Application

MATRIX-1000 is applied for cleaning the air from dry welding dust arising at the mobile workplaces. Maximum temperature of the forwarded air is +60°C. Due to the applied cartridge filter with a teflon membrane, fine dusts (even particles smaller than 0,4 µm) are captured. Dusts, accumulating at the filter outer surface, are struck down by impulses of compressed air.

MATRIX-1000-1 works with one extraction arm, whereas MATRIX-1000-2 is adapted for connection of two extraction arms. In the second case, MATRIX should be applied for use at workplaces of small emission, as the volume flow of one extraction arm is double reduced.

Structure

Filtering unit MATRIX-1000 consists of:

The MATRIX-1000 consists of following elements:

- housing of polyester-glass composite,
- radial fan,
- high-efficiency cartridge filter – polyester, teflon coated membrane – class H13,
- rotary jets for cartridge filter regeneration,
- support – to install the extraction arm, (two supports for MATRIX-1000-2),
- control unit (version with automatic or manual control),
- vacuum cleaner – to remove the contamination from the filtration chamber.

Operational use

MATRIX-1000 units are adapted for installing the extraction arm of diameter 160 mm and 2 m workrange.

It is important to connect the MATRIX-1000 to the external compressed air installation of 6 – 8 bar pressure. The pressure hose should have 16 mm diameter. In the course of filter regeneration the dust (accumulated on the outer filter surface) is periodically struck off by the rotary jets.

In standard version (refers MATRIX-S) – in case of the efficiency decrease, switch off the fan, open the compressed air valve and slide upwards and downwards the lance with a rotary jet (the lance is placed in the filter cover).

In automatic version (MATRIX-A) – in case of the efficiency decrease, switch off the fan and in two seconds start it again. The filter regeneration proceeds automatically.

The struck off dust is accumulating in the lower part of the filtration chamber of volume approx. 10 dm^3. The dust has to be removed periodically by means of a vacuum cleaner that is enclosed to each device. Before doing so, clasp-off the cover and withdraw the cartridge filter. The vacuum cleaning hose along with accessories is placed in a container underneath the vacuum cleaner. The cartridge filter has to be replaced for a new after 1 – 2 years of operational use.

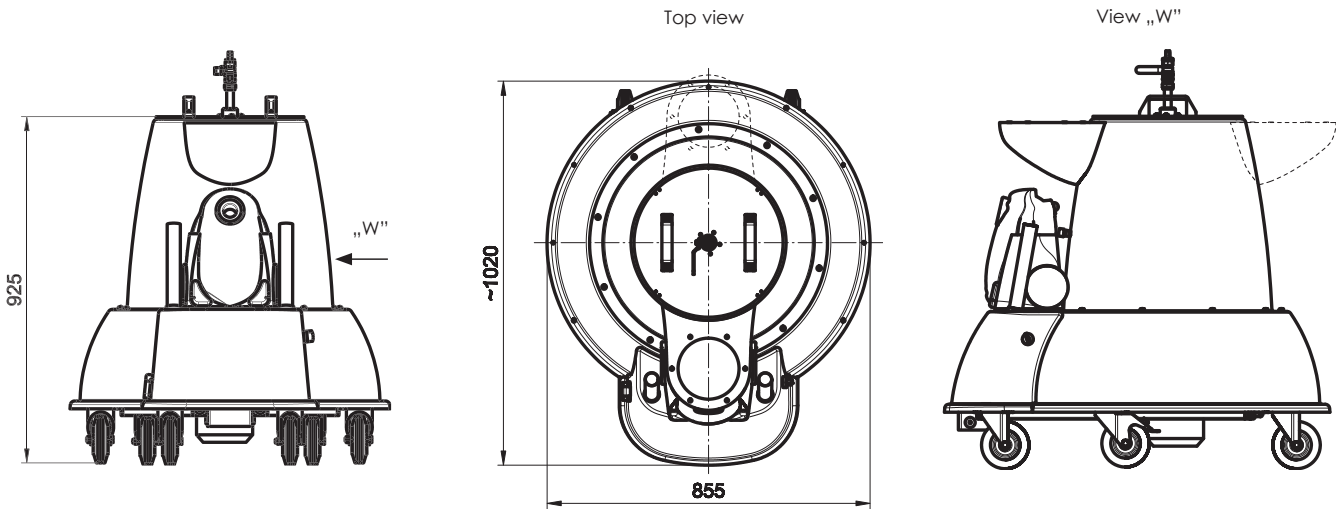
As option the appliance can be equipped with:

- active carbon impregnated spunbond filter – for filtering the gas contamination during the welding processes.

Technical data

Device type	Part No.	Filter regeneration	Maximum volume flow [m^3/h]	Maximum vacuum [Pa]	Supply voltage [V]	Motor rate [kW]	Acoustic pressure level [dB(A)] from distance		Weight [kg]	Quantity of the connections for ERGO arms
							1 m	5 m		
MATRIX-1000-1-S	800028	Manual	1000	2750	230	0,75	66	63,5	85	1
MATRIX-1000-1-A	800029	Automatic	1000	2750	230	0,75	66	63,5	85	1
MATRIX-1000-2-S	800030	Manual	1100	2750	230	0,75	67	65	88	2
MATRIX-1000-2-A	800031	Automatic	1100	2750	230	0,75	67	65	88	2

Caution: 1) Volume flow has been measured at the clean filters.
2) ERGO extraction arms are offered on separate catalogue cards.



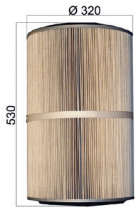
Additional Equipment

Activated carbon impregnated spunbond

Type	Part.No	Weight [kg]	Remarks
FCR-BIG-1000	838F73	0,6	The spunbond along with the protective net is placed inside the cartridge filter.

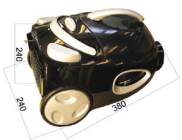
Replacable parts

Cartridge filter



Tyep	Part No.	Weight [kg]	Class	Filtering efficiency [%]	Quantity of filters
PTMb-085032R	838N20	4,2	H13	99,95	1

Vacuum cleaner

	Type	Part No.	Weight [kg]	Remarka
	vacuum cleaner Pitbull-1	857O23	4,2	The vacuum cleaner serves for removal of the dusts that accumulated in the container and for cleaning the workplace
	WJ-1	851O02	0,1	a single-use waste bag

Carbon filter insert

Type	Part.No	Weight [kg]	Remarks
WFCR-BIG-1000	838W95	0,3	The spunbond is placed between the internal diameter of the cartridge filter and the protective net.