



HDCL1210 FLOW RATE GUIDE PER LENGTH: 182.63L/min (if 7mm gap)
HDCL1210 FLOW RATE GUIDE PER LENGTH: 130.10L/min (if 5mm gap)

TECHNICAL EXPLANATION:

The flow rate through a slot drain is influenced by the slot's cross-sectional area and the hydraulic conditions, including the slope and roughness of the channel. In this estimation, we utilised standard flow rates for a known slot width and adjusted proportionally based on the given slot dimensions. For precise flow rate determination, it's recommended to perform detailed hydraulic calculations considering site-specific parameters or consult with a drainage engineer.

HLDC1210 FLOW RATE:

Width of the slot (W) = 7mm
Total slot length (L) = 2,420mm (2 x 1210)
Slot area (A) = $W \times L = 16,940\text{mm}^2$

1. Cross-Sectional Area

The cross-sectional area of the slot can be calculated as: $A = W \times L$
 $A = 7\text{mm} \times 2,420\text{mm} = 16,940\text{mm}^2$

2. Flow Velocity Estimation:

Using the proportional flow rate calculation from the reference slot system:
We determined that the flow rate per meter of slot length for a **12.7mm wide slot is approximately 136.6 L/min per meter.**

The width of the HIDE Drain Cover Slot (7mm) is **55.12%** of the reference width ($7 \div 12.7 \approx 0.5512$). Therefore, we adjust the flow rate proportionally:

Flow rate per meter = $136.6 \times 0.5512 \approx 75.3\text{L/min/m}$

3: Total Flow Rate:

For a total slot length of 2,420mm (or 2.42 m):

TOTAL FLOW RATE = $75.3\text{L/min/m} \times 2.42\text{m} \approx 182.63\text{L/min}$ (per length installed with 7mm gap)

4: Convert to Cubic Meters per Second

To express the flow rate in m^3/s :

$182.63\text{L/min} = 182.63 \times 10^{-3}\text{m}^3/\text{min} = 0.18263\text{m}^3/\text{min}$
 $0.18263\text{m}^3/\text{min} \div 60\text{s/min} \approx 0.003044\text{m}^3/\text{s}$

Guide Flow Rate:

For the 1210mm Linear HIDE Drain Cover with a 7 mm wide slot, the estimated flow rate is approximately 183 L/min ($0.003044\text{m}^3/\text{s}$) **PER LENGTH** under typical hydraulic conditions.

Disclaimer:

This flow rate is a general guide and may vary significantly depending on installation-specific factors like slope (fall), water pressure, and hydraulic conditions. For exact performance, site-specific analysis or consultation with a drainage engineer is recommended.

