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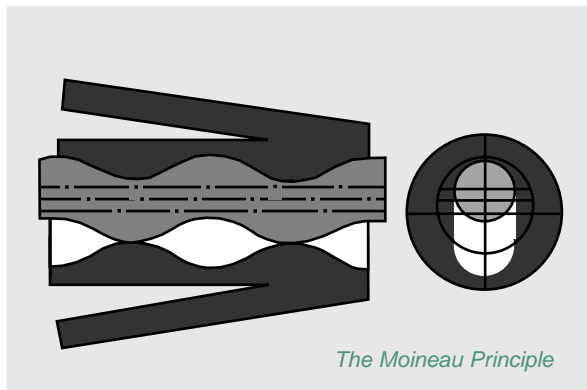
one

Environment One Low Pressure Sewer Systems

engineered

to do one job

perfectly.



The Moineau Principle

engineered
to do one job
perfectly.

The GP 2000i grinder pump station has evolved from everything we've learned in more than 30 years of engineering low pressure sewer systems.

The pump stations incorporate the grinder pump, motor controls and level sensing device integrated into a compact unit, easily removable for servicing when necessary.

The progressing cavity pump is based on the Moineau principle. A rotor turns within a stator, creating a sequence of sealed chambers. The precision cast and polished stainless steel rotor moves waste water through these chambers at a nearly constant flow, over a wide range of conditions— from negative to abnormally high heads.

Turning at just 1,440 rpm, the one horsepower motor can pump fluid through kilometers of small-diameter piping and elevation changes of over 45 meters.

In addition, the geometry of the pump not only produces a near-vertical pump curve, but allows passage of ground solids without clogging. Because of the low rpm, high torque, maintenance-free level controls, other unique design features and highest quality components, we experience the lowest service call rate in the industry. More than eight years mean time between service calls is typical.

Some Key Advantages:

- **High Heads/Negative Heads.** Reliable operation from negative head to 45+ meters of total head for continuous duty reduces the number of lift stations and pipe sizes. This cuts costs – both initially and in long-term operation and maintenance.
- **Constant Flow.** The system pressures to be overcome by any given grinder pump in a low pressure system vary dramatically over the course of a day. Only E/One's progressing cavity pump readily accommodates these pressure variations while maintaining a nearly constant flow without ever operating at "near shut off" – thus avoiding the wear and motor burn-out suffered by other pump types.
- **High Grinding Torque.** Our unique pump system, driven by a one-horsepower motor turning at 1,440 rpm, produces grinding torque equal to a two-horsepower pump turning at twice the speed and eliminates jamming.
- **Low Energy Consumption.** Pump is activated automatically. Runs for short periods. Typical annual energy consumption equals a 40-watt light bulb.
- **Low Maintenance Submersible Motor.** Low maintenance and long life are the hallmarks of our air-filled motor. Permanently lubricated ball bearings and Class F insulation eliminate the need for periodic oil changes and oil disposal costs required by oil-filled submersible motors.
- **Large Diameter Grinder Assembly.** Almost twice the diameter of most other types of pumps, contributing to a dramatic reduction of inflow velocity for less wear and no clogging or jamming.
- **No Preventive Maintenance.** Self-cleaning static level sensors require no preventive maintenance. Because of our unique, near constant discharge rate, no main line flushing is required in a properly designed system.
- **Corrosion Resistance.** E/One's stainless steel ball type discharge valve and piping won't corrode like copper or galvanized, and hold up years longer. No corrosion, no maintenance.
- **Dependability.** E/One pumps typically run eight to ten years between service calls with more than 30 years of in-ground experience.
- **Provides for environmentally sound waste water management.** The GP 2000i grinds waste material into small particles. This enables the use of inexpensive, small-diameter pressure pipes, buried at shallow depths, to transport waste water to a suitable processing site. Result: Ground water contamination from failing septic tanks is eliminated.
- **Serviceability.** Our unique core design eliminates the need for in-field troubleshooting and pump servicing. This means lower maintenance costs and minimum homeowner inconvenience.

Environment One

engineered

low-pressure systems:

repealing the law of gravity.

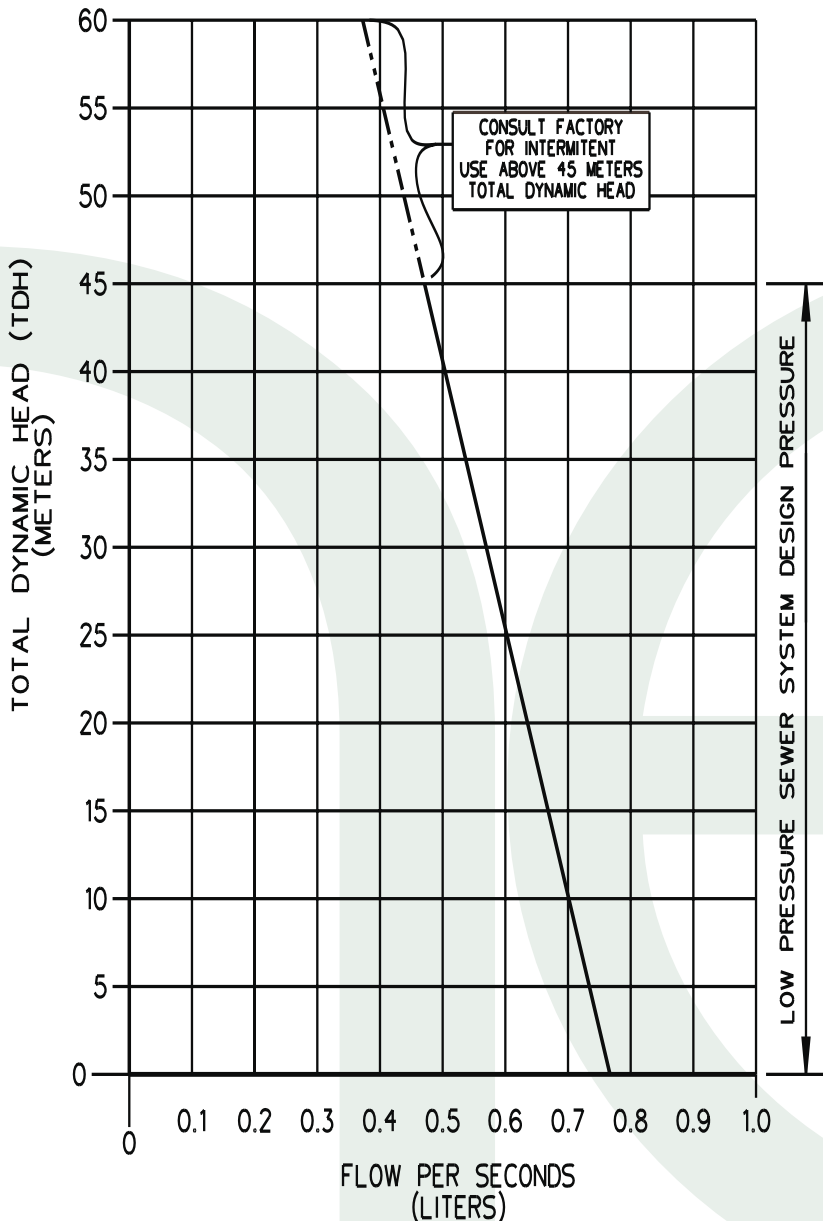
Gravity sewers are no longer the rule for solving waste water problems.

With huge savings in front-end costs, and a much gentler footprint on the environment, gravity-independent Environment One low pressure sewer systems are revolutionizing the field.

At the heart of the system is the E/One progressing cavity grinder pump – with high heads that eliminate costly lift stations, and a robust, powerful design that translates into the industry’s highest levels of reliability, availability and maintainability.

GRINDER PUMP PERFORMANCE CURVE

1 HP, 50 Hz



nobody can touch our curve.

In a low pressure system, constant, predictable pump output is the foundation for proper hydraulic design. It enables the engineer to minimize retention time, pump wear, and keep scouring action at effective levels.

Environment One’s semi-positive displacement, progressing cavity pump has a nearly vertical H-Q curve. It is by far the most “forgiving” pump design – providing predictable flow over the full range of typical system pressures; strengths critical in a large-scale, low pressure sewer.

E/One’s superior high head capability allows a system with few, if any, lift stations. And, it easily accommodates additional future connections without compromising system performance.

These E/One pump characteristics translate into:

- predictable hydraulic design
- lower collection system capital costs
- less maintenance
- lower operating costs

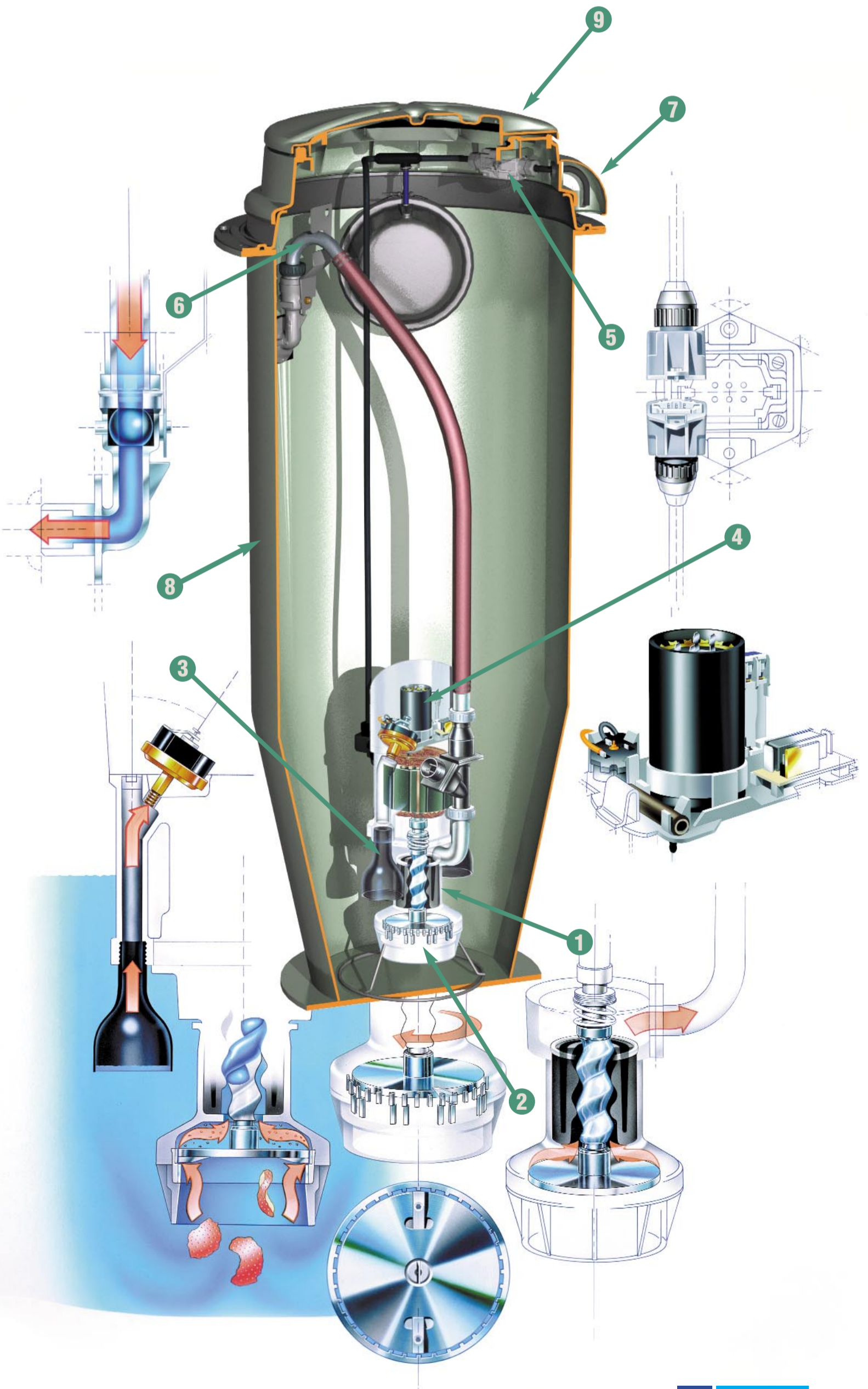
Anatomy of a Leader:

the inside

story on the

GP 2000i System.

- 1** Progressing Cavity Pump – A deceptively simple design produces a nearly constant flow under a wide range of continuously varying conditions.
- 2** Grinder Wheel and Shredder Ring – Hardened stainless steel cutter bars and teeth process sewage, grinding wastewater solids, as well as wood, plastic and cloth. Will not jam or clog!
- 3** Pressure Switch Level Control – Self-cleaning level sensors require no preventive maintenance.
- 4** Unique Core Design – Eliminates the need for in-field troubleshooting and service. Modular controls simplify service.
- 5** Electrical Quick Disconnect – For safe and easy service. No need for confined space entry.
- 6** Stainless Steel Piping & Hardware – E-One's SS discharge piping and ball valve won't corrode. No corrosion, no maintenance.
- 7** Direct-Bury Cable – For simple and inexpensive installation.
- 8** Fiberglass Reinforced Plastic Tank – Heavy duty construction for rugged reliability. Factory pressure-tested for infiltration and exfiltration free installation.
- 9** Low-Profile Cover – Aesthetically pleasing. Provides easy access for service while blending with surroundings.



leading the industry we invented.

Environment One not only pioneered the low pressure sewer system, but consistently leads the industry both in sales and innovation.

The company is dedicated to Total Quality and Continuous Improvement, as evidenced by the GP 2000i series. Today, there are more than a quarter million users, worldwide.



Protected by U.S. Patent Nos. 5,562,254, 5,439,180 and 5,816,510.
Other U.S. Patents and Foreign Patents Pending.

sewer anywhere, save thousands, virtually service-free.

Driven by the remarkable GP 2000i grinder pump, E/One Sewers give engineers, developers, sanitarians, and land planners unprecedented new freedom in land usage.

And they're so much easier to install. Front-end costs are reduced by as much as 70%.

The GP 2000i System reduces all forms of sanitary waste to a non-clogging slurry and pumps it through a network of small-diameter pipes. Since gravity is replaced by the power of the pump, sewer systems need not run downhill nor require large-diameter pipes, deep trenches, multiple booster stations – or their associated costs.

A system powered by the GP 2000i pump converts formerly cost-prohibitive building sites into cost-effective reality. "Problem areas," with high ground water, elevation changes or impenetrable bedrock, are transformed into valuable, developable real estate.

Of course, E/One's low upfront cost advantages apply to conventional building sites, as well.

In addition, E/One units are easy to install and virtually maintenance-free – refined through more than 30 years experience with the largest installed base in the industry.

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SEWER SYSTEMS

A PCC Flow Technologies, Inc. Company

Environment One Corporation
49/76 Bayview Street
Runway Bay, Queensland 4216
Australia
www.eone.com/au

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