# GMP Systems

The Wessels GMP Glycol/Water Make-up Package is a complete, fully automated, and autonomous system. Its function is to automatically supply pressurized water or water-glycol mixture to a closed-loop hydronic heating, chilled water, snowmelt, or process control system, to insure that critical minimum system pressure levels are maintained.

The basic GMP consists of a solution reservoir and a pump pressurization control station. The premixed fluid stored in the reservoir is manually maintained and isolated from the building’s plumbing, ensuring that there is no potential for cross-contamination into the building’s potable supply. The pump pressurization control station stores a portion of the fluid under pressure and meters it to the heating or process control system at the precise pressures required. In addition, a low fluid level sensor is included that shuts down pump operation and sounds an alarm to alert the operator when fluid levels are low.

## GMP Features

### Fully Automatic Fill Package
Maintains water/glycol solution or water solution levels in closed loop heating or cooling systems at optimum design pressures. Pressure is adjustable. Pump only operates to re-pressurize solution contained in the Pressurization Control Station.

### Pre-Wired, Pre-Piped Package
Tank, pump, and all controls packaged for easy connection to closed loop systems that require filling, mixing, and storage of make-up solutions.

### Prevents Major Floods
In the event of a system rupture, only the contents of the storage tank will be pumped into the system.

### No Direct Connection to Potable Water Supply
Eliminates the need for backflow prevention devices.

### Provides Leak Detection
Dropping solution level in storage tank warns of developing system leak.

### Freeze Level Protection
Maintains predetermined glycol/water solution mixture to closed loop systems.

### Treatment Chemicals
Allows mixing of treatment chemicals in make-up water.

### EPA Protection and Excessive Pressure Control
Piping relief valve to the solution reservoir eliminates EPA concerns of solution disposal.

### Solution Reservoir
- Visible solution level with graduated scale
- Hypoallergenic
- Easy access for re-filling

### Low Fluid Alarm
- Safety shut-off shuts system down if solution level gets low
- Notifies operator with audible and visual alarms

### Pressurization Control Station
- Cut-off switch protects against excessive pressure
- Low liquid level audible alarm (can be silenced)
- Low liquid level visible alarm
- Pump protection alarm

### Pressure Regulating Valve
- Maintains optimum system design pressure

### Sturdy Base
- Steel construction
- Easy access to components
Single System GMP Units
The single GMP unit is designed to automatically supply a pressurized solution, such as glycol and water, to a closed loop heating, chilled water, snowmelt, sprinkler, or other process control system to ensure minimum system pressure requirements are met. These systems are equipped with HOA controls, an adjustable pressure reducing valve (PRV), pressure gauge, and a low level alarm that cuts power to the pump and actuates an audible and visual alarm when solution levels are too low.

MODELS
GMP-13050: 1/3 HP Pump with 50-gallon reservoir
GMP-13100: 1/3 HP Pump with 100 gallon reservoir
GMP-15050: 1/2 HP Pump 50 gallon reservoir
GMP-15100: 1/2 HP Pump 100 gallon reservoir

Duplex GMP Units
The Duplex GMPD unit is designed to automatically supply a pressurized solution, such as glycol and water, to two separate closed loop heating, chilled water, snowmelt, sprinkler, or other process control systems to ensure minimum system pressure requirements are met. These systems are equipped with two automatic pumping assemblies each fitted with HOA controls, an adjustable pressure reducing valve (PRV), pressure gauge, and a low level alarm that cuts power to the pumps and actuates an audible and visual alarm when solution levels are too low.

MODELS
GMP-23050: (2) 1/3 HP Pump with (1) 50-gallon reservoir
GMP-23100: (2) 1/3 HP Pump with (1) 100 gallon reservoir
GMP-25050: (2) 1/2 HP Pump with (1) 50 gallon reservoir
GMP-25100: (2) 1/2 HP Pump with (1) 100 gallon reservoir

Twin GMP Units
The Twin GMPPT unit is designed to automatically supply a pressurized solution, such as glycol and water, to a closed loop heating, chilled water, snowmelt, sprinkler, or other process control system to ensure minimum system pressure requirements are met. These systems are equipped with two redundant and alternating fail-safe motors, pumps, and HOA controls that allow one pump to operate if the other pump malfunctions. These units are also equipped with an adjustable pressure reducing valve (PRV), pressure gauge, and low level alarm that cuts power to the pumps and actuates an audible and visual alarm when solution levels are too low.

MODELS
GMP-33050: (2) Alternating 1/3 HP Pump with (1) 50-gallon reservoir
GMP-33100: (2) Alternating 1/3 HP Pump with (1) 100 gallon reservoir
GMP-35050: (2) Alternating 1/2 HP Pump with (1) 50 gallon reservoir
GMP-35100: (2) Alternating 1/2 HP Pump with (1) 100 gallon reservoir

Regardless of the application, there is a Wessels make-up package to do the job.
DIMENSIONAL DATA

<table>
<thead>
<tr>
<th>Model Number</th>
<th>DIMENSIONS</th>
<th>Pump HP</th>
<th>Pressure Range (psi)</th>
<th>Make-up Capacity (gpm@psi)</th>
<th>Approx. Weight (lbs.)</th>
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TYPICAL SPECIFICATION

- The contractor shall supply and install, as indicated on the plans and in the specifications, a prefabricated, automatic and autonomous make-up package for each glycol system.
- The package shall be designed to occupy a minimum amount of floor space to operate on a 110V motor, 60 Hz electrical circuit, and to maintain a fill pressure in the glycol system of ____ psi. The pumping assembly shall be mounted on a sturdy steel frame with legs to keep it off the floor.
- It shall include a ____ (US GMP) at ____ (psi) pump a 1/2 or 1/3 HP motor, a magnetic starter, a pressure tank with pressure control, a priming valve, a shut-off valve and a pressure gauge. It shall be connected to the system with a 1/2" NPT connection. It shall feature a cut-off and alarm arrangement which will stop the pump in case of excessive pressure or low suction level and activate an audible (which can be silenced) and a visual alarm. A 110V dry contact shall also be available for a remote alarm.
- A translucent polyethylene (50) or (100) gallon solution reservoir complete with lid shall be mounted on the pumping assembly and shall include a strainer and a shut-off valve. A ____ in. NPT glycol solution recovery line shall be piped from the system relief valve outlet to the solution container through its lid in such a way that the lid can be removed for filling and mixing.
- The make-up package shall be Wessels model GMP-______ with discharge pressure factory preset at 12 psi and field adjustable as sold by ________.

For Duplex GMP Systems replace paragraph 3 with:
- The system shall consist of two independent pressurization modules for two glycol/water applications. Each module shall include a ____ (US GMP) at ____ (psi) pump a 1/2 or 1/3 HP motor, a magnetic starter, a pressure tank with pressure control, a priming valve, a shut-off valve and a pressure gauge. It shall be connected to the system with a 1/2" NPT connection. It shall feature a cut-off and alarm arrangement which will stop the pump in case of excessive pressure or low suction level and activate an audible (which can be silenced) and a visual alarm. A 110V dry contact shall also be available for a remote alarm.

For TwinGMP Systems replace paragraph 3 with:
- It shall include two ____ (US GMP) at ____ (psi) pump a 1/2 or 1/3 HP motor, a magnetic starter, a pressure tank with pressure control, a priming valve, a shut-off valve and a pressure gauge. It shall be connected to the system with a 1/2" NPT connection. It shall feature a control panel equipped with H-O-A switches for each pump starter and a fail safe alternator that allows one pump to operate if the other pump malfunctions. It shall feature a cut-off and alarm arrangement which will stop the pump in case of excessive pressure or low suction level and activate an audible (which can be silenced) and a visual alarm. A 110V dry contact shall also be available for a remote alarm.