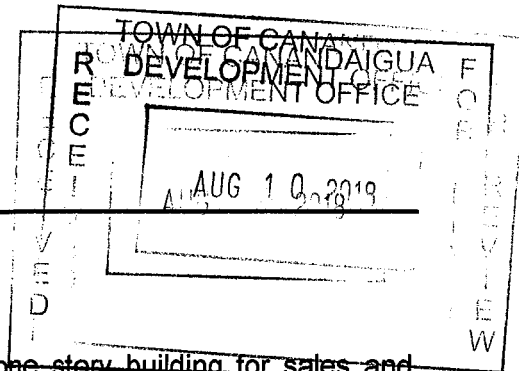




I. Project Description

Frontenac Holding intends to construct a 2,400 S.F. ~~one-story building for sales and~~ minor servicing of boats at 2121 State Route 332 in the Town of Canandaigua. The project will also include a lighted outdoor boat display area and a right turn in/right turn out driveway from the northbound lanes of NYS Route 332.

II. Water Service Design

Domestic water to the facility will be provided from a 12" diameter ductile iron pipe watermain situated along the east side of State Route 332. Water pressure in the main is reported to be about 71 psi. A 1 1/2" diameter polyethylene pipe water service will be provided to supply the peak domestic water demand of 20 gallons per minute to serve the two restrooms and two outside hose bibs. Refer to Appendix A for calculations.

III. Wastewater Treatment System Design

Since public sanitary sewer mains are not accessible, an onsite wastewater treatment system (WWTS) will be installed. The WWTS has been designed in accordance with the New York State Design Standards for Intermediate Sized Wastewater Treatment Systems published by the NYS Department of Environmental Conservation. The hydraulic loading rates contained in these Design Standards estimates water usage of 15 gallons per day for employees and 5 gallons per day per customer. With five employees and projected sales traffic of about 15 customers per day, an estimated daily water loading of 150 gallons has been estimated. However, a WWTS daily loading volume of 200 gallons has been employed due to possible sales promotions that could generate significantly higher sales traffic.

A raised fill WWTS will be provided due to soil percolation rates that exceeded 60 minutes at the conventional 24 inch depth. WWTS design calculations have been provided in Appendix B.

IV. Driveway Access from NYS Route 332

The application materials to substantiate the proposed right turn in/right turn out driveway configuration have been submitted to the NYS Department of Transportation (NYSDOT). Preliminary review comments received from NYSDOT have been addressed and final permit application documents are on file with NYSDOT.

Engineer's Report
Frontenac Boat Sales Facility
2121 State Route 332, Town of Canandaigua, NY

Appendix A

Water Service Calculations

CITY OF _____

Water Customer Data Sheet

Customer _____ Address _____

Building Address _____ Zip Code _____

Subdivision _____ Lot No. _____ Blk. No. _____

Type of Occupancy _____

Fixture	Fixture Value 60 psi		No. of Fixtures		Fixture Value
Bathtub	8	x	_____	=	_____
Bedpan Washers	10	x	_____	=	_____
Bidet	2	x	_____	=	_____
Dental Unit	2	x	_____	=	_____
Drinking Fountain – Public	2	x	_____	=	_____
Kitchen Sink	2.2	x	_____	=	_____
Lavatory	1.5	x	<u>2</u>	=	<u>3</u>
Showerhead (Shower Only)	2.5	x	_____	=	_____
Service Sink	4	x	_____	=	_____
Toilet – Flush Valve	35	x	_____	=	_____
– Tank Type	4	x	<u>2</u>	=	<u>8</u>
Urinal – Pedestal Flush Valve	35	x	_____	=	_____
– Wall Flush Valve	16	x	_____	=	_____
Wash Sink (Each Set of Faucets)	4	x	_____	=	_____
Dishwasher	2	x	_____	=	_____
Washing Machine	6	x	_____	=	_____
Hose (50 ft Wash Down) – 1/2 in.	5	x	_____	=	_____
– 5/8 in.	9	x	<u>2</u>	=	<u>18</u>
– 3/4 in.	12	x	_____	=	_____
Combined Fixture Value Total					<u>29</u>
Customer Peak Demand From Fig. 4 – 2 or 4 – 3 x Press. Factor				=	_____ gpm
Add Irrigation – _____ Sections* x 1.16 or 0.40†				=	_____ gpm
– _____ Hose Bibs x Fixture Value x _____ Press. Factor				=	_____ gpm
Added Fixed Load				=	_____ gpm
TOTAL FIXED DEMAND				=	_____ gpm

*100 ft² area = 1 section

†Spray systems – Use 1.16; Rotary systems – Use 0.40

Figure 4-5 Water customer data sheet

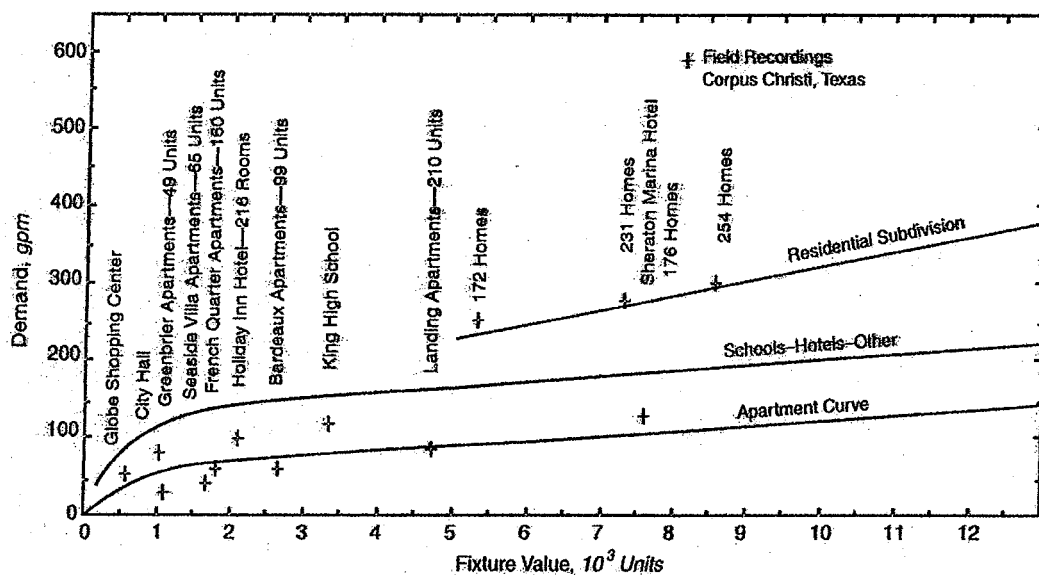


Figure 4-1 Peak flow demand of typical customer categories

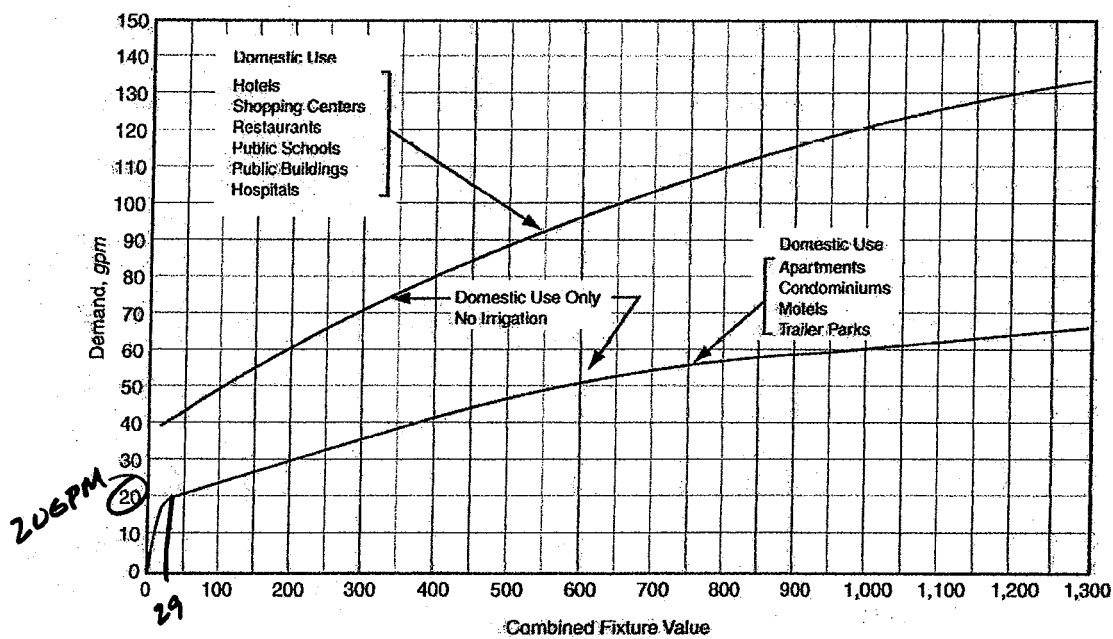


Figure 4-2 Water flow demand per fixture value—low range



Badger Meter

E-Series® Ultrasonic Meter

**Cold Water Engineered Polymer Meter, 5/8, 5/8 x 3/4, 3/4, & 1 inch
NSF/ANSI Standard 61 Certified, Annex G**

DESCRIPTION

The E-Series® Ultrasonic meter uses solid-state technology in a compact, totally encapsulated, weatherproof, and UV-resistant housing, suitable for residential and commercial applications. Electronic metering provides information—such as rate of flow and reverse flow indication—and data not typically available through traditional, mechanical meters and registers. Electronic metering eliminates measurement errors due to sand, suspended particles and pressure fluctuations.

The Ultrasonic 5/8, 5/8 x 3/4, 3/4, and 1 inch meters feature:

- Minimum extended low-flow rate lower than typical positive displacement meters.
- Simplified one-piece electronic meter and register that are integral to the meter body and virtually maintenance free.
- Sealed, non-removable, tamper-protected meter and register.
- Easy-to-read, 9-digit LCD display presents consumption, rate of flow, reverse-flow indication, and alarms.
- High resolution industry standard ASCII encoder protocol.

The Ultrasonic meter is available with an in-line connector for easy connection and installation to AMR/AMI endpoints. It is also available with a flying lead for field splice connection.

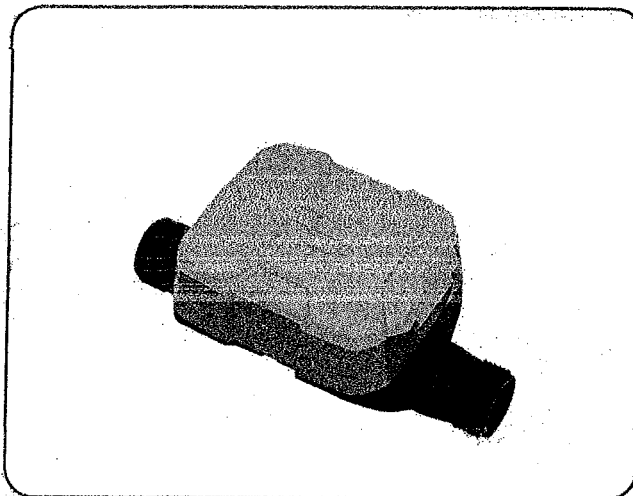
APPLICATIONS

Use the Ultrasonic meter for measuring potable cold water in residential, commercial and industrial services. The meter is also ideal for non-potable, irrigation water applications or less than optimum water conditions where small particles exist.

The Ultrasonic meter complies with applicable portions of ANSI/AWWA Standard C700 and NSF/ANSI Standard 61, Annex G. There is currently no AWWA standard that specifically addresses ultrasonic meters for residential applications.

OPERATION & PERFORMANCE

As water flows into the measuring tube, ultrasonic signals are sent consecutively in forward and reverse directions of flow. Velocity is then determined by measuring the time difference between the measurement in the forward and reverse directions. Total volume is calculated from the measured flow velocity using water temperature and pipe diameter. The LCD display shows total volume and alarm conditions and can toggle to display rate of flow.



In the normal temperature range of 45...85° F (7...29° C), the Ultrasonic "new meter" consumption measurement is accurate to:

- $\pm 1.5\%$ over the normal flow range
- $\pm 3.0\%$ from the extended low flow range to the minimum flow value

CONSTRUCTION

E-Series Ultrasonic meters feature an engineered polymer, lead-free meter housing, an engineered polymer and stainless steel metering insert, a meter-control circuit board with associated wiring, LCD, and battery. Wetted elements are limited to the pressure vessel, polymer/stainless steel metering insert and the transducers.

The electronic components are housed and fully potted within a molded, engineered polymer enclosure, which is permanently attached to the meter housing. The transducers extend through the polymer housing and are sealed by O-rings.

The metering insert holds the stainless steel ultrasonic reflectors in the center of the flow area, enabling turbulence-free water flow through the tube and around the ultrasonic signal reflectors. The metering insert's patented design virtually eliminates chemical buildup on the reflectors, ensuring long-term metering accuracy.

METER INSTALLATION

The meter is completely submersible and can be installed using horizontal or vertical piping, with flow in the up direction. The meter will not measure flow when an "empty pipe" condition is experienced. An empty pipe is defined as a condition when the flow sensors are not fully submerged.

SPECIFICATIONS

E-Series Ultrasonic Meter Size	5/8 in. (15 mm)	5/8 x 3/4 in. (15 mm)	3/4 in. (20 mm)	1 in. (25 mm)
Operating Range	0.1...25 gpm	0.1...25 gpm	0.1...32 gpm	0.4...55 gpm
Extended Low-Flow Rate	0.05 gpm	0.05 gpm	0.05 gpm	0.25 gpm
Maximum Continuous Operation	25 gpm	25 gpm	32 gpm	55 gpm
Pressure Loss	4.3 psi at 15 gpm	2.3 psi at 15 gpm	2.0 psi at 15 gpm	1.8 psi at 25 gpm
Reverse Flow - Maximum Rate	4.0 gpm	4.0 gpm	4.0 gpm	9.0 gpm
Operating Performance	In the normal temperature range of 45...85° F (7...29° C), new meter consumption measurement is accurate to: • ± 1.5% over the normal flow range • ± 3.0% from the extended low flow range to the minimum flow value			
Storage Temperature	- 40...140° F (- 40...60° C)			
Maximum Ambient Storage (Storage for One Hour)	150° F (72° C)			
Measured-Fluid Temperature Range	34...140° F (1°...60° C)			
Humidity	0...100% condensing; meter is capable of operating in fully submerged environments			
Maximum Operating Pressure of Meter Housing	175 psi (12 bar)			
Register Type	Straight reading, permanently sealed electronic LCD; digits are 0.28 in. (7 mm) high			
Register Display	• Consumption (up to nine digits) • Rate of flow • Alarms • Unit of measure factory programmed for gallons, cubic feet and cubic meters			
Register Capacity	• 10,000,000 gallons • 1,000,000 cubic feet • 100,000 cubic meters			
Totalization Display Resolution	• Gallons: 0.XX • Cubic feet: 0.XXX • Cubic meters: 0.XXXX			
Battery	3.6-volt lithium thionyl chloride; battery is fully encapsulated within the register housing and is not replaceable; 20-year battery life			

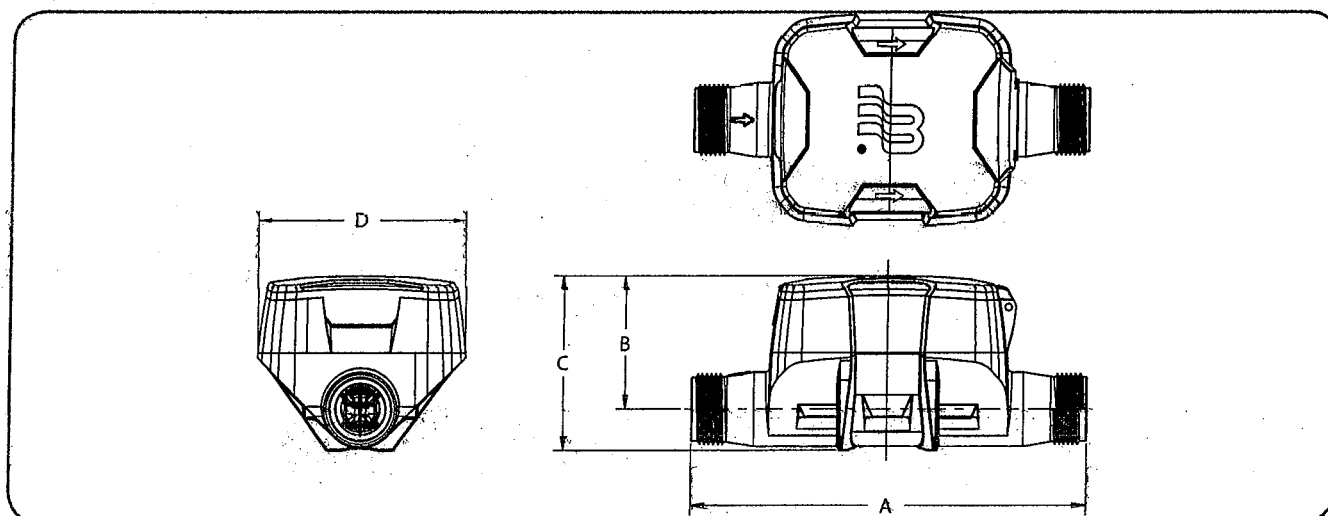
MATERIALS

Meter Housing	Engineered polymer
Measuring Element	Pair of ultrasonic sensors located in the flow tube
Register Housing & Lid	Engineered polymer
Metering Insert	Engineered polymer & stainless steel
Transducers	Piezo-ceramic device with wetted surface of stainless CrNiMo

PHYSICAL DIMENSIONS

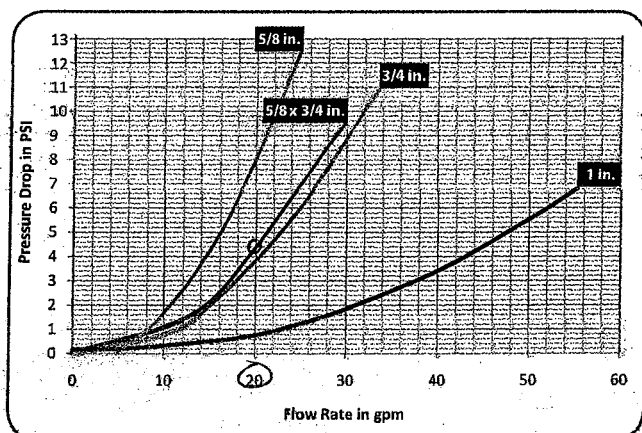
E-Series Ultrasonic Meter Size	5/8 in. (15 mm)	5/8 (15 mm) x 3/4 in. (20 mm)	3/4 in. (20 mm)	1 in. (25 mm)
Size Designation X Lay Length	5/8 x 7-1/2 in.	5/8 x 3/4 x 7-1/2 in.	3/4 x 7-1/2 in. or 3/4 x 9 in.	1 x 10-3/4 in.
Weight (without AMR)	1.60 lb	1.58 lb	3/4 x 7-1/2 in.: 1.58 lb 3/4 x 9 in.: 1.64 lb	2.3 lb
See illustration below for Measurement Designations.				
Length (A)	7.5 in.	7.5 in.	7.5 in. or 8.85 in.	10.75 in.
Height (B)	2.46 in.	2.46 in.	2.46 in.	2.66 in.
Height (C)	3.27 in.	3.23 in.	3.23 in.	3.62 in.
Width (D)	3.90 in.	3.90 in.	3.90 in.	3.90 in.
Bore Size	5/8 in.	3/4 in.	3/4 in.	1 in.
Coupling Nut & Spud Thread	3/4 in. x 14 NPSM	1 in. x 11-1/2 NPSM	1 in. x 11-1/2 NPSM	1-1/4 in. x 11-1/2 NPSM
Tailpiece Pipe Thread (NPT)	1/2 in.	3/4 in.	3/4 in.	1 in.
Service Pipe Thread (NPT)	1/2 in.	3/4 in.	3/4 in.	1 in.

MEASUREMENT DESIGNATIONS



PRESSURE LOSS CHART

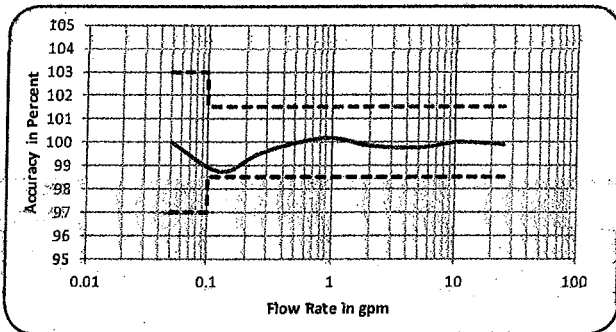
Rate of Flow in gallons per minute (gpm)



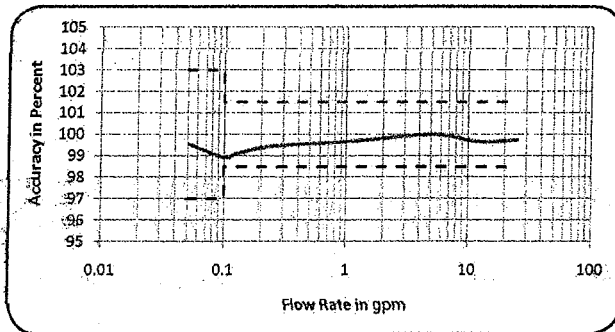
ACCURACY CHARTS

Rate of Flow in gallons per minute (gpm)

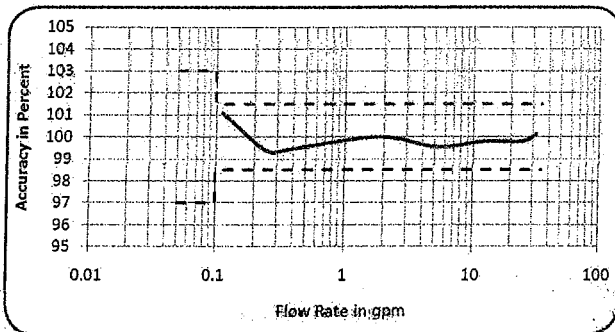
5/8 IN. METER



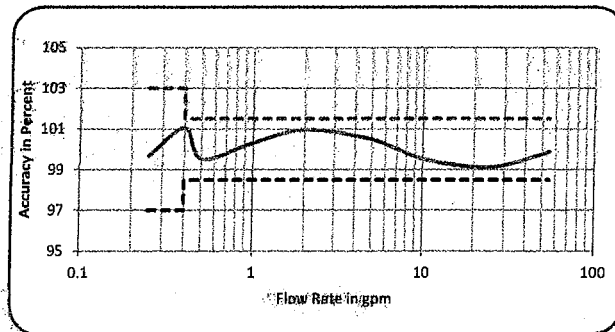
5/8 x 3/4 IN. METER



3/4 IN. METER



1 IN. METER



Making Water Visible®

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Legacy Document Number: ESM-T-12-EN

CLIENT

FRONTENAC BOAT SALES

PROJECT

2121 STATE ROUTE 332

ECT

WATER SERVICE

MADE

CHK

REV

JOB NO.

SHEET NO.

THORNTON

ENGINEERING LLP



12" DIA DIP WATERMAIN ALONG ST RTE 332 OPERATES AT 71 PSI

GROUND ELEV, AT MAIN 779

ELEV, AT BUILDING 787

SERVICE LENGTH 280'

PRESSURE LOSS THROUGH METER = -4.5 PSI

PRESSURE LOSS DUE TO GRADE = $(787-779) 0.433 = -3.5 \text{ PSI}$

PRESSURE LOSS THROUGH 280' OF SERVICE PIPE

 $2" \text{ PE} = (280' \times 1.64/100') (0.433) = -2.0 \text{ PSI}$ $1\frac{1}{2}" \text{ PE} = (280' \times 4.86/100') (0.433) = -5.9 \text{ PSI}$

AVAILABLE WATER SERVICE PRESSURE

 $2" \text{ PE} = 71 \text{ PSI} - 4.5 \text{ PSI} - 3.5 \text{ PSI} - 2.0 \text{ PSI} = 61 \text{ PSI}$ $1\frac{1}{2}" \text{ PE} = 71 \text{ PSI} - 4.5 \text{ PSI} - 3.5 \text{ PSI} - 5.9 \text{ PSI} = 57.1 \text{ PSI}$

USE 1 1/2" PE

Table C-29 Friction loss in pipe—C=130—2-in. polyethylene pipe

C=130	Copper Tubing Sizes*				Iron Pipe Sizes*			
	IDR9		IDR 11		IDR9		IDR 11	
	ID* = 1.653		ID = 1.739		ID = 1.847		ID = 1.943	
Flow gpm	Head Loss ft/100 ft	Velocity ft/s	Head Loss ft/100 ft	Velocity ft/s	Head Loss ft/100 ft	Velocity ft/s	Head Loss ft/100 ft	Velocity ft/s
10	0.78	1.50	0.61	1.35	0.45	1.20	0.36	1.08
12	1.09	1.79	0.85	1.62	0.64	1.44	0.50	1.30
14	1.45	2.09	1.14	1.89	0.85	1.68	0.66	1.51
16	1.86	2.39	1.46	2.16	1.09	1.92	0.85	1.73
18	2.32	2.69	1.81	2.43	1.35	2.16	1.05	1.95
20	2.82	2.99	2.20	2.70	1.64	2.39	1.28	2.16
25	4.26	3.74	3.33	3.38	2.48	2.99	1.94	2.71
30	5.97	4.49	4.66	4.05	3.48	3.59	2.72	3.25
35	7.94	5.23	6.20	4.73	4.62	4.19	3.61	3.79
40	10.17	5.98	7.94	5.40	5.92	4.79	4.63	4.33
45	12.64	6.73	9.88	6.08	7.36	5.39	5.75	4.87
50	15.37	7.48	12.00	6.75	8.95	5.99	6.99	5.41
55	18.33	8.22	14.32	7.43	10.68	6.59	8.34	5.95
60	21.54	8.97	16.83	8.10	12.55	7.18	9.80	6.49
70	28.66	10.47	22.38	9.46	16.69	8.38	13.04	7.57
80			28.66	10.81	21.37	9.58	16.70	8.66
90					26.58	10.78	20.77	9.74
100							25.24	10.82

*ID—inside diameter (calculated as average outside-diameter minimum wall thickness)—AWWA C901

NOTE: To convert psi to kPa: psi $\times$ 6.89476; to convert gpm to m³/hr: gpm $\times$ 0.227

Table C-28 Friction loss in pipe—C=130—1 1/2-in. polyethylene pipe

C=130	1 1/2" Nominal Diameter		ID = Inside diameter *		Iron Pipe Sizes*			
	Copper Tubing Sizes*							
	IDR9		IDR 11		IDR9		IDR 11	
	ID = 1.263		ID = 1.329		ID = 1.478		ID = 1.554	
Flow gpm	Head Loss ft/100 ft	Velocity ft/s	Head Loss ft/100 ft	Velocity ft/s	Head Loss ft/100 ft	Velocity ft/s	Head Loss ft/100 ft	Velocity ft/s
8	1.91	2.05	1.49	1.85	0.89	1.50	0.70	1.35
9	2.38	2.30	1.86	2.08	1.11	1.68	0.87	1.52
10	2.89	2.56	2.26	2.31	1.35	1.87	1.05	1.69
12	4.06	3.07	3.16	2.78	1.89	2.24	1.48	2.03
15	6.13	3.84	4.78	3.47	2.85	2.81	2.23	2.54
20	10.44	5.12	8.15	4.63	4.86	3.74	3.80	3.38
25	15.79	6.40	12.32	5.78	7.34	4.67	5.75	4.23
30	22.13	7.68	17.27	6.94	10.29	5.61	8.06	5.07
35	29.44	8.96	22.97	8.09	13.69	6.54	10.72	5.92
40	37.70	10.24	29.42	9.25	17.53	7.48	13.73	6.77
45			36.59	10.41	21.81	8.41	17.08	7.61
50					26.50	9.35	20.76	8.46
55					31.62	10.28	24.77	9.30
60							29.10	10.15

*ID=inside diameter (calculated as average outside-diameter minimum wall thickness)—AWWA C901

NOTE: To convert psi to kPa: psi $\times$ 6.89476; to convert gpm to m³/hr: gpm $\times$ 0.227

Appendix B

Wastewater Treatment System Calculations

CLIENT

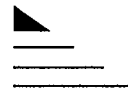
FRONTENAC BOAT SALES

PROJECT

2121 STRTE 332

JECT

WWTS DESIGN

THORNTON
ENGINEERING LLP

MADE

CHK

REV

JOB NO.

SHEET NO.

MAX. DAILY LOADING = 200 GALLONS
USE 1000 GALLON SEPTIC TANK

PROPOSED SYSTEM - RAISED FILL SYSTEM

$$\text{BASAL AREA} = 200 \text{ GALLONS} / 0.2 \text{ GALLONS/SF} = 1000 \text{ SF}$$

FILL MAT'L PERCOLATION RATE → ASSUME 30 MINUTES

$$\text{APPLICATION RATE} = 0.6 \text{ GAL/SF}$$

$$2' \text{ WIDE TRENCH PROVIDES } 1.2 \text{ GAL/LF}$$

$$200 \text{ GALLONS} / 1.2 \text{ GAL/LF} = 167 \text{ LF OF DISTRIBUTION LATERAL}$$

USE 3 LATERALS AT 56 LF EACH

$$\begin{aligned} \text{RESULTANT BASAL AREA} & (56' + 2.5' + 2.5') \times (2 \times 6' + 3.5' + 3.5') \\ & = 61' \times 19' = 1159 \text{ SF} \quad \underline{0.6} \end{aligned}$$

$$\text{TOTAL LENGTH OF 4" DIA LATERAL PIPE} = 3 \times 56' = 168'$$

$$\text{LATERAL PIPE VOLUME} = 168' \times 0.653 \text{ GAL/LF} = 110 \text{ GALLONS}$$

$$80\% \text{ OF PIPE VOLUME} = \text{DOSE RATE} = 80\% (110 \text{ GAL}) = 88 \text{ GAL}$$

USE A PUMP STATION TO DELIVER THE 88 GAL DOSE

$$\text{ELEV. HEAD} = 10'$$

$$\text{FORCE MAIN} \rightarrow 50 \text{ LF OF } 1\frac{1}{2}" \text{ PE}$$

$$\text{PUMP CYCLE} = 88 \text{ GAL}$$

$$\text{SAY MIN RUN TIME} = 5 \text{ MINUTES} \rightarrow 88/5 = 14 \text{ GPM} \quad \text{SAY } 15 \text{ GPM}$$

$$H_L \text{ IN FORCE MAIN} = 2.85/100' \times 50' = 1.4'$$

$$\text{TOTAL HEAD} = 10' + 1.4' = 12' \pm$$

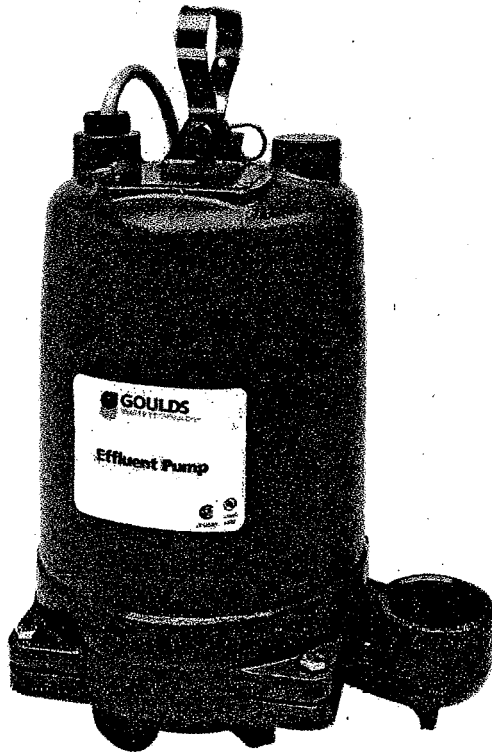
USE GOULDS W603L - 1/3 HP PUMP

Table C-28 Friction loss in pipe— $C=130$ —1 1/2-in. polyethylene pipe

C=130	1 1/2" Nominal Diameter		ID = Inside diameter *		Iron Pipe Sizes*			
	Copper Tubing Sizes*							
	IDR9		IDR 11		IDR9		IDR 11	
	ID = 1.263		ID = 1.329		ID = 1.478		ID = 1.554	
Flow gpm	Head Loss ft/100 ft	Velocity ft/s	Head Loss ft/100 ft	Velocity ft/s	Head Loss ft/100 ft	Velocity ft/s	Head Loss ft/100 ft	Velocity ft/s
8	1.91	2.05	1.49	1.85	0.89	1.50	0.70	1.35
9	2.38	2.30	1.86	2.08	1.11	1.68	0.87	1.52
10	2.89	2.56	2.26	2.31	1.35	1.87	1.05	1.69
12	4.06	3.07	3.16	2.78	1.89	2.24	1.48	2.03
15	6.13	3.84	4.78	3.47	2.85	2.81	2.23	2.54
20	10.44	5.12	8.15	4.63	4.86	3.74	3.80	3.38
25	15.79	6.40	12.32	5.78	7.34	4.67	5.75	4.23
30	22.13	7.68	17.27	6.94	10.29	5.61	8.06	5.07
35	29.44	8.96	22.97	8.09	13.69	6.54	10.72	5.92
40	37.70	10.24	29.42	9.25	17.53	7.48	13.73	6.77
45			36.59	10.41	21.81	8.41	17.08	7.61
50					26.50	9.35	20.76	8.46
55					31.62	10.28	24.77	9.30
60							29.10	10.15

*ID=inside diameter (calculated as average outside-diameter minimum wall thickness)—AWWA C901

NOTE: To convert psi to kPa: psi $\times$ 6.89476; to convert gpm to m³/hr: gpm $\times$ 0.227



FEATURES

Impeller: Cast iron, semi-open, non-clog with pump-out vanes for mechanical seal protection. Balanced for smooth operation. Silicon bronze impeller available as an option.

Casing: Cast iron volute type for maximum efficiency. 2" NPT discharge.

Mechanical Seal: Silicon Carbide vs. Silicon Carbide sealing faces. Stainless steel metal parts, BUNA-N elastomers.

Shaft: Corrosion-resistant, stainless steel. Threaded design. Locknut on all models to guard against component damage on accidental reverse rotation.

Fasteners: 300 series stainless steel.

Capable of running dry without damage to components.

Designed for continuous operation when fully submerged.

EXTENDED WARRANTY AVAILABLE FOR RESIDENTIAL APPLICATIONS.

WE Series Model 3885

SUBMERSIBLE EFFLUENT PUMPS



 **GOULDS**
WATER TECHNOLOGY
a xylem brand

Wastewater

APPLICATIONS

Specifically designed for the following uses:

- Homes, Farms, Trailer Courts, Motels, Schools, Hospitals, Industry, Effluent Systems

SPECIFICATIONS

Pump

- Solids handling capabilities: $\frac{3}{4}$ " maximum
- Discharge size: 2" NPT
- Capacities: up to 140 GPM
- Total heads: up to 128 feet TDH
- Temperature: 104°F (40°C) continuous, 140°F (60°C) intermittent.
- See order numbers on reverse side for specific HP, voltage, phase and RPM's available.

MOTORS

- Fully submerged in high-grade turbine oil for lubrication and efficient heat transfer.
- Class B insulation on $\frac{1}{2}$ - 1½ HP models.
- Class F insulation on 2 HP models.

Single phase (60 Hz):

- Capacitor start motors for maximum starting torque.
- Built-in overload with automatic reset.

- SJTOW or STOW severe duty oil and water resistant power cords.
- $\frac{1}{2}$ - 1 HP models have NEMA three prong grounding plugs.
- 1½ HP and larger units have bare lead cord ends.

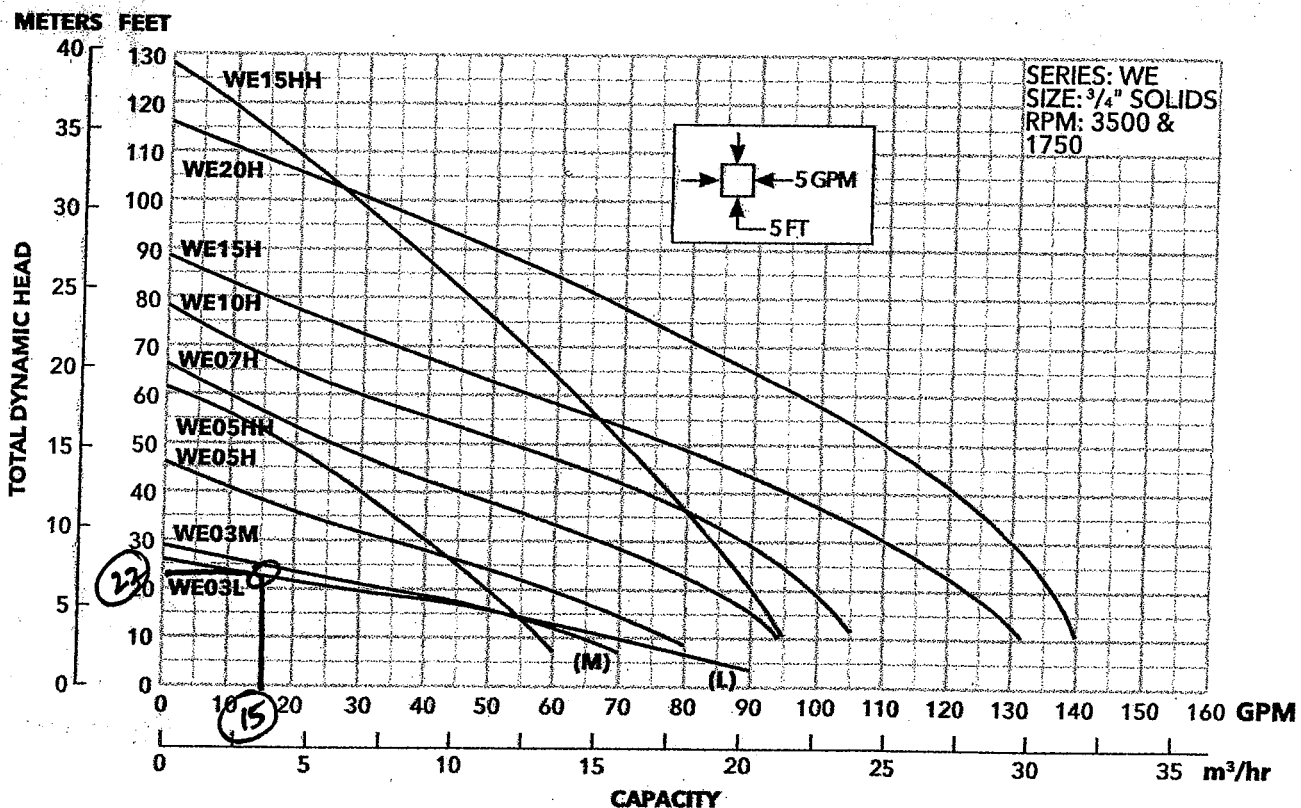
Three phase (60 Hz):

- Class 10 overload protection must be provided in separately ordered starter unit.
- STOW power cords all have bare lead cord ends.
- Designed for Continuous Operation: Pump ratings are within the motor manufacturer's recommended working limits, can be operated continuously without damage when fully submerged.
- Bearings: Upper and lower heavy duty ball bearing construction.
- Power Cable: Severe duty rated, oil and water resistant. Epoxy seal on motor end provides secondary moisture barrier in case of outer jacket damage and to prevent oil wicking. Standard cord is 20'. Optional lengths are available.
- O-ring: Assures positive sealing against contaminants and oil leakage.

AGENCY LISTINGS



Tested to UL 778 and CSA 22.2 108 Standards
By Canadian Standards Association File #LR38549



MODELS

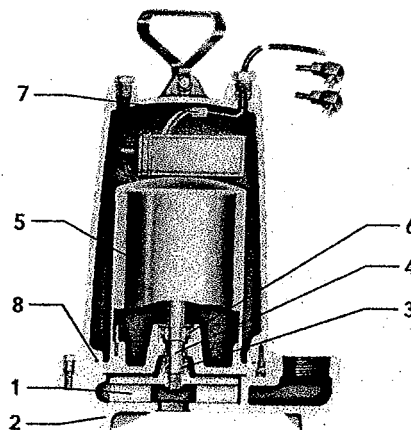
Order Number	HP	Phase	Volts	RPM	Impeller Diameter (in.)	Maximum Amps	Locked Rotor Amps	KVA Code	Full Load Efficiency %	Resistance		Power Cable Size	Weight (lbs.)			
										Start	Line-Line					
WE0311L	0.33	1	115	1750	5.38	10.7	30.0	M	54	11.9	1.7	16/3	56			
WE0318L			208			6.8	19.5	K	51	9.1	4.2					
WE0312L			230			4.9	14.1	L	53	14.5	8.0					
WE0311M			115			10.7	30.0	M	54	11.9	1.7					
WE0318M			208			6.8	19.5	K	51	9.1	4.2					
WE0312M			230			4.9	14.1	L	53	14.5	8.0					
WE0511H	0.5	1	115	3450	3.56	14.5	46.0	M	54	7.5	1.0	14/3	60			
WE0518H			208			8.1	31.0	K	68	9.7	2.4	16/3				
WE0512H			230			7.3	34.5	M	53	9.6	4.0	16/3				
WE0538H		3	200			4.9	22.6	R	68	NA	3.8	14/4				
WE0532H			230			3.3	18.8	R	70	NA	5.8					
WE0534H			460			1.7	9.4	R	70	NA	23.2					
WE0537H		1	575		3.88	1.4	7.5	R	62	NA	35.3	14/4				
WE0511HH			115			14.5	46.0	M	54	7.5	1.0			14/3		
WE0518HH			208			8.1	31.0	K	68	9.7	2.4			16/3		
WE0512HH			230			7.3	34.5	M	53	9.6	4.0			16/3		
WE0538HH		3	200			4.9	22.6	R	68	NA	3.8			14/4		
WE0532HH			230			3.6	18.8	R	70	NA	5.8					
WE0534HH		1	460		1.8	9.4	R	70	NA	23.2	14/4					
WE0537HH			575		1.5	7.5	R	62	NA	35.3		14/4				
WE0718H	0.75	1	208	3450	4.06	11.0	31.0	K	68	9.7	2.4	14/3	70			
WE0712H			230			10.0	27.5	J	65	12.2	2.7	14/3				
WE0738H		3	200			6.2	20.6	L	64	NA	5.7	14/4				
WE0732H			230			5.4	15.7	K	68	NA	8.6					
WE0734H			460			2.7	7.9	K	68	NA	34.2					
WE0737H			575			2.2	9.9	L	78	NA	26.5					
WE1018H	1	1	208	3450	4.44	14.0	59.0	K	68	9.3	1.1	14/3	80			
WE1012H			230			12.5	36.2	J	69	10.3	2.1	14/3				
WE1038H		3	200			8.1	37.6	M	77	NA	2.7	14/4				
WE1032H			230			7.0	24.1	L	79	NA	4.1					
WE1034H			460			3.5	12.1	L	79	NA	16.2					
WE1037H			575			2.8	9.9	L	78	NA	26.5					
WE1518H	1.5	1	208	3450	4.56	17.5	59.0	K	68	9.3	1.1	14/3	80			
WE1512H			230			15.7	50.0	H	68	11.3	1.6	14/3				
WE1538H		3	200			10.6	40.6	K	79	NA	1.9	14/4				
WE1532H			230			9.2	31.7	K	78	NA	2.9					
WE1534H			460			4.6	15.9	K	78	NA	11.4					
WE1537H			575			3.7	13.1	K	75	NA	16.9					
WE1518HH		1	208		5.50	17.5	59.0	K	68	9.3	1.1	14/3		80		
WE1512HH			230			15.7	50.0	H	68	11.3	1.6	14/3				
WE1538HH		3	200			10.6	40.6	K	79	NA	1.9	14/4				
WE1532HH			230			9.2	31.7	K	78	NA	2.9					
WE1534HH			460			4.6	15.9	K	78	NA	11.4					
WE1537HH			575			3.7	13.1	K	75	NA	16.9					
WE2012H		2	3		230	3450	5.38	18.0	49.6	F	78	3.2		1.2	14/3	83
WE2038H					200			12.0	42.4	K	78	NA		1.7	14/4	
WE2032H	230			11.6	42.4			K	78	NA	1.7					
WE2034H	460			5.8	21.2			K	78	NA	6.6					
WE2037H	575			4.7	16.3			L	78	NA	10.5					

PERFORMANCE RATINGS (gallons per minute)

Order No.	WE-03L	WE-03M	WE-05H	WE-07H	WE-10H	WE-15H	WE-05HH	WE-15HH	WE-20H
HP	1/8	1/8	1/4	1/4	1	1 1/2	1/2	1 1/2	2
RPM	1750	1750	3500	3500	3500	3500	3500	3500	3500
5	86	-	-	-	-	-	-	-	-
10	70	63	78	94	-	-	58	95	-
15	52	52	70	90	103	128	53	93	138
20	27	35	60	83	98	123	49	90	136
25	5	15	48	76	94	117	45	87	133
30	-	-	35	67	88	110	40	83	130
35	-	-	22	57	82	103	35	80	126
40	-	-	-	45	74	95	30	77	121
45	-	-	-	35	64	86	25	74	116
50	-	-	-	25	53	77	-	70	110
55	-	-	-	-	40	67	-	66	103
60	-	-	-	-	30	56	-	63	96
65	-	-	-	-	20	45	-	58	89
70	-	-	-	-	-	35	-	55	81
75	-	-	-	-	-	25	-	51	74
80	-	-	-	-	-	-	-	47	66
90	-	-	-	-	-	-	-	37	49
100	-	-	-	-	-	-	-	28	30

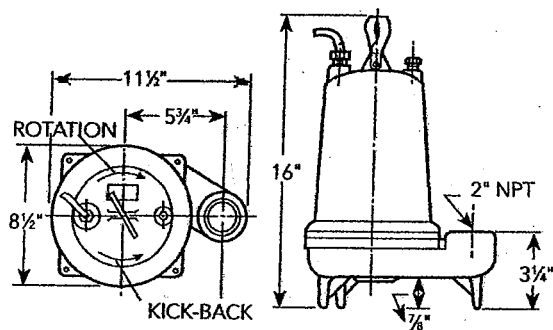
COMPONENTS

Item No.	Description
1	Impeller
2	Casing
3	Mechanical Seal
4	Motor Shaft
5	Motor
6	Ball Bearings
7	Power Cable
8	Casing O-Ring



DIMENSIONS

(All dimensions are in inches. Do not use for construction purposes.)



xylem
Let's Solve Water

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