

PRODUCT DATASHEET

Continuous Sand Filter

Continuous upflow filtration and media washing | 9 to 84 m³/h per vessel

DATASHEET NO.

DS-YS-CSF-R03

ENGINEERING BASIS

9-84 m³/h

PUBLISHED VESSEL RANGE

Hydraulic loading, solids duty and effluent target determine the selected vessel and number of units.

CONT.

SIMULTANEOUS FILTRATION AND WASHING

The filter remains online while the airlift moves dirty media through the washer.

AIRLIFT

MEDIA CIRCULATION

Compressed air transfers retained solids and media without a submerged mechanical drive.

BANKS

PARALLEL CONFIGURATION

Multiple vessels provide the required capacity, operating flexibility and staged expansion.

PRODUCT OVERVIEW

The YORA Continuous Sand Filter is a compact upflow deep-bed filtration system for drinking water, industrial water, wastewater polishing and reclaimed-water reuse. Raw water enters beneath the moving sand bed and rises through a single-grade media layer. Retained solids travel downward with the media, while an airlift continuously transfers dirty sand to the washer at the top of the vessel. Clean media returns to the bed and the separated washwater is discharged without interrupting filtration.



Continuous upflow sand-filter vessel with conical media collection zone.



Installed multi-vessel arrangement with common distribution header.

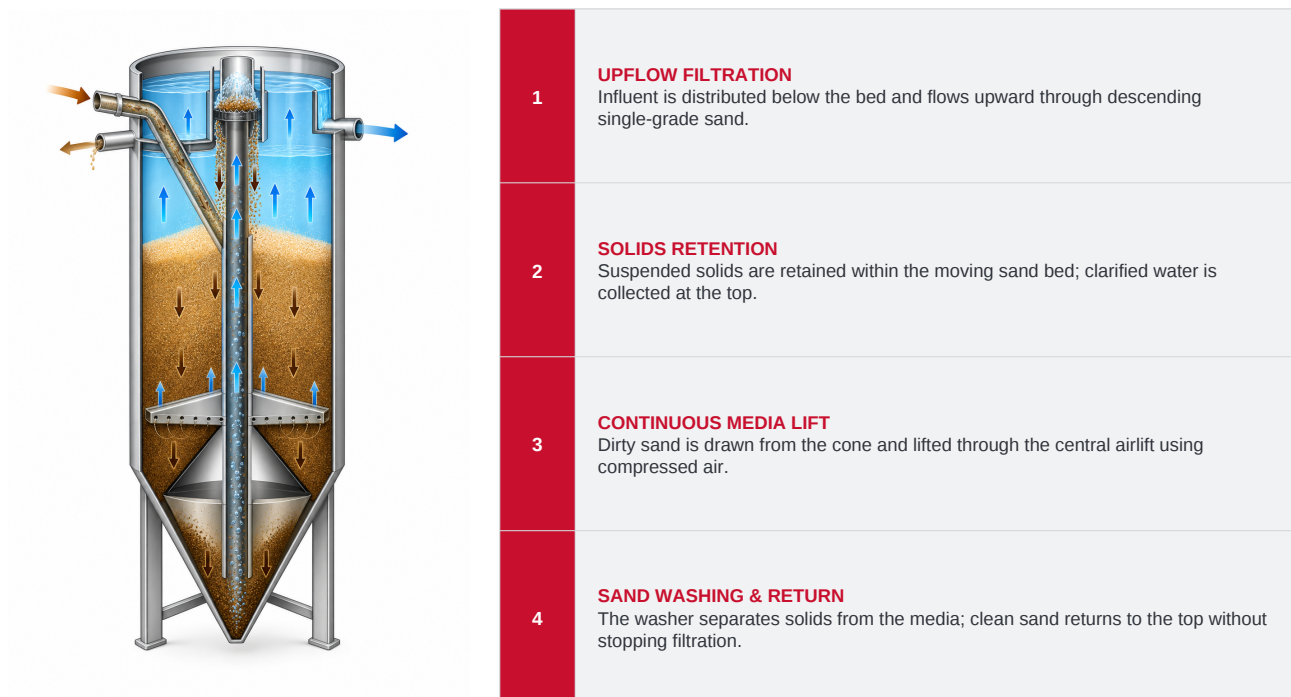
Illustrative equipment and installation arrangement. Final vessel finish, connections and bank configuration are project specific.

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Process Principle & Configuration

Continuous media circulation | no shutdown for backwashing

WORKING PRINCIPLE



TECHNICAL CONFIGURATION

ITEM	STANDARD / AVAILABLE CONFIGURATION
Treatment process	Continuous upflow deep-bed filtration with simultaneous media washing
Process integration	Optional contact coagulation / flocculation with filtration for suitable feed conditions
Filter media	Single-grade silica sand selected for target loading and filtration performance
Media circulation	Compressed-air-driven central airlift with integral sand washer
Vessel construction	SS304 or SS316; alternative project-specific construction available on request
Internal components	Water distributor, sand guide hopper, airlift tube, sand washer and filtrate collector
Hydraulic arrangement	Single vessel or parallel multi-vessel bank with common inlet, outlet and washwater headers
Backwash equipment	No separate high-rate backwash pump or dedicated backwash sequencing; normal isolation valves remain

Final vessel count, filtration rate, media grade, air demand, washwater reject, optional chemical conditioning and outlet guarantee are confirmed from the actual feed and required effluent.

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Model Range, Scope & Selection

Standard vessels with scalable parallel-bank architecture

INDICATIVE MODEL RANGE

MODEL	FILTER AREA m ²	DIAMETER mm	HEIGHT mm	CAPACITY m ³ /h
CSF-15	1.5	1,440	5,450	9-18
CSF-30	3.0	1,920	5,800	18-36
CSF-40	4.0	2,260	5,980	24-48
CSF-50	5.0	2,500	6,120	30-60
CSF-60	6.0	2,800	6,190	36-72
CSF-70	7.0	3,000	6,755	42-84

Capacities are preliminary selection ranges. Additional sizes and multi-vessel banks are available on request. Final capacity depends on hydraulic loading, influent suspended solids, particle characteristics, temperature and required effluent quality.

APPLICATIONS

MUNICIPAL & REUSE WATER	INDUSTRIAL WATER
› Drinking-water clarification and filtration › Municipal wastewater tertiary polishing › Reclaimed-water reuse treatment › Surface-water turbidity and solids removal › Upgrading existing clarification / filtration systems	› Industrial process-water treatment › Cooling-water side-stream filtration › Membrane pretreatment and solids protection › Recovery treatment for multi-media and sand-filter backwash water › Food, chemical and manufacturing wastewater polishing › Decentralized or packaged treatment plants

STANDARD SUPPLY SCOPE	EXTRA OPTIONS
› Filter vessel, conical bottom and support legs › Water distributor and filtrate collector › Central airlift and integral sand washer › Sand guide hopper and internal media-return arrangement › Main inlet, outlet, washwater and air connections	› Filter media and initial media charge › Air blower package with duty / standby arrangement › Coagulant and polymer dosing systems › Common headers, valves and multi-vessel skid / platform › Local PLC, instruments and remote monitoring interface › Washwater recovery or reject-handling package

INFORMATION REQUIRED FOR FINAL SELECTION

1 DESIGN FLOW	2 INFLUENT QUALITY	3 EFFLUENT TARGET	4 SITE BASIS
Average, peak and minimum operating flow	TSS, turbidity, particle size and water chemistry	Required TSS / turbidity and downstream process	Hydraulic profile, utilities, footprint and material requirements

Published capacities and treatment claims are preliminary selection values. Final number of vessels, media, utilities, options, applicable standards and performance guarantees are confirmed against actual conditions and client technical specifications.