



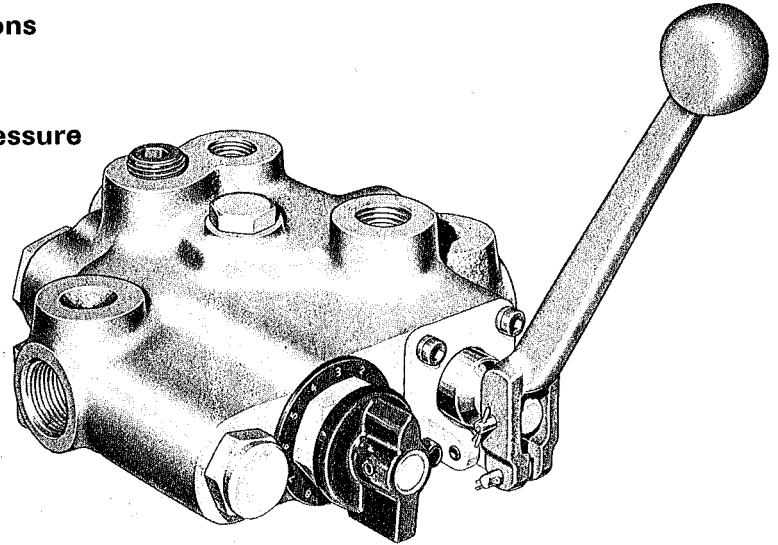
COMBINATION

ADJUSTABLE PRIORITY FLOW DIVIDER AND DIRECTIONAL CONTROL VALVE

MODEL BC

**SPEED &
DIRECTIONAL
CONTROL**

- Output volume adjustable from 0 to 25 GPM.
- Flow constant regardless of pressure variations within $\pm 5\%$ of rated volume.
- Built-in load checks.
- Secondary outlet flow can be used at any pressure up to 2500 PSI without affecting volume of regulated flow.
- Fully balanced spools are select-fit honed for maximum load-holding ability.
- Operate two or more separate systems from a single pump.
- Accurate speed and directional control of motors and cylinders.
- Built-in Differential Poppet-type Relief. (adjustable and non-adjustable)
- Hard chrome plated spools for maximum wear.
- Power beyond provision. (optional)
- Top, Bottom or End outlet. (optional)
- Top inlet. (optional - specify on order)



A manually adjustable, pressure compensated, priority-type flow divider is now combined with directional control and pressure relief in one compact package.

With one revolution of the calibrated flow control knob, the output volume easily and quickly adjusts from 0 to 25 gpm under all operating conditions.

The flow control combines with the single or double-acting spool directional control valve to provide accurate speed and directional control of motors and cylinders.

Valve is equipped with cylinder port load check, optional power-beyond provision, and optional secondary flow outlet port. By use of optional flow divider secondary outlet port, it is possible to operate two or more separate systems from a single pump. System relief is provided by the hydraulically dampened, differential poppet cartridge used in the Cross Model RD relief valve. (For performance curves and full flow pressures see Model RD catalog RD-200.) Valve body is high-strength, one-piece casting and precision machined, hard chrome plated spool, select-fit honed assures precise fit and excellent "load-holding" characteristics. Invertable handle and three mounting holes permit stable mounting and operation in any position. Spool wiper seals are standard and external spool seals are easily removed for maintenance. Cylinder port unidirectional orifice plates are available to restrict flow in either "IN" or "OUT" direction at cylinder port. (Refer to BA valve Catalog BA-200 for unidirectional orifice plates.)

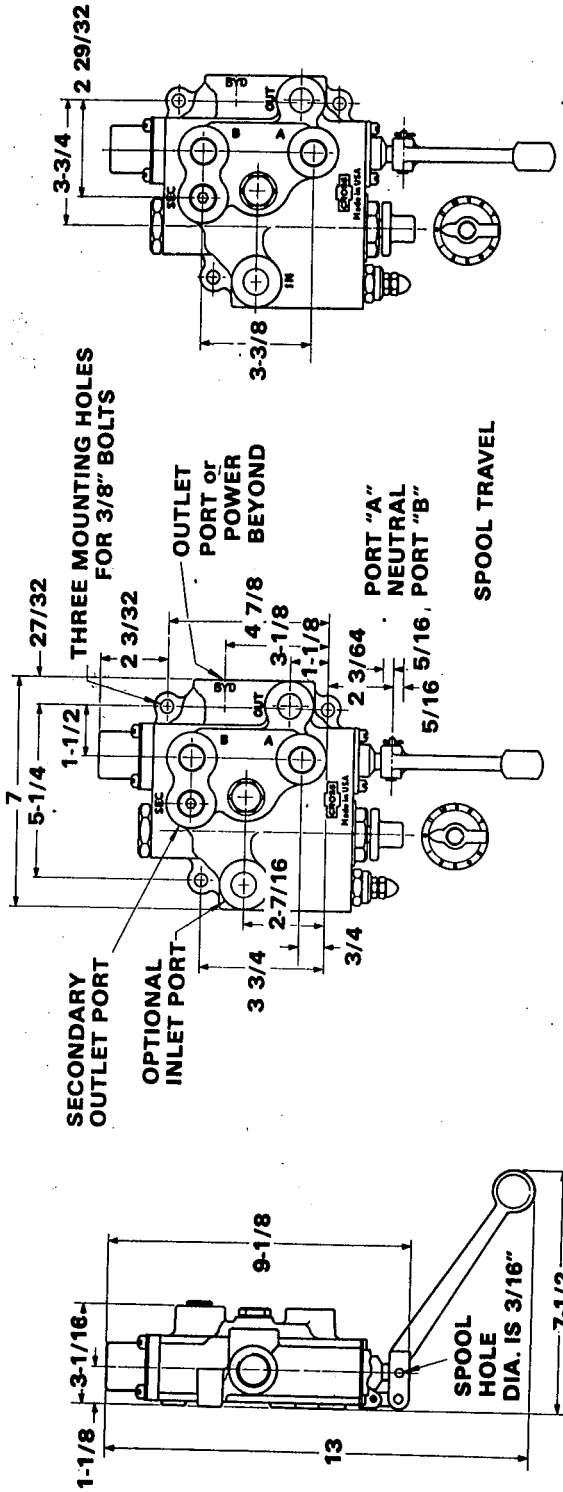
SPECIFICATIONS

PRESSURE.....	Up to 2500 PSI
CAPACITY.....	Up to 25 GPM
FLOW CONTROL.....	0-25 GPM
RELIEF VALVE.....	Adjustable
SHIPPING WEIGHT.....	21 lbs.

SECONDARY PORT FIELD CONVERTIBLE

When ordered with "no port", secondary port is plugged. For field conversion of secondary port for secondary flow, order insert plug No. IV0547.

DIMENSIONAL DATA



SPOOL OPTIONS

1. **4-WAY, 3-POSITION, OPEN CENTER**
Extends and retracts a cylinder. Powers a fluid motor in either direction. Cylinder or fluid motor is locked in position when spool is in neutral (also referred to as Tandem Center).
2. **4-WAY, 3-POSITION, CLOSED CENTER**
Center position stops and holds cylinder or motor. All ports are blocked in neutral position.
3. **3-WAY, 3-POSITION, OPEN CENTER**
For single acting cylinders and unidirectional motors. Cylinder or motor is locked in position when valve is in neutral position (also referred to as tandem center).
4. **3-WAY, 3-POSITION, CLOSED CENTER**
For single acting cylinders. Center position stops and holds cylinder or motor. All ports are blocked in neutral position.
5. **4-WAY, 3-POSITION, OPEN CENTER (MOTORING SPOOL)**
Will do the same as No. 1, except pump unloads to tank when valve is neutral. Cylinder or motor is free to move.
6. **4-WAY, 3-POSITION, CLOSED CENTER (MOTORING SPOOL)**
Same as No. 2, except both cylinder ports are connected to tank. Prevents stalling a fluid motor during slow-down with valve centered.
7. **3-WAY, 3-POSITION OPEN CENTER (MOTORING SPOOL)**
Same as No. 3, except pump unloads to tank in neutral. Cylinder or motor is free to move.
8. **3-WAY, 3-POSITION CLOSED CENTER (MOTORING SPOOL)**
Same as No. 4, except cylinder port is connected to tank in neutral. Prevents stalling a motor during slow-down with valve centered.
9. **4-WAY, 4-POSITION, OPEN CENTER (FLOAT SPOOL)**
Same as No. 1, plus detented in Float position only.
10. **4-WAY, 4-POSITION CLOSED CENTER (FLOAT SPOOL)**
Same as No. 2, plus detented in Float position only.

ORDERING INFORMATION

Cross computer programming serves to expedite delivery of your valves. To assist in fast and accurate delivery, please use the following assembly code breakdown.

VALVE MODEL NUMBER	SPOOL OPTIONS	SPOOL ACTIONS	RELIEF VALVE OPTIONS	POWER BEYOND OPTION	OUTLET PORT LOCATION	FLOW DIVIDER SECONDARY FLOW OUTLET PORT (OPTIONAL)	PORT SIZES IN & OUT WORK PORTS	HANDLE OPTIONS
BC	<ol style="list-style-type: none"> 4-way, 3-position, open center 4-way, 3-position, closed center 3-way, 3-position, open center 3-way, 3-position, closed center 4-way, 3-position, open center (w/motoring spool) 4-way, 3-position, closed center (w/motoring spool) 3-way, 3-position, open center (w/motoring spool) 3-way, 3-position, closed center (w/motoring spool) <p>A. 4-way, 4-position; open center (detent float position) B. 4-way, 4-position; closed center (detent float position)</p>	<ol style="list-style-type: none"> 3-position, with spring centering to neutral (std) 3-position detent (no spring centering) Manual Control (no spring centering) Pressure operated detent (2-position)* Pressure operated detent* (1-position - handle- or spool - in "IN" position) Pressure operated detent* (1-position - handle- or spool - in "OUT" position) <p>*When specified, indicate pressure setting required. If not specified, pressure will be set at 1000 psi.</p> <ol style="list-style-type: none"> 2-position detent with spring centering 1-position detent, "in" only, with spring centering 1-position detent, "out" only, with spring centering Spring extended spool, (no neutral position) Spring retracted spool, (no neutral position) 4-position, spring centering to neutral with detent in float position (available only with No. A and No. B spool options) 	<p>(at flow of 10 gpm.)</p> <ol style="list-style-type: none"> 1000 psi 1500 psi (std) 2000 psi No relief Other - not to exceed 2000 psi (Specify on order) Adjustable relief 500 to 1500 psi (Set at 1000 psi) Adjustable relief 1500 to 2500 psi (Set at 2000 psi) <p>*If pre-setting desired, specify on order.</p>	<ol style="list-style-type: none"> No provision for this option. 3/4" NPTF P/B Sleeve Port 1 1/16-12 (SAE #12) P/B Sleeve Port Conversion Plug 7/8-14 (SAE #10) <p>*Whenever these options are specified a Top, End or Bottom outlet must be specified.</p>	<ol style="list-style-type: none"> T, B, or E when ordering closed center spool, power beyond, or conversion plug. End - when P/B option not specified (std) Top Position Bottom Position End Position (other than std.) Bottom Position with grommet 	<ol style="list-style-type: none"> No Port 7/8"-14 (SAE #10) 1/2" NPTF SAE #8 1 1/16"-12 (SAE #12) <p>*When "No Port" is specified secondary port is plugged.</p>	<ol style="list-style-type: none"> In & Out 3/4" NPTF Ports 1/2" NPTF (std) In & Out 3/4" NPTF Ports 3/4" NPTF In & Out 1 1/16-12 (SAE #12) Ports 3/4-16 (SAE #8) In & Out 1 1/16-12 (SAE #12) Ports 1 1/16-12 (SAE #12) In & Out 3/4" NPTF Ports 3/8" NPTF Other (Specify on order) <p>*Machined for unidirectional orifice plates</p>	<ol style="list-style-type: none"> With complete handle ass'y Less complete handle ass'y Less handle only (Link & pin included)

EXAMPLE: BC1AB1OAO describes a BC value with 4-way, 3-position open center, with spring centering to neutral, relief set at 1500 psi, 3/4" NPTF power beyond sleeve port, outlet port in top position, no flow divider. 3/4" NPTF inlet & outlet and 1/2" NPTF ports with complete handle assembly.



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Form No. BC-100

Litho in U.S.A.