



Waterman[®] Threaded Cartridge Valves **SELECTION GUIDE**



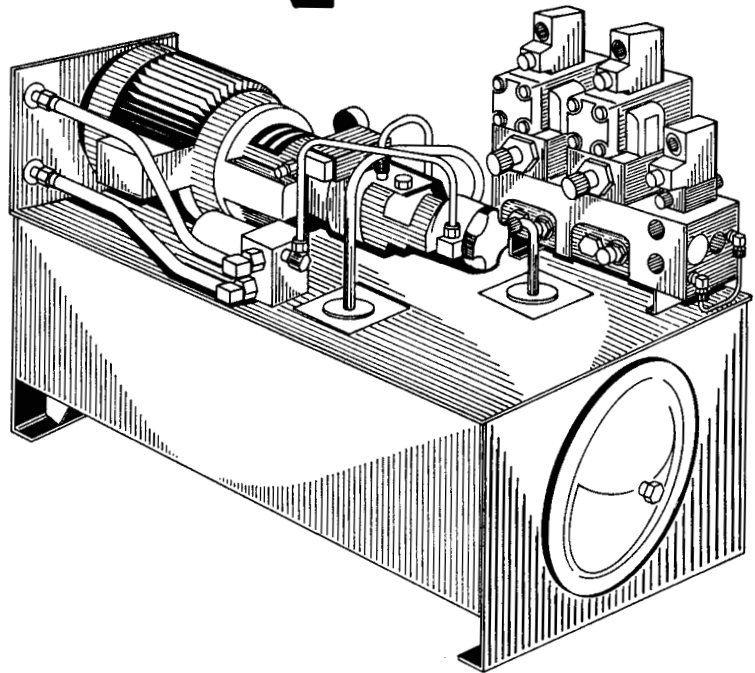
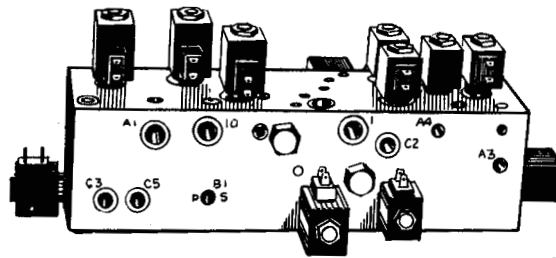
MACMILLIN

MACMILLIN

Solenoid operated cartridge valves, manufactured by Waterman and available from MacMillin Hydraulic Engineering Corporation, are providing reliable service in a wide variety of machine tool, transportation and related industries.

These newer style valves are offered in 2-way, 3-way, and 4-way flow patterns, and in a broad range of coil voltages and connections. They often provide an economical and readily available alternative to earlier design Waterman solenoid valves.

Waterman valves can be installed in single-unit bodies, or incorporated into a MacMillin "Circuit-Blok" manifold assembly that eliminates troublesome hydraulic plumbing. MacMillin engineers will analyze your system requirements and design a reliable economical manifold that fulfills your exact needs.



Waterman Cartridge Valve SELECTION GUIDE

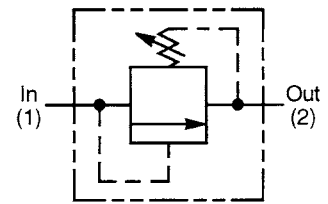
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Pressure Control Valves

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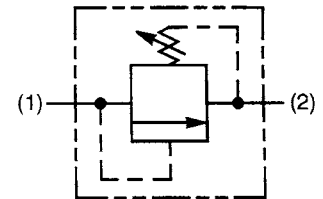
Direct Acting, Dart-Type, Relief Valve

Size	Model	Flow and Pressure	
12	12CRH1	1.9 L/M (0.5 GPM)	345 Bar (5000 PSI)
15	15CRH1	1.9 L/M (0.5 GPM)	345 Bar (5000 PSI)



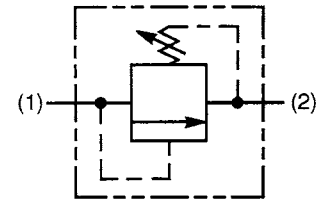
Direct Acting, Poppet-Type, Relief Valve

Size	Model	Flow and Pressure	
07	7CR2	3.8 L/M (1 GPM)	210 Bar (3000 PSI)
09	9CRH2	11.3 L/M (3 GPM)	345 Bar (5000 PSI)
10	10CR2	23.0 L/M (6 GPM)	210 Bar (3000 PSI)
12	12CRH2	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
15	15CR2	37.5 L/M (10 GPM)	210 Bar (3000 PSI)



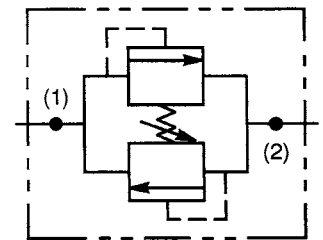
Direct Acting, Differential Area, Relief Valve

Size	Model	Flow and Pressure	
12	12CRH3	45.4 L/M (12 GPM)	345 Bar (5000 PSI)
15	15CRH3	75.0 L/M (20 GPM)	345 Bar (5000 PSI)
21	21CR12	150.0 L/M (40 GPM)	210 Bar (3000 PSI)



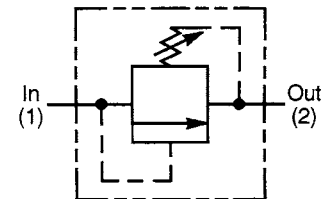
Cross-Over Relief Valve

Size	Model	Flow and Pressure	
15	15CDR1	60.6 L/M (16 GPM)	210 Bar (3000 PSI)



Pilot Operated, Spool-Type, Relief Valve

Size	Model	Flow and Pressure	
12	12CRAH1	75.8 L/M (20 GPM)	345 Bar (5000 PSI)
12A	12C5RAH1	75.8 L/M (20 GPM)	345 Bar (5000 PSI)
15	15CRAH1	112.5 L/M (30 GPM)	345 Bar (5000 PSI)
17	17CRAH1	189.5 L/M (50 GPM)	345 Bar (5000 PSI)
21	21CRAH1	300.0 L/M (80 GPM)	345 Bar (5000 PSI)
26	26CRAH1	375.0 L/M (100 GPM)	345 Bar (5000 PSI)

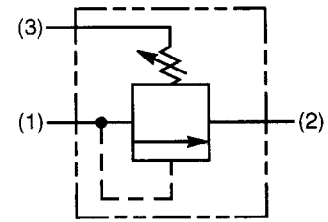


Pressure Control Valves

SELECTION GUIDE

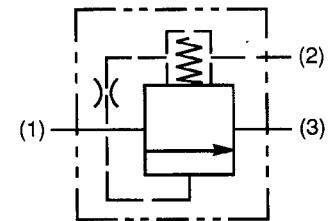
Pilot Operated, Spool-Type, Vented Relief Valve

Size	Model	Flow and Pressure	
15	15CRAH1V	68 L/M (18 GPM)	345 Bar (5000 PSI)



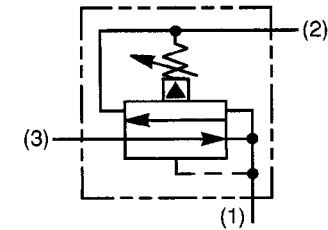
Remote Vented Relief Valve at Fixed Pressure Differential

Size	Model	Flow and Pressure	
21	21CPDS1-F	187.5 L/M (50 GPM)	245 Bar (3500 PSI)



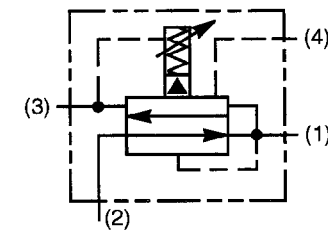
Pilot Operated, Pressure Reducing/Relieving Valve

Size	Model	Flow and Pressure	
12	12CPRH1	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
15	15CPRH1	56.3 L/M (15 GPM)	345 Bar (5000 PSI)
17	17CPRH1	112.5 L/M (30 GPM)	345 Bar (5000 PSI)
21	21CPRH1	150.0 L/M (40 GPM)	345 Bar (5000 PSI)



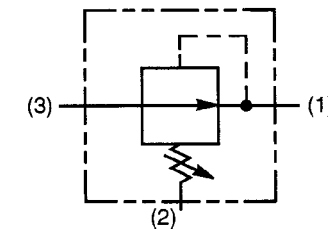
Pilot Operated, Vented Pressure Reducing/Relieving Valve

Size	Model	Flow and Pressure	
17	17CPRH1V	112.5 L/M (30 GPM)	345 Bar (5000 PSI)



Pilot Operated, Pressure Reducing Valve

Size	Model	Flow and Pressure	
12	12CPRH2	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
15	15CPRH2	56.3 L/M (15 GPM)	345 Bar (5000 PSI)
17	17CPRH2	112.5 L/M (30 GPM)	345 Bar (5000 PSI)
21	21CPRH2	150.0 L/M (40 GPM)	345 Bar (5000 PSI)

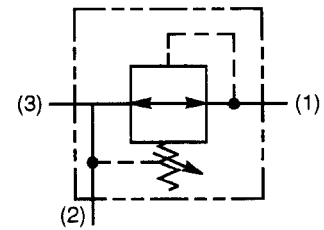


Pressure Control Valves

SELECTION GUIDE

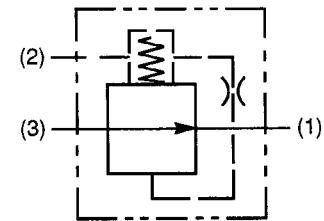
Direct Acting, Pressure Reducing/Relieving Valve

Size	Model	Flow and Pressure	
15	15CPR3	56.3 L/M (15 GPM)	210 Bar (3000 PSI)



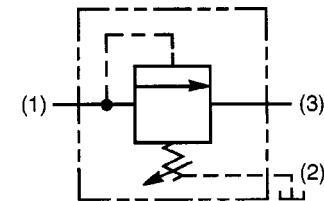
Remote Pressure Reducing Valve at Fixed Pressure Differential

Size	Model	Flow and Pressure	
21	21CPRS1-F	187.5 L/M (50 GPM)	210 Bar (3000 PSI)



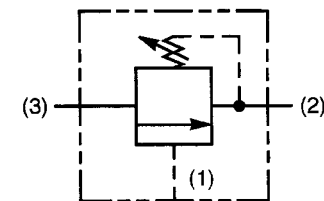
Pilot Operated, Externally Drained, Sequence Valve

Size	Model	Flow and Pressure	
12	12CSVH1	45.0 L/M (12 GPM)	345 Bar (5000 PSI)
15	15CSVH1	56.3 L/M (15 GPM)	345 Bar (5000 PSI)
17	17CSVH1	112.5 L/M (30 GPM)	345 Bar (5000 PSI)
21	21CSVH1	150.0 L/M (40 GPM)	345 Bar (5000 PSI)



Remote Pilot Operated, Sequence Valve

Size	Model	Flow and Pressure	
12	12CSVH2	37.5 L/M (10 GPM)	345 Bar (5000 PSI)
15	15CSVH2	56.3 L/M (15 GPM)	345 Bar (5000 PSI)
17	17CSVH2	112.5 L/M (30 GPM)	345 Bar (5000 PSI)
21	21CSVH	150.0 L/M (40 GPM)	345 PSI (5000 PSI)

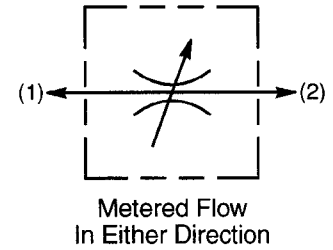


Volume Control Valves

SELECTION GUIDE

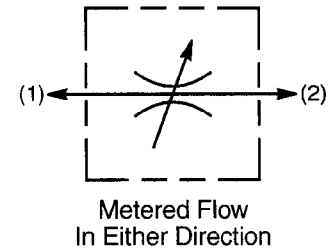
Needle Valve

Size	Model	Flow and Pressure	
12	12CNVH1	37.5 L/M (10 GPM)	345 Bar (5000 PSI)
15	15CNV1	60.0 L/M (16 GPM)	245 Bar (3500 PSI)
21	21CNV2-K	187.5 L/M (50 GPM)	210 Bar (3000 PSI)



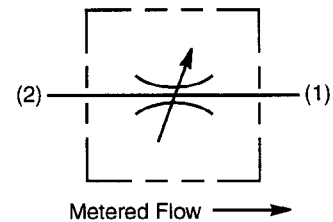
Rotary Needle Valve

Size	Model	Flow and Pressure	
15	15CNV2	56.3 L/M (15 GPM)	245 Bar (3500 PSI)



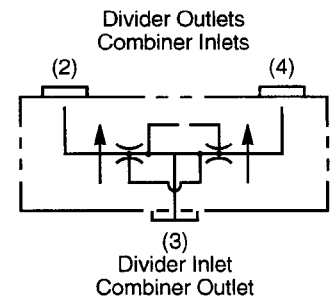
Pilot Assisted Needle Valve

Size	Model	Flow and Pressure	
21	21CNV1-K	168.8 L/M (45 GPM)	210 Bar (3000 PSI)



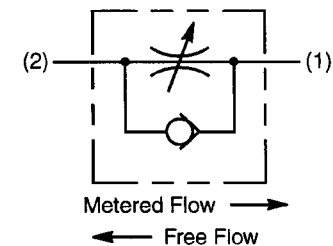
Flow Divider/Combiner

Size	Model	Flow and Pressure	
15	15CFDC	45 L/M (12 GPM)	210 Bar (3000 PSI)



Course Adjust Flow Control

Size	Model	Flow and Pressure	
15	15CFV1	45 L/M (12 GPM)	210 Bar (3000 PSI)

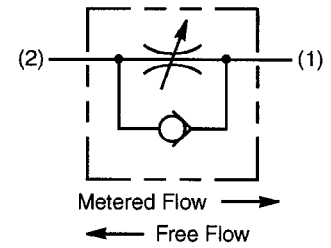


Volume Control Valves

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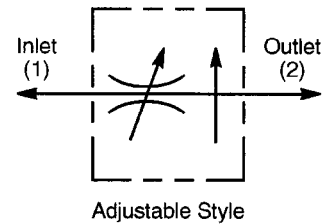
Fine Adjust Flow Control

Size	Model	Flow and Pressure	
15	15CFV2	22.5 L/M (6 GPM)	21 Bar (3000 PSI)



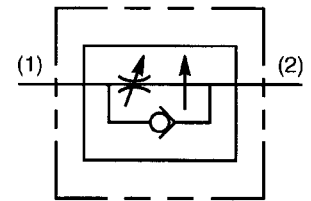
Pressure Compensated Restrictive-Type Flow Control

Size	Model	Flow and Pressure	
15	15CFR1	26.3 L/M (7 GPM)	210 Bar (3000 PSI)



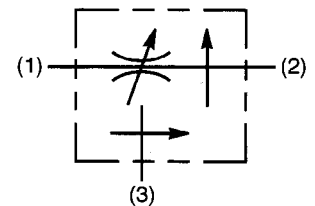
Pressure Compensated Restrictive-Type Flow Control with Reverse Flow Check

Size	Model	Flow and Pressure	
15	15CFC1	56.3 L/M (15 GPM)	210 Bar (3000 PSI)



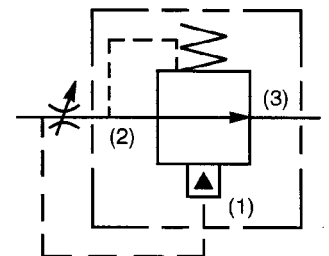
Pressure Compensated Priority-Type Flow Control

Size	Model	Flow and Pressure	
15	15CFP1	33.75 L/M (9 GPM)	210 Bar (3000 PSI)



Restrictive-Type Pressure Compensator

Size	Model	Flow and Pressure	
15	15CFCR1-F	37.5 L/M (10 GPM)	245 Bar (3500 PSI)
17	17CFCR1-F	93.8 L/M (25 GPM)	245 Bar (3500 PSI)
21	21CFCR1-F	150.0 L/M (40 GPM)	245 Bar (3500 PSI)

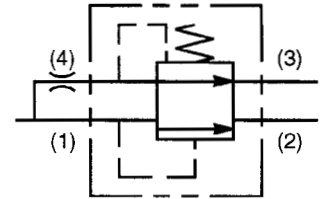


Volume Control Valves

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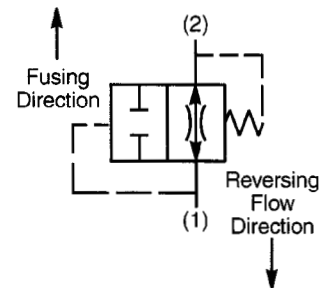
Priority-Type Pressure Compensator

Size	Model	Flow and Pressure	
15	15CFCP1-F	56.3 L/M (15 GPM)	245 Bar (3500 PSI)
17	17CFCPH1	93.8 L/M (25 GPM)	345 Bar (5000 PSI)



Velocity Fuse

Size	Model	Flow and Pressure	
15	15CVF1	30 L/M (8 GPM)	210 Bar (3000 PSI)

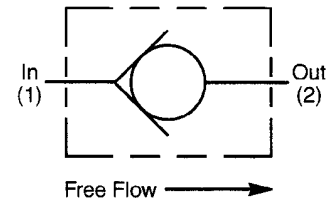


Waterman Hydraulics Load Holding Valves

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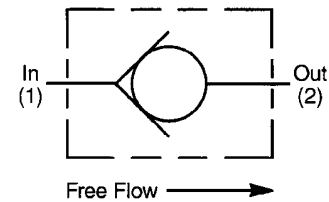
Check Valve

Size	Model	Flow and Pressure	
07	7CC1	3.8 L/M (1 GPM)	245 Bar (3500 PSI)
12	12CCH1	37.5 L/M (10 GPM)	345 Bar (5000 PSI)
15	15CC1	60.0 L/M (16 GPM)	245 Bar (3500 PSI)
15	15CCH3	82.5 L/M (22 GPM)	345 Bar (5000 PSI)
21	21CC1	225.0 L/M (60 GPM)	245 Bar (3500 PSI)



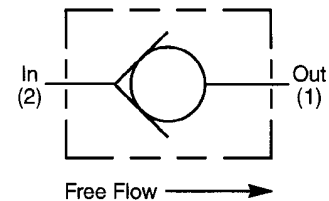
Soft Seat Check Valve

Size	Model	Flow and Pressure	
12	12CC2	37.5 L/M (10 GPM)	210 Bar (3000 PSI)
15	15CC2	60.0 L/M (16 GPM)	210 Bar (3000 PSI)



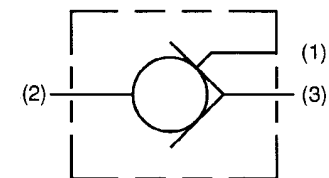
Side-To-Nose Flow Path Check Valve

Size	Model	Flow and Pressure	
15	15CCH4	37.5 GPM (10 GPM)	345 Bar (5000 PSI)



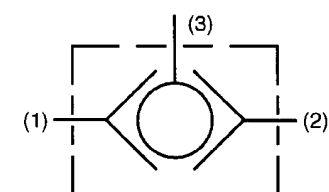
Pilot Operated Check Valve

Size	Model	Flow and Pressure	
12	12CCP1	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15CCPH1	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
17	17CCPH1	75.0 L/M (20 GPM)	345 Bar (5000 PSI)



Shuttle Valve

Size	Model	Flow and Pressure	
07	7CCS1	3.8 L/M (1 GPM)	210 Bar (3000 PSI)
15	15CCSH1	37.5 L/M (10 GPM)	345 Bar (5000 PSI)

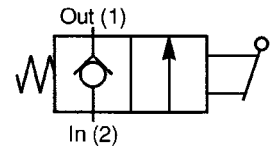


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Directional Control Valves

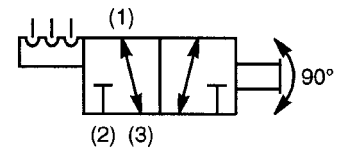
**Normally Closed, Two Position
Lowering Valve**

Size	Model	Flow and Pressure	
12	12CDL1	30 L/M (8 GPM)	210 Bar (3000 PSI)



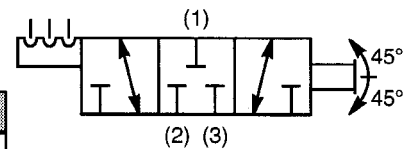
**Two Position, Three Way,
Rotary Valve**

Size	Model	Flow and Pressure	
15	15CDM3LD	22.5 L/M (6 GPM)	245 Bar (3500 PSI)



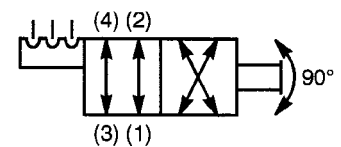
**Three Position, Three Way,
Rotary Valve**

Size	Model	Flow and Pressure	
15	15CDM3LN	22.5 L/M (6 GPM)	245 Bar (3500 PSI)



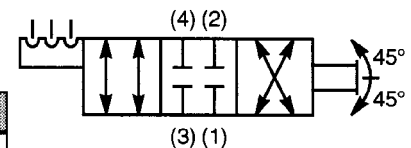
**Two Position, Four Way,
Rotary Valve**

Size	Model	Flow and Pressure	
15	15CDM4LD	7.5 L/M (2 GPM)	245 Bar (245 PSI)



**Three Position, Four Way,
Rotary Valve**

Size	Model	Flow and Pressure	
15	15CDM4LN	7.5 L/M (2 GPM)	245 Bar (245 PSI)

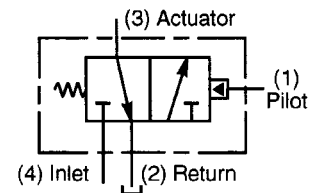


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Directional Control Valves

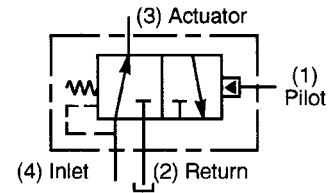
**Normally Closed, Two Position, Three Way,
Hydraulically Piloted**

Size	Model	Flow and Pressure	
15	15CDH3-A	37.5 L/M (10 GPM)	245 Bar (3500 PSI)
15	15CDH3-C	37.5 L/M (10 GPM)	245 Bar (3500 PSI)



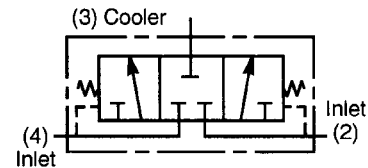
**Normally Open, Two Position, Three Way,
Hydraulically Piloted**

Size	Model	Flow and Pressure	
15	15CDH3-B	37.5 L/M (10 GPM)	245 Bar (3500 PSI)



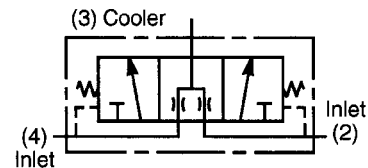
**Normally Closed, Three Position, Three Way,
Hydraulically Piloted**

Size	Model	Flow and Pressure	
15	15CDH3-D	37.5 L/M (10 GPM)	245 Bar (3500 PSI)



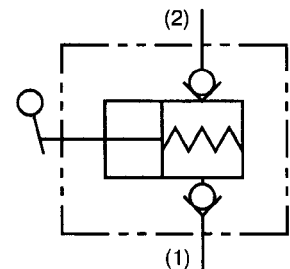
**Normally Open, Three Position, Three Way,
Hydraulically Piloted**

Size	Model	Flow and Pressure	
15	15CDH3-E	37.5 L/M (10 GPM)	245 Bar (3500 PSI)



Hand Pump

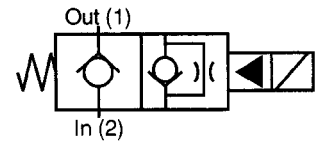
Size	Model	Flow and Pressure	
15	15CHP1	.083 cu in/stroke	48.3 Bar (700 PSI)



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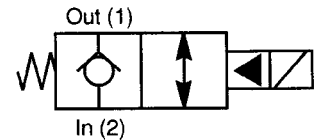
Directional Control Valves

Normally Closed, Two Way, Poppet-Type Solenoid Valve with Metered Reverse Flow when Energized



Size	Model	Flow and Pressure	
12	12C1SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
12	12C1SL	30.0 L/M (8 GPM)	245 Bar (3000 PSI)
12A	12C5SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
12A	12C5SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
14	14C1SH	56.3 L/M (30 GPM)	345 Bar (5000 PSI)
14	14C1SL	56.3 L/M (15 GPM)	210 Bar (3000 PSI)
15	15C1SH	56.3 L/M (15 GPM)	345 Bar (5000 PSI)
15	15C1SL	56.3 L/M (15 GPM)	245 Bar (3000 PSI)
17	17C1SH	90.0 L/M (24 GPM)	345 Bar (5000 PSI)
17	17C1SL	90.0 L/M (24 GPM)	210 Bar (3000 PSI)
21	21C1S	150.0 L/M (40 GPM)	210 Bar (3000 PSI)
26	26C1S	262.5 L/M (70 GPM)	210 Bar (3000 PSI)

Normally Closed, Two Way, Poppet-Type Solenoid Valve with Free Reverse Flow when Energized

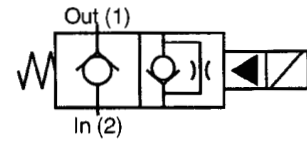


Size	Model	Flow and Pressure	
12	12C2SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
12	12C2SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
12A	12C6SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
12A	12C6SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
14	14C2SH	56.3 L/M (15 GPM)	345 Bar (5000 PSI)
14	14C2SL	56.3 L/M (15 GPM)	210 Bar (3000 PSI)
15	15C2SH	56.3 L/M (15 GPM)	345 Bar (5000 PSI)
15	15C2SL	56.3 L/M (15 GPM)	210 Bar (3000 PSI)
17	17C2SH	90.0 L/M (24 GPM)	345 Bar (5000 PSI)
17	17C2SL	90.0 L/M (24 GPM)	210 Bar (3000 PSI)
21	21C2S	150.0 L/M (40 GPM)	210 Bar (3000 PSI)
26	26C2S	262.5 L/M (70 GPM)	210 Bar (3000 PSI)

SELECTION GUIDE

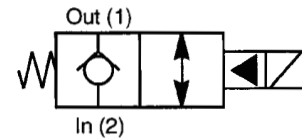
Directional Control Valves

**Normally Closed, Two Way,
Fast Response Solenoid Valve with
Metered Reverse Flow when Energized**



Size	Model	Flow and Pressure	
12	12C3SH	11.3 L/M (3 GPM)	345 Bar (5000 PSI)
12	12C3SL	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12A	12C7SH	11.3 L/M (3 GPM)	345 Bar (5000 PSI)
12A	12C7SL	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
14	14C3SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
14	14C3SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
15	15C3SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
15	15C3SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
17	17C3SH	41.3 L/M (11 GPM)	345 Bar (5000 PSI)
17	17C3SL	41.3 L/M (11 GPM)	210 Bar (3000 PSI)
21	21C3S	56.3 L/M (15 GPM)	210 Bar (3000 PSI)

**Normally Closed, Two Way,
Fast Response Solenoid Valve with
Free Reverse Flow when Energized**

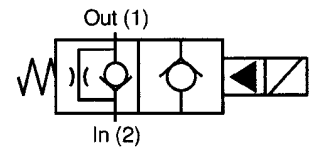


Size	Model	Flow and Pressure	
12	12C4SH	11.3 L/M (3 GPM)	345 Bar (5000 PSI)
12	12C4SL	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12A	12C8SH	11.3 L/M (3 GPM)	345 Bar (5000 PSI)
12A	12C8SL	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
14	14C4SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
14	14C4SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
15	15C4SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
15	15C4SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
17	17C4SH	41.3 L/M (11 GPM)	345 Bar (5000 PSI)
17	17C4SL	41.3 L/M (11 GPM)	210 Bar (3000 PSI)

SELECTION GUIDE

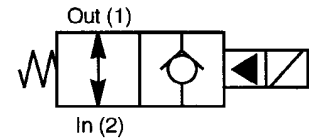
Directional Control Valves

**Normally Open, Two Way, Poppet-Type
Solenoid Valve with Metered
Reverse Flow when De-Energized**



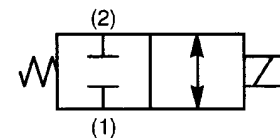
Size	Model	Flow and Pressure	
12	12C11SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
12	12C11SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
12A	12C15SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
12A	12C15SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
14	14C11SH	56.3 L/M (15 GPM)	345 Bar (5000 PSI)
14	14C11SL	56.3 L/M (15 GPM)	210 Bar (3000 PSI)
15	15C11SH	56.3 L/M (15 GPM)	345 Bar (5000 PSI)
15	15C11SL	56.3 L/M (15 GPM)	210 Bar (3000 PSI)
17	17C11SH	90.0 L/M (24 GPM)	345 Bar (5000 PSI)
17	17C11SL	90.0 L/M (24 GPM)	210 Bar (3000 PSI)
21	21C11S	150.0 L/M (40 GPM)	210 Bar (3000 PSI)
26	26C11S	262.5 L/M (70 GPM)	210 Bar (3000 PSI)

**Normally Open, Two Way,
Poppet-Type Solenoid Valve with
Free Reverse Flow when De-Energized**



Size	Model	Flow and Pressure	
12	12C12SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
12	12C12SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
12A	12C16SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
12A	12C16SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
14	14C12SH	56.3 L/M (15 GPM)	345 Bar (5000 PSI)
14	14C12SL	56.3 L/M (15 GPM)	210 Bar (3000 PSI)
15	15C12SH	56.3 L/M (15 GPM)	345 Bar (5000 PSI)
15	15C12SL	56.3 L/M (15 GPM)	210 Bar (3000 PSI)
17	17C12SH	90.0 L/M (24 GPM)	345 Bar (5000 PSI)
17	17C12SL	90.0 L/M (24 GPM)	210 Bar (3000 PSI)
21	21C12S	150.0 L/M (40 GPM)	210 Bar (3000 PSI)
26	26C12S	262.5 L/M (70 GPM)	210 Bar (3000 PSI)

**Normally Closed, Two Way,
Spool-Type, Solenoid Valve**

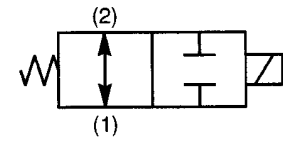


Size	Model	Flow and Pressure	
12	12C20SH	13.1 L/M (3.5 GPM)	345 Bar (5000 PSI)
12	12C20SL	13.1 L/M (3.5 GPM)	210 Bar (3000 PSI)
12A	12C21SH	13.1 L/M (3.5 GPM)	345 Bar (5000 PSI)
12A	12C21SL	13.1 L/M (3.5 GPM)	210 Bar (3000 PSI)
14	14C21SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
14	14C21SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
15	15C21SH	30.0 L/M (8 GPM)	345 Bar (5000 PSI)
15	15C21SL	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
21	21C21S	75.0 L/M (20 GPM)	210 Bar (3000 PSI)

SELECTION GUIDE

Directional Control Valves

**Normally Open, Two Way,
Spool-Type, Solenoid Valve**



Size	Model	Flow and Pressure	
12	12C24SH	13.1 L/M (3.5 GPM)	345 Bar (5000 PSI)
12	12C24SL	13.1 L/M (3.5 GPM)	210 Bar (3000 PSI)
12A	12C25SH	13.1 L/M (3.5 GPM)	345 Bar (5000 PSI)
12A	12C25SL	13.1 L/M (3.5 GPM)	210 Bar (3000 PSI)
14	14C25SH	26.3 L/M (7 GPM)	345 Bar (5000 PSI)
14	14C25SL	26.3 L/M (7 GPM)	210 Bar (3000 PSI)
15	15C25SH	26.3 L/M (7 GPM)	345 Bar (5000 PSI)
15	15C25SL	26.3 L/M (7 GPM)	210 Bar (3000 PSI)
21	21C25S	75.0 L/M (20 GPM)	210 Bar (3000 PSI)

**Two Position, Three Way,
Spool-Type, Solenoid Valve**

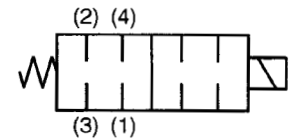


Size	Model	Flow and Pressure	
12	12C32SH	11.3 L/M (3 GPM)	345 Bar (5000 PSI)
12	12C34SH	11.3 L/M (3 GPM)	345 Bar (5000 PSI)
12	12C37SH	11.3 L/M (3 GPM)	345 Bar (5000 PSI)
12	12C32SL	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12	12C34SL	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12	12C37SL	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
14	14C32SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
14	14C34SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
14	14C37SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
14	14C32SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C34SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C37SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C32SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
15	15C34SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
15	15C37SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
15	15C32SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C34SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C37SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
21	21C31S	56.3 L/M (15 GPM)	210 Bar (3000 PSI)
21	21C34S	56.3 L/M (15 GPM)	210 Bar (3000 PSI)

SELECTION GUIDE

Directional Control Valves

**Two Position, Four Way,
Spool-Type, Solenoid Valve**

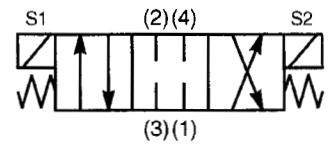


Size	Model	Flow and Pressure	
12	12C40SH	11.3 L/M (3 GPM)	345 Bar (5000 PSI)
12	12C41SH	11.3 L/M (3 GPM)	345 Bar (5000 PSI)
12	12C51SH	11.3 L/M (3 GPM)	345 Bar (5000 PSI)
12	12C40SL	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12	12C41SL	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12	12C51SL	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
14	14C40SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
14	14C41SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
14	14C48SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
14	14C51SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
14	14C55SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
14	14C56SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
14	14C57SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
14	14C40SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C41SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C48SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C51SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C55SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C56SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C57SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C40SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
15	15C41SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
15	15C48SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
15	15C51SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
15	15C55SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
15	15C56SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
15	15C57SH	18.8 L/M (5 GPM)	345 Bar (5000 PSI)
15	15C40SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C41SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C48SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C51SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C55SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C56SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C57SL	18.8 L/M (5 GPM)	210 Bar (3000 PSI)

SELECTION GUIDE

Directional Control Valves

**Three Position, Four Way,
Double Solenoid Valve**



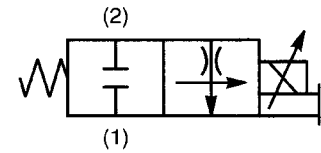
Size	Model	Flow and Pressure	
12	12C7CS	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12	12C7OS	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12	12C7MS	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12	12C7BS	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12	12C7AS	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12	12C7TS	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
14	14C7CS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C7OS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C7MS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C7BS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C7AS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
14	14C7TS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C7CS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C7OS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C7MS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C7BS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C7AS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C7TS	18.8 L/M (5 GPM)	210 Bar (3000 PSI)

Waterman Hydraulics Proportional Flow Control Valves

SELECTION GUIDE

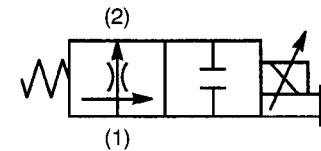
Normally Closed, Two Position, Proportional Flow Control Valve

Size	Model	Flow and Pressure	
12A	12C21SP-11	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
12A	12C21SP-11	22.5 L/M (6 GPM)	210 Bar (3000 PSI)
15	15C21SP-11	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C21SP-11	22.5 L/M (6 GPM)	210 Bar (3000 PSI)
17	17C21SP-12	52.5 L/M (14 GPM)	210 Bar (3000 PSI)



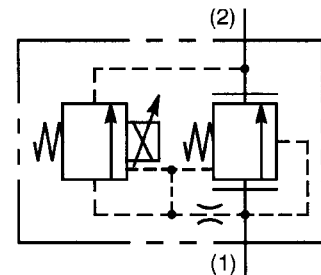
Normally Open, Two Position, Proportional Flow Control Valve

Size	Model	Flow and Pressure	
12A	12C24SP-11	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
12A	12C25SP-11	22.5 L/M (6 GPM)	210 Bar (3000 PSI)
12A	12C26SP-11	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
15	15C24SP-11	11.3 L/M (3 GPM)	210 Bar (3000 PSI)
15	15C25SP-11	22.5 L/M (6 GPM)	210 Bar (3000 PSI)
15	15C26SP-11	30.0 L/M (8 GPM)	210 Bar (3000 PSI)
17	17C26SP-12	52.5 L/M (14 GPM)	210 Bar (3000 PSI)



Normally Closed, Proportional Relief Valve

Size	Model	Flow and Pressure	
15	15C28SCR	30 L/M (8 GPM)	210 Bar (3000 PSI)

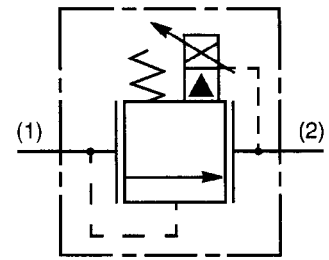


Proportional Flow Control Valves

SELECTION GUIDE

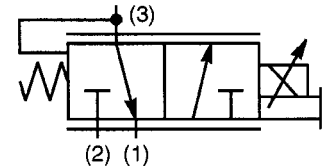
Normally Open, Proportional Relief Valve

Size	Model	Flow and Pressure	
12A	12C23SRP -11	11.3 L/M (3 GPM)	276 Bar (4000 PSI)
12A	12C28SRP -11	30.0 L/M (8 GPM)	276 Bar (4000 PSI)
12A	12C20SRP -11	1.9 L/M (0.5 GPM)	276 Bar (4000 PSI)
15	15C23SRP -11	11.3 L/M (3 GPM)	245 Bar (3500 PSI)
15	15C28SRP -11	30.0 L/M (8 GPM)	245 Bar (3500 PSI)
15	15C20SRP -11	1.9 L/M (0.5 GPM)	245 Bar (3500 PSI)
17	17C25SRP -11	93.8 L/M (25 GPM)	210 Bar (3000 PSI)
21	21C40SRP -11	150.0 L/M (40 GPM)	210 Bar (3000 PSI)



Normally Closed, Proportional Pressure Reducing Valve

Size	Model	Flow and Pressure	
12	12C31SDP -11	7.5 L/M (2 GPM)	210 Bar (3000 PSI)
12	12C33SDP -11	18.8 L/M (5 GPM)	210 Bar (3000 PSI)
15	15C33SDP -11	22.5 L/M (6 GPM)	210 Bar (3000 PSI)
15	15C36SDP -11	22.5 L/M (6 GPM)	210 Bar (3000 PSI)



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	CYLINDERS: NFPA STANDARD, MODIFIED INDUSTRIAL & MOBIL WELDED AGRICULTURE ASAE INTERCHANGEABLE		FILTERS, SUCTION STRAINERS PRESSURE GAUGES, SIGHT GAUGES HYDRAULIC FITTING ADAPTERS
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	MANUAL DIRECTIONAL, FLOW CONTROLS, VALVES PRIORITY DIVIDERS		PUMP / MOTOR ADAPTERS
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	FILTERS, CHECK VALVES, BALL VALVES, PRESSURE GAUGES, FLANGES, FLOW CONTROL VALVES		HYDRAULIC BRAKES & COMPONENTS
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	GEAR PUMPS & MOTORS		CYLINDERS: HEAVY DUTY HYDRAULIC & PNEUMATIC
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7355 N. Lawndale Ave. P.O. Box 6, Skokie, IL 60076
 Phone 847-676-2910 FAX 847-676-0365
 e-mail: sales@macmillinhydraulic.com