

SOLENOID VALVES

GENERAL PURPOSE

■ Direct Operated :

2 Way	6
3 Way	24
Manifolds.	42

■ Pilot Operated :

2 Way	52
3 Way	58
Manifolds.	62

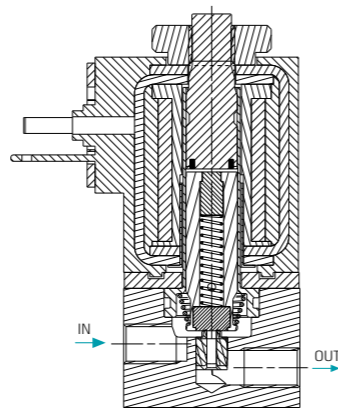
SOLENOID VALVES | General Purpose

Direct Operated | 2W

G65-A | 2 Way NC



Brass | 2W NC



Technical Data

Function	2 Way NC
Ports size	M5, #10UNF
Orifice size	See table
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Aluminium, Stainless Steel AISI 316, Brass Solenoid Operator Stainless Steel AISI 300 & 400 series, Brass Seals: NBR, FKM, EPDM
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector

Max. Pressure (bar) 2W NC table

Coil Current/Power	Orifice (mm)				
	0.8	1.0	1.2	1.6	2.0
AC - 3.6VA	30	25	20	12	8
DC - 3W	30	25	20	9	5
Flow factor Kv(l/min)	0.4	0.5	0.65	1.2	1.6

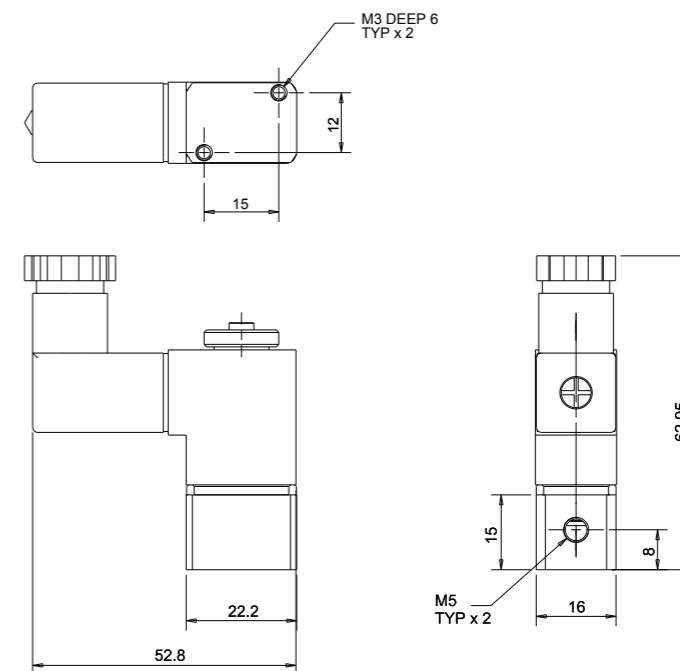
Voltage & Power Consumption

V	AC 50Hz		DC (W)
	3.2VA	3.6VA	3
12			•
24		•	•
110		•	
230	•		

• Available options

Direct Operated | 2W | G65 | NC

Dimensions



How to Order

G65-A	BODY ⁽¹⁾	PORT	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE	VOLTAGE	POWER	CONNECTOR								
Aluminium	1	M5	00	2W NC	1	0.8	1	NBR	N	None	0	W/out coil	0	No coil	0	without	0
Brass	2	#10UNF	01			1.0	2	FKM	V			12	2	AC 3.6VA ⁽²⁾ 50Hz	1	with	1
Stainless Steel	3					1.2	3	EPDM	E			24	3	DC 3W	3	other	9
						1.6	4					110	5				
						2.0	5					230	7				

Example : G65-A-10012V0-310

G65 direct operated, aluminium, M5, 2W NC, 1mm orifice, FKM, without manual override, 24V, AC 3.6VA 50Hz without connector.

G65-A - 1 00 1 2 V 0 - 3 1 0

(1) For Stainless Steel tube, add "s" : e.g. G65-A - Xs X X X X X X X X X X

(2) When choosing 230V AC, the power is 3.2VA

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

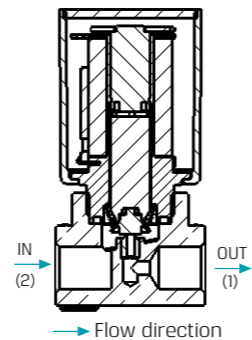
SOLENOID VALVES | General Purpose

Direct Operated | 2W

G75-A | 1/8", 1/4" 2 Way NC



Brass | 1/4"



Technical Data

Function	2 Way NC
Ports size	1/8" and 1/4" BSP & NPT
Orifice size	See table
Pressure range	See table
Temperature range	Fluid : 5°C to 50°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Manual override: Reinforced Nylon Main Valve: Brass Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: EPDM
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP66

• Available with brass adaptor upon request.

Max. Pressure (bar) table

Function	Orifice (mm)	AC	DC	DC Latch
2W NC	up to 2.0	12	12	12

Voltage & Power Consumption

V	AC (W) 50 Hz	DC (W)
	2	4.5
12	•	•
24	•	•
110	•	

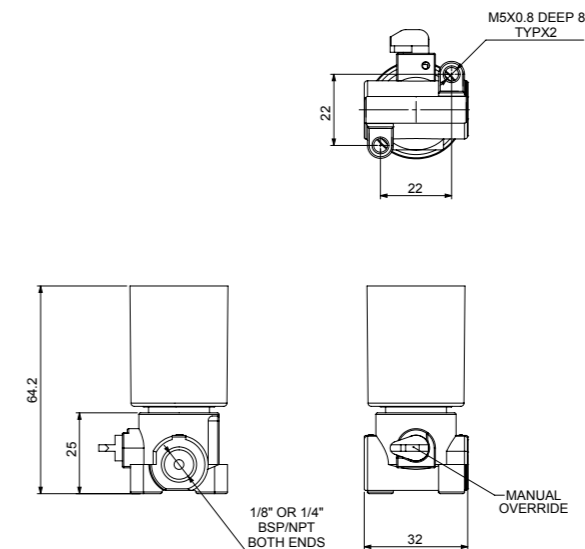
• Available options

Voltage & Current table

Solenoid	Voltage	Inrush [A]	Holding [A]
2W 50 Hz	V +10% n-20%	0.3	0.19
2W 60 Hz		0.2	0.14
3W 50/60 Hz		0.125	0.125
DC		4.5W	

Direct Operated | 2W | G75 | 1/8", 1/4" NC

Dimensions



How to Order

G75-A	-	TYPE ⁽¹⁾	PORT	FUNCTION	MANUAL OVERRIDE	ORIFICE	-	VOLTAGE ⁽⁴⁾	WIRES				
Brass	3	1/8" BSP	10	2W NC	1	None	0	1.0	1	24V AC	1	two	Null
		1/8" NPT	11			Plastic ⁽²⁾	1	1.2	2	12V AC	3	three ⁽³⁾	a
		1/4" BSP	20					1.6	3	12V DC	4		
		1/4" NPT	21					2.0	4	24V DC	5		
										23Ω	6		
										110V AC	7		
										4Ω	B		
										9Ω	C		
										12Ω	D		

Coil resistance vs input voltage range

Resistance [Ω]	Suitable input voltage range [V]
4	6 - 9
9	12 - 14
12	14 - 16
23	18 - 21

Example : G75-A-310102-1

G75 Brass, 1/8" BSP, 2W NC, no manual override, 1.2 orifice, 24V AC coil, two wires

G75-A - 3 10 1 0 2 - 1

- (1) G75-A valves are also available in plastic
- (2) Recommended for AC and continuous DC only
- (3) For Latch only
- (4) For Latch : Refer to coil resistance vs input voltage table

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

SOLENOID VALVES | General Purpose

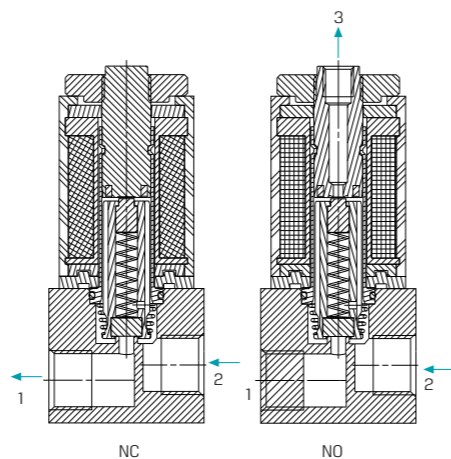
Direct Operated | 2W

G80-A | 2 Way NC, NO



Brass | #10UNF

Aluminium | plastic manual override



Technical Data

Function	2 Way NC, NO
Ports size	1/8" BSP, NPT, #10UNF, M5
Orifice size	See table
Pressure range	<ul style="list-style-type: none"> See table Valves for pressure higher than 12 bar cannot be supplied with manual override
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Manual override: Plastic * Maximum pressure : 16 bar Main Valve: Aluminium, Stainless Steel AISI 316, Brass Solenoid Operator Stainless Steel AISI 300 & 400 series, Brass Seals: NBR, FKM, EPDM, FFKM
Media	Air, water, oil
Coil voltage	<ul style="list-style-type: none"> Voltage and power consumption - see table All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector

Max. Pressure (bar) 2W NC table

Coil Current/Power	Orifice (mm)					
	1.0	1.2	1.6	2.0	2.4	3.0
AC - 75W	40	35	35	12	10	8
AC - 4W	40	30	15	8	6	5
DC - 6.5W ⁽⁵⁾	40	35	20	12	10	7
DC - 3W	40	30	15	5	4	2.5
Flow factor Kv(l/min)	0.5	0.65	1.2	1.6	2	2.6

Max. Pressure (bar) 2W NO table

Coil Current/Power	Orifice (mm)	
	1.2	1.6
AC - 4W	15	10
DC - 3W	15	10
Flow factor Kv(l/min)	0.4	0.7

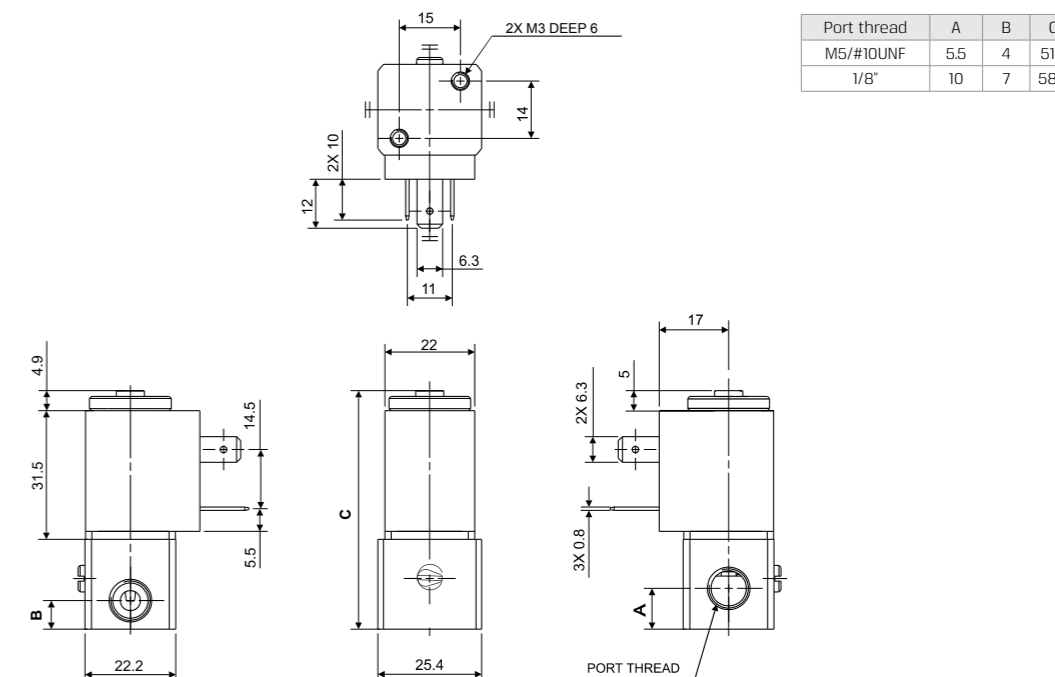
Voltage & Power Consumption

V	AC (W)				DC (W)	
	75	4	6	3	6.5	3
6					•	•
12	•	•	•	•	•	•
24	•	•	•	•	• ⁽⁵⁾	•
110	•	•	•	•		
230	•	•	•	•		

• Available options

Direct Operated | 2W | G80 | NC, NO

Dimensions



Port thread	A	B	C
M5/#10UNF	5.5	4	51.5
1/8"	10	7	58.5

How to Order

G80-A	BODY ⁽¹⁾	PORT	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE	* When ordering without coil, please define what current and pressure rating is needed (DC, AC)							
							VOLTAGE	POWER	CONNECTOR					
Aluminium	1	M5	00	2W NC 1	1.0 1	NBR N	None	0	W/out coil	0	No coil	0	without	0
Brass	2	#10UNF	01	2W NO 2	1.2 2	FKM V	Plastic ⁽⁴⁾	1	6	1	AC7.5W 50Hz	1	with	1
Stainless Steel	3	1/8" BSP	10		1.6 3	EPDM E			12	2	AC6W 60Hz	2	with bi-color LED	2
		1/8" NPT	11		2.0 ⁽²⁾ 4	FFKM ⁽³⁾ K			24	3	DC6.5W ⁽⁵⁾	3	surge protection with LED	3
					2.4 ⁽²⁾ 5				110	5	AC4W 50Hz	4	flying leads coil	4
					3.0 ⁽²⁾ 6				230	7	AC3W 60Hz	5	other	9
									other	9	DC3W	7		

Example : G80-A-10011V0-320

G80 direct operated, aluminium, M5 port, 2W NC, 1.0mm orifice, FKM, without manual override, 24VAC 6W 60Hz, without connector.

G80-A - 1 00 1 1 V 0 - 3 2 0

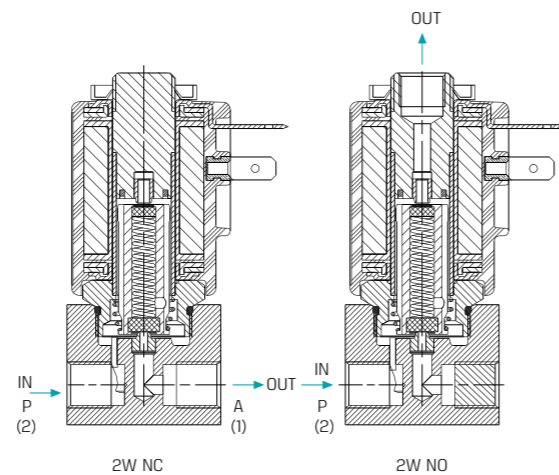
- (1) For Stainless Steel tube, add "s": e.g. G80-A-Xs-X-X-X-X-X-X-X-X-X-X
- (2) NC only
- (3) FFKM O-ring is available only upon request. When ordering FFKM seals, please consult with our technical sales department about O-ring compound.
- (4) Maximum pressure : 16 bar
- (5) 24VDC is 6Watt, 12VDC is 6.5Watt

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

SOLENOID VALVES | General Purpose

Direct Operated | 2W

GEM-A | 1/8", 1/4" 2 Way NC, NO



Technical Data

Function	2 Way NC, NO
Ports size	1/8" and 1/4" BSP & NPT
Orifice size	See table
Pressure range	<ul style="list-style-type: none"> See table Valves for pressure higher than 25 bar cannot be supplied with manual override
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Manual override: Plastic, Brass screw or Brass finger knob, Stainless Steel for Stainless Steel valves (1) Plastic manual override : Maximum pressure : 16 bar (2) Manual override is unavailable in 2W NO through base applications Main Valve: Brass or Stainless Steel AISI 316 Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM, FFKM, PTFE
Media	Air, water, oil
Coil voltage	<ul style="list-style-type: none"> Voltage and power consumption - see table All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

• Latch valves are available upon request

Max. Pressure (bar) 2W NC table

Coil Current/Power	Orifice (mm)						
	0.8	1.2	1.6	2.0	2.4	3.0	4.0
ADC *	60	50	35	20	15	10	5
AC8W/DC10W	80	80	60	38	30	18	10
AC5.5W	80	60	40	28	20	15	6
AC2.5W	60	50	35	20	15	9	5
DC5.5W	60	30	18	12	9	6	3
DC3.5W	40	20	12	8	6	4	2
Flow factor Kv(l/min)	0.5	1.1	1.7	2.5	3.5	4.5	5

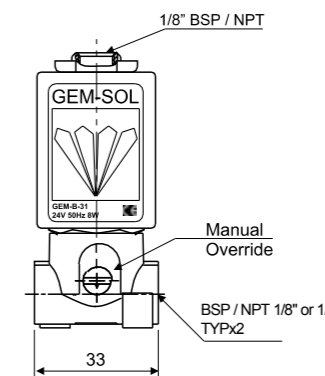
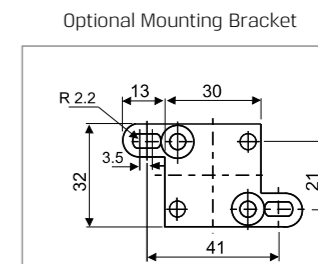
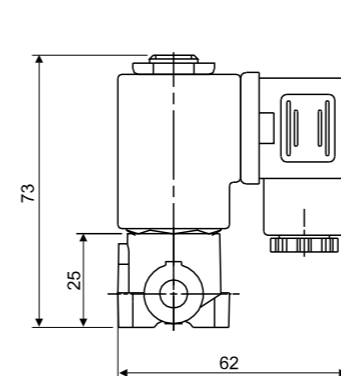
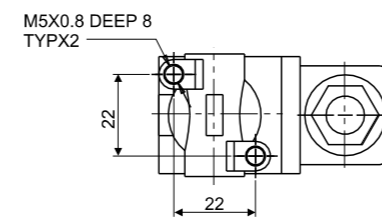
Max. Pressure (bar) 2W NO table

Coil Current/Power	Orifice (mm)					
	0.8	1.2	1.6	2.0	2.4	3.0
ADC *	25	25	25	20	15	10
Flow factor Kv(l/min)	0.5	1.1	1.4	2.5	3.0	3.5

* ADC valves are only suitable for use with AC8W or DC10W coils

Direct Operated | 2W | GEM-SOL | 1/8", 1/4" NC, NO

Dimensions



Brass / Stainless Steel

SOLENOID VALVES | General Purpose

Direct Operated | 2W

GEM-A | 1/8", 1/4" 2 Way NC, NO

Three Product Ordering Categories available

- STANDARD** | Reduced lead times, No MOQ
- SEMI-STANDARD** | Normal lead times, No MOQ
- SPECIAL** | Extended lead times, Non-stock items, MOQ may be applicable

Ordering Chart

STANDARD ITEMS | Reduced lead times, No MOQ
ADC operator only

MODEL	PORT	FUNCTION	ORIFICE (mm)	SEAL MATERIAL	MANUAL OVERRIDE	CONNECTOR	MOPD (bar)	PART NO. PER VOLTAGE & POWER									
								*Standard coils are not vacuum impregnated									
								24VDC 10W	24VAC 8W 50Hz	110VAC 8W 60Hz	230VAC 8W 50Hz						
GEM-A BRASS	1/8" BSP	2W NC	1.6	NBR	Slot	with		35	1253820062	1253820063	1253820064	1253820065					
									GEM-A-21013N2-331 ADC	GEM-A-21013N2-311 ADC	GEM-A-21013N2-521 ADC	GEM-A-21013N2-711 ADC					
								20	1253820218	1253820203	1253820219	1253820220					
									GEM-A-21014N2-331 ADC	GEM-A-21014N2-311 ADC	GEM-A-21014N2-521 ADC	GEM-A-21014N2-711 ADC					
								15	1253830041	1253830048	1253830049	1253830050					
									GEM-A-21015N2-331 ADC	GEM-A-21015N2-311 ADC	GEM-A-21015N2-521 ADC	GEM-A-21015N2-711 ADC					
	1/8" NPT	2W NC	1.6	NBR	Slot	with			35	1253820066	1253820067	1253820068	1253820069				
										GEM-A-21113N2-331 ADC	GEM-A-21113N2-311 ADC	GEM-A-21113N2-521 ADC	GEM-A-21113N2-711 ADC				
									20	1253820221	1253820222	1253820223	1253820224				
										GEM-A-21114N2-331 ADC	GEM-A-21114N2-311 ADC	GEM-A-21114N2-521 ADC	GEM-A-21114N2-711 ADC				
									15	1253830051	1253830052	1253830053	1253830054				
										GEM-A-21115N2-331 ADC	GEM-A-21115N2-311 ADC	GEM-A-21115N2-521 ADC	GEM-A-21115N2-711 ADC				
1/4" BSP	2W NC	1.6	NBR	Slot	with			35	1255820108	1255820031	1255820109	1255820110					
									GEM-A-22013N2-331 ADC	GEM-A-22013N2-311 ADC	GEM-A-22013N2-521 ADC	GEM-A-22013N2-711 ADC					
								20	1255820301	1255820302	1255820303	1255820304					
									GEM-A-22014N2-331 ADC	GEM-A-22014N2-311 ADC	GEM-A-22014N2-521 ADC	GEM-A-22014N2-711 ADC					
								15	1255830201	1255830202	1255830203	1255830580					
									GEM-A-22015N2-331 ADC	GEM-A-22015N2-311 ADC	GEM-A-22015N2-521 ADC	GEM-A-22015N2-711 ADC					
1/4" NPT	2W NC	1.6	NBR	Slot	with			35	1255820111	1255820112	1255820113	1255820114					
									GEM-A-22113N2-331 ADC	GEM-A-22113N2-311 ADC	GEM-A-22113N2-521 ADC	GEM-A-22113N2-711 ADC					
								20	1255820305	1255820306	1255820307	1255820308					
									GEM-A-22114N2-331 ADC	GEM-A-22114N2-311 ADC	GEM-A-22114N2-521 ADC	GEM-A-22114N2-711 ADC					
								15	1255830205	1255830206	1255830207	1255830208					
									GEM-A-22115N2-331 ADC	GEM-A-22115N2-311 ADC	GEM-A-22115N2-521 ADC	GEM-A-22115N2-711 ADC					

GEM-A SST	1/4" BSP	2W NC	1.6	FKM	Slot	with		35	1255820311	1255820312	1255820313	1255820314					
									GEM-A-32013V2-331 ADC	GEM-A-32013V2-311 ADC	GEM-A-32013V2-521 ADC	GEM-A-32013V2-711 ADC					
								20	1255820315	1255820316	1255820317	1255820318					
		GEM-A-32014V2-331 ADC	GEM-A-32014V2-311 ADC	GEM-A-32014V2-521 ADC	GEM-A-32014V2-711 ADC												
	1/4" NPT	2W NC	1.6	FKM	Slot	with			15	1255830211	1255830531	1255830213	1255830214				
										GEM-A-32015V2-331 ADC	GEM-A-32015V2-311 ADC	GEM-A-32015V2-521 ADC	GEM-A-32015V2-711 ADC				
35									1255820321	1255820322	1255820323	1255820324					
	GEM-A-32113V2-331 ADC	GEM-A-32113V2-311 ADC	GEM-A-32113V2-521 ADC	GEM-A-32113V2-711 ADC													
	2W NC	2.0	FKM	Slot	with			20	1255820325	1255820326	1255820327	1255820328					
									GEM-A-32114V2-331 ADC	GEM-A-32114V2-311 ADC	GEM-A-32114V2-521 ADC	GEM-A-32114V2-711 ADC					
		2.4						15	1255830215	1255830216	1255830217	1255830218					
									GEM-A-32115V2-331 ADC	GEM-A-32115V2-311 ADC	GEM-A-32115V2-521 ADC	GEM-A-32115V2-711 ADC					

Model Selection

- STANDARD** | Reduced lead times, No MOQ. Please refer to **Standard Items Ordering Chart**
- SEMI-STANDARD** | Normal lead times, No MOQ
- SPECIAL** | Extended lead times, Non-stock items, MOQ may be applicable
For a quote, please contact our sales department

GEM-A	BODY	PORT	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE				
Brass	2	1/8" BSP	10	2W NC	0.8 1	NBR	N	None	0	
			11	2W NO	1.2 2	FKM	V	Plastic (3)	1	
			20	2WNO (1) through base	1.6 3	EPDM	E	Slot	2	
		1/4" BSP	20	2W NO	2.0 4	FFKM (2)	K	Knob	3	
			21	2W NO	2.4 5	PTFE	T			
			21	2W NO	3.0 6					
	SST	3	1/8" BSP	10	2W NC	0.8 1	NBR	N	None	0
				11	2W NO	1.2 2	FKM	V	Plastic (3)	1
				20	2WNO (1) through base	1.6 3	EPDM	E	Slot	2
		1/4" NPT	20	2W NO	2.0 4	FFKM (2)	K	Knob	3	
			21	2W NO	2.4 5	PTFE	T			
			21	2W NO	3.0 6					

* For available options, please refer to **VOLTAGE & POWER CONSUMPTION** table below

VOLTAGE	POWER	CONNECTOR
No coil	0	None
6	1	AC8W 50Hz
12	2	AC8W 60Hz
24	3	DC10W
48	4	AC5.5W50Hz
110	5	AC5.5W60Hz
120	6	AC2.5W 50/60Hz
220	7A	DC5.5W
230	7	DC3.5W
240	8	
Latch/other(4)	9	

Voltage & Power Consumption

V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
6							●	●	●
12	●			●			●	●	●
24	▲	●	●	●	●	●	▲		●
48	●			●			●		
110	●			▲	●		●		
120	●			●			●		
220	●	●	●	●			●		
230	▲	●		●					
240	●			●			●		

Available options :
 ▲ STANDARD
 ● SEMI-STANDARD
 ■ SPECIAL

Example : GEM-A-21015N2-311

GEM-SOL direct operated brass, 1/8"BSP, 2W NC, 2.4 orifice, NBR, slot manual override, 24V AC8W 50Hz with connector

GEM-A	-	2		10		1		5		N		2		3		1		1
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- Option 2a : manual override is not available
- FFKM O-ring is available only upon request. When ordering FFKM seals, please consult with our technical sales department about O-ring compound
- Maximum pressure : 16 bar
- For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table

* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

SOLENOID VALVES | General Purpose

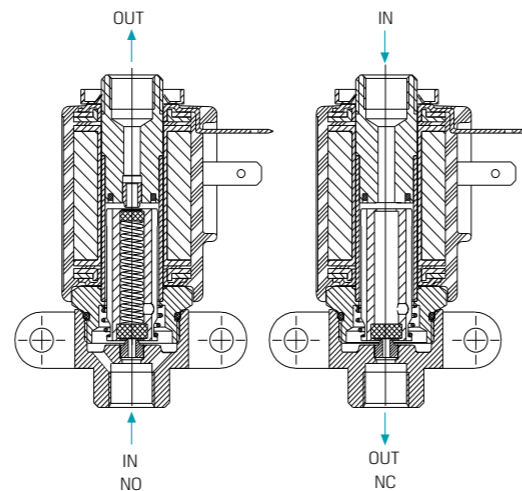
Direct Operated | 2W

GEM-I | Inline 1/8", 1/4" 2 Way NC, NO



Inline

Hex. Brass



Technical Data

Function	2 Way NC, NO
Ports size	1/8", 1/4" BSP & NPT
Orifice size	See table
Pressure range	See table • Higher pressures are available
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Brass Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

• Latch valves are available upon request.

Max. Pressure (bar) 2W NC table

Coil Current/Power	Orifice (mm)					
	0.8	1.6	2.4	3.0	4.0	6.0
ADC *	40	30	17	10	5	1.1
AC8W, DC10W	45	37	20	12	6	1.8
AC5.5W	40	32	16	8	2	0.5
DC5.5W	35	30	12	6	2	0.5
Flow factor Kv(l/min)	0.5	1.7	3.5	4.5	5	6

Max. Pressure (bar) 2W NO table

Coil Current/Power	Orifice (mm)			
	0.8	1.6	2.4	3.0
ADC *	32	27	13	9
AC8W, DC10W	35	32	18	12
Flow factor Kv(l/min)	0.5	1.6	3.2	3.8

* ADC valves are only suitable for use with AC8W or DC10W coils.

Voltage & Power Consumption

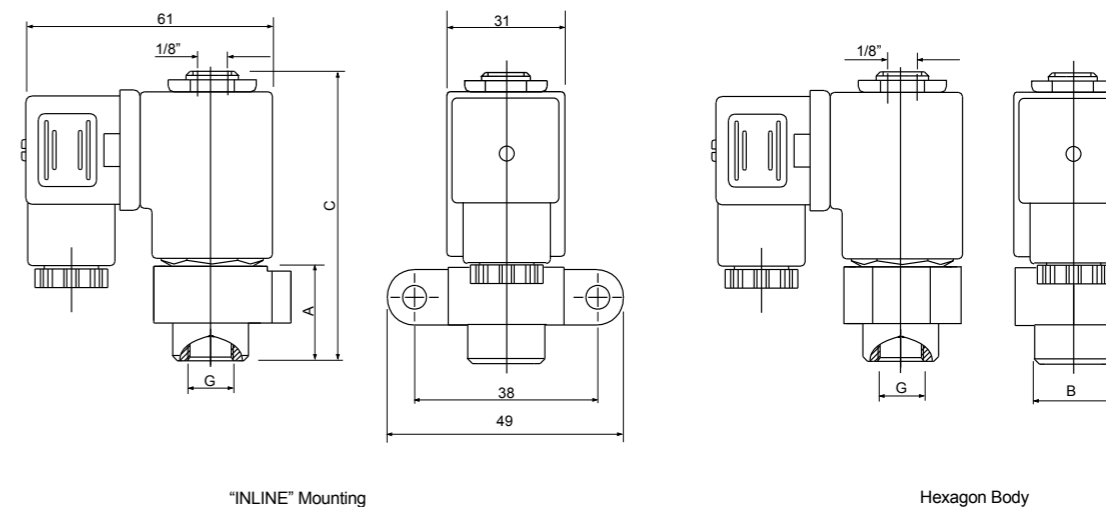
V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
	8	5.5	2.5	8	5.5	2.5			
6							•	•	
12	•			•			•	•	
24	•	•		•	•		•	•	
48	•			•			•		
110	•			•	•		•		
120	•			•					
220	•	•		•			•		
230	•	•		•	•				
240	•			•			•		

• Available options

Direct Operated | 2W | GEM-SOL | Inline 1/8", 1/4" NC, NO

Dimensions

Size (G)	A	ØB	C
1/8"	20	16	68
1/4"	23	18	88



How to Order

GEM-I	BODY	PORT	FUNCTION	ORIFICE (1)	SEALS	VOLTAGE	POWER	CONNECTOR							
Hex. Brass	4	1/8" BSP	10	2W NC	1	0.8	1	NBR	N	W/out coil	0	No coil	0	without	0
"Inline" mounting	5	1/8" NPT	11	2W NO	2	1.2	2	FKM	V	6	1	AC8W 50Hz	1	with	1
		1/4" BSP	20			1.6	3	EPDM	E	12	2	AC8W 60Hz	2	with LED	2
		1/4" NPT	21			2.0	4			24	3	DC10W	3	with bi-color LED	3
						2.4	5			48	4	AC5.5W 50Hz	4	flying leads coil	4
						3.0	6			110	5	AC5.5W 60Hz	5	with 1/2" Hub	5
						4.0 (3)	7			120	6	DC5.5W	7	surge protection with LED connector with moulded cable	6
						6.0 (2)(3)	8			220	7A			connector with moulded cable	7
										230	7			other	9
										240	8				
										Latch/other (4)	9				

Example : GEM-I-41015N-311

GEM-SOL direct operated inline, hex. brass, 1/8" BSP, 2W NC, 2.4 orifice, NBR, 24V AC8W 50Hz with connector.

GEM-I - 4 10 1 5 N - 3 1 1

(1) For NO, the maximum orifice size is 3mm

(2) 6mm orifice - for DC only

(3) Hex. body

(4) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied.

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

SOLENOID VALVES | General Purpose

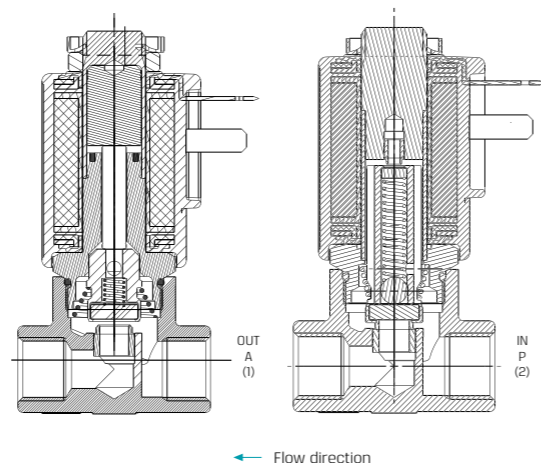
Direct Operated | 2W

GEM-A | Large orifice 1/4" 2 Way NC, NO (pressure & vacuum)



Stainless Steel

Brass



Technical Data

Function	2 Way NC, NO
Ports size	1/4" BSP & NPT
Orifice size	See table
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Brass or Stainless Steel AISI 316 Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: FKM, EPDM, FFKM, PTFE
Recommended use	Vacuum application
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

• Latch valves are available upon request.

Max. Pressure (bar) 2W NC table

Coil Current/Power	Orifice (mm)		
	4.5	6.0	8.0
AC8W	4.5	3.8	2.5
AC5.5W	3.8	3	2
DC10W	4.5	3.8	1.5
DC5.5W	3.2	2	1
Flow factor Kv(l/min)	5	6	10

Max. Pressure (bar) 2W NO table

Coil Current/Power	Orifice (mm)	
	4.5	6.0
ADC *	4	2
AC8W, DC10W	4	2
Flow factor Kv(l/min)	5	6

* ADC valves are only suitable for use with AC8W or DC10W coils.

Voltage & Power Consumption

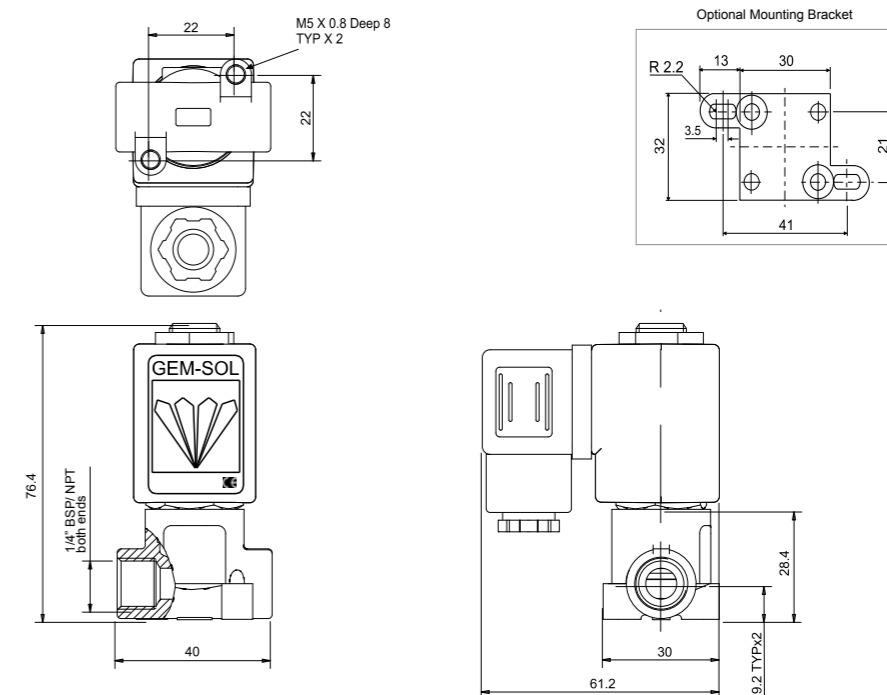
V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
6							•	•	•
12	•	•		•	•		•	•	•
24	•	•	•	•	•	•	•	•	
48	•	•		•	•		•	•	
110	•	•		•	•	•	•	•	
120	•	•		•	•		•	•	
220	•	•	•	•	•		•	•	
230	•	•	•	•	•	•			
240	•	•		•	•		•	•	

Available options :

- NC valves
- NO valves

Direct Operated | 2W | GEM-SOL | Large orifice 1/4" NC, NO

Dimensions



How to Order

GEM-A	BODY	PORT	FUNCTION	ORIFICE	SEALS	VOLTAGE	POWER	CONNECTOR							
Brass	2	1/4" BSP	20	2W NC	1	6.0	8	FKM	V	W/out coil	0	No coil	0	without	0
Stainless Steel	3	1/4" NPT	21	2W NO	2	4.5	9	EPDM	E	6	1	AC8W 50Hz	1	with	1
						8.0 ⁽¹⁾	a	FFKM ⁽²⁾	K	12	2	AC8W 60Hz	2	with LED	2
								PTFE	T	24	3	DC10W	3	with bi-color LED	3
										48	4	AC5.5W 50Hz	4	flying leads coil	4
										110	5	AC5.5W 60Hz	5	with 1/2" Hub	5
										120	6	DC5.5W	7	surge protection with LED	6
										220	7A			connector with moulded cable	7
										230	7			other	9
										240	8				
										Latch/other ⁽³⁾	9				

Example : GEM-A-2201aV-311

GEM-SOL direct operated brass, 1/4" BSP, 2W NC, 8.0 orifice, FKM, 24V AC 8W 50Hz with connector.

GEM-A - 2 20 1 a V - 3 1 1

(1) Not available in NO valve

(2) FFKM O-ring is available only upon request. When ordering FFKM seals, please consult with our technical sales department about O-ring compound

(3) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied.

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

SOLENOID VALVES | General Purpose

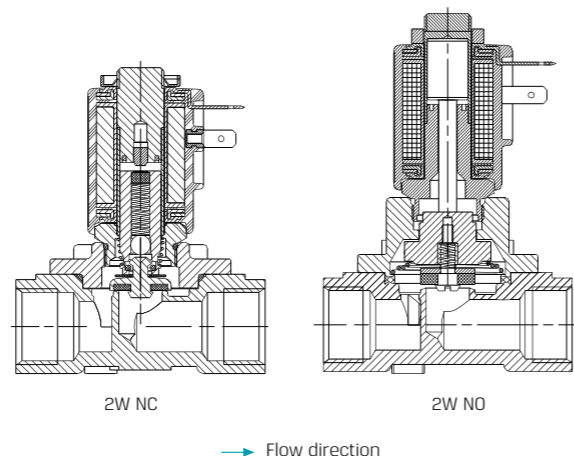
Direct Operated | 2W

GEM-L | Low pressure flows (LPF) 1/4" - 1/2" 2 Way NC, NO



Brass

Stainless Steel



→ Flow direction

Technical Data

Function	2 Way NC, NO
Ports size	1/4", 3/8", 1/2" BSP & NPT
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Brass Stainless Steel AISI 316 Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM
Media	Designed for use in LP gas systems. Also in air, water and vacuum systems : (high flow at low pressure)
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

• Latch valves are available upon request.

Pressure (bar) & Flow table NC, NO

Size	Orifice (mm)	Pressure (bar)			Kv (l/min)
		AC	DC	NO	
1/4"	8	1.5	0.7	0.5	12
3/8"	8	1.5	0.7	0.5	16
1/2"	12	0.8	0.4	0.3	35

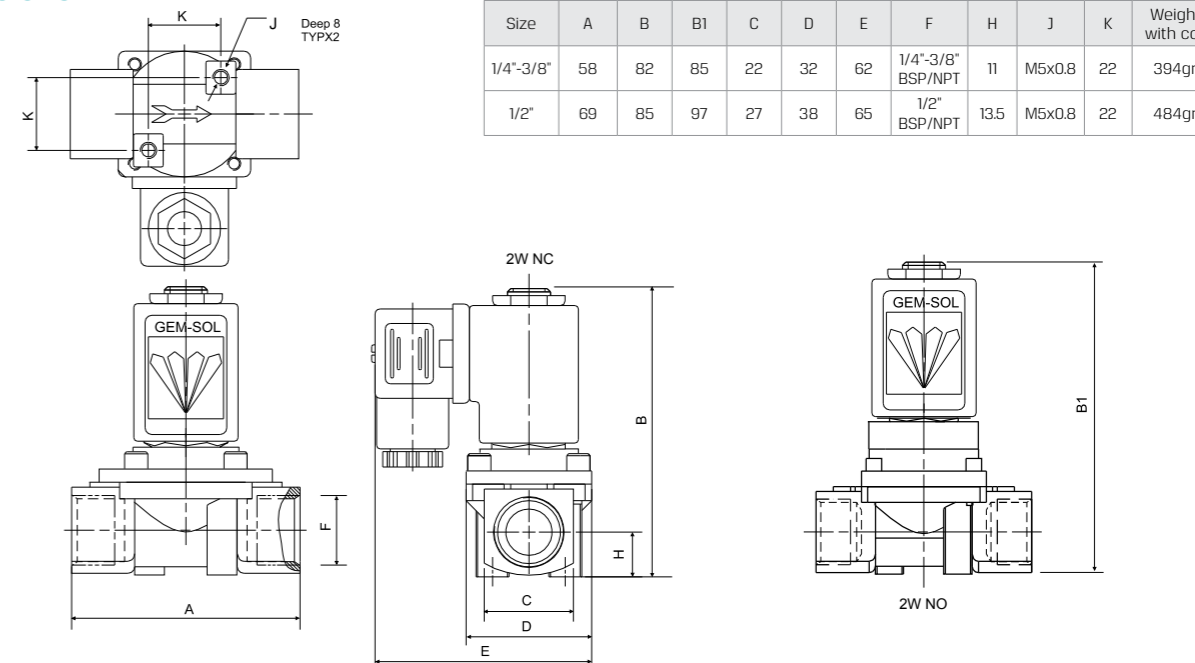
Voltage & Power Consumption

V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
	8	5.5	2.5	8	5.5	2.5			
6							•		
12	•			•			•		
24	•			•			•		
48	•			•			•		
110	•			•			•		
120	•			•					
220	•			•			•		
230	•			•					
240	•			•			•		

• Available options

Direct Operated | 2W | GEM-SOL | Low pressure flows 1/4" - 1/2" NC, NO

Dimensions



Size	A	B	B1	C	D	E	F	H	J	K	Weight with coil
1/4"-3/8"	58	82	85	22	32	62	1/4"-3/8" BSP/NPT	11	M5x0.8	22	394gr
1/2"	69	85	97	27	38	65	1/2" BSP/NPT	13.5	M5x0.8	22	484gr

How to Order

GEM-L	-	BODY	PORT	FUNCTION	SEALS	* When ordering without coil, please define what current and pressure rating is needed (DC, AC)				
						VOLTAGE	POWER	CONNECTOR		
		Brass	2 1/4" BSP	20 2W NC	1 NBR N	W/out coil	0 No coil	0	without	0
		Stainless Steel	3 1/4" NPT	21 2W NO	2 FKM V	6	1 AC8W 50Hz	1	with	1
						12	2 AC8W 60Hz	2	with LED	2
						24	3 DC10W	3	with bi-color LED	3
						48	4		flying leads coil	4
			3/8" BSP	30	EPDM E	110	5		with 1/2" Hub	5
			3/8" NPT	31		120	6		surge protection with LED	6
			1/2" BSP	40		220	7A		connector with moulded cable	7
			1/2" NPT	41		230	7		other	9
						240	8			
						Latch/other (1)	9			

Example : GEM-L-220IN-321
GEM-SOL LPF brass, 1/4"BSP, 2W NC, NBR seals, 24V AC 8W 60Hz with connector.

GEM-L - 2 20 1 N - 3 2 1

(1) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

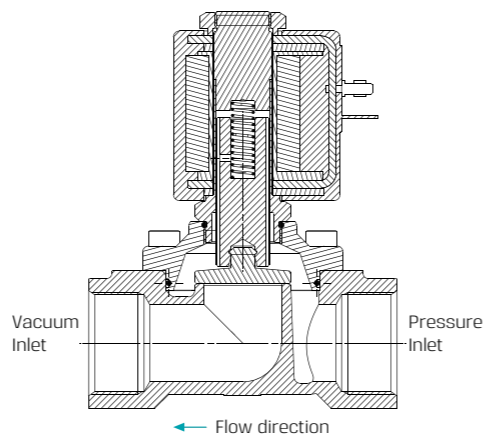
SOLENOID VALVES | General Purpose

Direct Operated | 2W

GEM-L | Low pressure flows (LPF) 3/4", 1" 2 Way NC



Brass | 1"



Technical Data

Function	2 Way NC
Ports size	3/4", 1" BSP & NPT
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Brass Stainless Steel AISI 316 Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR
Media	Designed for use in LP gas systems. Also in air, water and vacuum systems : (high flow at low pressure)
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

Pressure (bar) & Flow table NC

Size	Orifice (mm)	Pressure (bar)	Kv (l/min)
3/4"	20	-1 to 1	80
1"	25		125

Voltage & Power Consumption

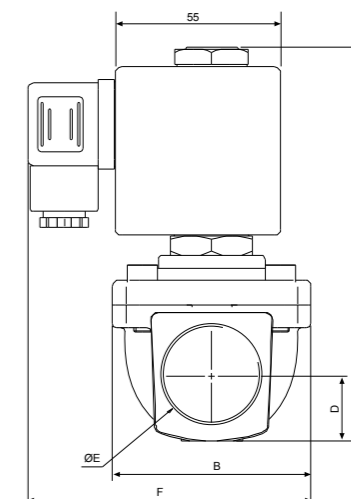
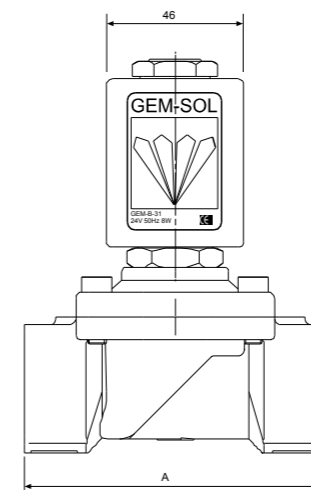
V	AC (W)		DC (W)
	50 Hz	60 Hz	
12			•
24	•		•
120		•	•
230	•		•

• Available options

Direct Operated | 2W | GEM-SOL | Low pressure flows 3/4", 1" NC

Dimensions

Size	A	B	C	D	E	F	Weight with coil
3/4"	90	55	119.5	17	3/4" BSP/NPT	87.7	87.7
1"	100	65	128.5	21	1" BSP/NPT	92.7	92.7



How to Order

GEM-L	BODY	PORT	FUNCTION	SEALS
Brass	2	3/4" BSP	50	2W NC 1 NBR N
Stainless Steel	3	3/4" NPT	51	
		1" BSP	60	
		1" NPT	61	

* When ordering without coil, please define what current and pressure rating is needed (DC, AC)

VOLTAGE	POWER	CONNECTOR
W/out coil	0 No coil	0 without
12	2 AC38W 50Hz	E with
24	3 AC38W 60Hz	F with LED
120	6 DC38W	J with bi-color LED
230	7	with 1/2" Hub surge protection with LED connector with moulded cable
		other

Example : GEM-L-2501N-3E1
GEM-SOL LPF brass, 3/4" BSP, 2W NC, NBR seals, 24V AC 38W 50Hz with connector.

GEM-L - 2 50 1 N - 3 E 1

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

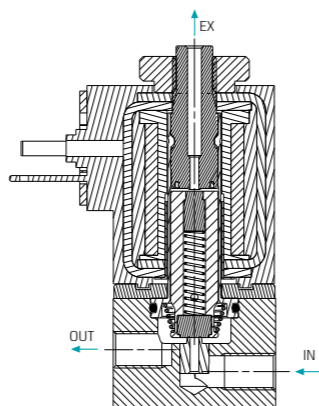
SOLENOID VALVES | General Purpose

Direct Operated | 3W

G65-A | 3 Way NC



Aluminium | 1.2 orifice



Technical Data

Function	3 Way NC
Ports size	M5, #10UNF
Orifice size	See table
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Aluminium, Stainless Steel AISI 316, Brass Solenoid Operator Stainless Steel AISI 300 & 400 series, Brass Seals: NBR, FKM, EPDM
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector

Max. Pressure (bar) 3W NC table

Coil Current/Power	Orifice (mm)		
	0.8	1.0	1.2
AC - 3.6VA	10	8.5	5.5
DC - 3W	10	8.5	5.5
Flow factor Kv(l/min)	0.4	0.5	0.65

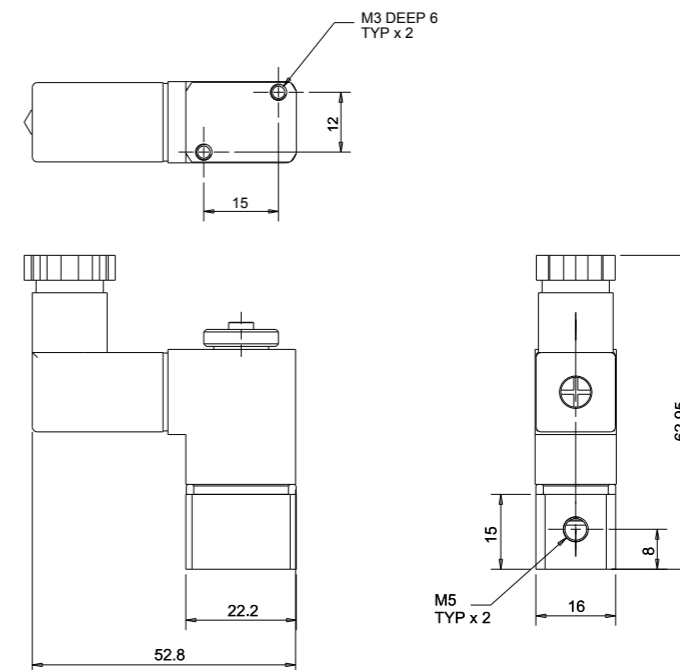
Voltage & Power Consumption

V	AC 50Hz		DC (W)
	3.2VA	3.6VA	3
12			•
24		•	•
110		•	
230	•		

• Available options

Direct Operated | 3W | G65 | NC

Dimensions



How to Order

G65-A	BODY ⁽¹⁾	PORT	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE	VOLTAGE	POWER	CONNECTOR								
Aluminium	1	M5	00	3W NC	3	0.8	1	NBR	N	None	0	W/out coil	0	No coil	0	without	0
Brass	2	#10UNF	01			1.0	2	FKM	V			12	2	AC3.6VA ⁽²⁾ 50Hz	1	with	1
Stainless Steel	3					1.2	3	EPDM	E			24	3	DC3W	3	other	9
							110					5					
							230					7					

Example : G65-A-10032V0-310

G65 direct operated, aluminium, M5, 3W NC, 1mm orifice, FKM, without manual override, 24V, AC 3.6VA 50Hz without connector.



(1) For Stainless Steel tube, add "s" : e.g. G65-A - xs x x x x x x x x x x

(2) When choosing 230V AC, the power is 3.2VA

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

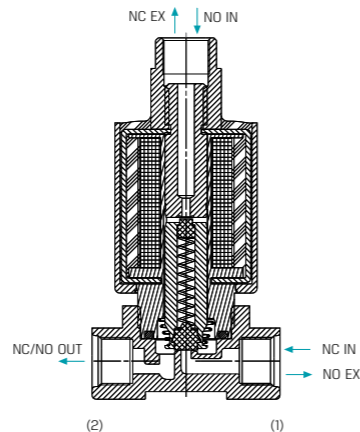
SOLENOID VALVES | General Purpose

Direct Operated | 3W

G75-A | 1/8", 1/4" 3 Way NC, NO



Brass | 1/4"



Technical Data

Function	3 Way NC, NO
Ports size	1/8" and 1/4" BSP & NPT
Orifice size	See table
Pressure range	See table
Temperature range	Fluid : 5°C to 50°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Manual override: Reinforced Nylon Main Valve: Brass Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: EPDM
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP66

• Available with brass adaptor upon request.

Max. Pressure (bar) table

Function	Orifice (mm)	AC	DC	DC Latch
3W NC	1	16	12	16
	1.2	11	9	11
	1.6	6	5	6
3W NO	1.0	16	16	16
	1.2	12	12	12
	1.6	10	10	10

Voltage & Power Consumption

	AC (W)	DC (W)
	50 Hz	
V	2	4.5
12	•	•
24	•	•

• Available options

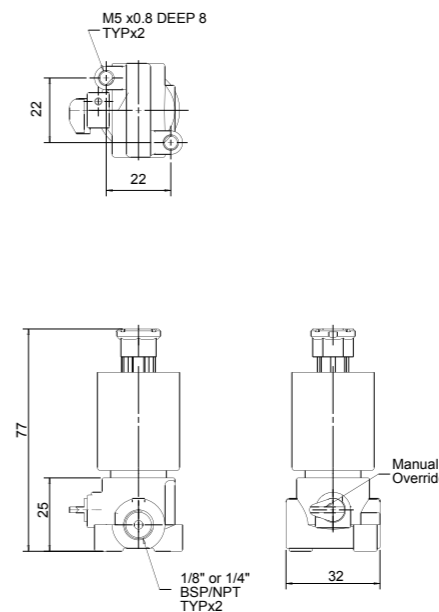
Voltage & Current table

Solenoid	Voltage	Inrush [A]	Holding [A]
2W 50 Hz	V +10% n-20%	0.3	0.19
2W 60 Hz		0.2	0.14
3W 50/60 Hz *		0.125	0.125
DC		4.5W	

* Except 24V AC without Diode

Direct Operated | 3W | G75 | 1/8", 1/4" NC, NO

Dimensions



How to Order

G75-A	-	TYPE ⁽¹⁾	PORT	FUNCTION	MANUAL OVERRIDE	ORIFICE	-	VOLTAGE ⁽⁶⁾	WIRES
Brass	3	1/8" BSP	10	3W NC	3 None	0 1.0	1	24V AC	1 two null
		1/8" NPT	11	3W NO	4 Plastic ⁽³⁾	1 1.2	2	24V AC w/out Diode ⁽⁵⁾	1R three ⁽⁴⁾ a
		1/4" BSP	20				3	12V AC	3
		1/4" NPT	21				4	12V DC	4
							5	24V DC	5
							6	23Ω	6
							7	4Ω	B
							8	9Ω	C
							9	12Ω	D

Coil resistance vs input voltage range

Resistance [Ω]	Suitable input voltage range [V]
4	6 - 9
9	12 - 14
12	14 - 16
23	18 - 21

Example : G75-A-310302-1

G75 Brass, 1/8"BSP, 3W NC, no manual override, 1.2 orifice, 24V AC coil, two wires

G75-A - 3 10 3 0 2 - 1

- (1) G75-A valves are also available in plastic
- (2) For 2mm orifice : top orifice is 1.6mm
- (3) Recommended for AC and continuous DC only
- (4) For Latch only
- (5) 3W NO 1.6 mm : Max pressure is 8 bars
- (6) For Latch : Refer to coil resistance vs input voltage table

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

SOLENOID VALVES | General Purpose

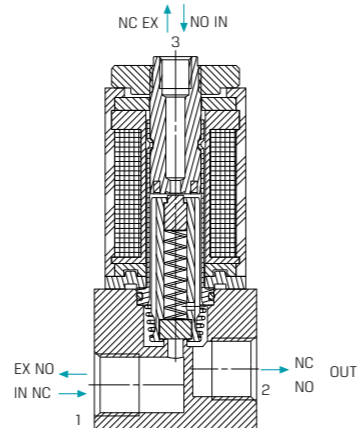
Direct Operated | 3W

G80-A | 3 Way NC, NO



Stainless Steel | 1/8"

Brass | plastic manual override



Technical Data

Function	3 Way NC, NO
Ports size	1/8" BSP, NPT, M5, #10UNF
Orifice size	See table
Pressure range	• See table • Valves for pressure higher than 12 bar cannot be supplied with manual override
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Manual override*: Plastic * Maximum pressure : 16 bar Main Valve: Aluminium, Stainless Steel AISI 316, Brass Solenoid Operator Stainless Steel AISI 300 & 400 series, Brass Seals: NBR, FKM, EPDM
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector

Max. Pressure (bar) 3W NC table

Coil Current/Power	Orifice (mm)		
	1.0	1.2	1.6
AC - 75W	15	12	10.5
AC - 4W	12	10	7
DC - 6.5W ⁽³⁾	15	12	10.5
DC - 3W	12	10	7
Flow factor Kv(l/min)	0.5	0.65	1

Max. Pressure (bar) 3W NO table

Coil Current/Power	Orifice(mm)	
	1.2	1.6
AC - 75W	12	8
AC - 4W	10	7
DC - 6.5W ⁽³⁾	12	8
DC - 3W	10	6
Flow factor Kv(l/min)	0.4	0.7

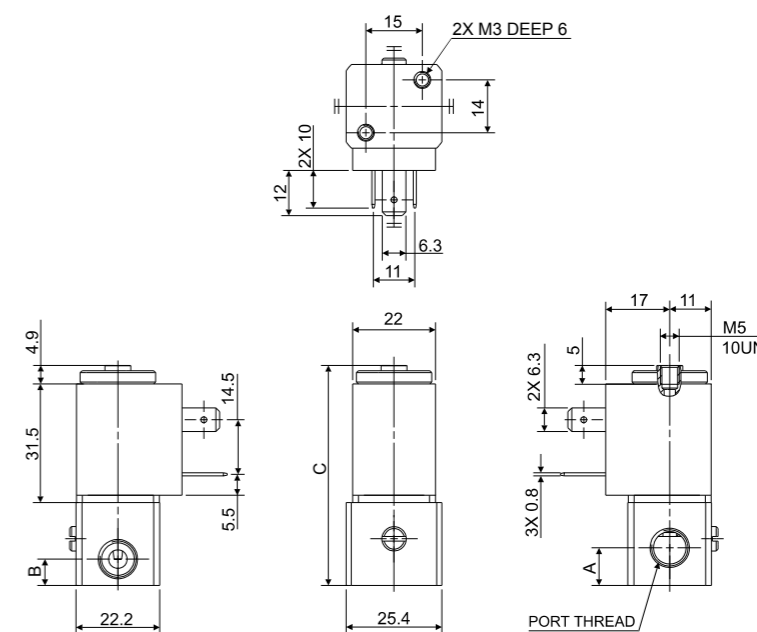
Voltage & Power Consumption

V	AC (W)				DC (W)	
	75	4	6	3	6.5	3
6					•	•
12	•	•	•	•	•	•
24	•	•	•	•	• ⁽³⁾	•
110	•	•	•	•		
230	•	•	•	•		

• Available options

Direct Operated | 3W | G80 | NC, NO

Dimensions



Port thread	A	B	C
M5/#10UNF	5.5	4	51.5
1/8"	10	7	58.5

How to Order

G80-A	BODY ⁽¹⁾	PORT	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE	* When ordering without coil, please define what current and pressure rating is needed (DC, AC)										
							VOLTAGE	POWER	CONNECTOR								
Aluminium	1	M5	00	3W NC	3	1.0	1	NBR	N	None	0	W/out coil	0	No coil	0	without	0
Brass	2	#10UNF	01	3W NO	4	1.2	2	FKM	V	Plastic ⁽²⁾	1	6	1	AC75W 50Hz	1	with	1
Stainless Steel	3	1/8" BSP	10			1.6	3	EPDM	E			12	2	AC6W 60Hz	2	with bi-color LED	2
		1/8" NPT	11									24	3	DC6.5W ⁽³⁾	3	surge protection with LED	3
												110	5	AC4W 50Hz	4	flying leads coil	4
												230	7	AC3W 60Hz	5	other	9
												other	9	DC3W	7		
														Latch ⁽⁴⁾	L		

Example : G80-A-11032V1-331

G80 direct operated, aluminium base, 1/8" BSP, 3W NC, 1.2 orifice, FKM, plastic manual override, 24VDC 6W with connector

G80-A - 1 10 3 2 V 1 - 3 3 1

(1) For Stainless Steel tube add "s" : e.g. G80-A-Xs-X-X-X-X-X-X-X-X-X

(2) Maximum pressure : 16 bar

(3) 24VDC is 6Watt, 12VDC is 6.5Watt

(4) When ordering a latch valve, please contact our technical sales department

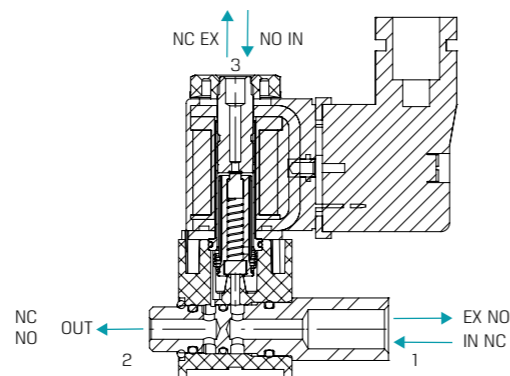
* 1/8" adaptor available

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

SOLENOID VALVES | General Purpose

Direct Operated | 3W

G80-BNJ | 1/8", 3 Way NC, NO



Technical Data

Function	3 Way NC, NO
Ports size	1/8" BSP
Orifice size	See table
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Manual override: Plastic
	Main Valve: Plastic (PA6 + FG) Metal Insert : Stainless Steel AISI 303
Media	Solenoid Operator Stainless Steel AISI 300 & 400 series & Brass
	Seals: NBR, FKM, EPDM
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector

Max. Pressure (bar) 3W NC table

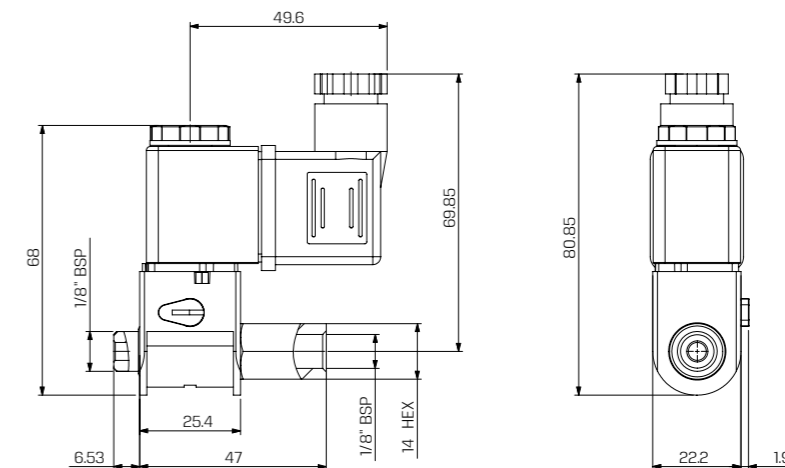
Coil Current/Power	Orifice (mm)
	2.0
AC - 75W	7
DC - 6.5W ⁽²⁾	7
Flow factor Kv(l/min)	1.4

Max. Pressure (bar) 3W NO table

Coil Current/Power	Orifice (mm)
	1.6
AC - 75W	7
DC - 6.5W ⁽²⁾	7
Flow factor Kv(l/min)	0.7

Direct Operated | 3W | G80 | 1/8" NC, NO

Dimensions



Model Selection

- STANDARD** | Reduced lead times, No MOQ.
- SEMI-STANDARD** | Normal lead times, No MOQ.
- SPECIAL** | Extended lead times, Non-stock items, MOQ may be applicable. For a quote, please contact our sales department.

How to Order

G80-BNJ	BODY	PORT	FUNCTION	ORIFICE ⁽¹⁾	SEALS	MANUAL OVERRIDE
	Plastic 4	1/8" BSP 10	3W NC 3 3W NO 4	1.6 3 2.0 4	NBR N FKM V EPDM E	Plastic 1

* For available options, please refer to **VOLTAGE & POWER CONSUMPTION** table below

VOLTAGE	POWER	CONNECTOR
W/out coil 0	No coil 0	None 0
12 2	AC75W 50Hz 1	with 1
24 3	DC6.5W ⁽²⁾ 3	with bi-color LED 2
110 5		surge protection with LED 3
230 7		flying leads coil 4
		other 9

Voltage & Power Consumption

V	AC (W)			DC (W)	
	50 Hz	60 Hz		6.5	3
6					
12				▲	
24	▲			▲ ⁽²⁾	
110	▲				
230	▲				

Available options:
▲ STANDARD
● SEMI-STANDARD
■ SPECIAL

Example : G80-BNJ-41034N1-331

G80 direct operated, plastic, 1/8" BSP, 3W NC, 2.0 orifice, NBR, plastic manual override, 24VDC 6W with connector

G80-BNJ - 4 10 3 4 N 1 - 3 3 1

(1) 3W NC available with 2.0mm orifice, 3W NO available with 1.6mm orifice
(2) 24VDC is 6Watt, 12VDC is 6.5Watt

* When ordering without coil, please define what current and pressure rating is needed (DC, AC)

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

SOLENOID VALVES | General Purpose

Direct Operated | 3W



* Available on selected models only

Direct Operated | 3W | GEM-SOL | 1/8", 1/4" NC, NO

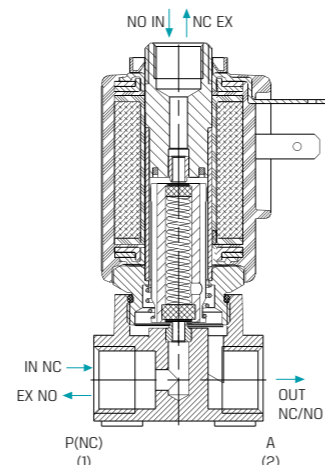
GEM-A | 1/8", 1/4" 3 Way NC, NO



Stainless Steel | slot manual override



Brass | slot manual override



Technical Data

Function	3 Way NC, NO
Ports size	1/8" and 1/4" BSP & NPT
Orifice size	See table
Pressure range	• See table • Valves for pressure higher than 25 bar cannot be supplied with manual override
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Manual override: Plastic, Brass screw or Brass finger knob, Stainless Steel for Stainless Steel valves (1) Plastic manual override : Maximum pressure : 16 bar (2) Manual override is unavailable in 3W NO through base applications Main Valve: Brass or Stainless Steel AISI 316 Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM, FFKM, PTFE
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard / Certification	• UL 429 * Available on selected models only. Contact our technical sales department for details.
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

• Latch valves are available upon request.

Max. Pressure (bar) 3W NC table

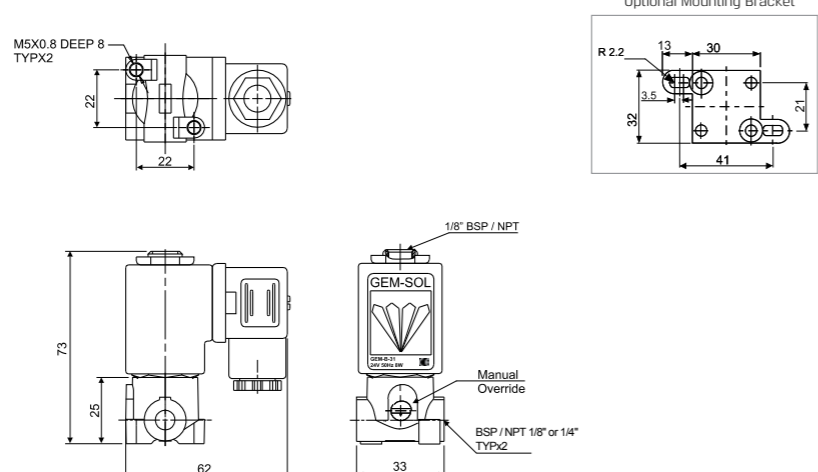
Coil Current/Power	Orifice (mm)					
	0.8	1.2	1.6	2.0	2.4	3.0
ADC *	23	20	15	10	8	5.5
AC8W, DC10W	35	30	17	14	10	6
AC5.5W	23	20	15	10	8	5.5
AC2.5W DC5.5W DC3.5W	20	16	10	9	5	4
Flow factor Kv(l/min)	0.6	1.1	1.7	2.5	3.5	4.5

Max. Pressure (bar) 3W NO table

Coil Current/Power	Orifice (mm)					
	0.8	1.2	1.6	2.0	2.4	3.0
ADC *	25	20	15	11	8	6
AC/8W DC/10W	30	22	17	12	10	7
AC/5.5W,DC/5.5W	25	20	15	11	8	6
AC/2.5W,DC/3.5W	20	18	12	8	6	4
Flow factor Kv(l/min)	0.6	1	1.4	2.2	3.0	3.5

* ADC valves are only suitable for use with AC8W or DC10W coils.

Dimensions



Three Product Ordering Categories available

- STANDARD** | Reduced lead times, No MOQ
- SEMI-STANDARD** | Normal lead times, No MOQ
- SPECIAL** | Extended lead times, Non-stock items, MOQ may be applicable

Ordering Chart

STANDARD ITEMS | Reduced lead times, No MOQ
ADC operator only

MODEL	PORT	FUNCTION	ORIFICE (mm)	SEAL MATERIAL	MANUAL OVERRIDE	CONNECTOR	MOPD (bar)	PART NO. PER VOLTAGE & POWER			
								24VDC 10W	24VAC 8W 50Hz	110VAC 8W 60Hz	230VAC 8W 50Hz
GEM-A BRASS	1/8" BSP	3W NC	1.6	NBR	Slot	with	15	1253088030 GEM-A-21033N2-331 ADC	1253088201 GEM-A-21033N2-311 ADC	1253088202 GEM-A-21033N2-521 ADC	1253088203 GEM-A-21033N2-711 ADC
			10				1253090201 GEM-A-21034N2-331 ADC	1253090202 GEM-A-21034N2-311 ADC	1253090203 GEM-A-21034N2-521 ADC	1253090204 GEM-A-21034N2-711 ADC	
			8				1253093201 GEM-A-21035N2-331 ADC	1253093202 GEM-A-21035N2-311 ADC	1253093203 GEM-A-21035N2-521 ADC	1253093204 GEM-A-21035N2-711 ADC	
			15				1253088204 GEM-A-21133N2-331 ADC	1253088205 GEM-A-21133N2-311 ADC	1253088206 GEM-A-21133N2-521 ADC	1253088207 GEM-A-21133N2-711 ADC	
			10				1253090205 GEM-A-21134N2-331 ADC	1253090206 GEM-A-21134N2-311 ADC	1253090632 GEM-A-21134N2-521 ADC	1253090207 GEM-A-21134N2-711 ADC	
			8				1253093205 GEM-A-21135N2-331 ADC	1253093206 GEM-A-21135N2-311 ADC	1253093207 GEM-A-21135N2-521 ADC	1253093208 GEM-A-21135N2-711 ADC	
	1/8" NPT	3W NO	1.6	15	1253127251 GEM-A-21043N2-331 ADC	1253127536 GEM-A-21043N2-311 ADC	1253127252 GEM-A-21043N2-521 ADC	1253127587 GEM-A-21043N2-711 ADC			
			2.0	11	1253130201 GEM-A-21044N2-331 ADC	1253130202 GEM-A-21044N2-311 ADC	1253130203 GEM-A-21044N2-521 ADC	1253130204 GEM-A-21044N2-711 ADC			
			2.4	8	1253138201 GEM-A-21045N2-331 ADC	1253138202 GEM-A-21045N2-311 ADC	1253138203 GEM-A-21045N2-521 ADC	1253138204 GEM-A-21045N2-711 ADC			
			1.6	15	1253127253 GEM-A-21143N2-331 ADC	1253127254 GEM-A-21143N2-311 ADC	1253127556 GEM-A-21143N2-521 ADC	1253127255 GEM-A-21143N2-711 ADC			
			2.0	11	1253130205 GEM-A-21144N2-331 ADC	1253130206 GEM-A-21144N2-311 ADC	1253130207 GEM-A-21144N2-521 ADC	1253130208 GEM-A-21044N2-711 ADC			
			2.4	8	1253138042 GEM-A-21145N2-331 ADC	1253138205 GEM-A-21145N2-311 ADC	1253138206 GEM-A-21145N2-521 ADC	1253138207 GEM-A-21145N2-711 ADC			
	1/4" BSP	3W NC	1.6	15	1255088333 GEM-A-22033N2-331 ADC	1255088202 GEM-A-22033N2-311 ADC	1255088203 GEM-A-22033N2-521 ADC	1255088204 GEM-A-22033N2-711 ADC			
			2.0	10	1255091030 GEM-A-22034N2-331 ADC	1255091202 GEM-A-22034N2-311 ADC	1255091203 GEM-A-22034N2-521 ADC	1255091204 GEM-A-22034N2-711 ADC			
			2.4	8	1255093030 GEM-A-22035N2-331 ADC	1255093202 GEM-A-22035N2-311 ADC	1255093203 GEM-A-22035N2-521 ADC	1255093204 GEM-A-22035N2-711 ADC			
			1.6	15	1255088032 GEM-A-22133N2-331 ADC	1255088352 GEM-A-22133N2-311 ADC	1255088205 GEM-A-22133N2-521 ADC	1255088382 GEM-A-22133N2-711 ADC			
			2.0	10	1255091205 GEM-A-22134N2-331 ADC	1255091206 GEM-A-22134N2-311 ADC	1255091207 GEM-A-22134N2-521 ADC	1255091208 GEM-A-22134N2-711 ADC			
			2.4	8	1255093205 GEM-A-22135N2-331 ADC	1255093206 GEM-A-22135N2-311 ADC	1255093207 GEM-A-22135N2-521 ADC	1255093208 GEM-A-22135N2-711 ADC			
	1/4" NPT	3W NO	1.6	15	1255127201 GEM-A-22043N2-331 ADC	1255127530 GEM-A-22043N2-311 ADC	1255127203 GEM-A-22043N2-521 ADC	1255127580 GEM-A-22043N2-711 ADC			
			2.0	11	1255130030 GEM-A-22044N2-331 ADC	1255130530 GEM-A-22044N2-311 ADC	1255130203 GEM-A-22044N2-521 ADC	1255130581 GEM-A-22034N2-711 ADC			
			2.4	8	1255138201 GEM-A-22045N2-331 ADC	1255138202 GEM-A-22045N2-311 ADC	1255138203 GEM-A-22045N2-521 ADC	1255138204 GEM-A-22045N2-711 ADC			
			1.6	15	1255127032 GEM-A-22143N2-331 ADC	1255127534 GEM-A-22143N2-311 ADC	1255127207 GEM-A-22143N2-521 ADC	1255127584 GEM-A-22143N2-711 ADC			
			2.0	11	1255130205 GEM-A-22144N2-331 ADC	1255130533 GEM-A-22144N2-311 ADC	1255130207 GEM-A-22144N2-521 ADC	1255130208 GEM-A-22144N2-711 ADC			
			2.4	8	1255138205 GEM-A-22145N2-331 ADC	1255138206 GEM-A-22145N2-311 ADC	1255138207 GEM-A-22145N2-521 ADC	1255138208 GEM-A-22145N2-711 ADC			

(continued on next page)

SOLENOID VALVES | General Purpose

Direct Operated | 3W

GEM-A | 1/8", 1/4" 3 Way NC, NO

Ordering Chart

STANDARD ITEMS | Reduced lead times, No MOQ
ADC operator only

MODEL	PORT	FUNCTION	ORIFICE (mm)	SEAL MATERIAL	MANUAL OVERRIDE	CONNECTOR	MOPD (bar)	PART NO. PER VOLTAGE & POWER				
								24VDC 10W	24VAC 8W 50Hz	110VAC 8W 60Hz	230VAC 8W 50Hz	
GEM-A	1/4" BSP	3W NC	1.6	FKM	Slot	with	15	1255088211 GEM-A-32033V2-331 ADC	1255088212 GEM-A-32033V2-311 ADC	1255088213 GEM-A-32033V2-521 ADC	1255088214 GEM-A-32033V2-711 ADC	
			2.0				10	1255091211 GEM-A-32034V2-331 ADC	1255091212 GEM-A-32034V2-311 ADC	1255091213 GEM-A-32034V2-521 ADC	1255091214 GEM-A-32034V2-711 ADC	
			2.4				8	1255093211 GEM-A-32035V2-331 ADC	1255093212 GEM-A-32035V2-311 ADC	1255093213 GEM-A-32035V2-521 ADC	1255093214 GEM-A-32035V2-711 ADC	
			1.6				15	1255088215 GEM-A-32133V2-331 ADC	1255088216 GEM-A-32133V2-311 ADC	1255088217 GEM-A-32133V2-521 ADC	1255088218 GEM-A-32033V2-711 ADC	
			2.0				10	1255091215 GEM-A-32034V2-331 ADC	1255091216 GEM-A-32134V2-311 ADC	1255091217 GEM-A-32134V2-521 ADC	1255091218 GEM-A-32134V2-711 ADC	
			2.4				8	1255093215 GEM-A-32135V2-331 ADC	1255093216 GEM-A-32135V2-311 ADC	1255093217 GEM-A-32135V2-521 ADC	1255093218 GEM-A-32135V2-711 ADC	
	SST	1/4" BSP	3W NO	1.6	FKM	Slot	with	15	1255127211 GEM-A-32043V2-331 ADC	1255127074 GEM-A-32043V2-311 ADC	1255127213 GEM-A-32043V2-521 ADC	1255127214 GEM-A-32043V2-711 ADC
				2.0				11	1255130211 GEM-A-32044V2-331 ADC	1255130212 GEM-A-32044V2-311 ADC	1255130213 GEM-A-32044V2-521 ADC	1255130214 GEM-A-32044V2-711 ADC
				2.4				8	1255138049 GEM-A-32045V2-331 ADC	1255138212 GEM-A-32045V2-311 ADC	1255138213 GEM-A-32045V2-521 ADC	1255138214 GEM-A-32045V2-711 ADC
				1.6				15	1255127149 GEM-A-32143V2-331 ADC	1255127215 GEM-A-32143V2-311 ADC	1255127216 GEM-A-32143V2-521 ADC	1255127217 GEM-A-32143V2-711 ADC
				2.0				11	1255130215 GEM-A-32144V2-331 ADC	1255130216 GEM-A-32144V2-311 ADC	1255130217 GEM-A-32144V2-521 ADC	1255130218 GEM-A-32144V2-711 ADC
				2.4				8	1255138215 GEM-A-32145V2-331 ADC	1255138216 GEM-A-32145V2-311 ADC	1255138217 GEM-A-32145V2-521 ADC	1255138218 GEM-A-32145V2-711 ADC

PART NO. PER VOLTAGE & POWER

*Standard coils are not vacuum impregnated

Direct Operated | 3W | GEM-SOL | 1/8", 1/4" NC, NO

Model Selection

- STANDARD** | Reduced lead times, No MOQ. Please refer to **Standard Items Ordering Chart**
- SEMI-STANDARD** | Normal lead times, No MOQ
- SPECIAL** | Extended lead times, Non-stock items, MOQ may be applicable. For a quote, please contact our sales department

GEM-A	BODY	PORT	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE					
Brass	2	1/8" BSP	10	3W NC	3	0.8 1	NBR	N	None	0	
			11	3W NO	4	1.2 2	FFKM (2)	V	Plastic (3)	1	
			20	3WNO (1) through base	4a	1.6 3	EPDM	E	Slot	2	
		1/4" NPT	21	2.0 4	FFKM (2)	K	Knob	3			
			2.4 5	PTFE	T						
			3.0 6								
	SST	3	1/8" BSP	10	3W NC	3	0.8 1	NBR	N	None	0
				11	3W NO	4	1.2 2	FFKM (2)	V	Plastic (3)	1
				20	3WNO (1) through base	4a	1.6 3	EPDM	E	Slot	2
		1/4" NPT	21	2.0 4	FFKM (2)	K	Knob	3			
			2.4 5	PTFE	T						
			3.0 6								

* For available options, please refer to **VOLTAGE & POWER CONSUMPTION** table below

VOLTAGE	POWER	CONNECTOR
No coil	0	None
6	1	AC8W 50Hz
12	2	AC8W 60Hz
24	3	DC10W
48	4	AC5.5W50Hz
110	5	AC5.5W60Hz
120	6	AC2.5W 50/60Hz
220	7A	DC5.5W
230	7	DC3.5W
240	8	
Latch/other(4)	9	

Voltage & Power Consumption

V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
6							●	●	●
12	●			●			●	●	●
24	▲	●	●	●	●	●	▲		●
48	●			●			●		
110	●			▲	●		●		
120	●			●					
220	●	●	●	●			●		
230	▲	●		●	●				
240	●			●			●		

Available options :
 ▲ STANDARD
 ● SEMI-STANDARD
 ■ SPECIAL

Example : GEM-A-21035N2-311

GEM-SOL direct operated brass, 1/8"BSP, 3W NC, 2.4 orifice, NBR, slot manual override, 24V AC8W 50Hz with connector

GEM-A - 2 10 3 5 N 2 - 3 1 1

- (1) Option 4a : manual override is not available
- (2) FFKM O-ring is available only upon request. When ordering FFKM seals, please consult with our technical sales department about O-ring compound
- (3) Maximum pressure : 16 bar
- (4) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table

* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

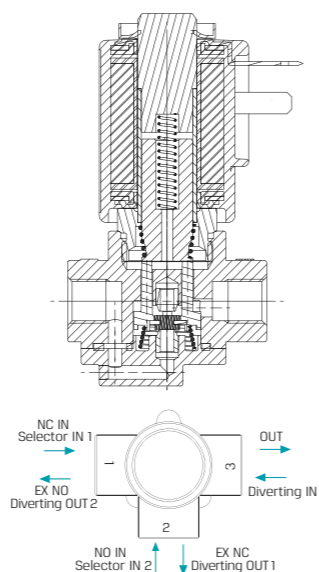
SOLENOID VALVES | General Purpose

Direct Operated | 3W

GEM-U | Universal 1/8", 1/4"



General purpose | 1/8"



Technical Data

Function	3 Way NC, NO selecting & diverting
Ports size	1/8", 1/4" BSP & NPT
Orifice size	See table
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Brass Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

- ADC valves are only suitable for use with AC8W or DC10W coils.
- Latch valves are available upon request.

Max. Pressure (bar) universal function

Coil Current/Power	Orifice (mm)			
	1.6	2.0	2.4	3.0
AC8W	14	9	6.5	3
AC5.5W	11	8	5.5	3
DC10W	10	8	5.5	3
Flow factor Kv(l/min)	1.7	2.5	3.5	4.5

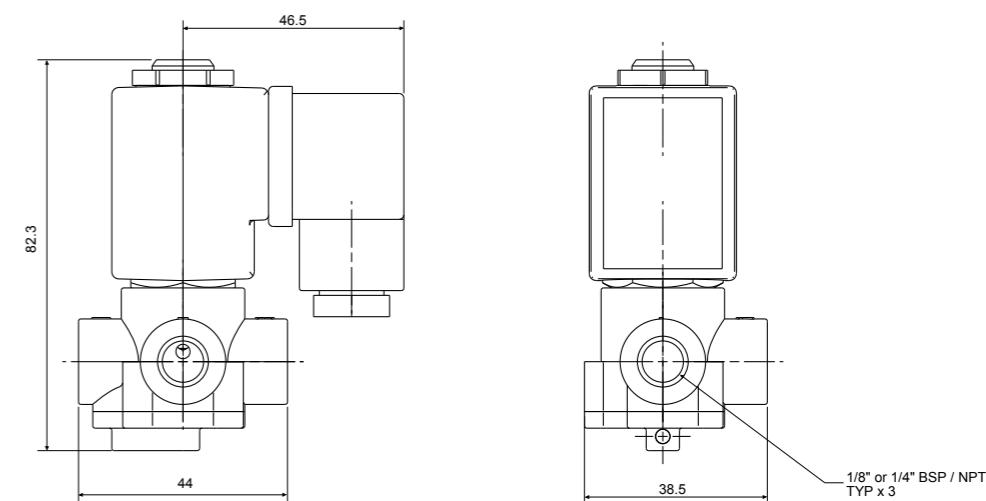
Voltage & Power Consumption

V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
	8	5.5	2.5	8	5.5	2.5			
6							•		
12	•			•			•		
24	•	•		•	•		•		
48	•			•			•		
110	•			•	•		•		
120	•			•					
220	•	•		•			•		
230	•	•		•	•				
240	•			•			•		

• Available options

Direct Operated | 3W | GEM-SOL | Universal 1/8", 1/4"

Dimensions



How to Order

GEM-U	BODY	PORT	FUNCTION	ORIFICE	SEALS	VOLTAGE	POWER	CONNECTOR								
	Brass	2	1/8" BSP	10	diverter ⁽¹⁾	5	1.6	3	NBR	N	W/out coil	0	No coil	0	without	0
			1/8" NPT	11	general purpose	9	2.0	4	FKM	V	6	1	AC8W 50Hz	1	with	1
			1/4" BSP	20			2.4	5	EPDM	E	12	2	AC8W 60Hz	2	with LED	2
			1/4" NPT	21			3.0	6			24	3	DC10W	3	with bi-color LED	3
											48	4	AC5.5W 50Hz	4	flying leads coil	4
											110	5	AC5.5W 60Hz	5	with 1/2" Hub	5
											120	6			connector with moulded cable	7
											220	7A				
											230	7				
											240	8				
											Latch/other ⁽²⁾	9				

Example : GEM-U-21095N-311

GEM-SOL direct operated, brass, 1/8" BSP, universal function, 2.4 orifice, NBR, 24V AC 8W 50Hz with connector.

GEM-U - 2 10 9 5 N - 3 1 1

(1) Use only for DC

(2) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied.

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

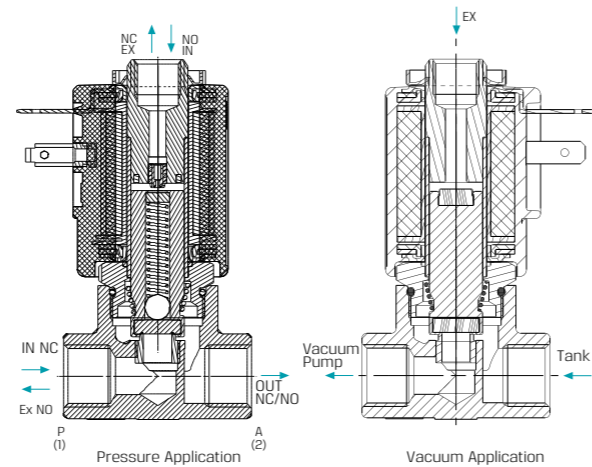
SOLENOID VALVES | General Purpose

Direct Operated | 3W

GEM-A | Large orifice 1/4" 3 Way NC, NO (pressure & vacuum)



Brass | pressure | 6mm orifice



Technical Data

Function	3 Way NC, NO
Ports size	1/4" BSP & NPT
Orifice size	Bottom orifice : 8.0mm, 6.0mm, 4.5mm Top orifice : 3mm, 4.5mm, 5mm (see table)
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Brass or Stainless Steel AISI 316 Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: FKM, EPDM, FFKM
Media	Air, water
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

• These valves have been especially designed for electronic automatic vacuum milking systems.

Vacuum Application (bar)

Function	Orifice (mm)		
	4.5	6.0	8.0
3W NC	-1	-1	-1
3W NO	-1 to 1	-1 to 0.5	NA
Flow factor Kv(l/min)	5	6	10

Pressure Application (bar)

Function	Orifice (mm)		
	4.5	6.0	8.0
3W NC	2.8	1.6	0.5
3W NO (for 3mm top orifice)	4	1.5	NA
Flow factor Kv(l/min)	5	6	10

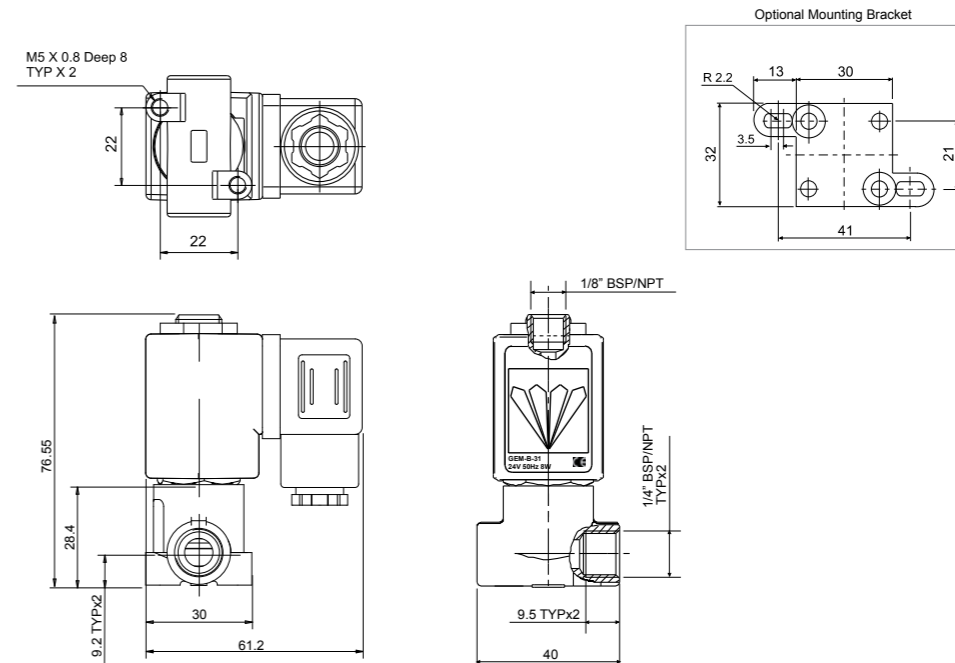
Voltage & Power Consumption

V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
	8	5.5	2.5	8	5.5	2.5			
6							•		
12	•			•			•		
24	•			•			•		
48	•			•			•		
110	•			•			•		
120	•			•			•		
220	•			•			•		
230	•			•	•		•		
240	•			•			•		

• Available options

Direct Operated | 3W | GEM-SOL | Large orifice 1/4" NC, NO

Dimensions



How to Order

GEM-A	BODY	PORT	FUNCTION	PRESSURE	ORIFICE (1)	SEALS	VOLTAGE	POWER	CONNECTOR									
	Brass	2	1/4" BSP	20	3W NC	3	Pressure	1	6.0	8	FKM	V	W/out coil	0	No coil	0	without	0
	Stainless Steel	3	1/4" NPT	21	3W NO	4	Vacuum	2	4.5	9	EPDM	E	6	1	ACBW 50Hz	1	with	1
									8.0 (2)	a	FFKM	K	12	2	ACBW 60Hz	2	with LED	2
													24	3	DC10W	3	with bi-color LED	3
													48	4			flying leads coil	4
													110	5			with 1/2" Hub	5
													120	6			surge protection with LED	6
													220	7A			connector with moulded cable	7
													230	7			other	9
													240	8				
													Latch/other (3)	9				

Orifice Table (mm)

Current	Bottom	Top
DC	4.5	4.5
DC	6	5
DC	8	5
AC	4.5 / 6	3

Example : GEM-A-220318V-331

GEM-SOL direct operated brass, 1/4" BSP, 3W NC, pressure, 6.0 orifice, FKM seals, 24V DC 10W with connector.

GEM-A - 2 20 3 1 8 V - 3 3 1

(1) See Orifice table

(2) Not available in NO valve

(3) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied.

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

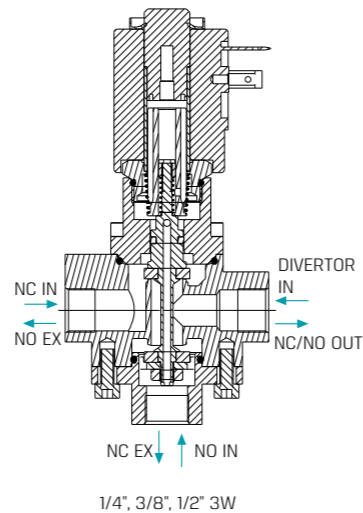
SOLENOID VALVES | General Purpose

Direct Operated | 3W

GEM-X | General purpose 1/4" - 1/2" 3 Way



Brass | 1/4" - 1/2"



Technical Data

Function	3 Way General purpose
Ports size	1/4", 3/8", 1/2" BSP & NPT
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Brass Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, EPDM
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

Pressure (bar) & Flow table NC, NO & diverter

Size	Orifice(mm)	Pressure (bar)	Kv(L/min)
1/4"	8	-1 to 3	12
3/8"	12	-1 to 5	16
1/2"	12	-1 to 5	35

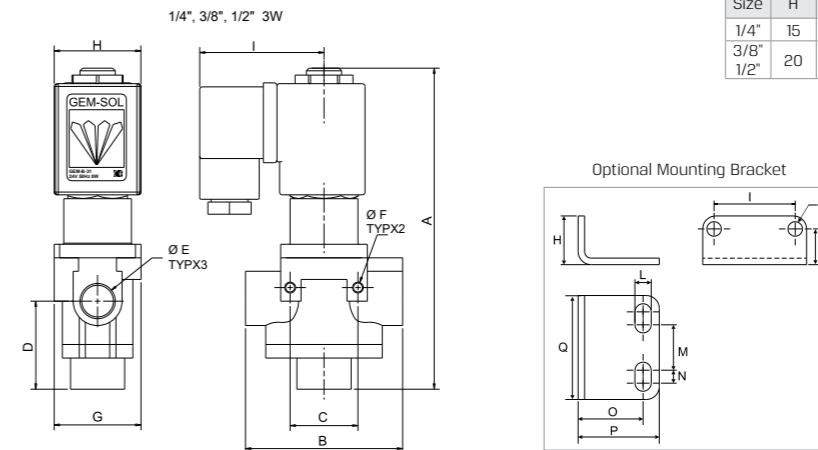
Voltage & Power Consumption 1/4" valves

V	AC						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
6							•		
12	•			•			•		
24	•			•			•		
48	•			•			•		
110	•			•			•		
120	•			•					
220	•			•			•		
230	•			•					
240	•			•			•		

• Available options

Direct Operated | 3W | GEM-SOL | General purpose 1/4" - 1/2"

Dimensions



Size	A	B	C	D	E	F	G	H	I
1/4"	118.5	58	25	32.5	1/4" 3/8"	M4X0.7 Deep 6	32	32	45.9
3/8" 1/2"	147.8	69	30	41	1/2"	M5X0.8 Deep 7	38	45	59.7

Optional Mounting Bracket

Size	H	I	J	K	L	M	N	O	P	Q
1/4"	15	25	Ø4.5	11	5	14	4	20	25	32
3/8" 1/2"	20	30	Ø6	13	6	22	4	25	33	40

How to Order

GEM-X	BODY	PORT	FUNCTION	SEALS	BRACKET	* When ordering without coil, please define what current and pressure rating is needed (DC, AC)														
						VOLTAGE	POWER	CONNECTOR												
Brass	2	1/4" BSP	20	general purpose	9	NBR	N	without	0	W/out coil	0	No coil	0	without	0					
		1/4" NPT								21	EPDM	E	with	1	6	1	AC8W 50Hz	1	with	1
		3/8" BSP								30					12	2	AC8W 60Hz	2	with LED	2
		3/8" NPT								31					24	3	DC10W	3	with bi-color LED	3
		1/2" BSP								40					48	4			flying leads coil	4
		1/2" NPT								41					110	5			with 1/2" Hub	5
						120	6			surge protection with LED	6									
						220	7A			connector with moulded cable	7									
						230	7			other	9									
						240	8													
						Latch/other (1)	9													

Example : GEM-X-2209N0-331

GEM-SOL general purpose direct operated, brass, 1/4" BSP, 3W general purpose, NBR, without bracket, 24V DC 10W with connector.

GEM-X - 2 20 9 N 0 - 3 3 1

(1) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

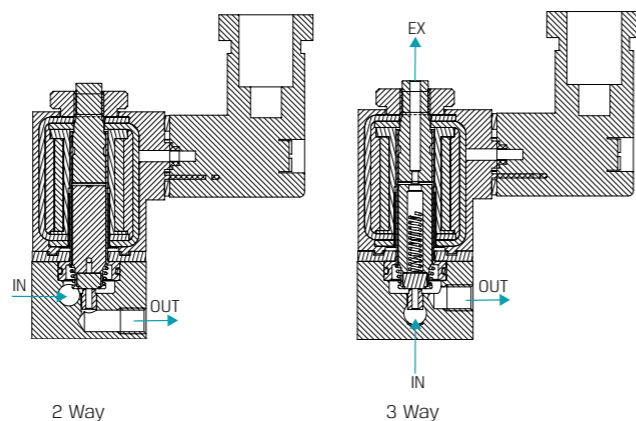
SOLENOID VALVES | General Purpose

Direct Operated | Manifolds

G65-M | Solenoid Valves Manifold



3 Stations



Technical Data

Function	2 Way, 3 Way NC
Ports size	M5, #10UNF
Orifice size	See table
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Aluminium Solenoid Operator: Stainless Steel AISI 300 & 400 series, Brass Seals: NBR, FKM, EPDM
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector

Max. Pressure (bar) 2W, 3W NC table

Coil Current/Power	Orifice (mm)		
	0.8	1.0	1.2
AC - 3.6VA	10	8.5	5.5
DC - 3W	10	8.5	5.5
Flow factor Kv(l/min)	0.4	0.5	0.65

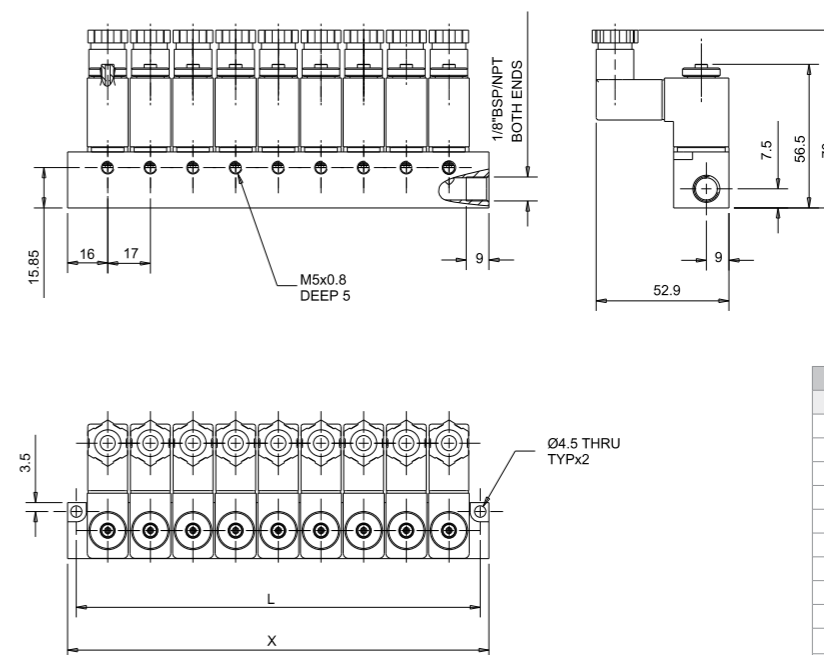
Voltage & Power Consumption

V	AC 50Hz		DC (W)
	3.2VA	3.6VA	3
12			•
24		•	•
110		•	
230	•		

• Available options

Direct Operated | Manifolds | G65

Dimensions



Station		
Station	X(mm)	L(mm)
2	49	42
3	66	59
4	83	76
5	100	93
6	117	110
7	134	127
8	151	144
9	168	161
10	185	178
11	202	195
12	219	212

How to Order

G65-M	# STATIONS	BODY (1)	PORT	FUNCTION	ORIFICE	SEALS	VOLTAGE	POWER	CONNECTOR							
Specify 02 - 12	Aluminium	1	M5	00	2W NC	1	0.8	1	NBR	N	W/out coil	0	No coil	0	without	0
			#10UNF	01	3W NC	3	1.0	2	FKM	V	12	2	AC3.6VA (2)	1	with	1
							1.2	3	EPDM	E	24	3	DC3W	3	other	9
							110	5								
							230	7								

Example : G65-M-0810133N-311

G65 direct operated manifold, 8 stations, aluminium, #10UNF, 3W NC, 1.2mm orifice, NBR, 24V AC 3.6VA 50 Hz with connector.

G65-M - 08 1 01 3 3 N - 3 1 1

(1) For Stainless Steel tube add "s" : e.g. G65-M - X Xs X X X X X X X X X

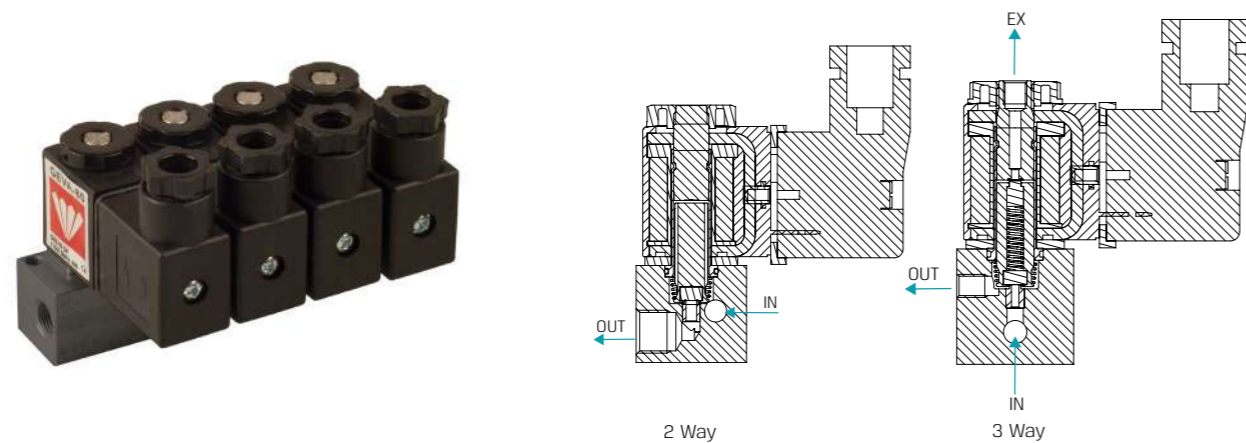
(2) When choosing 230V AC, the power is 3.2VA

* To order manifolds manufactured according to your specific requirements, please contact our technical sales department.

SOLENOID VALVES | General Purpose

Direct Operated | Manifolds

G80-M | Solenoid Valves Manifold



Technical Data

Function	2 Way, 3 Way NC
Orifice size	See table
Ports size	1/8" BSP & NPT, M5, #10UNF
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Mounting	Coil can be mounted in 2 positions at 180° apart and the coil plug can rotate to 2 positions at 180°.
Materials in contact with media	Main Valve: Aluminium, Stainless Steel AISI 316, Brass Solenoid Operator: Stainless Steel AISI 300 & 400 series, Brass Seals: NBR, FKM, EPDM, FFKM
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector

Max. Pressure (bar) 2W, 3W NC table

Coil Current/Power	Orifice (mm)	
	1.2	1.6
AC - 7.5W	12	10.5
AC - 4W	10	7
DC - 6.5W ⁽²⁾	12	10.5
DC - 3W	10	7
Flow factor Kv(l/min)	0.65	1

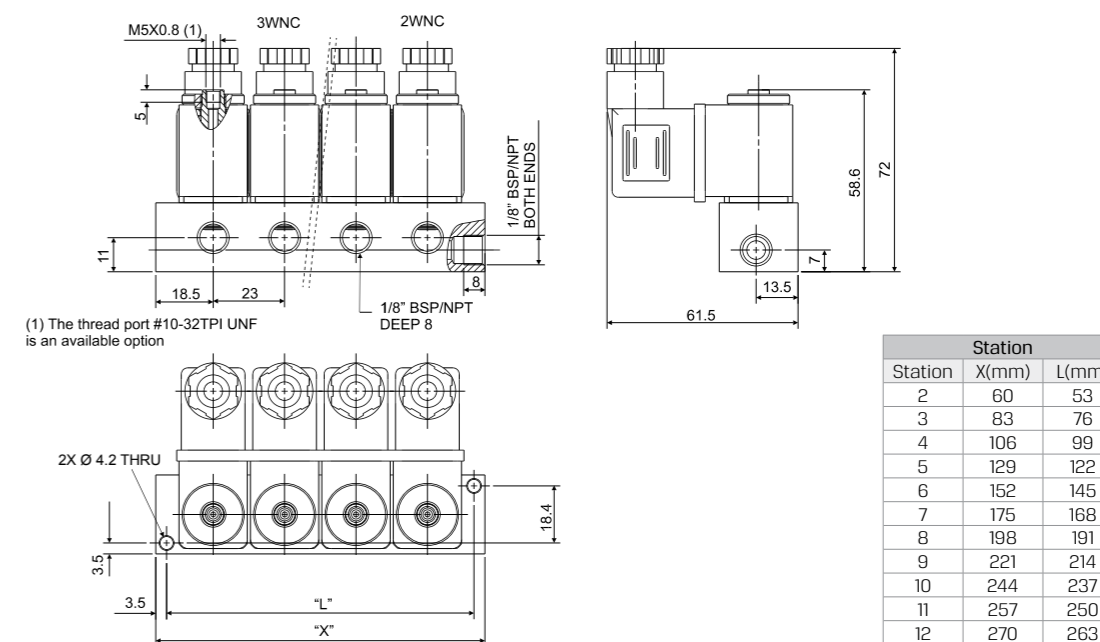
Voltage & Power Consumption

V	AC (W)				DC (W)	
	75	4	6	3	6.5	3
6					•	•
12	•	•	•	•	•	•
24	•	•	•	•	• ⁽²⁾	•
110	•	•	•	•		
230	•	•	•	•		

• Available options

Direct Operated | Manifolds | G80

Dimensions



How to Order

G80-M	# STATIONS	BODY ⁽¹⁾	PORT	FUNCTION	ORIFICE	SEALS	VOLTAGE	POWER	CONNECTOR					
Specify 00-12	Aluminium	1	M5	00	2W NC	1 1.2 2	NBR	N	W/out coil	0	No coil	0	without	0
	Brass	2	#10UNF	01	2W NO	2 1.6 3	FKM	V	6	1	AC7.5W 50Hz	1	with	1
	Stainless Steel	3	1/8" BSP	10	3WNC	3	EPDM	E	12	2	AC6W 60Hz	2	with bi-color LED	2
			1/8" NPT	11	3WNO	4	FFKM	K	24	3	DC6.5W ⁽²⁾	3	surge protection with LED	3
									110	5	AC4W 50Hz	4	flying leads coil	4
									230	7	AC3W 60Hz	5	other	9
									other	9	DC3W	7		

* When ordering without coil, please define what current and pressure rating is needed (DC, AC)

Example : G80-M-0811033N-311

G80, 8 station manifold, aluminium, 1/8" BSP, 3W NC, 1.6mm orifice, NBR, 24V AC 7.5W 50Hz with connector.

G80-M - 08 1 10 3 3 N - 3 1 1

(1) For Stainless Steel tube add "s" : e.g. G80-M - Xs X X X X X X X X X X

(2) 24VDC is 6Watt, 12VDC is 6.5Watt

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

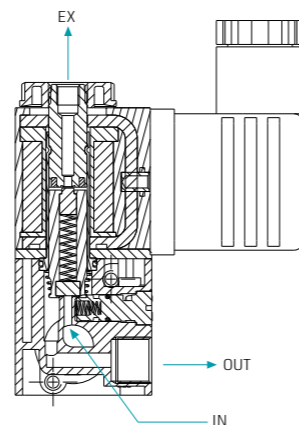
SOLENOID VALVES | General Purpose

Direct Operated | Manifolds

G80-C | Added-on Manifold



4 Station Manifold | plastic manual override



Technical Data

Function	2 Way, 3 Way NC
Orifice size	See table
Ports size	1/8" BSP & NPT
Pressure range	• See table • Valves for pressure higher than 12 bar cannot be supplied with manual override.
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Assembly	You can assemble your own manifold by adding segments. A set of two units can be connected by using two designated screws. For the first "stand" a different kit of screws is used.
Materials in contact with media	Manual override: Plastic Main Valve: Mazak Solenoid Operator: Brass, Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector

Max. Pressure (bar) 2W, 3W NC table

Coil Current/Power	Orifice (mm)		
	1.0	1.2	1.6
AC - 75W	15	12	10.5
AC - 4W	12	10	7
DC - 6.5W ⁽²⁾	15	12	10.5
DC - 3W	12	10	7
Flow factor Kv(l/min)	0.5	0.65	1

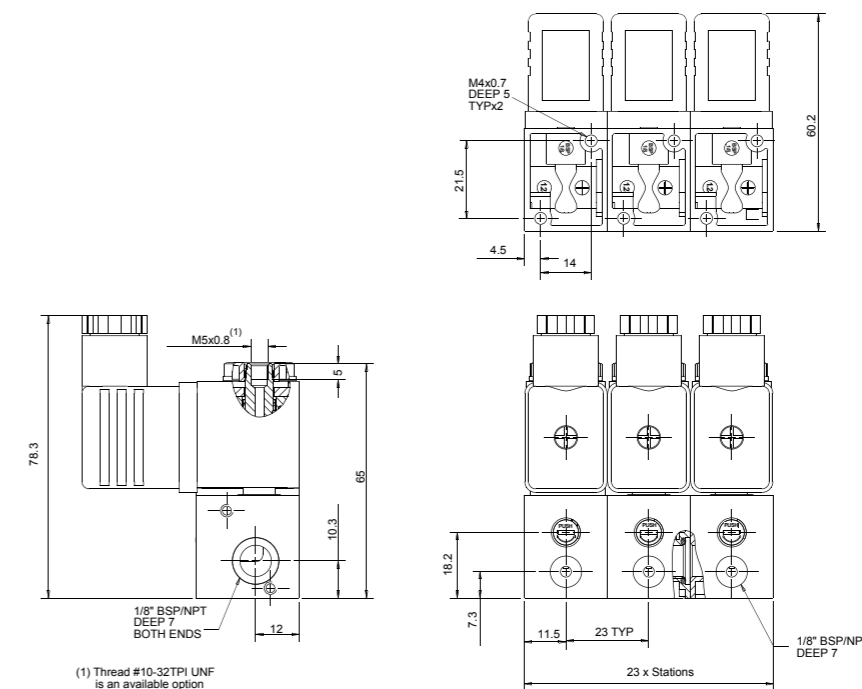
Voltage & Power Consumption

V	AC (W)				DC (W)	
	75	4	6	3	6.5	3
6					•	•
12	•	•	•	•	•	•
24	•	•	•	•	• ⁽²⁾	•
110	•	•	•	•		
230	•	•	•	•		

• Available options

Direct Operated | Manifolds | G80

Dimensions



How to Order

G80-C	# STATIONS	BODY ⁽¹⁾	PORT	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE	VOLTAGE	POWER	CONNECTOR
	Specify number 00-nn	Mazak 1	1/8" BSP 10	2W NC 1	1.0 1	NBR N	Plastic 1	W/out coil 0	No coil 0	without 0
			1/8" NPT 11	2W NO 2	1.2 2	FKM V		6 1	AC75W 50Hz 1	with 1
				3W NC 3	1.6 3	EPDM E		12 2	AC6W 60Hz 2	with bi-color LED 2
				3W NO 4				24 3	DC6.5W ⁽²⁾ 3	surge protection with LED 3
								110 5	AC4W 50Hz 4	flying leads coil 4
								230 7	AC3W 60Hz 5	other 9
								other 9	DC3W 7	

* When ordering without coil, please define what current and pressure rating is needed (DC, AC)

Example : G80-C-0611032N1-311

G80, 6 stations added-on manifold, Mazak, 1/8" BSP, 3W NC, 1.2mm orifice, NBR, with plastic manual override, 24V AC 75W with connector.

G80-C - 06 1 10 3 2 N 1 - 3 1 1

(1) For Stainless Steel tube add "s" : e.g. G80-C - X Xs X X X X X X X X X X

(2) 24VDC is 6Watt, 12VDC is 6.5Watt

* To order manifolds manufactured according to your specific requirements, please contact our technical sales department.



GEM-V/VL | Modular Manifold Installation



Brass | 5 valves

Technical Data

Function	2 Way, 3 Way NC, NO
Pressure range	<ul style="list-style-type: none"> See table Valves for pressure higher than 25 bar cannot be supplied with manual override.
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Mounting	Vertical, on sub-base, 2 screws M4. Any number of valves on the same sub-base plate. Any combination of 2/2, 3 Way NC or NO valves may be grouped together. * Standard valve orientation : Manual override and base port on the same side
Materials in contact with media	Manual override: Plastic, Brass screw or finger knob. NOa* - manual override is not available. *pressure is supplied through the base Main Valve: Brass Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM
Media	Air, water, oil
Coil voltage	<ul style="list-style-type: none"> Voltage and power consumption - see table All Baccara coil voltages are ± 10% of nominal
Standard / Certification	<ul style="list-style-type: none"> UL 429 * Available on selected models only. Please contact our technical sales department for details.
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

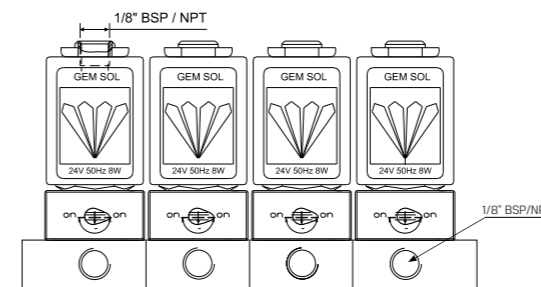
- Latch valves are available upon request.
- Pressure separation plug is available.

Two types of NO valves :

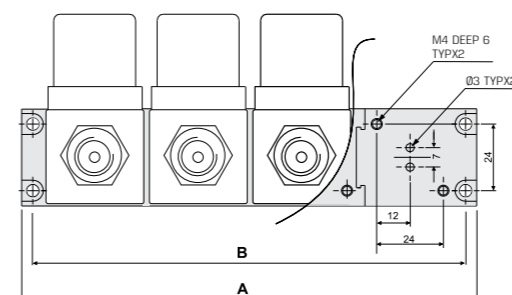
- Supply pressure is through the base like NC valves. These valves can be combined in a standard manifold. They are not supplied with manual override.
- Supply pressure is through the tube. These valves cannot be combined in a standard manifold. They are supplied with manual override.

When using a manifold with more than 8 stations, it is advisable to use two air supplies, one at each end.

Dimensions



*Standard valve orientation : Manual override and base port on the same side



$$A = 80 + (n - 2) \times 33$$

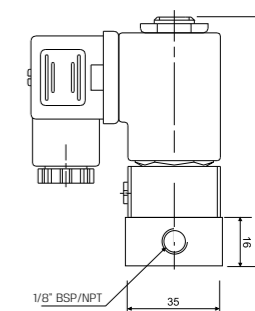
$$B = 72 + (n - 2) \times 33$$

n = the number of valves

Example : For 6 Valves

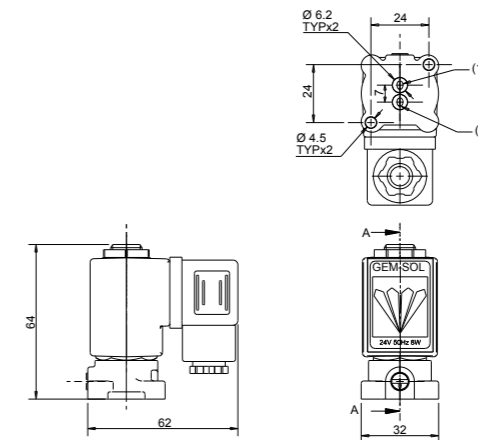
$$A = 80 + 4 \times 33 = 212$$

$$B = 72 + 4 \times 33 = 204$$

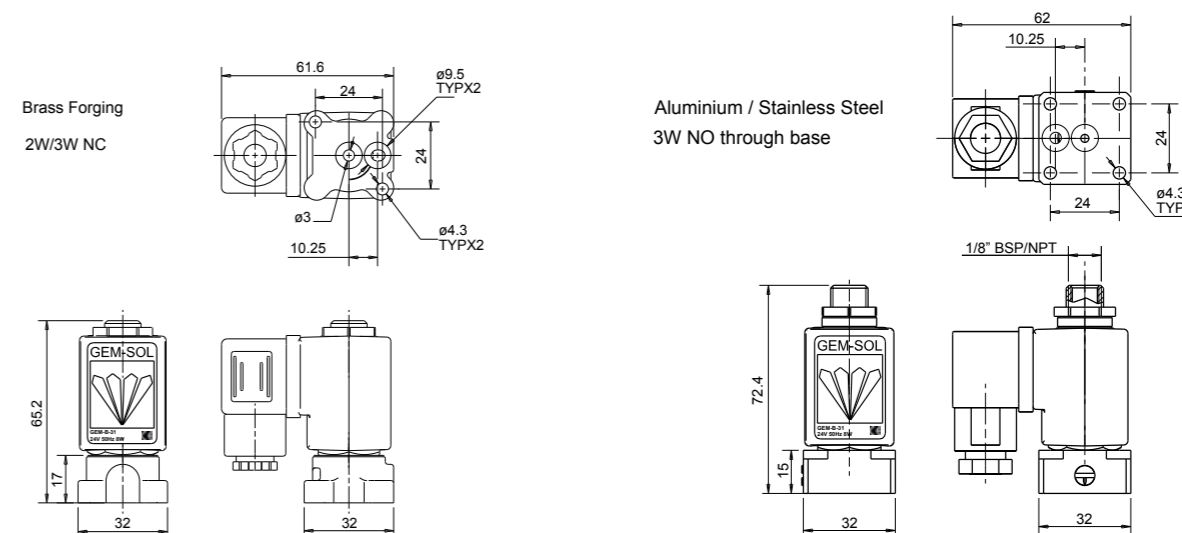


*Pressure separation plug can be ordered on request.

TYPE V



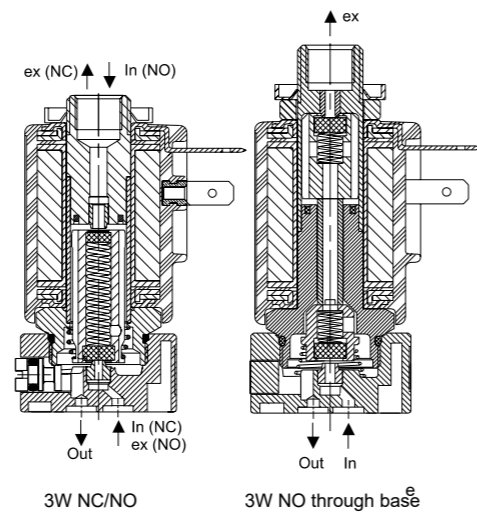
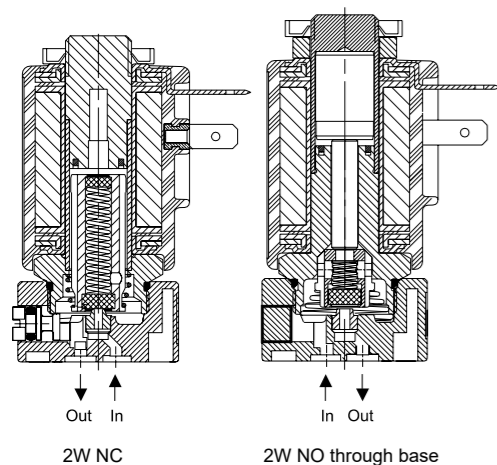
TYPE VL



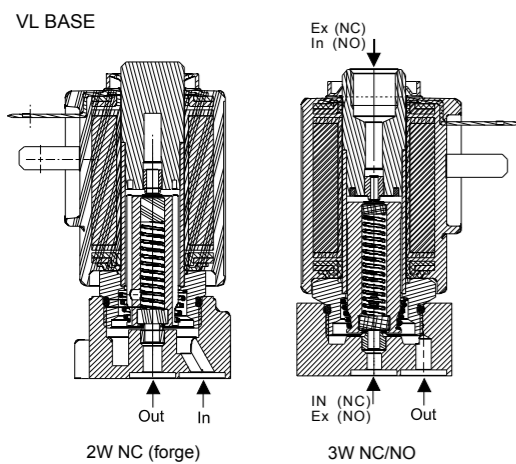
SOLENOID VALVES | General Purpose

Direct Operated | Manifolds | GEM-SOL

Type V 2 Way, 3 Way NC, NO



Type VL 2 Way, 3 Way NC, NO



Size : Any number of stations, built from three basic components: left end section, right end section and middle section.
 Assembly : Push in and turn 90° clockwise
 Port size : 1/8" BSP or NPT
 Material : Brass

Max. Pressure (bar) 2W, 3W NC table

Coil Current/Power	Orifice (mm)					
	0.8	1.2	1.6	2.0	2.4	3.0
• ADC	23	20	15	10	8	5.5
AC8W, DC10W	35	30	17	14	10	6
AC5.5W	23	20	15	10	8	5.5
AC2.5W, DC5.5W, DC3.5W	20	16	10	9	5	4
Flow factor Kv(l/min)	0.6	1.1	1.7	2.5	3.5	4.5

Max. Pressure (bar) 2W, 3W NO table

Coil Current/Power	Orifice (mm)					
	0.8	1.2	1.6	2.0	2.4	3.0
• ADC	25	20	15	11	8	6
*AC8W, DC10W	30	22	17	12	10	7
*AC5.5W, DC5.5W	25	20	15	11	8	6
*AC2.5W, DC3.5W	20	18	12	8	6	4
Flow factor Kv(l/min)	0.6	1	1.4	2.2	3.0	3.5

* These are not applicable for NO through base valves
 • ADC valves are only suitable for use with AC8W or DC10W coils.

Voltage & Power Consumption

V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
	8	5.5	2.5	8	5.5	2.5			
6							•	•	•
12	•			•			•	•	•
24	•	•		•	•		•		•
48	•			•			•		
110	•			•	•		•		
120	•			•					
220	•	•		•			•		
230	•	•		•	•				
240	•			•			•		

* Available options

How to Order manifold components

GEM-V	PORT	COMPONENT	BODY
	BSP 10	Left 1	Brass 2
	NPT 11	Right 2	
		Middle 3	

Example : GEM-V-1022

GEM-SOL V type manifold 1/8" BSP, right component, Brass body.

GEM-V - 10 2 2

* To order manifolds manufactured according to your specific requirements, please contact our technical sales department.

Direct Operated | Manifolds | GEM-SOL

How to Order | GEM-V manifold | all valves having identical functions

GEM-V	No. of VALVES / specify quantity	No. of STATIONS / specify quantity without manifold	PORT	BODY	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE	VOLTAGE	POWER	CONNECTOR
		0	1/8" BSP 10	Brass 2	2W NC 1	0.8 1	NBR N	None 0	W/out coil 0	No coil 0	without 0
			1/8" NPT 11		2W NO 2	1.2 2	FKM V	Plastic 1	6 1	AC8W 50Hz 1	with 1
					2W NO (1) 2a	1.6 3	EPDM E	Slot 2	12 2	AC8W 60Hz 2	with LED 2
					3W NC 3	2.0 4		Knob 3	24 3	DC10W 3	with bi-color LED 3
					3W NO 4	2.4 5		Push 4	48 4	AC5.5W 50Hz 4	flying leads coil 4
					3W NO (1) 4a			Push lock 5	110 5	AC5.5W 60Hz 5	with 1/2" Hub 5
									120 6	AC2.5W 50/60Hz 6	connector with moulded cable 7
									220 7A	DC5.5W 7	other 9
									230 7	DC3.5W 8	
									240 8		
									Latch/ other (2) 9		

Example : GEM-V-6/6-10232V2-220

GEM-SOL direct operated sub-base V type, 1/8" BSP with Brass body, 3WNC, 1.2, FKM, slot M/O, 12V AC 8W 60Hz without connector.

GEM-V - 6 6 10 2 3 2 V 2 2 2 0

(1) Supply pressure through base
 (2) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

How to Order | GEM-V | individual valves with independent functions

GEM-V	No. of VALVES / specify quantity	No. of STATIONS / specify quantity	PORT	BODY	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE	VOLTAGE	POWER	CONNECTOR
As above table											

GEM-SOL direct operated sub-base V type of which :
 Example : GEM-V-2/6-10232NO-221 : 2/6 stations with 1/8" BSP Brass, 3WNC, 1.2, NBR, no M/O, 12V AC 8W 60Hz with connector
 Example : GEM-V-3/6-10242NO-221 : 3/6 stations with 1/8" BSP Brass, 3WNO, 1.2, NBR, no M/O, 12V AC 8W 60Hz with connector
 Example : GEM-V-1/6-10212NO-221 : 1/6 stations with 1/8" BSP Brass, 2WNC, 1.2, NBR, no M/O, 12V AC 8W 60Hz with connector

How to Order | GEM-V body

GEM-V-BODY	PORT	BODY	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE	VOLTAGE	POWER	CONNECTOR
	1/8" BSP 10	Brass 2	2W NC 1	0.8 1	NBR N	None 0	W/out coil 0	No coil 0	without 0
	1/8" NPT 11		2W NO 2	1.2 2	FKM V	Plastic 1	6 1	AC8W 50Hz 1	with 1
			2W NO (1) 2a	1.6 3	EPDM E	Slot 2	12 2	AC8W 60Hz 2	with LED 2
			3W NC 3	2.0 4		Knob 3	24 3	DC10W 3	with bi-color LED 3
			3W NO 4	2.4 5		Push 4	48 4	AC5.5W 50Hz 4	flying leads coil 4
			3W NO (1) 4a			Push lock 5	110 5	AC5.5W 60Hz 5	with 1/2" Hub 5
							120 6	AC2.5W 50/60Hz 6	connector with moulded cable 7
							220 7A	DC5.5W 7	other 9
							230 7	DC3.5W 8	
							240 8		
							Latch/ other (2) 9		

Example : GEM-V-BODY-10232V2-220

GEM-SOL direct operated V type valve, 1/8" BSP with Brass body, 3WNC, 1.2, FKM, slot M/O, 12V AC 8W 60Hz without connector.

GEM-V-BODY - 10 2 3 2 V 2 2 2 0

(1) Supply pressure through base
 (2) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

How to Order | GEM-VL

GEM-VL	PORT	BODY	FUNCTION	ORIFICE	SEALS	MANUAL OVERRIDE	VOLTAGE	POWER	CONNECTOR
	1/8" BSP 10	Brass 2	2W NC 1	0.8 1	NBR N	None 0	W/out coil 0	No coil 0	without 0
	1/8" NPT 11		2W NO 2	1.2 2	FKM V	Plastic 1	6 1	AC8W 50Hz 1	with 1
			2W NO (1) 2a	1.6 3	EPDM E	Slot 2	12 2	AC8W 60Hz 2	with LED 2
			3W NC 3	2.0 4		Knob 3	24 3	DC10W 3	with bi-color LED 3
			3W NO 4	2.4 5		Push 4	48 4	AC5.5W 50Hz 4	flying leads coil 4
			3W NO (1) 4a			Push lock 5	110 5	AC5.5W 60Hz 5	with 1/2" Hub 5
				3.0 6			120 6	AC2.5W 50/60Hz 6	connector with moulded cable 7
							220 7A	DC5.5W 7	other 9
							230 7	DC3.5W 8	
							240 8		
							Latch/ other (2) 9		

Example : GEM-VL-1021V0-221

GEM-SOL direct operated VL type valve, 1/8" BSP with Brass body, 2WNC, 0.8, FKM, no M/O, 12V AC 8W 60Hz with connector.

GEM-VL - 10 2 1 1 V 0 2 2 1

(1) Supply pressure through base
 (2) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

*Note: Manifolds are not available for VL valves

SOLENOID VALVES | General Purpose

Pilot Operated | 2W



* Available on selected models only

GEM-S | 1/4" - 1" 2 Way NC, NO



Brass | NC |
knob manual override

Brass | NO |
slot manual override

Stainless Steel | 1/2"

Stainless Steel | 1"

Technical Data

Function	2 Way NC, NO
Ports size	1/4", 3/8", 1/2", 3/4", 1" BSP & NPT
Pressure range	See table *Minimum pressure differential of 0.3 or 0.5 is required
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Manual override: NC/NO - Brass screw NOa* - manual override is not available *pressure is supplied through the base Main Valve: Brass Stainless Steel AISI 316 Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard / Certification	• UL 429 * Available on selected models only. Please contact our technical sales department for details.
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

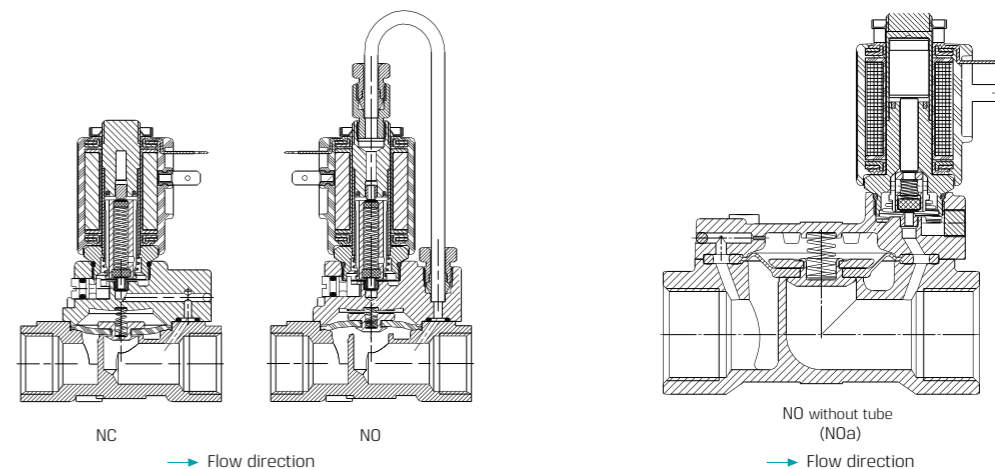
• Slow closing system to prevent water hammer effect

Voltage & Power Consumption

V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
6							•		
12	•			•			•		
24	•			•			•		
48	•			•			•		
110	•			•			•		
120	•			•					
220	•			•			•		
230	•			•	•				
240	•			•			•		

• Available options

Pilot Operated | 2W | GEM-SOL | 1/4" - 1" NC, NO



Pressure (bar) & Flow table NO/NC GEM-S-□-20...41

Size	Orifice (mm)	Pressure (bar)		Kv (l/min)
		AC, DC	ADC	
1/4"	8			12
3/8"	8	0.5 to 20	0.5 to 15	16
1/2"	12			35

Pressure (bar) & Flow table NO/NC GEM-S-□-□

Size	Orifice (mm)	Pressure (bar)		Kv (l/min)
		AC, DC	ADC	
1/2"	16			60
3/4"	16	0.5 to 20	0.5 to 15	80

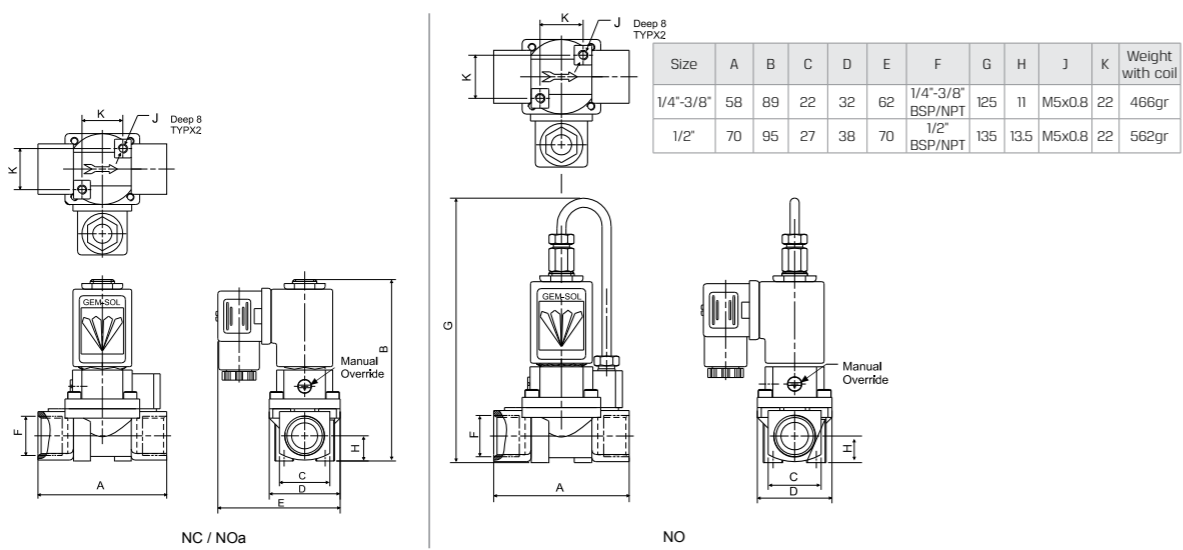
Pressure (bar) & Flow table NO/NC GEM-S-□-50...60

Port Connection	Orifice (mm)	Pressure range (bar) AC, DC & ADC	Kv (l/min)
3/4"	20	0.3-15	130
1"	25	0.5-15	200

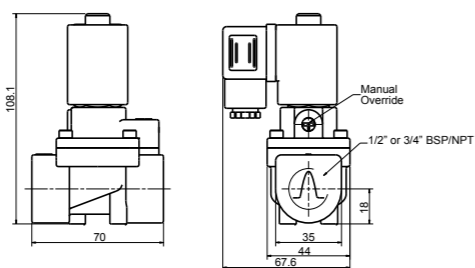
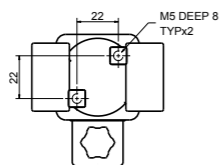
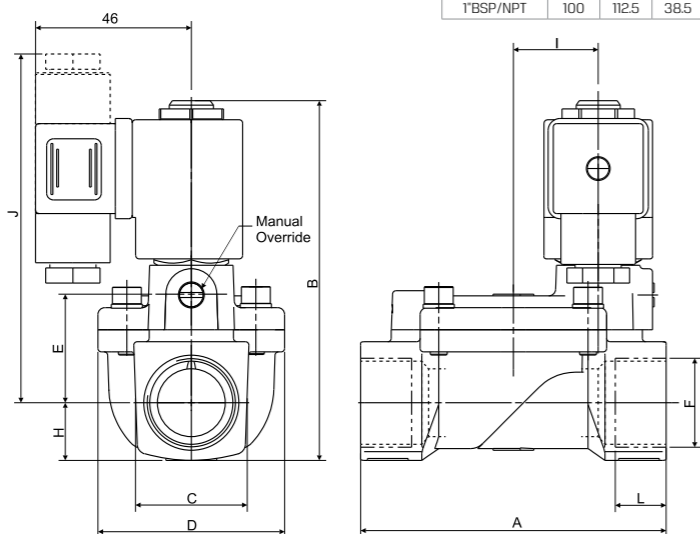
SOLENOID VALVES | General Purpose

Pilot Operated | 2W | GEM-SOL

Dimensions



Size	A	B	C	D	E	H	L	I	J
3/4" BSP/NPT	90	106	32	55	32	17	15	25	103
TBSP/NPT	100	112.5	38.5	65	34	21	16	29.5	109.50



GEM-□r 16mm orifice
NC / NOa

Pilot Operated | 2W | GEM-SOL | 1/4" - 1" NC, NO

How to Order

GEM-S	BODY	PORT	FUNCTION	SEALS	MANUAL OVERRIDE	VOLTAGE	POWER	CONNECTOR								
Brass	2	1/4" BSP	20	2W NC	1	NBR	N	None	0	W/out coil	0	No coil	0	without	0	
Stainless Steel	3	1/4" NPT	21	2W NO ⁽¹⁾	2	FKM	V	Slot	2	6	1	AC8W 50Hz	1	with	1	
		3/8" BSP	30	2W NO ⁽²⁾ w/out tube	2a	EPDM	E	Knob	3	12	2	AC8W 60Hz	2	with LED	2	
		3/8" NPT	31							24	3	DC10W	3	with bi-color LED	3	
		1/2" BSP	40							48	4			flying leads coil	4	
		1/2" NPT	41							110	5			with 1/2" Hub surge protection with LED	5	
		3/4" BSP	50							120	6			connector with moulded cable	6	
		3/4" NPT	51							220	7A				7	
		1" BSP	60							230	7			other	9	
		1" NPT	61							240	8					
														Latch/other ⁽³⁾	9	

Example : GEM-S-2202V2-321

GEM-SOL pilot operated, brass, 1/4"BSP, 2W NO, FKM seals, slot manual override, 24V AC8W 60Hz with connector.

GEM-S - 2 - 20 - 2 - V - 2 - 3 - 2 - 1

(1) Option available in 1/4" - 1/2"

(2) Without manual override

(3) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied.

How to Order

GEM-S	BODY	PORT	FUNCTION	SEALS	MANUAL OVERRIDE	VOLTAGE	POWER	CONNECTOR								
Brass	2	1/2" BSP	40r	2W NC	1	NBR	N	None	0	W/out coil	0	No coil	0	without	0	
		1/2" NPT	41r	2W NO	2	FKM	V	Slot	2	6	1	AC8W 50Hz	1	with	1	
		3/4" BSP	50r	2W NO ⁽¹⁾ w/out tube	2a	EPDM	E	Knob	3	12	2	AC8W 60Hz	2	with LED	2	
		3/4" NPT	51r							24	3	DC10W	3	with bi-color LED	3	
											48	4			flying leads coil	4
											110	5			with 1/2" Hub surge protection with LED	5
									120	6			connector with moulded cable	6		
									220	7A				7		
									230	7			other	9		
									240	8						
												Latch/other ⁽²⁾	9			

Example : GEM-S-240r1V2-321 (16mm orifice size)

GEM-SOL pilot operated, brass, 1/2"BSP, 2W NC, FKM seals, slot manual override, 24V AC8W 60Hz with connector.

GEM-S - 2 - 40r - 1 - V - 2 - 3 - 2 - 1

(1) Without manual override

(2) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied.

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

SOLENOID VALVES | General Purpose

Pilot Operated | 2W

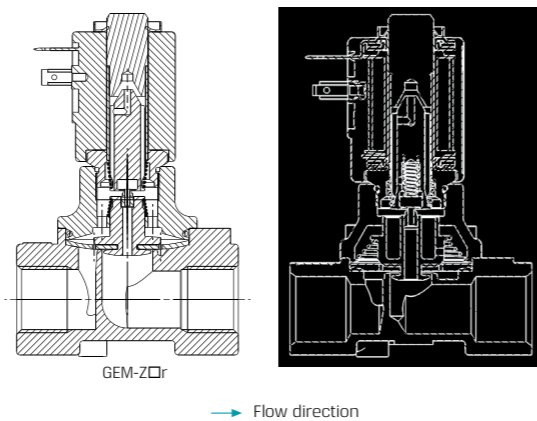
GEM-Z | Zero differential pressure 1/4" - 3/4" 2 Way NC, NO



Brass | 1/2" | NC



Stainless Steel | 1/2" | NC



Technical Data

Function	2 Way NC, NO
Ports size	1/4", 3/8", 1/2", 3/4" BSP & NPT
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Brass, Stainless Steel AISI 316 Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM
Media	Air, water, oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

- When switching from an AC to a DC coil, the solenoid operator must be changed as well.
- Can be used in vacuum application from -1 bar to maximum pressure - see tables.

Pressure (bar) & Flow table NC (GEM-Z)

Size	Orifice (mm)	Pressure (bar)		Kv (l/min)
		AC	DC	
1/4"	8	0 to 14	0 to 7	12
3/8"	12	0 to 14	0 to 8	17
1/2"	12	0 to 14	0 to 8	18

Pressure (bar) & Flow table NC (GEM-Z-□□r)

Size	Orifice (mm)	Pressure (bar)		Kv (l/min)
		AC	DC	
1/2"	16	0 to 10	0 to 6	60
3/4"	16	0 to 10	0 to 6	80

Pressure (bar) & Flow table NO (GEM-Z)

Size	Orifice (mm)	Pressure (bar)		Kv (l/min)
		AC	DC	
1/4"	8	0 to 8	0 to 8	12
3/8", 1/2"	12	0 to 8	0 to 8	20

Voltage & Power Consumption

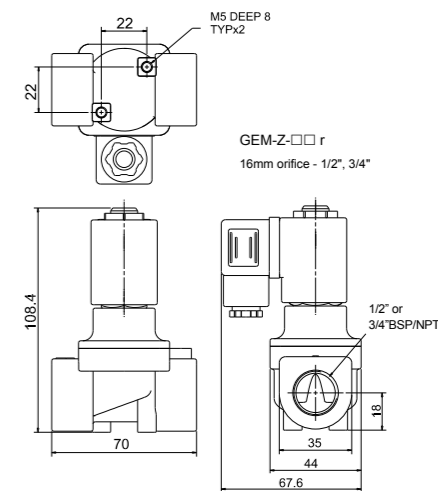
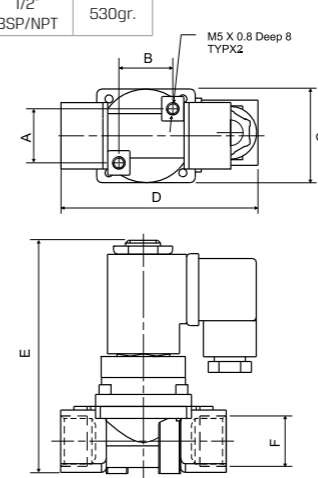
V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
	8	5.5	2.5	8	5.5	2.5			
6							•		
12	•			•			•		
24	•			•			•		
48	•			•			•		
110	•			•			•		
120	•			•					
220	•			•			•		
230	•			•	•				
240	•			•			•		

• Available options

Pilot Operated | 2W | GEM-SOL | Zero differential pressure 1/4" - 3/4" NC, NO

Dimensions

Size	A	B	C	D	E	F	Weight with coil
1/4"	22	22	32	58	89	1/4" BSP/NPT	415gr.
3/8"	22	22	38	70	95	3/8" BSP/NPT	530gr.
1/2"	22	22	38	70	95	1/2" BSP/NPT	530gr.



How to Order

GEM-Z	-	BODY ⁽¹⁾	PORT	FUNCTION	SEALS	-	VOLTAGE	POWER	CONNECTOR				
Brass	2	1/4" BSP	20	2W NC	1	NBR	N	W/out coil	0	No coil	0	without	0
Stainless Steel ⁽²⁾	3	1/4" NPT	21	2W NO ⁽⁴⁾	2a	FKM	V	6	1	AC8W 50Hz	1	with	1
		3/8" BSP	30			EPDM	E	12	2	AC8W 60Hz	2	with LED	2
		3/8" NPT	31					24	3	DC10W	3	with bi-color LED	3
		1/2" BSP	40					48	4			flying leads coil	4
		1/2" NPT	41					110	5			with 1/2" Hub	5
		1/2" BSP	40r					120	6			surge protection with LED	6
		1/2" NPT	41r					220	7A			connector with moulded cable	7
		3/4" BSP	50r					230	7			other	9
		3/4" NPT ⁽³⁾	51r					240	8				
								Latch/other ⁽⁵⁾	9				

* When ordering without coil, please define what current and pressure rating is needed (DC, AC)

Example : GEM-Z-2401N-221

GEM-SOL zero differential, brass, 1/2" BSP, 2W NC, NBR, 12V AC8W 60Hz with connector.

GEM-Z - 2 40 1 N - 2 2 1

- (1) This valve is also available in plastic
- (2) Not available for GEM-Z-□□r
- (3) 16mm orifice
- (4) NO function without M/O, not available for GEM-Z-□□r
- (5) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

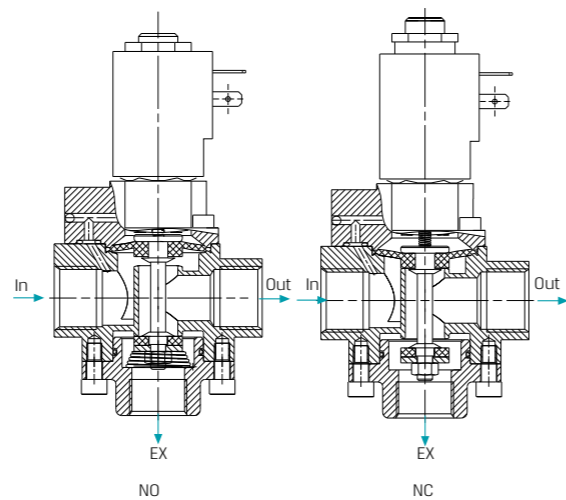
SOLENOID VALVES | General Purpose

Pilot Operated | 3W

GEM-S | 1/4" - 1/2" 3 Way NC, NO



Brass | 1/2" | knob manual override



Technical Data

Function	3 Way NC, NO
Ports size	1/4", 3/8", 1/2" BSP & NPT
Pressure range	See table
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Manual override: NC : Push in lock hydraulic bypass NO : Brass screw or finger knob Main Valve: Brass Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM
Media	Air, water, light oil
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

Pressure (bar) & Flow table

Size	Orifice (mm)	Pressure (bar)	Kv(l/min)
1/4"	8	0.8 to 12	18
3/8", 1/2"	12		50

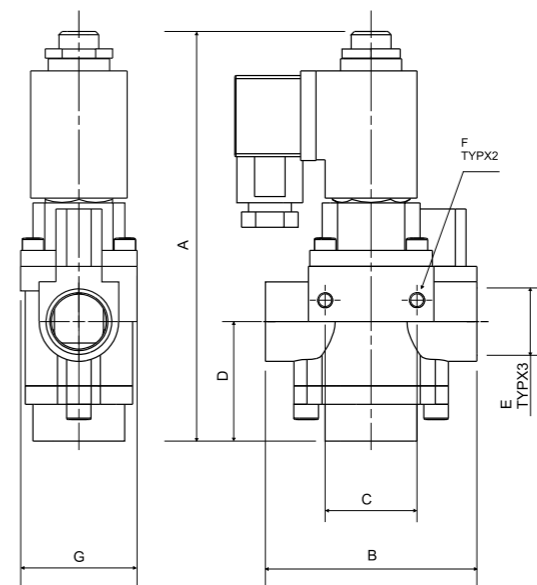
Voltage & Power Consumption

V	AC (W)				DC (W)		
	50 Hz		60 Hz		10	5.5	3.5
6					•		
12	•				•		
24	•				•		
48	•				•		
110	•				•		
120	•						
220	•				•		
230	•				•		
240	•				•		

• Available options

Pilot Operated | 3W | GEM-SOL | 1/4" - 1/2" NC, NO

Dimensions

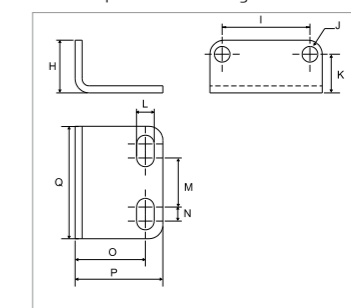


Size	A	B	C	D	E	F	G	Weight with coil
1/4"	124.5	58	25	32.5	1/4"	M4x0.7 Deep 6	32	540gr.
3/8" 1/2"	134	69	30	32.5	1/2"	M5x0.8 Deep 7	38	758gr.

Optional Mounting Bracket

Size	H	I	J	K	L	M	N	O	P	Q
1/4"	15	25	Ø4.5	11	5	14	4	20	25	32
3/8" 1/2"	20	30	Ø6	13	6	22	4	25	33	40

Optional Mounting Bracket



How to Order

GEM-S	BODY	PORT	FUNCTION	SEALS	MANUAL OVERRIDE	BRACKET	VOLTAGE	POWER	CONNECTOR								
Brass	2	1/4" BSP	20	3W NC	3	NBR	N	None	0	without	0	W/out coil	0	No coil	0	without	0
		1/4" NPT	21	3W NO	4	FKM	V	Slot (1)	2	with	1	6	1	AC8W 50Hz	1	with	1
		3/8" BSP	30			EPDM	E	Push lock (2)	5			12	2	AC8W 60Hz	2	with LED	2
		3/8" NPT	31									24	3	DC10W	3	with bi-color LED	3
		1/2" BSP	40									48	4			flying leads coil	4
		1/2" NPT	41									110	5			with 1/2" Hub	5
												120	6			surge protection with LED	6
												220	7A			connector with moulded cable	7
												230	7			other	9
												240	8				
												Latch/ other (3)	9				

Example : GEM-S-2204V21-311

GEM-SOL pilot operated, brass, 1/4" BSP, NO, FKM, slot manual override with bracket, 24V AC 8W 50Hz with connector.

GEM-S - 2 20 4 V 2 1 - 3 1 1

(1) For NO only

(2) For NC only

(3) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied.

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

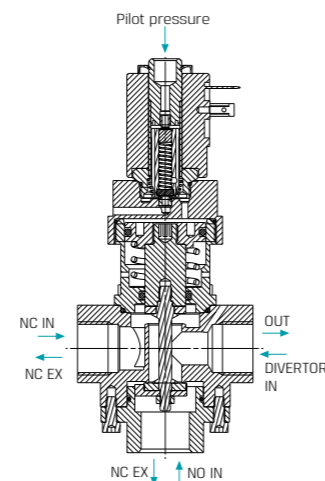
SOLENOID VALVES | General Purpose

Pilot Operated | 3W

GEM-SE | General purpose 1/4" - 1/2" 3 Way



Brass | 1/4"

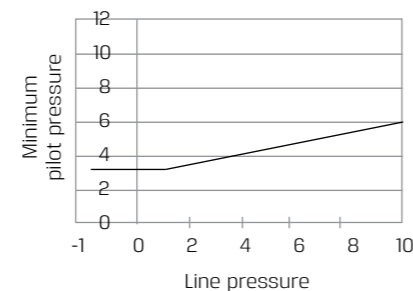


Technical Data

Function	3 Way General purpose
Ports size	1/4", 3/8", 1/2" BSP & NPT
Pressure range	• See table * Min. pilot pressure : 1.5 bar (for other, see graph)
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Main Valve: Brass Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM Piston seal PU* * other seals available upon request
Media	Air, water, oil
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

Pressure (bar) & Flow table

Size	Orifice(mm)	Pressure (bar)	Kv(l/min)
1/4"	8	0 to 10	12
3/8"	12		16
1/2"	12		35



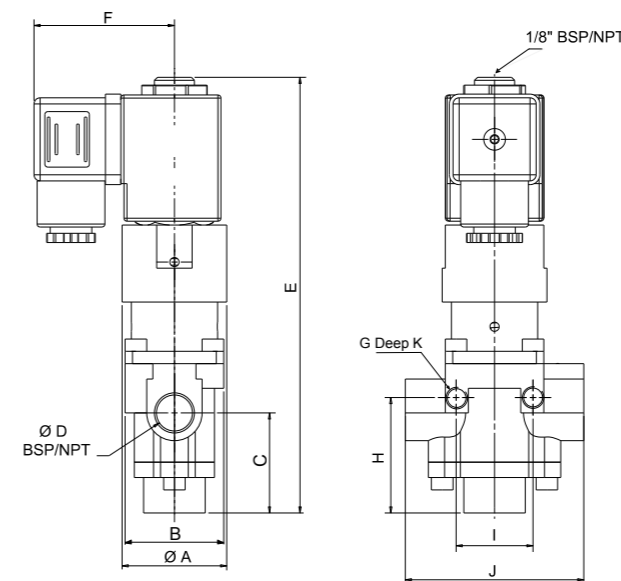
Voltage & Power Consumption

V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
6							•	•	
12	•			•			•	•	
24	•	•		•	•		•		
48	•			•			•		
110	•			•	•		•		
120	•			•					
220	•	•		•			•		
230	•	•		•	•				
240	•			•			•		

• Available options

Pilot Operated | 3W | GEM-SOL | General purpose 1/4" - 1/2"

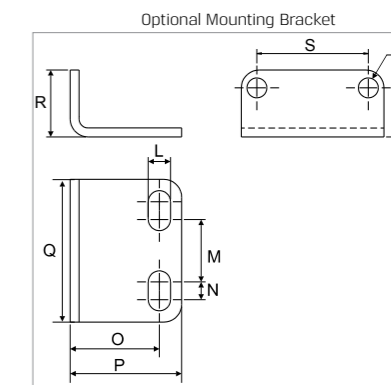
Dimensions



Size	A	B	C	D	E	F	G	H	I	J	K
1/4"	34	32	32.5	1/4"	141.5	45.6	M4	37.5	25	58	6
3/8"	45	38	41	3/8"	155	45.6	M5	47	30	69	7
1/2"				1/2"							

Optional Mounting Bracket

Size	L	M	N	O	P	Q	R	S	T	U
1/4"	5	14	4	20	25	32	15	25	Ø4.5	11
3/8"	6	22	4	25	33	40	20	30	Ø6	13
1/2"										



How to Order

GEM-SE	BODY	PORT	FUNCTION	SEALS	BRACKET	VOLTAGE	POWER	CONNECTOR								
	Brass	2	1/4" BSP	20	general purpose	9	NBR	N	without	0	W/out coil	0	No coil	0	without	0
			1/4" NPT	21			FKM	V	with	1	6	1	AC8W 50Hz	1	with	1
			3/8" BSP	30			EPDM	E			12	2	AC8W 60Hz	2	with LED	2
			3/8" NPT	31							24	3	DC10W	3	with bi-color LED	3
			1/2" BSP	40							48	4	AC5.5W 50Hz	4	flying leads coil	4
			1/2" NPT	41							110	5	AC5.5W 60Hz	5	with 1/2" Hub	5
											120	6	DC5.5W	7	surge protection with LED connector with moulded cable	6
											220	7A			with cable	7
											230	7			other	9
											240	8				
											Latch/other (1)	9				

Example : GEM-SE-2209N0-331

GEM-SOL general purpose pilot operated, brass, 1/4" BSP, 3W general purpose, NBR, without bracket, 24V DC 10W with connector.

GEM-SE - 2 20 9 N 0 - 3 3 1

(1) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied.

* To order valves manufactured according to your specific requirements, please contact our technical sales department.

SOLENOID VALVES | General Purpose

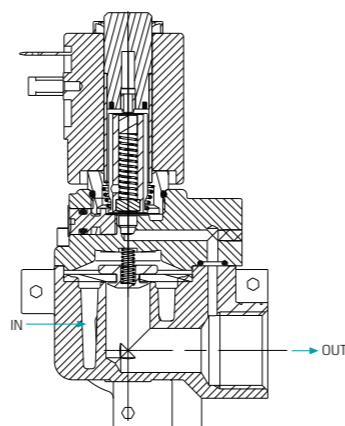
Pilot Operated | Manifolds

GEM-SM | Manifold 1/4", 1/2" 2 Way NC, NO



2 Station Manifold | Stainless Steel

4 Station Manifold | Brass



Technical Data

Function	2 Way NC, NO
Ports size	1/4", 1/2" BSP & NPT
Pressure range	See table *Minimum pressure differential of 0.3 or 0.5 is required
Kv (l/min)	See table
Temperature range	Fluid : -10°C to 80°C (no freezing) Ambient : -10°C to 50°C
Materials in contact with media	Manual override: NC/NO - Brass screw NOa* - manual override is not available *pressure is supplied through the base Main Valve: Brass Stainless Steel AISI 316 Solenoid Operator: Stainless Steel AISI 300 & 400 series Seals: NBR, FKM, EPDM
Assembly	• Stations attached by 3 screws • End stations are either with ports or plugged
Coil voltage	• Voltage and power consumption - see table • All Baccara coil voltages are ± 10% of nominal
Standard protection class	IP65 with connector * Option : IP68 (please refer to GEM-BP Coil)

- When using a manifold with more than 8 stations, it is advisable to use two air supplies, one at each end
- It is possible to combine functions on one manifold
- Slow closing system to prevent water hammer effect
- Pressure separation plug between stations is available.

Pressure (bar) & Flow table

Size	Orifice (mm)	Pressure (bar)	Kv(l/min)
1/4"	8	0.5 to 20	12
1/2"	12		35

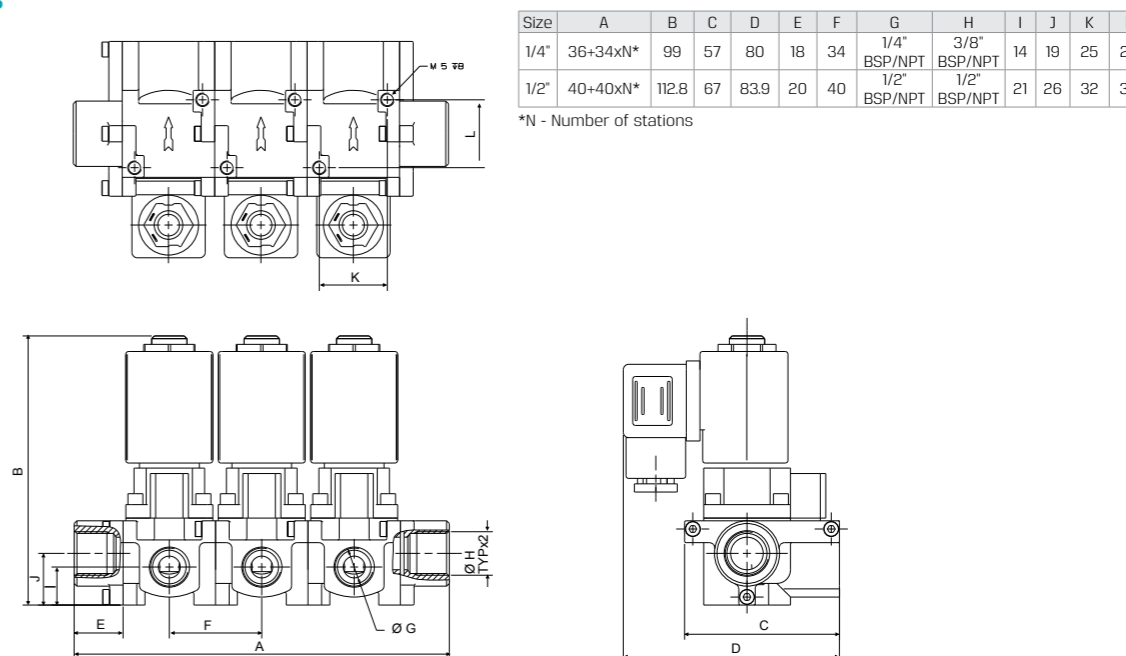
Voltage & Power Consumption

V	AC (W)						DC (W)		
	50 Hz			60 Hz			10	5.5	3.5
6							•		
12	•			•			•		
24	•			•			•		
48	•			•			•		
110	•			•			•		
120	•			•			•		
220	•			•			•		
230	•			•			•		
240	•			•			•		

• Available options

Pilot Operated | Manifolds | GEM-SOL | 1/4", 1/2" 2 Way NC, NO

Dimensions



Size	A	B	C	D	E	F	G	H	I	J	K	L
1/4"	36+34xN*	99	57	80	18	34	1/4" BSP/NPT	3/8" BSP/NPT	14	19	25	25
1/2"	40+40xN*	112.8	67	83.9	20	40	1/2" BSP/NPT	1/2" BSP/NPT	21	26	32	32

*N - Number of stations

How to Order

GEM-SM	No. of STATIONS	BODY	PORT	FUNCTION	SEALS	MANUAL OVERRIDE	VOLTAGE	POWER	CONNECTOR					
specify quantity	Brass	2	1/4" BSP (1)	20	2W NC	1 NBR N	None	0	W/out coil	0	No coil	0	without	0
	Stainless Steel	3	1/4" NPT (1)	21	2W NO	2 FKM V	Slot	2	6	1	AC8W 50Hz	1	with	1
			1/2" BSP	40	2W NO(2) w/out tube	2a EPDM E	Knob	3	12	2	AC8W 60Hz	2	with LED	2
			1/2" NPT	41					24	3	DC10W	3	with bi-color LED	3
								48	4			flying leads coil	4	
								110	5			with 1/2" Hub	5	
								120	6			surge protection with LED	6	
								220	7A			connector with moulded cable	7	
								230	7			other	9	
								240	8					
								Latch/ other (3)	9					

Example : GEM-SM-022202V2-321

GEM-SOL pilot operated manifold, 2 stations, brass, 1/4"BSP, 2W NO, FKM, slot manual override, 24V AC 8W 60Hz with connector.

GEM-SM - 02 2 20 2 V 2 - 3 2 1

(1) Available only in brass

(2) Manual override is not available

(3) For specifying Latch type coil, please refer to GEM-A3P valve - How to Order table.

* Note: When ordering without coil, please define what current and pressure rating is needed (DC, AC or ADC), otherwise an ADC valve will be supplied.

* To order valves manufactured according to your specific requirements, please contact our technical sales department.