

The relationship between the volumetric flow rate Q and the pressure drop ΔP across a flow channel can be expressed as:

$$\Delta P^n = \frac{Q}{K \times G^n}$$

where:

P is pressure. ΔP is pressure drop across the flow channel.

G is the “geometry constant” (available for various defined shapes)

K is a constant and

n is the power law exponent for the specific material.