

ROTH

ROTH PUMP COMPANY

**Pumps & Pumping Systems
For The
Heating & Air Conditioning Industry**



THE ROTH SOLUTION PROVIDES:

Lowest NPSHR • Lowest Motor Speeds

Lower Tank Heights • Reduced Maintenance

Roth Transfer Station Solutions

Why Roth Transfer Stations?

Roth Pump Company offers a variety of transfer stations for improving the operation and efficiency of heating systems. In most heating systems, condensate, and sometimes steam, is trapped out of heaters, kettles, hot presses, molds, absorbers, and other equipment and drained to a return unit having given up some of its heat in the process. If a trap malfunctions, the condensate can be passed to the return unit at a much higher temperature causing the return unit to fail. When using Roth Transfer Stations as the return unit, this problem is overcome because they are designed to eliminate cavitation at higher temperatures. In addition Roth Transfer Stations are designed to handle the higher load placed on it during a cold start. Roth transfer stations eliminate boiler system problems and continue to provide the efficient return of hot condensate to the boiler or feedwater system. Roth Transfer Stations are supplied with reliable pumps that are designed to handle hotter water and develop higher pressures at lower speeds.

Roth Transfer Stations are ideal for remote or non-accessible locations where unattended, dependable performance is essential.

This bulletin is intended to help you select the right Roth Transfer Station for your particular application. Our sales and engineering staff is prepared to help you in selecting the right unit or discussing special requirements.

Please call us toll free at 1-888-444-ROTH.

Roth Transfer Station Features

Roth offers a variety of transfer stations ranging from small efficient units to large, high temperature units for the most demanding applications. Every Roth transfer station has the following features:

CONSTRUCTION

Roth Transfer Stations can be supplied for either simplex or duplex operation. Simplex units, ordered with larger receivers, can be converted to

duplex operation in the field if an upgrade is required. Users can specify either cast iron or 3/16 inch (4.8 mm) steel receivers with receiver capacities ranging from 8 to 320 gallons (30 to 1211 liters). A safety reserve is provided in these capacities to handle water at up to 10psi (0.68 bar) above the selected discharge pressure. Safety venting to the atmosphere is standard.

Electrical equipment is generally mounted at least 1 foot (0.305 M) above floor level for safety and to maintain pumping if flooding occurs.

Roth units are supplied with an internal pump that operates at 1750 RPM. Pumps are leak proof and easy to maintain.

Floats are set at the factory to provide about 2 inches (5.08 cm) of water level variation between start and stop. This insures frequent recycling and smaller condensate transfers at higher temperatures, thus improving overall efficiency of the boiler system. If condensate is pumped directly to the boiler, this feature provides a more continuous flow.

Settings for both float switches and mechanical alternators can be field adjusted. All units can be provided with optional pressure gauges for the pump discharge. An optional thermometer can be provided for the receiver.

ELECTRICAL

Motor sizes range from 1/4 HP to 15 HP and operate at 1750 RPM. Operating voltages are 115/230 volt single phase or 230/460 volt three phase. Enclosed motors are available as an option.

Optional electrical equipment supplied with Roth Transfer Stations include starters, switches and/or alternators. All electrical equipment has been selected from electrical suppliers that have wide distribution and field service networks.

Roth Pump Company is a U.L. Listed manufacturer of control panels. Underwriters Laboratories Listed Industrial Control Panels are available on request.

Selecting the Roth Transfer Station for Your Application

Determine Your Application Requirements:

Temperature: °F *or* °C _____

Condensate Rate:

lb/hr *or* kg/hr _____

or

GPM *or* m³/hr _____

Pump Rate*:

GPM *or* m³/hr _____

Receiver Capacity:

Gallons *or* Liters _____

*Roth calculates Pump Rate at 2.0 times Condensate Rate.

How to Order

1. Knowing temperature, condensate rate, pump rate, and receiver capacity use the selection table (below) to determine the transfer station for your application.
2. Determine simplex or duplex operation.
3. Determine if steel or cast iron receiver is required.
4. Identify voltage and phase.
5. Select optional equipment:
Control panel (Standard or U.L.)
Electrical options
Motor enclosure
Thermometers
Pressure gauges
Certified drawings
6. Call Roth (**1-888-444-ROTH**) or your local Roth Representative for price and delivery information.

Selection Table

Temperature:	to 200°F (93°C)	
Condensate Rate:	to 30 GPM (6.8 m ³ /hr) <i>or</i> to 15,000 lb/hr (6804 kg/hr)	
Pump Rate:	to 60 GPM (13.6 m ³ /hr)	
Discharge Pressure:	10 - 60 psig (0.68 - 4.08 bar) depending on pump rate	
Receiver Capacity:	to 50 Gallons (189 Liters)	to 130 Gallons (492 Liters)
Use:	Standard Transfer Station (page 4) <i>or</i> Underground Station (page 8)	Peak Transfer Station (page 6)

Temperature:	to 212°F (100°C)	
Condensate Rate:	to 50 GPM (11.4 m ³ /hr) <i>or</i> 25,000 lb/hr (11340 kg/hr)	to 75 GPM (17.0 m ³ /hr) <i>or</i> 37,500 lb/hr (17010 kg/hr)
Pump Rate:	to 100 GPM (22.7 m ³ /hr)	to 150 GPM (34.1 m ³ /hr)
Discharge Pressure:	to 75 psig (5.10 bar)	
Receiver Capacity:	to 100 Gallons (379 Liters)	to 320 Gallons (1211 Liters)
Use:	212°F (100°C) Transfer Station (page 10)	212°F (100°C) Underground Station (page 12)

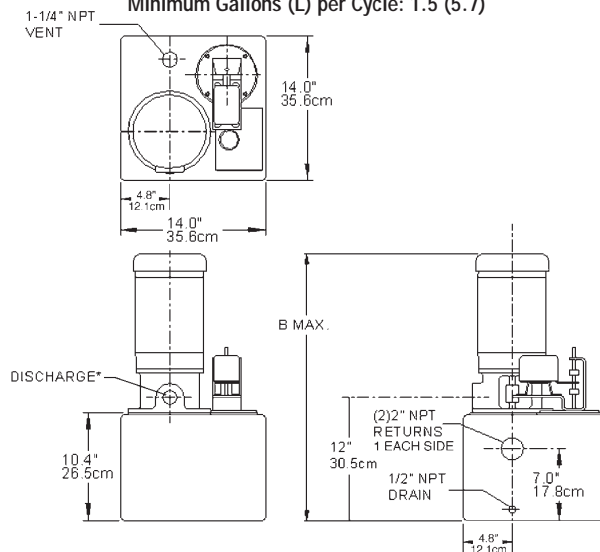
Temperature:	to 250°F (121°C)	
Condensate Rate:	to 75 GPM (17.0 m ³ /hr) <i>or</i> 37,500 lb/hr (17464 kg/hr)	
Pump Rate:	to 150 GPM (34.1 m ³ /hr)	
Discharge Pressure:	to 75 psig (5.10 bar)	
Receiver Capacity:	to 320 Gallons (1211 Liters)	
Use:	250°F (121°C) Underground Station (page 14)	

Standard Transfer Stations

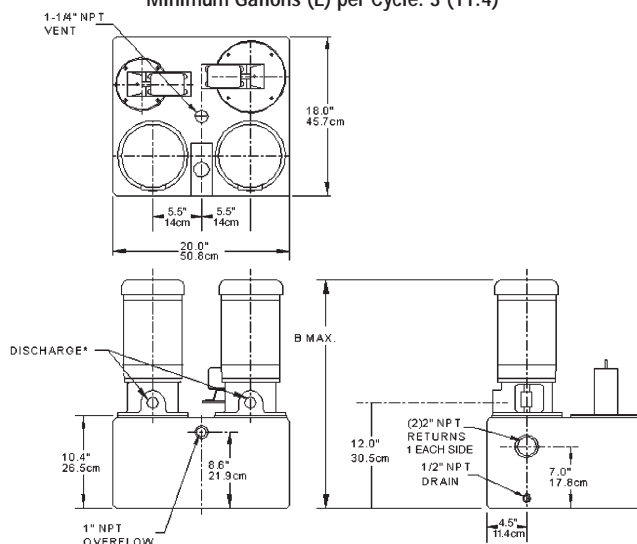


Roth Standard Transfer Stations are the most popular and meet most water applications. These units will deliver hot water at temperatures up to 200°F (93°C) and will not vapor bind at 210°F (98°C). Receiver capacities to 50 gallons (189 liters) can be supplied on these units.

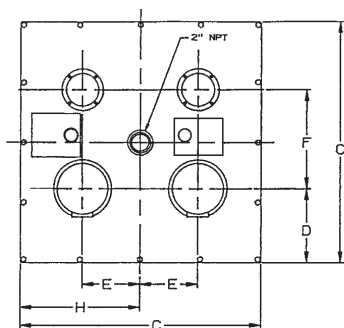
8 GALLON (30 LITER) CAST IRON RECEIVER Minimum Gallons (L) per Cycle: 1.5 (5.7)



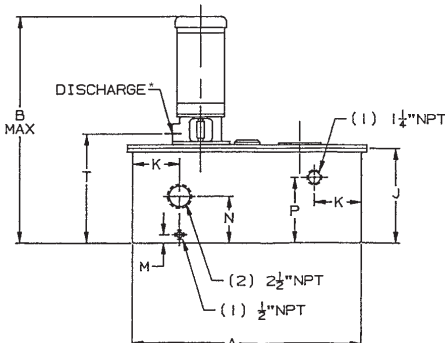
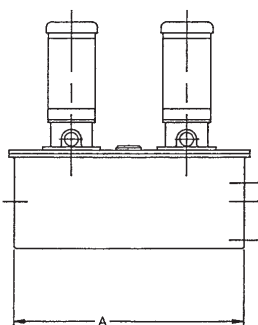
15 GALLON (57 LITER) CAST IRON RECEIVER Minimum Gallons (L) per Cycle: 3 (11.4)



23, 35 AND 50 GALLON (87, 132 AND 189 LITER) RECEIVERS



*See Selection Table



B MAX. FOR 8 AND 15 GALLON (30 AND 57 LITER) RECEIVERS

Motor HP	inches	cm
1/4 and 1/3	26	66
1/2, 1 and 1-1/2	27	69
3/4	28	71
2	31	78

DIMENSIONS FOR 23, 35 AND 50 GALLON (87, 132, 189 L) CAST IRON RECEIVERS inches (cm)

Receiver Capacity Gallons (L)	A	C	D	E	F	H	J	K	M	N	P	T
23 (87)	22-1/8 (56)	24 (61)	5-5/8 (14.3)	6-3/8 (16.2)	13-5/8 (35)	12 (30)	13 (33)	6-1/2 (16.5)	1-1/8 (3.8)	7 (17.8)	11-1/2 (29.2)	14-3/4 (37)
35 (132)	27-1/4 (69)	29 (74)	5-5/8 (14.3)	6-7/8 (17.5)	14-7/8 (38)	14-1/2 (37)	13 (33)	6-1/2 (16.5)	1-1/8 (3.8)	7 (17.8)	11-1/2 (29.2)	14-3/4 (37)
50 (189)	31-3/4 (81)	33-1/2 (85)	5-5/8 (14.3)	7-7/8 (20)	17-5/8 (45)	16-3/4 (43)	13 (33)	6-1/2 (16.5)	1-1/8 (3.8)	7 (17.8)	11-1/2 (29.2)	14-3/4 (37)

B MAX. FOR 23, 35 AND 50 GALLON (87, 132 AND 189 LITER) RECEIVERS

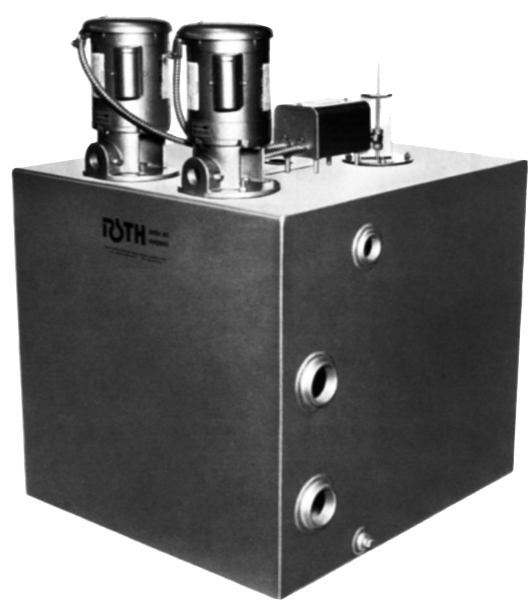
Motor HP	inches	cm
1/4 and 1/3	30	76
1/2, 1 and 1-1/2	31	79
3/4	32	81
2	35	89

Preliminary Outline Drawings
(Foundation data, not to be used for piping unless certified.)
NOTE: All receivers must be vented to atmosphere, not a pressure vessel.

Selection Table 1 – Standard Transfer Stations

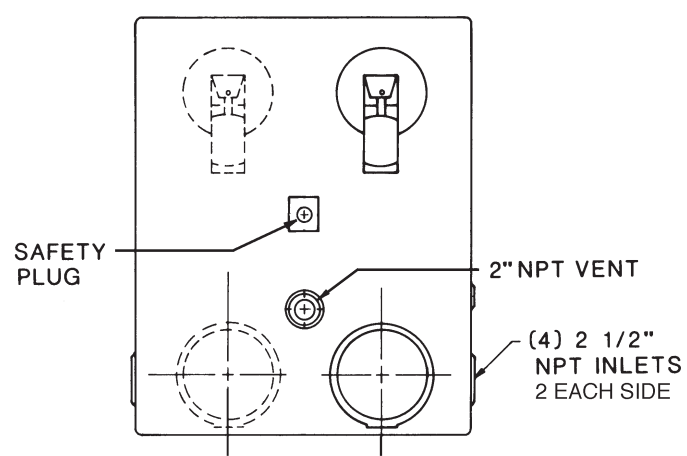
Condensate Rate	Pump Discharge Pressure psig (bar)	Minimum Pump GPM (m ³ /hr)	Motor H.P.	Receiver Capacity		Pump Discharge Size NPT	Unit Number		
				Simplex G (L)	Duplex G (L)		Cast Iron Receiver	Steel Receiver	
3.0 GPM (0.68 m ³ /hr) <i>or</i> 1500 lb/hr (680 kg/hr)	10 (0.68)	6.0 (1.36)	1/4	8 (30)	15 (57)	1"	6F	6S	
	15 (1.02)	6.0 (1.36)	1/4	8 (30)	15 (57)	1"	6F	6S	
	20 (1.36)	6.0 (1.36)	1/4	8 (30)	15 (57)	1"	6F	6S	
	30 (2.04)	6.0 (1.36)	1/3	8 (30)	15 (57)	1"	9F	9S	
	40 (2.72)	6.0 (1.36)	1/2	8 (30)	15 (57)	1-1/4"	37F	37S	
	50 (3.40)	6.0 (1.36)	1/2	8 (30)	15 (57)	1-1/4"	37F	37S	
5.0 GPM (1.14 m ³ /hr) <i>or</i> 2500 lb/hr (1134 kg/hr)	10 (0.68)	10.0 (2.27)	1/4	8 (30)	15 (57)	1"	26F	26S	
	15 (1.02)	10.0 (2.27)	1/3	8 (30)	15 (57)	1"	27F	27S	
	20 (1.36)	10.0 (2.27)	1/3	8 (30)	15 (57)	1"	27F	27S	
	30 (2.04)	10.0 (2.27)	1/2	8 (30)	15 (57)	1"	29F	29S	
	40 (2.72)	10.0 (2.27)	3/4	8 (30)	15 (57)	1-1/4"	38F	38S	
	50 (3.40)	10.0 (2.27)	3/4	8 (30)	15 (57)	1-1/4"	38F	38S	
7.5 GPM (1.70 m ³ /hr) <i>or</i> 3750 lb/hr (1701 kg/hr)	10 (0.68)	15.0 (3.41)	1/3	15 (57)	15 (57)	1-1/4"	23F	23S	
	15 (1.02)	15.0 (3.41)	1/2	15 (57)	15 (57)	1-1/4"	25F	25S	
	20 (1.36)	15.0 (3.41)	1/2	15 (57)	15 (57)	1-1/4"	25F	25S	
	30 (2.04)	15.0 (3.41)	3/4	15 (57)	15 (57)	1-1/4"	48F	48S	
	40 (2.72)	15.0 (3.41)	1	15 (57)	15 (57)	1-1/4"	50F	50S	
	50 (3.40)	15.0 (3.41)	1 1/2	15 (57)	15 (57)	1-1/4"	62F	62S	
10.0 GPM (2.27 m ³ /hr) <i>or</i> 5000 lb/hr (2268 kg/hr)	10 (0.68)	20.0 (4.54)	1/2	15 (57)	15 (57)	1-1/4"	2F	2S	
	15 (1.02)	20.0 (4.54)	1/2	15 (57)	15 (57)	1-1/4"	2F	2S	
	20 (1.36)	20.0 (4.54)	3/4	15 (57)	15 (57)	1-1/4"	3F	3S	
	30 (2.04)	20.0 (4.54)	1	15 (57)	15 (57)	1-1/4"	59F	59S	
	40 (2.72)	20.0 (4.54)	1 1/2	15 (57)	15 (57)	1-1/4"	62F	62S	
	50 (3.40)	20.0 (4.54)	2	15 (57)	15 (57)	1-1/2"	75F	75S	
15.0 GPM (3.41 m ³ /hr) <i>or</i> 7500 lb/hr (3402 kg/hr)	10 (0.68)	30.0 (6.81)	3/4	23 (87)	23 (87)	1-1/4"	58F	58S	
	15 (1.02)	30.0 (6.81)	3/4	23 (87)	23 (87)	1-1/4"	58F	58S	
	20 (1.36)	30.0 (6.81)	3/4	23 (87)	23 (87)	1-1/4"	58F	58S	
	30 (2.04)	30.0 (6.81)	1 1/2	23 (87)	23 (87)	1-1/2"	74F	74S	
	40 (2.72)	30.0 (6.81)	1 1/2	23 (87)	23 (87)	1-1/2"	74F	74S	
	17.5 GPM (3.97 m ³ /hr) <i>or</i> 8750 lb/hr (3969 kg/hr)	10 (0.68)	35.0 (7.95)	3/4	23 (87)	23 (87)	1-1/2"	70F	70S
15 (1.02)		35.0 (7.95)	1	23 (87)	23 (87)	1-1/2"	72F	72S	
20 (1.36)		35.0 (7.95)	1	23 (87)	23 (87)	1-1/2"	72F	72S	
30 (2.04)		35.0 (7.95)	2	23 (87)	23 (87)	1-1/2"	78F	78S	
20.0 GPM (4.54 m ³ /hr) <i>or</i> 10000 lb/hr (4536 kg/hr)		10 (0.68)	40.0 (9.08)	3/4	35 (132)	35 (132)	1-1/2"	80F	80S
		15 (1.02)	40.0 (9.08)	1	35 (132)	35 (132)	1-1/2"	82F	82S
	20 (1.36)	40.0 (9.08)	1	35 (132)	35 (132)	1-1/2"	82F	82S	
	30 (2.04)	40.0 (9.08)	2	35 (132)	35 (132)	1-1/2"	90F	90S	
	25.0 GPM (5.68 m ³ /hr) <i>or</i> 12500 lb/hr (5670 kg/hr)	10 (0.68)	50.0 (11.36)	1	35 (132)	35 (132)	1-1/2"	87F	87S
		15 (1.02)	50.0 (11.36)	1 1/2	35 (132)	35 (132)	1-1/2"	89F	89S
20 (1.36)		50.0 (11.36)	1 1/2	35 (132)	35 (132)	1-1/2"	89F	89S	
30.0 GPM (6.81 m ³ /hr) <i>or</i> 15000 lb/hr (8304 kg/hr)		10 (0.68)	60.0 (13.63)	1 1/2	50 (189)	50 (189)	1-1/2"	94F	94S
		15 (1.02)	60.0 (13.63)	2	50 (189)	50 (189)	1-1/2"	96F	96S
		20 (1.36)	60.0 (13.63)	2	50 (189)	50 (189)	1-1/2"	96F	96S

Peak Transfer Stations



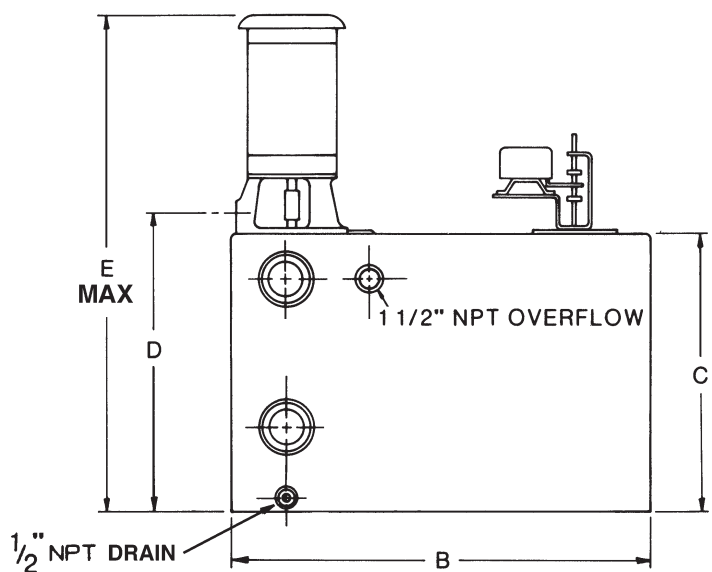
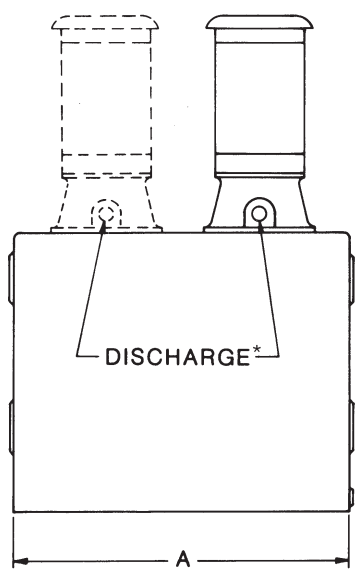
Roth Peak Transfer Stations have the same specifications standard transfer stations but have larger receiver capacities. These units will deliver hot water at temperatures up to 200°F (93°C) and will not vapor bind at 210°F (98°C). Receiver capacities to 130 gallons (492 liters) can be supplied on these units.

Preliminary Outline Drawings
 (Foundation data, not to be used for piping unless certified.)
 NOTE: All receivers must be vented to atmosphere, not a pressure vessel.



DIMENSIONS FOR PEAK TRANSFER STATIONS WITH LARGER RECEIVERS
 inches (cm)

Receiver Capacity Gallons (L)	A	B	C	D	E		
					1/4 and 1/3 HP	1/2, 3/4, 1 and 1-1/2 HP	2 HP
30 (114)	20 (51)	18 (46)	20 (51)	21-3/4 (55)	36 (91)	37 (94)	41 (104)
45 (170)	24 (61)	22-1/2 (57)	20 (51)	21-3/4 (55)	36 (91)	37 (94)	41 (104)
60 (227)	24 (61)	30 (76)	20 (51)	21-3/4 (55)	36 (91)	37 (94)	41 (104)
95 (360)	30 (76)	38 (97)	20 (51)	21-3/4 (55)	36 (91)	37 (94)	41 (104)
130 (462)	30 (76)	34 (86)	30 (76)	31-3/4 (81)	46 (117)	48 (122)	51 (130)



*See Selection Table

Selection Table 2 – Peak Transfer Stations

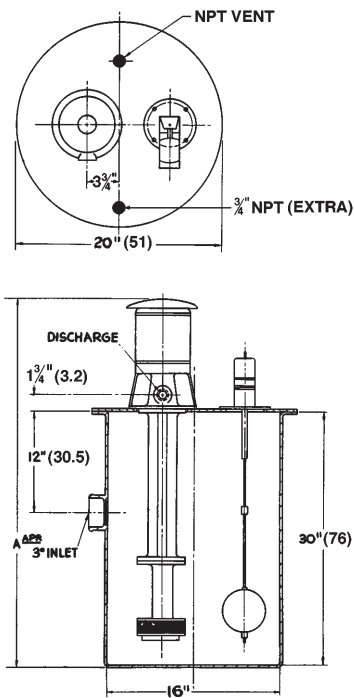
Condensate Rate	Pump Discharge Pressure psig (bar)	Minimum Pump GPM (m ³ /hr)	Motor H.P.	Receiver Capacity		Pump Discharge Size NPT	Unit Number Steel Receiver	
				Simplex G (L)	Duplex G (L)			
3.0 GPM (0.68 m ³ /hr) <i>or</i> 1500 lb/hr (680 kg/hr)	10 (0.68)	6.0 (1.36)	1/4	30 (114)	30 (114)	1"	6P	
	15 (1.02)	6.0 (1.36)	1/4	30 (114)	30 (114)	1"	6P	
	20 (1.36)	6.0 (1.36)	1/4	30 (114)	30 (114)	1"	6P	
	30 (2.04)	6.0 (1.36)	1/3	30 (114)	30 (114)	1"	9P	
	40 (2.72)	6.0 (1.36)	1/2	30 (114)	30 (114)	1-1/4"	37P	
	50 (3.40)	6.0 (1.36)	1/2	30 (114)	30 (114)	1-1/4"	37P	
5.0 GPM (1.14 m ³ /hr) <i>or</i> 2500 lb/hr (1134 kg/hr)	10 (0.68)	10.0 (2.27)	1/4	30 (114)	30 (114)	1"	26P	
	15 (1.02)	10.0 (2.27)	1/3	30 (114)	30 (114)	1"	27P	
	20 (1.36)	10.0 (2.27)	1/3	30 (114)	30 (114)	1"	27P	
	30 (2.04)	10.0 (2.27)	1/2	30 (114)	30 (114)	1"	29P	
	40 (2.72)	10.0 (2.27)	3/4	30 (114)	30 (114)	1-1/4"	38P	
	50 (3.40)	10.0 (2.27)	3/4	30 (114)	30 (114)	1-1/4"	38P	
7.5 GPM (1.70 m ³ /hr) <i>or</i> 3750 lb/hr (1701 kg/hr)	10 (0.68)	15.0 (3.41)	1/3	30 (114)	30 (114)	1-1/4"	23P	
	15 (1.02)	15.0 (3.41)	1/2	30 (114)	30 (114)	1-1/4"	25P	
	20 (1.36)	15.0 (3.41)	1/2	30 (114)	30 (114)	1-1/4"	25P	
	30 (2.04)	15.0 (3.41)	3/4	30 (114)	30 (114)	1-1/4"	48P	
	40 (2.72)	15.0 (3.41)	1	30 (114)	30 (114)	1-1/4"	50P	
	50 (3.40)	15.0 (3.41)	1 1/2	30 (114)	30 (114)	1-1/4"	62P	
10.0 GPM (2.27 m ³ /hr) <i>or</i> 5000 lb/hr (2268 kg/hr)	10 (0.68)	20.0 (4.54)	1/2	30 (114)	30 (114)	1-1/4"	2P	
	15 (1.02)	20.0 (4.54)	1/2	30 (114)	30 (114)	1-1/4"	2P	
	20 (1.36)	20.0 (4.54)	3/4	30 (114)	30 (114)	1-1/4"	3P	
	30 (2.04)	20.0 (4.54)	1	30 (114)	30 (114)	1-1/4"	59P	
	40 (2.72)	20.0 (4.54)	1 1/2	30 (114)	30 (114)	1-1/4"	62P	
	50 (3.40)	20.0 (4.54)	2	30 (114)	30 (114)	1-1/2"	75P	
15.0 GPM (3.41 m ³ /hr) <i>or</i> 7500 lb/hr (3402 kg/hr)	10 (0.68)	30.0 (6.81)	3/4	45 (170)	45 (170)	1-1/4"	58P	
	15 (1.02)	30.0 (6.81)	3/4	45 (170)	45 (170)	1-1/4"	58P	
	20 (1.36)	30.0 (6.81)	3/4	45 (170)	45 (170)	1-1/4"	58P	
	30 (2.04)	30.0 (6.81)	1 1/2	45 (170)	45 (170)	1-1/2"	74P	
	40 (2.72)	30.0 (6.81)	1 1/2	45 (170)	45 (170)	1-1/2"	74P	
	17.5 GPM (3.97 m ³ /hr) <i>or</i> 8750 lb/hr (3969 kg/hr)	10 (0.68)	35.0 (7.95)	3/4	45 (170)	45 (170)	1-1/2"	70P
15 (1.02)		35.0 (7.95)	1	45 (170)	45 (170)	1-1/2"	72P	
20 (1.36)		35.0 (7.95)	1	45 (170)	45 (170)	1-1/2"	72P	
30 (2.04)		35.0 (7.95)	2	45 (170)	45 (170)	1-1/2"	78P	
20.0 GPM (4.54 m ³ /hr) <i>or</i> 10000 lb/hr (4536 kg/hr)		10 (0.68)	40.0 (9.08)	3/4	60 (227)	60 (227)	1-1/2"	80P
		15 (1.02)	40.0 (9.08)	1	60 (227)	60 (227)	1-1/2"	82P
	20 (1.36)	40.0 (9.08)	1	60 (227)	60 (227)	1-1/2"	82P	
	30 (2.04)	40.0 (9.08)	2	60 (227)	60 (227)	1-1/2"	90P	
	25.0 GPM (5.68 m ³ /hr) <i>or</i> 12500 lb/hr (5670 kg/hr)	10 (0.68)	50.0 (11.36)	1	95 (360)	95 (360)	1-1/2"	87P
		15 (1.02)	50.0 (11.36)	1 1/2	95 (360)	95 (360)	1-1/2"	89P
20 (1.36)		50.0 (11.36)	1 1/2	95 (360)	95 (360)	1-1/2"	89P	
30.0 GPM (6.81 m ³ /hr) <i>or</i> 15000 lb/hr (8304 kg/hr)		10 (0.68)	60.0 (13.63)	1 1/2	130 (492)	130 (492)	1-1/2"	94P
		15 (1.02)	60.0 (13.63)	2	130 (492)	130 (492)	1-1/2"	96P
		20 (1.36)	60.0 (13.63)	2	130 (492)	130 (492)	1-1/2"	96P

Underground Transfer Stations



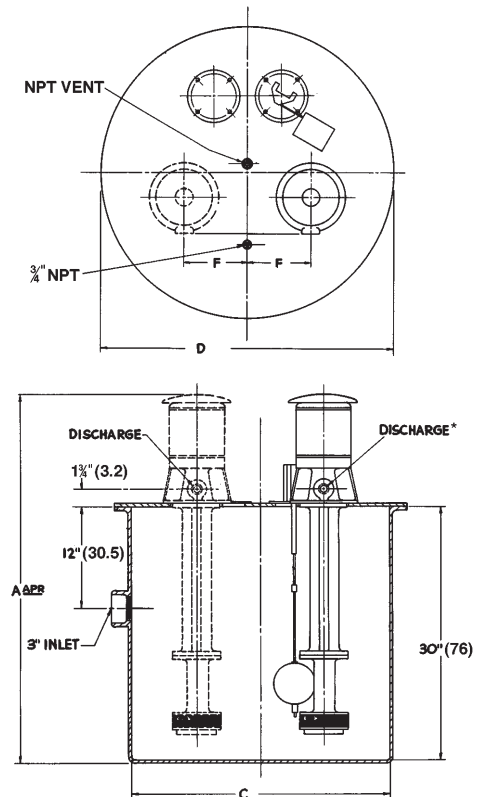
Roth Underground Transfer Stations have the same specifications as standard transfer stations but are designed for use in underground or between floor applications. Cast iron receivers are coated with an asphaltum coating to resist corrosion of subsoil moisture. The unique Roth pump design delivers specified pressure at 1750 RPM without using large diameter pump casings or special piping inside the sump. These units will deliver hot water at temperatures up to 200°F (93°C) and will not vapor bind at 210°F (98°C). Receiver capacities to 130 gallons (492 liters) can be supplied on these units. Receivers are cylindrical with relatively small diameters, allowing easy moving through construction sites and easy installation.

26 GALLON (98 LITER) RECEIVER



*See Selection Table

40 AND 60 GALLON (151 AND 227 LITER) RECEIVER



DIMENSIONS FOR UNDERGROUND TRANSFER STATIONS
inches (cm)

Receiver Capacity Gallons (L)	C	D	F
40 (151)	20 (51)	24 (61)	4-1/4 (10.7)
60 (227)	24 (61)	28 (71)	5 (12.7)

A^{APR.} FOR DIFFERENT MOTOR SIZES
inches (cm)

Motor HP	inches	cm
1/3	43-5/8	111
1/4 and 1/2	44	112
3/4	44-5/8	113
1	47-1/4	120
1-1/2 and 2	48-3/8	123

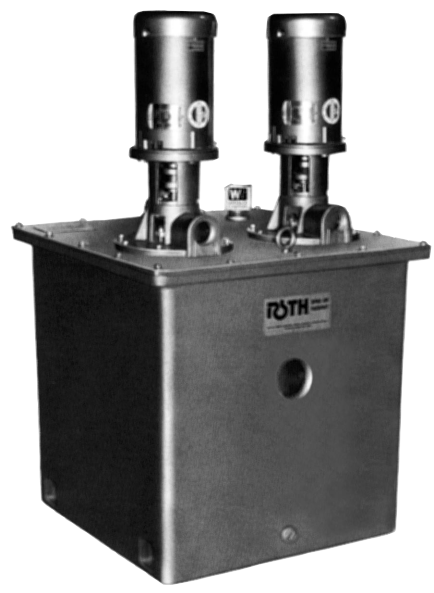
Preliminary Outline Drawings
(Foundation data, not to be used for piping unless certified.)

NOTE: All receivers must be vented to atmosphere, not a pressure vessel.

Selection Table 3 – Underground Transfer Stations

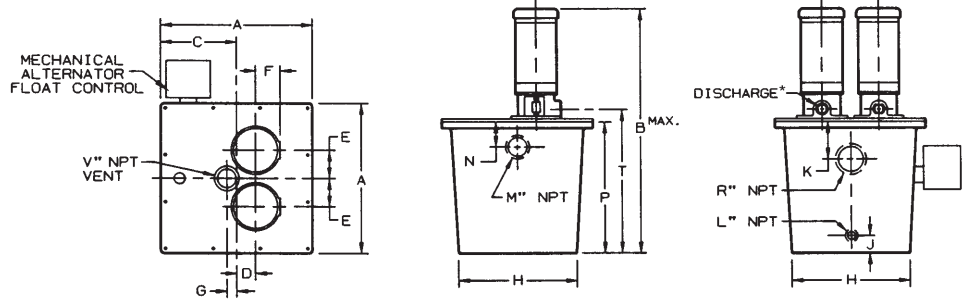
Condensate Rate	Pump Discharge Pressure psig (bar)	Minimum Pump GPM (m ³ /hr)	Motor H.P.	Receiver Capacity		Pump Discharge Size NPT	Unit Number		
				Simplex G (L)	Duplex G (L)		Cast Iron Receiver	Steel Receiver	
3.0 GPM (0.68 m ³ /hr) <i>or</i> 1500 lb/hr (680 kg/hr)	10 (0.68)	6.0 (1.36)	1/4	26 (98)	40 (151)	1"	RU111-610	SU111-610	
	15 (1.02)	6.0 (1.36)	1/4	26 (98)	40 (151)	1"	RU111-615	SU111-615	
	20 (1.36)	6.0 (1.36)	1/4	26 (98)	40 (151)	1"	RU111-620	SU111-620	
	30 (2.04)	6.0 (1.36)	1/3	26 (98)	40 (151)	1"	RU113-630	SU113-630	
	40 (2.72)	6.0 (1.36)	1/2	26 (98)	40 (151)	1"	RU163-640	SU163-640	
	50 (3.40)	6.0 (1.36)	1/2	26 (98)	40 (151)	1"	RU163-650	SU163-650	
5.0 GPM (1.14 m ³ /hr) <i>or</i> 2500 lb/hr (1134 kg/hr)	10 (0.68)	10.0 (2.27)	1/4	26 (98)	40 (151)	1"	RU116-1010	SU116-1010	
	15 (1.02)	10.0 (2.27)	1/3	26 (98)	40 (151)	1"	RU118-1015	SU118-1015	
	20 (1.36)	10.0 (2.27)	1/3	26 (98)	40 (151)	1"	RU118-1020	SU118-1020	
	30 (2.04)	10.0 (2.27)	1/2	26 (98)	40 (151)	1"	RU121-1030	SU121-1030	
	40 (2.72)	10.0 (2.27)	3/4	26 (98)	40 (151)	1"	RU143-1040	SU143-1040	
	50 (3.40)	10.0 (2.27)	3/4	26 (98)	40 (151)	1"	RU143-1050	SU143-1050	
7.5 GPM (1.70 m ³ /hr) <i>or</i> 3750 lb/hr (1701 kg/hr)	10 (0.68)	15.0 (3.41)	1/3	26 (98)	40 (151)	1-1/4"	RU123-1510	SU123-1510	
	15 (1.02)	15.0 (3.41)	1/2	26 (98)	40 (151)	1-1/4"	RU125-1515	SU125-1515	
	20 (1.36)	15.0 (3.41)	1/2	26 (98)	40 (151)	1-1/4"	RU125-1520	SU125-1520	
	30 (2.04)	15.0 (3.41)	3/4	26 (98)	40 (151)	1-1/4"	RU148-1530	SU148-1530	
	40 (2.72)	15.0 (3.41)	1	26 (98)	40 (151)	1-1/4"	RU150-1540	SU150-1540	
	50 (3.40)	15.0 (3.41)	1 1/2	26 (98)	40 (151)	1-1/4"	RU172-1550	SU172-1550	
10.0 GPM (2.27 m ³ /hr) <i>or</i> 5000 lb/hr (2268 kg/hr)	10 (0.68)	20.0 (4.54)	1/2	40 (151)	40 (151)	1-1/4"	RU130-2010	SU130-2010	
	15 (1.02)	20.0 (4.54)	1/2	40 (151)	40 (151)	1-1/4"	RU130-2015	SU130-2015	
	20 (1.36)	20.0 (4.54)	3/4	40 (151)	40 (151)	1-1/4"	RU131-2020	SU131-2020	
	30 (2.04)	20.0 (4.54)	1	40 (151)	40 (151)	1-1/4"	RU157-2030	SU157-2030	
	40 (2.72)	20.0 (4.54)	1 1/2	40 (151)	40 (151)	1-1/4"	RU161-2040	SU161-2040	
	50 (3.40)	20.0 (4.54)	2	40 (151)	40 (151)	1-1/4"	RU186-2050	SU186-2050	
15.0 GPM (3.41 m ³ /hr) <i>or</i> 7500 lb/hr (3402 kg/hr)	10 (0.68)	30.0 (6.81)	3/4	40 (151)	40 (151)	1-1/4"	RU158-3010	SU158-3010	
	15 (1.02)	30.0 (6.81)	3/4	40 (151)	40 (151)	1-1/4"	RU158-3015	SU158-3015	
	20 (1.36)	30.0 (6.81)	3/4	40 (151)	40 (151)	1-1/4"	RU158-3020	SU158-3020	
	30 (2.04)	30.0 (6.81)	1 1/2	40 (151)	40 (151)	1-1/4"	RU184-3030	SU184-3030	
	40 (2.72)	30.0 (6.81)	1 1/2	40 (151)	40 (151)	1-1/4"	RU184-3040	SU184-3040	
	17.5 GPM (3.97 m ³ /hr) <i>or</i> 8750 lb/hr (3969 kg/hr)	10 (0.68)	35.0 (7.95)	3/4	40 (151)	40 (151)	1-1/4"	RU180-3510	SU180-3510
15 (1.02)		35.0 (7.95)	1	40 (151)	40 (151)	1-1/4"	RU182-3515	SU182-3515	
20 (1.36)		35.0 (7.95)	1	40 (151)	40 (151)	1-1/4"	RU182-3520	SU182-3520	
30 (2.04)		35.0 (7.95)	2	40 (151)	40 (151)	1-1/4"	RU194-3530	SU194-3530	
20.0 GPM (4.54 m ³ /hr) <i>or</i> 10000 lb/hr (4536 kg/hr)		10 (0.68)	40.0 (9.08)	3/4	60 (227)	60 (227)	1-1/2"	RU189-4010	SU189-4010
		15 (1.02)	40.0 (9.08)	1	60 (227)	60 (227)	1-1/2"	RU191-4015	SU191-4015
	20 (1.36)	40.0 (9.08)	1	60 (227)	60 (227)	1-1/2"	RU191-4020	SU191-4020	
	30 (2.04)	40.0 (9.08)	2	60 (227)	60 (227)	1-1/2"	RU200-4030	SU200-4030	
	25.0 GPM (5.68 m ³ /hr) <i>or</i> 12500 lb/hr (5670 kg/hr)	10 (0.68)	50.0 (11.36)	1	60 (227)	60 (227)	1-1/2"	RU196-5010	SU196-5010
		15 (1.02)	50.0 (11.36)	1 1/2	60 (227)	60 (227)	1-1/2"	RU198-5015	SU198-5015
20 (1.36)		50.0 (11.36)	1 1/2	60 (227)	60 (227)	1-1/2"	RU198-5020	SU198-5020	
30.0 GPM (6.81 m ³ /hr) <i>or</i> 15000 lb/hr (8304 kg/hr)		10 (0.68)	60.0 (13.63)	1 1/2	60 (227)	60 (227)	1-1/2"	RU197-6010	SU197-6010
		15 (1.02)	60.0 (13.63)	2	60 (227)	60 (227)	1-1/2"	RU203-6015	SU203-6015
		20 (1.36)	60.0 (13.63)	2	60 (227)	60 (227)	1-1/2"	RU203-6020	SU203-6020

212°F (100°C) Transfer Stations

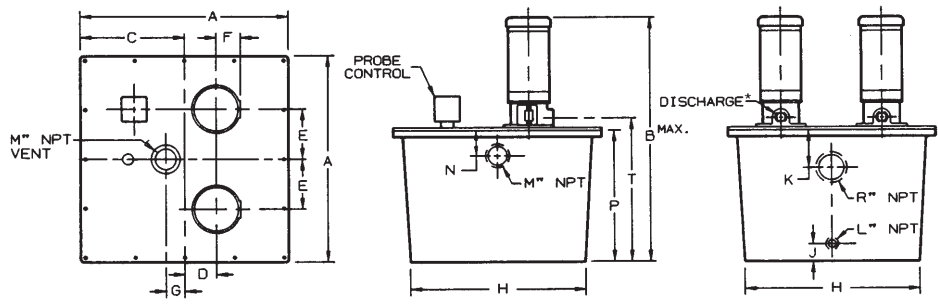


Roth 212°F (100°C) Transfer Stations are designed to handle water near or at the boiling point. Low NPSH submerged pumps provide full capacity at any liquid temperature up to 212°F (100°C). These units will deliver hot water at temperatures up to 212°F (100°C) and will not vapor bind at 212°F (100°C). Cast iron receivers are square with 1/2 inch (1.3 cm) minimum wall thickness with capacities to 100 gallons (379 liters). Cover plates are 1/2 inch (1.3 cm) steel.

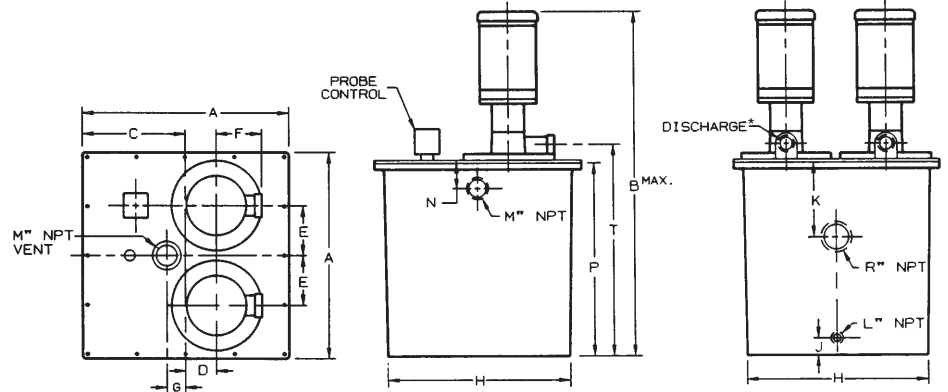
30 GALLON (114 LITER) RECEIVER



60 GALLON (227 LITER) RECEIVER



100 GALLON (379 LITER) RECEIVER



*See Selection Table

B^{MAX.} FOR ALL SKETCHES

Motor HP	Receiver Capacity Gallons (Liters)	inches	cm
1/2, 3/4, 1 and 1-1/2	30 (114) and 60 (227)	39-1/2	100
1-1/2	100 (379)	54-1/2	138
2	30 (114) and 60 (227)	42-1/2	108
2	100 (379)	55-1/2	141
3	30 (114)	45	114
3 and 5	60 (227)	48-1/2	123
3 and 5	100 (379)	58-1/2	149
7-1/2	100 (379)	60	152

DIMENSIONS FOR 30, 35 AND 50 GALLON (114, 227, 379 L) RECEIVERS inches (cm)

Receiver Capacity Gallons (L)	Minimum Gallons (L) per Cycle	Dimensions (inches/cm)															
		A	C	D	E	F	G	H	J	K	L	M	N	P	R	T	
30 (114)	4.5 (17)	24 (61)	12 (30)	4 (10.2)	4-1/2 (11.3)	3-7/8 (9.8)	2 (5.1)	20 (51)	2-3/4 (7)	6 (15.2)	1-1/4 (3.2)	3 (7.6)	4 (10.2)	21-1/4 (54)	3 (7.6)	23 (58)	
60 (227)	10.5 (40)	33 (84)	16-1/2 (42)	5 (12.7)	8 (20)	3-7/8 (9.8)	3 (7.6)	28 (72)	2-3/4 (7)	6 (15.2)	1-1/4 (3.2)	3 (7.6)	4 (10.2)	21-1/4 (54)	4 (10.2)	23 (58)	
100 (379)	10.5 (40)	33 (84)	16-1/2 (42)	5 (12.7)	8 (20)	7-1/4 (18.4)	3 (7.6)	29 (74)	2-3/4 (7)	12 (30.5)	1-1/4 (3.2)	3 (7.6)	4 (10.2)	31-1/4 (79)	4 (10.2)	34-1/4 (87)	

Preliminary Outline Drawings
(Foundation data, not to be used for piping unless certified.)

NOTE: All receivers must be vented to atmosphere, not a pressure vessel.

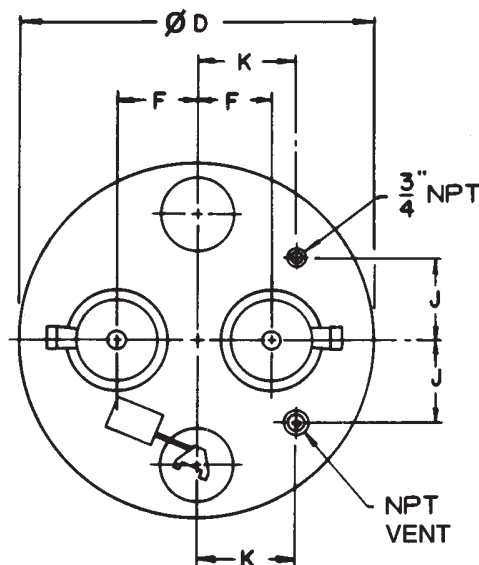
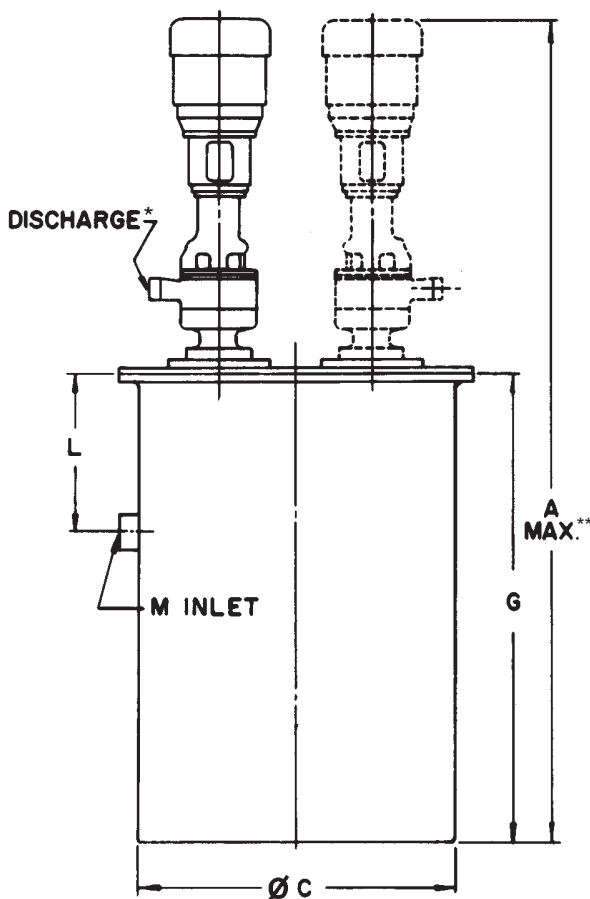
Selection Table 4 – 212°F (100°C) Transfer Stations

Condensate Rate	Pump Discharge Pressure psig (bar)	Minimum Pump GPM (m ³ /hr)	Motor H.P.	Receiver Capacity		Pump Discharge Size NPT	Unit Number Cast Iron Receiver
				Simplex G (L)	Duplex G (L)		
3.0 GPM (0.68 m ³ /hr) <i>or</i> 1500 lb/hr (680 kg/hr)	10 (0.68)	6.0 (1.36)	1/2	30 (114)	30 (114)	1"	3LX
	15 (1.02)	6.0 (1.36)	1/2	30 (114)	30 (114)	1"	3LX
	20 (1.36)	6.0 (1.36)	1/2	30 (114)	30 (114)	1"	3LX
	30 (2.04)	6.0 (1.36)	1/2	30 (114)	30 (114)	1"	4LX
	40 (2.72)	6.0 (1.36)	3/4	30 (114)	30 (114)	1"	6LX
	50 (3.40)	6.0 (1.36)	3/4	30 (114)	30 (114)	1-1/4"	17LX
	60 (4.08)	6.0 (1.36)	1	30 (114)	30 (114)	1-1/4"	21LX
5.0 GPM (1.14 m ³ /hr) <i>or</i> 2500 lb/hr (1134 kg/hr)	10 (0.68)	10.0 (2.27)	1/2	30 (114)	30 (114)	1"	4LX
	15 (1.02)	10.0 (2.27)	1/2	30 (114)	30 (114)	1"	4LX
	20 (1.36)	10.0 (2.27)	1/2	30 (114)	30 (114)	1"	10LX
	30 (2.04)	10.0 (2.27)	3/4	30 (114)	30 (114)	1"	11LX
	40 (2.72)	10.0 (2.27)	3/4	30 (114)	30 (114)	1-1/4"	20LX
	50 (3.40)	10.0 (2.27)	1	30 (114)	30 (114)	1-1/4"	24LX
	60 (4.08)	10.0 (2.27)	1 1/2	30 (114)	30 (114)	1-1/4"	35LX
7.5 GPM (1.70 m ³ /hr) <i>or</i> 3750 lb/hr (1701 kg/hr)	10 (0.68)	15.0 (3.41)	1/2	30 (114)	30 (114)	1"	10LX
	15 (1.02)	15.0 (3.41)	1/2	30 (114)	30 (114)	1"	22LX
	20 (1.36)	15.0 (3.41)	1/2	30 (114)	30 (114)	1"	22LX
	30 (2.04)	15.0 (3.41)	3/4	30 (114)	30 (114)	1-1/4"	26LX
	40 (2.72)	15.0 (3.41)	1	30 (114)	30 (114)	1-1/4"	27LX
	50 (3.40)	15.0 (3.41)	1 1/2	30 (114)	30 (114)	1-1/4"	35LX
	60 (4.08)	15.0 (3.41)	1 1/2	30 (114)	30 (114)	1-1/4"	35LX
10.0 GPM (2.27 m ³ /hr) <i>or</i> 5000 lb/hr (2268 kg/hr)	10 (0.68)	20.0 (4.54)	1/2	30 (114)	30 (114)	1-1/4"	25LX
	15 (1.02)	20.0 (4.54)	3/4	30 (114)	30 (114)	1-1/4"	26LX
	20 (1.36)	20.0 (4.54)	3/4	30 (114)	30 (114)	1-1/4"	26LX
	30 (2.04)	20.0 (4.54)	1	30 (114)	30 (114)	1-1/4"	30LX
	40 (2.72)	20.0 (4.54)	1 1/2	30 (114)	30 (114)	1-1/4"	35LX
	50 (3.40)	20.0 (4.54)	2	30 (114)	30 (114)	1-1/2"	41LX
	60 (4.08)	20.0 (4.54)	3	30 (114)	30 (114)	1-1/2"	69LX
15.0 GPM (3.41 m ³ /hr) <i>or</i> 7500 lb/hr (3402 kg/hr)	10 (0.68)	30.0 (6.81)	3/4	60 (227)	60 (227)	1-1/4"	33LY
	15 (1.02)	30.0 (6.81)	1	60 (227)	60 (227)	1-1/4"	34LY
	20 (1.36)	30.0 (6.81)	1	60 (227)	60 (227)	1-1/4"	34LY
	30 (2.04)	30.0 (6.81)	2	60 (227)	60 (227)	1-1/2"	41LY
	40 (2.72)	30.0 (6.81)	3	60 (227)	60 (227)	2"	75LY
	50 (3.40)	30.0 (6.81)	3	60 (227)	60 (227)	2"	78LY
	60 (4.08)	30.0 (6.81)	3	60 (227)	60 (227)	2"	78LY
17.5 GPM (3.97 m ³ /hr) <i>or</i> 8750 lb/hr (3969 kg/hr)	10 (0.68)	35.0 (7.95)	3/4	60 (227)	60 (227)	1-1/4"	33LY
	15 (1.02)	35.0 (7.95)	1 1/2	60 (227)	60 (227)	1-1/2"	40LY
	20 (1.36)	35.0 (7.95)	1 1/2	60 (227)	60 (227)	1-1/2"	40LY
	30 (2.04)	35.0 (7.95)	2	60 (227)	60 (227)	1-1/2"	41LY
	40 (2.72)	35.0 (7.95)	3	60 (227)	60 (227)	2"	78LY
	50 (3.40)	35.0 (7.95)	3	60 (227)	60 (227)	2"	78LY
20.0 GPM (4.54 m ³ /hr) <i>or</i> 10000 lb/hr (4536 kg/hr)	10 (0.68)	40.0 (9.08)	1	60 (227)	60 (227)	1-1/2"	39LY
	15 (1.02)	40.0 (9.08)	1 1/2	60 (227)	60 (227)	1-1/2"	40LY
	20 (1.36)	40.0 (9.08)	1 1/2	60 (227)	60 (227)	1-1/2"	40LY
	30 (2.04)	40.0 (9.08)	1 1/2	60 (227)	60 (227)	2"	43LY
	40 (2.72)	40.0 (9.08)	3	60 (227)	60 (227)	2"	48LY
	50 (3.40)	40.0 (9.08)	3	60 (227)	60 (227)	2"	81LY
30.0 GPM (6.81 m ³ /hr) <i>or</i> 15000 lb/hr (6804 kg/hr)	10 (0.68)	60.0 (13.63)	1	60 (227)	60 (227)	2"	42LY
	15 (1.02)	60.0 (13.63)	1 1/2	60 (227)	60 (227)	2"	46LY
	20 (1.36)	60.0 (13.63)	2	60 (227)	60 (227)	2"	47LY
	30 (2.04)	60.0 (13.63)	3	60 (227)	60 (227)	2"	51LY
	40 (2.72)	60.0 (13.63)	5	60 (227)	60 (227)	2"	88LY
	40.0 GPM (9.08 m ³ /hr) <i>or</i> 20000 lb/hr (9072 kg/hr)	10 (0.68)	80.0 (18.17)	2	100 (379)	100 (379)	2"
15 (1.02)		80.0 (18.17)	3	100 (379)	100 (379)	2"	84LZ
20 (1.36)		80.0 (18.17)	3	100 (379)	100 (379)	2"	87LZ
30 (2.04)		80.0 (18.17)	5	100 (379)	100 (379)	2"	88LZ
40 (2.72)		80.0 (18.17)	5	100 (379)	100 (379)	2"	88LZ
50.0 GPM (11.35 m ³ /hr) <i>or</i> 25000 lb/hr (11340 kg/hr)		10 (0.68)	100.0 (22.71)	5	100 (379)	100 (379)	2"
	15 (1.02)	100.0 (22.71)	5	100 (379)	100 (379)	2"	91LZ
	20 (1.36)	100.0 (22.71)	5	100 (379)	100 (379)	2"	91LZ
	30 (2.04)	100.0 (22.71)	7 1/2	100 (379)	100 (379)	2"	92LZ

212°F (100°C) Underground Stations



Roth 212°F (100°C) Underground Stations are designed to handle water near or at the boiling point. Low 1 foot (0.3 m) NPSH submerged pumps provide full capacity at any liquid temperature up to 212°F (100°C). These units will deliver hot water at temperatures up to 212°F (100°C) and will not vapor bind at 212°F (100°C). Discharge pressures of up to 75 psig (5.10 bar) can be achieved with these underground units. Cast iron receivers (steel available as an option) have capacities up to 320 gallons (1211 liters). This Roth underground unit is ideal for handling multiple source condensate returning at various temperature levels above and below the boiling point and where sub floor returns are essential to the structural design. These units eliminate the need for several local condensate stations to handle returns from various absorbers, kettles, hot presses, molds or unit heaters condensing at different temperatures.



DIMENSIONS FOR 40, 90, 160, 240, 320 GALLON
(151, 341, 606, 908, 1211 L) RECEIVERS inches (cm)

Receiver Capacity Gallons (L)	C	D	F	G	J	K	L	NPT M
40 (114)	20 (51)	24 (61)	6 (15)	30 (76)	7 (18)	6-1/2 (16.5)	12 (30)	3 (7.6)
90 (341)	30 (76)	35 (89)	8 (20)	30 (76)	9-1/2 (24)	9-1/2 (24)	12 (30)	3 (7.6)
160 (606)	30 (76)	35 (89)	8 (20)	54 (137)	9-1/2 (24)	9-1/2 (24)	12 (30)	4 (10.2)
240 (908)	36 (91)	40 (102)	9-1/4 (23)	54 (137)	11 (18)	8 (20)	12 (30)	4 (10.2)
320 (1211)	42 (107)	46 (117)	10-1/4 (26)	54 (137)	12 (30)	9 (23)	12 (30)	4 (10.2)

*See Selection Table
**consult factory

Preliminary Outline Drawings
(Foundation data, not to be used for piping unless certified.)

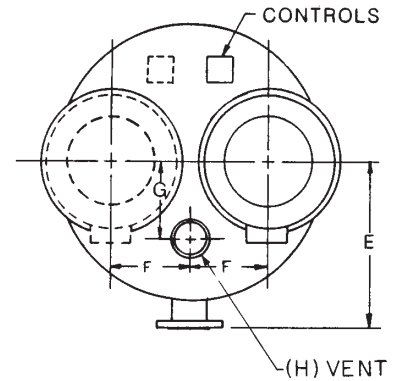
NOTE: All receivers must be vented to atmosphere, not a pressure vessel.

Selection Table 5 – 212°F (100°C) Underground Stations

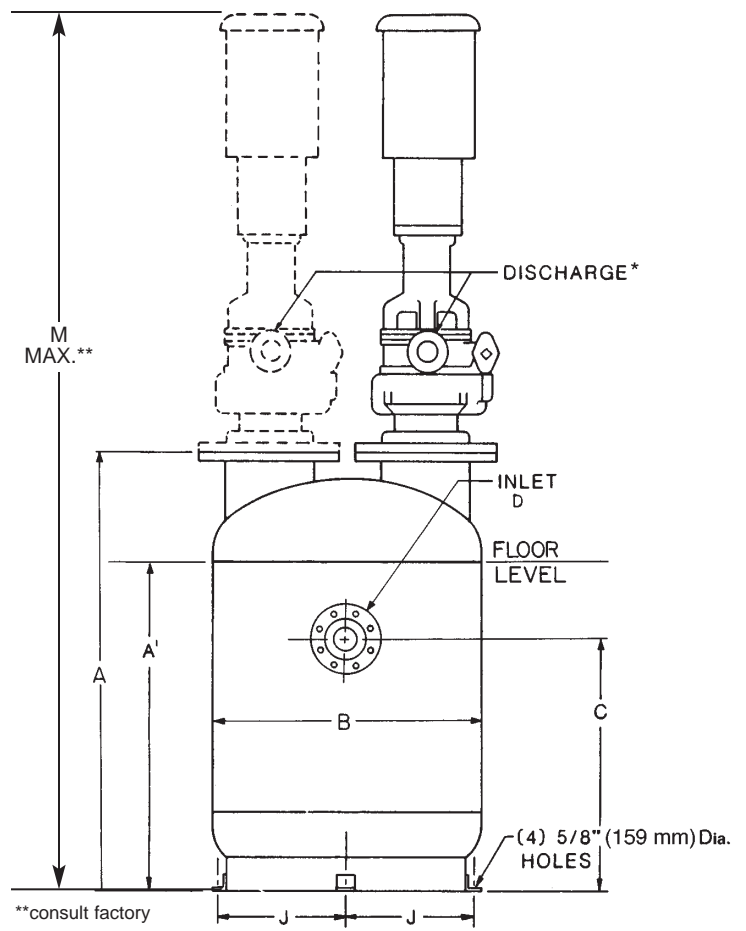
Condensate Rate	Pump Discharge Pressure psig (bar)	Minimum Pump GPM (m ³ /hr)	Motor H.P.	Receiver Capacity		Pump Discharge Size NPT	Unit Number Cast Iron Receiver
				Simplex G (L)	Duplex G (L)		
3.0 GPM (0.68 m ³ /hr) or 1500 lb/hr (680 kg/hr)	10 (0.68)	6.0 (1.36)	1/3	40 (151)	40 (151)	1-1/4"	RC170
	15 (1.02)	6.0 (1.36)	1/3	40 (151)	40 (151)	1-1/4"	RC170
	20 (1.36)	6.0 (1.36)	1/3	40 (151)	40 (151)	1-1/4"	RC170
	30 (2.04)	6.0 (1.36)	1/3	40 (151)	40 (151)	1-1/4"	RC180
	40 (2.72)	6.0 (1.36)	1/2	40 (151)	40 (151)	1-1/4"	RC190
	50 (3.40)	6.0 (1.36)	3/4	40 (151)	40 (151)	1-1/4"	RC200
	60 (4.08)	6.0 (1.36)	1	40 (151)	40 (151)	1-1/4"	RC160
	75 (5.10)	6.0 (1.36)	1	40 (151)	40 (151)	1-1/4"	RC160
5.0 GPM (1.14 m ³ /hr) or 2500 lb/hr (1134 kg/hr)	10 (0.68)	10.0 (2.27)	1/3	40 (151)	40 (151)	1-1/4"	RC210
	15 (1.02)	10.0 (2.27)	1/3	40 (151)	40 (151)	1-1/4"	RC210
	20 (1.36)	10.0 (2.27)	1/2	40 (151)	40 (151)	1-1/4"	RC220
	30 (2.04)	10.0 (2.27)	1/2	40 (151)	40 (151)	1-1/4"	RC220
	40 (2.72)	10.0 (2.27)	3/4	40 (151)	40 (151)	1-1/4"	RC240
	50 (3.40)	10.0 (2.27)	1	40 (151)	40 (151)	1-1/4"	RC250
	60 (4.08)	10.0 (2.27)	1 1/2	40 (151)	40 (151)	1-1/4"	RC260
	75 (5.10)	10.0 (2.27)	1 1/2	40 (151)	40 (151)	1-1/4"	RC270
10.0 GPM (2.27 m ³ /hr) or 5000 lb/hr (2268 kg/hr)	10 (0.68)	20.0 (4.54)	1/2	40 (151)	40 (151)	1-1/4"	RC380
	15 (1.02)	20.0 (4.54)	3/4	40 (151)	40 (151)	1-1/4"	RC340
	20 (1.36)	20.0 (4.54)	3/4	40 (151)	40 (151)	1-1/4"	RC340
	30 (2.04)	20.0 (4.54)	1	40 (151)	40 (151)	1-1/4"	RC390
	40 (2.72)	20.0 (4.54)	1 1/2	40 (151)	40 (151)	1-1/4"	RC260
	50 (3.40)	20.0 (4.54)	2	40 (151)	40 (151)	1-1/4"	RC360
	60 (4.08)	20.0 (4.54)	3	40 (151)	40 (151)	1-1/4"	RC400
	75 (5.10)	20.0 (4.54)	3	40 (151)	40 (151)	1-1/2"	RC370
20.0 GPM (4.54 m ³ /hr) or 10000 lb/hr (4536 kg/hr)	10 (0.68)	40.0 (9.08)	1 1/2	90 (341)	90 (341)	1-1/4"	RF520
	15 (1.02)	40.0 (9.08)	1 1/2	90 (341)	90 (341)	2"	RF530
	20 (1.36)	40.0 (9.08)	2	90 (341)	90 (341)	2"	RF540
	30 (2.04)	40.0 (9.08)	2	90 (341)	90 (341)	2"	RF540
	40 (2.72)	40.0 (9.08)	3	90 (341)	90 (341)	2"	RF550
	50 (3.40)	40.0 (9.08)	5	90 (341)	90 (341)	2"	RF560
	60 (4.08)	40.0 (9.08)	5	90 (341)	90 (341)	2"	RF560
	75 (5.10)	40.0 (9.08)	5	90 (341)	90 (341)	2"	RF570
30.0 GPM (6.81 m ³ /hr) or 15000 lb/hr (6804 kg/hr)	10 (0.68)	60.0 (13.63)	2	160 (606)	160 (606)	2"	RG630
	15 (1.02)	60.0 (13.63)	2	160 (606)	160 (606)	2"	RG630
	20 (1.36)	60.0 (13.63)	2	160 (606)	160 (606)	2"	RG640
	30 (2.04)	60.0 (13.63)	3	160 (606)	160 (606)	2"	RG650
	40 (2.72)	60.0 (13.63)	5	160 (606)	160 (606)	2"	RG660
	50 (3.40)	60.0 (13.63)	5	160 (606)	160 (606)	2"	RG670
	60 (4.08)	60.0 (13.63)	7 1/2	160 (606)	160 (606)	2"	RG670
	75 (5.10)	60.0 (13.63)	10	160 (606)	160 (606)	3"F	RG680
40.0 GPM (9.08 m ³ /hr) or 20000 lb/hr (9072 kg/hr)	10 (0.68)	80.0 (18.17)	3	160 (606)	160 (606)	2"	RG690
	15 (1.02)	80.0 (18.17)	3	160 (606)	160 (606)	2"	RG690
	20 (1.36)	80.0 (18.17)	3	160 (606)	160 (606)	2"	RG690
	30 (2.04)	80.0 (18.17)	5	160 (606)	160 (606)	3"F	RG660
	40 (2.72)	80.0 (18.17)	7 1/2	160 (606)	160 (606)	3"F	RG670
	50 (3.40)	80.0 (18.17)	7 1/2	160 (606)	160 (606)	3"F	RG700
	60 (4.08)	80.0 (18.17)	10	160 (606)	160 (606)	3"F	RG680
	75 (5.10)	80.0 (18.17)	15	160 (606)	160 (606)	3"F	RG710
50.0 GPM (11.35 m ³ /hr) or 25000 lb/hr (11340 kg/hr)	10 (0.68)	100 (22.71)	5	240 (908)	240 (908)	3"F	RH740
	15 (1.02)	100 (22.71)	5	240 (908)	240 (908)	3"F	RH740
	20 (1.36)	100 (22.71)	5	240 (908)	240 (908)	3"F	RH740
	30 (2.04)	100 (22.71)	5	240 (908)	240 (908)	3"F	RH750
	40 (2.72)	100 (22.71)	10	240 (908)	240 (908)	3"F	RH760
	50 (3.40)	100 (22.71)	10	240 (908)	240 (908)	3"F	RH760
	60 (4.08)	100 (22.71)	15	240 (908)	240 (908)	3"F	RH770
	75 (5.10)	100 (22.71)	20	240 (908)	240 (908)	3"F	RH780
60.0 GPM (13.63 m ³ /hr) or 30000 lb/hr (13608 kg/hr)	10 (0.68)	120 (27.25)	7 1/2	240 (908)	240 (908)	3"F	RH790
	15 (1.02)	120 (27.25)	7 1/2	240 (908)	240 (908)	3"F	RH790
	20 (1.36)	120 (27.25)	7 1/2	240 (908)	240 (908)	3"F	RH790
	30 (2.04)	120 (27.25)	10	240 (908)	240 (908)	3"F	RH760
	40 (2.72)	120 (27.25)	10	240 (908)	240 (908)	3"F	RH810
	50 (3.40)	120 (27.25)	15	240 (908)	240 (908)	3"F	RH770
	60 (4.08)	120 (27.25)	15	240 (908)	240 (908)	3"F	RH770
	75 (5.10)	120 (27.25)	20	240 (908)	240 (908)	3"F	RH800
70.0 GPM (15.90 m ³ /hr) or 35500 lb/hr (15876 kg/hr)	10 (0.68)	140 (34.06)	7 1/2	320 (1211)	320 (1211)	3"F	RJ820
	15 (1.02)	140 (34.06)	7 1/2	320 (1211)	320 (1211)	3"F	RJ820
	20 (1.36)	140 (34.06)	10	320 (1211)	320 (1211)	3"F	RJ830
	30 (2.04)	140 (34.06)	10	320 (1211)	320 (1211)	3"F	RJ830
	40 (2.72)	140 (34.06)	10	320 (1211)	320 (1211)	3"F	RJ830
	50 (3.40)	140 (34.06)	15	320 (1211)	320 (1211)	3"F	RJ840
	60 (4.08)	140 (34.06)	15	320 (1211)	320 (1211)	3"F	RJ840
	75 (5.10)	140 (34.06)	15	320 (1211)	320 (1211)	3"F	RJ850

F = Flange

250°F (121°C) Underground Stations



Roth 250°F (121°C) Underground Stations are designed to handle condensate that is above the boiling point. Low 1 foot (0.3 m) NPSH pumps provide full capacity at any liquid temperature up to 250°F (121°C). Discharge pressures of up to 75 psig (5.10 bar) can be achieved with these underground units. Dual pumps are supplied to control flow rates, needed for high volume returns. ASME receivers have capacities up to 320 gallons (1211 liters). This Roth unit is ideal for use with adsorption air conditioning equipment which normally condenses steam at temperatures above 230°F (110°C). These units are also found in high temperature applications in the food, paper, plastic and rubber industries.



**DIMENSIONS FOR 40, 90, 160, 240, 320 GALLON
(151, 341, 606, 908, 1211 L) RECEIVERS inches (cm)**

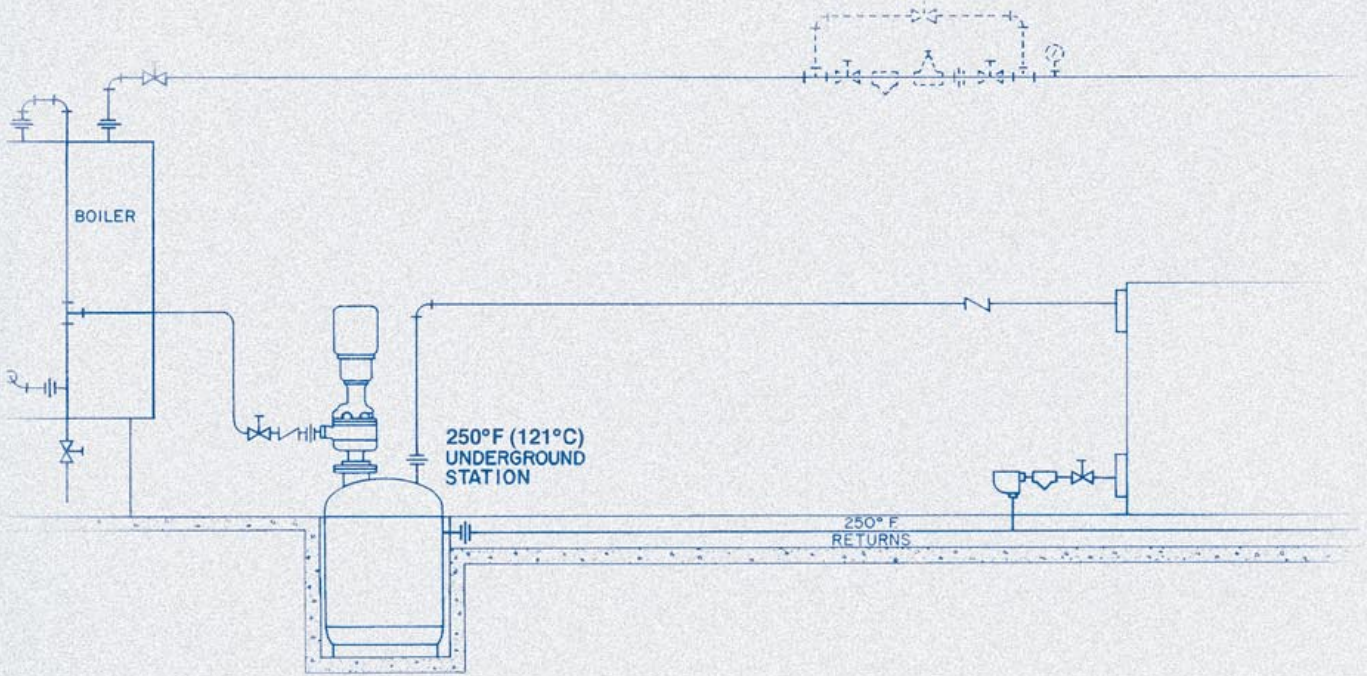
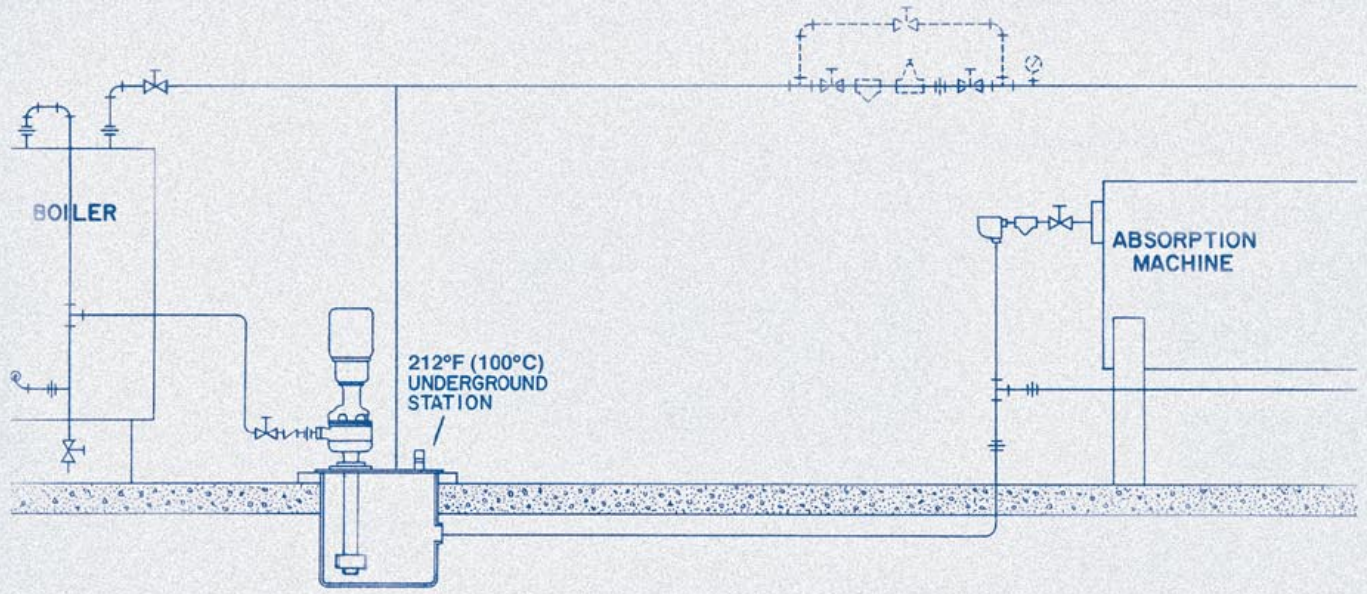
Receiver Capacity Gallons (L)	A		B		Flange		E		NPT		J	
	A	A'	B	C	D	E	F	G	H	I	J	
40 (114)	40 (102)	30 (76)	20 (51)	18 (46)	3 (7.6)	14 (36)	6 1/4 (15.8)	8 (20.3)	2 (5.1)	9 1/2 (24)		
90 (341)	42 (107)	30 (76)	30 (76)	18 (46)	3 (7.6)	19 (48)	7 (17.8)	10 (25.4)	3 (7.6)	14 1/2 (37)		
160 (606)	66 (168)	54 (137)	30 (76)	42 (107)	4 (10.2)	19 (48)	7 (17.8)	10 (25.4)	3 (7.6)	14 1/2 (37)		
240 (908)	68 (173)	54 (137)	36 (91)	42 (107)	4 (10.2)	22 (56)	10 (24.5)	12 (30.5)	4 (10.2)	17 (43.2)		
320 (1211)	70 (178)	54 (137)	42 (107)	42 (107)	4 (10.2)	25 (64)	10 (24.5)	12 (30.5)	4 (10.2)	20 (50.8)		

Preliminary Outline Drawings
(Foundation data, not to be used for piping unless certified.)

Selection Table 6 – 250°F (121°C) Underground Stations

Condensate Rate	Pump Discharge Pressure psig (bar)	Minimum Pump GPM (m ³ /hr)	Motor H.P.	Receiver Capacity G (L)	Pump Discharge Size NPT	Unit Number
3.0 GPM (0.69 m ³ /hr) or 1500 lb/hr (680 kg/hr)	10 (0.68)	6.0 (1.36)	1/3	40 (151)	1-1/4"	CU170
	15 (1.02)	6.0 (1.36)	1/3	40 (151)	1-1/4"	CU170
	20 (1.36)	6.0 (1.36)	1/3	40 (151)	1-1/4"	CU170
	30 (2.04)	6.0 (1.36)	1/3	40 (151)	1-1/4"	CU180
	40 (2.72)	6.0 (1.36)	1/2	40 (151)	1-1/4"	CU190
	50 (3.40)	6.0 (1.36)	3/4	40 (151)	1-1/4"	CU200
	60 (4.08)	6.0 (1.36)	1	40 (151)	1-1/4"	CU160
	75 (5.10)	6.0 (1.36)	1	40 (151)	1-1/4"	CU160
5.0 GPM (1.14 m ³ /hr) or 2500 lb/hr (1134 kg/hr)	10 (0.68)	10.0 (2.27)	1/3	40 (151)	1-1/4"	CU210
	15 (1.02)	10.0 (2.27)	1/3	40 (151)	1-1/4"	CU210
	20 (1.36)	10.0 (2.27)	1/2	40 (151)	1-1/4"	CU220
	30 (2.04)	10.0 (2.27)	1/2	40 (151)	1-1/4"	CU220
	40 (2.72)	10.0 (2.27)	3/4	40 (151)	1-1/4"	CU240
	50 (3.40)	10.0 (2.27)	1	40 (151)	1-1/4"	CU250
	60 (4.08)	10.0 (2.27)	1 1/2	40 (151)	1-1/4"	CU260
	75 (5.10)	10.0 (2.27)	1 1/2	40 (151)	1-1/4"	CU270
10.0 GPM (2.27 m ³ /hr) or 5000 lb/hr (2268 kg/hr)	10 (0.68)	20.0 (4.54)	1/2	40 (151)	1-1/4"	CU380
	15 (1.02)	20.0 (4.54)	3/4	40 (151)	1-1/4"	CU340
	20 (1.36)	20.0 (4.54)	3/4	40 (151)	1-1/4"	CU340
	30 (2.04)	20.0 (4.54)	1	40 (151)	1-1/4"	CU390
	40 (2.72)	20.0 (4.54)	1 1/2	40 (151)	1-1/4"	CU260
	50 (3.40)	20.0 (4.54)	2	40 (151)	1-1/4"	CU360
	60 (4.08)	20.0 (4.54)	3	40 (151)	1-1/4"	CU400
	75 (5.10)	20.0 (4.54)	3	40 (151)	2"	CU370
20.0 GPM (4.54 m ³ /hr) or 10000 lb/hr (4536 kg/hr)	10 (0.68)	40.0 (9.08)	1 1/2	90 (341)	1-1/4"	CU520
	15 (1.02)	40.0 (9.08)	1 1/2	90 (341)	2"	CU530
	20 (1.36)	40.0 (9.08)	2	90 (341)	2"	CU540
	30 (2.04)	40.0 (9.08)	2	90 (341)	2"	CU540
	40 (2.72)	40.0 (9.08)	3	90 (341)	2"	CU550
	50 (3.40)	40.0 (9.08)	5	90 (341)	2"	CU560
	60 (4.08)	40.0 (9.08)	5	90 (341)	2"	CU560
	75 (5.10)	40.0 (9.08)	5	90 (341)	2"	CU570
30.0 GPM (6.81 m ³ /hr) or 15000 lb/hr (6804 kg/hr)	10 (0.68)	60.0 (13.63)	2	160 (606)	2"	CU630
	15 (1.02)	60.0 (13.63)	2	160 (606)	2"	CU630
	20 (1.36)	60.0 (13.63)	2	160 (606)	2"	CU640
	30 (2.04)	60.0 (13.63)	3	160 (606)	2"	CU650
	40 (2.72)	60.0 (13.63)	5	160 (606)	2"	CU660
	50 (3.40)	60.0 (13.63)	5	160 (606)	2"	CU670
	60 (4.08)	60.0 (13.63)	7 1/2	160 (606)	2"	CU670
	75 (5.10)	60.0 (13.63)	10	160 (606)	2"	CU680
40.0 GPM (9.08 m ³ /hr) or 20000 lb/hr (9072 kg/hr)	10 (0.68)	80.0 (18.17)	3	160 (606)	2"	CU690
	15 (1.02)	80.0 (18.17)	3	160 (606)	2"	CU690
	20 (1.36)	80.0 (18.17)	3	160 (606)	2"	CU690
	30 (2.04)	80.0 (18.17)	5	160 (606)	2"	CU660
	40 (2.72)	80.0 (18.17)	7 1/2	160 (606)	2"	CU670
	50 (3.40)	80.0 (18.17)	7 1/2	160 (606)	2"	CU700
	60 (4.08)	80.0 (18.17)	10	160 (606)	2"	CU680
	75 (5.10)	80.0 (18.17)	15	160 (606)	2"	CU710
50.0 GPM (11.35 m ³ /hr) or 25000 lb/hr (11340 kg/hr)	10 (0.68)	100 (22.71)	5	240 (908)	3"F	CU740
	15 (1.02)	100 (22.71)	5	240 (908)	3"F	CU740
	20 (1.36)	100 (22.71)	5	240 (908)	3"F	CU740
	30 (2.04)	100 (22.71)	5	240 (908)	3"F	CU750
	40 (2.72)	100 (22.71)	10	240 (908)	3"F	CU760
	50 (3.40)	100 (22.71)	10	240 (908)	3"F	CU760
	60 (4.08)	100 (22.71)	15	240 (908)	3"F	CU770
	75 (5.10)	100 (22.71)	20	240 (908)	3"F	CU780
60.0 GPM (13.63 m ³ /hr) or 30000 lb/hr (13608 kg/hr)	10 (0.68)	120 (27.25)	7 1/2	240 (908)	3"F	CU790
	15 (1.02)	120 (27.25)	7 1/2	240 (908)	3"F	CU790
	20 (1.36)	120 (27.25)	7 1/2	240 (908)	3"F	CU790
	30 (2.04)	120 (27.25)	10	240 (908)	3"F	CU760
	40 (2.72)	120 (27.25)	10	240 (908)	3"F	CU810
	50 (3.40)	120 (27.25)	15	240 (908)	3"F	CU770
	60 (4.08)	120 (27.25)	15	240 (908)	3"F	CU770
	75 (5.10)	120 (27.25)	20	240 (908)	3"F	CU800
70.0 GPM (15.90 m ³ /hr) or 35500 lb/hr (15876 kg/hr)	10 (0.68)	140 (34.06)	7 1/2	320 (1211)	3"F	CU820
	15 (1.02)	140 (34.06)	7 1/2	320 (1211)	3"F	CU820
	20 (1.36)	140 (34.06)	10	320 (1211)	3"F	CU830
	30 (2.04)	140 (34.06)	10	320 (1211)	3"F	CU830
	40 (2.72)	140 (34.06)	10	320 (1211)	3"F	CU830
	50 (3.40)	140 (34.06)	15	320 (1211)	3"F	CU840
	60 (4.08)	140 (34.06)	15	320 (1211)	3"F	CU850

F = Flange



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