

Gas Mixer: iMixcompact

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

Gas mixer iMixcompact for the production of mixtures of two gases

Highlights

- Gas mixer iMixcompact for the production of up to two predefined and pre-adjusted gas mixtures of two gases
- Optimal factory calibration according to customer's requirement (within the permissible range)
- Infinitely variable up to 200 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**
- 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(N2)	
Additive Gas:	Carbon dioxide (CO2) Helium (He) Nitrogen (N2)		Carbon Dioxide (CO2) Helium (He)	
Mixing Range:	5 – 95 Vol%			
Inlet Pressure:	Min 0.5 MPa (5bar) Max 1 MPa (10 bar)			
Outlet Pressure:	0.4 – 0.8 MPa (4-8 bar) depending on the inlet pressure			
Mixed Gas Capacity:	5 – 200 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			
Connection Inlet Outlet	G1/4-F Optional: G1/4-M-EN560 quick plug-in connection for 8mm hose			
Material:	Housing: aluminium, anodised: in built parts: Brass , stainless steel, elastomer			
Measure & Weight Without connection:	Height 88mm	Width 80mm	Depth 68mm	Weight Approx. 1.05kg

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

Type: iMixcompact

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	75,0	68,8	50,0	-	-	-	-	-	-
5	114,6	106,3	89,6	62,5	-	-	-	-	-
6	139,6	135,4	125,0	104,2	77,1	-	-	-	-
7	175,0	166,7	158,3	141,7	118,8	87,5	-	-	-
8	208,3	200,0	193,8	181,3	160,4	135,4	100,0	-	-
9	237,5	231,3	225,0	216,7	197,9	177,1	143,8	110,4	-
10	262,5	258,3	250,0	245,8	237,5	208,3	195,8	158,3	118,8

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

When selecting another gas mixture, the flow capacity will be different and can be calculated by a correction factor.

Application table:

Gas mixture		
Vol.% CO ₂	Vol.% Ar	Correction factor
18	82	0,8812
4	96	0,8336
25	75	0,9050
Vol.% CO ₂	Vol.% N ₂	Correction factor
30	70	1,048
5	95	1,008
80	20	1,128
Vol.% He	Vol.% Ar	Correction factor
20	80	0,866
60	40	0,958
Vol.% He	Vol.% N ₂	Correction factor
10	90	1,005

Application table:

Gas mixture		
Vol.% O ₂	Vol.% Ar	Correction factor
4	96	0,8224
10	90	0,826
Vol.% O ₂	Vol.% N ₂	Correction factor
4	96	0,9952
25	75	0,9700
Vol.% O ₂	Vol.% CO ₂	Correction factor
50	50	1,020
85	15	0,922

Application example:

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