

PAINT BOOTHS



TECHNICAL OVERVIEW - PAINT BOOTHS

THE PAINT BOOTHS ENVIRONMENT REQUIRES OPTIMUM LIGHTING FOR PERFECT RESULTS. EVERY PRODUCT IN OUR RANGE IS RIGOROUSLY TESTED AND CERTIFIED TO PROVIDE SAFETY, RELIABILITY AND PERFORMANCE IN YOUR WORKING ENVIRONMENT.

Our luminaires are designed to meet the stringent parameters specific to paint booths, whether it's chemical resistance, dust and moisture tightness, or the specific lighting requirements of that environment.

TECHNICAL REQUIREMENTS FOR LUMINAIRES

- silicone free
- minimum IP54
- safety glass
- easy maintenance and cleaning

RECESSED MOUNTING into walls or corners is the ideal and recommended option.

SURFACE MOUNTING is suitable for luminaires with bevelled edges.



ELECTRICAL CONNECTION OF LUMINAIRES
Direct cable connection through the luminaire cable gland fitting. Connection using a pre-installed cable and a quick connector.

DIMMING REQUIREMENTS

All luminaires for painting cabins are also available with electronic dimming driver (DALI Dimm).

REQUIREMENTS FOR HIGHER AMBIENT TEMPERATURES

Ambient temperatures (Ta) are usually higher in areas where painting takes place. VYRTYCH luminaires meet the requirements for temperatures of up to +70°C, according to individual luminaire types.

REQUIRED NORMS AND REGULATIONS

- EN 12464-1:2011
- EN 15193-1:2017 and EN 15193-2:2017
- DIN V 18599:2007
- IEC 97:2005
- IEC 154:2003

Ēm

Maintained illuminance - the average illuminance value under which the illuminance may not drop. The minimum required value in workspace areas is 750 LUX.

Uo

Uniformity of illuminance - the ratio of the minimum to average illuminance of the surface

UGR

Glare index - a unified system for evaluation of glare in indoor spaces. The requirements for UGR are set in EN 12464-1. In addition to the luminance of the luminaire, the UGR value is also dependent upon the observer's position, viewing direction, and the luminance of the surrounding environment.

Ra (CRI)

General colour rendering index Ra (or CRI) is a dimensionless quantity stating the quality of a white light source with respect to the similarities in remission spectra of the eight defined test colours (see DIN 6169 or CIE 1974) as referring to the source of illumination.

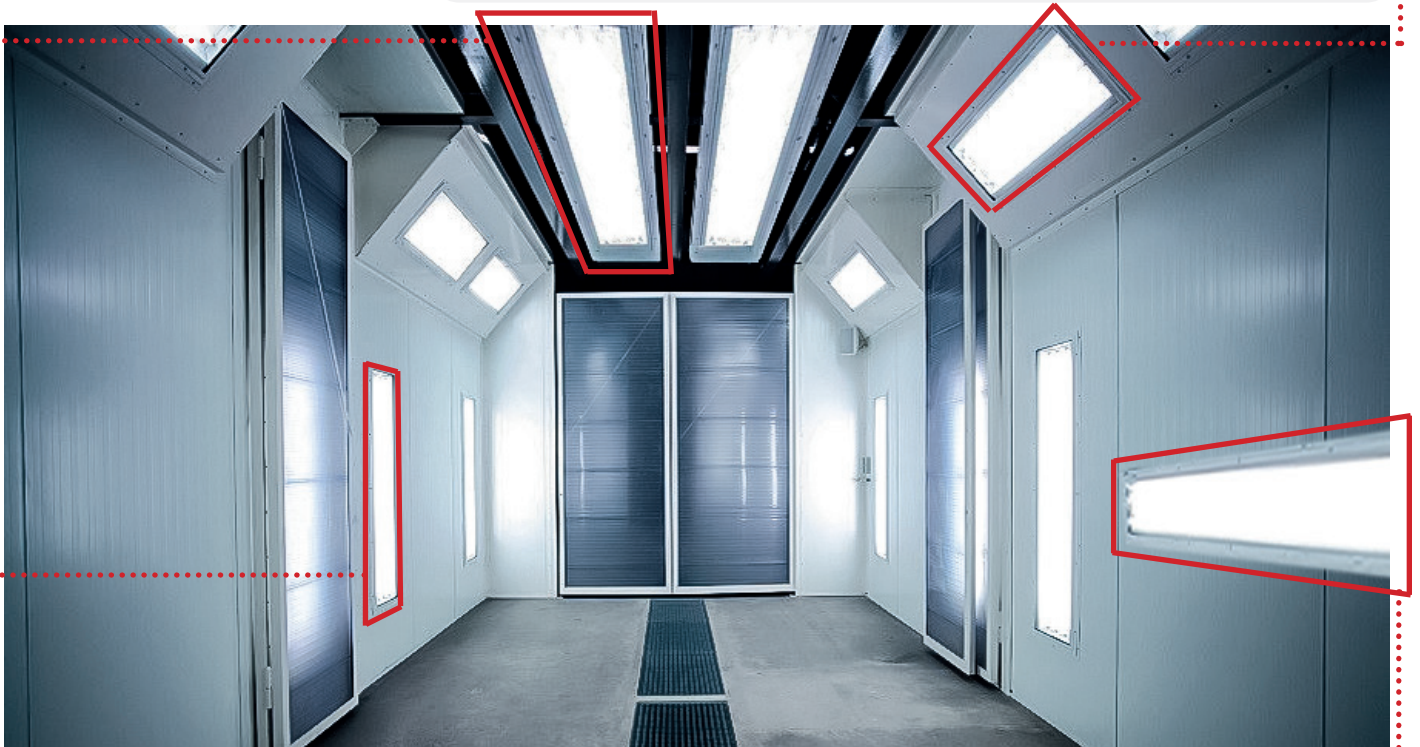
MOUNTING OPTIONS

CEILING MOUNTING

- The even distribution of light across the entire work surface ensures good visibility without significant shadows.
- Allows large areas to be illuminated.
- The luminaires are protected from direct damage during work.

CORNER MOUNTING

- Provides targeted illumination for areas that might remain in shadow when using only ceiling or side lighting.
- Allows light to be focused on specific areas of the work space, increasing detailed visibility.



VERTICAL WALL MOUNTING

- Ensures perfect shadow elimination and improves perception of detail on vertical surfaces and edges.
- Allows better identification of imperfections on the painted surface due to specific illumination of designated areas.
- Vertical positioning of luminaires can be particularly suitable for illuminating long or tall objects in the booth.

HORIZONTAL WALL MOUNTING

- Effectively eliminates shadows from the sides of objects, making it easier to apply paint to more difficult areas.
- Provides intense illumination of the side surfaces of objects, which is crucial for achieving a good spray finish.
- Ideal for booths where precise control of paint application is important, such as downflow booths.
- Improves visual control and quality of final finishes.

TYPES OF PAINT BOOTHS

Paint booth types can be categorized by size, which affects their use for different applications.

1. **SMALL PAINT BOOTHS:**

These booths are suitable for small objects such as electronic components, toys, or small pieces of furniture. They are relatively compact, which makes them easy to place in smaller workspaces or workshops.

2. **MEDIUM-SIZED PAINT BOOTHS:**

This category is designed for larger objects such as car parts, motorcycles, or medium-sized furniture. Medium-sized booths provide ample space for handling objects during painting and are suitable for small to medium-sized manufacturing operations.

3. **LARGE PAINT BOOTHS**

Large paint booths are essential for painting large objects such as cars, boats, or large industrial components. These booths are often tailored to specific production needs and may include special features such as high suction capacity or advanced filtration systems.

4. **INDUSTRIAL PAINT BOOTHS**

These paint booths are usually very large and may be equipped with advanced temperature, humidity and air cleanliness control systems to ensure the highest quality paintwork.

5. **FLEXIBLE OR MODULAR PAINT BOOTHS**

Some paint booths are designed to be flexible or modular, allowing them to be expanded or customized for different sizes and types of projects. These booths can be ideal for businesses that work on a variety of projects and need to be able to customize the size and configuration of the booth to meet their current needs.

VYRTYCH OFFERS SPECIFICALLY DESIGNED LIGHTING SOLUTIONS THAT ARE TAILORED TO THE NEEDS OF YOUR UNIQUE PAINT BOOTHS.

We are ready to design the optimal lighting solution for you, according to your technical requirements and specifications.

Our goal is to provide you with the most efficient and technically appropriate lighting solution. It is crucial that the lighting in your paint shop is not only adequate and functional, but also contributes to improved working conditions and efficiency.





recessed installation



recessed corner installation



recessed diagonal installation



surface installation



surface horizontal installation




surface vertical installation

Explosion proof paint booth luminaire

 II 3G Ex nR IIC T6 Gc

 II 3D Ex tc IIIC T70°C Dc

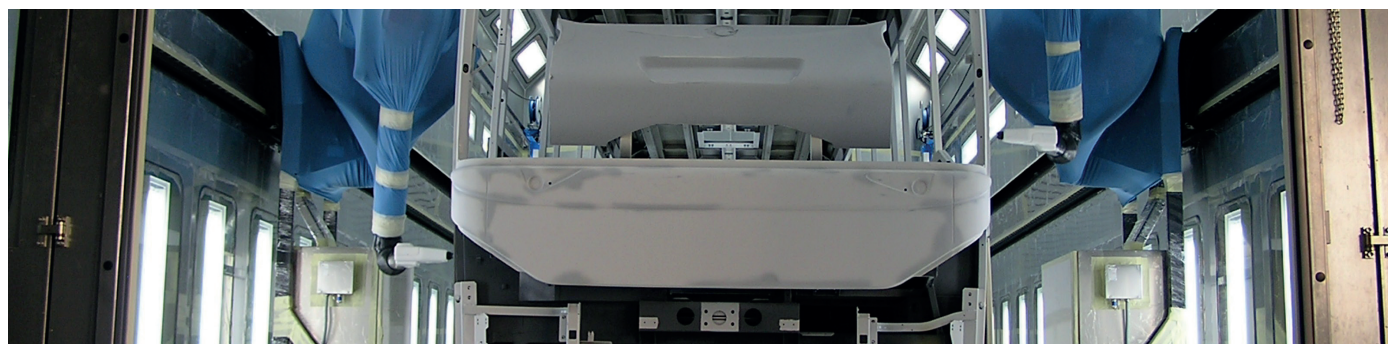
certificate FTZÚ 20 ATEX 0077X

- IP66
- IK07
- Up to 25 692 lm
- Up to 142 lm/W
-  -20°C to +65°C



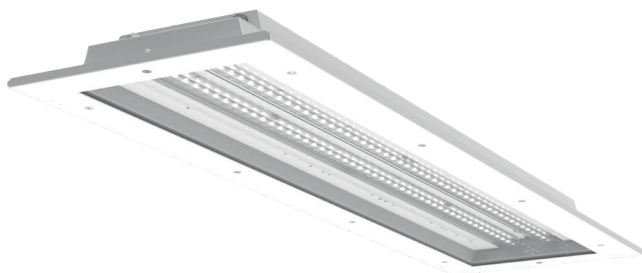
Characteristics:

- Painted steel housing RAL 9016 (stainless steel on request)
- Opal tempered safety glass
- Available in different colour temperatures (Tc)
- Emergency kit/Dimming on request
- Variable mounting options



NORD-N-LED-CG

Ex ZONE 2/22



Explosion proof paint booth luminaire

Ex II 3G Ex nR IIC T6 Gc
Ex II 3D Ex tc IIIC T80°C Dc
certificate FTZÚ 17 ATEX 0026X

- IP66
- IK10
- Up to 12 807 lm
- Up to 166 lm/W
- \updownarrow -20°C to +60°C

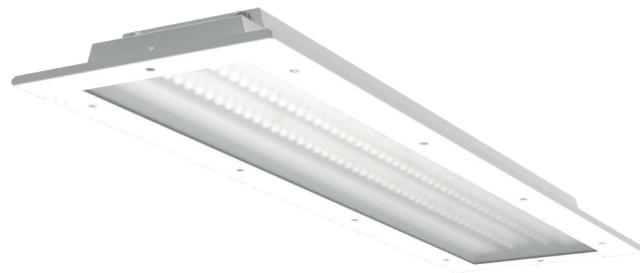


Characteristics:

- Painted steel housing RAL 9016 (stainless steel on request)
- Clear tempered safety glass
- Optics : ACL LINEAR LENS 24mm BATWING
- Available in different colour temperatures (Tc)
- Emergency kit/Dimming on request
- Recessed mounting

NORD-N-LED-OPG

Ex ZONE 2/22



Explosion proof paint booth luminaire

Ex II 3G Ex nR IIC T6 Gc
Ex II 3D Ex tc IIIC T80°C Dc
certificate FTZÚ 17 ATEX 0026X

- IP66
- IK10
- Up to 26 322 lm
- Up to 160 lm/W
- \updownarrow -20°C to +60°C



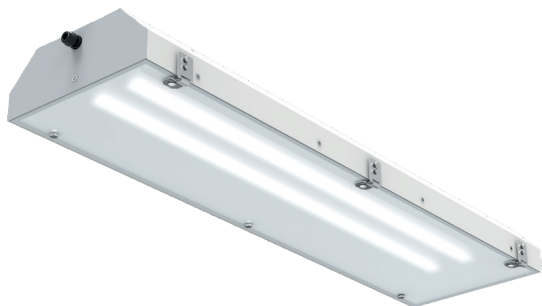
Characteristics:

- Painted steel housing RAL 9016 (stainless steel on request)
- Opal tempered safety glass
- Available in different colour temperatures (Tc)
- Emergency kit/Dimming on request
- Recessed mounting



PITBUL-N-LED

Ex ZONE 2/22



Explosion proof steep roof luminaire

Ex II 3G Ex nR IIC T6 Gc
Ex II 3D Ex tc IIIC T68°C Dc
certificate FTZÚ 17 ATEX 0129X

- IP65
- IK10+
- Up to 24 845 lm
- Up to 131 lm/W
- \updownarrow -20°C to +65°C

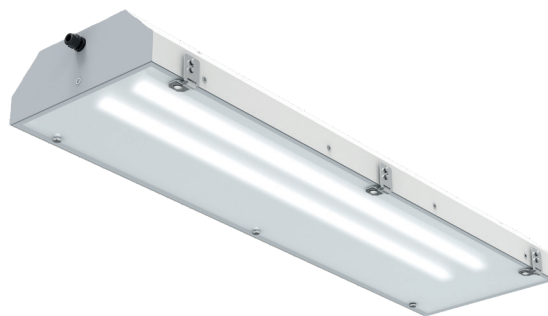


Characteristics:

- Painted steel housing RAL 9016 (stainless steel on request)
- Opal tempered safety glass
- Available in different colour temperatures (Tc)
- Emergency kit/Dimming on request
- Surface, recessed or suspended mounting

PITBUL-EX-LED

Ex ZONE 1/21



Explosion proof steep roof luminaire

Ex II 2G Ex db eb mb op is IIC T4 Gb
Ex II 2D Ex tb op is IIIC T 67°C Db
certificate FTZÚ 16 ATEX 0089X

- IP65
- IK10+
- Up to 13 447 lm
- Up to 159 lm/W
- \updownarrow -40°C to +60°C



Characteristics:

- Painted steel housing RAL 9016 (stainless steel on request)
- Opal tempered safety glass
- Available in different colour temperatures (Tc)
- Emergency kit on request
- Surface, recessed or suspended mounting



BORDER-N-LED

Ex ZONE 2/21, 22



Explosion proof lighting panel

ZONE 2/21


Ex II 3G Ex nR IIC T6 Gc

Ex II 2D Ex tb op is IIIC T85°C Db
certificate FTZÚ 23 ATEX 0038X

ZONE 2/22

Ex II 3G Ex nR IIC T6 Gc

Ex II 3D Ex tc IIIC T85°C Dc
certificate FTZÚ 23 ATEX 0039X

- IP66
- Up to 9 996 lm
- Up to 158 lm/W
-  -40°C to +60°C



Characteristics:

- Robust steel sheet or stainless steel housing RAL 9016
- Classified for clean areas in compliance with ISO 14644-1
- Clear or opal tempered safety glass or clear polycarbonate diffuser
- Available in different colour temperatures (Tc)
- Emergency kit/Dimming on request

Diffuser:

- GLM: matt tempered safety glass
- OP: clear PC + opal plexiglass
- MP: clear PC + microprismatic plexiglass
- CGOP: clear tempered safety glass + opal plexiglass
- CGMP: clear tempered safety glass + microprismatic plexiglass

Large variability of luminaires according to installation types:

- mounting into **false ceilings of M600/M625** modules
- installation using nivelation set for **metal suspended ceilings M598/M623**
- installation using nivelation set for **plasterboard**
- installation using frame for surface mounting



EXTRA-N-LED-2/21

Ex ZONE 2/21



Explosion proof linear luminaire

Ex II 3G Ex nR IIC T6 Gc
Ex II 2D Ex tb IIIC T80°C Db
certificate FTZÚ 24 ATEX 0020X

- IP66
- IK10
- Up to 16 311 lm
- Up to 155 lm/W
- -20°C to +60°C

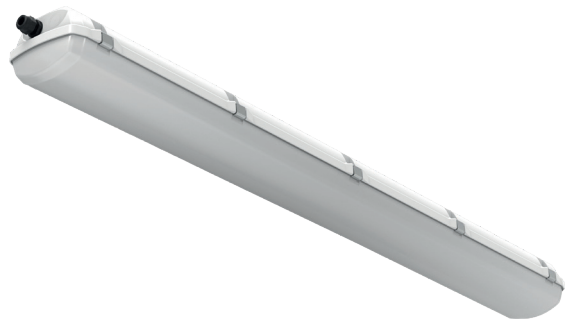


Characteristics:

- Polycarbonate UV stable housing RAL 7035
- Opal polycarbonate diffuser
- Available in different colour temperatures (Tc)
- Emergency kit/Dimming on request
- Surface or suspended mounting

EXTRA-N-LED

Ex ZONE 2/22



Explosion proof linear luminaire

Ex II 3G Ex nR IIC T6 Gc
Ex II 3D Ex tc IIIC T80°C Dc
certificate FTZÚ 16 ATEX 0102X

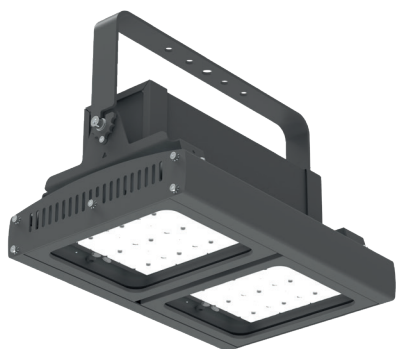
- IP66
- IK10
- Up to 17 903 lm
- Up to 166 lm/W
- -20°C to +60°C



Characteristics:

- Polycarbonate UV stable housing RAL 7035
- Opal polycarbonate diffuser
- Available in different colour temperatures (Tc)
- Emergency kit/Dimming on request
- Surface or suspended mounting





Explosion proof HIGH-BAY

ZONE 2/21

Ex II 3G Ex nR IIC T6...T5 Gc
Ex II 2D Ex tb op is IIC T85°C Db
certificate FTZÚ 22 ATEX 0107X

ZONE 2/22

Ex II 3G Ex nR IIC T6...T5 Gc
Ex II 3D Ex tc IIC T85°C Dc
certificate FTZÚ 22 ATEX 0108X

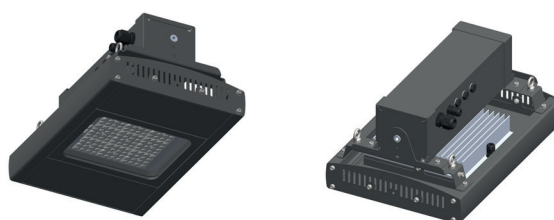
- IP66
- Up to 43 634 lm
- Up to 179 lm/W
- -40°C to +70°C



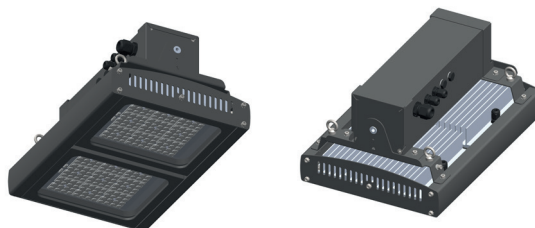
Characteristics:

- Robust aluminium housing RAL 7043
- Clear tempered safety glass
- Extreme high LED lifetime L70B50 Ta70 - 100 000 h even at high temperatures
- Available in different colour temperatures (Tc)
- Dimming on request
- Suspended by means of 4 eye bolts M5 (standard equipment) or surface mounted by means of adjustable bracket (adjustable bracket on request only)

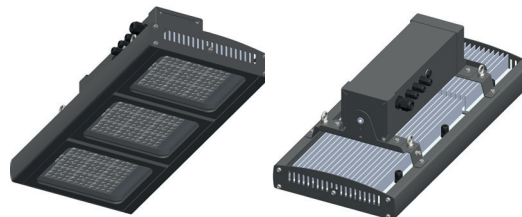
1M - 1 module



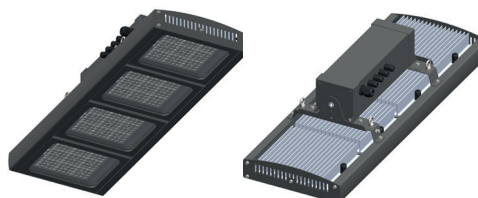
2M - 2 modules

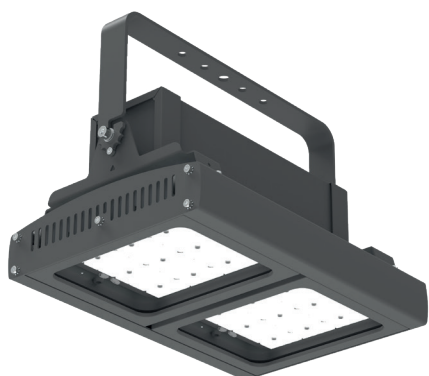


3M - 3 modules




4M - 4 modules





Industrial HIGH-BAY

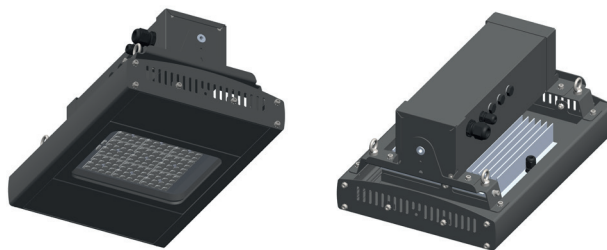
- IP66
- IK06
- Up to 43 634 lm
- Up to 179 lm/W
-  -40°C to +70°C



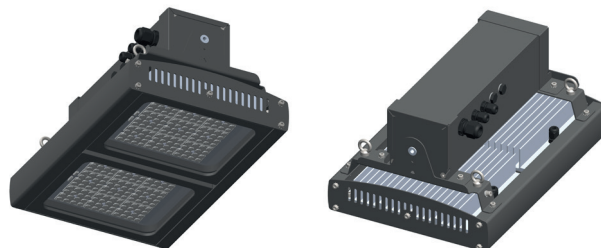
Characteristics:

- Robust aluminium housing RAL 7043
- Clear tempered safety glass
- Extreme high LED lifetime L70B50 Ta70 - 100 000 h even at high temperatures
- Available in different colour temperatures (Tc)
- Dimming on request
- Suspended by means of 4 eye bolts M5 (standard equipment) or surface mounted by means of adjustable bracket (adjustable bracket on request only)

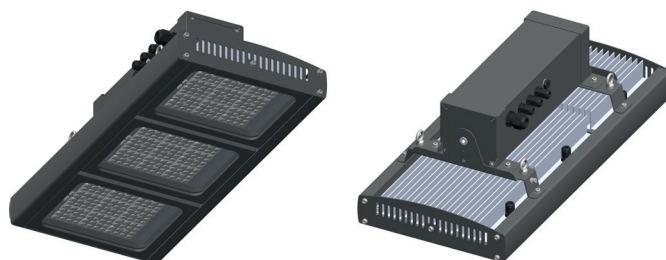
1M - 1 module



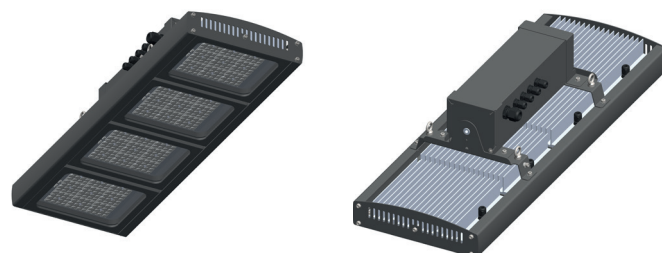
2M - 2 modules



3M - 3 modules



4M - 4 modules



SALUKA-N-LED

Ex ZONE 2/22



Explosion proof linear luminaire

Ex II 3G Ex nR IIC T6 Gc
Ex II 3D Ex tc IIIC T80°C Dc
certificate FTZÚ 17 ATEX 0027X

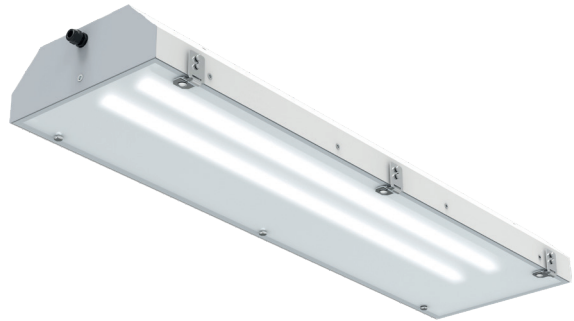
- IP66
- IK07
- Up to 16 963 lm
- Up to 154 lm/W
- -20°C to +60°C



Characteristics:

- Painted steel housing RAL 9016 (stainless steel on request)
- Opal tempered safety glass
- Available in different colour temperatures (Tc)
- Emergency kit/Dimming on request
- Surface or suspended mounting

PITBUL-LED



Industrial steep roof luminaire

- IP65
- IK10
- Up to 24 845 lm
- Up to 131 lm/W
- -20°C to +65°C



Characteristics:

- Painted steel housing RAL 9016 (stainless steel on request)
- Diffuser:
 - CG: clear tempered safety glass
 - OP: Opal tempered safety glass
- Available in different colour temperatures (Tc)
- Emergency kit/Dimming on request
- Surface, recessed or suspended mounting



MCE GmbH/HABAU GROUP - CZECH REPUBLIC



PAINT BOOTH FOR BRIDGES

luminaires:

- **PITBUL-N-LED** for ATEX ZONE 2/22
- **FILA-N-LED** for ATEX ZONE 2/21, 22

MCE Slaný s.r.o., part of the HABAU GROUP, is a key player in the production of steel bridges, transformer vessels and special steel structures. We are proud to be involved in their projects with our lighting solutions.

HELLA - SLOVAKIA



THE PAINT BOOTH - ROBOTIC PAINTING

luminaires:

- **NORD-N-LED** for ATEX ZONE 2/22

HELLA Slovakia Front-Lighting Nové Mesto nad Váhom
Paint shop for surface treatment of headlights (application of antifog paint on the inner part of headlamps).

NORDEC - POLAND



THE PAINT BOOTH FOR STEEL STRUCTURES

luminaires:

- **PITBUL-EX-LED** for ATEX ZONE 1/21
- **PITBUL-N-LED** for ATEX ZONE 2/22

REFERENCES

IVECO - CZECH REPUBLIC



THE LARGE PAINT BOOTH FOR BUSES

luminaires:

- **FILA-N-LED** for ATEX ZONE 2/21, 22

Iveco, an international leader in the development, manufacture, and servicing of an extensive range of light, medium and heavy commercial vehicles. It also manufactures passenger transport vehicles and special vehicles for defence, civil protection and special applications such as firefighting.

GERMANY

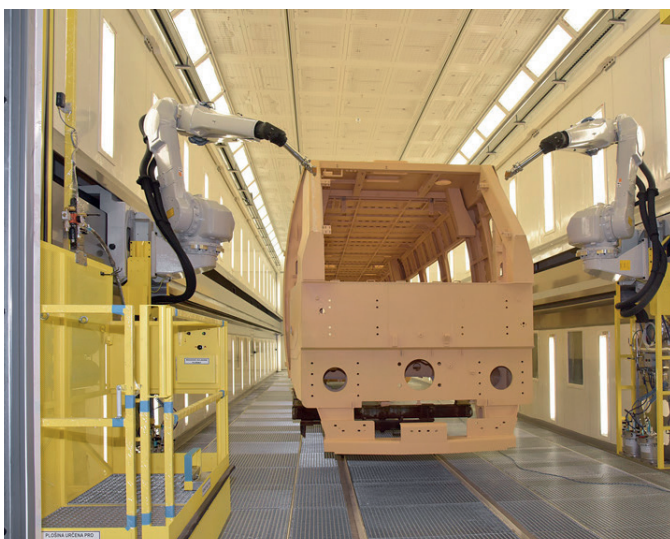


THE LARGE PAINT BOOTH

luminaires:

- **FILA-N-LED** for ATEX ZONE 2/21, 22

ALSTOM CZECH REPUBLIC a.s.



THE LARGE WAGON PAINT BOOTH

luminaires:

- **NORD-N-LED** for ATEX ZONE 2/22

ALSTOM Czech Republic a.s (formerly Bombardier Transportation Czech Republic).

Workplace for automatic application of liquid paints for wagon painting 17 painting workplaces (paint booths, cabins, drying room, acceptance workplace) including a robotic paint shop.



VYR TYCH

We are a Czech manufacturer of industrial luminaires with more than 30 years of experience, specializing in a wide range of industrial and luminaires for special applications suitable for various industries such as oil&gas, chemical&pharmaceutical sector, medical, industrial and others.



100+
employees



30+ years
in the market



70+ export
countries



2500+
luminaires



60 000+
company area



Zelená firma®



VYRTYCH a.s.
Židněves 116
294 06 Březno
CZECH REPUBLIC
www.vyrtych.cz

