## Hydraulic Control Valves for Forklift

Hydraulic Control Valves for Forklift - The control valve is a device which routes the fluid to the actuator. This tool will include steel or cast iron spool that is located in a housing. The spool slides to different locations in the housing. Intersecting grooves and channels route the fluid based on the spool's position.

The spool is centrally located, help in place with springs. In this particular position, the supply fluid can be blocked and returned to the tank. If the spool is slid to one side, the hydraulic fluid is routed to an actuator and provides a return path from the actuator to tank. When the spool is moved to the other side, the supply and return paths are switched. When the spool is allowed to return to the center or neutral place, the actuator fluid paths become blocked, locking it into position.

The directional control is normally intended to be stackable. They generally have a valve per hydraulic cylinder and a fluid input that supplies all the valves within the stack.

Tolerances are maintained very tightly, in order to tackle the higher pressures and so as to avoid leaking. The spools will usually have a clearance inside the housing no less than 25 Ã‚Âµm or a thousandth of an inch. In order to prevent jamming the valve's extremely sensitive components and distorting the valve, the valve block would be mounted to the machine' frame by a 3-point pattern.

The location of the spool could be actuated by hydraulic pilot pressure, mechanical levers, or solenoids that push the spool right or left. A seal enables a part of the spool to stick out the housing where it is accessible to the actuator.

The main valve block is usually a stack of off the shelf directional control valves chosen by flow performance and capacity. Some valves are designed to be on-off, while some are designed to be proportional, as in flow rate proportional to valve position. The control valve is among the most sensitive and costly components of a hydraulic circuit.