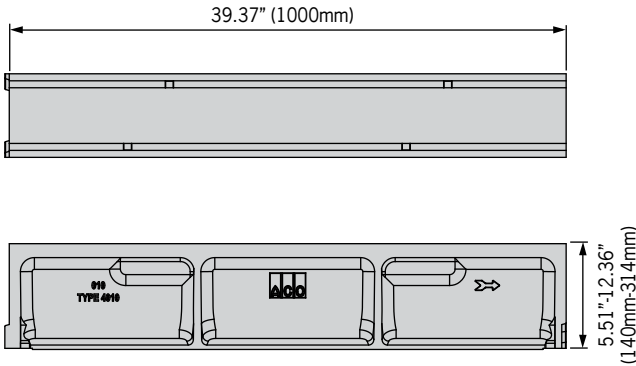
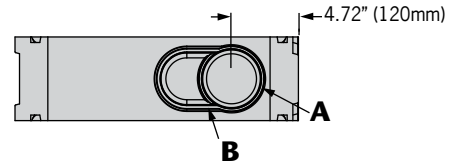
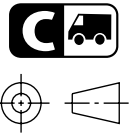
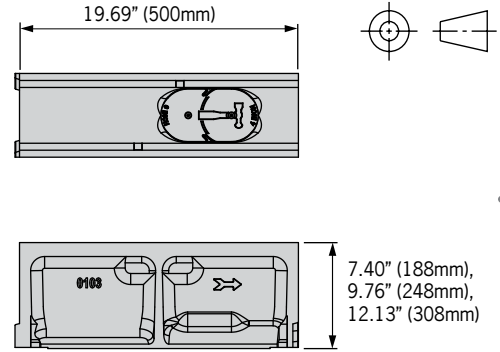


System 4000 - Open channel trench drain system

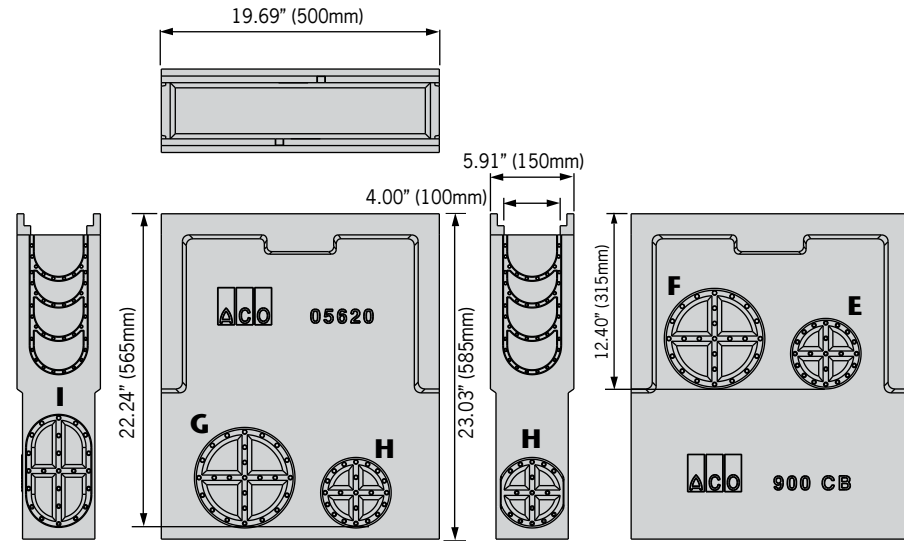
One meter channel



Half meter channel

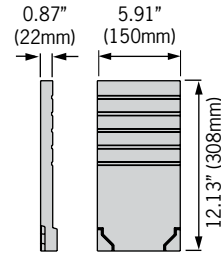


In-line catch basin

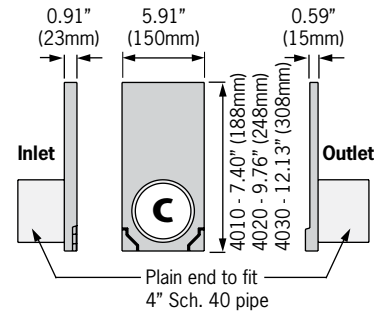


Total capacity = 5.9 gallons

Closing cap



4" Inlet/outlet caps

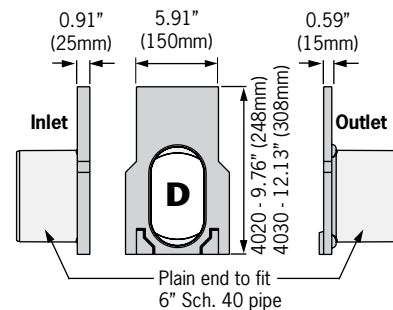


Outlet flow rates

Outlet	Product	Outlet size (Sch. 40)	Invert Depth	GPM	CFS
A	Bottom outlet - 40103	4" round	6.50	117	0.26
A	Bottom outlet - 40303	4" round	11.22	185	0.41
B	Bottom outlet - 40103	6" oval	6.50	183	0.40
B	Bottom outlet - 40303	6" oval	11.22	288	0.64
C	Outlet cap - 4010	4" round	6.50	119	0.27
C	Outlet cap - 4030	4" round	11.22	168	0.39
D	Outlet cap - 4020	6" oval	8.86	220	0.50
D	Outlet cap - 4030	6" oval	11.22	248	0.57
E	In-line catch basin*	4" round	12.40	175	0.40
F	In-line catch basin*	6" round	12.40	379	0.87
G	In-line catch basin*	6" round	22.24	530	1.22
H	In-line catch basin*	4" round	22.24	242	0.54
I	In-line catch basin*	6" oval	22.24	372	0.86

* In-line catch basin flow rate without trash bucket - using trash bucket reduces flow

6" Oval Inlet/outlet caps



ACO Specification Information



ACO SPORT

System 4000 Open channel trench drain system

ACO Specification Information

Description	Part No	Invert Depth inches	mm	Overall Depth inches	mm	Wgt lbs
4000-1 Sloped channel - 39.37" (1meter)	138001	4.61	117	5.51	140	32.0
4002 Constant depth channel - 39.37" (1meter)	06562	4.61	117	5.51	140	32.9
4000-2 Sloped channel - 39.37" (1meter)	138002	4.84	123	5.75	146	32.9
4000-3 Sloped channel - 39.37" (1meter)	138003	5.08	129	5.98	152	33.8
4000-4 Sloped channel - 39.37" (1meter)	138004	5.31	135	6.22	158	34.7
4000-5 Sloped channel - 39.37" (1meter)	138005	5.55	141	6.46	164	35.6
4000-6 Sloped channel - 39.37" (1meter)	138006	5.79	147	6.69	170	36.5
4000-7 Sloped channel - 39.37" (1meter)	138007	6.02	153	6.93	176	37.4
4000-8 Sloped channel - 39.37" (1meter)	138008	6.26	159	7.17	182	38.3
4000-9 Sloped channel - 39.37" (1meter)	138009	6.50	165	7.40	188	39.2
4010 Constant depth channel - 39.37" (1meter)	06561	6.50	165	7.40	188	40.1
40103 Constant depth channel - 19.69" (0.5meter)	138033	6.50	165	7.40	188	23.0
4000-10 Sloped channel - 39.37" (1meter)	138010	6.73	171	7.64	194	40.1
4000-11 Sloped channel - 39.37" (1meter)	138011	6.97	177	7.87	200	41.0
4000-12 Sloped channel - 39.37" (1meter)	138012	7.20	183	8.11	206	41.9
4000-13 Sloped channel - 39.37" (1meter)	138013	7.44	189	8.35	212	42.8
4000-14 Sloped channel - 39.37" (1meter)	138014	7.68	195	8.58	218	43.7
4000-15 Sloped channel - 39.37" (1meter)	138015	7.91	201	8.82	224	44.6
4000-16 Sloped channel - 39.37" (1meter)	138016	8.15	207	9.06	230	45.5
4000-17 Sloped channel - 39.37" (1meter)	138017	8.39	213	9.29	236	46.4
4000-18 Sloped channel - 39.37" (1meter)	138018	8.62	219	9.53	242	47.3
4000-19 Sloped channel - 39.37" (1meter)	138019	8.86	225	9.76	248	48.2
4020 Constant depth channel - 39.37" (1meter)	06563	8.86	225	9.76	248	49.1
40203 Constant depth channel - 19.69" (0.5meter)	138035	8.86	225	9.76	248	26.0
4000-20 Sloped channel - 39.37" (1meter)	138020	9.09	231	10.00	254	49.1
4000-21 Sloped channel - 39.37" (1meter)	138021	9.33	237	10.24	260	50.0
4000-22 Sloped channel - 39.37" (1meter)	138022	9.57	243	10.47	266	50.9
4000-23 Sloped channel - 39.37" (1meter)	138023	9.80	249	10.71	272	51.8
4000-24 Sloped channel - 39.37" (1meter)	138024	10.04	255	10.94	278	52.7
4000-25 Sloped channel - 39.37" (1meter)	138025	10.28	261	11.18	284	53.6
4000-26 Sloped channel - 39.37" (1meter)	138026	10.51	267	11.42	290	54.5
4000-27 Sloped channel - 39.37" (1meter)	138027	10.75	273	11.65	296	55.6
4000-28 Sloped channel - 39.37" (1meter)	138028	10.98	279	11.89	302	56.5
4000-29 Sloped channel - 39.37" (1meter)	138029	11.22	285	12.13	308	57.4
4030 Constant depth channel - 39.37" (1meter)	138036	11.22	285	12.13	308	58.3
40303 Constant depth channel - 19.69" (0.5meter)	138037	11.22	285	12.13	308	31.0
4000-30 Sloped channel - 39.37" (1meter)	138030	11.46	291	12.36	314	59.2
Catch basin						
In-line catch basin - 19.69" (0.5m)	05620	22.13	562	23.03	585	62.0
QuickLok bar (removable)	98717	-	-	-	-	0.1
Series 900 plastic trash bucket	01498	-	-	-	-	1.1
6" oval to round adapter (fits outlets B & I)	95140	-	-	-	-	1.1
Accessories						
Debris strainer for 4" bottom knockout (fits outlet A)	93488	-	-	-	-	0.2
Universal closing end cap	137090	-	-	12.13	308	4.5
104-4 Inlet cap with 4" schedule 40 pipe	137091	6.50	165	7.40	188	2.6
108-4 Outlet cap with 4" schedule 40 pipe	137092	6.50	165	7.40	188	2.0
204-4 Inlet cap with 4" schedule 40 pipe	137093	8.86	225	9.76	248	3.7
208-4 Outlet cap with 4" schedule 40 pipe	137094	8.86	225	9.76	248	2.6
204-6 Inlet end cap with 6" schedule 35 pipe	137099	8.86	225	9.76	248	3.3
208-6 Outlet end cap with 6" schedule 35 pipe	137095	8.86	225	9.76	248	2.6
304-4 Inlet cap with 4" schedule 40 pipe	137096	11.22	285	12.13	308	4.6
308-4 Outlet cap with 4" schedule 40 pipe	137097	11.22	285	12.13	308	3.3
304-6 Inlet end cap with 6" schedule 35 pipe	137100	11.22	285	12.13	308	4.4
308-6 Outlet end cap with 6" schedule 35 pipe	137098	11.22	285	12.13	308	3.3

Notes:

1. Preformed 4" dia. & 6" flumed drill-outlet cast on underside of half meter channels only.
2. Closing cap can be cut down to suit all channels.
3. Invert depths are at the male (downstream) end - subtract 0.24" (6mm) for female invert depth **EXCEPT** constant depth channels where the invert is the same both ends.

Part I - General

- 1.1 **Related Work** - Work specified in other sections includes: Excavation and backfill, cast-in-place concrete, and mechanical equipment.
- 1.2 **System Description** - Interconnecting, polymer concrete modular trench drainage system.
- 1.3 **Submittals** - On request, shop drawings showing schematic plan of total drainage system listing all parts with center-line dimensions. Copies of manufacturer's recommended installation instructions.
- 1.4 **Project History** - Manufacturer to provide list of installed projects, if required.
- 1.5 **Warranty** - Limited one year product warranty based on installation according to manufacturer's installation instructions (see below).

Part II - Product

- 2.1 **Products** - Manufactured by ACO, Inc.
- 2.2 **Physical & Mechanical Characteristics**
 - Overall width - 5.91 inches (150mm)
 - Internal width - 4.00 inches (100mm)
 - Unit depth - varies - see Product Table
 - Unit length - 39.37 inches (1000mm), or 19.69" (500mm)
 - Compressive strength - 14,000 psi
 - Flexural strength - 4,000 psi
 - Water absorption rate - <0.1% by weight.
 - ADA compliant to American Disabilities Act of 1990 Section 4.5.4 with appropriate grate (494Q/495Q)
- 2.3 **Channel Profile** - Each unit features a full radius in trench bottom, and male to female interconnecting ends. Horizontal cast-in anchoring features on outside walls to ensure maximum mechanical bond to surrounding bedding material.
- 2.4 **Catch Basins** - Manufactured from polymer concrete, be one half meter (19.69") in length and include a trash bucket (optional).
- 2.5 **Grates** - A choice of QuickLok grates are available. See separate Spec Info sheets for details.

Part III - Installation

- 3.1 **Site Preparation** - Excavate area to accommodate ACO SPORT System 4000 channel and to allow a minimum of 4 inches (100mm) concrete encasement (recommended 4,000psi) on 3 sides to provide necessary support. Top of channel must be evenly aligned to surface of surrounding slab. See installation section for haunch details for different loadings & pavement materials.
- 3.2 **Installation** - Start at outlet or catch basin. Insert channels from above to allow ends to interconnect. Channel sections shall be placed on brick, rebar basket, install device, or low slump concrete slurry to obtain correct finished elevation. Cutting will be made, if required, by masonry or concrete saw. Protect channel from concrete splash during concrete pour. Place concrete in a manner that will not dislodge channels.
- 3.3 **Finishing and Clean-up** - Following final set of concrete, remove channel protection and thoroughly flush system to remove debris.
- 3.4 Install in strict accordance with manufacturer's recommendations and drawings. Full details available at www.ACOSport.us.

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