

MDB-2/HV PRO

HIGH VACUUM FILTER SYSTEM

The MDB-2/HV PRO is a central filter system with integrated blower for connection to a certain number*) of welding torches via an extraction duct. The powerful high vacuum blower is placed in a sound absorbing box. The two filter cartridges inside the reinforced filter housing are automatically cleaned by compressed air pulses.

The MDB-2/HV PRO package further includes an external spark arrester, frequency inverter and intelligent control panel with HMI.

*) Max. 8 to 10; the maximum number depends on the specifications of the torch



APPLICATIONS

The MDB-2/HV PRO is intended to be used for the following applications:

- MIG-MAG/GMAW welding
- TIG welding
- FCAW welding
- stick/MMAW welding
- stainless steel welding
- grinding
- polishing
- finishing



SPECIFICATIONS

Physical dimensions and properties

Material (housing):	electro-zinc coated steel (according to DIN EN 10152)
• steel grade	• DC01+ZE
• steel grade no.	• 1.0330

Colour:	
• housing	• black RAL 9005
• cover plates	• grey RAL 7035

Weight (net):	
• base incl. filter module	• 150 kg (331 lbs)
• blower incl. housing	• 250 kg (551 lbs)

Capacity of dustbin	80 litres
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Air inlet position	left or right side
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Filter cartridges

Type	CART-PTFE/10
Shape	cylinder
Filter material	BiCo spunbond polyester with PTFE membrane
Filter surface area	2 x 10 m ²
Welding fume class	W3 according to EN-ISO 15012-1:2013
Filter class	M according to DIN EN 60335-29
Washable	no

Compressed air system

Required compressed air quality	dry and oil-free according to ISO 8573-3 class 6
Required pressure	5-10 bar
Compressed air connection	8 mm push-in fitting

Compressed air consumption (per pulse)	35 nl
Volume of compressed air tank	10 litres
Activation of filter cleaning system	pressure controlled, online / offline

Blower

Type	high vacuum side channel blower with pressure relief valve
Material	die-cast aluminium
Power	12,5 kW at 50Hz 14,5 kW at 60Hz

The compact design of the MDB-2/HV PRO, in combination with a high air performance, is achieved by using 60 Hz fan technology. You must install the supplied VFD-HV/ Panel (frequency inverter) for 50 Hz power grids (e.g. in Europe) to have the motor run at 60 Hz frequency, thus getting 14,5 kW power.

Motor speed	max. 3360 rpm
Negative pressure	Refer to the performance chart on page 2
Available connection voltages	• 380V/3ph/50Hz (435) • 480V/3ph/60Hz (536) • 600V/3ph/60Hz (636)
Noise level	68 dB(A)
Protection class	IP 55

Performance

Extraction capacity	• 1000 m ³ /h at 14.000 Pa • 850 m ³ /h at 23.000 Pa
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Also refer to the performance chart on page 2

Options and accessories

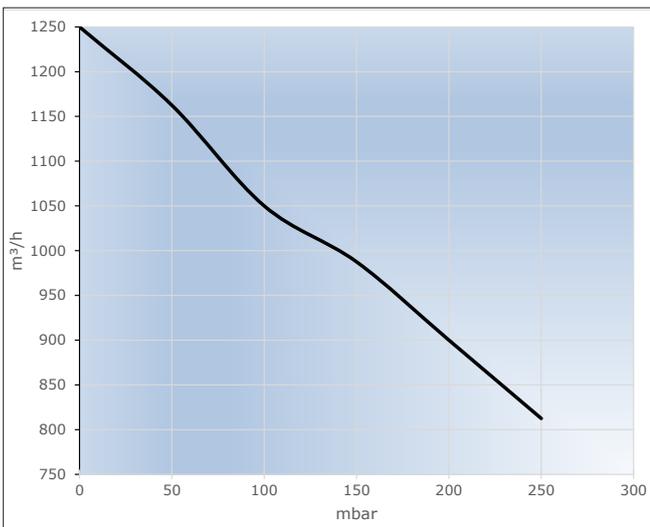
LightTower	external light tower to be used as additional signaling device
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Product combinations

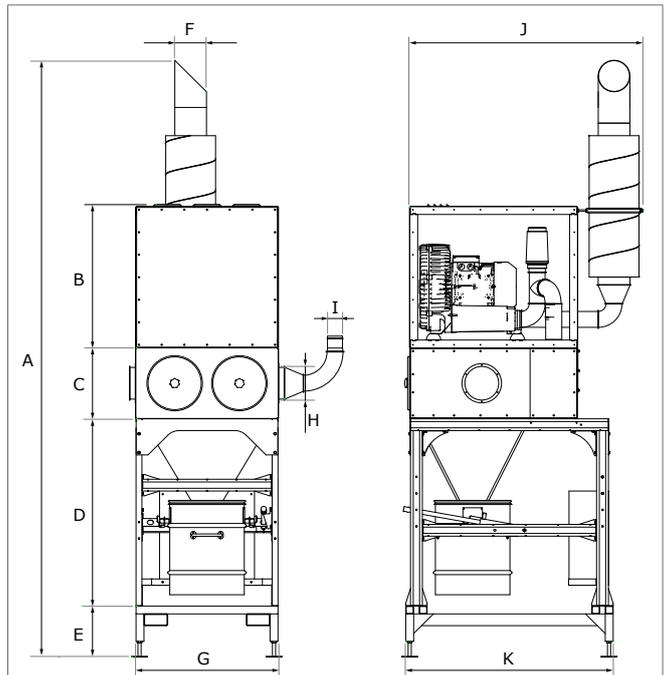
SHIELD fire safety solutions	all components of SHIELD, except for the sliding valves
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■ Ambient conditions	
Process temperature:	<ul style="list-style-type: none"> • min. • 5°C (41°F) • nom. • 20°C (68°F) • max. • 70°C (158°F)
Max. relative humidity	80%
Suitable for outdoor use	no
Storage conditions	<ul style="list-style-type: none"> • 5-45°C (41-113°F) • relative humidity max. 80%
■ Scope of supply	
Filter housing incl. filter cartridges, frame and compressed air regulation kit (CAR-KIT) Dustbin Blower SparkTrap (spark arrester) Duct silencer ControlPro/Panel (control panel) ControlPro/HMI (Human Machine Interface) VFD-HV/Panel (frequency inverter*) Cable 15 m Panel to HMI Connection and installation material	
*) Except for article no. 0000118643	
■ Order information	
Article no.:	Type:
• 0000118635	MDB-2/HV PRO (435)
• 0000118548	MDB-2/HV PRO (536)
• 0000118638	MDB-2/HV PRO (636)
• 0000118643	MDB-2/HV PRO (without VFD/Panel*)
*) An alternative motor starter to be arranged locally	
■ Shipping data	
Gross weight (incl. pallet)	
Packing dimensions (incl. pallet)	
Max. number/pallet	
Harmonized Tariff Code	84213925

PERFORMANCE CHART



DIMENSIONS

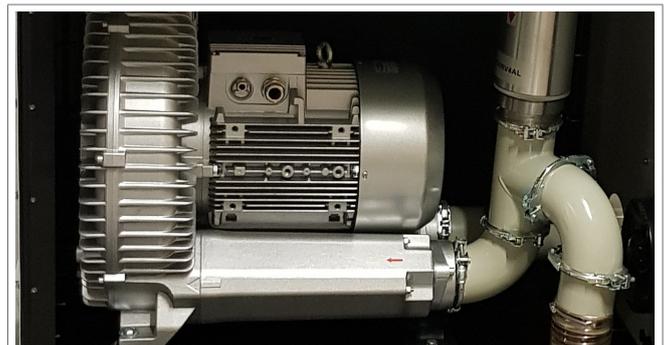


	mm	inch
A	3801	149¾
B	913	36
C	450	17¾
D	1194	47
E	325	12¾
F	Ø 200	Ø 7⅞

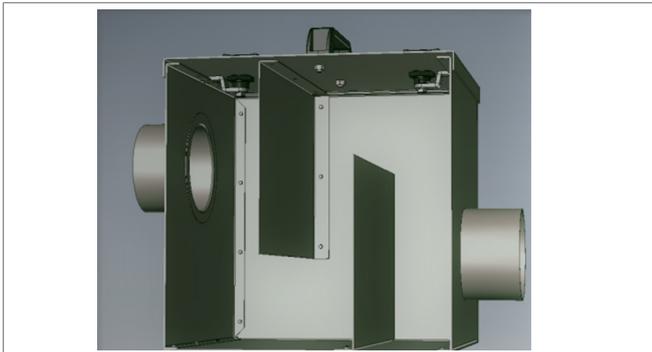
	mm	inch
G	897	35¼
H	Ø 200	Ø 7⅞
I	Ø 100	Ø 3⅞
J	1477	58¼
K	1311	51½

FEATURES & BENEFITS

Filter control by HMI with intuitive touch screen; allows for remote access via a network connection



The blower is placed in a sound absorbing box. An additional duct silencer on the outlet of the unit further reduces the sound level.



SparkTrap | Highly effective labyrinth spark arrester



The effective RamAir™ pulse amplifier: the two filter cartridges are individually cleaned by compressed air pulses



Forklift pockets to transport the unit to its final position after installation

APPROVALS/CERTIFICATES

	Directive 2011/65/EC (RoHS) valid as of 8 June 2011
	On ControlPro/Panel (control panel)
UL 508A	On VFD/Panel (frequency inverter) (536 and 636 unit types only)
	On motor

Application restrictions

Do **not** use the product for the following applications or in the following circumstances: polishing applications in combination with grinding, welding or any other application that generate sparks (fibres from polishing or abrasive flap disks are highly flammable and pose a high risk of filter fires when exposed to sparks) | aluminium laser cutting | oil mist | heavy oil mist in welding fume | arc-air gouging | extraction of aggressive fumes and gases (e.g. from acids, from alkaline, from soldering paste containing lithium) | extraction of hot gases (more than 70°C/158°F continuously) | grinding aluminum and magnesium | flame spraying | extraction of cement, saw dust, wood dust etc. | sucking cigarettes, cigars, oiled tissues and other burning particles, objects and acids | explosive environments or explosive substances/ gases



Product type
Article no.
Product category
Version

MDB-2/HV PRO
refer to Order information
central filter systems
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