



**chemical
products**
insulation solutions

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ASSEMBLY INSTRUCTION № CP-001/2010/08

of fire protection insulation system **ISOLSTOP FIRE 60 System**, developed for rectangular horizontal and vertical air-ducts for heating, ventilation and air-conditioning (HVAC).

1. INTRODUCTION

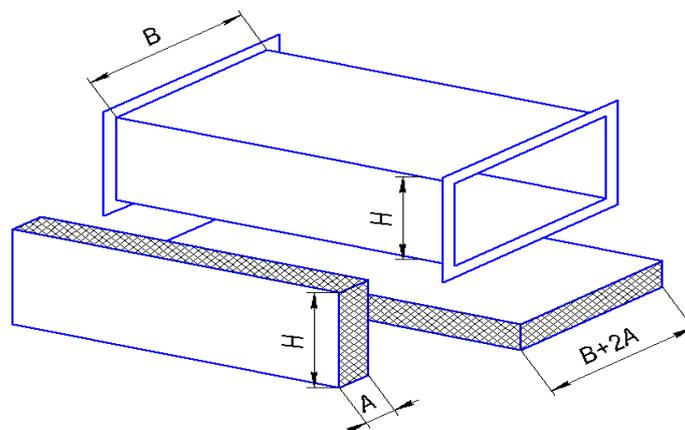
The insulation system for fire protection of rectangular – horizontal and vertical air-ducts with fire resistance of minimum 60 minutes, produced by Chemical products Ltd. is a single-layer insulation of mineral stone wool boards with density 80 kg/m³ and thickness 40 mm with aluminum foil **ISOLPLATE 80AL**.

2. INSTALLATION OF THE AIR-DUCT

Smooth or spiral steel HVAC ducts for fire protection must be made to ensure maximum tightness. Between the flanges is necessary to be put fire resistant sealing tape and sealant resistant to +600 ° C. Flanges are firmly fixed with a minimum of 6 pcs. screws per meter at each joint. The flanges of the duct could be up to 30mm in height. Penetration of ducts through fire zones walls (ceilings) and their free ends must be reinforced with steel cross fittings. Closed ends of ducts with nominal internal dimensions of 500 mm x 500 mm and more complete with flange.

3. CUTTING OF BOARDS

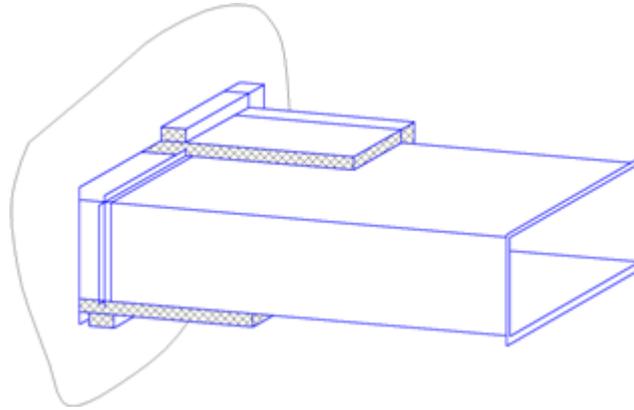
The mineral stone wool boards faced with aluminum foil **ISOLPLATE 80AL** are cut as per the size of the rectangular air-duct as overlapping of the ends should be foreseen.



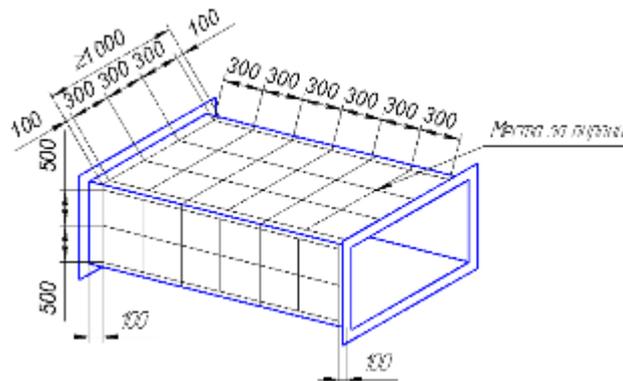
4. ASSEMBLY OF THE FIRERESISTANT INSULATION SYSTEM

The mineral stone wool boards are fixed to air-duct through adhesion and welding pins. Once the boards are cut, they are glued to each other in length and width with a high temperature adhesive (up to 1000 ° C) on the basis of "water glass". They should be firmly stuck in order to avoid gaps formation. The joint of the two adjacent boards is covered with aluminum tape 100mm width, which conceals the gap between the two boards.

Note: The joint of individual boards must be outside of the duct flanges.



The insulation is installed to the HVAC duct with 11 to 16 pcs. / m² welding pins (nails), (preferably insulated). Pins are placed in maximum 100 mm from the ends of the insulation and maximum 300 mm apart along the length and width.



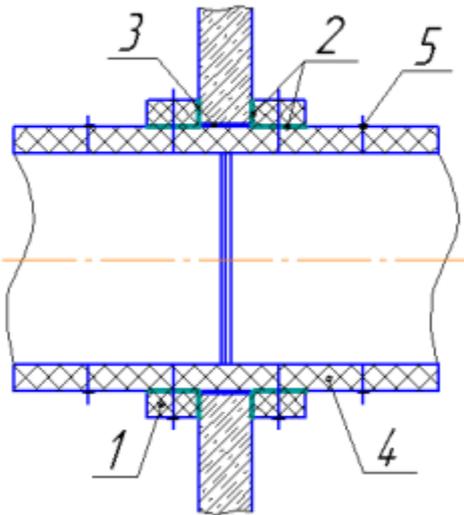
5. PROCESSING OF FLANGES

The flanges of the ducts are covered with the same insulation thickness as over the entire air-duct. The insulation over the flange place should be just pressed without cutting or making grooves / dents. In addition, the joint is covered with 200 mm wide and 40 mm thick band of ISOLPLATE 80AL, which is glued with water - based adhesive or fixed with 80 mm long welding pins on the flanges. The lid that closes the end of the duct through flange connection is insulated with additional band, as described for the flanges.

6. PENETRATION THROUGH WALLS

The penetration of air-ducts through fire zones of walls (ceilings) and their free ends should be reinforced by crossed steel fittings.

In the penetration zone the gaps between the walls and air-duct are covered with 150 kg/m³ mineral wool reinforced with a special 150 mm wide collar made from mineral stone wool boards **ISOLPLATE 80AL**.



1. Mineral wool ISOLPLATE 80 AL
2. Conlit glue
3. Partition wall
4. Mineral wool ISOLPLATE 80 AL
5. Welding pin with washer

7. FIRE RESISTANCE

The system ISOLSTOP FIRE 60 for minimum 60 minutes fire resistance developed on the basis of mineral stone wool 80 kg/m³, thickness 40 mm, reaction to fire classification A1.

Item	№	Description – characteristics	Unit	EI 60 S
Air duct	1	Maximum air-duct dimensions	mm	1250 mm x 1000 mm
	2	Joint at duct flanges	--	Through nails
	3	Maximum length between joining nails of air-duct flanges	mm	167
	4	Minimum covering of the insulation over the flanges	mm	30
	5	Sealing of the flanges with fire resistant mastic +600 °C	--	Mandatory
Insulation	1	ISOLPLATE 80 AL thickness	mm	40
	2	Number of insulation layers		1
	3	The ends of the insulation boards are glued with high temperature water based adhesive (up to 1000°C) and aluminum tape		Mandatory
Insulation fixing	Welding pins with washers			
	1	Maximum length; longitudinal across	mm mm	300 300
	2	Maximum length from the air-duct and the ends of the insulation – obligatory size	mm	100
	3	Minimum pcs. welding pins with washers	pcs./m ²	11
Penetration	Penetration through fire protection zone – bilateral sealing collar			
	1	Mineral stone wool with density	kg/m ³	150
	2	ISOLPLATE 80AL thickness	mm	40
	3	Width of the insulation collar around the perimeter	mm	150
	4	Maximum length of welded pins in the sealing collar	mm	250

	2	Insert cross steal fitting into the air duct	--	Mandatory
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The information in the present instruction describes the characteristics of the system produced by the materials listed above and strict compliance with all indicated sizes.

Chemical products Ltd. ensures fire resistance of the rectangular horizontal and vertical air-ducts only in strict compliance with the present instruction.

Installation is carried out under the supervision of professionally trained representative of Chemical products Ltd.

DECLARATION

The undersigned ,
(name, surname, family name)

in my capacity of
(position of the person that signs the declaration)

of (name of the legal entity)

DECLARE,

that together with the delivery of the System ISOLSTOP FIRE 60 I received instruction № CP-001/2010/08 and I am acquainted with it.

Date:

Signature:

(stamp)