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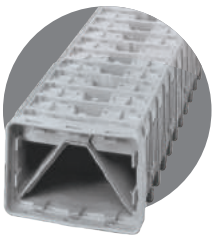
Let's Solve Water

Leopold® Type S/™SL™ Underdrains

INCREASES FILTER RUN TIMES, REDUCES BACKWASH

Type S underdrain with optional I.M.S® 1000 media retainer is ideal for denitrification



Recovery channel shown on Type SL underdrain

Improved Underdrain Performance for Superior Results

Upward airflow through competitor underdrains creates low pressure zones causing some orifices to become air deprived, or reverse flow. The S/SL design tackles this issue through a patented built-in water recovery channel; this ensures uniform and continuous airflow across all the top-deck orifices allowing water to re-enter and equalize the low-pressure areas. The dual lateral design provides superior results and improved performance.

Type S/SL underdrain results:

- Broader airflow range, 2 to 5 scfm/sf | 36 to 91 m/hr
- Improved air stability under all operating conditions with all orifices providing uniform and continuous airflow
- Lower water maldistribution – less than 5% (total)

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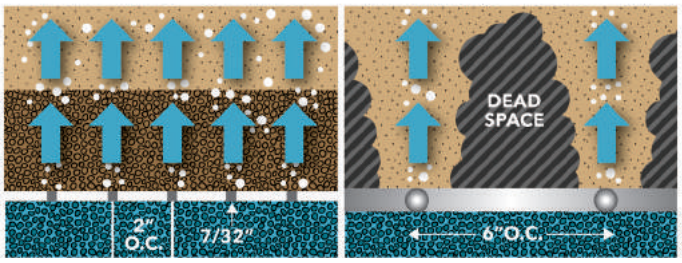
a xylem brand

Features and applications of Leopold® Type S™/SL™ underdrains

Improved Media Cleaning

Type S/SL underdrains feature closely spaced, non-clogging orifices for uniform distribution of air and/or water backwash. This promotes trouble-free operation and better media cleaning. This spacing prevents the formation of dead spaces and all the media is exposed to the cleaning action. Other underdrain designs can cause dead zones where the air does not reach and scour the media.



Collapse Pulse Cleaning, Regardless of Media Configuration

The wide, uniform air distribution of the Type S/SL underdrain enables various media configurations to benefit from collapse pulse cleaning during a concurrent backwash. Other underdrains limit the air flow rates. This can limit or even eliminate the possibility of collapse pulse cleaning.

Forgiving Level Tolerances

Older underdrains required a levelness of ±1/8 inch. Type S/SL underdrains, with internal baffles for reduced level sensitivity, can be installed to a level tolerance of ±1/4 inch, which is more forgiving in retrofit installations where the construction tolerances were not as rigid.

	Type S	Type SL
Underdrain Height gravel installation	12″	7 3/4″
Underdrain Height with I.M.S 1000 media retainer at 7/8″	13 3/8″	9 1/8″
Underdrain Height with I.M.S 200 media retainer at 1 3/8″	13 7/8″	9 5/8″

Cost-Saving Installation and Operation

More forgiving installation tolerances also means simpler installation and lower construction costs. Improved filter performance provides cleaner water and longer runs between backwashing which impacts lower operating costs per gallon of water filtered.

Applications for Leopold Universal Type S/SL underdrain

There's a Leopold Type S, or SL underdrain for every design need. Type S is ideal for installations requiring longer laterals and applications with wide ranges of air and water combination. The Type SL lower profile (4″) makes it ideal for shallow filters where greater filter media depth is needed. Both feature superior air scouring and water backwash performance.

- Turbidity (solids) removal
- Lime softening
- Iron/manganese removal
- Wastewater treatment solids removal
- Denitrification filters (elimi-NITE®)
- Scour water
- Reverse osmosis pretreatment

Both Type S and SL underdrains are made from High-Density Polyethylene (HDPE)

	Type S	Type SL
Length	48″	48″
Width	11″	11″
Height	12″	8″
Center Flume	96″	32″
Front Flume	48″	16″
Weight	25 lbs	19 lbs

Type SL underdrain with I.M.S 200 media retainer is ideal for shallow filters where greater filter media depth is needed

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Xylem, Inc.
4828 Parkway Plaza Blvd., Suite 200
Charlotte, NC 28217
Tel 704.409.9700
Fax 704.295.9080

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