

AF

G1/8 ÷ G1 1/2 Poppet valves for compressed air

- Wide range: G1/8 - G1/4 - G3/8 - G1/2 - G3/4 - G1 - G1 1/2
- Original Univer poppet system appreciated for decades
- Suitable for applications where high flow rate and high cycles rates are required
- G1 - 2/2 version for blowing



TECHNICAL CHARACTERISTICS

Ambient temperature								+50 °C max
Fluid temperature								-5 ÷ +60 °C
Fluid	filtered air 50 µm, lubricated or not							
Commutation system	poppet							
Ways/Positions	2/2 NC (upon request), 3/2 NC, 3/2 NO, 3/2 NC-NO							
Pressure	max 10 bar							
Control	pneumatic, indirect electropneumatic							
Return	pneumomechanical spring							
Connections	G1/8	G1/4	G3/8	G1/2	G3/4	G1	G1 1/2	
Nominal Ø (mm)	5,5	8	10	15	19	25	39	
Nominal flow rate (NI/min)	580	1100	1500	5400	6500	13500	35000	

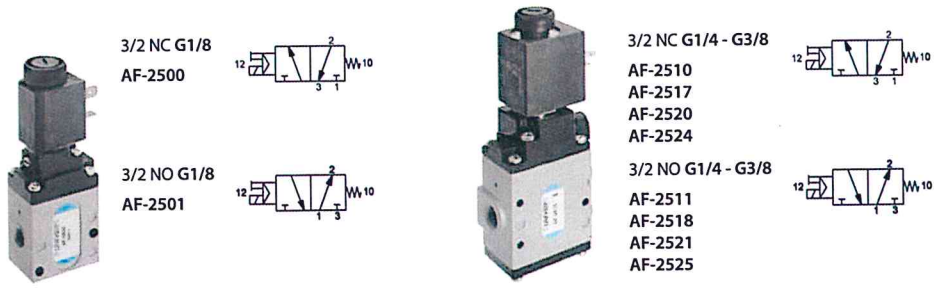
CONSTRUCTIVE CHARACTERISTICS

Valve body	G1/8 ÷ G1 = zamak G1 1/2 = aluminium
Seals	nitrile rubber, polyurethane
Actuators	G1/8 ÷ G1 = zamak G1 1/2 = aluminium
Spool	G1/8 ÷ G3/8 = aluminium G1/2 ÷ G1 1/2 = steel + plastic

ELECTRIC CHARACTERISTICS

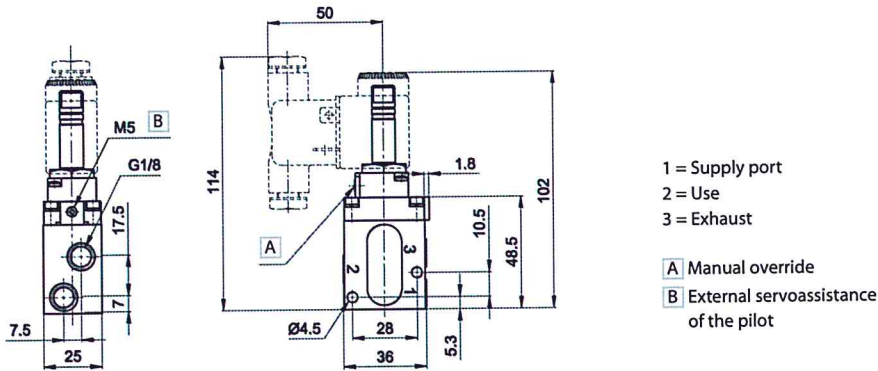
	G1/8	G1/4	G1/4 ÷ G1 1/2
Electropilot	U1		U2
Coil	DA		DB
Power consumption	3,5 W (DC) - 5 VA (AC)		11 W (DC) - 10 VA (AC)
Connector	AM-5110		AM-5111
Voltage	12 V DC - 24 V DC - 24 V AC - 110 V AC - 230 V AC		
Manual override	with 2 position screw		

G1/8 - G1/4 - G3/8 Electrovalves

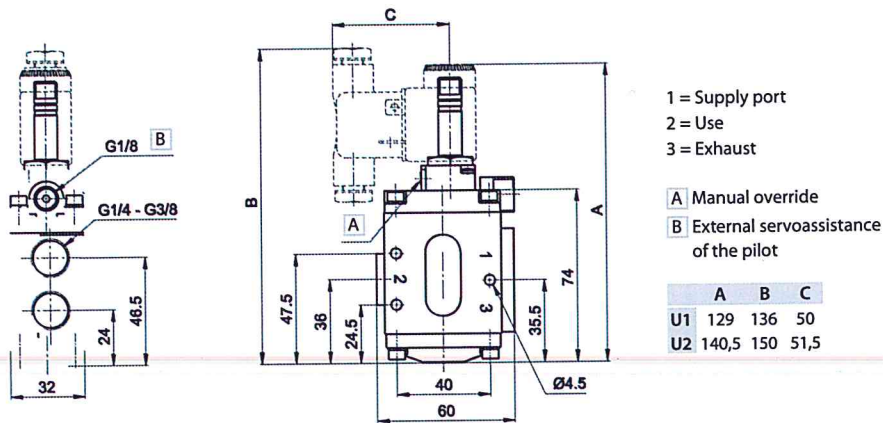


Connect.	Control	Return	Flow rate (NI/min)	Ø mm	Times (ms)		Pressure bar		Weight Kg	Coil	Part no.	
					En.	De-en.	min.	max.				
3/2 NC	G1/8	electric amplified	pneumomechanical spring	580	5,5	15	20	1,5	10	0,25	U1	AF-2500
	G1/4	electric amplified	pneumomechanical spring	1100	8	20	23	1,6	10	0,58	U1	AF-2510
	G1/4	electric amplified	pneumomechanical spring	1100	8	20	23	1,6	10	0,70	U2	AF-2517
	G3/8	electric amplified	pneumomechanical spring	1500	10	20	23	1,6	10	0,56	U1	AF-2520
	G3/8	electric amplified	pneumomechanical spring	1500	10	20	23	1,6	10	0,70	U2	AF-2524
3/2 NO	G1/8	electric amplified	pneumomechanical spring	580	5,5	15	20	1,5	10	0,25	U1	AF-2501
	G1/4	electric amplified	pneumomechanical spring	1100	8	15	20	1,6	10	0,58	U1	AF-2511
	G1/4	electric amplified	pneumomechanical spring	1100	8	15	20	1,6	10	0,70	U2	AF-2518
	G3/8	electric amplified	pneumomechanical spring	1500	10	15	20	1,6	10	0,56	U1	AF-2521
	G3/8	electric amplified	pneumomechanical spring	1500	10	15	20	1,6	10	0,70	U2	AF-2525

G1/8



G1/4 - G3/8

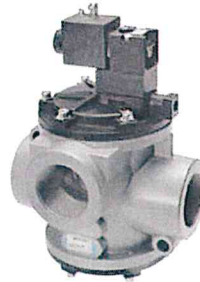


Upon request:
 - external servoassistance of the pilot
 - G1/4 - G3/8 U2 without manual override
 Electrovalves are supplied without coil, connector and locking ring

G1/2 - G3/4 - G1 - G1 1/2 Electrovalves



3/2 NC G1/2 - G3/4 - G1
AF-2530
AF-2540
AF-2545



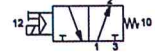
3/2 NC G1 1/2
AF-2565



3/2 NO G1/2 - G3/4 - G1
AF-2531
AF-2541
AF-2546

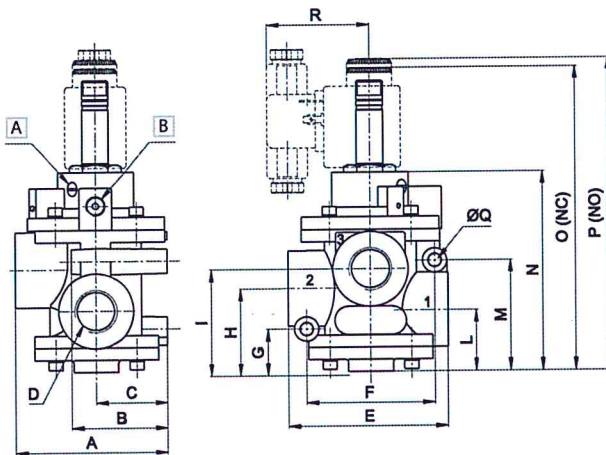


3/2 NO G1 1/2
AF-2561



Connect.	Control	Return	Flow rate (Nl/min)	Ø mm	Times (ms)		Pressure bar		Weight Kg	Coil	Part no.	
					En.	De-en.	min.	max.				
3/2 NC	G1/2	electric amplified	pneumomechanical spring	5400	15	17	27	2	10	1,19	U2	AF-2530
	G3/4	electric amplified	pneumomechanical spring	6500	19	17	27	2	10	1,13	U2	AF-2540
	G1	electric amplified	pneumomechanical spring	13500	25	20	32	2,2	10	1,62	U2	AF-2545
	G1 1/2	electric amplified	pneumomechanical spring	35000	39	47	22	2,5	10	2,27	U2	AF-2565
3/2 NO	G1/2	electric amplified	pneumomechanical spring	5400	15	30	22	3	10	1,19	U2	AF-2531
	G3/4	electric amplified	pneumomechanical spring	6500	19	30	22	3	10	1,13	U2	AF-2541
	G1	electric amplified	pneumomechanical spring	13500	25	28	23	3	10	1,62	U2	AF-2546
	G1 1/2	electric amplified	pneumomechanical spring	35000	39	55	20	3	10	2,27	U2	AF-2561

G1/2 - G3/4 - G1

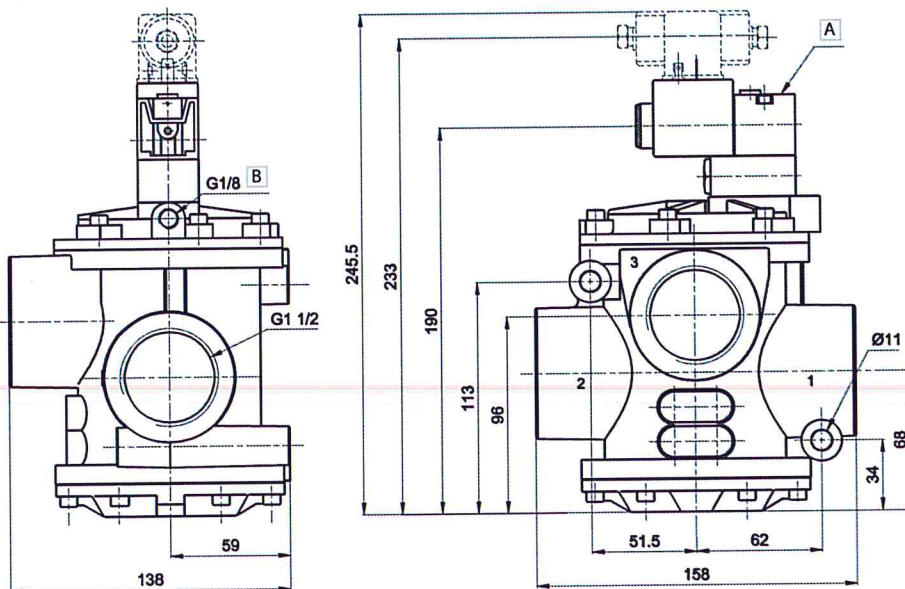


1 = Supply port
2 = Use
3 = Exhaust

A Manual override
B External servoassistance of the pilot

	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	150	154	6,4	50,5
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	150	154	6,4	50,5
G1	89	55	40	G1	101	76	25,5	51	64	38	62,5	115	167	175	8,4	50

G1 1/2

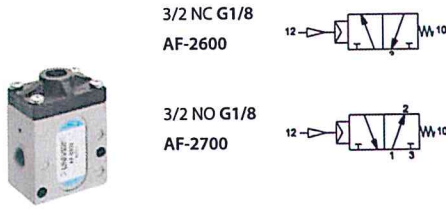


1 = Supply port
2 = Use
3 = Exhaust

A Manual override
B External servoassistance of the pilot

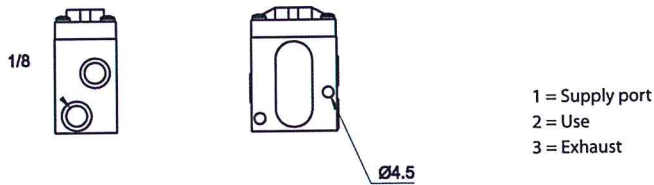
Electrovalves are supplied without coil, connector and locking ring

G1/8 - G1/4 - G3/8 Servo valves

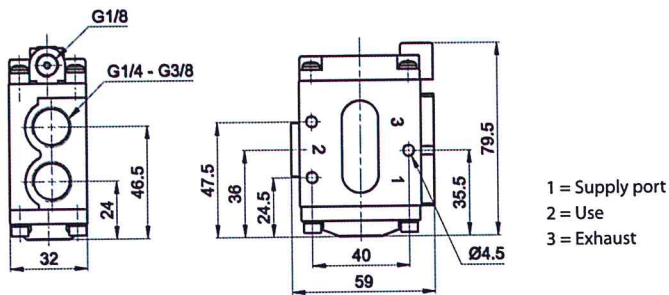


Connect.	Control	Return	Flow rate (Nl/min)	Ø mm	Times (ms)		Pressure bar		Weight Kg	Part no.
					En.	De-en.	supply	control		
3/2 NC	G1/8	pneumatic amplified	580	5,5	5	8	6	3,5	0,21	AF-2600
	G1/4	pneumatic amplified	1100	8	5	7	6	4	0,54	AF-2601
	G3/8	pneumatic amplified	1500	10	5	7	6	4	0,52	AF-2606
3/2 NO	G1/8	pneumatic amplified	580	5,5	5	8	6	3,5	0,21	AF-2700
	G1/4	pneumatic amplified	1100	8	5	7	6	4	0,54	AF-2701
	G3/8	pneumatic amplified	1500	10	5	7	6	4	0,52	AF-2706

G1/8



G1/4 - G3/8



G1/2 - G3/4 - G1 - G1 1/2 Servo valves



3/2 NC G1/2 - G3/4 - G1
AF-2603
AF-2610
AF-2615



3/2 NO G1/2 - G3/4 - G1
AF-2603
AF-2610
AF-2615



3/2 NC G1 1/2
AF-2620



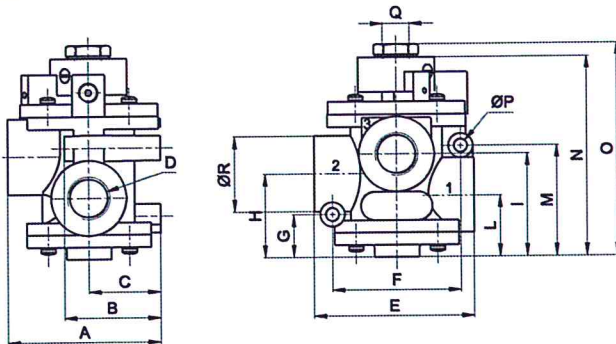
3/2 NO G1 1/2
AF-2620



3/2 NC-NO

Connect.	Control	Return	Flow rate (Nl/min)	Ø mm	Times (ms)		Pressure bar		Weight Kg	Part no.
					En.	De-en.	supply	control		
G1/2	pneumatic amplified	pneumomechanical spring	5400	15	7	10	6	4	1,27	AF-2603
G3/4	pneumatic amplified	pneumomechanical spring	6500	19	7	10	6	4	1,10	AF-2610
G1	pneumatic amplified	pneumomechanical spring	13500	25	10	12	6	4	1,59	AF-2615
G1 1/2	pneumatic amplified	pneumomechanical spring	35000	39	36	15	6	4	2,19	AF-2620

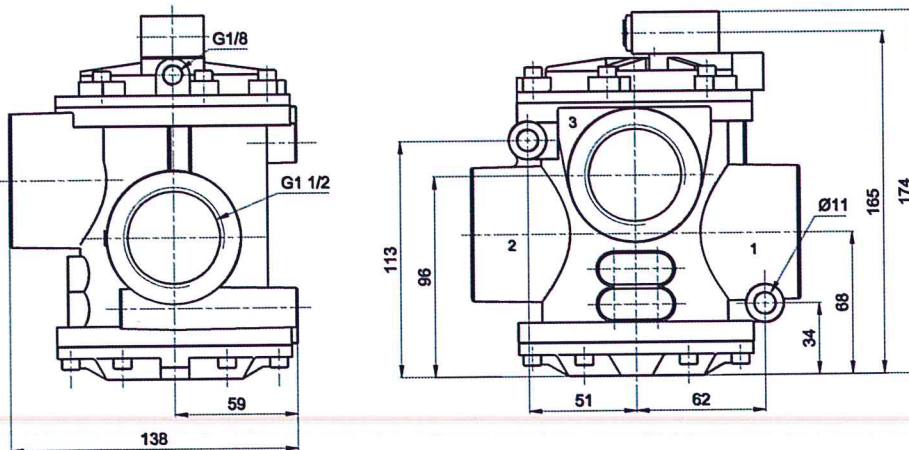
G1/2 - G3/4 - G1



1 = Supply port
2 = Use
3 = Exhaust

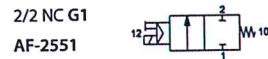
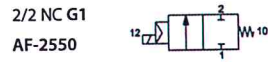
	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	105	6,4	G1/4	37
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	105	6,4	G1/4	37
G1	88,5	55	40	G1	101	76	25,5	51	64	38	62,5	115	120,5	8,4	G1/4	45

G1 1/2

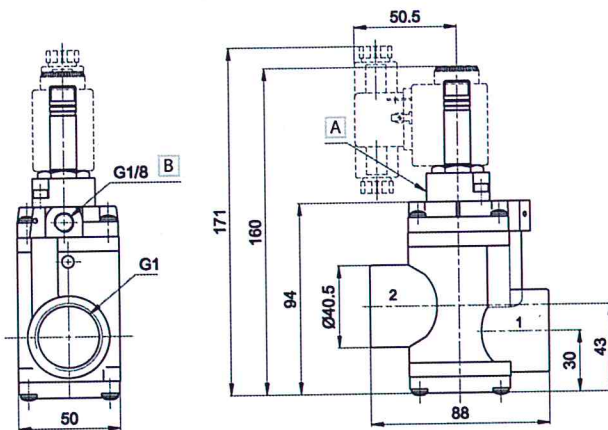


1 = Supply port
2 = Use
3 = Exhaust

G1 - 2/2 Electrovalve for blowing



Connect.	Control	Return	Flow rate (NI/min)	Ø mm	Times (ms)		Pressure bar		Weight Kg	Part no.			
					En.	De-en.	min.	max.			supply	control	
2/2 NC	G1	electric amplified	pneumomechanical spring	16000	25	23	55	2	10	-	-	1,06	AF-2550
	G1	electric amplified	pneumomechanical spring	16000	25	23	55	2	10	-	-	1,06	AF-2551
	G1	electric amplified	pneumomechanical spring	16000	25	23	35	-	-	6	4	1,06	AF-2552



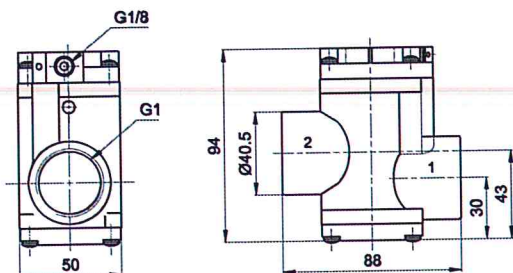
1 = Supply port
2 = Use

A Manual override AF-2551
B External servoassistance of the pilot AF-2552

G1 - 2/2 Servovalve for blowing



Connect.	Control	Return	Flow rate	Ø mm	Times (ms)		Pressure bar		Weight Kg	Part no.	
					En.	De-en.	min.	max.			
2/2 NC	G1	pneumatic amplified	pneumomechanical spring	16000	25	12	25	6	4	1	AF-2617



1 = Supply port
2 = Use

Electrovalves are supplied without coil, connector and locking ring

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
- Original Univer 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



TECHNICAL CHARACTERISTICS

Ambient temperature								+50 °C
Fluid temperature								-5 ÷ +60 °C
Fluid	filtered air 50 µm lubricated or not - vacuum							
Commutation system								poppet
Ways/Positions	2/2 NC (upon request), 3/2 NC, 3/2 NO, 3/2 NC-NO							
Pressure								max 10 bar
Control								indirect vacuum
Return								automatic by vacuum
Connections	G1/8	G1/4	G3/8	G1/2	G3/4	G1	G1 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	solenoid operated valve, servoassisted by compressed air conical plungers and Vulkollan diaphragm solenoid operated valve, servoassisted by vacuum silicon plugs
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	G1/4 ÷ 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	with 2 positions screw	

Solenoid valves 3/2 for vacuum, servoassisted by compressed air



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

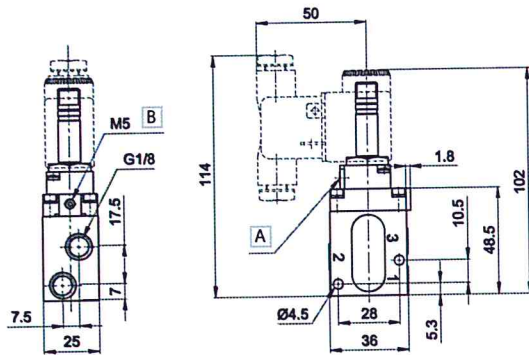


3/2 NO G1/4 - G3/8
AG-3010
AG-3012



	Connect.	Control	Return	Ø		Times (ms)		Minimum control pressure bar	Pump max m ³ /h	Max vacuum		Weight Kg	Coil	Part no.
				mm	mm	En.	De-en.			mm Hg	Torr			
3/2 NC	G1/8	electric	mechanical spring	5,5	14	25	1,5	1,5	1,5	759,5	0,5	0,25	U1	AG-3001
	G1/4	amplified	spring	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	mechanical spring	5,5	14	25	1,5	1,5	1,5	759,5	0,5	0,25	U1	AG-3002
	G1/4	amplified	spring	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	

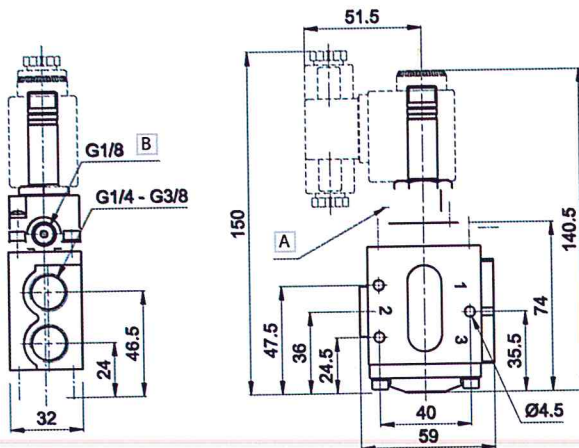
G1/8



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

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

G1/4 - G3/8



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

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

Upon request:

- external servoassistance of the pilot
 - G1/4 - G3/8 U2 without manual override
- Electrovalves are supplied without coil, connector and locking ring

Solenoid valves 3/2 for vacuum, servoassisted by compressed air



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

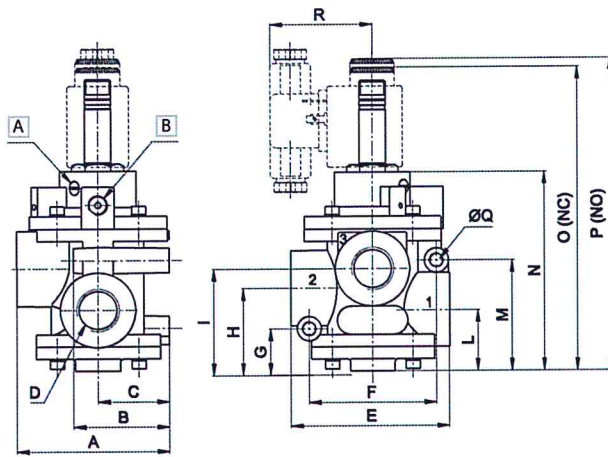


3/2 NC G1 1/2
 AG-3062

3/2 NO G1 1/2
 AG-3063

Connect.	Control	Return	Ø mm	Times (ms)		Minimum control pressure bar	Pump max m³/h	Max vacuum		Weight Kg	Coil	Part.no	
				En.	Dis.			mm Hg	Torr				
3/2 NC	electric amplified	mechanical spring	G1/2	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	electric amplified	mechanical spring	G1/2	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

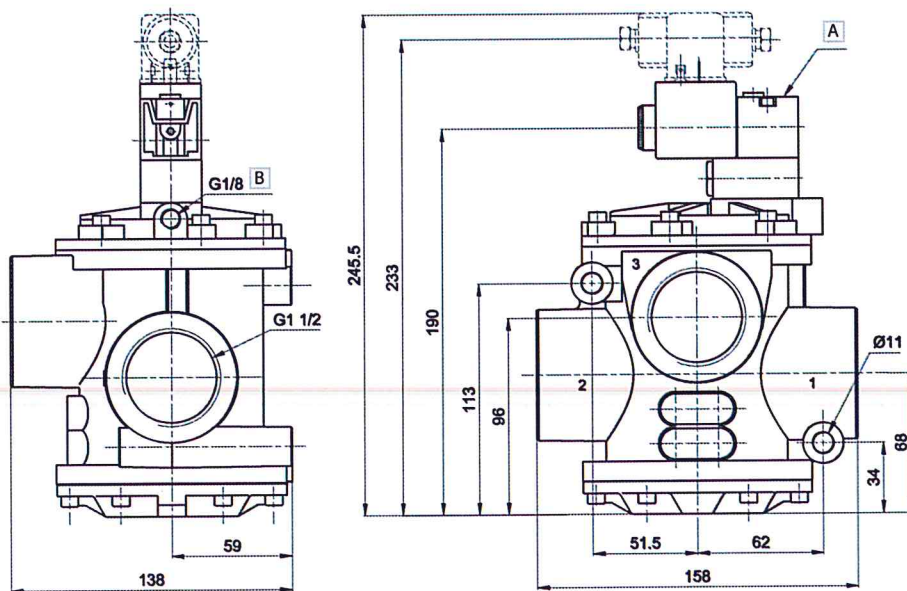


1 = Supply port
 2 = Use
 3 = Exhaust

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	P	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	150	154	6,4	50,5
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	150	154	6,4	50,5
G1	89	55	40	G1	101	76	25,5	51	64	38	62,5	115	167	175	8,4	50

G1 1/2

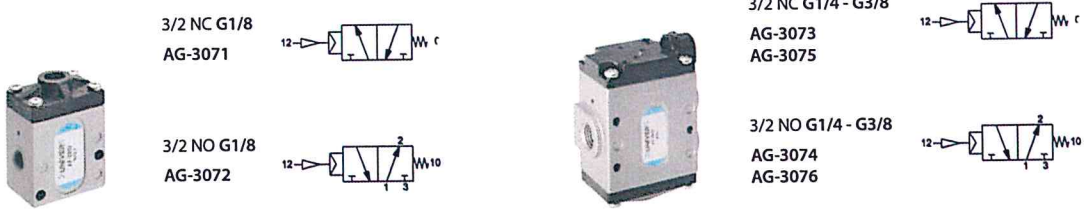


1 = Supply port
 2 = Use
 3 = Exhaust

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

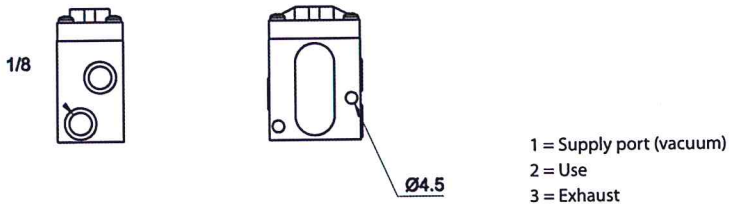
Electrovalves are supplied without coil, connector and locking ring

Servovalves 3/2 for vacuum servoassisted by compressed air

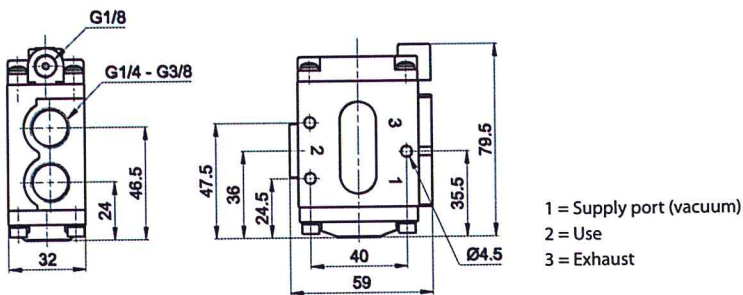


	Connect.	Control	Return	Ø		Times (ms)		Minimum control pressure bar	Pump max m³/h	Max vacuum		Weight Kg	Part no.
				mm		En.	De-en.			mm Hg	Torr		
3/2 NC	G1/8	pneumatic	mechanical	5,5		3	6	1,5	1,5	759,5	0,5	0,21	AG-3071
	G1/4	amplified	spring	8		4	8	2,5	4	759,5	0,5	0,54	AG-3073
	G3/8			10		4	8	2,5	10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

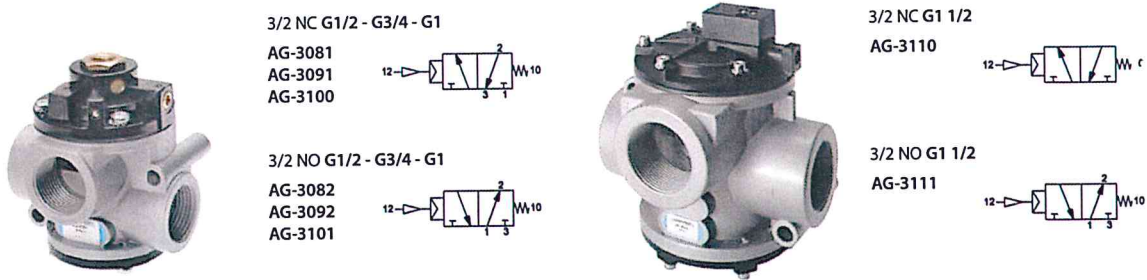
G1/8



G1/4 - G3/8

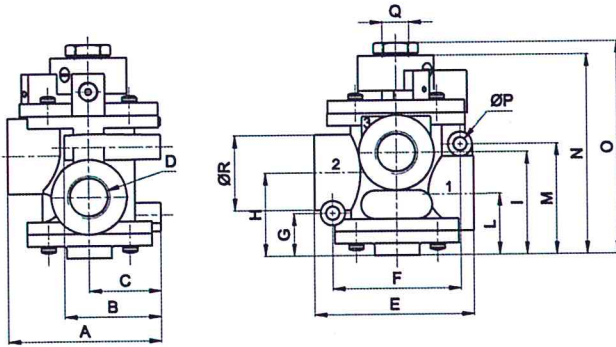


Servo valves 3/2 for vacuum servoassisted by compressed air



	Connect.	Control	Return	Ø mm	Times (ms)		Minimum control pressure bar	Pump max m³/h	Max vacuum		Weight Kg	Part no.
					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

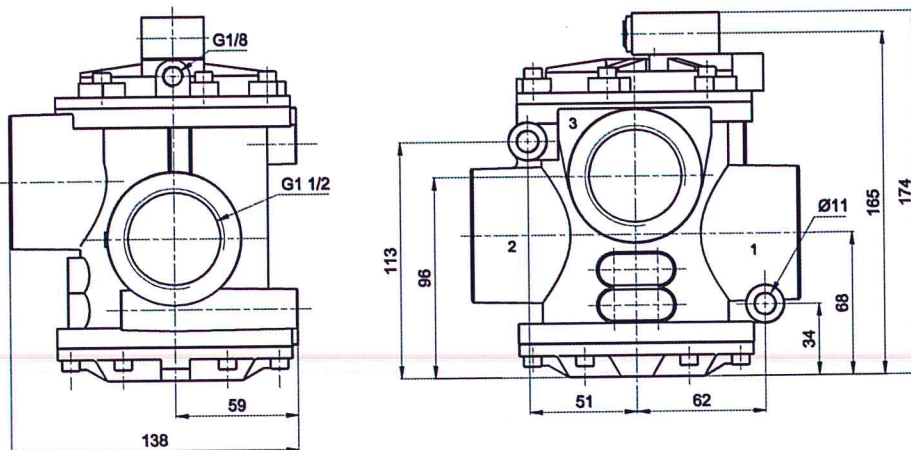
G1/2 - G3/4 - G1



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

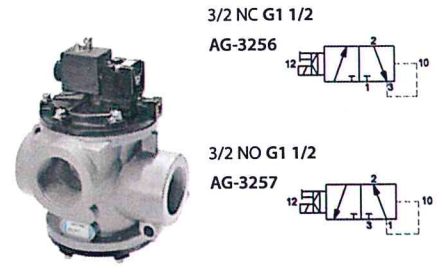
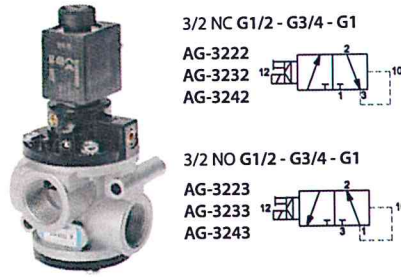
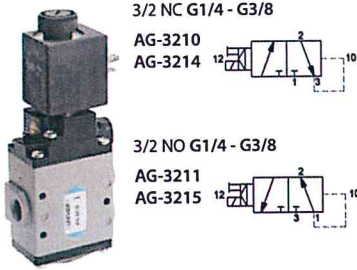
	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	105	6,4	G1/4	37
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	105	6,4	G1/4	37
G1	88,5	55	40	G1	101	76	25,5	51	64	38	62,5	115	120,5	8,4	G1/4	45

G1 1/2



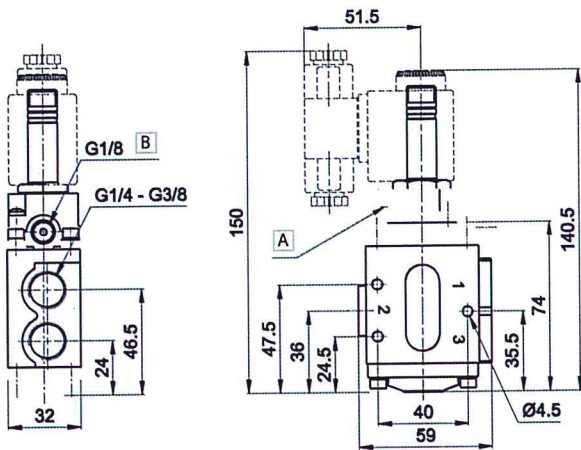
1 = Supply port (vacuum)
2 = Use
3 = Exhaust

Electrovalves 3/2 for direct vacuum servoassisted by vacuum

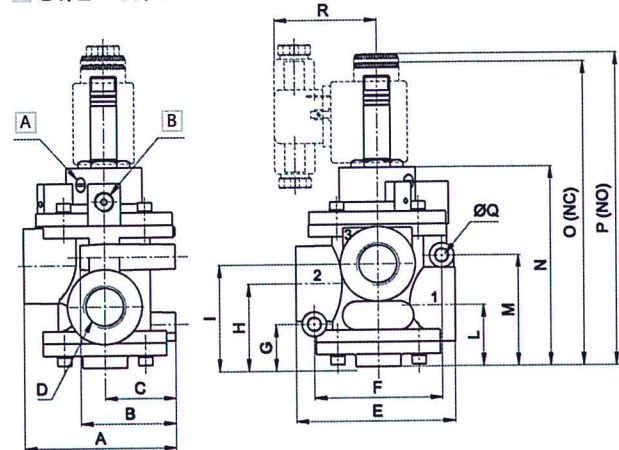


Connect.	Control	Return	Ø mm	Times (ms)		Pump max m³/h	Min. vacuum		Max vacuum		Weight Kg	Coil	Part no.	
				En.	De-en.		mm Hg	Torr	mm Hg	Torr				
3/2 NC	electric amplified	vacuum	G1/4	8	25	4	150	610	759,5	0,5	0,52	U2	AG-3210	
			G3/8	10	25	16	150	610	759,5	0,5	0,56	U2	AG-3214	
			G1/2	15	30	15	20	150	610	759,5	0,5	1,19	U2	AG-3222
			G3/4	19	30	15	35	150	610	759,5	0,5	1,13	U2	AG-3232
			G1	25	38	18	90	150	610	759,5	0,5	1,62	U2	AG-3242
			G1 1/2	39	75	50	100	150	610	759,5	0,5	2	U2	AG-3256
3/2 NO	electric amplified	vacuum	G1/4	8	20	14	150	610	759,5	0,5	0,58	U2	AG-3211	
			G3/8	10	20	14	150	610	759,5	0,5	0,56	U2	AG-3215	
			G1/2	15	20	18	20	150	610	759,5	0,5	1,19	U2	AG-3223
			G3/4	19	20	18	35	150	610	759,5	0,5	1,13	U2	AG-3233
			G1	25	25	20	90	150	610	759,5	0,5	1,62	U2	AG-3243
			G1 1/2	39	70	60	100	150	610	759,5	0,5	2	U2	AG-3257

G1/4 - G3/8

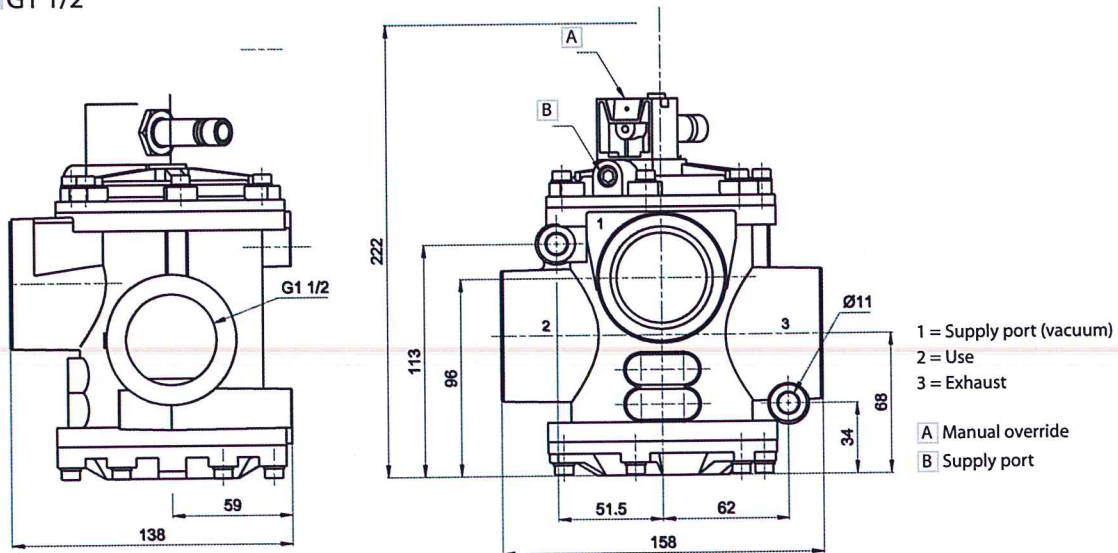


G1/2 - G3/4 - G1



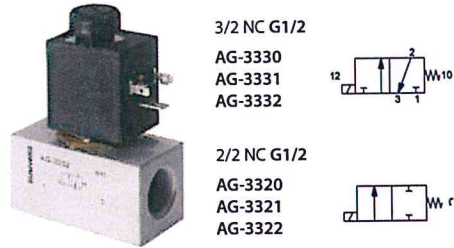
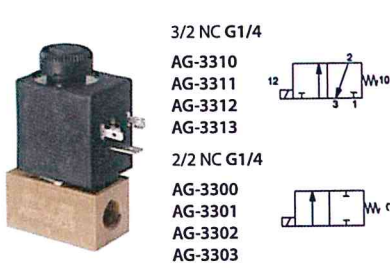
	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R
G1/2	75	47	35	G1/2	78,5	63	21	41	50,5	30	54,5	100	150	154	6,4	50,5
G3/4	75	47	35	G3/4	78,5	63	21	41	50,5	30	54,5	100	150	154	6,4	50,5
G1	89	55	40	G1	101	76	25,5	51	64	38	62,5	115	167	175	8,4	50

G1 1/2



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

Electrovalves 2/2 - 3/2 for direct vacuum servoassisted by vacuum



Material:

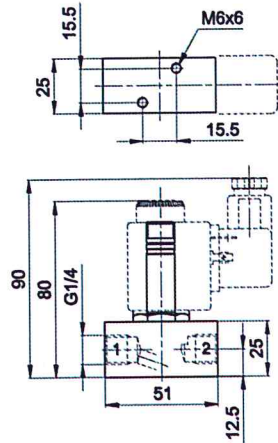
valve body	G1/4 = brass G1/2 = aluminium
tube/sleeve	stainless steel
nucleus and spring	stainless steel
seals (a)	G1/4 = NBR G1/2 = vulkollan

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

Connect.	Control	Return	Ø mm	Times (ms)		Pump max m ³ /h	Max vacuum		Weight Kg	Part no.	
				En.	De-en.		mm Hg	Torr			
3/2 NC	electric	mechanical spring	G1/4	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	electric	mechanical spring	G1/4	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			

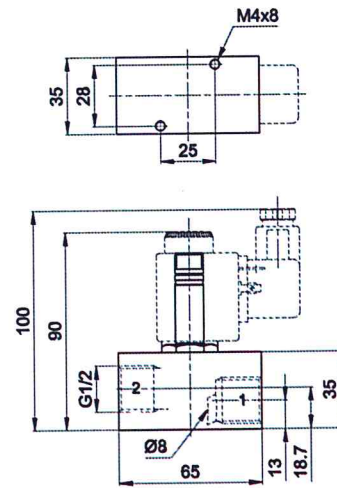
* = solenoid valves with 3 mm fixed exhaust

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

