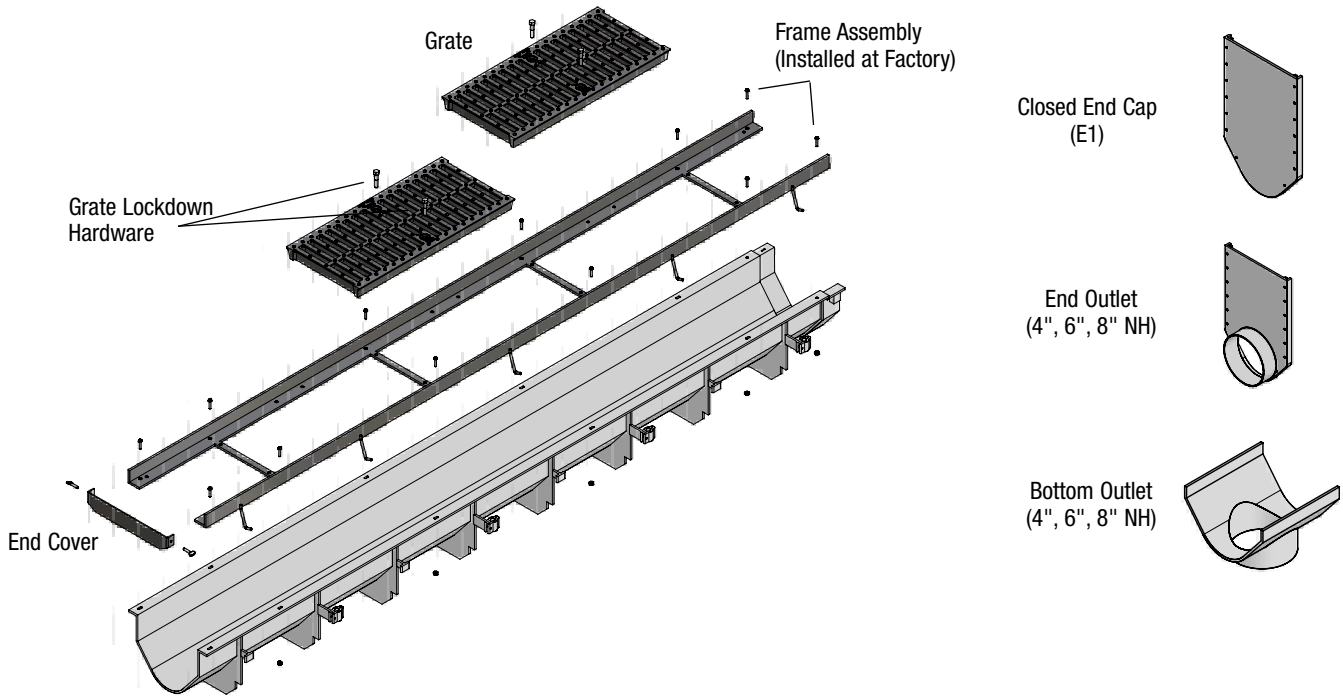


# Z882 Perma-Trench HDPE 12" Drain System (9.25" Throat)

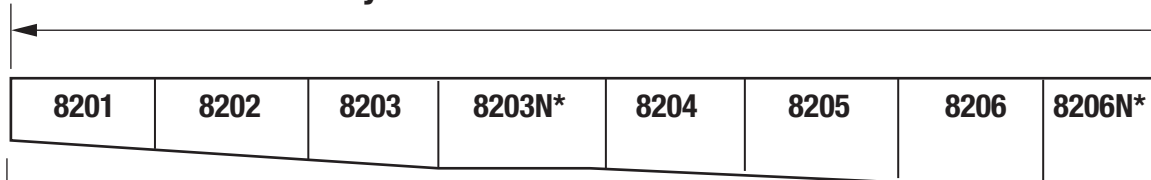
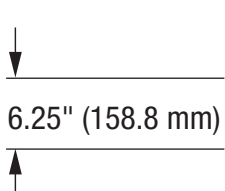
4



## Z882 Dimensional Data

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

## Z882 System Profile



\*N = Neutral (non-sloping)

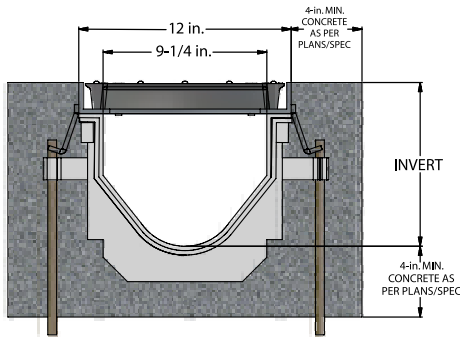
### Z882 Applications

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

### Features and Benefits

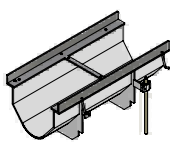
- **Eight-Foot Pre-engineered Modular Sections with 24" Grates**
- **1.04% Built-In Slope** – Handles greater flows, uniform slope.
- **Radiused Bottom** – Better flow rate, less solids build-up.
- **Smooth High Density Polyethylene Structural Composite Interior** – 0% water absorption.
- **Durable and 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).

### Installation Specification

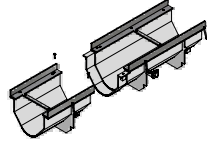


9-1/4" Throat / 12" Overall Width  
Consult Plans and Specifications

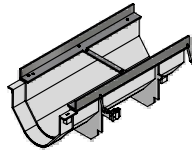
### Z882 System Highlights



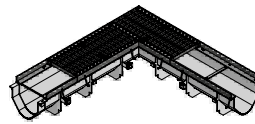
Integral Rebar Clips



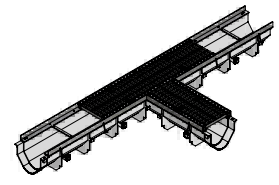
Mechanical Overlap Connection



Frame Assembly with Anchor Studs

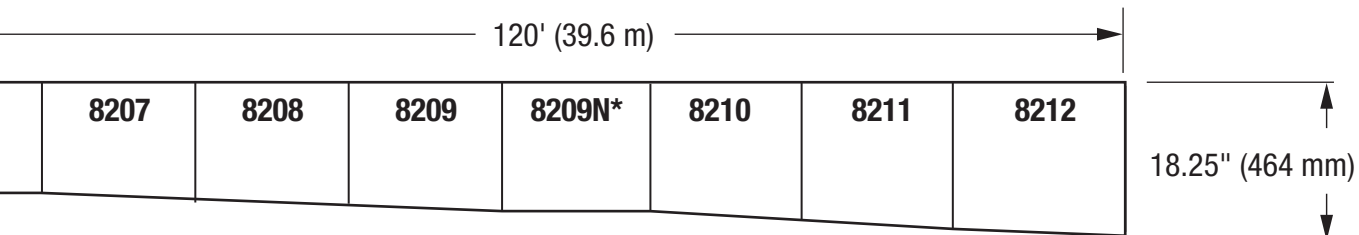


90° Fabrication



Tee Fabrication

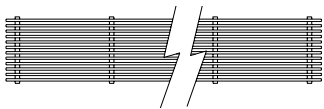
**Engineering Specification** Channels shall be 8' long, 12" wide, and have a 9-1/4" wide throat. Modular channel sections shall be made of High Density Polyethylene (HDPE), have interlocking ends, and radiused bottom. Channel shall be provided with no slope (neutral) or with a 1.04% built-in slope. 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](http://www.zurn.com).



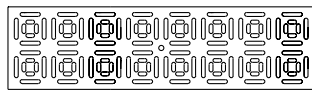
### 6" System Grates

Suffix	Description	Material	Weight (lbs./ft.)	Length	Open Area (sq. in. per ft.)	Slot Width/ Hole Size	DIN	ANSI	ADA	H-20	FAA
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

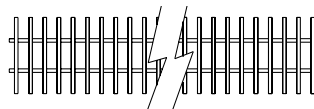
All gratings for the 6" systems have a width of 5.375" and a height of 3/4". For grate definitions and classifications, see page 37.



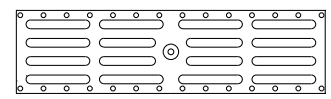
AWG/SWG



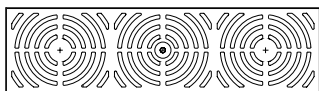
BZ/DOG/NBZ/SOG



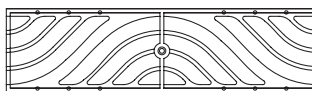
GG



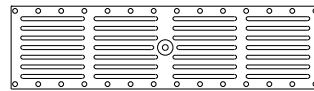
LD



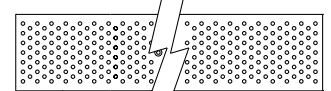
BCD/DCD/SCD



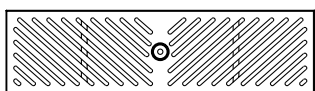
DWV



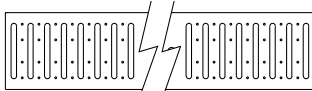
HPB/HPD/HPS



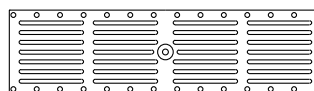
PG/PS



BDD/DDD/SDD



FG/FS



HPP

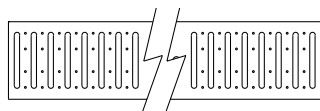


PVS/PVSG/PVSS

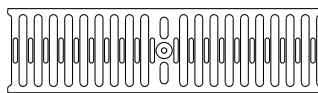
 Indicates 40" Grate Length

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
<b>SOG</b>	Decorative	Stainless Steel	5.60	20"	16.90	0.250	B	Medium Duty	No	No	No
<b>RFG</b>	Reinforced Slotted	Galvanized Steel	4.00	40"	12.00	0.375	B	Medium Duty	No	No	No
<b>RFS</b>	Reinforced Slotted	Stainless Steel	4.00	40"	12.00	0.375	B	Medium Duty	No	No	No
<b>RPG</b>	Reinforced Perforated	Galvanized Steel	4.00	40"	5.30	.250 Dia.	B	Medium Duty	Yes	No	No
<b>RPS</b>	Reinforced Perforated	Stainless Steel	3.80	40"	5.30	.250 Dia.	B	Medium Duty	Yes	No	No
<b>BG</b>	Slotted Bar Grate	Galvanized Ductile Iron	5.70	20"	23.90	0.3600	C	Heavy Duty	No	Yes	No
<b>DBG</b>	Slotted Bar Grate	Ductile Iron	5.70	20"	23.90	0.3600	C	Heavy Duty	No	Yes	No
<b>DCD</b>	Circular Decorative	Ductile Iron	6.30	20"	17.60	0.250	C	Heavy Duty	No	No	No
<b>DGC</b>	Slotted Grate	Ductile Iron	4.50	20"	28.10	0.500	C	Heavy Duty	No	Yes	No
<b>HDD</b>	Fixed Grate	Ductile Iron	7.70	20"	38.80	1.750	C	Heavy Duty	No	Yes	No
<b>HR</b>	Removable Grate	Ductile Iron	12.30	20"	32.80	1.625	C	Heavy Duty	No	Yes	No
<b>PPC</b>	Perforated Grate	Vinylester	3.30	20"	6.60	0.300	C	Heavy Duty	Yes	No	No
<b>DCE</b>	Solid Cover	Ductile Iron	8.00	20"	N/A	N/A	E	Special Duty	Yes	Yes	Yes
<b>DGE</b>	Slotted Grate	Ductile Iron	6.40	20"	27.80	0.500	E	Special Duty	No	Yes	Yes
<b>GDE</b>	Slotted Grate	Galvanized Ductile Iron	6.40	20"	27.80	0.500	E	Special Duty	No	Yes	Yes
<b>SBG</b>	Slotted Bar Grate	Stainless Steel	9.40	20"	27.70	0.500	E	Special Duty	No	Yes	Yes
<b>FGF</b>	Ductile Frame & Grate	Ductile Iron	18.70	20"	20.50	0.370	F	Special Duty	No	Yes	Yes
<b>GFG</b>	Galvanized Frame & Grate	Galvanized Ductile Iron	18.70	20"	20.50	0.370	F	Special Duty	No	Yes	Yes

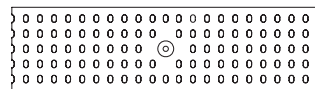
All gratings for the 6" systems have a width of 5.375" and a height of 3/4". For grate definitions and classifications, see page 37.



RFG/RFS



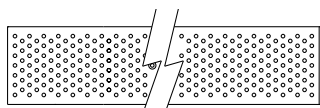
DGC



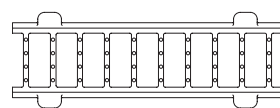
PPC



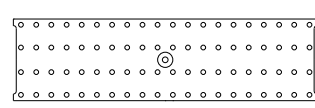
SBG



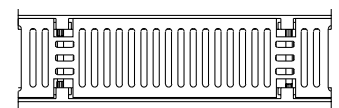
RPG/RPS



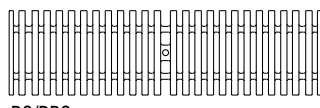
HDD



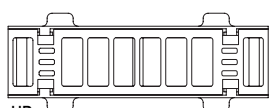
DCE



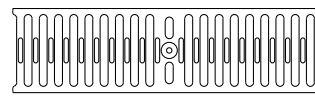
FGF/GFG



BG/DBG



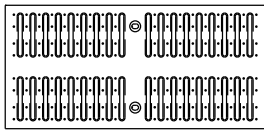
HR



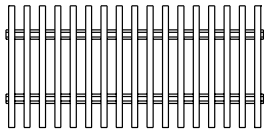
DGE/GDE

 Indicates 40" Grate Length

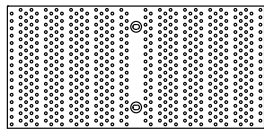
For downloadable CSI format specification, visit [www.zurn.com](http://www.zurn.com).



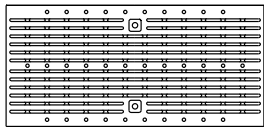
FG/FS



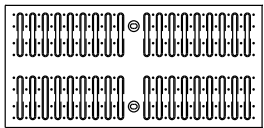
GG



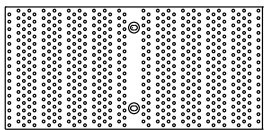
PG/PS



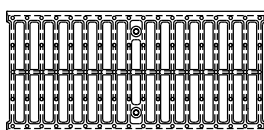
HPD



RFG/RFS



RPG/RPS

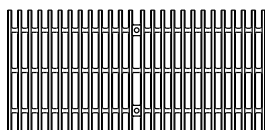


DGC

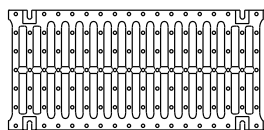
## 12" System Grates

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

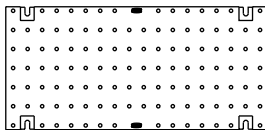
*All gratings for the 12" systems have a width of 11-1/4" and a height of 1-1/2". For grate definitions and classifications, see page 37.*



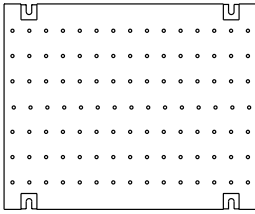
BG/SBG



DGE/DGF



DC

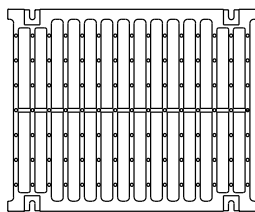


DCC

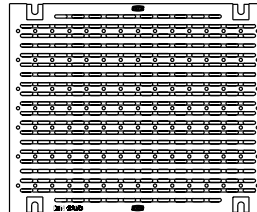
### Z874-12 System Grates

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

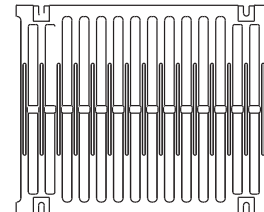
All gratings for the Z874-12 system have a width of 16-1/4" and a height of 1-3/4". For grate definitions and classifications, see page 37.



DGC

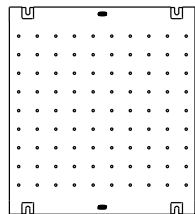


HPD



DGF

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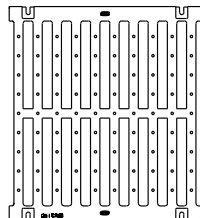


DCC

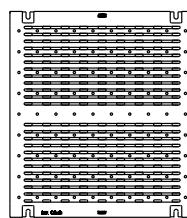
### Z874-18 System Grates

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

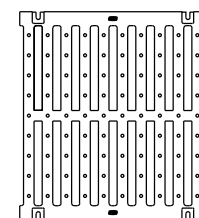
All gratings for the Z874-18 system have a width of 22-1/4" and a height of 1-3/4". For grate definitions and classifications, see page 37.



DGC



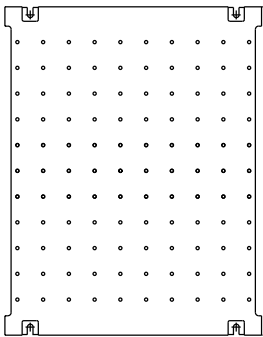
HPD



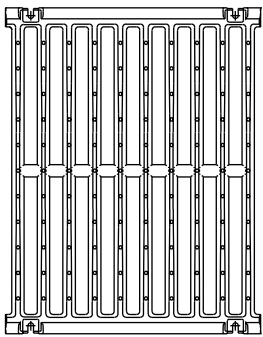
DGF

For downloadable CSI format specification, visit [www.zurn.com](http://www.zurn.com).

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



DCC

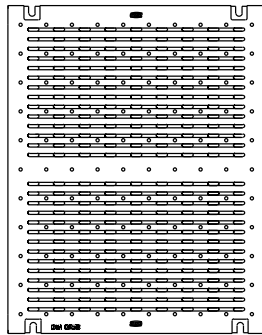


DGC

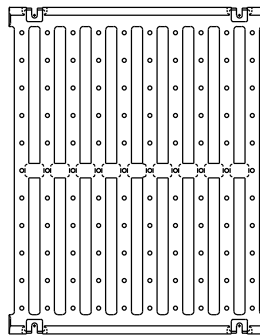
### Z874-21 System Grates

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.



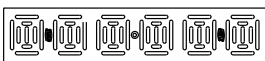
HPD



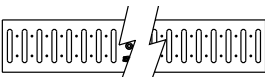
DGF

For downloadable CSI format specification, visit [www.zurn.com](http://www.zurn.com).

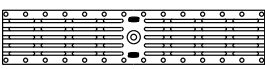
**Note:** Ductile iron grating for Z874-21 is furnished unpainted. Painted option available.



BZ



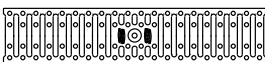
FG/FS



HPP



PG/PS



CG

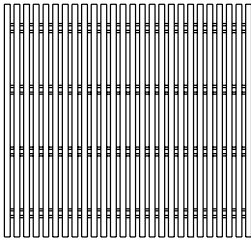
### Z884 4" System Grates

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

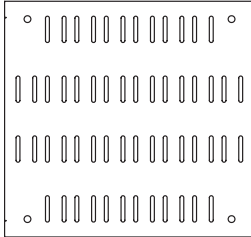
All gratings for the Z884 system have a width of 4-1/8" and a height of 3/4". For grate definitions and classifications, see page 37.

For downloadable CSI format specification, visit [www.zurn.com](http://www.zurn.com).

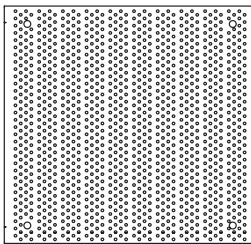
 Indicates 40" Grate Length



GG



RFG/RFS

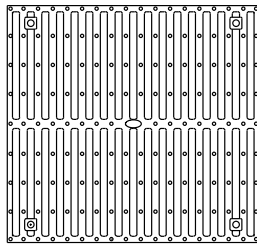


RPG/RPS

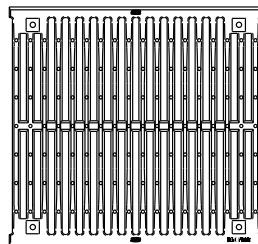
### Z817 and Z887 24" x 24" System Grates

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.



DGC



DGF

For downloadable CSI format specification, visit [www.zurn.com](http://www.zurn.com).

## 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. H2O).

**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. H2O).

**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.