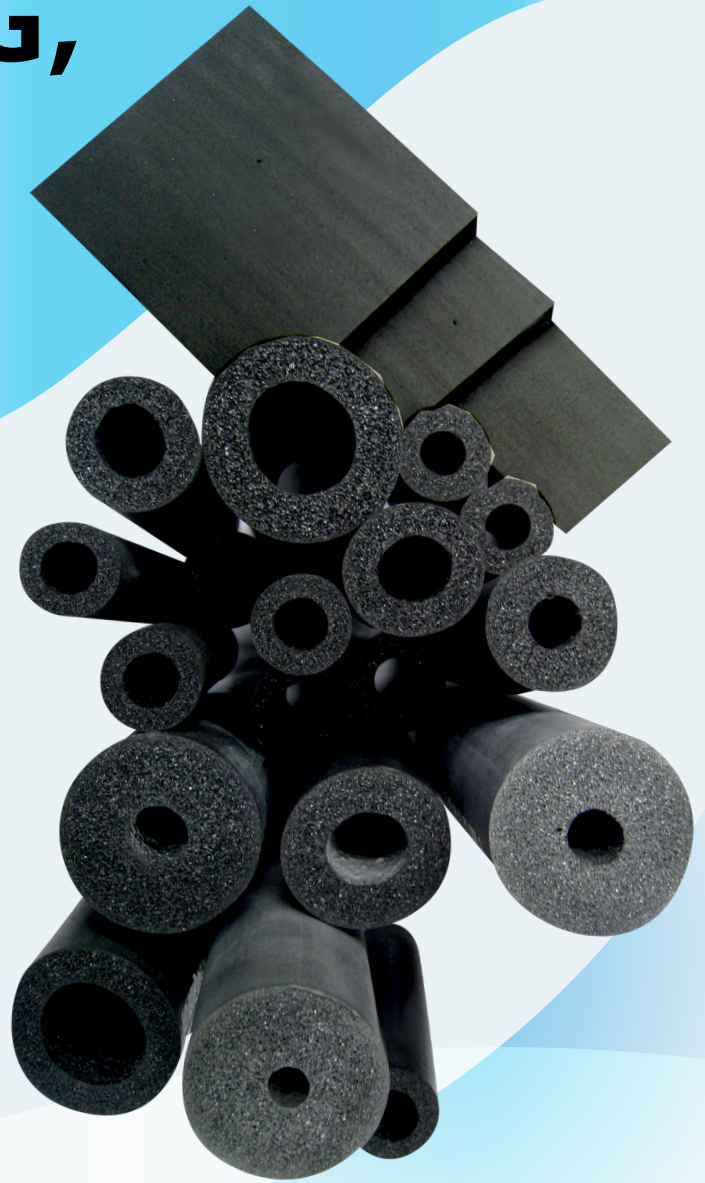
uPVC Drainage Pipe (Grey)		
	Length	Size (mm)
	2.9 m / length	13
		16
		20
		25

uPVC Drainage Pipe Fittings (Grey)		
	Length	Size (mm)
90°Elbow 	Per Piece	13 (3/8")
		16 (1/2")
		20 (3/4")
		25 (1")
Tee 	Per Piece	13 (3/8")
		16 (1/2")
		20 (3/4")
Socket 	Per Piece	25 (1")
		13
		16
		20
		25

uPVC Flexible Pipe		
	Length	Size (Inch)
	50 m / length	2" x 1.5"
		2" x 2"
		3" x 2"



CLOSED CELL TUBING, SHEET & ROLL INSULATION



DSP Closed Cell Elastomeric Nitrile Rubber Tubing and Sheet Insulation are specifically manufactured for uncompromising, reliable performance, meeting all requirements from structure to dimensions.

Combined with our relentless attention to quality and detail, our product selection offers every aspect to meet the technical insulation demands to reduce energy consumption and prevent condensation and corrosion under insulation of air-conditioning and refrigeration (ACR) applications.

Standard Length Per Piece

Type	Length (ft)	Length (m)
Closed Cell Tubing	6	1.83
Sheet Flat	4 x 3	1.22 x 0.91
Sheet Roll	4 x 30	1.22 x 9.14



Chemical & Mechanical Properties

Average Physical Properties	Rating	Test Method
Density	60 kg/m' to 80 kg/m'	ASTM D1667
Temperature Limit °C	-40°C to +105°C	-
Water Vapour Resistance u Factor	> 5000	DIN 52615 - 73
Average Fire Propagation Average Surface Spread of Flame Average Time of Burning	Class 0 Class 1 Less than 5 seconds	BS 476 Part 6 BS 476 Part 7 ASTM D635 - 91
Reaction To Fire	V-0, 5VA, HF-1, Self-Extinguishing, No Dripping	UL 94

Products

	Length	Size (Inch)	Type
	5.8m / length	7/8"	Insulation thickness: 1/4"
		1/4"	Insulation thickness: 1/2"
		3/8"	
		1/2"	
		5/8"	
		3/4"	
DSP Insulation Class "O"			
	6 ft / length	1/4"	Insulation thickness: 1/2"
		3/8"	
		1/2"	
		5/8"	
		3/4"	
		1/4"	Insulation thickness: 3/4"
		3/8"	
		1/2"	
		5/8"	
		3/4"	Insulation thickness: 1"
		7/8"	
		1 1/8"	
1 3/8"			
1 5/8"			

Specifications

Closed Cell Tubing												
No.	Normal Insulation Size		Copper Pipe		Tubing - Standard Unit Length (6 Feet)							
			Nominal Size (OD)		Nominal Thickness (6mm)	Nominal Thickness (9mm)	Nominal Thickness (13mm)	Nominal Thickness (19mm)	Nominal Thickness (25mm)	Nominal Thickness (32mm)	Nominal Thickness (38mm)	Nominal Thickness (50mm)
	mm	inch	mm	inch	Pcs/Ctn	Pcs/Ctn	Pcs/Ctn	Pcs/Ctn	Pcs/Ctn	Pcs/Ctn	Pcs/Ctn	Pcs/Ctn
1	6	1/4	6	1/4	250	168	100	48	-	-	-	-
2	10	3/8	10	3/8	200	120	90	36	30	-	-	-
3	13	1/2	13	1/2	150	100	70	30	28	-	9	-
4	16	5/8	16	5/8	120	90	63	30	24	-	9	6
5	19	3/4	19	3/4	100	72	56	26	20	-	9	6
6	22	7/8	22	7/8	90	65	42	24	20	14	9	6
7	25	1	25	1	80	49	36	20	18	12	9	6
8	28	1 1/8	28	1 1/8	-	49	36	20	18	12	9	6
9	32	1 1/4	32	1 1/4	-	42	30	20	16	12	-	-
10	35	1 3/8	35	1 3/8	-	36	30	18	15	12	8	4
11	42	1 5/8	42	1 5/8	-	30	25	16	12	10	8	4
12	48	1 7/8	48	1 7/8	-	28	20	12	10	9	6	4
13	51	2	51	2	-	24	20	12	9	8	-	-
14	54	2 1/8	54	2 1/8	-	20	18	12	9	6	6	4
15	60	2 3/8	60	2 3/8	-	20	18	9	9	6	6	4
16	67	2 5/8	67	2 5/8	-	18	13	8	8	6	6	4
17	73	2 7/8	73	2 7/8	-	18	13	8	8	6	-	-
18	76	3	76	3	-	18	12	8	8	6	-	-
19	79	3 1/8	79	3 1/8	-	15	12	6	6	5	-	-
20	89	3 1/2	89	3 1/2	-	15	12	6	6	5	-	-
21	100	4	100	4	-	13	12	6	5	5	-	-
22	115	4 1/2	115	4 1/2	-	13	10	6	5	5	-	-

Sheet Flat						
Standard Flat Sheets						
Nominal Thickness		Size		No of Sheets	Total Area Per Ctn	
mm	inch	m	ft	Per Carton	m ²	ft ²
3	1/8	1.22 x 0.914	4 x 3	80	89.2	960
6	1/4	1.22 x 0.914	4 x 3	40	44.6	480
9	3/8	1.22 x 0.914	4 x 3	26	28.99	312
13	1/2	1.22 x 0.914	4 x 3	20	22.3	240
15	5/8	1.22 x 0.914	4 x 3	16	17.84	192
19	3/4	1.22 x 0.914	4 x 3	14	15.61	168
25	1	1.22 x 0.914	4 x 3	10	11.15	120
32	1 1/4	1.22 x 0.914	4 x 3	8	8.92	96
38	1 1/2	1.22 x 0.914	4 x 3	7	7.8	84
50	2	1.22 x 0.914	4 x 3	5	5.57	60

Sheet Roll						
Continuous Rolls						
Nominal Thickness		Size Per Roll		Total Area Per Roll		
mm	inch	m	ft	m ²	ft ²	ft ²
3	1/8	1.22 x 9.14	4 x 30	11.15	120	960
6	1/4	1.22 x 9.14	4 x 30	11.15	120	480
9	3/8	1.22 x 9.14	4 x 30	11.15	120	312
13	1/2	1.22 x 9.14	4 x 30	11.15	120	240
15	5/8	1.22 x 9.14	4 x 30	11.15	120	192
19	3/4	1.22 x 9.14	4 x 30	11.15	120	168
25	1	1.22 x 9.14	4 x 30	11.15	120	120
31	1 1/4	1.22 x 9.14	4 x 30	11.15	120	96
38	1 1/2	1.22 x 9.14	4 x 30	11.15	120	84
50	2	1.22 x 4.57	4 x 15	5.57	60	60



REFRIGERANT GAS



R410A Refrigerant

R410A Refrigerant is widely used in numerous air-conditioning applications and is highly reliable and with quality assurance.

Physical Property			Quality Index		
Molecular Weight	-	72.6	Purity	%	≥ 99.96
Boiling Point	°C	-48.5	Moisture	%	≤ 0.0009
Critical Temperature	°C	72.6	Acidity	(HCL)%	≤ 0.0001
Critical Pressure	Mpa	4.96	Vapor Residue	ppm	≤ 0.005
Vapour residue	%	≤0.005	Appearance	-	Clear, colourless liquid and vapor
ODP	-	0	Odour	-	Faint ethereal odour
GWP	-	2000			
Packing			Application		
Disposable Rose Cylinder 25lb/11.3kg			Refrigerant in many air-conditioning applications, applicable to all types of R410A products		



R32 Refrigerant

R32A Refrigerant has a lower global warming potential (GWP 675) and less environmental impact compared to R410A Refrigerant, which makes it more energy efficient and environmentally friendly.

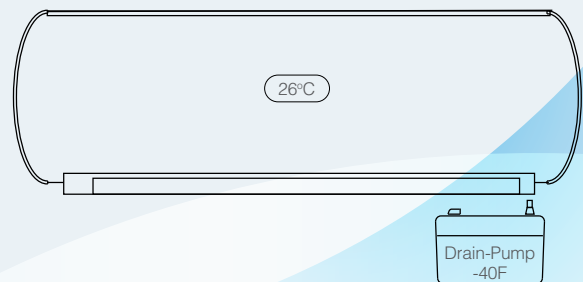
Physical Property			Quality Index		
Molecular Weight	-	52.02	Purity	%	≥99.8
Boiling Point	°C	-51.7	Moisture	ppm	% ≤ 0.0009
Critical Temperature	°C	78.25	Acidity	ppm	% ≤ 0.0001
Critical Pressure	bar	58.1	Vapor Residue	ppm	≤ 0.005
Vapour residue	%	≤0.005	Appearance	-	Clear, colourless compressed liquefied gas
ODP	-	0	Odour	-	Slight ethereal odour
GWP	-	675			
Packing			Application		
Disposable Blue Cylinder 6.6lb/3kg			Refrigerant in many air-conditioning applications		





CONDENSATE PUMPS

DSP Condensate Pump ensures the condensate water in HVAC and refrigeration processes are smoothly channelled out while keeping noise and vibration to the lowest level possible. It is not only suitable for all voltages, but also all kinds of air-conditioning systems due to its large flow rate. With a waterproof float made of rubber material and an individual dual control line, safety is ensured. Its design allows effortless elimination of condensate water while saving energy.



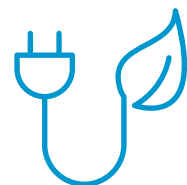
ADVANTAGES



Easy to Assemble



Quiet & Stable



Energy Savings

Features

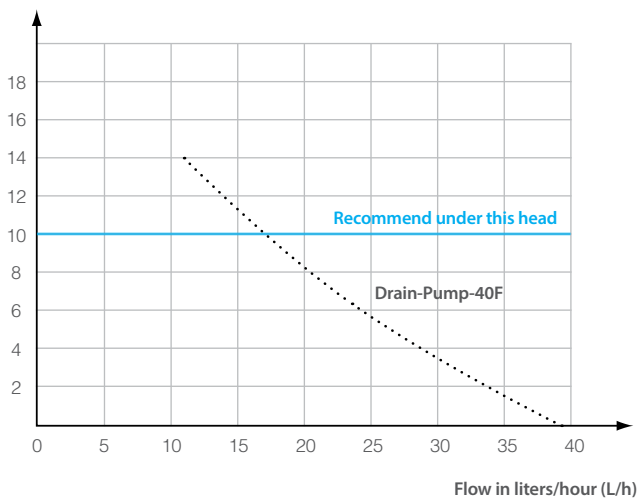
- Suitable for all voltages
- Energy savings with rate power at 3W
- Two inlet ports on top or side
- Minimum noise and no vibration
- Built-in non voltage safety switch
- Easy to assemble with buckle design
- Certificate

Specification

Model	Drain-Pump-40F
Voltage	100-230V~ / 50-60Hz
Discharge Head	Max. 10m (33ft)
Flow Rate	Max. 40L/h (10.5GPH)
Tank Capacity	200ml
Mini Spilts up to	15KW (45,000btu/hr)
Sound Level at 1m	21dB(A)
Ambient Temperature	0°C - 50°C
Power Consumption	3W

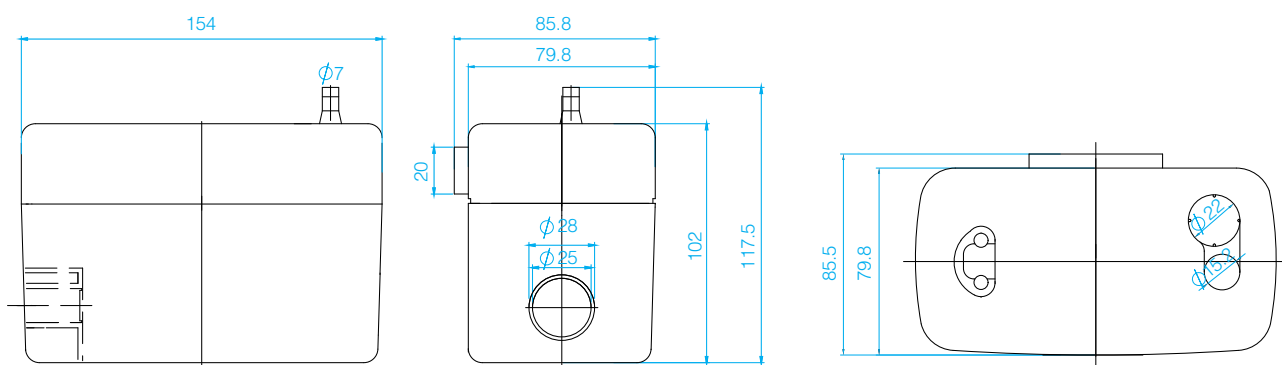
Flow Rate

Meters head (m)



Model	Performance (L/h @ Head)					
	0m	2m	4m	6m	8m	10m
Drain-Pump-40F	40	34	30	24	20	18


Dimension





Daikin Holdings Singapore Pte Ltd

10 Ang Mo Kio Industrial Park 2,
Singapore 569501

 6583 8888

 sales@daikin.com.sg

Specifications, designs and other content appearing
in this catalogue are correct as of October 2020 and
subject to change without notice.

DHOSMPC2010