

PILOT OPERATED SOLENOID VALVE CEME 2/2 ESM 85 NC

FEATURES

The ESM 85 solenoid valve is a 2/2 piloted valve dedicated to the shut off of clean and non-aggressive fluids. The operation way is normally closed. The standard construction includes quality brass body and cover, internal parts in stainless steel and diaphragm is NBR. Operating normally closed with 0,3 bar minimum differential pressure.

AVAILABLE MODELS

ESM85 : G 3/8" to G 1"

Diaphragm : NBR

Voltages: See on page 3.

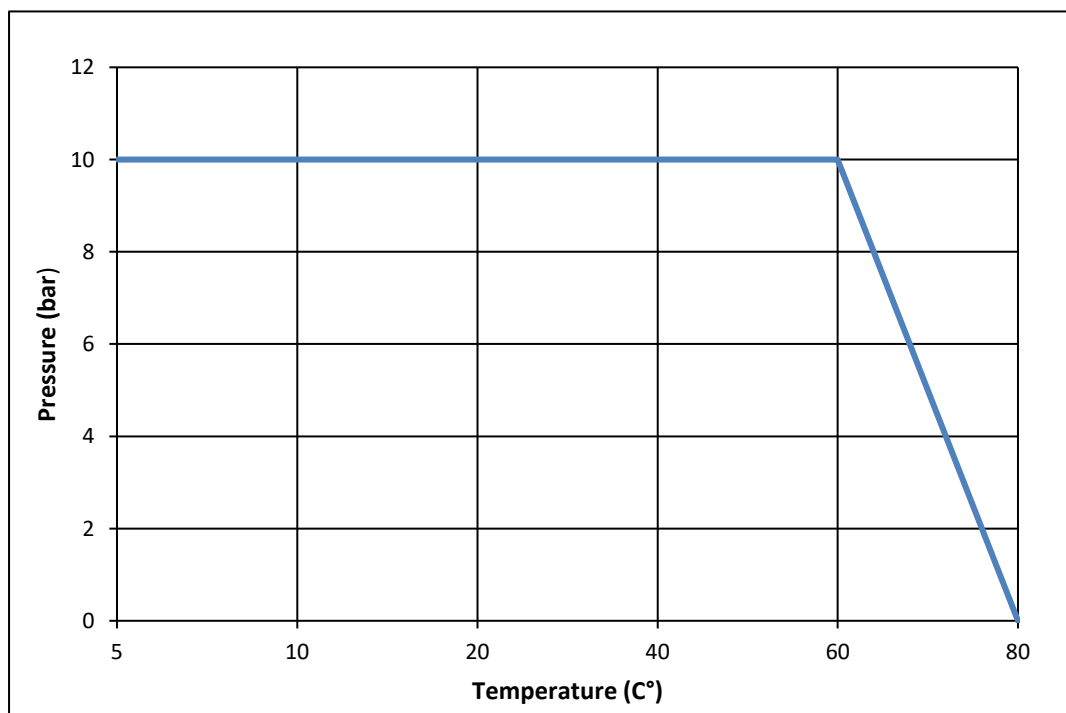
BSP Screwed end connections.



LIMITS OF USE

Electric protection	IP 65
Max allowed fluid pressure : PS	0 - 10 bar
Max allowed fluid temperature : TS	+5°C / +80°C
Room temperature:	-10°C / +80°C

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



Information given as an indication only, and subject to possible modifications



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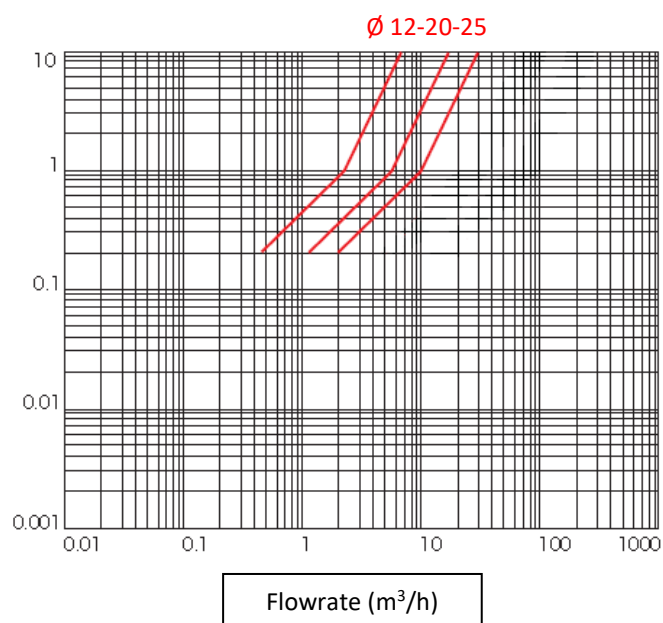
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REGULATIONS AND STANDARDS OF CONSTRUCTION

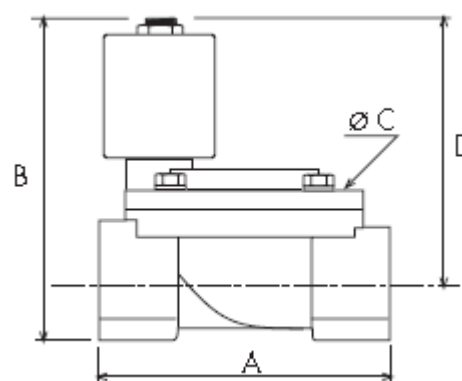
Item	Standard	Item	Standard
Pressure Equipement Directive CE 2014/68	3/8" à 1" : A4 § 3	Brass materials	EN 1503-4
Low voltage directive CE 2014/35		BSP thread	ISO 228
Connector	DIN 43650		

PRESSURE LOSS DIAGRAM (BAR)



DIMENSIONS (mm)

DN	A	B	C	D
G 3/8"	61	73	48	60
G 1/2"	60,5	79,5	48	67
G 3/4"	84	89	54	72,5
G 1"	97	97,5	64,5	77,5



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HYDRAULIC CHARACTERISTICS

DN	Port (mm)	Kv (m³/h)	Min Diff. pressure (bar)	Max Diff. pressure (bar)	Coil	Operating time (s)
G 3/8"	12	1,86	0,3	10	B 4	20-60 ms
G 1/2"	12	2,1	0,3	10		
G 3/4"	20	5,7	0,3	10		
G 1"	25	9,6	0,3	10		

ELECTRIC CHARACTERISTICS

Coil classified F. Duty 100%. Connecting by connector T22.

Coil	Current	Available voltages (V)		Frequency		Power consumption	
						Holding	Rush
B 4	AC Coil	24	230	50 Hz	60 Hz	11 VA	14,5 VA
	DC Coil	24				9 W	

OPTION : Energy saving connector

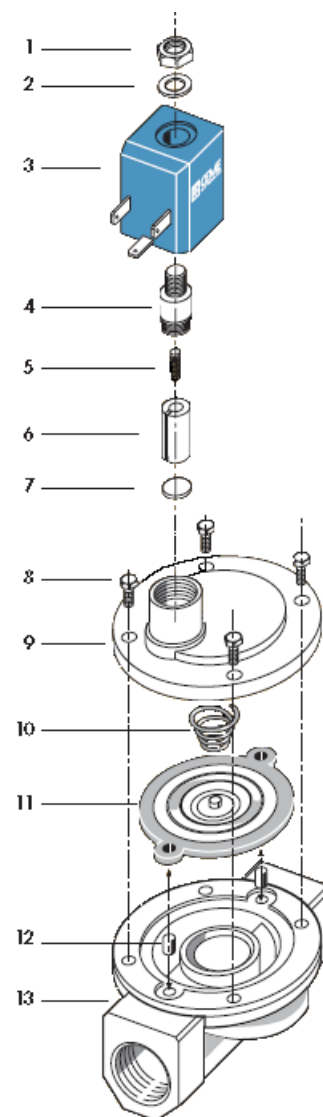
Using this innovative connector saves up to 70% of electrical energy and extends the life of the coil. The connector first sends a current surge at the nominal supply voltage to activate the solenoid. After 500 ms, the current is reduced by 80% to a value sufficient to maintain the magnetic field. As well as saving energy, this connector also significantly reduces coil heating.



CONSTRUCTION

Topology example

N°	Item	Material
1	Lock nut	Zincated steel
2	Washer	Zincated steel
3	Coil	PBT + 30% G.F.
4	Tube guide	Stainless steel AISI 300
5	Spring	Stainless steel AISI 300
6	Plunger	Stainless steel AISI 400
7	Seal	NBR
8	Screw	Stainless steel
9	Cover	Brass CW 617 N
10	Spring	Steel
11	Diaphragm	NBR
12	Bush	Brass
13	Body	Brass CW 617 N



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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.

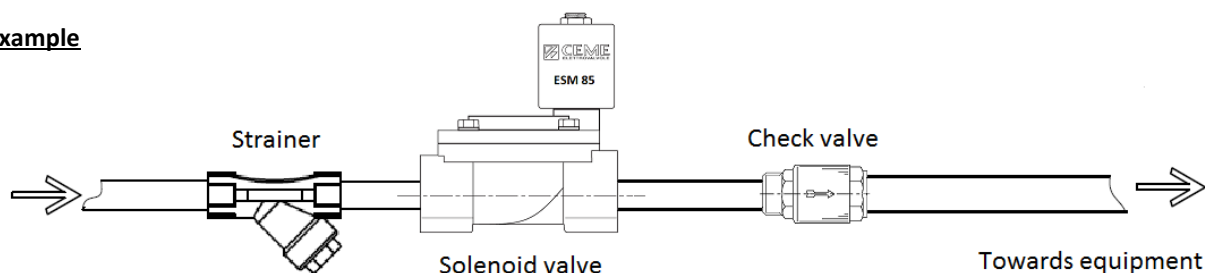
RISK OF CONDENSATION

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. Consult for other alternative solution.

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

B4 coil type (Number 3)				Connector
Voltage	230V 50Hz	24V 50Hz	24V cc	T22
Code	980300	980301	980302	980232

CEME TRANSLATIONS REFERENCES

ø Diameter	3/8"	1/2"	3/4"	1"
CEME	8513	8514	8515	8516
SECTORIEL	See WEB catalog			

OPTION : Energy saving connector

Energy saving T22 connector					
Voltage	230V 50Hz	24V 50Hz	110V 50Hz	48V 50Hz	24V cc
Code	980361	980365	980369	980367	980363

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