

6-INCH HDPE PRE-SLOPED TRENCH DRAIN SYSTEM

SWIFTDRAIN 600

Lightweight, chemical-resistant linear drainage with a built-in 0.7% fall, 33 interlocking channel sections and a grate for every load — from patios to forklift aisles.

Class A–D | Up to 396 GPM | Runs from 4'–1,000'+ | ADA Options

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SWIFTDRAIN 600 SERIES

INSIDE THIS CATALOG

CONTENTS

Why Swiftdrain 600	03
Applications	04
System Components	05
Product Specifications	06
Run Layout & Slope Planning	07
Standard Run Layouts	08
Channel Dimensions & Flow	09
Channel Cross-Section	10
Grate Selection Guide	11
Iron Grates & Frames	12
Steel Grates	13
Polymer Grates	14
Decorative Grates	15
Load Classes & Encasement	16
Rebar Installation Detail	17
Catch Basins & Accessories	18
Installation Guide	19
Chemical Resistance	20–21
Guide Specification	22

AT A GLANCE

6"
Nominal grate width

4"
Flow path, 2" radius invert

48"
Channel section length

0.7%
Built-in slope per section

33
Channels: 24 sloped + 9 neutral

266 ft
Counter-directional run

396
GPM max. flow capacity

A–D
Load classes with grate/frame

THE SHORT VERSION

Swiftdrain 600 is a modular 6-inch trench drain made from molded structural-foam HDPE. Each 4-ft channel carries a precise 0.7% fall and numbered flow arrows, so crews set sections in order with no couplers, no hand-forming and no guesswork. Pair the channel with polymer, steel, ductile iron or decorative grates to match the traffic and the look of the site.



BUILT TOUGH · DRAINAGE THAT LASTS

WHY SWIFTDRAIN 600

The most cost-effective, functional linear drainage system for commercial, industrial and residential work — the strength of a concrete trench without the cost of forming one.

01
Pre-sloped, numbered channels
Every channel is molded with a 0.7% built-in fall and stamped with its part number and a flow arrow. Lay them out in sequence and the slope takes care of itself.

02
Fast, light installation
At 7.5–16 lb per 4-ft section, one person can carry and set a channel. Lower installed cost than polymer concrete, with fewer parts and less freight.

03
Locks together, stays aligned
Tongue-and-groove joints with an integral snap lock keep runs straight and stop joint movement during the pour — no clamps or screws.

04
Built-in rebar supports
Integral supports every 24" along both sides accept #4 (½") rebar for fast height adjustment and a stable set before concrete.

05
Locking grates
Grates lock to the channel's integral edge and secure with stainless steel bolt-downs, protecting the channel in shipping and installation.

06
Chemical and freeze/thaw resistant
HDPE with UV inhibitors stands up to road salt, freeze/thaw cycles and a wide range of acids and alkalis. Absorption ≤ 0.01%.

07
Outlet flexibility
Drain from an end outlet, a knock-out bottom outlet on any channel, or an in-line catch basin with side or bottom exits for 3"–12" pipe.

08
A grate for every job
Polymer in six colors, stainless and galvanized steel, ductile iron, heavy-duty forklift-rated iron and decorative iron. ADA and heel-proof options.



Channels with in-line catch basin, iron and decorative grates



Grate locks to the channel edge; integral rebar supports

DEPENDABLE · SAFE · SIMPLE · RELIABLE

APPLICATIONS

Wherever surface run-off needs to be intercepted and carried away — from a single driveway to a 266-ft warehouse apron — Swiftdrain 600 is the go-to 6" system.

Commercial
Parking areas, gas station entrances, car washes, garages, drive-thrus, stadiums

Industrial
Warehouses, loading docks, wash-down areas, chemical processing, forklift aisles (with frame)

Food & Beverage
Breweries, wineries, food processing, hydroponic and nursery facilities

Residential
Driveways, patios, garages, pool decks, hot tubs, saunas and spas

Recreation
Tennis courts, athletic fields, golf courses, tracks, marinas

Animal Care
Dog kennels and veterinary facilities — paw-friendly grate options



Polymer and ductile iron grates on HDPE channel



Kennel and animal-care facilities

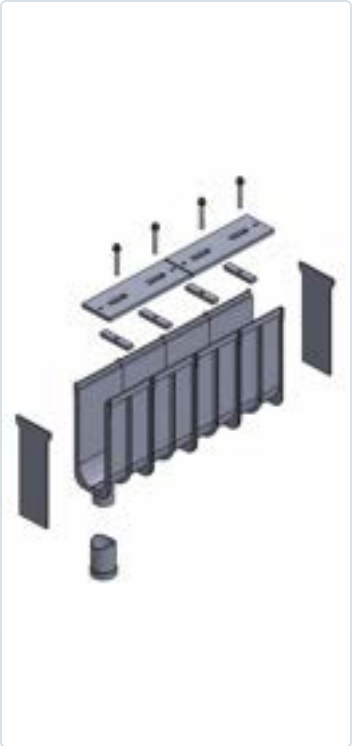


Galvanized steel slot grate

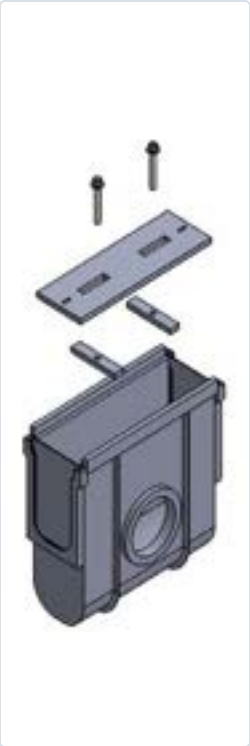
Not sure which grate? Start with the traffic: foot traffic and light vehicles → polymer or steel; cars and trucks → ductile iron; forklifts and hard-wheeled equipment → ductile iron with the 600-F frame. See the Grate Selection Guide on page 11.

EVERYTHING THAT GOES INTO A RUN

SYSTEM COMPONENTS



Channel assembly: grates, bolt-downs, install covers, end caps and outlet



In-line catch basin assembly

A **Channel**

4-ft HDPE section, 0.7% sloped or neutral, numbered with flow arrow. 33 sections, 600–714.

B **Grate**

24" long, 6" wide, ¾" thick. Two per channel. Polymer, steel, ductile iron or decorative.

C **Bolt-downs**

304 stainless steel screws lock the grate to the channel.

D **Install covers**

Protect the channel during the pour and keep concrete and debris out.

E **End cap**

Closes the shallow (start) end of a run.

F **End / bottom outlet**

Connects the deep end or any channel's bottom knock-out to Schedule 40 pipe.

G **Catch basin**

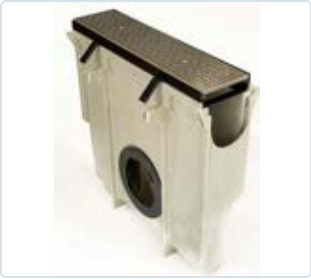
Seamless in-line sump, 24" long × 28" deep, side or bottom exits for 3"–12" pipe.

H **Filter basket**

Removable 304 stainless basket catches debris before it reaches the pipe.

I **Ductile iron frame**

600-F frame edges the channel for Class D and forklift traffic.



Catch basin



Stainless filter basket



Bottom outlet adapter

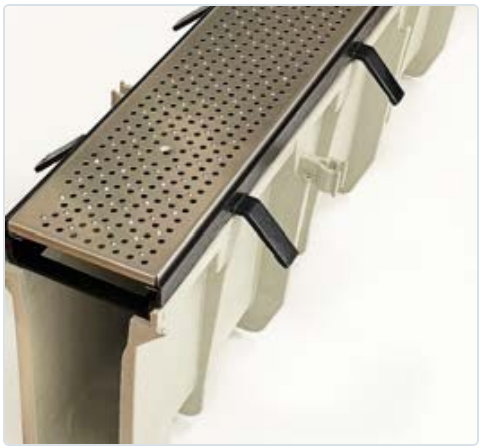


600-F ductile iron frame

SPECIFY WITH CONFIDENCE

PRODUCT SPECIFICATIONS

Channel material	Molded structural-foam high-density polyethylene (HDPE) with UV inhibitors. Gray.
Manufacturing	Injection molded in the U.S.A.; tested every production run.
Section length	48" (4 ft) channels · 24" (2 ft) grates, two per channel
Width	6" nominal grate width · 6-5/8" (168.3 mm) outside top dimension
Flow path	4" (101.6 mm) inside width with 2" (50.8 mm) radius bottom for sediment removal
Depth range	3.998"–12.062" inside · 5.354"–13.498" outside
Built-in slope	0.7% (0.336" fall per 4-ft sloped section)
System	33 channels: 24 pre-sloped + 9 neutral (part nos. 600–714)
Run lengths	96 ft continuous slope · 132 ft per side with neutrals · 266 ft counter-directional with center catch basin
Flow capacity	75 GPM (shallowest) to 396 GPM (deepest channel)
Channel weight	7.45 lb (600) to 16.06 lb (714)
Grate options	Polymer (6 colors), perforated polymer, 304 stainless steel, galvanized steel, ductile iron, heavy-duty ductile iron, decorative ductile iron
Grate weight	2.92 lb (polymer) to 16.0 lb (ductile iron)
Load class	A through D (EN 1433 A15–D400 equivalent) depending on grate, frame and concrete encasement
Material strength	Compressive 2,900 psi · tensile 4,550 psi · flexural 5,800 psi · absorption ≤ 0.01%
Durability	Freeze/thaw and road-salt resistant; broad chemical resistance (pages 20–21)
Joints	Tongue-and-groove with integral snap lock — no couplers, clamps or screws
Rebar supports	Integral, every 24" both sides, for #4 (½") rebar
Outlets	End outlet, bottom knock-out on every channel, or in-line catch basin · 3", 4", 6", 8", 12" pipe
Catch basin	Seamless in-line, 6" wide × 24" long × 28" deep, side or bottom outlet



Stainless steel perforated grate, heel-proof



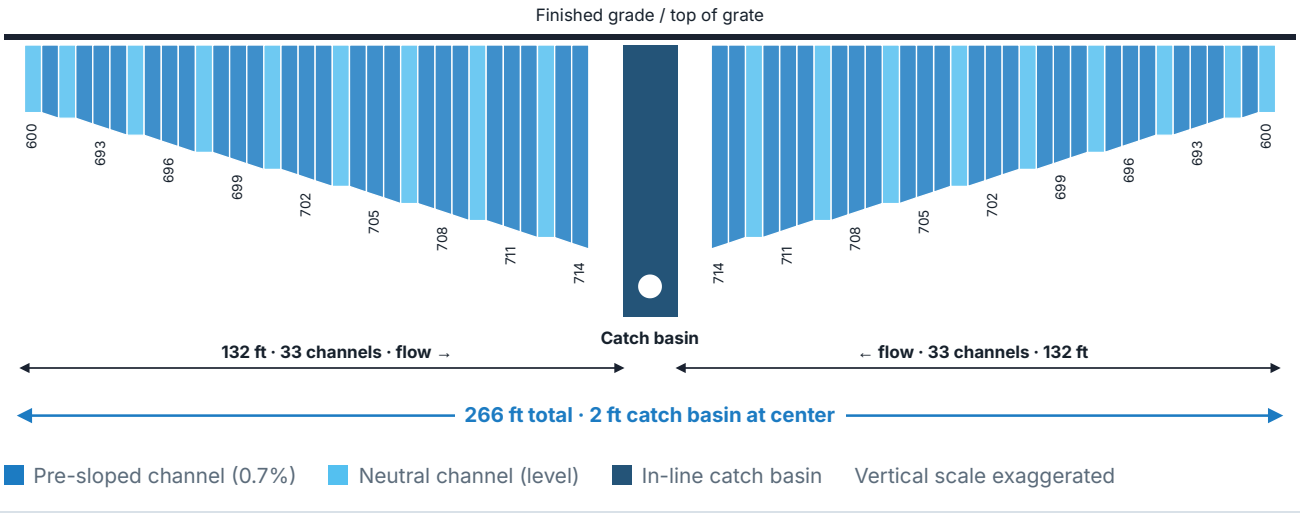
Ductile iron grate #606

All dimensions are nominal. Weights are for shipping purposes only. Specifications and availability are subject to change — confirm with Swiftdrain before final design.

INTUITIVE SLOPE DESIGN

RUN LAYOUT & SLOPE PLANNING

Swiftdrain 600 channels step down 0.336" every 4 ft. Neutral channels hold the depth level so a run can keep going after the slope is used up, and a center catch basin lets two runs fall toward each other.



96 ft

Continuous slope

All 24 sloped channels in sequence (691 → 714) give 8.06" of total fall at 0.7%.

132 ft

One direction with neutrals

Add the 9 neutral channels (600, 691N … 712N) to reach 132 ft before you need an outlet.

266 ft

Counter-directional

Two 132-ft runs falling into a 2-ft in-line catch basin at the center.

WORKED EXAMPLE — 40 FT SINGLE RUN

A 40-ft run is 10 channels. Starting shallow at **691** and running sloped to **700** gives an inside depth of 3.998" at the start and 7.358" at the outlet — 3.36" of fall. Order: 10 channels (691–700), 20 grates, 1 end cap, 1 end outlet or catch basin, and bolt-downs.

PLANNING TIPS

Begin at the outlet (deepest point) and work upstream following the arrows. Use the shallowest channel that still meets your flow requirement to minimize excavation. Runs that are not an even multiple of 4 ft can be field cut at the shallow end.



Polymer gray grate #610



Perforated polymer #610HP



Decorative iron on deep channel

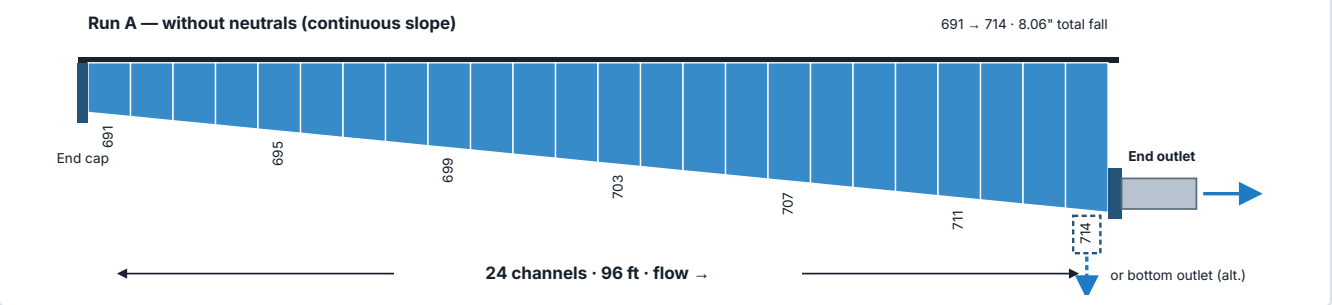


Runs meet at an in-line catch basin

END OUTLET OR BOTTOM OUTLET

STANDARD RUN LAYOUTS

The two most common single-direction runs, each draining to an end outlet at the deep end — or, alternatively, through the bottom outlet knock-out in the last channel.

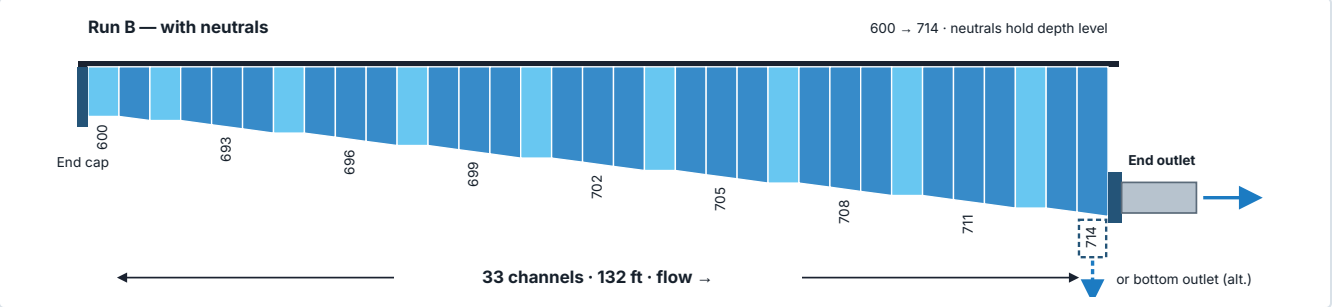


RUN A · 96 FT

Channels	24 sloped: 691–699, 700–714
Inside depth	3.998" at start → 12.062" at outlet
Grates	48 (two per channel)
Fittings	1 end cap at 691 · 1 end outlet at 714 (or bottom outlet in 714)
Best for	Maximum fall and self-cleansing flow over the full length

RUN B · 132 FT

Channels	24 sloped + 9 neutral: 600 → 714 incl. 691N … 712N
Inside depth	3.998" at start → 12.062" at outlet
Grates	66 (two per channel)
Fittings	1 end cap at 600 · 1 end outlet at 714 (or bottom outlet in 714)
Best for	Longest single run before an outlet, same end depth as Run A



Pre-sloped channel (0.7%) · Neutral channel (level) · End cap / end outlet

Dashed = bottom outlet alternative · vertical scale exaggerated

Shorter runs. Any consecutive section of either sequence works — start at the shallowest channel your site allows and stop where you need the outlet. Shorter runs can also end at an in-line catch basin instead of an end outlet.

Extended runs — 1,000+ linear feet. Multiple neutral channels can be used in a row at any depth to keep a run going after the slope is used up. By repeating neutrals between sloped sections, Swiftdrain 600 can achieve run lengths upwards of 1,000 linear feet. Level sections move water by hydraulic head, so confirm outlet spacing, catch basin locations and flow capacity with the project's hydraulic design — Swiftdrain will lay out the run for you.

33 SECTIONS · 600 TO 714

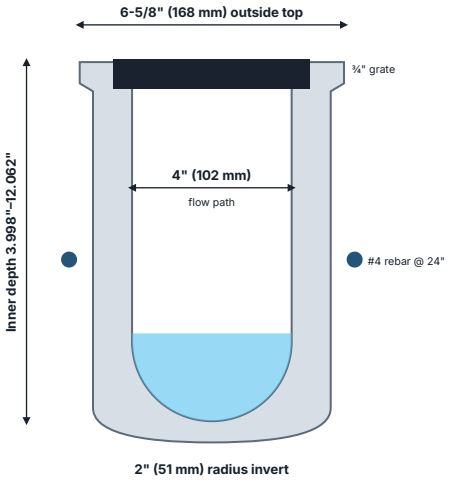
CHANNEL DIMENSIONS & FLOW

Part No.	Description	Flow GPM	Min. inner depth (in)	Max. inner depth (in)	Min. outer depth (in)	Max. outer depth (in)	Weight (lb)
600	3.99" Neutral	75	3.998	3.998	5.354	5.760	7.45
691	3.99" → 4.34" Sloped	75	3.998	4.334	5.690	5.770	7.52
691N	4.34" Neutral	89	4.334	4.334	5.692	6.103	7.81
692	4.34" → 4.67" Sloped	89	4.334	4.670	6.062	6.106	7.92
693	4.67" → 5.00" Sloped	103	4.670	5.006	6.362	6.442	8.27
694	5.00" → 5.34" Sloped	117	5.006	5.342	6.698	6.778	8.64
694N	5.34" Neutral	131	5.342	5.342	6.700	7.111	8.93
695	5.34" → 5.68" Sloped	131	5.342	5.678	7.034	7.114	8.99
696	5.68" → 6.01" Sloped	145	5.678	6.014	7.370	7.450	9.36
697	6.01" → 6.35" Sloped	159	6.014	6.350	7.706	7.786	9.74
697N	6.35" Neutral	173	6.350	6.350	7.708	8.119	10.04
698	6.35" → 6.69" Sloped	173	6.350	6.686	8.042	8.122	10.11
699	6.69" → 7.02" Sloped	187	6.686	7.022	8.378	8.458	10.48
700	7.02" → 7.36" Sloped	201	7.022	7.358	8.714	8.794	10.86
700N	7.36" Neutral	215	7.358	7.358	8.716	9.127	11.16
701	7.36" → 7.69" Sloped	215	7.358	7.694	9.050	9.130	11.23
702	7.69" → 8.03" Sloped	229	7.694	8.030	9.386	9.466	11.60
703	8.03" → 8.37" Sloped	243	8.030	8.366	9.722	9.802	11.98
703N	8.37" Neutral	257	8.366	8.366	9.724	10.135	12.27
704	8.37" → 8.70" Sloped	257	8.366	8.702	10.058	10.138	12.34
705	8.70" → 9.04" Sloped	271	8.702	9.038	10.394	10.474	12.71
706	9.04" → 9.37" Sloped	285	9.038	9.374	10.730	10.810	13.07
706N	9.37" Neutral	299	9.374	9.374	10.732	11.143	13.39
707	9.37" → 9.70" Sloped	299	9.374	9.710	11.066	11.146	13.40
708	9.70" → 10.05" Sloped	313	9.710	10.046	11.402	11.482	13.83
709	10.05" → 10.38" Sloped	327	10.046	10.382	11.738	11.818	14.20
709N	10.38" Neutral	341	10.382	10.382	11.740	12.151	14.50
710	10.38" → 10.71" Sloped	341	10.382	10.718	12.074	12.154	14.57
711	10.71" → 11.05" Sloped	355	10.718	11.054	12.410	12.490	14.95
712	11.05" → 11.39" Sloped	368	11.054	11.390	12.746	12.826	15.32
712N	11.39" Neutral	382	11.390	11.390	12.785	13.158	15.60
713	11.39" → 11.72" Sloped	382	11.390	11.726	13.082	13.162	15.69
714	11.72" → 12.06" Sloped	396	11.726	12.062	13.418	13.498	16.06

Shaded rows are neutral (level) channels. All channels 48" long × 6-5/8" outside top width × 4" flow path. All dimensions are nominal; weights are for shipping purposes only.

ENGINEERED PROFILE

CHANNEL CROSS-SECTION



Typical section — not to scale. Depth varies by channel number.

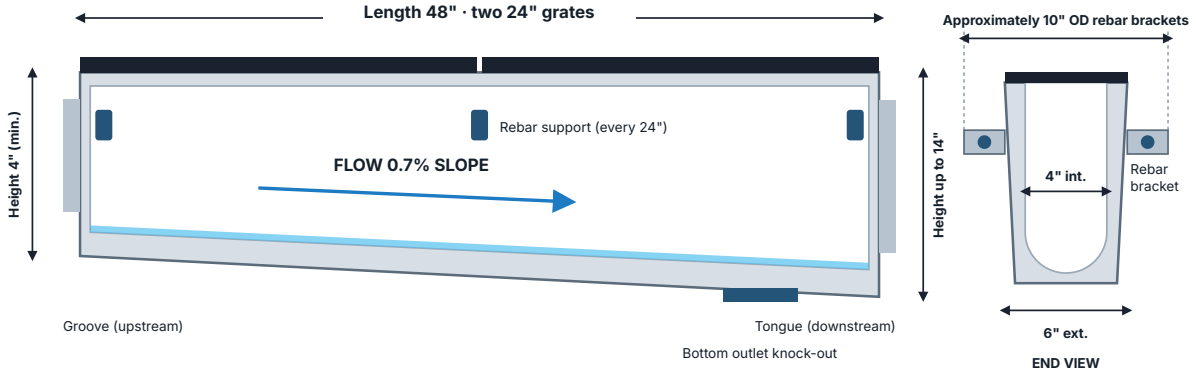
PROFILE DETAILS

Outside top width	6-5/8" (168.3 mm)
Grate width / length	6" nominal × 24", ¾" thick
Flow path	4" (101.6 mm)
Invert	2" (50.8 mm) radius — self-cleansing, easy sediment removal
Fall per sloped section	0.336" over 48" (0.7%)
Shallowest / deepest	600: 3.998" ID · 714: 12.062" ID
Rebar supports	Integral, both sides, every 24", #4 (½") bar
Bottom outlet	Knock-out on every channel section



Integral rebar supports and locked ductile iron grate

SIDE ELEVATION — SINGLE 4-FT SECTION



Height varies 4"–14" by channel number; each sloped section falls 0.336" over 48"

Not to scale; slope exaggerated for clarity. Internal width 4" · external width 6" · approximately 10" OD rebar brackets · length 48" · height varies 4"–14".

A GRATE FOR EVERY APPLICATION

GRATE SELECTION GUIDE

Choose the grate by traffic first, then by environment and appearance. All grates are 24" long × 6" wide and lock to the channel with stainless bolt-downs.

Part No.	Grate	Color	Load class	ADA	Heel proof	Open area in²/ft	Inflow GPM/ft	Weight lb	Best for
610	Polymer slot	Black, red, green, white, gray, tan	B	Yes	—	20.61	27.0	2.92	Patios, pools, driveways, landscape
610HP	Polymer perforated	Light gray	B	Yes	Yes	9.36	12.2	3.00	Pedestrian, plazas, pool decks
607	304 stainless steel, perforated	Steel	B	Yes	Yes	7.92	10.4	3.22	Food & beverage, pedestrian, chemical
608	Galvanized steel slot	Steel	B	Yes	—	19.85	26.0	4.00	Driveways, garages, light vehicles
606	Ductile iron, horizontal slot	Black	C	Yes	—	15.27	20.0	16.0	Parking, commercial drives, H-20
Deco J/K/L	Decorative ductile iron	Black	C	Yes	Yes	—	—	—	Plazas, storefronts, architectural
632-F	Ductile iron with frame	Black	D	Yes	—	—	—	—	Forklifts, loading docks
6-HD-TD	Heavy-duty ductile iron	Black	D	Yes	—	—	—	—	Industrial, hard-wheeled traffic

Class D requires ductile iron grates with the 600-F ductile iron frame and the encasement shown on page 16. "—" = data on request.

A–B

Pedestrian & light vehicles

Polymer, perforated polymer, stainless or galvanized steel.

C

Cars & trucks

Ductile iron #606 or decorative ductile iron.

D

Forklifts & heavy equipment

632-F or 6-HD-TD with 600-F frame.

CHEM

Chemical & wash-down

Stainless steel or polymer — avoid iron where acids are present.



Polymer #610



Stainless #607



Galvanized #608



Ductile iron #606



Ductile iron 632-F

LOAD CLASS C & D

IRON GRATES & FRAMES



PART # 606

DUCTILE IRON GRATE — HORIZONTAL SLOT

The everyday heavy-duty choice for parking areas, commercial drives and truck traffic.

Load class	C (D with 600-F frame)
Rating	H-20
Open area	15.27 in²/ft
Inflow	20.0 GPM/ft
ADA	Yes
Weight	16.0 lb



PART # 632-F

DUCTILE IRON GRATE WITH FRAME

Pairs with the 600-F frame to carry forklifts, semis and high-lows at speeds under 20 mph.

Load class	D
Forklift rated	Yes
Rating	H-20
ADA	Yes
Size	6" × 24"



PART # 6-HD-TD

HEAVY-DUTY DUCTILE IRON GRATE

Our heaviest 6" grate for industrial floors, loading docks and hard-wheeled equipment.

Load class	D
Forklift rated	Yes
Rating	H-20
ADA	Yes
Size	6" × 24"



PART # 600-F

DUCTILE IRON FRAME

Edges the channel and transfers wheel loads into the concrete encasement. Recommended for pneumatic-tire forklift traffic.

Load class	D (326–575 psi)
Length	2 ft
Weight	7.50 lb
Use with	Ductile/cast iron grates
Finish	Black

STAINLESS & GALVANIZED

STEEL GRATES



PART # 607

STAINLESS STEEL PERFORATED GRATE

Hygienic, corrosion-resistant and heel-proof — ideal for food and beverage, breweries and pedestrian plazas.

Material	**304 stainless**
Load class	**B**
ADA / Heel-proof	**Yes / Yes**
Open area	**7.92 in²/ft**
Inflow	**10.4 GPM/ft**
Weight	**3.22 lb**



PART # 607

STAINLESS STEEL — GRATE DETAIL

Round perforations keep heels, wheels and paws on the surface while letting water through.

Length × width	**24" × 6"**
Thickness	**¾"**
Finish	**Brushed stainless**
Pkg. qty.	**12**



PART # 608

GALVANIZED STEEL SLOT GRATE

High-capacity slot pattern with a durable galvanized finish for driveways, garages and light vehicle areas.

Material	**Galvanized rolled steel**
Load class	**B**
ADA	**Yes**
Open area	**19.85 in²/ft**
Inflow	**26.0 GPM/ft**
Weight	**4.00 lb**



PART # 608

GALVANIZED STEEL — GRATE DETAIL

Wide slots maximize inflow where heavy rain and sheet flow need to be captured quickly.

Length × width	**24" × 6"**
Slot style	**Horizontal slot**
Heel-proof	**No**
Pkg. qty.	**12**

SIX COLORS · LOAD CLASS B

POLYMER GRATES

Structural-foam polyolefin grates with UV inhibitors — light, affordable and available in six colors to blend with pavers, stone, turf and pool decks.

Part no.	#610-[color]
Load class	B (light traffic)
ADA	Yes
Open area / inflow	20.61 in²/ft · 27.0 GPM/ft
Weight · pkg.	2.92 lb · 12 per carton
Perforated option	#610HP light gray — heel-proof, ADA, 9.36 in²/ft, 12.2 GPM/ft, 3.0 lb



Polymer grate color range



#610 · HP · Light gray perforated



#610 · Gray



#610 · White



#610 · Tan



#610 · Red



#610 · Green

ARCHITECTURAL DUCTILE IRON

DECORATIVE GRATES

Decorative ductile iron grates turn the drain into a design feature for plazas, storefronts, courtyards and high-end residential work — while still carrying Class C loads.



Deco J · Ductile iron · Class C · ADA · Heel-proof



Deco K · Ductile iron · Class C · ADA · Heel-proof



Deco L · Ductile iron · Class C · ADA · Heel-proof



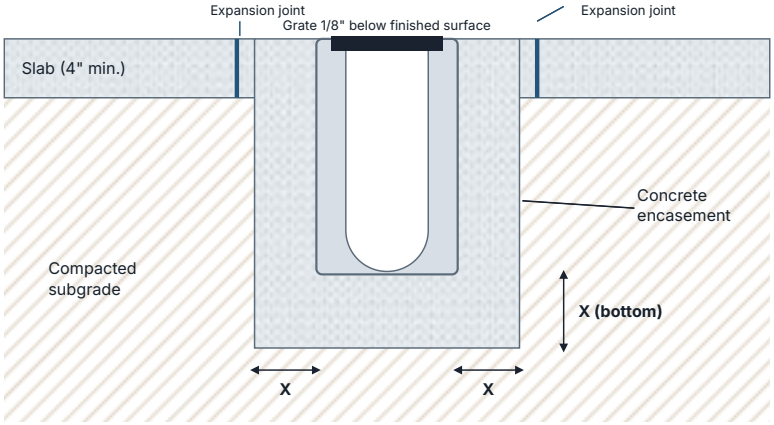
Decorative patterns on HDPE channel

Specifier note. All decorative grates are 6" × 24", H-20 rated, and lock to the channel with stainless bolt-downs. Ask about pattern availability for your project and finish samples for architect review.

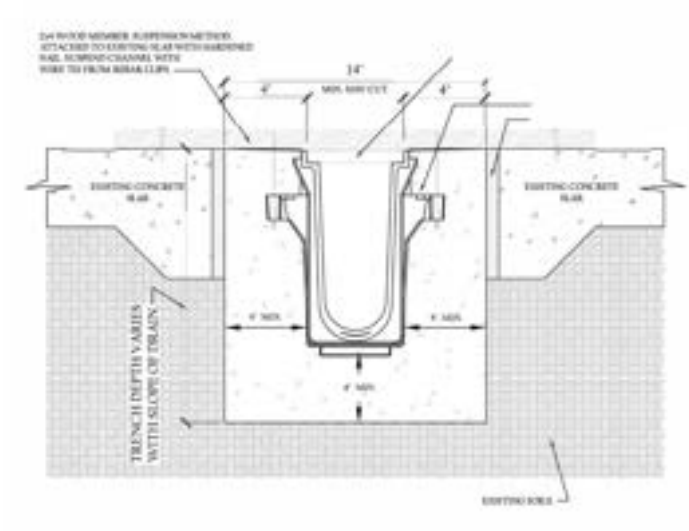
RATED BY GRATE, FRAME AND CONCRETE

LOAD CLASSES & ENCASEMENT

Class	EN 1433	Test load	Typical application	Swiftdrain 600 grates	Encasement X
A	A15	15 kN · 3,372 lbf	Pedestrian and bicycle areas, landscaping	610, 610HP, 607, 608	**4"**
B	B125	125 kN · 28,101 lbf	Driveways, patios, light-vehicle parking	610, 610HP, 607, 608	**4"**
C	C250	250 kN · 56,202 lbf	Parking lots, curbsides, car and truck traffic	606, Deco J/K/L	**6"**
D	D400	400 kN · 89,924 lbf	Forklifts, roads, loading docks	632-F, 6-HD-TD + 600-F frame	**8"**



Typical installation section — for guidance only.



Typical trench drain detail — retrofit in existing slab, Class A & B, wood member suspension method.

ENCASEMENT REQUIREMENTS

Swiftdrain 600 channels get their load rating from the concrete around them. Encase the channel on both sides and underneath to dimension X for the selected load class, regardless of the surface (concrete, asphalt or pavers).

Consolidate under and between the channel ribs with no voids, and place expansion joints parallel to the run on both sides. Where the slab is thicker than X, match the slab thickness. Class D requires the 600-F ductile iron frame.

RETROFIT NOTES

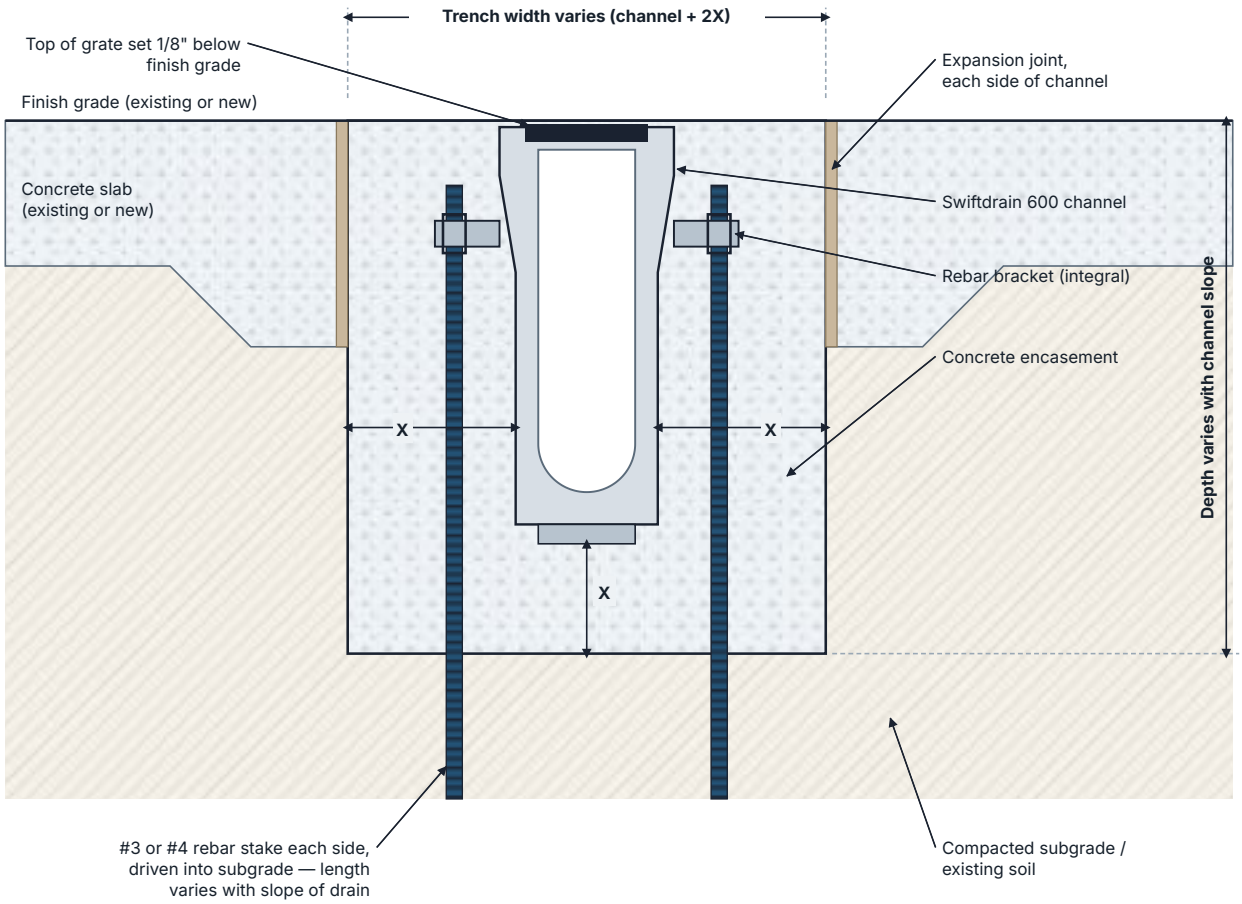
Install channels with blank grates or covers and tape the holes to keep concrete out. In an existing slab, saw cut a minimum 14" opening (4" each side of the channel) and suspend the channel from 2×4 members with wire ties to the rebar clips. Avoid full load traffic for 28 days or until the concrete has fully hardened.

If in doubt, specify the next higher class. Final encasement, reinforcement and joint design are the responsibility of the engineer of record.

TYPICAL INSTALLATION SECTION

REBAR INSTALLATION DETAIL

The standard way to set Swiftdrain 600 in new or existing slabs: rebar stakes driven on each side carry the channel at grade through its integral brackets, then the trench is filled with concrete to the encasement dimension X for the load class.



Rebar suspension method — typical section, not to scale. X per load class (page 16).

SETTING THE CHANNEL

Drive one #3 or #4 rebar stake on each side of the channel at every integral bracket (24" on center). Stake length varies along the run as the channel deepens with its 0.7% slope.

Snap the channel onto the stakes and tie or clip it at the brackets. Adjust each section to a string line so the top of grate sits 1/8" below finish grade along the full run.

ENCASEMENT & JOINTS

Excavate to channel width plus X on each side and X below the deepest outer depth. Fill under, around and between the ribs with concrete — no voids. Install a felt (or equal) expansion joint along each side of the trench.

Keep grates or install covers in place during the pour, and hold traffic off until the concrete has fully cured.

OUTLETS, CAPS AND MAINTENANCE

CATCH BASINS & ACCESSORIES



PART # CATCH BASIN

SEAMLESS IN-LINE CATCH BASIN

Joins two runs at the low point and collects sediment before it reaches the pipe. Inlets are trimmed to accept the adjoining channel depth.

Size	**6" W × 24" L × 28" D**
Outlets	**Side or bottom**
Pipe	**3", 4", 6", 8", 12"**
Fits	**All channel depths**



PART # FILTER BASKET

STAINLESS STEEL FILTER BASKET

Removable, hygienic and easy to clean — catches leaves and debris so the line stays clear over time.

Material	**304 stainless**
Fits	**In-line catch basin**
Service	**Lift-out handle**



PART # BOTTOM OUTLET

BOTTOM OUTLET ADAPTER

Turns any channel into an outlet point — drop straight to an underground line without a catch basin.

Fits	**Knock-out on any channel**
Pipe	**Schedule 40**
Sizes	**3"–12" with couplers**



PART # COUPLERS

PIPE COUPLERS & ADAPTERS

Connect end outlets and catch basin exits to the storm line in the size your design calls for.

Pipe	**Schedule 40**
Sizes	**3", 4", 6", 8", 12"**
Use	**End outlets, basin outlets**

Installation kit. Each project kit can include end caps, end outlets, 304 stainless bolt-downs, bottom outlet adapters and pipe couplers for 3", 4", 6", 8" or 12" pipe — ask us to build it into your quote.

EIGHT STEPS TO A STRAIGHT, SLOPED RUN

INSTALLATION GUIDE

1 Plan & excavate

Lay out the run and outlet location. Excavate a trench wide enough for the 6-5/8" channel plus encasement X on both sides, and deep enough for the deepest channel's outer depth plus X below.

2 Lay out in order

Set channels beside the trench in numbered sequence, starting at the outlet (deepest point) and working upstream with the flow arrows pointing toward the outlet.

3 Prepare the outlet

Open the bottom knock-out or fit the end outlet / catch basin, and connect to the storm line with the correct coupler. Fit an end cap on the shallow end.

4 Set on rebar

Drive #4 rebar stakes and clip them into the integral supports every 24". Snap channels together and adjust height to a string line so the grate sits about 1/8" below finished surface.

5 Protect the channel

Keep grates or install covers locked in place during the pour so the channel holds its shape and concrete stays out.

6 Pour the encasement

Place concrete under and around the channel to dimension X, working it fully between the ribs. Avoid aggregate larger than #57 and do not float concrete over the grate edge.

7 Joints & finish

Install expansion joints on both sides of the run. Finish the slab sloped toward the drain so water reaches the grate.

8 Cure & clean

Allow the concrete to cure before traffic, then remove debris, inspect joints and outlets, and flush the line.



Channels, grates, catch basin and basket



Grates locked and installation brackets in place

This is a general guide. Always follow the project drawings, local codes and the engineer of record. Full installation instructions are available from Swiftdrain.

HDPE CHANNEL · A-L

CHEMICAL RESISTANCE

HDPE is best known for its resistance to caustic chemicals. This chart shows how the Swiftdrain 600 channel performs against agents common in breweries, food and beverage plants and chemical facilities, under guidance of ASTM D543 at ambient temperature.

\+ Excellent — resistant, non-reactive ± Good to average — continuous exposure may cause swelling or structural change

– Not recommended — immediate structural damage likely

Agent	HDPE
Acetaldehyde	±
Acetic acid	+
Acetic acid 5%	+
Acetic acid 50%	+
Acetic acid, glacial	+
Acetone	+
Acetonitrile	+
Acetophenone	+
Adipic acid	+
Allyl alcohol	+
Aluminum chloride	+
Amino acids	+
Ammonia, aqueous sat. sol.	+
Ammonia, liquid 100%	+
Ammonium acetate sat. sol.	+
Ammonium chloride sat. sol.	+
Amyl acetate 100%	±
Amyl alcohol 100%	+
Aniline 100%	+
Aqua regia (HCl/HNO_3 3:1)	–
Arsenic acid	+
2-Butanol	+

Agent	HDPE
Benzaldehyde	+
Benzene	–
Benzyl alcohol	±
Boric acid	+
Butyl acetate 100%	±
Calcium chlorate	+
Calcium chloride	+
Calcium hydroxide	+
Calcium hypochlorite	+
Carbazole	+
Carbon tetrachloride	±
Chlorine, aqueous sat. sol.	±
Chlorine, liquid 100%	–
Chlorobenzene	±
Chloroform	±
Chromic acid up to 40%	–
Citric acid sat. sol.	+
Copper sulfate, aq.	+
1,4-Dioxane	±
Decahydronaphthalene	+
Dibutyl phthalate	+
Diethyl ether	±

Agent	HDPE
Diethyl malonate	+
Diethylene dioxide	+
Diethylene glycol	+
Dimethyl sulfoxide (DMSO)	+
Ethyl acetate	+
Ethyl alcohol, absolute	–
Ethyl alcohol 40%	+
Ethyl alcohol 96%	+
Ethylene chloride	–
Ethylene glycol	+
Ethylene oxide 100%	±
Fatty acids	+
Fluorinated hydrocarbon	–
Fluorine	–
Fluorine gas	–
Formaldehyde	+
Formaldehyde 10%	+
Formaldehyde 40%	+
Formic acid up to 40%	+
Formic acid up to 100%	+
Hexane	+
Hydrobromic acid up to 100%	+

HDPE CHANNEL · M–Z

CHEMICAL RESISTANCE

Agent	HDPE
Hydrochloric acid	+
Hydrochloric acid 5%	+
Hydrochloric acid 20%	+
Hydrochloric acid up to 40%	+
Hydrofluoric acid 4%	+
Hydrofluoric acid 48%	+
Hydrogen peroxide 30%	+
Isopropanol	+
Isopropyl ether 100%	+
Lactic acid 10%	+
Lactic acid up to 100%	+
Lead acetate	+
2-Methoxyethanol	+
Magnesium chloride sat. sol.	+
Mercury	+
Mercury hydroxide	+
Methanol 100%	+
Methoxyethyl oleate	+
Methyl alcohol	+
Methylene chloride	–
n-Butanol	+
n-Octane	+

Agent	HDPE
Nitric acid up to 30%	+
Nitric acid 40–50%	±
Oxalic acid sat. sol.	+
Ozone	±
2-Propanol	+
Perchloroethylene	–
Petroleum ether	±
Phenol 90%	+
Phosphoric acid	+
Phosphoric acid 5%	+
Phosphoric acid 85%	+
Phosphorus trichloride	+
Potassium hydroxide up to 50%	+
Potassium permanganate 30%	+
Propylene glycol	+
Pyridine	–
Silicone oil	+
Silver nitrate	+
Sodium carbonate up to 50%	+
Sodium dichromate sat. sol.	+
Sodium hydroxide 1%	±
Sodium hydroxide 10–60%	±

Agent	HDPE
Sodium hypochlorite 15%	+
Stearic acid	+
Sulfuric acid up to 10%	+
Sulfuric acid 10–30%	+
Sulfuric acid 50%	+
Sulfuric acid 96%	±
Sulfuric acid 98%	±
Tartaric acid sat. sol.	+
Tetrahydrofuran	–
Tincture of iodine	+
Toluene	±
Tributyl citrate	±
Trichloroethylene	–
Triethylene glycol	+
Tripropylene glycol	+
Trisodium phosphate	+
Urea sat. sol.	+
Xylene	±
Zinc chloride sat. sol.	+
Zinc sulfate sat. sol.	+

Grates in chemical environments. The channel is HDPE, but the grate is often the limiting material. Cast and ductile iron are not recommended where acids such as acetic, citric, hydrochloric, lactic, phosphoric or sulfuric are present — specify 304 stainless steel or polymer grates for wash-down, brewery and processing areas. Results vary with concentration, temperature and exposure time; contact Swiftdrain for project-specific guidance.

FOR ENGINEERS AND SPECIFIERS

GUIDE SPECIFICATION

Short-form guide specification. Edit to suit the project; bracketed items are options.

PART 1 — GENERAL

1.1 Summary. Furnish and install a pre-sloped HDPE trench drain system complete with channels, grates, [frames,] [catch basins,] end caps, outlets and accessories as shown on the drawings.

1.2 Submittals. Product data, layout drawing showing channel sequence and invert depths, grate schedule with load class, and manufacturer's installation instructions.

1.3 Delivery and handling. Store channels and grates on site protected from damage; keep channels in numbered sequence until installed.

PART 2 — PRODUCTS

2.1 Manufacturer. Swiftdrain 600 Series, Swiftdrain, Mineola, NY · 646-227-0910 · sales@swiftdrain.com. Substitutions per Division 01.

2.2 Channels. Molded structural-foam polyethylene with UV inhibitors; nominal outside top dimension 6-5/8" (168.3 mm); inside nominal flow path 4" (101.6 mm) with 2" (50.8 mm) radius bottom; 48" sections. System shall include neutral and pre-sloped sections with a slope of 0.7%. Channels shall have tongue-and-groove joints with integral snap-lock, integral rebar supports at 24" on each side for #4 rebar, and a bottom outlet knock-out on each section. Material: compressive strength 2,900 psi, tensile 4,550 psi, flexural 5,800 psi, absorption not to exceed 0.01%.

2.3 Grates. 24" × 6" [polymer #610-(color)] [perforated polymer #610HP] [304 stainless steel #607] [galvanized steel #608] [ductile iron #606] [decorative ductile iron Deco (J/K/L)] [ductile iron 632-F / 6-HD-TD], secured with stainless steel bolt-downs. Grates in pedestrian routes shall be ADA compliant [and heel-proof].

2.4 Frames. [Where Load Class D is required, provide 600-F ductile iron frames.]

2.5 Catch basins and outlets. [Seamless in-line catch basin, 6" × 24" × 28" deep, with side or bottom outlet for (3"/4"/6"/8"/12") pipe and removable 304 stainless steel filter basket.] End caps, end outlets and adapters by the channel manufacturer.

PART 3 — EXECUTION

3.1 Installation. Install per manufacturer's instructions beginning at the outlet and proceeding upstream in numbered sequence. Support channels on #4 rebar through integral supports and set grate 1/8" below finished surface. Keep grates or install covers in place during concrete placement.

3.2 Encasement. Encase in 4,000 psi minimum concrete to the dimensions required for the specified load class (Class A/B 4", Class C 6", Class D 8" minimum), fully consolidated with no voids. Provide expansion joints on both sides parallel to the run.

3.3 Cleaning. Remove debris from channels, basins and pipe; verify free drainage before acceptance.



SWIFTDRAIN

SAME-DAY PROPOSALS.
MOST ITEMS IN STOCK, READY TO SHIP.

Send us your plans or a quick sketch — we'll lay out the run, pick the channels and grates, and quote the full system.

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RONKONKOMA
59 Remington Blvd
Ronkonkoma, NY 11779

All dimensions are nominal. Weights are for shipping purposes only. Specifications, load ratings and availability are subject to change without notice. Load ratings assume installation per Swiftdrain instructions with proper concrete encasement. © 2026 Swiftdrain.