



Heating / Air Conditioning
Comfort Circular Unit Heater
Polaris Air Conditioner



ISO 9001 - Cert. n° 0545/3
Unit heaters
Radiant panels
Fan coils
Air handling units
Flues



SABIANA
ENVIRONMENTAL COMFORT

Vertical discharge circular unit heaters

For all factory premises, either commercial or industrial, the efficient "COMFORT SABIANA" vertical discharge circular unit heater offers a practical and economical solution for space heating.

They are available in ten sizes to a total of 100 various models for use with either Steam or Hot Water heating mediums, ranging in output from 13 kW to 200 kW depending upon the medium. They are acceptable for use on Steam with a working pressure of 6 bar, and with Hot Water up to 140°C.

CASING

The casing is made of spun steel on both top and bottom sections and is designed to give greater strength and quieter operation.

The casing is then phosphatised and finished with an epoxy polyester powder coating of light grey, RAL 9002, thus ensuring its continued attractive appearance. These top and bottom sections are assembled by means of threaded tie-rods, thus enabling the unit to be rapidly dismantled for maintenance etc.

HEAT EXCHANGER

The circular heat exchanger of the "COMFORT SABIANA" unit heater is constructed of copper tubes with aluminium fins. The supply and return connections are located on the top and bottom of the unit respectively and are positioned on the same side for simplicity of installation.

HELICOIDAL FAN

The helicoidal fan is statically and dynamically

balanced, the rational high-capacity profile provides maximum air volume with a minimum power consumption.

SUSPENSION

Four eye bolts are provided on the unit for suspension by means of chains or tie-rods. These can also be used for more permanent bracketry of the customers' choice.

ELECTRIC MOTOR

Standard motors are three phase with closed frame, flange mounted, pre-greased bearings. "COMFORT SABIANA" units are supplied as standard with three phase motors either 1400 rpm (normal speed) or 900 rpm (slow speed). Two speed motors and flameproof motors are all available, price and availability on request.



D.R.A. RADIAL LOUVRE

Is the model most commonly used: made up of eight separately adjustable large louvres, so shaped as to be able to cover the whole of the outlet area and therefore adaptable for minimum to maximum heights. This diffuser allows the air to be directed more easily to the areas where it is required the most, or conversely, if you do not require air to one particular corner you can close down one, two or three vanes and restrict the distribution.



T2 TWO WAY DIFFUSER

Is designed to give a two way or corridor distribution, suitable for corridor or gangway areas, between storage racks etc., generally mounted at any height dependant upon the length of corridor required.



D.T.C. ADJUSTABLE CONE

This diffuser is well adaptable for heating horticultural houses and greenhouses etc., where it is necessary to have indirect heating to the plants with a very wide coverage. With the unit installed at a normal height the vertical cone diffuser is adjustable to obtain the required distribution.



D.A. FOUR CONE DIFFUSER

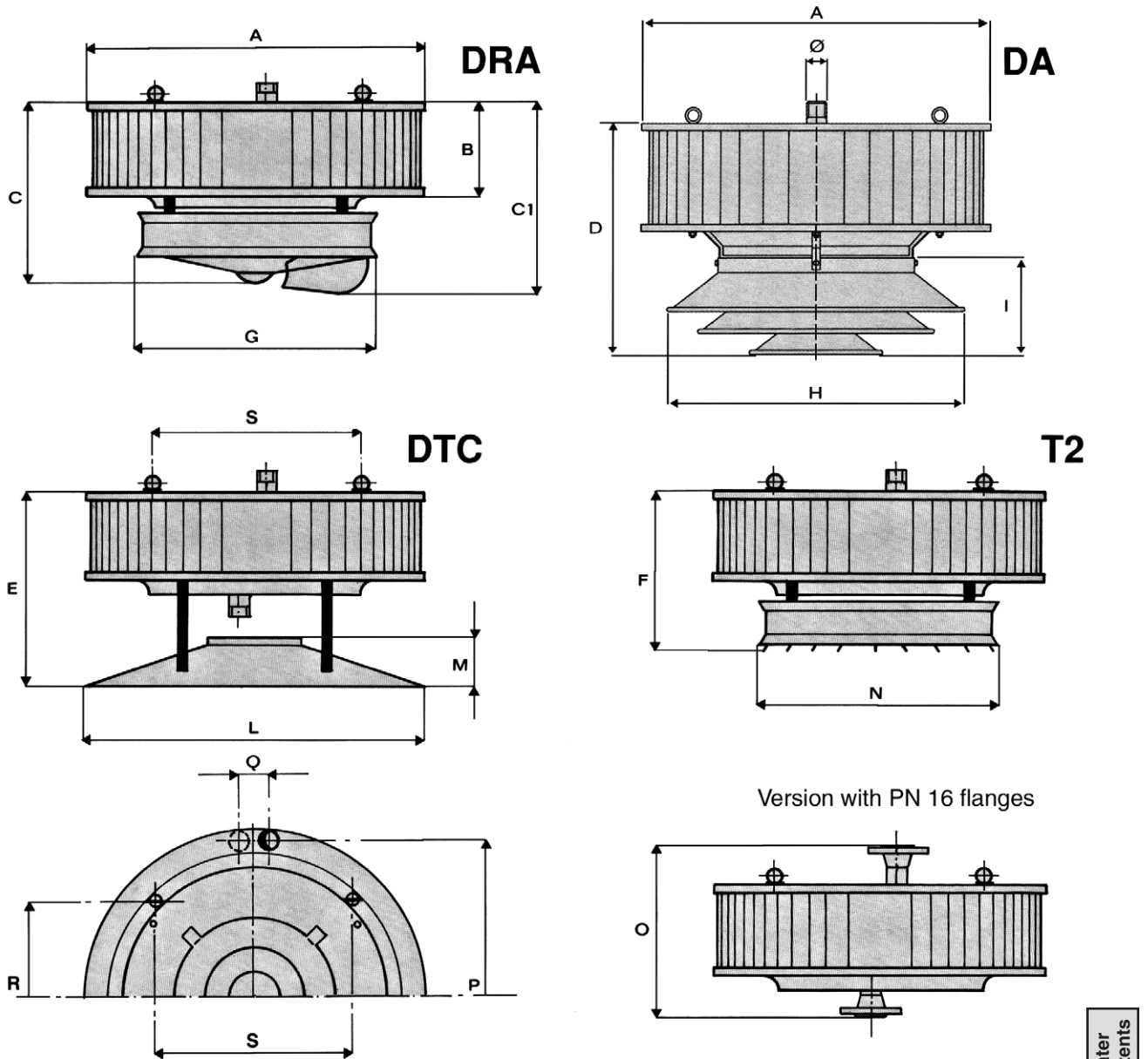
Is designed to distribute the air in large open areas at a reasonably low level. Its other particular advantage is its low noise level operation and the aesthetic appearance. Ideal for restaurants, schools, hospitals, theatres, etc.



Reference code eg: 6 Z 4 15

6	Z	4	15
6 POLES (900 rpm)	TYPE COMFORT	SIZE	N° OF CIRCUITS

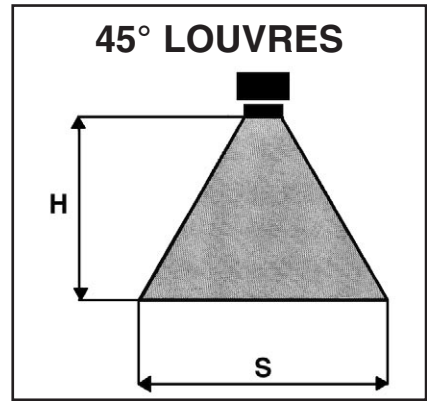
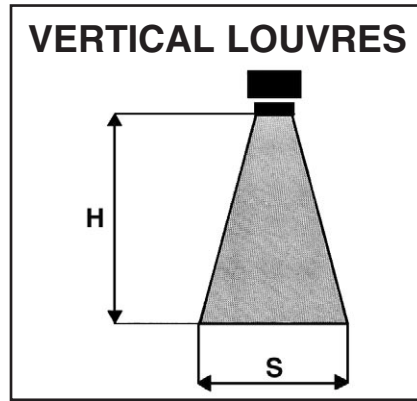
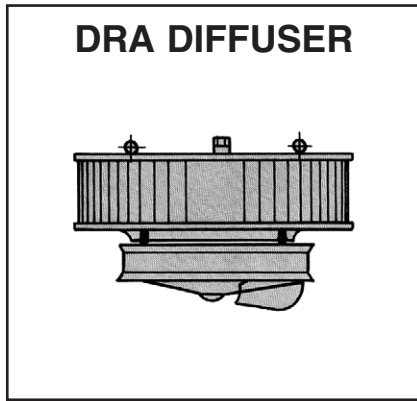
Dimension, weight and water content



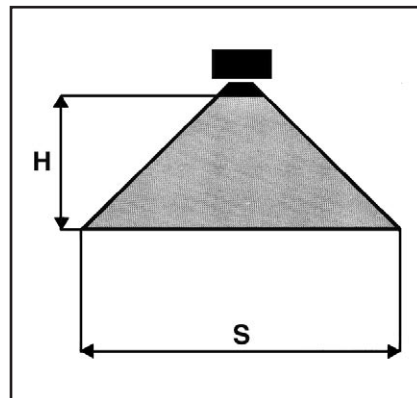
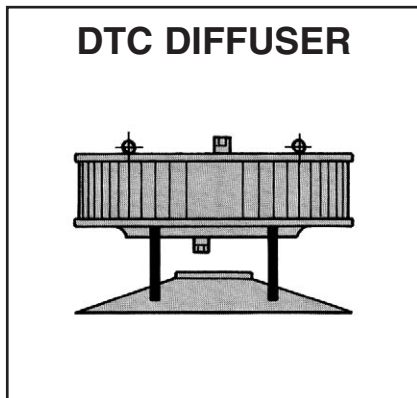
SIZE	A	B	C	C1	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	Ø	DN	kg	Water contents It
0	680	180	430	560	408	470	380	460	537	165	780	150	460	331	612	62	350	350	1" ¼	20	31	1,20
1	780	180	430	560	412	470	380	560	645	194	780	150	560	331	702	62	421	421	1" ¼	20	36	1,30
2	780	280	530	660	567	570	480	560	750	248	780	150	560	431	702	62	421	421	1" ¼	25	42	1,90
3	880	280	530	700	599	640	480	660	750	248	880	170	660	435	802	68	491	491	1" ½	32	52	2,40
4	880	380	630	760	709	740	580	660	858	273	880	170	660	535	802	68	491	491	1" ½	32	58	3,20
5	1080	380	630	870	739	780	580	760	858	273	1080	210	760	539	1005	80	755	440	2"	40	75	4,30
6	1080	455	705	945	843	855	655	760	1073	330	1080	210	760	614	1005	80	755	440	2"	40	85	5,20
7	1080	555	805	1045	943	955	755	760	1073	330	1080	210	760	714	1005	80	755	440	2"	40	95	5,90
8	1080	555	815	1055	944	965	765	760	1073	330	1080	210	760	714	1005	80	755	440	2"	40	97	5,90
9	1080	605	865	1105	994	1015	815	760	1073	330	1080	210	760	765	1005	80	755	440	2"	40	106	6,50

The units with steam batteries are supplied with connections for welding; on request they can be supplied with flanges.

Mounting heights and area of air distribution

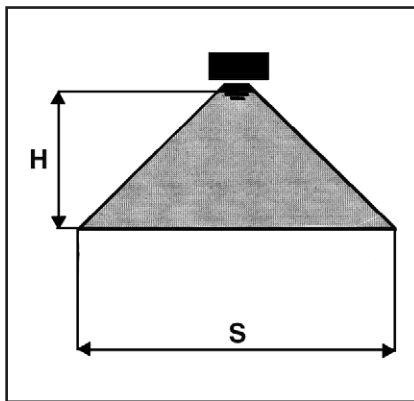
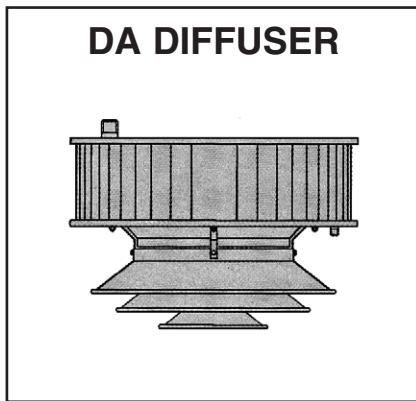


SIZE	1400 r.p.m.				900 r.p.m.			
	45° LOUVRES		VERTICAL LOUVRES		45° LOUVRES		VERTICAL LOUVRES	
	H m.	S m.	H m.	S m.	H m.	S m.	H m.	S m.
0	3 ÷ 5	15 ÷ 21	4 ÷ 6	7.5 ÷ 10.5	2.5 ÷ 4	10.5 ÷ 16.5	3.5 ÷ 5	6 ÷ 9
1	3.5 ÷ 5.5	16.5 ÷ 24	4.5 ÷ 6.5	9 ÷ 12	3 ÷ 4.5	12 ÷ 18	4 ÷ 5.5	7.5 ÷ 10.5
2	4 ÷ 6	18 ÷ 25.5	5 ÷ 7	10.5 ÷ 13.5	3 ÷ 5	12 ÷ 19.5	4.5 ÷ 6.5	9 ÷ 12
3	4 ÷ 6.5	18 ÷ 27	5.5 ÷ 8	10.5 ÷ 15	3.5 ÷ 5.5	15 ÷ 22.5	5 ÷ 7	9 ÷ 13.5
4	4 ÷ 7	18 ÷ 28.5	6 ÷ 9	10.5 ÷ 16.5	3.5 ÷ 6	15 ÷ 24	5.5 ÷ 8	10.5 ÷ 15
5	4.5 ÷ 7.5	18 ÷ 28.5	6.5 ÷ 10	12 ÷ 18	4 ÷ 6.5	16.5 ÷ 25.5	5.5 ÷ 8.5	10.5 ÷ 15
6	—	—	—	—	4 ÷ 8	16.5 ÷ 28.5	6 ÷ 10	12 ÷ 18
7	—	—	—	—	4 ÷ 8	16.5 ÷ 28.5	6 ÷ 10	12 ÷ 18
8	—	—	—	—	5 ÷ 11	18 ÷ 31.5	6.5 ÷ 14	13.5 ÷ 19.5
9	—	—	—	—	5 ÷ 11	18 ÷ 33	6.5 ÷ 14	13.5 ÷ 21

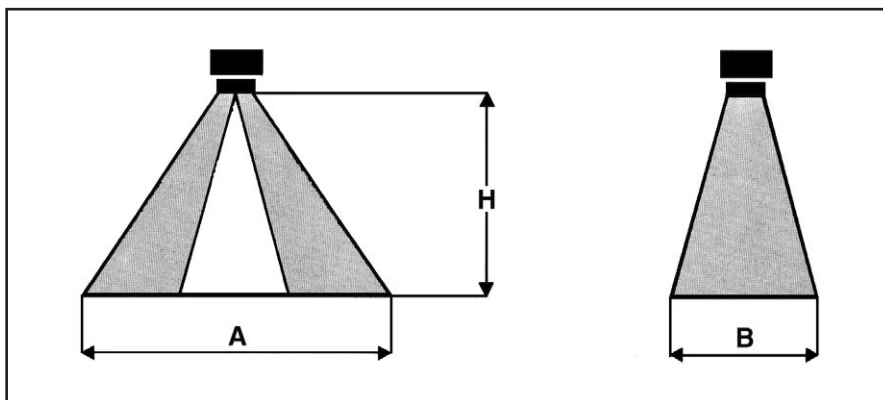
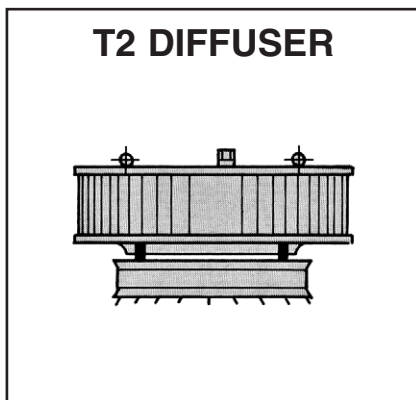


SIZE	1400 r.p.m.		900 r.p.m.	
	H m.	S m.	H m.	S m.
0	2.5 ÷ 3	13.5 ÷ 15	2.5 ÷ 3	12 ÷ 13.5
1	2.5 ÷ 3.5	15 ÷ 19.5	2.5 ÷ 3	12 ÷ 15
2	2.5 ÷ 4	16.5 ÷ 24	2.5 ÷ 3	13.5 ÷ 18
3	3 ÷ 4.5	24 ÷ 28.5	2.5 ÷ 3.5	18 ÷ 22.5
4	3 ÷ 5	25.5 ÷ 31	3 ÷ 4	19.5 ÷ 25.5
5	3 ÷ 5.5	30 ÷ 37.5	3 ÷ 4.5	25.5 ÷ 32.5
6	—	—	3 ÷ 5	28.5 ÷ 34.5
7	—	—	3 ÷ 5.5	30 ÷ 36
8	—	—	3.5 ÷ 6	32.5 ÷ 37.5
9	—	—	3.5 ÷ 6	33 ÷ 39

Mounting heights and area of air distribution



SIZE	1400 r.p.m.		900 r.p.m.	
	H m.	S m.	H m.	S m.
0	2.5 ÷ 3	16.5 ÷ 19.5	2.5 ÷ 2.7	15 ÷ 16.5
1	2.5 ÷ 3	18 ÷ 21	2.5 ÷ 2.7	16.5 ÷ 18
2	3 ÷ 3.5	21 ÷ 25.5	2.7 ÷ 3.2	19.5 ÷ 22.5
3	3.5 ÷ 4	24 ÷ 30	3 ÷ 3.5	21 ÷ 25.5
4	4 ÷ 4.5	36 ÷ 42	3.2 ÷ 3.7	31.5 ÷ 37.5
5	4.5 ÷ 5	37.5 ÷ 45	3.5 ÷ 4	33 ÷ 39
6	—	—	4 ÷ 4.5	36 ÷ 42
7	—	—	4.5 ÷ 5	37.5 ÷ 44.5
8	—	—	4.5 ÷ 5.5	39 ÷ 46.5
9	—	—	4.5 ÷ 5.5	39 ÷ 48



SIZE	1400 r.p.m.		900 r.p.m.	
	H m.	ZONE A B m.	H m.	ZONE A B m.
0	3 ÷ 6	15x6 ÷ 10x4	2.5 ÷ 5	13x5 ÷ 9x4
1	3 ÷ 6	16x7 ÷ 10x5	2.5 ÷ 5	14x6 ÷ 10x4
2	3.5 ÷ 7	18x8 ÷ 14x5	3 ÷ 6	16x7 ÷ 10x4
3	3.5 ÷ 8	20x10 ÷ 14x6	3 ÷ 6.5	17x8 ÷ 13x5
4	4 ÷ 9	22x10 ÷ 15x7	3.5 ÷ 7	20x10 ÷ 15x5
5	4 ÷ 10	25x12 ÷ 18x7	4 ÷ 8	22x10 ÷ 16x5
6	—	—	4 ÷ 10	24x10 ÷ 18x6
7	—	—	4 ÷ 11	24x11 ÷ 20x8
8	—	—	6 ÷ 15	26x12 ÷ 22x10
9	—	—	6 ÷ 15	26x12 ÷ 22x10

Thermal emission

Speed r.p.m.	Size	Air flow		Noise level dB(A) (at 5 m)	Model
		m³/sec	m³/h		
1400	0	0.83	3.000	56	4Z-007
	1	0.94	3.400	60	4Z-107
	2	1.42	5.100	63	4Z-211
	3	1.67	6.000	65	4Z-311
	4	2.17	7.800	66	4Z-415
	5	2.69	9.700	73	4Z-515
900	0	0.55	2.000	48	6Z-007
	1	0.67	2.400	52	6Z-107
	2	1.03	3.700	54	6Z-211
	3	1.22	4.400	55	6Z-311
	4	1.58	5.700	56	6Z-415
	5	1.97	7.100	63	6Z-515
	6	2.50	9.000	64	6Z-618
	7	2.75	9.900	65	6Z-722
	8	3.05	11.000	65	6Z-822
	9	3.33	12.000	66	6Z-924

Tab. 1
water 85-75°C
entering air temperature 15°C

Thermal emission kW	Air leaving temperature °C
24.4	39
28.4	39
41.8	39
48.8	39
64.4	39
79.2	39
19.1	43
22.1	42
32.7	41
38.0	40
50.2	41
61.5	40
77.8	40
92.0	42
107.0	44
115.1	44

Tab. 2
water 85-70°C
entering air temperature 15°C

Thermal emission kW	Air leaving temperature °C
22.7	37
26.1	37
38.9	37
45.3	37
59.9	37
73.6	37
17.7	41
20.4	40
30.3	39
35.3	38
46.7	39
57.1	39
72.2	38
85.6	40
99.5	42
106.7	42

Correction factors

ON REQUEST: double speed motor,
single tension, double wiring,
1400/900 r.p.m. or 900/700 r.p.m.

Thermal emission

with motor running at 700 r.p.m.:

Watt = 0.85 x Watt with motor at 900 r.p.m.

Air = 0.70 x air flow with motor at 900 r.p.m.

Entering air temperature °C	Water			
	75/65	80/70	85/75	90/80
+ 5	1.00	1.07	1.15	1.23
+ 10	0.92	1.00	1.07	1.15
+ 15	0.84	0.92	1.00	1.07
+ 20	0.76	0.84	0.92	1.00
+ 25	0.69	0.76	0.84	0.92
+ 30	0.61	0.69	0.76	0.84

Entering air temperature °C	Water			
	80/65	85/70	90/75	95/80
+ 5	1.07	1.15	1.23	1.32
+ 10	1.00	1.07	1.15	1.23
+ 15	0.92	1.00	1.07	1.15
+ 20	0.84	0.92	1.00	1.07
+ 25	0.76	0.84	0.92	1.00
+ 30	0.69	0.76	0.84	0.92

Thermal emission

Speed r.p.m.	Size	Air flow		Noise level dB(A) (at 5 m)	Model
		m³/sec	m³/h		
1400	0	0.83	3.000	56	4Z-007
	1	0.94	3.400	60	4Z-107
	2	1.42	5.100	63	4Z-211
	3	1.67	6.000	65	4Z-311
	4	2.17	7.800	66	4Z-415
	5	2.69	9.700	73	4Z-515
900	0	0.55	2.000	48	6Z-007
	1	0.67	2.400	52	6Z-107
	2	1.03	3.700	54	6Z-211
	3	1.22	4.400	55	6Z-311
	4	1.58	5.700	56	6Z-415
	5	1.97	7.100	63	6Z-515
	6	2.50	9.000	64	6Z-618
	7	2.75	9.900	65	6Z-722
	8	3.05	11.000	65	6Z-822
	9	3.33	12.000	66	6Z-924

Tab. 3	
water 90-70°C	
entering air temperature 15°C	
Thermal emission kW	Air leaving temperature °C
22.9	37
26.5	38
39.3	38
45.8	37
60.6	38
74.3	38
17.8	41
20.5	40
30.6	39
35.6	39
47.1	38
57.5	39
72.9	39
86.4	41
100.5	42
107.8	42

Tab. 4	
water 120-100°C	
entering air temperature 15°C	
Thermal emission kW	Air leaving temperature °C
32.5	48
37.8	48
55.9	48
65.2	48
86.3	48
105.8	48
25.3	53
29.3	52
43.5	51
50.7	50
67.1	51
82.0	50
103.8	50
123.0	53
142.8	54
153.3	54

Correction factors

ON REQUEST: double speed motor,
single tension, double wiring,
1400/900 r.p.m. or 900/700 r.p.m.

Thermal emission
with motor running at 700 r.p.m.:

Watt = 0.85 x Watt with motor at 900 r.p.m.

Air = 0.70 x air flow with motor at 900 r.p.m.

Entering air temperature °C	Water			
	80/60	85/65	90/70	95/75
+ 5	1.00	1.07	1.15	1.23
+ 10	0.92	1.00	1.07	1.15
+ 15	0.84	0.92	1.00	1.07
+ 20	0.76	0.84	0.92	1.00
+ 25	0.69	0.76	0.84	0.92
+ 30	0.61	0.69	0.76	0.84

Entering air temperature °C	Water			
	110/90	120/100	130/110	140/120
+ 5	1.00	1.10	1.21	1.31
+ 10	0.92	1.05	1.15	1.26
+ 15	0.89	1.00	1.10	1.21
+ 20	0.84	0.94	1.05	1.15
+ 25	0.78	0.89	1.00	1.10
+ 30	0.73	0.84	0.94	1.05

Thermal emission

Speed r.p.m.	Size	Air flow		Noise level dB(A) (at 5 m)	Model
		m³/sec	m³/h		
1400	0	0.83	3.000	56	4Z-007
	1	0.94	3.400	60	4Z-107
	2	1.42	5.100	63	4Z-211
	3	1.67	6.000	65	4Z-311
	4	2.17	7.800	66	4Z-415
	5	2.69	9.700	73	4Z-515
900	0	0.55	2.000	48	6Z-007
	1	0.67	2.400	52	6Z-107
	2	1.03	3.700	54	6Z-211
	3	1.22	4.400	55	6Z-311
	4	1.58	5.700	56	6Z-415
	5	1.97	7.100	63	6Z-515
	6	2.50	9.000	64	6Z-618
	7	2.75	9.900	65	6Z-722
	8	3.05	11.000	65	6Z-822
	9	3.33	12.000	66	6Z-924

Tab. 5
water 130-100°C
entering air temperature 15°C

Thermal emission kW	Air leaving temperature °C
34.5	50
39.9	51
59.2	51
69.0	50
91.3	51
112.1	51
26.1	55
30.9	55
46.1	54
53.7	53
70.9	53
86.7	53
109.8	53
130.2	56
151.4	58
162.5	57

Tab. 6
water 140-100°C
entering air temperature 15°C

Thermal emission kW	Air leaving temperature °C
35.3	51
40.9	52
60.8	52
70.9	51
93.7	52
115.1	52
27.4	57
31.8	56
47.3	54
55.1	54
73.0	55
89.1	54
112.8	54
133.7	57
155.2	60
166.5	59

ON REQUEST: double speed motor,
single tension, double wiring,
1400/900 r.p.m. or 900/700 r.p.m.

Thermal emission
with motor running at 700 r.p.m.:
Watt = 0.85 x Watt with motor at 900 r.p.m.
Air = 0.70 x air flow with motor at 900 r.p.m.

Correction factors

Entering air temperature °C	Water			
	110/80	120/90	130/100	140/110
+ 5	0.90	1.00	1.10	1.19
+ 10	0.85	0.94	1.04	1.14
+ 15	0.79	0.90	1.00	1.10
+ 20	0.74	0.85	0.94	1.04
+ 25	0.69	0.79	0.90	1.00
+ 30	0.65	0.74	0.85	0.94

Entering air temperature °C	Water	
	130/90	140/100
+ 5	1.00	1.09
+ 10	0.95	1.04
+ 15	0.90	1.00
+ 20	0.85	0.95
+ 25	0.80	0.90
+ 30	0.76	0.85

Thermal emission

Speed r.p.m.	Size	Air flow		Noise level dB(A) (at 5 m)	Model
		m³/sec	m³/h		
1400	0	0.83	3.000	56	4Z-007
	1	0.94	3.400	60	4Z-107
	2	1.42	5.100	63	4Z-211
	3	1.67	6.000	65	4Z-311
	4	2.17	7.800	66	4Z-415
	5	2.69	9.700	73	4Z-515
900	0	0.55	2.000	48	6Z-007
	1	0.67	2.400	52	6Z-107
	2	1.03	3.700	54	6Z-211
	3	1.22	4.400	55	6Z-311
	4	1.58	5.700	56	6Z-415
	5	1.97	7.100	63	6Z-515
	6	2.50	9.000	64	6Z-618
	7	2.75	9.900	65	6Z-722
	8	3.05	11.000	65	6Z-822
	9	3.33	12.000	66	6Z-924

Tab. 7	
steam 0.5 bar	
entering air temperature 15°C	

Thermal emission kW	Air leaving temperature °C
37.3	53
43.1	54
64.8	54
73.7	53
97.9	54
117.3	52
31.0	63
37.1	63
55.3	62
62.0	59
82.9	60
98.3	58
124.4	58
150.9	62
171.5	62
184.0	62

Tab. 8	
steam 3 bar	
entering air temperature 15°C	

Thermal emission kW	Air leaving temperature °C
49.6	68
57.3	68
86.0	68
98.0	66
130.2	67
156.0	65
41.3	79
49.3	79
72.9	77
82.4	73
110.2	75
130.8	73
165.5	73
200.7	78
228.0	79
245.0	79

ON REQUEST: double speed motor,
single tension, double wiring,
1400/900 r.p.m. or 900/700 r.p.m.

Thermal emission
with motor running at 700 r.p.m.:

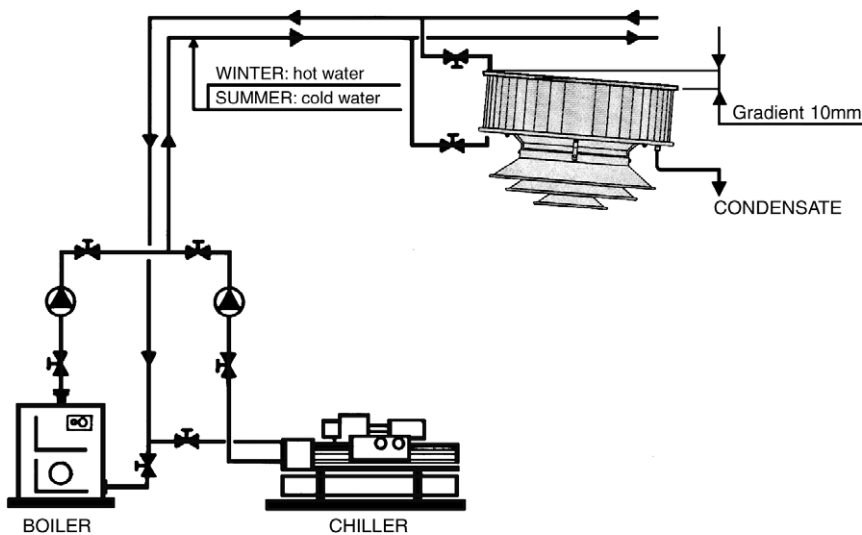
Watt = 0.85 x Watt with motor at 900 r.p.m.

Air = 0.70 x air flow with motor at 900 r.p.m.

Correction factors

Entering air temperature °C	Steam bar			
	0.3	0.5	1	2
+ 5	1.06	1.10	1.19	1.33
+ 10	1.00	1.05	1.14	1.28
+ 15	0.95	1.00	1.09	1.23
+ 20	0.90	0.94	1.03	1.17
+ 25	0.85	0.89	0.98	1.12
+ 30	0.79	0.84	0.93	1.07

Entering air temperature °C	Steam bar			
	3	4	5	6
+ 5	1.06	1.10	1.13	1.16
+ 10	1.03	1.06	1.10	1.13
+ 15	1.00	1.03	1.06	1.10
+ 20	0.96	1.00	1.03	1.06
+ 25	0.93	0.96	1.00	1.03
+ 30	0.89	0.93	0.96	1.00



Sabiana Polaris suspended circular air conditioners provide a simple solution to centralised air conditioning systems offering the following advantages:

- Simple installation
- Low equipment cost
- Low user running cost
- Flexibility in installation and project design
- High capacity fans for distribution of cooling and heating systems for large commercial and industrial buildings
- Minimum space is required for the units which can be suspended from the building roof supports, therefore not taking up valuable floor space, this type of unit also dispenses with expensive and cumbersome duct work systems.

The Sabiana Polaris Range of air conditioners can be matched to the Sabiana Krio Range of indoor and outdoor chillers and heat pumps.

On cooling when the fan is inactive for long periods, it is required to shut off the chilled water supply to the coil using 2/3-way valves, electrically connected to the thermostatic control, to avoid condensation forming on the outside of the unit.

Description

CASING

The casing is made of spun steel on both top and bottom sections which is designed to give greater strength and quieter operation. The casing is then phosphatised and finished with an epoxy polyester powder coating of light grey, RAL 9002, thus ensuring its continued attractive appearance. These top and bottom sections are assembled by means of threaded tie-rods, thus enabling the unit to be rapidly dismantled for maintenance etc.

HEAT EXCHANGER

The circular heat exchanger of the "POLARIS SABIANA" air conditioner is constructed of copper tubes with aluminium fins. The supply and return connections are located on the top and bottom of the unit respectively and are positioned on the same side for simplicity of installation.

ELECTRIC MOTOR

Standard motors are three phase with closed frame, flange mounted, pre-greased bearings. "POLARIS SABIANA" units are supplied as standard with two speed three phase motors 900 rpm (normal speed) or 700 rpm (slow speed).

HELICOIDAL FAN

The helicoidal fan is statically and dynamically balanced, the rational high-capacity profile provides maximum air volume with a minimum power consumption.

SUSPENSION

Four eye bolts are provided on the unit for suspension by means of chains or tie-rods. These can also be used for more permanent bracketry of the customers' choice.



D.R.A. RADIAL LOUVRE

Is the model most commonly used: made up of eight separately adjustable large louvre, so shaped as to be able to cover the whole of the outlet area and therefore adaptable for minimum to maximum heights. This diffuser allows the air to be directed more easily to the areas where it is required the most, or conversely, if you do not require air to one particular corner you can close down one, two or three vanes and restrict the distribution.



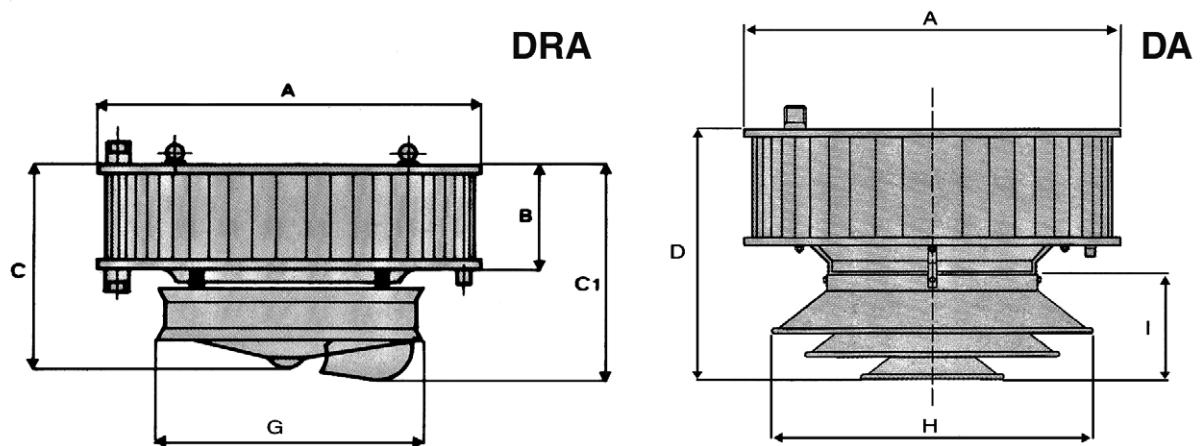
D.A. FOUR CONE DIFFUSER

Is designed to distribute the air in large open areas at a reasonably low level. Its other particular advantage is its low noise level operation and the aesthetic appearance. Ideal for restaurants, schools, hospitals, theatres, etc.

Mounting heights and area of air diffusion of the Polaris air conditioners

Model	Mounting heights (m)			Area of air diffusion (m)	
	"DRA" diffuser		"DA" diffuser max	"DRA" diffuser max	"DA" diffuser max
	min	max			
P.007	2,5	5,0	2,7	11	11
P.107	3,0	5,5	2,7	12	12
P.211	3,0	6,5	3,2	13	15
P.311	3,5	7,0	3,5	15	17
P.415	3,5	8,0	3,7	16	25
P.515	4,0	8,5	4,0	17	26
P.618	4,0	9,0	4,5	18	28
P.722	4,0	9,0	5,0	19	29
P.822	5,0	14,0	5,5	21	31
P.924	5,0	14,0	5,5	22	32

Dimension, weight and water contents



Model	A	B	C	C1	D	G	H	I	Ø	kg	Water contents
P.007	680	180	430	560	408	460	537	165	1" ¼	31	1,20
P.107	780	180	430	560	412	560	645	194	1" ¼	36	1,30
P.211	780	280	530	660	567	560	750	248	1" ¼	42	1,90
P.311	880	280	530	700	599	660	750	248	1" ½	52	2,40
P.415	880	380	630	760	709	660	858	273	1" ½	58	3,20
P.515	1.080	380	630	870	739	760	858	273	2"	75	4,30
P.618	1.080	455	705	845	843	760	1.073	330	2"	85	5,20
P.722	1.080	555	805	1.045	943	760	1.073	330	2"	95	5,90
P.822	1.080	555	815	1.055	944	760	1.073	330	2"	97	5,90
P.924	1.080	605	865	1.055	994	760	1.073	330	2"	106	6,50

Emission

Model	Noise level dB(A) (at 5 m)		Air flow				Heating WT 85/70°C, E.A.T. 15°C				Cooling 55% R.H. E.A.T. 28°C, WT 11/15°C	
	900 rpm	700 rpm	900 rpm		700 rpm		kW		L.A.T. °C		kW	
			m³/sec	m³/h	m³/sec	m³/h	900 rpm	700 rpm	900 rpm	700 rpm	900 rpm	700 rpm
P.007	48	46	0,55	2.000	0,39	1.400	17,6	15,1	41	47	3,1	2,7
P.107	52	49	0,67	2.400	0,46	1.680	20,4	17,4	40	46	4,0	3,5
P.211	54	51	1,03	3.700	0,72	2.600	30,3	25,8	39	44	6,2	5,4
P.311	55	52	1,22	4.400	0,85	3.080	35,3	30,0	38	44	7,5	6,6
P.415	56	53	1,58	5.700	1,11	4.000	46,7	39,6	39	44	10,9	9,5
P.515	63	58	1,97	7.100	1,38	4.970	57,1	48,5	39	44	13,6	11,9
P.618	64	59	2,50	9.000	1,75	6.300	72,2	61,4	38	44	17,2	15,0
P.722	65	60	2,75	9.900	1,92	6.930	85,6	72,7	40	46	18,9	16,5
P.822	65	60	3,05	11.000	2,14	7.700	99,5	84,5	43	48	22,0	19,0
P.924	66	61	3,33	12.000	2,33	8.400	106,7	90,7	42	47	23,7	20,6

Correction factors for different conditions on heating

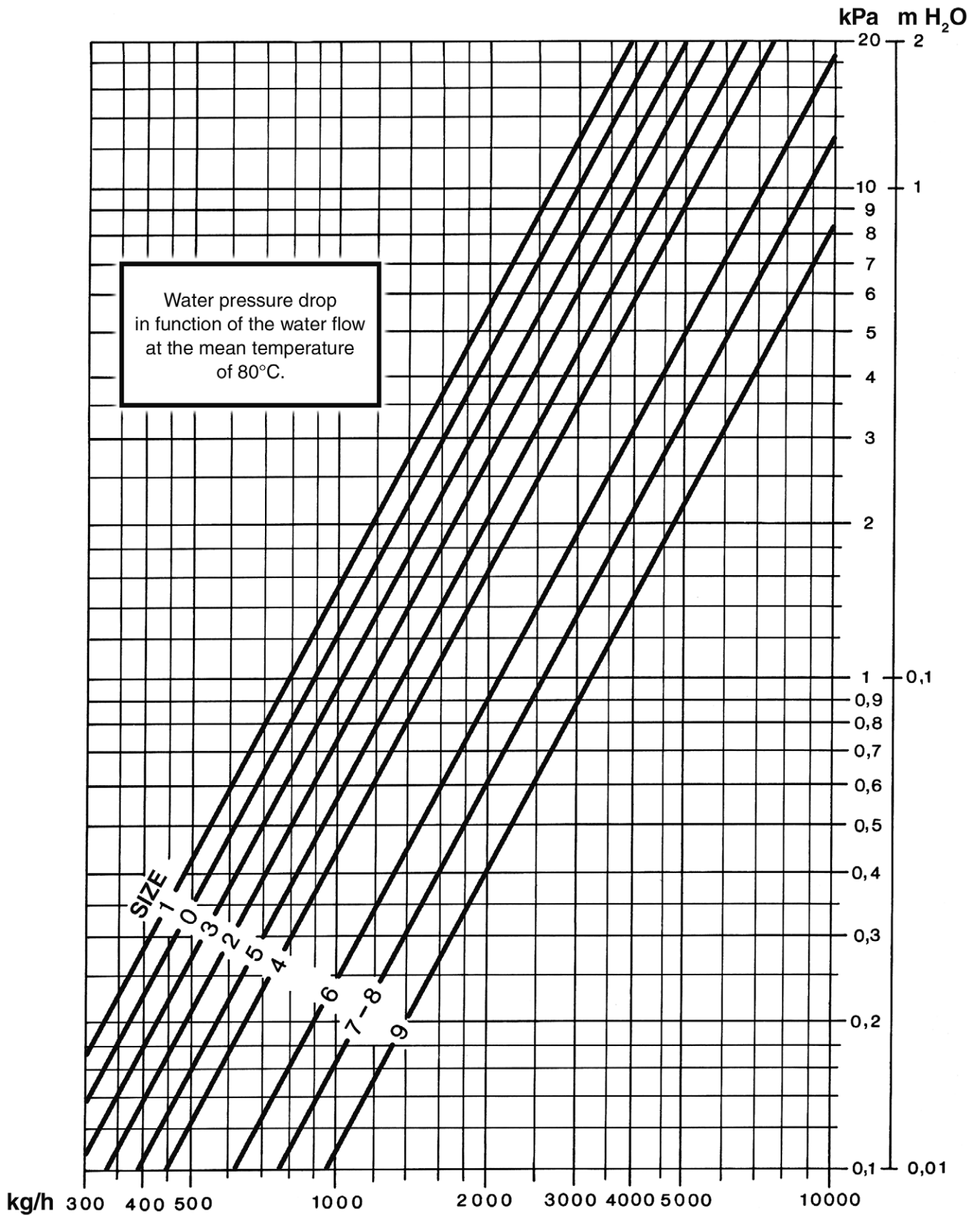
E.A.T. °C	10°C drop water temperature			15°C drop water temperature			20°C drop water temperature		
	90°/80°	80°/70°	70°/60°	90°/75°	85°/70°	80°/65°	110°/90°	100°/80°	90°/70°
5	1,28	1,17	0,96	1,24	1,16	1,08	1,52	1,36	1,20
10	1,20	1,08	0,88	1,16	1,08	1,00	1,44	1,28	1,12
15	1,12	0,99	0,80	1,08	1,00	0,92	1,36	1,20	1,04
20	1,04	0,90	0,72	1,00	0,92	0,84	1,28	1,12	0,96
25	0,96	0,81	0,64	0,92	0,84	0,76	1,20	1,04	0,88

Correction factors for different conditions on cooling

E.A.T. 55% R.H.	5°C drop water temperature		4°C drop water temperature		
	9°/14°	10°/15°	9°/13°	10°/14°	11°/15°
26°C	0,98	0,92	1,00	0,93	0,86
27°C	1,03	0,98	1,06	1,00	0,93
28°C	1,10	1,03	1,13	1,06	1,00
29°C	1,16	1,10	1,20	1,13	1,06
30°C	1,23	1,16	1,26	1,20	1,13

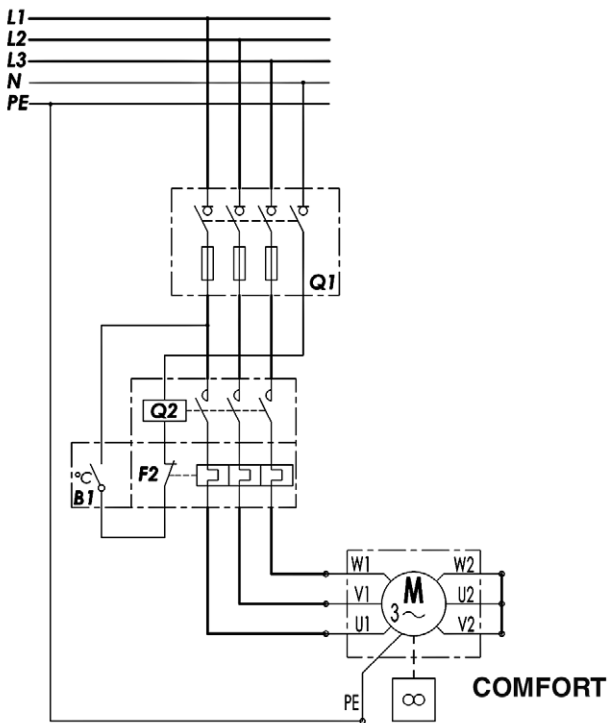
Do not supply the air conditioners with water at temperature lower than 9°C.

Water pressure drop



Correction factors for temperatures different from 80°C

10°	15°	65°	70°	75°	80°	85°	90°	95°	100°	105°
1,41	1,31	1,07	1,05	1,02	1	0,97	0,95	0,92	0,89	0,86



STANDARD MOTORS

Single speed, single wiring motor, V400, Hz 50, 3 PH

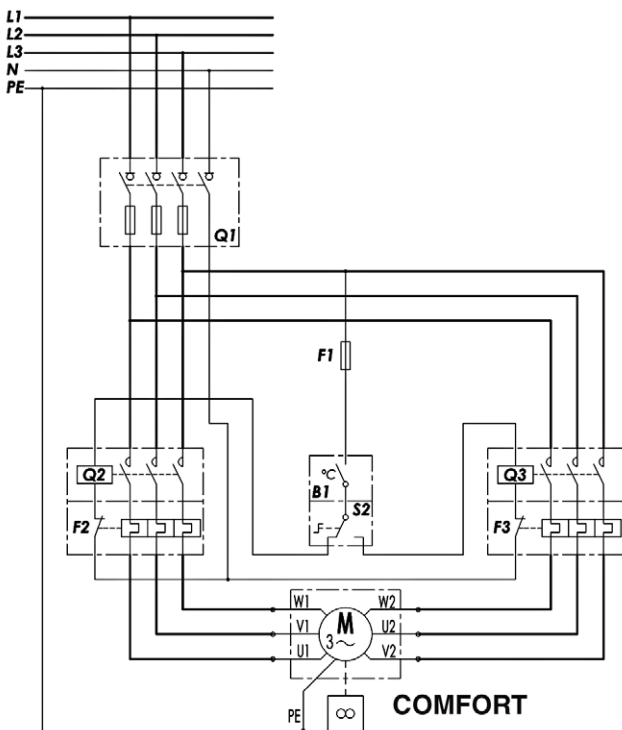
Model	Poles	rpm	Motor type	Power W	Absorption A
0	4	1.400	71/4	120	0.35
	6	900	71/6	40	0.17
1	4	1.400	71/4	120	0.35
	6	900	71/6	40	0.17
2	4	1.400	71/4	220	0.60
	6	900	71/6	75	0.30
3	4	1.400	80/4	550	1.60
	6	900	80/6	370	1.30
4	4	1.400	80/4	550	1.60
	6	900	80/6	370	1.30
5	4	1.400	80/4	750	2.10
	6	900	80/6	370	1.30
6	-	-	-	-	-
7	6	900	80/6	370	1.30
	6	900	80/6	370	1.30
8	6	900	80/6	550	1.70
	6	900	80/6	550	1.70
9	6	900	80/6	550	1.70
	6	900	80/6	550	1.70

LEGEND:

- Q1 Four poles Circuit Breakers with three poles protected by fuses
- Q2 Motor insertion power switch
- F2 Thermal protection (Power switch Q2)
- B1 Environment thermostat

ON REQUEST

Double speed, double wiring motor, V400, Hz 50, 3 PH

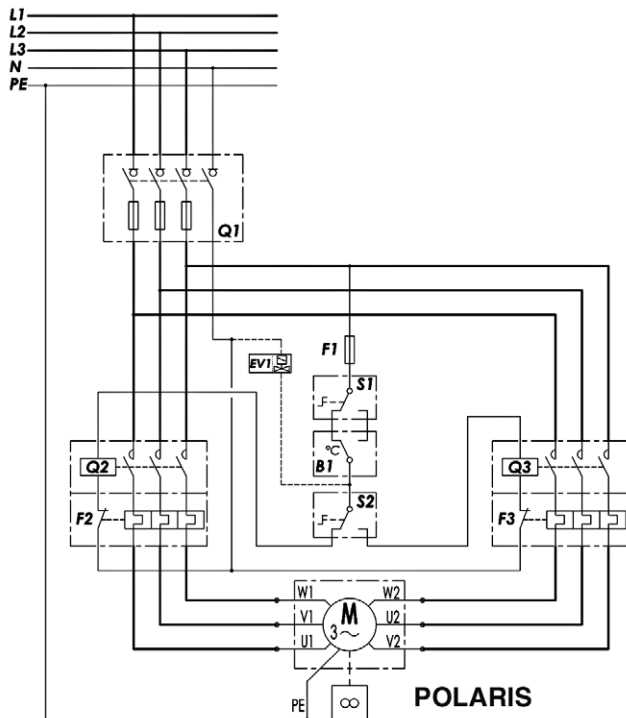


Model	Poles	rpm	Motor type	Power W	Absorption A
0	4/6	1.400/900	71/46	115/45	0.40/0.20
	6/8	900/700	71/68	50/30	0.20/0.18
1	4/6	1.400/900	71/46	115/45	0.40/0.20
	6/8	900/700	71/68	50/30	0.20/0.18
2	4/6	1.400/900	71/46	205/75	0.70/0.30
	6/8	900/700	71/68	65/35	0.30/0.23
3	4/6	1.400/900	80/46	370/150	1.10/0.60
	6/8	900/700	80/68	180/75	0.90/0.50
4	4/6	1.400/900	80/46	370/150	1.10/0.60
	6/8	900/700	80/68	180/75	0.90/0.50
5	4/6	1.400/900	80/46	750/370	2.30/1.33
	6/8	900/700	80/68	370/180	1.35/0.90
6	-	-	-	-	-
7	6/8	900/700	80/68	370/180	1.35/0.90
	6/8	900/700	80/68	370/180	1.35/0.90
8	6/8	900/700	90/68	550/250	1.90/1.00
	6/8	900/700	90/68	550/250	1.90/1.00
9	6/8	900/700	90/68	550/250	1.90/1.00
	6/8	900/700	90/68	550/250	1.90/1.00

LEGEND:

- Q1 Four poles Circuit Breakers with three poles protected by fuses
- Q2 Motor high speed insertion power switch
- Q3 Motor low speed insertion power switch
- F1 Control circuit thermal protection
- F2 Thermal protection (Power switch Q2)
- F3 Thermal protection (Power switch Q3)
- S2 Speed commutation switch
- B1 Environment thermostat

Protect each motor with a motor protector set to a value of 1.10 - 1.15 of the rating current of the motor.



LEGEND:

- Q1** Four poles Circuit Breakers with three poles protected by fuses
- Q2** Motor high speed insertion power switch
- Q3** Motor low speed insertion power switch
- F1** Control circuit thermal protection
- F2** Thermal protection (Power switch Q2)
- F3** Thermal protection (Power switch Q3)
- S1** Seasonal commutation switch (Summer/Winter)
- S2** Speed commutation switch
- B1** Environment thermostat
- EV1** Valve (eventual)

STANDARD MOTORS

Double speed, double wiring motor

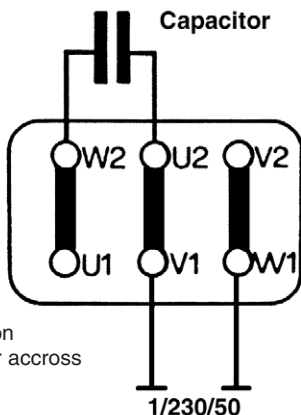
Model	Motor type	Power (W)		Absorption(A)	
		6 poles/8 poles	6 poles/8 poles	6 poles/8 poles	6 poles/8 poles
P.007	71/68	50/30	0,20/0,18		
P.107	71/68	50/30	0,20/0,18		
P.211	71/68	65/35	0,30/0,23		
P.311	80/68	180/75	0,90/0,50		
P.415	80/68	180/75	0,90/0,50		
P.515	80/68	370/180	1,35/0,90		
P.618	80/68	370/180	1,35/0,90		
P.722	80/68	370/180	1,35/0,90		
P.822	90/68	550/250	1,90/1,00		
P.924	90/68	550/250	1,90/1,00		

Electric motor with two separate wirings 6-8 poles (900-700 rpm). In this case the unit has in practice two different motors. These motors have a connector with six terminals, three for each wiring. They are three phase, single voltage and can be controlled with a manual three phase switch. It is suggested that the electric connection is made in accordance with the diagram shown below with a temperature relay for each motor wiring. Protect each motor with a motor protector set to a value of 1.10 - 1.15 of the rating current of the motor.

Comfort and Polaris single phase supply

Sabiana Comfort
Sabiana Polaris

One speed three phase 230/400V motors can operate on single phase 230V 50Hz supply with the introduction of a suitable sized capacitor.



To reverse rotation connect capacitor across "W2" and "V2".

Capacitor table

6 Pole motor

		Capacitor characteristics	
Size	Motor type	Capacity	Tension
0 - 1	71/4	10	450
2	71/4	12.5	450
3 - 4	80/4	16	450
5	80/4	25	450

6 Pole motor

		Capacitor characteristics	
Size	Motor type	Capacity	Tension
0 - 1	71/6	8	450
2	71/6	10	450
3 - 4	80/6	10	450
5	80/6	12.5	450
6 - 7	80/6	16	450
8	80/6	20	450
9		not available	

Comfort and Polaris installation instructions

- On cooling when the fan is inactive for long periods, it is required to shut off the chilled water supply to the coil using 2/3-way valves, electrically connected to the thermostatic control, to avoid condensation forming on the outside of the unit.
- When installing the Comfort / Polaris appliances, a free space of around 50 cm must be left from the ceiling, so as to allow the necessary maintenance.

The descriptions and illustrations provided in this publication are not binding: Sabiana reserves the right, whilst maintaining the essential characteristics of the types described and illustrated, to make, at any time, without the requirement to promptly update this piece of literature, any changes that it considers useful for the purpose of improvement or for any other manufacturing or commercial requirements.

Heating / Air Conditioning
Comfort Circular Unit Heater
Polaris Air Conditioner



SABIANA

ENVIRONMENTAL COMFORT