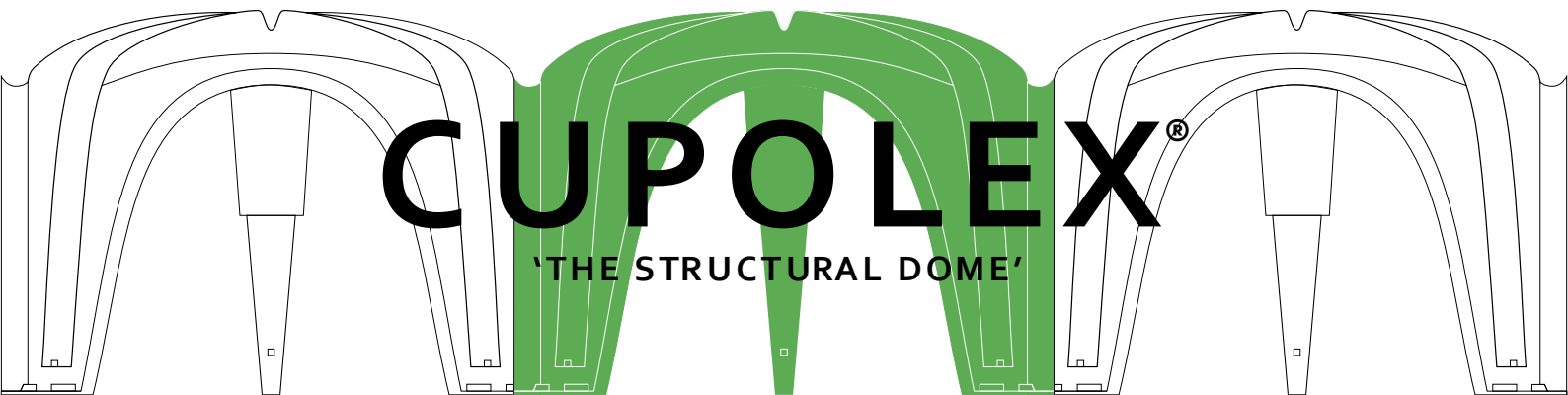


CUPOLEX[®] the structural dome system

THE LATEST INNOVATION
IN CONCRETE SLABS



What is Cupolex®

Cupolex is an environmentally friendly and cost effective alternative to Rib Raft, Stiffened Raft and other concrete void systems.

Cupolex is a patented structural dome concrete slab system made from recycled plastic. Each dome easily inter-connects to create a self supporting structure acting as permanent form work. Cupolex provides an absolute barrier and reduces potential for rising damp with no capillary action possible.

Cupolex allows designers, builders and developers to specify for new buildings and homes. A cost effective foundation which is both Green and Sustainable. All the while reducing building cycle time and minimizing engineered fill requirements which can be very expensive.

History

The name Cupolex comes from the Italian word “Cupola” meaning dome. Millions of square metres of Cupolex have been laid in concrete slabs and foundations throughout the Americas, Australasia and Europe.

Inventors of the Cupolex system Pontarolo Engineering have been marketing Cupolex worldwide since 1990. It was originally developed as a solution to ventilate Radon Gas from new buildings for the US Air Force in Italy. It is now a requirement for all new construction for the US Air Force. Radon Gas is prevalent in areas of Europe and the USA and some parts of Australia.

Since its creation the Cupolex system has been utilised as a solution in a number of different capacities other than its original design.

Cupolex can be used for a vary of applications;

- freezer floor slabs
- road construction
- air recirculation systems
- building renovations in place of hard fill
- sites with high and low weight bearings
- effective solution in flood plane sites

Go Green. Cupolex ticks all the boxes.



- 
Manufactured from 100% recycled plastic
- 
Speedy and easy installation
- 
Can be fully ventilated to reduce power usage
- 
No waste
- 
Standard components that lock together
- 
Reduced safety and environmental hazards
- 
Excellent thermal rating
- 
Reduced carbon footprint
 - Average home delivery is 2 pallets
 - Transport costs reduced
- 
Engineering design solutions tailored to suit all soil classifications
- 
Mitigating rising damp



Stop ends



Beton stops



Cuplex domes

Structural Drawings

Cuplex domes sizes available to suite all soil classifications.

PIERING NOTES:
PIERING IS SUBJECT TO FURTHER ON-SITE ANALYSIS. FINAL DETERMINATION OF THE PIERING REQUIREMENTS IS SUBJECT TO A PRELIMINARY SITE INSPECTION TO BE CARRIED OUT BY THE STRUCTURAL ENGINEER PRIOR TO THE RELEASE OF 'FOR CONSTRUCTION' DOCUMENTATION.

SLAB TO BE SET OUT ON LOOSELY COMPACTED FILL MATERIAL

DENOTES REMOVAL OF ONE DOME & PROVISION OF 400dia. MASS CONCRETE PIER EXTENDED MIN. 600mm INTO FIRM NATURAL SUBGRADE WITH 2M12 1500 LONG EACH WAY TOP OVER PIER

DENOTES SETOUT POINT & ORIENTATION FOR EACH DOME CLUSTER

SLAB SURFACE AREA (m ²)	251.47
CUPOLEX DOMES 260	667
STOP ENDS 260	229
BETON STOPS 260	101
SLAB PERIMETER (m)	67.09
TOTAL INT. BEAM LENGTH (m)	65
CONCRETE VOL. EXCL. PIERS (m ³)	33.49

DESIGN PARAMETERS:
 SITE CLASS & Yr: M - 40mm
 DEFLECTION CRITERIA: SPAN/400
 F_c: 25MPa
 CUPOLEX DOME HEIGHT: 200mm
 SLAB THICKNESS: 60 - 120mm
 SLAB FABRIC: S182
 BEAM WIDTH: 300mm
 BEAM DEPTH: 300mm
 E/B REQ: 3-11TM BTM + 1N12 TOP U.N.O.
 I/B REQ: 3-11TM BTM + 1N12 TOP U.N.O.
 SALINITY: SLIGHTLY SALINE (ASSUMED)
 TYPE OF CONSTRUCTION: AMV (ARTICULATED MASONRY VENEER)
 DESIGN: SECTION 4 - DESIGN BY ENGINEERING PRINCIPLES - AS2870-2011

LEGEND:
 J_{H,V} DENOTES # OF HORIZONTAL/VERTICAL CUPOLEX DOMES
 J_R DENOTES NUMBER OF EXPOSED BETON STOP RIBS
 D_E DENOTES BEAM TYPE REFER DETAILS
 DENOTES 3M Ø11TM TOP ±2000 LONG PAID TO TOP FABRIC
 DENOTES EXTENT OF TOP FABRIC: 20mm INTERNAL TOP COVER 20mm EXTERNAL TOP COVER
 DENOTES LOCATION & DEPTH OF MASS CONCRETE PIER FROM TOP OF SLAB IN ZONE OF INFLUENCE OF SEWER AND/OR OTHER SERVICES. REFER NOTES.

THESE DRAWINGS WERE INITIALLY PREPARED IN REFERENCE TO THE CUPOLEX DESIGN DOCUMENTS BELOW:
 JOB #: _____
 REV: 0
 DATE: 13/5/11

REVISION	DESCRIPTION	DATE
1	ISSUED FOR PRESENTATION	28.02.17

ADDRESS: SAMPLE


CLIENT: SAMPLE CLIENT

CUPOLEX SLAB PLAN

DATE: 13/5/11
 BME SCALE (m) 1:50 @ A3


JOB NUMBER: CUP00047
 SHEET: S1

HEAD OFFICE:
 Phone: (02) 9508 1611
 Fax: (02) 9508 1622
 PO Box 2012
 Taree Point, NSW 2229

CUPOLEX STRUCTURAL DOME SYSTEM (SBS) CONSULTANTS

 INNOVATIVE ENGINEERED STRUCTURES
 24/6 Av. 113 403 402

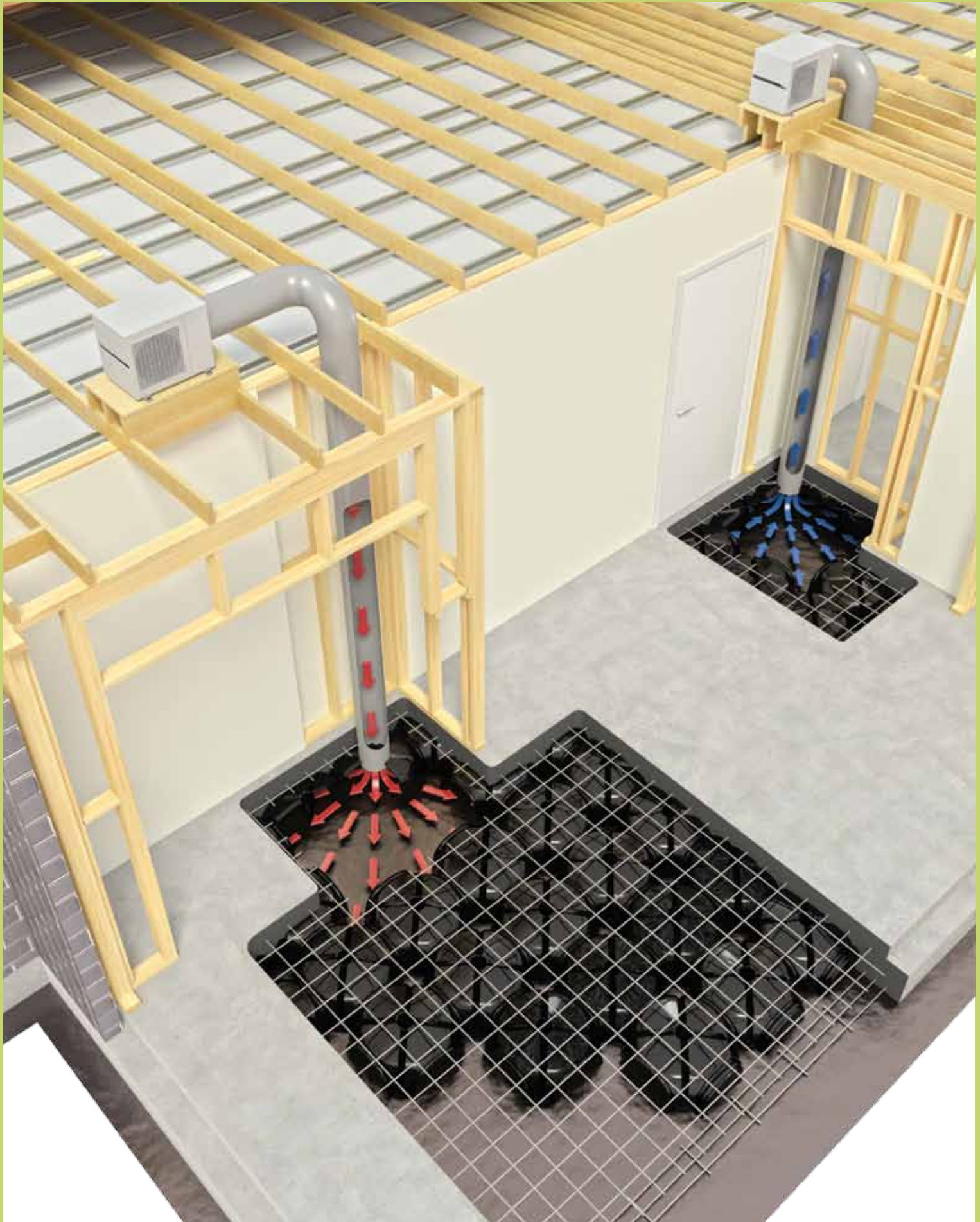
DWELLING TYPE: SS
 GARAGE TYPE: SS
 DESIGN ENGINEER: JOHN J. FORREST CP Eng 33212

THE DRAWING, SET, AND SPEC. FORMED, IDENTIFY ALL THE SERVICES TO BE PROVIDED BY THE CLIENT AND THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION OF ALL SERVICES TO BE PROVIDED BY THE CLIENT AND THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROVISION OF ALL SERVICES TO BE PROVIDED BY THE CLIENT AND THE CONTRACTOR.

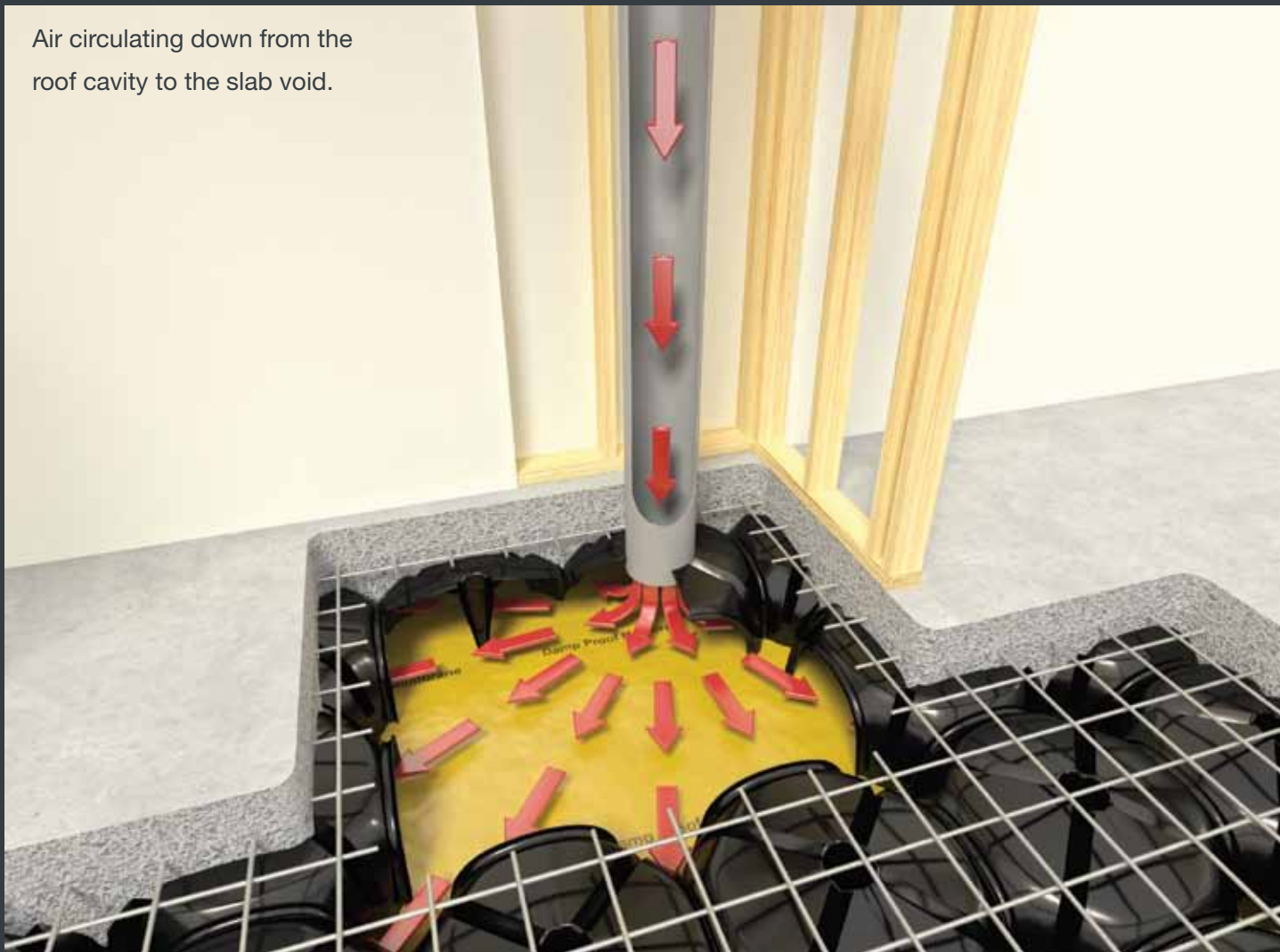
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Additional Benefits – Cupolex Air Articulation System

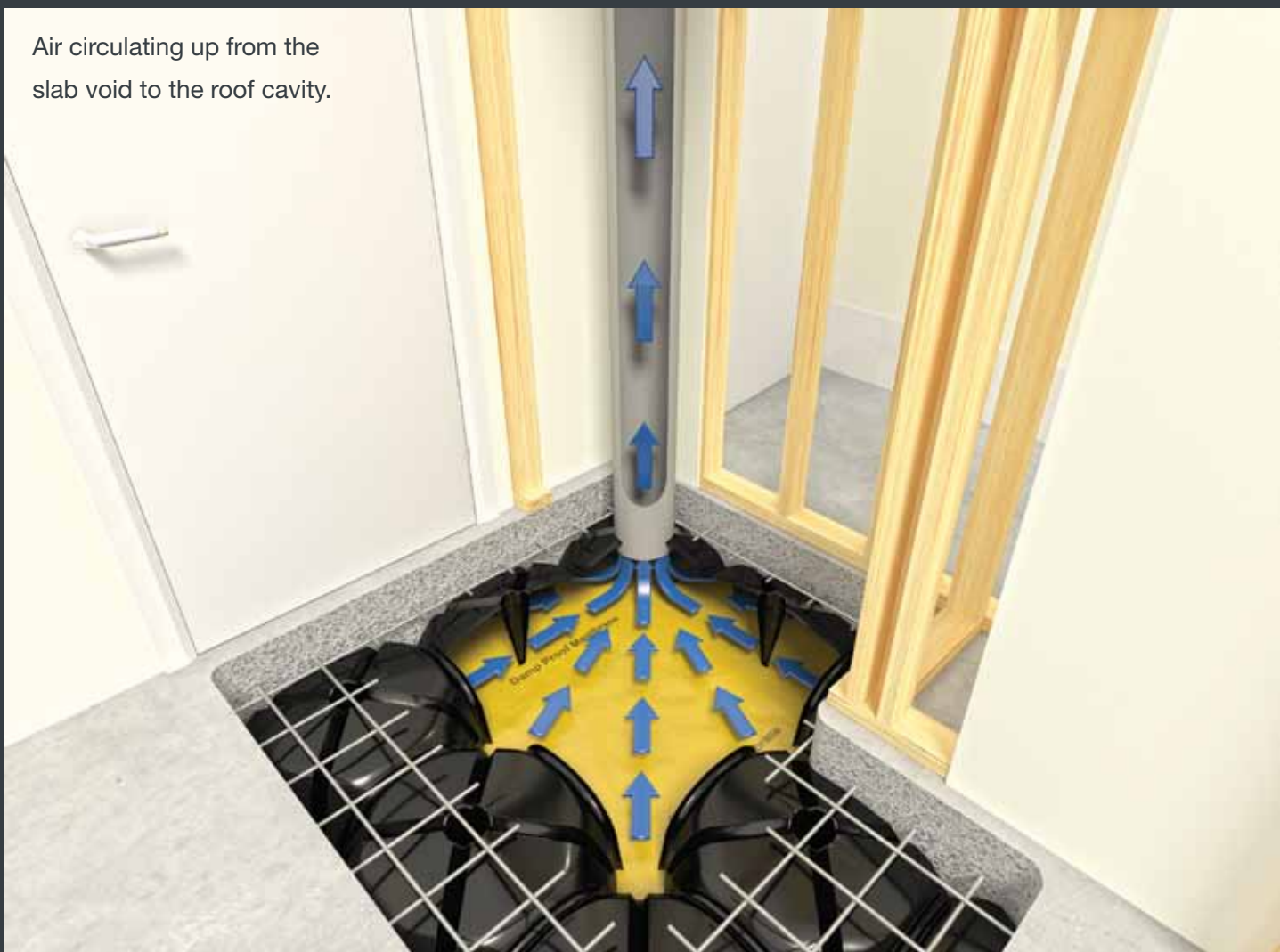
An air articulation system can be installed to circulate air within the roof cavity down through the concrete slab and back. This air movement reduces traditional heating and cooling costs.



Air circulating down from the roof cavity to the slab void.



Air circulating up from the slab void to the roof cavity.



Step by Step Process

1 Site preparation: Ground is prepared as per standard methods.



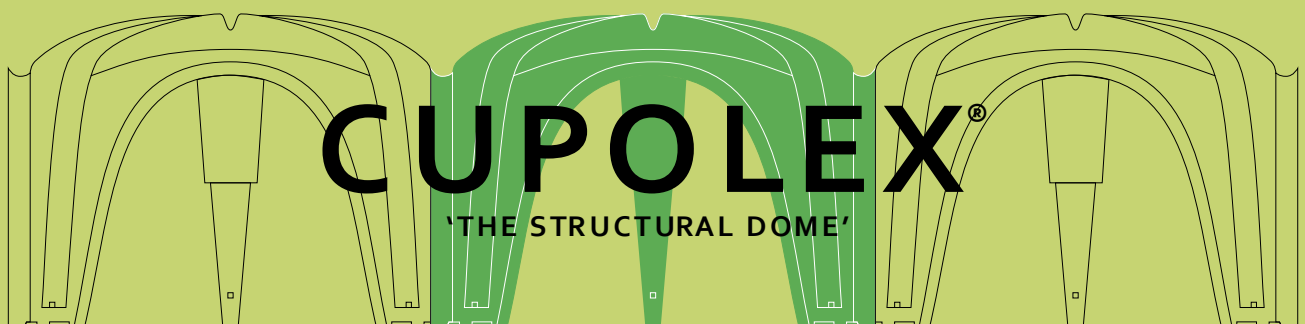
2 Cupolex dome installation: Simple standard components fit together for installation.



3 Steel placement: The Cupolex system allows the mesh reinforcement to sit directly on top of the domes, thus eliminating bar chairing.



4 Concrete placement: Safe concrete placement is completed on a sturdy platform.










About Us

Reozone prides itself on servicing our customer's needs. Our premises are equipped to service large and small projects within building industry. The moment you walk into Reozone you will be serviced by one of our friendly staff. From our Factory Staff, to our Customer Service Officer, to our Sales Officer we will ensure that all your needs are handled professionally. Reozone has the tools and equipment to fabricate and process projects of all sizes. Our showroom contains your everyday concrete tools to various size trowel machines.

Our strategy and our simple outlook in servicing our customers, is what makes Reozone unique over its competitors. With years of experience within the industry the team at Reozone will always have solutions for your every day needs. From supplying mesh to our concreters, to doing house slab packages for our home builders, to supplying scheduled reinforcement to our commercial builders, we do it all and to complete our service we will have all your concrete delivered to your site.

Reozone Packages

Reozone can supply the total Cupolex "GREEN" solution;

-  Soil classification
-  Engineering design
-  Cupolex dome packages
-  Placement solutions
-  Steel reinforcements
-  Air reticulation systems to improve ventilation and reduce energy usage
-  Supply of Boral Envirocrete range of Green star rated concrete.

“Years of experience and knowledge will ensure you will return to Reozone time and time again”



Contact Us

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Website: www.reozone.com.au

Products & services available

Reozone are a steel reinforcement supplier specialising in the supply of reinforced bar and mesh to AS standards 4671, we also supply reinforcing accessories such as bar chairs and building products including bondek, plastic membrane and expansion joints. We also supply concrete and concrete additives to projects all over the Sydney metropolitan area.

Proud suppliers of Boral Concrete

Boral has more than 200 premix concrete plants around Australia producing a wide range of mixes in metropolitan and country areas. Boral Concrete, through a high level of technical know-how, have developed mixes using high quality materials to guarantee the long term durability of your concrete structure as well as deliver the workability and consistency that professional concrete placers require.

Our technical experts will work with you to ensure the concrete has the right performance characteristics required.



To find out more about Boral Concrete, visit www.boral.com.au/concrete

