

SUCTION AND SEPARATION AT WORKSTATIONS, WORK BOOTHS AND WORK BENCHES

THE TASK

Grinding, shot blasting, welding or similar processes cause dusts during manual and automatic treatment. Collecting, suction and separation of these dusts is required for technical, product-specific, environmental and legal reasons.

To protect the surrounding workstations for dust and sound emissions it is compulsory to equip the workstation with a suitable sound attenuating work booth and a dust filter.

THE SOLUTION

is a state-of-the-art cabin technology in different designs (sliding or lift up roof, closed housing with sliding door, ...) with mounted dust control or capture elements to be connected to a separate filtration system, e.g. the VARIO series.

TYPICAL APPLICATIONS AND SEPARATION PROCESSES

Automobile industry - body making

Surface technology - grinding, shot blasting, polishing

Cutting processes - steel, plastics processing,
stonemason shops



Manual grinding processing of glass fibre reinforced plastic components



Grinding of glass fibre reinforced plastic components

ADVANTAGES

high-efficient capturing / filtration, independent of the particle spectrum

additional noise protection for surrounding workstations

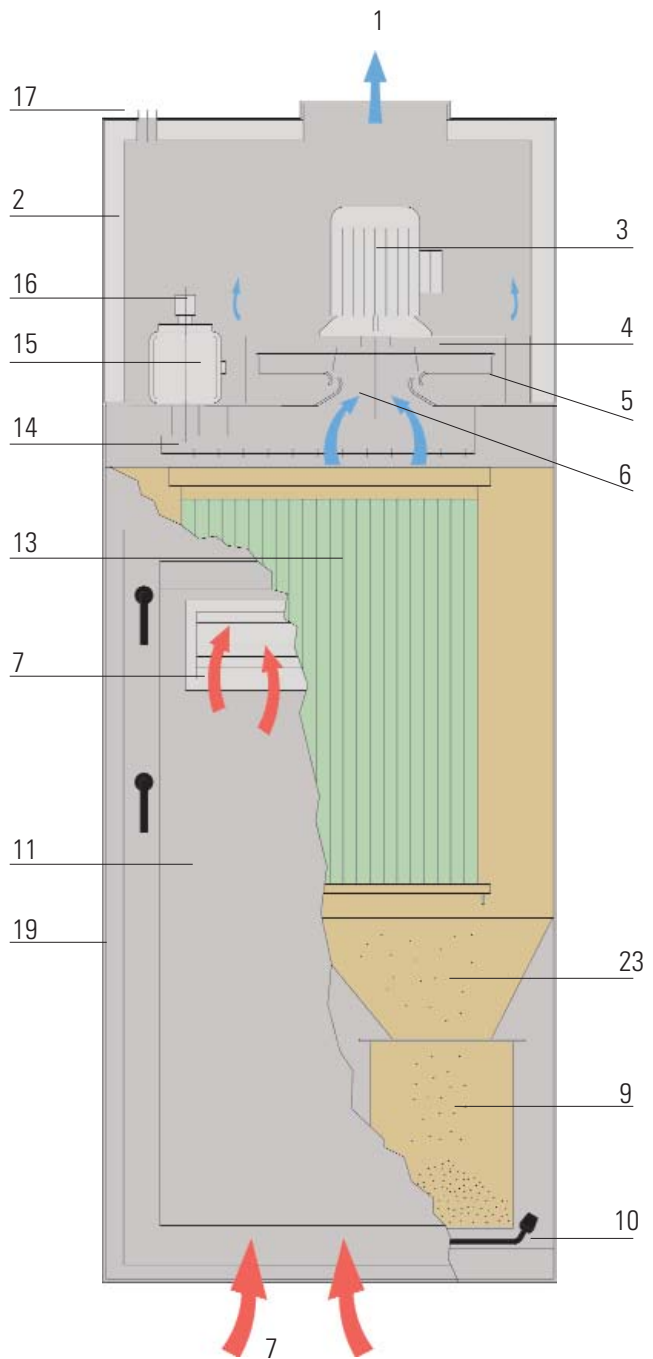
very high filtration efficiency = economical air recirculation and protection of the environment

FUNCTION EZV 2.1 - 2.3

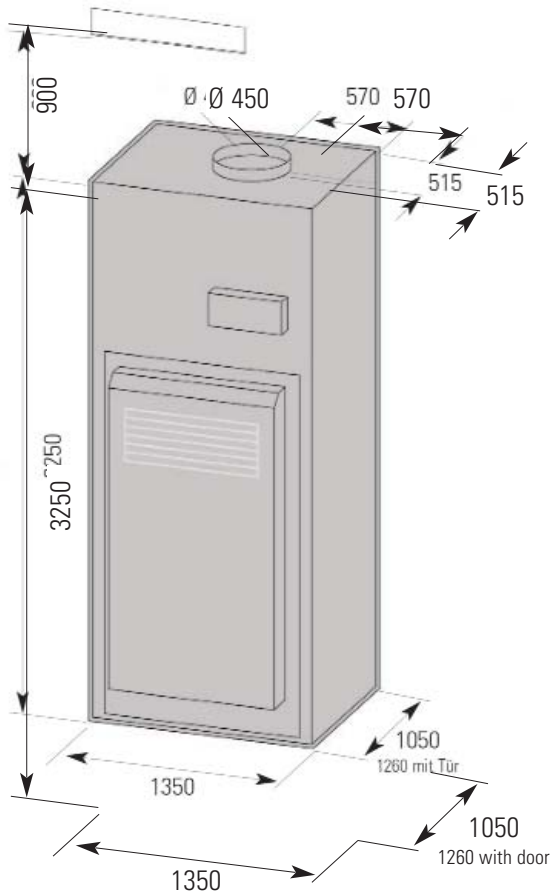
The crude gas (7) - air containing dust - flows against a baffle plate. Thus, the dust particles do not directly impinge the filter elements (13) but are slowed down and diverted. A downflow is created between the filter elements. The fan (4) sucks the crude gas through the filter elements and the dust particles get separated.

Cleaning of the dusty filter elements effects by means of compressed air pulses in online operation. The air flow through the fan is always constant. The clean air (1) - cleaned air - flows off on top of the unit and can either be returned into the work room or led away to the outside (air recirculation or exhaust air). The separated dust falls into the dust collection section.

- 1 clean air outlet
- 2 sound attenuating lining
- 3 motor with three built-in temperature probes for motor protection
- 4 radial fan
- 5 fan impeller, directly coupled to the motor
- 6 suction nozzle
- 7 crude gas inlet
- 9 dust collection bin
- 10 contact device for dust collection bin
- 11 filter chamber door
- 13 filter element
- 14 jet pipes to clean the filter elements
- 15 compressed air tank
- 16 solenoid valve
- 17 compressed air connection
- 19 filter housing
- 23 hopper



UNITS AVAILABLE



Work booth			EZV 2		
			3000 - 3500 m ³ /h	4000 - 4500 m ³ /h	5500 - 6000 m ³ /h
			2.1	2.2	2.3
filter elements	type		1200/18	1200/18	1200/18
	number	pcs	8	10	12
	surface	m ²	30	38	46
motor ¹⁾	output	kW	5,5	7,5	11,0
valves ²⁾	number	pcs	4	5	6
compressed air ³⁾	consumption	L/min	30	30	30
sound level ⁴⁾		dB(A)	75	75	75
blow out noise ⁵⁾		dB(A)	82	82	85
weight	basic unit	kg	1070	1100	1140

¹⁾ voltage 400 V / 50 Hz, speed 3000 min-1

²⁾ nominal width 2 inches, voltage 24 V DC

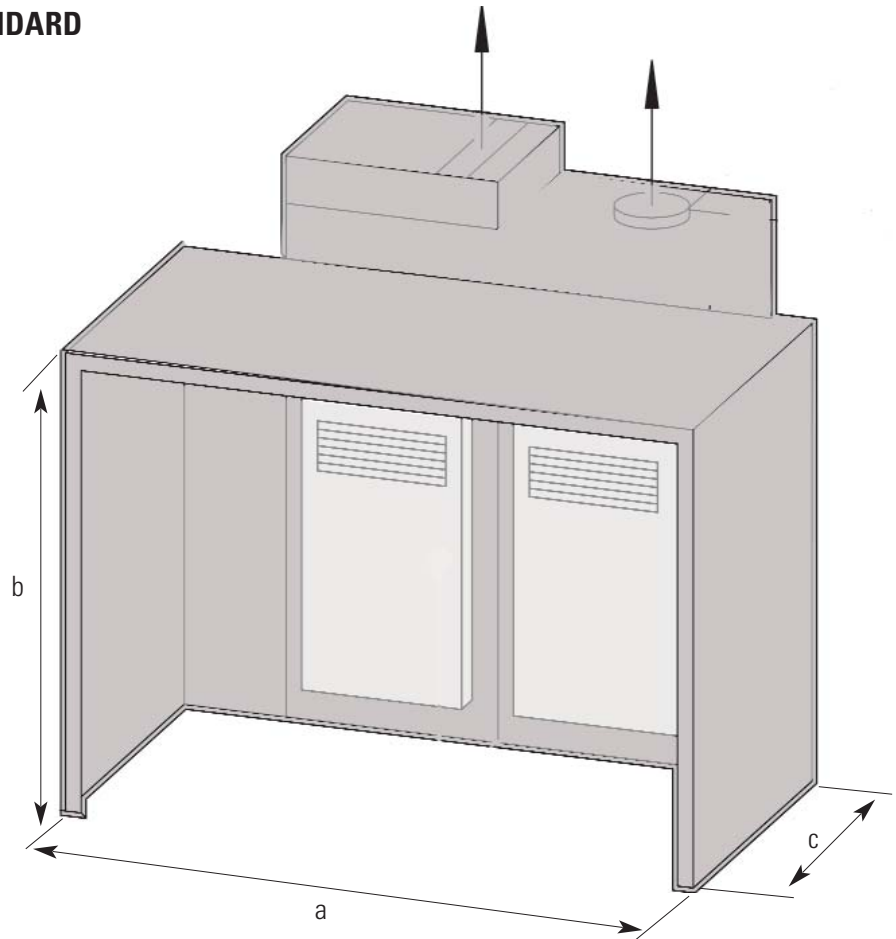
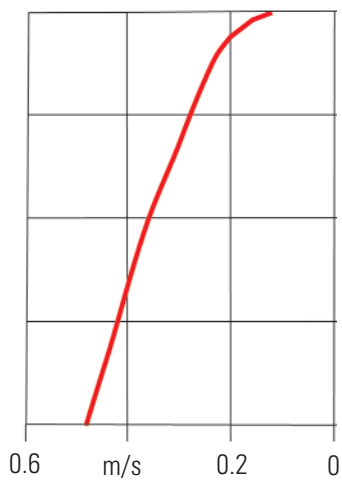
³⁾ nominal pressure 6 bar, consumption in litre under normal conditions if the pulse pause between the pulses is 3 minutes

⁴⁾ 1 m distance in front of the door, measured according to DIN EN ISO 3744, with connected suction ductwork

⁵⁾ 1 m distance to the blow out, angle 45 °, measured according to DIN EN ISO 3744

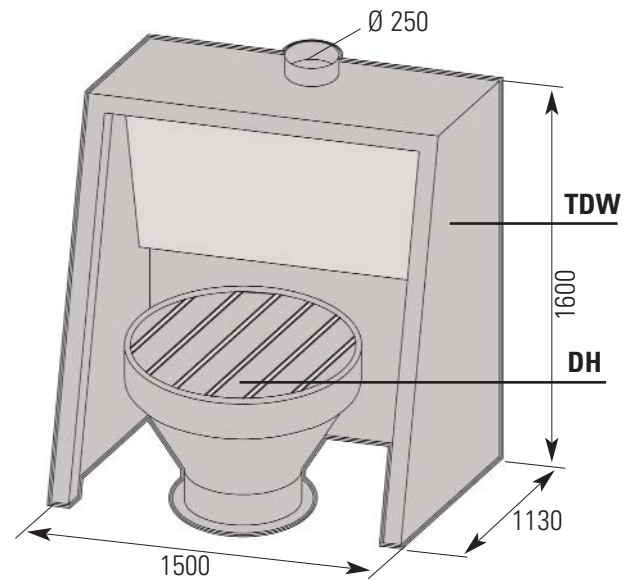
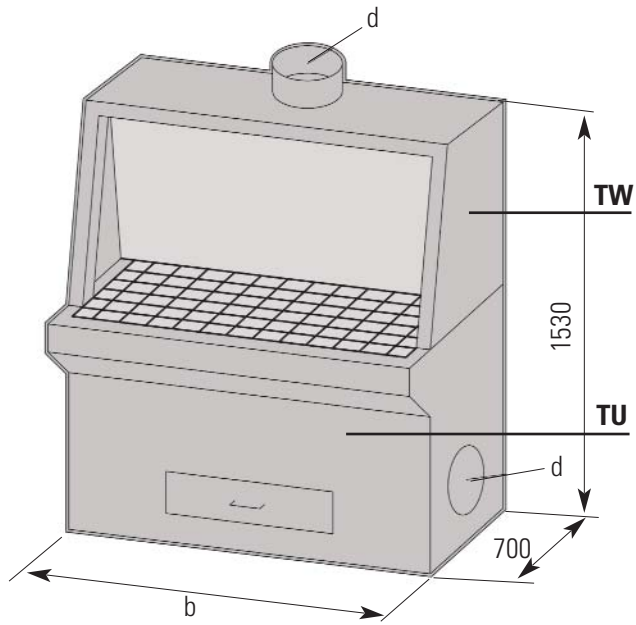
WORK BOOTHS CABIN STAR, STANDARD

Flow analysis
inlet cross section
of the work booth



Work booths		
width	a	any selectable
height	b	any selectable
depth	c	any selectable
number of separation cells		depends on work booth dimensions
number of exhaust cells		depends on work booth dimensions

WORK BENCHES



Unit type			TW			TU			TDW	DH
size			100	150	200	100	150	200	150	100
exhaust air volume ¹⁾	m ³ /h		1800	2800	4100	2270	3500	4500	2800	-
suction resistance	daPa		40			40			40	-
width	b	mm	1000	1450	2000	1000	1450	2000	1500	-
connection ²⁾	d	mm	200	250	315	224	280	315	250	-
weights										
including isolation		kg	60	80	135	-	-	-	-	-
without		kg	45	55	90	105	160	210	242	153
load capacity		kg	-	-	-	100	100	100	-	1500

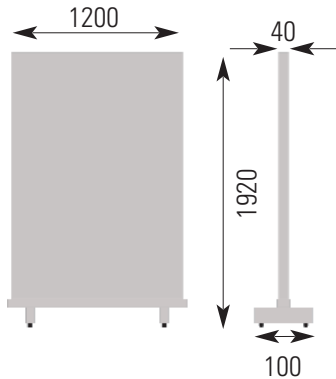
¹⁾ actual air volume after individual dimensioning

²⁾ nozzle for duct flange BF

Paint finish RAL 7032 pebble grey, except galvanized parts

ACCESSORIES

MOBILE PROTECTIVE SCREEN ECS



Universal applicable:
- sound insulation
- welding screen
- spark protection
- grinding protection
- room divider

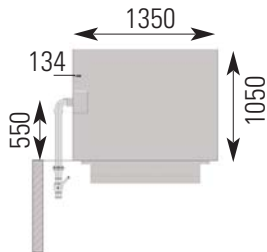
RISE AND FALL TURNTABLE DH 100 WITH WOODEN SLATS



- robust sheet steel construction
- adjustable height by square profile threaded shaft
- hand lever operated table lock
- wooden slats

Technical data:
load capacity up to 1500 kg
table height from 600 to 900 mm adjustable
paint finish RAL 7032

INJECTOR FACILITY



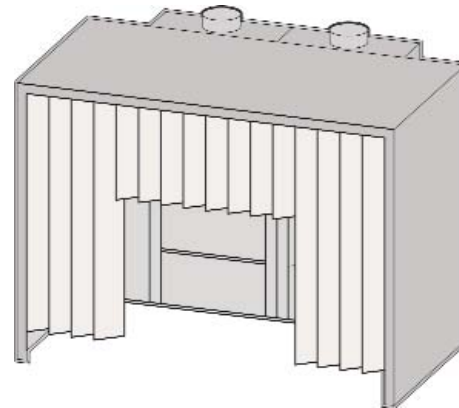
For vacuuming up coarse particles such as metal swarf from milling, turning and drilling operation that ordinary extraction systems do not handle. Therefore, we offer a simple but very effective suction unit with

compressed air injector. The injector works according to the ring jet principle. The free area of 49 mm ensures the unhindered material flow.

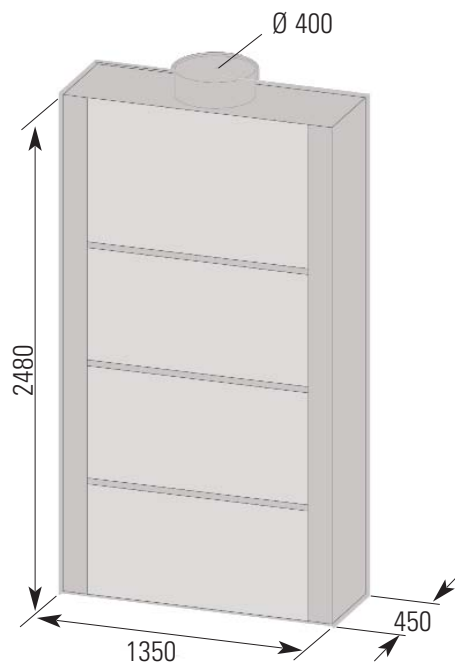
Injector facility consisting of:
ring jet DDs with 1/2" compressed air connection and manual isolating valve, 7 m suction hose d 50 mm, 1 scraper tool, 1 rubber nozzle and wall bracket for the hose.

Technical data:
compressed air connection 1/2" - 4 bar constant
generated suction 1000 - 2000 daPa
max. hose length up to 10 m

STRIP CURTAIN



Clear strip curtain to reduce air intake opening. It can be fitted either to the side or on top of the front of the cabin. It provides an improved dust capturing and noise reduction. Dimensions according to requirements.



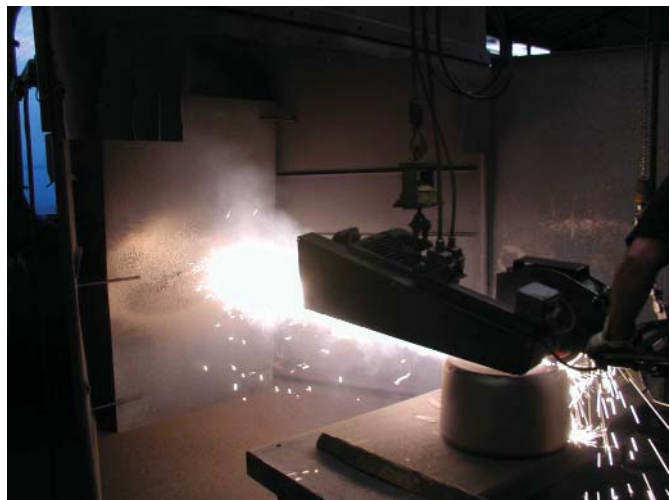
EXTRACTION CELL AZ-25

Extraction cell AZ is a component of our work booth CABIN-STANDARD and is also combined with CABIN-individual or other workstation enclosures that may be connected to special filter units or centralised exhaust systems.

The extraction cell consists of a welded sheet steel housing with three resp. four extraction slots, fitted with an impact plate in the front and outlet spigot for ductwork connection.

Paint finish:
RAL 7032 pebble grey, except galvanized parts.

Weight: 140 kg



Titanium grinding

AIR FILTRATION SYSTEM SOLUTIONS



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