

Shutoff/Control Motors

Boom Control motors are 22 RPM for 344B series (0.7 second shutoff valves) and 25 RPM for 346B and 356 series (0.6 second shutoff valves) for 12 VDC systems. Available with E or EC series motors with DIN or CABLE versions. E type motors work with DPDT (double pole, double throw) switch. EC type motors work with simple SPST (single pole, single throw) on/off switch and are compatible with all sprayer controls.

Current draw less than 2 amps (1.7 amps at 40 in.-lbs.).

Electrical connectors can be ordered with a standard number. See page 98 for more information.

Note: 2-way control motors can be rotated 180° to change the cable outlet direction on the valve. There is also an adapter to rotate motors 90°, contact your local representative for more information.

An internal fuse protects the valve and your electrical system, and it resets automatically by disconnecting power to the motor for 20 seconds.

Direct coupled visual indicator to verify position/operation. Yellow oval indicates 22 RPM motor. Yellow diamond indicates 25 RPM motor.

Cover fits snugly over the motor cavity to reduce air space and eliminate condensation. It's sealed and sonically welded to comply with the IP67 rating for submersion under water.

Permanent etched marking with complete motor number and date coded (year, date, month).

Double-wall construction of the gearbox increases strength and maintains permanent lubrication of the durable, all-metal gears.

Motor head assembly is easily detached by pulling a retaining pin allowing manual operation or easy replacement of the motor.

Available for either positive or negative switched electrical systems with a sturdy, built-in double sealed grommet and flat gasket that seals the DIN connector versions. Motor and DIN cables are made of polyurethane.



Regulating Motors

Choosing the proper regulating motor speed is important to maximizing the sprayer's performance. Three speeds are offered at this time: 1 RPM, 3 RPM and 6 RPM. The 1 RPM speed is used mostly in manual systems; it is too slow for automated rate control. The other two speeds are used in automated systems. The 3 RPM is the most popular and opens the valve to the maximum flow in about 6 seconds for the RL valve and about 10 seconds for the PR valves. The 6 RPM motor cuts those times in half.

DIN and Cable Electrical Connector

Both DIN and motor cables are made of polyurethane and are pressure extruded creating a round cable for improved sealing. Polyurethane has twice the strength and three times the tear and abrasion resistance of PVC. Motor cables include over-molded plugs that seal off the ends of cables and wires to prevent seepage. Conductor insulation uses familiar color coding of red, white and black.

DIN cable connectors are constructed for a special over molded elastomeric material that does not require a flat gasket to be sealed. The center screw is made of stainless steel.

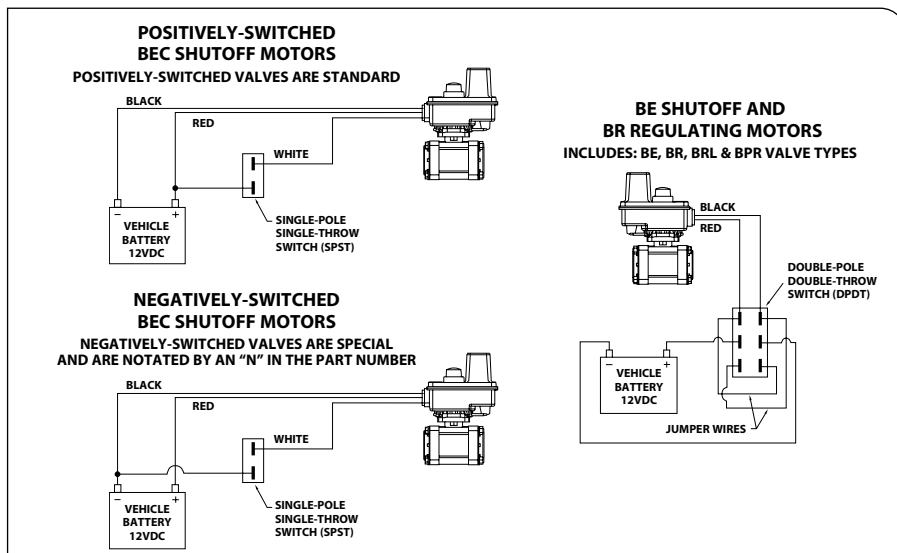
How to Order:

Example: 38082-30, 10 ft. (3 meter) DIN cable.



DIN CABLE	CABLE
38082-05	1.5' (0.5 meter) DIN cable
38082-15	5' (1.5 meter) DIN cable
38082-30	10' (3 meter) DIN cable
38082-60	20' (6 meter) DIN cable

DIN cables are ordered separately.





B Style Shutoff Motor Numbers

344B SERIES			CURRENT DRAW (AMPS)**	346B AND 356 SERIES			CURRENT DRAW (AMPS)**		CABLE LENGTH
BEC POSITIVE SWITCH MOTOR	*BEC NEGATIVE SWITCH MOTOR	BE SWITCH MOTOR	344B	BEC POSITIVE SWITCH MOTOR	*BEC NEGATIVE SWITCH MOTOR	BE SWITCH MOTOR	346B	356	
50515-22CP03	* 50515-22CN03	* 50533-22C03	1.1	50515-25CP03	* 50515-25CN03	* 50533-25C03	1.75	2.2	1.0' (0.3 meter) cable
50515-22CP05	* 50515-22CN05	50533-22C05	1.1	50515-25CP05	* 50515-25CN05	50533-25C05	1.75	2.2	1.5' (0.5 meter) cable
50515-22CP15	* 50515-22CN15	* 50533-22C15	1.1	50515-25CP15	* 50515-25CN15	* 50533-25C15	1.75	2.2	5' (1.5 meter) cable
50515-22CP60	* 50515-22CN60	* 50533-22C60	1.1	50515-25CP60	* 50515-25CN60	* 50533-25C60	1.75	2.2	20' (6 meter) cable
50515-22DP	* 50515-22DN	* 50533-22D	1.1	50515-25DP	* 50515-25DN	* 50533-25D	1.75	2.2	DIN Electrical Connector

Items marked with "*" are non-stock items.

** Current draw is a nominal rating @ 13.8 VDC and will vary dependent upon valve usage and chemicals used.

Note: DIN cables are ordered separately.

*Bypass Valve (Normally Open) BEC Motors

344B SERIES			CURRENT DRAW (AMPS)**	346B AND 356 SERIES			CURRENT DRAW (AMPS)**		CABLE LENGTH
BEC POSITIVE SWITCH MOTOR	*BEC NEGATIVE SWITCH MOTOR	BE SWITCH MOTOR	344B	BEC POSITIVE SWITCH MOTOR	*BEC NEGATIVE SWITCH MOTOR	BE SWITCH MOTOR	346B	356	
50994-22CP03	* 50994-22CN03	* 50533-22C03	1.1	50994-25CP03	* 50994-25CN03	* 50533-25C03	1.75	2.2	1.0' (0.3 meter) cable
50994-22CP05	* 50994-22CN05	50533-22C05	1.1	50994-25CP05	* 50994-25CN05	50533-25C05	1.75	2.2	1.5' (0.5 meter) cable
50994-22CP15	* 50994-22CN15	* 50533-22C15	1.1	50994-25CP15	* 50994-25CN15	* 50533-25C15	1.75	2.2	5' (1.5 meter) cable
50994-22CP60	* 50994-22CN60	* 50533-22C60	1.1	50994-25CP60	* 50994-25CN60	* 50533-25C60	1.75	2.2	20' (6 meter) cable
50994-22DP	* 50994-22DN	* 50533-22D	1.1	50994-25DP	* 50994-25DN	* 50533-25D	1.75	2.2	DIN Electrical Connector

Items marked with "*" are non-stock items.

** Current draw is a nominal rating @ 13.8 VDC and will vary dependent upon valve usage and chemicals used.

Note: DIN cables are ordered separately.

344B & 346B Regulating Motors

SPEED (RPM)	R & RL MOTOR NO.	PR MOTOR NO.	CURRENT DRAW (AMPS)**		CABLE LENGTH
			AA344B	AA346B	
1	* 50516-01C03	* 50996-01C03	0.10	0.12	1.0' (0.3 meter) cable
1	* 50516-01C05	* 50996-01C05	0.10	0.12	1.5' (0.5 meter) cable
1	* 50516-01C15	* 50996-01C15	0.10	0.12	5' (1.5 meter) cable
1	* 50516-01C60	* 50996-01C60	0.10	0.12	20' (6 meter) cable
1	* 50516-01D	* 50996-01D	0.10	0.12	DIN Electrical Connector
3	* 50516-03C03	* 50996-03C03	0.15	0.20	1.0' (0.3 meter) cable
3	* 50516-03C05	* 50996-03C05	0.15	0.20	1.5' (0.5 meter) cable
3	* 50516-03C15	* 50996-03C15	0.15	0.20	5' (1.5 meter) cable
3	* 50516-03C60	* 50996-03C60	0.15	0.20	20' (6 meter) cable
3	* 50516-03D	* 50996-03D	0.15	0.20	DIN Electrical Connector
6	* 50516-06C03	* 50996-06C03	0.43	0.50	1.0' (0.3 meter) cable
6	* 50516-06C05	* 50996-06C05	0.43	0.50	1.5' (0.5 meter) cable
6	* 50516-06C15	* 50996-06C15	0.43	0.50	5' (1.5 meter) cable
6	* 50516-06C60	* 50996-06C60	0.43	0.50	20' (6 meter) cable
6	* 50516-06D	* 50996-06D	0.43	0.50	DIN Electrical Connector

Items marked with "*" are non-stock items.

** Current draw is a nominal rating @ 13.8 VDC and will vary dependent upon valve usage and chemicals used.

Note: DIN cables are ordered separately. See page 71 for DIN cable options.



DirectoValve® Electric Pressure Regulating Valves

The proper regulating valve will enhance the operation of a sprayer, especially one with an automatic rate controller. While advanced electronics provide features and control, the proper regulating valve helps the system to respond quickly to input changes and functions over a wide range of application rates. Choosing the proper valve involves determining the maximum capacity required, the range of application rates and the proper motor speed.

System Capacity

A regulating valve's system requirements will depend on the application amount and the pumping capacity. Additionally, the regulating valve can be used in bypass or throttling mode. In throttling mode, the flow through the valve will be applied through the nozzles. In bypass mode, the excess flow from the pump is recirculated.

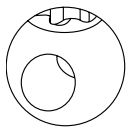
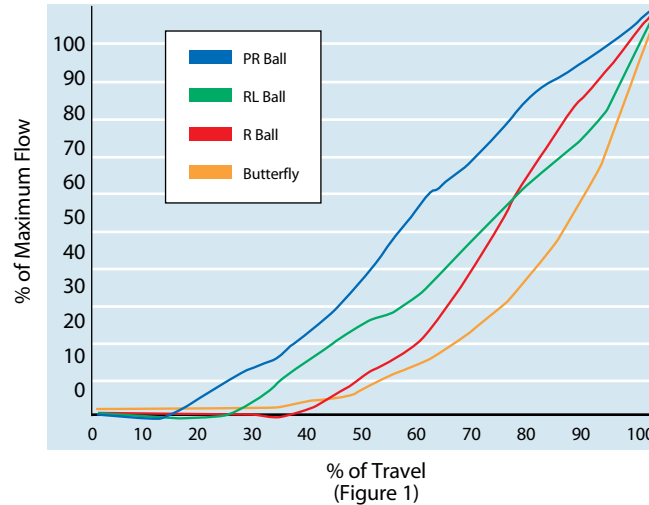
A valve that works well throughout the flow spectrum has the best chance to work in all situations.

Types of Regulating Valves

Special ball shapes make regulating valves more responsive and able to work with both high and low application rates. Most agricultural sprayers use either a

2-way ball valve or butterfly valve for regulating purposes. When considering sizing a regulating valve, the first concern is to understand the valve's flow curve to determine how efficiently the valve will regulate. Figure 1 shows typical flow curves for DirectoValve® regulating type valves. This will help to decide the type of valve to use.

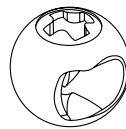
Regulating Valve Flow Curves



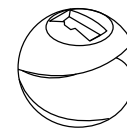
R Type Valve



Butterfly Valve



RL Valve



PR Valve

R Type and Butterfly Valves

As shown on the graph, the butterfly valve has the most non-linear flow curve for final 1/3 (30°) of travel leading to an increase of 75% in flow through the valve. The straight 2-way "R" ball curve is not quite as steep, with the flow through the valve increasing by 60% over the last 30° of travel. The "R" ball, however, has the additional disadvantage of not allowing significant flow during the first 1/3 of its rotation. Since a small change of rotation causes a significant change using these valves, trying to regulate large flows when the valve is two thirds to full open presents a challenge.

RL Valve

Spraying Systems Co.® has developed a special ball that allows the valve to start regulating earlier thus extending the regulating range. This special ball valve also increases flow and the linear characteristic of the valve during the first 3/4 of the valve cycle. The flow from the valve starts 10° earlier, than a regular R type ball and increases the flow of the RL ball during the first 70% of travel (Figure 1). The maximum capacity is about 10% less than an R type valve.

PR Valve

The PR valve uses a 3-way valve body and a ball with a wedge removed. The combination of this ball and a motor that rotates past the standard 90° results in a valve with an almost linear flow curve. The 2PR version has one outlet plugged. The 3PR version allows bypass flow to return to the tank.

As noted in Figure 1, the percentage of flow increases by approximately the amount of ball travel thus avoiding the rapid change seen with standard ball valves and butterfly valves.

Ball Type Regulating Valves

MODEL NUMBER	MAXIMUM PRESSURE	FLOW RATE AT A 5 PSI (0.34 bar) PRESSURE DROP
344BR-2	300 PSI (20 bar)	32 GPM (121 l/min)
344BR-3	300 PSI (20 bar)	24 GPM (91 l/min)
344BRL-2	300 PSI (20 bar)	27 GPM (102 l/min)
* 344BPR-2	300 PSI (20 bar)	12 GPM (45 l/min)
* 344BPR-3	300 PSI (20 bar)	12 GPM (45 l/min)
346BR-2	150 PSI (10 bar)	100 GPM (379 l/min)
346BR-3	150 PSI (10 bar)	64 GPM (242 l/min)
* 346BPR-2	150 PSI (10 bar)	53 GPM (200 l/min)
* 346BPR-3	150 PSI (10 bar)	53 GPM (200 l/min)

* Not available in stainless steel.



344B and 346B Pressure Regulating Ball Valves

The 340 series electrical regulating valves are designed to produce linear flow regulation and shutoff control in agricultural applications. Both models are available in several styles and motor speeds to accommodate different types of applications.

Features:

- Available in 2-way and 3-way versions.
- Available in 1, 3, or 6 RPM motor speeds. Note: The PR versions cycle time is double that of an R or RL version.
- Two-wire lead provides easy installation with 12 VDC systems.
- Low power consumption, less than 1 amp.
- Offered in a variety of inlet/outlet connections. See pages 96 and 97 for additional information and options.
- Wetted parts are Nylon, polypropylene, stainless steel, Teflon®, and Viton®.
- See pages 71–73 for additional information on B style motors.



R & RL Series



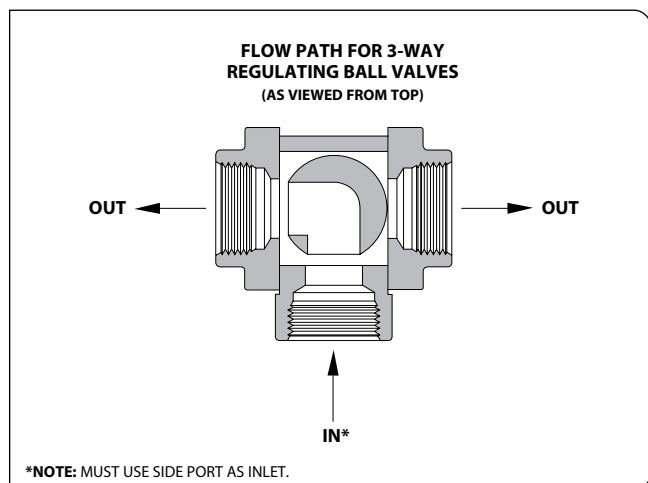
344 BPR Series



346 R Series



346 BPR Series



Butterfly Valve

AA(B)244C-3/4 Remote Control Electric Regulating Butterfly Valve

The AA244C remote control electric regulation valve has been specifically designed to provide remote pressure control in agricultural applications using DirectoValve AA144A or AA145 solenoid shutoff valves.

Features:

- Unrestricted flow when wide open – 5 PSI (0.34 bar) pressure loss for 28.4 GPM (107 l/min) flow.
- Bypass flow rate: 2 GPM (7.5 l/min) @ 10 PSI (0.7 bar).

- Operates in 12 VDC system and may be controlled by a double-pole double-throw spring-centered switch.
- Maximum operating pressure of 100 PSI (7 bar).
- Two-wire lead for use in 12 VDC system.
- 3/4" (F) NPT or BSPT connections.
- Easy installation (flows either direction).
- Good corrosion resistance.
- Low current draw (0.10 AMP).
- 20 second response time.



How to order:

Specify model number.
Example: AA(B)244C-3/4
(B) = BSPT



Sample Valve Part Number:

(B)344BRL-2FS-01C15AB

OUTLET THREADS	
PART CODE	DESCRIPTION
BLANK	ALL THREADS TO BE NPT (IF EQUIPPED)
(B)	ALL THREADS TO BE BSPT (IF EQUIPPED)

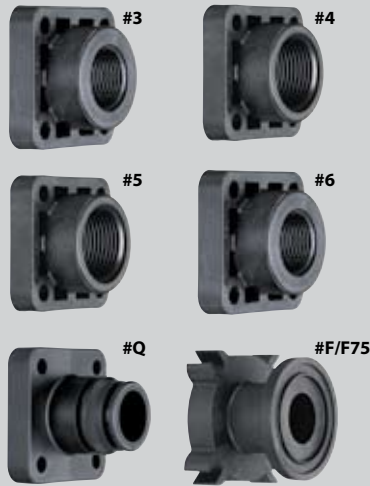
MODEL SPECIFICATIONS	
PART CODE	DESCRIPTION
344B/346B	REGULATING VALVE

MOTOR SPECIFICATIONS	
PART CODE	DESCRIPTION
R	REGULATING VALVE
RL	LINEAR REGULATING VALVE (344 SERIES ONLY)
*PR	PRESSURE REGULATING VALVE

*Not available in stainless steel.

VALVE TYPES	
PART CODE	DESCRIPTION
2	2-WAY VALVE
3	3-WAY VALVE (PR & R ONLY)

END CAPS OR OUTLET FITTINGS	
PART CODE	DESCRIPTION
3	3/4" PIPE THREAD (344 SERIES ONLY)
4	1" PIPE THREAD (344 SERIES ONLY)
5	1 1/4" PIPE THREAD (346 SERIES ONLY)
6	1 1/2" PIPE THREAD (346 SERIES ONLY)
Q	QUICK CONNECT (344 SERIES ONLY)
F	50 SERIES FLANGE
F75	75 SERIES FLANGE (346 SERIES ONLY)



See pages 96 and 97 for QC and flange fittings.

INLET/OUTLET REQUIRED CONNECTIONS
THE INLET/OUTLET FITTINGS ARE ORDERED SEPARATELY

- 3, 4, 5, 6:** When ordering 3/4" (3), 1" (4), 1 1/4" (5) or 1 1/2" (6) threaded NPT or BSPT inlet/outlet type valve connections, the inlets and outlets will be included during assembly.
- F:** When ordering F or F75 (flange) type valve connections, the inlet/outlet fittings are ordered separately. Clamps and flange fittings are required. See pages 96 and 97 for flange fitting options.
- Q:** When ordering QC (Quick Connect) hose barb type valve fittings, the inlet/outlet connections are ordered separately. Two 45529 QC fittings are required for 2-way valves and three each for 3-way valves. See page 97 for QC options.

Note: Many valve configurations are possible by mixing and matching flange fittings.

WIRING CONNECTORS	
SPECIFIC ELECTRICAL CONNECTOR STYLE AND PIN-OUTS. IF NO CONNECTOR IS NEEDED LEAVE BLANK.	
See page 98 for electrical connectors and codes.	

MOTOR CABLES	
PART CODE	DESCRIPTION
C	0.5-METER CABLE
* C03	0.3-METER CABLE
* C15	1.5-METER CABLE
* C60	6.0-METER CABLE
D	DIN CONNECTOR

Items marked with "*" are non-stock items. Please contact your regional sales office for ordering and availability information.

Note: DIN cables must be ordered separately. See page 71 for DIN cables.

MOTOR SPEEDS	
PART CODE	DESCRIPTION
01	1 RPM (18 SECOND CYCLE TIME) MOTOR
03	3 RPM (6 SECOND CYCLE TIME) MOTOR
06	6 RPM (3 SECOND CYCLE TIME) MOTOR

Note: PR series cycle times are doubled.

BALL MATERIAL SPECIFICATIONS	
PART CODE	DESCRIPTION
BLANK	POLYPROPYLENE BALL
S	STAINLESS STEEL BALL (R & RL SERIES ONLY)

REPAIR KITS	
AB344AE-KIT	AB346B-KIT

Note: AB344AE-KIT for 344A&B Valves



DirectoValve® 344 Series Electric Shutoff Valves

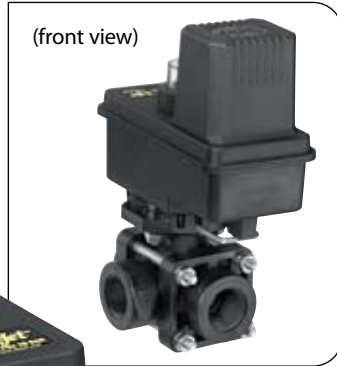
344B shutoff ball valves are available with E or EC series motors and with cable or DIN electrical connections. See page 71 for more information on DirectoValve motors.

Features:

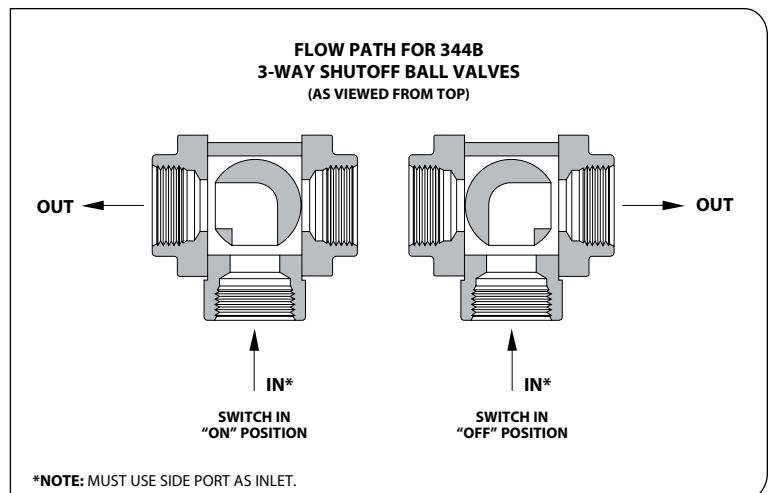
- 22 RPM, 0.7 second shutoff fully open to close.
- Flexible inlet/outlets provide quick simple plumbing for a single valve. See page 77 for more information.
- Available in 2-way or 3-way versions. 2-way valves allow complete shutoff while the 3-way valves divert flow to a bypass line when boom controls are shut off.
- Stainless steel stem with optional polypropylene or stainless steel ball.
- Maximum pressure rating is 300 PSI (20 bar).
- The flow rate for the 344BEC 2-way valve is 32 GPM (121 l/min) flow rate with a 5 PSI (0.34 bar) pressure drop.
- The flow rate for the 344BEC 3-way valve is 24 GPM (91 l/min) with a 5 PSI (0.34 bar) pressure drop.
- Wetted parts are Nylon, Teflon®, polypropylene, stainless steel and Viton®.



**344BEC-24-C
2-Way Valve**
(rear view)



**344BEC-33-C
3-Way Valve**
(rear view)





Sample Valve Part Number:

(B)344BEC-2FS-CN15AB

OUTLET THREADS	
PART CODE	DESCRIPTION
BLANK	ALL THREADS TO BE NPT (IF EQUIPPED)
(B)	ALL THREADS TO BE BSPT (IF EQUIPPED)

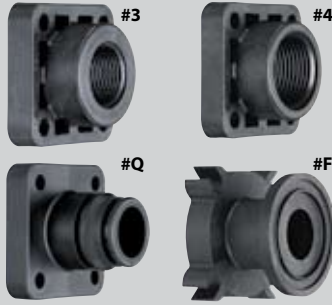
MODEL SPECIFICATION	
PART CODE	DESCRIPTION
344B	BALL VALVE

MOTOR SPECIFICATIONS		
PART CODE	SWITCH	DESCRIPTION
E	DPDT	22 RPM, 0.7 SECOND SHUTOFF VALVE
EC	SPST	

See page 71 for more information on E and EC motors.

VALVE TYPES	
PART CODE	DESCRIPTION
2	2-WAY VALVE
3	3-WAY VALVE

END CAPS OR OUTLET FITTINGS	
PART CODE	DESCRIPTION
3	3/4" PIPE THREAD
4	1" PIPE THREAD
Q	QUICK CONNECT
F	50 SERIES FLANGE



See pages 96 and 97 for QC and flange fittings.

WIRING CONNECTORS
SPECIFIC ELECTRICAL CONNECTOR STYLE AND PIN-OUTS. IF NO CONNECTOR IS NEEDED LEAVE BLANK.
See page 98 for electrical connectors and codes.

MOTOR CABLES	
PART CODE	DESCRIPTION
C	POSITIVELY SWITCHED w/ 0.5-METER CABLE
CN	NEGATIVELY SWITCHED w/ 0.5-METER CABLE
* C03	POSITIVELY SWITCHED w/ 0.3-METER CABLE
* CN03	NEGATIVELY SWITCHED w/ 0.3-METER CABLE
* C15	POSITIVELY SWITCHED w/ 1.5-METER CABLE
* CN15	NEGATIVELY SWITCHED w/ 1.5-METER CABLE
* C60	POSITIVELY SWITCHED w/ 6.0-METER CABLE
* CN60	NEGATIVELY SWITCHED w/ 6.0-METER CABLE
D	POSITIVELY SWITCHED w/ DIN CONNECTOR
DN	NEGATIVELY SWITCHED w/ DIN CONNECTOR

Items marked with "*" are non-stock items. Please contact your regional sales office for ordering and availability information.

Note: DIN cables must be ordered separately. See page 71 for DIN cables.

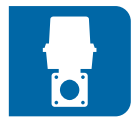
INLET/OUTLET REQUIRED CONNECTIONS
THE INLET/OUTLET FITTINGS ARE ORDERED SEPARATELY

- 3, 4:** When ordering 3/4" (3) or 1" (4) threaded NPT or BSPT inlet/outlet type valve connections, the inlets and outlets will be completed during the ordering process.
- F:** When ordering F (flange) type valve connections, the inlet/outlet fittings are ordered separately. Two 50 series clamps and flange fittings are required for 2-way valves and three each for 3-way valves. See pages 96 and 97 for flange fitting options.
- Q:** When ordering QC (Quick Connect) hose barb type valve fittings, the inlet/outlet connections are ordered separately. Two 45529 QC fittings are required for 2-way valves and three each for 3-way valves. See page 97 for QC options.

Note: Many valve configurations are possible by mixing and matching flange fittings.

BALL MATERIAL SPECIFICATIONS	
PART CODE	DESCRIPTION
BLANK	POLYPROPYLENE BALL
S	STAINLESS STEEL BALL

REPAIR KIT
AB344AE-KIT for 344A&B Valves



DirectoValve® 346 Series Shutoff Valves

346BEC shutoff ball valves are available with E or EC series motors with cable or DIN electrical connections. See page 71 for more information on DirectoValve motors.

Features:

- 25 RPM, 0.6 second shutoff fully open to close.
- Available in 2-way or 3-way versions. 2-way valves allow complete shutoff while the 3-way valves divert flow to a bypass line when boom controls are shut off.
- The flow rate for the 346BEC 2-way valve is 100 GPM (379 l/min) with 5 PSI (0.34 bar) pressure drop.
- The flow rate for the 346BEC 3-way valve is 64 GPM (242 l/min) with a 5 PSI (0.34 bar) pressure drop.
- Polypropylene ball with stainless steel stem.
- Maximum pressure rating of 150 PSI (10 bar).
- Available with 1¼", 1½" NPT or BSPT (F) threads or 50 series flange fittings.
- Wetted parts made of corrosion-resistant materials, glass-reinforced polypropylene, Teflon®, stainless steel and Viton®.

(front view)



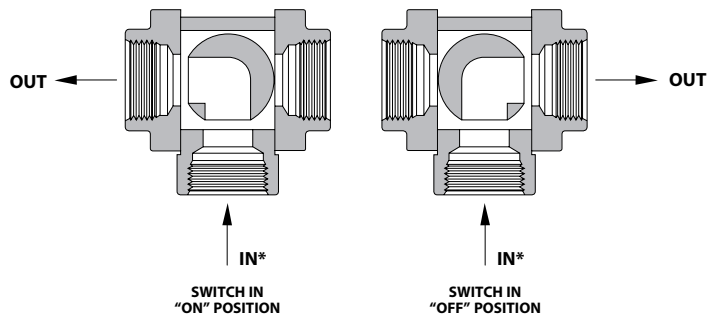
346BEC-25-C Valve
(rear view)

(front view)



346BEC-35-C Valve
(rear view)

**FLOW PATH FOR 346B
3-WAY SHUTOFF BALL VALVES
(AS VIEWED FROM TOP)**



*NOTE: MUST USE SIDE PORT AS INLET.



Sample Valve Part Number:

(B)346BEC-25S-CN15AB

OUTLET THREADS	
PART CODE	DESCRIPTION
BLANK	ALL THREADS TO BE NPT (IF EQUIPPED)
(B)	ALL THREADS TO BE BSPT (IF EQUIPPED)

MODEL SPECIFICATION	
PART CODE	DESCRIPTION
346B	BALL VALVE

MOTOR SPECIFICATIONS		
PART CODE	SWITCH	DESCRIPTION
E	DPDT	25 RPM, 0.6 SECOND SHUTOFF VALVE
EC	SPST	

See page 71 for more information on E and EC motors.

VALVE TYPES	
PART CODE	DESCRIPTION
2	2-WAY VALVE
3	3-WAY VALVE

END CAPS OR OUTLET FITTINGS	
PART CODE	DESCRIPTION
5	1¼" PIPE THREAD
6	1½" PIPE THREAD
F	50 SERIES FLANGE
F75	75 SERIES FLANGE



See pages 96 and 97 for QC and flange fittings.

WIRING CONNECTORS
SPECIFIC ELECTRICAL CONNECTOR STYLE AND PIN-OUTS. IF NO CONNECTOR IS NEEDED LEAVE BLANK.
See page 98 for electrical connectors and codes.

MOTOR CABLES	
PART CODE	DESCRIPTION
C	POSITIVELY SWITCHED w/ 0.5-METER CABLE
CN	NEGATIVELY SWITCHED w/ 0.5-METER CABLE
* C03	POSITIVELY SWITCHED w/ 0.3-METER CABLE
* CN03	NEGATIVELY SWITCHED w/ 0.3-METER CABLE
* C15	POSITIVELY SWITCHED w/ 1.5-METER CABLE
* CN15	NEGATIVELY SWITCHED w/ 1.5-METER CABLE
* C60	POSITIVELY SWITCHED w/ 6.0-METER CABLE
* CN60	NEGATIVELY SWITCHED w/ 6.0-METER CABLE
D	POSITIVELY SWITCHED w/ DIN CONNECTOR
DN	NEGATIVELY SWITCHED w/ DIN CONNECTOR

Items marked with "*" are non-stock items. Please contact your regional sales office for ordering and availability information.

Note: DIN cables must be ordered separately. See page 71 for DIN cables.

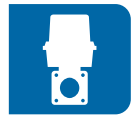
INLET/OUTLET REQUIRED CONNECTIONS THE INLET/OUTLET FITTINGS ARE ORDERED SEPARATELY

- **5, 6:** When ordering 1¼" (5) or 1½" (6) threaded NPT or BSPT inlet/outlet type valve connections, the valve will be completed during the ordering process.
- **F:** When ordering F or F75 (flange) type valve connections, the inlet/outlet fittings are ordered separately. Two clamps and flange fittings are required for 2-way valves and three each for 3-way valves. See pages 96 and 97 for flange fitting options.

Note: Many valve configurations are possible by mixing and matching flange fittings.

BALL MATERIAL SPECIFICATIONS	
PART CODE	DESCRIPTION
BLANK	POLYPROPYLENE BALL
S	STAINLESS STEEL BALL (2-WAY VALVE ONLY)

REPAIR KIT
AB346B-KIT



DirectoValve® 356 Series Flanged Shutoff Valves

The 356BEC DirectoValve control valve delivers performance and dependability. The trunnion-style valve is a hard-working, commercial-duty control valve made to go the distance. It combines dozens of design features into a control valve that will respond quickly and last longer than other valves.

356BEC shutoff ball valves are available with E or EC series motors with cable or DIN electrical connections. See page 71 for more information on DirectoValve motors.

Features:

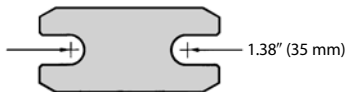
- 25 RPM, 0.6 second shutoff fully open to close.
- Flow rate is 100 GPM (379 l/min) with a 5 PSI (0.34 bar) pressure drop.
- Maximum pressure rating of 150 PSI (10 bar).
- Wetted parts are polypropylene, stainless steel, carbon-filled Teflon®, Viton® and Ryton®.
- 50 series flange fittings reduce leaks and allow various inlet/outlet connections. See pages 96 and 97 for more information.



(front view)



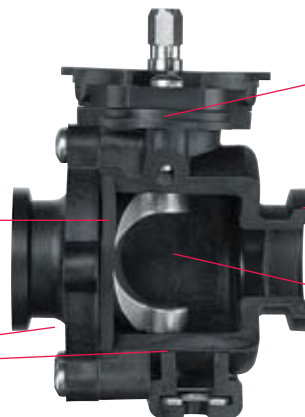
356BEC-C Valve
(rear view)



Mounting foot pattern for 5/16" (8 mm) bolts.

Wear-resistant, carbon-filled Teflon seal improves durability and minimizes the potential for leakage.

Fasteners and mounting foot made of 303 stainless steel to prevent corrosion, provide strength and provide easy mounting. A 5/16" or 8 mm bolt can be used to mount the valve.



Bearings above and below the ball maintain precise position and assure long life.

TeeJet® 50 series flanged fittings at the inlet and outlet permit easy attachment of hoses or to a manifold. It's compatible with other flanged fittings on the market.

Uniquely shaped, 316 stainless steel ball, polished for longer life, is the heart of this valve. Material doesn't get trapped as easily because the valve is self-cleaning.



Sample Valve Part Number:

356BEC-CN15AB

MODEL SPECIFICATION	
PART CODE	DESCRIPTION
356B	356 BALL VALVE

MOTOR SPECIFICATIONS		
PART CODE	SWITCH	DESCRIPTION
E	DPDT	25 RPM, 0.6 SECOND SHUTOFF VALVE
EC	SPST	

See page 71 for more information on E and EC motors.



See pages 96 and 97 for flange fittings.

INLET/OUTLET REQUIRED CONNECTIONS

THE INLET/OUTLET FITTINGS ARE ORDERED SEPARATELY

- **F:** Two 50 series clamps and flange fittings are required. See pages 96 and 97 for flange fitting options.
- **Q:** QC (Quick Connect) hose barb type valve fittings are not normally used due to flow limitations. See page 97 for more information on QC fittings.

Note: Many valve configurations are possible by mixing and matching flange fittings.

MOTOR CABLES	
PART CODE	DESCRIPTION
C	POSITIVELY SWITCHED w/ 0.5-METER CABLE
CN	NEGATIVELY SWITCHED w/ 0.5-METER CABLE
* C03	POSITIVELY SWITCHED w/ 0.3-METER CABLE
* CN03	NEGATIVELY SWITCHED w/ 0.3-METER CABLE
* C15	POSITIVELY SWITCHED w/ 1.5-METER CABLE
* CN15	NEGATIVELY SWITCHED w/ 1.5-METER CABLE
* C60	POSITIVELY SWITCHED w/ 6.0-METER CABLE
* CN60	NEGATIVELY SWITCHED w/ 6.0-METER CABLE
D	POSITIVELY SWITCHED w/ DIN CONNECTOR
DN	NEGATIVELY SWITCHED w/ DIN CONNECTOR

Items marked with "*" are non-stock items. Please contact your regional sales office for ordering and availability information.

Note: DIN cables must be ordered separately. See page 71 for DIN cables.

WIRING CONNECTORS
SPECIFIC ELECTRICAL CONNECTOR STYLE AND PIN-OUTS. IF NO CONNECTOR IS NEEDED LEAVE BLANK.
See page 98 for electrical connectors and codes.

REPAIR KIT

AB356-KIT



DirectoValve® Normally-Open (Bypass) Valves

The 344BEC, 346BEC and 356BEC valves are available in a normally-open configuration. Unlike standard shutoff ball valves, which are normally closed, normally-open valves will be in the closed position when the signal line (white wire or DIN terminal 2) is energized (+12 VDC) and will be in the open position when the signal is de-energized.

Features:

- Normally-open valves are wired in the identical manner to normally-closed, BEC style valves and operated by a single-pole single-throw (SPST) switch.
- Refer to the standard DirectoValve shutoff valve pages for typical features and specifications of a dump valve.



56602-11
(346BEC, see page 78)



56600-11
(344BEC, see page 76)



56604-11
(356BEC, see page 80)



Sample Valve Part Number:

(B)56600-11-2FS-CN15AB

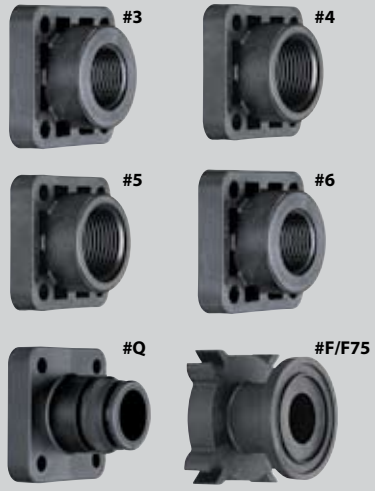
OUTLET THREADS (FOR 344 & 346)	
PART CODE	DESCRIPTION
BLANK	ALL THREADS TO BE NPT (IF EQUIPPED)
(B)	ALL THREADS TO BE BSPT (IF EQUIPPED)

MODEL SPECIFICATIONS (FOR 344, 346 & 356)	
PART CODE	DESCRIPTION
56600	344BEC BALL VALVE
56602	346BEC BALL VALVE
56604	356BEC BALL VALVE

VALVE TYPES (FOR 344 & 346)	
PART CODE	DESCRIPTION
2	2-WAY VALVE
3	3-WAY VALVE

END CAPS OR OUTLET FITTINGS (FOR 344 & 346)

PART CODE	DESCRIPTION
3	3/4" PIPE THREAD (344 ONLY)
4	1" PIPE THREAD (344 ONLY)
5	1 1/4" PIPE THREAD (346 ONLY)
6	1 1/2" PIPE THREAD (346 ONLY)
Q	QUICK CONNECT (344 ONLY)
F	50 SERIES FLANGE
F75	75 SERIES FLANGE (346 ONLY)



See pages 96 and 97 for QC and flange fittings.

WIRING CONNECTORS (FOR 344, 346 & 356)

SPECIFIC ELECTRICAL CONNECTOR STYLE AND PIN-OUTS. IF NO CONNECTOR IS NEEDED LEAVE BLANK.

See page 98 for electrical connectors and codes.

MOTOR CABLES (FOR 344, 346 & 356)

PART CODE	DESCRIPTION
C	POSITIVELY SWITCHED w/ 0.5-METER CABLE
CN	NEGATIVELY SWITCHED w/ 0.5-METER CABLE
* C03	POSITIVELY SWITCHED w/ 0.3-METER CABLE
* CN03	NEGATIVELY SWITCHED w/ 0.3-METER CABLE
* C15	POSITIVELY SWITCHED w/ 1.5-METER CABLE
* CN15	NEGATIVELY SWITCHED w/ 1.5-METER CABLE
* C60	POSITIVELY SWITCHED w/ 6.0-METER CABLE
* CN60	NEGATIVELY SWITCHED w/ 6.0-METER CABLE
D	POSITIVELY SWITCHED w/ DIN CONNECTOR
DN	NEGATIVELY SWITCHED w/ DIN CONNECTOR

Items marked with "*" are non-stock items. Please contact your regional sales office for ordering and availability information.

Note: DIN cables must be ordered separately. See page 71 for DIN cables.

INLET/OUTLET REQUIRED CONNECTIONS THE INLET/OUTLET FITTINGS ARE ORDERED SEPARATELY

- **3, 4, 5, 6:** When ordering 3/4" (3), 1" (4), 1 1/4" (5) or 1 1/2" (6) threaded NPT or BSPT inlet/ outlet type valve connections, the inlets and outlets will be included during assembly.
- **F:** When ordering F or F75 (flange) type valve connections, the inlet/outlet fittings are ordered separately. Clamps and flange fittings are required. See pages 96 and 97 for flange fitting options.
- **Q:** When ordering QC (Quick Connect) hose barb type valve fittings, the inlet/outlet connections are ordered separately. Two 45529 QC fittings are required for 2-way valves and three each for 3-way valves. See page 97 for QC options.

Note: Many valve configurations are possible by mixing and matching flange fittings.

BALL MATERIAL SPECIFICATIONS (FOR 344 & 346)

PART CODE	DESCRIPTION
BLANK	POLYPROPYLENE BALL
S	STAINLESS STEEL BALL

REPAIR KIT

AB344AE-KIT

AB346B-KIT



DirectoValve® 440 Series Manifold Shutoff Valves

The TeeJet® 440BEC series DirectoValve manifold provides a convenient, compact solution for the installation of multiple 344BEC electric ball valves. This system eliminates the need for custom fabrication of pipe or hose manifolds, drastically reducing both installation time and the chance for fluid leaks.

440BEC shutoff ball valves are available with E or EC series motors with cable or DIN electrical connections. See page 71 for more information on DirectoValve motors.

Features:

- Based on proven design of 344 ball valves.
22 RPM, 0.7 second shutoff fully open to close.
- Quick, simple plumbing of up to five electric ball valves.
- Flexible inlet and outlet connection options.
- Easy mounting with built-in brackets.
- Maximum pressure rating of 300 PSI (20 bar).
- Flow rate 26 GPM (98 l/min) with 5 PSI (0.34 bar) pressure drop (flow rate may vary based on number of valves and inlet size).
- Incorporates an internal resettable fuse.
- 12 VDC operation.
- Stainless steel stem with optional polypropylene or stainless steel ball.



441BEC-4T4T-C Valve
(rear view)



443BEC-4T4T-C Valve
(rear view)



Sample Valve Part Number:

(B)443BEC-4S4H4T-CN15AB

OUTLET THREADS

PART CODE	DESCRIPTION
BLANK	ALL THREADS TO BE NPT (IF EQUIPPED)
(B)	ALL THREADS TO BE BSPT (IF EQUIPPED)

440 MANIFOLD SIZES

PART CODE	DESCRIPTION
1	1-VALVE MANIFOLD
2	2-VALVE MANIFOLD
3	3-VALVE MANIFOLD
4	4-VALVE MANIFOLD
5	5-VALVE MANIFOLD

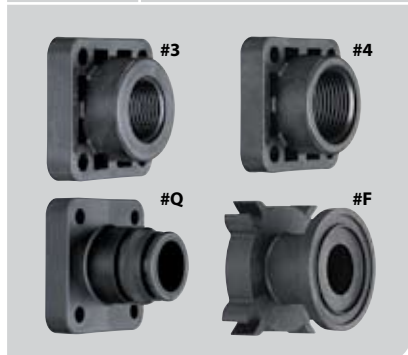
MOTOR SPECIFICATIONS

PART CODE	SWITCH	DESCRIPTION
E	DPDT	22 RPM, 0.7 SECOND SHUTOFF VALVE
EC	SPST	

See page 71 for more information on E and EC motors.

END CAPS OR OUTLET FITTINGS

PART CODE	DESCRIPTION
3	3/4" PIPE THREAD
4	1" PIPE THREAD
Q	QUICK CONNECT
F	50 SERIES FLANGE



See pages 96 and 97 for more information on QC and flange fittings.

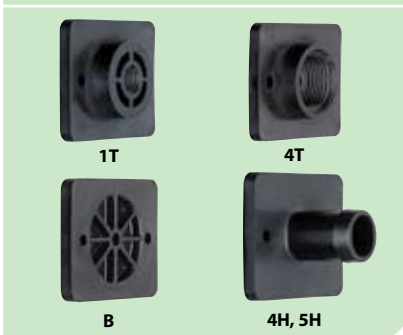
BALL MATERIAL SPECIFICATIONS

PART CODE	DESCRIPTION
BLANK	POLYPROPYLENE BALL
S	STAINLESS STEEL BALL

LEFT/RIGHT SIDE INLET FITTINGS

PART CODE	DESCRIPTION
4T	1" PIPE THREAD
4H	1" HOSE BARB
5H	1 1/4" HOSE BARB
B	INLET BLANK
1T	1/4" THREAD GAUGE PORT

Note: Right and left sides are as seen with outlets facing towards you (front view).



WIRING CONNECTORS

SPECIFIC ELECTRICAL CONNECTOR STYLE AND PIN-OUTS. IF NO CONNECTOR IS NEEDED LEAVE BLANK.

See page 98 for electrical connectors and codes.

MOTOR CABLES

PART CODE	DESCRIPTION
C	POSITIVELY SWITCHED w/ 0.5-METER CABLE
CN	NEGATIVELY SWITCHED w/ 0.5-METER CABLE
* C03	POSITIVELY SWITCHED w/ 0.3-METER CABLE
* CN03	NEGATIVELY SWITCHED w/ 0.3-METER CABLE
* C15	POSITIVELY SWITCHED w/ 1.5-METER CABLE
* CN15	NEGATIVELY SWITCHED w/ 1.5-METER CABLE
* C60	POSITIVELY SWITCHED w/ 6.0-METER CABLE
* CN60	NEGATIVELY SWITCHED w/ 6.0-METER CABLE
D	POSITIVELY SWITCHED w/ DIN CONNECTOR
DN	NEGATIVELY SWITCHED w/ DIN CONNECTOR

Items marked with "*" are non-stock items. Please contact your regional sales office for ordering and availability information.

Note: DIN cables must be ordered separately. See page 71 for DIN cables.

REPAIR KIT

AB344AE-KIT

INLET/OUTLET REQUIRED CONNECTIONS

- **3, 4:** When ordering a standard 440 series manifold, inlets/outlets will be completed in the ordering process. No additional valve connections are required.
- **F:** When ordering F (flange) type valve outlet connections, only the outlets will be 50 series flange fittings and are ordered separately. One 50 series clamp and flange fitting is required for each valve in the manifold. See pages 96 and 97 for flange fitting options. The inlets will be standard 440 connections as described in the ordering process.
- **Q:** When ordering QC (Quick Connect) type valve outlet fittings, only the outlets will be QC fittings and are ordered separately. One 45229 QC hose barb connection is required for each valve in the manifold. See page 97 for QC hose barb options. The inlets will be standard 440 connections as described in the ordering process.

Note: Other valve configurations are possible by mixing and matching flange fittings.



DirectoValve® 450 Series Shutoff Manifold

450BEC manifolds are available with E or EC series motors with cable or DIN electrical connections. See page 71 for more information on DirectoValve motors.

Features:

- 22 RPM, 0.7 second shutoff fully open to close.
- Available in 2-way version only. Pressure regulating valves can be incorporated.
- Flexible inlet/outlet connections allow for quick, simple plumbing for as many valves as needed for your sprayer.
- Stainless steel stem with optional polypropylene or stainless steel ball.
- Maximum pressure rating of 200 PSI (14 bar).
- The flow rate for the 450BEC 2-way valve is 32 GPM (121 l/min) with 5 PSI (0.34 bar) pressure drop.
- Wetted parts are Nylon, Teflon®, polypropylene and Viton®.



451BEC-2F-C Valve
(rear view)



(front view)



453BEC-2N3-C Manifold
(rear view)



(front view)



Sample Valve Part Number:

(B) 453BEC-2FS-CN15AB

OUTLET THREADS	
PART CODE	DESCRIPTION
BLANK	ALL THREADS TO BE NPT (IF EQUIPPED)
(B)	ALL THREADS TO BE BSPT (IF EQUIPPED)

MODEL SPECIFICATION	
PART CODE	DESCRIPTION
45	450 MANIFOLD

MANIFOLD SIZES	
PART CODE	DESCRIPTION
1	1-VALVE MANIFOLD
2	2-VALVE MANIFOLD
3	3-VALVE MANIFOLD
4	4-VALVE MANIFOLD
5	5-VALVE MANIFOLD

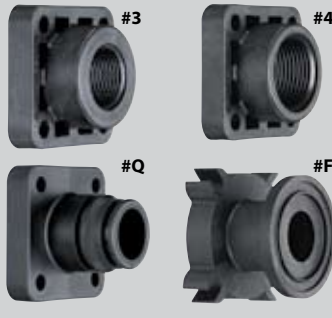
MOTOR SPECIFICATIONS		
PART CODE	SWITCH	DESCRIPTION
E	DPDT	22 RPM, 0.7 SECOND SHUTOFF VALVE
EC	SPST	

See page 71 for more information on E and EC motors.

VALVE TYPE	
PART CODE	DESCRIPTION
2	2-WAY VALVE
2N	2-WAY VALVE, NARROW

Note: 3-way valve type not available on 450 manifold.

END CAPS OR OUTLET FITTINGS	
PART CODE	DESCRIPTION
3	3/4" PIPE THREAD
4	1" PIPE THREAD
Q	QUICK CONNECT
F	50 SERIES FLANGE



See pages 96 and 97 for QC and flange fittings.

INLET/OUTLET REQUIRED CONNECTIONS
THE INLET/OUTLET FITTINGS ARE ORDERED SEPARATELY

- **3, 4:** When ordering 3/4" (3) or 1" (4) NPT or BSPT threaded connections, the valve outlet connection will be completed during the ordering process. For the inlets, the 75 series flange fittings are ordered separately. Two 75 series clamps and fittings are required per manifold assembly. See pages 96 and 97 for flange fitting options.
- **F:** When ordering F (flange) type valve connections, the inlet/outlet fittings are ordered separately. For the outlet, one 50 series clamp and flange fitting is required per valve. For the inlets, two 75 series clamps and flange fittings are required per manifold assembly. See pages 96 and 97 for flange fitting options.
- **Q:** When ordering QC (Quick Connect) type valve outlet fittings, only the outlets will be QC fittings and are ordered separately. One 45229 QC hose barb connection is required for each valve in the manifold. See page 97 for QC hose barb options. The inlets will be standard 440 connections as described in the ordering process.

Note: Many manifold configurations are possible by mixing and matching flange fittings.

WIRING CONNECTORS

SPECIFIC ELECTRICAL CONNECTOR STYLE AND PIN-OUTS. IF NO CONNECTOR IS NEEDED LEAVE BLANK.

See page 98 for electrical connectors and codes.

MOTOR CABLES	
PART CODE	DESCRIPTION
C	POSITIVELY SWITCHED w/ 0.5-METER CABLE
CN	NEGATIVELY SWITCHED w/ 0.5-METER CABLE
* C03	POSITIVELY SWITCHED w/ 0.3-METER CABLE
* CN03	NEGATIVELY SWITCHED w/ 0.3-METER CABLE
* C15	POSITIVELY SWITCHED w/ 1.5-METER CABLE
* CN15	NEGATIVELY SWITCHED w/ 1.5-METER CABLE
* C60	POSITIVELY SWITCHED w/ 6.0-METER CABLE
* CN60	NEGATIVELY SWITCHED w/ 6.0-METER CABLE
D	POSITIVELY SWITCHED w/ DIN CONNECTOR
DN	NEGATIVELY SWITCHED w/ DIN CONNECTOR

Items marked with "*" are non-stock items. Please contact your regional sales office for ordering and availability information.

Note: DIN cables must be ordered separately. See page 71 for DIN cables.

BALL MATERIAL SPECIFICATIONS	
PART CODE	DESCRIPTION
BLANK	POLYPROPYLENE BALL
S	STAINLESS STEEL BALL

REPAIR KIT

AB344AE-KIT



DirectoValve® 490 Series Shutoff Manifold

The 490BEC DirectoValve control valve delivers performance and dependability. The trunnion-style valve is a hard-working, commercial-duty control valve made to go the distance. It combines dozens of design features into a valve that will respond quickly and last longer than other valves.

Available with E or EC series motors with cable or DIN electrical connections. See page 71 for more information on DirectoValve motors.

Features:

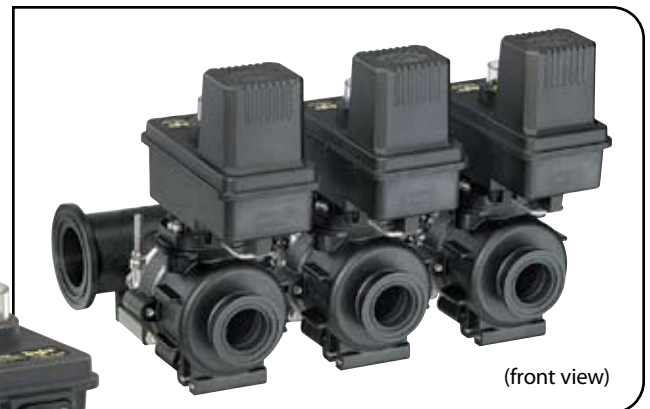
- 25 RPM, 0.6 second shutoff fully open to close. See page 71 for more information about DirectoValve motors.
- Flexible 50 series flange fitting inlet/outlet connections allow quick, simple plumbing for as many valves as needed for your sprayer.
- Available in 2-way version only. Pressure regulating valves can be incorporated.
- A uniquely designed 316 stainless steel ball reduces material that can be trapped causing corrosion ball drag that can shorten the life of a valve.
- Flow rate is 100 GPM (379 l/min) with 5 PSI (0.34 bar) pressure drop.
- Maximum pressure rating of 150 PSI (10 bar).
- Wetted parts are polypropylene, stainless steel, carbon-filled Teflon®, Viton® and Ryton®.
- Wear-resistant carbon-filled Teflon seals improve durability and minimize the potential for leaks.
- Fasteners and mounting foot made of stainless steel to prevent corrosion, provide strength and provide easy mounting using a $\frac{3}{8}$ " or 8 mm bolt.



491BEC-C Valve
(rear view)



(front view)



(front view)



493BEC-C Valve
(rear view)



Sample Valve Part Number:

493BEC-CN15AB

MODEL SPECIFICATION

PART CODE	DESCRIPTION
49	490 MANIFOLD

MANIFOLD SIZES

PART CODE	DESCRIPTION
1	1-VALVE MANIFOLD
2	2-VALVE MANIFOLD
3	3-VALVE MANIFOLD
4	4-VALVE MANIFOLD
5	5-VALVE MANIFOLD

50 SERIES FLANGE INLET/OUTLET



See pages 96 and 97 for flange fittings.

INLET/OUTLET REQUIRED CONNECTIONS THE INLET/OUTLET FITTINGS ARE ORDERED SEPARATELY

- **F:** For the outlets, one 50 series clamp and fitting is required per valve. For the inlets, two 75 series clamps and flange fittings are required. See pages 96 and 97 for flange fitting options.
- **Q:** QC (Quick Connect) hose barb type valve fittings are not normally used due to flow limitations. See page 97 for more information on QC fittings.

Note: Many manifold configurations are possible by mixing and matching flange fittings.

MOTOR CABLES

PART CODE	DESCRIPTION
C	POSITIVELY SWITCHED w/ 0.5-METER CABLE
CN	NEGATIVELY SWITCHED w/ 0.5-METER CABLE
* C03	POSITIVELY SWITCHED w/ 0.3-METER CABLE
* CN03	NEGATIVELY SWITCHED w/ 0.3-METER CABLE
* C15	POSITIVELY SWITCHED w/ 1.5-METER CABLE
* CN15	NEGATIVELY SWITCHED w/ 1.5-METER CABLE
* C60	POSITIVELY SWITCHED w/ 6.0-METER CABLE
* CN60	NEGATIVELY SWITCHED w/ 6.0-METER CABLE
D	POSITIVELY SWITCHED w/ DIN CONNECTOR
DN	NEGATIVELY SWITCHED w/ DIN CONNECTOR

Items marked with "*" are non-stock items. Please contact your regional sales office for ordering and availability information.

Note: DIN cables must be ordered separately. See page 71 for DIN cables.

WIRING CONNECTORS

SPECIFIC ELECTRICAL CONNECTOR STYLE AND PIN-OUTS. IF NO CONNECTOR IS NEEDED LEAVE BLANK.

See page 98 for electrical connectors and codes.

MOTOR SPECIFICATIONS

PART CODE	SWITCH	DESCRIPTION
E	DPDT	25 RPM, 0.6 SECOND SHUTOFF VALVE
EC	SPST	

See page 71 for more information on E and EC motors.

REPAIR KIT

AB356-KIT

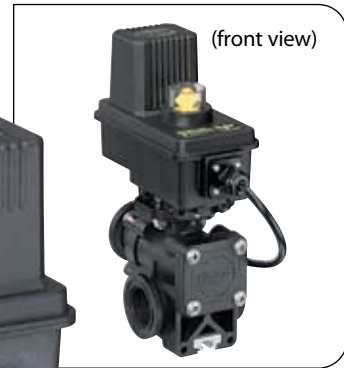


DirectoValve® 460 Series 2-Way Manifold

The 460BEC ball valve manifold gives you continued reliability. Available with E or EC series motors with cable or DIN electrical connections. See page 71 for more information on DirectoValve motors.

Features:

- 22 RPM, 0.7 second shutoff fully open to close.
- With a choice of threaded, QC (Quick Connect) hose barbs or 50 series flange fitting outlet connections, the 460BEC manifold allows quick, simple plumbing for as many valves as needed for your sprayer.
- Stainless steel stem and ball.
- Flow rate is 25 GPM (94 l/min) with 5 PSI (0.34 bar) pressure drop.
- Maximum pressure rating of 300 PSI (20 bar).
- The 460BEC valve series is also available in 3-way and flow back versions. See page 92 for 460B 3C and 3E, 3-way versions and page 94 for 460FB flow back version.



(front view)



461BEC-2F-C Valve
(rear view)



463BEC-2F-C Manifold
(rear view)



(front view)



Sample Valve Part Number:

(B)463BEC-2F-CN15AB

OUTLET THREADS	
PART CODE	DESCRIPTION
BLANK	ALL THREADS TO BE NPT (IF EQUIPPED)
(B)	ALL THREADS TO BE BSPT (IF EQUIPPED)

MODEL SPECIFICATION	
PART CODE	DESCRIPTION
46	460 MANIFOLD

MANIFOLD SIZES	
PART CODE	DESCRIPTION
1	1-VALVE MANIFOLD
2	2-VALVE MANIFOLD
3	3-VALVE MANIFOLD
4	4-VALVE MANIFOLD
5	5-VALVE MANIFOLD

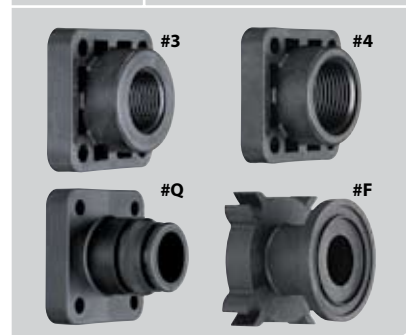
MOTOR SPECIFICATIONS		
PART CODE	SWITCH	DESCRIPTION
E	DPDT	22 RPM, 0.7 SECOND SHUTOFF VALVE
EC	SPST	

See page 71 for more information on E and EC motors.

VALVE TYPE	
PART CODE	DESCRIPTION
2	2-WAY VALVE

See page 92 for 3-way valve.

END CAPS OR OUTLET FITTINGS	
PART CODE	DESCRIPTION
3	3/4" PIPE THREAD
4	1" PIPE THREAD
Q	QUICK CONNECT
F	50 SERIES FLANGE



See pages 96 and 97 for QC and flange fittings.

WIRING CONNECTORS
SPECIFIC ELECTRICAL CONNECTOR STYLE AND PIN-OUTS. IF NO CONNECTOR IS NEEDED LEAVE BLANK.
See page 98 for electrical connectors and codes.

MOTOR CABLES	
PART CODE	DESCRIPTION
C	POSITIVELY SWITCHED w/ 0.5-METER CABLE
CN	NEGATIVELY SWITCHED w/ 0.5-METER CABLE
* C03	POSITIVELY SWITCHED w/ 0.3-METER CABLE
* CN03	NEGATIVELY SWITCHED w/ 0.3-METER CABLE
* C15	POSITIVELY SWITCHED w/ 1.5-METER CABLE
* CN15	NEGATIVELY SWITCHED w/ 1.5-METER CABLE
* C60	POSITIVELY SWITCHED w/ 6.0-METER CABLE
* CN60	NEGATIVELY SWITCHED w/ 6.0-METER CABLE
D	POSITIVELY SWITCHED w/ DIN CONNECTOR
DN	NEGATIVELY SWITCHED w/ DIN CONNECTOR

Items marked with "*" are non-stock items. Please contact your regional sales office for ordering and availability information.

Note: DIN cables must be ordered separately. See page 71 for DIN cables.

INLET/OUTLET REQUIRED CONNECTIONS THE INLET/OUTLET FITTINGS ARE ORDERED SEPARATELY

- **3, 4:** When ordering 3/4" (3) or 1" (4) NPT or BSPT threaded connections, the valve outlet connection will be completed during the ordering process. For the inlets to be threaded, the 50 series flange fittings are ordered separately. Two 50 series single clamps and fittings are required per manifold assembly. See pages 96 and 97 for flange fitting options.
- **F:** For the flange fitting versions, one 50 series single clamp and flange fitting is required per valve. For the inlets, two 50 series single clamps and flange fittings are required per manifold assembly. See pages 96 and 97 for flange fitting options.
- **Q:** When ordering QC (Quick Connect) hose barb type valve fittings. For the outlet, one 45529 QC hose barb connection is required per valve. 460 inlets are 50 series standard flanges. Any two 50 series fittings and clamps may be ordered. For the inlets to be QC, requires two each, CP46029-PP QC flange adapters, 50 series single clamps and 45529 QC hose barb connections per manifold assembly. See page 97 for QC fitting options.

Note: Many manifold configurations are possible by mixing and matching flange fittings.

REPAIR KIT

AB460-KIT



DirectoValve® 460 Series 3-Way Manifold

The 460BEC ball valve manifold gives you continued reliability. Available with E or EC series motors with cable or DIN electrical connections. See page 71 for more information on DirectoValve motors.

Features:

- 22 RPM, 0.7 second shutoff fully open to close.
- Version C has VisiFlo® color-coded settings that can be used to match multiple tips.
- Version E has a single adjustment.
- With a choice of threaded, QC (Quick Connect) hose barbs or 50 series flange fitting outlet connections, the 460BEC manifold allows quick, simple plumbing for as many valves as needed for your sprayer.
- Stainless steel stem and ball.
- Flow rate is 25 GPM (94 l/min) with 5 PSI (0.34 bar) pressure drop.
- Maximum pressure rating of 300 PSI (20 bar).
- The 460BEC valve series is also available in 2-way and flow back versions. See page 90 for 460BEC 2-way version and page 94 for 460FB flow back version.

461BEC-3EF-C Valve
(rear view)



461BEC-3CF-C Valve
(rear view)



463BEC-3CF-C Manifold
(rear view)



463BEC-3EF-C Manifold
(rear view)



(front view)



Sample Valve Part Number:

(B)463BEC-3CF-CN15AB

OUTLET THREADS

PART CODE	DESCRIPTION
BLANK	ALL THREADS TO BE NPT (IF EQUIPPED)
(B)	ALL THREADS TO BE BSPT (IF EQUIPPED)

MODEL SPECIFICATION

PART CODE	DESCRIPTION
46	460 MANIFOLD

MANIFOLD SIZES

PART CODE	DESCRIPTION
1	1-VALVE MANIFOLD
2	2-VALVE MANIFOLD
3	3-VALVE MANIFOLD
4	4-VALVE MANIFOLD
5	5-VALVE MANIFOLD

MOTOR SPECIFICATIONS

PART CODE	SWITCH	DESCRIPTION
E	DPDT	22 RPM, 0.7 SECOND SHUTOFF VALVE
EC	SPST	

See page 71 for more information on E and EC motors.

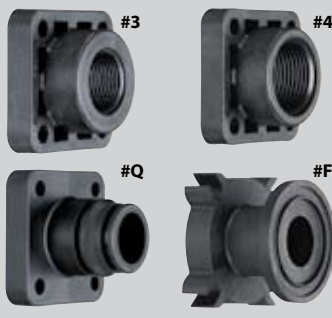
VALVE TYPE

PART CODE	DESCRIPTION
3C	3-WAY VALVE
3E	

See page 90 for 2-way valve.

END CAPS OR OUTLET FITTINGS

PART CODE	DESCRIPTION
3	3/4" PIPE THREAD
4	1" PIPE THREAD
Q	QUICK CONNECT
F	50 SERIES FLANGE



See pages 96 and 97 for QC and flange fittings.

WIRING CONNECTORS

SPECIFIC ELECTRICAL CONNECTOR STYLE AND PIN-OUTS. IF NO CONNECTOR IS NEEDED LEAVE BLANK.

See page 98 for electrical connectors and codes.

MOTOR CABLES

PART CODE	DESCRIPTION
C	POSITIVELY SWITCHED w/ 0.5-METER CABLE
CN	NEGATIVELY SWITCHED w/ 0.5-METER CABLE
* C03	POSITIVELY SWITCHED w/ 0.3-METER CABLE
* CN03	NEGATIVELY SWITCHED w/ 0.3-METER CABLE
* C15	POSITIVELY SWITCHED w/ 1.5-METER CABLE
* CN15	NEGATIVELY SWITCHED w/ 1.5-METER CABLE
* C60	POSITIVELY SWITCHED w/ 6.0-METER CABLE
* CN60	NEGATIVELY SWITCHED w/ 6.0-METER CABLE
D	POSITIVELY SWITCHED w/ DIN CONNECTOR
DN	NEGATIVELY SWITCHED w/ DIN CONNECTOR

Items marked with "*" are non-stock items. Please contact your regional sales office for ordering and availability information.

Note: DIN cables must be ordered separately. See page 71 for DIN cables.

INLET/OUTLET REQUIRED CONNECTIONS THE INLET/OUTLET FITTINGS ARE ORDERED SEPARATELY

- **3, 4:** When ordering 3/4" (3) or 1" (4) NPT or BSPT threaded connections, the valve outlet connection will be completed during the ordering process. For the inlets to be threaded, the 50 series flange fittings are ordered separately. Two 50 series double clamps and four flange fittings are required per manifold assembly. See pages 96 and 97 for flange fitting options.
- **F:** For the flange fitting versions, one 50 series single clamp and flange fitting is required per valve. For the inlets, two 50 series double clamps and four flange fittings are required per manifold assembly. See pages 96 and 97 for flange fitting options.
- **Q:** When ordering QC (Quick Connect) hose barb type valve fittings. For the outlet, one 45529 QC hose barb connection is required per valve. 460 inlets are 50 series standard flanges. Any four 50 series fittings and two double clamps may be ordered. For the inlets to be QC, requires four each, CP46029-PP QC flange adapters, 45529 QC hose barb connections and two 50 series clamps per manifold assembly. See pages 96 and 97 for QC and flange options.

Note: Many manifold configurations are possible by mixing and matching flange fittings.

REPAIR KIT

AB460-KIT



DirectoValve® 450FB and 460FB Flow Back Manifolds

The 450FB and 460FB flow back valves allow pressure from the boom lines to be relieved back to the tank when the valve is switched to the off position.

Available with E or EC series motors with cable or DIN electrical connections. See page 71 for more information on DirectoValve motors.

Features:

- 22 RPM, 0.7 second shutoff fully open to close.
- With a choice of threaded, QC (Quick Connect) hose barbs or 50 series flange fitting outlet connections, the 450FB and 460FB manifolds allow quick, simple plumbing for as many valves as needed for your sprayer.
- Choice of polypropylene or stainless steel ball with stainless steel stem for 450FB valve series. Stainless steel stem and ball for 460FB valve series.
- Flow rate for 450FB is 32 GPM (120 l/min) with 5 PSI (0.34 bar) pressure drop per valve. Flow rate for 460FB is 24 GPM (91 l/min) with 5 PSI (0.34 bar) pressure drop per valve.
- The 450FB offers a maximum pressure rating of 200 PSI (14 bar). The 460FB offers a maximum pressure rating of 300 PSI (20 bar).
- The 450FB valve series is also available in 2-way versions while the 460FB valve series are also available in 2-way and 3-way versions.

(front view)



461BEC-3FB4-C Valve
(rear view)



453BEC-3FB4-C Manifold
(rear view)



(front view)





Sample Valve Part Number:

(B) 463 BEC - 3FBF - CN15AB

OUTLET THREADS

PART CODE	DESCRIPTION
BLANK	ALL THREADS TO BE NPT (IF EQUIPPED)
(B)	ALL THREADS TO BE BSPT (IF EQUIPPED)

MODEL SPECIFICATION

PART CODE	DESCRIPTION
45	450 MANIFOLD
46	460 MANIFOLD

MANIFOLD SIZES

PART CODE	DESCRIPTION
1	1-VALVE MANIFOLD
2	2-VALVE MANIFOLD
3	3-VALVE MANIFOLD
4	4-VALVE MANIFOLD
5	5-VALVE MANIFOLD

MOTOR SPECIFICATIONS

PART CODE	SWITCH	DESCRIPTION
E	DPDT	22 RPM, 0.7 SECOND SHUTOFF VALVE
EC	SPST	

See page 71 for more information on E and EC motors.

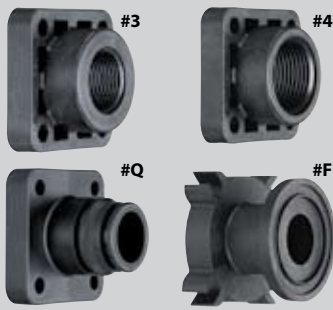
VALVE TYPE

PART CODE	DESCRIPTION
3FB	FLOW BACK

See page 92 for 3-way valve.

END CAPS OR OUTLET FITTINGS

PART CODE	DESCRIPTION
3	3/4" PIPE THREAD
4	1" PIPE THREAD
Q	QUICK CONNECT
F	50 SERIES FLANGE



See pages 96 and 97 for QC and flange fittings.

WIRING CONNECTORS

SPECIFIC ELECTRICAL CONNECTOR STYLE AND PIN-OUTS. IF NO CONNECTOR IS NEEDED LEAVE BLANK.

See page 98 for electrical connectors and codes.

MOTOR CABLES

PART CODE	DESCRIPTION
C	POSITIVELY SWITCHED w/ 0.5-METER CABLE
CN	NEGATIVELY SWITCHED w/ 0.5-METER CABLE
* C03	POSITIVELY SWITCHED w/ 0.3-METER CABLE
* CN03	NEGATIVELY SWITCHED w/ 0.3-METER CABLE
* C15	POSITIVELY SWITCHED w/ 1.5-METER CABLE
* CN15	NEGATIVELY SWITCHED w/ 1.5-METER CABLE
* C60	POSITIVELY SWITCHED w/ 6.0-METER CABLE
* CN60	NEGATIVELY SWITCHED w/ 6.0-METER CABLE
D	POSITIVELY SWITCHED w/ DIN CONNECTOR
DN	NEGATIVELY SWITCHED w/ DIN CONNECTOR

Items marked with "*" are non-stock items. Please contact your regional sales office for ordering and availability information.

Note: DIN cables must be ordered separately. See page 71 for DIN cables.

INLET/OUTLET REQUIRED CONNECTIONS

THE INLET/OUTLET FITTINGS ARE ORDERED SEPARATELY

- **3, 4:** When ordering 3/4" (3) or 1" (4) NPT or BSPT threaded connections, the valve outlet connection will be completed during the ordering process.
 - 450FB – For the inlets, two 75 series flange fittings and two 75 series clamps are required. For the flowback ports, two 45529 Quick Connect fittings are required.*
 - 460FB – For inlets and flowback ports, four 50 series flange fittings and two 50 series double clamps are required per manifold.*
- **F:** For the flange fitting versions, one 50 series single clamp and 50 series flange fitting is required per valve outlet.
 - 450FB – For the inlets, two 75 series flange fittings and two 75 series clamps are required. For the flowback ports, two 45529 Quick Connect fittings are required.*
 - 460FB – For inlets and flowback ports, four 50 series flange fittings and two 50 series double clamps are required per manifold.*
- **Q:** For Quick Connect versions, one 45529 QC hose barb fitting is required per valve outlet.
 - 450FB – For the inlets, two 75 series flange fittings and two 75 series clamps are required. For the flowback ports, two 45529 Quick Connect fittings are required.*
 - 460FB – For inlets and flowback ports, four 50 series flange fittings and two 50 series double clamps are required per manifold.*

*See pages 96 and 97 for flange and Quick Connect fitting options.

Note: Many manifold configurations are possible by mixing and matching flange fittings.

REPAIR KIT

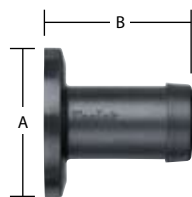
AB460-KIT
AB344AE-KIT



DirectoValve® Flange Fittings

Features:

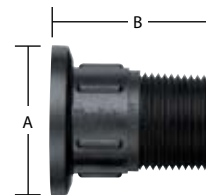
- Polypropylene construction.
- Full port design.
- Viton® O-ring seal available with clamp (not included with flange).



Straight Hose Barb Flanges

DESCRIPTION	SERIES	"A"	"B"	PART NUMBER
¾" Hose Barb	50	2" (51 mm)	1 1/16" (43 mm)	CP48150-PP
1" Hose Barb	50	2" (51 mm)	2" (51 mm)	CP45504-PP
1¼" Hose Barb	50	2" (51 mm)	2" (51 mm)	CP45505-PP
1½" Hose Barb	50	2" (51 mm)	2" (51 mm)	CP45506-PP
1¼" Hose Barb	75	3 1/16" (78 mm)	1 3/16" (46 mm)	CP48160-PP
1½" Hose Barb	75	3 1/16" (78 mm)	2 3/16" (56 mm)	CP46067-PP
2" Hose Barb	75	3 1/16" (78 mm)	2 3/4" (70 mm)	CP48161-PP

- Maximum pressure rating of 200 PSI (14 bar) for 75 series fittings.
- Maximum pressure rating of 300 PSI (20 bar) for 50 series fittings.



Threaded Flanges (Male)

DESCRIPTION	SERIES	"A"	"B"	PART NUMBER
¾" Male Pipe Thread	50	2" (51 mm)	2" (51 mm)	CP(B)48172-PP
1" Male Pipe Thread	50	2" (51 mm)	2 3/16" (56 mm)	CP(B)48155-PP
1½" Male Pipe Thread	50	2" (51 mm)	2 3/4" (70 mm)	CP(B)48156-PP
1¼" Male Pipe Thread	75	3 1/16" (78 mm)	2 1/2" (64 mm)	CP(B)48165-PP
1½" Male Pipe Thread	75	3 1/16" (78 mm)	2 1/2" (64 mm)	CP(B)48166-PP
2" Male Pipe Thread	75	3 1/16" (78 mm)	2 5/8" (65 mm)	CP(B)48167-PP

(B)=BSPT

90° Hose Barb Flanges



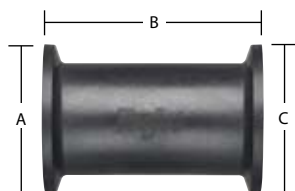
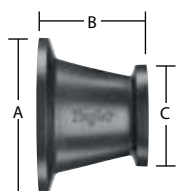
DESCRIPTION	SERIES	"A"	"B"	"C"	PART NUMBER
90° × ¾" Hose Barb	50	2" (51 mm)	1 1/2" (38 mm)	2" (51 mm)	CP48151-PP
90° × 1" Hose Barb	50	2" (51 mm)	1 1/2" (38 mm)	2" (51 mm)	CP48152-PP
90° × 1¼" Hose Barb	50	2" (51 mm)	1 5/16" (49 mm)	2 5/16" (65 mm)	CP72238-PP
90° × 1½" Hose Barb	50	2" (51 mm)	1 5/16" (49 mm)	2 5/16" (65 mm)	CP72239-PP
90° × 1¼" Hose Barb	75	3 1/16" (78 mm)	1 5/16" (49 mm)	2 5/16" (65 mm)	CP48162-PP
90° × 1½" Hose Barb	75	3 1/16" (78 mm)	1 5/16" (49 mm)	2 5/16" (65 mm)	CP48163-PP
90° × 2" Hose Barb	75	3 1/16" (78 mm)	1 5/16" (49 mm)	3 5/16" (84 mm)	CP48164-PP

Gauge Port Flange



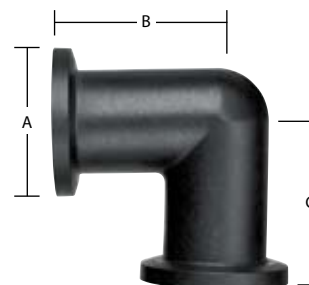
DESCRIPTION	SERIES	"A"	"B"	PART NUMBER
¼" Gauge Port	50	2" (51 mm)	¾" (19 mm)	CP(B)45508-1/4-PP CP(P)45508-1/4-PP
⅜" Gauge Port	50	2" (51 mm)	¾" (19 mm)	CP(B)45539-3/8-PP CP(P)45539-3/8-PP
Blank Inlet Cover	50	2" (51 mm)	5/16" (8 mm)	CP45507-PP
¼" Gauge Port	75	3 1/16" (78 mm)	¾" (9 mm)	CP(B)46127-1/4-PP
⅜" Gauge Port	75	3 1/16" (78 mm)	¾" (9 mm)	CP(B)46127-3/8-PP
Blank Inlet Cover	75	3 1/16" (78 mm)	¾" (9 mm)	CP46069-PP

(B)=BSPT (P)=BSPP



Straight Flange Couplings

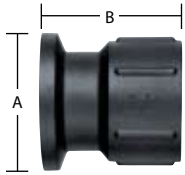
DESCRIPTION	SERIES	"A"	"B"	"C"	PART NUMBER
Straight Coupling	50	2" (51 mm)	2 1/4" (57 mm)	2" (51 mm)	CP48157-PP
Straight Coupling	75	3 1/16" (78 mm)	4 3/8" (111 mm)	3 1/16" (78 mm)	CP48169-PP
Reducer Coupling	75/50	3 1/16" (78 mm)	2 3/16" (56 mm)	2" (51 mm)	CP45207-PP



90° Flange Couplings

DESCRIPTION	SERIES	"A"	"B"	"C"	PART NUMBER
90° Elbow Coupling	50	2" (51 mm)	2 3/16" (56 mm)	2 3/16" (56 mm)	CP48158-PP
90° Elbow Coupling	75	3 1/16" (78 mm)	2 3/16" (56 mm)	3 1/16" (79 mm)	CP48168-PP

DirectoValve® Flange Fittings



Threaded Flanges (Female)

DESCRIPTION	SERIES	"A"	"B"	PART NUMBER
1" Female Pipe Thread	50	2" (51 mm)	2" (51 mm)	CP(B)48154-PP
1¼" Female Pipe Thread	50	2" (51 mm)	2" (51 mm)	CP(B)45512-PP
1½" Female Pipe Thread	75	3½" (78 mm)	2" (51 mm)	CP(B)46066-PP

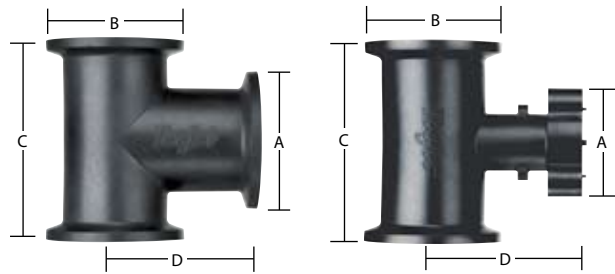


Flange Clamps

DESCRIPTION	SERIES	PART NUMBER
2-Way Valve	50	46070
3-Way Valve	50	46024
2-Way Valve Stainless Steel	50	55245-50
Viton® O-ring	50	CP7717-2/222-VI
2-Way Valve Stainless Steel	75	55245-75
Viton O-ring	75	CP7717-2-229-VI



Note: O-ring included.



Tee Flanges

DESCRIPTION	SERIES	"A"	"B"	"C"	"D"	PART NUMBER
Tee	50	2" (51 mm)	2" (51 mm)	4¾" (111 mm)	2⅞" (73 mm)	CP50193-PP
Narrow Tee		2" (51 mm)	2" (51 mm)	3⅜" (81 mm)	2" (51 mm)	CP55242-PP
Reducer Tee	50/75	2" (51 mm)	3⅜" (78 mm)	4¾" (111 mm)	2⅞" (73 mm)	CP46717-PP
Tee	75	3⅜" (78 mm)	3⅜" (78 mm)	4¾" (111 mm)	3⅜" (79 mm)	CP46716-PP
450 Tee Body		—	3⅜" (78 mm)	4¾" (111 mm)	3⅜" (82 mm)	CP45251-PP
450 Tee Body (Narrow)	75	—	3⅜" (78 mm)	3⅜" (79 mm)	3⅜" (82 mm)	CP55224-PP

Note: There are no mounting provisions on the 50 series tee.

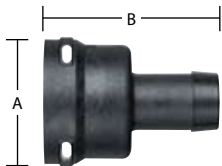
48143 Mounting Kit

Mounts to underside of tee and includes one extrusion and four screws. Mounting kit is not included with tees. Must be ordered separately. Also requires ⅝" or 8 mm bolt.



DESCRIPTION	PART NUMBER
Tee Mounting Kit (450 or 490 series manifold)	48143

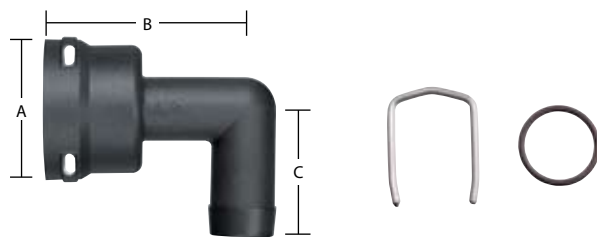
DirectoValve® Quick Connect Fittings



Quick Connect Straight Hose Barb

DESCRIPTION	SERIES	"A"	"B"	PART NUMBER
½" Straight Hose Barb	QC	1⅜" (43 mm)	2¼" (57 mm)	45529-1/2
¾" Straight Hose Barb			2" (51 mm)	45529-3/4
1" Straight Hose Barb			2" (51 mm)	45529-1
Quick Connect Cap		1⅜" (43 mm)	1⅜" (28 mm)	45529-C
Quick Connect Plug		1⅜" (36 mm)	1⅜" (33 mm)	45529-P

Note: O-ring and clip included.



90° Quick Connect Hose Barb

DESCRIPTION	SERIES	"A"	"B"	"C"	PART NUMBER
½" 90° Hose Barb	QC	1⅜" (43 mm)	2⅞" (58 mm)	1⅜" (41 mm)	45529-90-1/2
¾" 90° Hose Barb			2⅞" (58 mm)	1⅜" (41 mm)	45529-90-3/4
1" 90° Hose Barb			2⅞" (58 mm)	1⅜" (41 mm)	45529-90-1

Note: O-ring and clip included.

Quick Connection Outlet

DESCRIPTION	SERIES	"A"	"B"	PART NUMBER
Male Quick Connect Flanged	50	2" (51 mm)	1⅜" (46 mm)	CP46029-PP
Quick Connect	¾" (M)	1⅜" (33 mm)	2" (51 mm)	CP45527-NYB
Quick Connect	1" (M)	1⅜" (33 mm)	2" (51 mm)	CP45526-NYB



Clip and O-Ring

DESCRIPTION	PART NUMBER
Retaining Clip 302SS	CP37166-302SS
O-Ring (Viton®)	CP7717-3-912-VI



DirectoValve® Electrical Connectors

Note: Spraying Systems Co.® recommends the use of sealed connectors to improve reliability and prolong component life.

CHART 1: CONNECTOR CODES

	AMP MALE FASTON CONNECTOR	AMP FEMALE FASTON CONNECTOR
2-PIN OR 3-PIN	<p>Note: No pin-out code needed with these connectors.</p> <p>2-PIN = CODE A 3-PIN = CODE J</p>	<p>Note: No pin-out code needed with these connectors.</p> <p>2-PIN = CODE B 3-PIN = CODE K</p>
	<p>AMP FEMALE MATE-N-LOK® CONNECTOR (SEALED)</p> <p>2-PIN = CODE C 3-PIN = CODE L</p>	<p>AMP MALE MATE-N-LOK® CONNECTOR (SEALED)</p> <p>2-PIN = CODE D 3-PIN = CODE M</p>
	<p>PACKARD WEATHER PACK SHROUD CONNECTOR (SEALED)</p> <p>2-PIN = CODE E 3-PIN = CODE O</p>	<p>PACKARD WEATHER PACK TOWER CONNECTOR (SEALED)</p> <p>2-PIN = CODE F 3-PIN = CODE P</p>
	<p>DEUTSCH DT FEMALE CONNECTOR (SEALED)</p> <p>2-PIN = CODE G 3-PIN = CODE Q</p>	<p>DEUTSCH DT MALE CONNECTOR (SEALED)</p> <p>2-PIN = CODE H 3-PIN = CODE R</p>
	<p>PACKARD METRIPACK FEMALE CONNECTOR (SEALED)</p> <p>3-PIN = CODE S</p>	<p>JST VH FEMALE CONNECTOR (SEALED)</p> <p>2-PIN = CODE I 3-PIN = CODE T</p>
4-PIN	<p>PACKARD WEATHER PACK SHROUD CONNECTOR (SEALED)</p> <p>4-PIN = CODE U</p>	<p>PACKARD WEATHER PACK TOWER CONNECTOR (SEALED)</p> <p>4-PIN = CODE V</p>

CHART 2: PIN-OUT CODES

CODE LETTER	CONNECTOR POSITION				CODE LETTER	CONNECTOR POSITION			
	A OR 1	B OR 2	C OR 3	D OR 4		A OR 1	B OR 2	C OR 3	D OR 4
A	R	W	P	B	M	P	R	W	B
B	R	W	B	P	N	P	R	B	W
C	R	B	W	P	O	P	W	R	B
D	R	B	P	W	P	P	W	B	R
E	R	P	W	B	Q	P	B	R	W
F	R	P	B	W	R	P	B	W	R
G	W	R	B	P	S	B	R	W	P
H	W	R	P	B	T	B	R	P	W
I	W	P	R	B	U	B	W	R	P
J	W	P	B	R	V	B	W	P	R
K	W	B	R	P	W	B	P	R	W
L	W	B	P	R	X	B	P	W	R

How to order:

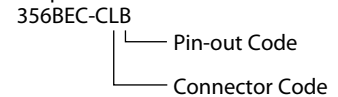
This system is to be used for 344B and 356B ball valves and 440B, 450B, 460B and 490B ball valve manifolds equipped with electrical connectors. Connector and pin-outs are to be specified in valve or manifold part number when ordering.

Note: On 2-pin connectors, only pin-out code C or S is used.

First: Specify code for connector desired (See Chart 1).

Second: Specify appropriate wire pin-out arrangement (See Chart 2).

Example:



Wire Codes:

- R = Red (+12V)
- W = White (Switched)
- P = Plugged
- B = Black (Ground)



AA144P-, AA144A-, AA145H-, DirectoValve Control Valves

- Direct acting; large internal flow chamber without pilot hole reduces chance of clogging.
- Stainless steel wetted parts provide additional corrosion resistance.

- Operate on 12 VDC system.
- Maximum pressure of 100 PSI (7 bar).
- Encapsulated solenoid coil can be changed without removing valve from system.

- EPDM diaphragms and seat washers, Viton® optional.
- Continuous flow through bypass connection, with flow to spray line controlled by valve "on-off" action.



AA144P DirectoValve Control Valves

- 10 GPM (37.9 l/min) flow with only 5 PSI (0.34 bar) pressure drop.
- 2.5 amp current draw.
- Polypropylene body for chemical resistance.
- Fabric reinforced Viton diaphragms and seat washers.

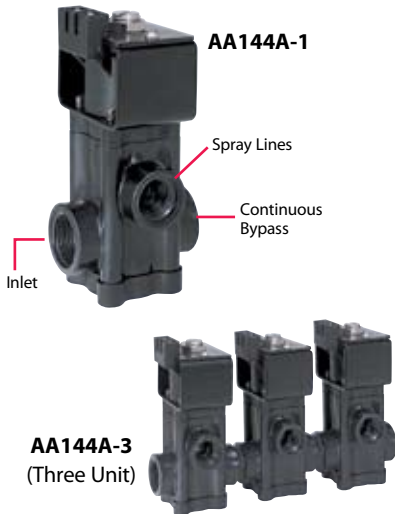
- No stroke adjustment required.
- Corrosion resistant, 430SS solenoid grade armature and armature stop.
- Encapsulated coil and magnetic circuit.

How to order:

To order, specify AA144P- then "1", "2" or "3" to indicate number of units.
Example: AA(B)144P-3

MODEL NUMBER	INLET SIZE	OUTLET SIZE	CURRENT DRAW
AA(B)144P-*	3/4"	1/2"	2.5 amp

(B) = BSPT



AA144A Valve for Pressures up to 100 PSI (7 bar)

- 10 GPM (37.9 l/min) flow with only 5 PSI (0.34 bar) pressure drop.
- Can be ganged with other 144A DirectoValve control valves.
- 2.5 amp current draw.
- Polypropylene body for chemical resistance.
- Fabric reinforced diaphragms.
- Also available as 2- or 3-unit assembly.

How to order:

To order, specify AA144A- then "1", "2" or "3" to indicate number of units.
Example: AA(B)144A-3

MODEL NUMBER	INLET SIZE	OUTLET SIZE	CURRENT DRAW
AA(B)144A-*	3/4"	1/2"	2.5 amp

(B) = BSPT



AA145H Control Valves

- For pressures to 100 PSI (7 bar); 15 GPM (56.7 l/min) flow with 5 PSI (0.34 bar) pressure drop.
- Can be ganged with other 145H DirectoValve control valves.
- 2.9 amp current draw.
- Fiberglass reinforced Nylon body.

How to order:

Specify part number.
Example: AA145H-1

MODEL NUMBER	INLET SIZE	OUTLET SIZE	CURRENT DRAW
AA145H-1	1"	1"	2.9 amp



DirectoValve® 3-Way Electrically Operated Solenoid Valves



AA144P-1-3

AA144P-1-3 DirectoValve Control Valves

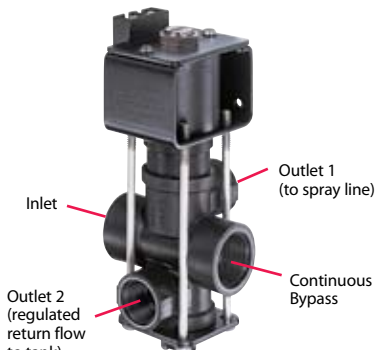
The 144P-1-3 three-way solenoid-operated DirectoValve control valve was specifically designed to provide bypass control in spraying applications. When used with part number 23520-PP throttling valve or a 4916 metering orifice plate in the bypass line, it can provide for a constant pressure spray system.

- For pressure to 65 PSI (4.5 bar).
- 5 PSI (0.34 bar) pressure drop with 8 GPM (30 l/min) flow.
- Fabric-reinforced Viton® diaphragms.

- Nylon encapsulated 12 VDC coil with 1/4" Quick Connect terminals.
- Power requirement 2.5 amp.
- Glass-filled polypropylene (black) valve body.
- Internal metal parts are stainless steel.
- No stroke adjustment needed.
- Corrosion resistant, 430SS solenoid grade armature and armature stop.

How to order: Specify part number.
Example: AA(B)144P-1-3

Note: 23520 Throttling Valve not included. See page 104 for more information.



AA144A-1-3

AA144A-1-3 DirectoValve Control Valves

The three-way solenoid-operated DirectoValve control valve bypasses boom flow to maintain constant spraying pressure when one or more boom sections are shut off. To maintain pressure with a 23520 Throttling Valve, Outlet 2 must be throttled to match the total capacity of the nozzles on that boom section.

- For pressures to 65 PSI (4.5 bar).
- 8 GPM (30 l/min) flow at only 5 PSI (0.34 bar) pressure drop.

- 2.5 amp current draw.
- Encapsulated 12 VDC coil can be easily changed without removing valve from line.
- Polypropylene body for chemical resistance.
- Stainless steel internal metal parts.
- Chemical resistant EPDM diaphragms and seat washers.

How to order:

As with the 144A DirectoValve, the 144A-1-3 can be supplied as a 2-unit and 3-unit assembly. When ordering, specify 144A-2-3 or 144A-3-3.

Note: 23520 Throttling Valve not included. See page 104 for more information.



AA144A-3-3
(Three Unit)

AA144P-3-3
(Three Unit)

MODEL NUMBER	NUMBER OF UNITS IN ASSEMBLY	SPRAY LINE CONNECTION	CONTINUOUS FLOW INLET BYPASS CONNECTION
AA(B)144P-1-3	1	1/2"	3/4"
AA(B)144P-2-3	2	1/2"	3/4"
AA(B)144P-3-3	3	1/2"	3/4"
AA(B)144A-1-3	1	1/2"	3/4"
AA(B)144A-2-3	2	1/2"	3/4"
AA(B)144A-3-3	3	1/2"	3/4"

(B) = BSPT



DirectoValve® Solenoid Foam Marker Valves



AA144F-1-3

TeeJet® AA144F-1-3 DirectoValve Solenoid Valve for Foam Markers

The 144F-1-3 three-way operated DirectoValve was designed for use with foam markers. With electrical power off, flow to Outlet 1 is stopped and liquid flows to Outlet 2. With electrical power on, flow to Outlet 2 is stopped and liquid flows to Outlet 1.

Features:

- Operating pressure range of 0–50 PSI (0–3.5 bar).

- Large flow capacities, 5 PSI (0.34 bar) pressure drop with 8 GPM (30 l/min) flow.
- Nylon encapsulated 12 VDC coil with 1/4" Quick Connect terminals.
- Glass filled polypropylene (black) valve body.
- Internal metal parts are made of brass, fasteners are made of stainless steel, other metal parts are zinc-plated.
- Chemical resistant EPDM rubber seat washer and diaphragm.

How to order:

AA144F-1-3



AA(B)344M-NYB

344M-NYB 2-Way Nylon Manual Ball Valves

- Quarter turn of handle from shutoff to full flow.
- 3/4" or 1" NPT and BSPT (F) connection.

- Wetted parts: Nylon, Teflon®, polypropylene and Viton®.

How to order:

Specify valve number.

Example: AA(B)344M-2-1

AA(B)344M-NYB

VALVE NUMBER	MAXIMUM PRESSURE	NUMBER OF OUTLETS	CONNECTION SIZE
AA(B)344M-2-3/4	300 PSI (20 bar)	1	3/4"
AA(B)344M-2-1		1	1"

Flow Rate: 5 PSI (0.34 bar) pressure drop for 32 GPM (121 l/min) flow.

(B) = BSPT



AA(B)343M-PP

340M-PP Series 2-Way Manual Ball Valves

- Quarter turn of handle from shutoff to full flow.
- 3/8", 1/2", 3/4", 1", 1 1/4" or 1 1/2" NPT and BSPT (F) connection.

- Wetted parts: glass-reinforced polypropylene, Teflon and Viton.

How to order:

Specify valve number.

Example: AA(B)343M-2-3/8-PP

AA(B)343M-PP

VALVE NUMBER	MAXIMUM PRESSURE	NUMBER OF OUTLETS	CONNECTION SIZE
AA(B)343M-2-3/8-PP	150 PSI (10 bar)	1	3/8"
AA(B)343M-2-1/2-PP		1	1/2"

Flow Rate: 5 PSI (0.34 bar) pressure drop for 11 GPM (42 l/min) flow.

(B) = BSPT



AA(B)344M-PP

How to order:

Specify valve number.

Example: AA(B)344M-2-3/4-PP

AA(B)344M-PP

VALVE NUMBER	MAXIMUM PRESSURE	NUMBER OF OUTLETS	CONNECTION SIZE
AA(B)344M-2-3/4-PP	125 PSI (9 bar)	1	3/4"
AA(B)344M-2-1-PP		1	1"

Flow Rate: 5 PSI (0.34 bar) pressure drop for 32 GPM (121 l/min) flow.

(B) = BSPT



AA(B)346M-PP

How to order:

Specify valve number.

Example: AA(B)346M-2-1-1/4-PP

AA(B)346M-PP

VALVE NUMBER	MAXIMUM PRESSURE	NUMBER OF OUTLETS	CONNECTION SIZE
AA(B)346M-2-1-1/4-PP	125 PSI (9 bar)	1	1 1/4"
AA(B)346M-2-1-1/2-PP		1	1 1/2"

Flow Rate: 5 PSI (0.34 bar) pressure drop for 100 GPM (322 l/min) flow.

(B) = BSPT



DirectoValve® 340 Series 3-Way Manual Bypass Ball Valves



AA(B)344M-NYB

344M-NYB

3-Way Nylon Manual Ball Valves

- 3-way version diverts flow to either outlet; no shutoff.
- 3/4" or 1" NPT and BSPT (F) connection.

- Wetted parts: Nylon, virgin Teflon®, polypropylene and Viton®.

How to order:

Specify valve number.

Example: AA(B)344M-3-1

AA(B)344M-NYB

VALVE NUMBER	MAXIMUM PRESSURE	NUMBER OF OUTLETS	CONNECTION SIZE
AA(B)344M-3-3/4	300 PSI (20 bar)	2	3/4"
AA(B)344M-3-1		2	1"

Flow Rate: 5 PSI (0.34 bar) pressure drop for 24 GPM (91 l/min) flow.

(B) = BSPT



AA(B)343M-PP

340M-PP Series

3-Way Manual Ball Valves

- 3-way version diverts flow to either outlet; no shutoff.
- 3/8", 1/2", 3/4", 1", 1 1/4" or 1 1/2" NPT and BSPT (F) connection.

- Wetted parts: glass-reinforced polypropylene, virgin Teflon and Viton.

How to order:

Specify valve number.

Example: AA(B)343M-3-3/8-PP

AA(B)343M-PP

VALVE NUMBER	MAXIMUM PRESSURE	NUMBER OF OUTLETS	CONNECTION SIZE
AA(B)343M-3-3/8-PP	150 PSI (10 bar)	2	3/8"
AA(B)343M-3-1/2-PP		2	1/2"

Flow Rate: 5 PSI (0.34 bar) pressure drop for 8 GPM (30 l/min) flow.

(B) = BSPT



AA(B)344M-PP

How to order:

Specify valve number.

Example: AA(B)344M-3-3/4-PP

AA(B)344M-PP

VALVE NUMBER	MAXIMUM PRESSURE	NUMBER OF OUTLETS	CONNECTION SIZE
AA(B)344M-3-3/4-PP	125 PSI (9 bar)	2	3/4" NPT or BSPT
AA(B)344M-3-1-PP		2	1" NPT or BSPT

Flow Rate: 5 PSI (0.34 bar) pressure drop for 24 GPM (91 l/min) flow.

(B) = BSPT



AA(B)346M-PP

How to order:

Specify valve number.

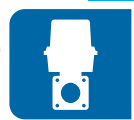
Example: AA(B)346M-3-1-1/4-PP

AA(B)346M-PP

VALVE NUMBER	MAXIMUM PRESSURE	NUMBER OF OUTLETS	CONNECTION SIZE
AA(B)346M-3-1-1/4-PP	125 PSI (9 bar)	2	1 1/4"
AA(B)346M-3-1-1/2-PP		2	1 1/2"

Flow Rate: 5 PSI (0.34 bar) pressure drop for 64 GPM (242 l/min) flow.

(B) = BSPT



Piston-Type Pressure Relief/Regulating Valves

Bypasses excess liquid. Adjustable to maintain control of line pressure at any pressure within the valve's operating range. Selected pressure setting firmly held in place by locknut. Extra large valve passages to handle large flows.



Model 23120

Model 23120

- 302 stainless steel spring and EPDM O-ring.
- Excellent chemical resistance.
- 1/4" port for pressure gauge pipe plug included.

Model 23120A

- Same as 23120 but with 316SS spring and Viton® O-ring.

How to order:

Specify valve number.
Example: (B)23120-1/2-PP

VALVE NUMBER	INLET & PIPE CONNECTIONS	MATERIAL	PRESSURE RANGE
(B)23120-*-PP	1/2" or 3/4"	Polypropylene	150 PSI (10 bar)
(B)23120A-*-PP	1/2" or 3/4"	Polypropylene	150 PSI (10 bar)
(B)23120-*-PP-60	1/2" or 3/4"	Polypropylene	60 PSI (4 bar)
(B)23120-*-PP-60-VI	1/2" or 3/4"	Polypropylene/Viton®	60 PSI (4 bar)

*Specify pipe size.

(B) = BSPT



Model 6815

Model 6815

- Other models for high pressures up to 1,200 PSI (82 bar) are also available.
- Brass also available with hardened stainless steel seat.

How to order:

Specify valve number.
Example: (B)6815-1/2-50

VALVE NUMBER	INLET & PIPE CONNECTIONS	MATERIAL	PRESSURE RANGE
(B)6815-*-50	1/2" or 3/4"	Brass or Aluminum	50 PSI (3.5 bar)
(B)6815-*-300	1/2" or 3/4"	Brass or Aluminum	300 PSI (20 bar)
(B)6815-*-700	1/2" or 3/4"	Brass or Aluminum	700 PSI (48 bar)

*Specify pipe size.

(B) = BSPT



Model 110-1/4 and 110-3/8



Model 110-1, 110-1-1/4 and 110-1-1/2

Model 110

- Removable bonnet for servicing unit without removing valve from line.

How to order:

Specify valve number.
Example: AA(B)110-1/4-300

VALVE NUMBER	INLET & PIPE CONNECTIONS	MATERIAL	PRESSURE RANGE
AA(B)110-*-300	1/4" or 3/8"	Brass	300 PSI (20 bar)
AA(B)110-*-700	1/4" or 3/8"	Brass	700 PSI (48 bar)
AA(B)110-1	1"	Brass, Aluminum or Ductile Iron	150 PSI (10 bar)
AA(B)110-1-1/4	1 1/4"	Brass, Aluminum or Ductile Iron	150 PSI (10 bar)
AA(B)110-1-1/2	1 1/2"	Brass, Aluminum or Ductile Iron	150 PSI (10 bar)

*Specify pipe size.

(B) = BSPT



Model 8460

Model 8460 Diaphragm-Type Pressure Relief/Regulating Valves

- Flow rate to 56 GPM (212 l/min) for 1/2" and 70 GPM (265 l/min) for 3/4".
- Stainless steel springs, responsive to the pressure range of each valve.
- Extra large valve passages to handle full flow from supply line.

- Positive locknut to hold adjustment screw firmly in place. Not affected by jarring and vibration.

How to order:

Specify valve number.
Example: 8460-1/2-50

VALVE NUMBER	INLET & PIPE CONNECTIONS	MATERIAL		PRESSURE RANGE
		INLET BODY	BONNET	
8460-*-50	1/2" or 3/4"	Nylon	Aluminum	50 PSI (3.5 bar)
8460-*	1/2" or 3/4"	Nylon	Aluminum	300 PSI (20 bar)

*Specify pipe size.



DirectoValve® Manual Control Valve

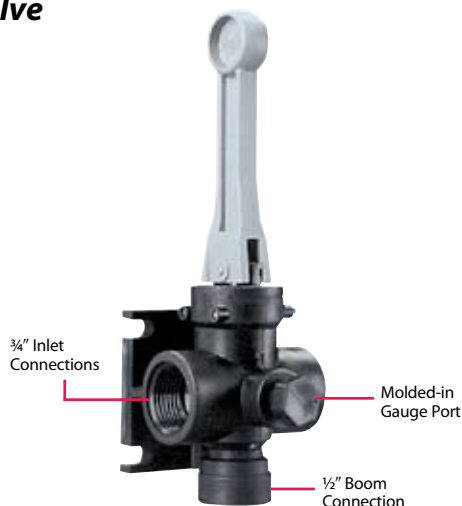
Model 6B

- Molded of corrosion resistant materials; all wetted parts are polypropylene, stainless steel and polyethylene.
- Maximum pressure of 150 PSI (10 bar).
- Large capacity, 12 GPM (47 l/min) at 5 PSI (0.34 bar) pressure drop.
- Molded-in mounting flange and 1/4" NPT gauge port.

- Valves can be ganged together using hex nipple for multiple boom control.
- Easily repaired without removing valve from spray line.

How to order:

Example: AA(B)6B
(B) = BSPT



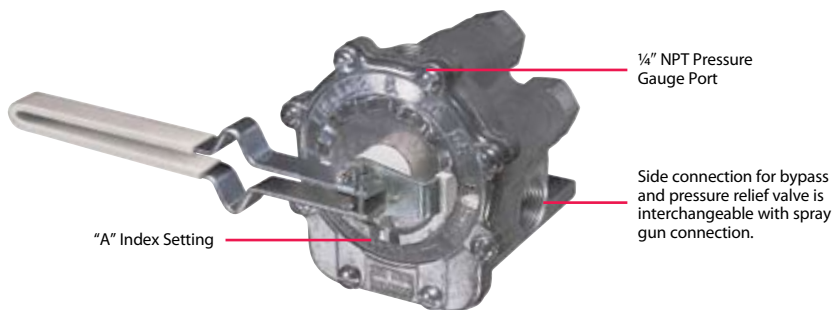
TeeValve® Control Valves

For Selective Control of Three-Section Boom Sprayers at Pressures up to 300 PSI (20 bar).

- Use to open any of three boom section lines in any desired combination.
- Raise lever to open, lower lever to close the valve without changing the indexed position.
- Aluminum construction with stainless steel and plastic internal parts for maximum corrosion resistance.

How to order:

Example: AA17Y



Model AA17

MODEL NUMBER	MATERIAL	MAXIMUM PRESSURE	INLET	(3) BOOM OUTLETS	ACCESSORY OUTLET
AA17Y	Aluminum, Polymer, SS	300 PSI (20 bar)	1" NPT	3/4" (F)	3/4" (F)
AA17L	Aluminum, Polymer, SS	300 PSI (20 bar)	3/4" NPT	3/4" (F)	3/4" (F)



TeeJet® Throttling Valves

For regulating flow in systems equipped with centrifugal pumps where sensitive regulation is required or to control flow in jet agitator return lines. Locknut holds pressure setting firmly in place.

Type 23520



- Polypropylene construction for excellent chemical resistance.
- Pressures to 150 PSI (10 bar).
- 1/2" and 3/4" NPT or BSPT connections.
- 10 PSI (0.6 bar) pressure drop at 6 GPM (37.8 l/min) flow rate for 1/2"; 18 GPM (69 l/min) for 3/4" size.

How to order:

Example: (B)23520-1/2-PP
(B) = BSPT

Type 12690



- Pressures to 125 PSI (9 bar).
- Constructed of Nylon, Celcon®, aluminum, steel and stainless steel.
- Choice of 1/2" or 3/4" NPT connections.
- Maximum flow rate at 100 PSI (7 bar) is 56 GPM (212 l/min) for 1/2" size and 82 GPM (310 l/min) for 3/4" size.

How to order:

Example: 12690-1/2-NYB

Type 12795



- Pressures to 150 PSI (10 bar).
- Available in brass, aluminum or ductile iron.
- Choice of 1", 1 1/4" or 1 1/2" NPT connections.
- Flow rate at 40 PSI (3 bar) is 116 GPM (440 l/min) for 1" and 1 1/4" sizes and 172 GPM (651 l/min) for 1 1/2" size.

How to order:

Example: 12795-1