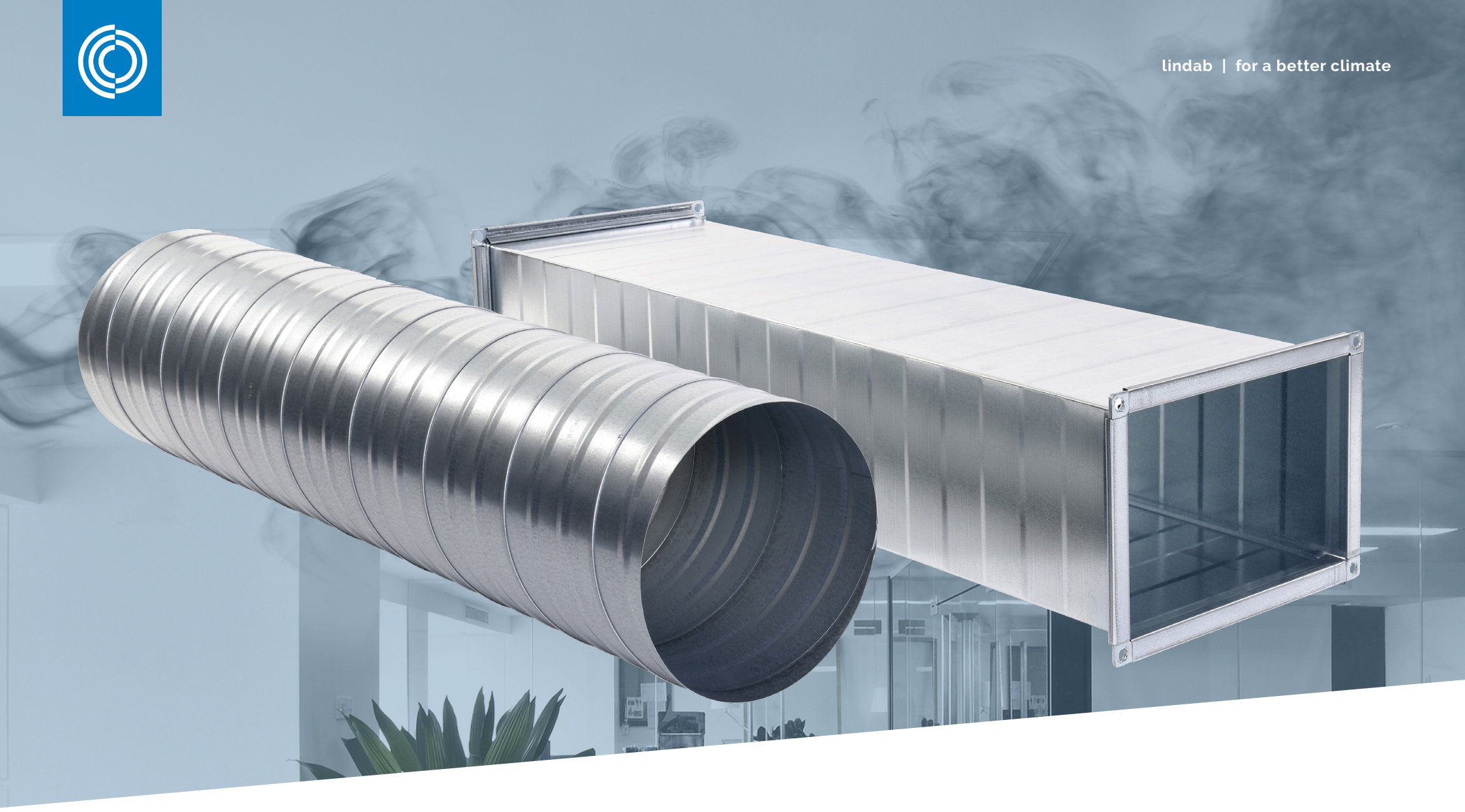


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Lindab**Safe and** Lindab**Rekt E60/E90**

Assembly instruction

Lindab®

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Lindab**Safe**

This guide applies to the duct system Lindab Safe

Lindabs circular duct system Lindab Safe is Eurovent certified and meets airtightness class ATC2 (D) and pressure class 2 (-750 to 2000 Pa) according to European standard DS EN 12237, provided that this assembly guide is followed.

- The system even meets fire technical material class A2–s1, d0, according to EN 13501-1.
- The duct system is tested acc. to EN 1366-1.
- The duct system is Classified acc. to EN 13501-3.
- The duct system is Approved to: E90 (ve ho i->o) in galvanized sheet in dimensions up to and including ø 1000 mm in standard sheet thicknesses.
- Duct fire penetrations is:
  Horizontal tested and approved in lightweight walls (standard supporting construction) acc. EN 1363-1:2020 ”Fire resistance tests - General requirements”, as well in EN1366-1:2014+A1:2020 ”Fire resistance tests for service installations - Part 1: Ventilation ducts” at an accredited testing institute.
  Vertical tested and approved in concrete (standard supporting construction) acc. EN 1363-1:2020 ”Fire resistance tests - General requirements”, and EN 1366-1:2014+A1:2020 ”Fire resistance tests for service installations - Part 1: Ventilation ducts” at an accredited testing institute.

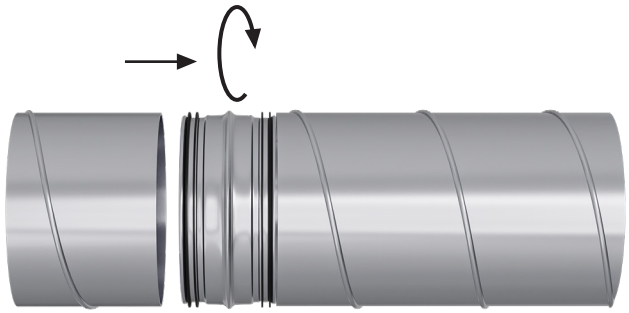
Wall constructions

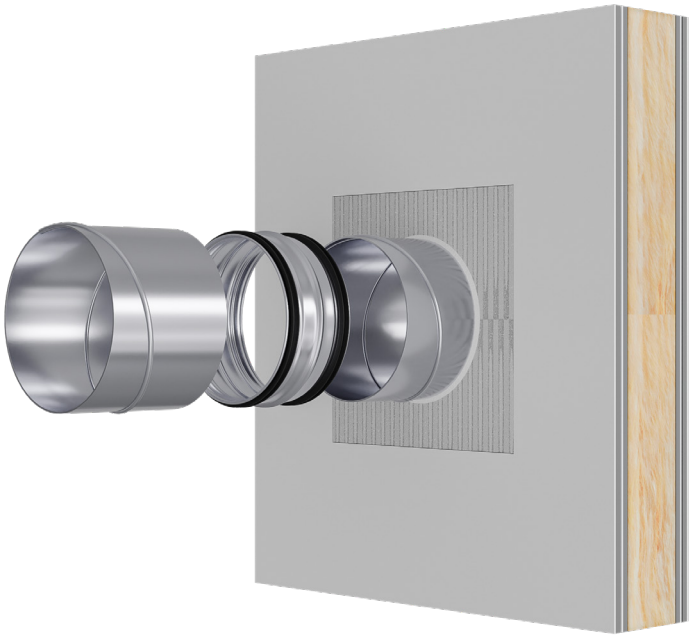
Penetrations that have been tested and approved in gypsum board walls (standard supporting construction) may be used under the same conditions in aerated concrete, masonry, and concrete walls ≥ 100 mm with a density ≤ 450 kg/m^3.

Before assembly

- Provide a well-organized storage space for the products where they are protected from the elements.
- Only use undamaged products.
- Prepare the assembly trench well.
- Complete the assembly according to this instruction.

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Assembly

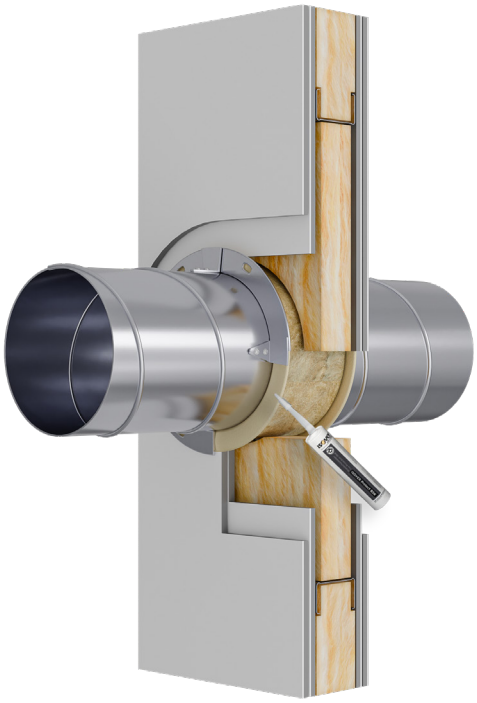
- Cut ducts at right angles. Carefully remove any burrs from cut edges to make installation easier and reduce the risk of damaging the rubber gasket. Cut away the needles created from the fold.
- Insert the fitting´s turned-over edge into the duct. Check that the rubber gasket's first lip is in contact with the duct's edge all the way around and points straight out so that the lip is not twisted in any direction.
- Push the rest of the fitting into the duct. Twisting the fitting slightly aids insertion. Carefully tapping the surface of the duct with your hand makes assembly easier.
- The fitting is attached to the duct with self-tapping screws (screws U42/ U52 - 4,2 x 13 mm).
- The screws must be evenly distributed around the circumference of the duct and be placed 10-15 mm from the end of the duct.

Ød (mm)	Minimum numbers of screws to achieve sufficient strength	Screws	
		Diameter (mm)	Length (mm)
63 - 112	2	4,2	13
125 - 224	3	4,2	13
250 - 630	4	4,2	13
710 - 1000	6	4,2	13

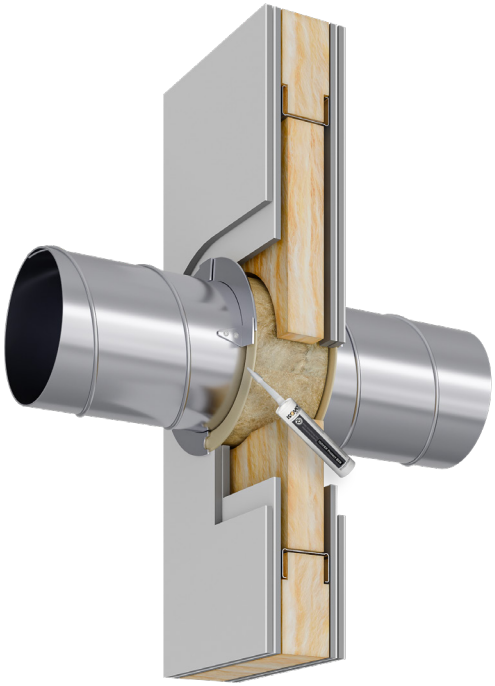
E90

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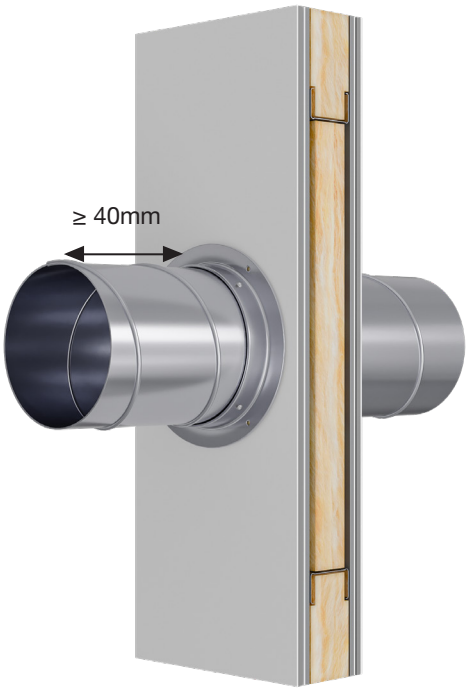
FL flanges



FLE60 flanges



VLG flanges



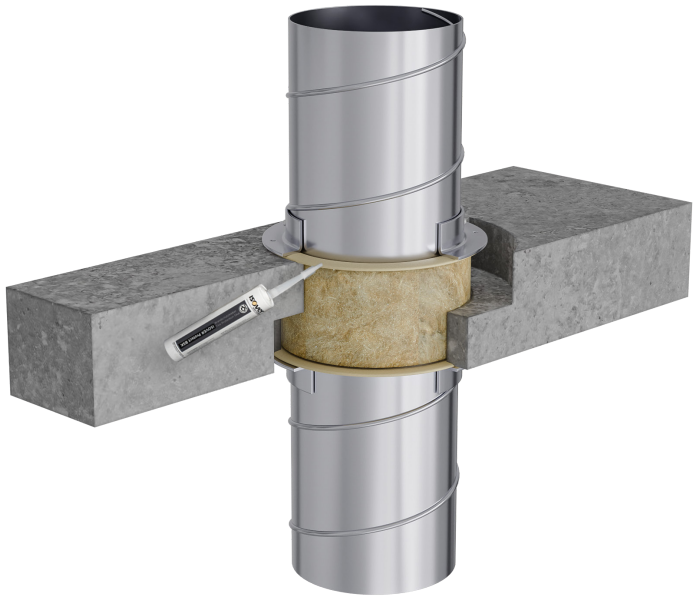
Bagstop, insulation and Sealant, wall max Ø1000 mm

- The gap between the wall and the duct min 10 mm and max 25 mm.
- Place the duct in the wall. Remember to put the flanges FL / VLG / VLGUH on the duct before connecting the duct system.
- Insulate with mineral wool A2-s1,d0, density min 66 kg/m³ such as FIRESTOP throughout the entire depth of the gap between the wall and the duct.
- Apply BSKTUBE sealant in the gap between the wall and duct.
- The sealant must have a thickness of min 2 mm. BSKTUBE must be used
- Press the flange against the wall and attach it to the duct using VINKE60 brackets. Screw the brackets in place with 2 pcs of 4,2 x 13 mm screws. The brackets must be evenly distributed around the circumference, on FLE60 they must be placed on the finger tabs.
- Fix the VLG/VLGUH to the duct using 4,2 x 13 mm screws.
- **The penetration is carried out on both sides of the wall.**
- The distance from the wall to first connection must be min 40 mm.
- The connections within 40-100 mm from a horizontal penetration, must be sealed with BSKTUBE or MFKE60 sealing clamps.

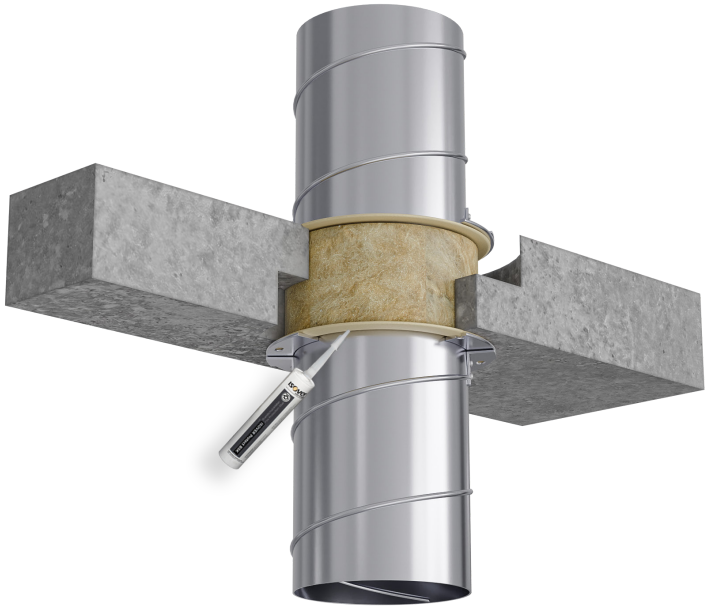
E90

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VLG flanges



FL flanges



FLE60

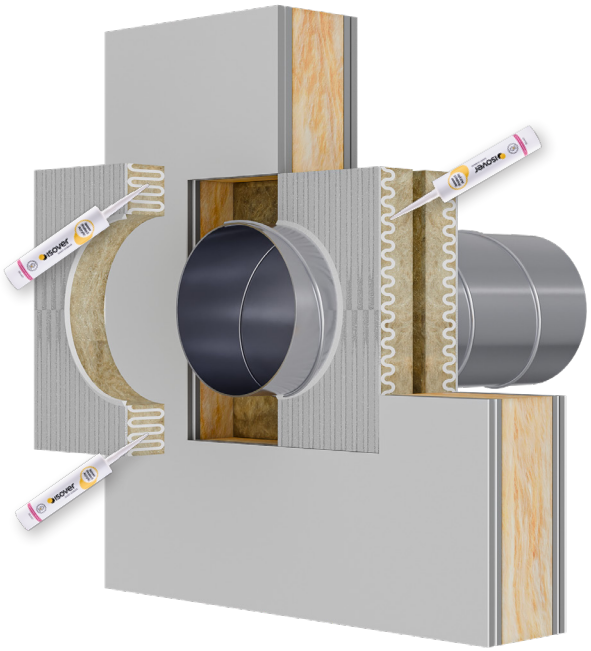


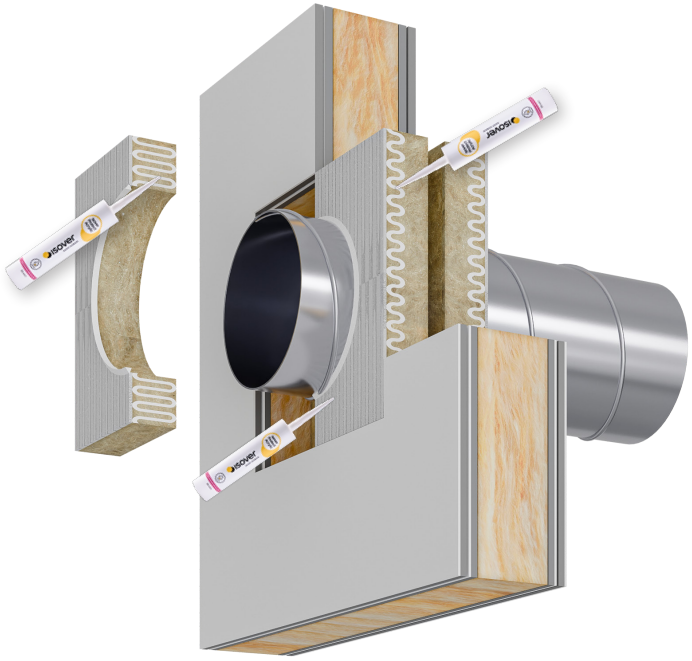
Bagstop, insulation and Sealant, max Ø1000 mm

- The gap between the deck and the duct min 10 mm and max 25 mm.
- Place the duct in the deck. Remember the flanges FL / VLG / VLGUH on the duct before connecting the duct system.
- Insulate with mineral wool A2-s1,d0, density min 66 kg/m³ such as FIRESTOP throughout the entire depth of the gap between the deck and the duct.
- Apply BSKTUBE sealant in the gap between the deck and duct.
- The sealant must have a thickness of min 2 mm. BSKTUBE must be used.
- Press the flange against the deck and attach it to the duct using VINKE60 brackets. Screw the brackets in place with 2 pcs of 4,2 x 13 mm screws. The brackets must be evenly distributed around the circumference, on FLE60 they must be placed on the finger tabs.
- Fix the VLG/VLGUH to the duct using 4,2 x 13 mm screws.
- **The penetration is carried out on both sides of the deck.**
- The distance from the deck to first connection is min 40 mm.
- The connections within 40-2000 mm from a vertical penetration, must be sealed with BSKTUBE or MFKE60 sealing clamps.

E90

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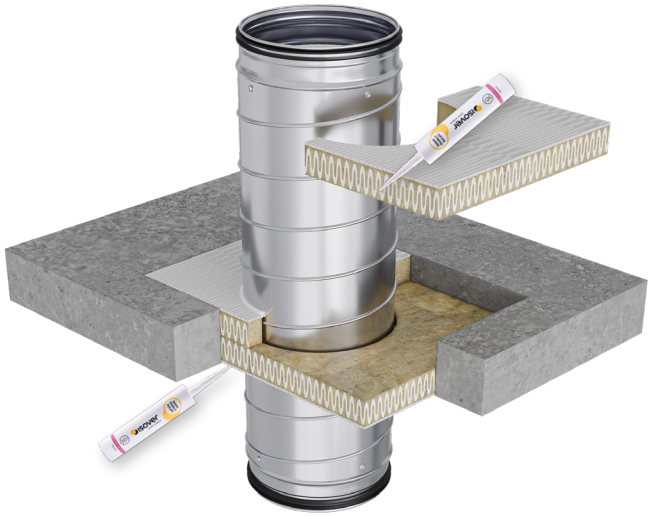


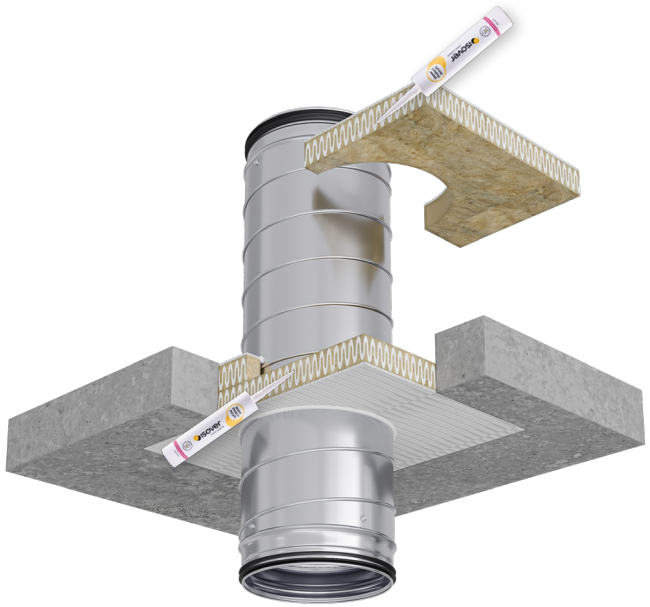


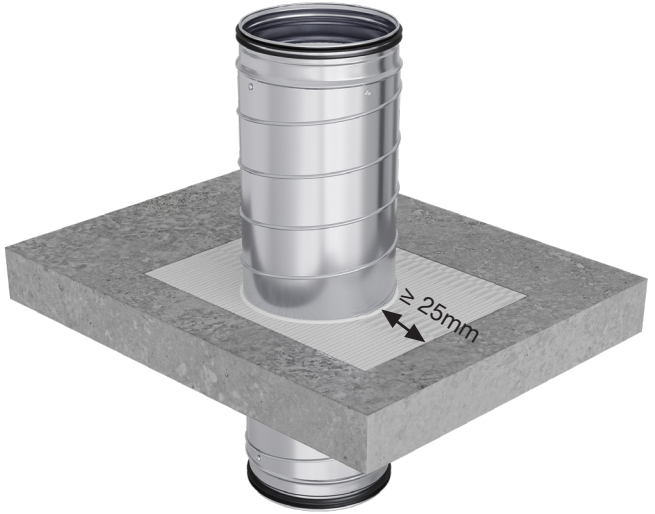
FIREBATT max Ø1000 mm

- The distance from wall to the duct horizontal/vertical min 25 mm, the maxi mum hole dimension is 2400x1200 mm.
- Close the gap between the duct and wall with 2x50 mm FIREBATT installed with staggered joints. The FIREBATT must be adjusted to fit tightly against the wall construction and the ventilation duct.
- The edges between the FIREBATT´s are sealed whith FIREFIX sealant.
- The edges between the FIREBATT and wall must be sealed with FIREFIX.
- All open joints and cracks must be sealed with FIREFIX.
- An external triangular seal must be applied around the ventilation duct against the FIREBATT using FIREFIX.
- **The penetration is carried out on both sides of the wall.**
- The distance from the wall to first connection must be min 40 mm.
- The connections within 40-100 mm from a horizontal penetration, must be sealed with BSKTUBE or MFKE60 sealing clamps.

E60



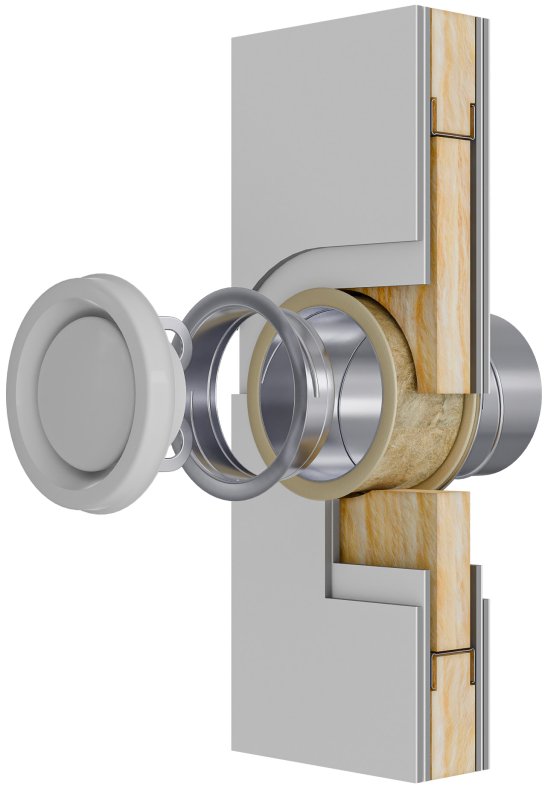


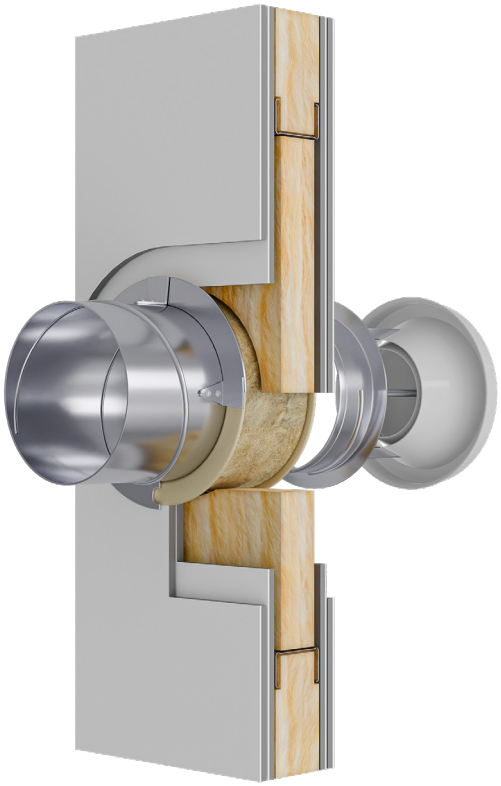


FIREBATT vertical max Ø1250

- The distance from deck to duct, must be min 25 mm max 400mm.
- Close the gap between the duct and deck with 2x50 mm FIREBATT installed with staggered joints. The FIREBATT must be adjusted to fit tightly against the deck construction and the ventilation duct.
- The edges between the FIREBATT's are sealed with FIREFIX.
- The edges between the FIREBATT and deck are sealed with FIREFIX.
- All open joints and cracks must besealed with FIREFIX.
- An external triangular seal is applied around the ventilation duct against the FIREBATT using FIREFIX.
- The penetration is carried out on from the top off the deck.
- The connections within 40-2000 mm from a vertical penetration, must be sealed with BSKTUBE or MFKE60 sealing clamps.

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Valve in wall max Ø200

- When installing the valve it must be flush with the wall. The installation must be carried out as in the example.
- This applies for ducts with dimensions ≤ Ø200 mm.
- The gap between the wall and the duct must be covered by the collar of the valve socket.
- Fill the gap with mineral wool A2-s1,d0, density min 66 kg/m³ as FIRESTOP throughout the entire depth of the gap between the wall and the duct.
- The socket must be attached to the duct from the inside with at least 2 screws.
- The penetration on the other side of the wall must be carried out as shown on page 5.

E60

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Single side surface mounted EKOCBG max Ø500

Hole dimensions = Ød + max 25 mm

- Apply BSKTUBE sealant on the wall and press the EKOCBG firmly against the wall.
- Detach the brackets from the EKOCBG and fasten them to the wall using 4 universal mounting screws K21K 6.3x30 mm.
- Attach the ducts to the EKOCBG.
- The first suspension after the EKOCBG must be max 300 mm.

Hole dimensions = Ød + max 50 mm with Bagstop

- Apply BSKTUBE on the wall and press EKOCBG firmly against the wall.
- Detach the brackets from the EKOCBG and fasten them to the wall using 4 universal mounting screws K21K 6.3x30 mm.
- Attach the ducts to the EKOCBG.
- Insulate with mineral wool A2-s1,d0, density min 66 kg/m^3 such as FIRESTOP throughout the depth between the wall and the duct.
- The first suspension after the EKOCBG max 300 mm.

E60

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Single side surface mounted EKOCBG max Ø630

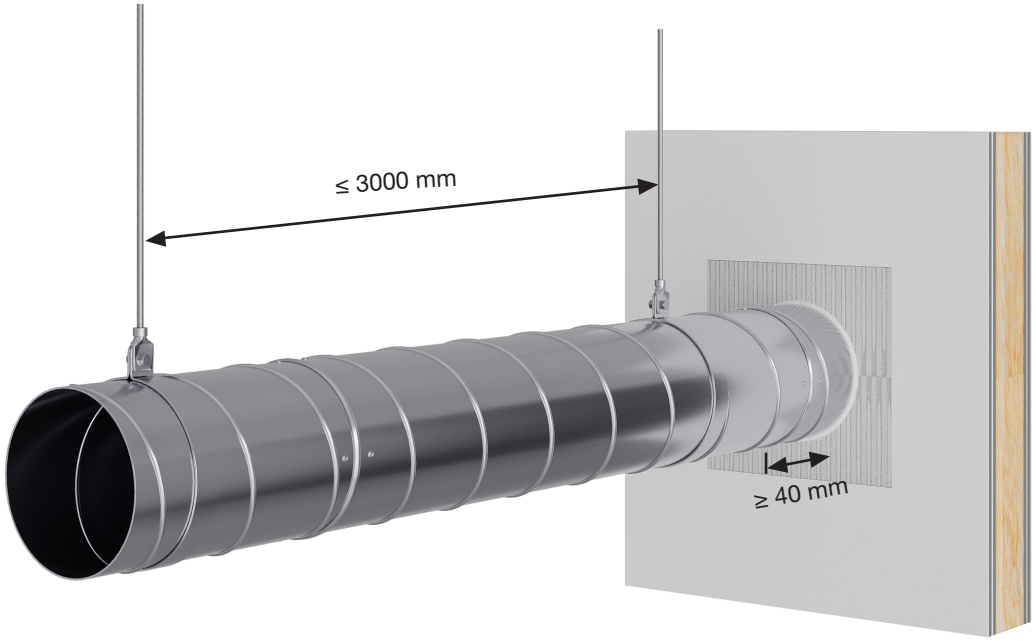
Hole dimensions = Ød + max 400mm

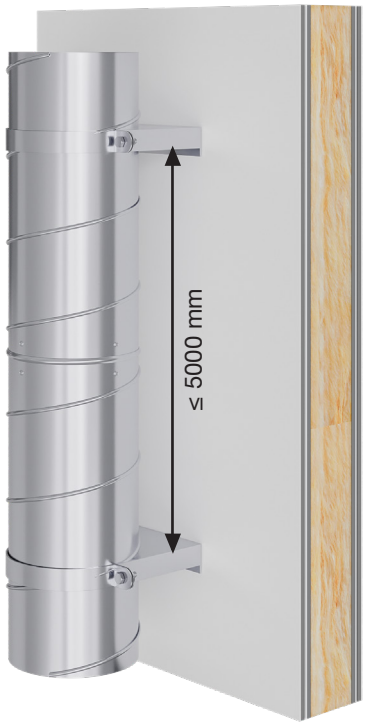
- Apply BSKTUBE sealant on the deck and press EKOCBG firmly against the deck.
- Detach the brackets from the EKOCBG and fasten them to the deck using 4 universal mounting screws K21K 6.3x30 mm.
- Attach the ducts to the EKOCBG.

*The connections within 40-2000 mm from a vertical penetration, must be sealed with BSKTUBE or MFKE60 sealing clamps.

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E90





Vertical assembly		Dim.
	**UVB**	Ø80 -630
	**DHC**	Ø100-160
	**DHCBR**	Ø200-630
	**FADK2**	Ø200-630
	**FAKO**	Ø100-800
	**FADK**	Ø63-630
	**FAST**	Ø63-630
	**MDH**	Ø315-1000
	**RK**	Ø100-1000
	**RK2**	Ø630-1000

Suspension

Horizontal

The maximum suspension distance is 3000 mm horizontally, depending on duct dimensions.

- The distance from the wall to first connection must be min 40 mm.

Vertical

The maximum suspension distance must not exceed 5 m.

Max suspension distance for vertical circular ducts (acc. DS 428.2019)

Ød	63	80	100	125	160	200	250	315	355	400	450	500	560	630	710	800	1000
M	2,00	2,00	2,00	2,00	2,00	2,00	2,00	2,52	2,84	3,20	3,60	4,00	4,48	5,00	5,00	5,00	5,00

Overview of assembly of FL, FLE60 and VLG/VLGUH

		Ø diameter (mm)															
		80	100	125	160	200	250	315	355	400	450	500	560	630	710	800	1000	
	**FL standard b x t**	25 x 3	25 x 3	25 x 3	30 x 4	30 x 4	30 x 4	35 x 5	35 x 5	35 x 5	35 x 5	35 x 5	35 x 5	40 x 5	40 x 5	40 x 5	40 x 5	
	**Min numbers VINKE60 for FL**	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	4	2 pcs. screws 4,2 x 13 per VINKE60
	**VLG standard b x t**	30 x 1	30 x 1	30 x 1	30 x 1	30 x 1	30 x 1	30 x 1	30 x 1	30 x 1	30 x 1	30 x 1	-	-	-	-	-	
	**Min number of screws for VLG**	4	4	4	4	4	6	6	6	6	6	6	-	-	-	-	-	Screws 4,2 x 13 evenly distrib-uted
	**FLE60 2-delt b x t**	30 x 4	30 x 4	30 x 4	30 x 4	30 x 4	30 x 4	35 x 4	35 x 4	35 x 4	35 x 4	35 x 4	35 x 4	35 x 4	35 x 4	35 x 4	35 x 4	
	**Min number of VINKE60 for FLE60**	2	2	2	2	2	4	4	4	4	4	4	4	4	4	4	4	2 pcs. screws 4,2 x 13 per VINKE60

Suspension distance for E60 ducts suspended from the ceiling

		Suspension distance (m)															
		80	100	125	160	200	250	315	355	400	450	500	560	630	710	800	1000
	UV25 + SJ25	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.7	2.4	-	-	-
	UVH25 + SJ25	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	UVH 303 + SJ30	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	UV25 + OSB60 M8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2,8	-	-	-
	UV25 + OSB60 M10	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	UVH25 + OSB60 M8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	UVH 303 + OSB60 M10	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	UVB	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	IN + OSB60 M10	-	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0*	3.0*	3.0*
	MDH + UV25	-	-	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	MDH + UVH25	-	-	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	MDH + UVH303	-	-	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	FADK2	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	FAKO	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-
	RK	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	RK2	-	-	-	-	-	-	-	-	-	-	-	-	3.0	3.0	3.0	3.0

* *Note: suspension on both sides, not at the top.*

Suspension distance for E60 ducts standing on deck/floor

		Suspension distance (m)															
		80	100	125	160	200	250	315	355	400	450	500	560	630	710	800	1000
	UVB	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	FADK2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	FAKO	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-
	FADK	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	FAST	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	MDH	-	-	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	RK	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	RK2	-	-	-	-	-	-	-	-	-	-	-	-	3.0	3.0	3.0	3.0

Suspension distance for E60 ducts mounted horizontal on wall

		Suspension distance (m)															
		80	100	125	160	200	250	315	355	400	450	500	560	630	710	800	1000
	FADK2	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	FAKO	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-
	UVB	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	DHCBR	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	MDH + UV25	-	-	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	MDH + UVH25	-	-	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	MDH+ UVH303	-	-	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	VK3	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-	-	-
	VK4	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-
	VK5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	VK6	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2,6	2,4
	VK8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.8	2.2	2.0
	VK10	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.8	2.5	2.0	1.8
	CLS300	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-	-
	CLS500	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-
	CLS1000	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.8	2.5	2.0	1.8

Suspension distance for E90 ducts suspended from the ceiling

		Suspension distance (m)															
		80	100	125	160	200	250	315	355	400	450	500	560	630	710	800	1000
	**UV25 + SJ25**	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.6	2.0	1.8	1.6	-	-	-
	**UVH25 + SJ25**	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	**UVH 303 + SJ30**	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
	**UV25 + OSB60 M8**	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.3	2.1	1.9	-	-	-
	**UV25 + OSB60 M10**	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	**UVH25 + OSB60 M8**	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	-	-	-
	**UVH 303 + OSB60 M10**	-	-	-	-	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.9

Lindab**Rekt**

This guide applies to the duct system LindabRekt

The duct system is approved for 90 minutes (E90) for both horizontal and vertical installation. The approval applies to dimensions ≤ 2500 × 2500 mm with rail system RJFP or integrated flange.
Lindab's rectangular duct system with rail profile RJFP or integrated flange meets tightness class ATC3 (C) and pressure class 2 (-750 to +1000 Pa) according to the European standard DS EN 1507, provided that these installation instructions are followed.
The duct system also meets fire-technical material class A2 – s1, d0 according to EN 13501-1.

- The duct system is testet according to EN 1366-1.
- The duct system is classified according to EN13501-3.
- The channel system is classified to E90 (ve ho i->o) in galvanized standard channel and shaped pieces ≤ 2500x2500 mm in standard plate thickness.
- Duct fire penetrations is:

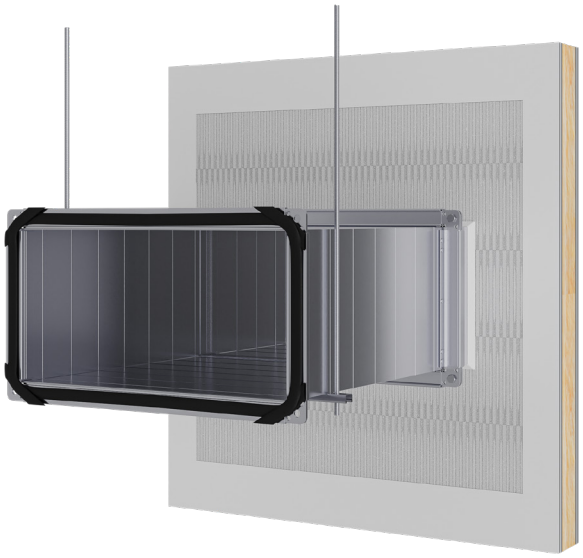
Horisontalt testet and approved in lightweight walls (standard supporting construction) acc. EN 1363-1:2020 "Fire resistance tests - General requirements", as well in EN1366-1:2014+A1:2020 "Fire resistance tests for service installations - Part 1: Ventilation ducts", at an accredited testing institute.
Verticalt testet and approved in concrete (standard supporting construction) acc. EN 1363-1:2020 "Fire resistance tests - General requirements", and EN 1366-1:2014+A1:2020 "Fire resistance tests for service installations - Part 1: Ventilation ducts", at an accredited testing institute.

Wall constructions

Penetrations that have been tested and approved in gypsum board walls (standard supporting construction) may be used under the same conditions in aerated concrete, masonry, and concrete walls ≥ 100 mm with a density ≤ 450 kg/m^3.

Before assembly

- Provide a well-organized storage space for the products where they are protected from the elements.
- Preferably use products with factory-fitted joint profiles.
  When using loose RJFP frames, these must be fastened to the duct with screws with a maximum distance of 100 mm between the screws (screws U42/U52 - 4.2 x 13 mm).
- Only use undamaged products.
- Prepare the assembly trench well.
- Complete the assembly according to this instruction.



1



2

Y max 150mm
X max 250mm



3

Assembly

1.
Install the RJSM sealing strip on the RJFP flange profile (as close as possible to the inner side of the duct).
Let the sealing strip intersect all four corners, as shown in the picture. Applies to all 4 corners. Sealing strips must be installed on one of the two components to be assembled.

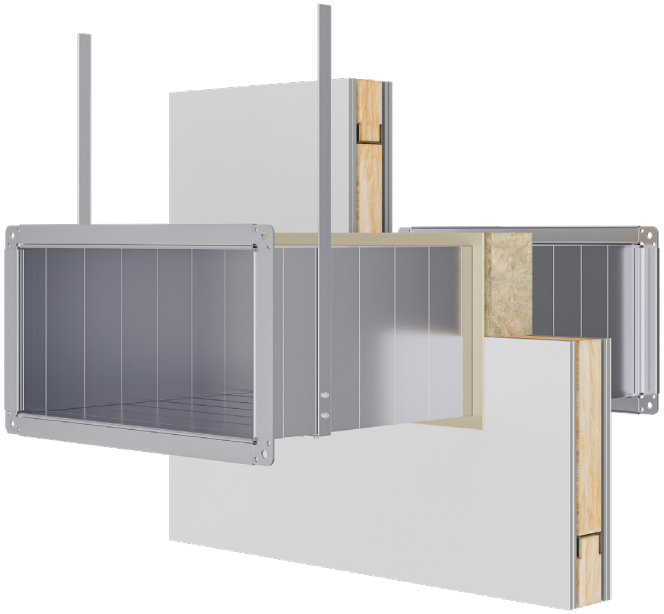
2.
In the four corners bolts and nuts must be installed. Do not overtighten the nuts ensure that the corners remain parallel.
RJFP 20 with M8 – bolts and nuts.
RJFP 30 with M10 – bolts and nuts.

Bolts and nuts are always delivered together with the products. Slider rails RJSP is installed at E60 / E90 duct systems.

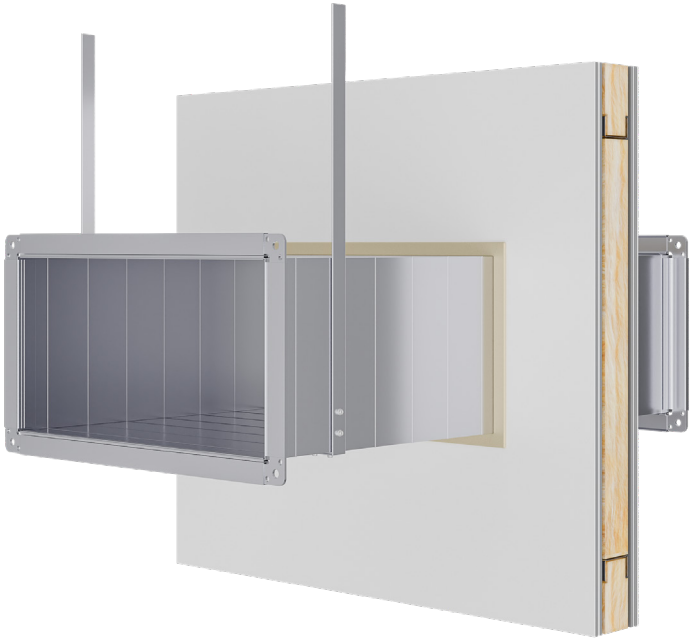
3.
Bolt clamps RJBC.
RJBC can be used for connections min. 1000 mm from penetrations E60 / E90.

- Maximum distance between the clamps 250 mm.
- Distance between the corner and the first clamp:150 mm see picture 3.

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Bagstop, insulating and sealant max 1250x1000 mm

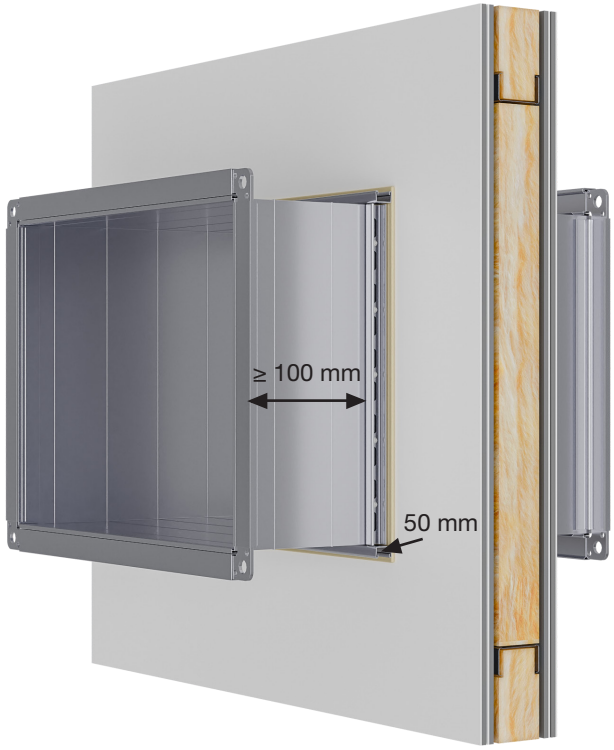
- The gap between the wall and the duct must be minimum 10 mm and maximum 25 mm.
- Position the duct in the center of the wall opening.
- Place the duct rod stifners inside the duct so that they are positioned in the middle of the wall.; they are mounted with self-tapping / self-drilling screws 4.2 × 13 mm in the anchor cup - 3 at the top and 3 at the bottom.
- Insert mineral wool A2-s1,d0, density min. 66 kg/m³ (e.g., FIRESTOP) throughout the entire depth of the gap between the wall and the duct.
- Apply BSKTUBE sealant in the gap between the wall and the duct.
- The sealing must have a minimum thickness of 2 mm. BSKTUBE must be used.
- The fire seal must be carried out on both sides of the wall.

Duct width	Number of vertical rod stifners
0-417 mm	0 rod stifner
418-834 mm	1 rod stifner
835-1250 mm	2 rod stifners

E90

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Bagstop, insulating and sealant max 2500x2500 mm

- The gap between the wall and the duct with RJFP20 must be min 10 mm and max 25 mm, with RJFP35 min 10 mm max 35 mm.
- Place the duct in the wall.
- Insulate with mineral wool A2-s1,d0, density min 66 kg/m³ as FIRESTOP throughout the depth of the gap between the wall and the duct.
- Apply BSKTUBE in the gap between the wall and duct.
- The sealant must have a thickness of min 2 mm. BSKTUBE must be used.
- Install the RPC rail profiles around the duct on both sides of the wall.
- On the upper and side of the duct, the rail profiles shall protrude 50 mm on both sides of the duct.
- The rail profiles are attached to the duct with screws (Ø4,2x13 mm) which are placed at a distance of no more than 100 mm. Screws can be used from outside or inside.
- The distance from the wall to first connection must be min 100 mm.
- **The penetration is carried out on both sides of the wall**.

RPC dimensions for penetrations

RPC: L ≤ 1250mm	RPC 41 x 21 x 1,6 mm
RPC: L ≥ 1250mm	RPC 41 x 41 x 2,5 mm

E90

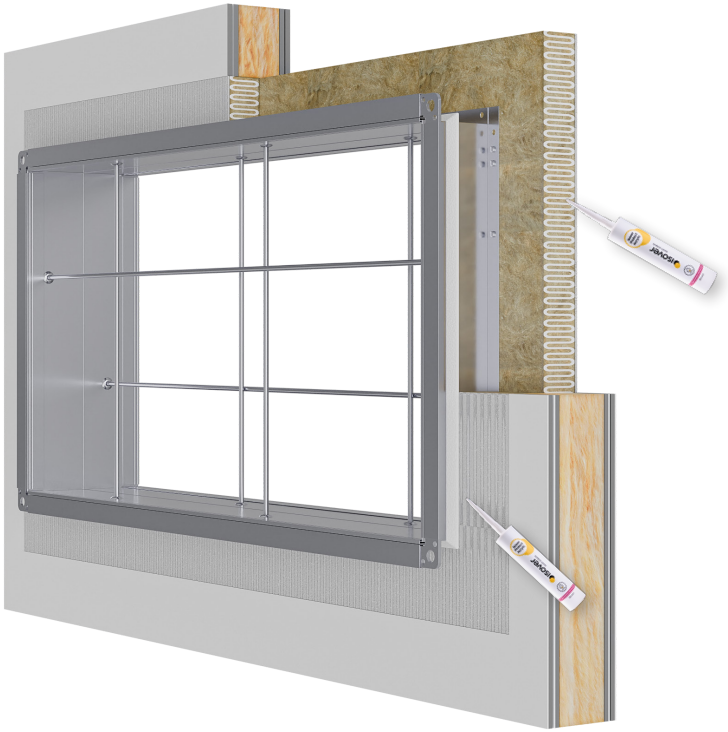
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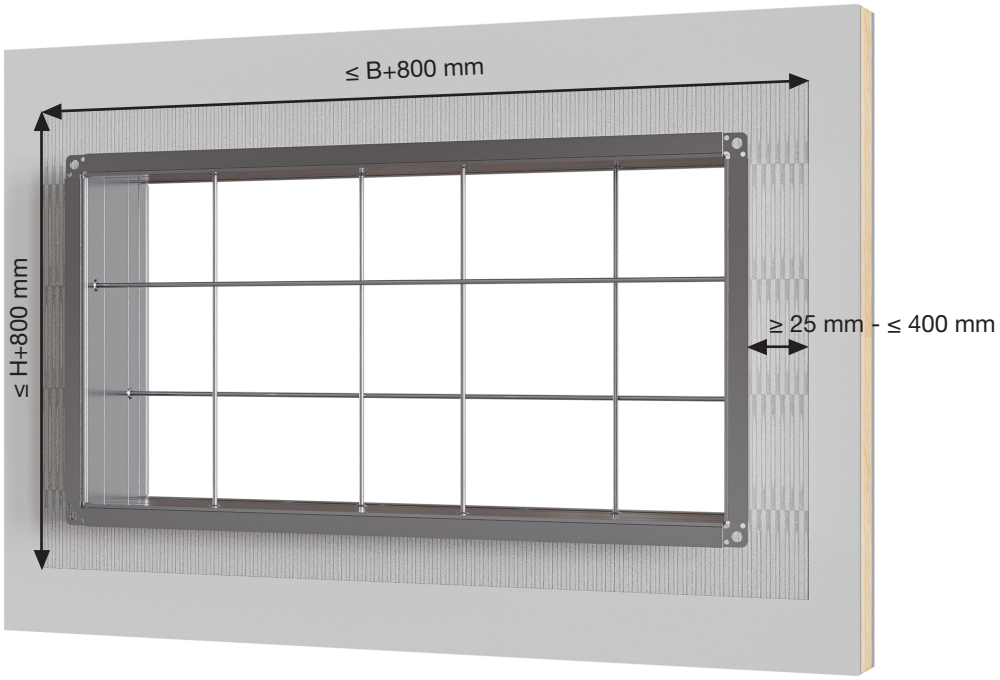




Bagstop, insulation and sealant, max 1250x1000 mm

- The gap between the wall and the duct must be a minimum of 10 mm and a maximum of 30 mm.
- Place the duct in the wall.
- Insulate with mineral wool A2-s1,d0, densitet min 66 kg/m³ as FIRESTOP throughout the depth of the gap between the wall and the duct.
- Apply FIREFIX fire sealant in the gap between the wall and the duct.
- FIREFIX must have a thickness of min 15 mm. FIREFIX must be used.
- Complete the installation by adhering FIREBATT or casting board to the duct as a 100 mm wide collar all around using FIREGRAB.
- The distance from the wall to first connection must be 100 mm.
- **The penetration must be carried out on both sides of the wall.**

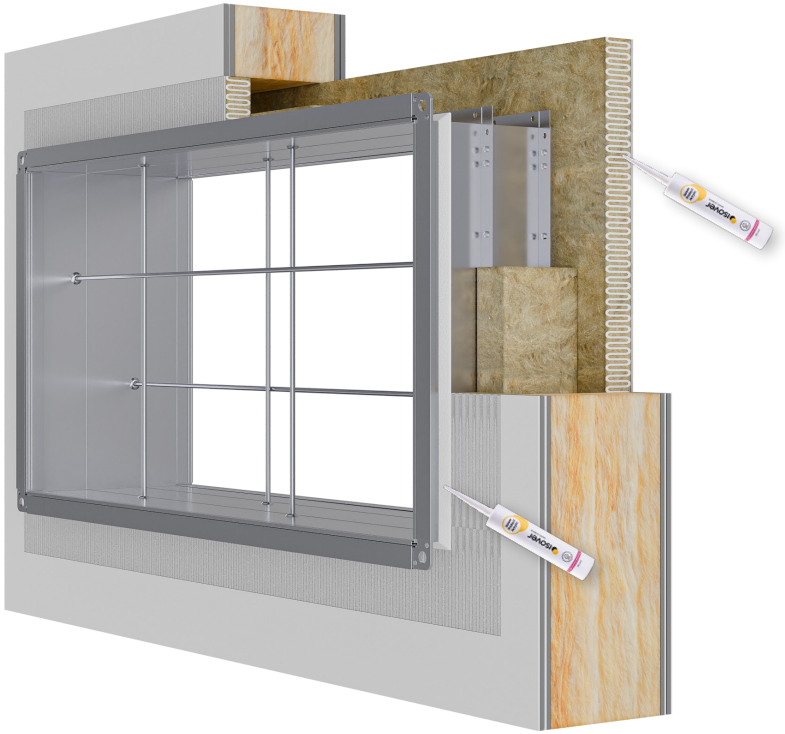


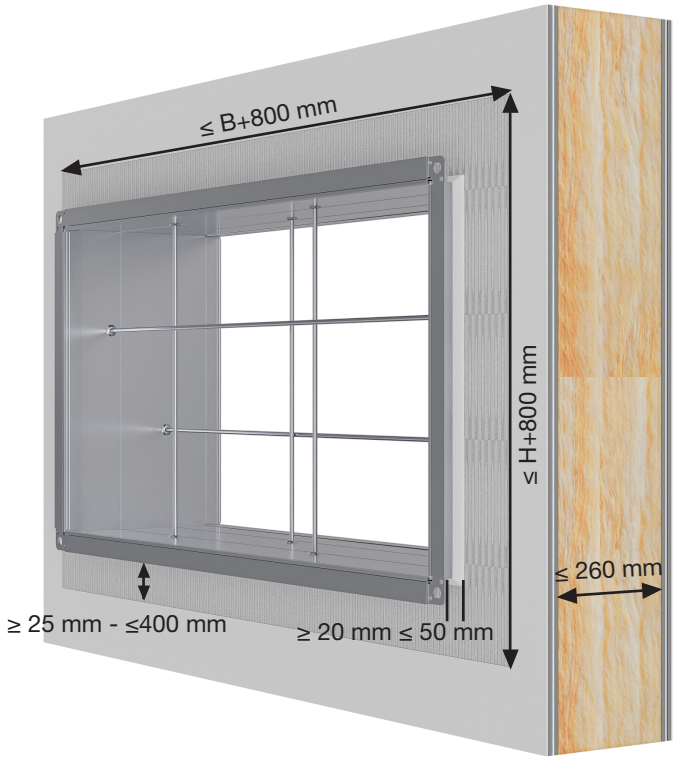


LBGE60 FIREBATT

- LBGE60 is ordered to fit wall thicknesses of 200-300-400 or 500 mm with a maximum distance to the first joint of 50 mm. The maximum size of LBGE60 is 2500x2500 mm.
- Distances from LBGE60 to the wall must be min 25 mm and a max of 400 mm.
- LBGE60 must be positioned in the center of the wall.
- Close the gap between the duct and the wall with 2x50 mm FIREBATT with staggered joints. FIREBATT must be adjusted to fit tightly against the wall construction and LBGE60.
- The flange on LBGE60 must be positioned in the center of the wall.
- Seal the edges between the FIREBATT with FIREFIX sealant.
- Seal the edges of the FIREBATT against the wall construction with FIREFIX.
- All open joints and cracks must be sealed with FIREFIX.
- Apply an external triangular sealing around the ventilation duct against the FIREBATT using FIREFIX.
- **The penetration must be carried out on both sides of the wall.**

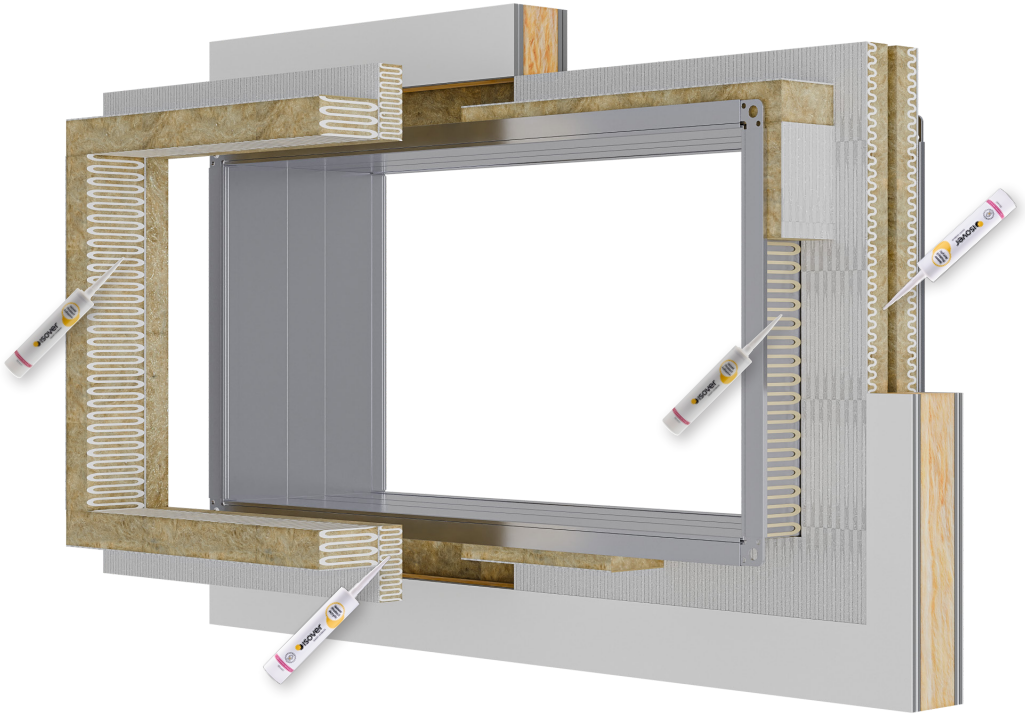
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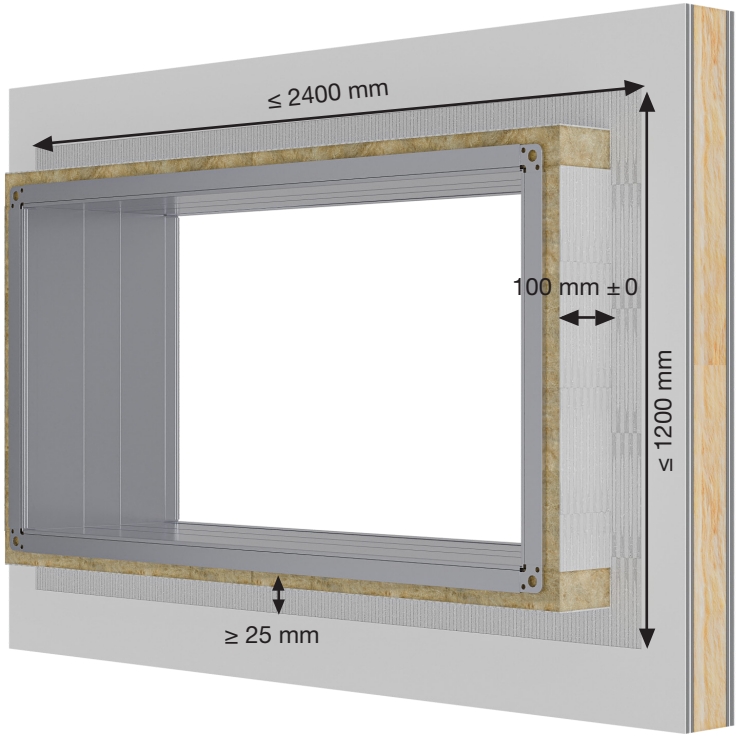




LBGE60 FIREBATT for wider wall constructions

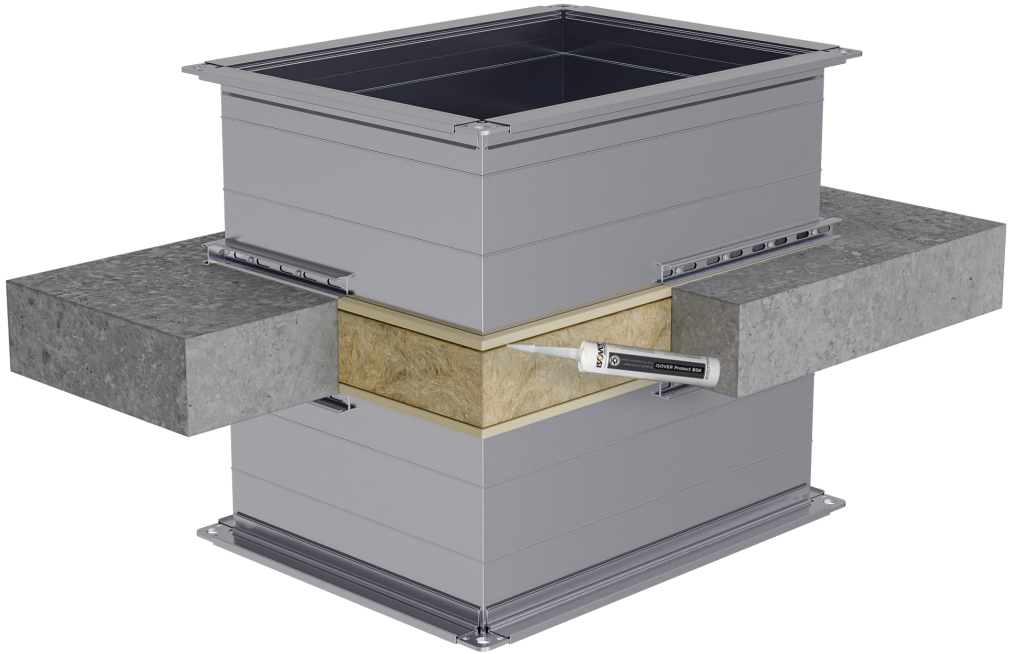
- LBGE60 is ordered to fit wall thicknesses of 200-300-400 or 500 mm with a maxi mum distance to the first joint of 50 mm.
  The max size of LBGE60 is 2500x2500 mm.
- For lightweight wall constructions the maximum wall thickness is 260 mm, for solid walls the maximum wall thickness is 400 mm.
- Distances from LBGE60 to the wall must be min 25 mm and a max of 400 mm
- LBGE60 must be positioned in the center of the wall.
- Place a FIREBATT over the 2 flanges.
- Close the gap between the duct and the wall with 2x50 mm FIREBATT with staggered joints. FIREBATT must be adjusted to fit tightly against the wall construction and LBGE60.
- Seal the edges between the FIREBATT with FIREFIX sealant.
- Seal the edges of the FIREBATT against the wall construction with FIREFIX.
- All open joints and cracks are sealed with FIREFIX.
- Apply an external triangular seal around the ventilation duct against the FIREBATT using FIREFIX.
- **The penetration must be carried out on both sides of the wall.**

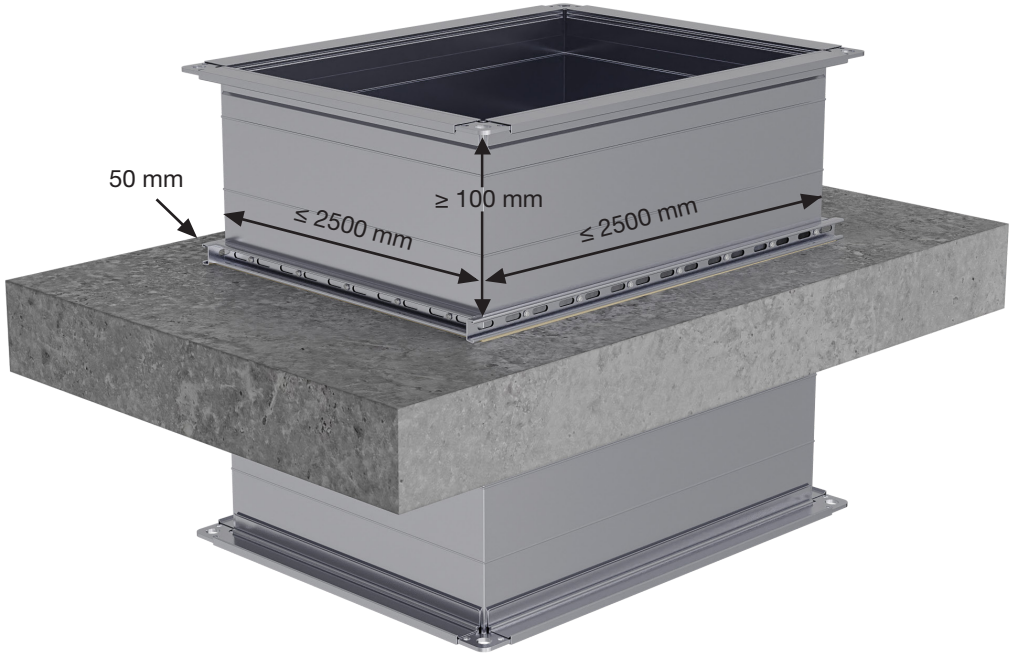




FIREBATT, max 1250x1000 mm

- The gap between the duct and the wall must be closed with 2x50 mm FIREBATT with staggered joints. FIREBATT is adjusted to fit tightly against the wall construction
- The edges between the fire boards must be sealed with FIREFIX sealant.
- The edges of the fire boards against the wall construction are sealed with FIREFIX.
- All open joints and cracks are sealed with FIREFIX.
- Complete the installation by adhering FIREBATT or casting board to the duct as a 100 mm wide collar all around using FIREGRAB.
- The distance from the wall to first connection must be 100 mm.
- **The penetration must be carried out on both sides of the wall**
- The first joint after the penetration must be fitted with RJFP flange profiles.





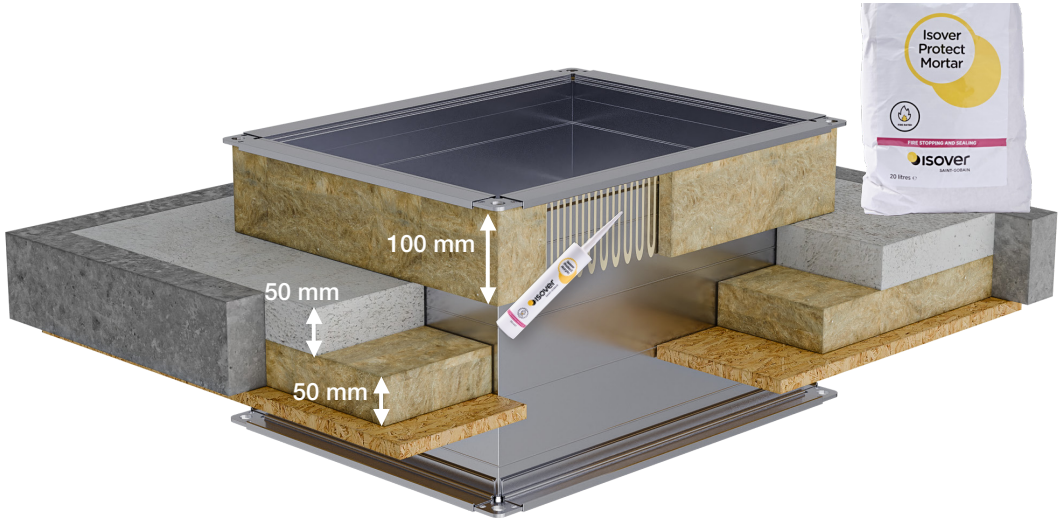
Bagstop, insulation and sealant, deck, max 2500x2500 mm

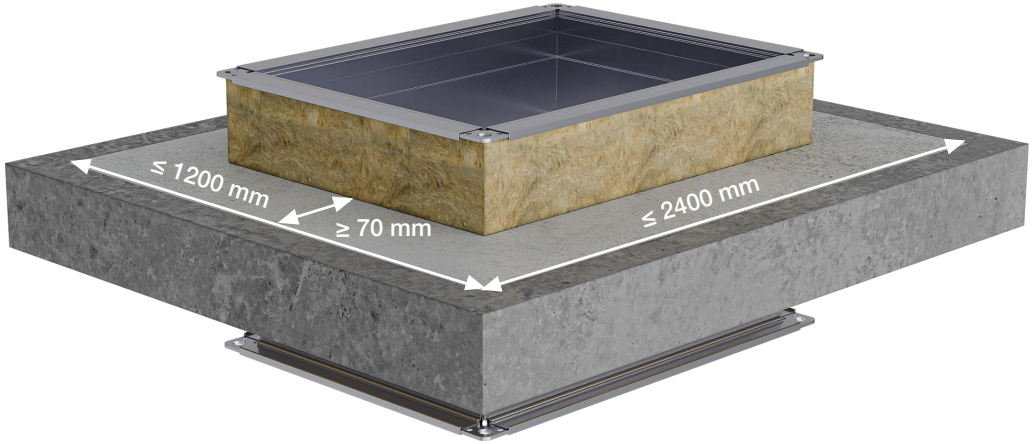
- The gap between the deck and the duct with RJFP20 must be min 10 mm and max 25 mm, with RJFP35 min 10 mm max 35 mm.
- Place the duct in the deck.
- Insulate with mineral wool A2-s1,d0, density min 66 kg/m³ as FIRESTOP throughout the depth of the gap between the deck and the duct.
- Apply BSKTUBE in the gap between the deck and duct.
- The sealant must have a thickness of min 2 mm. BSKTUBE must be used.
- Install the RPC rail profiles around the duct on both sides of the deck.
- On the long side of the duct, the rail profiles shall protrude 50 mm on both sides of the duct.
- The distance from the wall to first connection must be min 100 mm.
- Attach the rail profiles to the duct with screws (Ø4,2x13 mm) placed at intervals of no greater than 100 mm. Screws can be inserted from outside or inside.
- **The penetration must be carried out on both sides of the deck.**

RPC dimensions for penetrations

RPC: L ≤ 1250mm	RPC 41 x 21 x 1,6 mm
RPC: L ≥ 1250mm	RPC 41 x 41 x 2,5 mm

E90



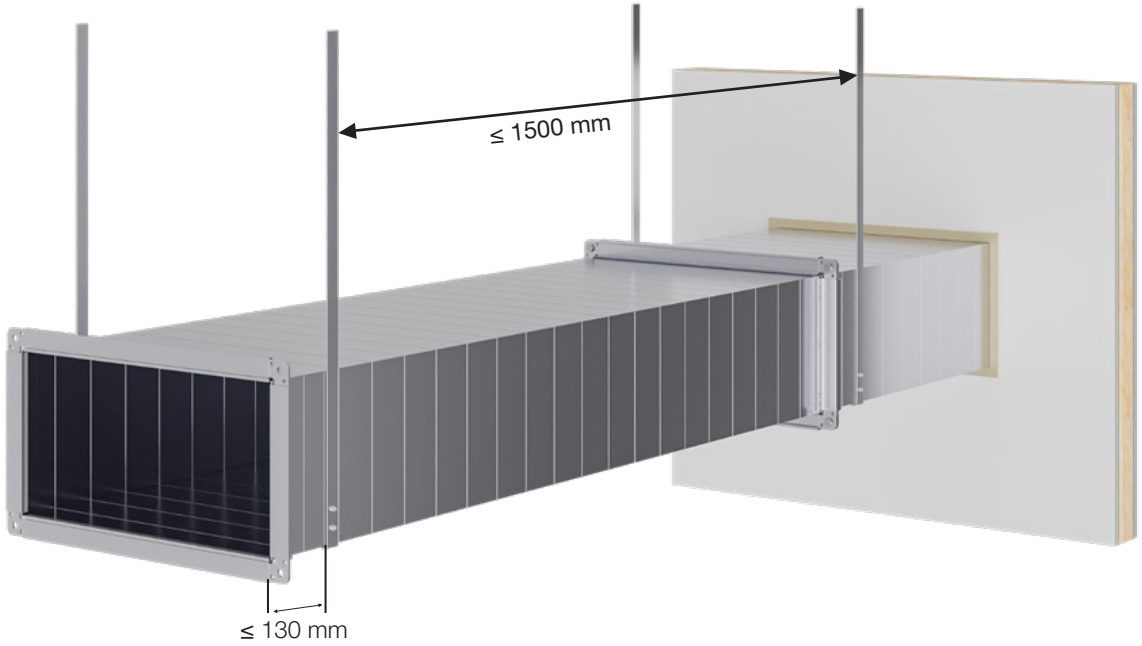


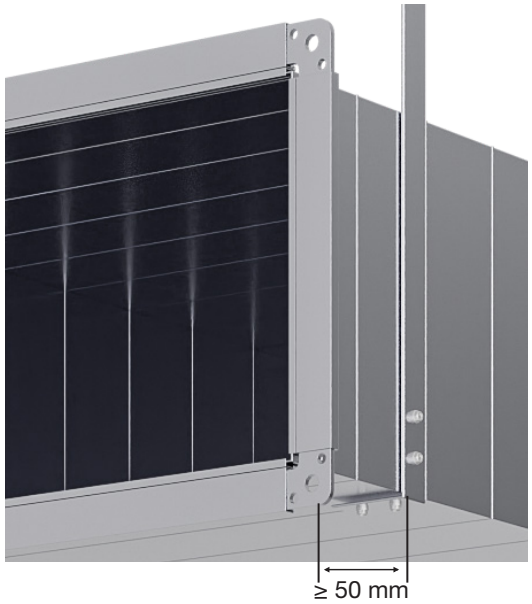
FIREBATT and FIREMORT, max 1250x1000 mm

- Trimm 50 mm FIREBATT to fit tightly in the opening and against the surrounding construction.
- Mix FIREMORT according to the instructions and pour to a thickness of 50 mm into the recess. Ensure that the FIREMORT mixture flows into all corners and seals tightly around the duct.
- Complete the installation by adhering FIREBATT or casting board to the duct as a 50 mm wide collar all around using FIREGRAB.
- After curing, the casting formwork can be dismantled. The formwork does not affect the fire sealing and can therefore remain in place.
- The first joint after the fire sealing must be fitted with RJFP flange profiles at a maximum distance of 100 mm.

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E60



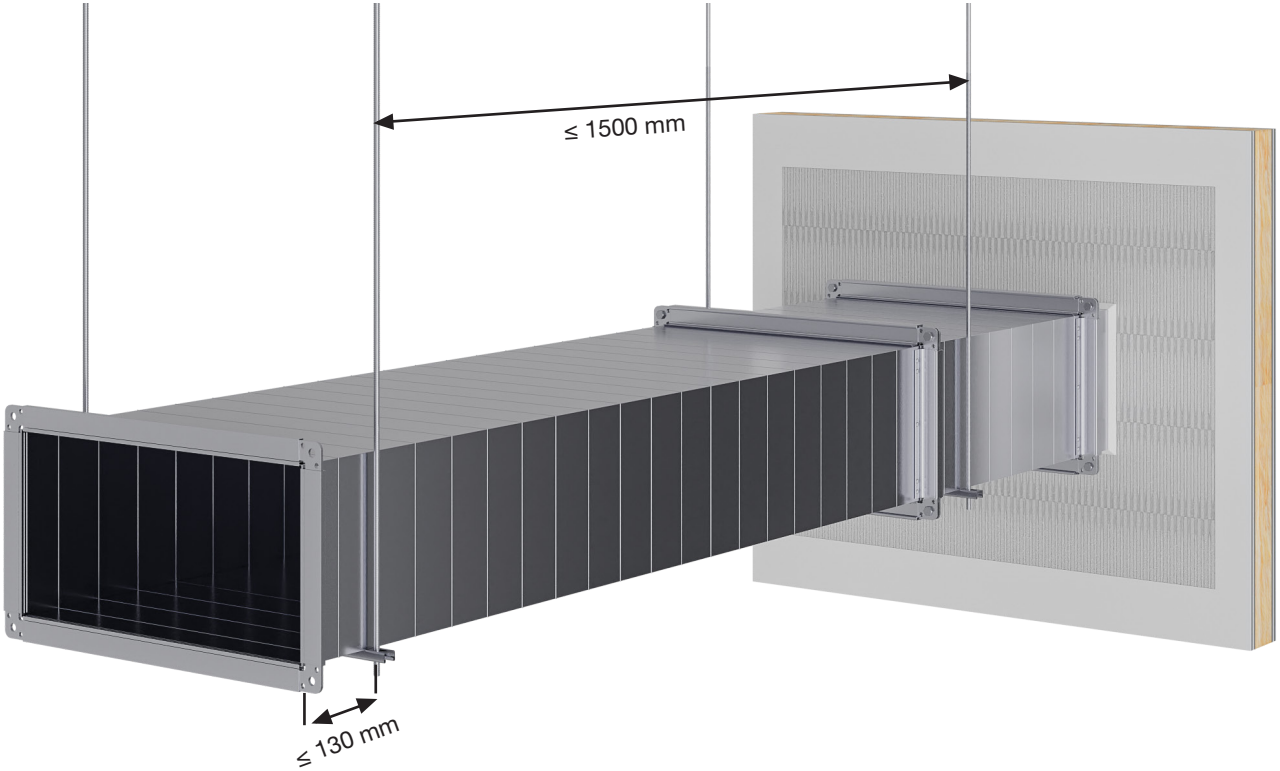


Suspension max 1250x1000 mm

- Suspension distance must not exceed 1500 mm horizontally, depending on duct dimensions.
- The distance from the suspension to the nearest duct joint must not exceed 130 mm.

Hanging with drop rod SJ25

- SJ25 must be bent 50 mm under the duct and fastened with 4 self-tapping / self-drilling screws 4.2 × 13 mm, 2 at the bottom and 2 on the side.





Suspension

- Suspension distance must not exceed 1500 mm horizontally, depending on duct dimensions.
- The distance from the suspension to the nearest duct joint must not exceed 130 mm.

Suspension with RPC and threaded rods

- The distance between the threaded rod and the vertical side of the duct must not exceed 50 mm.

Suspension verticalt (acc. DS 428.2019)

The maximum attachment distance for vertical rectangular ducts is 8 times the length of the smallest duct side, but must not exceed 5 m.
Ex. 800 x 500 = 4,0 m.

a	b	m
300	200	1,6
400	300	2,4
600	400	3,2
800	500	4,0
1000	600	4,8
1000	800	5,0
1250	1000	5,0
2500	2500	5,0

a, b = dimensions of the duct

Vertical suspension

- Wall bracket: CLS, CL, VK, K
- Mounting rail: RPC 41× 21×1,6 mm or stronger
- Bolt: M6S or M6SF – M8 or M10
- Nut: M6M or M6MF – M8 or M10
- Washers: BRB – to M8 or M10

Example with Wall Console CLS

Attach the CLS to the wall on both sides of the duct so that the duct connections are supported by the CLS. Mount RPC rail to CLS in front of the duct in order to get a stable construction.



Example with wall console K

Attach K to the wall on both sides of the duct so that the duct connections are supported by K. The K bracket is supplied in righ or left oriented versions so that it can be screwed onto the duct.

Suspension distance horizontal E60

	b																							Profil
a	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1250	1400	1600	1799	1800	2000	2200	2400	2500	RJFP/IF
100	1,5																								20
150	1,5	1,5																							20
200	1,5	1,5	1,5													SJ25 or threaded rods M8									20
250	1,5	1,5	1,5	1,5												Threaded rods M8									20
300	1,5	1,5	1,5	1,5	1,5											Threaded rods M10									20
350	1,5	1,5	1,5	1,5	1,5	1,5										Threaded rods M12									20
400	1,5	1,5	1,5	1,5	1,5	1,5	1,5																		20
450	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5																	20
500	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5																20
600	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5															20
700	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5														20
800	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5													20
900	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5												20
1000	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5											20
1200	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5										20
1250	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5									20
1400	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5								30
1600	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5							30
1799	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5						30
1800	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5					30
2000	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5				30
2200	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5			30
2400	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5		30
2500	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,4	1,4	30

To fulfill E60 requirements on a suspension, for a horizontal mounted duct system, the tensile stress must not exceed 9 N/mm². The table shows maximum suspension distance for uninsulated ducts and fittings in order to comply with this by using threaded rods and profiles RPC.

Mounting rail RPC 41× 21×1.6 mm or stronger.
The dimensions of threaded rods are indicated by the colours in the different fields. It is permissible to use stronger threaded rods on a smaller duct.

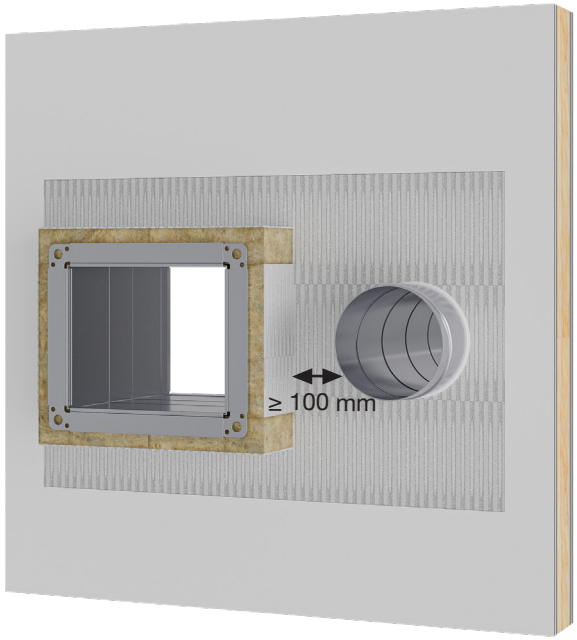
Suspension distance horizontal E90

	b																							Profil
a	100	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200	1250	1400	1600	1799	1800	2000	2200	2400	2500	RJFP/IF
100	1,5																								20
150	1,5	1,5																							20
200	1,5	1,5	1,5																						20
250	1,5	1,5	1,5	1,5												Threaded rods M8									20
300	1,5	1,5	1,5	1,5	1,5											Threaded rods M10									20
350	1,5	1,5	1,5	1,5	1,5	1,5										Threaded rods M12									20
400	1,5	1,5	1,5	1,5	1,5	1,5	1,5																		20
450	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5																	20
500	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5																20
600	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5															20
700	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5														20
800	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5													20
900	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5												20
1000	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5											20
1200	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5										20
1250	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5									20
1400	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5								30
1600	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5							30
1799	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5						30
1800	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,3					30
2000	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,2	1,2				30
2200	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,2	1,1	1,1			30
2400	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,1	1,1	1,0	1,0		30
2500	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,1	1,0	1,0	0,9	0,9	30

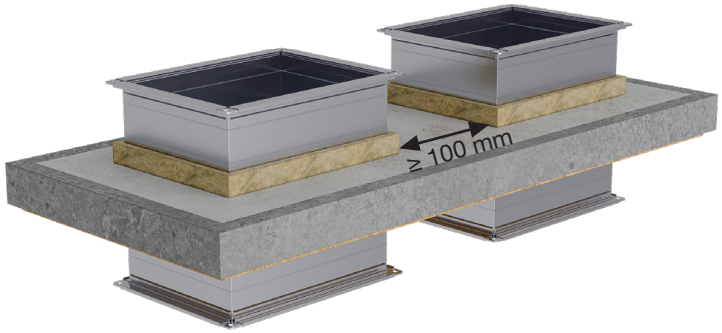
To fulfill E90 requirements on a suspension, for a horizontal mounted duct system, the tensile stress must not exceed 6 N/mm². The table shows the maximum suspension distance for ducts and fittings in order to comply with this by using threaded rods and rails RPC.

Mounting rail RPC 41× 21×1.6 mm or stronger.
The dimensions of threaded rods are indicated by the colours in the different fields.
It is permissible to use stronger threaded rods on a smaller duct.

More installations







Installation	Wall	Distance between penetrations
Duct-Duct	1 recesses Firebatt	100 mm
Duct - EN1366-3 *	1 recesses Firebatt	150 mm
Duct - EN1366-3	2 recesses in wall	100 mm
Installation	**Deck**	**Distance between penetrations**
Duct-Duct	1 recesses Firebatt and fire mortar	100 mm
Duct - EN1366-3 *	1 recesses Firebatt and fire mortar	150 mm
Duct - EN1366-3	2 recess in deck	100 mm

**Duct - EN1366-3 in one recess is not tested, but an option*

Update Overview

Changes

December 2025

Addition of backstop joint with duct rod stifners and drop rod suspension.
Removal of side references.

September 2025

Transition to new products.

March 2025

The dimensions Ø100 mm, Ø125 mm, and Ø160 mm FADK2 removed.

February 2025

Insertion of EKOCBG Vertical.

December 2024

Vertical support spacing (in accordance with DS 428:2019) updated:

Vertical mounting suspension

- Wall bracket, CLS, CL, VK, K
- Mounting rail RPC 41 × 21 × 1.6 mm or heavier
- Bolt, M6S or M6SF – M8 or M10
- Nut, M6M or M6MF – M8 or M10
- Washers, BRB – for M8 or M10

September 2024

Insertion of EKOCBG Horizontal

23024.04



Most of us spend the majority of our time indoors. Indoor climate is crucial to how we feel, how productive we are and if we stay healthy.

We at Lindab have therefore made it our most important objective to contribute to an indoor climate that improves people's lives. We do this by developing energy-efficient ventilation solutions and durable building products. We also aim to contribute to a better climate for our planet by working in a way that is sustainable for both people and the environment.

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