

ACHIEVE



YOUR VISION

Fan Coil Unit
Atys Series





We don't just manufacture & supply air conditioning systems; we also provide a broad range of supporting HVAC services to ensure our customers receive the best possible aftersales care and service HVAC support.



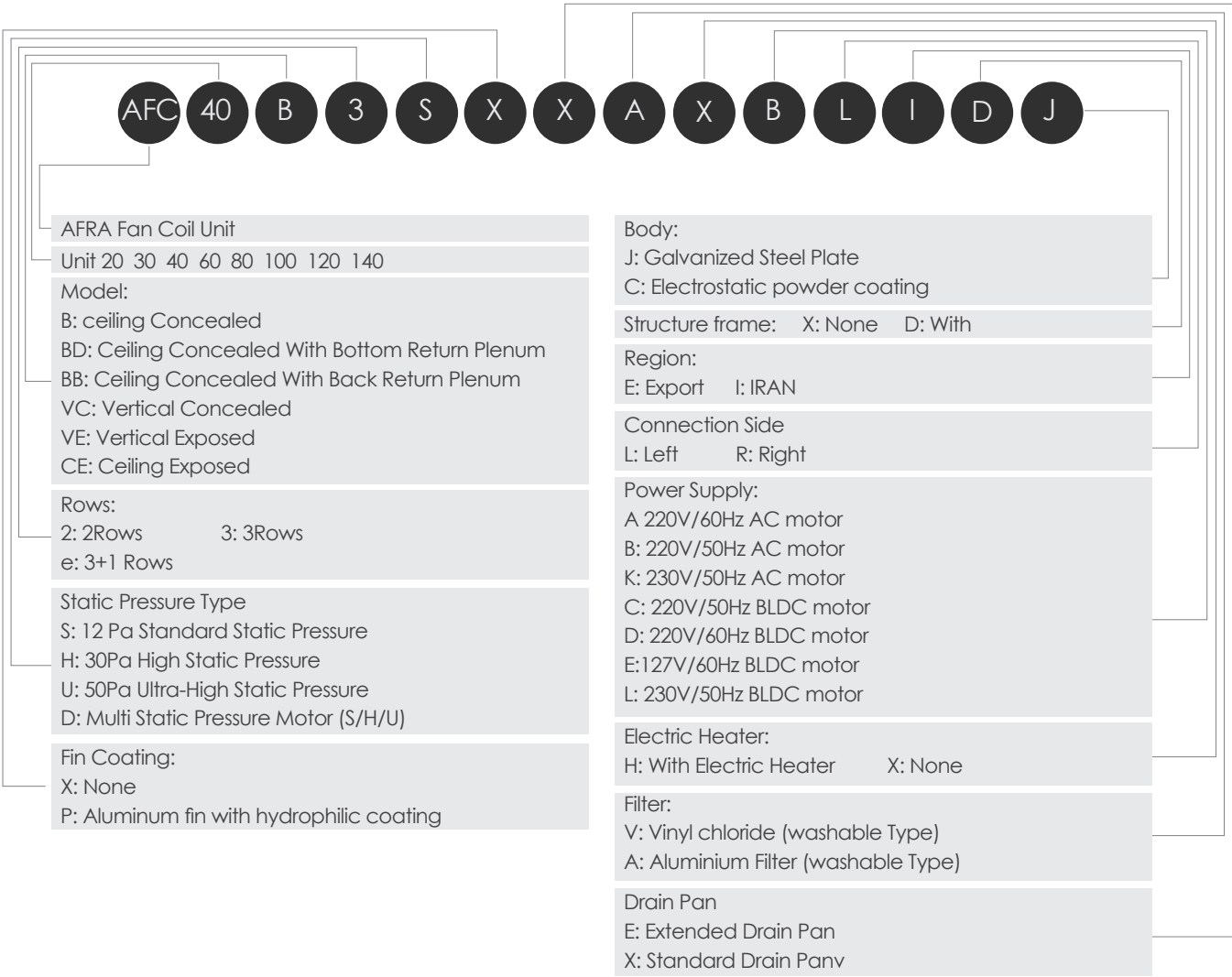
AFRA Company is able to provide ceiling concealed fan coil units with different technical specifications.

The air flow is from 350 m³/h to 2400 m³/h (at high speed).

The motor of the fan coil unit is the hermetic aluminum shell in 7 speed and the customer can use as a low and middle static pressure if necessary, during installation.

We are flexible for design and manufacture if it can be customized according to the requirement. The fan coil can equipped with suitable structure frame For All models to easy installation. Low noise, reliable energy saving, easy installation and the maintenance is our mission to achieve your trust.

Nomenclature



General Features



COIL:

- The coil can have 2 or 3 or 4 rows, with copper tubes mechanically bonded into corrugated aluminum fin .
- Optional copper fin or hydrophilic blue or Gold fin is available.
- Water inlet / outlet connections are 3/4-inch female pipe thread (BT).
- Coil assembly is tested over 20kg/cm² (300psig).
- A manual air vet is fitted with a drain line to the drain pan to avoid any water drips when venting.
- A water drain is located at the bottom of the coil header.

FILTER:

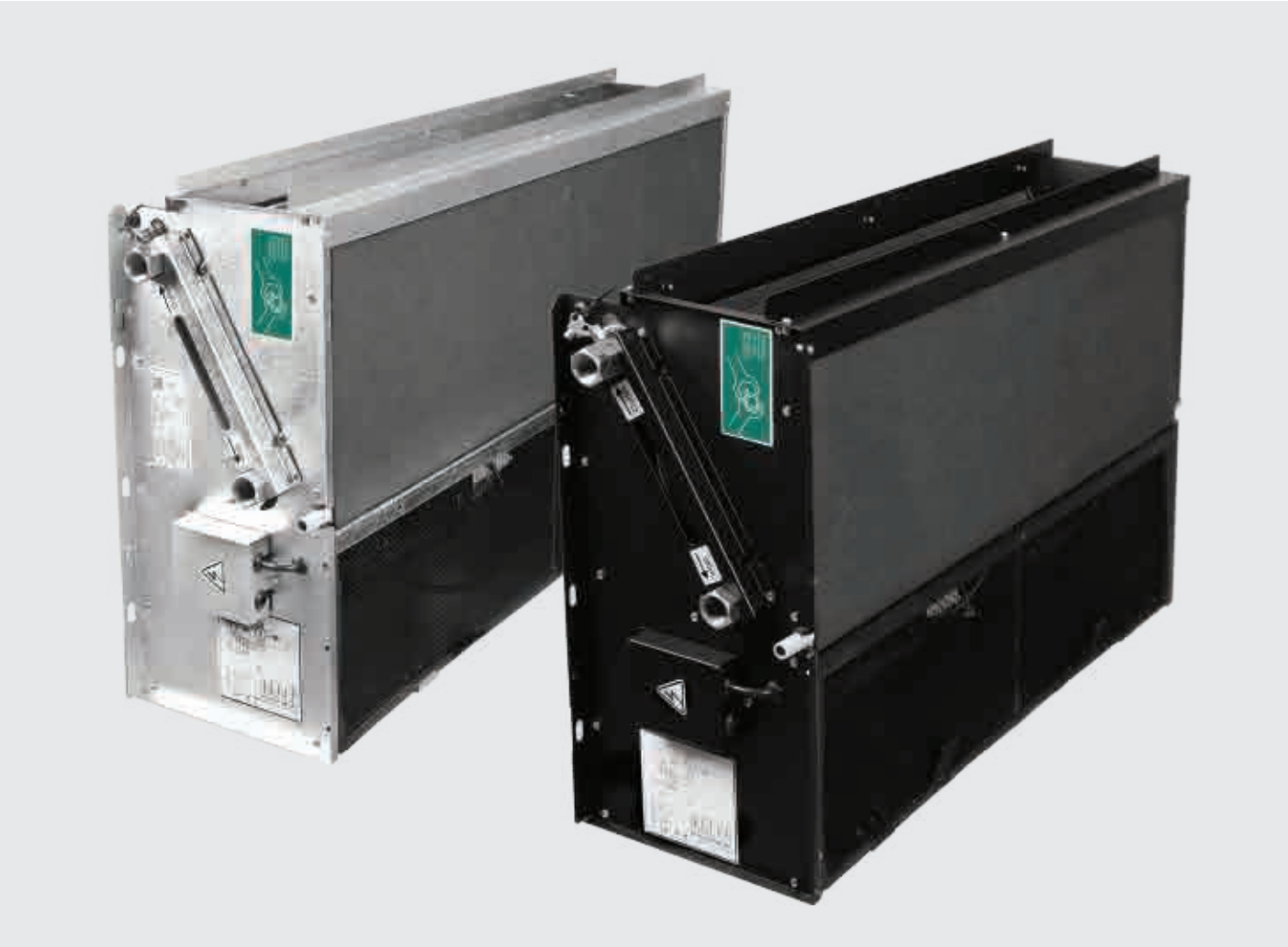
Regenerable synthetic fiber enclosed with wire mesh protection. The filter is easily removable for cleaning and maintenance. Filter efficiency G1, G2 and G3 (MERV 1-5).

Fan and Motor:

- Standard ABS fan wheel with optional galvanized steel fan wheel for low noise application.
- The motor comes with hermetic aluminum alloy casing and permanently lubricated ball bearing.
- The motor has grade B class insulation; with built-in thermal cutout.
- AC-motor – V230/1Ph/50-60Hz single phase, 3, 5, 6 or 7 speeds are available depending on model, 3 are wired to the fan speed switch

CASING:

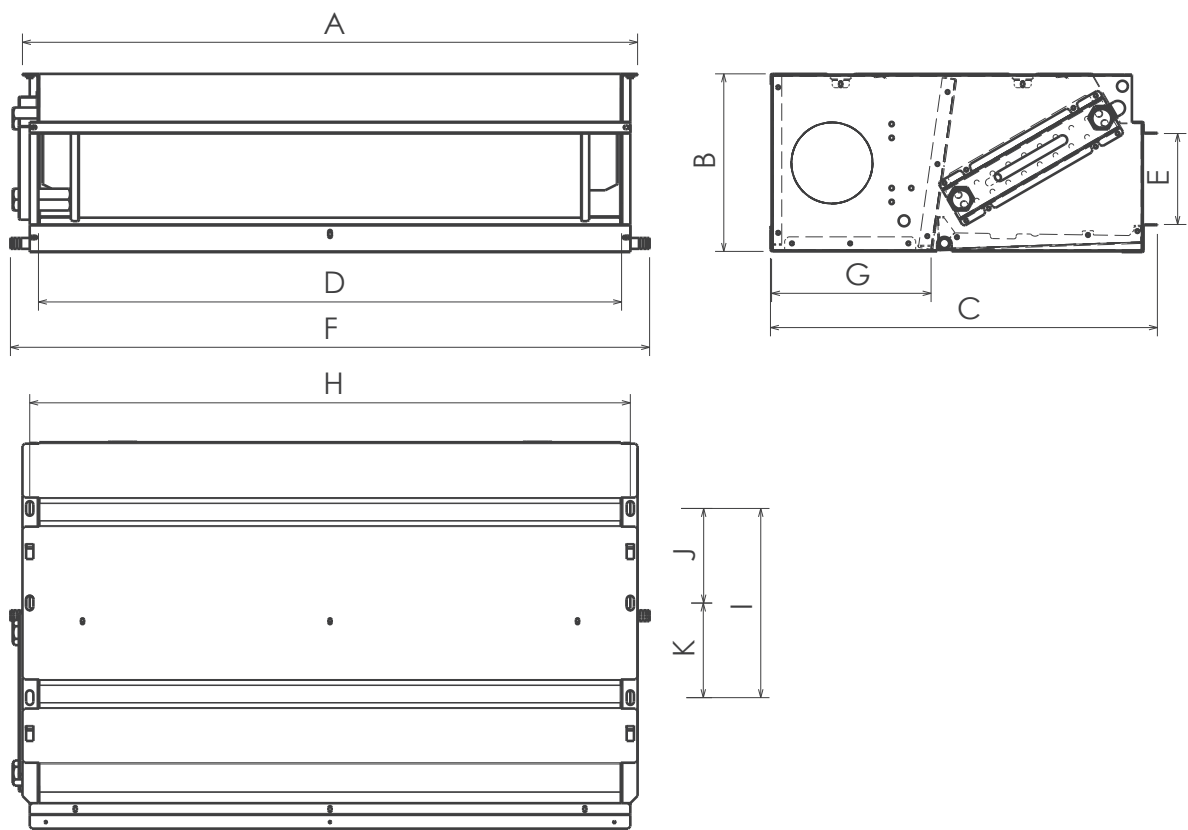
- Frame construction made of galvanised. steel,
- Casing epoxy powder coated RAL 9005 is available on request
- Fresh air inlet



MODEL		AFC20B	AFC30B	AFC40B	AFC60B	AFC80B
Rated air flow volume (CFM)	High	200	300	400	600	800
	Medium	140	210	280	420	560
	Low	90	135	180	310	380
Cooling capacity (Bthu)	High	6341	8973	12450	16500	24182
	Medium	5181	7395	10241	13820	20594
	Low	3870	5622	7623	11679	16871
Heating capacity (Bthu)	High	16972	24229	32671	44967	65000
Fan	Model	Standard ABS fan wheel with optional galvanized steel fan wheel for low noise application				
	Quantity	1	1	2	2	3
Motor	Model	Hermetic aluminum shell in 7 speed				
	Insulation	Level B				
	Quantity	1	1	1	1	2
Power supply (V/PH/HZ)		220V/1ph/50Hz				
Evaporator	Coil model	copper tubes mechanically bonded into corrugated aluminum fin				
	Working pressure	≥1.6mPa				
	Water running pipe diameter	RC3/4"(DN20)inner thread taper pipe				
	Condensing water pipe diameter	RC3/4"(DN20)inner thread taper pipe				
	Rows quantity	2	2	2	2	2
	Water flow volume (GPM)	2	2.5	3	3.5	4.5
	Water PD (FT H2O)	2.1	3.7	6.22	9	17.1
Overall dimensions	Length	678	778	878	978	1228
	Width	512	512	512	512	512
	High	245	245	245	245	245



Remark:
1: Refrigeration test conditions: inlet dry bulb 27°C and wet bulb 19.5°C. Water inlet temperature 7°C and water temperature difference is 5°C; Heating test conditions inlet air dry bulb 21°C and inlet hot water 60°C



MODEL	A	B	C	D	E	F	G	H	I	J	K
AFC 20 B	645	245	512	601	125	678	220	625	260	130	130
AFC 30 B	745	245	512	701	125	778	220	725	260	130	130
AFC 40 B	845	245	512	801	125	878	220	825	260	130	130
AFC 60 B	945	245	512	901	125	978	220	925	260	130	130
AFC 80 B	1195	245	512	1151	125	1228	220	1175	260	130	130
AFC 100 B	1445	245	512	1401	125	1478	220	1425	260	130	130

SIZE (m)



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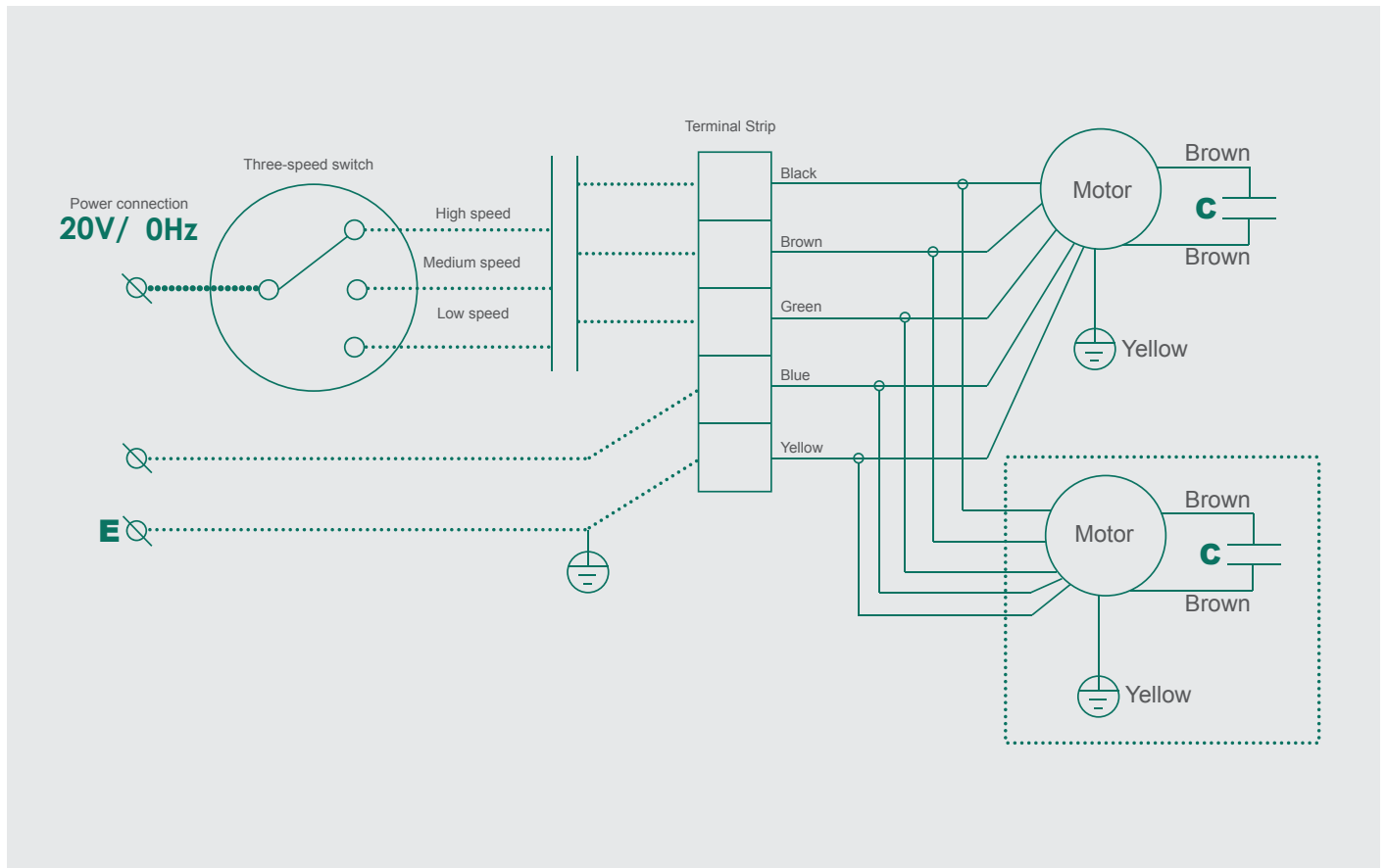
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Electrical wiring diagram

1. The unit uses single-phase 220V power supply and the power supply fluctuation can not exceed 10%.
2. Wiring must be carried out according the diagram strictly on the unit.



Wiring instructions:

- Wiring should be according to the dotted line;
- If wiring at static pressure illustrated by the nameplate, the three-speed switch including high, medium and low speed should be connected to 1, 2 and 3 terminals in turn;
- If wiring at secondary static pressure, the three-speed switch including high, medium and low grades should be connected to 2, and 4 terminals in turn

Notes: The wiring in the dotted line box is used for the dual-motor unit.

Cooling Performance Data

MODEL	GPM	PD (ft)	TH(Bthu)	SH(Bthu)
AFC20B	1	0.84	5150	3518
	1.5	1.7	5894	3795
	2	2.9	6341	3966
AFC30B	1.5	2	7654	5169
	2	3.2	8446	5464
	2.5	4.9	8973	5665
AFC40B	2	4.1	11000	7204
	2.5	6.1	11815	7524
	3	8.8	12410	7754
AFC60B	2.5	6.7	14737	9923
	3	9.2	15623	10252
	3.5	12	16500	10578
AFC80B	3	11.2	19245	13063
	3.5	14.8	20407	13868
	4	18.8	21407	13868
	4.5	23.2	22182	14161

2rows

DB:80°F
WB:67°F
Ent fluid :44.6°F
Altitude:4000 (ft)

MODEL	GPM	PD (ft)	TH(Bthu)	SH(Bthu)
AFC20B	1	0.84	5700	3721
	1.5	1.7	6564	4053
	2	2.9	7089	4262
AFC30B	1.5	2	8539	5500
	2	3.2	9425	5841
	2.5	4.9	10074	6098
AFC40B	2	4.1	12285	7706
	2.5	6.1	13176	8055
	3	8.8	13848	8325
AFC60B	2.5	6.7	16407	10549
	3	9.2	17536	11000
	3.5	12	18366	11310
AFC80B	3	11.2	21600	13941
	3.5	14.8	22855	14421
	4	18.8	23874	14818
	4.5	23.2	24742	15160

2rows

DB:80°F
WB:67°F
Ent fluid :41°F
Altitude:4000 (ft)

Cooling Performance Data

MODEL	GPM	PD (ft)	TH(Bthu)	SH(Bthu)
AFC20B	1	0.42	5991	4084
	1.5	0.86	6998	4460
	2	1.4	7534	4667
AFC30B	1.5	1	9071	6096
	2	1.65	10000	6448
	2.5	2.5	10890	6785
AFC40B	2	2	12723	8383
	2.5	3.05	13989	8862
	3	4.09	14755	9159
AFC60B	2.5	3.33	17135	11661
	3	4.4	18472	12155
	3.5	5.9	19541	12557
AFC80B	3	5.4	22657	15462
	3.5	7.2	24066	15981
	4	9.2	25240	16420
	4.5	11.3	26384	16853

3rows

DB :80°F

WB:67°F

Ent fluid :44.6°F

Altitude : 4000 (ft)

MODEL	GPM	PD (ft)	TH(Bthu)	SH(Bthu)
AFC20B	1	0.42	6688	4343
	1.5	0.86	7924	4821
	2	1.4	8393	5010
AFC30B	1.5	1	10090	6477
	2	1.65	11302	6946
	2.5	2.5	12085	7259
AFC40B	2	2	14234	8957
	2.5	3.05	15517	9459
	3	4.09	16468	9841
AFC60B	2.5	3.33	19151	12410
	3	4.4	20727	13012
	3.5	5.9	21866	13456
AFC80B	3	5.4	25202	16400
	3.5	7.2	26815	17018
	4	9.2	28305	17595
	4.5	11.3	29511	18068

3rows

DB :80°F

WB:67°F

Ent fluid :41°F

Altitude : 4000 (ft)

Heating Performance Data

MODEL	GPM	PD (ft)	Total Heating capa . (Bthu)70c	PD (ft)	Total Heating capa . (Bthu)60c
AFC20B	1	0.63	17517	0.65	15600
	1.5	1.3	18488	1.35	16500
	2	2.1	19000	2.26	16972
AFC30B	1.5	1.48	25557	1.53	22788
	2	2.48	26524	2.57	23665
	2.5	3.7	27134	3.83	24229
AFC40B	2	3	34898	3.17	31148
	2.5	4.75	35895	4.73	32056
	3	6.22	36567	6.45	32671
AFC60B	2.5	5	48183	5.2	42950
	3	6.82	49443	7.07	44107
	3.5	9	50373	9.3	44967
AFC80B	3	8.32	63500	8.63	56654
	3.5	11	65037	11.3	58039
	4	13.9	66200	14.4	59100
	4.5	17.1	67120	17.78	60000

2rows

MODEL	GPM	PD (ft)	Total Heating capa . (Bthu)70c	PD (ft)	Total Heating capa . (Bthu)60c
AFC20B	1	0.32	20788	0.32	18543
	1.5	0.65	21941	0.67	19613
	2	1.1	22533	1.13	20168
AFC30B	1.5	0.74	30576	0.77	27300
	2	1.24	31776	1.28	28404
	2.5	1.85	32500	1.91	29075
AFC40B	2	1.52	41749	1.58	37318
	2.5	2.28	42941	2.36	38419
	3	3.03	43736	3.14	39150
AFC60B	2.5	2.5	58261	2.58	52028
	3	3.33	59882	3.45	53524
	3.5	4.38	61059	4.54	54593
AFC80B	3	4.06	76877	4.21	68679
	3.5	5.34	78836	5.54	70472
	4	6.78	80303	7.03	71809
	4.5	8.37	81466	8.67	72883

3rows

OPTION

Structure frame

Filteration

Extra Drain Pan

Fresh air connection

Thermostat

PM Air delivery plenum

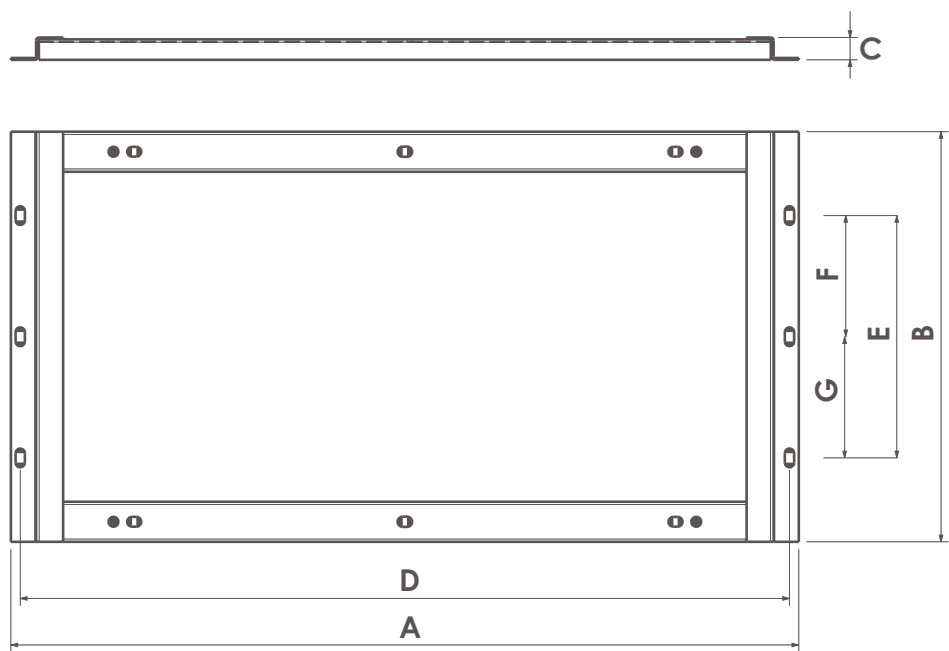
90°Air delivery plenum

Structure frame



Structure frame

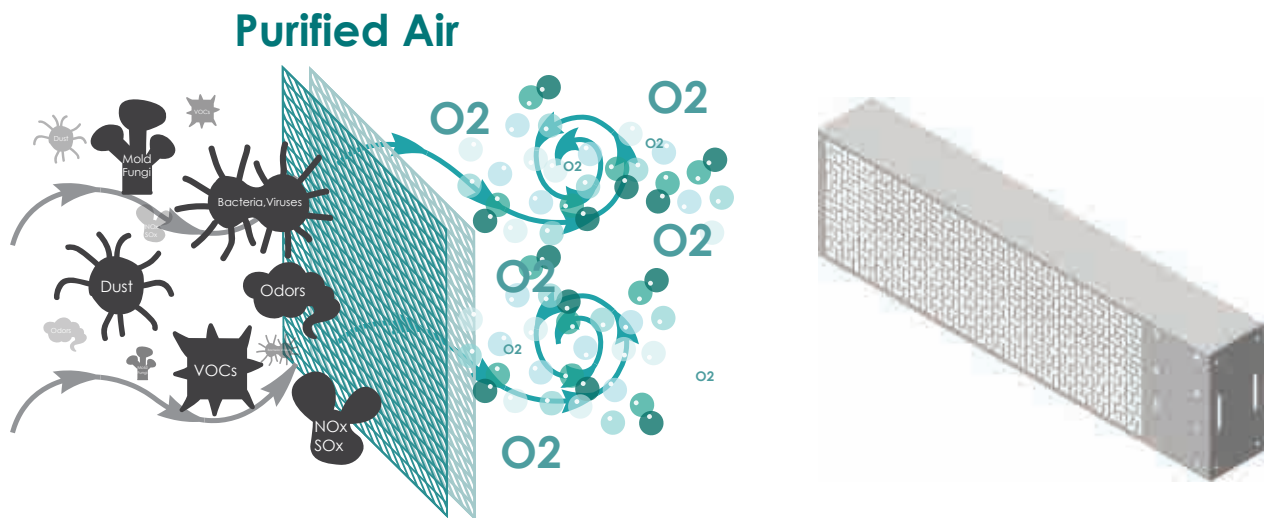
The fan coil can equipped with suitable structure frame For All models to easy installation.



MODEL	A	B	C	D	E	F	G
AFC 20 B	645	440	24	625	260	130	130
AFC 30 B	745	440	24	725	260	130	130
AFC 40 B	845	440	24	825	260	130	130
AFC 60 B	945	440	24	925	260	130	130
AFC 80 B	1195	440	24	1175	260	130	130
AFC 100 B	1445	440	24	1425	260	130	130

◀SIZE(m)

Filteration



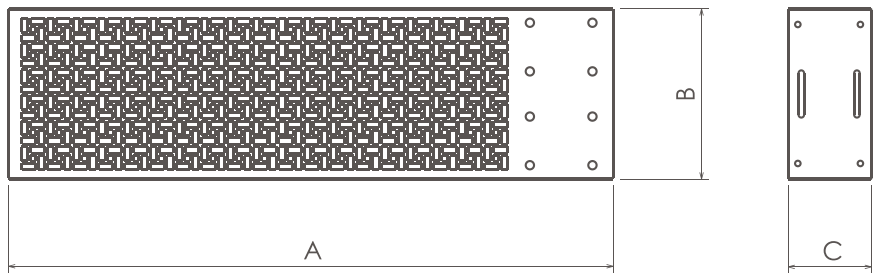
Industrial Leading Technology Nano-Tio2 Health, Air Sterilizer (optional)

By oxidizing and decomposing the harmful substances in the air AFRA Nano-Tio, healthy sterilization technology kills airborne germs, eliminates bad odors, and other harmful particles safely and efficiently.

- Biological pollutant e.g. bacteria and germs
- Organic pollutant volatile organic compounds (vocs) e.g. formaldehyde, benzene
- Molds, fungi
- Inorganic gaseous pollutant e.g. NOx, SOx
- Smoke and offensive odours

Nano-Tio, Healthy Air Sterilization Technology Contains the Following Features

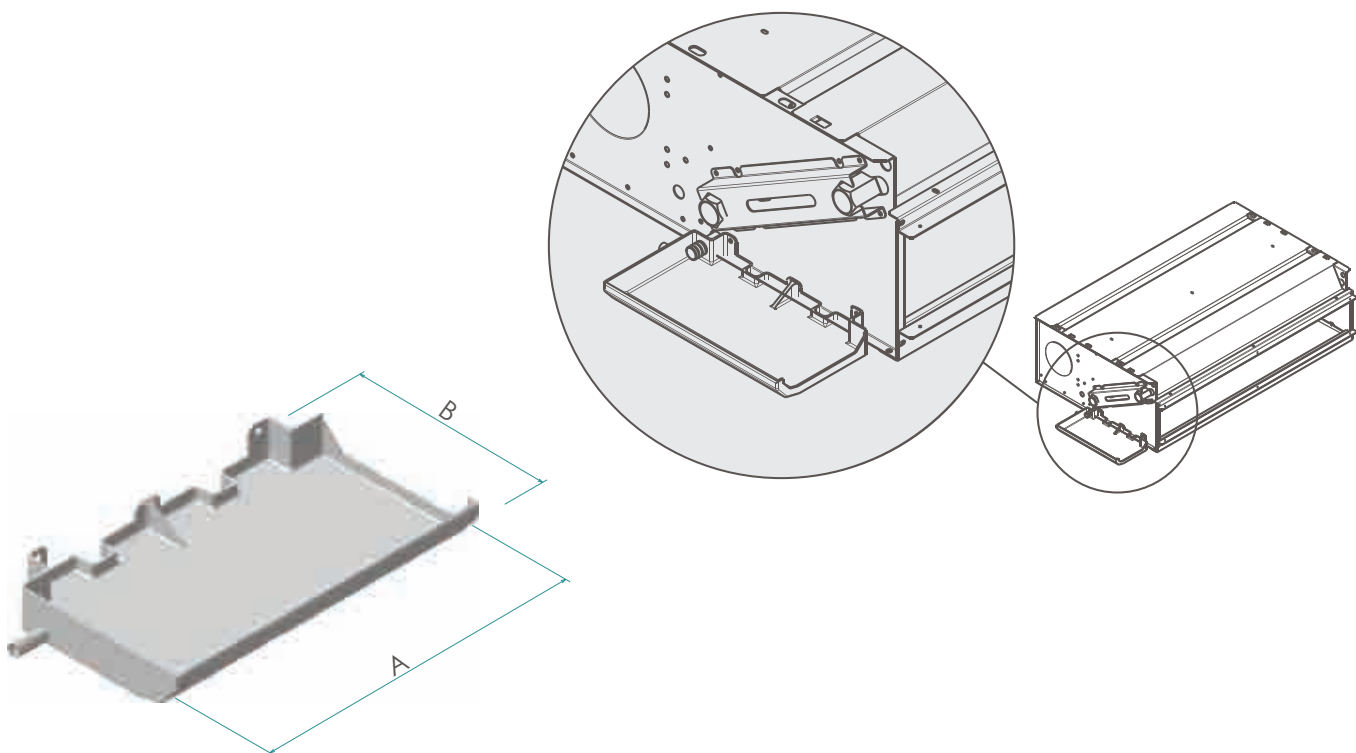
AFRA apply Nano grade Tio technology to fan coils, residential and commercial central air conditioners. Nano-grade Tioa has been recognised in 125 countries Tio, photo-catalysis not only filters bacteria but also kills them The ultraviolet light (UVA) in Nano-Tioa Healthy Air Sterilizer is designed to be durable, lasting up to 8,000 hours



MODEL	POWER INPUT (w)	A	B	C
AFC 20B	50	645	245	100
AFC 30B	50	745	245	100
AFC 40B	70	845	245	100
AFC 60B	70	945	245	100
AFC 80B	100	1195	245	100

◀ SIZE(m)

Extra Drain Pan



Extra drain pan		
CONNECTION SIDE	LEFT	RIGHT
SIZE (m)	A	B
	300	150

BSO extension condensate collection tray

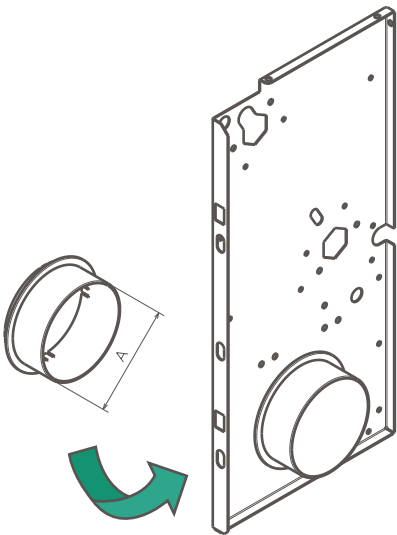
to cover valve assembly
(for horizontal units)

Fresh air connection

FRC

Fresh air connection (not mounted)

FRESH AIR		
SIZE (m)	A	B
	110	40
Standard push fit		



Thermostat

SAS 922FCT/HLP/SLP

MENU SETTING

FAN COIL THERMOSTAT

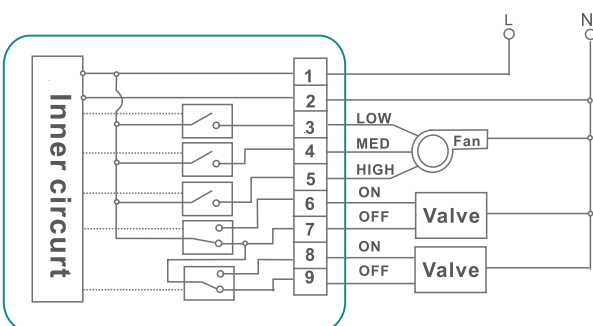
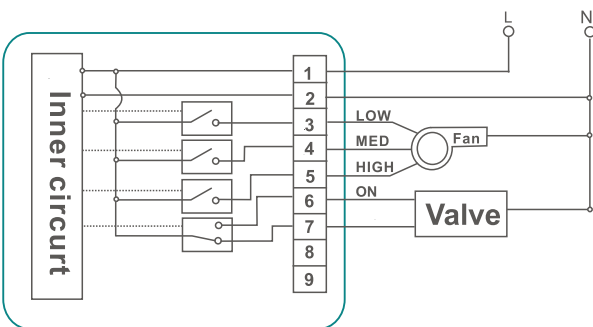
- Touch button & piano screen display more luxurious
- 2-pipe or 4-pipe heating/cooling available
- Heating mode / Cooling mode / Auto mode
- Room card function / Window card function / External sensor available / Timer function
- Sleeping mode save energy
- Auto fan with adjustable 3-fan speed.
- Keep user setting during power loss
- 7 days programmable function available



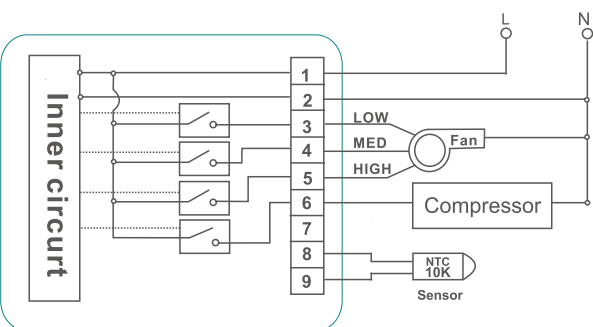
- Voltage:
- Power load:
- Setting range:
- Accuracy:
- Ambient temperature:
- Protective housing:
- Housing material:
- Dimensions:

Model No	Features and Functions Available			FAN Relay Max.	Application	Installation
	Compressor timer	Extenal Sensor	Room Card			
SAS922FCT-CO-S		■	■	3A	2-pipe or cool only (Heat/Cool)	Flush mount
SAS922FCT-4				3A	4-pipe Heat/Cool	Flush mount
SAS922HLP-0	■		■	8A	DX Heat/Cool	Flush mount
SAS922SLP-7-S	■	■		8A	DX Cooling Only	Flush mount

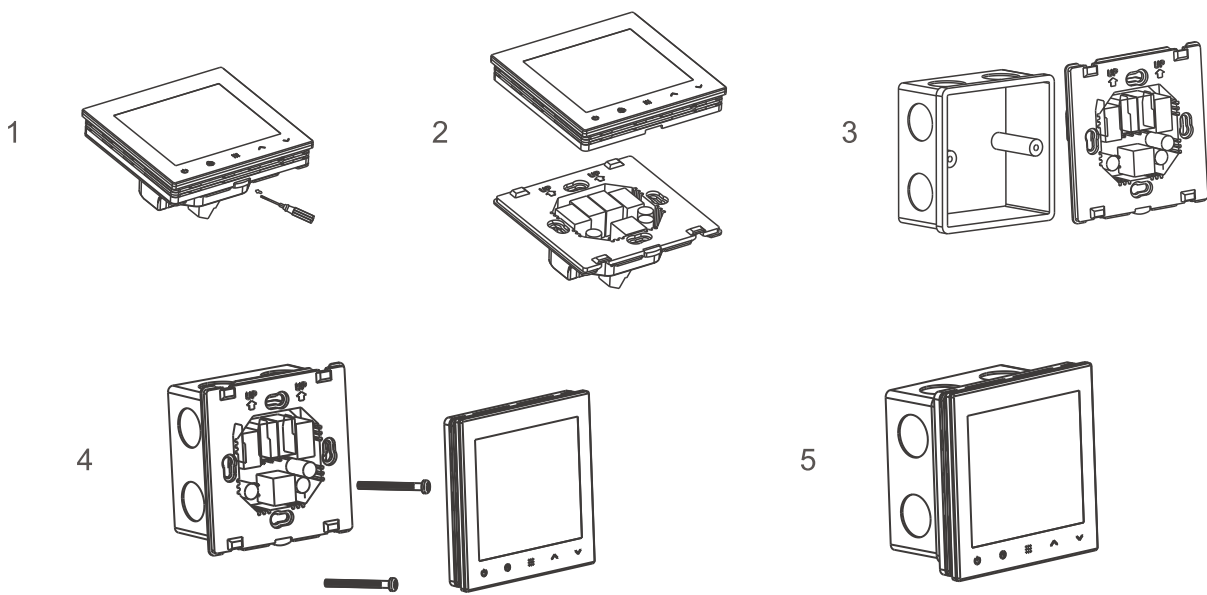
WIRING DIAGRAM



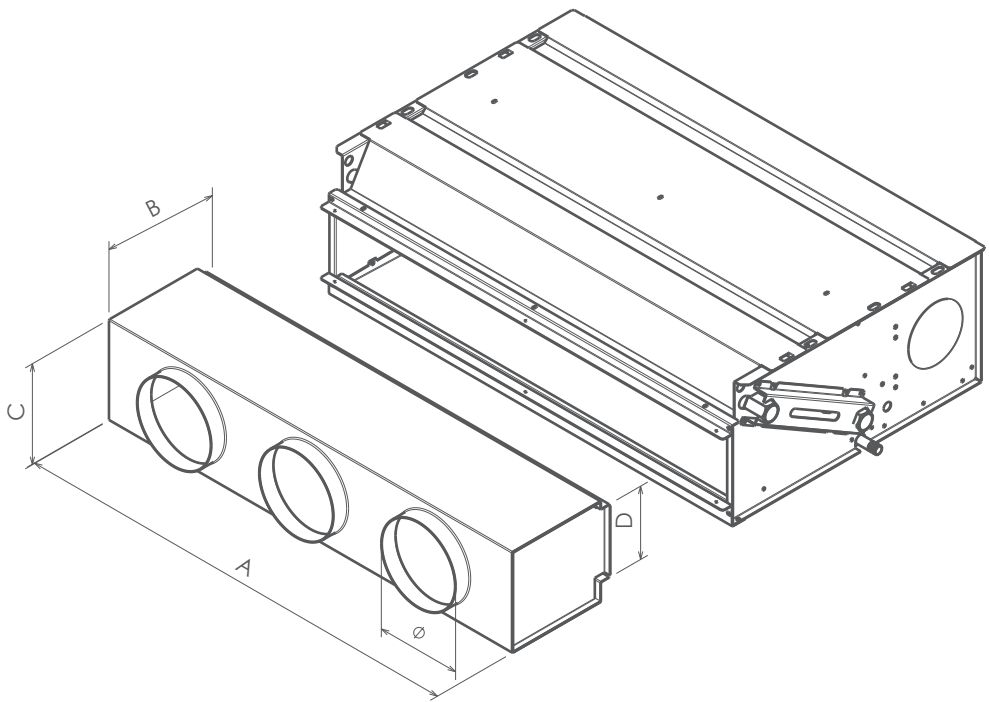
SAS922SLP-7-S



Installation



PM Air delivery plenum



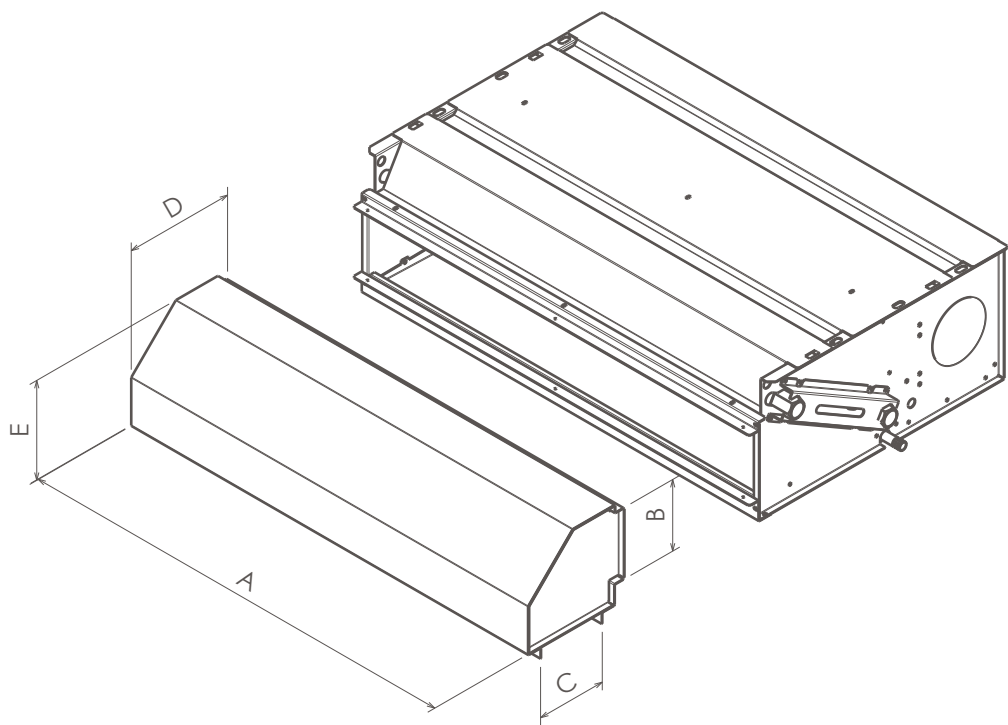
PM Air delivery plenum

The air delivery plenum is made of galvanized steel sheet, insulated inside, provided with spigots for the connection to the air ducts. It is mounted on the air outlet of the unit.

MODEL	AFC 20 B	AFC 30 B	AFC 40 B	AFC 60 B	AFC 80 B
NO. of spigots	2	2	3	3	4
spigots external	150	150	150	150	150
A	625	725	825	925	1175
B	230	230	230	230	230
C	179	179	179	179	179
D	128	128	128	128	128

◀ SIZE (m)

90°Air delivery plenum



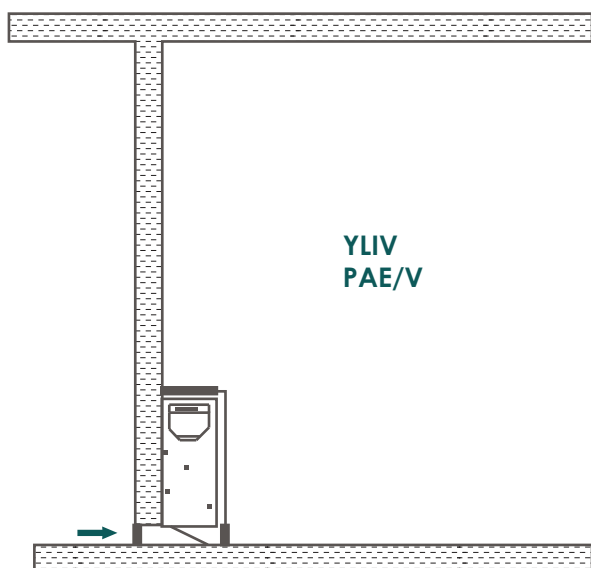
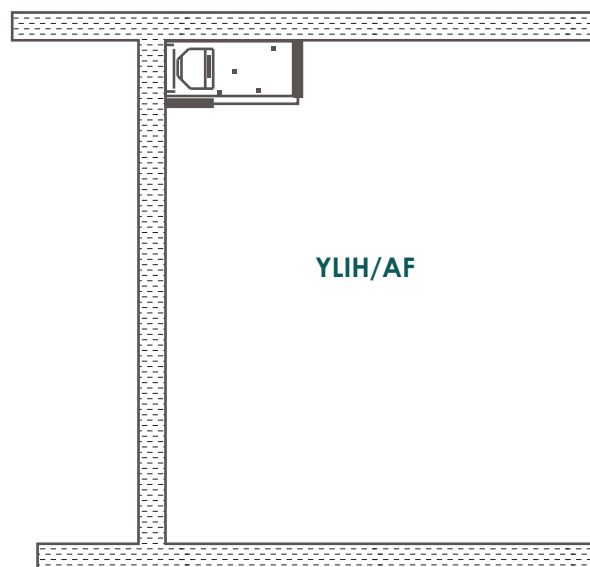
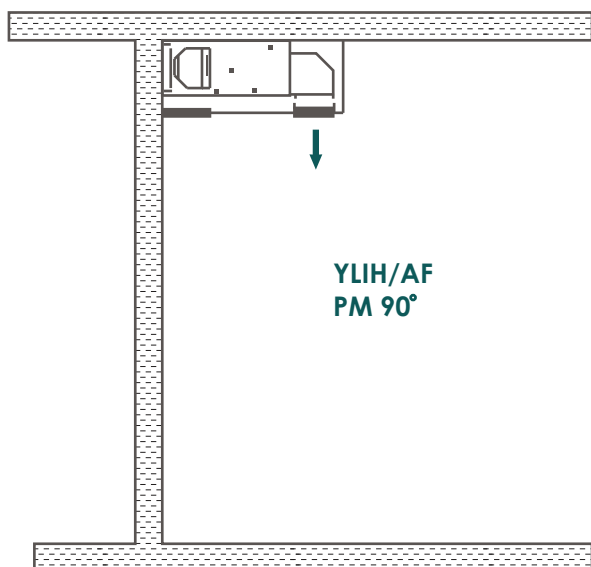
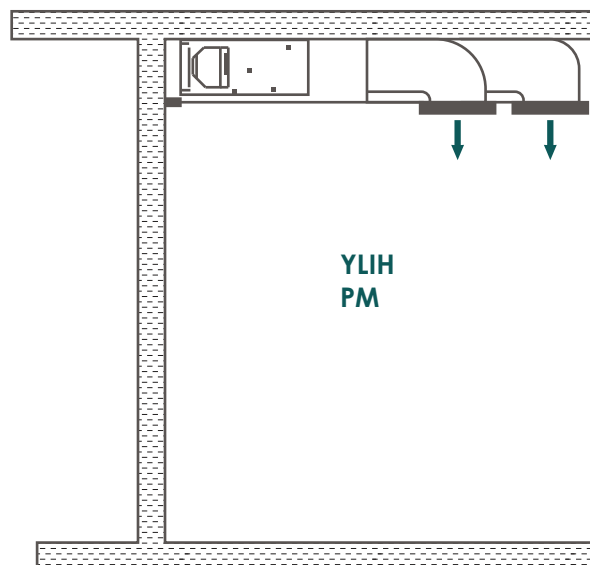
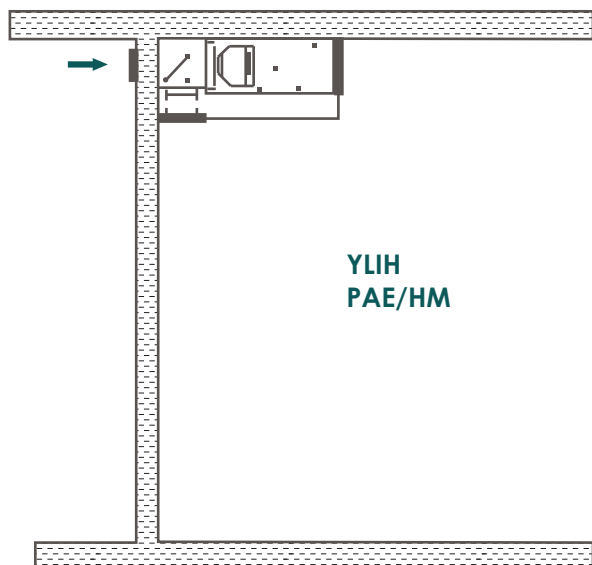
90°Air delivery plenum

The 90°air delivery plenum is made of galvanized steel sheet, insulated inside, provided with a rectangular collar for the connection to the duct. It is mounted on the air outlet of the unit.

MODEL	A	B	C	D	E
AFC 20 B	625	129	126	200	200
AFC 30 B	725	129	126	200	200
AFC 40 B	825	129	126	200	200
AFC 60 B	925	129	126	200	200
AFC 80 B	1175	129	126	200	200

◀SIZE(m)

Suggested Installation





Office : Unit 101, No 1812,
Diplomat building, Shariati St,Tehran,Iran

Tel : 021- 22645410

Fax : 021- 22645409

www.afragostar.co
afragostarsatiar@gmail.com