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

DATA SHEET
9130 H

For steam and hot water application upto 9 bar pressure

9130H- Normally Closed, Energised To Open.

SPECIFICATIONS

Sizes	:	3/8" (10 mm) to 2" (50 mm).
End Connections	:	Standard-G-ISO-228(BSP-F), Optional:NPT.
Body Material	:	SS ASTM A351 Gr.CF8/CF8M.
Body Test Pressure	:	40 Bar (Refer to table below).
Max.Wkg.Pressure	:	9 Bar (Refer to table below).
Seat Material	:	Standard - PTFE, Optional: PTFE backed by EPDM.
Core Tube Nut	:	St.St.304/St.St.316.
Plunger/Stopper	:	St.St.430FR.
Spring	:	St.St.302.
Shading Ring	:	Copper.
Temp.(ambient)	:	42Deg.C
Max.Wkg.Temp.	:	(-)5 to 155Deg.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.	:	1.4 to 9 bar, (Refer to Table below).
Coil Insulation	:	Class 'H' upto 155Deg.C, Class 'C' upto 180Deg.C.
Fluids	:	Steam temp.upto 120Deg.C, Hot water temp.upto 95Deg.C.
Manual Override	:	Not available.
Sales Point	:	Pilot Operated standard valve for high pressure steam application.
Application	:	Steaming equipment, Textile processing equipment, Laundry equipment, Kitchen equipment 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.
		3) Hot water temperature limited upto 95°Deg.C only.
		4) Not suitable for Wet steam.
		5) Not available in Normally Open design.
		6) For application where steam pressure is below 6 bar, we recommend use of 9130D design valve with Silicon seat.

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	Watt Rating	Coil	Housing
	Inch	mm	M^3/hr.	bar	Hot Water*	Steam	bar	Body	Seat		AC	DC	Type	
9130H104	3/8	16	2.6	1.4	9	9	40	CF8	PTFE	160	36	22	M50-HT	SQ
9130H154	1/2	16	3.6	1.4	9	9	40	CF8	PTFE	160	36	22	M50-HT	SQ
9130H204	3/4	20	5.3	1.4	9	9	40	CF8	PTFE	160	36	22	M50-HT	SQ
9130H254	1	25	8.6	1.4	9	9	40	CF8	PTFE	160	36	22	M50-HT	SQ
9130H304	1 1/4	28	14.0	1.4	9	9	40	CF8	PTFE	160	36	22	M50-HT	SQ
9130H354	1 1/2	34	17.3	1.4	9	9	40	CF8	PTFE	160	36	22	M50-HT	SQ
9130H504	2	45	30.5	1.4	9	9	40	CF8	PTFE	160	36	22	M50-HT	SQ

*Hot water at 95°C only

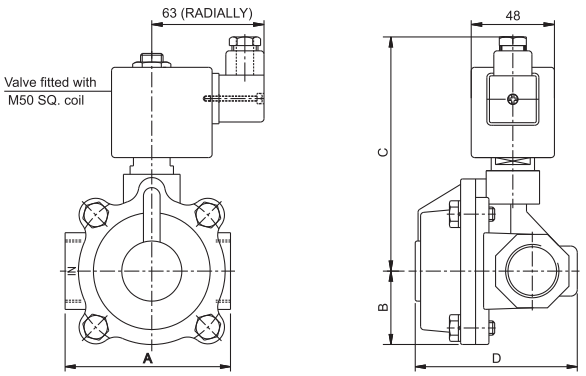
ELECTRICAL REFERENCE

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

DIMENSIONS (IN MM)

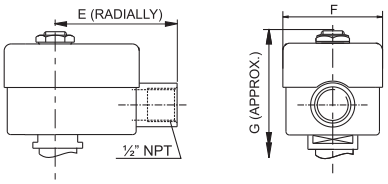
Catalogue Number	Pipe Size	Constr. Ref.	A	B	C	D	Weight (Approx.)
	Inch						Kgs.◈
9130H104	3/8	160	65	28	129	68	1.375
9130H154	1/2	160	65	28	129	68	1.375
9130H204	3/4	160	80	32	134	79	1.805
9130H254	1	160	95	41	139	93	2.295
9130H304	1 1/4	160	100	43	144	106	2.575
9130H354	1 1/2	160	118	43	144	117	3.080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

CONSTRUCTION REF. NO.:160

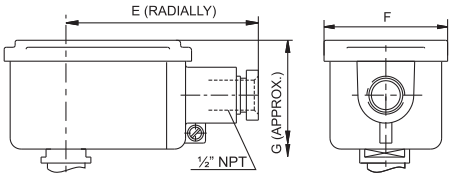


◈ Weight with SQ enclosure only, ask AVCON for other weights.

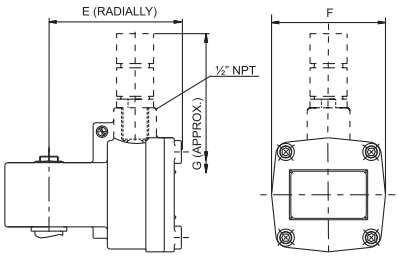
Valve fitted with M50 RD GP coil - General purpose enclosure as per IP-20



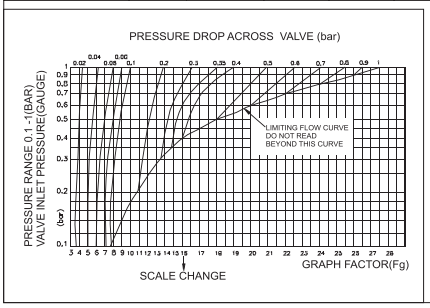
Valve fitted with M50 RD WP coil - Waterproof metallic enclosure as per IS/IEC 60529-2001 IP-67

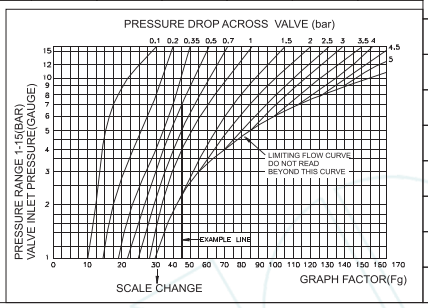


Valve fitted with M50 FLP IIC coil - Flameproof metallic enclosure as per IS/IEC 60079-1-2014 IP-67.



Catalogue Number	Pipe Size	Constr. Ref.	E (RADIALLY)			F			G (APPROX.)		
	Inch		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 Kv=1, If one cubic meter (m^3) water (at 30°C) is passing through the valve per hour with a pressure drop (Δp) of 1 bar. To select the right valve with certain Kv value, read the steam flow graphs as follows.

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

SOLUTION: Read the steam graph to find the graph factor(Fg) and use the formula : $Kv = \frac{Qm}{Fg} = \frac{400}{45} = 8.5$

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.

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