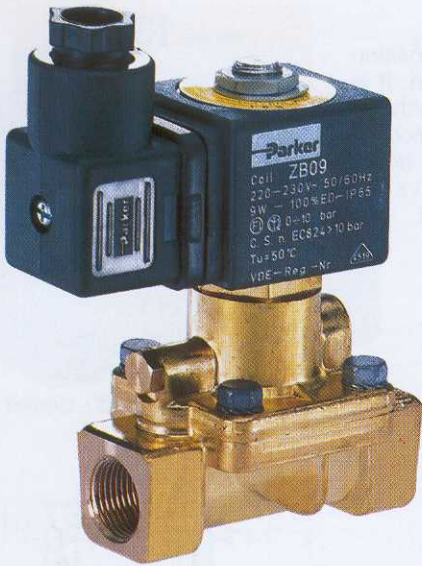


# Solenoid Valves for Automation

2/2 way - Normally Closed - Diaphragm pilot operated

Fittings :

G = 3/8" - 2"  
NPT = 3"



Series **133**

## General description:

PARKER series **133** solenoid valves are diaphragm pilot operated and require a minimum differential pressure to operate.

They are used for applications with high flow rates and media such as **water, light oils (2°E) and others**, provided they are compatible with the construction materials used.

Series **133** valves are **normally closed**.

## Temperatures:

The working temperature for media is:  
maximum **+90°C**  
minimum **-10°C**

with NBR seals (Buna N).

On request seals in Viton are available, for fittings  $\leq$  **G 1"** for maximum working temperature **+140°C**.

The maximum ambient temperature is:

- with class **"F"** coils **+50°C**
- with class **"H"** coils **+80°C**

## Coils:

For series **133** valves class **"F"** coils (**155°C**), encapsulated in thermoplastic containing 30% glass fiber (types: ZB, YB), are available.

Class **"H"** Coils are also available (**180°C**), encapsulated in thermoplastic containing 40% glass fiber (type: ZH).

All the coils are for continuous service, 100% E.D.

The rated voltage tolerance is:  
**±10% for A.C.** power supply and **+10% -5% for D.C.**

The **"Z"** and **"Y"** coils can be used on a.c. with frequency 50/60 Hz (dualfrequency).

The **"Z"** coils have Faston terminals for **DIN 43650A** connectors with protection to **IP65**.

The **"Y"** coil has terminals with 2 x 1,000 mm cables with protection to **IP67**.

Series **133** solenoid valves are also available in a watertight version for applications where the conditions of humidity are particularly critical (type: YE 09).

## Materials:

• Valve body:	OT58 UNI 5705 brass stamping
• Seals:	NBR (Buna N) - Viton
• Enclosing tube:	AISI 304 stainless steel
• Plunger:	AISI 430 F stainless steel
• Spring:	AISI 302 stainless steel
• Shading ring:	Copper

## Electrical features:

Coil type [ ]		Power [W]		Insulat. class
A.C.(~)	D.C.(=)	A.C.(~)	D.C.(=)	
ZB 09	ZB 12	9	12	F
YB 09	YB 12	9	12	F
ZH 14	ZH 16	14	16	H
YE 09	-	9	-	E

## Specification:

Fittings Ø G - NPT	Valve type	Nominal orifice Ø	Flow coefficient Kv	Minimum pressure	Max. differential pressure (M.O.P.D.)		Coil type	Weight	Notes
					in A.C.(~) bar	in D.C.(=) bar			
[ " ]	[ ]	[mm]	[m³/h]	[bar]			[ ]	[Kg]	[ ]
3/8 G	133 I	13	3.00	0.1	20	20	Z - Y	0.550	1
1/2 G	133 A	13	3.00	0.1	20	20	Z - Y	0.580	1
3/4 G	133 C	20	8.40	0.1	20	20	Z - Y	1.020	1
1 G	133 D	25	9.60	0.1	20	20	Z - Y	1.080	1
1 1/4 G	133.2 E	35	25.20	0.1	10	10	Z - Y	3.150	1 - 2
1 1/2 G	133.2 F	40	30.00	0.1	10	10	Z - Y	2.900	1 - 2
2 G	133 G	50	37.20	0.1	10	10	Z - Y	4.300	1 - 2
3 NPT	133 M	76	86.20	0.5	12	12	Z - Y	17.400	1

Note: 1) NP (nominal pressure): 25 bar (from 1 1/4 to 3" PN 16 bar).  
2) Slow closure version.



### Application:

Series 133 solenoid valves are ideal for the automatic control of media in a wide range of applications such as:

- thermohydraulic systems;
- autoclaves;
- cooling of machine tools;
- industrial washing plants;
- evaporation towers;
- hospital equipment;
- irrigation systems;
- fire-fighting systems;
- wood-working machines;
- marble-working machines;
- molding machines;
- hygiene-health equipment.


In **vacuum** application series 133 valves can be used in a range from  $10^{-3}$  to  $10^{+3}$  torr.

For air and inert gases they can be used for low operating frequencies.


### Installation:

The valves can be mounted in any position without jeopardising their operation. It is however advisable to install them with the coil in a vertical position above the body.

### Approvals:

 •Coil certification:

- ZB 09** 24V/50-60Hz, 115V/50-60Hz, 220-230V/50-60Hz, 240V/50-60Hz
- ZB 12** 12VDC, 24VDC
- YB 09** 220-230V/50-60Hz

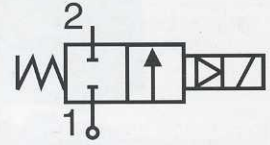
 •The coils:

- ZB 09** 220-230V/50-60Hz, 240V/50-60Hz
- YB 09** 220-230V/50-60Hz



- Models are 133IN,133AN
- ZB 09** coil:  
24V/60Hz, 110-120V/60Hz,  
208-240V/60Hz

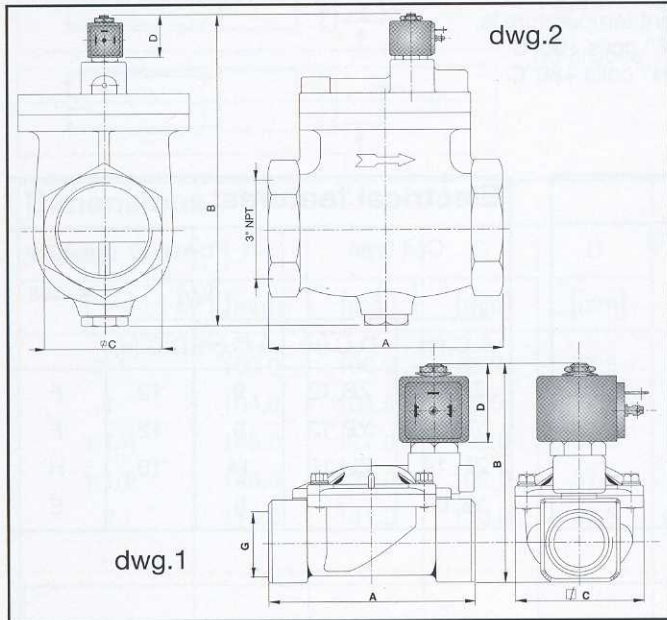
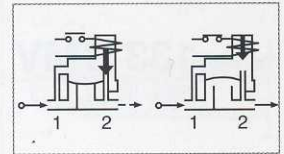
### Series 133



**N.C.**

**Normally closed**

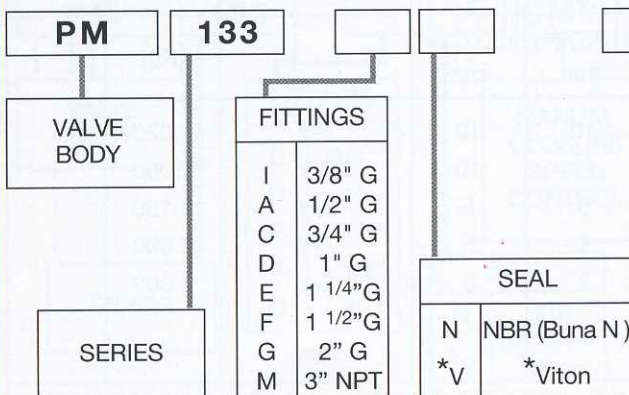
Coil energised - open  
Coil de-energised - closed



Dimensions				
Fittings Ø G - NPT	A	B	C	D
[ " ]	[mm]	[mm]	[mm]	[mm]
3/8 G	69.0	92.5	40.0	37.5
1/2 G	72.0	94.5	40.0	37.5
3/4 G	100.0	100.0	65.0	37.5
1 G	104.0	105.5	65.0	37.5
1 1/4 G	145.0	127.0	102.0	37.5
1 1/2 G	145.0	127.0	102.0	37.5
2 G	173.0	141.0	118.0	37.5
3 NPT*	225.0	295.0	112.0	37.5

\* = Dwg. 2

### Order code



Coil type	[V]		[Hz]		[c.c.]	
	24V 50/60 Hz	115V 50/60 Hz	220-230V 50/60 Hz	240V 50/60 Hz	12V c.c.	24V c.c.
ZB 09	•	•	•	•		
ZB 12					•	•
YB 09	•	•	•			
YB 12					•	•
ZH 14	•	•	•			
ZH 16						•
YE 09	•		•			

Note: Valve supplied with body (M.P.) and coil separate.  
Connector to be ordered separately.  
\* Optional Viton for fittings smaller than 1".

Coil type	24 V/60 Hz	110-120 V/60 Hz	208-240 V/60 Hz
ZB 09 UL	•	•	•