TROX® TECHNIK
The art of handling air

EDUCATION

Good air is a factor in your quality of life, especially in enclosed rooms. Schools in particular have special requirements when it comes to ventilation. TROX offers perfectly tailored air conditioning (air conditioning systems and ventilation systems) for optimum ventilation in schools.

At present, there are about 40,000 mainstream schools in Germany, many of which are in need of refurbishment. Energy efficient refurbishment of schools allows municipal authorities to cut their energy consumption and save money in the long run. Air conditioning from TROX can reduce a school's energy requirement by 70% on average.

PRODUCTS FOR SCHOOLS

Decentralised ventilation units from TROX are available in various construction styles and with various equipment features – from a simple construction to a comprehensive multifunctional device. All devices have been tested in practice for years.

Under sill units are particularly suitable for use in refurbishments; they can be installed under the windows or in the window casements.

OUR REFERENCES

With its extensive product portfolio, TROX offers the most advanced technological solutions to create the best possible conditions for a healthy environment and efficient learning in schools and universities. TROX SCHOOLAIR is the perfect solution for schools - energy-efficient ventilation solutions tailored to classroom needs.

TROX SCHOOLAIR - ADVANTAGES AND INFORMATION

FRESH AIR FOR LEARNERS

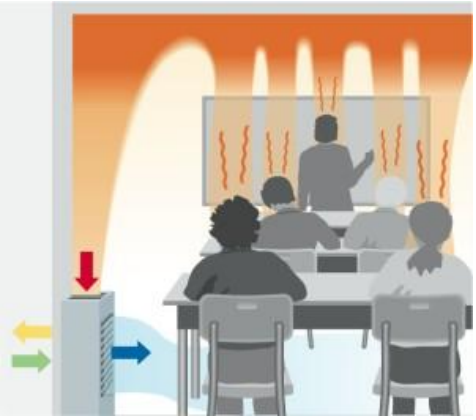
Saving costs by energy efficient refurbishment

At present, there are about 40,000 mainstream schools in Germany, many of which are in need of refurbishment. Energy efficient refurbishment of schools allows municipal authorities to save a great deal of money in the long run. Half of the annual energy costs a municipal authority has to pay can be attributed to the schools. Energy efficient refurbishment can lower the energy requirement of a school by 70% on average. This opens up a massive savings potential for municipal authorities, which considerably relieves the budget year after year.

Mechanical ventilation is absolutely necessary

The replacement of façades and windows improves the imperviousness and heat insulation of the building envelope and makes a mechanical ventilation of classrooms absolutely necessary. Otherwise, a danger of mould is not the only threat in case of insufficient ventilation. The air quality in particular can sink dramatically in classrooms occupied with up to 30 pupils.
In city centres, EN 13779 requires a CO_2 concentration of 1,200 ppm above the content in outdoor air as the standard value for a low room air quality (IDA 4). Higher concentrations lead to a drop in performance, headaches and indisposition. A bad indoor environment means a bad learning environment!

FLEXIBLE, EFFICIENT AND AFFORDABLE



Classrooms place high demands on supply and extract ventilation. They are sometimes used extensively with up to 30 people. A fresh air flow rate from 15 to 20 m3/h is usually assumed for each person. This results in an overall volume flow rate from 300 to 600 m3/h per classroom.
To achieve an optimum air distribution, the supply air should preferably be supplied

to the room at a minimum of two points with a displacement flow. In the case of a construction with a heat exchanger unit, the devices are efficiently supplied with water as the energy transfer medium.
Decentralised ventilation systems are very flexible. They can be regulated for individual rooms and specific requirements, thus minimising operating costs.

Made-to-measure comfort

- Minimum noise characteristics
- Optimum energy efficiency
- Optional cooling function
- Intelligent control system

SYSTEMS

TWO INTELLIGENT TYPES

For horizontal or vertical
installation on or in front of the sill

- TROX SCHOOLAIR-B
- TROX SCHOOLAIR-V

ADVANTAGES AT A GLANCE:

• Improved well-being and higher performance and concentration due to an optimum supply of fresh air
• Complete solution for ventilation, heating, and cooling (additional heaters and air conditioning are superfluous)
• Saving of heating energy due to heat recovery
• Low investment costs due to affordable unit price and low design and construction costs
• Fast and simple installation by the delivery of units that are ready for installation
• Great flexibility due to purpose designed equipment and demand-based control