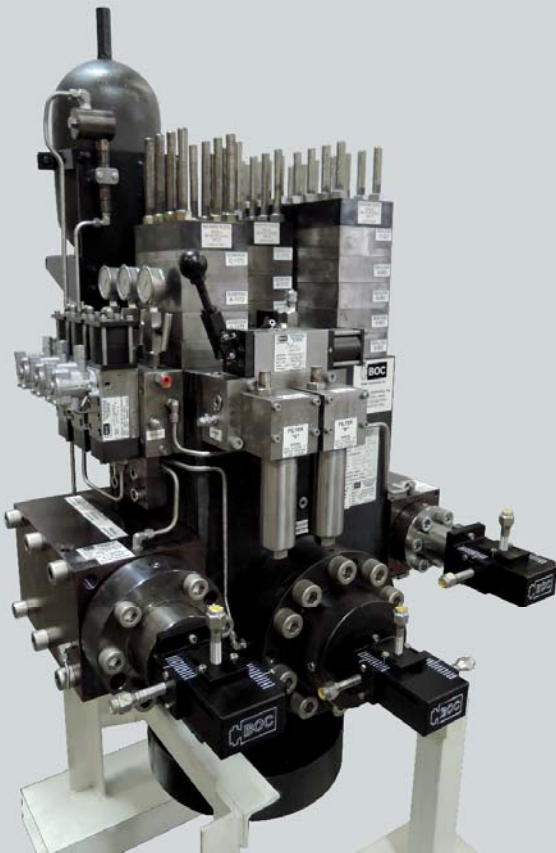




BOC WATER HYDRAULICS

DECOKING VALVES •DV SERIES•



'90 DEGREE' STYLE



'IN-LINE' STYLE



PROUDLY MADE IN THE USA

12024 SALEM WARREN ROAD
PO BOX 1028
SALEM, OHIO 44460
WWW.BOCWATERHYDRAULICS.COM



Water Hydraulics, Inc.

WORD FROM THE PRESIDENT



TODD OLSON, PRESIDENT AND OWNER

In 2004, we were approached by British Petroleum to supply them with a long lasting, serviceable, and reliable control valve package that could withstand the long term adversity of decoking applications. Building upon our successful track record of supplying descaling valves to the steel industry, BOC introduced our innovative, high pressure water cartridge valve to the refining industry and thus the DV Series valve was born. Today our DV Series Decoking Valve has established itself as the top-of-the-line, most reliable, dependable, friendliest to the pump operations, easiest to spare and service valve in the marketplace.

Each BOC valve is on-site engineered to meet your specific application and pumping requirements. Our unique capabilities enable us to minimize the stress on your pump caused by frequent loading and unloading during a cut cycle. BOC valves allow for more reliable operation of auto shift cutting heads. And we go the extra mile to ensure that our valves "bolt up" to your existing field piping envelopes. Rarely are piping changes required when installing a BOC Decoking Valve. Whatever your requirements may be, our Engineering Team will design and our state-of-the-art manufacturing facility will produce a DV series valve to meet your needs.

-Todd



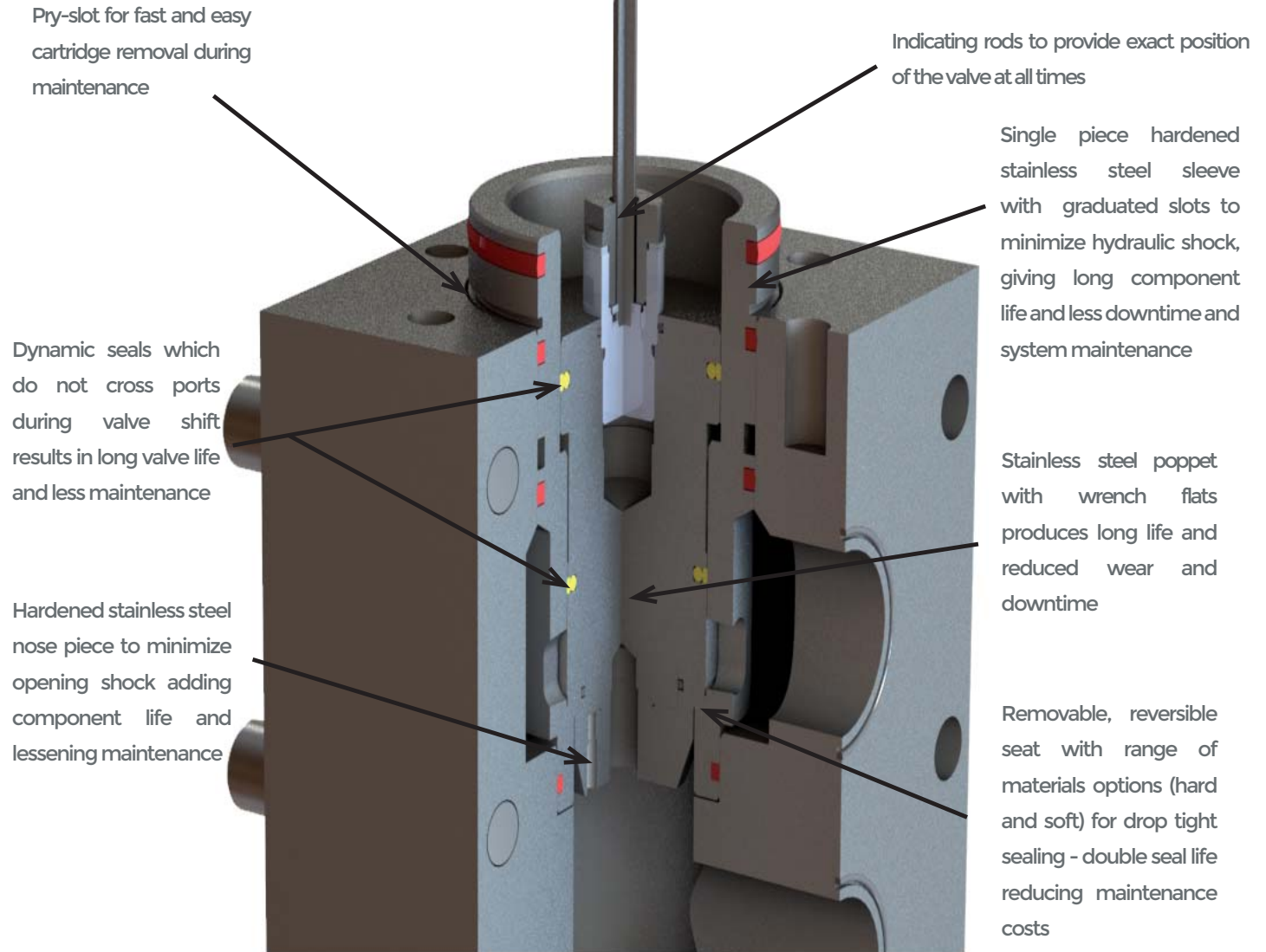
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TODD OLSON, PRESIDENT AND OWNER

VALVE OVERVIEW

BOC's DV Series line of decoking valves are designed specifically for refinery applications.

Quad-S™ Cartridges (Stainless Steel, Soft Shift)



The Heart of our Valves



- Zero Leakage
- High Quality Materials
- Capable of raw water operating up to 6000 psi
- Sizes ranging Din 16 up through Din 200
- Poppet style primary valve action



Size DIN 16 through DIN 200
3/4" - 8", 15gpm - 3000gpm

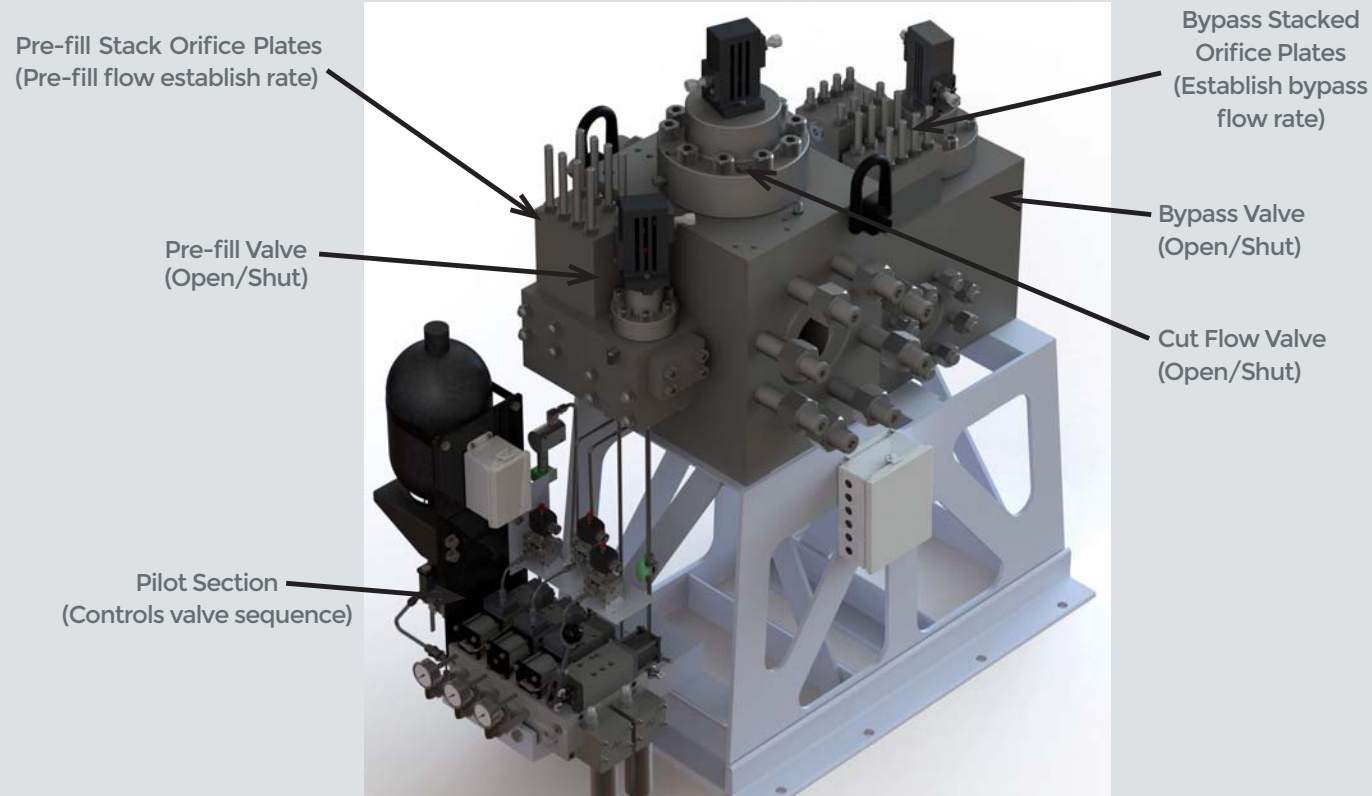
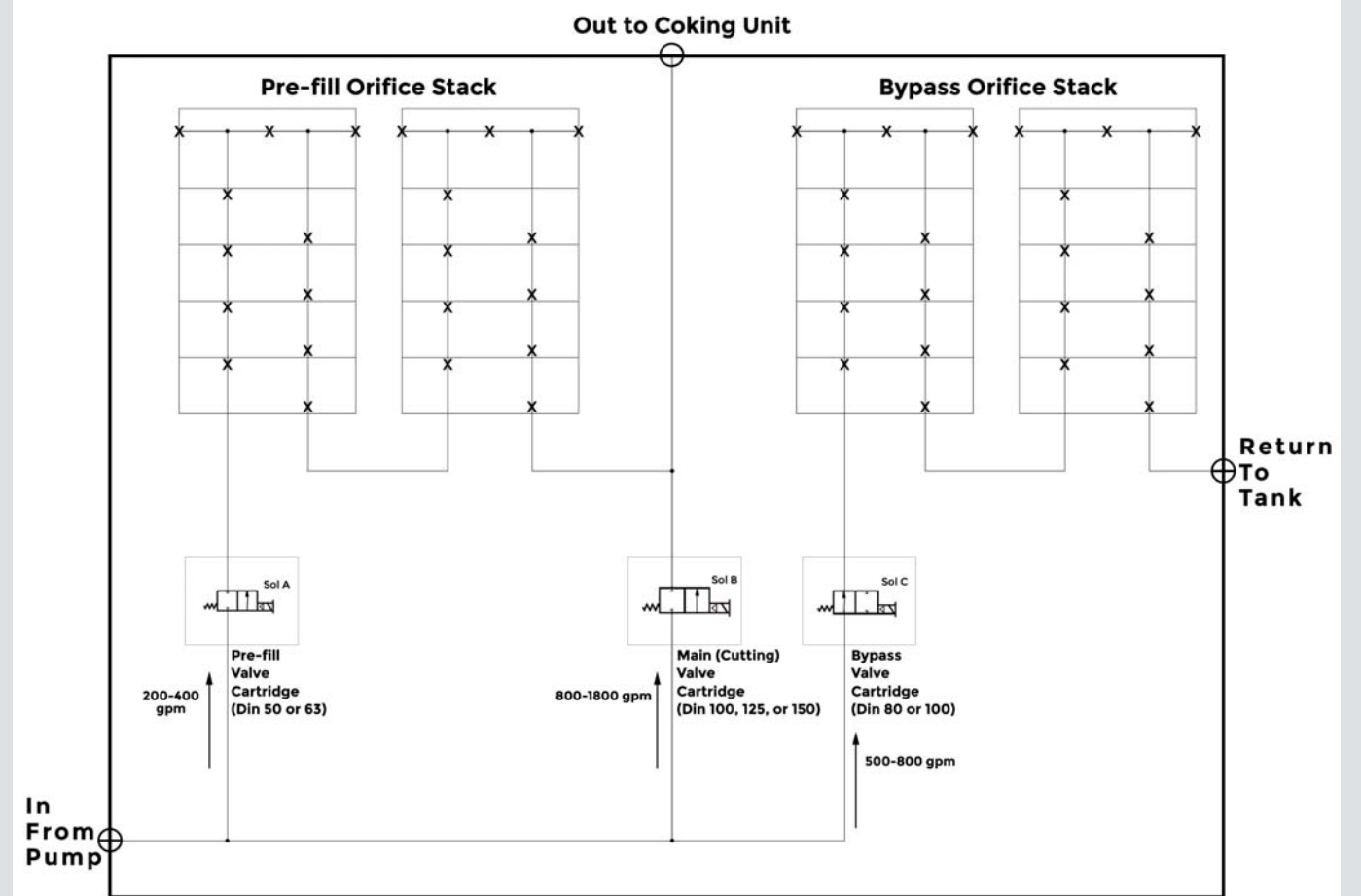
TYPICAL SEQUENCE OF OPERATION



Decoking Valve Building Blocks

- Main (Cut/Drill) Cartridge - Directs fluid to perform decoking cutting operation
- Bypass Cartridge - Directs pressurized fluid to the suction side tank when cutting is not required
- Pre-fill Cartridge - Directs fluid to pre-fill the cutting header before main cut flow is opened
- Pilot Section - Sequence opening and closing of main, bypass, and pre-fill valve cartridges
- Stacked Orifice Plates - reduce pressure and control fixed flow rates during bypass and pre-fill

Typical Schematic Pump and Water Control



Please see the corresponding Code Key on the back cover for detailed options

PRESSURE REDUCING ORIFICE STACKS

PILOT VALVES

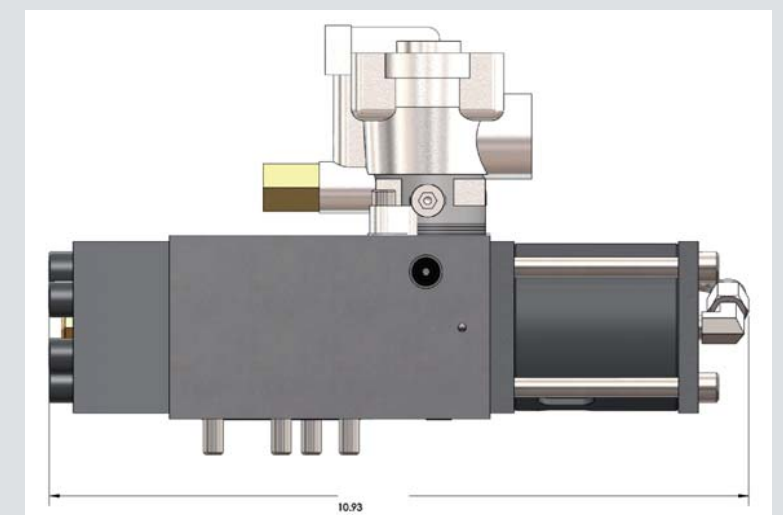
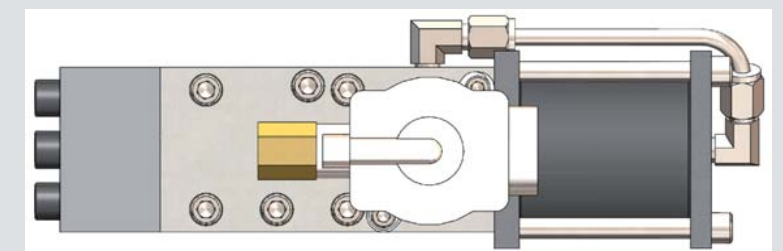
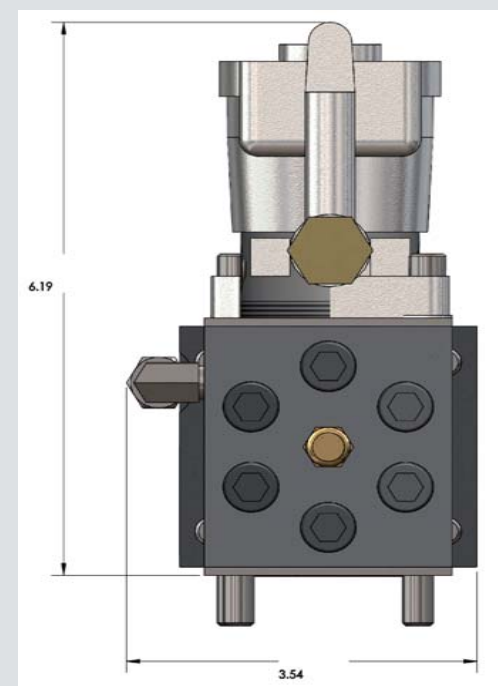
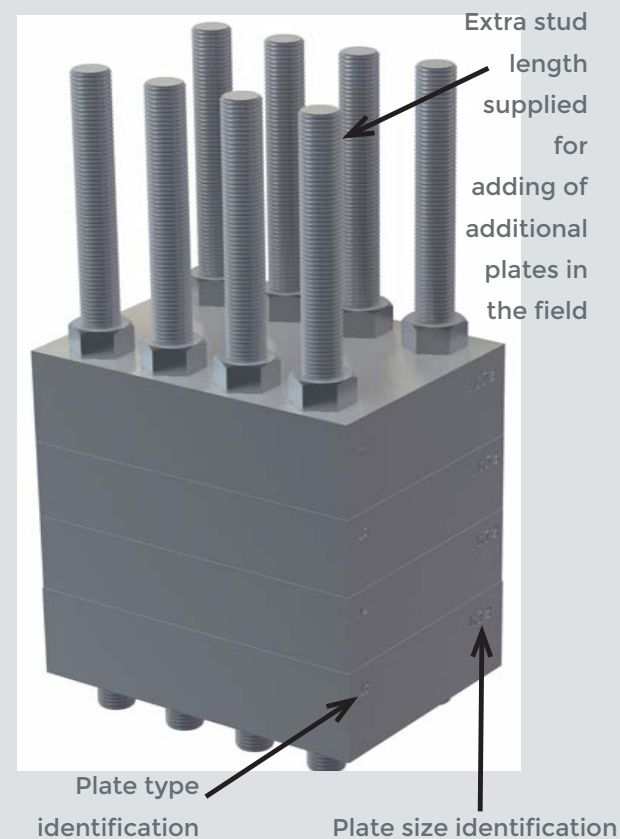
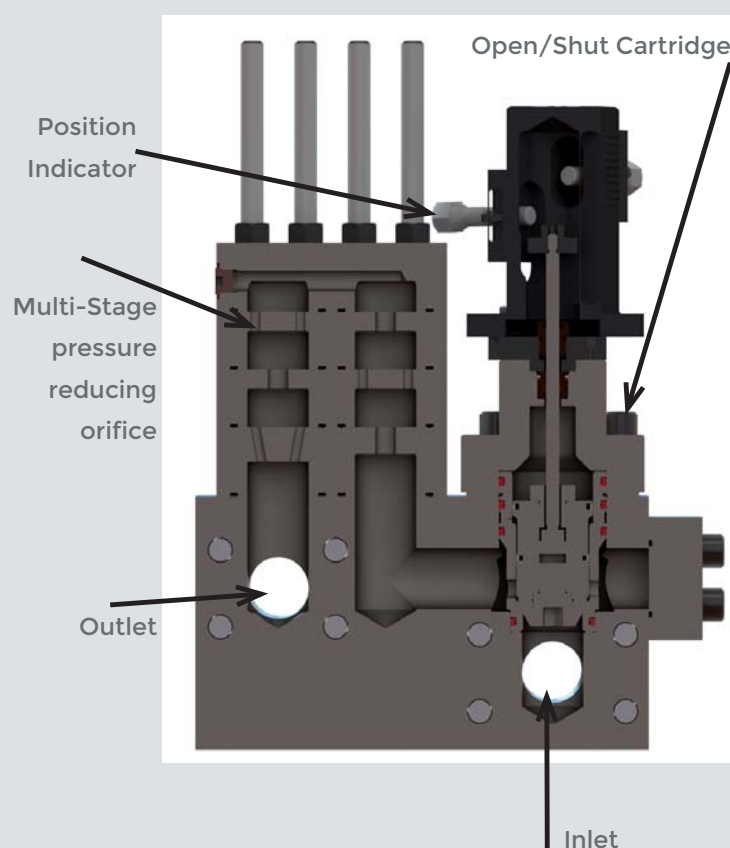


Orifice Stacks Features:

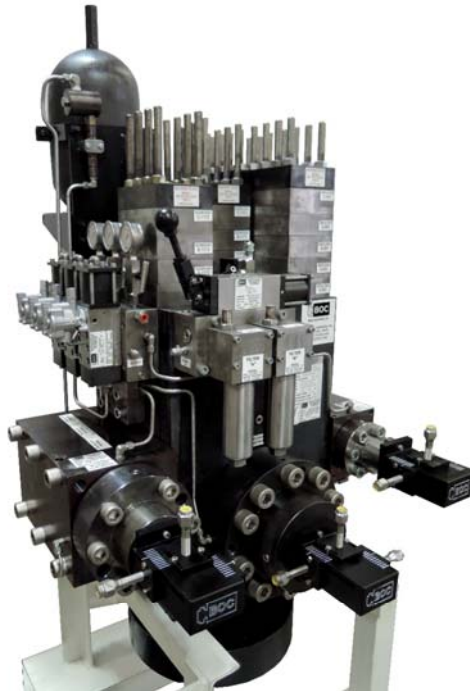
- Reduced pressure, constant flow
- Flow performance can be changed by adjusting stack height or orifice size
- Flow adjustments right in the field without sending the valve back to the factory
- Plates available in 1" through 3" sizes, 25 gpm through 800 gpm

Pilot Valves Features:

- Designed and built specifically for the challenges of piloting decoking valves
- 10 gpm, 3/2 way, air operated, packed spool type directional control valve
- Balanced spool for maximum seal life
- All stainless steel construction for peak life and performance in raw water operations



ADDITIONAL FEATURES



BOC DV Series Decoking Valves offer these additional features for your convenience.:

- Full 3D Animations of Valve Operation
- Operational & Maintenance Manual
- Arrangement and Assembly Drawings
- Removal and Replacement Instructions
- Spare Parts and Seal Kit Information
- Testing and Performance Data
- Engineering Consultation
- Custom Designs

WHY BUY BOC?

**Easy to Manage
Sustained Performance
Best Value**

Complete Engineering Design

BOC's knowledgeable and in-depth engineering team will work directly with you to customize to your needs. We will fit our products to the existing footprint to reduce investments needed for repairs or rebuilds.

Cartridges Reduce Costs

BOC's Quad-S Cartridges (see "The Heart of our Valves" on page 4) maximize your efficiencies while reducing replacement part inventory costs and unexpected downtime due to the interchangeability of parts.

World Class Customer Service

BOC's commitment to our customers is never ending. With ongoing maintenance and repair schedules, as well as on-site visits within 48 hours anywhere in the US, working with BOC is a true partnership throughout the life cycle of our products.

WHY WATER HYDRAULICS?



ENVIRONMENTALLY SAFE

Water hydraulics accomplish the same work as traditional oil based systems, without worrying about the environmental impacts.



EFFICIENT

Water hydraulics is a more efficient way to transmit fluid power; water is incompressible with no energy loss attributable to fluid compression.



SAFE MATERIAL

Water hydraulics is naturally fire resistant. Advertised "fire resistant fluid" can ignite when atomized under pressure. The simple key is water is truly non-flammable.



PROVEN TECHNOLOGY

Water hydraulics is a proven technology and is being used extensively throughout many industries today such as steel, aluminum, mining, medical, food processing...and the list continues to grow!

ORDERING INFORMATION

DV 125/80/50 - F01 - 21 - 624 / 999

MAIN VALVE

BYPASS VALVE

PRE-FILL VALVE

DECOKING VALVE

DIN CARTRIDGE SIZE (MM)	FLOW (gpm)*
050	250
080	519
100	800
125	1230
150	1770

* Flow rate through cartridge at 20 ft/sec

'NORMAL' POSITIONS	
F01	Main - Normally Closed Bypass - Normally Open Pre-fill - Normally Closed

SEAT TYPE	
1	Soft Seat
2	Hard Seat (Stainless Steel)

OPTION CODES	
EXP	Explosion Proof
PI	Position Indication
DXF	Duplex Pilot Filtration
24VDC	Special Solenoid Voltage
0	Other - Please Consult BOC

FLANGE TYPE - BORE	
1	XS Short Flange
2	X Strong Flange
3	XX Strong Flange
4	Sch 160 Flange

PILOT TYPE	
0	No Pilot Installed
1	Air Operated Pilot
2	Wet Pin Solenoid
3	Lever Operated Pilot

FLANGE SIZE	
3	3" Nominal Pipe
4	4" Nominal Pipe
6	6" Nominal Pipe
8	8" Nominal Pipe

FLANGE RATING	
6	600 lb.
9	900 lb.
1	1500 lb.
2	2500 lb.

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