

2/2-Way Pilot Operated, Piston Type, Solenoid Valves.

For steam and hot water application upto 9 bar pressure
Normally Closed, Energised To Open.

DATA SHEET
9130 H

SPECIFICATIONS

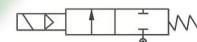
Sizes	: 10mm (3/8") to 50mm (2").
End Connections	: Standard-G-ISO-228 (BSP-F).
Construction-Body	: Upto 20mm (3/4") Brass forged IS 6912 and above in SS ASTM A351 Gr. CF8. or CF8M.
-Seat	: Standard-PTFE, Optional-PTFE backed by EPDM.
Differential Pressure	: 1.4 to 9 bar (See table).
Coil Voltage	: Standard-230-volts, 50Hz. A.C. Optional - 24,110, 240 V AC 50Hz or 60Hz & 24 V DC.
Coil Insulation and Temperature.	: Ambient upto 42°C. Class 'H' insulated upto 155°C. Class 'C' insulated upto 180°C.
Coil Rating	: Continuously rated.
Enclosure	: Standard-General purpose SQ. moulded coil upto IP-20, Optional-Weatherproof SQ. moulded coil upto IP-67, Flameproof coil upto FLP IIC.
Approvals	: CIMFR Dhanbad, CCOE.
Fluids	: Steam temp. upto 180°C. Hot water temp. upto 95°C.
Sales Point	: Pilot operated, standard valve for high pressure steam application.
Application	: Steaming equipment, textile, processing equipment, laundry equipment, kitchen equipment and others.



Note

: Not suitable for back pressure working from outlet side. Hot water temperature limited upto 95 °C only.
Not suitable for wet steam.
Not available in Normally Open design.
Manual override not available
For application where the steam pressure is below 6 bar, we recommend use of 9130D design valves with Silicon seat, (Refer to data sheet 9130D).
USE OF FILTER IN THE INLET SIDE IS HIGHLY RECOMMENDED .

SPECIFICATION TABLE 2/2 WAY NORMALLY CLOSED



Catalogue Number	Pipe Size	Orifice Size	Flow Factor Kv	Minimum Pressure	Maximum Operating Pressure (bar)		BTP	Material		Constr. Ref.	VA Rating	Coil	Housing
	Inch	mm	M ³ /hr.	bar	Hot Water*	Steam	bar	Body	Seat		AC	Type	
9130H104	3/8	16	2.6	1.4	9	9	40	BR	PTFE	160	36	M50-HT	SQ
9130H154	1/2	16	3.6	1.4	9	9	40	BR	PTFE	160	36	M50-HT	SQ
9130H204	3/4	20	5.3	1.4	9	9	40	BR	PTFE	160	36	M50-HT	SQ
9130H254	1	25	8.6	1.4	9	9	40	CF8	PTFE	160	36	M50-HT	SQ
9130H304	1 1/4	28	14.0	1.4	9	9	40	CF8	PTFE	160	36	M50-HT	SQ
9130H354	1 1/2	34	17.3	1.4	9	9	40	CF8	PTFE	160	36	M50-HT	SQ
9130H504	2	45	30.5	1.4	9	9	40	CF8	PTFE	160	36	M50-HT	SQ

*Hot water at 95°C only

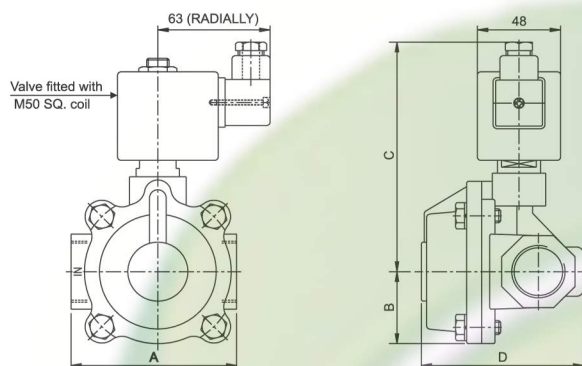
ELECTRICAL REFERENCE

Coil Type	Power Consumption & Watt Rating		Class of Insulation		Protection
	AC				
	VA Inrush	VA Holding			
M 50 HT SQ	50	36	H	C	GP/WP IP-67
M 50 HT RD	50	36	H	C	GP/WP IP-67
M 50 HT FLP IIC	50	36	H	C	IS/IEC 60079-1:2007, Group IIC. IS 12063-1987 IP-67 (IEC 60529:1989).

DIMENSIONS (IN MM)

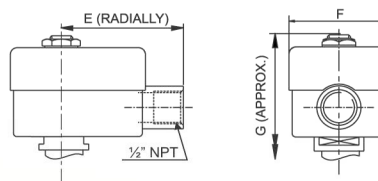
Catalogue Number	Pipe Size	Constr. Ref.	A	B	C	D	Weight (Approx.)
	Inch						Kgs. ◇
9130H104	3/8	160	65	28	129	68	1.375
9130H154	1/2	160	65	28	129	68	1.375
9130H204	3/4	160	80	32	134	79	1.805
9130H254	1	160	95	41	139	93	2.295
9130H304	1 1/4	160	100	43	144	106	2.575
9130H354	1 1/2	160	118	43	144	117	3.080
9130H504	2	160	137	58	151	135	4.495

CONSTRUCTION REF. NO.:160

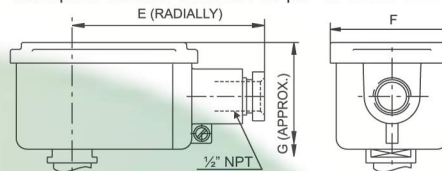


◇ Weight with SQ enclosure only, ask AVCON for other weights.

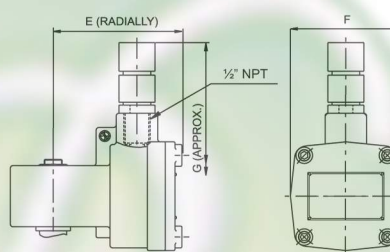
Valve fitted with M50 RD GP coil -
General purpose enclosure as per IP-20



Valve fitted with M50 RD WP coil -
Waterproof metallic enclosure as per IS 12063-1987 IP-67



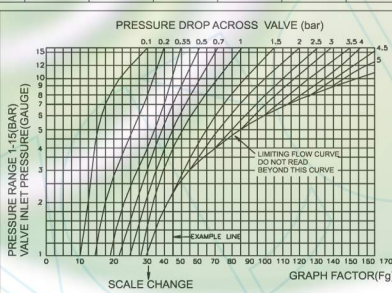
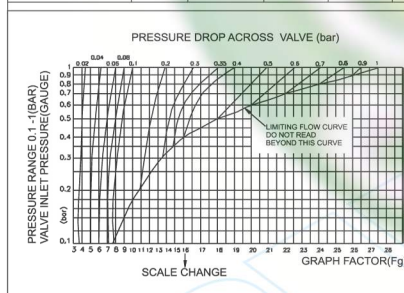
Valve fitted with M50 FLP IIC coil -
Flameproof metallic enclosure as per IS/IEC-60079-1:2007.



Catalogue Number	Pipe Size Inch	Constr. Ref.	E (RADIALY)			F			G (APPROX.)		
			RD GP	RD WP	FLP	RD GP	RD WP	FLP	RD GP	RD WP	FLP
9130H104	3/8	160	66	96	96	57	68	80	120	125	190
9130H154	1/2	160	66	96	96	57	68	80	120	125	190
9130H204	3/4	160	66	96	96	57	68	80	125	130	195
9130H254	1	160	66	96	96	57	68	80	130	135	200
9130H304	1 1/4	160	66	96	96	57	68	80	135	140	205
9130H354	1 1/2	160	66	96	96	57	68	80	135	140	205
9130H504	2	160	66	96	96	57	68	80	142	147	212

TEMPERATURE TABLE FOR SATURATED STEAM UNDER GAUGE PRESSURE

Pressure (bar)	Temp (°C)	Pressure (bar)	Temp (°C)
0.5	111	6	165
1	120	7	170
1.5	127	8	175
2	134	9	180
2.5	139	10	184
3	144	11	188
3.5	148	12	191
4	152	13	195
4.5	155	14	198
5	159	15	200



FLOW CALCULATION GRAPHS FOR SATURATED STEAM: The valve flow coefficient $K_v=1$, If one cubic meter (m^3) water (at $30^\circ C$) is passing through the valve per hour with a pressure drop (Δp) of 1 bar. To select the right valve with certain K_v value, read the steam flow graphs as follows.

EXAMPLE: A valve is required to pass 400 Kg/h (Q_m) of saturated steam at inlet pressure of 7 bar (g) (Δp) of 0.5 bar: What is the K_v ?

SOLUTION: Read the steam graph to find the graph factor (F_g) and use the formula : $K_v = \frac{Q_m}{F_g} = \frac{400}{45} = 8.5$

NOTE : Absolute pressure = gauge pressure plus atmospheric pressure of 1.033 bar. In most system it is desirable to keep the pressure drop to a minimum. Never use a (Δp) greater than 50% of the absolute inlet pressure because excessive pressure drop cause irregular flow.

Note:

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