

Gas mixer: iMixclassic

Compact gas mixer with integrated constant pressure regulators and diffusion mixing system

Gas mixer iMixclassic for the production of mixtures of two gases

Highlights

- Optimal factory calibration according to customer's requirement (within the permissible range)
- Infinitely variable up to 800 l/min (related to Nitrogen)
- **High accuracy, according to ISO 14175**
- No accidental mixture changes
- Mixture production stops automatically when gas supply is interrupted
- **Does not depend on gas withdrawal variations**
- No additional buffer vessel needed for discontinuous withdrawal of gas
- **Does not depend on input pressure differences due to integrated constant pressure regulation**
- Gas inlet filters protect the device against contamination
- Sturdy and compact design, low maintenance
- No power supply required



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.

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:	5 – 95 Vol. %			
Inlet pressure:	min. 0.5 MPa (5 bar) max. 1 MPa (10 bar)			
Outlet pressure:	0.4 - 0.9 MPa (4 - 9 bar) depending on the inlet pressure			
Mixed gas capacity:	1 - 800 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			
Inlet connection:	G1/4-F			
Outlet connection:	G1/4 F Optional: G1/4-M EN560 quick plug-in connection for 8 mm hose			
Material:	Housing: aluminum, anodised; In-built parts: brass, stainless steel, Elastomer			
Measure and weight:	height:	width:	depth:	weight:
without connection	88 mm	130 mm	68 mm	approx. 1.62 kg

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

Type: iMixclassic

Flow capacity in l/min related to Nitrogen:

Outlet pressure [bar] →	0,5	1	2	3	4	5	6	7	8
Inlet pressure [bar] ↓									
4	300.0	275.0	200.0	-	-	-	-	-	-
5	458.3	425.0	358.3	250.0	-	-	-	-	-
6	558.3	541.7	500.0	416.7	308.3	-	-	-	-
7	700.0	666.7	633.3	566.7	475.0	350.0	-	-	-
8	833.3	800.0	775.0	725.0	641.7	541.7	400.0	-	-
9	950.0	925.0	900.0	866.7	791.7	708.3	575.0	441.7	-
10	1050.0	1033.3	1000.0	983.3	950.0	833.3	783.3	633.3	475.0

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

The correct values of the selected gas mixtures are to be calculated by a correction factor.

Application table:

Gas mixture		
% CO ₂	% Ar	Correction factor
18	82	0.8812
4	96	0.8336
25	75	0.9050
% He	% Ar	Correction factor
20	80	0.866
60	40	0.958
% O ₂	% Ar	Correction factor
4	96	0.8224
10	90	0.826
% O ₂	% O ₂	Correction factor
50	50	1.02
85	15	0.922

Application table:

Gas mixture		
% CO ₂	% N ₂	Correction factor
30	70	1.048
5	95	1.008
80	20	1.128
% He	% N ₂	Correction factor
10	90	1.005
% O ₂	% N ₂	Correction factor
4	96	0.9952
25	75	0.97

Application example:

Gas mixture setting:	
Gas mixture:	18 % CO ₂ in Ar
Correction factor:	0.8812
Consumption:	18 l/min
Flow regulator:	18 : 0.8812 = 20 l/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)