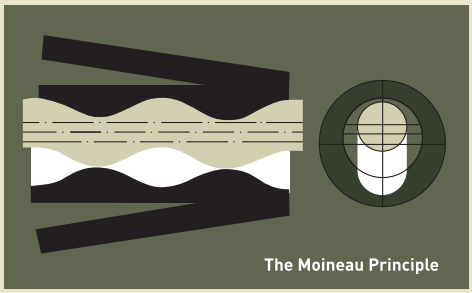
E/ONE
EXTREME
SERIES
PRESSURE
SEWER
SYSTEMS

ENGINEERED TO DO ONE JOB PERFECTLY.

At the heart of the E/One Sewer System is the toughest, hardest working pump in the industry. The new standard in excellence, durability, and longevity, the E/One Extreme Series Grinder Pump. Its evolution reflects everything we've learned in more than 40 years as the originator and leader in the category of 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.

And, the geometry of the pump not only produces a near-vertical pump curve, it also allows passage of ground solids without clogging. Because of the low rpm and highest quality components, we experience the lowest service call rate in the industry. An average mean time of 10 years between service calls is typical.



The progressing cavity pump itself 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 wastewater through these chambers at a nearly constant flow, over a wide range of conditions – from negative to abnormally high heads. Turning at just 1,725 rpm, the one-horsepower motor can pump fluid through more than two miles of small-diameter piping or elevation changes of over 185 feet.

Rugged, Ready, and Reliable – To The Extreme

DESIGN

- Enhanced pump controls: expanded diagnostics, protection, and communications capabilities
- "Core" concept with integral level and motor controls
- Radial O-ring seals on all joints
- Thermally welded discharge assembly for high-pressure performance
- Differential pressure switch level control in separate, removable assembly
- Equalizer compensates for fluctuations in atmospheric pressure while providing a sealed, water-tight level control system
- Integral check valve and anti-siphon valve assembly
- New, more resilient stator material enables higher pressure rating of 80 psi, using E/One proprietary stator chemistry
- All fasteners and hardware are 300 series stainless steel

RELIABILITY

- Huge double O-rings used for casting joint seals
- Casting joints designed for corrosive environment
- Indestructible level sensor housing
- Ultrasonically welded check valve assembly
- Superior corrosion protection – wet-applied coating on Class 30 cast iron vs. industry-standard powder coating
- Weld-free stainless steel stand

PERFORMANCE

- Design pressures to 80 psi (185 feet total dynamic head)
- Progressing cavity pump provides predictable flow over varying system pressure
- 1 hp, 1725 rpm, air-cooled motor provides low speed, high torque operation, eliminating jams
- Field-proven, large-diameter grinding mechanism provides low inlet velocity, eliminating pump blinding or clogging
- Integral check valve protects against system back pressure; anti-siphon valve facilitates downhill pumping applications

SERVICEABILITY

- No preventive maintenance required
- Quick-release core latch on D-Series – no mounting bolts required
- Electrical quick disconnect (EQD) seals and connects without tools; uses single turn locking ring
- Detachable level sensor assembly; wireless design available using inductive coupling
- Discharge plumbing quickly disconnects from grade level
- Backward compatibility to earlier generations/designs
- Air-filled motor more efficient than oil-filled motors and eliminates need to change and dispose of oil
- One pump for all series
- Backward-compatible EQD

SOME KEY ADVANTAGES:

High Heads/Negative Heads.
Industry's most reliable operation – rated for continuous duty of negative head to total dynamic head of 185 feet 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. 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 1725 rpm, produces grinding torque greater than a larger horsepower pump turning at twice the speed.

Energy Efficient.
The pump is activated automatically and runs for short periods. Typical annual energy consumption is comparable to a 40-watt light bulb.

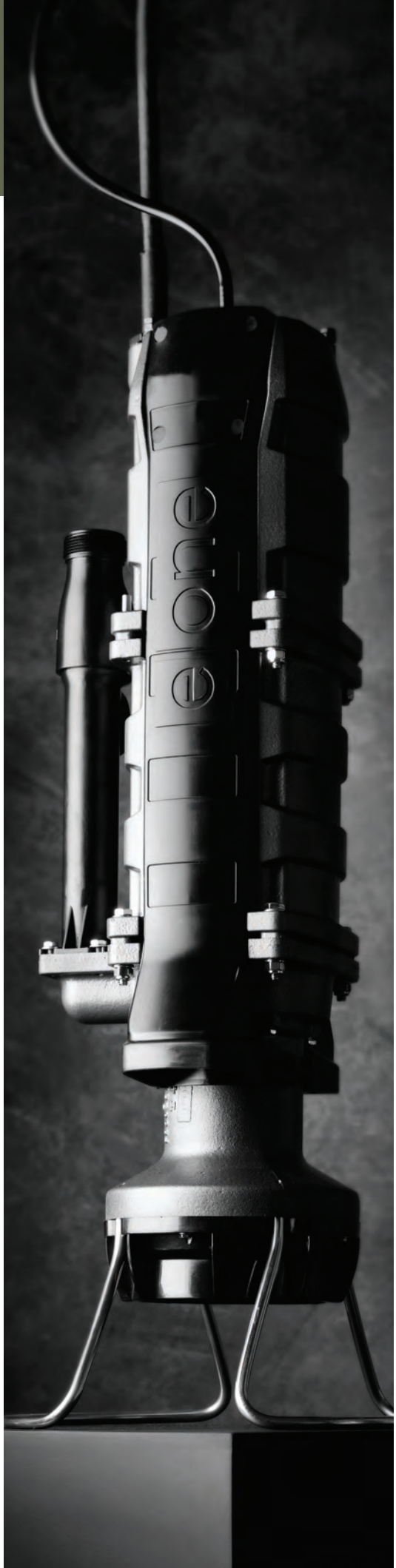
Low Maintenance Submersible Motor.
Low maintenance and long life are the hallmarks of our air-filled motor. Permanently lubricated ball bearings and Class F insulation eliminate the need for periodic oil changes and oil disposal costs required by oil-filled submersible motors.

Large-Diameter Grinder Assembly.
Almost twice the diameter of most other types of grinder pumps, contributing to a dramatic reduction of inflow velocity for less wear and no blinding, clogging or jamming.

No Preventive Maintenance.
Non-fouling 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.
Corrosion resistance is built into the E/One design.

Serviceability.
Our unique core design eliminates the need for in-field troubleshooting and pump servicing. This means lower maintenance costs and minimum homeowner inconvenience.



THE D-SERIES

Wetwell/Drywell for Superior Serviceability

The E/One D-Series features a wetwell/drywell design that provides a dry accessway for ease of service. Plus a modular design and one-piece core that permits simple core replacement – should it ever become necessary. Available in both simplex and duplex grinder pump stations to fit a wide variety of applications for single family homes or several homes in conjunction.

The tanks are made from tough, corrosion-resistant HDPE for long life and zero upkeep. Station capacities of 70 gallons to 500 gallons are available.

THE I-SERIES INDOOR UNIT

Self-Contained for Indoor Installation

More builders and municipalities are opting for the ease and convenience of the E/One Indoor Unit, which offers easy access along with all the benefits of the D-Series. An attractive self-contained unit, the I-Series fits unobtrusively into a basement or garage with a clean, contemporary design that feels right at home with other major appliances.

It can be used as part of a new E/One sewer system or retrofit into an existing low pressure or gravity sewer system.

With its quiet, energy-efficient pump and sound insulating properties, the I-Series is easy to live with.

THE W-SERIES

Engineered for choice.

The W-Series is E/One's most versatile grinder pump station – a range of basins, covers, discharges, inlets and panels are available. Simplex through quadriplex stations work with single homes, light commercial applications, or several homes.

The W-Series allows you to choose integral components for optimal installation and performance for your site's conditions. Whatever tank size is needed, many features from discharge configuration to panel options can be adjusted to your specific needs. W-Series stations can have one pump or up to four pumps, depending on the tank chosen.

Simplex Stations

- HDPE or fiberglass (not shown) construction
- Station capacities of 100, 237 and 476 gallons available
- Various station heights available

Multiple-Pump Stations

- HDPE construction
- Station capacities of 476 and 486 gallons available
- 476-gallon tank allows for 1 or 2 pumps
- 486-gallon tank allows for 2, 3 or 4 pumps
- Various station heights available

The W-Series fiberglass tanks offer a multitude of station volumes and heights with diameters from 24 inches to 72 inches, and heights from 60 inches to 240 inches.

* Please visit www.eone.com for application and flow information

237 gal

100 gal

476 gal

486 gal

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 velocity at effective levels.

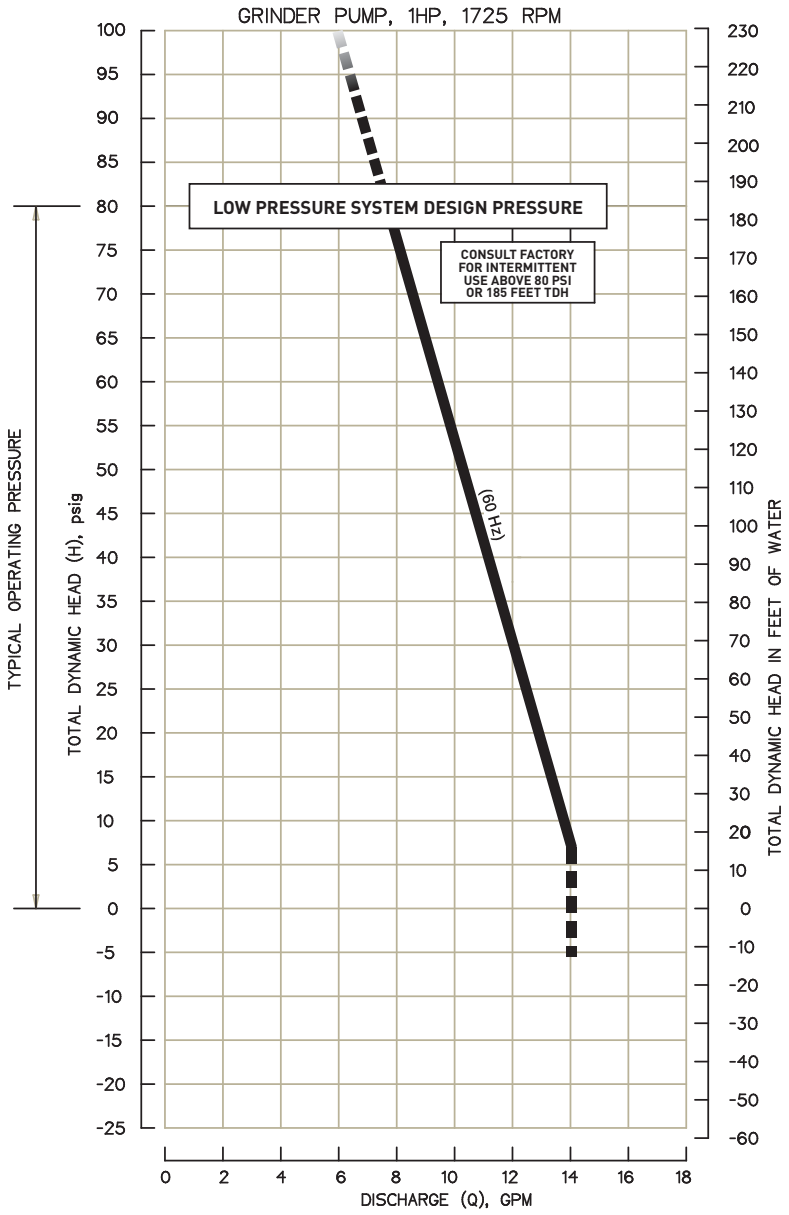
Environment One's semi-positive displacement, progressing cavity pump has a nearly vertical H-Q curve. It is by far the most "forgiving" pump design – providing predictable flow over the full range of typical system pressures; strengths critical in a large-scale, low pressure sewer system.

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

E/ONE SPD PUMP PERFORMANCE CURVE



Sewer Anywhere and Save

E/One Sewer Systems give engineers, builders, developers, municipal sanitarians and land planners unprecedented new freedom in land usage and sewer rehabilitation.

Easy to install. Easy to operate. And easy to maintain.

The sensible sewering solution that defies gravity and saves up to 50% – the E/One sewer system.

Environmentally sensitive. Economically sensible.

SEWER SYSTEMS

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