aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

General Purpose Solenoid Valves

Skinner™ and GoldRing™ Valves

Effective September 2011

Parker

ENGINEERING YOUR SUCCESS.

About Fluid Control Division

Parker Fluid Control Division (FCD) is a world-wide industry leader of solenoid valves that control motion, flow and pressure in a wide variety of applications in all markets. Since 1947, it has built a strong reputation as a recognized leader in solenoid valve technology and design – first as Skinner Valve Division, then with the addition of Lucifer Division (Geneva) in 1984, Gold Ring (Fluidex Division) in 1986 and SCEM (Italy) in 1989.

With manufacturing facilities strategically placed around the world, FCD is prepared to meet your global needs. Facilities located in the United States, Brazil, Italy, Switzerland, China, South Korea and India are equipped with a complete staff of experienced design engineers – among the best in the business – that are capable of rapidly completing customized valve designs for specific user requirements. Each facility has well equipped evaluation and testing laboratories to ensure proper valve operation, long cycle life, and optimum reliability.

With sales affiliates worldwide, an extensive distribution network and broad product breadth, FCD is in a unique position to service the world's requirements for solenoid valves.

Together we can control a wide variety of media, in hundreds of markets, under all conditions with thousands of designs that have been qualified to the most rigorous industry standards.

You'll find our products in OEM equipment for markets such as transportation, food & beverage, medical & instrumentation, fuel dispensing, refrigeration and air conditioning, industrial dishwashing and laundry equipment, as well as being specified on applications in process markets such as oil & gas, food processing, pharmaceutical, pulp & paper, tire & rubber, etc.

Fluid Control Division Headquarters, New Britain, CT.

Fluid Control Division Facility, Madison, MS.

Together we can work with you to cross over most all major competitive products to our wide variety of standard valves or work with your application specifications to select one of our unique product solutions.

All FCD valves come with an industry leading two year warranty against defects in workmanship.

Distribution

Our distribution network stocks 2-way, 3-way and 4-way valves that are engineered to control virtually any media over a wide range of applications. For a complete listing of our distribution network, please visit www.parker.com/fcd and select "where to buy."

FCD partners with our extensive distribution network and their end-users to ensure that their needs are met and all systems kept up and running!

System Solutions: Engineering Your Success

Besides offering superior products through our distribution network, FCD also works with distribution and OEMs to find value added solutions to satisfy your application's unmet needs.

Together we can partner with you and utilize the power of Parker's expertise in technology and innovation to create a world class system solution just for you.

FCD has cutting edge design and prototyping capabilities along with a staff of the industry's top engineers that will assist you with creating your next generation of solenoid valve solutions.

Combine all that with Parker's Premier Customer Service, and you've got a real winning team to partner with.

ISO 9001:2008

WARNING – USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met.

To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

The product described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

OFFER OF SALE

The items described in this document are hereby offered for sale by Parker-Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated on the separate page of this document entitled "Terms and Conditions of Sale".

Table of Contents

How to order (see coil section for part numbering charts)

Valves using Coil Charts 1-6 (Gold Ring Series Valves)

Step 1: Select the pressure vessel catalog number based on the application requirements. The catalog number is specified in the individual catalog sections.

Step 2: Select one enclosure code, one coil termination code and one voltage code. Standard leads are 18-inches long with all enclosures, except splice box where six-inch leads are standard.

Step 3: When separate valve and solenoid, the last two digits of the valve must match the first two digits of the solenoid. **Example:** Valve: 04F20C1103AAF Solenoid: AF4C05

Step 4: Valves with enclosure Types 7 & 9 must be ordered factory assembled and not as modular.

Valves using Coil Charts 7, 8, 10, 11 & 12 (Skinner 7000 Series Valves)

Ordering items 1 and 2, fully assembled valves

Step 1: Select the pressure vessel catalog number based on the application requirements. The catalog number is specified in the individual catalog sections.

Step 2: Use the mechanical options table, if required, to write the option code in place of the last two pressure vessel digits - "00."

Step 3: Select the appropriate integrated coil, and enter (NO=Nut & Washer as the 13th/14th digits), or enclosure and conventional coil.

Step 4: Use the electrical options table, if required, to write the option code in place of the last two coil digits.

Step 5: Use the voltage code to specify the correct voltage for the valve.

Item	Description
1	**Fully assembled valves with integrated coils**
2	**Fully assembled valves with conventional coils and enclosures**

Pressure Vessels	Enclosure	Coil	Voltage Code
7121KBN2NV00 +	**N0**	**+ C111 +**	**P3**

Example: 7121KBN2NV00N0C111P3

Valves using Coil Chart 9 (Miniature 2-way/3-way valves and Miniature Manifold Mounted Cartridge Valves)

These valves can be ordered in two parts: pressure vessel and solenoid coil.

To order modular units, select the pressure vessel, then mix and match one of the three different coil styles to meet your application requirement.

The available modular coils consist of the following coils:

- C4 conduit coil
- B4 leaded coil
- D6 DIN coil

To order pressure vessel:
Choose your pressure vessel from the the technical specification pages. The pressure vessel will contain the required coil retainig nut.

To order coil:

- Select either the C4 (Conduit), B4 (leaded) or D6 (DIN) coil required.
- Select voltage code
- Add voltage code to end of the coil number
- The coil assembly will contain the O-ring seals.

Assembled Valve Units:
To order a complete valve follow these three easy steps:

Step 1: Choose your pressure vessel from the technical specification pages.

Step 2: Select either the encapsulated (Integrated) or conventional coil. Apply that two-digit code to the end of the pressure vessel part number.

Step 3: Lastly, go to the voltage code chart and select the one digit voltage code and add the code to the end of the coil code to create the final complete assembled valve part number.

Parker Hannifin Corporation
Fluid Control Division
1 800 825 8305 (1 800 Valve05)
www.parker.com/fcd

2-Way Miniature

Direct Acting Valves
1/8" NPT

General Description:

2-way Miniature Direct Acting valves are available in Normally Closed and Normally Open constructions with interchangeable AC/DC coils. Valves are standard with 303 stainless steel bodies and FKM seals. These compact valves are durable with the potential for long life. Under lab conditions, these valves have survived 20 million cycles.

Installation
Valves can be mounted in any position. The preferred orientation is with the coil vertical and upright.

Standard Materials of Construction
Please refer to page A4

Compatible Fluids
Lubricated Air, Inert Gases, Water, Light Oil (300 SSU) and additional fluids compatible with materials of construction.

Use of non-lubricated gaseous media can affect valve life.

Electrical Characteristics:

Standard Voltages:
AC – 24/60
120/60 –110/50
240/60 –220/50
DC –12, 24
For other voltages – consult factory

Coil Classification:

Class F standard/Class H available AC & DC coils are interchangeable on the same pressure vessel.

Agency Approvals:
Standard valves with NEMA 4X are C-UL-US Listed or Recognized. For additional details, consult factory.

NSF Certification available on 2-way Normally Closed Valves. (Consult Factory)

Maximum Ambient Temperature
135°F (AC)/125°F (DC)

In absence of moisture, applications at temps as low as -20°F are possible. Please refer to page A4 for details.

Applications:

- Instrumentation equipment
- Analyzers and diagnostic equipment
- Gas analyzers
- Medical and dental equipment
- Portable welding equipment
- Spraying equipment
- Lubrication equipment
- Beverage dispensing & vending machines
- Oil burners
- Humidification and misting equipment
- Mobile fuel shut off
- Textile and dry cleaning equipment
- Air horns
- Pneumatic fan clutch
- Irrigation equipment

2-Way Miniature Direct Acting - Normally Closed - Stainless Steel

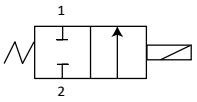
Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1/8	3/64	0.06	0	950	950	950	8.5	240	FKM	20CC02EV4	9	A1
1/8	1/16	0.10	0	625	625	625	8.5	240	FKM	20CC02GV4	9	A1
1/8	5/64	0.15	0	450	450	450	8.5	240	FKM	20CC02JV4	9	A1
1/8	3/32	0.22	0	320	320	320	8.5	240	FKM	20CC02LV4	9	A1
1/8	7/64	0.28	0	245	245	245	8.5	240	FKM	20CC02MV4	9	A1
1/8	1/8	0.32	0	175	175	175	8.5	240	FKM	20CC02PV4	9	A1
1/8	5/32	0.38	0	100	100	100	8.5	240	FKM	20CC02QV4	9	A1
DC TECHNICAL SPECIFICATIONS												
1/8	3/64	0.06	0	390	390	390	8	240	FKM	20CC02EV4	9	A1
1/8	1/16	0.10	0	255	255	255	8	240	FKM	20CC02GV4	9	A1
1/8	5/64	0.15	0	180	180	180	8	240	FKM	20CC02JV4	9	A1
1/8	3/32	0.22	0	130	130	130	8	240	FKM	20CC02LV4	9	A1
1/8	7/64	0.28	0	100	100	100	8	240	FKM	20CC02MV4	9	A1
1/8	1/8	0.32	0	60	60	60	8	240	FKM	20CC02PV4	9	A1
1/8	5/32	0.38	0	30	30	30	8	240	FKM	20CC02QV4	9	A1

2-Way Miniature Direct Acting - Normally Open - Stainless Steel

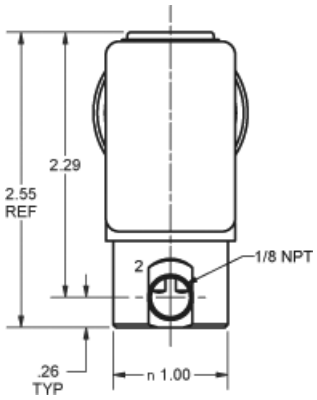
Port Size NPT	Orifice Size in.	Flow Factor Cv	Operating Pressure Differential (MOPD) PSI				Watt	Max. Media Temp. °F	Seal	Pressure Vessel Number	Reference	
			Min.	Air, Inert Gas	Water	Light Oil					Coil	Valve
AC TECHNICAL SPECIFICATIONS												
1/8	1/32	0.02	0	375	375	375	10	240	FKM	20CF02AV4	9	A2
1/8	3/64	0.06	0	230	230	230	10	240	FKM	20CF02EV4	9	A2
1/8	1/16	0.10	0	150	150	150	10	240	FKM	20CF02GV4	9	A2
1/8	5/64	0.14	0	105	105	105	10	240	FKM	20CF02JV4	9	A2
1/8	3/32	0.20	0	80	80	80	10	240	FKM	20CF02LV4	9	A2
DC TECHNICAL SPECIFICATIONS												
1/8	1/32	0.02	0	375	375	375	8	240	FKM	20CF02AV4	9	A2
1/8	3/64	0.06	0	230	230	230	8	240	FKM	20CF02EV4	9	A2
1/8	1/16	0.10	0	150	150	150	8	240	FKM	20CF02GV4	9	A2
1/8	5/64	0.14	0	105	105	105	8	240	FKM	20CF02JV4	9	A2
1/8	3/32	0.20	0	80	80	80	8	240	FKM	20CF02LV4	9	A2

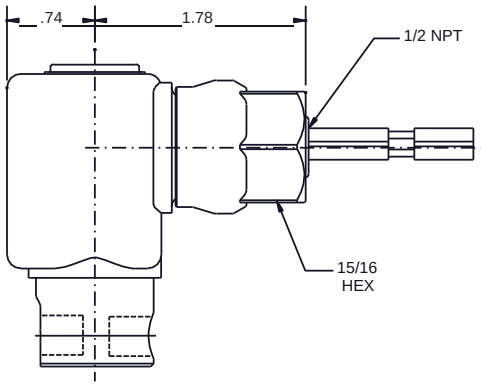
Parker Hannifin Corporation
Fluid Control Division
1 800 825 8305 (1 800 Valve05)
www.parker.com/fcd

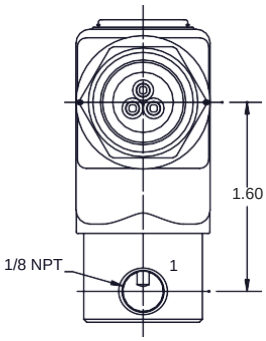
Valve Reference A1

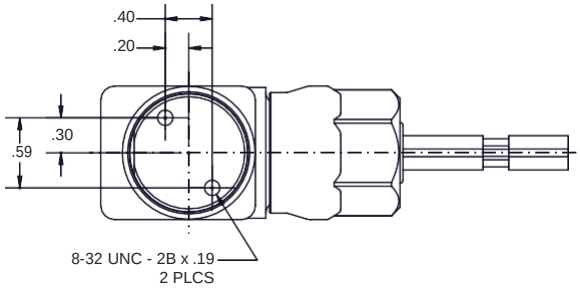


2-Way Normally Closed:
20CCxx
Port Identification:
2-In/1-Out

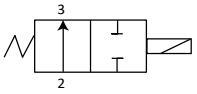




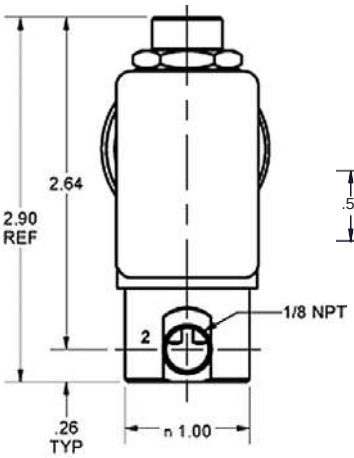


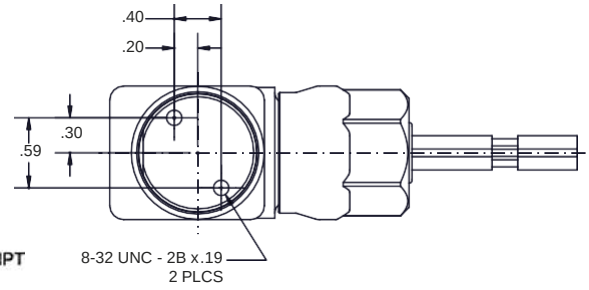


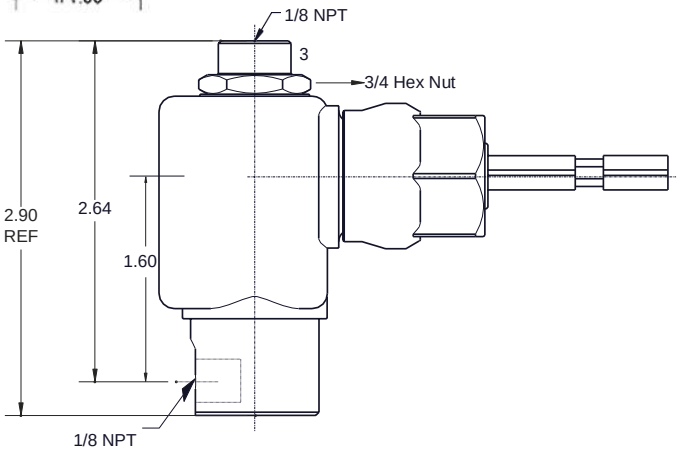
Valve Reference A2



2-Way Normally Open:
20CFxx
Port Identification:
2-In/3-Out







2-Way Miniature Direct Acting Materials of Construction**

Product*	Wattage	Type	Port Size	Body	Sleeve Tube	Sleeve Stop	Sleeve Flange	"Plunger Blank"	Plunger Spring	Shading Ring	Max. Ambient Temp.
20CC02	8.5 (AC)	2WNC	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	135°F
20CC02	8 (DC)	2WNC	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	125°F
20CF02	10 (AC)	2WNC	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	135°F
20CF02	8 (DC)	2WNC	1/8	303SS	304SS	430FR	430FR	430FR	18-8SS	Copper	125°F

* Shows the first 6 digits of the pressure vessel part number.

** Maximum ambient temperature shown is the rating when valve is operating at the maximum fluid temperature as shown in the product sections for each of the valves in this catalog.

Check out the 2-Way and 3-Way Manifold Mounted Miniature Cartridge valves in the Specialty Section of this catalog.

Product Features:

- Space saving approach
- Less manifold machining means lower overall manifold cost
- No manifold orifices to machine or press in
- Cartridge valves are 100% tested
- Easy to assemble & disassemble with a 5/32" hex wrench. (Torque = 25-35 in-lbs).
- No loose parts: sleeve, plunger, spring and orifice are pressed together as one unit
- Available with all coils and enclosures shown on Chart 9 in Coil Section of this catalog.

Parker Hannifin Corporation
Fluid Control Division
1 800 825 8305 (1 800 Valve05)
www.parker.com/fcd

CAT FCDFL0911 September 2018

Parker Hannifin Corporation
Fluid Control Division

95 Edgewood Avenue
New Britain, CT 06051
phone 860 827 2300
fax 860 827 2384
www.parker.com/fcd

147 West Hoy Road
Madison, MS 39110
www.parker.com/fcd