

Comfort in the office

Future-orientated and with the latest trends



Comfort in the office

Feeling good brings added value

Professional and private life are converging more and more. The office is becoming an integral part of life. People spend an average of 1,718 hours per year* at work. The more comfortable they feel, the better they perform. Studies show that productivity can increase by up to 36% with a suitable working environment.** At the same time, the number of sick days and absences decrease.

Based on our interdisciplinary work and many years of project experience in the construction and management of office buildings, we have developed a concept for the comfortable office of the future: the GOLDBECK Comfort Levels. With this concept, which focuses on the health and wellbeing of employees, we give building owners the opportunity to configure their desired level of comfort quickly and easily, as well as supporting companies on their way to a healthy, performance-enhancing office environment.

* Reinhardt, Ulrich (n.a.), Study: „Freizeit-Monitor 2018“, Foundation for Future Studies, available at: http://www.freizeitmonitor.de/fileadmin/user_upload/freizeitmonitor/2018/Stiftung-fuer-Zukunftsfragen_Freizeit-Monitor-2018.pdf (as of 12/05/2020).

** Kelter, Jörg. (2006), Office-Excellence-Check: Ergebnisse der Zwischenauswertung zur Orgatec 2006 (Results of the interim evaluation of Orgatec 2006), Stuttgart, Fraunhofer Institute for Industrial Engineering and Organisation.

6 comfort criteria
3 comfort levels
1 bespoke solution



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Room climate

The GOLDBECK climate system is like the ideal piece of all-year-round clothing – not too cold, not too warm. It provides that feel-good factor. In addition to an ideal room climate, energy consumption is minimised and adjustable. Economic cooling, for example, has long since ceased to be based on the theoretical maximum load, but on the real needs of the users. Our sustainable system also works with intelligent sun protection systems and energy and heat-saving lighting, so that the heat input can also be significantly restricted. Floor cooling or geothermal cooling also ensure an efficient cooling capacity. In addition to external sun protection, internal anti-glare protection can be installed. Each user determines their temperature and fresh air supply, using the room control unit according to their personal preferences.

| | Standard | Premium | Premium-Plus |
|--|---|--|--|
|  Cold | Floor cooling via energy floor with single room control | Floor cooling via energy floor and ventilation | Surface cooling via energy floor and ventilation with additional cooling via induction unit |
|  Heat | Floor heating via energy floor* (+/-3° adjustable) | Floor heating via energy floor and ventilation (heat recovery via mechanical ventilation system) | Floor heating via energy floor and ventilation (heat recovery via mechanical ventilation system) |
|  Shading | Solar protection via external blinds | Solar protection via external blinds, including sun sensor and daylight control | Solar protection via external blinds, including sun position tracking for each storey |

From a room temperature of 26° C, a lack of concentration and loss of performance is already to be expected*



* WEKA MEDIA Editorial Staff (2018), Temperatur am Arbeitsplatz: Gesetzliche Regelung und Schutzmaßnahmen [Temperature at the workplace: Legal regulations and protection measures], WEKA MEDIA GmbH & Co. KG, available at: <https://www.weka.de/arbeitschutz-gefahrstoffe/zulaessige-temperatur-am-arbeitsplatz/> (as of 12/05/2020).

Air and light quality

With our three comfort levels for air quality, the concentration of pollutants in the indoor air can be tracked in a controlled manner. In offices, when windows are closed, the CO₂ in the air exceeds the recommended guideline values after just 40 minutes of use, in meeting rooms after just 20 minutes. The GOLDBECK system enables you to support the health and performance of your employees. The fresh air can be regulated both manually and mechanically, with the windows always being openable. In addition, air humidification can be installed if desired.

| | Standard | Premium | Premium-Plus |
|--|---|---|---|
|  Ventilation | <ul style="list-style-type: none"> In the office rooms natural ventilation via the windows In the meeting rooms mechanical ventilation (occupancy controlled) | Mechanical ventilation throughout with wall mounted air distribution on the corridor side | <ul style="list-style-type: none"> Mechanical ventilation throughout with swirl diffusers or induction units Occupancy or CO₂-controlled for meeting rooms |
|  Zero-emission | Construction materials according to the legal requirements | Low-pollutant construction materials according to the specifications of the DGNB multiple certificate | Measurement of indoor air according to DGNB benchmarks |
|  Air humidity | No additional humidification measures | No additional humidification measures | Active air humidification (relative humidity ≥ 30 % during winter) |
|  Natural lighting | Daylight in the workplace according to workplace ordinance | Daylight in the corridors / combination zones through glass side panels or skylights | Increased amount of daylight in corridors and combination zones through minimum 50 % transparent portion in the associated partition walls |
|  Anti-glare protection | No additional measures for internal glare protection | Preparations for internal anti-glare protection | Internal anti-glare protection |

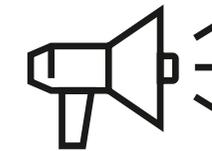
If the CO₂ level rises above 1,500 ppm, this can impair the ability to concentrate and cause headaches and fatigue*



* Springer Medizin Verlag (2008), Bekanntmachung des Bundesumweltamtes: Gesundheitliche Bewertung von Kohlendioxid in der Innenraumluft – Mitteilungen der Ad-hoc-Arbeitsgruppe Innenraumrichtwerte der Innenraumlufthygiene-Kommission des Umweltbundesamtes und der Obersten Landesgesundheitsbehörden (Announcement of the Federal Environmental Agency: Health evaluation of carbon dioxide in indoor air – Announcements of the Ad-hoc German Working Group on Indoor Air Quality Guidelines of the Indoor Air Hygiene Commission of the Federal Environment Agency and the Supreme State Health Authorities), available at: https://www.umweltbundesamt.de/sites/default/files/medien/pdfs/kohlendioxid_2008.pdf (as of 12 May 2020).



Every second person is disturbed by noise at work several times a day – this leads to a lack of concentration and reduces productivity*



Room acoustics and noise protection

Studies show that noise is the biggest disturbance factor at the workplace. And not only noise caused by the outside world (street noise etc.), but also and above all by sounds and noises that are generated inside. Optimum acoustics help to minimise any disturbing noise and amplify the sounds that should be heard. Think of the old amphitheatres: The actors can be heard, but whispering in the audience doesn't reach your ears. The various GOLDBECK Comfort Levels all comply with the latest guidelines and offer the highest acoustic quality. Wall and ceiling insulation in different thicknesses enables individual noise protection.

| | Standard | Premium | Premium-Plus |
|---|---|--|---|
|  Room acoustics | Acoustically effective suspended ceiling | Acoustically effective suspended ceiling according to the recommendations of DIN 18041 | Simulation or calculation of the required measures in the important rooms |
|  Indoor noise protection | <ul style="list-style-type: none"> Normal noise protection of the office walls and doors Meeting rooms according to the requirements for rooms with confidentiality | <ul style="list-style-type: none"> Increased noise protection of the office walls and doors Meeting rooms according to the requirements for rooms with confidentiality | <ul style="list-style-type: none"> Increased noise protection of the office walls and doors Meetingrooms according to the increased requirements for rooms with confidentiality |
|  Outdoor noise protection | Windows according to the site-specific requirements | <ul style="list-style-type: none"> Windows according to the site-specific requirements Mechanical ventilation | <ul style="list-style-type: none"> Windows according to the site-specific requirements Mechanical ventilation |

* Plantronics (2018), Lärm am Arbeitsplatz – hören, gehört werden und konzentriert arbeiten, Umfrageergebnisse (Noise at the workplace – hearing, being heard and working in a concentrated way, survey results), Germany, October 2017, available at: <https://docplayer.org/111156571-Laerm-am-arbeitsplatz.html> (as of 12/05/2020).



Up to 36 % more productivity in an optimal working environment*

Quality of fittings and furnishings

The quality of the fittings and furnishings in an office determine its appearance, operability and feel-good factor. Whether technical equipment or optical highlights: GOLDBECK offers you individual solutions in design and function that create a comfortable user experience.

| | Standard | Premium | Premium-Plus |
|--|--|--|---|
|  Surfaces | <ul style="list-style-type: none"> Fibre-bonded needle floor coverings in offices, porcelain stoneware (30 × 30 cm) in staircases Perforated mineral fibre ceiling, visible rail Woodchip wallpaper | <ul style="list-style-type: none"> Loop pile fabric or velour in offices, porcelain stoneware (30 × 60 cm) in staircases Smooth mineral fibre ceiling, visible grid Paint substrate or glass fabric | <ul style="list-style-type: none"> Loop pile fabric or velour in offices, artificial stone or natural stone in staircases Plasterboard perforated ceiling Paint substrate or Q3-smoothed |
|  Lighting | Recessed louvre luminaires | Pendant luminaires | Floor lamps |
|  Sanitary appliances | <ul style="list-style-type: none"> Standard height cubicle partitions Manual fittings Porcelain stoneware (30 × 60 cm) | <ul style="list-style-type: none"> Floor to ceiling cubicle partitions Contact-free washbasin fittings Porcelain stoneware (30 × 60 cm) | <ul style="list-style-type: none"> Plasterboard walls for each cubicle Completely contact-free Porcelain stoneware (60 × 60 cm) |

* Kelter, Jörg (2006), Office-Excellence-Check: Ergebnisse der Zwischenauswertung zur Orgatec 2006 (Results of the interim evaluation of Orgatec 2006), Stuttgart, Fraunhofer Institute for Industrial Engineering and Organisation.

Flexibility

GOLDBECK office buildings are flexible in design and use. Various interior design possibilities and combinations are available, enabling variation when it comes to window openings and the sun protection per grid, as well as the division and distribution of heating and cooling. These variation possibilities allow you to think today about the office of tomorrow because the possible uses remain variable: From open-plan to individual office, everything is conceivable and realisable at any time.

| | Standard | Premium | Premium-Plus |
|--|---|---|--|
|  Window opening | One window opening per 2.50 m / 2.70 m grid | One window opening per 2.50 m / 2.70 m grid | Two window openings per 2.50 m / 2.70 m grid |
|  Sun protection | Louvre blind slat coupled w=2.50 m / 2.70 m, motors every 5.00 m / 5.40 m | Louvre blind slat w=2.50 m / 2.70 m, each with a motor | Louvre blind slat coupled w=1.25 m / 1.35 m, motors every 2.50 m / 2.70 m |
|  Distribution Heating and cooling | Single mode heating / cooling across the building, seasonally adjustable | Simultaneous heating & cooling zonal control for the energy floor per floor level | Simultaneous heating & cooling zonal control for the energy floor per wing of building per floor level |
|  Division Heating and cooling | Control unit every 2.50 m / 2.70 m grid | Control unit every 2.50 m / 2.70 m grid | Control unit every 1.25 m / 1.35 m grid |

Worldwide there are:
34 % individual offices,
41 % combinations of individual and open-plan offices, 25 % open-plan offices*



* Haufe Online Editorial Staff (2014), News Büroformen: „Mitarbeiter fordern flexible Konzepte“ (News – Office designs: Employees demand flexible concepts), available at: https://www.haufe.de/personal/hr-management/buerokonzepte-mitarbeiter-fordern-flexible-konzepte_80_256482.html (as of 12/05/2020).



“Normal” user behaviour leads to unnecessarily high energy consumption – building automation makes a major contribution to energy efficiency*

Building automation

The networked communication between and control of technical systems for heat and cold generation, as well as ventilation systems creates an intelligent, integrated overall system. The system automation thus enables a smooth interaction of all components and ensures calculable operating costs. A well-thought-out room control system enables not only a high level of user comfort through demand-based regulation of the technical room equipment, but also flexible interior design – today and in the future.

| | Standard | Premium | Premium-Plus |
|--|---|---|---|
|  System automation | <ul style="list-style-type: none"> Smart, integrated control of central HVAC systems Dashboard with remote access and storage of selected operating data for five years | <ul style="list-style-type: none"> Smart, integrated control of central HVAC systems Dashboard with remote access and storage of selected operating data for five years | <ul style="list-style-type: none"> Smart, integrated control of central HVAC systems Dashboard with remote access and storage of selected operating data for five years Service package for continuous optimization of systems performance |
|  Room automation | <ul style="list-style-type: none"> Manual operation via thermostats with mode indicator | <ul style="list-style-type: none"> Automatic control via room automation Manual operation via wired room control units | <ul style="list-style-type: none"> Automatic control via room automation Manual operation via flexible, wireless room control units |

* Becker, Martin & Knoll, Peter (2011), Brief summary of the study „Energieeffizienz durch Gebäudeautomation mit Bezug zur DIN V 18599 und DIN EN 15232“ (Energy efficiency through building automation with reference to DIN V 18599 and DIN EN 15232), Biberach University of Applied Sciences (HBC) – College of Civil Engineering and Industry – Institute for Building and Energy Systems (IGE) – Department of Measurement and Control Technology and Building Automation, available at: https://www.zvei.org/fileadmin/user_upload/Verband/Fachverbaende/Elektroinstallationsysteme/Studie_Energieeffizienz_durch_Gebaeudeautomation/Kurzfassung-ZVEI-Studie-Energieeffizienz-durch-Gebaeudeautomation.pdf (as of 12/05/2020).

More information about GOLDBECK Office buildings

Discover our "Office buildings" and "Office building Architecture" brochures.

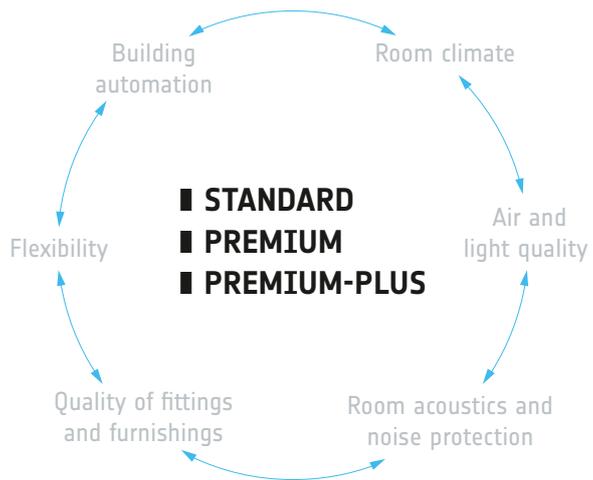


You can find all brochures online at goldbeck.de/downloads



Your selection of comfort levels

| | Standard | Premium | Premium-Plus |
|--|----------|---------|--------------|
| Room climate | | | |
| Cold | | | |
| Heat | | | |
| Shading | | | |
| Air and light quality | | | |
| Ventilation | | | |
| Zero-emission | | | |
| Air humidity | | | |
| Natural lighting | | | |
| Anti-glare protection | | | |
| Room acoustics and noise protection | | | |
| Room acoustics | | | |
| Indoor noise protection | | | |
| Outdoor noise protection | | | |
| Quality of fittings and furnishings | | | |
| Surfaces | | | |
| Lighting | | | |
| Sanitary appliances | | | |
| Flexibility | | | |
| Window opening | | | |
| Sun protection | | | |
| Distribution – heating/cooling | | | |
| Division – heating/cooling | | | |
| Building automation | | | |
| System automation | | | |
| Room automation | | | |



GOLDBECK GmbH
 Ummelner Straße 4-6
 33649 Bielefeld, Germany
 Tel. +49 521 9488-0

GOLDBECK International GmbH
 Ummelner Straße 4-6
 33649 Bielefeld, Germany
 Tel. +49 521 9488-1061

goldbeck.de

Checklist

Record your wishes directly in the checklist.
 Simply open it and select the ones you want.
 We will gladly answer your questions in a
 personal consultation.

