

# Hydraulics

## Used in Plastics & Rubber



	Plastic Injection Molding	Plastic Blow Molding	Tire Press	Rubber Molding
<b>Gear Products</b>	<ul style="list-style-type: none"> <li>• S26</li> <li>• L2</li> <li>• GGP</li> </ul>	<ul style="list-style-type: none"> <li>• L2</li> </ul>	<ul style="list-style-type: none"> <li>• L2</li> </ul>	<ul style="list-style-type: none"> <li>• L2</li> </ul>
<b>Vane Products</b>	<ul style="list-style-type: none"> <li>• V</li> <li>• VMO</li> </ul>	<ul style="list-style-type: none"> <li>• V</li> <li>• VMO</li> </ul>	<ul style="list-style-type: none"> <li>• V</li> <li>• VMO</li> </ul>	<ul style="list-style-type: none"> <li>• V</li> <li>• VMO</li> </ul>
<b>Open Circuit Piston</b>	<ul style="list-style-type: none"> <li>• PVM</li> </ul>	<ul style="list-style-type: none"> <li>• PVM</li> </ul>	<ul style="list-style-type: none"> <li>• PVM</li> </ul>	<ul style="list-style-type: none"> <li>• PVM</li> </ul>
<b>GG Motors</b>	<ul style="list-style-type: none"> <li>• Series 2000</li> <li>• Series 6000</li> </ul>	<ul style="list-style-type: none"> <li>• Series 6000</li> <li>• VIS 30</li> </ul>		<ul style="list-style-type: none"> <li>• Series 2000</li> <li>• Series 6000</li> </ul>
<b>Directional Valves</b>	<ul style="list-style-type: none"> <li>• DG4V-3/5</li> <li>• DG5V-5/7/8/10</li> </ul>	<ul style="list-style-type: none"> <li>• DG4V-3/5</li> <li>• DG5V-5/7/8</li> </ul>	<ul style="list-style-type: none"> <li>• DG4V-3/5</li> <li>• DG5V-5/7/8</li> </ul>	<ul style="list-style-type: none"> <li>• DG4V-3/5</li> <li>• DG5V-5/7/8/10</li> </ul>
<b>Proportional Valves</b>	<ul style="list-style-type: none"> <li>• K(B)DG</li> <li>• K(B)HDG</li> <li>• K(B)SDG</li> <li>• K(B)CG</li> <li>• K(B)FDG</li> <li>• EHST</li> </ul>	<ul style="list-style-type: none"> <li>• K(B)DG</li> <li>• K(B)HDG</li> <li>• K(B)SDG</li> <li>• K(B)CG</li> <li>• K(B)FDG</li> <li>• EHST</li> </ul>	<ul style="list-style-type: none"> <li>• K(B)DG</li> <li>• K(B)FDG</li> <li>• K(B)CG</li> </ul>	<ul style="list-style-type: none"> <li>• K(B)DG</li> <li>• K(B)HDG</li> <li>• K(B)SDG</li> <li>• K(B)CG</li> <li>• K(B)FDG</li> <li>• EHST</li> </ul>
<b>Slip-in Cartridge Valves</b>	<ul style="list-style-type: none"> <li>• CVCS / CVI</li> <li>• CVU-EFP1</li> <li>• Valvistor</li> <li>• CVU-EPO</li> </ul>	<ul style="list-style-type: none"> <li>• CVCS / CVI</li> <li>• CVU-EFP1</li> <li>• Valvistor</li> <li>• CVU-EPO</li> </ul>	<ul style="list-style-type: none"> <li>• CVCS / CVI</li> </ul>	<ul style="list-style-type: none"> <li>• CVCS / CVI</li> <li>• CVU-EFP1</li> <li>• Valvistor</li> <li>• CVU-EPO</li> </ul>
<b>Stack Valve</b>			<ul style="list-style-type: none"> <li>• DGMDC</li> <li>• DGMPC</li> <li>• DGMFN</li> <li>• DGMX</li> <li>• DGMC</li> </ul>	
<b>Servo Valves</b>		<ul style="list-style-type: none"> <li>• SM4</li> </ul>		
<b>Flange Valves</b>			<ul style="list-style-type: none"> <li>• CPF</li> <li>• UPF</li> <li>• DCPFS</li> <li>• DICPFS</li> </ul>	
<b>Cylinders</b>	<ul style="list-style-type: none"> <li>• Vickers Series TZ, Hydro-Line Series N5</li> </ul>	<ul style="list-style-type: none"> <li>• Vickers Series TZ, Hydro-Line Series N5</li> </ul>	<ul style="list-style-type: none"> <li>• Vickers Series TZ, Hydro-Line Series N5</li> </ul>	<ul style="list-style-type: none"> <li>• Vickers Series TZ, Hydro-Line Series N5</li> </ul>
<b>Fluid Conveyance</b>	<ul style="list-style-type: none"> <li>• Braided &amp; Spiral Hose</li> <li>• Walterscheid Metric Tube Fittings</li> </ul>	<ul style="list-style-type: none"> <li>• Braided &amp; Spiral Hose</li> <li>• Walterscheid Metric Tube Fittings</li> </ul>	<ul style="list-style-type: none"> <li>• Braided &amp; Spiral Hose</li> <li>• Walterscheid Metric Tube Fittings</li> </ul>	<ul style="list-style-type: none"> <li>• Braided &amp; Spiral Hose</li> <li>• Walterscheid Metric Tube Fittings</li> </ul>
<b>Filtration</b>	<ul style="list-style-type: none"> <li>• H20-gate &amp; Fluid Analysis</li> <li>• Pressure / Return / Offline Filters</li> </ul>	<ul style="list-style-type: none"> <li>• H20-gate &amp; Fluid Analysis</li> <li>• Pressure / Return / Offline Filters</li> </ul>	<ul style="list-style-type: none"> <li>• H20-gate &amp; Fluid Analysis</li> <li>• Pressure / Return / Offline Filters</li> </ul>	<ul style="list-style-type: none"> <li>• H20-gate &amp; Fluid Analysis</li> <li>• Pressure / Return / Offline Filters</li> </ul>

# System Solutions - Plastic Injection Molding

To meet requirements of Injection Molding Machines such as high pressure & flow, closed loop control, high-energy efficiency, Eaton offers a wide range of products and system solutions to customers.

## Pump Schemes

There are many combinations of pumps and valves to provide required system pressure and flow control capability.

1. Load sensing piston pumps (PVM series) for energy efficiency
2. Multiple fixed Vane pumps (VMQ, V series) staged for matching flow requirements and low cost

3. Combination of load sensing piston and fixed vane pumps for energy efficiency and low cost
4. PQ manifolds with: pressure control - K(B) CG-3 / EHST; flow control - CVU-EFP1 / Valvistor

## Injection

Precisely controlling plasticizing process requires accurate, repeatable, and smooth transition from velocity into pressure regulation in order to ensure part quality. Eaton offers PQ-manifolds and high performance proportional valves to control injection process.

1. High performance proportional valves: K(B) HDG5V with 2C & 5C, PQ spool

## Clamping

Eaton offers high performance Proportional valves and Cylinders to move clamp in a quick and controlled motion to improve productivity and reduce waste.

1. High performance Proportional Valves: K(B) HDG5V with 2C, 5C, 133C(Regen) spool, KBFDG5V, DG5V
2. Cylinder - TZ / N5

## Screw Drive

The shear rate of plastic is controlled during screw rotation with the proportional valve.

1. K(B)HDG5V
2. CVU-EFP1 / Valvistor valves

## Mold Height Adjustment

"GG" motor is used to adjust mold height to control closing force in toggle type of IMM.

