Hi-Vac Fume & Smoke Extraction for Production Welding Applications
A Better Solution for Hi-Vac Source Extraction

For more than 25 years, RoboVent has been at the forefront of clean air innovation for welding and metalworking.

Now, we’re pleased to add the RoboVent Extractor™ fume gun to our line of hi-vac (high-vacuum) extraction solutions. The RoboVent Extractor integrates a high-performance welding gun with a powerful source extraction system, so fumes are captured as soon as they are generated.

For welders engaged in MIG or GMAW welding processes—especially those working on or inside large equipment—fume gun extraction may be the best way to keep weld fumes out of the breathing zone. If you think that has to mean heavy, bulky equipment and reduced visibility during welding, think again.

This is not your father’s fume gun. The RoboVent Extractor is the perfect balance of power, ergonomics and flexibility. Welders will love the lightweight, maneuverable handle and the streamlined nozzle designed for maximum visibility and control. But don’t let the size fool you. Combined with the RoboVent FlexPro air filtration unit, it reduces the welder’s exposure to welding fumes by 90-95%.

So give fume gun extraction another look. We are confident that when your welders see how easy it is to maneuver with the RoboVent Extractor, they won’t want to go back. With the powerful FlexPro hi-vac system, you can be sure that you’re making the best possible decision for your welders’ health and safety.

Breathe easy.
The RoboVent Extractor™: Safe extraction of welding fumes at the source

Welding fumes are a health hazard, and welders who inhale too many fumes run a higher risk of developing asthma, bronchitis, COPD and cardiovascular disorders. As a result, the U.S. and other international regulatory agencies are moving to more stringent thresholds for weld fume exposures.

The American Conference of Governmental Industrial Hygienists (ACGIH) recommended limit for welding fumes in the workplace is 1 milligram of welding fumes per cubic meter of air (1 mg/m³), over the span of an 8-hour work day.

This norm is, in practice, exceeded in many workplaces. To comply, companies may adopt various measures including room ventilation, mobile extraction hoods, or personal protective equipment such as dust masks or ventilated helmets. The effect of these is often insufficient:

- extraction hoods are not placed close enough to the source
- the objects to be welded are too large
- the welder is very mobile
- welding may take place in enclosed areas (e.g. the hold in a ship)
- personal protective gear is not used correctly

In these cases, an integrated welding fume extraction provision in the welding gun is a more effective measure that is easier for the welder to apply independently in comparison to other means.

The RoboVent Extractor consists of a welding gun with a built-in extraction module. The gun can be connected to a central extraction system or to a stand-alone version without any problems. One advantage of the RoboVent Extractor gun integrated with a RoboVent hi-vac collection system is that it can be used in different workplaces, such as in ships’ holds or tanks.

Built for Better Performance and Control

- The welding gun has a conical suction head, welding tip and gas outlet for the shielding gas in order to promote good visibility and reachability of the object.
- The suction module is located at the end of the welding gun, close to the source of fumes.
- The shielding gas can be emitted with an increased flow velocity without raising shielding gas consumption.
- A ball-and-socket joint between the torch and hoses improves maneuverability.
- A conical suction hose, running from thin to wide.

Where and how?

The RoboVent Extractor is intended for use in MIG and GMAW welding processes that employ shielding gases. The gun will in all cases deliver an improved performance in comparison to current guns with source suction.

The RoboVent Extractor reduces the welder’s exposure to welding fumes by 90-95%.*

* This applies to (pulling) underhand welding. The reduction in (pushing) overhand welding and very swift horizontal movements may be slightly less.
**Flexible and Maneuverable**

A ball-and-socket joint between the torch handle and the hoses offers flexibility and maneuverability. The RoboVent Extractor is a very light gun and weighs only 2.86 lbs. Due to the small size of the handle, the welder does not feel any difference between the Extractor and a standard welding gun.

**Integrated Fume Extraction**

The RoboVent Extractor is a welding gun with integrated fume extraction. The gun can be connected to a central extraction system or to a stand-alone mobile extraction unit without any problems. The advantage of a mobile extraction unit with an integrated filtration system is that it can be used in different workplaces.

**Faster Gas Flow**

Due to the design of the gas nozzle at the inside, the shielding gas comes out faster than normal. The combination of the faster gas flow with the correct extraction flow at the gas nozzle gives a perfect weld in all positions.

**Helpful Hint**

The RoboVent Extractor prevents fume buildup when working in enclosed areas such as ship holds or storage tanks.

Patent-Pending
RoboVent FlexPro™
Hi-Vac Filtration Systems
for Manual and Robotic Welding Applications

The RoboVent FlexPro hi-vac smoke-collection system is a versatile, simple and powerful solution for welding smoke extraction. Suitable for both manual and robotic welding applications. FlexPro is designed to eliminate the need for backdraft hoods and large ductwork.

The FlexPro hi-vac air filtration system collects fumes right at the source. It’s the perfect companion to the RoboVent Extractor. It can also be used with suction tubes mounted to your fixture or welding table—or, in the case of shipbuilding, directly to the ship!

FlexPro is designed for plug-and-work use: simply attach your hi-vac suction tube, connect to a power source and start collecting weld fumes.

Manual Welding Hi-Vac Applications:
- Ship building and repairs
- Tank building and repairs
- Large pipe welding
- Large weldments
- Applications that require extensive crane use
- Stainless steel welding
- Any application where a welder is overexposed to harmful welding fumes

Robotic Welding Applications:
- Any robotic welding applications
- Applications requiring extensive overhead crane use
- Large cells with multiple robots
- Assembly lines

eTell™ Intelligent Controls
Each FlexPro unit comes standard with eTell, a revolutionary control system that learns your systems and routines, makes automatic adjustments to save energy and extend filter life, and alerts you when maintenance is needed.

SafeSensor™ Particulate Monitoring
SafeSensor is the FlexPro collector’s advanced particulate-monitoring device that can detect leaks past the filters. If one should occur, SafeSensor will shut the equipment down and trigger an alarm.

Dynamic Pulse™ System
This patent-pending system takes filter cleaning to an entirely new level. Far more than just a simple blast of compressed air, it has multiple valves working together in a computer-synchronized double-pulse sequence to virtually eliminate re-entrainment while propelling the dust down into the collection area.

Endurex™ RMO Filters
RoboVent’s Endurex RMO filters use Reinforced Media Optimization and a rigorous quality control system to guarantee performance. In addition to RMO Technology™ a wide selection of media is available including high performance cellulose, NanoFiber, and PTFE, so that the filters can be tailored specifically to the application.

Integrated Base & Containment Unit
The collector base is constructed of 1/4-inch steel for strength and stability. No tools are needed to empty it or to do regular maintenance. It comes standard with an integrated dust tray; alternate configuration with hopper pedestal and 5-gallon drum optional.
Helpful Hint

The RoboVent FlexPro collector assembles in 15 minutes on-site.*

* Collector Assembly only. Does not include time for ducting, electrical connections, etc.

All-In-One

RoboVent FlexPro collectors are truly all-in-one! Much more than just the sum of their individual components, these units are a seamless integration of all of the components needed, bringing together what would typically be very complex into one incredibly simple package. The energy-efficient motor is directly coupled to the regenerative blower and prewired to onboard controls. The unit is completely assembled and powered up, and then all operating systems are put through their paces before the FlexPro collector leaves the factory.

Supprex200™ Fire Suppression System (option)

This is a dual-stage system activated by smoke or heat. If smoke is detected, a fire damper closes, stopping all airflow and oxygen supply. If heat is detected, FM-200 gas is instantly deployed, suppressing the fire.

eDrive™ Automatic VFD (option)

The eDrive constantly monitors airflow, and automatically adjusts the motor RPM to compensate for filter loading. Energy peaks and valleys are evened out, and energy usage is cut by 20% to 30% while filter life is extended by as much as 30%.

Rugged Cabinet Design

The RoboVent FlexPro collector features a modular cabinet design that aligns with our signature protocol. The fully welded 10-gauge steel cabinet has a 3/16-inch tube sheet, 1/4-inch-thick steel for the base and a Schedule 40 compressed-air pressure vessel. The entire cabinet and all structural components are backed by the 15-year warranty that is RoboVent’s assurance of quality.