

Case Report

Portable gas mixer for various applications on the spot, adjusts to individual needs

Often in companies that use welding robots the mixed gas supply is not available at all locations within the plant. Many companies are not even equipped with a central mixed gas supply system.



In these cases the work is conducted using locally supplied gas, which is delivered directly to the welding area.

More and more often small gas mixers are used to adapt the gas mixture composition on the spot, i.e. where the work is carried out.

An important advantage resulting from installing the gas mixer directly on the cylinder is the possibility to move it to any location in the plant. The gas mixer is always where the work is to be performed.



You don't need to handle several pre-mix cylinders because you can obtain the required mixtures from a cylinder of Argon and a cylinder of CO₂ in proportions of 0-25 % of CO₂ and the balance Argon.

The gas mixer can be installed very easily using standard fittings. The nuts on the mixer can be tightened using a standard wrench.

The shielding gas is supplied to the welding area using a standard hose.

The gas mixer starts to operate once the gas cylinder valves are opened. Additional cylinder pressure regulators are not required, as the gas mixer is fitted with an integrated pressure control mechanism and safety valves. The flow of the gas mixture is controlled by a metering valve.



simple operation



Thanks to this solution only gases need to be stored, and there is no need to use a number of cylinders with pre-mixed gases, which is complicated and expensive. Not to mention the fact that a cylinder with just one gas is usually less expensive than a pre-mix.

The gas mixer is installed between the cylinders, taking up less space and being protected against damage.



The mixer is operated using two adjustment knobs. One adjusts the percentage of CO₂ in Argon, and the other is used to adjust the gas mixture flow 8 - 25 l/min.

The gas mixer can be easily disconnected from the cylinders and connected to other cylinders.

Other models and accessories are available upon request.

Technical Data

Gases	Ar/CO ₂ (0-25%), Ar/He other gases on request
Gas Inlet Pressures	min. 4,5 bar, max. 230 bar
Gas Outlet Pressures	max. 3 bar
Mixture Output (Air)	8 - 25 NI/min.
Setting accuracy	±1% absolute at 0-25% or ±2% absolute at 0-100%
Mixing accuracy	better than ±1% absolute
Inlet gas connections	Connectors specific for the given country 2BVDIN478
Outlet gas connections	G ¼ DIN 8542
Casing	aluminum
Weight	approx. 3,2 kg
Dimensions	approx. 220 x 160 x 140 mm (without connectors)
Standards	Company certified to ISO 9001:2000 and ISO 14001

PRACTICAL OPINION

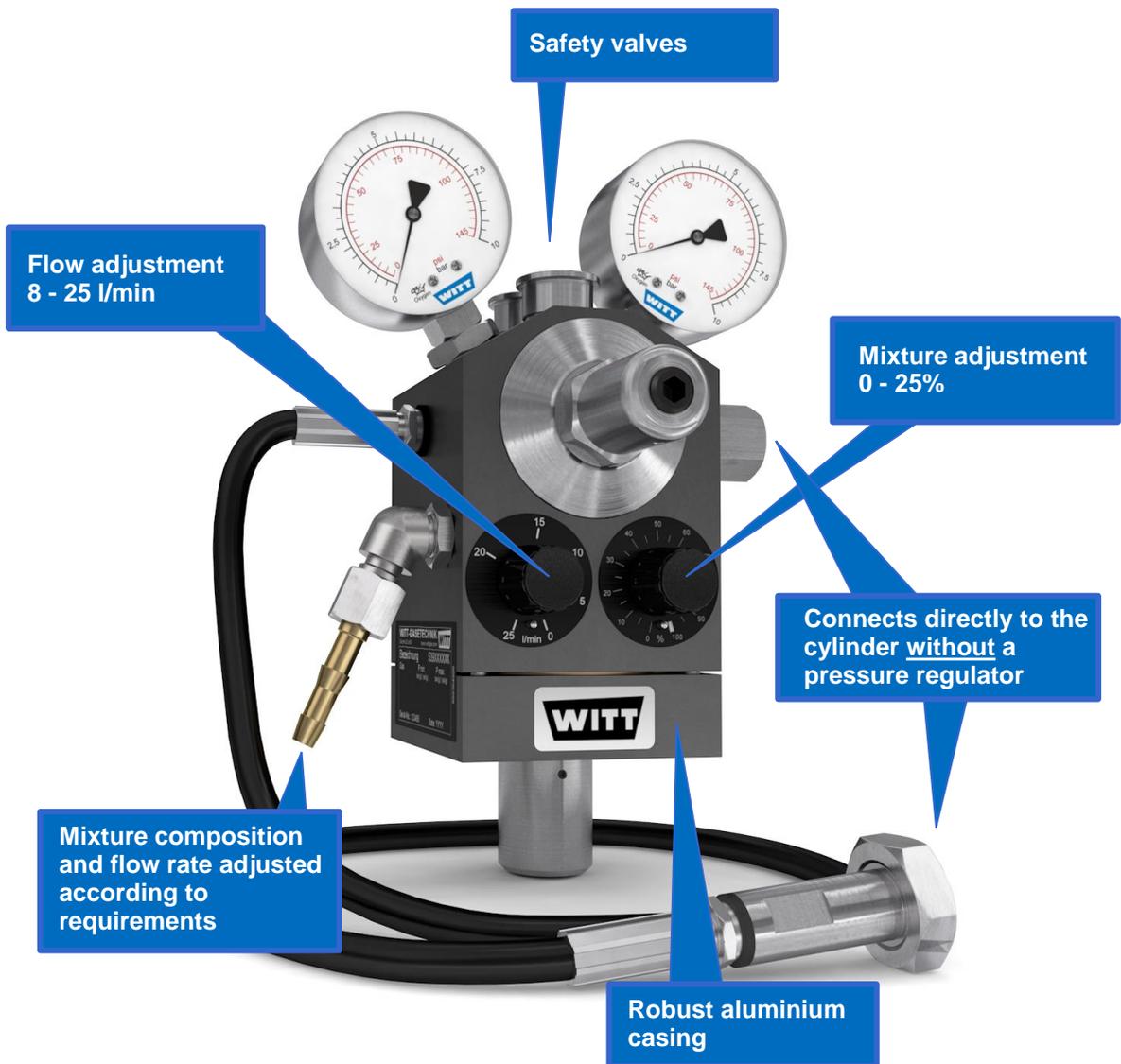
**Valeri Kwashenkov, engineer
Welding Department Manager at
“Belenergomash” Machine
Construction Company in
Belgorod said:**



“We use thirty WITT BM-2M gas mixers to mix Argon and CO₂ in various welding processes. Our plant is very large and has many branches, often there is no access to the gas supply system and we must use gas cylinders. The gas mixer can be easily connected to the cylinder. To do this, you do not even need a pressure regulator as the mixer is fitted with one. The cylinders are placed on a carriage for cylinder transportation, thanks to this we can perform welding work anywhere in the plant.

We often have to change the argon and CO₂ gas mixture composition. If we used pre-mixed gas we would need a large stock of cylinders with different mixtures, which would be expensive and impractical. The BM-2M gas mixer eliminates these problems, because we can obtain any mixture composition using only two cylinders. Our purchasing department is happy, because now we have to procure only two types of gas, which is simpler, and thanks to the larger quantities of single products we are offered better prices.”

Gas Mixer BM-2M: Main benefits



- + automatically adjusts pressure
- + inexpensive and simple in operation
- + operates without electrical power supply
- + additionally protects the connected system against excessive pressure
- + to be used at a single workstation
- + used when there is no central gas supply system, or as supplement to such a system
- + independent from pressure fluctuations and flow requirements

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