



Product Catalogue

Trane Water Fan & Coil

FWC 003-015 – 4 Way Cassette Unit

FWH 002-006 – Hi Wall Unit





Introduction

Copyright

This document and the information in it are the property of Trane, and may not be used or reproduced in whole or in part without written permission. Trane reserves the right to revise this publication at any time, and to make changes to its content without obligation to notify any person of such revision or change.

Trademarks

All trademarks referenced in this document are the trademarks of their respective owners.

Warnings, Cautions, and Notices

Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

NOTICE

Indicates a situation that could result in equipment or property-damage only accidents.

Table of Contents

Nomenclature.....	5
Features & Benefits.....	6
Brushless DC Motor	6
Water valve	6
Temperature control	7
Cassette Units:.....	7
Hi Wall Units:	7
General data	8
Dimensions and Specifications	12
Dimensions 50/60Hz.....	12
Performance factors.....	16
Water valves	17
Electrical data and controls.....	20
50 / 60Hz electrical diagrams.....	20
Controls	23
Wired control.....	23
Infrared remote control	23

Nomenclature

F	W	C	0	0	3	2	N	1	A	A	L
1	2	3	4	5	6	7	8	9	10	11	12

Digits 1-3: Nomenclature

FWC = 4-Way Cassette Unit DC Motor
 FWH = Hi Wall unit DC motor

Digits 4-6: CFM Normalized Airflow

002 = 250 CFM
 003 = 300 CFM
 004 = 400 CFM
 005 = 500 CFM
 006 = 600 CFM
 008 = 750 CFM
 009 = 850 CFM
 010 = 950 CFM
 012 = 1200 CFM
 015 = 1500 CFM

Digit 7: Unit type

2 = 2 pipe

Digit 8: Electric Heating

N = None

Digit 9: Voltage / Phase / Frequency

F = 220-240V/1Ph/50-60Hz

Digit 10: Thermostat Options

0 = Controller suitable for remote and wired control (ordered separately)

Digit 11: Service Code

A = Version A

Digit 12: Region

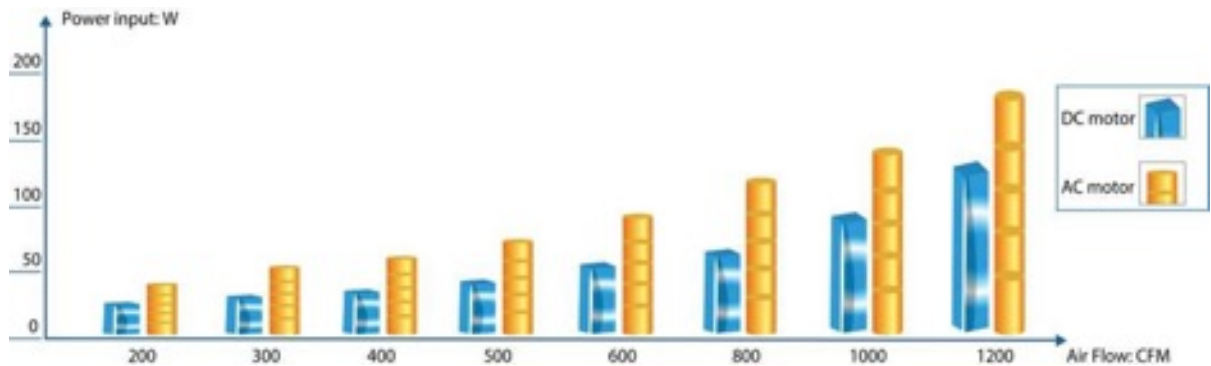
L = LAR

Features & Benefits

Trane chilled water fan coils are designed and manufactured based on advanced technology and materials. Its super slim design has advantages from an aesthetic perspective, space saving and ease of installation. With the design that allows a large volume of air flow, these models can increase the ventilation frequency of the room and balance the temperature distribution within the rooms. Cassette fan coil units also have the option of a fresh air inlet to improve indoor air quality. They can be applied in hotels, offices, hospitals, airports, etc.

This new Trane DC FCU equipment adopts brushless DC motor, the DC motor is up to 90% efficient.

The power consumption of the DC FCU can be reduced by more than 30% compared to a similar FCU with traditional AC motor.



Brushless DC Motor

The robust motor uses a fully enclosed designed structure and is easy to maintain. The motor bearings can run up to 80,000 hours continuously with high operating efficiency that additionally saves energy.



Water valve

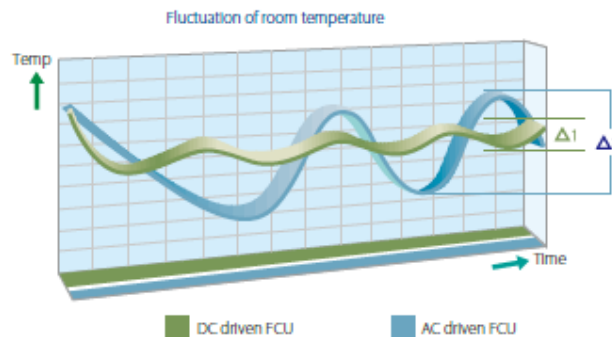
Wall-mounted (FWH) models come standard with a 3-way valve with a built-in bypass. On the other hand, Cassette (FWC) units do not include a standard valve; this must be ordered separately.

Details of the valve that ships with the High Wall (FWH) models are shown at page 17.



Temperature control

The inverter DC fan coil fan motor adjusts the air outlet flow based on the thermal load of the room, achieving less fluctuation in temperature and better thermal comfort of the environment.



Cassette Units:

- Four-way air discharge and rotating blades for better air Distribution.
- Elegant appearance that matches the architectural design.
- Exclusive design of the centrifugal fan with high efficiency and ultra low noise level.
- Outside air intake in models 06 to 15.
- Side outlet for auxiliary duct to adjoining room in models 06 to 15.
- Internal drain pump to drain condensation water. 500 mmH₂O in equipment 03 to 05 and 750 mmH₂O in equipment 06 to 15.
- Low weight and easy installation.
- Wired (TCONTKJR12B) or wireless (TCONTRM05B) controller options.
- Option of built-in 3-way valve (RAYVALV0331 or RAYVALV0305).

Hi Wall Units:

- Sleek new panel design that integrates easily into all interior designs.
- Low noise level with multi-directional air outlet.
- 3-way valve included as STD with high wall units.
- Low weight and easy installation.
- Wired (TCONTKJR12B) or wireless (TCONTRM05B) controller options.

General data

4-way cassette units - 003, 004, 006 (50 / 60Hz)

4-way cassette units

FWC			003	004	005
Air volume	High	CFM	314	359	459
	Med	CFM	252	281	359
	Low	CFM	189	224	290
Cooling capacity		W	2980	3960	4200
Heating capacity		W	4010	5400	5760
Electrical power		W	15	28	43
Noise level (H/M/L)		dB(A)	39/33/27	42/36/30	43/38/32
Water flow		M ³ /hs	0.53	0.70	0.75
Water pressure drop		kPa	10	11.5	12.32
Panel	Net dimensions (W × H × D)	mm	647×50×647		
	Net weight	kg	2.5		
	Packing size (W × H × D)	mm	715×123×715		
	Gross weight	kg	4.5		
Indoor Unit	Net dimensions (W × H × D)	mm	575×261×575		
	Net weight (with EAH)	kg	16.5		
	Packing size (W × H × D)	mm	670×290×670		
	Gross weight	kg	22.5		
Hydraulic connection	Water inlet pipe	In	G3/4"		
	Water outlet pipe	In	G3/4"		
	Condensation tube	mm	ODØ25		

Notes:

1. Data is high speed performance with std static pressure.
2. Cooling conditions: Water inlet 7 ° C, temperature rise 5 ° C, air inlet 27 ° C DB / 19 ° CWB. Heating conditions: 50 ° C water inlet, 20 ° C air inlet, the same water flow as the cooling conditions.
3. Noise is tested in an anechoic test room.

4-way cassette units - 006, 008, 009 (50 / 60Hz)

FWC			006	008	009
Air volume	High	CFM	691	722	853
	Med	CFM	580	600	674
	Low	CFM	451	476	595
Cooling capacity		W	5930	6120	7520
Heating capacity		W	8420	8620	10370
Electrical power		W	41	49	68
Noise level (H/M/L)		dB(A)	43/39/33	44/40/34	45/40/37
Water flow		M ³ /hs	1.05	1.10	137
Water pressure drop		kPa	19.2	21.3	20.1
Panel	Net dimensions (W x H x D)	mm	950x45x950		
	Net weight	kg	6		
	Packing size (W x H x D)	mm	1035x90x1035		
	Gross weight	kg	9		
Indoor Unit	Net dimensions (W x H x D)	mm	840x230x840	840x230x840	840x300x840
	Net weight (with EAH)	kg	23	23	27
	Packing size (W x H x D)	mm	900x237x900	900x237x900	900x307x900
	Gross weight	kg	28	28	33
Hydraulic connection	Water inlet pipe	In	RC3/4"		
	Water outlet pipe	In	RC3/4"		
	Condensation tube	mm	ODØ32		

Notes:

1. Data is high speed performance with std static pressure.
2. Cooling conditions: Water inlet 7 ° C, temperature rise 5 ° C, air inlet 27 ° C DB / 19 ° CWB. Heating conditions: 50 ° C water inlet, 20 ° C air inlet, the same water flow as the cooling conditions.
3. Noise is tested in an anechoic test room.

General data
4-way cassette units - 010, 012, 015 (50 and 60 Hz)

FWC			010	012	15
Air volume	High	CFM	900	930	1100
	Med	CFM	720	806	832
	Low	CFM	647	727	704
Cooling capacity		W	7840	7870	11190
Heating capacity		W	10860	10920	14920
Electrical power		W	75	85	126
Noise level (H/M/L)		dB(A)	46/42/39	48/44/41	49/43/39
Water flow		l/min	23.6	29.8	36.9
Water pressure drop		kPa	31.2	44	40
Panel	Net dimensions (W × H × D)	mm	950×45×950		
	Net weight	kg	6		
	Packing size (W × H × D)	mm	1035×90×1035		
	Gross weight	kg	9		
Indoor Unit	Net dimensions (W × H × D)	mm	840×300×840		
	Net weight (with EAH)	kg	27	27	29.5
	Packing size (W × H × D)	mm	900×330×900		
	Gross weight	kg	33	33	34.5
Hydraulic connection	Water inlet pipe	In	RC3/4"		
	Water outlet pipe	In	RC3/4"		
	Condensation tube	mm	ODØ32		

Notes:

1. Data is high speed performance with std static pressure.
2. Cooling conditions: Water inlet 7 ° C, temperature rise 5 ° C, air inlet 27 ° C DB / 19 ° CWB. Heating conditions: 50 ° C water inlet, 20 ° C air inlet, the same water flow as the cooling conditions.
3. Noise is tested in an anechoic test room.

High Wall units - 002, 003, 004, 005, 006 (50 and 60 Hz)

High Wall units

FWC			002	003	004	005	006
Air volume	High	CFM	289	344	489	507	575
	Med	CFM	267	285	405	435	499
	Low	CFM	235	242	347	372	421
Cooling capacity		W	2700	2910	3810	4470	4870
Heating capacity		W	3020	3290	5080	5680	6310
Electrical power		W	12	15	34	26	38
Noise level (H/M/L)		dB(A)	32/30/27	32/27/23	45/39/35	38/34/30	44/40/35
Water flow		M ³ /hs	0.48	0.51	0.67	0.77	0.85
Water pressure drop		kPa	31.61	37.2	56.75	41.17	50
Indoor Unit	Net dimensions (W x H x D)	mm	915x290x233			1072x315x237	
	Net weight	kg	12.7	12.7	15.1		14.9
	Packing size (W x H x D)	mm	1020x390x315			1180x415x315	
	Gross weight	kg	17.3	17.6	16.3	19	18.6
Hydraulic connection	Water inlet pipe	In	G3/4"				
	Water outlet pipe	In	G3/4"				
	Condensation tube	mm	ODØ20				

Notes:

1. Data is high speed performance with std static pressure.
2. Cooling conditions: Water inlet 7 ° C, temperature rise 5 ° C, air inlet 27 ° C DB / 19 ° CWB. Heating conditions: 50 ° C water inlet, 20 ° C air inlet, the same water flow as the cooling conditions.
3. Noise is tested in an anechoic test room.

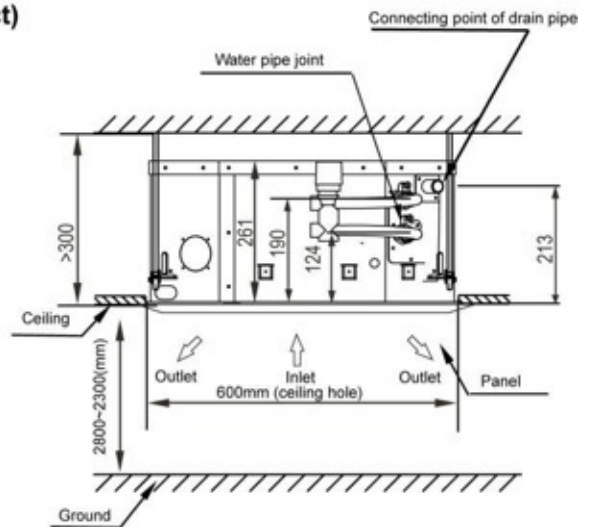
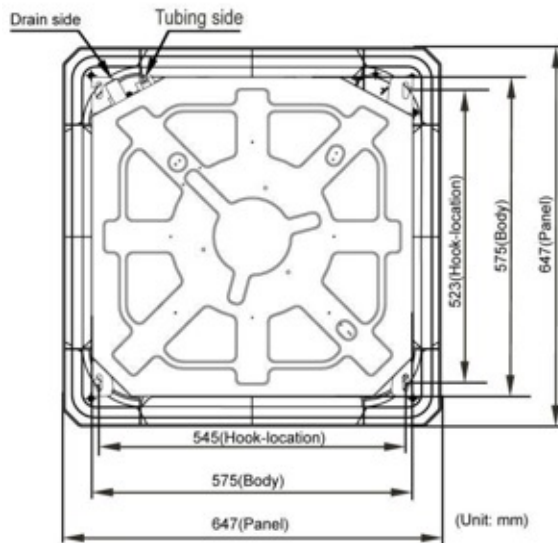
Dimensions and Specifications

Dimensions 50/60Hz

FWC003-005

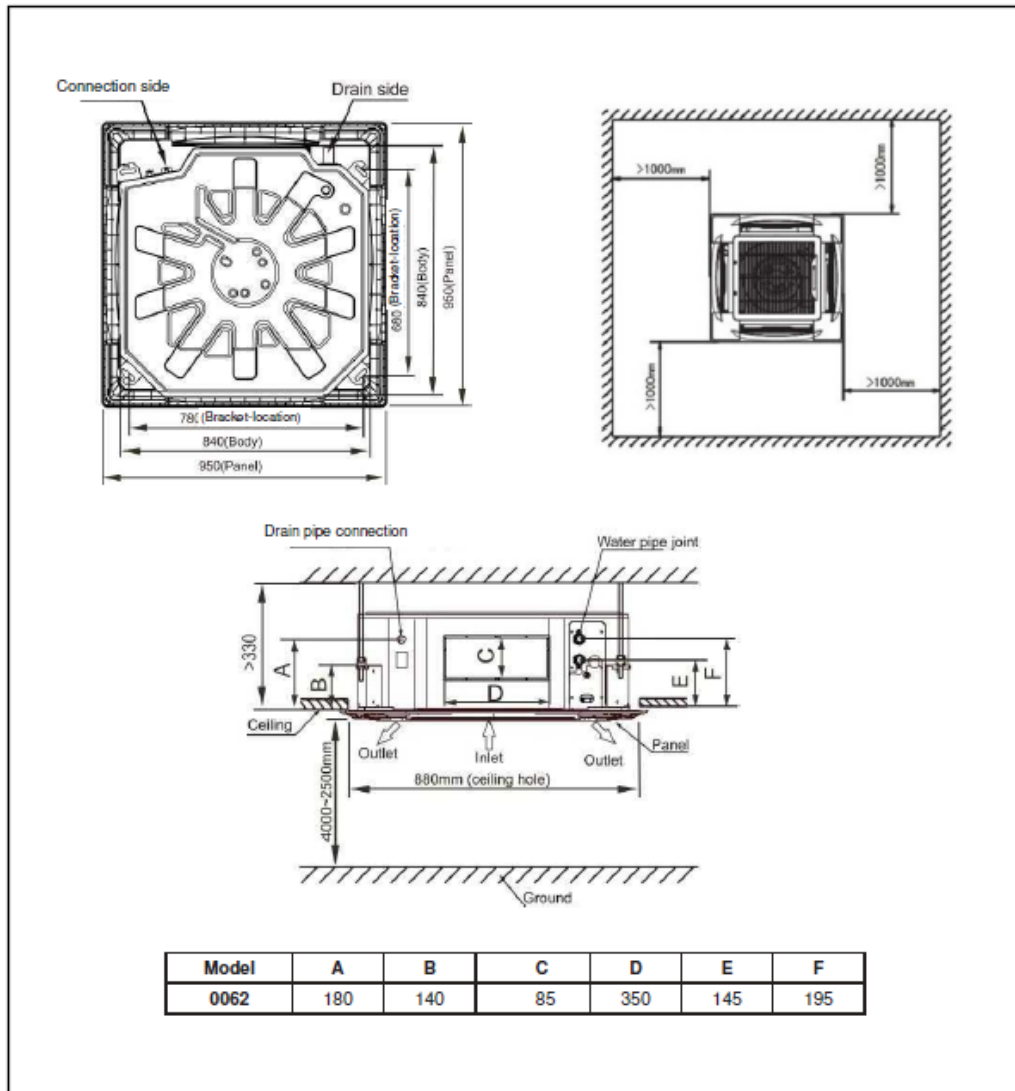


**Four-way Cassette
(compact)**



Dimensions and Specifications

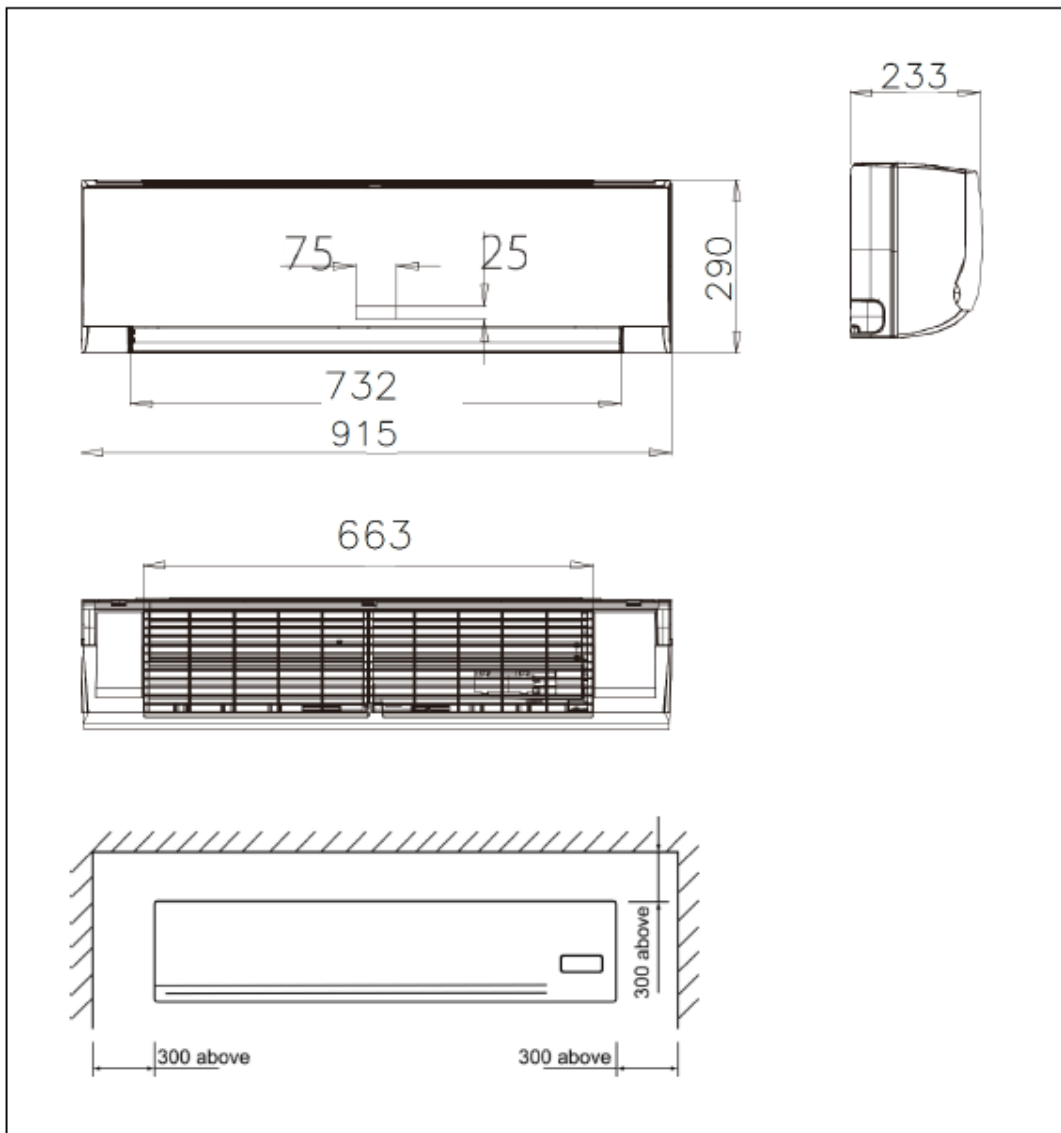
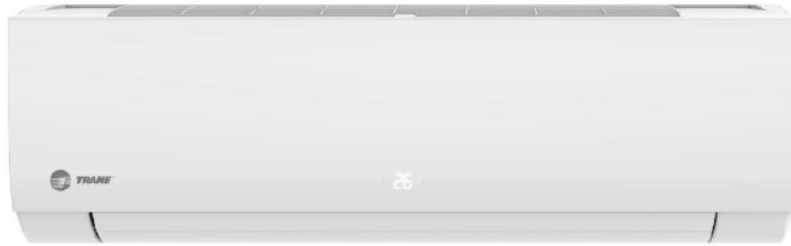
FWC006~015





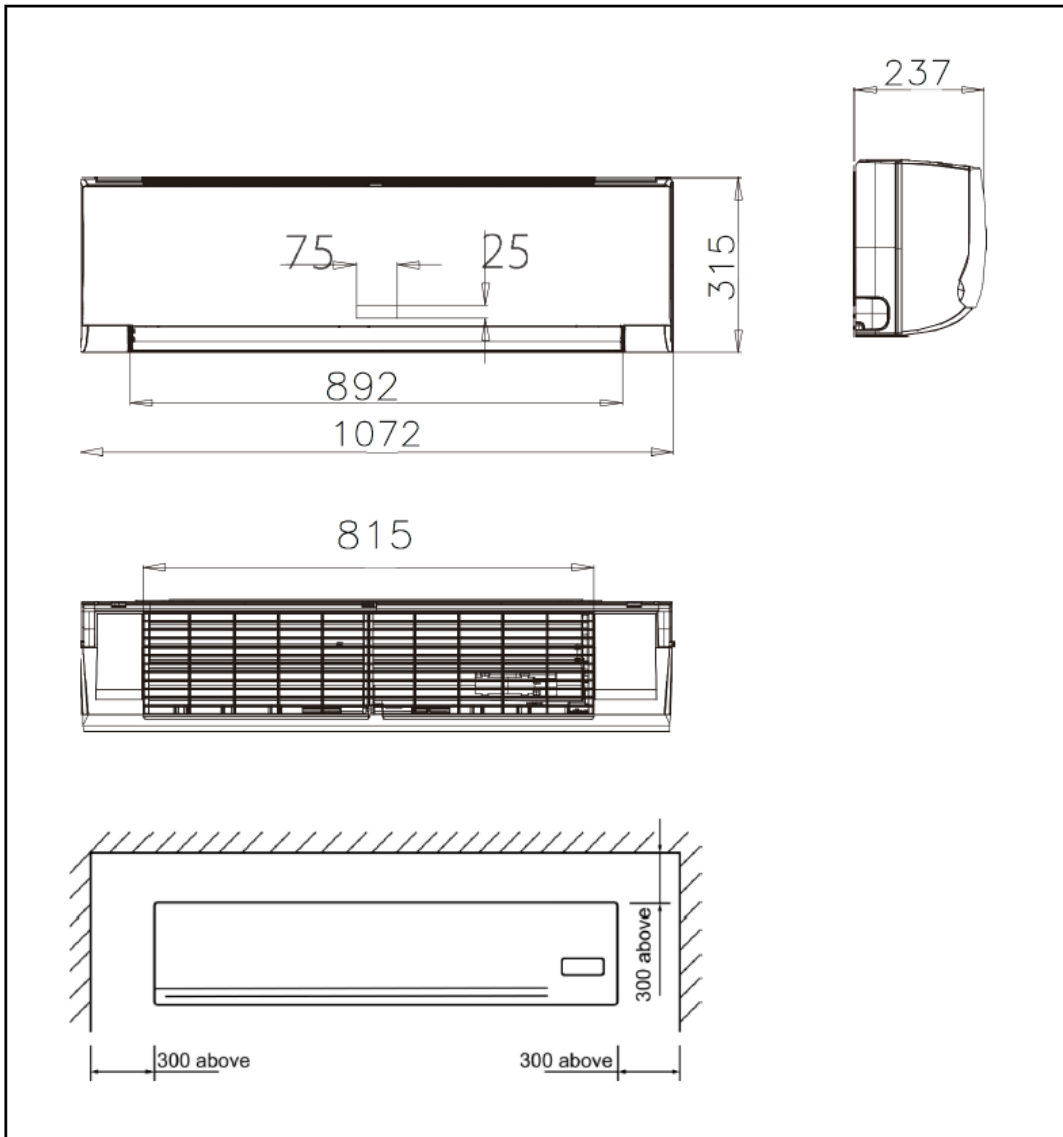
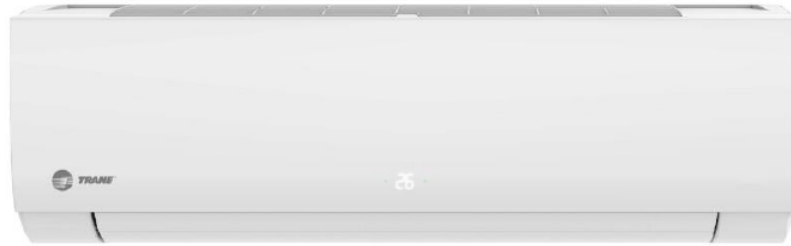
Dimensions and Specifications

FWH002~004



Dimensions and Specifications

FWH005~006



Performance factors

Cooling modification tables:

Capacity detail tables:

- See Manual
 - MC-SVN002A-EM for fan coil units 4-way cassette.
 - MC-SVX001A-EM for compact 4-way cassette fan coil units.
 - SUB-WM-FAC-0022-2021-R00 / 0032-2021-R00 / 0042-2021-R00 / 0052-2021-R00 / 0062-2021-R00 for High Wall units fan coil units.

Performance modification table with altitude (4-way cassette and wall units).

Altitude (m)	TC	SC	TH
500	0.98	0.95	0.95
1000	0.97	0.91	0.91
1500	0.95	0.86	0.86
2000	0.94	0.82	0.82
2500	0.93	0.78	0.78
3000	0.91	0.74	0.7

Water valves

Wall-mounted (FWH) standard models include a 3-way valve with built-in bypass. On the other hand, Cassette (FWC) units do not include a standard valve; this must be ordered separately.

The incorporated valve in the High Wall (FWH) models is as follows:

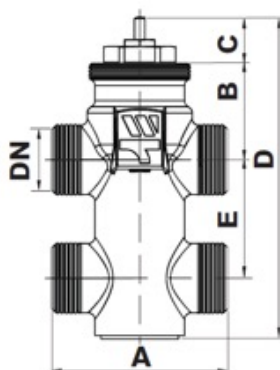


3-way valve 4 ports				Use as a diverter valve				Use as a mixing valve			
Model	DN Inches	DN mm	Max. PN pressure operation [bar]	Kvs	Kv by-pass	Max. differential operating pressure (noise <38 db A) [bar]	Closing pressure drop with actuators 22C NO/NC [bar]	Kvs	Kv by-pass	Max. differential operating pressure (noise <38 dBA) [bar]	Closing pressure drop with actuators 22C NO/NC [bar]
FWH002 - 04	1/2"	15	16	1.7	1.3	0.8	2.5	1.7	1.2	0.7	2
FWH005 - 06	3/4"	20	16	2.8	1.8	0.7	1.5	2.5	1.6	0.5	1

KVs = nominal value of the flow in the main valve path in m³ / h with the valve fully open at a pressure of 1 bar and with a water temperature of 20 ° C.

Delta Pmax = maximum dynamic differential pressure at the ends of the valve being fully open, without risk of noise (<38 dBA).

Delta Ps = maximum static differential pressure at the valve ends against which the valve can be opened (through its internal spring for three-way versions; through the actuator for two-way versions).

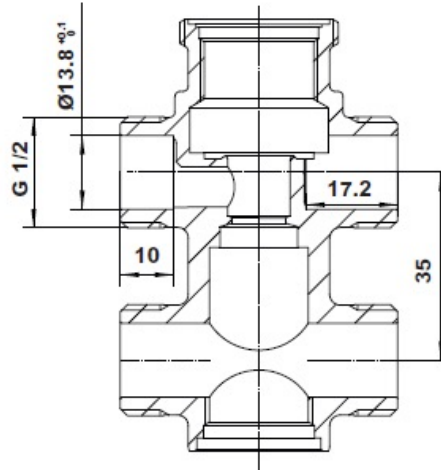


Models	DN	A	B	C	D	E
FWH002 - 04	1/2"	52	29	13.5	95.5	35
FWH005 - 06	3/4"	56	28	13.5	112.5	50

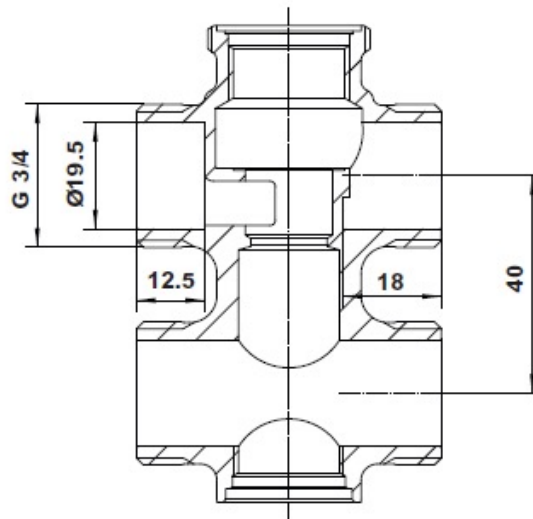
Valve connection threads are BSP male type.

Dimensions and Specifications

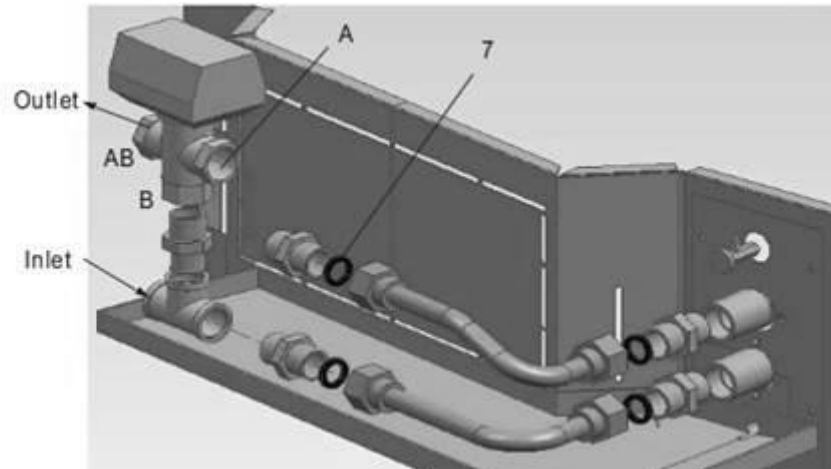
FWH 002 – 004



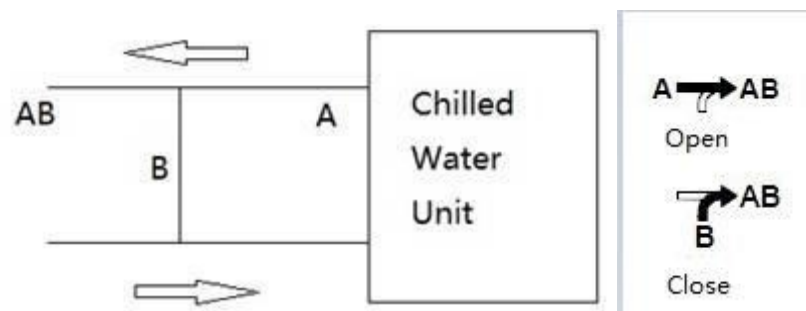
FWH 005 – 006



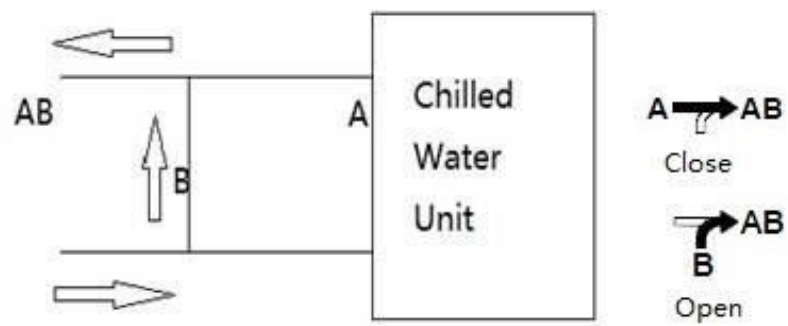
Examples of water flow in High Wall units with control valves:



Working:



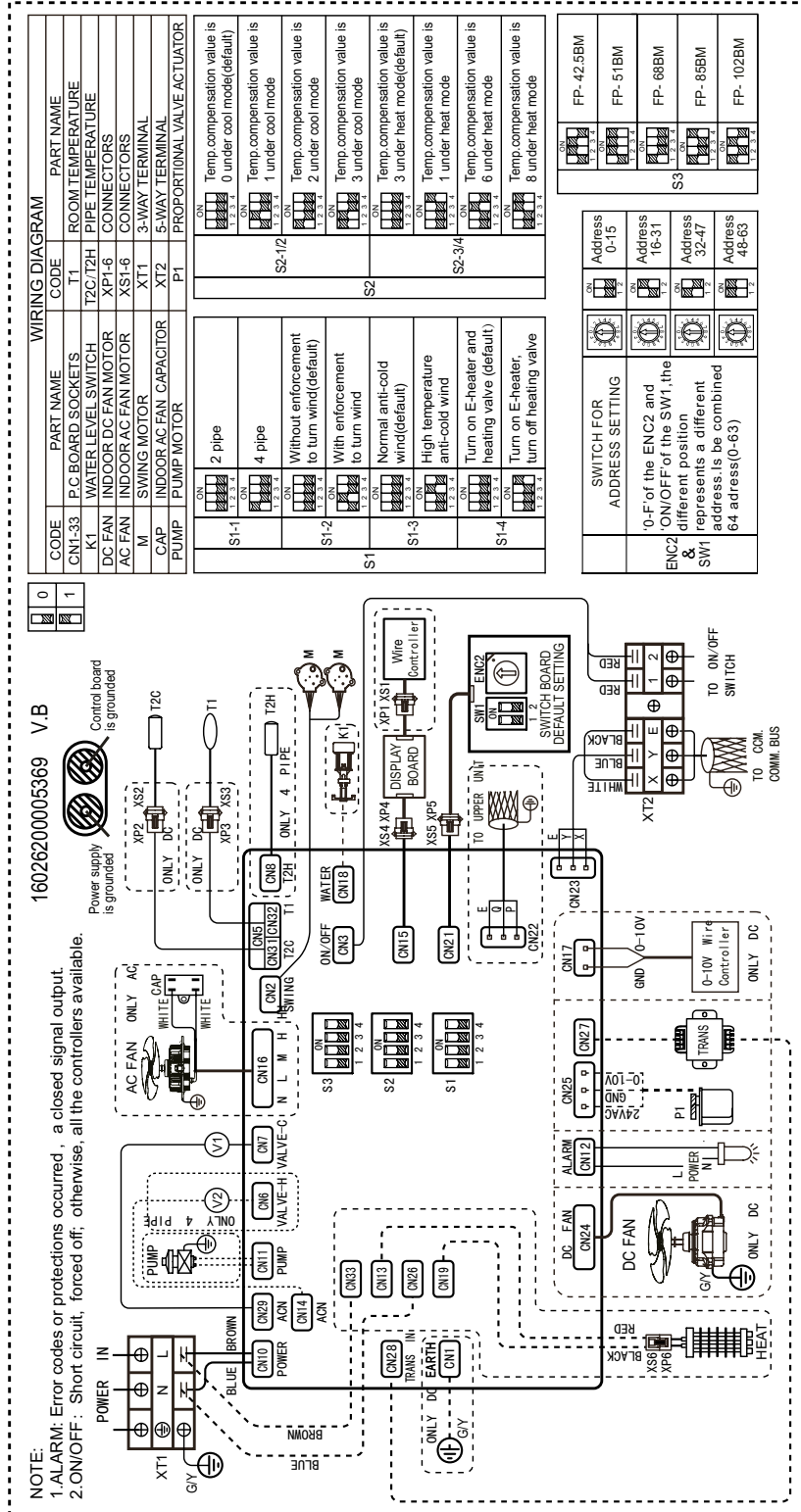
When not in operation:



Electrical data and controls

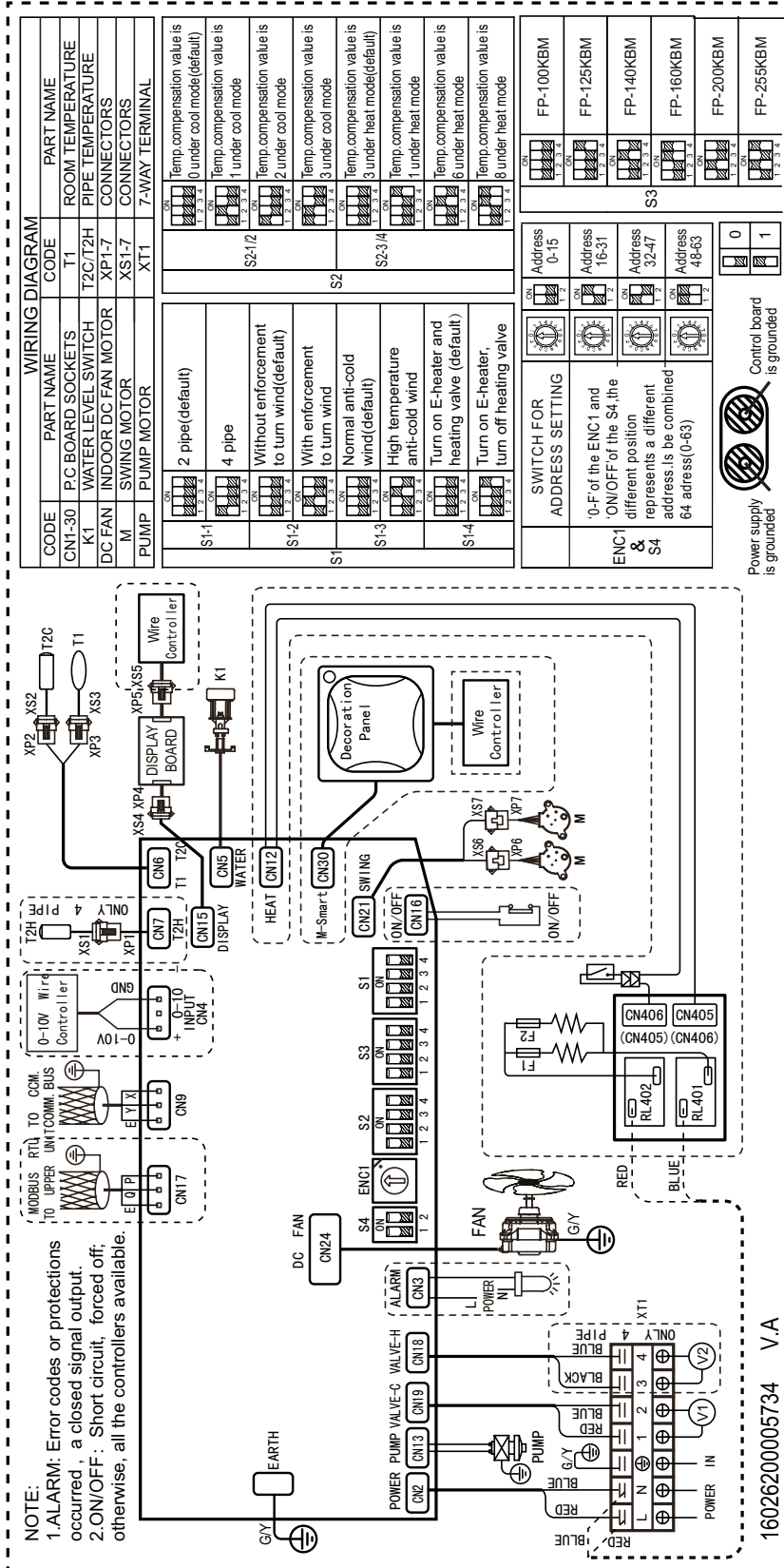
50 / 60Hz electrical diagrams

FWH 002~006



Electrical data and controls

FWC006-015



Controls

Wired control

- Voltage: 5V DC.
- Environmental conditions:
 - Temperature: -15~43°C.
 - Relative Humidity: 40%~90%.
 - Temperature control range: 17~30°C.
 - Temperature control precision: $\pm 1^{\circ}\text{C}$.
- Large LCD screen.
- Modes: auto/ cool/heat/dry/fan.
- Settings:
 - Fan speed: auto/high/medium/low.
 - Economical mode of operation.
 - Time setting.
 - Temperature setting.
 - On / Off.



Infrared remote control

- Mode selection:
 - Auto, Cool, Dry, Heat, Fan only
- Temperature setting range: 17 °C to 30 °C.
- Daily timer setting.
- Air outlet louver oscillation.
- Fan speed setting: H/M/L/Auto.
- Economy operation button.





Controls

Refer to manuals MC-SVN002-EN / MC-SVN004-EN and SVX001A-EN for additional details on performances and capacities.



Trane - by Trane Technologies (NYSE:TT), a global climate innovator - creates comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or tranetechnologies.com.

Trane has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.