



ZUMTOBEL



Bosch Rexroth

CO₂ and cost efficient:
premium lighting solution
with daylight-based control
for the production bay.



◀ BEFORE 31.63 kWh/m²a

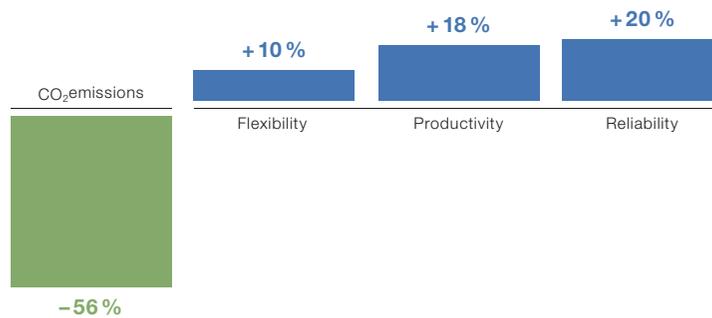
Cutting energy consumption, improving quality

The objective of upgrading the lighting system in Bosch Rexroth's production bay was to maximise energy savings by installing a top-class modern lighting solution capable of meeting all requirements in terms of quality and controllability. Using the flexible TECTON trunking system for ambient lighting made it possible to improve lighting quality significantly and provide bright, comfortable working conditions. Lighting control makes it possible to use the daylight entering through skylights to judiciously supplement artificial lighting.

zumtobel.com/Industriallighting



AFTER 14.04 kWh/m²a ▶



Bosch Rexroth, Linz | AT

Lighting design and electrical installations: Belfanti/Füeder
 Technisches Büro für Elektro- und Haustechnik GmbH, Linz | AT
 Lighting solution: TECTON continuous-row system, LUXMATE
 LITENET lighting control system, ONLITE emergency lighting system

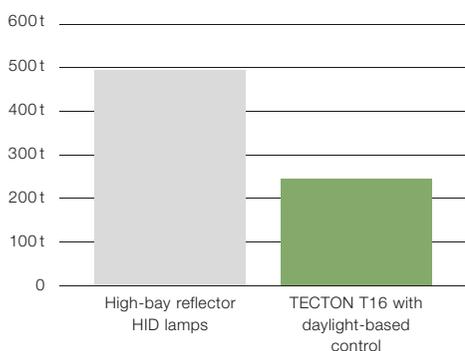
1. CO₂ efficiency and cost efficiency

-56% CO₂

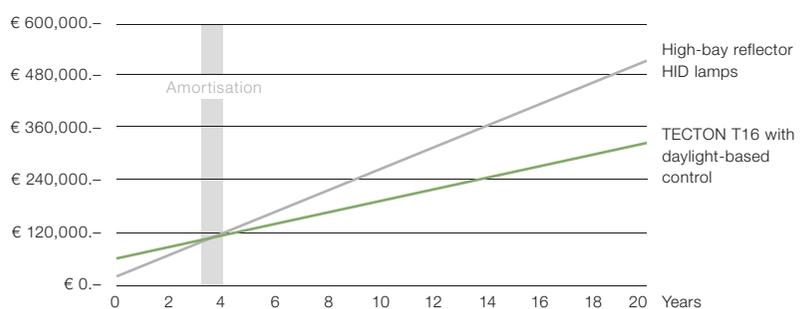
Responsible use of energy

The production bay is approximately 9m high and was illuminated by high-bay HID reflector luminaires before it was refurbished. Simply switching over to modern T16 technology cut energy consumption in half. A LUXMATE LITENET daylight-based lighting control system is the second pillar of excellent energy efficiency. Daylight entering through the skylights is judiciously supplemented by just the right amount of artificial lighting when necessary. The lighting level is a constant 500 lx. This ensures perfect lighting conditions while nevertheless reducing CO₂ emissions by 280 tonnes over a 20-year period.

CO₂ emissions over service life (20 years)



Payback period: 3.76 years (total costs)



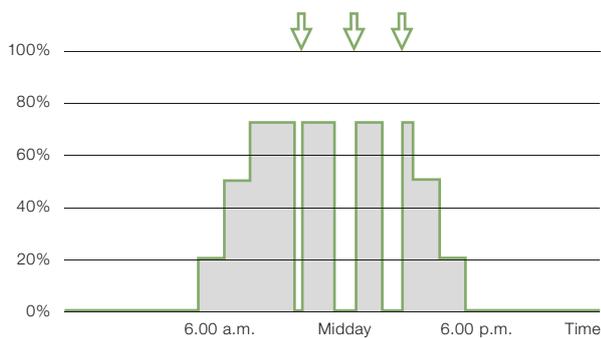
2. Flexibility

+10 %

Automatically flexible thanks to presence-based control

During working hours, the 54 m long, 66 m wide production bay is a bustling hive of activity. Nevertheless, there are zones that are used only rarely or on an ad hoc basis. The TECTON continuous-row system's built-in presence-based control ensures that light is only made available when it is actually needed – and that lighting quality is impeccable. The lighting solution is designed to illuminate the entire production bay uniformly at 500 lx, so that activity areas can be relocated at any time and workstations can be repositioned anywhere.

Energy consumption reduced by built-in presence-based control



3. Productivity

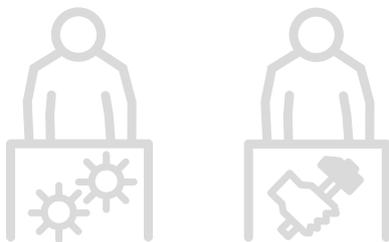


+ 18 %

Abundant cool white light

The lighting in this production bay for hydraulic control blocks and electrical control systems was getting a bit long in the tooth. Typical shortcomings of the HID high-bay reflector luminaires included excessively low illuminance levels, multiple shadows and strobing. The new lighting solution with a TECTON T16 continuous-row system is able to remedy this situation and also improve productivity. A stable lighting level of 500 lx and stimulating, cool white colour temperature make sure that the various visual tasks involved in manual processing and machining can be carried out quickly with relatively low error rates.

Better performance thanks to more light



Machining and manual processing 500 lx

4. Reliability

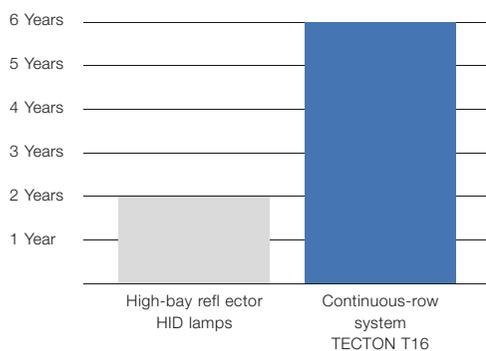


+ 20 %

Modern lamp and control technology

This extra reliability is reflected above all in lower luminaire failure rates. The service life of the HID lamps that were previously used was relatively short and the associated maintenance work involved was correspondingly onerous. The TECTON continuous-row system installed for Bosch Rexroth uses T16 fluorescent lamps to produce light. Thanks to this, downtimes are significantly less frequent and expenditure on relamping is also lower. The reliability of luminaires and lighting control systems, including all LUXMATE modules, is backed up by Zumtobel's five-year guarantee.

Relamping interval





ZUMTOBEL

United Kingdom

Zumtobel Lighting Ltd.
Chiltern Park
Chiltern Hill, Chalfont St. Peter
Buckinghamshire SL9 9FG
T +44/(0)1753 482 650
F +44/(0)1753 480 350
uksales@zumtobel.com
zumtobel.co.uk

USA and Canada

Zumtobel Lighting Inc.
17-09 Zink Place, Unit 7
Fair Lawn, NJ 07410
3300 Route 9W
Highland, NY 12528
T +1/(0)845/691 6262
F +1/(0)845/691 6289
zli.us@zumtobel.com
zumtobel.us

Australia and New Zealand

Zumtobel Lighting Pty Ltd
333 Pacific Highway
North Sydney, NSW 2060
T +61/(2)89135000
F +61/(2)89135001
info@zumtobel.com.au
zumtobel.com.au

China

Zumtobel Lighting China
Shanghai office
Room 101,
No 192 YIHONG Technology Park
Tianlin Road, Xuhui District
Shanghai City, 200233, P.R. China
T +86/(21) 6375 6262
F +86/(21) 6375 6285
sales.cn@zumtobel.com
zumtobel.cn

Hong Kong

Zumtobel Lighting Hong Kong
Unit 4319-20, Level 43,
Tower 1, Metroplaza,
223 Hing Fong Road,
Kwai Fong, N.T.
T +852/(0)2503 0466
F +852/(0)2503 0177
info.hk@zumtobel.com

India

Zumtobel Lighting GmbH
A 274, 1st Floor,
Defence Colony,
110024 New Delhi
T +91/98 102 19 531
enquiries.india@zumtobel.com

Singapore

Zumtobel Lighting Southeast Asia
5 Kaki Bukit Crescent,
#04-02 Koyotech Building
416238 Singapore
T +65 6844 5800
F +65 6745 7707
info.sg@zumtobel.com

United Arab Emirates

Zumtobel Lighting GmbH (Branch)
Dubai Airport Free Zone,
Building 6W, B Block, 233
PO Box 54302
Dubai
T +971/(0)4 299 3530
F +971/(0)4 299 3531
info@zumtobeluae.ae

Romania

Zumtobel Lighting Romania SRL
Tipografilor 11-15,
S-Park Office, Wing A1-A2
013714 Bucharest
T +40 312253801
F +40 312253804
welcome.ro@zumtobel.com
zumtobel.com

Hungary

Zumtobel Lighting Kft
Váci út 49
1134 Budapest
T +36/(1) 35 00 828
F +36/(1) 35 00 829
welcome@zumtobel.hu
zumtobel.hu

Croatia, Bosnia and Herzegovina

Zumtobel Licht d.o.o.
Radnička cesta 80 – Zagrebtower
10000 Zagreb
T +385/(1) 64 04 080
F +385/(1) 64 04 090
welcome@zumtobel.hr
welcome.ba@zumtobel.com

Serbia

Zumtobel Licht d.o.o.
Karadjordjeva 2-4
Beton Hala
11000 Belgrade
T +381/(0)11 65 57 657
F +381/(0)11 65 57 658
welcome@zumtobel.rs

Czech Republic

Zumtobel Lighting s.r.o.
Jankovcova 2
Praha 7
170 00 Praha
T +420/(2) 66 782 200
F +420/(2) 66 782 201
welcome@zumtobel.cz
zumtobel.cz

Slovak Republic

Zumtobel Lighting s.r.o.
Vlčie Hrdlo 1,
824 12 Bratislava
welcome@zumtobel.sk
zumtobel.sk

Poland

Zumtobel Licht GmbH Sp.z.o.o.
Platinum III
ul. Woloska 9a
02-583 Warszawa
T +48/(22) 856 74 31
F +48/(22) 856 74 32
welcome@zumtobel.pl
zumtobel.pl

Slovenia

Zumtobel Licht d.o.o.
Štukljeva cesta 46
1000 Ljubljana
T +386/(1) 5609 820
F +386/(1) 5609 866
welcome@zumtobel.si
zumtobel.si

Russia

Zumtobel Lighting GmbH
Official Representative Office
Skakovaya Str. 17
Bld. No 1, Office 1104
125040 Moscow
T +7/(495) 945 36 33
F +7/(495) 945 16 94
info-russia@zumtobel.com
zumtobel.ru

Norway

Zumtobel Belysning
Hoffsveien 4
Postboks 1025 Hoff
0218 Oslo
T +47 22 06 50 50
F +47 22 06 50 52
firmapost@zumtobel.com
zumtobel.no

Sweden

Zumtobel Belysning
Birger Jarlsgatan 57
11356 Stockholm
T +46 8 262650
F +46 8 2656 05
info.se@zumtobel.com
zumtobel.se

Denmark

Zumtobel Belysning
Indiavej 1
2100 København
T +45 35 43 7000
F +45 35 4354 54
info.dk@zumtobel.com
zumtobel.com

Headquarters

Zumtobel Lighting GmbH
Schweizer Strasse 30
Postfach 72
6851 Dornbirn, AUSTRIA
T +43/(0)5572/390-0
F +43/(0)5572/22 826
info@zumtobel.info

Zumtobel Licht GmbH
Grevensmarschstrasse 74-78
32657 Lemgo, GERMANY
T +49/(0)5261 212-0
F +49/(0)5261 212-7777
info@zumtobel.de

zumtobel.com



Top quality – with a five-year guarantee.

As a globally leading luminaire manufacturer, Zumtobel provides a five year manufacturer's guarantee on all Zumtobel branded products subject to registration within 90 days from the invoice date and in accordance with the terms of guarantee at zumtobel.com/guarantee.

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