

TIGTOWER 1200

The TIG TOWER 1200 is primarily designed for removing and cleaning welding fumes from the production floor. These fumes contain byproducts from the welding process and can be harmful to human health if inhaled. Companies involved in mechanical engineering using welding processes have long standing issues with maintaining a clean air environment for operators. Welding fume can be handled in several ways depending on different criteria such as the type of welding technology utilised, the welding method and the type and size of the the welds. Fume extraction can be divided into two groups :

1. **Local extraction** – utilising extraction hoods at the point of use.
2. **Spatial extraction** – extracting from the complete production hall using TCL or Push/Pull Systems.

In the field of mechanical engineering it is often found that these two types of extraction systems do not meet the customers needs mainly due to the high installation and operating costs. One of the advantages of the TIG TOWER 1200 is that it is portable with no fixed pipe work which makes it ideal for use remotely on site or in rented accomodation where structural changes to the building are not allowed. The TIG TOWER 1200 filters the fume with an efficiency of 99.9% and then returns the cleaned air to the workspace resulting in no heat losses in cold weather. Energy savings and health and welfare were the key priorities when our designers developed the TIG TOWER 1200. Don't just take our word for it – try one for yourself !!



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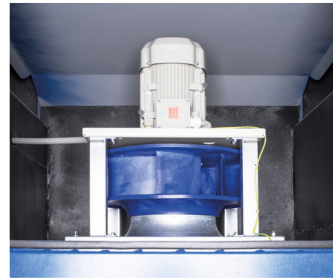
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Tigemma®



Filtering tower
TIGTOWER 1200

Tigemma®



Operating Principle

It is common knowledge that welding fumes are lighter than air. Due to their high temperatures they tend to rise to a height of approx. 4 to 5 metres above the floor of the manufacturing hall where a cloud of concentrated fumes develops. The volume of this cloud increases over time eventually contaminating the whole of the production floor. The TIG TOWER 1200 fume extractor has been developed to deal with this situation. The combination of its height and the utilisation of a medium pressure fan allows it to effectively extract the fumes before passing them through a high efficiency filtering system. This removes harmful particulates before returning the clean air back into the production hall via the outlet panels. This process is continuous allowing the air quality inside the hall to be maintained at acceptable hygienic limits throughout the working day.

Advantages of the TIG TOWER 1200

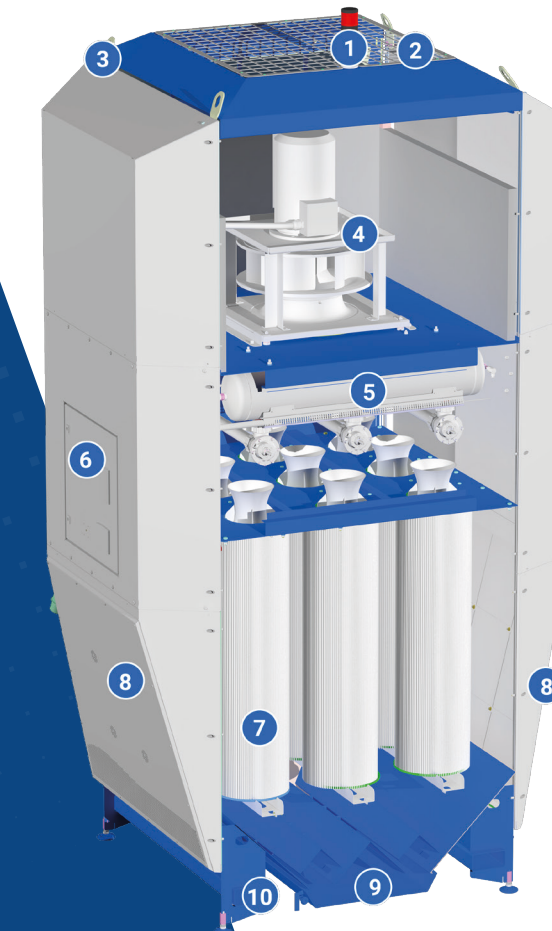
1. It is a portable plug and play solution reducing installation costs to virtually zero and allowing it to be moved around as required during the production process.
2. It requires no external ducting or pipe work
3. It removes harmful contaminants from the air protecting the health of employees.
4. Clean air is returned directly back to the production floor saving on heating costs during the winter.
5. It provides a low cost solution compared to conventional fume extraction systems.

Please note

The TIG TOWER 1200 is a re-circulation unit, it does not provide fresh clean air into the production hall from outside the building. This must be introduced by some other means in accordance with local rules and regulations relating to welding processes.

To Summarize

The TIG TOWER 1200 provides a low cost flexible alternative to large fixed fume extraction systems. It will provide an improvement in the localised air quality inside the production hall adjacent to welding operations.



Technical parameters:

Number of filtering cartridges	9 units
Total filtering surface	180 m ²
Load of the filtering surface	66 m ³ /m ² .h-1
Dimensions of the filtering cartridge	D327 x 1205 mm
Filtering material	Polyester and PTFE coating, Mat. 973001
Filtering material classified in DIN EN 60335-2-69	M
Air/dust characteristics	TZL (solid pollution stuff)
Air input	Suck ceiling 0.64 m ²
Air output	outlet, holes 2 x 0.76 m ²
Compressed air input	5,5 - 10 bar according to ISO 8573, TZ 3
Operating pressure of the pneumatic cleaning system	4 - 4.5 bar
Max. consumption of compressed air	6 Nm ³ /h
Supply of filtering machine	3 x 230/400V, 60 Hz according to ČSN EN 50160
Ziehl-Abegg GR50C-4DN.H5.CR fan	113771/2F035
Sucking power	3.9 m ³ /s / 2450 Pa
Number of rotations of the fan	2498 revolutions /min 2450 Pa
Electric motor	ICE 2
Power input rated/maximum	7.6 /8.75 kW
Power supply of the electric motor	400V/690V/60 Hz
Rated/maximum current	8.4/14 A
Dust drawer volume	30 litres
Dimensions of the machine (width x depth x height in mm)	1970 x 1750 x 3850 mm
Weight of the machine	1513 kg
Operating temperature range	from -15°C to + 50°C
Noise level according to ČSN EN ISO 11202-1997	LpA =70 dB

- 1 Signal light - machine in operation

2 Sucking of the filtering tower

3 Manipulation loops

4 A fan without a spiral box

5 Air chamber
- 6 Control system

7 Filtering cartridges

8 Outlet of the filtering tower

9 Space for waste separation

10 Manipulation holes for air piping