Flo-Thru Trench Drain Systems

industrial · civil · mechanical

Landscape | Hardscape

Transportation

Sports Facilities

Commercial | Industrial

www.zurn.com

Flo-Thru Drain Systems Introduction

Zurn Flo-Thru pre-engineered modular trench drain systems are designed for ease of installation, load-bearing strength, hydraulics, chemical resistance, and structural integrity. Strong and durable for the toughest job applications, Zurn trench drain systems work well in manufacturing and industrial facilities, parking areas, swimming/sport facilities, tracks and athletic fields, high volume roadside applications, airports, and food processing or pharmaceutical applications. The Zurn Flo-Thru systems offer several advantages over either on-site cast-in-place forming or precast polymer concrete systems.

***Savings** – Lightweight modular assemblies reduce labor and installation time, eliminate costly leveling/alignment hardware and reduce costly freight charges.*

Support Materials Available Upon Request

- DOT approvals
- CD specifications
- Technical assistance
- Jobsite installation assistance
- CAD layout drawings – custom design, sizing chart

Continuing Education Courses

- Online at www.zurn.com
- Lunch and Learn

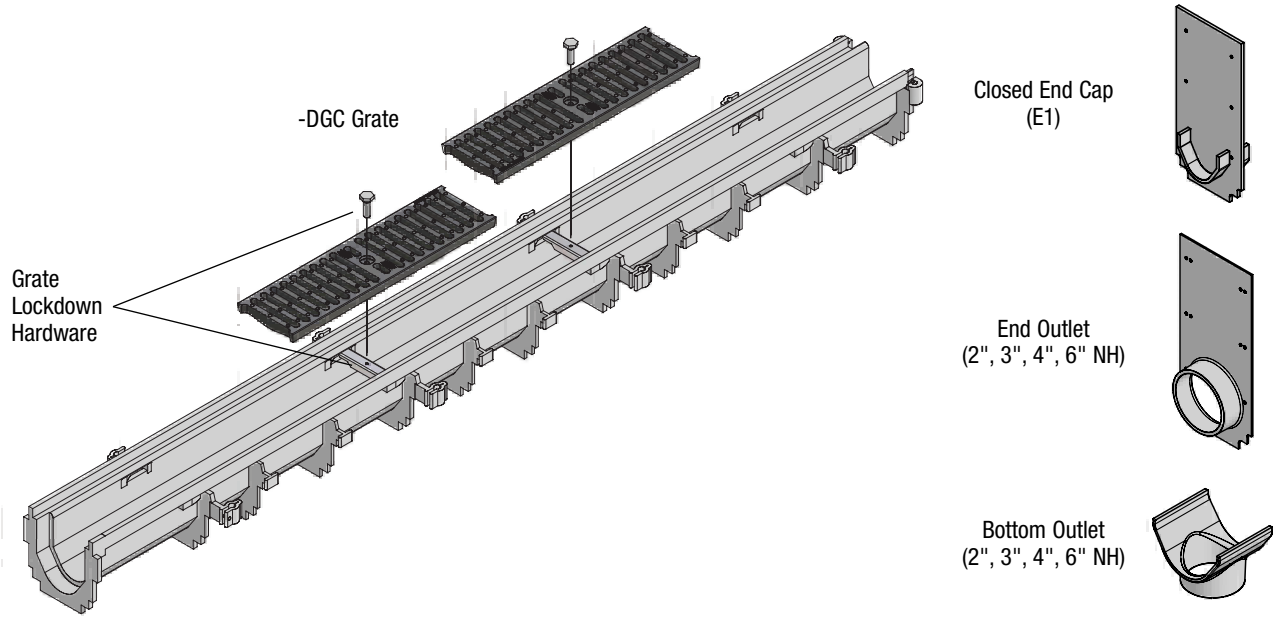
For your next project, look to Zurn for design assistance. Contact us at 800-906-5060, or e-mail us at flothru@zurn.com.

***Flow Velocity** – Built-in molded slope produces superior flow characteristics. Smooth, non-porous internal surface further enhances flow.*

***Versatility** – Optional accessories and ease of modification offer the most versatile trench drainage systems available to satisfy your project requirements.*

***Quality** – Modular sections are assembled together to produce straight, uniform drainage systems. Options such as Dura-Coated heavy-duty steel frames and grates, mechanical overlaps, rebar clips, and combination anchor tabs/leveling devices reduce labor during installation and allow for durable, flexible systems.*

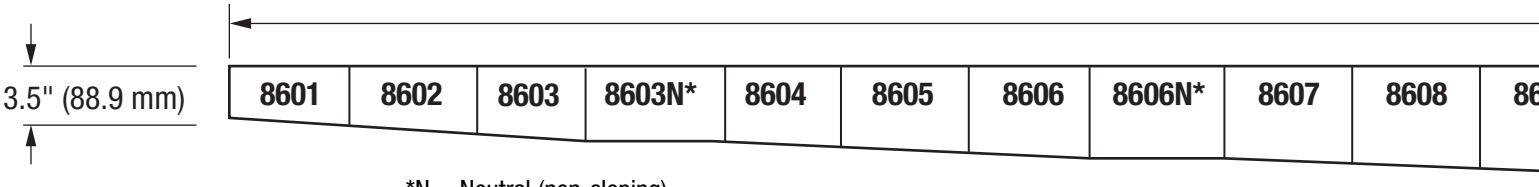
Flo-Thru Drain Systems Table of Contents



Z886 Dimensional Data

Trench Number	Shallow Invert Inches	Shallow Invert mm	Deep Invert Inches	Deep Invert mm	Max. Flow Rate GPM	Max. Flow Rate LPS	Max. Flow Rate CFS	Approx. Weight (Less Grate) Lbs.	Approx. Weight (Less Grate) Kg
8601	3.50	89	4.10	104	93	6	0.207	14	6.2
8602	4.10	104	4.70	119	122	8	0.272	15	6.8
8603	4.70	119	5.30	135	152	10	0.339	16	7.4
8603N	5.30	135	5.30	135	–	–	–	17	7.7
8604	5.30	135	5.90	150	183	12	0.408	18	8.3
8605	5.90	150	6.50	165	214	14	0.477	20	8.9
8606	6.50	165	7.10	180	245	16	0.546	21	9.5
8606N	7.10	180	7.10	180	–	–	–	22	10.0
8607	7.10	180	7.70	196	276	17	0.615	23	10.6
8608	7.70	196	8.30	211	308	19	0.686	25	11.2
8609	8.30	211	8.90	226	339	21	0.755	26	11.8
8610	8.90	226	9.50	241	371	23	0.827	27	12.4
8611	9.50	241	10.10	257	403	26	0.898	29	13.0
8612	10.10	257	10.70	272	435	28	0.969	30	13.6
8612N	10.70	272	10.70	272	–	–	–	30	13.6
8613	10.70	272	11.30	287	467	30	1.041	31	14.2
8614	11.30	287	11.90	302	498	32	1.110	33	14.8
8615	11.90	302	12.50	318	530	34	1.181	34	15.4

Z886 System Profile

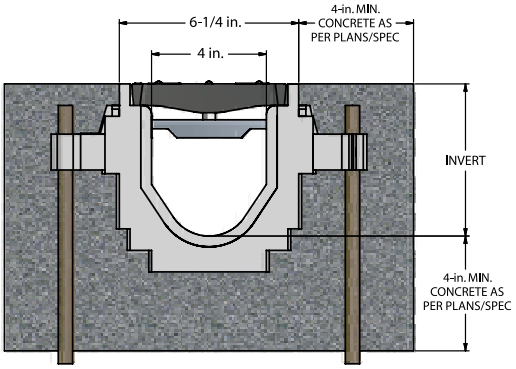


*N = Neutral (non-sloping)

Z886 Applications

Highways
Driveways
Kitchens
Pools
Parking Lots
Gas Stations
Airports
Airplane Hangars
Industrial Parks
Chemical Plants
Food Processing
Shopping Malls
Industrial Plants
Pharmaceuticals
Amusement Parks

Installation Specification

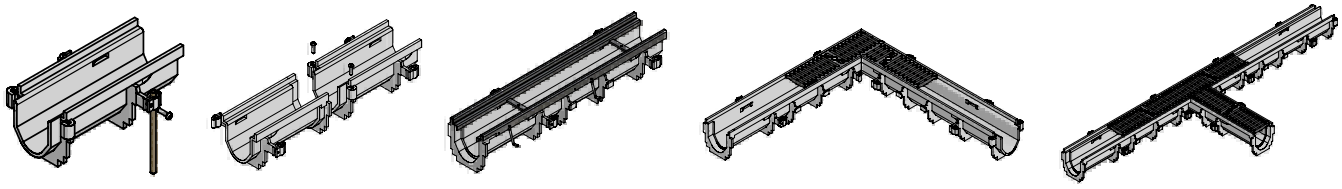


4" Throat / 6-1/4" Overall Width
Consult Plans and Specifications

Features and Benefits

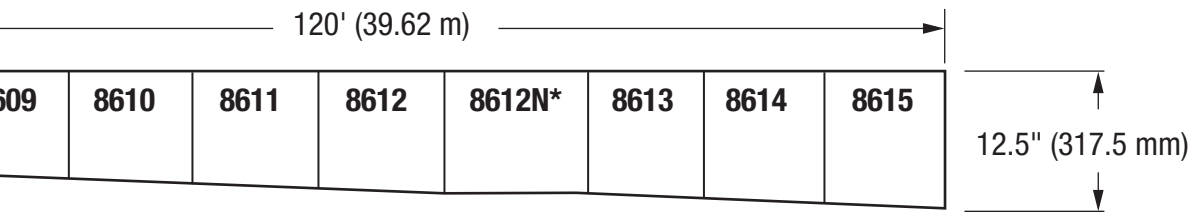
- ***80" Pre-engineered Modular Channel Sections with 20" or 40" Grates***
- ***.75% Built-In Slope*** *– Handles greater flows, uniform slope.*
- ***Radiused Bottom*** *– Better flow rate, less solids build-up.*
- ***Smooth High Density Polyethylene Structural Composite Interior*** *– 0% water absorption.*
- ***Durable and Lightweight*** *– Strong corrosion-resistant material.*
- ***Extra Long Runs*** *– Sidewall extensions allow pre-slope runs up to 300 feet.*
- ***Variety of Gratings***
- ***Grate Options*** *– From pedestrian to FAA rated; ADA compliant.* *See pages 24-25.*
- ***Built-In Rebar Clips*** *– Accommodates #3 or #4 rebar (supplied by others).*

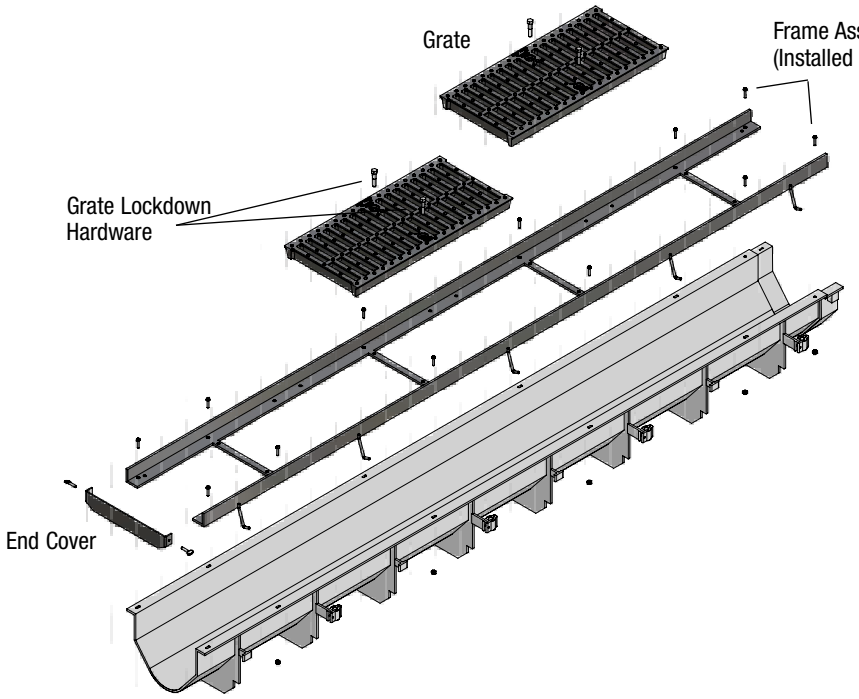
Z886 System Highlights

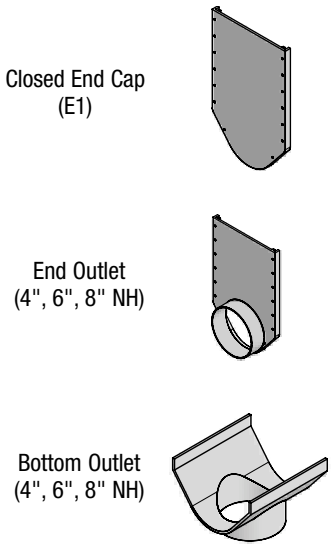


Integral Rebar Clips | Mechanical Interlocking Connection | Optional -HD Frame Assembly | 90° Fabrication | Tee Fabrication

Engineering Specification Channels shall be 80" long, 6-1/4" wide, and have a 4" wide throat. Modular channel sections shall be made of High Density Polyethylene (HDPE), have mechanical interlocking ends, and radiused bottom. Channel shall be provided either flat (neutral) or with a .75% built-in slope. Channels shall be available with inverts ranging from 3.5" to 12.50" (sidewall extensions optional; must be installed at factory). Channels shall have clips molded into the sides of the channel to accommodate vertical rebar for positioning and anchoring purposes. Choice of class A, B, C, D, E, and F grates shall be available with H-20 and/or FAA load ratings and/or ADA compliance with mechanical lockdown devices (refer to pages 24 and 25). End caps and catch basins shall be available to complement the channels and grates. End outlets, bottom outlets, and side outlets shall be available in 2", 3", 4", and 6" diameters. Trench drain shall be Flo-Thru model Z886. For downloadable CSI format specification, visit *www.zurn.com*.



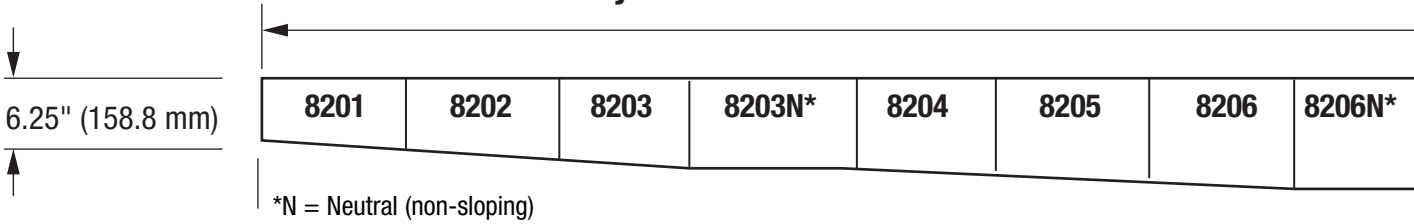




Z882 Dimensional Data

Trench Number	Shallow Invert Inches	Shallow Invert mm	Deep Invert Inches	Deep Invert mm	Max. Flow Rate GPM	Max. Flow Rate LPS	Max. Flow Rate CFS	Approx. Weight (Less Grate) Lbs.	Approx. Weight (Less Grate) Kg
8201	6.25	159	7.25	184	557	35	1.241	68	30.8
8202	7.25	184	8.25	210	774	49	1.725	68	30.8
8203	8.25	210	9.25	235	999	63	2.226	70	31.8
8203N	9.25	235	9.25	235	–	–	–	71	32.2
8204	9.25	235	10.25	260	1232	78	2.745	72	32.7
8205	10.25	260	11.25	286	1468	93	3.271	75	34.0
8206	11.25	286	12.25	311	1709	108	3.808	77	34.9
8206N	12.25	311	12.25	311	–	–	–	78	35.4
8207	12.25	311	13.25	337	1951	123	4.347	79	35.8
8208	13.25	337	14.25	362	2196	139	4.893	80	36.3
8209	14.25	362	15.25	387	2443	155	5.443	83	37.7
8209N	15.25	387	15.25	387	–	–	–	84	38.1
8210	15.25	387	16.25	413	2691	170	5.996	85	38.6
8211	16.25	413	17.25	438	2940	186	6.551	87	39.5
8212	17.25	438	18.25	464	3189	202	7.106	89	40.4

Z882 System Profile

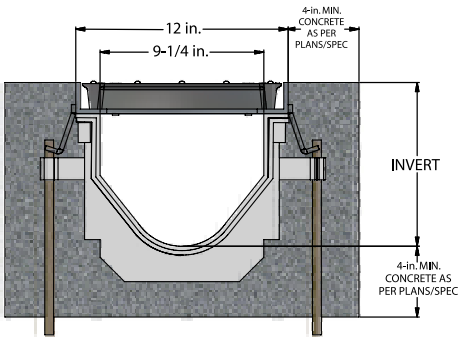


*N = Neutral (non-sloping)

Z882 Applications

Highways
Airports
Airplane Hangars
Parking Lots
Gas Stations
Industrial Parks
Chemical Plants
Food Processing
Industrial Plants
Pharmaceuticals
Port Facilities
Water Parks

Installation Specification

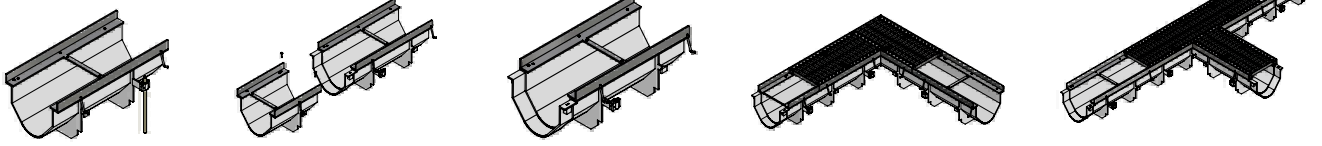


9-1/4" Throat / 12" Overall Width
Consult Plans and Specifications

Features and Benefits

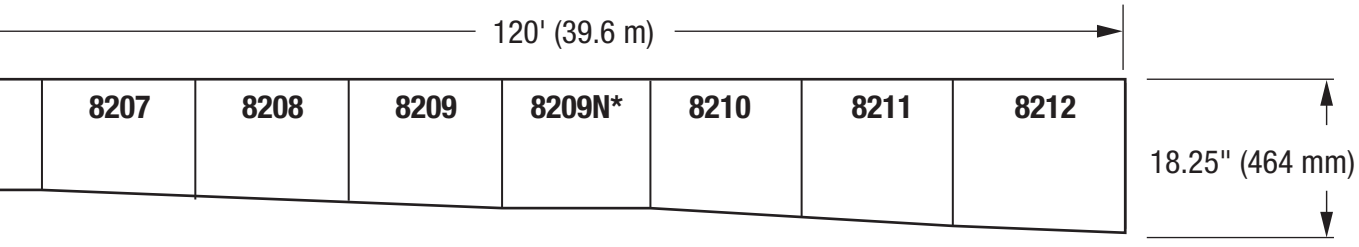
- ***Eight-Foot Pre-engineered Modular Sections with 24" Grates***
- ***1.04% Built-In Slope*** *– Handles greater flows, uniform slope.*
- ***Radiused Bottom*** *– Better flow rate, less solids build-up.*
- ***Smooth High Density Polyethylene Structural Composite Interior*** *– 0% water absorption.*
- ***Durable and Lightweight*** *– Strong corrosion-resistant material.*
- ***Extra Long Runs*** *– Sidewall extensions allow pre-slope runs up to 288 feet.*
- ***Variety of Gratings***
- ***Grate Options*** *– From pedestrian to FAA rated; ADA compliant.* *See page 26.*
- ***Built-In Rebar Clips –*** *Accommodates #3 or #4 rebar (supplied by others).*

Z882 System Highlights

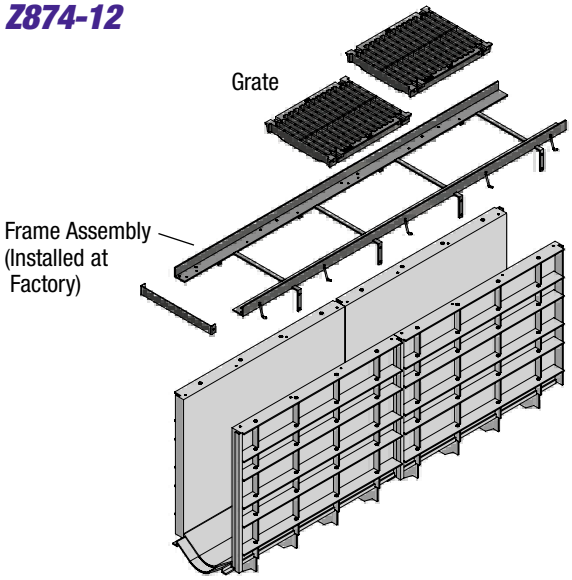


Integral Rebar Clips | Mechanical Overlap Connection | Frame Assembly with Anchor Studs | 90° Fabrication | Tee Fabrication

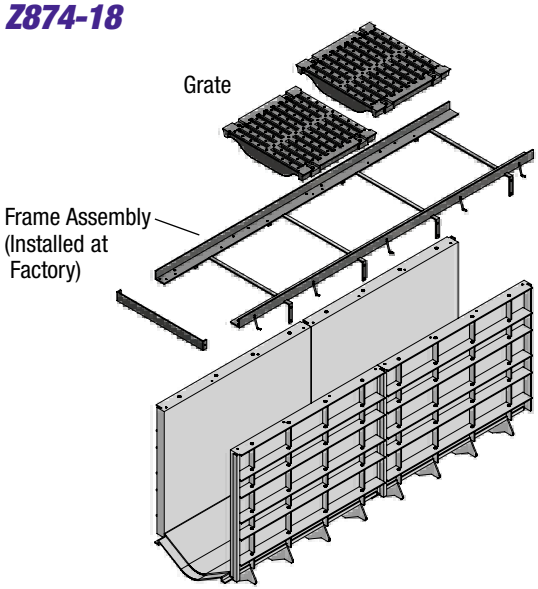
Engineering Specification Channels shall be 8' long, 12" wide, and have a 9-1/4" wide throate. Modular channel sections shall be made of High Density Polyethylene (HDPE), have interlocking ends, and radiused bottom. Channel shall be provided with no slope (neutral) or with a 1.04% built-in slope. Channels shall be available with inverts ranging from 6.25" to 18.25" (sidewall extensions optional; must be installed at factory). Channels shall have clips molded into the sides of the channel to accommodate vertical rebar for positioning and anchoring purposes. Choice of class A, B, C, D, E, and F grates shall be available with H-20 and/or FAA load ratings and/or ADA compliance with mechanical lockdown devices (refer to page 26). A heavy-duty steel frame shall be provided to distribute weight between the grates and the HDPE channel. End caps and catch basins shall be available to complement the channels and grates. End outlets, bottom outlets, and side outlets shall be available in 4", 6", and 8" diameters. Trench drain shall be Flo-Thru model Z882. For downloadable CSI format specification, visit *www.zurn.com*.



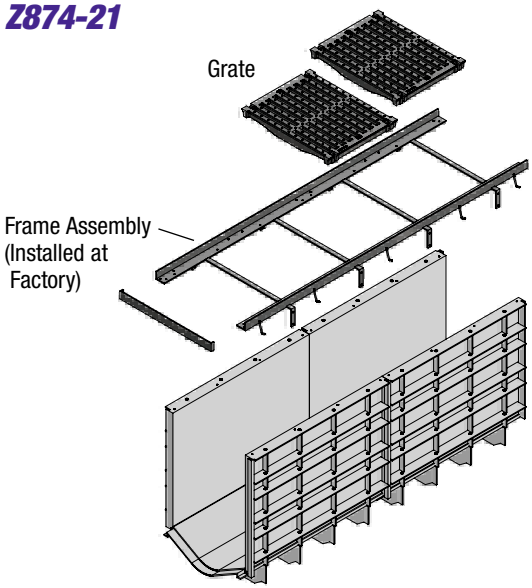
Z874-12



Z874-18

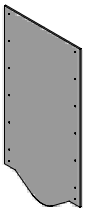


Z874-21

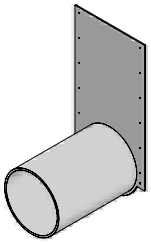


*4-corner bolt lockdown on all systems.

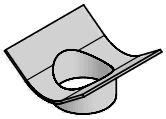
Closed End Cap
(E1)



End Outlet
Z874-12
(4", 6", 8" NH)
Z874-18
(4", 6", 8", 12" NH)
Z874-21
(4", 6", 8", 12", 18" NH)



Bottom Outlet
Z874-12
(4", 6", 8" NH)
Z874-18
(4", 6", 8", 12" NH)
Z874-21
(4", 6", 8", 12", 18" NH)



Z874-12, Z874-18, Z874-21 Applications

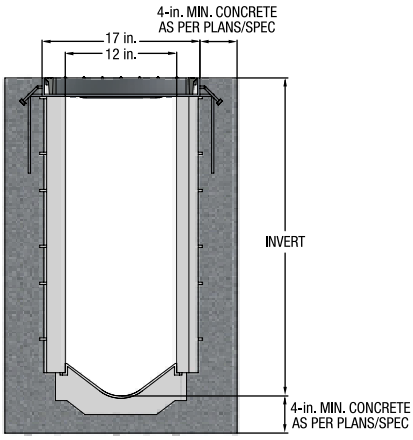
Airports
Airplane Hangars
Chemical Plants
Highways
Industrial Parks
Industrial Plants
Parking Lots
Port Facilities

Engineering Specification Channels shall be 80" long, Z874-12 (17" wide and have 12" wide throat); Z874-18 (23" wide and 18" wide throat); or Z874-21 (26-1/4" wide and 21-1/4" wide throat). Modular channel sections shall be made of High Density Polyethylene (HDPE), have interlocking ends, and radiused bottom. Channel shall be provided with no slope (neutral) or with a 1.00% built-in slope. Channels shall be available with inverts ranging from 9.25" to 36.21". Channels shall have clips attached to the frame to accommodate vertical rebar for positioning and anchoring purposes. Choice of class A, B, C, E, and F grates shall be available with H-20 and/or FAA load ratings and/or ADA compliance with mechanical lockdown devices (refer to pages 27 and 28). A heavy-duty steel frame is installed at the factory prior to shipping. End outlets, bottom outlets, and side outlets shall be available in 4", 6", 8", 12", and 18" diameters. Trench drain shall be Flo-Thru model Z874-12, Z874-18, or Z874-21. For downloadable CSI format specification, visit *www.zurn.com*.

Z874-12 Flow Rate Data				Z874-18 Flow Rate Data				Z874-21 Flow Rate Data			
Trench Number	Shallow Invert In. [mm]	Deep Invert In. [mm]	Flow Rate CFS	Trench Number	Shallow Invert In. [mm]	Deep Invert In. [mm]	Flow Rate CFS	Trench Number	Shallow Invert In. [mm]	Deep Invert In. [mm]	Flow Rate CFS
1201P	9.25 [235]	10.08 [256]	3.306	1801P	10.25 [260]	11.08 [281]	6.850	2101P	11.25 [286]	12.08 [307]	8.369
1202P	10.08 [256]	10.91 [277]	3.941	1802P	11.08 [281]	11.91 [303]	8.040	2102P	12.08 [305]	12.91 [328]	9.857
1203P	10.91 [277]	11.75 [298]	4.589	1803P	11.91 [303]	12.75 [324]	9.260	2103P	12.91 [328]	13.75 [349]	11.388
1204P	11.75 [298]	12.58 [319]	5.248	1804P	12.75 [324]	13.58 [345]	10.500	2104P	13.75 [349]	14.58 [370]	12.953
1205P	12.58 [319]	13.41 [341]	5.915	1805P	13.58 [345]	14.41 [366]	11.760	2105P	14.58 [370]	15.41 [391]	14.549
1205NP	13.41 [341]	13.41 [341]	–	1805NP	14.41 [366]	14.41 [366]	–	2105NP	15.41 [391]	15.41 [391]	–
1206P	13.41 [341]	14.24 [362]	6.589	1806P	14.41 [366]	15.24 [387]	13.040	2106P	15.41 [391]	16.42 [417]	16.170
1207P	14.24 [362]	15.07 [383]	7.268	1807P	15.24 [387]	16.07 [408]	14.330	2107P	16.42 [417]	17.07 [434]	17.814
1208P	15.07 [383]	15.91 [404]	7.953	1808P	16.07 [408]	16.91 [429]	15.630	2108P	17.07 [434]	17.91 [455]	19.478
1209P	15.91 [404]	16.74 [425]	8.641	1809P	16.91 [429]	17.74 [451]	16.940	2109P	17.91 [455]	18.74 [476]	21.159
1210P	16.74 [425]	17.57 [446]	9.333	1810P	17.74 [451]	18.57 [472]	18.270	2110P	18.74 [476]	19.57 [497]	22.855
1211P	17.57 [446]	18.40 [467]	10.028	1811P	18.57 [472]	19.40 [493]	19.600	2111P	19.57 [497]	20.40 [518]	24.565
1212P	18.40 [467]	19.23 [489]	10.726	1812P	19.40 [493]	20.23 [514]	20.930	2112P	20.40 [518]	21.23 [539]	26.287
1213P	19.23 [489]	20.07 [510]	11.426	1813P	20.23 [514]	21.07 [535]	22.280	2113P	21.23 [539]	22.07 [560]	28.020
1214P	20.07 [510]	20.90 [531]	12.128	1814P	21.07 [535]	21.90 [556]	23.630	2114P	22.07 [560]	22.90 [582]	29.763
1215P	20.90 [531]	21.73 [552]	12.832	1815P	21.90 [556]	22.73 [577]	24.980	2115P	22.90 [582]	23.73 [603	31.514
1215NP	21.73 [552]	21.73 [552]	–	1815NP	22.73 [577]	22.73 [577]	–	2115NP	23.73 [603]	23.73 [603]	–
1216P	21.73 [552]	22.56 [573]	13.538	1816P	22.73 [577]	23.56 [598]	26.340	2116P	23.73 [603]	24.56 [624]	33.274
1217P	22.56 [573]	23.39 [594]	14.244	1817P	23.56 [598]	24.39 [620]	27.710	2117P	24.56 [624]	25.39 [645]	35.041
1218P	23.39 [594]	24.23 [615]	14.953	1818P	24.39 [620]	25.23 [641]	29.080	2118P	25.39 [645]	26.23 [666]	36.814
1219P	24.23 [615]	25.06 [636]	15.662	1819P	25.23 [641]	26.89 [683]	30.450	2119P	26.23 [666]	27.06 [687]	38.594
1220P	25.06 [636]	25.89 [658]	16.372	1820P	26.89 [683]	26.89 [683]	31.820	2120P	27.06 [687]	27.89 [701]	40.379
1221P	25.89 [658]	26.72 [679]	17.084	1821P	26.89 [683]	27.72 [704]	33.200	2121P	27.89 [701]	28.72 [729]	42.169
1222P	26.72 [679]	27.55 [700]	17.796	1822P	27.72 [704]	28.55 [725]	34.580	2122P	28.72 [729]	29.55 [751]	43.964
1223P	27.55 [700]	28.39 [721]	18.509	1823P	28.55 [725]	29.39 [746]	35.960	2123P	29.55 [751]	30.39 [772]	45.763
1224P	28.39 [721]	29.22 [742]	19.223	1824P	29.39 [746]	30.22 [768]	37.350	2124P	30.39 [772]	31.22 [793]	47.567
1225P	29.22 [742]	30.05 [763]	19.937	1825P	30.22 [768]	31.05 [789]	38.740	2125P	31.22 [793]	32.05 [814]	49.374
1225NP	30.05 [763]	30.05 [763]	–	1825NP	31.05 [789]	31.05 [789]	–	2125NP	32.05 [814]	32.05 [814]	–
1226P	30.05 [763]	30.88 [784]	20.652	1826P	31.05 [789]	31.89 [810]	40.120	2126P	32.05 [814]	32.88 [835]	51.184
1227P	30.88 [784]	31.71 [806]	21.367	1827P	31.89 [810]	32.71 [831]	41.520	2127P	32.88 [835]	33.71 [856]	52.998
1228P	31.71 [806]	32.55 [827]	22.083	1828P	32.71 [831]	33.55 [852]	42.910	2128P	33.71 [856]	34.55 [878]	54.815
1229P	32.55 [827]	33.38 [848]	22.800	1829P	33.55 [852]	34.38 [873]	44.300	2129P	34.55 [878]	35.38 [899]	56.634
1230P	33.38 [848]	34.21 [869]	23.517	1830P	34.38 [873]	35.21 [894]	45.700	2130P	35.38 [899]	36.21 [920]	58.457

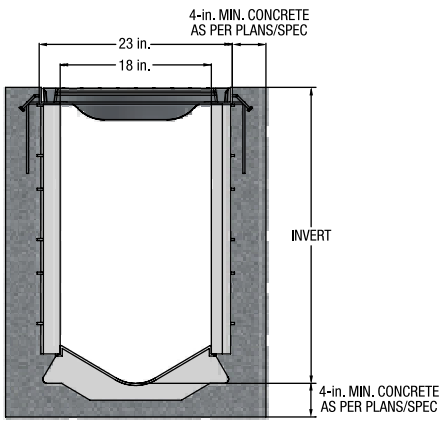
Installation Specifications *Consult Plans and Specifications*

Z874-12



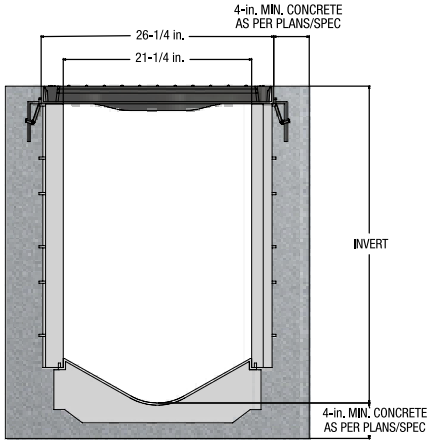
12" Throat / 17" Overall Width

Z874-18



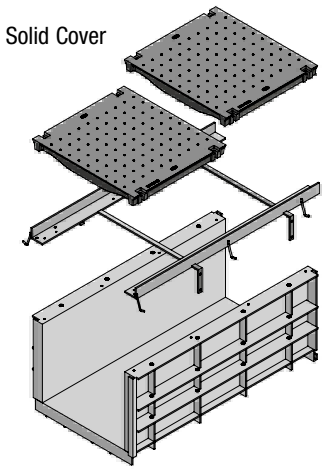
18" Throat / 23" Overall Width

Z874-21



21-1/4" Throat / 26-1/4" Overall Width

Z874-U-XX-HD Perma-Trench HDPE Utility Chase System



Z874-U-XX-HD Applications

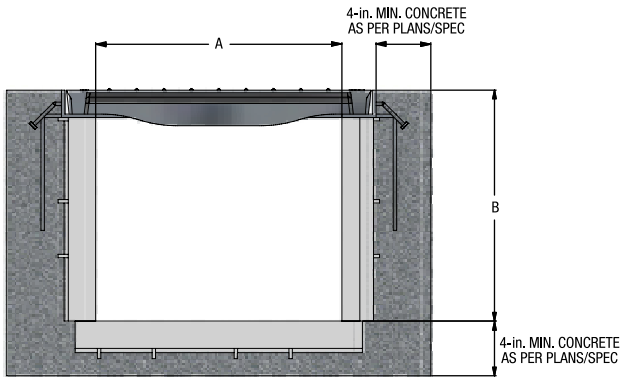
Manufacturing Facilities
Grocery Stores
Malls
Banks
Schools
Hospitals
Electronics Stores
Pharmaceuticals

Z874-U-XX-HD Dimensional Data

System	Dimension A (Throat) Inches	Dimension A (Throat) mm	Dimension B (Invert) Inches
Z874-U-9-HD	9-1/4	235	*
Z874-U-12-HD	12	305	*
Z874-U-18-HD	18	457	*
Z874-U-21-HD	21	533	*

*The Z874-U-XX-HD is a neutral, non-sloped utility chase system. Depths of this system may range from 4" to 30".

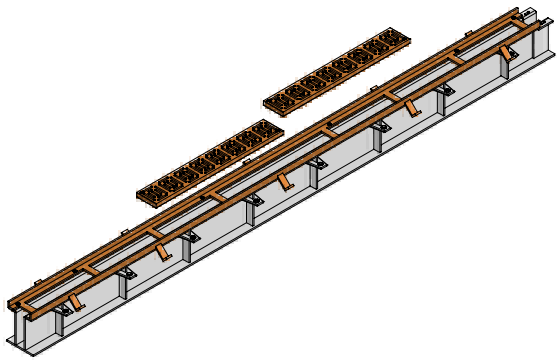
Installation Specification



A Throat / B Invert
Consult Plans and Specifications

Engineering Specification Zurn Z874-U-XX-HD Heavy-Duty Utility Chase Drainage System with Ductile Grate. High Density Polyethylene (HDPE) drain channel. All sections modular 80" or 8' lengths with interlocking ends. Complete with Dura-Coated steel frame system, ductile iron solid cover, or checkered steel plate. For downloadable CSI format specification, visit *www.zurn.com*.

Z880-CUSTOM Perma-Trench Aesthetic Drainage System



Z880-CUSTOM Applications

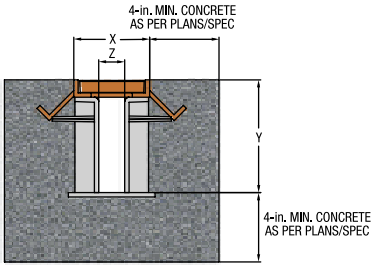
Pools
Residential
Balconies
Fountains

Features and Benefits

- *Custom Lengths*
- *HDPE Channels*
- *Stainless Steel and Aluminum Frames and Grates Available*
- *All Aluminum Components Can Be Anodized to Match Colors*
- *Ability to Custom Radius 7" to Infinity*
- *Contact Factory for Design Assistance*

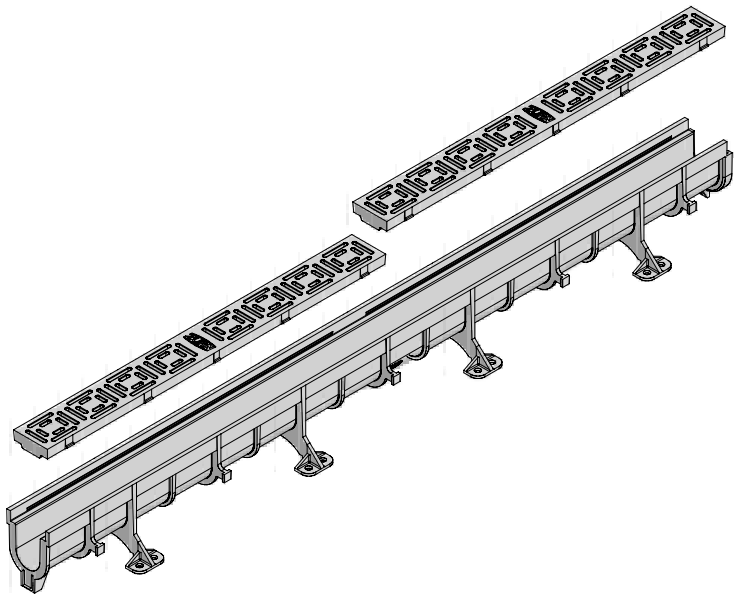
Installation Specification

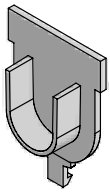
X, Y, and Z varies from 2" to 12".



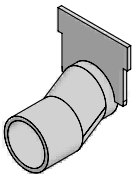
Consult Plans and Specifications

Engineering Specification Contact the factory for engineering assistance with a specification to meet the requirements.

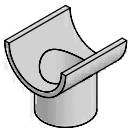




Closed End Cap
(E1)

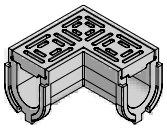


End Outlet
(1-1/2" NH)

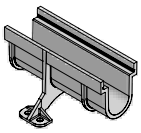


Bottom Outlet
(1-1/2" NH)

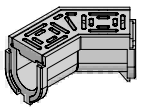
Z880 System Highlights



90° Connector
Channel with Grate

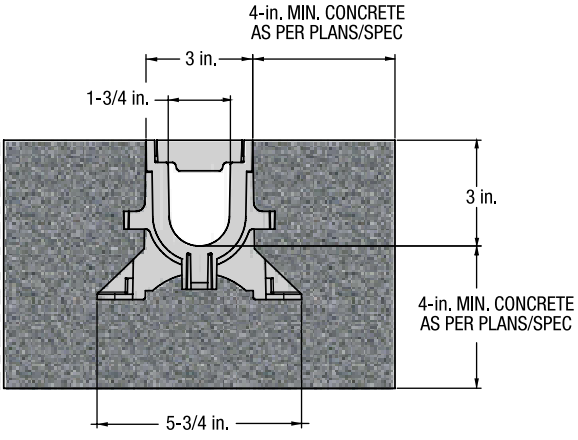


Bedding Feet



45° Connector
Channel with Grate

Installation Specification



Consult Plans and Specifications

Z880 Applications

Pools

Residential

Hardscapes

Features and Benefits

- *48" Pre-engineered Modular Channel Sections with 24" Grates*
- *Durable and Lightweight*
- *3" Trench Depth*
- *Prefabricated 45's and 90's*
- *Five Standard Colors – Gray, Brick Red, Blue, Sand, and White*





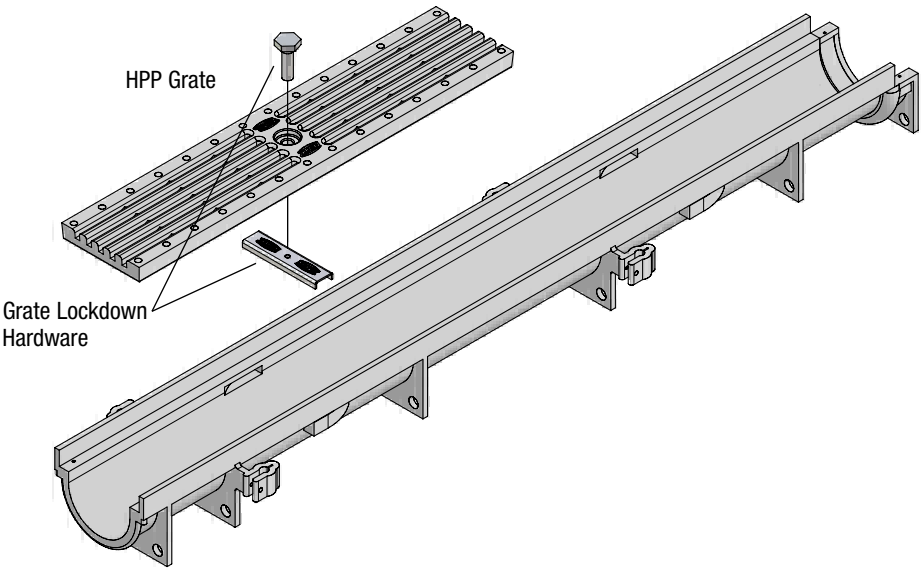
- *Grate Options – Heel-Proof Polyethylene Grate (-POG), Bronze Decorative Grate (-BZ), Aluminum Wire Grate (-AWG), Stainless Steel Wire Grate (SWG), and Stainless Steel Decorative Grate (SOG).*

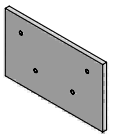
Z880 Dimensional Data

Top Size	Overall Depth C Minimum Inches	mm	D Maximum Inches	mm	Approx. Weight (Less Grate) Lbs.	Kg
880	3.0	76.2	3.0	76.2	4	1.8

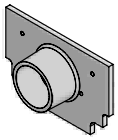
Engineering Specification 2-1/2" Wide Trench Drain System shall be 48" long and 2-1/2" wide. Drain shall be 3" deep. Drain shall be made of High Density Polyethylene (HDPE) and be UV-10 stabilized. Drain shall have bedding feet and/or bedding feet shall be used for positioning and anchoring purposes. Drain shall have tongue and groove snap fit connection. End outlets and bottom outlets shall be available in 1-1/2" diameter. Drain shall be Flo-Thru model Z880. 24" long High Density Polyethylene decorative grate (-POG) provided as standard. For downloadable CSI format specification, visit *www.zurn.com*.

Z884 Perma-Trench 4-3/4" Shallow Drain System (3.25" Throat)

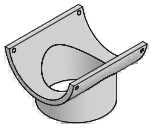




Closed End Cap (E1)



End Outlet (2" NH)



Bottom Outlet (3" NH)

Z884 Applications

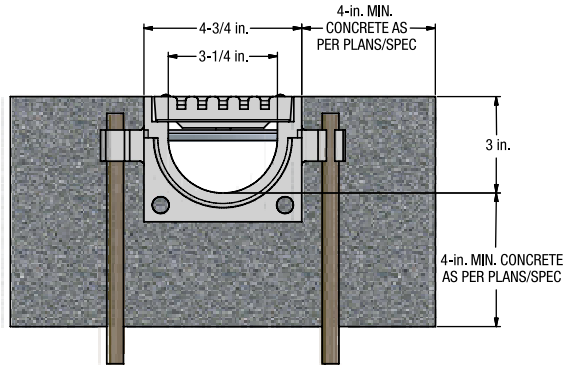
Sidewalks

Kitchens

Pools

Residential

Installation Specification



3-1/4" Throat / 4-3/4" Overall Width
Consult Plans and Specifications

Features and Benefits

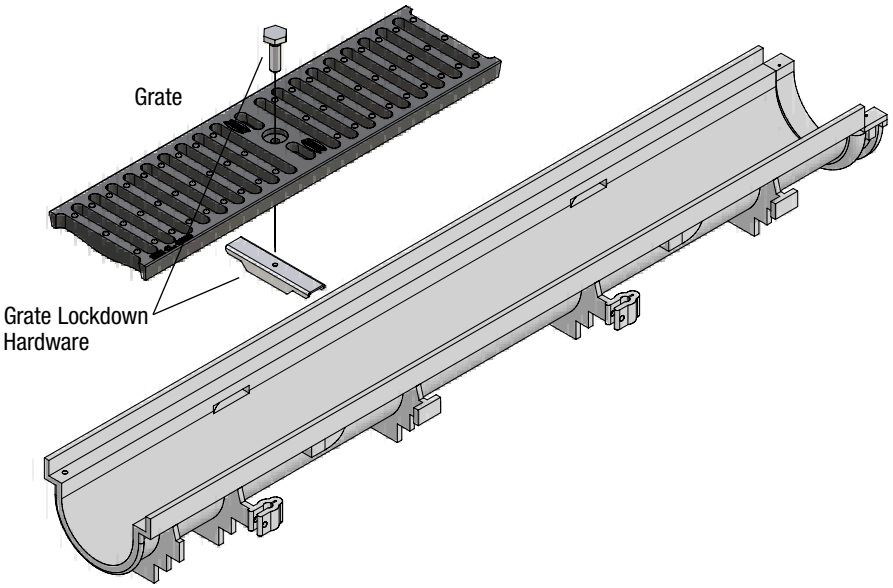
- ***40" Pre-engineered Modular Channel Sections with 20" or 40" Grates***
- ***Smooth Seamless Construction** – Clean, sanitary installation.*
- ***Durable and Lightweight** – Strong corrosion-resistant material.*
- ***2-7/8" Trench Depth** – For depth restricted applications.*
- ***Variety of Gratings** – Able to meet specific job requirements.*
- ***Grate Options** – Available in ADA. See page 28.*
- ***Optional** – Stainless veneer frame.*
- ***Built-In Rebar Clips –** Accommodates #3 rebar (supplied by others).*

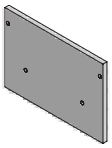
Z884 Dimensional Data

	Overall Depth		Approx. Wt. (Less Grate)	
Number	Inches	mm	Lbs.	Kg
884	2.875	73	2.3	1.04

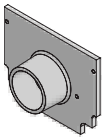
Engineering Specification Channels shall be 40" long, 4-3/4" wide, and have a 3-1/4" wide throat. Modular channel sections shall be made of polypropylene, have interlocking ends, and radiused bottom. Channel shall be provided flat (neutral) with a 2.875" invert. Channels shall have clips molded into the sides of the channel to accommodate vertical rebar for positioning and anchoring purposes. Choice of class A, B, and C grates shall be available with H-20 and/or ADA compliance with mechanical lockdown devices (refer to page 28). End caps and catch basins shall be available to complement the channels and grates. End outlets in 2" diameter and bottom outlets in 3" diameter shall be available. Trench drain shall be Flo-Thru model Z884. For downloadable CSI format specification, visit *www.zurn.com*.

Z883 Perma-Trench 6" Shallow Drain System (4" Throat)

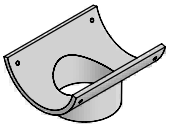




Closed End Cap (E1)



End Outlet (2" NH)



Bottom Outlet (2", 3", 4" NH)

Z883 Applications

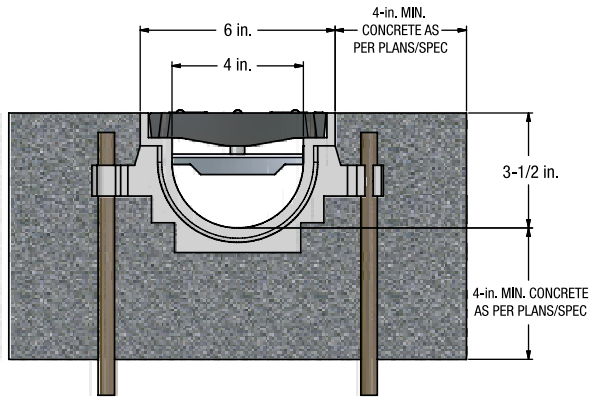
Sidewalks

Kitchens

Pools

Residential

Installation Specification



4" Throat / 6" Overall Width

Consult Plans and Specifications

Features and Benefits

- ***40" Pre-engineered Modular Channel Sections with 20" or 40" Grates***
- ***Smooth Seamless Construction** – Clean, sanitary installation.*
- ***Durable and Lightweight** – Strong corrosion-resistant material.*
- ***3-1/2" Trench Depth** – For depth restricted applications.*
- ***Variety of Gratings** – Able to meet specific job requirements.*
- ***Grate Options** – Available in ADA. See pages 24-25.*
- ***Optional** – Stainless veneer frame.*
- ***Built-In Rebar Clips –** Accommodates #3 rebar (supplied by others).*

Z883 Dimensional Data

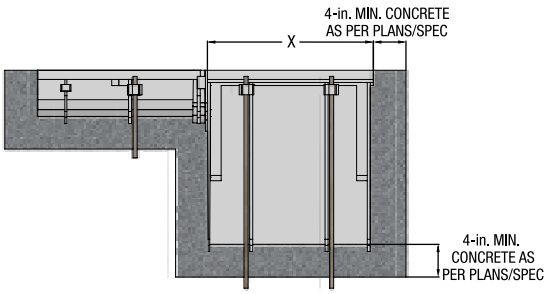
	Overall Depth					
	C Minimum		D Maximum		Approx. Wt. (Less Grate)	
Top Size	Inches	mm	Inches	mm	Lbs.	Kg
883	3.5	88.9	3.5	88.9	4	1.8

Engineering Specification Channels shall be 40" long, 6" wide, and have a 4" wide throat. Modular channel sections shall be made of polypropylene, have interlocking ends, and radiused bottom. Channel shall be provided flat (neutral) with a 3-1/2" invert. Channels shall have clips molded into the sides of the channel to accommodate vertical rebar for positioning and anchoring purposes. Choice of class A, B, and C grates shall be available with H-20 and/or ADA compliance with mechanical lockdown devices (refer to pages 24 and 25). End caps and catch basins shall be available to complement the channels and grates. End outlets in 2" diameter and bottom outlets in 2", 3", and 4" diameters shall be available. Trench drain shall be Flo-Thru model Z883. For downloadable CSI format specification, visit *www.zurn.com*.

Z887 Applications

Highways	Industrial Parks
Driveways	Chemical Plants
Kitchens	Food Processing
Pools	Shopping Malls
Parking Lots	Industrial Plants
Gas Stations	Pharmaceuticals
Car Washes	Amusement Parks
Airports	Port Facilities
Airplane Hangars	Water Parks

Installation Specification



Consult Plans and Specifications

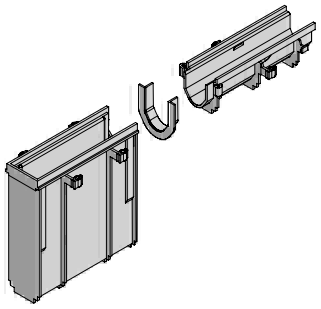
Features and Benefits

- ***6" x 20" Catch Basin*** *– The 6" x 20" basin is meant to be used as an in-line sump for applications where, from the top surface, the visual appearance is of continuous 6" wide Z886 trenching. Simply trace and cut the trench section to be connected into the end of the basin, insert into the basin, bolt together, and caulk around the exterior. For grate options, refer to pages 24-25.*
- ***12" x 24" and 24" x 24" Catch Basins*** *– The larger catch basins, 12" x 24" x 24" and 24" x 24" x 24", provide greater sump capacities for larger trench runs. These catch basins can be used with Z882 and Z886 trenches. These basins have an external trench adapter supplied to make the transition between the trench and basin (see illustration). This adapter, along with the hardware, is supplied by Zurn to make a fast and easy connection to any basin. Additional adapters can be used to make numerous connections of trench into the catch basin. For grate options, refer to page 26.*
- ***Basin Extension for 24" x 24"*** *– This 12" polyethylene extension for 24" x 24" catch basin provides greater depths and capacities. These stackable units allow for depths in 12" increments. For grate options, refer to page 29.*

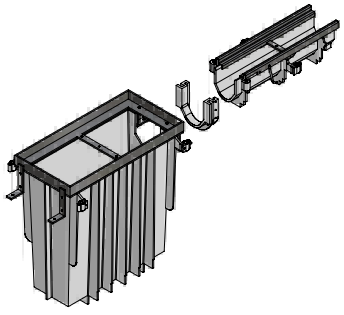
Z887 Dimensional Data

	Overall Top Dimensions				Approx. Weight (Less Grate)	
	Length		Width			
Basin	Inches	mm	Inches	mm	Lbs.	Kg
6 x 20	20-3/4	527	6-1/4	159	17.0	7.7
12 x 24	23-1/4	591	12	305	14.6	6.6
24 x 24	23-1/4	591	24-5/8	625	19.9	9.0

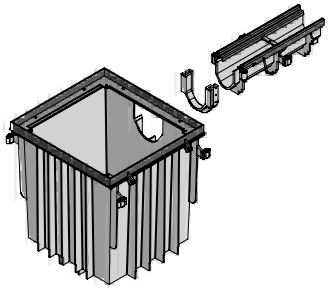
Z887 System Highlights



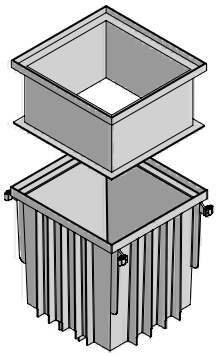
6" x 20" Catch Basin with Z886 Connecting Trench



12" x 24" Catch Basin with Z886 Connecting Trench



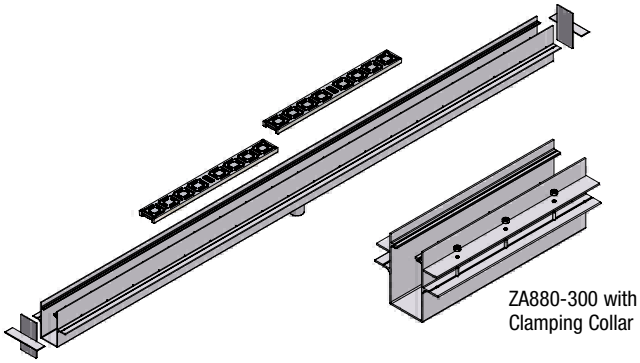
24" x 24" Catch Basin with Z886 Connecting Trench



24" x 24" Catch Basin with 12" High Basin Extension

Engineering Specification Catch Basins shall be 6" wide x 20" long x 20" deep, 12" wide x 24" long x 24" deep, or 24" wide x 24" long x 24" deep and shall be made of High Density Polyethylene (HDPE). Choice of class A, B, C, D, E, and F grates shall be available with H-20, FAA, and/or ADA compliance with mechanical lockdown devices (refer to page 28). Outlets in 2", 3", 4", 6", and 8" diameters shall be available. Catch Basin shall be Flo-Thru model Z887. For downloadable CSI format specification, visit *www.zurn.com*.

ZA880-300 Extruded Aluminum Trench Drain



ZA880-300 with Clamping Collar

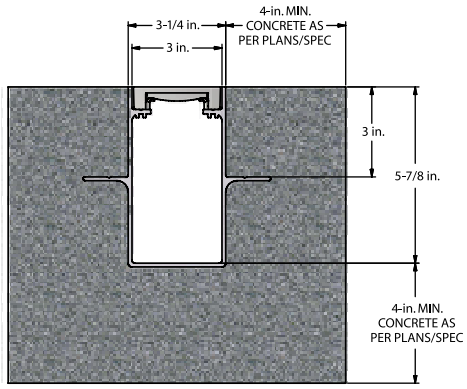
Features and Benefits

- *96" Channel Sections with 24" Grates*
- *Flanged on Both Sides of Trench*
- *Four-Corner Lockdown Bronze or Ductile Iron Grates Available*
- *Mechanically Fastened Joint Connector with Integral Gasket*
- *Optional – Clamping Collar and Pan (-KC) w/Weep Holes*
- *Compatible with Vapor Barrier Applications*
- *Aluminum Channel Can Be Anodized to Match Pantone Color*

ZA880-300 Applications

Pools
Shower Drains
Residential
Decks

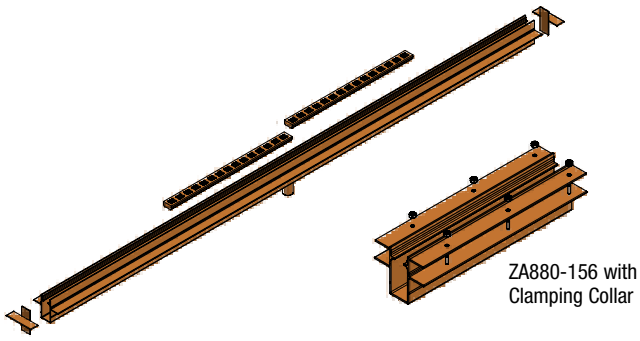
Installation Specification



Consult Plans and Specifications

Engineering Specification Zurn ZA880-300 Extruded Aluminum Trench Drain System. 3" interior width x 6" overall height x 96" long, 48" long, or 24" long. Complete with 1-1/2" wide flanges on one or both sides. Material to be Aluminum Alloy 6063T5. Cast decorative bronze grate conforms to ASTM B584 Copper Alloy No. 844. Trench is anodized after extrusion to match grate color. End caps and outlets factory attached at the location determined by the customer before anodizing. For downloadable CSI format specification and other options available, visit *www.zurn.com*.

ZA880-156 Extruded Aluminum Trench Drain



ZA880-156 with Clamping Collar

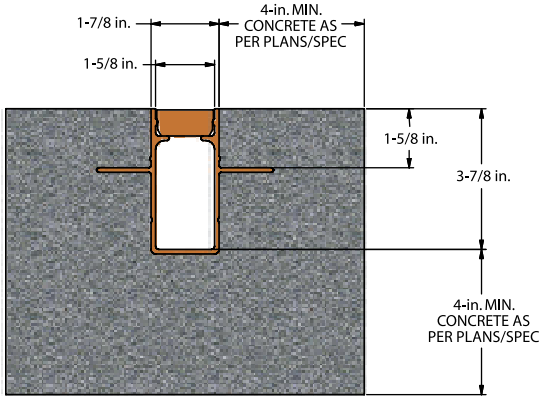
Features and Benefits

- *96" Channel Sections with 24" Grates*
- *Flanged on Both Sides of Trench*
- *Bronze Decorative Grate*
- *Optional – Clamping Collar and Pan (-KC) w/Weep Holes*
- *Compatible with Vapor Barrier Applications*
- *Aluminum Channel Can Be Anodized to Match Pantone Color*

ZA880-156 Applications

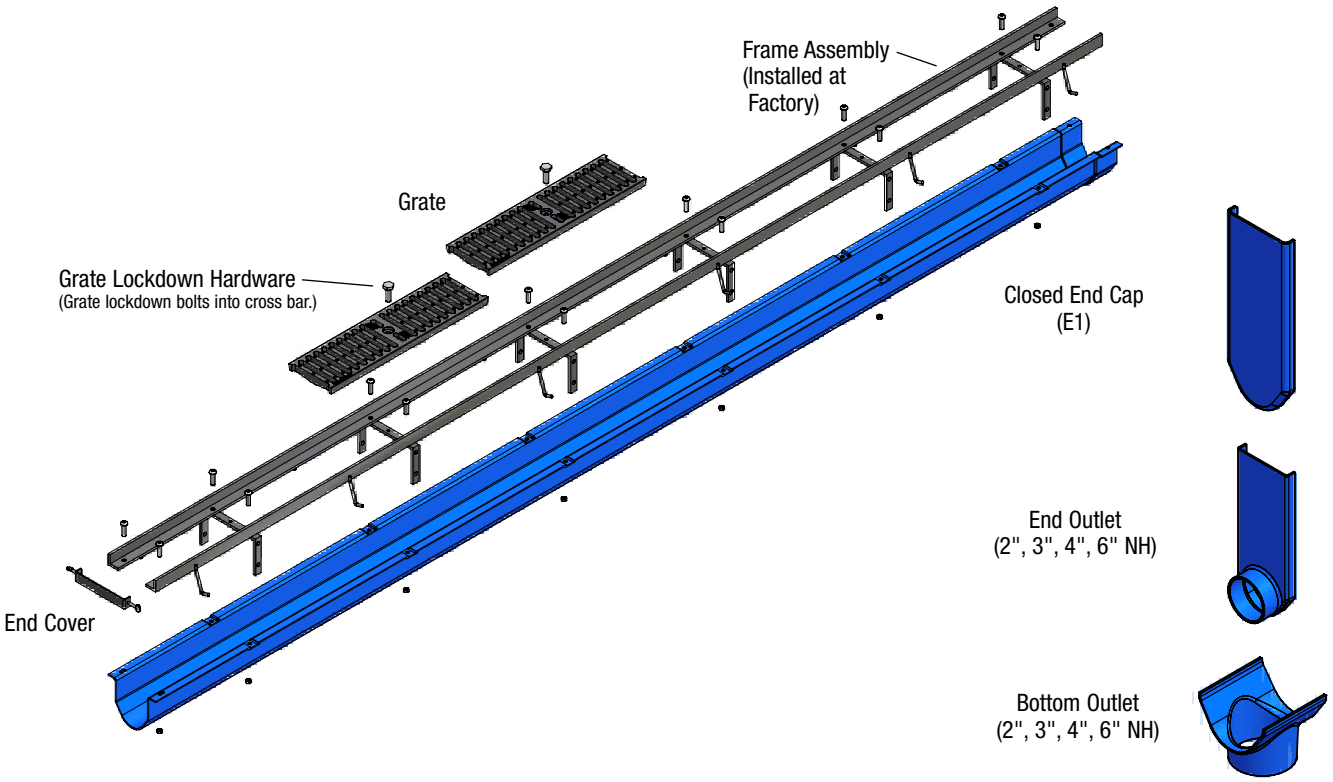
Pools
Shower Drains
Residential
Decks

Installation Specification



Consult Plans and Specifications

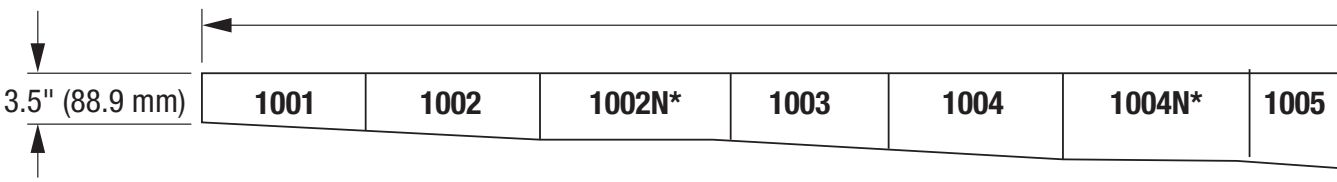
Engineering Specification Zurn ZA880-156 Extruded Aluminum Trench Drain System. 1.63" interior width x 4" overall height x 80" long. Complete with 1-1/2" wide flanges on side. Material to be Aluminum Alloy 6063T5. Cast decorative bronze snap-in grate conforms to ASTM B584 Copper Alloy No. 844. Trench is anodized after extrusion to match grate color. End caps and outlets factory attached at the location determined by the customer before anodizing. For downloadable CSI format specification and other options available, visit *www.zurn.com*.



Z806 Dimensional Data

Trench Number	Shallow Invert Inches	Shallow Invert mm	Deep Invert Inches	Deep Invert mm	Max. Flow Rate GPM	Max. Flow Rate LPS	Max. Flow Rate CFS	Approx. Weight (Less Grate) Lbs.	Approx. Weight (Less Grate) Kg
1001	3.50	89	4.40	112	88	6	0.196	39	17.7
1002	4.40	112	5.30	135	133	8	0.296	40	18.1
1002N	5.30	135	5.30	135	–	–	–	40	18.1
1003	5.30	135	6.20	157	178	11	0.397	41	18.6
1004	6.20	157	7.10	180	225	14	0.501	43	19.5
1004N	7.10	180	7.10	180	–	–	–	43	19.5
1005	7.10	180	8.00	203	271	17	0.604	44	20.0
1006	8.00	203	8.90	226	319	20	0.711	46	20.9
1007	8.90	226	9.80	249	366	23	0.816	47	21.3
1008	9.80	249	10.70	272	414	26	0.922	49	22.2
1008N	10.70	272	10.70	272	–	–	–	49	22.2
1009	10.70	272	11.60	295	462	29	1.029	50	22.7
1010	11.60	295	12.50	318	510	32	1.136	51	23.1

Z806 System Profile

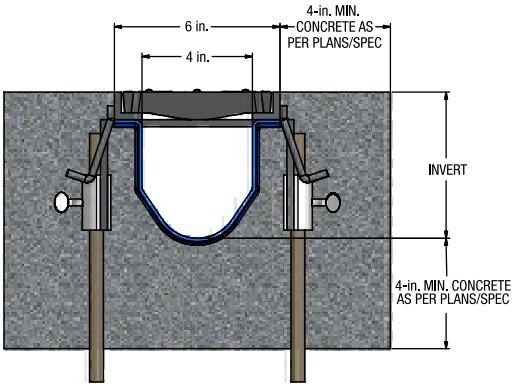


*N = Neutral (non-sloping)

Z806 Applications

Highways
Driveways
Kitchens
Pools
Parking Lots
Gas Stations
Airports
Airplane Hangars
Industrial Parks
Chemical Plants
Food Processing
Shopping Malls
Industrial Plants
Pharmaceuticals
Amusement Parks

Installation Specification

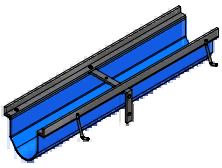


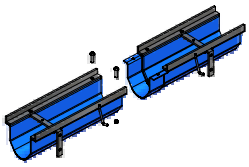
4" Throat / 6" Overall Width
Consult Plans and Specifications

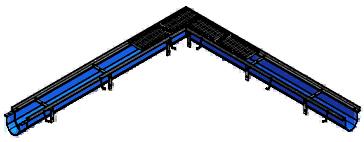
Features and Benefits

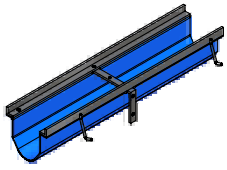
- ***Ten-Foot Pre-engineered Modular Sections***
- ***.75% Built-In Slope*** *– Handles greater flows, uniform slope.*
- ***Radiused Bottom*** *– Better flow rate, less solids build-up.*
- ***Durable and Lightweight*** *– Strong corrosion-resistant material.*
- ***Extra Long Runs*** *– Sidewall extensions allow pre-slope runs up to 190 feet.*
- ***Available in Vinylester***
- ***Tie Strap Every 20"*** *– Easier to place and level intermediate anchor mechanisms.*
- ***Versatility of Outlet Locations*** *– Easier to install, flexible outlet location.*
- ***Variety of Gratings***
- ***Grate Options*** *– From pedestrian to FAA rated; ADA compliant. See pages 24-25.*
- ***Optional Rebar Clips –*** *Accommodates #3 or #4 rebar (supplied by others).*

Z806 System Highlights

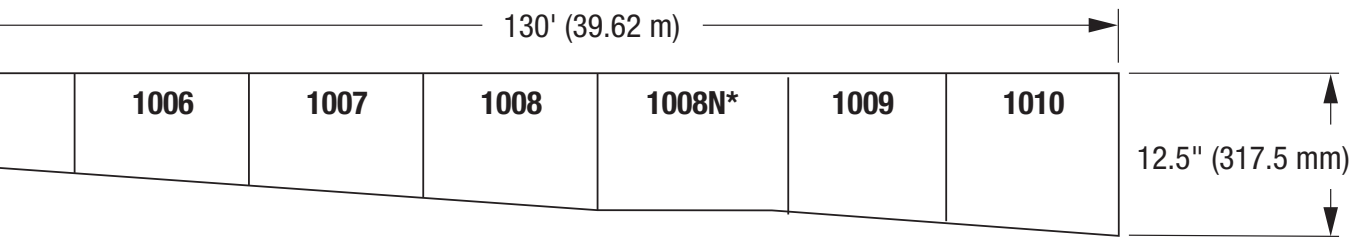

Frame Assembly with Anchor Studs

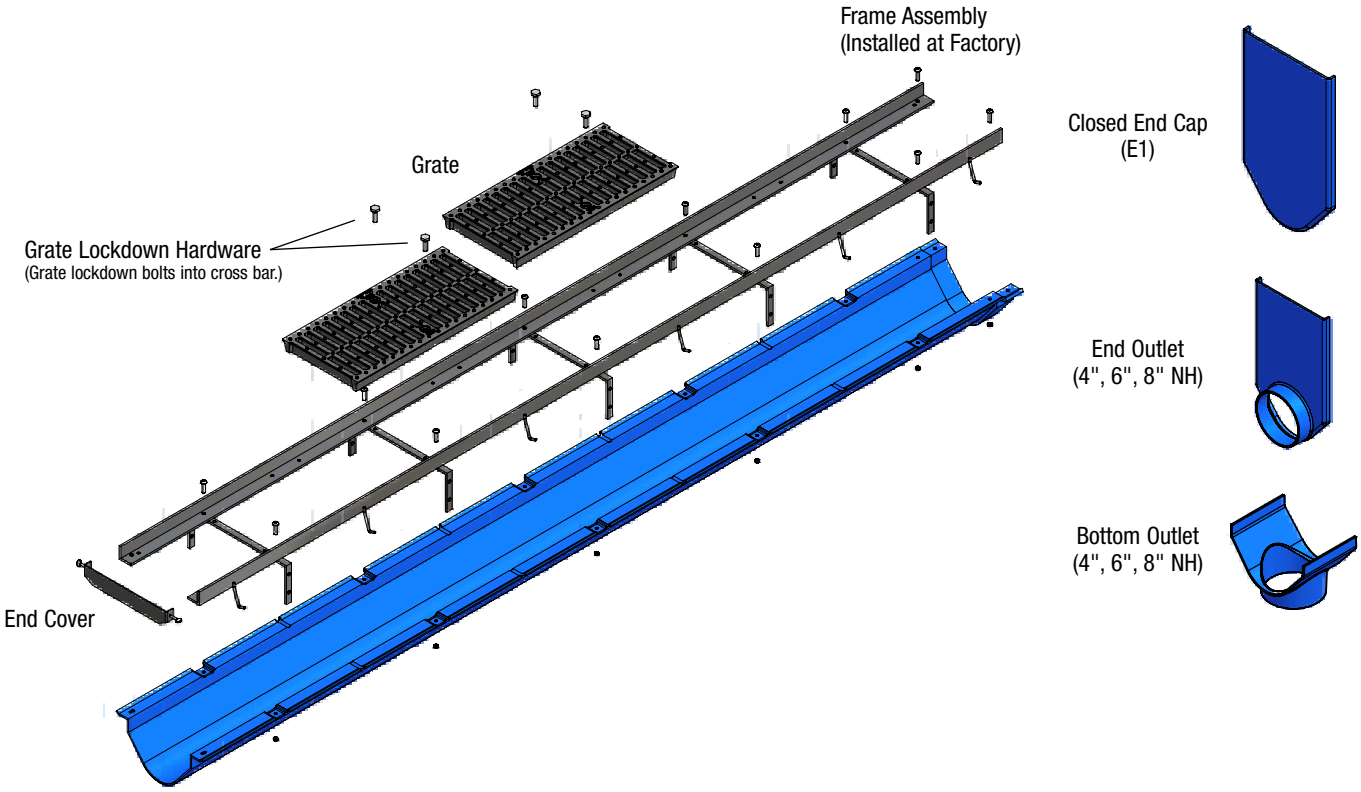

Mechanical Overlap Connection


90° Fabrication


Optional Rebar Clips For Installation

Engineering Specification Channels shall be 10' long, 6" wide, and have a 4" wide throat. Modular channel sections shall be made of Fiber Reinforced Polyester (FRP) fiberglass, have interlocking ends, and radiused bottom. Channel shall be provided with no slope or with a .75% built-in slope. Channels shall be available with inverts ranging from 3.5" to 12.50" (sidewall extensions optional; must be installed at factory). Choice of class A, B, C, D, E, and F grates shall be available with H-20 and/or FAA load ratings and/or ADA compliance with mechanical lockdown devices (refer to pages 24 and 25). A heavy-duty steel frame shall be provided to distribute weight between the grates and the FRP fiberglass channel. End caps and catch basins shall be available to complement the channels and grates. End outlets, bottom outlets, and side outlets shall be available in 2", 3", 4", and 6" diameters. Trench drain shall be Flo-Thru model Z806. For downloadable CSI format specification, visit *www.zurn.com*.

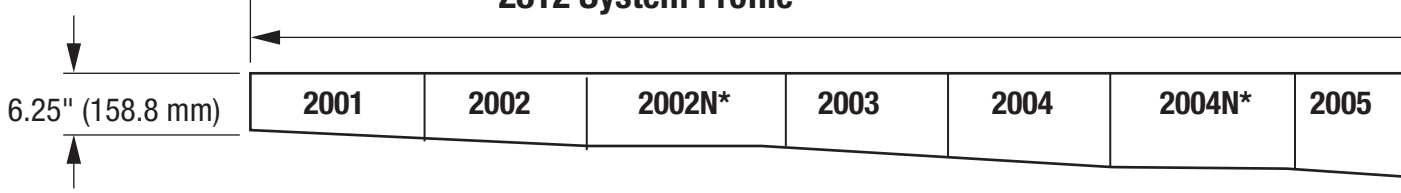




Z812 Dimensional Data

Trench Number	Shallow Invert Inches	Shallow Invert mm	Deep Invert Inches	Deep Invert mm	Max. Flow Rate GPM	Max. Flow Rate LPS	Max. Flow Rate CFS	Approx. Weight (Less Grate) Lbs.	Approx. Weight (Less Grate) Kg
2001	6.25	159	7.50	191	583	37	1.299	78	35.4
2002	7.50	191	8.75	222	857	54	1.910	80	36.3
2002N	8.75	222	8.75	222	–	–	–	82	37.2
2003	8.75	222	10.00	254	1144	72	2.549	84	38.1
2004	10.00	254	11.25	286	1438	91	3.204	87	39.5
2004N	11.25	286	11.25	286	–	–	–	88	39.9
2005	11.25	286	12.50	318	1739	110	3.875	91	41.3
2006	12.50	318	13.75	349	2043	129	4.552	94	42.6
2007	13.75	349	15.00	381	2350	149	5.236	97	44.0
2008	15.00	381	16.25	413	2659	168	5.925	99	44.9
2008N	16.25	413	16.25	413	–	–	–	100	45.4
2009	16.25	413	17.50	445	2970	188	6.618	103	46.7
2010	17.50	445	18.75	476	3283	208	7.315	106	48.1

Z812 System Profile

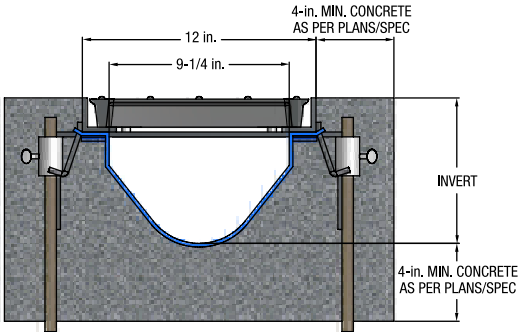


*N = Neutral (non-sloping)

Z812 Applications

Highways
Airports
Airplane Hangars
Parking Lots
Gas Stations
Industrial Parks
Chemical Plants
Food Processing
Industrial Plants
Pharmaceuticals
Port Facilities
Water Parks

Installation Specification

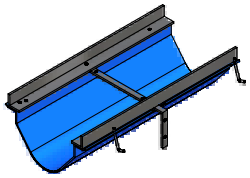


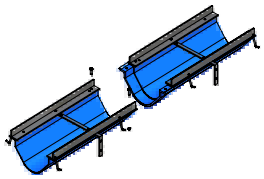
9-1/4" Throat / 12" Overall Width
Consult Plans and Specifications

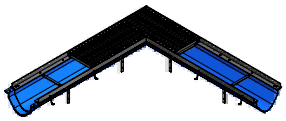
Features and Benefits

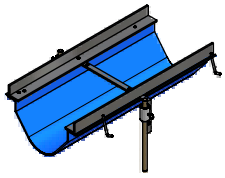
- ***Ten-Foot Pre-engineered Modular Sections***
- ***1.04% Built-In Slope*** *– Handles greater flows, uniform slope.*
- ***Radiused Bottom*** *– Better flow rate, less solids build-up.*
- ***Durable and Lightweight*** *– Strong corrosion-resistant material.*
- ***Extra Long Runs*** *– Sidewall extensions allow pre-slope runs up to 200 feet.*
- ***Available in Vinylester***
- ***Tie Strap Every 24"*** *– Easier to place and level intermediate anchor mechanisms.*
- ***Versatility of Outlet Locations*** *– Easier to install, flexible outlet location.*
- ***Variety of Gratings***
- ***Grate Options*** *– From pedestrian to FAA rated; ADA compliant. See page 26.*
- ***Optional Rebar Clips –*** *Accommodates #3 or #4 rebar (supplied by others).*

Z812 System Highlights

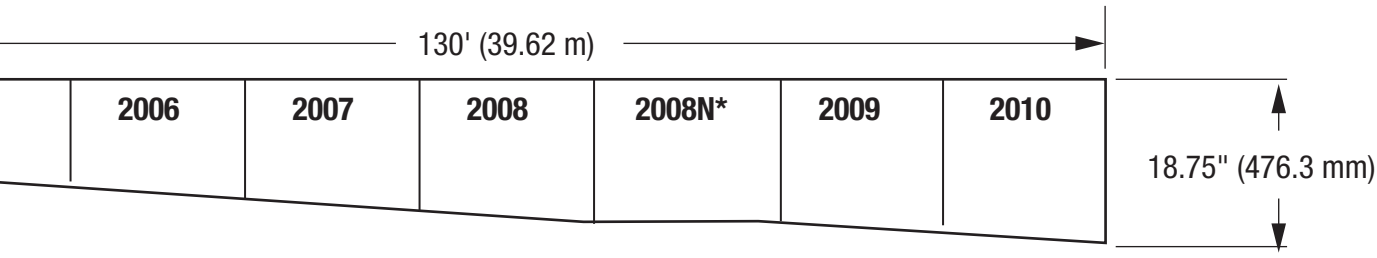

Frame Assembly with Anchor Studs


Mechanical Overlap Connection


90° Fabrication


Optional Rebar Clips For Installation

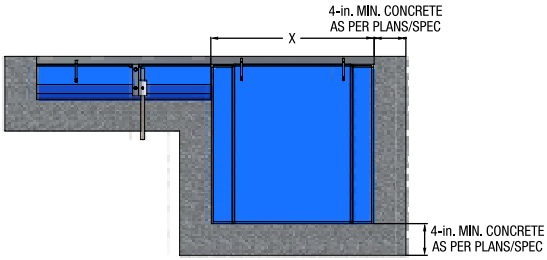
Engineering Specification Channels shall be 10' long, 12" wide, and have a 9-1/4" wide throat. Modular channel sections shall be made of Fiber Reinforced Polyester (FRP) fiberglass, have interlocking ends, and radiused bottom. Channel shall be provided either flat (neutral) or with a 1.04% built-in slope. Channels shall be available with inverts ranging from 6.25" to 18.25" (sidewall extensions optional; must be installed at factory). Choice of class A, B, C, D, E, and F grates shall be available with H-20 and/or FAA load ratings and/or ADA compliance with mechanical lockdown devices (refer to page 26). A heavy-duty steel frame shall be provided to distribute weight between the grates and the FRP fiberglass channel. End caps and catch basins shall be available to complement the channels and grates. End outlets, bottom outlets, and side outlets shall be available in 4", 6", and 8" diameters. Trench drain shall be Flo-Thru model Z812. For downloadable CSI format specification, visit *www.zurn.com*.



Z817 Applications

Highways
Driveways
Kitchens
Pools
Parking Lots
Gas Stations
Airports
Airplane Hangars
Industrial Parks
Chemical Plants
Food Processing
Shopping Malls
Industrial Plants
Pharmaceuticals
Port Facilities
Water Parks
Amusement Parks

Installation Specification



Consult Plans and Specifications

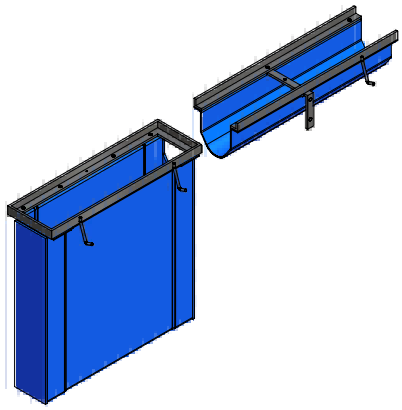
Features and Benefits

- ***6" x 20" Catch Basin*** *– The 6" x 20" basin is meant to be used as an in-line sump for applications where, from the top surface, the visual appearance is of continuous 6" wide Z806 trenching. Simply trace and cut the trench section to be connected into the end of the basin, insert into the basin, bolt together, and caulk around the exterior.*
- ***12" x 24" and 24" x 24" Catch Basins*** *– The larger catch basins, 12" x 24" x 24" and 24" x 24" x 24", provide greater sump capacities for larger trench runs. These catch basins can be used with Z806 and Z812. These basins have an external trench adapter supplied to make the transition between the trench and basin (see illustration). This adapter, along with the hardware, is supplied by Zurn to make a fast and easy connection to any basin. Additional adapters can be used to make numerous connections of trench into the catch basin.*

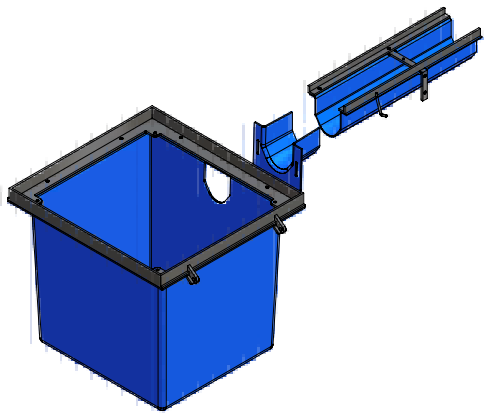
Z817 Dimensional Data

	Overall Top Dimensions				Approx. Weight (Less Grate)	
	Length		Width			
Basin	Inches	mm	Inches	mm	Lbs.	Kg
6 x 20	20-5/8	524	6	152	11	5.0
12 x 24	23-1/4	591	12	305	36	16.3
24 x 24	23-1/4	591	24-5/8	625	50	22.7

Z817 System Highlights



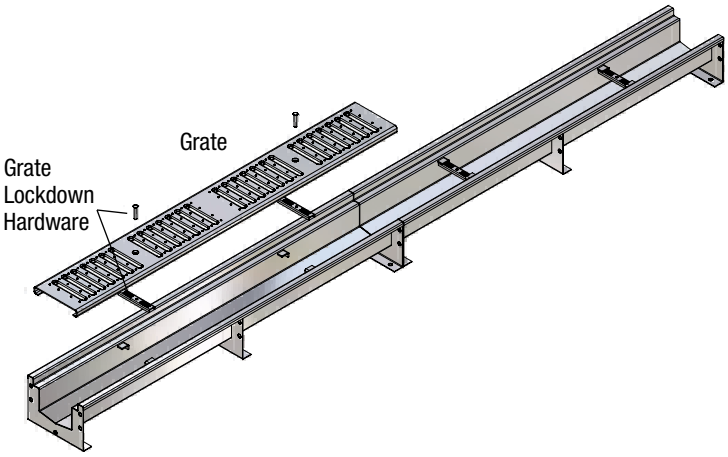
6" x 20" Catch Basin with Z806 Connecting Trench



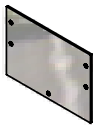
24" x 24" Catch Basin with Z806 Connecting Trench

Engineering Specification Catch Basins shall be 6" wide x 20" long x 20" deep, 12" wide x 24" long x 24" deep, or 24" wide x 24" long x 24" deep and shall be made of Fiber Reinforced Polyester (FRP) fiberglass. Choice of class A, B, C, D, E, and F grates shall be available with H-20, FAA, and/or ADA compliance with mechanical lockdown devices (refer to page 28). Outlets in 2", 3", 4", 6", and 8" diameters shall be available. Catch Basin shall be Flo-Thru model Z817. For downloadable CSI format specification, visit *www.zurn.com*.

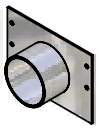
Z890 Sani-Flo 6" Stainless Steel Drain System (4" Throat)



Closed End Cap
(E1)
Z890 supplied with outlet attached.



End Outlet
(2", 3", 4", 6" NH)
Z890 supplied with outlet attached.



Bottom Outlet
(2", 3", 4", 6" NH)
Z890 supplied with outlet attached.

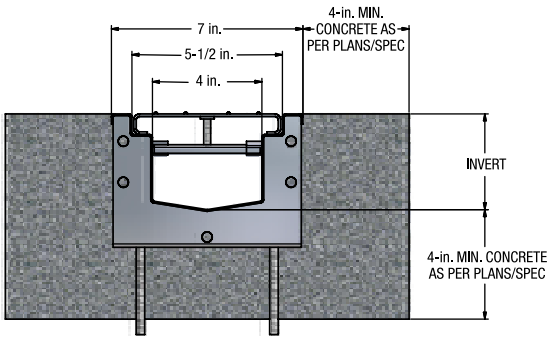
Z890 Applications

Food Processing
Dairies
Showers/Restrooms
Breweries
Chemical Plants
Pharmaceuticals

Features and Benefits

- *5' Pre-engineered Modular Sections*
- *1.04% Built-in Slope*
- *Smooth Seamless Construction*
- *Variety of Gratings – See pages 24-25.*
- *Custom Fabrications*
- *Optional – Type 316 Stainless Steel Available*
- *Optional – Clamping Collar and Pan (-KC)*

Installation Specification



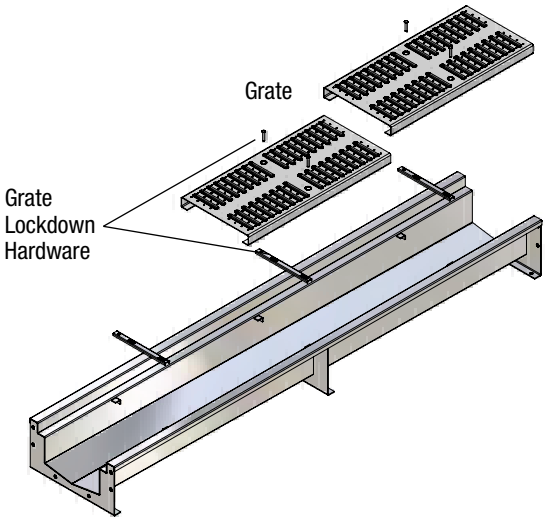
4" Throat / 7" Overall Width
Consult Plans and Specifications

Z890 Dimensional Data

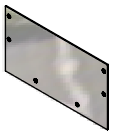
Trench Number	Shallow Invert Inches	Shallow Invert mm	Deep Invert Inches	Deep Invert mm	Max. Flow Rate GPM	Max. Flow Rate LPS	Max. Flow Rate CFS	Approx. Weight (Less Grate) Lbs.	Approx. Weight (Less Grate) Kg
89001	3.50	89	4.13	105	97	6	0.216	20	9.0
89002	4.13	105	4.75	121	124	8	0.276	21	9.5
89002N	4.75	121	4.75	121	–	–	–	22	10.0
89003	4.75	121	5.38	137	151	10	0.336	23	10.4
89004	5.38	137	6.00	152	179	11	0.399	24	10.9
89004N	6.00	152	6.00	152	–	–	–	25	11.3
89005	6.00	152	6.63	168	207	13	0.461	26	11.8
89006	6.63	168	7.25	184	235	15	0.524	27	12.2
89006N	7.25	184	7.25	184	–	–	–	28	12.7
89007	7.25	184	7.88	200	263	17	0.586	29	13.1
89008	7.88	200	8.50	216	292	18	0.651	30	13.6
89008N	8.50	216	8.50	216	–	–	–	31	14.0
89009	8.50	216	9.13	232	321	20	0.715	32	14.5
89010	9.13	232	9.75	248	349	22	0.778	34	15.4
89010N	9.75	248	9.75	248	–	–	–	35	15.9
89011	9.75	248	10.38	264	378	24	0.842	35	15.9
89012	10.38	264	11.00	279	407	26	0.907	37	16.8
89012N	11.00	279	11.00	279	–	–	–	38	17.2
89013	11.00	279	11.63	295	436	28	0.971	39	17.7
89014	11.63	295	12.25	311	465	29	1.036	40	18.1
89014N	12.25	311	12.25	311	–	–	–	41	18.6
89015	12.25	311	12.88	327	494	31	1.101	42	19.0
89016	12.88	327	13.50	343	523	33	1.165	43	19.5
89016N	13.50	343	13.50	343	–	–	–	44	20.0
89017	13.50	343	14.13	359	552	35	1.230	45	20.4
89018	14.13	359	14.75	375	581	37	1.295	46	20.8
89018N	14.75	375	14.75	375	–	–	–	47	21.3
89019	14.75	375	15.38	391	610	39	1.359	48	21.8
89020	15.38	391	16.00	406	639	40	1.424	49	22.2

Engineering Specification Channels shall be 5' long, 6" wide, and have a 4" wide throat. Modular channel sections shall be made of 16-gauge 304 stainless steel and shall be provided with a gasket for flanged connections. Channel shall be provided either flat (neutral) or with a 1.04% pre-slope. Channels shall be available with inverts ranging from 3.5" to 16.00". Choice of class A, B, C, D, E, and F grates shall be available with H-20 and/or FAA load ratings and/or ADA compliance with mechanical lockdown devices (refer to pages 24 and 25). End caps and catch basins shall be available to complement the channels and grates. End outlets, bottom outlets, and side outlets shall be available in 2", 3", 4", and 6" diameters. Trench drain shall be Flo-Thru model Z890. For downloadable CSI format specification, visit *www.zurn.com*.

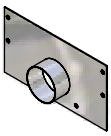
Z895 Sani-Flo 12" Stainless Steel Drain System (9.25" Throat)



Closed End Cap
(E1)
Z895 supplied with outlet attached.



End Outlet
(4", 6", 8" NH)
Z895 supplied with outlet attached.



Bottom Outlet
(4", 6", 8" NH)
Z895 supplied with outlet attached.

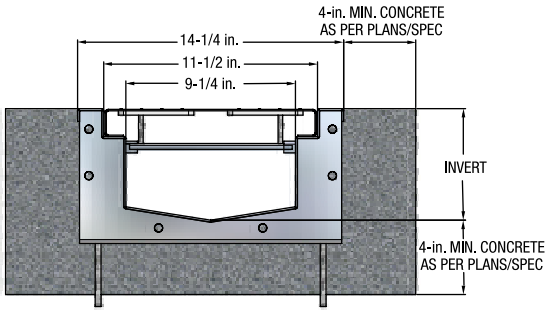
Z895 Applications

Food Processing
Dairies
Showers/Restrooms
Breweries
Chemical Plants
Pharmaceuticals

Features and Benefits

- *5' Pre-engineered Modular Sections*
- *1.04% Built-in Slope*
- *Smooth Seamless Construction*
- *Variety of Gratings – See page 26.*
- *Custom Fabrications*
- *Optional – Type 316 Stainless Steel Available*
- *Optional – Clamping Collar and Pan (-KC)*

Installation Specification

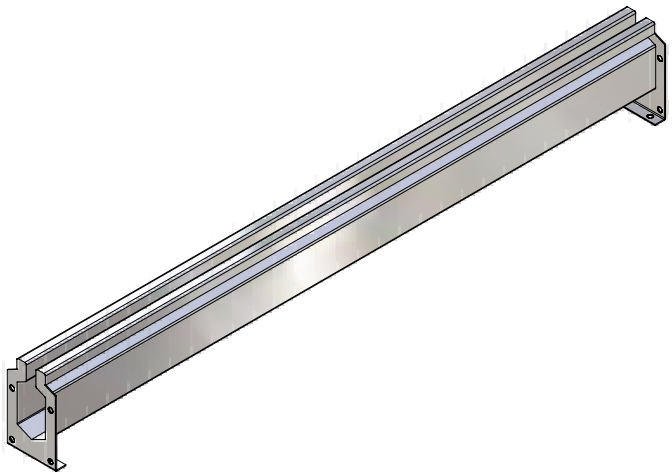


9-1/8" Throat / 14-5/16" Overall Width
Consult Plans and Specifications

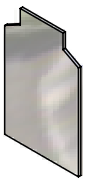
Z895 Dimensional Data

Trench Number	Shallow Invert Inches	Shallow Invert mm	Deep Invert Inches	Deep Invert mm	Max. Flow Rate GPM	Max. Flow Rate LPS	Max. Flow Rate CFS	Approx. Weight (Less Grate) Lbs.	Approx. Weight (Less Grate) Kg
89501	6.00	152	6.63	168	548	35	1.221	70	31.7
89502	6.63	168	7.25	184	652	41	1.453	73	33.1
89502N	7.25	184	7.25	184	–	–	–	74	33.5
89503	7.25	184	7.88	200	759	48	1.691	76	34.5
89504	7.88	200	8.50	216	868	55	1.934	80	36.3
89504N	8.50	216	8.50	216	–	–	–	81	36.7
89505	8.50	216	9.13	232	978	62	2.179	83	37.6
89506	9.13	232	9.75	248	1090	69	2.429	86	39.0
89506N	9.75	248	9.75	248	–	–	–	87	39.4
89507	9.75	248	10.38	264	1203	76	2.680	90	40.8
89508	10.38	264	11.00	279	1316	83	2.932	93	42.2
89508N	11.00	279	11.00	279	–	–	–	94	42.6
89509	11.00	279	11.63	295	1431	91	3.189	96	43.5
89510	11.63	295	12.25	311	1546	98	3.445	99	44.9
89511	12.25	311	12.88	327	1662	105	3.703	103	46.7
89512	12.88	327	13.50	343	1779	113	3.964	106	48.0
89512N	13.50	343	13.50	343	–	–	–	107	48.5
89513	13.50	343	14.13	359	1896	120	4.225	109	49.4
89514	14.13	359	14.75	375	2013	127	4.485	113	51.2
89514N	14.75	375	14.75	375	–	–	–	114	51.7
89515	14.75	375	15.38	391	2131	135	4.748	116	52.6
89516	15.38	391	16.00	406	2249	142	5.011	119	54.0
89516N	16.00	406	16.00	406	–	–	–	120	54.4
89517	16.00	406	16.63	422	2368	150	5.276	122	55.3
89518	16.63	422	17.25	438	2487	157	5.541	126	57.1
89518N	17.25	438	17.25	438	–	–	–	127	57.6
89519	17.25	438	17.88	454	2606	165	5.807	129	58.5
89520	17.88	454	18.50	470	2752	174	6.132	132	59.9

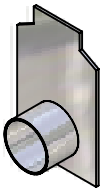
Engineering Specification Channels shall be 5' long, 12" wide, and have a 9-1/8" wide throat. Modular channel sections shall be made of 16-gauge 304 stainless steel. Channel shall be provided with no slope (neutral) or with a 1.04% built-in slope. Channels shall be available with inverts ranging from 6.00" to 18.50". Choice of class A, B, C, D, E, and F grates shall be available with H-20 and/or FAA load ratings and/or ADA compliance with mechanical lockdown devices (refer to page 26). End caps and catch basins shall be available to complement the channels and grates. End outlets, bottom outlets, and side outlets shall be available in 4", 6", and 8" diameters. Trench drain shall be Flo-Thru model Z895. For downloadable CSI format specification, visit *www.zurn.com*.



Closed End Cap
(E1)
Z891 supplied with outlet attached.



End Outlet
(2" NH)
Z891 supplied with outlet attached.

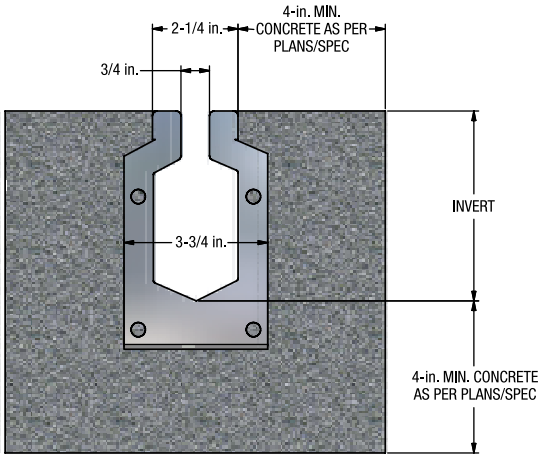


Bottom Outlet
(2" NH)
Z891 supplied with outlet attached.

Z891 Applications

Food Processing
Dairies
Showers/Restrooms
Breweries
Chemical Plants
Pharmaceuticals

Installation Specification



Consult Plans and Specifications

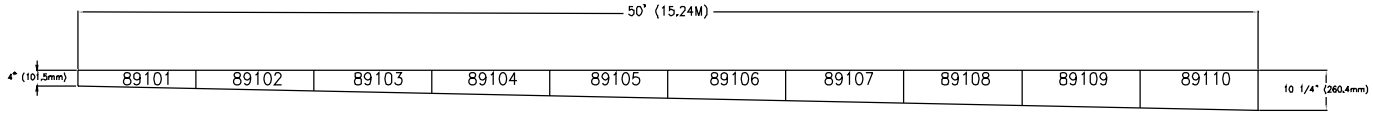
Features and Benefits

- ***5' Pre-engineered Modular Sections*** *– Allows quick and easy assembly, straighter installation.*
- ***1.04% Built-In Slope (1/8" per Foot)*** *– Able to handle greater flows, uniform slope.*
- ***Smooth, Seamless Construction*** *– Provides clean, sanitary installation.*
- ***Durable and Lightweight*** *– Strong corrosion-resistant material.*
- ***Bolted, Gasketed Feature*** *– Keeps trench system straight and liquid tight.*
- ***Optional*** *– Type 316 Stainless Steel Available*
- ***Optional*** *– Anchoring leg*

Z891 Dimensional Data

Trench Number	Shallow Invert Inches	Shallow Invert mm	Deep Invert Inches	Deep Invert mm	Max. Flow Rate GPM	Max. Flow Rate LPS	Max. Flow Rate LPM	Approx. Weight (Less Grate) Lbs.	Approx. Weight (Less Grate) Kg
89101	4.00	102	4.63	118	51	3	194	15	6.8
89102	4.63	118	5.25	133	67	4	255	16	7.3
89103	5.25	133	5.88	149	84	5	316	17	7.7
89104	5.88	149	6.50	165	100	6	378	18	8.2
89105	6.50	165	7.13	181	117	7	441	19	8.6
89106	7.13	181	7.75	197	135	8	504	20	9.1
89107	7.75	197	8.38	213	150	9	568	21	9.6
89108	8.38	213	9.00	229	167	11	632	22	10.0
89109	9.00	229	9.63	245	184	12	696	23	10.5
89110	9.63	245	10.25	260	201	13	760	24	10.9

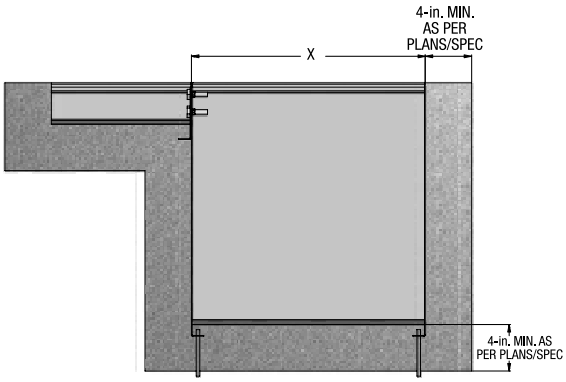
Engineering Specification Channels shall be 5' long, 3/4" wide slot, and have a 2-1/4" wide throat. Modular channel sections shall be made of 16-gauge type 304 stainless steel. Channel shall be provided with no slope (neutral) or with a 1.04% built-in slope. Channels shall be available with inverts ranging from 4" to 16.5". End caps and catch basins shall be available to complement the channels. Trench drain shall be Flo-Thru model Z891. For downloadable CSI format specification, visit *www.zurn.com*.



Z897 Applications

Food Processing
Dairies
Showers/Restrooms
Breweries
Chemical Plants
Pharmaceuticals

Installation Specification



Consult Plans and Specifications

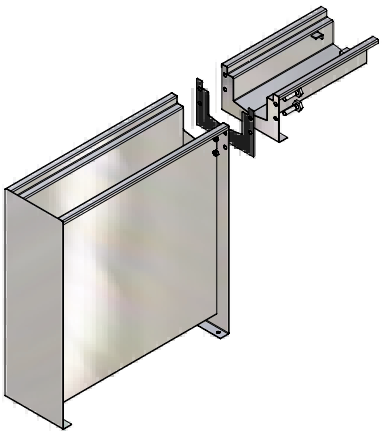
Features and Benefits

- ***6" x 20" Catch Basin*** *– The 6" x 20" basin is meant to be used as an in-line sump for applications where, from the top surface, the visual appearance is of continuous 6" wide Z890 trenching. These catch basins with bolted flange connection come complete with flange gasket and assembly hardware for fast, easy installation. Outlets are fabricated at the factory based upon the specified location.*
- ***12" x 24" and 24" x 24" Catch Basins*** *– The larger catch basins, 12" x 24" x 24" and 24" x 24" x 24", provide greater sump capacities for larger trench runs and can be used with Z890 and Z895 trenches. These basins share a bolted flanged connection and come complete with flanged gasket and assembly hardware for fast, easy installation. Outlets are fabricated at the factory based upon the specified location.*
- ***Optional*** *– Type 316 Stainless Steel Available*

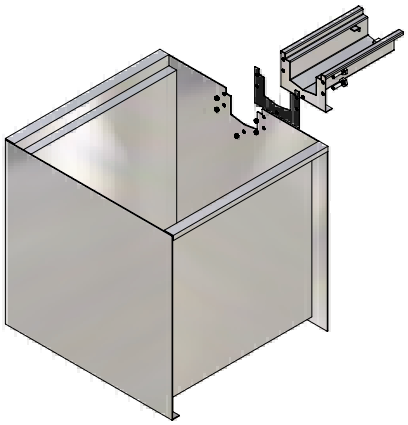
Z897 Dimensional Data

Nominal Size	Overall Dimensions Width Inches	Width mm	Length Inches	Length mm	Depth Inches	Depth mm	Approx. Weight (Less Grate) Lbs.	Approx. Weight (Less Grate) Kg
6 x 20	7	178	20	508	20-3/4	527	49	22
12 x 24	14-5/16	363	24-1/8	612	24-3/4	629	67	30
24 x 24	26-5/16	685	25-9/16	647	24-3/4	629	88	40

Z897 System Highlights



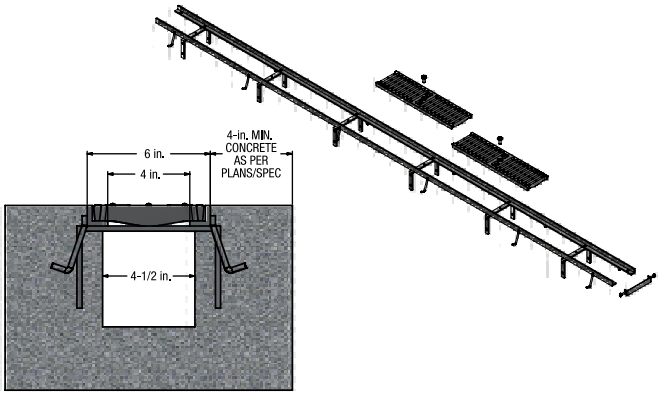
6" x 20" Catch Basin with Z890 Connecting Trench



24" x 24" Catch Basin with Z890 Connecting Trench

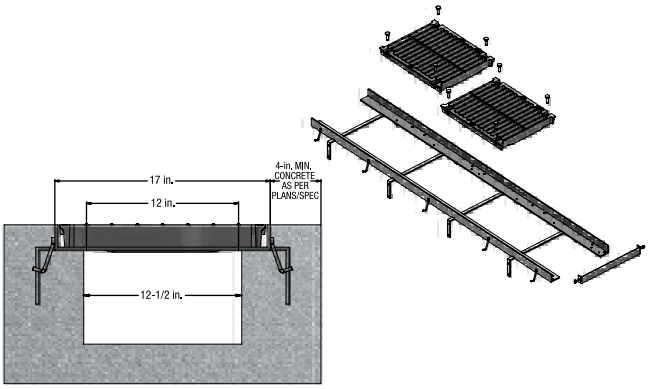
Engineering Specification Catch Basins shall be 6" wide x 20" long x 20" deep, 12" wide x 24" long x 24" deep, or 24" wide x 24" long x 24" deep and shall be made of #16- or #12-gauge 304 stainless steel. Choice of class A, B, C, D, E, and F grates shall be available with H-20, FAA, and/or ADA compliance with mechanical lockdown devices. Outlets in 2", 3", 4", 6", and 8" diameters shall be available. Catch Basin shall be Flo-Thru model Z897. For downloadable CSI format specification, visit *www.zurn.com*.

Z706 *6" Frame and Grate System*



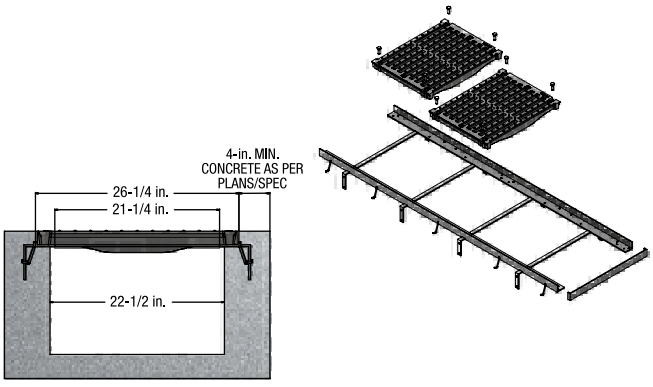
Engineering Specification Z706 6" Wide Frame and Grate System. 1" x 1" x 1/4" angle, 10' long, carbon steel frame assembly. 1/4" x 3" studs and combination anchor tabs/leveling devices at appropriate locations for embedding into surrounding concrete. Complete with Class C ductile iron slotted grates (-DGC).

Z717 *17" Frame and Grate System*



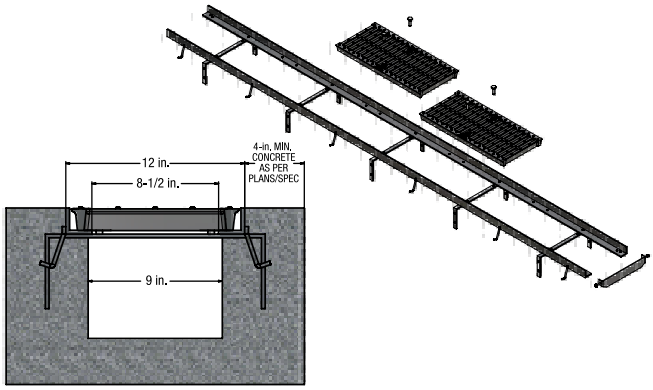
Engineering Specification Z717 17" Wide Frame and Grate System. 2" x 2-1/2" x 1/4" angle, 80" long, carbon steel frame assembly. 1/4" x 3" studs and combination anchor tabs/leveling devices at appropriate locations for embedding into surrounding concrete. Complete with Class C ductile iron slotted grates (-DGC).

Z726 *26" Frame and Grate System*



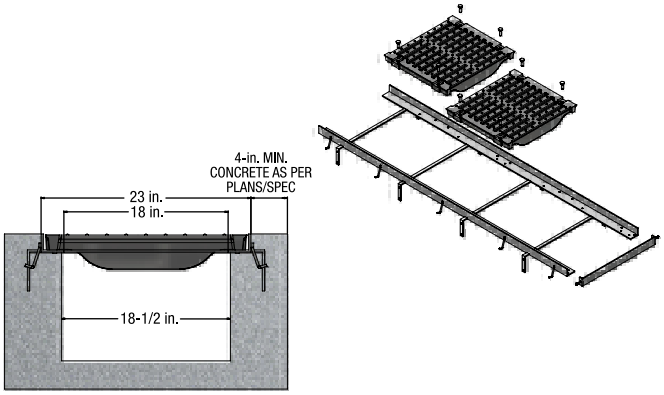
Engineering Specification Z726 26" Wide Frame and Grate System. 2" x 2-1/2" x 1/4" angle, 80" long, carbon steel frame assembly. 1/4" x 3" studs and combination anchor tabs/leveling devices at appropriate locations for embedding into surrounding concrete. Complete with Class C ductile iron slotted grates (-DGC).

Z712 *12" Frame and Grate System*



Engineering Specification Z712 12" Wide Frame and Grate System. 1-3/4" x 1-3/4" x 1/4" angle, 10' long, carbon steel frame assembly. 1/4" x 3" studs and combination anchor tabs/leveling devices at appropriate locations for embedding into surrounding concrete. Complete with Class C ductile iron slotted grates (-DGC).

Z723 *23" Frame and Grate System*

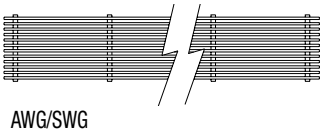


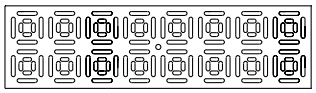
Engineering Specification Z723 23" Wide Frame and Grate System. 2" x 2-1/2" x 1/4" angle, 80" long, carbon steel frame assembly. 1/4" x 3" studs and combination anchor tabs/leveling devices at appropriate locations for embedding into surrounding concrete. Complete with Class C ductile iron slotted grates (-DGC).

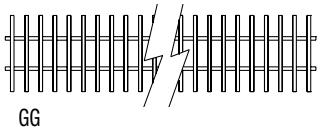
Consult Plans and Specifications

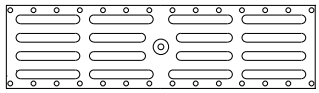
6" System Grates											
Suffix	**Description**	**Material**	**Weight (lbs./ft.)**	**Length**	**Open Area (sq. in. per ft.)**	**Slot Width/ Hole Size**	**DIN**	**ANSI**	**ADA**	**H-20**	**FAA**
AWG	Aluminum Wire Grate	Aluminum	0.70	40"	37.50	0.250	A	Light Duty	Yes	No	No
BCD	Circular Decorative	Bronze	7.80	20"	17.60	0.250	A	Light Duty	No	No	No
BDD	Diagonal Decorative	Bronze	6.90	20"	17.90	0.250	A	Light Duty	Yes	No	No
BZ	Bronze Decorative	Bronze	6.20	20"	16.90	0.250	A	Light Duty	No	No	No
DDD	Diagonal Decorative	Ductile Iron	5.50	20"	17.90	0.250	A	Light Duty	Yes	No	No
DWV	Decorative Wave Grate	Ductile Iron	4.20	20"	36.90	0.900	A	Light Duty	No	No	No
FG	Fabricated Slotted	Galvanized Steel	1.70	40"	12.00	0.375	A	Light Duty	No	No	No
FS	Fabricated Slotted	Stainless Steel	1.70	40"	12.00	0.375	A	Light Duty	No	No	No
GG	Slotted Grate	Fiberglass	0.98	40"	41.60	0.750	A	Light Duty	No	No	No
HPB	Heel-Proof Slotted	Bronze	7.80	20"	17.00	0.250	A	Light Duty	Yes	No	No
HPP	Heel-Proof Slotted	HDPE	0.90	20"	14.50	0.250	A	Light Duty	Yes	No	No
HPS	Heel-Proof Slotted	Stainless Steel	7.10	20"	17.00	0.250	A	Light Duty	Yes	No	No
PG	Fabricated Perforated	Galvanized Steel	1.60	40"	5.30	.250 Dia.	A	Light Duty	Yes	No	No
PS	Fabricated Perforated	Stainless Steel	1.80	40"	5.30	.250 Dia.	A	Light Duty	Yes	No	No
SWG	Stainless Steel Wire Grate	Stainless Steel	2.50	40"	37.50	0.250	A	Light Duty	Yes	No	No
DOG	Decorative	Ductile Iron	4.90	20"	16.90	0.250	B	Medium Duty	No	No	No
HPD	Heel-Proof Longitudinal	Ductile Iron	6.30	20"	17.00	0.250	B	Medium Duty	Yes	No	No
LD	Longitudinal Slotted	Ductile Iron	6.48	20"	20.94	0.5625	B	Medium Duty	No	No	No
PVS	Slotted Grate	Fabricated Steel	4.60	40"	6.00	0.500	B	Medium Duty	Yes	No	No
SCD	Circular Decorative	Stainless Steel	7.20	20"	17.60	0.250	B	Medium Duty	No	No	No
SDD	Diagonal Decorative	Stainless Steel	6.30	20"	17.90	0.250	B	Medium Duty	Yes	No	No

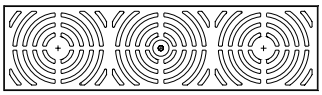
All gratings for the 6" systems have a width of 5.375" and a height of 3/4". For grate definitions and classifications, see page 37.

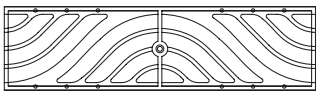

AWG/SWG

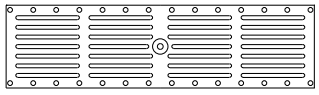

BZ/DOG/NBZ/SOG

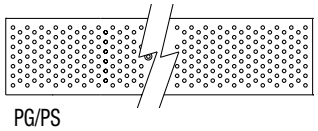

GG

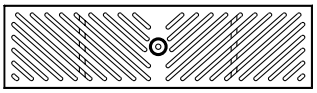

LD

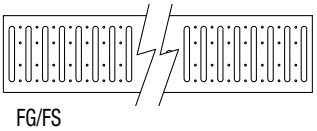

BCD/DCD/SCD

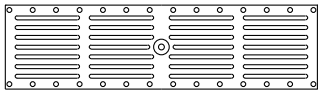

DWV

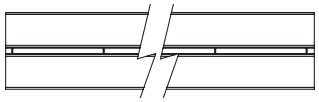

HPB/HPD/HPS


PG/PS


BDD/DDD/SDD


FG/FS


HPP

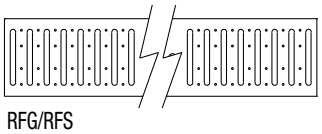

PVS/PVSG/PVSS

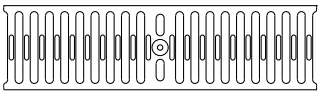
Indicates 40" Grate Length

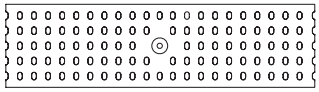
For downloadable CSI format specification, visit *www.zurn.com*.

6" System Grates											
Suffix	**Description**	**Material**	**Weight (lbs./ft.)**	**Length**	**Open Area (sq. in. per ft.)**	**Slot Width/ Hole Size**	**DIN**	**ANSI**	**ADA**	**H-20**	**FAA**
SOG	Decorative	Stainless Steel	5.60	20"	16.90	0.250	B	Medium Duty	No	No	No
RFG	Reinforced Slotted	Galvanized Steel	4.00	40"	12.00	0.375	B	Medium Duty	No	No	No
RFS	Reinforced Slotted	Stainless Steel	4.00	40"	12.00	0.375	B	Medium Duty	No	No	No
RPG	Reinforced Perforated	Galvanized Steel	4.00	40"	5.30	.250 Dia.	B	Medium Duty	Yes	No	No
RPS	Reinforced Perforated	Stainless Steel	3.80	40"	5.30	.250 Dia.	B	Medium Duty	Yes	No	No
BG	Slotted Bar Grate	Galvanized Ductile Iron	5.70	20"	23.90	0.3600	C	Heavy Duty	No	Yes	No
DBG	Slotted Bar Grate	Ductile Iron	5.70	20"	23.90	0.3600	C	Heavy Duty	No	Yes	No
DCD	Circular Decorative	Ductile Iron	6.30	20"	17.60	0.250	C	Heavy Duty	No	No	No
DGC	Slotted Grate	Ductile Iron	4.50	20"	28.10	0.500	C	Heavy Duty	No	Yes	No
HDD	Fixed Grate	Ductile Iron	7.70	20"	38.80	1.750	C	Heavy Duty	No	Yes	No
HR	Removable Grate	Ductile Iron	12.30	20"	32.80	1.625	C	Heavy Duty	No	Yes	No
PPC	Perforated Grate	Vinylester	3.30	20"	6.60	0.300	C	Heavy Duty	Yes	No	No
DCE	Solid Cover	Ductile Iron	8.00	20"	N/A	N/A	E	Special Duty	Yes	Yes	Yes
DGE	Slotted Grate	Ductile Iron	6.40	20"	27.80	0.500	E	Special Duty	No	Yes	Yes
GDE	Slotted Grate	Galvanized Ductile Iron	6.40	20"	27.80	0.500	E	Special Duty	No	Yes	Yes
SBG	Slotted Bar Grate	Stainless Steel	9.40	20"	27.70	0.500	E	Special Duty	No	Yes	Yes
FGF	Ductile Frame & Grate	Ductile Iron	18.70	20"	20.50	0.370	F	Special Duty	No	Yes	Yes
GFG	Galvanized Frame & Grate	Galvanized Ductile Iron	18.70	20"	20.50	0.370	F	Special Duty	No	Yes	Yes

All gratings for the 6" systems have a width of 5.375" and a height of 3/4". For grate definitions and classifications, see page 37.


RFG/RFS


DGC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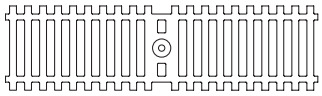
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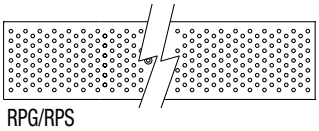
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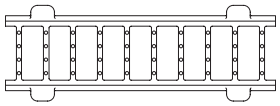
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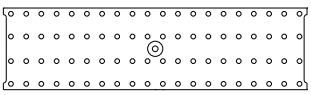
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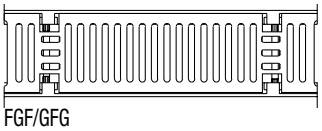
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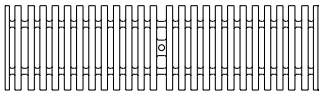
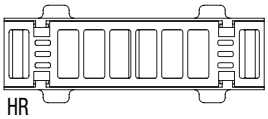

BG/DBG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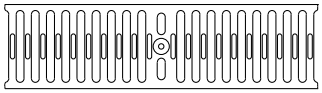
DGE/GDE

Indicates 40" Grate Length

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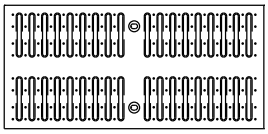

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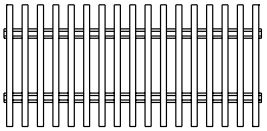

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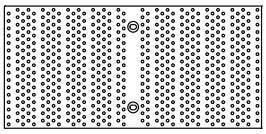
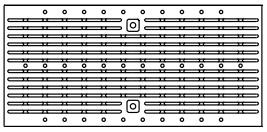


PG/PS



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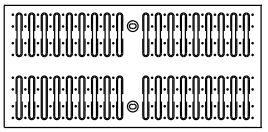
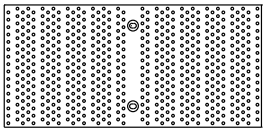
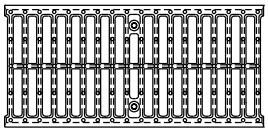


RFG/RFS



RPG/RPS

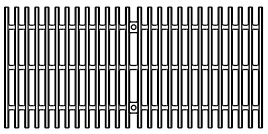


DGC

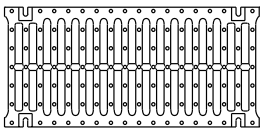
12" System Grates

Suffix	Description	Material	Weight (lbs./ft.)	Length	Open Area (sq. in. per ft.)	Slot Width/ Hole Size	DIN	ANSI	ADA	H-20	FAA
FG	Fabricated Slotted	Galvanized Steel	7.70	24"	25.61	0.375	A	Light Duty	No	No	No
FS	Fabricated Slotted	Stainless Steel	7.70	24"	25.61	0.375	A	Light Duty	No	No	No
GG	Slotted Grate	Fiberglass	2.80	24"	82.50	0.875	A	Light Duty	No	No	No
PG	Fabricated Perforated	Galvanized Steel	7.00	24"	14.90	.250 Dia.	A	Light Duty	Yes	No	No
PS	Fabricated Perforated	Stainless Steel	7.30	24"	14.90	.250 Dia.	A	Light Duty	Yes	No	No
HPD	Heel-Proof Longitudinal	Ductile Iron	14.00	24"	33.70	0.250	B	Medium Duty	Yes	No	No
RFG	Reinforced Slotted	Galvanized Steel	11.80	24"	25.61	0.375	B	Medium Duty	No	No	No
RFS	Reinforced Slotted	Stainless Steel	12.20	24"	25.61	0.375	B	Medium Duty	No	No	No
RPG	Reinforced Perforated	Galvanized Steel	11.30	24"	14.90	.250 Dia.	B	Medium Duty	Yes	No	No
RPS	Reinforced Perforated	Stainless Steel	11.60	24"	14.90	.250 Dia.	B	Medium Duty	Yes	No	No
DGC	Slotted Grate	Ductile Iron	14.70	24"	86.70	0.980	C	Heavy Duty	No	Yes	No
SBG	Slotted Bar Grate	Stainless Steel	22.50	24"	73.90	0.750	C	Heavy Duty	No	Yes	No
BG	Slotted Bar Grate	Galv. Ductile Iron	19.70	24"	73.90	0.750	D	Heavy Duty	No	Yes	No
DC	Solid Cover	Ductile Iron	27.90	24"	N/A	N/A	E	Special Duty	Yes	Yes	Yes
DGE	Slotted Grate	Ductile Iron	19.80	24"	60.30	0.760	E	Special Duty	No	Yes	Yes
DGF	Slotted Grate	Ductile Iron	26.00	24"	54.00	0.700	F	Special Duty	No	Yes	Yes

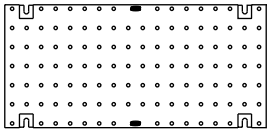
All gratings for the 12" systems have a width of 11-1/4" and a height of 1-1/2". For grate definitions and classifications, see page 37.



BG/SBG



DGE/DGF



DC

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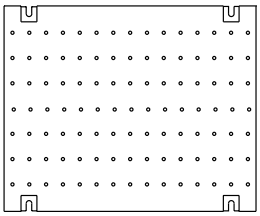
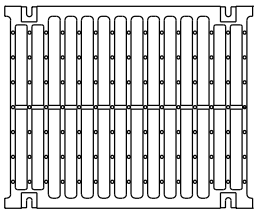


DCC

Z874-12 System Grates

Suffix	Description	Material	Weight (lbs./ft.)	Length	Open Area (sq. in. per ft.)	Slot Width/ Hole Size	DIN	ANSI	ADA	H-20	FAA
DCC	Solid Cover	Ductile Iron	29.00	20"	N/A	N/A	C	Heavy Duty	Yes	Yes	No
DGC	Slotted Grate	Ductile Iron	27.00	20"	118.00	.950	C	Heavy Duty	No	Yes	No
HPD	Heel-Proof Longitudinal	Ductile Iron	29.00	20"	37.07	.250	C	Heavy Duty	Yes	Yes	No
DGF	Slotted Grate	Ductile Iron	49.00	20"	90.00	.740	F	Special Duty	No	Yes	Yes

All gratings for the Z874-12 system have a width of 16-1/4" and a height of 1-3/4". For grate definitions and classifications, see page 37.



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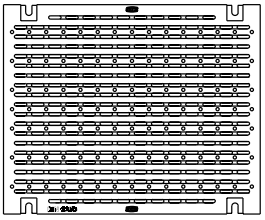

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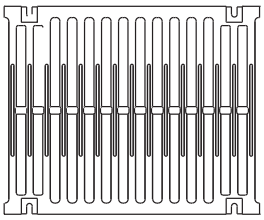

DGF

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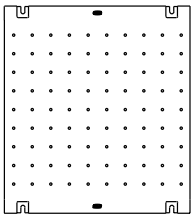
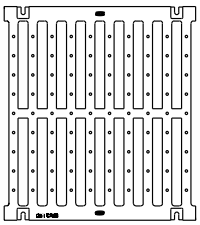


DCC

Z874-18 System Grates

Suffix	Description	Material	Weight (lbs./ft.)	Length	Open Area (sq. in. per ft.)	Slot Width/ Hole Size	DIN	ANSI	ADA	H-20	FAA
DCC	Solid Cover	Ductile Iron	54.10	20"	N/A	N/A	C	Heavy Duty	Yes	Yes	No
DGC	Slotted Grate	Ductile Iron	46.60	20"	111.90	1.030	C	Heavy Duty	No	Yes	No
HPD	Heel-Proof Longitudinal	Ductile Iron	53.20	20"	31.20	.250	C	Heavy Duty	Yes	Yes	No
DGF	Slotted Grate	Ductile Iron	73.40	20"	94.10	0.870	F	Special Duty	No	Yes	Yes

All gratings for the Z874-18 system have a width of 22-1/4" and a height of 1-3/4". For grate definitions and classifications, see page 37.



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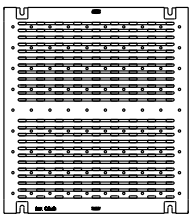
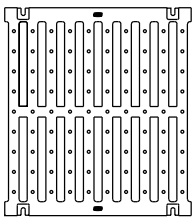


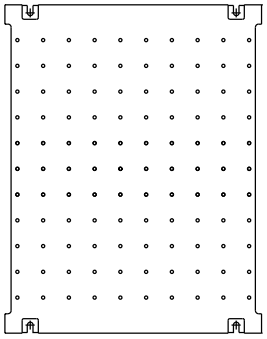
HPD



DGF

For downloadable CSI format specification, visit *www.zurn.com*.

Note: Ductile iron grating for Z874-12 and Z874-18 are furnished unpainted. Painted option available.



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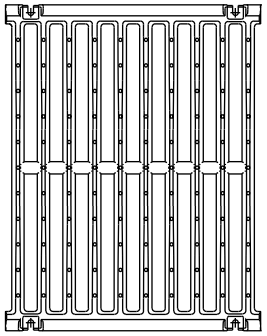

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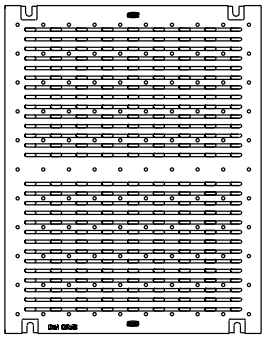

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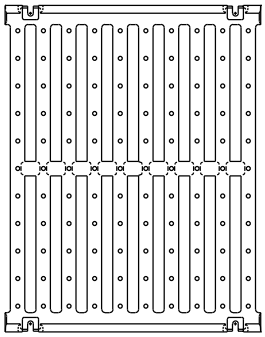


DGF

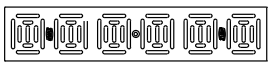
Z874-21 System Grates

Suffix	Description	Material	Weight (lbs./ft.)	Length	Open Area (sq. in. per ft.)	Slot Width/ Hole Size	DIN	ANSI	ADA	H-20	FAA
DCC	Solid Cover	Ductile Iron	58.00	20"	N/A	N/A	C	Heavy Duty	Yes	Yes	No
DGC	Slotted Grate	Ductile Iron	54.00	20"	132.00	1.030	C	Heavy Duty	No	Yes	No
HPD	Heel-Proof Longitudinal	Ductile Iron	55.20	20"	39.40	.250	C	Heavy Duty	Yes	Yes	No
DGF	Slotted Grate	Ductile Iron	85.20	20"	111.00	0.870	F	Special Duty	No	Yes	Yes

All gratings for the Z874-21 system have a width of 25-1/2" and a height of 1-3/4". For grate definitions and classifications, see page 37.

For downloadable CSI format specification, visit *www.zurn.com*.

Note: Ductile iron grating for Z874-21 is furnished unpainted. Painted option available.



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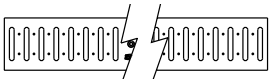
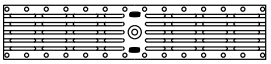


FG/FS



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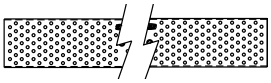
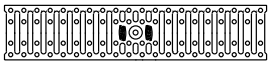


PG/PS



CG

Z884 4" System Grates

Suffix	Description	Material	Weight (lbs./ft.)	Length	Open Area (sq. in. per ft.)	Slot Width/ Hole Size	DIN	ANSI	ADA	H-20	FAA
BZ	Bronze Decorative	Bronze	4.50	20"	11.50	0.250	A	Light Duty	No	No	No
FG	Fabricated Slotted	Galvanized Steel	1.80	40"	10.20	0.375	A	Light Duty	No	No	No
FS	Fabricated Slotted	Stainless Steel	1.80	40"	10.20	0.375	A	Light Duty	No	No	No
HPP	Heel-Proof Slotted	HDPE	0.78	20"	10.30	0.250	A	Light Duty	Yes	No	No
PG	Fabricated Perforated	Galvanized Steel	1.20	40"	5.90	.250 Dia.	A	Light Duty	Yes	No	No
PS	Fabricated Perforated	Stainless Steel	1.20	40"	5.90	.250 Dia.	A	Light Duty	Yes	No	No
CG	Slotted Grate	Cast Iron	5.20	20"	12.20	0.375	B	Medium Duty	No	No	No

All gratings for the Z884 system have a width of 4-1/8" and a height of 3/4". For grate definitions and classifications, see page 37.

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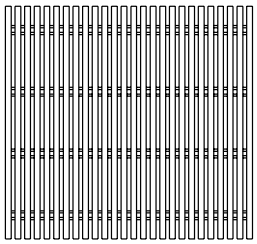
Indicates 40" Grate Length



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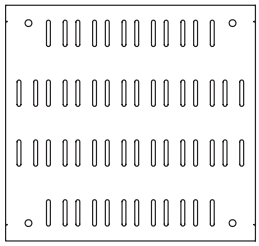
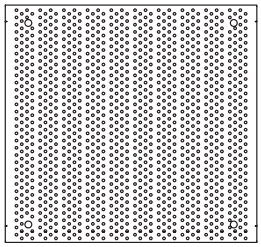


RFG/RFS

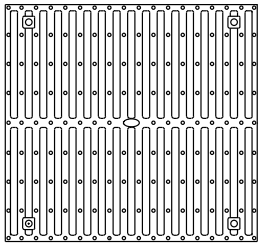


RPG/RPS

Z817 and Z887 24" x 24" System Grates

Suffix	Description	Material	Weight (lbs.)	Open Area (sq. in.)	Slot Width/ Hole Size	DIN	ANSI	ADA	H-20	FAA
GG	Slotted Grate	Fiberglass	15.29	208.50	0.375	A	Light Duty	No	No	No
RFG-USA	Reinforced Slotted	Galvanized Steel	46.20	101.00	0.380	B	Light Duty	Yes	No	No
RFS-USA	Reinforced Slotted	Stainless Steel	47.50	101.00	0.380	B	Light Duty	Yes	No	No
RPG-USA	Reinforced Perforated	Galvanized Steel	46.70	62.52	0.250	B	Light Duty	Yes	No	No
RPS-USA	Reinforced Perforated	Stainless Steel	48.00	62.52	0.250	B	Light Duty	Yes	No	No
DGC	Slotted Grate	Ductile Iron	96.00	228.80	0.344	C	Heavy Duty	No	Yes	No
DGF	Slotted Grate	Ductile Iron	115.20	206.40	0.344	F	Special Duty	No	Yes	Yes

All gratings for the Z817 and Z887 systems have a width of 24" and a height of 1-7/16". For grate definitions and classifications, see page 37.



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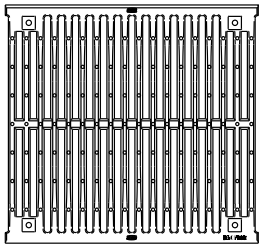

DGF

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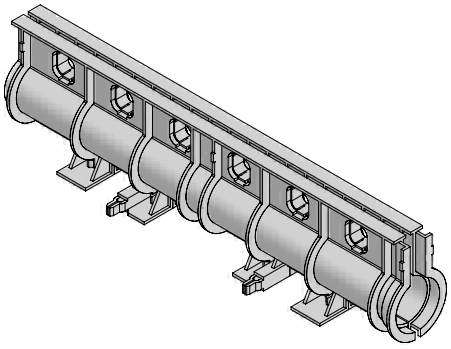
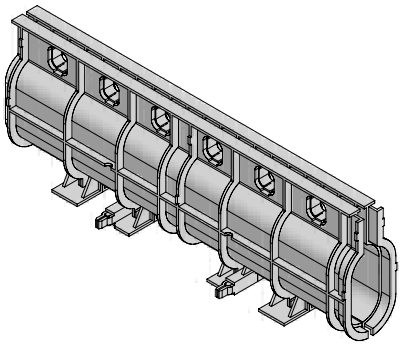
Z888-4, Z888-6, Z888-8 Applications

Residential
Running Tracks
Sports Facilities
Hardscape Areas
Pools

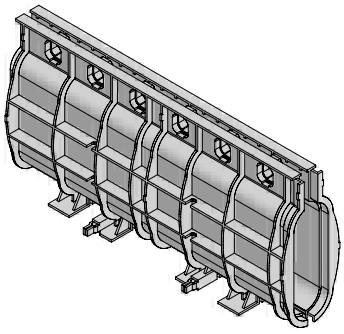
Z888-4 Slot Drain

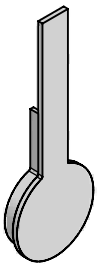


Z888-6 Slot Drain

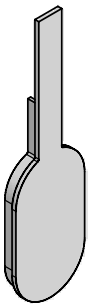


Z888-8 Slot Drain

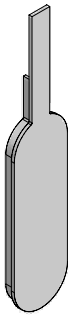




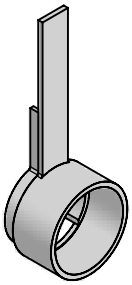
Z888-4
Closed End Cap (E1)



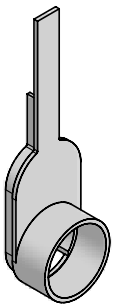
Z888-6
Closed End Cap (E1)



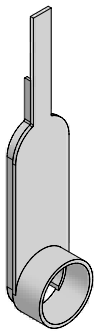
Z888-8
Closed End Cap (E1)



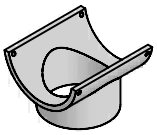
Z888-4 End Outlet
(2", 3", 4" NH)



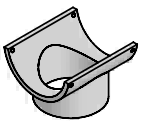
Z888-6 End Outlet
(2", 3", 4", 6" NH)



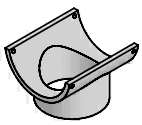
Z888-8 End Outlet
(2", 3", 4", 6", 8" NH)



Z888-4
Bottom Outlet
(2", 3", 4" NH)



Z888-6
Bottom Outlet
(2", 3", 4" NH)

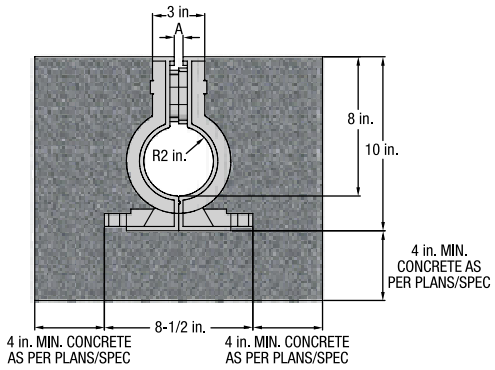


Z888-8
Bottom Outlet
(2", 3", 4" NH)

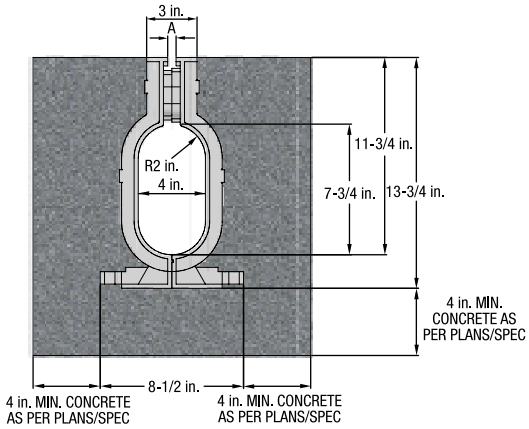
Engineering Specification Slot drain shall be 40" long, Z888-4 (8" deep and 4" wide); Z888-6 (11-3/4" deep and 4" wide); or Z888-8 (17-5/8" deep and 4" wide) with 1/2" wide slot opening (ADA compliant). Drain shall be made of High Density Polyethylene (HDPE) and be UV-10 stabilized. Drain shall have rebar clips molded onto bedding feet and/or bedding feet shall be used for positioning and anchoring purposes. Overlap connection shall be interlocked. For downloadable CSI format specification, visit *www.zurn.com*.

Installation Specifications

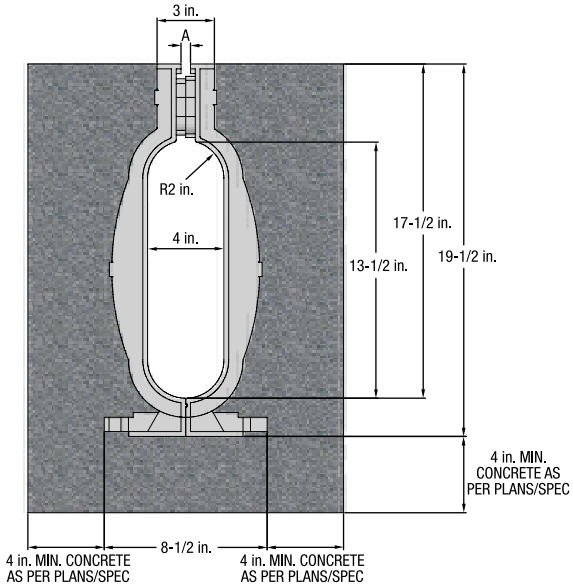
Consult Plans and Specifications



Z888-4



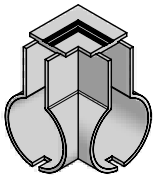
Z888-6



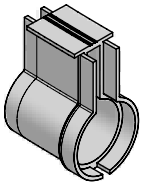
Z888-8

Features and Benefits

- ***40" Pre-engineered Modular Sections*** *– Allows quick and easy installation.*
- ***Variable Slot Opening*** *– "A" Dimension (1/4" or 1/2")*
- ***ADA Compliant***
- ***Smooth High Density Polyethylene Structural Composite Interior*** *– 0% water absorption.*
- ***Inlet and Conveyance Pipe***
- ***Flow Capacity***
- ***Interlocking Joints***
- ***Radius System Capability***
- ***Heavy-Duty Frame Available*** *– Carbon Steel, Galvanized, or Stainless Steel*
- ***Built-In Rebar Clips*** *– Accommodates #3 or #4 rebar (supplied by others).*

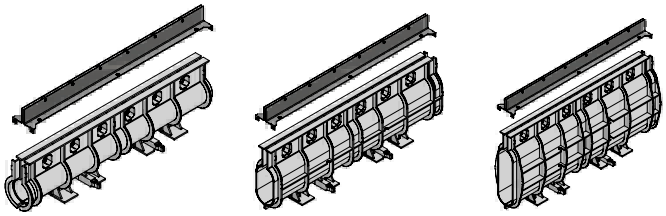


90° Connector
(Only Available with Z888-4)



Radius Connector
(Only Available with Z888-4)

Z888-4, Z888-6, Z888-8 System Paver Slot Options



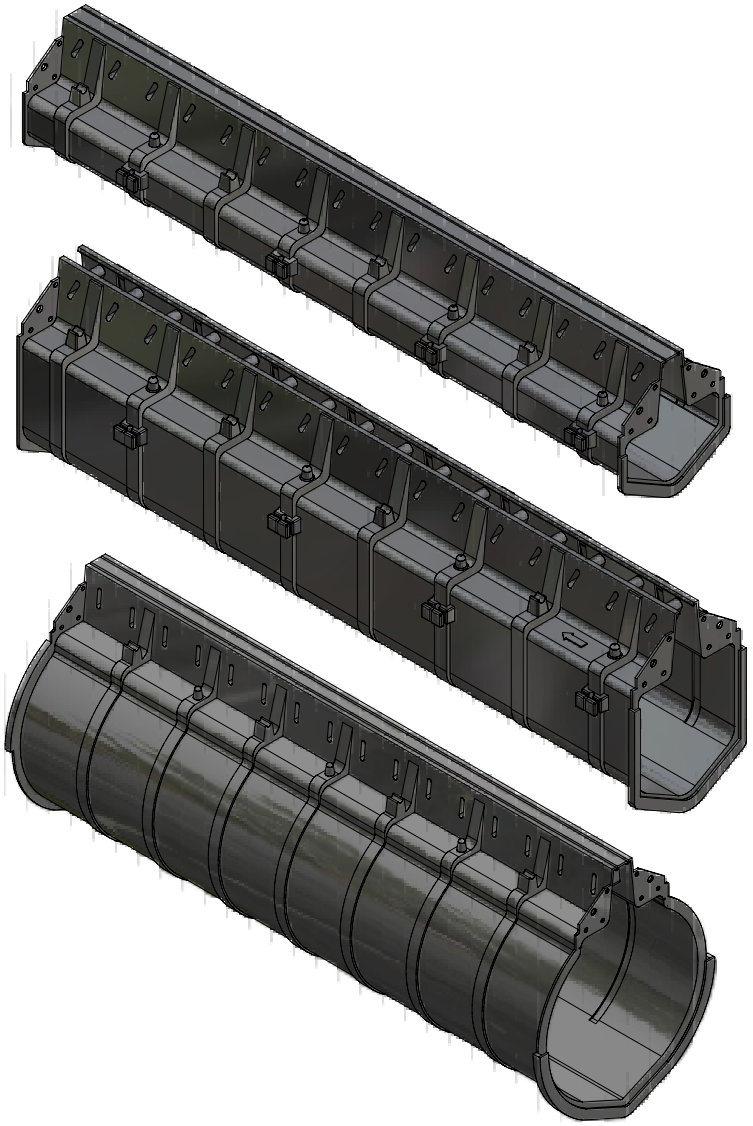
Z888-4-HD | Z888-6-HD | Z888-8-HD

For downloadable CSI format specification, visit *www.zurn.com*.

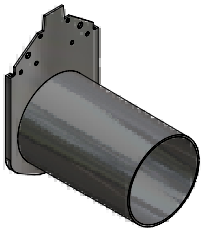
Z888-12

Z888-18

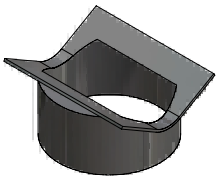
Z888-36



Closed End Cap
(E1)



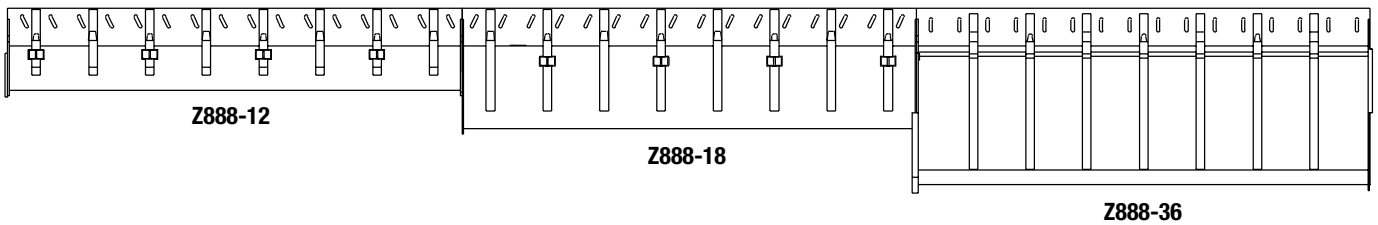
End Outlet
Z888-12
(4", 6", 8", 12" NH)
Z888-18
(8", 12", 18", 24" NH)
Z888-36
(12", 18", 24", 36" NH)



Bottom Outlet
Z888-12
(4", 6", 8", 12" NH)
Z888-18
(8", 12", 18", 24" NH)
Z888-36
(12", 18", 24", 36" NH)

Z888 System Chart

Product Size	Flow Rates @ Grades				Storage Capacity (gpf)
	Laid Flat (cfs)	.3% Slope (cfs)	.6% Slope (cfs)	1% Slope (cfs)	
888-12	0.65	1.13	1.59	2.06	3.609
888-18	2.18	3.78	5.34	6.90	9.2475
888-36	7.59	13.15	18.59	24.00	23.238



Z888 Applications

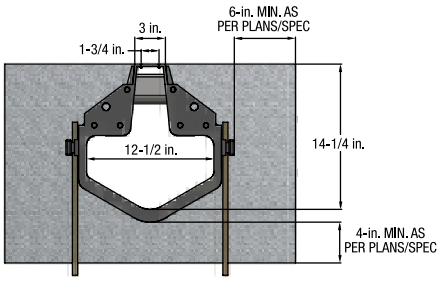
Highways
Airports
Ports
Wineries
Parking Lots
Gas Stations
Industrial Parks
Airplane Hangars

Features and Benefits

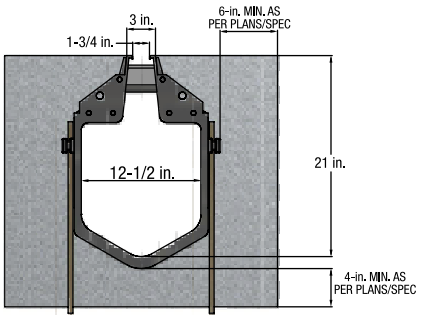
- ***80" Pre-engineered Modular Sections*** *– Allows quick and easy assembly, straighter installation.*
- ***"V" Shaped Bottom*** *– Better flow rate, less solids build-up.*
- ***Smooth Polyethylene Interior*** *– 0% water absorption.*
- ***Chemical Resistance*** *– Strong corrosion-resistant material.*
- ***Positive Mechanical Joint Connection*** *– Keeps trench system straight and rigid.*
- ***Tie Down Leveling Device Every 20"*** *– Positive anchoring to place and set installation to the desired elevation.*
- ***Integral Protective "Zip Strip"*** *– Keeps body clean of debris and materials during installation. Remove after concrete pour.*
- ***Extra-Heavy-Duty Frame*** *– Optional extra-heavy-duty top frame or heavy-duty ductile iron frame complete with anchor studs to handle dynamic loads.*

Installation Specifications *Consult Plans and Specifications*

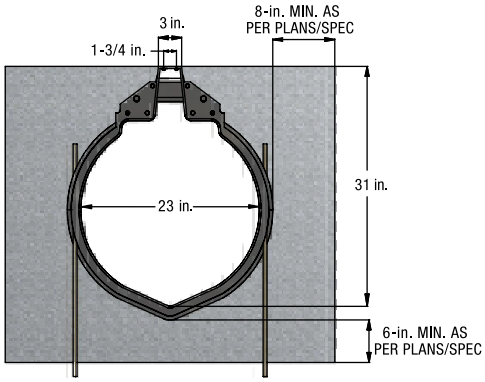
Z888-12



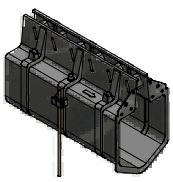
Z888-18



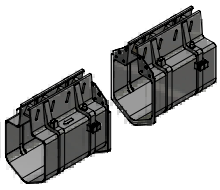
Z888-36



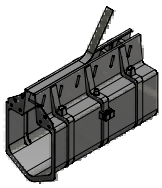
Z888 System Highlights



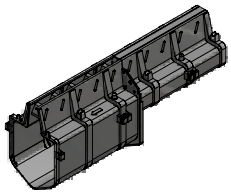
Support Antiflotation Rebar Clips



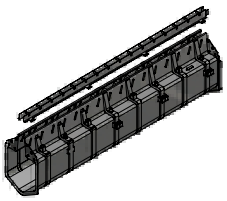
Mechanical Interlocking Connection



Integral "Zip Strip"



Transition (Optional)



Pre-Sloped Frame (Optional)

Engineering Specification Slot drain shall be 80" long, Z888-12 (14-1/4" deep and 12" wide); Z888-18 (21" deep and 12" wide); or Z888-36 (31" deep and 23" wide). Slot shall be 1-3/4" wide and have spacer bars at 5" intervals to keep sides of slot apart. Drain shall be made of Linear Low Density Polyethylene (LLDPE). Drain shall have tongue-and-groove interlocking ends and clips molded into the sides of the channel to accommodate vertical rebar for positioning and anchoring purposes. Drain shall be available with a choice of pedestrian, bicycle, FAA, and/or H-20 grates. End outlets, bottom outlets, and side outlets shall be available in 4", 6", 8", 12", 18", 24", and 36" diameters. Twenty-four-inch long cleanout sections shall be available with removable ductile iron grate. Slot drain shall be Flo-Thru model Z888-12, Z888-18, or Z888-36. For downloadable CSI format specification, visit *www.zurn.com*.

Z889-12

Z889-18

Z889-36

Z889 Applications

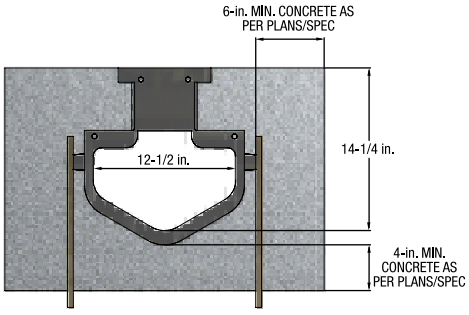
Highways
Airports
Pools
Ports
Wineries
Parking Lots
Gas Stations
Industrial Parks
Airplane Hangars

Features and Benefits

- *24" Pre-engineered Modular Cleanout Port*
- *Integral Top Frame*
- *Smooth Radiused Interior*
- *Mechanically Interlocking Joints*
- *Integral Rebar Clips*
- *Dura-Coated Ductile Iron Grate (H-20 Loading - Standard)*
- *Class F Available*

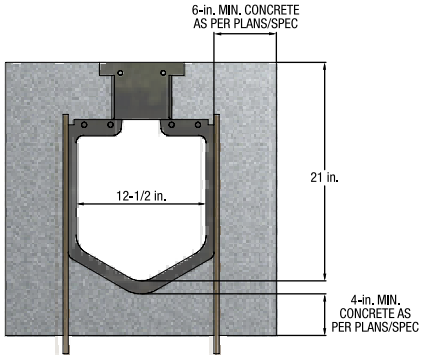
Installation Specifications *Consult Plans and Specifications*

Z889-12



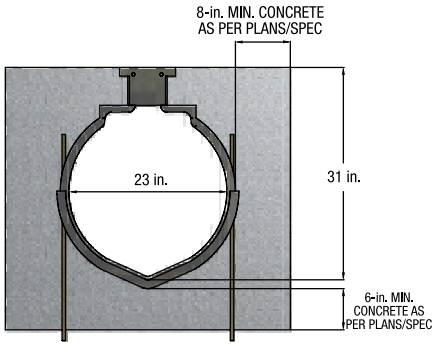
14-1/4" Throat / 12" Overall Width

Z889-18



21" Throat / 12" Overall Width

Z889-36



31" Throat / 23" Overall Width

Engineering Specification Slot drain cleanout port shall be 24" long. Z889-12 cleanout port shall be 24" long, 12" wide, and 14" deep. Z889-18 cleanout port shall be 24" long, 12" wide, and 21" deep. Z889-36 cleanout port shall be 24" long, 12" wide, and 31" deep. The grate shall be 8" wide. Cleanout port shall be made of Linear Low Density Polyethylene (LLDPE), tongue-and-groove interlocking ends, and clips molded into the sides of the channel to accommodate vertical rebar for positioning and anchoring purposes. Cleanout port shall be available with a choice of pedestrian, bicycle safe, FAA, and/or H-20 grates. End outlets, bottom outlets, and side outlets shall be available in 4", 6", 8", and 12" diameters. Slot drain cleanout port shall be Flo-Thru model Z889-12, Z889-18, or Z889-36. For downloadable CSI format specification, visit *www.zurn.com*.

Z885 Applications

Industrial Plants

Kitchens

Chemical Plants

Food Processing

Features and Benefits

- ***Smooth Polyethylene Interior*** *– 0% water absorption.*
- ***Standard Steel Angle Frame with Anchor Studs***
- ***Polyethylene Tanks*** *– Lightweight, strong, corrosion-resistant.*
- ***Medium-Duty Tread Plate Cover with Stainless Steel Lockdown Hardware***
- ***Contact Factory For Custom Sizes***

Installation Specifications

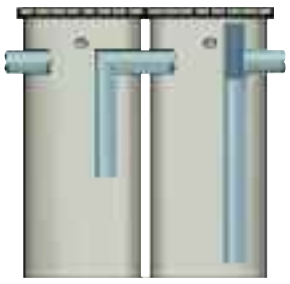
Double basins are standard for Z885.

Z885 Dimensional Data

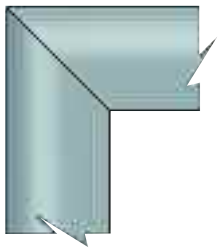
Capacity Gallons	Top Dimension Inches	Top Dimension mm	Height Inches	Height mm	Approx. Wt. Lbs.	Approx. Wt. Kg
140	70-1/2 x 35-1/4	1791 x 895	30	762	328	149
200	70-1/2 x 35-1/4	1791 x 895	36	914	354	161
260	70-1/2 x 35-1/4	1791 x 895	48	1219	382	173

Single and triple basins available upon request.

Z885 System Highlights



Single Assembled Unit



Pre-Welded Piping

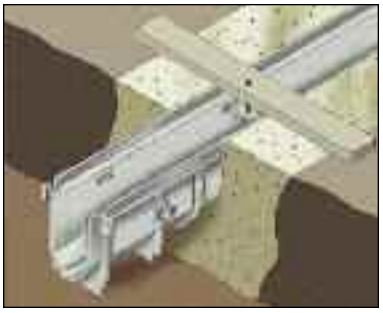
Engineering Specification Z885 Polyethylene Oil Separator. 1/4" thick polyethylene body complete with heavy-duty Dura-Coated steel frame and 1/4" thick steel diamond plate covers with medium-duty top loading classification. Four-inch diameter No-Hub inlet/outlet with 2" diameter No-Hub vent connections. Dimensions shown nominally for reference. Top of grate to center of outlet distance is 8" unless otherwise specified. For downloadable CSI format specification and additional options available, visit *www.zurn.com*.

General Information

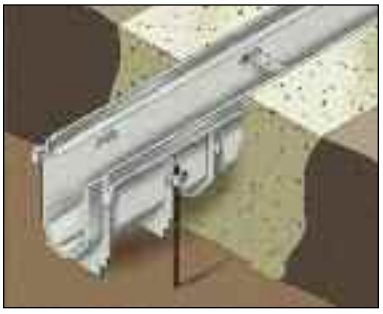
Versatility best defines Zurn Trench Drain systems. Unlike other channel drainage systems, Zurn systems can be installed using various techniques to meet job conditions.

Two workers can easily pick up and set in place up to a 20-foot assembled section (less grates) of Zurn channels, securing into position and setting to finished elevation more efficiently. Longer length channels in the Zurn systems result in a better installation with fewer joints.

Note: Angle iron frame must be anchored in concrete. Voids in the concrete pour or removal of concrete around the frame may result in a trench failure. When epoxy coated floors are used, the concrete pour should be planned so as to allow floor coating to be applied flush to the angle iron top or above without the removal or disturbing of concrete around the frame.



Suspended Installation
Z886 Perma-Trench Illustrated



Rebar Clip Installation
Z886 Perma-Trench Illustrated

Installation Tips

- Always begin trench installation at the outlet end and work upstream.
- Always follow standard concrete installation methods including vibration under and around both sides of trench.
- Excavation can be dug with a gradual slope (trench channels have built-in sloping invert).
- Install trench at (-)1/8" below finished floor elevation for positive fall into trench.
- All-thread rod offers more up and down flexibility for finish grade.
- Rebar clips accommodate #3 or #4 rebar.

The minimum concrete surround is 4", but is usually based upon the thickness of slab. Consult structural engineer's specifications on plans.

Suspended installation is the most widely practiced installation method on an existing slab or where form boards can be utilized to hold channel sections in place.

Use 2" x 4" boards of sufficient length to span trench (minimum of 4" of concrete on either side of trench) and 3" long bolts or all-thread rods, nuts, and washers. Secure the channel to the boards, either through attachment to the rebar clips or grate lockdown bar. Follow the shop drawings or engineered layout of channels. Position each channel section (channels are numbered in sequence) end to end by inserting the mechanical joint together for proper alignment and grade.

Rebar clip installation is best suited for new construction. Prepare trench excavation and pull string-line for proper elevation and straightness. Place cut rebar lengths inside rebar clips. Set trench in ditch, connecting each joint. Beginning at the outlet end, drive rebar stakes into ground. Raise the trench to finished floor elevation and secure screw into rebar clip. Set concrete under and evenly on both sides of trench drain in 6" lifts to finished floor elevation.

	Suspended Installation	Rebar Clip Installation	Leveling Stud Installation	Anchor Bar Installation
Z886	X	X		
Z882	X	X		
Z874	X	X		X
Z874-U-HD	X	X		X
Z874	X	X		
Z883	X	X		
Z880	X			
ZA880	X			
Z890	X		X	
Z895	X		X	
Z891	X		X	
Z806	X	X		X
Z812	X	X		X
Z888 Slot Drain	X	X		
Z888 Hi-Cap	X	X		

Refer to www.zurn.com and/or specifications.

Material Definitions and Grate Loading Classifications

Definition of Terms

ACID-RESISTING EPOXY COATING (A.R.C.) is a baked-on powder coating which produces a smooth, hard, high-gloss finish. This epoxy-based coating offers high impact resistance and excellent life expectancy in all drainage applications.

GALVANIZING STEEL is a process of applying a coating of zinc to the finished sheet or fabricated parts to provide corrosion resistant properties. The coating is applied by hot dipping or electrolytic deposition.

POLYESTER is a thermosetting resin utilized to bond the individual fibers during the manufacture of molded fiberglass components. It provides high durability and excellent chemical- and weather-resistant properties.

POLYETHYLENE, HIGH DENSITY (HDPE) is a thermoplastic resin that offers excellent physical characteristics such as light weight, outstanding chemical resistance to household and industrial chemicals, good toughness, and 0% water absorption.

POLYPROPYLENE (PP) is a thermoplastic that offers excellent physical characteristics such as light weight, outstanding chemical and impact resistance, and 0% water absorption.

STAINLESS STEEL is any steel containing four or more percent chromium content. Chromium, along with other alloying elements like nickel and silicon, provides corrosion and heat resistant characteristics. Type 304 stainless steel is typical with 316 available as an option.

STAINLESS STEEL HARDWARE is used to secure steel angle frame to fiberglass trench for all Zurn Trench Systems.

VINYLESTER is a thermosetting resin utilized in the manufacture of molded fiberglass components. Its superior corrosion resistance in acidic and alkaline services, along with excellent impact and flexural fatigue resistance, make it ideal for hazardous chemical applications.

ZURN CAST IRON conforms to ASTM Specification for Gray Iron Castings A 48-83, Class 25. It is produced utilizing the latest equipment and newest developed foundry techniques. Zurn cast iron castings are characterized by a high degree of strength, corrosion resistance, workmanship, and finish.

ZURN DURA COAT is a specially formulated paint designed to resist cracking and chipping. Dura Coat is a latex-based coating developed to be used with cast iron substrates.

ZURN DURESIST is a ductile iron complying with ASTM Specification A 536-84, Grade 85-65-10. Its physical properties make it ideal for grates and drain components that are subjected to severe and heavy-duty service. Its chemical characteristics make possible a degree of corrosion resistance far superior to that of cast iron.

LLDPE (linear low density polyethylene) exhibits the following properties: excellent chemical resistance, low moisture absorption, extremely flexible, and very impact resistant.

Grate Top Loading Classifications

Two grate classification systems are shown to assist in grate selection. Both standards are used in the trench drain industry to choose the proper grating to meet loading requirements.

6.1 ANSI A112.21.1M

Grates and top rims shall be designed to meet the following loading classifications:

6.1.1 Light Duty – All grates having safe live load (as calculated in paragraph 6.1.6) under 2,000 lb. [900 kg] (i.e. Pedestrian).

6.1.2 Medium Duty – All grates having safe live load (as calculated in paragraph 6.1.6) between 2,000 lb. [900 kg] and 4,999 lb. [2,250 kg] (i.e. Light Vehicle).

6.1.3 Heavy Duty – All grates having safe live load (as calculated in paragraph 6.1.6) between 5,000 lb. [2,250 kg] and 7,499 lb. [3,375 kg] (i.e. H20).

6.1.4 Extra Heavy Duty – All grates having safe live load (as calculated in paragraph 6.1.6 between 7,500 lb. [3,375 kg] and 10,000 lb. [4,500 kg] (i.e. Forklift).

6.1.5 Special Duty – Grates having safe live load (as calculated in paragraph 6.1.6) over 10,000 lb. [4,500 kg] shall be considered special and treated accordingly (i.e. Airport).

The maximum safe live load is computed by dividing the load at failure by two.

6.2 DIN 19580

Grates and top rims shall be designed to meet the following load classifications:

6.2.1 Classification A – Grate design load up to or exceeding 3372 lbf [15 kn] (i.e. Pedestrian).

6.2.2 Classification B – Grate design load of at least 28101 lbf [125 kn] (i.e. Light Vehicle).

6.2.3 Classification C – Grate design load of at least 56202 lbf [250 kn] (i.e. H20).

6.2.4 Classification D – Grate design load of at least 89924 lbf [400 kn] (i.e. Pneumatic Forklift).

6.2.5 Classification E – Grate design load of at least 134885 lbf [600 kn] (i.e. Forklift).

6.2.6 Classification F – Grate design load of at least 202328 lbf [900 kn] (i.e. Airport).

In areas of extreme hard wheel forklift traffic (i.e. steel wheels), the Zurn -HD Frame Assembly is required.

Transportation Classifications

The American Association of State Highway and Transportation Officials' (AASHTO) "Standard Specification for Highway Bridges" defines H-20 loading as a two-axle truck with a maximum dual-wheel load of 16,000 pounds. HS-20 loading is defined as a tractor truck with a tandem axle semi trailer with a dual-wheel load of 16,000 pounds.

The FAA (Federal Aviation Administration) Advisory Circular AC 150/5320-6D describes aircraft loading as 100,000 pounds placed over a 9" x 9" area.

The Americans with Disabilities Act (ADA) stipulates that the slot width be limited on gratings in walkways and elongated slots must be placed longitudinally so they are perpendicular to the dominant direction of travel.

Flo-Thru Drainage System

Chart below shows chemical resistance of polyester and vinylester to select chemicals. For a more complete list or for other chemicals, contact your Zurn Sales Representative.

Chemical	Percentage Concentration	Polyester Resin Max. Temperature °F	Vinylester Resin Max. Temperature °F
Acetic Acid	50	120	210
Acetone	10	NR	NR
Ammonium Acetate	65	NR	80
Ammonium Chloride	All	150	210
Amyl Alcohol	All	NR	120
Benzene	100	NR	NR
Borax	100	150	210
Boric Acid	All	150	210
Chlorine, dry gas	100	120	210
Chlorine, wet gas	100	NR	210
Chlorine Dioxide	All	NR	150
Chlorine Water	Sat'd.	NR	180
Chromic Acid	5	NR	150
Chromic Acid	20	NR	120
Citric Acid	All	150	210
Crude Oil (Sour)	100	150	210
Dibutyl Ether	100	NR	180
Diesel Fuel	100	110	180
Diethlene Glycol	100	140	180
Ethylene Glycol	100	150	210
Fatty Acids	All	150	210
Fuel Oil	100	150	180
Gasoline, Aviation	100	100	180
Glycerine	100	150	210
Hydraulic Fluid	100	NR	180
Hydrogen Chloride	100	110	210
Jet Fuel (JP-4)	100	–	180
Kerosene	100	110	180
Lead Acetate	All	80	210
Linseed Oil	100	150	210
Magnesium Nitrate	All	150	210
Mercury	100	150	210
Minerals Oils	100	150	210
Naptha	100	80	180
Napthalene	100	110	210
Nickel Sulfate	All	110	210
Nitric Acid	5	NR	150
Potassium Bicarbonate	50	–	180
Potassium Nitrate	All	150	210
Silver Nitrate	All	150	210
Sodium Acetate	All	150	210
Sodium Carbonate	10	NR	180
Sodium Chloride	50	NR	100
Sodium Hydroxide	50	NR	210
Sour Crude Oil	100	150	210
Sugar, Sucrose	All	–	210
Sulfuric Acid	75	–	100
Toluene	100	NR	80
Turpentine	100	NR	150
Vinegar	100	110	210
Vinyl Toluene	100	–	80
Xylene	100	NR	80
Zinc Chloride	70	150	210

NR = Not Recommended
– = No Information Available

Perma-Trench Drainage System

Chart below shows chemical resistance of high density polyethylene structural composite to select chemicals and temperatures at the maximum concentration percentage. For a more complete list or for other chemicals, contact your Zurn Sales Representative.

Chemical	Max. % Concentration	Max. Temp. F
Acetic Acid	60	70
Acetone	All	140
Alcohol	All	140
Aluminum Chloride	All	140
Ammonia	All	68
Ammonium Hydroxide		NR
Battery Acid	All	140
Beer	All	140
Benzene	All	140
Borax	All	140
Brake Fluid	All	140
Bromic Acid	10	140
Calcium Carbide	All	140
Calcium Chloride	All	140
Calcium Hypochlorite	All	140
Carbon Tetrachloride		NR
Chlorinated Pool and Spa Water		105
Chlorobenzene		NR
Citrus Juices	All	140
Dibutyl Ether		NR
Dichloroethane		NR
Ethanol	96	140
Ethyl Alcohol	96	140
Ethylene Dichloride		NR
Formaldehyde	10	140
Fructose	All	140
Fuel Oil	All	140
Heptane		NR
Hydraulic Fluid	All	68
Hydrochloric Acid	35	140
Kerosene	All	68
Machine Oil	All	68
Methyl Ethyl Ketone		NR
Methanol	All	68
Methyl Alcohol	All	68
Milk	All	140
Phosphoric Acid	90	140
Sodium Carbonate	All	140
Sodium Hydroxide	All	140
Sodium Nitrate	50	140
Sulfuric Acid	50	140
Toluene		NR
Urine	All	140
Vinegar	All	140
Water, Distilled	All	140
Xylene		NR
Zinc Oxide	All	140
Zinc Sulfate	All	140

Sani-Flo Trench Drainage System

Typical corrosion resistance of type 304 and 316 stainless steel to various chemicals.

Code:

a – Unaffected
b – Slightly Attacked
c – Attacked
m – Complete details concerning the conditions of service must be evaluated.

Chemical	Type Numbers CF8 304	CF8M 316
ORGANIC SUBSTANCES		
Acetone	a	a
Benzol	a	a
Carbon Tetrachloride	c	c
Ethyl Alcohol	a	a
Ethyl Chloride	a	a
Ethyl Ether	a	a
Food Pastes	a	a
Fruit Juices	a	a
Ink	m	m
Mustard	b	a
Paregoric Cmpd.	a	a
Quinine Bisulfate	b	a
Quinine Sulfate	a	a
Vinegar at 70°F	m	m
ACIDS		
Acetic	m	m
Benzoic	a	a
Boric	a	a
Carbolic	a	a
Chromic (50%)	c	c
Citric	a	a
Formic	c	m
Hydrobromic	c	c
Hydrocyanic	a	a
Hydrochloric	c	c
Hydrofluoric	c	c
Lactic	a	a
Nitric (conc.)	a	a
Nitric (conc. plus 2% HCl)	a	NR
Nitrous (conc.)	a	a
Oxalic	m	m
Phosphoric	a	a
Phosphoric (10%)	a	a
Picric (conc.)	a	a
Pyrogallic (conc.)	a	a
Pyroligneus (conc.)	a	a
Stearic (conc.)	a	a
Succinic (molten)	c	NR
Sulfuric (conc.)	a	a
Sulfuric (dil.)	m	m
Sulfuric 15% (plus 2% potassium dichromate)	a	a
Sulfurous (conc.)	b	a
Tannic (conc.)	a	a
Tartaric (conc.)	a	a
Trichloracetic Acid (10%)	a	a
Uric (conc.)	a	a

Chemical	Type Numbers CF8 304	CF8M 316
SALTS		
Aluminum Chloride	c	c
Aluminum Fluoride	c	b
Aluminum Sulfate	a	a
Ammonium Alum	a	a
Ammonium Bromide	c	a
Ammonium Chloride	b	a
Ammonium Hydroxide	a	a
Ammonium Nitrate	a	a
Ammonium Sulfate	a	a
Barium Chloride	a	a
Bleaching Powder	c	a
Calcium Chloride	c	a
Calcium Hydroxide or Oxide	a	a
Copper Chloride	c	c
Copper Cyanide	a	a
Copper Nitrate	a	a
Copper Sulfate (plus 2% sulfuric acid)	a	a
Copper Sulfate	a	a
Creosote	c	a
Creosote (plus 3% salt)	c	c
Hydrogen Peroxide	b	a
Magnesium Carbonate	a	a
Magnesium Chloride	m	m
Magnesium Sulfate	a	a
Magnesium Hydroxide	a	a
Magnesium Nitrate	a	a
Phosphorous Trichloride	a	a
Potassium Bromide	a	a
Potassium Carbonate	a	a
Potassium Chloride	m	m
Potassium Chlorate	a	a
Potassium Cyanide	a	a
Potassium Dichromate	a	a
Potassium Ferricyanide	a	a
Potassium Ferricyanide (boiling)	a	a
Potassium Hypochlorite	c	m
Potassium Iodide	a	a
Potassium Iodide (sat. plus 0.1% sodium carbonate evaporated to dryness)	a	a

Chemical	Type Numbers CF8 304	CF8M 316
SALTS, continued		
Potassium Hydrate	a	a
Potassium Nitrate	a	a
Potassium Oxalate	a	a
Potassium Permanganate	a	a
Potassium Sulfate	a	a
Silver Nitrate	a	a
Silver Cyanide	a	a
Sodium Bicarbonate	a	a
Sodium Borate	a	a
Sodium Bromide	a	a
Sodium Chloride (2% aerated)	a	a
Sodium Citrate	a	a
Sodium Fluoride	b	NR
Sodium Hydroxide	a	a
Sodium Nitrate	a	a
Sodium Peroxide (212 °F)	a	a
Stannic Chloride	c	c
Stannous Chloride	b	NR
Sulfur (molten) 500 °F	a	a
Sulfur Chloride	b	NR
Titanium Tetrachloride	a	a
Zinc Chloride	c	b
Zinc Sulfate	a	a
MISCELLANEOUS		
Ammonia	a	a
Baking Oven Gases	a	a
Bromine	c	c
Carbonated Beverages	a	a
Chlorine (wet and dry)	c	c
Glycerin	a	a
Hydrogen Sulfide (400 °F)	b	a
Iodine	c	a
Lead (molten)	c	c
Lysol	m	m
Mercury	a	a
Sauerkraut Brine	c	a
Sea Water	m	m
Sulfur Dioxide	b	b
Vegetable Juices	a	a
X-ray Developing Solution	b	a
Zinc (molten)	c	c

NR = Not Recommended

Price and Terms of Payment

Prices are F.O.B. Seller's plant, Falconer, New York, or Service Center, 2% cash discount payable 30 days from date of invoice, net 31 days. Interest chargeable at the maximum legal rate on past due items still unpaid after 31 days from date of invoice. In addition to the prices and freight specified, Buyer shall pay all sales, consumers, or other applicable taxes. Minimum invoice $25.00. All prices subject to change at any time without notice.

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Unless otherwise specifically stated, materials will be shipped freight collect, and all freight is to be paid by the Buyer, but Seller reserves the option to prepay the freight. Buyer agrees to make all complaints for damage in transit or "short count" directly to the carrier; before the contents are unloaded to have the carrier agent's acknowledgement of such damage noted on the bill of lading; and to present to the carrier its agent's acknowledgement of such damaged material with formal claim covering said damage. Shipping dates are estimates and time of delivery is not the essence of this sale of the contract therefor. Under no circumstances will the Seller have any responsibility on account of any delays in manufacture, transportation, or otherwise. Freight prepaid policy is $5,000.

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Standard cataloged material may be returned only with written permission of Seller. Approval will only be granted when material is currently manufactured and listed in the Flo-Thru Price Guide, January 2008, Form No. FT776. Returned goods are subject to a 25% restocking charge plus cost of reconditioning, if necessary, to make material salable. Transportation charges must be prepaid by the Buyer. Credit allowance will be in the form of merchandise credit only – not cash credit. The value of a return must total at least $100.00 to qualify for credit allowance. Galvanized material will be credited at value of Dura-Coated cast iron, and chrome plated at value of bronze. No credit will be allowed for parts unless originally ordered and invoiced as parts. No credit will be allowed for auxiliary tappings, discontinued, or made-to-order items. No returns will be accepted after one year from the date of purchase.

Illustrations of Installations

Installation illustrations are intended to show the products and their options. Under no circumstances are they to be construed as recommended installation procedures. Consult local codes and project specifications for proper installation instructions.

General

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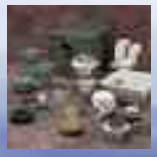

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