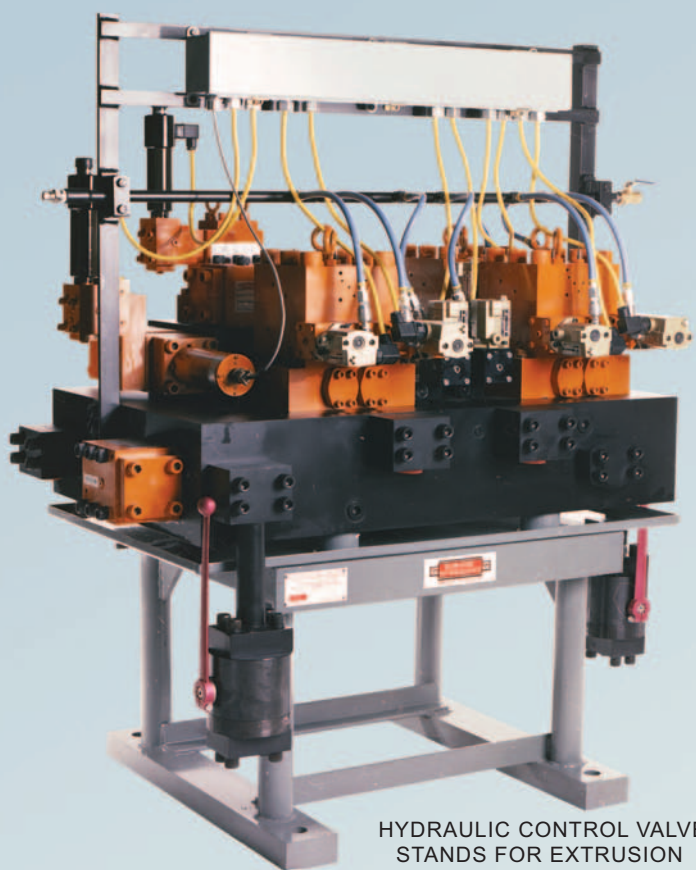


WATER HYDRAULICS FOR EXTRUSION PRESS & HYDRO FORMING

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HYDRAULIC CONTROL VALVE
STANDS FOR EXTRUSION
PRESS CONTROL



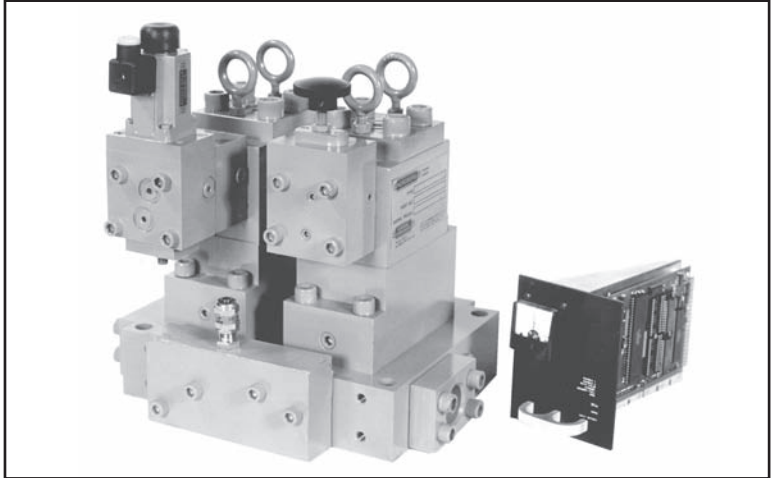
D05 CONTROL VALVE
USED FOR HYDROFORMING



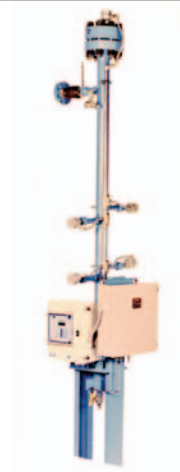
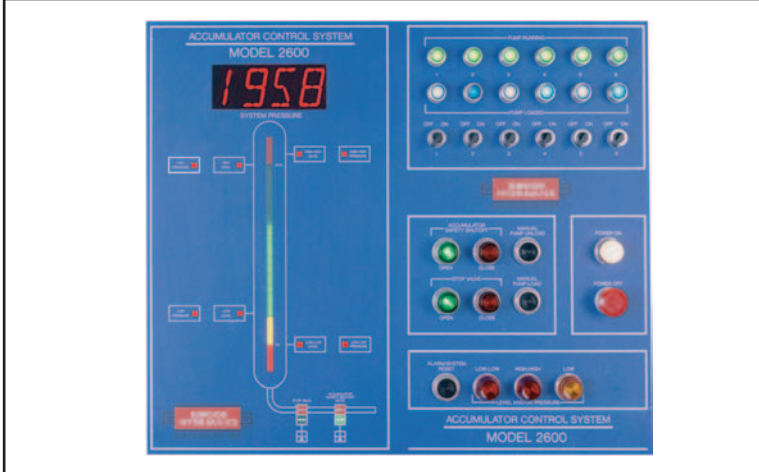
Lockout/Tagout Isolation Valve - D05, D08 and D10



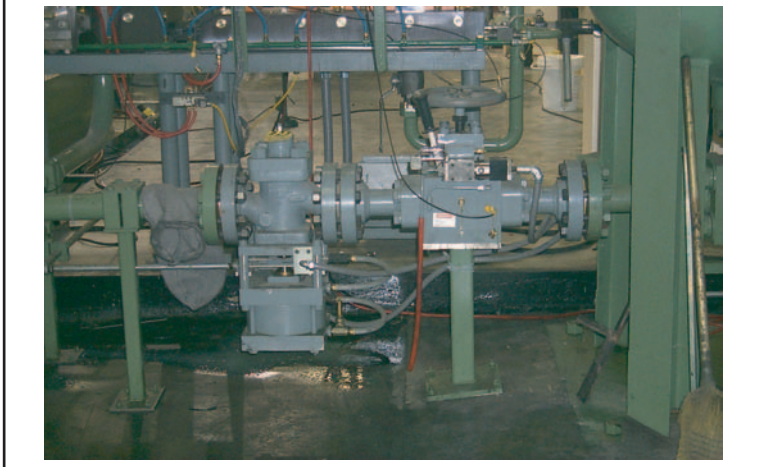
Pressure Control Valve



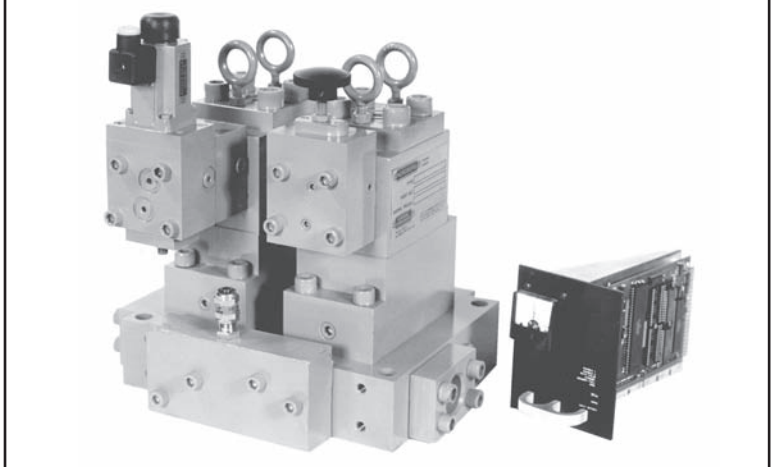
Accumulator Level and Pressure Control System



Balanced Automatic Shutoff Valve With Hydraulically Assisted Stop Valve



Proportional Valve for Extrusion Press Control



Example 1 - 5000 PSI w/Intensify to 58,000 PSI



Hydroforming Press
For Producing
Automotive Frame Parts
Capable to 15,000 PSI

Example 2 - 2500-2900 PSI Copper Alloy Extrusion - Tube and Pipe

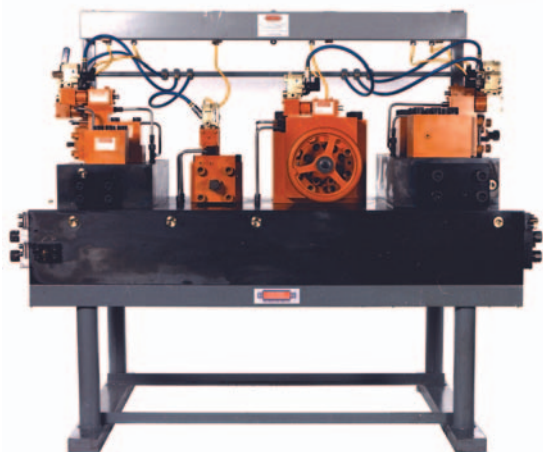


Valve Stand Featuring 2-Way, 3-Way and
Check Valves for Flows of 25-1000 GPM



Pump Unloading/Relief Manifolds

Example 3 - 3000-4500 PSI



Aluminum Extrusion
Valve Stand for Tube
and Pipe Production
Featuring Quick
Response Valves

Product Line Overview

Hydraulic System Components

- Directional Control Valves
- Pressure Control Valves
- Isolation Valves
- Cartridge Valves
- Proportional Valves
- Servo Control Valves
- Valve Stands & Manifolds
- Accumulator Shut-off Valves
- Accumulator Control System
- Pump Bypass Orifice Packages
- Fluid Media: Water/Soluble Oil, Raw Water, Low Viscosity, Kerosene Based

Poppet Style DIN Cartridge

- 2-, 3-, and 4-way control valves
- High flow, low pressure drop
- Simple, "top-down" maintenance
- Positive seal
- Built-in flow control
- 3000 PSI (207 BAR), 4500 PSI (310 BAR), and 6000 PSI (414 BAR) models; others to 15,000 PSI (1034 BAR)
- Cartridge sizes 16 to 100 ISO 7368/DIN 24342 and Elwood DN150 and 200
- Capacities to 1600 GPM (6057 L/Min.)
- Stainless Steel internals
- Polymer static and dynamic seals

Accumulator Control

- Level, pressure and ballast control
- Pump sequencing
- Level and pump status indicators
- Pressure indicators
- Computer port
- Chart recorder outputs
- Pump-enable switches
- Shut-off control
- Stop valve control
- Redundant probe sidearm w/Discreet and LVDT
- Automatic Shut-off
- Hydraulically-assisted stop valves
- Flows to 6000 GPM (22,710 L/Min.)

Packed Spool Valves

- Directional Valve for Applications up to 43 GPM (163 L/Min.)
- Drop Tight Sealing ("0" leakage)
- 3000 PSI (207 BAR), 4500 PSI (310 BAR) and 6000 PSI (414 BAR)
- NFPA Manifold Mount - DO5 Pattern - ISO - CETOP 5
- Stainless Steel Internals

Pressure and Flow Controls

- Relief and Reduce Styles
- Precision Proportional Pressure Control
- 10 GPM (38 L/Min.) - 1000 GPM (3787 L/Min.)
- Operating Temperature: 40°F (4°C) - 150°F (66°C)
- Manifold Mount or SAE-Flange Connections
- Precision Speed Control
- Open and Closed Loop Versions

Common Open and Closed Loop Specifications:

Supply Voltage	120/240 Volts, 50/60 Hz.
Supply Current	2/1 Amps.
Output Current	0 to 1.6 Amps.
Command Signal:	
- Panel Potentiometer.....	1 turn (270°) 5 kohm
- Remote Potentiometer	10 turn, 5 kohm
- External Voltage Command	0-10 volts
- External Current Command	0-50 milliamps
Resolution.....	Infinite
Frequency Response.....	20 Kilohertz
Pressure Transducer:	
- Excitation.....	10 Vdc
- Input Sensitivity	30 mV. full scale
- CMRR.....	60 dB at 60 Hz.
- Common Mode Voltage.....	5 volts
Auxiliary Output Pressure	0-10 Vdc full scale at 5 mA.
Dither Amplitude	0-100% Adjustable
Dither Frequency	5 to 45 Hz.
Command Signal Analog Meter.....	(0 to 100%)
Output Current Analog Meter.....	(0 to 2 Amps)