



Polaris Circular Air Conditioner

The *Polaris air conditioners* for vertical discharge offer a practical and economical solution for space heating and cooling with hot water supply (17 - 107 kW) or chilled water supply (2-20 kW).

Main components:

- CASING**
 Made of spun steel on both top and bottom sections which is designed to give greater strength and quieter operation. The casing is then finished with an epoxy, polyester powder coating of light grey, RAL 9002.
- HEAT EXCHANGER**
 The heat exchanger is manufactured from the highest quality copper tube. The fins are pressed from aluminium sheet, bonded onto the tubes facilitating the maximum transfer contact available.
- HELICOIDAL FAN**
 The helicoidal fan is statically and dynamically balanced, the rational high-capacity profile provides maximum air volume with a minimum power consumption.
- ELECTRIC MOTOR**
 The motor fitted is hermetically sealed and therefore maintenance free. It is supplied as standard for a three phase 230/400 V 50 Hz two speed 6/8 poles.

On request:

- IP 55 motor protection.
- Flanged connections.
- Steam execution.



"DRA" 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.



"DA" 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.



Polaris Technical Characteristics

Model	Noise level (at 5 m)		Air flow		HEATING: W.T. 85/70°C - E.A.T. 15°C			
	dB(A)		m ³ /h		kW		L.A.T. °C	
	900 r.p.m.	700 r.p.m.	900 r.p.m.	700 r.p.m.	900 r.p.m.	700 r.p.m.	900 r.p.m.	700 r.p.m.
P.007	48	46	2.000	1.400	17,6	15,1	41	47
P.107	52	49	2.400	1.680	20,4	17,4	40	46
P.211	54	51	3.700	2.600	30,3	25,8	39	44
P.311	55	52	4.400	3.080	35,3	30,0	38	44
P.415	56	53	5.700	4.000	46,7	39,6	39	44
P.515	63	58	7.100	4.970	57,1	48,5	39	44
P.618	64	59	9.000	6.300	72,2	61,4	38	44
P.722	65	60	9.900	6.930	85,6	72,7	40	46
P.822	65	60	11.000	7.700	99,5	84,5	43	48
P.924	66	61	12.000	8.400	106,,7	90,7	42	47

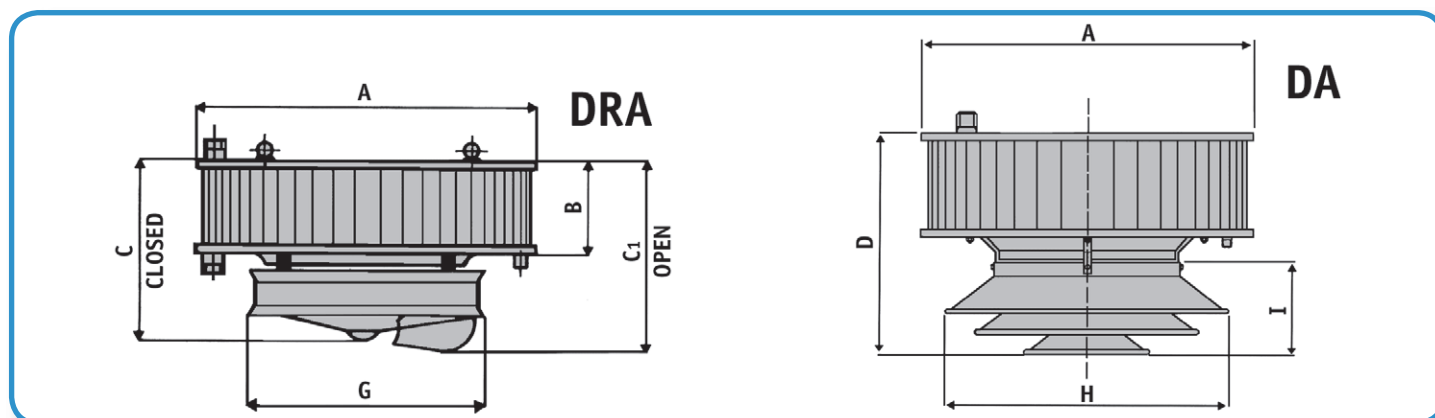
Model	Noise level (at 5 m)		Air flow		COOLING: 55% R.H. - W.T. 11/15°C - E.A.T. 28°C	
	dB(A)		m ³ /h		kW	
	900 r.p.m.	700 r.p.m.	900 r.p.m.	700 r.p.m.	900 r.p.m.	700 r.p.m.
P.007	48	46	2.000	1.400	3,1	2,7
P.107	52	49	2.400	1.680	4,0	3,5
P.211	54	51	3.700	2.600	6,2	5,4
P.311	55	52	4.400	3.080	7,5	6,6
P.415	56	53	5.700	4.000	10,9	9,5
P.515	63	58	7.100	4.970	13,6	11,9
P.618	64	59	9.000	6.300	17,2	15,0
P.722	65	60	9.900	6.930	18,9	16,5
P.822	65	60	11.000	7.700	22,0	19,0
P.924	66	61	12.000	8.400	23,7	20,6



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

Model	Mounting heights H (m)			Area of air diffusion (m)	
	"DRA" diffuser	"DRA" diffuser	"DA" diffuser	"DRA" diffuser	"DA" diffuser
	min	max	max	max	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

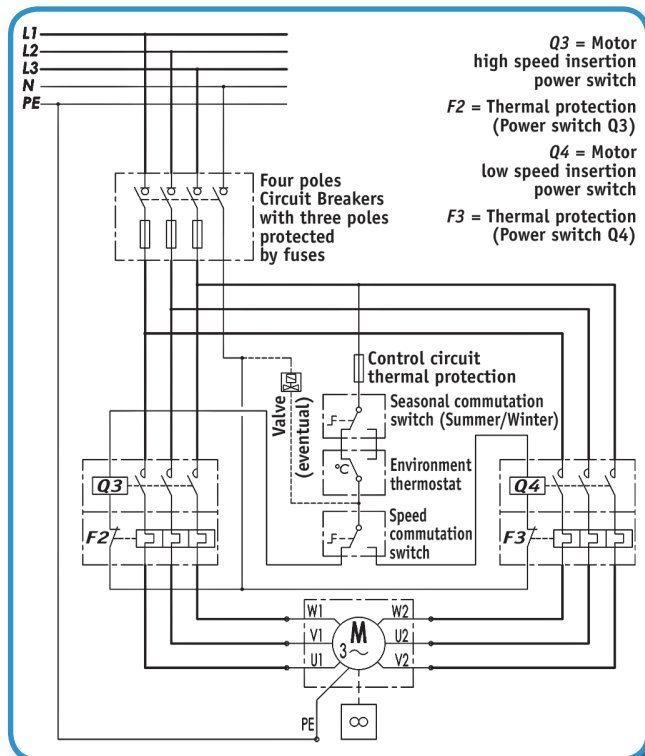
Dimensions, weight and water content



MODEL	A	B	C	C1	D	G	H	I	Ø	WEIGHT	WATER CONTENT
										kg	litres
P.007	680	180	430	560	408	460	537	165	1" 1/4	31	1,20
P.107	780	180	430	560	412	560	645	194	1" 1/4	36	1,30
P.211	780	280	530	660	567	560	750	248	1" 1/4	42	1,90
P.311	880	280	530	700	599	660	750	248	1" 1/2	52	2,40
P.415	880	380	630	760	709	660	858	273	1" 1/2	58	3,20
P.515	1.080	380	630	870	739	760	858	273	2"	75	4,30
P.618	1.080	455	705	945	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

It is recommended to install the unit at least 50 cm from the ceiling, to install the valves and to keep the water inlet temperature above 9°C.

Electric diagram



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 single phase motor with two separate wirings 6-8 poles (900-700 r.p.m.).

These motors have a connector with six terminals, three for each wiring.

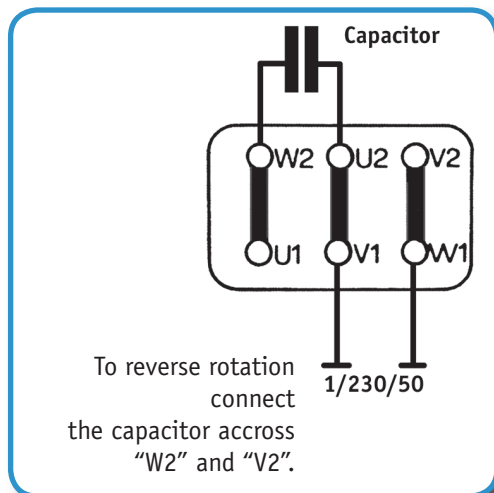
They are three phase, single voltage and can be controlled with a manual three phase switch.

It is suggested that the electric connection is made in accordance with the wiring shown diagram 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.

Single phase supply

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



4 POLE MOTOR

6 POLE MOTOR

		CAPACITOR	
SIZE	MOTOR TYPE	CAP.	TEN.
0 - 1	71/4	10	450
2	71/4	12.5	450
3 - 4	80/4	16	450
5	80/4	25	450

		CAPACITOR	
SIZE	MOTOR TYPE	CAP.	TEN.
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	