



SANDHYAFLEX

ISO 9001:2015 certified company

Drainage spout

TECHNICAL DATASHEET

Sandhya Flex, we're proud to provide premium Bridge Drainage spout, that are known for their outstanding functionality and quality. Our drainage spouts are made to endure a long time and are made to handle extreme environmental conditions using quality materials like mild steel and galvanised steel.

MORTH Specifications Compliance

The Ministry of Road Transport and Highways (MORTH) exacting criteria are carefully followed in the production of our Bridge Drainage Spouts. This guarantees that our products are reliable and of the greatest calibre, making them appropriate for use in bridge-building projects of all kinds.

History of Drainage Spout:

- **1950s – Growth of Modern Drainage Systems:**

With rapid urbanization and infrastructure development, effective roof and bridge drainage systems became essential for managing rainwater and preventing structural damage.

- **1960s – Introduction of Metal Drainage Spouts:**

Galvanized steel and cast-iron drainage spouts were widely used in buildings, bridges, and industrial structures to channel water away from critical areas.

- **1970s – Focus on Improved Water Management:**

Engineers developed more efficient spout designs to enhance water flow, reduce leakage, and minimize water accumulation on structures.

- **1980s – Emergence of Polymer-Based Drainage Spouts:**

PVC and other polymer materials began replacing traditional metal spouts due to their corrosion resistance, lightweight construction, and ease of installation.

- **1990s – Wider Adoption in Infrastructure Projects:**

Drainage spouts became standard components in bridges, flyovers, commercial buildings, and drainage networks, improving stormwater management and structural protection.

- **2000s – Enhanced Material Technology:**

Advancements in PVC and polymer formulations improved durability, UV resistance, weather resistance, and long-term performance in harsh environmental conditions.

• 2010s – Infrastructure Expansion and Standardization:

Growing investments in highways, metro systems, airports, and urban development projects increased the demand for high-quality drainage spouts manufactured to standardized specifications.

• 2020s – Advanced Designs and Sustainable Solutions:

Modern drainage spouts feature optimized hydraulic designs, improved installation systems, and durable materials that support efficient water management and sustainable infrastructure development.

• Modern Era:

Drainage Spouts are widely used in bridges, flyovers, buildings, parking structures, industrial facilities, and infrastructure projects worldwide, providing efficient rainwater discharge, protecting structures from water damage, and enhancing the service life of drainage systems.

Materials :

The **Drainage Spout** shall be manufactured from high-quality PVC, HDPE, Rubber, or other approved polymeric materials with suitable additives to enhance strength, flexibility, durability, and weather resistance. The material shall provide excellent resistance to moisture, corrosion, UV radiation, temperature variations, and environmental ageing.

The finished Drainage Spout shall be capable of efficiently conveying rainwater and surface runoff while maintaining its structural integrity under long-term service conditions. It shall be suitable for use in bridges, flyovers, buildings, and other infrastructure projects requiring reliable and durable drainage solutions.

RAW MATERIALS OF DRAINAGE SPOUT				
S. No.	Raw Material	Image	Typical Grade / Example	Function / Purpose
1	PVC / HDPE Compound (Virgin Polymer)		PVC Resin (SG-5 / K-67) HDPE Resin (PE-100 / PE-80)	<ul style="list-style-type: none"> Main body material Provides strength, durability and weather resistance Ensures long service life
2	Stabilizers (Heat & UV Stabilizers)		Ca-Zn Stabilizer UV Stabilizer (HALS Based)	<ul style="list-style-type: none"> Improves heat and UV resistance Prevents degradation and embrittlement Enhances outdoor performance
3	Impact Modifiers (Toughening Agents)		CPE / Acrylic Impact Modifier MBS Impact Modifier	<ul style="list-style-type: none"> Increases impact strength Enhances toughness and durability Prevents cracking during service
4	Lubricants (Processing Aids)		Paraffin Wax Stearic Acid PE Wax	<ul style="list-style-type: none"> Improves flow and smooth extrusion Reduces friction during processing Improves surface finish
5	Fillers (Functional Fillers)		Calcium Carbonate (CaCO ₂) Talc / Kaolin	<ul style="list-style-type: none"> Improves dimensional stability Enhances stiffness and reduces cost Improves physical properties
6	Pigments (Colorants)		Titanium Dioxide (White) Carbon Black (Black) Organic Pigments (Colors)	<ul style="list-style-type: none"> Provides desired color / appearance UV protection (with pigmented grades) Enhances product identification
7	Antioxidants (Anti-aging Agents)		Antioxidants (1010 / 168) As per formulation	<ul style="list-style-type: none"> Prevents oxidation and ageing Increases service life

MANUFACTURING PROCESS OF DRAINAGE SPOUT									
<p>1 RAW MATERIAL STORAGE</p> <p>Raw materials are stored in clean and dry conditions.</p>	<p>2 MIXING / BLENDING</p> <p>PVC/HDPE, additives and fillers are mixed uniformly.</p>	<p>3 AUTOMATIC FEEDING</p> <p>Mixed material is fed into the extrusion line.</p>	<p>4 EXTRUSION</p> <p>Material is melted and extruded into spout profile.</p>	<p>5 VACUUM CALIBRATION</p> <p>Extruded spout is shaped and sized through vacuum calibration.</p>	<p>6 COOLING</p> <p>Spout is cooled in water tank to maintain shape and strength.</p>	<p>7 CUTTING / TRIMMING</p> <p>Ends are cut and edges are trimmed for proper fitment.</p>	<p>8 INSPECTION</p> <p>Dimensions, surface finish and quality are inspected.</p>	<p>9 PACKING</p> <p>Spouts are packed with protection to avoid damage.</p>	<p>10 DISPATCH</p> <p>Packed spouts are loaded and dispatched.</p>

QUALITY CONTROL AT EVERY STAGE							APPLICATIONS							
Raw Material Inspection	In Process Quality Check	Dimension Measurement	Tensile & Impact Testing	Heat & UV Resistance Test	Visual Inspection	Weight Verification	Final Packing Inspection	Bridges & Flyovers	Buildings & Rooftops	Parking Structures	Industrial Facilities	Highways & Expressways	Water & Storm Water Drainage	Underground Structures

High Durability • Corrosion Resistant • UV Resistant • Easy Installation • Efficient Water Discharge • Long Service Life

We think that in order to guarantee the exceptional quality of our products, we need only use the best materials. Galvanised and mild steel, two premium-grade materials, are used in the construction of our Bridge Drainage Spouts. These materials are well known for their strength, resilience to corrosion, and ability to survive the rigours of challenging environmental circumstances.

For bridge authorities, contractors, infrastructure developers, and construction professionals seeking reliable drainage solutions, **SANDHYAFLEX Drainage Spouts** are the ideal choice. Offering excellent water discharge efficiency, corrosion resistance, durability, and long service life, they are widely used in bridges, flyovers, highways, metro rail projects, parking structures, and other infrastructure applications. Designed to effectively channel rainwater away from structures, SANDHYAFLEX Drainage Spouts help prevent water accumulation, seepage, and structural deterioration, ensuring enhanced safety, durability, and long-term performance.

Packing standard of Drainage Spout

- ✓ Size: 210mmx210mm, Dia of Collection Pipe 100mm, length of Collection Pipe 300mm
- ✓ Size: 210mmx210mm, Dia of Collection Pipe 150mm, length of Collection Pipe 600mm.
- ✓ Size: 180mmx305mm, Dia of Collection Pipe 150mm, length of Collection Pipe 100mm.
- ✓ Size: 200mmx150mm, Dia of Collection Pipe 50mm, length of Collection Pipe 300.
- ✓ Size: 200mmx150mm, Dia of Collection Pipe 50mm, length of Collection Pipe 400.
- ✓ Size: 300mmx300mm, Dia of Collection Pipe 100mm, length of Collection Pipe 400.
- ✓ Drainage Spout - Diagrams

Application:

- **Bridges & Flyovers** – Efficient drainage of rainwater from bridge decks and elevated structures.
- **Highways & Expressways** – Prevents water accumulation and protects road infrastructure.

- **Metro Rail & Railway Structures** – Used in viaducts, stations, and elevated corridors for controlled water discharge.
- **Parking Structures** – Provides effective drainage in multi-level parking facilities and ramps.
- **Commercial Buildings** – Used for rooftop and podium drainage systems.
- **Industrial Facilities** – Protects structures from water damage and ensures proper stormwater management.
- **Stormwater Drainage Systems** – Channels rainwater safely into drainage networks and collection systems.
- **Tunnels & Underground Structures** – Helps manage seepage and surface runoff in transportation and utility infrastructure.
- **Airports & Transportation Hubs** – Used in large-scale infrastructure projects requiring reliable water drainage.
- **Urban Infrastructure Projects** – Commonly installed in smart cities, elevated corridors, and municipal drainage systems.

Advantageous Properties: SANDHYAFLEX Drainage Spout boast:

Customized Solutions:

Since every project has different requirements, we provide a large selection of drainage spouts specifically designed to fulfill our client's needs. We have the knowledge and resources to successfully meet your needs, whether you need standard-sized spouts or specially-tailored solutions.

Durability and Longevity:

Our drainage spouts are built to last and are made with long-lasting durability in mind. They are engineered to withstand the most severe weather conditions, including intense downpours, intense heat waves, and corrosive substances, by utilising high-quality materials and sophisticated manufacturing processes. Because of their endurance, our drainage spouts offer dependable performance year after year, saving our customers money on maintenance and replacement.

Exceptional Performance:

Our drainage spouts have outstanding rust and corrosion-resistant qualities and are designed to work exceptionally well. This guarantees the spouts' survival and functionality under the most extreme weather conditions, offering dependable drainage solutions for all kinds of bridges.

Rigorous Quality Control:

Our goods undergo strict quality control procedures at every level of the manufacturing process to maintain our commitment to quality excellence. We make every effort to create products that surpass our client's expectations, from choosing the finest raw materials to using state-of-the-art technology and following best practices

Types of Drainage Spout:

- i) [Type-1](#)
- ii) [Type-2](#)
- iii) [Type-3](#)
- iv) [Type-4](#)

Description		HSN Code
	"Drainage Spout Pipe"	
1	<i>Drainage Spunt size:x210x132mm Pipe Dia 100mm Pipe Length 300 mm weight 13 kg/Nos with Galvanized at 400 Deg 100 Microns at 400 Decg C as per Drg</i>	7308
2	<i>Drainage Spunt size:x210x132mm (Outer 262x262mm Pipe Dia 100mm Pipe Length 600 mm weight 16 kg/Nos with Galvanized at 400 Deg 100 Microns at 400 Decg C as per Drg</i>	7308
3	<i>Drainage Spunt size:x210x132mm Pipe Dia 100mm Pipe Length 600 mm weight 16 kg/Nos with Galvanized at 400 Deg 100 Microns at 400 Decg C as per Drg</i>	7308
4	<i>Drainage Spunt size:210x210 mm, Depth 132mm Pipe Dia 100mm , Pipe Length 300mm weight kg/Nos , with Galvanized at 400 Deg 100 Microns at 400 Decg C as per Drg</i>	7308

5	<p>Drainage Spunt size:210x210 (outer 262x262mm) depth 132mm Pipe Dai 100mm , Pipe Length 600mm weight 16 kg/Nos, with Gulgvnized at 400 Deg 100 Microns at 400 Decg C as per Drg</p>	7308
6	<p>Drainage Spunt size:210x210 depth 132mm Pipe Dai 100mm , Pipe Length 500mm weight 10 kg/Nos with Spay Silver Painting with Gulgvnized at 400 Deg 100 Microns at 400 Decg C as per Drg , Note : Angle Pipe</p>	7308
7	<p>Drainage Spunt size:210x210 depth 132mm Pipe Dai 100mm , Pipe Length 600mm weight 10 kg/Nos with Spay Silver Painting with Gulgvnized at 400 Deg 100 Microns at 400 Decg C as per Drg Note: Pipe Taper</p>	7308
8	<p>Drainage Spunt size:210x210 , Outer 262mmx262mm depth 132mm Pipe Dai 100mm , Pipe Length 600mm weight 16 kg/Nos with Spay Silver Painting with Gulgvnized at 400 Deg 100 Microns at 400 Decg C as per Drg , Note : Angle Pipe</p>	7308
9	<p>Drainage Spunt size:210x210 , depth 132mm Pipe Dai 100mm , Pipe Length 500mm weight 12 kg/Nos with Gulgvnized at 400 Deg 100 Microns at 400 Decg C as per Drg , Note : Angle Pipe</p>	7308
10	<p>Drainage Spunt size:210x210mm, depth 132mm Pipe Dai 100mm , Pipe Length 700mm wei weight 13kg/Nos with Gulgvnized at 400 Deg 100 Microns at 400 Decg C as per Drg , Note : Angle Pipe</p>	7308
11	<p>Drainage Spunt size:x210x132mm (Outer 262x262mm Pipe Dia 114mm Pipe Class C Pipe Thickness 5.0mm Jindal Pipe Length 600 mm weight 23 kg /Nos with Gulgvnized at 400 Deg 100 Microns at 400 Decg C as per Drg</p>	7308
12	<p>Drainage Spunt size:300x300mm , Depth 150mm, Pipe Dia 100mm Welded Pipe Length 600 mm weight 16 kg/Nos with Gulgvnized at 400 Deg 100 Microns at 400 Decg C as per Drg</p>	7308

13	<i>Drainage Spunt size:x210x132mm (Outer 262x262mm Pipe Dia 100mm Pipe Length 300 mm weight 13 kg/Nos with Galvgnized at 400 Deg 100 Microns at 400 Decg C as per Drg</i>	7308
14	<i>Drainage Spunt size:x300x300mm Depth 150mm Pipe Dia 100mm Pipe Length 600 mm weight 16.0 kg /Nos with Galvgnized at 400 Deg 100 Microns at 400 Decg C as per Drg</i>	7308

PHYSICAL AND MECHANICAL PROPERTIES

S. No.	Property / Test	Requirement
1	Product Type	PVC Drainage Spout
2	Product Configuration	One-Piece Injection/Extruded PVC Drainage Outlet
3	Standard Colour	Black (Other Colours Available on Request)
4	Material	Rigid Polyvinyl Chloride (PVC) Compound
5	Base Polymer	PVC Resin
6	Applicable Standard	As per Manufacturer Specification / Relevant IS Standards
7	Surface Finish	Smooth, Uniform and Defect-Free
8	UV Resistance	Excellent
9	Weather Resistance	Excellent
10	Moisture Resistance	Excellent
11	Corrosion Resistance	Excellent Resistance to Water, Moisture and Atmospheric Exposure
12	Chemical Resistance	Resistant to Mild Acids, Alkalis, Salts and Common Cleaning Chemicals
13	Impact Resistance	High
14	Abrasion Resistance	Good
15	Colour Stability	Excellent Colour Retention Under Normal Service Conditions
16	Water Flow Performance	Smooth Internal Surface for Efficient Water Discharge
17	Operating Environment	Suitable for Indoor and Outdoor Applications

18	Temperature Resistance	Suitable for Typical Ambient Weather Conditions
19	Service Life	Long-Term Durable Performance
20	Maintenance Requirement	Low
21	Installation Method	Compatible with Waterproofing Membranes and Drainage Systems
22	Leak Resistance	Designed to Provide Secure and Reliable Water Drainage
23	Typical Applications	Roof Drainage Systems, Balconies, Terraces, Podiums, Sunshades, Parapet Walls, Parking Decks and Building Drainage Infrastructure

APPLICATIONS BY COUNTRIES:

India:

- Widely used in bridges, flyovers, highways, and railway overpasses for efficient rainwater drainage.
- Commonly installed in metro rail projects, elevated corridors, and urban infrastructure developments.
- Increasing demand in smart city projects and large-scale transportation networks.

China:

- Extensively used in expressways, high-speed railway bridges, and urban transit infrastructure.
- Widely adopted in large bridge projects, elevated roadways, and municipal drainage systems.
- Strong demand from rapidly expanding infrastructure and transportation sectors.

United States:

- Commonly used in highway bridges, parking structures, and transportation infrastructure projects.
- Widely installed in stormwater management systems and bridge drainage networks.
- Increasing use in bridge rehabilitation and urban development projects.

Europe:

- Used in bridge decks, flyovers, tunnels, and public infrastructure projects.
- High demand due to stringent requirements for drainage efficiency and structural protection.
- Commonly installed in transportation corridors and sustainable infrastructure developments.

Africa:

- Widely used in road bridges, urban drainage systems, and transportation infrastructure projects.
- Important for managing stormwater and protecting structures from water damage.
- Growing adoption in highway expansion and urban development programs.

Middle East:

- Strong demand in highways, flyovers, metro systems, and smart city developments.
- Widely used in infrastructure exposed to intense rainfall events and harsh climatic conditions.
- Commonly installed in commercial developments, airports, and transportation networks.

Australia:

- Extensively used in bridges, highways, and public infrastructure projects.
- Common in stormwater drainage systems and transportation corridors.
- Increasing demand in coastal and regional infrastructure developments.

South America:

- Widely used in highway bridges, urban flyovers, and transportation infrastructure.
- Commonly installed in municipal stormwater drainage and road development projects.
- Growing demand from infrastructure modernization and urban expansion programs.

Southeast Asia:

- High demand in bridges, elevated expressways, and metro rail projects.
- Widely used in regions experiencing heavy rainfall and tropical weather conditions.
- Increasing adoption in urban infrastructure, airports, and smart city developments.

Get in touch:

Address : 5-24-1223/5/1, Ambedkar Nagar, Gajularamaram, Quatubulapur, R. R. Dist, Hyderabad, Telangana - 500055, India

PhoneNo : (+91) 9652998932

(+91) 6304766851

(+91) 8688537041

(+91) 9392275616

(+91)9550921831

(+91) 8919488523

(+91)8074580219

Email : info@sandhyaflex.com