

## **Rain-handler**

### **What is a Rain-handler?**

Rain-handler is a state of the art rain dispersal system invented by an M.I.T. aeronautical engineer (Dick Schapker) as an alternative to conventional roof gutter systems. Rain-handler aids in the dispersal of the rain in a sheet flow fashion versus the concentrated flow typically created by conventional gutter systems through the downspouts. Rain-handler in conjunction with good ground cover consisting of grass or other plantings can be an effective and low maintenance solution to meet the MDE's ESD criteria for roof top disconnection. It basically converts the roof to a non-roof impervious surface which can be disconnected at that point per the MDE non-roof disconnection criteria.

The Rain-handler is manufactured in the US (Bridgeport, CT) with nationwide distributors, including but not limited to, Home Depot and Lowes. The [website](#) for "**Research Gutters**" provides information about this system. This [video](#) also provides additional information regarding how the system disperses the sheet flow from the roof systems and re-establishes the rain drop pattern and pushes it away from the gutter system.

### **Design Detail:**

Rain-handler render flow from rooftops as sheet flow and thus can be designed as a non-structural practice as long as they meet the MDE ESD Disconnection of Non-Rooftop Runoff criteria (N2). The information below is summarized from the MDE design guidance for non-rooftop disconnection.

- 1- Disconnections may be directed over HSG A, B, or C soils. HSG D soils that are compacted by construction equipment may need to be tilled and/or amended (to a depth of 4-6 inches) to increase permeability.
- 2- A 1-2 foot wide gravel (typ. No. 57 stone) transition strip should be provided from the disconnected area to the vegetated area to assure that runoff will flow in a safe and non-erosive manner.
- 3- Disconnections shall be at least 10 ft. from the nearest impervious surface of similar or lower elevation to prevent reconnection.
- 4- The drainage area to each disconnection shall be 1,000 ft<sup>2</sup> or less.
- 5- Disconnections shall be located on an average slope of 5% or less. Terraces, berms, or similar grade controls may be used where average slopes exceed 5%.

**Landscaping:** Areas receiving disconnected runoff shall be identified and notations relating to grading and construction operations included on the landscaping plans.

**Inspection:** To minimize disturbance and compaction, construction vehicles and equipment should avoid areas receiving disconnected runoff. A final inspection shall be conducted before use and occupancy approval to ensure that adequate treatment areas and permanent stabilization have been established.

**Maintenance:** Maintenance of areas receiving disconnected runoff is generally no different than that required for other lawn or landscaped areas. The areas receiving runoff should be protected

from future compaction (e.g., by planting trees or shrubs along the perimeter). Use in commercial areas, specifically areas expected to receive high foot traffic, should be discouraged.

**Photographs**



**What about roof water falling over entrance doors?**



Install a Doorbrella Accessory that diverts the water to the side and leaves the doorway dry.

**Will the water from a Rainhandler installation result in ground erosion?**



No, providing there is good ground cover in the form of grass or other plantings.

**Will Rainhandler work with steel roofs?**



Yes, Rainhandler works with all roofing materials.

**Will ice form on walkways that are located under Rainhandlers?**



In a melt and freeze situation it is unavoidable.

**Are some buildings better served with a combination of Rainhandler and gutters?**



Yes, i.e.: A recessed main entrance on a U shaped home with most of the water at the front of the house coming down a valley at each side of the door. Use eaves troughs and long downspouts on front side and Rainhandler on rear.

**Roof designs that have valleys carrying large amounts of water to the eave make it difficult to disperse without damage on the ground. How does Rainhandler help?**



Valley water is a problem associated with roof design but can be improved with the addition of a roof valley diverter mounted ½-1" below the drip edge.

**When ice slides off a roof, why is Rainhandler unaffected?**



Because it is mounted at the bottom edge of the fascia and ice passes outside it.

**Does Rainhandler cause ice dams?**



No, ice may form on the underside only, in the shape of icicles.

**Is the water dispersed from the lower side of the Rainhandler grids in a mist?**



No. Rainhandler breaks up the flow of water off the drip edge into droplets which are spread on a swath from 2 –4 feet wide, dependent upon the amount of rain.

**If a building has an overhang and sidewalks located directly under or just outside the fascia, will the water splash back onto the building wall?**



Likely, especially in windy conditions.

**How does Rainhandler work with very heavy and very light rains?**



Rainhandler gives the best dispersion on heavy rains and its narrowest swath on light drizzles.

**Will Rainhandler withstand ice and snow?**



Rainhandler will carry a load of 90 lbs per 5 ft section without damage.

**Can Rainhandler be used on buildings with angled fascias or other special situations such as Gambrel roofs?**



Yes, Rainhandler Eavestrough Alternative can be installed in special situations with the use of our accessories.

**Are Rainhandlers warranted against ice and snow damage?**



Yes, Rainaway products replaces any damaged section at no cost to the customer.

**If a roof is delivering water onto a deck, will deck damage occur?**



Yes, deck damage can occur. Adding Rainhandler will help prevent this damage.

**Should Rainhandler be installed on a second storey if the water falls on a lower roof?**



Yes. It saves wear and tear on the main level roof.