ORCA DRAIN

Polymer concrete channel range

Industrial Cast Iron

www.steelandtube.co.nz
ORCA DRAIN
CV100 Polymer concrete channel range
**ORCA CV100**
Ductile edge rail polymer concrete channel system

- Cast in Ductile edge rail
- Outlet position marking for easy installation
- Anti-shunt and anti-slip grating
- Structural ribs for increased strength
- 2mm Sealing groove for channel connection
- High density polymer concrete body
- Directional arrows and channel marking

---

**Load Rating Guide**

- **Class A**: Extra Light
- **Class B**: Light
- **Class C**: Medium
- **Class D**: Heavy
- **Class E**: Extra Heavy E
- **Class F**: Extra Heavy F
- **Class G**: Extra Heavy G

---

**Orca CV100 Series—Ductile edge rail polymer concrete channel, 100mm C/O, Class G**

<table>
<thead>
<tr>
<th>Name</th>
<th>CCP Part No.</th>
<th>Polymer concrete channel type</th>
<th>Class Load</th>
<th>Width C/O (mm)</th>
<th>Length O/A (mm)</th>
<th>Start depth (mm)</th>
<th>End depth (mm)</th>
<th>Cross sectional open area (mm²)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CV110</td>
<td>600725</td>
<td>CV110.0 channel, 100mm C/O x 170 O/A deep cast edge, Class G</td>
<td>G900</td>
<td>100</td>
<td>1000</td>
<td>170</td>
<td>170</td>
<td>10592</td>
<td>21</td>
</tr>
<tr>
<td>CV120</td>
<td>600747</td>
<td>CV120.0 channel, 100mm C/O x 220 O/A deep cast edge, Class G</td>
<td>G900</td>
<td>100</td>
<td>1000</td>
<td>220</td>
<td>220</td>
<td>15592</td>
<td>23</td>
</tr>
</tbody>
</table>

---

**GROUND LINE**

- CV110
- CV120

---

**0800 478 335**
Orca Polymer
Concrete Properties

Orca Drain CV100 series is manufactured from corrosion resistant polymer concrete with cast in ductile iron edge rails. Orca polymer concrete is non flammable, frost proof and resistant to weathering and diluted acids and alkali's.

Compressive Strength: 95 MPa
Water Absorption: 0 - 0.06%
Density: 2300 kg/m3
Mannings Roughness: n=0.011

Orca Drain CV100 grates lead the industry in design and quality. CV100 channel grates are engineered to meet the following standards:

AS3996:2006 Access covers and grates
AS4586:2013 Slip resistance of new pedestrian surfaces
AS1428.1 Design for access and mobility

<table>
<thead>
<tr>
<th>Grate</th>
<th>Description</th>
<th>Class Load</th>
<th>Width C/O(mm)</th>
<th>Length C/O(mm)</th>
<th>Slot width(mm)</th>
<th>Intake area (mm²) Per metre</th>
<th>Material</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G125</td>
<td>Ductile iron heelguard grate CV100, Class G</td>
<td></td>
<td>100</td>
<td>500</td>
<td>7</td>
<td>13300</td>
<td>Ductile</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Description</th>
<th>Class Load</th>
<th>Width C/O(mm)</th>
<th>Length C/O(mm)</th>
<th>Slot width(mm)</th>
<th>Intake area (mm²) Per metre</th>
<th>Material</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>600793</td>
<td>End Cap multi-depth suit CV100 and CV120</td>
<td></td>
<td>100</td>
<td>220</td>
<td></td>
<td></td>
<td>Galv</td>
<td>0.1</td>
</tr>
<tr>
<td>600995</td>
<td>M10 SS bolt set per meter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SS</td>
<td>0.1</td>
</tr>
</tbody>
</table>
ORCA DRAIN

CV200 Polymer concrete channel range

www.steelandtube.co.nz
ORCA CV200
Ductile edge rail polymer concrete channel system

- Anti-shunt and anti slip grating
- Cast in Ductile edge rail
- Directional arrows and channel marking
- Outlet position marking for easy installation
- 2mm Sealing groove for channel connection
- Structural ribs for increased strength
- High density polymer concrete body

**Load Rating Guide**

<table>
<thead>
<tr>
<th>Class</th>
<th>Extra Light</th>
<th>Light</th>
<th>Medium</th>
<th>Heavy</th>
<th>Extra Heavy E</th>
<th>Extra Heavy F</th>
<th>Extra Heavy G</th>
</tr>
</thead>
<tbody>
<tr>
<td>E400</td>
<td>35</td>
<td>39</td>
<td>44</td>
<td>49</td>
<td>54</td>
<td>60</td>
<td>65</td>
</tr>
</tbody>
</table>

**Assessment Guide: CSA 3986:2006**

**1000mm 248mm**

**CV200 channel, 200mm C/O x 225 O/A deep cast edge**

<table>
<thead>
<tr>
<th>Name</th>
<th>CCP Part No.</th>
<th>Polymer concrete channel type</th>
<th>Class Load</th>
<th>Width C/O(mm)</th>
<th>Length O/A(mm)</th>
<th>Start depth (mm)</th>
<th>End depth (mm)</th>
<th>Cross sectional open area(mm²)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CV200</td>
<td>600800</td>
<td>CV200 channel, 200mm C/O x</td>
<td>E400</td>
<td>200</td>
<td>1000</td>
<td>225</td>
<td>225</td>
<td>29386</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>225 O/A deep cast edge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CV210</td>
<td>600825</td>
<td>CV210 channel, 200mm C/O x</td>
<td>E400</td>
<td>200</td>
<td>1000</td>
<td>275</td>
<td>275</td>
<td>36713</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td></td>
<td>275 O/A deep cast edge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CV220</td>
<td>600847</td>
<td>CV220 channel, 200mm C/O x</td>
<td>E400</td>
<td>200</td>
<td>1000</td>
<td>325</td>
<td>325</td>
<td>38267</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>325 O/A deep cast edge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Orca Polymer
Concrete Properties

Orca Drain CV200 series is manufactured from corrosion resistant polymer concrete with cast in ductile iron edge rails. Orca polymer concrete is non flammable, frost proof and resistant to weathering and diluted acids and alkali’s.

Compressive Strength: 95 MPa
Water Absorption: 0 - 0.06%
Density: 2300 kg/m³
Mannings Roughness: n=0.011

Orca Drain CV200 grates lead the industry in design and quality. CV200 channel grates are engineered to meet the following standards:

AS3996:2006 Access covers and grates
AS4586:2013 Slip resistance of new pedestrian surfaces
AS1428.1 Design for access and mobility

### Grate

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>CCP Part No.</th>
<th>Description</th>
<th>Class Load</th>
<th>Width C/O(mm)</th>
<th>Length C/O(mm)</th>
<th>Slot width(mm)</th>
<th>Intake area (mm²) Per metre</th>
<th>Material</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G225</td>
<td>G225</td>
<td>E400</td>
<td>Ductile iron heelguard grate suit CV200, Class E</td>
<td>E400</td>
<td>200</td>
<td>500</td>
<td>7</td>
<td>84115</td>
<td>Ductile</td>
<td>9</td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>CCP Part No.</th>
<th>Description</th>
<th>Class Load</th>
<th>Width C/O(mm)</th>
<th>Length C/O(mm)</th>
<th>Slot width(mm)</th>
<th>Intake area (mm²) Pre meter</th>
<th>Material</th>
<th>Weight (kg)</th>
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</thead>
<tbody>
<tr>
<td>600292</td>
<td>600292</td>
<td>-</td>
<td>End Cap suit CV200</td>
<td>-</td>
<td>200</td>
<td>225</td>
<td>-</td>
<td>-</td>
<td>GMG</td>
<td>0.1</td>
</tr>
<tr>
<td>600995</td>
<td>600995</td>
<td>-</td>
<td>M10 SS bolt set</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>SS</td>
<td>0.1</td>
</tr>
</tbody>
</table>
ORCA DRAIN
CV300 Polymer concrete channel range

ORCA Civil Products

www.steelandtube.co.nz
ORCA CV300
Ductile edge rail polymer concrete channel system

2mm Sealing groove for channel connection
Structural ribs for increased strength
High density polymer concrete body
Outlet position marking for easy installation
Directional arrows and channel marking
Anti-shunt and anti slip grating

Knockout for 150/250mm outlet

Load Rating Guide
Class A
Extra Light
Class B
Light
Class C
Medium
Class D
Heavy
Class E
Extra Heavy E

Orca CV300 Series—Ductile edge rail polymer concrete channel, 100mm C/O, Class G

<table>
<thead>
<tr>
<th>Name</th>
<th>CCP Part No.</th>
<th>Polymer concrete channel type</th>
<th>Class Load</th>
<th>Width C/O(mm)</th>
<th>Length O/A(mm)</th>
<th>Start depth (mm)</th>
<th>End depth (mm)</th>
<th>Cross sectional open area(mm²)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CV300</td>
<td>600900</td>
<td>CV300.0 channel, 300mm C/O x 325 O/A deep cast edge, Class E</td>
<td>E400</td>
<td>300</td>
<td>1000</td>
<td>300</td>
<td>300</td>
<td>65057</td>
<td>65</td>
</tr>
</tbody>
</table>
Orca Polymer Concrete Properties

Orca Drain CV300 series is manufactured from corrosion resistant polymer concrete with cast in ductile iron edge rails. Orca polymer concrete is non flammable, frost proof and resistant to weathering and diluted acids and alkali’s.

Compressive Strength: 95 MPa
Water Absorption: 0 - 0.06%
Density: 2300 kg/m³
Mannings Roughness: n=0.011

Orca Drain CV300 grates lead the industry in design and quality. CV300 channel grates are engineered to meet the following standards:

AS3996:2006 Access covers and grates
AS4586:2013 Slip resistance of new pedestrian surfaces
AS1428.1 Design for access and mobility

<table>
<thead>
<tr>
<th>Grate Type</th>
<th>Name</th>
<th>CCP Part No.</th>
<th>Description</th>
<th>Class Load</th>
<th>Width C/O (mm)</th>
<th>Length C/O (mm)</th>
<th>Slot width (mm)</th>
<th>Intake area (mm²) Per metre</th>
<th>Material</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G325</td>
<td>G325</td>
<td></td>
<td>Ductile iron heelguard grate suit CV300, Class E</td>
<td>E400</td>
<td>300</td>
<td>500</td>
<td>7</td>
<td>133000</td>
<td>Ductile</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories Type</th>
<th>Name</th>
<th>CCP Part No.</th>
<th>Description</th>
<th>Class Load</th>
<th>Width C/O (mm)</th>
<th>Length C/O (mm)</th>
<th>Slot width (mm)</th>
<th>Intake area (mm²) Per metre</th>
<th>Material</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>600392</td>
<td>600392</td>
<td></td>
<td>End Cap suit CV300</td>
<td>-</td>
<td>300</td>
<td>325</td>
<td>-</td>
<td>-</td>
<td>Galv</td>
<td>0.1</td>
</tr>
<tr>
<td>600995</td>
<td>600995</td>
<td></td>
<td>M10 SS bolt set per meter</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>SS</td>
<td>0.1</td>
</tr>
</tbody>
</table>
**Installation Detail**

**Class A**  
*Extra Light*

**Class B**  
*Light*

**Class C**  
*Medium*

**Class D**  
*Heavy*

**Class E**  
*Extra Heavy E*

**Class G**  
*Extra Heavy G*

---

**Legend**

- **A** Pavers
- **B** Sand
- **C** Concrete haunch
- **D** Sub base
- **E** Earth
- **F** Concrete
- **G** Asphalt
- **H** Base course
- **I** Road base
- **J** Sitting compound

---

**Concrete**

- **Concrete haunch**
- **Concrete**
- **Concrete**
- **Concrete**
- **Concrete**
- **Concrete**
- **Concrete**
- **Concrete**
- **Concrete**
- **Concrete**

---

**Legend**

- **B** Sand
- **C** Concrete haunch
- **A** Pavers

---

**2mm**

---

**Non-shrink mortar**

- **250 250 250 250**
- **200 200 200 200**
- **150 150 100 100**

---

**2mm**

---

**Solid edge block Non-shrink mortar**

---

**F**

---

**Solid edge block Non-shrink mortar**

---

**2mm**

---

**F**

---
ORCA DRAIN
CH200 Polymer concrete channel range

Industrial Cast Iron

www.steelandtube.co.nz
ORCA CH200-130
Ductile edge rail polymer concrete channel system

Anti-shunt and anti slip grating
Outlet position marking for easy installation
2mm Sealing groove for channel connection
High density polymer concrete body
Directional arrows and channel marking

Load Rating Guide
- Class A: Extra Light
- Class B: Light
- Class C: Medium
- Class D: Heavy
- Class E: Extra Heavy E

Orca CH200 Series – Ductile edge rail polymer concrete channel, 200mm c/o, Class G

<table>
<thead>
<tr>
<th>Name</th>
<th>CCP Part No.</th>
<th>Polymer concrete channel type</th>
<th>Class Load</th>
<th>Width C/O(mm)</th>
<th>Length O/A(mm)</th>
<th>Start depth (mm)</th>
<th>End depth (mm)</th>
<th>Cross sectional open area(mm²)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH200-130</td>
<td>600040</td>
<td>CH200 channel, 200mm C/O x 130 O/A Ductile edge, Class D</td>
<td>G900</td>
<td>200</td>
<td>1000</td>
<td>130</td>
<td>130</td>
<td>14882</td>
<td>32</td>
</tr>
</tbody>
</table>
Orca Polymer
Concrete Properties

Orca Drain CH200 series is manufactured from corrosion resistant polymer concrete with cast in galvanized steel edge rails. Orca polymer concrete is non flammable, frost proof and resistant to weathering and diluted acids and alkali’s.

Compressive Strength: 95 MPa
Water Absorption: 0 - 0.06%
Density: 2300 kg/m3
Mannings Roughness: n=0.011

Orca Drain CH200 grates lead the industry in design and quality. CH200 channel grates are engineered to meet the following standards:

AS3996:2006 Access covers and grates
AS4586:2013 Slip resistance of new pedestrian surfaces
AS1428.1 Design for access and mobility

<table>
<thead>
<tr>
<th>Grate</th>
<th>Description</th>
<th>Type</th>
<th>Width C/O(mm)</th>
<th>Length C/O(mm)</th>
<th>Slot width(mm)</th>
<th>Intake area (mm²) Per metre</th>
<th>Material</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G225</td>
<td>Ductile iron heelguard grate suit CV200, Class E</td>
<td>G225</td>
<td>200</td>
<td>500</td>
<td>7</td>
<td>84115</td>
<td>Ductile</td>
<td>9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accessories</th>
<th>Description</th>
<th>Type</th>
<th>Width C/O(mm)</th>
<th>Length C/O(mm)</th>
<th>Slot width(mm)</th>
<th>Intake area (mm²) Per metre</th>
<th>Material</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>600016</td>
<td>End Cap suit CH200</td>
<td>600016</td>
<td>200</td>
<td>225</td>
<td>-</td>
<td>-</td>
<td>SS</td>
<td>0.1</td>
</tr>
</tbody>
</table>
Industrial Cast Iron

ORCA DRAIN

CH300 Polymer concrete channel range

www.steelandtube.co.nz
ORCA CH300-130
Ductile edge rail polymer concrete channel system

Anti-shunt and anti slip grating
Directional arrows and channel marking
Outlet position marking for easy installation
2 mm Sealing groove for channel connection
Cast in Ductile edge rail
High density polymer concrete body

1000 mm
130 mm
348 mm
300 mm

Knockout for 160/250 mm outlet

End cap

Orca CH300 Series—Ductile edge rail polymer concrete channel, 300 mm C/O, Class G

<table>
<thead>
<tr>
<th>Name</th>
<th>CCP Part No.</th>
<th>Polymer concrete channel type</th>
<th>Class Load</th>
<th>Width C/O (mm)</th>
<th>Length O/A (mm)</th>
<th>Start depth (mm)</th>
<th>End depth (mm)</th>
<th>Cross sectional open area (mm²)</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH300-130</td>
<td>600080</td>
<td>CH300 channel, 300 mm C/O x 130 O/A Galv edge, Class D</td>
<td>G900</td>
<td>300</td>
<td>1000</td>
<td>130</td>
<td>130</td>
<td>29386</td>
<td>37</td>
</tr>
</tbody>
</table>
Orca Polymer Concrete Properties

Orca Drain CH300 series is manufactured from corrosion resistant polymer concrete with cast in galvanized steel edge rails. Orca polymer concrete is non flammable, frost proof and resistant to weathering and diluted acids and alkali's.

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### Grate

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>CCP Part No.</th>
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<th>Class</th>
<th>Load</th>
<th>Width C/O (mm)</th>
<th>Length C/O (mm)</th>
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<th>Intake area (mm²) Per metre</th>
<th>Material</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G325</td>
<td>G325</td>
<td></td>
<td>Ductile iron heelguard grate suit CH300, Class E</td>
<td>E400</td>
<td></td>
<td>300</td>
<td>500</td>
<td>7</td>
<td>133000</td>
<td>Ductile</td>
<td>15kg</td>
</tr>
<tr>
<td>G328</td>
<td>G328</td>
<td></td>
<td>Ductile iron Slotted grate suit CH300, Class D</td>
<td>D210</td>
<td></td>
<td>300</td>
<td>500</td>
<td>80x80</td>
<td>192000</td>
<td>Ductile</td>
<td>11kg</td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>CCP Part No.</th>
<th>Description</th>
<th>Class</th>
<th>Load</th>
<th>Width C/O (mm)</th>
<th>Length C/O (mm)</th>
<th>Slot width (mm)</th>
<th>Intake area (mm²) Per metre</th>
<th>Material</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>600022</td>
<td>600022</td>
<td></td>
<td>End Cap suit CH300, Class D</td>
<td></td>
<td></td>
<td>345</td>
<td>130</td>
<td>-</td>
<td>-</td>
<td>Galv</td>
<td>0.1</td>
</tr>
</tbody>
</table>
Installation
Detail

Legend
A Pavers
B Sand
C Concrete haunch
D Sub base
E Earth
F Concrete
G Asphalt
H Base course
I Road base
J Sitting compound

Class A
Extra Light

Class B
Light

Class C
Medium

Class D
Heavy

Class E
Extra Heavy E

Class G
Extra Heavy G