

DRYCOOLERS



Performance
Flexibility
Intelligence
Energy optimisation
Acoustic optimisation

COOLING

09PE

From 10 to 1100 kW

The 09PE range is particularly suited to tertiary, industrial and healthcare applications. Drycoolers in the 09PE range are mainly designed for cooling water or glycol/water mix for:

- Condensers for water chillers,
- Free cooling,

These devices are designed to be installed outdoors.



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DESCRIPTION

Excellent resistance to corrosion

The casing boasts category C3 protection against corrosion, in line with ISO standard 12944-2 – RAL 7035 (light grey)



- a **Coil**
Copper tubing and manifolds, high-performance aluminium fins, resistant to fouling.
Anti-shear system for bundle tubing.
Piping: ISO PN16 02A type rotating flanges as per DIN 2642 in 304L stainless steel (1 or 2 inlets/outlets depending on flow rate).
- b **Fan motor assemblies**
Profiled collars in galvanised steel with RAL7035 polyester powder paint or RAL9005 composite depending on the motor reference.
Aluminium and polypropylene impeller.
Class F motor - IP54 - three-phase 400 V +/-10 % 50 Hz +/-2 % - Standard connection to the motor terminal boxes.
Black protective grille compliant with standard BS ISO 12499.
Individual partitioning.
The motors are also available in a 60 Hz version or in other voltages.
- c **Casing**
Galvanised steel with polyester powder paint. Assembly using stainless rivets and LANTHANUM nuts and bolts for the feet.
- d **Feet**
Galvanised steel with polyester powder paint.
- e **Protective enclosures on the elbows and manifolds**

Each device is tested:

- The coil sealing is subjected to an underwater airtightness test.
- For devices with the terminal strip or electrical cabinet option: rotation tests, dielectric tests, current measurement.

The 09PE range complies with the following European directives:

- Machinery directive 2006/42/EC,
- EMC directive 2014/30/EU,
- Pressure Equipment Directive (PED) 2014/68 EU.

RANGE

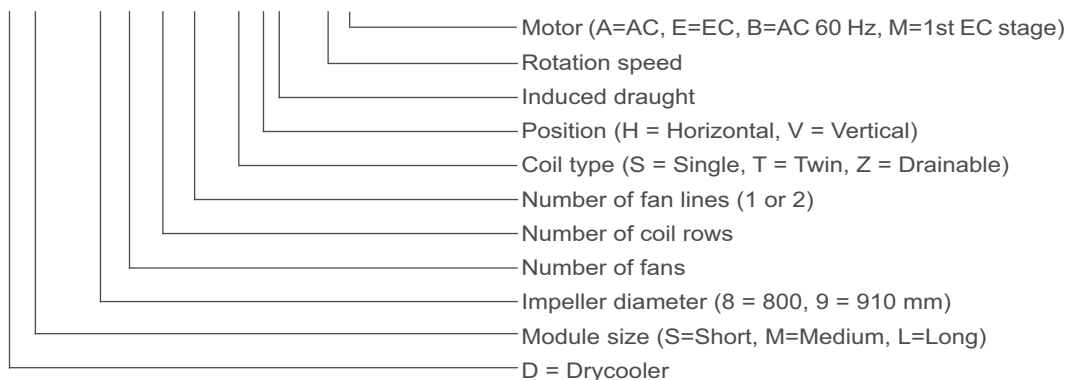
09PE is a large modular range, which offers:

- 3 casing lengths (S, M or L module), allowing either the dimensions, the capacity or the power consumption to be optimised.
- A range of sizes, from 1 to 14 fans.
- 2 impeller diameters, 800 or 910 mm.
- Several rotation speeds, from 340 to 1270 rpm (AC motor).
- Configuration: horizontal or vertical unit.

Various combinations of these elements, as well as the choice of a number of options, allow us to provide devices that are adapted to a range of applications and environments.

DESCRIPTION

09PE DLN 9 12 4-2 SHI 690A 9A

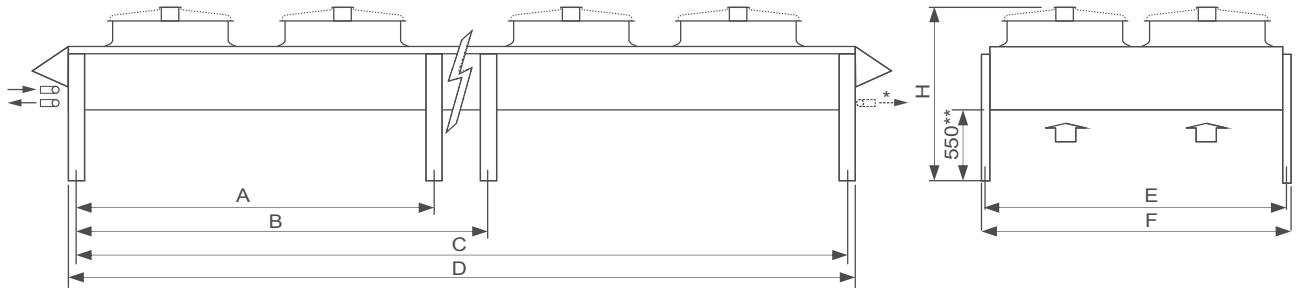


OPTIONS FOR EACH APPLICATION

	Options	Description/Advantages
Protection adapted for the environment	Pre-coated aluminium fins	Improves the resistance of the fins to corrosion. For low corrosion environments.
	High-efficiency coating on fins: ALUCOAT@507/HERESITE (on request)	Improves the resistance of the fins to corrosion. For corrosive environments.
	Stainless steel tubing bundle	For corrosive fluids.
	Corrosiveness resistance category C5M	Casing and fan motor assemblies for corrosive environments.
	ATEX II 2G/3G	For explosive atmospheres.
Quick, simple installation	Terminal box	Connection to the terminals of each motor on the front panel of the device.
	Protection cabinet	Protected by a thermal-magnetic circuit breaker on each motor.
	Control cabinet	Motor and control protection, either by electronic board, depending on the temperature, or by the chiller if compatible.
	Maintenance switch	For stopping individual motors.
	Counter-flanges	In stainless steel, with gaskets, bolts and collar.
	Raised feet	To ensure a good flow of air depending on how the units are installed: against a wall, side by side, etc.
	Blade protective screen	Protection against hail, impacts, etc. For vertical position.
Installation surface constraints	Vertical position	For narrow terraces.
Optimised, secure transport	Stacking of 2 identical devices	
	Skid for transport by container	Secure transport and easy loading/unloading.
Optimisation of electrical consumption and noise	EC motor (with electronic switching)	Variable speed control from 0 to 100% using a 0/10V signal.
Application for water without glycol	Drainable coil	Device located on a slope to prevent frost - drainage by gravity
Free cooling application	Free cooling valve kit	Valves with motor, controlled by the control cabinet. Controlled according to the operation of the drycooler or chiller.
Adiabatic cooling application	ADIABATIC COOLER (water misting into the air flow)	Size of the unit reduced by cooling of the ambient air. Operates completely safely due to the antibacterial treatment applied to the water (Option).

DIMENSIONS

Horizontal Position - Induced Draught



Unit shown has 2 fan lines - no. of motors between the feet is not contractually binding

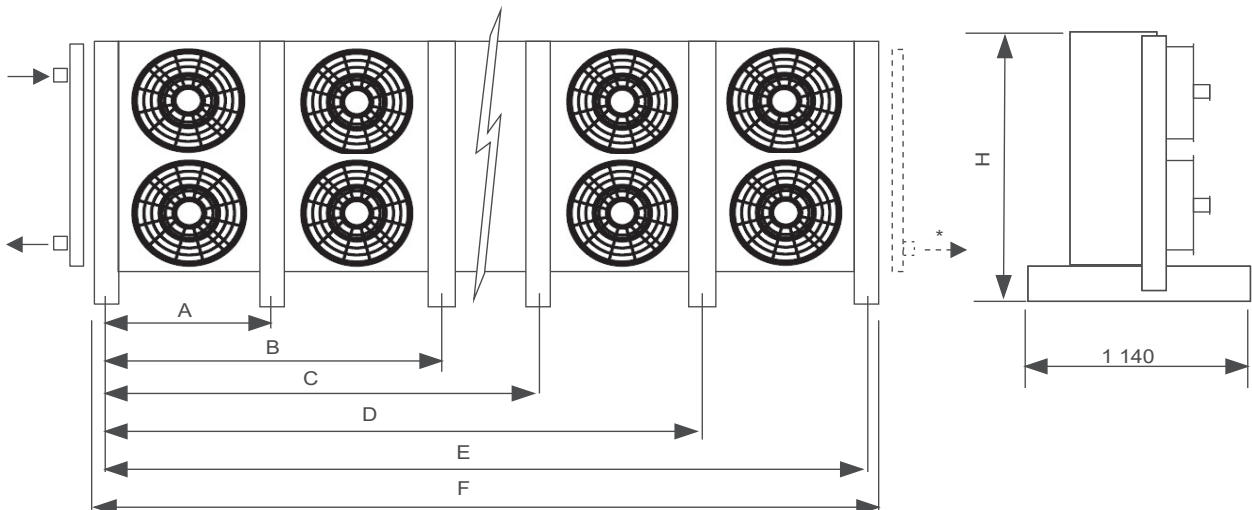
* for units with input/output piping on the opposite side

** standard feet

No. of motors	1	2	3	4	5	6	4	6	8	10	12	14	
DSN S module	A	-	-	-	-	1840	1840	-	-	-	1840	1840	1840
	B	-	-	-	-	2790	3740	-	-	-	2790	3740	4690
	C	830	1780	2730	3680	4630	5580	1780	2730	3680	4630	5580	6530
	D	950	1900	2850	3800	4750	5700	1900	2850	3800	4750	5700	6650
	H	1390 max											
	Max empty weight without options +/-10% (kg)												
	233	369	503	666	809	928	638	875	1135	1393	1617	1874	
DMN M module	A	-	-	-	3140	3140	-	-	3140	3140	4740	3140	
	B	-	-	-	4740		-	-	-	4740	-	7940	
	C	1480	3080	4680	6280	7880		3080	4680	6280	7880	9480	11080
	D	1600	3200	4800	6400	8000		3200	4800	6400	8000	9600	11200
	H	IMPELLER ø 800: 1390 max - IMPELLER ø 910: 1460 max											
	Max empty weight without options +/-10% (kg)												
	314	523	712	958	1183		918	1298	1645	2029	2388	2772	
DLN L module	A	-	-	-	3740	3740	-	-	3740	3740	5640		
	B	-	-	-	5640		-	-	-	5640	-		
	C	1780	3680	5580	7480	9380		3680	5580	7480	9380	11280	
	D	1900	3800	5700	7600	9500		3800	5700	7600	9500	11400	
	H	IMPELLER ø 800: 1390 max - IMPELLER ø 910: 1460 max											
	Max empty weight without options +/-10% (kg)												
	352	599	846	1110	1373		1036	1474	1929	2384	2806		
All	E	1240						2360					
	F	1280						2400					

Dimensions in mm, excluding options

Vertical position



Unit shown has 2 fan lines - no. of motors between the feet is not contractually binding

* for units with input/output piping on the opposite side

DIMENSIONS

No. of motors		1	2	3	4	5	6	4	6	8	10	12	14
DSN S module	A	-	-	-	1840	1840	1840	-	-	1840	1840	1840	1840
	B	-	-	-	-	2790	3740	-	-	-	2790	3740	4690
	C	-	-	-	-	-	-	-	-	-	-	-	-
	D	-	-	-	-	-	-	-	-	-	-	-	-
	E	830	1780	2730	3680	4630	5580	1780	2730	3680	4630	5580	6530
	F	950	1900	2850	3800	4750	5700	1900	2850	3800	4750	5700	6650
	Max empty weight without options +/-10% (kg)	282	419	554	705	915	1039	684	922	1181	1497	1727	1983
DMN M module	A	-	-	1540	1540	1540	-	1540	1540	1540	3140	3140	3140
	B	-	-	3140	4740	3140	-	3140	4740	3140	6340	4740	4740
	C	-	-	-	-	4740	-	-	-	4740	-	6340	6340
	D	-	-	-	-	6340	-	-	-	6340	-	7940	7940
	E	1480	3080	4680	6280	7880	3080	4680	6280	7880	9480	11080	11080
	F	1600	3200	4800	6400	8000	3200	4800	6400	8000	9600	11200	11200
	Max empty weight without options +/-10% (kg)	356	558	835	1046	1339	927	1383	1734	2187	2464	2920	2920
DLN L module	A	-	-	1840	1840	1840	-	1840	1840	1840	3740	3740	3740
	B	-	-	3740	5640	3740	-	3740	5640	3740	7540	7540	7540
	C	-	-	-	-	5640	-	-	-	5640	-	7540	7540
	D	-	-	-	-	7540	-	-	-	7540	-	9440	9440
	E	1780	3680	5580	7480	9380	3680	5580	7480	9380	11280	11280	11280
	F	1900	3800	5700	7600	9500	3800	5700	7600	9500	11400	11400	11400
	Max empty weight without options +/-10% (kg)	399	639	972	1204	1537	1053	1572	1986	2501	2842	3356	3356
All	H	1370						2490					

Dimensions (mm)

INSTALLATION RECOMMENDATIONS

■ These units are designed to operate outside. When starting up, frost and snow could adversely affect the operation of horizontal units.

As a general measure, all steps should be taken to avoid the risk of air recycling. This is especially important when the installation comprises several units.

It is not recommended to install units near the hot air extraction duct outlet or close to deciduous plants (this could cause fouling).

■ A horizontal unit must have a surrounding clearance of 1.5 m. Where the use of anti-vibration mounts is required, use a rigid frame which locks the feet together.

■ A vertical unit should preferably be placed parallel to the direction of the wind. It is not recommended for use with low fan rotation speeds. In addition, we recommend that these units be stabilised using braces connecting their two upper ends to fixed supports (wall or framework).

■ If speed regulators other than those recommended by the manufacturer are used, check that these are compatible with the electric motors.

■ Commissioning and maintenance: refer to the instruction manual.

■ These units comply with the European directives. The installer is responsible for ensuring the compliance of the installation. The installer must ensure safety and protective devices (emergency stop, shut-off valves, lightning protection, etc.) are put in place and are accessible.