GAS MIXER MG-FIX/FLEX

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MG 25/45/75/95/125-2 FIX

MG 25/45/75/95/125-2 FLEX

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

FIX: pre-set for two- or three-component gas mixtures.

FLEX: adjustable for two-component gas mixtures.

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

MG 25 capacity range up to approx. 790 SCFH
MG 45 capacity range up to approx. 1 640 SCFH
MG 75 capacity range up to approx. 2 400 SCFH
MG 95 capacity range up to approx. 3 170 SCFH
MG 125 capacity range up to approx. 4 780 SCFH
For the exact pressure and flow-capacity ratios, please see the technical data overleaf.

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 17 SCFH to the max. flow
- robust, compact design
- panel for wall mounting
- minimal maintenance required

Easy operation

- blends are factory-set and tamper-proof (FIX)
- mixing valve with control knob and %-scale for variable mixture settings (FLEX)

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 (FLEX)

Other models, options and accessories available upon request.

Please identify the individual gases at the time of enquiring!

KM14 USA - N02/I8 subject to change

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Type	MG 25/45/75/95/125-2 FIX; MG 45/95/125-3 FIX; MG 25/45/75/95/125-2 FLEX
Gases	N_2, CO_2, Ar or others as well as their mixtures; not for flammable gases!
Mixing range	
MG 25/45/75/95/125	-2 FIX/FLEX: 2-92% according to gas combination and type (see table on last page)
MG 45/95/125	-3 FIX: carrier gas 47-96% 1st admix gas 2-24% 2nd admix gas 2-29% according to the pre-set gas blend smaller admix concentrations for MG 125 available upon request
	by selection of suitable mixing range the accuracy corresponds to ISO 14175
Pressure settings	see tables
Inlet pressure differential between the gases	max. 43.5 PSI
Mixture output (N_2)	see tables (other gases available upon request)
Setting accuracy	
Mixing range 1: < 5%	± 0.5% absolute
Mixing range 2: 5-20%	± 10% of the nominal value
Mixing range 3: > 20%	± 2% absolute
Temperature (gas/environment)	-13°F to 122°F
Gas connections	
MG 25/45/75	1/2″ NPT with cone, soldering nipple for pipe OD 15 mm
MG 95/125	1″ NPT with cone, soldering nipple for pipe OD 22 mm
Housing	stainless steel
Weight	
MG FIX	ranges from approx. 39.7 - 59.5 lb
MG FLEX	ranges from approx. 44.1 - 70.5 lb
Dimensions (HxWxD)	approx. 22.4 x 18.5 x 9.4 inches (without connections)
Approvals	Company certified according to ISO 9001 CE-marked according to: - PED 2014/68/EU Cleaned for Oxygen Service according to: - EIGA IGC Doc 13/12/E: Oxygen Pipeline and Piping Systems

Caution!
Gas flows under the min. mixed gas output (e.g. switching off the gas consumption and then refilling the pipes etc.) can cause an undefined gas mix, flowing to the point of use.

Flow **MG 25-2** (in SCFH) in relation to N_2 — min. mixed gas production 17 SCFH

min. inlet pressure in PSIG (max. 290 PSI) \ outlet pressure in PSIG	7.3	14.5	29.0	43.5	58.0	72.5	87.0	101.5	116.0	130.5	145.0	159.5	174.0	188.5	203.0
58.0	95	74	-	-	-	-	-	-	-	-	-	-	-	-	-
72.5	173	152	95		-	-	-	-	-	-	Note:				-
87.0	268	247	194	120	-	-	-	-	-	-	Flow values > P_V 145 PSI				-
101.5	371	357	300	230	134	-	-	-	-	-	do not apply to O_2 and CO_2				-
116.0	512	494	445	371	290	177	-	-	-	-	-	-	-	-	-
130.5	653	639	593	523	434	332	205	-	-	-	-	-	-	-	-
145.0	791	777	731	667	583	480	350	212	-	-	-	-	-	-	-
159.5	943	939	901	837	763	671	558	434	290	-	-	-	-	-	-
174.0	1 067	1 052	1 028	971	893	805	696	569	441	283	-	-	-	-	-
188.5	1 236	1 232	1 197	1 148	1 070	989	879	763	622	470	300	-	-	-	-
203.0	1 420	1 402	1 377	1 338	1 275	1 208	1 095	971	840	685	523	343	-	-	-
217.6	1 667	1 656	1 642	1 589	1 519	1 377	1 289	1 183	1 063	911	738	551	360	-	-
232.1	1 776	1 776	1 759	1 716	1 660	1 582	1 494	1 391	1 275	1 151	939	795	597	385	-
246.6	2 002	1 988	1 960	1 925	1 865	1 794	1 713	1 621	1 511	1 391	1 247	1 077	865	657	441

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Flow **MG 45-2 /-3** (in SCFH) in relation to N_2 — min. mixed gas production 34 SCFH

min. inlet pressure in PSIG (max. 363 PSI) \ outlet pressure in PSIG	7.3	14.5	29.0	43.5	58.0	72.5	87.0	101.5	116.0	130.5	145.0	159.5	174.0	188.5	203.0
58.0	208	131	-	-	-	-	-	-	-	-	-	-	-	-	-
72.5	427	297	180	-	-	-	-	-	-	-	Note: Flow values > P_V 145 PSI do not apply to O_2 and CO_2				-
87.0	614	512	399	244	-	-	-	-	-	-					-
101.5	855	749	639	491	293	-	-	-	-	-	-	-	-	-	-
116.0	1 130	1 014	904	763	569	343	-	-	-	-	-	-	-	-	-
130.5	1 377	1 303	1 194	1 063	883	660	371	-	-	-	-	-	-	-	-
145.0	1 639	1 589	1 508	1 367	1 190	989	724	403	-	-	-	-	-	-	-
159.5	1 907	1 886	1 812	1 709	1 564	1 377	1 144	862	505	-	-	-	-	-	-
174.0	2 179	2 158	2 094	1 999	1 868	1 699	1 483	1 232	915	526	-	-	-	-	-
188.5	2 472	2 458	2 405	2 320	2 200	2 048	1 861	1 621	1 331	982	544	-	-	-	-
203.0	2 726	2 716	2 670	2 592	2 486	2 352	2 179	1 992	1 727	1 423	1 031	586	-	-	-
217.6	2 998	2 988	2 952	2 885	2 783	2 656	2 504	2 310	2 087	1 812	1 490	1 067	625	-	-
232.1	3 267	3 260	3 235	3 185	3 115	3 005	2 882	2 712	2 500	2 267	1 971	1 642	1 187	689	-
246.6	3 507	3 496	3 486	3 436	3 373	3 281	3 154	3 009	2 815	2 592	2 334	2 027	1 663	1257	703

Flow **MG 75-2** (in SCFH) in relation to N_2 — min. mixed gas production 68 SCFH

min. inlet pressure in PSIG (max. 363 PSI) \ outlet pressure in PSIG	7.3	14.5	29.0	43.5	58.0	72.5	87.0	101.5	116.0	130.5	145.0	159.5	174.0	188.5	203.0
58.0	403	325	-	-	-	-	-	-	-	-	-	-	-	-	-
72.5	685	614	403	-	-	-	-	-	-	-	Note: Flow values > P_V 145 PSI do not apply to O_2 and CO_2				-
87.0	1 028	971	788	501	-	-	-	-	-	-					-
101.5	1 353	1 307	1 158	936	576	-	-	-	-	-	-	-	-	-	-
116.0	1 674	1 635	1 515	1 335	1 070	657	-	-	-	-	-	-	-	-	-
130.5	2 031	2 024	1 907	1 748	1 526	1 218	763	-	-	-	-	-	-	-	-
145.0	2 391	2 373	2 288	2 151	1 963	1 663	1 317	788	-	-	-	-	-	-	-
159.5	2 786	2 769	2 702	2 631	2 472	2 232	1 911	1 462	879	-	-	-	-	-	-
174.0	3 101	3 090	3 044	2 963	2 853	2 677	2 419	2 077	1 596	971	-	-	-	-	-
188.5	3 348	3 341	3 309	3 231	3 136	3 009	2 836	2 596	2 232	1 723	1 031	-	-	-	-
203.0	3 634	3 627	3 599	3 542	3 454	3 330	3 189	3 009	2 747	2 355	1 826	1 105	-	-	-
217.6	3 920	3 920	3 895	3 842	3 768	3 659	3 535	3 344	3 154	2 896	2 479	1 928	1 141	-	-
232.1	4 259	4 259	4 252	4 213	4 022	3 948	3 853	3 722	3 577	3 383	3 101	2 624	2 055	1 254	-
246.6	4 722	4 722	4 722	4 587	4 573	4 527	4 460	4 262	4 125	3 984	3 687	3 281	2 811	2 186	1 328

Flow **MG 95-2 /-3** (in SCFH) in relation to N_2 — min. mixed gas production 68 SCFH

min. inlet pressure in PSIG (max. 363 PSI) \ outlet pressure in PSIG	7.3	14.5	29.0	43.5	58.0	72.5	87.0	101.5	116.0	130.5	145.0	159.5	174.0	188.5	203.0
58.0	410	332	-	-	-	-	-	-	-	-	-	-	-	-	-
72.5	749	675	459		-	-	-	-	-	-	Note: Flow values > P_V 145 PSI do not apply to O_2 and CO_2				-
87.0	1 165	1 088	879	576	-	-	-	-	-	-					-
101.5	1 596	1 526	1 317	1 028	636	-	-	-	-	-	-	-	-	-	-
116.0	2 154	2 084	1 858	1 600	1 254	788	-	-	-	-	-	-	-	-	-
130.5	2 652	2 596	2 426	2 310	1 868	1 434	904	-	-	-	-	-	-	-	-
145.0	3 171	3 129	2 973	2 882	2 444	2 069	1 575	957	-	-	-	-	-	-	-
159.5	3 853	3 835	3 694	3 493	3 200	2 815	2 355	1 790	1 102	-	-	-	-	-	-
174.0	4 386	4 383	4 273	4 065	3 842	3 500	3 087	2 550	1 942	1 183	-	-	-	-	-
188.5	4 888	4 877	4 806	4 665	4 453	4 213	3 860	3 351	2 793	2 115	1 282	-	-	-	-
203.0	5 371	5 368	5 301	5 159	4 997	4 764	4 471	4 079	3 592	2 991	2 242	1 335	-	-	-
217.6	5 866	5 866	5 848	5 725	5 583	5 410	5 142	4 828	4 383	3 874	3 224	2 405	1 416	-	-
232.1	6 434	6 434	6 325	6 275	6 148	5 951	5 749	5 446	5 124	4 704	4 149	3 433	2 592	1 543	-
246.6	6 929	6 929	6 918	6 759	6 509	6 293	6 226	6 088	5 799	5 442	4 997	4 383	3 648	2 747	1 596

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Flow **MG 125-2 /-3** (in SCFH) in relation to N_2 — min. mixed gas production 136 SCFH

min. inlet pressure in PSIG (max. 363 PSI) \ outlet pressure in PSIG	7.3	14.5	29.0	43.5	58.0	72.5	87.0	101.5	116.0	130.5	145.0	159.5	174.0	188.5	203.0
58.0	855	699	-	-	-	-	-	-	-	-	Note: Flow values > P_V 145 PSI do not apply to O_2 and CO_2				-
72.5	1 458	1 321	908	-	-	-	-	-	-	-					-
87.0	2 144	2 024	1 656	1 119	-	-	-	-	-	-					-
101.5	2 850	2 765	2 458	1 963	1 331	-	-	-	-	-	-	-	-	-	-
116.0	3 482	3 422	3 192	2 800	2 221	1 451	-	-	-	-	-	-	-	-	-
130.5	4 178	4 160	3 994	3 715	3 298	2 684	1 780	-	-	-	-	-	-	-	-
145.0	4 782	4 778	4 647	4 407	4 072	3 613	2 924	1 935	-	-	-	-	-	-	-
159.5	5 318	5 318	5 258	5 078	4 796	4 407	3 853	3 079	1 963	-	-	-	-	-	-
174.0	5 869	5 869	5 862	5 682	5 453	5 135	4 690	4 132	3 267	2 052	-	-	-	-	-
188.5	6 434	6 434	6 395	6 290	6 134	5 912	5 555	5 064	4 460	3 602	2 112	-	-	-	-
203.0	7 261	7 261	7 261	7 123	7 021	6 689	6 378	5 943	5 431	4 718	3 683	2 158	-	-	-
217.6	7 741	7 741	7 741	7 677	7 529	7 338	7 084	6 731	6 307	5 725	5 054	3 966	2 271	-	-
232.1	8 377	8 377	8 377	8 373	8 204	8 052	7 914	7 621	7 261	6 738	6 138	5 428	4 368	2 546	-
246.6	8 811	8 811	8 811	8 807	8 723	8 518	8 380	8 197	7 942	7 494	6 996	6 470	5 707	4 559	2 740

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 propotion in vol.%	18	82	0.8812
admix propotion in vol.%	4	96	0.8336
admix propotion in vol.%	25	75	0.905
mixture	**CO_2**	**N_2**	
admix propotion in vol.%	30	70	1.048
admix propotion in vol.%	5	95	1.008
admix propotion in vol.%	80	20	1.128
mixture	**He**	**Ar**	
admix propotion in vol.%	20	80	0.866
admix propotion in vol.%	60	40	0.958
mixture	**He**	**N_2**	
admix propotion in vol.%	10	90	1.005
mixture	**O_2**	**Ar**	
admix propotion in vol.%	4	96	0.8224
admix propotion in vol.%	10	90	0.826
mixture	**O_2**	**N_2**	
admix propotion in vol.%	4	96	0.9952
admix propotion in vol.%	25	75	0.97
mixture	**O_2**	**CO_2**	
admix propotion in vol.%	50	50	1.02
admix propotion in vol.%	85	15	0.922

Possible admix range		
Mix	**Range**	**Type**
CO_2 in Ar	2-23% CO_2	MG 75/95/125
CO_2 in Ar	3-46% CO_2	MG 45/75/95/125
CO_2 in Ar	5-92% CO_2	MG 25/45/75/95/125
CO_2 in N_2	5-85% CO_2	MG 25/45/75/95/125
CO_2 in O_2	7-90% CO_2	MG 25/45/75/95/125
O_2 in Ar	2-46% O_2	MG 45/75/95/125
O_2 in Ar	5-92% O_2	MG 25/45/75/95/125
O_2 in N_2	5-92% O_2	MG 25/45/75/95/125
He in Ar	5-92% He	MG 25/45/75/95/125
He in N_2	5-85% He	MG 25/45/75/95/125

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