

# Swegon Solutions



## Swegon PUBLIC™

Complete package solution for a demand-controlled and economical indoor climate in schools and public buildings.

**Swegon**<sup>i</sup>  
ENERGIZING INDOOR CLIMATE

# Demand-controlled and economical indoor climate.

The GOLD air handling unit together with active air diffusers or the passive air diffusers in the CEILING Collection and KCD controller constitute a flexible package solution in Swegon Public. Ventilation is then demand-controlled and several different control options can be utilized.

## Special Needs

In public buildings, such as schools and libraries, the load caused by occupants varies substantially as the day progresses. This normally requires complicated solutions to achieve correct airflow and temperature at every individual point in time and for every individual load condition.

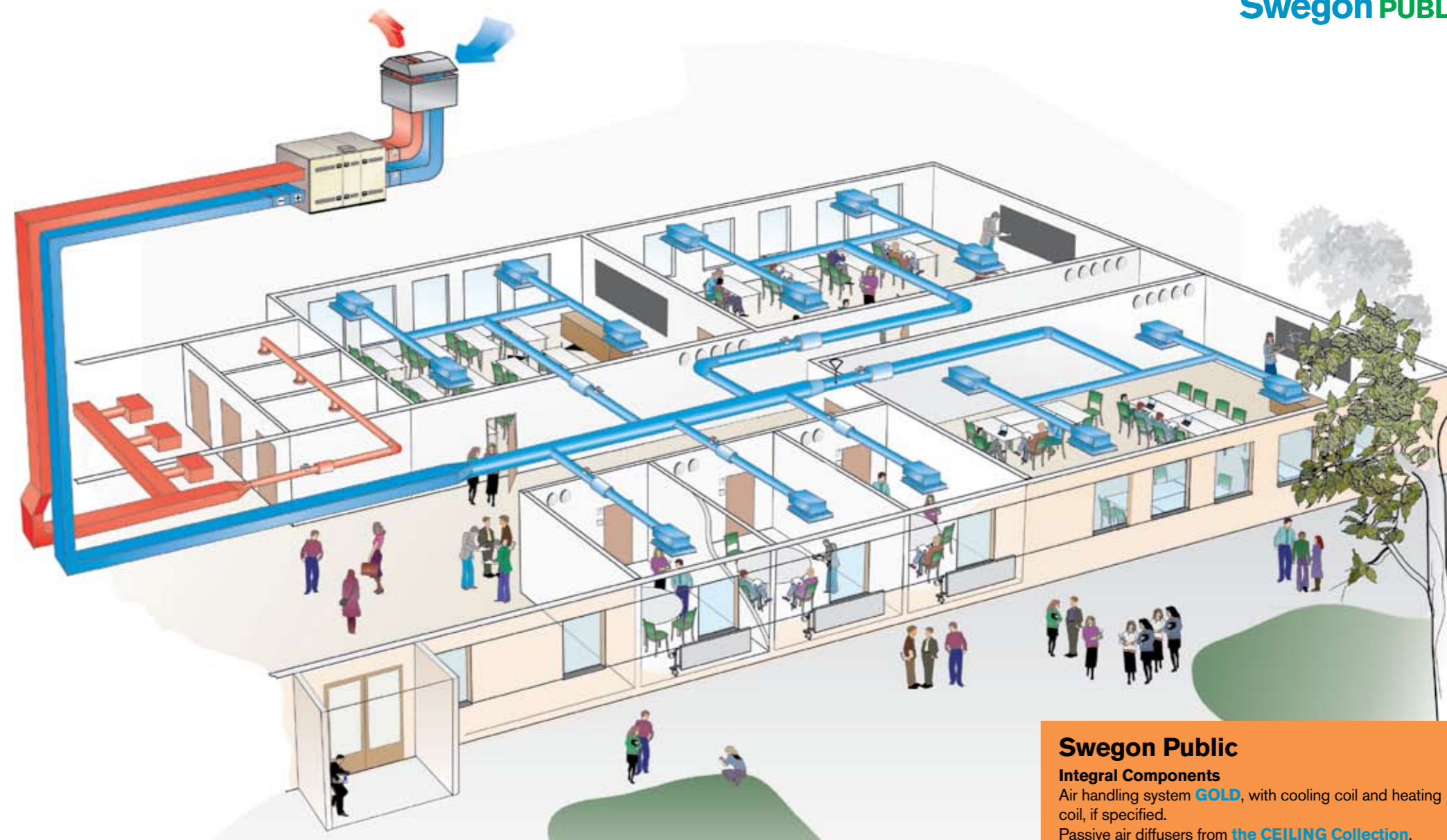
## Swegon Public

Swegon Factory is a simple and cost-effective solution that involves mixing several types of zones, both with variable airflow and constant airflow.

The concept is based on having the GOLD supply the rooms with preheated/cooled air at a constant supply air temperature of 15-18°C. The pressure in the supply air duct is kept constant and the flow to the extract air fan is slave controlled so that the supply air and the extract air will be kept in balance. The extract air from each room leaves via transfer grilles, doors or other openings and is then evacuated at a central location.

At room level, the intelligent KCD room controller controls temperatures and air quality in response to signals from temperature sensors and CO<sub>2</sub>-sensors, or presence detectors. This solution provides a demand-controlled and substantially energy-saving ventilation system. If the design outdoor temperatures exceed -15°, and if GOLD RX units (with rotary heat exchanger) are used, the system can in many cases manage without any reheating coils. This saves on both initial investment costs and subsequent maintenance costs.

## Swegon Bonus



## Swegon BONUS

### Swegon Public

A simple and uncomplicated solution with low initial investment and installation costs.

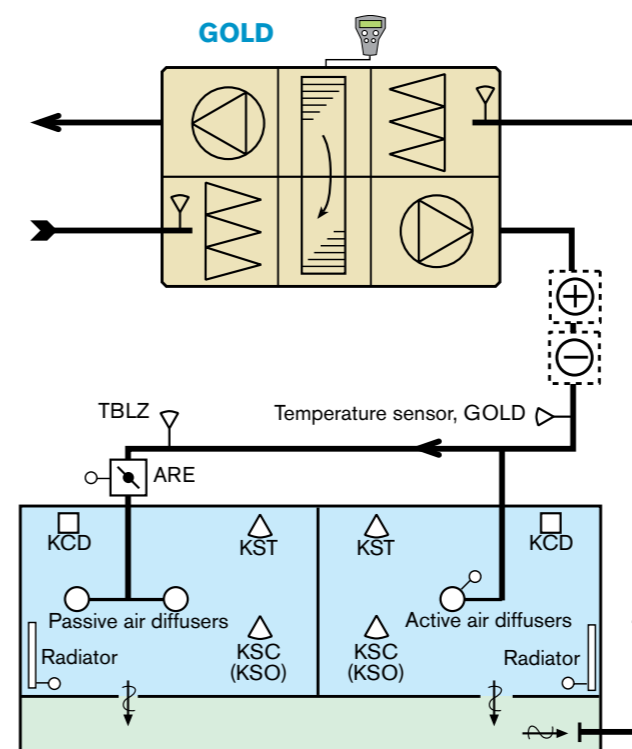
All the control functions are included as standard in the GOLD System and several control options are possible.

The unique control functions make it possible in many cases to manage without any reheating coils, and this makes the installation work simpler and less expensive, and means lower maintenance costs. Temperatures and airflows can be compensated for various seasons of the year, which gives good operating economy. Demand-controlled ventilation offers optimal comfort and optimal operating economy.

Swegon's active and passive air diffusers allow large flow variations and the discharge of supply air substantially below room temperature without risk of draught.

The highest degree of comfort in terms of low noise, draught-free ventilation and superb air quality provide an invigorating indoor climate.

Eurovent certificated units with zero tolerance mean that all data that we specify is consistent with actual performance.



## Swegon Public

### Integral Components

Air handling system **GOLD**, with cooling coil and heating coil, if specified.

Passive air diffusers from **the CEILING Collection**.

Active air diffusers: type **ACK**, **ACL** and **AKY**.

Pressure sensor, **TBLZ**. Duct damper, **ARE**.

Room controller, **KCD** and room unit, **KST** for temperature and CO<sub>2</sub>-sensor, **KSC**, or presence detector, **KSO**. Radiators can be equipped with valve actuator, **LUNA**.

### Functions

The GOLD keeps the supply air temperature constantly at the preset value and has provision for winter and summer compensation.

The TBLZ pressure sensor keeps the pressure constant in the supply air duct.

The extract air is evacuated as common transfer air via corridors or the like and is slave controlled to the same flow as the supply air.

**Rooms with active air diffusers:** The KCD room controller regulates the air volume and temperature in each room by opening/closing the active air diffusers in response to signals from the KST room unit and the KSC CO<sub>2</sub>-sensor, or KSO presence detector.

The KCD room controller can also control the LUNA valve actuators for radiators.

**Rooms with passive air diffusers:** The KCD room controller regulates the air volume and temperature in each room by opening/closing the ARE duct dampers in response to signals from the KST room unit and the KSC CO<sub>2</sub>-sensor, or KSO presence detector.

The KCD room controller can also control the LUNA valve actuators for radiators.

# The products in SwegonPUBLIC

## **GOLD** Air handling system

The GOLD is a complete one-piece air handling unit for comfort ventilation available in several sizes for airflows up to 28,800 m<sup>3</sup>/h (8 m<sup>3</sup>/s). The GOLD is available with rotary heat exchanger, plate heat exchanger or coil heat exchanger or as separate supply air and extract air handling units.

The GOLD has built-in type IQnomic control equipment with a large number of functions that can be activated when they are needed.

The control equipment can communicate with most supervisory systems available on the market and in networks with web interface.

The GOLD is certified with guaranteed values by Eurovent (AHU 06-06-319).

## **Active and passive** air diffusers

The airflow is regulated by means of Swegon's active air diffusers via a rotatable slot in the diffuser face or via a damper in the commissioning box.

The active air diffusers are designed to manage temperatures substantially below room temperature and airflow ranges and yet generate low noise levels.

The passive air diffusers in Swegon's CEILING Collection are disc air diffusers in which it is possible to change the pattern of diffusion as needed without changing the airflow, pressure drop or noise level.

Characteristic of Swegon's disc air diffusers is that they manage substantial cooling capacities and variable airflows without risk of draught.

## **KCD room controller**

The KCD is an electronic room controller designed for controlling active air diffusers or dampers. It can control temperatures, presence and carbon dioxide content and also control valve actuators for radiators.



*GOLD RX air handling unit  
with rotary heat exchanger.*



*Examples of active air diffusers.*



*Examples of passive air diffusers in the Ceiling Collection.*



*KCD room controller.*

*Swegon manufactures air handling systems, power roof ventilators, air terminals, waterborne indoor climate systems for ceiling and exterior wall mounting, acoustical products and control systems.*

[www.swegon.com](http://www.swegon.com)

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