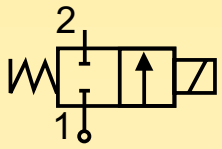
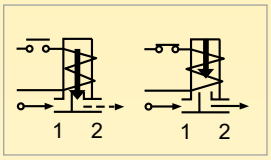
Series **146**



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 (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**.

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:

• For the coils:

ZB 09	115V/50-60Hz, 220-230V/50-60Hz, 240V/50-60Hz
ZH 09	24V/50-60Hz
ZH 12	12V DC, 24V DC
ZB 14	115V/50-60Hz, 220-230V/50-60Hz
ZH 14	24V/50-60Hz
ZH 16	24V DC, 12V DC
YB 09	220-230V/50-60Hz
YB 14	220-230/50-60Hz

• 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. coils mark:

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

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MATERIALS

- Valve body: CW617N UNI EN 12165:98 brass stamping
- Seals: Viton
- Enclosing tube: AISI 304 stainless steel
- Plunger: AISI 430F 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
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

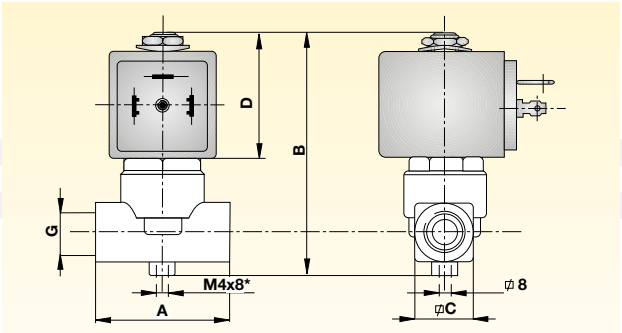
SPECIFICATION

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.(~) [bar]	in D.C.(=) [bar]	[ ]	[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.

DIMENSIONS



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

ORDER CODE

PM	146		V			[V]	[Hz] / d.c.

VALVE BODY

SERIES

FITTINGS

F	1/8"
H	1/8"
W	1/4"
Y	1/4"
•3K	1/4"
•3AB	1/4"

SEAL

V	Viton

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.
ZB 09	●	●	●	●		
ZH 09	●					
ZB 12					●	●
ZH 12					●	●
ZB 14	●	●	●	●		
ZB 16					●	●
YB 09	●	●	●			
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.

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