

SATTE SSX Side-Mount Sand Filter



SATTE SSX

Typical Applications

- Residential and villa pools: removes debris, particles and contaminants to keep water clean and safe.
- Commercial, hotel, school and club pools where clarity and hygiene for many users are the priority.
- Spa and wellness centres, hydrotherapy and public recreational pools with higher bather loads.
- Water parks, competition pools and indoor pools requiring continuous circulation and filtration.
- Aquaculture and ornamental water where fine filtration is required for a healthy environment.

Features

- Tank: filament-wound glass-fibre reinforced polymer, corrosion resistant, abrasion resistant and deformation-proof; indefinite service life.
- Side-mounted six-position multiport valve (filter / backwash / rinse / recirculate / waste / closed) with union connections for easy servicing.
- Uniquely designed distributor and collector laterals give a stable, even water flow across the whole bed and an efficient backwash.
- Outlet turbidity below 2 FTU with 0.5 - 0.8 mm graded silica sand; media is loaded through the top-mounted access lid.
- Pressure gauge and air-release fitted as standard; easy to install and virtually maintenance-free.

Operating Conditions

- Maximum working pressure 3.5 bar (350 kPa); test pressure 4.5 bar. Maximum water temperature 43 C (109 F).
- Rated flow is at a filtration velocity of about 60 m/h. For commercial and public pools size at 30 - 40 m/h for best clarity.
- Backwash for 3 - 5 minutes when the gauge reads 0.5 bar above the clean-bed pressure, then rinse for 30 - 60 seconds.
- Install on a level base with the multiport valve accessible; never operate the valve with the pump running.
- Media: 0.5 - 0.8 mm silica sand or equivalent glass media; height of outfall equals height of inlet.

Materials of Construction

- **Tank:** Filament-wound GRP with polyester resin liner
- **Base:** Injection-moulded reinforced polymer
- **Multiport valve:** ABS / PP, 1 1/2" or 2" unions
- **Laterals:** ABS, slotted, screwed to hub
- **Lid / fittings:** ABS, with pressure gauge and air release
- **Media:** Silica sand 0.5 - 0.8 mm (not supplied unless ordered)

SATTE SSX Technical Data

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			Rated	Filter	Dimensions (mm)						Media	Package	Weight (kg)	
			flow (m ³ /h)	area (m ²)	H1	H2	H3	H4	H5	W	Sand (kg)	L x W x H (mm)	Net	Gross
SSX 525	525	1.5"	12	0.19	610	720	410	475	150	885	65	550x550x650	14.1	18.1
SSX 600	600	1.5"	14	0.22	620	730	430	495	150	960	115	620x620x680	16.9	21.4
SSX 650	650	1.5"	17	0.32	695	805	450	515	150	1010	145	680x680x740	20	25.5
SSX 700	700	1.5"	19	0.35	715	825	470	535	150	1060	180	720x720x750	22.3	27.8
SSX 750	750	2.0"	21	0.4	765	875	540	615	200	1140	225	780x780x830	25.7	32.7
SSX 800	800	2.0"	24	0.5	815	925	550	625	200	1190	275	820x820x860	28.8	36.3
SSX 900	900	2.0"	30	0.64	900	1010	620	695	200	1290	390	920x920x950	35.4	44.9
SSX 1050	1050	2.0"	38	0.88	1065	1175	700	775	200	1440	615	1055x1055x1150	53.3	58.6
SSX 1200	1200	2.0"	42	1.13	1200	1310	780	855	200	1590	920	1215x1215x1280	59.8	65.4

Rated flow is the manufacturer's maximum at approximately 60 m/h filtration velocity, working pressure 350 kPa, outlet turbidity below 2 FTU. Filtration area is the bed cross-section. Sand quantity is for a bed of 0.5 - 0.8 mm silica sand at the design depth; a 25 % glass-media reduction applies if glass is used.

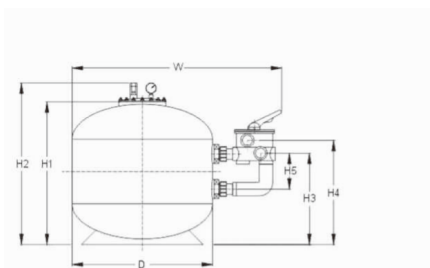
SELECTION: divide the pool volume by the required turnover time (residential 6 - 8 h, semi-public 4 - 6 h, public / commercial 3 - 4 h, spa 0.5 - 1 h) to obtain the design flow, then choose the filter whose flow at the chosen velocity meets or exceeds it. Match with a SATTE SPL, SHQS or SFLS pump whose duty point at the system head gives that flow.

Selection Guide

Pool volume served at the stated turnover, filtering at 40 m/h (commercial) or 60 m/h (residential). Flow = area x velocity.

Model	Flow at 40 m/h (m ³ /h)	Flow at 60 m/h (m ³ /h)	Public pool, 4 h turnover (m ³)	Residential pool, 8 h turnover (m ³)
SSX 525	7.6	12	30	96
SSX 600	8.8	14	35	112
SSX 650	12.8	17	51	136
SSX 700	14.0	19	56	152
SSX 750	16.0	21	64	168
SSX 800	20.0	24	80	192
SSX 900	25.6	30	102	240
SSX 1050	35.2	38	141	304
SSX 1200	45.2	42	181	336

Dimensions



- D** tank diameter
- W** overall width including valve
- H1 / H2** height to lid / overall height
- H3 / H4** height to inlet / outlet centreline
- H5** spacing between valve ports

Dimensioned outline for the series. Per-model dimensions are tabulated above. Certified drawings are available on request for final design.

SATTE SSX Pool Sizing Guide

How Many Filters Do I Need?

Design flow = pool volume / turnover time. The tables below use a filtration velocity of 40 m/h, which gives clear water with a reasonable backwash interval. Turnover: private pool 8 h, residential / apartment or hotel 6 h, public or heavily used pool 4 h. Where more than one filter is needed, install them in parallel with one pump per filter, each pump sized at about 10 m system head (SPL and SHQS for residential heads, SFLS and SNP for larger flows).

Capacity per Filter

Model	Filter area (m ²)	Flow at 40 m/h (m ³ /h)	Private pool, 8 h (m ³)	Residential / hotel, 6 h (m ³)	Public pool, 4 h (m ³)	Pump per filter
SSX 525	0.19	8	61	46	30	SPL 601
SSX 600	0.22	9	70	53	35	SPL 601
SSX 650	0.32	13	102	77	51	SPL 801
SSX 700	0.35	14	112	84	56	SPL 801
SSX 750	0.40	16	128	96	64	SPL 1101
SSX 800	0.50	20	160	120	80	SHQS 1500
SSX 900	0.64	26	205	154	102	SFLS 2-200
SSX 1050	0.88	35	282	211	141	SNP 550
SSX 1200	1.13	45	362	271	181	SNP 550

Example: a 250,000-litre (250 m³) hotel pool at 6-hour turnover needs 42 m³/h. One SSX 900 gives 26 m³/h at 40 m/h, so two SSX 900 filters in parallel, each with its own SHQS 1500 (or SPL 1101) pump, are recommended.

Recommended Filters by Pool Volume (6-hour turnover)

Pool volume	Design flow (m ³ /h)	Recommended filters - choose one option	Matching SATTE pumps (one per filter, same order)
30 m ³ (30,000 L)	5	1 x SSX 525	1 x SPL 601
50 m ³ (50,000 L)	8	1 x SSX 600 or 2 x SSX 525	1 x SPL 601 or 2 x SPL 601
80 m ³ (80,000 L)	13	1 x SSX 700 or 2 x SSX 525	1 x SPL 801 or 2 x SPL 601
100 m ³ (100,000 L)	17	1 x SSX 800 or 2 x SSX 600 or 3 x SSX 525	1 x SPL 1101 or 2 x SPL 601 or 3 x SPL 601
150 m ³ (150,000 L)	25	1 x SSX 900 or 2 x SSX 650 or 3 x SSX 600	1 x SFLS 2-200 or 2 x SPL 801 or 3 x SPL 601
200 m ³ (200,000 L)	33	1 x SSX 1050 or 2 x SSX 800 or 3 x SSX 650	1 x SNP 550 or 2 x SPL 1101 or 3 x SPL 801
250 m ³ (250,000 L)	42	1 x SSX 1200 or 2 x SSX 900 or 3 x SSX 700	1 x SNP 550 or 2 x SHQS 1500 or 3 x SPL 801
300 m ³ (300,000 L)	50	2 x SSX 900 or 3 x SSX 800 or 4 x SSX 650	2 x SFLS 2-200 or 3 x SPL 1101 or 4 x SPL 801
400 m ³ (400,000 L)	67	2 x SSX 1050 or 3 x SSX 900 or 4 x SSX 800	2 x SNP 550 or 3 x SFLS 2-200 or 4 x SPL 1101
500 m ³ (500,000 L)	83	2 x SSX 1200 or 3 x SSX 1050 or 4 x SSX 900	2 x SNP 550 or 3 x SFLS 3-300 or 4 x SHQS 1500
750 m ³ (750,000 L)	125	3 x SSX 1200 or 4 x SSX 1050	3 x SNP 550 or 4 x SFLS 3-300

Options are limited to four filters per bank; larger pools are split into two independent circuits. For a private pool at 8-hour turnover the next size down may be used; for public pools at 4-hour turnover multiply the design flow by 1.5.

Selection Notes

- Prefer several medium filters over one very large filter on commercial pools: one unit can be backwashed or serviced while the others keep the pool running.
- Two or more filters must be the same model, each with an identical pump and its own multiport valve, on a common suction manifold and a common return manifold.
- Check the pump against its curve: the flow at the actual system head (pipe run + filter + heater) must reach the filter's design flow, and the backwash flow must be at least the rated filter flow.