

CONSTRUCTION PRODUCTS
CATALOG



 **J.R. HOE**
AND SONS



In 1909, J.R. Hoe (2nd from right) migrated with his family from Pittsburgh to the mountain region of Kentucky to take over operations of the Pioneer Iron Works. Over the next several decades his five sons, each skilled in ironmaking, developed the company into a regional center of metalworking expertise. By the mid-20th century the company began to make construction castings to serve the nation's growing infrastructure needs. The 'HOE OF KY' brand is present today on tens of thousands of street castings across the region, a mark of their quality and durability. Over 100 years later, J.R. HOE and SONS continues to produce quality construction products using state-of-the-art technology and innovative design. The founding principle of J.R. Hoe is carried forward:

Build quality and it will last.



CONSTRUCTION PRODUCTS CATALOG

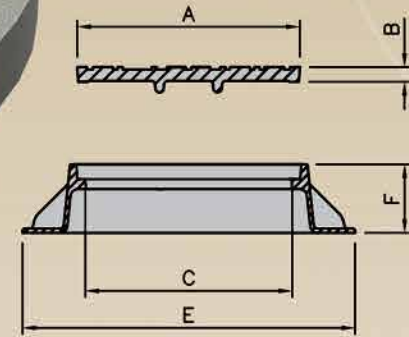
844-240-7860 www.jrhoe.com

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Today, J.R. HOE and SONS is a multi-faceted manufacturer that serves a diverse customer base. In addition to its line of Construction Products highlighted in this catalog, J.R. HOE produces gray and ductile iron castings used in the pump and valve, aluminum processing, and construction tool industries, among others. We offer in-house CNC machining to produce OEM parts for manufacturers which are shipped globally. The Fabrication Division at J.R. HOE supplies structural and miscellaneous steel to major infrastructure projects across the Eastern U.S. Recent projects include highway bridges, light rail, airport and water treatment facilities. J.R. HOE and SONS is certified by the American Institute of Steel Construction (AISC) in 3 categories: STD Structural, Simple Bridge, and Highway/Bridge Components.

QUALITY + SERVICE = CUSTOMER SATISFACTION



Round Manhole Covers and Frames

Catalog Number	A Cover Diameter	B Cover Thickness	C Clear Opening	E Flange OD	F Frame Height
MC-82	13-1/4	1-1/2	11-1/2	17-5/8	4
MC-162	21-7/8	1-1/2	20-1/4	26-5/8	4
MC-200	22-3/4	1-1/2	20	25	2-3/4
MC-260	22-3/4	1-1/2	21	32	4
MC-315	22-3/4	1-3/4	21	34	7
MC-350	22-3/4	1-1/2	21	35	7
MC-420	24	1-3/16	22	34	7
MC-275	24	1-3/16	22	30	4
MC-206	25-1/4	1-1/2	23-1/2	29-1/2	4
MC-285	26	1-1/2	24	36	4
MC-375	26	1-1/2	24	36	7
KY-510	28	1	25	38	8
MC-680	31-15/16	1-3/8	30	46	5-5/8
MC-780	31-15/16	1-3/8	30	46	10
MC-520	31-3/4	1-3/8	30	38	4
MC-455	34	1-1/2	32-1/4	38-1/2	4-1/8
MC-747	38	2	36	46	6
MC-900	50-1/4	2	48	56-1/2	6

Other sizes available

- Designed for H-20 traffic loading
- Standard lettering up to 26" ID: Sanitary or Storm Sewer
- Standard lettering 30" ID: Electric, Communications or Telephone
- Options: Special lettering, locking options, bolted, watertight



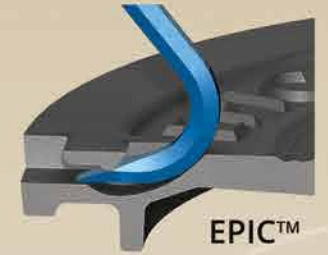
Pickhole Designs



Open



Concealed

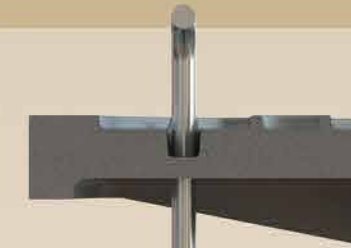


EPIC™

Lift Handle Options



Ring Handle



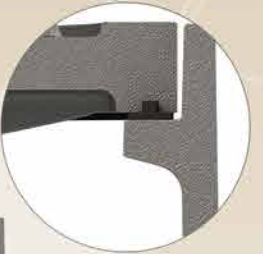
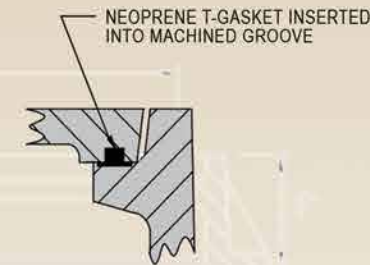
Drop Handle



Pick Bar

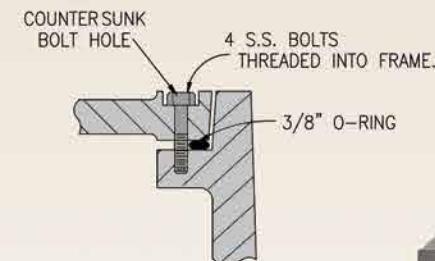
Self-Sealed Manhole Covers

Weight of cover "seals" gasket to frame.



Watertight Manhole Covers

Cover is bolted to frame with (4) SS bolts. Neoprene gasket glued to frame seat.



Manhole Cover Accessories

Pavement Riser Rings

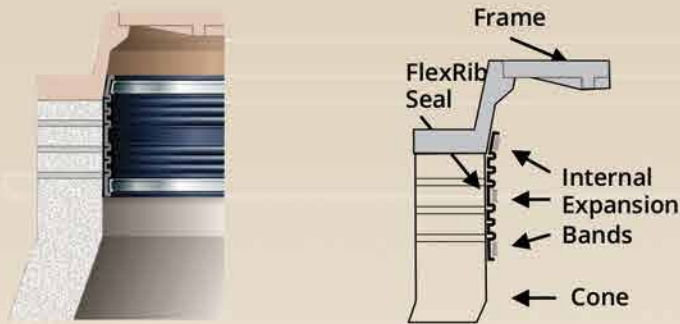
Infra-Risers

Below Ground Rubber Riser

- Reduces traffic vibration damage to prolong the life of pavement and manhole structures
- Reduces water infiltration
- Made of 92% recycled raw materials
- Available in round, square and rectangular; flat and tapered risers
- Installed between concrete and casting to raise top to pavement grade level

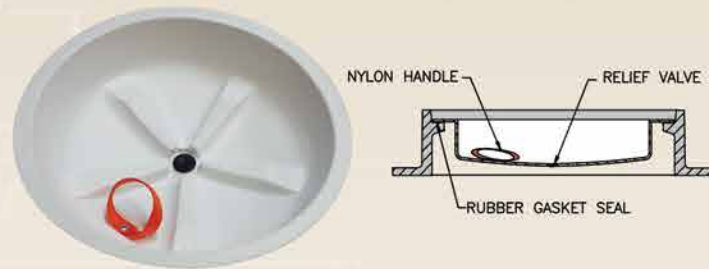
Chimney Seal

FlexRib Seals stop leaking joints by bridging the joint with a flexible rubber seal. This is achieved by compressing the rubber seal against the manhole frame and the manhole cone on either side of the joint with the internal expansion bands forming a watertight seal.



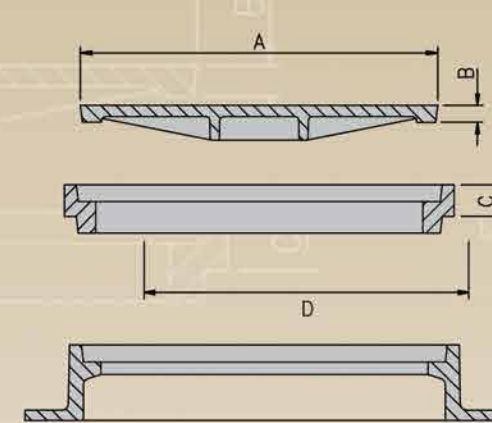
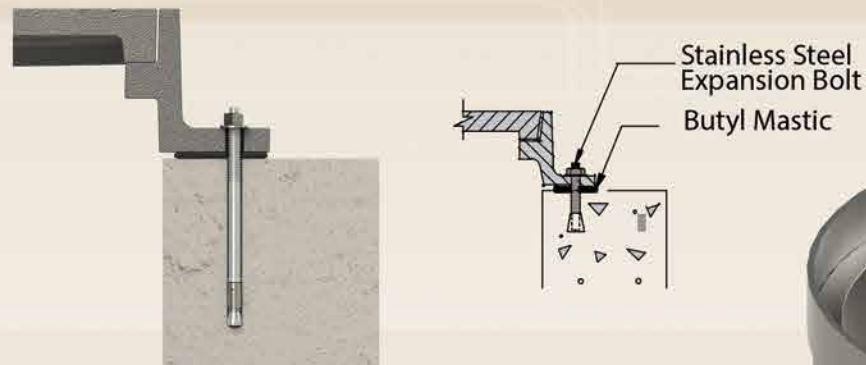
Rainstopper

- Stops flow of rainwater into sewage systems
- Controls manhole odors
- Keeps dirt out of system
- Easily installed by one person.
- To order, provide lid diameter and ID of frame opening



Anchor Bolts

- Secures frame casting to concrete structure.
- Mastic seals out water infiltration.



Solid Cast Iron Manhole Riser Rings and Expandable Diameter Steel Riser Rings are used in paving applications to raise the manhole cover to pavement grade level.

INFORMATION NEEDED TO ORDER:

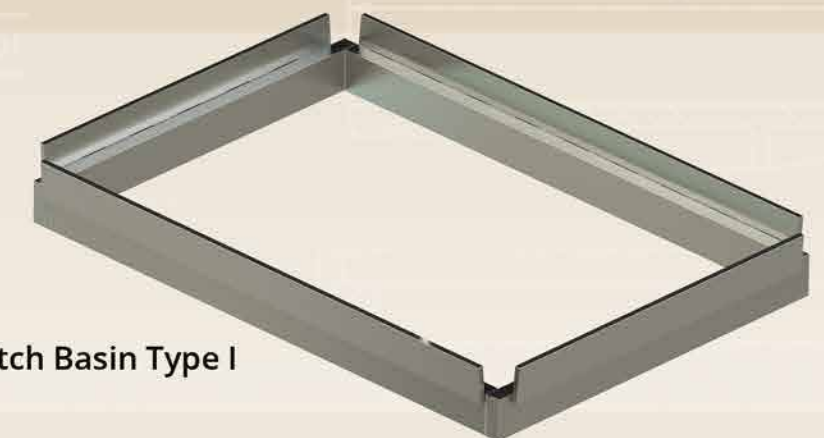
- A. Cover Diameter or Grate Dimensions
- B. Cover or Grate Thickness
- C. Height Grate/Cover Needs to be Raised
- D. Inside Clear Opening of Frame



Cast Iron Riser Ring

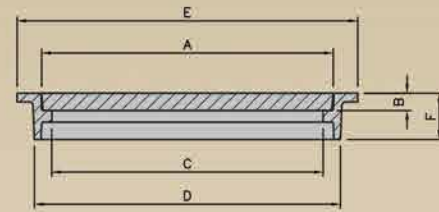


Expandable Diameter Steel Riser Ring



Catch Basin Type I

Manhole Covers/Grates for Slab



- Cast with flange up to anchor into top of concrete slab
- Designed for H-20 traffic loading
- Options: Bolted, watertight, locking options

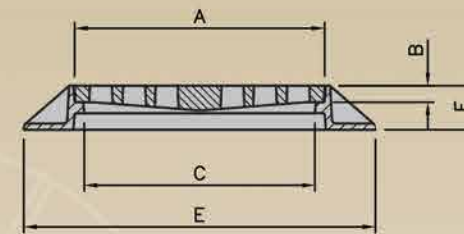
Manhole Covers/Grates for Slab Construction

Catalog Number	A Cover/Grate Diameter	B Cover/Grate Thickness	C Clear Opening	D Barrel Diameter	E Flange OD	F Frame Height	Grate Types	Drain Area Square Feet
MCS-82	13-1/4	1-1/2	11-1/2	14-1/2	17-5/8	4	B	0.4
MCS-162	21-7/8	1-1/2	20-1/4	23-1/2	26-5/8	4	B	1.1
MCS-290	22-3/4	1-1/2	21	24	32	4	B,R,BH	1.3
MCS-206	25-1/4	1-1/2	23-1/2	26-3/8	29-1/2	4	B	1.3
MCS-288	26	1-1/2	24	27-3/4	33	4	B,P,BH	1.3
MCS-455	34	1-1/2	32-1/4	35-1/2	38-1/2	4	B	2.7
MCS-520	31-3/4	1-3/8	30	34	38	4	B	2.4
MCS-747	38	2	36	41	46	6	B	3.3
MCS-900	50-1/4	2	48	53	56-1/2	6	B	5.3

Other sizes available



Round Manhole Catch Basins



- All flat grates designed for H-20 traffic loading
- All sizes interchangeable with solid covers
- Options: Bolted

Grate Types



Bar (B)



Radial (R)



Beehive (BH)



Pedestrian (P)

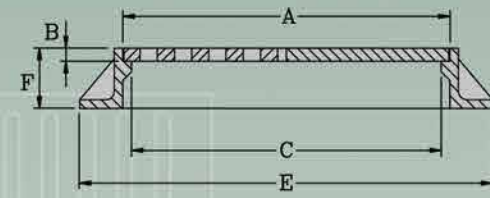
Round Manhole Catch Basins

Catalog Number	A Grate Diameter	B Grate Thickness	C Clear Opening	E Flange OD	F Frame Height	Grate Type	Drain Area Square Feet
MCB-82	13-1/4	1-1/2	11-1/2	17-5/8	4	B	0.4
MCB-162	21-7/8	1-1/2	20-1/4	26-5/8	4	B	1.1
MCB-210	22-3/4	1-1/2	20	25	2-3/4	B,R,BH	1.3
MCB-260	22-3/4	1-1/2	21	32	4	B,R,BH	1.3
MCB-315	22-3/4	1-3/4	21	34	7	R, BH	1.0
MCB-350	22-3/4	1-1/2	21	35	7	B,R,BH	1.3
MCB-420	24	1-3/16	22	34	7	B	0.9
MCB-275	24	1-3/16	22	30	4	B	0.9
MCB-206	25-1/4	1-1/2	23-1/2	29-1/2	4	B	1.3
MCB-285	26	1-1/2	24	36	4	B,P,BH	1.3
MCB-375	26	1-1/2	24	36	7	B,P,BH	1.3
MCB-520	31-3/4	1-3/8	30	38	4	B	2.4
MCB-455	33-7/8	1-1/2	32-1/4	38-1/2	4	B	2.7
MCB-747	38	2	36	46	6	B	3.3
MCB-900	50-1/4	2	48	56-1/2	6	B	5.3

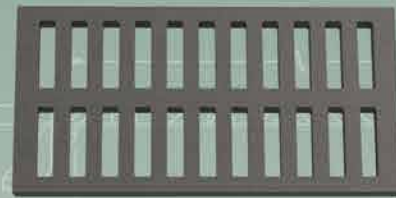
Other sizes available



Square Catch Basin Inlets



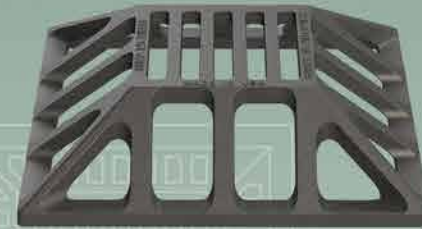
Grate Types



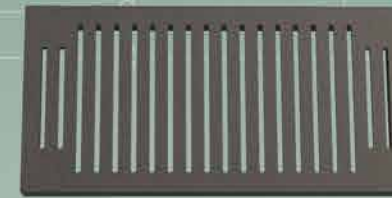
Standard (S)



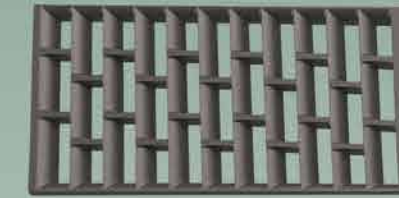
Cross Drain (CD)



Beehive (BH)



ADA/Pedestrian (P)



Directional Flow (DF)



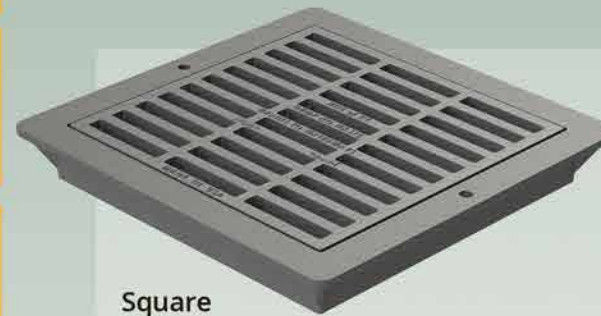
Solid Cover (SC)

Square Catch Basins

Catalog Number	A Grate	B Grate Thickness	C Clear Opening	E Flange OD	F Frame Height	Grate Type	Drain Area Square Ft
HOE-60-A	11-3/4 x 11-3/4	1-1/4	10 x 10	16 x 16	2-1/2	S	0.4
HOE-165-A	18 x 18	1-1/2	18 x 18	23 x 23	4	S,SC	1.0
HOE-280	24 x 24	1-1/2	22 x 22	29-1/4 x 29-1/4	4	S,SC	1.9
HOE-342	23-5/8 x 23-5/8	1-1/2	22 x 22	32-3/4 x 32-3/4	6	S,P,DF	1.4
HOE-320	25-3/4 x 25-3/4	1-1/2	24 x 24	31-3/8 x 31-3/8	4	S, P,BH	2.0
HOE-428	30 x 30	1-1/2	28 x 28	34-1/2 x 34-1/2	4	C	2.7
HOE-468	32 x 32	1-1/2	30 x 30	36 x 36	4	CD,SC	2.8
HOE-595	35-1/2 x 35-1/2	1-7/8	33-1/4 x 33-1/4	40-3/4 x 40-3/4	3	CD	3.6
HOE-598	37-1/2 x 37-1/2	1-1/2	36 x 36	43-1/4 x 43-1/4	4	S	4.5
HOE-918	50-5/8 x 50-5/8	1-5/8	48-5/8 x 48-5/8	58-3/4 x 58-3/4	4-3/8	S	9.7

Square Inlets for Slab

Catalog Number	A Grate	B Grate Thickness	C Clear Opening	E Flange OD	F Frame Height	Grate Type	Drain Area
MCS-112	13-3/8 x 13-3/8	1-9/16	11-5/8 x 11-5/8	19-1/8 x 19-1/8	4	S,P,CD	0.40
MCS-234	23-3/4 x 23-3/4	1-1/2	22 x 22	29-1/4 x 29-1/4	4	S,P	1.85
MCS-320	25-3/4 x 25-3/4	1-1/2	24 x 24	31-3/8 x 31-3/8	4	S,P,BH	2.05
MCS-428	30 x 30	1-1/2	28 x 28	34-1/2 x 34-1/2	4	CD	2.70
MCS-468	32 x 32	1-1/2	30 x 30	36 x 36	4	CD,SC	2.80
MCS-718	38 x 38	2	36 x 36	43 x 43	4	CD,SC	4.10

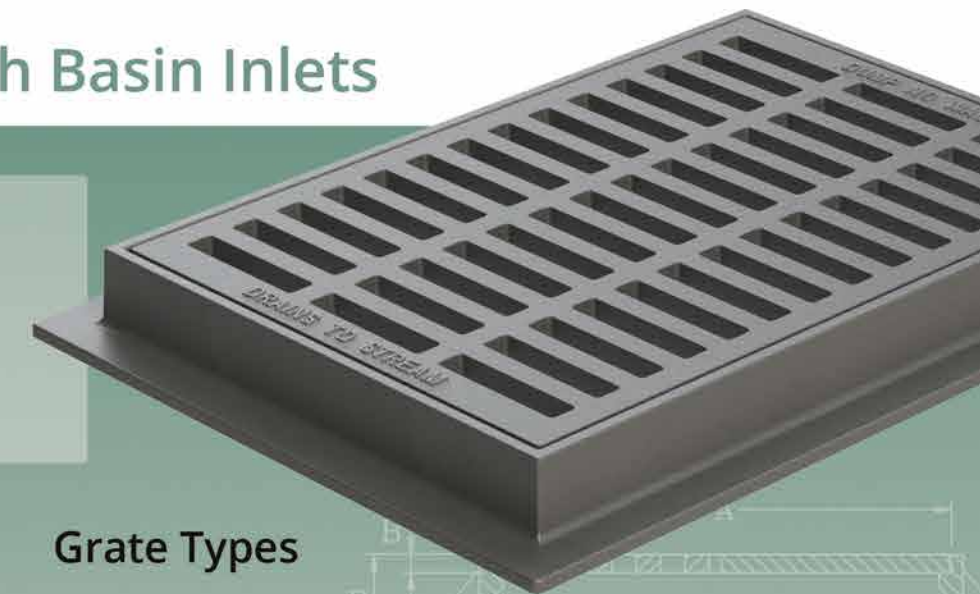


Square Inlets for Slab



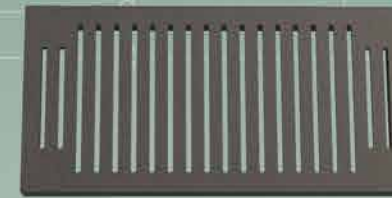
Double Catch Basin Inlets

Rectangular Catch Basin Inlets



- Frame bottom flange to rest on concrete structure
- Designed for H-20 traffic loading
- Most available with solid covers
- Options for one piece solid covers: bolted, watertight

Grate Types



ADA/Pedestrian (P)



Directional Flow (DF)



Solid Cover (SC)

Rectangle Catch Basins

Catalog Number	A Grate	B Grate Thickness	C Clear Opening	E Flange OD	F Frame Height	Grate Type	Drain Area Square Ft
HOE-180-A	18 x 24	1-1/2	16 x 22	24 x 30-1/4	4	CD	1.2
HOE-175-A	20 x 23	1-1/2	18 x 21	24 x 27	3-1/2	S,DF	1.1
HOE-275-A	24 x 30	2	20 x 26	29 x 35	3-1/2	S	2.4
KY-460	23-1/2 x 30	3	21-3/8 x 27-7/8	32-1/2 x 39	4	CD	2.3
HOE-562	25-3/4 x 31-3/4	1-1/2	24-1/4 x 30-1/8	31-3/8 x 37-3/8	4	S	2.7
HOE-580	16-7/8 x 38	1-3/4	15-1/4 x 35-3/4	26 x 41-3/8	5-1/2	S,DF	1.4
HOE-518	23-3/4 x 35-3/4	1-1/2	22 x 34	29-1/2 x 41-1/2	4	S,SC,P	2.7
HOE-818	24x48 (2)	1-1/2	24 x 48	35 x 60	5	S,SC	3.3
HOE-567	49-3/4 x 49-3/4	1-1/2	24 x 48	31-1/2 x 55-1/2	4	S	4.2

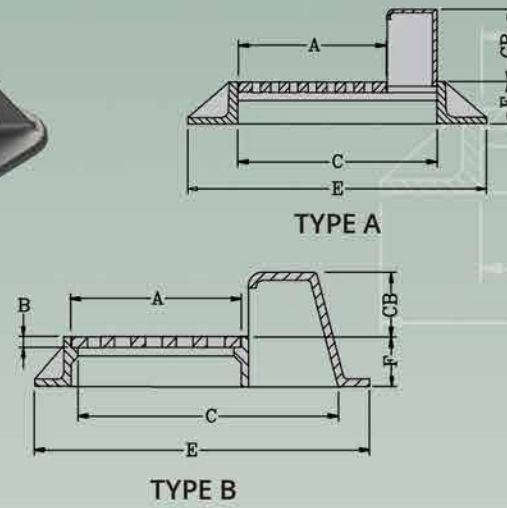
Double Catch Basins

Catalog Number	A Grate	B Grate Thickness	C Clear Opening	E Flange OD	F Frame Height	Grate Type	Drain Area Square Ft
HOE-275-A DBL	30 x 48	2	26 x 46	36 x 56	3-1/2	S	5.0
HOE-428-DBL	30 x 60	1-1/2	28 x 60-1/4	34-1/2 x 66-1/2	4	S	5.3
HOE-518-DBL	36 x 48	1-1/2	34 x 48	43 x 57-1/2	4	S	4.2
HOE-818-DBL	48 x 48 (4)	1-1/2	48 x 48	60 x 57-1/2	4	S	6.6

Curb Box Inlets



- For curb and gutter drainage applications
- Available in two design types: A and B
- Grates designed for H-20 traffic loading



Curb Box Inlets

Catalog Number	A Grate	B Grate Thickness	C Clear Opening	E Flange OD	F Frame Height	Curb Boxes	Design	Grate Types	Drain Area Square Foot
HOE-399	16-1/16 x 23	2	20-7/8 x 22	36" DIA	8	Adj	A	S,DF	0.9
HOE-445	19-7/8 x 22-7/8	1-1/2	17-1/2 x 20-1/4	26-3/4 x 32-5/8	7	Adj	B	S,DF	0.8
HOE-360	19-7/8 x 22-7/8	1-1/2	17-1/2 x 20-1/4	32 x 36	6	Adj	A	S,DF	0.8
KY-465*	18 x 24	1-1/4	22 x 22	34 x 34	5	6	A	S,P	0.9
HOE-470	16-7/8 x 19 (2)	1-3/4	14-3/4 x 36	32 x 44	6	Adj.	A	S,DF	1.4
HOE-730	16-7/8 x 19 (2)	1-3/4	15-1/4 x 35-3/4	34-1/4 x 41-3/8	5-1/2	4	B	S,DF	1.4
HOE-525*	17-3/4 x 35-1/2	1-7/8	24-1/4 x 33-1/4	31 x 43	4-6	Adj.	A	CD,DF	1.8
HOE-950	24 x 48	2	28 x 44	34 x 50	4	12	B	CD	3.2

*Double available
Other sizes available



Double Curb Inlets

Grate Types



Standard (S)



Directional Flow (DF)

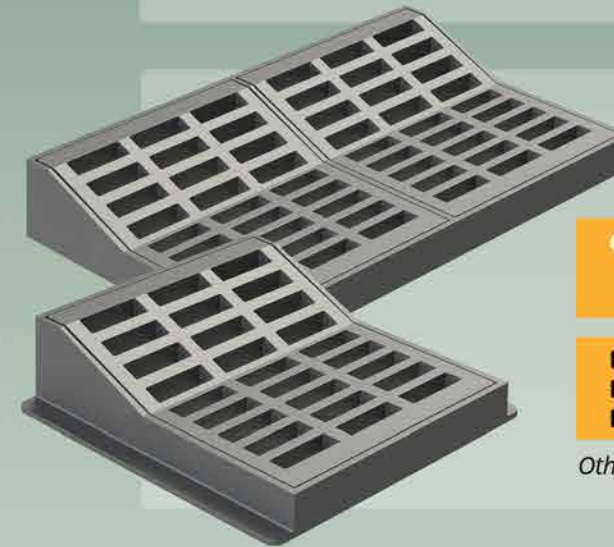
Concave and Drive Over/Roll Curb Inlets



Concave Inlets For Special Surface Drainage Conditions

Catalog Number	A Grate	B Grate Thickness	C Clear Opening	E Flange OD	F Frame Height	Drain Area Square Ft
HOE-149	18 x 24	1-1/2	16 x 22	19-1/2 x 25-1/2	3-1/2	1.1
KY-550	18 x 30	2-1/2	16 x 28	30 x 42	4-1/2	1.5
HOE-405	24 x 24	1-1/2	24 x 24	35 x 35	6	1.3
HOE-449	23-1/4 x 33	1-3/4	23 x 31	30 x 40-1/2	5	2.1

Other sizes available

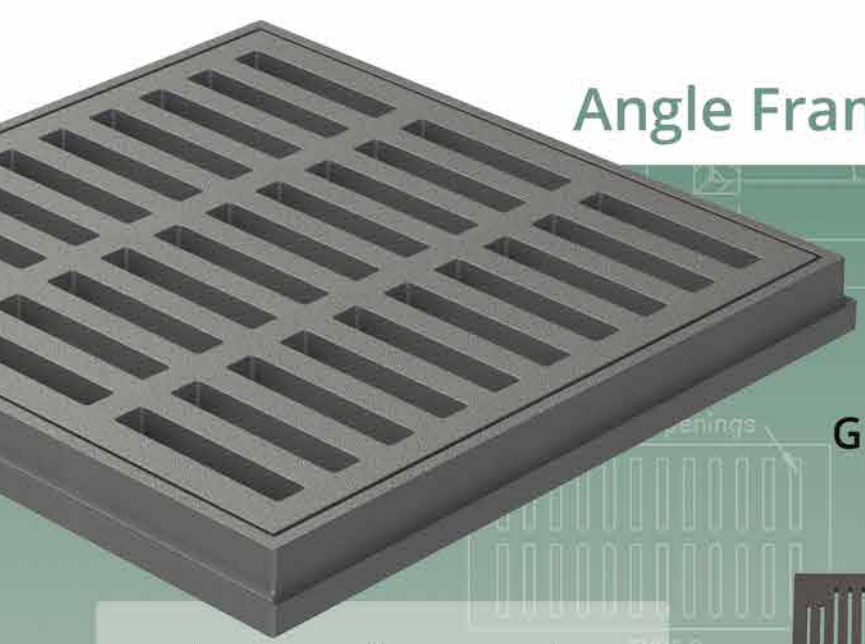


Drive Over/Roll Curb Inlets For Driveways and Mountable Curbs

Catalog Number	A Grate	B Grate Thickness	C Clear Opening	E Flange OD	F Frame Height	Drain Area Square Ft
HOE-410	26 x 22-1/2	2	23-3/8 x 20	28-1/4 x 28-3/8	3-1/2 - 6	2.0
HOE-698	26 x 22-1/2 (2)	2	23-3/8 x 44	28-1/4 x 48-1/4	3-1/2 - 6	4.0
HOE-530	28-5/8 x 28-5/8	2	27 x 27	33-5/8 x 36	7 - 10	2.8

Other sizes available

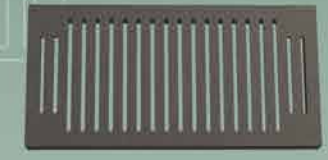




Grate Types



Standard (S)



ADA/Pedestrian (P)



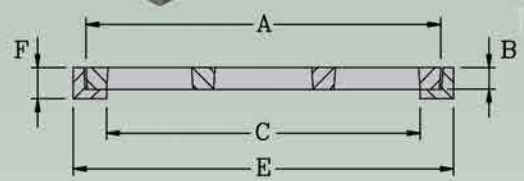
Directional Flow (DF)



Solid Cover (SC)



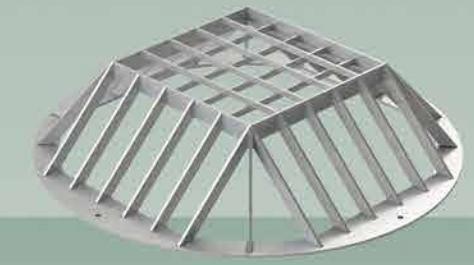
Cross Drain (CD)



- Cast or fabricated angle frames available
- Grates and/or covers available as noted
- Designed for H-20 traffic loading

Round Galvanized Steel Top Mount Grates

Engineered for high volume drainage applications such as ponds, detention basins and outlet structures



Opening Diameter	Grate Outside Dimension	Part Number
36"	44"	LDR - 36
48"	56"	LDR - 48
60"	68"	LDR - 60
72"	80"	LDR - 72

Square Galvanized Steel Top Mount Grates

Square fabricated grates may be provided with flanged frames.



Opening	Grate Outside Dimension	Part Number
36" x 36"	44" x 44"	LSQ - 36
48" x 48"	56" x 56"	LSQ - 48
60" x 60"	68" x 68"	LSQ - 60
72" x 72"	80" x 80"	LSQ - 72

Angle Frame and Grate Covers

Catalog Number	A Grate	B Grate Thickness	C Clear Opening	E Flange OD	F Frame Height	Grate Type	Drain Area Square Feet
Square							
HOE-60	12 x 12	1	10 x 10	13-1/2 x 13-1/2	1-1/2	S,SC	0.4
HOE-165	18 x 18	1-1/2	15-1/2 x 15-1/2	21 x 21	2-1/2	S,SC	0.9
HOE-200	24 x 24	1-1/2	22 x 22	26 x 26	2-1/2	S,CD,SC	1.4
HOE-315	27 x 27	1-1/2	25-1/2 x 25-1/2	30-1/2 x 30-1/2	2-1/2	S, CD,SC	2.3
HOE-368	32 x 32	1-1/2	29-1/4 x 29-1/4	32-3/4 x 32-3/4	1-3/4	S,CD,SC	2.8
HOE-490	35-1/4 x 35-1/4	2	32-1/4 x 32-1/4	36-1/4 x 36-1/4	2-1/2	S, CD,DF	3.8
HOE-555	38-3/8 x 38-3/8	2	36 x 36	42 x 42	3	S,CD	4.5
Rectangular							
HOE-108	14 x 24	1-1/2	11-1/2 x 21-1/4	15 x 25	1-3/4	S,P,SC	0.8
HOE-180	18 x 24	2	16 x 22-1/2	19 x 25	2-1/2	CD	1.2
KY-230	17-5/8 x 29-3/4	2-1/2	15-3/4 x 27-3/4	20 x 31-1/2	3-1/2	DF	1.4
HOE-245	17-1/2 x 35-1/4	2	14-7/8 x 32	18-1/4 x 36	2-1/2	CD,DF	1.5
HOE-275	24 x 30	2	20 x 26	25-1/2 x 31-1/2	2-1/2	S	2.4
HOE-330	24 x 36	2	21 x 33	25 x 37	2-1/2	S	2.9
HOE-690	24 x 48	2	20 x 44	25-7/8 x 49-7/8	4	CD	3.2
HOE-700	27-3/4x36	3	24 x 35	30 x 39-1/2	4	CD	2.4

Other sizes available

Custom Fabrications

J.R. Hoe can engineer and fabricate for any stormwater drainage structure.

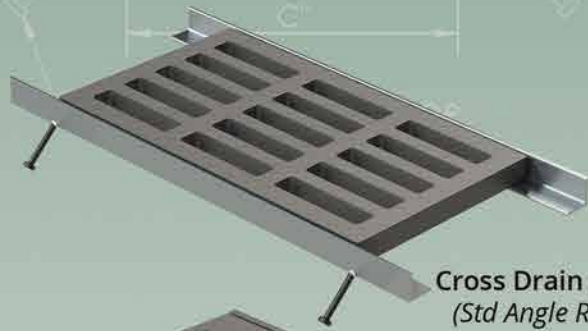
- Inlet Grates
- Trash Racks
- Pipe Guards
- Orifice Plates
- Headwall Grates
- Box Culvert Grates

Available in Galvanized Steel, Stainless Steel and Aluminum





Standard (S)
(Z Frame)



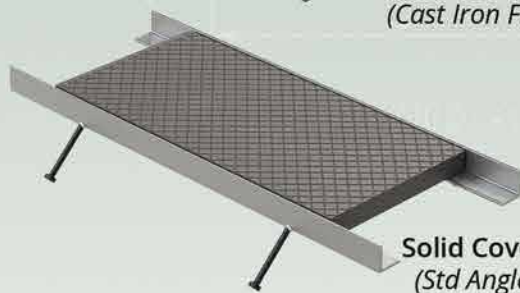
Cross Drain (CD)
(Std Angle Rail)



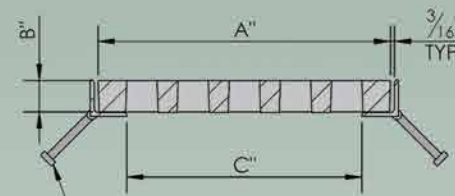
ADA Pedestrian (P)
(Cast Iron Frame)



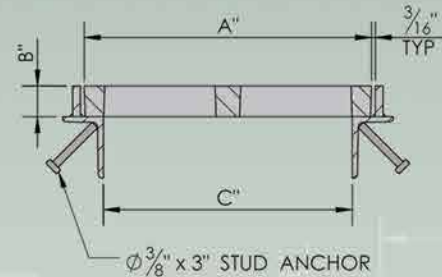
Direct Flow (DF)
(Cast Iron Frame)



Solid Cover (SC)
(Std Angle Rail)



Standard Frame



Z Frame

- Designed for H-20 traffic loading
- Three frame options: Standard, Z or cast iron
- Options: Bolted or security bolted to cast iron frame only; locking Solid
- Recommend installing frame for all trench applications

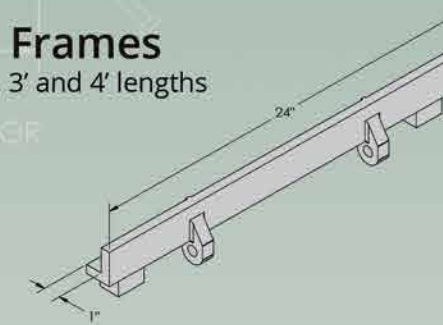
Standard Trench Grates

A	B	C	C	Open Area	Grate
Width	Height	Cast / Z Frames	Standard Angle Rails	In Sq Feet	Type
8	1-1/2	6	5-1/4	.20	S, CD, SC, P
10	1-1/2	8	7-1/4	.24	S, CD, SC, P
12	1-1/2	10	9-1/4	.31	S, CD, SC, P
14	1-1/2	12	11-1/4	.39	S, CD, SC, P, DF
17	1-1/2	15	14-1/4	.51	S, CD, SC, P
20	1-1/2	18	17-1/4	.62	S, CD, SC, P
23	1-1/2	21	20-1/4	.74	S, CD, SC
26	1-1/2	24	23-1/4	.85	S, CD, SC
30	2-1/2	27	n/a	1.26	S, CD, SC
33	2-1/2	30	n/a	1.32	S, CD, SC
36	2-1/2	33	n/a	1.47	S, CD, SC
39	2-1/2	36	n/a	1.61	S, CD, SC
45	2-1/2	42	n/a	1.85	S, CD, SC

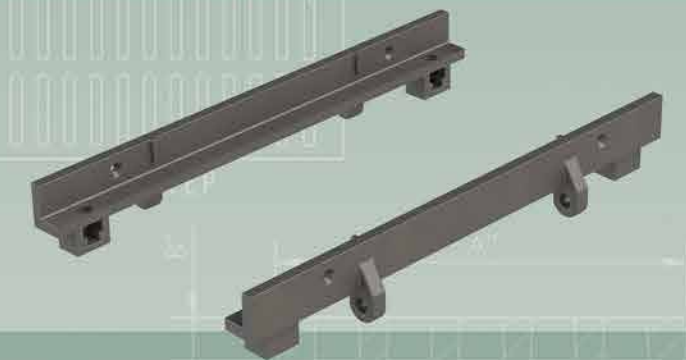
Grates are furnished in 2' lengths

Cast Iron Frames

Furnished in 2', 3' and 4' lengths

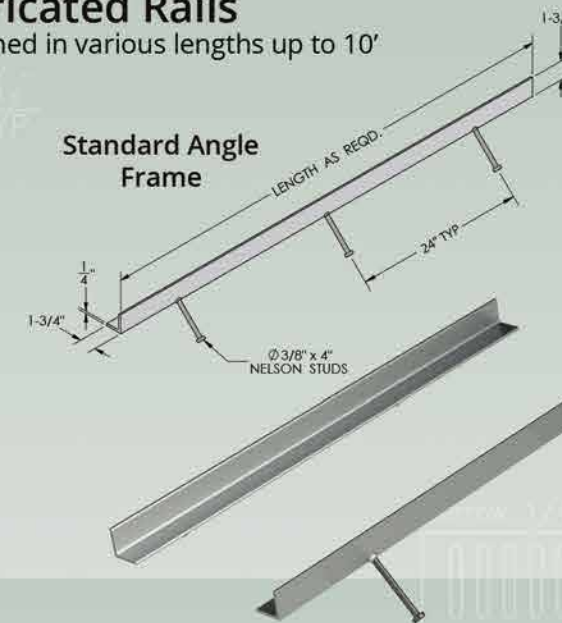


Narrow 1/4" Openings



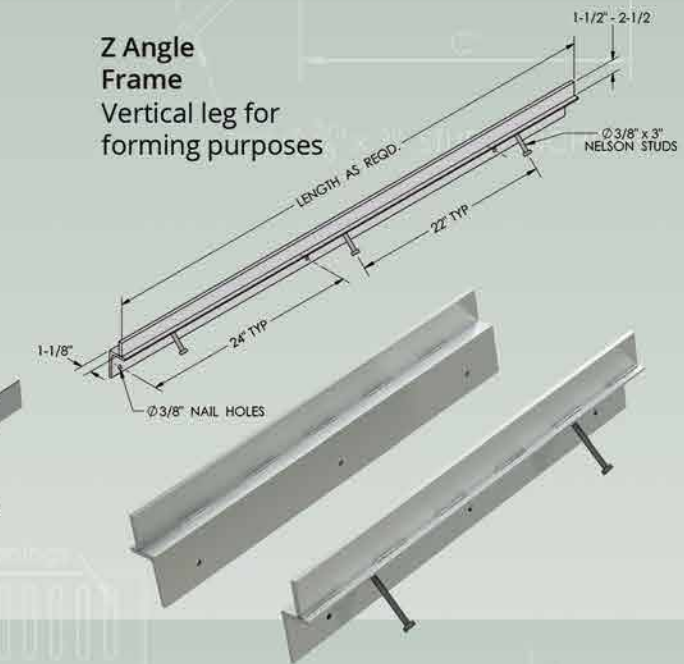
Fabricated Rails

Furnished in various lengths up to 10'



Standard Angle Frame

Z Angle Frame
Vertical leg for forming purposes

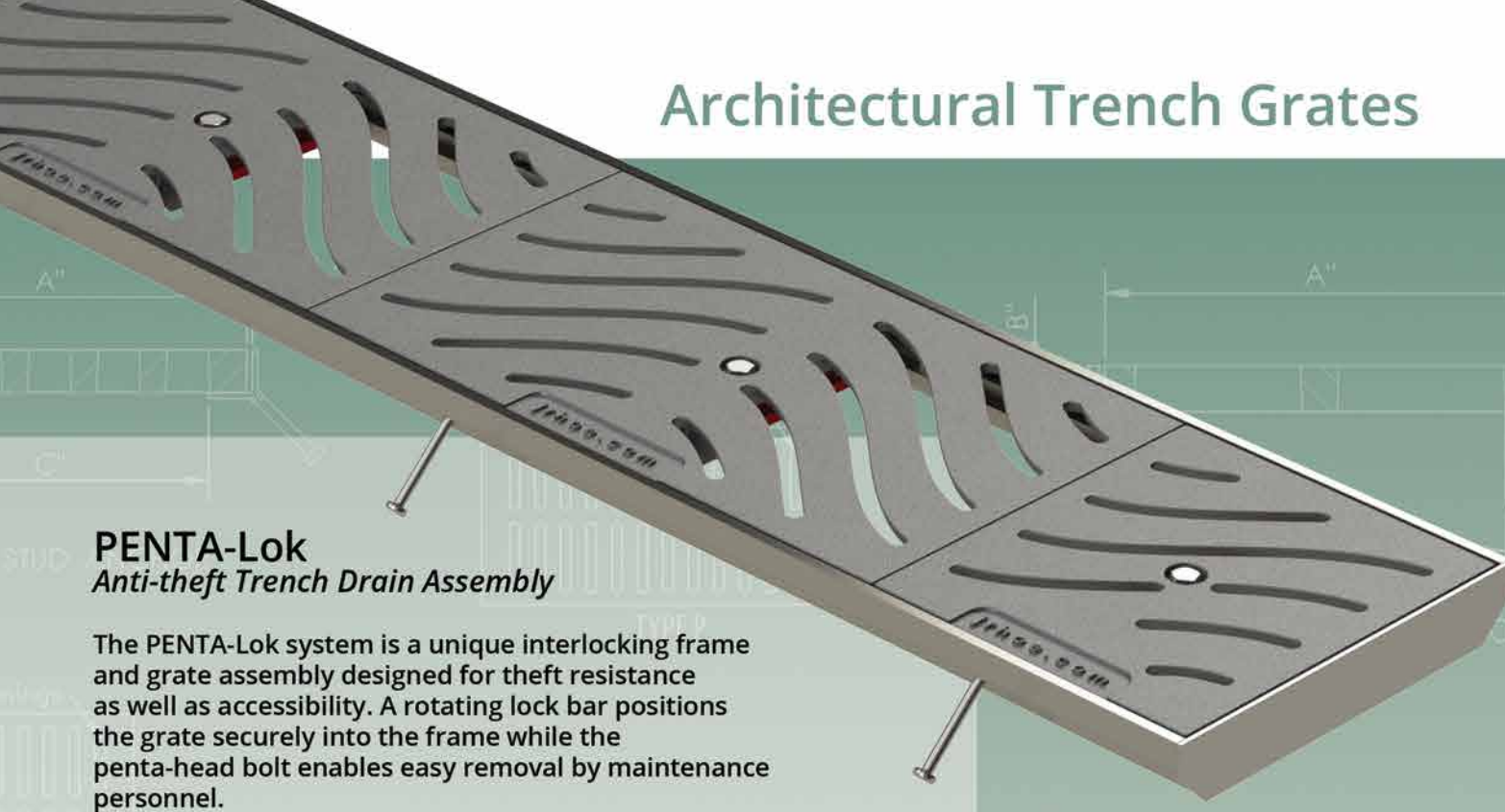


Bolted Grating or Covers

All trench grates/covers listed may be security bolted to cast frame. Theft-proof bolts available upon request.



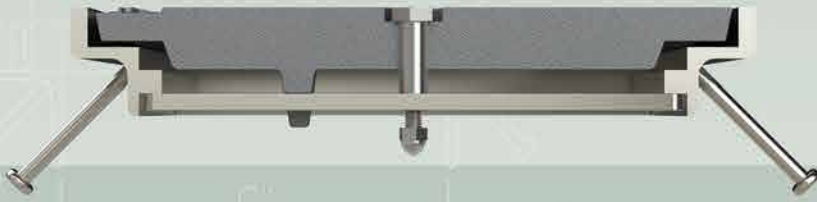
Architectural Trench Grates



PENTA-Lok Anti-theft Trench Drain Assembly

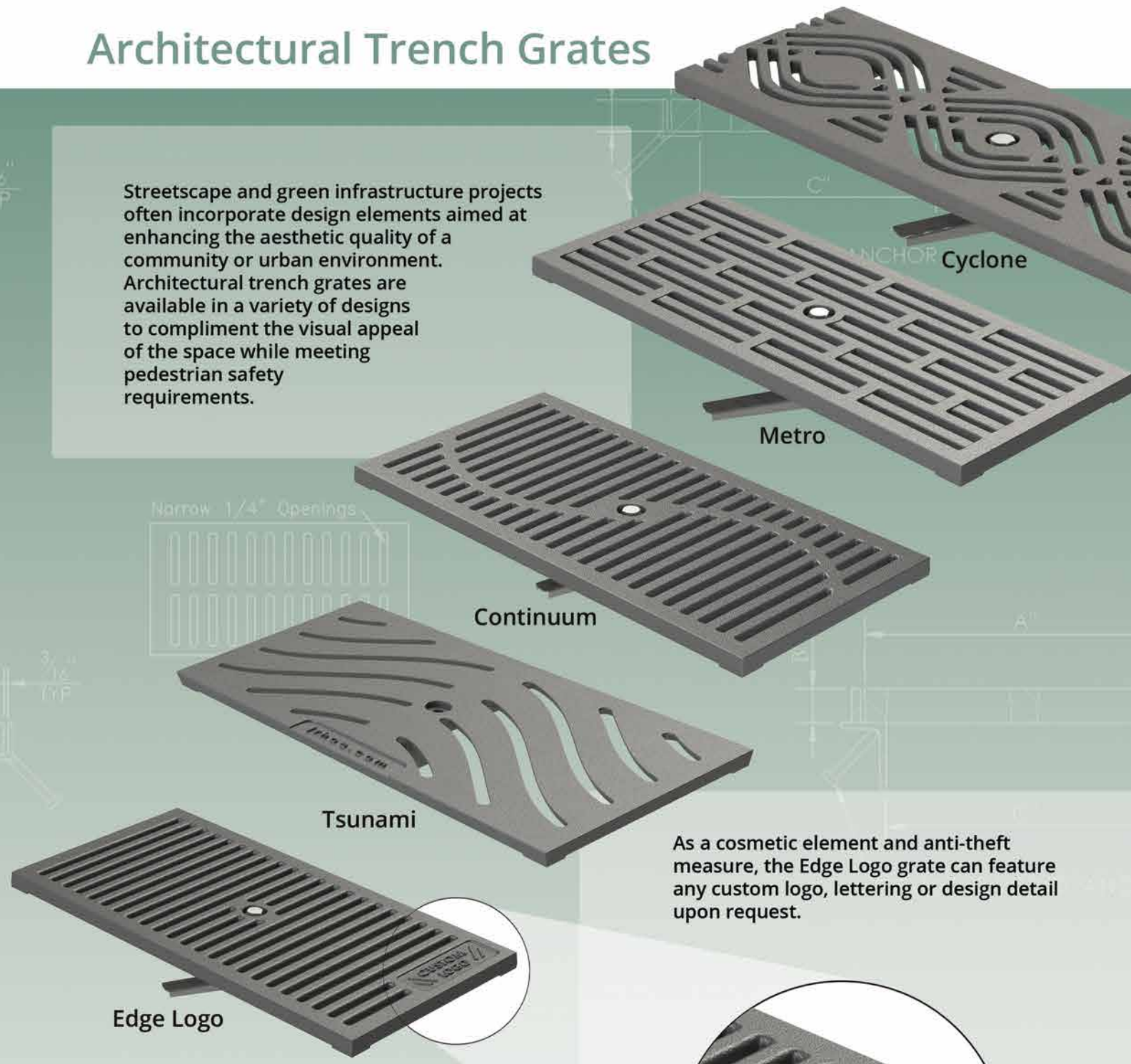
The PENTA-Lok system is a unique interlocking frame and grate assembly designed for theft resistance as well as accessibility. A rotating lock bar positions the grate securely into the frame while the penta-head bolt enables easy removal by maintenance personnel.

Recommended for light duty applications where grate retention and aesthetic appeal are desired.

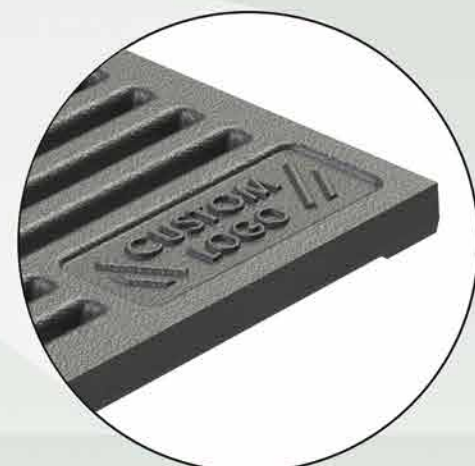


Architectural Trench Grates

Streetscape and green infrastructure projects often incorporate design elements aimed at enhancing the aesthetic quality of a community or urban environment. Architectural trench grates are available in a variety of designs to compliment the visual appeal of the space while meeting pedestrian safety requirements.



As a cosmetic element and anti-theft measure, the Edge Logo grate can feature any custom logo, lettering or design detail upon request.



Architectural Trench Grates

Style	Width	Length	Thickness	Penta-Lok
Edge Logo	8", 14"	24"	7/8"	✓
Tsunami	8", 14"	24"	7/8"	✓
Continuum	8", 14"	24"	7/8"	✓
Metro	8", 14"	24"	7/8"	✓
Cyclone	8", 14"	24"	7/8"	✓

CAST IRON

STRENGTH * DURABILITY * SUSTAINABILITY * BEAUTY

Cast Iron is one of the world's great building materials. It has been used on infrastructure and architectural projects dating back to the 16th century in Europe. Made up of three of the Earth's primary elements (Carbon, Silica, and Iron), iron castings weather naturally without harm to the environment. Often, the iron is recycled again and cast into new parts. It is a versatile material that offers unique qualities:

- **STRENGTH:** Gray Cast Iron may be produced from 20 ksi to 40 ksi in tensile strength, depending on its intended use. General engineering grade cast iron is Class 30. For increased strength Ductile Iron may be cast in strengths from 60 to 80 ksi, and with specialized heat treat reach tensile properties well over 100 ksi.
- **DURABILITY:** Cast iron resists weathering. Uncoated cast iron, when exposed to outdoor elements, forms a natural corrosion resistant skin that resists oxidation. It far outlasts steel, even when galvanized, and carries no potentially harmful residues into the environment.
- **SUSTAINABILITY:** Domestic iron castings today contain a high percentage recycled content – averaging over 75% at J.R. HOE. Used or obsolete iron parts are entered back into the scrap supply chain and re-melted; then poured into molds to make new castings. Iron castings qualify under United States Green Building Council LEED Credits 4.1/4.2 as "Made From Recycled Content".
- **BEAUTY:** Iron castings may be designed with smoothly contoured shapes to enhance the aesthetic appeal of any landscape or building project. They age beautifully, becoming part of the architectural feature over time. Cast iron has become a 'material of choice' in the design of today's urban streetscape and green infrastructure projects.

CASTINGS SPECIFICATIONS

GENERAL: Castings are of uniform quality and free from defects. Castings are manufactured with smooth finish and well cleaned by shotblast. Due to the natural corrosion resistance of cast iron, castings are furnished uncoated.

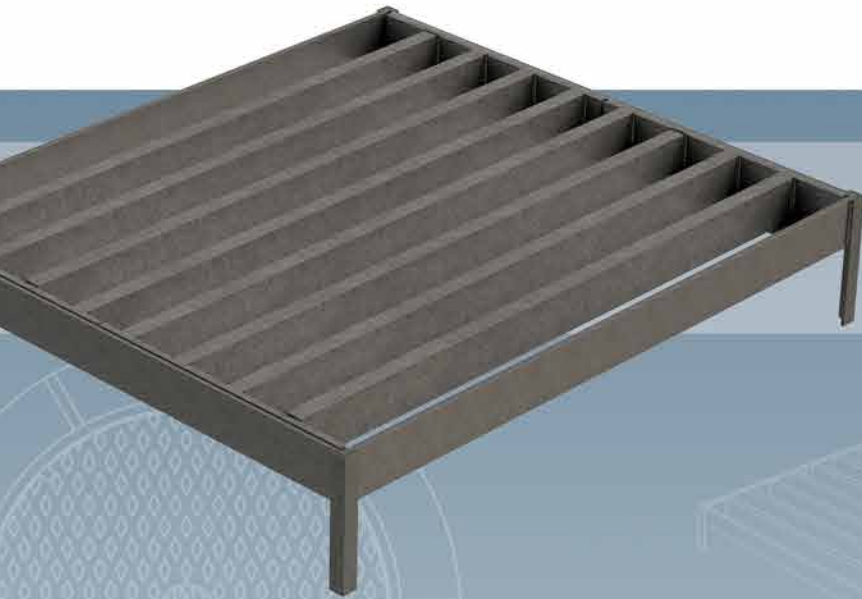
MATERIALS: Gray iron castings manufactured by J.R. HOE conform to ASTM A48, Class 35B where specified. For extreme loading conditions ductile iron may be specified conforming to ASTM A536 in tensile strength ranges from 65,000 to 80,000 psi.

TOLERANCES: As-cast dimensions may vary per industry standards, typically (+/-) 1/16" per unit foot.

BEARING SURFACES: Round frames with grates or covers are supplied with machined bearing surfaces to prevent rocking, unless otherwise noted.

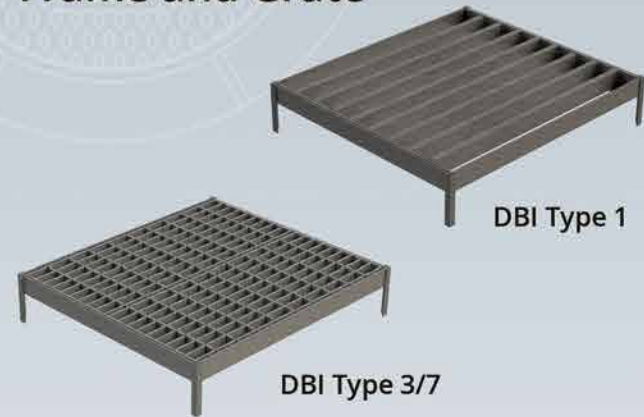
PERFORMANCE: Overall function and shape, rather than weight, are the major considerations of casting performance. Many castings have been redesigned to provide better load-bearing capabilities at a lower weight. Proof load data is available upon request.

SUBMITTALS: The J.R. HOE engineering department cooperates closely with engineers to specify the appropriate casting for each application. Individual detailed drawings are available for each casting listed in the catalog.



All castings and fabrications conform to KYDOH material specifications. Certifications provided upon request.

Steel Drop Box Inlet Frame and Grate



Cat. No.	Description
KY-316	Drop Box Inlet Type 1: Frame and 2pc Grate
KY-398	Drop Box Inlet Type 2: Frame and 2pc Grate
KY-328	Drop Box Inlet Type 3: Frame and 2pc Grate
KY-410	Drop Box Inlet Type 4: Frame and 2pc Grate
KY-460	Drop Box Inlet Type 5A, 5B, 5C, 5D, 5E, or 5F: Frame and 2pc Grate
KY-426	Drop Box Inlet Type 6A, 6B, 6C, 6D, 6E, or 6F: Frame and 2pc Grate
KY-328	Drop Box Inlet Type 7: Frame and 2pc Grate

Cast Iron Drop Box Inlet Frame and Grate

Cat. No.	Description
KY-550	Drop Box Inlet Type 10: Frame & Grate
KY-460CI	Drop Box Inlet Type 11: Frame & Grate
KY-130	Drop Box Inlet Type 12: Frames & Grates
KY-130BLT	Drop Box Inlet Type 12A: Bolted Frames & Grates
KY-240	Drop Box Inlet Type 13/16 Grade: Frame & Grate
KY-480	Drop Box Inlet Type 13/16 Sag: Frames & Grates
KY-210	Drop Box Inlet Type 14: Frame & Grate
KY-215	Drop Box Inlet Type 15: Frame & Beehive Grate



Steel Sloped Headwall Grates



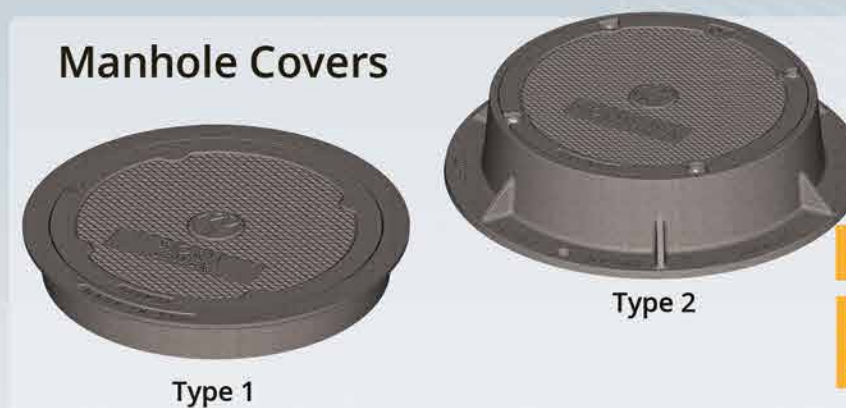
Cat. No.	Description
KY-161	15-18" Sloped Box Outlet Type 1: 2 pc Grate Set
KY-300	24" Sloped Box Outlet Type 1: 3 pc Grate Set
KY-272	18" Sloped and Flared Box Inlet/Outlet: 2 pc Grate Set
KY-454	24" Sloped and Flared Box Inlet/Outlet: 2 pc Grate Set
KY-796	30" Sloped and Flared Box Inlet/Outlet: 3 pc Grate Set
KY-1218	36" Sloped and Flared Box Inlet/Outlet: 4 pc Grate Set
KY-298	Sloped Box Inlet or Outlet Type 1: 2 pc Grate Set
KY-206S	Sloped Box Inlet or Outlet Type 2: 2 pc Grate Set

Cast Iron Curb Boxes

Cat. No.	Description
KY-345	Concrete Median Barrier Box Inlet: Frames and Grate
KY-206	Curb Box Inlet Type A: Frame and Cover
KY-345	Curb Box Inlet Type B: Frames and Grate
KY-465	Standard Curb Box Inlet Type F: Frame, Grate and Curb Box



Manhole Covers

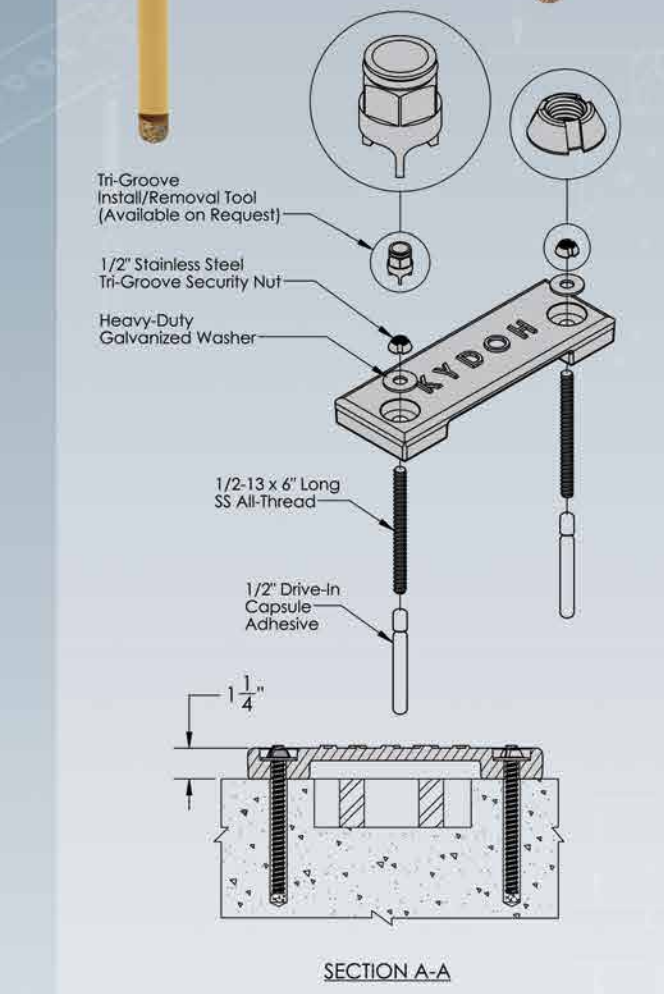


Cat. No.	Description
KY-206	Non-Traffic Frame and Cover Type 1
KY-510	Traffic, Bolted Frame and Cover Type 2

KYDOH Security Plate Assembly



The Headwall Security Plate Assembly is designed to deter theft of headwall grates. Made of unbreakable ductile cast iron, the plate attaches to the headwall via two anchor bolts using 1/2" Drive-In Adhesive Capsules for easier installation. What really sets the KYDOH Security Plate apart is the use of a Tri-Groove Tool, which is engineered to fit the 1/2" Stainless Steel Tri-Groove security nut.



Bridge Drains



- Scupper: From ASTM A48 Class 35 Gray Iron
- Grates: From ASTM A536 Grade 65 Ductile Iron
- Grates bolted to scupper body and are interchangeable
- Optional bolt-on steel levelers for stabilization in bridge deck

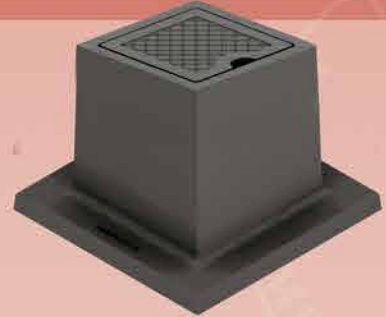
Bridge Drains

Scupper Type	Grate Width	Number Grates	Open Area SF	Body Length	Outlet Diameter I.D.
JRH 8-24-6	8	1	.7	26.5"	6"
JRH 8-48-6	8	2	1.4	49.5"	6"
JRH 8-72-6	8	3	2.1	73.5"	6"
JRH 14-24-8	14	1	1.4	26.5"	8"
JRH 14-48-8	14	2	2.8	49.5"	8"
JRH 14-72-8	14	3	4.2	73.5"	8"





- Designed for H-20 traffic loading
- INDOT Certification Letters furnished with castings



Mon A/B



OS/OSD



SQA



Type 2



Type 3



Type 4



Type 5



Type 6



Type 7



Type 8



Type 10



Types 12 (DBL) & 12 A (SGL)



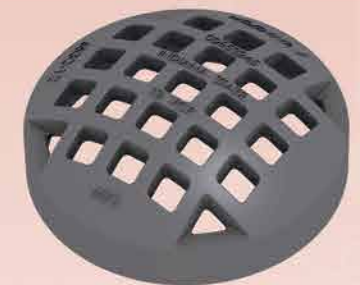
Type 13



Type 14



Type 15



RCP-BH

Indiana Department of Transportation Specifications

INDOT castings comply with INDOT Standard Specification Section 910.05. INDOT castings are melted and manufactured 100% in the United States of America at EJ USA in East Jordan, Michigan and Ardmore, Oklahoma. INDOT castings comply with the applicable provisions of the Code of Federal Regulations 23 CFR 635.410 BUY AMERICA Requirements. Material Certification Letters are available upon request.

Light Duty Access Hatches



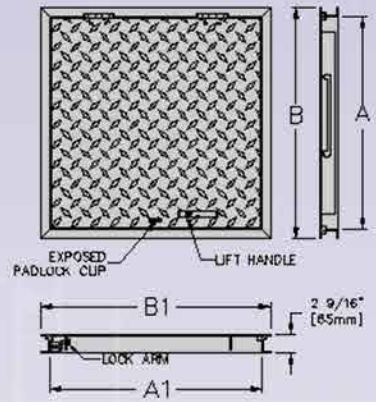
Heavy Duty Access Hatches



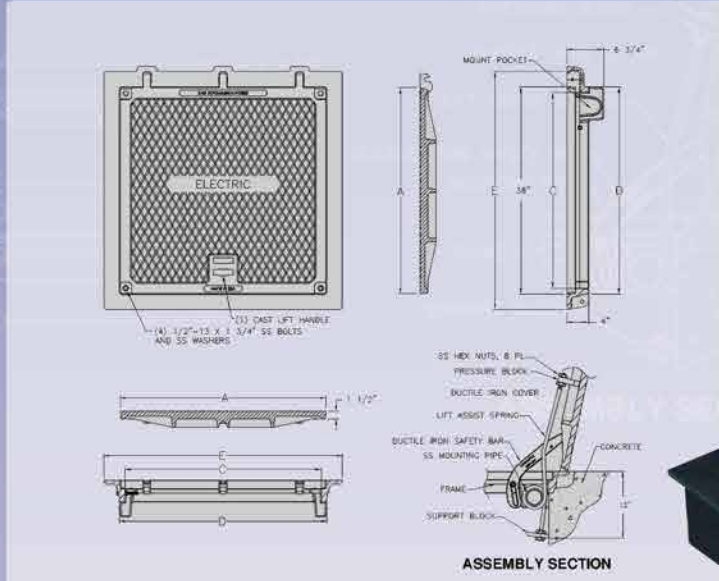
Light Duty Access Hatches

Description	Inside Dimensions
1 Door	24 x 24
1 Door	24 x 30
1 Door	24 x 36
1 Door	30 x 30
1 Door	30 x 36
1 or 2 Door	30 x 48
1 Door	36 x 36
1 or 2 Door	36 x 48
1 Door	42 x 42
2 Door	30 x 54
2 Door	36 x 60
2 Door	42 x 48
2 Door	48 x 48
2 Door	48 x 54
2 Door	48 x 72
2 Door	60 x 60

All dimensions are in inches.



- Available with angle frame or channel frame
- 1-door or 2-door
- No vehicle traffic allowed/ pedestrian 300 lb. load per square foot
- Added options available: hold open arm, recessed lift handle, exposed padlock clip, hinged safety grate, spring-assist



- Extra heavy duty / Proof load 200,000 lbs. / Gray iron frame / Ductile iron cover
- Furnished with hex head bolts and washers
- Options: special lettering, security bolting, water resistant gasket



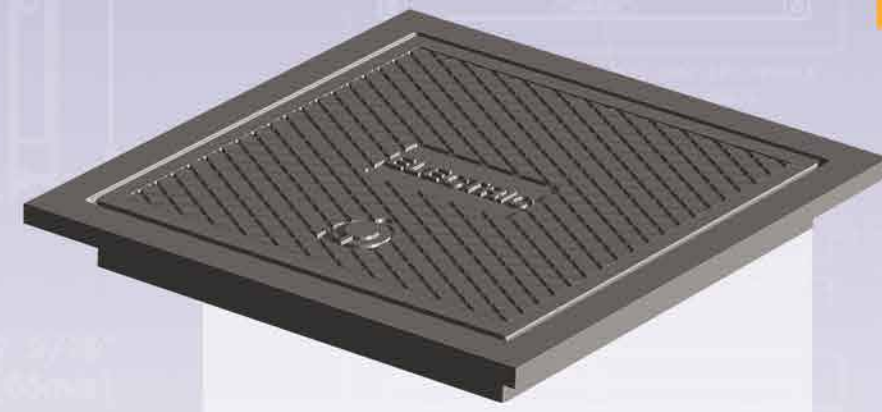
Heavy Duty Spring Assist Hatches

Heavy Duty Spring Assist Hatches

Cover Size	Clear Opening	Bottom Frame Opening	Top Flange
25-3/4 x 37-3/4	24 x 36	27-1/8 x 38	31-3/4 x 43-3/4
25-3/4 x 25-3/4	24 x 24	27-1/8 x 27-1/8	31-3/4 x 31-3/4
31-3/4 x 31-3/4	30 x 30	32 x 32	37-3/4 x 37-3/4
37-3/4 x 37-3/4	36 x 36	38 x 38	43-3/4 x 43-3/4
37-3/4 x 37-3/4*	36 x 72	37-3/8 x 76	43-3/4 x 88-1/8

*Removable safety bar required for airport loading

Square and Rectangular Heavy Duty Hatches



- Lift Ring
- Options: special lettering, hinged with safety bar, bolted, hasp lock

Square and Rectangular Heavy Duty Hatches

Cover Size	Clear Opening	Frame Outside	Flange Size
13-5/8 x 13-5/8	12 x 12	14-7/8 x 14-7/8	18 x 18
20 x 20	18 x 18	22 x 22	24-1/4 x 24-1/4
21-1/2 x 21-1/2	20 x 20	23-1/4 x 23-1/4	26 x 26
23-1/2 x 23-1/2	22 x 22	25 x 25	28 x 28
25-3/4 x 25-3/4	23-1/2 x 23-1/2	27-1/2 x 27-1/2	30 x 30
31-3/4 x 31-3/4	30 x 30	33-3/8 x 33-3/8	36-5/8 x 36-5/8
19 x 25	18 x 24	21-5/16 x 27-3/8	24 x 30
25-1/2 x 31-1/2	24 x 30	27-1/4 x 33-1/4	30 x 36
32 x 50	30 x 48	34-1/4 x 52-1/4	38 x 54



Airport Castings

EJ airport castings are offered in many styles: round or square manhole covers, catch basins, drainage inlets, trench grating and mooring eyes. All extra heavy duty construction castings are manufactured from gray iron conforming to ASTM A48, Class 35B and ductile iron conforming to ASTM A536.

6900 Airport Trench Grating
Proof Load 200,000 lb.



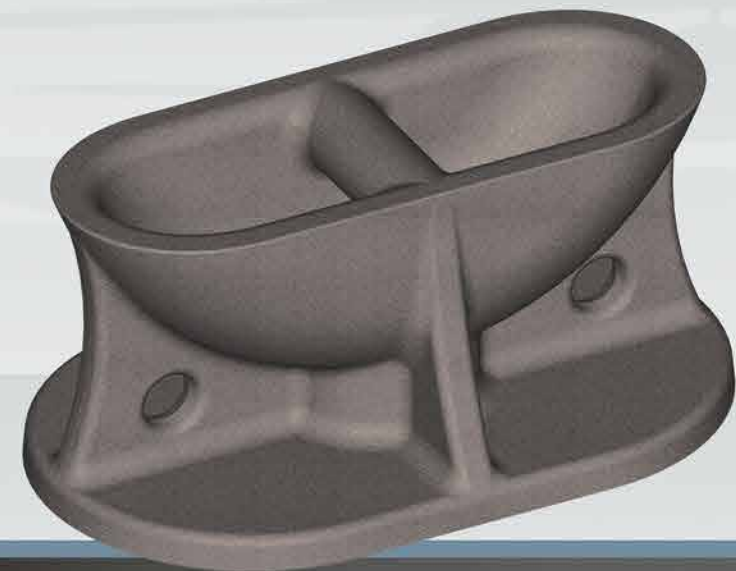
1895 Airport Manhole Frame & Cover
Proof Load 345,000 lbs.

Other Airport Castings available



7585 Airport Manhole Frame & Grate
Proof Load 245,000 lbs.

Airport Spring Assist Hatches
Proof Load 200,000 lbs.



Airport Mooring Eye
Ductile Iron ASTM A536

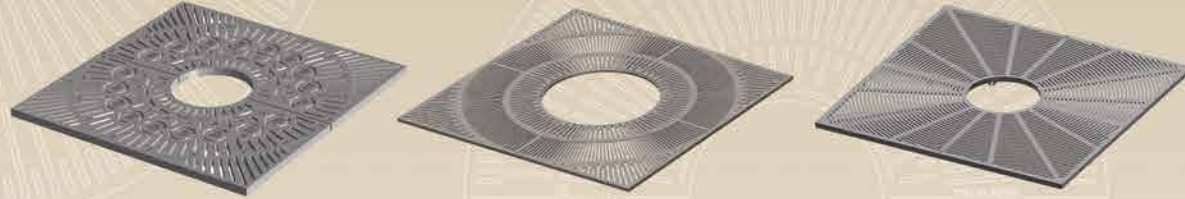
2880 Airport Frame & Grate
Proof Load 200,000 lbs.

Other Airport Castings available

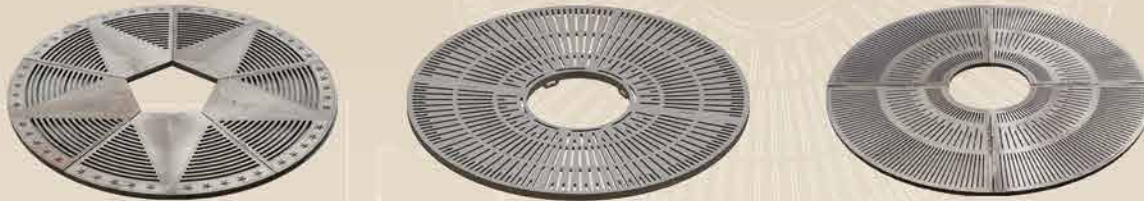


Durable, functional and architecturally appealing, EJ tree grates are a necessity for healthy trees in various settings from urban environments, campus, parks, to indoor malls. Tree grates provide more area for pedestrian activity while protecting developing trees and root systems. The slotted design allows for watering and drainage in addition to being 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.

Square Tree Grates



Round Tree Grates



Rectangle Tree Grates

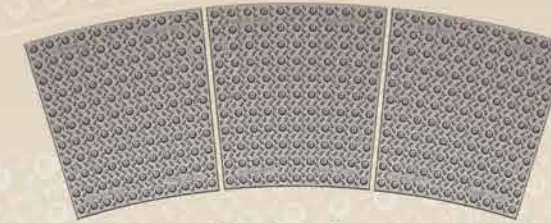


Additional designs available.

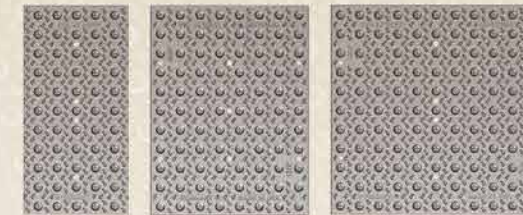


- Compliant with ADA Accessibility Guidelines
- Easy Installation
- Made from Recycled Materials (LEED)
- Cast Iron: durable, reliable, corrosion resistant, permanently embedded in concrete
- Available in many sizes; radial in 5 foot increments up to 35 feet
- Made in USA
- Impervious to vehicular and snow plow traffic

Plate Sizes



Radial sizes available in 5' increments



12"x24" 18"x24" 24"x24"

* Custom Sizes - Build Your Own Width.



Detectable Warning Plates

Radius	Number of Plates for a 90° Corner
10 ft.	8
15 ft.	15
17.5 ft.	18
20 ft.	20
25 ft.	23
30 ft.	25
35 ft.	30





O-Series Offset

The Offset style downspout boot features a 2-inch offset at the bottom of the boot allowing for a vertical connection to the underground drainage pipe. The offset transition provides adequate clearance from the building wall to fit a pipe hub around the downspout boot.



N-Series Ninety Degree

Designed for a horizontal connection to the receiving drainage pipe, the N-Series downspout boot features a 90 degree transition leading into the bottom outlet. The horizontal connection directs flow away from the building and into the drainage system.



A-Series Angular

Angular downspout boots are recommended for both ground level discharge as well as below grade drainage pipe connections. The A-Series downspout boot features a 45 degree transition to direct flow away from the building and into the drainage system or onto the ground.



DOWNSPOUTBOOTS.com

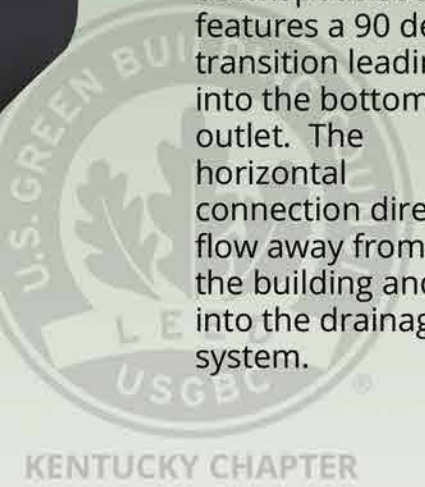
A DIVISION OF **J.R. HOE AND SONS**

Style	Top Bell (L X W)	Outlet OD
O-Series Offset	3" x 4"	4 1/4", 4 7/8"
	4" x 4"	4 1/4", 4 7/8"
	4" x 5"	4 7/8", 5 7/8"
	4" x 6"	4 7/8", 5 7/8"
	5" x 5"	4 7/8", 5 7/8"
	5" x 6"	5 7/8", 6 7/8"
	5" x 7"	5 7/8", 6 7/8"
6" x 6"	5 7/8", 6 7/8"	

N-Series Ninety Degree	3" x 4"	4 1/4", 4 7/8"
	4" x 4"	4 1/4", 4 7/8"
	4" x 5"	4 7/8", 5 7/8"
	4" x 6"	4 7/8", 5 7/8"
	5" x 5"	4 7/8", 5 7/8"
	5" x 6"	5 7/8", 6 7/8"
	5" x 7"	5 7/8", 6 7/8"
6" x 6"	5 7/8", 6 7/8"	

A-Series Angular	3" x 4"	4 1/4", 4 7/8"
	4" x 4"	4 1/4", 4 7/8"
	4" x 5"	4 7/8", 5 7/8"
	4" x 6"	4 7/8", 5 7/8"
	5" x 5"	4 7/8", 5 7/8"
	5" x 6"	5 7/8", 6 7/8"
	5" x 7"	5 7/8", 6 7/8"
6" x 6"	5 7/8", 6 7/8"	

All Downspout Boots Available in Lengths:
16", 20", 24", 28", 32", 36", 40", 44", 48", 52", 56", 60", 64", 68", 72", 76", 80"



KENTUCKY CHAPTER

Standard Side Cleanout

The side cleanout is a standard feature on J.R. Hoe downspout boots. Each cleanout cover features a neoprene gasket and is fastened to the downspout boot body with stainless steel tamper proof screws. The side cleanout allows access into the downspout boot for maintenance and/or inspection of the drainage system.





CUSTOMER SERVICE

Customer service excellence has always been a priority for J.R. HOE and SONS. We pride ourselves in the ability to provide high-quality products in a timely manner. Every inquiry is addressed with responsiveness, competence and courtesy. Customer loyalty is earned and we treat all our customers like champions. Our knowledgeable staff will work to find a solution to help your project progress smoothly.

J.R. HOE is a progressive, technology based company. We are here to assist from the bidding process to the completed project. Regardless of the type of casting or fabrication or where it may go, our primary job at J.R. HOE is to serve the needs of our customers.

From its centrally located distribution center in Louisville, Kentucky, J.R. HOE distributes from an inventory of over 750 tons of construction castings and fabrications. With fast, efficient delivery, competitive pricing, and excellent customer responsiveness - J.R. HOE is established as:

*THE Regional Source For
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EJ = INFRASTRUCTURE SOLUTIONS

EJ is the world leader in the design, manufacture, and distribution for access solutions for water, sewer, drainage, telecommunications and utility networks worldwide. In addition to the operation of two world-class foundry operations in the U.S., EJ is active in research and development of new and innovative products for the municipal casting industry. Since 2014, J.R. HOE has partnered with EJ - America as exclusive distributor for their line of construction products in the Kentuckiana region. With this diverse offering of EJ Infrastructure Solution Products coupled with the regional manufacturing capabilities of J.R. HOE and SONS, casting and fabrication specifications may be supplied to meet the needs of any engineering application.



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