

Manufacturers of Custom Fluid Systems



CLARKSON



Valve Automation

Resilient seated knife gate valve and bonneted knife gate applications.

Products for the mining, oil, gas, and power industries; Oil Sands, Mining, Power, Chemical, Municipal and Pulp & Paper industries.

Used in Slurry applications such as mine slurry pipelines. High solid slurries, high solids content, large particle abrasive slurry hydro-transport.

Hydraulic Actuation Systems for valves provide better performance than other actuation methods.

Developed and manufactured a complete line of specialty actuators, hydraulic power units to compliment those products manufactured by other companies.

Plant hydraulic power units for centrally located valves

Powered by electric motors which are connected to your plant electrical system and custom designed to interface with your plant's control system.

Operable in manual or automatic modes.

Typically used together with optional knife gate valve limit switches so that the hydraulic power unit and your plant control system can determine the knife gate's open/closed state.

Available with your choice of diagnostic sensors and alarms.

Typically come complete with accumulators to allow one or more open/close cycles in "manual mode" after a power failure. Can be supplied with or without accumulators.

Can also provide "fail open," "fail closed," or "fail last" behavior, if required.

Field hydraulic power units for remotely located valves

Typically powered by your service vehicle's electrical system.

Can be mounted on your vehicle, in which case they are supplied complete with hoses and hydraulic quick connect couplings suitable for connecting to your valve's hydraulic actuator.

Can be mounted on your valve or Y fitting, in which case they are supplied complete with electrical cables and a junction box for tying in to your service vehicle's electrical system.

Can be used with or without optional valve limit switches.

Advantages of Hydraulic Valve Actuation

Flexibility in speed control. Adjustable open/close speeds.

Variable speed. Valve opens/closes part way at high speed and finishes the stroke at a different speed.

Precise positioning.

Ideal for frequent cycling. Eliminate wear and maintenance of screw components.

Multiple valves can be operated from a single system.

Controls valves in remote locations.

Control Panel Options. From simple pushbutton operation, to sophisticated programmable positioning. Integrate with input signals from level, flow, or pressure sensors.

Confidence of Emergency Actuation. Operations during power failure via fail-safe. Stored energy fail-safe actuators.

Reliability in Hazardous or Hostile Environments. Safe and reliable option.

Design Questions

What **type** of valves?

What **size** are the valves?

What is the operating **speed** of the valves?

How **many** valves?

How many valves will be **operated at one time**?

Will the valves be **operated** by a push-button station at the valve? Or control panel? Or both?

Will the valves be operated from an **external signal**?

Is valve **position indication** required? If so, should this be end of travel only, continuous position indication only? or both?

How **far apart** are the valves? How far from hydraulic system?

How **frequently** will the valves be operated?

What is the **environment**? Extremes of temperature, corrosive, outdoor exposure, or hazardous atmosphere?

Is **power failure** or emergency operation required? Should valve open or close upon power failure?



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