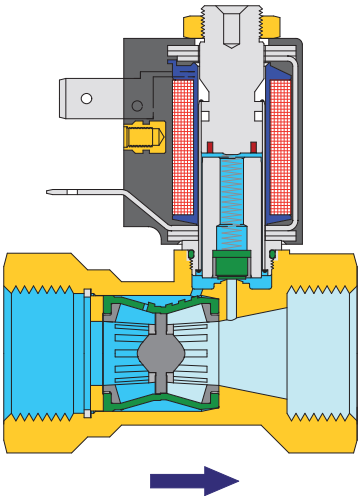
GAMMA Valves Serie 200





Especially economical valve series DN 10 (G 3/8) and DN 12 (G 1/2) for the most varied of applications in mechanical and apparatus construction.

Dirt particles in the medium can lead to malfunction in the solenoid valves. The installation of a strainer is thus to be recommended, e.g. type SMF-133..

The minimal space requirement of this socket valve series is especially of advantage in small apparatus construction (representations G1/2 in scale 1:1)

CHARACTERISTICS

GENERAL

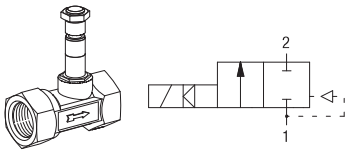
Constructional design	Low noise membrane valve with coaxial flow			
Product name	2/2-way Solenoid valve servo controlled	2/2-way Solenoid valve servo controlled	2/2-way Solenoid valve pressure operated	2/2-way valve, pressure operated by external or own medium
Product type	EGV	EGV	EGV	PGV
Function	"A" normally closed	"B" normally open	"Z" normally closed	"B" normally open
Nominal diameter	DN 10 and DN 12			
Port size	Thread (ISO 228) G 3/8 and G 1/2			
Ambient temperature	-20 °C to +60 °C (others on request)			
Medium temperature	for NBR: -10 °C to +90 °C for FKM and EPDM: -10 °C to +130 °C (for exceptions see table)			
Medium viscosity	up to ca. 20 mm^2/s			
Valve body material	Brass			
Membrane support unit material	reinforced synthetic material (others on request)			
Other internal component	Stainless steel and non-ferrous metal			
Material	NBR (nitrile rubber), EPDM (ethylene propylene) or FKM (fluoride rubber) (others on request)			
Mounting method	Installation in rigid pipe system			
Mounting position	optional, preferably upright			

PNEUMATIC - HYDRAULIC

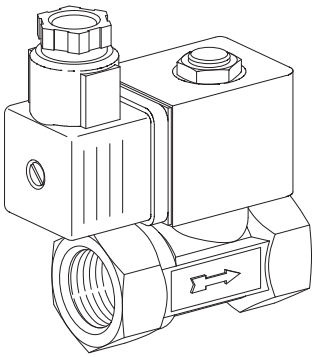
Nominal pressure (bar)	according to type table. The numerical value of the nominal pressure PN signifies the Permitted Operating Pressure OP in bar at 60°C ambient temperature and 60°C medium temperature. Insofar as two values are given, the first value refers to solenoid coil with highest electrical current consumption, the second value to that with lowest current consumption.
Pressure range	0.3 bar up to permitted operating pressure OP according to table.
Rate	Kv-value according to type table (full passage with pressure difference of 0.5 bar or higher)
Medium	gaseous or fluids Sealing material NBR: e.g. compressed air, water, hydraulic fluids, neutral gases Sealing material EPDM: e.g. hot water Sealing material FKM: e.g. solvents, hot water, hot air above 90 °C
Response time	Opening time: 20 ms to 1 s; closing time: 25 ms to 3 s, according to medium
Electric	see solenoid coils

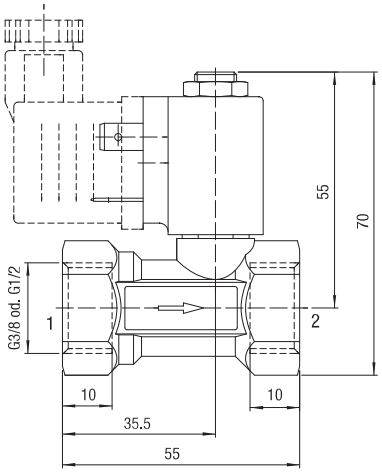
2/2-Way Solenoid Valve - Type EGV Series 200

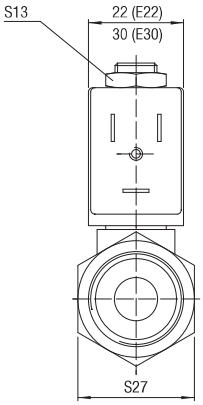
Price group **53** | Function "A" normally closed | low noise and impact-free closing, for neutral, gaseous or fluids | **Brass**

Version		DN	Kv-value water [m³/h]	G	PN	Possible type of current	Sealing material	Type	Order number	Price
	Valve without solenoid coils Permitted operating pressure 0.3 bar up to value according to table below.	10	2	G 3/8	16/8	AC/DC	NBR	EGV-211-A79-3/8BN-00	613041	o. r.
		10	2	G 3/8	16/8	AC/DC	EPDM	EGV-211-A79-3/8PN-00	613043	o. r.
		10	2	G 3/8	16/8	AC/DC	FKM	EGV-211-A79-3/8FN-00	613045	o. r.
		12	2.2	G 1/2	16/8	AC/DC	NBR	EGV-211-A79-1/2BN-00	613051	o. r.
		12	2.2	G 1/2	16/8	AC/DC	EPDM	EGV-211-A79-1/2PN-00	613053	o. r.
		12	2.2	G 1/2	16/8	AC/DC	FKM	EGV-211-A79-1/2FN-00	613055	o. r.

Illustration

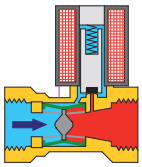




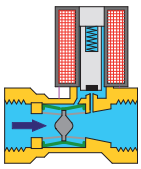


Cable sockets adaptable with solenoid coils E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coilss 360° rotatable.

Function



In 0-position - magnetic system not under current - its seat is closed. Pressure thus builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in "closed" position.



In overrideal position - magnetic system under current - its seat is open, the control chamber discharged and the membrane is held by the medium in "open" position. A minimum pressure difference is required for this.

Options



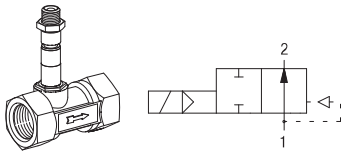
increases resistance to corrosion and replaces stainless steel valves cost-effectively for many medium Type EGV-211Q-...

Permitted Operating Pressure OP

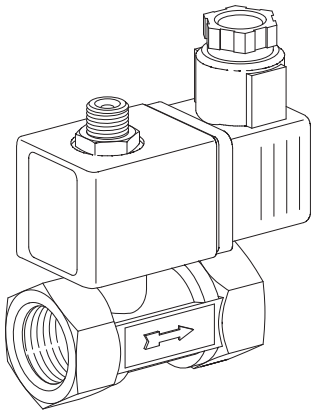
DN	type	PN	Combinable solenoid coils				Permitted Operating Pressure OP [bar] at ambient temperature +60 °C														
			type	Nominal current P_{20}			AC 50 Hz 90 %U_N Medium temperature			AC 60 Hz 90 %U_N Medium temperature			DC 90 %U_N Medium temperature			DC 90 %U_N Medium temperature			DC 100 %U_N Medium temperature		
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C
10 and 12	EGV-211-A..	16/8	E22...L.	3.5	on req.	2.5	16	13	12	16	13	on req.	15	10	9	8	6	4	9	8	7
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
			E22...H.	-	-	8	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

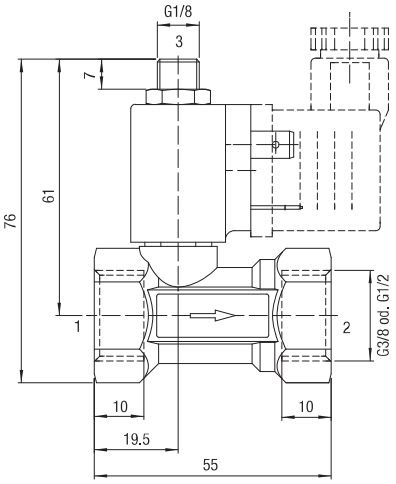
2/2-Way Solenoid Valve - Type EGV Series 200

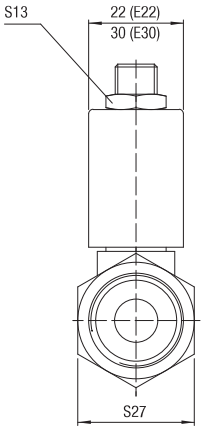
Price group **53** | Function "B" normally open | Low noise and impact-free closing, for neutral, gaseous or fluids | **Brass**

Version		DN	Kv-value water [m³/h]	G	PN	Possible type of current	Sealing material	Type (Partial solenoid valve without solenoid coils)	Order number	Price
	Valve without solenoid coils Permitted operating pressure 0.3 bar up to value according to table below.	10	2	G 3/8	16/8	AC/DC	NBR	EGV-211-B97-3/8 BP-00	613291	o. r.
		10	2	G 3/8	16/8	AC/DC	EPDM	EGV-211-B97-3/8 PP-00	613293	o. r.
		10	2	G 3/8	16/8	AC/DC	FKM	EGV-211-B97-3/8 FP-00	613295	o. r.
		12	2.2	G 1/2	16/8	AC/DC	NBR	EGV-211-B97-1/2 BP-00	613301	o. r.
		12	2.2	G 1/2	16/8	AC/DC	EPDM	EGV-211-B97-1/2 PP-00	613303	o. r.
		12	2.2	G 1/2	16/8	AC/DC	FKM	EGV-211-B97-1/2 FP-00	613305	o. r.

Illustration



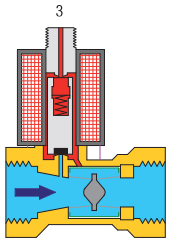




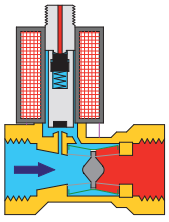
These valves, due to their long lifetime, are primarily used as a start-up unloading device for compressors.
If the magnet loses current, control chamber volume leakage of "3" occurs briefly. If necessary this must be caught and discharged at connector G 1/8 (above).

Cable sockets adaptable with solenoid coils E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coilss 360° rotatable.

Function



In 0-position - magnetic system not under current - its seat is closed and its overrideal seat open. Thereby the control chamber is discharged by port"3" and the membrane held in "open" position by the medium. A minimum pressure difference is required for this operation.



In overrideal position - magnetic system under current - its seat is open and its overrideal seat closed. Pressure thus builds up in the control chamber, which due to the larger effective membrane surface holds the membrane in "closed" position.

Options

Brass components chemically nickel-plated

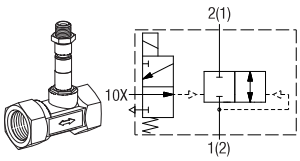
increases resistance to corrosion and replaces stainless steel valves cost-effectively for many medium
Type EGV-211Q-...

Permitted Operating Pressure OP

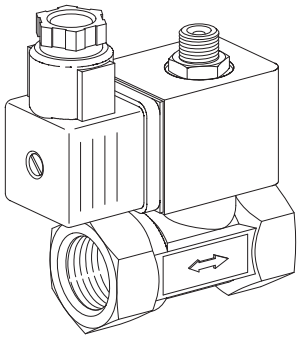
DN	type	PN	Combinable solenoid coils				Permitted Operating Pressure OP [bar] at ambient temperature +60 °C														
			type	Nominal current P_{20}			AC 50 Hz 90 %U_N Medium temperature			AC 60 Hz 90 %U_N Medium temperature			DC 90 %U_N Medium temperature			DC 90 %U_N Medium temperature			DC 100 %U_N Medium temperature		
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C
10 and 12	EGV-212-B..	16/8	E22...L.	3.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.
			E22...M.	5.5	5	5	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
			E22...H.	-	-	8	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

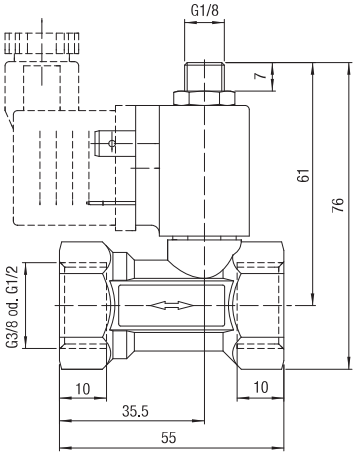
2/2-Way Solenoid Valve - Type EGV Series 200

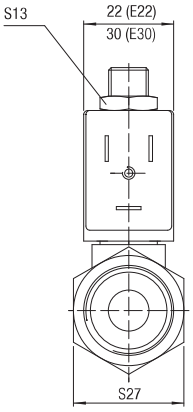
Price group **53** | Function "Z" normally closed with existing auxiliary pressure at "10" | low noise and impact-free closing, for neutral, gaseous or fluids | **Brass**

Version		DN	Kv-value water [m³/h]	G	PN	Possible type of current	Sealing material	Type (Partial solenoid valve without solenoid coils)	Order number	Price
	Valve without solenoid coils Permitted operating pressure 0.3 bar up to value according to table below, double-sided blocking.	10	2	G 3/8	16	AC/DC	NBR	EGV-211-Z77-3/8BP-00	613341	o. r.
		10	2	G 3/8	16	AC/DC	EPDM	EGV-211-Z77-3/8PP-00	613343	o. r.
		10	2	G 3/8	16	AC/DC	FKM	EGV-211-Z77-3/8FP-00	613345	o. r.
		12	2.2	G 1/2	16	AC/DC	NBR	EGV-211-Z77-1/2BP-00	613351	o. r.
		12	2.2	G 1/2	16	AC/DC	EPDM	EGV-211-Z77-1/2PP-00	613353	o. r.
		12	2.2	G 1/2	16	AC/DC	FKM	EGV-211-Z77-1/2FP-00	613355	o. r.

Illustration



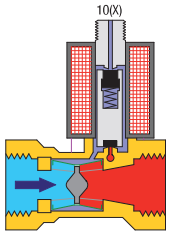




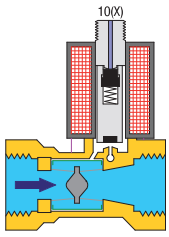
These valves can also be used for dirty media by the application, depending on constructional design, of an external medium, e.g. compressed air, for controlling the membrane.

Cable sockets adaptable with solenoid coils E22 by 2 x 180°, with E30 by 4 x 90° repositionable. Both solenoid coilss 360° rotatable.

Function

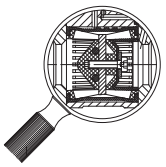


In 0-position - magnetic system not under current - its seat is closed. The auxiliary pressure accumulated at "10" thus builds up in the control chamber and holds the membrane in "closed" position.



In overrideal position - magnetic system under current - its overrideal seat is closed. The control chamber is discharged by the open seat and the membrane held in "open" position by the medium. A minimum pressure difference is required for this.

Options



0-pressure membrane requires no differential pressure to open, however to close control pressure 1 bar above operating pressure
TYPE EGV-211-Z77-..-0-00



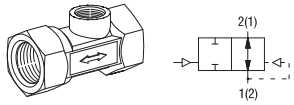
increases resistance to corrosion and replaces stainless steel valves cost-effectively for many medium
Type EGV-211Q-...

Permitted Operating Pressure OP

DN	type	PN	Combinable solenoid coils				Permitted Operating Pressure OP [bar] at ambient temperature +60 °C														
			type	Nominal current P_{20}			AC 50 Hz 90 %U_N Medium temperature			AC 60 Hz 90 %U_N Medium temperature			DC 90 %U_N Medium temperature			DC 90 %U_N Medium temperature			DC 100 %U_N Medium temperature		
				AC 50 Hz [VA]	AC 60 Hz [VA]	DC [W]	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C	60 °C	90 °C	130 °C
10 and 12	EGV-211-Z..	16/8	E22...L.	3.5	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.	on req.
			E22...M.	5,5	5	5	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
			E22...H.	-	-	8	-	-	-	-	-	-	16	16	16	16	16	16	16	16	16
			E30...P.	12	10.5	8	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16

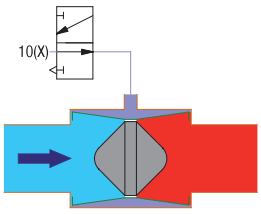
2/2-Way Valve - Type PGV Series 200 - Pressure Operated (Volume Booster) by External Medium

Price group **53** | Function "B" normally open | low noise and impact-free closing, for neutral, gaseous and fluids | **Brass**

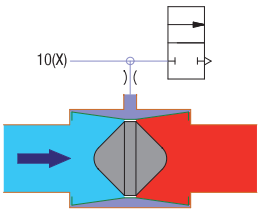
Version		Con-trolpres-sure [bar]	DN	Kv-value water [m³/h]	G	PN	Sealing material	Type (Partial solenoid valve without solenoid coils)	Order number	Price
	2/2-way valve pressure operated, double-sided blocking by external medium Permitted operating pressure 0.3 to 16 bar Further features Page <AE>	≥ excess operating pressure max. 16	10	2	G 3/8	16	NBR	PGV-231 -B77-3/8BP	614041	o. r.
			10	2	G 3/8	16	EPDM	PGV-231 -B77-3/8PP	614043	o. r.
			10	2	G 3/8	16	FKM	PGV-231 -B77-3/8FP	614045	o. r.
			12	2.2	G 1/2	16	NBR	PGV-231 -B77-1/2BP	614051	o. r.
			12	2.2	G 1/2	16	EPDM	PGV-231 -B77-1/2PP	614053	o. r.
			12	2.2	G 1/2	16	FKM	PGV-231 -B77-1/2FP	614055	o. r.

Illustration

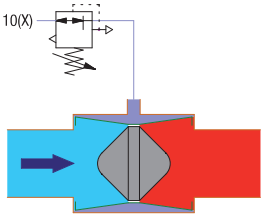
Remotely operated 2/2-way valve regulated by external medium with 3/2-way valve (positive control)



Remotely operated 2/2-way valve regulated by external medium with 2/2-way valve

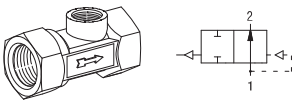


Remotely operated excess pressure valve regulated by external medium with pressure regulator



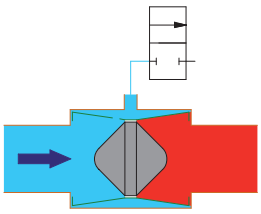
2/2-Way Valve - Type PGV Series 200 - Pressure Operated (Volume Booster) by Own Medium

Price group **53** | Function "B" normally open (without control pressure) | low noise and impact-free closing, for neutral, gaseous and fluids | **Brass**

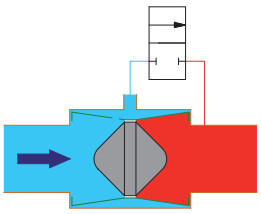
Version		Con-trolpres-sure [bar]	DN	Kv-value water [m³/h]	G	PN	Sealing material	Type (Partial solenoid valve without solenoid coils)	Order number	Price
	2/2-way valve pressure operated, by own medium Permitted operating pressure 0.3 to 16 bar	≥ excess operating pressure max. 16	10	2	G 3/8	16	NBR	PGV-231-B77-3/8BN	614095	o. r.
			10	2	G 3/8	16	EPDM	PGV-231-B77-3/8PN	614073	o. r.
			10	2	G 3/8	16	FKM	PGV-231-B77-3/8FN	614075	o. r.
			12	2.2	G 1/2	16	NBR	PGV-231-B77-1/2BN	614081	o. r.
			12	2.2	G 1/2	16	EPDM	PGV-231-B77-1/2PN	614083	o. r.
			12	2.2	G 1/2	16	FKM	PGV-231-B77-1/2FN	614085	o. r.

Illustration

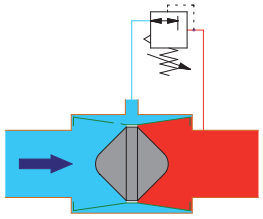
Remotely operated 2/2-way valve regulated by own medium with 2/2-way valve (negative control)



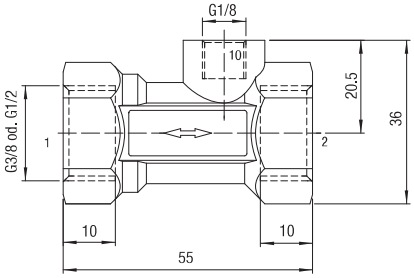
Remotely operated 2/2-way valve regulated by own medium with 2/2-way valve (control medium recycled)



Remotely operated pressure regulator valve regulated by own medium with pressure regulator (control medium recycled)



Illustration



Options



increases resistance to corrosion and replaces stainless steel valves cost-effectively for many flow media
Type PGV-231Q-...


E10F