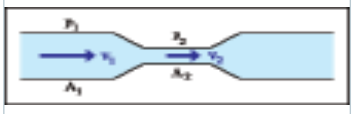
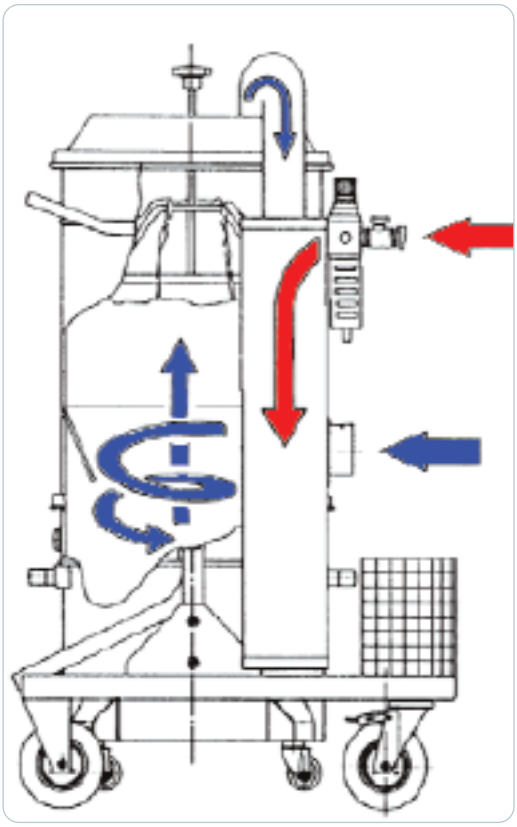
How do compressed air vacuums work?



The Venturi effect is the physical effect achieved when a flow of air is channelled into a tube that suffers a significant and sudden reduction of the square section.
The air flow (which in this case behaves just like a fluid) tends to proportionally increase its speed while reducing its pressure, as the tube narrows.



The compressed air passes through the pressure gauge and compressed air filter and is then channelled downwards into the “Venturi tube”. By quickly passing through it, it creates a vacuum inside the entire unit, through the pipe in the head. In this way we suck air through the inlet (blue arrow), which then goes into the filter chamber, through the filter and down the “Venturi tube” where it joins the compressed air (red arrow).

The two flows go down the “Venturi tube”, and come out through a first diffuser at its end: they then return up the outer pipe and are expelled into the environment through another diffuser that further reduces the air speed.

TECHNICAL SPECIFICATIONS

Description	Unit	A500	A500 ATEX	A 1000	A1000 ATEX
Air consumption	Rl/min	870	870	1600	1600
Air pressure	Bar	4/6	4/6	4/9	4/9
Airflow	l/min.	2800	2800	6100	6100
Vacuum	KPa	23.6	23.6	44	44
Filter surface	cm^2	7000	7000	19500	19500
Sound level	dB(A)	70	70	74	74
Absolute filtration (HEPA)*	cm^2	-/11000	-/11000	-/56000	-/56000
Supply pipe	mm/”	ø12x20	ø12x20	3/8”	3/8”
Feed tube length	mm	6000	6000	6000	6000
Capacity	l	25	25	60/100	60/100
Inlet	mm	50	50 ATEX	50/70	50/70 ATEX
Length x width x height	cm	55x50x95	55x50x95	68x86x116	68x86x116
Length x width x height (100 l dust bin)	cm			79x75x153	79x75x153
Weight	kg	24	24	62/68	62/68

Specifications and details are subject to change without prior notice.

**Standard versions come without absolute filtration*

Nilfisk Advance
setting standards

Nilfisk-Advance A/S
Sognevej 25
DK-2605 Brøndby
Denmark
Tel.: +45 4323 8100
Fax: +45 4343 7700
mail@nilfisk-advance.dk
www.nilfisk-advance.com

Compressed air vacuum cleaners

Nilfisk A500/A1000

Non-electrical

- and multi functional

Nilfisk Advance
setting standards

No potential ignition source

Compressed air vacuums are the ideal solution in ATEX zoned areas, for maintenance, general cleaning, and for collection of organic and metallic dusts, and swarf containing explosive vapours.

In industries, whenever electricity is prohibited or unavailable, such as shipyards, metalworking labs, oil refineries, chemical industries, spray-painting facilities, rifle ranges are but a few of the most common applications for these vacuums. They are also appreciated in the food industry, whenever in presence of static electricity (working with sugar or flour), on building sites, and during surface treatment operations.

Nilfisk-Advance has years of experience in coping with such demanding environments. In fact, nobody understands this business better. The Nilfisk A500/1000 series are certified compressed air vacuums that can recover both solid debris and liquid spills. Nilfisk-Advance has the answer to all customers' need.

Ideal

for hazardous environments

- Compressed air powered - for non-electrical environments
- Multi functional
- Both wet and dry applications
- Standard models available in mild steel
- Models available in all stainless steel AISI 304 - ATEX Z 1/2, 21/22
- Small size A500 models - ideal whenever the air supply is limited as well as quantities of debris (using only 870 l/min)
- Powerfull A1000 models - guarantees excellent performance
- No moving parts - guarateeing no wear and minimal maintenance
- Continuous duty (24/7) - ideal for automated applications (without operator)
- Very quiet 70 dB(A)

Thanks to the practical container release mechanism, it is very easy to empty the container. Here shown on A500.

A full range of anti static accessories are available for the compressed air vacuums.

For picking up smaller quantities of debris, the A500 models are ideal.

www.nilfisk-advance.com