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## Tender Description

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### **Movable bollard M50**

Movable bollard M50 with integrated hydraulic aggregate including base frame, guidance, metal housing, cover plate and separate control unit for up to five bollard units.

#### **KINETIC IMPACT ENERGY:**

1852 kJ (7.5 t @ 80 km/h)

#### **CERTIFICATION:**

Crash test certified according to PAS 68:2013 V/7500[N3]/80/90:5.2/7.8, IWA 14-1:2013 V/7200[N3C]/80/90:5.5 and ASTM F 2656-07 M50/P2

#### **WHEEL LOAD:**

100 kN wheel load according to SLW60 - DIN 1072

#### **BOLLARD CONFIGURATION:**

Single unit  
Double unit  
Triple unit  
Quadruple unit  
Penta unit

#### **BLOCKING ELEMENT:**

Diameter: 355 mm  
Wall thickness: 30 mm (steel)  
Blocking height: 1100 mm  
Blocking element complete with screwed on top plate  
Optional: Blocking element fitted with stainless steel sleeve and stainless steel top plate

#### **LIGHTING (OPTIONAL):**

Bollard top lighting, Ufo-shape  
Colour: LED red, white or yellow

#### **TAMPERING RESISTANCE (OPTIONAL):**

Reed contact for top plate and cover plate

#### **OPERATING TIMES:**

Raising: 5-6 sec  
Lowering: 3-4 sec  
Emergency Fast Operation (EFO): raising 2-3 sec (with optional accumulator)

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### **EMERGENCY OPERATION DURING POWER FAILURE:**

Bollard remains in raised position and can be lowered manually.

Optional: Accumulator and rechargeable battery pack for one raising movement with charged accumulator (RO1)

### **HYDRAULIC FLUID:**

Biodegradable hydraulic fluid Plantohyd 22 S, non-hazardous to water, or mineral oil HLP 22

### **HEATER (OPTIONAL):**

Heater for up to -30°C

### **ACCUMULATOR (OPTIONAL):**

Accumulator for Emergency Fast Operation (EFO) and one raising movement with charged accumulator during power failure (RO1) in connection with optional rechargeable battery pack

### **DRIVE:**

1.5 kW, 120 V, single phase, 60 Hz

### **SUPPLY VOLTAGE:**

120 V (1Ph + N + PE), 60 Hz

### **CONTROL:**

Control voltage 24 V DC

Max. distance between bollard and control unit: 50 m

Microprocessor control unit WE-Tronic II in control box (IP 66)

for wall installation inside a building

Optional: With rechargeable battery pack for RO1

Optional: Socket SCHUKO type F, plug CEE 7/3 mounted on a top-hat rail inside the control box

### **OUTDOOR CONTROL CABINET (OPTIONAL):**

Control box installed in outdoor control cabinet complete with rain cover, hygostat, thermostat, heater, fan, hose-proof hood and outdoor coating HxWxD = 1200x1200x400 mm + 200 mm socket (for single, double and triple bollard unit with RO1) or HxWxD = 1000x800x400 mm + 200 mm socket (for all other bollard units) respectively

### **LOCKING MECHANISM FOR OPTIONAL CONTROL CABINET:**

3-point locking system with double-bit insert

Optional: Folding lever handle with profile cylinder

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### **CONTROL DEVICES (OPTIONAL):**

- Push button "raise/stop/lower" or key switch "raise/stop/lower"
- Key switch "fire brigade"
- Key switch "automatic closing on/off"
- Anti-terror push button (for EFO/EO)
- Light beam system
- Remote control receiver, 4-channel including rod antenna
- 2-channel or 4-channel hand-held transmitter
- 1-channel or 2-channel loop detector
- Traffic light red/green, D200
- Flashing permanent beacon or revolving beacon
- Alarm horn for outdoor control cabinet
- Potential free contacts "bollard raised/lowered"
- Reed contact for cover plate
- Door contact switch for optional outdoor control cabinet

### **FINISH:**

Blocking element: Standard RAL colour 6005, 7016, 7030, 7035 or 9010

Optional: Blocking element: Special RAL colour or

Blocking element fitted with stainless steel sleeve and stainless steel top plate

Bollard top plate: Galvanised finish

Optional: Bollard top plate in RAL colour of blocking element or

stainless steel bollard top plate (only in connection with stainless steel sleeve)

Cover plate: Galvanised finish

Optional: Cover plate in RAL colour of blocking element

Metal housing: galvanised finish

### **INSTALLATION UNIT:**

The bollard M50 is delivered as a ready to install unit. The electro-hydraulic drive unit is integrated in the blocking element and factory-adjusted.

### **FOUNDATION:**

Reinforced foundation according to manufacturer's instructions