



Planet Products
c o r p o r a t i o n

4200 Malsbary Rd
Blue Ash, OH 45242
Phone: 513-984-5544
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Catalog





Planet Products Corporation
 4200 Malsbary Rd.
 Cincinnati, OH 45242
 Phone: 513-984-5544
 Fax: 513-984-5580
 Email: info@planet-products.com
 Website: www.planet-products.com

HYDRAULIC PRODUCTS

Planet manufactures specialty hydraulic motors, valves, and pumps that have been used for applications demanding precision and durability. We produce a range of motors that have been used such diverse applications as: personnel carrier turret operation, submarine controls, machine tool cutters, and motion picture camera controls. If you have an application that requires specialty hydraulic products, please call us and talk to our applications engineer.



Item #	Item Name	Maximum Displacement	Torque /100 psi	Nominal Output
<u>MV-A 01-200</u>	MV-A Standard Motor	0.93 in ³	14 in·lb	6 hp
<u>MV-A 01-201</u>	MV-A Heavy Duty Motor	0.93 in ³	14 in·lb	12 hp
<u>MF-.47 01-241</u>	MF-.47 Flange Mount Standard Motor	0.47 in ³	7 in·lb	4.5 hp
<u>MF-.47 01-270</u>	MF-.47 Flange Mount Heavy Duty Motor	0.47 in ³	7 in·lb	9 hp
<u>MF-.47 01-243</u>	MF-.47 Face Mount Standard Motor	0.47 in ³	7 in·lb	4.5 hp

Item #	Item Name	Maximum Displacement	Torque /100 psi	Nominal Output
MF-47 01-269	MF-47 Face Mount Heavy Duty Motor	0.47 in ³	7 in·lb	9 hp
1DA	1DA Valve	N/A	N/A	N/A
DS81C	DS81C Valve	N/A	N/A	N/A
DS83C	DS83C Valve	N/A	N/A	N/A
DS82N	DS82N Valve	N/A	N/A	N/A
DS87C	DS87C Valve	N/A	N/A	N/A
DS820	DS820 Valve	N/A	N/A	N/A
DS88C	DS88C Valve	N/A	N/A	N/A
3DA-A	3DA-A Valve	N/A	N/A	N/A
DP83C	DP83C Valve	N/A	N/A	N/A
DP82N	DP82N Valve	N/A	N/A	N/A
DP820B	DP820B Valve	N/A	N/A	N/A
DP840B	DP840B Valve	N/A	N/A	N/A
DP81C	DP81C Valve	N/A	N/A	N/A
DP820A	DP820A Valve	N/A	N/A	N/A
1CS	1CS Valve	N/A	N/A	N/A
32P-40A	32P-40A Valve	N/A	N/A	N/A
85K15	85K15 Valve	N/A	N/A	N/A
2Y	2Y Pump	3 in ³	N/A	N/A



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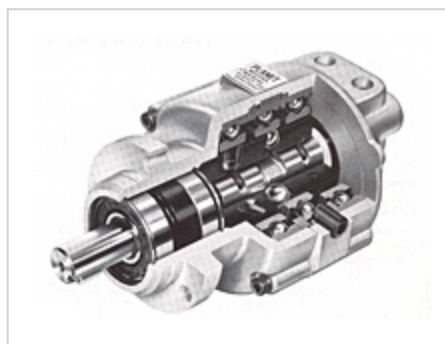
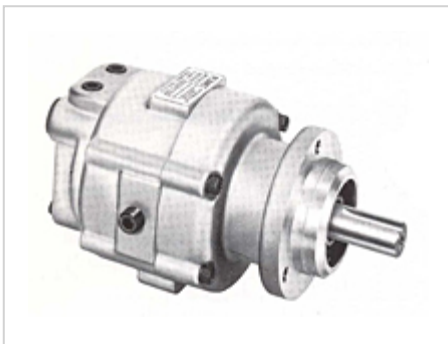
MV-A STANDARD MOTOR

PPC Variable Displacement Hydraulic Motors are adjustable displacement ball piston motors built to the highest standards of accuracy. Designed for applications requiring rugged durability, smooth low speed running, highest efficiency and minimum leakage, they permit precision control of torque and speed. It provides a versatile power package of high efficiency. Adjustments of the motor displacement can be made to exactly match torque and speed characteristics as required by specific conditions.

The motor employs 20 ball pistons uniformly distributed and ported, reacting with precision anti friction bearing displacement rings to provide a virtually pulseless, vibration-free output rotation at any speed. Output torque is constant throughout entire speed range, with constant input pressure. Reversibility with identical dynamic characteristics in either direction is provided by precisely identical flow paths within the motor.

Balanced forces within the motor minimize frictional losses permitting slow rotation under servo control, as well as providing a small start-run pressure. The motor may be operated continuously, reversed or stalled while under full load conditions. It may be mounted in any position. The motor can be run with or without case filled. Empty case is recommended for speeds above 2000 rpm. Operating temperature is limited by hydraulic fluid capabilities. 10 micron filtration ahead of the motor is recommended. Filtration to this degree will prolong motor life and efficiency.

Motor mountings: Flange is standard. Consult factory for other mountings.
Manual control of motor displacement is standard; Hydraulic remote control is available.



MOTOR SPECIFICATIONS

Motor Type	Standard
Mount Type	Flange
Maximum Displacement	0.93 in ³
Torque /100 psi	14 in·lb
Rated Minimum Speed	5 rpm
Rated Maximum Speed	3000 rpm
Rated Pressure	1000 psi
Nominal Output at Rated Speed and Pressure	6 hp
Flow Rate /100 rpm	0.4 gpm
Inertia	0.94 lb·in ²
Rotational Acceleration, 1000 psi	57250 rad/s ²
Maximum Pressure	20 psi
Maximum Overhung Load	300 Pound
Hydraulic Oil	Premium Grade 75 to 300 SSU at 100 °F
Contained Oil Volume - Port to Port	1.62 in ³
Compressed Oil Volume	0.81 in ³
Typical Leakage Rate	20 in ³ /min
Number of Ball Pistons	20
Configuration Options	close coupled shaftless face mounting cross port bleed and relief valves feedback/readout drive shaft flow or directional valve manifolds hydraulic/mechanical displacement shifters manifolds for standard servovalves
Weight	10.25 Pound



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MV-A HEAVY DUTY MOTOR

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Balanced forces within the motor minimize frictional losses permitting slow rotation under servo control, as well as providing a small start-run pressure. The motor may be operated continuously, reversed or stalled while under full load conditions. It may be mounted in any position. The motor can be run with or without case filled. Empty case is recommended for speeds above 2000 rpm. Operating temperature is limited by hydraulic fluid capabilities. 10 micron filtration ahead of the motor is recommended. Filtration to this degree will prolong motor life and efficiency.

Motor mountings: Flange is standard. Consult factory for other mountings.
Manual control of motor displacement is standard; Hydraulic remote control is available.



MOTOR SPECIFICATIONS

Motor Type	Heavy Duty
Mount Type	Flange
Maximum Displacement	0.93 in ³
Torque /100 psi	14 in·lb
Rated Minimum Speed	5 rpm
Rated Maximum Speed	3000 rpm
Rated Pressure	2000 psi
Nominal Output at Rated Speed and Pressure	12 hp
Flow Rate /100 rpm	0.4 gpm
Inertia	0.94 lb·in ²
Rotational Acceleration, 1000 psi	57250 rad/s ²
Maximum Pressure	20 psi
Maximum Overhung Load	300 Pound
Hydraulic Oil	Premium Grade 75 to 300 SSU at 100 °F
Contained Oil Volume - Port to Port	1.62 in ³
Compressed Oil Volume	0.81 in ³
Typical Leakage Rate	20 in ³ /min
Number of Ball Pistons	20
Configuration Options	close coupled shaftless face mounting cross port bleed and relief valves feedback/readout drive shaft flow or directional valve manifolds hydraulic/mechanical displacement shifters manifolds for standard servovalves
Weight	10.25 Pound



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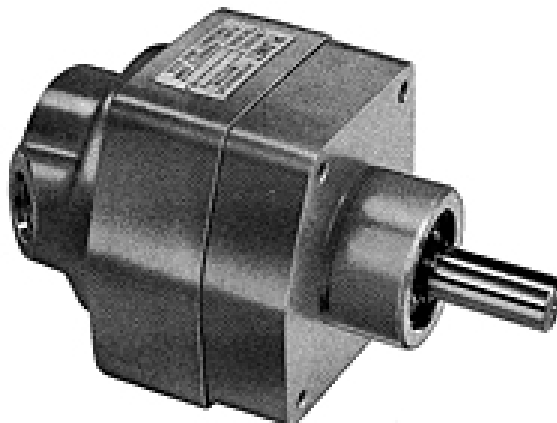
Website: www.planet-products.com

MF-.47 FLANGE MOUNT STANDARD MOTOR

The Planet Fixed Displacement Ball Piston Hydraulic Motor is built to the highest quality standards - a compact light weight, high efficiency motor that provides dependable rotary power with a broad speed range and low noise level.

This motor employs 10 ball pistons uniformly distributed and ported, reacting with precision anti-friction bearing displacement rings to provide a virtually pulseless, vibration-free output rotation at any speed. Output torque is constant throughout entire speed range, with constant input pressure. Reversibility with identical dynamic characteristics in either direction is provided by precisely identical flow paths within the motor.

The motor may be operated continuously, reversed or stalled while under full load conditions. It may also be mounted in any position. Motor can be run with or without case filled. An empty case is recommended for speeds above 2000 rpm. Operating temperature is limited by the hydraulic fluid capabilities. A 10 micron filtration ahead of the motor is recommended. Filtration to this degree will prolong motor life and efficiency.



MOTOR SPECIFICATIONS

Motor Type	Standard
Mount Type	Flange
Maximum Displacement	0.47 in ³
Torque /100 psi	7 in·lb
Rated Minimum Speed	5 rpm
Rated Maximum Speed	4000 rpm
Rated Pressure	1000 psi
Nominal Output at Rated Speed and Pressure	4.5 hp
Flow Rate /100 rpm	0.2 gpm
Maximum Pressure	20 psi
Maximum Case Temperature	140 °F
Maximum Overhung Load	250 Pound
Hydraulic Oil	Premium Grade 75 to 300 SSU at 100 °F
Typical Leakage Rate	15 in ³ /min
Number of Ball Pistons	10
Configuration Options	0.23 cu. in. displacement in same package face mount (for close couple mounting) heavy duty parts for adverse conditions rear tach-shaft output
Weight	5 Pound



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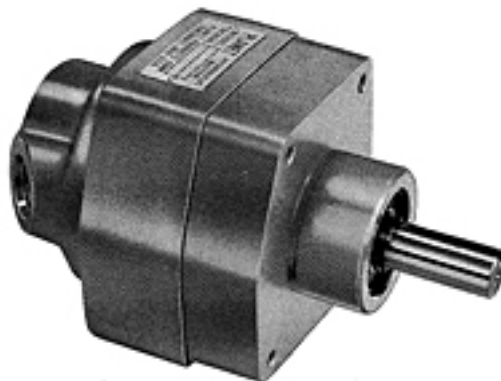
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MF-.47 FLANGE MOUNT HEAVY DUTY MOTOR

The Planet Fixed Displacement Ball Piston Hydraulic Motor is built to the highest quality standards - a compact light weight, high efficiency motor that provides dependable rotary power with a broad speed range and low noise level.

This motor employs 10 ball pistons uniformly distributed and ported, reacting with precision anti-friction bearing displacement rings to provide a virtually pulseless, vibration-free output rotation at any speed. Output torque is constant throughout entire speed range, with constant input pressure. Reversibility with identical dynamic characteristics in either direction is provided by precisely identical flow paths within the motor.

The motor may be operated continuously, reversed or stalled while under full load conditions. It may also be mounted in any position. Motor can be run with or without case filled. An empty case is recommended for speeds above 2000 rpm. Operating temperature is limited by the hydraulic fluid capabilities. A 10 micron filtration ahead of the motor is recommended. Filtration to this degree will prolong motor life and efficiency.



MOTOR SPECIFICATIONS

Motor Type	Heavy Duty
Mount Type	Flange
Maximum Displacement	0.47 in ³
Torque /100 psi	7 in·lb
Rated Minimum Speed	5 rpm
Rated Maximum Speed	4000 rpm
Rated Pressure	2000 psi
Nominal Output at Rated Speed and Pressure	9 hp
Flow Rate /100 rpm	0.2 gpm
Maximum Pressure	20 psi
Maximum Case Temperature	140 °F
Maximum Overhung Load	250 Pound
Hydraulic Oil	Premium Grade 75 to 300 SSU at 100 °F
Typical Leakage Rate	15 in ³ /min
Number of Ball Pistons	10
Configuration Options	0.23 cu. in. displacement in same package face mount (for close couple mounting) heavy duty parts for adverse conditions rear tach-shaft output
Weight	5 Pound



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The motor may be operated continuously, reversed or stalled while under full load conditions. It may also be mounted in any position. Motor can be run with or without case filled. An empty case is recommended for speeds above 2000 rpm. Operating temperature is limited by the hydraulic fluid capabilities. A 10 micron filtration ahead of the motor is recommended. Filtration to this degree will prolong motor life and efficiency.



MOTOR SPECIFICATIONS

Motor Type	Standard
Mount Type	Face
Maximum Displacement	0.47 in ³
Torque /100 psi	7 in·lb
Rated Minimum Speed	5 rpm
Rated Maximum Speed	4000 rpm
Rated Pressure	1000 psi
Nominal Output at Rated Speed and Pressure	4.5 hp
Flow Rate /100 rpm	0.2 gpm
Maximum Pressure	20 psi
Maximum Case Temperature	140 °F
Maximum Overhung Load	250 Pound
Hydraulic Oil	Premium Grade 75 to 300 SSU at 100 °F
Typical Leakage Rate	15 in ³ /min
Number of Ball Pistons	10
Configuration Options	0.23 cu. in. displacement in same package face mount (for close couple mounting) heavy duty parts for adverse conditions rear tach-shaft output
Weight	5 Pound



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MOTOR SPECIFICATIONS

Motor Type	Heavy Duty
Mount Type	Face
Maximum Displacement	0.47 in ³
Torque /100 psi	7 in·lb
Rated Minimum Speed	5 rpm
Rated Maximum Speed	4000 rpm
Rated Pressure	2000 psi
Nominal Output at Rated Speed and Pressure	9 hp
Flow Rate /100 rpm	0.2 gpm
Maximum Pressure	20 psi
Maximum Case Temperature	140 °F
Maximum Overhung Load	250 Pound
Hydraulic Oil	Premium Grade 75 to 300 SSU at 100 °F
Typical Leakage Rate	15 in ³ /min
Number of Ball Pistons	10
Configuration Options	0.23 cu. in. displacement in same package face mount (for close couple mounting) heavy duty parts for adverse conditions rear tach-shaft output
Weight	5 Pound

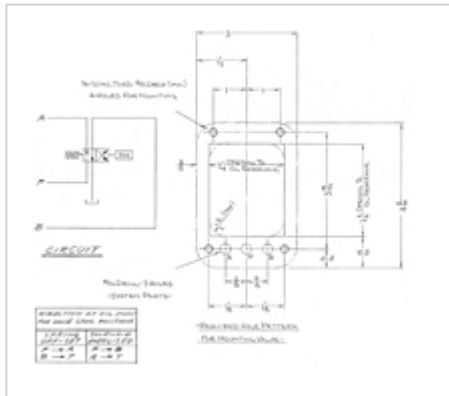
1DA Valve



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1DA VALVE

Single - 4way- Direct Acting Solenoid Valve



Motor Specifications | Specifications

MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
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SPECIFICATIONS

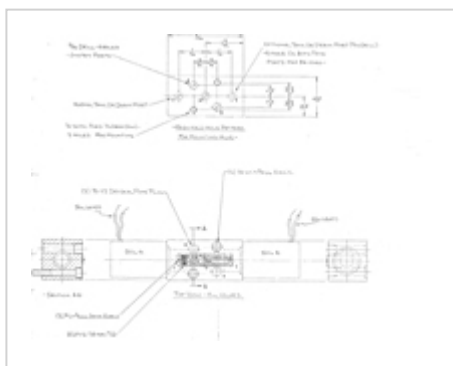
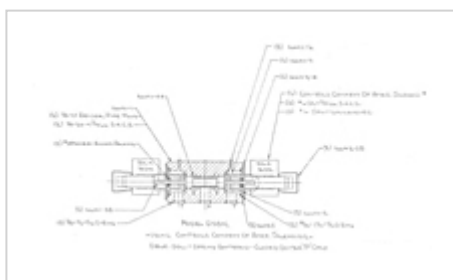
Max Flow Rate	10 gpm
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DS81C VALVE

Double solenoid - Spring Centered - Closed Center "P" Only



MOTOR SPECIFICATIONS

Rated Pressure 2000 psi

Flow Rate /100 rpm 10 gpm

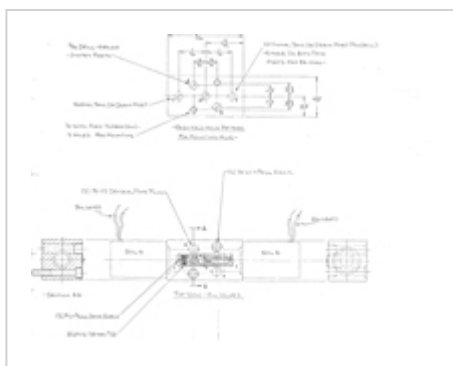
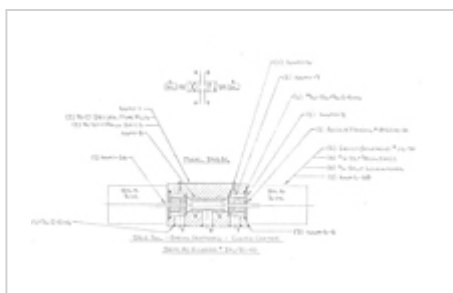


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DS83C VALVE

Double solenoid - Spring Centered - Closed Center

Replaces Vickers DIL-26-10



MOTOR SPECIFICATIONS

Rated Pressure 2000 psi

Flow Rate /100 rpm 10 gpm



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DP82N VALVE

Directonal control 4 port/ 2 position

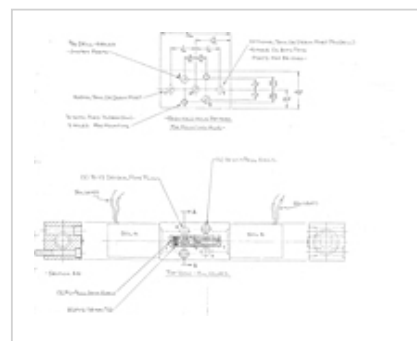
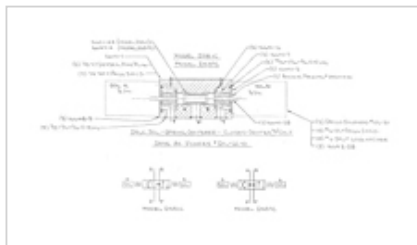
MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
Flow Rate /100 rpm	10 gpm

DS87C VALVE

Double solenoid - Spring centered Closed Center "P" only

Replaces Vickers DIL-60-10



MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
Flow Rate /100 rpm	10 gpm



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corporation

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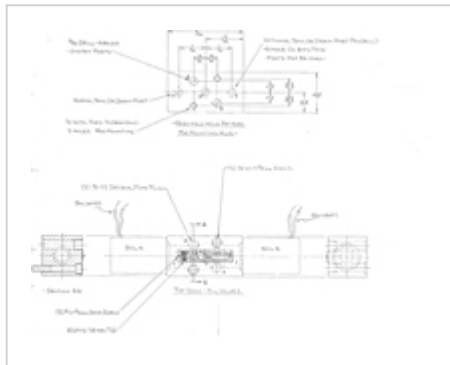
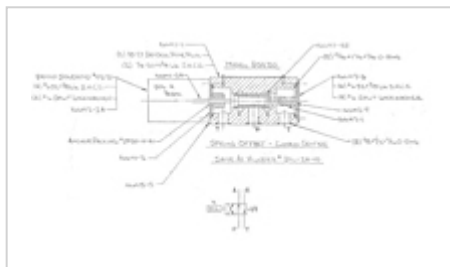
Email: info@planet-products.com

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DS820 VALVE

Spring offset - closed center

Replaces Vickers DIL-2A-10



MOTOR SPECIFICATIONS

Rated Pressure 2000 psi

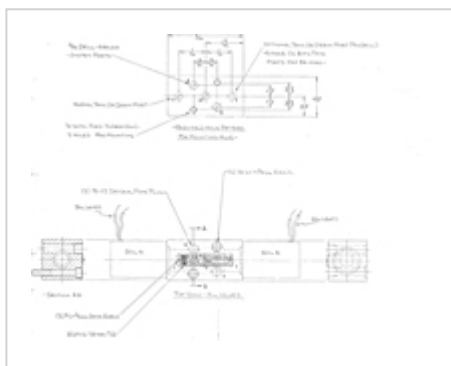
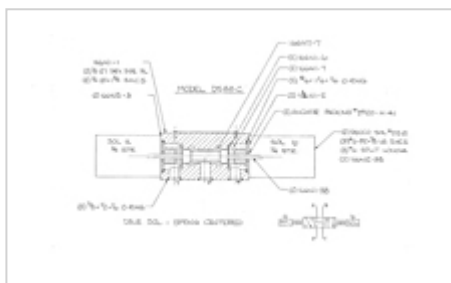
Flow Rate /100 rpm 10 gpm



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DS88C VALVE

Double Solenoid - Spring Centered



MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
Flow Rate /100 rpm	10 gpm



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3DA-A VALVE

3 Spool (2) 4 way (1) 3 way Direct Acting Solenoid Valve

MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
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Flow Rate /100 rpm	10 gpm
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DP83C VALVE

Spring centered directional control 4 port/ 3 position

MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
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Flow Rate /100 rpm	10 gpm
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DP82N VALVE

Directonal control 4 port/ 2 position

MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
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Flow Rate /100 rpm	10 gpm
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DP820B VALVE

Directonal control 4 port/ 2 position

MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
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Flow Rate /100 rpm	10 gpm
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DP840B Valve & DP81C Valve



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DP840B VALVE

Directonal control 4 port/ 2 position

DP81C VALVE

Spring centered directional control 4 port/ 3 positon

MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
Flow Rate /100 rpm	50 gpm



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DP820A VALVE

Directonal control 4 port/ 2 position

MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
Flow Rate /100 rpm	10 gpm

1CS VALVE

Control Selector Valve - Single Spool 4 input/ 8 output

MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
Flow Rate /100 rpm	10 gpm



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32P-40A VALVE

Crossport Relief Valve for 1 cu in motor

MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
Flow Rate /100 rpm	10 gpm

85K15 VALVE

Infeed Only Valve

MOTOR SPECIFICATIONS

Rated Pressure	2000 psi
Flow Rate /100 rpm	10 gpm

2Y Pump



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2Y PUMP

2Y Hand Pump

3 cu in/ stroke, 200 psi working pressure, 1000 psi test pressure



MOTOR SPECIFICATIONS

Maximum Displacement	3 in ³
Rated Pressure	200 psi
Maximum Pressure	1000 psi