

CALCULATION CHART

ROCK CALCULATION FOR PONDS

$(L \text{ in meters} \times W \text{ in meters}) / 4.1 = \text{metric tonnes of Rock \& Boulder}$

Use 1:2:1 Ratio . So for every 1 tonne of 15 - 30 cm rock : 2 tonne of 30 - 45 cm rock : 1 tonne of 45 - 60 cm Boulder. Using a variety of sizes makes the pond look more natural.

Example: 5m x 5m pond needs $(5 \times 5) / 4.1 = 6.1$ tonnes of Rock & Boulder. So $6.1 / 4 = 1.53$. Therefore use 1530 Kg of (15-30cm rock) and 3060 Kg of 30-45cm rock and 1530 Kg of 45-6 cm Boulders.

PEBBLE CALCULATION FOR PONDS

Use 30% of required metric tonnes of POND Rock & Boulder

Gravel 1-4 cm size

Example: 6.1 tonnes of Rock & Boulder required $\times 0.3 = 1830$ Kg or 1.83 tonne

ROCK CALCULATION FOR STREAMS

For every 3m of Stream use 1.4 metric tonnes of rock using 1:2:1 ratio as above

To have a 6m stream into the pond use 2.8 metric tonnes of rock. You will need 700 Kg of 15-30cm rock and 1400Kg of 30-45cm rock and 700 Kg of 45-60cm rock.

PEBBLE CALCULATION FOR STREAMS

Use 30% of required metric tonnes of STREAM Rock & Boulder

Pebble 1-4 cm size

Example: 2.8 tonnes of STREAM Rock & Boulder required above $\times 0.3 = 840$ Kg

ROCK CALCULATION FOR THE FACE OF THE BIOFALL

Mini or Signature BIOFALLS use 1 tonne of large boulder

Use beautiful character boulders

APPROXIMATE VOLUME OF WATER IN A POND OF AVERAGE SHAPE WITHIN A RECTANGULAR GRID.

$L \times W \times \text{average Depth} \times \text{Factor}$.

$L \times W \times \text{average Depth} \times \text{Factor}$. If surface area of Pond approximately 80% of rectangular area then Factor = 80%

Example: 5m long x 5m wide x 0.6m average depth x 80% = 12m³ or 12,000 litres

APPROXIMATE VOLUME OF WATER IN A STREAM

$L \times W \times .077 \times 1000 = \text{Its in flow}$.

Example: 3m x 0.6m x .077 x 1000 = 138.6 Its.

HOW BIG SHOULD YOUR PONDLESS WATERFALL RESERVOIR VOLUME BE?

$L \times W \times .077 \times 1000 \times 2$

Example: $(3m \times 0.6m \times .077 \times 1000) \times 2 = 277.2$ Its.

AQUABLOX REQUIRED IN RESERVOIR

Reservoir basin volume /121 for large aquablox or 64 for small aquablox = Aquablox required.

Example : $277.2 / 121 \text{ Its} = 2.2$ Always round up so use 3 large aquablox

AVERAGE APPROXIMATE MONTHLY ELECTRICAL CONSUMPTION

$(\text{amps} \times \text{volts} / 1000) \times (\text{kW per hour costs}) \times 730 = \text{monthly cost}$