



BobbinWound Commercial

Commercial Hi-Rate Sand Filter — Filament-Wound Fibreglass
Installation, Operation & Maintenance Manual

Models: Ø1200 · Ø1400 · Ø1600 · Ø1800 · Ø2000 · Ø2200 · Ø2300 · Ø2500 | 102.01.50 – 56 ·
102.01.61



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1. Safety Warnings

Read this manual fully before installing or operating the filter.

High Pressure — Risk of Explosion

This filter operates under pressure. Trapped air can blow the lid, manhole or valve off with lethal force. NEVER open the manhole, loosen bolts or move the valve while the system is pressurised — stop the pump and release pressure through the air-release first.

Heavy Unit

A filled filter weighs several tonnes (media + water). Ensure the base and floor can carry the full load and use proper lifting equipment for the empty tank.

Chemicals & Backwash Water

Do not dose concentrated chemicals directly into the filter. Dispose of backwash water according to local regulations.

Qualified Installation

Installation and commissioning must be carried out by qualified personnel, in line with local pool and electrical codes for the pump set.

Manufactured in accordance with EN 16713 / EN 60335 where applicable. See Section 10 — Warranty.

2. Product Overview & Construction

The BobbinWound Commercial series are vertical, high-rate sand filters for public, hotel, sports and large commercial pools. The tank is manufactured by continuous filament winding of polyester resin over non-corrosive fibreglass, producing a seamless monoblock body with an injection-moulded PVC internal distribution system. The UV-resistant outer surface allows outdoor installation.

Each size is available with two internal water-distribution systems. **With Collector Arms** uses a hub-and-lateral under-drain and a top diffuser. **With Nozzle Plate** uses a full false-floor of nozzles for the most even flow distribution. Select the system that matches the project design; both use the same tank and accessories.

Body: filament-wound fibreglass-reinforced polyester (monoblock).

Internals & connections: injection-moulded PVC.

Flange side connections (inlet/outlet); large manhole for media loading & inspection.

Optional pressure-control manometer panel, sight glass, and cover lid.

Suitable for filter sand 0.5–0.8 mm over 1–2 mm support gravel.



Commercial hi-rate sand filter

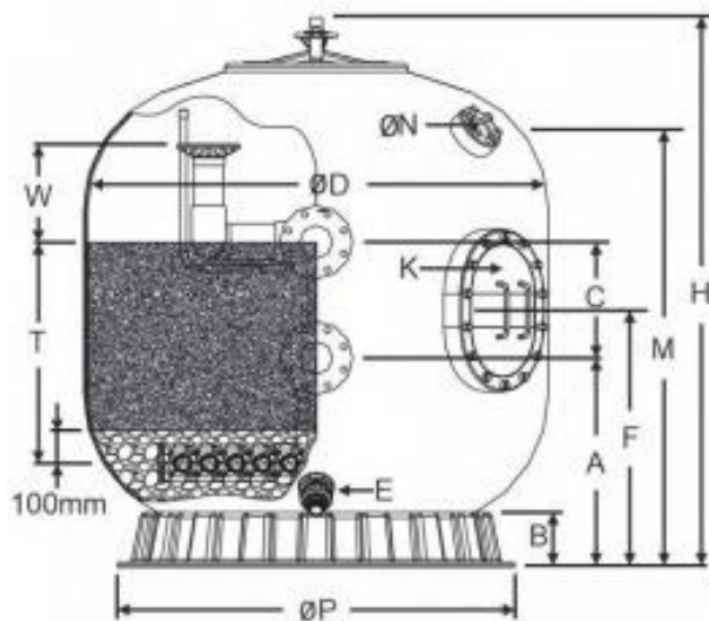
3. Technical Specifications

3.1 Filter Range — With Collector Arms

Code	Ø (mm)	Area (m ²)	Flow (m ³ /h)	Flange	Sand (kg)	Gravel (kg)	Height (mm)
102.01.50	Ø1200	1.13	45	3" (DN90)	750	300	1420
102.01.51	Ø1400	1.54	61	4" (DN110)	1200	500	1670
102.01.52	Ø1600	2.01	80	4" (DN110)	1850	750	1750
102.01.53	Ø1800	2.54	101	6" (DN160)	2500	1050	1950
102.01.54	Ø2000	3.14	125	6" (DN160)	3300	1150	2140
102.01.61	Ø2200	3.80	152	6" (DN160)	4150	1470	2350
102.01.55	Ø2300	4.15	166	8" (DN200)	4900	1600	2350
102.01.56	Ø2500	4.90	196	8" (DN200)	6000	2200	2450

Flange connection sizes are given in inches / DN (de mm).

3.2 Dimensions — With Collector Arms



With Collector Arms

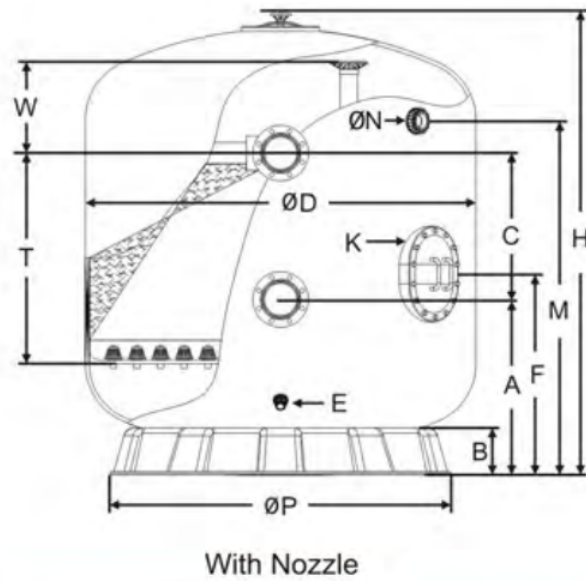
Dimensional layout — With Collector Arms (values in table below)

mm	Ø1200	Ø1400	Ø1600	Ø1800	Ø2000	Ø2200	Ø2300	Ø2500
D	1200	1400	1600	1800	2000	2200	2300	2500
H	1420	1670	1750	1950	2140	2350	2350	2450
A	560	650	680	730	800	900	940	960
B	165	165	215	215	240	240	240	240
C	340	350	450	550	550	600	600	600
E	60	60	60	60	60	60	60	60
F	740	800	875	910	1050	1070	1070	1100
K	180x180	400x300	400x300	400x300	400x300	400x300	400x300	400x300
M	1150	1250	1450	1650	1700	1750	1800	1900
N	80	80	80	80	80	80	80	80
P	1010	1215	1450	1610	1800	1800	2010	2010
T	600	700	800	850	900	1000	1000	1050
W	300	300	320	320	350	400	400	400

3.3 Filter Range — With Nozzle Plate

Code	Ø (mm)	Area (m²)	Flow (m³/h)	Flange	Sand (kg)	Gravel (kg)	Height (mm)
102.01.51	Ø1400	1.54	61	4" (DN110)	1800	220	1900
102.01.52	Ø1600	2.01	80	4" (DN110)	2300	300	2000
102.01.53	Ø1800	2.54	101	6" (DN160)	2900	360	2100
102.01.54	Ø2000	3.14	125	6" (DN160)	3600	440	2200
102.01.55	Ø2300	4.15	166	8" (DN200)	4800	580	2350
102.01.56	Ø2500	4.90	196	8" (DN200)	5700	680	2400

3.4 Dimensions — With Nozzle Plate



Dimensional layout — With Nozzle Plate (values in table below)

mm	Ø1400	Ø1600	Ø1800	Ø2000	Ø2300	Ø2500
D	1420	1620	1830	2030	2300	2500
H	1900	2000	2100	2200	2350	2400
A	700	810	850	900	940	960
B	165	215	215	240	240	240
C	550	550	550	550	600	600
E	40	40	40	40	40	40
F	850	900	980	1030	1070	1100
K	400x300	400x300	400x300	400x300	400x300	400x300
M	1400	1500	1600	1700	1800	1900
N	80	80	80	80	80	80
P	1215	1450	1610	1800	2010	2010
T	1000	1000	1000	1000	1000	1050
W	300	320	320	350	400	400

3.5 Operating Limits

The following limits apply to every model, both distribution systems:

Max. working pressure (standard)	36 psi / 2.5 kg/cm ²
Max. working pressure (optional)	58 psi / 4.0 kg/cm ²
Max. test pressure (std / opt)	58 psi / 4.0 kg/cm ² / 86 psi / 6.0 kg/cm ²
Max. water temperature	50 °C
Filter sand	0.5–0.8 mm
Support gravel	1–2 mm
Warranty	2 years

4. Filter Media & Loading

Load the support gravel first, then the filter sand. The tank must be about half-filled with water before loading to cushion the internals. Quantities are per single fill and depend on the distribution system.

Media Quantities — Collector Arms

Code	Ø	Sand 0.5-0.8 mm (kg)	Gravel 1-2 mm (kg)
102.01.50	Ø1200	750	300
102.01.51	Ø1400	1200	500
102.01.52	Ø1600	1850	750
102.01.53	Ø1800	2500	1050
102.01.54	Ø2000	3300	1150
102.01.61	Ø2200	4150	1470
102.01.55	Ø2300	4900	1600
102.01.56	Ø2500	6000	2200

Media Quantities — Nozzle Plate

Code	Ø	Sand 0.5-0.8 mm (kg)	Gravel 1-2 mm (kg)
102.01.51	Ø1400	1800	220
102.01.52	Ø1600	2300	300
102.01.53	Ø1800	2900	360
102.01.54	Ø2000	3600	440
102.01.55	Ø2300	4800	580
102.01.56	Ø2500	5700	680

Loading Order

Half-fill the tank with water to protect the laterals / nozzle plate.

Load the **1-2 mm support gravel** evenly over the bottom, covering the collector arms / nozzle plate.

Load the **0.5-0.8 mm filter sand** on top, up to the level marked for the model.

Keep the central pipe capped while loading so no media enters it.

Level the bed, remove the cap, refit the top diffuser and close the manhole.

5. Installation

Foundation & Positioning

Install on a level, load-bearing concrete base sized for the filled weight (tank + media + water).
Provide floor drainage.

Leave clearance around the tank for the manhole, valves and service. Position as close to the pump as practical.

The filter must never bear pipework loads — support all pipes independently.

Pipework & Valves

Connect inlet and outlet to the marked flanges using full-face gaskets and stainless bolts.

Fit the backwash valve battery (or multiport) and a sight glass on the waste line to observe backwash water.

Install isolation valves so the filter can be shut off without draining the system. Fit the pressure gauge / manometer panel.

6. Commissioning & Backwash Operation

First Filling & Start-up

Confirm media is loaded and the manhole and drain are closed.

Set the valve to **Filter**, open the air-release, and start the pump. Let trapped air escape, then close the air-release.

Record the clean-bed pressure on the gauge — this is the reference for backwashing.

Backwash & Rinse

Backwash when the pressure rises about **0.3-0.5 bar** above the clean-bed value, or per the operating schedule.

Stop the pump. Set the valve to **Backwash**. Start the pump and run until the sight glass runs clear (typically 2-4 min).

Stop the pump, set to **Rinse**, run 30-60 s to settle the bed, stop, then return to **Filter**.

Never move the valve while the pump is running.

Normal Filtration

In normal operation water enters the top, passes down through the sand bed where dirt is trapped, and returns to the pool through the collector arms / nozzle plate.

Check the pressure gauge and sight glass daily; keep pool chemistry balanced to protect the media and tank.

7. Maintenance

Backwash regularly as above; the interval shortens with bather load.

Inspect gaskets, the manhole seal and flange bolts periodically; replace perished seals.

Top up or renew the filter sand every 3-5 years, or when filtration quality drops.

Winterising: drain the tank, leave the drain open and the manhole slightly loose to avoid freeze damage.

Keep the pressure gauge and sight glass clean and legible.

8. Troubleshooting

Problem	Possible cause	Solution
Pressure rises quickly, short cycles	High bather load / fine debris	Backwash more often; check pre-filtration and dosing
Low flow, high pressure	Media clogged or channelled	Backwash; if it persists, inspect/replace sand
Sand returns to the pool	Broken lateral / nozzle or cracked distributor	Depressurise, open manhole, inspect and replace the damaged part
Cloudy water despite filtering	Undersized filter or unbalanced water	Check flow vs filter area; correct chemistry / add clarifier
Channelling / uneven flow	Media caked or bed not level	Backwash thoroughly; if needed, remove and re-level media
Leak at manhole or flanges	Perished gasket or loose bolts	Depressurise, replace gasket, torque bolts evenly
Pressure gauge reads zero	Faulty gauge or blocked port	Clean the port; replace the gauge
Continuous air in sight glass	Air leak on suction / low pool level	Check pump lid, suction line and skimmer level
Backwash does not clear dirt	Insufficient backwash flow/time	Increase backwash duration; verify pump performance
Water still turbid after backwash	Rinse step skipped	Always run Rinse 30-60 s before returning to Filter
Weeping / crack in tank body	Overpressure or freeze damage	Take out of service; do not exceed 2.5 kg/cm ² ; winterise properly

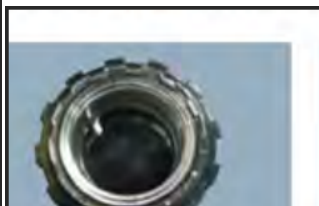
9. Spare Parts & Accessories

Genuine Oxygen accessories for the BobbinWound Commercial series:

Accessory	Oxygen Code
Manhole (Ø220 mm)	102.01.57
Sight Glass	102.01.58
Pressure-Control Manometer Panel	102.01.59
Cover Lid	102.01.60



Manhole (Ø220 mm)



Sight Glass



Pressure-Control
Manometer Panel



Cover Lid

10. Warranty & Contact

Contact Information

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ISO Certifications

ISO 9001:2015 Quality Management <i>EUROCERT</i>	ISO 14001:2015 Environmental Management <i>BQV</i>	ISO 45001:2018 Health & Safety <i>BQV</i>
ISO 22301:2019 Business Continuity <i>EUROCERT</i>	ISO 46001:2019 Water Efficiency <i>BQV</i>	

Recycling of materials must be carried out in accordance with applicable regulations.