HIDE
Exterior Covers

HCONDCL1000 CONCRETE LINEAR FLOW RATE GUIDE: 150.6L/min (if 7mm gap)
HCONDCL1000 CONCRETE LINEAR FLOW RATE GUIDE: 107.6L/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) = 2,000mm (2 x 1000)
Slot area (A) = W×L = 14,000mm^2

1. Cross-Sectional Area
The cross-sectional area of the slot can be calculated as: A = W × L
A=7mm × 2,000mm = 14,000mm^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 ÷ 12.7 ≈ 0.5512). Therefore, we adjust the flow rate proportionally:

Flow rate per meter = 136.6 × 0.5512 ≈ 75.3L/min/m

3: Total Flow Rate:
For a total slot length of 2,000 (2 x Slots) mm (or 2m):

TOTAL FLOW RATE = 75.3L/min/m × 2m ≈ 150.6L/min (per length installed)

4: Convert to Cubic Meters per Second
To express the flow rate in m^3/s:

150.6L/min = 150.6 × 10^{-3} m^3/min = 0.1506m^3/min
0.1506m^3/min ÷ 60s/min ≈ 0.00251m^3/s

Guide Flow Rate:
For the 1000mm Linear HIDE Concrete Drain Cover with a 7mm wide slot, the estimated flow rate is approximately 151 L/min (0.00251m^3/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.