



## Separator Systems Operations & Maintenance Manual



**Record Your Model, Serial Number and  
Other Information on the back of this document.**

**Manufacturing:** Bypass & Filter Feeders, Glycol Feed Packages, Separators & Separator Systems, Tanks, Tank Stands, Chemical Batch Mixers, Corrosion Coupon Racks, Packaged Feed Systems and Custom Systems

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**General Treatment Products, Brea, CA 92821**  
O&M Manual INSTSEPSYS Rev. 0220, Page 1 of 5

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**\*\*\* WARNING – BEFORE YOU GET STARTED \*\*\***

- 1)** All fasteners & fittings should be inspected and secured before operation as they may be loosened in transit
- 2)** Personnel safety practices should apply at all times
- 3)** Safety glasses or face shields and gloves should be worn
- 4)** Do not service without disconnecting power
- 5)** Close isolation valve and release pressure before servicing any components on the system
- 6)** All liquids in system should be drained before servicing

**1.0 INTRODUCTION** Thank you for choosing General Treatment Products Separators Systems. These industrial centrifugal separators systems are design to remove heavier than water solids system flow. Utilizing centrifugal force, tangential entry and GTP proprietary features, such as vortex tube stabilizers and solids velocity hood, solids are removed through a series of chambers and eventually collected in an extended purge chamber at bottom of separator. Infrequent purging of the chamber is all that is required for effective solids maintenance. For further information, please visit [www.gtpcompany.com](http://www.gtpcompany.com) or contact customer service.

**2.0 WARRANTY** General Treatment Products Separators Systems are guaranteed for two years from date of shipment against manufacturing defects in material and workmanship that develop in the service for which they are designed. We will repair or replace a defective part of this system when returned to our factory with freight prepaid; providing that the part is found to be defective upon inspection. We assume no liability for labor and/or other expenses in making repairs or adjustments.

**3.0 UNPACKING** Upon receipt of order, inspect package thoroughly. In the event there was damage incurred in transit you must notify the freight company within **3-5 days of receipt of order**. Once inspected for damage and received in good condition, store indoors until installing.

### 3.1 ORDER VERIFICATION

Model Numbering	
TCS	-0040 /MPK
<b>Options</b>	
<b>MPK</b>	Motorized Purge Kit with timer and motorized valve
<b>Line Size</b>	
<b>0040</b>	40 GPM flow rate
<b>0065</b>	65 GPM flow rate
<b>0100</b>	100 GPM flow rate
<b>0175</b>	175 GPM flow rate
<b>0200</b>	200 GPM flow rate
<b>0275</b>	275 GPM flow rate
<b>0325</b>	325 GPM flow rate
<b>0450</b>	450 GPM flow rate
<b>0550</b>	550 GPM flow rate
<b>0800</b>	800 GPM flow rate
<b>1200</b>	1200 GPM flow rate
<b>1800</b>	1800 GPM flow rate
<b>2500</b>	2500 GPM flow rate
<b>3100</b>	3100 GPM flow rate
<b>4800</b>	4800 GPM flow rate
<b>Base Model</b>	
<b>TCS</b>	Tower clean systems designed at high head (90TDH)
<b>SPS</b>	Side stream packages designed at low head (45TDH)

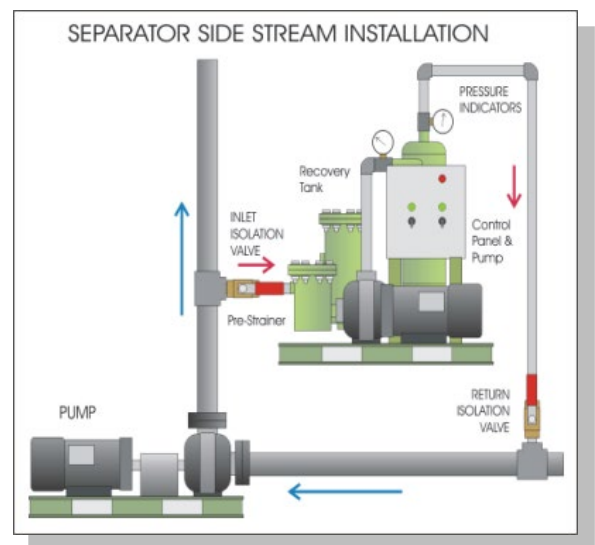
**4.0 LOCATION AND ENVIRONMENT** Although the control panel is NEMA rated, separator package systems should not be exposed to direct elements. These installations require dry locations to validate warranty. In the case there is no dry location that is convenient to install the centrifugal separators. A shelter, awning or shed should be installed to extend product life.

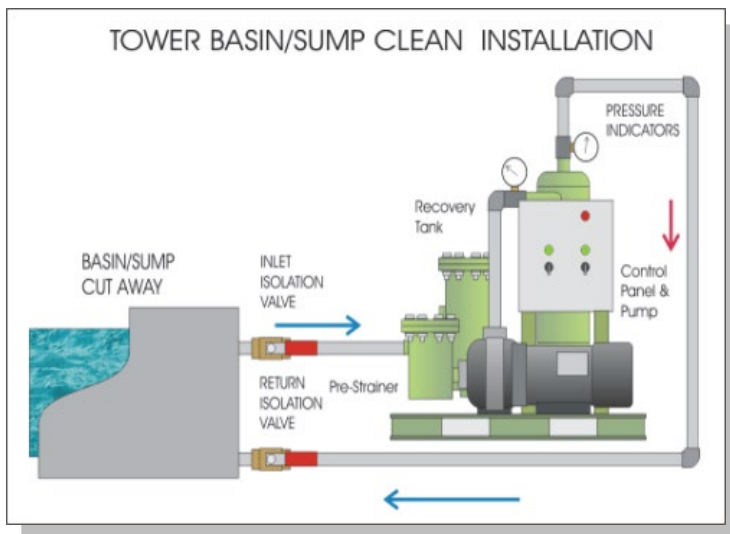
**5.0 INSTALLATION** Once location is decided on, separator needs to be securely mounted to concrete base. **Be sure that mounting pad and anchoring bolts comply with local building codes.** All separator packaged systems come standard with single electrical power hook up. Contact Factory for help.

**5.1 CONNECTING TO THE SYSTEM** Separators can be installed in a number of applications; these applications can determine how the separator package is connected to the system. See diagrams below, if your installation / application is not listed below, contact factory before proceeding.

#### **Side Stream Applications:**

The side stream application shown in the diagram, the separator system is installed in the discharge line of the recirculation pump. Side stream sizing is typically 10% of system flow. System package will generate it's own pressure differential with the system pump included. Pump pre-strainer removes large solids that would typically damage the pump head and the recovery tank (standard) will reclaim the system water so that there is no loss of fluid.





**Tower Basin/Sump Clean Application:**

Tower/Sump cleaning application as show in diagram, are a bit more complicated. Each system needs to be sized by the volume of fluid in the basin/sump. Then the fluid is drawn into the separator system, cleansed and returned to the basin. The return flow can be coupled with 5:1 flow eductors to help stir the basin water and flush the sediment back to the separator system suction. Avoid swirling or repeated flow patterns on the return, as this will typically add to sediment accumulation in corners and behind objects.

**6.0 PRESSURE AND TEMPERATURE LIMITATIONS:** Separator Systems maximum operating perimeters are 200PSI @ 150F. Some optional fittings, as noted in descriptions, may change limitations, contact factory for assistance.

MATERIAL	MAXIMUM SHORT TERM TEMPERATURE	MAXIMUM OPERATING TEMPERATURE	MAXIMUM OPERATING PRESSURE
Polyethylene (PE)	160°F/69°C	85°F/36°C	N/A
Polyvinylchloride (PVC)	140°F/60°C	85°F/36°C	100PSI/6.9BAR
Chlorinated Polyvinylchloride (CPVC)	180°F/77°C	120°F/49°C	100PSI/6.9BAR
Polypropylene (PP)	180°F/77°C	100°F/49°C	100PSI/6.9BAR
Carbon Steel (CS)	200°F/93°C	200°F/93°C	150PSI/10.3BAR
Cast Iron (CI)	200°F/93°C	200°F/93°C	150PSI/10.3BAR
Brass (BR)	200°F/93°C	200°F/93°C	150PSI/10.3BAR
Stainless Steel (SS)	200°F/93°C	200°F/93°C	150PSI/10.3BAR

Note: Minimum Fluid Temperature is 50°F/10°C.

**7.0 ROUTINE MAINTENANCE** Routine maintenance for separator systems is quit simple. Once installed and started up, all that is need is regular inspection and check for leaks and check pump for wear.

**7.1 PRE-STRAINER AND RECOVERY TANK** Pump pre-strainer is installed to catch large particle that may damage the circulation pump. Recovery tank purge systems provided is a continual purge. Always filtering and reclaiming the system water. At start up, the system can be dirty from construction and needs constant attention, but once the system is cleansed, recovery tank clean up should weekly or even monthly depending on environment and system cleanliness. Recovery tank comes complete with isolation valves and pressure switch.

**7.2 SETTING OPTIONAL PURGE TIMER** Automated purge valve cycle timer, purges solids collected in the purge. By opening a full port ball valve, the collected solids are purged and sent either to drain or processing station for dewatering. Please visit [www.gtpcompany.com](http://www.gtpcompany.com) for purge timer instructions or contact customer service.

**8.0 PARTS LISTING** Contact factory for help.

**9.0 WIRING** For help, please contact the factory or visit our website [www.gtpcompany.com](http://www.gtpcompany.com).

**10.0 TROUBLE SHOOTING**

<b>PROBLEM</b>	<b>POSSIBLE CAUSE / ACTION</b>
Low/Excessive Pressure Drop	Improper installation
	Improperly sized
	Installed backwards
No solids removal	Installed backwards
	Improperly sized
	Not enough flow rate

If you are still having trouble, please visit [www.gtpcompany.com](http://www.gtpcompany.com) or contact customer service.

**11.0 NOTES**

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**12.0 PRODUCT LABEL**

Model:

Serial Number:

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