

# Office Solution

AIR



Complete package solution  
for an invigorating  
indoor climate in offices

**Swegon**

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Als het om lucht gaat.

**AUERHAAN**  
KLIMAATTECHNIEK

# Correct indoor climate all year round with minimal energy consumption

The most important economic figure for offices is the cost in relation to income from lettable floor area. The use of this area must be flexible, although comfort is the highest priority. Installations must take up as little space as possible.

## Special Demands

Office premises usually have surplus heat from people, computer equipment, lighting, etc. There is a significant need to maintain an even temperature and a good indoor climate, irrespective of the season or outdoor temperature. Moreover, occupants often have a great need for individual variations at room level.

Rooms can be divided flexibly using modules, varying between single offices, double offices, open-plan offices and conference rooms.

## Office Solution Air

Cooling and heating production using reversible TETRIS and the GOLD air handling system, together with the ADAPT Colibri active supply air diffuser, is the underlying structure, which along with the Super WISE intelligent control unit make up the package solution Office Solution Air, the optimal airborne solution for a good indoor climate in offices.

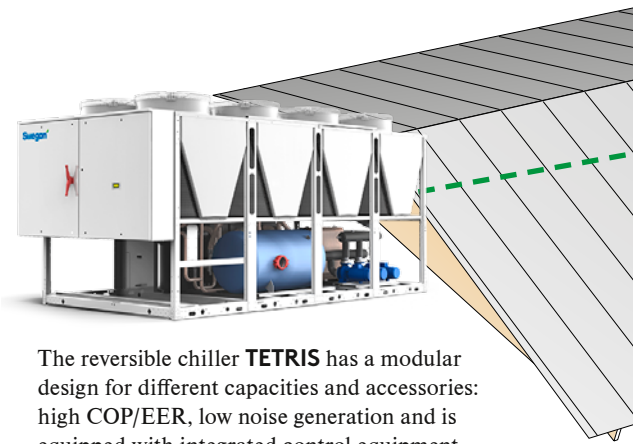
The ADAPT Damper room control damper and the COLIBRI Ceiling air diffuser are used in conference rooms and, in some cases, in open-plan offices.

The room's heating requirements are satisfied by means of TETRIS with a water-borne radiator system, whose thermostat is controlled by the WISE system. For a simultaneous cooling requirement free cooling in the supply air is used.

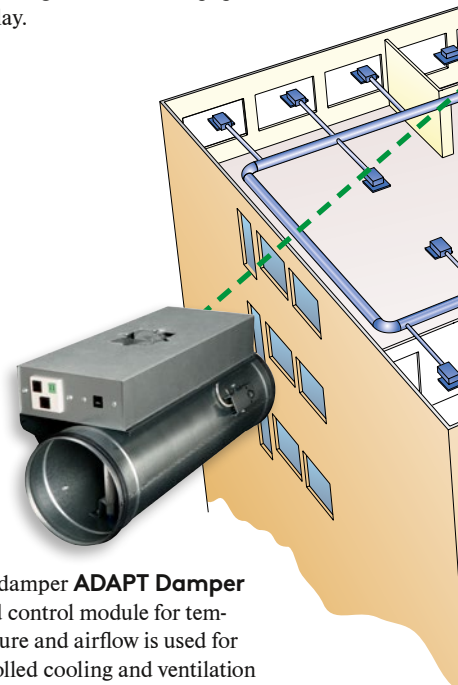
Cooling and ventilation requirements in each room are controlled with the aid of a temperature sensor and presence detector integrated into ADAPT Colibri. Each room module can be controlled separately for the maximum possible comfort.

GOLD and TETRIS units provide a constant supply air temperature. Supply air and extract air ducts have constant pressure control. The pressure is continually optimised by Super WISE in order to save energy and therefore the environment. If the outdoor temperature is below 15°C, only free cooling is used in order to save energy.

GOLD, TETRIS and Super WISE can also supervise and control the entire Office Solution Air via the integrated web interface, via Swegon NESTOR or via an external supervisory system. Remote connection is possible with the help of Swegon Remote Access.



The reversible chiller **TETRIS** has a modular design for different capacities and accessories: high COP/EER, low noise generation and is equipped with integrated control equipment for plug-and-play.



Room control damper **ADAPT Damper** with integrated control module for temperature, pressure and airflow is used for demand-controlled cooling and ventilation in conference rooms or open-plan offices.

## Swegon Bonus

### Demand-controlled and flexible

- Air volume and cooling energy as required
- Flexible division of office modules and open plan offices
- Adjustable air direction
- Individual room regulator if required

### Built-in control equipment with communication

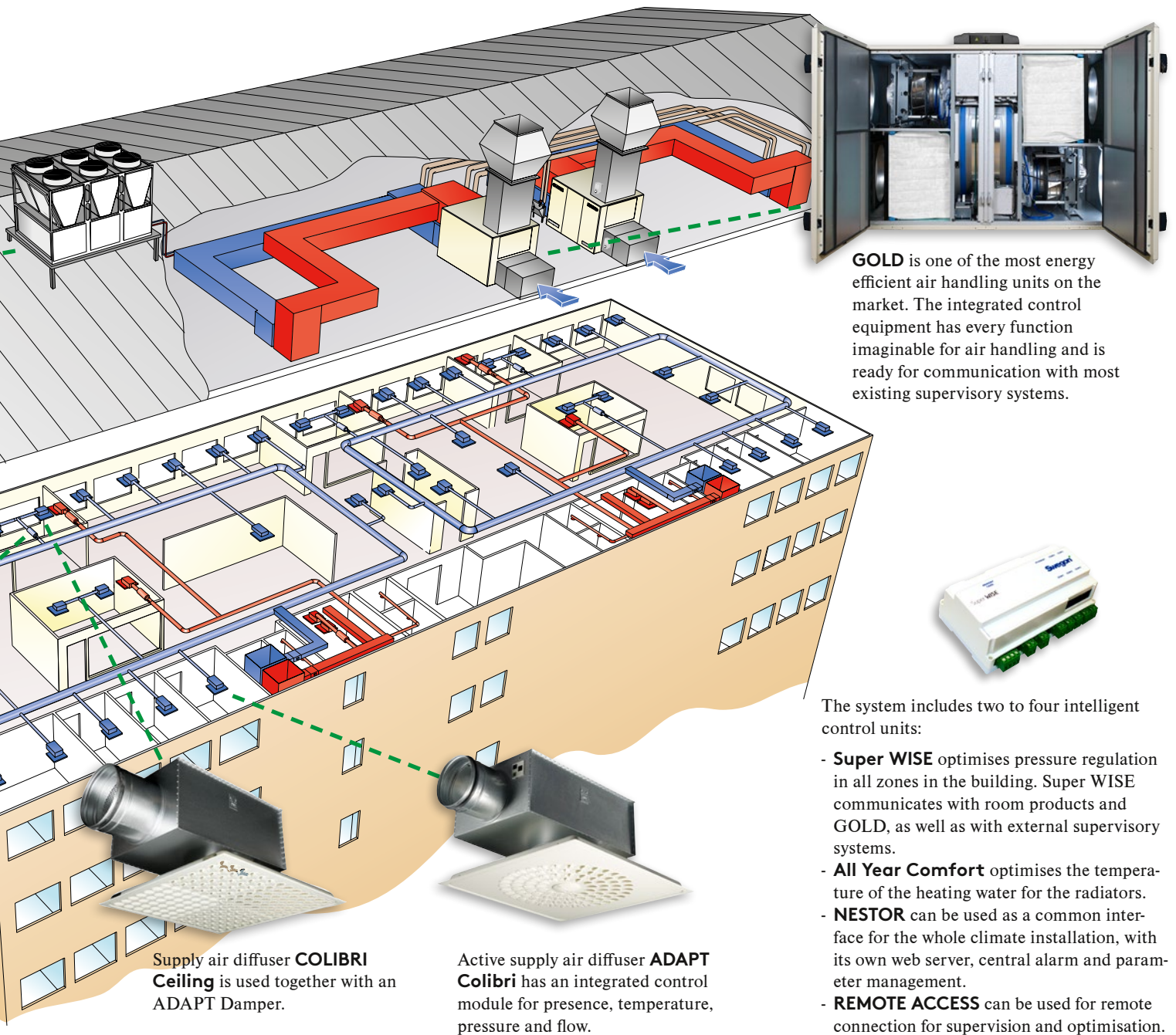
- Jointly developed control equipment for optimum functionality
- Supervision via web interface makes external supervision systems cheaper or superfluous.
- Integrated sensor module in the air diffuser (presence, temperature, pressure, flow control)
- Possibility to log and optimisation of operations

### Low energy consumption

- Demand control with presence function (+/- 2 degrees when unoccupied) saves electricity, cooling and heating energy
- Approx. 80% heat recovery and cooling energy recovery
- Free cooling and summer night cooling
- Energy efficient fans with EC motors in GOLD and TETRIS
- Pressure and temperature optimisation via Super WISE and All Year Comfort

### Quiet, draught-free and simple maintenance

- Optimum mixing without draughts
- Simple to clean
- No water pipes in the ceiling



**GOLD** is one of the most energy efficient air handling units on the market. The integrated control equipment has every function imaginable for air handling and is ready for communication with most existing supervisory systems.



The system includes two to four intelligent control units:

- **Super WISE** optimises pressure regulation in all zones in the building. Super WISE communicates with room products and GOLD, as well as with external supervisory systems.
- **All Year Comfort** optimises the temperature of the heating water for the radiators.
- **NESTOR** can be used as a common interface for the whole climate installation, with its own web server, central alarm and parameter management.
- **REMOTE ACCESS** can be used for remote connection for supervision and optimisation.

Supply air diffuser **COLIBRI Ceiling** is used together with an ADAPT Damper.

Active supply air diffuser **ADAPT Colibri** has an integrated control module for presence, temperature, pressure and flow.

## This is how it works

A central reversible chiller, TETRIS, supplies the entire property with cooling and heating water. One GOLD air handling unit per building structure (central ventilation) or per storey (decentralised ventilation) provides the system with supply air and extract air.

The supply air maintains a constant temperature. GOLD is equipped with change-over coil (cooling and heating) for the correct supply air temperature. The air flow in the supply and extract air ducts is pressure controlled. The air flow and pressure are constantly optimised at the lowest possible level by the Super WISE control unit. The All Year Comfort control unit optimises the temperature of the heating water for the radiators. WISE controls the actuators on the radiators for optimum room function.

Demand-controlled room regulation takes place via the intelligence in ADAPT Colibri. This also includes boosted airflow in the case of summer night cooling as well as emergency functions (e.g. can the diffusers be closed in the event of a fire). Airflow

control is variable according to requirements via damper control integrated in the air diffuser.

The extract air is evacuated centrally via the air transfer grille or via the extract air diffusers in each room. Supply and extract air are balanced via WISE zone dampers.

Room temperature and airflow can be controlled via:

- Room thermostat
- Presence detector
- CO<sub>2</sub> control (conference room)
- Supervisory system (BMS)
- Manual unit in the room

ADAPT Damper and COLIBRI Ceiling ventilate and air condition conference rooms and in certain cases open-plan offices. Swegon also offers suitable extract air registers as well as grilles, dampers and sound attenuators.

# Offices with indoor climate from Swegon



Västerport, Stockholm



Roissy Parc Mail, Paris



Bengt Dahlgren Head Office, Gothenburg



Karlstad University



Honda Head Office, Malmö

- Swiss Life, Lille, France
- LTU Lulea TU, Sweden
- Better Place, Nørrebro/Copenhagen, Denmark
- Mixum, Motala, Sweden
- Agilent, HP office in Scotland, United Kingdom
- Valhall Park, Ängelholm, Sweden
- Ericsson offices, Kyrkslätt, Finland
- Offices in Swedbank Stadium, Malmö, Sweden
- Akademiska Hus, Uppsala, Sweden
- Heino offices, Espoo, Finland
- ..... and many more