Courtesy of Steven Engineering, Inc. • 230 Ryan Way, South San Francisco, CA 94080-6370 • Main Office: (650) 588-9200 • Outside Local Area: (800) 258-9200 • www.stevenengineering.com



# Solenoid Valve Product Guide



in design engineering,

facilities management,

plant maintenance,

or purchasing,

you already know

a thing or two about

solenoid valves.

So...why use

Skinner and Gold Ring<sup>™</sup>

solenoid valves from

**Parker Hannifin?** 







**Top left:** We make great valves! Parker's portfolio of solenoid valves includes a wide variety of two-way, three-way, and fourway valves for virtually any application.

**Top right:** They pass our toughest test-our people! All Skinner products undergo 100% functional testing.

**Bottom:** We're dedicated to shipping our products on your request date! Within our facility, individual manufacturing cells have been created to build our product lines.

# Because Parker gives you a whole lot more than just great valves!

*More products.* We offer one of the most extensive solenoid valve product lines available anywhere for virtually any application. Our products can be found dispensing gasoline in your local self-service gas station, aiding kidney patients in dialysis treatment, providing safety in transportation vehicle systems, keeping water flowing in farm irrigation systems, as well as a myriad of other applications in commercial, business, and industrial markets. And, our products are offered with competitive pricing, on-time delivery, better technical support, and premier customer service.

As an added bonus, our products meet-or exceed-the specifications and performance characteristics of our competitors' products. *More value–added products, service, and support.* With our new ParkerPlus program, we can offer you specially tailored plans to deliver individual valve products or complete fluid and motion control sub-systems.

From on-time delivery and inventory programs to value-added sub-assemblies, our ParkerPlus team will work with you to develop a program that will meet your specific production requirements.

We can evaluate and engineer a product or sub-system to give you a complete turnkey solution ready for installation into your system design. And if your sub-assembly requires products from any of our other Parker divisions throughout the world, we can easily incorporate those products into your sub-assembly while reducing your total cost. *More convenience.* Since we're part of Parker Hannifin's global organization, we can also offer "One-stop-shopping" to quickly and conveniently meet all of your fluid and motion control requirements.

As the largest manufacturer of fluid and motion control products, Parker can fulfill your need for hydraulic components, valves, hoses, fittings, fluid connectors, automation components, filters,

> and sealing systems, as well as a host of other products that you may require.

In short, you get more from Parker's Skinner Valve Division ... a company you can depend on!



# We've been making great fluid control and fluid power products for a long time.

#### Parker Hannifin plant circa 1950.



We're not new to the business. Parker's Skinner Valve Division has been making solenoid valves since Harry and Bess Truman were in the White House. We developed our first solenoid valve during the era when *Guys & Dolls* was Broadway's biggest hit and 'Mambo fever' was sweeping the nation.

We've had a few hits ourselves. Our business has always been focused on providing the most innovative solenoid valve products. We were the first to come up with the latching coil. Then a solenoid valve used to actuate dampers in HVAC systems. And our patented dual-flow valve made it possible for you to pump your own gas at the filling station.



Next, we developed a proportional valve. We are the ones who introduced the modular idea to solenoid valve design. And we were first out of the gate with electronic enhancements to coils.

There's just no telling what our R&D department will come up with next.

Along the way, we attracted the attention of some of the big guns.



Parker Hannifin Corporation purchased the Skinner Valve Division in 1997. That's good for you and us, because Parker is the world's leading supplier of motion, flow, and pressure control products. In fact, Parker offers over 1400 product lines for use in a broad spectrum of essential uses for hydraulic, pneumatic, and electromechanical applications in some 1,000 industrial and aerospace markets. In the field of fluid, motion, and pressure control, no single competitor presents a product line as broad as ours.

So, now we have both the people and the products in place to help you with virtually any application you can imagine.

#### We want to make you happy.

Our design engineers and technical support team are a pretty talented and tireless group. And our Sales Engineers, Customer Service Specialists, and Authorized Distributors are as hard working a bunch as you'll find anywhere. They consistently give 110% effort.

Utilizing our three manufacturing facilities, a U.S. distribution network of nearly 250 locations, and affiliates located throughout the world, we can provide you with global support wherever your business is.

As a result, many of the world's largest original equipment manufacturers use Skinner valves in their equipment and systems. We're very proud of that fact.



#### You want valves? Boy, do we have valves.

If you need a high performance two-way, three-way, or four-way solenoid valve for any fluid control application, you've come to the right place. We've got proportional valves, miniature valves, microminiature valves, intrinsically safe valves, modular valves, an actuation series of valves, and the know-how to design any other kind of valve you might need.

# We've helped practically

any industry you can name... Skinner valves are hard at work in a wide range of industries, including chemical, petrochemical, mobile, fuel dispensing, pulp and paper production, food and beverage, commercial and industrial, medical, refrigeration, and transportation to name just a few.

#### ... in all kinds of ways.

Our products are used for a variety of applications from control valve actuators, dispensing equipment, and commercial machinery to mobile and medical equipment and control systems instrumentation.

#### We make good on our promises.

Every Skinner valve is 100% tested before leaving our factories and each is backed by a two-year materials and workmanship warranty.

### And, we've learned a lot from hanging around some really fine distributors.

Our distributors are the cream of the crop. They know valves. And they know their customers. You can count on your Skinner valve distributor to help you specify the right valve for the job at hand.











# **Skinner Valve Technology**

#### 7000 Series.

Available in two-way, three-way, and four-way constructions in brass or stainless steel bodies. Each 7000 Series valve provides the ultimate in performance, versatility, and quality. And each includes standard features not found in any competitive product.

#### 3000 Series.

When your applications require reliable performance, economy, and a compact design, Skinner 3000 Series valves are your best choice. Developed with fully interchangeable components, 3000 Series valves are user-flexible by design and available in both two-way and three-way configurations.

#### Intrinsically Safe Series.

These two-way, three-way, and four-way valves provide a number of significant performance advantages, including low-power consumption, low temperature rise, a wide range of sizes, and media compatibility. They are available in brass, stainless steel, anodized aluminum, and zinc alloy bodies.

#### K-Series.

Although small in stature, each Skinner K-Series three-way and four-way valve includes features and performance capabilities usually found only on larger, more expensive solenoid valves. They are designed to satisfy most pneumatic application requirements.

#### Actuation Series.

Three-way and four-way valves are designed for use in controlling pneumatic actuators used in process industries, such as chemical, petrochemical, petroleum refining, power generation, pulp and paper production, food and beverage, and oil and gas transmission.

Many of our valves are available in manifold configurations as well.

# **Skinner Condensed Valve Listing**

# **Skinner Two-Way Solenoid Valves**

**SKINNER 7000 SERIES** 

			Maximum				Valve Types	
Valve Application Type	Standard Body Material	Pipe Size	Operating Pressure Differential	Orifice Sizes (inches)	C <sub>V</sub> Factor	Normally Closed	Normally Open	Dual Purpose
Direct-Acting	Brass or	1/8" to 1/2" NPT	To 1000 PSI	1/2" to 7/16"	0.02 to 2.5	Х	Х	Х
General Purpose	Stainless Steel							
Direct-Lift and	Brass or	1/4" to 2" NPT	To 300 PSI	1/4" to 1-9/16"	0.76 to 38.6	Х	Х	Х
Pilot Operated	Stainless Steel							
General Purpose								
Hot Water &	Brass or	1/4" to 1-1/2" NPT	To 150 PSI	13/64" to 1-1/4"	0.76 to 22.5	Х	Х	
Steam	Stainless Steel							
High Pressure	Brass or	1/8" to 1/2" NPT	To 3000 PSI	1/32" to 9/16"	0.021 to 4.1	Х	Х	
	Stainless Steel							
Anti-Water Hammer	Brass	3/8" to 2" NPT	To 230 PSI	7/16" to 1-9/16"	2.5 to 38.6	Х	Х	
Manual Reset	Brass or	1/4" to 1-1/2" NPT	To 300 PSI	3/32" to 1-1/4"	0.18 to 22.5	Х	Х	
	Stainless Steel							
Remote	Brass	3/8" to 1" NPT	190 PSI	1/2" to 1"	11.0			Х
Pressure-Operated								

#### **SKINNER 3000 SERIES**

			Maximum			C <sub>V</sub> F	actor
Valve Application Type	Standard Body Material	Pipe Size	Operating Pressure Differential	Body Orifice (inches)	Sleeve Orifice (inches)	Body	Sleeve
2-Way	Brass or	1/8" NPT	50 to 800 PSI	1/32" to 5/32"	-	.03 to .30	-
Normally Closed	Stainless Steel						
2-Way	Brass or	1/8" NPT,	10 to 800 PSI	-	1/32" to 3/32"	-	.03 to .18
Normally Open	Stainless Steel	#10-32 UNF	40 to 300 PSI				

#### SKINNER B, C, LB, AND A SERIES

No.1						Valve	Types
Valve Application Type	Standard Body Material	Pipe Size	Maximum Operating Pressure Differential	Orifice Sizes (inches)	Cv Factor	Normally Closed	Normally Open
Skinner B Series							
B Series	Stainless Steel	1/16" PTF,	25 to 400 PSI	1/32" to 1/8"	0.019 to 0.24	Х	Х
General Purpose		1/8" NPT					
Skinner C Series							
C Series	Brass or	1/8" NPT	30 to 275 PSI	1/16" to 5/32"	0.01 to 0.39	Х	
General Purpose	Stainless Steel						
Skinner LB27 Series Z	ero Delta P						
LB27 Series	Brass	1" to 1-1/2" NPT	125 PSI	1-1/16" to 1-1/4"	13.5 to 22.5	Х	
Skinner A2 Series							
A2 Series	Brass	1/2" NPT	15 PSI	1/2"	2.7	Х	
Low Pressure							

# Skinner Condensed Valve Listing continued

# **Skinner Three-Way Solenoid Valves**

### SKINNER 7000 SERIES

			Maximum				Valve	Types	
Valve Application Type	Standard Body Material	Pipe Size	Operating Pressure Differential	Orifice Sizes (inches)	C <sub>V</sub> Factor	Normally Closed	Normally Open	Multi- Purpose	Diverting
Direct-Acting	Brass or	1/8" to 1/4" NPT and	Vacuum to 580	1/32" to 1/4"	0.02 to 0.67	Х	Х	Х	Х
General Purpose	Stainless Steel	Flange Mounting	PSI						
Pilot-Operated	Brass	3/8" to 3/4" NPT	To 180 PSI	3/8" to 3/4"	2.1 to 7.3	Х	Х	Х	Х
General Purpose									
Quick Exhaust	Brass or	1/8", 1/4" NPT	To 250 PSI	3/64" to 1/4"	0.052 to 1.1	Х			
	Stainless Steel								
High Pressure	Brass or	1/8", 1/4" NPT	To 1100 PSI	1/32" to 1/16"	0.02 to 0.11	Х		Х	
	Stainless Steel								
Manual Reset	Brass or	1/4" to 3/4" NPT	To 200 PSI	3/64" to 3/4"	0.062 to 7.3	Х	Х	Х	
	Stainless Steel								
Remote	Brass	3/8" to 3/4" NPT	180 PSI	3/8" to 3/4"	2.1 to 7.3			Х	
Pressure-Operated									

#### SKINNER 3000 SERIES

	Standard Body		Maximum Operating	Body Orifice	Sleeve Orifice	Cv F	actor
Valve Type	Material	Pipe Size	Pressure Differential	(inches)	(inches)	Body	Sleeve
3-Way	Brass or	1/8" NPT	10 to 200 PSI	1/32" to 5/32"	1/32" to 1/16"	.03 to .30	.03 to .09
Normally Closed	Stainless Steel						
3-Way	Brass or	1/8" NPT	10 to 160 PSI	1/32" to 5/32"	1/32" to 1/16"	.03 to .30	.03 to .09
Normally Open	Stainless Steel	#10-32 UNF					
3-Way	Brass or	1/8" NPT	10 to 150 PSI	1/32" to 5/32"	1/32" to 1/16"	.03 to .30	.03 to .09
Multipurpose	Stainless Steel	#10-32 UNF					
3-Way Diverting	Brass or	1/8" NPT	10 to 230 PSI	1/32" to 5/32"	1/32" to 1/16"	.03 to .30	.03 to .09
	Stainless Steel	#10-32 UNF					

#### SKINNER B, C, A SERIES

			Maximum				Valve	Types	
Valve Application Type	Standard Body Material	Pipe Size	Operating Pressure Differential	Orifice Sizes (inches)	C <sub>V</sub> Factor	Normally Closed	Normally Open	Multi- Purpose	Directional Control
Skinner B Series									
B Series	Stainless Steel	1/16" PTF	30 to 250 PSI	1/32" to 3/32"	0.019 to 0.16	Х	Х	Х	Х
General Purpose		1/8" NPT							
Skinner C Series									
C Series	Brass or	1/8" NPT,	30 to 175 PSI	3/64" to 1/8"	0.05 to 0.26	Х	Х	Х	
General Purpose	Stainless Steel	Adapted 1/8" PTF							
Skinner A3 Series									
A3 Series	Zinc	1/4" NPT body ports,	75 to 250 PSI	3/32" to 5/32"	0.21 to 0.45	Х	Х	Х	Х
General Purpose		1/8" NPT sleeve							
		port connection							

### **Skinner Four-Way Solenoid Valves**

#### **SKINNER 7000 SERIES**

Valve Application Type	Standard Body Material	Pipe Size	Maximum Operating Pressure Differential	Orifice Sizes (inches)	C <sub>V</sub> Factor
Pilot-Operated General Purpose Poppet	Aluminum Alloy or Zinc Alloy	1/8", 1/4" NPT	150 PSI	5/32" to 5/16"	0.35, 1.4
Pilot-Operated and Manually-Operated General Purpose	Aluminum	1/4" NPT	150 PSI	1/4"	1.0
Manual Reset	Aluminum	1/4"	150 PSI	1/4"	1

Courtesy of Steven Engineering , Inc. • 230 Ryan Way, South San Francisco, CA 94080-6370 • Main Office: (650) 588-9200 • Outside Local Area: (800) 258-9200 • www.stevenengineering.com

#### **SKINNER V9 SERIES**

			Maximum				Valve	Types
Valve Application Type	Standard Body Material	Pipe Size	Operating Pressure Differential	Orifice Sizes (inches)	C <sub>V</sub> Factor	Normally Closed Normally Closed	Normally Open Normally Open	Normally Open Normally Open
V9 Series General Purpose	Zinc	1/4" NPT	50 to 225 PSI	3/64" to 1/8"	0.052 to 0.21	Х	Х	Х

# **Skinner Specialty Solenoid Valves**

SKINNER 7000 SERIES TWO-WAY VALVES

					Valve Types			
Valve Application Type	Standard Body Material	Pipe Size	Operating Pressure Differential	Orifice Sizes PTF)	C <sub>V</sub> Factor	Normally Closed	Normally Open	Dual Purpose
Hydraulic	Stainless Steel	1/8" NPT	1000 PSI	7/64"	0.21	Х	Х	
Dry Operator	Noryl, PTFE, or	1/8" Male NPT,	To 70 PSI	5/64" to 3/16"	0.16 to 0.47	Х		
	Stainless Steel	1/4" NPT, 3/8" Bib						

#### SKINNER 7000 SERIES THREE-WAY VALVES

			Maximum				Valve	Types	
Valve Application	Standard Body		Operating Pressure	Orifice Sizes		Normally	Normally	Multi-	
Туре	Material	Pipe Size	Differential	(inches)	C <sub>V</sub> Factor	Closed	· · · · ·		Diverting
Hydraulic	Stainless Steel	1/8" NPT	1000 PSI	7/64"	0.21	Х	Х	Х	Х

#### SKINNER DUAL FLOW VALVES

			Maximum	Orifice I	Diameter	Cv	Factor
Valve	Standard		Operating				
Application Type	Body Material	Pipe Size	Pressure Differential	Full Flow	Low Flow	Full Flow	Low Flow
Dual-Flow Dispensing	Brass	3/4" to 1-1/2"	To 50 PSI	3/4" to 1-1/4"	3/32" to 1/16"	5.5 to 21	0.17 to 0.12

#### SKINNER BP PROPORTIONAL VALVES

					Flow R	anges
Valve Application Type	Standard Body Material	Pipe Size	Maximum Operating Pressure	Orifice Sizes (inches)	At Maximum Operating Pressure (SCCM)	10 PSI Example (SCCM)
BP Proportional	Stainless Steel	1/8" NPT	To 200 PSI	1/64" to 3/32"	To 80,000	To 45,000

# Skinner Condensed Valve Listing continued

# **Skinner Intrinsically Safe Series**

Valve Type	Standard Body Material	Port Sizes	Operating Pressure Differential	Orifice Sizes	Flow Rate
Two-Way, Two-Position Valve	s				
2-Way Normally Closed	Brass	1/4", 1/2", 3/4", 1", 1-1/4",	Up to 150 PSI	3/64", 5/8", 3/4", 1", 1-1/4",	C <sub>V</sub> : 0.04 to 39.2
		1-1/2", 2" NPTF		1-9/16"; 1, 1.2 and 1.5mm	SCFM: 1.25 to 1400
Three-Way, Two-Position Valv	res				
3-Way	Brass,	1/4", 1/2" NPTF,	Up to 150 PSI	3/64", 9/32", 5/8", 1";	C <sub>V</sub> : 0.04 to 11.2
Normally Closed	Stainless Steel or	1" BSP,		1.2, 1.5 and 5mm	SCFM: 1.25 to 390
	Aluminum	Subbase Mounting			
3-Way Universal	Stainless Steel	1/4"	Up to 150 PSI	5mm	C <sub>V</sub> : 0.5
					SCFM: 24.5
Four-Way, Two-Position Valve	S				
4-Way, 4-Ported	Aluminum	1/4", 1/2" NPTF	Up to 150 PSI	1/4", 9/16"	C <sub>V</sub> : 0.07 to 4
					SCFM: 24 to175
4-Way, 5-Ported	Aluminum	1" BSP	15 to 150 PSI	1"	C <sub>V</sub> : 10.5
					SCFM: 390
4-Way, 5-Ported	Zamak	1/4" NPTF	15 to 150 PSI	5/16"	C <sub>V</sub> : 1.4
Double Solenoid	(Zinc Alloy)				SCFM: 54
hree-Way, Two-Position Spe	cial Purpose Valves				
3-Way, 2-Position	Stainless Steel	1/4" NPTF	0 to 150 PSI	5mm	C <sub>V</sub> : 0.5
Universal, Manual Reset					SCFM: 24.5
3-Way, 2-Position	Brass	1/4" NPTF	1.5 to 105 PSI	P: 3/32"	Cv: P-0.29; E-1.1
Quick Exhaust				E: 1/4"	SCFM: P-8; E-39

#### SKINNER A10 SERIES VALVES

						Valve Types		Multi- Purpose Control		
Valve Application Type	Standard Body Material	Pipe Size	Maximum Operating Pressure Differential	Orifice Sizes (inches)	C <sub>v</sub> Factor	Normally Closed	Normally Open	Multi- Purpose		
A10 Series High Pressure Hydraulic	Stainless Steel	1/8" NPT	3000 PSI	3/32"	0.15	Х	Х			
A10 Series High Pressure Hydraulic	Stainless Steel	1/8" NPT	1000 to 3000 PSI	3/32"	0.15	Х	Х		Х	

#### SKINNER MB SERIES VALVES

						Valve	Types
Valve Application Type	Standard Body Material	Pipe Size	Maximum Operating Pressure Differential	Orifice Sizes (inches)	C <sub>V</sub> Factor	Normally Closed	Normally Open
MB Series	Plastic	#10-32 UNF 2B	150 PSI	3/64"	.028 to .032	Х	Х
		Subbase Ported					
		1/8" NPT Manifold					

#### **SKINNER V9 SERIES**

		Maximum				Valve Types			
Valve Application Type	Standard Body Material	Pipe Size	Operating Pressure Differential	Orifice Sizes (inches)	C <sub>V</sub> Factor	Normally Closed Normally Closed	Normally Open Normally Open	Normally Open Normally Open	
A35 Series	Stainless Steel	1/8" NPT	2000 PSI	0.082", 0.086"	0.12, 0.13	See catalog for details			
High Pressure									
Hydraulic									

# **Skinner K-Series Valves**

		C <sub>v</sub> i	Factor	v	- Valve	
Valve Type	Operating Pressure Differential	P to Cyl	Cyl to R	DC	AC	- vaive Manifolds
Three-Way Microminiatur	re Valves					
Normally Closed	0 to 114 PSI	0.005 to 0.1	0.005 to 0.1	0.5 or 1.8	0.5 or 1.8	To 10 stations
(K3F, K3H, K3P)						
Normally Open	28 to 100 PSI	0.1	0.1	0.5	-	To 10 stations
(K3H)						
Four-Way Microminiature	e Valves					
4-Way	21 to 114 PSI	0.02	0.02	0.5 to 1.8	0.5 to 1.8	To 10 stations
Pilot Operated (K4P)						

Valve Type	Operating Pressure Differential	C <sub>v</sub> Factor	Watts	Solenoid Model	Valve Manifold
4-Way Pilot Operated (K4H)	28 to 100 PSI	0.1	0.5	Single and Double	To 10 stations
4-Way Single Solenoid Pilot Operated (K4R)	28 to 100 PSI	0.2	0.5	Single and Double	To 10 stations
4-Way Double Solenoid Pilot Operated (K4R)	28 to 100 PSI	0.2	0.5	Double	To 10 stations
4-Way Latching Single Solenoid (K4RL)	28 to 100 PSI	0.2	1.8	Single Latching	To 10 stations
4-Way Direct Acting (K4M)	0 to 120 PSI	0.04	2	Single and Double	To 10 stations
4-Way Double Solenoid 3-position (K5R)	28 to 100 PSI	0.14	0.5	Double	To 10 stations

# **Skinner Valve Actuation Series**

								N	alve Types	5			
Valve Type	Standard Body Material	Pipe Size	C <sub>V</sub> Flow Factor	Operating Pressure Differential	Normally Closed	Normally Open	Multi- purpose	All-Ports- In-Body		External Pilot	Direct Mount (NAMUR)	Manual Reset	Remote Operated
7300 Line	Brass or	1/4"	0.55 to 1.2	0 to 150 PSI	Х				Х	Х			Х
3-Way and	Stainless Steel												
4-Way Valves													
7000 Series	Brass,	1/8" to 3/4"	0.52 to 7.3	0 to 215 PSI	Х	Х	Х	Х					
3-Way and	Stainless Steel												
4-Way Valves	or Aluminum												
3300 Line	Anodized	1/4"	0.55	40 to 150 PSI	Х								
3-Way and	Aluminum												
4-Way Valves													
Intrinsically Safe	Brass,	1/4"	0.04 to 1.2	0 to 150 PSI	Х				Х		Х	Х	
3-Way and	Stainless Steel												
4-Way Valves	or Aluminum												
Ultra Low-Power	Brass,	1/4"	0.04 to 4.0	0 to 150 PSI	Х		Х		Х		Х		
3-Way and	Stainless Steel												
4-Way Valves	or Aluminum												
Manual Reset	Brass,	1/4" to 3/4"	0.09 to 7.3	0 to 200 PSI		No-Vo	oltage Rele	ease or Ele	ctrically Trip	oped Mode	els		
3-Way and	Stainless Steel												
4-Way Valves	or Aluminum												
Direct Mount	Aluminum or	1/4"	0.14 to 1.2	0 to 150 PSI	Х			Х	Х	Х	Х		
(NAMUR) 3-Way	Stainless Steel												
and 4-Way Valves													

# **Gold Ring Valve Technology**

Gold Ring Two-Way, Three-Way, and Four-Way Solenoid Valves Gold Ring solenoid valves are available in a wide variety of sizes, seal, disc, and body materials, as well as in AC or DC, ensuring that we have a standard valve to fit most applications. If a unique application requires a unique product, our technical and manufacturing experience allows us to develop the right valve for that application.

Unit valves and unit solenoids enable Gold Ring valves to offer versatility in stocking and manufacturing requirements. With the introduction of Parker's Gold Ring II<sup>™</sup> completely encapsulated solenoid, NEMA TYPE 4X requirements can also be met with unit valves and unit solenoids.

#### Gold Ring Two-Way Valves

Two-way Gold Ring valves are available in a variety of Series including: Direct Acting Valves, Low Pressure Valves, Pilot Operated Valves, High Pressure Valves as well as Hot Water and Steam Valves.

#### **Gold Ring Three-Way Valves**

Three-way Gold Ring valves are available as Direct Acting, Quick Exhaust, or Pilot Operated Valves, in brass or stainless steel body constructions.

#### Gold Ring Four-Way Valves

Four-way, two-position, Gold Ring valves require a minimum 10 PSI operating pressure for acceptable system operation.

#### **Gold Ring Specialty Valves**

In order to meet specific application requirements, Parker has developed three types of specialty valves: Cryogenic Two-Way Valves; Vacuum Service Two-Way Valves; and Long Life-Quiet Operating Valves.

- Cryogenic Valves were developed to withstand the severe temperatures associated with controlling cryogenic fluids at temperatures to -320°F (-196°C).
- Vacuum Service Valves are designed for low, medium, and high (to
  - 10<sup>-6</sup> Torr) service.
- Long Life-Quiet Operating Valves are designed to extend cycle life. By eliminating metal to metal contact, wear is greatly reduced.



# **Gold Ring Valve Listing**

### Gold Ring Two-Way Solenoid Valves

Valve			Maximum Operating			Valve	Types
Application Type	Standard Body Material	Pipe Size	Pressure Differential	Orifice Sizes (inches)	C <sub>v</sub> Factor	Normally Closed	Normally Open
Series 20	Brass or	1/8" to 1/4" NPT	To 2200 PSI	3/64" to 9/32"	.06 to .96	Х	Х
General Purpose	Stainless Steel						
Series 20	Brass or	3/8" to 3/4" NPT	To 20 PSI	5/16" to 3/4"	1.10 to 6.00	Х	Х
Low Pressure	Stainless Steel						
Series 22, 23, 24, 28	Brass, Stainless Steel	3/8" to 3" NPT	To 300 PSI	5/8" to 3"	3.00 to 125	Х	Х
Pilot Operated	or Bronze						
Series 25	Brass or	1/4" to 1" NPT	To 300 PSI	11/32" to 1"	1.20 to 12.20	Х	Х
H5 Pivoted Edge	Stainless Steel						
Series S	Brass or	1/4" to 1-1/2" NPT	To 125 PSI	5/32" to 1-1/2"	.52 to 22.50	Х	Х
Hot Water and Steam	Stainless Steel						
Series 28, High Pressure	e Brass	1/4" to 3/4" NPT	15 to 1500 PSI	5/16" to 3/4"	1.5 to 7.8	Х	Х

### Gold Ring Three-Way Solenoid Valves

			Maximum				Valve Types	
Valve Application Type	Standard Body Material	Pipe Size	Operating Pressure Differential	Orifice Sizes (inches)	C <sub>V</sub> Factor	Normally Closed	Normally Open	Universal
Series 30	Brass or	1/8" to 1/4" NPT	To 250 PSI	3/64" to 11/64"	.06 to .35	Х	Х	Х
General Purpose	Stainless Steel							
Series 34	Brass	3/8" to 3/4" NPT	10 to 250 PSI	5/8"	3.00 to 5.00	Х	Х	Х
High Flow								
Series 35, 38	Brass or	1/4" to 3/8" NPT	5 to 200 PSI	1/4" to 11/32"	.20 to 1.20	Х	Х	Х
Quick Exhaust	Stainless Steel							

### **Gold Ring Four-Way Solenoid Valves**

			Maximum				Valve Types	
Valve Application Type	Standard Body Material	Pipe Size	Operating Pressure Differential	Orifice Sizes (inches)	C <sub>V</sub> Factor	Normally Closed	Normally Open	Universal
Series 48	Brass	1/4" NPT	10 to 150 PSI	1/16", 3/32"	0.09			Х
4-Way, 2-Position				Inlet/Exhaust				

### **Gold Ring Specialty Solenoid Valves**

			Maximum				Valve Types Normally Open Universa X		
Valve Application Type	Standard Body Material	Pipe Size	Operating Pressure Differential	Orifice Sizes (inches)	C <sub>V</sub> Factor	Normally Closed		Universal	
Cryogenic Valves									
2-Way Cryogenic Service and Liquid CO <sub>2</sub>	Brass or Stainless Steel	1/8" to 1" NPT	To 500 PSI	1/8" to 1"	.06 to 13.5	х	Х		
Vacuum Service Valves									
2-Way Low, Medium and High Vacuum Service	Brass or Stainless Steel	1/4" to 1" NPT	To 15 PSI	9/32" to 1"	.96 to 12.20	Х	Х		

# Gold Ring Long Life-Quiet Operating Valves

			Maximum			Valve Types			
Valve Application Type	Standard Body Material	Pipe Size	Operating Pressure Differential	Orifice Sizes (inches)	C <sub>V</sub> Factor	Normally Closed	Normally Open	Universal	4-Way 2-Position
2-Way, 3-Way and 4-Way, Long Life-Quiet Operating	Brass or Stainless Steel	1/4" to 1-1/2" NPT	To 175 PSI	1/8" to 1-1/4"	.35 to 22.50	Х	Х	Х	Х

# **Our Full Line Is Now Online!**

For a closer look at Parker's innovative valve technologies including full color product photographs, complete technical specifications, and suggested applications, visit us on the Internet anytime day or night, 365 days

www.parker.com/skinner

a year at:



#### UNITED STATES

#### **Skinner Valve Division**

Parker Hannifin Corporation Climate & Industrial Controls Group 95 Edgewood Ave. New Britain, CT 06051-9914 USA Tel: (860) 827-2300 Fax: (860) 827-2384 Email: skinnervalve@parker.com Internet: www.parker.com/skinner

#### EUROPE, MIDDLE EAST and AFRICA

Parker Lucifer SA P.O. Box 1456 CH-1227 Carouge/Geneva Switzerland Tel: 41 22 3077 111 Fax: 41 22 3077 110

#### **Republic of South Africa**

Parker Hannifin (Africa) (Pty) Ltd. Parker Place 10 Berne Avenue Aeroport, Kempton Park P.O. Box 1153 Kempton Park 1620 Republic of South Africa Tel: (27) (11) 392-7280 Fax: (27) (11) 392-7213

#### CANADA

#### Parker Hannifin (Canada) Inc.

Skinner Valve Division 530 Kipling Avenue Toronto,Canada M8Z 5E6 Tel: 416 255-1585 1-888-249-4806 Fax: 416-255-2107

#### MEXICO

Schrader Bellows-Parker, S.A. de C.V. Division Mexico Calle 9 no. 6, Franc. Alce Blanco 053370 Naucalpan Edo. de Mexico Tel: (52-5) 358-5477 Fax: (52-5) 358-1823

#### SOUTH AMERICA AND CARIBBEAN

Caribbean, Central America, Columbia, Equador, Peru, Bolivia, Chile, Guyana, Suriname, French Guiana

#### Parker Hannifin Corporation Pan American Division 7400 N.W. 19th St. Suite A

Miami, FL 33126 USA Tel: (305) 470-8800 Fax: (305) 470-8808

# Argentina

Parker Hannifin Argentina Stephenson 2711 1667 - tortuguitas Malvinas Argentinas Buenos Aires Argentina Tel: 5411 4752 4129 Fax: 5411 4753 3704

#### Venezuela

#### Parker Hannifin de Venezuela S.A. Av. Ppal. De Boleita Norte con

Calle Miraima Edificio DRAZA, PB Caracas 1070, Venezuela Tel: (58)-2-2385422 Fax: (58) - 2-2392272

#### ASIA PACIFIC

Australia Parker Hannifin (Australia) Pty. Ltd 9 Carrington Road Castle Hill NSW 2154 Australia Tel:(61) 2 9 634 7777 Fax: (61) 2 9 842 5111

#### New Zealand

#### Parker Hannifin (N.Z.) Limited 103 Harris Road, East Tamaki Private Bag 94420, Greenmount Auckland, New Zealand

Tel: (64 9) 273 8944 Fax: (64 9) 273 8943

#### India

Parker Hannifin India Pvt. Ltd. 701, Gateway Plaza

Hiranandani Gardens Powai, Mumbai 400 076. India Tel: 91-570 5671 Fax: 91-22 570 5880

#### Japan

#### Yamatake-Corporation 1-12-2, Kawana, Fujisawa

Kanagawa, 251 Tel: (81) 466 20 2232 Fax: (81) 466 20 2193

#### Korea

#### LG-Honeywell Co Ltd

17F, Hanil Group Building 191 Hangangro-2 ga, Yongsan-gu Seoul 140-702, Korea Tel: (822) 799 6011 Fax: (822) 792 9013

#### Parker Hannifin Korea Ltd

902 Dae Heung Bldg 648-23 Yeoksam-Dong Kangnam-Ku, Seoul, Korea 135-080 Tel: 82 2 561 0414 Fax: 82 2 556 8187

#### Singapore

Parker Hannifin Singapore Pte Ltd. No. 11 4th Chin Bee Road Jurong Town, Singapore 619702 Republic of Singapore Tel: (65) 261-5233 Fax: (65) 265-5125, 261-4929

#### Taiwan

#### Parker Hannifin

Taiwan Co., Ltd. 8F-1, No. 102 Sung Lung Rd. Taipei, Taiwan, ROČ Tel: 886 2 8787 3780 Fax: 886 2 8787 3782

#### Thailand

Parker Hannifin (Thailand) Co. Ltd 252/96, 18th Floor Muang Thai Phatra II Rachadaphisek Rd., Huaykwang, Bangkok 10320, Thailand Tel: (662) 693 3304 Fax: (662) 693 3307

#### CHINA REGION

Parker Hannifin Hong Kong Ltd.

8/F, Kin Yip Plaza 9 Cheung Street Cheung Sha Wan Kowloon, Hong Kong Tel: (852) 2428-8008 Fax: (852) 2480-4256

#### Parker Hannifin Beijing Office

Suite B9-B11. 21st Floor Hanwei Plaza No. 7 Guanghua Road, Chaoyang District Beijing 100004, P.R. China Tel: 8610 65610520-5 Fax: 86 10 65610527

#### Parker Hannifin Shanghai Office

Rm 1101, Peregrine Plaza 1325 Huai Hai Road (M) Shangai 200031, China Tel: 86 21 6445 9339 Fax: 86 21 6445 9717