

HARCO Drainage Structure Specification

Revision: 10-14-2013

Product Requirements:

HARCO plastic drainage structures, including drain basins and inline drains, are fabricated from PVC pipe stock. HARCO employs a thermo-molding process to ensure a consistent watertight seal throughout the drainage structure and its outlet stubs. The PVC resin utilized to make this PVC pipe stock conforms to ASTM D1784 cell class 12454.

The outlet stubs for HARCO plastic drainage structures are also manufactured from PVC pipe stock utilizing a thermo-molding process to ensure a tight pipe-to-structure fit, so that when utilizing the appropriate pipe gaskets, the pipe-to-structure connection meets or exceeds the pressure requirements of the ASTM D3212 standard for pipe connections of plastic drainage pipe and sewer pipe using flexible elastomeric seals. These pipe gaskets must meet ASTM F477 requirements.

The ductile iron castings provided with HARCO drain basins and inline drains are viewed as an integral part of the HARCO drainage structure package. These ductile iron castings are to be provided by HARCO Fittings of Lynchburg, VA., or by a pre-approved alternate source.

HARCO ductile iron grates and frames are designed specifically to fit HARCO surface drainage structures. This line of ductile iron grates and frames are rated either H25 for standard traffic loads, H10 for pedestrian area loads, or light duty for landscape or other non-traffic areas, affording flexibility for customer needs depending on application and project requirements. The H10 rated grates meet ADA vane width requirement not to exceed .5 inch. This line of ductile iron castings is manufactured from metal conforming to ASTM A536 grade 80-55-06 for ductile iron. The ductile iron grates and frames are painted black.

Installation Guidelines:

HARCO plastic drainage structures and inline drains are designed to be installed using accepted plastic pipe backfill materials and practices as referenced in ASTM D2321. Use of class 2 rated bedding and backfill material, including angular stone and other crushed or granular materials as clarified in ASTM D2321 are acceptable materials. Acceptable bedding and backfill material will also be placed and compacted in layers according to ASTM D2321 guidelines. A concrete support ring is required to be poured around and under the grate and frame for H10 rated pedestrian and vehicle load applications, and for all H25 traffic load applications. Local project conditions should be considered in the design of the concrete support ring, including, but not limited to, soil conditions and expected traffic loads. Refer to ASTM D2321 procedures and guidelines for any additional installation-related issues.