Danfoss has developed a system, which prevents engine over-speeding. This feature is called Integrated Brake Function (IBF) and is available for series 90 pumps.

The special components are a pilot operated pressure reducing valve and an orifice installed in the pump end cap. They are located in the return line from the motor and reduce the maximum pressure at the pump while braking.

The main advantage of this function is when starting to brake - when the pump is still at maximum angle – the system pressure across the pump is limited to prevent engine over-speed.

The full braking power of the engine is used in every braking condition.

**Features**

- Avoids over-speeding of the diesel engine and other attached components.
- The hydrostatic braking power of the machine is not influenced. Across the motor, the maximum braking pressure of 450 bar is available.
- No change in driving comfort
- Wear-resistant system
- Nearly the same installation dimensions as standard pumps
- No electronic / sensors are necessary

Comprehensive technical literature online at powersolutions.danfoss.com
General Specifications

<table>
<thead>
<tr>
<th>Availability</th>
<th>Series 90 pumps with 100 cm³ [6.10 in³] and 130 cm³ [7.93 in³]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure rates of the brake valve</td>
<td>175 [2500], 210 [3050], 250 [3625], 280 [4060], 310 [4495] bar [psi]</td>
</tr>
<tr>
<td>IBF</td>
<td>Works only if braking mode comes from forward direction</td>
</tr>
</tbody>
</table>

Circuit Diagram