KM 10-2 FLEX

Mixing system for 2 gases

Ideally suitable as a portable desktop unit

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

Features

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 Nl/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 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. (Power supply required by the operator)

Other models, options and accessories availableon request.
Please identify the individual gases at the time of enquiring!

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Technical Data		
Type		KM 10-2 FLEX
Gases		All technical gases (excluding toxic or corrosive gases, also no mixtures of fuel gases with air, O2 or N2O)
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
Inlet pressure differential		Max. 3 bar
Mixture output (N2)		See table (other gases on request)
Setting accuracy	Mixing range 1: 5 to 20%	± 10% of the nominal value
	Mixing range 2: > 20%	± 2% absolute
Temperature (gas/environment)		-25 °C to +50 °C (-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. 10 kg
Dimensions (HxWxD)		approx. 316 x 158 x 370 mm (12.4 x 6.2 x 14.6 inches) without connections
Approvals		Company certified according to ISO 9001 CE-marked according to: ATEX 114 Directive 2014/34/EU (without plastic handle)

	Flow KM 10-2 FLEX (in Nl/min) in relation to N2 min. mixed gas production 1 l/min outlet pressure in barg															
min. inlet pressure in barg (max. 10 bar)	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
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

KM 10-2 FLEX

HTK gas mixers

Discover our PCU series

- Extremely precise & rapid control
- All components are modular
- High reproducibility
- Calibration with real gas
- Multiple gases per device
- Great potential savings for mixed gases
- Independent of temperature and pressure
- Easy to maintain and service
- 3-year warranty

The direkt way to our website:

www.htk-hamburg.com

Note: The determined data of mixture output are only in relation to N2!

The use of other required gases results in a difference to the mixture output, which is compensated by the correction factor Fmix :

Fmix for concentrations (example):	GAS 1	GAS 2	Fmix
Mixture	**CO2**	**Ar**	
Admix proportion in Vol.%	18	82	0,8812
Admix proportion in Vol.%	25	75	0,905
Mixture	**CO2**	**N2**	
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**	**N2**	
Admix proportion in Vol.%	10	90	1,005
Mixture	**O2**	**Ar**	
Admix proportion in Vol.%	10	90	0,826
Mixture	**O2**	**N2**	
Admix proportion in Vol.%	25	75	0,97
Mixture	**O2**	**CO2**	
Admix proportion in Vol.%	50	50	1,02
Admix proportion in Vol.%	85	15	0,922

Possible admix range

Mix	Range
CO2 in Ar	5-92% CO2
CO2 in N2	5-92% CO2
CO2 in Air	5-92% CO2
O2 in CO2	5-85% O2
O2 in Ar	5-92% O2
O2 in He	5-88% O2
O2 in N2	5-87% O2
He in Ar	5-92% He
He in N2	5-87% He
N2 in Ar	5-92% N2

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