HYDRO-LOGIC composite valves revolutionize the structure of hydraulic control valves in a way that makes it possible to control multiple functions with a single valve. Unlike contemporary valves that limit each valve to a single function, the HYDROLOG-IC control valve allows a tremendous reduction in overall equipment size and energy savings as well. In addition, a poppet structure delivers high response, low leakage, and outstanding power. These valves are made possible by fully applying technology of the proven cartridge logic valve. A gasket type and flange type logic valve series can be used with total confidence in a wide variety of hydraulic applications. (For details, see catalog number 9244-2.)

1. **Multi-function composite valve to meet high-level hydraulic needs**
   A single multi-function composite valve controls direction, pressure and flow.

2. **Makes hydraulic equipment more compact**
   Since a single valve performs multiple functions, the number of required valves is reduced, which simplifies the hydraulic circuit and makes the overall design of the equipment more compact.

3. **Fast switching with less shock**
   A poppet valve is used for the basic structure, which eliminates overrun and reduces mass for very fast switching. A restrictor valve built into the pilot line makes it possible to freely set the open/close timing of each port and easily reduce shock.

4. **Less internal leaking than spool type valves**
   Poppet seal construction minimizes seat leaks, while a long slide length ensures much less internal leaking than a spool type valve.

5. **Dramatically reduced hydraulic equipment production cost**
   A fewer valves not only means more compact designs, it also translates into much lower production costs.

6. **Dimensions conform to international ISO standards**
   The 06, 10 sizes gasket type valve mounting dimensions conform to ISO standards for easy interchangeability with existing valves (except for 3-direction valves).

7. **Simple mounting, without modification**
   Unlike cartridge type valves that require drilling of holes in the block, gasket installation and flange connection of this type of valve is quick and simple.

8. **A wide selection of valve models**
   An extensive selection of models includes Size 13 2-direction valves and size 2000 3-direction and 4-direction valves to meet a wide range of needs.

### Main Specifications

<table>
<thead>
<tr>
<th>2-Direction Valves</th>
<th>3-Direction Valves</th>
<th>4-Direction Valves</th>
<th>Pipe Diameter (Nominal Diameter)</th>
<th>Maximum Working Pressure (MPa/kgf/cm²)</th>
<th>Maximum Flow Rate (ℓ/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HT(S)-G06</td>
<td>HY(S)-G06</td>
<td>HF(S)-G06</td>
<td>3/4B</td>
<td>28(286)</td>
<td>200(×2)</td>
</tr>
<tr>
<td>HT(S)-G10</td>
<td>HY(S)-G10</td>
<td>HF(S)-G10</td>
<td>11/4B</td>
<td>500(×300)</td>
<td>1000(×600)</td>
</tr>
<tr>
<td>HT(S)-G16</td>
<td>—</td>
<td>—</td>
<td>2B</td>
<td>32(326)</td>
<td>2300</td>
</tr>
</tbody>
</table>

Note: 1. Flow rates marked with an asterisk (*) apply to 2-direction model number 2G* (pressure reducing valve).
2. The maximum operating pressure for 3-direction valves is 32MPa (325kgf/cm²).
3. Contact your agent for details.
### Main Circuit Symbol Examples

<table>
<thead>
<tr>
<th>Function Symbol</th>
<th>Function</th>
<th>Model No.</th>
<th>Function Symbol</th>
<th>Function</th>
<th>Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLR</td>
<td>Double pump pressure control, with unloading circuit</td>
<td>HF(S)<em><strong>-PLR</strong></em>-**-12</td>
<td>H</td>
<td>Operation switching basic circuit</td>
<td>HF(S)<em><strong>-H</strong></em>-**-12</td>
</tr>
<tr>
<td>DY</td>
<td>A, B port meter out restrictor</td>
<td>HF(S)<em><strong>-DY</strong></em>-**-12</td>
<td>CXZ</td>
<td>A, B port meter in restrictor, counterbalance, overload and P port pressure release</td>
<td>HF(S)<em><strong>-CXZ</strong></em>-**-12</td>
</tr>
</tbody>
</table>

### Applications

- **Pressure MPa(kgf/cm²)**
  - 35(357)
  - 32(326)
  - 28(286)

- **Composite valve series**
  - Cartridge type hydro-logic series

- **Composite valve series**
  - Cartridge series

- **Flow rate ℓ/min**
  - 06 10 16 24
  - 08 10 16 20 24 40 48

- **Applications**
  - **Press Machinery**
    - Stepped pressure presses
    - Scrap presses
    - Extrusion presses
    - Tile presses
  - **Metal Processing Machinery**
    - Shearing machines
    - Bending machines
    - Forming machines
    - Deep-drawing press
  - **Molding Machines**
    - Injection pressure molding machines
    - Rubber injection machines
    - Extrusion molding machines
    - (Injection) Blow molding machines
    - Die casting machines
  - **Iron and Steel Machinery**
    - Continuous casting machines
    - Rolling mills
    - Conveying lines
    - Manipulators
  - **General Manufacturing Machinery**
    - Packing machines
    - Transfer machine
    - Garbage processing plants
    - Granulators
    - Waste paper presses