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.

Features new mixing technology, eliminating the need for a receiver.

Capacity range up to approx. 59 SCFH.
For the exact pressure and flow capacity ratios, please see the technical data.

Benefits

- high mixing accuracy
- no need to stock multiple pre-mixes (cost saving)
- no receiver required (cost and space saving)
- inlet gas filters protect the device against impurities
- pneumatic operating principle, no electrical connections required
- mixed gas production from 2 SCFH to the max. flow
- robust, compact design
- minimal maintenance required

Easy operation

- mixing valve with control knob and %-scale for variable mixture settings

High process reliability

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

Options

- alarm module AM3: 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 SCFH) in relation to N_2																min. mixed gas production 2 SCFH		
								outlet pressure in PSIG										
		7.3	14.5	21.8	29.0	36.3	43.5	50.8	58.0	65.3	72.5	79.8	87.0	94.3	101.5	108.8	116.0
	3.0	14	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	58.0	20	20	18	12	-	-	-	-	-	-	-	-	-	-	-	-
min. inlet pressure in PSIG (max. 145 PSI)	**72.5**	27	27	26	26	24	17	-	-	-	-	-	-	-	-	-	-
	87.0	33	32	32	32	31	31	28	18	-	-	-	-	-	-	-	-
	101.5	39	39	39	39	39	38	38	36	31	20	-	-	-	-	-	-
	116.0	46	45	45	45	44	44	44	44	43	40	35	22	-	-	-	-
	130.5	53	53	52	52	52	52	52	51	51	51	47	44	37	22	-	-
	145.0	60	59	59	59	59	58	58	58	58	57	57	57	54	49	42	26

GAS MIXER KM 10-2 FLEX

Type	KM 10-2 FLEX
Gases	all technical gases (excluding toxic or corrosive gases, also no mixtures of fuel gases with air, O_2 or N_2O)
Mixing range	5-92% according to gas combination (see table) by selection of suitable mixing range the accuracy corresponds to ISO 14175
Pressure settings	see table on the front page
Inlet pressure differential between the gases	max. 43.5 PSI
Mixture output (N_2)	see table on the front page (other gases upon request)
Setting accuracy **Mixing range 1: 5-20%** **Mixing range 2: > 20%**	± 10% of the nominal value ± 2% absolute
Temperature (gas/environment)	-13°F to 122°F
Gas connections **fuel gas connection**	G 1/4 RH with cone, hose nipple 6 mm G 3/8 LH with cone, soldering nipple for pipe OD 10 mm
Housing	stainless steel
Weight	approx. 22 lb
Dimensions (HxWxD)	approx. 12.4 x 6.2 x 14.6 inches (without connections)
Approvals	Company certified according to ISO 9001 and ISO 22000
	CE-marked according to: - ATEX 114 Directive 2014/34/EU (without plastic handle)
	for food-grade gases according to: - Regulation (EC) No 1935/2004

Note: The determined data of mixture output are only in relation to Nitrogen!
The use of other required gases results in a different mixture flow rate, which is calculated via the correction factor F_{MIX} :

F_{MIX} for concentrations (example):

	GAS 1	GAS 2	F_{MIX}
mixture	**CO_2**	**Ar**	
admix proportion in Vol.%	18	82	0.8812
admix proportion in Vol.%	25	75	0.905
mixture	**CO_2**	**N_2**	
admix proportion in Vol.%	30	70	1.048
admix proportion in Vol.%	80	20	1.128
mixture	**He**	**Ar**	
admix proportion in Vol.%	20	80	0.866
admix proportion in Vol.%	60	40	0.958
mixture	**He**	**N_2**	
admix proportion in Vol.%	10	90	1.005
mixture	**O_2**	**Ar**	
admix proportion in Vol.%	10	90	0.826
mixture	**O_2**	**N_2**	
admix proportion in Vol.%	25	75	0.97
mixture	**O_2**	**CO_2**	
admix proportion in Vol.%	50	50	1.02
admix proportion in Vol.%	85	15	0.922

Possible admix range	
Mix	**Range**
CO_2 in Ar	5-92% CO_2
CO_2 in N_2	5-92% CO_2
CO_2 in Air	5-92% CO_2
O_2 in CO_2	5-85% O_2
O_2 in Ar	5-92% O_2
O_2 in He	5-88% O_2
O_2 in N_2	5-87% O_2
He in Ar	5-92% He
He in N_2	5-87% He
N_2 in Ar	5-92% N_2