

# Lindab **Dampers & Measure units**

Product overview

# We simplify construction

At Lindab we are driven by a strong desire to continuously generate improvements and to simplify construction. We do that by developing products and systems that are easy to use and energy efficient, together with industry-leading knowledge, support, logistics and efficient availability.

We want to simplify everything – from designing, ordering, delivery, goal achievement and installation to the entire way of doing business with us. By simplifying in every stage of the construction process, we also contribute to energy-efficiency.

## A good thinking company

Good thinking is a deeply rooted philosophy that guides us in everything we do. We firmly believe that good thinking makes good solutions to the challenges we all face. Taking responsibility for what we do and how we do things is therefore important to us. Because good thinking is not only about making life easier and more comfortable for our customers and end users. It is also a matter of thinking in a global perspective, all the time. Knowing that we at Lindab are helping to make the world a better place.

## Dampers and measuring units for optimized air volume in your duct system

Our dampers and measuring units gives you clear benefits, and helps you regulate the air flow in your building, creating a perfect indoor climate with fresh air, low sound levels, and optimum comfort.

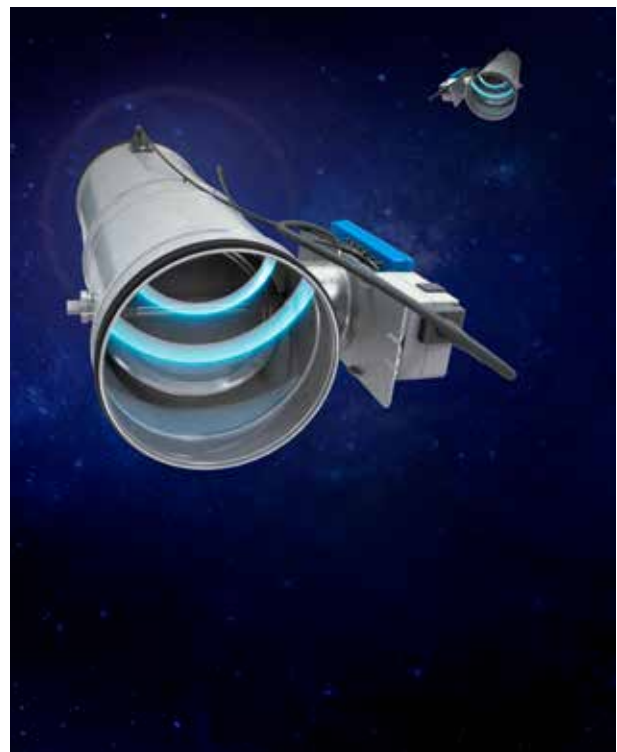
Dampers are installed in ventilating equipment for various purposes, such as: regulating, shut off, motorized, constant flow and variable flow. Flow meters are used to decide airflow rate in a duct system. Our range is extensive, and our solutions for dampers and measuring units includes; regulating dampers, shut-off dampers, cleaning dampers, constant- and variable flow units and sliding dampers.

Permanently installed flow meters gives more accurate reading than what measurement with handheld measuring equipment will give, and you can also continuously supervise the system.

You can have the dampers manual or motorized, electric or pneumatic. This means we can supply solutions for every requirement and for every segment. Regardless of whether your project is within housing, offices, industry or the marine sector.

Furthermore, our dampers and measuring units are extremely installation-friendly. Also the products with Lindab Safe and Lindab Safe Click connections are certified to strength and leakage in tightness class D according to Eurovent Certified performance program for circular metallic duct systems.

Quality, service and knowledge have always been crucial factors for the customers that have chosen us as a partner. So, behind each solution lies industry leading expertise, extensive research, evaluation and full documentation.



# General

## Dampers for different purposes are used in a ventilation system

**Regulating dampers** are used to balance the plant so that the wanted air flow is achieved.

The damper blade is normally designed so that a certain flow of air can always leak through, even if the damper is closed. This makes the sensitivity to angle changes less than for a shut-off damper.

Dampers are available in both manual and automatic versions. The manual dampers are adjusted when the installation is commissioned, and are cheaper than the automatic ones. On the other hand, manual dampers need many more hours of adjustment, and means of flow measurement. For this reason, some dampers have measuring nozzles. In large systems, or where pressure variations occur, it is better to use automatic dampers. These are also referred to as constant flow dampers.

**Shut-off dampers** are used to save energy, to prevent the spread of poisonous gas etc. These dampers often have rubber seals on the damper blade. The damper can either be designed as a straight piece of ducting, or as a T-piece to switch the air flow from one duct to another. The blade is normally either fully open or fully closed.

## Tightness

Three types of classification is described for dampers:

### 1. Tightness to the environment

This specifies the magnitude of the air leakage through joints and leaks in the duct sides in relation to the duct surface. This leakage is classified into tightness classes A, B, C and D. Most dampers can be used in installations/ systems which require them to maintain tightness class D.

These casing leakages is measured as l/s/m<sup>2</sup> according to EN 1751 that stipulates a virtual surface area on the damper that is the circumference of the damper times 1 meter. The same method can be found in EN 15727.

### 2. Tightness past a closed damper shutter

This refers to the amount of air leaking past the closed blade, in relation to shutter area. This relationship is classified into five sealing classes 0-4. There is no tightness requirement for class 0. The classes 0 and 1 are regulating dampers. The highest class, tightness class 4, refers to very tight shut-off dampers.

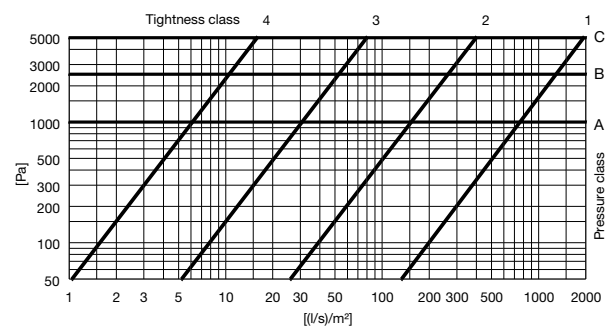
The tightness classes is measured according to EN 1751.

### 3. Pressure classes

This refers to the highest static pressure over the blade that is allowed to fulfill the tightness classes past a closed damper shutter. The classification is divided into three pressure classes, A 1000 Pa, B 2500 Pa and C 5000 Pa.

The pressure classes is described in the Swedish Building Code VVS AMA.

## Tightness past the closed damper blade and pressure classes



## Motorized dampers

Dampers can be supplied ex works with actuators installed. Various types of actuators are available, both electric and pneumatic.

## Material

### Standard

Bushings are made from polyamide. The bushings can withstand constant temperatures of up to 150 °C.

### Special

If a higher corrosivity class is required than standard Galvanized Z275 (C3), some of the dampers can be produced from several material such as:

- Stainless steel EN 1.4301 (AISI 304)
- Stainless steel, acid proof EN 1.4404 (AISI 316L)
- Aluminium Zink AZ 185
- ZinkMagnesium ZM 310
- Powder coated polyester epoxy

You can read about the corrosivity of the different materials in our [General information and theory](#).

The blades can also be provided with silicone rubber seals for higher temperature operation. The dampers can then withstand constant temperatures of 150 °C and 200 °C intermittent. In these cases, please contact Lindab.

## CE-labeling

Our dampers with electrical shifting motor are regarded as components of the duct system and need not to be separately CE-labeled. Their electrical shifting motor on the contrary is a part of the electrical system and is CE-labeled. Assurance of conformity can be found at [www.belimo.com](http://www.belimo.com).

## Blade setting

DRU and DSU dampers of dimensions Ø63–160 are supplied with their blades completely open, to facilitate adjustment preparations. Dampers of other dimensions are supplied with closed blades to prevent transport damage.

## Cleaning of duct system

Most dampers have components which obstruct the duct system to a greater or lesser extent, and thus obstruct or prevent cleaning.

## Motorized dampers

In this overview we show our standard range of motorized dampers. Other combinations of dampers and motors can be ordered, and it is also possible to build your own motorized damper using a standard damper and buy accessories from Lindab.

Please read more about this in our mounting instruction for dampers by clicking [here](#) or visiting [www.lindab.com](http://www.lindab.com).

## Eurovent certification

Lindab's circular duct system with rubber gasket connections Lindab Safe and Lindab Safe Click is certified to strength and leakage in tightness class D according to the Eurovent Certified Performance program for circular metallic ducts systems (DUCT-MC). Check ongoing validity of certificate:

[www.eurovent-certification.com](http://www.eurovent-certification.com)



The circular dampers with the safe and safe click connection is a part of this system certification program.

Lindab products that are Eurovent certified have the Eurovent logotype in the footer of the technical documentation.

Note: Most Lindab Safe and Lindab Safe Click and the most commonly used product in a ventilation system are essentially better than class D, however some products are according to EN 15727 not class D as a single product. These products are stated in the documentation as Class C and can be used in D class systems to a limited extension.

# lindQST – Lindab Quick Selection Tool

[lindQST](#) is an advanced web tool that makes the selection of our solutions quick and simple.




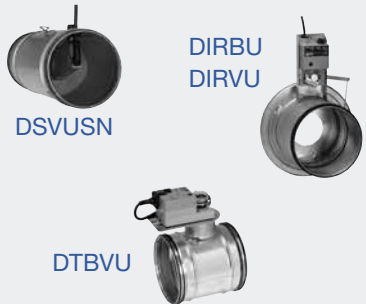


With lindQST all documentation is made available directly on the web. That means consultants, installers and architects always have access to the latest documentation, installation instructions and product images etc. lindQST is a unique online tool where you can simulate your room in the Indoor Climate Designer, keep track of your projects and share it with your business partners etc. lindQST provides a simple shortcut to Lindab's material and is a tool that speeds up and simplifies the daily work. All information is just a mouse-click away.



# Product overview

Click on the product for link to detailed technical information, or visit [www.lindab.com](http://www.lindab.com)

## Standard dampers



	To regulate	To shut-off
<b>manual</b>	 <p>DRU      DIRU</p>	 <p>DSU      DTU      DTMU</p>
<b>Prepared for motor</b> electric or pneumatic		 <p>DTH1U      DTHU DTH2U</p>
<b>with motor</b> electric	 <p>DSVUSN      DIRBU      DIRVU DTBVU</p>	 <p>DSUSN      DTBU      DTBCU DTFU      DTBLU</p>
<b>with motor</b> pneumatic		 <p>DTPU</p>

## Cleaning dampers

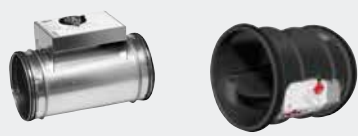

	To regulate	To shut-off
<b>manual</b>	 <p>PSDRU      TDRU</p>	

# Product overview

## Alternating dampers

	To regulate	To shut-off
manual		 <p>TASU      TATU</p>
with motor    electric		 <p>TATBU</p>

## Constant- and variable flow units (automatic dampers)

	To regulate	To shut-off
manual	 <p>DAU      VRL1</p>	
with motor    electric	 <p>DAVU DA2EU</p>	

Click on the product for link to detailed technical information, or visit [www.lindab.com](http://www.lindab.com)

## Back draft dampers

	To regulate	To shut-off
manual		 <p>CAR      CARU      RSKA</p>

# Product overview

## Flow meters



FMDRU



FMU



FMDU

## Flow meters with ultrasonic sensor

### UltraLink Monitor



FTMU

### UltraLink Controller



FTCU

Click on the product for link to detailed technical information, or visit [www.lindab.com](http://www.lindab.com)

## Other dampers

### Rectangular dampers



LKSR



JSM



JSMM  
JSMMU

### Insulated dampers



DSUI

### Sliding dampers



SKMTR



SKPTR

## Accessories

### Insulation cup



IK

### Handles



DRHTG



HANDLE

### Assembly kits



MSATS PPWS  
MSATS P0WS

### Extension spindles



VREDF 15 60  
VREDF 15 100



AXFL

### Mounting shelves



KOMHY



KOMHY  
LONG



LÖMOK



HYLLA  
PNEU


# Tightness and pressure classes

## Dampers

Pressure class*	Tightness class*				
	0	1	2	3	4
	To regulate		To shut-off		
<b>A</b>	DRU	DSU Ø355-1000	DSUSN		DTU Ø710-1000
	DIRU	DSVUSN	TATU		DTHU Ø710-1000
	DIRBU		TATBU		DTBU Ø710-1000
	DIRVU				DTBVU Ø710-800
	DSU Ø63-315				
	PSDRU				
	TDRU				
	TASU				
	DAU				
	VRL1				
	DA2EU				
	DAVU				
	<b>B</b>				
					DTMU Ø355-630
					DTHU Ø355-630
					DTH1U Ø355-630
					DTBU Ø355-630
					DTBCU Ø355-630
					DTBVU Ø355-630
					DTPU Ø355-630
				FTCU Ø355-630	
<b>C</b>					DTU Ø80-315
					DTMU Ø80-315
					DTHU Ø80-315
					DTH1U Ø80-315
					DTH2U Ø80-315
					DTBU Ø80-315
					DTBCU Ø80-315
					DTBVU Ø80-315
					DTFU Ø80-250
					DTBLU Ø80-315
					DTPU Ø80-315
					FTCU Ø80-315

Click on the product for link to detailed technical information, or visit [www.lindab.com](http://www.lindab.com)

\* see page 3



Click or scan the QR-code to view mounting instructions for our dampers >>  
Or visit [lindab.com](http://lindab.com)





## Good Thinking

**At Lindab**, good thinking is a philosophy that guides us in everything we do. We have made it our mission to create a healthy indoor climate – and to simplify the construction of sustainable buildings. We do that by designing innovative products and solutions that are easy to use, as well as offering efficient availability and logistics. We are also working on ways to reduce our impact on our environment and climate. We do that by developing methods to produce our solutions using a minimum of energy and natural resources, and by reducing negative effects on the environment. We use steel in our products. It's one of few materials that can be recycled an infinite number of times without losing any of its properties. That means less carbon emissions in nature and less energy wasted.

**We simplify construction**