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Airport and Port Infrastructure Access Solutions



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Airport and Port Authority Access Solutions

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1845 Series
Up to 42 1/4" of clear opening (page 14)

Linear Trench Drainage
Our most popular heavy duty trench series (page 34)

Airport and Port Construction Castings and Innovative Access Solutions



EJ products are used on airport projects around the world, providing reliable drainage and access solutions.

EJ offers many styles of construction castings specifically designed for airports and other environments that undergo excessive load conditions. From round or square manhole frames and covers, catch basins, drainage inlets, trench grating and mooring eyes, EJ has you covered. All extra heavy duty construction castings are manufactured with gray iron conforming to ASTM A 48 Class 35B and ductile iron conforming to ASTM A 536. Many of our airport castings can be made-to-order with custom logos and messaging, in most languages, to meet your project specifications.

These airport and sea port authority access solutions can be found installed and in use at numerous airports, ports and other large projects located in North America and other parts of the world. For a list of projects utilizing EJ products, please see page 53.

Loading Requirements

All of our products are designed to meet or exceed the specified loading requirements. They conform to AASHTO and ASTM standards. These standards specify product groups and minimum load classifications dependent on the place of installation. Additionally many casting are also certified by a third party to meet EN124 requirements.



Proof Load Testing – Airport Castings

All airport construction castings must pass a rigorous proof load test conducted in accordance with AASHTO M306 guidelines, with the proof load amount revised to 200,000 pounds to account for high loading environments. The proof load testing procedure calls for the load to be concentrated on a 9" x 9" contact area in the center of the cover or grate and hold 200,000 pounds for one minute. Following the test the casting is carefully inspected. Cracks or permanent deformation are cause for rejection. Frequently, EJ castings are tested far beyond the specified proof load, often to destruction. EJ castings that are rated for airport service are designed to meet or exceed the loading requirements listed in Federal Aviation Administration (FAA) advisory circulars AC 150/5320-6D Appendix 3 and AC 150/5370-10A, Item D-751.



Material Selection

Depending on the model, our construction castings can be manufactured using either gray iron or ductile iron. Gray iron has an unequalled record of success as a material for construction castings. Gray iron is highly resistant to corrosion and maintains compressive strength, abrasion resistance, vibration absorption and low-notch sensitivity. Additionally, gray iron has a long service life and is very cost effective. Ductile iron combines the advantages of gray iron with greater strength, toughness, higher impact resistance and increased durability without additional weight. Because it has the ability to withstand greater loads without failure, it is often specified for extra-heavy load applications.

Load Ratings and Descriptions

Rating	Acceptable Load Weight (lbs)	Description
Airport Extra Heavy Duty	Max. 200,000	Casting has been proof load tested to a minimum 200,000 lbs. This includes an additional safety factor over FAA design loading.
Extra Heavy Duty	Max. 100,000	Casting has been proof load tested to 100,000 - 200,000 lbs. This meets the design loading associated with the FAA wheel loading.
Heavy Duty	Max. 40,000	Casting must meet the requirements of AASHTO M306 to be classified as heavy duty. AASHTO M306 requires that castings bear a minimum of 40,000 lbs on a 9" x 9" area.

We are EJ

EJ is the leader in the design, manufacture and distribution of access solutions for water, sewer, drainage, telecommunications and utility networks worldwide.

EJ offers the broadest range of high-quality infrastructure access solutions. Our distribution coverage continues to expand into new markets. As an entrepreneurial family-owned company, we have a long, successful heritage of meeting change with innovation.

Since our founding in 1883, we have grown by providing access solutions to meet the demands of the world’s growing infrastructure. Fueled by innovation, our design, manufacturing, and distribution processes continue to evolve—creating solutions that provide an unparalleled customer experience.

EJ is a family-owned company that has a long history of fostering strong customer relationships. These relationships are supported with personal contact from company representatives, a complete offering of product literature, a comprehensive web site (ejco.com), trade show exhibits, as well as seminars and training opportunities. All these services help to provide customers with the product information required for successful projects.

Wherever you are, EJ provides access solutions that adhere to the local specifications in a timely and competitive manner. We also work with our customers to produce access solutions to meet their specialized requirements. Our sales staff around the world understands the unique needs of your market.

Our people: our core strength. While working together, employees use their expertise, knowledge, and ability to achieve positive results. Core values at EJ include: safety and security, honesty and integrity, environmental responsibility, respect for others, quality and excellence and social responsibility. These core values are imbedded into our culture and are practiced daily throughout the organization.

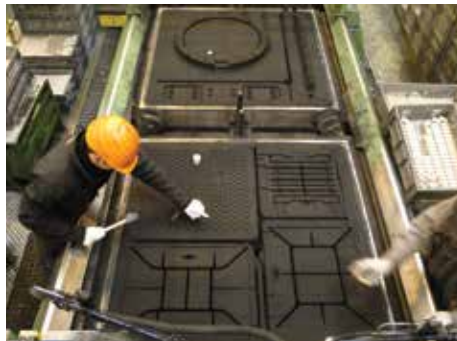
Our state-of-the-art manufacturing plants employ world class machinery, systems and processes to produce specified products efficiently and on time.

Wherever you are, whatever your specific requirement might be, EJ has the best access solutions for your infrastructure project.



Product Range

EJ offers a comprehensive portfolio of products and services; including municipal and construction castings, fabricated products, water distribution solutions, and other infrastructure access solutions.



Quality Manufacturing

Integrating technology, lean processes and over a century of experience in crafting metal castings and fabrications keeps our facilities performing at peak efficiencies.



Distribution Network

Access solution products, including municipal and construction castings, are available worldwide at our internal stocking locations and from our extensive network of distribution partners.

A Legacy is Cast



William E. Malpass (standing back right, next to window) with employees during the 1920s.

The EJ legacy dates back to 1883 when William E. Malpass and his father-in-law Richard W. Round established a foundry on the shores of Lake Charlevoix, in the town of East Jordan, Michigan, USA. This foundry was called East Jordan Iron Works and originally produced cast parts for the lumber industry, machinery, ships, agricultural equipment and railroads.

In the 1920s, when the lumbering era came to a close, the company expanded into new markets allowing continued success in changing times and shifted to the production of street castings, water works valves, fire hydrants and various industrial castings.

During World War II the foundry produced castings for the war effort.

In the 1950s semi-automation was introduced into the foundry. During the 60s, the third generation converted the foundry to an automated high-pressure molding line. By integrating automatic sand processing and mechanized casting handling systems, the company was operating the largest

automated molding line in the United States and maximized production capabilities.

Since the mid-1980s the business has been led by the fourth generation descendants of the Malpass family. They have transformed the Midwest business into an international leader of construction castings.

In the 1990s, new acquisitions throughout the United States allowed the company to expand product lines, sales offices, distribution capabilities and customer service across North America. In 2001, a new foundry was built in Oklahoma, providing additional capacity to service the construction castings market.

The 21st century had barely introduced itself when East Jordan Iron Works began turning its attention to expansion in other parts of the world, including Cavanagh Foundry in Ireland (2000), Norinco in France (2004), McCoy Construction Castings in Canada (2006), and HaveStock in Australia (2010).

In 1999, the fifth generation of the Malpass family began joining the company to continue the strong family commitment to its success. Dedicated to maintaining the company's long-established culture and values, they are significantly involved in strategies and priorities, bringing a renewed energy and enthusiasm to the company.

In 2012, East Jordan Iron Works and its affiliated companies began doing business using the same name and brand EJ. One global name and brand, supported by a single mission, vision and set of values has unified the company. This action leverages all company resources to improve internal operations, as well as provide superior product offerings and services to its valued customers. EJ has supplied products to infrastructure projects in over 140 countries around the world.

EJ continues to be 100% owned and operated by the Malpass family with corporate headquarters located in East Jordan, Michigan.

Product Lines

Street Castings

- Manhole Frames and Covers
- Curb Inlets and Frames
- Utility Castings
- Airport and Port Authority Castings
- Tree Grates
- Trench Grates
- Drainage Grates
- DURALAST® Detectable Warning Plates



Fabricated Products

- Grating
- Riser Rings
- INFRA-RISER® Adjustment Risers
- Aluminum Access Hatches
- Custom Fabrications



Water Products

- WaterMaster® Fire Hydrants
- FlowMaster® RW Gate Valves
- Valve Boxes
- Meter Boxes

Innovative Access Solutions

- Captive Hinge Grates/Covers
- ERGO® and ERGO® XL Access Assemblies
- Ductile Hinged Hatch Access Assemblies
- 5624 Heavy Duty Hinged Grates
- SELFLEVEL® Access Assemblies
- REVOLUTION® Access Assemblies
- ERMATIC® Modular Covers
- Multi-Leaf® Hinged Covers
- CAMPRESSION® Access Assemblies
- Composite Access Covers



Innovative Features

- LOCKEO® Security Feature
- Mechanical Strut Lift Assist
- Cam Lock
- EON LOCK® Designs
- EPIC® Pick Bar
- MPIC® Multi-tool Pick Bar



Capabilities

Service

- Employees with localized knowledge throughout the world
- On-site assistance
- Seminars and technical presentations
- Communicate new product innovations
- Assistance with specification process

Innovative Use of Technology

- Electronic invoicing
- EDI transactions
- ejco.com—comprehensive product database with advanced search and browsing capabilities
- Electronic certification of materials provided upon request
- CAD and PDF drawings available electronically

Quality Manufacturing

- Product research and development
- Commitment to reinvestment
- North America ISO 9001 certified facilities
- Europe ISO 9001, ISO 14001, OHSAS 18001 certified facilities
- Australia ISO 9001 certified facilities

Foundry Facilities

- East Jordan, Michigan
- Ardmore, Oklahoma
- Picardie/St. Crepin, France

Fabrication Facilities

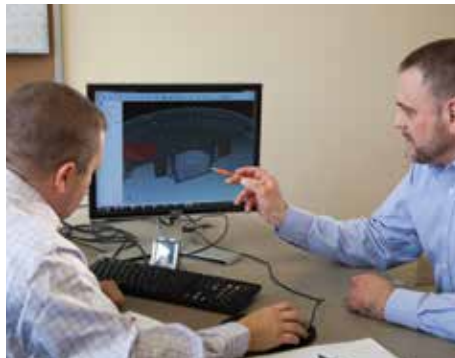
- Birr, Ireland
- Youngstown, Ohio
- Cicero, New York
- Tooele, Utah
- Ardennes/Bogny sur Meuse, France
- Geebung/Queensland, Australia

Water Products Manufacturing

- East Jordan, Michigan

Distribution

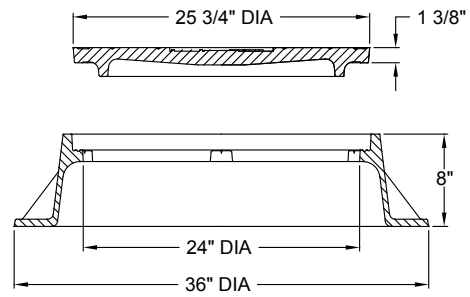
- Delivering products quickly and smoothly worldwide
- Stocking branch locations throughout U.S., Canada, Europe, and Australia
- Distribution centers located in Michigan, Oklahoma, Ireland, France, and Australia



Manhole Frames, Covers and Assemblies



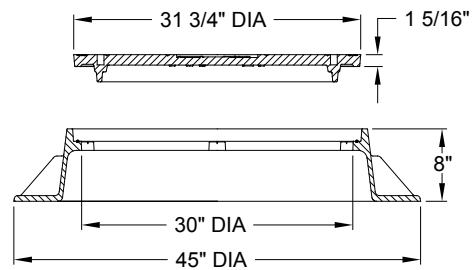
1207 FRAME, COVER, AND GRATE



Features	Cover	Grate	Frame*	Lock Type	Other
Airport extra heavy duty Special proof load to 245,000 lbs Closed pickholes Threaded lift holes	Ductile iron Solid Vented Closed pickholes Threaded lift holes	Ductile iron Extra heavy duty 1203M1—202 sq. in. open area	Gray iron Bottom Flange 4" frame—1203Z1 6" frame—1405Z 8" frame—1203Z3 10" frame—1204Z Reversible 4" frame—3771Z	Hex bolts Tamper proof bolts Pent head bolts	Gaskets Custom badging/ lettering

*Flange dimensions vary per series

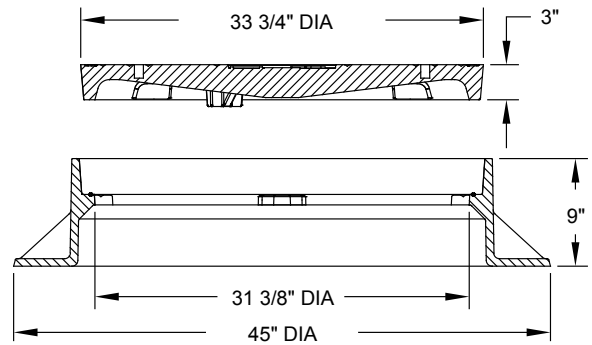
1230 FRAME, COVER, AND GRATE



Features	Cover	Grate	Frame*	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Vented Closed pickholes Threaded lift holes	Ductile iron Airport extra heavy duty V3600-4—350 sq. in. open area	Gray iron Bottom Flange 4" frame—1230Z 5 5/8" frame—1820Z 6 1/2" frame—1232Z 7" frame with square base flange—8027Z 7 1/2" frame—1370Z 8" frame—1234Z1 10" frame—1825Z Reversible 4" frame—V1600-4	Hex bolts Tamper proof bolts Pent head bolts	Gaskets Custom badging/ lettering

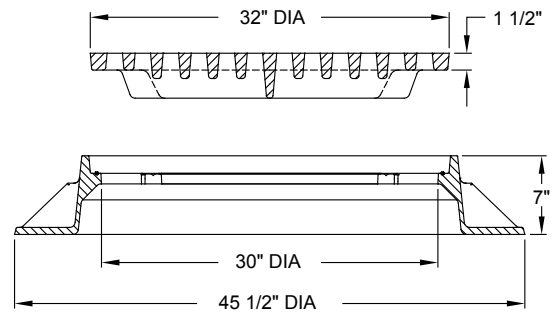
*Flange dimensions vary per series

1240 FRAME AND COVER



Features	Cover	Frame	Lock Type	Other
Airport extra heavy duty Special proof load to 245,000 lbs	Ductile iron Solid Vented Closed pickholes Threaded lift holes	Gray iron Bottom Flange 9" frame—1240ZPT	Hex bolts Tamper proof bolts Pent head bolts	Gaskets Custom badging/ lettering

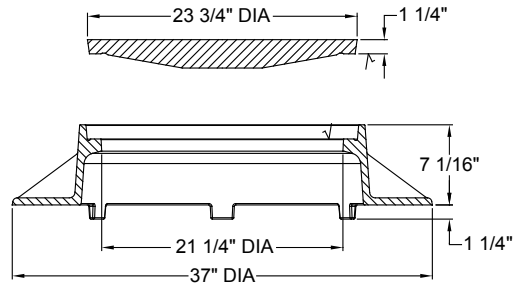
1324 FRAME, COVER, AND GRATE



Features	Cover	Grate	Frame*	Lock Type	Other
Airport extra heavy duty	Ductile iron Extra heavy duty Vented	Ductile iron Airport extra heavy duty 1324M—270 sq. in. open area	Gray iron Bottom Flange 4 1/2" frame—V1420 5 1/2" frame—1496Z 6 1/2" frame—1320Z 6 1/2" frame—1322Z 6 1/2" frame with square base flange—1323Z 7" frame—1324Z 8 1/2" frame—V1419 Top Flange 4 1/2" frame—V1816 Reversible 4" frame—V1480Z	Hex bolts Tamper proof bolts Pent head bolts	Custom badging/ lettering

*Flange dimensions vary per series

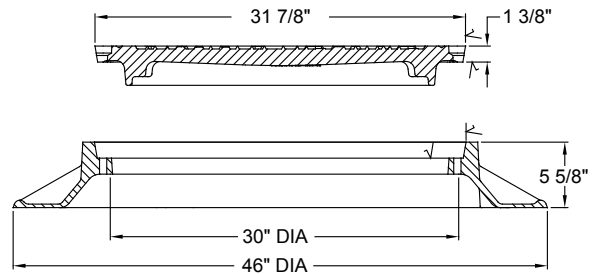
1770 FRAME AND COVER



Features	Cover	Frame*	Lock Type	Other	
Airport extra heavy duty	Ductile iron Solid Closed pickholes	Gray iron Bottom Flange 2 1/2" frame—V1136 4" frame—1244Z 4" frame with square base flange—1244Z 6" frame—1246Z1 6" frame—1337Z 6" frame—1338Z 7 1/16" frame—1771Z2 8" frame—1248Z1	Reversible 4" frame—1244Z1 Top Flange 4" frame—2855Z	Crack drill hex bolts Crack drill tamper proof bolts Crack drill pent head bolts	Gaskets Custom badging/lettering

*Flange dimensions vary per series

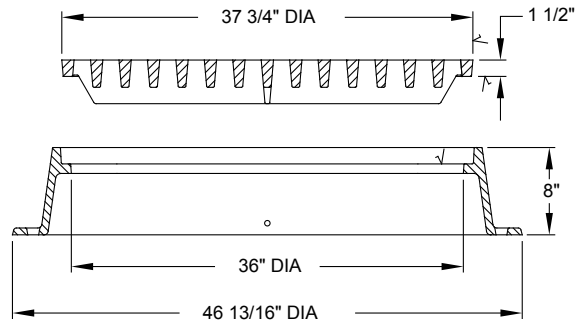
1810 FRAME, COVER, AND GRATE



Features	Cover	Grate	Frame*	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Pick bars Open pickholes	Ductile iron Airport extra heavy duty V3600-4—350 sq. in. open area	Gray iron Bottom Flange 4" frame—1230Z 5 5/8" frame—1820Z 6 1/2" frame—1232Z 7" frame with square base flange—8027Z 7 1/2" frame—1370Z 8" frame—1234Z1 10" frame—1825Z Reversible 4" frame—V16004	Hex bolts Tamper proof bolts Pent head bolts	Gaskets Custom badging/lettering

*Flange dimensions vary per series

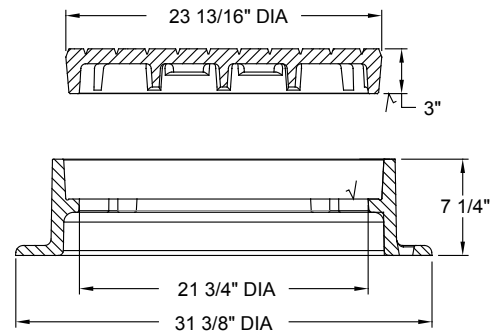
1833 FRAME AND GRATE



Features	Cover	Grate	Frame*	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Closed pickhole Threaded lifting hole	Ductile iron 2812M/1580M—Airport extra heavy duty—458 sq. in. of open area 2812M2—Extra heavy duty ADA style—304 sq. in. of open area	Gray iron Bottom Flange 4" frame—1833Z4 5" frame with square base flange—1833Z3 6" frame—2287Z 8" frame—1833Z2 8" frame with square base flange—1833Z1 10" frame—2381Z Top Flange 4 1/2" frame—2812Z	Hex bolts Tamper proof bolts Pent head bolts	Gaskets Custom badging/lettering

*Flange dimensions vary per series

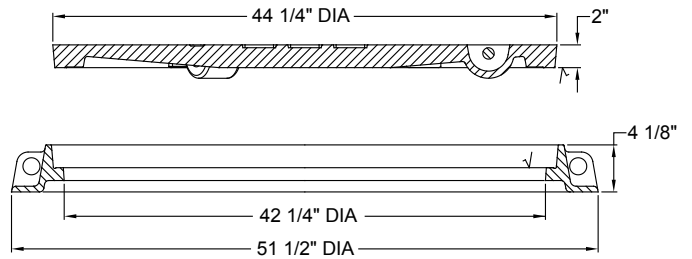
1835 FRAME AND COVER



Features	Cover	Frame*	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Vented Lift holes Closed pickholes	Gray iron Bottom Flange 4" frame—1834Z 7 1/16" frame—1835Z 7 1/4" frame—1840Z	Crack drill hex bolts Crack drill pent head bolts	Custom badging/lettering

*Flange dimensions vary per series

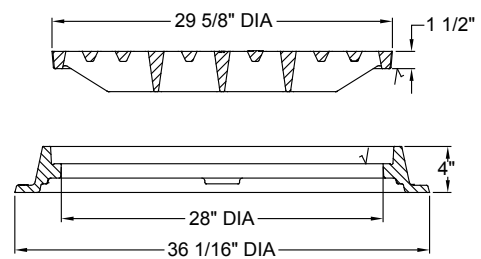
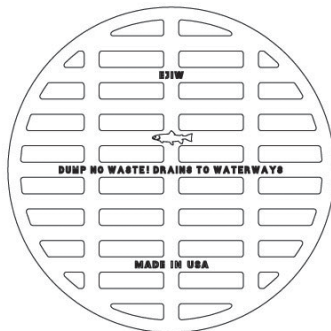
1845 FRAME AND COVER



Features	Cover	Frame*	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Pick bars Inner/outer cover— accepts 1810 inner cover	Gray iron Bottom Flange 4 1/8" frame—1845Z 8 1/2" frame—1845Z2 Top Flange 4" frame—1843Z2	Crack drill hex bolts Crack drill pent head bolts Crack drill tamper proof	Custom badging/ lettering

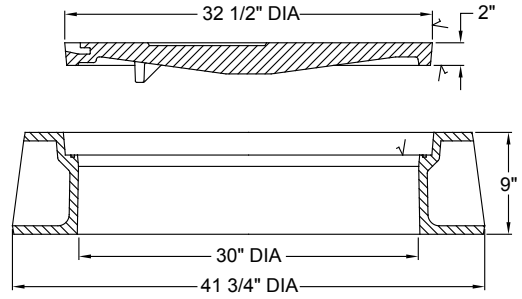
*Flange dimensions vary per series

1892 FRAME AND GRATE



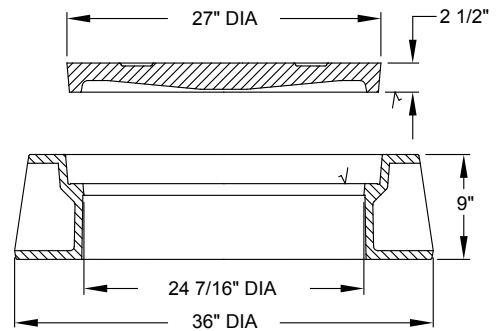
Features	Cover	Grate	Frame	Lock Type
Airport extra heavy duty	Ductile iron Solid Vented Lift holes Closed pickholes	Ductile iron 253 sq. in. of open area	Gray iron Bottom Flange 4" frame—1892Z 7 1/4" frame—1470Z	Crack drill hex bolts Crack drill pent head bolts

1895 FRAME, COVER, AND GRATE



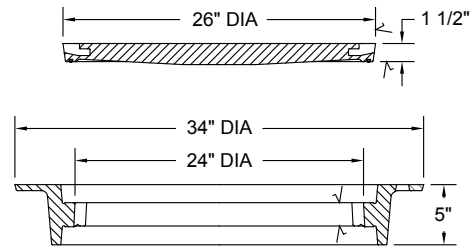
Features	Cover	Grate	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Vented Closed pickholes Pick bars	Ductile iron 378 sq. in. of open area—2880	Gray iron Bottom Flange 9" frame—1895Z	Hex bolts Pent head bolts	Gasketed Custom badging/ lettering

1900 FRAME, COVER, AND GRATE



Features	Cover	Grate	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Vented Closed pickholes Pick bars	Ductile iron 378 sq. in. of open area—2870	Gray iron Bottom Flange 9" frame—1900Z	Hex bolts Pent head bolts	Gasketed Custom badging/ lettering

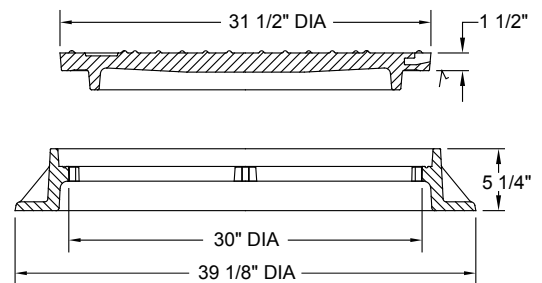
1905 FRAME AND COVER



Features	Cover	Frame*	Lock Type	Other
Airport extra heavy duty Pick options available	Ductile iron Solid Closed pickholes	Gray iron Bottom Flange 4" frame-1046Z 6" frame-V1380-1 6" frame-V1424-2 7" frame-1040Z 7" frame-1045Z 7" frame-1045Z1 7" frame-1045Z2 7" frame-1045Z3 7 1/2" frame-2027Z1 8" frame-1047Z 9" frame-1048Z 10" frame-1049Z	Top Flange 4" frame-2800Z 4" frame-2800Z1 Reversible 5" frame-2450Z Cast in Slab Type Frame 4" frame-1080Z	Hex bolts Pent head bolts Gaskets Custom badging/ lettering

*Flange dimensions vary per series

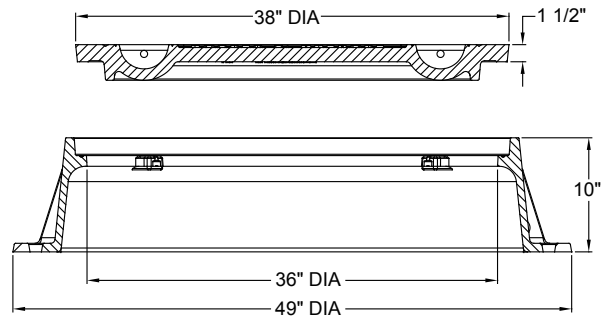
2230 FRAME AND COVER



Features	Cover	Frame*	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Closed pickholes	Gray iron Bottom Flange 5 1/4" frame-2230Z 5 1/4" frame-2295Z 6" frame-2232Z Reversible 4" frame-2230Z1	Hex bolts Pent head bolts	Gasketed Custom badging/ lettering

*Flange dimensions vary per series

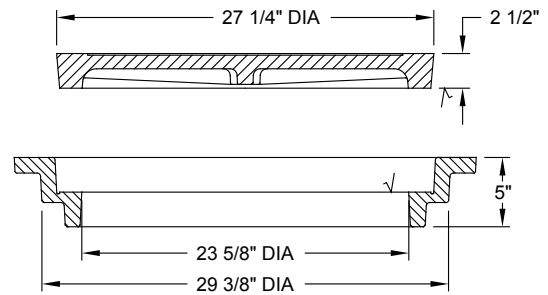
2812 FRAME, COVER, AND GRATE



Features	Cover	Grate	Frame*	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Pick bars Drop handles	Ductile iron Airport extra heavy duty—458 sq. in. of open area—2812M/1580M Extra heavy duty ADA style—304 sq. in. of open area—2812M2	Gray iron Bottom Flange 6" frame—2380Z 7" frame—1812Z3 10" frame—1812Z2 10" frame—2381Z Top Flange 4 1/2" frame—2812Z	Hex bolts Tamper proof bolts Pent head bolts	Gaskets Custom badging/lettering

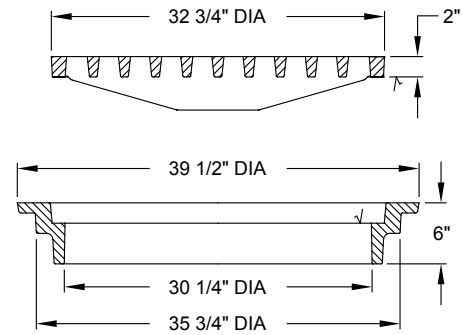
*Flange dimensions vary per series

2870 FRAME, COVER, AND GRATE



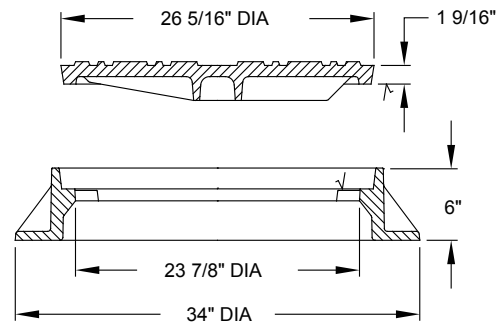
Features	Cover	Grate	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Drop handles	Ductile iron 236 sq. in. of open area	Ductile iron Top Flange 5" frame—2870Z	Crack drill hex bolts Crack drill pent head bolts Crack drill tamper proof bolts Cross strap	Custom badging/lettering

2880 FRAME, COVER, AND GRATE



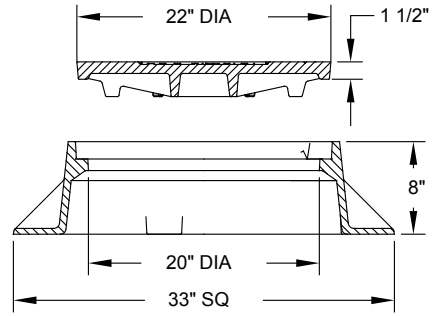
Features	Cover	Grate	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Drop handles	Ductile iron 378 sq. in. of open area	Gray iron Top Flange 5" frame—2880Z	Crack drill hex bolts Crack drill pent head bolts	Custom badging/ lettering

3767 FRAME AND COVER



Features	Cover	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron Vented Lift holes	Gray iron Bottom Flange 6" frame—3767Z	Allen head bolts	Custom badging/ lettering

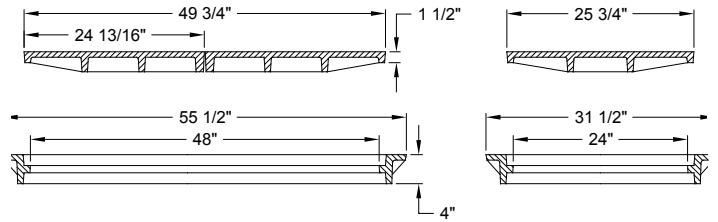
8055 FRAME AND 1130 COVER



Features	Cover	Frame*	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Vented Lift hole Closed pickhole	Gray iron Bottom Transitional Frame with Square Base Flange 8" frame—8055Z Bottom Flange 4" frame—1130Z 4" frame—1490Z 8" frame—1125Z Top Flange 4" frame—2935Z Reversible 4" frame—1135Z 4" frame—1490Z2	Hex bolts Pent head bolts	Custom badging/ lettering

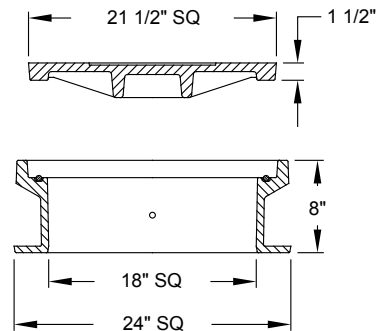
*Flange dimensions vary per series

V6667 JUNCTION BOX FRAME WITH DOUBLE COVERS, GRATES



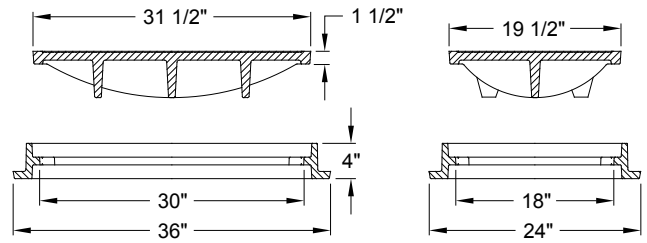
Features	Cover	Grate	Frame	Lock Type	Other
Extra heavy duty	Ductile iron Solid Pick bar	Ductile iron V5667 (see pg. 30 for more information)	Gray iron Reversible 4" frame—V6667	Crack drill hex bolts Crack drill pent head bolting	Custom badging/lettering

8080 JUNCTION BOX FRAME AND COVER



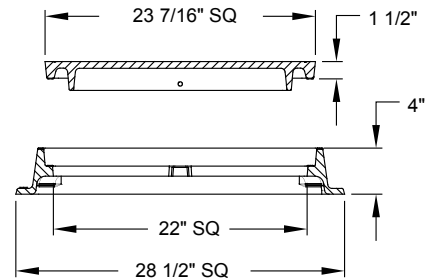
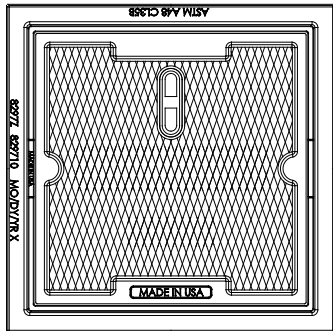
Features	Cover	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Pick bar	Gray iron Bottom Flange 8" frame—8080Z	Hex bolts Pent head bolts	Gasketed Custom badging/lettering

8083 JUNCTION BOX FRAME AND COVER



Features	Cover	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Drop handles	Gray iron Reversible 4" frame—8083Z	Hex bolts Pent head bolts	Custom badging/ lettering

8297 JUNCTION BOX FRAME AND COVER

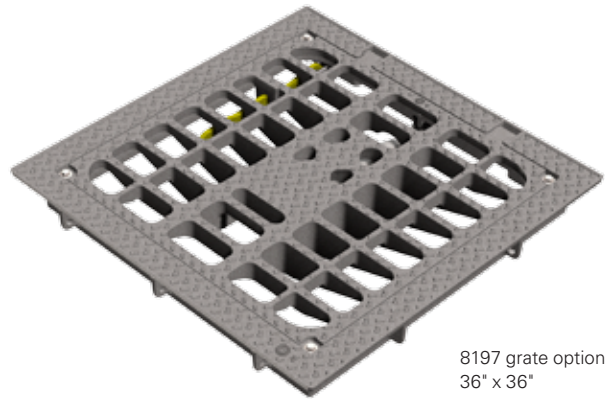


Features	Cover	Frame	Lock Type	Other
Extra heavy duty	Ductile iron Solid Pick bar Location for grounding strap	Gray iron Bottom Flange 4" frame—8297Z Location for grounding strap	Hex bolts Pent head bolts	Custom badging/ lettering

8192-8198 HINGED ACCESS ASSEMBLIES



8192 hinged hatch
24" x 36"



8197 grate option
36" x 36"

Features	Cover	Grate	Frame	Lock Type	Other
Airport extra heavy duty Self-engaging hold open arm Lift assist	Ductile iron Solid Vented MPIC multi-tool pick bar	Ductile iron 750 sq. in. of open area—8197 series only	Ductile iron Top Flange 5" frame 6" frame—8198 48" x 48" series only Bottom Flange 5" frame 6" frame—8198 48" x 48" series only	Hex bolts Pent head bolts Cam lock	Gasketed Custom badging/ lettering

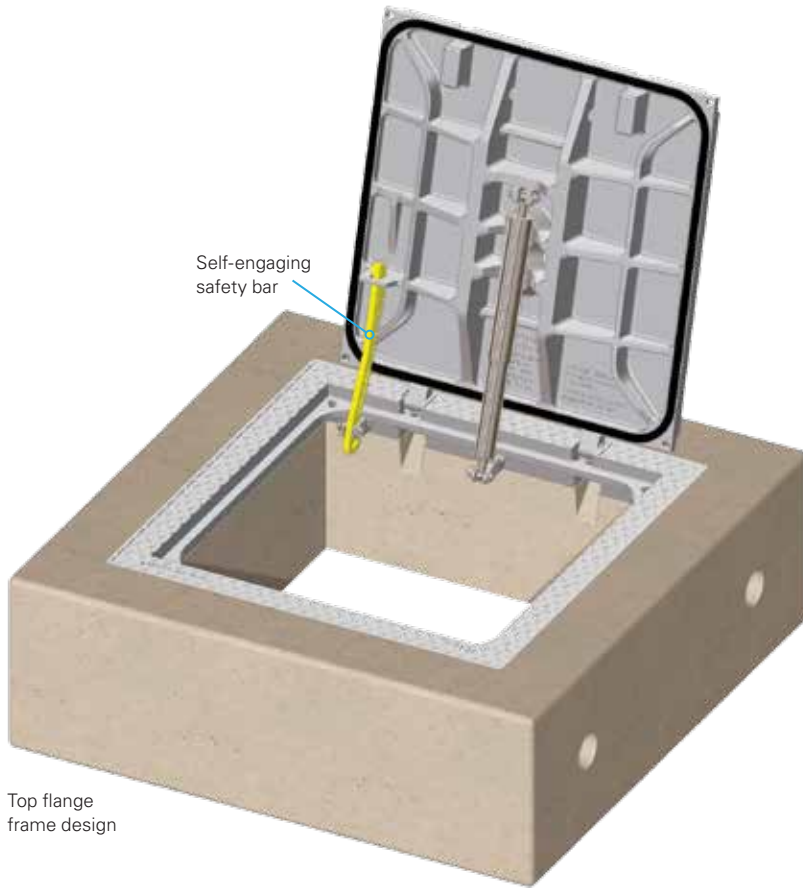


Airport Extra Heavy Duty Sizes

Series No.	Clear Opening
8195	24 x 24
8192	24 x 36
8196	30 x 30
8196—Double	30 x 62
8197	36 x 36
8197—Double	36 x 74
8198	48 x 48

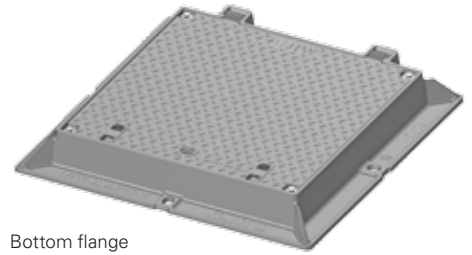
Note: All dimensions are in inches. Heavy duty rated hatches available.

8192-8198 HINGED ACCESS ASSEMBLIES (CONTINUED)



Self-engaging safety bar

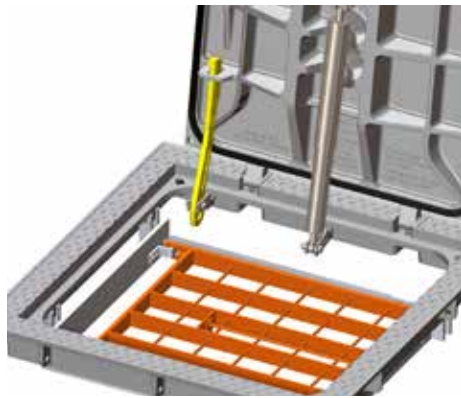
Top flange frame design



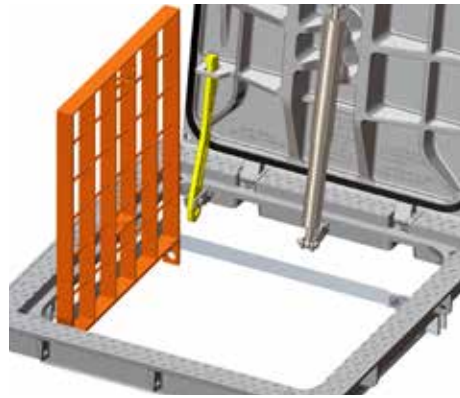
Bottom flange



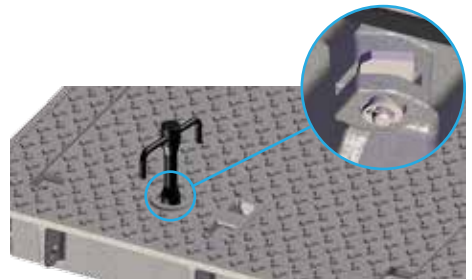
8196 double assembly
30" x 62"



Optional aluminum safety grate in the closed position



Optional aluminum safety grate in the open position



Optional security cam lock and wrench. Wrench is only removable when cover is in the locked position.



Lift assist is a corrosion-resistant stainless steel mechanical spring strut. Reduces the lifting force of the cover to less than 35 pounds.

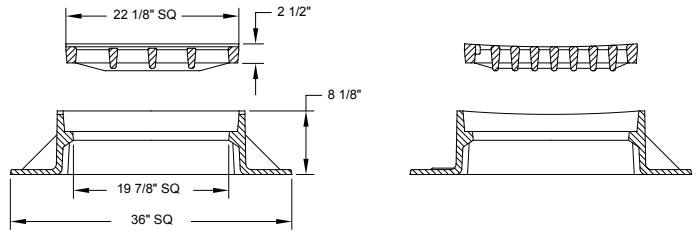


For a video on the functionality of our Hinged Hatches, please scan this QR code.

Trench and Drainage Grates

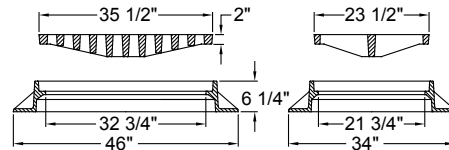


5105 FRAME AND GRATE



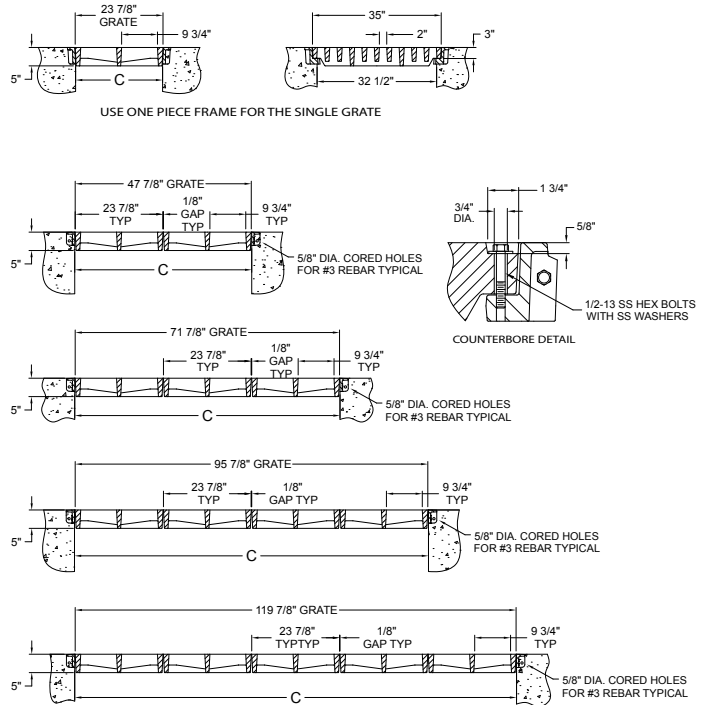
Features	Grate	Frame	Lock Type
Extra heavy duty	Ductile iron Sinusoidal style— 652 sq. in. of open area Dump No Waste messaging	Gray iron Bottom Flange 4" frame—5100Z1 8" frame—5100Z	Crack drill hex bolting Crack drill pent head bolting

5430 FRAME AND GRATE



Features	Grate	Frame	Lock Type
Airport extra heavy duty	Gray iron 355 sq. in. open area Dump No Waste messaging	Gray iron Bottom Flange 6 1/4" frame—5430Z	Crack drill hex bolts Crack drill pent head bolting

5436 FRAME, GRATE, AND COVER



Caution: Do not disassemble bolted grates before setting sections in concrete

Features	Cover	Grate	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron	Ductile iron 385 sq. in. of open area per grate	Ductile iron Top Flange—One Piece Single grate or cover (new)—5436Z5 Top Flange—Modular/Expandable Multiple grate/cover assemblies 5436Z1—Load bearing support side frame (with new 1 1/2" thick support area) 5436Z2—End side frame	Hex bolts Pent head bolting	Custom badging/lettering on cover

5436 Standard Drainage Inlet, Frame and Grate Assembly Series Options

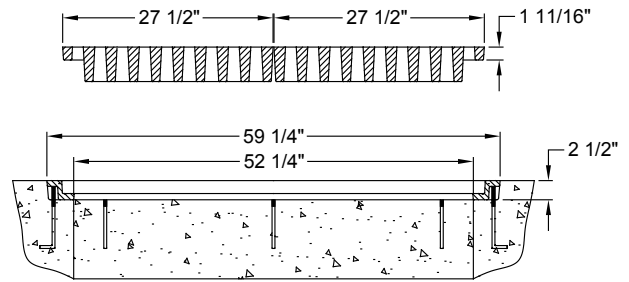
Catalog Number	Clear Opening	Grate Open Area Sq. In.
00543633B03—Single Grate	23 3/4 x 32	385
00543604—2 Grate	48 1/8 x 32 1/2	769
00543606—3 Grate	72 1/8 x 32 1/2	1155
00543608—4 Grate	96 1/4 x 32 1/2	1538
00543734B01—5 Grate	120 1/8 x 38 7/8	1930

Note: All dimensions are in inches.



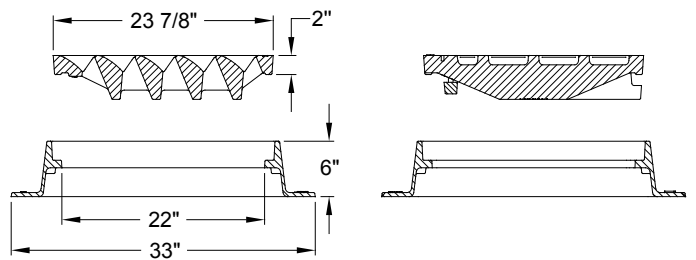
For more information about linear trench and other airport products, please scan this QR code.

5440 FRAME AND GRATES



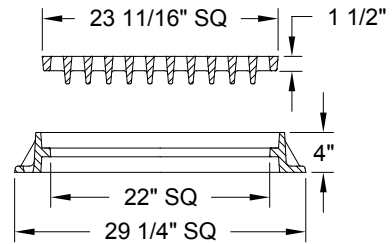
Features	Grate	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron 590 sq. in. of open area per assembly	Gray iron Top flange	Hex bolts Pent head bolting	Anchor bolts on frame

5520 FRAME AND GRATE



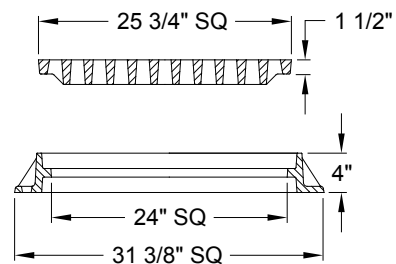
Features	Grate	Frame	Lock Type
Airport extra heavy duty	Flat bar style—Ductile iron—5520M5 217 sq. in. of open area Vane style—Gray iron—5520M8 300 sq. in. of open area Dump No Waste messaging	Gray iron Bottom Flange 4" frame—5525Z 6" frame—5546Z 8" frame—5521Z Reversible 6" frame—5370Z	Hex bolts Pent head bolting Cam lock—5520M8 only

V5622 FRAME AND GRATE



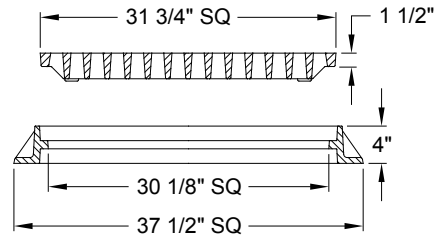
Features	Grate	Frame	Lock Type
Extra heavy duty	Ductile iron 266 sq. in. of open area Dump No Waste messaging	Gray iron Bottom Flange 5" frame—V5622-1 6" frame—5250Z 8" frame—5235Z Reversible 4" frame—V5622	Crack drill hex bolts Crack drill pent head bolting

V5624 FRAME AND GRATE



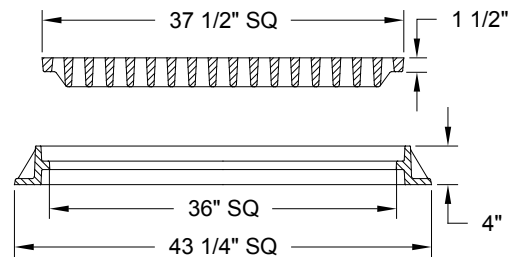
Features	Grate	Frame	Lock Type
Extra heavy duty	Ductile iron 295 sq. in. of open area Dump No Waste messaging	Gray iron Reversible 4" frame—V5624	Crack drill hex bolts Crack drill pent head bolting

V5630 FRAME AND GRATE



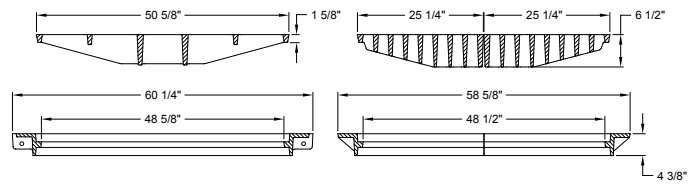
Features	Grate	Frame	Lock Type
Extra heavy duty	Ductile iron 474 sq. in. of open area Dump No Waste messaging	Gray iron Reversible 4" frame—V5630	Crack drill hex bolts Crack drill pent head bolting

V5636 FRAME AND GRATE



Features	Grate	Frame	Lock Type	Other
Extra heavy duty	Ductile iron 651 sq. in. of open area Dump No Waste messaging	Gray iron Reversible 4" frame—V5636	Crack drill hex bolts Crack drill pent head bolting	Anchor bolts on frame

V5648 FRAME AND GRATE



Features	Grate	Frame	Lock Type
Airport extra heavy duty	Ductile iron 1374 sq. in. of open area Dump No Waste messaging	Gray iron Reversible 4 3/8" frame—V5648 2 piece frame	Crack drill hex bolts Crack drill pent head bolting

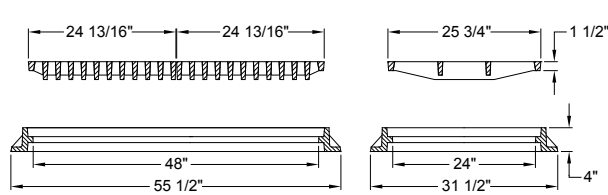
V5667, V5668, V5669, AND V5670 FRAME, GRATE, AND COVER



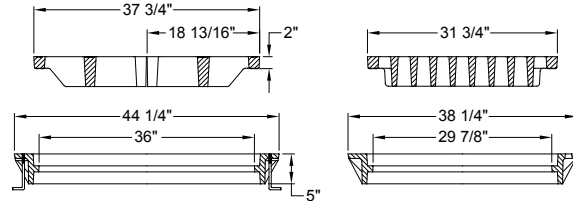
V5668 frame and grates

Series	Features	Grate	Frame	Lock Type	Other
V5667	Extra heavy duty	Ductile iron 598 sq. in. of open area per assembly	Ductile iron V6667 shown in junction box section (see pg. 20)	Gray iron Reversible 4" Frame—V5667	Crack drill hex bolts Crack drill pent head bolting
V5668	Airport extra heavy duty	Ductile iron 472 sq. in. of open area per assembly	Gray iron Reversible 5" frame—V5668	Hex bolting Pent head bolting	Anchor bolts in frame*
V5669	Extra heavy duty	Ductile iron 724 sq. in. of open area per assembly	Gray iron Reversible 4" frame—V5669	Crack drill hex bolting Crack drill pent head bolting	
V5670	Extra heavy duty	Ductile iron 708 sq. in. of open area per assembly	Gray iron Reversible 4" frame—V5670	Crack drill hex bolting Crack drill pent head bolting	

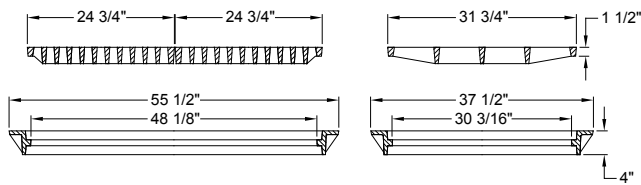
*(12) 3/8-16NC anchor bolts supplied by EJ and added by the customer



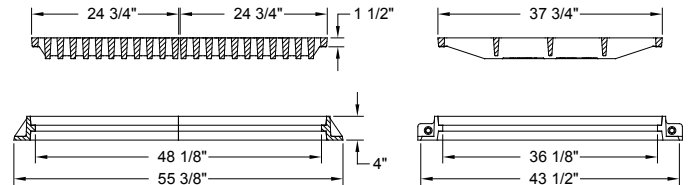
V5667



V5668

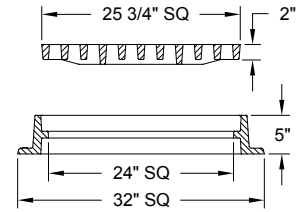


V5669



V5670

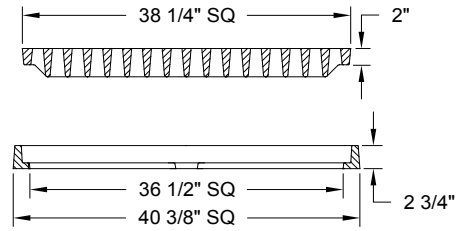
V5726 FRAME AND GRATE



Features	Grate	Frame	Lock Type
Extra heavy duty	Ductile iron 321 sq. in. of open area Dump No Waste messaging	Gray iron Angle Style 2 3/4" frame—V5726-1 Bottom Flange 5" frame—V5626-1 Reversible 6" frame—V5626-2	Crack drill hex bolting Crack drill pent head bolting



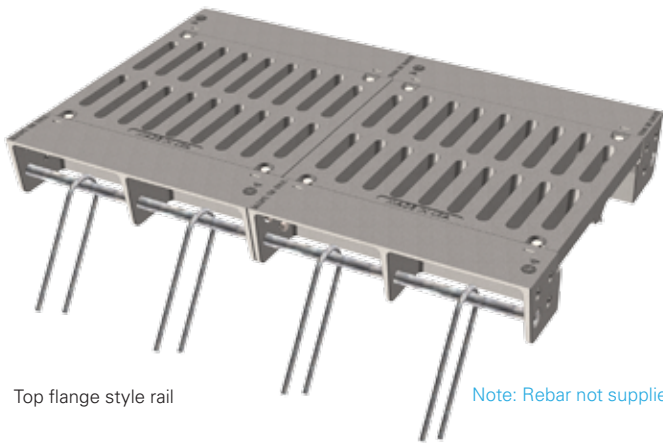
V5736 FRAME AND GRATE



Features	Grate	Frame	Lock Type
Extra heavy duty	Ductile iron 652 sq. in. of open area	Ductile or gray iron Angle Style 2 3/4" frame—V5736	Crack drill hex bolting Crack drill pent head bolting



LINEAR TRENCH DRAINAGE



Top flange style rail

Note: Rebar not supplied



Angle style rail

Features	Grate	Trench Rail	Lock Type	Other
Airport extra heavy duty Holes in rail for rebar	Ductile or gray iron	Top Flange Gray iron 24" lengths—6900Z4 Angle Style Gray iron or ductile iron 24" and 48" lengths— 6900Z1 and 6900Z2	Hex bolts Pent head bolts	End cap for 24" wide trench 45 degree turns—18", 48" wide trenches 90 degree turns—18", 24", wide trenches 90 degree tee—18", 24", wide trenches 90 degree cross intersection—18", 24" wide trenches

6900 Top Flange Trench Frame 'Rail' and grate Options

Catalog Number	Trench Width	Sq. In. of Opening per Linear Foot
6901M	6	29
6902M2DI	8	33
6903M2DI	10	40
6904M2DI	12	49
6905M2DI	15	66
6906M3M4DI	18	90
6908M4DI	24	102
6909M1DI	30	254
6910M2DI	32	138
6912M	48	248

Note: All dimensions are in inches.

Trench frame and grate with EON LOCK® security feature

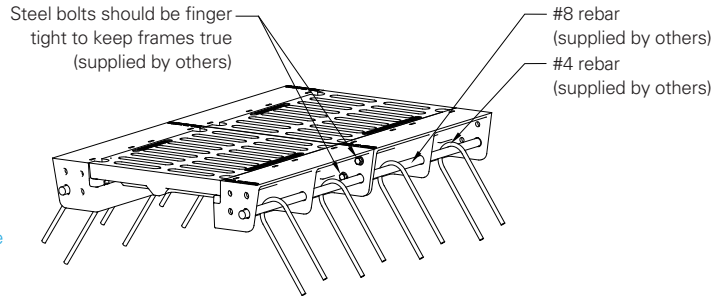
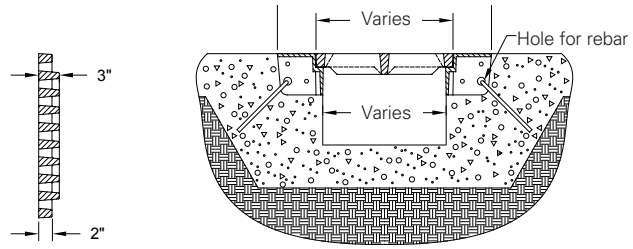
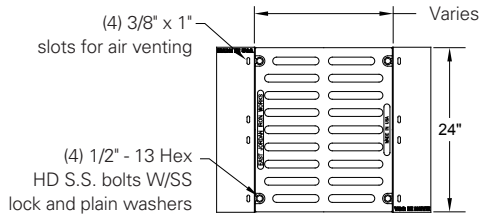


EON LOCK® square nut out horizontally

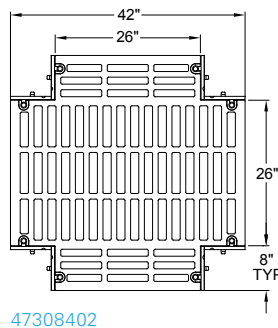
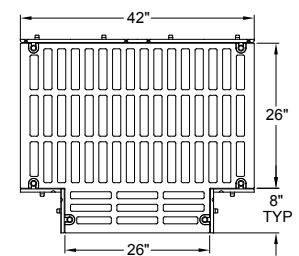
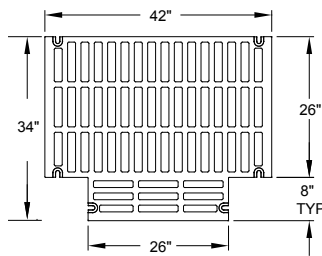
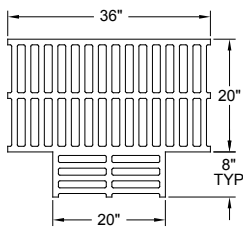
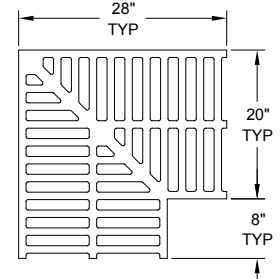
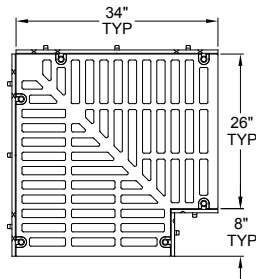
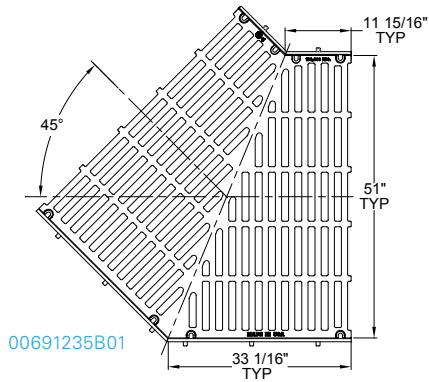


EON LOCK® square nut in horizontally

LINEAR TRENCH DRAINAGE (CONTINUED)

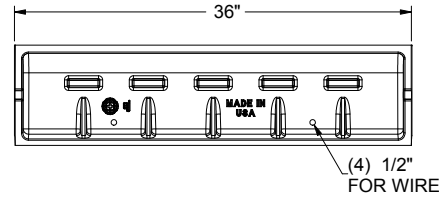


Caution: Do not disassemble bolted grates before setting sections in concrete



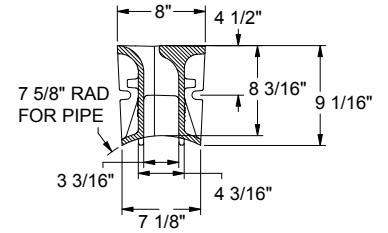
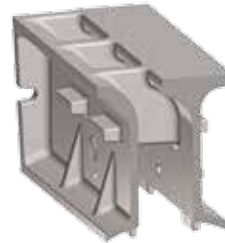
For more information about linear trench and other airport products, please scan this QR code.

6979 LINEAR SLOTTED DRAIN VANE GRATE



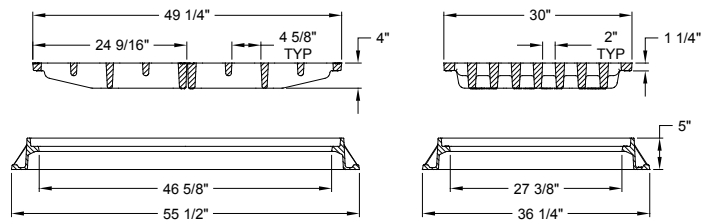
Features

- Airport extra heavy duty
- 9" tall
- Vane style grate
- Fits into slot cut into PVC pipe
- Allows for capture of surface water between catch basins



Cross section view

7585 FRAME AND GRATE



Features

Airport extra heavy duty
Special proof load to
245,000 lbs

Grate

Ductile iron
560 sq. in. of open area
per assembly
Dump No Waste
messaging

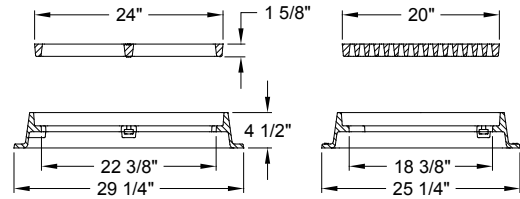
Frame

Gray iron
Bottom Flange
5" frame—7585Z1

Lock Type

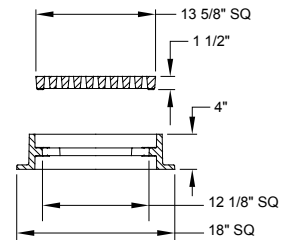
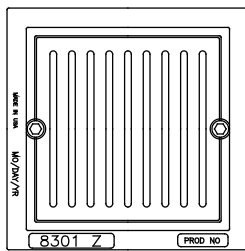
Hex bolts
Pent head bolts

7750 FRAME AND GRATE



Features	Grate	Frame	Lock Type
Extra heavy duty	Ductile iron Herringbone style— 185 sq. in. of open area—7750M1 Vane style—216 sq. in. of open area—7750M2 Dump No Waste messaging	Gray iron Reversible 4 1/2" frame—7750Z	Allen head bolts

8301 FRAME AND GRATE

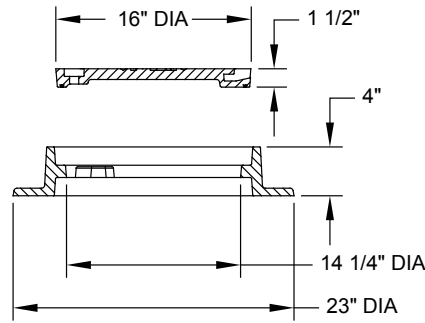
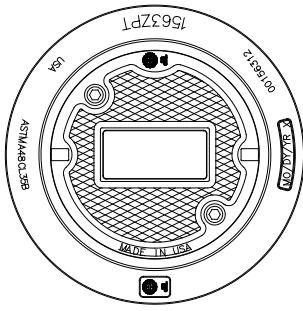


Features	Grate	Frame	Lock Type
Extra heavy duty	Ductile iron ADA style—50 sq. in. of open area—8201M	Gray iron Reversible 4" frame—8301Z	Crack drill hex bolts Crack drill pent head bolts

Cleanout and Monument Boxes

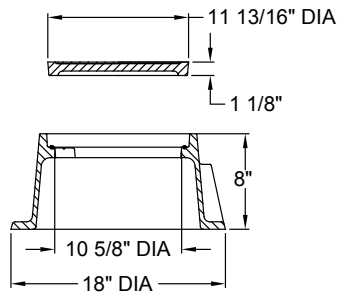


1563 CLEANOUT/MONUMENT BOX FRAME AND COVER



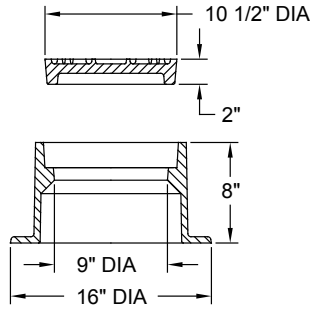
Features	Cover	Frame	Lock Type	Other
Extra heavy duty	Gray iron Solid Closed pickholes	Gray iron Reversible 4" frame—1563Z	Hex bolts Pent head bolts	Gasketed Custom badging/ lettering

1564 CLEANOUT/MONUMENT BOX FRAME AND COVER



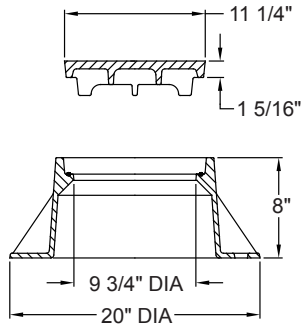
Features	Cover	Frame	Lock Type	Other
Extra heavy duty	Gray iron Solid Closed pickholes	Gray iron Bottom Flange 8" frame—1564Z	Cam locking Hex bolts Pent head bolts	Gasketed Custom badging/ lettering

1565 CLEANOUT/MONUMENT BOX FRAME AND COVER



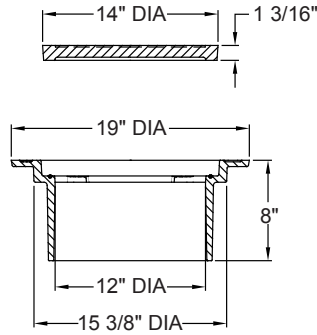
Features	Cover	Frame	Lock Type	Other
Extra heavy duty	Gray iron Solid Open pickholes	Gray iron Bottom Flange 8" frame—1564Z	Crack drill hex bolts Crack drill pent head bolts	Gasketed Custom badging/ lettering

1578 CLEANOUT/MONUMENT BOX FRAME AND COVER



Features	Cover	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Closed pickholes	Gray iron Bottom Flange 8" frame—1578Z	Hex bolts Pent head bolts	Gasketed Custom badging/ lettering

1716 CLEANOUT/MONUMENT BOX FRAME AND COVER

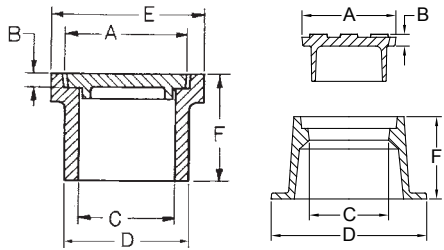


Features	Cover	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Closed pickholes	Gray iron Top Flange 3" frame—1716Z 8" frame—1716Z1	Hex bolts Pent head bolts	Gasketed Custom badging/ lettering Anchor studs on 3" frame

2965 CLEANOUT/MONUMENT BOX FRAME, COVER AND GRATE



Illustrating bottom flange.



Illustrating top flange

Illustrating bottom flange

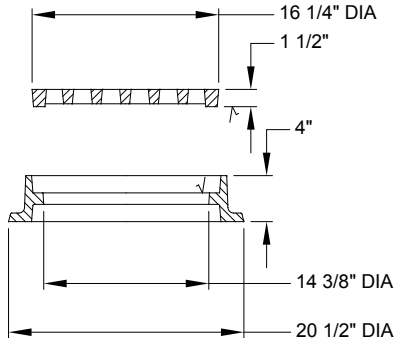
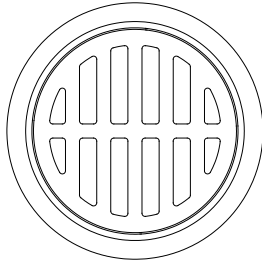
2960 - 2980 Monument Boxes

Catalog Number	Cover Diameter A	Cover Thickness B	Clear Opening C	Dimension D	Top Flange E	Frame Height F
2960 [†]	6.5	1 1/2	5	5 3/4	7 5/8	6 1/4
2965*	8	1	6 1/2	8	9 3/4	10
2966*	8	1	6 1/2	11 1/2	9 3/4	10
2967 [†]	8	1	6 1/2	7 13/16	9 3/4	10
2970 [†]	8 1/4	3/4	7	7 3/4	9 1/2	6 1/4
2975 [†]	9 5/8	3/4	8 1/4	9	10 3/4	7 1/2
2980 [†]	11 3/8	5/8	10	—	13	7 1/2

Note: All dimensions are in inches. *Airport extra heavy duty rated. †Heavy duty rated.

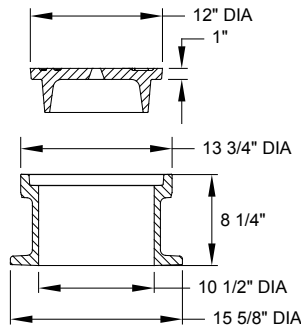
Features	Cover	Grate	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron Solid Extra deep 3" skirt on underside of cover Open pickholes	Ductile iron 2695M—17 Sq. In. of open area	Gray iron Bottom Flange 7" frame—1570Z 10" frame—2966Z Top Flange 10" frame—2965Z custom badging/lettering	Crack drill hex bolts Crack drill pent head bolts	Custom badging/ lettering

V3610-4 FRAME AND GRATE



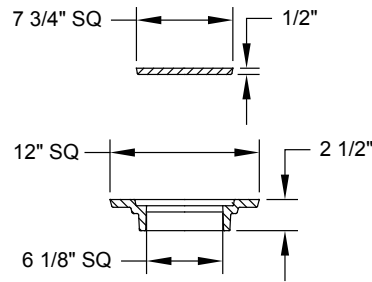
Features	Grate	Frame	Lock Type
Extra heavy duty	Ductile iron 73 sq. in. of open area— V3610-3	Gray iron Reversible 4" frame—V1610-3	Crack drill hex bolts Crack drill pent head bolts

3697 CLEANOUT/MONUMENT BOX FRAME AND COVER



Features	Cover	Frame	Lock Type	Other
Airport extra heavy duty	Ductile iron Vented Lift hole	Gray iron Bottom Flange 8 1/4" frame—3697Z	Crack drill hex bolts Crack drill pent head bolts	Custom badging/ lettering

8350 MONUMENT BOX FRAME AND COVER



Features	Cover	Frame	Lock Type	Other
Airport extra heavy duty	Gray iron Solid Open pickhole	Gray iron Top Flange 2 1/2" frame—8380Z	Countersunk screw	Custom badging/ lettering

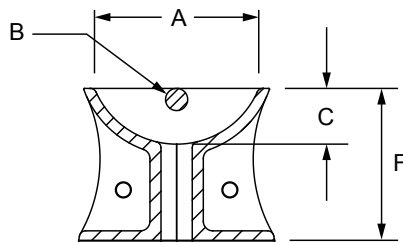
AIRPORT MOORING EYES



5993 Series



5996 Series



5999 Series

Features
Airport extra heavy duty
Ductile iron

Airport Mooring Eyes

Catalog Number	Width	Dia.	Depth	Height	Pull Out Force*
00599300	A	B	C	F	20,000 lbs
00599600	6 1/2"	7/8"	2 3/16"	3 1/2"	20,000 lbs
00599900	16"	2 3/8"	8"	9"	20,000 lbs

*Pull out force of mooring eyes is dependent on proper anchoring in the field. These products are suitable for environments requiring much greater pull out force, if properly anchored.

Additional Solutions and Information



Aluminum Access Hatches

Hatches designed for pedestrian and unintended traffic rating, backed by proper engineering calculations. This product features heavy duty lift handles, stainless steel hinges with a 3/8" diameter stainless steel hinge pin, and stainless steel slam lock plugs. State-of-the-art manufacturing.

Design Features

- Easy installation: in many cases, all that is needed is the removal of the existing cover and hinges. The new hatch is then lagged to the top of the existing structure.
- All stainless steel hardware
- Stainless steel lift-spring for ease of opening cover
- Exposed padlock clip: other locking devices are available upon request.

Design Benefits

- Visual inspection: limited maintenance can be performed with safety grates in place.
- Visible hazard barrier: safety orange epoxy coating is highly visible for hazard areas.
- Corrosion resistant

Caution: Aluminum access hatches are not airport traffic rated and are intended for pedestrian rated applications.



Shown with optional SAFE HATCH® Safety Grate System



Slam lock with plug



T-handle in slam lock



Lift hinges and hardware —stainless steel



Recessed padlock clip closed



Recessed padlock clip open



Safety sure grip optional (left), slip resistant surface per ADA standards

ERMATIC® Modular Covers

The ERMATIC® system is a comprehensive and highly engineered range of access covers for a wide variety of underground services. This modular system can be customized to fit any underground vault dimension or cover configuration. The ERMATIC range leverages the global engineering and design experience within EJ, to enhance ergonomic design and security.

Features/Options

- Pedestrian to airport rated (or EN124 Standards—B125, C250, D400, E600, F900)
- Standard sizes between 2' x 2' to 10' x 17'
- Custom sizes available
- Water resistant
- Security locking
- Available with hinged and assisted opening (gas or spring loaded struts)
- Ergonomic key for opening
- Available with safety grates and/or safety railings
- Cover options: solid cover with 4L slip resistant tread, recessed for concrete infill or brick pavers, or cover with removable inner hatch/cover
- Available with PREMARK® anti-skid coating

Project Applications

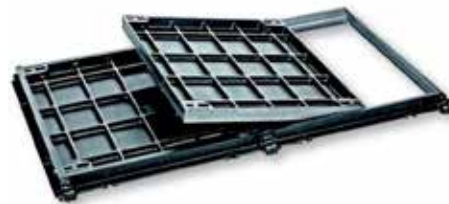
- Sewerage: inspection pits for sludge chambers, access shafts for large plants, etc.
- Telecommunications: cable jointing chambers, etc.
- Utility: lighting, signals, transformer pits, cable joint boxes, etc.

Project Types

- Airports and ports
- Railways
- Tunnels
- Power stations
- Water treatment and purification plants
- Manufacturing plants
- Exhibition and convention centers, leisure parks, stadiums, etc.



Modular Construction—The use of modular elements gives a vast range of sizes. Frame elements (side frames and end plates) are assembled using bolts and aluminium joints to provide linear openings for even the longest ducts. Above clear opening spans of 47 1/4" (1200 mm), ERMATIC units use removable beams supported in boxes which are fixed to the frames. This allows the construction of units to suit the largest openings.



1/2/3 covers and frames



Maximizes Surface Area for Unobstructed Use

ERMATIC products assure protection against damage, debris or aggressive chemicals, and allow designers to conceal underground services, maximizing productive use of the unobstructed surface area.



Cover with removable beams

MANHOLE FRAMES AND COVERS



EJ produces street castings to meet ASTM and AASHTO criteria. In addition, our castings meet federal and state DOT specifications, and that of individual customers. Non-traffic, light, medium, heavy, extra heavy-duty and extra heavy-duty airport are the load designations assigned, which indicate where (on which application) a product should be used.

As a result of continued research and development—the product line is increasingly expanding—and has become more complex and diverse than ever. New features such as ergonomic lift-assist devices; new configurations that are more modular and scalable; new advanced security attributes help prevent theft or mitigate explosions; and applied technology provides capabilities like remote sensing with wireless telemetry.

UTILITY CASTINGS



EJ offers a comprehensive line of high quality utility construction casting solutions for specialized applications such as telecommunication, electric, gas, traffic signals and street lighting.

Utilities are the lifeblood of any facility, and uninterrupted service is crucial. Our product designs offer superior access and unparalleled security for critical infrastructure—available in a variety of sizes, shapes, materials and load ratings to fit the needs of any project.

EJ is the world leader in telecom and utility solutions, offering features and attributes to meet your unique requirements:

- Ergonomic and safety
- Vented covers
- Composite materials
- Wireless monitoring
- Specialty and custom
- Explosion mitigation

DRAINAGE CASTINGS



Drainage castings or grates are designed to accept water and can be round, square, or rectangular. They are typically sold with a frame, curb inlet frame, monument box, or bridge drain. Some markets call these slotted covers.

Specifying the appropriate drainage solution is an important part of a storm water management plan. EJ offers a wide array of products designed for storm water drainage including ditch grates, pipe grates, curb and gutter inlets and catch basins. Drainage castings are available as an assembly or set. EJ also offers bridge drains, scuppers and a grates.

Optional “Dump No Waste! Drains To Waterways” and other custom cast-in lettering is an effective, low cost and long term means to support local environmental initiatives.

TRENCH



From pedestrian areas to airport loading ramps, EJ has the trench drainage solution to fit your application. With a grate that is designed to be supported on two sides, it is expandable and available in numerous widths.

Grating options include parallel grates, perpendicular cross-street drainage, and ADA styles - available in 24" lengths, and width from 8" up to 51". Frames come in standard 24", 36" and 48" lengths.

Standard heavy duty grates and covers are suitable for general traffic service and AASHTO H-20 loading conditions. Our ADA style trench grating and solid trench covers are available for either general traffic loading or non-traffic applications. Extra heavy duty (EXA) airport trench grating is made with ductile iron and is proof load tested to 200,000 pounds.

For that artistic touch, EJ offers designer trench grates that can be standalone architectural enhancements, or can accompany matching tree grate designs.

ADJUSTMENT RISERS



Maintain the integrity of your infrastructure by reducing traffic vibration damage. Adjust any manhole or catch basin to grade on your resurfacing projects, new installations, or rehabilitation work with INFRA-RISER® rubber composite adjustment risers.

Below ground—INFRA-RISER reduces traffic vibration damage—prolonging the life of manhole structures and surrounding pavement:

- Protects against load concentration stress
- Dramatically reduces water infiltration
- Perfect grade adjustment in moments with uniform precision
- Will not break, split, rot, crack, or chip
- Made of 92% recycled raw materials
- Round, square, and rectangular designs; flat and tapered risers, select bolt hole patterns
- Custom sizes available

INFRA-RISER adjustment riser is a simple, economic, efficient, and long-lasting solution. It dissipates the energy transferred between the casting and the manhole structure.

RISER RINGS



Riser rings are an adjustable solution to bring a manhole or catch basin to grade on your resurfacing projects. They are used in conjunction with a frame to increase its overall height. A typical application would be during pavement overlays.

Avoid unnecessary project costs by eliminating extra labor, equipment and materials. There are reduced traffic disruptions—when the street is paved the job is done and the manhole cover is finished to grade.

- Solid or adjustable styles
- Steel and cast iron risers available to fit all your grade adjustments
- Load tested to ensure dependable strength and long lasting durability
- Large inventory ready for delivery nationwide
- Made to order sizes for custom application
- Slope risers available
- DOT approved in many states

FIRE HYDRANTS



WaterMaster® Fire Hydrants have set the standard for reliability and ease of maintenance. With 2 and 3-nozzle hydrant designs, along with multiple shoe connection options, WaterMaster hydrants offer the right options to meet your standard specifications. All hydrants are compliant with the Reduction of Lead in Drinking Water Act 2011. Computer aided design and analysis, along with ductile iron construction, ensures superior performance. All cast components are made and assembled in the USA.

Each hydrant is pressure tested to twice the rated working pressure. WaterMaster 5CD250 and 5BR250 Fire Hydrants meet or exceed the requirements of ANSI/AWWA C502 Standard for Dry-Barrel Fire Hydrants, Underwriters Laboratories Standard UL246, and Factory Mutual 1510.

Options include individual hydrants being assembled to your (municipal) specification. Additionally, EJ offers hydrant accessories, including the snow barrel for BR models to keep hydrants accessible for areas with high snowfall, and Storz nozzle connections for quick pumper nozzle attachment.

GATE VALVES



FlowMaster® Resilient Wedge Gate Valves are designed to control the flow of water, such as in fire hydrant applications—but can also be utilized for other water distribution or sewer system applications. All valves are compliant with the Reduction of Lead in Drinking Water Act 2011.

The valves incorporate quality parts and a simple design. All-ductile iron construction delivers superior strength, impact resistance and reduced weight ensuring long service life. All valve parts are manufactured and assembled in the USA.

Available in 2" through 24" sizes, with multiple end connections, and bevel or spur gear operators for 20" and 24" valves. The valves are available as either an assembly or set.

FlowMaster® meets or exceeds the performance requirements of AWWA C515 and Underwriters Laboratories Standards UL262. The valve body and other ductile iron components are manufactured from material conforming to ASTM A536. The wedge is fully rubber encapsulated to meet ASTM D429 requirements.

VALVE BOXES



Valve boxes are used to access an underground valve and can be adjustable using multiple pieces with either a screw type or slip type arrangement.

Valve boxes are available to accommodate 4" through 20" valves.

- Natural gray iron and asphalt coated
- Covers with special lettering and custom logos
- Locking lids
- Valve box risers—raise valve box lid to adapt to a new grade
- Made in the USA

The slip type has interchangeable pieces that allow for overall height adjustment with parts sliding past each other, while the screw type has interchangeable pieces that allow for overall height adjustment with parts threaded into each other. The valve boxes are available as either an assembly or set—depending on whether assembled together before shipment to the customer.

METER BOXES



The meter box product is specifically intended to cover a water meter. It is typically large enough for inspection and limited access, and is often intended for non-traffic situations.

EJ offers an assortment of meter boxes, covers, and rings to fit your application. Our broad meter box product offering includes customized logo covers to help promote your entity's identity, special lettered covers that clearly identify the access point, and touch read covers.

- Oval meter boxes
- Round meter boxes
- Rectangular meter boxes
- Meter pits
- Meter lids
- Meter box cover accessories including security locking

Meter boxes are available as either an assembly or set—depending on whether assembled together before shipment to the customer.

TREE GRATES



Style your surroundings with timeless and appealing streetscape products manufactured by EJ. Tree grates are durable, functional, and architecturally appealing, and promote healthy tree growth. Designed for pedestrian traffic; our full line of tree grates provide natural drainage and enhance any urban, campus, or park setting.

The slotted design allows for efficient watering and is ADA compliant for pedestrian safety. The narrow slot of an ADA grate also prohibits litter from collecting in the tree well and minimizes the growth of weeds.

Optional expandable tree openings consist of removable center rings, which are a convenient way to adjust diameter of the grate opening as the tree trunk grows in width. Other options include security bolting features, and light port options.

Cast iron grating is strong and stands up to harsh environmental conditions. As an added value, the tree grates can carry community logos and mottos and made in the USA.

DETECTABLE WARNING PLATES



DURALAST® Detectable Warning Plates help warn the blind or visually impaired of the approaching street. Engineered to outlast the sidewalk, this cast iron plate is a long-lasting streetscape product that can withstand rigorous urban conditions, such as snow plows, street cleaning machines, and vehicular traffic.

Lower your maintenance and product life cycle costs by using DURALAST Detectable Warnings—your ADA compliant and environmentally friendly solution.

- Long-wearing cast iron (over 500 times more wear resistant than composites*)
- Withstands vehicular and snow plow traffic
- Corrosion resistant
- Permanently embedded into concrete
- Comply with the latest ADA guidelines regarding pedestrian and vehicular traffic

*An independent third party laboratory test was conducted to determine the wear index values of DURALAST® Detectable Warning Plates versus a competing composite surface. Test results indicate that DURALAST plates are over 500 times more wear resistant than composites.

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Featuring a comprehensive product database with advanced search and browsing capabilities

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- Installation instructions

The Video Tour

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Finding your Solution

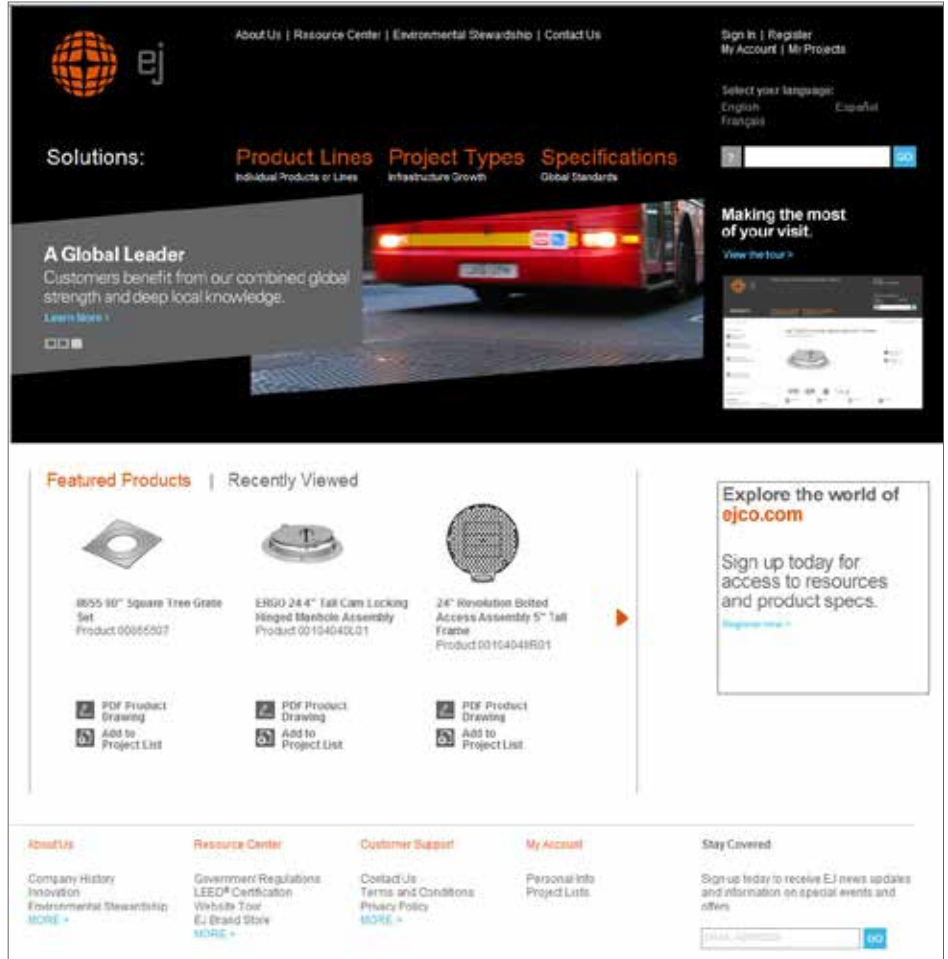
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- Search by Project Type
- Search Bar
- Narrow Search by Product Attributes
- Search by Regional Specification

Product Specifications

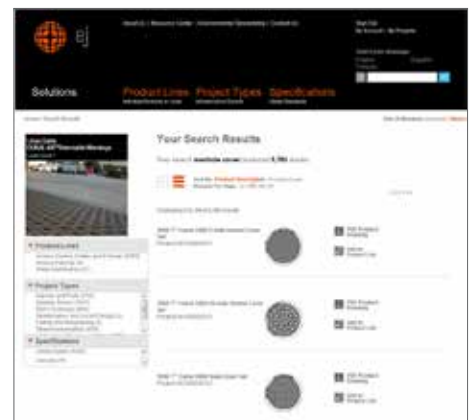
- Available only to registered users
- National and international specifications
- Local Standards—City, County, State

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- Feature—print project list
- Feature—e-mail project list
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The search results can be narrowed by using the facets and attributes on the left



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Airport and Port Projects

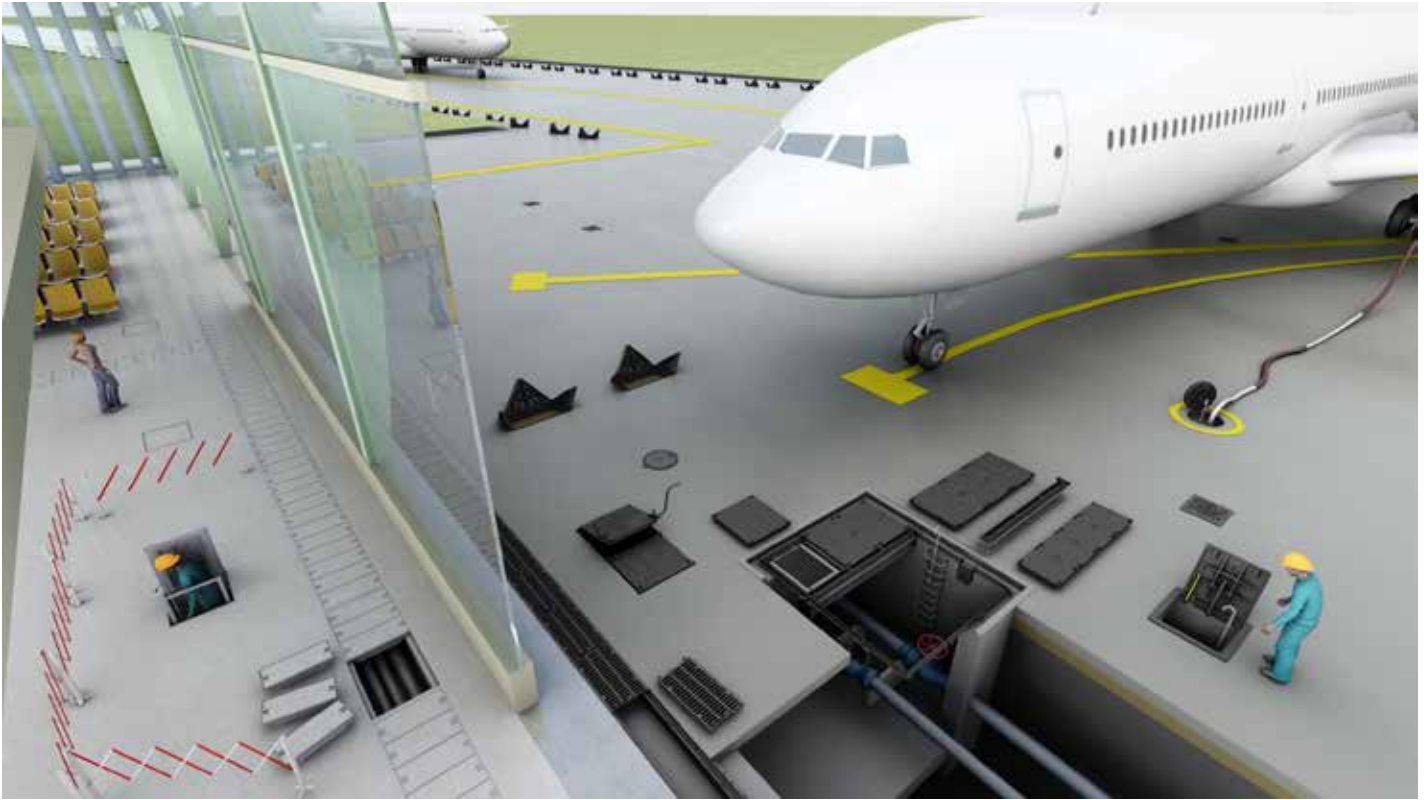
Projects	Country	Location		
Airport Projects AMERICAS	United States of America	<p>Arizona Phoenix Sky Harbor Intl. (PHX) Tucson Intl. (TUS)</p> <p>California John Wayne (SNA) Los Angeles Intl. (LAX) San Jose Intl. (SJC) Santa Maria Public (SMX)</p> <p>Colorado Denver Intl. (DEN)</p> <p>Delaware New Castle County (ILG)</p> <p>Florida Jacksonville Intl. (JAX) Miami Intl. (MIA) Sarasota-Bradenton (SRQ)</p> <p>Georgia Hartsfield-Jackson Atlanta Intl. (ATL) Savannah Airport (SAV)</p> <p>Illinois Chicago O’Hare Intl. (ORD)</p>		
		<p>Indiana Indianapolis Intl. (IND)</p> <p>Iowa Fort Dodge Regional (FOD)</p> <p>Kentucky Cincinnati/Northern Kentucky Intl. (CVG)</p> <p>Maryland Baltimore/Washington Intl. (BWI)</p> <p>Massachusetts General Edward Lawrence Logan Intl. (BOS)</p> <p>Michigan Detroit Metropolitan (DTW)</p> <p>Minnesota Minneapolis-Saint Paul Intl. (MSP)</p> <p>Nevada Las Vegas-McCarran Intl. (LAS) Reno-Tahoe Intl. (RNO)</p> <p>Ohio Cleveland Hopkins (CLE)</p> <p>Pennsylvania Philadelphia Intl. (PHL) Pittsburgh Intl. (PIT)</p> <p>Tennessee Memphis Intl. (MEM)</p> <p>Texas Dallas-Fort Worth Intl. (DFW) George Bush Intercontinental (IAH) Scholes Intl. at Galveston (GLS) William P. Hobby (HOU)</p> <p>Virginia Ronald Reagan Washington National (DCA) Washington Dulles Intl. (IAD)</p> <p>Washington Sea-Tac Intl. (SEA) Spokane Intl. (GEG)</p> <p>Wisconsin General Mitchell Intl. (MKE)</p>		
		Canada	Montréal Pierre Elliott Trudeau Intl. (YUL)	
		Mexico	Licenciado Benito Juarez Mexico Intl. (MEX)	
		Argentina	Ministro Pistarini Intl. (EZE)	
		Columbia	El Dorado Intl. (BOG)	
		Jamaica	Sangster Intl. (MBJ)	
		Puerto Rico	Luis Munoz Marin Intl. (SJU)	
	EUROPE, MIDDLE EAST AND AFRICA (EMEA)	United Kingdom	Manchester Runway II (MAN), London Heathrow (LHR)	
		Spain	Madrid Barajas Intl. (MAD)	
		France	Charles de Gaulle Intl. (CDG)	
		Ireland	Dublin (DUB), Shannon (SNN)	
		Germany	Frankfurt am Main Intl. (FRA), Stuttgart (STR), Franz Josef Strauss Intl. (MUC)	
		Greece	Eleftherios Venizelos Intl. (ATH)	
		Italy	Linate (LIN), Malpensa Intl. (MXP)	
		Poland	Warsaw Chopin (WAW)	
		Egypt	Cairo Intl. (CAI)	
		United Arab Emirates	Dubai Intl. (DXB)	
		South Africa	OR Tambo Intl. (JNB)	
		ASIA-PACIFIC	China	Beijing Capital Intl. (PEK)
			Guam	Antonio B. Won Pat Intl. (GUM)
	New Zealand		Christchurch Intl. (CHC)	
	Singapore		Singapore Changi Intl. (SIN)	

Note: This list is not inclusive of all projects. Project references available upon request.

Airport and Port Projects (continued)

Projects	Country	Location
Port Projects		
AMERICAS	United States of America	Long Beach (California), Port Authority of New York and New Jersey, Port of Houston (Texas), Blount Island Marine Terminal (Florida), Port of Savannah (Georgia)
	Mexico	Port of Vera Cruz
	Brazil	Paranagua
EUROPE, MIDDLE EAST AND AFRICA (EMEA)	United Kingdom	DML Devonport Royal Dockyard, Portsmouth Naval Base HMS Warrior Portsmouth
	France	Dunkerque - Rouen
	Germany	Bremenhaven, Kiel, Frankfort
	Spain	Valencia
ASIA-PACIFIC	Australia	Port of Brisbane
Large Project		
AMERICAS	United States of America	North Texas Tollway Extensions, Dallas Area Rapid Transit, Dallas Cowboys Metroplex Stadium, American Airlines Arena in Dallas, Texas, Heinz Field in Pittsburgh
EUROPE, MIDDLE EAST AND AFRICA (EMEA)	United Kingdom	Wembley Stadium, Channel Tunnel
	France	Disneyland Paris, TGV Train Stations
	Spain	Bilbao Exhibition Centre
ASIA-PACIFIC	Malaysia	Kuala Lumpur Exhibition Centre
	Singapore	Night Race Formula 1 Circuit

Note: This list is not inclusive of all projects. Project references available upon request.





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As EJ, we will continue to provide the same quality products and excellent service that our customers have come to expect. One global name and brand will unify the company and support our vision to be the global leader in infrastructure access solutions.

EJ

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