



# PVC & CPVC GATE VALVES

GV-2-0709

## Performance Engineered



This solid, proven design is well suited for a variety of chemical, industrial and irrigation applications. Spears® Gate Valves are feature-packed with multiple end connector options. Individual special features are found in each size range 1/2" through 2", 2-1/2" & 3" and in the full featured Heavy Industrial 4" valve.

See Spears® Plug Gate Valves for 6" & 8" size.

### Heavy Bodied PVC or CPVC

Computer engineered, heavy bodied PVC or CPVC construction adds extra strength with superior chemical and corrosion resistance.

### Non-rising Stem

Non-rising stem reduces clearance requirements and incorporates an O-ring stem seal which eliminates the need to retighten the stem nut, as required with traditional stem packing in order to stop leaks.

### Specially Designed Sealing Surface

Specially designed sealing surface and tapered wedge promote positive sealing and smooth operation with minimal tightening.

### Exclusive Strain-Equalizing Thread

Special strain-equalizing thread is used to couple the stem and wedge. This exclusive feature reduces the chance of stripping wedge threads in the event of accidental over tightening.

### High Impact Polypropylene Handle

Wheel style, high impact polypropylene handle is sized for a solid grip to effect positive opening and closing.

### Fully Repairable In-Line

Replaceable components are accessible without removing valve from line. Convenient O-ring replacement kits provide for easy ordering, servicing and extended valve life.

For additional information, please refer to Spears® THERMOPLASTIC VALVES & ACCESSORIES PRODUCT GUIDE & ENGINEERING SPECIFICATIONS V-4 and THERMOPLASTIC VALVES & ACCESSORIES PRICE SCHEDULE V-1.



### Vacuum Service

Spears® Gate Valves are tested at 26 in. Hg vacuum for one hour with less than 1 in. Hg loss.

### 1/2" through 2" Heavy Duty Gate Valves

- Available with socket, threaded or flanged end connectors. Also available in 20mm through 63mm metric sockets or 1/2" through 2" BSP threads.
- Buna-N, EPDM or FKM O-rings.
- 200 psi Maximum Internal Pressure Rating @ 73°F.
- NSF® Certified for potable water service.

### 2-1/2"\* & 3" Heavy Duty Gate Valves

- Available with either socket, special reinforced (SR) threaded or flanged end connectors.
- Buna-N, EPDM or FKM O-rings.
- 150 psi Maximum Internal Pressure Rating @ 73°F.
- Optional 2" Square or T-Style Operator Nuts available.
- Manufactured from NSF® Certified materials.

\*reducer bushed 3" valve

### 4" Heavy Industrial Gate Valves

- Designed for the most demanding of industrial applications with heavy, type 316 stainless steel exterior bonnet.
- Special Quick-View stem position indicator shows gate position at a glance.
- Available with either socket, special reinforced (SR) threaded or flanged end connectors.
- Buna-N, EPDM or FKM O-rings.
- 235 psi Maximum Internal Pressure Rating @ 73°F.
- Optional 2" Square or T-Style Operator Nuts available.
- Manufactured from NSF® Certified materials.

### Sample Engineering Specifications

All thermoplastic gate valves shall be constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All O-rings shall be Buna-N, EPDM or FKM. All valves shall have non-rising stem and Polypropylene handwheel. All gate valve wedges shall have Strain-Equalizing threads. PVC valves shall have Polypropylene Wedge and CPVC valves shall have CPVC Wedge. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated at 200 psi, all 2-1/2" through 3" and all flanged valves shall be pressure rated at 150 psi, and all 4" valves shall be pressure rated at 235 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

**PROGRESSIVE PRODUCTS FROM SPEARS® INNOVATION & TECHNOLOGY**

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## Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Numbers <sup>1</sup>			Pressure Rating	
		Socket	Threaded	Flanged		
1/2	Buna-N	2012-005	2011-005	2013-005	200 psi Non-Shock Water @ 73°F	
	EPDM	2022-005	2021-005	2023-005		
	FKM	2032-007	2031-005	2033-005		
3/4	Buna-N	2012-007	2011-007	2013-007		
	EPDM	2022-007	2021-007	2023-007		
	FKM	2032-007	2031-007	2033-007		
1	Buna-N	2012-010	2011-010	2013-010		
	EPDM	2022-010	2021-010	2023-010		
	FKM	2032-010	2031-010	2033-010		
1-1/4	Buna-N	2012-012	2011-012	2013-012		(Flanged 150 psi Non-Shock Water @ 73°F)
	EPDM	2022-012	2021-012	2023-012		
	FKM	2032-012	2031-012	2033-012		
1-1/2	Buna-N	2012-015	2011-015	2013-015		
	EPDM	2022-015	2021-015	2023-015		
	FKM	2032-015	2031-015	2033-015		
2	Buna-N	2012-020	2011-020	2013-020		
	EPDM	2022-020	2021-020	2023-020		
	FKM	2032-020	2031-020	2033-020		
2-1/2	Buna-N	2012-025 <sup>3</sup>	2011-025 <sup>3</sup>	2013-025 <sup>3</sup>	150 psi Non-Shock Water @ 73°F	
	EPDM	2022-025 <sup>3</sup>	2021-025 <sup>3</sup>	2023-025 <sup>3</sup>		
	FKM	2032-025 <sup>3</sup>	2031-025 <sup>3</sup>	2033-025 <sup>3</sup>		
3	Buna-N	2012-030	2011-030SR	2013-030		
	EPDM	2022-030	2021-030SR	2023-030		
	FKM	2032-030	2031-030SR	2033-030		
4	Buna-N	2012-040	2011-040SR	2013-040		235 <sup>2</sup> psi Non-Shock Water @ 73°F
	EPDM	2022-040	2021-040SR	2023-040		
	FKM	2032-040	2031-040SR	2033-040		

### C<sub>v</sub> Values

Normal Size	C <sub>v</sub>	
	Thd/Soc	Flanged
1/2	19	15
3/4	37	29
1	44	39
1-1/4	128	105
1-1/2	144	127
2	333	279
2-1/2	Not Available	
3	335	323
4	583	566

NOTE: Valves, Unions and Specialty Products have different elevated temperature ratings than pipe.

- 1: For CPVC valves, add the letter "C" to the part numbers (e.g., 2031-005C).  
 2: Flanged end connectors have a Maximum Internal Pressure Rating of 150 psi @ 73°F.  
 3: Outlet sized with bushing.

### Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	200 (1.38)	135 (.93)	120 (.83)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	200 (1.38)	155 (1.07)	140 (.97)	125 (.86)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 3"	PVC	150 (1.03)	130 (.90)	110 (.76)	60 (.41)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	4"	PVC	235 (1.62)	140 (.97)	130 (.90)	90 (.62)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	95 (.66)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)



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