

MASTER DISTRIBUTOR

Heavy Duty Valves

Shear-Seal® Manual Control Valve

Series 140, 200, 920, 5620



145R3WC3

- ✦ Shear-Seal® Technology
- ✦ Low Pressure Drop
- ✦ High Velocity Flow
- ✦ Tolerates Contaminates
- ✦ Low Handle Load at High Pressures
- ✦ 2- and 3-Position Actuators
- ✦ Spring Return Option



141P3WC3

Barksdale's **Heavy Duty Valves** provide superior directional control for fluids and gasses up to 6,000 psi in the toughest industrial applications. Using Barksdale's Shear-Seal® technology, the **Heavy Duty Valve** products offer dependable performance and long life even when the media being controlled is contaminated with debris that would ruin ordinary valves. Featuring rugged ball bearing construction, hardened stainless steel seals, and durable bronze and iron cast housings, these valves will provide trouble-free performance for your critical applications even in the harshest environments.

Barksdale Exceeding Your Expectations Through Our People, Products and Performance
CONTROL PRODUCTS

Heavy Duty Valves

With Barksdale, Pressure is Under Control

Barksdale is a recognized leader in the design and manufacture of superior directional control valves for numerous hydraulic and pneumatic industrial systems. At the core of Barksdale's exceptional valve performance is its ShearSeal® technology which provides zero leakage* and long life in tough applications where other valves fall short.

Our Valves Don't Wear Out...They Wear In

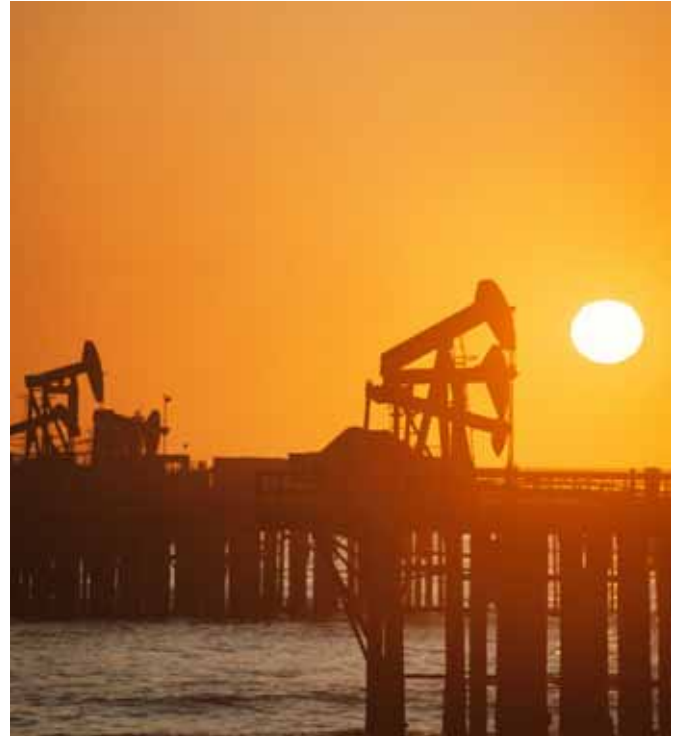
What makes Shear-Seal® so special? This unique design controls the media through internal galleries in the sealing components rather than across the critical sealing faces. This means that contaminants that are common in many industrial systems have little opportunity to damage the valve. The continual sliding motion between the Shear-Seal® faces and the rotor along with the combination of spring and pressure loading allows for automatic adjustment of the seals. Also, the lapping action between the valve sealing elements mends minor sealing surface defects with each movement of the handle. The result is a valve that doesn't wear out – but wears in.

High Flows, High Velocities and Long Life

Due to the Shear-Seal® design, **Barksdale's Heavy Duty Valves** excel in applications where high flows and high velocities are required. Such applications would severely limit the life of an ordinary valve which will often wash out and begin leaking.

Designed For Tough Duty

Barksdale Heavy Duty Valves are constructed of a bronze body and ductile iron housing which can withstand the abuses of harsh industrial applications. The standard hardened stainless steel internal elements are compatible with most common medias. The stainless steel ball bearings provide a low handle force for the operator and



smooth controlled motion even at the highest pressures.

Typical applications include:

- Offshore Drilling Equipment
- Steel Mills
- Nitrogen Charging Panels
- Refineries and Chemical Processing Plants
- Power Generation Facilities

Flexibility in the Design

Barksdale's Heavy Duty Valve is designed to provide a flexible solution to a wide variety of applications. Some of the key options available are:

- Non-interflow Designs
- 2 and 3-Position Detent
- Panel Mounting
- Special O-ring Materials
- Two- and Three-Position Actuators

Barksdale
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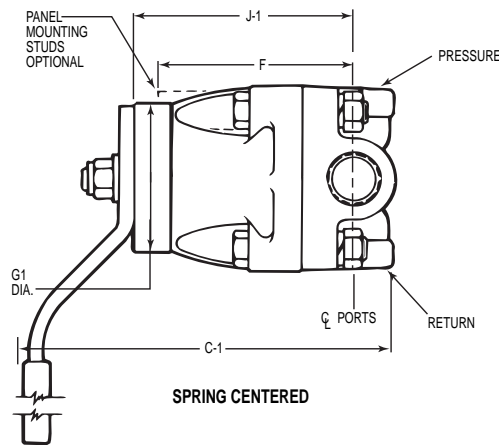
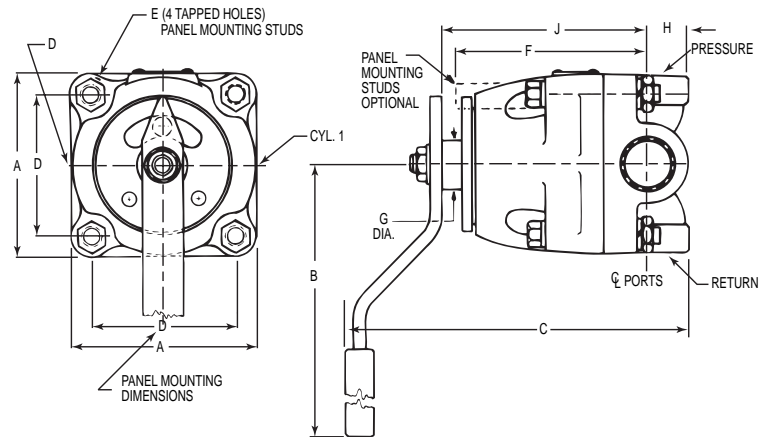
Heavy Duty Valves

Operating Data

- Working Pressure** Air (Pneumatic) up to 4,000 psi (276 bar)
Hydraulic Oil or Lubricated Water up to 6,000 psi (413 bar)
- Flow Capacity, Cv** See Table & Supplemental Guide
- Back Pressure** Must not exceed 250 psi (17.2 Bar) at return port for satisfactory operation
- Proof Pressure** 1-1/2 times working pressure except at return port
- Burst Pressure** 2-1/2 times working pressure
Return port 3,000 psi (206 bar) maximum
- Media Temperature Range** -40° to +250°F (-40° to +121°C)

Material of Construction

- Rotor** 400 Series Stainless Steel
- Pressure Seals** Stainless Steel
- Shaft** Stainless Steel
- Body** Bronze
- Housing** Ductile Iron
- Standard O-rings** Buna N, others available
- Back-up Rings** Teflon®



	Flow Capacity (Approx.)						Approx. Shipping Weight lbs (kgs)
	Main Valve Port Size	Service: Oil and Lubricated Water			Min. Flow Passage Dia.	Cv Factor	
		20 ft/sec gpm (l/min)	40 ft/sec gpm (l/min)	60 ft/sec gpm (l/min)			
140/920 Series Valve	1/4"	3 (11)	6 (23)	9 (34)	1/4"	0.95	4.5 (2)
	3/8" & 1/2"	9 (34)	19 (72)	28 (106)	7/16"	3.20	8.5 (3.9)
200/562 Series Valve	3/4" & 1"	25 (95)	50 (189)	75 (284)	23/32"	9.20	21.5 (9.8)
	1-1/2"	57 (217)	114 (433)	171 (650)	1-3/32"	21.00	48.5 (22)
140/920 Series Valve	1/4"	3 (11)	6 (23)	9 (34)	1/4"	0.95	4.5 (2)
	1/2"	5 (19)	10 (38)	15 (57)	5/16"	1.60	8.5 (3.9)
	1"	9 (34)	19 (72)	28 (106)	7/16"	3.20	21.5 (9.8)

DIMENSIONS in inches (mm)

Port Size NPT	A	B	C	C-1	D	E	F	G Dia.	G-1 Dia.	H	J	J-1
1/4"	2.6 (66.0)	5 (127.0)	4.7 (119.4)	4.7 (119.4)	1.8 (48.3)	3/8 - 16 NC	2.6 (66.0)	0.7 (17.8)	1.9 (48.3)	0.6 (15.2)	2.9 (73.7)	2.9 (73.7)
3/8" & 1/2"	3.3 (83.8)	7.0 (177.8)	6.5 (165.1)	6.5 (165.1)	2.4 (61.0)	3/8 - 16 NC	3.5 (88.9)	1.1 (27.9)	2.6 (66.0)	0.7 (17.8)	3.9 (99.1)	3.9 (99.1)
3/4" & 1"	4.6 (116.8)	10.0 (254.0)	8.7 (221.0)	9.9 (251.5)	3.6 (91.4)	1/2 - 13 NC	4.8 (121.9)	1.3 (33.0)	3.6 (91.4)	1.0 (25.4)	5.2 (132.1)	6.4 (162.6)
1-1/2" *	6.8 (172.7)	12.0 (304.8)	10.5 (266.7)	11.8 (299.7)	5.3 (134.6)	3/4 - 10 NC	6.2 (157.5)	1.3 (33.0)	3.6 (91.4)	1.5 (38.1)	6.5 (165.1)	7.8 (198.1)

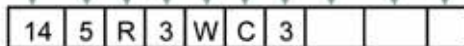
* 1 1/2" available in 140 and 920 Series only

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Shear-Seal® Manual Control Valve

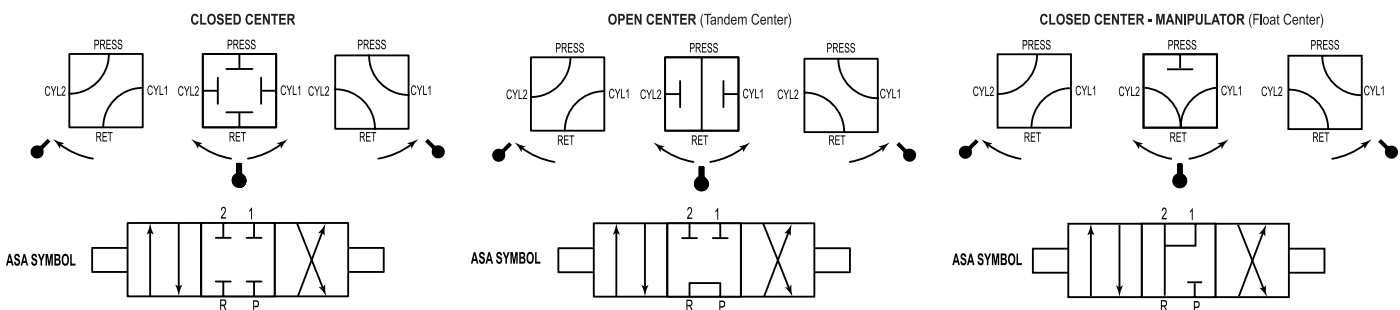
Series 140, 200, 920, 5620

Series	14	Basic 140 Series Valve (3,000 psi)
	20	Basic 200 Series Valve (6,000 psi)
	92	Basic 920 Series Valve (3,000 psi Manipulator)
	562	Basic 5620 Series Valve (6,000 psi Manipulator)
Port Size	1	1/4" NPT Ports
	2	3/8" NPT Ports (Series 140 & 920 Only)
	3	1/2" NPT Ports
	4	3/4" NPT Ports (Series 140 & 920 Only)
	5	1" NPT Ports
	7	1-1/2" NPT Ports (Series 140 & 920 Only)
	Style	R
P		Inline Porting with Panel Mounting Studs
Pressure Range	3	3,000 psi Water/Oil & 2,000 psi Air (Pneumatic) (Series 140, 920)
	6	6,000 psi Water/Oil & 4,000 psi Air (Pneumatic) (Series 200, 5620)
Service	A	Air (Pneumatic)
	W	Lubricated Water or Hydraulic Oil
Flow Pattern	C	Closed Center (Series 140, 200)
	O	Open Center (Tandem Center) (Series 140, 200)
	Q	Manipulator (Float Center) (Series 920, 5620)
Position	3	Three Position
Suffix	-MC	Spring Centering
	-MS	Porting per SAE AS5202
Optional Position	-Z30	2 Position 45° CW Detent
	-Z31	2 Position 45° CCW Detent
	-Z32	2 Position 90° Detent
Optional O-ring Material	-	See Supplemental Guide



Example: 145R3WC3

FLOW PATTERNS (viewed from shaft end)



Barksdale
CONTROL PRODUCTS

3211 Fruitland Avenue • Los Angeles, CA 90058 • ☎ 800-835-1060 • Fax: 323-589-3463 • www.barksdale.com