

DESIGNED, ENGINEERED AND MANUFACTURED IN GERMANY







**Aerial view factory I – Head office**



**Aerial view factory II – Development, Production and Logistics**

#### **Imprint**

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**This catalogue provides only an overview of some of our products. For further information please contact us.**

**Specifications are subject to change without notice. Illustrations may vary from original products. All technical data are approximate values.**

**Products are supplied without batteries resp. rechargeable batteries unless otherwise specified.**

**Attention:** Setting and operation of all products mentioned in this catalogue must only be carried out by trained personnel. Operating manuals and setting instructions resp. mounting instructions as well as all corresponding rules and regulations are to be followed strictly!

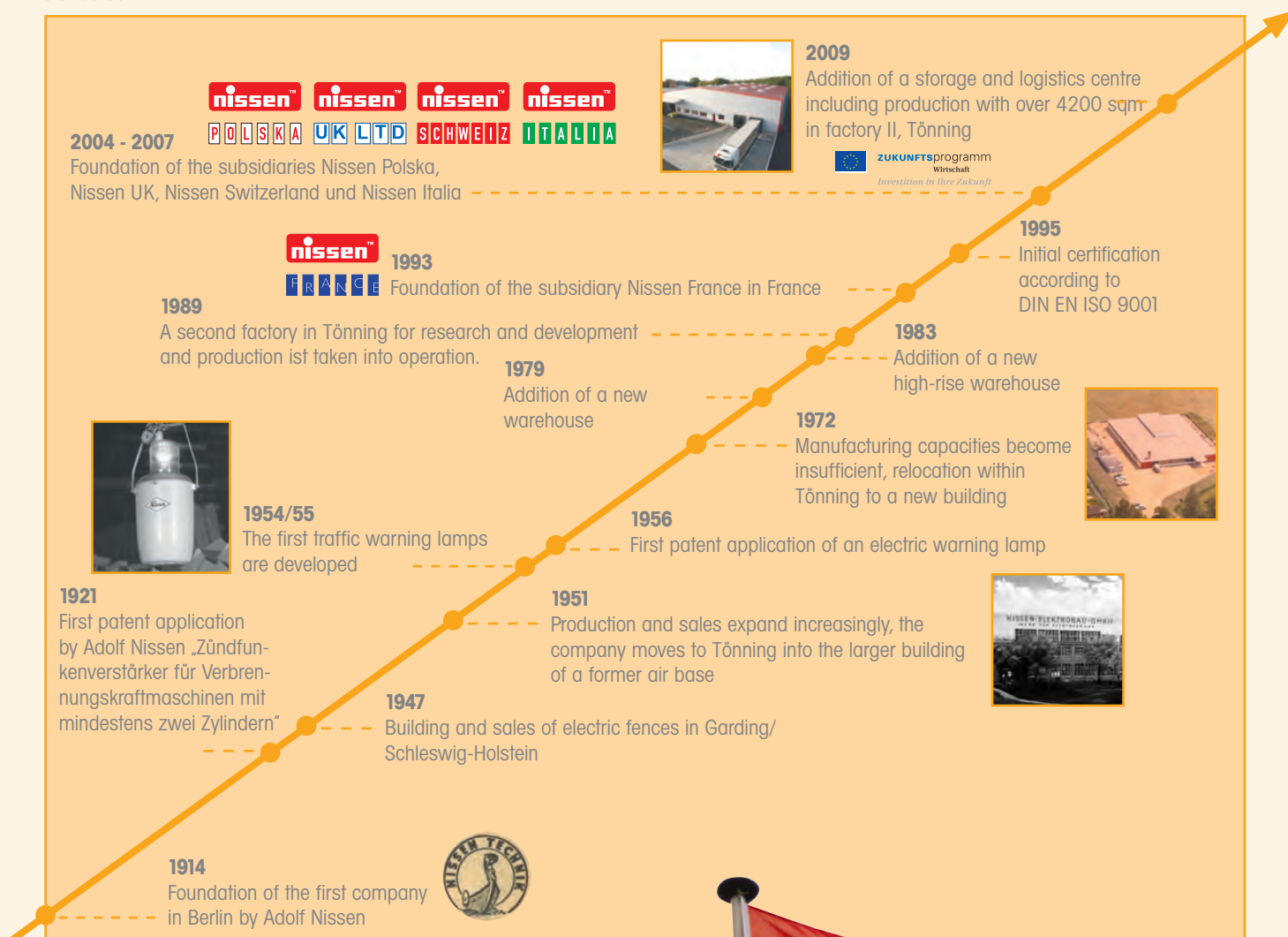
# Birth of a pioneering idea: 97 years Nissen Elektrobau - more than 50 years in service of traffic safety

The company Adolf Nissen Elektrobau GmbH + Co. KG, founded in 1914, has its head office in Tönning/Schleswig-Holstein.

After successful years in the field of agricultural engineering the age of traffic warning equipment began in the mid-1950s with the development of a traffic warning lamp, the first corresponding Nissen patent application was made in 1956.

Since 1956, Nissen built up a worldwide reputation by continuous research and development and new product development of high-quality and innovative products for traffic safety. The company has become leading manufacturer in Europe with subsidiaries in France, United Kingdom, Poland, Switzerland and Italy.

Reasons of such success are continuous innovation and the high quality of our products which of course correspond with national and international standards.



**Our products are designed for protecting human lives!**

Therefore it is our first priority to supply only high quality products and services.

Since 1995 the permanent improvement of our high quality level is verified by annual confirmation of our certification according to DIN EN ISO 9001.





## Leadership by innovation

### From the idea to the final product - designed, engineered and manufactured in Germany



Design and engineering

1. In our main plant in Tönning, we design and develop traffic securing systems beginning with the first sketch up to the final product.



Mould making

2. Manufacturing of moulds for our injection moulding machines also takes place here...



Injection moulding

3. ...as well as the production of moulded components, e.g. all housings and lenses.



Production of SMD circuit boards

4. The production in Tönning also includes the manufacturing of circuit boards in state-of-art SMD technique. This takes place in cooperation with the sheltered workshops for disabled people. For our long-term cooperation with these sheltered workshops we were awarded the integration award „The Mermaid“ in 2008.



Final assembly



Trailer construction



LED construction

5. The high quality level of the lamps, devices, trailers and LED variable message signs produced by us is guaranteed through extensive series of tests, inspection and control systems. No product leaves our facility without final test according to ISO 9001.



Beacon Blow mold machine



Welding robot



Base plate production

Products from Nissen:

DESIGNED, ENGINEERED AND MANUFACTURED IN GERMANY

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## List of approval numbers



## List of approved products



# List of approval numbers



Ref.No.	Description	Lamp class	Approval no.
111 241-1/-51	BakoLight LED one-sided amber	WL1	V4-01-2004
111 241-3/-53	BakoLight LED one-sided red	WL1	V4-47-2004
111 242-1/-51	BakoLight LED two-sided amber	WL2	V4-02-2004
111 221-1	Beacon Lamp Konstant-Norm LED one-sided amber	WL1	V4-120-2003
111 222-1	Beacon Lamp Konstant-Norm LED two-sided amber	WL2	V4-121-2003
112 127-51	Euro-Nitra LED one-sided amber	WL1	V4-120-2004
112 127-53	Euro-Nitra LED one-sided red	WL1	V4-117-2004
112 128-51	Euro-Nitra LED two-sided amber	WL2	V4-80-2004
120 910	Halogen lamp for Sequential Direction Light Set	WL3	U5-2496N
130 273-11	Super-Primär 823/2 one-sided amber	WL4	V4-25-2001
130 304-1	Traffic Cone Lamp Type 42/2 one-sided amber	WL4	V4-26-2001
122 211-1	Multi-Light 200 LED L8H Advance Warning Lamp	WL6/L8H	V4-54-2006
122 212-1	Multi-Light 200 LED L8H Twofold Warning Light System	WL6/L8H	
129 360-151	Multi-Light 200 LED L8H Arrow Lamp LP 8/S	WL6/L8H	
129 478-162/-171	Multi-Light 200 LED L8H Arrow Lamp LP 15/S	WL6/L8H	
129 400-3/-13	Multi-Light 200 LED L8H Arrow Lamp LP 7000 B	WL6/L8H	
129 403-3/-13	Multi-Light 200 LED L8H Arrow Lamp LP 7000 L	WL6/L8H	
122 311-1	Multi-Light 340 LED L9H Advance Warning Lamp	L9H	MTkP805472
122 312-1	Multi-Light 340 LED L8H Twofold Warning Light System	L9H	
122 334-1	Advance Warning Lamp Halogen 340 mm	WL7	U5-2096
122 460-11	Twofold Warning Light System Halogen 340 mm	WL7	
122 428-1	Advance Warning Lamp Xenon Flash 340 mm	WL5	U5-3596
122 483-1	Twofold Warning Light System Xenon Flash 340 mm	WL5	
129 354-15	Halogen lamp for light arrow LP13	WL6	U5-3796N
129 360-1	Halogen lamp for light arrow LP 8/RS-Norm	WL6	U5-3696N
129 478-1	Halogen lamp for light arrow LP 15/1	WL6	
129 400-1/-11	Halogen lamp for light arrow LP 7000	WL6	
120 606-1	Halogen lamp for Directive Light System	WL6	
145 562-1	Traffic Signal Unit LZA 500		Ni-0812008
071 120-5	Traffic cone 750 mm, foil type A, class III		97 3S 02
071 110-5	Traffic cone 500 mm, foil type A, class III		97 3F 01
071 120-6	Traffic cone 750 mm, foil type B, class III		V4-70/2003
071 110-6	Traffic cone 500 mm, foil type B, class III		V4-72/2003
070 665-541	Traffic Guidance System Quick Marker Type B (screwed) with indicator		V4-17/2006
071 511-2	Folding Beacon ToNi 75		02 2K 10
071 512-2			
071 513-2			
	Safety Beacon with lamp Konstant-Norm LED and base plates 50-53 + 56		94 2K 013
	Safety Beacon with lamp BaKoLight LED and base plate TL 56 K1 (approved for base plates type 50 - 54 and 56)		2000 2K 01
	Beacon Tornado 75 Flex		V4-16/2006
	Reversible Beacon WeBaNi 40 with base plate TL 56 K1		V4-12/2006

## Lamp classes according to European Standard EN 12352



Class		Light emitting surface	Opening angle		Luminosity	
D	EN	in cm <sup>2</sup>	Horizontal	Vertical	Minimal in cd	Maximal in cd
	L1	(see EN 12352; 4.1.2)	300°	+ 5° bis - 5°	1	100
	L2L	> 18	+ 7° to - 7°	+ 7° bis - 7°	25	100
	L2H	> 18	+ 7° to - 7°	+ 7° bis - 7°	150	1500
	L3	> 75	+ 10° to - 10°	+ 5° bis - 5°	2	100
	L4(F2)	> 140	+ 10° to - 10°	+ 5° bis - 5°	43	100
	L5	> 140	+ 2° to - 2°	+ 2° bis - 2°	500	2000
WL 2	L6	> 2 x 250	+ 10° to - 10°	+ 5° bis - 5°	10	100
WL 1	L7	> 250	+ 10° to - 10°	+ 5° bis - 5°	20	100
WL 3	L8G	> 250	+ 7,5° to - 7,5°	+ 5° bis - 5°	25	100
WL 4	L8L	> 250	+ 7,5° to - 7,5°	+ 5° bis - 5°	250	500
WL 6	L8M	> 250	+ 7,5° to - 7,5°	+ 5° bis - 5°	500	1500
WL 6	L8H	> 250	+ 7,5° to - 7,5°	+ 5° bis - 5°	1500	5000
WL 7	L9L	> 700	+ 1,5° to - 1,5°	+ 1,5° bis - 1,5°	500	2000
WL 5	L9M	> 700	+ 1,5° to - 1,5°	+ 1,5° bis - 1,5°	2000	8000
WL 7	L9H	> 700	+ 1,5° to - 1,5°	+ 1,5° bis - 1,5°	20000	40000



The product complies with the European Standard EN 12352



The product was tested by the German Federal Highway Research Institute according to German Standards



The product complies with German Standards



The product is approved according to EC Guideline 72/245/EEC, as last amended by Guideline 95/54/EC and as latest changed by Directive 2005/83/EC



The product is approved according to EC Guideline 89/106/EEC, as last amended by Guideline 93/68/EEC



The product can be monitored and controlled by Nissen Navigation System NiNa



## **Warning lamps according to German Standards and EN 12352**



- **To be used on all roads and motorways**
- **For mounting on e.g. beacons and safety barriers**

# Warning lamps

## according to German Standards and EN 12352

### Beacon and Warning Lamp BakoLight LED



tested according to German Standards

- Lamp class L6 (one-sided) resp. L7 (two-sided) according to EN 12352
- High-quality LEDs with nearly unlimited life time
- Lens diameter 200mm
- Automatic solar switch and indication for operating condition
- Battery integrated in the lamp housing, therefore no cable connection
- Only one battery needed
- Easy mounting on beacon systems
- Easy attachment to barriers with the firmly mounted bracket or to tubes with the enclosed clamp
- Examples of application (depending on country-specific regulations)
  - on beacons
  - on barriers
  - on site fences

Beacon and Warning Lamp BakoLight LED	Ref. No.
BakoLight LED, flashing/steady light, one-sided amber, with bracket	11 241-51
BakoLight LED, flashing/steady light, two-sided amber, with bracket	11 242-51
BakoLight LED, flashing/steady light, one-sided red, with bracket	11 241-53
BakoLight LED, flashing/steady light, one-sided amber, without bracket	11 241-1
BakoLight LED, flashing/steady light, one-sided red, without bracket	11 241-3
BaKoLight LED, flashing/steady light, two-sided amber, without bracket	11 242-1

Accessories and Spare parts	Ref. No.
Key	070 090-3

#### Operating time with one set of batteries

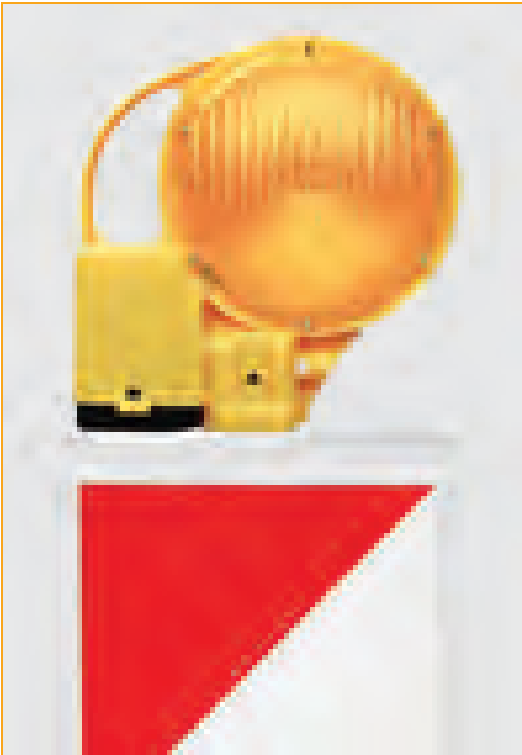
With battery Premium 800	one-sided steady light	150 hrs
	flashing light	450 hrs
	two-sided steady light	300 hrs
	flashing light	900 hrs
With battery Konstant 25	one-sided steady light	500 hrs
	flashing light	1500 hrs
	two-sided steady light	1000 hrs
	flashing light	3000 hrs

#### Technical data

Light colour	amber resp. red
Eff. light intensity	amber one-sided 30 cd / two-sided 12 cd
Blink-/flash rate	60 - 70 fl./min.
Dimensions (LxWxH)	267 x 05 x 275 mm

#### Packaging unit

12 lamps in one carton / 216 lamps on one pallet  
also available in other quantities



BakoLight LED on a Safety Beacon



BakoLight LED on a Safety Barrier



Key



BakoLight with bracket



Changing battery



# Beacon Lamp Konstant-Norm LED



tested according to German Standards

- Lamp classes according to EN 12352 - L6 (one-sided) resp. L7 (two-sided)
- High-quality LEDs with nearly unlimited life time
- Lens diameter 200 mm
- Automatic solar switch
- Battery integrated in base plate
- Fits all beacon systems when using the appropriate adapter (42 mm Ø, 40x40 mm)
- Examples of application (depending on country-specific regulations)
  - on beacons

Beacon Lamp Konstant-Norm LED	Ref. No.
Konstant-Norm LED, flashing/steady light, one-sided amber	11 221-1
Konstant-Norm LED, flashing/steady light, two-sided amber	11 222-1

Accessories and Spare parts	Ref. No.
Pulser LED, one-sided amber	355 521-11
Pulser LED, two-sided amber	355 522-11

## Operating time with one set of batteries

With battery Konstant 111	steady light 1550 hrs flashing light 4600 hrs
With battery Konstant 100	steady light 1450 hrs flashing light 4300 hrs
With battery Konstant 60	steady light 1050 hrs flashing light 3000 hrs

## Technical data

Light colour	amber
Eff. light intensity	one-sided 30 cd / two-sided 16 cd
Blink-/flash rate	60 fl./min.
Dimensions (LxWxH)	207 x 88 x 270 mm

## Packaging unit

10 lamps in one carton / 250 lamps on one pallet also available in other quantities
--



Konstant-Norm LED on a Safety Beacon



Locking bolt



Battery compartment

# Warning Lamp Euro-Nitra LED



tested according to German Standards

- Lamp class L6 (one-sided) resp. L7 (two-sided) according to EN 12352
- High-quality LEDs with nearly unlimited life time
- Lens diameter 200mm, lamp head adjustable
- Automatic solar switch
- Easy battery replacement without removing the lamp
- Easy attachment to tubes or barriers with the firmly mounted bracket
- Loop for carrying
- Examples of application (depending on country-specific regulations)
  - at barriers
  - at site fences
  - on beacons
  - on folding traffic signs
  - on traffic cones

Warning Lamp Euro-Nitra LED	Ref. No.
Euro-Nitra LED, flashing/steady light, one-sided amber, with bracket	21127-51
Euro-Nitra LED, flashing/steady light, one-sided red, with bracket	21127-53
Euro-Nitra LED, flashing/steady light, two-sided amber, with bracket	21128-51
Euro-Nitra-LED, flashing/steady light, two-sided red, with bracket	21128-53

Accessories and Spare parts	Ref. No.
NiKo key	070 090-1
Pulser LED, one-sided amber	358 057-21
Pulser LED, one-sided red	358 057-23
Pulser LED, two-sided amber	358 058-21
Pulser LED, two-sided red	358 058-23

### Operating time with one set of batteries

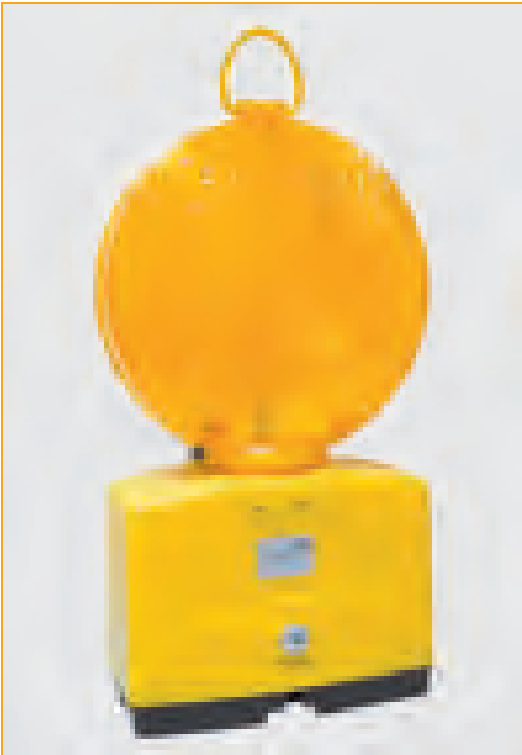
With battery Premium 800	steady light 250 hrs flashing light 750 hrs
With battery Premium 3000	steady light 1500 hrs flashing light 4500 hrs
With battery Konstant 45	steady light 1500 hrs flashing light 4500 hrs

### Technical data

Light colour	amber resp. red
Eff. light intensity	amber one-sided 24 cd / two-sided 18 cd
Eff. light intensity	red one-sided 22 cd / two-sided 20 cd
Blink-/flash rate	60 fl./min.
Dimensions (LxWxH)	185 x 90 x 350 mm

### Packaging unit

8 lamps in one carton / 200 lamps on one pallet  
also available in other quantities



Euro-Nitra LED



Euro-Nitra LED with bracket



NiKo key



Changing battery

## Warning lamps according to EN 12352



For mounting on e.g. beacons, safety barriers, site fences  
and scaffolds

# Warning lamps according to EN 12352

EN  
12352

## Warning Lamp Nitra LED

- Lamp class L3 (two-sided) according to EN 12352
- High-quality LEDs with nearly unlimited life time
- Lens diameter 180 mm with reflective rim, lamp head adjustable
- Automatic solar switch
- Available with firmly mounted bracket for mounting on tubes or without bracket
- Loop for carrying or rapid attachment
- Use on folding triangles without additional holder
- Examples of application (depending on country-specific regulations)
  - on barriers
  - on site fences
  - on beacons
  - on folding traffic signs
  - on traffic cones

Warning Lamp Nitra LED	Ref. No.
Nitra LED, flashing/steady light, two-sided amber, with bracket	11 520-51
Nitra LED, flashing/steady light, two-sided red, with bracket	11 520-53
Nitra LED, flashing/steady light, two-sided amber, without bracket	11 520-1
Nitra LED, flashing/steady light, two-sided red, without bracket	11 520-3

Accessories and Spare parts	Ref. No.
NiKo key	070 090-1
Pulser LED, two-sided amber	358 070-1
Pulser LED, two-sided red	358 070-3

### Operating time with one set of batteries

With battery Premium 800	steady light 850 hrs flashing light 3400 hrs
With battery Premium 3000	steady light 2000 hrs flashing light 7000 hrs
With battery Konstant 45	steady light 2400 hrs flashing light 9000 hrs

### Technical data

Light colour	amber resp. red
Eff. light intensity	15 cd
Blink/flash rate	60-70 fl./min.
Dimensions (LxWxH)	185 x 90 x 350 mm

### Packaging unit

With bracket  
8 lamps in one carton / 240 lamps on one pallet  
Without bracket  
10 lamps in one carton / 300 lamps on one pallet  
also available in other quantities



Nitra LED



Nitra LED on folding traffic sign



NiKo key



Nitra LED with bracket

## Warning Lamp MonoLight 2 LED

EN  
12352

- Lamp class L3 (two-sided) according to EN 12352
- High-quality LEDs with nearly unlimited life time
- Only one battery needed
- Lens diameter 180 mm with reflective rim, lamp head adjustable
- Automatic solar switch
- Firmly mounted bracket for attachment to vertical tubes
- Examples of application (depending on country-specific regulations)
  - on barriers
  - on site fences
  - on beacons
  - on traffic cones

Warning Lamp MonoLight 2 LED	Ref. No.
MonoLight 2 LED, flashing/steady light, two-sided amber, with bracket	11602-51
MonoLight 2 LED, flashing/steady light, two-sided red, with bracket	11602-53
MonoLight 2 LED, flashing/steady light, two-sided amber, without bracket	11602-1
MonoLight 2 LED, flashing/steady light, two-sided red, without bracket	11602-3
MonoLight 2 LED, flashing/steady light, omni-directional amber, without bracket	11605-1

Accessories and Spare parts	Ref. No.
NiKo key	070 090-1
NiKo bracket for mounting the MonoLight on barriers	365 519
Bracket for mounting the MonoLight on traffic cones	292 032-3

### Operating time with one set of batteries

With battery Premium 800	steady light 300 hrs flashing light 1200 hrs
With battery Premium 3000	steady light 1150 hrs flashing light 4500 hrs
With battery Konstant 45	steady light 1400 hrs flashing light 5500 hrs

### Technical data

Light colour	amber resp. red
Eff. light intensity	two-sided 15 cd / omnidirectional 3 cd
Blink-/flash rate	60 - 70 fl./min.
Dimensions (LxWxH)	without bracket 185 x 120 x 340 mm

### Packaging unit

20 lamps in one carton / 400 lamps on one pallet  
also available in other quantities



MonoLight 2 LED on a Safety Beacon



MonoLight omni-directional



MonoLight with bracket

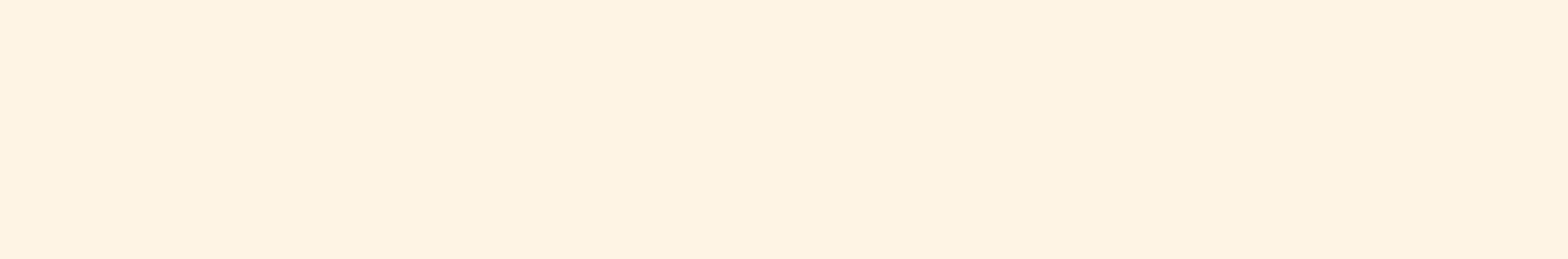


NiKo key



Changing battery





## Beacons according to German Standards



### Safety Beacons according to German Standards

- To be used on all roads and motorways
- For use with approved warning lamps

### Beacons

- To be used with all warning lamps

# Beacons

## according to German Standards

### Safety Beacon System



tested according to German Standards

- For use with beacon lamps BaKoLight LED and Konstant-Norm-LED
  - Equipped with retro-reflecting foil RA1 A or RA2 B on one or both sides
  - Reflective area 250 x 1000 mm
  - Foil protected against damage by protecting rim
  - Replaceable aluminium stand tube 40 x 40 mm
  - Stackable without risk of slipping
  - Transport and storage rack for up to 68 beacons available
- 
- Image of the base plate see page 33

Safety Beacon System	Ref. No.
Safety Beacon, one-sided, foil RA1 A, pointing left, without base plate	071 322-202
Safety Beacon, one-sided, foil RA1 A, pointing right, without base plate	071 324-202
Safety Beacon, two-sided, foil RA1 A, pointing left/right, without base plate	071 330-202
Safety Beacon, one-sided, foil RA2 B, pointing left, without base plate	071 322-22
Safety Beacon, one-sided, foil RA2 B, pointing right, without base plate	071 324-22
Safety Beacon, two-sided, foil RA2 B, pointing left/right, without base plate	071 330-22
Safety base plate "TL 56 K1", weight ca. 28,5 kg Dimensions in mm: 880 x 440 x 115 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, battery compartment	070 293-1

Accessories and Spare parts	Ref. No.
Transport and storage rack for 60 to 72 beacons, depending on beacon type	081 600
Spare tube with stopper	071 319-2

#### Technical data

Dimensions (LxWxH)	139 x 304 x 60 mm
Weight	2,6 kg

#### Packaging unit

60 safety beacons on one pallet / 30 safety base plates on one pallet  
also available in other quantities



Safety beacon pointing left and right



Safety beacon system



Aluminium stand tube



Transport and storage rack

# Beacon System with Reversible Beacon WeBaNi 40

tested according to German Standards

- With full-length stand tube, with connecting piece 40 x 40 mm on both sides
- With foil RA2 B
- Reflective area 250 x 1000 mm
- Foil protected against damage by protective rim
- Easy fixing of the warning lamps BakoLight LED and Konstant-Norm-LED
- Stackable without risk of slipping
- Transport and storage rack for up to 72 beacons available
- Other versions on request
- Image of the base plate see page 33

Beacon System with Reversible Beacon WeBaNi 40	Ref. No.
Beacon WeBaNi 40, one-sided, foil RA2 B, arrow red/white, without base plate	070 321-2
Beacon WeBaNi 40, two-sided, foil RA2 B, arrow red/white, pointing left/right, without base plate	070 322-2
Beacon WeBaNi 40, two-sided, foil RA2 B, arrow red/white, pointing right/right, without base plate	070 323-2
Safety base plate "TL 56 K1", weight ca. 28,5 kg Dimensions in mm: 880 x 440 x 115 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, battery compartment	070 293-1

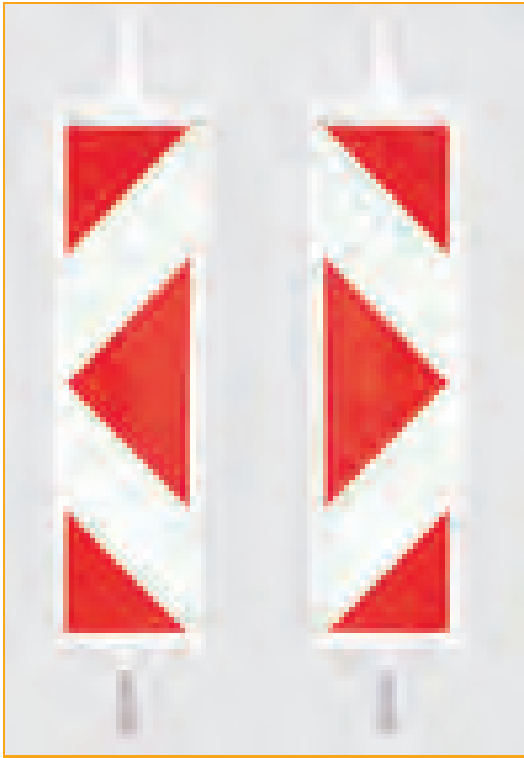
Accessories and Spare parts	Ref. No.
Transport and storage rack for 60 to 72 beacons, depending on beacon type	081 600

## Technical data

Dimensions (LxWxH)	1400 x 300 x 54 mm
Weight	2,4 kg

## Packaging unit

60 safety beacons on one pallet / 30 base plates on one pallet  
also available in other quantities



WeBaNi 40 pointing left and right



Safety beacon system WeBaNi 40



Stacked beacons



Transport and storage rack

# Standard Beacon

- With plastic connecting piece 60 x 60 mm
  - No internal steel tube, therefore recycling without separation of material
  - Equipped with retro-reflecting foil RA1 A or RA2 B on both sides
  - Foil protected by protecting rim
  - Reflective area 250 x 1000 mm
  - Easy fixing of warning lamps resp. beacon lamps
  - Stackable without risk of slipping
  - Transport- and storage rack for up to 68 beacons available
  - Other versions on request
- 
- Images of the base plates see page 33 / 34

Standard Beacon	Ref. No.
Beacon, basic colour white, two-sided, foil RA1 A, pointing left/right, without base plate	070 236-204
Beacon, basic colour white, two-sided, foil RA2 B, pointing left/right, without base plate	070 236-224
Universal base plate "K1", weight ca. 28 kg Dimensions in mm: 880 x 440 x 115 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, battery compartment	070 350-31
Universal base plate "Light", weight ca. 25 kg Dimensions in mm: 880 x 440 x 105 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, battery compartment	070 350-33
Universal Base Plate "Kompakt", weight ca. 28,0 kg Dimensions in mm: 790 x 390 x 130 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, Ø 51, battery compartment	070 350-80

Accessories and Spare parts	Ref. No.
Transport and storage rack for 60 to 72 beacons, depending on beacon type	081 600

## Technical data

Dimensions (LxWxH)	1335 x 287 x 60 mm
Weight	2,6 kg

## Packaging unit

60 beacons on one pallet also available in other quantities
--



Standard beacon pointing left and right



Transport and storage rack



## Reversible Beacon WeBaNi 60

- With connecting piece 60 x 60 mm on both sides
  - Recyclable without separation of materials
  - With reflecting foil RA2 B
  - Foil protected against damage by protective rim
  - Reflective area 250 x 1000 mm
  - Stackable without risk of slipping
  - Transport and storage rack for up to 68 beacons available
  - Other versions on request
- Images of the base plates see pages 33 / 34

Reversible Beacon WeBaNi 60	Ref. No.
Beacon WeBaNi 60, one-sided, foil RA2 B, arrow red/white, without base plate	070 331-2
Beacon WeBaNi 60, two-sided, foil RA2 B, arrow red/white, pointing left/right, without base plate	070 332-2
Beacon WeBaNi 60, two-sided, foil RA2 B, arrow red/white, pointing right/right, without base plate	070 333-2
Universal base plate "K1", weight ca. 28 kg Dimensions in mm: 880 x 440 x 115 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, battery compartment	070 350-31
Universal base plate "Light", weight ca. 25 kg Dimensions in mm: 880 x 440 x 105 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, battery compartment	070 350-33
Universal Base Plate "Kompakt", weight ca. 28,0 kg Dimensions in mm: 790 x 390 x 130 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, Ø 51, battery compartment	070 350-80

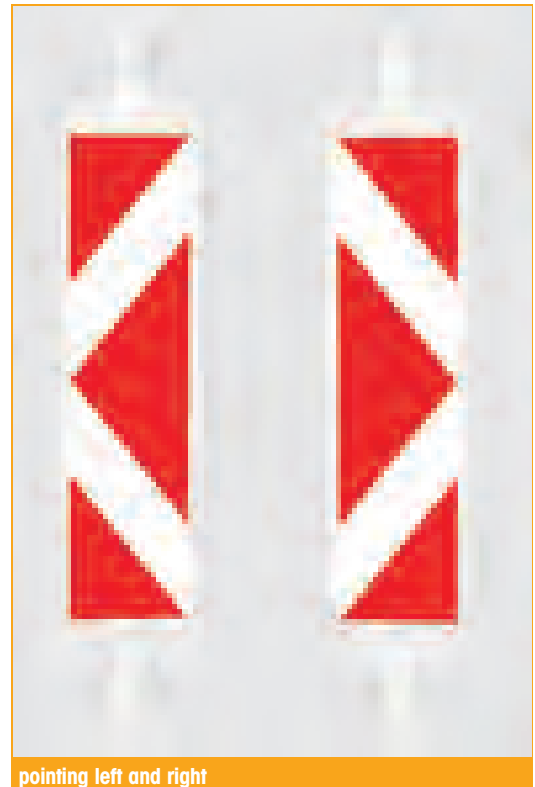
Accessories and Spare parts	Ref. No.
Transport and storage rack for 60 to 72 beacons, depending on beacon type	081 600

### Technical data

Dimensions (LxWxH)	145 x 287 x 60 mm
Weight	2,6 kg

### Packaging unit

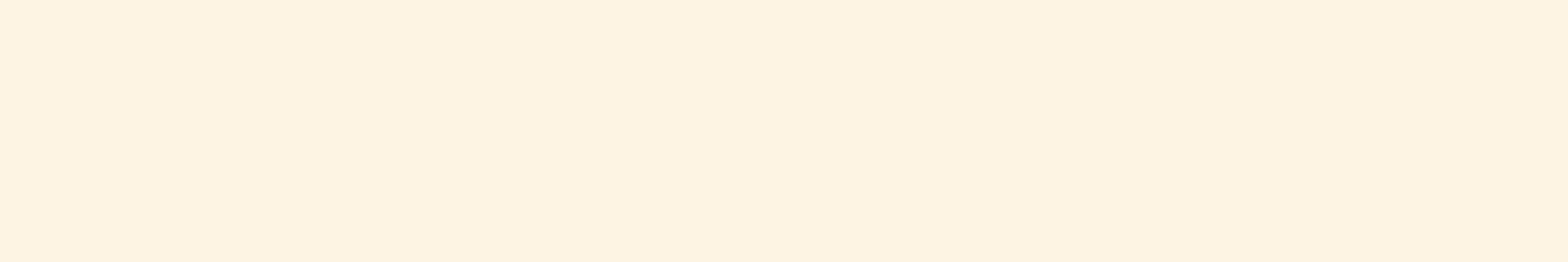
60 beacons on one pallet  
also available in other quantities



pointing left and right



transport and storage rack



## Mobile Safety Barriers according to German Standards



### Mobile Safety Barriers

- For securing e.g. inner-city road construction zones and excavations

### Mobile Light Plastic Safety Barriers

- For use as building site barrier and screen from view as well as for events to separate and guide visitors and participants

# Mobile Safety Barriers

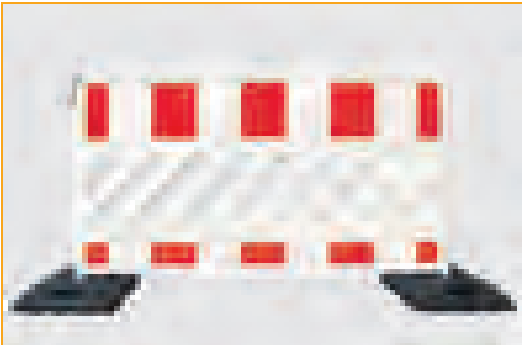
## according to German Standards

RSA

### Mobile Plastic Safety Barrier

according to German Standards

- Made of high quality plastic, with galvanized tubes
  - Weatherproof and maintenance free
  - All parts firmly connected to each other
  - Barrier and blind man's rail equipped with reflecting foil RA1 A on one side
  - Foil protected against damage by frame recess
  - With connecting pieces resp. holes for mounting warning lamps
  - Any angle possible when using safety base plates
  - Area for company logo or advertisement
  - Universally stackable
  - According to German Standards
  - Other versions (e.g. length, foil, colour) on request
- 
- Images of the base plates see page 33
- 
- Examples of application (depending on country-specific regulations)
    - as single element for half-sided or full road closures
    - as stable barrier around shafts and building excavations
    - as homogenous building site barrier and screen from view
    - for separating pedestrian and cycle ways
    - for events to separate and guide visitors and participants
    - for workings in the area of overhead electrical lines (surge proof)



Mobile Plastic Safety Barrier



Warning lamp on safety barrier



Individual advertising area

Mobile Plastic Safety Barrier	Ref. No.
Mobile Plastic Safety Barrier, one-sided, foil RA1 A Dimensions: 2000 x 1000 mm	071 655-3

#### Packaging unit

5 safety barriers in one bunch  
also available in other quantities

# Mobile Steel Safety Barrier



according to German Standards

- All steel parts hot-galvanized
  - Barrier and blind man's rail equipped with reflecting foil RA1 A on one side
  - Foil protected against damage by frame recess
  - Barrier, grid and blind man's rail firmly connected with the stand tubes
  - With holes for the mounting of warning lamps
  - Any angle possible when using safety base plates
  - Tested according to German Standards
  - Other versions on request
- Images of the base plates see pages 33
- Examples of application (depending on country-specific regulations)
- as single element for half-sided or full road closures
  - as stable barrier around shafts and building excavations
  - as homogenous building site barrier
  - for separating pedestrian and cycle ways
  - for events to separate and guide visitors and participants

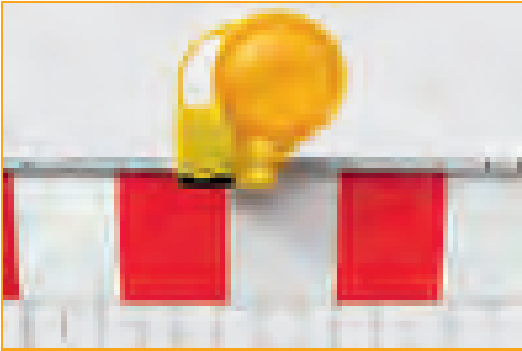
Mobile Steel Safety Barrier	Ref. No.
Safety Barrier made of hot-galvanized steel, one-sided, foil RA1 A Dimensions: 2000 x 1000 mm	071 650-3
Safety Barrier made of hot-galvanized steel, one-sided, foil RA1 A Dimensions: 2400 x 1000 mm	071 650-4

## Packaging unit

10 safety barriers in one bunch  
also available in other quantities



Mobile Steel Safety Barrier



BakoLight at the safety barrier

# Accessories for Mobile Plastic and Steel Safety Barriers

Accessories for Mobile Plastic and Steel Safety Barriers	Ref. No.
Universal base plate "K1", weight ca. 28 kg Dimensions in mm: 880 x 440 x 115 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, battery compartment	070 350-31
Support made of galvanized steel	071 661-1
Transport and storage rack "Standard", for 20 safety barriers 2000 mm Other versions on request	071 660-3
Transport and storage rack "Simplex", for 20 safety barriers 2000 mm or 2400 mm (stackable)	071 660-31
Transport and storage rack "Kombi", for 20 safety barriers 2000 mm or 2400 mm (stackable)	071 660-20
Pile support for "Kombi" version (1 pc)	071 660-21
1 set of pile supports, consisting of 4 pcs	071 660-24



Transport and storage rack "Simplex"



Transport and storage rack "Standard"



Simplex with mobile plastic barrier



Standard with steel plastic barrier



## Mobile Light Plastic Barrier

- Homogenous site appearance and sight protection
  - Suitable for events to separate and guide visitors and participants
  - Shock-proof and UV-resistant plastic (HDPE), no sharp edges
  - No "ladder effect" due to diagonal arrangement of the struts
  - Safe work in connection with current conductions
  - Simple but stable connection with "hooks and eyes"
  - Barrier and blind man's rail equipped with reflecting foil RA1 A or RA2 B
  - Foil protected against damage by frame recess
  - Area for company logo or advertisement
  - Swivelling bases, patent pending for locking system
  - Universally stackable
  - Mounting of Nissen warning lamps on the back, theft-proof and protected against breaking off
  - Other versions on request (e.g. length, foil etc.)
- Examples of application (depending on country-specific regulations)
    - as building site barrier
    - as screen from view
    - for events to separate and guide visitors and participants

Mobile Light Plastic Barrier	Ref. No.
Mobile Light Plastic Barrier, one-sided, foil red/white, RA1 A Dimensions: 2000 x 1000 mm	071 680-1
Mobile Light Plastic Barrier, one-sided, foil red/white, RA2 B Dimensions: 2000 x 1000 mm	071 680-21

Accessories and Spare parts	Ref. No.
Transport and storage rack for Mobile Light Plastic Barriers	071 685-1

### Packaging unit

5 barriers in one bunch  
also available in other quantities



Mobile Light Plastic Barrier



Transport and storage rack



Swivelling bases



Individual advertising area

# Crowd Control Barrier

- Frame and grid made of hot-galvanized steel
- Quick and easy deployment
- Protected against leverage
- Wind and weatherproof

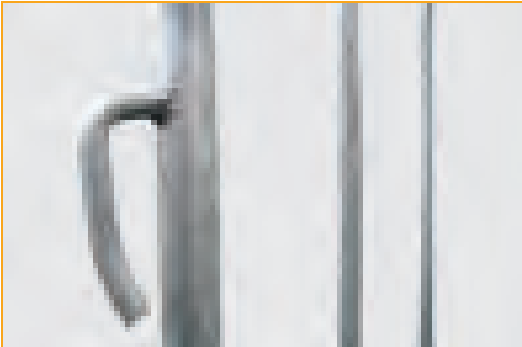
Crowd Control Barrier	Ref. No.
Crowd Control Barrier Dimensions: 2000 x 1100 mm	071 670-3
Crowd Control Barrier Dimensions: 2400 x 1100 mm	071 670-4

### Packaging unit

10 crowd control barriers in one bunch  
also available in other quantities



Crowd Control Barrier



Protection against leverage

Safety Base Plate



- Safety base plate made of recycled plastic material
- For use with safety beacon and reversible beacon WeBaNi 40

Safety Base Plate	Ref. No.
Safety base plate "TL 56 K1", weight ca. 28,5 kg Dimensions in mm: 880 x 440 x 115 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, battery compartment	070 293-1

Packaging unit

30 base plates on one pallet
------------------------------



Safety base plate "TL 56 K1"

Universal Base Plate "K1"



- For use with reversible beacon WeBaNi 60 and standard beacons as well as for crash barriers and site fences

Universal Base Plate "K1"	Ref. No.
Universal base plate "K1", weight ca. 28 kg Dimensions in mm: 880 x 440 x 115 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, battery compartment	070 350-31

Packaging unit

36 base plates on one pallet also available in other quantities
--



Universal Base Plate "K1"

# Universal Base Plate "Light"

- For use with reversible beacon WeBaNi 60 and standard beacons

Universal Base Plate "Light"	Ref. No.
Universal base plate "Light", weight ca. 25 kg Dimensions in mm: 880 x 440 x 105 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, battery compartment	070 350-33

### Packaging unit

36 base plates on one pallet also available in other quantities
--



# Universal Base Plate "Kompakt"

- For use with reversible beacon WeBaNi 60 and standard beacons

Universal Base Plate "Kompakt"	Ref. No.
Universal Base Plate "Kompakt", weight ca. 28,0 kg Dimensions in mm: 790 x 390 x 130 Holes in mm: 40x40, 41x41 / Ø 43, 60x60, 2 x Ø 45, Ø 51, battery compartment	070 350-80

### Packaging unit

30 base plates on one pallet also available in other quantities
--



## **Traffic Guidance System according to German Standards**



- To be used on all roads and motorways
- For use e.g. as lane separation or traffic guidance

# Traffic Guidance System according to German Standards

## Traffic Guidance System Quick Marker



tested according to German Standards

- Tested according to German Standards with small beacon
  - Strong road grip by skid-resistant base-studs, no collection of water
  - To be removed from the road surface without traces
  - Openings for reflector elements, indicators and beacons Tornado 50-Flex and Tornado 75-Flex
  - Practical assembly tool available
  - Environment friendly, made of recycled material
  - Other versions on request
- 
- Examples of application (depending on country-specific regulations)
    - as lane separation
    - as traffic guidance device
    - as side boundary e.g. between lane and bus lane

Traffic Guidance System Quick Marker	Ref. No.
Quick Marker Type B, yellow, with 2 reflector elements	070 665-541
Quick Marker initial piece with recess, yellow	070 660-4
Quick Marker end piece with nose, yellow	070 662-4

Accessories and Spare parts	Ref. No.
Reflector elements, yellow (2 pcs each Quick Marker needed)	070 642-4
Hexagon head screw M12 x 80, hot-galvanized	010 283
Battery impact wrench with rapid charger for bolting Quick Marker elements	070 652
Box spanner insert for bolting Quick Marker elements	070 373
Assembly tool for Quick Marker	070 653-2
Unlocking tool for Indicator	070 377

### Technical data

Material	recycled plastic material
Dimensions (LxWxH)	Quick Marker 1000 x 275 x 95 mm
Empty	initial/end piece 500 x 275 x 95 mm
Weight	Quick Marker 19 kg, initial/end piece 9 kg

### Packaging unit

56 Quick Markers on one pallet / weight: 1064 kg  
also available in other quantities



Traffic Guidance System Quick Marker



Quick Marker with Tornado 50-Flex



Quick Marker with Tornado 75-Flex



Assembly tool



Reflector element



# Small Beacon (Indicator)

for traffic guidance system "Quick Marker"

- Beacon reduced by 50% according to German Standards
- For use in the traffic guidance system "Quick Marker"
- Reflecting area 125 x 500 mm
- Weatherproof
- Can be run over several times without danger
- Equipped with reflecting foil RA2 B on one or both sides

Small Beacon (Indicator)	Ref. No.
Indicator, one-sided, foil RA2 B pointing left	071 255-21
Indicator, two-sided, foil RA2 B pointing left	071 250-21
Indicator, one-sided, foil RA2 B pointing right	071 265-21
Indicator, two-sided, foil RA2 B pointing right	071 260-21
Indicator, two-sided, foil RA2 B pointing left/right	071 270-21

Accessories and Spare parts	Ref. No.
Transport and storage rack for up to 150 small beacons	081 608

## Technical data

Material	plastic
Colour	black
Dimensions (LxWxH)	660 x 30 x 32,6 mm
Weight	0,32 kg

## Packaging unit

25 indicators in one carton also available in other quantities
---



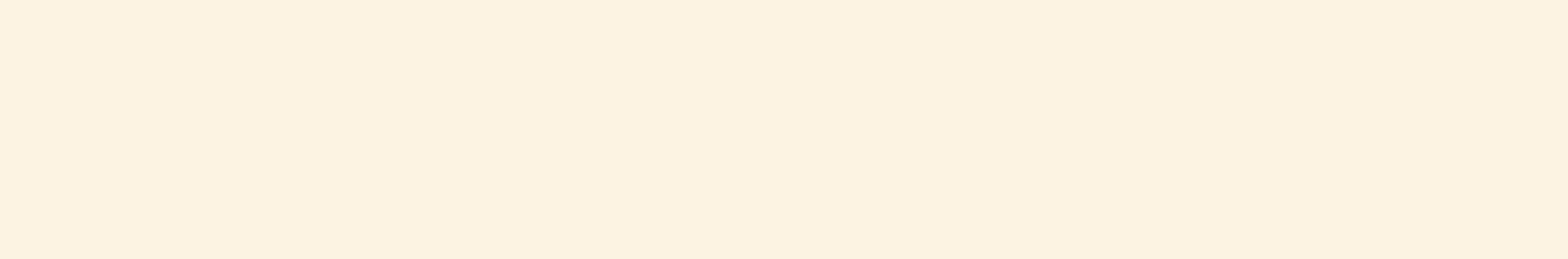
Small Beacon (Indicator)



Small Beacon on a Quick Marker



Transport and storage rack



## Folding Beacons



- For rapid securing on roads
- Suitable e.g. for operational and rescue forces, also for parking areas, hotels etc.

# Folding Beacons

## Beacon Tornado 50-Flex

- For use in the traffic guidance system "Quick Marker" Type B or with separate base plate
- Reflective area 187,5 x 500 mm
- Equipped with reflecting foil RA2 B on one or both sides
- Foil protected against damage by protective rim
- Can be run over without danger

Beacon Tornado 50-Flex	Ref. No.
Tornado 50-Flex, without foil, without base plate	071 530-1
Tornado 50-Flex, one-sided, foil RA2 B pointing left, without base plate	071 531-2
Tornado 50-Flex, one-sided, foil RA2 B pointing right, without base plate	071 532-2
Tornado 50-Flex, two-sided, foil RA2 B pointing left/right, without base plate	071 533-2

Accessories and Spare parts	Ref. No.
Base plate, yellow, for Tornado 50-Flex / Tornado 75-Flex, ca. 14 kg	071 292-4
Base plate, yellow, for Tornado 50-Flex / Tornado 75-Flex, ca. 14 kg with 4 reflector elements	071 292-14

### Technical data

Dimensions (LxWxH)	720 x 201 x 110 mm
Weight	11, kg

### Packaging unit

5 beacons in one carton also available in other quantities
---



Tornado 50-Flex pointing left and right



Tornado 50-Flex with base plate



Tornado 50-Flex with Quick Marker



Reflector element

## Beacon Tornado 75-Flex



tested according to German Standards

- For use in the traffic guidance system "Quick Marker" Type B or with separate base plate
- With the same properties as the Tornado 50-Flex
- Reflective area 187,5 x 750 mm

Beacon Tornado 75-Flex	Ref. No.
Tornado 75-Flex, without foil, without base plate	071 540-1
Tornado 75-Flex, one-sided, foil RA2 B pointing left, without base plate	071 541-2
Tornado 75-Flex, one-sided, foil RA2 B pointing right, without base plate	071 542-2
Tornado 75-Flex, two-sided, foil RA2 B pointing left/right, without base plate	071 543-2

Accessories and Spare parts	Ref. No.
Base plate, yellow, for Tornado 50-Flex / Tornado 75-Flex, ca. 14 kg	071 292-4
Base plate, yellow, for Tornado 50-Flex / Tornado 75-Flex, ca. 14 kg with 4 reflector elements	071 292-14

### Technical data

Dimensions (LxWxH)	930 x 202 x 110 mm
Weight	1,2 kg

### Packaging unit

5 beacons in one carton  
also available in other quantities



Tornado 75-Flex pointing left and right



Tornado 75-Flex with base plate



Tornado 75-Flex with Quick Marker



Reflector element

# Base Plate for Tornado 50-Flex and Tornado 75-Flex

- Light base plate made of recycled plastic
- For quick setting of Tornado 50-Flex and Tornado 75-Flex
- With additional hole for beacons 40 x 40 mm
- Suitable for the use of four reflecting elements
- Standard colour yellow, other colours possible

Base Plate for Tornado 50-Flex and Tornado 75-Flex	Ref. No.
Base plate, yellow, for Tornado 50-Flex / Tornado 75-Flex, ca. 14 kg Dimensions in mm: 900 x 275 x 92 Holes: Tornado Flex, beacon 40 x 40 mm	071 292-4
Base plate, yellow, for Tornado 50-Flex / Tornado 75-Flex, ca. 14 kg with four reflecting elements Dimensions in mm: 900 x 275 x 92 Holes: Tornado Flex, beacon 40 x 40 mm	071 292-14



Base plate with four reflecting elements



Base plate with Tornado 50-Flex



Base plate with Tornado 75-Flex



# Folding Beacon ToNi 75

tested according to German Standards

- Tested according to German Standards
- Equipped with reflecting foil RA2 B
- Foil protected against damage by protective rim
- Beacon and base plate firmly connected with each other
- Foldable, stackable and very space-saving
- Can be run over without danger
- Quick and easy placing

Folding Beacon ToNi 75	Ref. No.
ToNi 75, one-sided, foil RA2 B pointing left, with base plate	071 511-2
ToNi 75, one-sided, foil RA2 B pointing right, with base plate	071 512-2
ToNi 75, two-sided, foil RA2 B pointing left/right, with base plate	071 513-2

Accessories and Spare parts	Ref. No.
Holder for LED Guide Light Element (ToNi 75 / Sequential Hazard Set), 2 holders are necessary for one ToNi 75	392 337-1
Transport and storage rack for 5 folding beacons ToNi 75	071 595-5
Carriage for 071 595-5	071 595-105

## Technical data

Material	Folding beacon: high-quality plastic
Weight	1,5 kg
Dimensions (LxWxH)	202 x 45 x 985 mm
Reflective area	750 x 85,5 mm
Colour	grey
Material	Base plate: recycled material
Weight	1 kg
Dimensions (LxWxH)	800 x 290 x 90 mm
Colour	yellow

## Packaging unit

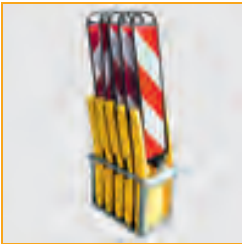
10 beacons (without base plate) in one carton  
also available in other quantities



Folding Beacon ToNi 75



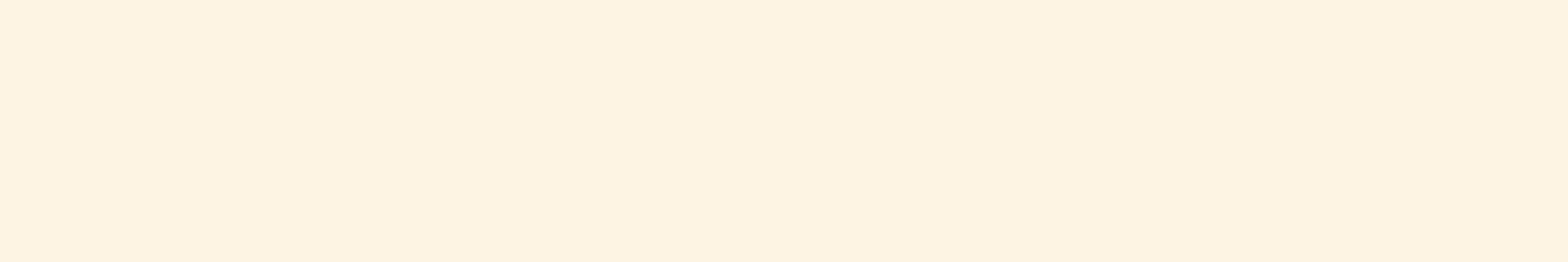
Folding Beacon ToNi 75 folded



Transport and storage rack



Holder 392 337-1



## Traffic Calming



**To be used e.g. on side roads, gateways, parking and loading areas, traffic-calmed areas, danger spots etc.**

# Traffic Calming

## Speed Cushion

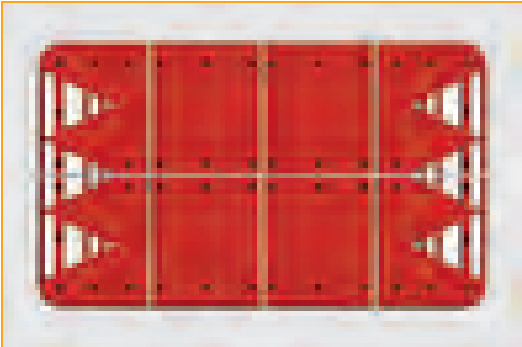
- Speed cushion for up to 50 km/h
- Consisting of 8 elements ( 4 middle elements, 2 left and 2 right corner elements)
- Corner elements with reflecting 3M foil type A 340, clearly visible also in darkness
- Configuration of the reflecting areas according to European Standard
- Low-noise drive over
- Wear-resistant and effective
- Quick and easy mounting by screwing into the road surface
- Examples of application (depending on country-specific regulations)
  - in residential areas
  - at traffic junctions and danger spots
  - as bus priority system

Speed Cushion	Ref. No.
Speed Cushion cpl., incl. screw sets	070 360-1

Technical data	
Material	rubber with steel reinforcement
Colour	reddish brown
Dimensions (LxWxH)	3000 x 800 x 60 mm



Speed Cushion



Speed Cushion consists of 8 elements

# Speed Ramp

- For speeds up to 10 km/h or 20 km/h
- High stability and long life time
- Excellent traffic guidance by applied reflectors
- Easy mounting by screwing into the road surface
- Examples of application (depending on country-specific regulations)
  - on play roads and side roads
  - on gateways
  - in traffic-calmed areas
  - on parking areas

Speed Ramp	Ref. No.
Speed Ramp up to <b>10 km/h</b> , black	070 357-1
Speed Ramp up to <b>10 km/h</b> , yellow	070 357-2
End piece up to <b>10 km/h</b> , yellow	070 357-3
Speed Ramp up to <b>20 km/h</b> , black	070 357-11
Speed Ramp up to <b>20 km/h</b> , yellow	070 357-12
End piece up to <b>20 km/h</b> , yellow	070 357-13

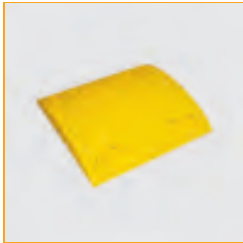
Accessories and Spare parts	Ref. No.
Screw set, consisting of 1 screw, 1 dowel and 1 washer (4 screw sets/element, 2 screw sets/end piece)	070 357-90
Stabilisation bar (per meter)	070 357-91

## Technical data

Material	recycled plastic material	
Colour	yellow, black	
Weight	speed ramp up to 10 km/h	13,0 kg
Empty	speed ramp up to 20 km/h	10,2 kg
Empty	end piece up to 10 km/h	3,7 kg
Empty	end piece up to 20 km/h	2,8 kg
Dimensions (LxWxH)	speed ramp up to 10 km/h	500 x 430 x 60 mm
Empty	speed ramp up to 20 km/h	500 x 430 x 50 mm
Empty	end piece up to 10 km/h	215 x 430 x 60 mm
Empty	end piece up to 20 km/h	215 x 430 x 50 mm



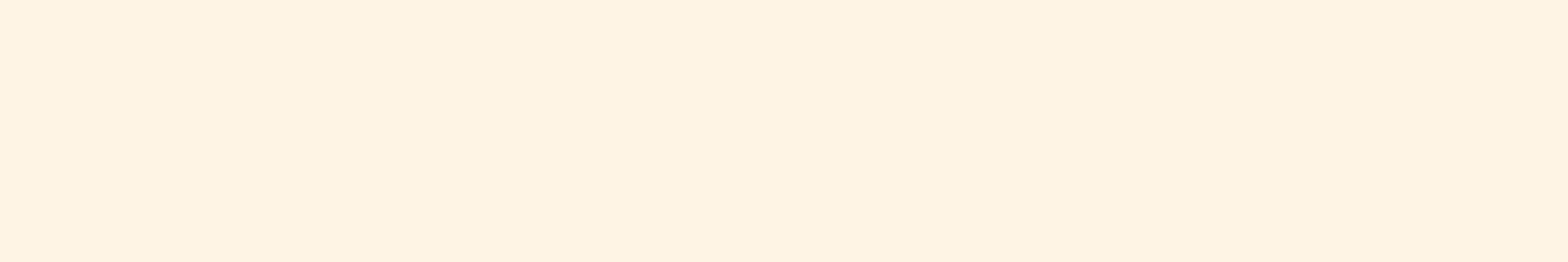
Speed Ramp



Speed Ramp, yellow



End piece, yellow





## Traffic Guide Light Systems according to German Standards and EN 12352



### Traffic Guide Light Systems according to German Standards

- To be used on all roads and motorways, also for rapid use by operational and rescue forces

### Traffic Guide Light Systems

- Suitable for operational and rescue forces

# Traffic Guide Light Systems

## according to German Standards and EN 12352

### Sequential Direction Light Set Type 22/3



tested according to German Standards

- Lamp class L8H according to EN 12352
  - Good visibility of the traffic guidance also at darkness by basic steady light
  - Lens diameter 200 mm
  - Setting of the solar switch as needed
  - Available as 10-fold or 5-fold system, sequence operation with several systems possible
  - Guide length of 100 m resp. 50 m per system
  - For 230 V 50 Hz mains operation or 12 V battery operation, switching automatically at power failure
  - Operation by foil-keyboard with LCD display
  - Fastening of the lamps on any beacon type (42 mm Ø, 40 x 40 mm)
  - Available programs see battery operating times
- 
- Examples of application (depending on country-specific regulations)
    - on beacons
    - for traffic guidance in front of building sites



Sequential Direction Light Set Type 22/3



Box for rechargeable batteries



control unit 12 V

Sequential Direction Light Set Type 22/3	Ref. No.
10-fold Sequential Direction Light Set Halogen Type 22/3, 230/12 V with power supply unit / charger 230 V and battery box, without beacons	120 90-1
5-fold Sequential Direction Light Set Halogen Type 22/3, 230/12 V with power supply unit / charger 230 V and battery box, without beacons	120 90-5
10-fold Sequential Direction Light Set Halogen Type 22/3, 12 V with battery box, without beacons	120 90-11
5-fold Sequential Direction Light Set Halogen Type 22/3, 12 V with battery box, without beacons	120 90-15

Accessories and Spare parts	Ref. No.
Control unit 12 V, also for sequence operation	220 910-1
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230A-
Mains supply / charger 230 V	220 909-1
Connecting cable 120 m for sequence operation	400 078-2
Halogen bulb type 026, 12 V / 20 W	090 234

#### Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	1. Guide light 70 hrs
	2. Overlapping guide light 47 hrs
	3. Sequenced light 22 hrs
	4. Sequenced and declining light 22 hrs
	5. Flashing synchronous 40 hrs
	6. Flashing asynchronous 40 hrs
	7. Steady light 19 hrs

#### Technical data

Light colour	yellow
Max. light intensity	flashing light day 2500 cd / night 700 cd
Max. power consumption	at mains operation 230 V max. 1,5 A

# Multi-Light Cascade 200 LED 12/24 Volt

- Lamp class L8H according to EN 12352
- Consisting of 1 Multi-Light master lamp and 9 Multi-Light slave lamps, each lamp connected to another by cable
- The first lamp (master lamp) controls all further lamps
- Lens diameter 220 mm
- With solar switch
- Power supply by a rechargeable battery which is connected to the master lamp
- With bracket 82 mm Ø, therefore suitable for most beacon types
- Examples of application (depending on country-specific regulations)
  - on beacons
  - for traffic guidance in front of building sites

Multi-Light Cascade 200 LED 12/24 Volt	Ref. No.
Multi-Light Cascade 200 LED 10-fold, yellow, 12/24 V	122 25-10

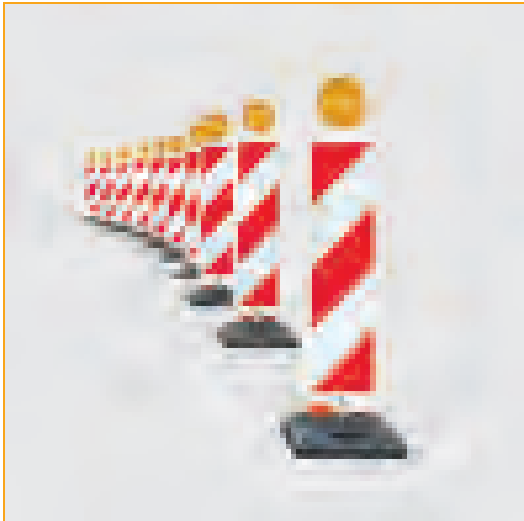
Accessories and Spare parts	Ref. No.
Control lamp Multi-Light Cascade 200 LED, yellow with 5 m cable and battery clips	122 25-11
Secondary lamp Multi-Light Cascade 200 LED, yellow with 12 m connecting cable	122 25-12
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

## Operating time with one set of batteries

With rechargeable battery 12 V, 100 Ah	10-fold system - 45 hrs
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## Technical data

Light colour	yellow
Eff. light intensity	1500 cd
Aver. power consumption day at 12 V	0,23 A
Aver. power consumption day at 24 V	0,15 A
Aver. power consumption night at 12 V	0,05 A
Aver. power consumption night at 24 V	0,043 A
Blink-/flash rate	60 fl./Min.



Multi-Light Cascade 200 LED 12/24 Volt



Fixation at a Standard Beacon



Box for recharge. battery, lockable



Cable gland to the recharge. battery

## Cascade Flash System 12 Volt

- Lamp class L2H according to EN 12352
- Consisting of 1 master lamp and 9 slave lamps, each lamp connected to another by cable
- The first lamp (master lamp) controls all further lamps
- Each lamp with basic steady light
- Lens diameter 200 mm
- Switchable solar switch for use at night only or at day and night
- Power supply by a rechargeable battery which is connected to the master lamp
- Fastening of the lamps on nearly any beacon type (42 mm Ø, 40 x 40 mm)
- Examples of application (depending on country-specific regulations)
  - on beacons
  - for traffic guidance in front of building sites

Cascade Flash System 12 Volt	Ref. No.
10-fold Cascade Flash System, without beacons	120 353-2

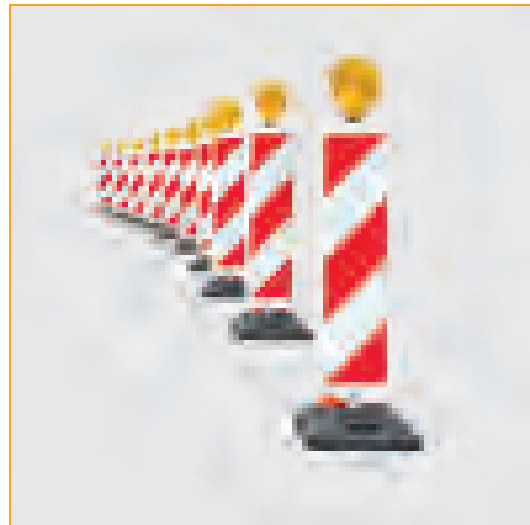
Accessories and Spare parts	Ref. No.
Master lamp Cascade with 5 m cable and battery clips	220 406-21
Slave lamp Cascade with 15 m cable	220 407-21
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

### Operating time with one set of batteries

With rechargeable battery 12 V, 100 Ah	10-fold system - 59 hrs
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### Technical data

Light colour	yellow
Eff. light intensity	150 cd
Max. power consumption	total 1,5 A
Flash performance	0,7 joule/lamp
Blink-/flash rate	60 fl./min.



Cascade Flash System 12 Volt



Box for recharge. battery, lockable



Cable gland to the recharg. battery

## BakoTaper LED-Flash Guide Light System

EN  
12352

- Lamp class L8L according to EN 12352 at 100% brightness
  - Switchable to 50% brightness for lower energy consumption
  - With only one Super LED
  - Lens diameter 200 mm
  - Each lamp is switched on separately and can be used as individual lamp
  - Stable synchronization of the lamps by long infrared path of up to 10 m
  - Steady basic light for better orientation switchable
- Examples of application (depending on country-specific regulations)
    - on beacons
    - for traffic guidance in front of building sites

BakoTaper LED-Flash Guide Light System	Ref. No.
BakoTaperType 628 LED-Flash Guide Light, one-sided amber	129 084

### Operating time with one set of batteries

With battery Premium 800	day + night 300 hrs / night only 500 hrs
With battery Premium 3000	day + night 770 hrs / night only 250 hrs
With battery Konstant 45	day + night 400 hrs / night only 1600 hrs

### Technical data

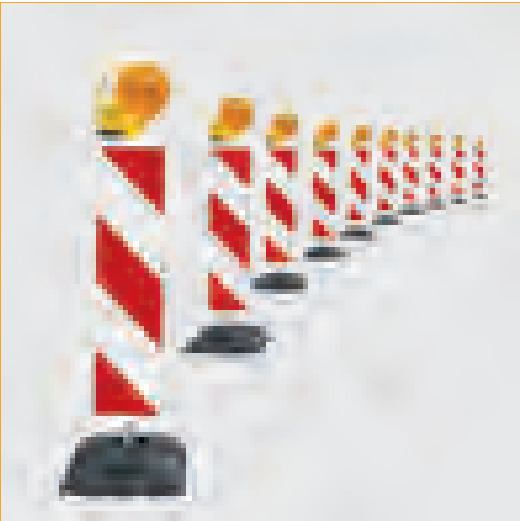
Light colour	yellow
Eff. light intensity	270 cd / 35 cd
Blink-/flash rate	60 fl./min.

### Packaging unit

One tenfold system in one carton also available in other quantities
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BakoTaper LED-Flash Guide Light System



BakoTaper LED-Flash on safety beacons

# BakoLight LED/S GPS/2 Guide Light System

- Lamp class L7 according to EN 12352
  - With only one Super LED
  - Lens diameter 200 mm
  - Equipped with a GPS receiver for independent synchronization of the lamp chain worldwide
  - Lamp chain of up to 10 lamps possible
  - Also usable as individual lamp
- 
- Examples of application (depending on country-specific regulations)
    - on beacons
    - for traffic guidance in front of building sites

BakoLight LED/S GPS/2 Guide Light System	Ref. No.
BakoLight LED/S GPS/2, one-sided amber	220 441-1
BakoLight LED/S GPS/2 Set, 10fold, one-sided yellow	220 441-10

Accessories and Spare parts	Ref. No.
Key	070 090-3

## Operating time with one set of batteries

With battery Premium 800	day + night 300 hrs / night only 500 hrs
With battery Premium 3000	day + night 770 hrs / night only 250 hrs
With battery Konstant 45	day + night 400 hrs / night only 1600 hrs

## Technical data

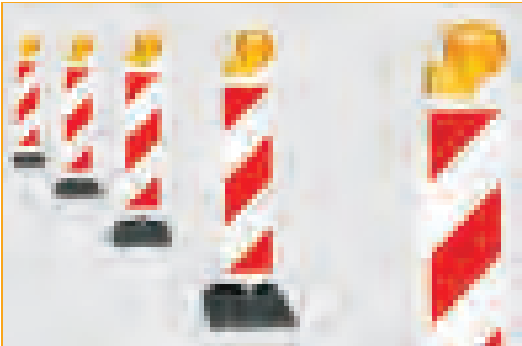
Light colour	yellow
Eff. light intensity	70 cd
Blink-/flash rate	60 fl./min.

## Packaging unit

One tenfold system in one carton also available in other quantities
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BakoLight LED/S GPS/2 Guide Light System



BakoLight LED/S GPS/2 on safety beacons



# Primär Xenon Guide Light System



tested according to German Standards

- Lamp class L8L/L8M according to EN 12352
  - Easy activation, no cable connection
  - Synchronization by infrared diodes in each lamp
  - Lamp chains of any length and any amount of lamps possible
  - All lamps identical, each lamp can be used individually
  - Lens diameter 200 mm
  - Automatic day/night adaptation and low-voltage indication
  - Basic steady light, therefore increased visibility at darkness
  - For use with 4 batteries or 2 rechargeable nickel cadmium batteries in each lamp
  - Space-saving transport box
- Examples of application (depending on country-specific regulations)
    - on folding traffic signs (without additional adapter)
    - on traffic cones (with adapter)
    - directly on the road surface
    - at accident scenes
    - in case of vehicle breakdowns

Primär Xenon Guide Light System	Ref. No.
Primär Xenon Guide Light System	129 058-
Basic system consisting of:	
4 lamps with electronic xenon flash type Primär 825/2 FÜQ	
1 transport box	
Single lamp type Primär 825/2 FÜQ	129 058-1

Accessories and Spare parts	Ref. No.
Charger for nickel cadmium rechargeable batteries (1 charger per lamp)	16 060-1
Adapter for using the Nitra, Euro-Nitra, Star-Blitz, City Flash and Primär on traffic cones	081 736-1
Charging cable 12 V, fourfold (for 1 system)	400 83-4
Transport box for 4 lamps	081 734-4

## Operating time with one set of batteries

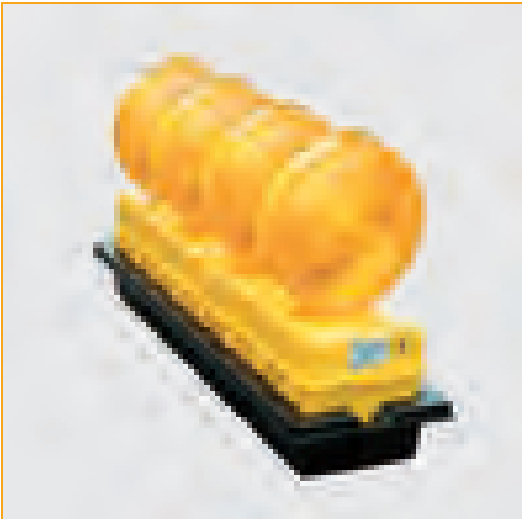
With battery Premium 800	38 - 46 hrs
With battery Premium 3000	140 70 hrs
With battery Konstant 45	280 - 340 hrs
With nickel cadmium battery 5 V, 4,5 Ah	14 8 hrs

## Technical data

Light colour	yellow
Eff. light intensity day	600 cd
Eff. light intensity night	300 cd
Blink-/flash rate	60 fl./min.
Light source	xenon flash tube

## Packaging unit

One guide light system in one carton  
also available in other quantities



Primär Xenon Guide Light System



Primär Xenon Guide Light System lined up



Primär 825/2 on traffic cone



Adapter for traffic cones



## Star-Blitz and Star-Flash LED/S Guide Light Systems

- Lamp class L8L/L8M according to EN 12352
- Guiding lamps with only 2 batteries
- Systems similar to the Primär Xenon Guide Light System
- Examples of application (depending on country-specific regulations)
  - on folding traffic signs (without additional adapter)
  - on traffic cones (with adapter)
  - directly on the road surface
  - at accident scenes
  - in case of vehicle breakdowns

Star-Blitz and Star-Flash LED/S Guide Light Systems	Ref. No.
Star-Blitz Guide Light System, with night dimming	129 059-
Basic system consisting of:	
4 lamps Star-Blitz 425 FÜQ	
1 transport box	
Single lamp type Star-Blitz 425 FÜQ	129 059-1
Star-Flash LED/S3 Guide Light System, cpl., without night dimming	129 080-5
Basic system consisting of:	
4 lamps type Star-Flash LED 625/S3 FÜQ	
1 transport box	
Single lamp type Star-Flash LED/S3 FÜQ	129 080-6

Accessories and Spare parts	Ref. No.
Charger for nickel cadmium rechargeable batteries (1 charger per lamp)	16 060-1
Adapter for using the Nitra, Euro-Nitra, Star-Blitz, City Flash and Primär on traffic cones	081 736-1
Charging cable 12 V, fourfold (for 1 system)	400 83-4
Transport box for 4 lamps	081 735-4

### Operating time with one set of batteries

With battery Premium 800	Star-Blitz 22 hrs / Star-Flash LED/S 250 hrs
With battery Premium 3000	Star-Blitz 70 hrs / Star-Flash LED/S 400 hrs
With battery Konstant 45	Star-Blitz 155 hrs / Star-Flash LED/S 750 hrs
With nickel cadmium battery 5 V, 4,5 Ah	Star-Blitz 16 hrs / Star-Flash LED/S 100 hrs

### Technical data

Light colour	yellow
Eff. light intensity day	Star-Blitz 600 cd
Eff. light intensity night	Star-Blitz 300 cd
Eff. light intensity	Star-Flash LED/S 130 cd
Blink-/flash rate	60 Bl./min.
Light source	Star-Blitz - xenon flash tube
Empty	Star-Flash LED/S - 1 Super-LED

### Packaging unit

One guide light system in one carton  
also available in other quantities



Star-Blitz and Star-Flash LED/S Guide Light S.



Guide Light System lined up

# TaperLamp 626-C LED Guide Light System

tested according to British Standards

- Lamp class L2L/L4 according to EN 12352
- With integrated cone bracket
- Lens diameter 186 mm with reflective rim
- Each lamp is switched on separately and can be used as individual lamp
- Stable synchronization of the lamps by long infrared path of up to 10 m
- Steady basic light for better orientation
- Automatic switch-on by putting on a cone
- Examples of application (depending on country-specific regulations)
  - on traffic cones
  - at accident scenes
  - in case of vehicle breakdowns
  - for traffic guidance in front of building sites

TaperLamp 626-C LED Guide Light System	Ref. No.
TaperLamp 626-C LED FÜQ Lamp, one-sided amber, with cone bracket	129 083-

## Operating time with one set of batteries

With battery Premium 800	300 hrs
With battery Premium 3000	1000 hrs
With battery Konstant 45	1500 hrs
With nickel cadmium battery 5 V, 4,5 Ah	70 hrs

## Technical data

Light colour	yellow
Eff. light intensity	100 cd
Blink-/flash rate	60 fl./min.
Light source	1 SuperLED

## Packaging unit

11 lamps in one don
also available in other quantities



TaperLamp 626-C LED Guide Light System



Changing battery



Holder



## Mobile LED Sequential Hazard Set „Synchros“



- For securing of danger spots, e.g. accidents or breakdowns
- Suitable e.g. for operational, and rescue forces
- For carrying along in all vehicles

# Mobile LED Sequential Hazard Set "Synchros"

## Mobile LED Sequential Hazard Set "Synchros"

- Early recognition of danger spots due to five bright shining LED guide light elements
  - Synchronized light sequence to ensure safe passing of the hazardous spot
  - Compact form, LED guide light elements stored in one transport- and charging case
  - Easy storage also in small storage places
  - Charger cable with 2-pole vehicle plug
  - Available in yellow and blue
- 
- Examples of application (depending on country-specific regulations)
    - directly on the road surface
    - at accident scenes
    - in case of vehicle breakdowns
    - in case of police traffic checks

Mobile LED Sequential Hazard Set "Synchros"	Ref. No.
Mobile LED Sequential Hazard Set 12/24 V, yellow, cpl.	14 060-1
Mobile LED Sequential Hazard Set 12/24 V, blue, cpl.	14 060-2
each set consisting of:	
5 LED guide light elements yellow resp. blue	
1 transport and charging box with	
1 charging cable with 2-pole vehicle plug	

Accessories and Spare parts	Ref. No.
Mains charger for 230 V	070 37-1
Mains charger, UK version (not illustrated)	070 37-2
Holder for LED Guide Light Element (ToNi 75 / Sequential Hazard Set), 2 holders are necessary for one ToNi 75	392 337-1

### Technical data

Light colour	yellow or blue
Max. light intensity	yellow 500 cd / blue 100 cd
Aperture angle	horizontal / vertical 15 °
Operating voltage	10 - 30 V DC
Aver. power consumption	with completely discharged battery 0,5 A
Empty	with completely charged battery 10 mA
Dimensions (LxWxH)	LED guide light element 00 x 90 x 25 mm
Empty	transport and storage case 260 x 160 x 125 mm



Elements available in yellow and blue



Single element



Element on folding beacon ToNi 75

## **Lamps for rapid securing according to German Standards and EN 12352**



- For rapid securing of danger spots or at traffic congestions
- To be used e.g. on traffic cones or folding traffic signs
- Suitable e.g. for operational and rescue forces





# Lamps for rapid securing according to German Standards and EN 12352

## City Flash 63/S LED

EN  
12352

- Lamp class L8L according to EN 12352
  - Rapid use lamp with high light intensity
  - Lens diameter 190 mm
  - Switchable solar switch for use at night only or at day and night
  - Attachment to tubes and barriers by theft-proof NiKo bracket (accessory)
- 
- Examples of application (depending on country-specific regulations)
    - on folding traffic signs (without additional adapter)
    - on traffic cones (with adapter)
    - directly on the road surface
    - at accident scenes
    - in case of vehicle breakdowns

City Flash 63/S LED	Ref. No.
City Flash 63/S LED, one-sided amber	130 58-51
City Flash 63/S LED, two-sided amber	130 59-51

Accessories and Spare parts	Ref. No.
NiKo bracket for attachment to vertical tubes	365 516-1
Set consisting of 10 NiKo brackets 365 516-1 and 1 NiKo key 70 090-1	365 516-2
NiKo bracket for attachment to steel barrier frames	365 517-1
Set consisting of 10 NiKo brackets 365 517-1 and 1 NiKo key 70 090-1	365 517-2
Adapter for using the Nitra, Euro-Nitra, Star-Blitz, City Flash and Primär on traffic cones	081 736-1

### Operating time with one set of batteries

With battery Premium 800	300 hrs
With battery Premium 3000	550 hrs
With battery Konstant 45	1000 hrs

### Technical data

Light colour	yellow
Eff. light intensity	260 cd
Blink-/flash rate	60 fl./min.

### Packaging unit

10 lamps in one carton / 250 lamps on one pallet  
also available in other quantities



City Flash 63/S LED



City Flash with NiKo bracket



Adapter for traffic cones



# Star-Blitz Type 410 Xenon Flash

- Lamp class L8L/L8M according to EN 12352
- High flash intensity at day and night, effective especially at poor sight
- Lens diameter 200 mm
- Switching on by external, rain-protected switch
- Use on folding traffic signs without additional adapter or on traffic cones with adapter
- Examples of application (depending on country-specific regulations)
  - on folding traffic signs (without additional adapter)
  - on traffic cones (with adapter)
  - directly on the road surface
  - at accident scenes
  - in case of vehicle breakdowns

Star-Blitz Type 410 Xenon Flash	Ref. No.
Star-Blitz Type 410, one-sided amber	130 522-
Star-Blitz Type 410, two-sided amber	130 523-

Accessories and Spare parts	Ref. No.
NiKo bracket for attachment to vertical tubes	365 516-1
Set consisting of 10 NiKo brackets 365 516-1 and 1 NiKo key 70 090-1	365 516-2
NiKo bracket for attachment to steel barrier frames	365 517-1
Set consisting of 10 NiKo brackets 365 517-1 and 1 NiKo key 70 090-1	365 517-2

## Operating time with one set of batteries

With battery Premium 800	34 hrs
With battery Premium 3000	11 hrs
With battery Konstant 45	190 hrs

## Technical data

Light colour	yellow
Eff. light intensity	one-sided 600 cd
Empty	two-sided 350 cd
Blink-/flash rate	60 fl./min.

## Packaging unit

10 lamps in one carton / 250 lamps on one pallet  
also available in other quantities



Star-Blitz Type 410 Xenon Flash



Star-Blitz with NiKo bracket



Adapter for traffic cones

# Super Primär 823/2 Xenon Flash



tested according to German Standards

- Lamp class L8L/L8M according to EN 12352
- High flash intensity - 2 Joule at day, 1 Joule at night
- Lens diameter 200 mm
- Additional basic steady light at night
- For operation with 4 dry cell batteries or 2 nickel cadmium rechargeable batteries
- With built-in charging socket
- With folding stand supports
- Examples of application (depending on country-specific regulations)
  - on folding traffic signs (without additional adapter)
  - on traffic cones (with adapter)
  - directly on the road surface
  - at accident scenes
  - in case of vehicle breakdowns

Super Primär 823/2 Xenon Flash	Ref. No.
Super Primär 823/2, one-sided amber	130 273-1
Super Primär 823/2, two-sided amber	130 274-11

Accessories and Spare parts	Ref. No.
Charger for nickel cadmium rechargeable batteries (1 charger per lamp)	16 060-1
Adapter for using the Nitra, Euro-Nitra, Star-Blitz, City Flash and Primär on traffic cones	081 736-1

### Operating time with one set of batteries

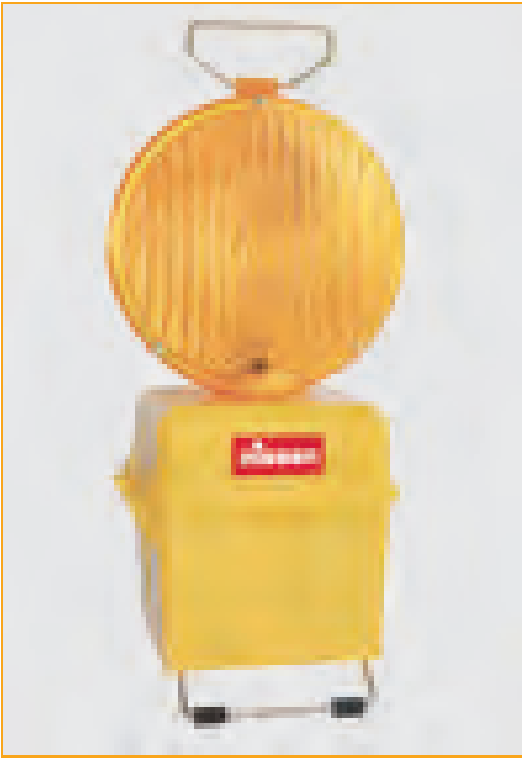
With battery Premium 800	day - 85 hrs night - 110 hrs
With battery Premium 3000	day - 200 hrs night - 240 hrs
With battery Konstant 45	day - 360 hrs night - 430 hrs
With nickel cadmium battery 5 V, 4,5 Ah	day - 6 hrs night - 23 hrs

### Technical data

Light colour	yellow
Eff. light intensity day	600 cd
Eff. light intensity night	300 cd

### Packaging unit

10 lamps in one carton / 120 lamps on one pallet also available in other quantities
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Super Primär 823/2 Xenon Flash



Super Primär on folding traffic sign



Super Primär on traffic cone

# Rapid Use Lamp Stab-Blitz 42-R-05

EN  
12352

- Lamp class L8G according to EN 12352
- For use in traffic cones 500 mm and 750 mm
- High flash intensity
- Lens diameter 200 mm
- For operation with mono cells or rechargeable battery cells
- Examples of application (depending on country-specific regulations)
  - at accident scenes
  - in case of rescue operations
  - in case of vehicle breakdowns
  - in case of maintenance works on the side of a road

Rapid Use Lamp Stab-Blitz 42-R-05	Ref. No.
Stab-Blitz Type 42-R-05, one-sided amber, without traffic cone	130 35-1
Stab-Blitz Type 42-R-05, two-sided amber, without traffic cone	130 36-1

Accessories and Spare parts	Ref. No.
Mono Cell, alkaline, 1,5 V	155 007
Nickel Cadmium Cell	156 020
Charger for nickel cadmium rechargeable batteries (1 charger per lamp)	16 060-1

## Operating time with one set of batteries

With mono cell, alkaline, 1,5 V	150 hrs
With nickel cadmium cell	36 hrs

## Technical data

Light colour	yellow
Eff. light intensity	one-sided 90 cd

## Packaging unit

5 lamps in one carton / 125 lamps on one pallet also available in other quantities
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Rapid Use Lamp Stab-Blitz 42-R-05



Stab-Blitz 42-R-05 at a traffic cone

# Traffic Cone Lamp Type 42/2 Xenon Flash



tested according to German Standards

- Lamp class L8L/L8M according to EN 12352
- To be integrated in traffic cones 750 mm
- Lens diameter 200 mm
- High flash intensity
- With automatic day/night adaptation
- For operation with 4 dry cell batteries or 2 nickel cadmium rechargeable batteries
- With built-in charging socket
- Complete lamp firmly connected with the traffic cone
- Increased stability due to the weight of the batteries
  
- Examples of application (depending on country-specific regulations)
  - at accident scenes
  - in case of rescue operations
  - in case of vehicle breakdowns
  - in case of maintenance works on the side of a road

Traffic Cone Lamp Type 42/2 Xenon Flash	Ref. No.
Traffic Cone Lamp Type 42/2, 12 V, one-sided amber, without traffic cone	130 304-
Traffic Cone Lamp Type 42/2, 12 V, two-sided amber, without traffic cone	130 34-1

Accessories and Spare parts	Ref. No.
Charger for nickel cadmium rechargeable batteries (1 charger per lamp)	16 060-1

### Operating time with one set of batteries

With battery Premium 800	0 hrs
With battery Premium 3000	400 hrs
With battery Konstant 45	730 hrs
With nickel cadmium battery 5 V, 4,5 Ah	with 2 rechargeable batteries 20 hrs

### Technical data

Light colour	yellow
Eff. light intensity	one-sided 300 cd / two-sided 600 cd

### Packaging unit

1 lamp in one carton
also available in other quantities



Traffic Cone Lamp Type 42/2 Xenon Flash



Traffic Cone Lamp suitable for traffic cone 750 mm

# Traffic Cone Lamp LED Flash Type 690F 340 mm

EN  
12352

- Lamp class L9M according to EN 12352
- For use in traffic cones of 750 mm and 1000 mm height
- With 4 super bright LED, therefore effective warning even at poor sight
- Lens diameter 340 mm
- Double warning effect due to large PVC cone and bright LED light
- Low power consumption
- Lamp head connected to the base by stable adjustable tube, therefore no bending of the cone in hot weather
- High stability because of low mass center
- Examples of application (depending on country-specific regulations)
  - at accident scenes
  - in case of rescue operations
  - in case of vehicle breakdowns
  - in case of maintenance works on the side of a road

Traffic Cone Lamp LED Flash Type 690F 340 mm	Ref. No.
Traffic Cone Lamp LED Flash Type 690F, one-sided amber 340 mm diameter, without traffic cone	130 323-

## Operating time with one set of batteries

With battery Premium 800	90 hrs
With battery Premium 3000	370 hrs
With battery Konstant 45	600 hrs

## Technical data

Light colour	yellow
Eff. light intensity	8000 cd

## Packaging unit

1 lamp in one carton also available in other quantities
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# Traffic Cone Lamp Type S-LED

- Lamp class L2H according to EN 12352
  - High brightness
  - Lens diameter 200 mm
  - For use on traffic cones
  - Easy mounting by special adapter (accessory),  
firm connection with the traffic cone
  - Replacement of battery also possible when mounted on a cone
  - Only one battery needed
  - Particularly suitable for long operating times
- Examples of application (depending on country-specific regulations)
    - at accident scenes
    - in case of rescue operations
    - in case of vehicle breakdowns
    - in case of maintenance works on the side of a road

Traffic Cone Lamp Type S-LED	Ref. No.
Traffic Cone Lamp Type S-LED, 6V, one-sided amber, without traffic cone	130 340-

Accessories and Spare parts	Ref. No.
Special adapter for use on traffic cones, cpl.	381 736-2

## Operating time with one set of batteries

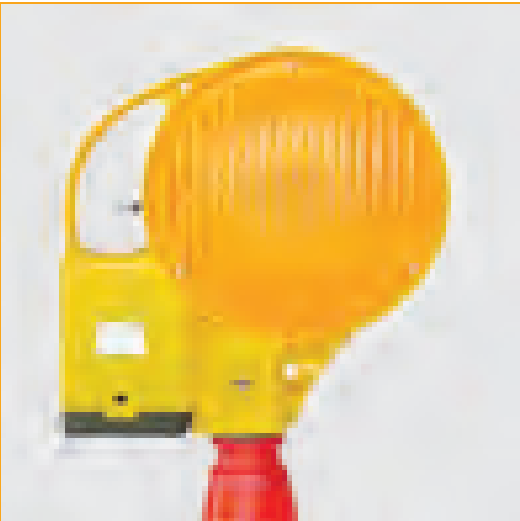
With battery Premium 800	60 hrs
With battery Premium 3000	300 hrs
With battery Konstant 45	250 hrs

## Technical data

Light colour	yellow
Eff. light intensity	200 cd

## Packaging unit

1 lamp in one carton also available in other quantities
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Traffic Cone Lamp Type S-LED



Special adapter 381 736-2



Changing battery

# Rapid Use Lamp ConiLamp LED

EN  
12352

- Lamp class L3 according to EN 12352
  - LED traffic cone lamp with only 1 battery
  - High flashing intensity
  - Lens diameter 186 mm with reflective rim
  - With integrated cone bracket
  - Automatic switch-on by putting on a cone
  - Particularly suitable for long operating times
- Examples of application (depending on country-specific regulations)
    - at accident scenes
    - in case of rescue operations
    - in case of vehicle breakdowns
    - in case of maintenance works on the side of a road

Rapid Use Lamp ConiLamp LED	Ref. No.
Rapid Use Lamp ConiLamp LED, steady light, one-sided amber	130 33-1

## Operating time with one set of batteries

With battery Premium 800	400 hrs
With battery Premium 3000	1500 hrs
With battery Konstant 45	2300 hrs

## Technical data

Light colour	yellow
Eff. light intensity	10 cd

## Packaging unit

10 lamps in one carton
also available in other quantities



Rapid Use Lamp ConiLamp LED



Changing battery



Integrated cone bracket





## Traffic Cones according to German Standards



- For rapid securing of danger spots or at traffic congestions
- To be used e.g. with rapid securing lamps

# Traffic Cones

## according to German Standards



### Traffic Cones

tested according to German Standards

- Increased stability due to the mass center in the base plate
- Strong road grip by skid-resistant base-studs
- Recess for road markings at the bottom of the base plate
- Stacking on the base plate, therefore no damaging of the foil
- Cone body made of high-impact PE material, base plates made of recycled material

Traffic Cones	Ref. No.
Traffic Cone 500 mm, red/white, fully retroreflecting foil type A weight 2,5 kg	071 110-5
Traffic Cone 750 mm, red/white, fully retroreflecting foil type A weight 5 kg	071 120-5
Traffic Cone 500 mm, red/white, fully retroreflecting foil type B weight 2,5 kg	071 110-6
Traffic Cone 750 mm, red/white, fully retroreflecting foil type B weight 5 kg	071 120-6
Traffic Cone 750 mm with 2 white stripes, weight 5 kg, not tested	071 120-2
Traffic Cone 750 mm with 2 white reflective stripes, foil RA1 A (type 1), weight 5 kg, not tested	071 120-3
Traffic Cone 1000 mm with 2 white stripes, weight 6,5 kg, not tested	070 012
Traffic Cone 1000 mm with 2 retroreflecting stripes, weight 6,5 kg not tested	070 016

Accessories and Spare parts	Ref. No.
Bracket for mounting the Nitra, Euro-Nitra, Star-Blitz and City Flash on traffic cones	292 032-1
Bracket for mounting the MonoLight on traffic cones	292 032-3
Adapter for using the Nitra, Euro-Nitra, Star-Blitz, City Flash and Primär on traffic cones	081 736-1

#### Technical data

Dimensions base plate	cone 500 mm - 312 x 312 x 35 mm
Height of stripes	85 mm
Dimensions base plate	cone 750 mm - 462 x 462 x 35 mm
Height of stripes	134 mm



Traffic cone 500 and 750 mm



Bracket for lamps

## Traffic Cones made of PVC

- Easy handling because of low weight
- Strong warning effect due to broad white stripes
- Easy disposal, no separation of material necessary

Traffic Cones made of PVC	Ref. No.
Traffic Cone 320 mm with 1 white stripes, PVC, weight approx. 0,6 kg	071 125-1
Traffic Cone 500 mm with 2 white stripes, PVC, weight approx. 1,2 kg	071 126-1





## Folding Traffic Signs



- For rapid securing of danger spots or at traffic congestions
- Suitable e.g. for operational and rescue forces, construction companies, gas and electric power companies, surveyor's offices etc.



# Folding Traffic Signs

## Folding Traffic Signs

- All Folding Traffic Signs consisting of signal covering made of PVC coated plastic fabric, tripod made of galvanized steel and slipcover
- Various versions available, side length 60, 70, 90 or 110 cm
- Traffic signs as required, the three sides can be fitted with the same or with different signs or texts
- Easy replacing of the signal covering
- Further use due to exchangeable additional signs (optional)
- Additional centre weight available for increased stability (optional)
- Use of the lamps Super Primär 823, Nitra, Star-Blitz, City Flash, Primär 825 FÜQ and Star-Blitz 425 FÜQ/Star-Flash 625 FÜQ without additional adapter
- Also available with telescope tube
- Examples of application (depending on country-specific regulations)
  - at accident scenes
  - in case of vehicle breakdowns
  - in case of works on gas mains
  - in case of measuring works
  - in front of danger spots

Folding Traffic Signs	Ref. No.
Folding Traffic Sign Type 60 with <b>white normal foil</b> , side length 600 mm	167 060-1
Folding Traffic Sign Type 60 with <b>retroreflective foil</b> , side length 600 mm	167 061-1
Folding Traffic Sign Type 70 with <b>white normal foil</b> , side length 700 mm	167 070-1
Folding Traffic Sign Type 70 with <b>retroreflective foil</b> , side length 700 mm	167 071-1
Folding Traffic Sign Type 90 with <b>white normal foil</b> , side length 900 mm	167 090-1
Folding Traffic Sign Type 90 with <b>retroreflective foil</b> , side length 900 mm	167 091-1
Folding Traffic Sign Type 110 with <b>white normal foil</b> , side length 1100 mm	167 110-1
Folding Traffic Sign Type 110 with <b>retroreflective foil</b> , side length 1100 mm	167 111-1

Accessories and Spare parts	Ref. No.
Velcro band, fluorescent, for folding traffic sign type 70	266 90
Velcro band, retroreflecting, for folding traffic sign type 70	266 91
Velcro band, fluorescent, for folding traffic sign type 90	266 200
Velcro band, retroreflecting, for folding traffic sign type 90	266 201
Velcro band, fluorescent, for folding traffic sign type 110	266 210
Velcro band, retroreflecting, for folding traffic sign type 110	266 211



Folding Traffic Signs



Folding Traffic Sign with Primär 823/2



Velcro band text examples



Carry handle



## Hand Lamps



**Suitable e.g. for all operational and rescue forces, surveillance firms and also for leisure time activities**

# Hand Lamps

## Hand Lamp with halogen bulb

- For working and warning purposes, with adjustable lamp head
- Sight of up to 500 m, sufficient ambient light
- Shock-proof plastic case

Hand Lamp with halogen bulb	Ref. No.
Hand Lamp, steady light only	140 250-2
Hand Lamp, steady/permanent light switchable	140 260-2

Accessories and Spare parts	Ref. No.
Halogen bulb type 054, 6 V / 0,5 A, plug-type socket	090 263-2
Red disc	270 910
Yellow disc	270 920
Green disc	270 930
Blue disc	270 940

### Operating time with one set of batteries

With battery Premium 800	steady light 80 hrs / flashing light 250 hrs
With battery Premium 3000	steady light 120 hrs / flashing light 390 hrs

### Technical data

Light colour	white or coloured disc
Max. light intensity	without disc 4100 cd
Blink-/flash rate	60 fl./min.



Hand Lamp with halogen bulb



Adjustable lamp head



Hand lamp discs

# Hand Lamp Z-Lite

- Sight of up to 1000 m
- With krypton bulb
- Support for nearly any direction of the light cone
- For operation with one dry cell battery 4R25

Hand Lamp Z-Lite	Ref. No.
Hand Lamp Z-Lite	070 076-1

## Operating time with one set of batteries

With battery Premium 800	3,5 hrs
With battery Premium 3000	16 hrs

## Technical data

Max. light intensity	40000 cd
Max. illuminated area in 3m distance	3220 lux
Weight	with battery 1,25 kg
Light source	krypton bulb





## Revolving Beacons according to EC Guidelines



**For mounting on monitoring and office vehicles**



# Revolving Beacons

## according to EC Guidelines

### Revolving Beacons Halogen TriOptic and Mini-TriOptic



- Approved according to EC Guide Line for all European countries
- Excellent warning effect in any distance by 3-lens technique
- Easy handling of the Mini-TriOptic due to light weight of max. 780 g
- Very good adhesion of the Mini-TriOptic with magnetic base (approved according to German Standards for up to 250 km/h), no scratching or skidding

Revolving Beacons Halogen TriOptic and Mini-TriOptic	Ref. No.
TriOptic for mounting on a horizontal surface, 12/24 V, amber without halogen bulb EC approval no. E1 0165	070 70-1
TriOptic for slipping onto tubes, 12/24 V, amber without halogen bulb EC approval no. E1 0165	070 71-1
Mini-TriOptic with magnetic support, 12 V, amber with halogen bulb 55 W, spiral cable and two-pin vehicle plug EC approval no. E1 0491	070 75-1
Mini-TriOptic for mounting on a horizontal surface, 12 V, amber with halogen bulb 55 W EC type approval no. E1 0491	070 73-1
Mini-TriOptic for slipping onto tubes, 12 V, amber, with halogen bulb 55 W EC type approval E1 0491	070 74-1

Accessories and Spare parts	Ref. No.
Special gasket for TriOptic for mounting on curved vehicle roofs	165 260
Tubular support for welding on for TriOptic and Mini-TriOptic	165 270-
Tubular support with angle mount 90° for TriOptic and Mini-TriOptic	070 078-24
Halogen bulb „H1“ type 021, 12 V / 55 W	090 202
Halogen bulb „H1“ type 022, 24 V / 70 W	090 213

#### Technical data

Max. power consumption	TriOptic / Mini TriOptic 12 V - 5,0 A
Max. light intensity	6600 cd
Eff. light intensity	330 cd
Weight	TriOptic 1,1 kg / Mini TriOptic 0,78 kg
Insulation	TriOptic IP 54 / Mini TriOptic IP 56



TriOptic for mounting on a horizontal surface



MiniTriOptic for slipping onto tubes



TriOptic with magnetic support

# Double Flash Signal Solar Star

- Approved according to EC Guide Line for all European countries
- Automatic switching from 12 V to 24 V
- Very economical operation
- No moving parts, therefore no maintenance costs
- Synchronous operation of up to four lamps possible

Double Flash Signal Solar Star	Ref. No.
Double Flash Signal Solar Star for mounting on a horizontal surface 12/24 V, amber EC approval no. E2 000015	070 515-1
Double Flash Signal Solar Star with magnetic support, 12/24 V, amber EC approval no. E2 000015	070 515-11

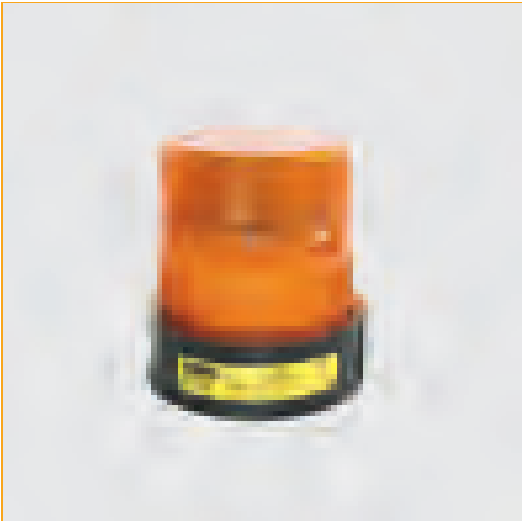
Accessories and Spare parts	Ref. No.
Support for slipping onto tubes	070 517-13

## Technical data

Flash performance	7 Joule
Blink-/flash rate	120 fl./Min.
Aver. power consumption	12 V ,41A
Aver. power consumption	24 V - 0,65 A
Weight	0,6 kg
Operating temperature	-30°C to +50°C



Solar Star with magnetic support



Solar Star for mounting on a horizontal surface





## Lighting System „Light-Ball“



**Suitable e.g. for all operational and rescue forces as well as roadworks, tunnel construction and high-building**

# Lighting System Light-Ball



## Lighting System Light-Ball

- With integrated vacuum blower to fill the cover within seconds
  - Cooling of the halogen bulb by the blower, therefore extended life time
  - Neither tools nor special knowledge necessary
  - Suitable for the use on tripods
  - With transport and storage box
  - Other versions on request
- 
- Examples of application (depending on country-specific regulations)
    - on building sites
    - in case of events
    - in case of rescue works

Lighting System Light-Ball	Ref. No.
Light-Ball Halogen 2000 W (2 x 1000 W)	071 060-4

Accessories and Spare parts	Ref. No.
Spare cover for Halogen 2000 W	071 061-11
Multiple swivelling joint	071 061-2
Tripod P 500 TB, max. height 5,57 m	071 061-1
Anchor set	071 061-10
Adapter / fire brigade	071 061-3
Halogen bulb 1000 W	090 270-4

### Technical data

Diameter	11, m
Power of lamps	2000 W
Operating voltage	230 V
Light source	Halogen 2 x 1000 W (230 V)
Illuminated area	1500 m²
Operating height	2,5 - 5,0 m
Weight	8 kg
Inflation time	45 seconds
Wind resistance	100 km/h



Lighting System Light-Ball



Tripod



Transport and storage box

## The right illumination for your purpose

### 1. Light colour

Halogen light (artificial light) is a warm light, turning a little yellowish.

### 2. Colour temperature

Colour temperature of halogen is 3200.

### 3. Light intensity

Lumen of halogen lamps is approx. 25 lumen per Watt.

### 4. The ballast

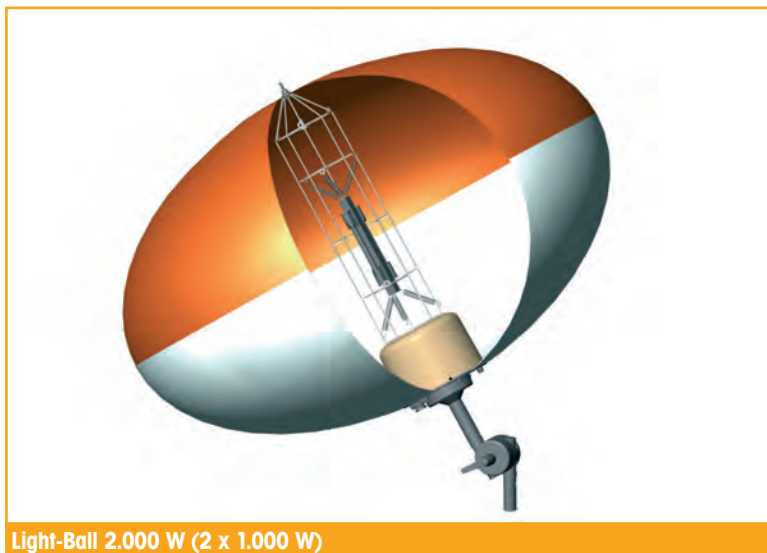
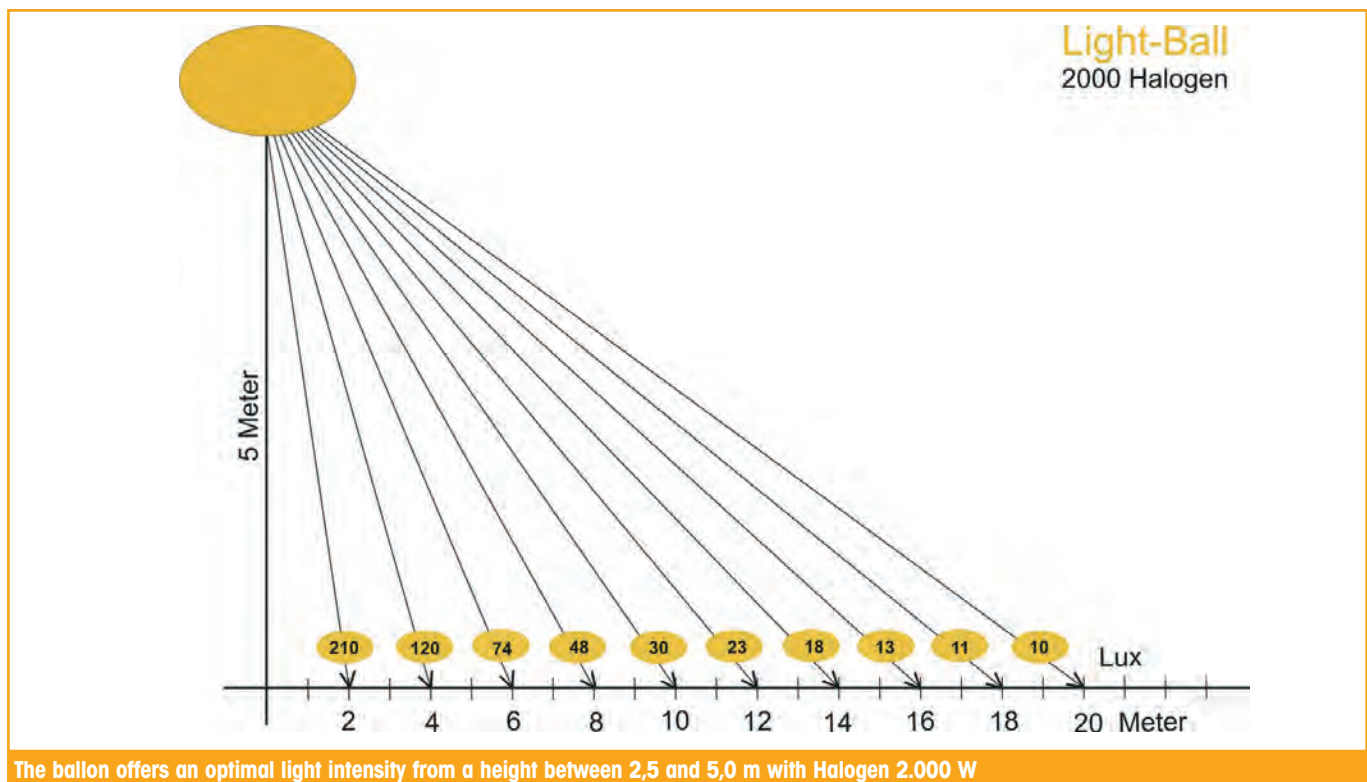
Halogen lamps do not need a start ballast.

### 5. Lifetime of light sources

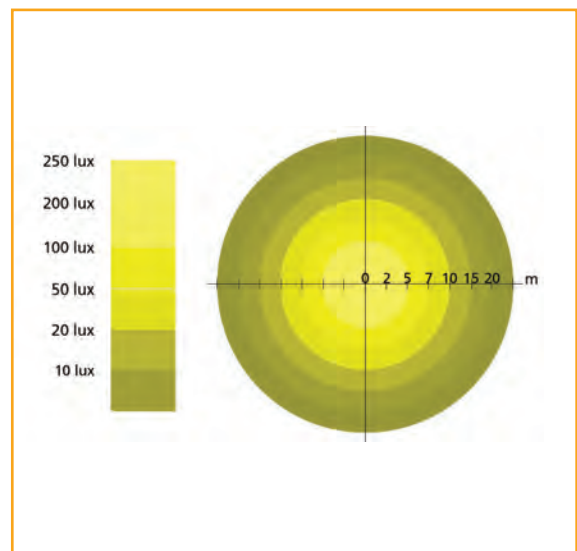
The halogen lamp 1000 W has a lifetime of approx. 300 hours.

### 6. Start after power failure

Light-Ball halogen allows a re-start immediately after power failure.



Light-Ball 2.000 W (2 x 1.000 W)







## Mobile Traffic Signal Units according to German Standards



**For securing and traffic guidance at road constrictions caused by  
construction sites**

# Mobile Traffic Signal Units according to German Standards

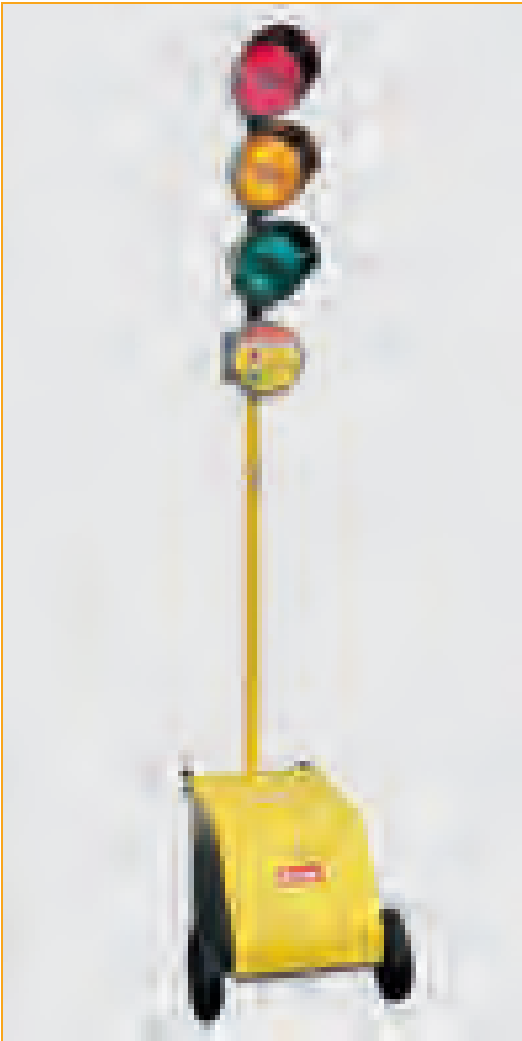


## Traffic Light System LZA 500

tested according to German Standards

- Traffic light system for single-lane traffic guidance
- Equipped for quartz and cable operation as standard
- Also available for crossings or T-junctions
- Battery-free pilot for data transfer
- Multilingual display, country-specific programs and languages
- Upgrade to radio operation with multiple frequency technique possible
- Also available with radar sensors for traffic-dependent density response (KVA/FVA) or for maximum „green“ time (KVG/FVG)
- For 12 V battery operation
- Optional with
  - contrast shield
  - plastic battery box
- Accessories and operating times see Traffic Light System LZA 500-LED

Traffic Light System LZA 500	Ref. No.
Quartz Traffic Light System LZA 500 consisting of: 2 signal transmitters with sunshades, control unit and folding stand tube, 2 carriages with steel battery box, 1 pilot	145 56201
Quartz Traffic Light System LZA 500 for cable operation consisting of: 2 signal transmitters with sun shades, control unit and folding stand tube, 2 carriages with steel battery box, 1 pilot (for start-up without connecting cable), 100 m connecting cable	145 56202
Quartz Traffic Light System LZA 500 F with radio report consisting of: 2 signal transmitters with sun shades, control unit and folding stand tube, 2 carriages with steel battery box, 1 pilot (for start-up without radio modules), 2 radio modules	145 56203
Quartz Traffic Lights LZA 500 KVG/KVA for cable operation with radar sensors for traffic-dependent control consisting of: 2 signal transmitters with sun shades, quartz control unit, 2 radar sensors and folding stand tubes, 2 carriages with steel battery box, 1 pilot (for start-up without connecting cable), 100 m connecting cable	145 56204
Quartz Traffic Lights LZA 500 FVG/FVA with radio report with radar sensors for traffic-dependent operation consisting of: 2 signal transmitters with sun shades, quartz control unit, 2 radar sensors and folding stand tubes, 2 carriages with steel battery box, 1 pilot (for start-up without radio modules), 2 radio modules	145 56205



Traffic Light System LZA 500



Transport position



Radar sensor



Control panel



Contrast shield



# Traffic Light System LZA 500-LED

tested according to German Standards

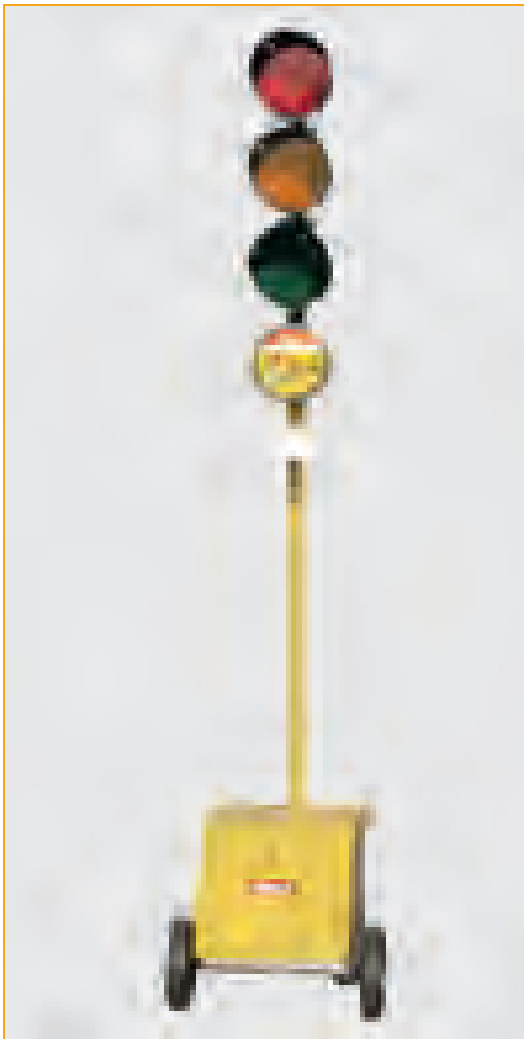
- Traffic light system for single-lane traffic guidance
- Equipped for quartz and cable operation as standard
- Also available for crossings or T-junctions
- Battery-free pilot for data transfer
- Multilingual display, country-specific programs and languages
- Upgrade to radio operation with multiple frequency technique possible
- Also available with radar sensors for traffic-dependent density response (KVA/FVA) or for maximum „green“ time (KVG/FVG)
- For 12 V battery operation
- Optional with
  - contrast shield
  - plastic battery box
- Description of the below mentioned systems see Quartz Traffic Lights LZA 500

Traffic Light System LZA 500-LED	Ref. No.
Quartz Traffic Light System LZA 500-LED	145 56251
Quartz Traffic Light System LZA 500-LED for cable operation	145 56252
Quartz Traffic Light System LZA 500-LED with radio report	145 56253
Quartz Traffic Lights LZA 500-LED KVG/KVA for cable operation with radar sensors for traffic-dependent control	145 56254
Quartz Traffic Lights LZA 500-LED FVG/FVA with radio report with radar sensors for traffic-dependent operation	145 56255

Accessories and Spare parts	Ref. No.
100 m signal transmitter connection cable for cable operation	400 227-1
Contrast shield	080 58-1

## Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	LZA 500 - 288 hrs LZA 500-LED - 550 hrs
With rechargeable battery 12 V, 230 Ah	LZA 500 - 360 hrs LZA 500-LED - 700 hrs



Traffic Light System LZA 500-LED



Transport position



Radar sensor



Control panel



Contrast shield

# LED-Counter for LZA 500 and LZA 500-LED

- Decrementer for traffic light systems
- Counting down during the whole red phase
- No special adjustments necessary
- Large LED display, clearly visible, height of text ca. 150 mm
- Low power consumption
- Weatherproof aluminium housing
- Connection and supply directly by the LZA 500
- With bracket for mounting on tubes

LED-Counter for LZA 500 and LZA 500-LED	Ref. No.
LED-Counter for LZA 500 and LZA 500-LED, red, with bracket	245 602-1

Technical data

Width	350 mm
Height	220 mm



LED-Counter for LZA 500 and LZA 500-LED

## Advance Warning Lamps and Systems according to German Standards and EN 12352



### **Advance warning lamps 340 mm diameter**

- To be used e.g. on all roads and motorways

### **Advance warning systems 340 mm diameter**

- To be used e.g. on all roads and motorways as well as on pre-warning and warning trailers and vehicles

### **Advance warning lamps 220 mm diameter**

- To be used e.g. on inner-city roads

### **Advance warning systems 220 mm diameter**

- To be used e.g. on vehicles

# Advance Warning Lamps and Systems according to German Standards and EN 12352

## Advance Warning Lamp Multi-Light 200 LED L8H



tested according to German Standards and EN 12352

- Tested according to German Standards and European Standard EN 12352
- Lamp class L8H according to EN 12352
- With only two Super LED
- Lens diameter 220 mm
- Automatic day/night adaptation, switchable to solar switch
- Bracket for mounting on tubes up to 82 mm diameter available
- Examples of application (depending on country-specific regulations)
  - for advance warning in front of building sites
  - for advance warning in front of danger spots

Advance Warning Lamp Multi-Light 200 LED L8H	Ref. No.
Advance Warning Lamp Multi-Light 200 LED L8H Type 670/1, 12/24 V with 5 m cable and battery clips EC type approval no. e1*72/245*2006/28*5360*00	122 21-1

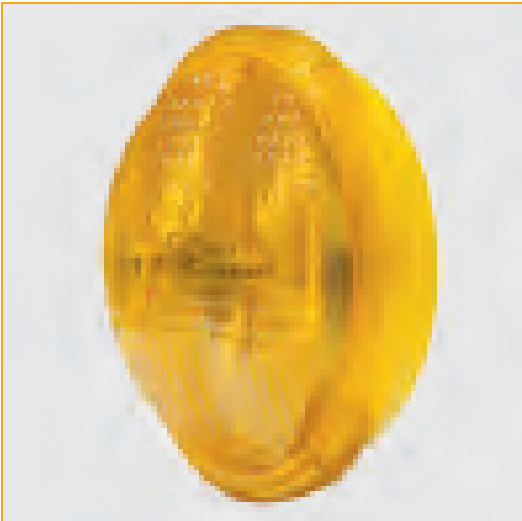
Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

### Operating time with one set of batteries

With rechargeable battery 12 V, 100 Ah	570 hrs
With rechargeable battery 12 V, 180 Ah	1000 hrs
With rechargeable battery 12 V, 230 Ah	1300 hrs

### Technical data

Light colour	yellow
Eff. light intensity	1500 cd
Aver. power consumption day at 12 V	0,23 A
Aver. power consumption night at 12 V	0,05 A
Blink-/flash rate	60 fl./min.



Adv. Warning Lamp Multi-Light 200 LED L8H



Adv. Warning Lamp with bracket



Box for rechargeable batteries

# Twofold Warning System Multi-Light 200 LED L8H



tested according to German Standards and EN 12352

- Tested according to German Standards and European Standard EN 12352
- Lamp class L8H according to EN 12352
- Each lamp only two Super-LED
- Lens diameter 220 mm
- Automatic day/night adaptation, switchable to solar switch
- With 5 m connecting cable, cable length between the lamps ca. 3 m
- System consisting of 1 master lamp and 1 slave lamp
- Further multiple systems on request
- Examples of application (depending on country-specific regulations)
  - for advance warning in front of building sites
  - for advance warning in front of danger spots
  - on service and maintenance vehicles

Twofold Warning System Multi-Light 200 LED L8H	Ref. No.
Twofold Warning Light System Multi-Light 200 LED L8H Type 670/1 12/24 V	122 22-1
EC type approval no. e1*72/245*2006/28*5360*00	

Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

## Operating time with one set of batteries

With rechargeable battery 12 V, 100 Ah	300 hrs
With rechargeable battery 12 V, 180 Ah	550 hrs
With rechargeable battery 12 V, 230 Ah	700 hrs

## Technical data

Light colour	yellow
Eff. light intensity	1500 cd
Aver. power consumption day at 12 V	0,45 A
Aver. power consumption night at 12 V	0,07 A
Blink-/flash rate	60 fl./min.



Twofold Warning S. Multi-Light 200 LED L8H



Twofold Warning S. with bracket



Box for rechargeable batteries

## Twofold Warning System Xenon Flash 230 mm

- Lamp class L8M according to EN 12352
- With automatic day/night adaptation
- Lens diameter 230 mm
- 5 m connecting cable with pole clamps (standard) or vehicle plug
- Cable length between the lamps ca. 3 m
- With bracket for tubes up to 82 mm
- Examples of application (depending on country-specific regulations)
  - for advance warning in front of building sites
  - for advance warning in front of danger spots
  - on service and maintenance vehicles

Twofold Warning System Xenon Flash 230 mm	Ref. No.
Twofold Xenon Flash System Type 41, 12/24 V	122 493-

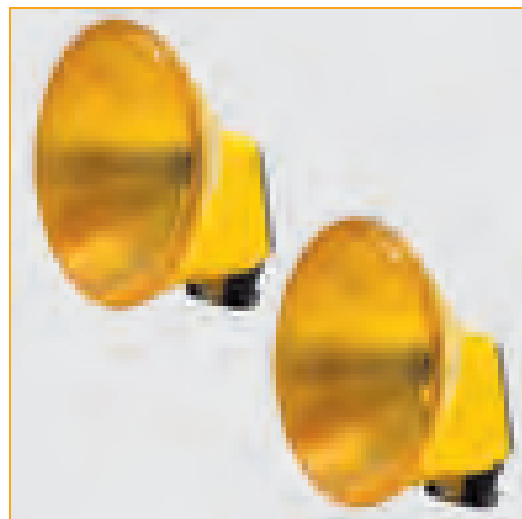
Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

### Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	380 hrs
With rechargeable battery 12 V, 100 Ah	210 hrs

### Technical data

Light colour	yellow
Eff. light intensity day	1000 cd
Eff. light intensity night	500 cd
Blink-/flash rate	60 fl./min.



Twofold Warning S. Xenon Flash 230 mm



with bracket



Box for rechargeable batteries

# Advance Warning Lamp Multi-Light 340 LED L9H



tested according to EN 12352

- Lamp class L9H according to EN 12352
- Tested according to the EN 12352
- With only four super LED
- Lens diameter 340 mm
- Automatic day/night adaptation, switchable to solar switch
- 5 m connecting cable with battery clips
- With bracket for tubes up to 82 mm
- Examples of application (depending on country-specific regulations)
  - for advance warning in front of building sites
  - for advance warning in front of danger spots

Advance Warning Lamp Multi-Light 340 LED L9H	Ref. No.
Advance Warning Lamp Multi-Light 340 LED L9H Type 690/1, 12/24 V with 5 m connecting cable EC type approval no. e1 *72/245*2009/19*5361*01	122 31-1
Advance warning lamp Multi-Light 340 LED L9H Type 690, 230 V with 5 m connecting cable	122 31-51

Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

## Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	700 hrs
With rechargeable battery 12 V, 100 Ah	350 hrs

## Technical data

Light colour	yellow
Eff. light intensity day	20000 cd
Eff. light intensity night	2000 cd
Aver. power consumption day at 12 V	0,9 A
Aver. power consumption night at 12 V	0,1 A
Blink-/flash rate	60 fl./min.



Adv. Warning Lamp Multi-Light 340 LED L9H



Adv. Warning Lamp with bracket



Box for rechargeable batteries



# Twofold Warning System Multi-Light 340 LED L9H



tested according to EN 12352

- Lamp class L9H according to EN 12352
- Each lamp with only four Super-LED
- Lens diameter 340 mm
- Automatic day/night adaptation, switchable to solar switch
- Consisting of one master lamp and one slave lamp, cable length between the lamps 6 m
- Master lamp with 5 m connecting cable with battery clips
- Further multiple systems on request
- Examples of application (depending on country-specific regulations)
  - on service and maintenance vehicles
  - on gritting vehicles
  - on building site vehicles
  - on pre-warning trailers
  - on warning trailers

Twofold Warning System Multi-Light 340 LED L9H	Ref. No.
Twofold Warning Light System Multi-Light 340 LED L9H Type 690/1, 12/24 V EC type approval no. e1*72/245*2009/19*5361*01	122 32-1

Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

### Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	350 hrs
With rechargeable battery 12 V, 100 Ah	175 hrs

### Technical data

Light colour	yellow
Eff. light intensity day	20000 cd
Eff. light intensity night	2000 cd
Aver. power consumption day at 12 V	1,8 A
Aver. power consumption night at 12 V	0,2 A
Blink-/flash rate	60 fl./min.



Twofold Warning S. Multi-Light 340 LED L9H



Twofold Warning S. with bracket



Box for rechargeable batteries

# Advance Warning Lamp Multi-Light 340 LED Flash L9M



- Lamp class L9M according to EN 12352
- With four super LED
- Lens diameter 340 mm
- Automatic day/night adaptation, switchable to solar switch
- 5 m connecting cable with battery clips
- With bracket for tubes up to 82 mm
- Examples of application (depending on country-specific regulations)
  - for advance warning in front of building sites
  - for advance warning in front of danger spots

Advance Warning Lamp Multi-Light 340 LED Flash L9M	Ref. No.
Advance Warning Lamp Multi-Light 340 LED Flash L9M, 12/24 V with 5 m connecting cable EC type approval no. e1*72/245*2009/19*5361*01	122 31-201

Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

## Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	1400 hrs
With rechargeable battery 12 V, 100 Ah	800 hrs

## Technical data

Light colour	yellow
Eff. light intensity day	7500 cd
Eff. light intensity night	1950 cd
Aver. power consumption day at 12 V	0,15 A
Aver. power consumption night at 12 V	0,05 A
Blink-/flash rate	60 fl./min.



Adv. W. Lamp Multi-Light 340 LED Flash L9M



Adv. Warning Lamp with bracket



Box for rechargeable batteries

# Twofold Warning System Multi-Light 340 LED Flash L9M



- Lamp class L9M according to EN 12352
- Each lamp with four Super-LED
- Lens diameter 340 mm
- Automatic day/night adaptation, switchable to solar switch
- Consisting of one master lamp and one slave lamp, cable length between the lamps 6 m
- Master lamp with 5 m connecting cable with battery clips
- Further multiple systems on request
- Examples of application (depending on country-specific regulations)
  - on service and maintenance vehicles
  - on gritting vehicles
  - on building site vehicles
  - on pre-warning trailers
  - on warning trailers

Twofold Warning System Multi-Light 340 LED Flash L9M	Ref. No.
Twofold Warning Light System Multi-Light 340 LED Flash L9M, 12/24 V	122 32-201
EC type approval no. e1 *72/245*2009/19*5361*01	

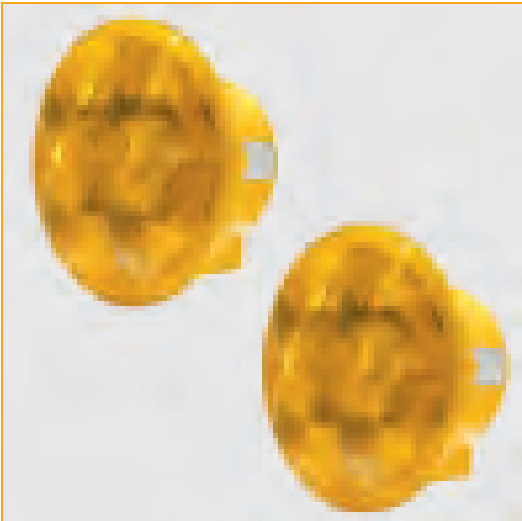
Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

### Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	700 hrs
With rechargeable battery 12 V, 100 Ah	380 hrs

### Technical data

Light colour	yellow
Eff. light intensity day	7500 cd
Eff. light intensity night	1950 cd
Aver. power consumption day at 12 V	0,3 A
Aver. power consumption night at 12 V	0,1 A
Blink-/flash rate	60 fl./Min.



Twof. W. S. Multi-Light 340 LED Flash L9M



Twofold Warning S. with bracket



Box for rechargeable batteries

# Advance Warning Lamp Xenon Flash 340 mm



tested according to German Standards

- Lamp class L9M according to EN 12352
- With xenon flash tube
- Lens diameter 340 mm
- Automatic day/night adaptation
- 5 m connecting cable with battery clips
- With bracket for tubes up to 82 mm
- Examples of application (depending on country-specific regulations)
  - for advance warning in front of building sites
  - for advance warning in front of danger spots

Advance Warning Lamp Xenon Flash 340 mm	Ref. No.
Advance Warning Lamp Xenon Flash Type 47/7, 12/24 V with 5 m connecting cable	122 428-

Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

## Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	180 hrs
With rechargeable battery 12 V, 100 Ah	100 hrs

## Technical data

Light colour	yellow
Eff. light intensity day	7700 cd
Eff. light intensity night	3000 cd
Aver. power consumption day at 12 V	1,3 A
Aver. power consumption night at 12 V	0,7 A
Blink-/flash rate	60 fl./min.



Adv. Warning Lamp Xenon Flash 340 mm



Adv. Warning Lamp with bracket



Box for rechargeable batteries

# Twofold Warning System Xenon Flash 340 mm



tested according to German Standards

- Lamp class L9M according to EN 12352
- Each lamp with one xenon tube
- Lens diameter 340 mm
- Automatic day/night adaptation
- Consisting of one master lamp and one slave lamp, cable length between the lamps 6 m
- Master lamp with 5 m connecting cable with battery clips
- Further multiple systems on request
  
- Examples of application (depending on country-specific regulations)
  - on service and maintenance vehicles
  - on gritting vehicles
  - on building site vehicles
  - on pre-warning trailers
  - on warning trailers

Twofold Warning System Xenon Flash 340 mm	Ref. No.
Twofold Warning Light System Xenon Flash Type 47/7, 12/24 V EC type approval no.: e1 72/245*95/54*3754*00	122 483-

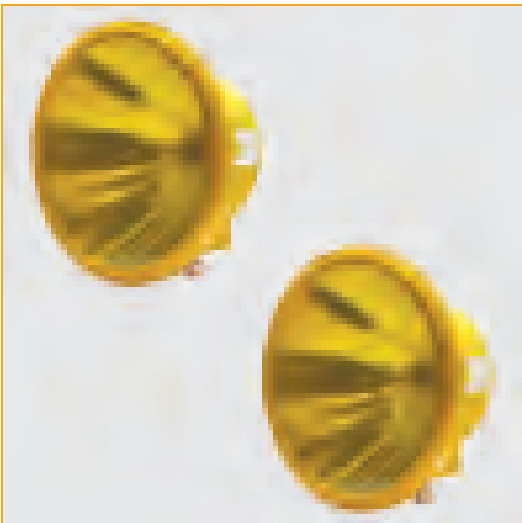
Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

### Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	90 hrs
With rechargeable battery 12 V, 100 Ah	50 hrs

### Technical data

Light colour	yellow
Eff. light intensity day	7700 cd
Eff. light intensity night	3000 cd
Aver. power consumption day at 12 V	2,6 A
Aver. power consumption night at 12 V	1,4 A
Blink-/flash rate	60 fl./min.



Twofold Warning S. Xenon Flash 340 mm



Twofold Warning S. with bracket



Box for rechargeable batteries

# Advance Warning Lamp Halogen 340 mm



tested according to German Standards

- Lamp class L9H according to EN 12352
- With high-performance halogen bulb
- Linsendurchmesser 340 mm
- Automatic day/night adaptation
- 5 m connecting cable with battery clips
- With bracket for tubes up to 82 mm
- Examples of application (depending on country-specific regulations)
  - for advance warning in front of building sites
  - for advance warning in front of danger spots

Advance Warning Lamp Halogen 340 mm	Ref. No.
Advance Warning Lamp Halogen Type 22/5, 12/24 V with 5 m connecting cable	122 334-

Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

## Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	200 hrs
With rechargeable battery 12 V, 100 Ah	110 hrs

## Technical data

Light colour	yellow
Eff. light intensity day	34500 cd
Eff. light intensity night	2600 cd
Aver. power consumption day at 12 V	1,5 A
Aver. power consumption night at 12 V	0,3 A
Blink-/flash rate	60 fl./min.



Advance Warning Lamp Halogen 340 mm



Adv. Warning Lamp with brackets



Box for rechargeable batteries

# Twofold Warning System Halogen 340 mm



tested according to German Standards

- Lamp class L9H according to EN 12352
- Each lamp with high-performance halogen bulb
- Lens diameter 340 mm
- Automatic day/night adaptation
- Consisting of one master lamp and one slave lamp, cable length between the lamps 6 m
- Master lamp with 5 m connecting cable with battery clips
- Further multiple systems on request
  
- Examples of application (depending on country-specific regulations)
  - on service and maintenance vehicles
  - on gritting vehicles
  - on building site vehicles
  - on pre-warning trailers
  - on warning trailers

Twofold Warning System Halogen 340 mm	Ref. No.
Twofold Warning Light System Halogen Type 22/5, 12/24 V EG type approval no.: e1 72/245*95/54*3753*00	122 460-1

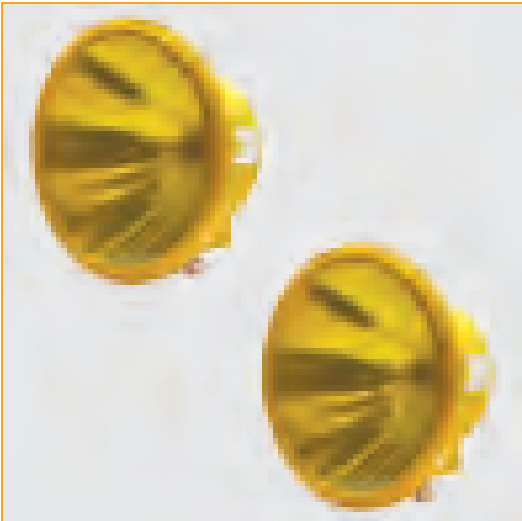
Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

### Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	100 hrs
With rechargeable battery 12 V, 100 Ah	55 hrs

### Technical data

Light colour	yellow
Eff. light intensity day	34500 cd
Eff. light intensity night	2600 cd
Aver. power consumption day at 12 V	2,9 A
Aver. power consumption night at 12 V	0,6 A
Blink-/flash rate	60 fl./min.



Twofold Warning System Halogen 340 mm



Twofold Warning S. with bracket



Box for rechargeable batteries



**Fivefold Directive Light System LED**

- Lamp class L8H according to EN 12352
- For mounting on vehicles and work machines
- Up to six different programs can be selected by remote control
- Lens diameter 220 mm
- With manual day/night adaptation
- Examples of application (depending on country-specific regulations)
  - on vehicles
  - on warning trailers

Fivefold Directive Light System LED	Ref. No.
Fivefold Directive Light System LED L8H Type 670/1-CAN, 12/24 V with remote control Eco-Remote consisting of: 5 LED lamps, 220 mm, with 5 m connecting cable and cable remote control Eco-Remote	120 608-

Accessories and Spare parts	Ref. No.
Box for rechargeable batteries 12 V up to 230 Ah, lockable	190 230-

**Technical data**

Light colour	amber
Max. light intensity	2000 cd
Blink-/flash rate	40 fl./min.



Fivefold Directive Light System LED



on a vehicle



Remote Control Eco-Remote



Box for rechargeable batteries



## Light Arrows according to German Standards and EN 12352



To be used e.g. on all office and operational vehicles, service, maintenance and working vehicles

# Light Arrows

## according to German Standards and EN 12352

### Light Arrow LP 13/2 Halogen



tested according to German Standards

- Lamp class L8H according to EN 12352
  - Lens diameter 200 mm
  - Electrically switchable to pointing left or right or to light cross
  - Also available with motor-driven lifting/lowering device
  - With bracket for mounting on tubes
- 
- Examples of application (depending on country-specific regulations)
    - on service and maintenance vehicles
    - on gritting vehicles
    - on warning trailers
    - on roof racks

Light Arrow LP 13/2 Halogen	Ref. No.
Halogen Light Arrow Type LP 13/2 L8H, 12/24 V EC type approval no. e1*72/245*95/54*3832*00 consisting of: 1 housing, made of highly weatherproof plastic, with 13 lamps 200 mm Ø, 3 m connecting cable with battery clips	129 3545

Accessories and Spare parts	Ref. No.
Adapter for mounting on board sides	329 365-1
Adapter for mounting on roof racks of cars or special vehicles, with motor-operated lifting/lowering device incl. cable remote control	329 366-2
Cable remote control for electrical switching of the arrow directions (not for motor-operated lifting/lowering device)	329 318-2
Halogen bulb type 026, 12 V / 20 W	090 234

#### Technical data

Light colour	yellow
Max. light intensity	2500 cd
Eff. light intensity	2200 cd
Aver. power consumption day at 12 V	6,7 A
Aver. power consumption night at 12 V	3,3 A
Weight	14 g
Dimensions (LxWxH)	900 x 900 x 95 mm



Light Arrow LP 13/2 Halogen



LP13/2 manual toggle



LP13/2 remote control

# Light Arrow LP 8/RS-Norm Halogen



tested according to German Standards

- Lamp class L8H according to EN 12352
- Lens diameter 200 mm
- With continuous brightness adaptation
- Low wind load according to open design
- Quick and easy mounting at or on vehicles and carriages
- Aluminium frame, slip-on type, for pointing left or right
- Bracket for mounting on tubes for manual setting to five different positions available
- Examples of application (depending on country-specific regulations)
  - on vehicles
  - on tubes
  - on guardrails

Light Arrow LP 8/RS-Norm Halogen	Ref. No.
Halogen Light Arrow Type LP 8/RS-Norm L8H, 12/24 V, EC type approval no. e1 *72/245*95/54*3755*00 consisting of: 8 halogen lamps 200 mm, mounted on an aluminium frame with slip-on device, and 3 m connecting cable with battery clips	129 360-

Accessories and Spare parts	Ref. No.
Bracket for mounting on tubes with adjustment device, 5 positions	329 360-1
Halogen bulb type 026, 12 V / 20 W	090 234

## Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	30 hrs
With rechargeable battery 12 V, 230 Ah	37 hrs

## Technical data

Light colour	yellow
Max. light intensity	2700 cd
Eff. light intensity	2500 cd
Aver. power consumption day at 12 V	6,7 A
Aver. power consumption night at 12 V	3,3 A
Weight	13 g
Dimensions (LxWxH)	30 x 900 x 240 mm



# Light Arrow LP 8/S



tested according to German Standards and EN 12352

- Lamp class L8H according to EN 12352
- Lens diameter 220 mm
- With continuous brightness adaptation
- Low wind load according to open design
- Quick and easy mounting at or on vehicles and carriages
- Aluminium frame, slip-on type, for pointing left or right
- Bracket for mounting on tubes for manual setting to five different positions available
- Examples of application (depending on country-specific regulations)
  - on vehicles
  - on tubes
  - on guardrails

Light Arrow LP 8/S	Ref. No.
LED Light Arrow Type LP 8/S LED, L8H Type 670/1, 12/24 V EC type approval no. e1*72/245*95/54*3755*00 consisting of: 8 halogen lamps 220 mm, mounted on an aluminium frame with slip-on device, and 3 m connecting cable with battery clips	129 36-152

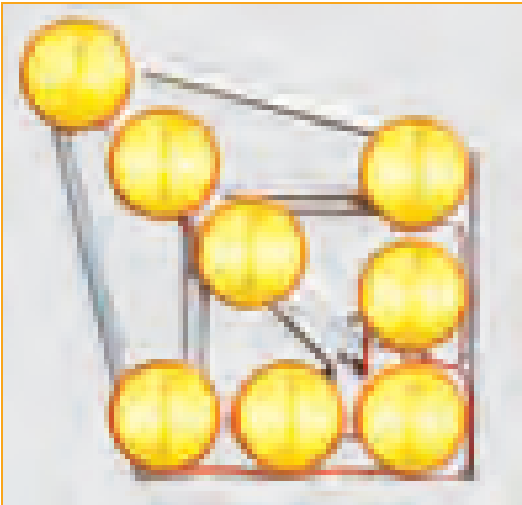
Accessories and Spare parts	Ref. No.
Bracket for mounting on tubes with adjustment device, 5 positions	329 360-1

### Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	140 hrs
With rechargeable battery 12 V, 230 Ah	180 hrs

### Technical data

Light colour	yellow
Max. light intensity	2200 cd
Eff. light intensity	1500 cd
Aver. power consumption day at 12 V	1,8 A
Aver. power consumption night at 12 V	0,2 A
Weight	13 g
Dimensions (LxWxH)	30 x 900 x 240 mm



Light Arrow LP 8/S LED

# Light Arrow LP 15/1 Halogen



tested according to German Standards

- Lamp class L8H according to EN 12352
- Light arrow device mounted on a high-grade steel frame, 8 lamps at a time are forming an arrow
- With light cross for use on hard shoulders
- Lens diameter 200 mm
- Continuous brightness adaptation
- Optionally available with 2-fold warning light system 340 mm
- Also available with motor-driven lifting/lowering device
- With cable remote control
- Examples of application (depending on country-specific regulations)
  - on service and maintenance vehicles
  - on gritting vehicles
  - on office vehicles
  - on warning trailers
  - in roof frame "Pamir"



Light Arrow LP 15/1 Halogen

Light Arrow LP 15/1 Halogen	Ref. No.
Halogen Light Arrow Type LP 15/1 L8H, 12/24 V EC type approval no. e1*72/245*95/54*3756*00 with roof frame and lifting/lowering device incl. cable remote control	129 478-
Halogen Light Arrow Type LP 15/1 L8H, 12/24 V EC type approval no. e1*72/245*95/54*3756*00 with cable remote control without roof frame and lifting/lowering device	129 478-28
Halogen Light Arrow Type LP 15/1 L8H, 12/24 V with twofold light warning unit Multi-Light 340 LED Flash L9M EC type approval no. e1*72/245*95/54*3756*00 with roof frame and lifting/lowering device incl. cable remote control	129 478-27
Halogen Light Arrow Type LP 15/1 L8H, 12/24 V with twofold warning light system Multi-Light 340 LED Flash L9M EC type approval no. e1*72/245*95/54*3756*00 with cable remote control without roof frame and lifting/lowering device	129 478-30

Accessories and Spare parts	Ref. No.
Halogen bulb type 026, 12 V / 20 W	090 234

## Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	30 hrs
With rechargeable battery 12 V, 230 Ah	37 hrs

## Technical data

Light colour	yellow
Max. light intensity	2750 cd
Eff. light intensity	2500 cd
Aver. power consumption day at 12 V	6,7 A
Aver. power consumption night at 12 V	3,3 A
Weight	with roof frame 50 kg
Dimensions (LxWxH)	00 x 1120 x 370 mm



LP 15/1 with Twofold Warning S.



LP 15/1 remote control



# Light Arrow LP 15/S LED



tested according to German Standards and EN 12352

- Lamp class L8H according to EN 12352
- Light arrow device mounted on a high-grade steel frame, 8 lamps at a time are forming an arrow
- With light cross for use on hard shoulders
- Lens diameter 220 mm
- Continuous brightness adaptation
- Optionally available with 2-fold warning light system 340 mm
- Also available with motor-driven lifting/lowering device
- With cable remote control
  
- Examples of application (depending on country-specific regulations)
  - on service and maintenance vehicles
  - on gritting vehicles
  - on office vehicles
  - on warning trailers
  - in roof frame "Pamir"



Light Arrow LP 15/S LED

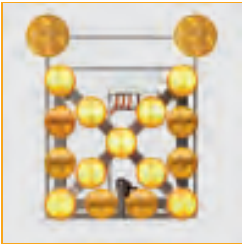
Light Arrow LP 15/S LED	Ref. No.
LED Light Arrow Type LP 15/S L8H, 12/24 V EC type approval no. e1*72/245*95/54*3756*00 with roof frame and lifting/lowering device consisting of: 1 roof frame made of high-grade steel with with motor-operated lifting and lowering device (without roof rack) incl. cable remote control 15 LED lamps 220 mm mounted on a frame	129 47862
LED Light Arrow Type LP 15/S L8H, 12/24 V EC type approval no. e1*72/245*95/54*3756*00 with cable remote control without roof frame and lifting/lowering device	129 478-71
LED Light Arrow Type LP 15/S L8H, 12/24 V with twofold warning light system Multi-Light 340 LED L9H EC type approval no. e1*72/245*95/54*3756*00 with roof frame and lifting/lowering device incl. cable remote control	129 478-266
LED Light Arrow Type LP 15/S L8H, 12/24 V with twofold warning light system Multi-Light 340 LED L9H EC type approval no. e1*72/245*95/54*3756*00 with cable remote control without roof frame and lifting/lowering device	129 478-269

### Operating time with one set of batteries

With rechargeable battery 12 V, 180 Ah	140 hrs
With rechargeable battery 12 V, 230 Ah	180 hrs

### Technical data

Light colour	yellow
Max. light intensity	2200 cd
Eff. light intensity	1500 cd
Aver. power consumption day at 12 V	1,8 A
Aver. power consumption night at 12 V	0,2 A
Weight	with roof frame 50 kg
Dimensions (LxWxH)	00 x 1120 x 370 mm

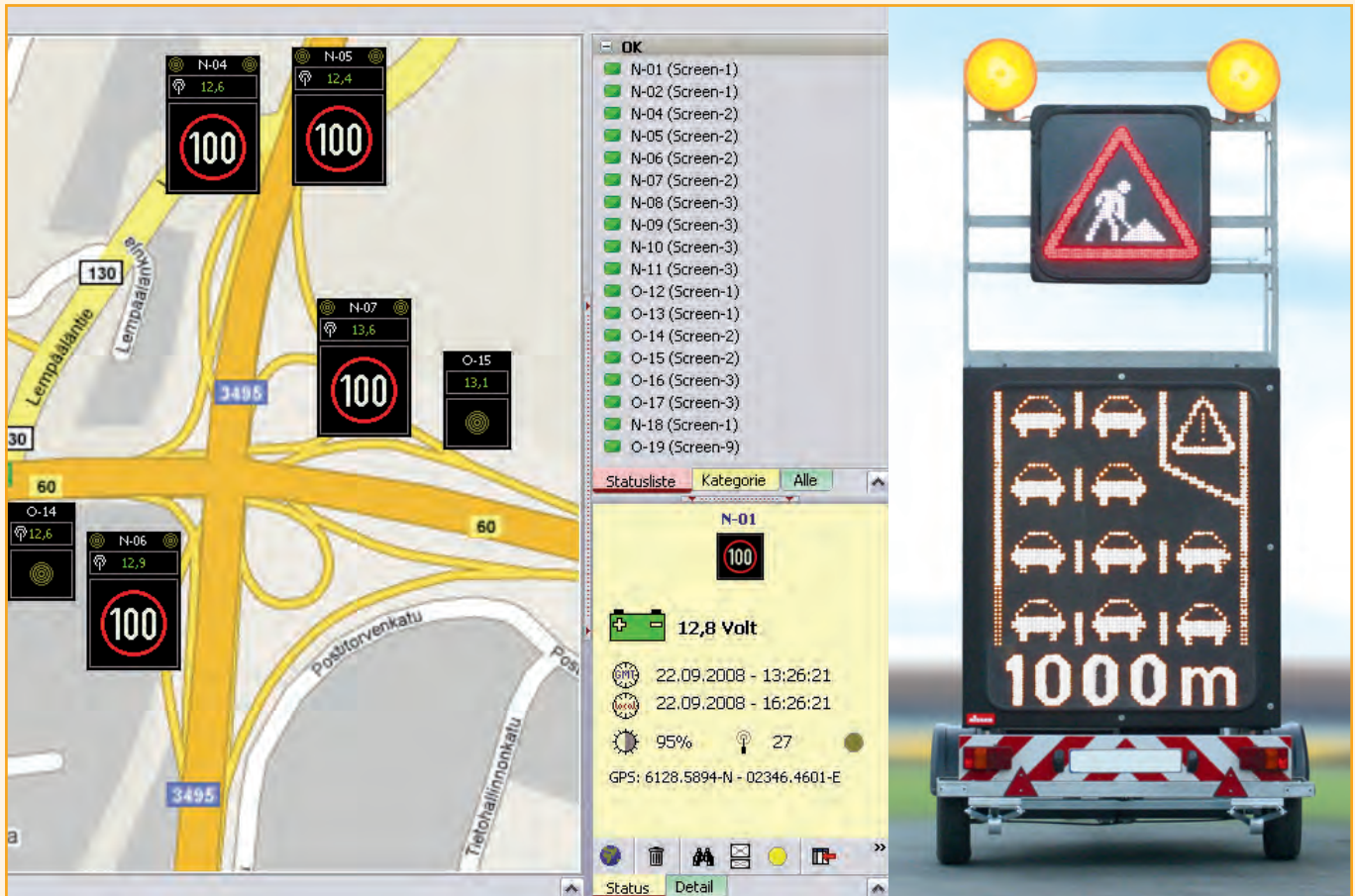


LP 15/S with Twofold Warning S.



LP 15/S remote control

# Nissen Navigation System



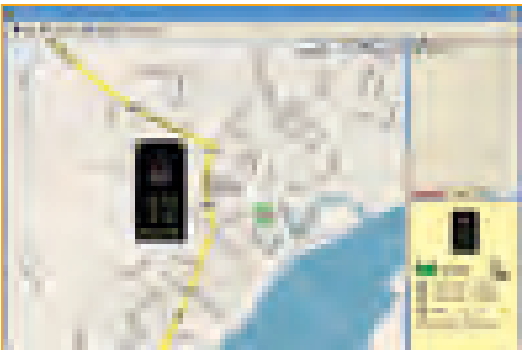
For location-independent control and monitoring of e.g. LED variable message signs and warning trailers

# NiNa Nissen Navigation System

## NiNa Nissen Navigation System



- Data transfer based on servers and internet connection by GPRS
- Control by special software NiNa Center and NiNa Connect
- Connection with third-party software by NiNa Connect, data transfer to external traffic guidance centers and navigation systems possible
- Control of up to 9999 variable message signs possible
- Automatic update of data, time or event controlled
- Visual display of symbols as well as numerous additional information (e.g. voltage indication, brightness etc.) at the basic station
- Complete recording of all processes
- Data archiving by integrated black box
- Localisation by GPS sensor with display on actual internet based card material and tracking, therefore monitoring without installation possible
- Storage of the positions of the warning boards
- Fault indication as SMS to a mobile phone or by email possible



Screen display NiNa Connect

Please call us, we will be glad to advise you.

NiNa Nissen Navigation System	Ref. No.
Software NiNa Connect for the control and monitoring of mobile LED variable message signs, warning trailers etc.	295 502-1



**Mobile queue warning system e.g. for use at short-term resp. short time constructional measures at roads or during events**



# NiNa Traffic Queue Warning System

## NiNa Traffic Queue Warning System



- Mobile use, easy activation
- Up to 4 detectors possible
- Quick mounting, also on existing poles
- Little space requirement in vehicles
- Low power consumption
- Optional with external power supply by solar panels
- Two-stage traffic data acquisition (queue pre-warning and queue warning)
- Low costs - no earthworks for cable laying, no intervention into the road surface

Please call us, we will be glad to advise you.

NiNa Traffic Queue Warning System	Ref. No.
Traffic Jam Sensor NiNa Guard with control unit, rechargeable battery and bracket for mounting on tubes (without solar panel)	142 01-1

Accessories and Spare parts	Ref. No.
Solar panel on a frame, with solar controller and mounting material Dimensions: 1235 x 641 x 241 mm Weight: 21 kg	156 900-01



NiNa Traffic Queue Warning System



Illustration example



Solar panel

## Advance Warning Trailers with LED Variable Message Signs



- To be used on all roads and motorways
- Suitable for pre-warning, traffic guidance, parking guidance systems and during events
- For use with NiNa Nissen Navigation System

# Advance Warning Trailers with LED Variable Message Signs

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## Advance LED Warning Trailers



- Available in different versions
- As VLT EcoLine<sup>SMD</sup> in a standard configuration for normal purposes
- As VLT BasicLine<sup>SMD</sup> in a standard configuration for advanced purposes
- As VLT ProLine<sup>SMD</sup>, version as well as programming of the variable message signs are freely configurable
- Each LED can be selected individually
- Available with remote control cable or radio/cable
- Different chassis available
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the variable message signs as well as the trailer itself
  - NiNa Traffic Queue Warning System
  - Power supply by solar panel
  - Fuel cell system

We offer a wide range of variable message signs and combinations.  
Please call us, we will be glad to advise you.



Advance Warning Trailers VLT ProLine SMD

Advance LED Warning Trailers	Ref. No.
Advance Warning Trailer VLT EcoLine <sup>SMD</sup> with LED variable message signs	129 263-x
Advance Warning Trailer VLT BasicLine <sup>SMD</sup> with LED variable message signs	129 264-x
Advance Warning Trailer VLT ProLine <sup>SMD</sup> with LED variable message signs	129 265-x





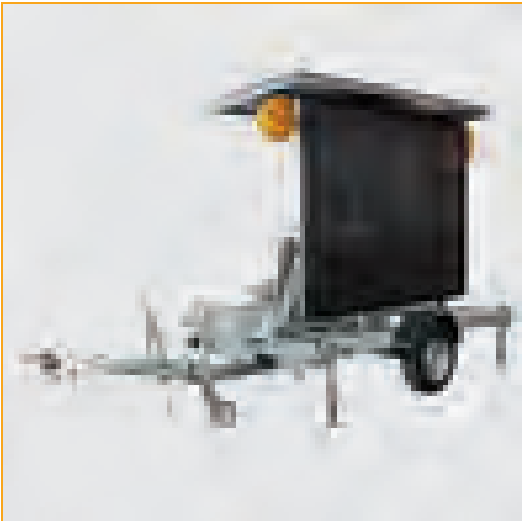
# Mobile LED Information Board



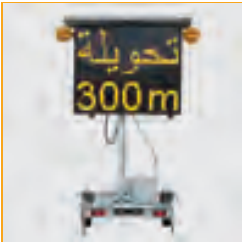
- Available in different versions
- As VMS EcoLine<sup>SMD</sup> for simple display of text
- As VMS ProLine<sup>SMD</sup> for detailed, configurable display of texts
- Available with remote control cable, radio or radio/cable
- Different chassis available
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the text message sign
  - NiNa Traffic Queue Warning System
  - Power supply by solar panel
  - Fuel cell system

We offer a wide range of variable message signs and combinations.  
Please call us, we will be glad to advise you.

Mobile LED Information Board	Ref. No.
Advance Warning Trailer VMS EcoLine <sup>SMD</sup> with LED text display	129 268-x
Advance Warning Trailer VMS ProLine <sup>SMD</sup> with LED text display	129 269-x



Example Mobile LED Information Board



## Advance LED Overhead Warning Trailer "Pharos"



Total height ca. 7 m

- Mobile three tier VMS system for long distance advanced warning
- For use on roads and motorways with high truck volume
- Also suitable for use at all kinds of events
- Top sign highly visible for car drivers, also over trucks
- Quick and easy to deploy on nearly every surface due to 4 hydraulic supports with automatic level regulation
- Variable message signs available in 2 or 4 colour as well as MultiSign<sup>SMD</sup> LED technique
- Wide choice of symbols and texts, suitable for all purposes
- Wide light emitting angle and anti-glare screen
- Good visibility of all signs from nearly every viewing angle also at bright daylight
- Each LED can be selected individually
- Photometric values tested according to European Standard EN 12966
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the variable message signs as well as the trailer itself
  - NiNa Traffic Queue Warning System
  - Power supply by solar panel
  - Fuel cell system

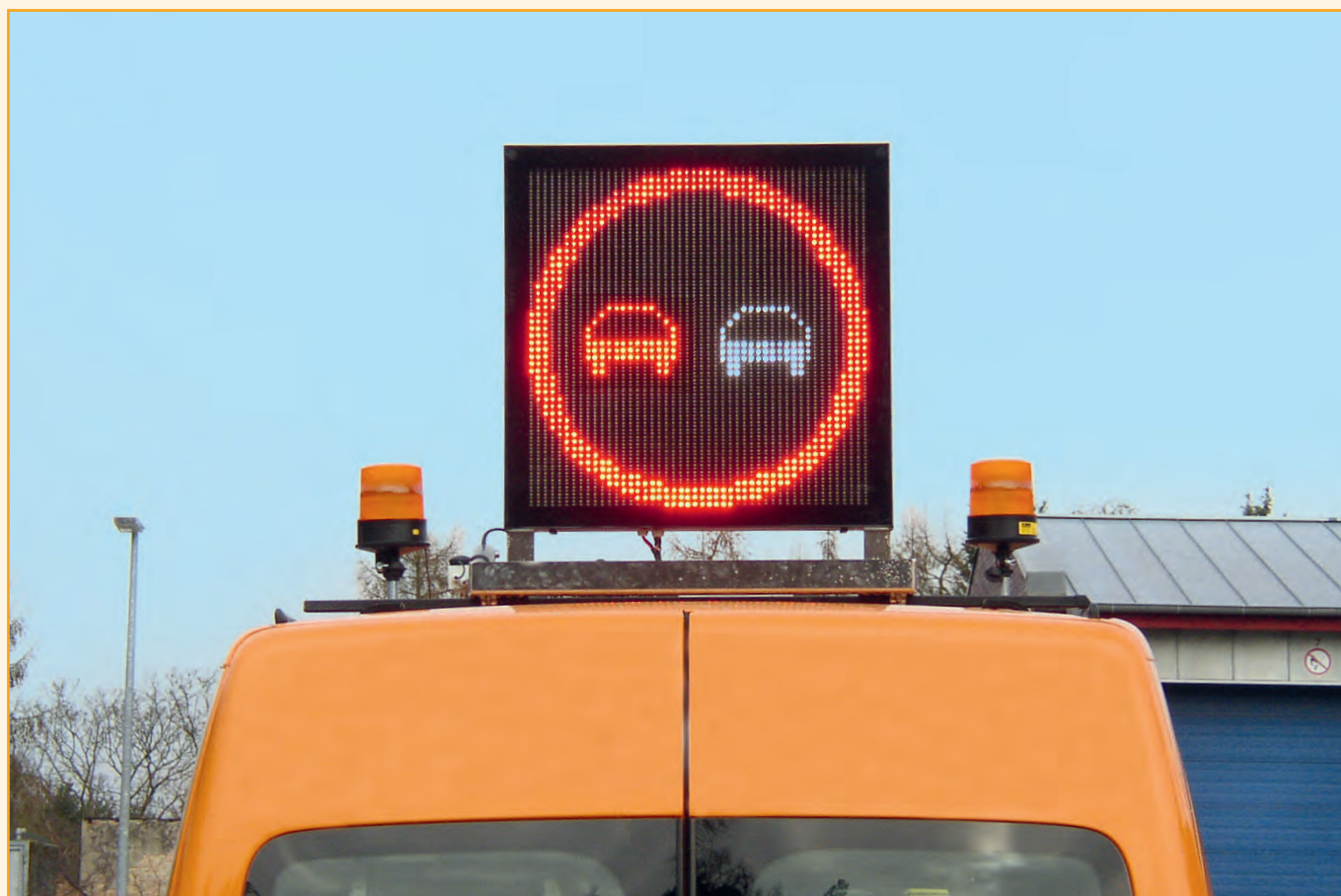
We offer a wide range of variable message signs and combinations.  
Please call us, we will be glad to advise you.

Advance LED Overhead Warning Trailer "Pharos"	Ref. No.
Advance LED Overhead Warning Trailer "Pharos" (without variable message signs)	129 870-x



Adv. LED Overhead Warning Trailer "Pharos"

## Mobile LED Variable Message Signs



### Portable LED Variable Message Signs

- To be used on all roads and motorways
- Suitable e.g. for speed indication, pre-warning, traffic guidance, and during events
- For use with NiNa Nissen Navigation System

### LED Variable Message Signs for mounting on roofs (WeNiPol II)

- To be used e.g. on office and operational vehicles as well as service and maintenance vehicles
- Suitable e.g. for speed indication, pre-warning and traffic guidance

# Mobile LED Variable Message Signs

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## Portable LED Variable Message Signs



- Available in different versions
- As SpeedSign<sup>SMD</sup> 750 with the signs 60/80/100
- As SpeedSign<sup>SMD</sup> with all speed indications from 5 - 130 km/h
- As MultiSign BasicLine<sup>SMD</sup> 750 with 23 defined symbols in 2 colour technique
- As freely configurable MultiSign ProLine<sup>SMD</sup> 750 in 1 colour, 2 colour and 3 colour technique
- Wide light emitting angle and anti-glare screen
- Good visibility of all signs from nearly every viewing angle also at bright daylight
- Each LED can be selected individually
- Low weight because of aluminium frame, seawater-resistant
- Saves up to 40% energy on conventional technique by light emitting diodes in SMD technique
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the variable message sign
  - NiNa Traffic Queue Warning System
  - Speed sensor
  - Power supply by solar panel
  - Fuel cell system

We offer a wide range of variable message signs.  
Please call us, we will be glad to advise you.



Portable LED Variable Message Sign



Portable LED Variable Message Signs	Ref. No.
Portable LED Variable Message Sign SpeedSign <sup>SMD</sup> 750 60/80/100, red/white, 12 V	229 219-161
Portable LED Variable Message Sign SpeedSign <sup>SMD</sup> 750 red/white (5-130), 12 V	229 282-1
Portable LED Variable Message Sign SpeedSign <sup>SMD</sup> 750 red/yellow (5-130), 12 V	229 282-2
Portable LED Variable Message Sign MultiSign BasicLine <sup>SMD</sup> 750 red/white, 23 symbols, 10-30 V	229 280-11
Portable LED Variable Message Sign MultiSign ProLine <sup>SMD</sup> 750 red/white partly assembled, 10-30 V	229 280-13
Portable LED Variable Message Sign MultiSign ProLine <sup>SMD</sup> 750 red partly assembled, white fully assembled, 10-30 V	229 280-14
Portable LED Variable Message Sign MultiSign ProLine <sup>SMD</sup> 750 red partly assembled, yellow fully assembled, 10-30 V	229 280-15
Portable LED Variable Message Sign MultiSign ProLine <sup>SMD</sup> 750 red/white/yellow partly assembled, 10-30 V	229 280-16
Portable LED Variable Message Sign MultiSign ProLine <sup>SMD</sup> 750 red/white partly assembled, yellow fully assembled, 10-30 V	229 280-17
Portable LED Variable Message Sign MultiSign ProLine <sup>SMD</sup> 750 red/white fully assembled, 10-30 V	229 280-2
Portable LED Variable Message Sign MultiSign ProLine <sup>SMD</sup> 750 red/white/yellow fully assembled, 10-30 V	229 280-3

### Technical data

Dimensions (LxWxH)	without additional parts 870 x 870 x 70 mm
Weight	18 kg

## LED Information Board

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- Photometric values tested according to EN 12966
- For mobile or stationary use
- Various possibilities of mounting, e.g. tubular poles or cranes
- Available in 2- or 4 colour technique
- Free programming of texts and symbols
- Each LED can be selected individually
- Good visibility at daylight
- Long lifetime of the LED
- Continuous automatic or manual day/night adaptation
- Very long operating times with rechargeable batteries, due to optimised power supply of the LED
- Available with remote control cable or radio/cable
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the variable message sign
  - NiNa Traffic Queue Warning System
  - Power supply by solar panel
  - Fuel cell system
- Other versions on request

We offer a wide range of variable message signs.  
Please call us, we will be glad to advise you.



LED Information Board	Ref. No.
LED Information Board in two-colour-technique, freely programmable display of up to 250 texts/symbols, 24 V	229 243-1
LED Information Board in four-colour-technique, freely programmable display of up to 250 texts/symbols, 24 V	229 255-4

## LED Variable Message Sign WeNiPol II

for mounting on vehicles

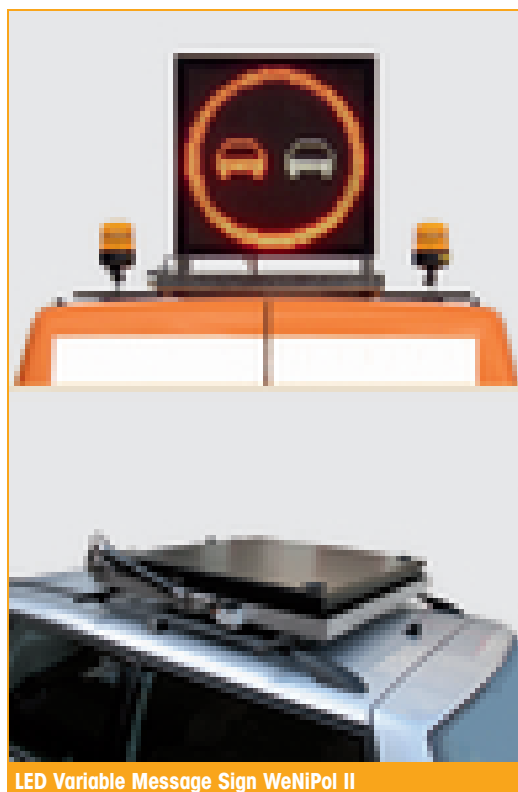
- Indication of all current traffic signs, lane change symbols and texts, also dynamic
- Assembly of the WeNiPol II ProLine with up to four colours possible
- Possibility of indicating a text blinking or alternating with symbols
- Also available with integrated yellow or blue LED advance warning lamps
- High daytime visibility of all signs, texts and symbols due to anti-glare screen, no phantom light
- Stainless steel frame with central motor-driven lifting/lowering device (protected design)
- Window protected when sign is lowered
- Maximum speed in lifted position up to 80 km/h, in lowered position up to 160 km/h
- Optional with GPS speed sensor for automatic lowering when the maximum speed is exceeded
- Remote control with LCD display for cable or radio/cable operation

We offer a wide range of variable message signs and combinations.

Please call us, we will be glad to advise you.

LED Variable Message Sign WeNiPol II	Ref. No.
WeNiPol II BasicLine 12/24 V, red/white consisting of: LED board in a high-grade steel frame with 23 firmly programmed traffic symbols and freely programmable texts	129 503-11
WeNiPol II ProLine (ZTS), 12/24 V, red/white	129 503-2
WeNiPol II ProLine 12/24 V, red/yellow	129 503-12
Both WeNiPol II ProLine consisting of: LED board in a high-grade steel frame with up to 250 firmly programmed traffic signs, symbols and texts in static and dynamic version	

Accessories and Spare parts	Ref. No.
Software and accessories for free programming of the variable message sign WeNiPol II ZTS	129 501-81
Programmer	036 520-1
GPS speed sensor	229 484-2



LED Variable Message Sign WeNiPol II



WeNiPol II BasicLine symbols



Remote control Basic-Remote



Remote control Pro-Remote



## Roof Frame for Service Vehicles „Pamir“



- To be used on office and service vehicles
- Suitable e.g. for speed indication, pre-warning and traffic guidance



# Roof Frame for Service Vehicles "Pamir"

## Roof Frame for Service Vehicles "Pamir"

- Housing made of GRP (glass fibre reinforced plastic) with LED textmatrix 9 or 10 segments
- With continuous brightness adaptation
- For the use with light arrows LP 15/, LP 23 and LED variable message sign WeNiPol II
- With cable remote control
- With motor-driven lifting/lowering device
- Other versions on request
  
- Examples of application
  - on service and maintenance vehicles
  - on office vehicles
  - for speed limitation
  - for pre-warning
  - for traffic guidance

Roof Frame for Service Vehicles "Pamir"	Ref. No.
Roof Frame for Service Vehicles, 9 segments with small light arrow LP 15/1 Dimensions: 1995 x 1742 x 390 mm	129 48-12
Roof Frame for Service Vehicles, 9 segments with light arrow LP 23 Dimensions: 2360 x 1742 x 390 mm	129 48802
Roof Frame for Service Vehicles, variable textmatrix with LED variable message sign WeNiPol II Dimensions: 1995 x 1742 x 390 mm	129 48-101



"Pamir" with 9 seg. and light arrow LP 23



"Pamir" with 9 seg. and LP 15/1



"Pamir" side view lowered

## Warning Trailers according to German Standards



### Warning trailer type A

- To be used on all dual carriage ways and motorways
- For use with Nissen Navigation System NiNa

### Warning trailer type B

- To be used on all major and country roads
- For use with Nissen Navigation System NiNa

# Warning Trailers for motorways and dual carriageways according to German Standards

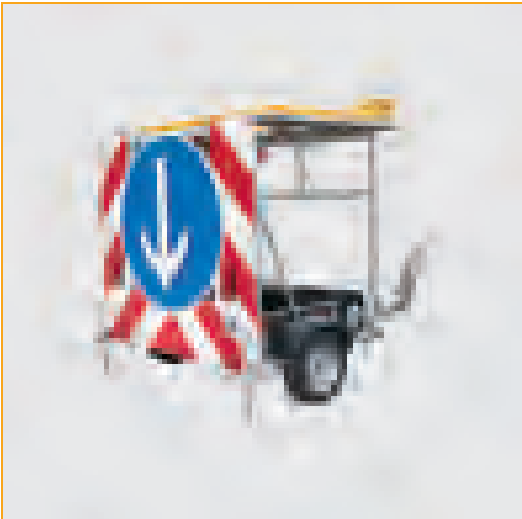
RSA

## Warning Trailer Type A 1/L

according to German Standards



- For use on motorways and dual carriageways
- Solid T-chassis with vehicle frame made of rectangular steel tube
- Hot-galvanized drawbar with towing eye, height adjustable
- Rubber spring axle, braked
- Crankable nose-wheel
- Two drop-type supports at the rear
- Wheels 195/65 R 15 or similar
- Loading area and side boards made of waterproof silkscreen plates, with additional plastic box for rechargeable batteries
- Stable warning board, 3600 x 2200 mm, with retro-reflecting foil
- Upper warning board liftable with gas spring support, also available with hydraulic or electric motor
- Lower warning board with turnable traffic sign "arrow", 1500mm Ø, including possibility of sight for monitoring the rear traffic
- Protection against wind load when the upper board is lifted
- Completely hot-galvanized
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the light warning system as well as the trailer itself
  - Power supply by solar panel
  - Fuel cell system



Warning Trailer Type A 1/L



Warning Trailer Type A 1/L	Ref. No.
Warning Trailer Type A 1/L, without light arrow combination	129 76-001

### Technical data

Total weight	750 to 1300 kg
Empty weight	650 kg
Load capacity	100d 550 kg
Loading area	1000 x 30 mm
Total length	3800 mm
Total width	2200 mm
Track width	2000 mm
Brake	parking brake for 750 kg
Empty	overrun brake above 750 kg

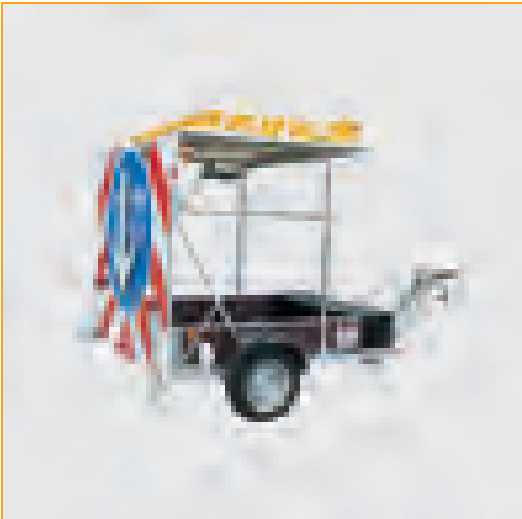
## Warning Trailer Type A 2/L



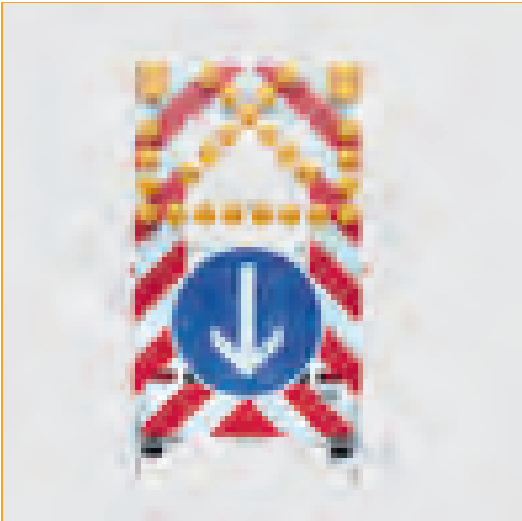
according to German Standards



- For use on motorways and dual carriageways
- Solid T-chassis with vehicle frame made of rectangular steel tube
- Hot-galvanized drawbar with towing eye, height adjustable, with overrun brake
- Rubber spring axle, braked
- Crankable nose-wheel
- Two drop-type supports at the rear
- Wheels 195/65 R 15 or similar
- Loading area and side boards made of waterproof silkscreen plates, with additional plastic box for rechargeable batteries
- Stable warning board, 3600 x 2200 mm, with retro-reflecting foil
- Upper warning board liftable with gas spring support, also available with hydraulic or electric motor
- Lower warning board with turnable traffic sign "arrow", 1500mm Ø, including possibility of sight for monitoring the rear traffic
- Protection against wind load when the upper board is lifted
- Completely hot-galvanized
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the light warning system as well as the trailer itself
  - Power supply by solar panel
  - Fuel cell system



Warning Trailer Type A 2/L



Warning Trailer Type A 2/L	Ref. No.
Warning Trailer Type A 2/L, without light arrow combination	129 76-002

### Technical data

Total weight	1200 500 kg
Empty weight	700 kg
Load capacity	up to 800 kg
Loading area	1820 x 630 mm
Total length	4650 mm
Total width	2200 mm
Track width	2000 mm
Brake	overrun brake

# Warning Trailer Type A 3/L

according to German Standards

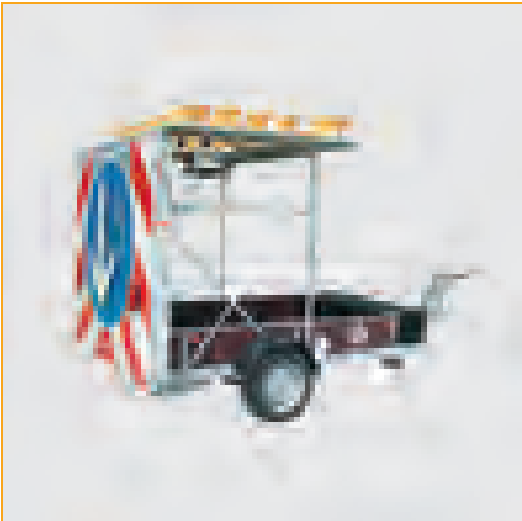


- For use on motorways and dual carriageways
- Solid T-chassis with vehicle frame made of rectangular steel tube
- Hot-galvanized drawbar with towing eye, height adjustable, with overrun brake
- Rubber spring axle, braked
- Crankable nose-wheel
- Two crank supports at the rear
- Wheels 195/65 R 15 or similar
- Loading area and side boards made of waterproof silkscreen plates, with additional plastic box for rechargeable batteries
- Stable warning board, 3600 x 2200 mm, with retro-reflecting foil
- Upper warning board liftable with gas spring support, also available with hydraulic or electric motor
- Lower warning board with turnable traffic sign "arrow", 1500mm Ø, including possibility of sight for monitoring the rear traffic
- Lower board can be folded down in full width with gas spring support for use as loading ramp, passage width 1630 mm
- Protection against wind load when the upper board is lifted
- Completely hot-galvanized
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the light warning system as well as the trailer itself
  - Power supply by solar panel
  - Fuel cell system

Warning Trailer Type A 3/L	Ref. No.
Warning Trailer Type A 3/L, without light arrow combination	129 76-003

## Technical data

Total weight	1200 500 kg
Empty weight	800 kg
Load capacity	up to 700 kg
Loading area	2450 x 830 mm
Total length	5200 mm
Total width	2200 mm
Track width	2000 mm
Brake	overrun brake



Warning Trailer Type A 3/L

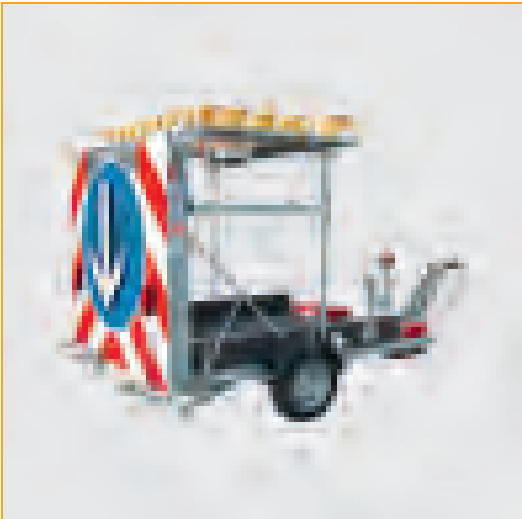


# Warning Trailer Type A 31 /L

according to German Standards



- For use on motorways and dual carriageways
- Solid T-chassis with vehicle frame made of rectangular steel tube
- Hot-galvanized drawbar with towing eye, height adjustable, with overrun brake
- Rubber spring axle, braked
- Crankable nose-wheel
- Two crank supports at the rear
- Wheels 195/65 R 15 or similar
- Loading area and side boards made of waterproof silkscreen plates, with additional plastic box for rechargeable batteries, optional with two separately recessable battery resp. storage boxes
- Stable warning board, 3600 x 2200 mm, with retro-reflecting foil
- Upper warning board liftable with gas spring support, also available with hydraulic or electric motor
- Lower warning board with turnable traffic sign "arrow", 1500mm Ø, including possibility of sight for monitoring the rear traffic
- Lower board can be folded down in full width with gas spring support for use as loading ramp, passage width 1830 mm
- Possibility of transporting advance warning boards
- Protection against wind load when the upper board is lifted
- Completely hot-galvanized
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the light warning system as well as the trailer itself
  - Power supply by solar panel
  - Fuel cell system



Warning Trailer Type A 31 /L



Warning Trailer Type A 31/L	Ref. No.
Warning Trailer Type A 31/L, without light arrow combination	129 76-031

## Technical data

Total weight	1200 500 kg
Empty weight	820 kg
Load capacity	up to 680 kg
Loading area	2400 x 830 mm
Total length	5200 mm
Total width	2430 mm
Track width	2200 mm
Brake	overrun brake

# Warning Trailer Type A 4/L

according to German Standards



- For use on motorways and dual carriageways
- Tandem version
- Solid T-chassis with vehicle frame made of rectangular steel tube
- Hot-galvanized drawbar with towing eye, height adjustable, with overrun brake
- Rubber spring axle, braked
- Crankable nose-wheel
- Two crank supports at the rear
- Wheels 195/65 R 15 or similar
- Loading area and side boards made of waterproof silkscreen plates, with additional plastic box for rechargeable batteries
- Stable warning board, 3600 x 2200 mm, with retro-reflecting foil
- Upper warning board liftable with gas spring support, also available with hydraulic or electric motor
- Lower warning board with turnable traffic sign "arrow", 1500mm Ø, including possibility of sight for monitoring the rear traffic
- Lower board can be folded down in full width with gas spring support for use as loading ramp, passage width 1630 mm
- Protection against wind load when the upper board is lifted
- Completely hot-galvanized
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the light warning system as well as the trailer itself
  - Power supply by solar panel
  - Fuel cell system

Warning Trailer Type A 4/L	Ref. No.
Warning Trailer Type A 4/L, without light arrow combination	129 76-004

## Technical data

Total weight	2000 - 2500 kg
Empty weight	00 kg
Load capacity	up to 1400 kg
Loading area	3500 x 830 mm
Total length	6800 mm
Total width	2200 mm
Track width	2000 mm
Brake	overrun brake



Warning Trailer Type A 4/L





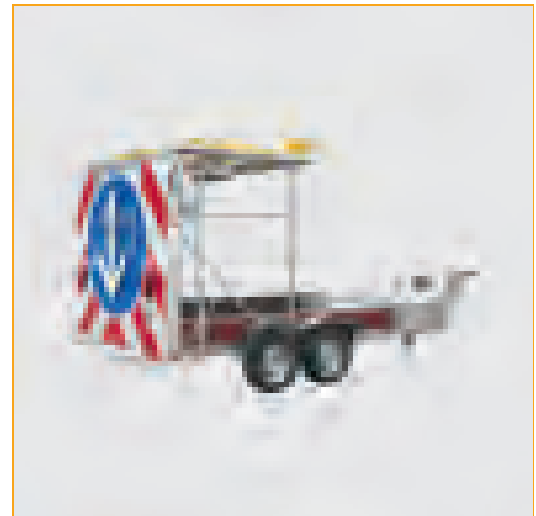
## Warning Trailer Type A 41/L

RSA

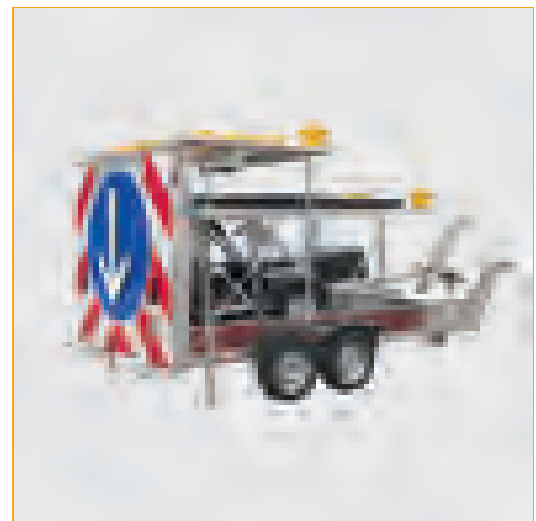
according to German Standards



- For use on motorways and dual carriageways
- Solid T-chassis with vehicle frame made of rectangular steel tube
- Hot-galvanized drawbar with towing eye, height adjustable, with overrun brake
- Rubber spring axle, braked
- Crankable nose-wheel
- Two crank supports at the rear
- Wheels 195/65 R 15 or similar
- Loading area and side boards made of waterproof silkscreen plates, with additional plastic box for rechargeable batteries, optional with two separate battery resp. storage boxes
- Stable warning board, 3600 x 2200 mm, with retro-reflecting foil
- Upper warning board liftable with gas spring support, also available with hydraulic or electric motor
- Lower warning board with turnable traffic sign "arrow", 1500mm Ø, including possibility of sight for monitoring the rear traffic
- Lower board can be folded down in full width with gas spring support for use as loading ramp, passage width 1830 mm
- Suitable for transport of advance warning boards
- Protection against wind load when the upper board is lifted
- Completely hot-galvanized
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the light warning system as well as the trailer itself
  - Power supply by solar panel
  - Fuel cell system



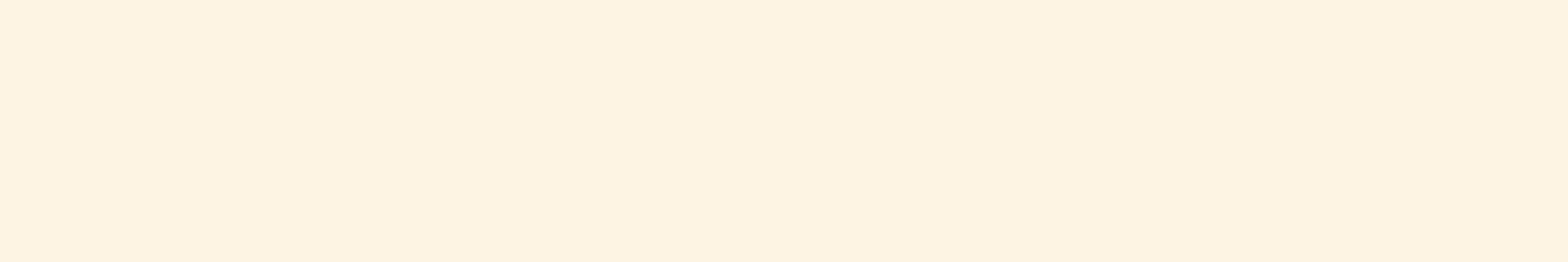
Warning Trailer Type A 41/L



Warning Trailer Type A 41/L	Ref. No.
Warning Trailer Type A 41/L, without light arrow combination	129 76-041

### Technical data

Total weight	2000 - 2500 kg
Empty weight	50 kg
Load capacity	up to 1350 kg
Loading area	3050 x 830 mm
Total length	6800 mm
Total width	2430 mm
Track width	2200 mm
Brake	overrun brake



# Light Arrow Combination Type 7000 / Type 7000 LED



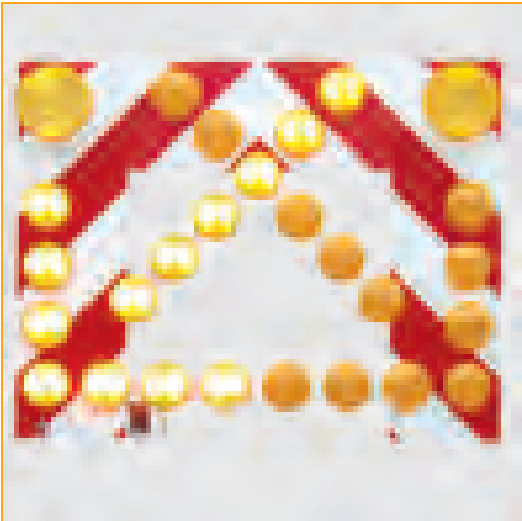
## Light Arrow Combination Type 7000 / Type 7000 LED



tested according to German Standards and EN 12352

- Tested according to German and European Standards
- All light arrow combinations type 7000 contain a remote control and a motor operated arrow adjustment with white arrow
- Automatic, continuous brightness adaptation
- Each lamp is monitored individually
- Lenses made of high impact, weatherproof and colour-fast material
- High-quality, microprocessor controlled electronic
- Optional with radio/cable remote control
- Easy to service

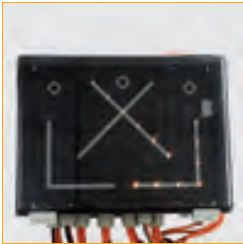
Light Arrow Combination Type 7000 / Type 7000 LED	Ref. No.
Light Arrow Combination Type 7000 B with 25 light arrow lamps halogen and 2 xenon flash lamps	129 400-
Light Arrow Combination Type 7000 B, radio operation with 25 light arrow lamps halogen and 2 xenon flash lamps	129 400-1
Light Arrow Combination Type 7000 B with 25 light arrow lamps Multi-Light LED and 2 xenon flash lamps	129 400-3
Light Arrow Combination Type 7000 B, radio operation with 25 light arrow lamps Multi-Light LED and 2 xenon flash lamps	129 400-3
Light Arrow Combination Type 7000 L with 25 light arrow lamps Multi-Light 200 LED and 2 lamps Multi-Light 340 LED	129 403-3
Light Arrow Combination Type 7000 L, radio operation with 25 light arrow lamps Multi-Light 200 LED and 2 lamps Multi-Light 340 LED	129 403-3



Light Arrow C. Type 7000 / Type 7000 LED



Remote control



Control system

# Warning Trailers for main and country roads according to German Standards



## Warning Trailer Type B 1

according to German Standards



- For use on major and country roads
- Solid T-chassis with vehicle frame made of rectangular steel tube
- Hot-galvanized drawbar with towing eye, height-adjustable up to 950 mm
- Rubber spring axle, braked
- Two drop-type supports at the rear
- Wheels 155 R 13 or similar
- Stable warning board, 2500 x 1700 mm, with retro-reflecting foil
- Traffic sign "arrow" with electromotive arrow setting unit
- Plastic box for rechargeable batteries 12 V up to 230 Ah and charger, 750 x 350 mm, with lockable lid
- Protection against wind load when the upper board is lifted
- Completely hot-galvanized
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the light warning system as well as the trailer itself
  - Power supply by solar panel
  - Fuel cell system



Warning Trailer Type B 1



Warning Trailer Type B 1	Ref. No.
Warning Trailer Type B 1, without light warning system - Without loading area	129 700-00

### Technical data

Total weight	750 kg
Empty weight	350 kg
Total length	4200 mm
Total width	1700 mm
Track width	1400 mm
Brake	parking brake

# Warning Trailer Type B 2

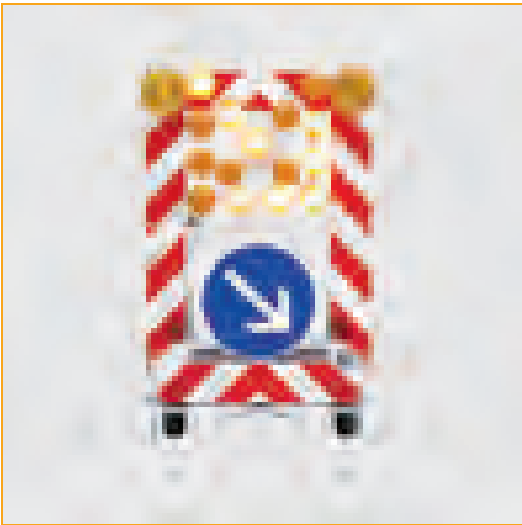
according to German Standards



- For use on major and country roads
- Solid T-chassis with vehicle frame made of rectangular steel tube
- Hot-galvanized drawbar with towing eye, height-adjustable up to 950 mm
- Rubber spring axle, braked
- Two drop-type supports at the rear
- Wheels 155 R 13 or similar
- With loading area made of waterproof silkscreen plates, with additional plastic box for rechargeable batteries
- Stable warning board, 2500 x 1700 mm, with retro-reflecting foil
- Traffic sign "arrow" with electromotive arrow setting unit
- Protection against wind load when the upper board is lifted
- Completely hot-galvanized
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the light warning system as well as the trailer itself
  - Power supply by solar panel
  - Fuel cell system



Warning Trailer Type B 2



Warning Trailer Type B 2	Ref. No.
Warning Trailer Type B 2, without light warning system	129 700-002
- With loading area made of waterproof silk-screen plates	

## Technical data

Total weight	750 up to 1000 kg
Empty weight	400 kg
Load capacity	up to 600 kg
Loading area	1750 x 50 mm
Total length	4200 mm
Total width	1700 mm
Track width	1400 mm
Brake	parking brake for 750 kg
Empty	overrun brake above 750 kg

# Warning Trailer Type B 3

according to German Standards



- For use on major and country roads
- Solid T-chassis with vehicle frame made of rectangular steel tube
- Hot-galvanized drawbar with towing eye and overrun brake, height-adjustable up to 1100 mm
- Rubber spring axle with overrun brake
- Crankable nose-wheel
- Two drop-type supports at the rear
- Wheels 195/65 R or similar
- Stable warning board, 2500 x 1700 mm, with retro-reflecting foil
- Traffic sign "arrow" with electromotive arrow setting unit
- Upper warning board liftable with gas spring support
- Lower warning board can be used as loading ramp
- Loading area and side boards made of waterproof silkscreen plates, optionally made of aluminium
- Additional compartment 1500 x 450 x 300 mm for rechargeable batteries, with lockable aluminium lid
- Completely hot-galvanized
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the light warning system as well as the trailer itself
  - Power supply by solar panel
  - Fuel cell system

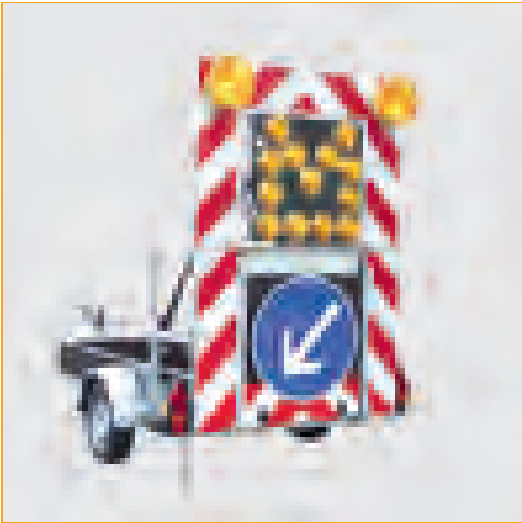
Warning Trailer Type B 3	Ref. No.
Warning Trailer Type B 3, without light warning system	129 700-003

## Technical data

Total weight	1300 500 kg
Empty weight	550 kg
Load capacity	up to 950 kg
Loading area	2550 x 800 mm
Total length	5200 mm
Total width	2100 mm
Track width	1900 mm
Brake	overrun brake



Warning Trailer Type B 3

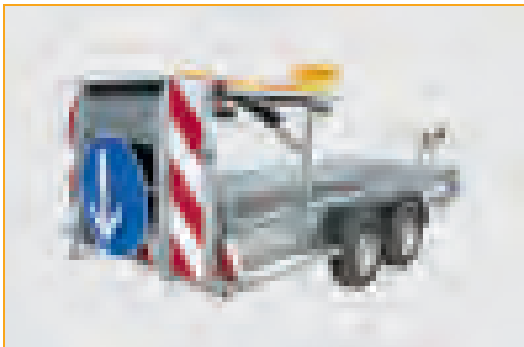


# Warning Trailer Type B 4

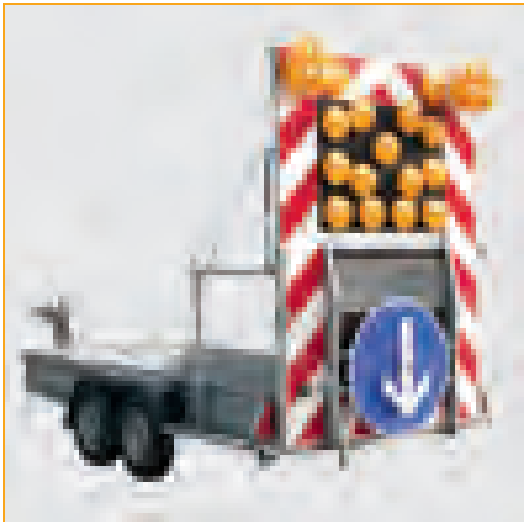
according to German Standards



- For use on major and country roads
- Tandem version
- Solid T-chassis with vehicle frame made of rectangular steel tube
- Hot-galvanized drawbar with towing eye and overrun brake, height-adjustable up to 1100 mm
- Rubber spring axle with overrun brake
- Crankable nose-wheel
- Two drop-type supports at the rear
- Wheels 195/65 R or similar
- Stable warning board, 2500 x 1700 mm, with retro-reflecting foil
- Traffic sign "arrow" with electromotive arrow setting unit
- Upper warning board liftable with gas spring support
- Lower warning board can be used as loading ramp
- Loading area and side boards made of waterproof silkscreen plates, optionally made of aluminium
- Additional compartment 1500 x 450 x 300 mm for rechargeable batteries, with lockable aluminium lid
- Completely hot-galvanized
- Optional with
  - NiNa Nissen Navigation System for controlling and monitoring the light warning system as well as the trailer itself
  - Power supply by solar panel
  - Fuel cell system



Warning Trailer Type B 4



Warning Trailer Type B 4	Ref. No.
Warning Trailer Type B 4, without light warning system - Tandem version	129 700-004

## Technical data

Total weight	2000 - 2500 kg
Empty weight	760 kg
Load capacity	up to 1740 kg
Loading area	3600 x 520 mm
Total length	6000 mm
Total width	2150 mm
Track width	1900 mm
Brake	overrun brake



# Advance Warning Trailer VLT according to German Standards



## Advance Warning Trailer VLT 1

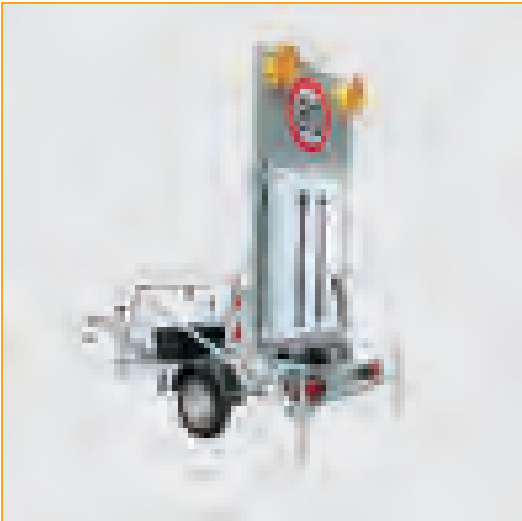
according to German Standards

- Solid T-chassis with vehicle frame made of rectangular steel tube
- Hot-galvanized drawbar with towing eye, height-adjustable up to 950 mm
- Rubber spring axle, braked
- Crankable nose-wheel
- Four drop-type supports
- Wheels 155 R 13 or similar
- Folding warning board with gas spring support, also available with hydraulic or electric motor
- With traffic sign "100 km/h", 750 mm Ø and 3-fold prism guide sign, 1250 x 1600 mm, with four rotating triangular posts for indicating different directional arrows
- Traffic signs with foil type 1, with safety signs
- With lockable plastic box for rechargeable batteries 12 V up to 230 Ah
- Completely hot-galvanized
- For transport on a warning trailer type A31/L or A 41/L

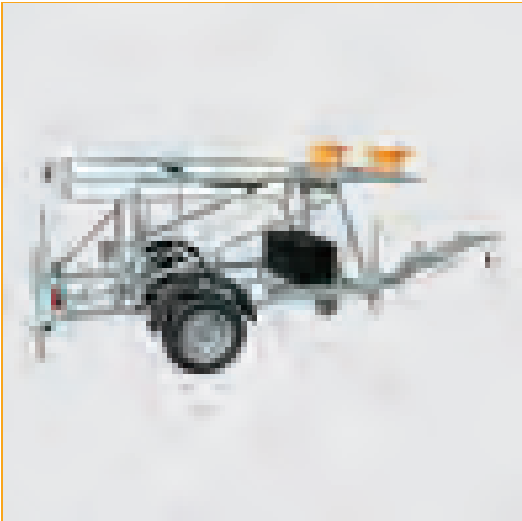
Advance Warning Trailer VLT 1	Ref. No.
Advance Warning Trailer Type VLT 1 with prism technique, without twofold warning system	129 260-9

### Technical data

Total weight	750 kg - 1000 kg
Empty weight	340 kg
Total length	4400 mm
Total width	1700 mm
Track width	1600 mm
Brake	parking brake
Empty	overrun brake for 1000 kg



Advance Warning Trailer VLT 1

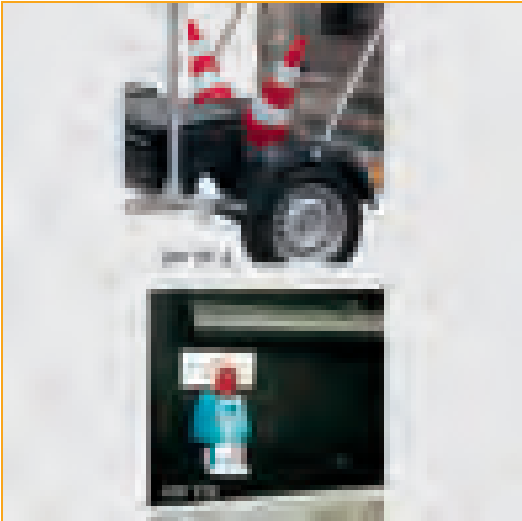
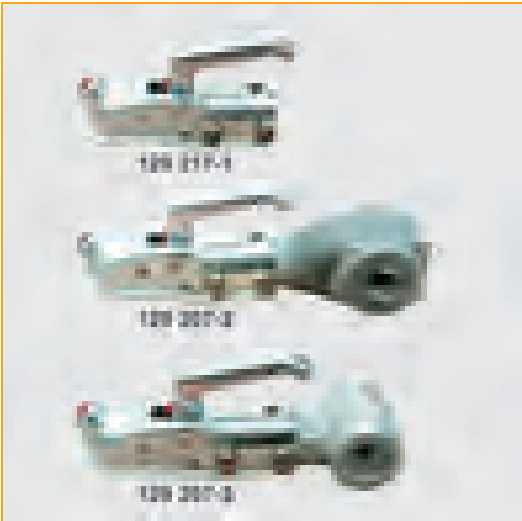


# Accessories for Advance Warning and Warning Trailers



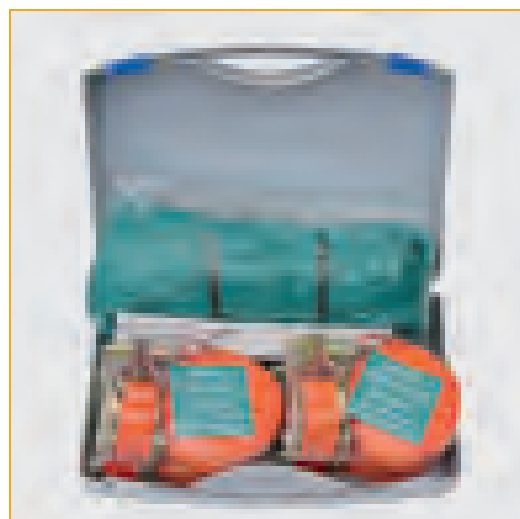
## Accessories for Warning Trailers and Advance Warning Trailers (1)

Accessories for Warning Trailers and Advance Warning Trailers (1)	Ref. No.
Motor operated lifting/lowering device	129 21-1
Hydraulic lifting/lowering device for use with the battery of the warning trailer	129 209-6
Ball-type trailer hitch for height adjustable drawbar with auto-reverse braking system for type A2/L to type A 41/L and for type "Pro-Line" and "Pharos"	129 27-1
Ball-type trailer hitch for height adjustable drawbar without auto-reverse braking system for type A1/L	129 207-2
Ball-type trailer hitch for height adjustable drawbar without auto-reverse braking system for type B1, B2, VLT and for type "Eco-Line <sup>SMD</sup> "	129 207-3
Central crank supports for all mobile warning trailers type A	329 753-1
Holder for up to 8 traffic cones	329 97-2
Battery guard 12/24 V for warning and advance warning trailers	229 486-1
Battery degassing (included in batteries supplied by Nissan)	081 712-1
Parking light socket for all warning trailers type A and B	329 338
Feeding plug for all warning trailers type A and B, 230 V, with charging control indication for built-in charger	329 343-2
Built-in charger 24 V, 32 A, IP44	070 075-32
Built-in charger 12 V, 30 A, IP44	070 074-30
Charging connection for all warning trailers type A and B 12/24 V, CEE-Norm, double-pole, for connecting an external charger	329 339
Built-in charger 12/24 V, 35 A, IP44	070 075-35



## Accessories for Warning Trailers and Advance Warning Trailers (2)

Accessories for Warning Trailers and Advance Warning Trailers (2)	Ref. No.
Securing of load set in a box consisting of 1 covering net 2 x 3 m 4 lashing straps 6 m with ratch and hook, LC 1000/2000 daN 8 abrasion protection hoses (20 cm), suitable for 35mm and 25 mm lashing straps	081 549-31
Securing of load for warning trailers A2, A3, A31, consisting of covering net and hooks	081 549-12
Securing of load for warning trailers A1, B2 and LED advance warning trailers, consisting of covering net and hooks	081 549-11
Securing of load for warning trailers A4 and A41, consisting of covering net and hooks	081 549-14
Lashing eyes (1 set = 4 pcs)	081 549-4
Lashing eyes (1 set = 6 pcs)	081 549-6
Spare wheel with holder	374 274-1
Anti-theft device for spare wheel	081 793-1
Monitoring device (siren and revolving beacon) for LED advance warning trailers and warning trailers with LP 7000, 12 V	129 25-2
Axle distance recorder	081 729
Twofold Warning Light System Multi-Light 340 LED L9H Type 690/1, 12/24 V EC type approval no. e1*72/245*2009/19*5361*01	122 32-1
Light Arrow Combination for Type B consisting of Light Arrow LP 15/1 Halogen, Arrow Setting Unit and Twofold Warning System Xenon Flash, 340 mm Ø	129 45602
Halogen Light Arrow Type LP 15/1 L8H, 12/24 V EC type approval no. e1*72/245*95/54*3756*00 with cable remote control without roof frame and lifting/lowering device	129 478-28
LED Light Arrow Type LP 15/S L8H, 12/24 V EC type approval no. e1*72/245*95/54*3756*00 with cable remote control without roof frame and lifting/lowering device	129 478-71
Threefold Warning Light System Xenon Flash Type 47/7, 12/24 V	13 260-4
Arrow Setting Unit Type 4000/3 with white arrow and remote control	129 27-12
Twofold Warning Light System Multi-Light 340 LED Flash L9M, 12/24 V EC type approval no. e1*72/245*2009/19*5361*01	122 32-201



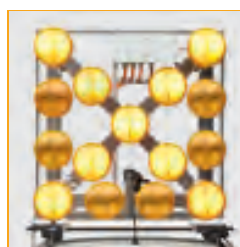
Securing of load set in a box



Axle distance recorder



Halogen Light Arrow Type LP 15/1



LED Light Arrow Type LP 15/S



2-fold 340 mm LED Flash

## Dimensions and weights

### Warning trailers and Advance Warning Trailers

Type	Length	Width	Height with lowered board	Height with lifted board	Track width	Empty weight
A 1/L	3800 mm	2200 mm	2600 mm	4000 mm	2000 mm	ca. 650 kg
A 2/L	4650 mm	2200 mm	2600 mm	4000 mm	2000 mm	ca. 700 kg
A 3/L	5100 mm	2200 mm	2600 mm	4000 mm	2000 mm	ca. 800 kg
A 31/L	5200 mm	2430 mm	2600 mm	4000 mm	2200 mm	ca. 820 kg
A 4/L	6700 mm	2200 mm	2600 mm	4000 mm	2000 mm	ca. 1100 kg
A 41/L	6700 mm	2430 mm	2600 mm	4000 mm	2200 mm	ca. 1150 kg
B1	4200 mm	1700 mm	2100 mm	2950 mm	1400 mm	ca. 350 kg
B2	4200 mm	1700 mm	2100 mm	2950 mm	1400 mm	ca. 400 kg
B3	5200 mm	2100 mm	2100 mm	3050 mm	1900 mm	ca. 550 kg
B4	6000 mm	2150 mm	1500 mm	2850 mm	1900 mm	ca. 760 kg
VLT	4400 mm	1740 mm	1600 mm	3800 mm	1600 mm	ca. 340 kg



## Mobile Crash Absorber „Rambo“



**For mounting on heavy maintenance and service vehicles**

# Mobile Crash Absorber "Rambo"

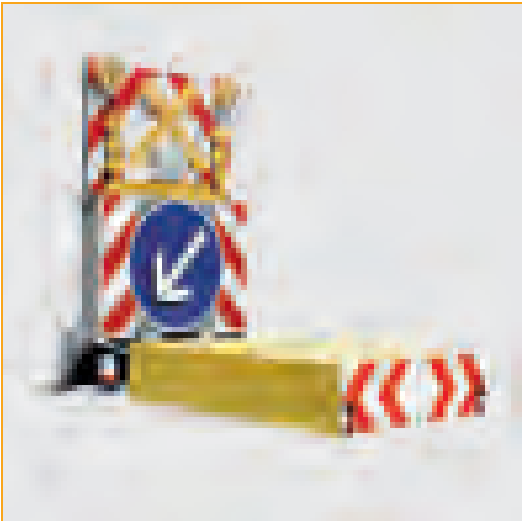
## Crash Absorber (TMA) "Rambo"

according to NCHRP 350

- Tested according to NCHRP 350
- Available with crash cushion for 80 km/h or for 100 km/h
- Excellent protection against traffic from behind, the whole width of the towing vehicle is covered
- Made of recyclable material
- Optional available with hydraulic aggregate 24 V for stand-alone operation

Crash Absorber (TMA) "Rambo"	Ref. No.
Crash Absorber Rambo with cushion for 80 km/h and vertically liftable warning board "Slider" with light arrow combination type 7000	129 653-1
Crash Absorber Rambo with cushion for 100 km/h and vertically liftable warning board "Slider" with light arrow combination type 7000	129 653-2
Crash absorber cushion for 80 km/h	229 653-1
Crash absorber cushion for 100 km/h	229 653-2

Accessories and Spare parts	Ref. No.
Dockingstation for Crash Absorber (TMA) "Rambo" with folding frame, lifting cylinder, transport carriage and 4-point-attachment	229 640-1
Dockingstation for Crash Absorber (TMA) "Rambo" with folding frame, lifting cylinder and transport carriage, without 4-point-attachment	229 640-11
Dockingstation for Crash Absorber (TMA) "Rambo" with battery compartment, folding frame and lifting cylinder, without transport carriage, without 4-point-attachment	229 640-12
Dockingstation for Crash Absorber (TMA) "Rambo" with battery compartment, folding frame, lifting cylinder and 4-point-attachment, without transport carriage	229 640-2
Dockingstation for Crash Absorber (TMA) "Rambo" with folding frame, hydraulic cylinder and hydraulic aggregate	229 640-21
Transport carriage for docking station	381 675-21



Crash Absorber (TMA) "Rambo"



Dockingstation



Transport carriage



## Vertically Liftable Warning Board „Slider”



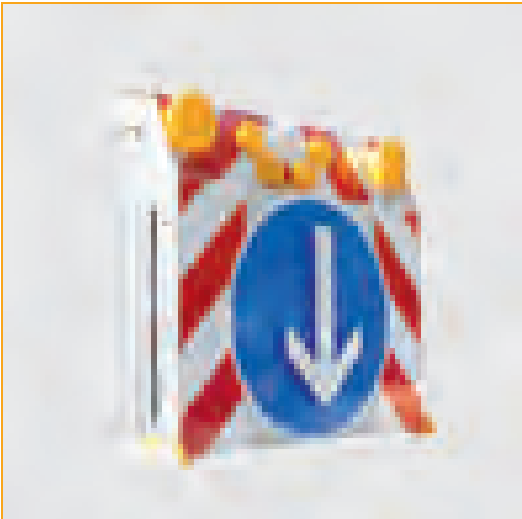
**For mounting on vehicles which are not suitable for folding warning boards**

# Vertically liftable Warning Board "Slider"

## Vertically Liftable Warning Board "Slider"

- Low wind load when the upper board is lowered
- Available in nearly all country-specific versions
- Examples of application (depending on country-specific regulations)
  - on vehicles which are not suitable for folding warning boards

Vertically Liftable Warning Board "Slider"	Ref. No.
Vertically Liftable Warning Board "Slider" Type Germany with light arrow combination Type 7000 and motor operated arrow adjustment	129 40-18
Vertically Liftable Warning Board "Slider" Type UK	129 40-20
Vertically Liftable Warning Board "Slider" Type Sweden	129 40-22



Type "Germany"



Type "Germany"



Type "Danmark"



Type "Danmark"



Type "Sweden"

## Remote Control



### Three versions available

- Eco-Remote, a cable remote control for quick and easy access to all important functions
- Basic-Remote, a cable remote control with access also to advanced functions like parameters etc.
- Pro-Remote, a cable/radio remote control on Basic-Remote basis with additional touchscreen display



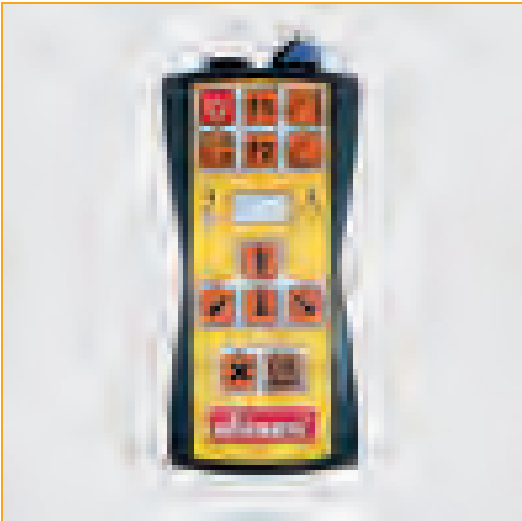
## Remote Control Eco-Remote

- Compact remote control for secure and easy operating of devices via cable connection
- Large operating keys
- Low weight
- LCD-Display for indication of the most important functions
- For use with
  - Fivefold Directive Light System
  - LED variable message sign "SpeedSign<sup>SMD</sup>" (only single sign)
  - LED variable message sign "MultiSign<sup>SMD</sup>" (only single sign)

Remote Control Eco-Remote	Ref. No.
Eco-Remote cable remote control (without cable)	329 233-1

### Technical data

Dimensions (LxWxH)	175 x 80 x 3 mm
Weight	166 g



Remote Control Eco-Remote

## Remote Control Basic-Remote

- Universal remote control for secure and easy operating also of complex devices via cable connection
- Large operating keys
- Easily readable large display
- For use with
  - NiNa Traffic Queue Warning System
  - All LED Variable Message Signs
  - Advance Warning Trailers with LED Variable Message Signs
  - Roof Frame for Service Vehicles
  - Warning trailers
  - Light Arrow Combination Type LP 7000 / Type LP 7000 LED
  - Mobile Crash Absorber
  - Vertically Liftable Warning Board

Remote Control Basic-Remote	Ref. No.
Basic-Remote cable remote control (without cable)	329 232-1

### Technical data

Dimensions (LxWxH)	215 x 130 x 45 mm
Weight	480 g



Remote Control Basic-Remote

## Remote Control Pro-Remote

- Universal remote control for secure and easy operating also of complex devices via cable or radio connection
- Large operating keys
- Easily readable large display with additional touch screen function
- For use with
  - NiNa Traffic Queue Warning System
  - All LED Variable Message Signs
  - Advance Warning Trailers with LED Variable Message Signs
  - Roof Frame for Service Vehicles
  - Warning trailers
  - Light Arrow Combination Type LP 7000 / Type LP 7000 LED
  - Mobile Crash Absorber
  - Vertically Liftable Warning Board

Remote Control Pro-Remote	Ref. No.
Pro-Remote radio/cable remote control (without cable)	329 231-11

### Technical data

Dimensions (LxWxH)	215 x 130 x 45 mm
Weight	700 g







## Batteries and Rechargeable Batteries



To be used in resp. with traffic warning lamps and systems



# Batteries and rechargeable Batteries

## Premium Batteries

dry cell or alkaline

- Antipollution
- Without mercury or cadmium
- With good winter characteristics

Premium Batteries	Ref. No.
Dry Cell Battery Premium 800, 6V, 7 - 9 Ah	155 05
Battery Premium 3000, 6 V, 28 - 30 Ah	155 053

### Technical data

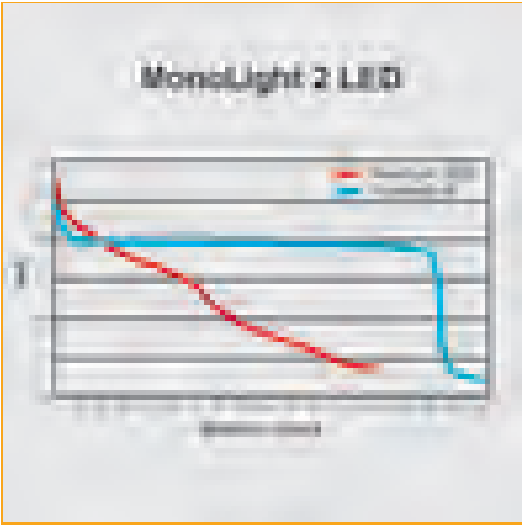
Dimensions (LxWxH)	Premium 800/Premium 3000	67 x 98 x 67 mm
Weight	Premium 800	0,54 kg
Empty	Premium 3000	0,94 kg

### Packaging unit

Premium 800  
20 batteries in one carton / 1360 batteries on one pallet  
Premium 3000  
20 batteries in one carton / 1360 batteries on one pallet  
also available in other quantities



Premium 800 and Premium 3000 batteries



Discharge characteristics for MonoLight 2 LED

# Konstant Batteries

## air-oxygen batteries

- Constant discharge, therefore steady brightness of the warning lamps
- Exceptionally long operating times
- Cold resistant down to - 25° C
- Free of cadmium and mercury

Konstant Batteries	Ref. No.
Battery Konstant 25, 6 V, 25-28 Ah	155 054
Battery Konstant 45, 6 V, 45-50 Ah	155 056
Battery Konstant 60, 6 V, 60 Ah	155 057
Battery Konstant 110, 6 V, 105 - 110 Ah	155 059
Battery Konstant 111, 6 V, 120 Ah	155 065

### Technical data

Dimensions (LxWxH)	Konstant 25	67 x 98 x 67 mm
Weight		0,53 kg
Dimensions (LxWxH)	Konstant 45	67 x 98 x 67 mm
Weight		0,68 kg
Dimensions (LxWxH)	Konstant 60	160 x 75 x 130 mm
Weight		1,4 kg
Dimensions (LxWxH)	Konstant 110	125 x 45 x 248 mm
Weight		1,8 kg
Dimensions (LxWxH)	Konstant 111	160 x 75 x 130 mm
Weight		1,43 kg

### Packaging unit

Konstant 25 / Konstant 45  
 12 batteries in one carton / 1152 batteries on one pallet  
 Konstant 60  
 10 batteries in one carton / 540 batteries on one pallet  
 Konstant 110  
 10 batteries in one carton / 480 batteries on one pallet  
 Konstant 111  
 10 batteries in one carton / 540 batteries on one pallet  
 also available in other quantities



Konstant 25 and Konstant 45 batteries



Konstant 60 and Konstant 111 batteries

# Rechargeable Batteries and Batteries

Rechargeable Batteries and Batteries	Ref. No.
Nickel Cadmium Rechargeable Battery 5 V, 4,5 Ah	356 017
Monocell alkaline, 1,5 V	155 007
Nickel Cadmium Cell	156 020
Lead Acid Rechargeable Battery (drive battery) 12 V, 100 Ah	165 340-2
Lead Acid Rechargeable Battery (drive battery) 12 V, 180 Ah	165 330
Lead Acid Rechargeable Battery (drive battery) 12 V, 230 Ah	165 331
Lead Gel Rechargeable Battery 12 V, 140 Ah	165 335
Lead Gel Rechargeable Battery 12 V, 205 Ah	165 338



Nickel Cadmium Rechargeable Battery



Lead Acid and Lead Gel Recharge. Battery

## Chargers and Battery Tester

Chargers and Battery Tester	Ref. No.
Charger for nickel cadmium rechargeable batteries (1 charger per lamp)	16 060-1
Built-in charger 12/24 V, 35 A, IP44	070 075-35
Battery tester for all 12 V lead-acid batteries	070 081-2



Charger



Built-in charger

## Table of operating times

	Lamp type	Batteries 6 Volt						
		Premium 800 7 - 9 Ah	Premium 3000 28 - 30 Ah	Konstant 25 25 - 28 Ah	Konstant 45 45 - 50 Ah	Konstant 60 60 Ah	Konstant 110 105 - 110 Ah	Konstant 111 120 Ah
1	Beacon and warning lamp BakoLight LED (with 1 battery)	one-sided p = 150 hrs f = 450 hrs two-sided p = 300 hrs f = 900 hrs	one-sided p = 950 hrs f = 2850 hrs two-sided p = 1400 hrs f = 4200 hrs	one-sided p = 500 hrs f = 1500 hrs two-sided p = 1000 hrs f = 3000 hrs	one-sided p = 900 hrs f = 2700 hrs two-sided p = 1800 hrs f = 5400 hrs			
1	Beacon lamp Konstant-Norm LED (with 1 battery)					p = 1050 hrs f = 3000 hrs	p = 1450 hrs f = 4300 hrs	p = 1550 hrs f = 4600 hrs
1	Euro-Nitra LED (with 2 batteries)	p = 250 hrs f = 750 hrs	p = 1000 hrs f = 2800 hrs	p = 850 hrs f = 2500 hrs	p = 1500 hrs f = 4500 hrs			
1	Nitra-LED (with 2 batteries)	p = 850 hrs f = 3400 hrs	p = 1900 hrs f = 6700 hrs	p = 1700 hrs f = 6600 hrs	p = 2400 hrs f = 9000 hrs			
1	MonoLight 2 LED (with 1 battery)	p = 300 hrs f = 1200 hrs	p = 900 hrs f = 3600 hrs	p = 950 hrs f = 3800 hrs	p = 1400 hrs f = 5500 hrs			
1	BakoLight LED/S GPS	Day and night 300 hrs, only night 500 hrs	Day and night 770 hrs, only night 1250 hrs	Day and night 460 hrs, only night 960 hrs	Day and night 1400 hrs, only night 1600 hrs			
1	BakoTaper LED Flash	Day and night 300 hrs, only night 500 hrs	Day and night 600 hrs, only night 1100 hrs	Day and night 460 hrs, only night 960 hrs	Day and night 1400 hrs, only night 1600 hrs			
1	City Flash Typ 63/S LED (with 2 batteries)	300 hrs	550 hrs		1000 hrs			
2	Star-Blitz Typ 410 (with 2 batteries)	34 hrs	110 hrs		190 hrs			
2	Super Primär 823/2 day - 2Ws night - 1Ws (with 4 batteries)	85 hrs 110 hrs	200 hrs 240 hrs		360 hrs 430 hrs			
2	Traffic Cone Lamp Typ 42/2 200 mm ø (with 4 batteries)	110 hrs	400 hrs		730 hrs			
2	Traffic Cone Lamp Typ S-LED	60 hrs	300 hrs	250 hrs	450 hrs			
2	ConiLamp LED	400 hrs	1500 hrs	1300 hrs	2300 hrs			
2	Traffic Cone Lamp LED Flash Typ 690F 340 mm (with 4 batteries)	90 hrs	200 hrs		400 hrs			
3	Hand Lamp with halogen bulb	p = 80 hrs f = 250 hrs	p = 120 hrs f = 390 hrs		p = 190 hrs f = 600 hrs			

p = permanent light; f = flashing light

1 operating times based on 12 hours on / 12 hours off

2 operating times based on 2 hours / day on

3 operating times based on 1 hour (4 x 15 minutes) / day on



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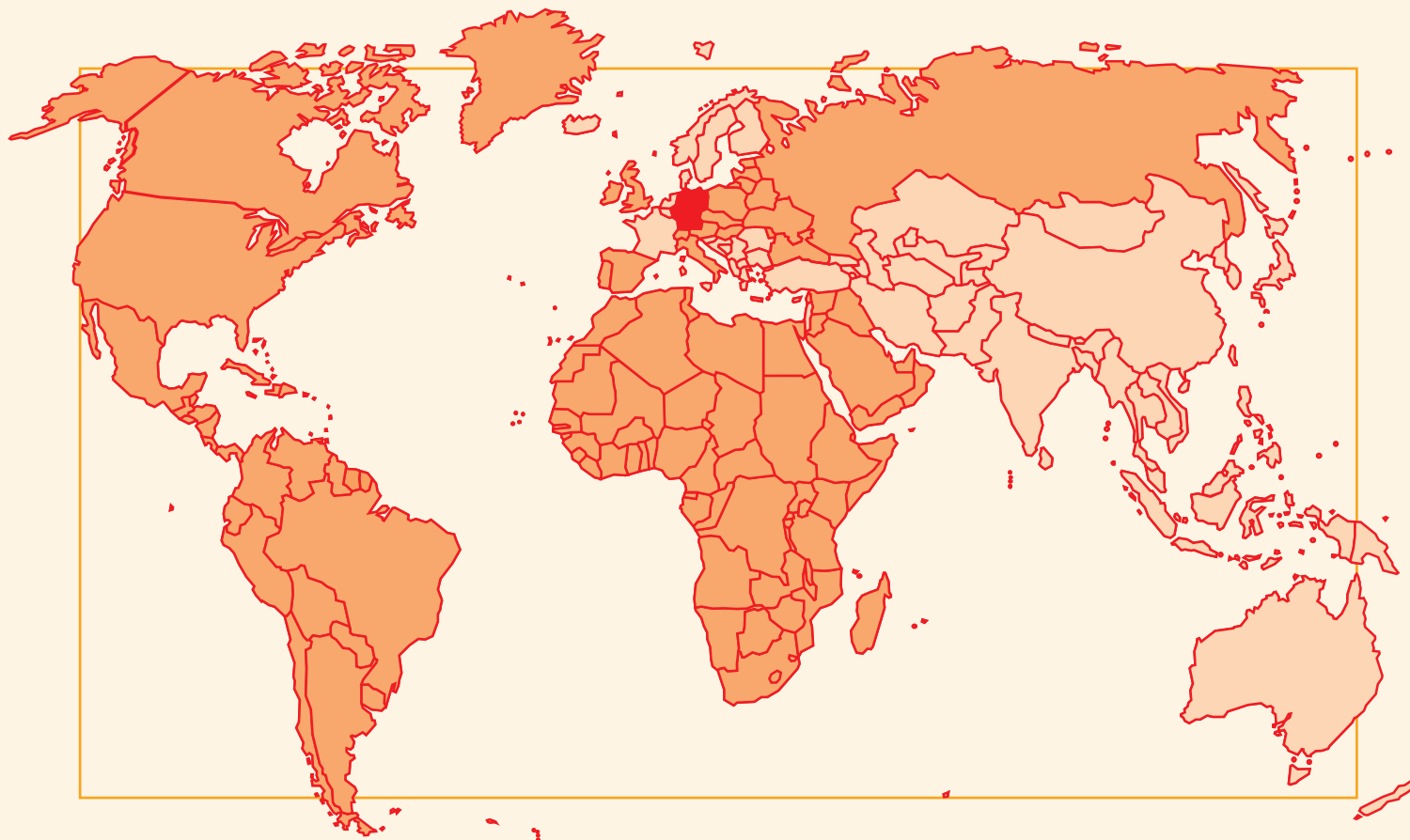
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## Storage and logistics centre

Addition of a storage and logistics centre including production with over 4200 sqm in factory II, Tönning.  
This building project was co-financed by the European Union and the European regional development fund (ERDF).



**ZUKUNFTS**programm

Wirtschaft

*Investition in Ihre Zukunft*



Storage and logistic centre factory II, Tönning



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