



## Flow Control, Needle, and Check Valves

Brass valves are for pneumatic and medium-pressure hydraulic applications. Steel valves are for high-pressure hydraulic applications.

**Flow Control**—Provide precision flow control in 1 direction and automatically allow unrestricted free flow in opposite direction. 2-step needle allows fine adjustment at low flow.

**Needle**—Used as speed controls where a reverse flow check valve is not needed. May be used to control flow in both directions.

**Check**—Provide free flow in 1 direction and dependable shutoff in the opposite direction. Cracking pressure: 5 psi.

Note: Parker, DT, CV, and DC check valves are available; on Grainger.com, search for "check valves."

FLOW CONTROL VALVES				NEEDLE VALVES				CHECK VALVES			
Port Range (in.) (gpm)	Mr. Model	H* (in.)	L (in.)	Item No.	Mr. Model	H* (in.)	L (in.)	Item No.	Mr. Model	H* (in.)	L (in.)
<b>Brass Valves 2000 psi</b>											
1/4-27 3	F200B	1.54	2.0	1A853	N200B	1.54	1.5	1A861	C200B	0.63	2.0
1/4-18 5	F400B	1.79	2.63	1A854	N400B	1.79	2.0	1A862	C400B	0.81	2.63
3/8-18 8	F600B	2.18	2.75	1A855	N600B	2.18	2.5	1A863	C600B	1.0	2.75
1/2-14 15	F800B	2.7	3.44	1A856	N800B	2.7	2.62	1A864	C800B	1.25	3.44
<b>Steel Valves 3000 psi</b>											
3/4-14 25	F1200S	3.38	3.88	1A865	—	—	—	—	—	—	—
<b>Steel Valves 5000 psi</b>											
1/4-18 5	F400S	1.79	2.63	1A041	N400S	1.79	2.0	1A047	C400S	0.81	2.63
3/8-18 8	F600S	2.18	2.75	1A042	N600S	2.18	2.5	1A048	C600S	1.0	2.75
1/2-14 15	F800S	2.7	3.44	1A043	N800S	2.7	2.62	1A049	C800S	1.25	3.44
3/4-14 25	—	—	—	—	N1200S	3.38	3.25	1A867	C1200S	1.5	3.88

\* Height of valves is measured from center of port with adjustment knob fully open.



## High-Pressure Carbon Steel Ball Valves

■ Max. pressure: 6000 psi

Excellent for use in high-pressure hydraulic oil systems. Lockable handle valves have a handle that can be locked into position using a padlock that has a 5/16"-dia. shackle (not included).

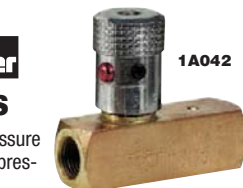
Port Size	STANDARD HANDLE		LOCKABLE HANDLE	
	Mr. Model	Item No.	Mr. Model	Item No.
<b>NPT</b>				
1/4 in NPT	BVHP04NSS1N	6PAA1	BVHP04NSS1NA	6PAC7
3/8 in NPT	BVHP06NSS1N	6PAA2	BVHP06NSS1NA	6PAC8
1/2 in NPT	BVHP08NSS1N	6PAA3	BVHP08NSS1NA	6PAC9
3/4 in NPT	BVHP12NSS1N	6PAA4	BVHP12NSS1NA	6PAD0
1 in NPT	BVHP16NSS1N	6PAA5	BVHP16NSS1NA	6PAD1
1 1/4 in NPT	BVAH20NSS1N	6PAA6	BVAH20NSS1NA	6PAD2
1 1/2 in NPT	BVAH24NSS1N	6PAA7	BVAH24NSS1NA	6PAD3
2 in NPT	BVAH32NSS1N	6PAA8	—	—
<b>SAE</b>				
#4 SAE	BVHP04SSS1N	6PAA9	—	—
#6 SAE	BVHP06SSS1N	6PAC0	—	—
#8 SAE	BVHP08SSS1N	6PAC1	—	—
#12 SAE	BVHP12SSS1N	6PAC2	BVHP12SSS1NA	6PAD8
#16 SAE	BVHP16SSS1N	6PAC3	BVHP16SSS1NA	6PAD9



## Hydraulic Double Pilot-Operated Check Valves

■ Cast iron body  
■ Reverse free flow

Inlet Port Size	Outlet Port Size	Max. Flow	Max. Pressure	Mr. Model	Item No.
1/2 in NPT	1/2 in NPT	25 gpm	2,000 psi	LO-50-D	38D927
3/4 in NPT	3/4 in NPT	25 gpm	3,000 psi	LO-10-D	38D928



## Relief Valves

Control maximum pressure within a hydraulic circuit. 6X843 is designed for full flow with low pressure drop.

4HL34 is a differential poppet inline relief that has a minimum variation between cracking and full flow pressures.

4BA48 to 4BA50 have 2-stage balanced piston design, providing fast response and minimizing pressure override.

4HL35 is a double differential poppet relief that is used in systems that require crossover relief protection such as a hydraulic motor.

Item	Port Size	Pressure Range	Max. Flow	Brand	Mr. Model	Item No.
<b>Single</b>						
Relief Valve	1/2 in NPT	1000 to 2500 psi	16 gpm	Prince	RD1850H	6X843
Adjustable Relief Valve	1/8"-14 UNF	125 to 1000 psi	45 gpm	Vickers	CS-03-B50	4BA48
	1/8"-14 UNF	500 to 2000 psi	45 gpm	Vickers	CS-03-C50	4BA49
	1/8"-14 UNF	1500 to 3000 psi	45 gpm	Vickers	CS-03-F50	4BA50
Inline Relief Valve	3/4 in NPT	1500 to 3000 psi	30 gpm	Prince	RV-2H	4HL34
	#12 SAE	100 to 1532 psi	53 gpm	Parker	R4V065B110A1	6PAE3
Hydraulic Valve	#12 SAE	100 to 3045 psi	53 gpm	Parker	R4V065B310A1	6PAE4
	#12 SAE	100 to 5075 psi	53 gpm	Parker	R4V065B510A1	6PAE5
Pressure Relief Valve	3/4 in NPT	0 to 2000 psi	60 gpm	Parker Gresen	RPL-75-A	38D924
	#12 SAE	0 to 5000 psi	60 gpm	Parker Gresen	RPL-12-A	38D923
<b>Double</b>						
Relief Valve	3/4 in NPT	1500 to 3000 psi	30 gpm	Prince	DRV-2HH	4HL35



## Hydraulic 2-Position Selector Valves



Port Size	Valve Ways and Positions	Overall Length	Max. Pressure	Mr. Model	Item No.
1/2 in NPT	3-Way/2-Position	5 13/16 in	2,000 psi	S-50	38D932
3/4 in NPT	3-Way/2-Position	6 5/8 in	2,000 psi	S-75	38D934
1 in NPT	6-Way/2-Position	8 1/2 in	2,000 psi	DS-75	38D926
#8 SAE	3-Way/2-Position	5 13/16 in	3,000 psi	S-8	38D931
#12 SAE	3-Way/2-Position	6 5/8 in	3,000 psi	S-12	38D933
#12 SAE	6-Way/2-Position	8 1/2 in	3,000 psi	DS-12	38D925

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