**Technical Features**

- The valve keeps the pressure drop between the inlet and the pilot connection at a constant level
- Used as a load sensing valve with proportional directional and flow valves to control the flow rate independently of pressure variations
- Excellent stability throughout flow range with rapid response to dynamic pressure changes
- Spring setting of the variable adjustment compensator can be varied from 4 to 14 bar (58 to 203 Psi)
- Quiet and modulate response to load changes
- Integrated stroke limiter for reliable operation
- Adjustable by allen key or hand knob, or delivered with fix setting
- Hardened precision parts
- High flow capacity
- In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227

**Functional Description**

A normally closed, direct-acting, spring loaded pressure compensator valve in the form of a screw-in cartridge.

From the outlet of the controlled directional or proportional flow valve a load sensing signal is taken to the spring chamber of the pressure compensator port X. Typically, 3-way pressure compensators are used as meter-in regulators in parallel with flow restrictor valves when raising or lowering variable loads at the same velocity is required.

The pressure compensator valve than keeps the pressure difference between its pressure inlet and the pressure at the output port of the regulated flow valve nearly constant. When the pressure differential exceeds the pre-set value, the pressure compensator opens and releases excessive flow from the main circuit to port B. If there is no flow demand from the consumer, the compensator allows the oil to flow back to tank and therefore vents the whole system. This prevents the hydraulic system from overheating especially in load sensing circuits with a fixed displacement pump.

**Technical Data**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. operating pressure</td>
<td>350 (5080) bar (PSI)</td>
</tr>
<tr>
<td>Max. flow</td>
<td>80 (21.1) l/min (GPM)</td>
</tr>
<tr>
<td>Control pressure differential</td>
<td>4 … 14 (58 … 203) bar (PSI)</td>
</tr>
<tr>
<td>Fluid temperature range (NBR)</td>
<td>-30 … +100 (725 … 1450) °C (°F)</td>
</tr>
<tr>
<td>Fluid temperature range (FPM)</td>
<td>-20 … +120 (5080 … 3630) °C (°F)</td>
</tr>
<tr>
<td>Mass</td>
<td>0.15 (0.3) kg (lbs)</td>
</tr>
</tbody>
</table>

**Characteristics** measured at \( v = 32 \text{ mm}^3/\text{s} \) (156 SUS)

**Regulated flow related to input pressure**

The characteristic of the pressure compensator corresponds with the flow rate of a PRM2-103Z11/60 proportional directional valve.

![Flow Characteristics Graph](chart.png)

If the pressure resistance increases due to a flow rate increase, the pressure differential also has to increase in order to ensure correct regulation.
**Application Example**

**Meter-in compensator**

![Diagram of meter-in compensator](image)

**Ordering Code**

**TV2-103/S**

3-Way pressure compensator, spool-type, direct-acting

Nominal size

M27x2 / QM3

3-Way pressure compensator

Cartridge design

Pressure range

4 - 12 bar (58 - 174 PSI), 10 bar (145 PSI) "C" Model

10 - 14 bar (145 - 203 PSI), 14 bar (203 PSI) "C" Model

**Surface treatment**

zinc-coated (ZnCr-3), ISO 9227 (240 h)
zinc-coated (ZnNi), ISO 9227 (520 h)

**Seals**

NBR

FPM (Viton)

**Adjustment option**

fixed setting, not adjustable

Allen key (hex. 5), without protective cap

Hand knob, plastic

**Adapter M10x1/G1/4-ED**

addition of equipment for external LS connection

Ordering number: 19860700

**Dimensions in millimeters (inches)**

**TV2-103/S*C**

**TV2-103/S*S**

**TV2-103/S*RP**