



## **MSD-25E “Edge” Container**

The Otto Multi-System Design MSD-25E “Edge” rollout container consists of injection-molded, high density polyethylene plastic body, hinged lid, two (2) hinge pins, two (2) plastic wheel assemblies, and a solid steel axle.

The MSD-25E rollout refuse container is compatible with fully automated arm lifter systems. The MSD-25E is also compatible with the semi-automated bar lifter systems, with the purchase of a special attachment.

### **VOLUME CAPACITY:**

The total actual volume of the Otto MSD-25E container is 28.35 gallons.  
Base: 25.65 gal      Lid: 2.7 gal

### **LOAD RATING:**

The Otto MSD-25E rollout refuse container is capable of accommodating a load of 88 lbs.

### **WEIGHT:**

The completed assembly weight of the Otto MSD-25E container is 14.8 lbs. when equipped with Otto’s 8” blow molded wheels.

### **DIMENSIONS:**

Overall Height:      28.8"  
Loading Height:      26.0"  
Overall Width:      19.8"  
Overall Depth:      24.8"  
Minimum Grip Diameter: 18.0"

### **CONTAINER BODY:**

The Otto MSD-25E container body is injection-molded from High Density Polyethylene (HDPE). The container body has smooth surfaces both on the interior and exterior. The interior is free of crevices and recesses where refuse could become trapped, in order to allow complete emptying. The average wall thickness is 0.15" on the container sidewalls and 0.15" on the bottom section. The high-density polyethylene has a density of 0.945 to 0.954 grams cm<sup>3</sup>. The Melt Index (MI) of the HDPE is 3.5 to 6.0.

The top of the container body is reinforced with a rim around its entire perimeter. This feature adds structure and stability to the Otto MSD-25E container and provides a flat surface for the lid to close on. The top of the rim has a rain lip to prevent water from entering the container with the lid closed. The handles are integrally molded into the

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container body at the top rim. The underside of the rim is reinforced with a total of twenty-eight (28) integrally molded-in gussets/ribs spaced around the entire circumference of the container.

The front of the container has a molded recess that provides for the front “catch,” or lower lift bar. The Otto MSD-25E container is offered with an integrally molded plastic front catch bar. The container is nestable with this feature fully installed/integrated. The plastic lower catch bar is integrally molded into the container base in the front recess. Plastic bar containers have no openings into the container bodies.

The bottom of the container has molded-in wear ridges that extend around its perimeter. The wear ridges provide additional protection against abrasive wear if the container is slid on asphalt or pavement and improve impact resistance of the bottom of the container. There is a clearance opening in the middle of the axle which allows a person’s foot to be placed directly upon the axle to allow the container to be easily tilted, even with a full load.

The Otto MSD-25E rollout container has an integrally molded front “pouch” to facilitate semi-automated lifting. The front wall of the pouch has eleven (11) corrugations in order to support the lifting platform under maximum load lifting forces. This upper pouch is reinforced with a pattern of eight (8) internal ribs. These ribs add strength and structure to the lifting pouch and front of the container.

Otto containers are designed for nesting and easy stacking for shipment and storage. Stacking ribs are molded onto the exterior of the top rim to prevent containers from becoming wedged together during shipment.

The weight of the container body is approximately 10.7 lbs. This weight does not include any other components.

### **LID:**

The Otto MSD-25E container lid is injection-molded from HDPE and is attached to the container body using two HDPE snap-lock hinge pins. The lid rotates freely about the hinge a full 270 degrees. The lid, when closed, rests on the top rim of the container body, providing a secure, tight fit around the entire perimeter between the lid and base. This prevents rain, insects and vermin from entering the container, as well as preventing the escape of most odors when the lid is closed.

The lid is molded with a hand-hold lip that extends across the full width of the front of the lid, and wraps around both corners. This allows the lid to be easily opened from three sides without contact with refuse or residue.

The Otto MSD-25E lid attachments are cylindrical-shaped and double-ribbed, creating an extremely robust attachment to the container body. The locking mechanism for the lid hinge pin, which is inserted into the attachments, is retained beneath a molded-in step feature within the lid.

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The minimum material thickness in the lid is 0.12".

The weight of the lid is approximately 2.1 lbs.

### **HINGE PIN:**

The Otto MSD-25E lid hinge pins are injection-molded from HDPE. The hinge pins secure the lid to the integrally molded lid hinge and handle detail. Two (2) hinge pins are used to secure the lid. The hinge pins are installed at the factory using a rubber mallet. At installation, the truncated conical center portion of the hinge pin compresses and snaps into the open slot in each side of the handle detail. This prevents vandalism and securely fastens the lid to the container base. The hinge pins can be removed with a special tool available from Otto.

### **LID HINGE AND HANDLE DETAIL:**

The Otto MSD-25E lid hinge is integrally molded to the container body and lid. The handle diameter is 1.2" and provides 1.87" clearance for gloved hands.

### **AXLE:**

The Otto MSD-25E machined hollow steel axle has a 3/4" diameter. The axle is zinc plated to protect against rust and corrosion. The large diameter of the axle allows the container to be easily rolled on any surface and supports a fully loaded container. The axle will withstand a 105-lb. load without permanent deformation. The weight of the axle is 0.85 lbs.

### **WHEELS:**

The Otto MSD-25E wheels are slightly recessed into the container body and can be relocated to forward positioned hole setting, to allow for a fully assembled nestable cart. The overall diameter of the blow molded wheel is 8".

The wheel assembly is tamper and theft-resistant and takes seconds to install on the axle. This is made possible with the use of a spring-loaded internal steel detent, which snaps into a locking groove in the axle. Yet, the wheel assembly can be easily removed with a special small hand tool available from Otto.

The weight of each wheel is 0.89 lbs.

### **MARKINGS:**

All Otto MSD-25E containers are hot stamped with a unique sequenced serial number to facilitate distribution and control. The customer's name or logo can be hot stamped on the container's body or lid. The containers are permanently marked with the month and year of production, mold number, material identification, patent number, model, and manufacture's insignia.

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## **WORKMANSHIP:**

The Otto MSD-25E plastic material — high-density polyethylene — is manufactured from virgin raw materials by major petrochemical companies, (e.g., Exxon, Chevron-Phillips, Quantum) and includes no recycled or regenerated plastic or foreign material. Up to 50% recycled material (PCR) content may be available upon request on particular colors, where suitable feedstock is available.

## **COLOR:**

Otto's standard colors are Dark Blue, Light Blue, Green, Forest Green, Dark Gray, Light Gray, Brown, and Black. Other colors are available to special order.

All injection-molded parts are specifically prepared to be colorfast so that the plastic material does not alter appreciably in normal use. Due to the use of UV (ultraviolet) stable pigment and injection molding process, Otto containers have excellent color fastness.

## **UV LIGHT STABILIZATION:**

The Otto MSD-25E container is stabilized against ultraviolet degradation with not less than 0.3% UV additives. This is a state-of-the-art package that meets or exceeds older systems requiring 0.5% UV additive by weight, and provides product viability for a minimum of 10 years of outdoor exposure.

## **RECYCLABILITY:**

The Otto MSD-25E container is produced with a fully recyclable thermoplastic High Density Polyethylene (HDPE) resin. This allows the material to be recycled and reused after the useful life of the container.

## **QUALITY ASSURANCE PROCEDURES AND PERFORMANCE TESTING:**

The Otto MSD-25E container is designed to withstand the following series of performance tests. The performance test requirements were designed to simulate the type of situations encountered in actual use. The severity of some tests were scaled to anticipate an expected 10-year life.

### Material Testing

1. Melt Flow Index Test: To check that the polymer batch matches the supplier certification.
2. Colorant Color Match: Compare lot based color chips to the color chip master to ensure consistency.

### In-Process Quality Tests

1. Drop Test: Cart is raised 12' under load and dropped 4 consecutive times.
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- This provides that there is not a processing issue.
2. Bib Pull Test: Bib pulled to failure to evaluate brittleness. Bib should break tensile.
  3. Bar Pull Test: Bar pulled to failure. Determines if there is weakness at knit line at center of plastic bar. Bar should break off center.
  4. Fit Checks: Mating components (axle and lid) installed onto carts after cooled to ensure proper fit, form & function.
  5. Weight & Thickness Checks: Evaluates molding process.

All designs, specifications, and components are subject to change at the manufacturer's sole discretion at any time without notice. Data published herein is informational in nature and shall not be construed to warranty suitability of the unit for any particular purpose as performance may vary with the conditions encountered.



# RESIDENTIAL Containers



# 95-GALLON

# solutions

95EDGE



**SPECIFICATIONS**  
 MODEL .....Edge 95G  
 LOAD RATING..... 335 Pounds  
 ASSEMBLY WEIGHT .....approx. 37.8 Pounds  
 STACKING ..... 8 High  
 LTL STACKING.....7 High  
 TOTAL QUANTITY (53' Truck) .....504

95MOMENTUM



**SPECIFICATIONS**  
 MODEL ..... Momentum 95G  
 LOAD RATING..... 335 Pounds  
 ASSEMBLY WEIGHT .....approx. 35.7 Pounds  
 STACKING .....13 High  
 LTL STACKING..... 11 High  
 TOTAL QUANTITY (53' Truck) .....728

95MILLENNIUM



**SPECIFICATIONS**  
 MODEL ..... Millennium 95G  
 LOAD RATING..... 335 Pounds  
 ASSEMBLY WEIGHT .... approx. 34.5 Pounds  
 STACKING .....9-10 High  
 LTL STACKING..... 8 High  
 TOTAL QUANTITY (53' Truck) ..... 504 (AZ)  
 TOTAL QUANTITY (53' Truck) ..... 560 (NC)



# 65EDGE

# 45EDGE



### SPECIFICATIONS

MODEL ..... Edge 65G  
 LOAD RATING..... 230 Pounds  
 ASSEMBLY WEIGHT ..... approx. 29.5 Pounds  
 STACKING ..... 9 High  
 LTL STACKING..... 8 High  
 TOTAL QUANTITY (53' Truck) .....720

### SPECIFICATIONS

MODEL ..... Edge 45G  
 LOAD RATING..... 160 Pounds  
 ASSEMBLY WEIGHT ... approx. 22.2 Pounds  
 STACKING (Assembled) ..... 8 High  
 STACKING (Unassembled)..... 10 High  
 LTL STACKING (Assembled)..... 8 High  
 LTL STACKING (Unassembled) ..... 10 High  
 TOTAL QTY Assembled (53' Truck) .....672  
 TOTAL QTY Unassembled (53' Truck)...760

# 35EDGE

# 25EDGE



### SPECIFICATIONS

MODEL ..... Edge 35G  
 LOAD RATING..... 122.5 Pounds  
 ASSEMBLY WEIGHT ..... approx. 19.8 Pounds  
 STACKING ..... 10 High  
 LTL STACKING..... 9 High  
 TOTAL QUANTITY (53' Truck) ..... 940

### SPECIFICATIONS

MODEL ..... Edge 25G  
 LOAD RATING ..... 88 Pounds  
 ASSEMBLY WEIGHT ... approx. 14.8 Pounds  
 STACKING (Assembled) ..... 9 High  
 STACKING (Unassembled) .....12 High  
 LTL STACKING (Assembled)..... 9 High  
 LTL STACKING (Unassembled) .....12 High  
 TOTAL QTY Assembled (53' Truck) ..... 954  
 TOTAL QTY Unassembled (53' Truck) ... 1,272