

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 hoses**
- 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 specification**
- 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 the input pressure difference 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
- Optimized 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) (72.5 psig) max. 20 / 30 MPa (200 / 300 bar) (2,900 / 4,350 psig) | | | |
| Outlet pressure: | max. 0.45 MPa (4.5 bar) (62.25 psig) | | | |
| Opening pressure relief valve: | 1.0 MPa (10 bar) (145 psig) | | | |
| 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: | +14° to 122°F / -10 to +50°C | | | |
| Gas inlet: | Carrier gas: Flange connection with hose 1000 mm CGA 580 Additive gas: Flange connection CGA 580 (CGA 320 CO ₂) | | | |
| Gas outlet: | ¼ NPT and variable area flowmeter (optional) | | | |
| Material: | Housing: aluminum, anodized; In-house built parts: brass, stainless steel, Elastomer | | | |
| Measure and weight: | height: | width: | depth: | weight: |
| without cylinder connection | 8.46" / 215 mm | 5.91" / 150 mm | 4.92" / 125 mm | 11 lbs. / approx. 5 kg |

Further versions for the production of two-component gas mixers 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 | | |
|---------------------------------|------|-------------------|
| % CO ₂ | % 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 : 0.8812 = 20 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 9001:2008 and ISO 14001:2004

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

(Subject to change without notice)