



2.1 Folded square air ducts

2.1.1.1 Folded C+Duct parts from galvanized steel



BerlinerLuft.



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Product description



Energy-saving C+Duct

C+Duct represents a new generation of duct parts for an energy-efficient operation of air-conditioning systems. Thanks to innovative technology in the manufacturing process, the hygienic requirements according to VDI 6022 and the tightness requirements according to DIN EN 1507 can be smoothly met - a proper installation assumed.

A significant feature of the new technology is the automatic bordering of the flange sections (pdf-3 section) directly from the sheet metal coil. Unlike in other comparable technologies, forming and stabilization of the flanges is made in a single pass without additional corrosion-prone bonding techniques.

To achieve the tightness class C according to DIN EN 1507 a silicone-free permanently elastical sealing compound is injected in the folding bag by machine already during contouring. Additionally, a new internal sealing element reduces leakage losses in the corner area of the fold.

This solution provides a secure basis for the hygienic safety of the air flow to be conveyed according to VDI 6022.

Part connection



PDF 3 section

Although the flange sections are bordered we deliver our ducts at a standard length of 1500 mm. Dimensions and cross sections are based on the standard DIN EN 1505. The sheet metal thickness of the parts depends on the pressure levels according to VDI 3803.

The energy-saving C+Duct products are available for following pressure levels acc. to VDI 3803:

Low pressure	+1000/-500 Pa
Medium pressure	+2000/-750 Pa

Flange edge heights are

20 mm at lengths	150 - 1000 mm
30 mm at lengths	1001 - 2000 mm

This ensures the compatibility with previous standards.

The proven BLKS trapezoidal stiffening corrugation is used for part stiffening (duct walls). If required, additional stiffening elements according to BLKS works standard can be built in to meet the stability requirements according to DIN EN 1507.



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Tightness thanks to built-in sealing element



Patented sealing element

To ensure their function and an energy-saving operation of air-conditioning systems high tightness requirements are set for air conduction systems. The standard DIN EN 1507 defines the permissible leakage air flow volume per m² air conduction area depending on the static internal pressure. Preconditions for achieving a high extent of tightness include:

- High-quality manufactured parts and
- High quality of installation work for duct lines

The sealing compounds are

- Silicone-free
- Permanently elastic
- Odorless
- Hygienically safe

Additional requirements such as

- Hardly inflammable
 - Increased temperature resistance
 - Resistance to disinfectants
- are possible on request.

Regulations and standards

EPBD	Energy Performance of Buildings Directive (EC directive)
EnEV	Ventilation for buildings
DIN EN 1507	sheet metal air ducts with rectangular sections - Requirements for strength and leakage
DIN EN 12599	Test procedures and measuring methods for handing over installed ventilation and air conditioning systems
DIN EN 13779	Ventilation for non-residential buildings
VDI 3803	Structural and technical principles of central air-conditioning systems
VDI 6022	Hygienic requirements for ventilation systems

To make our offering for ducts complete we offer the pre-assembly of accessories in the factory:

- Butterfly valves
- Condensate drain connections
- Revision covers
- Reinforced cut-outs
- Internal perforated sheet metal components
- Partitioning plates
- Round and square connecting pieces

Further possible extras include:

- Priming, painting, powder coating
- Special painting resisting to chlorine and fatty acids
- Parts free from dust and grease
- part ends closed
- Parts completely wrapped with film



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