ARE YOU PREPARED TO RISK THE ALTERNATIVE?

BACKFLOW PREVENTION

Prime Composites Aust P/L
Prime Composites Australia P/L is located at Arundel on the Gold Coast. We are a family owned and operated business, so we are able to offer old-fashioned customer service and backup, and take the time to listen to our customers. We have been at the forefront of manufacturing and supply of quality fibreglass floodgates for more than forty years. Prime floodgates are a non-return valve used extensively around Australia and internationally, and are regularly specified by water authorities, councils and engineers. Prime floodgates are also known as King Valves, reflux valves, tidal flaps, gas checks and croc stops. Prime floodgates are the most popular end of line backflow prevention device used in Australia on large diameter pipes and box culverts.

**Application:**
Prevents tidal inundation.
Ideal for reclamation of low lying areas.
Prevents children from entering dangerous stormwater lines.
Prevents the entry of animals and vermin.

**Construction:**
All Prime floodgates are produced from high quality fibreglass materials and are fitted with neoprene seals as standard (other materials are available for different applications) The use of 316 grade stainless steel hinges and pins make Prime floodgates suitable for the most demanding environments.

**Advantages:**
Excellent resistance to sea water, sewage and a wide range of chemicals.
Extremely durable.
UV stable.
Quick and easy to install.
Cost effective.
Due to the pin location on all our gates, they will seal effectively when fitted to the spigot end of an uncut pipe. Because they are fibreglass and have only small metal components they do not have any scrap value.

**We have several attachment methods for our floodgates:**

**Ring Mount**
Our Ring Mount Floodgate is fitted to a collar via a hinge. The collar slides over the end of the pipe and is epoxied in place making it quick and easy to install. A neoprene seal is embedded into the face of the mounting ring, and worked to fine tolerances in the final stages of production, the flap seats against the seal.

**Wall Mount**
Our Wall Mount Floodgate is very similar to the ring mount floodgate but has been fitted with a flange which is bolted to the wall. This unit is ideal for installation onto pit walls and headwalls.

**Scour Valve**
Our Scour Valve is very similar to the wall mount, the difference is that the scour flange is drilled to specific bolt patterns to match flanged metal pipes.

**Bolt-On Top Type**
Our Bolt-On Top Floodgates have a neoprene seal embedded into the face of the flap; this seal contacts the face of the pipe to create a seal. As the name suggests this unit bolts onto the top of the pipe.

We can also produce square and rectangular units to suit box culverts in wall mounts and bolt on top type. Due to the material selection, our floodgates will operate in the most demanding environments.
What Else Do We Do?

As a customer solutions focused supplier, Prime Composites is also involved in sourcing and supplying a range of Rubber Duckbill Valves which give the same result as a Floodgate but operate differently.

These are available in:

**Slip On Type** which is clamped onto the pipe with stainless steel clamp/s in sizes DN50 to DN1800.

This type is also available with a flat bottom.

**Flanged Type** which is fitted with a stainless steel backing flange drilled to your pattern of choice in sizes DN50 to DN1800.

This type is also available with a flat bottom.

**In-Line Type** which is fitted inside the pipe and held in place with an internal Stainless Steel clamp.

**In-Line Flanged Type** which is held in between two pipe flanges.

In 2013 we became involved in Composite Access Covers and Surrounds for use in Sewer and Stormwater Systems and in 2104 we were included in the SEQ code product list for Non-Corrosive MH Lids and Frames for Discharge Manholes and all Manholes for sewers DN300 and larger, classes B&D.

Since then we have supplied large numbers of various covers and surrounds to Gold Coast City Council and Logan Water.

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1. TERMS OF WARRANTY

1.1 Prime Composites Australia (PCA) warrants to the Customer that the manufactured floodgate product line (the Goods) are reasonably fit for the purpose described in the Product, or (the Catalogue) and free of defects (the Warranty).

(a) Subject to the conditions at Clause 1.1(b) and (c), if a defective product (Product) does not conform with the Warranty in Clause 1.1, PCA shall at its sole option:

(i) repair or replace such Product (or the defective part); or

(ii) refund the price of such Product provided that, if PCA so requests, the Customer shall return the Product or the part of such Product which is defective to PCA.

(b) Subject to the provisions of Clause 1.1(c), PCA will only be required to repair, replace or refund the price of a Product if:

(i) the Customer gives written notice of the Product’s defect to PCA;

(ii) the Customer gives written notice of the Product’s defect to PCA; and

(iii) the Customer returns the Product to PCA’s place of business for examination.

1.2 The Customer shall be responsible for the costs of delivering the Product to PCA; however, if it is determined that the Product is subject to Warranty, then PCA will reimburse the Customer the lesser of the Customer’s costs or the cost of standard Australian parcel post for delivery, provided request is made by the Customer within 10 days of notifying PCA that it is by the Customer, and the Customer provides written evidence of the costs.

1.3 If the Goods delivered are not what the Customer ordered or of an incorrect quantity, PCA shall have no liability to the Customer unless the Customer uses reasonable efforts to notify PCA in writing at PCA’s contact address of the problem within 10 business days of the delivery of the Goods from PCA, or any authorised distributor, to the Customer.

1.4 If an order is scheduled to be delivered but such order is not received by the Customer, the Customer must notify PCA within 30 days of the date on which the delivery was scheduled to occur (the Scheduled Delivery Date).

(a) In the event the order is not received, and the Customer does not notify PCA within 30 days of the Scheduled Delivery Date, no liability or obligation of any sort shall arise on the part of PCA to the Customer for any direct or indirect loss or damage;

(b) In the event the order is not received, and the Customer notifies PCA within 30 days of the Scheduled Delivery Date, the Customer’s remedies shall be strictly limited to either delivery of such Goods or refund of monies with selection of such relief to be at the sole discretion of PCA and PCA shall be not otherwise be liable for any direct or indirect loss or damage to the Customer.

(c) The Customer acknowledges that delivery dates are estimates only and PCA accepts no liability for delays in delivery up to 30 days.

1.5 The Customer acknowledges that, except where provided in these Terms of Warranty or otherwise required by law (including, if applicable, the Competition and Consumer Act 2010 (Cth)), PCA is not liable for any cost, expenses, loss or damage of whatsoever nature, whether direct, indirect or consequential.

1.6 If any term of these Terms of Warranty is determined by a court to be invalid, unlawful or unenforceable to any extent, such term, condition or provision will to that extent be severed from the remaining terms, conditions and provisions which will continue to be valid to the fullest extent permitted by law.

2. TRANSFER OF TITLE

2.1 The Customer (Grantor) grants a security interest in the Goods (Collateral) (Secured Party) to secure payment of the purchase amount (Secured Money) on the personal Property Security Interest Registrar (Security Interest), which authority shall be continuing until the Secured Money and reasonable costs incurred in recovering the Secured Money and exercising its rights under the Security Interest (Total Secured Money) are paid in full.

2.2 The Grantor must not do, or agree to do, any of the following unless it has fully paid the Total Secured Money to the Secured Party; create or allow another interest in the Collateral, or dispose of, or part with possession, of the Collateral. The Grantor’s obligation is not extinguished despite a delay in issuing a Validation Statement following registration.

2.3 If the Collateral is dealt with or disposed of in a manner in contravention to the Security Interest terms above shown, then the Secured Party shall be at liberty to exercise to the fullest extent all rights, powers or remedies allowed under the Personal Property Security Interest 2009 (Cth) and Personal Property Securities Regulations 2010 (Cth), without obligation to provide notice to the Grantor.

2.4 The Customer shall be liable for the costs of preparing, stamping, registering or perfecting title or registration of the Security, in the event of a default by the Customer to pay the Secured Money in accordance with any credit term offered, and these costs are payable on demand by PCA.

3. RETURN/CANCELLATION POLICY

3.1 The Customer acknowledges the uniqueness of the Goods manufactured by PCA and recognises that no refunds or cancellations of orders shall be permitted.

4. JURISDICTION

4.1 These Terms of Warranty shall be deemed to have been agreed to in the State of Queensland and the Customer agrees to submit to the exclusive jurisdiction of the courts of that State.

5. REPRESENTATIONS AND WARRANTIES

5.1 The Customer acknowledges that except for the representations and warranties recorded in these Terms of Warranty, PCA has not made any other representations or warranties regarding the Goods or any matter which is or might be relevant to the Customer buying or selling the Goods.

6. DISCLAIMER

6.1 Whilst all care is taken in the preparation of the Catalogue, PCA will not be responsible for any errors or omissions contained within the Catalogue.
# 100-900 Ring Mounted Floodgates

2 x 900 ring mounted floodgates, Coffs Creek, Coffs Harbour, NSW

## Floodgate Dimension Chart (Ring Mount) 100 - 900

<table>
<thead>
<tr>
<th>NB</th>
<th>RC/VC Pipe A</th>
<th>PVC Pipe A</th>
<th>DI Pipe A</th>
<th>FRC Pipe A</th>
<th>Head to open mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>150</td>
<td>120</td>
<td>125</td>
<td>135</td>
<td>45</td>
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<td>710</td>
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<td>675</td>
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<td>920</td>
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<td>825</td>
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<td>1035</td>
<td>1065</td>
<td>1095</td>
<td>1095</td>
<td>150</td>
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</table>

### Component Details

- **Stainless Steel hinge & pin**
- **Mounting ring**
- **Epoxy Adhesive**
- **A=INSIDE MOUNTING RING**
1050-1800 Ring Mounted Floodgates

**RING MOUNTED FLOODGATES**

**FLOODGATE DIMENSION CHART (RING MOUNT) 1050 - 1800**

<table>
<thead>
<tr>
<th>NB</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>Approx Flap Weight kg</th>
<th>Head required to open (mm)</th>
</tr>
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<tbody>
<tr>
<td>1050</td>
<td>350</td>
<td>1240</td>
<td>1210</td>
<td>130</td>
<td>270</td>
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<td>1800</td>
<td>300</td>
<td>2075</td>
<td>2045</td>
<td>620</td>
<td>300</td>
</tr>
</tbody>
</table>

**STAINLESS STEEL HINGE PIN (316)**

**MINIMUM RECOMMENDED DROP**
**BELOW BOTTOM OF FLAP = 300mm**
100-1800 Low Head Ring Mounted Floodgates

Ideal for use where there is a low flow or flat grade, or sewer systems where less restriction is required. The flap will open sooner than the standard Prime Heavy Duty flap, minimising backup. Available in sizes up to 1800mm.

**Hinge type and colour of product may change without notice.**

**RING MOUNTED FLOODGATE INSTALLATION**

**INSTALLATION:**
1) Make sure the inside of the mounting ring is clean and dry.
2) Mix together the epoxy adhesive (supplied) in containers marked A and B. Continue to mix until an even colour is achieved.
3) Apply an even coating of the mixture to the inside of the mounting ring.
4) With the hinge at top centre, press the ring and flap assembly firmly onto the pipe end. Allow 24 hours for the adhesive to cure.

**Two people may be required for gates larger than 600mm.**

**Do not remove ring from flap.**

**Do not apply pressure to hold the gate onto the pipe during installation.**

**When fitting to HDPE pipe, we recommend that the end 70mm of the pipe be grooved to allow a mechanical bond rather than a chemical bond due to the characteristics of HDPE.**

**HANDLING:**
During transit and storage the gate must be laid flat on an even surface or distortion of the gate may occur. (This is not a concern once the gate is fitted to the pipe)

**RECOMMENDATIONS:**
* Where floodgates could be damaged by floating debris or severe wave action we recommend it be protected by a headwall or pit.
* We recommend a minimum drop below the bottom of the floodgate of 300mm to allow debris discharge to clear the floodgate, this will also help prevent the build up of silt which will foul the operation.
* As with any product, PRIME ring mount floodgates need to be checked and maintained regularly to ensure correct operation and to prolong the life of the gate. (The only maintenance required is to keep the area around the gate free of debris and silt.)

**Outside diameter of pipe should be stated when ordering.**
# 100-900 Wall Mounted Floodgates

We recommend that the hole in the headwall be raised the distance shown on the chart to allow for the flange at the base, or the assembly may affect the flow characteristics. This will also minimise silt and debris collection.

## Floodgate Dimension Chart (100-900 Wall Mount)

<table>
<thead>
<tr>
<th>SIZE (NB)</th>
<th>FLANGE DIA</th>
<th>HOLES @ DIA</th>
<th>BOLT CENTRES</th>
<th>HEAD REQUIRED TO OPEN (approx) mm</th>
<th>APPROX WEIGHT KG</th>
<th>RAISE HOLE BY mm</th>
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</thead>
<tbody>
<tr>
<td>100</td>
<td>215</td>
<td>4 @ 14mm</td>
<td>180</td>
<td>45</td>
<td>1</td>
<td>60</td>
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<tr>
<td>150</td>
<td>280</td>
<td>4 @ 14mm</td>
<td>235</td>
<td>45</td>
<td>2</td>
<td>80</td>
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<tr>
<td>200</td>
<td>350</td>
<td>4 @ 14mm</td>
<td>300</td>
<td>55</td>
<td>5</td>
<td>80</td>
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<tr>
<td>225</td>
<td>400</td>
<td>4 @ 14mm</td>
<td>350</td>
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<td>6</td>
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<td>250</td>
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<td>300</td>
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<td>5 @ 14mm</td>
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<td>450</td>
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<td>800</td>
<td>8 @ 14mm</td>
<td>725</td>
<td>60</td>
<td>30</td>
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<td>600</td>
<td>880</td>
<td>8 @ 14mm</td>
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<td>90</td>
<td>40</td>
<td>140</td>
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<tr>
<td>675</td>
<td>965</td>
<td>8 @ 14mm</td>
<td>890</td>
<td>100</td>
<td>50</td>
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<td>1215</td>
<td>8 @ 14mm</td>
<td>1140</td>
<td>150</td>
<td>100</td>
<td>160</td>
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</tbody>
</table>

**NOTE:** Dimensions are approximate only – Fasteners not included.
1050-1800 Wall Mounted Floodgates

We recommend that the hole in the headwall be raised the distance shown on the chart to allow for the flange at the base, or the assembly may affect the flow characteristics. This will also minimise silt and debris collection.

FLOODGATE DIMENSION CHART (1050-1800 WALL MOUNT)

<table>
<thead>
<tr>
<th>NB</th>
<th>FLANGE DIA</th>
<th>HOLES @ DIA</th>
<th>WEIGHT (approx) kg</th>
<th>HEAD REQUIRED TO OPEN (mm)</th>
<th>RAISE HOLE BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1050</td>
<td>1385</td>
<td>9 @18mm</td>
<td>250</td>
<td>270</td>
<td>170</td>
</tr>
<tr>
<td>1200</td>
<td>1565</td>
<td>9 @18mm</td>
<td>400</td>
<td>310</td>
<td>180</td>
</tr>
<tr>
<td>1350</td>
<td>1720</td>
<td>9 @18mm</td>
<td>420</td>
<td>390</td>
<td>185</td>
</tr>
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<td>1500</td>
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<td>11 @18mm</td>
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<tr>
<td>1650</td>
<td>2065</td>
<td>13 @18mm</td>
<td>850</td>
<td>255</td>
<td>210</td>
</tr>
<tr>
<td>1800</td>
<td>2220</td>
<td>13 @18mm</td>
<td>1200</td>
<td>300</td>
<td>210</td>
</tr>
</tbody>
</table>

NOTE: Dimensions are approximate only – Fasteners not included.
INSTALLATION OF WALL MOUNTED FLOODGATES

1) Ensure wall is flat or distortion of the mounting ring will result.
2) Hold the floodgate against the wall and mark through holes in flange. (Lifting equipment will be required)
3) Remove floodgate and drill holes into wall to suit chosen fasteners.
4) Apply a bead of sealant to the entire circumference of the mounting flange.
5) Hold floodgate against the wall and do up fasteners.  
(DO NOT OVERTIGHTEN FASTENERS)

Do not remove ring from flap.

NOTE: Fasteners not supplied.

HANDLING:
During transit and storage the gate must be laid flat on an even surface or distortion of the gate may occur. (This is not a concern once the gate is fitted to the wall)

RECOMMENDATIONS:
* Where floodgates could be damaged by wave action or floating debris such as logs, the gate should be protected by headwalls or pits.
* We recommend a minimum drop below the bottom of the floodgate of 300mm to allow debris discharge to clear the floodgate. This will also help prevent the build up of silt which will foul the operation.
* As with any product, PRIME wall mount floodgates need to be checked and maintained regularly to ensure correct operation and to prolong the life of the gate. (The only maintenance required is to keep the area around the gate free of debris and silt.)
Bolt on Top of Pipe Floodgates

3 x 1350 bolt on top of pipe floodgates, Coomera River, Gold Coast, Qld

FLOODGATE DIMENSION CHART (BOLT ON) 1050-1800

<table>
<thead>
<tr>
<th>NB</th>
<th>A</th>
<th>B</th>
<th>WEIGHT (approx)</th>
<th>HEAD REQUIRED TO OPEN (mm)</th>
</tr>
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<tbody>
<tr>
<td>1050</td>
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<tr>
<td>1800</td>
<td>260</td>
<td>2020</td>
<td>620</td>
<td>300</td>
</tr>
</tbody>
</table>

NOTE: Dimensions are nominal only

STAINLESS STEEL HINGE PIN(316)
PIPE
Neoprene O ring

MINIMUM RECOMMENDED DROP BELOW BOTTOM OF FLAP=300mm
100-900 Low Internal Head Floodgates (Bolt-on Top Type)

Ideal for use where there is a low flow or flat grade, or in sewer systems where less restriction is required.

The flap will open sooner than the standard Prime Heavy Duty flap, minimising backup.

Also suitable for installing when ring mount type is not practical, due to water level that doesn’t allow the use of adhesives to attach the standard ring mount type.

**To achieve optimum seal the face of the pipe must be clean and flat.**

Available in 100-900 bolt on, ring mount, and wall mount

**Hinge type and colour of product may change without notice.**

**INSTALLATION: Bolt-on Top of Pipe Floodgates**

1. Check that the face of the pipe is flat.
2. Place the floodgate on the pipe to ensure it fits correctly. Mechanical lifting equipment will be required on larger gates.
3. With the hinge on the top of the pipe, drill through the hinge and the top of the pipe.
4. Attach with chosen fasteners.

**NOTE:** Fasteners not supplied.

**CAUTION:** Confined spaces procedures should be followed if entry to the pipe is necessary to tighten fasteners

**HANDLING:**

During transit and storage the gate must be laid flat on an even surface or distortion of the gate may occur. (This is not a concern once the gate is fitted to the pipe)

**RECOMMENDATIONS:**

* Where floodgates could be damaged by floating debris or severe wave action, we recommend it be protected by a headwall or pit.
* We recommend a minimum drop below the bottom of the floodgate of 300mm to allow debris discharge to clear the floodgate, this will also help prevent the build up of silt which will foul the operation.
* As with any product, **PRIME** bolt on floodgates need to be checked and maintained regularly to ensure correct operation and to prolong the life of the gate. (The only maintenance required is to keep the area around the gate free of debris and silt.)
* The pipe face must be flat if a seal is expected.
* Packing may be required under the hinge in some cases.
# 100-375 Flanged Pipe Application

## Nominal Size

<table>
<thead>
<tr>
<th>Table C/D</th>
<th>100</th>
<th>150</th>
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<th>225</th>
<th>250</th>
<th>300</th>
<th>375</th>
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<tr>
<td>Flange diameter</td>
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<td>PCD</td>
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<tbody>
<tr>
<td>Flange diameter</td>
<td>215</td>
<td>280</td>
<td>335</td>
<td>370</td>
<td>405</td>
<td>455</td>
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</tr>
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<td>PCD</td>
<td>178</td>
<td>235</td>
<td>292</td>
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<td>Diameter of holes</td>
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<td>22</td>
<td>22</td>
<td>22</td>
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<td>Diameter of holes</td>
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<td>30</td>
</tr>
<tr>
<td>No. of holes</td>
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<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

*Other flange sizes and bolt patterns are available on request.*
The above table shows head loss e.g. the head loss caused by a 600 diameter floodgate would be similar to the head loss of approx. 12 metres of 600 diameter pipe.

The head loss caused by a 1800 diameter floodgate would be similar to the head loss of approx. 24 metres of 1800 diameter pipe.
Small Box Culvert Floodgates

4 1200 x 375 installed at Eagle Mount Heights, Mackay, Qld

Dimensions A and B are required when ordering.
Please include 120mm at the base.
Hinge type, quality and colour of product may change without notice.

Wall mounted box culvert floodgate, Jericho, Qld
Large Box Culvert Floodgates

3 1200 x 900 installed at Burrum Heads, Qld

3300 x 1200 floodgate covering an opening installed at Bowen, Qld

Dimensions A and B are required when ordering. Please include a minimum of 120mm at the base. Hinge type, quality and colour of product may change without notice.
PRIMEFLEX Rubber Duckbill Check Valves (Clamp-On)

APPLICATION:
PRIMEFLEX Clamp-On Rubber Duckbill Check Valves are a non-return valve used extensively around Australia and internationally, and are regularly specified by water authorities, councils and design engineers for use in sewage treatment plants, ocean outfalls, and as tidal inundation prevention.
* Prevents children from entering dangerous stormwater lines
* Prevents backflow
* Ideal for reclamation of low lying areas
* Prevents the entry of animals and vermin

ADVANTAGES:
* Excellent resistance to sea water, sewage, and a wide range of chemicals
* Extremely durable
* UV stable
* Quick and easy to install
* All rubber construction resists abrasive slurries
* Quiet operation, ideal for residential areas
* No water hammer
* Can be installed on any gradient of pipe
* Cost effective
  
  If chemical contact is expected, please advise in the first instance

SPECIFICATION:
* Produced from a large range of rubber compounds to withstand the most demanding situations
* Supplied with stainless steel clamps
* 25 year design life

INSTALLATION:
1) Measure ID of rubber check valve to ensure correct size has been supplied. The ID of the check valve should be as close as possible to the OD of the pipe.
2) Pipe must be free of sharp edges to avoid valve damage.
3) Apply soapy water to outside of pipe prior to installation. This will help slide the check valve onto the pipe.
4) With the bill vertical, fix clamp/s. If more than one clamp has been supplied fix the second clamp at 90 degrees to the first to ensure even pressure is applied to the valve. Make sure clamp bolts are accessible for easy tightening.
5) Once the clamps are tightened, drill a hole/s through the centre hole on the clamp/s right through the pipe wall.
6) Insert suitably sized lengths of stainless steel bolts into the holes so they go the depth of the pipe wall.
7) Weld bolt head/s to the clamp/s, this will anchor the valve to the pipe and ensure zero slippage

HANDLING:
Lifting equipment is recommended.
RECOMMENDATIONS:

* Where there are abnormal currents or severe wave action we recommend it be protected by a headwall or pit.

* The PRIMEFLEX Rubber Duckbill Check Valve should be installed with the bill vertical, however if bottom clearance is an issue, the valve may be installed with the bill rotated up to 30 degrees.

* As with any product, PRIMEFLEX Rubber Duckbill Check Valves need to be checked and maintained regularly to ensure correct operation and to prolong the life of the valve. (The only maintenance required is to inspect the bill for trapped debris.)

Outside diameter of pipe should be stated when ordering.
Internal and external head should be stated when ordering.

SIZES:

PRIMEFLEX Rubber Duckbill Check Valves can be produced to suit any size and type of pipe up to 1800mm diameter.

Units are available to suit flanged pipes as well as in line installations.

Rubber Duckbill Check Valves (Clamp On)

<table>
<thead>
<tr>
<th>NB</th>
<th>LENGTH (L)</th>
<th>CUFF WIDTH (C)</th>
<th>DUCKBILL HEIGHT (H)</th>
<th>APPROX WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>220</td>
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<td>180</td>
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</tr>
<tr>
<td>150</td>
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<td>200</td>
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<tr>
<td>1800</td>
<td>2120</td>
<td>360</td>
<td>2860</td>
<td>770</td>
</tr>
</tbody>
</table>

NOTES:

1) Dimensions and weights are approximate only and may change due to pipe dimension changes, inlet, back pressure and flow rates.
2) Leakage rate = Average 2 litres/min/ mtr of bill height @ 1 mt head.
3) 316 Stainless Steel clamp/s.
4) Lifting eye fitted to DN600 & above.

Also available with flat bottom
Flat Bottom Rubber Duckbill Check Valves (Clamp-On)

APPLICATION:
PRIMEFLEX Clamp-On Flat Bottom Rubber Duckbill Check Valves are a non-return valve used extensively around Australia and internationally, and are regularly specified by water authorities, councils and design engineers for use in sewage treatment plants, ocean outfalls, and as tidal inundation prevention.

* An ideal choice when the pipe has insufficient drop below the apron to be able to fit a standard clamp on unit
* Prevents children from entering dangerous stormwater lines
* Prevents backflow
* Ideal for reclamation of low lying areas
* Prevents the entry of animals and vermin

ADVANTAGES:
* Excellent resistance to sea water, sewage, and a wide range of chemicals
* Extremely durable
* UV stable
* Quick and easy to install
* All rubber construction resists abrasive slurries
* Quiet operation, ideal for residential areas
* No water hammer
* Can be installed on any gradient of pipe
* Cost effective

If chemical contact is expected, please advise in the first instance

SPECIFICATION:
* Produced from a large range of rubber compounds to withstand the most demanding situations
* Supplied with stainless steel clamps
* 25 year design life

INSTALLATION:
1) Measure ID of rubber check valve to ensure correct size has been supplied. The ID of the check valve should be as close as possible to the OD of the pipe.
2) Pipe must be free of sharp edges to avoid valve damage.
3) Apply soapy water to outside of pipe prior to installation. This will help slide the check valve onto the pipe.
4) With the bill vertical, fix clamp/s. If more than one clamp has been supplied fix the second clamp at 90 degrees to the first to ensure even pressure is applied to the valve. Make sure clamp bolts are accessible for easy tightening.
5) Once the clamps are tightened drill a hole/s through the centre hole on the clamp/s right through the pipe wall.
6) Insert suitable sized lengths of stainless steel bolts into the holes so they go the depth of the pipe wall.
7) Weld bolt head/s to the clamp/s, this will anchor the valve to the pipe and ensure zero slippage.

HANDLING:
Lifting equipment is recommended.
**RECOMMENDATIONS:**

* Where there are abnormal currents or severe wave action we recommend it be protected by a headwall or pit.

* The **PRIMEFLEX** Flat Bottom Rubber Duckbill check valve should be installed with the bill vertical, however if bottom clearance is still an issue, the valve may be installed with the bill rotated up to 30 degrees.

* As with any product, **PRIMEFLEX** Flat Bottom Rubber Duckbill check valves need to be checked and maintained regularly to ensure correct operation and prolong the life of the valve. (The only maintenance required is to inspect the bill for trapped debris.)

Outside diameter of pipe should be stated when ordering. Internal and external head should be stated when ordering.

**SIZES:**

**PRIMEFLEX** Flat Bottom Rubber Duckbill check valves can be produced to suit any size and type of pipe up to 1800mm diameter.

Units are available to suit flanged pipes.

**Flat Bottom Rubber Duckbill Check Valves (Clamp On)**

<table>
<thead>
<tr>
<th>SUIT PIPE</th>
<th>LENGTH (L)</th>
<th>CUFF WIDTH (C)</th>
<th>DUCKBILL HEIGHT (H)</th>
<th>APPROX WEIGHT</th>
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**NOTES:**

1) Dimensions and weights are approximate only and may change due to pipe dimension changes, inlet, back pressure and flow rates.

2) Leakage rate = Average 2 litres/min/mtr of bill height @ 1 mt head.

3) 316 Stainless Steel clamp/s.

4) Lifting eye fitted to DN600 & above.
PRIMEFLEX Rubber Duckbill Check Valves (Flanged)

APPLICATION:
PRIMEFLEX Flanged Rubber Duckbill check valves are a non return valve used extensively around Australia and internationally, and are regularly specified by water authorities, councils and design engineers for use in sewage treatment plants, ocean outfalls, and as tidal inundation prevention.
* Prevents children from entering dangerous stormwater lines
* Prevents backflow
* Ideal for reclamation of low lying areas
* Prevents the entry of animals and vermin

ADVANTAGES:
* Excellent resistance to sea water, sewage, and a wide range of chemicals
* Extremely durable
* UV stable
* Quick and easy to install
* All rubber construction resists abrasive slurries
* Quiet operation, ideal for residential areas
* No water hammer
* Can be installed on any gradient of pipe
* Cost effective

If chemical contact is expected, please advise in the first instance

SPECIFICATION:
* Produced from a large range of rubber compounds to withstand the most demanding situations
* Supplied with stainless steel flange
25 year design life

HANDLING:
Lifting equipment is recommended.

NOTES:
1) Available drilling patterns, Table D, E, F, H, ANSI, 125 & 150 lb, Table D is standard.
2) Leakage rate - Average 2 litres/min/mtr of bill height @ 1 mtr head.
3) Lifting eye fitted to DN600 and larger.
4) Pipe, nuts, bolts and gasket not supplied.

Also available in flat bottom
PRIMEFLEX Clamp In-line Duckbill Valve

APPLICATION:

PRIMEFLEX in-line Rubber Duckbill check valves are a non-return valve used extensively around Australia and Internationally, and are regularly specified by water authorities, councils and design engineers for use in sewage treatment plants, ocean outfalls and as protection against tidal inundation.

PRIMEFLEX in-line Rubber Duckbill check valves are an excellent choice where there is no exposed pipe to mount an end of line valve.

* Prevents children from entering dangerous stormwater lines
* Prevents backflow
* Ideal for reclamation of low lying areas
* Prevents the entry of animals and vermin

ADVANTAGES:

* Excellent resistance to sea water, sewage, and a wide range of chemicals
* Extremely durable
* UV stable
* Quick and easy to install
* All rubber construction resists abrasive slurries
* Quiet operation, ideal for residential areas
* No water hammer
* Can be installed on any gradient of pipe
* Cost effective

Installation:

1) Check that supplied valve will fit into pipe.
2) Check that inside of pipe is smooth and free of sharp edges.
3) Fit valve into pipe and tighten internal clamp until clamp is embedded into the wall of the valve.

NOTES:

1) Materials not included in above table available on request.
2) Leakage rate: Average 2 litres/min/mtr of bill height @ 1 mt head.
3) To be fitted into the upstream end of the pipe (if this is not possible then the valve bill will need to be held open with the use of clamps so a DN100 PVC pipe section can be used to allow access to the clamp during installation)
### JM-PCMR107 Series Access Cover & Surround

**AS 3996 KEYHOLE**

All measurements in mm

<table>
<thead>
<tr>
<th>PRODUCT CODE</th>
<th>CLEAR OPENING</th>
<th>CLASS</th>
<th>O</th>
<th>D</th>
<th>F</th>
<th>H</th>
<th>h</th>
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<th>SEALED</th>
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### PC-MS201 Series Access Cover & Surround

**AS 3996 KEYHOLE**

All measurements in mm

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<th>O</th>
<th>D</th>
<th>F</th>
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<th>h</th>
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### PC-MS209D Access Cover & Surround

All measurements in mm

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<th>H</th>
<th>h</th>
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### PC-MS210D Access Cover & Surround

**AS 3996 KEYHOLE**

All measurements in mm

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<th>D</th>
<th>F</th>
<th>H</th>
<th>h</th>
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</thead>
<tbody>
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<td>D</td>
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<td>100</td>
<td>65</td>
<td>Yes - 10 x M10</td>
<td>Yes</td>
<td>64 Kg</td>
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</table>
Removal of Access Cover From Road Way

Step 1: Set up traffic control area

Step 2: Using the appropriate cutting tool, wet-cut a suitable square out around the access cover, ensuring it is larger than the new lid surround to be fitted.

Step 3: Then, using a Jack hammer, break away bitumen and concrete around existing access cover inside the previously cut square from Step 2, cleaning away all debris as you go.

Step 4: Remove existing access cover and surround from top of access chamber.

Installation of New Access Covers

Step 1: Remove stainless steel bolts from new Access Cover using an M8 Allen key, then remove cover from surround using AS3996 lifting keys.

Step 2: Place lid surround on top of the chamber to check height to gauge amount of grout required under frame for installation. (Recommend using a string line or straight edge for this step) Remove frame from top of chamber.

Step 3: Mix chosen grout and cup into a ball shape to place around the top of the access chamber to ensure lid surround is level with road way (recommend using a string line or straight edge for this step) add additional grout until the lid surround is level with road surface.

Step 4: Wait for grout to set before filling under inside lid surround. Mix more grout to fill under lid surround on the inside of the frame and let set. Ensure sealing area and bolt holes are free of all grout and debris.

Step 5: Make up a mixture of rapid set concrete to a desired consistency and pour around outside of lid surround covering the flange of the lid surround and wait for concrete to set (approx. 1 hour depending on conditions).

Step 6: Fit access cover lid to surround, using stainless steel bolts (torqued at 10Nm ± 1Nm) (which were removed in step 1) fit plugs to bolt and key holes. Pour Emulsion (adhesive) over the top of the concrete, then shovel bitumen over the Emulsion and compact down with industrial tampering tool, brush sand over bitumen to help set and not stick to vehicle tyres (Drying time is approx. 1 hour).

Prime Composites Aust P/L is proud to have partnered with Gold Coast City Council & J.A’s Asphalt in this installation process