

Patent No. 4,918,384

RECIRCULATING MEDIA FILTER SYSTEM

SCOPE: HOUSEHOLD SEWAGE WILL FLOW BY GRAVITY THROUGH A TREATMENT UNIT, TYPICALLY A SEPTIC TANK, TO THE SANDFILTER FEED TANK. FROM THE SANDFILTER FEED TANK THE EFFLUENT IS PUMPED TO THE SANDFILTER WHERE, AFTER TREATMENT, IT FLOWS BY GRAVITY TO A RECIRC VALVE WHERE ALL OF THE EFFLUENT WILL BE SENT BACK TO THE RECIRCULATION TANK AND THE OVERFLOW TO DISPOSAL.

IF SURFACE DISCHARGE, CHLORINATE THE EFFLUENT AND FLOW BY GRAVITY THROUGH A SERIES OF CHLORINE CONTACT CHAMBERS. THE FINAL CONTACT CHAMBER WILL ALSO ACT AS A SAMPLE MODULE. FROM THE CONTACT CHAMBERS THE EFFLUENT WILL FLOW BY GRAVITY TO A DISCHARGE POINT.

has designed the drip dispersal system for the specific site in accordance with findings recommendations with the site evaluator/soils evaluator, who is the consultant for the owner. American's pre-engineered system has been selected for the site by the owners representative. American only certifies the system mechanical application for this site and makes no representation for soil suitability or other site engineering code requirements.

LOCATION MAP

SITE DIRECTIONS

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- Page 2 Site Layout Plan & Zone Detail
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- Page 4 Control, Pump Curve, & Cool Guide Details
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I hereby certify that the evaluations and designs contained herein (refer to subdivision, lot, etc.) were conducted in accordance with the "regulations" of the State of Virginia. I certify that the evaluations and designs comply with the minimum requirements of the regulations.

I recommend a _____ be _____
 Licensed PE: _____ Date _____
 Seal

AMERICAN MANUFACTURING CO.
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PROJECT NAME :	DRAWER:	DATE:
JOB NAME	CHECKED:	03/20/06
TITLE :	APPROVED:	DATE:

COUNTY : _____
 COUNTY, STATE _____

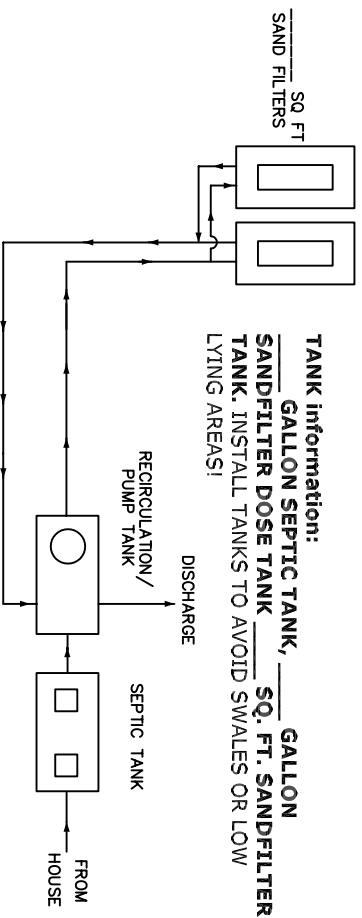
COVER SHEET

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SITE PLAN (SYSTEM LAYOUT SKETCH)

SCALE: ~1" = ___'

ONE OR MULTIPLE
SAND FILTER MODULES
NOT TO SCALE

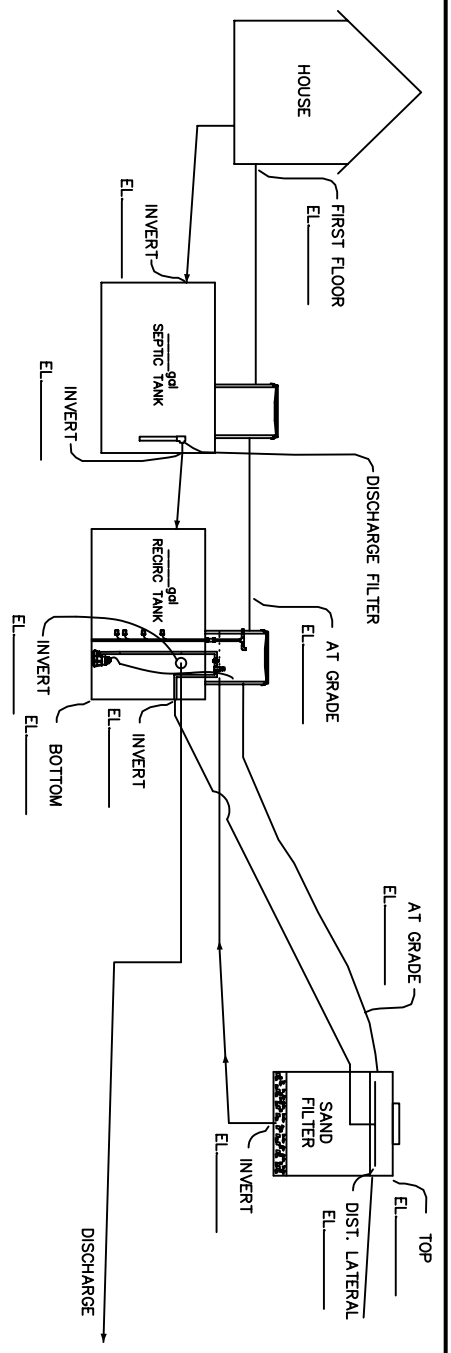


TANK information:
GALLON SEPTIC TANK, _____ GALLON
SAND FILTER DOSE TANK _____ SQ. FT. SAND FILTER
TANK. INSTALL TANKS TO AVOID SWALES OR LOW
LYING AREAS!

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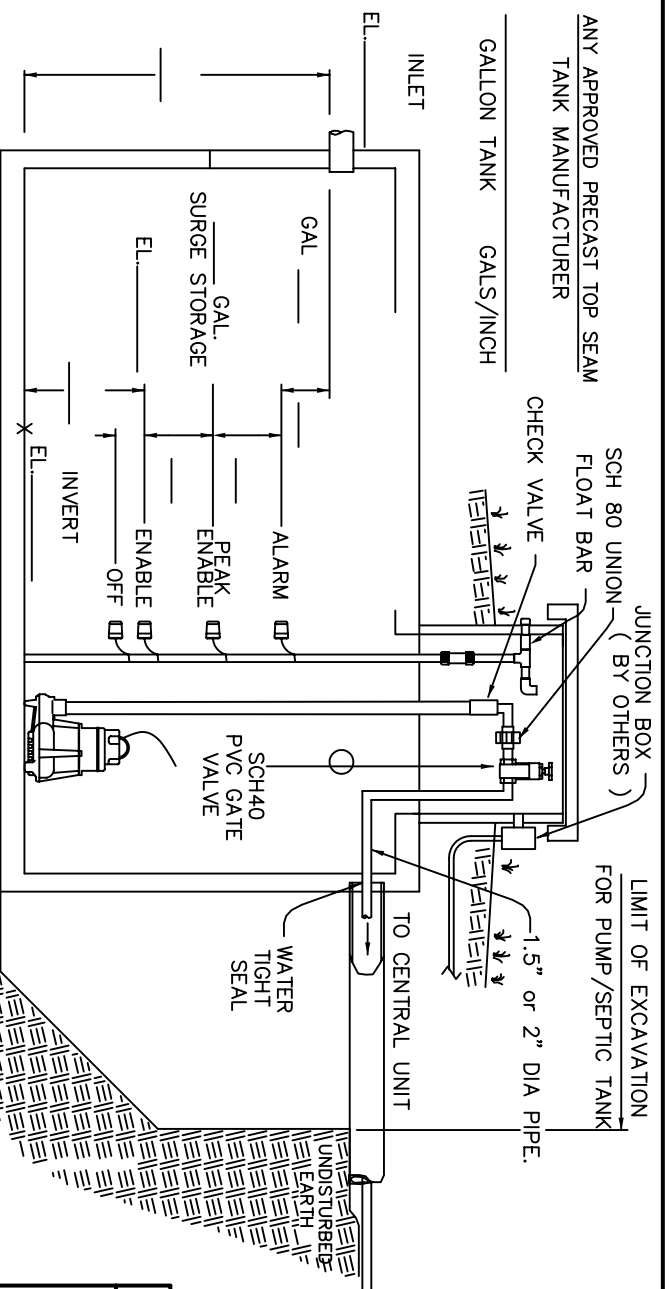
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JOB NAME	CHECKED:	DATE
COUNTY :	APPROVED:	DATE
COUNTY, STATE	TITLE :	
		SITE LAYOUT PLAN & ZONE DETAILS



Elevations are based on referenced site plan. During installation elevations must be checked to verify that system will function as designed. There must be at least 2% gravity fall from House Sewer main to Septic Tank inlet.

HYDRAULIC PROFILE
NTS



PRETREATMENT PUMP TANK DETAIL
NTS

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APPROVED: DATE:	TITLE :

JOB NAME : HYDRAULIC PROFILE & PUMP TANK DETAILS

COUNTY : COUNTY, STATE

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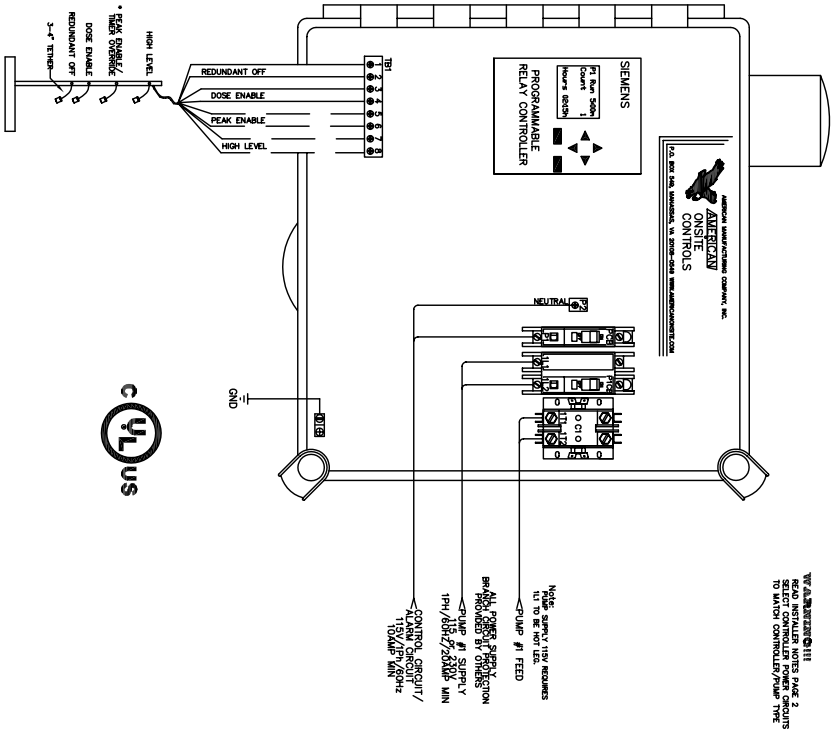
AMERICAN ONSITE CONTROLS

A Division of American Manufacturing Co., Inc. P.O. Box 569, Narrows, VA, 22078

INSTALLATION GUIDE FOR "SEPR" Multifunction SERIES TIMED DOSE CONTROL PROGRAMMABLE SIMPLEX EQUALIZATION SYSTEM (1 PH, OPTIONS A,U,L,R Multifunction)

DWG# E4689 REV/B 03/07/06

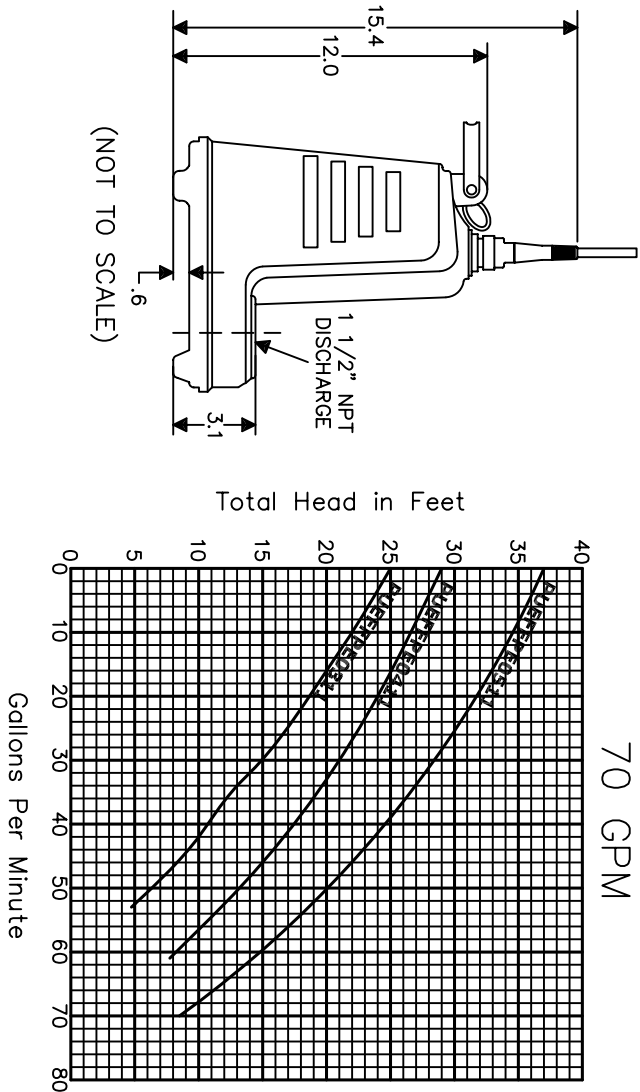
SEE ALTERNATE SHEET FOR INSTALLATION NOTES PAGE 2 TO MATCH CONTROLLER/PUMP TYPE



AVAILABLE MODEL-S:
ITEM NO. DESCRIPTION
SER#-E4689 SIMPLEX EQUALIZATION REPEAT CYCLE TIMER (MULTIFUNCTION)
DEPR-E4689 DUPLEX EQUALIZATION REPEAT CYCLE TIMER (MULTIFUNCTION)

SUBMERSIBLE EFFLUENT PUMP AND PUMP CURVE

PUFFPE0311 = 1/3 HP, 115V, 1 PHASE
PUFFPE0411 = 1/2 HP, 115V, 1 PHASE
PUFFPE0511 = 3/4 HP, 115V, 1 PHASE



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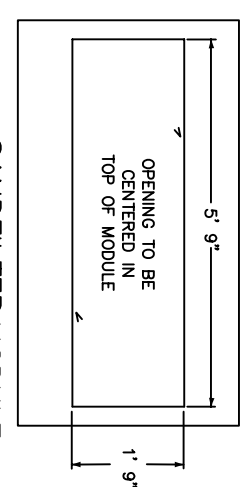
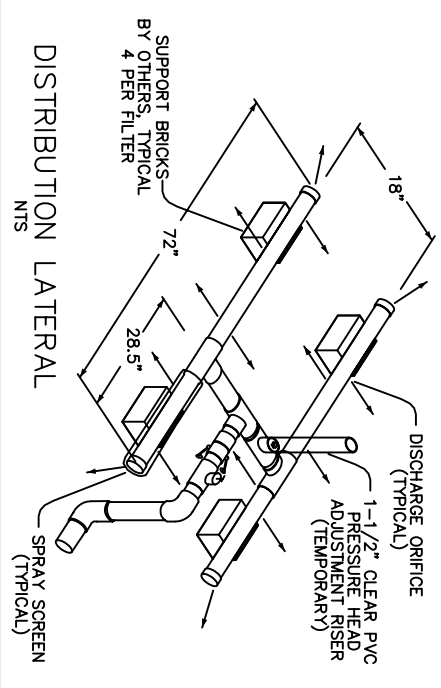
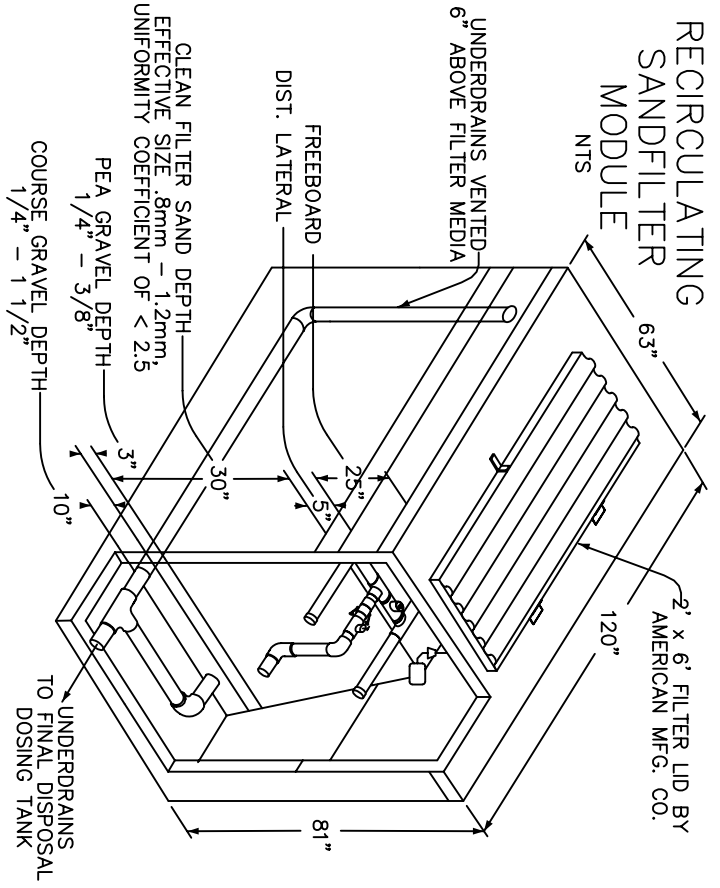
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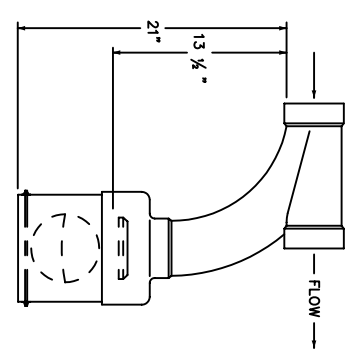
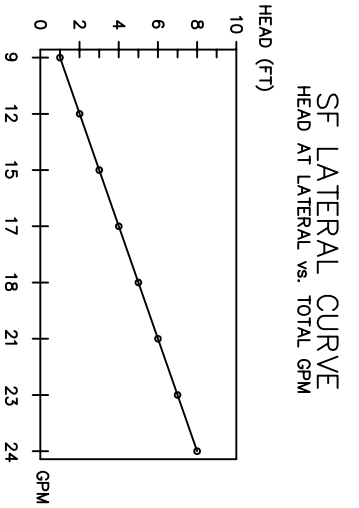
TITLE : CONTROL & PUMP CURVE DETAILS

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RECIRCULATING SANDFILTER MODULE



Patent No. 4,822,485



RECIRCULATING SANDFILTER TO DISCHARGE CALCULATIONS

1. _____ NUMBER OF BEDROOMS WATER CONSERVATION YES () NO ()
2. _____ GPD/BEDROOM
3. _____ TOTAL GALLONS
4. _____ DESIGN GAL/SQFT/DAY SANDFILTER LOADING
5. _____ SQ FEET FILTER REQUIRED (#3 / #4)
6. _____ S.F. MODULES @ _____ SQ FT / MODULE
7. _____ TOTAL SQ FT @ _____ GPD/SQ FT PROVIDED
8. _____ :1 DESIGN RECIRCULATION RATIO BASED ON FORWARD FLOW
9. _____ TOTAL GALLONS PER DAY DOSED (#8X #3) (SEE NOTE 1 BELOW)
10. _____ CYCLES PER DAY
11. _____ HR _____ MIN FREQUENCY OF CYCLE
12. _____ GALLONS PER CYCLE (#9 / #10)
13. _____ INCHES COVER / CYCLE ((#12 / 7.48) / #7) X 12)
14. _____ GALLONS - DOSING TANK SIZE @ _____ GALS PER INCH OF TANK
15. _____ INCHES DRAWN PER CYCLE (#12 / #40)
16. _____ GALLONS RECIRCULATION STORAGE (1/2 DAY TO 1 DAY)
17. _____ NO. OF FILTERS TO RECEIVE PUMP DISCHARGE
18. _____ NUMBER OF DISCHARGE LATERALS PER FILTER
19. _____ GPM PER DISCHARGE
20. _____ FT. DESIGN HEAD FOR DISCHARGE HOLES
21. _____ TOTAL GPM (#17 X #18 X #19)
22. _____ FEET OF STATIC HEAD
23. _____ INCHES DIAMETER SUPPLY PIPE
24. _____ FT. OF EQUIVALENT LENGTH OF SUPPLY PIPE
25. _____ FT. TOT. HEAD LOSS FOR FILTERS (@ #20 & #21)
26. _____ MINUTES _____ SECONDS DRAWDOWN TIME FOR RECIRCULATION TANK
27. _____ MINUTES _____ SECONDS DRAWDOWN TIME FOR SPRAY TANK

NOTE 1:
 BASED ON FORWARD FLOW FOR A RATIO BOX THE RATIO IS THE RELATIONSHIP OF THE INLET TO THE TOTAL NUMBER OF OUTLETS. A 4:1 RATIO HAS 3 PARTS RETURN AND 1 PART DISCHARGE (TOTAL OF PARTS) TO ONE INLET ; i.e., TOTAL GALLONS = INLET FLOW / % DISCHARGE.

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PROJECT NAME : _____ DATE: 03/20/06

JOB NAME _____ CHECKED: _____ DATE: _____

COUNTY : _____ TITLE : _____

COUNTY, STATE _____ RECIRCULATION TANK & SANDFILTER DETAILS

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