OPENWELL SUBMERSIBLE PUMP SYSTEM

Smaart Openwell Pump Product Catalogue

Complete openwell submersible pumping system — pump, floater-switch control, NRV & ball valve, HDPE/UPVC pipework, Astral fittings and Polycab electricals.



IP68
Floater Switch Rating

9A
Rated Current

100,000
Mech. Endurance (ops)

Astral | Cimberio | Polycab

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01 Instrumentation

Monitoring and control devices.

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Floater Switch



Parameter	Specification
Rated Voltage	250 V
Rated Current	9A
Working Temperature	0°C to 80°C
Mechanical Endurance	100,000 operations
Electrical Endurance	50,000 operations
Protection Grade	IP68

★ WHY THIS IS NECESSARY

- Automatically starts/stops the pump on tank level — protects against dry-running and overflow without manual attention.
- IP68 sealed switch is safe for continuous submerged duty inside the sump, tank or well.

02 Valves

Flow control and protection valves.

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NRV



Parameter	Specification
Make	Cimberio
Product Type	NRV
Model	CIM 30 / CIM 32
Material Composition	Forged Brass (EN 12165 – CW617N)
Type	Spring Loaded / Lift Check
Operation	Automatic (non-return)
Nominal Pressure	PN 16 / PN 20
Size Range	½″ – 4″ (15 NB – 100 NB)
Connection Type	BSP Threaded (Female)
Spring Material	Stainless Steel (SS 316)
Seat Material	PTFE / Metal Seat
Temperature Range	-10°C to +95°C
Test Pressure	Up to 25–30 bar
Opening Pressure	Low cracking pressure (~10–25 mbar)
Standard	EN 12266-1 (Testing)
Application	Water, HVAC, air, oil, non-corrosive fluids
Warranty	Up to 5 years (typical)

★ WHY THIS IS NECESSARY

- Prevents reverse flow back into the pump or supply line — protects the pump from backspin damage and stops the system draining down when it stops.
- Spring-loaded lift-check design gives fast, reliable closing with a low cracking pressure, so it doesn't add unnecessary head loss.

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UPVC Ball Valve



Parameter	Specification
Brand	Astral
Product Type	UPVC Ball Valve
Type	2-Way Ball Valve
Material	UPVC (Unplasticized Polyvinyl Chloride)
Standard	SCH 40 / SCH 80
Nominal Pressure	PN 10 / PN 16
Size Range	15 mm – 50 mm (½″ – 2″)
Connection Type	Socket / Threaded / Flanged
Operation	Manual Lever (Quarter Turn)
Ball Material	UPVC / PTFE Coated
Seat Material	PTFE
Seal Material	EPDM / FKM
Temperature Range	0 to 60°C
Flow Type	Full Bore
Colour	White / Off-white
Application	Water, Pool, Jacuzzi, WTP, ETP
Quality Standard	ISO 9001:2015

★ WHY THIS IS NECESSARY

- Quarter-turn full-bore shutoff for local isolation during maintenance without draining the whole line.
- Corrosion-free UPVC/PTFE construction holds a drip-tight seal across the working pressure range for years.

03 Piping

Mainline and distribution pipework.

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HDPE Pipe



Parameter	Specification
Product Type	HDPE Pipe (High Density Polyethylene)
Material	PE63 / PE80 / PE100
Application	Water Supply / WTP / RO / Industrial / Irrigation
Color	Black with Blue Stripes (water)
Size Range	20 mm to 630 mm
Pressure Rating	PN2.5 to PN16
SDR Rating	SDR 41 to SDR 11
Standard	IS 4984 / ISO 4427
Density	≥ 0.94 g/cm³
Temperature Range	Up to 60°C
Jointing Method	Butt Fusion / Electrofusion / Compression Fittings
Flexibility	High (can bend without breaking)
Chemical Resistance	Excellent
Corrosion Resistance	100% corrosion-free
UV Resistance	UV Stabilized (black color)
Roughness Coefficient	Very low (smooth bore)
Life Span	50+ years
Thermal Conductivity	Low (insulated performance)

★ WHY THIS IS NECESSARY

- Corrosion-free rigid pipework rated to the system's full working pressure — carries the mainline run from source to point of use.
- Smooth bore and UV-stabilised construction keep flow losses low and the pipe stable across decades of outdoor and buried service.

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UPVC Pipe



Parameter	Specification
Product Type	UPVC Pipe
Make	Astral
Material	Unplasticized Polyvinyl Chloride (uPVC)
Application	Cold Water Supply / WTP / Industrial Piping
Color	White / Grey
Size Range	15 mm (½") to 300 mm (12")
Pressure Rating	2.5 to 16 kg/cm²
Standard	ASTM D1785 / IS 4985
Pipe Schedule	SCH 40 / SCH 80
Temperature Range	Up to 60°C
Density	~1.4 g/cm³
Jointing Method	Solvent Weld / Ring Fit
Chemical Resistance	Excellent (Acids, Alkalis, Salts)
Surface Finish	Smooth inner bore (low friction)
UV Stability	UV Stabilized
Electrical Conductivity	Non-conductive
Corrosion Resistance	100% corrosion-free

★ WHY THIS IS NECESSARY

- Corrosion-free rigid pipework rated to the system's full working pressure — carries the mainline run from source to point of use.
- Smooth bore and UV-stabilised construction keep flow losses low and the pipe stable across decades of outdoor and buried service.

04 Fittings

Joints and connections for the piping network.

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UPVC FTA



Parameter	Specification
Product Type	UPVC Threaded Adapter (Male & Female)
Types	MTA (Male Threaded Adapter) / FTA (Female Threaded Adapter)
Material	Unplasticized Polyvinyl Chloride (uPVC)
Insert (FTA Optional)	Brass Insert (for higher strength threads)
Color	White / Grey
Application	WTP / RO / Plumbing / Industrial piping
Function	Connects UPVC pipe to threaded fittings (valves, pumps, tanks)
Size Range	15 mm (½") to 63 mm (2.5")
Pressure Rating	PN10 / PN16 / SCH 40 / SCH 80
Standard	ASTM D2467
Connection Type	Socket (Solvent Weld) × Thread (Male / Female)
Thread Type	BSP / NPT
Temperature Range	Up to 60°C
Chemical Resistance	Excellent (Acids, Alkalis, Salts)
Corrosion Resistance	100% rust-free
Surface Finish	Smooth internal bore
Jointing Method	Solvent cement (socket side)
Sealing Method	PTFE tape (thread side)
Installation	Hand tighten + spanner (avoid over-tightening)
Leakage	Leak-proof when properly installed

★ WHY THIS IS NECESSARY

- Provides a threaded female connection point onto UPVC pipework for pumps, valves and tank fittings.
- Solvent-weld socket on one side and sealing thread on the other gives a leak-proof transition in one fitting.

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UPVC Elbow



Parameter	Specification
Product Name	Astral CPVC Elbow
Material	CPVC (Chlorinated Polyvinyl Chloride)
Standard	ASTM F439 / ASTM F438 / ASTM D2846
Connection Type	Socket (Solvent Cement Joint)
Available Size Range	15 mm – 300 mm (½″ – 12″)
Pressure Rating	SCH 40 / SCH 80 / SDR Series
Maximum Operating Temp.	Up to 93 °C
Angle Types	90° Elbow / 45° Elbow
Chemical Resistance	Resistant to acids, alkalis, salts, corrosion
Typical Applications	Plumbing, WTP, ETP, filtration systems, hot & cold-water lines, flowmaster, etc.

★ WHY THIS IS NECESSARY

- Changes flow direction with a fully rated, leak-free solvent-weld joint — matched to the same pressure class as the pipe it joins.
- Smooth internal bore keeps friction loss low at every direction change in the run.

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UPVC Coupling



Parameter	Specification
Product Type	UPVC Coupling (Socket Coupler)
Material	Unplasticized Polyvinyl Chloride (uPVC)
Color	White / Grey
Application	WTP / RO / Plumbing / Industrial piping
Function	Joins two pipes of same diameter in straight line
Design	Socket × Socket (Slip Type)
Size Range	15 mm (½") to 110 mm (4")
Pressure Rating	PN6 / PN10 / PN16 / SCH 40 / SCH 80
Standard	ASTM D2466 / ASTM D1785
Connection Type	Solvent Weld (Socket)
Temperature Range	Up to 60°C
Chemical Resistance	Excellent (Acids, Alkalis, Salts)
Corrosion Resistance	100% rust-free
Surface Finish	Smooth inner bore
Jointing Method	Solvent cement
Leakage	Leak-proof when properly installed
Installation	Simple & quick

★ WHY THIS IS NECESSARY

- Joins two lengths of pipe of the same diameter in a straight, permanent, leak-free run.
- Corrosion-free UPVC construction outlasts metal couplers in wet, chemically active environments.

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UPVC Union



Parameter	Specification
Brand	Astral
Product Type	UPVC Union
Type	Three-piece (Union Nut + Body + Tail Pieces)
Material	UPVC (Unplasticized Polyvinyl Chloride)
Standard	ASTM D1785 / SCH 40 / SCH 80
Pressure Rating	PN 10 / PN 16
Size Range	15 mm – 100 mm (½" – 4")
Connection Type	Socket (Solvent Weld) / Threaded
Seal Type	EPDM / NBR O-Ring
Temperature Range	0 to 60°C
Color	White
Chemical Resistance	Excellent
Corrosion Resistance	100% Rust Proof
Flow Characteristics	Smooth internal surface, low pressure drop
Reusability	Yes (multiple times detachable)
Application	Plumbing, WTP, ETP, Pool, Industrial piping
Quality Standard	ISO 9001:2015

★ WHY THIS IS NECESSARY

- Three-piece design lets a section of pipework be disconnected and reconnected for maintenance without cutting the pipe.
- Reusable, corrosion-free joint that holds a leak-tight seal through repeated open/close cycles.

05 Electricals

Power, control cabling and enclosures.

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Control Panel



Parameter	Specification
Panel Configuration	NXT 33
Overall Size	235(H) x 260(V) x 130(D) mm
Cutout Size	190(H) x 222(V) mm
Mounting	Wall / Panel Mount
Raw Water Pump	5 hp 3Ø
High Pressure Pump	5 hp 3Ø
Switch Inputs	7 Switch Inputs (LPS, HPS, TWT, FLT, Dosing Tank level & RWT level, AMPV Inputs.
Flow Input	2 Flow Input (with totalizer for channel one)
Sensors	Conductivity/TDS
Outputs	RWP, HPP, Flush solenoid valve, Doser & Alarm.

★ WHY THIS IS NECESSARY

- Automates pump start/stop, protection and alarms from level, pressure and flow inputs — removes the need for manual operation.
- Multiple switch and sensor inputs let one panel run and protect the whole pumping system.

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Cables



Parameter	Specification
Make	Polycab
Cable Type	Flat 2.5 sq mm × 3 core & 1.5 sq mm × 3 core
Application	Submersible pump power & control connection

★ WHY THIS IS NECESSARY

- Correctly sized copper conductor for motor starting current — prevents voltage drop, overheating and nuisance trips.
- FR/FRLS insulation is the safety standard for enclosed plant rooms and panel wiring.

06

Hardware & Site Accessories

Every fastener, clamp and sealant for a professional, leak-free installation — supplied as a complete package.

Product	Specification & Application
Hose Nozzle	SS 304 / Brass, 25 mm Threaded Connection, Pressure Rated
HEX Nipple	SS 304, 25mm Thread, Pressure Rated.
C Clamp	Stainless Steel, 20mm Opening, High Torque.
Hose Clamp	SS 304, Adjustable Screw Type, Suitable for 25 mm Hose Diameter, Corrosion Resistant.
Screw	1.5" length, austenitic steel, corrosion resistant.
UPVC Solvent	Chemical Weld, 118ml Volume, Fast Curing.
Tapes	Teflon, rubber & insulation.
Nylon Rope	High-strength, abrasion-resistant nylon rope suitable for general tying, lifting, etc.

smaartwater

Smaart Openwell Pump — End-to-End Engineering, Trusted Global Brands

BRANDS FEATURED

Astral • Cimberio • Polycab

STANDARDS REFERENCED

ASTM D1785 • ASTM D2466/D2467
IS 4985 • IS 4984 / ISO 4427
IS 694 • IS 9537 • IP68

SUPPLIED BY

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