1342CL Series

Anti water hammer solenoid valve

Slow closing.Normally closed and Normally open.

Applications:

- Water and other liquids of low viscosity.
- Hydraulic systems where, given the fluid's speed, the upstream pipeline's length and its quick-closing system, a water hammer capable of damaging or breaking pipelines, instruments and accessories and/ or causing intolerable noises and vibrations may be produced.

Jefferson reduces the water hammer problem.

The water hammer, or Joukowski impulse, is the main cause of breakdowns, sometimes of a severe nature, in pipelines and hydraulic installations.
In an hydraulic circuit, the quick closing of a valve results in a sudden interruption of the flow, generating in the upstream pipelines a pressure wave which goes through it back and forth several times at about the sound speed and with an amplitude which may be over 100 bar depending, among other factors, on the closing speed, the flow speed and the pipeline's length.
Jefferson's slow-closing valves act on the closing speed, which is ultimately the only factor which may be altered in an already installed circuit.
In order to make an approximate calculation of the transient pressure amplitude at the time the valve is closed, the following formula may be used:

Metric system:

$$P_T(bar_m) = \frac{0{,}0515 \times V(m/s) \times L(m)}{T(s)} + P1(bar_m)$$

English system:

$$P_T(psig) = \frac{0{,}07 \times V(ft/s) \times L(ft)}{T(s)} + P1(psig)$$

Slow closing is inversely proportional to transient ΔP.

Examples		
System	**Metric**	**English**
Constant	0,0515	0,07
(V) Speed	6 m/s	19,7 ft/s
(L) Long Pipe	30 m	98,7 ft
(T) Normal closing time	0,1 s	0,1 s
(P1) Inlet pressure	3 bar_m	45 psig
P_T Transient pressure	**96 bar_m**	**1406 psig**
(T) Slow closing time	3 s	3 s
P_TCL Transient pressure	**6 bar_m**	**90 psig**

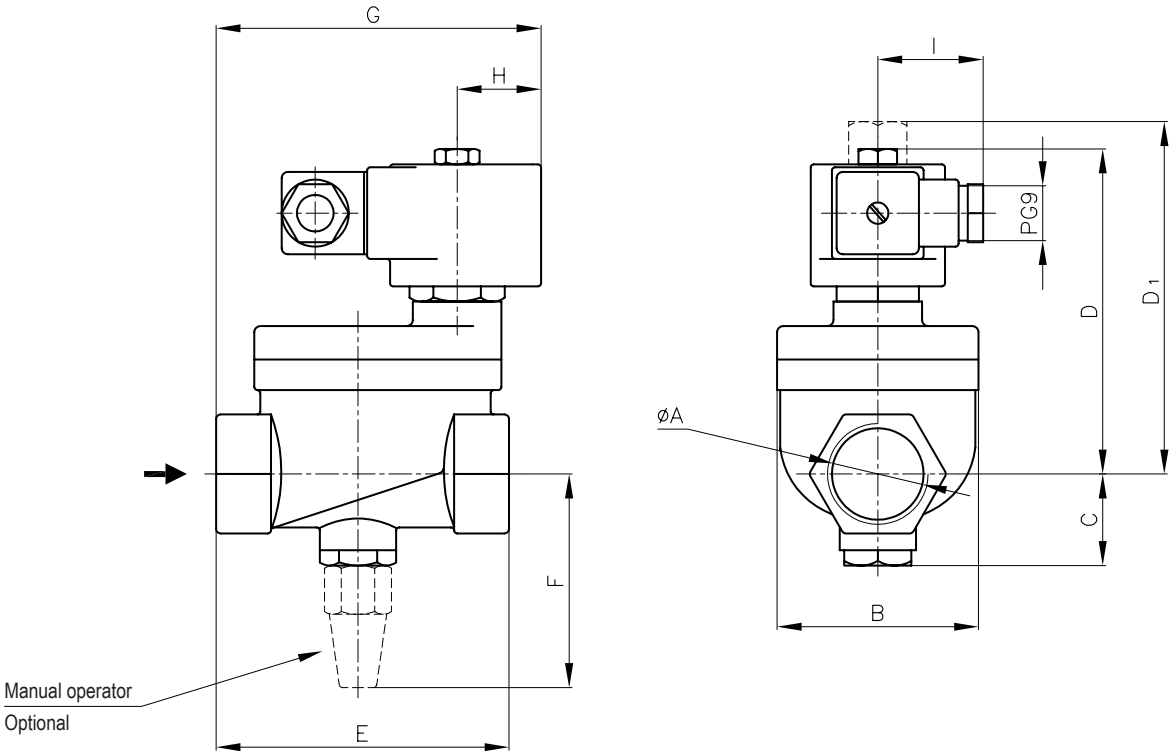
Main characteristics

- Specifically designed to eliminate water hammer.
- Stainless steel or brass body.
- Normally closed and Normally open.
- Seats and Buna N seals
- Encapsulated coils DIN PG9 electrical connection or metal conduit R.1 / 2 "NPT.

Technical specifications

Pipe ins.	Ø Orifice		Flow Factor		Weight		ΔP				Maximum Temperature		Catalog Nº	
							Minimum		Maximum					
	mm	ins.	Kv	Cv	Kg	Lb	bar	psi	bar	psi	ºC	ºF	N. Closed	N. Open
3/4"	20	0.79	5	5.9	1.2	2.6	0.2	3	15 (NC) 10 (NO)	225 (NC) 150 (NO)	80º	176	1342BA06CLT	1342BA06INACLT
1"	26	1.02	11	13	1.7	3.8							1342BA08CLT	1342BA08INACLT
1 1/2"	38	1.50	25	29	3.1	6.8							1342BA12CLT	1342BA12INACLT
2"	50	1.97	40	47	4.1	9.0							1342BA16CLT	1342BA16INACLT

General dimensions *1342CL*



ØA	B	C	D	D_1	F	G	H	I
R 3/4"	52	26	104	71	68	84	27	35
R 1"	67	30	108	96	72	104		
R 1 1/2"	81	36	119	114	79	122		
R 2"	97	44	125	128	85	138		

Measurements mm.

ØA	B	C	D	D_1	F	G	H	I
R 3/4"	2.05	1.02	4.09	4.49	2.68	3.31	1.06	1.38
R 1"	2.64	1.18	4.25	4.65	2.83	4.09		
R 1 1/2"	3.19	1.42	4.69	5.08	3.11	4.80		
R 2"	3.82	1.73	4.92	5.31	3.35	5.43		

Measurements ins.

Special construccion:

Stainless steel body:
AISI304: change letter **B** for **S** in the catalog number.
Example:1342**S**A08CL
AISI316: change letter **B** for **I** in the catalog number.
Example: 1342**I**A08CL

Options	Prefix	Suffix	Examples
Water, weather and saline corrosion proof coils.	**YC**		**YC**1342BA08CLT
Explosion and weather proof coils.	**ZC**		**ZC**342BA08CLT
Manual operator on the main orifice.		**-M**	1342BA08CLT-**M**
BSP connections. (remove suffix **T**)		~~T~~	1342BA08CL
Energized coil indicator light.	See coils.		

Coil characteristics

Electric power supply	Coil Type	Power W	VA (volt-amper)		Maximum Temp.		Available tensions
			Inrush	Holding.	ºC	ºF	
AC 50 Hz	MF11C	11	40	22	155	311	1
AC 60 Hz	MF13C	13	45	27	155	311	2
DC	MF19C	19	19	19	180	356	3

1-(12, 24,110,220,240)V **2**-(12, 24,110, 120, 220, 240)V **3**-(12, 24, 110, 220)V

Recommendations for installation

Place a strainer upstream the valve with a porosity ≤ 100 µ. Mount the valve only over horizontal pipeline with the coil upright. The inlet pressure to the valve must always be greater than the output pressure thereof. For the valve to open, either normally closed or normally open, one must respect the minimum pressure indicated on each model.