

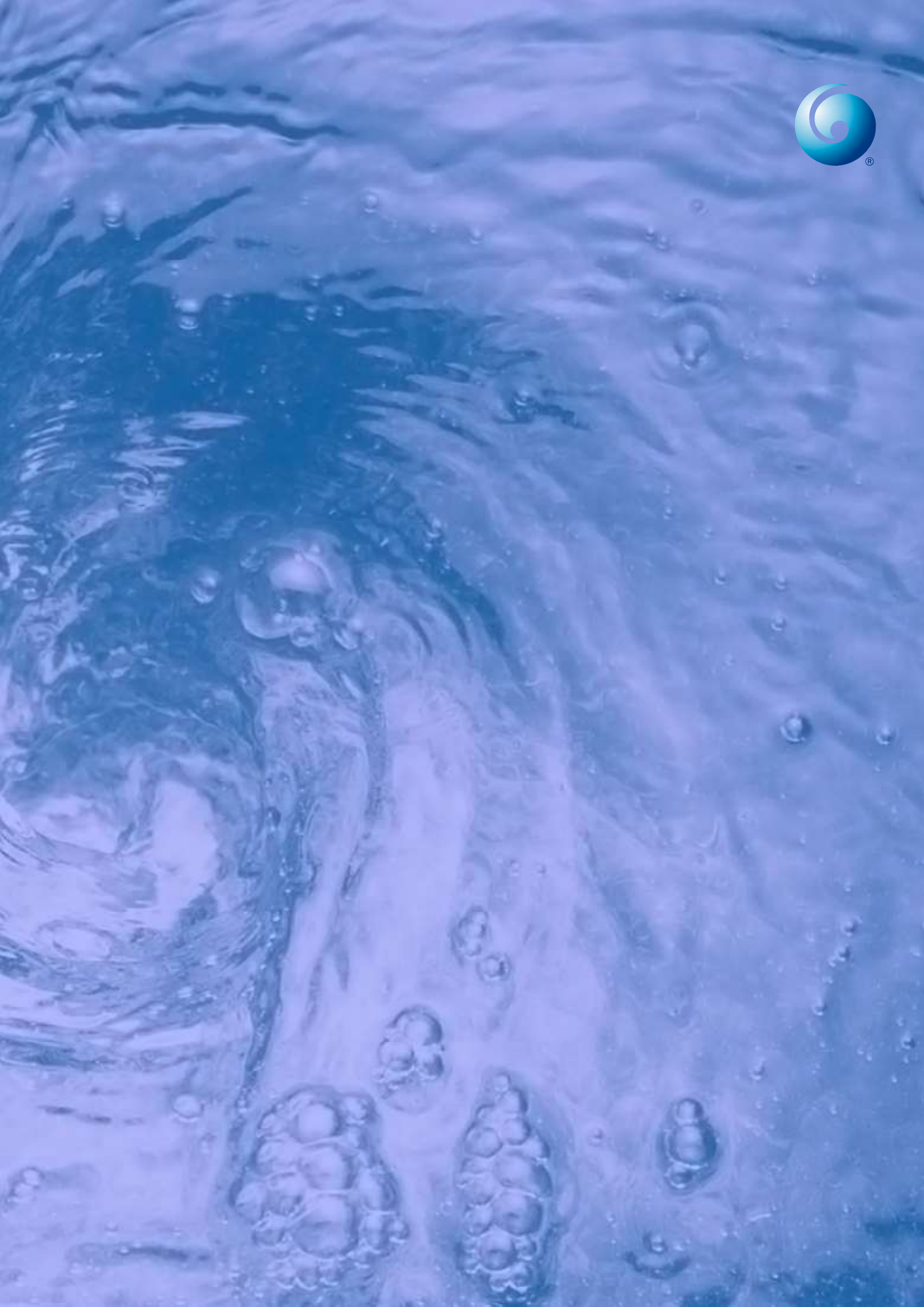
## Commercial Ducted Split Unit

Heating & Cooling

12 to 104kW

R-410a Refrigerant





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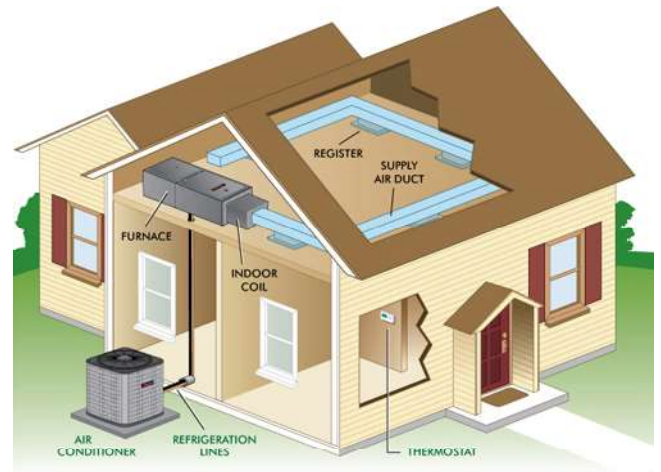
AIRWAVE is well-known in the international air conditioning industry for its professional research and design, high quality products and aftersales service, originated from Italia in 2005. Today, AIRWAVE has grown into an international refrigeration & air conditioning products and system supplier, providing users all over the world with our reliable products, professional expert group and all-around prompt supporting services to meet customers' diverse needs on HVAC in commercial, industrial and residential fields.

AIRWAVE aims to users who have special demands on product quality, size and energy saving, etc. We are committed to provide them comprehensive services including system design, product development, project installation and after-sales support.

AIRWAVE brings great influences to the world around us in many ways. Our products are widely used in many countries and regions, including Europe, Russia, Middle East, South Asia, Middle Asia, South Africa, North Africa, etc. We provide not only comfortable sight experience, but also perfect energy-saving solutions, which are genuine benefits to the users.

# Introduzione / Introduction

Ducted Split Unit is a high efficient and energy saving air conditioning system that applicable to hotel, supermarket, office building, factory, entertainment lieu, etc. It combines comfort of central air conditioning with flexibility of split unit. The new design considers the features of modern building, spreading cool/heating air to everywhere of the room equally, to form zero temperature difference. This model occupies less space, integrating duct and indoor decoration, become the upgrade production of central AC and traditional commercial air conditioning.



# Caratteristiche / Features

## 1. Wide Range, Various Type

Indoor units provides various specifications to satisfy residential and commercial application, with electrical heater and fan coil unit, to create a comfortable environment for customer the whole year.

## 2. Free Application

High static pressure heads making distant air supply realized, convenient for installation.  
Three-speed drive.  
Horizontal airflow of indoor unit, suitable for ceiling installation.

## 3. Low Noise, Easy Maintenance

Indoor unit can be ceiling-mounted, reducing noise to the lowest level.  
High efficiency, low noise centrifugal fan motor, with sound-absorbing and heat preservation material makes low noise operation realized.  
Simple design provides convenient for maintenance. Maintain any component of indoor unit by removing screws from the both sided of unit.

## 4. Intelligent Control

Advanced microcomputer control system with fully automatic control function and protection of high and low pressure, overload, voltage insufficient, phase lack and low temperature, etc.; Error alarm and display in controller.

## 5. Excellent Performance

World famous components, strictly tested to match the unit. Adopting multi-blade pitch centrifugal fan coil, high efficiency compressor, controller, motor. etc. Ensure the stable operation, low vibration and noise.



# Nomenclatura / Nomenclature

V D S C 1 2 0 W A 5 S S S S  
1 2 3 4 5 6 7 8 9 10 11 12 13 14

1: AIRWAVE

2&3: Product type: ducted split unit

4: Function: H: Heat pump, C: Cooling Only, T: Tropical (T3)

5, 6, 7: Cooling capacity: 40MBTU to 360MBTU

8: Installation: W: outdoor, N: indoor

9: Refrigerant: A: R410a

10: Power supply:

4=230V/3PH/60HZ

5=380V/3PH/50HZ

6=415V/3PH/50HZ

7=460V/3PH/60HZ

11: Condensing fan: S: Standard, H: High static pressure type

12: Auxiliary heater: S: Standard, E: Electrical C: Hot water coil

13: Supply fan: S: Standard ESP, H: High ESP, L: Low ESP

14: Compressor: S: Standard, D: Danfoss, C: Copeland

# Specifiche tecniche / Specification

Model	Outdoor	VDSC/H42W	VDSC/H72W	VDSC/H84W	VDSC/H108W
	Indoor	VDSC/H42N	VDSC/H72N	VDSC/H84N	VDSC/H108N
Cooling capacity	kW	12.5	19.5	24.8	31.2
	BTU/H	42,660	66,500	85,000	106,500
Heating capacity	kW	14.6	22.6	28.9	35.8
Cooling power input	kW	4.63	7.20	9.30	11.80
Heating power input	kW	4.50	7.13	9.21	11.68
Compressor start current	A	65.8	2×46.2	2×65.8	2×65.8
Cooling running current	A	8.24	12.87	16.62	21.09
Heating running current	A	8.02	12.74	16.46	20.88
Dimension	Outdoor (mm)	1100×590×1180	1120×830×1030	1120×830×1030	1120×830×1030
	Indoor (mm)	1180×880×540	1660×915×480	1660×915×480	1660×915×480
Weight	Outdoor (kgs)	170	170	180	220
	Indoor (kgs)	110	90	100	150
Noise	Outdoor dB(A)	≤62	≤67	≤67	≤68
	Indoor dB(A)	≤60	≤64	≤64	≤66
Power supply	V/φ/Hz	380/3/50			
Indoor fan	Air flow (m3/h)	2000	3500	4500	5650
	ESP (Pa)	80	120	100	150
	Power input (kW)	2x0.25	2x0.32	2x0.37	2x0.45
Connection type		Screwed	Screwed	Screwed	Welded
Pipe size	Liquid (mm)	12.7	9.52×2	12.7×2	12.7×2
	Gas (mm)	19.05	15.88×2	19.05×2	19.05×2
Condensing water pipe	mm	DN25			
Refrigerant	Type	R410a			
	Charging amount (kgs)	4.2	3.0×2	4×2	4.5×2
E-heater	Optional	1×4	2×3	2×4	2×5
Hot water coil (optional)	Capacity (kW)	14.3	22.2	28.4	35.1
	Water flow (m3/h)	1.23	1.91	2.44	3.02

#### Note

Condizioni di funzionamento esterno:

in raffreddamento, temperatura DB:35°C (95F), WB:24°C (75F);

In riscaldamento, temperatura DB:7°C (47F), WB:6°C (43F);

#### Notes

Out working conditions:

in cooling, temperature DB:35°C (95F), WB:24°C (75F);

in heating, temperature DB:7°C (47F), WB:6°C (43F);

## Specifiche tecniche / Specification

Model	Outdoor	VDSC/H120W	VDSC/H144W	VDSC/H162W	VDSC/H180W
	Indoor	VDSC/H120N	VDSC/H144N	VDSC/H162N	VDSC/H180N
Cooling capacity	kW	35.6	41.3	47.4	51.3
	BTU/H	120,000	141,000	162,000	175,000
Heating capacity	kW	40.8	46.9	54.4	58.9
Cooling power input	kW	12.8	15.1	17.9	18.4
Heating power input	kW	12.67	14.95	17.72	18.22
Compressor start current	A	2×76	105+65.8	127+65.8	155+65.8
Cooling running current	A	22.88	26.99	32.00	32.89
Heating running current	A	22.65	26.72	31.68	32.56
Dimension	Outdoor (mm)	1180×960×1130	1180×960×1130	1640×880×1130	1640×880×1130
	Indoor (mm)	1660×915×580	1790×915×580	1840×1045×680	2065×1160×680
Weight	Outdoor (kgs)	230	260	280	330
	Indoor (kgs)	160	180	200	220
Noise	Outdoor dB(A)	≤70	≤71	≤71	≤71
	Indoor dB(A)	≤66	≤68	≤68	≤68
Power supply	V/φ/Hz	380/3/50			
Indoor fan	Air flow (m3/h)	6450	7400	8550	9250
	ESP (Pa)	130	180	200	200
	Power input (kW)	2×0.55	2×0.8	2×0.8	2×0.8
Connection type		Welded	Welded	Welded	Welded
Pipe size	Liquid (mm)	15.88	15.88/12.7	15.88/12.7	15.88/12.7
	Gas (mm)	28	28/19.05	28/19.05	28/19.05
Condensing water pipe	mm	DN25			
Refrigerant	Type	R410a			
	Charging amount (kgs)	10.5	9+4.5	9.5+4.5	10+4.5
E-heater	Optional	2×6	2×6	2×8	2×8
Hot water coil (optional)	Capacity (kW)	40.0	46.0	53.3	57.8
	Water flow (m3/h)	3.44	3.96	4.59	4.97

Note

Condizioni di funzionamento esterno:

in raffreddamento, temperatura DB:35°C (95F), WB:24°C (75F);

In riscaldamento, temperatura DB:7°C (47F), WB:6°C (43F);

Notes

Out working conditions:

in cooling, temperature DB:35°C (95F), WB:24°C (75F);

in heating, temperature DB:7°C (47F), WB:6°C (43F);

# Specifiche tecniche / Specification

Model	Outdoor	VDSC/H216W	VDSC/H240W	VDSC/H300W	VDSC/H360W
	Indoor	VDSC/H216N	VDSC/H240N	VDSC/H300N	VDSC/H360N
Cooling capacity	kW	63.3	71.3	87.9	103.7
	BTU/H	216000	240000	300000	360000
Heating capacity	kW	72.6	81.9	100.0	115.8
Cooling power input	kW	23.1	26.6	28.1	39.3
Heating power input	kW	22.87	26.33	27.82	38.91
Compressor start current	A	2×127	2×155	2×135	2×175
Cooling running current	A	41.29	47.55	50.23	70.25
Heating running current	A	40.88	47.08	49.7	69.55
Dimension	Outdoor (mm)	1840×970×1130	1840×970×1130	2120×970×1130	2243×1250×1380
	Indoor (mm)	2165×1160×680	1870×1230×980	1870×1230×1080	2100×1270×1180
Weight	Outdoor (kgs)	340	460	600	650
	Indoor (kgs)	230	300	320	400
Noise	Outdoor dB(A)	≤71	≤71	≤71	≤71
	Indoor dB(A)	≤68	≤69	≤69	≤70
Power supply	V/φ/Hz	380/3/50			
Indoor fan	Air flow (m3/h)	11450	12900	14800	17100
	ESP (Pa)	300	300	280	500
	Power input (kW)	2×1.5	2×1.8	2×2.2	2×4
Connection type		Welded	Welded	Welded	Welded
Pipe size	Liquid (mm)	15.88×2	15.88×2	15.88×2	19.05×2
	Gas (mm)	28×2	28×2	28×2	35×2
Condensing water pipe	mm	DN25			
Refrigerant	Type	R410a			
	Charging amount (kgs)	9.5×2	10.5×2	12×2	15×2
E-heater	Optional	2×10	2×10	2×12	2×14
Hot water coil (optional)	Capacity (kW)	71.2	80.3	98.0	113.5
	Water flow (m3/h)	6.12	6.90	8.43	9.76

#### Note

Condizioni di funzionamento esterno:

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In riscaldamento, temperatura DB:7°C (47F), WB:6°C (43F);

#### Notes

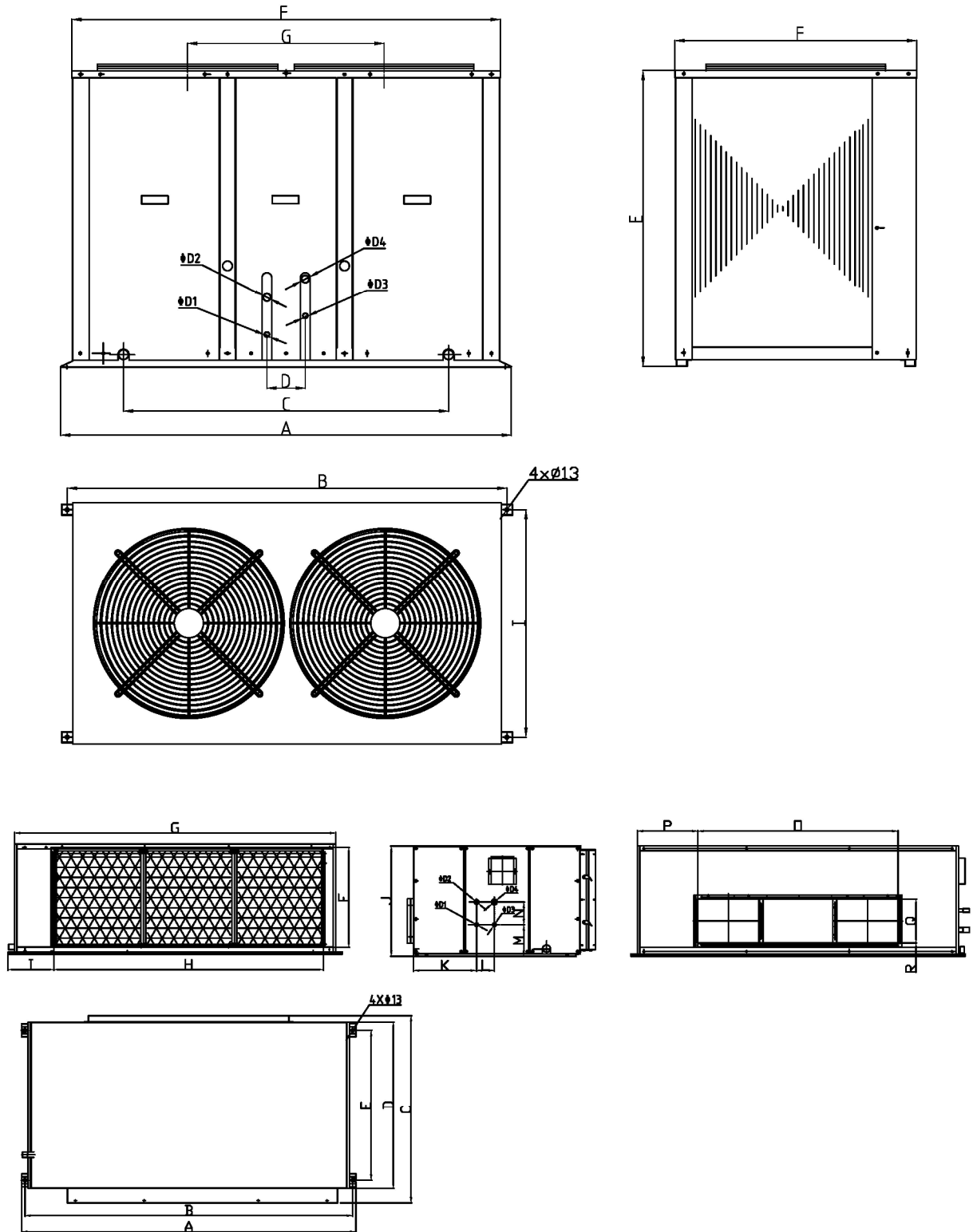
Out working conditions:

in cooling, temperature DB:35°C (95F), WB:24°C (75F);

in heating, temperature DB:7°C (47F), WB:6°C (43F);



# Dimensione / Dimension drawing





AirWave srl

via Posillipo,  
69/34 80123  
Napoli, Italia

[info@airwavehvac.com](mailto:info@airwavehvac.com)  
[www.airwavehvac.com](http://www.airwavehvac.com)