



# REC FLEX HDPEA

**MORE AIR**

**MORE FLEXIBILITY**

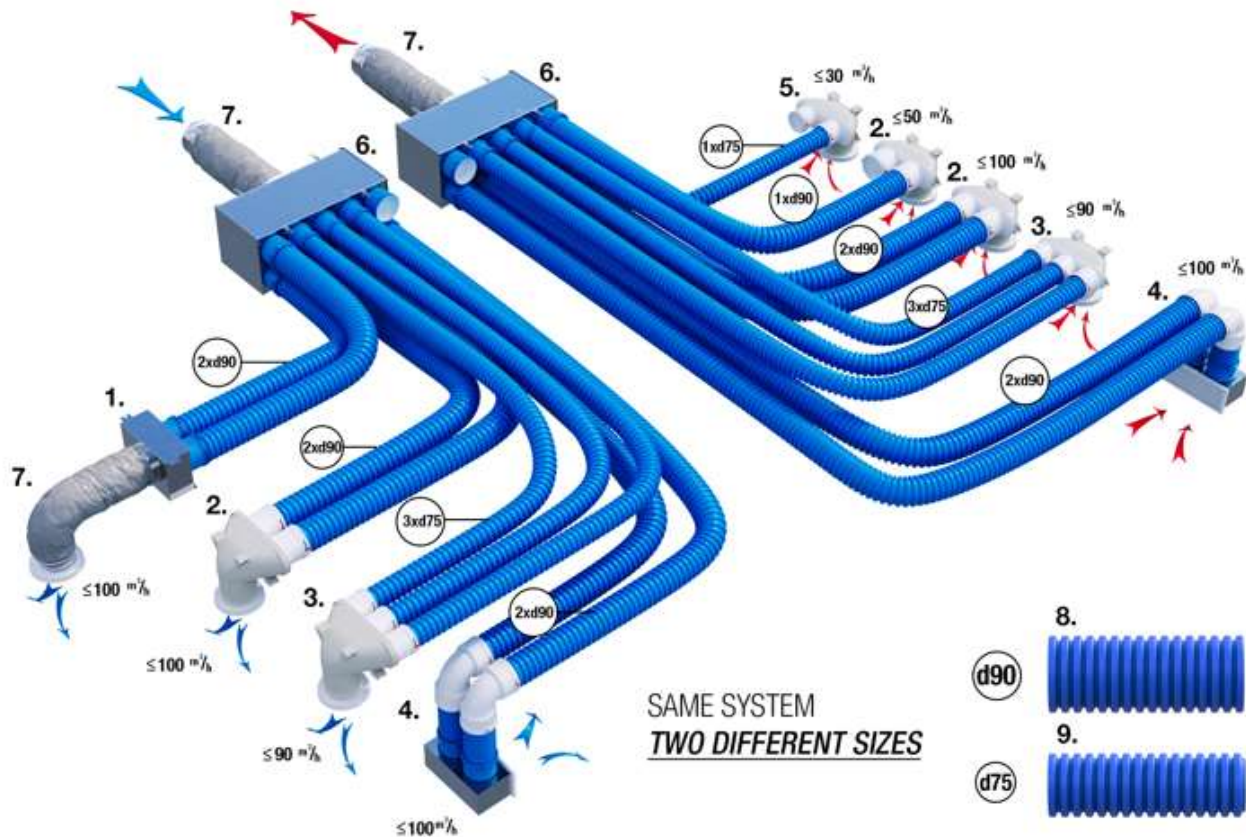


**UAB REC BALTICVENT**

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# GET THE **MAXIMUM** AIR VOLUME WITH **REC FLEX** SYSTEM!



## NEW AND IMPROVED

EASY TO USE d75 AND d90



## System Components

1. LDL-H-125-90x2
2. LDL-P-125-90x2
3. LDL-P-125-75x3
4. LDL-V-250x100-90x2
5. LDL-P-125-75x2
6. LFT-125/160/200
7. AKU COMP-125/160/200-1,2
8. REC Flex HDPEA 90
9. REC Flex HDPEA 75
10. FP 75
11. FP 90

**UAB REC BALTICVENT**

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## **REC FLEX HDPEA ventilation system**

- Easy and simple installation.
- No need for fittings.
- The collector duct system guarantees a balanced air supply and reduces system noise, with no telephone effect between rooms.
- Only virgin polyethylene is used for production.
- The outer profiled wall is made of unrecycled PE-HD.
- The inner smooth wall is made of virgin PE-LD with the addition of an effective antifungal and antibacterial additive: the biocide zinc pyrithione CAS No 13463-41-7.
- Duct diameter 75 or 90mm, taking up less space under suspended ceilings.
- Can be installed in concrete structures.

### **Notes**

- The air intake and exhaust ducts of the ventilation unit shall be made of galvanised sheet metal and shall be insulated with 50 mm PE anti-condensation insulation.
- Flexible Aku-Comp silencers shall be installed between the air handling unit and the air distribution manifolds.
- All flexible ducts, diffuser boxes, air distribution manifolds must be sealed before the system is commissioned.
- In rooms with only supply air or extract air, a clearance of ~ 1 cm under the door shall be left for air movement.
- All natural draught ducts, except in rooms where forced mechanical ventilation is not installed, must be sealed.
- The exact installation locations of the diffusers shall be agreed with the customer.
- All installation work shall be carried out in accordance with the manufacturer's installation instructions.
- Any changes made without the agreement of the designer shall be the responsibility of the person making them.
- After the installation work has been carried out, balancing of the system air quantities is mandatory.
- The ventilation unit must be connected to the fire alarm system. In the event of a fire, the unit must switch off.

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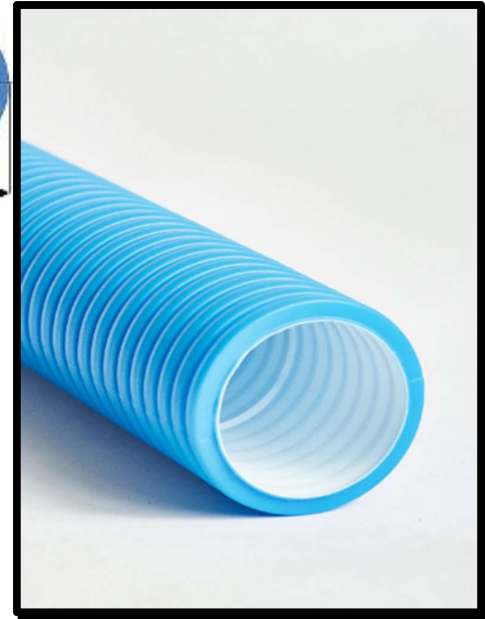
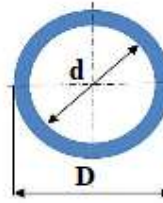
## REC FLEX HDPEA flexible duct

### Application:

REC FLEX HDPEA flexible duct used for supply and extract air in ventilation and air conditioning systems.

### Dimensions:

| Product code        | D, mm | d, mm |
|---------------------|-------|-------|
| REC FLEX HDPEA - 75 | 75    | 63    |
| REC FLEX HDPEA - 90 | 90    | 75    |



### Material:

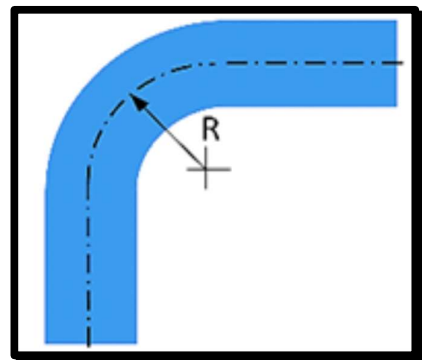
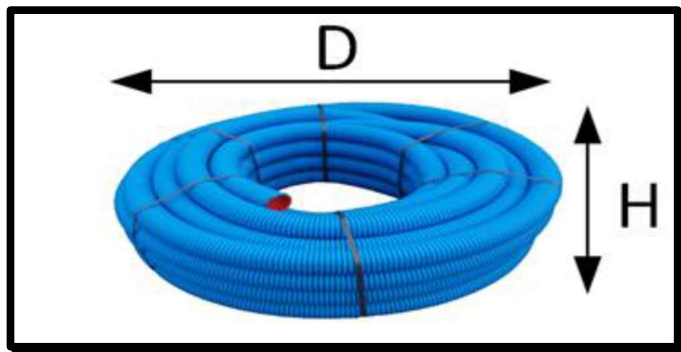
The outer profiled duct is made of unprocessed PE-HD. The inner smooth duct is made of virgin PE-LD with the addition of an effective antifungal and antibacterial additive: zinc pyrithione biocide CAS No 13463-41-7. REC FLEX HDPEA has anti-static properties.

### Regulation on dangerous substances:

The incoming raw materials do not contain hazardous substances in accordance with Regulation (EC) No. 1907/2006 (REACH) and comply with Regulation 2011/65/EU (Restriction of Hazardous Substances Directive) on the content of polybrominated lead, cadmium, mercury and hexavalent chromium, biphenyl (PBB), polybrominated diphenyl ethers (PBDEs), bis (2-ethylhexyl) phthalates (DEHPs), butyl benzyl phthalates (BBP), dibutyl phthalates (DBPs), and di-isobutyl phthalates (DIBP).

### Characteristics:

| Quantity                                    | Size                 | Units of measure                                   | Note                           |
|---|----------------------|--|--------------------------------|
| Roll length                                 | 50 ± 0,5             | m  |                                |
| Weight d75                                  | 300                  | g/m  |                                |
| Weight d90                                  | 420                  | g/m  |                                |
| Bending radius d75                          | 0,29                 | m  |                                |
| Bending radius d90                          | 0,33                 | m  |                                |
| Class of reaction to fire                   | E                    | /  | EN 13501-1                     |
| Ring stiffness                              | 10                   | kN/m <sup>2</sup>                                  | EN ISO 9969                    |
| Resistance to external pressure min.        | 200                  | N  | EN 17192, 3%,<br>200mm,2mm/min |
| Biocidal effect R%                          | >99                  | %  | ISO 22196                      |
| Assessment of the action of micro-organisms | A / C                | /  | EN ISO 846                     |
| Air tightness class                         | D, ATC 2             | m <sup>3</sup> · s <sup>-1</sup> · m <sup>-2</sup> | EN 17192, -2000/+2000 (Pa)     |
| Operating pressure range                    | -500/+500            | Pa   | EN 17192                       |
| Installation ambient temperature            | -5/+50               | °C   |                                |
| Operating temperature                       | -20/+50              | °C   | EN 17192, STL-20 to STH +50    |
| Antistatic properties                       | 1,0.10 <sup>14</sup> | Ω  | IEC 93                         |
| Dimensions of the roll pack d75             | 1.15 x 0.39          | m  | D x H                          |
| Roll packaging dimensions d90               | 1.35 x 0.45          | m  | D x H                          |



**Quality of production:**

Production is certified to EN ISO 9001/2016.

**Identification:**

Product identification: product type-manufacturer-manufacturing order number.

The information may be provided on the label, on the lettering on the duct or both.

**Storage:**

We recommend that duct rolls are stored horizontally on pallets.

Maximum pallet

height -2,8 m. Storage time up to 3 months. Storage ambient temperature -40/+60 (°C).

Factory packed ducts are protected on the pallet by a UV stabilised film with a perforation at the top (allowing air to pass through to reduce the temperature inside the package).

Mechanical damage or deformation of the plastic ducts must be prevented during loading, unloading or handling. The dimensions of the standard packaging are shown in the picture below.

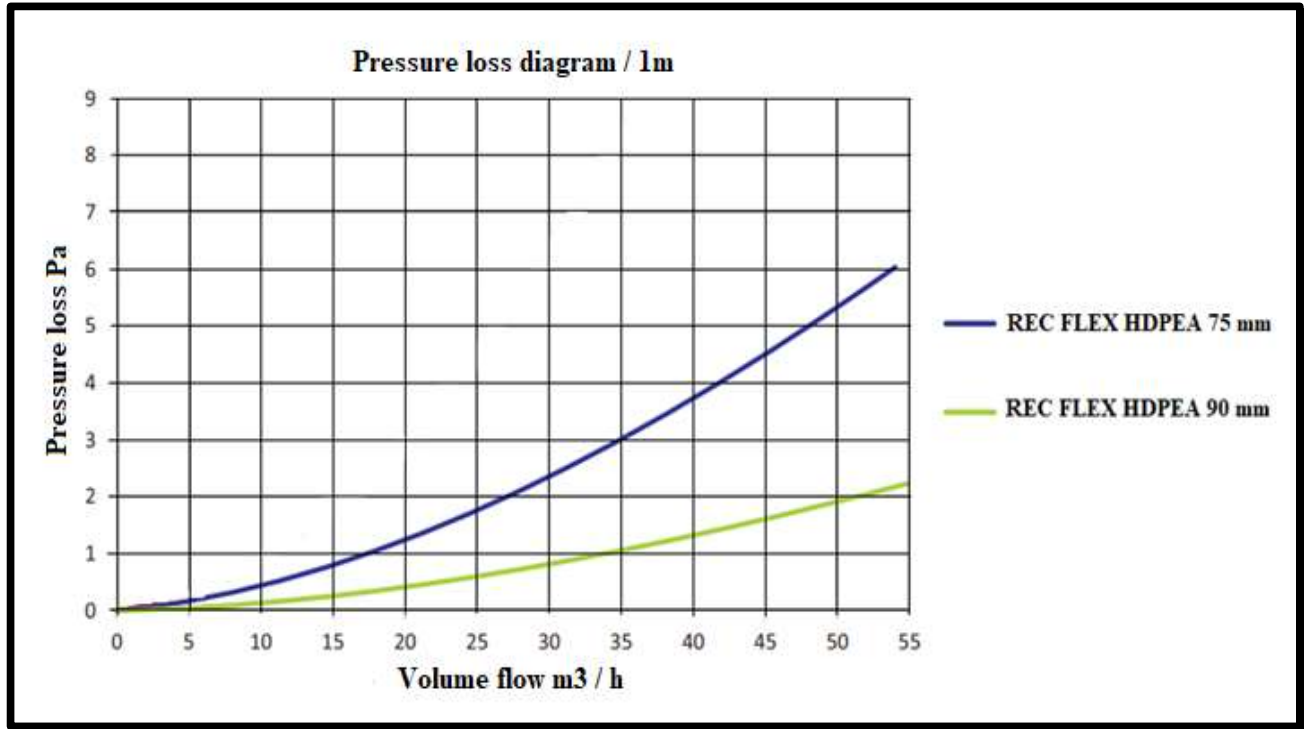
**Recommendations for design and installation:**

Recommended air velocity in the duct is up to 3 m/s.

Maximum distance between duct fixings 1m.



## Pressure loss diagram for REC FLEX HDPEA



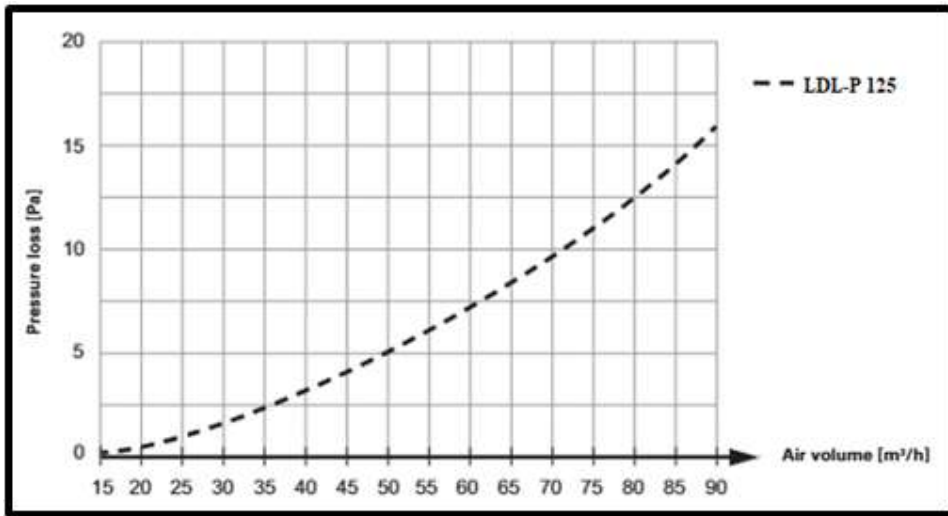
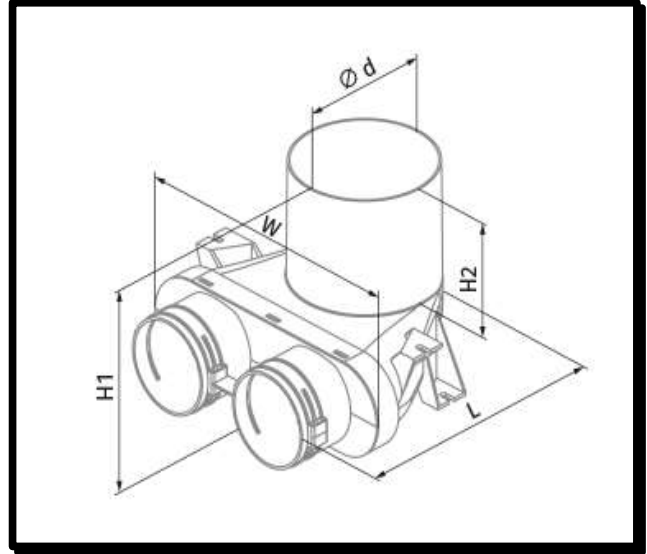
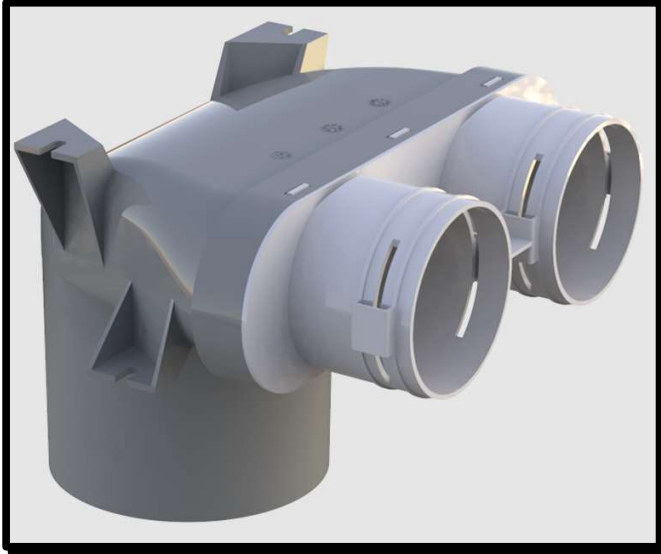
| REC FLEX HDPEA 75 mm |                        |                        |                        |
|----------------------|------------------------|------------------------|------------------------|
| Air duct quantity    | Air speed              |                        |                        |
|                      | 2 m/s                  | 2,5 m/s                | 3m/s                   |
| <b>O</b>             | 21,7 m <sup>3</sup> /h | 27,2 m <sup>3</sup> /h | 32,6 m <sup>3</sup> /h |
| <b>OO</b>            | 43,4 m <sup>3</sup> /h | 54,4 m <sup>3</sup> /h | 65,2 m <sup>3</sup> /h |
| <b>OOO</b>           | 65,1 m <sup>3</sup> /h | 81,6 m <sup>3</sup> /h | 97,8 m <sup>3</sup> /h |

| REC FLEX HDPEA 90 mm |                        |                         |                         |
|----------------------|------------------------|-------------------------|-------------------------|
| Air duct quantity    | Air speed              |                         |                         |
|                      | 2 m/s                  | 2,5 m/s                 | 3m/s                    |
| <b>O</b>             | 31,8 m <sup>3</sup> /h | 39,8 m <sup>3</sup> /h  | 47,7 m <sup>3</sup> /h  |
| <b>OO</b>            | 63,6 m <sup>3</sup> /h | 79,6 m <sup>3</sup> /h  | 95,4 m <sup>3</sup> /h  |
| <b>OOO</b>           | 95,4 m <sup>3</sup> /h | 119,4 m <sup>3</sup> /h | 143,1 m <sup>3</sup> /h |

## LDL-P 125 75/90x2 plastic diffuser connection box

### Application:

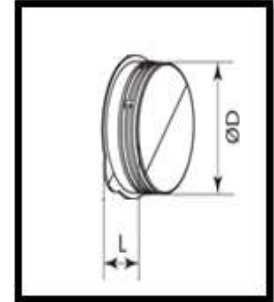
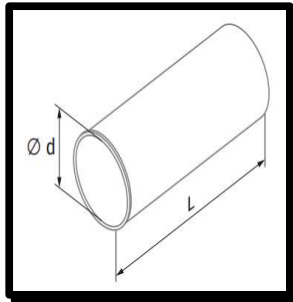
LDL-P diffuser connection boxes are used to connect diffusers to the HDPEA duct system. Rubber gaskets RE 75/90 shall be used to ensure a tight connection.



### Dimensions:

| Type           | W   | H1  | H2  | L   | Ø d |
|----------------|-----|-----|-----|-----|-----|
| LDL-P 125-75x2 | 266 | 183 | 100 | 243 | 127 |
| LDL-P 125-90x2 | 266 | 183 | 100 | 243 | 127 |

**LDL-P attachments:**



**Dimensions:**

| Type             | L   | $\varnothing D$ |
|------------------|-----|-----------------|
| LDL-PB extension | 302 | 127             |
| PL 75 blind      | 32  | 75              |
| PL 90 blind      | 32  | 90              |

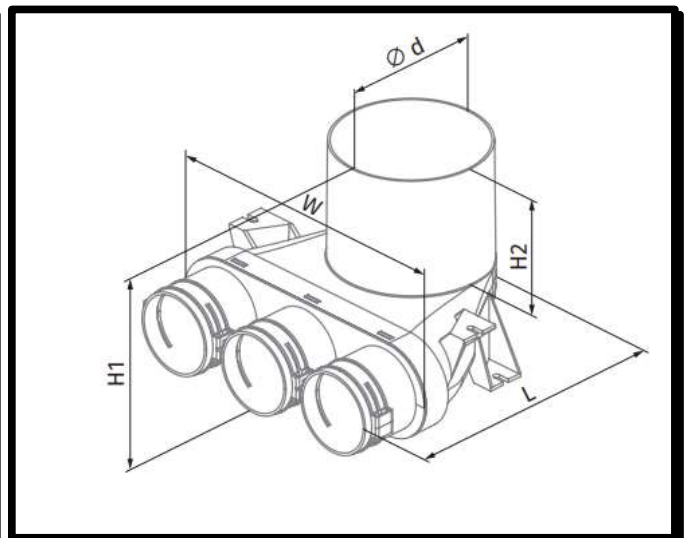
**Construction:**

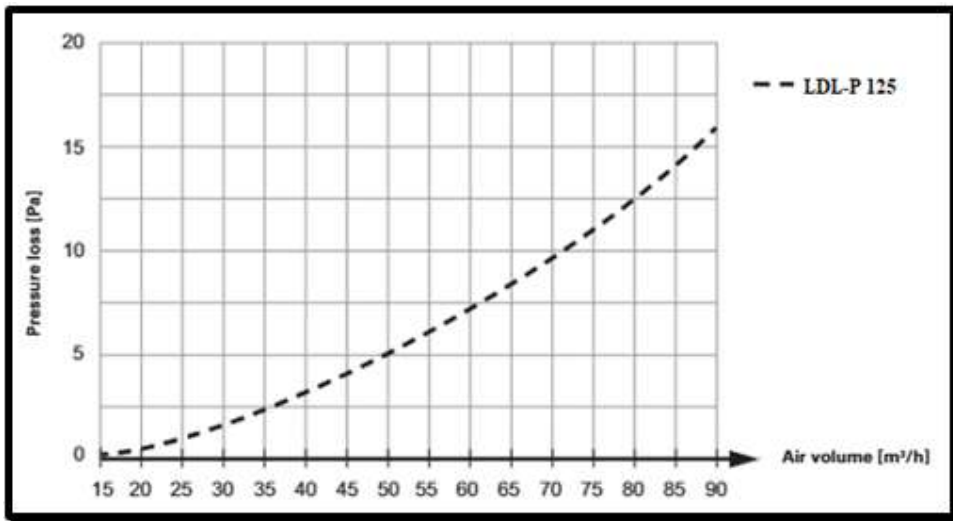
Made of polypropylene PP with thermoplastic (SEBS)

**LDL-P 125 75x3 plastic diffuser connection box**

**Application:**

The LDL-P diffuser connection box is used to connect the diffusers to the HDPEA duct system. Rubber gaskets RE 75 must be used to ensure the tightness of the joint.





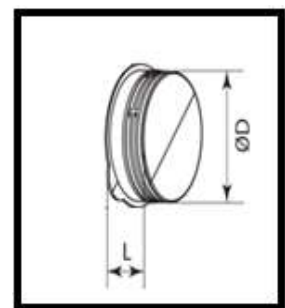
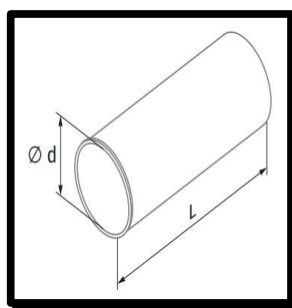
**Dimensions:**

| Type           | W   | H1  | H2  | L   | Ø d |
|----------------|-----|-----|-----|-----|-----|
| LDL-P 125-75x3 | 266 | 183 | 100 | 243 | 127 |

**Construction:**

Made of polypropylene PP with thermoplastic (SEBS)

**LDL-P attachments:**



**Dimensions:**

| Type             | L   | Ø D |
|------------------|-----|-----|
| LDL-PB extension | 302 | 127 |
| PL 75 blind      | 32  | 75  |

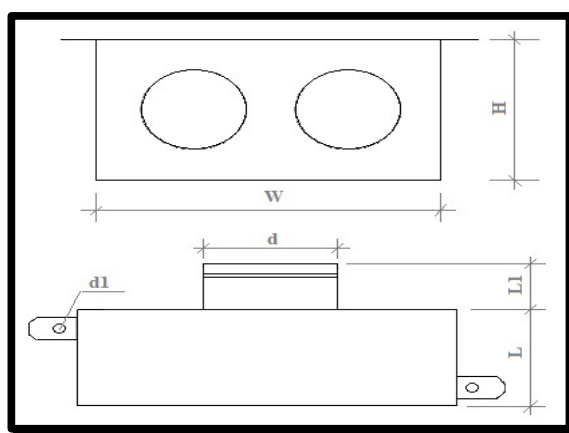
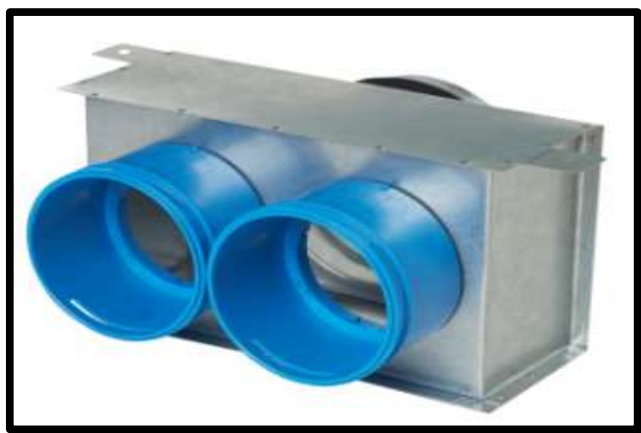
## LDL-H 125-75/90 x 2 diffuser connection box

### Operation:

The LDL-H 125 – 75/90 x 2 diffuser connection box is used to connect diffusers to the REC Flex System duct system in the following standard cases:

- when we want to have an especially quiet operation of the ventilation system (e.g. in bedrooms) we install a flexible AKU Comp silencer between the LDL-H box and the diffuser.
- when the air supply or extract diffuser is mounted on the wall.
- when we do not know in advance the exact installation location of the diffuser in the room. Then by connecting 1 - 2 m of flexible d125 duct to the LDL-H we can easily choose the right location later.

To ensure the tightness of the connection, rubber gaskets RE 75 or RE 90 must be used. Using connectors FP 75 or FP 90, d75 or d90 ducts can be connected to the same LDL-H box.

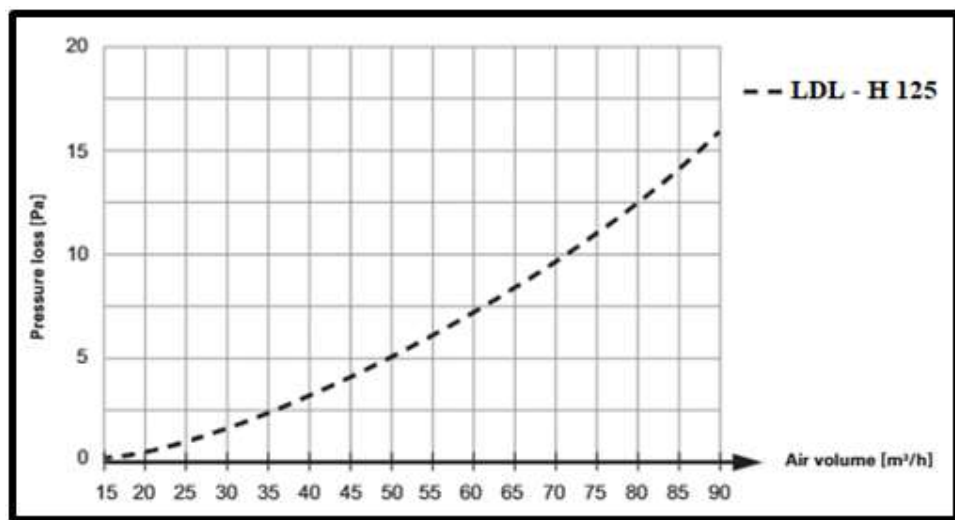


### Dimensions:

| Tipas                | W   | H   | L   | d   | L1 | d1 |
|----------------------|-----|-----|-----|-----|----|----|
| LDL - H 125-75/90 x2 | 245 | 140 | 100 | 125 | 50 | 5  |

### Construction:

Made of galvanized sheet steel Zn 275



## LFT air distribution manifold

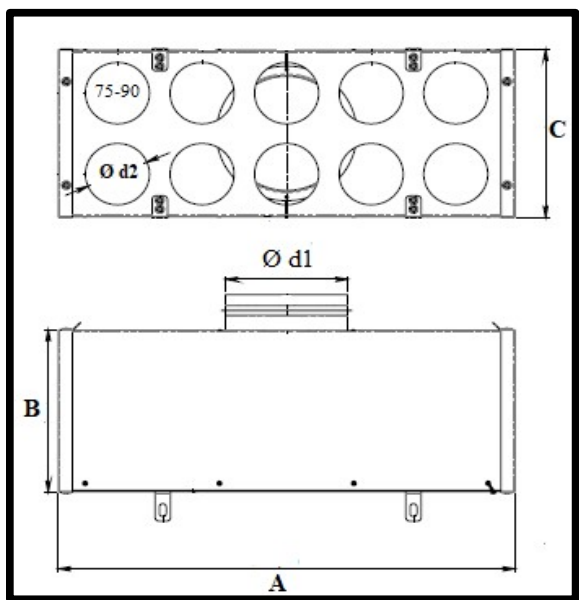
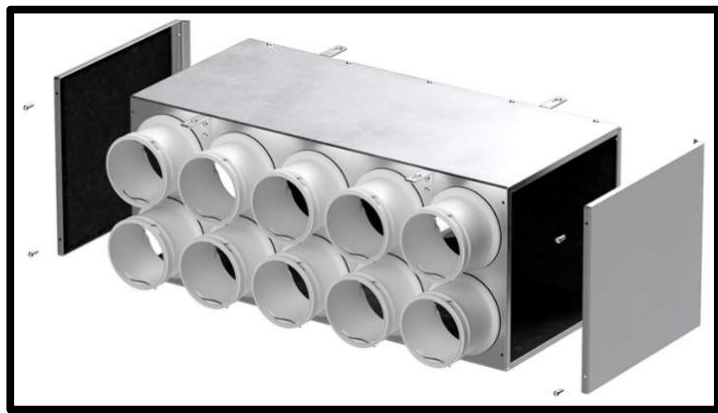
### Operation:

LFT air distribution manifold used for air supply / exhaust from the premises. D75 or d90 ducts can be connected to the same manifold by replacing FP 75 or FP 90 the flanges. When connecting REC Flex HDPEA ducts, rubber gaskets RE 75, RE90 must be used to ensure the tightness of the connection.

LFT-I air distribution manifold, which is additionally insulated 6 mm from the inside with synthetic rubber foam insulation REC FLEX G.

### REC FLEX G insulation properties:

- prevents the growth of bacteria, microorganisms and mold
- has good thermal insulation properties
- high resistance to vapor diffusion
- does not emit dust and fibers
- corrosion resistant
- thickness 6 mm



- Easy-to-replace plastic precision-diameter duct connection coupling
- Branch with double rubber gasket for duct connection
- Internal air distributor made of perforated sheet metal, in 12 and more branch manifolds
- Sealed joints
- Reliable duct fastening with wire clamps
- Collector mounting brackets made of 2mm steel
- Easy-to-remove service hatches on both sides

### Dimensions:

| Type             | A   | B   | C   | L  | d1  | d2    | n  |
|------------------|-----|-----|-----|----|-----|-------|----|
| LFT 160-75/90x5  | 563 | 220 | 150 | 50 | 125 | 75/90 | 5  |
| LFT 160-75/90x6  | 355 | 220 | 215 | 50 | 160 | 75/90 | 6  |
| LFT 160-75/90x8  | 458 | 220 | 215 | 50 | 160 | 75/90 | 8  |
| LFT 160-75/90x10 | 565 | 220 | 215 | 50 | 160 | 75/90 | 10 |
| LFT 160-75/90x12 | 670 | 220 | 215 | 50 | 160 | 75/90 | 12 |
| LFT 200-75/90x14 | 775 | 220 | 253 | 50 | 200 | 75/90 | 14 |
| LFT 200-75/90x16 | 880 | 220 | 253 | 50 | 200 | 75/90 | 16 |
| LFT 200-90x10    | 565 | 220 | 215 | 50 | 200 | 90    | 10 |
| LFT 200-90x12    | 670 | 220 | 215 | 50 | 200 | 90    | 12 |

### Construction:

Made of galvanized sheet steel ZN 275

## LFT air distribution manifold pressure selection table

| Supply air      |      |     |      |     |      |    |      |    |
|-----------------|------|-----|------|-----|------|----|------|----|
| LFT manifold    | m3/h | Pa  | m3/h | Pa  | m3/h | Pa | m3/h | Pa |
| LFT 125-75 x 5  | 50   | 1   | 100  | 4   | 150  | 10 | -    | -  |
| LFT 160-75 x 6  | 60   | 2   | 120  | 6   | 180  | 10 | -    | -  |
| LFT 160-75 x 8  | 80   | 2   | 160  | 6   | 240  | 13 | -    | -  |
| LFT 160-75 x 10 | 100  | 2   | 200  | 6   | 300  | 14 | -    | -  |
| LFT 160-75 x 12 | 120  | 2   | 240  | 7   | 360  | 9  | -    | -  |
| LFT 200-75 x 14 | 140  | 2   | 280  | 7   | 420  | 10 | -    | -  |
| LFT 200-75 x 16 | 160  | 2,5 | 320  | 8,5 | 480  | 17 | -    | -  |
|                 |      |     |      |     |      |    |      |    |
| LFT 125-90 x 5  | 50   | 1   | 100  | 4   | 150  | 10 | 225  | 12 |
| LFT 160-90 x 6  | 60   | 1,5 | 120  | 3,5 | 180  | 5  | 270  | 14 |
| LFT 160-90 x 8  | 80   | 1   | 160  | 3,5 | 240  | 8  | 360  | 22 |
| LFT 160-90 x 10 | 100  | 2   | 200  | 4   | 300  | 7  | 450  | 15 |
| LFT 160-90 x 12 | 120  | 2   | 240  | 4   | 360  | 6  | 540  | 15 |
| LFT 200-90 x 14 | 140  | 2   | 280  | 6   | 420  | 13 | 630  | 30 |
| LFT 200-90 x 16 | 160  | 2   | 320  | 8   | 480  | 19 | 720  | 35 |

| Extract air     |      |     |      |     |      |    |      |    |
|-----------------|------|-----|------|-----|------|----|------|----|
| LFT manifold    | m3/h | Pa  | m3/h | Pa  | m3/h | Pa | m3/h | Pa |
| LFT 125-75 x 5  | 50   | 1   | 100  | 3   | 150  | 9  | -    | -  |
| LFT 160-75 x 6  | 60   | 1   | 120  | 5   | 180  | 9  | -    | -  |
| LFT 160-75 x 8  | 80   | 1   | 160  | 5   | 240  | 12 | -    | -  |
| LFT 160-75 x 10 | 100  | 1   | 200  | 5   | 300  | 13 | -    | -  |
| LFT 160-75 x 12 | 120  | 1   | 240  | 6   | 360  | 8  | -    | -  |
| LFT 200-75 x 14 | 140  | 1   | 280  | 6   | 420  | 9  | -    | -  |
| LFT 200-75 x 16 | 160  | 1,5 | 320  | 7,5 | 480  | 16 | -    | -  |
|                 |      |     |      |     |      |    |      |    |
| LFT 125-90 x 5  | 50   | 1   | 100  | 3   | 150  | 9  | 225  | 11 |
| LFT 160-90 x 6  | 60   | 1   | 120  | 2   | 180  | 4  | 270  | 12 |
| LFT 160-90 x 8  | 80   | 1   | 160  | 2,5 | 240  | 8  | 360  | 19 |
| LFT 160-90 x 10 | 100  | 1   | 200  | 3   | 300  | 6  | 450  | 13 |
| LFT 160-90 x 12 | 120  | 1   | 240  | 3   | 360  | 5  | 540  | 13 |
| LFT 200-90 x 14 | 140  | 1   | 280  | 5   | 420  | 12 | 630  | 25 |
| LFT 200-90 x 16 | 160  | 1   | 320  | 7   | 480  | 18 | 720  | 30 |

**Airtightness class - C.**

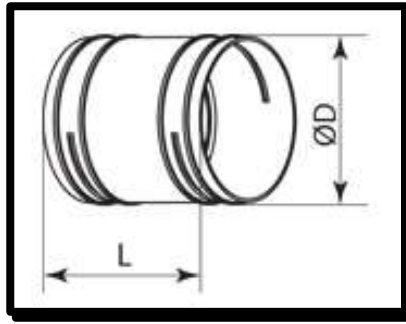
**Tested according to LST EN 15727:2010 Ventilation of buildings. Ducts and duct components, leakage classification and testing.**

## MF plastic coupling for HDPEA ducts

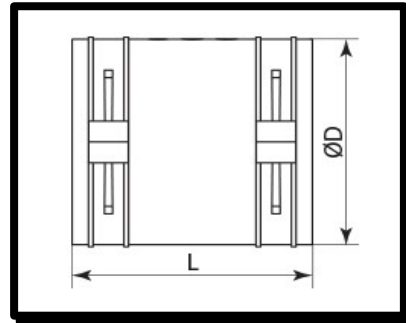
### Operation:

The MF plastic coupling is used to connect the two HDPEA ducts. Rubber gaskets RE 75 or RE 90 must be used to ensure the tightness of the connection, depending on the diameter of the duct to be connected. The clamps ensure the stability of the duct when installed with the coupling.

### HDPEA d75



### HDPEA d90



| Type  | Ø D (mm) | L   |
|-------|----------|-----|
| MF 75 | 75       | 95  |
| MF 90 | 90       | 105 |

### Construction:

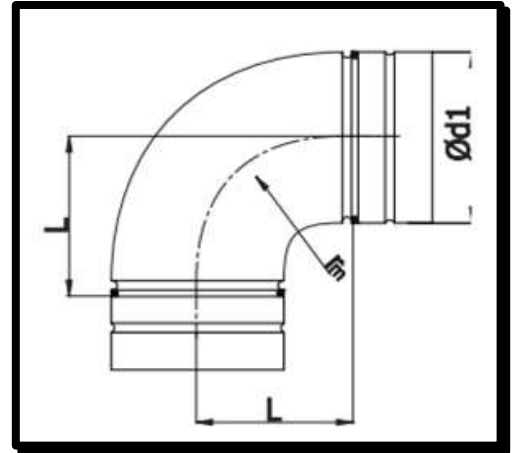
Made of polypropylene PP with thermoplastic (SEBS)

## B 75/90 bend for HDPEA ducts

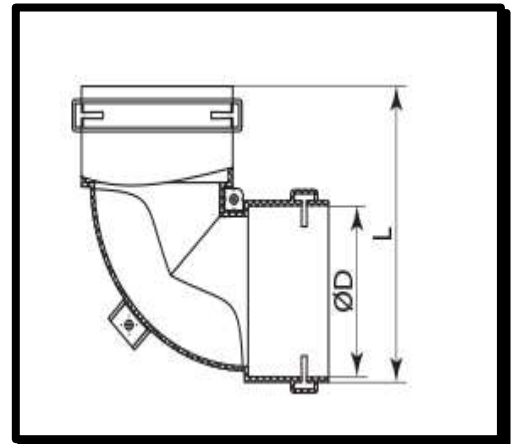
### Operation:

The B 75/90 bend is used to connect two HDPEA ducts at an angle of 90°. Rubber gaskets RE 75/90 must be used to ensure the tightness of the connection.

### B75



### B90



### Dimensions:

| Type | Ø d1 / D (mm) | L   |
|------|---------------|-----|
| B 75 | 75            | 100 |
| B90  | 90            | 167 |

### Construction:

B75 - made of galvanized sheet steel ZN 275

B90 - made of polypropylene PP with thermoplastic (SEBS)

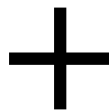
## PL plastic end cap

### Operation:

Plastic blind PL is used to blindly and tightly close unused couplings of the diffuser connection box and air distribution manifold.



### Installation:



### Dimensions:

| Type  | D (mm) |
|-------|--------|
| PL 75 | 75     |
| PL 90 | 90     |

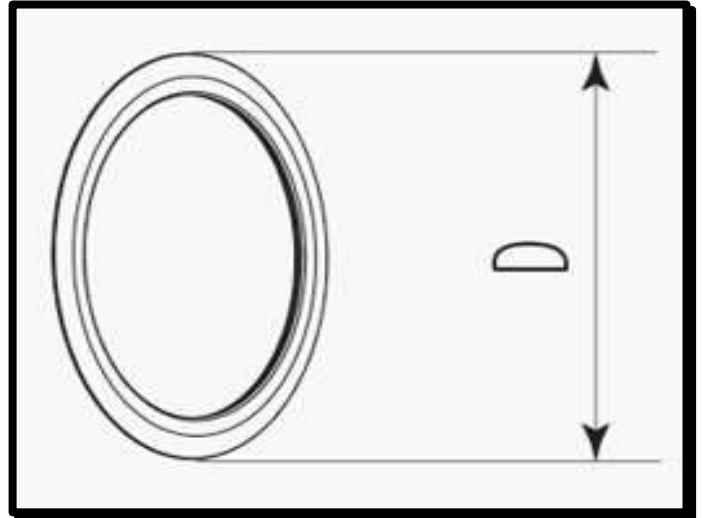
### Construction:

Made of polypropylene PP with thermoplastic (SEBS)

## RE rubber gasket for REC FLEX HDPEA ducts

### Operation:

Rubber gasket RE is used for sealing REC FLEX HDPEA duct joints with diffuser connection boxes LDL, LDL-P, air distribution manifolds LFT, dampers RRD, couplings MF 75/90, elbows B 75/90.



### Dimensions:

| Type  | D (mm) |
|-------|--------|
| RE 75 | 79     |
| RE 90 | 94     |

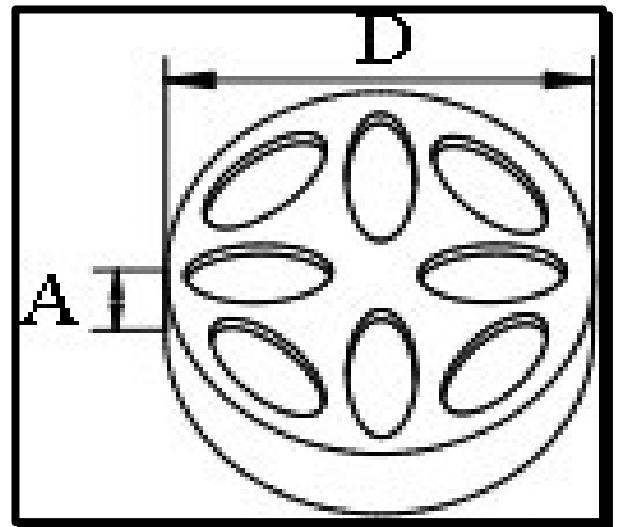
### Material:

EPDM rubber

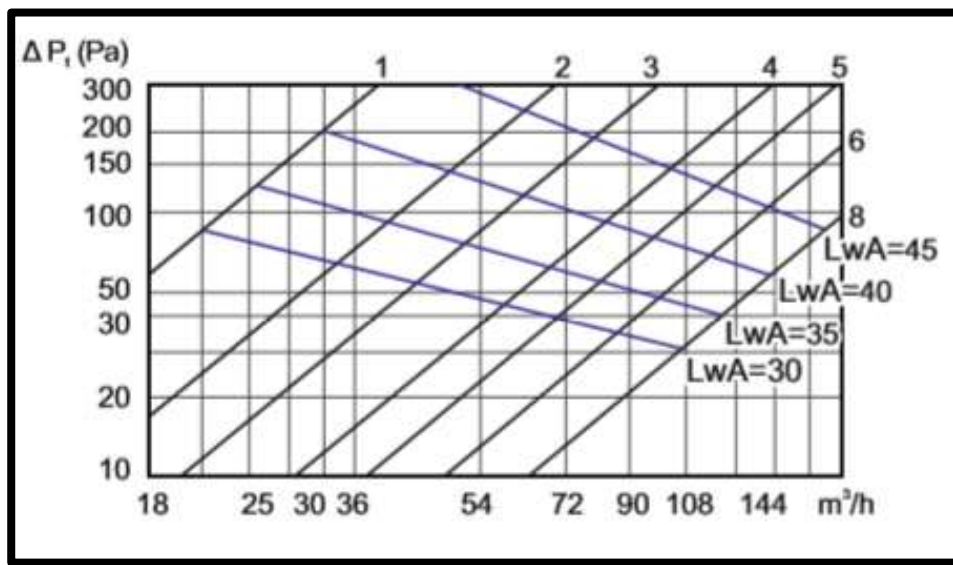
## INNO dampers for airflow control and sound insulation

### Application:

INNO damper used for airflow control and sound insulation in diffuser connection boxes LDL-P.



### Number of holes opened:



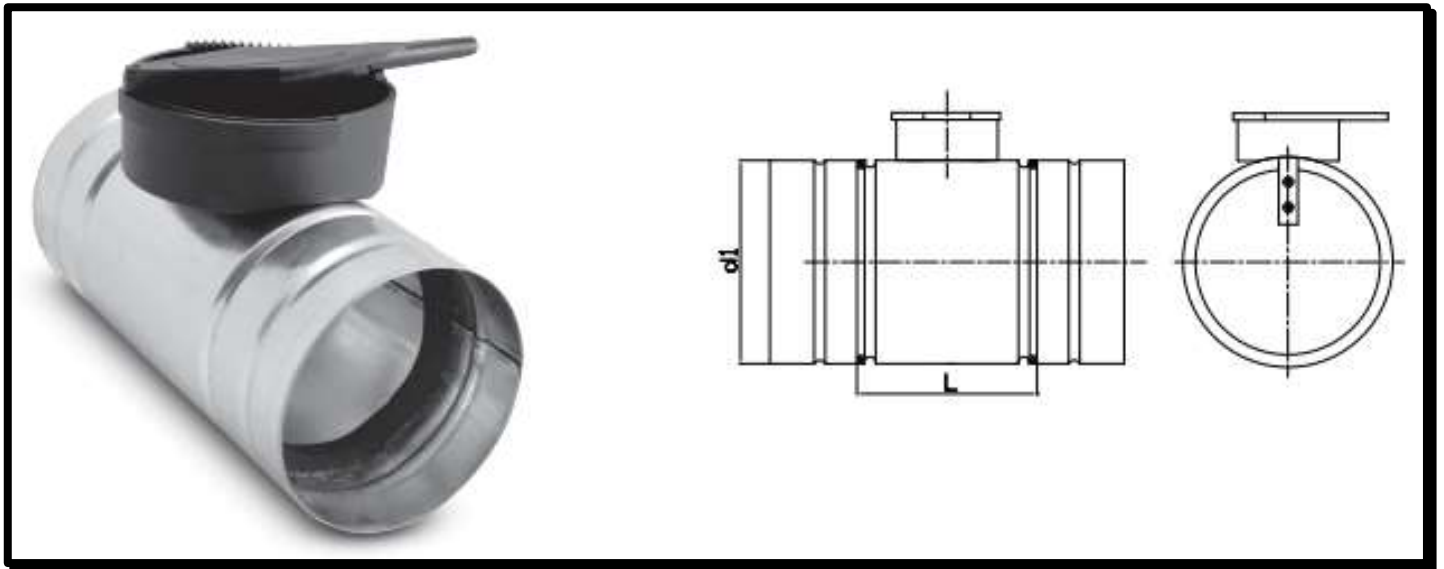
### Dimensions:

| Type     | D (mm) | A (mm) |
|----------|--------|--------|
| INNO-125 | 125    | 40     |

## RRD damper for air flow regulation

### Application:

The RRD damper is used for airflow control, rotation angle from 0 to 90°, mounted in a flexible d75 or d90 REC FLEX HDPEA duct.



### Dimensions:

| Type   | d1 | L   |
|--------|----|-----|
| RRD 75 | 75 | 110 |
| RRD 90 | 90 | 110 |

### Construction:

Made of galvanised sheet Zn 275,  
The axis of the valve is fitted with a sealing gasket to prevent air leakage.

### Material:

Plastic PP, tinplate Zn 275