ORTHOS
Liquid Systems

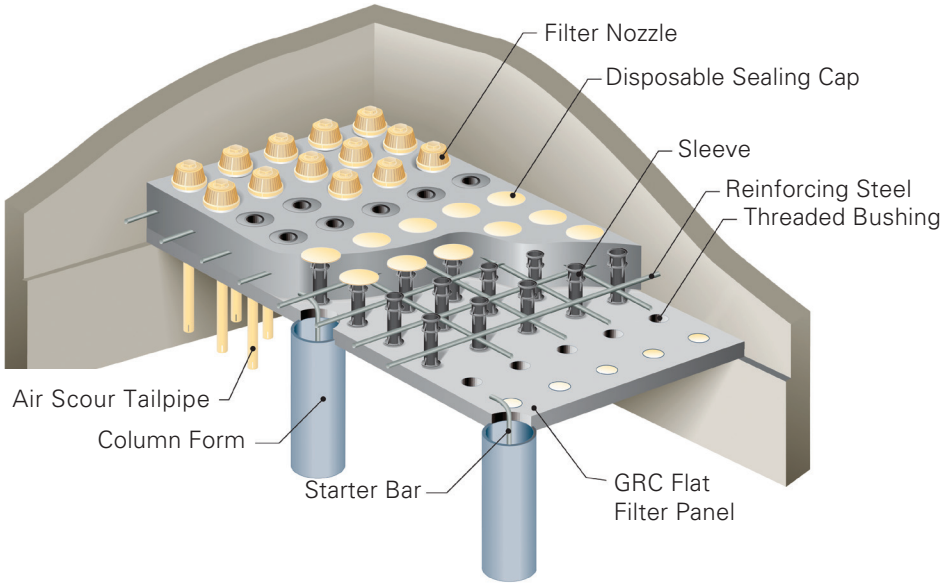
POSEIDON
FILTRATION SYSTEMS®

Centurion™ Monolithic Filter Underdrain

Centurion™ Nozzle-Based Monolithic Underdrain

20 Years of Reliability… Not One Underdrain Failure — Ever.

The Centurion™ monolithic design is cast in-situ and becomes "locked into" the surrounding civil structure, lasting for many, many decades. Unlike block and triangular lateral systems that are not a permanent part of the filter, *Centurion* monolithic underdrains feature reinforced concrete that withstands abnormal vertical forces to afford practically no risk of structural failure.



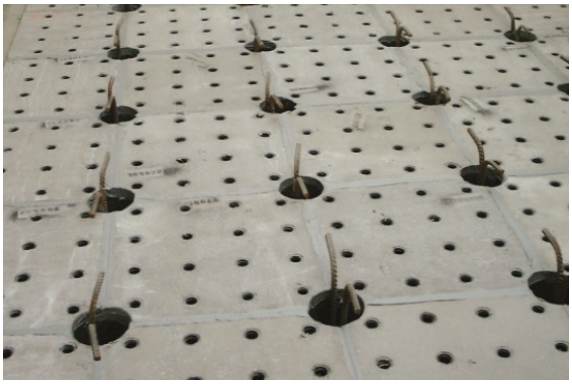
Creating Ongoing Value:

- An **elevated floor**, supported on columns or between dwarf wall, creates a plenum underneath
- The **plenum** space, often with 12" to 30" of vertical height, advantageously provides for inspection and service through an access hatch
- **Monolithic slabs** minimize grouting (i.e., potential leakage points) and include embedded steel reinforcement bars linked to the tank floor and walls
- **Nozzle** sleeves are cast into the concrete floor, and once curing is finished, nozzles are quickly installed

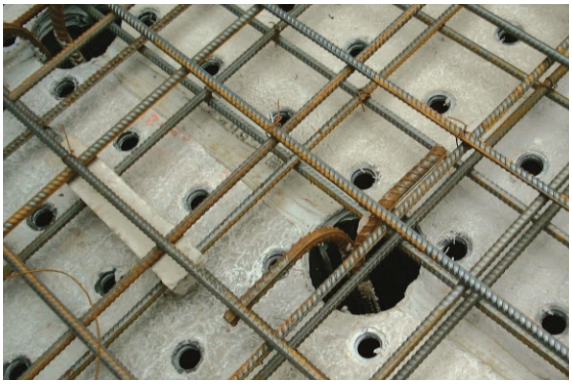
Installation

Flat GRC Panels delivered in crates

Column forms, cut to size and leveled



Panels sealed to column forms and abutting panel



Steel reinforcement showing connecting steel within column form

Installed threaded sleeves and protection caps

Pouring and vibration of concrete
Trowel level to caps

Top 5 Reasons to Choose Orthos Centurion™

Over Filters with Block or Triangular Lateral Underdrains

1. **Zero underdrain failures** — Orthos has NEVER had a monolithic underdrain filter failure. Not once. Ever. Longevity is ensured by structurally-superior, reinforced concrete, locked into the sidewalls and filter floor.

2. **Experience** — Orthos is installed in 200 downflow filters, some with 20+ years of service.

3. **Huge life cycle cost benefits** — At the end of equipment life cycle, in contrast to a costly lateral underdrain demolition and replacement, nozzles are economically and easily unscrewed and exchanged—the monolithic floor remains part of the civil structure.

   "No need to replace the chandelier when all you have to do is change out the light bulbs!"

   Thus, facility life cycle cost analyses with appropriate 50+ year terms will routinely identify Poseidon as the prudent choice over other systems.

4. **Excellent backwash and air scour distribution** — Because of our nozzle back pressure design and that air and water move freely under the monolithic floor, distribution is repeatedly exceptional, resulting in optimal media cleaning and long-lasting structural integrity.

5. **Construction is less dependent on hard-to-control installation practices** — Concrete underdrain slabs are easily constructed in contrast to pouring non-structural grout into narrow spaces with interfering anchor hardware or fastening and leveling long, triangular laterals.

Filter Nozzles

Full line of nozzles offer cost-effective retrofit solutions

When it comes to filter performance of a nozzle underdrain system, it is vital that the nozzle being used is properly designed to meet your filter specifications. With multiple design options such as material, mounting style, flow rate capacity and tailpipes for air scour, we are sure that Orthos Liquid Systems has a filter nozzle that will meet your requirements. We are capable of replacing any OEM design on the market by supplying a direct replacement, or if required, redesigning the nozzle to ensure optimum filter performance.

- Mechanically locked screens
- Reinforced cages
- V shaped slots to prevent clogging
- NSF 61 certification
- Made in the USA
- 25 year life cycle

ORTHOS Liquid Systems

PO Box 1970, Bluffton, SC 29910
Tel: 843.987.7200
Fax: 843.987.7203
info@orthosfilters.com

www.orthosfilters.com

201 1119