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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***** 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 glycol feed package with out 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 contact us at customerservice@gtpcompany.com or call us at the phone number on the cover.

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

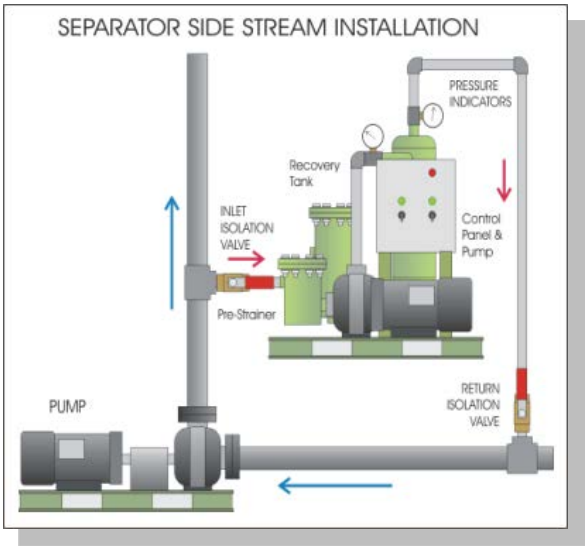
Options		
	MPK	Motorized Purge Kit inlue of standard recovery vessell
Line Size		
	0040	Flow Rate is GPM
Base Model		
	TCS	Tower clean systems designed at high head
	SPS	Side stream packages designed at low head

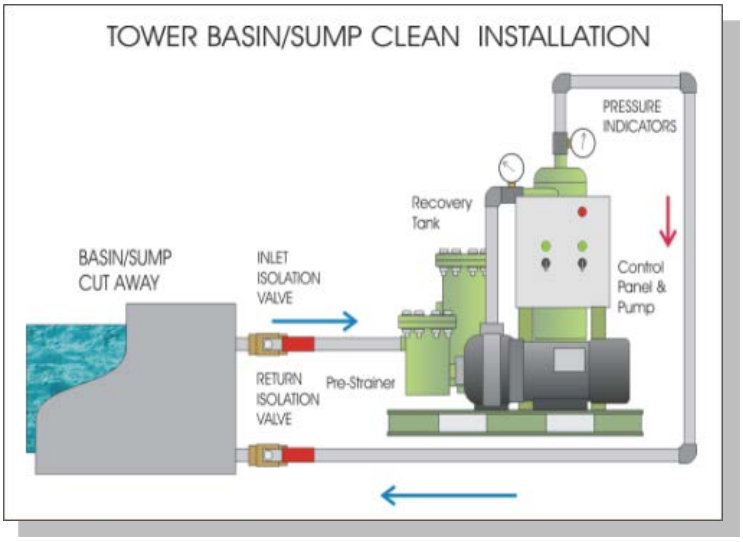
4.0 LOCATION AND ENVIROMENT Although the control panel is NEMA rated, separators package systems should not be exposed to direct elements. These installations require dry locations to validate warranty. In the case there is no dry location that is convenient to install the centrifugal separators. A shelter, awning or shed should to 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)	160ºF/69ºC	85ºF/36ºC	N/A
Polyvinylchloride (PVC)	140ºF/60ºC	85ºF/36ºC	100PSI/6.9BAR
Chlorinated Polyvinylchloride (CPVC)	180ºF/77ºC	120ºF/49ºC	100PSI/6.9BAR
Polypropylene (PP)	180ºF/77ºC	100ºF/49ºC	100PSI/6.9BAR
Carbon Steel (CS)	200ºF/93ºC	200ºF/93ºC	150PSI/10.3BAR
Cast Iron (CI)	200ºF/93ºC	200ºF/93ºC	150PSI/10.3BAR
Brass (BR)	200ºF/93ºC	200ºF/93ºC	150PSI/10.3BAR
Stainless Steel (SS)	200ºF/93ºC	200ºF/93ºC	150PSI/10.3BAR

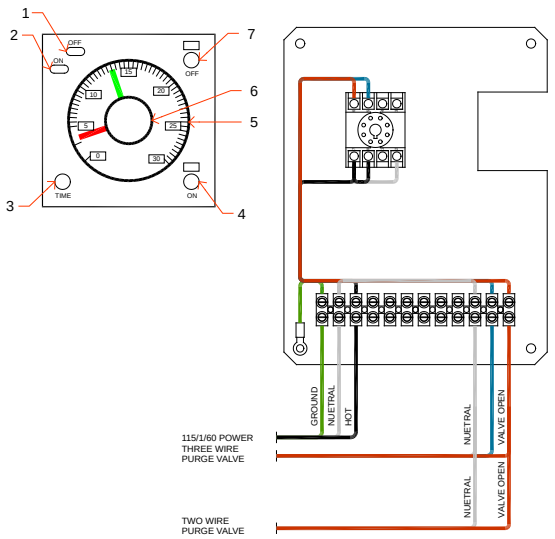
Note: Minimum Fluid Temperature is 50ºF/10ºC.

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 SWITCH AND SERVICING RECOVERY TANK Once the system is installed and running, you can set the pressure switch. Depending on systems pressure, loosen or tighten the center nut until either the service (red) light goes on or goes off. Adjust ¼ turn more to allow for pressure fluctuations. After switch is set, red light will indicate solids clogging the filter media. Close isolation valves and relieve pressure. Remove filter and clean.

7.3 SETTING OPTIONAL PURGE TIMER Optional purge cycle timer automatically opens a motorized valve (based on time) and removes the collected solids from the purge chamber of the separator. During the purge the solids and system water is sent to drain. Set time frame for both on and off time with dials 4 & 7. Dial number 3 sets the time frame. Green dial indicates on time and red dial indicates off time. Indicators 1 & 2 show state of timer.



8.0 PARTS LISTING Separators systems do not carry many replacement parts, with the exception of accessories items like pressure gauges and recovery tank filters. Contact factory for help.

9.0 WIRING The only wiring needed is for the control panel. All separator systems are wired 230/3/60 unless otherwise stated. Terminal 1, 2 & 3 are for the three legs of three phase power. Please check motor data label for amp load. Besure all wiring is done by experience personnel and meet local building codes. For help, please contact the factory or visit our website www.gtpcompany.com.

10.0 TROUBLE SHOOTING

PROBLEM	POSSIBLE CAUSE / ACTION
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, contact us at repairs@gtpcompany.com, or you can call us at the number on the front of the Instruction manual.

11.0 NOTES

12.0 PRODUCT LABEL

Model:

Serial Number: