

SQUID II WATER CLARIFYING SETTLING TANK SYSTEM



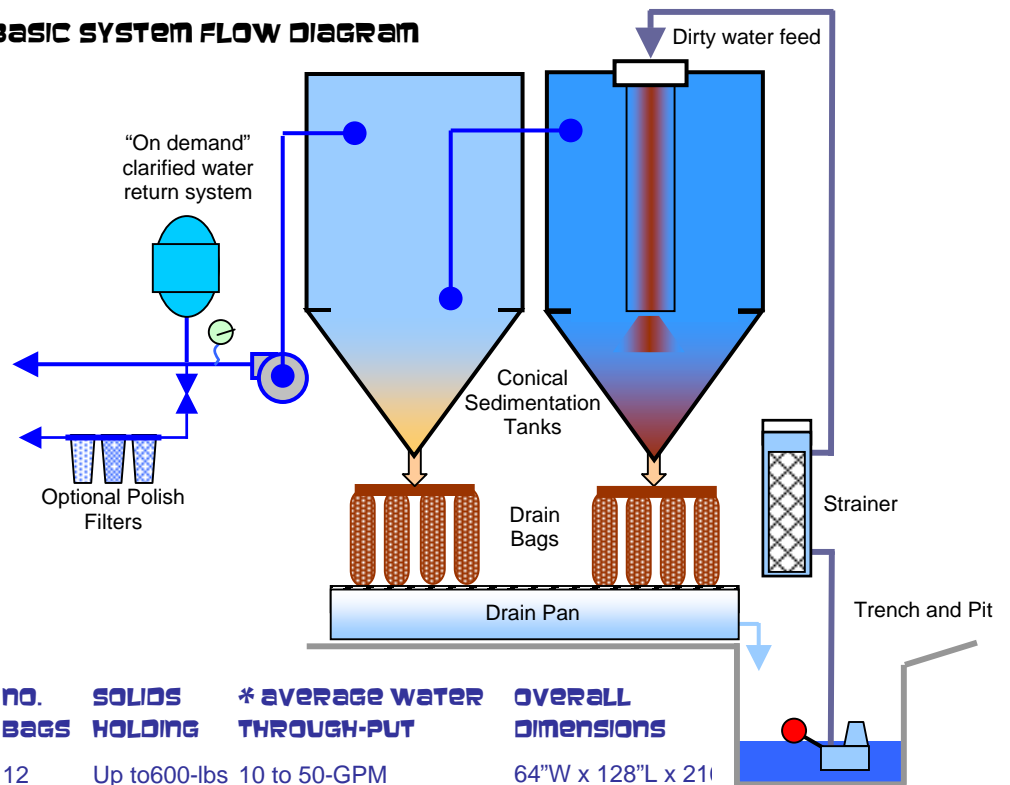
SQUID II SYSTEM

The **SQUID II SYSTEM** from US Centrifuge is a uniquely designed modular dehydration and water clarifying system for efficient settling and collection of suspended solids for the Glass, Stone, and other Brittle Material Fabrication Industries. The **SQUID II SYSTEM** consists two specially baffled cone bottom tanks of specific volume with a drain manifold and valves and hanging bags to collect the concentrated slurry which are easily removed for replacement and disposal. The Squid can be purchased as a basic large volume dehydrator or can be fully equipped with pit and distribution pumps and controls for a water complete package.

SQUID II SYSTEM FEATURES AND ADVANTAGES:

- Large water volume for added retention and greater settling time
- Large water volume stored above bags provides greater static drainage pressure
- Heavy-duty poly tanks with structural steel support base for added quality and long term usage with six bag drain manifold per tank
- Six smaller bags provide greater total external bag surface area for improved drainage capability and improved solids dehydration to the center of the bag
- Up to 50-lbs sludge cake per bag provides easier “one-man” handling and do not require added material handling equipment for exchange
- Fully engineered pre-constructed system modules ship knocked down for easier handling and sets up quickly for easy installation

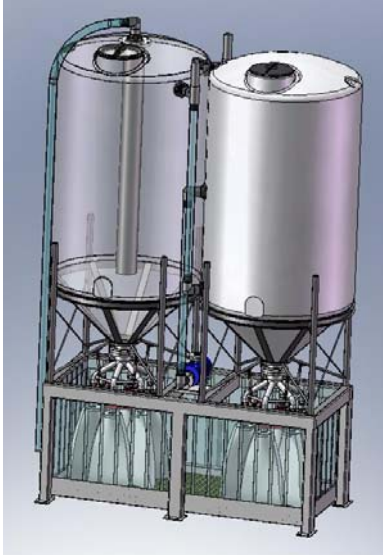
BASIC SYSTEM FLOW DIAGRAM



SQUID MODEL	LIQUID VOLUME	NO. BAGS	SOLIDS HOLDING	* AVERAGE WATER THROUGH-PUT	OVERALL DIMENSIONS
Squid II	3,000-gallons	12	Up to 600-lbs	10 to 50-GPM	64"W x 128"L x 21"

- ❑ * 99% average clean water clarity @ above rated water through-put w/o chemistry
- ❑ Clean water clarity is based on flow and the resulting retention time / More settling time equals cleaner return water
- ❑ Chemical addition improves water clarity, reduces settling time, and increases water through-put
- ❑ How the customer operates the system determines the results

SQUID II WATER CLARIFYING SETTLING TANK SYSTEM



SQUID II settling tank system separates the solid material in suspension through gravitational settling. Dirty water coming from the fabricating equipment is collected in a pit where a float actuated submersible pump automatically pumps the dirty water into the first cylindrical settling tank. Before reaching the tank, an optional flocculant (settling agent) can be injected into the dirty water feed manifold. The chemical reaction of the flocculant bonds suspended solid particles together and accelerates the settling rate producing a clean water medium. The inlet pipe minimizes turbulence to further facilitate an efficient settling process. The thickened solids concentration accumulates in the tank bottom and continuously drains at low flow into a uniquely designed 6-bag dehydrator manifold attached to the tank's conical bottom. The sludge is extracted and dehydrated as the concentrate passes through the filter bags, which must be manually removed for disposal when full. The "cleaner" water flows to the top of the first tank over-flowing into the lower section of the second conical tank for additional settling time and solids collection. The "clean water" and/or "nominally clean gray water" water is pumped from the clean water chamber back to the fabricating machines by a relatively high-pressure centrifugal pump.

SQUID II 3,000-GALLON SETTLING TANK SYSTEM WITH 12-BAG DEHYDRATING BAGS DESCRIPTION:

3,000-gallon capacity twin poly cone bottom settling tank system with 6-bag dehydrating manifold under each tank with individual regulating 2" NPT butterfly valves for each bag. Settling tank system includes painted structural steel fabricated support structure and drain pan and (12) Twelve 8" Diameter x 28" Long 50-micron polyester filter bags with handle loop included that rest on a grated drain pan with (2) 3" drain connections that return to the pit. To prevent flooding (2) two 4" pneumatically operated anti-drain safety butterfly valves with solenoid control are fitted between the bottom of each tank and drain bag manifold. The 2" dirty water inlet manifold includes a large strainer housing with a removable stainless steel mesh basket and a tap and inline static mixer for proper chemical addition and mixing.

PIT AND RETURN PUMP SYSTEM PACKAGE DESCRIPTION: The system includes a 1.0-hp 75-gpm @ 20' of head submersible pit pump with float switch control to transfer dirty water from the pit to the inlet manifold. A 2-hp centrifugal pump supplies clarified water to the fabrication equipment at a maximum capacity of 50-gpm @ 60-psi. For low volume clean polish water an optional secondary water filtering manifold with 50-20-10 micron filter housings and cartridges can be included. Water level is maintained by an automatic fresh water make-up manifold and 1" solenoid. All pump and tank level functions are PLC controlled and a pressure transducer and VFD regulate the supply pump. All control panel components are housed in a NEMA 12 enclosure with a fused rotary disconnect. The standard power supply is 240/480-VAC 60-HZ 3-Ø. All system components are pre-mounted with inter-connecting piping and wiring.

The use of straight water is acceptable but in many cases reduces the usable life of the water even though the centrifuge can separate particles as small as 3-micron the overall particle count will continue to increase requiring the addition of fresh water and / or chemistry. US Centrifuge recommends using specially formulated additives or coolants to condition the water with lubricants and corrosion inhibitors and / or flocculants to increase fine particle agglomeration and settling rates. Such chemical addition improves the overall efficiency of the recycling system and increases the life of the machinery and tooling.

OPTIONAL COOLANT / FLOCCULANT SYSTEM PACKAGE: An initial chemical charge including (2) two 55-gallon drums of "Stone Cool" and (1) one 5-gallon pail of "Rock Flock" for extended closed loop operation and improved settling performance is available at the time of purchase or anytime there after. An optional automated chemical dosing system is available that includes a proportional coolant dosing unit integrated into the fresh water make-up manifold and a peristaltic flocculant pump.

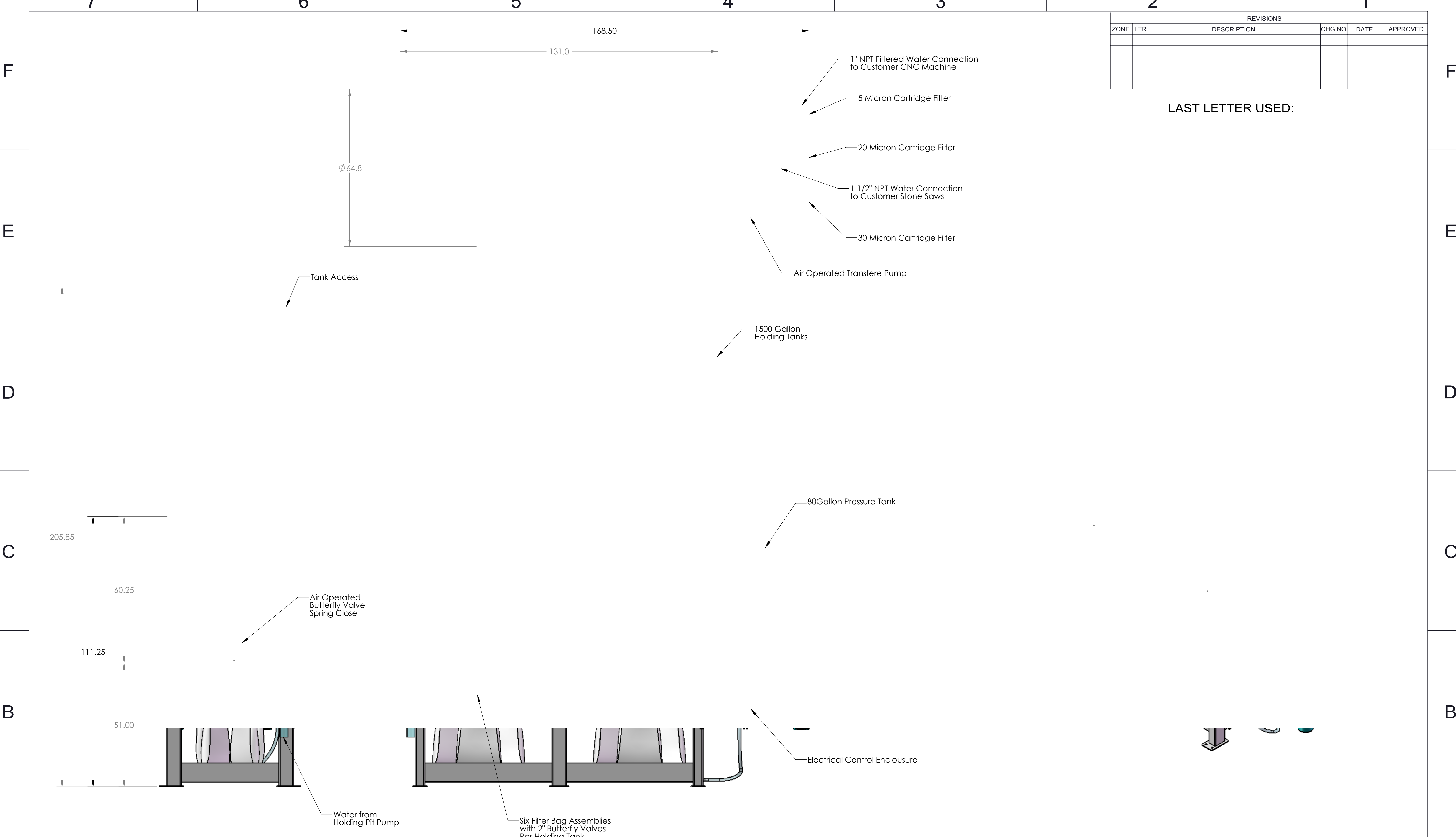
AVAILABLE ON-SITE INSTALLATION / COMMISSIONING WITH USC FILED SERVICE ENGINEER.

SPACE REQUIREMENTS: (PRINT NO. L10279A SQUID 3000)

- Approximate floor space requirement: 65"W x 170"L x 210"H
- System to be located within 10' radius of dirty water collection pit

REVISIONS					
ZONE	LTR	DESCRIPTION	CHG.NO.	DATE	APPROVED

LAST LETTER USED:



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<p>US CENTRIFUGE The Liquid-Solid Separation Experts</p>		DWG NO. L10279A TITLE Squid 3000 Dual Tank Stone System	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCE ON 2 PLACE 3 PLACE ANGLE ±.01 ±.005 ±0.30°		THIRD ANGLE PROJECTION 	
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