

# 2/2 DIRECT ACTING SOLENOID VALVE TYPE VSO 84 NC

## MAIN CHARACTERISTICS

The VSO 84 solenoid valve is a 2/2 direct acting valve dedicated to the shut off of clean and non-aggressive fluids. The operation way is normally closed and it can be used on  $\Delta P=0$  applications. The standard construction includes quality brass body and cover, internal parts in stainless steel and diaphragm is NBR. This solenoid valve is also available with several diaphragm materials and various coil voltages. Manufacturing quality is following ISO 9001. Connection is G threaded according to ISO 228/1.



## LIMITS OF USE

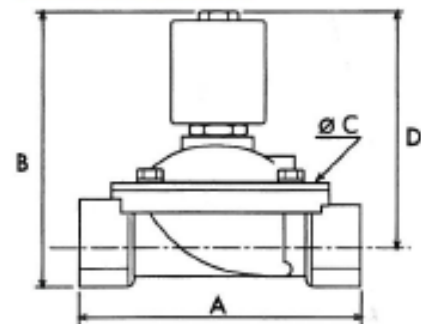
Electric protection	IP 65		
Max allowed fluid pressure : PS	0 - 10 bar		
Differential pressure :	See the table bellow		
Max allowed fluid temperature : TS	NBR	EPDM	FPM
	-5°C / +80°C	-5°C / +110°C	-5°C / +150 °C
Room temperature* :	-10°C / +80°C		



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

## DIMENSIONS (mm) AND WEIGHT (kg)

DN	A	B	C	D	Weight
G 3/8"	61	105	48	92	0,68
G 1/2"	61	105	48	92	0,66
G 3/4"	100	110	80	93	1,10
G 1"	100	116	80	96	1,20
G 1" 1/4	146	200	128	170	5,20
G 1" 1/2	146	200	128	170	5,00
G 2"	174	216	146	180	6,50



## HYDRAULIC CHARACTERISTICS

DN	Port (mm)	Kv (m <sup>3</sup> /h)	Max diff. Pressure (bar) C.A.	Max diff. Pressure (bar) C.C.	Coil	Operating time (s)
G 3/8"	12	2,20	5	5	B 12	20-60 ms
G 1/2"	12	2,20	5	5		
G 3/4"	20	5,50	4	2		
G 1"	25	7,50	4	2		
G 1" 1/4	36	17,5	4	2	B 60	50-80 ms
G 1" 1/2	39	19,0	4	2		
G 2"	51	32,4	4	2		

Modifications reserved



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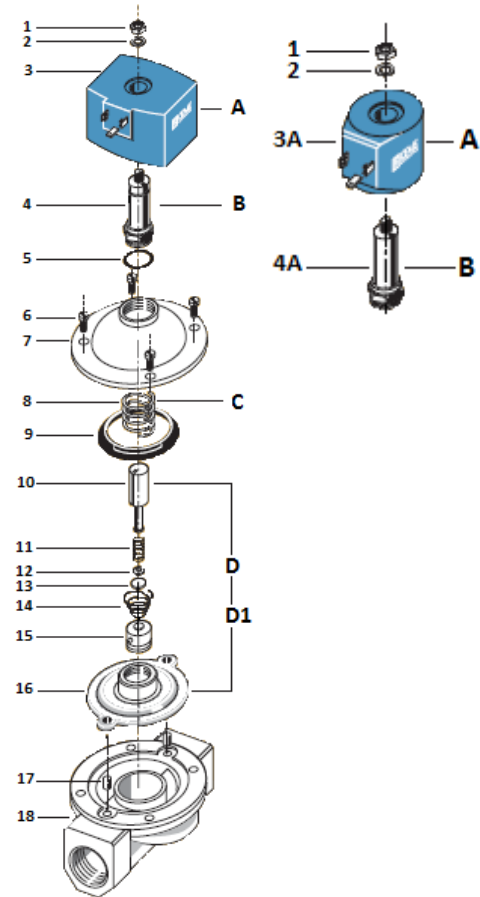
## ELECTRIC CHARACTERISTICS

Coil classified H. Duty 100%. Connecting by connector T30.

Coil	Current	Available voltages (V)						Frequency		Power consumption	
		12	24	48	110	230	380	50 Hz	60 Hz	Holding	Rush
B 12	AC Coil	12	24	48	110	230	380	50 Hz	60 Hz	18 VA	47 VA
	DC Coil	12	24		110			na		21 W	
B 60	AC Coil		24	48	110	230	380	50 Hz	60 Hz	140 VA	430 VA
	DC Coil	12	24					na		43 W	

## CONSTRUCTION

n°	Item	Material
1	Lock nut	Zincated steel
2	Washer	Zincated steel
3	Coil	PBT + 30% G.F
4	Tube guide	Stainless steel AISI 430
5	O-ring	FPM
6	Screw	Stainless steel
7	Cover	Brass CW 617 N
8	Spring	Steel
9	Ring	Stainless steel
10	Plunger	Stainless steel
11	Spring	Steel
12	Support	Stainless steel
13	Seal	NBR
14	Spring	Steel
15	Bush	Stainless steel
16	Diaphragm	NBR
17	Bush	Stainless steel
18	Body	Brass CW 617 N



## REGULATIONS AND STANDARDS OF CONSTRUCTION

Item	Standard	Item	Standard
Pressure equipment directive 97/23	1/4" to 1" : Excluded	Brass materials	EN 1503-4
	1" 1/4 to 2" : category I	BSP thread	ISO 228
Low voltage directive 72/23	category I	Drinking water (VSO 84 W)	AC LY 361
Connector	DIN 43650		

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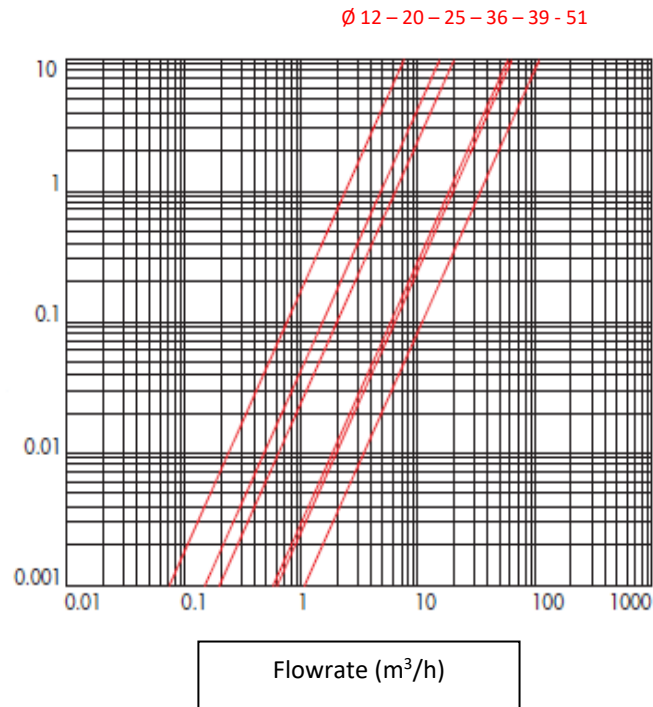


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## PRESSURE LOSS DIAGRAM (BAR)



## USE ON DRINKING WATER

The W version of the VSO 84 in diameter 3/4" et 1" can be used on the networks of drinking water. It has the French homologation ACS.

## RISK OF CONDENSATION

In case of use in a wet area or on a network of cooling fluid, there is a risk of condensation between the coil and the pilot-tube. This phenomenon can cause damage to the coil. In this case, plan to use the reinforced sealing kit. Also consult for other alternative solution.

<b>VSO 84 : 3/8" - 1"</b>	Reinforced sealing kit	980691
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## RISK OF FREEZING

If the fluid of the network is likely to freeze, intend to provide a heating system adapted to the solenoid valve.

## USE ON AIR

**Air:** Life cycle decreased in 100 % duty service due to the lack of thermal exchange (See typical 8320).

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### MOUNTING

Installation in every position except horizontal pipe with coil towards the bottom.

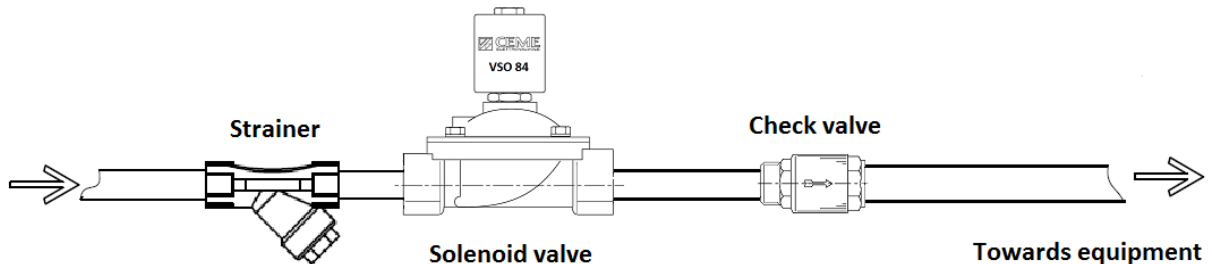
Respect the sense of flow indicated by the arrow marked on the body.

For an use on liquids, the installation of a strainer for upstream protection is recommended.

### 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

B 12 coil type (Number A)							Connector
Voltage	230V 50Hz	24V 50Hz	48V 50Hz	110V 50Hz	12V cc	24V cc	T30
Code	980410	980411	980413	980414	980415	980416	980696
Voltage	230V 60Hz	24V 60Hz	380V 50Hz	110V cc	12V 50 Hz		
Code	980420	980421	980419	980417	980412		
B 60 coil type (Number A)							Connector
Voltage	230V 50Hz	24V 50Hz	48V 50Hz	110V 50Hz	12V cc	24V cc	T30
Code	980510	980511	980513	980514	980515	980516	980696
Moving parts (Number 10, 11, 12, 13, 14, 15, 16 et 17)							
DN	3/8"	1/2"	3/4"	1"	1" 1/4	1" 1/2	2"
NBR	980600		980601		980602		980603
EPDM	980610		980611		980612		980613
FPM	980620		980621		980622		
EPDM W			980660				

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