REVERSE OSMOSIS PIPING & FITTINGS SYSTEM

Smaart RO Product Catalogue

Complete UPVC piping and fittings range for RO plant installation — mainline pipe, tank adaptors, unions, valves, solvent cement and site hardware.



PN16	60°C	½"–4"
Max Pressure Rating	Max Temperature	Size Range

Astral | Weld-On

CONTENTS

01 Piping 02 Fittings 03 Electricals

01 Piping

Mainline and distribution pipework.

RO

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)
Life Span	50+ years
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.

02 Fittings

Joints and connections for the piping network.

RO

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
Maximum Operating Temperature	Up to 60 °C
Angle Types	90° Elbow / 45° Elbow
Function	Change flow direction in piping system
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.

RO

UPVC Tank Adaptor



Parameter	Specification
Product Name	UPVC Tank Adaptor (Bulkhead Fitting)
Material	UPVC (Unplasticized Polyvinyl Chloride)
Seal Material	EPDM / NBR Rubber Gasket
Standard	ASTM D2467 / ASTM D1785
Pipe Compatibility	ASTM D1785 / SCH Series / IS 4985
Connection Type	Socket / Threaded × Tank Mount (Bulkhead Type)
Available Size Range	15 mm – 110 mm (½" – 4")
Pressure Rating	PN10 / PN16 / SCH 40 / SCH 80
Maximum Operating Temperature	Up to 60 °C
Design Type	Bulkhead with locking nut & gasket
Installation Method	Drill hole > insert adaptor – tighten nut – solvent joint pipe
Sealing Method	Rubber gasket compression seal
Chemical Resistance	Resistant to acids, alkalis, salts, corrosion
Leakage	Leak-proof when properly installed
Typical Applications	Water tanks, RO tanks, chemical tanks, WTP / ETP systems

★ 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 (where fitted) gives the durability of metal threads with the corrosion resistance of UPVC.

RO

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.

RO

UPVC MTA



Parameter	Specification
Brand	Astral
Product Type	UPVC Male Threaded Adapter (MTA)
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.

RO

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.

RO

UPVC Bush



Parameter	Specification
Product Type	UPVC Bush (Reducing Bush)
Material	Unplasticized Polyvinyl Chloride (uPVC)
Colour	White / Grey
Application	Plumbing / WTP / RO / Industrial piping
Function	Reduces pipe size (large to small connection)
Size Range	20×15 mm to 110×90 mm (¾″×½″ to 4″×3″)
Pressure Rating	SCH 40 / SCH 80 / PN10 / PN16
Standard	ASTM D2466 / ASTM D1785
Connection Type	Socket × Spigot / Threaded
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 Weld / Threaded
Leakage	Leak-proof (with solvent cement)

★ WHY THIS IS NECESSARY

- Steps pipework down from a larger to a smaller bore at pump, valve or tank connections without an extra length of reducer pipe.
- Single-piece moulded construction keeps the reduction leak-free and compact.

RO

UPVC Coupling



Parameter	Specification
Product Type	UPVC Coupling (Socket Coupler)
Material	Unplasticized Polyvinyl Chloride (uPVC)
Colour	White / Grey
Application	Plumbing / WTP / RO / 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	SCH 40 / SCH 80 / PN10 / PN16
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
Leakage	Leak-proof (with solvent cement)

★ 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.

RO

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.

RO

UPVC Solvent Cement



Parameter	Specification
Product Type	UPVC Solvent Cement
Brand	Weld-On
Model	705
Grade	Industrial Grade
Packing Size	473 ml (Pint)
Color	Clear
Body Type	Medium Bodied
Setting Type	Fast Setting
Application	UPVC Pipe & Fittings Jointing
Suitable Pipe Type	UPVC Pressure Pipes
Pipe Size Range	Up to 6″ dia (Interference Fit)
Pipe Schedule	SCH 40 / SCH 80
Standard	ASTM D2564
VOC Level	Low VOC
Joint Type	Solvent Weld (Permanent Joint)
Initial Setting Time	1–2 minutes
Handling Time	5–10 minutes
Full Cure Time	24 hours
Temperature Range	Up to 60°C
Shelf Life	~3 years (sealed)
Packaging	Metal Tin with Brush
Safety	Flammable, use with ventilation

★ WHY THIS IS NECESSARY

- Fuses UPVC pipe and fitting into a single homogeneous, pressure-rated joint — the joint fails without a certified cement.
- Fast setting time keeps installation moving without compromising the permanent bond.

03 Electricals

Power, control cabling and enclosures.

RO

UPVC Conduit Bend



Parameter	Specification
Product Name	UPVC Conduit Bend
Material	uPVC (Unplasticized Polyvinyl Chloride)
Application	Electrical conduit system for cable routing
Color	Grey / White
Standard	IS 9537 (Part 3) / IS 3419
Type	Light Duty / Medium Duty / Heavy Duty
Size Range	16 mm to 63 mm
Angle	90° (standard)
Bend Radius	Standard / Long Radius (as per conduit type)
Connection Type	Socket / Plain end (push fit)
Jointing Method	Solvent cement / Coupler connection
Temperature Range	Up to 60 °C
Mechanical Strength	High impact resistance
Fire Property	Self-extinguishing
Electrical Property	Non-conductive
Corrosion Resistance	100% corrosion-free
UV Resistance	UV Stabilized (for outdoor use)
Surface Finish	Smooth internal surface for easy wire pulling
Function	Changes direction of conduit pipe

★ WHY THIS IS NECESSARY

- Protects power and control cable runs from abrasion, moisture and accidental damage along the installation route.
- Meets IS-marked flame-retardant standards required for enclosed electrical routing.

RO

C Clamp



Parameter	Specification
Product Name	GI Saddle Clamp / Pipe Clamp
Material	Galvanized Iron (GI) / Mild Steel
Finish	Zinc Plated / Hot Dip Galvanized
Application	Pipe fixing (PVC / UPVC / HDPE / Conduit pipes)
Type	2-Hole Saddle Clamp
Design	U-shaped with mounting holes
Size Range	15 mm to 110 mm (½″ to 4″ pipe size)
Thickness	0.8 mm – 2.5 mm (depends on size)
Hole Type	Pre-drilled holes for screw fixing
Corrosion Resistance	Good (galvanized coating)

Smaart RO — End-to-End Engineering, Trusted Global Brands

BRANDS FEATURED

Astral • Weld-On

STANDARDS REFERENCED

ASTM D1785 • ASTM D2466/D2467
IS 4985 • IS 7834 • ASTM D2564
IS 9537 • ISO 9001:2015

SUPPLIED BY

Scientific Precision Pvt. Ltd.
1604 Lodha Supremus, Worli
Dr. E. Moses Road
Mumbai — 400 018