POLYSAN
POLYMERBETON - POLYMER CONCRETE

Channel Capacity A40-15.0

$$Q = \frac{1}{n} \times \frac{A^{5/3}}{P^{2/3}} \times S^{0,5}$$

Q= The total discharge (m^3 /s)
A=The Total area (section wise) of the channel
P = Wetted perimeter of the channel
S is the longitudinal slope of the channel
n = The Manning roughness coefficient.
Assumptions: 100% filled, clean, new channels, calculated with a slope as described.

Note that this is channel capacities. If mounted with a grate or a reduced outlet, these can be reducing capacity, depending on their shape and size.

Example for **A40-15.0** with a 0,5‰ slope:

n = 0,020 Polymere Concrete gives the below results:

$$Q = \frac{1}{0,020} \times \frac{(0,12727013)^{\frac{5}{3}}}{0,97108506^{\frac{2}{3}}} \times 0,0005^{0,5} \approx 0,03671366\ {m^3}/{s} \approx 36,7\ l/s$$

Example for **A40-15.0** with a 2,3‰ slope:

n = 0,020 Polymere Concrete gives the below results:

$$Q = \frac{1}{0,020} \times \frac{(0,12727013)^{\frac{5}{3}}}{0,97108506^{\frac{2}{3}}} \times 0,0023^{0,5} \approx 0,07874202\ {m^3}/{s} \approx 78,7\ l/s$$

Example for **A40-15.0** with a 3,5‰ slope:

n = 0,020 Polymere Concrete gives the below results:

$$Q = \frac{1}{0,020} \times \frac{(0,12727013)^{\frac{5}{3}}}{0,97108506^{\frac{2}{3}}} \times 0,0035^{0,5} \approx 0,0971352\ {m^3}/{s} \approx 97,1\ l/s$$