



TWIN-C REPORT

INDUSTRIAL | B.BRAUN

CURRENT INFORMATION ABOUT INTELLIGENT LIGHTING SOLUTIONS FROM WALDMANN



METICULOUSLY CLEAN!

INNOVATIVE LIGHTING CONCEPTS FOR CLEAN ROOMS AT B. BRAUN AG IN MELSUNGEN



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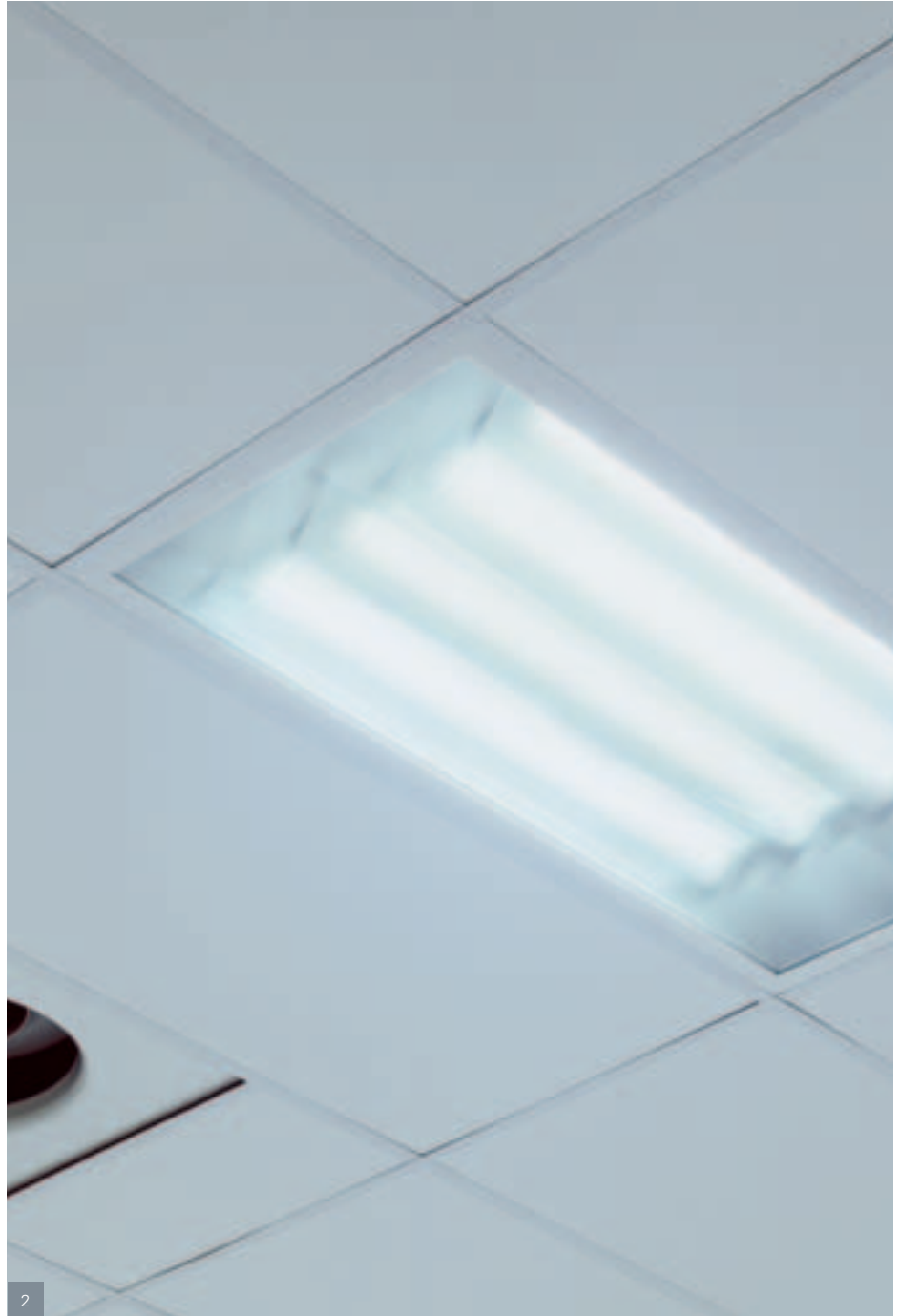
B. Braun AG in Melsungen, Northern Hesse, Germany, can look back at nearly 170 years of successful company history. With approximately 30,000 employees worldwide and branches in all continents, the company is presently generating total sales of about 2.8 billion euros. B. Braun supplies the international health markets with products for anesthesia, intensive care, cardiology, extracorporeal blood treatment and surgery, as well as with

services for clinics, physicians in private practices and the home care field. The dialog with daily users of B. Braun products perpetually provides new findings, which are incorporated into product development. The pooled ingenuity of the entire company, however, is not limited to the product level, but also encompasses all conceivable fields and applications. According to the assessment of renowned observers and experts, the expansive investment

policy, which is reflected, among other things, in the spectacular new construction projects of the PfiEFFewiesen facility and documents a clear commitment to Melsungen as a business center, is also exemplary. The consistently high growth rates require a continuous increase in capacity.

The output of infusion-transfusion systems, for example, is scheduled to increase from 107 million units in 2007 to 200 million units in 2011. The new production facility constructed for this purpose, built at a cost of 26 million euros and equipment cost of nearly 51 million euros, creates the necessary prerequisites for this planned doubling of the production operation. Innovative expertise is also apparent in this project from the implemented lighting solution for the 60,000 ft² production area.

Due to the high hygiene requirements, a clean room atmosphere is mandatory for production spaces of this type. The illumination is somewhat problematic, because each lighting system requires maintenance, e.g. replacing defective bulbs. Conventionally, the necessary work would be very time and cost-intensive to perform with regards to cleaning, and in this form would therefore be unacceptable. In order to implement this project, completely new approaches were required, which in all areas resulted in absolutely new solutions.

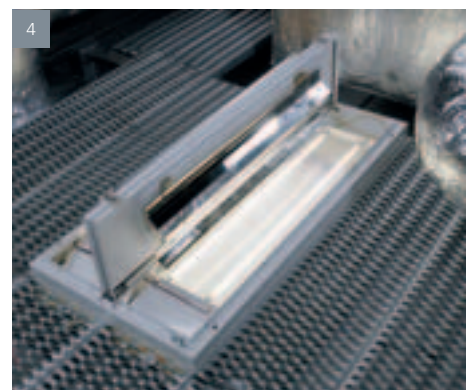


1 Before installation of the production units, the finished production hall features uniform functional illumination according to the required quality standards.

2 The luminaire assembly is integrated into the ceiling and at 4 x 54 watt and a special luminaire cover provides a pleasant glare-free lighting environment.

3 Easy access to the lighting elements in the supply level.

4 The bulbs or other components are easy to replace.

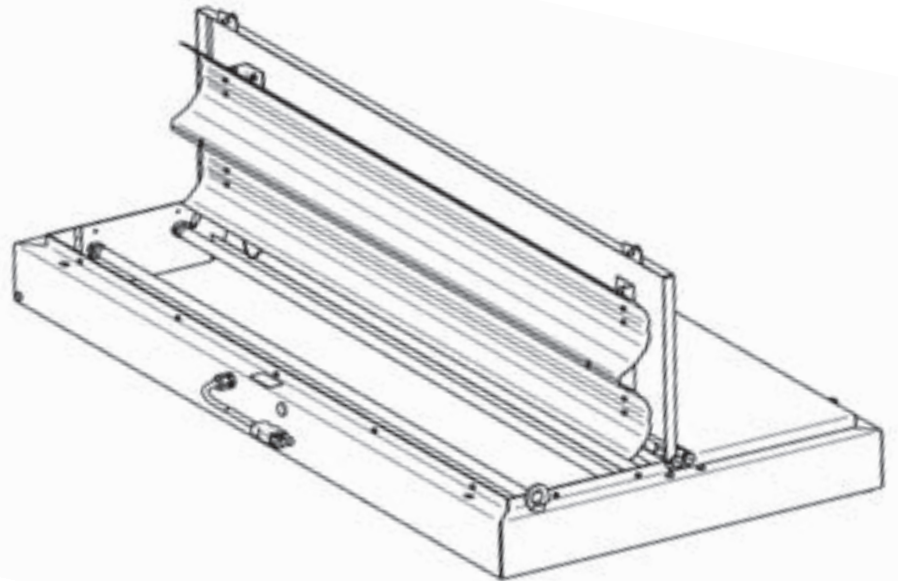
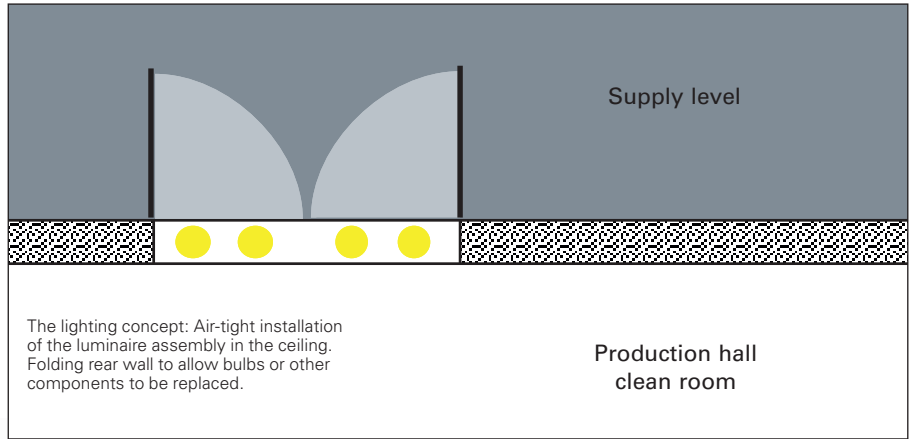


The illumination of the workplaces had to blend with the overall design, so that, on the one hand, the functional, individual visual tasks of the approximately 300 employee can be perfectly performed and, on the other hand, building management system-related requirements were covered. In this context, the principle of sustainability was systematically defined as a decision criterion. In concrete terms, this means system thinking, i.e. the uncompromising minimization of energy consumption, while achieving pleasant lighting comfort at the same time.

A basic solution has already been created by the customer for this objective. Above the hall ceiling, an additional level has been added, where in particular the supply lines are accommodated. The ceiling luminaires used were specially developed and engineered for this project by Waldmann lighting specialists.

A special feature – no air can penetrate through the ceiling luminaire installation into the production area, thereby ensuring clean room quality at all times.

For the replacement of the lighting components, a special opening was created at the back of the luminaire assembly which allows maintenance work to be easily performed.



In different building sections and projects, a total of 474 special-purpose ceiling luminaires of the ZWB series with 4 x 54 watt T16 fluorescent lamps in the IP 20 protection class were used.

MORE ABOUT TWIN-C:



TWIN-C brochure

Find out, in our TWIN-C brochure, how industrial workplaces can become even more productive through lighting. EN 1837 defines the requirements of machine-integrated luminaires. Machine manufacturers are obligated to comply with this standard and document their compliance. This is not a problem with a TWIN-C lighting solution from Waldmann. Waldmann goes even one step further than is required by EN 1837: It focuses not only on complying with the standards from a technical aspect, but also on the financial benefit for the customer.

Request our brochure to learn more about the applicable standards. We will show you, based on different TWIN-C lighting concepts, how the 'right lighting combination' can increase your company's success.

www.waldmann.com