SUBMERSIBLE TRANSFER PUMP SYSTEM

# Smaart Transfer Pump Product Catalogue

Complete submersible transfer pump system — pump, floater-switch level control, NRV, Astral UPVC pipework and fittings, and Polycab electricals for reliable water transfer.



**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.

# 03 Piping

Mainline and distribution pipework.

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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.

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# Fittings

Joints and connections for the piping network.

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## UPVC MTA



| Parameter | Specification |
|---|---|
| Brand | Astral |
| Product Type | UPVC Male Threaded Adapter (MTA) |
| Material | UPVC with Brass Thread Insert |
| Standard | ASTM D1785 / SCH 40 / SCH 80 |
| Size Range | 15 mm – 100 mm (½″ – 4″) |
| Connection Type | Socket (Solvent) × Male Thread |
| Thread Type | BSP / NPT |
| Pressure Rating | PN 10 / PN 16 |
| Temperature Range | 0 to 60°C |
| Thread Material | Brass (for strength & durability) |
| Jointing | Solvent Cement + Threaded Connection |
| Color | White / Grey |
| Corrosion Resistance | Excellent |
| Application | Pipe to valve / pump / metal fitting connection |
| Standards Compliance | ASTM / IS standards |
| Service Life | 25–50 years |

★ WHY THIS IS NECESSARY

- Converts the solvent-weld pipe end to a threaded connection for valves, pumps and metal fittings — the transition point between plastic and metal parts of the system.
- Brass thread insert gives the durability of metal threads with the corrosion resistance of UPVC.

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# UPVC Elbow



| Parameter | Specification |
|---|---|
| Product Name | UPVC Elbow |
| Material | UPVC (Unplasticized Polyvinyl Chloride) |
| Standard | ASTM D2466 / ASTM D1785 / IS 7834 |
| Pipe Compatibility | ASTM D1785 / SCH Series / IS 4985 |
| Connection Type | Socket (Solvent Cement Joint) |
| Available Size Range | 15 mm – 315 mm (½" – 12") |
| Pressure Rating | SCH 40 / SCH 80 / PN10 / PN16 |
| Max. Operating Temp. | Up to 60 °C |
| Angle Types | 90° Elbow / 45° Elbow |
| Installation Method | Solvent cement joint |
| Chemical Resistance | Resistant to acids, alkalis, salts, corrosion |
| Typical Applications | Plumbing, WTP, ETP filtration systems, pump piping, cold-water lines |

★ 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 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.

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# UPVC Reducer Coupling



| Parameter | Specification |
|---|---|
| Product Name | UPVC Reducer Coupling |
| Material | UPVC (Unplasticized Polyvinyl Chloride) |
| Standard | ASTM D2466 / ASTM D1785 / IS 7834 |
| Pipe Compatibility | ASTM D1785 / SCH Series / IS 4985 |
| Connection Type | Socket × Socket (Solvent Cement Joint) |
| Available Size Range | 20 × 15 mm to 110 × 90 mm (¾″×½″ to 4″×3″) |
| Pressure Rating | SCH 40 / SCH 80 / PN10 / PN16 |
| Maximum Operating Temperature | Up to 60 °C |
| Design Type | Reducing (Concentric) |
| Installation Method | Solvent cement joint |
| Chemical Resistance | Resistant to acids, alkalis, salts, corrosion |
| Surface Finish | Smooth internal bore (low friction loss) |
| Leakage | Leak-proof when properly installed |
| Typical Applications | Plumbing, WTP, ETP filtration systems, RO piping, industrial pipelines. |

★ WHY THIS IS NECESSARY

- Joins two pipes of different diameters in a straight, permanent, leak-free run.
- Corrosion-free UPVC construction outlasts metal couplers in wet, chemically active environments.

# 05 Electricals

Power, control cabling and enclosures.

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## Control Panel



| Parameter | Specification |
|---|---|
| Panel Configuration | NXT 33 |
| Overall Size | 235(H) × 260(V) × 130(D) mm |
| Cutout Size | 190(H) × 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 | 2.5 Sq.mm × 3 Core & 1.5 Sq.mm × 3 Core |

★ 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.

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

**BRANDS FEATURED**

Astral • Cimberio • Polycab

**STANDARDS REFERENCED**

ASTM D1785 • ASTM D2466
IS 4985 • IS 7834 • EN 12266-1 • IP68

**SUPPLIED BY**

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