



ej

English

Canada Municipal and Construction Castings



Table of Contents

Infrastructure Access Solutions

Section	Sub Section	Page
Introduction		3
	Overview	6
	Custom Logo Covers	11
	Coating of Castings	11
	Fabricated Products	12
	Municipal and Construction Casting Load Ratings	13
	Flow Capacities of Inlet Grates	14
Ontario Municipal & Construction Castings	Catch Basin Frames and Grates	17
	Curb Inlets	22
	Maintenance Hole Frames and Covers	24
	Ottawa	31
	Ontario Steel Riser Rings	35
Québec Municipal & Construction Castings	BNQ Certified Products	37
	Features of SELFLEVEL™ Access Assembly	38
	SELFLEVEL Access Assembly	40
	SELFLEVEL Catch Basin Assembly	45
	Manhole Frames and Covers	49
	Drainage Grates (Rectangular, Square, Beehive)	54
	Traps	57
Linear Trench Grates	Linear Trench	58
	Decorative Trench	60
Additional Information	Additional Product Lines	73
	Suggested Specification for Construction and Utility Castings	79
Cross Reference	Québec Cross Reference	80
	Ontario Cross Reference	83

Infrastructure Access Solutions



One Company. Many Solutions.

EJ is a family-owned company that has grown into a global supplier of infrastructure access solutions. Along the way, EJ acquired the strengths and talents of several reputable companies throughout the U.S. and Canada.

EJ customers can expect a robust portfolio of products and services designed to meet their specific needs—all backed by a legacy built on trust and reliability. Our ability to leverage the largest range of access solutions allows us to bring you more solutions with a focus on ergonomics, security and safety.



I'd like to introduce you to EJ,
the global leader in the design
and manufacture of infrastructure
access solutions.

As a worldwide company, we excel at serving our customers by leveraging our global and local strengths. We feature best-in-class design and service, furnishing product design and engineering support from conception through installation.

Our products include:

- Local standard manhole frames and covers
- Curb inlets and linear trench grates
- Adjustment risers
- DURALAST® detectable warning plates
- Tree grates and tree guards
- Innovative access solutions
- Aluminum access hatches
- Fire hydrants and gate valves

We take pride in our level of excellence in everything we do—from product innovation to our unparalleled customer service. We are excited to operate two branches in Canada, one in St. George, Ontario, and a second in St. Philippe, Québec.

Thank you for your business, we look forward to working with you.

Best regards,

Tom Teske

A handwritten signature in black ink, appearing to read "Thomas W. Teske".

Vice President & General Manager,
Americas

Sales locations to serve you in Ontario & Québec.



Ontario Branch

159 Sugar Maple,
St. George, Ontario N0E 1N0
519.448.3395

Québec Branch

1005 Édouard VII
Suite 101
St. Philippe, QC J0L 2K0
450 444 9929

Corporate Office

301 Spring Street
East Jordan, MI 49727
800 874 4100

Two locations in Canada to service your local needs. Our Corporate Office is located in Northern Michigan.



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.

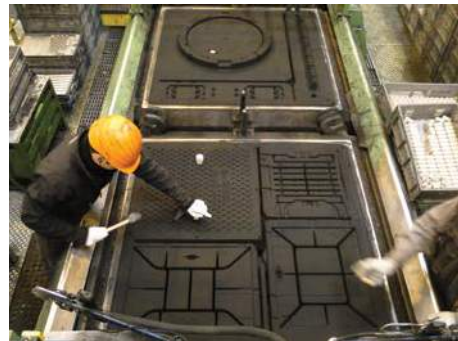
EJ is a family-owned company that has a long history of fostering strong customer relationships. These relationships are supported with personal contact from company representatives, a complete offering of product literature, a comprehensive web site (ejco.com), trade show exhibits, as well as seminars 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 understand 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
- MULTILEAF™ Hinged Covers
- CAMPRESSION® Access Assemblies
- Composite Access Solutions

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 and 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

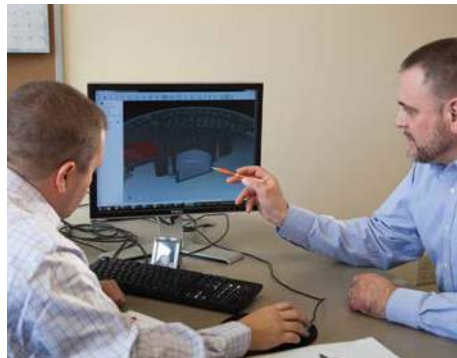
- Birr, Ireland
- Youngstown, Ohio
- Cicero, New York
- Tooele, Utah
- Ardennes/Bogny sur Meuse, France
- Geebung/Queensland, Australia
- Boppard, Germany

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, United Kingdom, France, Germany, and Australia



Environmentally Friendly

EJ is committed to continuous environmental improvement. Our castings contain over 85% recycled content and our foundries meet some of the most stringent environmental regulations in the world.

MACT Standards

Our foundries meet the Environmental Protection Agency's new air quality Maximum Achievable Control Technology (MACT) standards. The MACT rules require stack testing along with additional record keeping and reporting on several air pollution control systems.

Reclaimed Sand and Foundry Sand

Over 90% of our green sand is reclaimed daily and reused in our molding process. Foundry sands are recycled for use in cement production at nearby facilities.

Reuse

One of the best ways to reduce any environmental impact is to dispose of less waste. Heated air once lost to the environment is now captured and reused in the melting process, significantly reducing energy consumption.

Universal Waste

EJ participates in the safe management of all wastes. Paper, plastic, cardboard and numerous universal wastes, including computers, lamps and batteries, are collected and properly recycled.

Awards:

[Emmet County Recycler of the Year 2012](#)
[Charlevoix County Recycler of the Year 2007](#)



Messaging

Environmentally friendly messaging helps protect our waterways. Castings read "Dump No Waste! Drains to Waterways" accompanied by a fish image. These permanently cast messages and environmentally friendly designs serve as an enduring reminder against dumping into our waterways.



Recycled Tires

Recycled tires make up the majority of our INFRA-RISER® multi-purpose rubber composite adjustment risers. Boasting 92% recycled content, this environmentally friendly product also reduces unwanted storm water infiltration into sanitary sewer systems.



Scrap Metal

Thousands of tons of scrap metals, that otherwise may be strewn across the countryside or dumped in landfills, are recycled annually and turned into usable infrastructure products. Products produced at our foundries are 100% recyclable. [Post-consumer and post-industrial scrap metals are recycled into castings that build your infrastructure.](#)



Slag

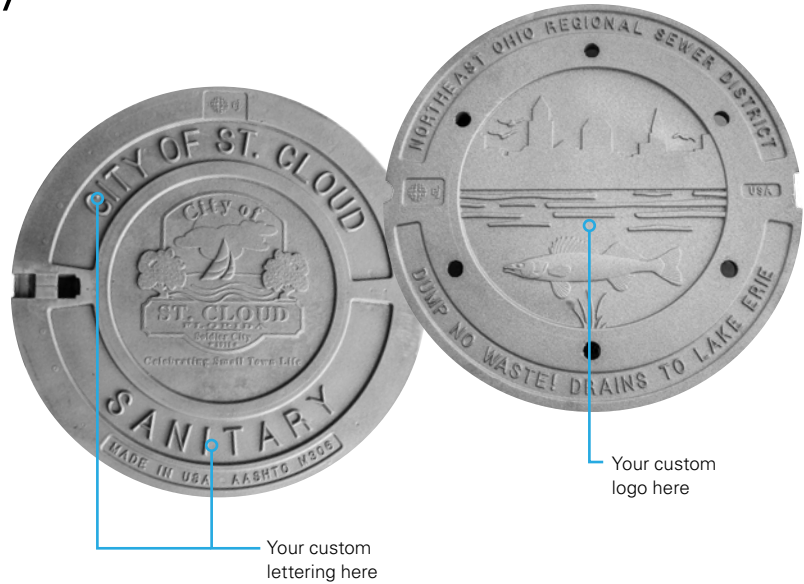
EJ makes use of the by-products from the melt process whenever possible. One of these by-products, referred to as "slag", is known to other industries as "calcium stabilizer" because of its high calcium content and lack of metallic compounds. It is reused in other industries to replace fine aggregate in products such as asphalt and concrete. During harsh winter months, county road commissions use this for sanding roads to improve vehicle traction.

Custom Logo Covers

Promote Your Identity

Customize Your Casting

Always popular, custom covers may feature a slogan, logo, mascot or a popular characteristic. EJ provides custom logo and lettered covers for many municipalities, utilities and universities in a multitude of cover designs. Specialized lettering, in any language, lets you specify the city, corporation and type of structure beneath the cover. Customized logos and lettering are available on a wide selection of EJ manhole covers.



Coating of Castings

AASHTO M306 specifically calls for castings to be uncoated. Cast iron is a highly corrosion resistant product and coatings are not needed. Coatings have been applied in the past for aesthetic reasons and may hide castings defects.

EJ is dedicated and committed to environmental stewardship for clean air, water, and earth, while adhering to standard specifications designated by AASHTO.



Fabricated Products

EJ offers a variety of fabricated solutions for both on road and off road applications.

We manufacture an extensive range of access solutions in a variety of materials — including galvanized steel, stainless steel, aluminium, ductile iron and composite — in our world class production facilities.

Our range of fabricated steel drainage grating conforms to rigorous DOT and municipal standards. Approved products are used on federal highway projects across the USA.

Access hatches are designed to withstand heavy use. They are also available for lighter weight applications including pedestrian or unintended vehicular traffic.

Applications

- Infrastructure access
- Drainage and storm water management
- Utility and telecommunication vaults
- Pump and lift stations
- Decorative streetscapes

Services

- Knowledgeable customer support
- Experienced engineering
- High quality materials and hardware
- Automated welding and machining
- Hand fabrication
- Large volume production
- Custom solutions

Products

- Access hatches
- Infill floor doors
- Steel riser rings
- Roadway grates
- Reticuline grates
- Bar grates
- Trench frames
- Tree guards
- Hand rails and safety bars
- Trash racks and intake screens
- Other custom fabricated solutions to satisfy your specific application

Access Hatches



Fabricated aluminum and steel access hatches are available in a wide range of styles, equipped with the features you need for your project.

Roadway Grates



Our fabricated grating can be customized to fit existing drainage structures.

Trench Frames and Grates



Build to any length of drainage required and incorporate cast iron trench or fabricated steel grates to meet your project needs.

Infill Floor Doors



Infill hatches accommodate pavers or concrete of varying heights to maintain the flow and identity of a streetscape, campus, or park landscape.

Catch Basin and Curb Inlet Grates



Including galvanized riveted reticuline and bar grates.

Riser Rings



Adjust any manhole or catch basin to grade on your resurfacing projects, new installations, or rehabilitation work. Available in round, square, or rectangular sizes.

Municipal and Construction Casting Load Ratings

Loading Requirements

All products manufactured by EJ are designed to meet or exceed the specified loading requirements. They conform to AASHTO and ASTM standards. These standards specify material quality and load requirements.

Proof Load Testing

All H-20 heavy duty traffic rated construction castings must pass a proof load test conducted in accordance with AASHTO M306 guidelines. 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 40,000 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.

Material Selection

Depending on the model, our construction castings can be manufactured using either grey iron or ductile iron. Grey iron has an unequalled record of success as a material for construction castings. Grey iron is highly resistant to corrosion and maintains compressive strength, abrasion resistance, vibration absorption, and low-notch sensitivity. Additionally, grey iron has a long service life and is very cost effective. Ductile iron combines the advantages of grey 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.

Gray and Ductile Iron 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.
Medium Duty	Max. 16,000	Castings designated as medium duty accept loading from 16,000 - 40,000 lbs. These castings can accept standard traffic loading, and are in conformance with H-20/HS-20 (wheel load of 16,000 lbs. on a tire contact area of 10" x 20") or Federal Specification RR-F-621D (25,000 lbs. on a 9" x 9" load contact area).
Light Duty	Max. 2,500	Light duty castings are able to withstand some vehicular loading, but are not designed to accept roadway traffic. Items can accept loading from 2,500-16,000 lbs. These products may be subject to occasional traffic from process maintenance, mowers, etc.
Non-traffic	Under 2,500	Castings designated as non-traffic are intended for use in areas that are not subject to vehicle traffic. Generally nothing over 2,500 lbs. should be placed on these items. Duty rating is 0 - 2,500 lbs.

Flow Capacities of Inlet Grates

Selecting and specifying the proper type of inlet grates for drainage is an important part of a stormwater management design plan. EJ manufactures many different types and sizes of inlet drainage grates to meet your design needs. See a listing of EJ drainage tables for round grates and catch basins in the back of this catalog.

The flow capacity of any inlet grate in a sump or ponded condition is a function of the depth of water over the grate and the open area of the grate. For this calculation, the orifice equation is used. The orifice equation can be used to determine the flow through a grate.

$$Q = CA\sqrt{2gd}$$

where Q = flow

C = orifice coefficient
 A = open area of grate (ft²)
 g = acceleration due to gravity (32.2 ft/sec²)
 d = depth of water over grate (feet)

Using an orifice coefficient of 0.67 and correcting open area from square feet to square inches and depth of water from feet to inches, this equation simplifies to:

$$Q = 0.0108 A\sqrt{d}$$

where Q = flow (CFS, cubic feet per second)
 A = open area of grate (in²)
 d = depth of water over grate (inches)

Note: This equation is valid for inlet grates in a sump condition where water depths are 4 inches or greater. At water depths less than 4 inches an inlet grate acts as a weir to incoming flow and requires different analysis to determine flow capacity. The weir equation used is listed below and it is used to determine how much water flows to the grate:

$$Q = 3.33 L(H)^{3/2}$$

where Q = flow (CFS)
 L = perimeter of grate where flow is present (in feet)
 H = depth of water above grate (in feet)

It is important to note that the orifice or weir calculations listed above do not compensate for any reduction in flow capacity due to clogging by debris. This adjustment may vary and is left up to the discretion of the specifying engineer. In traveled portions of roadways, inlets should be placed at low points and along slopes. The inlets placed along slopes are intended to reduce inlet bypass and to reduce or eliminate ponding which can be a hazard to traffic. Maximum allowable ponding varies between specifying bodies.

Example 1:

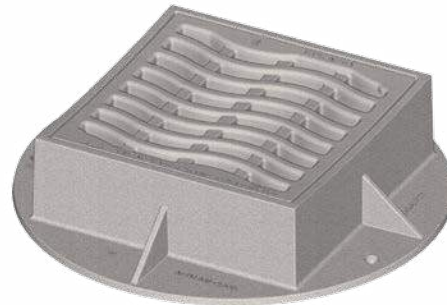
Calculate the flow capacity of an EJ model 5105 TYPE M1 Inlet Grate with 6 inches of water over it. Since depth exceeds 4" the orifice equation is applicable.

Recall: $Q = 0.0108 A\sqrt{d}$ $A = 175 \text{ in}^2$

$d = 6 \text{ inches}$

$$Q = 0.0108 \times 175 \times \sqrt{6}$$

$$Q = 4.6 \text{ CFS}$$



Illustrating 510M1

Example 2:

Select a suitable EJ manhole catch basin unit with a grate to handle 6 CFS. Depth of water is 5 inches.

$$\text{Recall: } Q = 0.0108 A \sqrt{d}$$

$$Q = 6 \text{ CFS}$$

$$d = 5 \text{ inches}$$

$$\text{Solve for A: } A = Q / (0.0108 \sqrt{d})$$

$$A = 6 / (0.0108 \sqrt{5})$$

$$A = 249 \text{ in}^2$$



Illustrating V-5622

Choose EJ model V-5622 Grate with 266 sq. in. open area.

Sinusoidal and Vane grate flow characteristics

It is generally accepted that vane grates are more efficient than standard bar grates when capturing water that is moving across them. Sinusoidal and vane grates have greater efficiency due to better directional flow characteristics. Sinusoidal and vane grates typically allow less water to bypass the grate. Please note that if a vane grate is installed improperly (i.e. backwards) the grate will have poor flow characteristics, while sinusoidal grates accept water equally in either direction.



Illustrating sinusoidal grate 5416



Illustrating vane grate 7750

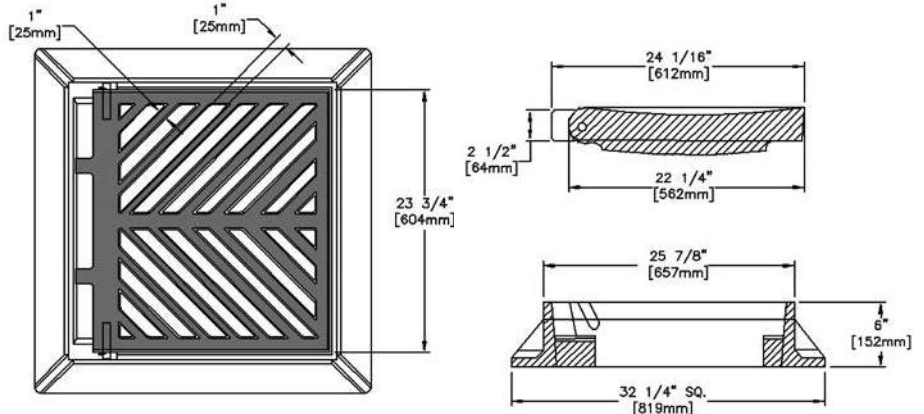
Ontario Municipal and Construction Castings



400.01 CATCH BASIN FRAME WITH SQUARE DISHED GRATE

Heavy duty
 Square frame with square overflow-type
 dished grate for catch basins, MC400010301U
 Herringbone openings
 Approximate 242 sq. in. open area

Frame also accepts:
 400.11 flat grate perforated
 openings, MC400110300U

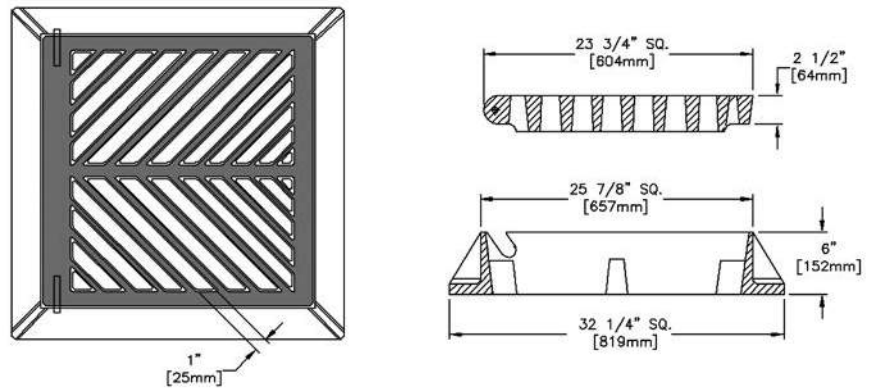


Illustrating MC400010301U

400.02 CATCH BASIN FRAME WITH SQUARE FLAT GRATE

Heavy duty
 Square frame with square flat grate for
 catch basins, MC400020301U
 Herringbone openings
 Approximate 203 sq. in. open area

Frame also accepts:
 400.10 flat grate perforated
 openings, MC400100300U
 Beehive grate, MC400020800U
 401.081 fish grate, MC400020310U
 Walmart grate, MC400020700U
 400.12 birdcage grate, MC400120300U

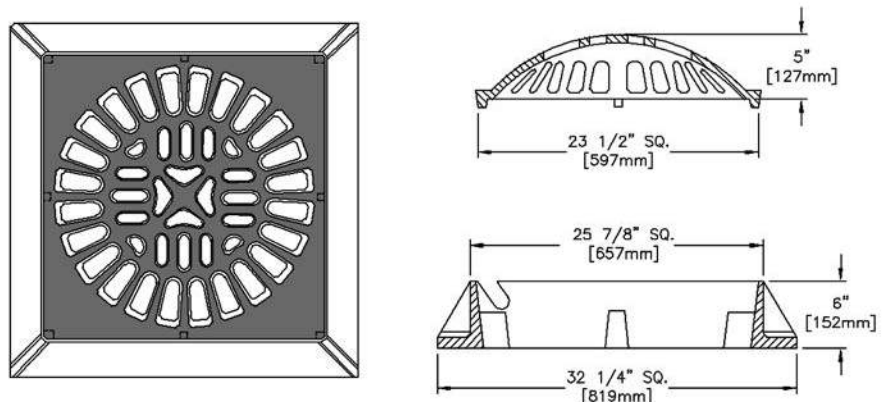


Illustrating MC400020301U

400.02 CATCH BASIN FRAME WITH BEEHIVE GRATE

Heavy duty
 Square frame with beehive style catch
 basin, MC400020801U
 Approximate 155 sq. in. open area

Frame also accepts:
 400.02 flat grate herringbone
 openings, MC400020300U
 400.10 flat grate perforated
 openings, MC400100300U
 401.081 fish grate, MC400020310U
 Walmart grate, MC400020700U
 400.12 birdcage grate, MC400120300U

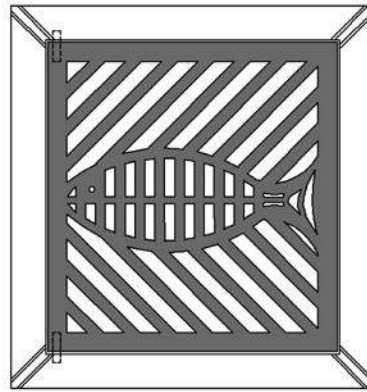


Illustrating MC400020801U

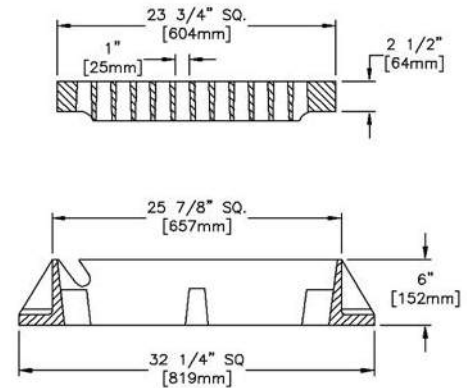
400.02 CATCH BASIN FRAME WITH 401.081 FISH GRATE

Heavy duty
 Square frame with 401.081 Fish
 Grate, MC400020311U
 Approximate 246 sq. in. open area

Frame also accepts:
 400.02 flat grate herringbone
 openings, MC400020300U
 400.10 Flat grate perforated
 openings, MC400100300U
 Beehive grate, MC400020800U
 Walmart grate, MC400020700U
 400.12 Birdcage grate, MC400120300U



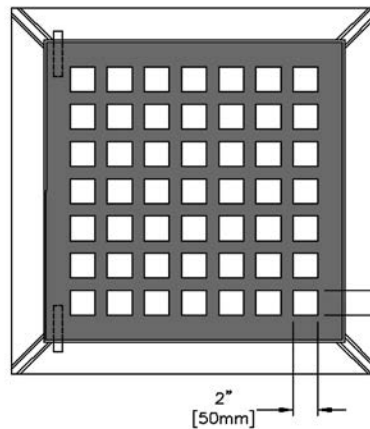
Illustrating MC400020311U



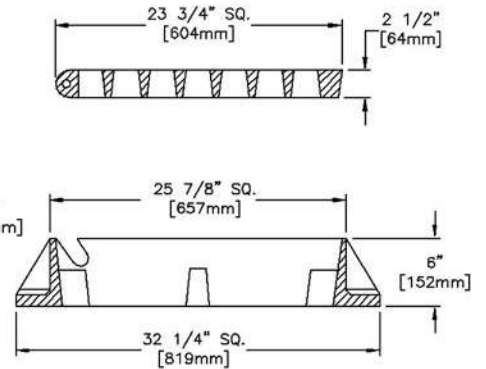
400.02 CATCH BASIN FRAME WITH WALMART GRATE

Heavy duty
 Square Frame and flat grate with perforated
 openings for Walmart, MC400020701U
 Approximate 196 sq. in. open area

Frame also accepts:
 400.02 flat grate herringbone
 openings, MC400020300U
 400.10 flat grate perforated
 openings, MC400100300U
 Beehive grate, MC400020800U
 401.081 fish grate, MC400020310U
 400.12 birdcage grate, MC400120300U

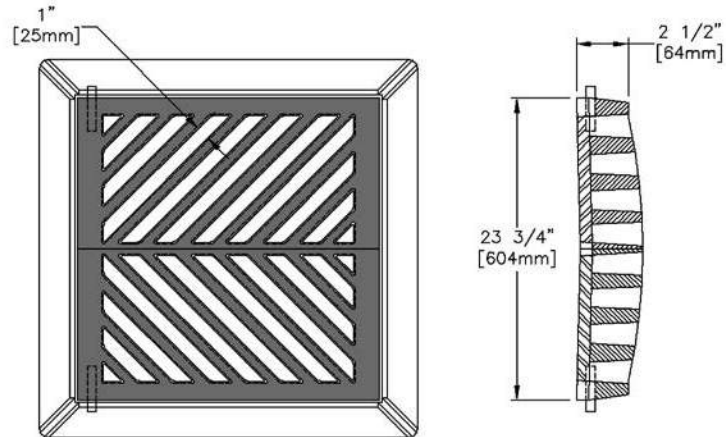


Illustrating MC400020701U

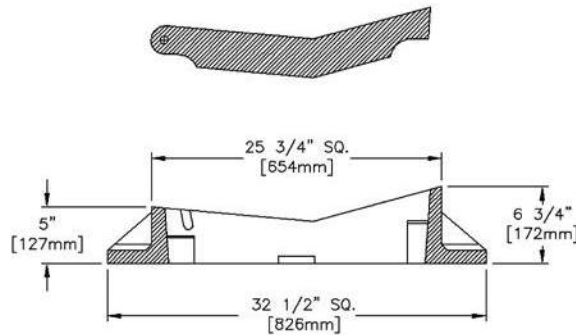


400.03 CATCH BASIN FRAME WITH SQUARE V GRATE

Heavy duty
 Square frame with square V grate for
 catch basins, MC400030000U
 Herringbone openings
 Approximate 203 sq. in. open area



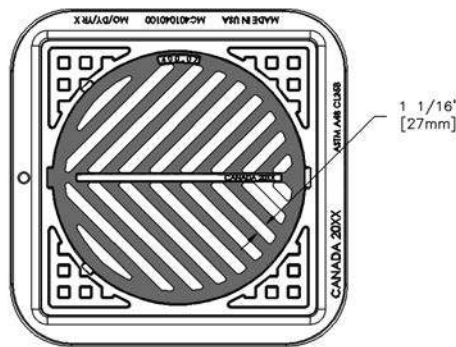
Illustrating MC400030000U



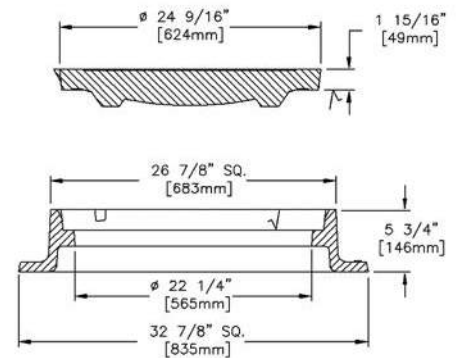
400.07 CATCH BASIN FRAME WITH CIRCULAR FLAT GRATE

Heavy duty
 Machine bearing surface
 Raised square frame with circular flat grate
 for catch basins, MC400070301U
 Herringbone openings
 Approximate 182 sq. in. open area

Frame also accepts:
 400.07 fish grate, MC400070312
 401.04 Type A cover, MC401040200U
 401.04 Type B cover, MC401040300U
 401.06 locking cover, MC401060200U
 402.01 valve chamber
 cover, MC402010200U
 402.02 valve chamber
 cover - MC402011200U



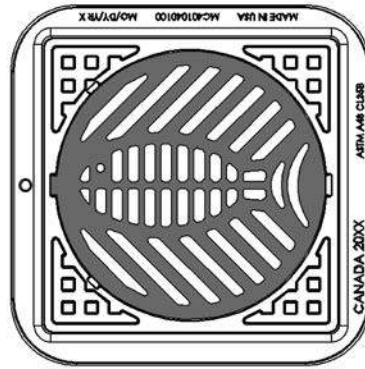
Illustrating MC400070301U



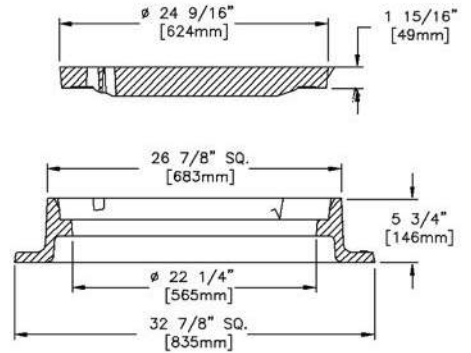
400.07 CATCH BASIN FRAME WITH CIRCULAR FISH GRATE

Heavy duty
 Machine bearing surface
 Raised square frame with circular fish grate
 for catch basins, MC400070313
 Herringbone openings
 Approximate 167 sq. in. open area

Frame also accepts:
 400.07 flat grate, MC400070306
 401.04 Type A, MC401040200U
 401.04 Type B, MC401040300U
 401.06 locking cover, MC401060200U
 402.01 valve chamber, MC402010200U
 402.02 valve chamber, MC402011200U



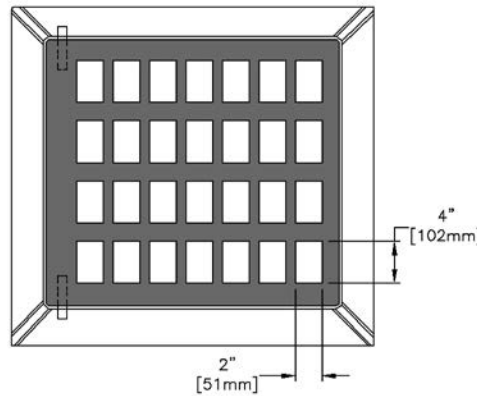
Illustrating MC400070313



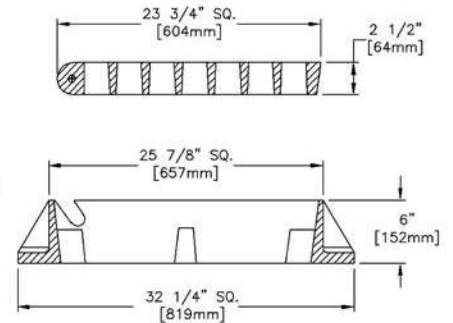
400.10 CATCH BASIN SQUARE FRAME WITH SQUARE FLAT GRATE

Heavy duty
 Square frame with square flat grate for
 catch basins, MC400100301U
 Perforated openings
 Approximate 224 sq. in. open area
 Product number MC400100301U

Frame also accepts:
 400.02 flat grate herringbone
 openings, MC400020300U
 Beehive grate, MC400020800U
 401.081 fish grate, MC400020310U
 Walmart grate, MC400020700U
 400.12 birdcage grate, MC400120300U



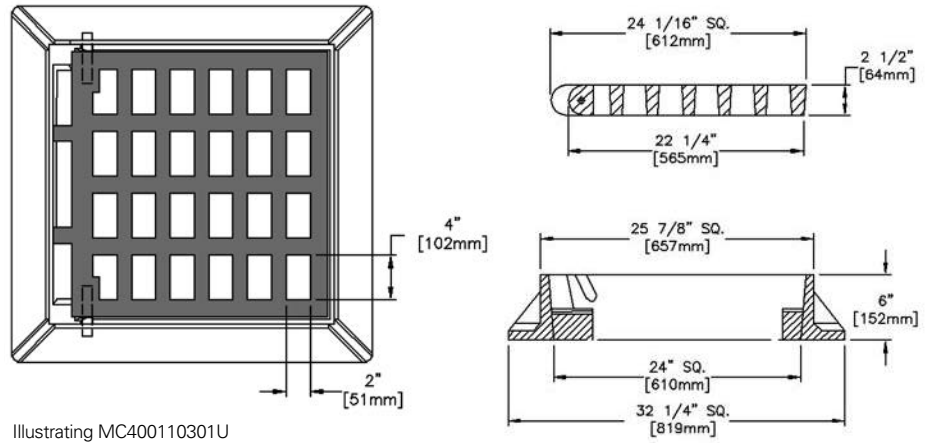
Illustrating 400.02 frame with 400.10 grate,
 MC400100301U



400.11 CATCH BASIN FRAME WITH FLAT GRATE

Heavy duty
 Square catch basin frame and flat
 grate (perforated) overflow
 type, MC400110301U
 Approximate 231 sq. in. open area

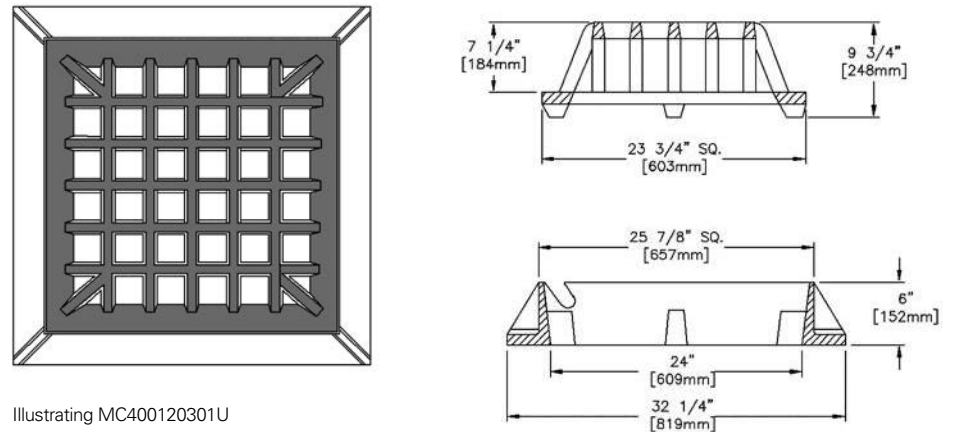
Frame also accepts:
 400.01 square dished grate
 herringbone openings, MC400010300U



400.12 CATCH BASIN FRAME WITH BIRDCAGE GRATE

Heavy duty
 Square frame with birdcage grate for catch
 basins, MC400120301U
 Approximate 300 sq. in. open area

Frame also accepts:
 400.02 flat grate herringbone
 opening, MC400020300U
 400.10 flat grate perforated
 openings, MC400100300U
 Beehive grate, MC400020800U
 401.081 Fish grate, MC400020310U
 Walmart grate, MC400020700U



400.08 CATCH BASIN SIDE INLET WITH GRATE

Heavy duty

Side inlet for catch basins, MC400020302U

Approximate 203 sq. in open area

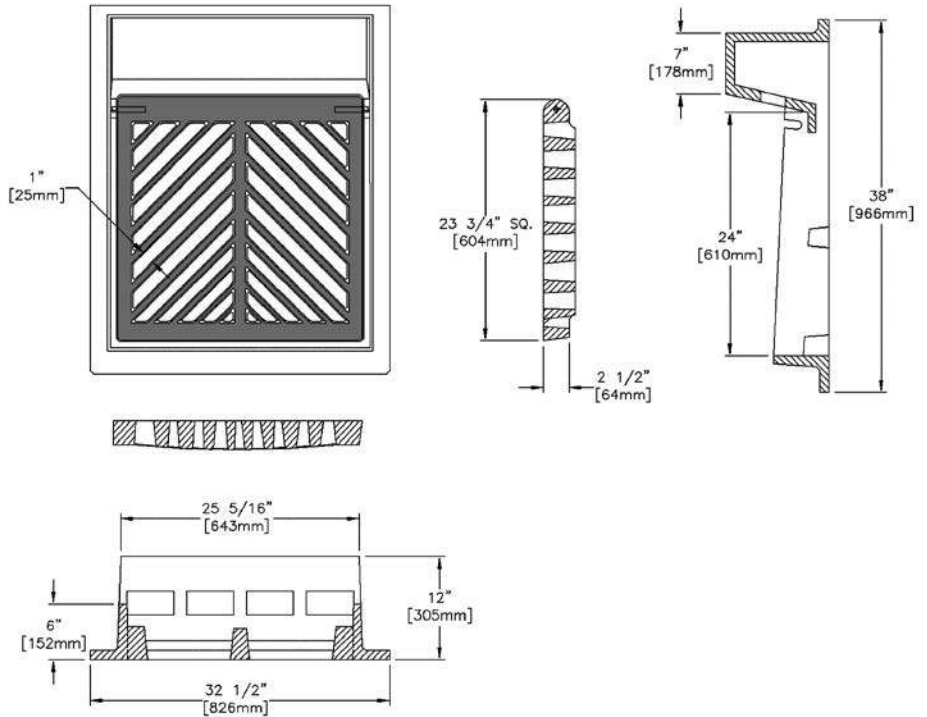
Frame accepts:

400.02 flat grate herringbone openings, MC400020300U

400.10 flat grate with perforated openings, MC400100300U

401.081 fish grate, MC400020310U

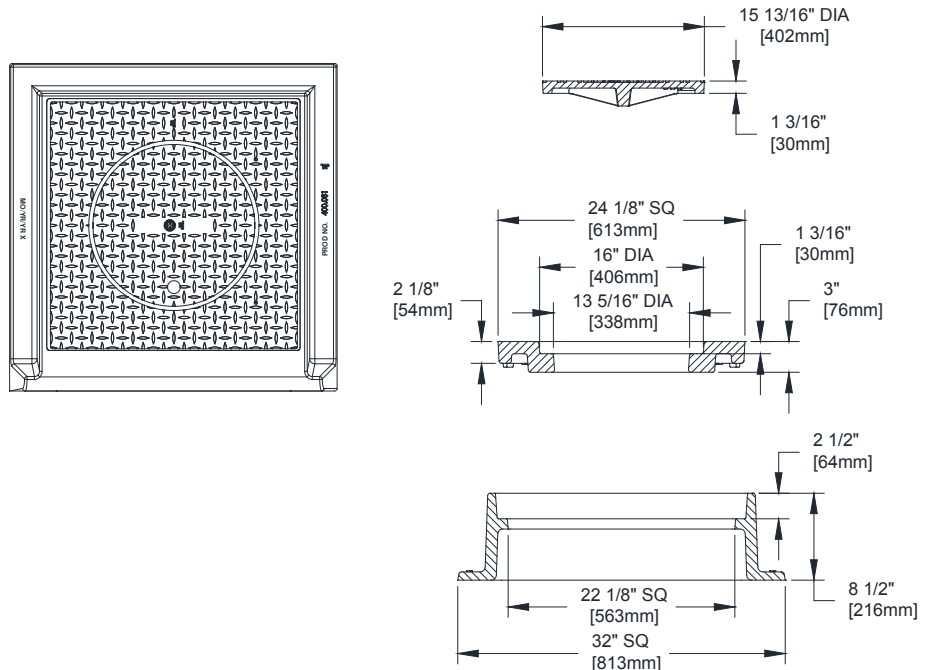
Walmart grate, MC400020700U



Illustrating 400.08 frame and 400.02 grate, MC400020302U

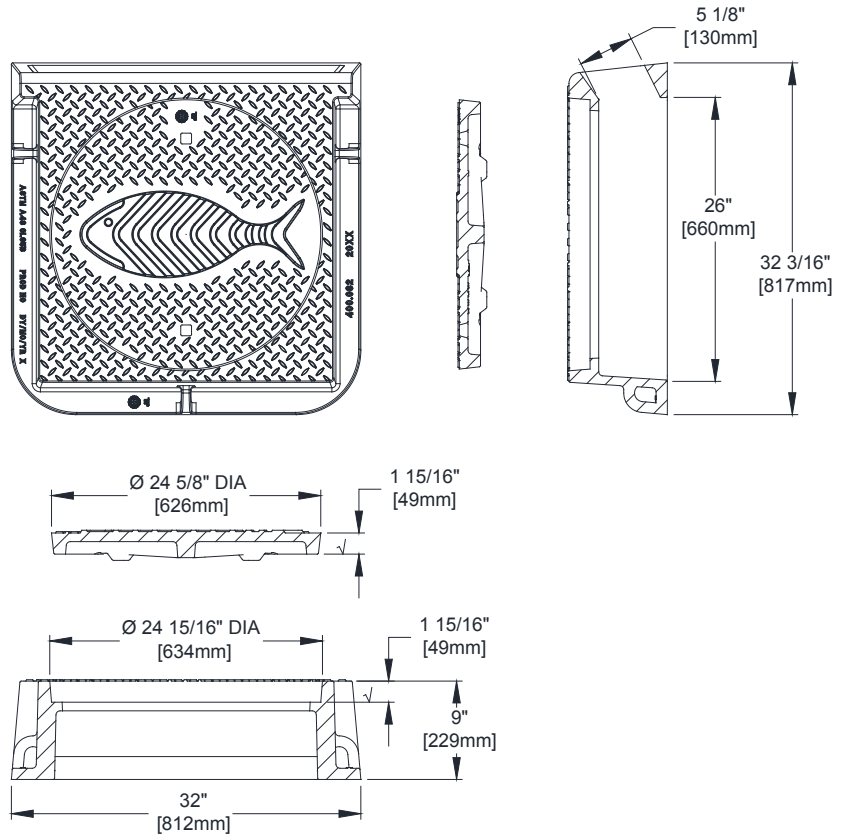
400.081 THREE PIECE CURB INLET

400.081 frame and two piece cover, MC400081000U



400.082 CURB INLET FRAME WITH 401.08 FISH LOGO COVER

400.082 frame with 401.08 fish cover, MC400082201U

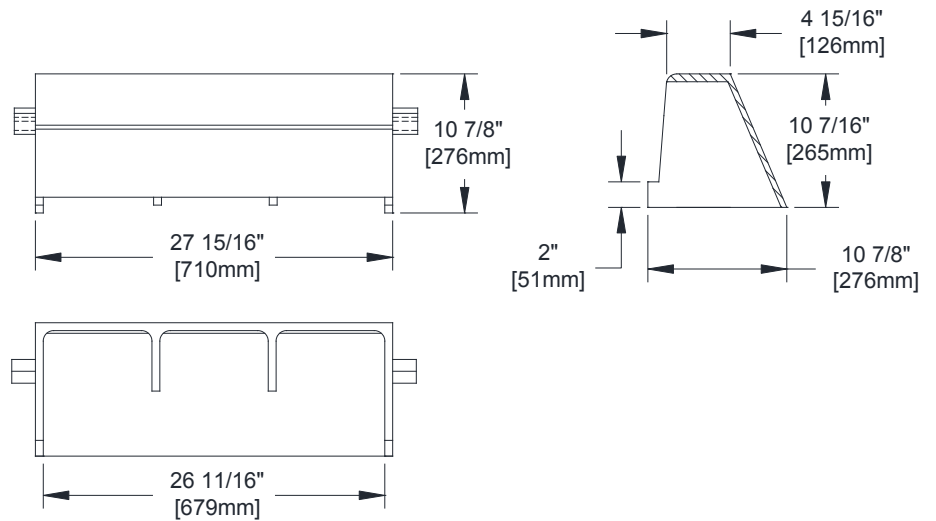


400.09 CATCH BASIN CURB INLET HOOD

Curb inlet overflow for catch basins
Approximate 276 sq. in open area

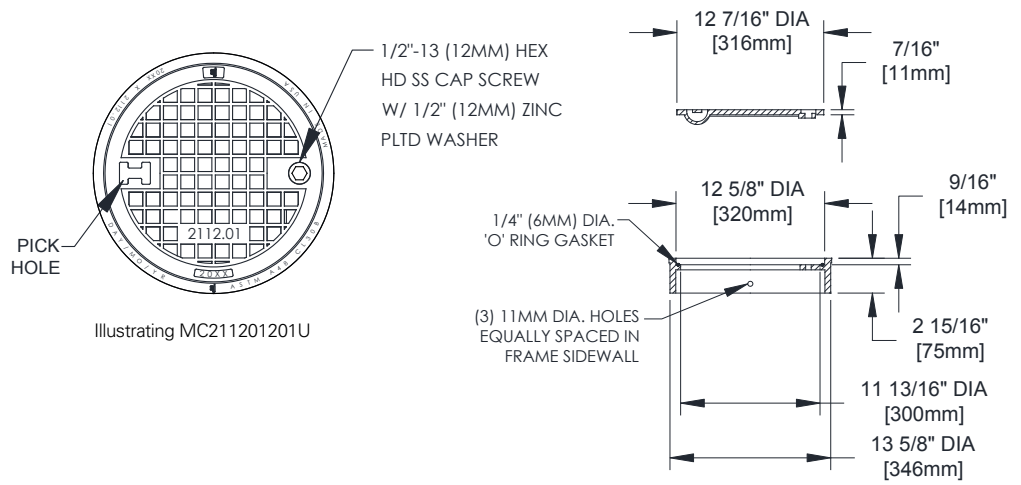
Back arch only, MC400090600U

Note: Hood only



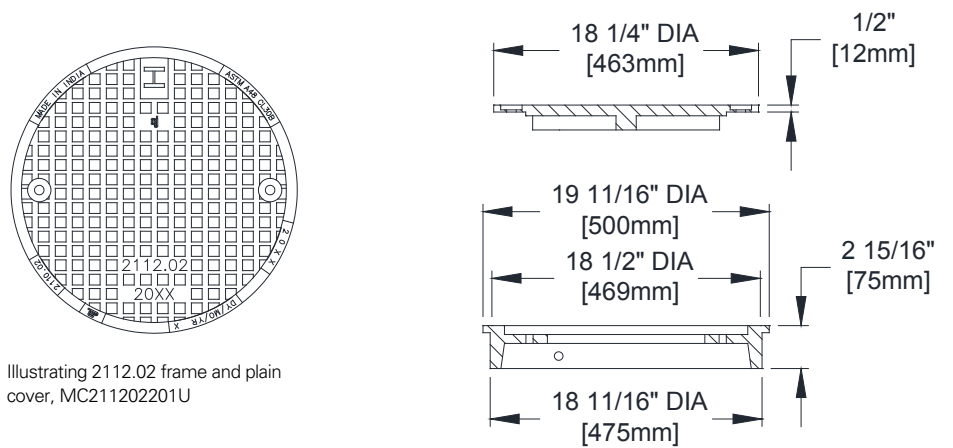
2112.01 12" BOLTED FRAME AND COVER

MC211201201U



2112.02 18" BOLTED FRAME AND COVER

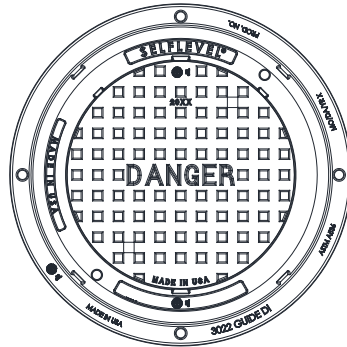
Traffic cover and frame, MC211202205U
MTO SP602S01 cover and
frame, MC211202231U



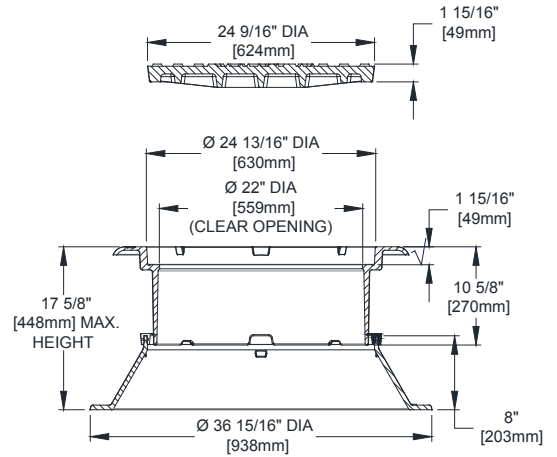
401.01A SELFLEVEL™ ACCESS ASSEMBLY

SELFLEVEL assembly with
Type A cover, MC401010243

401.01 Type A cover, MC401010199
401.01 Type B perforated
cover, MC401010301



Illustrating MC401010243



401.01 FRAME WITH 401.01 TYPE A COVER 401.01 FRAME WITH 401.01 TYPE B COVER

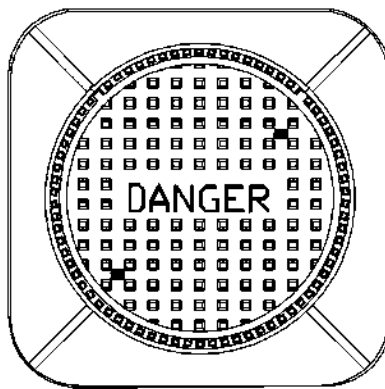
Heavy duty
Machined bearing
401.01 frame with 401.01 Type A
cover, MC401010160
401.01 frame with 401.01 Type B
cover, MC401010305

Frame also accepts:
402.010 valve chamber, MC402010200U
402.020 valve chamber, MC402011200U

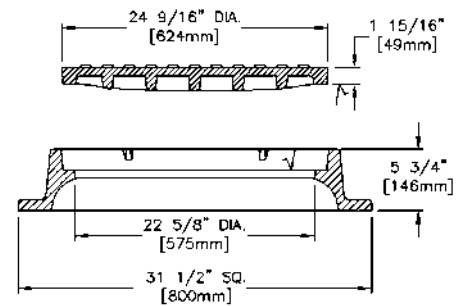
Frame is also available in 3" high

Available lettering:
Sanitary, MC401010221U
Sewer, MC401010230U
Storm, MC401010240U
Water, MC401010210U

Also available:
Custom Lettering
Custom Logos



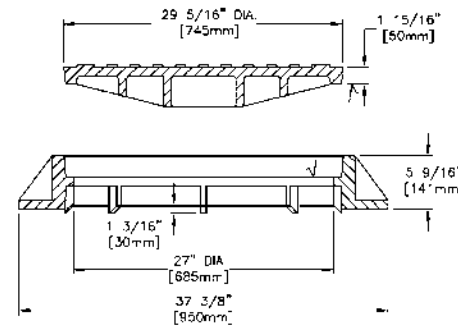
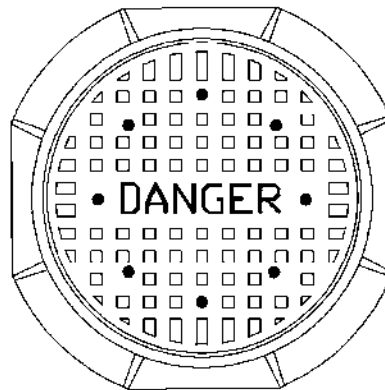
Illustrating MC401010160 and MC401010305



401.02 CIRCULAR FRAME WITH CIRCULAR COVER

Heavy duty
 Machined bearing
 Circular frame with circular cover for
 maintenance holes, MC401020201U

Also available:
 Custom Lettering
 Custom Logos



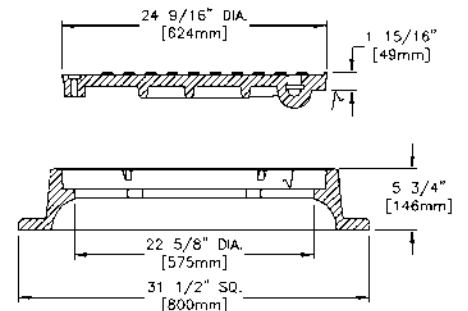
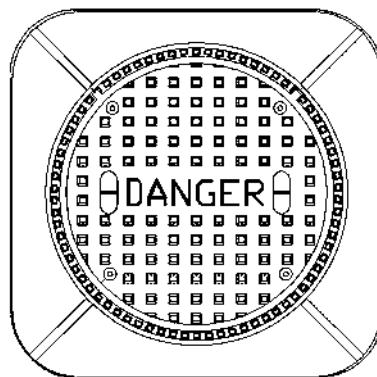
Illustrating MC401020201U

401.03 SQUARE FRAME WITH WATER RESISTANT CIRCULAR COVER

Heavy duty
 Machined bearing
 Square frame with circular water resistant cover
 for maintenance holes, MC401030201U
 Complete with gasket and 4 stainless steel
 bolts, 16mm x 57mm long countersunk
 into cover

Available lettering:
 Sanitary, MC401030221U

Also available:
 Non-bolted
 Non-gasket
 Custom Lettering
 Custom Logos



Illustrating MC401030201U

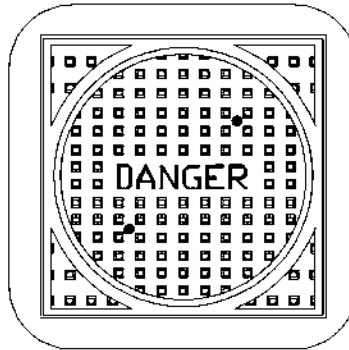
401.04A SQUARE FRAME WITH CIRCULAR COVER

Heavy duty
 Machined bearing
 Raised square frame with circular
 Type A closed cover for maintenance
 holes, MC401040201U

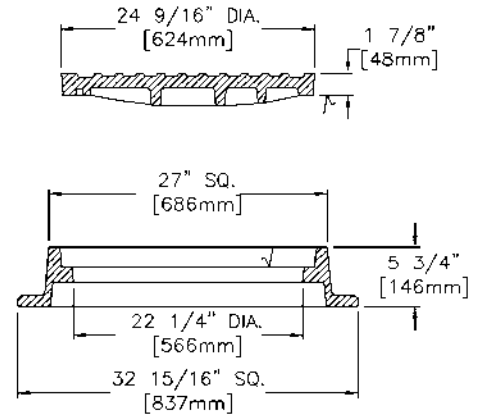
Frame also accepts:
 400.07 fish grate, MC400070312
 401.04 Type B open cover, MC401040300U
 401.06 locking cover, MC401060200U
 402.01 valve chamber, MC402010200U
 402.02 valve chamber, MC402011200U

Available lettering:
 Sanitary
 Sewer
 Storm
 Water

Also available:
 Custom Lettering
 Custom Logos



Illustrating 401.01 frame with 401.04 Type A cover, MC401040201U



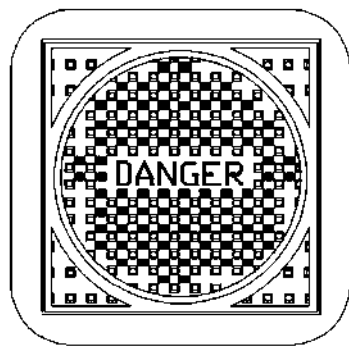
401.04B SQUARE FRAME WITH CIRCULAR COVER

Heavy duty
 Machined bearing
 Raised square frame with circular
 Type B perforated cover for
 maintenance holes, MC401040301U

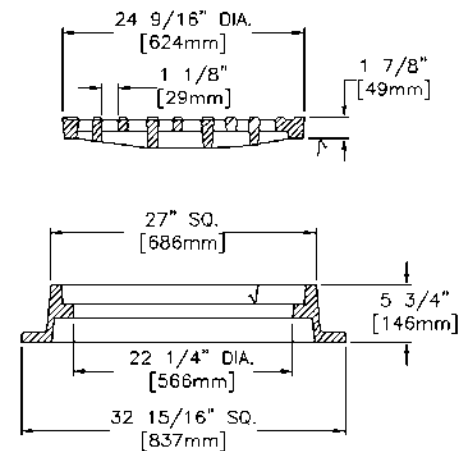
Frame also accepts:
 400.07 fish grate, MC400070312
 401.04 Type A closed cover, MC401040200U
 401.06 locking cover, MC401060200U
 402.01 valve chamber, MC402010200U
 402.02 valve chamber, MC402011200U

Available lettering:
 Sanitary
 Sewer
 Storm
 Water

Also available:
 Custom Lettering
 Custom Logos



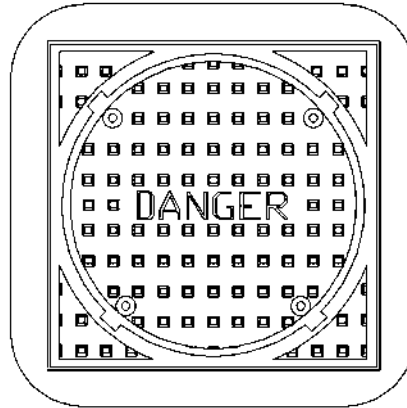
Illustrating 401.04 frame with 401.04 Type B perforated cover, MC401040301U



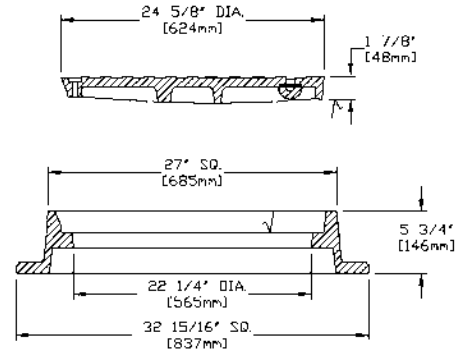
401.05 SQUARE FRAME WITH CIRCULAR WATER RESISTANT COVER

Heavy duty
Machined bearing
Raised square frame with circular
water resistant cover for maintenance
holes, MC401050201U
Complete with gasket and 4 stainless steel
bolts, 16mm x 57mm long countersunk
into cover

Also available:
Custom Lettering
Custom Logos



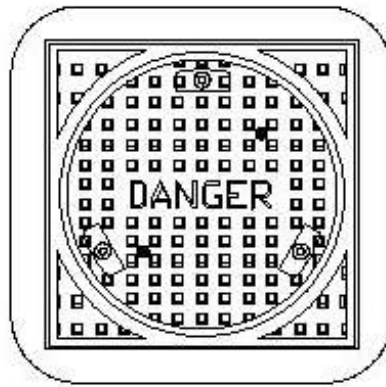
Illustrating 401.05 frame with circular water resistant cover, MC401050201U



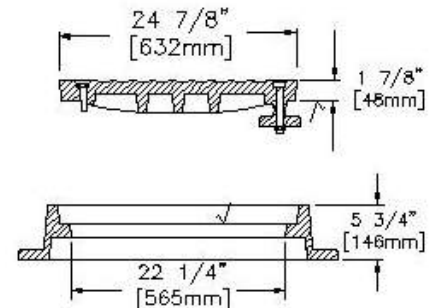
401.06 SQUARE FRAME WITH CIRCULAR LOCKING COVER

Heavy duty
Machined bearing
Raised square frame with circular
locking cover for maintenance
holes, MC401060201U

Frame also accepts:
400.07 grate, MC400070300U
400.07 fish grate, MC400070310U
401.04 Type A cover, MC401040200U
401.04 Type B cover, MC401040300U
401.06 locking cover, MC401060200U
402.01 valve chamber cover, MC402010200U
402.02 valve chamber cover, MC402011200U
Sanitary cover, MC401010221U
Sewer cover, MC401010230U
Storm cover, MC401010240U
Water cover, MC401010210U



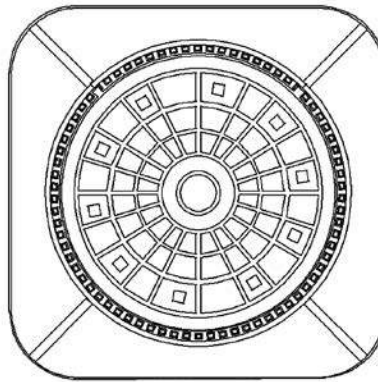
Illustrating 401.04 frame and circular locking cover, MC401060201U



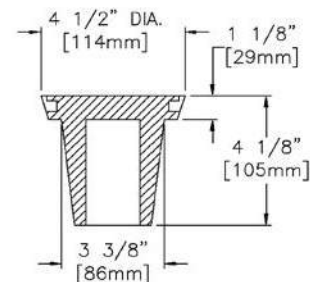
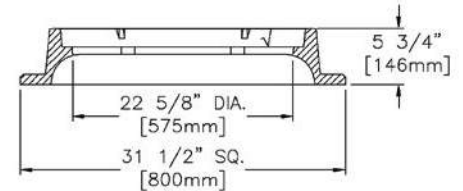
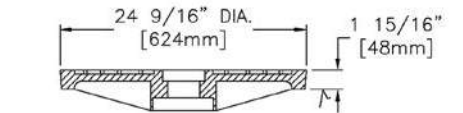
402.010 SQUARE FRAME WITH CIRCULAR SOLID COVER WITH PLUG FOR VALVE CHAMBER
402.011 SQUARE FRAME WITH CIRCULAR 10 - 30MM SQUARE HOLE VENTED COVER WITH PLUG FOR VALVE CHAMBER

Heavy duty
 Machined bearing
 Square frame with circular cover and
 plug for valve chambers, MC402011201U

Frame also accepts:
 400.07 herringbone grate, MC400070300U
 400.07 fish grate, MC400070310U
 401.04 Type A cover, MC401040200U
 401.04 Type B cover, MC401040300U
 401.06 locking cover, MC401060200U
 402.01 valve chamber, MC402010200U
 402.02 valve chamber, MC402011200U
 Sanitary cover, MC401010221U
 Sewer cover, MC401010230U
 Storm cover, MC401010240U
 Water cover, MC401010210U



Illustrating 401.010 frame and 402.011 cover, MC402011201U

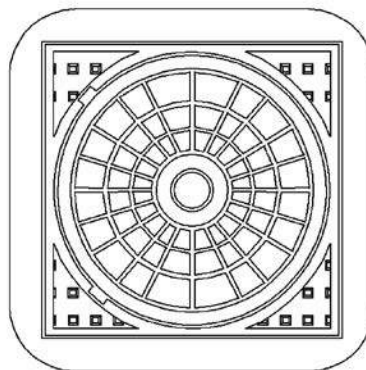


PLUG DETAIL

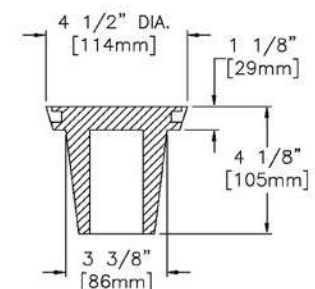
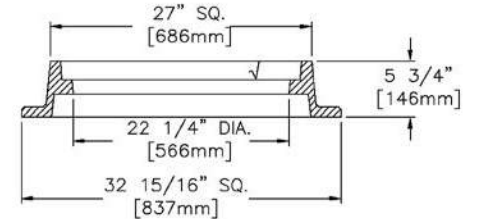
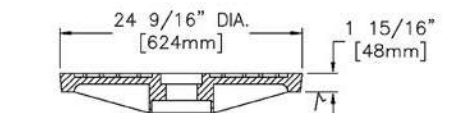
402.020 SQUARE FRAME WITH CIRCULAR SOLID COVER WITH PLUG FOR VALVE CHAMBER
402.021 SQUARE FRAME WITH CIRCULAR 10 - 30MM SQUARE VENTED COVER FOR VALVE CHAMBER

Heavy duty
 Raised square frame with circular cover and
 plug for valve chambers, MC402020201U

Frame also accepts:
 400.07 herringbone grate, MC400070300U
 400.07 fish grate, MC400070310U
 401.04 Type A cover, MC401040200U
 401.04 Type B cover, MC401040300U
 401.06 locking cover, MC401060200U
 402.01 valve chamber, MC402010200U
 402.02 Valve chamber, MC402011200U
 Sanitary cover, MC401010221U
 Sewer cover, MC401010230U
 Storm cover, MC401010240U
 Water cover, MC401010210U



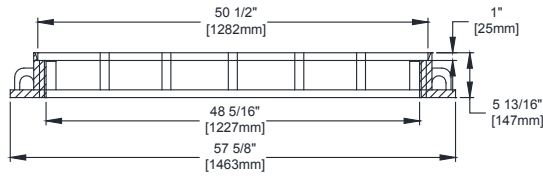
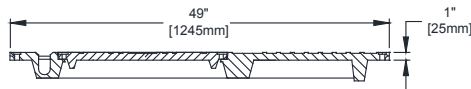
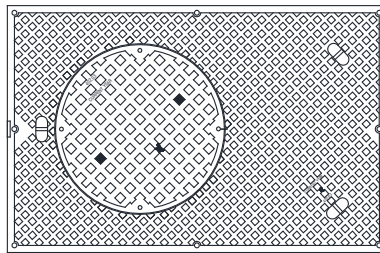
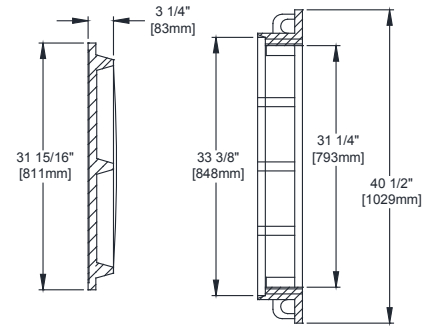
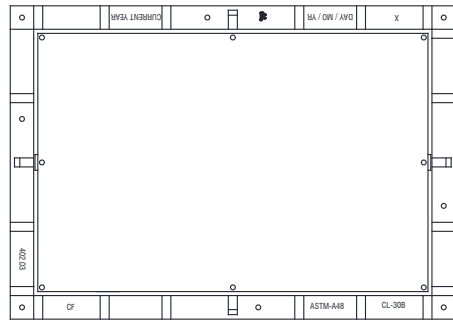
Illustrating 401.04 frame 402.020 cover, MC402020201U



PLUG DETAIL

402.03 RECTANGULAR FRAME WITH TWO PIECE COVER FOR METER AND VALVE CHAMBERS

Heavy duty
 Rectangular frame and two
 piece cover, MC402030202U
 Also available with 402.03
 3" frame, MC402030202U



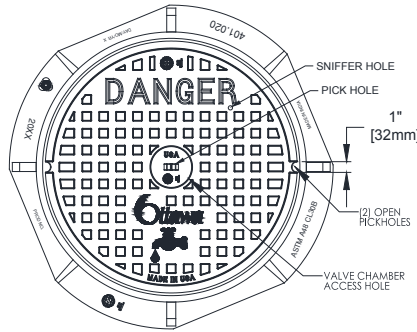
Illustrating MC402030211U

Ottawa

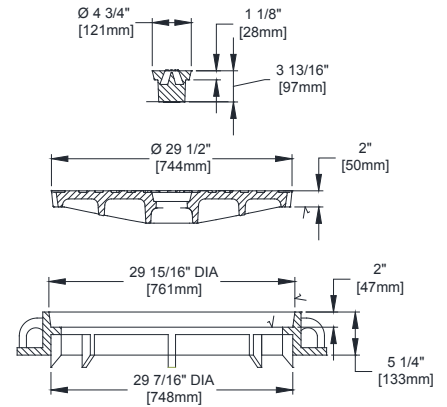
W16 MANHOLE FRAME WITH W15 VALVE CHAMBER COVER WITH PLUG

Manhole frame and cover, MC401020231U

Frame also accepts:
Solid cover with 8 vent holes, MC401020200U

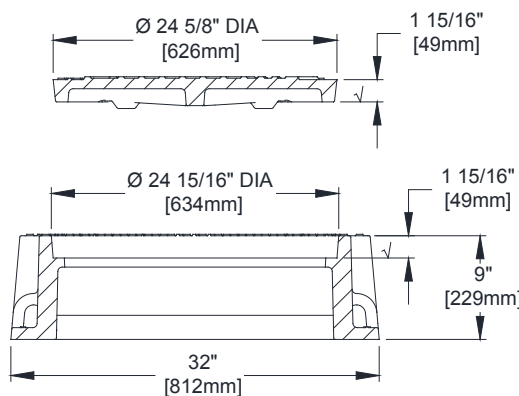
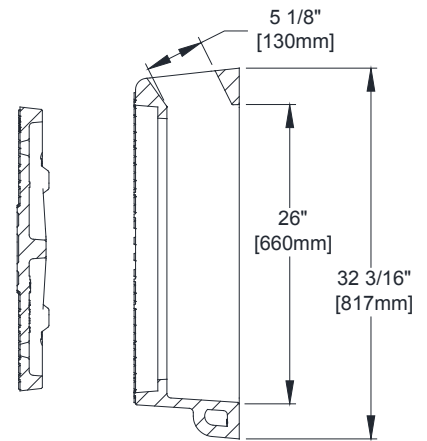
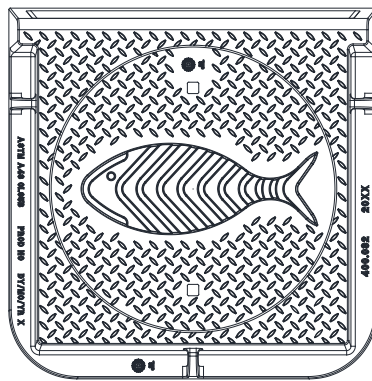


Illustrating MC401020231U



S22/S23 - 400.082 CURB INLET FRAME & FISH LOGO COVER

MC400082201U



Illustrating MC400082201U

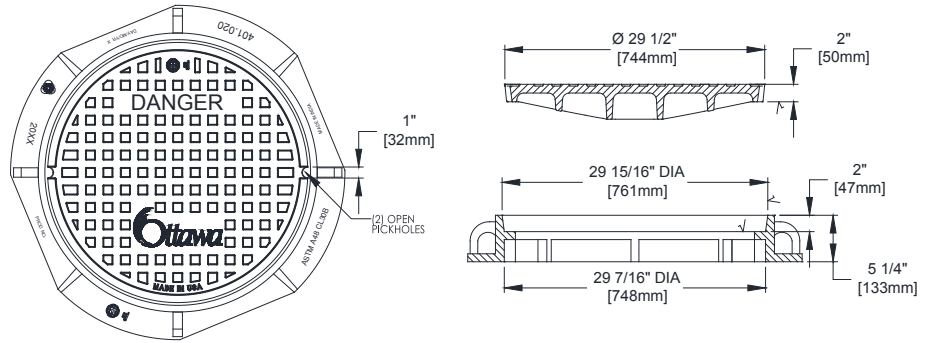
OTTAWA MAINTENANCE HOLE FRAME S25 WITH S28.1 PERFORATED COVER

Frame and cover, MC401020221U

Frame also accepts:

Fish cover S24.1, MC401020240

Toilet cover S24, MC401020210



Illustrating 401.02 frame with S28.1 perforated cover, MC401020221U

S19 CATCH BASIN HEAVY DUTY FRAME & FISH LOGO GRATE

Frame and fish grate, MC400070311U

Frame also accepts:

400.07 grate, MC400070300U

401.04 Type A cover, MC401040200U

401.04 Type B cover, MC401040300U

401.06 locking cover, MC401060200U

402.01 valve chamber cover, MC402010200U

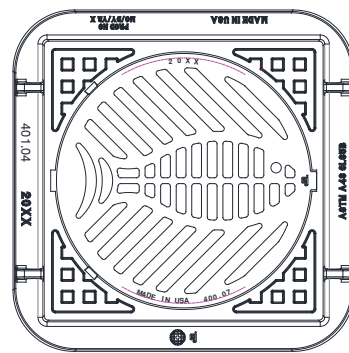
402.02 valve chamber cover, MC402011200U

Sanitary cover, MC401010221U

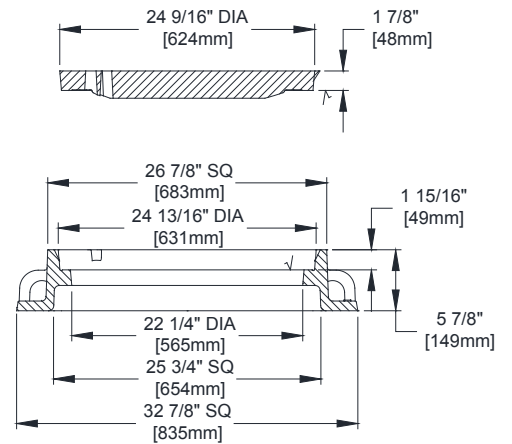
Sewer cover, MC401010230U

Storm cover, MC401010240U

Water cover, MC401010210U



Illustrating MC400070311U



OTTAWA MAINTENANCE HOLE FRAME S25 AND FISH LOGO COVER S24.1

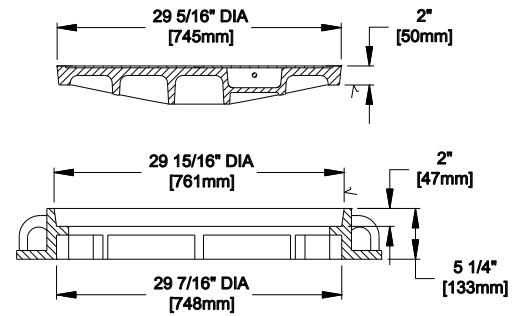
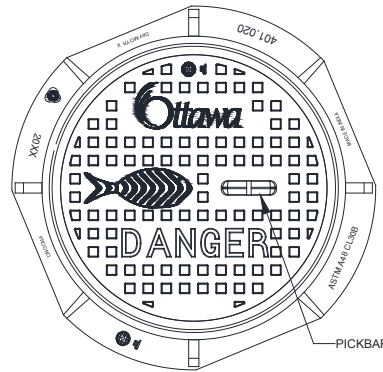
Frame and fish cover, MC401020241U

Frame also accepts:

Toilet cover S24, MC401020210

Perforated cover S28.1, MC401020220U

W15 valve chamber cover, MC401020243U



Illustrating MC401020241U

OTTAWA MAINTENANCE HOLE FRAME S25 AND TOILET LOGO COVER S24

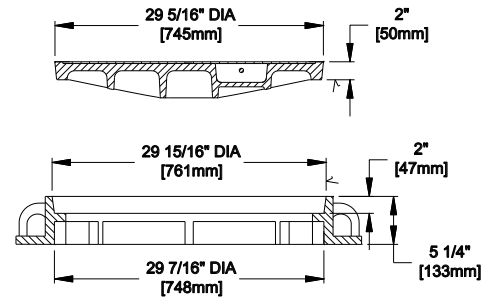
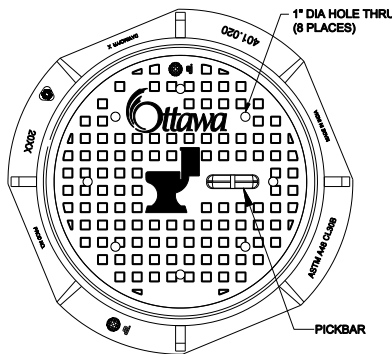
Frame and toilet cover, MC401020231U

Frame also accepts:

Fish cover S24.1, MC401020240

Perforated cover S28.1, MC401020220U

W15 valve chamber cover, MC401020243U



Illustrating MC401020231U

SELFLEVEL™ ACCESS ASSEMBLY Manhole Frame and "Danger" Cover

Frame and cover, MC401010243

Frame also accepts:

Sanitary cover, MC401010221U

Sewer cover, MC401010230U

Storm cover, MC401010240U

Water cover, MC401010210U

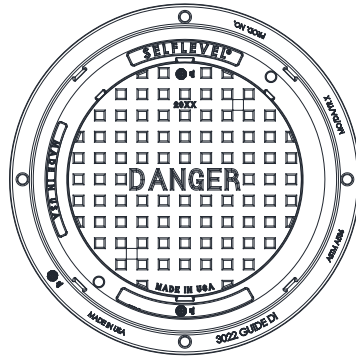
Perforated cover, MC401010301

400.07 grate, MC400070300U

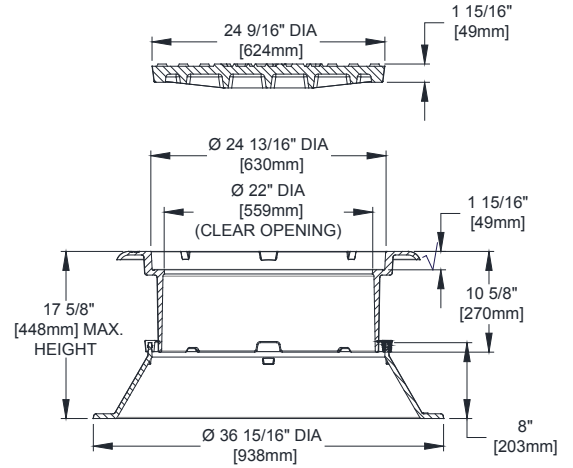
400.07 fish grate, MC400070310U

402.01 valve chamber cover, MC402010200U

402.02 valve chamber cover, MC402011200U



Illustrating MC401010243



OTTAWA SELFLEVEL ACCESS ASSEMBLY

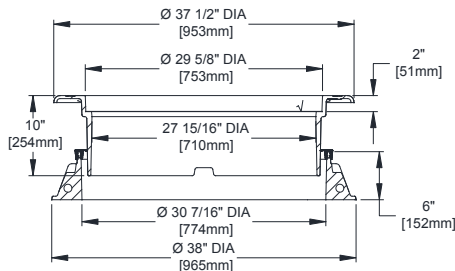
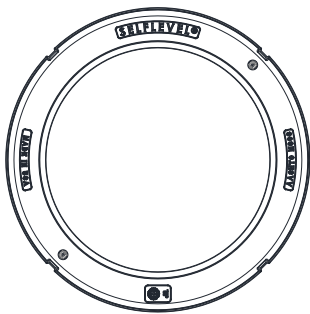
Ottawa SELFLEVEL frame with S24 toilet cover, MC401020211

Ottawa SELFLEVEL frame with S24.1 fish cover, MC401020241

W15 valve chamber cover, MC401020243U

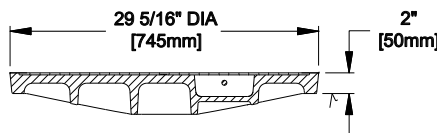
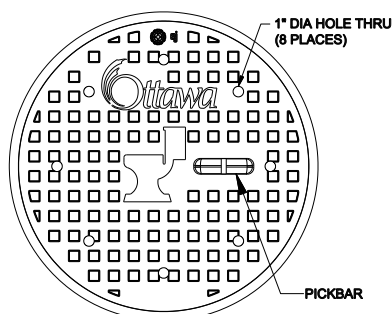
SELFLEVEL Frame

00302815A01



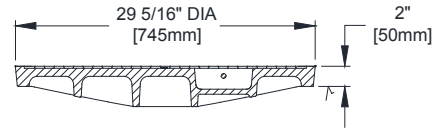
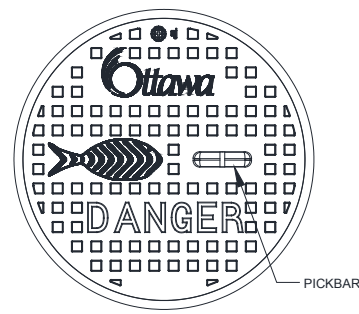
Toilet Cover

MC401020210



Fish Cover

MC401020240



ONTARIO STEEL RISER RINGS

Adjust any manhole or catch basin to grade on your resurfacing projects with steel or cast iron riser rings from EJ.

- 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

Avoid unnecessary project costs by eliminating extra labor, equipment and materials. There is no need to tear out new paving, brick and mortar to grade, then re-patch the street. In addition, there are no traffic disruptions — when the street is paved the job is done and the manhole cover is finished to grade.



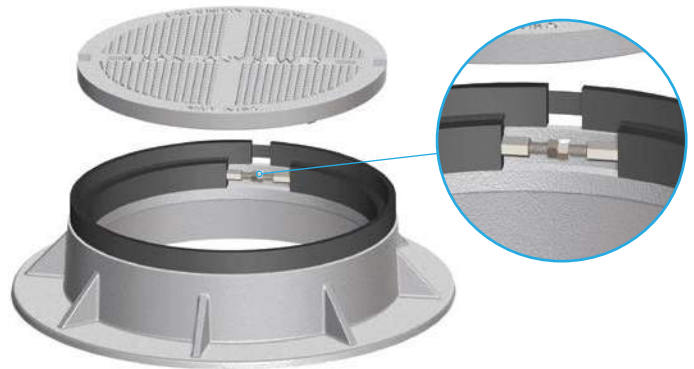
Adjustable Type M5

Rise less than or equal to lid thickness



Type M5 Adjustable Riser Rings

Type	Product Number
1" adjustable riser ring	M5245611107A
1 1/4" adjustable riser ring	M5245611137A
1 1/2" adjustable riser ring	M5245611157A
1 3/4" adjustable riser ring	M5245611187A
2" adjustable riser ring	M5245611207A
3" adjustable riser ring	M2246320308A



The steel adjustable risers include a stainless steel adjustable stud with positive lock that adjusts the diameter + or - 3/8". The risers include allen head set screws that lock the riser to the manhole frame.

Solid Type M7

Rise less than or equal to lid thickness



Type M7 Solid Riser Rings

Type	Product Number
1" solid riser ring	M7245620106A
1 1/4" solid riser ring	M7245620136A
1 1/2" solid riser ring	M7245620156A
1 3/4" solid riser ring	M7245620186A
2" solid riser ring	M7245620206A
3" solid riser ring	M1245620306A

Québec Municipal and Construction Castings

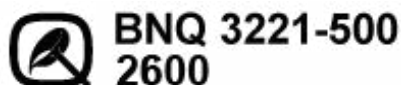


BNQ Certified Products

EJ is a certified manufacturer of all products included in BNQ Standard NQ 3221-500, for Grey-Iron and Ductile-Iron Castings for Civil Engineering Works.

BNQ Certification specifies the physical, mechanical, and dimensional properties of iron castings used primarily in municipal sewer and drinking water supply systems.

The products listed in this table are parts, as defined in the specification, and were sampled/inspected by the BNQ Inspector.



Description	Material	Product Number
Cadre guideur 570 mm	Grey	Q225011
Cadre ajustable 570 mm	Ductile	Q225015
Tampon egout pluvial 570 mm	Ductile	Q225022
Tampon egout sanitaire 570 mm	Ductile	Q225024
Grille 570 mm	Ductile	Q225031
Grille anti-velo 750 mm	Ductile	Q506032
Cadre guideur 750 mm	Grey	Q750014
Cadre ajustable 750 mm	Ductile	Q750016
Grille anti-velo 775 mm	Ductile	Q526041
Cadre guideur 775 mm	Grey	Q775013
Cadre ajustable 775 mm	Ductile	Q775014
Tampon aqueduc 775 mm	Ductile	Q775022
Tampon egout pluvial 775 mm	Ductile	Q775076
Tampon egout sanitaire 775 mm	Ductile	Q775088
Tampon egout unitaire 775 mm	Ductile	Q775107
Tampon eau potable 775 mm	Ductile	Q775260
Cadre conventionnel 775 mm	Grey	Q402011
Tampon aqueduc conventionnel 775 mm	Grey	Q402023
Tampon egout pluvial conventionnel 775 mm	Grey	Q402073
Tampon egout sanitaire conventionnel 775 mm	Grey	Q402082
Tampon eau potable conventionnel 775 mm	Grey	Q402123
Tampon egout unitaire conventionnel 775 mm	Grey	Q402125
Grille anti-velo conventionnel 775 mm	Ductile	Q526032
Cadre ajustable 355 x 585 mm	Ductile	Q501014
Cadre guideur 355 x 585 mm	Grey	Q501016
Grille 355 x 585 mm	Ductile	Q501037
Cadre conventionnel 355 mm x 610 mm	Grey	Q142411
Grille conventionnelle 355 mm x 610 mm	Grey	Q142430
Grille conventionnelle 355 mm x 610 mm	Ductile	Q142432
Cadre conventionnel 455 mm x 915 mm	Grey	Q183615
Grille conventionnelle 455 mm x 915 mm	Grey	Q183631
Grille conventionnelle 455 mm x 915 mm	Ductile	Q183633
Trappe de puisard 250 mm	Grey	Q553060
Trappe de puisard 280 mm	Grey	Q554066
Trappe de puisard 280 mm (375 mm)	Grey	Q555068
Trappe de puisard 400 mm	Grey	Q221066

Features of SELFLEVEL™ Access Assembly

Municipalities are continually striving to improve cost efficiency and maximize their return on "Public Works Money." In response to this, the SELFLEVEL™, a revolutionary free floating frame and cover system, was designed to save time and money when building or re-surfacing roads.

The system is designed to be paved right into the road surface; it sits on the surface instead of the concrete infrastructure. This allows the shock from the traffic to be transmitted to the sub-surface rather than the manhole itself.

The floating system allows for movement of the frame with the road surface. If the road heaves or settles, it eliminates the need for costly repairs.

Features

- Upper frame is supported by road surface
- Unit stays level with the road surface, even when road heaves due to extreme temperature changes
- Absorbs shock and reduces noise
- Designed to provide a secure installation
- Years of successful installations throughout Québec
- Rubber cushion inserts on the side to prevent pull-out

The Savings for Municipalities

- Lower installation costs
- Extends the life of new installations and protects the concrete from heavy traffic
- Lowers the cost of resurfacing in the future—clean, lift, and pave
- Can be installed on existing infrastructure and adapted to existing installations
- Smooth driving surface - installation according to crown and slope



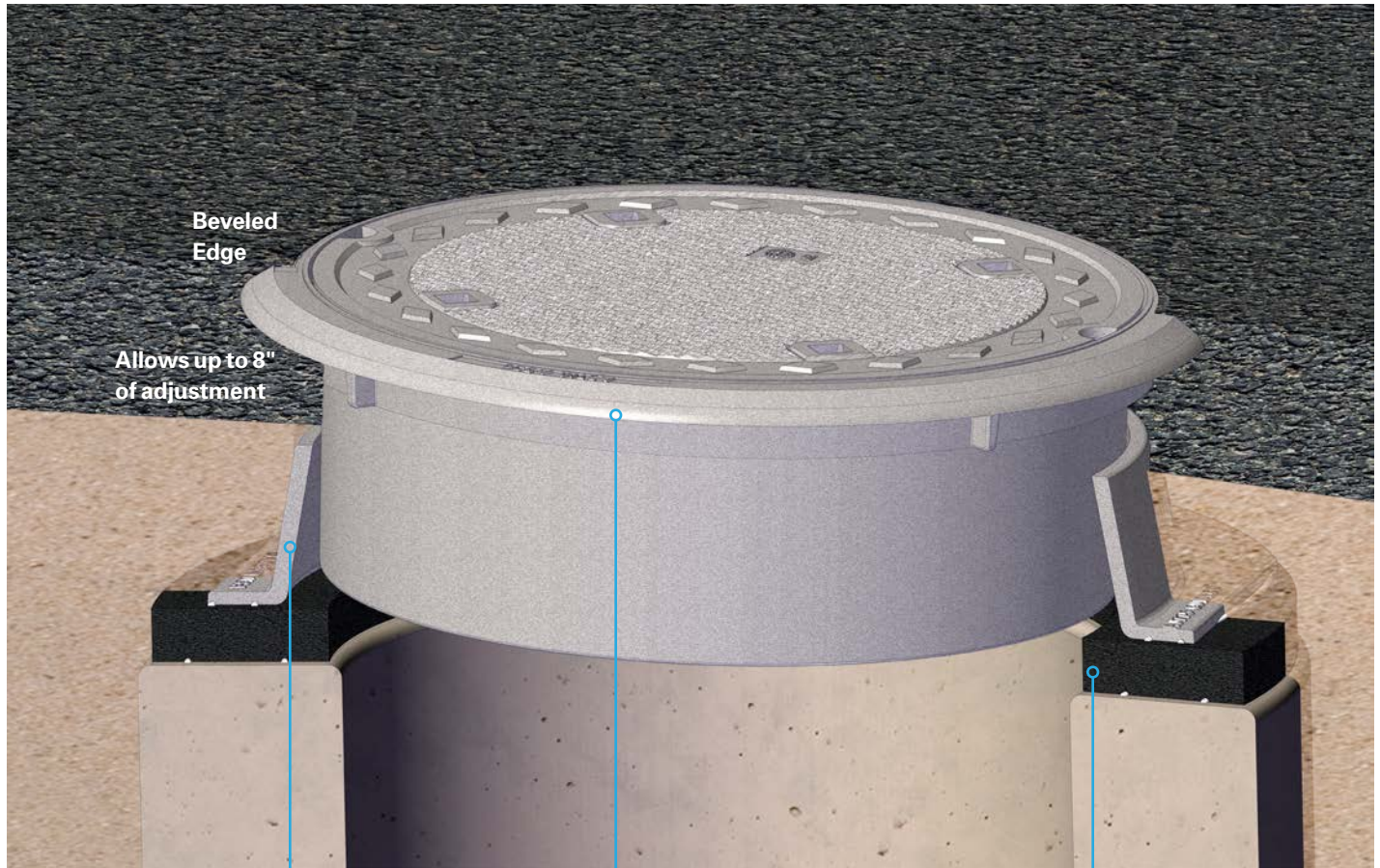
The SELFLEVEL sits on the road surfaces instead of the brick or concrete structure. This allows shock from the traffic to be transmitted to the sub-surface rather than the manhole itself.



Contraction



Expansion



Guide Frame

This frame facilitates self-centering and keeps the upper frame centered over the manhole structure. Showing cone shaped guide frame.

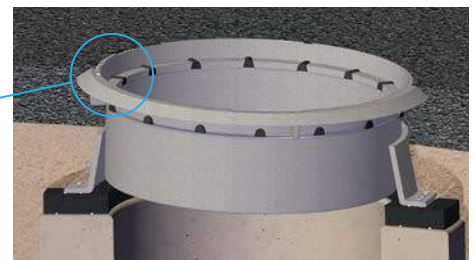
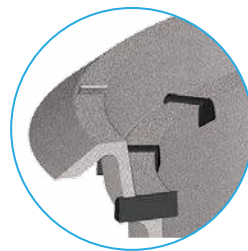
Upper Frame

The upper frame of the SELFLEVEL assembly is supported by and moves with the surrounding road surface. This allows it to remain level with the road surface. This "floating" affect helps prevent road damage and protects the infrastructure underground by dispersing traffic vibrations and shock throughout the road surface, rather than into the structure below.

Optional INFRA-RISER® rubber composite adjustment riser



The cone shaped guide frame allows installation to conform with the crown as well as installation on a slope up to 17%.



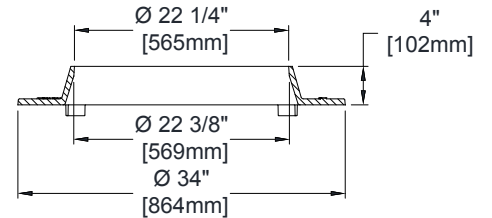
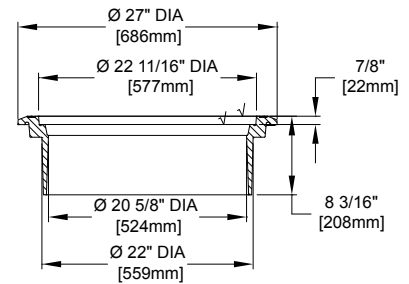
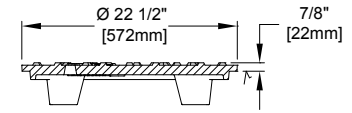
Optional rubber cushion inserts on the side to prevent pull-out reduces road noise.

572MM (22 1/2") SELFLEVEL™ ACCESS ASSEMBLY

Manhole Frames, Covers, and Grates

Machined bearing surfaces
 Guide frame height: 102mm (4")

- Options
- Custom logo covers
 - Special lettered covers
 - Grate (grey or ductile iron, with or without insertion lugs)
 - Straight or conical guide frame (allows for wider range of movement/adjustment)
 - Standard frame (Q225028)



Frame Options

Type	Height	Material	Product Number
Upper frame	208mm (8 3/16")	Ductile iron	Q225015
Guide frame	102mm (4")	Grey iron	Q225011

Cover Options

Cover Type	Material	Product Number
Grate	Grey iron	Q225030
Grate	Ductile Iron	Q225031
Grate, without insertion lug	Grey iron	Q225032
Cover, PLUVIAL	Grey iron	Q225020
Cover, DUCTILE	Ductile iron	Q225036



Grate, Q225030



PLUVIAL cover, Q225020

600MM (24") SELFLEVEL™ ACCESS ASSEMBLY Manhole Frames and Covers

Machined bearing surfaces

Options

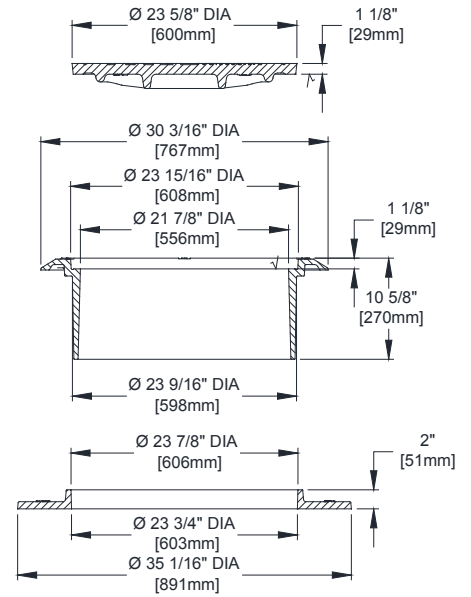
Custom logo covers

Special lettered covers

Grate (grey or ductile iron, with or without insertion lugs)

Guide frame height

Straight or conical guide frame (allows for wider range of movement/adjustment)



Frame Options

Type	Height	Material	Product Number
Upper frame	275mm (10 13/16")	Ductile iron	Q600014
Guide frame, straight	51mm (2")	Grey iron	Q600010
Guide frame, straight	102mm (4")	Grey iron	Q600012
Guide frame, conical	152mm (6")	Grey iron	Q600011

Cover Options

Cover Type	Material	Product Number
Cover	Grey iron	Q600020
Cover, Halifax Water	Grey iron	Q600022



Halifax Water, Q600022

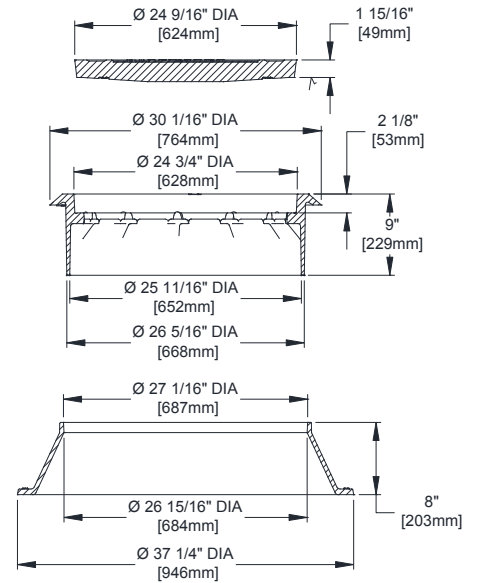
624MM (24 1/2") SELFLEVEL™ ACCESS ASSEMBLY Manhole Frames and Covers

Machined bearing surfaces
Cover: 2 vent holes

- Options
- Upper frame with rubber cushion inserts
 - Guide frame height
 - Straight or conical guide frame (allows for wider range of movement/adjustment)
 - Custom logo covers
 - Special lettered covers
 - Closed pick-holes



Illustrating conical guide frame (Q633011), upper frame with rubber cushion insert, custom manhole cover.



Frame Options

Type	Height	Material	Product Number
Upper frame	229mm (9")	Ductile iron	Q633017
Upper frame, with rubber cushion inserts	156mm (6 1/8")	Ductile iron	Q633008
Upper frame, with rubber cushion inserts	229mm (9")	Ductile iron	Q633018
Guide frame, straight	102mm (4")	Grey iron	Q633014
Guide frame, straight	152mm (6")	Grey iron	Q633010
Guide frame, conical	203mm (8")	Grey iron	Q633012

Cover Options

Cover Type	Material	Product Number
Cover, Sewer	Grey iron	Q633023



Illustrating 156mm upper guide frame with rubber cushion inserts, Q633008



Illustrating 229mm upper guide frame with rubber cushion inserts, Q633018



Illustrating 102mm straight guide frame, Q633015



Illustrating 152mm straight guide frame, Q633009

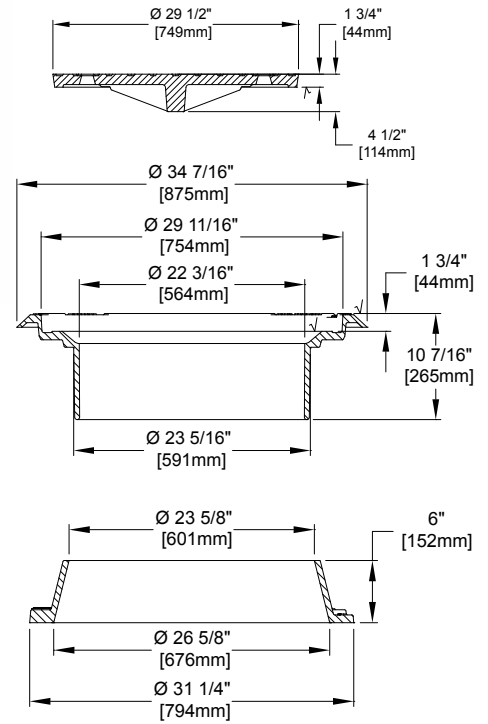


Illustrating 203mm conical guide frame, Q633011

750MM (29 1/2") SELFLEVEL™ ACCESS ASSEMBLY Manhole Frames and Covers

Machined bearing surfaces
Straight guide frame

- Options
- Custom logo covers
 - Custom lettering
 - Guide frame height
 - Conical guide frame (allows for wider range of movement/adjustment)



Frame Options

Type	Height	Material	Product Number
Upper frame	265mm (10 7/16")	Ductile iron	Q750016
Guide frame	102mm (4")	Grey iron	Q750010
Guide frame, conical	152mm (6")	Grey iron	Q750014

Cover Options

Seat Thickness	Material	Product Number
44mm	Ductile iron	Q429021
44mm	Grey iron	Q429020

775MM (30 1/2") SELFLEVEL™ ACCESS ASSEMBLY Manhole Frames, Covers, and Grates

Machined upper frame

Options

Custom logo covers

Custom lettering

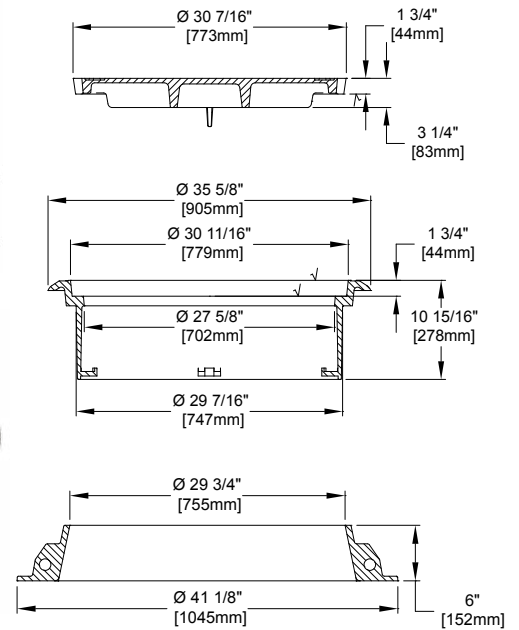
O-ring on cover

Rubber cushion insert on upper frame

Straight or conical guide frame (allows for wider range of movement/adjustment)



Pluvial, Q775076



Frame Options

Type	Height	Material	Product Number
Upper frame	278mm (10 15/16")	Ductile iron	Q775014
Upper frame, with rubber cushion inserts	273mm (10 3/4")	Ductile iron	Q775016
Guide frame, straight	114mm (4 1/2")	Grey iron	Q775009
Guide frame, conical	152mm (6")	Grey iron	Q775013

Cover Options

Cover Type	Material	Product Number
Cover	Ductile iron	Q775020
Cover with o-ring gasket	Ductile iron	Q775233
Cover, Aqueduc	Ductile iron	Q775022
Plug for cover	Grey iron	Q402190
Grate, Electrical	Ductile iron	Q775030
Safety Grate	Galvanized	Q275030



Ville de Gatineau, Q775043



Ville de Gatineau, Q775042



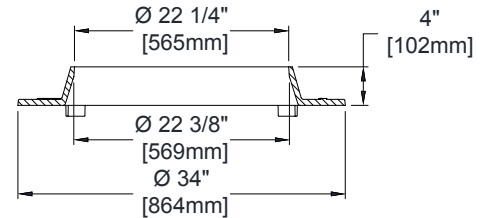
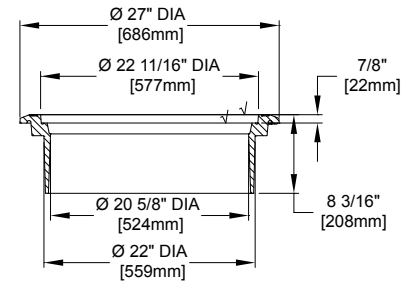
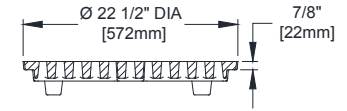
Grate, Electrical, Q775030

572MM (22 1/2") SELFLEVEL™ CATCH BASIN ASSEMBLY

Catch Basin Frames and Grate



Illustrating ductile iron grate, Q225031



Frame Options

Type	Height	Material	Product Number
Upper frame	208mm (8 3/16")	Ductile iron	Q225015
Guide frame	102mm (4")	Grey iron	Q225011

Grate Options

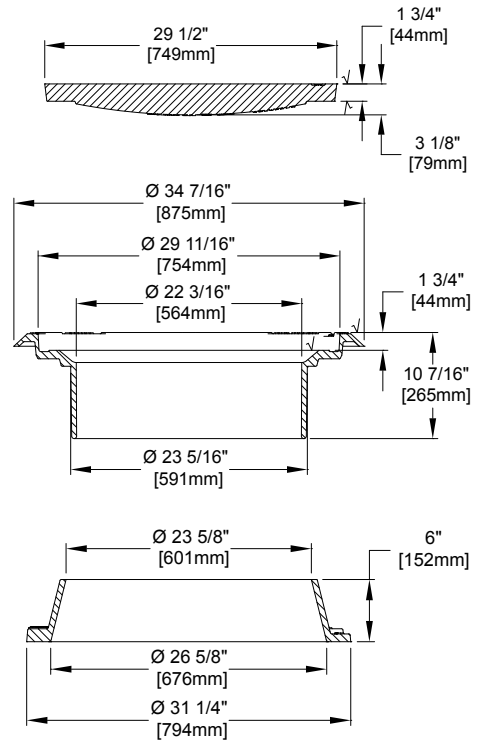
Cover Type	Material	Product Number
Grate	Ductile iron	Q225031
Grate	Grey iron	Q225030
Grate, without insertion lug	Grey iron	Q225032

750MM (29 1/2") SELFLEVEL™ CATCH BASIN ASSEMBLY

Catch Basin Frames and Grates

Machined bearing surfaces
Straight guide frame

Options
Guide frame height
Conical guide frame (allows for wider range of movement/adjustment)



Frame Options

Type	Height	Material	Product Number
Upper frame	265mm (10 7/16")	Ductile iron	Q750016
Guide frame	102mm (4")	Grey iron	Q750010
Guide frame, conical	152mm (6")	Grey iron	Q750014

Grate Options

Grate Type	Material	Open Area	Product Number
Grate	Grey iron	1743 Sq. cm (268 Sq. in.)	Q506030
Grate	Ductile iron	1743 Sq. cm (268 Sq. in.)	Q506036
Grate, heavy duty	Grey iron	1812 Sq. cm (281 Sq. in.)	Q508030
Grate, herringbone	Grey iron	1480 Sq. cm (229 Sq. in.)	Q506034
Grate, herringbone	Ductile iron	1480 Sq. cm (229 Sq. in.)	Q506032



Grate, Q506030



Grate, herringbone, Q506032



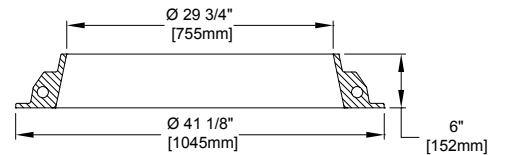
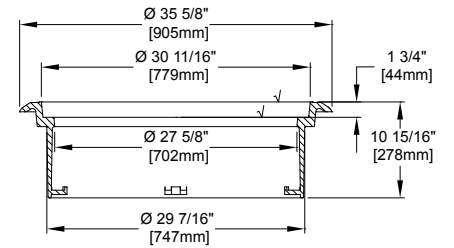
Grate heavy duty, Q508030

775MM (30 1/2") SELFLEVEL™ CATCH BASIN ASSEMBLY

Catch Basin Frames and Grates

Machined bearing surfaces
Straight guide frame

Options
Guide frame height
Conical guide frame (allows for wider range of movement/adjustment)



Frame Options

Type	Height	Material	Product Number
Upper frame	278mm (10 15/16")	Ductile iron	Q775014
Upper frame, with rubber cushion inserts	273mm (10 3/4")	Ductile iron	Q775016
Guide frame, straight	114mm (4 1/2")	Grey iron	Q775009
Guide frame, conical	152mm (6")	Grey iron	Q775013

Cover Options

Cover Type	Material	Product Number
Grate, herringbone	Ductile iron	Q526041
Grate, Electrical	Ductile iron	Q775030
Safety Grate	Galvanized	Q275030



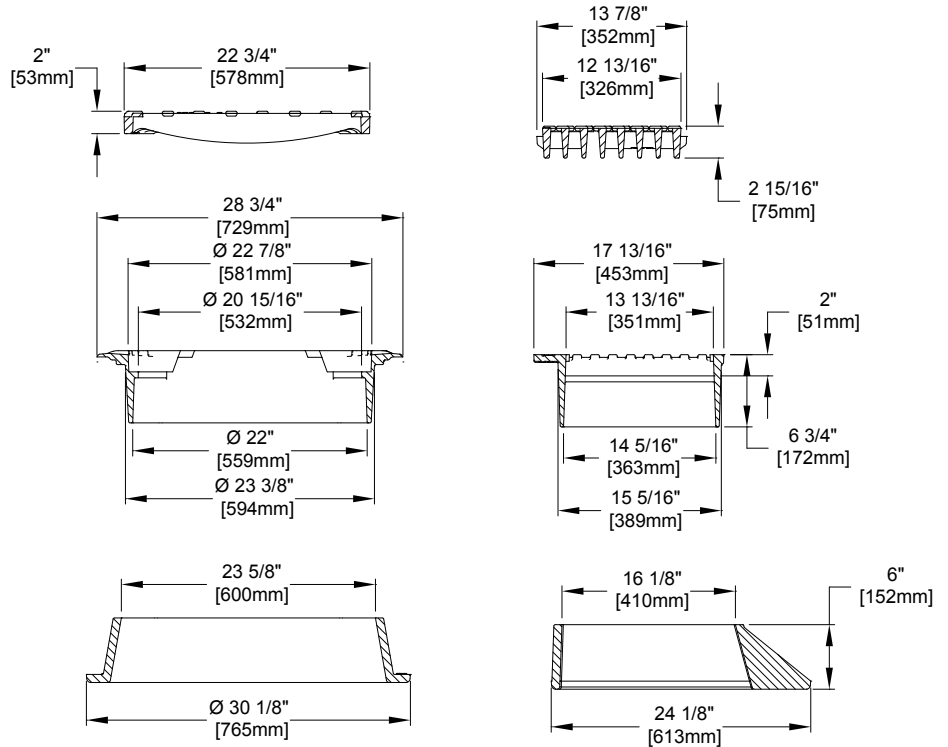
Grate, Electrical, Q775030

578 X 355MM (22 3/4" X 14") SELFLEVEL™ CATCH BASIN ASSEMBLY

Catch Basin Frames and Grates



Illustrating conical guide frame, upper frame, slam grate



Illustrating conical guide frame, Q501018



Grate, anti leaf, Q501032



Grate, cascade, Q501037



Grate, slam, Q501030

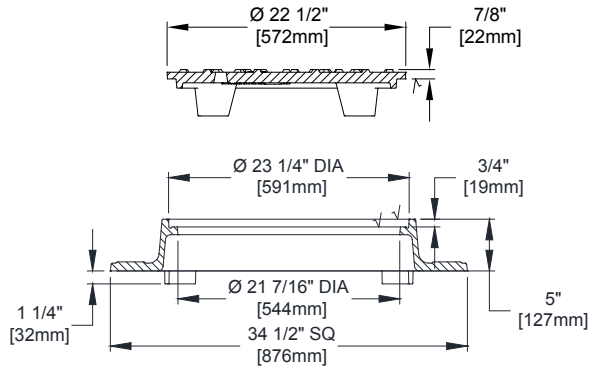
Frame Options

Type	Height	Material	Product Number
Upper frame	173mm (6 13/16")	Ductile iron	Q501014
Guide frame, conical	152mm (6")	Grey iron	Q501016
Guide frame, straight	216mm (8 1/2")	Grey iron	Q501019

Grate Options

Grate Type	Material	Open Area	Product Number
Grate, anti leaf	Ductile iron	851 sq. cm, 132 sq. in.	Q501032
Grate, cascade	Ductile iron	684 sq. cm, 106 sq. in.	Q501037
Grate, slam	Ductile iron	800 sq. cm, 124 sq. in.	Q501030

570MM (22 1/2") MANHOLE FRAME AND COVER



Frame Options

Height	Material	Product Number
127mm (5")	Grey iron	Q225028

Cover Options

Cover Type	Material	Product Number
Cover, PLUVIAL	Grey iron	Q225020
Cover, DUCTILE	Ductile iron	Q225036

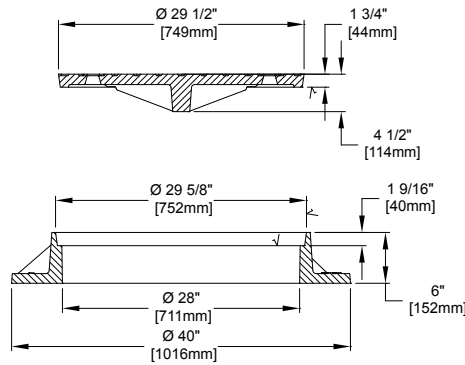


PLUVIAL cover, Q225036

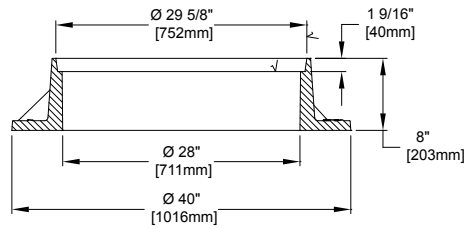
750MM (29 1/2") MANHOLE FRAMES AND COVERS



Illustrating Q429010 frame and Q429030 cover



Illustrating Q429028 frame



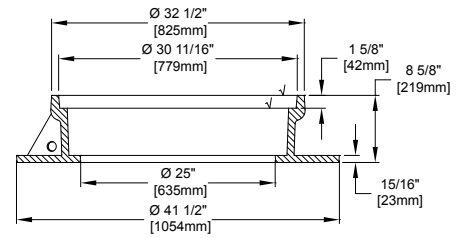
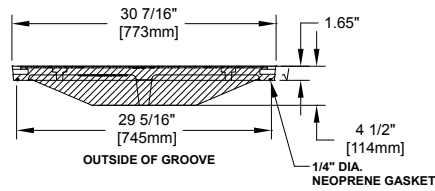
Frame Options

Height	Material	Product Number
152mm (6")	Grey iron	Q429010
152mm (6")	Ductile iron	Q429012
203mm (8")	Grey iron	Q429028
203mm (8")	Ductile iron	Q429014

Cover Options

Seat Thickness	Material	Product Number
40mm	Ductile iron	Q429025
40mm	Grey iron	Q429030

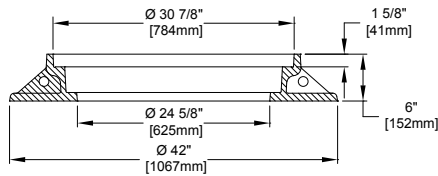
775MM (30 1/2") MANHOLE FRAMES



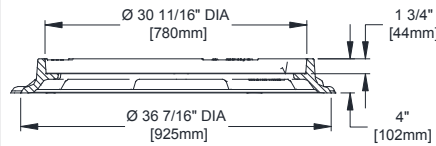
Illustrating Q402056W01 frame and cover, bolted



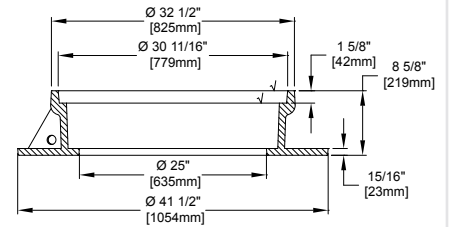
Illustrating Q150011 frame



Illustrating Q100012 frame



Illustrating Q402010 frame



Frame Options

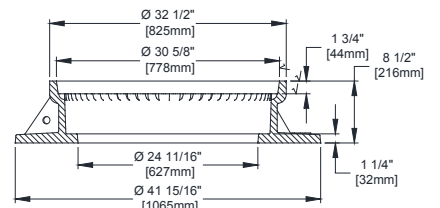
Height	Material	Bolted	Product Number
95mm (3 3/4")	Grey iron	No	Q405011
95mm (3 3/4")	Ductile iron	No	Q405015
102mm (4")	Grey iron	No	Q100010
102mm (4")	Grey iron	Yes	Q100012
152mm (6")	Grey iron	No	Q150011
216mm (8 1/2"), interrupted machine seat	Grey iron	No	Q401010
219mm (8 5/8")	Ductile iron	No	Q402015
219mm (8 5/8")	Grey iron	No	Q402011
219mm (8 5/8")	Grey iron	Yes	Q402013
219mm (8 5/8")*	Grey iron	Yes	Q402056W01

*Frame and cover bolted assembly

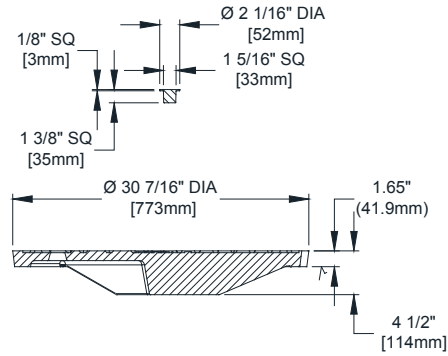
Covers and grates are illustrated on following pages.



Illustrating Q401010 frame, interrupted machine seat



775MM (30 1/2") MANHOLE COVERS



Illustrating Q402042 with plugs (Q402190)

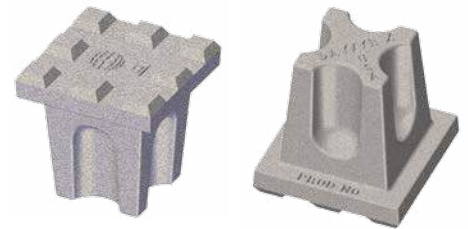
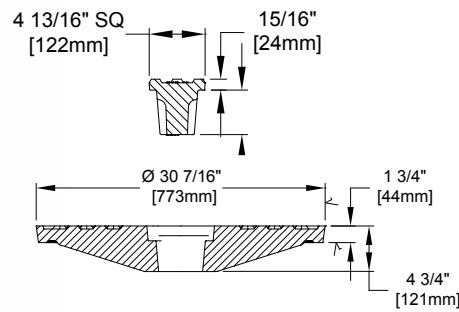
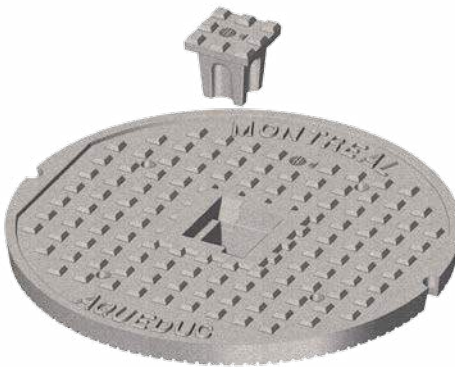


Cover Options

Cover Type	Seat Thickness	Material	Product Number
Cover	41.9mm (1.65")	Grey iron	Q402020
Cover with o-ring gasket	41.9mm (1.65")	Grey iron	Q402074
Cover	41.9mm (1.65")	Ductile iron	Q402042
Cover, Ville de Blainville Sanitarie	41.9mm (1.65")	Grey iron	Q402132
Cover, Montreal Egout*	45mm (1.77")	Grey iron	Q401020
Cover, Ville de Laval*	45mm (1.77")	Grey iron	Q401022
Plug for Cover	—	Grey iron	Q402190

* Designed to fit with interrupted machine seat

MONTREAL ACQUEDUC COVER AND PLUG



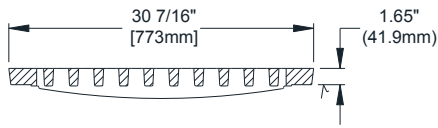
Cover and Plug

Type	Material	Product Number
Cover, Montreal Acqueduc	Ductile iron	Q236020
Plug	Grey iron	Q236026

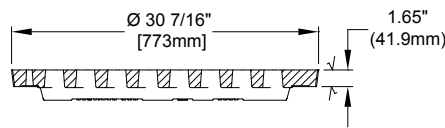
775MM (30 1/2") GRATES



Grate, Q526034
Open area: 299 Sq. in./ 1929 Sq. cm



Grate, herringbone, Q526032
Open area: 310 Sq. in./ 2000 Sq. cm.



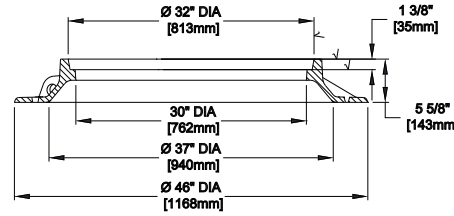
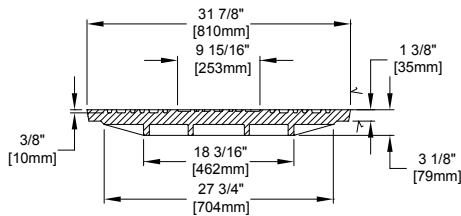
Grate Options

Cover Type	Material	Product Number
Grate	Grey iron	Q526038
Grate	Ductile iron	Q526034
Grate, herringbone	Grey iron	Q526030
Grate, herringbone	Ductile iron	Q526032

810MM (31 7/8") MANHOLE FRAME AND COVERS



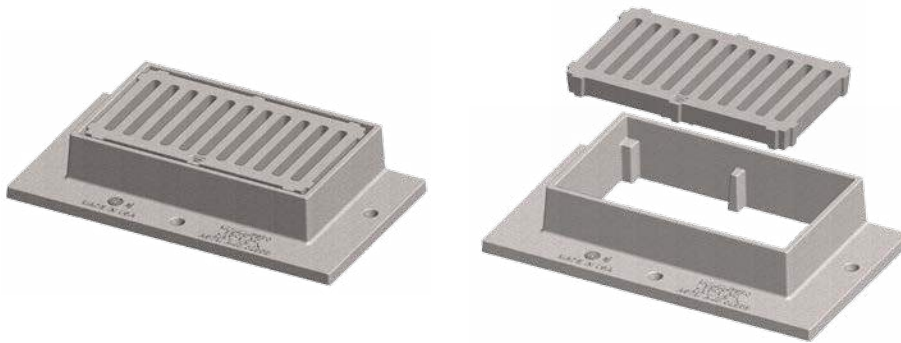
Illustrating Power Electric cover, Q021022



Frame and Cover Options

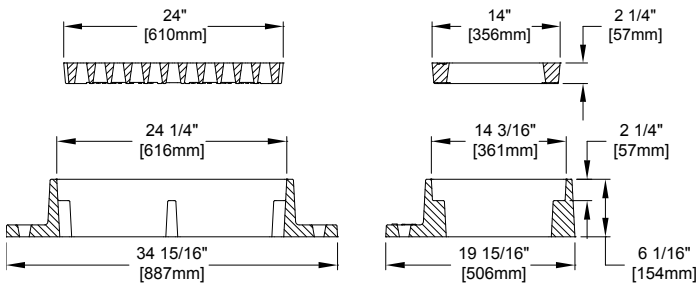
Type	Material	Product Number
Cover, Hydro Ottawa	Grey iron	Q021020
Cover, Power Electric	Grey iron	Q021022
Frame	Grey iron	00182017

354MM X 608MM (14" X 24") RECTANGULAR FRAMES AND GRATES



Rectangular Frames and Grates

Type	Material	Product Number
Frame	Grey iron	Q142411
Grate	Grey iron	Q142430
Grate	Ductile iron	Q142432



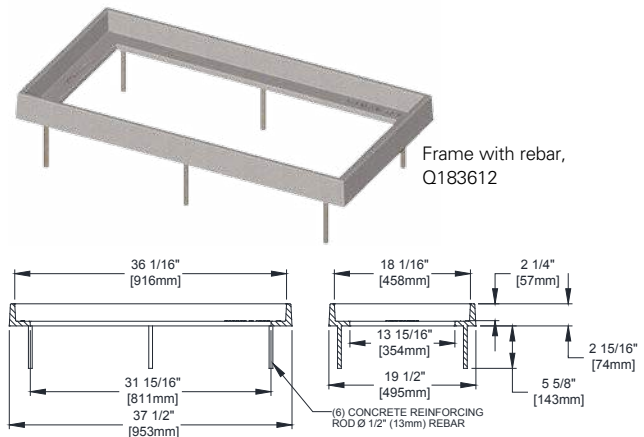
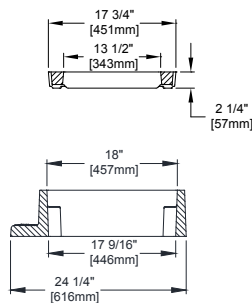
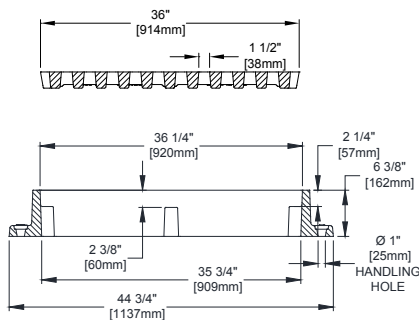
451MM X 912MM (18" X 36") RECTANGULAR FRAMES AND GRATES



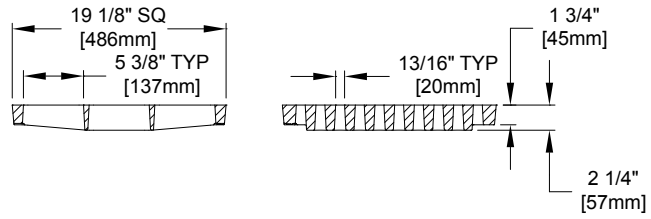
Rectangular Frames and Grates

Type	Material	Open Area	Product Number
Frame	Grey iron	-	Q183615
Frame, with rebar	Grey iron	-	Q183612
Grate	Grey iron	1400 sq. cm (217 sq. in)	Q183631
Grate	Ductile iron	1400 sq. cm (217 sq. in)	Q183633

Illustrating Q183615 frame with Q183631 grate.



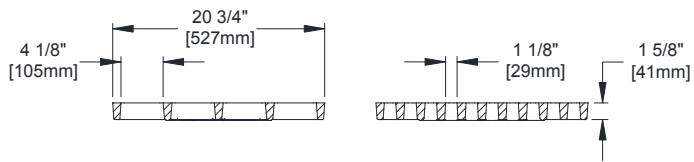
468MM X 468MM (19" X 19") SQUARE GRATES



Square Grates

Type	Material	Open Area	Product Number
Grate	Grey iron	806 sq. cm (125 sq. in)	Q504030
Grate	Ductile iron	806 sq. cm (125 sq. in)	Q504032

527MM X 527MM (20 3/4" X 20 3/4") SQUARE GRATE



Square Grate

Type	Material	Open Area	Product Number
Grate	Grey iron	529 sq. cm (182 sq. in)	Q540030

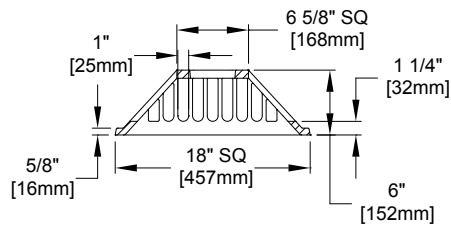
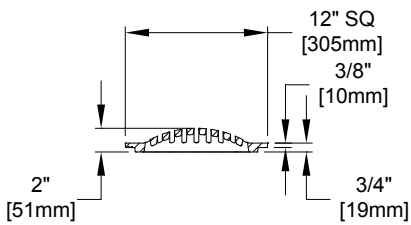
BEEHIVE GRATES



Illustrating 305mm SQ Beehive Grate, Q121230



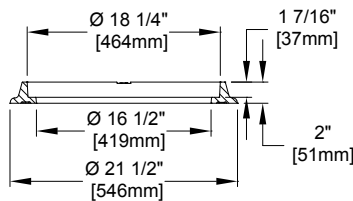
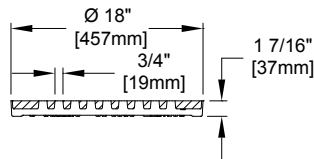
Illustrating 475mm SQ Beehive Grate, Q018030



Beehive Grates

Type	Material	Open Area	Product Number
305mm SQ Beehive Grate	Grey iron	529 sq. cm (82 sq. in)	Q121230
475mm SQ Beehive Grate	Grey iron	529 sq. cm (82 sq. in)	Q018030

457MM (18") GRATE AND FRAME



Grate and Frame

Type	Material	Product Number
Frame	Grey iron	Q041010
Grate	Grey iron	Q041030

TRAPS



Illustrating Q553060
8"≤ (203mm) pipe

Illustrating Q554066
8"≤ (203mm) pipe

Illustrating Q555068
10"≤ (254mm) pipe

Illustrating Q221066
12"≤ (305mm) pipe

Traps	Length	Width	Depth	Material	Product Number
Trap	407mm (16")	255mm (10 1/16")	106mm (4 3/16")	Grey iron	Q553060
Trap	460mm (18 1/8")	284mm (11 3/16")	93mm (3 11/16")	Grey iron	Q554066
Trap, with closed end	460mm (18 1/8")	284mm (11 3/16")	93mm (3 11/16")	Grey iron	Q554064
Trap	532mm (20 15/16")	375mm (14 3/4")	140mm (5 1/2")	Grey iron	Q555068
Trap	555mm (21 7/8")	441mm (17 3/8")	152mm (6")	Grey iron	Q221066

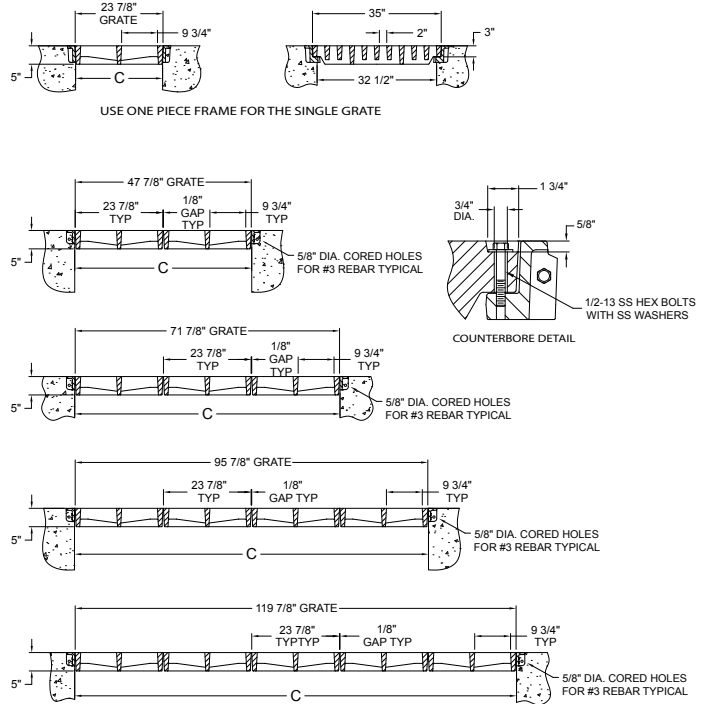
Linear Trench Grates



5436 FRAME, GRATE, AND COVER

Airport extra heavy duty
 Ductile iron
 385 sq. in. of open area per grate

- Options
- Bolting
- Custom lettering
- One piece top flange frame — 5436Z5
- Modular/expandable top flange frame



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

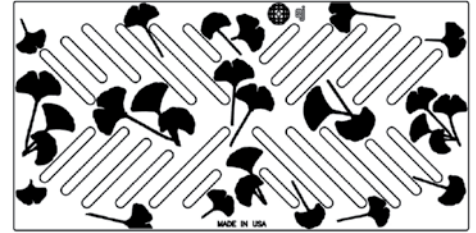
5436 Standard Drainage Inlet, Frame and Grate Assembly Series Options

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

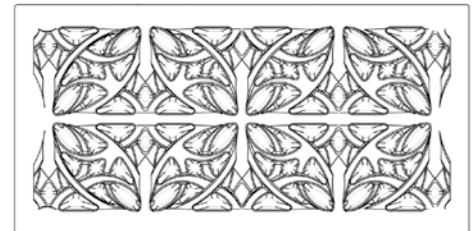
Note: All dimensions are in inches.

ARTISTIC TRENCH GRATES

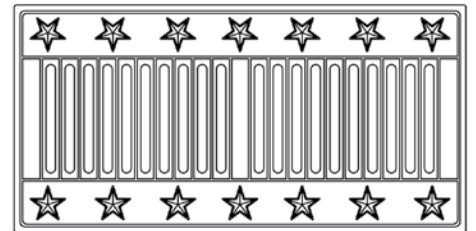
Surface drainage for dynamic public spaces require a unique solution. Make an impression with our cast iron ADA designer trench grates. Patterns that coordinate with our exclusive tree grates are cast in 24" lengths, 1-1/2" seat. Optional 6950 cast iron frames are available in 24", 36" and 48" lengths. For security, bolted trench grate units are assembled in 24" sections using stainless steel 1/2" hex bolts and special lock washers. Call for additional widths.



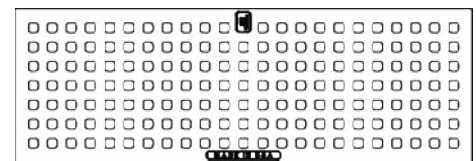
6883 Ginkgo 12" x 24"



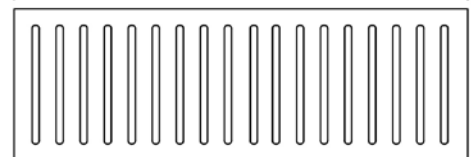
6873 Garland 12" x 24"



6893 Patriot 12" x 24"



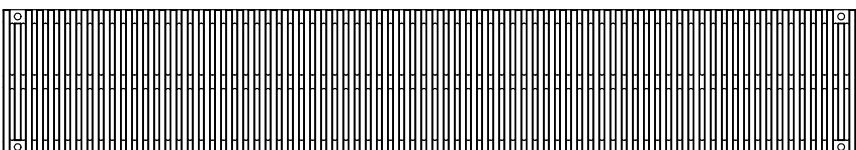
6898M Manhattan 8" x 24"



V7381 Trench Grate 8" x 24"

Artistic Trench Grates Series

Series Name	Series	Size	Options	Load Rating
Ginkgo	6883	12" x 24" (305 x 610mm)	Security bolting	Heavy duty
Garland	6873	12" x 24" (305 x 610mm)	Security bolting	Medium duty
Patriot	6893	12" x 24" (305 x 610mm)	Security bolting	Heavy duty
Manhattan	6896M	4" x 24" (102 x 610mm)		Non-traffic
Manhattan	6897M	6" x 24" (152 x 610mm)		Non-traffic
Manhattan	6898M	8" x 24" (203 x 610mm)		Non-traffic
Pedestrian	V7381	8" x 24" (203 x 610mm)	Security bolting	Heavy duty
Pedestrian	V7382	10" x 24" (254 x 610mm)	Security bolting	Heavy duty
Pedestrian	V7383	12" x 24" (305 x 610mm)	Security bolting	Heavy duty
Pedestrian	V7384	14" x 24" (356 x 610mm)	Security bolting	Heavy duty
Pedestrian	V7385	17" x 24" (432 x 610mm)	Security bolting	Heavy duty
Pedestrian	V7386	20" x 24" (508 x 610mm)	Security bolting	Heavy duty
Pedestrian	6861M	8" x 48" (203 x 1219mm)	Security bolting	Heavy duty
Pedestrian	6932M	9" x 36" (229 x 914mm)	Security bolting	Heavy duty



6861M Trench Grate 8" x 48"

6900 LINEAR TRENCH DRAINAGE

Airport Extra Heavy Duty

Holes in rail for rebar

Options

Top flange and angle style rails

24" top flange rail length

24 and 48" angle rail length

Bolting



Top flange style rail

Note: Rebar not supplied



Angle style rail

6900 Trench Frame 'Rail' and grate Options

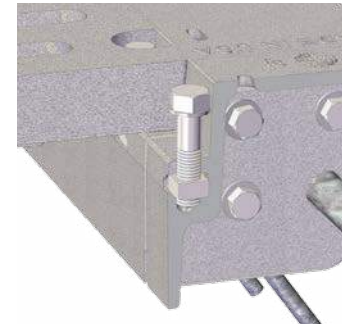
Catalog Number	Trench Width	Sq. In. of Opening per Linear Foot
6901M	6	29
6902M2DI	8	33
6903M2DI	10	40
6904M2DI	12	49
6905M2DI	15	66
6906M3M4DI	18	90
6908M4DI	24	102
6909M1DI	30	254
6910M2DI	32	138
6912M	48	248

Note: All dimensions are in inches.

Trench frame and grate with EON LOCK® security feature

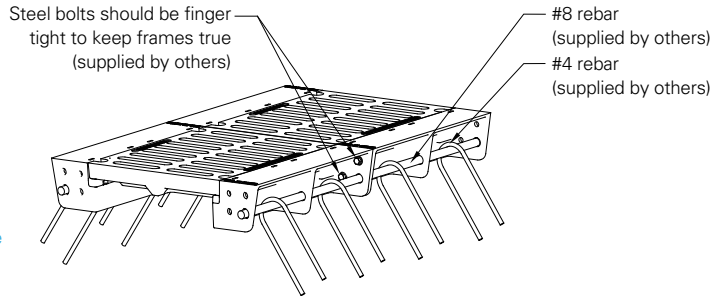
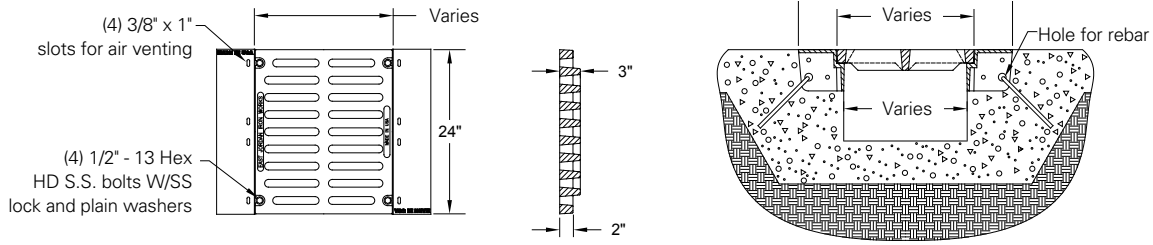


EON LOCK® square nut out horizontally

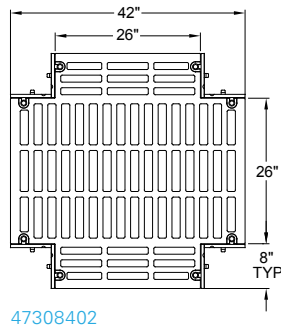
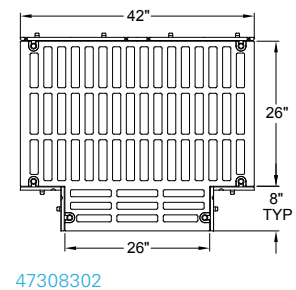
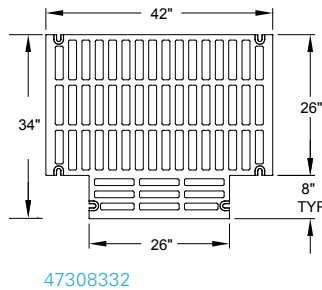
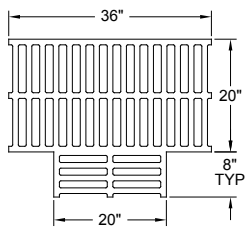
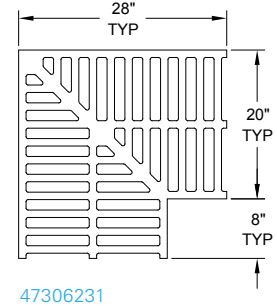
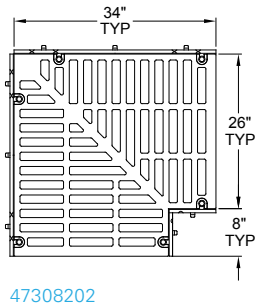
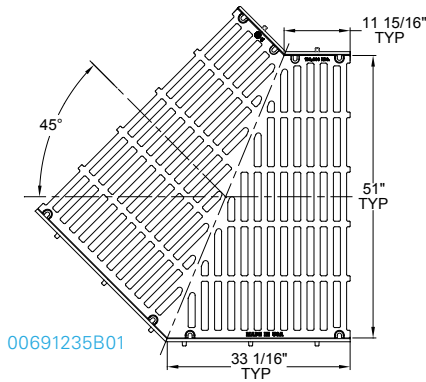


EON LOCK® square nut in horizontally

6900 LINEAR TRENCH DRAINAGE (CONTINUED)

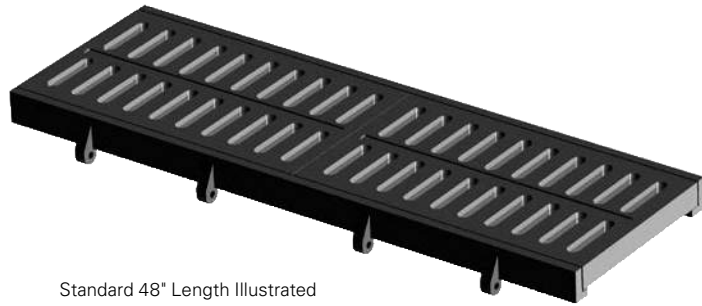


Caution: Do not disassemble bolted grates before setting sections in concrete



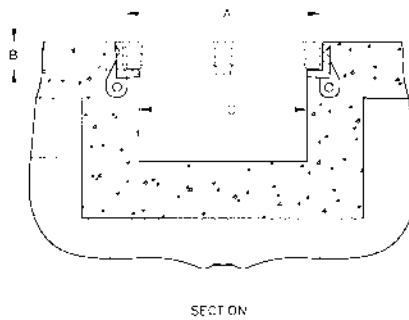
6950 TRENCH GRATE & FRAME SERIES

Heavy duty
 Available bolted or unbolted (standard)
 Standard trench grates are furnished in
 23 7/8" lengths
 Frames are available in 24", 36" and
 48" lengths
 Bolted trench grate units are assembled in
 24" sections using stainless steel 1/2" hex
 bolts and special lock washers
 Solid covers available



Standard 48" Length Illustrated

Caution: Do not disassemble bolted grates/covers before setting frame/grate or cover sections in concrete.



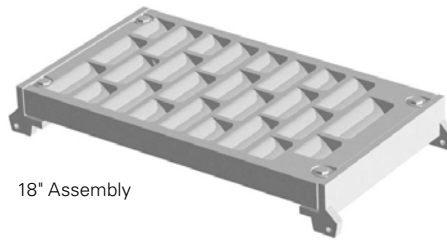
6950 Series, Angle Style Frame and Grate Options*

Catalog Number	Trench Width	Grate Width	Open Area Sq. In/Ft
6951	6	8	23
6952	8	10	34
6953	10	12	45
6954	12	14	56
6955	15	17	73
6956	18	20	89
6957	21	23	106
6958	24	26	122

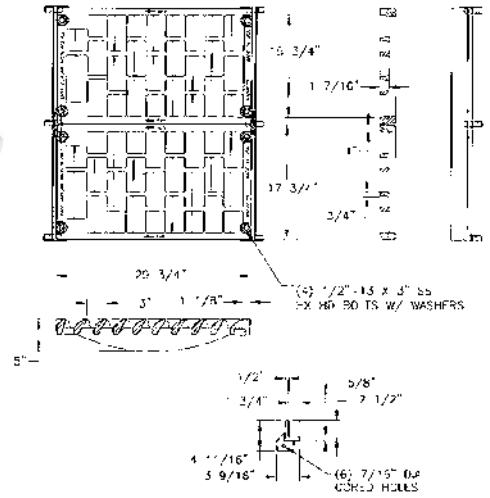
Note: All dimensions are in inches.
 * See product drawings for load ratings

6970 BOLTED VANE STYLE TRENCH ASSEMBLY

Heavy duty
 Available in 18" and 36" assemblies
 Riser frame available



18" Assembly



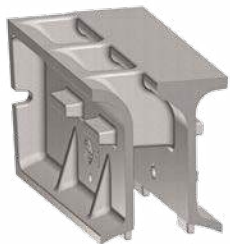
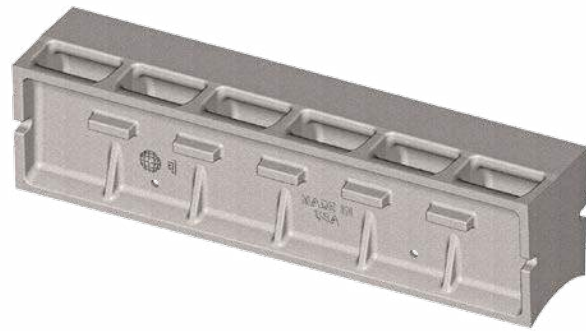
6970 Series

Assembly Length	Open Area per Assembly/Sq. In
18	186
36	372

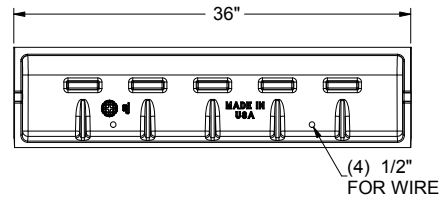
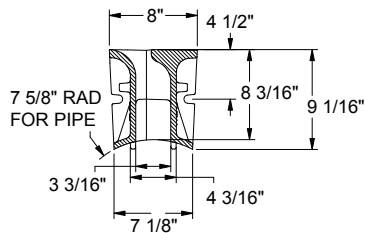
Note: All dimensions are in inches.

6979 LINEAR SLOTTED DRAIN VANE GRATE

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



V-7300 TRENCH GRATE & FRAME SERIES

Heavy duty

Standard trench grates are furnished in 23 7/8" lengths

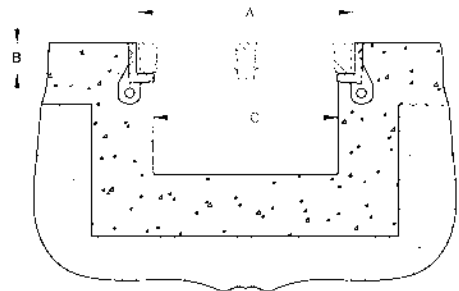
Frames are available in 24", 36" and 48" lengths

Trench frame ends available

Specify trench length and part number of desired trench width (dimension "C")

V-7300 Trench Grate & Frame Series

Catalog Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In/Ft.
V-7301	8	1 1/2	6	42
V-7302	10	1 1/2	8	57
V-7303	12	1 1/2	10	64
V-7304	14	2	12	78
V-7305	17	2	15	99
V-7306	20	2	18	120
V-7307	23	2	21	133
V-7308	26	2	24	154
V-7309	30	2 1/2	27	182
V-7310	33	2 1/2	30	190
V-7311	36	2 1/2	33	211
V-7312	39	2 1/2	36	232
V-7313	45	2 1/2	42	266
V-7314	51	2 1/2	48	305



V-7300 & V-7320

Note: All dimensions are in inches.

V-7320 BOLTED TRENCH GRATE & FRAME SERIES

Heavy duty

Bolted trench grate units are assembled in 24" sections using stainless steel 5/8" hex bolts and flat washers

Trench frame ends available

Specify trench length and part number of desired trench width (dimension "C")

Caution: Do not disassemble bolted grates before setting frame/grate sections in concrete.



See drawing in V-7300 series for measurement reference drawing

V-7320 Bolted Trench Grate & Frame Series

Catalog Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In/Ft.
V-7322	11	1 1/2	8	63
V-7325	18	2	15	105
V-7329	30	2 1/2	27	180
V-7330	33	2 1/2	30	196
V-7331	36	2 1/2	33	210
V-7332	39	2 1/2	36	231
V-7333	45	2 1/2	42	266
V-7334	51	2 1/2	48	305

Note: All dimensions are in inches.

V-7340 CROSS DRAINAGE TRENCH GRATE & FRAME SERIES

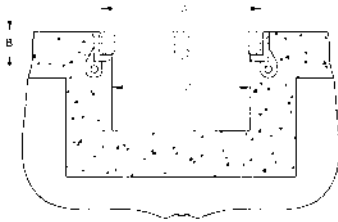
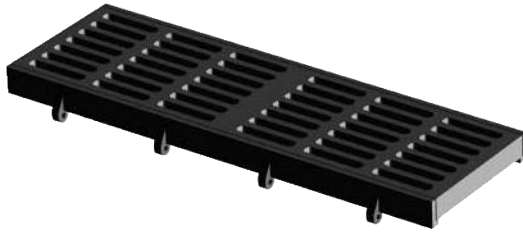
Heavy duty

Designed for cross-street drainage with slot openings perpendicular to traffic (Type C)

Standard trench grates are furnished in 23 7/8" lengths

Frames are available in 24", 36" and 48" lengths

Specify trench length and part number of desired trench width (dimension "C")



V-7340 & V-7360

V-7340 Cross Drainage Trench Grate & Frame Series

Catalog Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In./Ft.
V-7341	8	1 1/2	6	40
V-7342	10	1 1/2	8	50
V-7343	12	1 1/2	10	64
V-7344	14	2	12	80
V-7345	17	2	15	93
V-7346	20	2	18	115
V-7347	23	2	21	124
V-7348	26	2	24	154
V-7349	30	2 1/2	27	162
V-7350	33	2 1/2	30	183
V-7352	39	2 1/2	36	216
V-7353	45	2 1/2	42	250
V-7354	51	2 1/2	48	290

Note: All dimensions are in inches.

V-7360 CROSS DRAINAGE BOLTED TRENCH GRATE & FRAME SERIES

Heavy duty

Designed for cross-street drainage with slot openings perpendicular to traffic (Type C)

Bolted trench grate units are assembled in 24" sections using stainless steel 5/8" hex bolts and flat washers

Specify trench length and part number of desired trench width (dimension "C")

Caution: Do not disassemble bolted grates before setting frame/grate sections in concrete.



See drawing in V-7340 series for measurement reference drawing

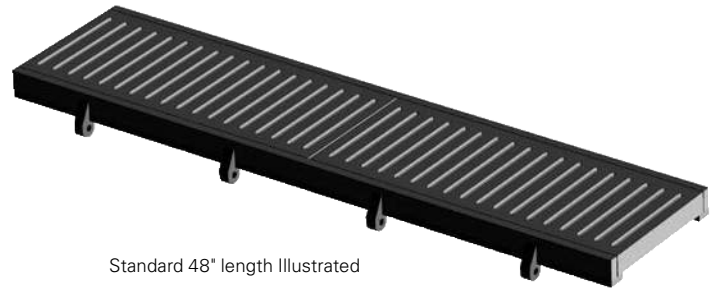
V-7360 Cross Drainage Bolted Trench Grate & Frame Series

Catalog Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In./Ft.
V-7361	9	1 1/2	6	45
V-7362	11	1 1/2	8	63
V-7363	13	1 1/2	10	73
V-7364	15	2	12	87
V-7365	18	2	15	101
V-7366	21	2	18	120
V-7367	24	2	21	138
V-7368	27	2	24	160
V-7369	30	2 1/2	27	162
V-7370	33	2 1/2	30	183
V-7373	45	2 1/2	42	250

Note: All dimensions are in inches.

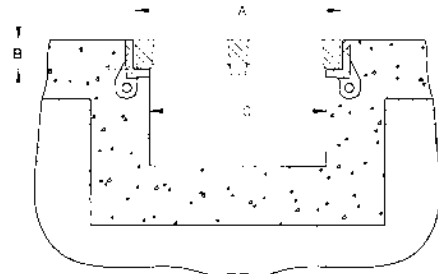
V-7380 ADA TRENCH GRATE & FRAME SERIES

Heavy duty
 ADA compliant
 Available bolted or unbolted (standard)
 Designed with 3/8" slot openings
 Standard trench grates are furnished in 23 7/8" lengths
 Frames are available in 24", 36" and 48" lengths
 Specify trench length and part number of desired trench width (dimension "C")
 Bolted trench grate units are assembled in 24" sections using stainless steel 5/8" hex bolts and flat washers



Standard 48" length Illustrated

Caution: Do not disassemble bolted grates before setting frame/grate sections in concrete.



V-7380 & V-7390

V-7380 ADA

Catalog Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In./Ft.	Specify Trench Frame
V-7381	8	1 1/2	6	21	
V-7382	10	1 1/2	8	28	6950
V-7383	12	1 1/2	10	29	
V-7384	14	2	12	39	
V-7385	17	2	15	48	6900
V-7386	20	2	18	58	

Note: All dimensions are in inches.

V-7380 ADA Bolted Assemblies

Catalog Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In./Ft.
V-7381-20	9	1 1/2	6	21
V-7382-20	11	1 1/2	8	28
V-7383-20	13	1 1/2	10	32
V-7384-20	15	2	12	36
V-7385-20	18	2	15	48
V-7386-20	21	2	18	58

Note: All dimensions are in inches.

V-7500 TRENCH COVER & FRAME SERIES

Heavy duty

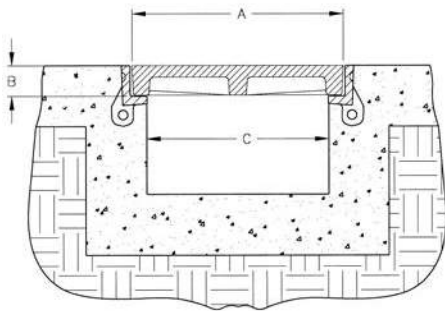
Standard trench covers are furnished in

23 7/8" lengths

Frames are available in 24", 36" and

48" lengths

Specify trench length and part number of desired trench width (dimension "C")



V-7500 & V-7520

V-5700 Trench Cover & Frame Series

Catalog Number	A Grate Width	B Seat Depth	C Trench Width	Pick Type	Specify Trench Frame
V-7504	14	2	12	Pick Hole	6900
V-7508	26	2	24	Pick Bar	
V-7509	30	2 1/2	27	Pick Bar	
V-7510	33	2 1/2	30	Pick Bar	V-7300 48" Long Only
V-7512	39	2 1/2	36	Pick Bar	
V-7513	45	2 1/2	42	Pick Bar	
V-7514	51	2 1/2	48	Pick Bar	

Note: All dimensions are in inches.

V-7520 BOLTED TRENCH COVER & FRAME SERIES

Bolted trench cover units are assembled in 24" sections using stainless steel 5/8" hex bolts and flat washers

Specify trench length and part number of desired trench width (dimension "C")

Caution: Do not disassemble bolted grates before setting frame/grate sections in concrete.



See drawing in V-7500 series for measurement reference drawing

V-7520 Bolted Trench Cover & Frame Series

Catalog Number	A Grate Width	B Seat Depth	C Trench Width	Pick Type
V-7530	33	2 1/2	30	Pick Bar
V-7532	39	2 1/2	36	Pick Bar
V-7533	45	2 1/2	42	Pick Bar
V-7534	51	2 1/2	48	Pick Bar

Note: All dimensions are in inches.

V-7600 30" TRENCH GRATE SERIES

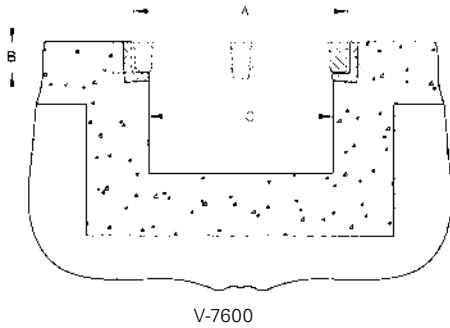
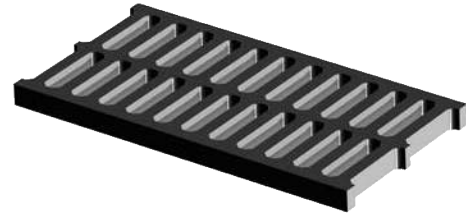
Heavy duty

Trench grates are furnished in 30" lengths

Grates are designed to fit popular steel angle sizes

Build your trench using trench width and steel angle iron frame per dimensions shown. Maintain dimension "C" and the opening between the top of the frames will be dimension "A" + 1/4". The extra 1/4" width at top represents necessary tolerance for proper grate fit.

Specify trench length and part number of desired trench width (dimension "C")



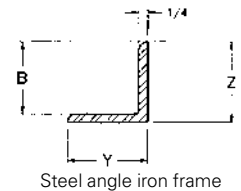
V-7600 30" Trench Grate Series

Catalog Number	A Grate Width	B Seat Depth	C Trench Width	Grate Length
V-7601	8 3/4	1 1/2	6	30
V-7602	10 3/4	1 1/2	8	30
V-7603	12 3/4	1 1/2	10	30
V-7604	15 1/4	1 3/4	12	30
V-7605	18 1/4	1 3/4	15	30
V-7607	24 1/4	1 3/4	21	30
V-7608	27 1/4	1 3/4	24	30

Note: All dimensions are in inches.

Steel Angle Frame

B	Y	Z
1 1/2	1 3/4	1 3/4
1 3/4	2	2
2 3/4	2	3



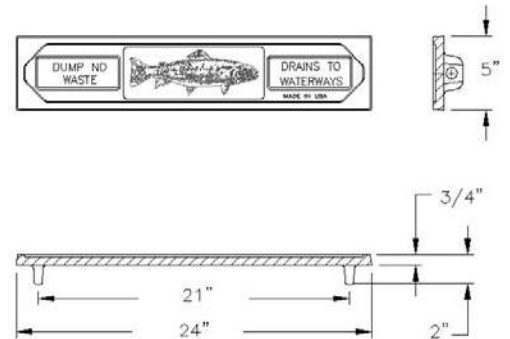
Note: All dimensions are in inches.

7001 CURB PLATE

Used in sidewalk above a trench grate

Embedded into concrete during construction

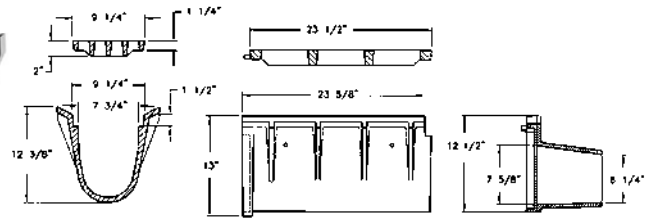
Customized messages available



7743 GUTTER INLET WITH END OUTLET

Heavy duty
 Approximate 94 sq. in. open area
 Expandable to any length

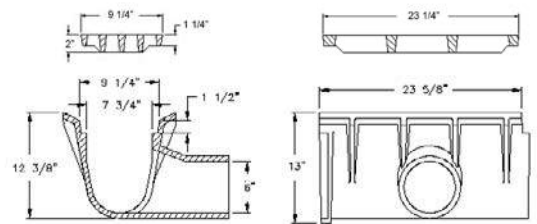
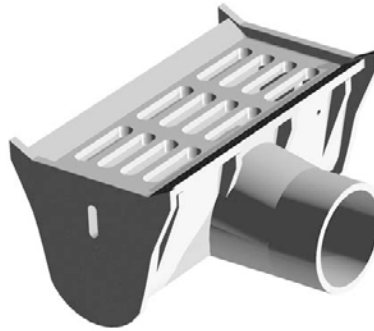
Options
 Adjusting risers
 Optional end caps



7744 GUTTER INLET WITH SIDE OUTLET

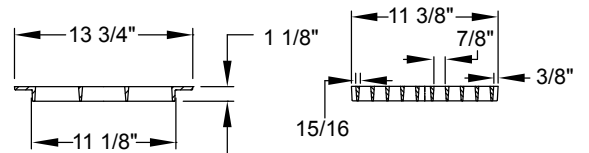
Heavy duty
 Accepts 7743 grate
 Expandable to any length

Options
 Adjusting risers
 Optional end caps



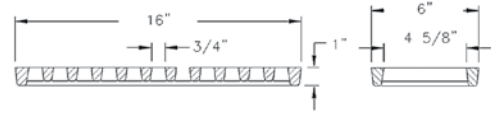
7796 TRENCH GRATE

Non-traffic



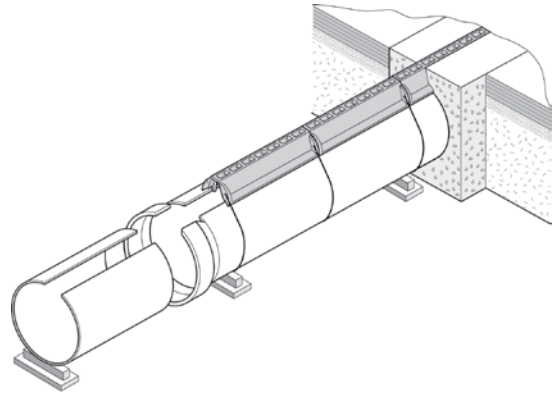
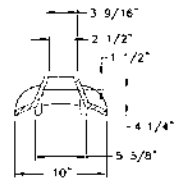
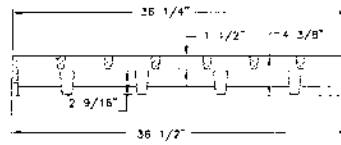
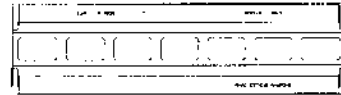
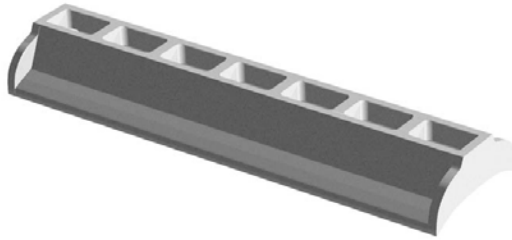
7799 TRENCH GRATE

Heavy duty



V-7950 SLOTTED GRATE FOR PIPE

Heavy duty



Additional Information



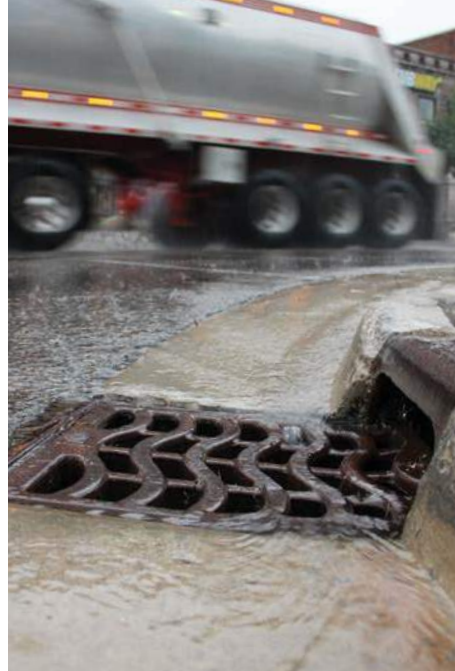
MANHOLE FRAMES AND COVERS



EJ produces street castings to meet ASTM and AASHTO criteria. In addition, our castings meet provincial and municipal 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.

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 ADA grates.

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

TRENCH GRATES



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 widths from 8" to 51". Frames available 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 stand alone architectural enhancements, or can accompany matching tree grate designs.

AIRPORT AND PORT AUTHORITY



Environments that undergo excessive load conditions require construction castings specifically designed to meet or exceed heavy duty load rating standards. EJ offers many solutions for these types of applications.

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 grey iron conforming to ASTM A48 Class 35B and ductile iron conforming to ASTM A536. Many of our airport castings can be made-to-order with custom logos and messaging, in most languages, to meet your project specifications.

UTILITY AND TELECOMM 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 telecommunication 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

INNOVATIVE ACCESS SOLUTIONS



Innovative access solutions are a classification of products that address issues beyond standard manhole frames and covers. This product series includes ergonomic solutions, advanced locking mechanisms, and products that prolong your infrastructure.

For example, the SELFLEVEL® manhole assembly allows the upper frame cover to adjust with the surface of the roadway; keeping the cover level at all times. This product is ideal for extreme freeze/thaw (frost heave) environments.

INFRA-RISER® adjustment risers prolong structure life by dissipating traffic vibrations.

The mechanical strut on our ductile iron hatch line reduces the lifting force of covers weighing up to 560 pounds to less than 35 pounds.

EJ has taken generations of knowledge and experience and fine-tuned designs to offer you the best innovative access solutions.

ERMATIC RANGE AND OTHER MODULAR SOLUTIONS



Worldwide, the ERMATIC® modular system is one of the most adaptable product ranges in the industry. This comprehensive and highly engineered range of access covers can be customized to fit any underground vault dimension or cover configuration.

Some of the world's most prestigious infrastructure projects have selected the ERMATIC range as their preferred solution: from airports, docks and tunnels to sewage, telecommunications and other utility networks.

Specifiers, contractors, and end users choose this product because it is reliable, durable and serviced by the most professional technical support teams. EJ provides solutions that lead the industry, act as best-in-class benchmarks, and satisfy the most demanding customer expectation.

Features and options include security locking, various load ratings and standard sizes between 2' x 2' to 10' x 17'. Custom sizes are available to fit your needs. Cover options include solid or recessed for concrete infill or brick pavers. This product is manufactured at our regional facility in France.

HINGED HATCH ACCESS ASSEMBLIES



Hinged access assemblies offer ergonomic benefits with the strength of ductile iron. The 8190 and 8210 series of hinged hatch access assemblies are typically installed in traffic areas, airports, and ports.

This hatch provides a secure and easy access point to underground utility structures, and the mechanical strut reduces the lifting force of the cover to less than 35 pounds. The pre-assembled unit saves time and money on the job site; just "drop and pour." The cover opens to 105 degrees and removes at 90 degrees, and features a self-engaging safety bar.

COMPOSITE COVERS AND FRAMES



Field performance has proven that composite manhole covers are ideal for the most challenging environment. Safety for pedestrian traffic and utility workers has driven EJ to develop an advanced solution offering the highest level of safety and performance. Composite manhole covers will conduct neither stray voltage nor high heat, thus shielding pedestrians from the underground environment. The advanced ergonomic aspects of composite manhole covers and frames help to safeguard the municipal workforce from injuries.

Contact your local Sales Representative for the solution that best fits your unique needs: stray voltage, heat transfer, steam covers, ergonomics, radio frequency and cellular transmissions, theft (no scrap value), corrosion, identification (color options), and noise abatement.

Patented design features and advanced fiber reinforced polymer (FRP) material technology make our composite products strong, lightweight, and safe for everyone.

ALUMINUM ACCESS HATCHES



EJ has a broad offering of access hatch products available in aluminum, steel, and ductile iron.

Our hatches are designed to provide easy and secure access to below ground, and below floor installations. The aluminum SAFE HATCH® safety grate system is available in all hatch series. This additional fall through protection and controlled confined space entry enhances worker safety. Heavy duty stainless steel hinges are standard on all units.

Access hatches are used in areas such as sewer pump stations, water treatment plants, gas valve vaults, water meter pits, water valve vaults, telephone and electric vaults, industrial plant pits, fuel storage pits, de-icing control facilities, storm drains, monitoring wells, and collection pits.

EJ also has a complete line of fabricated steel reticulate and welded type drainage grates.

Our modern manufacturing facilities are capable of producing custom fabrications. Contact our expert design team next time you need a custom solution for your project.

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
- Sloped risers available

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, the rubber composite adjustment 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.

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 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 valves meet or exceed 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 grey iron or water-based asphaltic coating
- 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. Valve boxes are available as either an assembly or set.

METER BOXES



The meter box product is specifically intended to cover a water meter. It is typically large enough to allow 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 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.

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 the 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 are made in the USA.

DETECTABLE WARNING PLATES



DURALAST® Detectable Warning Plates help warn visually impaired pedestrians 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.

SUGGESTED SPECIFICATION FOR CONSTRUCTION AND UTILITY CASTINGS

General

This specification is applicable for grey and ductile iron construction castings. All castings shall be manufactured in the United States of America by EJ USA, Inc. All manufacturers shall be approved suppliers and be able to demonstrate that there is an acceptable quality control program at the producing foundry, prior to supplying castings.

Material

Grey iron castings for heavy duty applications shall be manufactured from iron conforming to ASTM A48, Class 35B of AASHTO M306, or as requested by the purchaser. Grey iron castings for sidewalk or pedestrian applications shall be manufactured from iron conforming to ASTM A48, Class 30B or 35B, or as requested by the purchaser. Ductile iron castings shall conform to ASTM A536. The iron material used in products provided shall have a minimum recycled material content of 85%. The recycled materials shall consist of post-consumer material.

Manufacture

Castings shall be of uniform quality, free from sand holes, gas holes, shrinkage, cracks and other surface defects. Castings shall be ground smooth and well cleaned by shot blasting. For traffic service castings, bearing surfaces between manhole rings and covers or grates and frames shall be cast or machined with such precision to prevent rocking. As-cast dimensions may vary within accepted foundry tolerances as outlined in the Iron Castings Handbook published by the American Foundry Society. Nominally, casting dimensional tolerances shall be $\pm 1/16"$ per foot. All published casting weights are average and approximate values and shall vary $\pm 5\%$. Castings shall be furnished painted or unpainted as specified by the purchaser.

Proof Load Testing

Traffic service castings shall have a first article proof load test conducted and the results of that proof load shall be made available to the purchaser upon request. The proof load shall be conducted in accordance with the method and procedure that is outlined in AASHTO M306. The casting shall be tested on a suitable and calibrated load testing machine and the casting shall hold a 40,000 pound proof load for one minute without experiencing any cracks or detrimental permanent deformation.

Inspection

Inspections shall be in accordance with AASHTO M306. Results of these tests shall be furnished to the purchaser upon request. The heat or production date and product numbers shall be cast on the casting. This information shall be used for casting traceability and testing.

Marking

Each casting shall be identifiable and show, at a minimum, the following: name of the producing foundry, country of manufacture (such as "Made in USA"), ASTM material designation, recycle symbol, individual part number, cast or heat date. Castings shall include all lettering as shown on the specification drawings.

Sampling

Random checks on the castings may be conducted by the purchaser. These random checks shall be conducted in accordance with AASHTO M306.

Records

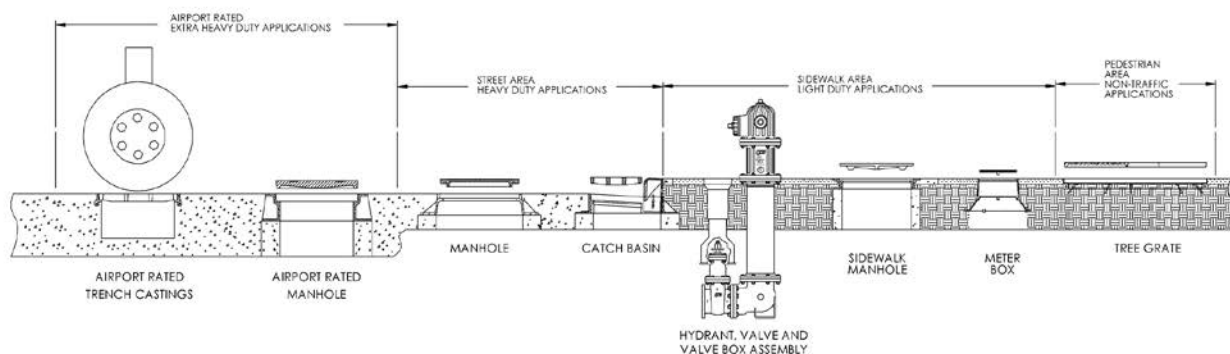
Test results for each lot of castings shall be maintained by the foundry for a minimum of seven years and shall be made available to the purchaser upon request.

Certification/Standards Compliance

ASTM A48	Material
ASTM A536	Material
AASHTO M306	Product Performance/Quality
ISO 9001:2008	Quality Assurance

Quality Assurance

System of manufacturing quality assurance must conform to the requirements of ISO 9001:2008 and be certified by a third party.



Québec Cross Reference

EJ Part Number	EJ Description	Mueller	Mueller Description	Bibby
00182017	Frame - Hydro Ottawa 1030mm bolt circle		Frame - Grey Iron - Hydro Ottawa 1030mm bolt circle	
Q018030	Beehive grate grey iron	CB18G	CB18G - Beehive grate grey iron	P-33-4
Q021020	Cover grey iron - Hydro Ottawa	UG21CHYDROOTT	UG21CHYDROOTT - grey iron cover Hydro Ottawa	
Q021022	Cover grey iron - power electric	UG21CPOWERELEC	Q021022 - grey iron cover Power Electric	
Q041010	Round grey iron frame 51mm	MU41AF	MU41AF grey iron frame 51mm	P-41A
Q041030	Straight grate grey iron	MU41AF	MU41AG grey iron straight grate	P-41A
Q100010	Frame - 102mm grey iron	S100F	S100F - 102mm grey iron frame	C-100
Q100012	Frame - 102mm bolted grey iron	S100FEB	S100FEB - 102mm bolted grey iron frame	
Q121230	Beehive grate grey iron	EL1212	EL1212G - Beehive grate grey iron	
Q142411	Frame 614 x 360 x 154mm grey iron (24x14)	MU1424FSPC	MU1424FSPC - 614 x 360 x 154mm grey iron frame (14 x 24)	P-45
Q142430	Grate 608 x 354 x 57 grey iron (24x14)	MU1424GSPC	MU1424GSPC - 608 x 354 x 57 grey iron grate (14 x 24)	P-45
Q142432	Grate 608 x 354 x 57 ductile iron (24x14)	MU1424GDSPC	MU1424GDSPC - 608 x 354 x 57 ductile iron grate (14 x 24)	P-45
Q150011	Frame - 152mm grey iron	S150FE	S150FE - 152mm grey iron frame	C-6
Q183615	Frame 920 x 457 x 162mm grey iron (36x18)	MU1836F6	MU1836F6 - 920 x 457 x 162mm grey iron frame (18 x 36)	P-46
Q183631	Grate 912 x 451 x 57 grey iron (36x18)	MU1836G	MU1836G - 912 x 451 x 57 grey iron grate (18 x 36)	P-46
Q183633	Grate 912 x 451 x 57 ductile iron (36x18)	MU1836GDMTQ	MU1836GDMTQ - 912 x 451 x 57 ductile iron (18 x 36)	P-46
Q221066	555Mm x 441mm x 152mm grey iron trap	MV221C.225	MV221C.225 - 555mm x 441mm x 152mm grey iron trap	T-7
Q225011	Guide frame - grey iron	AJ22.5GUIDECO	AJ 22.5 Guider Frame grey iron	CG22.5
Q225011	Guide frame - grey iron	AJ22.5GUIDECO	AJ 22.5 Guider Frame grey iron	CG22.5
Q225015	Upper frame - ductile iron	AJ22.5F	AJ 22.5 Upper frame ductile iron	C-50M1
Q225015	Upper frame - ductile iron	AJ22.5F	AJ 22.5 Upper frame ductile iron	C-50M1
Q225020	Cover - grey iron	MU22.5C	MU22.5 Grey iron cover	C-46
Q225028	Frame - grey iron	MU22.5F	MU22.5F4PATTVQ	C-46
Q225030	Grate - grey iron	MU22.5G	MU22.5 Grate - Grey Iron	C-46
Q225031	Grate - ductile iron	MU22.5GD	MU22.5GD Grate Ductile Iron / Grille Fonte Ductile	C-46
Q225031	Grate - ductile iron	MU22.5GD	MU22.5 Ductile Iron grate	C-46
Q225032	Grate - ductile iron without stacking lugs	MU22.5GSP	MU22.5 Grate without stacking lugs	
Q225036	Cover - ductile iron	MU22.5CD	MU22.5 Ductile Iron Cover	C-46
Q236020	Cover - ductile iron - valve chamber Montreal	MV236CDMTLA	MV236CD - ductile iron cover	C-4V
Q236026	Plug 5" for above cover	MV236PLUG	MV236PLUG	PLUG
Q275030	Galvanized steel safety grate	MV275B	MV275B - Galvanized steel safety grate	GS-4
Q401010	Frame - 216mm interrupted seat grey iron	S401FE	S401FE - 216mm Interrupted Seat Grey iron frame	C-4S
Q401020	Cover - grey iron - Montreal Egout	S401C	S401C Cover Grey Iron / Couverture Fonte Grise - Montreal Egout	C-4
Q401022	Cover - grey iron - Montreal Egout - Ville de Laval	S401C	S401C Cover Grey Iron / Couverture Fonte Grise - Ville de Laval	C-4
Q402011	Frame - 219mm grey iron	S402FE	S402FE - 219mm grey iron frame	C-6S
Q402013	Frame - 219mm bolted grey iron	S402FEB	S402FEB - 219mm grey iron bolted frame	C-6S
Q402015	Frame - 219mm ductile iron	S402FED	S402FED - 219mm ductile iron frame	C-6S
Q402020	Cover - grey iron	S402C	S402C - grey iron cover	C-6

Québec Cross Reference (continued)

EJ Part Number	EJ Description	Mueller	Mueller Description	Bibby
Q402042	Cover - ductile iron	S402CD	S402CD - ductile iron cover	C-6
Q402056W01	Frame 219mm and cover bolted assembly grey iron	S402FEB	S402FEB - 219mm frame and bolted cover assembly - grey iron	
Q402074	Cover - grey iron with o-ring gasket	S402C-R	S402C-R - Grey iron cover with O Ring gasket	C-6
Q402132	Cover - grey iron - ville de blainville sanitaire	S402C	S402C Cover Grey Iron / Couverture Fonte Grise - Ville de Blainville Sanitaire	C-6
Q402190I	Grey iron plug for above cover	PLUGS402	PLUGS402 - grey iron plug for above cover	C-6
Q405011	Frame - 95mm grey iron	S405F	S405F - 95mm grey iron frame	C-24
Q405015	Frame - 95mm ductile iron	S405FD	S405FD - 95mm ductile iron frame	C-24
Q429010	Frame - 150mm grey iron	S429F	S429F - 750mm Standard 150mm Frame Grey Iron	C-6S
Q429012	Frame - 150mm ductile iron	S429FD	S429FD - 150mm Ductile Iron Frame	C-6S
Q429014	Frame - 200mm ductile iron	S429F8D	S429F8D - 200mm Ductile Iron	C-6S
Q429020	Cover - 44mm thick grey iron	S429C	S429C - 44mm thick Grey Iron Cover	C-6
Q429021	Cover - 44mm thick ductile iron	S429C/D	S729CD - 44mm thick Ductile Iron Cover	C-6
Q429025	Cover - 40mm ductile iron	S429CD	S429CD - 40mm Ductile Iron Cover	C-6S
Q429028	Frame - 200mm grey iron	S429F8	S429F8 - 200mm Frame Grey Iron	C-6S
Q429030	Cover - 40mm grey iron	S429C	S429C - 40mm Grey Iron Cover	C-6S
Q429033	Cover - 44mm thick grey iron - egout	S429C	S429C - Egout - 40mm grey iron cover	C-6
Q501014	Upper frame - ductile iron	CB501FD	CB501FD upper frame ductile iron	P-51T
Q501016	152Mm cone guide frame grey iron	CB501-6GUIDECO	CB501-6GUIDECO 152mm guider grey iron	P-51C
Q501019	216Mm guide frame grey iron	CB501-8GUIDECO	CB501-8GUIDECO 216mm guider grey iron	P-51C
Q501030	Slam grate ductile iron	CB501GD	CB501GD slam grate ductile iron	P-51A
Q501032	Anti leaf slam grate - ductile iron	CB501GDAF	CB501GD Anti Leaf grate ductile iron	P-51A
Q501037	Cascade / bicycle slam grate - ductile iron	CB501GDC	CB501GD Cascade / Bicycle grate ductile iron	P-51AM
Q504030	Grey iron grate	CB504G	CB504G - grey iron grate	P-36
Q504032	Ductile iron grate	CB504GD	CB504GD - ductile iron grate	P-36
Q506030	Grate - grey iron	CB506G	CB506G - 750mm grate	P-3A
Q506032	Grate - bicycle - ductile iron	CB506BGD	CB506BGD - Bicycle Grate - Ductile Iron	P-3V
Q506034	Grate - bicycle - grey iron	CB506BG	CB506BG - Bicycle Grate - Grey Iron	P-3V
Q506036	Grate - ductile iron	CB506GD	CB506GD - Grate - Grey Iron	P-3A
Q508030	Grate- heavy duty grey iron	CG508G	CB508G - Grate Heavy Duty Grey Iron	P-1
Q526030	Grate - grey iron bicycle grate	CB526BG	CB526BG grey iron bicycle grate	P-3V
Q526032	Grate - ductile iron bicycle grate	CB526BGD	CB526BGD ductile iron bicycle grate	P-3V
Q526034	Grate - ductile iron	CB526GD	CB526GD Ductile iron grate	P-3
Q526038	Grate - grey iron	CB526G	CB526G grey iron grate	P-3
Q540030	Grey iron grate	CB540G	CB540G - grey iron grate	P-17
Q553060	407Mm x 255mm x 106mm grey iron trap	D553	D553 - 407mm x 255mm x 106mm grey iron trap	T-1Q
Q554064	460Mm x 284mm x 93mm grey iron trap with closed end	D554R	D554R - 460mm x 284mm x 93mm grey iron trap with closed end	T-1R
Q554066	460Mm x 284mm x 93mm grey iron trap	D554	D554 - 460mm x 284mm x 93mm grey iron trap	T-1
Q555068	532Mm x 375mm x 140mm grey iron trap	D555	D555 - 532mm x 375mm x 140mm grey iron trap	T-6
Q600010	50Mm straight guide frame grey iron	AJ600-2GUIDEUR	AJ600-2GUIDEUR - 50mm straight guider	
Q600011	152Mm conical guide frame grey iron	AJ600GUIDECO	AJ600GUIDECO - 152mm Conical guider	
Q600012	100Mm straight guide frame grey iron	AJ600-4GUIDEUR	AJ600-4GUIDEUR - 100mm straight guider	
Q600014	Upper frame ductile iron	AJ600.200	AJ600.200 Upper frame ductile iron	

Québec Cross Reference (continued)

EJ Part Number	EJ Description	Mueller	Mueller Description	Bibby
Q600020	Grey iron cover	AJ600C	AJ600C - 600mm grey iron cover	
Q633008	Resilient seat upper frame 156mm ductile iron	AJ633.125SR	AJ633.125SR - 156mm Resilient seat upper frame ductile iron	
Q633010	150mm straight guide frame grey iron	AJ633GUIDEUR	AJ633GUIDEUR - 150mm straight guider grey iron	
Q633012	200mm cone guide frame grey iron	AJ633GUIDECO	AJ633GUIDECO - 200mm cone guider grey iron	
Q633014	100mm grey iron straight guide frame	AJ633-4GUIDEUR	AJ633GUIDEUR - 100mm straight grey iron guider	
Q633016	127mm straight guide frame	AJ633-5GUIDEUR	AJ633-5GUIDEUR - 127mm straight guider grey iron	
Q633017	Upper frame ductile iron	AJ633.200	AJ633.200 Upper frame ductile iron	
Q633018	Resilient seat upper frame 229mm ductile iron	AJ633.200SR	AJ633.200SR - 229mm Resilient seat upper frame ductile iron	
Q633023	Cover - grey iron	AJ633C	AJ633CSE - 624mm grey iron cover	
Q750010	Guide frame - 100mm - grey iron	AJ750-4GUIDEUR	AJ 750 Guider - 100mm Grey Iron	CG-29.5
Q750014	Guide frame - 150mm - cone - grey iron	AJ750GUIDEURCO	AJ750 Guider - 150mm Grey Iron	CG-29.5C
Q750016	Upper frame - ductile iron	AJ750.200	AJ 750 - 750mm guide frame Ductile Iron	C-50P
Q750016	Upper frame - grey iron	AJ750.200	AJ750 - 750mm upper frame Grey Iron	C-50P
Q775009	Guide frame 114mm grey iron	AJ775-4.5GUIDE	AJ775-4.5 - 114mm guide frame grey iron	CG-30.5
Q775013	Guide frame	AJ775GUIDEURCO	AJ775GUIDEURCO - 775mm Cone Guide Frame 150mm Grey Iron	CG-30.5C
Q775014	Upper frame ductile iron	AJ775.200E	AJ775.200E - 775mm Frame Ductile Iron	C-50MSR
Q775016	Upper frame with resilient seat ductile iron	AJ775.200ESR	AJ775.200ESR - 775mm Frame with Resilient Seat Ductile Iron	C-50MSR
Q775020	Cover - ductile iron	AJ775CD	AJ775CD - cover ductile iron	C-50M
Q775022	Cover - ductile iron with Aqueduc and square vent holes	AJ775CDA	AJ775CDA ductile iron cover Aqueduc with square plug	C-50M
Q775030	Electrical ductile iron grate	EL775GD	EL775GD - Electrical ductile iron grate	
Q775233	Cover- ductile iron with o-ring gasket	AJ775CD-R	AJ775CD-R - Ductile Iron cover with O Ring gasket	

Note: Cross reference guide is not guaranteed to contain all options available. If you do not see a specific product, be sure to consult with your EJ Sales Representative.

Ontario Cross Reference

Product Description	Part Number	OPSD Number	McCoy	Bibby	Star	Sigma
Maintenance Hole Frames and Covers						
624mm (24.5")						
401.01 frame & 401.01 A cover	MC401010201U	401.01 A	HM331	JW150	MB-5001	MH6401RN
401.01 frame & 401.01 B cover perf	MC401010301U	401.01 B	HM332	JW150PE	MB5002	MH64011RV
Low profile 3" frame and 401.01 A cover	MC401010203U	3" - 401.01 frame and 401.01 A cov Perf				
401.04 frame & 401.04 A cover	MC401040201U	401.04 A		C81		
401.04 frame & 401.04 B cover perf	MC401040301U	401.04 B		C-81		
401.01 solid cover no vent holes	MC401010227	401.01 solid no vent hole	ETOB16	JW154		
SELFLEVEL Maintenance Hole Frame and Cover						
SELFLEVEL frame & 401.01 cover	MC401010243	Self Level		Autostable		MH62502/ MH62502-D
745mm (29-5/16")						
401.020 frame & 401.020 cover	MC401020201U	401.02		C13APPC		MH6251D
Water Resistant						
401.03 frame & 4 bolt cover with gasket	MC401030201U	401.03	4/19	JW153WTWAT	MB5003	MH6401RWTB
401.05 frame & 4 bolt cover with gasket	MC401050201U	401.05				
Locking Frame and Cover						
401.04 frame & 401.06 locking cover	MC401060201U	401.04 / 401.06		JW150 LCO		MH6401RVP
Catch Basins						
400.01 frame & 400.01 grate	MC400010301U	400.01	HM313	JW107A	FG5003	FG6401-D/ FG6401-D-U
400.02 frame & 400.02 grate	MC400020301U	400.02	HM311	JW100A	FG5001	FG6402/ FG6402-U
400.02 frame & beehive grate	MC400020801U		BURL #1			FG112
400.03 frame & 400.03 grate	MC400030000U	400.03	DD705	JW102A		FG6403
One piece frame & grate MTO spec	MC400040000U	400.04		JW100M		
400.07 frame & 400.07 round grate	MC400070301U	400.07		C81		FG6407
400.02 frame & 400.10 grate	MC400100301U	400.10	KESM21	JW112	FG5004	FG6402VS
400.01 frame & 400.11 grate	MC400110301U	400.11		JW112A	FG5005	
400.02 frame & 400.12 birdcage grate	MC400120301U	400.12	ETOB 21			FG6109
400.02 frame & 401.081 fish grate	MC400020311U	400.02 / 401.081		JW100AF	FG5002	FG6402F/ FG6402F-U
Low profile 3" frame with 400.07 grate	MC400070303U	3"- 401.01 fr / 400.07 gr				
Inlets						
400.08 frame & 400.02 grate	MC400020302U	400.08 / 400.02		JW116 FR & JW100 A GR		FG6408
400.081 frame with 2 piece cover	MC400081000U	400.081		P43A	MB5004	
400.082 frame & 401.080 fish cover	MC400082201U	400.082 / 401.080		P80	FG5009	MH6422
400.09 back arch	MC400090600U	400.09	AM14	JW120		FG6409C

Ontario Cross Reference (continued)

Product Description	Part Number	OPSD Number	McCoy	Bibby	Star	Sigma
Valve Chambers 624mm (24.5")						
401.01 frame with 402.01 cover and plug	MC402010202U	402.01	HM404	JW300		MH6401RWP
401.01 frame with 402.011 vented cover and plug	MC402011201U	402.011	RWS106	JW300 'A'-10Vent		
401.04 frame with 402.02 cover and plug	MC402020201U	402.02				
401.04 frame with 402.021 vented cover and plug	MC402021202U	402.021				
City of Hamilton Valve Key frame & cover	MC102000000U		RWS102			
Meter Chambers 1126mm x 790mm (48" x 31")						
6" Frame and 2 pc bolted covers	MC402030202U	402.03	LM5	C-16BG		MH6403RWTB
Ditch Inlet (Galvanized Steel)						
Type A, 762 x 768 (30" x 30")	MC403010310	403.01 A				
Type B, 1338mm x 768mm (52-11/16" x 30")	MC403010320	403.01 B				
Type C, 1465mm x 768mm (57 - 11/16" x 30")	MC403010330	403.01 C				
Electrical Handholes						
316mm x 12 - 7/16" frame and 1 bolt cover	MC211201201U	2112.01		JW405		
406mm - 18" frame and 2 bolt cover	MC211202201U	2112.02		JW404		
Valve Box Road Levellers for 5 1/4" Valve Boxes						
Frame Ductile Iron	MCVBX0011					
Cover - Water - Ductile Iron	MCVBX0020					
Valve Box Risers - Cast Iron for 5 1/4" Valve Boxes						
8500 1" valve box riser	85008010					
8500 1 1/2" valve box riser	85008015					
8500 2" valve box riser	85008020					
8500 2 1/2" valve box riser	85008025					
8500 3" valve box riser	85008030					
8500 4" valve box riser	85008040					
8500 6" valve box riser	85008060					
Valve box cover for above riser "WATER"	6800007					
Ottawa						
Maintenance Hole Frames and Covers						
Sanitary manhole toilet logo	MC401020211U	S24/S25		C13A		
Storm manhole fish logo	MC401020241U	S24.1/2S25		C13A		
Valve chamber with tap logo	MC401020231U	W15/WW16		C13-AVCC		
2 piece curb inlet fish logo	MC400082201U	S22/S23		P80		
Perforated cover and frame	MC401020221U	S28.1		C-13A perf		
CB heavy duty fish logo	MC400070311U	S19		C81		
Dished catch basin frame and grate	MC400010301U	400.01		JW107A		

Ontario Cross Reference (continued)

Product Description	Part Number	OPSD Number	McCoy	Bibby	Star	Sigma
Flat catch basin frame and grate	MC400020301U	400.02		JW100A		
V grate and frame	MC400030000U	400.03		JW102A		
Standard manhole frame and cover	MC401010201U	401.01A		JW150		
Storm manhole frame and cover	MC401010301U	401.01B		JW150PE		
Water resistant manhole frame and cover	MC401030201U	401.03		JW153WTWAT		
Valve chamber frame and cover	MC402010202U	402.01		JW300		
Round grate and frame	MC400070301U	400.07		C81		
555mm (21-7/8") x 384 (15") fr & gr	MC020000101U	S20/S21		P-5/JW203		
SELFLEVEL Maintenance Hole Assembly						
SELFLEVEL Frame with S24 toilet cover	MC401020211	SELFLEVEL Frame with S24 Toilet cover				
SELFLEVEL Frame with 24.1 fish cover	MC40102024M	SELFLEVEL Frame with 24.1 Fish cover				
Steel Riser Rings for Maintenance Holes						
Adjustable Riser Rings						
1" adjusting riser ring	M5245611107A					
1 1/4" adjusting riser ring	M5245611137A					
1 1/2" adjusting riser ring	M5245611157A					
1 3/4" adjusting riser ring	M5245611187A					
2" adjusting riser ring	M5245611207A					
3" adjusting riser ring	M2246320308A					
Solid Riser Rings						
1" non-adjusting	M7245620106A					
1 1/4" non-adjusting	M7245620136A					
1 1/2" non-adjusting	M7245620156A					
1 3/4" non-adjusting	M7245620186A					
2" non-adjusting	M7245620206A					
3" non-adjusting	M1245620306A					
Catch Basin Riser Rings Used with 400.02 Frame						
1" rise	D2432431510Z					
1 1/2" rise	D2432431515Z					
2" rise	D2432431520Z					

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