Composting toilets since 1939
Clivus Multrum

- Invented in Sweden in 1939 by Rikard Lindström
- Established distribution in 15 countries
  - Europe
  - North America
  - South Korea
  - Australia & New Zealand
- >20,000 units installed

www.clivusmultrum.eu
The Bio-Cycle
Some Basics

Average person

- 5x/day to the bathroom
- Every 2.7 hours
- 2 litres/day
Main Benefits

- No / Low water consumption
- No smell
- No discharge
- No chemicals
- Low maintenance
- Low cost
- Use of end products
  - Compost
  - Fertiliser

www.clivusmultrum.eu
Why & When?

• No access to sewage
• Limited or no access to water
• Re-use of end-products
  – Fertilizer
  – Compost
How does it work?
Compost Volume Reduction

- Yr1: 100%
- Yr2: 35%
- Yr3: 15%
- Yr4: 7%
- Yr5: 4%
- Yr6: 3%
- Yr7: 2%
Test Results

No pathogens!

Fertiliser Nutrients
Installation - Waterless

www.clivusmultrum.eu
Waterless Installation

Required Equipment

- M100 or M150
- CL200 or CL400
- Fan
- Wood shavings
- ø100mm ventilation pipe
- ø250mm discharge pipe (optional)
- Garden hose (optional)
Vacuum Flush Installation

Required Equipment

- M100 or M150
- CL700
- Vacuum Pump
- Fan
- Fluid Storage Tank
- Submersible Pump
- Wood Shavings
- Ø38mm Discharge Pipe
- Ø100mm Ventilation Pipe

www.clivusmultrum.eu
Toilet Cabins

www.clivusmultrum.eu
Commercial Facility
2 toilets – 65,000 visitors per year
Commercial Facility

Large

- 9 toilets fixtures
- 3 composters
- 200,000 visitors per year

www.clivusmultrum.eu
Bronx Zoo – New York

- 15 toilets fixtures
- 10 composters
- 500,000 visitors per year
Composting Tanks (1)

**M150**

H x D x W = 150 cm x 115 cm x 79 cm

Capacity:
- 1000 liters total
- Max. 850 liters compost
- Max. 100 liters leachate
- Starter bed is ~150 liters
- 6,000 visits/year

**M100**

H x D x W = 100 cm x 115 cm x 79 cm

Capacity:
- 650 liters total
- Max. 500 liters compost
- Max. 100 liters leachate
- Starter bed is ~150 liters
- 3,000 visits/year

Made of durable black recycled (and recyclable) polyethylene. The walls have a 6 mm thickness.

www.clivusmultrum.eu
Composting Tanks (2)

M300-M350

- H x D x W = 176 cm x 200 cm x 167 cm
- Total volume: 4.2 m³
- Up to 4 toilets fixtures

M300 Capacity:
- Max. 2.3 m³ compost
- Max. 1.1 m³ leachate
- 25,000 visits/year

M350 Capacity:
- Max. 3.6 m³ compost
- Max. 335 liters leachate
- 38,000 visits/year

Made of durable black recycled (and recyclable) polyethylene. The walls have a 9 mm thickness.

www.clivusmultrum.eu
Toilet Fixtures (1)

**CL300**
H x D x W = 16 cm x 53 cm x 40 cm

Color: White (glossy)

- Glass fiber and polyester resin base
- Gelcoat finishing
- Stainless steel inside
- Standard toilet seat

**CL310**
H x D x W = 16 cm x 50 cm x 36 cm

Color: White

- Vitreous china base
- Standard toilet seat

These waterless toilet fixture are mounted on a bench, right above the composting tank. They connect to a 250mm discharge pipe.
Toilet Fixtures (2)

**CL200**

- H x D x W = 46 cm x 50 cm x 36 cm
- Color: White
  - Vitreous china base
  - Standard toilet seat

**CL400**

- H x D x W = 46 cm x 53 cm x 40 cm
- Color: White (glossy)
  - Glass fiber and polyester resin base
  - Gelcoat finishing
  - Stainless steel inside
  - Standard toilet seat

These waterless toilet fixture are mounted on the floor, right above the composting tank. They connect to a 250mm discharge pipe.

www.clivusmultrum.eu
Toilet Fixtures (3)

**CL500**

H x D x W = 46 cm x 52 cm x 39 cm

Color: White

- Micro-flush (~0.5 liter/flush)
- Up to 70 cm displacement from composting tank
- Discharge pipe with max. 45°
- Connects to 76mm/3 inch discharge pipe
- Water through standard 0.5 inch NPT connection.
- Bowl made of porcelain
- Foot-operated mechanical flush mechanism which seals the discharge pipe

**CL510**

Same as CL500, and:

- Vacuum flush (~0.5 liter/flush) toilet
- Up to 15m displacement from the composting tank, and 1.8m up
- Connects to 38mm/1.5 inch discharge pipe
- Requires vacuum pump

www.clivusmultrum.eu
Toilet Fixtures (4)

**CL700**

H x D x W = 46 cm x 47 cm x 38 cm

Color: White

- Vacuum flush (~0.5 liter/flush)
- Up to 15m displacement from the composting tank, and 1.8m up
- Connects to 38 mm/2 inch discharge pipe
- Water through standard 0.5 inch NPT connection.
- Bowl made of porcelain
- Requires vacuum pump
- Electronic control panel

www.clivusmultrum.eu
Dry Urinal

**CL100**

H x D x W = 71 cm x 41 cm x 39 cm

Color: White

- Does not use water
- No foul odours entering the bathroom
- Easy to install and clean
- Made of vitreous china

**CL140 Urinal Trap**

- Traps foul odours coming from pipe
- Opens with a liquid flow and closes with its own gravity
- Installed under the drain
- Available as spare part

[www.clivusmultrum.eu](http://www.clivusmultrum.eu)
Thank You!

clivusmultrum