

THE IDEAL CLIMATE FOR YOUR PRODUCTS

Dehumidification systems
by adsorption and climate control



... from sunrise to sunset ...
... from evening to morning ...
... from breakfast to dinner ...
... during work,

in relax
in sport,
in well-being ...

SAMP is always with you!

A little history

SAMP was born in Monza in 1969 and was one of the first Italian companies specialized in AHU production. First production site was 500 m².

In 1977 SAMP increases its plant in 2500 m² of production area.

SAMP continues to grow and double in 1990 to 5000 m² its production area.

Today SAMP based in Concorezzo and to produce his units on a surface of 11000 m² and today employs over 70 people.

On evidence of his quality research, SAMP obtained national and international quality accreditations:

1999 ISO9000:2000 - CSQ

2010 GOST R CERTIFICAZIONE DI SISTEMA
(СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р)

2010 CESI – ATEX-

2011 Eurovent

Today SAMP is leader in the Air Treatment market not only thanks to the quality of its products, but especially in respect of total quality that can provide to its clients from the initial design to delivery... and after too

- Standard Air Handling Units
- Air Handling Units Package version: panel control, with chiller and / or VRF
- Air Handling Unit-specific pools
- Air Handling Units for specific operating rooms

And now, to complete its range of product SAMP is able to provide

- Complete adsorption dehumidification systems
- Honeycombe system to achieve low dew points



Many Type of humidity....

Relative humidity: indicates the ratio between the amount of water contained by a mass of air and maximum (saturation) that the mass of air can hold at the same conditions of temperature and pressure.

A relative humidity of 100% indicates that the mass of air at that temperature contains the maximum amount of water possible.

The relative humidity is always linked to the temperature

Absolute humidity: represents the real amount of water in the air, usually expressed in grams contained in a cubic meter of air or kg. It is defined absolute because it is a real value and do not change if air temperature change.

Many types of dehumidifiers

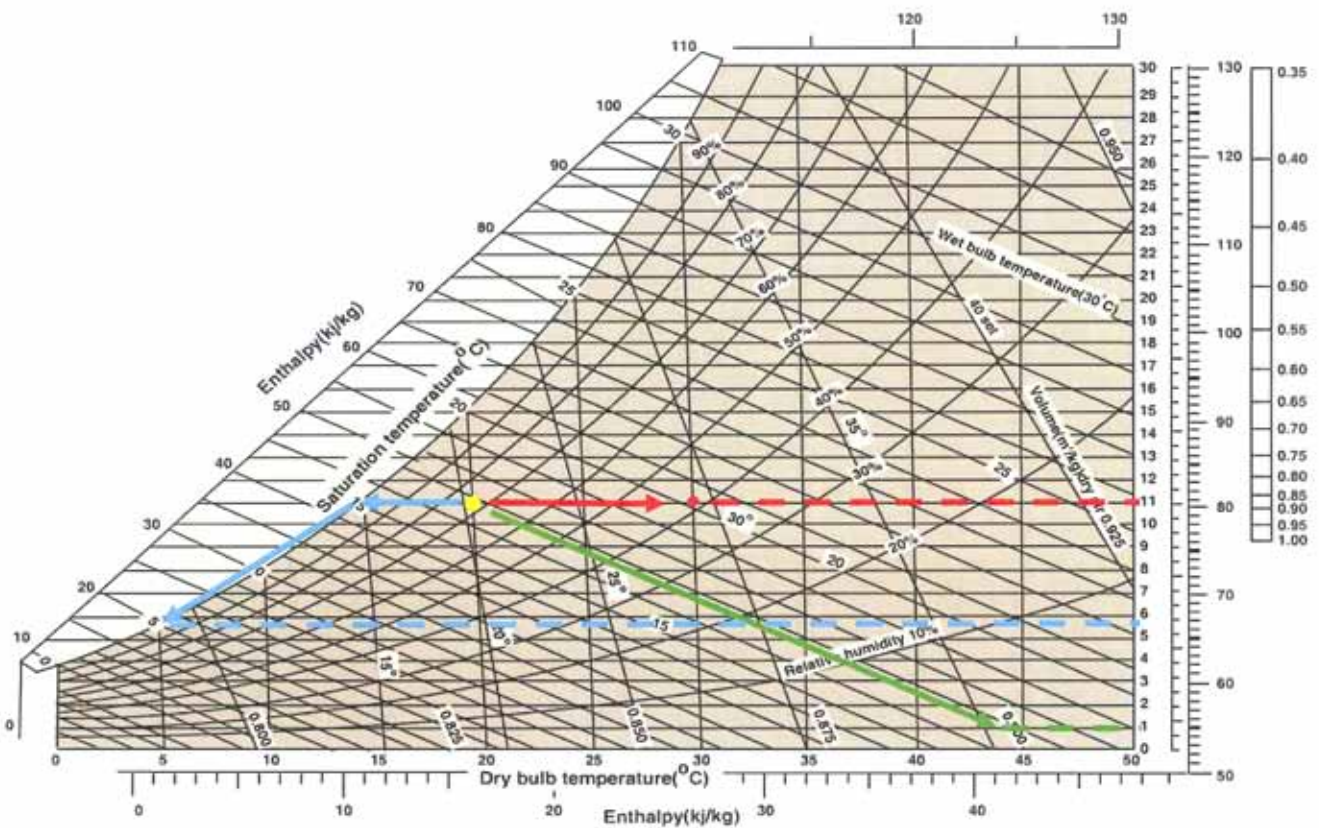
Condensing... Heating... Adsorption...

Which is right system...

Heating: to the temperature increase corresponds air capacity to hold water in the air mass. The absolute humidity does not change. The relative humidity decreases. We have a reduction of water pressure, but not a real-drying because the content absolute water does not change.

Condensation: the decrease in temperature corresponds less capacity of air mass to contain water moisture. The relative humidity increases up to 100%. The absolute humidity varies when the air is not longer able to retain water and to arrive at the condensation. Cooling temperature to reach condensation of water should not fall below the condensation levels icing of air

Adsorption: With SAMP system we have a real decrease in absolute humidity and consequently of relative humidity. We have a real reduction of moisture air. With SAMP system we can achieve very low humidity that can not be reached by other drying methods.



The value of a successful application of a technology:

The “heart” of the SAMP adsorption dehumidification system is a rotor made of composite material, created in order to obtain the highest air contact surface.

On the rotor elements are fixed permanently highly hygroscopic elements able to retain moisture. The dehumidified air is sucked through a fan through a filter and is fed to the rotor drying, where the exchange takes place: the transition air through the rotor of drying, the difference water pressure between the air and the surface of the rotor that determines the adhesion of water molecules to rotor surface.

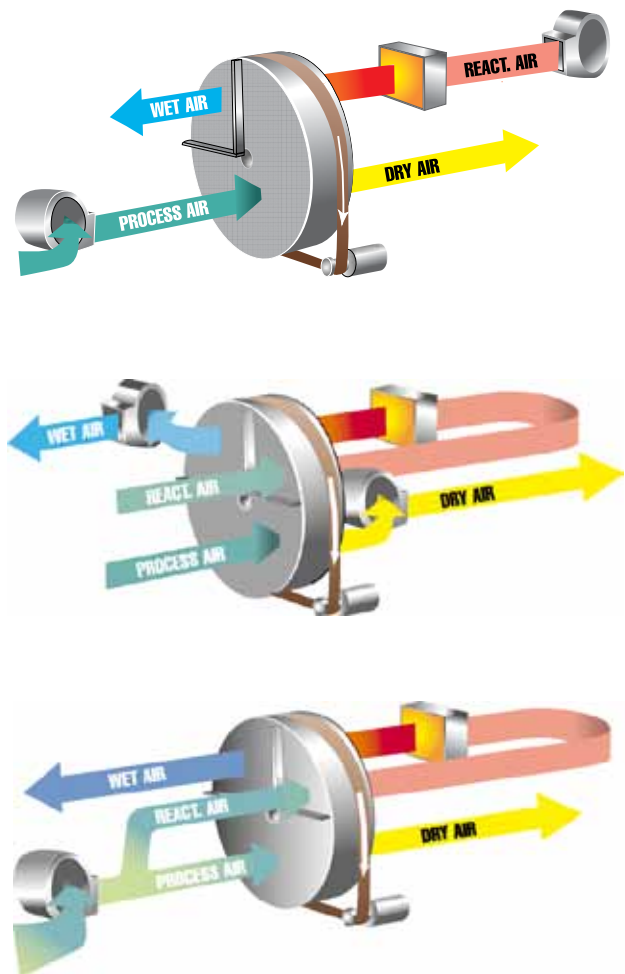
The absorbed moisture is eliminated when the rotor, slowly rotating, reaching the “Regeneration sector”, in this sector a hot air flow collects and sells out the adsorbed moisture.

Thanks to reactivation action, the rotor is maintained always able to optimally absorb moisture.

The two processes of absorption and reactivation take place in parallel, so the drying process is continuously on.

The system has few moving parts: one or two fans and a motor drive.. no cooling compressor ...

Simply magic



Where to apply SAMP dehumidification system...

The applications of our systems are endless, each day we discover an application that can increase the quality of products and plants.

Discover with us the benefits arising from the use of Our systems here are some examples

Food

Cold chain:

Frozen, cold and chilled store work 24 hours a day without stop due to the defrosting process. saving work time and energy: cooling coils without ice working better.

Drying cold:

Drying, curing, storage, all the year. Cutting rooms and processing at low temperature, curing food

Confectionery:

Cooling chocolate, filled biscuits, sweets gummy, sweetened... finally shining and beautiful

Pneumatic conveying:

Stop to stop production due to clogging of the pipes, moisture is no longer a problem: sugar, flour, milk powder... can flow without problems.

Packaging rooms:

So much effort and investment to produce... protect... the packaging of your products.

Chemicals & Pharmaceuticals

Processing powders:

Effervescent, hygroscopic powder may be dried and processed without problems

Packaging:

Atmosphere suitable not to damage the production

Tablet press:

Working without stop

Jellies:

Production and storage in the best

Laboratory with low RH:

Security Optimal conditions of humidity

Tablets coating:

Covers best and look great

Plastic PET:

Increased productivity

Glass processing:

The production of laminated glass is not a problem

Electronics

Utilities

Museums

Sports facilities

Transport

make us your questions... we find the best solution



RANGE ADSORPTION SAMP DEHUMIDIFIERS

DSS Series Small

- With air flow 160 m³ / h to 800 m³ / h
- Stainless steel panels
- Regeneration through electrical resistance PTC (Positive Temperature Cut-Out: automatic) for a total safety against overheating
- All models can be implemented with accessories eg: Filtration, batteries hot / cold, control

DSS small Series dehumidifiers are designed to achieve effective moisture control and to satisfy the most demanding requirements. On request is possible to integrate the dehumidifier with filtration and controls. Strength and corrosion resistance were obtained thanks to the construction of units with panels easily removable in stainless steel that form a structure particularly suitable to be used in all industrial environments. Heating Regeneration elements PTC (Positive temperature cut-out) for increased security against overheating to ensure safety of use maximum levels. There are also complete electrical panel board Full operation indicators, fault diagnostics, Remote Alarm and start / stop unit.



		DSS 160	DSS 210	DSS 250	DSS 400	DSS 450	DSS 800
Moisture capacity removal at 20°C; 60% RH	kg/h	0,6	0,6	1,1	1,5	2,2	4,4
Process Air	m ³ /h	160	210	290	400	450	800
Total Electric Power	kW	1	1,1	1,4	2,3	3,5	7
W x D x H	mm	315 x 315 x 307	315 x 315 x 457	335 x 351 x 412	500 x 428 x 525	500 x 428 x 525	1052 x 600 x 687
Voltage supply		1x230V 50Hz	1x230V 50Hz	1x230V 50Hz	1x230V 50Hz	1x230V 50Hz	3x400V 50Hz

Series DSS Medium

- With airflows from 1000m³ / h to 3500 m³ / h
- Stainless steel panels with thermal insulation of 30mm
- Regeneration through electrical resistance PTC (Positive Temperature Cut-Out: automatic) for a total safety against overheating
- Plug Motors without any belt and for maximum efficiency and clean without maintenance needed
- All models can be implemented with accessories eg: Filtration, batteries hot / cold, controls

DSS Series medium dehumidifiers are designed to achieve effective moisture control and to satisfy the most demanding requirements. On request is possible to integrate the dehumidifier with filtration and controls.

Strength and corrosion resistance were obtained thanks to the construction of units with panels easily Removable in stainless steel that form a structure particularly suitable to be used in all industrial environments.

Heating elements Regeneration PTC (Positive temperature cut-out) for increased security against overheating and fans, plug fans without belt for a quality guarantee safety in use at the highest levels. In addition, the reactivation power can be carried out alternatively with PTC resistors, batteries, hot water/steam, or natural gas for increased energy savings.

There are also complete electrical panel board Full operation indicators, fault diagnostics, Remote Alarm and start/stop unit.



		DSS 1000	DSS 1500	DSS 2000	DSS 3000	DSS 3500
Moisture capacity removal at 20°C; 60% RH	kg/h	7,4	8,6	11,9	13,3	17,7
Process Air	m ³ /h	1000	1500	2000	3000	3500
Total Electric Power*	kW	12,5	14	20	22	27
W x D x H	mm	1122 x 805 x 1020	1122 x 805 x 1020	1122 x 805 x 1020	1122 x 805 x 1020	1703 x 950 x 1071
Voltage supply		3x400V 50Hz	3x400V 50Hz	3x400V 50Hz	3x400V 50Hz	3x400V 50Hz

* With electric regeneration

Serie DSI

- DSI Series with airflow from 5000 m³/h to 9000 m³/h
- Sandwich panels PL / AZ with internal thermal insulation min. 30mm
- Electric reactivation or hot water or steam or natural gas or thermal oil
- Plug fan motors without belt for maximum efficiency and clean removal without maintenance needed
- Inverter control as standard for speed control for process fan
- All models can be implemented with accessories eg: Filtration, batteries hot / cold, adjustments

DSI Series dehumidifiers are designed to achieve effective control of moisture and to meet the most demanding requirements. You can integrate the dehumidifier with special filtration and regulations.

Already arranged for connection with pre-and post-treatment.

Strength and corrosion resistance were obtained thanks to the construction of units with panels easily removable galvanized steel and Preplastified 30 mm insulated with

mineral wool to form a structure particularly suited for use in all industrial environments. They are equipped with plug fans no belt for a much quieter in order to optimize the performance of the dryer and reduce the need maintenance and the risk of downtime.

Also are already predisposed to use power reactivation as an alternative to electric: steam, Natural gas, hot water, hot water and thermal oil Regeneration even at low temperatures.

Complete electric panel board operation indicators, fault reporting, alerts and remoting start/stop unit.



		DSI 5000	DSI 7000	DSI 9000
Moisture capacity removal at 20°C; 60% RH	kg/h	35	49	61
Process Air	m ³ /h	5000	7000	9000
Total Electric Power*	kW	55	75	98
Voltage supply		3x400V 50Hz	3x400V 50Hz	3x400V 50Hz

* With electric regeneration

Serie DSI Plus

- The dress for our customer

Dehumidifiers SAMP Line Plus series is a series Fully modular with flow air and configuration on Customers requests.

Each part of the unit can be changed according needs: from the panels to the control, to the type of filters and batteries etc.. SAMP is able to provide the "dress" more suited to the customer thanks to the design capacity of its Technical Department and the experience gained



Rotor Cassette

- Series DSIN With airflow from 100 m³/h to 100000 m³/h
- Structure in galvanized steel (steel on request)
- Construction using CNC machines for maximum precision mechanics
- PTFE one piece seals radial and peripheral
- Complete with full metal gear and chain auto tensioners
- Drive motor control wheel Speed



DSIN Rotor Cassette use adsorption rotors type PPS (silica gel) PPH (hygiene) and PPM (molecular sieves).

- DSIN Rotor Cassette use adsorption rotors type PPS (silica gel) PPH (hygiene) and PPM (molecular sieves).
- Support desiccant fiber diameter > 6 microns, so as to be not nalabile human body
- Silica Gel 82%
- Surface strength acrylic 2% > 200 kPa from any direction pore area 600 m²/g

A request can be supplied with purge sector and adjustable by-pass. The reactivation system (filter, heater and fan) and the other components of the air handling system can be easily connected to rotor casing by flanged connections.

IDEAL SOLUTIONS FROM EXPERTISE ORIENTED TO CUSTOMER NEEDS

A SIMPLE WINNING FORMULA

Analyze problems, design, install,
and up to after sale, means services
we can offer in partnership with you ...

Perfects construction, standards or not, always
for accurate targeting
as the best solutions for the customer...

On time and professional ethics...
allow us to speak with you...

know-how, application expertise, willingness
to learn, let us say that we can provide
a customized solution for you and with you

SAMP uses a simple winning form:

To be customer-oriented

This simple formula has allowed us
to grow... to grow with you.

Today SAMP has an organizational structure
and as also recognized by the institutions of
certification, but especially by its customers.

**Consult us and get to know each other
and grow together**





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