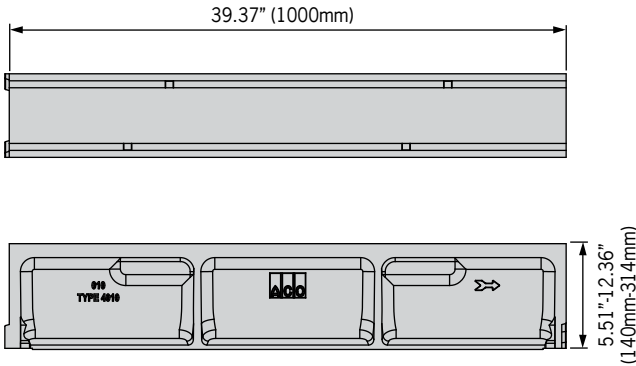
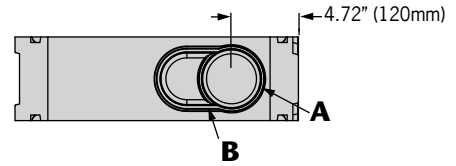
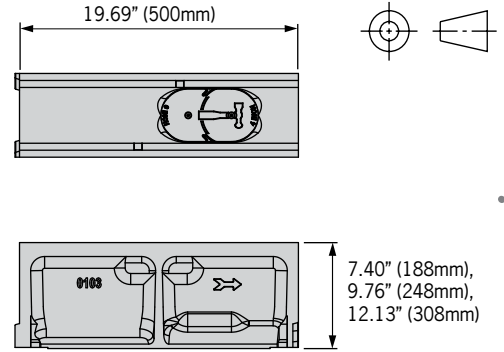


System 4000 - Open channel trench drain system

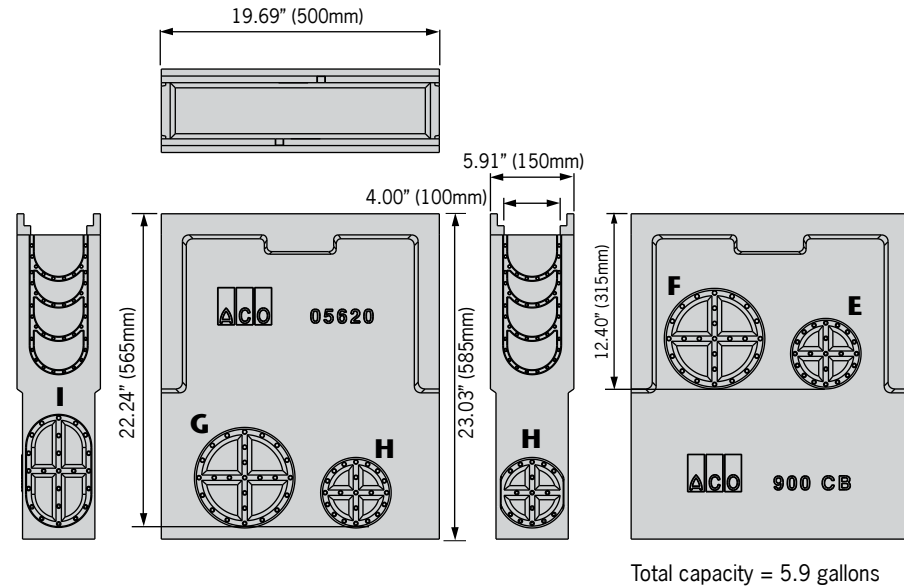
One meter channel



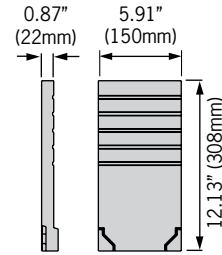
Half meter channel



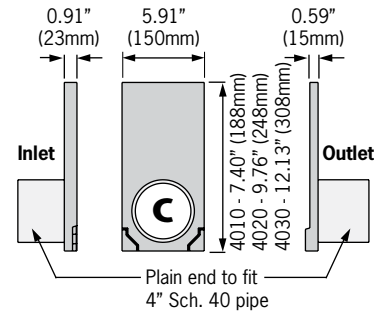
In-line catch basin



Closing cap



4" Inlet/outlet caps

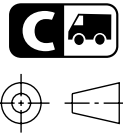
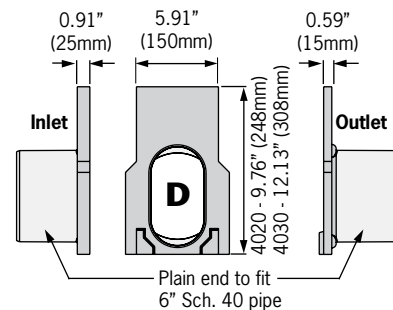


Outlet flow rates

| 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 | | Overall Depth | | Wgt lbs |
|---|---------------|--------------|------------|---------------|------------|-------------|
| | | inches | mm | inches | mm | |
| 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 Polymer Products, 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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