

# 2/2-Way Midget Type, Direct Acting Solenoid Valves.

DATA SHEET  
9210 B  
9220 B

9210B-Normally Closed, Energised To Open,  
9220B-Normally Open, Energised To Close.

## SPECIFICATIONS

Sizes	: 1/4" (6 mm) to 1/2" (15 mm).
End Connections	: Standard-G-ISO-228(BSP-F) Optional-NPT.
Body Material	: Brass forged IS 6912 or ASTM A351.CF8/ CF8M.
Body Test Pressure	: 40 Bar(Refer to table below).
Max.Wkg.Pressure	: 10 Bar (Refer to table below).
Seat Material	: Std. : Buna Nitrile, Optional - Viton, Neoprene, PTFE and others.
Core Tube Nut	: St.St.304/St.St.316.
Plunger/Stopper	: St.St.430FR.
Spring	: St.St.302.
Shading Ring	: Copper. Optional: Silver for corrosive media.
Temp.(ambient)	: 42Deg.C
Max.Wkg.Temp.	: (-)5 to 80Deg.C.
Voltage (AC)	: 230, 110, 48, 24 V - 50/60 Hz.
(DC)	: 24, 110, 240 V.
Enclosures	: General Purpose (IP20). Weatherproof- RD-WP-67. Flameproof-RD-FLP-IIC+WP67.
Approvals	: KLPL/PESO/CE/ATEX/BIS.
Differential Pr.	: 0 to 40 bar (Refer to table below).
Coil Insulation	: Class 'H' upto 155Deg.C.
Fluids	: Air,Water,Gas Light & Heavy oil, mild corrosive fluid, etc.
Manual Override	: Available only for 9210B-Normally Closed Valve. Not available for 9220B-Normally Open Valve.
Sales Point	: Most versatile and reliable valve for millions of trouble free operations.
Application	: Furnaces, Boilers, Textile machinery, Water Treatment plant, Ash handling, Sugar machinery and others.
Mounting	: In horizontal pipeline, keeping solenoid upright and vertical.
Note	: 1) Use of Filter in the inlet side is highly recommended. 2) Not suitable for back pressure from outlet side.



## SPECIFICATION TABLE 2/2 WAY NORMALLY CLOSED

Catalogue Number	Pipe Size Inch	Orifice Size mm	Flow Factor M <sup>3</sup> /hr.	Minimum Pressure bar	Maximum Operating Pressure (bar)						BTP bar	Material		Constr. Ref.	VA Rating AC	Watt Rating DC	Coil Type	Housing
					AC			DC				Body	Seat					
					Air/Gas	Water	Light Oil	Air/Gas	Water	Light Oil								
9210B15	1/4	1.5	0.07	0	30	18	11	40	28	24	40	BR	BN	2.1	18	12	M45.1	SQ
9210B20	1/4	2.0	0.09	0	22	16	9	30	20	16	40	BR	BN	2.1	18	12	M45.1	SQ
9210B25	1/4	2.5	0.11	0	17	9	4.5	20	15	12	40	BR	BN	2.1	18	12	M45.1	SQ
9210B30	1/4	3.0	0.13	0	12	6	3	12	10	7	40	BR	BN	2.1	18	12	M45.1	SQ
9210B31	1/4	3.0	0.15	0	15	12	9	25	22	20	40	BR	BN	157	36	22	M50	SQ
9210B40	1/4	4.0	0.40	0	5	3.5	1.5	5	4.5	3.5	40	BR	BN	2.1	18	12	M45.1	SQ
9210B41	1/4	4.0	0.43	0	10	8	8	20	18	18	40	BR	BN	157	36	22	M50	SQ
9210B45	1/4	4.5	0.60	0	3.5	2.5	1	4.5	4	3	40	BR	BN	2.1	18	12	M45.1	SQ
9210B46	1/4	4.5	0.62	0	8	6	4	18	16	16	40	BR	BN	157	36	22	M50	SQ
9210B60	1/4	6.0	0.78	0	2.5	2	0.6	3.5	3	2	40	BR	BN	2.1	18	12	M45.1	SQ
9210B61	1/4	6.0	0.80	0	5	4.5	3.5	11	11	11	40	BR	BN	157	36	22	M50	SQ

## 2/2 WAY NORMALLY OPEN

9220B15	1/4	1.5	0.07	0	22	21	17	25	22	18	20	BR	BN	2.1	18	12	M45.1	SQ
9220B25	1/4	2.5	0.11	0	10	9	8	12	10	8	20	BR	BN	2.1	18	12	M45.1	SQ
9220B30	1/4	3.0	0.13	0	7	5	3.5	8	6	4	20	BR	BN	2.1	18	12	M45.1	SQ

## 2/2 WAY NORMALLY CLOSED

9210B2510	3/8	2.5	0.11	0	17	9	4.5	20	15	12	40	CF8	BN	172	18	12	M45.1	SQ
9210B3010	3/8	3.0	0.13	0	12	6	3	12	10	7	40	CF8	BN	172	18	12	M45.1	SQ
9210B3110	3/8	3.0	0.15	0	15	12	9	25	22	20	40	CF8	BN	164	36	22	M50	SQ
9210B4010	3/8	4.0	0.40	0	5	3.5	1.5	5	4.5	3.5	40	CF8	BN	172	18	12	M45.1	SQ
9210B4110	3/8	4.0	0.43	0	10	8	8	20	18	18	40	CF8	BN	164	36	22	M50	SQ
9210B4510	3/8	4.5	0.60	0	3.5	2.5	1	4.5	4	3	40	CF8	BN	172	18	12	M45.1	SQ
9210B4610	3/8	4.5	0.62	0	8	6	4	18	16	16	40	CF8	BN	164	36	22	M50	SQ
9210B6010	3/8	6.0	0.78	0	2.5	2	0.6	3.5	3	2	40	CF8	BN	172	18	12	M45.1	SQ
9210B6110	3/8	6.0	0.80	0	5	4.5	3.5	11	11	11	40	CF8	BN	164	36	22	M50	SQ
9210B8110	3/8	8.0	1.10	0	2	1.8	1	3	2.7	2.5	40	CF8	BN	164	36	22	M50	SQ

## 2/2 WAY NORMALLY OPEN

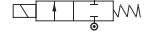
9220B2610	3/8	2.5	0.11	0	10	9	7	12	10	8	20	CF8	BN	164	36	22	M50	SQ
9220B3110	3/8	3.0	0.13	0	7	5	3.5	8	6	4	20	CF8	BN	164	36	22	M50	SQ

NOTE - For Higher port sizes in normally open design AVCON shall use different construction.

## ELECTRICAL REFERENCE

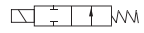
Coil Type	Power Consumption & Watt Rating			Class of Insulation	Protection	Certification Standard
	AC		DC			
	VA Inrush	VA Holding	Watts			
M 45.1 SQ	25	18	12	H	GP/WP IP-67	IS/IEC 60529-2001
M 50 SQ	50	36	22	H	GP/WP IP-67	IS/IEC 60529-2001
M 45.1 RD	25	18	12	H	GP/WP IP-67	IS/IEC 60529-2001
M 50 RD	50	36	22	H	GP/WP IP-67	IS/IEC 60529-2001
M 45.1 FLP IIC	25	18	12	H	FLP-IIC-IP-67	IS/IEC 60079-1-2014
M 50 FLP IIC	50	36	22	H		

### 2/2 WAY NORMALLY CLOSED



Catalogue Number	Pipe Size Inch	Orifice Size mm	Flow Factor M <sup>3</sup> /hr.	Minimum Pressure bar	Maximum Operating Pressure (bar)						BTP bar	Material		Constr. Ref.	VA Rating AC	Watt Rating DC	Coil Type	Housing
					AC			DC				Body	Seat					
					Air/Gas	Water	Light Oil	Air/Gas	Water	Light Oil								
9210B4115	1/2	4.0	0.43	0	10	8	8	20	18	18	40	CF8	BN	164	36	22	M50	SQ
9210B6115	1/2	6.0	0.80	0	5	4.5	3.5	11	11	11	40	CF8	BN	164	36	22	M50	SQ
9210B8115	1/2	8.0	1.30	0	2	1.8	1	3	2.7	2.5	40	CF8	BN	164	36	22	M50	SQ
9210B9115	1/2	9.0	1.50	0	1.8	1	0.5	2.5	2	1	40	CF8	BN	164	36	22	M50	SQ
9210B1115	1/2	11.0	2.00	0	1	0.6	0.3	1	1	0.5	40	CF8	BN	164	36	22	M50	SQ

### 2/2 WAY NORMALLY OPEN



9220B3115	1/2	3.0	0.13	0	7	5	3.5	8	6	4	20	CF8	BN	164	36	12	M50	SQ
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## DIMENSIONS (IN MM)

<p>CONSTRUCTION REF. NO. :2.1</p> <p>BRASS BODY</p>		<p>CONSTRUCTION REF. NO. :157</p> <p>BRASS BODY</p>		<p>CONSTRUCTION REF. NO. :2.2</p> <p>SS BODY</p>		<p>CONSTRUCTION REF. NO. :165</p> <p>SS BODY</p>									
<p>CONSTRUCTION REF. NO. :172</p> <p>SS BODY Without MO</p> <p>☐ Valve fitted with M45 SQ. coil.</p>		<p>CONSTRUCTION REF. NO. :164</p> <p>SS BODY Without MO</p> <p>☐ Valve fitted with M50 SQ. coil.</p>		<p>Valve fitted with M45 / M50 RD GP coil - General purpose enclosure as per IP-20</p>		<p>Valve fitted with M45 / M50 FLP IIC coil Flameproof metallic enclosure as per IS/IEC 60079-1-2014 IP-67.</p>									
Catalogue Number	Pipe Size Inch	Constr. Ref.	A	B	C	Weight (Approx.) Kgs. ⚡	E (RADIALLY)			F			G (APPROX.)		
							RD GP	RD WP	FLP	RD GP	RD WP	FLP	RD GP	RD WP	FLP
9210B15-30/40/45/60	1/4	2.1	39.5	10.5	85	0.518	60	96	96	48	62	80	72	80	150
9210B31/41/46/61	1/4	157	39.5	10.5	95	0.615	66	96	96	57	68	80	86	80	156
9220B15-30	1/4	2.1	39.5	10.5	85	0.518	60	96	96	48	62	80	72	80	150
9210B15-30/40/45/60	1/4	2.2	51	12.6	78	0.503	60	96	96	48	62	80	65	73	143
9210B31/41/46/61	1/4	165	51	12.6	108	0.605	66	96	96	57	68	80	79	104	163
9220B15-30	1/4	2.2	51	12.6	78	0.503	60	96	96	48	62	80	65	73	143
9210B2510-6010	3/8	172	68	16	93	0.583	60	96	96	48	62	80	80	88	158
9210B3110-8110	3/8	164	54	16	103	0.680	66	96	96	57	68	80	94	99	164
9220B 2610-3110	3/8	172	68	16	103	0.744	66	96	96	57	62	80	94	99	164
9210B4115-1115	1/2	164	54	16	103	0.690	66	96	96	57	68	80	94	99	164
9220B3115	1/2	172	54	16	93	0.593	60	96	96	48	62	80	80	88	158

⚡ Weight with SQ enclosure only, ask AVCON for other weights.

### Note:

Technical specifications, details & dimensions are subject to change without prior notice. Dimensions in the table are approximate subject to final confirmation by AVCON.

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