



VAZDELAR
SISTEMAS DE PINTURA



KNOW - HOW

OUR COMPANY HAS DEVELOPED A SPECIFIC KNOW-HOW FOR THE USE OF NITROGEN ENRICHED AIR IN PAINT PROCESSES

TECHNOLOGY

THE TECHNOLOGY FITS ANY KIND OF PROCESS: PNEUMATIC, ELECTROSTATIC AND ROTARY BELLS, BOTH FOR SPRAY PAINTING AND POWDER COATING. NITROGEN IS PRODUCED ON-SITE USING THE MAIN LINE COMPRESSED AIR AS SOURCE

PROCESS OPTIMIZATION

WE CAN OPTIMIZE YOUR PROCESS THROUGH THE EVALUATION OF YOUR STANDARD PRODUCTION PARAMETERS AND SETTINGS REPROGRAMMING



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POLIFLUID

COVERED BY
INTERNATIONAL
PATENT



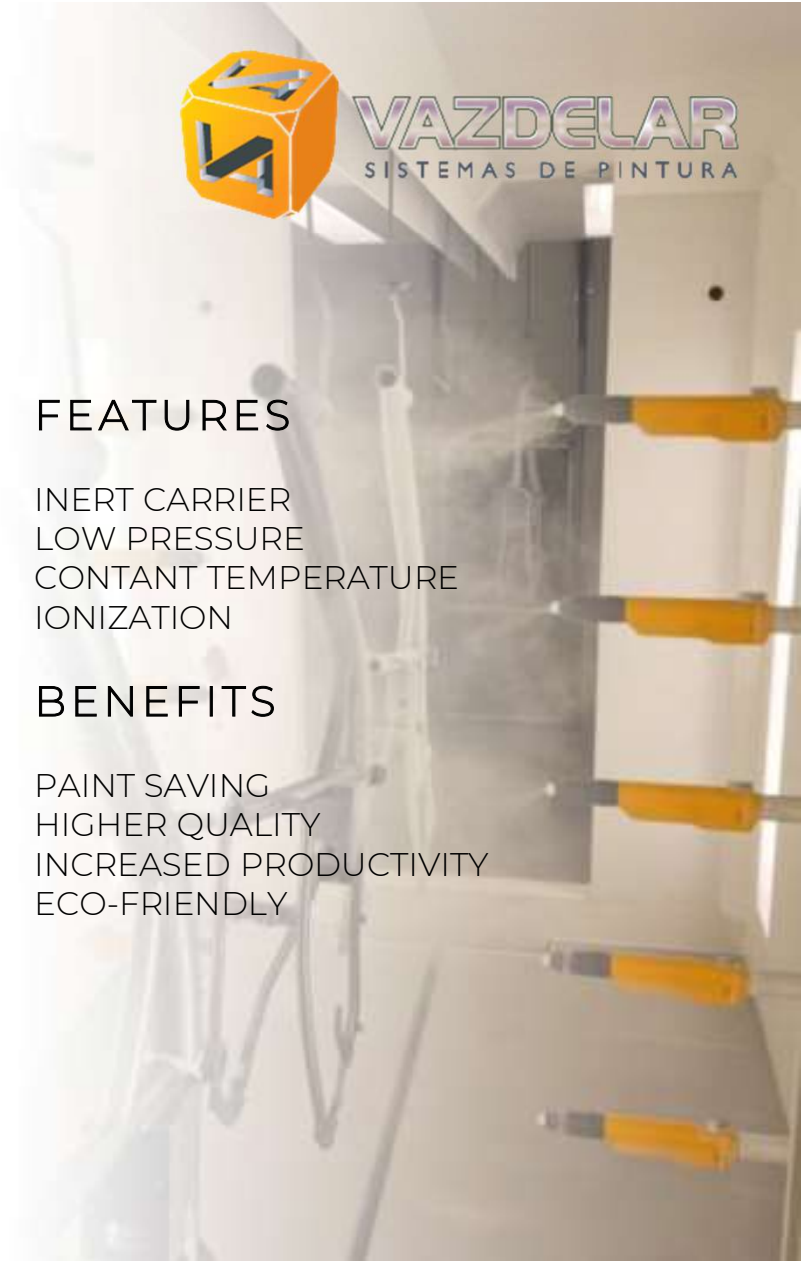
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FEATURES

INERT CARRIER
LOW PRESSURE
CONTANT TEMPERATURE
IONIZATION

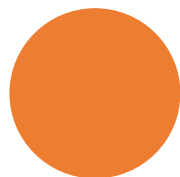
BENEFITS

PAINT SAVING
HIGHER QUALITY
INCREASED PRODUCTIVITY
ECO-FRIENDLY

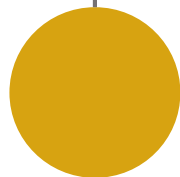




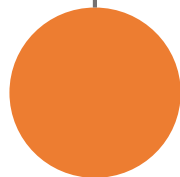
BENEFITS



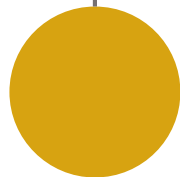
UP TO 20% PAINT SAVING
REDUCED SPEED AND POWDER
VOLUME AT THE GUN



SCRAP PARTS REDUCED



LESS MAINTENANCE
REQUIRED FOR BOOTH
AND FILTERS



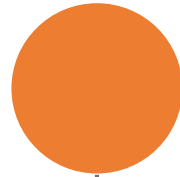
LESS THAN ONE YEAR
RETURN ON INVESTMENT



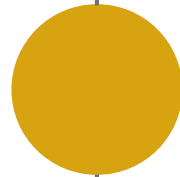
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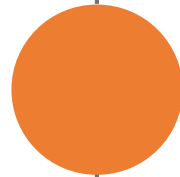
BENEFITS



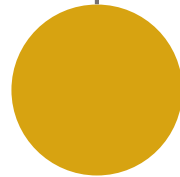
EXCELLENT APPEARANCE
THICKNESS AND COLOUR
UNIFORMITY



REDUCTION OF FINISHING
DEFECTS
ORANGE PEEL, BLISTERING,
BLUSHING



FARADAY CAGE EFFECT
REDUCTION
EASIER REACHING OF
DIFFICULT AREAS (CORNERS
AND EDGES)



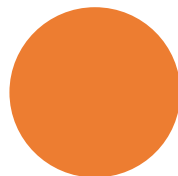
DRYER AND
CLEANER POWDER



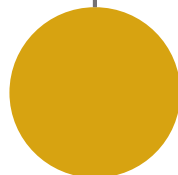
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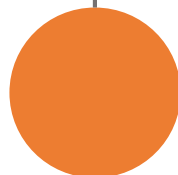
BENEFITS



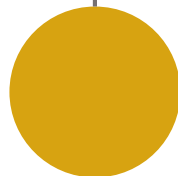
INCREASED TRANSFER
EFFICIENCY



INCREASED LINE SPEED
UP TO 15%



QUICKER COLOUR
SWITCH



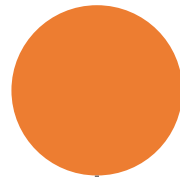
OPTIMIZATION OF
TECHNICAL APPLICATION
PARAMETERS



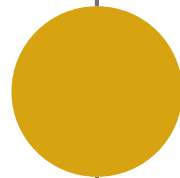
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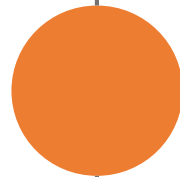
BENEFITS



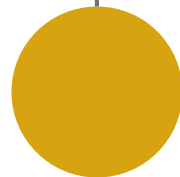
IMPROVED WORKING
CONDITIONS



REDUCED POWDER WASTE
AND REDUCED QUANTITY
OF RECYCLED POWDER



CLEANER BOOTHS



ACCESS TO "GREEN
CERTIFICATES"

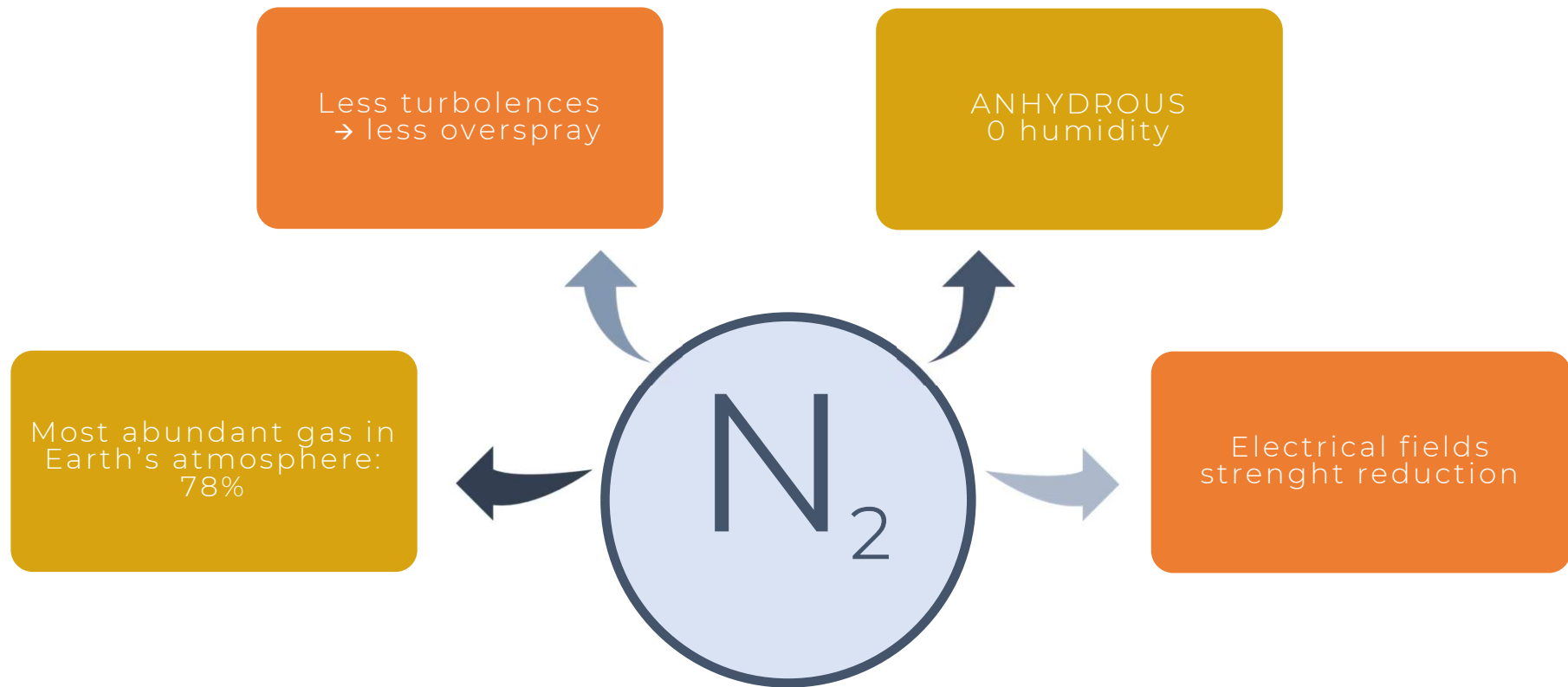


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FEATURES

NITROGEN

WHY TO PREFER N₂



FEATURES

RELATIVE HUMIDITY CONTROL

Electrical Resistivity = Rate of decay of the charge applied to a droplet or granule.

Defined by Colovoy as: $r(t) = r_0 \exp(-b \cdot RH)$

$I_{cc} = Kt \cdot (\%RH/100) \exp(13)$

I_{cc} = number of ions per cm^3 of vapour

The higher the Relative Humidity, the higher the rate of Release of conductive ions, the stronger the Electric field.

Nitrogen enriched air allows to spray with lower RH allowing to reduce the number of ions released and hence reducing the field's strength and contributing to greater uniformity of coverage and so transfer efficiency.

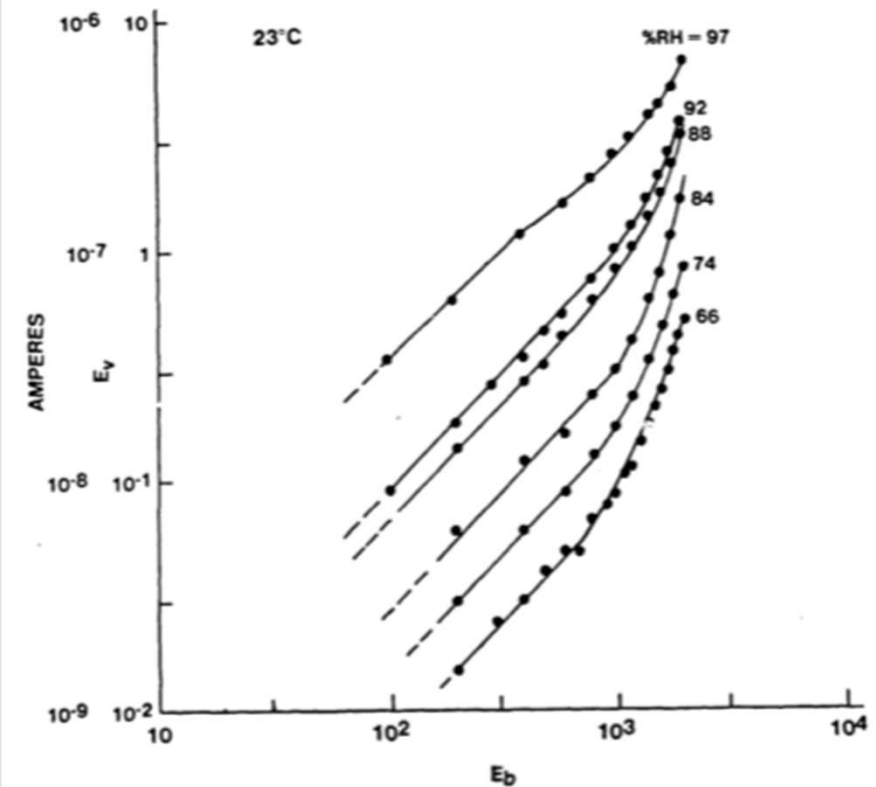


Figure 10. Data Taken for A'r at 23 °C Being Humidified Using Ultrasonic Nebulizer, Fan Off, Continuous Bias Voltage Decreasing for Readings

FEATURES

PARAMETERS



NITROGEN
PURITY

%

A selective permeation system through a special membrane allows to reach a concentration of 97%±2 nitrogen purity

IONIZATION

+ / -
kW

The *Destatic option* allows to charge the nitrogen flow (either positive or negative charge) ±20kW

TEMPERATURE

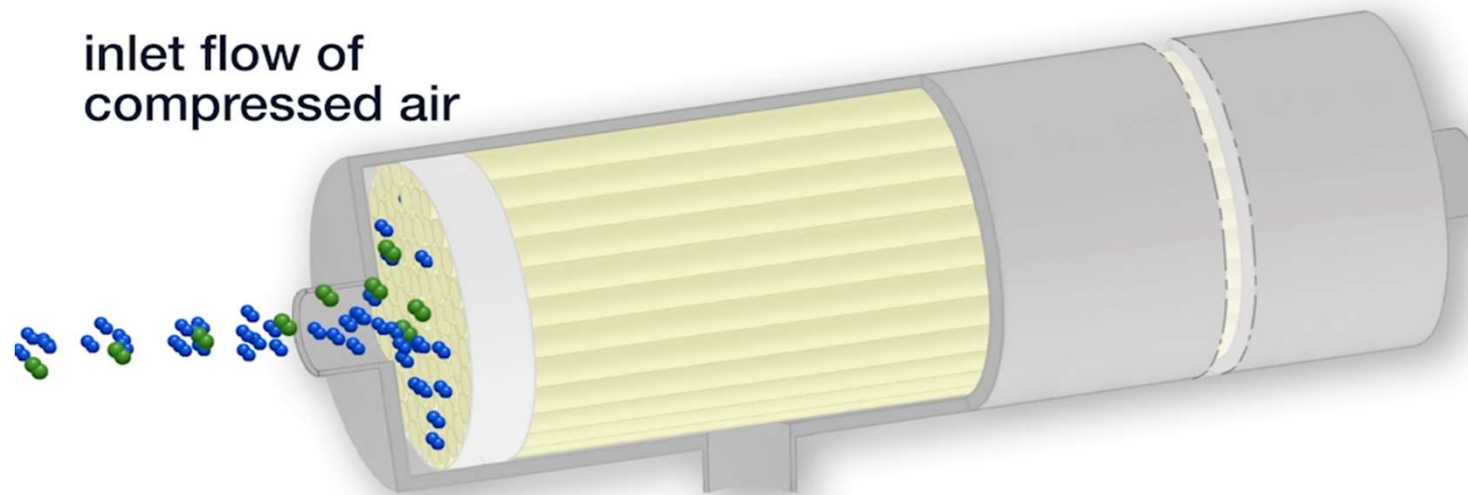
°C

A conditioning system enables temperature control between 0-20 °C

FEATURES

SELECTIVE PERMEATION

HOLLOW FIBERS MEMBRANE



SELECTIVE PERMEATION

IONIZATION

TEMPERATURE CONTROL

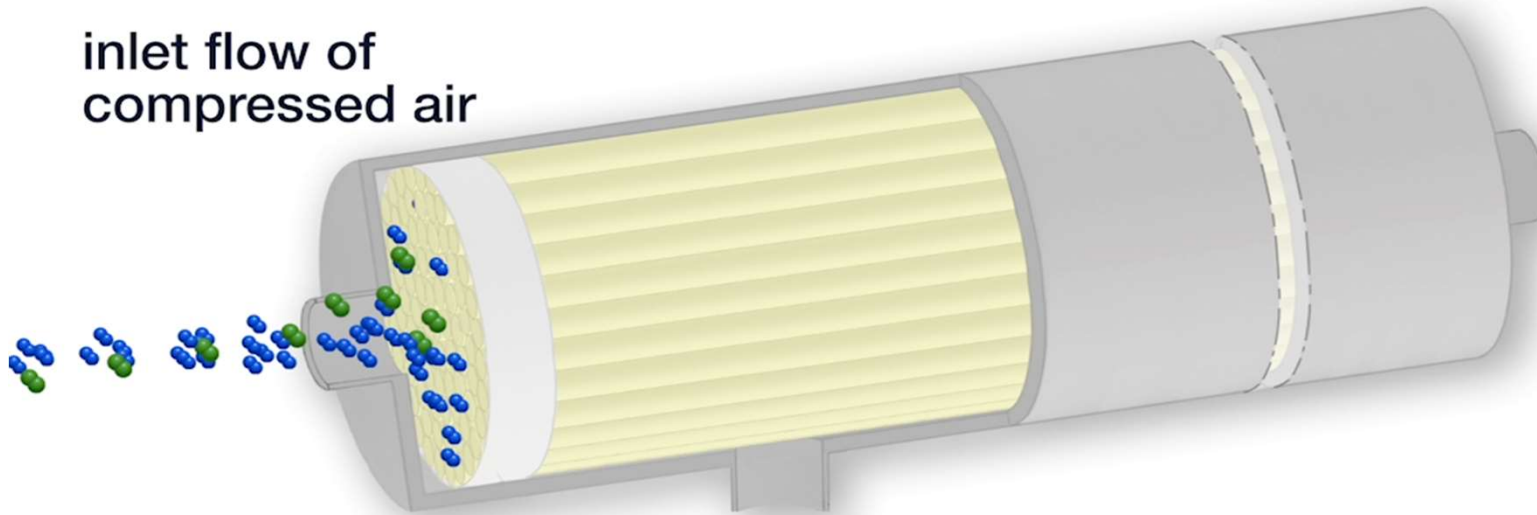
FEATURES

DESTATIC OPTION

HOLLOW FIBERS MEMBRANE



inlet flow of
compressed air



SELECTIVE PERMEATION

IONIZATION

TEMPERATURE CONTROL

FEATURES

TEMPERATURE CONTROL

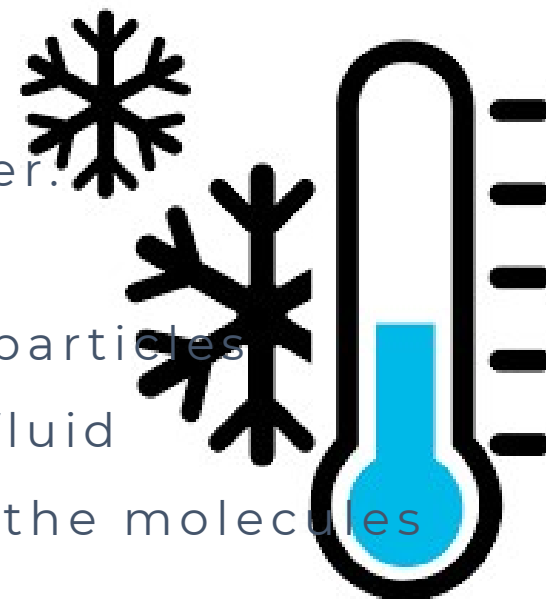


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The system can cool down to 0°C the fluid carrier.

Cooling improves the powder transport:

- reducing the internal movements of nitrogen particles
- increasing the density and creating a thicker fluid
- increasing the stability of electrical charge of the molecules



SELECTIVE PERMEATION

IONIZATION

TEMPERATURE CONTROL

THE IMPORTANCE OF PARAMETERS CONTROL

SELECTIVE PERMEATION

FEATURES



VAZDELAR
SISTEMAS DE PINTURA

%

NITROGEN PURITY

UNIFORMITY
NO HUMIDITY

+ / -
kW

ELECTROSTATIC CHARGE

UNIFORM DISTRIBUTION OF CHARGE

°C

TEMPERATURE

STABILITY

IONIZATION

TEMPERATURE CONTROL



e l e m e n t a r y

INSTALLATION RUNNING MAINTENANCE



EASY INTEGRATION

The generator does not require any equipment substitution. It perfectly fits the existing lines

ADAPTABILITY TO EXISTING LINES

Installation only requires connection from compressed air line to nitrogen generator

EFFORTLESS MAINTENANCE

The only maintainace needed is substitution of filters every 2.000 working hours

LONGER LIFETIME

With compressed air free from oil and other pollutant particles the membrane has a 10 years life time

INSTALLATIONS



Air compressor

Polifluid

Spray booth



Air compressor

Polifluid

Horizontal System



Air compressor

Polifluid

Vertical System



NITROGEN GENERATOR
FOR MANUAL BOOTH

NITROGEN GENERATOR
FOR HORIZONTAL
SYSTEM

NITROGEN GENERATOR
FOR VERTICAL SYSTEM



VAZDELAR
SISTEMAS DE PINTURA

GET IN TOUCH WITH US

LOCATION

- PUEBLA, PUE, MÉXICO.
- MONTERREY, NL, MÉXICO.

CONTACT US

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