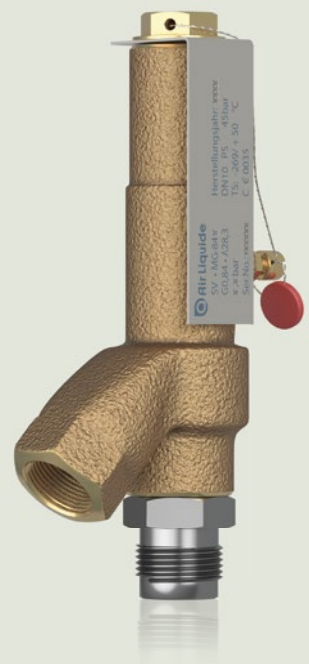
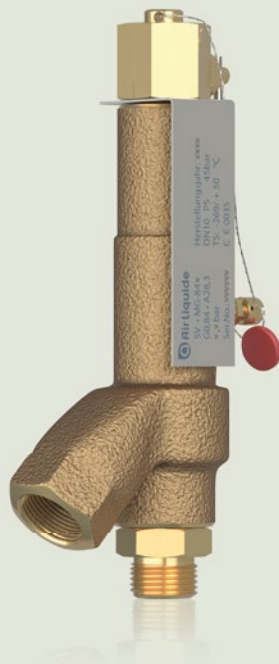
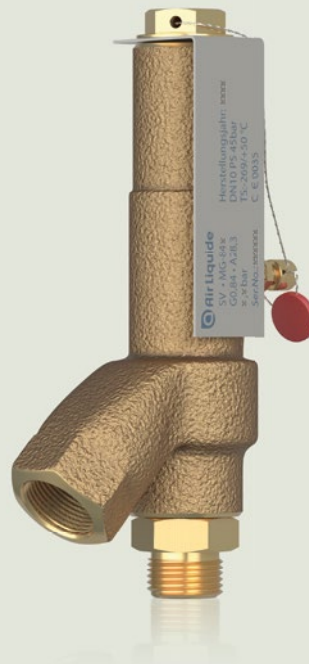


Safety valve MG84

Product data sheet







Spring-loaded, direct-acting safety valve which protect pressurized areas from unacceptable excessive pressures. Advanced requirements of pressure protection at low temperatures have resulted in the development of this compact, cryogenic full lift safety valve with the following features:

- Reliable also at sudden temperature effects.
- Tight until shortly before opening.
- Stable mode of operation also with two-phase flow.

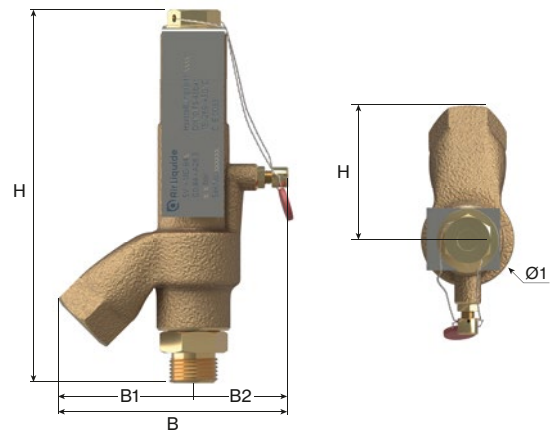
The valve is available in four different versions::

- S = Standard
- A = with lift lever
- P = testable
- M = MEGAPUR
- K = for corrosive gases

Suitable for: all non-corrosive gases and their gas mixtures. For corrosive gases on request. The SV is cleaned for oxygen service and supplied together with the operational instructions and the TÜV acceptance certificate.

Technical Data				
Type	MG-84S	MG-84A	MG-84M	MG-84K
				
Medium	N ₂ , O ₂ , Ar, Xe, H ₂ , Ne, CO, CO ₂ , Kr, CH ₄ and their mixtures.			
Housing	CuSn5ZnPb (Rg5)			1.4308
Material	CuZn39Pb3		1.4301 – electro polished	1.4301
Inlet Connection	M18 x 1,5 AG (DN10)		7/8-14UNF-2A AG (DN10)	
Outlet Connection	G1/2" (DN15)			
Sealing	PTFE / PTFE-Compound			
Operating temperature:	4 to 323 K (-269 °C to 50 °C)			
Pressure range	0,5 to 45 bar (gauge / differential pressure)			
Characteristics	<ul style="list-style-type: none"> - Setting range 5 % to 30 % of set pressure - Set to 10%, sealed 			

Dimensions and Weight				
Type	MG-84S	MG-84A	MG-84M	MG-84K
H [mm]	139	163	146	139
H1 [mm]	49	49	49	49
B [mm]	77	77	77	77
B1 [mm]	40	40	40	40
B2 [mm]	37	37	37	37
Weight [kg]	0,54	0,62	0,57	0,57



Gasspezifischer Umrechnungsfaktor von kg/h in m ³ /h [1 bar, 15 °C]			
Type of Gas	Factor**	Type of Gas	Factor**
Argon (Ar)	0,599	Helium (He)	5,989
Oxygen (O ₂)	0,748	Hydrogen (H ₂)	11,89
Air	0,783	Carbon dioxide (CO ₂)	0,541
Methane (CH ₄)	1,411		

Table of References for Safety valve MG84 – Standard

Reference	Designation	Setting Pressure [bar]	Discharge capacity [kg/h]**							
			Ar	O ₂	Air	N ₂	CH ₄	He	H ₂	CO ₂
123364	SV MG-84S 0,5 BAR TÜV	0,5	35,6	30,8	29,2	28,8	21,5	11,3	7,7	35,6
126857	SV MG-84S 1,0 BAR TÜV	1,0*	49,2	42,0	39,6	39,3	29,2	15,6	10,1	48,5
123409	SV MG-84S 1,2 BAR TÜV	1,2*	54,6	46,5	43,8	43,5	32,3	17,3	11,1	53,7
123501	SV MG-84S 1,5 BAR TÜV	1,5*	62,8	53,2	50,0	49,7	36,9	19,8	12,6	61,4
123351	SV MG-84S 2,0 BAR TÜV	2,0	76,4	64,4	60,4	60,2	44,6	24,1	15,0	74,3
123353	SV MG-84S 2,9 BAR TÜV	2,9	99,4	83,8	79,1	78,4	58,1	31,3	20,9	97,0
123352	SV MG-84S 3,0 BAR TÜV	3,0	101,9	85,9	81,1	80,4	59,6	32,1	21,4	99,5
123354	SV MG-84S 4,0 BAR TÜV	4,0	127,5	107,4	101,9	100,5	74,7	40,1	26,7	125,0
123398	SV MG-84S 4,6 BAR TÜV	4,6*	142,9	120,4	114,4	112,6	83,8	44,9	29,9	140,5
123367	SV MG-84S 5,0 BAR TÜV	5,0	153,2	129,0	122,8	120,7	89,8	48,1	32,1	150,8
123400	SV MG-84S 5,5 BAR TÜV	5,5*	166,1	139,8	133,2	130,9	97,4	52,1	34,8	163,8
123336	SV MG-84S 6,0 BAR TÜV	6,0	178,9	150,5	143,6	141,0	104,9	56,1	37,4	176,8
123401	SV MG-84S 6,5 BAR TÜV	6,5*	191,8	161,3	154,0	151,1	112,5	60,1	40,1	189,0
123355	SV MG-84S 7,5 BAR TÜV	7,5	217,5	183,0	174,9	171,4	127,7	68,1	45,4	213,3
123506	SV MG-84S 8,0 BAR TÜV	8,0*	230,4	193,8	185,3	181,6	135,4	72,1	48,1	227,4
123411	SV MG-84S 9,3 BAR TÜV	9,3*	264,1	222,0	212,5	208,1	155,3	82,5	55,0	264,0
123356	SV MG-84S 10,0 BAR TÜV	10,0	282,2	237,1	227,1	222,4	166,1	88,1	58,7	283,7
123363	SV MG-84S 13,8 BAR TÜV	13,8*	381,4	319,9	306,4	300,5	225,4	118,4	78,8	392,4
123431	SV MG-84S 15,8 BAR TÜV	15,8*	433,7	363,5	348,1	341,5	256,6	134,3	89,4	449,7
123358	SV MG-84S 17,0 BAR TÜV	17,0	465,0	389,6	373,1	366,2	275,3	143,9	95,8	484,0
123432	SV MG-84S 17,4 BAR TÜV	17,4*	475,5	398,3	381,4	374,4	286,4	147,1	98,0	496,1
123500	SV MG-84S 17,5 BAR TÜV	17,5	478,1	400,5	383,5	376,5	289,2	147,9	98,5	499,1
123368	SV MG-84S 17,6 BAR TÜV	17,6	480,7	402,7	385,6	378,6	284,8	148,7	99,0	502,1
123337	SV MG-84S 18,0 BAR TÜV	18,0	491,3	411,5	393,9	386,9	291,1	151,9	101,1	514,3
123433	SV MG-84S 19,3 BAR TÜV	19,3*	525,5	439,9	421,0	413,9	311,8	162,2	108,0	554,3
123362	SV MG-84S 19,5 BAR TÜV	19,5	530,8	444,3	425,2	418,0	315,0	163,8	109,1	560,5
123338	SV MG-84S 20,0 BAR TÜV	20,0	544,1	455,3	435,6	428,4	323,0	167,8	111,7	576,2
123497	SV MG-84S 22,0 BAR TÜV	22,0*	597,2	499,3	477,4	470,1	355,3	183,7	122,3	641,4
123359	SV MG-84S 24,0 BAR TÜV	24,0	650,2	543,2	519,1	511,8	387,5	199,5	132,9	706,6
123360	SV MG-84S 25,0 BAR TÜV	25,0	676,9	565,2	539,9	532,8	403,8	207,4	138,1	740,8
123402	SV MG-84S 25,1 BAR TÜV	25,1*	679,6	567,4	542,0	534,9	405,4	208,2	138,6	744,3
123495	SV MG-84S 26,0 BAR TÜV	26,0	703,6	587,3	560,8	553,8	420,1	215,4	143,4	775,6
123496	SV MG-84S 29,0 BAR TÜV	29,0*	784,2	653,6	623,4	617,0	469,6	239,1	159,2	886,2
123403	SV MG-84S 29,4 BAR TÜV	29,4*	794,9	662,4	631,7	625,5	476,2	242,3	161,3	901,0
123339	SV MG-84S 30,0 BAR TÜV	30,0	811,0	675,7	644,2	638,1	486,1	247,0	164,5	923,1
123472	SV MG-84S 35,0 BAR TÜV	35,0*	946,6	786,8	748,5	744,5	570,4	286,4	190,7	1137,7
123404	SV MG-84S 35,9 BAR TÜV	35,9*	971,0	806,8	767,3	763,6	585,6	293,5	195,4	1176,4
123340	SV MG-84S 37,0 BAR TÜV	37,0	1000,8	831,2	790,2	787,0	604,1	302,2	201,2	1223,6
123361	SV MG-84S 38,5 BAR TÜV	38,5	1041,7	864,6	821,5	819,2	629,8	314,0	209,1	1298,1
123341	SV MG-84S 40,0 BAR TÜV	40,0	1082,8	898,1	852,8	851,4	655,6	325,8	216,9	1377,5
123390	SV MG-84S 45,0 BAR TÜV	45,0	1279,8	1009,6	958,6	958,9	741,6	364,8	242,9	1645,5

* The discharge capacity at the set pressure is evaluated interpolation methodology.

** Discharge capacity at 1 bar ambient pressure and 15 °C ambient temperature.

Table of References for Safety valve MG84 – Megapur

Reference	Designation	Setting Pressure [bar]	Discharge capacity [kg/h]**							
			Ar	O ₂	Air	N ₂	CH ₄	He	H ₂	CO ₂
123554	SV MG-84M 3,0 BAR TÜV	3,0	101,9	85,9	81,1	80,4	59,6	32,1	21,4	99,5
123555	SV MG-84M 6,0 BAR TÜV	6,0	178,9	150,5	143,6	141	104,9	56,1	37,4	176,8
123556	SV MG-84M 10,0 BAR TÜV	10,0	282,2	237,1	227,1	222,4	166,1	88,1	58,7	283,7
123557	SV MG-84M 15,0 BAR TÜV	15,0*	412,7	345,9	331,4	325,0	243,9	128,0	85,2	425,8
123553	SV MG-84M 16,0 BAR TÜV	16,0*	438,7	367,7	352,2	345,5	259,5	136,0	90,5	454,2
123558	SV MG-84M 18,0 BAR TÜV	18,0	491,3	411,5	393,9	386,9	291,1	151,9	101,1	514,3
123559	SV MG-84M 20,0 BAR TÜV	20,0	544,1	455,3	435,6	428,4	323	167,8	111,7	576,2
123560	SV MG-84M 25,0 BAR TÜV	25,0	676,9	565,2	539,9	532,8	403,8	207,4	138,1	740,8
123561	SV MG-84M 40,0 BAR TÜV	40,0	1082,8	898,1	852,8	851,4	655,6	325,8	216,9	1377,5

* The discharge capacity at the set pressure is evaluated interpolation methodology.

** Discharge capacity at 1 bar ambient pressure and 15 °C ambient temperature.

Table of References for Safety valve MG84 – Corrosive

Reference	Designation	Setting Pressure [bar]	Discharge capacity [kg/h]**							
			Ar	O ₂	Air	N ₂	CH ₄	He	H ₂	CO ₂
123507	SV MG-84K 25,0 BAR TÜV	25	676,9	565,2	539,9	532,8	403,8	207,4	138,1	740,8

** Discharge capacity at 1 bar ambient pressure and 15 °C ambient temperature.

Table of References for Safety valve MG84 – with lift lever

Reference	Designation	Setting Pressure [bar]	Discharge capacity [kg/h]**							
			Ar	O ₂	Air	N ₂	CH ₄	He	H ₂	CO ₂
123499	SV MG-84A 18,0 BAR TÜV	18	491,3	411,5	393,9	386,9	291,1	151,9	101,1	514,3

** Discharge capacity at 1 bar ambient pressure and 15 °C ambient temperature.

Additional information:

Installation:

An installation position should be selected that allows moisture to discharge freely from the outlet connection; otherwise any installation position can be selected at a set pressure above 4 bar.

For pressures below 4 bar, vertical upright installation is required. Any other installation position will change the set pressure due to the force of the weight of the internal components.

Safety alert:

As a rule, the hardened pre-assembly socket type VOMO 10 L and/or VOMO 12 L from Ermeto is recommended for the assembly using the locking ring.

Repairs, changes to settings

Due to their specific design, safety valves must not be repaired. The set pressure or reseal pressure difference shall not be modified. Faulty valves should be returned to the manufacturer and replaced by new valves.

Pi marking

The marking indicates that transportable pressure equipment complies with the applicable requirements for conformity assessment requirements for conformity assessment according to Directive 2008/68/EC and Directive 2010/35/EU.

Options

Type / Designation	Material	Inlet	Outlet	Reference
Adapter	Stainless Steel / Brass	G 1/2" A	M 18 x 1,5	126821
T-fitting G 1/2" x 12L x G 1/2"	Brass	G 1/2" IG	M 18 x 1,5 UWM	124264
Gascet for Adapter	Copper	22 x 26 x 1,3		126512
Insect protection	Brass	SW 27 (G 1/2" AG)		126835
Preassemble Device - 12L				127381

Type / Designation	Material	Dimension	Reference
Exhaustion pipe incl. insect protection	Stainless Steel	Lenght approx. 300 mm	126849
Exhaustion pipe incl. insect protection	Copper	Lenght approx. 430 mm	126850
Stainless Steel pipe 12 x 1 mm	1.4571	Lenght in meter, up to 6 m	126315
Copper pipe 12 x 1 mm	SFCU F25		151695

Type / Designation	Material	Dimension		Reference
		Inlet	Outlet	
Progressive ring for SS piping 12 x 1	Stainless Steel			127369
Progressive ring for copper piping	Brass			127368
Nut 12L	Stainless Steel	SW 22 (M 18 x 1,5)		127378
Shuttle valve brass, KR 12mm ***	Brass	CF 12 mm MS		185993
Shuttle valve brass, NPT 1/4" F***		NPT 1/4" IG		185992
Fitting 1/4" NPT M - CF 12MM SS	Stainless Steel	NPT 1/4"	12 mm KRV	127621
Fitting 1/4" NPT M - CF 10MM SS			10 mm KRV	127602
Sealing band 12,7mm x 13,3mm	PTFE			127829

*** Not suitable for very low temperatures. See DN10 valve data sheet.



Accessories

Type / Designation	Material	Reference
Padlock with double locking, keyed alike, waterproof	Body: Brass, U-lock: hardened Steel	189076
Mounting bracket	Steel	189073
Plug NPT 1/4"	Brass	189072
Plug for copression fitting 12 mm	Brass	189075



Shuttle valve

Contact

Air Liquide Deutschland GmbH
 Füttingsweg 34
 47805 Krefeld
 Tel: +49 (0) 2151 379 - 4555
 equipment@airliquide.com
 www.airliquide.de

Air Liquide Austria GmbH
 Sendnergasse 30
 2320 Schwechat
 Tel: +43 810 242427
 technik.at@airliquide.com
 www.airliquide.at

Carbagas AG
 Hofgut
 3073 Gümligen
 Tel: +41 31 95 05050
 info@carbagas.ch
 www.carbagas.ch

www.airliquide.de



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