KANTA

# KANTA POLYMER

## PVC WATERSTOPS & PROFILES

Product Catalogue & Technical Data Sheet

**Manufactured & Tested as per IS:15058:2002**

# PVC Waterstop and Other Extruded Profiles

**Applicable Standard:** IS:15058:2002, IS:12200, CRD-C572

Extruded PVC waterstop profiles, based on a specifically formulated plasticised PVC compound, are embedded within concrete construction and expansion joints of hydraulic and water-retaining structures to safeguard against hydrostatic pressure and water seepage. The profiles accommodate expansion, contraction and differential movement at the joint without loss of watertightness, and are manufactured and tested as per IS:15058:2002. The range includes centre-bulb (dumbbell and serrated) profiles for expansion/construction joints as well as flat and ribbed profiles, together with allied extruded items such as the PVC joint former.

| Parameter | Specification / Typical Range |
|---|---|
| **Material** | Specifically formulated plasticized PVC compound conforming to IS:15058:2002 |
| **Profile Type** | Centre bulb (dumbbell / serrated), flat, and ribbed profiles as per joint requirement |
| **Nominal Width Range** | 150 mm to 300 mm (standard range, see sizing table) |
| **Thickness Range** | 4 mm to 10 mm (profile dependent) |
| **Recommended Hydrostatic Pressure** | 25 to 65 m of water head, depending on profile and thickness (see sizing table) |
| **Test Basis** | Factory tested as per ASTM / IS:15058:2002 performance requirements |

## Key Features

- Manufactured and tested as per IS:15058:2002
- Wide range of standard profiles and sizes to suit joint width and expected movement
- High mechanical strength, elasticity and chemical resistance
- Reliable, seam-welded joints for continuous watertightness

## Typical Applications

- Water-retaining and hydraulic structures
- Bridges, tunnels and underground structures
- Basements, water tanks and retaining walls
- Industrial and irrigation infrastructure

## Standard Sizing Range

The table below indicates the standard profile codes, design, sizes and recommended hydrostatic pressure rating for the PVC waterstop range. Exact profile and size shall be selected based on project-specific joint width, movement and hydrostatic head, as per the selection criteria given below.

| CODE | PVC WATER STOPS DESIGN | Nominal Width (MM) | Thickness (MM) | Recommended Hydrostatic Pressure in Metre of Water |
|---|---|---|---|---|
| KFW-501 |  | 150 | 8-11 | 38-40 |
| KFW-502 |  | 150 | 4-5 | 30-33 |
| KFW-503 |  | 225/230 | 8-11 | 50-55 |
| KFW-504 |  | 225/230 | 4-5 | 32-35 |
| KFW-505 |  | 305 | 10 | 58-65 |
| KFW-506 |  | 180 | 8-11 | 38-40 |
| KFW-507 |  | 230 | 5 | 25 |
| KFW-508 |  | 230 | 5 | 25 |
| KFW-509 |  | 240 Rs | 5 | 25 |

## Applications by Sector

| Sector | Typical Applications |
|---|---|
| Public Utilities | Bridges, road embankments, concrete roads, tunnels, water tanks, swimming pools, water treatment and sewage disposal plants, clarifiers, neutralisation tanks |
| Buildings | Basements and raft foundations, floor slabs, terraces, concrete runways, retaining walls, overhead and underground water tanks, multi-storeyed buildings |
| Industries | Fertiliser and steel plants, effluent treatment plants, thermal power stations, atomic reactors, shipyards and docks, cooling towers |
| Agriculture / Irrigation | Dams, canals, aqueducts, large reservoirs, irrigation projects |

## Properties

- Good ageing resistance and long service life
- High mechanical and tensile strength
- Immune to corrosion
- High elasticity and stretch recovery
- Excellent weather resistance, effective in tropical climates
- Unaffected by acids, alkalis, metal salts and common chemicals
- Lower water absorption compared to rubber water stops
- Non-hazardous and fire retardant
- Withstands high hydrostatic pressure while allowing safe passage of seepage water

## Selection Criteria

- Selection of water stop profile and size is governed by the design hydrostatic pressure and the movement expected at the joint
- Dumbbell type profiles are preferred where substantial expansion / contraction of the joint is expected
- Serrated type profiles are preferred where differential settlement occurs and firm grip within the concrete is required
- Overall width of the water stop shall not be greater than the thickness of the concrete member
- Distance between the concrete face and the water stop shall not be less than half the width of the water stop
- Width of the water stop shall be at least 6 times the largest aggregate size used, for satisfactory compaction around the profile

## Installation Guidelines

- One half of the water stop is embedded in the first concrete pour, with the second half left extended across the joint
- The second half is embedded in the subsequent pour, leaving the centre bulb free to accommodate expansion and contraction
- Care shall be exercised while pouring and compacting concrete to avoid displacement or misalignment of the water stop
- Joints between water stop lengths shall be made by hot-air/thermal welding to ensure a continuous watertight seal

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