



New automatic bollards with efficient and operationally reliable hydraulic drive are used both for passages with an increased traffic frequency and as simple barriers. These include traffic-calmed zones, pedestrian areas or bus lanes. Different types of control on control pillars, or installed on walls or booths allow simple, intelligent control.

The new bollard series will impress you with its:

- High degree of operational safety
- Intelligent control
- Low-maintenance mechanism
- Attractive design
- Very good visibility
- Safety from vandalism

#### **Quality & long life of service**

Both the bollard and the mechanism are designed for an extremely long service life. This is achieved by the use of a small number of mechanical parts as well as of high-quality materials and components. Non-corrosive materials prevent rust formation and guarantee long service life and cost security.

#### **The design**

The timeless minimal design fits very well architecturally into all urban areas. The innovative LED fully illuminated bollard head ensures good visibility both day and night.

Thanks to their identical design, fixed, manually and automatically retractable bollards of the **urbanstar** series can be seamlessly combined with each other.

#### **The reliable hydraulic mechanism**

The integrated, closed hydraulic mechanism is designed for 2,000 movement cycles per day and is operated with bio-oil. All hydraulic connections are made of stainless steel, the single-acting hydraulic lifting cylinder is specially coated with an anti-corrosive material.



## Bollard control

A new smart bollard control system enables the system to continuously monitor itself with a wide variety of sensors. The new control system offers:

### Self-monitoring

- Detailed fault analysis, displayed on the control display
- Automatic emergency retraction
- Independent emergency retraction in the event of faults (programmable)
- Visual display in case of malfunction
- Special flashing sequence of the head lighting for fault indication
- Adjustment of brightness / acoustic warning
- Automatic adjustment of the brightness of the head lighting and switching off of the acoustic warning (at night) by means of geo-coordinates
- Data acquisition and storage

- Simplified fault analysis or investigation of evidence in the event of incidents (accidents/collisions)

### Remote monitoring and control (optional)

Optionally, we offer remote monitoring and control via a cloud platform (web-based).

### Advantages

- Status display of the system in real time
- Web-based control of the system
- Automatic error messages via email / SMS

## Options

### Adaptation to road gradient

The bollard inserts (shafts) can be adapted to the road gradient – a great advantage in construction and operation: unhindered road cleaning and snow removal, no tripping/ danger for pedestrians or cyclists.

### Heating

For better operational safety in winter, it is advisable to install a bollard heater. This works exactly where the heat is needed – with intelligent heating control and a local temperature sensor.

### Custom Bollards

We manufacture the bollard of your choice:

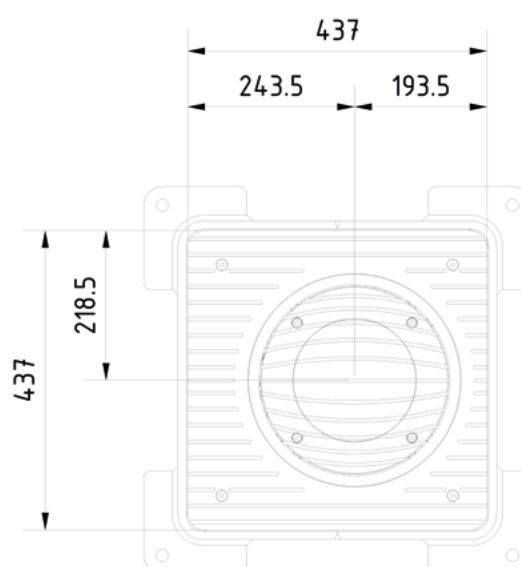
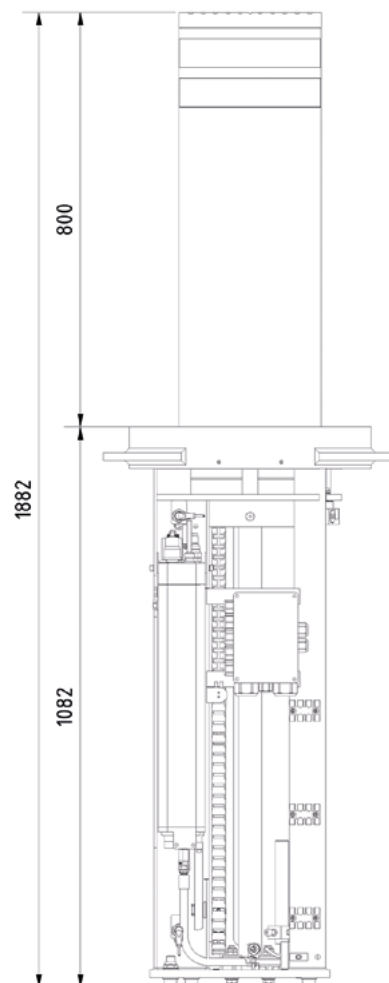
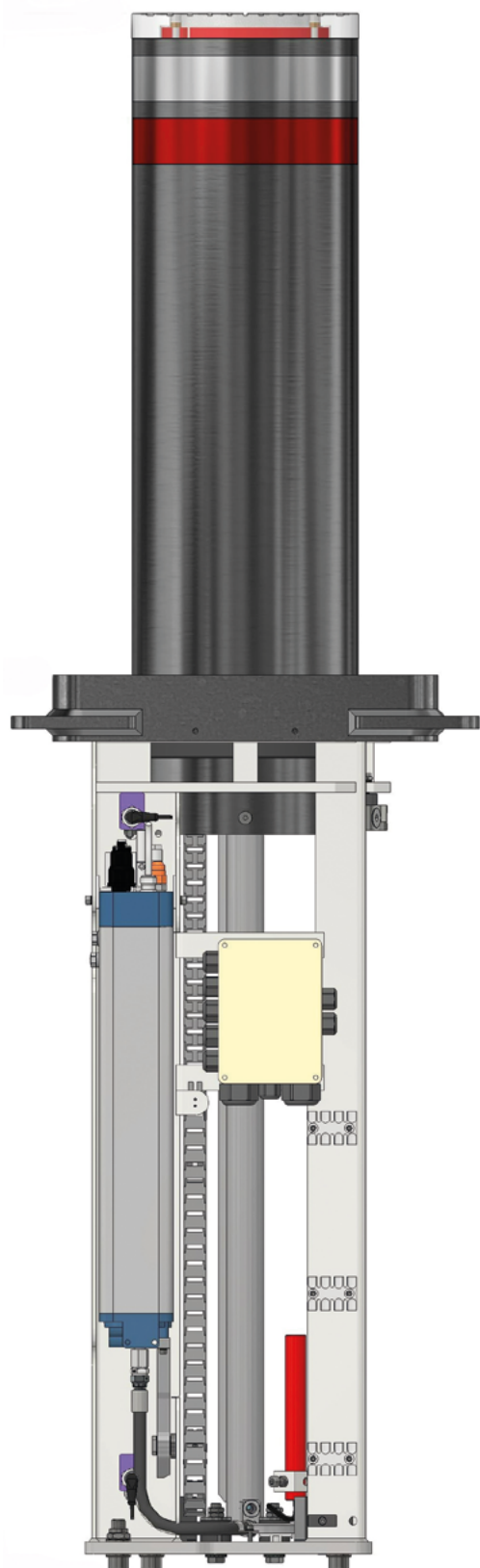
- Surface in polished stainless steel or painted in RAL color
- Laser engraving with logo or lettering
- Different head lighting
- Warning markings

### Custom-made control pillars

We manufacture control pillars and control elements in individual designs.

## The benefits at a glance

- strong 360° LED bollard head illumination
- acoustic warning for pedestrians, wheelchairs and cyclists (can be switched off at any time)
- visually impaired labeling with reflector foils
- ground-level bollard head and shaft end
- polished stainless steel bollard cylinder
- substructure anti-corrosion coated mechanism
- suitable for very intensive use: guaranteed up to 2,000 work cycles per day.
- adjustable lifting force limitation (6 to 35 kg)
- automatic retraction in case of malfunction/power failure
- integrated, thermostatically controlled heating



## Technical specifications

<b>Construction type</b>	Automatically retractable bollard with integrated hydraulic drive. Connection via normal control line to external control distribution.
<b>Substructure</b>	Compact bollard frame made of hot-dip galvanized steel
<b>Blocking element</b>	Cylindrical bollard with a diameter of 275 mm and a height from the bottom of 800 mm
<b>Cylinder material</b>	Polished stainless steel; optional other versions or RAL colours
<b>Corrosion protection</b>	All components made of hot-dip galvanized steel or stainless materials
<b>Lost formwork</b>	Bollard shaft is made of zinc sheet; stainless steel shafts are optionally available for installing the bollards in building envelopes. Dimensions: 441 x 441 x 1160 mm (body 465 x 465 mm)
<b>Mechanism</b>	Hydraulic drive with bio-oil, installed in the bollard
<b>Motor power</b>	500W; 8-12A (Rated Power / Rated Current)
<b>Operating voltage of mechanism</b>	230 VAC / 24 VDC
<b>Bollard head</b>	Made of hardened polycarbonate and aluminium block
<b>Bollard head illumination</b>	360° and upward shining LED lighting in red (continuous light or flashing); other colors optional
<b>Lowering time</b>	3.5 seconds
<b>Lifting time</b>	5.5 seconds
<b>Bollard control</b>	Supply voltage 230V +6/-10% 50/60Hz; maximum cable length: 80 meters
<b>Degree of protection on the part of the bollard</b>	IP 67
<b>Load class</b>	D400; 25 t wheel load
<b>Frequency of use / duty cycle</b>	Intensive use (2,000 movements/day); designed for continuous operation
<b>Reflector tapes</b>	Standard width 55mm, white or red; equipped with two reflector bands for better contrast
<b>Operating temperature</b>	-40 °C (with heating) to +70 °C
<b>Heater for winter operation (optional)</b>	80 W with thermostat control (built into the bollard)
<b>Force limitation during lifting</b>	freely adjustable for the first 15 cm; standard setting: 30 kg
<b>Acoustic warning (optional)</b>	Built-in buzzer in the bollard for warning pedestrians
<b>Emergency operation / lowering</b>	The bollard automatically lowers in the event of a power failure or malfunction. Optionally, this function can be switched off so that the bollard remains in the raised position (battery supported).
<b>Impact strength</b>	40,000 J (without deformation) / 250,000 J (breakout resistance)
<b>Weight of bollard system</b>	131 kg
<b>Weight of shaft with frame</b>	56 kg