

## Solenoid Valve Fire Systems - Deluge Valve

### Benefits & Features

- Two way manual reset, with magnetic latch
- Brass body ( 3/8" to 2" ) or 316 Stainless Steel body ( 1/2" and 3/4" )
- IP67 housing for waterproof operation
- Ideal for fire fighting deluge systems
- IP65, IP67, Ex-d IIB, Ex-d IIC versions
- Ex-d IIC -60°C to +60°C ambient versions
- ATEX, EAC Ex (CU TR 012) and IECex, Ex-d approved



Magnetic Latch Plunger

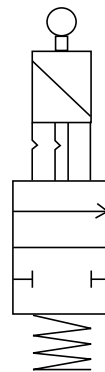


### Specification

<b>Configuration</b>	Pilot operated diaphragm
<b>Port Sizes</b>	1/2" to 2" BSP/NPT screwed ports.
<b>Max. Applied pressures</b>	PN25 body. Maximum differential pressure: 10 Bar
<b>Body</b>	Brass ( 3/8" to 2" ) or 316 Stainless Steel ( 1/2" and 3/4" )
<b>Media</b>	Liquid/gases compatible with the seal/body materials
<b>Power consumption</b>	>500 m/s pulse

### Valve Function

- Site engineer closes the valve by pressing on the reset knob ( A ). Valve is now closed.
- Valve opens when the solenoid coil receives a >500 m/s pulse.
- Valve then stays open without power



#### "E" Type Operation with Magnetic Latch

Valve is latched CLOSED after pressing the centre plunger knob.  
Valve Opens when the coil is energised.

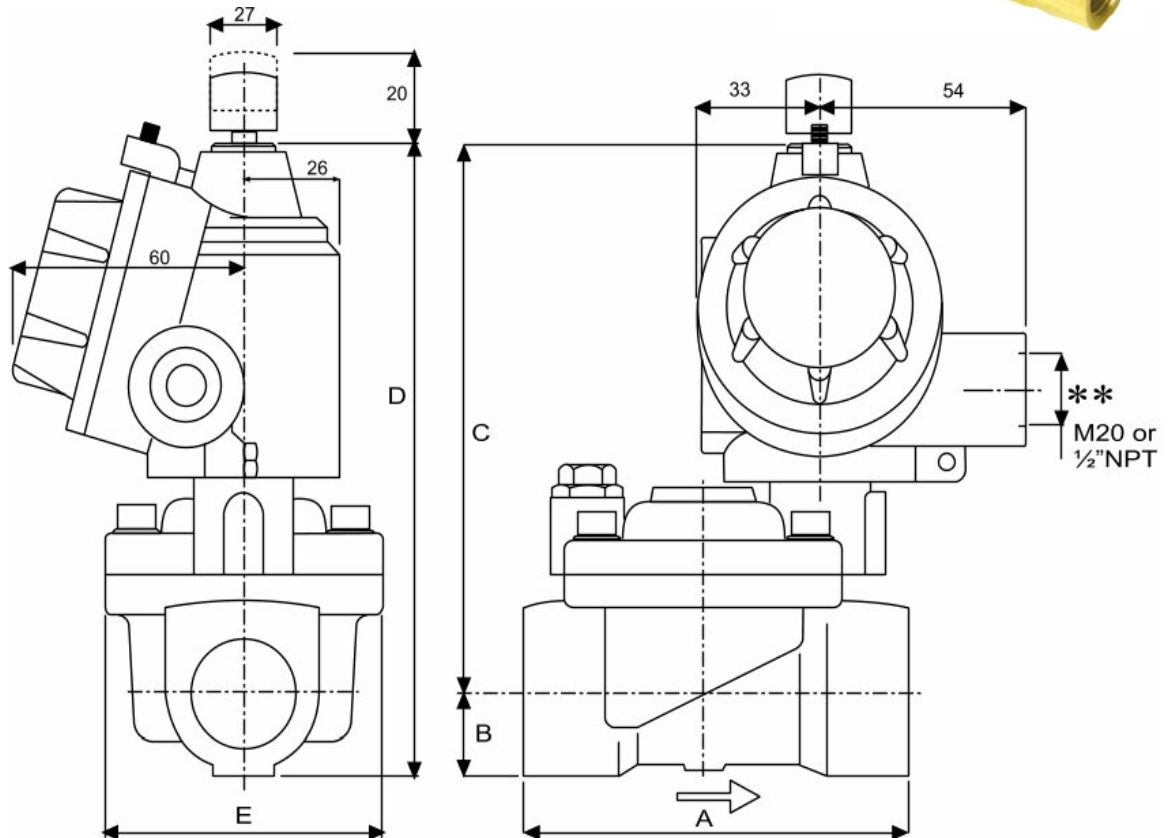
### Technical Data

	Reset Knob					Port Size BSP	Orifice mm	Body Rating	Min. /Max. Operating Differential Pressures. BAR.			KV Flow Factor L/min.
	A	B	C	D	E				Min.	Maximum		
										AC	DC	
E66	12					3/8"	12.7	25	0.2	10	10	35
E66	12					1/2"	12.7	25	0.2	10	10	40
E66	18					3/4"	18	25	0.2	10	10	87
E66	25					1"	25	25	0.2	10	10	170
E66	36					1 1/4"	36	20	0.3	10	10	300
E66	36					1 1/2"	36	20	0.3	10	10	340
E66	50					2"	50	20	0.3	10	10	600

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### Weights & Dimensions

Port Size	Weight Kg	Dimensions mm				
		A	B	C	D	E
3/8"	1	64	14	119	133	45
1/2"	1	64	14	119	133	45
3/4"	1.3	82	17	128	145	55
1"	1.8	100	20	135	155	70
1 1/4"	3.3	144	28	142	170	98
1 1/2"	3.1	144	28	142	170	98
2"	4.9	152	35	153	188	120



### Order Codes

A	Body	B	Port	C	Seals (fluid temp. min / max)	D	Protection	E	Options
I	316 Stainless steel*	E	3/8" BSP	T	3/8" NPT	0	NBR (-10°C to +70°C)	P	IP65 Safe Area
N	Niploy Plated Brass**	F	1/2" BSP	G	1/2" NPT	1	VITON (-10°C to +90°C)	S	IP67 Safe Area
T	Brass	H	3/4" BSP	I	3/4" NPT	6	EPDM (-10°C to +90°C)	B	II 1/2 GD Ex-d IIB T6 (-20 to +40°C)
	* 1/2" & 3/4" only	L	1" BSP	M	1" NPT	7	HNBR (-45°C to +90°C)	C	II 1/2 GD Ex-d IIC T6 (-20 to +40°C)
	** Upon request	N	1 1/4" BSP	O	1 1/2" BSP			/LT	II 1/2 GD Ex-d IIC T6 (-60 to +60°C)
		V	1 1/2" NPT	P	2" BSP			H	Ex-d c IIB IP67 IECEX
		W	2" NPT					T	Ex-d c IIC IP67 IECEX
								R	Ex-d IIC EAC Ex

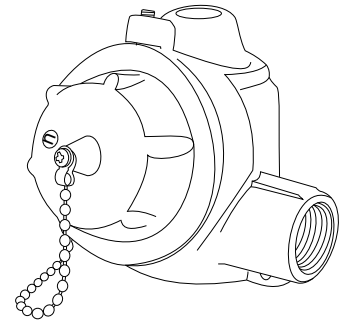


# Electrical Wiring - IP67 Housing

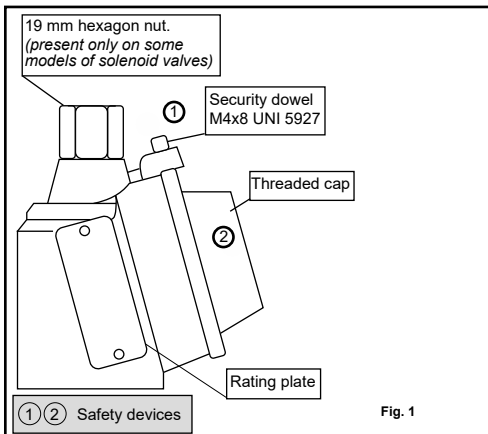
## Installation Procedures & Methods



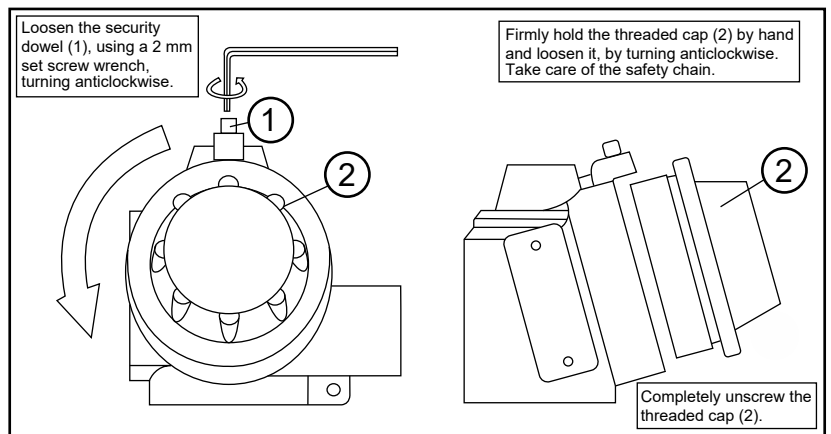
**Attention: For safety purposes, always ensure that the power supply is disconnected. After de-energising, allow 15 minutes before continuing the following procedures**



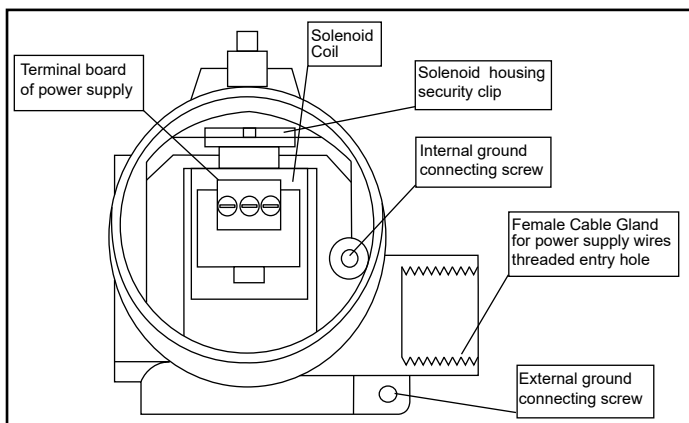
**A**



**B**

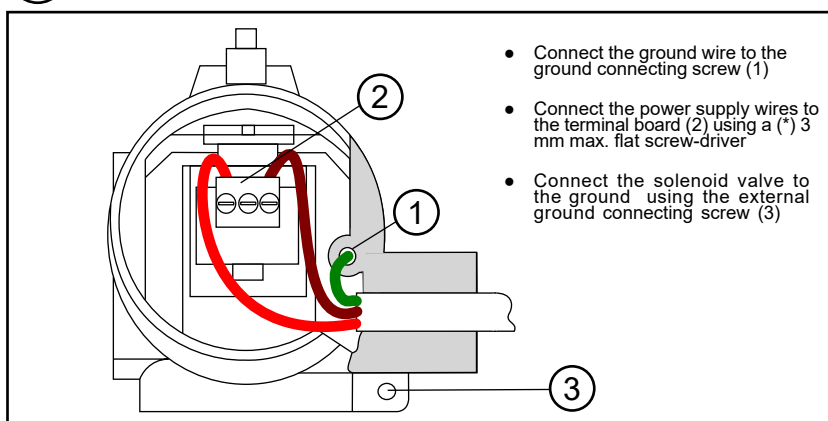


**C**

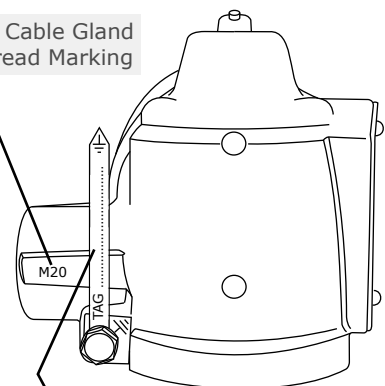


Pipe fittings used for cable entry (Cable, duct, conduit etc) are NOT supplied by the manufacturer. Installation engineers should ensure that the use of fittings are of the correct diameter and suitable to secure the tightness of the cable used. Where site conditions indicate, cable duct, conduit etc. must be ATEX approved, for a protection degree equal or greater than the protection degree indicated on the rating plate. The female thread type is indicated on the housing: M20\*1.5mm or 1/2"NPT

**D**



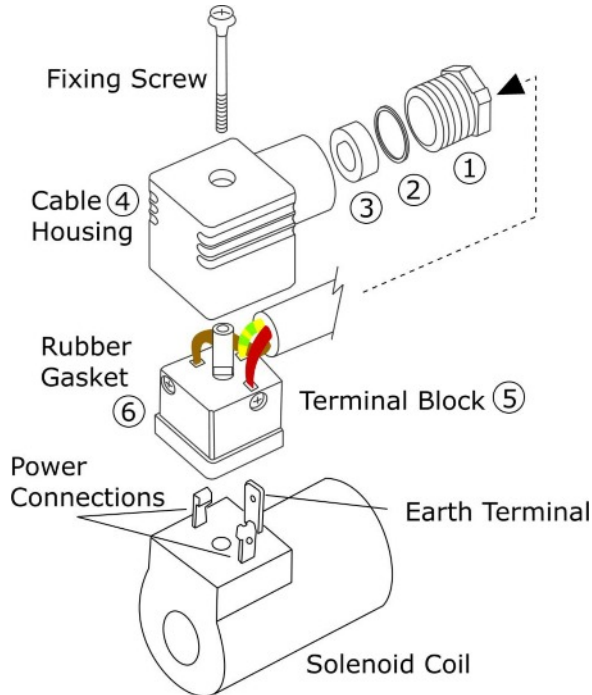
Electrical Cable Gland Entry Thread Marking



Earth Tag. Can be customised with Tag number, part number etc.



DIN electrical socket connectors to protect solenoid coil terminals and wiring.



### Section 1: DIN Connector Assembly

- Insert the electrical power cable through the gland assembly (1,2,3)
- Push the cable through cable housing (4)
- Connect power and earth cables to terminal block 5
- Push terminal block (5) backwards, inside cable housing (4)
- Place rubber gasket (6) on terminal block (5) front face
- Push terminal block onto solenoid coil terminals
- Push fixing screw through complete assembly
- Tighten fixing screw with small screwdriver
- Do not over tighten
- Tighten cable gland (1,2,3) by hand

### Section 2: How to install Solenoid Valves

Solenoid Valves can normally be installed and operate in any orientation. However, certain models are designed to operate in horizontal installations. Please contact Red Dragon for further information.

#### Installation Procedure:

Check that the Solenoid Valve is the correct product ordered for the application:

- Isolate the site electrical power supply
- Isolate the site media supply (dependant on the application)...air, water, steam etc. Leave until cool/safe.
- Insert the valve onto the pipe, ensuring that the flow direction is observed.....IN for incoming media, or an arrow stamped on the valve body.
- Ensure that the pipe connections are free from burrs or loose pipe thread tape
- Tighten all pipe joints
- Connect electrical power supply via DIN electrical socket connector, as detailed in section 1
- Ensure that DIN connector is properly connected to solenoid coil and the gasket is installed correctly
- Apply media pressure and check for leaks

### Section 3: Maintenance Procedure for Solenoid Valves

In the unlikely event of a valve malfunction, or routine maintenance, follow these instructions:

- Isolate the site electrical power supply
- Isolate the site media supply (dependant on the application)...air, water, steam etc.
- Remove the solenoid coil by unscrewing the coil retention nut anti-clockwise
- Remove the coil tube stem by unscrewing anti-clockwise
- Carefully remove the plunger assembly (inside the coil stem)
- Check the plunger assembly for damage or worn seals
- Check the face inside the coil stem for foreign particles that could prevent correct operation
- For Pilot Diaphragm Solenoid Valves: remove the top cover housing and check the diaphragm for damage and blocked transfer port.
- Re-assemble the valve in reverse order, ensuring that all parts are cleaned and assembled correctly