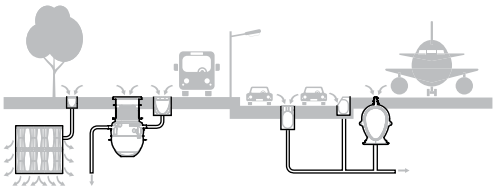
ACO External Drainage

ACO DRAIN

PowerDrain Line



S100K - 4" internal width, iron edge channel

S200K - 8" internal width, iron edge channel

S300K - 12" internal width, iron edge channel

ACO DRAIN

ACO Drain is the market leading modular trench drain system and is ideal for commercial applications varying from gas stations to airports.

ACO Drain systems consist of factory manufactured, modular channel units made from either corrosion-resistant, polymer concrete or fiberglass, together with grates from a variety of materials for all loading applications. ACO Drain systems are available in 2", 4", 8" and 12" internal widths, and most systems are available with a built-in slope for up to 130 ft (40 meters) of continuous slope.

The ACO Drain product line is segmented into different product types depending on use:

1. KlassikDrain
KlassikDrain - K100/K200/K300
MiniKlassik - K50
Brickslot

2. PowerDrain
PowerDrain - S100K/S200K/S300K

2. Slab Solutions
SlabDrain
FlowDrain
MembraneDrain

PowerDrain

Heavy duty sloped trench drain system ideal for applications requiring the most rugged product. PowerDrain features an integrally cast-in ductile iron edge rail, and choice of slotted or longitudinal ductile iron grates up to EN 1433 Load Class F (90 ton loading).

PowerDrain is available in 4" (S100K), 8" (S200K) and 12" (S300K) internal width systems.

Grates are locked in place with either the patented PowerLok boltless locking system or a 4-bolt option is also available.

Typical applications

- *Airports*
- *Highways*
- *Heavy duty industrial areas*
- *Gas stations*
- *Docks & ports*
- *Military bases*
- *Truck stops*

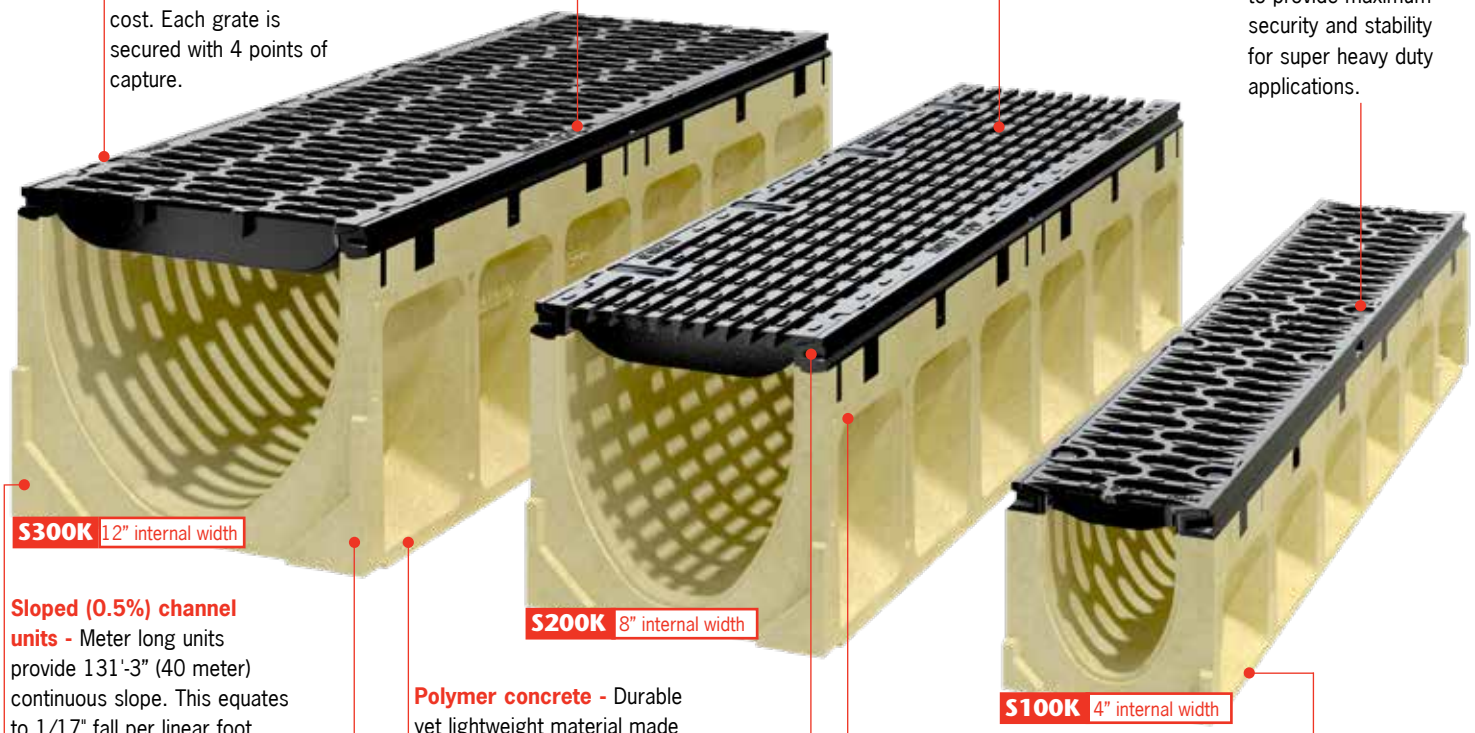
Product overview - S100K/S200K/S300K

'Anti-shunt' lugs - Recesses in grate fit around lugs on the edge rail to prevent longitudinal movement.

Ductile iron grates - Heavy duty ductile iron grates in choice of ADA compliant (Load Class E*) or slotted (Load Class F). (*S100K ADA grates rated to Load Class F).

PowerLok - A patented, boltless locking system that provides easy fitting and removal of grates. Reduces installation/ maintenance time and cost. Each grate is secured with 4 points of capture.

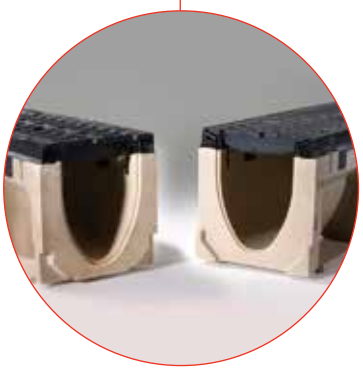
4-Bolt slotted grate - 4-bolt grate option is available on all widths to provide maximum security and stability for super heavy duty applications.



Sloped (0.5%) channel units - Meter long units provide 131'-3" (40 meter) continuous slope. This equates to 1/17" fall per linear foot. Five constant depth channels extend run lengths. Four half-meter units and accessories also available.

Polymer concrete - Durable yet lightweight material made from polyester resin binder reinforced by mineral aggregates and fillers.

Channel identification & system numbering - In addition to channel numbering on sidewalls and base of channel, each end of the channel indicates the number of the channel that will connect to it.

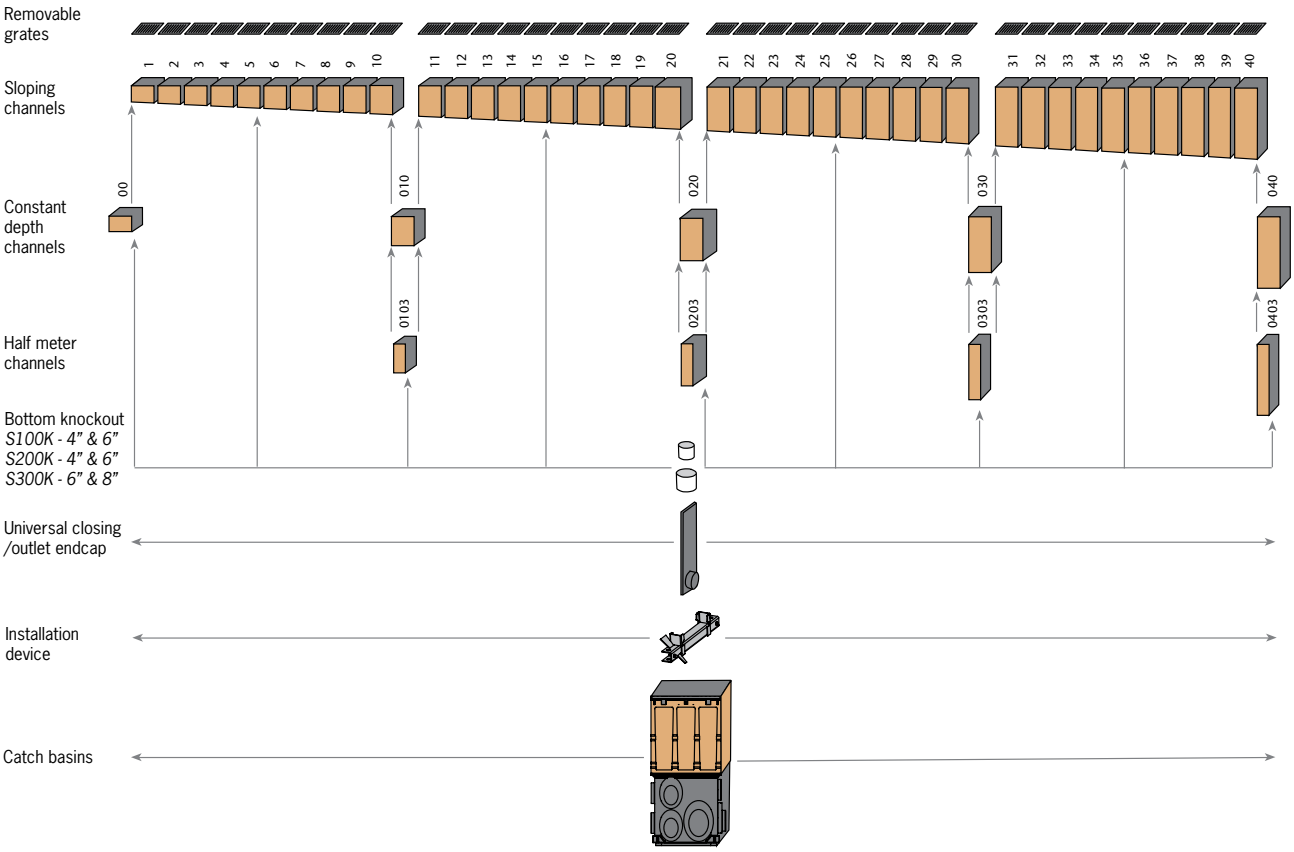


Interconnecting end profiles - Allow easy and effective joining of channels. **SF Sealant Groove -** A $^{3}/_{16}$" by $^{5}/_{16}$" groove is cast into both ends of every channel. The combined groove this creates allows for a bead of appropriate flexible sealant to be inserted at joints.

Ductile iron edge rail - Integrally cast-in rail provides maximum strength and protection for channel body.

Knock-outs - Included on certain channel units to allow vertical evacuation of the system along the run. See Product table for details.

Typical system layout - S100K/S200K/S300K



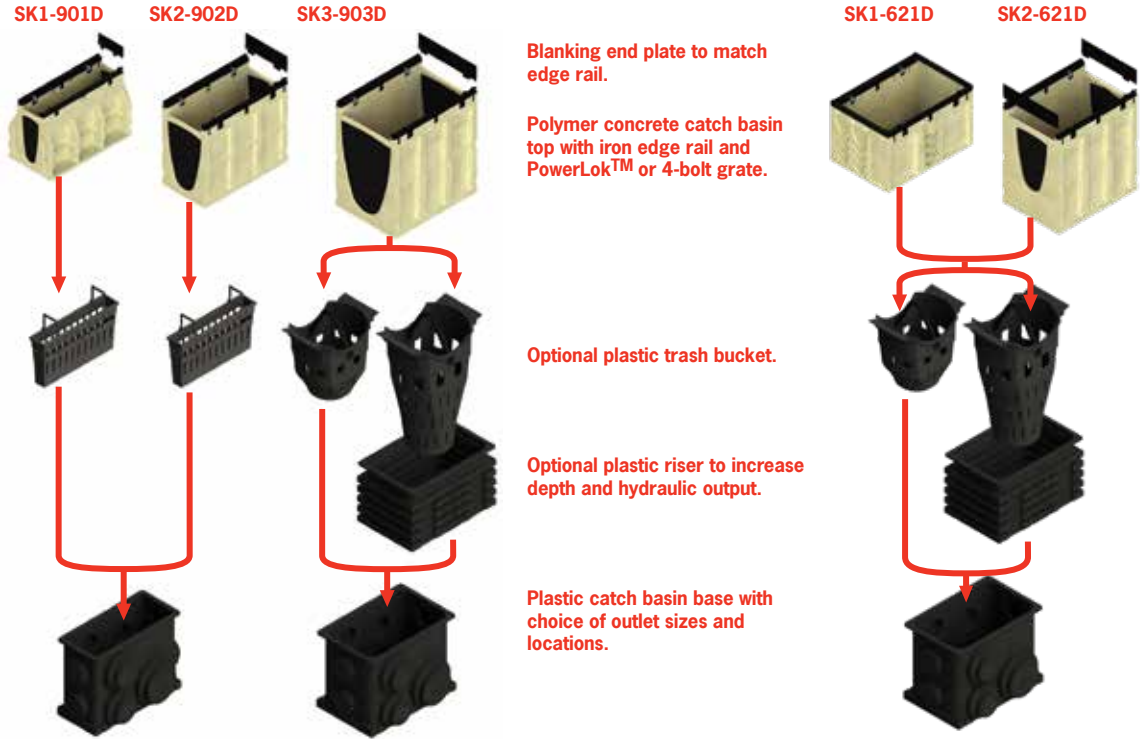
Catch basin options

In-line catch basins

Type 900 in-line catch basins are the same width as the trench run. Uses same grate as trench run for seamless aesthetics.

Type 600 catch basins

Type 600 catch basins are 12" wide, providing greater hydraulic output and maintenance access. S300K grates match/complement trench run.



SK1-901 & SK2-902 in-line catch basins use same base.

Parts table

	S100K - 4" internal width			S200K - 8" internal width			S300K - 12" internal width		
	Part No	Invert Inches ②	Weight Lbs	Part No	Invert Inches ②	Weight Lbs	Part No	Invert Inches ②	Weight Lbs
00 Constant depth channel - 39.37" (1m) ①	**67041**	**3.94**	**48.1**	**68041**	**7.87**	**85.2**	**69041**	**11.81**	**140.0**
1 Sloped channel - 39.37" (1m)	**67001**	4.13	48.1	**68001**	8.07	85.2	**69001**	12.01	140.0
2 Sloped channel - 39.37" (1m)	**67002**	4.33	49.1	**68002**	8.27	86.3	**69002**	12.20	141.3
3 Sloped channel - 39.37" (1m)	**67003**	4.53	50.1	**68003**	8.46	87.4	**69003**	12.40	142.8
4 Sloped channel - 39.37" (1m)	**67004**	4.72	51.1	**68004**	8.66	88.5	**69004**	12.60	144.1
5 Sloped channel - 39.37" (1m) ①	**67005**	4.92	52.1	**68005**	8.86	89.6	**69005**	12.80	145.4
6 Sloped channel - 39.37" (1m)	**67006**	5.12	53.1	**68006**	9.06	90.7	**69006**	12.99	146.9
7 Sloped channel - 39.37" (1m)	**67007**	5.31	54.1	**68007**	9.25	91.8	**69007**	13.19	148.2
8 Sloped channel - 39.37" (1m)	**67008**	5.51	55.1	**68008**	9.45	92.9	**69008**	13.39	149.5
9 Sloped channel - 39.37" (1m)	**67009**	5.71	56.1	**68009**	9.65	94.0	**69009**	13.58	150.9
10 Sloped channel - 39.37" (1m) ①	**67010**	5.91	57.1	**68010**	9.84	95.1	**69010**	13.78	152.3
010 Constant depth channel - 39.37" (1m) ①	**67043**	**5.91**	**57.1**	**68043**	**9.84**	**95.2**	**69042**	**13.78**	**152.3**
0103 Constant depth channel - 19.69" (0.5m) ①	**67044**	**5.91**	**29.4**	**68044**	**9.84**	**61.2**	**69045**	**13.78**	**84.2**
11 Sloped channel - 39.37" (1m)	**67011**	6.10	58.1	**68011**	10.04	96.2	**69011**	13.98	153.6
12 Sloped channel - 39.37" (1m)	**67012**	6.30	59.1	**68012**	10.24	97.3	**69012**	14.17	155.0
13 Sloped channel - 39.37" (1m)	**67013**	6.50	60.1	**68013**	10.43	98.4	**69013**	14.37	156.4
14 Sloped channel - 39.37" (1m)	**67014**	6.69	61.1	**68014**	10.63	99.6	**69014**	14.57	157.7
15 Sloped channel - 39.37" (1m) ①	**67015**	6.89	62.1	**68015**	10.83	100.7	**69015**	14.76	149.1
16 Sloped channel - 39.37" (1m)	**67016**	7.09	63.1	**68016**	11.02	101.8	**69016**	14.96	160.5
17 Sloped channel - 39.37" (1m)	**67017**	7.28	64.1	**68017**	11.22	102.9	**69017**	15.16	161.9
18 Sloped channel - 39.37" (1m)	**67018**	7.48	65.1	**68018**	11.42	104.0	**69018**	15.35	163.2
19 Sloped channel - 39.37" (1m)	**67019**	7.68	66.1	**68019**	11.61	105.1	**69019**	15.55	164.6
20 Sloped channel - 39.37" (1m) ①	**67020**	7.87	67.1	**68020**	11.81	106.2	**69020**	15.75	166.0
020 Constant depth channel - 39.37" (1m) ①	**67045**	**7.87**	**67.1**	**68045**	**11.81**	**106.2**	**69044**	**15.75**	**166.0**
0203 Constant depth channel - 19.69" (0.5m) ①	**67046**	**7.87**	**33.9**	**68046**	**11.81**	**68.8**	**69047**	**15.75**	**92.0**
21 Sloped channel - 39.37" (1m)	**67021**	8.07	68.1	**68021**	12.01	107.3	**69021**	15.94	167.3
22 Sloped channel - 39.37" (1m)	**67022**	8.27	69.1	**68022**	12.20	108.4	**69022**	16.14	168.7
23 Sloped channel - 39.37" (1m)	**67023**	8.46	70.0	**68023**	12.40	109.5	**69023**	16.34	170.1
24 Sloped channel - 39.37" (1m)	**67024**	8.66	71.0	**68024**	12.60	110.6	**69024**	16.54	171.4
25 Sloped channel - 39.37" (1m) ①	**67025**	8.86	72.0	**68025**	12.80	111.7	**69025**	16.73	172.7
26 Sloped channel - 39.37" (1m)	**67026**	9.06	73.0	**68026**	12.99	112.3	**69026**	16.93	174.2
27 Sloped channel - 39.37" (1m)	**67027**	9.25	74.0	**68027**	13.19	113.9	**69027**	17.13	175.5
28 Sloped channel - 39.37" (1m)	**67028**	9.45	75.0	**68028**	13.39	115.8	**69028**	17.32	176.8
29 Sloped channel - 39.37" (1m)	**67029**	9.65	76.0	**68029**	13.58	116.1	**69029**	17.52	178.3
30 Sloped channel - 39.37" (1m) ①	**67030**	9.84	77.0	**68030**	13.78	117.2	**69030**	17.72	179.6
030 Constant depth channel - 39.37" (1m) ①	**67047**	**9.84**	**77.0**	**68047**	**13.78**	**117.2**	**69046**	**17.72**	**179.6**
0303 Constant depth channel - 19.69" (0.5m) ①	**67048**	**9.84**	**38.4**	**68048**	**13.78**	**73.3**	**69049**	**17.72**	**100.0**
31 Sloped channel - 39.37" (1m)	**67031**	10.04	78.0	**68031**	13.98	118.4	**69031**	17.91	180.9
32 Sloped channel - 39.37" (1m)	**67032**	10.24	79.0	**68032**	14.17	119.5	**69032**	18.11	182.4
33 Sloped channel - 39.37" (1m)	**67033**	10.43	80.0	**68033**	14.37	120.6	**69033**	18.31	183.7
34 Sloped channel - 39.37" (1m)	**67034**	10.63	81.0	**68034**	14.57	121.7	**69034**	18.50	185.0
35 Sloped channel - 39.37" (1m) ①	**67035**	10.83	82.0	**68035**	14.76	122.8	**69035**	18.70	186.5
36 Sloped channel - 39.37" (1m)	**67036**	11.02	83.0	**68036**	14.96	123.9	**69036**	18.90	187.8
37 Sloped channel - 39.37" (1m)	**67037**	11.22	84.0	**68037**	15.16	125.0	**69037**	19.09	189.1
38 Sloped channel - 39.37" (1m)	**67038**	11.42	85.0	**68038**	15.35	126.1	**69038**	19.29	190.5
39 Sloped channel - 39.37" (1m)	**67039**	11.61	86.0	**68039**	15.55	127.2	**69039**	19.49	191.9
40 Sloped channel - 39.37" (1m) ①	**67040**	11.81	87.0	**68040**	15.75	128.3	**69040**	19.69	193.2
040 Constant depth channel - 39.37" (1m) ①	**67049**	**11.81**	**87.0**	**68049**	**15.75**	**128.3**	**69048**	**19.69**	**193.2**
0403 Constant depth channel - 19.69" (0.5m) ①	**67050**	**11.81**	**43.0**	**68050**	**15.75**	**82.1**	**69050**	**19.69**	**109.0**
Type 900 In-line catch basin - 19.69" (0.5m) ④	**67051**	-	86.0	**68053**	-	81.8	**69053**	-	99.4
SK3-904D In-line catch basin - 19.69" (0.5m) ⑤	**-**	-	-	**-**	-	-	**69054**	-	104.4
621D catch basin - 19.69" (0.5m) ④	**67053**	-	75.7	**68055**	-	116.0	**-**	-	-
631D catch basin - 19.69" (0.5m) ⑤	**67054**	-	85.7	**68056**	-	126.0	**-**	-	-
Type 600 Optional riser	**99902**	-	10.0	**99902**	-	10.0	**99902**	-	10.0
Foul air trap - fits both 910 & 610 basins	**90854**	-	1.2	**90854**	-	1.2	**90854**	-	1.2
SK1-304-6 6" Inlet Cap	**96861**	9.84	6.2	-	-	-	-	-	-
SK1-308-6 6" Outlet Cap	**96862**	9.84	6.0	-	-	-	-	-	-
SK1-404-6 6" Inlet Cap	**96863**	11.81	7.2	-	-	-	-	-	-
SK1-408-6 6" Outlet Cap	**96864**	11.81	7.0	-	-	-	-	-	-
Universal end cap	**96824**	11.81	0.4	**96823**	15.75	1.4	**96827**	19.69	2.5
Debris strainer for 4" bottom knockout	**93488**	-	0.2	**93488**	-	0.2	**-**	-	-
4" Oval to 6" round outlet adaptor	**95140**	-	1.1	**-**	-	-	**-**	-	-
Installation device	**97477**	-	2.8	**97478**	-	4.0	**97479**	-	4.9
Grate removal tool	**01318**	-	0.3	**01318**	-	0.3	**01318**	-	0.3

Notes:

1. This channel offers bottom knockout feature; S100K - 4" round/6" oval, S200K - 4" & 6" round, S300K - 6" & 8" round.
2. Inverts shown are male end, for female invert depth - subtract 0.2" from male invert (except constant depth channels where it will be same as male invert).
3. To calculate overall channel depth - add 1.0" to invert depth.
4. Catch basin assembly: Polymer concrete top with iron edge rail, blanking end kit, trash bucket and plastic base. Select appropriate grate to suit.
5. Catch basin assembly: Polymer concrete top with iron edge rail, blanking end kit, deep trash bucket, riser and plastic base. Select appropriate grate to suit.

Choosing PowerDrain grates

There are three available grate styles to fit the PowerDrain heavy duty channels.

The conventional slotted grate, with PowerLok™, gives an excellent all-around heavy duty solution with the ease of the PowerLok™ locking/unlocking mechanism. Ideal for use where regular removal of the grate for maintenance is required.

The ADA compliant, longitudinal slotted grate, with PowerLok™, gives the ideal solution to a heavy duty location where some pedestrian access may be required.

Although easy locking and grate removal is important for maintenance, some specific applications require a 4-bolt solution. The four threaded stainless steel inserts in the PowerDrain channel body allow a 4-bolt grate to be bolted into the channel (using 4 qty M10 bolts) for ultimate stiffness and security. Tamper resistant bolts can also be used.

PowerLok™ - safety clip

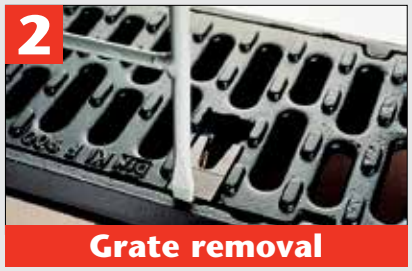
For areas of extra security or safety concerns, an optional safety clip is available that provides a visual alert if the PowerLok™ devices are left open. The clip push fits next to the PowerLok™ device and sits level with the grate when the grate is locked. The clip cannot be fitted if the PowerLok™ is open. If all grates are engaged, a run of red dots is visible.

Grate accessories

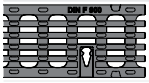
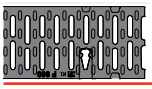
	Part No.	Weight lbs
PowerLok safety clip (red)	**10443**	0.1
Replacement bolt for 4-bolt grate	**95526**	0.1
Tamper resistant bolt for 4-bolt grate	**138127**	0.1
Tamper resistant bolt drive	**138128**	0.1

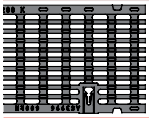
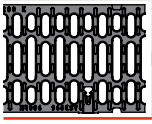
PowerLok™ - boltless locking system

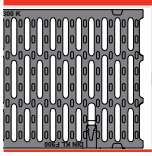
To close, place hook part of tool into 'V' and push towards rail.



To open PowerLok, insert tool between rail and PowerLok device. Rotate tool 90º; PowerLok device should push away from rail. To remove first grate, insert grate removal tool into slots at end of grate, pull up sharply. Remaining grates can be removed by hand.

S100K grates		Length mm	Part No	Wgt lbs				
LOAD CLASS F - EN 1433 - 200,000lbs - 4,182psi								
	Iron longitudinal	500	**96096**	12.8	✓	×	✓	28.1
	Iron slotted	500	**96082**	10.2	×	×	✓	35.6

S200K grates		Length mm	Part No	Wgt lbs				
LOAD CLASS E - EN 1433 - 135,000lbs - 2,321psi								
	Iron longitudinal	500	**72263**	26.4	✓	×	✓	55.6
LOAD CLASS F - EN 1433 - 200,000lbs - 3,485psi								
	Iron slotted	500	**02449**	30.8	×	×	✓	21.4

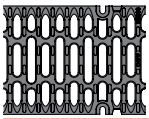
S300K grates		Length mm	Part No	Wgt lbs				
LOAD CLASS E - EN 1433 - 135,000lbs - 2,321psi								
	Iron longitudinal	500	**96833**	64.0	✓	✓	✓	48.9
LOAD CLASS F - EN 1433 - 200,000lbs - 3,485psi								
	Iron slotted	500	**02445**	50.0	×	×	✓	31.5

4-Bolt secure locking system

Position grate onto channel, align holes in grate with matching holes in edge rail. Using wrench or socket set to tighten. If using a torque wrench, do not set to more than 15 ft. lbs.

To remove grates, use wrench or socket set. Carefully store bolts for refitting of grates.

S100K 4-bolt grates		Length mm	Part No	Wgt lbs				
LOAD CLASS F - EN 1433 - 200,000lbs - 4,182psi								
	4-Bolt Iron slotted*	500	**99590**	10.8	×	×	✓	35.6

S200K 4-bolt grates		Length mm	Part No	Wgt lbs				
LOAD CLASS F - EN 1433 - 200,000lbs - 3,485psi								
	4-Bolt Iron slotted*	500	**99591**	26.4	×	×	✓	21.4

S300K 4-bolt grates		Length mm	Part No	Wgt lbs				
LOAD CLASS F - EN 1433 - 200,000lbs - 3,485psi								
	4-Bolt Iron slotted*	500	**99592**	50.2	×	×	✓	31.5

* Supplied with 4 qty M10 bolts.

ACO. creating the future of drainage

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