SAVINGS BOOK

TEDDINGTON
AIR CURTAIN SYSTEMS

DOORS MADE
OF AIR.

IT'S NOT A TRICK, JUST PHYSICS.

Hot air rises, opening the door to heat loss. An air curtain system counteracts the unpleasant consequences of the thermal and incoming cold air.

This reduces energy costs and creates a good indoor climate.

Energy-saving

Savings of over 80 % are possible compared to unprotected entrances.

Environmental protection

Energy that is not required does not need to be produced. Air curtain systems make a significant contribution to reducing heating costs and emissions.

Cost saving

Thanks to their high efficiency, Teddington air curtain systems pay for themselves in a very short time, enabling you to save money. Day in and day out.

Sense of well-being

Customers are more disposed to stay and spend money in a shop that is at a comfortable temperature. The level of sickness of your workforce is also reduced.

WHY AIR CURTAINS?

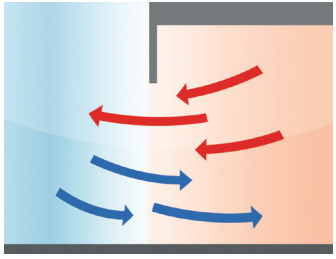
Physics reserves the right to balance air masses in all types of busy public buildings.

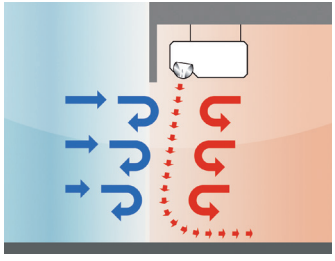
Warm air that has previously been heated at great expense then escapes through doors.

We have perfected the “Doors made of air” principle and developed several applications with it.

Today energy-saving air curtain systems are used in the following places:

- **Shops and salesrooms**
- **Shopping malls**
- **Banks and office buildings**
- **Industrial buildings and logistics centres**
- **and many other areas**



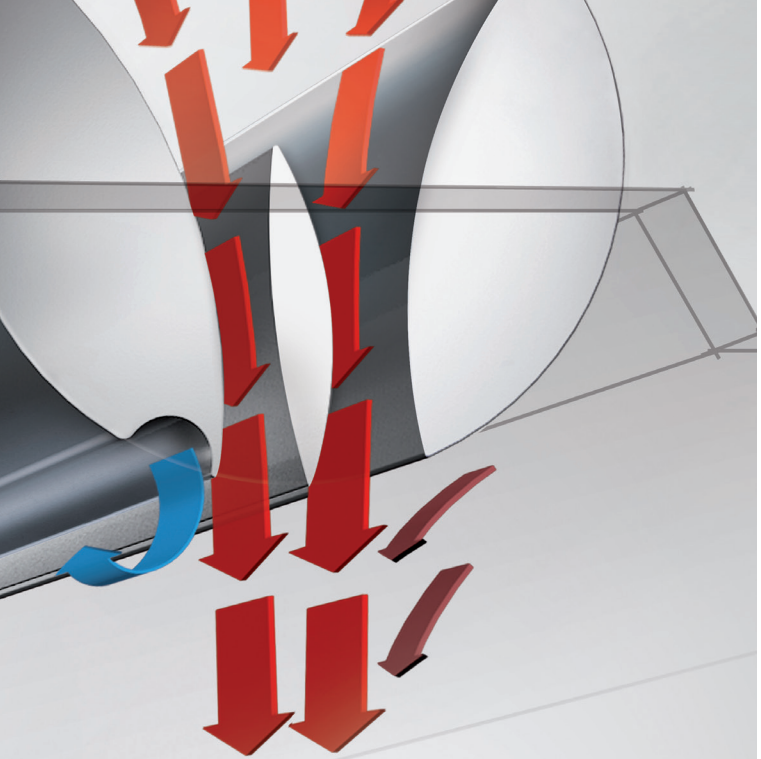


The task of an air curtain system is to prevent unpleasant incoming cold air in the entrance area, and this is achieved using a counter-current.

In order to generate optimal use and comfort, the volume flow rate, speed, temperature and momentum must correspond to the force of the incoming cold air.

OUR SYSTEMS OFFER THE FOLLOWING:

- **HIGH LEVEL OF EFFICIENCY**
- **ENERGY SUSTAINABILITY**
- **OUTSTANDING QUALITY**



THE TECHNOLOGY MAKES THE DIFFERENCE.

Our patented CONVERGO® pressure chamber nozzle system is based on the Venturi principle. In addition, aerofoil shaped profiles divide the jet of air into a core jet and a support jet, and then bring it back together again. A fillet on the outer nozzle profile deflects the unwanted proportions of outdoor air, while the “soft” edge on the inside of the nozzle profile brings about the desired induction of indoor air into the air curtain.

The result is a powerfully directed jet of air that enables high and wide doors to be screened using little energy.

CONVERGO®
GREENtec®

LESS ENERGY
GREATER EFFICIENCY

The discharge angle of the CONVERGO® system may be finely adjusted to adapt the air curtain to local conditions.

FOR ALL APPLICATIONS

Shop & Business

Design

Industries

SAVINGS EXAMPLE 1 (A-SERIES)

INNER CITY TEXTILES SHOP

Initial situation

Door measurements	2.5 x 2.4 m (open all day)
Outdoor temperature	Up to - 5 °C
Heating period	178 days (open approx. 150 days)
Operating time	80 days à 10 hrs. (-5 °C / +7 °C) 70 days à 6 hrs. (+7 °C /+10 °C)
Total	**1,220 hours**

	With air curtain A-3-S-250 N			Without air curtain through the exchange of air at the door		
Operating duration	Hrs.	kW	kWh	Inflow	kW	kWh
Of which at Level 4	200	26.7	5,340	1.0 m/s	77.0	15,400
Of which at Level 3	600	23.7	14,220	0.8 m/s	54.0	32,400
Of which at Level 2	420	18.9	7,938	0.5 m/s	21.0	8,820
Efficiency loss	25 %		14,155			
Energy expenditure			41,653			56,620

Difference

14,967 kWh
(à 0.08 €)

Annual savings with Teddington A-3-S-250 N

1,197.00 €

Upward trend.

The fig. shows the A-Series of units by way of example

SAVINGS EXAMPLE 2 (C-SERIES)

INNER CITY TEXTILES SHOP

Initial situation

Door measurements	2.5 x 2.4 m (open all day)
Outdoor temperature	Up to - 5 °C
Heating period	178 days (open approx. 150 days)
Operating time	80 days à 10 hrs. (-5 °C / +7 °C) 70 days à 6 hrs. (+7 °C /+10 °C)
Total	**1,220 hours**

	With air curtain C-2-S-250 N			Without air curtain through the exchange of air at the door		
Operating duration	Hrs.	kW	kWh	Inflow	kW	kWh
Of which at Level 4	200	20.3	4,060	1.0 m/s	77.0	15,400
Of which at Level 3	600	18.2	10,920	0.8 m/s	54.0	32,400
Of which at Level 2	420	14.5	6,090	0.5 m/s	21.0	8,820
Efficiency loss	15 %		8,493			
Energy expenditure			29,563			56,620

Difference

27,057 kWh
(à 0.08 €)

Annual savings with Teddington C-2-S-250 N

2,165.00 €

Upward trend.

The fig. shows the C-Series of units by way of example

SAVINGS EXAMPLE 3 (E-SERIES)

INNER CITY TEXTILES SHOP

Initial situation

Door measurements	2.5 x 2.4 m (open all day)
Outdoor temperature	Up to -5 °C
Heating period	178 days (open approx. 150 days)
Operating time	80 days à 10 hrs. (-5 °C /+7 °C) 70 days à 6 hrs. (+7 °C /+10 °C)
Total	**1,220 hours**

	With air curtain E-2-S-250 N			Without air curtain through the exchange of air at the door		
Operating duration	Hrs.	kW	kWh	Inflow	kW	kWh
Of which at Level 4	200	20.5	4,100	1.0 m/s	77.0	15,400
Of which at Level 3	600	18.4	11,040	0.8 m/s	54.0	32,400
Of which at Level 2	420	14.7	6,174	0.5 m/s	21.0	8,820
Efficiency loss	15 %		8,493			
Energy expenditure			29,807			56,620

Difference

26,813 kWh

(à 0.08 €)

Annual savings with Teddington E-2-S-250 N

2,145.00 €

Upward trend.

The fig. shows the E-Series of units by way of example

SAVINGS EXAMPLE 4 (E-SERIES)

INNER CITY DRUGSTORE AUTOMATIC DOOR

Initial situation

Door measurements	2.2 x 2.0 m
Outdoor temperature	Up to - 5 °C
Heating period	178 days (open approx. 150 days)
Operating time	100 days á 10 hrs. therefrom 4 hours opening time, otherwise space heating
Total	**1,000 hours**

	With air curtain E-1-S-200 N			Without air curtain through the exchange of air at the door		
Operating duration	Hrs.	kW	kWh	Inflow	kW	kWh
Of which at Level 4	400	14.4	5,760	1.5 m/s	85.0	34,000
Of which at Level 1	600	6.1	3,660	0.02 m/s	1.1	660
Efficiency loss	15 %		5,199			
Energy expenditure			**14,619**			**34,660**

Difference

20,041 kWh

(à 0.08 €)

Annual savings with Teddington E-1-S-200 N

1,603.00 €

Upward trend.

The fig. shows the E-Series of units by way of example

SAVINGS EXAMPLE 5 (ELLIPSE)

MULTI-STOREY CLOTHING STORE

Initial situation

Door measurements	3.0 x 3.0 m (open all day)
Outdoor temperature	Up to -5 °C
Heating period	178 days (open approx. 150 days)
Operating time	20 days à 10 hrs. (-5 °C / 0 °C) 60 days à 10 hrs. (0 °C /+5 °C) 70 days à 6 hrs. (+5 °C /+10 °C)
Total	**1,220 hours**

	With air curtain Ellipse-3-300 N			Without air curtain through the exchange of air at the door		
Operating duration	Hrs.	kW	kWh	Inflow	kW	kWh
Stepless	200	49.0	9,800	1.2 m/s	139.0	27,800
Stepless	600	43.0	25,800	0.8 m/s	80.0	48,000
Stepless	420	32.0	13,440	0.5 m/s	31.0	13,020
Efficiency loss	15 %		13,323			
Energy expenditure			62,363			88,820

Difference

26,457 kWh

(à 0.08 €)

Annual savings with Teddington Ellipse-3-300 N

2,117.00 €

Upward trend.

The fig. shows the Ellipse series of units by way of example

SAVINGS EXAMPLE 6 (RATIOVENT)

MATERIALS HANDLING PASSAGE

Initial situation

Door measurements	4.5 x 4.0 m (door open approx. 60 x 3 min.)
Outdoor temperature	Up to -5 °C
Heating period	178 days (approx. 110 workdays)
Operating time	15 days à 3 hrs. (below 0 °C) 70 days à 3 hrs. (up to 5 °C) 25 days à 3 hrs. (up to 10 °C)
Total	**330 hours**

	With air curtain Ratiovent-SW-H-420 N			Without air curtain through the exchange of air at the door		
Operating duration	Hrs.	kW	kWh	Inflow	kW	kWh
Of which at Level 5	45	89.0	4,005	2.0 m/s	464.0	20,880
Of which at Level 4	210	70.0	14,700	1.5 m/s	302.0	63,420
Of which at Level 3	75	62.0	4,650	1.0 m/s	124.0	9,300
Efficiency loss	15 %		14,040			
Energy expenditure			37,395			93,600

Difference

56,205 kWh
(à 0.08 €)

Annual savings with Teddington Ratiovent-SW-H-420 N

4,496.00 €

Upward trend.

The fig. shows the Ratiovent series of units by way of example

SAVINGS EXAMPLE 7 (RATIOVENT)

FACTORY PASSAGE

Initial situation

Door measurements	5.0 x 5.0 m (door open approx. 10 x 15 min.)
Outdoor temperature	Up to - 5 °C
Heating period	178 days (approx. 110 workdays)
Operating time	15 days à 2,5 hrs. (below 0 °C) 70 days à 2,5 hrs. (up to 5 °C) 25 days à 2,5 hrs. (up to 10 °C)
Total	**275 hours**

	With air curtain Ratiovent-SW-V-480 NK (left & right)			Without air curtain through the exchange of air at the door		
Operating duration	Hrs.	kW	kWh	Inflow	kW	kWh
Of which at Level 5	37.5	134.0	5,025	2.0 m/s	645.0	24,188
Of which at Level 4	175.0	108.0	18,900	1.5 m/s	419.0	73,325
Of which at Level 3	62.5	97.0	6,063	1.0 m/s	172.0	10,750
Efficiency loss	15 %		16,239			
Energy expenditure			46,227			108,263

Difference

62,036 kWh
(à 0.08 €)

Annual savings with Teddington Ratiovent-SW-V-480 NK (left & right)

4,963.00 €

Upward trend.

The fig. shows the Ratiovent series of units by way of example

GREENtec®

OUR CONTRIBUTION TO ENERGY EFFICIENCY.

With GREENtec®, Teddington offers units that have all been optimised from an energy-saving point of view:

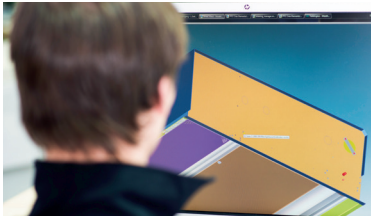
- **Enhanced CONVERGO® pressure chamber nozzle system**
- **Energy-saving EC motors in accordance with the new ErP guidelines**
- **Low temperature heat exchanger**
- **Flexible, intelligent control unit**

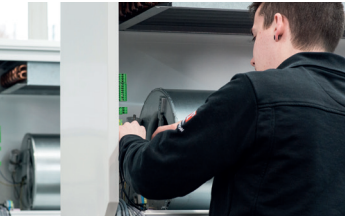
The result: absolute energy efficiency.

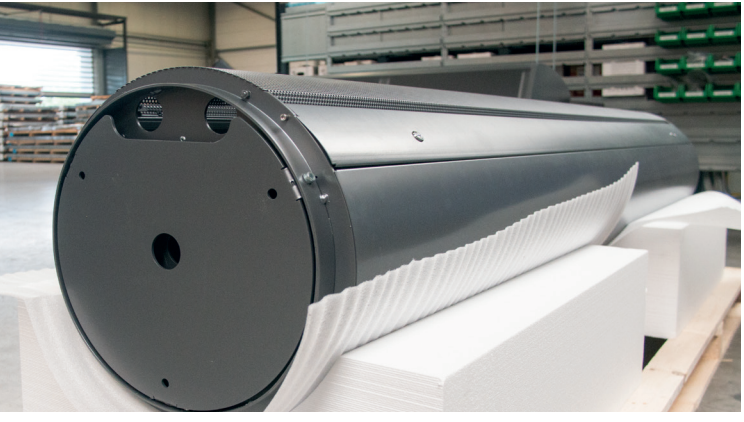
In this way the GREENtec® systems achieve significantly greater energy savings with the same high screening efficiency and maximum comfort.

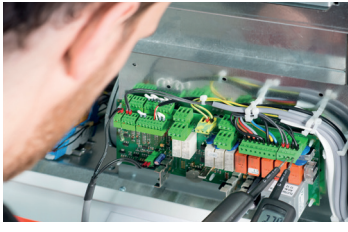
This makes economic sense because GREENtec® systems from Teddington pay for themselves, at which point you will make money.

QUALITY IN PROCESSES AND PRODUCTS.









QUALITY IN PROCESSES AND PRODUCTS.

- **Sound advice during the planning phase**
- **Decades of experience in design and production**
- **Modern production facilities**
- **Individual test reports**
- **Provision of digital planning data**
- **Reliable service whenever and wherever you need support**
- **ISO-certified in accordance with 9001:2015**

FAMILY-OWNED AND INDEPENDENT.

Thomas Hennecke

Stephan Hennecke

Since presenting the first air curtain system developed in Germany, we have continued to set pioneering trends and benchmarks.

As a non-affiliated family enterprise, we are the oldest German manufacturer on the market. Flat hierarchies, short decision-making channels and in-house manufacturing at our own premises directly benefit our customers.

NATIONALLY AND INTERNATIONALLY WELL-POSITIONED.

You can find further information at:
www.teddington.de

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Teddington. The benchmark for air curtain technology.