

# Hydraulic Valve Panel (HVP)



Engineering  
*GREAT* Solutions

**Hydraulic Powered  
Actuator Control**

# Hydraulic Valve Panel (HVP)

The Hydraulic Valve Panel (HVP) is designed to control up to four hydraulic powered actuators (HPA); two modulating actuators and two open/close actuators. The HVP can work with an inlet pressure of up to 220, though typically the working pressure of IMI CCI's actuation system is 120-140 bar. In addition to the modulating functions, HVPs are normally equipped with fail safe functions, with a choice between open, close and stay-put. An Intelligent Positioning System (IPS) comes fully installed on the HVP as standard.

*Control up to four actuators*



## Key features

### > Modular valve block

The valve block structure is a stackable modular system without internal tubing and fittings. The base module, fixed to the base plate, always contains an isolating ball valve on the inlet pressure side and a check valve on the return side. Flushing connections at pump and tank line are available in the base module configuration. This module is always a modulating type. All manifolds are available in two sizes and can be mounted independently of each other

### > Optimised proportional valves

The flow characteristic of the proportional directional valves is optimised for controlling IMI CCI valves, enabling excellent position accuracy and high flow velocities with low internal leakage. This allows for a smooth operation during quick open/close, resulting in less wear on mechanical parts

### > Fail functions

The valve block can be configured so that in the case of a power failure, the actuators can execute a predetermined action, that is either open, close or stay put

### > Intelligent Positioning System (IPS)

The Intelligent Positioning System (IPS) is a Proportional Integral Derivative

(PID) controller that can regulate two independent modulating cylinders. The system is designed to work with steam and water valves in steam bypass applications. The IPS is continuously monitoring the actual position of the cylinder and makes adjustments whenever necessary. The behaviours of these adjustments are governed by the PID parameters that can be set via the computer-based Service Tool

### > One-click calibration

IPS is designed to work with position feedback signals between 4 to 20 mA. Inside the IPS cabinet there are two automatic calibration buttons that can scale the feedback signals to match the stroke lengths of the valves, without the need for a connected computer

### > Surface protection

As standard, carbon steel parts such as frame, roof and oil tray are painted with corrosion protection for coastal environments with optional coating suitable for seawater areas with high salinity

### > Flexible design

The HVP design can be fitted with sun roof, be wall mounted or stand on the floor



*Coated for harsh conditions*

## Typical applications

- > Working pressure up to 220 bar
- > Control up to four actuators, two modulating valves and two stop valves
- > Inlet flow up to 250 litres per minute
- > Oil tray with drain as standard
- > Equipped with ports for flushing as standard
- > Intelligent Positioning System (IPS) with simple one-click auto calibration
- > Suitable for outdoor use
- > Operational temperature: -40°C to +70°C
- > Protection: IP66
- > Different bus communication protocols available as option



The HVP can be designed to handle very high oil flows. In this configuration, the actuators can draw pressurised oil from accumulators installed on the HVP frame

## Product Specifications

### Valve block configurations

Number of modulating actuators	1-2
Number of on/off actuators	0-2
Fail mode options	Fail Open
	Fail Close
	Stay Put
Modulating functions	4-20 mA input signal Quick operation by step signal

### Mounting plate

Width	950 mm
Height	980 mm (if stand is added, this increases)
Depth	330 mm
Manufactured in mild steel plate	Equipped with oil tray with drain plug

### Interfaces

Standard	Analogue (4-20 mA)
Optional communication	CAN Bus (standard)
Protocols	CC-Link
	ControlNet
	DeviceNet
	EtherCAT 2-port
	EtherNet/IP 2-port
	Modbus RTU
	Modbus-TCP 2-port
	PROFIBUS
PROFINET-IO 1-port	
PROFINET-IRT 2-port	

### Supply voltage

Standard	24 VDC or 110-230 VAC, 50-60 Hz Other available on request
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### Surface protection

Painting	HX-4 (C4)
	ISO 12944-2
Colour (standard)	NCS 6005-G80Y Equivalent to RAL 7003
Components other than mounting plate are provided with suitable surface treatment.	

### Options

Frame for floor standing
Wall mounting
Sun roof

### Performance

Inlet flow (NG6)	< 130 lpm
Inlet flow (NG10)	< 250 lpm
Max working pressure	220 bar
Proportional directional valve (NG6)	< 40 lpm
Proportional directional valve (NG10)	< 90 lpm
Directional valve (NG6)	< 80 lpm
Directional valve (NG10)	< 150 lpm

### Fluids

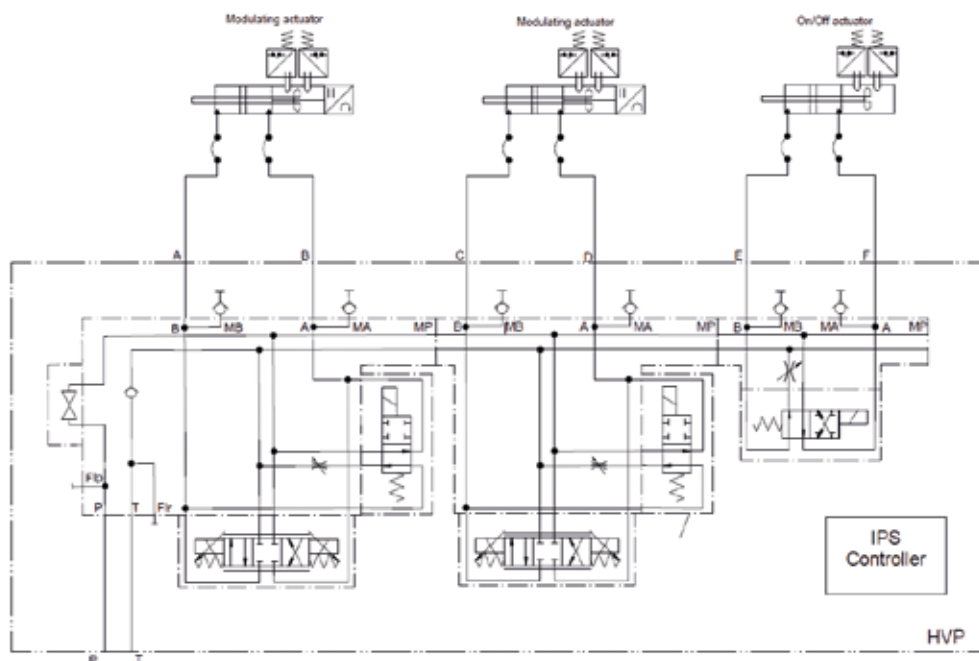
Standard, 46cSt	Mineral oil HLP DIN 51524 part 2 Flash point: 230°C
Optional, 46cSt	Synthetic Polyolester Quintolubric 888-46 Flash point: 300°C

### Installation

Heavy industrial environments / outdoor	
Area classification	Safe area
Ambient temperature	-20°C to +55°C
Relative humidity	100%

## Typical system example

One HVP connected to three HPA actuators, two with modulating functions and one with open/close function. All actuators in the example are configured with fail-close function.



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