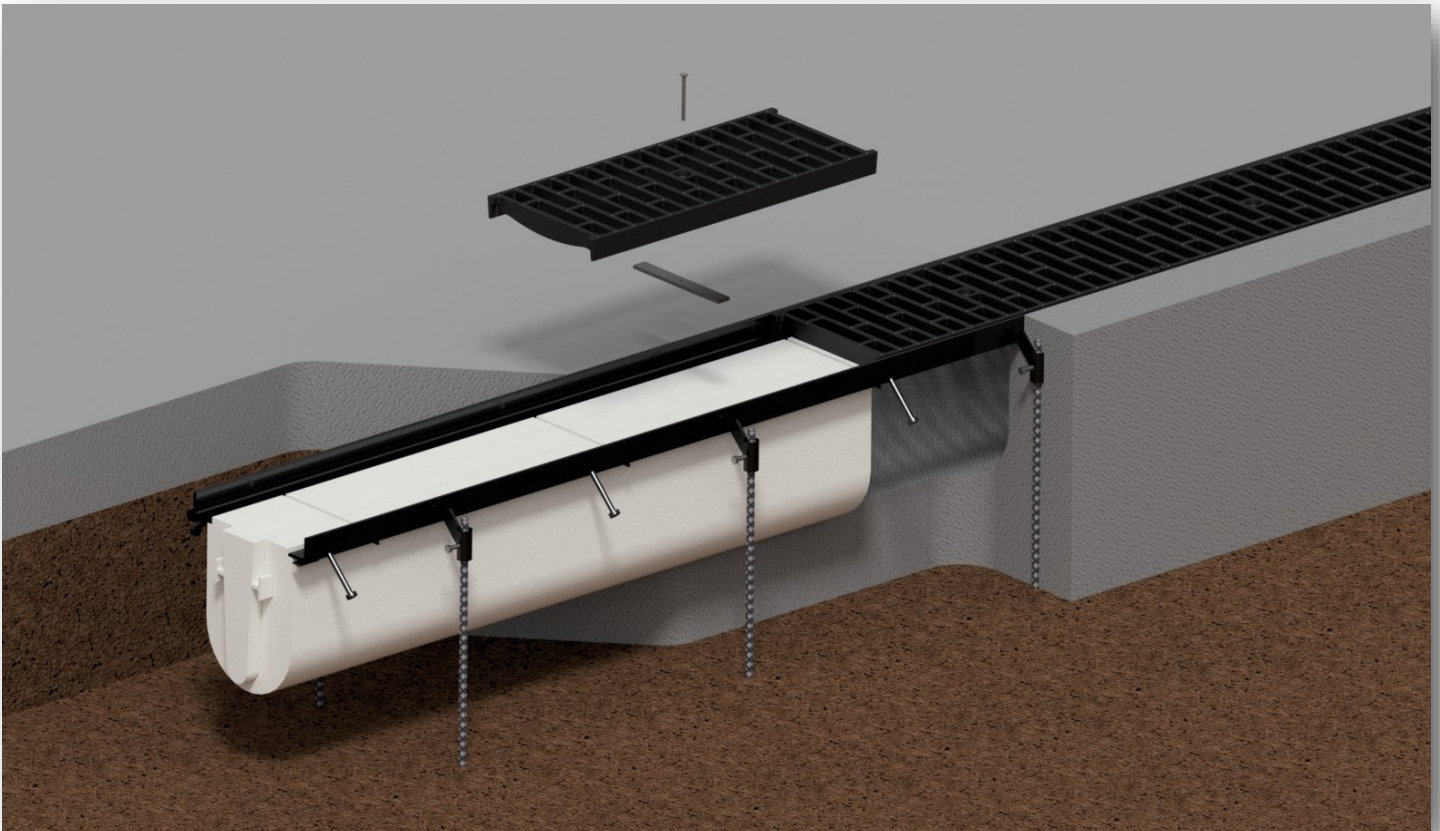


MultiDrain Systems, Inc.

Manufacturers of Pre-engineered Trench Drain Systems

EconoDrain[®] & EconoDrain PT-2[™]

Pre-engineered Trench Drain Forming Systems



Surface Drainage Technology & Solutions

EconoDrain[®] • EconoDrain PT-2[™] • EconoDrain DG-4[™] • Alfa Channel[®] • Alfa Slot[®] • MultiDrain[®]

MultiDrain[®]
We Drain Your Site, Not Your Budget!

EconoDrain[®]
www.multidrainsystems.com

MultiDrain Products

EconoDrain® • EconoDrain PT-2™ • EconoDrain DG-4™ • Alfa Channel® • Alfa Slot® • MultiDrain®

	Product Name & Description	Typical Applications	Product Information
	EconoDrain® Pre-engineered Trench Drain Forming System (Removable Forms)	Loading docks Food & beverage Petrochemical Automobile dealerships Fire stations Numerous civil uses Commercial & Industrial	96" Long form sections 4.5" - 24" Trench Widths 0.5% Standard Slope Radius or Square Bottoms Monolithic Concrete Run Lengths 264' to 336' (Std.) Easily Customized
	EconoDrain PT-2® 2 - Point Bolt Down Grate System Extra Heavy Duty Pre-engineered Trench Drain Forming System (Removable Forms)	Airports Ports Intermodal DOT Heavy Industrial Military Petrochemical	96" Long Form Sections 8" & 12" Trench Widths 0.5% Standard Slope Extra Heavy Duty System Load Rating: HS25/FAA Bolt Down Grates Made in America
	EconoDrain DG-4™ Decorative Grate Series and EconoDrain Pre-engineered Trench Drain Forming System (Removable Forms)	Driveways Parks Plaza Decks Patios Fountains Entryways Landscape & Hardscape	78-3/8" Long Form Sections 4" Interior Trench Width 24 Decorative Grate Options Ductile Iron & Stamped Grates Run Length 336' (Std.) Fast and Easy to Install Made in America
	MultiDrain® Steel Trench Drain System	Food & Beverage Food Service Medical Fire Stations Automobile Dealerships Petrochemical Facilities Commercial & Industrial	96" Long Sections 6", 8", 10", 12", 15" 18" & 24" Pre-sloped up to 1% Heavy Duty System Stainless & Galvanized Steel 12, 14, 16 or 18 Gauge Steel EZ Rebar Anchor Stand
	Alfa Channel® Modular, Precast, Polymer Concrete Trench Drain System.	Loading Docks Food & Beverage Petrochemical DOT Civil Military Industrial	39" Long Sections 4" Interior Trench Width Pre-sloped 0.6% Polyester (Std) / Vinylester Radius Bottom Tongue & Groove Joints UL Certified
	Alfa Slot® PVC Pipe and Polymer Concrete Light Duty Trench Drain System	Swimming Pools Plaza Decks Side Walks Patio Pavilions Shower Stalls Water Features	39" & 78" Sections 4" & 6" PVC Pipe Sizes Schedule 40 PVC 1/4" & 1/2" Slots Light Duty ADA Compliant Connector Saddles & End Caps

Refer to www.multidrainsystems.com for additional information and available components.

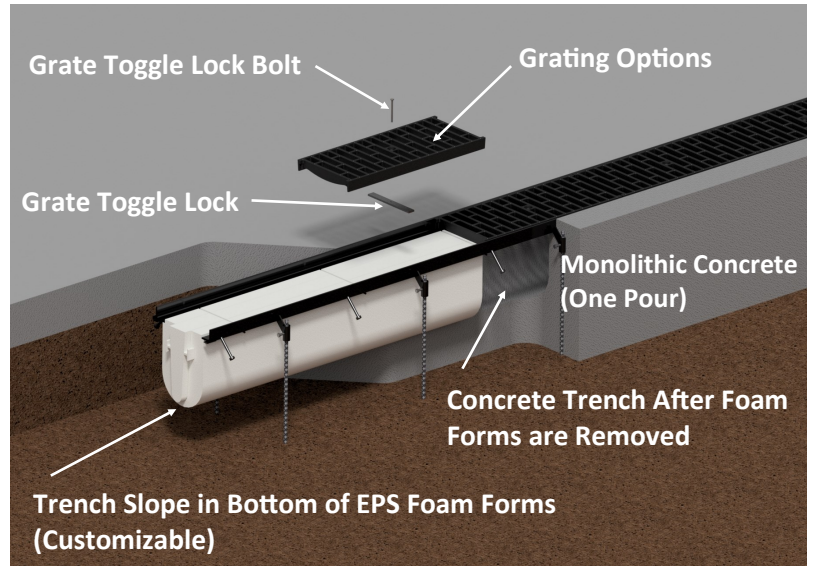
EconoDrain Trench Drain Forming System

EconoDrain® is a pre-engineered trench forming system made from expanded polystyrene (EPS) foam forming sections and steel frames for strength and supporting the various types of grates. Concrete is poured around the EPS foam and frame, forming the engineered trench. The EPS foam forms are then removed leaving the desired trench width, depth and slope. Grates are then placed in the frame rail and locked in place with a center toggle locking device assembly. Two point bolt down system is available, see Series PT-2. Custom slopes, depths, lengths and square bottoms are also available.

EconoDrain form sections are 8' long, widths range from 4.5" up to 24", and depths from 4.25" up to 28.5". Standard run lengths range from 264' to 336' (See Run Slope of Slope ft. on Page 12).

EconoDrain standard sections, including the EPS foam and steel frames are light weight and easy to handle. The smaller Series #4 (4.5" wide) weighs approximately 32 lbs. and the very large Series #24 (24" wide) is 88 lbs.

EconoDrain is specified for many site drainage and containment applications for warehouses, loading docks, airports, ports, firehouses, car wash bays, automobile dealership garages and may other uses.



EconoDrain Pre-engineered Trench Forming System

ECONOMICAL

- Fast and easy to install
- Monolithic concrete
- No external form lumber
- No special installation chairs
- Only three basic components
- Easy to field miter sections
- Easy to use Intersection Kits
- Easily customized

FAST & ACCURATE

- 8' Long forming sections
- Patented leveling system
- Engineered frame assembly
- Pre-sloped EPS foam forms
- Interlocking channels & frames
- No restriction on drain outlets
- Installs in one pour
- Easy removal of forms



Applying form release to foam forms



Installing EconoDrain 8' long sections



Frames secured with alignment clips



Placing concrete & vibrating



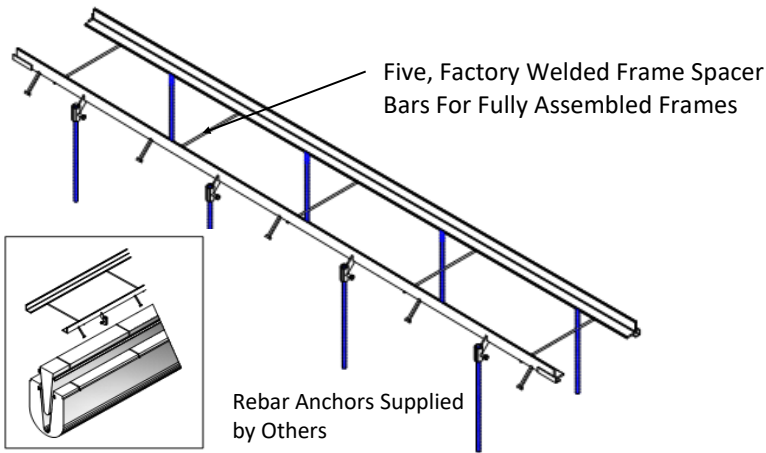
EPS foam forms removed



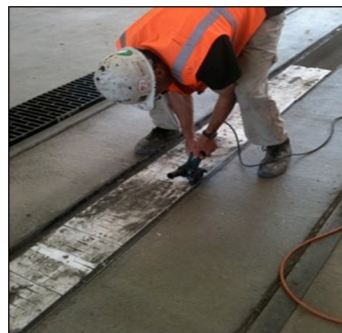
Completed trench drain and grate

EconoDrain Steel Frame Options

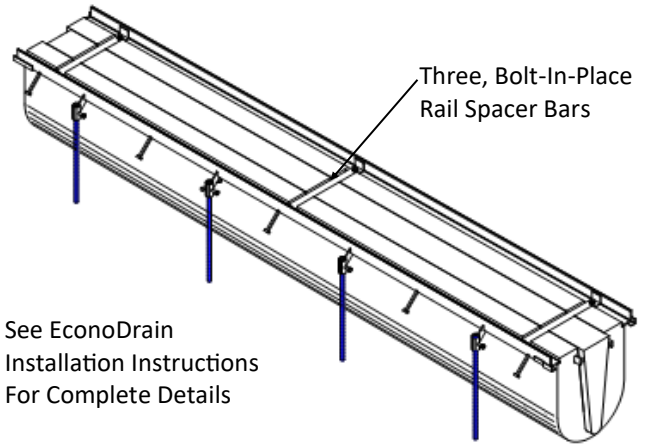
ECONODRAIN STEEL FRAME & RAIL SPACER OPTIONS



FACTORY WELDED FRAME SPACER & FRAME ASSEMBLY



- 8 Feet long frame sections
- Factory welded frame spacers
- Accurate spacing & alignment
- Straight runs
- Fast and easy to install
- Form removal, field cut spacers
- Easy foam form removal



FIELD ASSEMBLED BOLT-IN-PLACE RAIL SPACER



- 8 Feet frame sections
- Field assemble
- Only three spacers
- Accurate spacing
- Accurate alignment
- Straight runs
- Simple spacer removal
- Easy form removal

WELDED ROD FRAME SPACER ASSEMBLY & BOLT-IN-PLACE REUSABLE RAIL SPACER

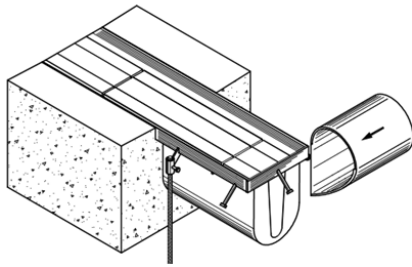
EconoDrain Series	#4	#6	#8	#10	#12	#15	#18	#24	#8 PT-2	#12 PT-2
Welded Rod Frame Spacer	Only Option	Standard	Standard	Not Available	Standard	Not Available	Not Available	Not Available	Not Available	Not Available
Bolt-in-Place Rail Spacer Bar	Not Available	Option	Option	Only Option	Option	Only Option	Only Option	Only Option	Only Option	Only Option

FRAME RAIL OPTIONS

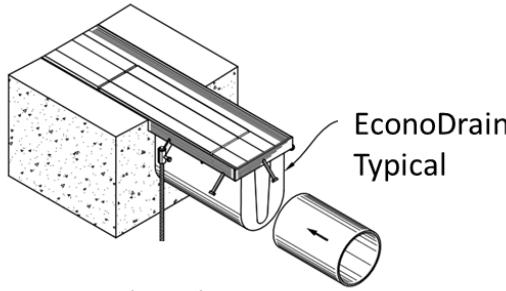
Black, Polyester Powder Coating	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Galvanized - Hot Dipped	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option
Stainless Steel	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option

EconoDrain Outlet Details

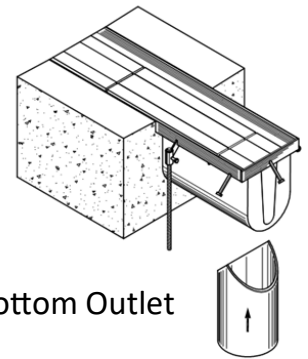
PIPE OUTLET DETAILS



Side Outlet



End Outlet



Bottom Outlet

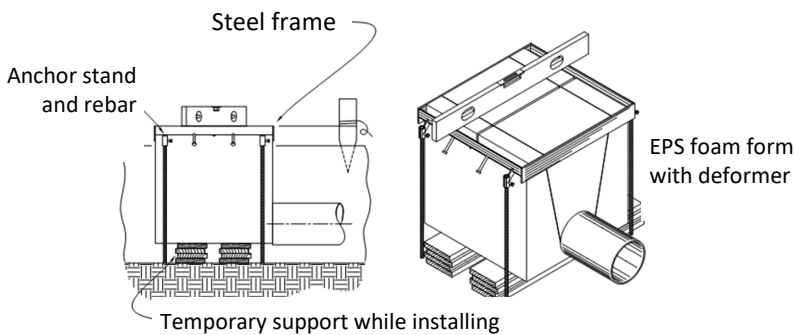
EconoDrain Typical



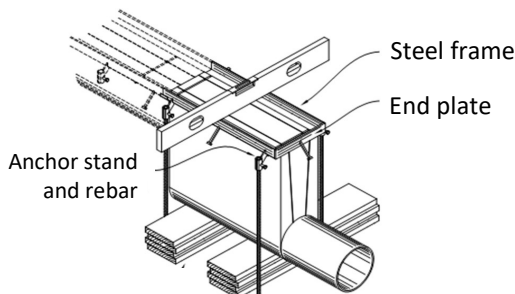
- Side, end or bottom outlets
- Simply snug the pipe to the foam form
- No special fittings required
- No expensive fittings
- No expensive fabrications required
- No factory fabrications required
- Can evacuate water at any location

Piping and code required fittings are supplied by others.

CATCH BASIN OPTIONS



LARGE CATCH BASIN



INLINE CATCH BASIN



Large Catch Basins

- 24" x 24" x 24" Deep
- 24" x 24" x 36" Deep
- 24" x 24" x 42" Deep
- 36" x 36" x 48" Deep
- 36" x 36" x 60" Deep



Inline Catch Basins

- EconoDrain Series #4
- EconoDrain Series #6
- EconoDrain Series #8
- EconoDrain Series #10
- EconoDrain Series #12
- EconoDrain Series #15
- EconoDrain Series #18
- EconoDrain Series #24

Steel Frame Options

- Carbon steel black polyester powder coating (Std.)
- Carbon steel hot dipped galvanized
- Stainless steel

EconoDrain Intersections & Deep Forms

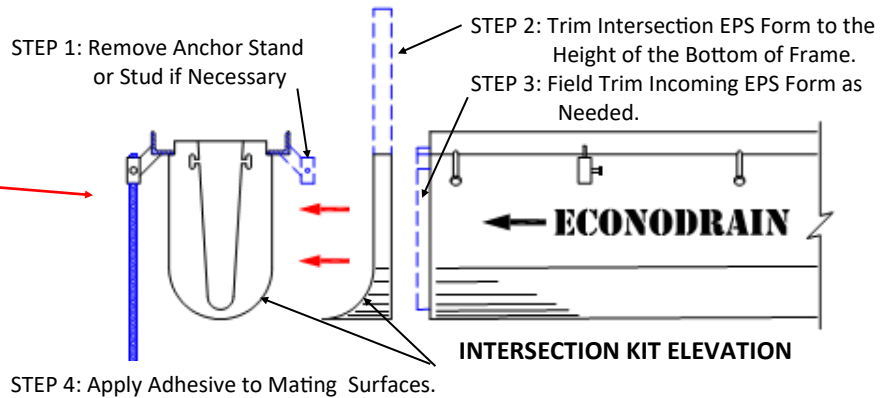


Miters

Contractors can easily field cut and miter EconoDrain to fit any angle. Other types of products may require factory fabricated miters costing hundreds of dollars per cut. Should factory miters get damaged, this could delay the project completion and be very costly.

Intersections and Corners

EPS Tee and Ell intersections are inexpensive foam parts manufactured to fit any size EconoDrain section. These foam intersections form a snug fit between two intersecting trenches resulting in a smooth transition.



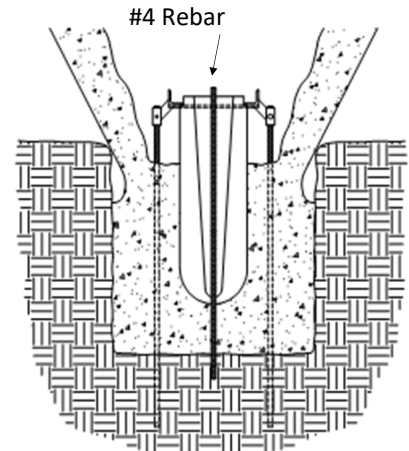
INSTALLING ECONODRAIN FORM IN DEEPER PORTION OF SYSTEM

Holes are provided through the center of the deeper EPS Forms for insertion of rebar. These holes maintain vertical alignment during initial concrete placement.

The rebar is driven only a few inches into the ground or sub-base.

Concrete must be filled on both sides of the form as evenly as possible. Multiple passes on either side are preferable while avoiding filling the trench from one side.

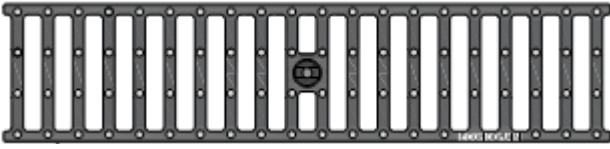
The rebar **MUST** be removed once the concrete/form pressure equalizes but prior to the concrete setting up.



EconoDrain & MultiDrain Grates

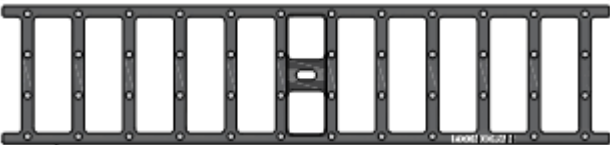
EconoDrain Series #4

Grate #A



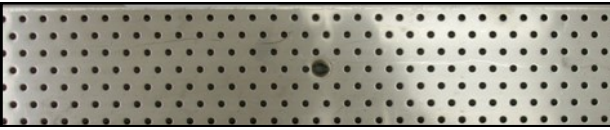
EconoDrain Series #4

Grate #C



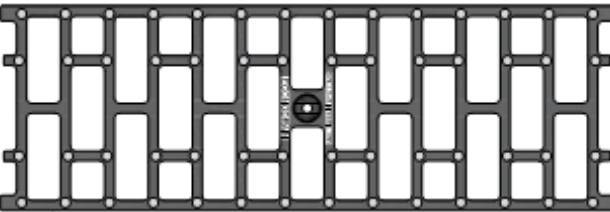
EconoDrain Series #4

Grate #E



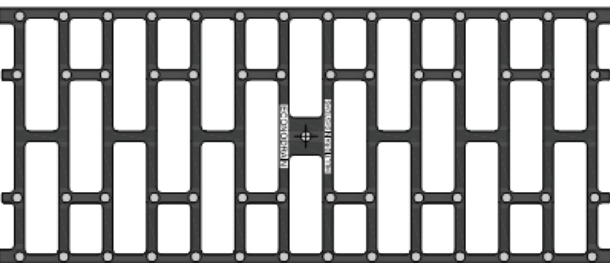
EconoDrain Series #6

Grate #G



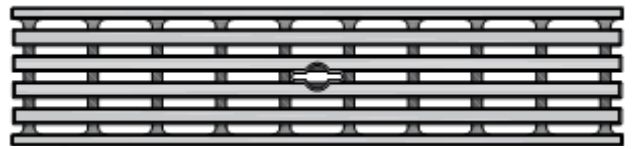
EconoDrain Series #8

Grate #I



EconoDrain Series #4

Grate #B



EconoDrain Series #4

Grate #D



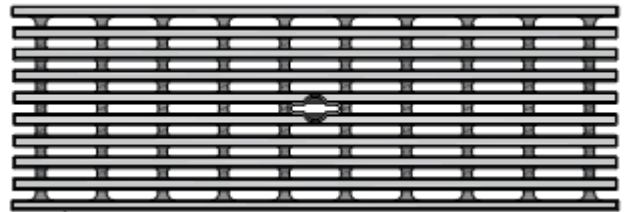
EconoDrain Series #4

Grate #F



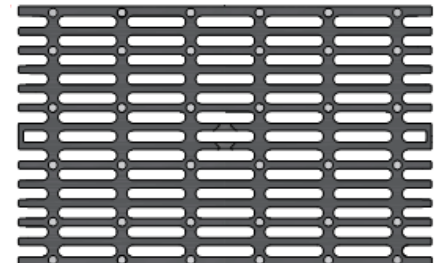
EconoDrain Series #6

Grate #H



EconoDrain Series #8

Grate #J



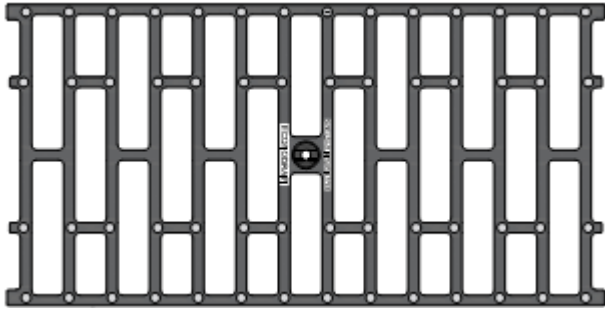
Grate ID	Series	Part Number	Material Type	Size	Grate Slot Size	Open Area	Load Rating
A	#4	EG-0424-1-DI-A	Ductile Iron	5-1/4" x 24"	3/4" x 4-1/2"	51.9%	HS25
B	#4	EG-0424-1-DI-ADA	Ductile Iron - ADA Compliant	5-1/4" x 24"	7/16" x 2-1/16"	30.4%	HS25
C	#4	EG-0424-1-DI-B	Ductile Iron	5-1/4" x 24"	1-1/2" x 4-1/2"	64.1%	HS25
D	#4	EG-0424-1-CI-B2	Cast Iron	5-1/4" x 24"	1-3/16" x 4-3/8"	55.2%	H20
E	#4	* EG-0448-P	Stamped Perforated-ADA Compliant	5-1/4" x 48"	1/4" Round	8.5%	Pedestrian or H20
F	#4	* EG-0448-B	Stamped Slotted	5-1/4" x 48"	5/16" x 3-3/16"	17%	Pedestrian or H20
G	#6	EG-0824-1-DI-A	Ductile Iron	8" x 24"	1-3/8" x 3-7/16"	63.5%	HS25
H	#6	EG-0824-1-DI-ADA	Ductile Iron - ADA Compliant	8" x 24"	7/16" x 2"	38.1%	HS25
I	#8	EG-1024-1-DI-A2	Ductile Iron	10" x 24"	1-5/16" x 4-7/16"	66.3%	HS25
J	#8	EG-1016-1-DI-ADA	Ductile Iron - ADA Compliant	10" x 16"	7/16" x 2-1/4"	48%	HS25

* Available in Galvanized and Stainless Steel, Unreinforced and Reinforced.

EconoDrain & MultiDrain Grates

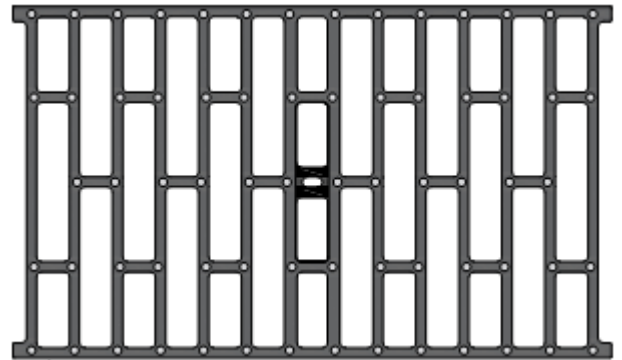
EconoDrain Series #10

Grate #K



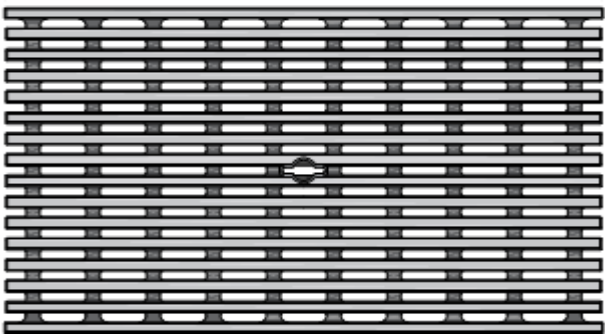
EconoDrain Series #12

Grate #L



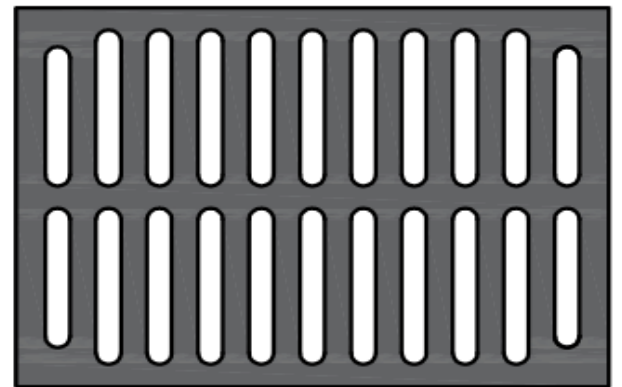
EconoDrain Series #12

Grate #M



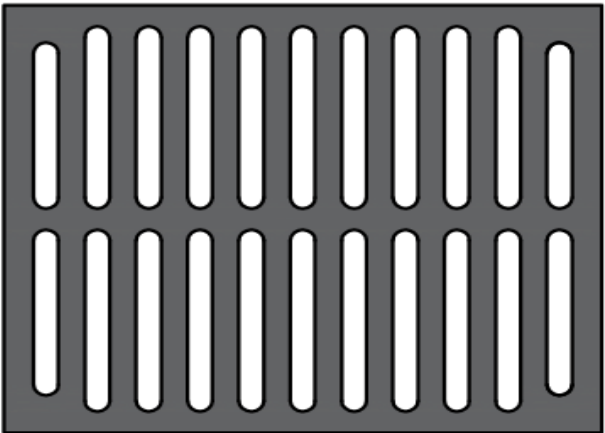
EconoDrain Series #15

Grate #N



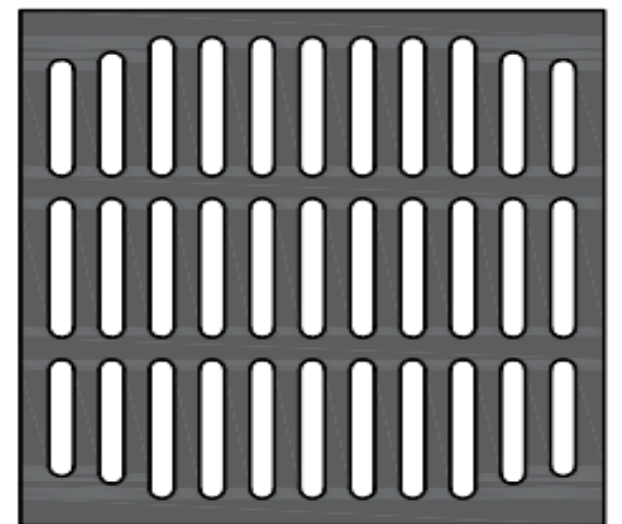
EconoDrain Series #18

Grate #O



EconoDrain Series #24

Grate #P



Grates are not to scale.

Fiberglass and Bar Grates are available, consult your MultiDrain Specialist.

Grate ID	Series	Part Number	Material Type	Size	Grate Slot Size	Open Area	Load Rating
K	#10	EG-1224-1-DI-A	Ductile Iron	12" x 24"	1-5/16" x 5-7/16"	64.8%	HS25
L	#12	EG-1424-1-DI-A2P	Ductile Iron	14" x 24"	1-3/16" x 6-3/8"	67%	H20
M	#12	EG-1424-1-DI-ADA	Ductile Iron - ADA Compliant	14" x 24"	3/8" x 1-13/16"	33.1%	HS25
N	#15	EG-1724-CI-A	Cast Iron	17" x 24"	1" X 6-5/8" Avg.	35.8%	H20
O	#18	EG-2024-DI-A	Cast Iron	20" x 24"	1" x 8-1/8" Avg.	37%	H20
P	#24	MG-2624-CI-A	Cast Iron	26" x 24"	1" x 7-1/4" Avg.	38%	H20

**All Grate Dimensions are Nominal*

EconoDrain PT-2 Extra Heavy Duty

EconoDrain PT-2[®] Extra Heavy Duty Trench Drain System is a complete pre-engineered trench drain forming system combining the features and advantages of our heavy duty EconoDrain[®] series with added load-carrying capability necessary for airports, seaports and intermodal facilities.

The system includes EPS forms for both 8" and 12" trench widths plus an anchored grate frame and standard cast grates capable of FAA and extra heavy duty load capability. The grate frame and grate incorporate a 2-bolt lockdown design firmly securing the grate to the frame. The system is complemented by In-Line catch basin or 24" x 24" and 32" x 32" catch basin assembly. The PT-2 system, for all its added durability, loses none of the simplicity and economy of the original EconoDrain system, and it's designed to fulfill any and all industrial site drainage needs.

Grate Rail / Frame Assembly

Grate rails are assembled on the jobsite with Bolt-In-Place Spacer Bars. The left and right rail shall be affixed together to assure proper symmetry and planar accuracy.

Grate rails provides positive lock of grate to frame by two point bolt down. The grate lock features additional anchor for solid embedment in concrete. Eight anchor stands provided per 8' rail to aid installation assembly; allow simple grade adjustments and provide grate rail pull out resistance.

Bolt-In-Place technology allows for easy shipment, sturdy construction, design flexibility, re-usable spacer Bar and improved shipping scheduling.

The grate seat rail standard finish is Black, Polyester Powder Coating, with options for Hot Dipped Galvanized or Stainless Steel.



EPS forms with form release applied, laid out in numerical sequence and ready to be Installed.



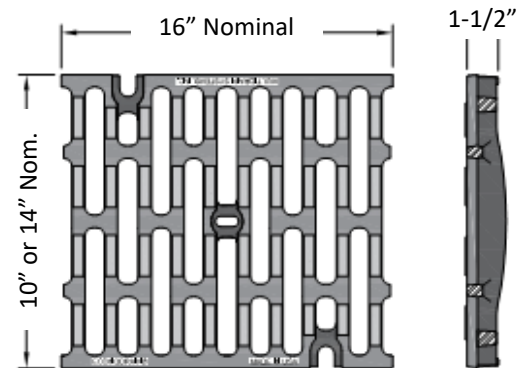
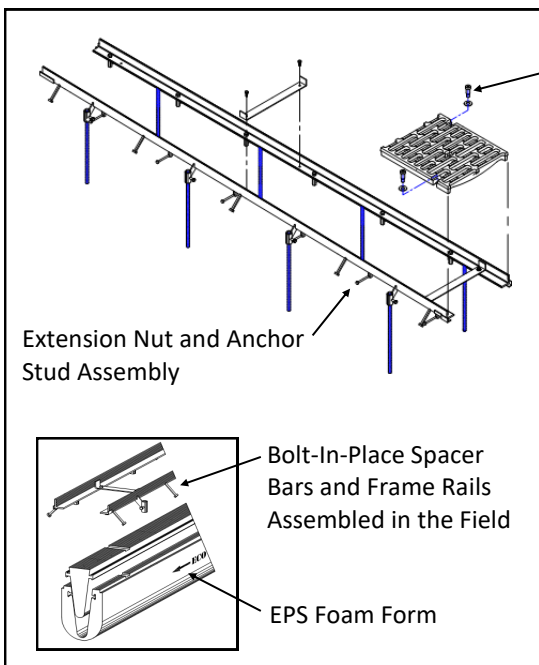
EconoDrain system installed, aligned and leveled with #4 rebar inserted through anchor stands and driven into earth.



Place concrete per installation instructions and vibrate concrete on each side of EPS forms.



EPS forms are removed, the monolithic concrete trench is cleaned then install PT-2 grates with two point bolt down.



Series #8 and #12, Extra Heavy Duty PT-2 Grate. Attachment options, Two Point Bolt Down or Center Toggle Locking Device.

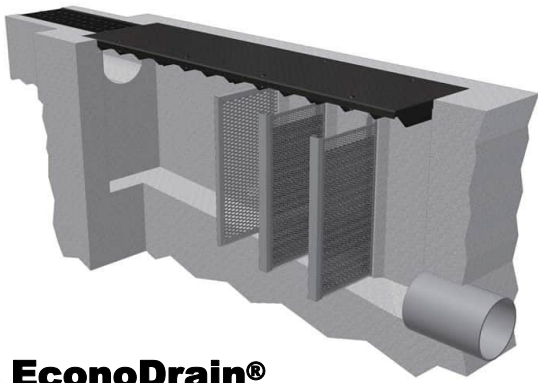
Frame Rail Options:

- Black, Polyester Powder Coating - Standard
- Hot Dip Galvanized - Optional
- Stainless Steel - Optional

EconoDrain Trench Forming System Data

EconoDrain® Standard	Series #4	Series #6	Series #8	Series #10	Series #12	Series #15	Series #18	Series #24	EconoDrain DG-4 Decorative Series	PT-2 #8 Airports / Ports DOT / Intermodal	PT-2 #12 Airports / Ports DOT / Intermodal
Form Width (in)	4.5"	6"	8"	10"	12"	15"	18"	24"	4"	8"	12"
Single Form Length (ft)	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	6' - 6.74" (2 Meters)	8' - 0"	8' 0"
Grate Width	5.25"	8"	10"	12"	14"	17"	20"	26"	4.8" Nom.	10"	14"
Form Depth	4.25" - 25.25"	6" - 26"	6" - 26"	8" - 26"	8" - 26"	12" - 28.5"	12" - 28.5"	15" - 28.5"	4.375" - 25.75"	6" - 26"	8" - 26"
Standard Slope	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Custom Slope	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
Flow (gpm)	102 to 868	200 to 1,372	281 to 2,151	606 to 3,030	743 to 3,989	1,914 to 6,229	2,359 to 8,115	4,721 to 19,581	86 to 706	281 to 2,151	743 to 3,989
Flow (cfs)	0.23 to 1.93	0.45 to 3.06	0.63 to 4.79	1.35 to 6.75	1.66 to 8.89	4.26 to 13.88	5.26 to 18.08	10.52 to 43.63	0.19 to 1.57	0.63 to 4.79	1.66 to 8.89
Run of Slope (ft)	336'	320'	320'	288'	288'	264'	264'	264'	336'	320'	288'
Radius Bottom	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Steel Frame											
Black Polyester Powder Coating	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Galvanized - Hot Dipped	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option
Stainless Steel	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option
Catch Basin											
Catch Basin	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available
In-Line	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available	Available

EconoDrain Inline Debris & Filtration



EconoDrain® Filtration

EconoDrain® Filtration is a patented forming technology to create a highly durable concrete component. EconoDrain Filtration is an economic solution for inline debris trap and filtration. EconoDrain Filtration is a pre-engineered concrete forming system manufactured of removable Expanded Polystyrene (EPS) foam forms. The unit comes complete with stainless steel debris screen, stainless steel filter rack holders, filter racks, filtration media, solid covers, side rails and end rails.

EconoDrain® pre-engineered trench drain forming system or Alfa Channel® polymer concrete channels capture the surface water runoff then feeds into EconoDrain Filtration. As effluent enters either through an inlet pipe or EconoDrain, the first chamber captures solid debris. After passing through the sediment screen, effluent passes through two removable smart sponge filter panels before exiting. The pre-sloped bottom eliminates ponding, an excellent feature where vector control is an issue.

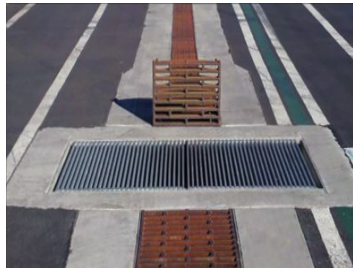
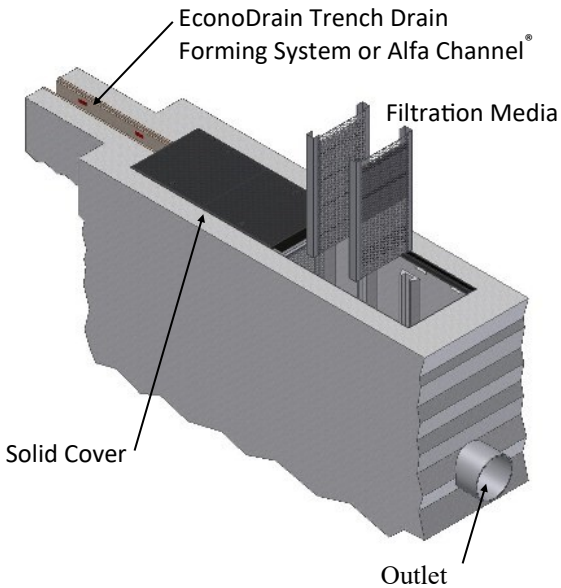
EconoDrain Filtration is fast and easy to install with minimal excavation required. When site space is restricted, EconoDrain Filtration technology is perfect for sites that lack the necessary area for retention ponds and larger structures.

EconoDrain Filtration is designed especially for sites under 100 acres where specific pollutants such as oils, greases and hydrocarbons must be captured without impeding bypass flow particularly during the first fifteen minutes of rainfall or first flush effect. This system is ideal for parking lots, auto sales & repair, trucking facilities, fire stations, commercial & industrial, container terminals and cargo ports.

Storm Water Filtration Media

EconoDrain Filtration is the perfect solution when seeking a BMP that must handle sheet flow, control vectors, collect debris, treat bacteria and capture hydrocarbons all at the same site. This system utilizes a variety of filtration media and fabrics.

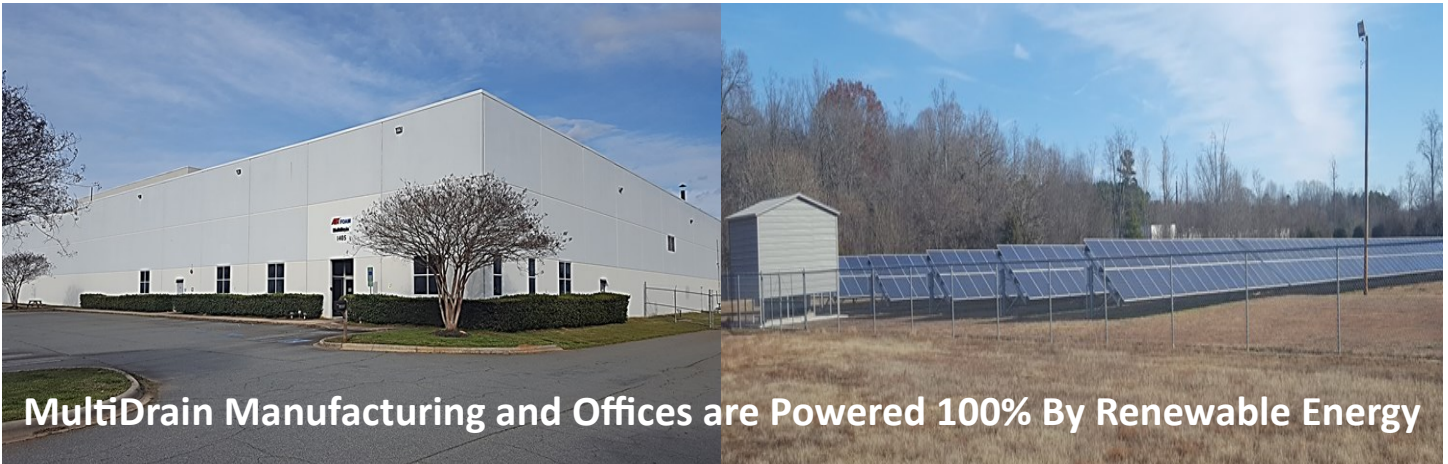
- Standard Filtration “Blankets”
- Antimicrobial Filtration Media
- Hydrocarbon Media
- Heavy Metals Removal Media (HMR)



Description	Dimensions (in) Width, Depth, Length	Debris Volume	Bypass Flow Area Debris Chamber (in-sq)	Bypass Flow Area Filter Chamber #1 (in-sq)	Bypass Flow Area Filter Chamber #2 (in-sq)
1640FF24-4 (4' Long)	24" x 48" x 48"	9.4	46.8	165.8	-NA-
1640FF24-6 (6' Long)	24" x 48" x 72"	15.5	46.8	146.6	-NA-
1640FF24-6H (6' Long)	24" x 30" x 72"	9.5	42.5	146.6	-NA-
1640FF24-8 (8' Long)	24" x 48" x 96"	19.2	44.6	129.6	163.6
1640FF24-8H (8' Long)	24" x 30" x 96"	11.85	42.5	142.4	153.0



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