

Pipe Installation

The instructions are provided as a guide only - installations should be carried out in accordance with AS/NZS 3500.2.2: 1996.

1. Pre-installation

Positioning of support brackets

Vertical Stacks

- Must be positioned at not more than 2 metre centres.
- Allow at least one bracket per fitting preferably at the downstream end.
- Use additional brackets at changes of direction or junction points.

Horizontal Runs

- Use at least two brackets per 3 metre pipe length.
- One bracket should be within 300mm of the pipe joint and the other at the midpoint of the pipe length, but not more than 2 metres from the next bracket.
- Additional brackets should be used at direction changes and junction points - downstream of the fitting.
- Where long pipe runs occur i.e. greater than 15 metres, a fixing arm should be attached to the bracket to prevent pendulum movement within the system.

Pipe Weights

When designing vertical stack and horizontal pipe run systems, pipe weights and loadings need to be considered.

The table below gives weights for all pipe sizes empty and full of water.

Pipe Ø (mm)	Weight empty (kg/m)	Weight full (water) (kg/m)
50	1.2	3.0
75	1.8	6.9
110	2.7	11.9
160	5.0	24.6

Do NOT use tools to assemble pipe sections, as damage to the pipes, fittings and seals may occur. ACO offer a lubricant to aid assembly (Part No. 400520).

2. Installation



- i) Lubricate seal using ACO PIPE™ lubricant and push fit to existing pipe connection. If connecting to a metal non-stainless steel pipe a suitable coupling should be used.



- ii) Fix support bracket to wall using appropriate screws and plugs. Fix pipe to brackets, allow a 30mm clearance between the pipe and the wall to allow access for painting the wall and maintenance.



- iii) Lubricate next pipe section and repeat, using support brackets at calculated intervals. Once finished, air and water tests should be completed as instructed in part 3.

Note: Below ground installations backfilling should **NOT** commence until successful testing is complete. Care should be taken to avoid damage/distortion of pipe system during backfilling and compacting.

3. Post installation

Earth Continuity

Certain applications may require provision for earthing across pipe joints, please contact ACO Technical Services for advice.

Testing

It is generally considered practical to carry out either air or water testing of the pipe system during and at the completion of the construction. AS/NZS 3500.2.2:1996 outline the following requirements:

Air Test - pipe are required to withstand an air pressure of 30Kpa for a period of 3 minutes to allow for the temperature to stabilize. The subsequent pressure drop once the air supply is shut off is then timed. Refer to AS/NZS 3500.2.2:1996 for full details.

Water Test - pipes for below ground applications should be tested to a maximum head of 3 metres and maintained for 5 minutes. The water added to maintain this head is measured. Refer to AS/NZS 3500.2.2:1996 for full details.

Maintenance

See page 15 for maintenance guidelines.

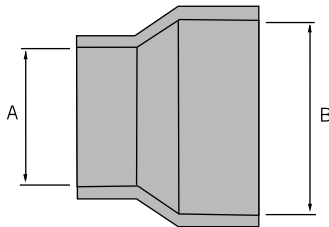
Pipe Cutting

Branch and angle fittings should not be cut. If it is necessary to adapt or shorten pipe lengths, cut straight pipe sections only and the cut must be square, clean and ready chamfered to avoid damage to the seal. Cutting fluid assists cutting and reduces wear on cutting discs. (See page 14 for equipment.)

Pipe Connections

ACO PIPE™ sections push fit easily together, where the pipe is to be connected to existing or other fittings.

Flexible couplings provide a simple solution to connect pipes of differing diameters. They should also be used where the fitting or pipe is a metal other than stainless steel to avoid galvanic corrosion.



Flexible PVC Couplings*

Ø A (mm) Min-Max	Ø B (mm) Min-Max	Part No
53-61	53-61	43814
53-61	75-88	43813
75-88	75-88	43801
75-88	96-114	43803
96-114	96-114	43805
96-114	145-168	43807
145-168	145-168	43811

* A maximum continuous operating temperature of 70°C and maximum intermittent (less than 1 minute) temperature of 85°C is recommended.

Pipe Cutting

Branch and angle fittings should not be cut. If it is necessary to adapt or shorten pipe lengths, cut straight pipe sections only. The cut must be square, clean and ready chamfered to avoid damage to the seal.

Cutting fluid assists cutting and reduces wear on cutting discs. The holder ensures a clean square cut.



Pipe Cutting Tools

Description	Part No
Complete Set	98992
Cutter 50-110mm Dia	400737
Cutter 110-160mm Dia	400738
Holder for 50mm pipe	400739
Holder for 75mm pipe	400740
Holder for 110mm pipe	400741
Holder for 160mm pipe	400742
Replacement manual cutter disc	400578
Cutting fluid	400577

Maintenance

Stainless steel is easy to clean. Washing with soap or mild detergent and warm water followed by a clear water rinse is usually quite adequate for many industrial applications. An enhanced aesthetic appearance will be achieved if the cleaned surface is finally wiped dry. Frequency of cleaning will vary depending upon application and local conditions.

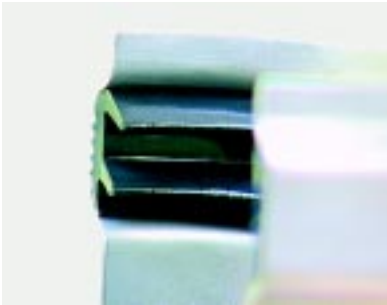
All grades of stainless steel will stain and discolour due to surface deposits, regular cleaning is required to minimise this effect and maintain corrosion resistance.

Strong acid solutions, wire brushes and steel wool MUST NOT be used to remove marks or cement spillage as this will damage the chromium rich surface and reduce corrosion resistance properties.

Joint Seal Replacement

The double lip seal is easily removed and replaced from the female end of all pipe and fittings. This allows the on-site upgrade of seal material from EPDM to Viton*, for example without the need for specialist tools.

Important: the seal **MUST** be fitted as per the diagram and notes provided.

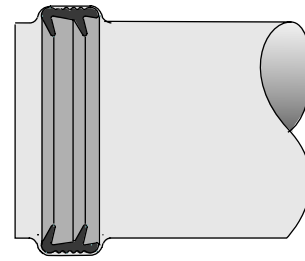


a. If changing the seal, ensure the correct size and grade of seal is selected for the application. EPDM seals are BLACK and Viton* seals are GREEN.

b. Ensure the seal and the area around the pipe receiving the seal is clean, dry and free from dust, grit and any metallic particles.

c. Insert dry seal into the recess as shown in the above diagram.

NOTE: The seal **MUST** be inserted so the double sealing lips face away from the opening of the pipe/fitting.



Seal insertion diagram



EPDM



Viton*

Replacement Seals

External Ø (mm)	EPDM Part No	Viton* Part No
50	98400	98404
75	98401	98405
110	98402	98406
160	98403	98407

Seals are colour coded for easy identification; EPDM are **BLACK** and Viton are **GREEN**.

* Viton is a registered Du Pont Trade Mark.