



City of Portland, Oregon - Bureau of Development Services

1900 SW Fourth Avenue • Portland, Oregon 97201 • 503-823-7300 • www.portlandoregon.gov/bds



Permit Revision Application and Submittal Requirements

A Permit Revision is required when there are proposed changes to the project after the permit has been issued. This may arise due to discrepancies between the city-approved permit drawings and actual field conditions, or the customer has changed their mind about an aspect of the project. In all cases, a revision to the existing permit must be submitted, reviewed and approved.

Applicants will provide:

A copy of this application

Three (3) sets of plans that clearly reflect the proposed change(s).

Drawings and calculations must be stamped and signed by the Architect and/or the Engineer of Record, if applicable.

One (1) copy of the original city approved permit drawings. (NOTE: If your project has an assigned process manager please contact them regarding submittal of the revision).

Two (2) sets of calculations, if applicable

Inspector's correction notice, if revision is due to an inspection correction

Revision fee (paid at time of submittal)

Contact Information:

Contact name DAN YOUNG

Address P.O. Box 80301

City PORTLAND State OR Zip Code 97280

Phone 503.703.2555 Email dan@orbizarch.com

Value of proposed revision 0 Issued permit # 12-172581-CO

Description of revision REVIEW EJECTOR PUMP.

Fees:

The Permit Revisions are subject to fees associated with plan review, processing and any increase in project value. Additional fees may apply if adding plumbing fixtures.

The Bureau of Development Services fee schedule is available under the fees tab on the BDS web site at: www.portlandoregon.gov/bds. Fees are updated annually on July 1st.

Helpful Information:

Bureau of Development Services
City of Portland, Oregon
1900 SW 4th Avenue, Portland, OR 97201
www.portlandoregon.gov/bds

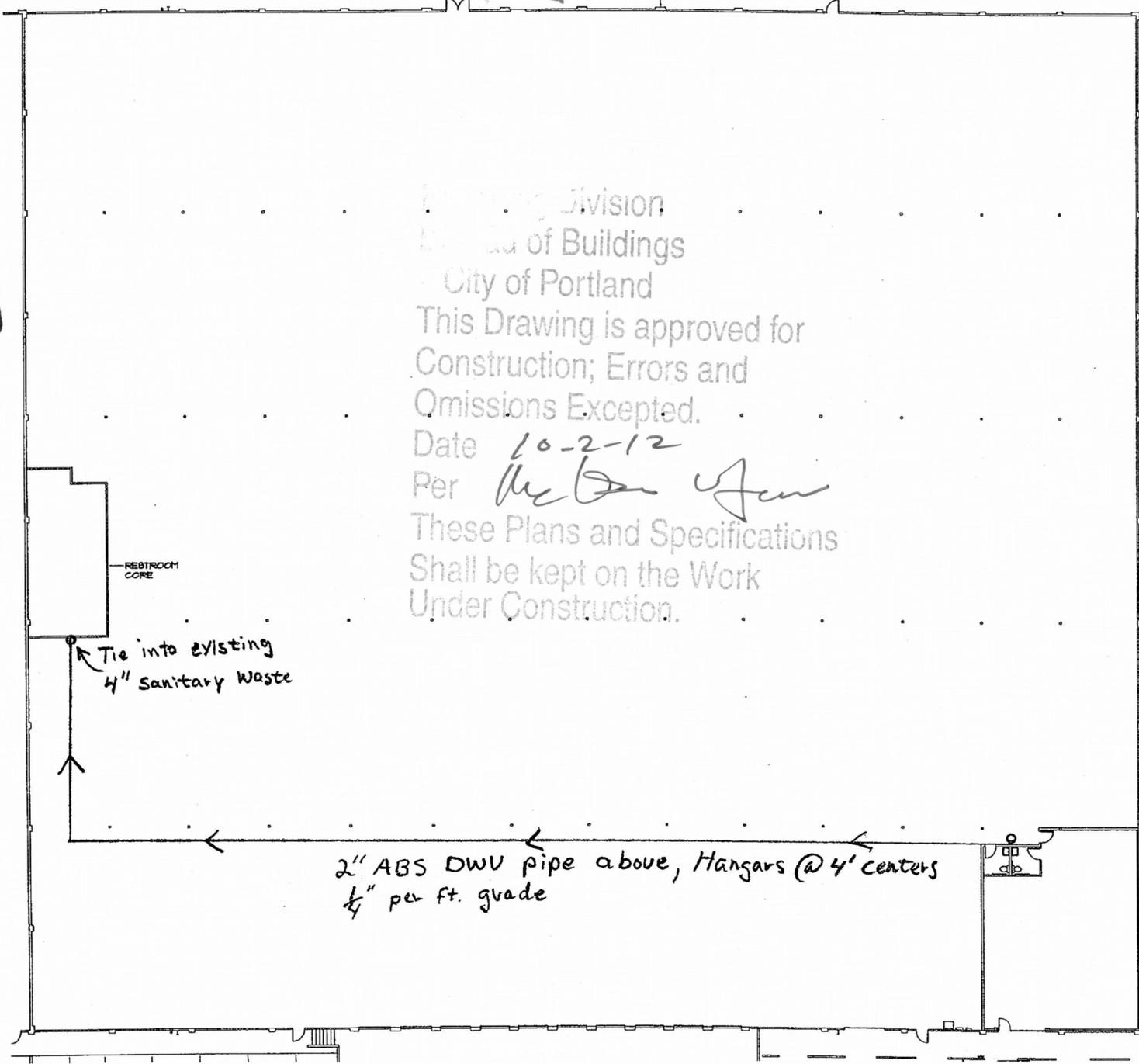
Submit your plans in person to:
Development Services Center (DSC), First Floor,
Tuesday - Friday:
7:30 am - 12:00 pm
Closed Mondays

Important Telephone Numbers:

BDS main number503-823-7300
DSC automated information line503-823-7310
Building code information503-823-1456
BDS 24 hour inspection request line503-823-7000
Residential information for
one and two family dwelling503-823-7388
General Permit Processing and
Fee Estimate info503-823-7357
City of Portland TTY503-823-6868

SCAN

12.173581-Dev 01 02



Planning Division
 Bureau of Buildings
 City of Portland
 This Drawing is approved for
 Construction; Errors and
 Omissions Excepted.
 Date 10-2-12
 Per *Michael Jones*
 These Plans and Specifications
 Shall be kept on the Work
 Under Construction.

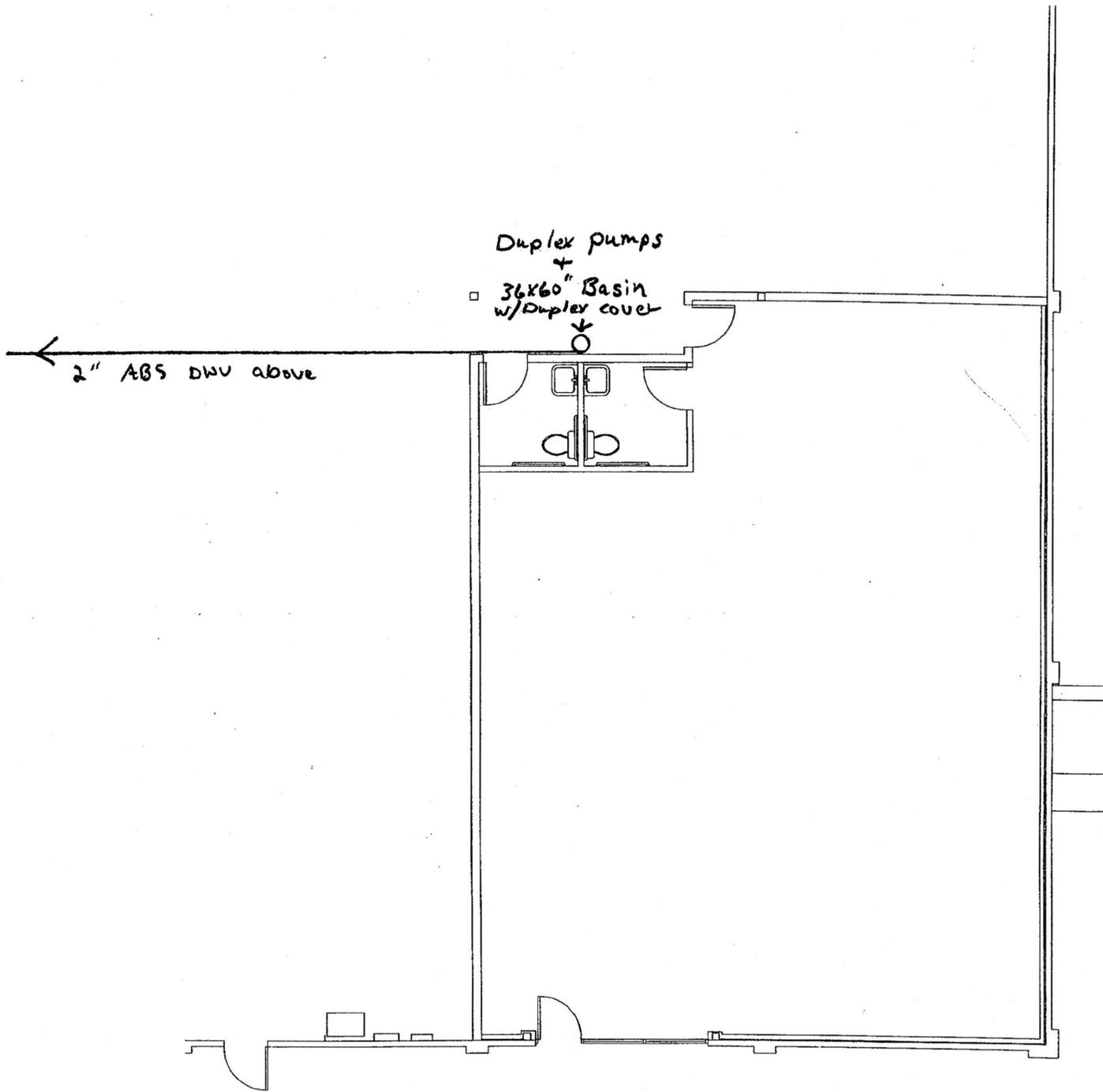
City of Portland
 REVIEWED FOR CODE
 COMPLIANCE
 OCT 02 2012
 Permit Number

6800 NE 59th PL

2" ABS DWV pipe above, Hangers @ 4' centers
1/4" per ft. grade

Portland OR

9/12/2012



Duplex pumps

36x60" Basin
w/Duplex cover

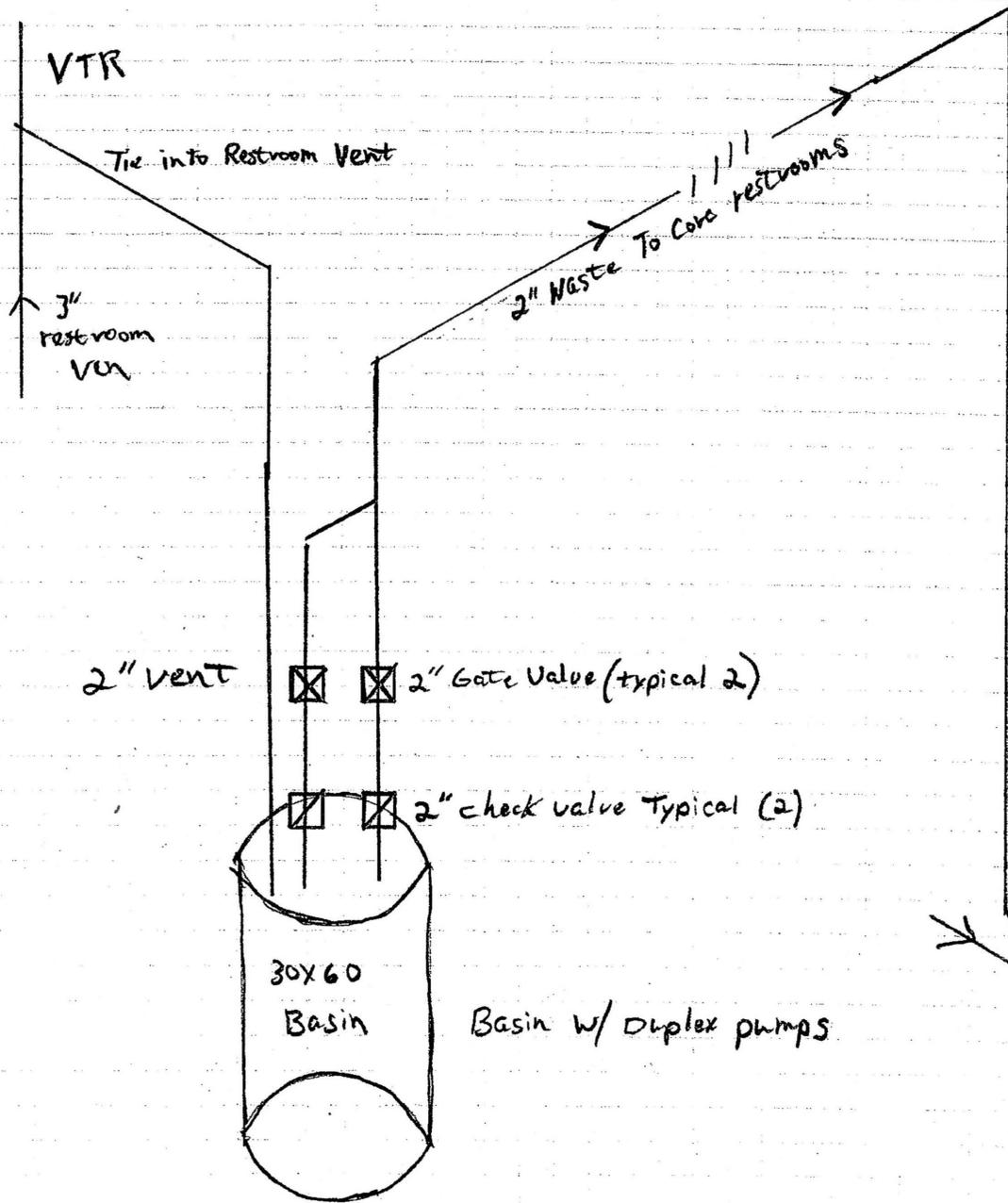
← 2" ABS DWV above

City of Portland
REVIEWED FOR CODE
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6800 NE 59th PL

Portland, Or.

9/12/2012

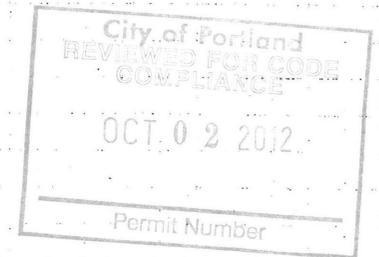


6800 NE 59th PL

Portland, OR

9/12/2012

Duplex Sewage ejector
 @ new restrooms +
 Tie in @ Core restrooms



4" Existing
 SS
 @ Core restrooms

HOLLABAUGH BROTHERS
3028 SE 17TH
PORTLAND, OR 97202
503-238-0313
503-235-2824 FAX
MIKE WITZEL

9-21-12

FERGUSON
1536 NE 25TH
HILLSBORO, OR 97124
503-707-7777
503-707-7782 FAX
ERIC

JOB NAME: 59TH PLACE WAREHOUSE

QTY	SYMBOL	DESCRIPTION	LIST PRICE EACH
DUPLEX 2" SOLIDS HANDLING SYSTEM			
2		N270 2" DISCHARGE PUMP 115V/ 1 PHASE	\$708.00
1		10-1045 CONTROL PANEL NEMA 4	\$948.00
2		30-0152 2" CHECK VALVE	\$85.00
1		31-1451 36" X 60" FIBERGLASS BASIN	\$1,344.00

2 TOILETS, 2 LAVS, 1 BREAK ROOM SINK

16' RISE
30' RUN
2" LINE RECOMMENDED
INVERT CALCULATED TO BE WITHIN THE TOP 21" OF THE BASIN

IF THERE ARE ANY CHANGES TO THE ABOVE INFORMATION THIS SHOULD BE RECALCULATED.

ANY QUESTIONS PLEASE CALL.

THANKS,

MIKE WITZEL

"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

SECTION: 2.30.025

FM1921

0612

Supersedes

0105

visit our web site:
www.zoeller.com

COMPARE THESE FEATURES

- Durable cast construction. ASTM Class 25 cast iron, motor housing cover, and pump housing
- Engineered plastic base on 270
- Bronze non-clogging vortex impeller
- Not affected by materials normally found in drainage and sewage sumps
- Stainless steel screws, bolts, and handle
- 20 ft. UL Listed 3-wire neoprene cord and plug
- Motor - 1 HP, 60 Hz, 3450 RPM, oil-filled, hermetically sealed, automatic reset thermal overload protected
- Square Ring & Gasket - Neoprene
- Carbon and ceramic shaft seal
- Double seal pump available - 4270 Series
- Cast iron base on 4270
- Upper sleeve bearing and lower ball bearing running in a bath of oil
- Passes 2" spherical solids
- 2" NPT Discharge
- Corrosion-resistant powder coated epoxy finish

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.

**SIMPLEX AND
DUPLEX SYSTEMS
AVAILABLE**

**PACKAGED
SYSTEMS
AVAILABLE**

FEATURES AVAILABLE

- Double Seal Pump in 4270, 115 or 230V, 1Ph, 1HP
- 2" NPT Discharge
- Passes 2" Spherical Solids
- BN and BE pumps available packaged with a Piggyback Variable Level Float Switch

**ALL MODELS ARE COMPLETELY
SUBMERSIBLE, HERMETICALLY SEALED
Watertight - dust tight**

*May be used in those states where codes do not restrict solids size in effluent systems.

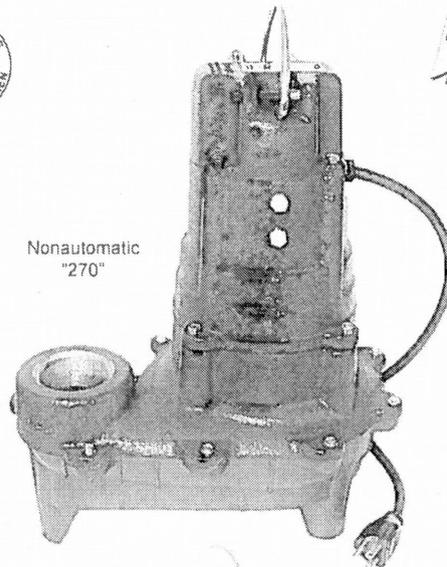
270-4270 Series

(For Pump Prefix Identification see News & Views 0052)

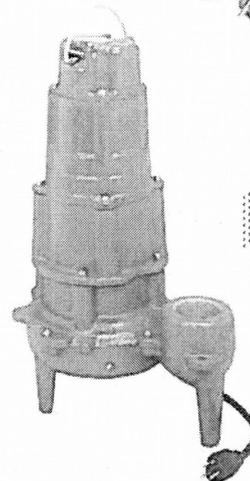
"WASTE-MATE" SUBMERSIBLE SEWAGE/*EFFLUENT PUMP OR DEWATERING PUMP 2" NPT DISCHARGE

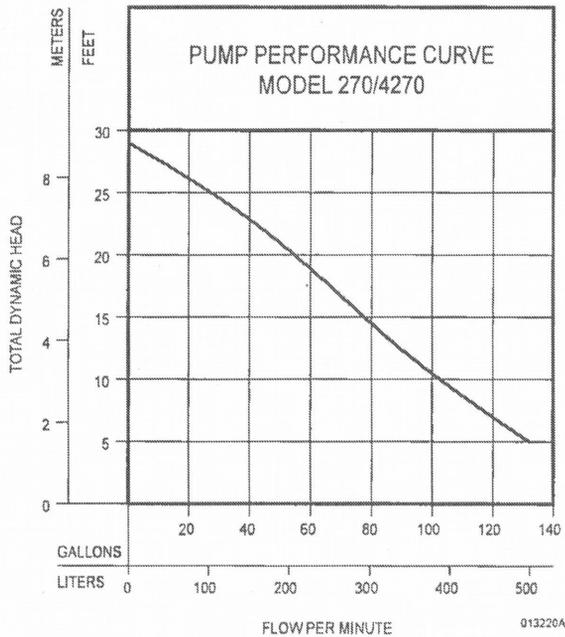


Nonautomatic
"270"



Nonautomatic
"4270"
double seal pump



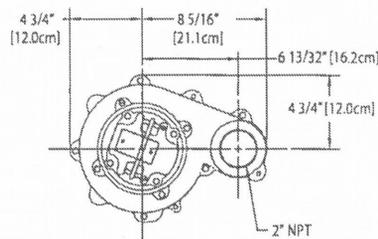


**TOTAL DYNAMIC HEAD/FLOW
PER MINUTE
SEWAGE AND DEWATERING**

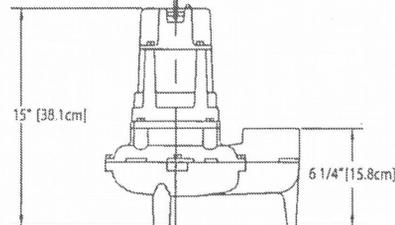
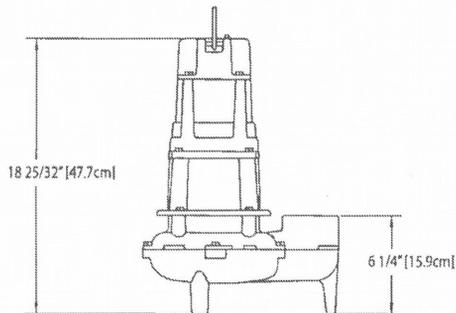
MODEL		270/4270	
Feet	Meters	Gal.	Liters
5	1.5	132	500
10	3.0	101	382
15	4.6	77	291
20	6.1	56	212
25	7.6	29	110
Shut-off Head:		29 ft. (8.8m)	

013220B

SINGLE SEAL MODEL



DOUBLE SEAL MODEL



SK1532

CONSULT FACTORY FOR SPECIAL APPLICATIONS

270/4270 MODELS				Control Selection		
Model	Model	Volts-Ph	Mode	Amps	Simplex	Duplex
N270	N4270	115 1	Non	15.0	1 or 2	3
E270	E4270	230 1	Non	7.5	1 or 2	3

- Electrical alternators for duplex systems available with variable level control switches.
- Minimum recommended basin size (Small load applications) Simplex - 18" x 30" - Duplex - 30" x 30".

Standard All Models -

- 270 - Weight 49 lbs. 1 HP.
- 4270 - Weight 73 lbs. 1 HP.

- High water alarms available.
 - Mechanical alternators available for duplex systems.
- Caution:** Maximum temperature of sewage or dewatering must be limited to 130°F (54°C). For over 130°F (54°C) special quotation required.

SELECTION GUIDE

1. For automatic use single piggyback variable level float switch or double piggyback variable level float switch. Refer to FM0477.
2. See FM1228 for correct model of simplex control panel.
3. See FM0712 for correct model of duplex control panel.

For information on additional Zoeller products refer to catalog on Simplex Panels, FM1596 Piggyback Variable Level Switches, FM0477 Electrical Alternator, FM0486 Mechanical Alternator, FM0495 Sump/Sewage Basins, FM0487 Single Phase Alarm Systems, FM0732 Watertight Junction Boxes, FM1597, and Disconnect & Rail Systems, FM0787

CAUTION

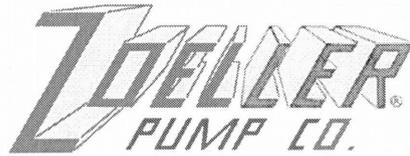
All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electric Code (NEC) and the Occupational Safety and Health Act (OSHA).

RESERVE POWERED DESIGN

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

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"QUALITY PUMPS SINCE 1939"



SECTION: 4.10.010
FM0486
0910
Supersedes
0306

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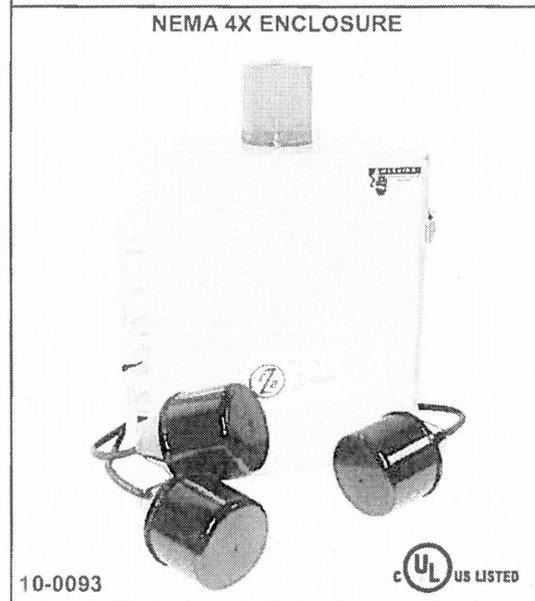
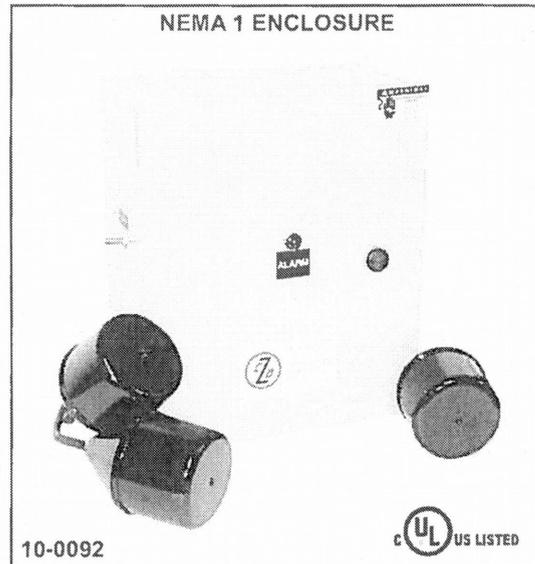
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www.zoeller.com

ELECTRICAL ALTERNATOR CONTROL PANEL - FOR DUPLEX INSTALLATIONS

An Electrical Alternator is used on a Duplex pump application where automatic alternation of the pumps is desired for added protection in residential or commercial applications. With one pump operating to handle normal flow, a second pump becomes operational in the event the water level continues to rise. The built-in alarm system, a standard feature, can be connected to sound when the second pump becomes operational (3-float switch system) or independently (4-float switch system). All electrical systems must be installed by a qualified electrician and according to the National Electrical Code. (See Section 430-71 through 430-113 plus any others that apply.)

Control Panel Features:

- Hand-Off-Auto Toggle Switch for each pump
- Green pump run pilot light for each pump
- Alarm test and silence switches
- Red pilot light (Nema 1 Only) and audible alarm with 83 to 85 decibel rating for a high water condition
- Red Alarm Beacon included with Nema 4X enclosure
- Auxiliary Dry Contact
- High Water Alarm
- On Single Phase - Circuit breaker for each pump
- On Three Phase - Motor protective switch with overload protection
- Magnetic starter for each pump
- Alternating mechanism
- Numbered terminal strip for connecting pumps and variable level float switches
- Nema 1 - general purpose or
Nema 4X - Watertight enclosures available
- Integral auxiliary terminal board connections (dry contact) for remote alarm devices
- 3 or 4 variable level float switch control operation
- Three 20' float switches included with single phase panels
- 2 Year Warranty
- The use of off-the-shelf components provide for relatively easy field maintenance and repair
- Float switches not included with three phase panels (See FM0526)



CONTROL PANEL USED WITH SINGLE PHASE PUMPS

NEMA 1 ENCLOSURE WITH 20' FLOAT SWITCH			
Order No.	Dimensions H x W x D	Volts	Amp Range
10-1039	12" x 10" x 6"	115	7-15
10-1040	12" x 10" x 6"	115	15-20
10-0092*	12" x 10" x 6"	115/200/230	0-20

NEMA 4X ENCLOSURE WITH 20' FLOAT SWITCH			
Order No.	Dimensions H x W x D	Volts	Amp Range
10-1041	12" x 10" x 6"	115	7-15
10-1042	12" x 10" x 6"	115	15-20
10-1043	12" x 10" x 6"	115/200/230	0-7
10-1044	12" x 10" x 6"	115/200/230	7-15
10-1045	12" x 10" x 6"	115/200/230	15-20
10-1046	12" x 10" x 6"	115/200/230	20-30
10-0093*	12" x 10" x 6"	115/200/230	0-20

* Branch circuit protection provided by installing electrician

NOTE: 600 and X600 Series single phase pumps require special panels that include start components. See Selection Guide FM0712 for correct panel selection.
NOTE: All variable level float switches in this section are mechanically activated and do not contain mercury.

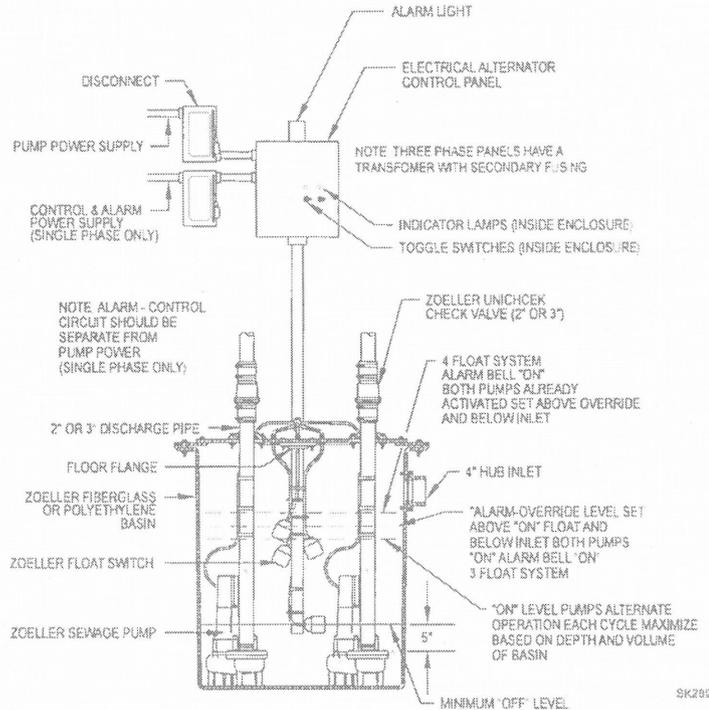
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CONTROL PANEL USED WITH THREE PHASE PUMPS

NEMA 4X ENCLOSURE (Float Switches not included)			
Order No.	Dimensions H x W x D	Volts*	Amp Range
10-1102	14" x 12" x 6"	200/230/460	1.0 - 1.6
10-1104	14" x 12" x 6"	200/230/460	1.6 - 2.5
10-1106	14" x 12" x 6"	200/230/460	2.5 - 4.0
10-1108	14" x 12" x 6"	200/230/460	4.0 - 6.3
10-1110	14" x 12" x 6"	200/230/460	6.0 - 10.0
10-1111	14" x 12" x 6"	200/230/460	9.0 - 14.0
10-1112	14" x 12" x 9"	200/230/460	13.0 - 18.0
10-1114	14" x 12" x 6"	200/230/460	17.0 - 23.0
10-1115	14" x 12" x 6"	200/230/460	20.0 - 25.0
10-1183	14" x 12" x 6"	200/208	23.0 - 32.0
10-1154	14" x 12" x 6"	575	1.6 - 2.5
10-1156	14" x 12" x 6"	575	2.5 - 4.0
10-1158	14" x 12" x 6"	575	4.0 - 6.3

*Three phase panel has multi-tap transformer with secondary fusing.

DUPLEX ELECTRICAL ALTERNATING SYSTEM



Sequence of Operation for Duplex Panel

1. Operation can begin after the following:
 - Correct voltage is supplied to Panel
 - Panel is properly grounded
 - Pumps are connected correctly to Panel
 - Panel Circuit Breakers are closed
 - Floats are installed properly
 - Overload Protection is adjusted to Pump nameplate amps
 - Pump HOA Switches are set to "Auto"
 - Control On/Off Switch is set to "On"
2. When the "Stop" and "Lead" floats are closed Pump 1 will energize and the Pump 1 Pump Run Light will illuminate. Pump 1 will remain operational until the "Stop" float opens.
3. The next time the "Stop" and "Lead" floats are closed the Alternating Circuit will energize Pump 2 and the Pump 2 Pump Run Light will illuminate. Pump 2 will remain operational until the "Stop" float opens. This cycle will repeat each time the fluid level rises and falls.
4. If the fluid level continues to rise after the first pump has been energized the "Lag" float will close. When the "Lag" float has closed the second Pump will Energize. Both Pumps will remain operational until the "Stop" float opens.
 5. In a three float system when the "Lag" float is closed the following will also occur:
 - The External High Water Light will illuminate
 - The Audible High Water Horn will sound
 - The Auxiliary Dry Contacts will close
 6. In a four float system, the alarm float should be the third float causing an alarm to sound when the lead pump fails to operate or the rate of in flow into the basin exceeds the capacity of one pump. When the alarm float is closed the following will occur.
 - The External High Water Light will illuminate
 - The Audible High Water Alarm will sound
 - The Auxiliary Dry Contacts will close
 As the liquid level continues to rise the fourth float will close, energizing the lag pump. The lag pump and the lead pump will remain energized until the "Stop" float opens.

NOTE: In Duplex systems where it is considered normal for two pumps to operate in tandem during peak flow conditions, the third and fourth float may be reversed.
 7. The Audible High Water Horn can be silenced by pressing the Alarm Silence Button. When the "Alarm" float opens the External High Water Light, Audible High Water Horn and Dry Auxiliary Contacts will be reset.



WARNING All electrical systems must be installed by a qualified licensed electrician and according to the National Electrical Code. (See section 430-71 through 430-113 plus any others that apply)

Refer to FM0712 for correct selection of Electrical Alternator.

"QUALITY PUMPS SINCE 1939"

ZOELLER
PUMP CO.



SECTION: 4.10.100
FM0217
0705
Supersedes
1104

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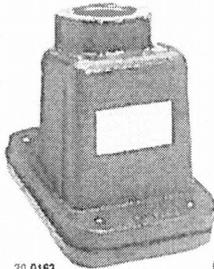
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THE "FULL-FLOW" UNICHECKS

30-0163 1 1/4" CAST IRON NPT

30-0164 1 1/2" CAST IRON NPT



30-0163
Pictured

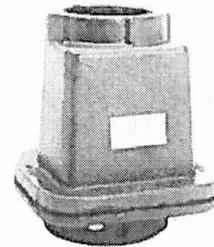
Outside dimensions
5 1/16" W x 4" W x 6 1/4" H

POWDER
COATED
TOUGH

- Vertical or horizontal installation.
- Full flow design - no restrictions.
- Stops backflow of water.
- Standard, 1/4", 1/2", 2", 3" female NPT pipe.
- Neoprene polyester reinforced flapper - smooth edge design, with cast iron and noncorrosive metal backing plates & stainless steel fastener.
- Corrosion resistant powder coated epoxy finish.
- Rated at 50 PSI (115 feet of head) at 130°F
- Stainless steel bolts.
- 1 per carton.
- Weight: 30-0163, 7.5 lbs.; 30-0164, 7.5 lbs.;
- 30-0152, 10 lbs.; 30-0160, 18 lbs.
- Suitable for installation below basin cover.

30-0152 2" CAST IRON NPT

30-0160 3" CAST IRON NPT



30-0160
Pictured

Outside dimensions
6 5/8" W x 6 5/8" W x 8" H

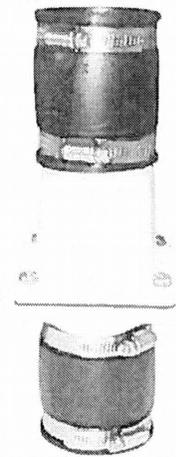
30-0021 2" PLASTIC SLIP X SLIP UNIONS

30-0151 2" CAST IRON SLIP X SLIP UNIONS

- Full 2" flow design - meets BOCA (P.604.2) 2" Full Flow Pump Code
- Checks backflow of water and sewer gas.
- Simple to install (no threading of pipe required). Save time & material costs.
- Neoprene gasket and flapper, weighted with heavy stainless steel metal backing plates and stainless steel rivet.
- Can be installed on vertical or horizontal line.
- Slips over ABS, PVC, steel pipe or copper piping
- Reduces motor and pump noise from plumbing system.
- Meets requirements of Wisconsin Uniform Plumbing Code.
- Flexible neoprene slip x slip union includes stainless steel clamps for low pressure systems. Avoid more than 10 ft. static head above the check valve. 4.3 PSI at 130°F.
- Stainless steel screws.
- Extra wide hinge to reduce hinge stress.
- Plastic check has PVC body and can be installed with solvent welded couplings for pressure systems to 25 PSI (57 ft. of Head). (P/N 30-0023)
- Model 30-0151 has corrosion resistant powder coated epoxy finish.
- Stainless Steel sleeves available to meet Illinois plumbing code. C.I. 30-0201 / PVC 30-0202.
- Plastic check individual rack pack Model 30-0022.
- 6 per carton.



30-0151
CAST IRON



30-0021
PVC PLASTIC

30-0181 / 30-0200 1 1/2" or 1 1/4" SLIP X SLIP UNION

- Flapper bends over a radius, no sharp 90° edges—lengthens life of flapper hinge.
- PVC plastic check body, ultrasonically welded and can be solvent welded for rigid pressure rated piping systems to 25 PSI - (57 ft. of Head) at 130°F. (30-0182).
- Vertical or horizontal installation.
- Available in individual packages for pegboard display (30-0191).
- All stainless steel screws, nuts and clamps on model 30-0200 only.
- Slip x Slip for 4.3 PSI (10 ft. of Head) at 130°F. Avoid more than 10 ft. static head above the check valve.
- Designed to reduce water hammer.
- 10 per carton.



OUTDOOR BASINS AND ACCESSORIES

SIMPLEX OUTDOOR BASINS - FIBERGLASS ONLY - NO HOLES DRILLED

Size	Item No.	Description
24" X 48"	31-0866	Solid Fiberglass Basin with Solid Fiberglass Cover and Anti-Flotation Ring
24" X 60"	31-0946	Solid Fiberglass Basin with Solid Fiberglass Cover and Anti-Flotation Ring
24" X 72"	31-0594	Solid Fiberglass Basin with Solid Fiberglass Cover and Anti-Flotation Ring
30" X 48"	31-1830	Solid Fiberglass Basin with Solid Fiberglass Cover and Anti-Flotation Ring
30" X 60"	31-1831	Solid Fiberglass Basin with Solid Fiberglass Cover and Anti-Flotation Ring
30" X 72"	31-1586	Solid Fiberglass Basin with Solid Fiberglass Cover and Anti-Flotation Ring

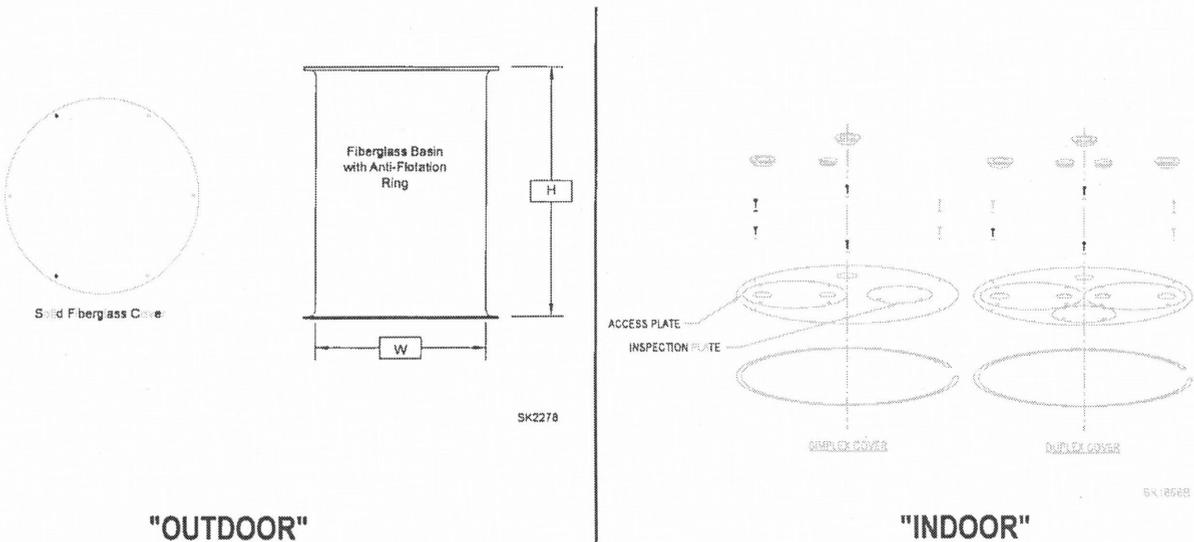
All basins include 5 field installed adapta-flex seals - (1) 1¼", (1) 1½", (2) 2" and (1) 4" grommets.

DUPLEX OUTDOOR BASINS - FIBERGLASS ONLY - NO HOLES DRILLED

Size W X H	Item No.	Description
36" X 48"	31-1450	Solid Fiberglass Basin with Solid Fiberglass Cover and Anti-Flotation Ring
36" X 60"	31-1451	Solid Fiberglass Basin with Solid Fiberglass Cover and Anti-Flotation Ring
36" X 72"	31-1452	Solid Fiberglass Basin with Solid Fiberglass Cover and Anti-Flotation Ring

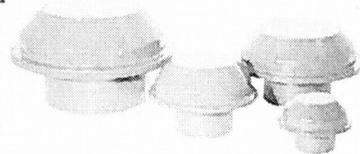
All basins include 5 field installed adapta-flex seals - (1) 1¼", (1) 1½", (2) 2" and (1) 4" grommets.

ADDITIONAL BASIN SIZES WITH OPTIONS (i.e. Rail Studs) ARE AVAILABLE. CONSULT FACTORY.



OUTDOOR TANK VENTS

Item No.	Color	Material	Size	Dimension (W x H)	Pipe Area	Screen Area
10-1753	Black	Plastic	2" Female NPT	4.625" X 3.125"	3.1 sq. in.	6.9 sq. in.
10-1461	Green	Metal	2" Female NPT	4.625" X 3.125"	3.1 sq. in.	6.9 sq. in.
10-1462	Green	Metal	3" Female NPT	6.875" X 4.500"	7.1 sq. in.	19.6 sq. in.
10-1463	Green	Metal	4" Female NPT	9.250" X 5.000"	12.6 sq. in.	35.8 sq. in.
10-1464	Green	Metal	6" Female NPT	11.125" X 6.625"	28.3 sq. in.	42.5 sq. in.



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FAX (502) 774-3624

Manufacturers of
"Quality Pumps Since 1939"