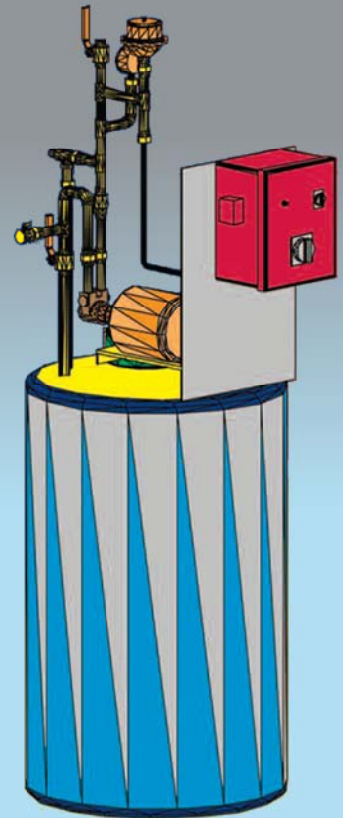


FLO FAB

Glycol Fill System

Series GLY



www.flofab.com

Manufacturer of Pumps, Tanks, Heat Exchangers & Accessories
for HVAC Market After-Sales Parts and Services

Glycol Fill System
Series GLY

FLO FAB INC
LAKE WORTH,
FLORIDA, USA

FLO FAB S- Gly, D-Gly or T-Gly pumping sets offer several advantages over jobsite assembly of components. The most important advantage is that FLO FAB selects the unit and mounts all the components in house therefore eliminating the margin of error.

Simplex models are normally-stocked and cover most applications. Other models can be manufactured to meet the requirements for a specific application. A shop drawing and a wiring diagram, both incorporating a list of components, are prepared for approval prior to fabrication. The electrical control system may vary from one magnetic motor starter for each pump, indicator lights, control transformers and a system control pressure switch (see EP panel for complete details). When pump operation is intermittent, a control is frequently used to alternate pumps (on duplex units only) and automatically turns on the back-up pump in case of malfunction.

The **CYS** model pump is an industrial pump. This pump has become the industry standard in glycol fill units. The **CYS** pump features a new open-core design that provides improved performance at higher speeds and pressures. The rotor head is hydraulically balanced to provide minimum end clearance, assuring instant priming and instant capacity over a wide viscosity and pressure range. The pump is provided with a new improved mechanical face-type seal and Teflon impregnated outboard design for direct drive. These seals are capable of handling inlet pressures as high as 200 PSI at standard 1750 RPM motor speeds. As shown in the tables herein, this pump is available in five sizes. Each pump is provided with an internal relief valve. FLO FAB Simplex glycol fill units are ideal in heating systems and for those applications where the requirements for a continuous pressure and supply of glycol is required.

1. For each closed glycol system, you should have a FLO FAB Series "**GLY**" automatic Glycol Pressurization unit. This system is used to automatically compensate for possible glycol leakage in a closed system.
2. Each unit has the following items:
 - Polyethylene tank with cover
 - Adjustable connections for water or Glycol
 - Low-level float and internal pump relief valve
 - A separate external relief valve to return the glycol solution to the holding tank
3. Systems have stainless steel rotary vane type pump(s) with electric closed coupled motor(s) :

<ul style="list-style-type: none"> - Control panel Nema 1 with piston type pressure switch - 3 position selector (H.O.A.) - Low-level indicator light - Low-level shut-off float - Dry contact for remote low level alarm signal (5 amps) (see EP panel for complete details) - Isolating ball valves 	<ul style="list-style-type: none"> - Pump discharge check valve(s) - Liquid filled pressure gauge - Water hammer arrestor - Factory-assembled, wired and tested prior to shipping
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------



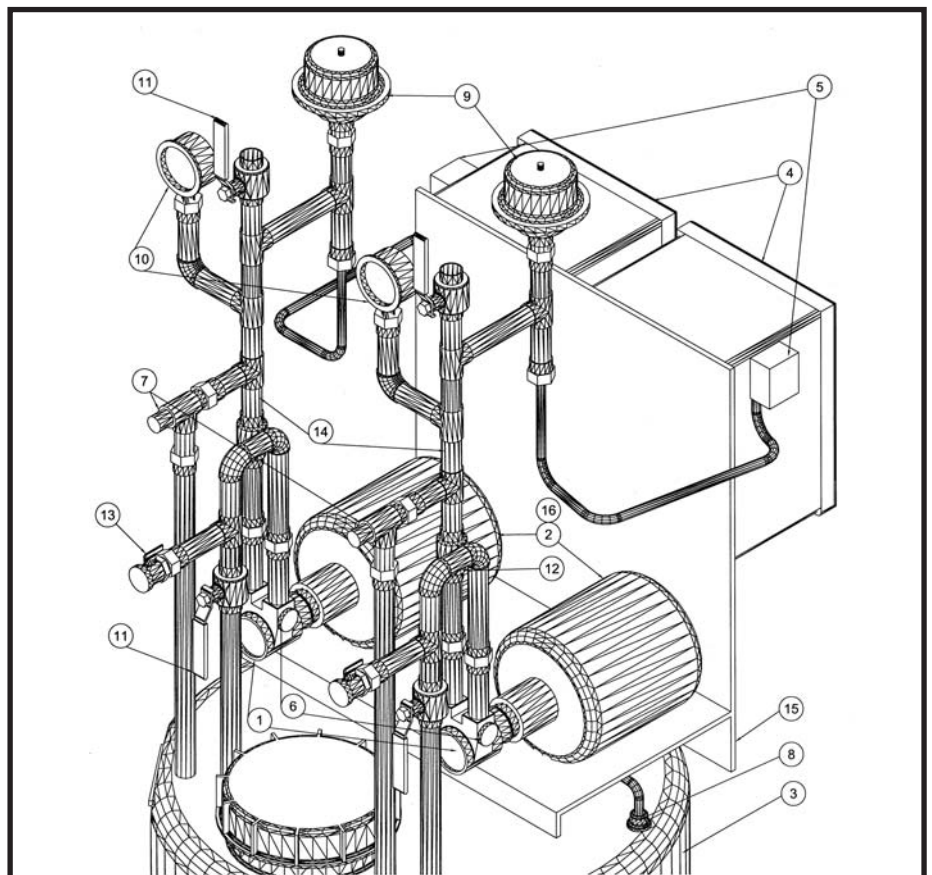
FEATURES

- Simplex, Duplex or Triplex Units
- Self-feed transfer unit
(transfers glycol from the tank to the system)
- Ability to fill system directly from external supply
- Ability to fill tank from external drum

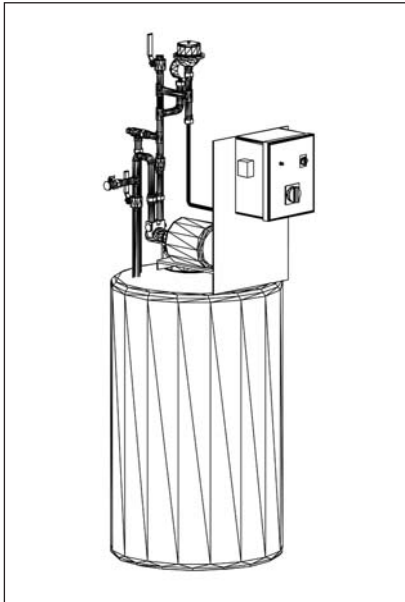
COMPONENTS

1. Pump(s) Closed-coupled rotary vane
2. Motor(s)
3. Polyethylene Tank with access cover

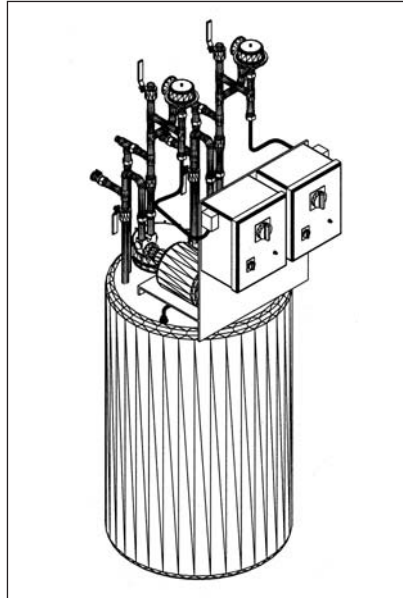
tank capacity:
25 gallons
53 gallons
106 gallons
200 gallons
4. Simplex, Duplex and
Triplex Control Panel
(see EP panel for proper selection)
5. System Pressure Switch(es)
6. Pump internal Relief Valve(s)
7. External Pressure Relief Valve(s)
8. Low-level shut-off float
9. Water hammer arrestor
10. Liquid filled Pressure Gauge(s)
11. Ball Valve(s)
12. Check Valve(s)
13. Hose fill valve(s) with cap
(transfers glycol from external
supply drum to tank or system)
14. Copper Piping
15. PVC base-plate for pump(s)
and motor(s)
16. Electrical connection
between panel and motor



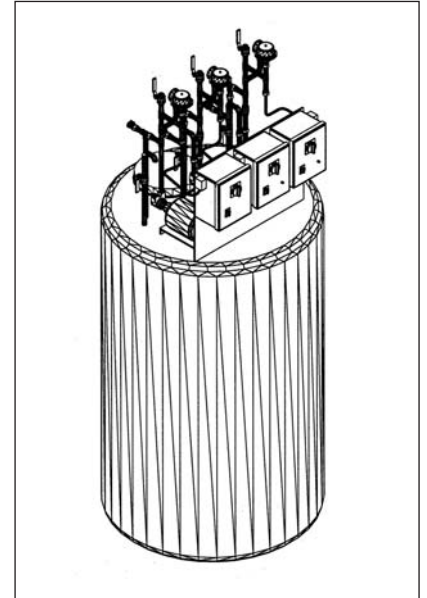
Duplex Model shown



Series Tank Size (Gal.) Pump Model
Simplex: S - GLY - _____ - CYS16 - _____
 Example: S - GLY - 25 - CYS16 - 170



Series Tank Size (Gal.) Pump Model
Duplex: D - GLY - _____ - CYS16 - _____
 Example: D - GLY - 25 - CYS16 - 170



Series Tank Size (Gal.) Pump Model
Triplex: T - GLY - _____ - CYS16 - _____
 Example: T - GLY - 25 - CYS16 - 170

SIMPLEX UNIT SELECTION CHART FOR TANK

Unit Model	Tank capacity		Diameter		Height		Weight	
	gallons	litres	in	mm	in	mm	lbs	kg
S-GLY-25	25	94	18	457	29	737	70	31
S-GLY-53	53	200	22	559	39	990	90	40
S-GLY-106	106	400	26	660	44	1118	115	52
S-GLY-200	200	754	30	762	43	1092	125	57

DUPLEX UNIT SELECTION CHART FOR TANK

Unit Model	Tank capacity		Diameter		Height		Weight	
	gallons	litres	in	mm	in	mm	lbs	kg
D-GLY-25	25	94	18	457	29	737	70	31
D-GLY-53	53	200	22	559	39	990	90	40
D-GLY-106	106	400	26	660	44	1118	115	52
D-GLY-200	200	754	30	762	43	1092	125	57

TRIPLEX UNIT SELECTION CHART FOR TANK

Unit Model	Tank capacity		Diameter		Height		Weight	
	gallons	litres	in	mm	in	mm	lbs	kg
T-GLY-25	25	94	18	457	29	737	70	31
T-GLY-53	53	200	22	559	39	990	90	40
T-GLY-106	106	400	26	660	44	1118	115	52
T-GLY-200	200	754	30	762	43	1092	125	57



DESCRIPTION

Rotary vane positive displacement pumps run quietly and require no maintenance. For clean fluids at low flow and high pressure. Pumps are designed for pumping water/glycol and moderately aggressive liquids. 304 Stainless Steel pump is superior for non-abrasive and non-flammable liquids that are compatible with pump component materials. Maximum operating temperature is 180°F.

APPLICATIONS

- Carbonated water for beverage dispensers
 - Ultra-filtration
 - Deionized water
 - Reverse-osmosis systems
 - Espresso coffee machines
 - Lubrication spraying
 - Light fuel oil
 - Insecticide spraying
 - Dispensing soap
 - Glycol Feed
 - Distilled water
 - Fire resistant fluids
 - Hydraulic oil
 - Steam cleaning machines with clean water
 - Cooling circulation
 - Pressure booster
 - Atomizing misting humidification systems
 - Laboratory pumps
 - Pilot plants
 - Boiler feeds
 - Water purification
 - Jockey fire pumps
- and many more applications...*

CONSTRUCTION

- Two piece 304 Stainless Steel body
- Built-in bypass relief valve
- Carbon graphite pump chamber and vanes
- Available with and without built-in cleanable strainer
- 71 Mesh Filter
- 304 Stainless Steel
- Hub dimensions for special FLO FAB pump motors
- Clamp included 304 Stainless Steel body
- Carbon graphite pump chamber
- 304 Stainless Steel rotor and shaft
- Carbon graphite vanes
- Carbon rotating seal
- Ceramic stationary seal with Buna N bellows
- Stainless Steel spring

OPERATION

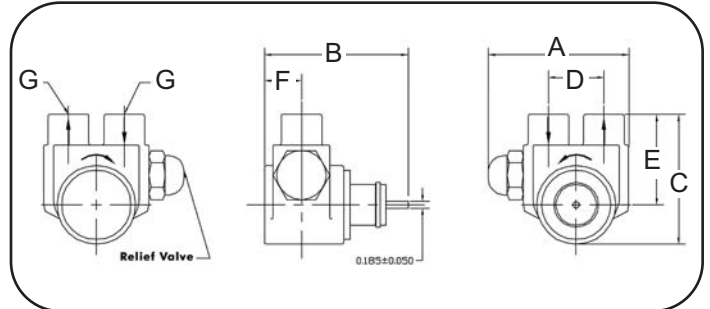
This unit is used to automatically compensate for possible glycol leaks in a closed system. The pressure switch has an adjustable pressure range for various pressure requirements. Should pressure increase to above the setting of the adjustable pressure relief valve, the relief valve will open allowing the excess pressure/fluid to return to the tank. When the pressure switch has reached its set point, the pump is turned off. The pump can also operate continuously if the selector switch is positioned to manual. The pump can be used as a transfer pump from a barrel to fill the tank by removing the cap on the hose valve and adjusting the relief valve at low pressure, and this will automatically fill the polyethylene tank. When the poly tank is full, you can disconnect the hose, re-install the hose valve cap and re-adjust the relief valve to the required setting. A low-level float is provided in the tank. Should the level of glycol become dangerously low, it will disable the pump to prevent it from operating without fluid, and send an alarm signal.

GALLONS PER HOUR AT PRESSURE IN POUNDS PER SQUARE INCH GAUGE (PSI)*											
Models	In / Out	20 PSI	40 PSI	60 PSI	80 PSI	100 PSI	120 PSI	140 PSI	160 PSI	180 PSI	200 PSI
Stainless Steel											
CYS16-170	3/8"	49 - 1/4hp	48 - 1/4hp	47 - 1/4hp	46 - 1/4hp	45 - 1/4hp	43 - 1/4hp	42 - 1/4hp	41 - 1/4hp	40 - 1/4hp	39 - 1/4hp
CYS16-295	3/8"	111 - 1/4hp	110 - 1/4hp	109 - 1/4hp	108 - 1/4hp	107 - 1/3hp	105 - 1/3hp	104 - 1/3hp	103 - 1/3hp	102 - 1/2hp	101 - 1/2hp
CYS16-377	3/8"	144 - 1/4hp	143 - 1/4hp	142 - 1/4hp	141 - 1/3hp	140 - 1/3hp	138 - 1/3hp	137 - 1/2hp	136 - 1/2hp	135 - 1/2hp	134 - 1/2hp
CYS16-560	1/2"	201 - 1/4hp	200 - 1/3hp	198 - 1/3hp	197 - 1/3hp	196 - 1/3hp	195 - 1/2hp	194 - 1/2hp	193 - 1/2hp	192 - 1/2hp	190 - 1/2hp
CYS16-1026	1/2"	327 - 1/3hp	326 - 1/3hp	324 - 1/2hp	323 - 1/2hp	322 - 1/2hp	321 - 3/4hp	320 - 3/4hp	318 - 3/4hp	317 - 3/4hp	316 - 3/4hp

* Performance based on water at 68°F, no inlet pressure, motor speed of 1725 RPM. Flows will change in direct proportion to new speed vs. old speed

STANDARD PUMP SPECIFICATIONS

- Body** Stainless Steel
- Capacity** 49 to 316 GPH
- Nominal Speed** 1725 RPM
- Maximum Discharge Pressure** 200 PSI
- Rotation** Clockwise Rotation
- Dry-Weight** 2.75 lbs
- Self Priming (water)** max. 6 feet



DIMENSIONS

Model	A		B		C		D		E		F		G (NPT)	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
CYS16-170	3 7/16	91	3 7/8	99	3 1/2	95	1 1/2	40	2 7/16	61	1	25	3/8	9
CYS16-295	3 7/16	91	3 7/8	99	3 1/2	95	1 1/2	40	2 7/16	61	1	25	3/8	9
CYS16-377	3 7/16	91	3 7/8	99	3 1/2	95	1 1/2	40	2 7/16	61	1	25	3/8	9
CYS16-560	4 3/16	105	4 3/8	109	3 7/8	99	1 7/8	47	2 1/2	65	1 1/4	32	1/2	15
CYS16-1026	4 3/16	105	4 3/8	109	3 7/8	99	1 7/8	47	2 1/2	65	1 1/4	32	1/2	15

Dimensions are approximate and are subject to change without prior notice.

TYPICAL SPECIFICATIONS

The contractor shall furnish and install a Simplex, Duplex or Triplex glycol fill system model **S-GLY**, **D-GLY** or **T-GLY** as designed and manufactured by FLO FAB. The system shall be capable of automatically compensating for possible glycol leaks in a closed system. Maximum discharge pressure should not exceed 200 PSI and maximum operating temperature is 180°F.

The system shall be a factory-manufactured one-piece assembly and shall contain: a tank, pump(s), check valve(s), ball valves, hose fill valve(s), water hammer arrestor, independently mounted relief valve(s), control panel(s), a low-level switch and all necessary electrical controls and accessories for a complete automatic operation.

PUMP

The rotary vane positive displacement pump(s) series **CYS** shall be constructed 304 stainless steel, and will have a built-in By-Pass relief valve as manufactured by FLO FAB. The pump(s) shall have carbon graphite vanes, carbon rotating seal, ceramic stationary seal with Buna N bellows and stainless steel spring. The electric close-coupled motor(s) shall be open-drip-proof motor, standard NEMA construction. Single-phase fractional H.P. motor to include built-in thermal overload protection and stainless steel shaft. Motor bearings shall be sealed and factory-greased for extra long trouble-free operation.

RELIEF VALVE

Adjustable pressure relief valve, with discharge piped to tank.

BALL VALVES

All ball valves shall be of bronze construction series LBV as manufactured by FLO FAB and shall be sized to minimize the pressure drop through the system.

SILENT CHECK VALVE

On each pump discharge a silent bronze check valve series STB as manufactured by FLO FAB shall be supplied.

PRESSURE GAUGE

A FLO FAB liquid-filled pressure gauge shall be installed on the discharge of the pump(s).

POLYETHYLENE TANK WITH COVER

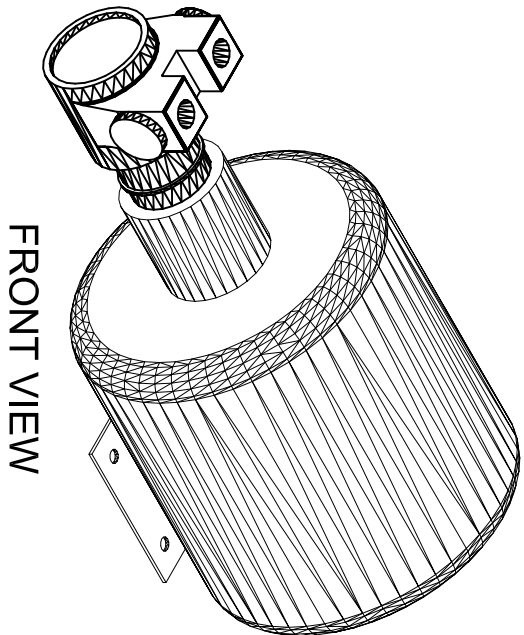
A polyethylene tank with inspection cover shall be supplied as manufactured by FLO FAB. The tank capacity shall be: 25 gallons, 53 gallons, 100 gallons or 200 gallons.

CONTROLLER(S)

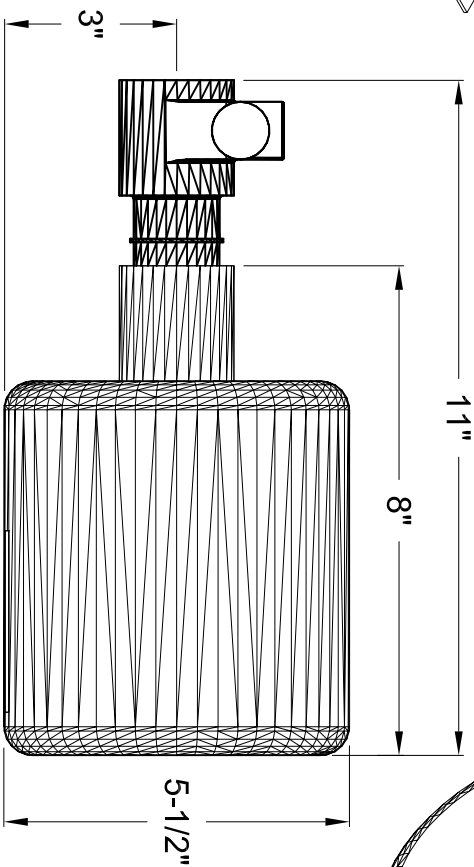
NEMA 1 Simplex control panel(s) shall include: manual transfer, HOA, pilot lights, low-level shut-off float and a system pressure switch. The system pressure switch shall have an adjustable pressure range in order to increase and decrease pressure according to system requirements. When the pressure switch has reached its set point, the pump is turned off. The low-level float installed in the tank shall disable the pump(s) and send an alarm signal should the glycol level become dangerously low.

ADDITIONAL FEATURES

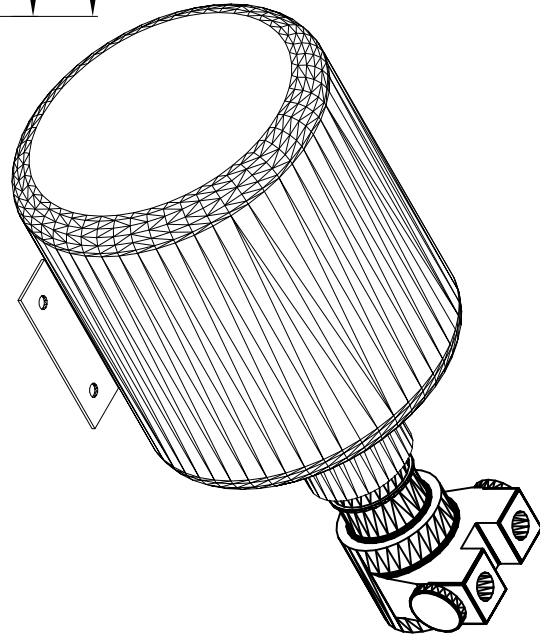
The glycol fill system shall have a hose bib connection to allow its pump to fill the system directly from the external supply drum and to fill the tank directly from external supply drum.



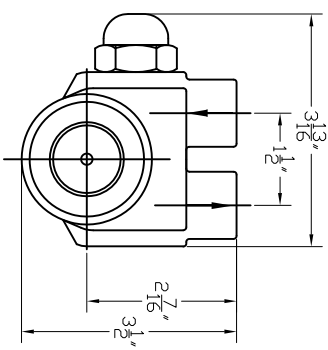
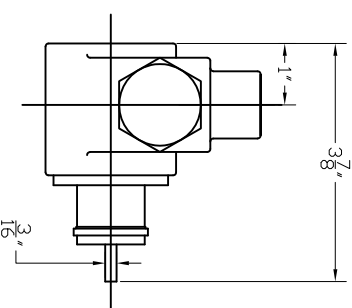
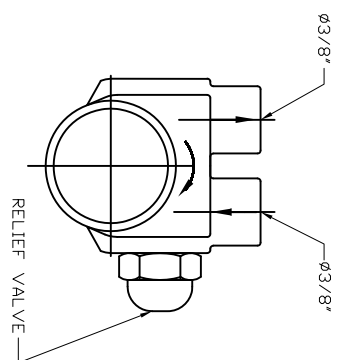
FRONT VIEW



SIDE VIEW



BACK VIEW



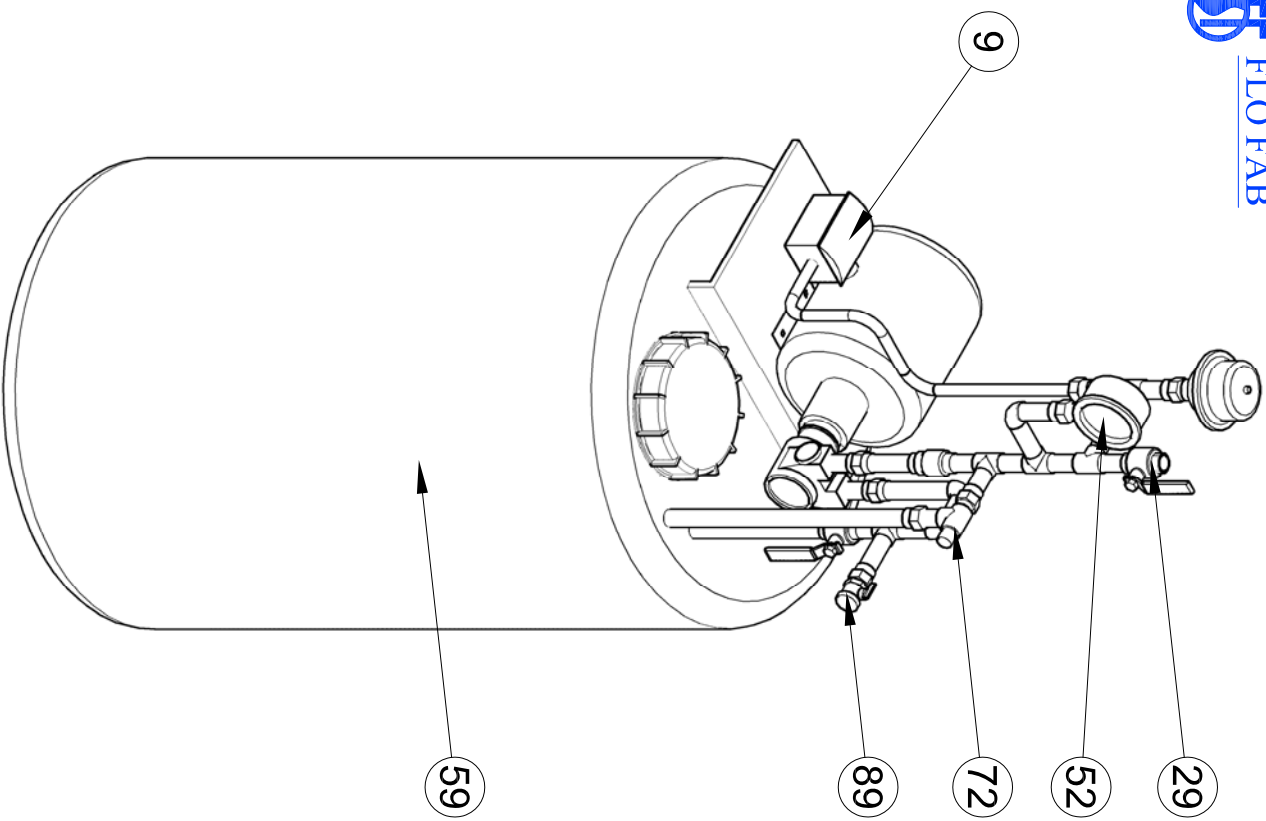
DETAILS

CAP.: 20 USGPM @ 20'
 1/3HP 110V. 1750RPM

DESSIN TYPIQUE. LES DIMENSIONS, FINALES ET LE DESIGN PEUVENT VARIER.
 TYPICAL DRAWING. FINALE DIMENSIONS AND DESIGN MAY VARY

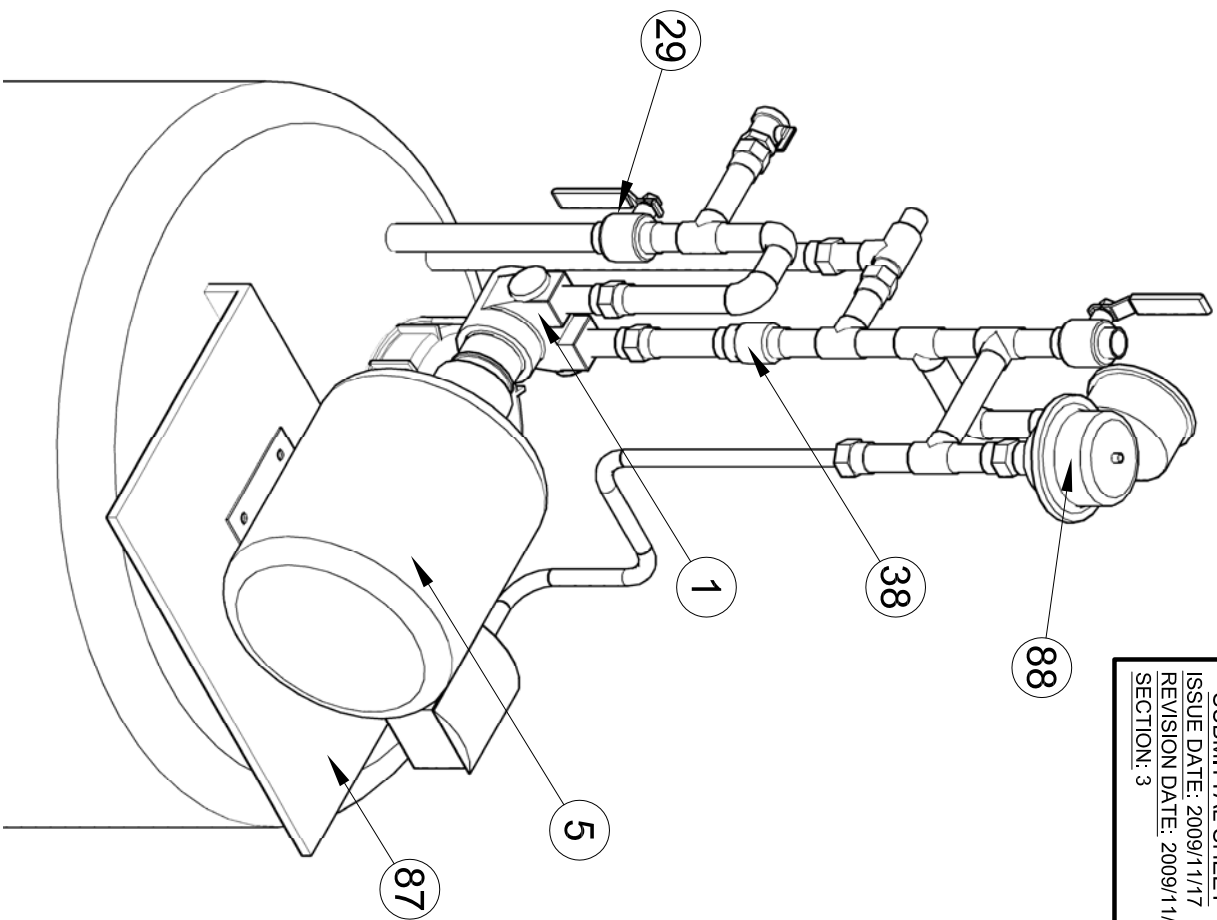
TITLE / TITRE
 FLOFAB PUMP
 CYS16-170

		PROJECT/PROJET CUSTOMER/CLIENT	
860 BOULEVARD INDUSTRIEL BOIS-DES-FILON, QC J6Z 4N7 (450) 821-2995		PART LIST N° / LISTE DE MATIEREL N°	
DRAWN BY / DESSINATEUR M. LYMBURNER		DATE / DATE 2008/02/01	
SCALE / ECHELLE N/A		DRAWING N° / N° DESSIN CYS16-170	
		REV 0	




<input type="checkbox"/>	S-GLY-_____	-CYB16B-170
<input type="checkbox"/>	S-GLY-_____	-CYB16B-295
<input type="checkbox"/>	S-GLY-_____	-CYB16B-377
<input type="checkbox"/>	S-GLY-_____	-CYB16B-560
<input type="checkbox"/>	S-GLY-_____	-CYB16B-1026

	TANK CAPACITY
<input type="checkbox"/>	25 GALLONS (18"Ø X 29"H)
<input type="checkbox"/>	53 GALLONS (22"Ø X 39"H)
<input type="checkbox"/>	106 GALLONS (26"Ø X 44"H)
<input type="checkbox"/>	200 GALLONS (30"Ø X 43"H)

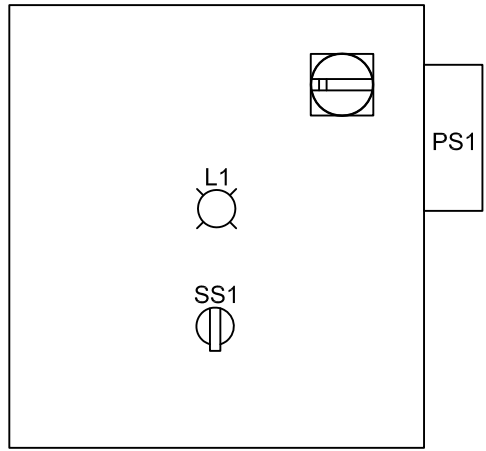
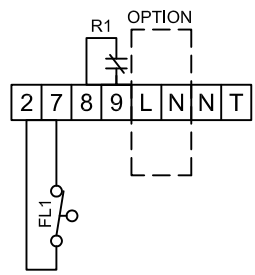
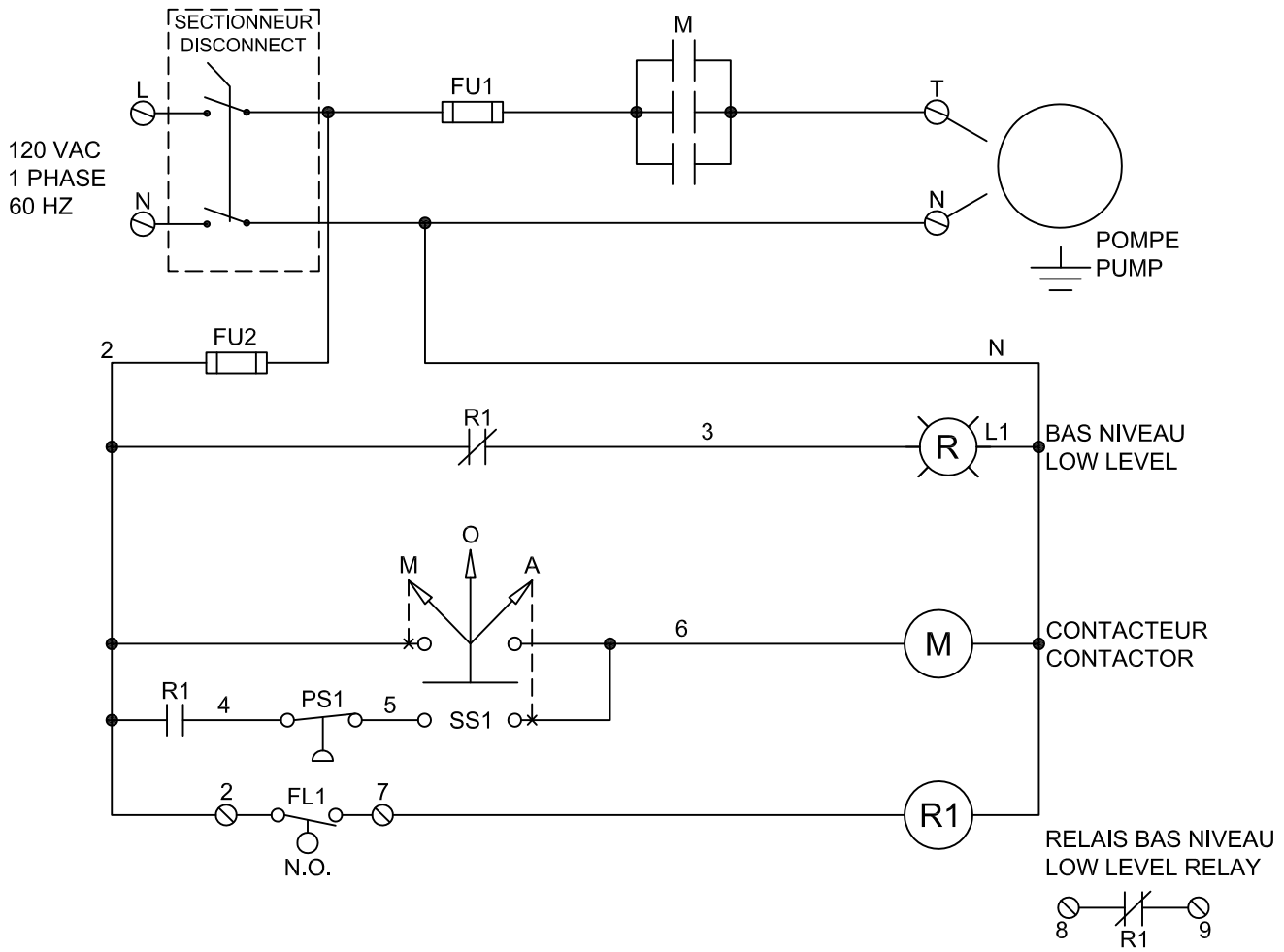


SUBMITTAL SHEET
 ISSUE DATE: 2009/11/17
 REVISION DATE: 2009/11/17
 SECTION: 3

DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE. DO NOT USE FOR CONSTRUCTION PURPOSES
 LES DIMENSIONS SONT SUJET AU CHANGEMENT SANS PRÉAVIS. NE PAS UTILISER POUR RÉFÉRENCE DE CONSTRUCTION


FLO FAB
 AQUA PROFAB
 LAKE WORTH
 FLORIDA, U.S.A
 WWW.FLOFAB.COM

TITLE / TITRE	SIMPLEX ECONOMIC GLYCOL SERIES (GLY)		
PROJECT / PROJET	TYPE	DATE	REV.
CUSTOMER / CLIENT			
DRAWING BY / N° DESINAT	LAYOUT	SCALE / ÉCHELLE	REV.
M. LYMBURNER	S-GLY-ECONO	N/A	0



For Future Use

For Future Use

FF

FLO FAB



**Manufacturer of Pumps, Tanks, Heat Exchangers & Accessories
for HVAC Market After-Sales Parts and Services**

www.flofab.com

FLO-FAB INC
LAKE WORTH,
FLORIDA, USA

SEPTEMBER 2009