



CAST IRON AIR BRICK COMPANY

Building Architectural Enhancements

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Specification Sheet - CiabMETIMP-2018

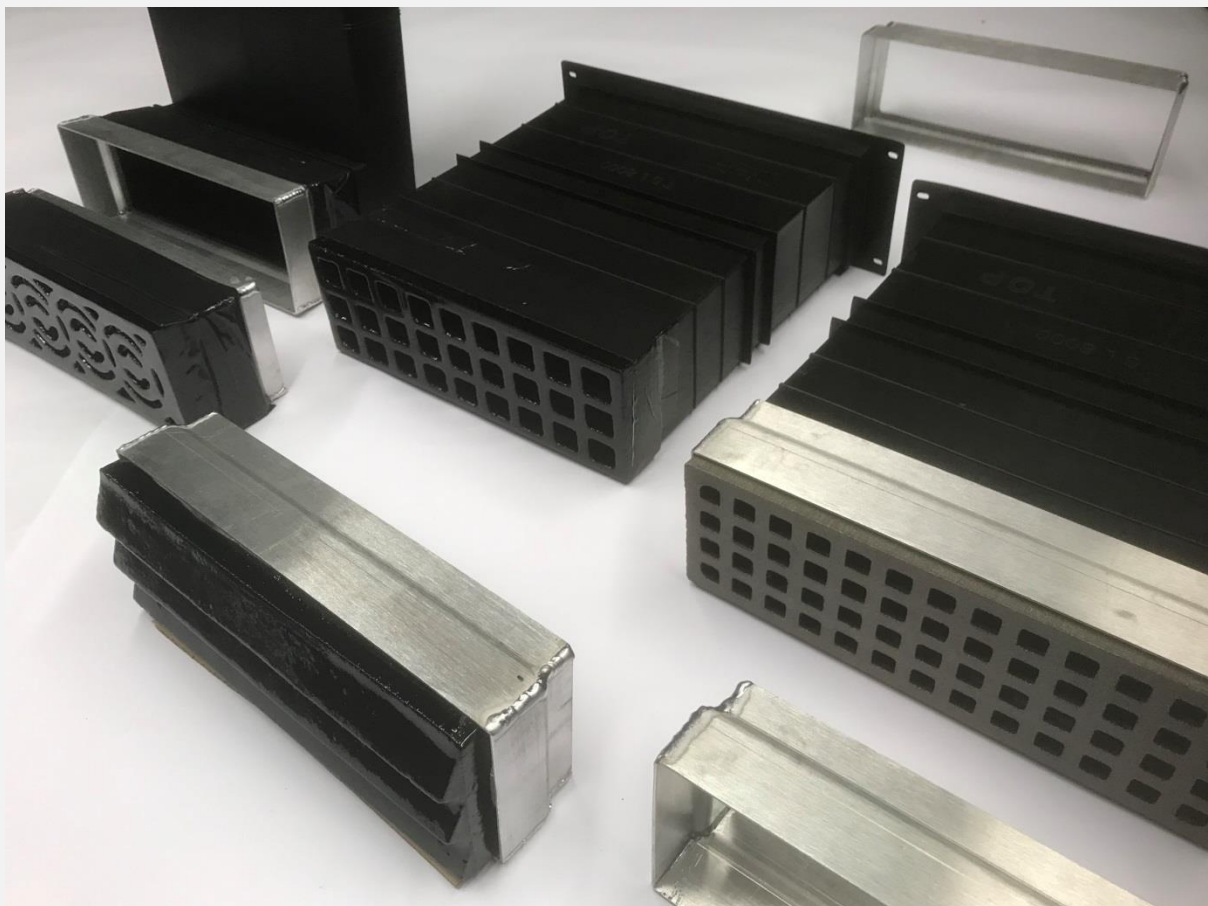
www.castironairbricks.co.uk

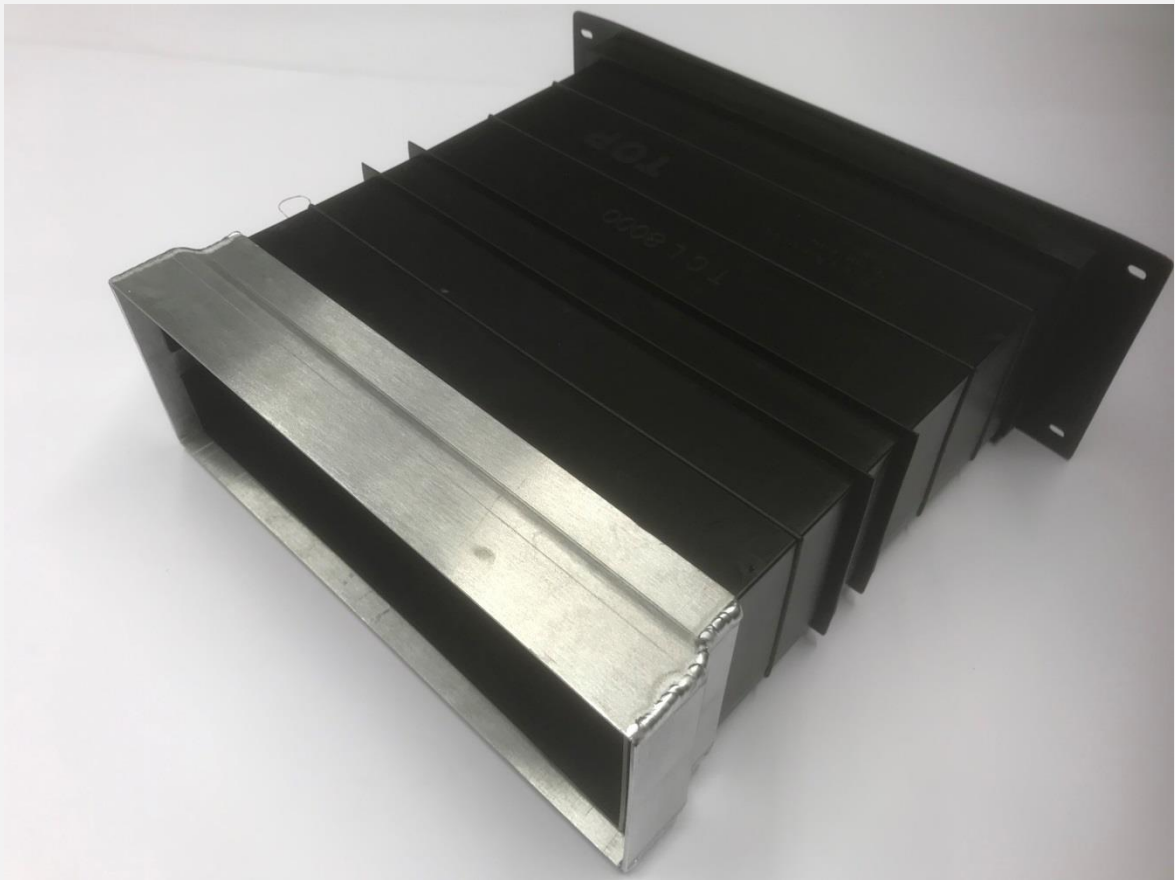
Single Imperial Brick Size

Connecting imperial air bricks to plastic cavity wall sleeves and periscope ducting with or without METIMP adapters.

Connecting Item CAVHEXT3 and PER to GRID3 – VV3 – L3 – HM3 – FLY3 – MAX3 – WIN3 – Y3 – REG3

Using adapter item METIMP





Problem Solver

Imperial air bricks are about the size of a Victorian brick which is around 9 x 3 inch or 225 x 75mm. They are quite a bit smaller than a metric air brick which is 8 ½ x 2 ½ inch or 213 x 66mm.

When Georgian, Victorian and Edwardian properties were built they didn't (generally) have cavities and so when an air brick was installed in the wall, the transfer duct for the air from outside to in was made by simply removing the bricks on the inner wall and pointing up. This suited the construction of period properties which were considerably more "airy" and more ventilated than houses today. They weren't concerned about back draughts so there was no need for a duct to be installed (which has an integral back draught arrestor) and therefore imperial ducts didn't exist. It was ok for the Victorian contractors who worked on an adhoc basis to not have a sleeve but it can create a few headaches for 21st century architects and planners who want to deploy modern techniques and want to install period air bricks combined with modern ducts or want to reduce the back draught in their installations.

In a more modern house, the air transfers from the air brick on the external wall to the vent grille on the internal wall in much the same way except between the walls is usually a cavity. To prevent this air travelling from the outside and into the cavity a duct is fitted, often known as a cavity wall sleeve. At one end the duct engages with air brick and at the other, a telescopic sleeve extends or contracts to match a flat grille on the internal wall. The cavity wall sleeve also prevents any debris from within the cavity dropping into the vent transfer path but most importantly, prevents any insulation, either pumped or laid in the cavity dropping into the vent hole.

The periscope vent has much the same problem when installed in older properties or when trying to use imperial air bricks with the metric opening of the periscope duct.

Now the periscope duct or cavity wall sleeve is a modern invention and therefore is metric, designed to engage with a metric air brick 213x66mm and there are no imperial versions available designed to fit the 225x75mm imperial air brick. We have therefore designed an aluminium adapter to convert the metric duct so it will engage with many of the imperial air bricks we have. We call the adapter the metimp – the name which conveniently translates to metric imperial.

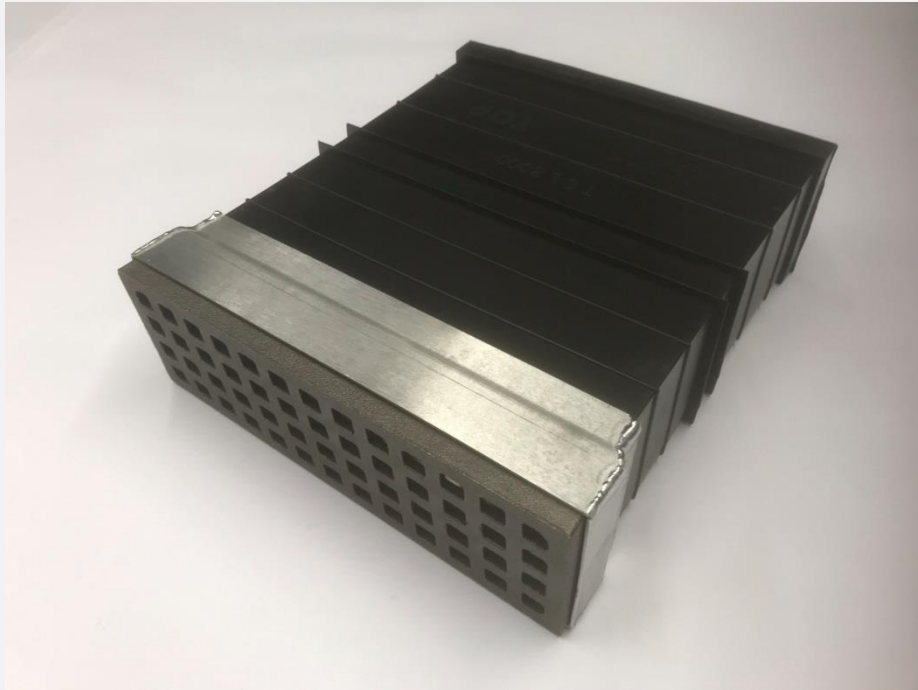
Examples of air bricks to use with METIMP adapters.

Please be aware our imperial air bricks in single brick size are all nominally 9x3 inch but they are not all exactly the same size and therefore all require slightly different approaches to installation depending on the design of air brick chosen.

Here we look at the suitability of using our imperial air bricks with the metric cavity wall sleeves and the plastic periscope duct and whether or not the METIMP aluminium adapter is needed or if it would be easier to attach the imperial air brick to the duct without the adapter. In all cases using a fabric based, heavy duty adhesive duct tape is recommended and in some cases essential, here we look at each product ...

GRID3 Square Hole 9x3 Air Brick

Used with the straight through cavity wall sleeve (item CAVHEXT3) it is essential to use the METIMP adapter as the back of the GRID3 air brick has cut away shoulders and wouldn't sit flat on the sleeve, duct tape is optional as the fit of the air brick in the adapter is very good



Used with the periscope duct (item PER) it is essential to use the METIMP adapter as the back of the GRID3 air brick has cut away shoulders and wouldn't sit flat on the sleeve, duct tape is also essential, the fit of the air brick in the adapter is very good but the adapter is loose fitting on the periscope duct.



Y3 Victorian Y Pattern 9x3 Air Brick

Used with the straight through cavity wall sleeve (item CAVHEXT3) it is essential to use the METIMP adapter as the back of the Y3 air brick has cut away shoulders and wouldn't sit flat on the sleeve, duct tape is also essential as the fit of the air brick in the adapter is loose



Used with the periscope duct (item PER) it is essential to use the METIMP adapter as the back of the Y3 air brick has cut away shoulders and wouldn't sit flat on the sleeve, duct tape is also essential as the fit of the air brick in the adapter is loose and the adapter is loose fitting on the periscope duct.

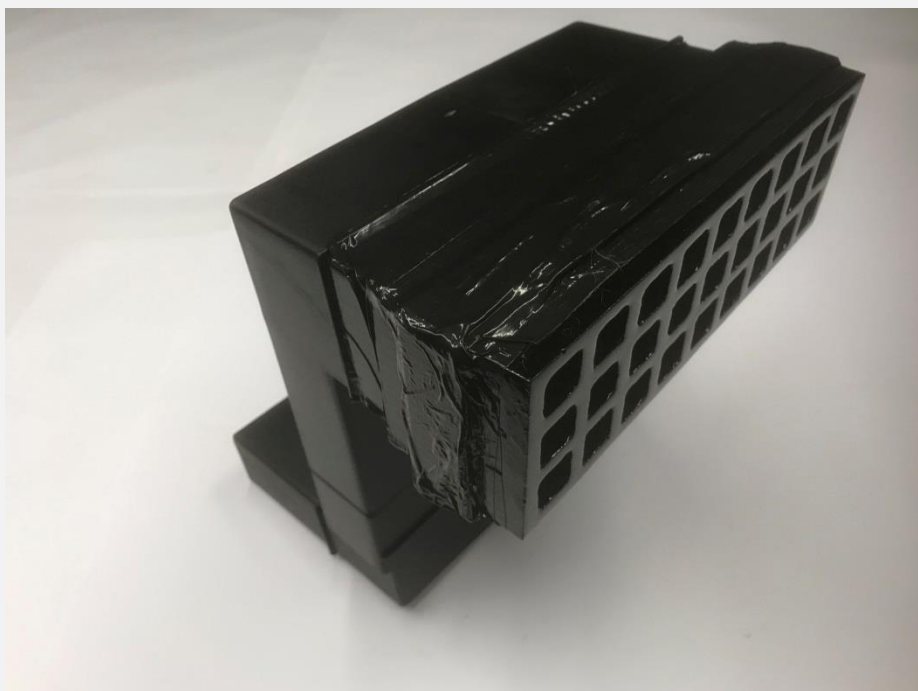


MAX3 Max Flow Square Hole 9x3 Air Brick

Used with the straight through cavity wall sleeve (item CAVHEXT3) the METIMP adapter is not required. The back of the MAX3 air brick has a flat box that sits against the sleeve and can be duct taped into position.



Used with the periscope duct (item PER) the METIMP adapter is not required. The back of the MAX3 air brick has a flat box that sits against the sleeve and can be duct taped into position. The periscope duct reduces the free area of the MAX3 by 50mm² to 7750mm².



HM3 and VV3 Hit and Miss and Victorian Vertical Slotted 9x3 Air Brick

Used with the straight through cavity wall sleeve (item CAVHEXT3) it is essential to use the METIMP adapter as the back of the HM3 and VV3 air bricks have cut away shoulders and wouldn't sit flat on the sleeve, duct tape is optional as the fit of the air brick in the adapter is very good



Used with the periscope duct (item PER) it is essential to use the METIMP adapter as the back of the HM3 and VV3 air bricks have cut away shoulders and wouldn't sit flat on the sleeve, duct tape is also essential, the fit of the air brick in the adapter is very good but the adapter is loose fitting on the periscope duct.



FLY3 Flyscreen 9x3 Air Brick

Used with the straight through cavity wall sleeve (item CAVHEXT3) the METIMP adapter is not required. The back of the FLY3 air brick has a flat box top and bottom that sits against the sleeve and can be duct taped into position.



Used with the periscope duct (item PER) the METIMP adapter is not required. The back of the FLY3 air brick has a flat box along the top and bottom that sits against the sleeve and can be duct taped into position.



REG3 Regency Scroll Pattern 9x3 Air Brick

Used with the straight through cavity wall sleeve (item CAVHEXT3) it is essential to use the METIMP adapter as the back of the REG3 air brick has cut away shoulders and wouldn't sit flat on the sleeve, duct tape is also essential as the fit of the air brick in the adapter is loose



Used with the periscope duct (item PER) it is essential to use the METIMP adapter as the back of the REG3 air brick has cut away shoulders and wouldn't sit flat on the sleeve, duct tape is also essential as the fit of the air brick in the adapter is loose and the adapter is loose fitting on the periscope duct.



L3 Louvre 9x3 Air Brick

Used with the straight through cavity wall sleeve (item CAVHEXT3) it is essential to use the METIMP adapter as the back of the L3 air brick has cut away shoulders and wouldn't sit flat on the sleeve, duct tape is optional as the fit of the air brick in the adapter is good.



Used with the periscope duct (item PER) it is essential to use the METIMP adapter as the back of the L3 air brick has cut away shoulders and wouldn't sit flat on the sleeve, duct tape is also essential as the fit of the adapter is loose fitting on the periscope duct.



Notes for architects

The guidance in these notes applies to fitting cast iron imperial air bricks from Cast Iron Air Brick Company (single size) 9x3 into metric plastic ducting supplied by Rytons.

We also supply metric cast iron air bricks that engage exactly into the plastic ducting which is covered in another spec sheet. The cast iron metric air bricks are known as the Windsor air bricks and are 213 x 66 mm (item WIN3) which is exactly the same size as modern plastic air bricks.

All plastic ducting for connecting to air bricks either, periscope or cavity wall sleeves, have baffles to reduce the back draught into the room from wind blowing outside.

Max3 air brick has a free area of 7800mm² and this (along with all the other air bricks in this size) is unaffected when the air brick is used with cavity wall sleeves (item CAVHEXT3). The free area is very slightly reduced when the MAX3 is used with a periscope duct down to 7750mm². This is the only occasion where the ducting (either cavity wall sleeves or periscope) reduces the free area of any of the cast iron air bricks in the single brick size (9x3 nom)

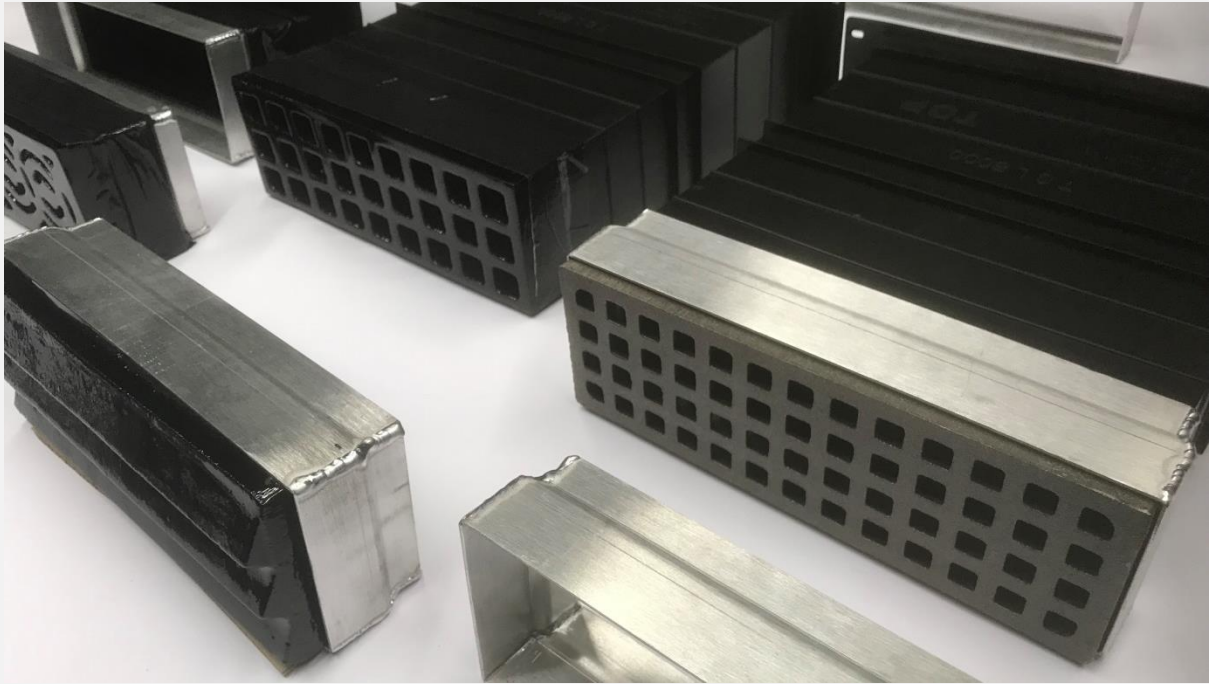
SPECIFICATION TABLE – SINGLE SIZE AIRBRICKS

Item Code	Nom. Size (Inch)	Size in mm	Vent Size (mm)	Weight (KG)	Free Area with mesh (mm ²)	Plate Thickness (mm)	Depth (mm)
WIN 3	8.5 x 2.5	213 x 66	10 x 40	1	4500	6	50
GRID3	9 x 3	228 x 76	10 x 10	0.5	5000	4	25
MAX3	9 x 3	228 x 77	17 x 17	1	7800	8	30
HM3 VV3	9 x 3	225 x 75	8 x 55	0.8	4500	4	30
L3	9 x 3	221 x 75	7	0.65	2500	5	37
Y3	9 x 3	228 x 75	-	0.5	4500	4	30
REG3	9 x 3	228 x 78	-	0.8	4500	5	50
FLY3	9 x 3	228 x 78	16 x 16	1.5	5200 (with mesh)	8	50

Material – Grey cast iron 250

British Made Product

Cast iron foundry source –WIN3 made in Oxford, REG3 amd MAX3 made in Edinburgh and remainder made in West Midlands, England.



For more details on the air bricks covered in this guidance please see our website...

<https://www.castironairbricks.co.uk/product-category/cast-iron-air-bricks/airbrick-9x3inch/>

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