

# STAINLESS STEEL ATEX 2/2 SOLENOID VALVE SPU225-X NF

## MAIN CHARACTERISTICS

The SPU 225-X is a pilot operated ATEX 2/2 solenoid valve in stainless steel. It's intended for the shut-off the networks of aggressive fluids no charged in hazardous explosives atmospheres, areas 1, 2, 21 et 22. Normally closed operating. The standard construction is with stainless steel and diaphragm is FPM. This solenoid valve, exists in numerous types. Operating normally closed with 0,5 bar minimum differential pressure.

**SPU225X** : G 3/8" to G 2"

**Diaphragm** : FPM.

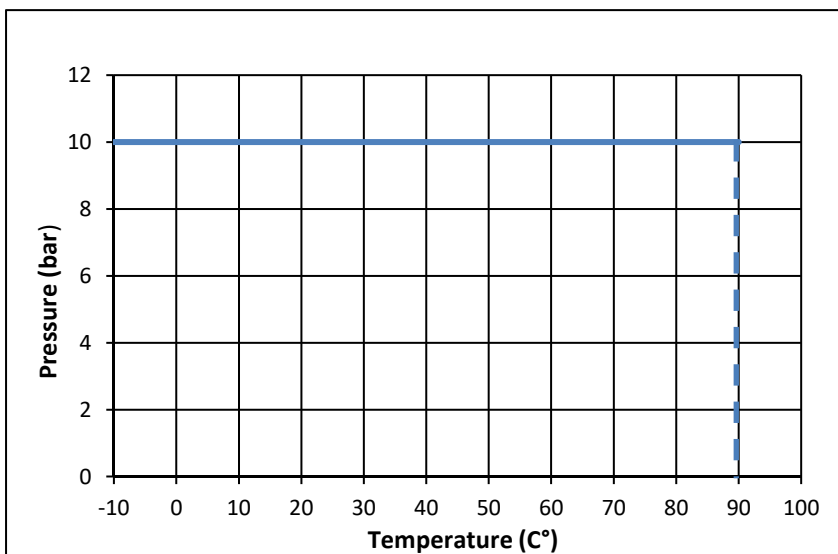
**Voltages** : See on page 3.

BSP Screwed end connections.

## LIMITS OF USE

Electric protection :	IP 65
Hazardous explosives atmosphere :	1, 2, 21 and 22
Max allowed fluid pressure : PS	10 bar
Minimum +ΔP :	0,5 bar
Max viscosity:	50 Cst
Max allowed fluid temperature : TS	-10°C / +90°C
Room temperature* :	-10°C / +60°C

\* In direct current, over 40°C, the maximum differential Pressure can be reduced.



Modifications reserved

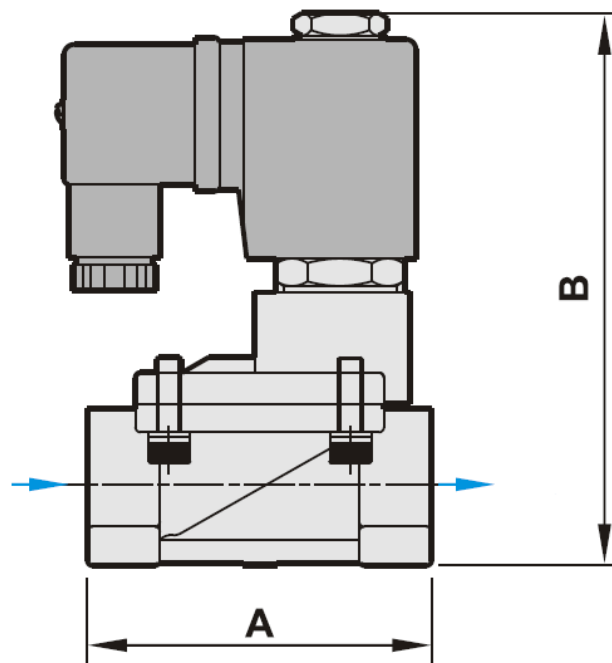
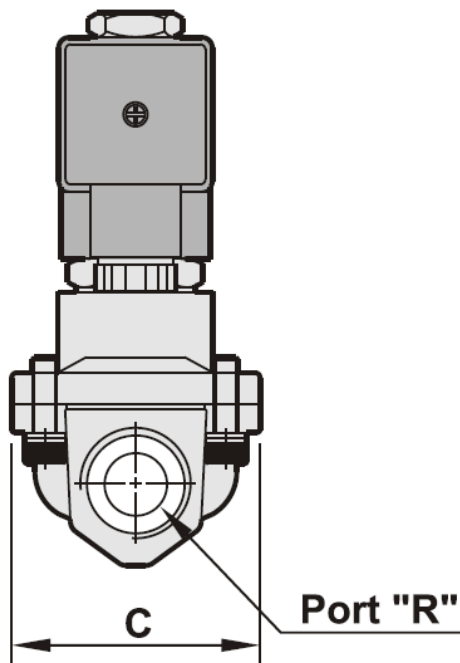
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## REGULATIONS AND STANDARD OF CONSTRUCTION

Item	Standard	Item	Standard
Pressure Equipment Directive 97/23	3/8" to 1": A3 § 3 excluded	Stainless steel	EN 1503-1
Low voltage directive 73/23	1" 1/4 to 2": category I	BSP Thread	ISO 228
Directive ATEX	Category 2	Size	EN 12516-1
Coil : II 2G/D EEx m II T4	PTB 03 ATEX 2086 X	Body : II 2G/D EEx c II T4	SIRA 09 ATEX 6180 X

## DIMENSIONS (mm) AND WEIGHT (kg)

DN	A	B	C	Weight (kg)
3/8"	66,5	106,5	48	1,11
1/2"	66,5	106,5	48	1,09
3/4"	99	126,5	70	1,91
1"	99	126,5	70	1,77
1" 1/4	131	145,5	96	3,11
1" 1/2	131	145,5	96	2,92
2"	160	160,5	112	2,90



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## HYDRAULICS CHARACTERISTICS

DN	Port (R) (mm)	Kv (m <sup>3</sup> /h)	Max Diff Pressure (bar)	Min Diff Pressure (bar)	Operating time (s)
3/8 "	13	3,4	10	0,5	20-60 ms
1/2"	13	3,4	10	0,5	20-60 ms
3/4 "	25	8,9	10	0,5	20-60 ms
1"	25	8,9	10	0,5	20-60 ms
1" 1/4	38	15,8	10	0,5	50-80 ms
1" 1/2	38	21,3	10	0,5	50-80 ms
2"	50	34,1	10	0,5	50-80 ms

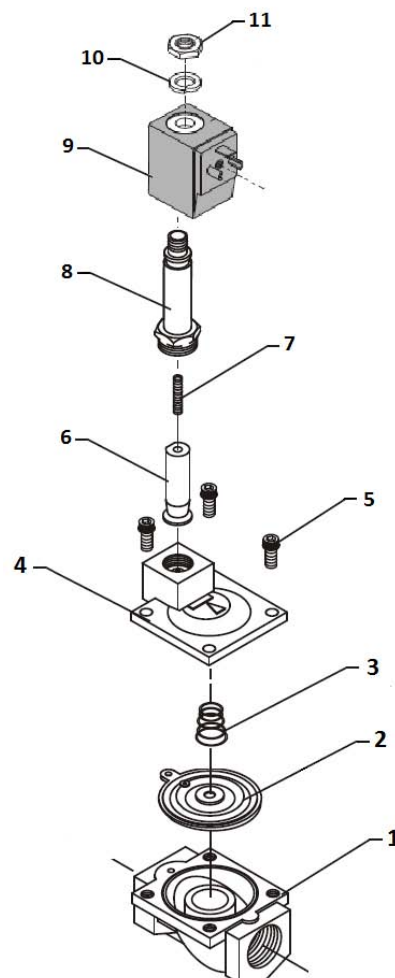
## ELECTRIC CHARACTERISTICS

Coil classified F. Duty 100%. Connecting by thread

Coil ATEX	Current	Available voltages (V)		Frequency		Power consumption
		24	230	50 Hz	60 Hz	
	AC Coil	24	230	50 Hz	60 Hz	18,1 VA
	DC Coil	24				15 W

## CONSTRUCTION

n°	Item	Material
1	Body	Stainless steel 1.4408
2	Diaphragm	FPM
3	Spring	Stainless steel
4	Cover	Stainless steel 1.4408
5	Screw	Stainless steel 1.4301
6	Plunger	Stainless steel 1.4301
7	Spring	Stainless steel
8	Tube-guide	Stainless steel 1.4301
9	Coil	PBT +30 % GF
10	Washer	Stainless steel
11	Nut	Stainless steel

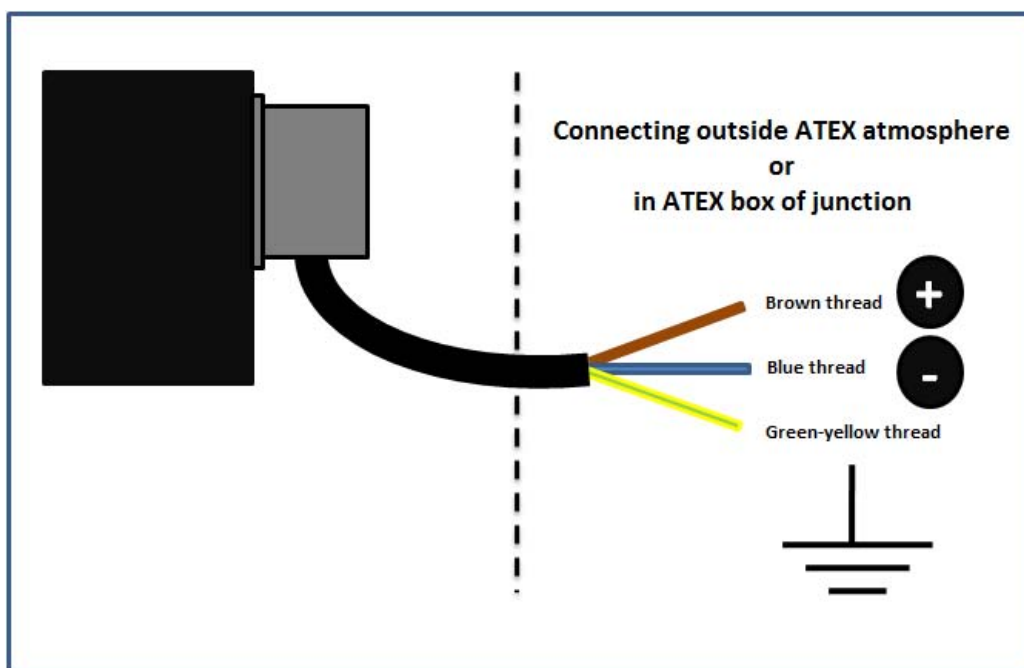


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## SPECIAL INSTRUCTIONS OF MOUNTING AND MAINTENANCE IN HAZARDOUS EXPLOSIVE ATMOSPHERE

- 1 - It is recommended to install the solenoid valve at his reception. If this equipment must be stored, it has to be made in a dry place and protected from the bad weather.
- 2 - The installation of the solenoid valve can be realized only by an authorized person to work in explosive area.
- 3 - Wear protection equipments necessary for this type of intervention : Glasses and gloves.
- 4 - The installation of the solenoid valve is not recommended in wet environment.
- 5 - Verify the compatibility of the solenoid valve with the category of the potentially explosive zone and with his surface's temperature.
- 6 - Verify the voltage and the frequency of the electric current of supply. The coil must be switched off if it is not installed on the body of the solenoid valve.
- 7 - Before any operation, Depressurize the piping and wait for its cooling at room temperature.
- 8 - The preliminary cleaning of the pipings and the tank is compulsory and must be realized with the great care.
- 9 - The installation of a strainer of protection upstream to the solenoid valve is strongly recommended.
- 10 - Respect the sense of flow indicated by the arrow marked on the body.
- 11 - The power cable must be linked with a box on screw outside of the explosive atmosphere or in ATEX approved Box. Plan a protection's fuse of the feeding system of the solenoid valve.



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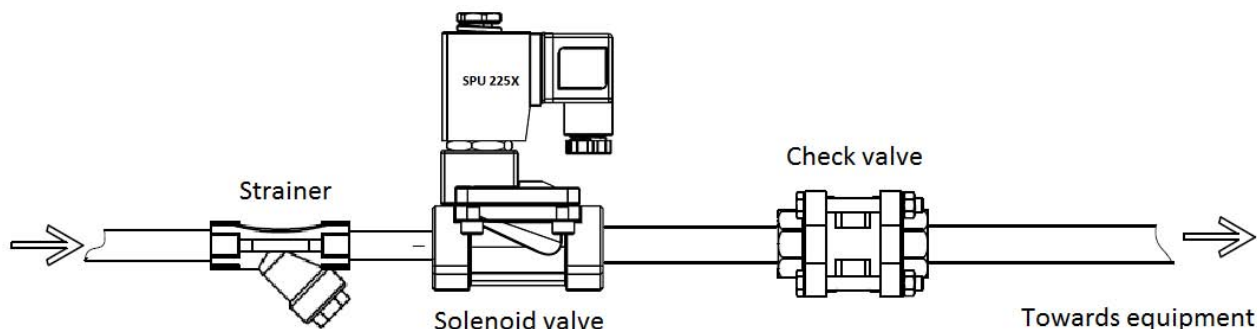
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## NOTA:

### Check-valve :

A solenoid valve cannot be used as a check-valve. A de-energized normally closed solenoid valve can be crossed by a downstream counterflow. If a both side tightness is required, please add a check-valve downstream of the solenoid valve.

### Example



### Scaling :

A solenoid valve used on hard water and kept energized during long period can face scaling problem that can block the operation. For this kind of application, please consult.



Conform also to the assembly instructions supplied with the solenoid valve.

## SPARE PARTS

Coil ATEX (item 9)					
Voltage	230V 50/60Hz	24V 50/60Hz	24V cc		
Code	980540	980541	980542		
Diaphragm (item 2)					
DN	3/8" - 1/2"	3/4" - 1"	1" 1/4	1" 1/2	2"
FPM	980570	980571	980572	980573	980574
EPDM	980585	980586	980587	980588	980589

## OPTION

Diaphragm : EPDM

NPT thread according to ANSI B1.20

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