

## 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:				
<b>Carrier Gas:</b>	Argon (Ar)		Nitrogen(N2)	
<b>Additive Gas:</b>	Carbon dioxide (CO <sub>2</sub> ) Helium (He) Nitrogen (N <sub>2</sub> )		Carbon Dioxide (CO <sub>2</sub> ) Helium (He)	
<b>Mixing Range:</b>	5 – 95 Vol %			
<b>Inlet Pressure:</b>	Min - 0.5 MPa (5bar) Max – 1 MPa (10 bar)			
<b>Outlet Pressure:</b>	0.4 – 0.9 MPa (4-9 bar) depending on the inlet pressure			
<b>Mixed Gas Capacity:</b>	1 – 188 l/min, infinitely variable (related to Nitrogen)			
<b>Mixing Precision:</b>	± 0,5 % abs: 1-5 Vol. % additive gas ± 10 % of nominal value: >5-20 Vol. % additive gas ± 2 % abs: > 20 Vol. % additive gas			
<b>Temperature:</b>	-10 to + 50°C			
<b>Connection</b>	G1/4-F			
<b>Inlet</b>	G1/4F			
<b>Outlet</b>	Optional: G1/4-M E560 quick plug-in connection for 8mm hose			
<b>Material:</b>	Housing: aluminium, anodised; in built parts: Brass , stainless steel, elastomer			
<b>Measure &amp; Weight</b>	Height	Width	Depth	Weight
<b>Without connection:</b>	88mm	130mm	68mm	Approx. 1.62kg

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.

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 <sub>2</sub>	Vol.% Ar	Correction factor
18	82	0,8812
4	96	0,8336
25	75	0,9050
Vol.% He	Vol.% Ar	Correction factor
20	80	0,866
60	40	0,958
Vol.% O <sub>2</sub>	Vol.% Ar	Correction factor
4	96	0,8224
10	90	0,8260
Vol.% O <sub>2</sub>	Vol.% O <sub>2</sub>	Correction factor
50	50	1,020
85	15	0,922

**Application table:**

Gas mixture		
Vol.% CO <sub>2</sub>	Vol.% N <sub>2</sub>	Correction factor
30	70	1,048
5	95	1,008
80	20	1,128
Vol.% He	Vol.% N <sub>2</sub>	Correction factor
10	90	1,005
Vol.% O <sub>2</sub>	Vol.% N <sub>2</sub>	Correction factor
4	96	0,9952
25	75	0,9700

**Application example:**

Gas mixture setting:	
Gas mixture:	18 % CO <sub>2</sub> in Ar
Correction 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)