

Gas mixer: iMixone

Compact gas mixer with integrated high-pressure regulators and diffusion mixing system

Gas mixer iMixone for the production of mixtures of two gases

Highlights

- **Straightforward use due to two integrated high-pressure regulators and high-pressure hose**
- Optimal factory calibration according to customer's requirement (within the permissible range)
- Infinitely variable up to 30 l/min (related to Nitrogen)
- **High accuracy, according to ISO 14175**
- No accidental mixture changes
- Protection against overpressure due to two relief valves
- Mixture production stops automatically when gas supply is interrupted
- **Does not depend on gas withdrawal variations**
- **Does not depend on input pressure differences due to integrated constant pressure regulation**
- Selector switch for selecting up to 3 pre-set mixing ratios
- Gas inlet filters protect the device against contamination
- Sturdy and compact design, low maintenance
- No power supply required
- Optimised for one welding machine



Technical Data:				
Carrier gas:	Argon (Ar)		Nitrogen (N ₂)	
Additive gas:	Carbon dioxide (CO ₂) Helium (He) Nitrogen (N ₂)		Carbon dioxide (CO ₂) Helium (He)	
Mixing range:	One to three pre-set gas mixtures: Example: 2 / 8 / 18Vol % Carbon dioxide (CO ₂) in Argon (Ar)			
Inlet pressure:	min. 0,5 MPa (5 bar) max. 20 / 30 MPa (200 / 300 bar)			
Outlet pressure:	max. 0,45 MPa (4,5 bar)			
Opening pressure relief valve:	1,0 MPa (10 bar)			
Mixed gas capacity:	5 – 30 l/min, infinitely variable (related to Nitrogen)			
Mixing precision:	± 0,5 % abs: 1-5 Vol. % additive gas ± 10 % of nominal value: >5-20 Vol. % additive gas ± 2 % abs: > 20 Vol. % additive gas			
Temperature:	-10 to +50°C			
Gas inlet:	Carrier gas: Cylinder connection DIN 477 with hose 1000 mm Additive gas: Cylinder connection DIN 477			
Gas outlet:	G 1/4 M, EN560 variable area flowmeter (optional)			
Material:	Housing: aluminum, anodised;		In-built parts: brass, stainless steel, Elastomer	
Measure and weight:	height:	width:	depth:	weight:
without cylinder connection	215 mm	150 mm	125 mm	approx. 5 kg

Further gas mixer versions for the production of gas mixtures of two gases are available on request.

Type: iMixone

Maintenance:

Gas mixers are to be tested for leaks at least once a month.

Gas mixers are only to be opened and repaired by the manufacturer.

The flow values set at the flow-scale of the iMixone relate to the flow rates of Nitrogen. The correct values of the selected gas mixtures are to be calculated by a correction factor.

The following table shows the correction factors as an example for 3 different gas mixtures.

Application table

Gas mixture CO ₂ /Ar		
Vol.% CO ₂	Vol.% Ar	Conversion factor
18	82	0,8812
8	92	0,8472
2	98	0,8268

Application example

Gas mixture setting:	
Gas mixture:	18 % CO ₂ in Ar
Conversion factor:	0,8812
Consumption:	18 NI/min
Flow regulator:	18 x 0,8812 = 15,9 NI/min

Certification/ Technical Standards/ Rules

TRBS German Technical rules for operation safety, DVS German Association for Welding, Cutting and Allied Processes, DGUV German Employer's liability insurance association rules and regulations.

Standards/ Approvals

Company certified according to

ISO 9001:2015 and ISO 14001:2015,

CE-marking according to: Pressure Equipment Directive 2014/68/EU

(Subject to change without notice)