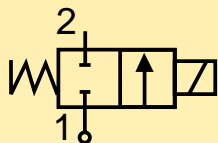


# Solenoid Valves for Automation

2/2 way - Normally Closed - Direct operated

Fittings: G = 1/8" - 1/4"

Series **146**

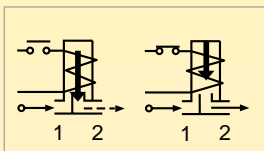


N.C.

Normally closed

Coil energised - open

Coil de-energised - closed



## General description:

PARKER series **146** solenoid valves are direct operated and do not require a minimum differential pressure to operate. They are used for general applications with media such as **water, air, light oils (2°E) and inert gases**, provided they are compatible with the construction materials used. Series **146** valves are **normally closed**.

## Temperatures:

The working temperature for media is:

maximum	+140°C
minimum	-10°C

The maximum ambient temperature is:

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

## Application:

Series **146** solenoid valves are ideal for the automatic control of media in a wide range of applications such as:

- Burglar alarm systems;
- Sterilisers;
- Espresso coffee machines;
- Diesel oil burners;
- Shoe manufacturing machinery;
- Ceramic plants;
- Air dryers;
- Automatic dispensers;
- Industrial washing machines;
- Water massage systems;
- Floor washing machines;
- Welding systems;
- Machines for plastics;
- Humidifiers.

For use with air the maximum differential pressure (MOPD) may be increased by 25%.



## Coils:

For series **146** valves class "F" coils (**155°C**), encapsulated in thermoplastic containing 30% glass fiber (type ZB, YB), and class "H" coils (**180°C**), encapsulated in thermoplastic containing 40% glass fiber (type: ZH), are available.

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 of 50/60Hz (dual frequency).

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**.

## 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** 12V DC, 24V DC

**ZB 14** 24V/50-60Hz, 115V/50-60Hz, 220-230V/50-60Hz,

**ZB 16** 24V DC

**YB 09** 220-230V/50-60Hz

**YB 14** only voltage 220/50-60Hz

**YB 16** 24V DC



- For the coils:

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

**ZB 14** 220-230V/50-60Hz

**YB 09** 220-230V/50-60Hz



- For the model VE 146.3 ABV with coil

**ZH 14** with voltage 220-230V/50-60Hz



- UL Recognized Comp. Mark for coils:

**ZB 09** 24V/60Hz, 110-120V/60Hz, 208-240V/60Hz

**YB 09** 24V/60Hz, 110-120V/60Hz, 208-240V/60Hz

## Special versions:

On request and for large orders, the series **146** valves can be fitted with quick connect fittings such as **Prestolock** cartridge.

Series **146**

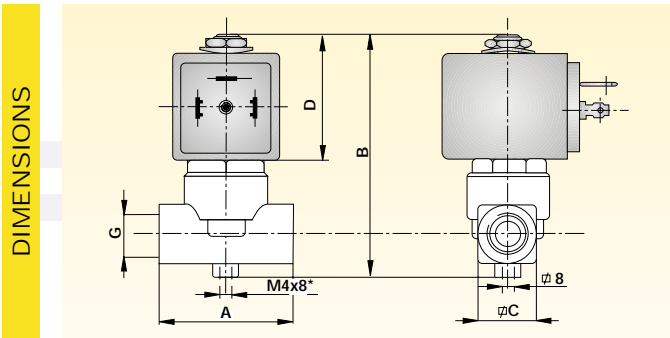
<b>MATERIALS</b>	• Valve body:	OT58 UNI 5705 brass stamping
	• Seals:	Viton
	• Enclosing tube:	AISI 304 stainless steel
	• Plunger:	AISI 430 F stainless steel
	• Spring:	AISI 302 stainless steel
	• Shading ring:	Copper

<b>ELECTRICAL FEATURES</b>	Coil type [ ]		Power [ W ]		Insulat. class
	A.C.(~)	D.C.(=)	A.C.(~)	D.C.(=)	
	ZB 09	ZB 12	9	12	F
	ZB*14	ZB*16	14	16	F
	YB 09	YB 12	9	12	F
	YB*14	YB*16	14	16	F
ZH*14	ZH*16	14	16	H	

<b>SPECIFICATION</b>	Fittings Ø G	Valve type	Nominal orifice Ø	Flow coefficient Kv	Minimum pressure	Max differential pressure (M.O.P.D.)		Coil type	Weight	Notes
	[ " ]	[ ]	[mm]	[m³/h]	[bar]	in A.C.(~)	in D.C.(=)	[ ]	[Kg]	[ ]
	1/8	146 F	2,5	0,197	0	15	12	Z - Y	0,340	1
	1/8	146 H	3,0	0,270	0	10	8	Z - Y	0,340	1
	1/4	146 W	2,5	0,197	0	15	12	Z - Y	0,340	1
	1/4	146 Y	3,0	0,270	0	10	8	Z - Y	0,340	1
	1/4	146.3 K	4,5	0,527	0	10	3	Z* - Y*	0,340	1
1/4	146.3 AB	6,0	0,750	0	8	1	Z* - Y*	0,340	1	

Note: 1) NP (nominal pressure): 64 bar

See specification table.



Fittings Ø G	A	B	C	D
[ " ]	[mm]	[mm]	[mm]	[mm]
*1/8	40,0	74,5	18	37,5
1/4	40,0	74,5	18	37,5
*1/4	40,0	74,5	18	37,5

\* excluded mod. 146.3K - 146.3AB

<b>ORDER CODE</b>	PM	146	V	[V]	[Hz] / d.c.					
	VALVE BODY	FITTINGS	SEAL	Coil type	24 V 50/60 Hz	115V 50/60 Hz	220-230 V 50/60 Hz	240 V 50/60 Hz	12 V d.c.	24 V d.c.
		F 1/8"	V	ZB 09	•	•	•	•		
		H 1/8"	Viton	ZB 12					•	•
		W 1/4"		ZB 14	•	•	•	•		
		Y 1/4"		ZB 16						•
		.3K 1/4"		YB 09	•	•	•			
		.3AB 1/4"		YB 12					•	•
				YB 14	•		•			
				YB 16						•
			ZH 14	•	•	•				
			ZH 16						•	
			Coil type	24 V / 60 Hz		110-120 V / 60 Hz		208-240 V / 60 Hz		
			ZB 09 UL		•		•		•	
			YB 09 UL		•		•		•	

Note: Valve supplied with body (PM) and coil separate. Connector to be ordered separately.