

AG

Poppet valves for vacuum G1/8 ÷ G1 1/2

- A complete range: G1/8 - G1/4 - G3/8 - G1/2 - G3/4 - G1 - G1 1/2
- UNIVER Original poppet system appreciated for decades
- Servoassisted version
- A complete range of solenoid valves and pneumatic valves for vacuum with connection from G1/8 ÷ G1 1/2 to satisfy all requirements
- The internal system ensures high reliability and long life

Available ATEX version upon request

CE Ex II 2Gc IIC T5 II 2Dc T100°C

CE Ex II 3 GD c nA II T5-10°C ≤ Ta ≤ 45°C

TECHNICAL CHARACTERISTICS

Ambient temperature	+50 °C						
Fluid temperature	-5 ÷ +60 °C						
Fluid	50 µm filtered air, with or without lubrication - vacuum						
Commutation system	poppet						
Ways/Positions	2/2 NC (upon request), 3/2 NC, 3/2 NO, 3/2 NC-NO						
Control	indirect vacuum						
Return	automatic by vacuum						
Connections	G 1/8	G 1/4	G 3/8	G 1/2	G 3/4	G 1	G 1 1/2
Nominal Ø (mm)	5,5	8	10	15	19	25	39

CONSTRUCTIVE CHARACTERISTICS

Valve body	G1/8 ÷ G1 = zamak G1 1/2 = aluminium
Seals	valve for vacuum with external air operation polyurethane conical poppets and Vulkollan diaphragm valve for direct vacuum with external vacuum operation silicon poppets
Actuators	G1/8 ÷ G1 = zamak G1 1/2 = aluminium
Spool	G1/8 ÷ G3/8 = aluminium G1/2 ÷ G1 1/2 = steel + plastic

ELECTRIC CHARACTERISTICS

	G1/8	G1/4 ÷ G1 1/2
Electropilot	U1	U2
Coil	DA	DB
Power consumption	3,5 W (DC) - 5 VA (AC)	11 W (DC) - 10 VA (AC)
Connector	AM 5110	AM 5111
Voltage	12 V DC - 24 V DC - 24 V AC - 110 V AC - 230 V AC	
Manual override	impulse screw - 2 positions	



3/2 Solenoid valve for vacuum with external pilot air supply



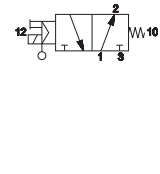
3/2 NC G1/8
AG-3001



3/2 NO G1/8
AG-3002



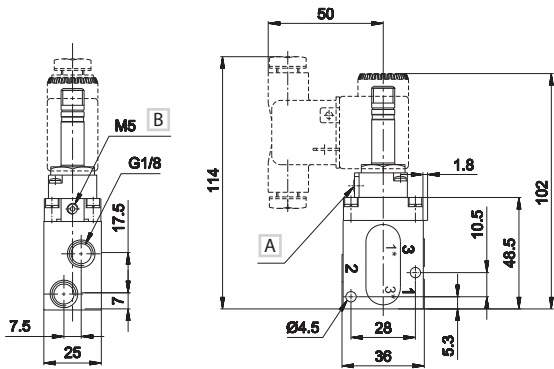
3/2 NC G1/4 - G3/8
AG-3009
AG-3011



3/2 NO G1/4 - G3/8
AG-3010
AG-3012

	Connect.	Control	Return	Ø	Resp. Time (ms)		Minimum control		Pump		Max vacuum		Weight	Coil	Part no.
		12	10	mm	En.	De-en.	pressure bar		max m³/h		mm Hg	Torr	Kg		
3/2 NC	G1/8	electric amplified	mechanical spring	5,5	14	25	1,5		1,5		759,5	0,5	0,25	U1	AG-3001
	G1/4			8	16	27	2,5		4		759,5	0,5	0,58	U2	AG-3009
	G3/8			10	16	27	2,5		10		759,5	0,5	0,56	U2	AG-3011
3/2 NO	G1/8	electric amplified	mechanical spring	5,5	14	25	1,5		1,5		759,5	0,5	0,25	U1	AG-3002
	G1/4			8	16	27	2,5		4		759,5	0,5	0,58	U2	AG-3010
	G3/8			10	16	27	2,5		10		759,5	0,5	0,56	U2	AG-3012

G1/8



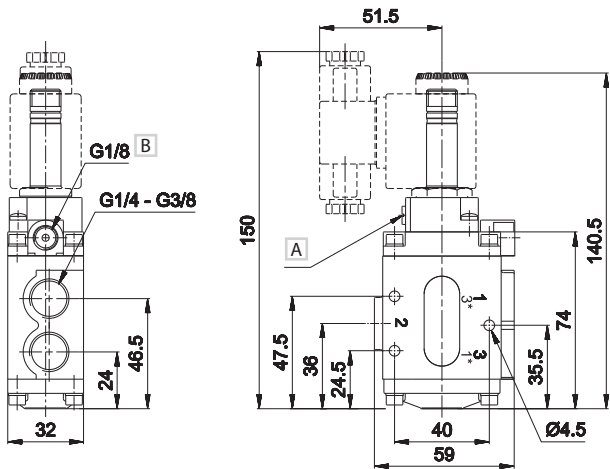
- NC

1 = Supply port (vacuum)
2 = Use
3 = Exhaust

A Manual override
B Supply port for external servoassistance of the pilot
- NO

1* = Supply port (vacuum)
2 = Use
3* = Exhaust

G1/4 - G3/8



- NC

1 = Suplly port (vacuum)
2 = Use
3 = Exhaust

A Manual override
B Supply port for external servoassistance of the pilot
- NO

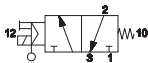
1* = Supply port (vacuum)
2 = Use
3* = Exhaust

Electrovalves are supplied without coil, connector and locking ring

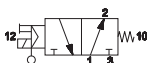
3/2 Solenoid valve for vacuum with external pilot air supply



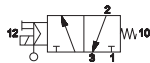
3/2 NC G1/2 - G3/4 - G1
AG-3020
AG-3040
AG-3050



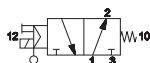
3/2 NO G1/2 - G3/4 - G1
AG-3021
AG-3041
AG-3051



3/2 NC G1 1/2
AG-3062

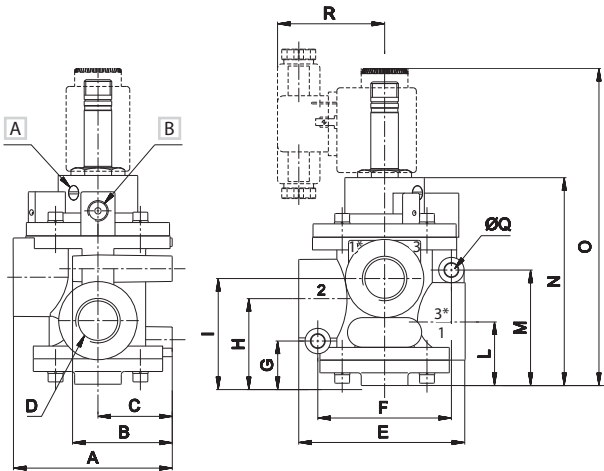


3/2 NO G1 1/2
AG-3063



	Connect.	Control	Return	Ø	Resp. Time (ms)		Minimum control	Pump	Max vacuum		Weight	Coil	Part.no
		12	10	mm	En.	De-en.	pressure bar	max m³/h	mm Hg	Torr	Kg		
3/2 NC	G1/2	electric amplified	mechanical spring	15	16	40	3	20	759,5	0,5	1,19	U2	AG-3020
	G3/4			19	16	40	3	35	759,5	0,5	1,13	U2	AG-3040
	G1			25	18	42	3	90	759,5	0,5	1,62	U2	AG-3050
	G1 1/2			39	60	38	4	180	759,5	0,5	2,25	U2	AG-3062
3/2 NO	G1/2	electric amplified	mechanical spring	15	16	40	3	20	759,5	0,5	1,19	U2	AG-3021
	G3/4			19	16	40	3	35	759,5	0,5	1,13	U2	AG-3041
	G1			25	18	42	3	90	759,5	0,5	1,62	U2	AG-3051
	G1 1/2			39	60	38	4	180	759,5	0,5	2,25	U2	AG-3063

G1/2 - G3/4 - G1



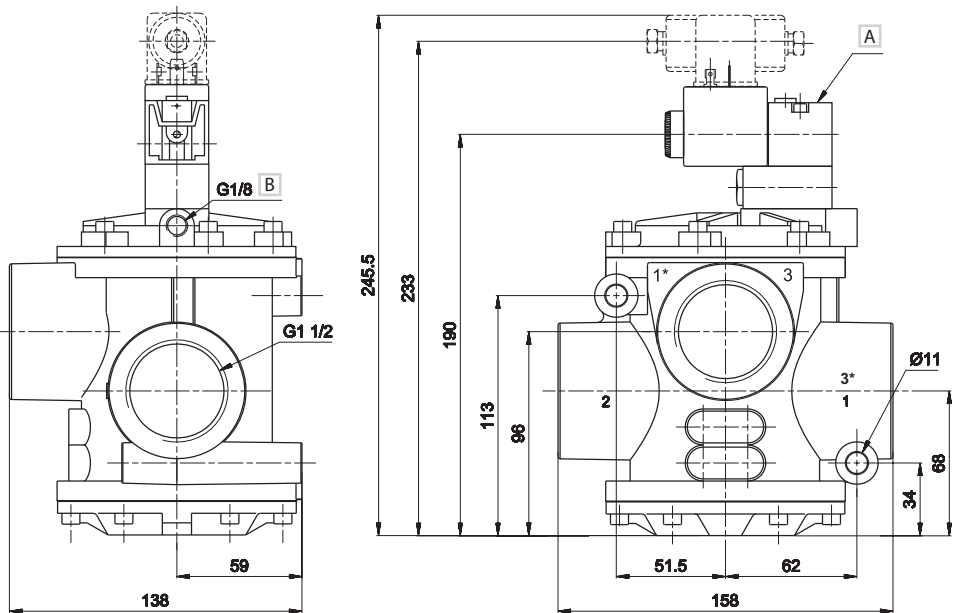
NC
1 = Supply port
2 = Use
3 = Exhaust

NO
1* = Supply port
2 = Use
3* = Exhaust

A Manual override
B Supply port for external servoassistance of the pilot

	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	150	6,4	50,5
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	150	6,4	50,5
G1	89	55	40	G1	101	76	25,5	51	64	38	62,5	115	167	8,4	50

G1 1/2



NC
1 = Supply port
2 = Use
3 = Exhaust

NO
1* = Supply port
2 = Use
3* = Exhaust

A Manual override
B Supply port for external servoassistance of the pilot

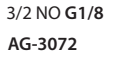
Electrovalves are supplied without coil, connector and locking ring

Subject to change

3/2 Pneumatic valve for vacuum with external air operation



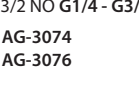
3/2 NC G1/8
AG-3071



3/2 NO G1/8
AG-3072



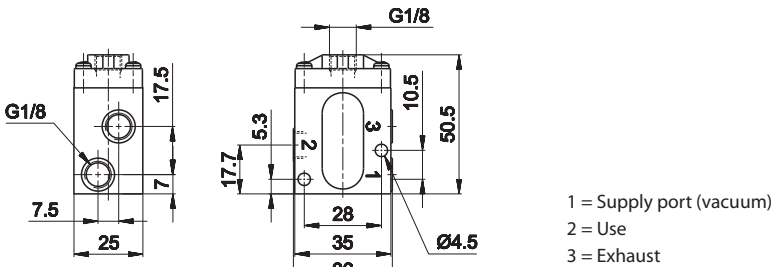
3/2 NC G1/4 - G3/8
AG-3073
AG-3075



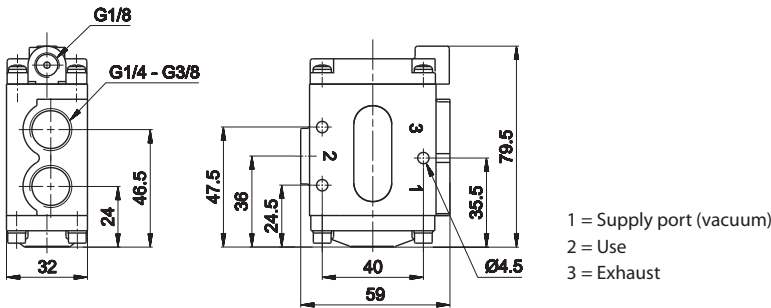
3/2 NO G1/4 - G3/8
AG-3074
AG-3076

	Connect.	Control	Return	Ø		Resp. Time (ms)		Minimum control	Pump	Max vacuum		Weight	Part no.
		12	10	mm		En.	De-en.	pressure bar	max m³/h	mm Hg	Torr	Kg	
3/2 NC	G1/8	pneumatic amplified	mechanical spring	5,5		3	6	1,5	1,5	759,5	0,5	0,21	AG-3071
	G1/4			8		4	8	2,5	4	759,5	0,5	0,54	AG-3073
	G3/8			10		4	8	2,5	10	759,5	0,5	0,52	AG-3075
3/2 NO	G1/8	pneumatic amplified	mechanical spring	5,5		3	6	1,5	1,5	759,5	0,5	0,21	AG-3072
	G1/4			8		4	8	2,5	4	759,5	0,5	0,54	AG-3074
	G3/8			10		4	8	2,5	10	759,5	0,5	0,52	AG-3076

G1/8



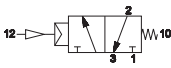
G1/4 - G3/8



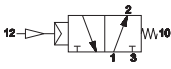
3/2 Pneumatic valve for vacuum with external air operation



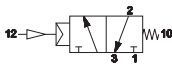
3/2 NC G1/2 - G3/4 - G1
AG-3081
AG-3091
AG-3100



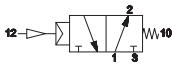
3/2 NO G1/2 - G3/4 - G1
AG-3082
AG-3092
AG-3101



3/2 NC G1 1/2
AG-3110

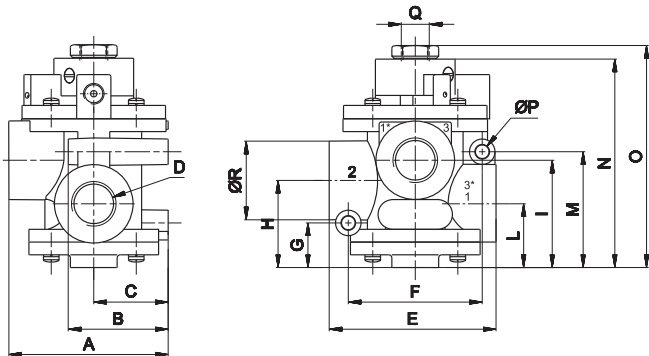


3/2 NO G1 1/2
AG-3111



	Connect.	Control	Return	Ø	Times (ms)		Minimum control pressure bar	Pump max m³/h	Max vacuum		Weight Kg	Part no.
		12	10		En.	De-en.			mm Hg	Torr		
3/2 NC	G1/2	pneumatic amplified	mechanical spring	15	6	15	3	20	759,5	0,5	1,16	AG-3081
	G3/4			19	6	15	3	35	759,5	0,5	1,10	AG-3091
	G1			25	7	16	3	90	759,5	0,5	1,59	AG-3100
	G1 1/2			39	65	25	4	180	759,5	0,5	2,19	AG-3110
3/2 NO	G1/2	pneumatic amplified	mechanical spring	15	6	15	3	20	759,5	0,5	1,16	AG-3082
	G3/4			19	6	15	3	35	759,5	0,5	1,10	AG-3092
	G1			25	7	16	3	90	759,5	0,5	1,59	AG-3101
	G1 1/2			39	65	25	4	180	759,5	0,5	2,19	AG-3111

G1/2 - G3/4 - G1



- NC

1 = Supply port (vacuum)

2 = Use

3 = Exhaust
- NO

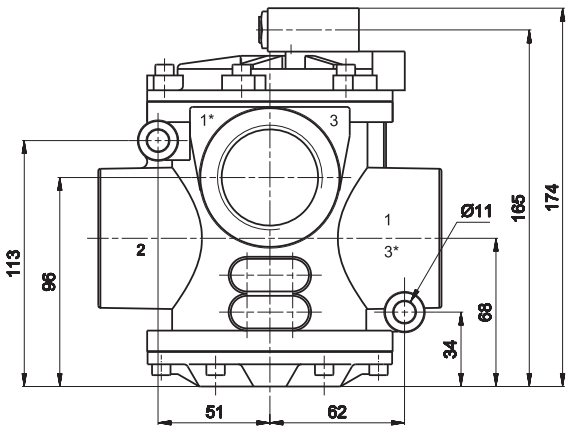
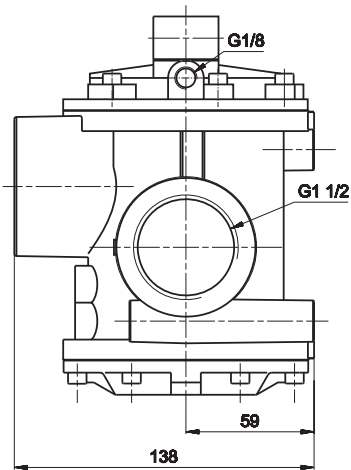
1* = Supply port (vacuum)

2 = Use

3* = Exhaust

	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	105	6,4	G1/4	37
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	105	6,4	G1/4	37
G1	88,5	55	40	G1	101	76	25,5	51	64	38	62,5	115	120,5	8,4	G1/4	45

G1 1/2



- NC

1 = Supply port (vacuum)

2 = Use

3 = Exhaust
- NO

1* = Supply port (vacuum)

2 = Use

3* = Exhaust

3/2 Solenoid valve for direct vacuum with pilot vacuum supply



3/2 NC G1/4 - G3/8
AG-3210
AG-3214

3/2 NO G1/4 - G3/8
AG-3211
AG-3215



3/2 NC G1/2 - G3/4 - G1
AG-3222
AG-3232
AG-3242

3/2 NO G1/2 - G3/4 - G1
AG-3223
AG-3233
AG-3243



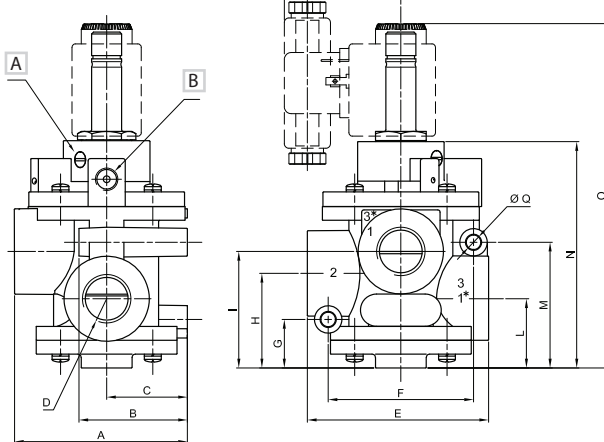
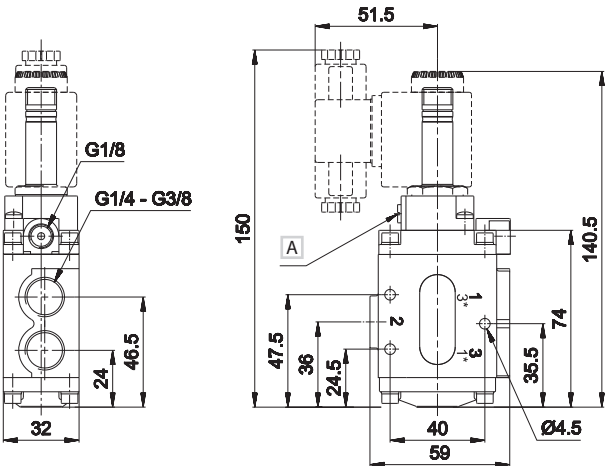
3/2 NC G1 1/2
AG-3256

3/2 NO G1 1/2
AG-3257

Connect.	Control	Return	Ø	Resp. Time (ms)		Pump	Min. vacuum		Max vacuum		Weight	Coil	Part no.
				En.	De-en.	max m³/h	mm Hg	Torr	mm Hg	Torr			
3/2 NC	electric amplified	vacuum	8	25	16	4	150	610	759,5	0,5	0,52	U2	AG-3210
			10	25	16	10	150	610	759,5	0,5	0,56	U2	AG-3214
			15	30	15	20	150	610	759,5	0,5	1,19	U2	AG-3222
			19	30	15	35	150	610	759,5	0,5	1,13	U2	AG-3232
			25	38	18	90	150	610	759,5	0,5	1,62	U2	AG-3242
			39	75	50	100	150	610	759,5	0,5	2	U2	AG-3256
3/2 NO	electric amplified	vacuum	8	20	14	4	150	610	759,5	0,5	0,58	U2	AG-3211
			10	20	14	10	150	610	759,5	0,5	0,56	U2	AG-3215
			15	20	18	20	150	610	759,5	0,5	1,19	U2	AG-3223
			19	20	18	35	150	610	759,5	0,5	1,13	U2	AG-3233
			25	25	20	90	150	610	759,5	0,5	1,62	U2	AG-3243
			39	70	60	100	150	610	759,5	0,5	2	U2	AG-3257

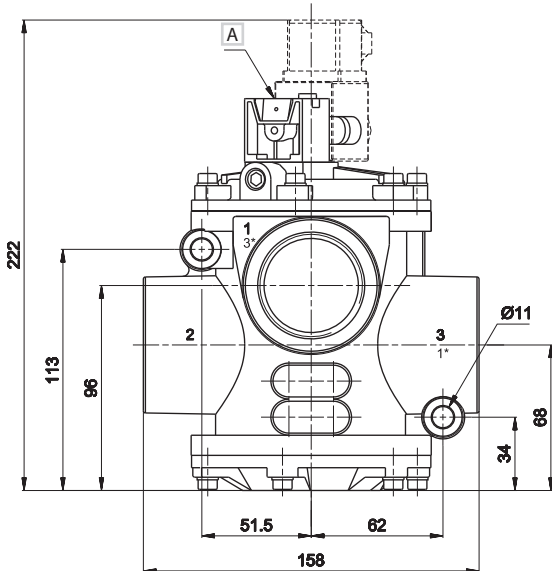
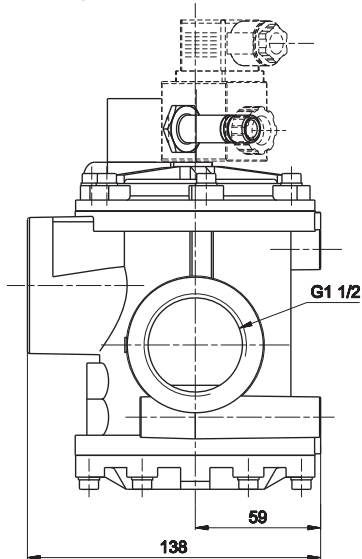
G1/4 - G3/8

G1/2 - G3/4 - G1



	A	B	C	D	E	F	G	H	I	L	M	N	O	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	150	6,4	50,5
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	150	6,4	50,5
G1	89	55	40	G1	101	76	25,5	51	64	38	62,5	115	167	8,4	50

G1 1/2



NC
1 = Supply port (vacuum)
2 = Use
3 = Exhaust

NO
1* = Supply port (vacuum)
2 = Use
3* = Exhaust

A Manual override
B For G1/8 plug

For 2/2 version put a plug on the exhaust (3)
Electrovalves are supplied without coil, connector and locking ring

2/2 - 3/2 Solenoid valve for vacuum with direct operation



3/2 NC G1/4

AG-3310
AG-3311
AG-3312
AG-3313

2/2 NC G1/4

AG-3300
AG-3301
AG-3302
AG-3303

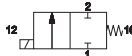
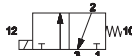
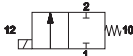
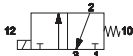


3/2 NC G1/2

AG-3330
AG-3331
AG-3332

2/2 NC G1/2

AG-3320
AG-3321
AG-3322



Material:

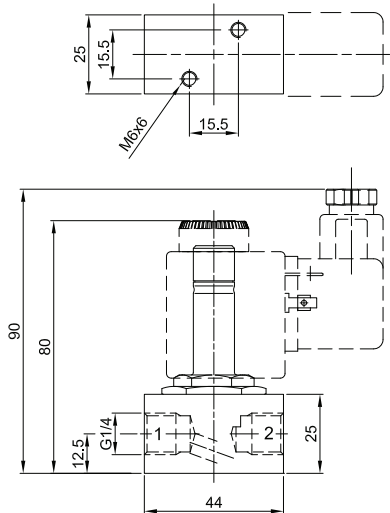
valve body	G1/4 = brass
	G1/2 = aluminium
tube/sleeve	stainless steel
nucleus and spring	stainless steel
seals (a)	G1/4 = NBR
	G1/2 = vulkollan

(a) = vulkollan + NBR for valves 3/2 version

	Connect.	Control	Return	Ø	Resp. Time (ms)		Pump	Max vacuum		Weight	Part no.
					En.	De-en.		mm Hg	Torr		
3/2 NC	G1/4	electric	mechanical spring	3-3*	10	10	1,8	759,5	0,5	0,22	AG-3310
	G1/4			4-3*	12	8	2,5	759,5	0,5	0,22	AG-3311
	G1/4			5-3*	13	8	4	759,5	0,5	0,22	AG-3312
	G1/4			6-3*	15	8	5	759,5	0,5	0,22	AG-3313
	G1/2			8-3*	17	8	6	759,5	0,5	0,25	AG-3330
	G1/2			10-3*	20	10	7,5	759,5	0,5	0,25	AG-3331
2/2 NC	G1/2			11-3*	28	10	10	759,5	0,5	0,25	AG-3332
	G1/4	electric	mechanical spring	3	10	-	1,8	759,5	0,5	0,22	AG-3300
	G1/4			4	12	-	2,5	759,5	0,5	0,22	AG-3301
	G1/4			5	13	-	4	759,5	0,5	0,22	AG-3302
	G1/4			6	15	-	5	759,5	0,5	0,22	AG-3303
	G1/2			8	17	-	6	759,5	0,5	0,25	AG-3320
	G1/2			10	20	-	7,5	759,5	0,5	0,25	AG-3321
	G1/2			11	28	-	10	759,5	0,5	0,25	AG-3322

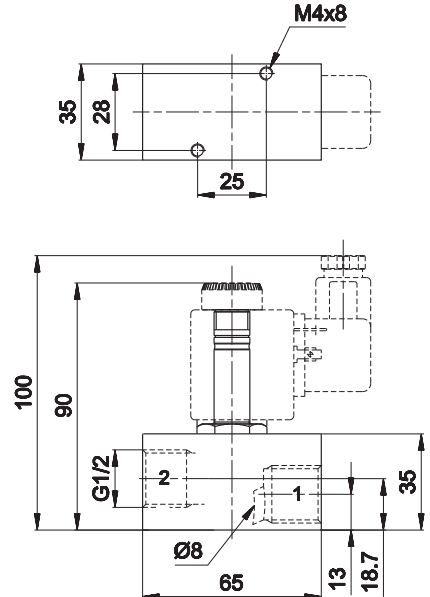
* = solenoid valves with 3 mm fixed exhausts

G1/4



1 = Supply port (vacuum)
2 = Use
3 = Exhaust

G1/2



1 = Supply port (vacuum)
2 = Use
3 = Exhaust



Coil U2 - 17 VA

Voltage	24 V CA - 50/60 Hz	DB-0607
	110 V CA - 50/60 Hz	DB-0608
	220 V CA - 50/60 Hz	DB-0610

Electrovalves are supplied without coil, connector and locking ring