

COOLING

Installer's Manual



**PLEASE READ THESE INSTRUCTIONS CAREFULLY
BEFORE INSTALLING THIS PRODUCT**



Scope

This Brivis Evaporative Cooler shall be installed in accordance with these instructions, local building codes, electrical codes, local water authority regulations, duct fixing regulations, EPA guidelines and AS HB276-2004 "A Guide to Good Practice".

Do not install or service the Cooler during adverse weather conditions, or drain water onto the roof where it could cause a slippery and hazardous work environment.

Models covered in this manual:

Brivis Contour Series*	Brivis Promina Series	Brivis Advance Series	Brivis Advance Plus Series*	Brivis AD Series	Brivis AD BAL Series
L26	P26	F26D	F26DS		
L36	P36	F36D			
L46	P46		F46DS		
L56	P56	F56D			AD56 / AD56D
L66	P66		F66DS	AD66 / AD66D	AD66 / AD66D
L76	P76	F76D		AD76 / AD76D	
			F86DS	AD86 / AD86D	

* Brivis Contour and Brivis Advance Plus are fitted with a Motorised Winter-Seal.

Definitions

Shall

Indicates a mandatory requirement of this manual.

Should

Indicates a recommended requirement of this manual.

Any deviations from these instructions may, at the discretion of Brivis, void the warranty. As a result, the customer and/or installer may be charged a fee for product non-warranty related call outs. Also, note that failure to comply with these instructions may preclude Brivis from being able to service the unit.

Disclaimer

IMPORTANT NOTICE: This document is a guide only. Laws, regulations and industry standards can vary between States and Territories. Accordingly, this guide must be read in conjunction with, and subject to, all laws, regulations and industry standards applicable in the State or Territory in which the products are installed. You must ensure that the installation of the products will comply with those laws, regulations and standards, and that the products recommended to customers are fit for the purpose for which they are intended.

Table of Contents

1. General Guidelines	2
1.1 Unpacking the Cooler	2
1.2 Unloading the Cooler	2
1.3 Cooler Positioning	2
1.4 Weather Proofing	2
1.5 Insulation	2
1.6 Installing Ductwork	2
1.7 System	2
2. Cooler Service Requirements	3
2.1 Electrical Power Supply to the Cooler	3
2.2 Water Supply to the Cooler	3
2.3 Installing the Wall Control	3
3. Cooler Hardware	4
3.1 Bends and Elbows	4
3.2 Dampers	4
3.3 Fix and Seal the roof flashing	4
3.4 Dropper Duct Installation Guidelines	4
4. Brivis Promina & Brivis Contour Model Installation	4
4.1 Dropper Duct Installation and Fitting the Cooler	4
4.2 Fitting Brivis Promina & Advance Optional Winter-Seal	5
4.3 Fitting the Brivis Promina & Brivis Contour	5
5. Brivis Advance Installation	6
5.1 Brivis Advance Dropper Duct Specific	6
5.2 Fitting the Brivis Advance Optional Winter-Seal	6
5.3 Fitting the Brivis Advance Unit	6
6. Brivis Advance, Brivis Promina & Brivis Contour Models Network Connection	6
6.1 Wiring Connection at Brivis Networkers	6
6.2 Installing Dual Brivis Networkers	7
6.3 Dual Brivis Networkers	7
6.4 Master and Slave Addressing	7
6.5 Wiring the Programmable or Manual Wall Control to a Brivis Advance, Brivis Promina or Brivis Contour	8
6.6 Setting up Multiple Coolers on the Network	9
6.7 Changing an Identification Number	10
7. Brivis Advance, Brivis Promina & Brivis Contour Models Water Connection	11
7.1 Inlet Connection	11
7.2 Tank Water Quality Management	11
7.3 Water Drain Connection	11
8. Timing and Cooling Functions Brivis Advance, Brivis Promina & Brivis Contour Models	12
8.1 Start Up	12
8.2 Pre-wet	12
8.3 Programmable Wall Control Models in Auto Mode	12
8.4 Tank Water Quality and Replenishment During Operation	12
8.5 Shut-down Times	12
9. Dismantling the Brivis Advance, Brivis Promina & Brivis Contour Cooler	13
9.1 Removing the Front and Rear Pads	13
9.2 Removing the Side Pads	13
9.3 Dismantling the Framework	13
10. Brivis AD model Installation Instructions	13
10.1 Brivis AD Dropper Duct Specific	13
10.2 Installing the Dropper Duct and fitting the Brivis AD Cooler	14
10.3 Brivis AD Winter Seal Installation	14
10.4 Wiring the Brivis AD to the Programmable and Manual Wall Control	15
11. Brivis AD Water Connection Float Valve & Bleed Off	16
11.1 Inlet Connection	16
11.2 Brivis AD Float Valve Setting Details	16
11.3 Brivis AD Bleed Off	16
11.4 Brivis AD Bleed Rate Settings	16
11.5 Brivis AD Bleed Setting Instructions	16
11.6 Brivis AD Optional Dump Valve Functions	17
12. Brivis AD Timing and Cooler Functions	17
12.1 Start-up - Brivis AD Model Standard	17
12.2 Start-up - Brivis AD Model with Optional Dump Valve	17
12.3 Pre-wet	17
12.4 Programmable Wall Control Models in auto mode	17
12.5 Shut-down Times (Optional Dump Valve)	17
13. Commissioning Checklist	17
13.1 Isolating Switch - Brivis Advance, Brivis Promina & Brivis Contour Model	18
13.2 Isolating Switch - Brivis AD Model	18
13.3 Checklist	18
13.4 What if the Fan Motor will not start	18
13.5 What if the Pump will not start	18
14. Exhaust and Ventilation	19
15. Technical Specifications	20-21

1. General Guidelines

1.1 Unpacking the Cooler

The unit is supplied on a pallet and enclosed with protective packaging.

To unpack:

- Carefully remove the outer packaging and any retaining brackets/straps that secure the cooler to the pallet.
- For AD units cut and remove the strap at the bottom centre of the unit, where the fan motor assembly is held to the pallet.

Brivis coolers must be installed in accordance with these instructions and related regulations, codes, standards, and authorities. These include but may not be limited to:

- AS 3500.2 - Plumbing & Drainage
- AS 4254 - Ductwork for air-handling systems in buildings
- HB 276 - A Guide to Good Practice
- Local Plumbing and Electricity Authorities
- Brivis "SuperSizeGuide"
- Local Building Regulations
- Environment Authorities
- Building Code of Australia (BCA)

1.2 Unloading the Cooler

When lifting the cooler onto the roof, ensure the lifting equipment is in good operating condition and capable of lifting the total weight. Be sure there is a clear area to place the cooler down, which is within reach of the lifting equipment.

1.3 Cooler Positioning

The Cooler shall be installed in a position that allows adequate and safe access for service, and enables only fresh outside air to be drawn into the unit. The cost of any equipment and additional labour involved in accessing cooler installations will not be accepted by Brivis.

Avoid positioning the cooler near any source of smoke, dust or objectionable fumes so that only fresh outside air will be drawn into it. Coolers should not be sited close to the windows or bedrooms of neighbouring houses.

The cooler shall not be installed within a 5m (6m in W.A.) radius of a sanitary vent, 1.5m radius from a gas appliance flue terminal and 3m horizontal radius from a wood stove flue terminal.

1.4 Weather Proofing

All ductwork, electrical cables and water pipes must be flashed and sealed, to prevent water entry into the building. Exposed ductwork must be weatherproofed and coated with reflective aluminium paint.

1.5 Insulation

It is important that ducting should be well insulated. It is mandatory under some building codes to install insulated, fire rated ducting on Evaporative Cooling systems. Check with your local authority.

1.6 Installing Ductwork

The duct system should be designed and installed in accordance with the following:

- These installation instructions.
- Standard engineering practices.
- Brivis Sizing Guide and Installation Guidelines.

1.7 System

The installation unit must comply with all laws, regulations and industry standards applicable in the state or territory in which the products are installed.

2. Cooler Service Requirements

2.1 Electrical Power Supply to the Cooler

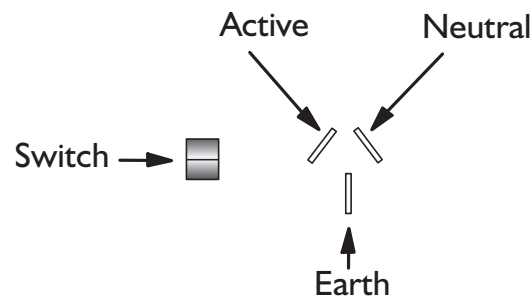
The Cooler is pre-wired with a 3-pin plug and lead, and should be plugged into a standard 10 Amp - 240 Volt fixed switched socket outlet located within the roof cavity, in close proximity to the dropper duct. The fixed switched socket outlet should be wired back to the meter box on a dedicated power circuit.

Note: A qualified electrician must install the 240 Volt wiring according to local regulations.

IMPORTANT: Switch OFF the power and unplug the Cooler before touching any wiring. If any electrical wiring is damaged, it must be replaced by the manufacturer, its service agents or an electrically qualified technician, in order to avoid a hazard.

The electricity supply must be 240 Volt / 50 Hertz, and from an authorised power supplier.

Generators should never be used, as their output may be incompatible with or damage the Cooler's electronic control system.



2.2 Water Supply to the Cooler

The Cooler's water system is designed to operate with a water supply pressure between 300 kPa and 1000 kPa. If the supply pressure is excessive, a pressure-reducing regulator will be required. If the pressure is insufficient the Cooler's operation will be compromised. In areas subject to water pipes freezing, provision must be made to drain water piping to prevent damage to the Cooler.

- Ensure the supply piping has been flushed before connecting it to the Cooler.
- A registered licensed plumber must install the water supply piping and connection to the Cooler in accordance with the local water supply regulations.
- An isolating valve on the supply pipe must be placed external and adjacent to the unit, not inside the ceiling. This must be provided to facilitate isolation of the water or to disconnect the water supply piping when servicing.
- Non-return isolating valves on the water supply are not recommended as they may cause damage or lock up the Cooler's inlet mechanism where high lock-up pressures or freezing water in pipes may occur.
- For the owner's convenience, an additional isolating valve may be provided at ground level to isolate the water supply.
- The water supply pipe must be supported and secured so as not to place strain on the Cooler's water connection fittings or cause water hammer noise.
- Water quality should be checked and filtration fitted where necessary e.g. tank or bore water.
- Do not remove water supply line, (braided hose) from rear of cooler.

2.3 Installing the Wall Control

The Brivis Networker, Manual and Programmable Wall Controls are part of a sophisticated control system. Controllers with Auto mode constantly monitor the temperature inside the house, switching the Cooler ON and OFF to maintain the target comfort level selected. To do this effectively, the wall control must be positioned correctly:

- **Install the wall control within the area being cooled.** It is important that the Wall Control is placed in a position that will provide the most accurate reading of the temperature within the area being cooled.
- **Attach to an internal wall.** The temperature difference on an external wall can affect the reading, so always mount the wall control on an internal wall. Also keep the hole in the wall for your wiring as small as possible to prevent draughts from within the wall cavity affecting the temperature sensing.
- **Get the height right.** The Wall Control should be approximately 1500mm above floor level.
- **Avoid hot spots.** Keep it as far away as possible from heat sources, e.g. above electrical equipment, direct sunlight and walls backing onto wall-ovens and stoves.
- **Avoid cold spots.** Ensure that the Wall Control is not affected by draughts coming through doorways, windows and stairwells, and is not placed too close to cooling outlets.
- **Avoid dead spots.** Don't site it in areas with no or little circulation, e.g. behind doors, in corners or alcoves.
- **Interference from other electrical connections.** Ensure the thermostat and wiring are kept away from other electrical, data and antenna cables.
- **Use the right cable:** Ensure the cable is 0.75mm² in cross section and less than 100m in length.

3. Cooler Hardware

3.1 Bends and Elbows

- Where square ducting elbows are to be used, install turning vanes within the elbow to aid airflow.
- Use unrestricted ductwork with smooth changes of duct cross section.
- Bends in ducting should have a large radius and branches should have shallow angles.

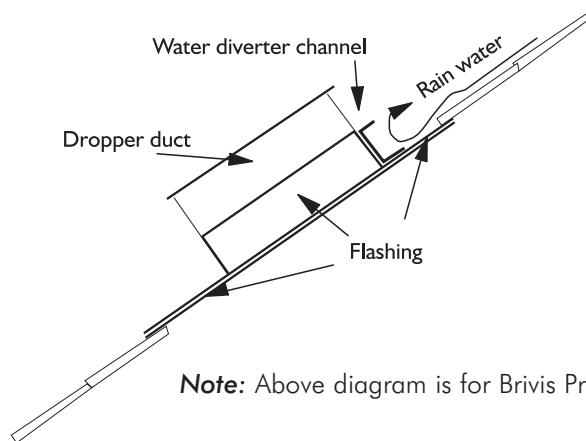
3.2 Dampers

Dampers may be required to balance the air distribution of the duct system.

3.3 Fix and Seal the roof flashing

The roof flashing must be fixed and sealed to the dropper duct to prevent water entry into the building. Ensure that the screws or rivets do not protrude into the dropper duct more than 8mm.

Installations where the Cooler is more than 4m downstream from the roof peak should be fitted with an additional water-diverting channel on the dropper duct high side, that extends beyond the dropper duct sides by at least 50mm (see diagram below).



Note: Above diagram is for Brivis Promina and Brivis Contour Models.

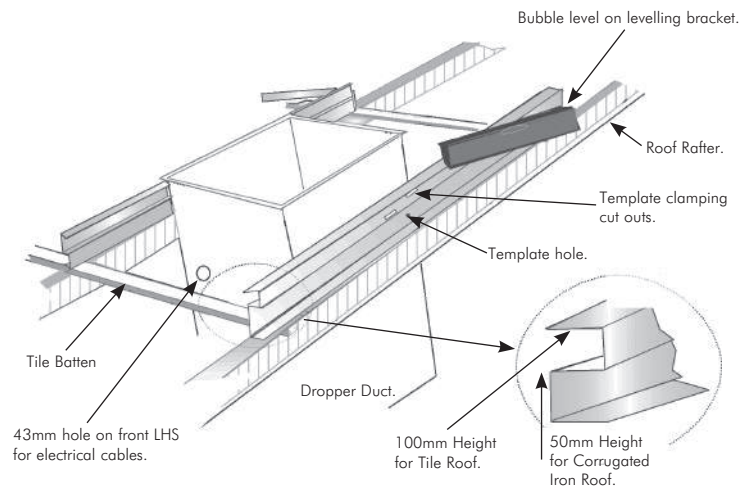
3.4 Dropper Duct Installation Guidelines

- The dropper duct on which the Cooler is mounted must be properly secured to the roof structure or timbers.
- Ensure the dropper duct does not contact the ceiling joists or other structural members that can transmit vibration.
- If possible, the dropper duct should be positioned to the rear or on the service side of the home.
- It should also be as far down the roof as practicable.
- Brivis recommend installing a diffuser or cone in the base of the dropper box. This will assist distributing the airflow evenly into the duct system and can also reduce noise levels.

4. Brivis Promina & Brivis Contour Model Installation

4.1 Dropper Duct Installation and Fitting the Cooler

- The dropper duct size for all Brivis Promina & Brivis Contour models is 550mm X 550mm.
- Brivis Promina & Brivis Contour Series Coolers must use a dropper duct with an out turned flange (15-20mm). This is installed on an angle through the roof.
- A spirit level is needed to set the correct angle to the dropper duct. Brivis levelling templates are advisable. Note that the levelling templates do not come as standard, they must be ordered through the Brivis Sales Centre.
- Determine the point of penetration through the roof and prepare the opening according to the type of building construction and roofing material.
- Frame the roof rafters to the correct width to suit the dropper duct.
- Position the 2 templates to each side of the dropper duct, under the out turned flange, and with the right angle bracket hard against the dropper duct corner.
- The templates provide a 50mm clearance (mid-level) for corrugated iron roofs, and 100mm clearance (top of template) for tile roofs, to give the correct height through the roof opening.
- Use the 50mm template position when resting the templates on top of the corrugated iron roof material, whereas the 100mm template position is used with the templates placed on the roof tile batten.
- Clamp the templates in position, or use a screw or rivet through the template hole provided to securely hold them to the dropper duct.
- Insert the dropper duct between the roof rafters (see diagram).
- Ensure the template levelling bracket is positioned on the high roof side of the dropper duct.
- Rest the templates equally on the tile battens or roof timbers, at both sides of the dropper duct.



- Place a spirit level on the templates levelling bracket, and raise one of the template ends (if necessary) until a level plane is reached.
- Depending on the pitch of the roof, either the lower or the higher template end will need raising, to level the bracket.
- This procedure will also locate the correct dropper duct height through the roof opening.
- When the template bracket is level, mark and/or fix the dropper duct to the roof frame timbers using bolts or coach screws.
- Be sure to use the level on both template sides to correctly position the dropper duct.
- **Note:** The Cooler outlet has an 8mm clearance from the dropper duct for the bolt or screw heads.
- The unit's power supply and wall control leads are pre-wired to the Cooler control module.
- These leads feed down from the base inside the dropper duct, and then out into the roof cavity through a 43mm hole in the dropper duct.
- This hole must be on the left-hand-side on the low side of the roof. This will accommodate the loom grommet and allow the wires to be retracted from the dropper duct.

4.2 Fitting Brivis Promina Optional Winter-Seal - Part No. B019068

- For detailed instructions please refer to Brivis Series 5 Winter-Seal Installation Instructions provided with the Brivis Series 5 Winter-Seal kit.
- This Procedure must be completed before the Cooler is mounted onto the dropper duct, preferably before the Cooler is lifted up onto the roof.
- Gently lift the unit up so that you can see the Cooler's air outlet.
- On the Winter-Seal blades is an orange sticker indicating the bottom. This sticker should be facing down when the cooler is in its final position.
- Insert one end of the winter seal blades into the mounting holes provided on the base of the cooler.
- Lock the other side into place, ensuring that they have been placed in the correct direction and that they are both free moving.
- Then proceed with the mounting of the cooler into the dropper duct.

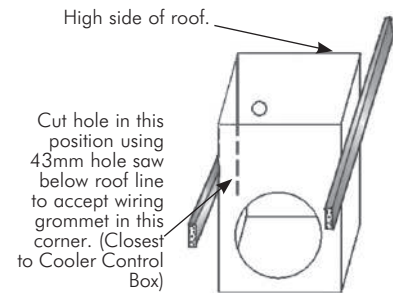
4.3 Fitting the Brivis Promina & Brivis Contour

- The Cooler should now be mounted into position. Insert the Cooler's air outlet fully into the dropper duct.
- Ensure the Cooler base sits fully on the dropper box flange and that the base latching brackets (four) retract over the flange on both sides of the dropper, to lock it onto the dropper duct.
- Fold the end of all four latching brackets in towards the dropper box. Using the hole at the end of the latching bracket as a guide, drill a 3mm pilot hole through the dropper box only. Do not penetrate the plastic chassis. Four 8g x 1/2" stainless steel screws should be inserted to secure the four latching brackets to the dropper box.
- The Cooler's smallest filter pad and the water supply connection fitting must be on the high side of the roof.
- Ensure the 3 pin power plug and lead, together with the Wall Control connection lead, are also fed to the inside of the dropper duct before retracting the wires and fitting the grommet.

5. Brivis Advance Installation

5.1 Brivis Advance Dropper Duct Specific

- All Brivis Advance units sit on a 550mm x 550mm dropper box with a 15-20mm out turned flange.
- Brivis Advance units can also be installed on an existing dropper box. Ensure the dropper box is in a sound condition and the top of the dropper box is level.
- Brivis Advance units may also be installed using a dropper box transition piece. (refer to Brivis Sales Department)
- The dropper box must be positioned as per the following diagram.
- Secure the dropper duct vertically, so the Cooler is level when placed on top of it.
- Ensure the 3 pin power supply plug and lead, the Wall Control Loom connection lead, and the rubber grommet, are fed to the inside of the dropper duct.
- Cut a 43mm hole in the dropper duct below the roof line, on the left-hand-side on the low side of the roof, to accept the wiring grommet. This will allow the 3-pin plug and lead, and the Wall Control Loom connection lead to be withdrawn from the dropper into the roof cavity.



5.2 Fitting Brivis Advance Optional Winter-Seal - Part No. B019068

- For detailed instructions please refer to Brivis Series 5 Winter-Seal Installation Instructions provided with the Brivis Series 5 Winter-Seal kit.
- This Procedure must be completed before the Cooler is mounted onto the dropper duct, preferably before the Cooler is lifted up onto the roof.
- Gently lift the unit up so that you can see the Cooler's air outlet.
- On the Winter-Seal blades is an orange sticker indicating the bottom. This sticker should be facing down when the cooler is in its final position.
- Insert one end of the winter seal blades into the mounting holes provided on the base of the cooler.
- Lock the other side into place, ensuring that they have been placed in the correct direction and that they are both free moving.
- Then proceed with the mounting of the cooler into the dropper duct.

(Note: The Brivis Promina Series 6 & Brivis Advance Series 6 both accept the Brivis Series 5 Winter-Seal).

(Note: All Brivis Advance Plus models are fitted with a Motorised Winter-Seal).

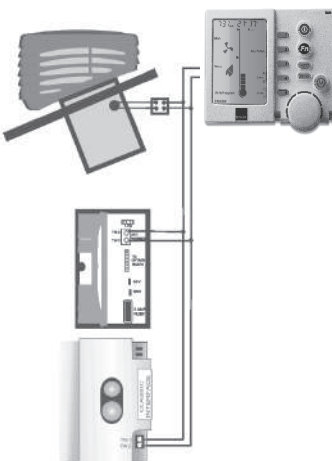
5.3 Fitting the Brivis Advance Unit

- The Brivis Advance Cooler chassis comprises latching brackets to secure the unit to the dropper box. To assist with connection it is important the dropper box has a 15-20mm outward turned flange.
- In addition to the latching brackets the unit must be secured to the dropper box and the cooler chassis with screws, refer below for method:
 1. Fold the end of all four latching brackets in towards the dropper box.
 2. Using the 5mm hole in the bracket as a guide secure with 8g x 1/2" stainless steel screws.

6. Brivis Advance, Brivis Promina & Brivis Contour Models Network Connection

6.1 Wiring Connection at Brivis Networkers

The Brivis Networker backing plate has 4 terminal points for the connection of Thermostat wires. When connecting, use the top 2 terminal points marked TW1 and TW2 or the bottom 2 terminal points also marked TW1 or TW2. Never use a combination of terminals when connecting to a single appliance.



For example; A Brivis Networker operating a cooler and a heater would have the 2 bottom terminals connected to the heater and the 2 top terminals connected to the cooler.

Run a twin wire cable (i.e. figure 8 cable - 0.75mm²) from the Cooler to the Brivis Networker.

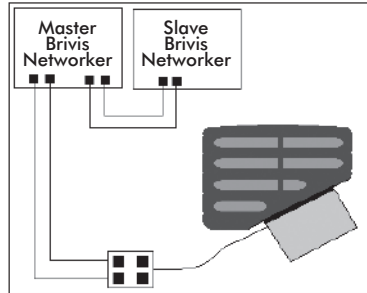
- Remove the backing plate from the Brivis Networker by unclipping it at the sides.
- Draw the wires from the wall cavity and feed them through the opening in the backing plate, connect the cable to the terminal connections on the backing plate before mounting it on the wall and re-assembling the Brivis Networker.
- Connect the cable to the Brivis Networker connection lead terminal block at the Cooler.

If the Cooler is integrated with a Brivis Heater(s) then simply connect the wiring to the Brivis Networker in parallel with the Heater's circuit.

(Note: Classic Series Heaters require an interface module to enable connection).

6.2 Installing Dual Brivis Networkers

It is possible to have two Brivis Networkers connected together on a system. The Brivis Networkers should be wired in parallel, never in series (see diagram of typical wiring). The two Brivis Networkers are identified as either Master or Slave. All Brivis Networkers come set as Master by default, and the slave Brivis Networker will need to be configured upon installation.



Note: Both Brivis Networkers cannot be set as Master on a system otherwise it will malfunction. Both Brivis Networkers cannot be set as Slave otherwise the system will lock out.

6.3 Dual Brivis Networkers

Adjustments to the cooler settings can be made from either Brivis Networker; but the settings are common to both Brivis Networkers. If an adjustment is made on one Brivis Networker it is immediately reflected on the other Brivis Networker.

When the cooler is operating in AUTO mode, the Master Brivis Networker only will be sensing the inside comfort level, unless the cooler has been designated to the Slave. This means the Master Brivis Networker should be located in the most appropriate location to control the inside comfort level.

Once the location for the Master and Slave controllers has been determined, the Brivis Networker addresses should be configured. All Brivis Networkers come set as Master by default, which means only the Slave Brivis Networker needs to be configured.

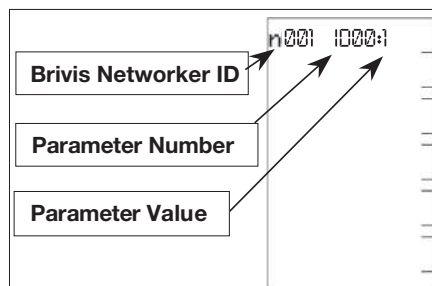
A Master Brivis Networker can be identified by the word "clock" beside Key 5 (while the Brivis Networkers are in the off position). Initially, both Brivis Networkers upon power up will have the word "clock" beside key 5, because they are both still Masters at this stage.

6.4 Master and Slave Addressing

- Press the clock Key 5, and across the top a scrolling message should say "Clock setting mode", and after the message has finished the time will begin flashing.
- Push and hold Keys 2 & 4, until the screen displays this message "Installer parameter access".
- After the message has finished, push the Mode key until the screen displays - n01 ID00:1 at the top (see diagram).
- Rotate the circular dial to change the parameter value displayed at the top right of screen to the number required for the Slave e.g. Slave=2.

Unit type Parameter Value

Master	1
Slave	2



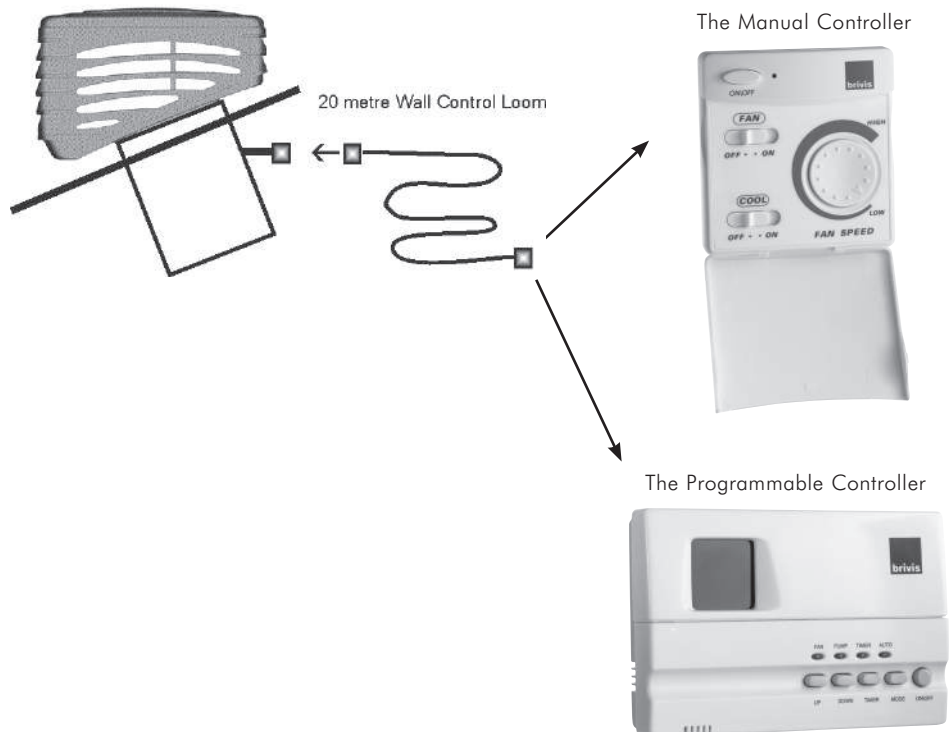
- Once this parameter value has been set, push the ON/OFF button to exit this Installer set-up program.

This Brivis Networker will now become the Slave Brivis Networker, and the installer parameters can no longer be accessed from this Brivis Networker. The Master Brivis Networker must now be used to access the installer parameters.

6.5 Wiring the Programmable or Manual Wall Control to a Brivis Advance, Brivis Promina or Brivis Contour

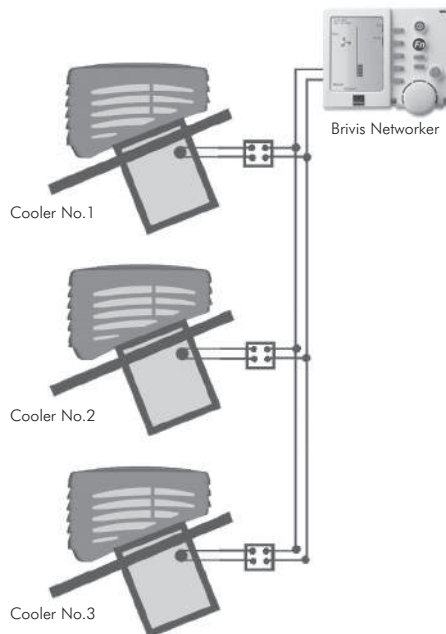
After the Cooler's power supply and pre-wired wall control leads are fed down from the base into the roof cavity, connect the 20-metre wall control loom plug to the cooler's lead plug.

- Ensure the wall control is positioned so that it is within reach of the cooler using the 20-metre wire loom assembly supplied.
- These Wall Controls accept the polarised plug connection. The Manual wall control has a small loom to connect the polarised plug to. The Programmable wall control connection is internal and can be accessed by removing a screw from the top of the control, then removing the top access panel.

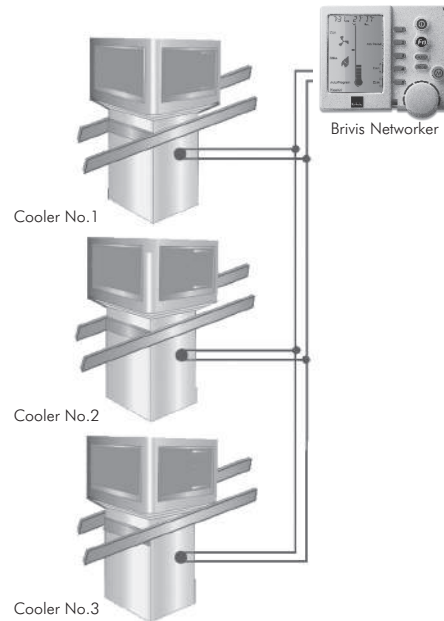


6.6 Setting up Multiple Coolers on the Network

To ensure each Cooler is configured correctly to the Bravis Networker see the instructions below and refer to the Bravis Networker Advanced Programming Manual No. 400 (Available on request from Bravis Customer Service).



Typical Bravis Advance, Bravis Promina & Bravis Contour Application



Typical Bravis AD Application

As the Bravis Networker is polarity sensitive when more than one Cooler is installed on a Bravis Networker all the Coolers should be wired in parallel. (see diagrams above)

To ensure each Cooler is configured correctly to the Bravis Networker, each Cooler must be:

- Given a different specific identification number, starting at No. 1.
- Designated to a zone (refer to the Bravis Networker Advanced Programming Manual No. 404).

Each Cooler comes with the ID number set at number 1. To give it a new number, first complete the installation and wiring of all the units, as described previously and follow the instructions on the next page. (Changing an Identification Number)

6.7 Changing an Identification Number

To change the ID number a cooler must be powered and configured individually.

So, turn OFF the power to all the other coolers and heaters on the Network System.

Use the Installer Set-Up program as follows.

- Turn the Bravis Networker OFF.
- Press (clock) Key 5 and the screen will display the message "Clock setting mode". After the message has finished ensure that the time is flashing.
- Now simultaneously press and hold the 2nd & 4th keys for 3-5 seconds until the message displays "Installer parameter access". After the message has finished the display will appear like this. If a Heater is also on the system you will need to press the Mode button.

Bravis Advance, Bravis Promina & Bravis Contour Models Only:

EO1	IDO7:	1
Cooler	Parameter	Parameter
Number	Number	Value

Bravis AD Models Only:

EO1	IDO9:	1
Cooler	Parameter	Parameter
Number	Number	Value

- Rotate the circular dial to change the parameter value displayed at the top right of screen to the unit number required for this Cooler (as shown below by unit number "2").
- Wait one minute before proceeding to allow for the programming change.

Bravis Advance, Bravis Promina & Bravis Contour Models Only:

EO1	IDO7:	2
Cooler	Parameter	Parameter
Number	Number	Value

Bravis AD Models Only:

EO1	IDO9:	2
Cooler	Parameter	Parameter
Number	Number	Value

- Press the Bravis Networker ON/OFF button to exit the program.
- Turn the power supply at the Cooler OFF to save the new ID number.
- Repeat the sequence for each Cooler.
- Then follow the Bravis Networker Advanced Programming Instructions to allocate the Coolers to their respective zones.

7. Brivis Advance, Brivis Promina & Brivis Contour Models Water Connection

7.1 Inlet Connection

The water inlet connection point is under the cooler base on the left hand side, at the high side of the roof. The connection is via a 1/2" BSP female fitting supplied on a flexible hose.

7.2 Tank Water Quality Management.

The Brivis Advance, Brivis Promina and Brivis Contour's electronic water level sensor automatically maintains the correct water level within the tank. The Brivis Advance and Brivis Promina models are programmed to periodically flush the tank and refill it with clean water, depending on the operating conditions, and automatically maintain the water quality within the tank. The Brivis Contour is fitted with an AquaSave module that maintains water purity during the cooler's operation and therefore does not flush as often.

7.3 Water Drain Connection

Brivis Advance, Brivis Promina and Brivis Contour models have a drainage connection point at the underside of the base, on the low side of the roof.

When the cooler's discharge is likely to fall on a roof or catchment area for potable water, or water reuse, then a drain must be fitted. In some municipalities it is mandatory to fit a drain to the cooler. Check with the local authority regarding the regulations.

Where required Brivis recommend the drain outlet be plumbed to a suitable point in order to disperse the waste water away adequately without causing damage or nuisance i.e. overflowing roof guttering, accelerated corrosion.

There are two recommended options when connecting drainage to the unit:

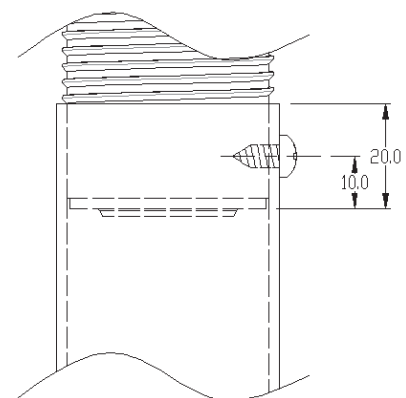
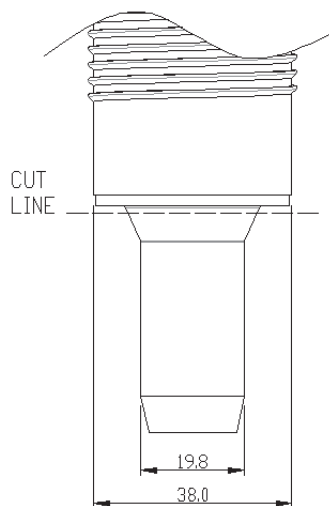
- Option one is for a small diameter pipe, which MUST slide over the Ø19.8mm fitting detailed in Figure 1.
- Option two is for a larger diameter pipe and prior to connection, the snorkel outlet must be modified by cutting and de-burring at the "CUT LINE" shown in Figure 1. Once complete, slide on the large diameter pipe, drill a pilot hole Ø3mm and secure with a 8gx3/8 stainless steel screw as shown in Figure 2.

Ensure that all field supplied drainage pipe is rigid (not flexible) and UV stabilised.

Ensure any drain has a continuous fall, the joints and fittings are adequately sealed, and that all penetrations in and out of the roof cavity are sealed against water entry into the building.

The drain pipe must also be properly supported along its entire run, and must not place strain on the Cooler's outlet fitting or base.

For installations on tiled roofs where a drain may not be required, Brivis recommend fitting a water distribution spreader to the Cooler's drain outlet.



8. Timing and Cooler Functions

Brivis Advance, Brivis Promina & Brivis Contour Models

8.1 Start Up

Brivis Cooler with Dump Valve fitted will have a 15 second delay on start up.

On start up, the Brivis Contour ServoSeal damper will also open before any other function.

If the Cooler has been OFF for longer than 60 minutes the tank will require refilling. Allow approximately 3-5 minutes depending on the water pressure.

8.2 Pre-wet

The Cooler has been pre-programmed to automatically saturate the filter pads when the pump is turned ON.

Pre-wet is the process of running the pump and wetting the pads without the fan operating ensuring full pad saturation and optimum cooling potential when the fan starts.

Pump OFF Time	Pre-wet Time
• Less than 2 minutes	No Pre-Wet
• Between 2-10 minutes	Pre-Wet 1 minute
• Longer than 10 minutes	Pre-Wet 4 minutes
• Longer than 60 minutes	Tank has to be filled, therefore total time including Pre-Wet is 5-7 minutes.

8.3 Programmable Wall Control Models in Auto Mode

These models operate similar to Brivis Networker and Manual wall control models but in auto mode the Pre-wet operates slightly differently.

If the Cooler has been OFF for longer than 15 minutes it will begin with a 2 minute Pre-wet, then turn OFF the pump and start the fan.

Depending on the room conditions and the wall control setting the Cooler may perform another Pre-Wet (as described previously) when the pump is turned ON again, forcing the fan to turn OFF for that period.

8.4 Tank Water Quality and Replenishment During Operation

During the Cooler's operation with the pump operating, the Cooler will be evaporating water from the tank and automatically refilling itself.

Brivis Advance and Brivis Promina models will periodically, after a specified number of tank refills, flush out the tank (discharging water from the drain outlet for approximately 1 minute) without stopping the Cooler.

How frequently this flush occurs will vary according to local water conditions and the rate of evaporation.

Note: Brivis Contours will not flush as often, as they are fitted with an AquaSave.

8.5 Shut-down Times

When the Cooler is turned OFF at the end of use, the controls are programmed to wait 60 minutes before commencing Shut-down.

This Shut-down procedure starts with draining the tank (approximately 60 seconds). Brivis Contour models will also close the ServoSeal damper at the start of the Shut-down procedure. Then a wash cycle is performed to clean the tank for approximately 30 seconds.

9. Dismantling the Brivis Advance, Brivis Promina & Brivis Contour Cooler

9.1 Removing the Front and Rear Pads

For general servicing, remove the front and back pads to access all components.

- Loosen the 4 plastic thumbscrew knobs on the cooler's roof until the large front pad can be lifted up enough to clear the bottom edge.
- Swing the large front pad out at the top edge.
- Remove the 2 thumbscrews above the small back pad completely.
- Raise the roof until the small back pad has enough clearance at the top to be removed.
- With the front and rear pad frames removed, the filter pads simply slide up and out of their frames.

9.2 Removing the Side Pads

Remove the front and back pads as above, then:

- Disconnect the 19mm clear hose supplying water to the roof distribution spreader at the fitting in the cooler's base (squeeze clip then pull to release).
- Ensure that all thumb screws have been removed.
- Remove the roof assembly.
- Slide the filter pads up and out of their frames.

9.3 Dismantling the Framework

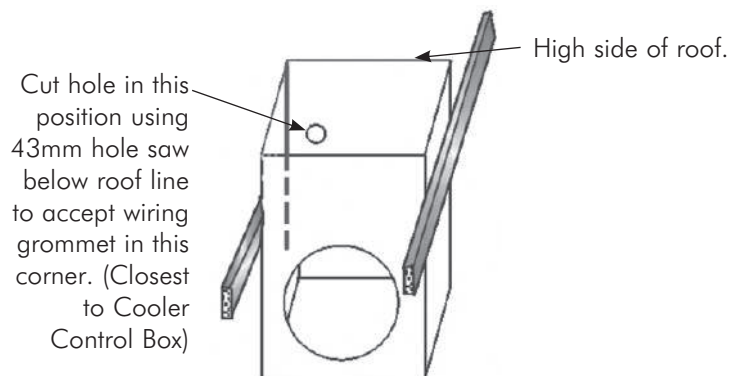
Complete all the steps above then:

- From the front of the unit remove all four 10g screws securing the posts to the base caps. Note that the top brackets are glued to the posts, and cannot be separated.
- Lift up and remove the 4 PVC support posts, disengaging the pad's restraining angle brackets.
- Slide the side pad frames out from the formed brackets at the base of the frames.
- Remove the side pad frames and external panel assemblies.

10. Brivis AD model Installation Instructions

10.1 Brivis AD Dropper Duct Specific

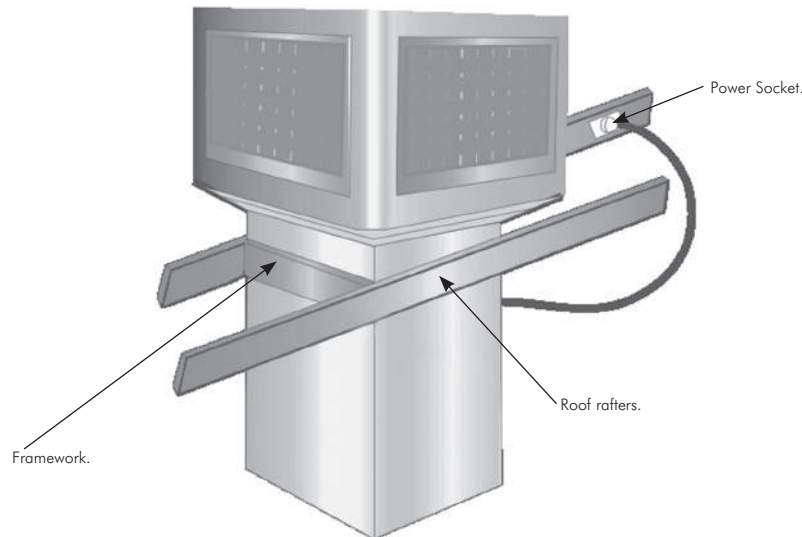
- For Brivis AD models 66, 76 and 86 the dropper box size is 650mm x 650mm.
- For Brivis AD 56 the dropper box size is 550mm x 550mm.
- Determine the point of penetration through the roof and prepare the opening according to the type of building construction and roofing material.
- Cut and form a frame in the opening for the dropper duct. Place the dropper duct in the framework & secure it with bolts or coach screws, on all 4 sides.
- Secure the dropper duct vertically, so the Cooler is level when placed on top of it.
- Ensure the 3 pin power supply plug and lead, the Wall Control Loom connection lead, and the rubber grommet, are fed to the inside of the dropper duct.
- Cut a 43mm hole in the dropper duct below the roof line on the left-hand-side on the high side of the roof, to accept the wiring grommet. This will allow the 3-pin plug and lead, and the Wall Control Loom connection lead to be withdrawn from the duct into the roof cavity.



10.2 Installing the Dropper Duct and fitting the Brivis AD Cooler

Place the Cooler on the dropper duct and secure the sub base frame of the Cooler to the dropper duct, in a level position with bolts or screws. If a Winter Seal is fitted, ensure screws don't interfere with the Winter Seal operation.

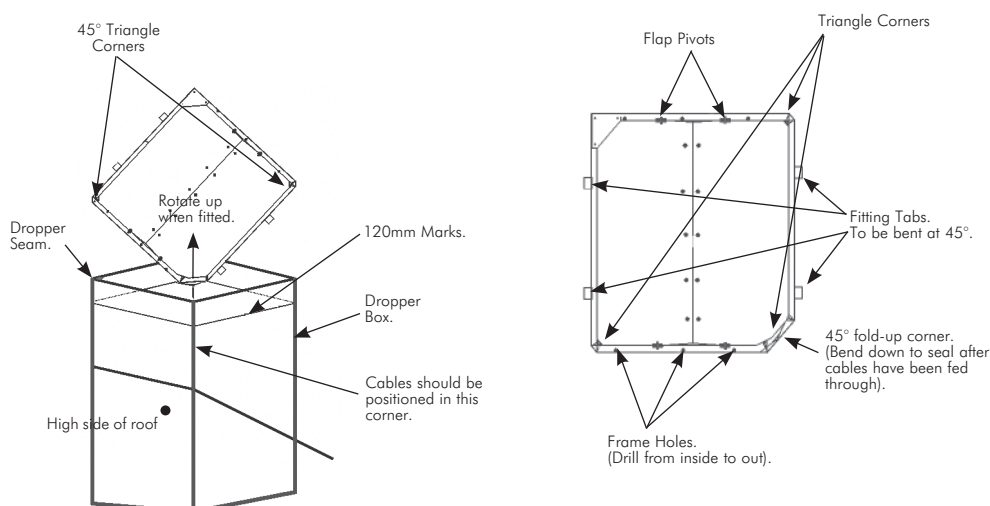
Alternatively, the Cooler may be mounted on a suitable roof stand capable of supporting both the Cooler and the dropper duct.



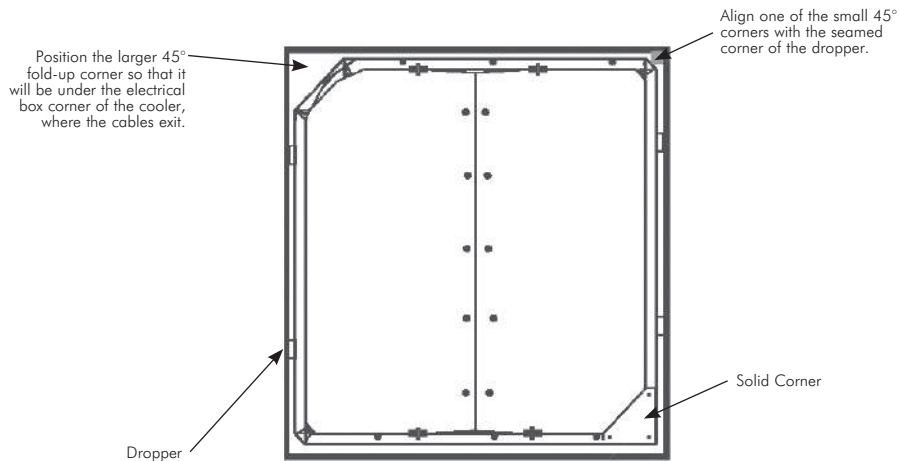
10.3 Brivis AD Winter Seal Installation

The Winter Seal can be fitted into the dropper duct before or after the dropper has been installed, but it is important to ensure that:

- Dropper duct is square
- The dropper duct seam and the large 45° fold-up corner are to the high side of the roof as shown in the drawing below, otherwise the flaps will not open correctly.
- The Winter Seal is level and a minimum of 120 mm down from the top of the dropper (150 mm maximum).
- On the inside surface of the dropper duct, measure and mark points 120mm down from top of dropper in each corner. Join the marked points, drawing four level horizontal lines on the inside of the dropper duct to provide the height position to fix the Winter Seal.
- Use pliers to bend fitting tabs on Winter Seal sides out at 45°, and bend up the large 45° fold-up corner.
- Hold the Winter Seal by the solid corner (90°) and lower into dropper with small 45° corners aligned diagonally across the dropper duct. Lower until small corners line up with marked lines. (See diagram below)
- Rotate the fold-up corner up until the frame aligns with the marked lines allowing fitting tabs to jam tight against the dropper duct sides.
- Check again that the large 45° fold-up is in the correct corner as per previous instructions.

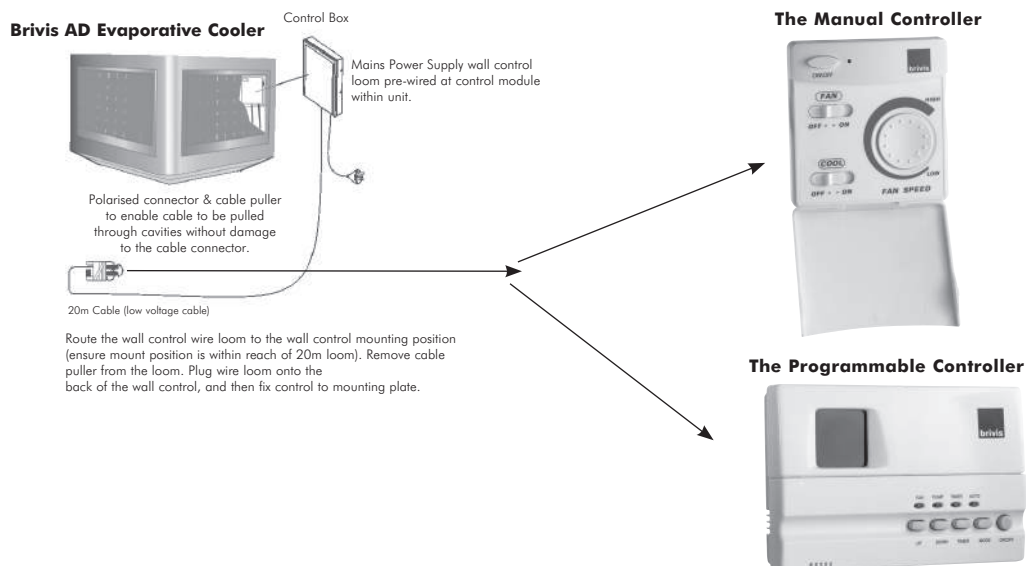


- Align the top edge on the marked lines and drill through frame holes from inside to out. Pop rivet or screw from outside to in, making sure screw or rivet tails do not interfere with the seal's operation.
- Note:** Fitting tabs should be straightened before screwing or rivetting.
- Route the cables through the 45° fold-up corner and bend the 45° corners down to seal. The large fold-up should hold the cable against dropper duct away from the Winter Seal.
- Ensure flaps on Winter Seal operate freely.



10.4 Wiring the Brivis AD to the Programmable and Manual Wall Control

- The Brivis AD coolers are supplied with a 20 metre wall control loom pre-wired to the Cooler's electronic module.
- Ensure the wall control is positioned so that it is within reach of the Cooler, using the 20 metre wire loom assembly supplied.
- The wall control accepts the polarised plug connection. The Manual wall control has a small loom to connect the polarised plug to. The Programmable wall control connection is internal and can be accessed by removing a screw from the top of the control then removing the top access panel.



11. Brivis AD Water Connection Float Valve & Bleed Off

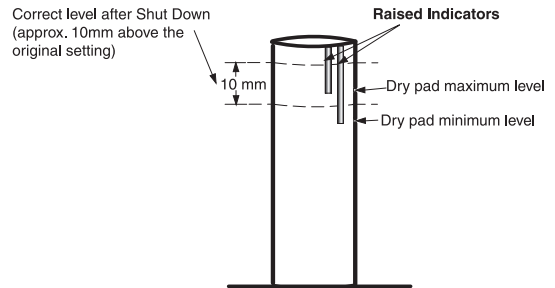
11.1 Inlet Connection

The water inlet connection point is in the Cooler base, which should be positioned on the low side of the roof. The connection is a 12mm copper tube union (flare).

11.2 Brivis AD Float Valve Setting Details

The Float Valve has been factory set so that the water fills initially to a level between the minimum and maximum level marks on the overflow pipe. The float valve may require re-adjustment due to varying water pressures.

It is important that the correct float level is checked during installation. An incorrect setting can cause the water to overflow or starve the circulating pump of water during initial start up of the Cooler.



Note: The NORMAL water level, after the unit has been shutdown, is approximately 10mm above the initial water level setting as water returns to the tank from the pads.

11.3 Brivis AD Bleed Off

To ensure the water in the tank is clean and fresh, a small amount continuously flows from the unit during operation. This is called "bleed off". This prevents a build up of salts and minerals in the tank (which can accelerate filter pad and component deterioration) by constantly topping it up with fresh water.

The rate of bleed off depends on the local water quality, the capacity of the Cooler and local weather conditions. Poor water quality and high temperatures require a higher bleed rate to ensure that the water remains consistently fresh and clean.

11.4 Brivis AD Bleed Rate Settings

The bleed rate has been factory set to a nominal rate to suit the model. However, the bleed rate should be adjusted within the following range to suit local conditions.

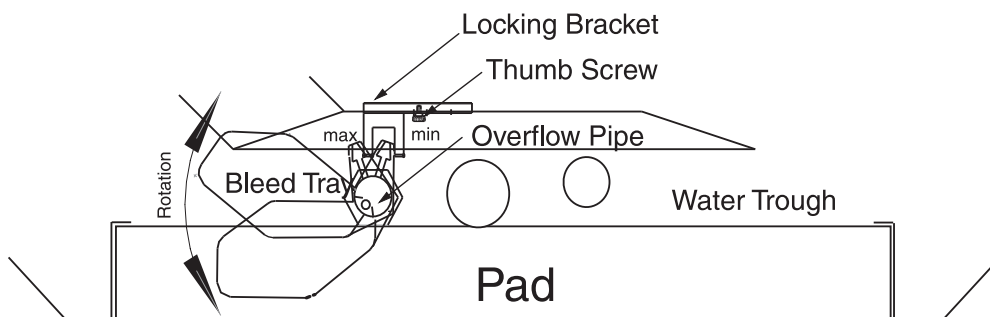
MODEL	LITRES per hour
Brivis AD56	35 - 60
Brivis AD66	35 - 60
Brivis AD76	35 - 65
Brivis AD86	35 - 70

Note: If the unit is fitted with a Dump Valve these bleed rates may be reduced by up to 50%.

11.5 Brivis AD Bleed Setting Instructions

- Loosen the thumb screw, firmly grip the over flow pipe, and rotate it.
- Move the bleed tray further under the pad to increase the bleed rate or further away from the pad to decrease it.
- Measure to confirm the required bleed rate and then tighten the thumb screw.

Note: Ensure the arrow of the overflow pipe assembly sits between the leg of the locking bracket



11.6 Brivis AD Optional Dump Valve Functions

The Dump Valve empties the tank after the Cooler is turned OFF, leaving it dry.

When using the Cooler again, refilling the tank will take 4 minutes before Pre-Wet begins. When the Cooler is turned OFF at the end of use, the Dump Valve will wait 45 minutes before turning OFF the water supply and draining the tank.

If the Cooler is in continuous operation, the Dump Valve will flush the tank automatically after 35 hours of pump operation. (Note: this is not 35 hours of Cooler operation, but 35 hours of actual pump operation).

Note: The entire Start Up sequence, including Pre-Wet could be as long as 8 minutes in some cases, if the Cooler has been OFF for more than 45 minutes.

12. Brivis AD Timing and Cooler Functions

12.1 Start-up - Brivis AD Model Standard

These Coolers are not pre-programmed to automatically saturate the filter pads when the pump is turned ON, therefore no Pre-Wet will occur where a manual wall control is fitted.

12.2 Start-up - Brivis AD Model with Optional Dump Valve

The Cooler has been pre-programmed to automatically saturate the filter pads when the pump is turned ON (Pre-Wet). For Dump Models the cooler will delay this Pre-Wet operation for a period of 4 minutes to allow the tank to fill with water (Fill-Time). This delay will only occur where the pump has been OFF for longer than 45 minutes.

12.3 Pre-Wet

Pre-wet is the process of running the pump and wetting the pads without the fan operating, ensuring full pad saturation and optimum cooling potential when the fan starts.

Pump OFF Time	Pre-wet Time
• Less than 10 minutes	Pre-Wet 1 minute
• Longer than 10 minutes	Pre-Wet 4 minutes
• Longer than 45 minutes (Dump Model Only)	Tank has to be filled, therefore total time including Pre-Wet is 8 minutes.

12.4 Programmable Wall Control Models in auto mode

These models operate similar to Brivis Networker and Manual wall control models but in auto mode the Pre-wet operates slightly differently.

If the Cooler has been OFF for longer than 15 minutes it will begin with a 2 minute Pre-wet, then turn OFF the pump and start the fan.

Depending on the room conditions and the wall control setting the Cooler may perform another Pre-Wet (as described above) when the pump is turned ON again, forcing the fan to turn OFF for that period.

12.5 Shut-down Times (Optional Dump Valve)

When the Cooler is turned OFF at the end of use the controls are programmed to wait 45 minutes before draining the tank.

13. Commissioning Checklist

IMPORTANT: Switch OFF the power and unplug the Cooler before touching any wiring. Care must be taken to ensure electrical components have been isolated before performing any service work, i.e. water inlet valve, Servo Seal motor. Only an electrically qualified technician should carry out any service to electrical wiring.

13.1 Isolating Switch - Brivis Advance, Brivis Promina & Brivis Contour Model

The Brivis Advance, Brivis Promina and Brivis Contour both have an external power-isolating switch to facilitate servicing.

The switch is located under the front left hand side of the cooler. To access the switch, reach under the front of the Cooler's trough and locate the switch. By observing the LED light on the control box you can ascertain whether the power is on or off. Always test for electrical voltage before commencing any work on the cooler.

13.2 Isolating Switch - Brivis AD Model

The Brivis AD Cooler has an isolating switch located on the side of the Cooler's electronic control module. Access to the switch is by removing the appropriate pad or by inserting a screwdriver in the access hole provided in the corner post nearest to where the electronic control module is mounted, the latter option does not apply to AD BAL units.

13.3 Checklist

- The Bleed / Overflow outlet pipe assembly is in place in the bottom of the tank (Brivis AD Models only).
- The ServoSeal damper is not catching and opens fully (Brivis Contour Models only).
- The isolating valve on the water supply is turned ON.
- The water tank fills with water and the water inlet valve closes when the tank is full.
- The water level is set correctly (Brivis AD Models).
- There is no foreign matter in the water tank or fan housing.
- The pads are correctly located.
- The pump operates when turned ON at the Wall Control.
- The fan operates through the entire speed range.
- For even water distribution with the pads in position and the Cooler in operation.
- The bleed off water rate and adjust if necessary (Brivis AD Models only).
- The water drains completely from the tank and that any external drain piping is not blocked or restricted.
- That the optional dump valve functions correctly by isolating the power to the unit and ensuring that the tank drains completely (Optional extra for Brivis AD Models Only).

Note: New cooling pads should be thoroughly flushed before use so, following commissioning, run the pump for 30 minutes without the fan, and then drain the tank fully. This will prime the pads, flush out some of the new pad odour, and remove any foreign matter that may have settled in the system during transport.

13.4 What if the Fan Motor will not start?

Check:

- The 10 Amp fuse in the meter box has not blown.
- The Cooler's 3-pin supply plug is correctly located in the power socket.
- For power at the power socket (plug in another appliance and test).
- The isolating switches at the unit and the supply power socket are turned ON.
- The unit is turned ON at the Brivis Networker/Wall Control.
- The fan is not in a delay due to ServoSeal damper, tank filling, or pad Pre-Wet operation.
- The motor will spin freely with adequate tip clearance (approximately 2mm).
- The motor is not hot, causing the auto-reset thermal overload switch in the fan motor to open circuit.
- The motor speed sensor has not been damaged or displaced (where fitted).
- That all electrical connections are secure, and if the motor will not start, call Brivis for service.

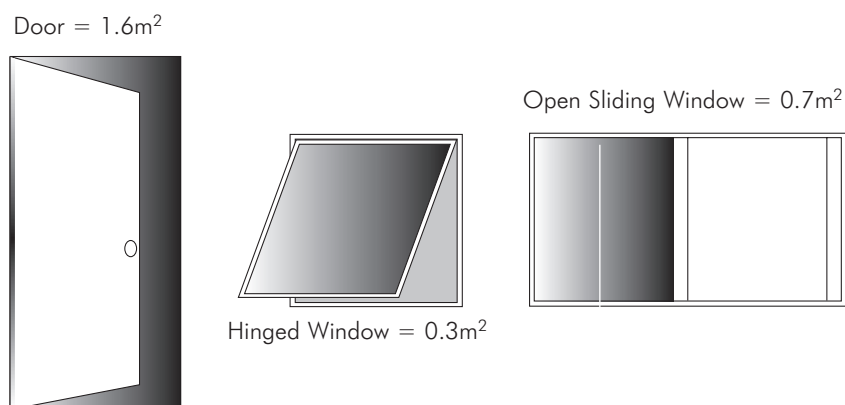
13.5 What if the Pump will not start?

Check:

- The 10 Amp fuse in the meter box has not blown.
- The Cooler's 3-pin supply plug is correctly located in the power socket.
- For power at the power socket (plug in another appliance and test).
- The isolating switches at the unit and the supply power socket are turned ON.
- The unit is turned ON at the Brivis Networker/Wall Control.
- The pump is not in a delay due to ServoSeal damper, or tank filling operation (Brivis Promina, Brivis Contour, Brivis Advance & Brivis AD Dump Models).
- The filter basket on the pump is not blocked (Brivis AD only)
- The pump impellor is not blocked or obstructed.
- All electrical connections are secure, and if the pump will not start, call Brivis for service.

14. Exhaust and Ventilation

Note: Exhaust fans may be required if insufficient free exhaust area exists. If the exhaust fan is the only exhaust or ventilation outlet, then its capacity should be at least equal to the Cooler's air output.



Average ventilation area provided by various openings when fully opened.

Table 1. Opening required for each model.

Model					Number of average size windows & doors (suggestions only)	Highest Fan Setting	Lowest Fan Setting
Brivis Contour Series	Brivis Promina Series	Brivis Advance Series	Brivis Advance Plus Series	Brivis AD Series			
L26	P26	F26D	F26DS		Two sliding windows or Five hinged windows	1.5 m ²	0.9 m ²
L36	P36	F36D			One door and a hinged window	1.9 m ²	1.1 m ²
L46	P46 & P56	F56D	F46DS	AD56, AD56D	Three sliding windows or one door & two hinged windows	2.3 m ²	1.4 m ²
L56	P66		F66DS	AD66, AD66D	Four sliding windows or one door and four hinged windows	2.8 m ²	1.7 m ²
L66	P75	F76D		AD76, AD76D	Five sliding windows or one door and five hinged windows	3.1 m ²	1.9 m ²
L76			F86DS	AD86, AD86D	Six sliding windows or one door and six hinged windows	3.4 m ²	2.1 m ²

Text and Illustration Copyright – Brivis Pty Ltd

All rights reserved. No part of these documents may be used in any way or form without prior written consent from Brivis Pty Ltd.

15. Technical Specifications

Model	Weight kg		Tank Capacity (litres)	Motor		Fan Impellor Blades	Water Connection	Loom Note: the type of loom depends on the wall control used	Dropper Box Size	Minimum Dropper Box Length	Angle of Dropper Box	Dump Drain Connection
	Dry	Wet		Watts	Amps							
Brivis Contour L26	49.5	67.3	12	315	2.4	6	Flexible hose connection with 1/2" BSP thread	Networker - twin wire cable (figure 8 cable). Programmable & Manual - 20 metre wiring loom	550 mm x 550 mm with 15-20 mm Flange out	900 mm	21 degrees	20 mm or 40 mm
Brivis Contour L36	51.5	70.4	12	750	4.9	11						
Brivis Contour L46	55.6	77.8	12	750	4.9	11						
Brivis Contour L56	56.6	80.3	12	750	4.9	11						
Brivis Contour L66	55.6	77.8	12	750	4.9	11						
Brivis Contour L76	57.6	79.8	12	1000	7.3	11						
Brivis Promina P26	47.0	64.8	12	315	2.4	6						
Brivis Promina P36	48.2	66.0	12	750	4.9	11						
Brivis Promina P46	49.0	67.9	12	750	4.9	11						
Brivis Promina P56	49.9	70.2	12	750	4.9	11						
Brivis Promina P66	50.7	72.3	12	750	4.9	11						
Brivis Promina P76	51.9	77.2	12	1000	7.3	11						

Wall Control

All models can have either a Networker, Programmable or Manual wall control.



Pictures are for illustration purposes only.

Technical Specifications (continued)

Model	Weight kg		Tank Capacity (litres)	Motor		Fan Impellor Blades	Water Connection	Loom Note: the type of loom depends on the wall control used	Dropper Box Size	Minimum Dropper Box Length	Angle of Dropper Box	Dump Drain Connection
	Dry	Wet		Watts	Amps							
Brivis Advance F26D	47.5	65.5	15	315	2.4	6	Flexible hose connection with 1/2" BSP thread	Networker - twin wire cable (figure 8 cable). Programmable & Manual - 20 metre wiring loom	550 mm x 550 mm with 15-20 mm Flange out	1200 mm	90 degrees	20 mm or 40 mm
Brivis Advance F26DS	47.5	65.5	15	315	2.4	6						
Brivis Advance F36D	49.0	67.0	15	750	4.9	11						
Brivis Advance F46DS	50.5	69.0	15	750	4.9	11						
Brivis Advance F56D	51.0	69.5	15	750	4.9	11						
Brivis Advance F66DS	53.0	71.5	15	1000	7.3	11						
Brivis Advance F76D	60.0	81.0	15	1000	7.3	11						
Brivis Advance F86DS	60	81	15	1000	7.3	11						
Brivis AD56 BAL AD56D BAL	46.0	67.5	32	750	4.9	11	12mm Copper tube union (flare)	20 metre wiring loom	550 mm x 550 mm			40 mm Brass
Brivis AD66 BAL AD66D BAL	46.0	67.5	32	750	4.9	10						
Brivis AD66/ AD66D	44.0	65.5	32	750	4.9	10						
Brivis AD76/ AD76D	46.0	68.0	32	950	6.8	5						
Brivis AD86/ AD86D	48.0	75.0	32	950	6.8	5						

Note: Brivis reserves the right to change specifications without notice

Wall Control

All models can have either a Networker, Programmable or Manual wall control.



Pictures are for illustration purposes only.



For all your Sales and Service enquiries call us on **1300 BRIVIS** (1300 274 847).

www.brivis.com.au

Brivis Australia

61 Malcolm Road
Braeside Victoria 3195
Australia
1300 BRIVIS (1300 274 847)
Fax: +61 (03) 9264 9400
www.brivis.com.au
email: sales@brivis.com.au

Brivis South Africa

Distributor: Lorenz and Associates
Northlands Deco Park
Cnr Witkoppen and Newmarket Roads
North Riding, Johannesburg South Africa 2194
0861 BRIVIS (0861 274 847)
Ph: +27 (011) 704 6112
Fax: +27 (011) 704 0022
www.brivis.co.za
email: info@brivis.co.za

Copyright – Brivis Climate Systems Pty Ltd

All rights reserved. No part of these documents may be used in any way or form without prior written consent from Brivis Climate Systems Pty Ltd.