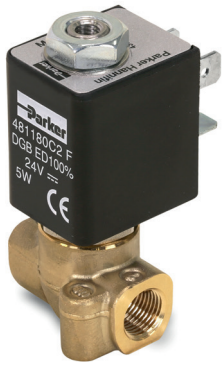

Fluid Control Solutions for Beverage Dispensing

Low Lead Brass Series

Parker

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WARNING - USER RESPONSIBILITY

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Parker Fluid Control Division Europe - FCDE

Parker Hannifin

Parker Hannifin is the world's leading diversified manufacturer of motion and control technologies and systems, providing precision-engineered solutions for a wide variety of commercial, mobile, industrial, life science and aerospace markets.
The company's products are vital to virtually everything that moves or requires control, including the manufacture and processing of raw materials, durable goods, infrastructure development and all forms of transport.

Gessate (Italy)
Fluid Control Division Europe

Fluid Control Division Europe

The Fluid Control Division in Europe (FCDE) is a division of Parker Hannifin, the global leader in motion and control technologies.
FCDE core competences are the development and manufacturing of an extremely diverse range of fluid control products, including solenoid valves and pressure regulators.

Parker Fluidic Solutions (PFS) is a global designer and manufacturer of bespoke integrated system solutions. Renowned globally for solutions in high technology, fluid and motion control utilising advanced design and manufacturing techniques. PFS is focused on incorporating the best of Parker products into solutions designed for you.

History

Parker FCDE has been a leading player in the manufacturing and development of solenoid valve technologies for over 60 years, with continuous research and development bringing innovative solutions to the marketplace, for example leading the way in the utilisation of synthetic ruby for critical water applications or the unsurpassed reliability and precision of our pressure regulators. The expertise accumulated and developed through the years is evident in the superior quality of FCDE solutions.

Markets

Our products and solutions are typically designed for markets including Industrial Equipment, Industrial Automation, Mobile, Transportation, Life Sciences, Beverage dispensing and for Fluid and Process Control.

Benefits

The modular concept of our products, having separate solenoid valves and electrical parts, provides the customer with increased flexibility by allowing numerous combinations. This additional flexibility can enable distributors to greater reduce valve inventory levels, whilst retaining the same number of capabilities. Parker also has unrivalled experience in developing customised product solutions complying with the highest technical, **environmental, energy and service life requirements.**

Introduction

Parker Fluid Control Division Europe is your ideal partner offering the broadest range of solutions for beverage dispensers.

Thanks to Parker's extensive expertise and our dedication to innovation we are today in the position to offer a broad range of robust and exclusive solutions.

In fact, all our products have been developed in order to achieve superior performance in high demanding professional equipment.

Market segments

- Professional coffee machines
- Vending distributors for hot drinks
- Semi-professional and domestic coffee machines
- Automatic water dispensers

Applications

Typical applications in beverage dispensers are:

- Water loading control of a boiler
- Steam control
- Cold, hot and superheated water shut-off
- Cold water and steam mixing
- Steam pressure control (pressure switch)

Benefits

Parker was the first company to develop the ruby sealing system for solenoid valves. Our expertise in this technology makes our products extremely efficient against limescale build-up.

High performance and low power consumption electrical components, with a wide range of configurations and approvals are available.

The strong and robust design provides you with high reliability, minimizing the risk of failures when your equipment is operating and avoiding downtime.

Technical vocabulary

The basic technical features of each solenoid valve model are indicated in the tables with the following headings:

Port size:	Fitting dimensions are defined as threaded in inches (G) or sub-base, when a flat interface for ports is adopted.
Orifice:	Main orifice diameter in millimetres (nominal diameter).
Flow factors:	Defined as the quantity of water, temp. between +5°C and +30°C, which flows through the solenoid valve with a pressure drop of 1 bar (100 KPa-0.1 MPa), in m3/h (cubic metres per hour) and in l/min (liters per minute).
Minimum pressure:	The lowest differential pressure required for operation, in bar.
Maximum differential pressure (MOPD):	The highest working differential pressure with 90% of the rated voltage (-10% Vn).
Fluid maxi. temperature:	Maximum admissible temperature for the media used. In °C.
Seat disc:	Material used for the seat discs.
Pressure vessel:	The mechanical part of a solenoid valve.
Electrical part:	Compatible electrical part reference. Our tables are indicating the most standard solution. Please refer to "Coil group" column to identify alternative electrical parts.
Power consumption:	Power consumption of a specific electrical part on selected pressure vessel, rated by AC and DC, in W. Power consumption must be considered in cold condition for the coil, at TAmb: +20°C. For 481865 series, power consumption indicated in the tables must be considered in warm conditions. See also details in each electrical part description (pages 16-20).
Weight:	Weight of the complete valve without accessories, in grams.
Safe body working pressure:	Ref. EN 1333:2007 (PN) the maximum admissible pressure at 20°C which can be applied to the solenoid valve to check the tightness of the mechanical seals (threads, welds) and the mechanical resistance of the materials.
Coil group:	Alternative electrical parts to the main one listed in the chart, having particular features (approvals, insulation classes). Please refer to electrical parts description (pages 16-20) to select alternative coils.

General description

Material specifications: A description of the materials used for each solenoid valve family.

Installation: The valves can be mounted in any position. It is however recommended to install them with the coil in vertical position above the body.

Media: These valves have been developed to achieve the best performances with cold and hot water, superheated water and steam.
Within the main description of the family you will be able to find out the recommended media and application.

Electrical parts: Electrical parts compatible with each solenoid has been indicated directly in the main datasheets you will find at pages 8 to 20.
Details about electrical parts specifications are available at pages 16-20.
Please consult also the "How to order" section at page 22 on how to select the product configuration which fits your application requirements.

Product selection

This catalogue has been designed to make selection as easy as possible.
The structure allows you to find your valve step by step, beginning with the most basic features and gradually focusing on more precise details.

To make the selection easier we have included in each valve description an indication about typical applications, like water loading and cold water control, superheated water and steam control.

In the first column you will be able to identify the port size, and proceeding you will meet all the available product solution.

2/2 Valve range

121ZH, 121KH, 121FH Series

2 way valves, normally closed

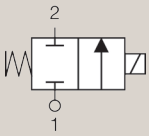
Our Parker range of low lead brass solutions provides you with top-class performance as a result of the entire stainless steel structure of the valve pilots. Forged body is made in CW510L Low Lead Brass. The references listed in this page are NSF169 certified.

Compact and robust at the same time, the stainless steel nozzle included in all 32mm operated range improves valve life, endurance and resistance to lime-scale build up effect. A wide range of electrical parts can be used with this valve, including IP65 VDE and UL solutions. Typical applications include cold water loading function or hot water-steam on/off control.

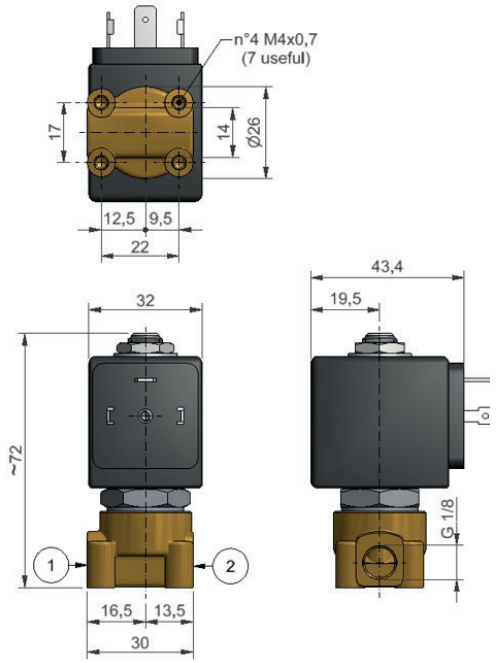
Valve body: moulded brass, CW510L UNI EN 12165
Seals: FDA FKM, Ruby
Sleeve, plungers and nozzle: stainless steel

CW510L brass body

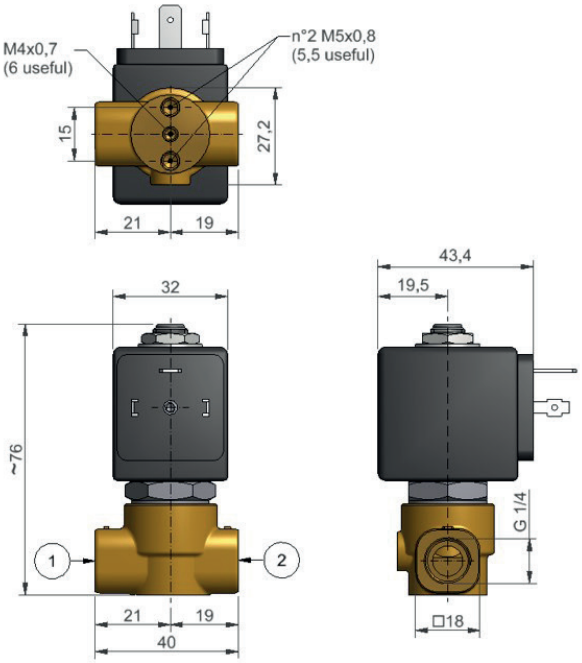
Pipe mounting/flanged (SB)



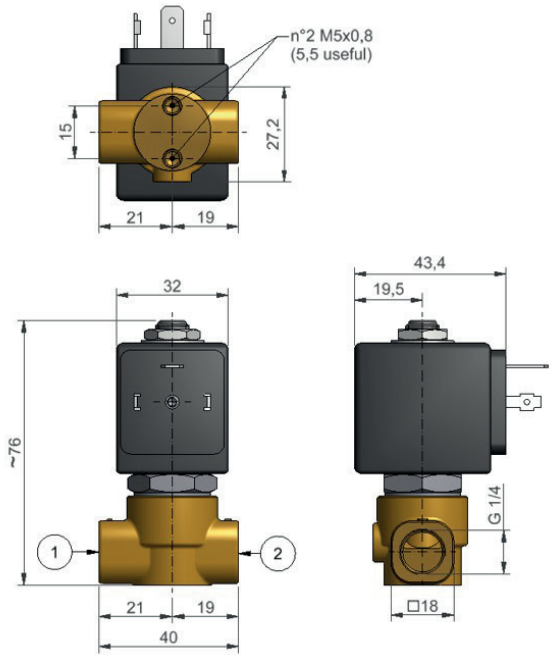
Port Size	Orifice Ø	Flow Factors		Operating Pressure Differential			Fluid Temperature		Seat Seal	Parker Valves			Power		Coil Group	Dwg N°
		Kv	KV	Min.	Max. (MOPD)		Min.	Max.		Valve Ref.	Housing Ref.	Coil Ref.	AC	DC		
	mm	l/min	m³/h	Bar	AC bar	DC bar	°C	°C					W	W		
G1/8	1.5	1.5	0.09	0	20	18	-10	140	FDA FKM	121ZH1015	2995	481865	9	8	2.0, 2.1, 2.2	1
	2.0	2.6	0.16	0	20	15	-10	140	FDA FKM	121ZH1020	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	3.5	0.21	0	19	14.5	-10	140	FDA FKM	121ZH1025	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	4.5	0.27	0	13	8.5	-10	140	FDA FKM	121ZH1030	2995	481865	9	8	2.0, 2.1, 2.2	
	1.5	1.5	0.09	0	20	18	-10	140	Ruby	121ZH0015	2995	481865	9	8	2.0, 2.1, 2.2	
	2.0	2.6	0.16	0	20	15	-10	140	Ruby	121ZH0020	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	3.5	0.21	0	19	14.5	-10	140	Ruby	121ZH0025	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	4.5	0.27	0	13	8.5	-10	140	Ruby	121ZH0030	2995	481865	9	8	2.0, 2.1, 2.2	
G1/4	1.5	1.5	0.09	0	20	18	-10	140	FDA FKM	121KH1015	2995	481865	9	8	2.0, 2.1, 2.2	2
	2.0	2.6	0.16	0	20	15	-10	140	FDA FKM	121KH1020	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	3.5	0.21	0	19	14.5	-10	140	FDA FKM	121KH1025	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	4.5	0.27	0	13	8.5	-10	140	FDA FKM	121KH1030	2995	481865	9	8	2.0, 2.1, 2.2	
	4.0	5.5	0.33	0	9	6	-10	140	FDA FKM	121KH1040	2995	481865	9	8	2.0, 2.1, 2.2	3
	5.0	9.5	0.57	0	2.5	2	-10	140	FDA FKM	121KH1050	2995	481865	9	8	2.0, 2.1, 2.2	
	1.5	1.5	0.09	0	20	18	-10	140	Ruby	121KH0015	2995	481865	9	8	2.0, 2.1, 2.2	2
	2.0	2.6	0.16	0	20	15	-10	140	Ruby	121KH0020	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	3.5	0.21	0	19	14.5	-10	140	Ruby	121KH0025	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	4.5	0.27	0	13	8.5	-10	140	Ruby	121KH0030	2995	481865	9	8	2.0, 2.1, 2.2	
SB	1.5	1.4	0.08	0	20	20	-10	140	FDA FKM	121FH1015	2995	481865	9	8	2.0, 2.1, 2.2	4
	2.0	2.3	0.14	0	20	20	-10	140	FDA FKM	121FH1020	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	3.0	0.18	0	20	14	-10	140	FDA FKM	121FH1025	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	3.4	0.2	0	17	10	-10	140	FDA FKM	121FH1030	2995	481865	9	8	2.0, 2.1, 2.2	
	1.5	1.4	0.08	0	20	20	-10	140	Ruby	121FH0015	2995	481865	9	8	2.0, 2.1, 2.2	
	2.0	2.3	0.14	0	20	20	-10	140	Ruby	121FH0020	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	3.0	0.18	0	20	14	-10	140	Ruby	121FH0025	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	3.4	0.2	0	17	10	-10	140	Ruby	121FH0030	2995	481865	9	8	2.0, 2.1, 2.2	



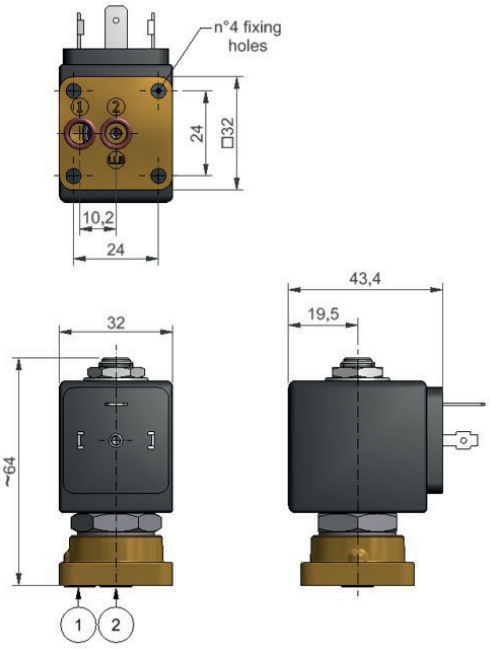
Dimensional drawing N° 1



Dimensional drawing N° 2



Dimensional drawing N° 3



Dimensional drawing N° 4

All dimensions are in mm

3/2

131ZH, 131KH, 131FH Series

3 ways, normally closed

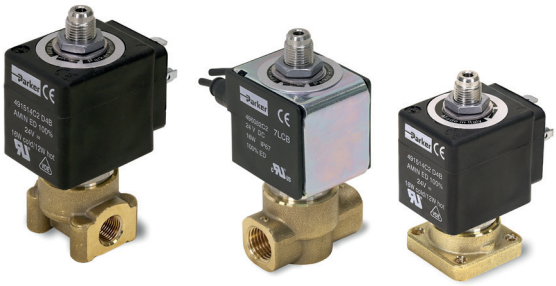
The Parker range of low lead brass valves provides superior performance, resulting from the entire stainless steel structure of the valve pilots. Forged body is made of CW510L. The references listed in this page are NSF169 certified.

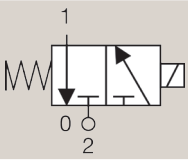
Compact and robust at the same time, the stainless steel nozzle included in all 32mm operated range improves valve life, endurance and resistance to lime-scale build up effect. A wide range of electrical parts can be used with this valve, including IP65 VDE and UL solutions. Typical applications include cold water loading function or hot water-steam on/off control.

Valve body: moulded brass, CW510L UNI EN 12165

Seals: FDA FKM, Ruby

Sleeve, plungers and nozzle: stainless steel

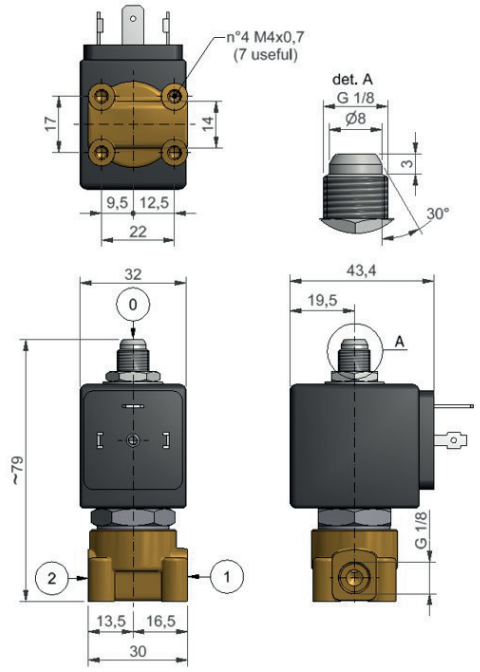




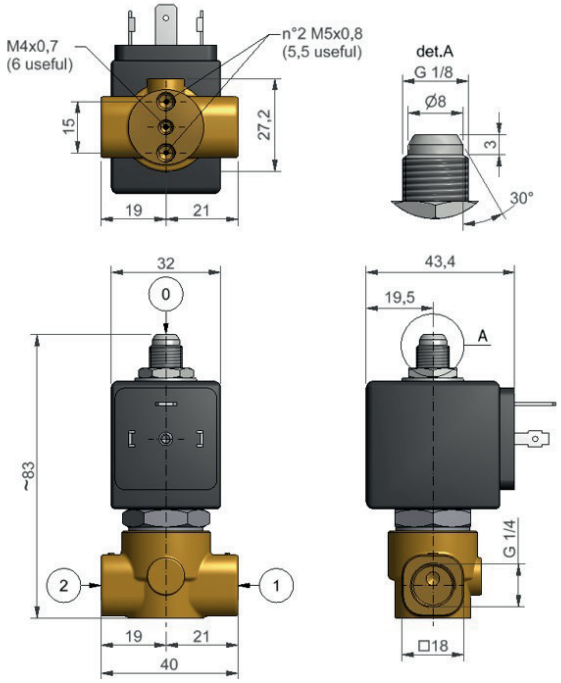
CW510L brass body

Pipe mounting/flanged

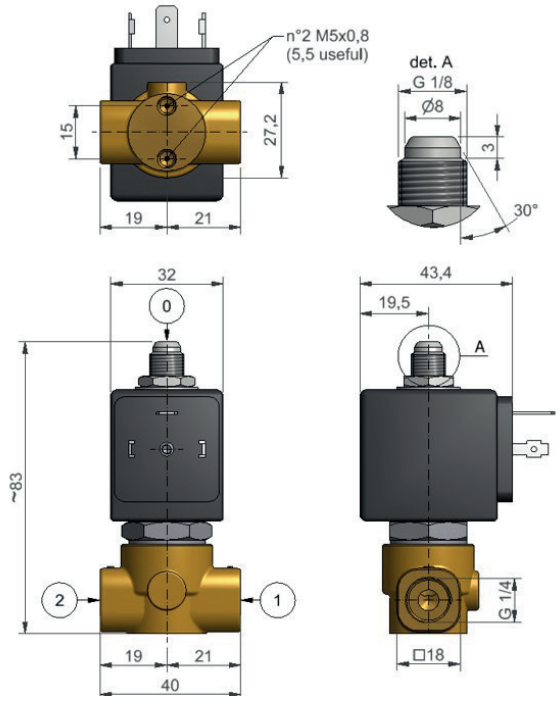
Port Size	Orifice Ø	Flow Factors Kv	Flow Factors KV	Operating Pressure Differential Min.	Operating Pressure Differential Max. (MOPD)		Fluid Temperature Min.	Fluid Temperature Max.	Seat Seal	Parker Valves Valve Ref.	Parker Valves Housing Ref.	Parker Valves Coil Ref.	Power AC	Power DC	Coil Group	Dwg N°
	mm	l/min	m³/h	Bar	AC bar	DC bar	°C	°C					W	W		
G1/8	1.5	1.4	0.08	0	20	20	-10	140	FDA FKM	131ZH1115	2995	481865	9	8	2.0, 2.1, 2.2	6
	2.0	2.0	0.12	0	14	14	-10	140	FDA FKM	131ZH1120	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	3.0	0.18	0	8.5	8.5	-10	140	FDA FKM	131ZH1125	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	3.7	0.22	0	6	6	-10	140	FDA FKM	131ZH1130	2995	481865	9	8	2.0, 2.1, 2.2	
	1.5	1.4	0.08	0	20	20	-10	140	Ruby	131ZH0115	2995	481865	9	8	2.0, 2.1, 2.2	
	2.0	2.0	0.12	0	14	14	-10	140	Ruby	131ZH0120	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	3.0	0.18	0	8.5	8.5	-10	140	Ruby	131ZH0125	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	3.7	0.22	0	6	6	-10	140	Ruby	131ZH0130	2995	481865	9	8	2.0, 2.1, 2.2	
G1/4	1.5	1.4	0.08	0	20	20	-10	140	FDA FKM	131KH1115	2995	481865	9	8	2.0, 2.1, 2.2	7
	2.0	2.0	0.12	0	14	14	-10	140	FDA FKM	131KH1120	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	3.0	0.18	0	8.5	8.5	-10	140	FDA FKM	131KH1125	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	3.7	0.22	0	6	6	-10	140	FDA FKM	131KH1130	2995	481865	9	8	2.0, 2.1, 2.2	
	4.0	5.2	0.31	0	3.5	3.5	-10	140	FDA FKM	131KH1140	2995	481865	9	8	2.0, 2.1, 2.2	8
	5.0	9.3	0.56	0	2	2	-10	140	FDA FKM	131KH1150	2995	492425	14	14	-	
	1.5	1.4	0.08	0	20	20	-10	140	Ruby	131KH0115	2995	481865	9	8	2.0, 2.1, 2.2	7
	2.0	2.0	0.12	0	14	14	-10	140	Ruby	131KH0120	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	3.0	0.18	0	8.5	8.5	-10	140	Ruby	131KH0125	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	3.7	0.22	0	6	6	-10	140	Ruby	131KH0130	2995	481865	9	8	2.0, 2.1, 2.2	
SB	1.5	1.3	0.08	0	20	20	-10	140	FDA FKM	131FH1115	2995	481865	9	8	2.0, 2.1, 2.2	9
	2.0	2.0	0.12	0	15	15	-10	140	FDA FKM	131FH1120	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	2.6	0.16	0	10	10	-10	140	FDA FKM	131FH1125	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	3.0	0.18	0	7.5	7.5	-10	140	FDA FKM	131FH1130	2995	481865	9	8	2.0, 2.1, 2.2	
	1.5	1.3	0.08	0	20	20	-10	140	Ruby	131FH0115	2995	481865	9	8	2.0, 2.1, 2.2	
	2.0	2.0	0.12	0	15	15	-10	140	Ruby	131FH0120	2995	481865	9	8	2.0, 2.1, 2.2	
	2.5	2.6	0.16	0	10	10	-10	140	Ruby	131FH0125	2995	481865	9	8	2.0, 2.1, 2.2	
	3.0	3.0	0.18	0	7.5	7.5	-10	140	Ruby	131FH0130	2995	481865	9	8	2.0, 2.1, 2.2	



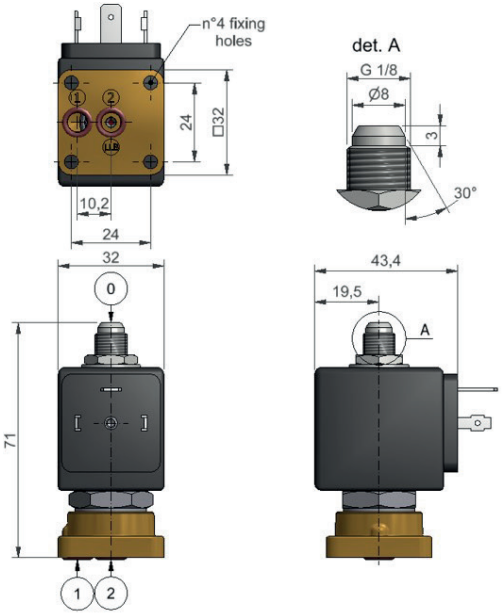
Dimensional drawing N° 6



Dimensional drawing N° 7



Dimensional drawing N° 8



Dimensional drawing N° 9

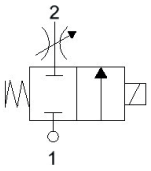
All dimensions are in mm

2/2

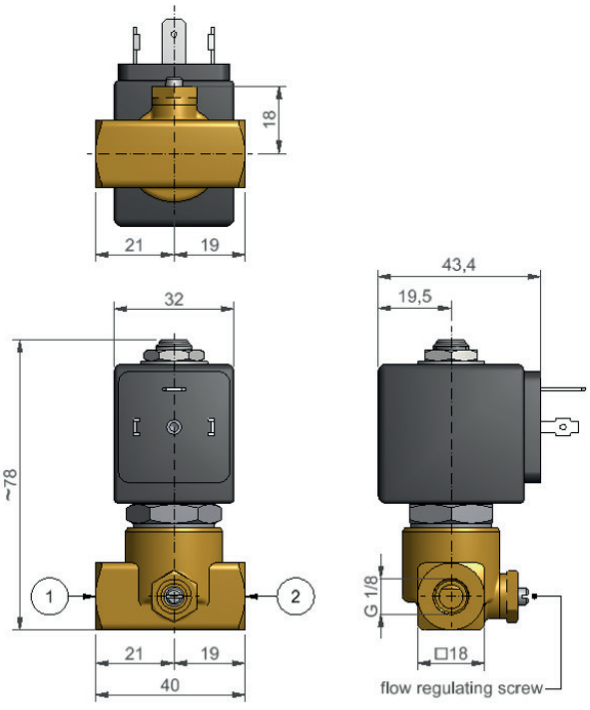
121KH Series with manual flow regulator
2 way valves, normally closed

121KH series provides superior performance, resulting from the entire stainless steel structure of the valve pilots. The structure of the manual regulator is made by stainless steel, which improves reliability and offers a repetitive precision in calibration also after many regulations. A wide range of electrical parts might be used with this valve, including IP65 VDE and UL solutions.

Fluids: cold and hot water, within the media temperature limits
Valve body: CW510L UNI EN 12165
Seals: FDA FKM
Sleeve and plungers: stainless steel
Regulation screw to adjust flow rate: stainless steel



Port Size G	Orifice mm	Flow Factors		Admissible Differential Pressure bar			Fluid Maxi. Temp. C°	Seat Disc	Reference Numbers			Power Consumption (W)		Dimensional Ref	Note
				Minimum Pressure	Maximum Differential Pressure										
		l/m	m³/h		AC	DC			Pressure Vessel	Housing	Electrical Part	DC	AC		
G1/8	1.5	0.83	0.05	0	15	15	140	FKM	**121KH1465**	**2995**	**481865**	9	8	5	Manual calibration of the flow rate



Dimensional drawing N° 5

All dimensions are in mm

Parker Hannifin Corporation
Fluid Control Division Europe
Low Lead Brass Catalogue FCDE/5502/UK/V1.0

2/2

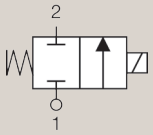
121WH Series - Compact
2 way valves, normally closed

121WH series is a small, compact and flexible 2/2 solution, with a robust stainless steel operator. 1/8" ports and wide range of valve orifices are available. IP65 electrical parts as well as UL/CSA recognized electrical parts may be used with this valve. The references listed in this page are NSF169 certified.

Typical applications: cold water, hot water and steam on/off control.

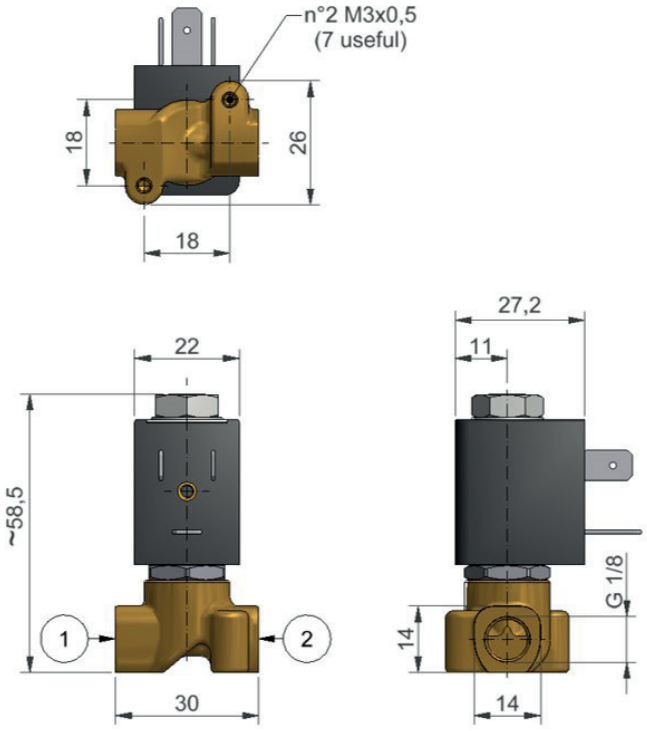
Fluids: cold and hot water, within the media temperature limits
Valve body: moulded brass, CW510L UNI EN 12165
Seals: FDA FKM
Sleeve, plungers: stainless steel

CW510L brass body



Pipe mounting/flanged

Port Size	Orifice Ø	Flow Factors Kv	Flow Factors KV	Operating Pressure Differential Min.	Operating Pressure Differential Max. (MOPD) AC bar	Operating Pressure Differential Max. (MOPD) DC bar	Fluid Temperature Min.	Fluid Temperature Max.	Seat Seal	Parker Valves Valve Ref.	Parker Valves Housing Ref.	Parker Valves Coil Ref.	Power AC	Power DC	Coil Group	Dwg N°
	mm	l/min	m³/h	Bar	AC bar	DC bar	°C	°C					W	W		
G1/8	1.0	0.5	0.03	0	20	20	-10	140	FDA FKM	121WH1010	8993	481180	4	5	1.1, 1.3	10
	1.2	0.7	0.04	0	20	12	-10	140	FDA FKM	121WH1012	8993	481180	4	5	1.1, 1.3	
	1.5	1	0.06	0	20	10	-10	140	FDA FKM	121WH1015	8993	481180	4	5	1.1, 1.3	
	1.8	0.9	0.05	0	19	7.5	-10	140	FDA FKM	121WH1018	8993	481180	4	5	1.1, 1.3	
	2.0	1.8	0.11	0	15	7	-10	140	FDA FKM	121WH1020	8993	481180	4	5	1.1, 1.3	
	2.5	2.3	0.14	0	10	4	-10	140	FDA FKM	121WH1025	8993	481180	4	5	1.1, 1.3	



Dimensional drawing N° 10

All dimensions are in mm

3/2

131WH Series - Compact

3 ways, normally closed

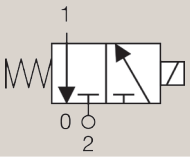
131WH series is a small, compact and flexible 3/2 solution, with a robust stainless steel operator. 1/8" ports and wide range of valve orifices are available. IP65 electrical parts as well as UL/CSA recognized electrical parts may be used with this valve. The references listed in this page are NSF169 certified.

Typical application: cold water, hot water and steam on/off control.

Fluids: cold and hot water, within the media temperature limits
Valve body: moulded brass, CW510L UNI EN 12165
Seals: FDA FKM
Sleeve, plungers: stainless steel

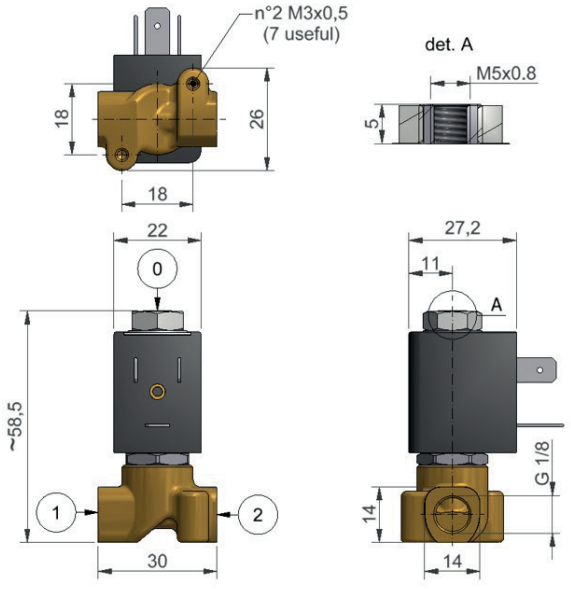
CW510L brass body

Pipe mounting/flanged

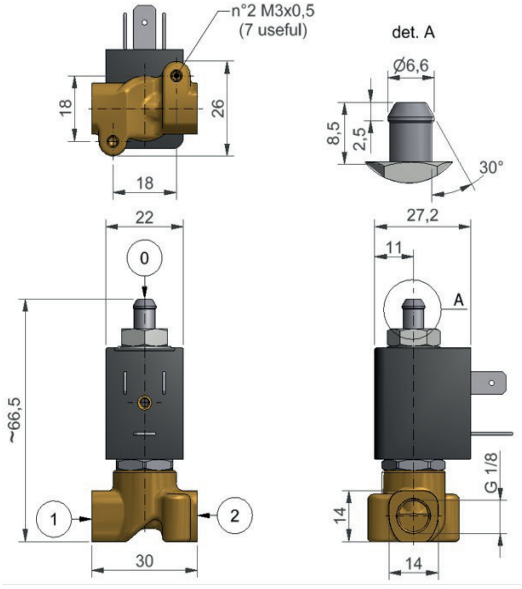


Port Size	Orifice Ø	Flow Factors		Operating Pressure Differential			Fluid Temperature		Seat Seal	Parker Valves			Power		Coil Group	Dwg N°
		Kv	KV	Min.	Max. (MOPD)		Min.	Max.		Valve Ref.	Housing Ref.	Coil Ref.	AC	DC		
	mm	l/min	m³/h	Bar	AC bar	DC bar	°C	°C					W	W		
G1/8	1.0	0.5	0.03	0	15	15	-10	140	FDA FKM	131WH1410	8993	481180	4	5	1.1, 1.3*	11
	1.2	0.7	0.04	0	14	14	-10	140	FDA FKM	131WH1412	8993	481180	4	5	1.1, 1.3*	
	1.5	1.0	0.06	0	8	8	-10	140	FDA FKM	131WH1415	8993	481180	4	5	1.1, 1.3*	
	1.8	1.2	0.07	0	6	6	-10	140	FDA FKM	131WH1418	8993	481180	4	5	1.1, 1.3*	
	2.0	1.5	0.09	0	5	5	-10	140	FDA FKM	131WH1420	8993	481180	4	5	1.1, 1.3*	
	2.5	2.3	0.14	0	3	3	-10	140	FDA FKM	131WH1425	8993	481180	4	5	1.1, 1.3*	
G1/8	1.0	0.5	0.03	0	15	15	-10	140	FDA FKM	131WH1510	8993	481180	4	5	1.1, 1.3*	12
	1.2	0.7	0.04	0	14	14	-10	140	FDA FKM	131WH1512	8993	481180	4	5	1.1, 1.3*	
	1.5	1.0	0.06	0	8	8	-10	140	FDA FKM	131WH1515	8993	481180	4	5	1.1, 1.3*	
	1.8	1.2	0.07	0	6	6	-10	140	FDA FKM	131WH1518	8993	481180	4	5	1.1, 1.3*	
	2.0	1.5	0.09	0	5	5	-10	140	FDA FKM	131WH1520	8993	481180	4	5	1.1, 1.3*	
	2.5	2.3	0.14	0	3	3	-10	140	FDA FKM	131WH1525	8993	481180	4	5	1.1, 1.3*	

* 1.3 Coil group solution applicable in AC voltages only



Dimensional drawing N° 11



Dimensional drawing N° 12

All dimensions are in mm

Housing

Housing for 22 mm coil

Composed of a nameplate with the details of the valve type, a washer and a nut to secure the 22 mm coil to the valve.

Reference	Specification	Application
8993	Standard - aluminium nameplate - passivated washer and nut - pressure indication in [bar]	Compact valves 121WH/131WH Series

Housing for 32 mm coil

Composed of a nameplate giving details of the valve type, a round washer and a nut to ensure the fixing between 32 mm coil and the valve.

Reference	Specification	Application
2995	Standard - aluminium nameplate - passivated iron washer and nut - pressure indication in [bar]	ZH, FH and KH valve families

Electrical parts

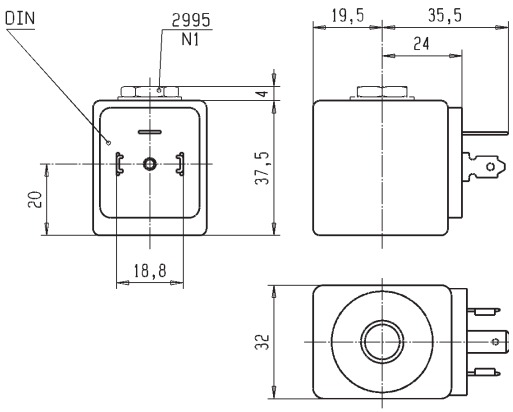
481865/483510 Series

These coils can be mounted with every Parker solenoid valves corresponding to the specified coil group. See column "Coil Group" valve pages.
This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.
The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.
Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.
Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive 2014/35/EU.

Specification			Standard				Double frequency	
Reference (without DIN plug)			481865				483510	
Coil group			2.0 / 2.1					
Degree of protection			**IP65** according to IEC / EN 60529 standards (with DIN plug)					
Class of insulation			F 155°C					
Electrical connection			The coil is connected with a 2 P + E plug according to EN 175301-803 type A					
Ambient temperature			-40°C to +50°C The application is limited also by the temperature range of the valve					
Elect. Power	DC	**Pn** (hot)	9 W				-	
		P (cold) 20°C	12 W				-	
	AC	**Pn** (holding)	8 W				9 W	
		Attraction cold	26 VA (9 W)				32 VA (10 W)	
Weight			130 g (without plug)					
Voltages "Un"			VAC/Hz	Code	VDC	Code	VAC/Hz	Code
-10% to +10% of the Un			24/50 110/50 220-230/50	A2 A5 3D	24	C2	24/50, 24/60 110-115/50, 120/60 220-240/50, 240/60	P0 S5 S6

To order a coil choose Coil Ref + Voltage Code, example: 481865 for 24 VDC = **481865C2**

These coils must be used with suitable housing 2995.



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Fluid Control Division Europe
Low Lead Brass Catalogue FCDE/5502/UK/V1.0

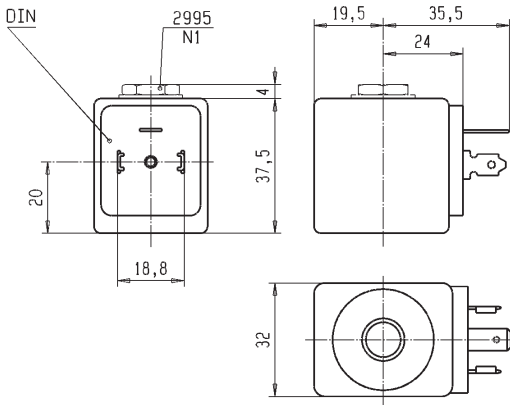
491514 Series - UL recognized

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" valve pages.
This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.
The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.
Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.
Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive 2014/35/EU.
DIN plug connector to be ordered separately (see coil accessories section).

Specification			UL-recognized coil - UL File E200N - designation AMIF			
Ref. (without DIN plug)			491514			
Coil group			2.0 / 2.1			
Degree of protection			IP65 according to IEC / EN 60529 standards (with DIN plug)			
Class of insulation			F 155°C			
Electrical connection			The coil is connected with a 2 P + E plug according to EN 175301-803 type A			
Ambient temperature			-40°C to +50°C The application is limited also by the temperature range of the valve			
Elect. Power	DC	Pn (hot)	-		12 W	
		P (cold) 20°C	-		16 W	
	AC	Pn (holding)	11 W		-	
		Attraction cold	40 VA (13 W)		-	
Weight			130 g (without plug)			
Voltages "Un"			VAC/Hz	Code	VDC	Code
- 15% to +10% of the Un			110/50-120/60 220/50-240/60	P3 Q3	24	C

To order a coil choose Coil Ref + Voltage Code, example: 491514 for 24 VDC = **491514C2**

These coils must be used with suitable housing 2995.



Parker Hannifin Corporation
Fluid Control Division Europe
Low Lead Brass Catalogue FCDE/5502/UK/V1.0

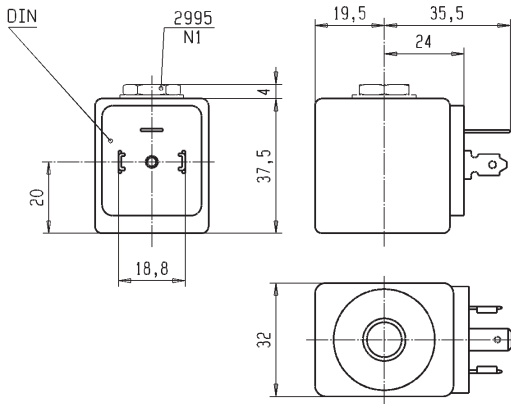
492453/492425 Series - High Temperature

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" valve pages.
This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.
The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.
Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.
Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive 2014/35/EU.

Specification			High temperature				High temp. + high power			
Reference (without DIN plug)			492453				492425			
Coil Group			2.0 / 2.1				2.0 / 2.2			
Degree of protection			IP65 according to IEC / EN 60529 standards (with DIN plug)							
Class of insulation			H 180°C							
Electrical connection			The coil is connected with a 2 P + E plug according to EN 175301-803 type A							
Ambient temperature			-40°C to +50°C The application is limited also by the temperature range of the valve							
Elect. Power	DC	Pn (hot)	9 W				14 W			
		P (cold) 20°C	12 W				21 W			
	AC	Pn (holding)	8 W				14 W			
		Attraction cold	26 VA (9 W)				55 VA (18 W)			
Weight			130 g (without plug)							
Voltages "Un"			VAC/Hz	Code	VDC	Code	VAC/Hz	Code	VDC	Code
-10% to +10% of the Un			24/50 110/50 220/50-230/50	A2 A5 3D	24	C2	24/50 110/50 230/50	A2 A5 F4	24	C2

To order a coil choose Coil Ref + Voltage Code, example: 492453 for 24 VDC = **492453C2**

These coils must be used with suitable housing 2995.



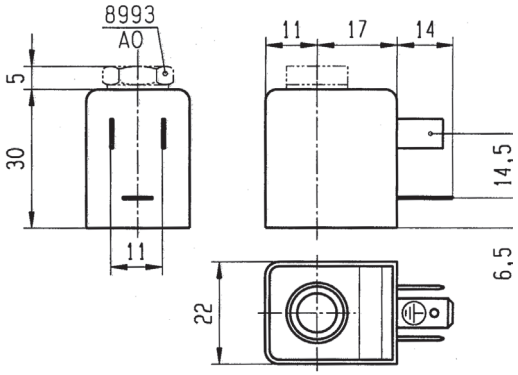
481180 Series

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" valve pages.
This coil is designed for valves equipped with a miniature tube assembly (2000 series valves). This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.
The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.
Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.
Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive 2014/35/EU.

Specification			Standard			
Reference (without DIN plug)			481180			
Coil group			1.1			
Degree of protection			IP65 according to IEC / EN 60529 standards (with DIN plug)			
Class of insulation			F 155°C			
Electrical connection			The coil is connected with a 2 P + E plug according to EN 175301-803 type A			
Ambient temperature			-40°C to +50°C The application is limited also by the temperature range of the valve			
Elect. Power	DC	Pn (hot)	5 W			
		P (cold) 20°C	6.5 W			
	AC	Pn (holding)	4 W			
		Attraction cold	8.9 VA (5W)			
Weight			100 g (with plug)			
Voltages "Un"			VAC/Hz	Code	VDC	Code
- 15% to +10% of the Un			24/50 110/50-115/50 220/50-230/50	A2 0A 3D	24	C2

To order a coil choose Coil Ref + Voltage Code, example: C2 for 24 VDC = **481180C2**

These coils must be used with suitable housing 8993.



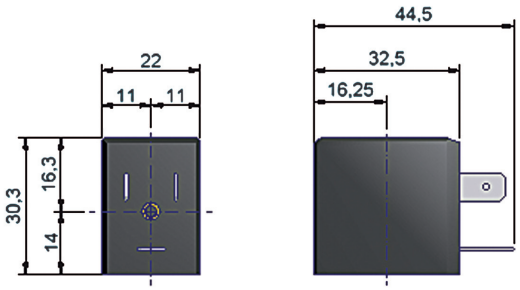
COIL GROUP
1.3

WB Series - UL Recognized

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" valve pages.
Coil manufactured with H class copper wire, moulded in thermoplastic material polyester with 30% glass fiber. IP65 protection rate with EN 175301-803 - Type A three pin connector and appropriate gasket.
The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.
Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive 2014/35/EU.
For UL recognized version: UL file MH19410
DIN plug connector to be ordered separately (see coil accessories section).

Specification			Standard	UL recognized version
Reference (without DIN plug)			**WB4.5 for AC** **WB5.0 for DC**	**WB4.5 cURus** **WB5.0 cURus**
Coil Group			1.3	
Degree of protection			IP65 according to IEC / EN 60529 standards (with DIN plug + gasket)	
Class of insulation			F 155°C	F 155°C
Electrical connection			The coil is connected with a 2 P + E plug according to EN 175301-803 type B	
Ambient temperature			-10°C to +50°C The application is limited also by the temperature range of the valve.	-10°C to +50°C
Elect. Power	**DC**	**P** (cold) 20°C	5 W	-
	AC	**Pn** (holding)	4.5 W	4.5 W
		Attraction cold	7.5 VA	7.5 VA
Weight			90 g (without plug)	
Voltages "Un" -10% to +10% of Un for AC - 5 % to + 10 % for Un DC			**WB4.5 VAC/Hz** 24/50-60 115/50-60 230/50-60	**WB4.5 UR VAC/Hz** 115/60 208-240/60 24/60 **WB5.0 cURus VDC** 24 VDC

This coil does not require housings if ordered together with the valve.



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Fluid Control Division Europe
Low Lead Brass Catalogue FCDE/5502/UK/V1.0

Accessories

Coil accessories

DIN PLUG CONNECTOR ACCORDING TO EN 175301-803 -B

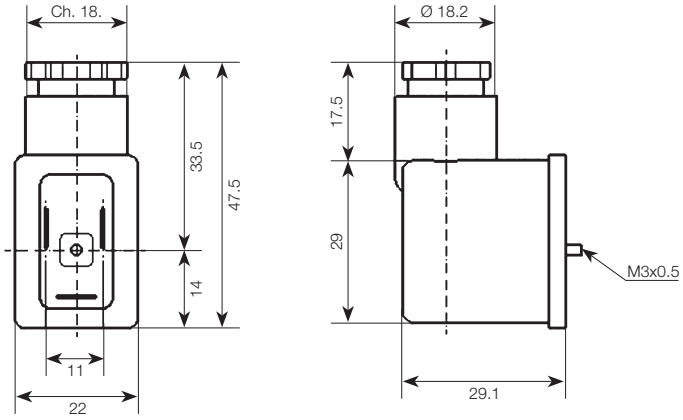
Part number No. 600040

Max A: 16 A
Cable section: 6 - 8 mm2
Nominal voltage: 250-/300 V=
Dimensional drawing N°13

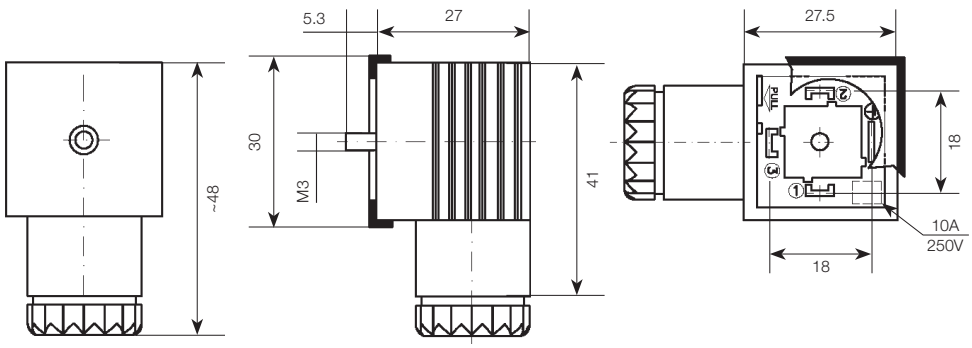
DIN PLUG CONNECTOR ACCORDING TO EN 175301-803 - A

Part number No. 600003PLUG

Max A: 16A
Cable section: 6-10mm2
Nominal voltage: 250-/300 V =
Dimensional drawing N°14



Dimensional drawing N° 13



Dimensional drawing N° 14

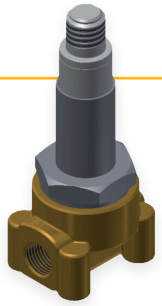
All dimensions are in mm

How to order

To order a complete solenoid valve, please select the 3 elements following the procedure below.

Step 1

Select the pressure vessel reference needed on pages 8-14.

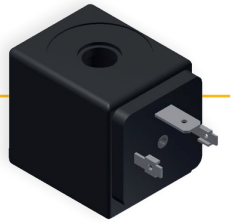


Seat Seal	Parker Valves		
	Valve Ref.	Housing Ref.	Coil Ref.
FDA FKM	**121ZH1015**	2995	481865
FDA FKM	121ZH1020	2995	481865
FDA FKM	121ZH1025	2995	481865

Step 2

Select housing on page 15.

Step 3

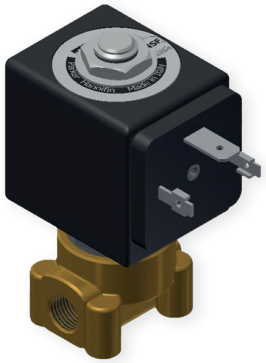


Select coil on page 16.
Note: WB coil series does not require housing if ordered together with the valve.

Specification	Standard
Reference (without DIN plug)	**481865**

Step 4

Select accessories on page 21.



Complete valve example:

121ZH1015-2995-481865C2

Ordering a product or a configuration not listed in the catalogue.
When an application demands a combination of features not listed in the catalogue, please feel free to contact the closest Parker office. Parker personnel will assist you in determining the applicability availability and price of the new product.

Parker's Motion & Control Technologies

At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker. For further info call 00800 27 27 5374

Aerospace

Key Markets

Aftermarket services
Commercial transports
Engines
General & business aviation
Helicopters
Launch vehicles
Military aircraft
Missiles
Power generation
Regional transports
Unmanned aerial vehicles

Key Products

Control systems & actuation products
Engine systems & components
Fluid conveyance systems & components
Fluid metering, delivery & atomization devices
Fuel systems & components
Fuel tank inerting systems
Hydraulic systems & components
Thermal management
Wheels & brakes

Climate Control

Key Markets

Agriculture
Air conditioning
Construction Machinery
Food & beverage
Industrial machinery
Life sciences
Oil & gas
Precision cooling
Process
Refrigeration
Transportation

Key Products

Accumulators
Advanced actuators
CO_2 controls
Electronic controllers
Filter driers
Hand shut-off valves
Heat exchangers
Hose & fittings
Pressure regulating valves
Refrigerant distributors
Safety relief valves
Smart pumps
Solenoid valves
Thermostatic expansion valves

Electromechanical

Key Markets

Aerospace
Factory automation
Life science & medical
Machine tools
Packaging machinery
Paper machinery
Plastics machinery & converting
Primary metals
Semiconductor & electronics
Textile
Wire & cable

Key Products

AC/DC drives & systems
Electric actuators, gantry robots & slides
Electrohydrostatic actuation systems
Electromechanical actuation systems
Human machine interface
Linear motors
Stepper motors, servo motors, drives & controls
Structural extrusions

Filtration

Key Markets

Aerospace
Food & beverage
Industrial plant & equipment
Life sciences
Marine
Mobile equipment
Oil & gas
Power generation & renewable energy
Process
Transportation
Water Purification

Key Products

Analytical gas generators
Compressed air filters & dryers
Engine air, coolant, fuel & oil filtration systems
Fluid condition monitoring systems
Hydraulic & lubrication filters
Hydrogen, nitrogen & zero air generators
Instrumentation filters
Membrane & fiber filters
Microfiltration
Sterile air filtration
Water desalination & purification filters & systems

Fluid & Gas Handling

Key Markets

Aerial lift
Agriculture
Bulk chemical handling
Construction machinery
Food & beverage
Fuel & gas delivery
Industrial machinery
Life sciences
Marine
Mining
Mobile
Oil & gas
Renewable energy
Transportation

Key Products

Check valves
Connectors for low pressure fluid conveyance
Deep sea umbilicals
Diagnostic equipment
Hose couplings
Industrial hose
Mooring systems & power cables
PTFE hose & tubing
Quick couplings
Rubber & thermoplastic hose
Tube fittings & adapters
Tubing & plastic fittings

Hydraulics

Key Markets

Aerial lift
Agriculture
Alternative energy
Construction machinery
Forestry
Industrial machinery
Machine tools
Marine
Material handling
Mining
Oil & gas
Power generation
Refuse vehicles
Renewable energy
Truck hydraulics
Turf equipment

Key Products

Accumulators
Cartridge valves
Electrohydraulic actuators
Human machine interfaces
Hybrid drives
Hydraulic cylinders
Hydraulic motors & pumps
Hydraulic systems
Hydraulic valves & controls
Hydrostatic steering
Integrated hydraulic circuits
Power take-offs
Power units
Rotary actuators
Sensors

Pneumatics

Key Markets

Aerospace
Conveyor & material handling
Factory automation
Life science & medical
Machine tools
Packaging machinery
Transportation & automotive

Key Products

Air preparation
Brass fittings & valves
Manifolds
Pneumatic accessories
Pneumatic actuators & grippers
Pneumatic valves & controls
Quick disconnects
Rotary actuators
Rubber & thermoplastic hose & couplings
Structural extrusions
Thermoplastic tubing & fittings
Vacuum generators, cups & sensors

Process Control

Key Markets

Alternative fuels
Biopharmaceuticals
Chemical & refining
Food & beverage
Marine & shipbuilding
Medical & dental
Microelectronics
Nuclear Power
Offshore oil exploration
Oil & gas
Pharmaceuticals
Power generation
Pulp & paper
Steel
Water/wastewater

Key Products

Analytical Instruments
Analytical sample conditioning products & systems
Chemical injection fittings & valves
Fluoropolymer chemical delivery fittings, valves & pumps
High purity gas delivery fittings, valves, regulators & digital flow controllers
Industrial mass flow meters/ controllers
Permanent no-weld tube fittings
Precision industrial regulators & flow controllers
Process control double block & bleeds
Process control fittings, valves, regulators & manifold valves

Sealing & Shielding

Key Markets

Aerospace
Chemical processing
Consumer
Fluid power
General industrial
Information technology
Life sciences
Microelectronics
Military
Oil & gas
Power generation
Renewable energy
Telecommunications
Transportation

Key Products

Dynamic seals
Elastomeric o-rings
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FCDE/5502/UK/V1.0 September 2017

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