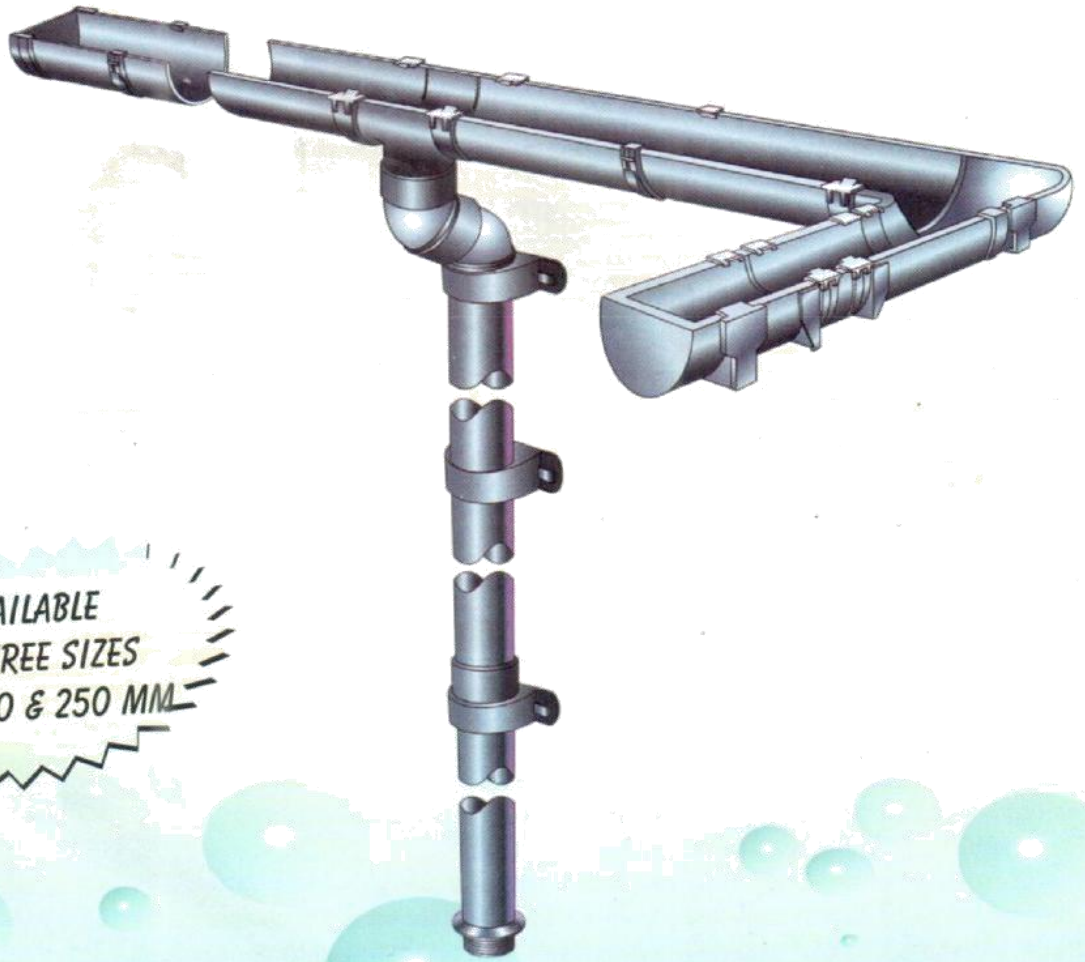
# KisaN®

# BARISH™

## RAIN WATER SYSTEMS



AVAILABLE
IN THREE SIZES
140, 180 & 250 MM

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**The Revolutionary Concept**
**For Rainwater Collection, Storage,**
**& Roof Top Harvesting**

## RAINWATER HARVESTING

KisaN® BARISH RAIN WATER SYSTEMS

Nature replenishes the Groundwater Resource annually through seasonal rainfall, by way of infiltration through soil layers. Due to urbanisation, the soil surface exposed to the recharge gets drastically reduced and therefore natural recharge gets diminished. Groundwater resources have already been extensively developed and therefore any further indiscriminate development should not take place. Groundwater sources as a natural resource has the major benefit in meeting the emergency supplies during the water scarcity periods. In order to maintain the groundwater resources potential, a hydraulic dovetailing rain water harvesting and artificial recharge will augment the groundwater resource.

At this juncture, measures are to be taken up by various Governmental and non Governmental organisations as well as the public at large, to harvest the rainfall and maintain groundwater balance. Such measures will help to have reliable and sustainable groundwater resource for supplementing the domestic and industrial water supply needs of urban area.

## WHAT IS RAIN WATER HARVESTING

- Deliberate collection of rain water within a catchment, and use for the purpose of drinking, irrigation Etc. is called rain water harvesting.
- Collection and storage of Rainwater can be made in man made structures or natural depression in the catchment surface.
- Catchment includes rooftops, compounds, rocky surfaces or hill slopes or artificially prepared Impervious/semi Impervious land surface.
- Storage is generally done in man made tanks, Lined pits and small dams or in the sandy beds of seasonal rivers.
- The collection and storage generally begins and ends with the rainy season.
- Users are left with a fixed volume of water until the next rainy season comes. • Thus the amount of water harvested (collected and stored) depends on the frequency and intensity of rainfall, the catchment characteristics, amount of water need and capacity of the storage tanks.

## AN APPROACH AND NEED FOR RAIN WATER HARVESTING

### Why Rain water harvesting and Artificial Recharge?

- To Arrest ground water decline and improve ground water levels and availability.
- To beneficiate water quality in Aquifers.
- To arrest sea water ingress.
- To conserve surface water run-off during monsoons.
- To enhace availability of ground water at the specific place and time.
- To reduce power consumption
- To Conserve urban waste water.
- To meet the ever increasing demand for water.
- To avoid flooding of roads.
- To reduce ground water pollution.
- To reduce the soil erosion.
- To supplement domestic water requirement during summer ,drought etc.

## KISAN BARISH RAINWATER SYSTEM HIGHLIGHTS

### The Most Ideal Method For Roof Top Harvesting:

- Light Weight: Elegant in appearance, easy to transport, store, handle and install.
- High Dimensional Standard - giving good leakproof joints.
- No leakage, as no galvanic action & corrosion taking place. • Easy to maintain and longer lasting.
- The Rubber Ring Gasket jointing gives a cushioning to the system during change in climatic condition.
- Superior flow compared to GI and Asbestos Cement Systems.
- The system is totally rodent Proof. • Provides self-sufficiency to your water supply.
- Improves the quality of ground water through dilution when recharged to ground water. • Reduces soil erosion in urban areas.
- The roof top rain water harvesting is less expensive when compared with other rain water harvesting system.
- Rooftop rain water harvesting systems are easy to construct, operate and maintain, and can be installed quickly.
- In saline or coastal areas, rain water provides good quality water and when recharged to ground water it reduces salinity and also helps in maintaining balance between the fresh-saline water interface.
- In Islands, due to limited extent of fresh water aquifers, rain water harvesting is the most preferred source of water for domestic use. In desert, where rain fall is low, roof top rain water harvesting has been providing relief to people.

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## KISAN BARISH RAINWATER SYSTEMS BENEFITS

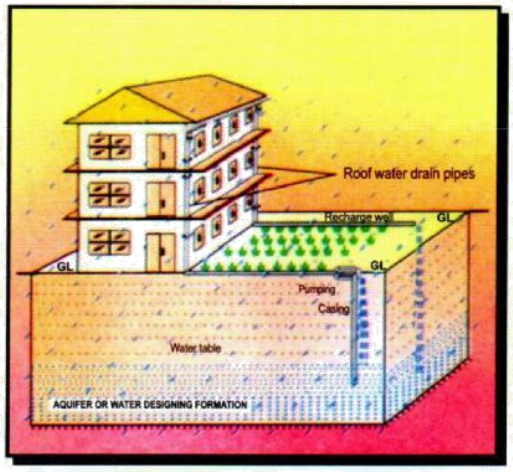
### • CORROSION RESISTANT

- No Surface Corrosion.Rust Free. • No protective coating required.
- Immune to Galvanic or Electrolytic Erosion. • PVC pipes are not attacked by low or high concentrated acids, oxdizing agents, alkalies, oils, fats and halogens.
- Low thermal conductivity means it maintains uniform temperatures in transforming fluids.
- Energy saving, environment friendly, recyclable and flexible. • Available in dark grey colour.
- Biological resistance. • Fit for potable water applications as PVC does not impart any taste to it.
- Stability of PVC pipes against rodent attack. • Resists bacterial and fungal growth.
- Abrasion Resistance: Due to toughness and inner bore smoothness it's ideal for abrasive resistant application.
- Can be installed at very low cost, further more it is maintenance free (No painting or no coating required.)
- Less expensive than conventional material like C.I., MS. and Asbestos Cement systems.

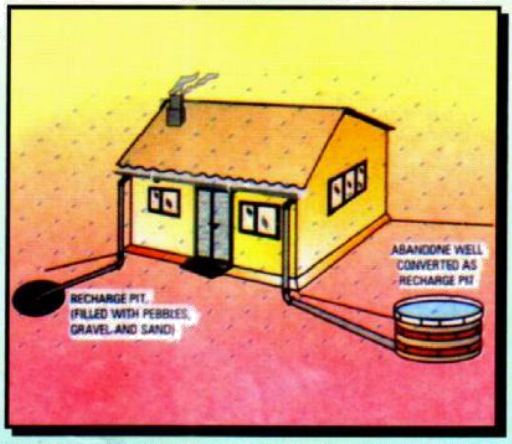
## ARTIFICIAL RECHARGE

Artificial recharge may be defined as the process of augmenting the natural infiltration of rain water or surface run off into the underground formation by some artificial methods. The methods suggested are water spreading, recharge through pits, trenches, borewells shafts and directly diverting run off water into the existing wells, the choice and effectiveness of any particular methods is governed by local hydrogeological and soil conditions and ultimate use

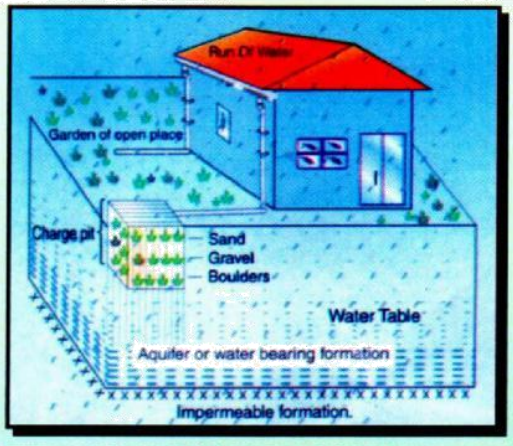
ROOF TOP WATER COLLECTION AND RECHARGE




ARTIFICIAL RECHARGE IN THE APARTMENT AREAS




RECHARGE THROUGH ROOF TOP OF INDIVIDUAL HOUSE




ARTIFICIAL RECHARGE BY WATER SPREADING AND PIT METHODS

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# PRODUCT DIMENSION & SIZES

KisaN® BARISH RAIN WATER SYSTEMS

## Joint Bracket :

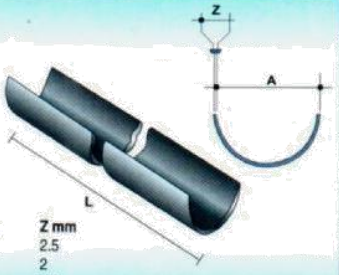
DESIGN REGN. NO. 185747

To join together two lengths of plain pipe using the new pivot mounted clips. The joint bracket is through half-round section fitted with deep Rubber Gasket & Chips Must be screwed directly to fascia or anchored by a suitable rafter bracket.


| ARTICLE NO. | SIZE mm | A mm | Z mm |
|---|---|---|---|
| 101 | 180 | 198 | 201 |
| 501 | 140 | 144 | 2.0 |
| 901 | 250 | 207 | 3.0 |

## Half Round Pipe :

To Connect all pipe fittings supplied in Plain Ended lengths of 3 Mtrs.




| ARTICLE NO. | SIZE mm | Z mm |
|---|---|---|
| 108 | 180 | 2.5 |
| 508 | 140 | 2 |
| 908 | 250 | 3.6 |

## Running Outlet :

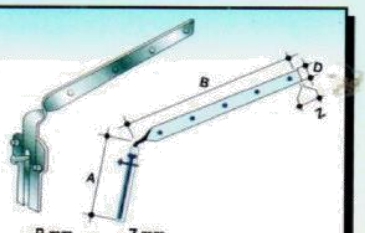
DESIGN REGN. NO. 185751

To connect pipe to rainwater pipe Via a fitting. Through half round Section, fitted with deep Rubber Gasket & clips. Must be screwed Directly to fascia or anchored by a suitable rafter bracket.


| ARTICLE NO. | SIZE mm | A mm | B mm | C mm | D mm |
|---|---|---|---|---|---|
| 102 | 180 | 348 | 110 | 50 | 190 |
| 502 | 140 | 234 | 75 | 45 | 136 |
| 902 | 250 | 415 | 160 | 87 | 242 |

## Adjustable Rafter Side Brackets :

To fix pipe support brackets With open ends of rafters. Must be screwed to rafter. Available with plastic support Brackets & bolts.

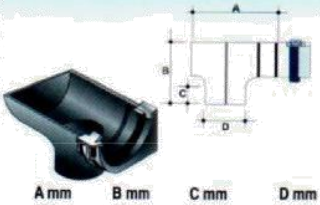



| ARTICLE NO. | SIZE mm | B mm | Z mm |
|---|---|---|---|
| 109 | 180 | 205/315/600 | 3.5 |
| 509 | 140 | 235 | 3 |
| 909 | 170 | 427 | 3.0 |

## Stop End Outlet :

DESIGN REGN. NO. 185748

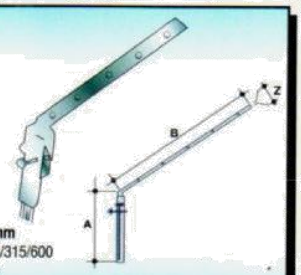
To cap open end of pipe and Provide for connection to Rainwater pipe via a fitting, Through half-round section. Fitted with deep rubber Gasket & clips.




| ARTICLE NO. | SIZE mm | A mm | B mm | C mm | D mm |
|---|---|---|---|---|---|
| 103 | 180 | 250 | 192 | 70 | 110 |
| 503 | 140 | 177 | 136 | 46 | 75 |
| 903 | 250 | 319 | 242 | 87 | 160 |

## Adjustable Rafter Top Brackets :

To fix pipe support brackets open Ends of rafters. Must be screwed To rafter. Allows vertical Adjustment Of the pipe support bracket. Available with plastic support Brackets & bolts.

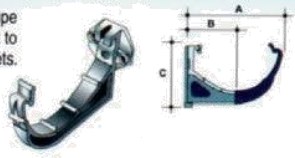



| ARTICLE NO. | SIZE mm | B mm |
|---|---|---|
| 110 | 140 | 205/315/600 |
| 510 | 107 | 235 |
| 910 | 170 | 427 |

## Pipes Support Bracket :

DESIGN REGN. NO. 185749

New support brackets for pipe And fittings. Screw fix to Fascia or bolt to rafter brackets.




| ARTICLE NO. | SIZE mm | A mm | B mm | C mm |
|---|---|---|---|---|
| 104 | 180 | 204 | 110 | 138 |
| 504 | 140 | 156 | 81 | 110 |
| 904 | 250 | 275 | 146 | 195 |

## Elbow (without outlet/with outlet):

DESIGN REGN NO. 185746

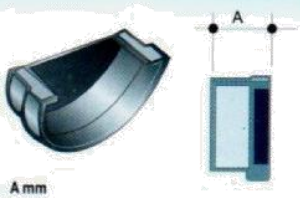
To provide For change of direction In gutter. Through half-round section, Fitted with rubber Gasket & clips.


| ARTICLE NO. | SIZE mm | A mm | Z mm |
|---|---|---|---|
| 111 | 180 | 230 | 230 |
| 511 | 140 | 147.5 | 148 |
| 911 | 250 | 242 | 242 |

## Short Stop End :

DESIGN REGN. NO. 185750

To cap open end of pipe. Through half-round section, Fitted with rubber Gasket.




| ARTICLE NO. | SIZE mm | A mm |
|---|---|---|
| 105 | 180 | 66 |
| 505 | 140 | 48 |
| 905 | 250 | 85 |

Spare Grip Clip

Spare Plastic Support Bracket

Spare Rubber Gasket

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# INSTALLATION GUIDE LINES

KisaN® BARISH RAIN WATER SYSTEMS

## INSTALLATION OF HALF ROUND PIPES (GUTTER) INTO FITTINGS

Fig 1.
1. Locate rear edge of gutter under rear lip of bracket.

Fig 2.
2. Press front edge firmly down until level with front lip of bracket.

Fig 3.
3. Pull forward and downward on front edge of gutter and fitting until gutter snaps under the lip of fitting.


## GUTTER FITTING DESIGN(FIXING)

All fitting have been designed with:-

A) either their own fixing lugs

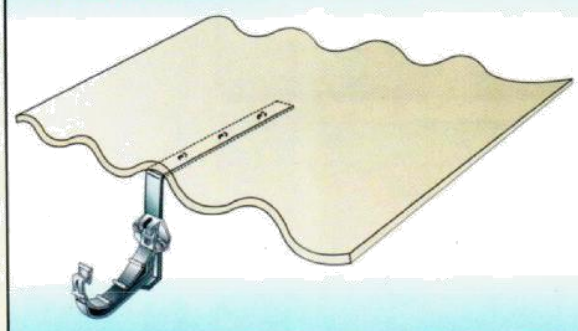


B) or a recess to accept a standard support bracket

Standard support bracket

Whichever method used, the fittings must be anchored with support bracket

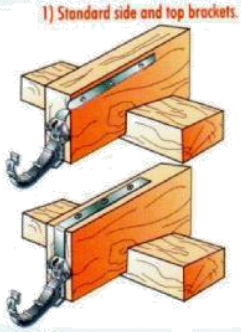
## FIXING ON CORRUGATED ROOFS DIRECTLY



## Rafter Brackets

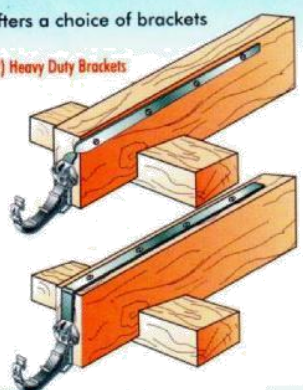
When fixing to open ended rafters a choice of brackets is available.

1) Standard side and top brackets



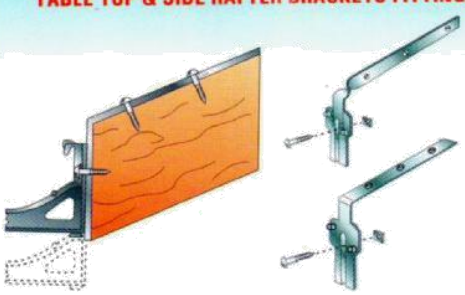
Note:
a) Suitable only for rafters in good condition
b) Fork at bottom or vertical leg prevents support bracket twisting.

2) Heavy Duty Brackets



Note:
a) Suitable for use on old rafters with ends in poor condition.
b) Fork at bottom or vertical leg prevents support bracket twisting.

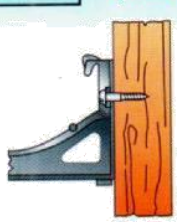
## TABLE TOP & SIDE RAFTER BRACKETS FITTINGS



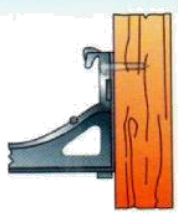

NOTE

A) Pegs on rafter bracket locate in screw holes of support bracket
b) if centre hole flashed over. Remove by pushing bolt through from back.

## EXAMPLE OF FIXING TO SOFTWOOD FASCIA



Support bracket when using centre hole fixing.



Support brackets and all gutter fittings with their Own fixing lugs

If the fascia is less than 19 mm thick or has less holding power than 'standard grade joinery softwood' e.g. Cedarwood an alternative method of fixing must be employed.

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Indiscriminate use of ground water resources for irrigation, industrial and other forms of commercial usage has caused fast-depletion in the groundwater level in majority of the regions in the country. Rapid urbanization has drastically reduced the exposed soil surface area, which prevents infiltration of rain in the Soil to naturally replenish the ground water resources.

KisaN® BARISH RAIN WATER SYSTEMS

**Kisan Barish rainwater Systems** is introduced by the Kisan Group, the most leading name in manufacturing and marketing a wide range of plastic products including uPVc Pipes & Fittings for various applications in water management & Irrigation, Construction & Telecommunication industry, besides a complete range of Plastic Moulded Furniture, marketed under the "Kisan" brand throughout the country through a wide dealer network.

**Kisan Barish rainwater Systems** are the country's first customised range of pipes and leak proof fittings designed to collect and direct the flow of rainwater to desired storage destinations like pits, trenches, bore wells, shafts and wells or to augment the water level by ensuring infiltration of rain water in the soil. Steel, Cast Iron or Cement pipes are been overlooked because the long lasting PVC pipes apart from being cheaper and maintenance free have distinct advantages,as they are corrosion free and less prone to breakage. The material used in the making of PVC pipes being inert dose not support bacterial and fungal growth. Usage of water is omnipresent at homes, in factories, at offices, in farms, in recreation and any place you name but still as the famous saying goes 'Water water everywhere but not a single drop to drink.'The **Kisan Barish rainwater Systems** has been launched keeping this in mind and will prove to be a boon for all of us to contribute in enhancing the availability of water for self-use.

## OUR PRODUCT RANGE

- PVC SWR PIPES & FITTINGS AS PER ISS: 13592
- uPVC PIPES & FITTINGS AS PER ISS: 4985
- uPVC CASING PIPES AS PER ISS 12818.
- uPVC SUBMERSIBLE RISING MAIN PIPES
- PVC BALL VALVE & FOOT VALVE
- uPVC CABLE DUCTING PIPES (MTNL-DOT APPROVED)
- BLUE THREADED PLUMBING PIPES & FITTING AS PER ASTM-D 1785
- HDPE PIPES AS PER ISS 4984 & 14151
- HDPE PLB CABLE DUCT PIPES
- HDPE SPRINKLER & DRIP IRRIGATION SYSTEMS
- KISAN CREST MOULDED FURNITURE


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| **BANGALORE** | : 080-22272454/22293114 | Fax : 22272238 |
| **AHMEDABAD** | : 079-27544080/30919079 | Fax : 27540183 |
| **SECUNDERABAD** | : 040-27902728/27902838 | Fax : 27903339 |


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CERTIFIED QUALITY RvA
ISO 9001 : 2000 CERTIFIED COMPANY