

TYPE IV CONTROL

MANUALLY OPERATED 4-WAY VALVE, METERING VALVE, AND JOG BUTTON CONTROL FOR OPERATING TWO DOUBLE ACTING CYLINDERS

USE

This control system is used to operate two double acting cylinders where a "jogging" action, possibly remotely controlled, is desired. Since the cylinders may operate at different pressures, a metering valve is required to maintain nearly equal speeds.

TYPICAL APPLICATIONS

This system is used principally to raise or push a load using two double acting hydraulic jacking cylinders. The metering valve is used to keep the load level by maintaining equal cylinder speeds.

OPERATION

The jog button controls the solenoid operating venting valve. When the jog button is pushed, the venting valve will block the relief valve's vent line. This will cause the relief valve to function and will permit pressure buildup to the relief valve's setting. When the jog button is released, the relief valve's vent line will be connected to tank. This will cause the relief

valve to "dump" the combined delivery of the pumps back to the reservoir at low pressure.

The jog button will be mounted on 15 feet of cable for remote control. The metering valve and 4-way valve, however, will remain on the pump unit.

To raise or lower the cylinder rams, the operator:

1. Moves the 4-way valve handle.
2. Pushes the jog button.

The metering valve can be used to control ram speeds when raising or lowering by rotating the valve handle to "meter" or split the flow.

When lowering, there may be some tendency for the low pressure pump to remain unloaded continuously.

If the capability for "locking" the cylinders hydraulically is desired, the "fail-safe" globe valve and check valve arrangement shown on the hydraulic schematic should be added for each cylinder. The "fail-safe" valves can be mounted on the pump unit or on the cylinders. The globe valves and check valves hold the cylinders in position whenever the power is shut off. The globe valves must be opened to retract the rams.

ELECTRIC MOTOR DRIVEN PUMP UNITS

Model Number of Pump Unit and Controls	GPM of High Pressure Pump @ 1800 RPM	GPM of Low Pressure Pump @ 1800 RPM	Electric Motor H.P. @ 1800 RPM	Reservoir Capacity (Gallons)		Shipping Weight (Lbs.) Without Fluid	Maximum Pressure (PSI)	
				Total	Usable		Intermittent	Continuous
84-1033	1.83	--	7½	50	35	690	10,000	6,700
84-1035	1.83	8	7½	50	35	740	10,000	6,700
84-3038	4.76	--	20	50	35	910	10,000	5,150
84-3039	4.76	12	20	50	35	960	10,000	5,150

GASOLINE ENGINE DRIVEN PUMP UNITS

Model Number of Pump Unit and Controls	GPM of High Pressure Pump @ 1800 RPM	GPM of Low Pressure Pump @ 1800 RPM	Gasoline Engine H.P. @ 1800 RPM	Reservoir Capacity (Gallons)		Shipping Weight (Lbs.) Without Fluid	Maximum Pressure (PSI)	
				Total	Usable		Intermittent	Continuous
1036	1.83	--	11.7	50	35	1270	10,000	10,000
1037	1.83	8	11.7	50	35	1310	10,000	10,000
3041	4.76	--	32	50	35	1620	10,000	10,000
3043	4.76	12	32	50	35	1690	10,000	10,000

