

Industrial Vacuum Cleaners for
ADDITIVE PRINTING

made in Italy



| 3D ADDITIVE MANUFACTURING, an innovative and fast growing sector

This new technology is spreading rapidly in the fields of **engineering** and **prototyping**.

Due to its extreme precision, low cost and speed of execution, this technology is used for the production of prototypes, special low-series and customized parts.

During the process of operation of additive techniques **SLM** (Selective Laser Melting) e **DMLS** (Direct Metal Laser Sintering) **RGS vacuum cleaners are extracting explosive and unsafe dust**.

Equipped with a system of **recovery and screening of unused dust** allow the reuse of dust in other printing processes, given the high costs of the same.



| What functions does the vacuum cleaner have?



Cleaning of finished parts

To allow dust recovery.



Printer cleaning

To avoid cross-contamination of different types of dust.



Cleanliness of the working environment

To keep the contamination level low.



RGS RANGE, for plastic or metal powders of 3D printers

RGS vacuum cleaners are designed to offer the maximum **safety, ease of use** and **sturdy** for the maintenance of 3D printers.

Vacuum cleaners for NON CONDUCTIVE EXPLOSIVE DUSTS

All **ATEX Z22** machines are suitable. These models are recommended for compactness reasons.

These kinds of **dust** are usually the **plastic** ones.



Vacuum cleaner for EXPLOSIVE CONDUCTIVE DUSTS

We recommend the AD36X2 1D/3D, compressed air machine with **ATEX Z20 internal** and **Z22 external certification**.

This kind of **dust**, are the **metallic** ones, therefore more dangerous.



Z20 internal
Z22 external
ATEX
certification

Vacuum cleaner for EXPLOSIVE CONDUCTIVE or REACTIVE DUSTS

We recommend the models A21PMINX1.3D, AD36INX1.3D and A346/60EPINX1.3D equipped with **liquid inertization system**.

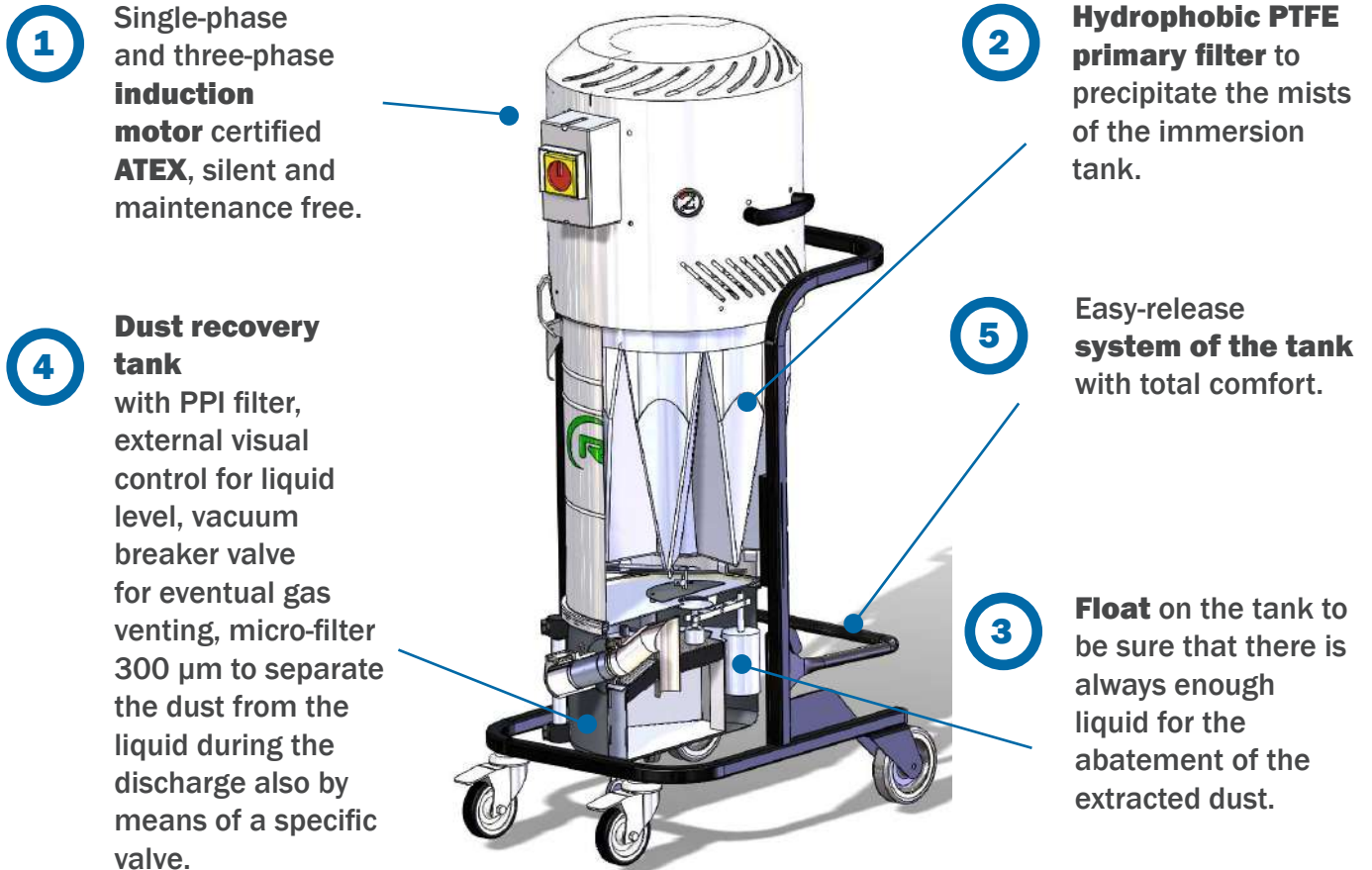
This type of **dust**, are the **reactive metallic** ones, therefore even more dangerous.



with **system of inertization liquid**

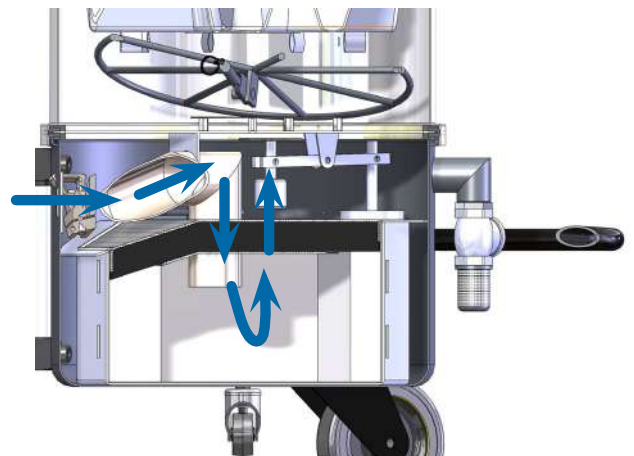
RGS ADDITIVE VACUUM MANUFACTURING, the vacuum cleaner for the maintenance and cleaning of your metal powder 3D printer.

*Our best ATEX vacuum cleaner with immersion container for the
recollection of metal dust in total safety.*



Operation of our immersion vacuum cleaner

- > The sucked metal powder runs through the diving deflector and is conveyed into the inertizing liquid with which it mixes.
- > The powder remains trapped in the liquid as the purified air rises, passes through the PPI mist filter, passes through the hole kept open by the float and continues towards the coalescing cartridge placed under the cover.
- > The float in the tank ensures that there is always sufficient inertizing liquid.
If the level should drop excessively due to use, the intake passage closes and the machine no longer sucks.



A21PMINX1.3D

ATEX certified vacuum cleaner specifically designed to **inertize reactive and potentially explosive metal powders with liquid**. This kind of metal powders are used in laser sintering in 3D printers.

The special **liquid bath** (water or oil) ensures that the dust that will be aspirated can not react and ignite, or worse, explode.

Inside the tank then, a special **float** has been placed which interrupts the suction in case the inertizing liquid is absent or too little. This greatly increases the safety of the machine, and of the operators and its use.

The practical **drain tap** placed on the tank, allows to empty the machine from the liquid without effort by the user. The parts in contact in brushed stainless steel, in addition to making the appearance of the machine extremely pleasant, guarantees a longer life of materials and an intrinsic safety from the risk of shock ignition.

A **safety (or vent) valve** is located on the tank to ensure that if water is used as the inerting liquid, the dangerous hydrogen concentration (developed through hydrolysis) is expelled if aluminium powder is recovered.

The vacuum cleaner then has a **coalescence filter** that retains any vapours that might be generated as a result of turbulence produced by air reflux.



Technical data

Legend	Unite	A21PMINX1.3D
ATEX certified	-	Atex 22 - II3D T135° C
Voltage	V	1Ph 230V/50Hz
Power	kW	1.5
Vacuum pressure	mbar	250
Air flow	m ³ /h	220
Primary filter	type	stellar PTFE
Primary filter surface	m ²	1.14
Filter cleaning system	type	manual
2 nd stage on filtration	cat.	PPI
3 rd stage on filtration	cat.	300 micron microfilter
Suction inlet	mm	Ø50
Liquid capacity	L	25
Dust capacity	L	6
Container	type	AISI 304
Noise level	dB(A)	67
Overall dimensions	cm	47x61x135h
Weight	kg	60
Protection	IP	65

AD36INX1.3D

ATEX certified vacuum cleaner specifically designed to **inertize reactive and potentially explosive metal powders with liquid**. This kind of metal powders are used in laser sintering in 3D printers.

The special **liquid bath** (water or oil) ensures that the dust that will be aspirated can not react and ignite, or worse, explode.

Inside the tank then, a special **float** has been placed which interrupts the suction in case the inertizing liquid is absent or too little. This greatly increases the safety of the machine, and of the operators and its use.

The practical **drain tap** placed on the tank on wheels, allows to empty the machine from the liquid without effort by the user. The parts in contact in brushed stainless steel, in addition to making the appearance of the machine extremely pleasant, guarantees a longer life of materials and an intrinsic safety from the risk of shock ignition.

A **safety (or vent) valve** is located on the tank to ensure that if water is used as the inerting liquid, the dangerous hydrogen concentration (developed through hydrolysis) is expelled if aluminium powder is recovered.

The vacuum cleaner then has a **coalescence filter** that retains any vapours that might be generated as a result of turbulence produced by air reflux.



Technical data

Legend	Unite	AD36INX1.3D
ATEX certified	-	Atex 22 - II3G T6 II2D T85° C
Compressed air consumption	l/min	630NI/min
Power	kW	-
Vacuum pressure	mbar	320
Air flow	m ³ /h	220
Primary filter	type	stellar PTFE
Primary filter surface	m ²	1.14
Filter cleaning system	type	manual
2 nd stage on filtration	cat.	PPI
3 rd stage on filtration	cat.	300 micron microfilter
Suction inlet	mm	Ø50
Liquid capacity	L	25
Dust capacity	L	6
Container	type	AISI 304
Noise level	dB(A)	67
Overall dimensions	cm	48x65x118h
Weight	kg	36
Protection	IP	65

A346/60EPINX1.3D

It is an **ATEX certified** vacuum cleaner specifically designed to **inertize reactive and potentially explosive metal powders with liquid**. This kind of metal powders are used in laser sintering in 3D printers.

The special **liquid bath** (water or oil) ensures that the dust that will be aspirated can not react and ignite, or worse, explode.

Inside the tank then, a special **float** has been placed which interrupts the suction in case the inertizing liquid is absent or too little. This greatly increases the safety of the machine, and of the operators and its use.

The practical **drain tap** placed on the tank on wheels, allows to empty the machine from the liquid without effort by the user. The parts in contact in brushed stainless steel, in addition to making the appearance of the machine extremely pleasant, guarantees a longer life of materials and an intrinsic safety from the risk of shock ignition.

A **safety (or vent) valve** is located on the tank to ensure that if water is used as the inerting liquid, the dangerous hydrogen concentration (developed through hydrolysis) is expelled if aluminium powder is recovered.

The vacuum cleaner then has a **coalescence filter** that retains any vapours that might be generated as a result of turbulence produced by air reflux.



Technical data

Legend	Unite	A346/60EPINX1.3D
ATEX certified	-	Ex II 2/3D H T.135 ° C
Voltage	V	3 Ph 400V/50Hz
Power	kW	3.4
Vacuum pressure	mbar	300
Air flow	m ³ /h	310
First filter	cat.	polyester star 1.9 m ²
Second filter	cat.	PPI
Third filter	cat.	absolute H14 3.1 m ²
Fourth filter	cat.	300 micron microfilter
Suction inlet	mm	70
Liquid capacity	L	60
Dust capacity	L	25
Container	type	AISI 304
Noise level	dB(A)	75
Overall dimensions	cm	64x112x155h
Protection	IP	55

I Other RGS solutions

VACUUM CLEANERS

RGS Vacuum Systems offers a wide range of industrial **vacuum cleaners with various powers and capacities:** single-phase, three-phase and compressed air industrial vacuum cleaners.



Specific models are also available for **vacuuming oils and shavings**, others for applications **in the food and pharmaceutical industry** as well as **special machines** designed to meet the customer needs.

PNEUMATIC CONVEYORS

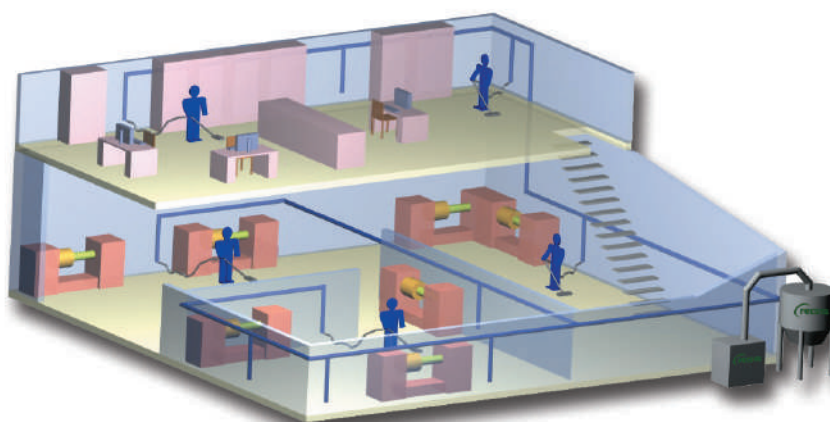
Pneumatic conveyors systems for powders and granules for all industrial sectors with **customization** options.



Thanks to a long experience in this field, it is possible to design and create the most suitable and the cheapest conveying system to solve the problems of the customers, according to the type of product and the needs of the sector.

CENTRALIZED SYSTEMS

RGS Vacuum Systems offers a wide range of components for the construction of **centralized vacuum systems** (such as *suction units, collection silos, pre-separators, components for the piping, control systems*) and **centralized ventilation systems** (such as *dust collectors, electro-fans, mobile arms, electrical control panels and piping components*).



All products can be made of painted steel, stainless steel and **ATEX version** according to the needs of the customer and the application sector.

| RGS services



**Design and production of
customized products**

Quick call maintenance service



**Preventive maintenance
agreements**

**Additions and updates to
regulations in force of
installed systems**





Aspiratori industriali
Vacuum cleaners

Impianti centralizzati
Centralized systems

Trasportatori pneumatici
Pneumatic conveyors

RGS in the World.



● **RGS headquarter**

● **RGS branches**


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