

An air-conditioning duct made from corrugated sheet that minimizes carbon dioxide emissions during manufacturing process.

Eco-friendly Air-conditioning Duct made from Corrugated Sheet

Features

- The rate of carbon dioxide emissions during the manufacture of the product is approximately 25% of that during the manufacture of conventional steel-made ducts.
- The duct will be shipped in sheet form thus can reduce cubic measure while transportation by 86% compared with conventional steel ducts.
- A product with a Green Mark made from recycled paper.



Corrugated sheet for CORRU-AIR DUCT

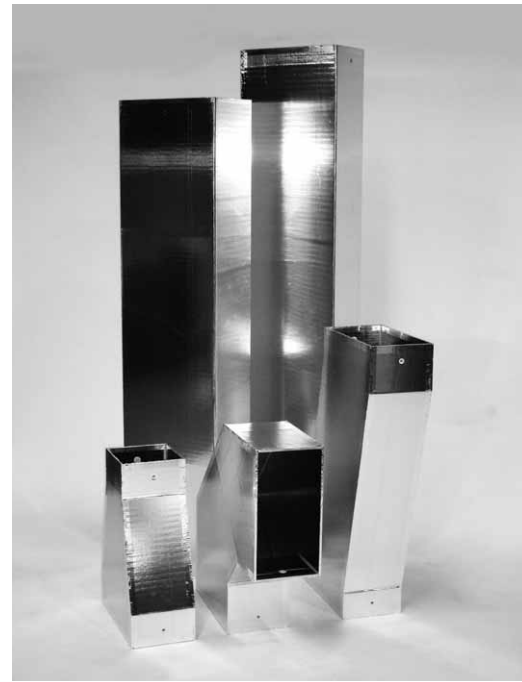


Installation

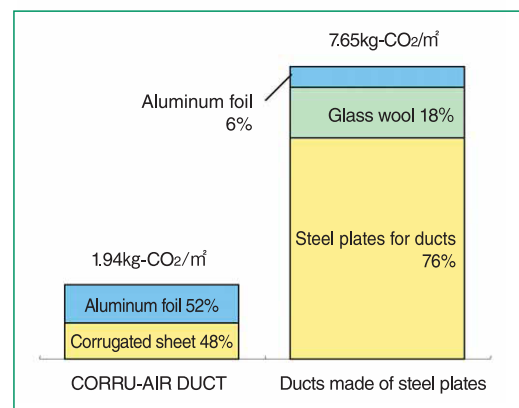
Overview

(Technical principles, actions, etc.)

This product (sold under the brand name of CORRU-AIR DUCT) is an air-conditioning ventilating duct made from 8-mm-thick corrugated board composite with noncombustible 20- μ m-thick aluminum foil (under the approval number of NM-1176). The product of wavy hollow construction peculiar to corrugated board has high thermal insulation performance, and does not require heat insulation work with glass wool for standard air conditioning. Therefore, the product greatly shortens the required period of installation and reduces the cost of installation. CORRU-AIR DUCT sheets can be assembled into ducts with ease. Bundles of CORRU-AIR DUCT sheets can be transported to installation sites, where on-site workers assemble them. As a result, the transportation efficiency of CORRU-AIR DUCT is seven times as high as that of a conventional steel duct. Furthermore, the weight of the CORRU-AIR DUCT is approximately 1/5 of a conventional steel duct. CORRU-AIR DUCT components can be coupled on the floor and lifted, which reduces high-place work and contributes to safety at work. Recycled paper content of CORRU-AIR DUCT is 75% and is a product provided with a Green Mark. The CORRU-AIR DUCT received the 2008 CHO MONODZUKURI Innovative Components Award from the Conference for the Promotion of Monodzukuri and Nikkan KogyoShimbun, Ltd.



CORRU-AIR DUCT



Environmental performance: Amount of carbon dioxide emissions

Effects

- As a result of calculation based on the life cycle assessment (LCA) tool of the Architectural Institute of Japan, the rate of carbon dioxide emissions during the manufacture of the CORRU-AIR DUCT is approximately 1/4 of that required for the manufacture of a conventional steel duct. CORRU-AIR DUCT is transported to installation sites in sheet form, where on-site workers assemble them. As a result, the occupancy area of CORRU-AIR DUCT components in transit is 14% of that of a conventional steel duct, which greatly improves the efficiency of transportation. Furthermore, the use of corrugated board of hollow construction provides the duct with high thermal insulation performance and eliminates conventional insulation material made of glass wool that has difficulty in recycling for reuse, which is one of the great merits of this product. The CORRU-AIR DUCT is a product made of recycled corrugated board and provided with a Green Mark by the Paper Recycling Promotion Center.

Applicable field
Building Components and Air-conditioning Equipment and Systems

Water

Energy saving/Energy recovery

Energy storage/Energy creation

New energy

Waste disposal/Recycling/Resource saving

Air

Soil

Other

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