

# GAS MIXER KM 10-2 FLEX



Gas mixing systems for 2 defined gases, designed for variable processes with a mixing range from 5-92%. See other ranges on overleaf.

Specially designed for applications with only low gas consumption. Ideally suitable as a portable desktop unit, e.g. for laboratory applications.

Using a new mixing technology, no receiver is required.



Capacity range up to approx. 28 NI/min. For the exact pressure and flow capacity ratios, please see the technical data.

### Benefits

- high mixing accuracy
- avoids the need to stock multiple pre-mixes (cost saving)
- does not require receiver (cost and space saving)
- inlet gas filters protect the device against impurities
- pneumatic operating principle, no electrical connections required
- mixed gas production from 1 l/min to the max. flow
- robust, compact design
- minimal maintenance required

### Easy operation

- a mixing valve with a control knob and %-scale provides infinitely variable mixture settings

### High process reliability

- independent of pressure fluctuations in the gas supply
- independent of withdrawal fluctuations (in permitted range)
- fail safe design (unit shuts down on failure of either gas supply)
- lockable to prevent tampering

### Options

- alarm module NXT+: integrated inlet pressure monitoring with digital display for pressure (with analog pressure transmitters) plus optical alarm, adjustable alarm limits, obligation of acknowledgement, protection of alarms, interfaces for controlling external alarms etc.

Other models, options and accessories available upon request.

Please identify the individual gases at the time of enquiring!

Flow KM 10-2 FLEX (in NI/min) in relation to N <sub>2</sub>		min. mixed gas production 1 l/min															
		outlet pressure in barg															
		0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0
min. inlet pressure in barg (max. 10 bar)	3.0	6.7	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4.0	9.4	9.3	8.5	5.8	-	-	-	-	-	-	-	-	-	-	-	-
	5.0	12.6	12.6	12.4	12.3	11.1	8.1	-	-	-	-	-	-	-	-	-	-
	6.0	15.4	15.2	15.2	15.2	14.7	14.4	13.3	8.6	-	-	-	-	-	-	-	-
	7.0	18.6	18.5	18.4	18.3	18.2	18.1	17.8	17.0	14.8	9.4	-	-	-	-	-	-
	8.0	21.5	21.3	21.2	21.1	20.9	20.9	20.8	20.7	20.4	18.8	16.6	10.3	-	-	-	-
	9.0	24.9	24.8	24.7	24.6	24.5	24.5	24.4	24.3	24.2	24.1	22.3	20.9	17.6	10.5	-	-
	10.0	28.2	28.0	27.9	27.8	27.7	27.6	27.4	27.3	27.2	27.1	27.0	26.9	25.6	23.2	19.9	12.4

# GAS MIXER KM 10-2 FLEX



<b>Type</b>	KM 10-2 FLEX
<b>Gases</b>	all technical gases (excluding toxic or corrosive gases, also no mixtures of fuel gases with air, O <sub>2</sub> or N <sub>2</sub> O)
<b>Mixing range</b>	5 – 92% according to gas combination (see table) by selection of suitable mixing range the accuracy corresponds to ISO 14175
<b>Pressure settings</b>	see table on the front page
<b>Inlet pressure differential between the gases</b>	max. 3 bar
<b>Mixture output (N<sub>2</sub>)</b>	see table on the front page (other gases on request)
<b>Setting accuracy</b>	
<b>Mixing range 1: &lt; 5%</b>	± 0.5% absolute
<b>Mixing range 2: 5 bis 20%</b>	± 10% of the nominal value
<b>Mixing range 3: &gt; 20%</b>	± 2% absolute
<b>Temperature (gas/environment)</b>	-25 °C to +50 °C (-13 °F to +122 °F)
<b>Gas connections</b>	G 1/4 RH with cone, hose nipple 6 mm
<b>fuel gas connection</b>	G 3/8 LH with cone, soldering nipple for pipe OD 10 mm
<b>Housing</b>	stainless steel
<b>Weight</b>	approx. 10 kg
<b>Dimensions (HxWxD)</b>	approx. 316 x 158 x 370 mm (12.4 x 6.2 x 14.6 inches) without connections
<b>Approvals</b>	Company certified according to ISO 9001 CE-marked according to: - ATEX 114 Directive 2014/34/EU (without plastic handle)

**Note: The determined data of mixture output are only in relation to N<sub>2</sub>!**  
The use of other required gases results in a difference to the mixture output, which is compensated by the correction factor  $F_{MIX}$  :

### $F_{MIX}$ for concentrations (example):

	GAS 1	GAS 2	$F_{MIX}$
<b>mixture</b>	<b>CO<sub>2</sub></b>	<b>Ar</b>	
admix proportion in Vol.%	18	82	0.8812
admix proportion in Vol.%	4	96	0.8336
admix proportion in Vol.%	25	75	0.905
<b>mixture</b>	<b>CO<sub>2</sub></b>	<b>N<sub>2</sub></b>	
admix proportion in Vol.%	30	70	1.048
admix proportion in Vol.%	5	95	1.008
admix proportion in Vol.%	80	20	1.128
<b>mixture</b>	<b>He</b>	<b>Ar</b>	
admix proportion in Vol.%	20	80	0.866
admix proportion in Vol.%	60	40	0.958
<b>mixture</b>	<b>He</b>	<b>N<sub>2</sub></b>	
admix proportion in Vol.%	10	90	1.005
<b>mixture</b>	<b>O<sub>2</sub></b>	<b>Ar</b>	
admix proportion in Vol.%	4	96	0.8224
admix proportion in Vol.%	10	90	0.826
<b>mixture</b>	<b>O<sub>2</sub></b>	<b>N<sub>2</sub></b>	
admix proportion in Vol.%	4	96	0.9952
admix proportion in Vol.%	25	75	0.97
<b>mixture</b>	<b>O<sub>2</sub></b>	<b>CO<sub>2</sub></b>	
admix proportion in Vol.%	50	50	1.02
admix proportion in Vol.%	85	15	0.922

Possible admix range	
Mix	Range
CO <sub>2</sub> in Ar	5-92% CO <sub>2</sub>
CO <sub>2</sub> in N <sub>2</sub>	5-92% CO <sub>2</sub>
CO <sub>2</sub> in Air	5-92% CO <sub>2</sub>
O <sub>2</sub> in CO <sub>2</sub>	5-85% O <sub>2</sub>
O <sub>2</sub> in Ar	5-92% O <sub>2</sub>
O <sub>2</sub> in He	5-88% O <sub>2</sub>
O <sub>2</sub> in N <sub>2</sub>	5-87% O <sub>2</sub>
He in Ar	5-92% He
He in N <sub>2</sub>	5-87% He
N <sub>2</sub> in Ar	5-92% N <sub>2</sub>
H <sub>2</sub> in N <sub>2</sub>	5-95% H <sub>2</sub>
H <sub>2</sub> in Ar	8-95% H <sub>2</sub>