

SWC

SMART CHOICES,
STRONG
CONNECTIONS
WITH SWC PIPES



CERTIFIED BY:



GeM
Government
e Marketplace

Efficient • Transparent • Inclusive



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Society is transforming into a digital revolution, from conventional systems to smart infrastructure, from basic utilities to sustainable solutions, from growing cities to expanding industrial hubs—we need strong, reliable piping systems to support this evolving landscape.

At Sudarshan Pipes, we are committed to providing high-quality SWC HDPE piping solutions designed for efficient water management, industrial waste handling, and drainage systems that support seamless urban and rural development.

Sudarshan has developed a wide range of SWC HDPE Pipe solutions for applications in Smart Cities, Metro, Railways, Solar Projects, Industrial Zones, Agriculture, Airport Infrastructure, National Highways, Real Estate, and Residential Layouts—offering durability, flexibility, and long-lasting performance.

About Company



Sudarshan Pipes, promoted by CA Arvind Salampuria, a highly visionary professional Industrialist- to provide high quality product in Piping Industry.



Established in 2003, Sudarshan Pipes is South India's largest manufacturer of PVC/UPVC/OPVC/Column Pipes/HDPE/ MDPE/PLB Duct/ DWC/ SWC/Gas Pipe and Fittings. It is recognized for its quality, durability, and innovation and provides reliable piping solutions for industries, water management, agriculture, real estate, and infrastructure.

Sudarshan PE Pipes provides solutions for Drinking, Drainage, and ducting, Infrastructure Projects, Railway, Metro, Telecom, Gas Pipes, Airport, Real Estate, Water Management, and Irrigation.

SINGLE-WALL CORRUGATED PIPES

SWC pipes are mainly used in post-tensioned concrete structures such as bridges, flyovers, viaducts, tunnels, and underpasses. They help in creating ducts through which iron rods or cables are passed before pouring concrete, making the structure stronger and more stable. These pipes are also used during the casting of pillars and slabs to ensure proper placement of reinforcement.

Sudarshan SWC Pipes — designed specifically to meet the rigorous demands. Manufactured using premium-grade High-Density Polyethylene (HDPE), these pipes offer excellent flexibility, corrosion resistance, and long service life even in harsh underground conditions.

Produced using state-of-the-art extrusion technology and adhering to industry standards like IS 14930, Sudarshan SWC pipes ensure consistency, reliability, and top-tier performance. Available in various sizes and load-bearing capacities, these pipes are tailor-made for metro projects.



**ISO 9001
QMS Certificate**



**ISO 14001
EMS Certificate**



SALIENT FEATURES



Excellent-Load
Bearing Capacity



Excellent Anti-Corrosive
Properties



Chemically Inert



Suitable for aggressive
climatic conditions



Abrasion resistant



Gives excellent soil
bonding



Flexible and Fatigue
Resistant



SWC PIPES MANUFACTURING CONFIRMS TO

- FIB Bulletin No. 7
- IRC Specification
- NPCIL Specifications
- Addendum and corrigendum IRS slip No 4, Railway concrete Bridge code 1957
- As per customer's specific technical specification

CORE PROPERTIES



SUPERIOR CORROSION PROTECTION



LESS PRETRESSED LOSSES, i.e,
FRICTION AND WOBBLE



PROVIDE SOLID BONDING WITH
CONCRETE



AVAILABLE IN VARIOUS
LENGTH OPTIONS



CHEMICAL INERT



SPEED INSTALLATION DUE TO
FEWER JOINTS



HIGH STIFFNESS, FLEXIBILITY AND
LIGHT WEIGHT



PRODUCED WITH HIGH
QUALITY RAW MATERIAL



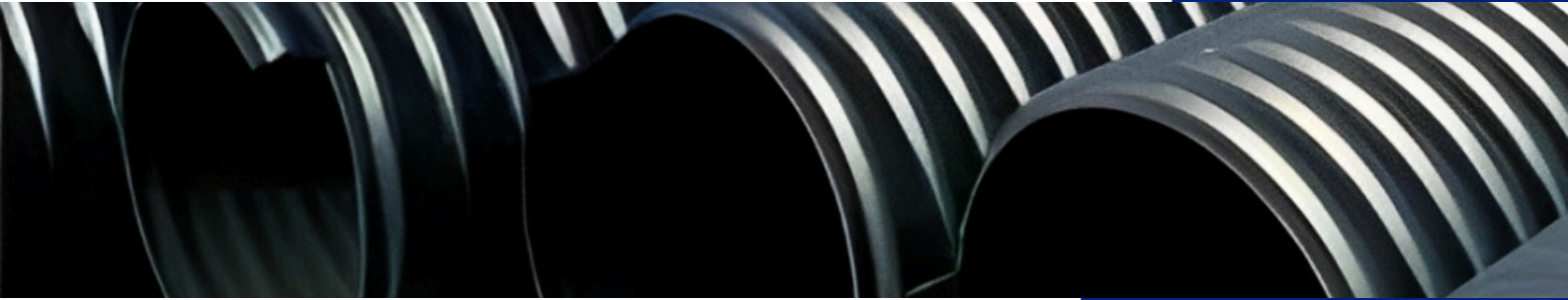
CONSISTENT QUALITY



IN-HOUSE WEL-EQUIPPED
TESTING FACILITY



LATEST TECHNOLOGY
MACHINERY



WHY SUDARSHAN'S SWC PIPES ?

HIGHEST NUMBER OF APPROVALS

Sudarshan's SWC is approved by most of the Government and Private organization for Sewerage application.

STATE OF THE ART MANUFACTURING

Sudarshan is equipped with state-of-the-art manufacturing facilities at Dabaspur and Oblapur plants specifically for SWC Pipes. High-speed and accurate extruders, injection moulding machines, and innovative manufacturing techniques are used to manufacture the ultra-modern, errorless Sudarshan pipes.



RESISTANT TO CORROSION & CHEMICALS

No rust, no chemical damage! These pipes stay intact even when exposed to harsh sewage and industrial waste.

WIDEST PRODUCT RANGE

Sudarshan has wide variety of sizes ranging from 75 mm to 800 mm diameter, SN 4 & SN 8 stiffness classes to cater all sorts of modern drainage & sewerage requirements



SMOOTH FLOW, NO CLOGS

The inner surface is super smooth, which means water and waste flow efficiently without blockages.

ECO FRIENDLY & COST EFFECTIVE

Made from recyclable material, these pipes are an environmentally friendly option. Plus, their durability means lower maintenance costs in the long run.

FIELDS OF APPLICATIONS

- HIGHWAYS
- METRO
- RAILWAY BRIDGES
- FLYOVERS
- OFFSHORE PLATFORMS
- UNDERPASSES/ BUILDINGS
- NUCLEAR CONTAINMENT
- VIADUCTS



QUALITY CONTROL

Sudarshan is equipped with a state-of-the-art laboratory that specializes in high-quality testing as per the ISI standards for testing of all SWC pipes. The high-quality performance is attained and ensured throughout the plant in all the processes through experienced and well-qualified staff and skilled workers.

Each batch of Sudarshan SWC pipes is rigorously tested according to the Bureau of Indian Standards' relevant scheme of testing and inspection. Sudarshan conducts the following high-critical tests in its laboratory, and the products are passed only after a strict quality check process.

TESTS CONDUCTED ON PIPES

1. Ring Flexibility
2. Ring Stiffness
3. Creep Ratio
4. Water Tightness Test
5. Tensile Test
6. Melt Flow Index Test
7. Impact Test
8. Environmental Stress Cracking Resistance Test
9. Oxidation Induction Time



DIMENSION & SIZES

Size Nominal ID (MM)	Size Nominal OD (MM)	Wall thickness
75 MM	90 MM	2.30 MM to 2.80 MM
84 MM	97 MM	2.50 MM to 3.50 MM
107 MM	125 MM	2.50 MM to 3.50 MM
128 MM	148MM	2.50 MM to 3.50 MM

AS PER				
		WALL THICKNESS		
SL NO	SIZE	AWT	TR + -	WT/Mtr
1	90/77	2	0.3	0.560
2	98/85	2	0.3	0.670
3	122/107	2.3	0.3	0.850

SINGLE WALL PIPE SPECIFICATION

Scope

This specification describes 3—through 15-inch (75 to 375 mm) single-wall high-density corrugated polyethylene pipe for use in gravity-flow land drainage applications.

Pipe Requirements

Single-wall high-density corrugated polyethylene pipe shall have annular interior and exterior corrugations.

- **3- Through 15-inch (75 to 375 mm) pipe shall meet ASTM F667.**

Joint Performance

Joints for 3- to 15-inch (75 – 375 mm) shall be made with split or snap couplings. Standard connections shall meet the requirements of the ASTM F667. Gasketed connections shall incorporate a closed-cell synthetic expanded rubber gasket meeting the requirements of ASTM D1056 Grade 2A2. Gaskets, when applicable, shall be installed by the pipe manufacturer.

SWC Pipes Joints & Fittings

- Couplers Snap-fit / Heat Shrink
- Tee
- Grout Vent

Material Properties

Pipe and fitting material shall be high-density polyethylene conforming to the minimum requirements of cell classification 323410C or 333410C as defined and described in the latest version of ASTM D3350.



GEOMETRICAL CHARACTERISTICS & DIMENSIONS OF SWC PIPE

Wall thickness	Required = $t = 1.8 \text{ mm} \pm 0.3 \text{ mm}$
Dimension	OD 90 $\pm 1 \text{ mm}$, ID 77 $\pm 1 \text{ mm}$
Construction	Required = Duct shall be corrugated from inside and outside
Workability Test	Required = There shall be no failure of opening of joint when pipes is bent at bending ratios of $\frac{1}{1800}$ mm
Transverse Load Rating Test	Required = Permanent Deformation Should be $< 5\%$ load -1250N
Tension load Test	Required =No deformation of joint at 2250 N - LOAD
Water loss Test	Required =Joint shall withstand internal pressure of 0.05 MPA for 5 min Compression test for loss of wall thickness Required =Residual wall thickness should be $>1.5 \text{ mm}$

TESTING AND ACCEPTANCE PARARMETERS OF SWC PIPES

Carbon black Content	Required = $>2\%$
Density	Required = $0.940 - 960 \text{ gm/cc}^3$ at 23°C
Melt Flow Index (MFI) IS 2530	Required = $0.5 - 1.1/10$ Minutes Tem. 190°C Under a mass of 5kg
Elongation at Yield (BSEN ISO 527-3)	Required = $7\% - 10\%$
Tensile Strength at Yield	Required = $20.0 - 26.0 \text{ N/mm}^2$
Shore D Hardness VALUE	Required = 3 sec 60 Min, 15 Sec 58 Min
Notch Impact Strength	Required = No Break at 23°C & 10 KJ/m^2



HDPE And PVC Division

Mfg.: PVC/ OPVC/ Column Pipes/ Casing Pipes/ Electro Fusion Fitting/ Butt, Spigot Fittings/ MDPE Compression Fittings / HDPE / MDPE/ GAS / PLB / Single / Double Wall Corrugated Pipes/ DRIP/ SPRINKLER PIPES



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