MODEL 112 Control Panel

Single phase, simplex motor contactor control.

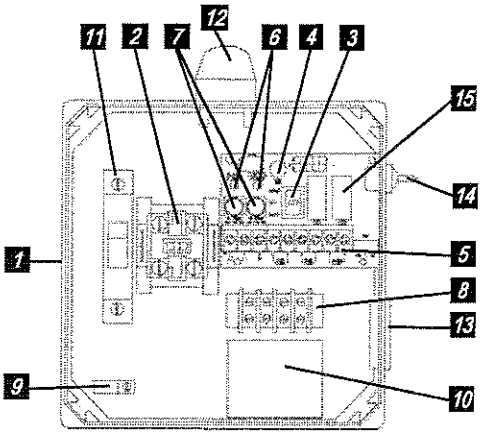
The Model 112 control panel provides a reliable means of controlling one 120, 208, or 240 VAC single phase pump in pump chambers, sump pump basins, irrigation systems and lift stations. Two control switches activate a magnetic motor contactor to turn the pump on and off. If an alarm condition occurs, an additional alarm switch activates the audio/visual alarm system.

PANEL COMPONENTS

1. **Enclosure** measures 8 x 8 x 4 inches (20.32 X 20.32 X 10.16 cm). Choice of NEMA 1 (steel for indoor use), or NEMA 4X (ultraviolet stabilized thermoplastic with removable flanges for outdoor or indoor use).

   * Options selected may increase enclosure size and change component layout.

2. **Magnetic Motor Contactor** controls pump by switching electrical lines.
3. **HOA Switch** for manual pump control (mounted on circuit board).
4. **Green Pump Run Indicator Light** (mounted on circuit board).
5. **Float Switch Terminal Block** (mounted on circuit board).
6. **Alarm and Control Fuses** (mounted on circuit board).
7. **Alarm and Control Power Indicators** (mounted on circuit board).
8. **Pump Input Power and Pump Connection Terminal Block**
9. **Ground Lug**
10. **Terminal Block Installation Label**
11. **Circuit Breaker** (optional) provides pump disconnect and branch circuit protection.



Model Shown 1121W914X

STANDARD ALARM PACKAGE

12. **Red Alarm Beacon** provides 360° visual check of alarm condition. **Note:** NEMA 1 style utilizes a door mounted indicator in lieu of a beacon.
13. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating). **Note:** NEMA 1 style utilizes an internally mounted buzzer in lieu of horn.
14. **Exterior Alarm Test/Normal/Silence Switch** allows horn and light to be tested and horn to be silenced in an alarm condition. Alarm automatically resets once alarm condition has been cleared.
15. **Horn Silence Relay** (mounted on circuit board).

NOTE: other options available.

FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes three 20' Sensor Float® control switches
- Complete with step-by-step installation instructions
- Three-year limited warranty

c UL us LISTED

SEE BACKSIDE FOR COMPLETE LISTING OF AVAILABLE OPTIONS.

SJE Rhombus® CONTROLS

PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE • 1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com

112	1	W	9	1	4	H	3A, 8A, 8C

MODEL 112

ALARM PACKAGE
- [ ] 0 = select options or no alarm package
- [X] 1 = alarm package (includes test/normal/silence switch, fuse, red light, horn & float)

ENCLOSURE RATING
- [ ] I = Indoor, NEMA 1 (metal)
- [X] W = Weatherproof, NEMA 4X (engineered thermoplastic)

STARTING DEVICE
- [ ] 1 = magnetic motor contactor 120/208/240V
- [X] 9 = magnetic motor contactor 120V only

PUMP FULL LOAD AMPS
- [ ] 0 = 0-7 FLA
- [X] 1 = 7-15 FLA
- [ ] 2 = 15-20 FLA
- [ ] 3 = 20-30 FLA

PUMP DISCONNECTS
- [ ] 0 = no pump disconnect
- [ ] 1 = pull-out with safety deadfront in a 10"x8" enclosure
- [X] 4 = circuit breaker 120V (select STARTING DEVICE option 9 above)
  120/208/240V (select STARTING DEVICE option 1 above)

FLOAT SWITCH APPLICATION
- [X] H or L = pump down or pump up
- [ ] X = no floats

WITH alarm package
WITHOUT alarm package

OPTIONS *Listed below*

★ ENCLOSURE UPSIZE - If you selected 3 or more of the ★ options, or one ★★ option, **a one-time enclosure upsize fee would apply.**

If additional features are required, call the factory for a quote on either a SJE-Rhombus Pro-Line or Engineered Custom control panel.

	CODE	DESCRIPTION
[ ]	1A	Red beacon only / no audio *(must select 1E if floats included)*
[ ]	1C	Horn only / no visual *(must select 1E if floats included)*
[ ]	1E	Alarm float
[X]	3A	Alarm flasher
[ ]	★ 3B	Manual alarm reset
[ ]	★ 4A	Low level cutout *(select option 4D if floats included)*
[ ]	★ 4B	Red low-level indicator & alarm *(must select 4A also)*
[ ]	4D	Low-level float
[ ]	★ 5A	Thermal cutout/heat sensor auto reset (for pumps w/thermal switch leads)
[ ]	★★5E	Seal failure circuit & red indicator (2 wire)
[ ]	6A	Auxiliary alarm contact, form C type
[X]	★ 8A	Elapsed time meter
[X]	★ 8C	Event (cycle) counter
[ ]	★★9_A	Pump overload specify amperage after number 9 followed by letter "A". Example: 912A = 12 amp pump.
	★★[ ]	0-25 FLA
	★★[ ]	25-30 FLA
[ ]	10E	Lockable latch - NEMA 4X
[ ]	10E	Lockable latch - NEMA 1
[ ]	★10F	Lightning arrester
[ ]	★10K	Anti-condensation heater

	CODE	DESCRIPTION
[ ]	11C	NEMA 1 alarm panel *must select option 6A*
[ ]	11D	NEMA 4X alarm panel *must select option 6A*
[ ]	★★14B	Main disconnect (rotary style, mounted through door) non-fused
	★★[ ]	0-20 FLA (total of both pumps)
	★★[ ]	20-30 FLA (total of both pumps)
[ ]	15A	Control / alarm circuit breaker *Does not include the circuit board as in standard.*
[ ]	16A	10' cord in lieu of 20' *(per float)*
[ ]	16B	15' cord in lieu of 20' *(per float)*
[ ]	16C	30' cord in lieu of 20' *(per float)*
[ ]	16D	40' cord in lieu of 20' *(per float)*
[ ]	17A	SJE SignalMaster® / mounting strap ● *(per float)*
[ ]	17B	SJE SignalMaster® / externally weighted ● *(per float)*
[ ]	17C	Sensor Float® / internally weighted ▲ *(per float)*
[ ]	17D	Sensor Float® / externally weighted ▲ *(per float)*
[ ]	17E	Sensor Float® Mini / pipe clamp ▲ *(per float)*
[ ]	17F	Sensor Float® Mini / externally weighted ▲ *(per float)*
[ ]	19T	TOA (Test/Off/Automatic) switch and pump run light through door mounted
[ ]	19U	HOA (Hand/Off/Automatic) switch and pump run light through door mounted
[ ]	19X	Door mounted pump run indicator
[ ]	21A	SJE PumpMaster® in lieu of on/off switches ●
[ ]	21B	SJE PumpMaster® Plus in lieu of on/off switches ●
[ ]	21C	Super Single® in lieu of on/off switches ▲
[ ]	21D	Double Float® in lieu of on/off switches ▲

● Mechanically-activated ▲ Mercury-activated

SAMPLE

MODEL	112	1	W	9	1	4	H	3A 8A

Alarm Package
Enclosure Rating
Starting Device
Pump Full Load Amps
Pump Disconnect
Float Switch Application
Options: Flasher, Elapsed Time Meter

©SJE-Rhombus Printed in USA 06/05

"Quality Pumps Since 1939"

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

ZOELLER PUMP CO.

MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP • FAX (502) 774-3624

visit our web site:
http://www.zoeller.com

ZOELLER ON-SITE WASTEWATER PRODUCTS

INTRODUCING ZOELLER ON-SITE "DOSE-MATE" PUMPS

COMPARE THESE FEATURES

- Durable cast iron construction.
- Model 151 comes standard with a glass-filled polypropylene base.
- Corrosion resistant powder coated epoxy finish.
- Stainless steel lifting handle.
- Assembled with stainless steel bolts.
- Non-clogging engineered thermoplastic vortex impeller design.
- Model 151 - 1/3 HP passes ½" solids.
- Model 152 - .4 HP passes ¾" solids.
- Model 153 - 1/2 HP passes ¾" solids.
- Motor - 60 Hz, 3450 RPM, oil-filled, hermetically sealed, automatic reset thermal overload protected.
- Carbon/Ceramic seals.
- Upper sleeve bearing and lower ball bearing running in bath of oil.
- 20' UL Listed power cord with molded 3-wire plug.
- 1½" NPT vertical discharge.
- BN and BE standard models include a 20' variable level float switch.
- Operates at temperatures to 130°F (54°C) in effluent applications.
- All models include a 1½" x 2" PVC adapter fitting.

Note: The sizing of effluent systems normally requires variable level float(s) controls and properly sized basins to achieve required pumping cycles or dosing timers with nonautomatic pumps.

ZOELLER PUMP CO.

Manufacturers of . . .

"Quality Pumps Since 1939"

151/152/153 EFFLUENT SERIES

(For Pump Prefix Identification see News & Views 0052)

"DOSE-MATE"

FOR SEPTIC TANK - LOW PRESSURE PIPE (LPP) AND ENHANCED FLOW STEP SYSTEMS

EFFLUENT

SUBMERSIBLE

1½" NPT DISCHARGE

SSPMA MEMBER Sump and Sewage Pump Mfrs. Assn.

Made in the U.S.A. by Quality Craftsmen

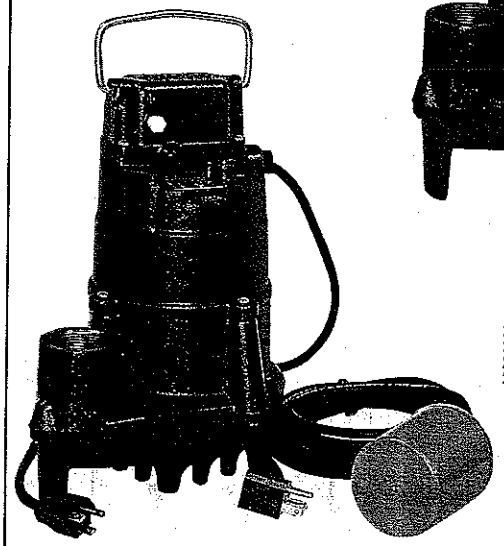
C US Tested to UL 778 and CSA 22.2 108 Standards

Model N152/N153
High Head
Effluent



MODELS AVAILABLE

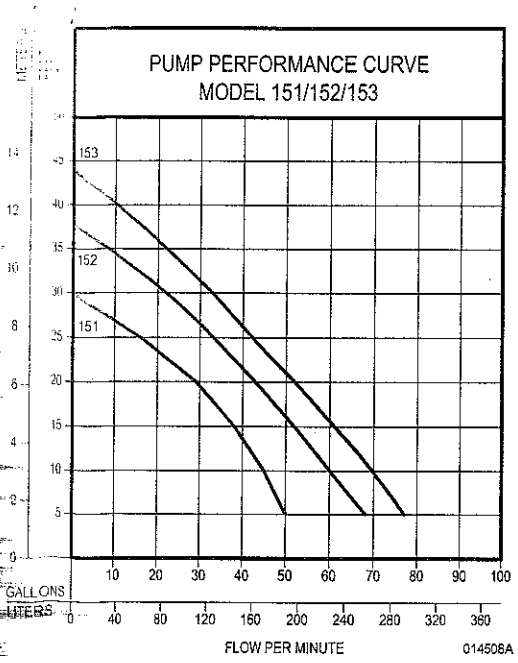
- N151/N152/N153 & E151/E152/E153 nonautomatic
- BN151/BN152/BN153 & BE151/BE152/BE153 packaged with Piggyback Variable Level Float Switch
- 1/3, .4 & 1/2 HP, 1Ph 115V or 230V



POWDER COATED TOUGH™

Model BN152/BN153
High Head
Effluent

© Copyright 2002 Zoeller Co. All rights reserved.



TOTAL DYNAMIC HEAD/FLOW
PER MINUTE
EFFLUENT AND DEWATERING

MODEL		151		152		153	
Feet	Meters	Gal.	Liters	Gal.	Liters	Gal.	Liters
5	1.5	50	189	69	261	77	291
10	3.0	45	170	61	231	70	265
15	4.6	38	144	53	201	61	231
20	6.1	29	110	44	167	52	197
25	7.6	16	61	34	129	42	159
30	9.1	–	–	23	87	33	125
35	10.7	–	–	–	–	22	85
40	12.2	–	–	–	–	11	42
Shut-off Head:		30 ft. (9.1m)		38 ft. (11.6m)		44 ft. (13.4m)	

014508B

CONSULT FACTORY FOR SPECIAL APPLICATIONS

- Timed dosing panels available.
- Electrical alternators, for duplex systems, are available and supplied with an alarm.
- Variable level control switches are available for controlling single phase systems.
- Double piggyback variable level float switches are available for variable level long and short cycle controls.
- Sealed Qwik-Box available for outdoor installations. See FM1420.
- Over 130°F. (54°C.) special quotation required.

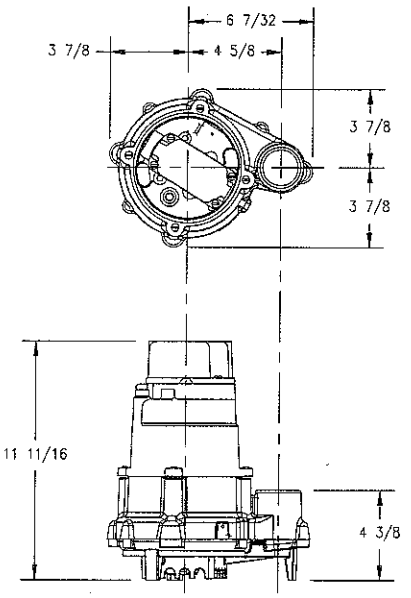
151/152/153 Series

	151/152/153 MODELS				Control Selection	
Model	Volts-Ph		Mode	Amps	Simplex	Duplex
N151	115	1	Non	6.0	1	2 or 3
BN151	115	1	Auto	6.0	Included	2 or 3
E151	230	1	Non	3.2	1	2 or 3
BE151	230	1	Auto	3.2	Included	2 or 3
N152	115	1	Non	8.5	1	2 or 3
BN152	115	1	Auto	8.5	Included	2 or 3
E152	230	1	Non	4.3	1	2 or 3
BE152	230	1	Auto	4.3	Included	2 or 3
N153	115	1	Non	10.5	1	2 or 3
BN153	115	1	Auto	10.5	Included	2 or 3
E153	230	1	Non	5.3	1	2 or 3
BE153	230	1	Auto	5.3	Included	2 or 3

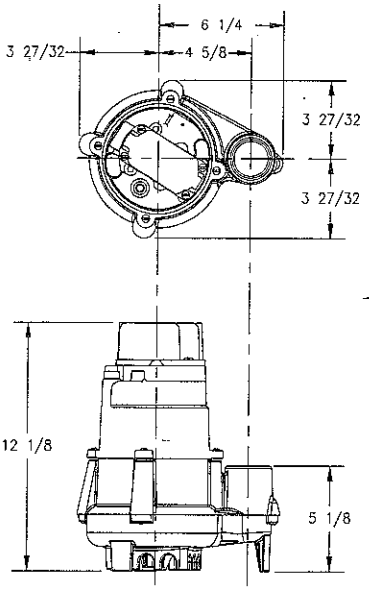
⚠ CAUTION

All ... of controls, protection devices and wiring should be done by a qualified ... trician. All electrical and safety codes should be followed including the most ... al Electric Code (NEC) and the Occupational Safety and Health Act (OSHA).

Model 151



Models 152 / 153



SELECTION GUIDE

1. Single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
2. See FM0712 for correct model of Electrical Alternator E-Pak.
3. Variable level control switch 10-0225 used as a control activator, specify duplex (3) or (4) float system.

RESERVE POWERED DESIGN

For unusual conditions a reserve safety factor is engineered into the design of every Zoeller pump.

http://www.zoeller.com

ZOELLER PUMP CO.

MAIL TO: P.O. BOX 16347
Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road
Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP
FAX (502) 774-3624

Manufacturers of . .
"Quality Pumps Since 1939"

© Copyright 2002 Zoeller Co. All rights reserved.

SECTION: 3.20.065
FM1775
1101
Supersedes
0501

Quality Pumps Since 1939"

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.

ZOELLER PUMP CO.

MAIL TO: P.O. BOX 16347 • Louisville. KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP • FAX (502) 774-3624

visit our web site:
http://www.zoeller.com

ZOELLER ON-SITE WASTEWATER PRODUCTS

INTRODUCING ZOELLER SEPTIC SYSTEM FILTERS

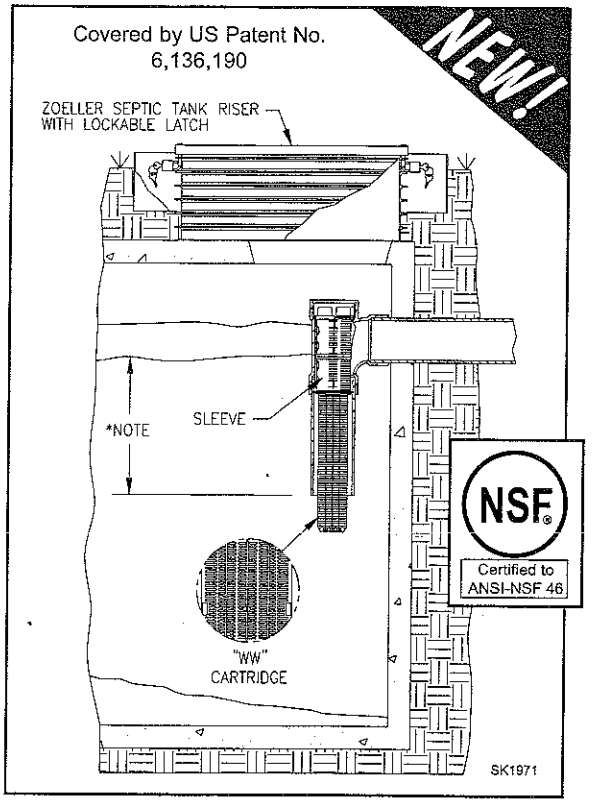
QUALITY MADE America's Pump Co. BY U.S. CRAFTSMEN

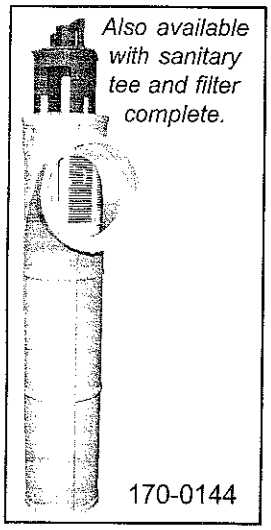
Zoeller "WW" Residential Effluent Filter P/N 170-0078

The Zoeller "WW" residential filter gives your septic system protection like no other. Zoeller Company's patented design keeps your lateral fields safe with twice the filtration area of most residential filters. All of the filtration area is submerged, making the filter 100% effective. The best feature of the WW filter is that the sleeve section of the filter remains in the outlet tee when the main filter is removed for servicing. This will guarantee no solids larger than 1/16" reach the lateral fields during servicing. The Zoeller "WW" filter is ultimate protection.

Improve the performance of your septic system: The number one reason that septic systems fail is because the lateral field becomes clogged. By preventing solids larger than 1/16" from exiting to your drain field, the lifetime of your system can be greatly increased.

Allows only the clearest effluent to leave the tank: Located in the sanitary tee, this filter extends beneath the scum layer, above the sludge layer, and withdraws effluent from the clear water zone of the tank.





Lowers maintenance costs: The filter must be serviced on a periodic basis to maintain peak performance. Under normal circumstances, the filter requires servicing when the septic tank is pumped. However, site specific circumstances may require more frequent service. A Zoeller Riser & Lid will make septic tank and filter maintenance an easy task.

***NOTE:** State and local plumbing codes may require a specific liquid penetration. For example, 25% - 45% into the liquid depth or 9" off the tank bottom.

Allows any responsible management entity to monitor the condition of the tank: During routine maintenance, the tank should be inspected to be sure unnecessary particulate is not getting into your tank (i.e. fruit peelings, cigarette filters, feminine hygiene materials, etc.). Check your local plumbing codes to determine how often your tank should be pumped. If sludge buildup becomes apparent on the bottom of your tank, then a more frequent pumping interval is suggested.

P/N 013244

Distributed by:

ZOELLER PUMP CO.

© Copyright 2001 Zoeller Co. All rights reserved.

Zoeller Residential Septic Tank Effluent Filter Specifications

Application: Single family homes.

Filter Area: 122 Linear Feet of 1/16" filtration.

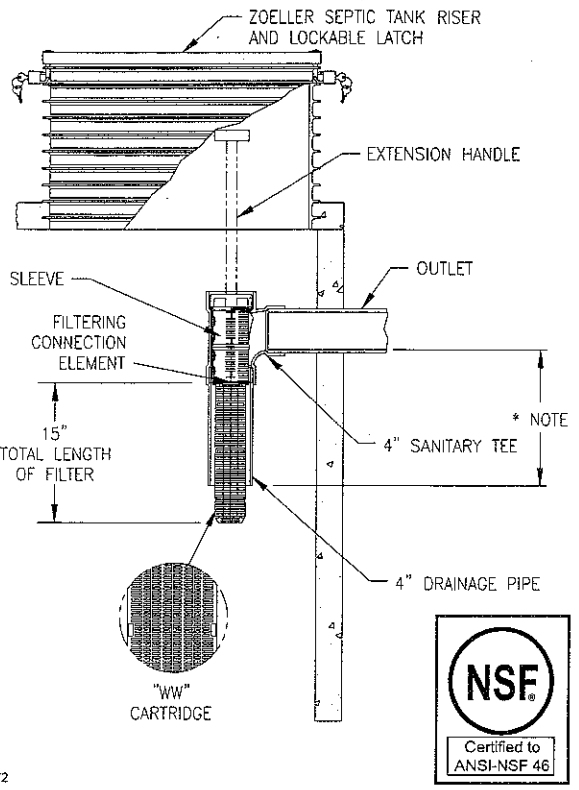
Flow Rate: 1000 gpd.

Material: All materials are noncorrosive in the septic tank environment. Sleeve is PVC, primary filter is polypropylene, and filter connection element is neoprene.

Easy to install or retrofit: The Zoeller Septic System Filter fits inside any 4" sanitary tee. Slide the filter cartridge into the filter sleeve. Lock the cartridge and sleeve together by holding the sleeve stationary and rotating the cartridge clockwise. Slide the assembled cartridge and sleeve into the sanitary tee at the tank's outlet. Ensure the sleeve latch is pointing toward the outlet of the septic tank before filter placement into the tee. The drain field is now protected from solids greater than 1/16".

Adding an extension handle: Zoeller's effluent filter can be easily retrofitted with an extension handle. Attach a 1/2" PVC pipe to the top of the filter with properly installed stainless steel screws. Cut off to appropriate length below the lid. A 1/2" PVC Tee can be added to the pipe for added leverage and control.

Covered by US Patent No. 6,136,190



Easy to maintain: The filter cartridge can be maintained by rotating the cartridge counterclockwise and removing for cleaning. The sleeve should remain in the sanitary tee while cleaning the cartridge. To clean the cartridge, hold cartridge over septic tank opening and thoroughly rinse with hose until clean, washing filtered trash back into septic tank. After cleaning the cartridge, it is imperative that the sleeve be cleaned inside and out, by reinserting the cartridge; turning it clock wise in the sleeve and removing the sleeve from the sanitary tee. The Zoeller filter should be cleaned each time the septic tank is pumped or when the need is indicated by slow flows from the house. More frequent cleanings will not hurt the filter and could even improve the performance of your septic tank. For installations that exceed the design flow rate of the filter, more frequent cleanings may be required or manifold more than one sanitary tee to accept more than one filter.

Trouble shooting, repair, and replacement: Follow the install and maintenance instructions above. For replacement components, call 1-800-928-PUMP.

Lifetime Warranty: Every Zoeller filter is guaranteed to be free from defects in materials and workmanship for the lifetime of the homeowner/ purchaser. Free repair or replacement, excluding labor, will be made on return of the filter prepaid to the factory. This warranty is limited to product proven to be free from abuse or improper installation.

***NOTE:** State and local plumbing codes may require a specific liquid penetration. For example, 25% - 45% into the liquid depth or 9" off the tank bottom.

ALL ZOELLER ON-SITE WASTEWATER PRODUCTS MUST BE INSTALLED IN ACCORDANCE WITH LOCAL AND/OR STATE PLUMBING AND/OR HEALTH DEPARTMENT CODES.

http://www.zoeller.com

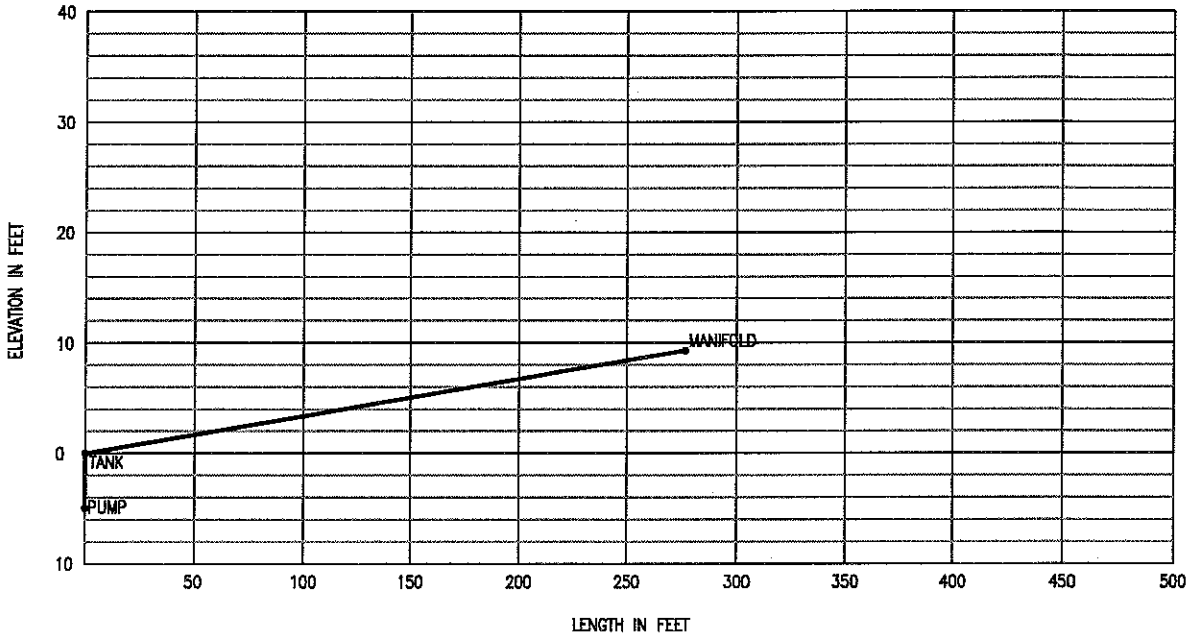
ZOELLER PUMP CO.

MAIL TO: P.O. BOX 16347
Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road
Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP
FAX (502) 774-3624

Manufacturers of . .
"Quality Pumps Since 1939"

© Copyright 2001 Zoeller Co. All rights reserved.

SUPPLY LINE
HYDRAULIC PROFILE

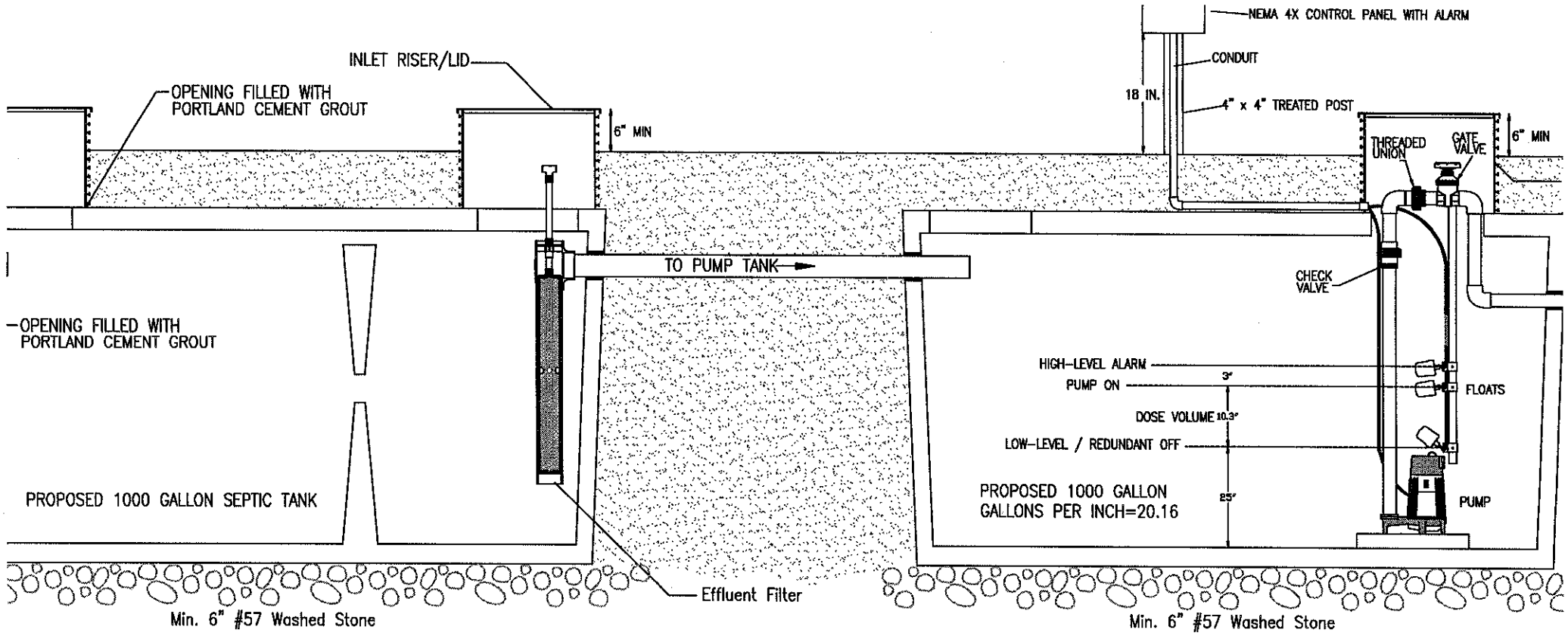


Bateman Civil Survey Company
Engineers • Surveyors • Planners
200 N. Main Street, Holly Springs, NC 27540 Ph: 919.577.1080 Fax: 919.577.1081
www.batemancivilsurvey.com info@batemancivilsurvey.com
NCBELS Firm No. C-0378

MeritageHomes

LOT 15

BELLS CROSSING SUBDIVISION
MOORESVILLE, NC IREDELL COUNTY
DATE: 03/18/15
DRAWN BY: TMB CHECKED BY: TMB



APPROVED FEB 22 2016

PANEL SHALL HAVE A
ND AUDIO ALARM

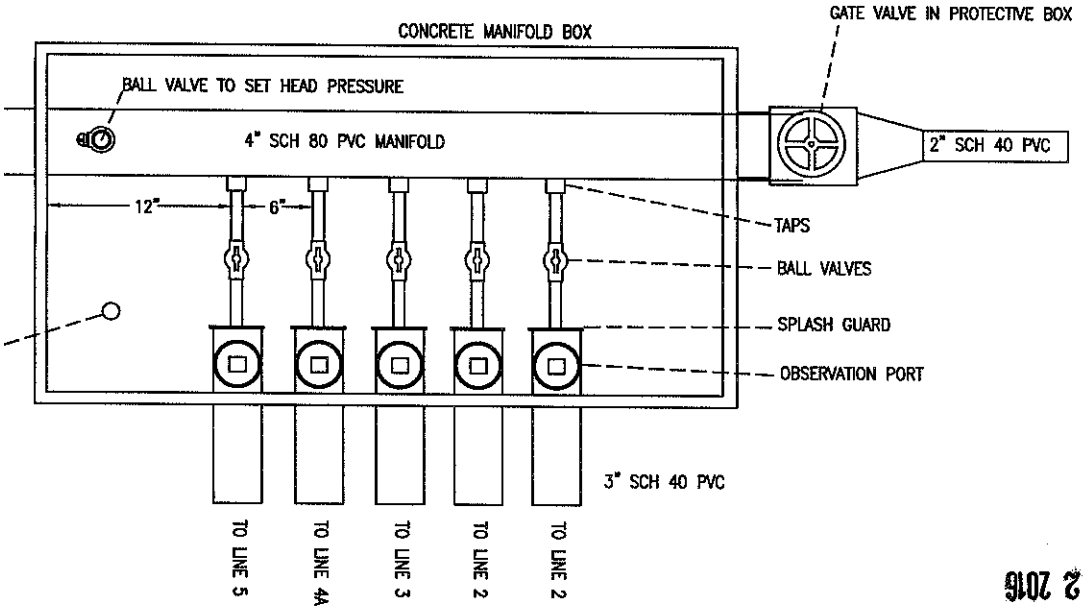
ADE SHOULD SHED WATER
OM TANKS

ALL BE CONSTRUCTED IN
ANCE WITH STATE RULE
18A .1953

TANK DE

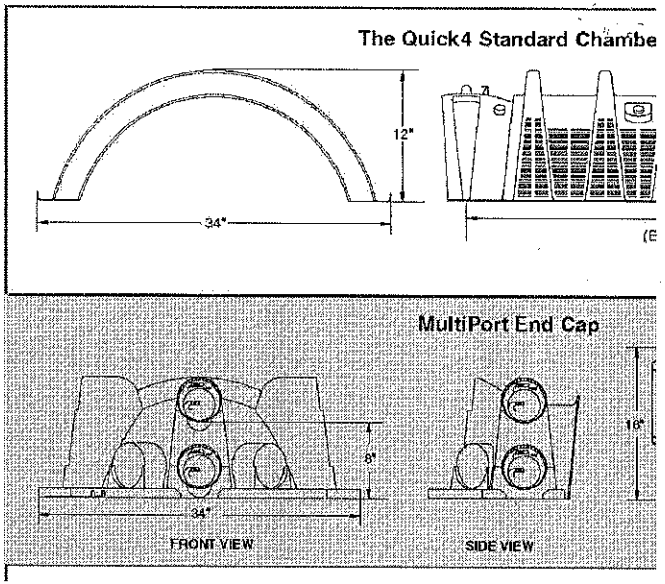
Merit

TOP VIEW

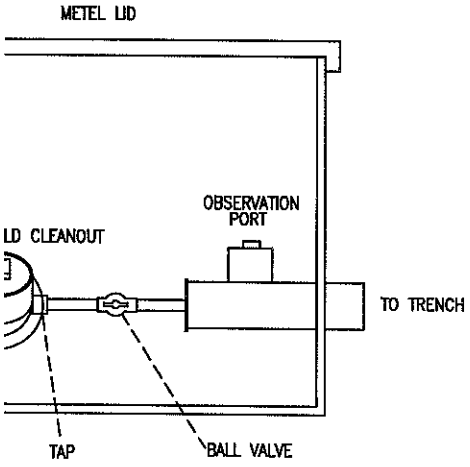


APPROVED FEB 22 2016

The
Quick4® Standard
Chamber



MANIFOLD DETAILS
END VIEW



TAP SCHEDULE	
LINE #	TAP
2	2 - $\frac{1}{2}$" SCH 40
3	$\frac{1}{2}$" SCH 40
4A	$\frac{3}{4}$" SCH 80
5	$\frac{1}{2}$" SCH 40

CHAMBER DE

MANIFOLD

Merit