

CPO® Stormwater Pits

CPO® Pits

Rocla CPO® Pits are specifically designed for stormwater use and are suitable for pits up to 10m in depth. The system is supplied complete with precast base slab, riser segments and a range of precast concrete covers and surrounds, grates and lintels suitable for most council applications. All components and shafts have a profiled joint rebate.



RTA Approved

The Rocla CPO® system is approved for use on RTA projects. A complete precast solution is available for most common RTA pit types (see page 29).

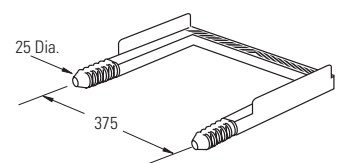
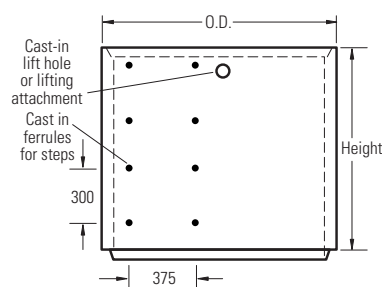
Step Irons

Step irons are spaced at nominal 300mm vertical centres and are generally available on CPO® Pits from 900mm to 1200mm diameter. The plastic-encapsulated step irons can be knocked into position using a 1.5 to 2kg hammer, even after the pit has been backfilled.

The 450mm high shaft with step irons must be placed at the top of the pit structure to maintain step spacing.

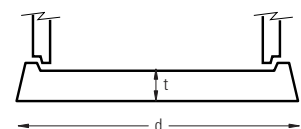
CPO® Pit Shafts

| Product Code | | CPO Pit Nom Dia (mm) | Shaft Height (mm) | OD (mm) |
|--------------|--------------|----------------------|-------------------|---------|
| No Steps | With Steps | | | |
| CP450600A | N/A | 450 | 600 | 535 |
| CP600300A | N/A | 600 | 300 | 700 |
| CP600450A | N/A | 600 | 450 | 700 |
| CP600600A | N/A | 600 | 600 | 700 |
| CP600900A | N/A | 600 | 900 | 700 |
| CP6001200A | N/A | 600 | 1200 | 700 |
| CP750300A | N/A | 750 | 300 | 870 |
| CP750450A | N/A | 750 | 450 | 870 |
| CP750600A | N/A | 750 | 600 | 870 |
| CP750900A | N/A | 750 | 900 | 870 |
| CP7501200A | N/A | 750 | 1200 | 870 |
| CP900300A | CP900300AS | 900 | 300 | 1030 |
| CP900450A | CP900450AS | 900 | 450 | 1030 |
| CP900600A | CP900600AS | 900 | 600 | 1030 |
| CP900900A | CP900900AS | 900 | 900 | 1030 |
| CP9001200A | CP9001200AS | 900 | 1200 | 1030 |
| CP1050300A | CP1050300AS | 1050 | 300 | 1200 |
| CP1050450A | CP1050450AS | 1050 | 450 | 1200 |
| CP1050600A | CP1050600AS | 1050 | 600 | 1200 |
| CP1050900A | CP1050900AS | 1050 | 900 | 1200 |
| CP10501200A | CP10501200AS | 1050 | 1200 | 1200 |
| CP1200300A | CP1200300AS | 1200 | 300 | 1360 |
| CP1200450A | CP1200450AS | 1200 | 450 | 1360 |
| CP1200600A | CP1200600AS | 1200 | 600 | 1360 |
| CP1200900A | CP1200900AS | 1200 | 900 | 1360 |
| CP12001200A | CP12001200AS | 1200 | 1200 | 1360 |



CPO® Pit Base

| Product Code | CPO Pit Nom Dia (mm) | Diameter (d) (mm) | Thickness (t) (mm) |
|--------------|----------------------|-------------------|--------------------|
| CPB450 | 450 | 605 | 90 |
| CPB600 | 600 | 770 | 90 |
| CPB750 | 750 | 940 | 90 |
| CPB900 | 900 | 1100 | 90 |
| CPB1050 | 1050 | 1265 | 90 |
| CPB1200 | 1200 | 1430 | 90 |



CPO® Stormwater Pits

CPO® Pits – Handling & Installation

Key installation points

All work should be conducted from outside the pit.

- Cut the reinforcement only when all holes are punched.
- Punch the smallest possible hole (recommended hole diameter pipe OD plus 50mm).
- Holes should be separated by a minimum space of 200mm.
- At least 40% of the pit wall should remain in any horizontal plane.
- The starter shaft should be high enough to take the biggest pipes.
- Ensure holes do not interfere with step irons.
- Check step irons are in correct alignment.
- If a 450mm high shaft is used, it must be placed at the top of the structure to maintain step spacing.
- With square surrounds, ensure that backfill is placed to the full height and properly compacted under corners.

Handling Guidelines

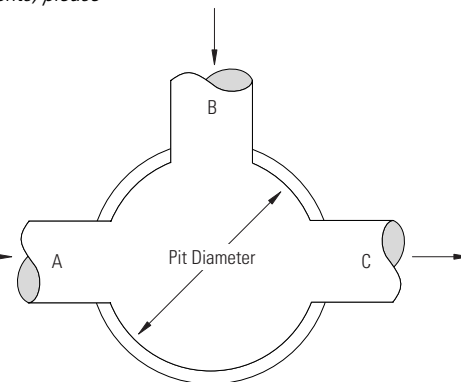
Pit components are provided with cast-in lifting adaptors or lifting holes. Where lifting holes are provided, the pit must be lifted using proprietary lifting attachments, available from specialist lifting equipment suppliers. Lifting should be undertaken strictly in accordance with the equipment supplier's instructions.

Contact Rocla for further information.

CPO® Pits – Pipe accommodation limits

| Permissible Concrete Pipe Diameters | | | |
|-------------------------------------|--------------------|-----|-----|
| Pit Diameter (mm) | Pipe Diameter (mm) | | |
| | A | B | C |
| 600 | 375 | | 375 |
| 600 | 300 | 225 | 375 |
| 750 | 450 | | 450 |
| 750 | 300 | 225 | 450 |
| 900 | 600 | | 600 |
| 900 | 450 | 225 | 600 |
| 900 | 450 | 375 | 450 |
| 1050 | 750 | | 750 |
| 1050 | 600 | 225 | 750 |
| 1050 | 600 | 450 | 600 |
| 1200 | 900 | | 900 |
| 1200 | 750 | 300 | 900 |
| 1200 | 750 | 450 | 750 |

Note: Pipe B may be increased by one size if all angles between pipe centrelines exceed 100 degrees. For other pipe arrangements, please contact Rocla for advice on pit sizing.



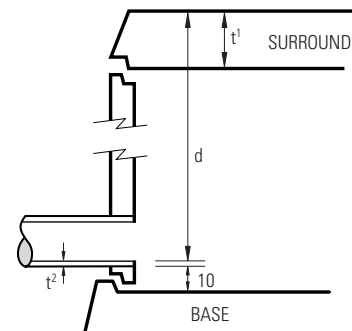
Ordering

To construct a CPO® Pit of the required height, use any combination of shaft heights in the table.

$$\begin{aligned} \text{Total height of shafts} = & \text{Depth to invert outlet pipe (d)} \\ & + \text{outlet pipe wall thickness (t2)} \\ & + 10\text{mm} \\ & - \text{Surround thickness (t1)} \end{aligned}$$

If exact dimensions are required, either:

- Pack joint with mortar (max. 50mm)
- Cut off top of shaft
- Set pit lower for sump of silt trap



CPO® Stormwater Pits

Concrete Lids

600mm diameter CPO® Pits are available with a circular lid. The lids are rebated to provide positive interlock with the shaft.

Covers and Surrounds

Rocla CPO® Pit surrounds are available in circular or square profiles. The underside of the surround is rebated to fit the CPO® Pit shaft. On shaft diameters of 1050mm and above, the cover is offset to facilitate the use of step irons.

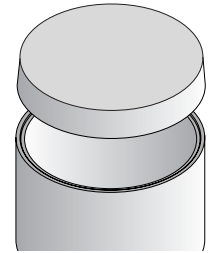


Concrete surrounds are available in Class C (150kN) or Class D (210kN) ultimate load applications in accordance with AS3996. Standard Class C surrounds are shown here. Class D available on special order. For Class D, replace the "M" at the end of the code with "H", e.g., CPS1050SH. Similarly for the cover, e.g., CPCH.

Circular Lid

| Product Code | CPO Pit Nom Dia (mm) | Load Class* | Overall Width (mm) | Effective Thickness (mm) |
|--------------|----------------------|-------------|--------------------|--------------------------|
| CPL600M | 600 | C | 700 | 80 |

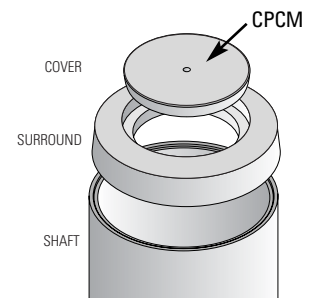
* Class D lids available on order.



Circular Surround

| Product Code | CPO Pit Nom Dia (mm) | Load Class* | Overall Width (mm) | Effective Thickness (mm) |
|--------------|----------------------|-------------|--------------------|--------------------------|
| CPS750M | 750 | C | 870 | 150 |
| CPS900M | 900 | C | 1030 | 150 |
| CPS1050M | 1050 | C | 1200 | 150 |
| CPS1200M | 1200 | C | 1360 | 150 |

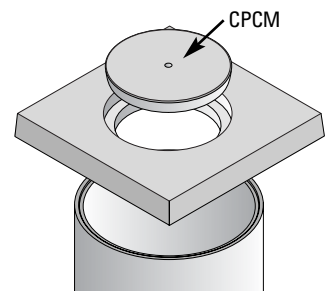
* Class D surrounds available on order.



Square Surround

| Product Code | CPO Pit Nom Dia (mm) | Load Class* | Overall Width (mm) | Effective Thickness (mm) |
|--------------|----------------------|-------------|--------------------|--------------------------|
| CPS750SM | 750 | C | 870 | 150 |
| CPS900SM | 900 | C | 1030 | 150 |
| CPS1050SM | 1050 | C | 1200 | 150 |
| CPS1200SM | 1200 | C | 1360 | 150 |

* Class D surrounds available on order.



CPO® Stormwater Pits

Grated Inlets

Grated inlets are available in circular or square profiles. The underside of the surround is rebated to fit the CPO® Pit shaft. The grate is centrally located to facilitate installation. The surround should be placed so that the main bearing bars are parallel to the traffic flow. The grates are available as drop-in, hinged, or hinged with a lock.

Surrounds are available in Class C (150kN) or Class D (210kN) ultimate load applications in accordance with AS3996. Class C surrounds are shown here. For Class D, replace the "M" at the end of the code with "H", e.g., CPSG1050SDH. Similarly for the cover, e.g., CPCH.

For a hinged grate, replace the "D" in the code with "H", e.g., CPSG1050SHM for Class C or CPSG1050SHH for Class D.



Grated Lids

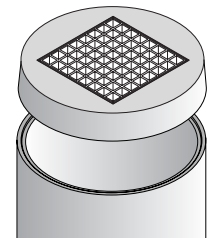
Grated lids are also available with hinge and lock.



Circular Surround with Drop-in Grate

| Product Code | CPO Pit Nom Dia (mm) | Load Class* | Overall Width (mm) | Effective Thickness (mm) |
|--------------|----------------------|-------------|--------------------|--------------------------|
| CPSG600DM | 600 | C | 700 | 150 |
| CPSG750DM | 750 | C | 870 | 150 |
| CPSG900DM | 900 | C | 1030 | 150 |
| CPSG1050DM | 1050 | C | 1190 | 150 |
| CPSG1200DM | 1200 | C | 1360 | 150 |

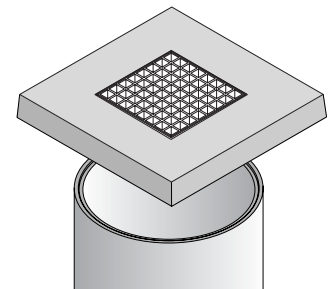
* Class D surrounds available on order.



Square Surround with Drop-in Grate

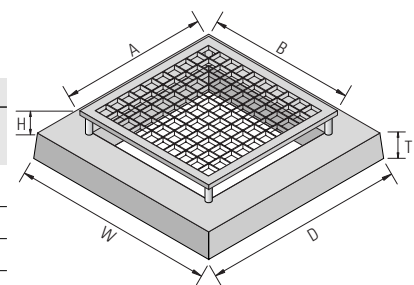
| Product Code | CPO Pit Nom Dia (mm) | Load Class* | Overall Width (mm) | Effective Thickness (mm) |
|--------------|----------------------|-------------|--------------------|--------------------------|
| CPSG600SDM | 600 | C | 700 | 150 |
| CPSG750SDM | 750 | C | 870 | 150 |
| CPSG900SDM | 900 | C | 1030 | 150 |
| CPSG1050SDM | 1050 | C | 1190 | 150 |
| CPSG1200SDM | 1200 | C | 1360 | 150 |

* Class D surrounds available on order.



Surcharge Pit Grate

| Product Code | Surround | | | Grate | | |
|--------------|----------|--------|--------|--------|--------|--------|
| | W (mm) | D (mm) | T (mm) | A (mm) | B (mm) | H (mm) |
| CPSG900FM | 1030 | 1030 | 150 | 800 | 800 | 170 |
| CPSG1050FM | 1200 | 1200 | 150 | 800 | 800 | 170 |
| CPSG1200FM | 1360 | 1360 | 150 | 1100 | 1100 | 170 |



Circular Grated Lid

| Product Code | CPO Pit Nom Dia (mm) | Load Class* | Overall Width (mm) | Effective Thickness (mm) |
|--------------|----------------------|-------------|--------------------|--------------------------|
| CPGL600DM | 600 | C | 720 | 65 |
| CPGL750DM | 750 | C | 870 | 65 |
| CPGL900DM | 900 | C | 1030 | 75 |
| CPGL1050DM | 1050 | C | 1200 | 75 |
| CPGL1200DM | 1200 | C | 1360 | 75 |

* Class D lids available on order.

