Skidmore®
A Swan Group Company

Revision 1

Industrial Glycol Feed Units 55/100 Gallons
Product Bulletin

Pictured: 55 Gallon Simplex, No Options

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APPLICATION

From chilled water to snowmelt, radiant heat, and closed-loop heating—the Skidmore Glycol Feed is designed to bring an automatic supply of water-glycol mix to any heating or cooling closed-loop system. Factory engineered and assembled, Glycol Feed units are available in 55- and 100-gallon capacities and can feed up to two closed-loop systems. These compact and self-contained units make for an easy install and no-hassle operation. Easy plug 'n play run capability also allows for immediate usage, no secondary wiring required!

The following document includes product information, as well as available options. Units are customizable, and our team will be happy to help ensure the product meets the system specifications if possible.

STANDARD FEATURES

PRESSURE PUMP – The standard (1/3HP 115 VAC / 1PH / 60hz) pressure pump utilizes a brass rotary-vane pump, capable of 1.6 GPM at 100PSI. Pump has a built-in inlet strainer to help prevent particulate from entering the system.

TANKS – Tanks are available in 55- and 100-gallon configurations. All tanks are heavy duty polyethylene with a graduated capacity scale and lid. Tanks are elevated on a heavy-duty powder coated structural steel support stand.

UL/CUL 508A ELECTRICAL PANEL – All industrial glycol feed configurations ship with a UL/CUL rated control panel. Unit is factory wired and tested in a type 4X enclosure, and includes indicator lights for power (green), pump operation (yellow), and low level alarm (red). Units ship with a 9-foot power cord with standard US three-pronged plug.

PRESSURE CONTROL – Units are fitted with a pressure switch, factory set to cut in at 10 psi and pressurize to 40 psi. Units may be adjusted to customer specifications at the factory (recommended), or out in the field after installation (See "Industrial Glycol Operation and Maintenance Manual" for adjustment instructions).

BRASS DISCHARGE AND SUCTION PIPING – Where pressurized, piping is composed of schedule 40 brass fittings and reinforced high-pressure plastic tubing. A pressure gauge and a pressure relief valve (100 psi) are included on every unit.

LOW WATER FLOAT SWITCH AND ALARM – Low water float switch shuts down the system in response to a low-level condition, protecting the pumps from running dry. A visual and audible alarm alerts to low-water condition, and dry contacts for remote alarm are also located in the panel.

OPTIONS AVAILABLE (DESIGNATOR)

ADDITIONAL PUMP - DUPLEX – An additional pump may be mounted in the following situations.

- **ADDITIONAL LOOP (DL)** – An output for an additional loop may be added to the system. The new loop contains its own control, pump, and pressure switch, but shares the panel and low water cut off with the other loop.
- **BACKUP PUMP** – An additional pump may be added to a single loop system as a backup pump. The two pumps may be set up to run in lead-lag configuration **(LL)** or to alternate via a timer **(ALT*)**. Standard configuration has the lead pump set to cut in at 20psi-45psi, and the lag pump set to cut in at 10psi-45psi.

PLC Controller (PLC) – In order to simplify wiring or to enable BMS integration, a PLC may be added to replace the relays utilized in a standard system.

AUTOMATIC MIXING TIMER (AMT) – Solenoid valve controlled mixing loop agitates glycol mixture at fixed intervals, to avoid settling of the mixture.

- **MANUAL TANK FILL** – Included with the Automatic Mixing Timer is the capability to fill the tank using the included pump(s). If this capability alone is desired, the Automatic Mixing Timer may be set to the "Off" setting in the standard condition. For the filling procedures, refer to the "Industrial Glycol Operation and Maintenance Manual".

EXPANSION TANK (ET) – 2 Gallon steel expansion tank. Comes pre-assembled and integrated into the system. The expansion tank option prevents excessive pump cycling by helping to maintain pressure on the system. Tank is pre-charged by the factory to 2 psi lower than the cut-in pressure (8 psi standard).

STAINLESS STEEL EXPANSION TANK (SET) – 2 Gallon stainless steel expansion tank. Comes pre-assembled and integrated into the system. The expansion tank option prevents excessive pump cycling by helping to maintain pressure on the system. Tank is pre-charged by the factory to 2 psi lower than the cut-in pressure (8 psi standard).

HIGH FLOW PUMP (HFP) – (SIMPLEX ONLY) The high flow pump replaces the standard pump in the assembly. The pump is 1/2hp and is rated at 4.5 GPM @ 100 PSI.

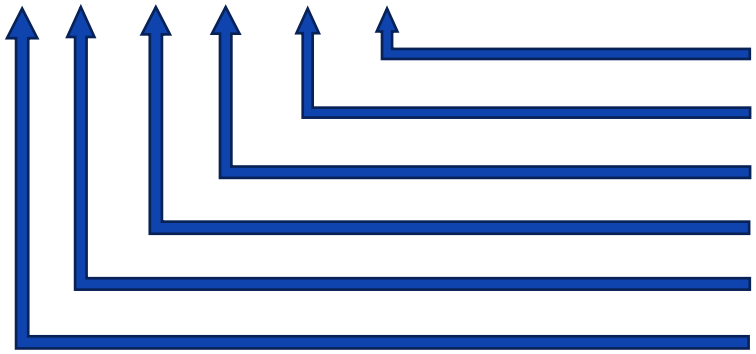
HIGH LEVEL ALARM (HLA) – The high-level alarm option includes a high-level float switch, which activates an alarm in response to a high-level condition.

PRESSURE REGULATING VALVE (PRV) – (PRV option must be accompanied with an expansion tank option, ET or SET.) The pressure regulating valve option allows for a consistent pressure output, may be set from 8-50 psi.

*Option automatically included with the use of a PLC

SYSTEM NUMBER

EX: S – 55 – 100 – 2 – PEFS – ET



OPTIONS – DL/LL/ALT/AMT ECT.

PEFS – Polyethylene Feed System

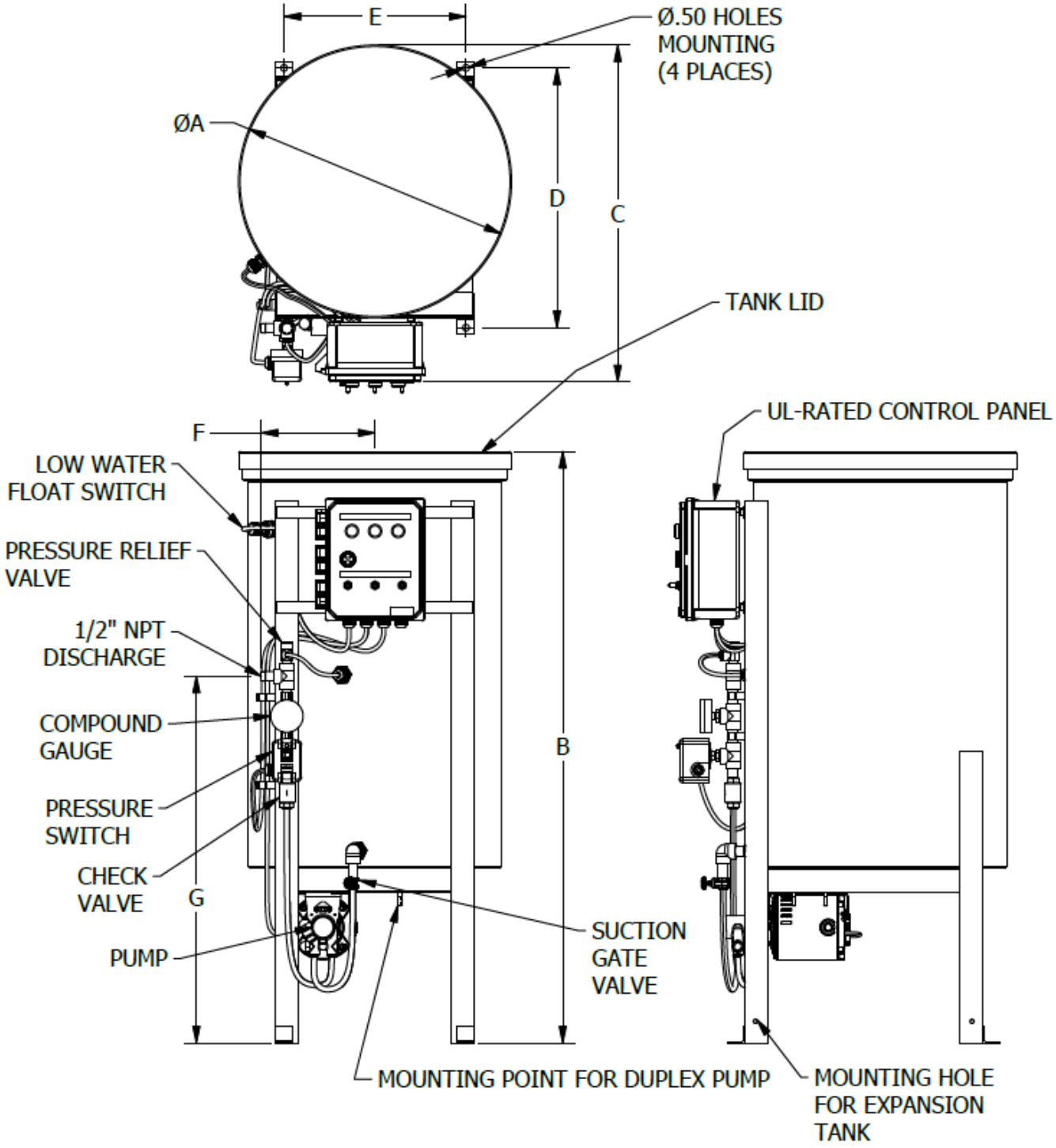
PUMP GPM – 2/4.5

PRESSURE RANGE – 100 psi

TANK SIZE – 55/100 Gallons

UNIT STYLE – S/D (Simplex or Duplex)

DIMENSIONAL MODEL



ALL DIMENSIONS ARE APPROXIMATE AND GIVEN IN INCHES							
TANK CAPACITY (GAL)	A	B	C	D	E	F	G
55	23 5/8	51 1/4	37 3/4	22 1/2	15 3/4	9 7/8	30 7/8
100	33	51 1/2	29 3/16	30 1/8	19	11 7/8	30 7/8

TYPICAL ENGINEERING SPECIFICATIONS

1. Industrial Glycol Feed System
   1.1. The contractor shall furnish and install as specified in the plans and in accordance with the manufacturer's instructions, a complete prefabricated, automatic glycol feed makeup unit. Each unit shall consist of a steel frame base, polyethylene tank with removable cover, low water cut-off alarm, brass rotary vane pump with built in suction strainer, Nema 4X control panel, brass suction and discharge piping, pump isolation valve, discharge check valve, pressure switch, pressure gauge, pressure relief valve, and interconnecting piping.
   1.2. Tank shall be 55-gallon industrial grade polyethylene with graduated scale. The base assembly shall be made of structural steel welded together and painted with a powder coat process for high durability.
   1.3. Pump shall be rotary vane close coupled type with brass housing and built in suction strainer. Pump motor is open drip proof type, 1/3 hp. 110 VAC 1ph. with built in auto reset thermal overload. Pump will be capable of up to 1.6 GPM @100PSI.
   1.4. Electrical control panel assembly shall be Nema 4x UL/CUL 508A listed, labeled, and rated at 110 VAC, 1ph, 60Hz. Panel shall have an audible alarm for low water, H.O.A. selector switch and yellow pilot light for pump run, off-on selector switch and green pilot light for unit power, off-on selector switch and red pilot light for low water alarm, circuit breaker protection, motor rated starter relay, auxiliary contacts for alarm circuit and a 110 VAC 1ph 9-foot plug in power cord.
   1.5. Suction piping shall be brass with drain connection and plug. Suction isolation valve shall be a brass body gate. Discharge shall be brass with a brass body check valve, field adjustable pressure switch, pressure gauge, pressure relief valve and ½" N.P.T. male discharge pipe connection. Interconnecting piping to and from pump will be high pressure poly reinforced braided hose.
   1.6. Float switch shall be made of ABS plastic. The float will be tethered on the upper portion of the tank. Low tank level will deactivate all pumping operations and activate the low-level visual and audible alarm on the control panel.

	Unit Style (S or D)	Tank Size (55 or 100)	Pressure	Pump GPM (2 or 4.5)	Unit Type	Options
Part Number		-	- 100	-	- PEFS	-

Special Pressure Settings	ON - _____ PSI / OFF - ____ PSI (10 / 40 psi standard)	Full Load Amps	_____ AMPS (8.0 Standard)

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MANUFACTURING AND DESIGN OF QUALITY HVAC SYSTEMS SINCE 1921