

Gas mixer: *iMixproVario*

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

Gas mixer *iMixproVario* for the production of mixtures of two gases

Highlights

- Individually adjustable gas mixture (within the technical limits)
- Gas mixture settings are displayed by the integrated gas analysis
- Infinitely variable up to 130 m³/h (related to Nitrogen)
- **High accuracy, according to ISO 14175**
- 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**
- Sturdy and compact design, low maintenance
- No power supply required for production of the gas mixture
- Inlet and outlet pressure regulator (pre-adjusted)

Optional:

- Inlet gas filter GF

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)	Carbon dioxide (CO ₂)	
Additive gas:	Carbon dioxide (CO ₂) Helium (He) Nitrogen (N ₂) Oxygen (O)	Carbon dioxide (CO ₂) Helium (He) Oxygen (O)	Oxygen (O)	
Mixing range:	2 mixed gases: 5 – 95 Vol. %			
Inlet pressure:	min. 0.4 MPa (4 bar) max. 1 MPa (10 bar)			
Outlet pressure:	0.05 – 0.8 MPa (0.5 - 8 bar) depending on the inlet pressure			
Mixed gas capacity:	1 – 50 / 100 / 130 m ³ /h, 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 up to +50°C			
Connection EN560 Gas inlet/Gas outlet:	< 100 m ³ /h: G1/2RH-M > 100m ³ /h: G1RH-M	(optional solder connection for pipe Ø 18mm) (optional solder connection for pipe Ø 28 mm)		
Material:	Housing: sheet steel, powder coated In-built parts: brass, stainless steel, Elastomer Copper, aluminum, anodised			
Measure and weight:	height:	width:	depth:	weight:
without connection	500 mm	500 mm	210 mm	approx. 18 - 30 kg

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

Type: iMixprovari

Flow capacity in Nm³/h related to Nitrogen:

Mixed gas capacity: 50m³/h

Outlet pressure [barÜ] →	0.5	1	2	3	4	5	6	7	8
Inlet pressure [barÜ] ↓									
4	18.0	16.5	12.0	-	-	-	-	-	-
5	27.5	25.5	21.5	15.0	-	-	-	-	-
6	33.5	32.5	30.0	25.0	18.5	-	-	-	-
7	42.0	40.0	38.0	34.0	28.5	21.0	-	-	-
8	50.0	48.0	46.5	43.5	38.5	32.5	24.0	-	-
9	57.0	55.5	54.0	52.0	47.5	42.5	34.5	26.5	-
10	63.0	62.0	60.0	59.0	57.0	50.0	47.0	38.0	28.5

Mixed gas capacity: 100m³/h

Outlet pressure [barÜ] →	0.5	1	2	3	4	5	6	7	8
Inlet pressure [barÜ] ↓									
4	36.0	33.0	24.0	-	-	-	-	-	-
5	55.0	51.0	43.0	30.0	-	-	-	-	-
6	67.0	65.0	60.0	50.0	37.0	-	-	-	-
7	84.0	80.0	76.0	68.0	57.0	42.0	-	-	-
8	100.0	96.0	93.0	87.0	77.0	65.0	48.0	-	-
9	114.0	111.0	108.0	104.0	95.0	85.0	69.0	53.0	-
10	126.0	124.0	120.0	118.0	114.0	100.0	94.0	76.0	57.0

Mixed gas capacity: 130m³/h

Outlet pressure [barÜ] →	0.5	1	2	3	4	5	6	7	8
Inlet pressure [barÜ] ↓									
4	46.8	42,9	31,2	-	-	-	-	-	-
5	71.5	66,3	55,9	39,0	-	-	-	-	-
6	87.1	84,5	78,0	65,0	48,1	-	-	-	-
7	109,2	104,0	98,8	88,4	74,1	54,6	-	-	-
8	130,0	124,8	120,9	113,1	100,1	84,5	62,4	-	-
9	148,2	144,3	140,4	135,2	123,5	110,5	89,7	68,9	-
10	163,8	161,2	156,0	153,4	148,2	130,0	122,2	98,8	74,1

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)

Application table

Gas mixture		
% CO ₂	% Ar	Conversion factor
18	82	0.8812
4	96	0.8336
25	75	0.9050

% He	% Ar	Conversion factor
20	80	0.866
60	40	0.958

% O ₂	% Ar	Conversion factor
4	96	0.8224
10	90	0.826

% O ₂	% CO ₂	Conversion factor
50	50	1.02
85	15	0.922

Application table

Gas mixture		
% CO ₂	% N ₂	Conversion factor
30	70	1.048
5	95	1.008
80	20	1.128

% He	% N ₂	Conversion factor
10	90	1.005

% O ₂	% N ₂	Conversion factor
4	96	0.9952
25	75	0.97