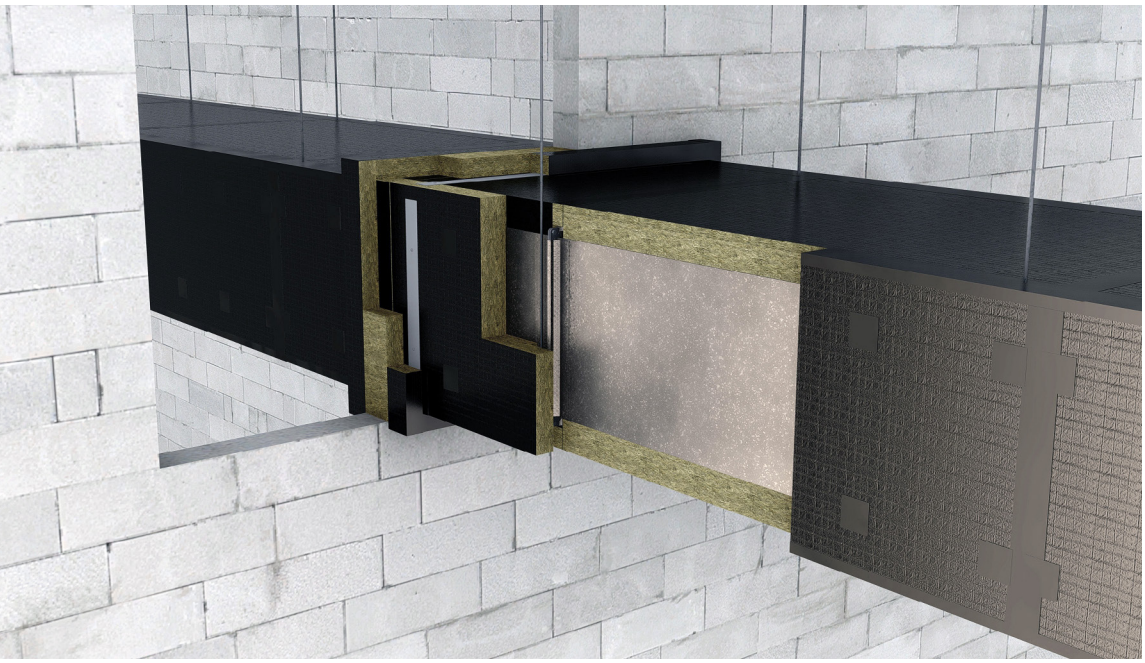


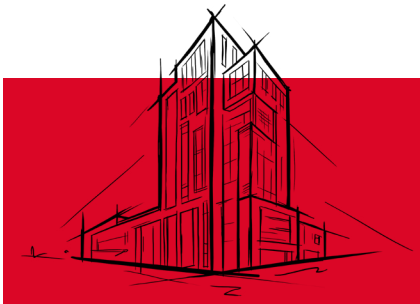
DuctRock® Slab

Fire protection for ventilation, smoke extract and kitchen extract ducts

DuctRock Slab is a high density, non-combustible stone wool insulation finished with a factory-applied black aluminium foil facing. Available in three thicknesses, DuctRock Slab is easy to handle, simple to install and capable of achieving fire resistance of up to EI 120.

FirePro Glue and a high performance Black Aluminium Foil Tape are also readily available from ROCKWOOL for sealing all board joints.

- Offers up to EI 120 minutes protection to ventilation and smoke extract ductwork
- Tested on both vertical and horizontal ducts
- Black foil finish
- Patented horizontal penetration detail

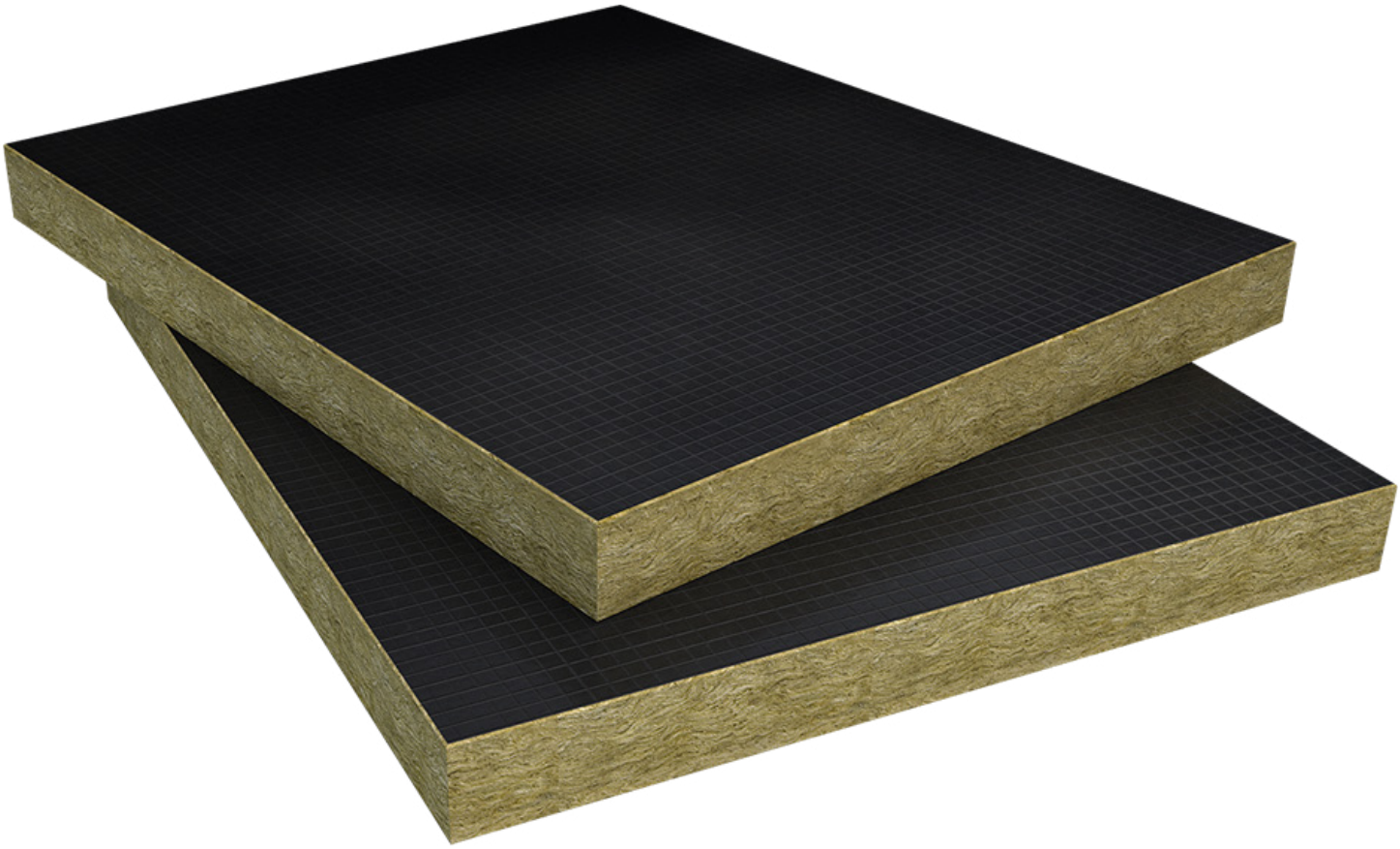


Tested to BS EN 1366-1 and -8

DuctRock Slab provides up to 2-hours fire resistance to rectangular ventilation and smoke extract ductwork.

Pencoed, Bridgend CF35 6NY
Tel: (+44) 1656 862 621 • technical.solutions@rockwool.com

DuctRock Slab



APPLICATIONS

DuctRock Slab has been designed for use with rectangular and square steel ductwork systems and has been fire tested in conjunction with the following duct types shown below.

Ventilation Duct: Type A		Ventilation Duct: Type B		Smoke Extract Duct: Type C
Horizontal	Vertical	Horizontal	Vertical	
✓	✓	✓	✓	✓

Pencoed, Bridgend CF35 6NY
Tel: (+44) 1656 862 621 • technical.solutions@rockwool.com

DuctRock Slab

PERFORMANCE

Fire performance

Thickness of DuctRock Slab Required (mm)			
	Duct Type		
Fire Rating (minutes)	Ventilation (Types A & B)	Smoke Extract (Type C)	Combustible Lining
EI 60*	60	60	90**
EI 90	80	80	-
EI 120	90	90	-

**Use 60mm DuctRock Slab for EI 30 fire ratings*

***DuctRock slab has been tested in accordance with the criteria set out in section 11.2.2 of BS EN 1366-1:2014 (Ducts with combustible lining) where additional thermocouples were positioned within the duct to record the average and maximum temperature rise. Insulation failure was defined in accordance with EN 1363-1.*

PRODUCT INFORMATION

Property	Description
Length	1200mm
Width	1000mm
Thickness	60, 80 & 90mm
Facing	Black aluminium foil
Fire resistance	Up to EI 120*

** Subject to the application*

STANDARDS AND APPROVALS

Certificate
DuctRock Slab has been tested in accordance with BS EN 1366: Part 1 for ventilation ducts and also BS EN 1366: Part 8 for smoke extraction ducts achieving up to EI 120 minutes*.
DuctRock Slab has been classified in accordance with EN 13501-3:2005 +A1: 2009.
Fire Resistance Classification: up to **EI 120 (ve, ho, i ↔ o) S**
DuctRock has been classified in accordance with EN 13501-4:2016.
Fire Resistance Classification: up to **EI 120 multi (ho/ve) S 500**

** Subject to the application*

Pencoed, Bridgend CF35 6NY
Tel: (+44) 1656 862 621 • technical.solutions@rockwool.com

DuctRock Slab

INSTALLATION

DuctRock Slab can be rapidly installed onto rectangular and square steel ductwork using a combination of Ø2.7 - Ø3.0mm stud welded pins, Ø30mm steel washers and ROCKWOOL FirePro Glue. All board abutments and cross joints must be covered with ROCKWOOL Black Aluminium Foil Tape.

DuctRock Slab thickness (mm)	Stud welded pin length (mm)
60	62mm
80	82mm
90	92mm

DuctRock is easily cut with a hand saw or alternatively a circular/table saw. The top and bottom slabs should be cut 10mm wider than the width of the duct to ensure a tight cross joint with the side slabs. The side slabs should be cut to the height of the duct (H) + 2 x the insulation thickness as shown in Figure 1.

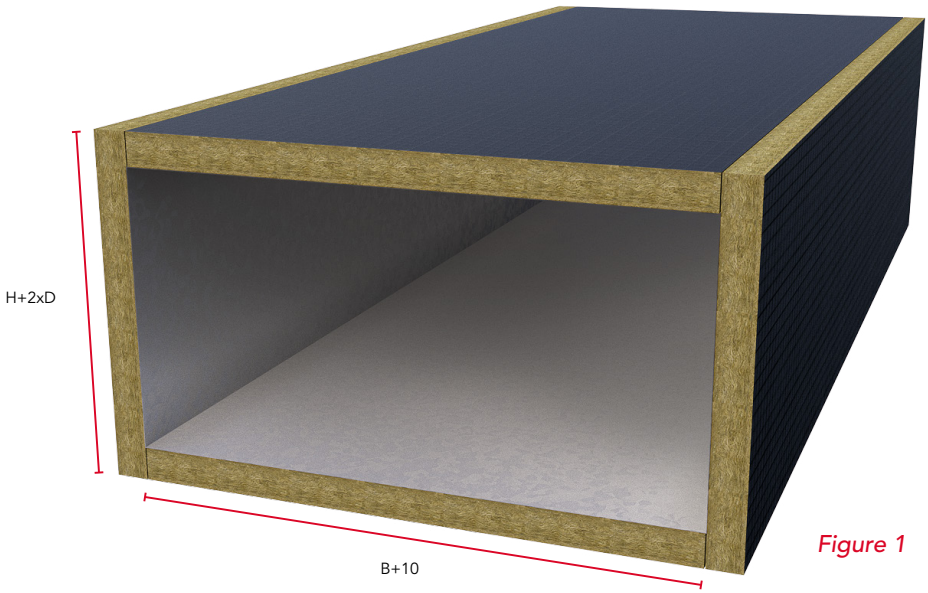


Figure 1

Top slab

When installed within horizontal applications the top boards do not require any stud welded pins and is simply positioned onto the duct with all board joints bonded with FirePro Glue. Board joints must be covered using ROCKWOOL Black Aluminium Foil Tape.

Pencoed, Bridgend CF35 6NY
Tel: (+44) 1656 862 621 • technical.solutions@rockwool.com

DuctRock Slab

Side wall slabs

The side wall slabs are installed using stud welded pins with 350mm maximum centres along the length of the duct and 400m centres across the depth as shown in Figure 2.

Side wall slabs must overlap the top and bottom boards as shown in Figures 3 & 4. All cross joints must be bonded with ROCKWOOL FirePro Glue.

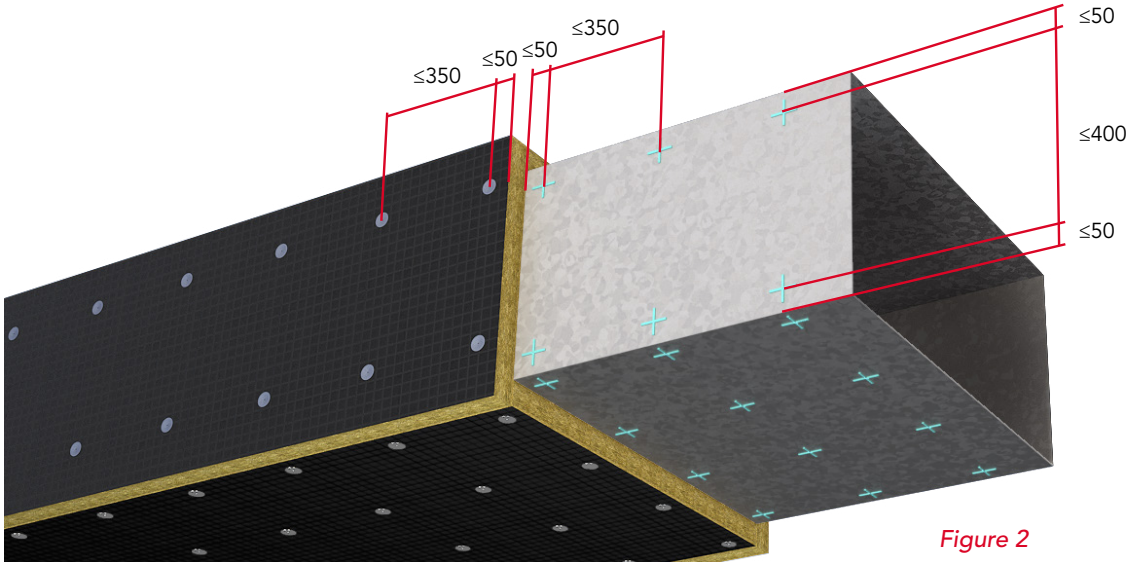


Figure 2

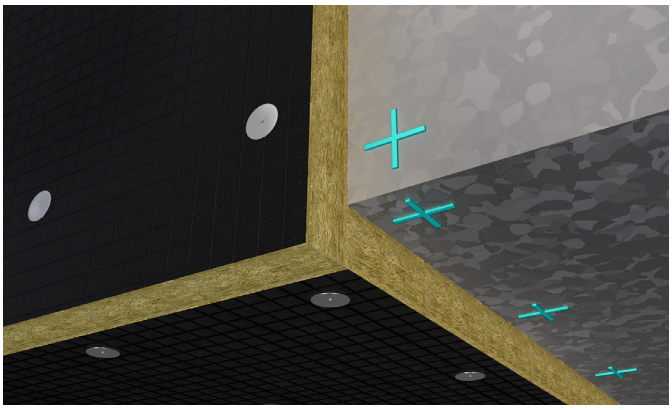


Figure 3
Cross joint horizontal duct

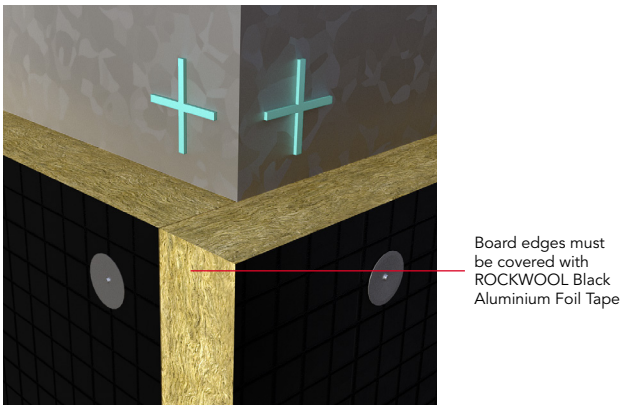


Figure 4
Cross joint vertical duct

Important: To ensure that there is a strong bond between the welded pin and the duct, always ensure that the welded pin is sufficiently isolated from for the foil surface of the insulation during welding.

DuctRock Slab

Base slab

Install the base slabs with stud welded pins at a maximum of 350mm centres along the length of the duct and 300mm centres across the width of horizontal ducts and 450mm across the width of vertical ducts as shown as shown in Figures 5 and 6.

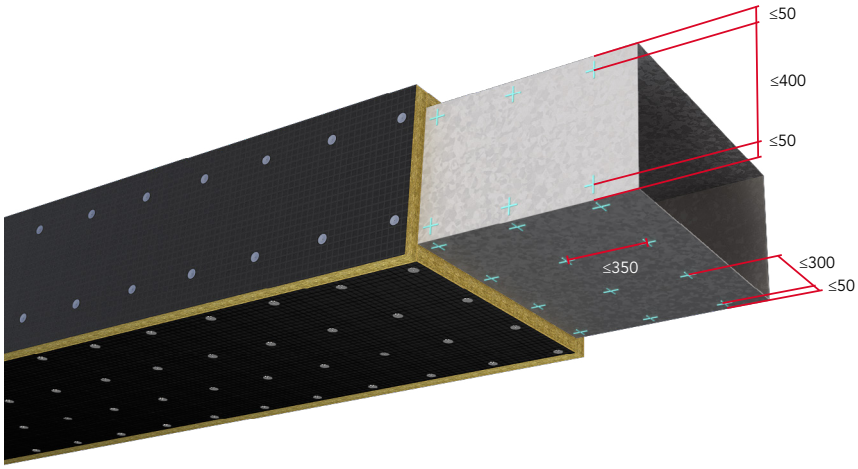


Figure 5
Horizontal duct

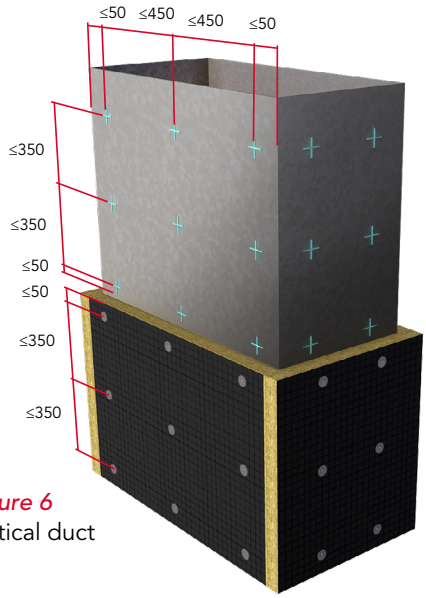


Figure 6
Vertical duct

Detailing around flanges and drop rod hangers

Where the DuctRock Slab bypasses a flange, drop rod hanger or both, cut a notch into the insulation as shown in Figure 7a-c. The insulation can easily be cut with a sharp knife or hand saw. All board joints must be bonded with FirePro Glue.

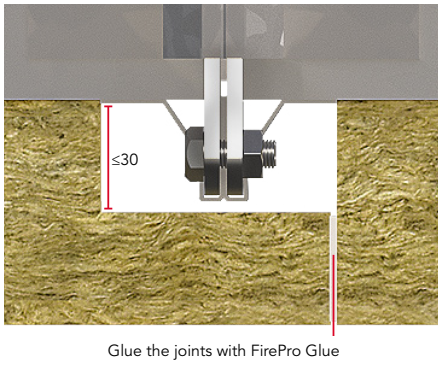


Figure 7a

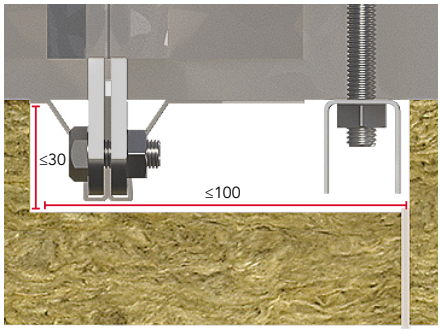


Figure 7b

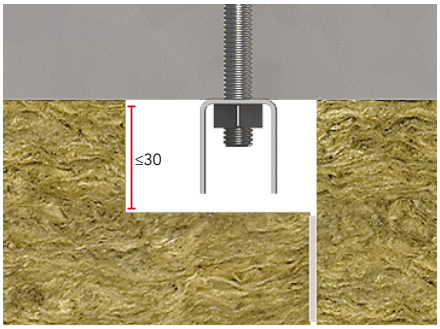


Figure 7c

Dry wall penetration

In order to maintain fire performance, provide stability and minimise noise transfer, ROCKWOOL have developed a patented solution for installing DuctRock Slab at the point where the duct penetrates a dry wall system.

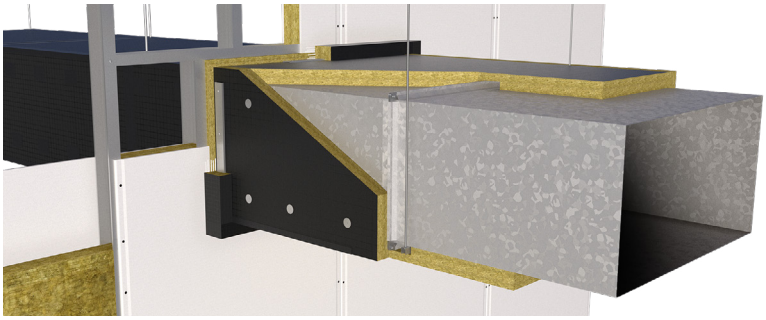


Figure 8
ROCKWOOL Patented Dry Wall Penetration Detail

DuctRock Slab

Installation procedure: Dry wall Penetration

1. A joint in the DuctRock Slab must be accommodated at the centre point of the aperture, as shown in Figure 10.
2. Fill the remaining annular space between the DuctRock Slab and supporting structure of the dry wall system with ROCKWOOL RWA45 as shown in Figure 9.
3. To stiffen the duct around the penetration a 1.5mm thick steel u-profile (60 x 25 mm) must be fitted approx. 20mm from the wall, to both the vertical and horizontal sides of the duct (both sides of the aperture) the length of the profile can be determined using the following formula:

Duct width / height + (2 x insulation thickness) – 50mm

Examples shown in table below:

Duct size (mm)	Insulation thickness (mm)	U-Profile length (mm)	
		Horizontal	Vertical
1500 (L) x 1000 (W) x 500 (H)	90	1130	630
1500 (L) x 1000 (W) x 250 (H)	90	1130	380

4. Before applying the u-profile to the DuctRock Slab slits must be cut into the insulation to allow the profile sides to penetrate the insulation (Figure 10). The u-profile can be attached to the ductwork using 100mm self-tapping screws. 4No to the top and bottom slabs and 2No to the vertical slabs.
5. Once the u-profiles have been applied an insulated collar must be installed around the perimeter of the aperture. The collar can be simply cut from the DuctRock Slab. Fix the collars in place with FirePro Glue as shown in Figure 9. Use nails to temporarily hold the collars in place whilst the glue cures.
6. ROCKWOOL Black Aluminium Foil Tape can be used to cover any exposed edges of the collars.

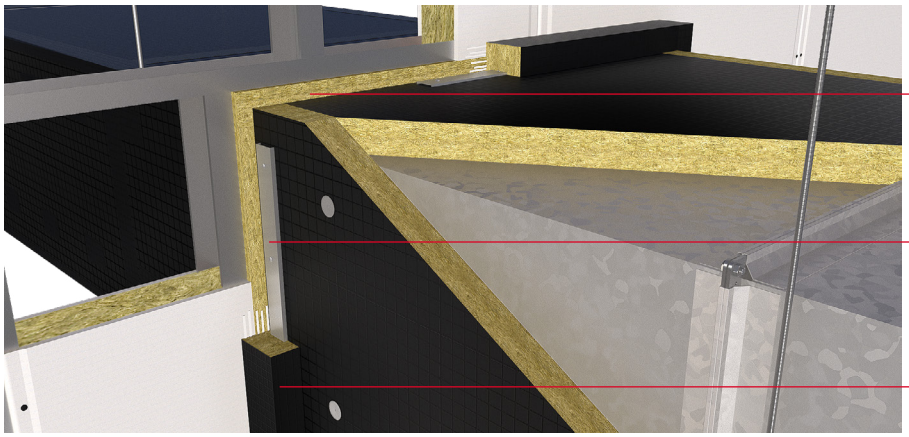


Figure 9

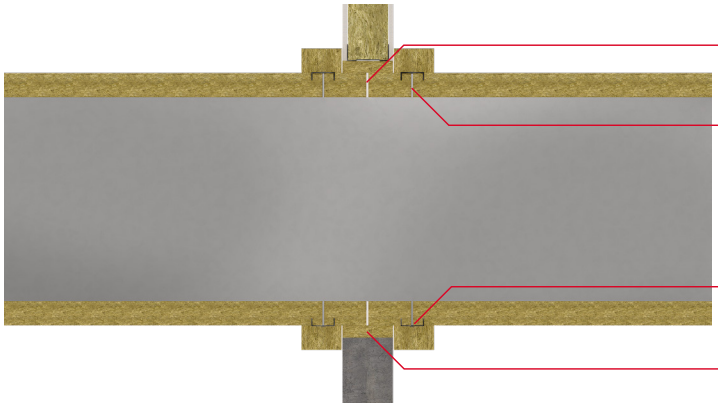


Figure 10

DuctRock Slab

Installation procedure: Floor penetration

1. Maintain a 30mm gap between the ductwork and floor structure. Fill the gap between the duct and the floor structure with a ROCKWOOL Slab e.g. ROCKWOOL RWA45 as shown in Figure 11a. The flexible slab can be sealed within the void using FirePro Glue.
2. Secure the duct to the floor structure using 4No. 50 x 50 x 45 x 2.5mm galvanised steel angles to both sides of the aperture. The angles can be fixed using 2No 3.2 x 25mm self-tapping screws. Alternatively, the duct can be secured with a 40 x 40 x 3mm L profile as shown in Figure 11b. The length of the L profile should be equal to the width of the duct and installed to both sides (duct width).
3. Apply a DuctRock Collar to the perimeter of the aperture and on both sides as shown in Figure 11a. The collars can be fixed using FirePro Glue and temporarily held in place with nails until the glue cures.

Figure 11a

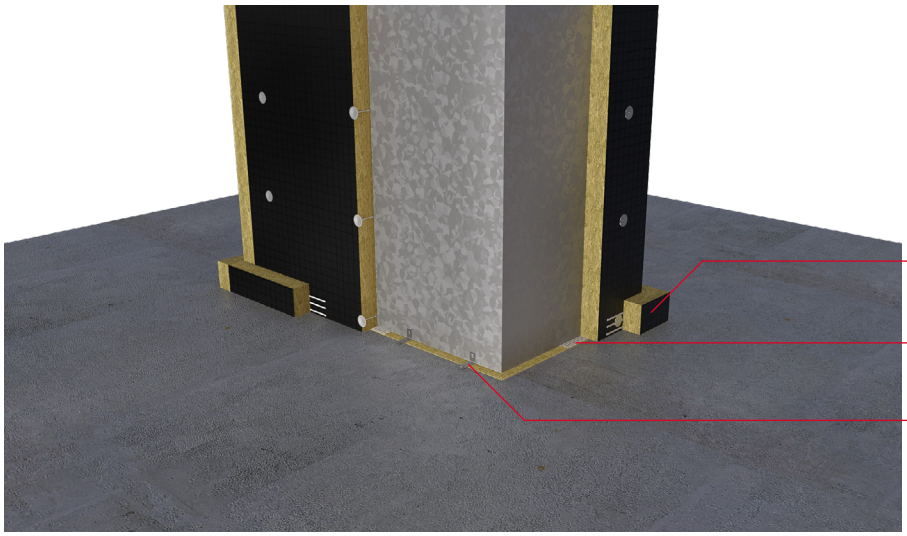
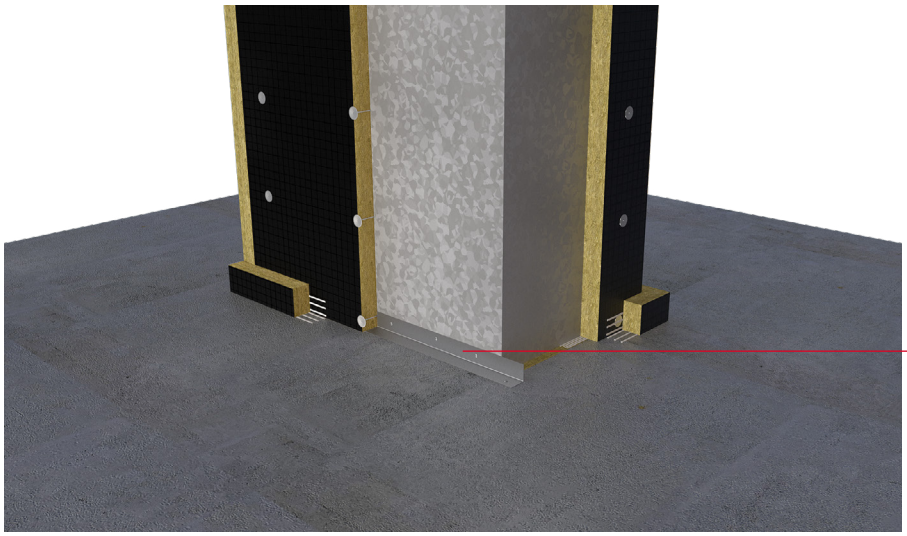


Figure 11b



DuctRock Slab

Elbows

Elbows can be protected by cutting the DuctRock Slab into fan shaped segments as shown in Figure 12a. Alternatively v-shaped slits can be cut into the back of the DuctRock Slab allowing it to wrap around the elbow as shown in Figure 12b. Fill the v-shaped channels with FirePro Glue before applying to the duct and use nails to temporarily hold the insulation in place whilst the glue cures.

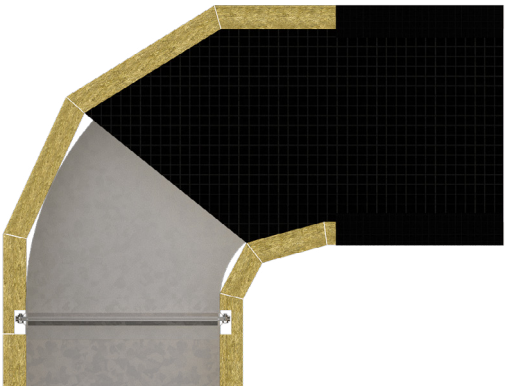


Figure 12a

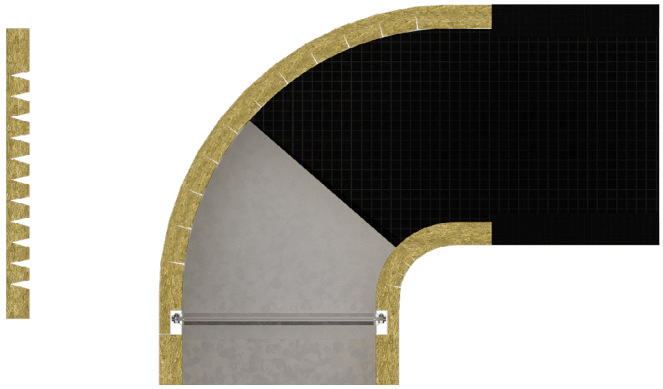


Figure 12b

Access hatches

DuctRock Slab can be cut and positioned within a steel frame to form a removable cover in the location of the steel access hatch. The insulated cover can be attached to the duct using 4No M8 threaded rods (Figure 13a) ensuring the rods are secured on both sides of the duct. The cover is then fixed to the rods using steel M8 nuts and washers. The thickness of insulation should be appropriate to the fire resistance required.

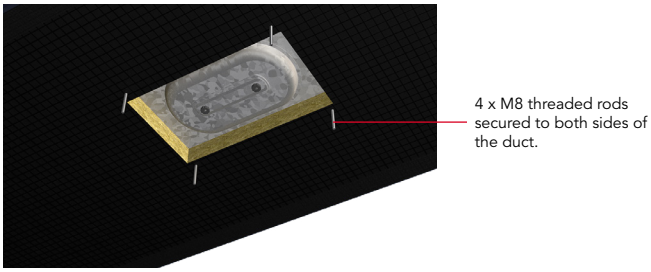


Figure 13a

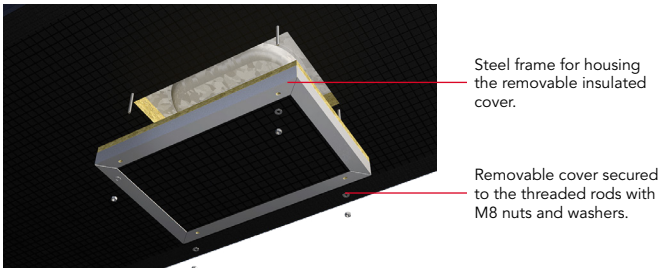
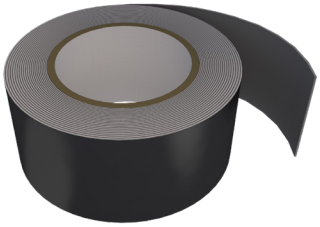


Figure 13b

Ancilliaries

FirePro Glue and ROCKWOOL Black Aluminium Foil Tape is available from ROCKWOOL Stockists

Stud welded pins and self-tapping screws are available through CEVaC Limited, Tel: +44 (0) 1403 786503



Pencoed, Bridgend CF35 6NY
Tel: (+44) 1656 862 621 • technical.solutions@rockwool.com

DuctRock Slab

SPECIFICATION CLAUSES

All ductwork is to be insulated with……* mm ROCKWOOL DuctRock Slab, having a factory applied reinforced black aluminium foil to one face and tested in accordance with BS EN 1366: Part 1 and/or BS EN 1366:Part 8.

DuctRock Slab is to be fixed to the duct using 2.7 - 3.0 mm diameter welded steel pins and 30 mm spring steel washers in accordance with the ROCKWOOL Product Data Sheet 'DuctRock'.

All joints are to be filled with FirePro Glue and held tightly closed.

Installed to steel ductwork which complies with the following specification criteria:
Steel duct dimensions up to 1000x1250 (height x width) and 1500mm in length
With leakage class B in accordance with EN 1507. Further information on leakage classes can also be found in DW/144: Specification for Sheet Metal Ductwork low, medium and high pressure/velocity air systems.
With an under-pressure or over-pressure up to 500Pa
Steel flanges to be spot welded to the duct: • Ventilation Duct - 20mm flange • Smoke Extract Duct - 30mm flange
Flanges to be held together with either a 20mm flange joint profile (duct types A & B) or 30mm flange joint profile (duct type C). All flange joints to be sealed with sealing grease.
With stiffeners as follows: • EI 120 – Ventilation Duct: 1 x Ø 15mm steel pipe in each duct segment • EI 120 – Smoke Extract Duct: 2 x Ø 15mm steel pipe in each duct segment
Sealed with and appropriate duct sealant and 5 x 15mm EPDM tape

The duct suspension system complies with the following specification criteria:

Horizontal ducts:

Fire resistance	Max tensile stress of suspension device	Max shearing stress of screws	Max distance from suspension device to duct joint
EI 30	9 N/mm²	15 N/mm²	150mm
EI 60	9 N/mm²	15 N/mm²	150mm
EI 90	6 N/mm²	10 N/mm²	150mm
EI 120	6 N/mm²	10 N/mm²	150mm
EI 120 (Smoke Extract)	6 N/mm²	10 N/mm²	150mm

With distance between suspension devices not exceeding 1500mm

The lateral distance between the outer vertical surface of the steel duct and the centre line of the suspension rod shall not exceed 50mm

Vertical ducts:

With distance between supporting structures not exceeding 5m

Pencoed, Bridgend CF35 6NY
Tel: (+44) 1656 862 621 • technical.solutions@rockwool.com

DuctRock Slab

Any duct penetrations comply with the following specification criteria:

Horizontal:

Penetrating in rigid wall constructions or flexible walls with a minimum thickness of:

- EI30 – 70mm
- EI 60 – 95mm
- EI 90 – 95mm
- EI 120 – 130mm

And with a fire resistance equal to or greater than the tested DuctRock Slab thickness.

For horizontal penetrations, the gap between the DuctRock Slab and supporting structure will not exceed 20mm.

For horizontal penetrations U-profiles 1.5mm thick, with dimensions 60 x 25mm must be installed approximately 20mm from the wall and on both sides of the wall. The legs of the u-profiles are lowered into slits cut into DuctRock Slab and fixed to the duct by means of

Ø 4.8mm x 100mm for EI 30 & EI 120
self-tapping screws; 4 on the top and bottom profiles and 2 on the vertical profiles.

Vertical:

Penetrating rigid floor constructions with a minimum thickness of:

- EI 30 – 100mm
- EI 60 – 100mm
- EI 90 – 150mm
- EI 120 – 150mm

And with a fire resistance equal to or greater than the tested DuctRock Slab thickness.

For vertical penetrations the duct is to be stabilised using 4No. 'L' galvanised steel angles of 50 x 50 x 45 x 2.5mm or a 40 x 40 x 3mm L profile which are fixed to the vertical steel duct and the supporting structure on both sides of the floor.

DuctRock Slab is associated with the following NBS specification clauses:

U90 General Ventilation – Domestic
490 Site applied insulation to ductwork

Y30 Mechanical Thermal Insulation
340 Mineral fibre slab insulation

Pencoed, Bridgend CF35 6NY
Tel: (+44) 1656 862 621 • technical.solutions@rockwool.com

BUILDING SAFETY AND PRODUCT USE

LEGAL NOTICES

General safety requirements – Building Safety Act 2022

ROCKWOOL Limited is committed to supporting specifiers, resellers and users of ROCKWOOL products for the full life cycle of the product to comply with the obligations and responsibilities set out in the Building Safety Act 2022. With regard to the general safety requirements of the Act, ROCKWOOL Limited cannot control or foresee every situation where its products might be used. We therefore strongly advise that specifiers, resellers and users contact us where use of ROCKWOOL products is contemplated in applications different from those explicitly described in the latest, relevant ROCKWOOL product datasheets; especially in applications that can be reasonably foreseen as critical to safety.

ROCKWOOL Limited reserves the right to amend the specification of its products without notice. Changes to the ROCKWOOL manufacturing process, or to pertinent regulations, may be reflected in changes to tested and certified product performance. Whilst ROCKWOOL Limited endeavours to keep its publications up to date, readers will appreciate that between publications there may be pertinent changes in the law or other developments affecting the accuracy of the information contained in our publications.

ROCKWOOL Limited does not accept responsibility for the consequences of using (including testing or certifying) its products in applications different from those explicitly described in the relevant ROCKWOOL product datasheets. Expert advice should be sought, and ROCKWOOL Limited should be contacted, where such different use is contemplated, or where the extent of any use described by ROCKWOOL Limited is in doubt.

The ROCKWOOL Trademark

ROCKWOOL® - our trademark

The ROCKWOOL trademark was initially registered in Denmark as a logo mark back in 1936. In 1937, it was accompanied with a word mark registration; a registration which is now extended to more than 60 countries around the world.

The ROCKWOOL trademark is one of the most important assets of the ROCKWOOL Group, and is therefore well-protected and defended by ROCKWOOL throughout the world.

If you require permission to use the ROCKWOOL logo for your business, advertising or promotion, you must apply for a Trade Mark Usage Agreement.

To apply, write to:
marketcom@rockwool.com

Trademarks

Registered trademarks of the ROCKWOOL Group include but are not limited to:

ROCKWOOL®, RockClose®, RainScreen Duo Slab®, HardRock®, RockFloor® Flexi®, RockFall®, FirePro®, DuctRock®, BeamClad®, NyRock®

© ROCKWOOL 2025.
All rights reserved.

Photography and illustrations

The product illustrations are the property of ROCKWOOL Limited and have been created for indicative purposes only.

Unless indicated below, the photography and illustrations used in this guide are the property of ROCKWOOL Limited. We reserve all rights to the usage of these images.

If you require permission to use ROCKWOOL images, you must apply for a Usage Agreement.

To apply, write to:
marketcom@rockwool.com

Pencoed, Bridgend CF35 6NY
Tel: (+44) 1656 862 621 • technical.solutions@rockwool.com

ROCKWOOL stone wool - safe to install and live alongside

There are no hazardous classifications associated with stone wool insulation manufactured by ROCKWOOL-UK according to EU REACH and UK REACH regulations on health and the environment.

ROCKWOOL safe use instruction sheets and material safety data sheets (where applicable) can be downloaded **here**.

Sustainability

ROCKWOOL products are used to enrich modern living, creating safer, healthier and more climate-resilient communities.

We transform abundant, natural volcanic rock into stone wool insulation products that are used to reduce energy demand, lower fuel bills and help address society's climate change challenges.

ROCKWOOL stone wool insulation is recyclable and can be transformed into new ROCKWOOL products. Please contact us for details of how we can work together to recycle waste ROCKWOOL stone wool material that may be generated during on-site installation.

Our annual sustainability reports, which set out progress against our sustainability goals, and further details of the positive impacts of using our products can be found on our website.

Environment

ROCKWOOL takes a fact-based, auditable approach to documenting our progress in maximising our products' positive impact and minimising the effect our operations have on the environment, backed by third-party references and methodologies. Further details can be found online in our annual sustainability report.

Our high-tech production process uses filters, pre-heaters, after-burners and other cleaning and collection systems that help to reduce the effects of our manufacturing operations on the environment.

ROCKWOOL stone wool insulation does not contain (and has never contained) gases that have ozone depletion potential (ODP) or global warming potential (GWP).

Pencoed, Bridgend CF35 6NY
Tel: (+44) 1656 862 621 • technical.solutions@rockwool.com