

Seljuk®

PP INJECTION-MOLDED SAND FILTER TECHNICAL DATA SHEET – TDS

Model Series: Seljuk

Product Type: PP Injection-Molded Sand Filter

Valve Configuration: Side Mount / Top Mount

Valve Connection: 1,5" - 2"



Quality Management System

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1. Product Description

GEMAŞ Seljuk is a polypropylene (PP) sand filter designed for swimming pool water filtration.

The filter pressure vessel is manufactured by permanently joining separately injection-molded upper and lower PP body sections by butt welding.

This manufacturing method provides a corrosion-resistant thermoplastic filter vessel suitable for swimming pool water filtration applications.

Seljuk series are available in two different multiport valve configurations:

- Side Mount – Product Code 021131(500); 021132 (630); 021133 (710); 021134 (900)
- Top Mount – Product Code 021131T (500); 021132T (630); 021133T (710); 021134T (900)

Both configurations use the same filter vessel platform, while the position of the multiport valve and mounting dimensions vary according to the selected configuration.

2. GENERAL FEATURES

- Ø 500, Ø 630, Ø 710 and Ø900 mm nominal filter diameters
- Injection-molded PP filter vessel
- Upper and lower PP body sections joined by butt welding
- Corrosion-resistant thermoplastic construction
- Side Mount and Top Mount valve configuration
- 1,5" and 2" multiport valve
- Transparent polycarbonate top lid
- ABS lid frame
- Internal collector and lateral system
- ABS laterals with 0.5 mm slot width
- Ø19 mm bottom drain connection
- Pressure gauge
- Internal distribution system suitable for sand filtration systems

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* Depending on the relevant filter configuration.



3. CONSTRUCTION FEATURES

Component	Material / Construction
Filter Vessel	Polypropylene (PP)
Upper Body	Injection-Molded PP
Lower Body	Injection-Molded PP
Body Joining Method	Butt Welding
Top Lid	Transparent Polycarbonate (PC)*
Lid Frame	ABS*
Filter Base	Injection-Molded PP
Internal Distribution System	Collector and Laterals
Lateral Material	ABS
Lateral Slot Width	0,5 mm
Multiport Valve	1,5" - 2"
Valve Configuration	Side / Top
Pressure Gauge	Pressure Gauge
Drain Connection	Ø19 mm Bottom Drain

* Depending on the configuration.

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4. TECHNICAL SPECIFICATIONS

Specification	021131	021131T	021132	021132T	021133	021133T	021134	021134T
Nominal Filter Diameter	Ø500	Ø500	Ø630	Ø630	Ø710	Ø710	Ø900	Ø900
Valve Configuration	Side	Top	Side	Top	Side	Top	Side	Top
Valve Connection	1½"	1½"	1½"	1½"	2"	2"	2"	2"
Connection Size	Ø50	Ø50	Ø50	Ø50	Ø63	Ø63	Ø63	Ø63
Filtration Area (m²)	0.19	0.19	0.31	0.31	0.39	0.39	0.64	0.64
Flow @ 30 m³/h/m² (m³/h)	6	6	9	9	12	12	19	19
Flow @ 50 m³/h/m² (m³/h)	10	10	16	16	20	20	32	32
Filter Media Volume (L)	110	110	180	180	240	240	420	420
Filter Media Grain Size	0.4–0.8 mm	0.4–0.8 mm	0.4–0.8 mm	0.4–0.8 mm	0.4–0.8 mm	0.4–0.8 mm	0.4–0.8 mm	0.4–0.8 mm
Operating Pressure	2.5 kg/cm²	2.5 kg/cm²	2.5 kg/cm²	2.5 kg/cm²	2.5 kg/cm²	2.5 kg/cm²	2.5 kg/cm²	2.5 kg/cm²
Test Pressure	3.5 kg/cm²	3.5 kg/cm²	3.5 kg/cm²	3.5 kg/cm²	3.5 kg/cm²	3.5 kg/cm²	3.5 kg/cm²	3.5 kg/cm²
Vessel Material	PP	PP	PP	PP	PP	PP	PP	PP
Manufacturing Method	Injection Molding	Injection Molding	Injection Molding	Injection Molding	Injection Molding	Injection Molding	Injection Molding	Injection Molding
Body Joining Method	Butt Welding	Butt Welding	Butt Welding	Butt Welding	Butt Welding	Butt Welding	Butt Welding	Butt Welding

FILTRATION PERFORMANCE

Model	Filtration Area	Flow @ 30 m³/h/m²	Flow @ 50 m³/h/m²	Media Volume
Ø500	0.19 m²	6 m³/h	10 m³/h	110 L
Ø630	0.31 m²	9 m³/h	16 m³/h	180 L
Ø710	0.39 m²	12 m³/h	20 m³/h	240 L
Ø900	0.64 m²	19 m³/h	32 m³/h	420 L

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5. MODEL CONFIGURATIONS

Specification	021131	021131T	021132	021132T	021133	021133T	021134	021134T
Filter Diameter	Ø500	Ø500	Ø630	Ø630	Ø710	Ø710	Ø900	Ø900
Valve Position	Side	Top	Side	Top	Side	Top	Side	Top
Valve Connection	1½"	1½"	1½"	1½"	2"	2"	2"	2"
Connection Size	Ø50	Ø50	Ø50	Ø50	Ø63	Ø63	Ø63	Ø63
Filtration Area	0.19	0.19	0.31	0.31	0.39	0.39	0.64	0.64
Flow @ 30 m³/h/m²	6 m³/h	6 m³/h	9 m³/h	9 m³/h	12 m³/h	12 m³/h	19 m³/h	19 m³/h
Flow @ 50 m³/h/m²	10 m³/h	10 m³/h	16 m³/h	16 m³/h	20 m³/h	20 m³/h	32 m³/h	32 m³/h
Filter Media Volume	110 L	110 L	180 L	180 L	240 L	240 L	420 L	420 L
Overall Height H1 (mm)	785 ±5	855 ±10	870 ±5	940 ±5	940 ±5	1040 ±5	990 ±5	1100 ±5

Product code convention: models ending with “T” designate the Top Mount configuration; models without “T” designate the Side Mount configuration.

6. SIDE MOUNT MODEL

Product Codes: 021131; 021132; 021133; 021134

In the Side Mount configuration, the 1,5” or 2” multiport valve is positioned on the side of the filter vessel.

The connection between the valve and the internal filter distribution system is provided through the upper and lower connection pipes.

Dimension / Specification	021131	021132	021133	021134
Nominal Filter Diameter	Ø500 mm	Ø630 mm	Ø710 mm	Ø900 mm
Overall Height H1	785 ±5 mm	870 ±5 mm	940 ±5 mm	990 ±5 mm
Body Height H3	665 ±5 mm	750 ±5 mm	820 ±5 mm	890 ±5 mm
Base Diameter	Ø425 ±5 mm	Ø510 ±5 mm	Ø580 ±5 mm	Ø730 ±5 mm
Upper Connection Center	300 ±5 mm	345 ±5 mm	360 ±5 mm	400 ±5 mm
Distance Between Connections	130 ±2 mm	130 ±2 mm	150 ±2 mm	150 ±2 mm
Base Height	110 ±5 mm	130 ±5 mm	110 ±5 mm	140 ±5 mm
Connection Pipe	Ø50 – 1½"	Ø50 – 1½"	Ø63 – 2"	Ø63 – 2"
Drain Connection	Ø19 mm	Ø19 mm	Ø19 mm	Ø19 mm
Valve Angular Position	23° ±5°	23° ±0°	23° ±5°	20° ±2°

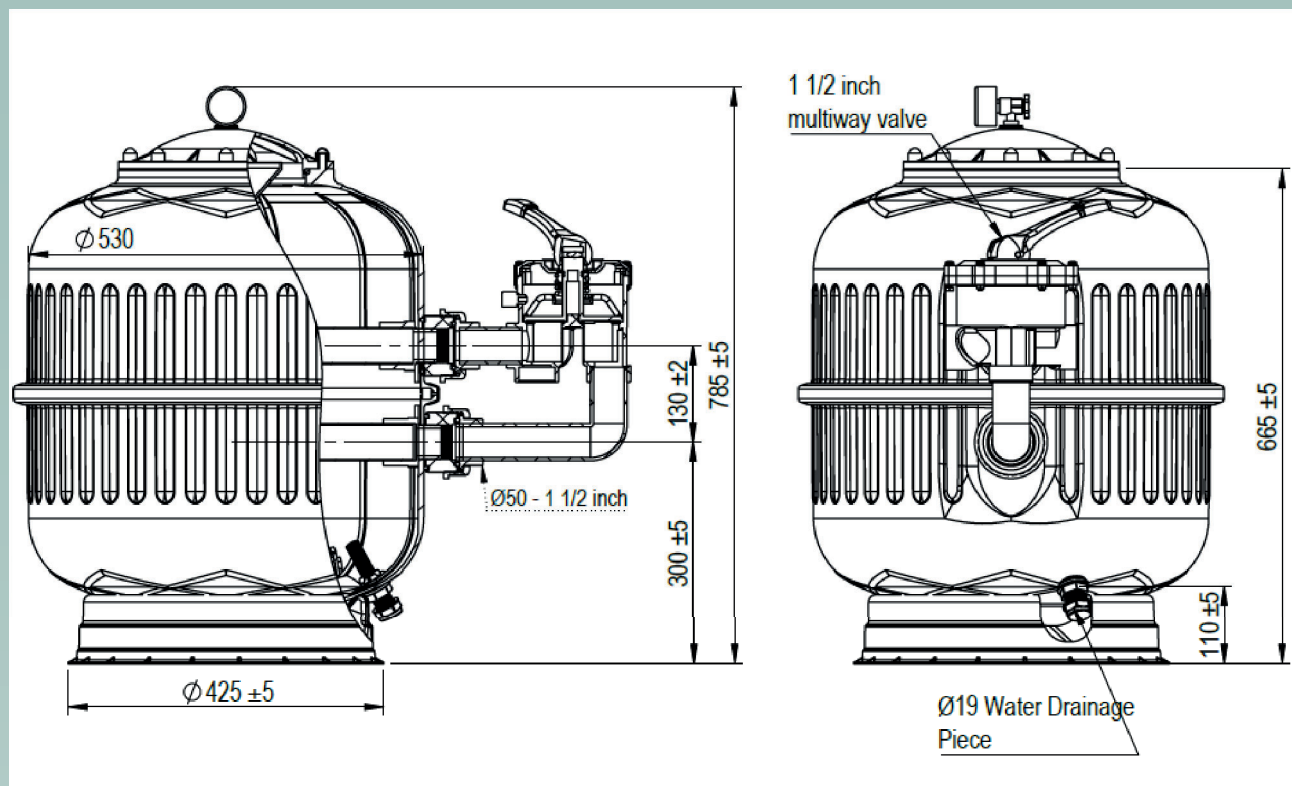
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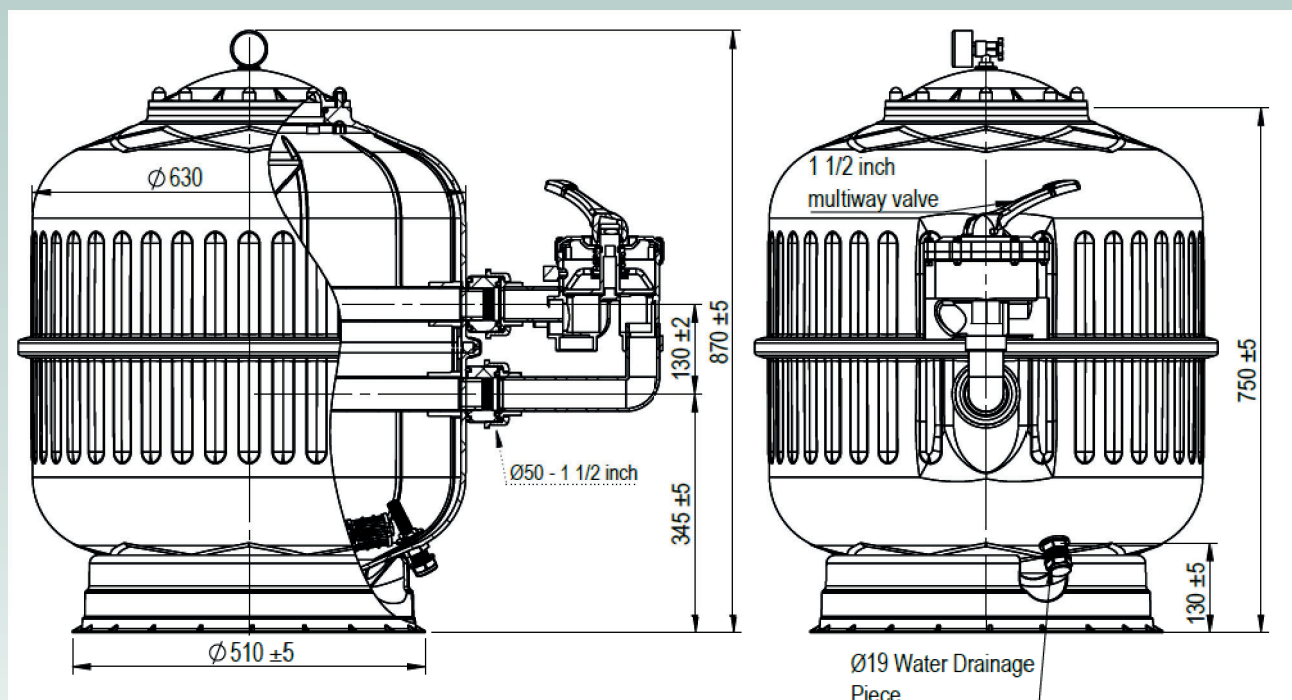
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Ø500 Side Mount model



Ø630 Side Mount model



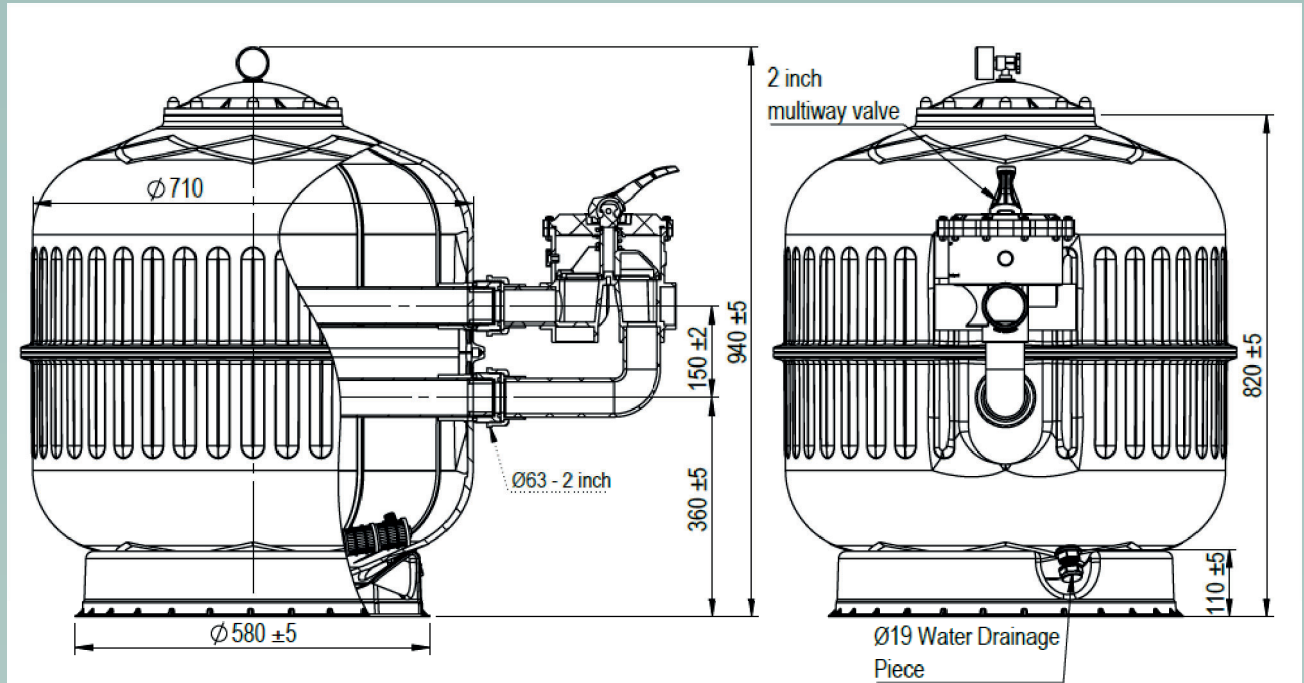
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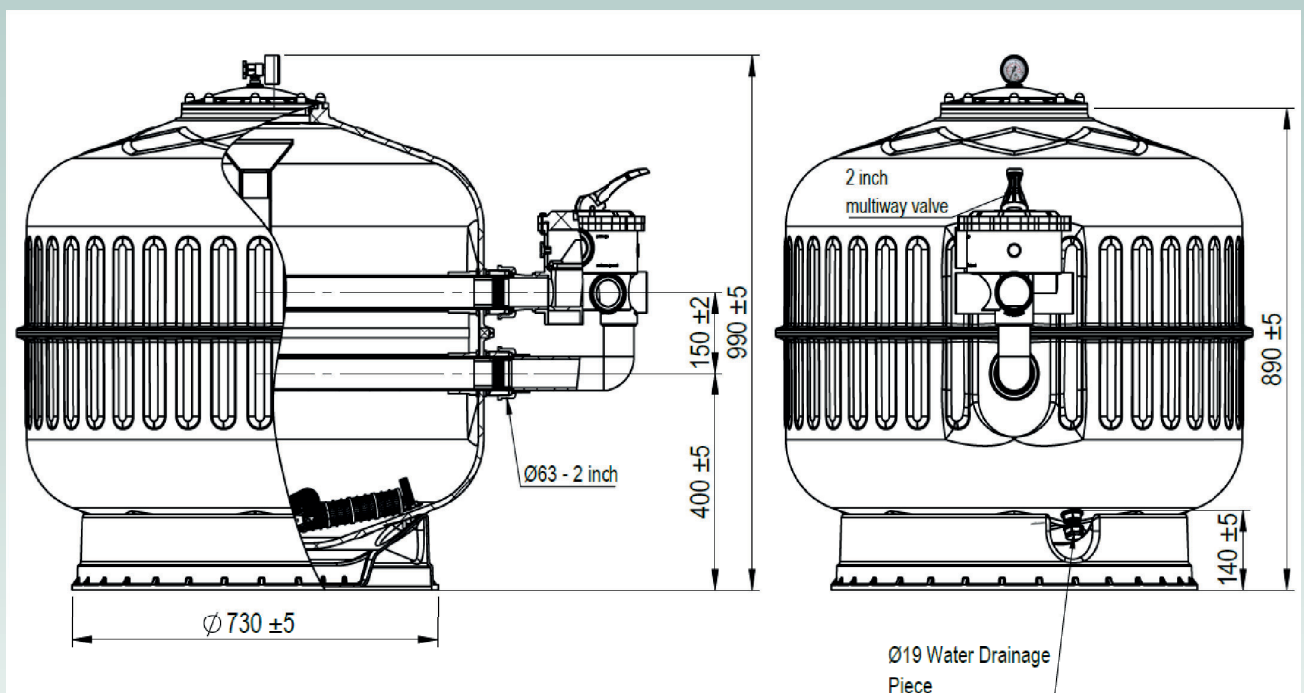
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Ø710 Side Mount model



Ø900 Side Mount model



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7. TOP MOUNT MODEL

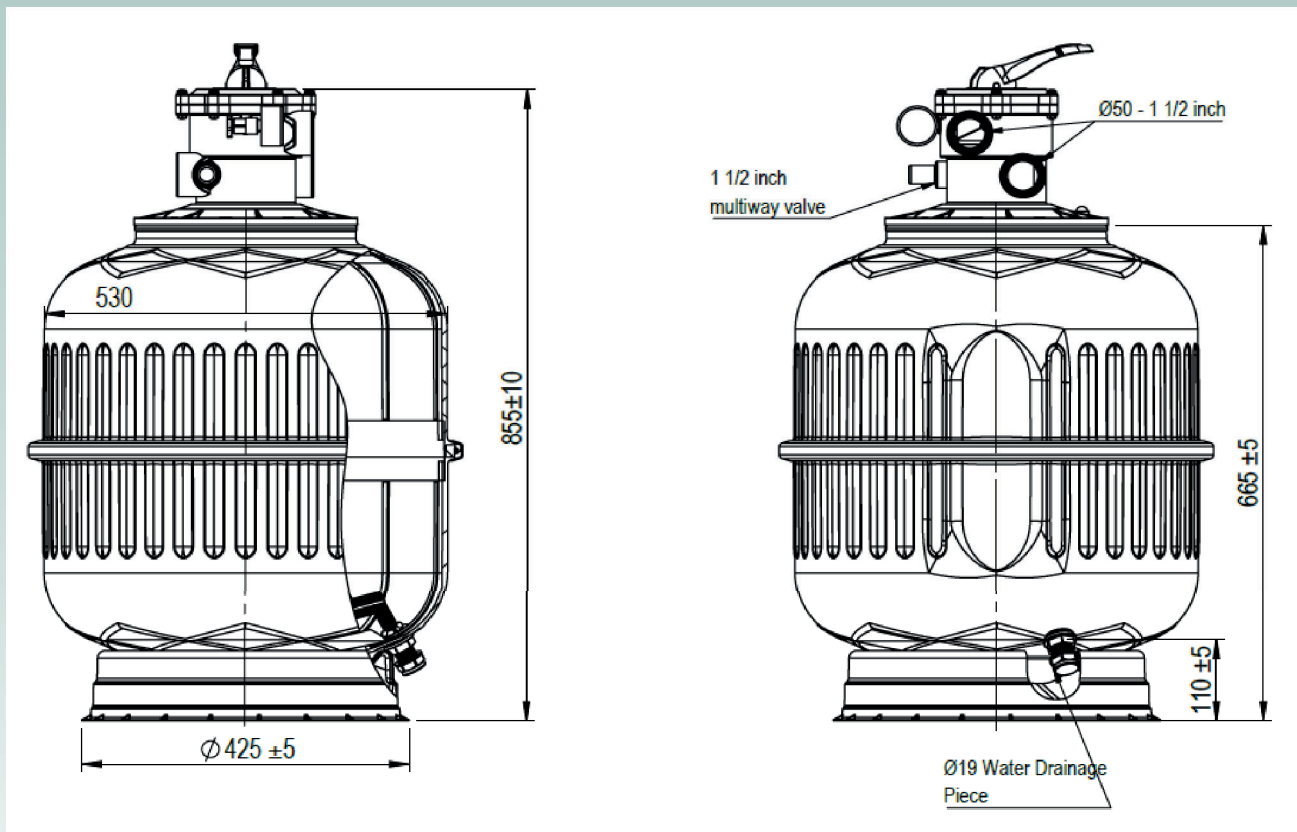
Product Codes: 021131T; 021132T; 021133T; 021134T

In the Top Mount configuration, the 1,5" or 2" multiport valve is directly mounted on the top of the filter vessel.

This configuration provides a more compact installation arrangement by integrating the multiport valve into the top connection of the filter.

Dimension / Specification	021131T	021132T	021133T	021134T
Nominal Filter Diameter	Ø500 mm	Ø630 mm	Ø710 mm	Ø900 mm
Overall Height H1	855 ±10 mm	940 ±5 mm	1040 ±5 mm	1100 ±5 mm
Body Height H3	665 ±5 mm	750 ±5 mm	820 ±5 mm	890 ±5 mm
Base Diameter	Ø425 ±5 mm	Ø510 ±5 mm	Ø580 ±5 mm	Ø730 ±5 mm
Base Height	110 ±5 mm	130 ±5 mm	110 ±5 mm	140 ±5 mm
Connection Pipe	Ø50 – 1½"	Ø50 – 1½"	Ø63 – 2"	Ø63 – 2"
Drain Connection	Ø19 mm	Ø19 mm	Ø19 mm	Ø19 mm
Valve Angular Position	23° ±5°	23° ±0°	23° ±5°	20° ±2°

Ø500 Top Mount model



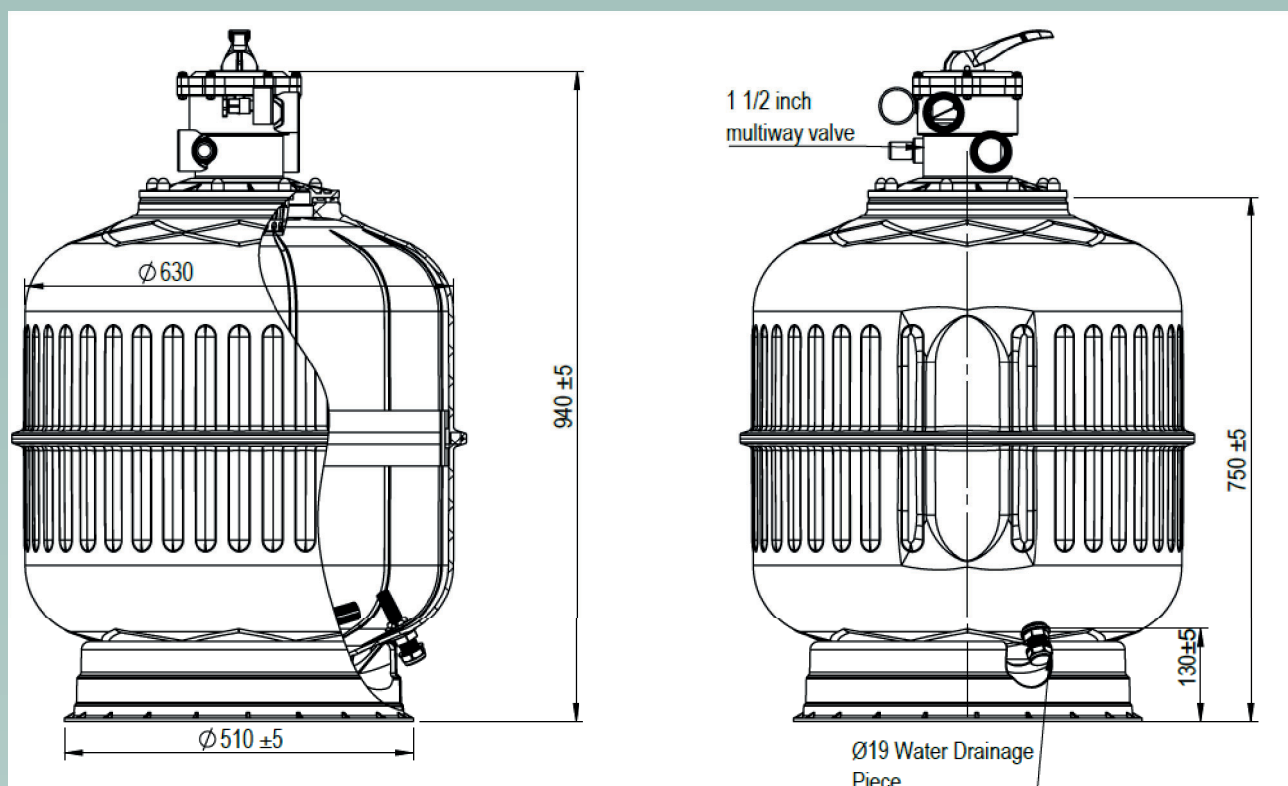
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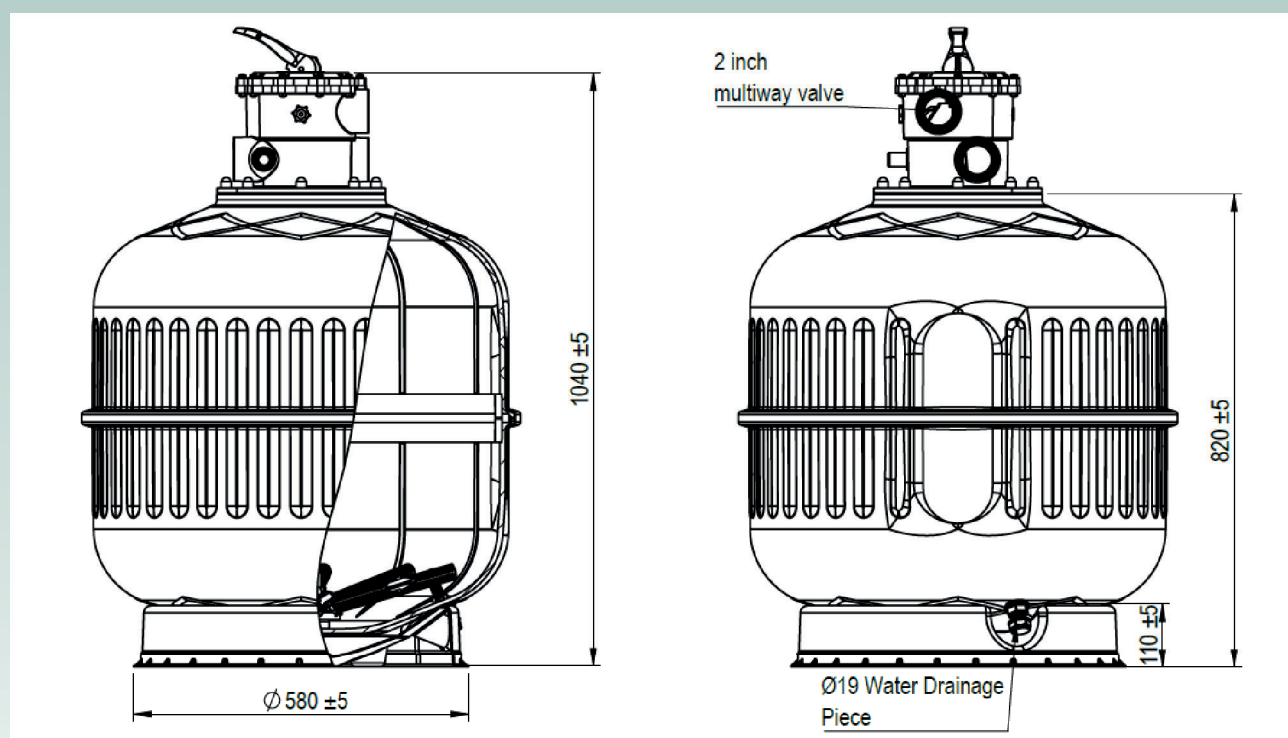
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Ø630 Top Mount model



Ø710 Top Mount model



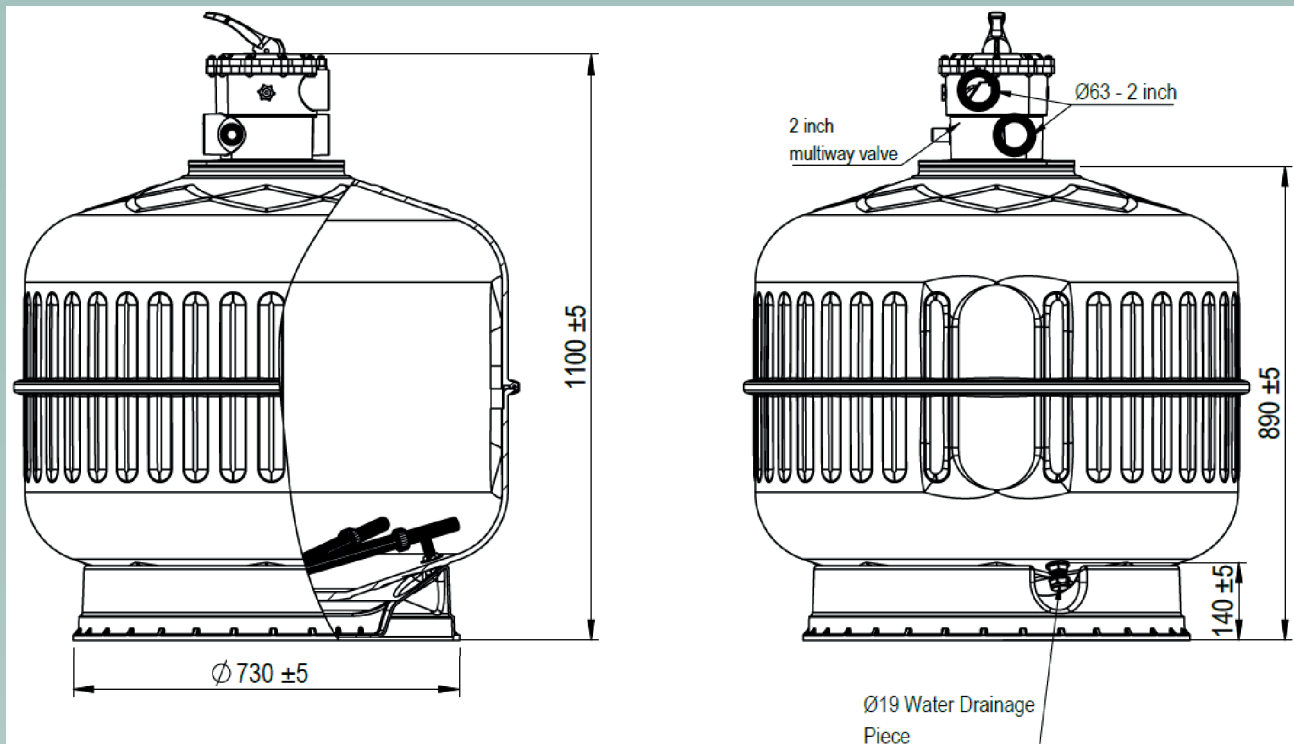
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Ø900 Top Mount model

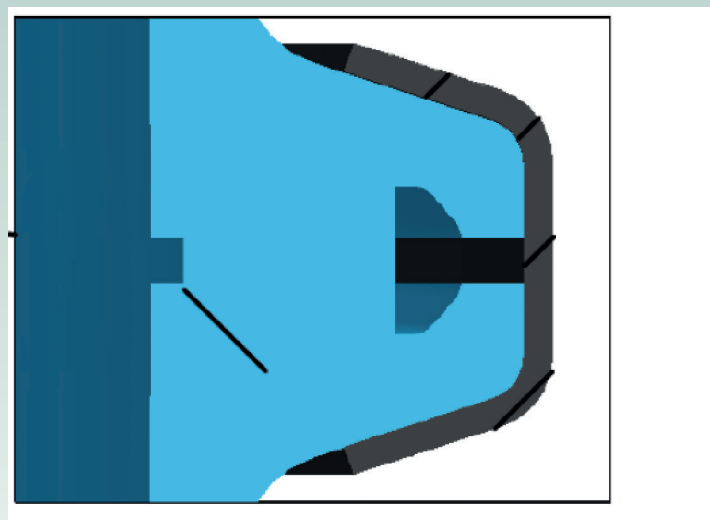


8. FILTER VESSEL AND MANUFACTURING

The Seljuk pressure vessel consists of two PP body sections manufactured separately by injection molding.

Following injection molding, the upper and lower body sections are permanently joined by butt welding to form the filter pressure vessel.

This manufacturing method is one of the fundamental structural features of the Seljuk Series and distinguishes the product from composite/GRP filter vessel manufacturing methods.



Butt Welding Detail

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9. INTERNAL DISTRIBUTION AND LATERAL SYSTEM

The Seljuk incorporates a collector and lateral system designed to distribute and collect water passing through the filter media.

The lateral arms are manufactured from ABS and have a 0.5 mm slot width.

Model	Lateral Arrangement
Ø500	10 pcs. × 140 mm
Ø630	10 pcs. × 140 mm
Ø710	10 pcs. × 200 mm
Ø900	10 pcs. × 200 mm + 10 pcs. × 100 mm extension pieces

This lateral arrangement is also clearly specified in the Top Mount technical drawing.



10. FILTRATION SYSTEM

During filtration, water from the pool is passed through the filter media, allowing mechanical particles in the water to be retained in the filter bed.

The filtered water is collected through the internal collector and lateral system and returned to the pool circulation system.

Contaminants accumulated in the filter media are removed from the system through the backwash process performed via the multiport valve.

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11. MAIN COMPONENTS

No.	Component	Material / Description
1	Upper Body	Injection-Molded PP
2	Lower Body	Injection-Molded PP
3	Body Joint	Butt Welding
4	Top Lid	Transparent Polycarbonate (Side Mount)
5	Lid Frame	ABS (Side Mount)
6	Multiport Valve	1,5"-2"
7	Collector System	Internal Water Distribution / Collection System
8	Laterals	ABS – 0.5 mm Slot Width
9	Filter Base	Injection-Molded PP
10	Pressure Gauge	Pressure Gauge
11	Drain	Ø19 mm Bottom Drain

12. OPERATING AND PERFORMANCE DATA

Parameter	Ø500	Ø630	Ø710	Ø900
Filtration Area	0.19 m ²	0.31 m ²	0.39 m ²	0.64 m ²
Economic Filtration Velocity	30 m ³ /h/m ²	30 m ³ /h/m ²	30 m ³ /h/m ²	30 m ³ /h/m ²
Flow @ 30 m ³ /h/m ²	6 m ³ /h	9 m ³ /h	12 m ³ /h	19 m ³ /h
Standard Filtration Velocity	50 m ³ /h/m ²	50 m ³ /h/m ²	50 m ³ /h/m ²	50 m ³ /h/m ²
Flow @ 50 m ³ /h/m ²	10 m ³ /h	16 m ³ /h	20 m ³ /h	32 m ³ /h
Operating Pressure	2.5 kg/cm ²	2.5 kg/cm ²	2.5 kg/cm ²	2.5 kg/cm ²
Test Pressure	3.5 kg/cm ²	3.5 kg/cm ²	3.5 kg/cm ²	3.5 kg/cm ²
Filter Media Volume	110 L	180 L	240 L	420 L
Filter Media Grain Size	0.4–0.8 mm	0.4–0.8 mm	0.4–0.8 mm	0.4–0.8 mm

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13. APPLICATIONS

The GEMAŞ Seljuk PP injection-molded sand filter is mainly suitable for:

- Private swimming pools
- Villa pools
- Residential and communal swimming pools
- Hotel swimming pools
- Commercial swimming pools
- Similar swimming pool water filtration applications is suitable for.

14. PERIODIC INSPECTION AND MAINTENANCE

Regular maintenance is recommended to maintain filtration performance and ensure reliable operation of the filter.

Maintenance Item	Recommended Action / Frequency
Filter Pressure	Check regularly during operation. An increase in pressure may indicate that backwashing is required.
Backwashing	Perform when required according to pressure increase and filtration performance.
Filter Media	Inspect periodically for contamination, channeling, compaction or deterioration; replace when necessary.
Multiport Valve	Check periodically for correct operation, leakage and sealing condition.
Lid and Sealing Elements	Inspect the lid, O-rings and sealing surfaces periodically and keep them clean. Damaged elements should be replaced.
Collector and Laterals	Inspect during general maintenance for blockage, damage or deformation.
Drain Connection	Check periodically for leakage or blockage.
Filter Vessel	Visually inspect the vessel, welded joint area and connection points periodically for deformation, leakage, cracks or abnormal conditions.
Pipe Connections	Check for leakage and ensure that excessive mechanical loads from the piping system are not transferred to the filter connections.
Winterization / Long-Term Non-Use	Where there is a risk of freezing, the filter should be drained and the system protected against freezing.

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Maintenance Notes

- The multiport valve position must not be changed while the pump is running.
- Before opening the filter or starting any maintenance operation, stop the pump and completely release the pressure inside the filter.
- The filter must never be opened while pressurized.
- During reassembly, sealing surfaces must be kept clean and free from sand, dirt and foreign matter.
- Damaged or deformed parts must be replaced before the filter is returned to service.
- Compatible spare parts and sealing elements must be used.
- Maintenance frequency may vary depending on operating conditions, water quality, filtration load and operating time.