



**PROTECT  
YOUR WORLD!**

**DEFENDER<sup>®</sup>**  
CABLE PROTECTION SYSTEMS  
**PRODUCT CATALOG**

 **MADE IN GERMANY**





## DEFENDER® CABLE PROTECTION SYSTEMS

Originally developed to guard electrical cables and prevent tripping hazards at rock concerts, Defender® cable protectors have become the standard in a wide variety of industrial, commercial, and public applications. Designed and made in Germany from ultra-rugged, recyclable TPU (thermoplastic polyurethane), the Defender® range comprises various modular protection systems for cables and hoses with diameters up to 113 mm [4.5"]. Stringent raw material and production controls ensure that Defender® protectors meet exacting specifications and the highest quality standards. Defender® cable ramps are DEKRA certified in conformity with DIN 31000 and EN 61537, B2 fire-rated according to DIN 4102 (B1 also available) and compliant with the Low Voltage Directive.

For detailed information on Defender® cable protection systems in English, French, German, and Spanish, visit [www.defender-protects.com](http://www.defender-protects.com). For support, contact the Defender team of cable guard experts.



## DEFENDER® KABELBRÜCKEN

Ursprünglich als Schutz von Stromkabeln und zur Vermeidung von Stolperfallen bei Rockkonzerten gedacht, haben sich die Defender® Kabelschutz-Systeme mittlerweile als Standard bei zahlreichen Anwendungen in industriellen, kommerziellen und öffentlichen Bereichen durchgesetzt. Die in Deutschland entworfenen und hergestellten Defender® Produkte werden aus besonders robustem, wiederverwertbarem TPU (thermoplastisches Polyurethan) gefertigt und umfassen verschiedene modular einsetzbare Schutzsysteme für Kabel und Schläuche bis zu einem Durchmesser von 113 mm. Strengste Rohstoff- und Produktionskontrollen gewährleisten, dass die Defender® Kabelbrücken die anspruchsvollen Spezifikationen und höchste Qualitätsstandards erfüllen. Die Defender® Kabelschutzsysteme sind nach DIN 31000 und EN 61537 mit dem DEKRA Siegel ausgezeichnet. Sie erfüllen die Anforderungen der Brandschutzklasse B2 nach DIN 4102 (auch in B1 lieferbar) und sind mit der Niederspannungsrichtlinie konform.

Weitere Informationen über die Defender® Kabelbrücken sind unter [www.defender-protects.com](http://www.defender-protects.com) in den Sprachen Englisch, Französisch, Deutsch und Spanisch verfügbar. Bei Fragen stehen Ihnen die Kabelschutzexperten von Defender gerne zur Verfügung.



## SISTEMAS DE PROTECCIÓN DE CABLES DEFENDER®

Desarrollados en principio para proteger los cables eléctricos y evitar tropiezos en conciertos de rock, los protectores de cables Defender® se han convertido en artículos habituales en una amplia variedad de usos industriales, comerciales y públicos. Diseñada y fabricada en Alemania con TPU (poliuretano termoplástico) muy resistente y reciclable, la gama Defender® comprende diversos sistemas de protección modular para cables y tubos flexibles con diámetros de hasta 113 mm. Los estrictos controles sobre materias primas y producción garantizan que los protectores Defender® cumplen las más rigurosas especificaciones y las más altas normas de calidad. Las rampas para cables Defender® cuentan con el certificado DEKRA conforme a la DIN 31000 y EN 61537, presentan la clase de inflamabilidad B2 según la DIN 4102 (también disponible en B1) y cumplen la directiva sobre bajo voltaje.

Para ampliar la información sobre los sistemas de protección de cables Defender® en inglés, francés, alemán y español, visite [www.defender-protects.com](http://www.defender-protects.com); y para obtener asistencia, contacte con el equipo de Defender de expertos en protección de cables.



## SYSTÈMES DE PROTECTION DE CÂBLES DEFENDER®

Conçus à l'origine pour protéger les câbles électriques et prévenir les risques de trébuchement lors des concerts de rock, les passages de câbles Defender® sont devenus la référence dans un ensemble très large d'applications industrielles, commerciales et publiques. La gamme Defender®, conçue et fabriquée en Allemagne à partir de TPU (polyuréthane thermoplastique) recyclable et ultra-robuste, comporte différents systèmes de protection modulaires pour câbles et flexibles/tuyaux ayant jusqu'à 113 mm de diamètre. Grâce à des contrôles rigoureux des matières premières et de la production, les passages de câbles Defender® répondent aux spécifications les plus précises et aux normes de qualité les plus élevées. Les passages de câbles Defender® sont certifiés DEKRA conformément aux normes DIN 31000 et EN 61537, classés B2 conformément à la norme de réaction au feu DIN 4102 (B1 également disponible) et sont conformes à la directive basse tension.

Pour obtenir des informations détaillées sur les systèmes de protection de câbles Defender® en anglais, français, allemand et espagnol, veuillez-vous rendre sur le site [www.defender-protects.com](http://www.defender-protects.com), et pour obtenir de l'assistance, veuillez contacter l'équipe Defender d'experts en passages de câbles.



# EVEN GREATER SAFETY, THANKS TO THE NEW 3D LASERGRIP® SURFACE

THE INNOVATIVE DESIGN OF THE 3D LASERGRIP® SURFACE SIGNIFICANTLY INCREASES TREAD AND SLIP RESISTANCE. DUE TO THE SPECIAL SHAPE AND SURFACE STRUCTURE, THE RISK OF MOVING AN ENTIRE LINE OF DEFENDER® MICRO CABLE PROTECTORS IS SIGNIFICANTLY REDUCED, EVEN WHEN DRIVEN OVER BY HEAVY VEHICLES.



# PROTECTION AND ENVIRONMENT

Most companies nowadays give a high value to sustainability, so do we. And most probably so does your company. This is why, we recycle over 90% of the DEFENDER® materials in-house – from shredding to granulating. We even monitor the whole process here in our production premises. We know exactly which materials we are processing. Everything comes from Germany and exclusively from certified companies. DEFENDER® continually recycles granulate and is an official recycler of materials from Bayer®, BASF® and DOW® Chemical.

## RECYCLING

After processing the raw material from our german certified suppliers, the granulate remains in our recycling loop. At the end of their life-cycle, cable protectors are reprocessed into new granulate and the whole is repeated.



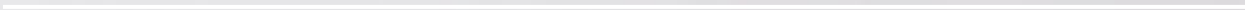




**PVC-FREE**

DEFENDER® products contain no environmentally harmful PVC.

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# STRONG ARGUMENTS



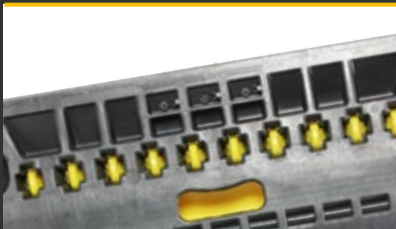
## DEKRA AND TÜV CERTIFIED

The DEFENDER cable protection range has been awarded the DEKRA certificate. In accordance with testing standards EN 61537:2001 and DIN 31000:1979, all of the Defender cable crossovers adhere to the highest safety and quality requirements. Thanks to the manufacturing process being completed in Germany, Adam Hall GmbH, exclusive distributor of DEFENDER products, is able to ensure that as part of the certification process, DEKRA can complete the required material and production checks on a regular basis. TÜV certification is in process.



## HIGH TECH RAW MATERIAL

All DEFENDER cable crossovers are made of extremely sturdy, unbreakable TPU (thermoplastic polyurethane), produced from recycled and new plastic materials. They feature a B2 fire resistance rating (also available with a B1 rating - difficult to ignite - in compliance with DIN4102) and are resistant to oil, acids, and petrol. The operating temperature range is approximately  $-30^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  [ $-22^{\circ}\text{F}$  to  $140^{\circ}\text{F}$ ]. The Shore A hardness range is  $88 \pm 4$ .



## PATENTED SELF-CLEANING HINGE

Our cable protectors are equipped with patented self-cleaning hinges. The dirt gathering around the hinges is automatically pushed out when opening and closing the lid of the DEFENDER cable protector. All DEFENDER products are made of extremely sturdy, unbreakable TPU (thermoplastic polyurethane). If needed, the crossovers can be easily cleaned by using a steam jet cleaner.



## EASY LOCK SYSTEM

The DEFENDER cable protectors feature a very easy and efficient opening and locking system, allowing you to open and close the lid without tooling or special efforts. This exclusive feature also guarantees that the lid remains closed at all times, even when cars or trucks cross over it.





### EASY HANDLING

The heaviest DEFENDER cable protection systems are equipped with transport handles (DEFENDER XXL, DEFENDER 3, and DEFENDER Midi). The DEFENDER Box provides safe and practical storage but also a logistically efficient solution for the transport of many protectors at once (EUR-pallet dimensions).



### MODULAR SYSTEM

The DEFENDER Cable protection systems also offer high quality accessories to adapt your configuration to each new location, such as end ramps, 90° and 45° bends. Each cable protector has connectors and corresponding sockets that enable you to connect cable protectors in the same series continuously with each other with maximum stability.



### LABEL YOUR CABLE PROTECTORS

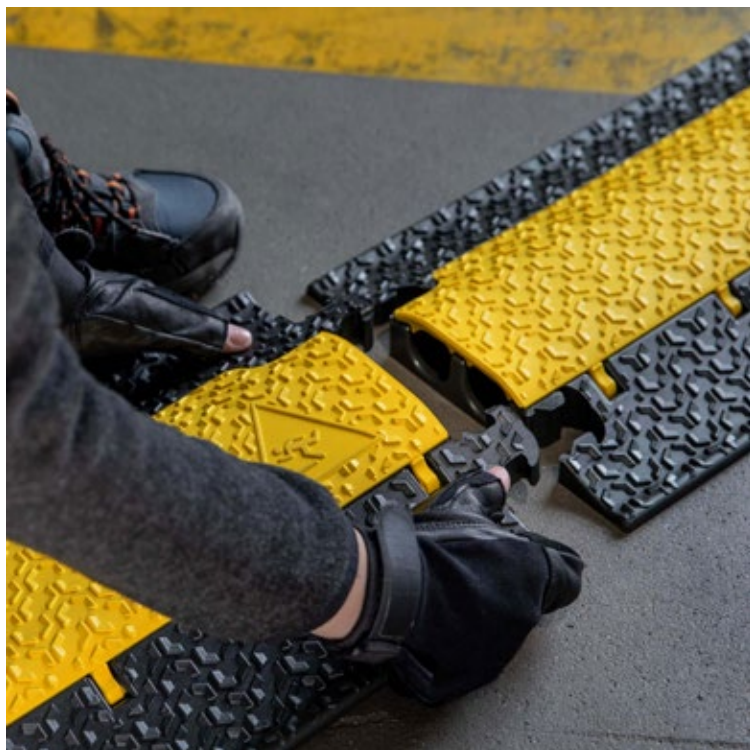
Self branding of your cable protectors has three main advantages :

Advertisement for your brand / Corporate identity conformity / Avoid mixing up your equipment with another company's at large events. Self branding of the DEFENDER cable protectors with the logo of your company can be purchased for orders exceeding 30 pieces. You will find the logo format requirements on our website. Feel free to contact our sales team for more information at: [sales@adamhall.com](mailto:sales@adamhall.com)

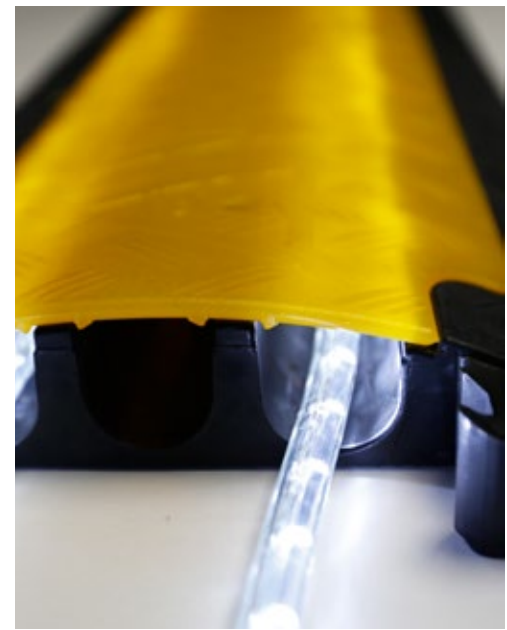


### FIVE-YEAR GUARANTEE

We, like many companies, are completely convinced by the high quality, longevity, and durability of the rugged DEFENDER® cable protection systems. Therefore, we are delighted to provide a five-year guarantee on all DEFENDER® products.







## DEFENDER<sup>®</sup> LUX

### SEMI-TRANSPARENT LID SERIES

The ultimate in cable protection and trip hazard prevention, our innovative Defender LUX Series feature highly translucent, yellow-tinted lids for running LED rope lights along your cables and cords. Developed in conjunction with major venues and event organizers, Defender LUX Cable Protectors are the state-of-the-art indoor and outdoor solution to ensure maximum visibility and security in the dark. Defender LED rope lights are also available as dedicated accessories. See our price list for the Defender LUX and rope light range, or talk to your Defender representative.

Description:	Art. No.:
Defender Ultra L Lux	85600LUX
Defender Ultra L II Lux	85601LUX
Defender XXL Lux	85500LUX
Defender 3 Lux	85002LUX

Description:	Art. No.:
Defender Midi Lux	85300LUX
Defender Mini Lux	85200LUX
Defender Micro 2 Lux	86100LUX
Defender Nano Lux	85150LUX

For more information, see the price list.





## DEFENDER<sup>®</sup> CUSTOM SERVICE

DESIGN YOUR CABLE PROTECTION SYSTEM!

### SPECIAL CONFIGURATIONS



#### Robotic plastic welding

For superior flexibility in designing your cable protection system and perfect integration into your environment, Defender provides its own in-house robotic plastic welding service. Need an intersection, T-junction, special angle, or radius curve? We produce one-offs and small quantities of Defender elements customized to your requirements. What's more, at Defender engineering and tooling, we develop and produce special purpose, injection-molded protection solutions like those below. Talk to your Defender representative for more information and minimum orders.



### CUSTOM SOLUTION DEVELOPMENT



#### Defender subterra

Developed with and produced for Halliburton Oil Field Services, the Subterra is a protection system for underground hydraulic lines. It combines thermoplastic polyurethane and reinforced polyamide materials to withstand earth pressure and truly demonstrates the scope of Defender's purpose design and custom production facilities.

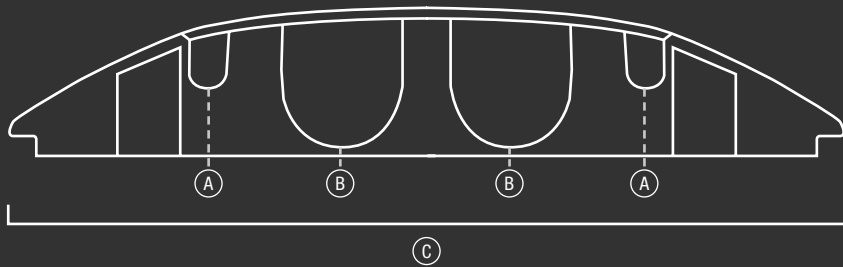


#### Defender race result

Developed with leading race management and timing company race results, these injection molded thermoplastic polyurethane protectors are another Defender Custom product that has been purpose-designed for the company's sports event timing system antennas.

# DEFENDER® RANGE OVERVIEW

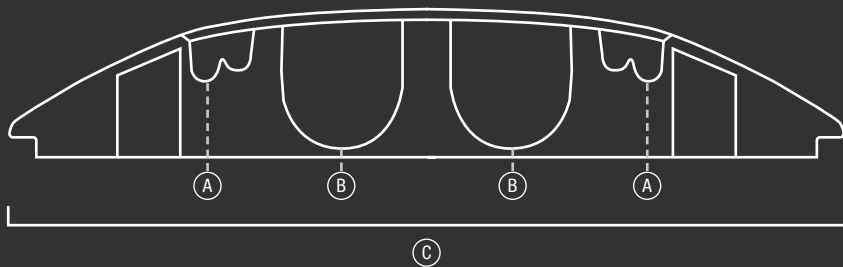
IN PROPORTIONAL SCALE



## DEFENDER® ULTRA L

TWO ULTRA LARGE CHANNELS - THE HEAVY-DUTY GIANT

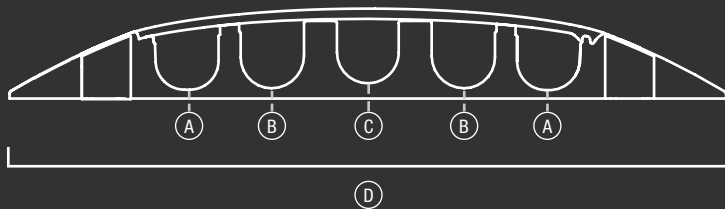
A	33 x 50 mm / 1.3" x 2.0"
B	113 x 120 mm / 4.5" x 4.7"
C	783 mm / 30.8"



## DEFENDER® ULTRA L 2

TWO ULTRA LARGE CHANNELS (2+4) - THE HEAVY-DUTY GIANT

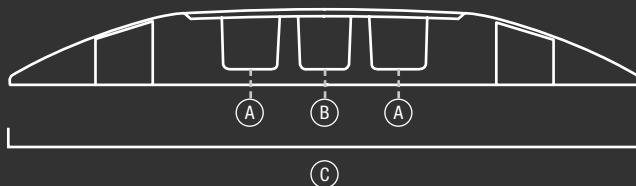
A	25 mm (2x) / 1.0"
B	108 x 110 mm / 4.2" x 4.3"
C	766 mm / 30.2"



## DEFENDER® XXL

FIVE XXL CHANNELS - THE HEAVY-DUTY ALL-ROUNDER

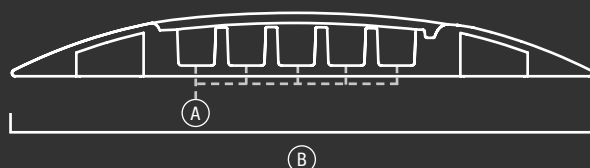
A	61 x 59 mm / 2.4" x 2.3"
B	62 x 65 mm / 2.4" x 2.6"
C	60 x 63 mm / 2.4" x 2.5"
D	696 mm / 27.4"



## DEFENDER® 3

THREE BIG CHANNELS - MOST POPULAR

A	52 x 49 mm / 2.1" x 2.0"
B	45 x 50 mm / 1.8" x 2.0"
C	600 mm / 23.6"

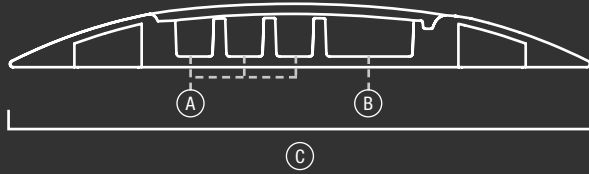


## DEFENDER® MIDI

FIVE MEDIUM CHANNELS - THE SOLUTION FOR NEARLY ANYTHING

A	34x36 mm / 1.3" x 1.4"
B	542 mm / 21.3"

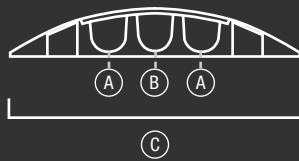




### DEFENDER® MIDI 4C

FOUR MEDIUM CHANNELS - ONE BIG CHANNEL FOR FIREHOUSE

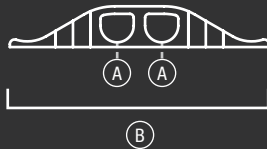
A	34 x 36 mm / 1.3" x 1.4"
B	80 x 36 mm / 3.2" x 1.4"
C	542 mm / 21.3"



### DEFENDER® MINI

THREE SMALL CHANNELS - THE LIGHTWEIGHT CHAMPION

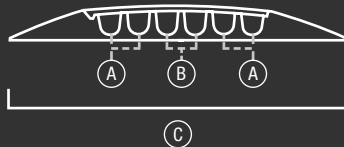
A	35 x 30 mm / 1.4" x 1.2"
B	35 x 35 mm / 1.4" x 1.4"
C	290 mm / 11.4"



### DEFENDER® MICRO 2

CABLE PROTECTOR WITH 2 CHANNELS

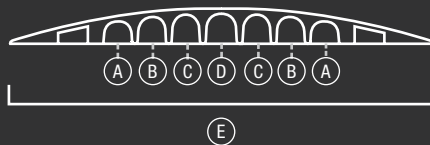
A	35 x 35 mm / 1.4" x 1.4"
B	273 mm / 10.7"



### DEFENDER® NANO

SIX SLIM CHANNELS - DISCRETE OUTDOOR / INDOOR PROTECTION

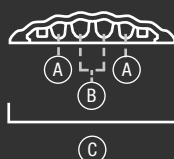
A	17 x 18 mm / 0.7" x 0.7"
B	17 x 19 mm / 0.7" x 0.7"
C	280 mm / 11.0"



### DEFENDER® COMPACT

SEVEN SMALL CHANNELS - THE DROP-OVER SOLUTION

A	28 x 23 mm / 1.1" x 0.9"
B	28 x 27 mm / 1.1" x 1.1"
C	28 x 29 mm / 1.1" x 1.1"
D	28 x 30 mm / 1.1" x 1.1"
E	430 mm / 16.9"



### DEFENDER® OFFICE

FOUR MINI CHANNELS - INDOOR & DESIGN SOLUTION

A	10 x 10 mm / 0.4" x 0.4"
B	12 x 12 mm / 0.5" x 0.5"
C	120 mm / 4.7"

## RANGE OF APPLICATION

Trade fairs / walkways / marketplaces / Christmas markets / workshops / warehouses / shopping centers / department stores / construction sites, streets, etc.

However, please ensure your compliance with road traffic regulations (higher than 75 mm / 3.0").

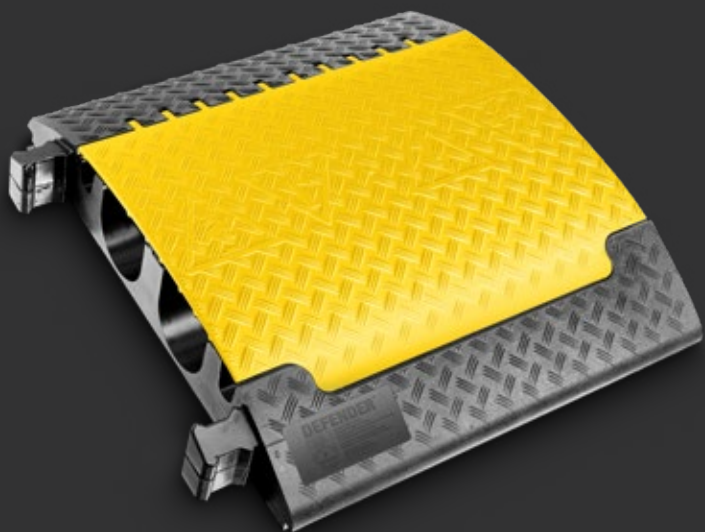
# DEFENDER® ULTRA L

## TWO ULTRA LARGE CHANNELS – THE HEAVY-DUTY GIANT

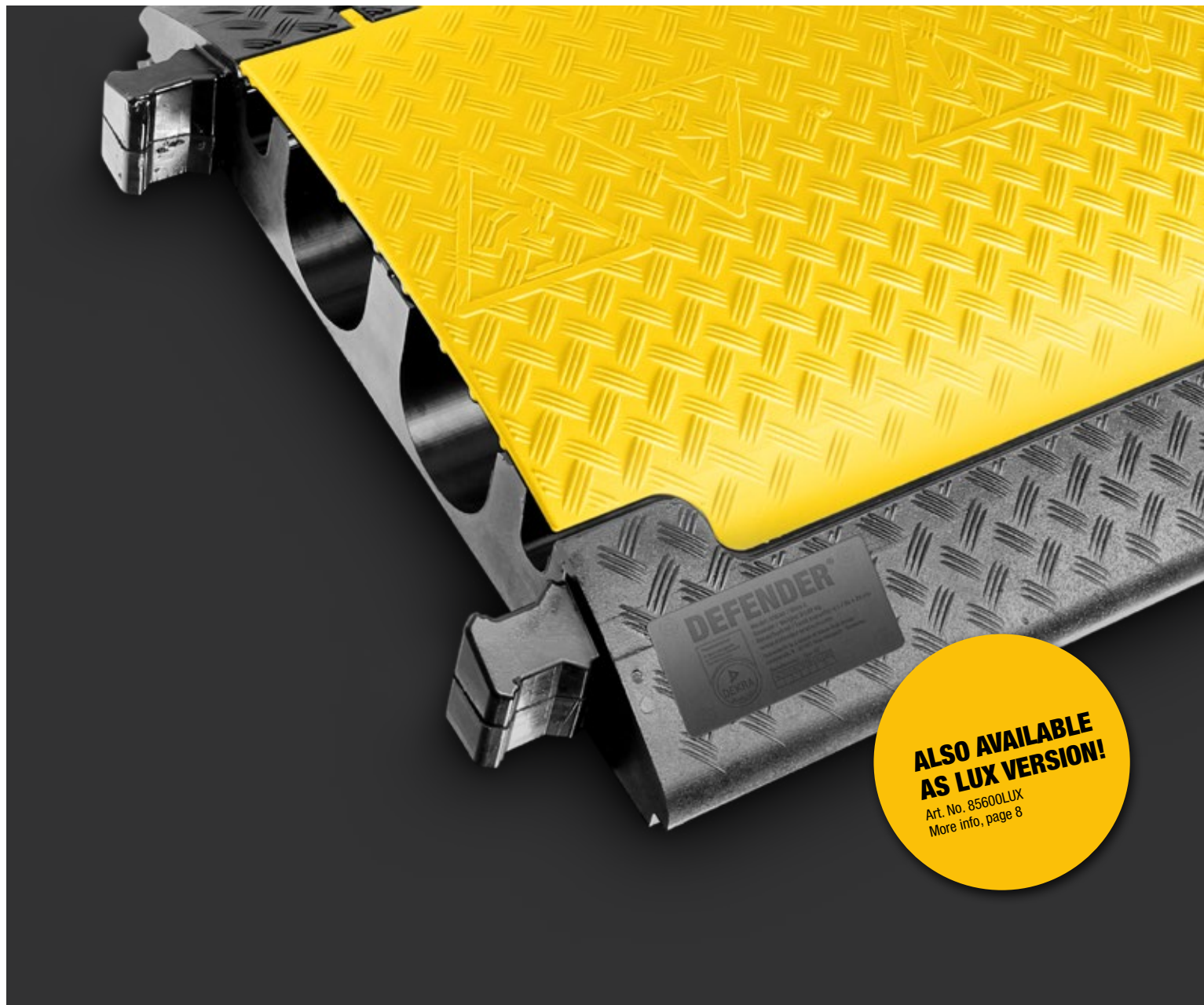
The Ultra L cable protection system is designed for extra heavy-duty environments and the largest cable and hose diameters. Featuring a pair of 120 x 113 mm / 4.7" x 4.5" channels flanked by two 33 x 50 mm / 1.3" x 2.0" ducts, integrated dog bone connectors for easy linking and a 5.0 ton/11,023 lbs. per 20 x 20 cm / 7.9" x 7.9" load capacity, Defender® Ultra L protectors are eminently suitable for heavy wheeled traffic, construction sites, warehouses, carnivals, fairs, music events, and other demanding applications.

### SPECIFICATIONS:

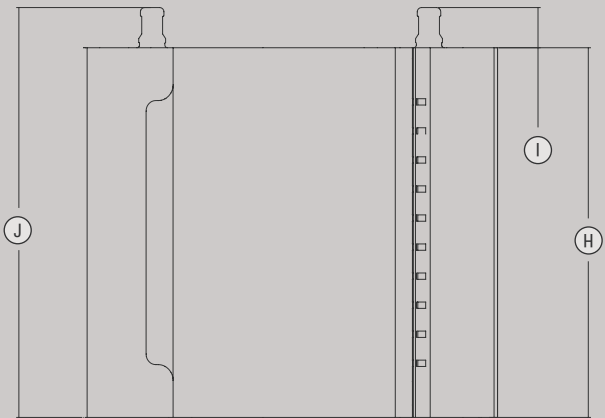
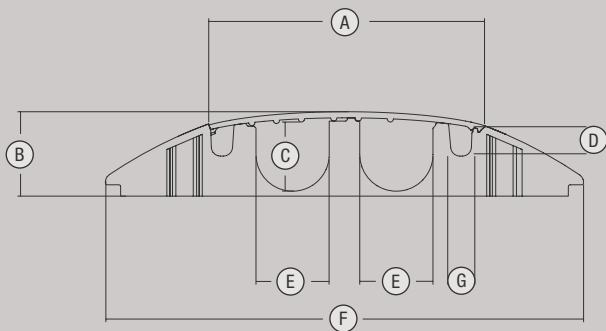
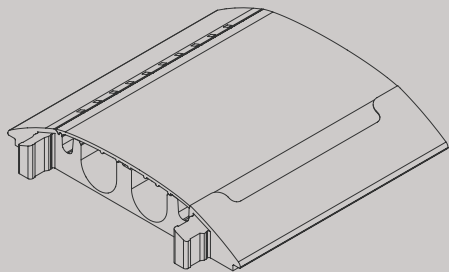
Art. No.:	85600
Product:	Four-channel cable protector
Channel W x H:	33 x 50 mm / 1.3" x 2.0" (channels 1 and 4), 120 x 113 mm / 4.7" x 4.5" (channels 2 and 3)
Material:	TPU (thermoplastic polyurethane)
Shore A hardness:	88 ± 4
Load capacity:	approx. 5.0 ton/11,023 lbs. / 20 x 20 cm / 7.9" x 7.9" (typical tire footprint area)
Fire rating:	B2 (B1 also available)
Resistant to:	most acids, oils, gasoline
Operating temperature:	-30° to +60° C / -22° F to 140° F
Length:	700 mm / 27.6"
Width:	783 mm / 30.8"
Height:	139 mm / 5.5"
Weight:	30.5 kg / 67.2 lbs.







**ALSO AVAILABLE  
AS LUX VERSION!**  
Art. No. 85600LUX  
More info, page 8



A	452 mm / 17.8"	F	783 mm / 30.8"
B	139 mm / 5.5"	G	33 mm / 1.3"
C	113 mm / 4.5"	H	700 mm / 27.6"
D	50 mm / 2.0"	I	76 mm / 3.0"
E	120 mm / 4.7"	J	776 mm / 30.6"

## RANGE OF APPLICATION

Trade fairs / walkways / marketplaces / Christmas markets / workshops / warehouses / shopping centers / department stores / construction sites, streets, etc.

However, please ensure your compliance with road traffic regulations (higher than 75 mm / 3.0").

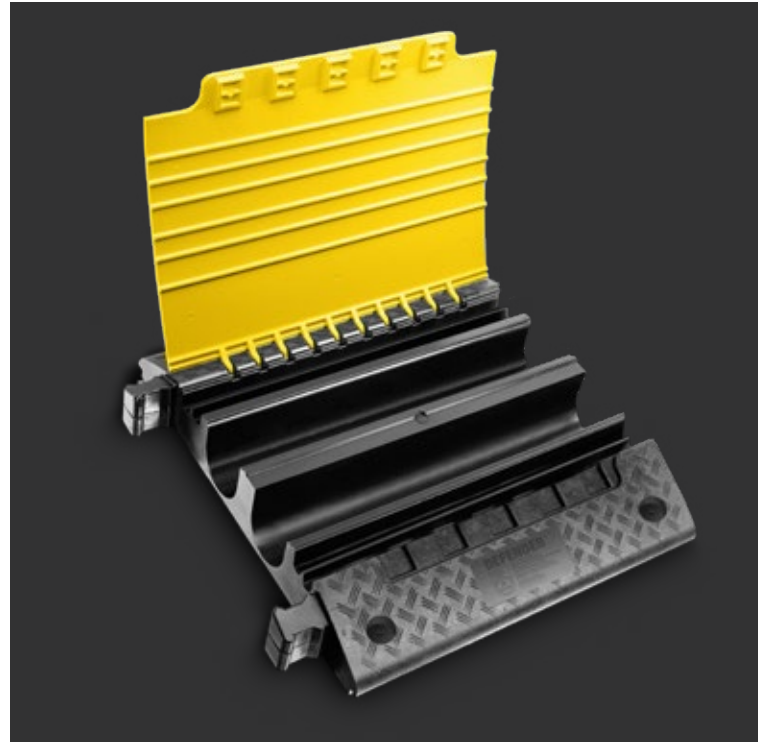
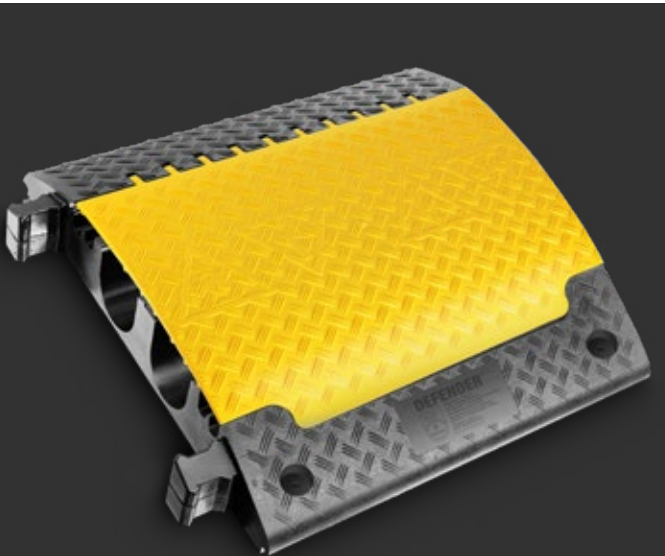
# DEFENDER® ULTRA L 2

## TWO ULTRA LARGE CHANNELS (2+4) – THE HEAVY-DUTY GIANT

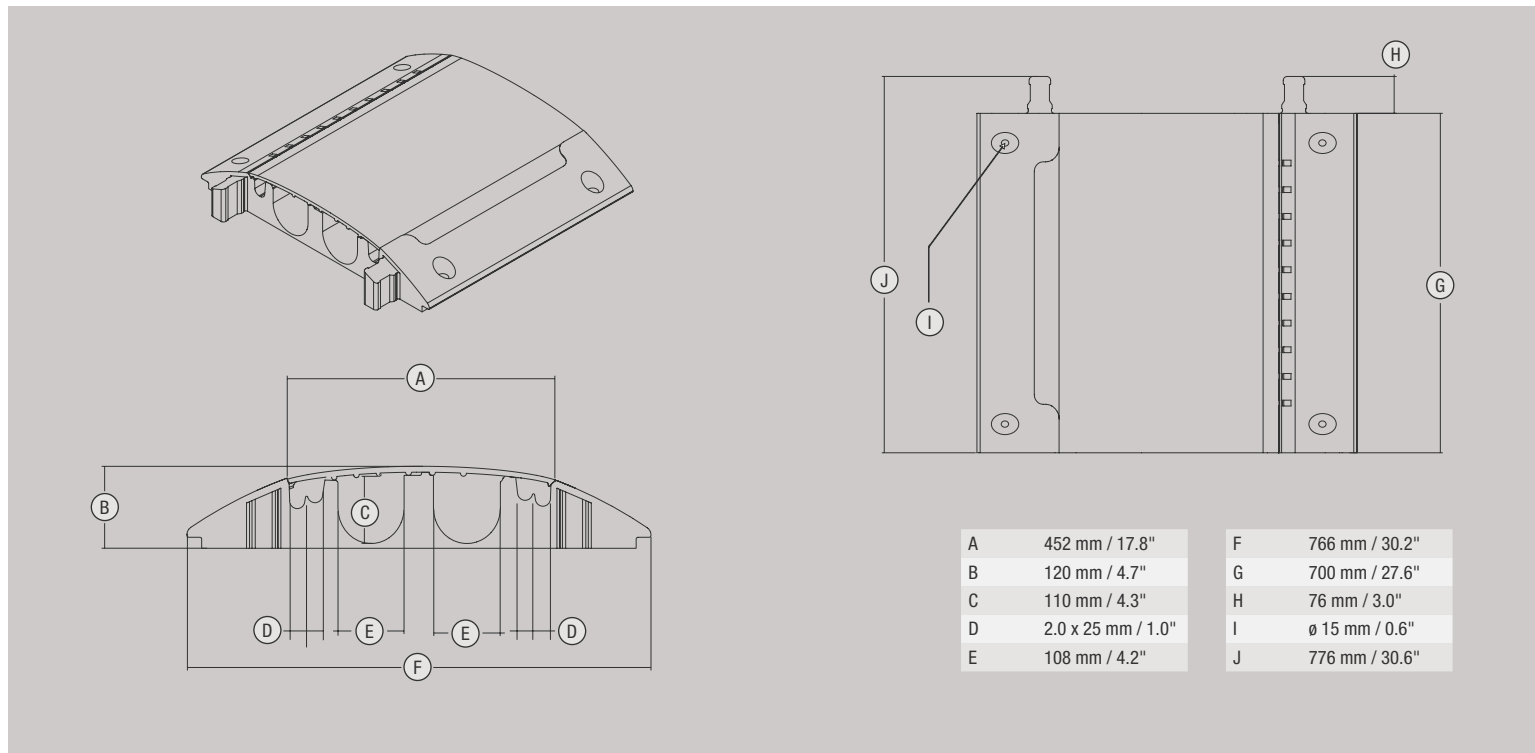
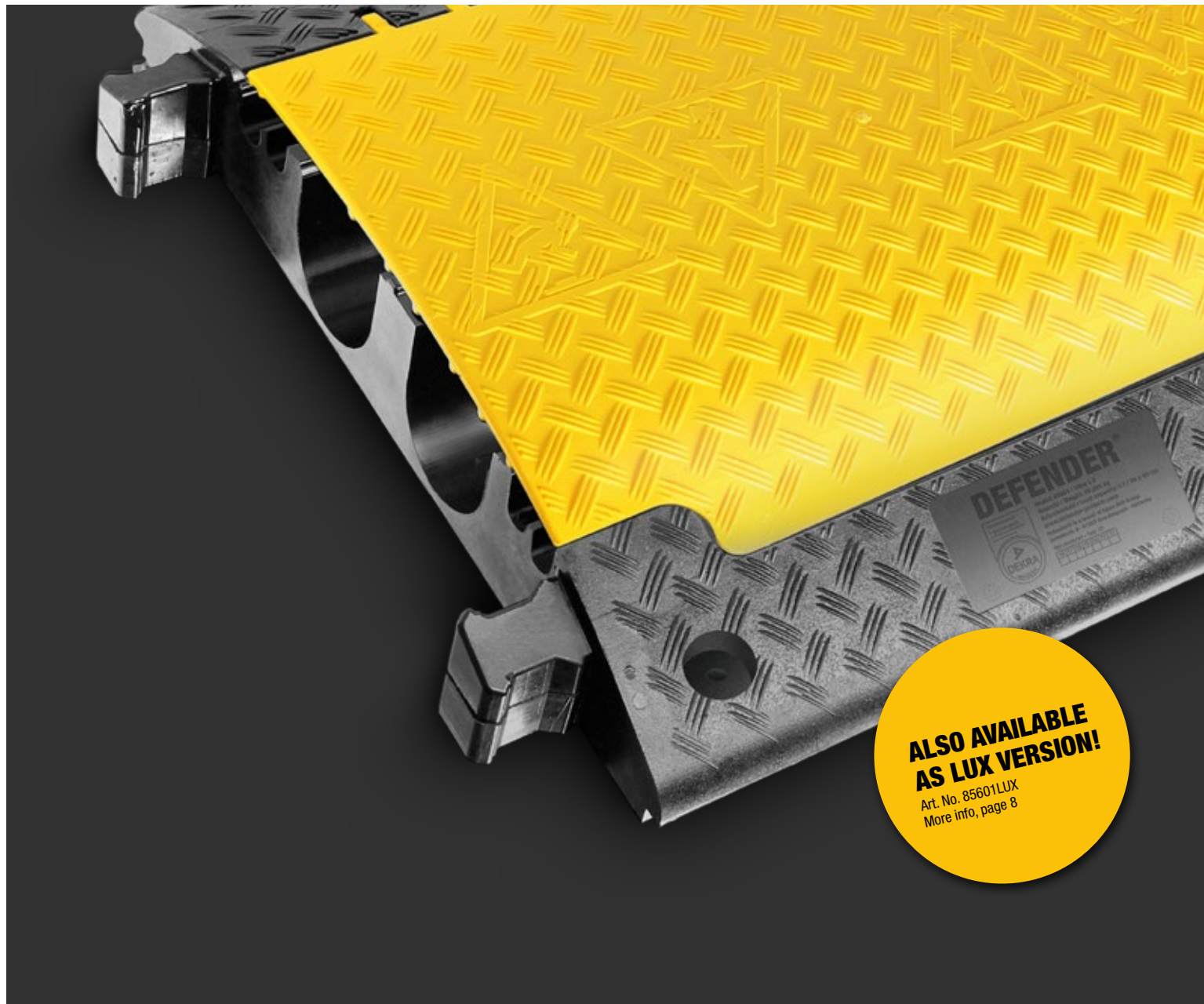
Ultra L 2 - heavy-duty cable crossovers are designed for the most demanding applications and feature two extra large cable channels of 108 x 110 mm / 4.2" x 4.3", plus four channels with 25 mm / 1.0" diameter and integrated connector plugs for easy coupling of several elements. The load bearing capacity is approx. 5.0 tons/11,023 lbs. on a 20 x 20 cm / 7.9" x 7.9" surface area. Therefore, Ultra L 2 cable crossovers are the ideal solution for heavy traffic, construction sites, warehouses, trade shows, carnivals, and music events, and other applications involving particularly heavy use. They are equipped with four fixation holes (ø 15 mm / 0.6") for street installation.

### SPECIFICATIONS:

Art. No.:	85601
Product:	2+4-channel cable protector
Channel W x H:	Diameter channel 1+2: 25 mm / 1.0" / Diameter channel 5+6: 25 mm / 1.0" Channel 3: 108 x 110 mm / 4.2" x 4.3" / Channel 4: 108 x 110 mm / 4.2" x 4.3"
Material:	TPU (thermoplastic polyurethane)
Shore A hardness:	88 ± 4
Load capacity:	approx. 5.0 tons/11,023 lbs. / 20 x 20 cm / 7.9" x 7.9" (typical tire footprint area)
Fire rating:	B2 (B1 also available)
Resistant to:	most acids, oils, gasoline
Operating temperature:	-30° to +60° C / -22° F to 140° F
Length:	700 mm / 27.6"
Width:	766 mm / 30.2"
Height:	120 mm / 4.7"
Weight:	28.3 kg / 62.4 lbs.







## RANGE OF APPLICATION

Trade fairs / walkways / marketplaces / Christmas markets / workshops / warehouses / shopping centres / department stores / construction sites, streets, etc.

However, please ensure your compliance with road traffic regulations (higher than 75 mm / 3.0").

# DEFENDER® XXL

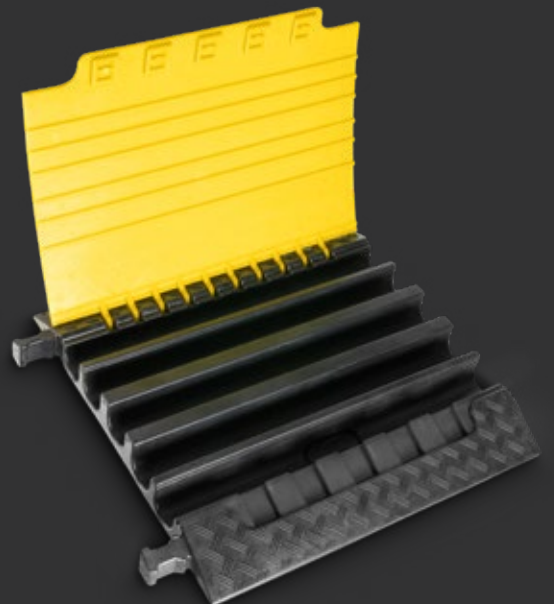
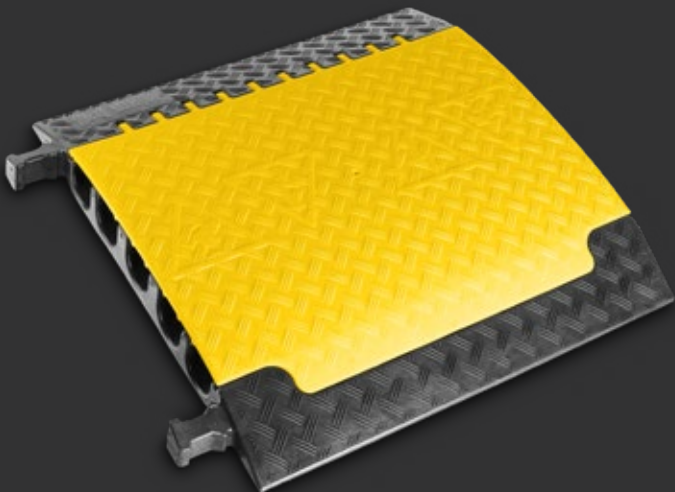
## FIVE XXL CHANNELS – THE HEAVY-DUTY ALLROUNDER

Developed for extreme work environments, the Defender® XXL cable protection system provides five channels for large cable and hose diameters, including three channels suitable for type C fire hoses (only hoses up to Ø62 mm / 2.4" - no coupling) as well as high voltage cables. Integrated dog bone connectors facilitate linking to form a rigid continuous protector. End ramps are available for secure cable entry and exit. With a 5.0 ton/11,023 lbs. per 20 x 20 cm / 7.9" x 7.9" load capacity, Defender® XXL protectors are ideal for heavy wheeled traffic, construction sites, warehouses, carnivals, fairs, and music events. Built-in handles are supplied for easy portability.

### SPECIFICATIONS:

Art. No.:	85500
Product:	Five-channel cable protector
Channel W x H:	61 x 59 mm / 2.4" x 2.3" (channels 1 and 5), 62 x 65 mm / 2.4" x 2.6" (channels 2 and 4), 60 x 63 mm / 2.4" x 2.5" (channel 3)
Material:	TPU (thermoplastic polyurethane)
Shore A hardness:	88 ± 4
Load capacity:	approx. 5.0 ton/11,023 lbs. / 20 x 20 cm / 7.9" x 7.9" (typical tire footprint area)
Fire rating:	B2 (B1 also available)
Resistant to:	most acids, oils, gasoline
Operating temperature:	-30° to +60° C / -22° F to 140° F
Length:	700 mm / 27.6"
Width:	696 mm / 27.4"
Height:	87 mm / 3.4"
Weight:	21.4 kg / 47.2 lbs.

**DEFENDER® XXL End Ramp, connectors included**  
Art. No.: 85510

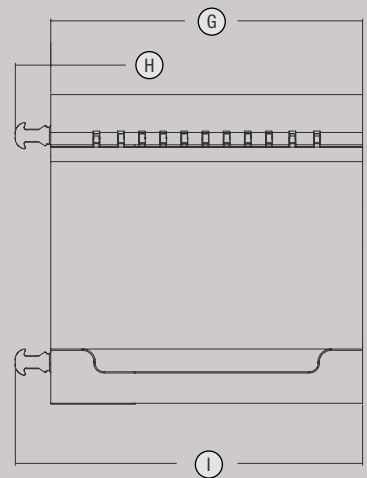
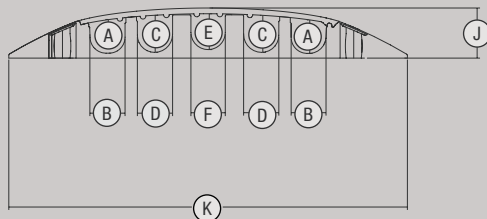
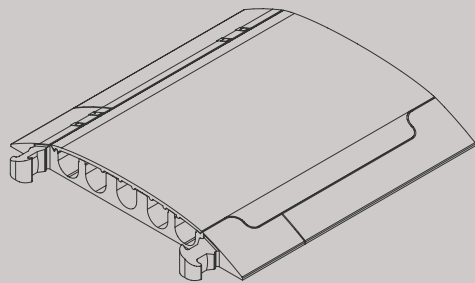






**ALSO AVAILABLE  
AS LUX VERSION!**  
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Art. No. **85510**



A	59 mm / 2.3"
B	61 mm / 2.4"
C	65 mm / 2.6"
D	62 mm / 2.4"
E	63 mm / 2.5"
F	60 mm / 2.4"

G	700 mm / 27.6"
H	80 mm / 3.0"
I	780 mm / 30.7"
J	87 mm / 3.4"
K	696 mm / 27.4"

## RANGE OF APPLICATION

Trade fairs / walkways / marketplaces / Christmas markets / workshops / warehouses / shopping centers / department stores / construction sites, streets, etc.

# DEFENDER® 3

## THREE BIG CHANNELS – MOST POPULAR

Featuring a 73 mm / 2.9" profile, 45° curve, and end ramps with detachable dovetail connectors, the Defender® 3 cable protection system provides versatile cable routing and safe crossing for vehicles and pedestrians. With three medium large channels, built-in handles for easy portability, and a 5.0 ton/11,023 lbs. per 20 x 20 cm / 7.9" x 7.9" load capacity, the 73 mm / 2.9" profile Defender® 3 cable protectors are the perfect all-round choice for a wide variety of applications, including heavy wheeled traffic, construction sites, warehouses, carnivals, fairs, trade shows, exhibitions, shopping malls, and music events.

### SPECIFICATIONS:

Art. No.:	85002
Product:	Three-channel cable protector
Channel W x H:	52 x 49 mm / 2.1" x 2.0" (channels 1 and 3), 45 x 50 mm / 1.8" x 2.0" (channel 2)
Material:	TPU (thermoplastic polyurethane)
Shore A hardness:	88 ± 4
Load capacity:	5.0 ton/11,023 lbs. / 20 x 20 cm / 7.9" x 7.9" (typical tire footprint area)
Fire rating:	B2 (B1 also available)
Resistant to:	most acids, oils, gasoline
Operating temperature:	-30° to +60° C / -22° F to 140° F
Length:	1,000 mm / 39.4"
Width:	600 mm / 23.6"
Height:	73 mm / 2.9"
Weight:	22 kg / 48.5 lbs.

### DEFENDER® 3 45° Curve with detachable lid and two dovetail connectors

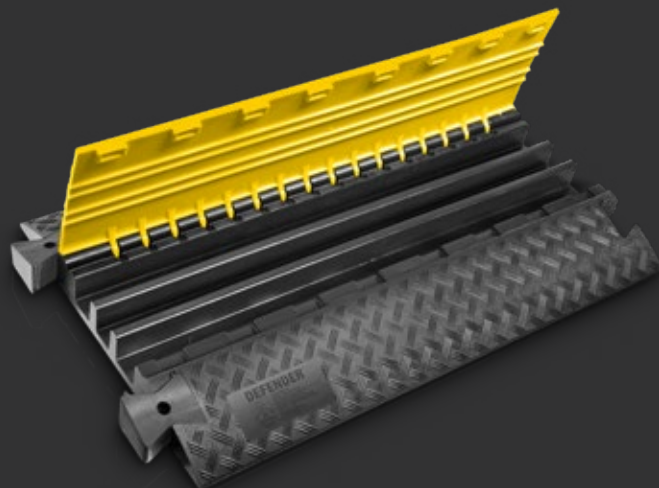
Art. No.: **85009**

### DEFENDER® 3 End Ramp

Art. No.: **85008**

### DEFENDER® 3 Dovetail Connector

Art. No.: **85004**



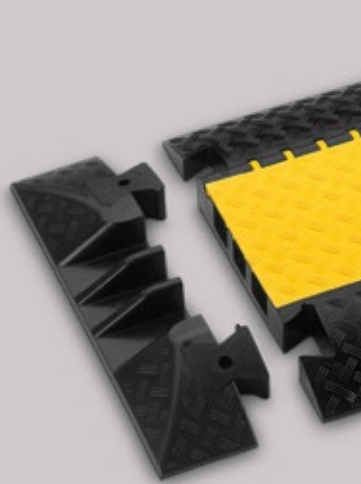




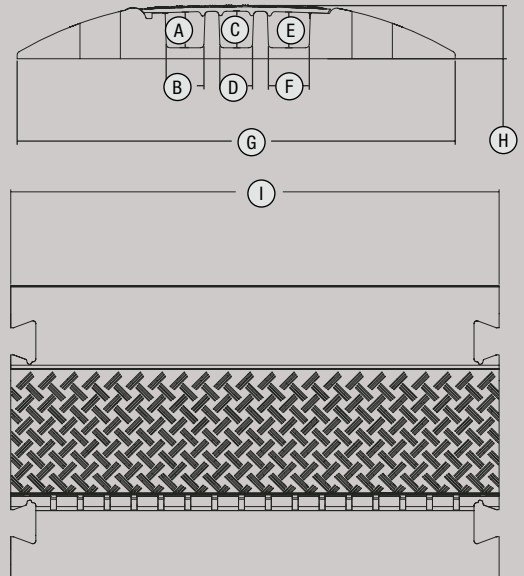
Art. No. **85009**



Art. No. **85008**



Art. No. **85004**



A 49 mm / 2.0"

B 52 mm / 2.1"

C 50 mm / 2.0"

D 45 mm / 1.8"

E 49 mm / 2.0"

F 56 mm / 2.2"

G 600 mm / 23.6"

H 73 mm / 2.9"

I 1,000 mm / 39.4"

## RANGE OF APPLICATION

Trade fairs / walkways / marketplaces / Christmas markets / workshops / warehouses / shopping centers / department stores / construction sites, streets, etc.

# DEFENDER® MIDI

## FIVE MEDIUM CHANNELS – THE SOLUTION FOR NEARLY ANYTHING

The Defender® MIDI cable protection system has been designed for maximum routing versatility and secure crossings. Featuring a low profile, 5.0 ton/11,023 lbs. per 20 x 20 cm / 7.9" x 7.9" load capacity, integrated connectors and handles, the straight ramp, 45° curve, and end ramps are easily linked to form a continuous cable guard while five 34 x 36 mm / 1.3" x 1.4" channels allow for individual sound, lighting, and power line arrangement. Defender® MIDI cable protectors are ideal for a multitude of usages such as heavy wheeled traffic, construction sites, warehouses, carnivals, fairs, trade shows, exhibitions, shopping malls, broadcasting, and music events. Available system option: wheelchair ramp (see page 34).

### SPECIFICATIONS:

Art. No.:	85300
Product:	Five-channel cable protector
Channel W x H:	34 x 36 mm / 1.3" x 1.4" (channels 1 to 5)
Material:	TPU (thermoplastic polyurethane)
Shore A hardness:	88 ± 4
Load capacity:	approx. 5.0 ton/11,023 lbs. / 20 x 20 cm / 7.9" x 7.9" (typical tire footprint area)
Fire rating:	B2 (B1 also available)
Resistant to:	most acids, oils, gasoline
Operating temperature:	-30° to +60° C / -22° F to 140° F
Length:	890 mm / 35"
Width:	542 mm / 21"
Height:	52 mm / 2.0"
Weight:	11.5 kg / 25.4 lbs.

### DEFENDER® MIDI 45° Curve for Defender Midi

Connectors are detachable and can be mounted on both sides.

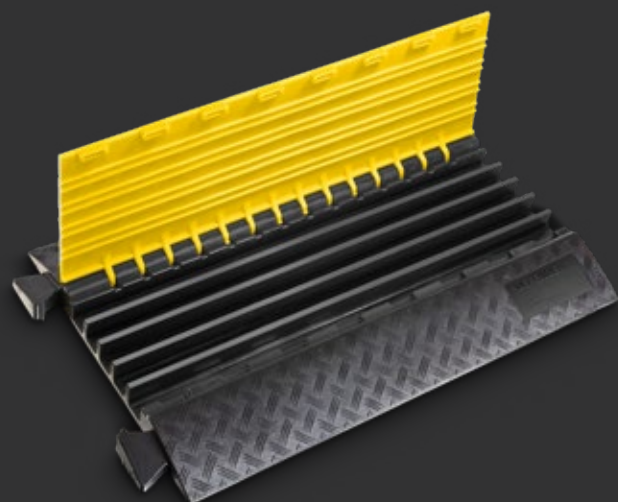
Art. No.: **85310**

### DEFENDER® MIDI End Ramp, connectors included

Art. No.: **85308**

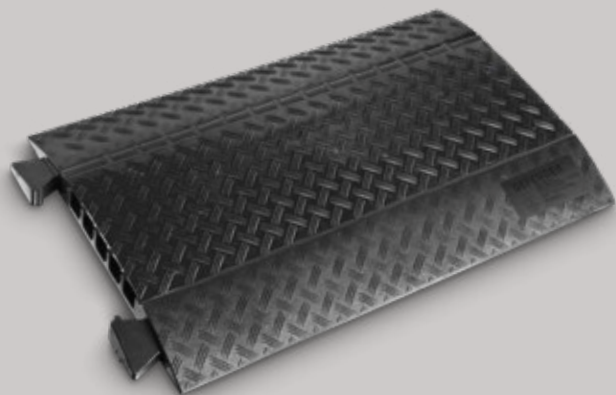
### DEFENDER® Wheelchair Ramp

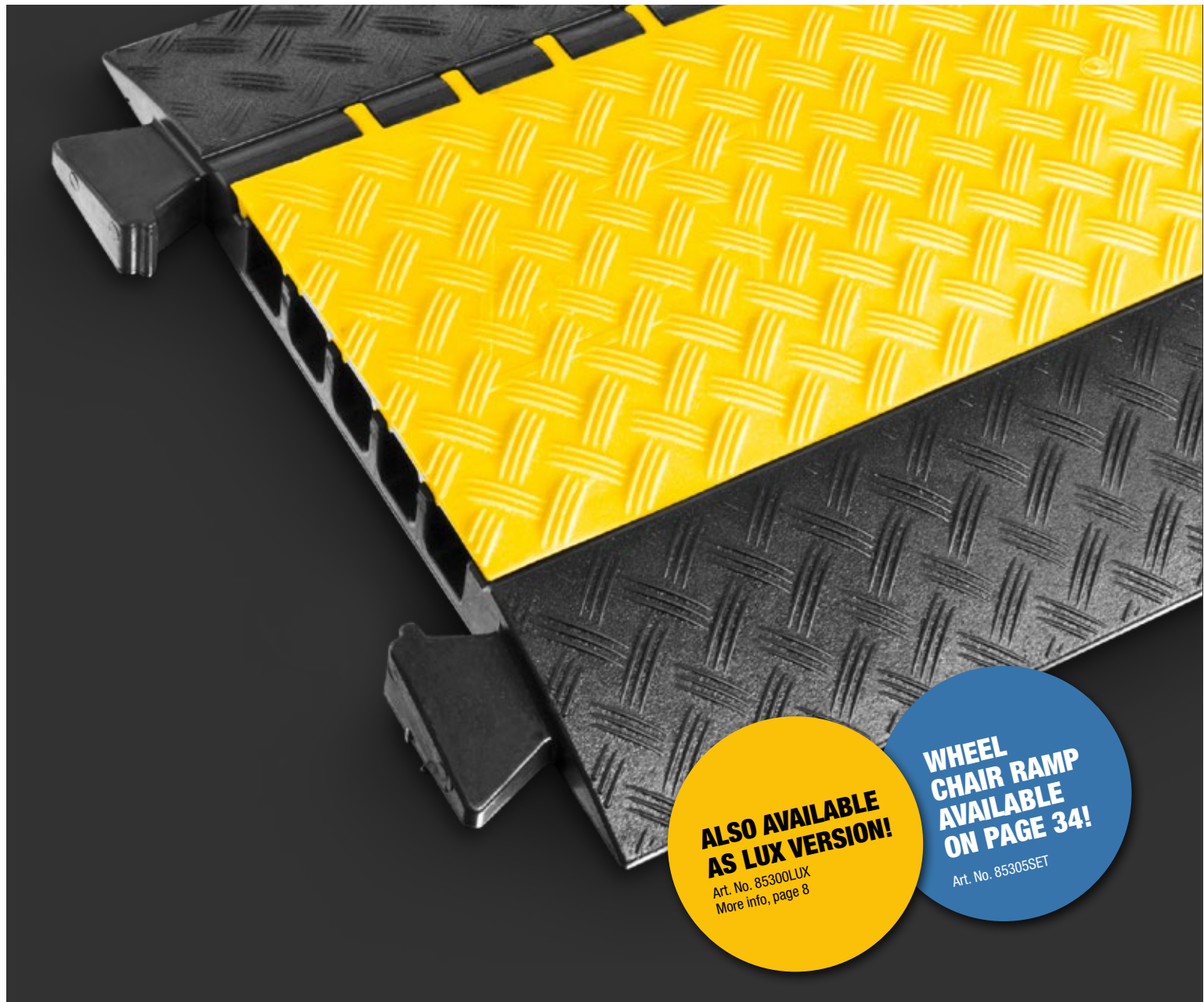
Art. No.: **85305SET** (for detailed information, see page 34)



20

With black lid  
Art. No. **85300BLK**

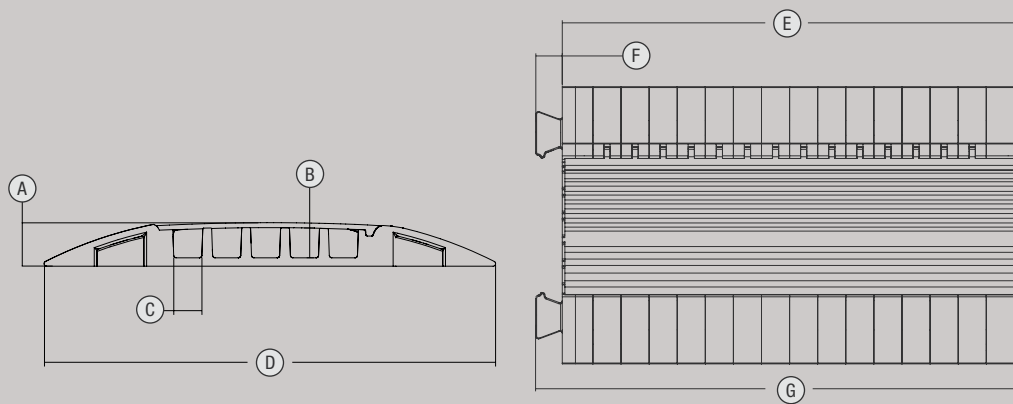




Art. No. **85310**



Art. No. **85308**



A	52 mm / 2.0"
B	36 mm / 1.4"
C	34 mm / 1.3"
D	542 mm / 21.3"

E	890 mm / 35"
F	52 mm / 2.0"
G	942 mm / 37"



## RANGE OF APPLICATION

Trade fairs / walkways / marketplaces / Christmas markets / workshops / warehouses / shopping centers / department stores / construction sites, streets, etc.

# DEFENDER® MIDI 4C

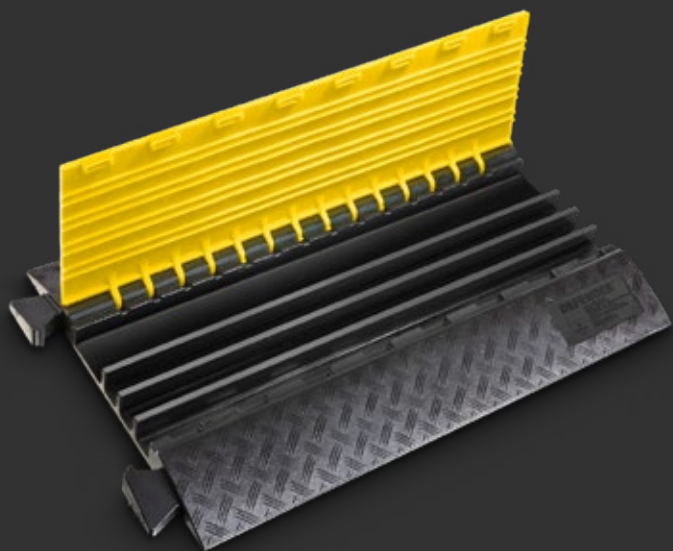
## FOUR MEDIUM CHANNELS – ONE BIG CHANNEL FOR FIRE HOSE

With one wide 80 x 36 mm / 3.2" x 1.4" channel and three 34 x 36 mm / 1.3" x 1.4" ducts, the Defender® MIDI 4C cable protection system is the perfect choice when a lay flat hose must be run next to separate sound, lighting, and power lines. Featuring integrated connectors, the low profile and 5.0 ton/11,023 lbs. per 20 x 20 cm / 7.9" x 7.9" load capacity of the Defender® MIDI system MIDI 4C protectors are suitable for heavy wheeled traffic, construction sites, warehouses, carnivals, fairs, trade shows, exhibitions, shopping malls, and music events.

### SPECIFICATIONS:

Art. No.:	85301
Product:	Four-channel cable protector
Channel W x H:	34 x 36 mm / 1.3" x 1.4" (channels 1 to 3), 80 x 36 mm / 3.2" x 1.4" (channel 4)
Material:	TPU (thermoplastic polyurethane)
Shore A hardness:	88 ± 4
Load capacity:	Approx. 5.0 ton/11,023 lbs. per typical tire imprint (20 x 20 cm / 7.9" x 7.9")
Fire rating:	B2 (B1 also available)
Resistant to:	most acids, oils, gasoline
Operating temperature:	-30° to +60° C / -22° F to 140° F
Length:	890 mm / 35"
Width:	542 mm / 21.3"
Height:	52 mm / 2.0"
Weight:	11.5 kg / 25.4 lbs.

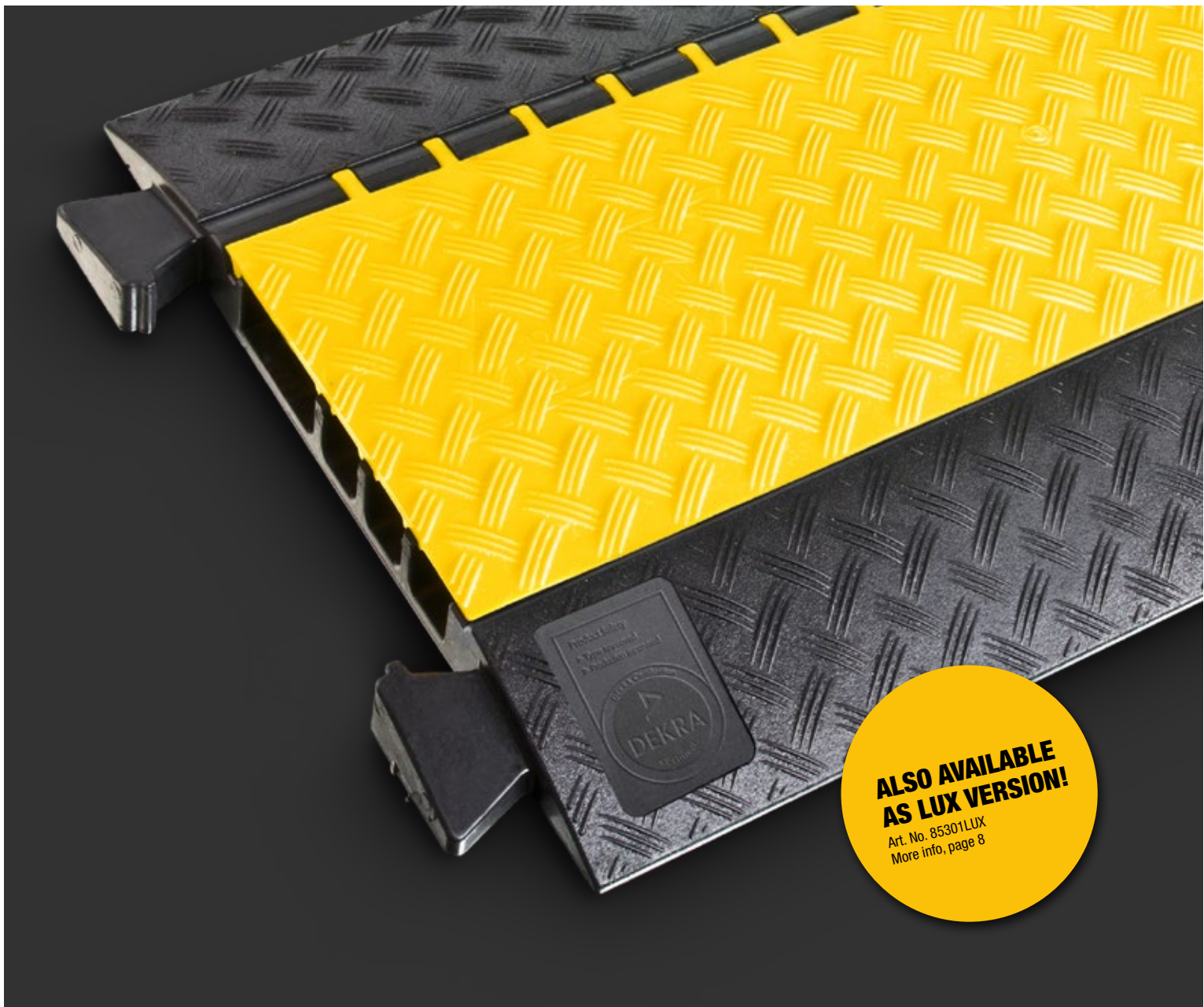
**DEFENDER® MIDI 4C End Ramp,**  
**connectors included**  
Art. No.: **85308**



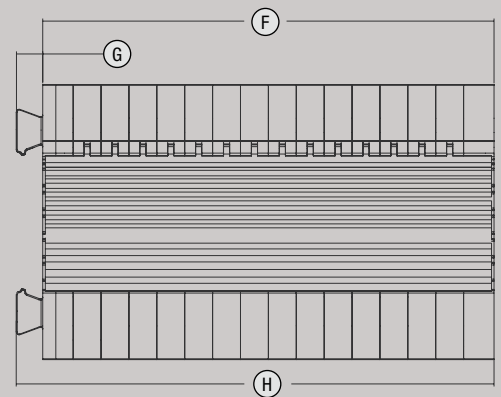
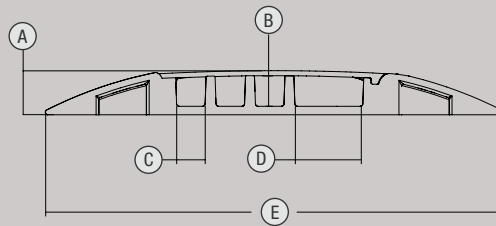
22

With black lid  
Art. No. **85301BLK**





Art. No. **85308**



A	52 mm / 2.0"	E	542 mm / 21.3"
B	36 mm / 1.4"	F	890 mm / 35"
C	34 mm / 1.3"	G	52 mm / 2.0"
D	80 mm / 3.2"	H	942 mm / 37.1"

## RANGE OF APPLICATION

Trade fairs / walkways / marketplaces / Christmas markets / workshops / warehouses / shopping centers / department stores / construction sites, streets, etc.

# DEFENDER® MINI

## THREE SMALL CHANNELS – THE LIGHTWEIGHT CHAMPION

Available with a choice of black or yellow lids, the Defender® MINI cable protection system is ideal for both indoor and outdoor use. The compact, low profile three-channel ramp with integrated dog bone connectors features a slip-resistant underside for superior grip on a wide variety of surfaces. Male and female end ramps are available to provide secure and tidy cable entry and exit. With a 2.0 ton/4,409 lbs. per 20 x 20 cm / 7.9" x 7.9" load capacity, Defender® MINI protectors support lightweight vehicles, carts, and pedestrian traffic. Applications include carnivals, fairs, trade shows, exhibitions, shopping malls, warehouses, stages, studios, and broadcasting. Not suitable for road traffic.

### SPECIFICATIONS:

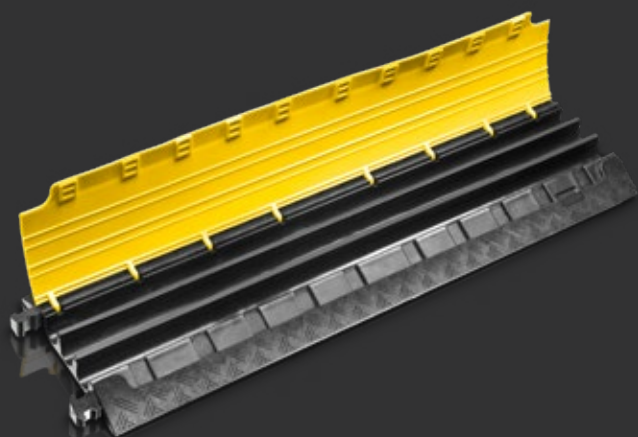
Art. No.:	85200
Product:	Three-channel cable protector
Channel W x H:	35 x 30 mm / 1.4" x 1.2" (channels 1 and 3), 35 x 35 mm / 1.4" x 1.4" (channel 2)
Material:	TPU (thermoplastic polyurethane)
Shore A hardness:	88 ± 4
Load capacity:	approx. 2.0 ton/4,409 lbs. / 20 x 20 cm / 7.9" x 7.9" (typical tire footprint area)
Fire rating:	B2 (B1 also available)
Resistant to:	most acids, oils, gasoline
Operating temperature:	-30° to +60° C / -22° F to 140° F
Length:	1,000 mm / 39.4"
Width:	290 mm / 11.4"
Height:	48 mm / 1.9"
Weight:	5.0 kg/11 lbs.

### DEFENDER® MINI End Ramp female

Art. No.: **85208F**

### DEFENDER® MINI End Ramp male

Art. No.: **85208M**

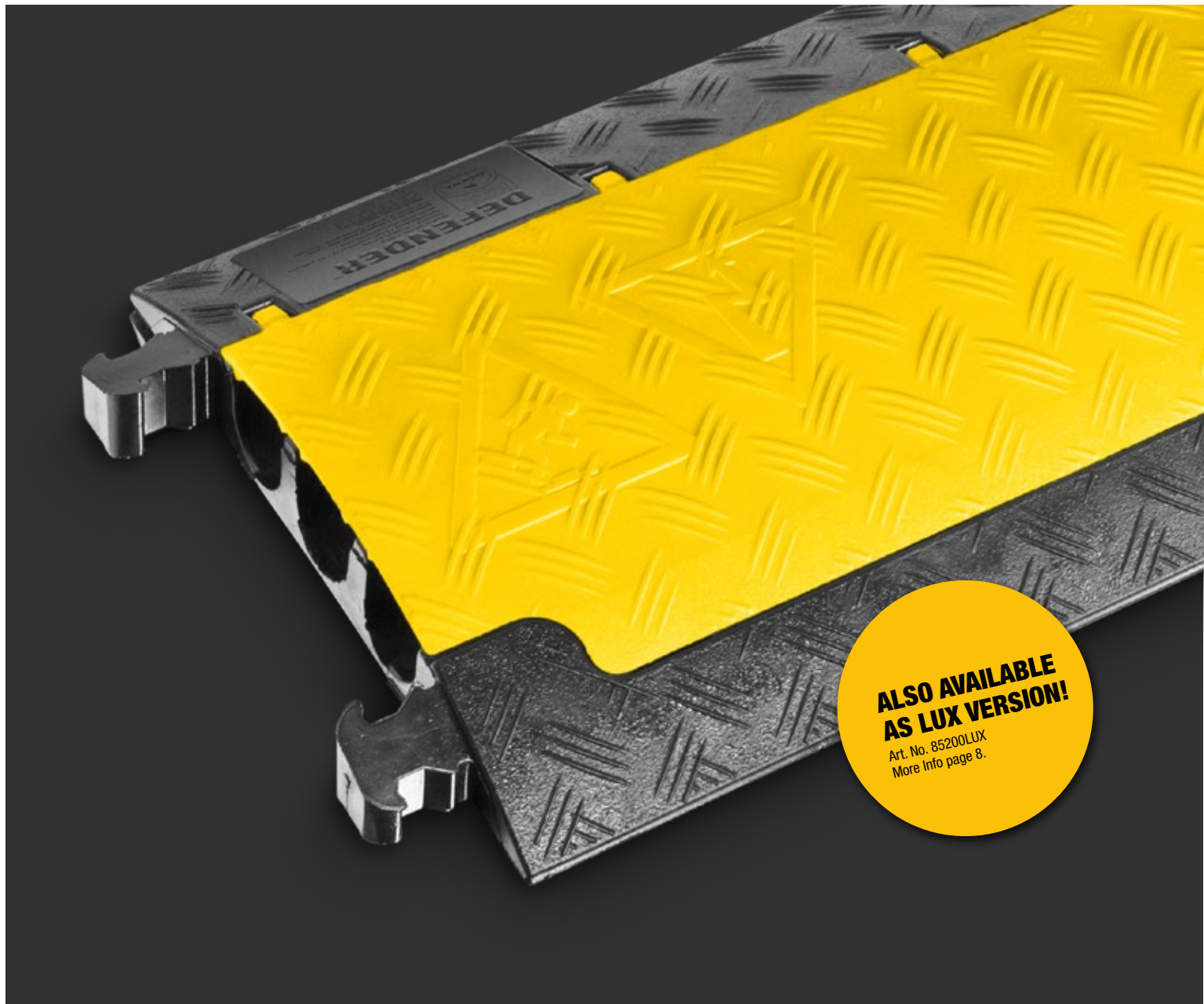


24

With black lid  
Art. No. **85200BLK**

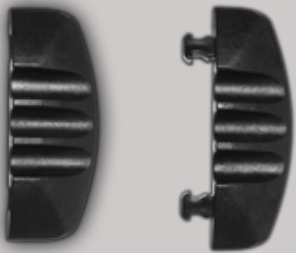






Art. No. **85208F**

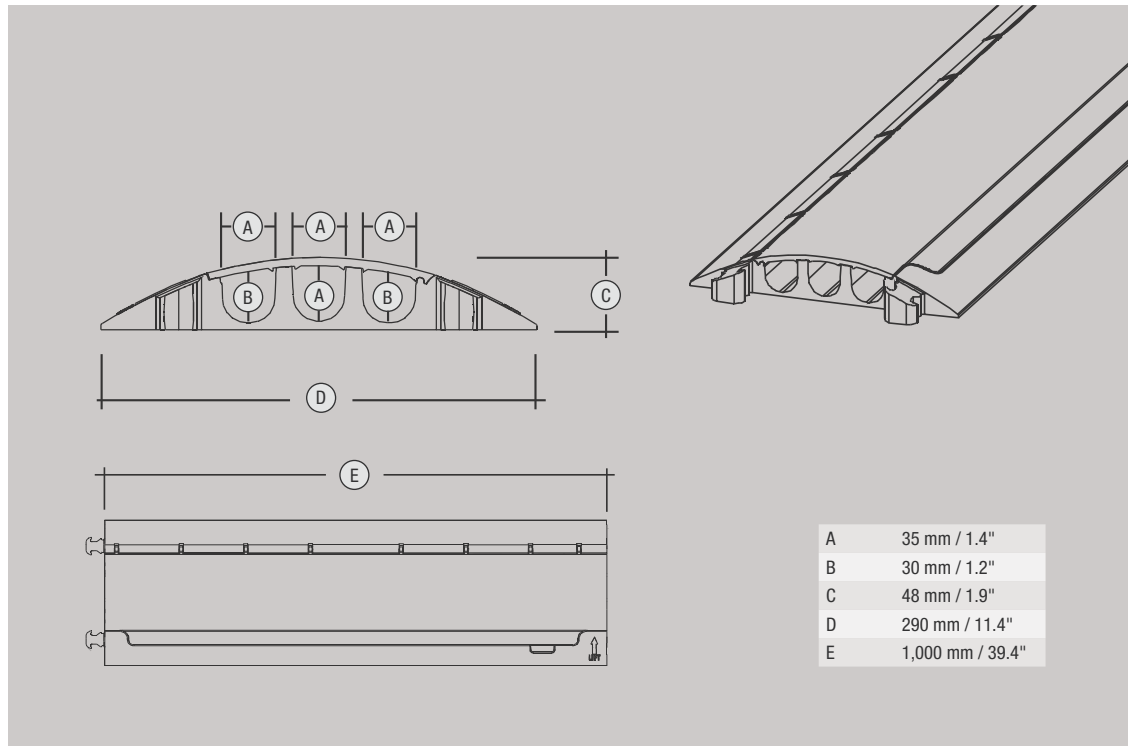
Art. No. **85208M**



Art. No. **85210L**



Art. No. **85210R**



A	35 mm / 1.4"
B	30 mm / 1.2"
C	48 mm / 1.9"
D	290 mm / 11.4"
E	1,000 mm / 39.4"

## RANGE OF APPLICATION

Trade fairs / walkways / marketplaces / Christmas markets / workshops / warehouses / shopping centers / department stores / construction sites, streets, etc.

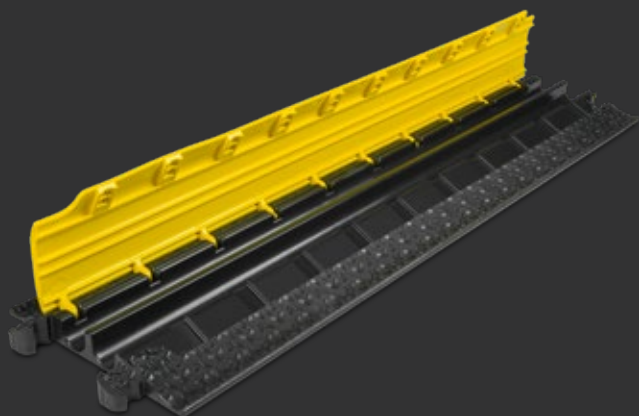
# DEFENDER® MICRO 2

## 2 SMALL CHANNELS – THE MICRO MAESTRO

The compact Defender® MICRO cable protector is ideally suited to indoor and outdoor use such as at exhibitions and trade fairs and in shopping centres, stages or studios. It has two 35 x 30 mm cable guides for high-power cables and water hoses. With a maximum load capacity of 2 tons per 20 x 20 cm area, MICRO cable protectors are able to withstand vehicles, trolleys and pedestrians. Their high level of tread and slip resistance is derived from the LaserGrip® surface with its special structure and unique design. Extremely breakage-resistant TPU material ensures the durability of the robust cable protector.

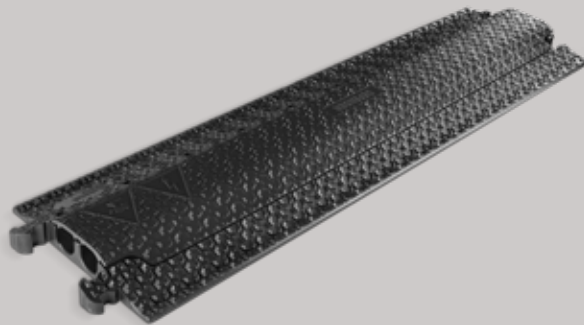
### SPECIFICATIONS:

Art. No.:	86100
Product:	Two-channel cable protector
Channel W x H:	35 x 30 mm / 1.4" x 1.2" (channels 1 and 3), 35 x 30 mm / 1.4" x 1.2" (channel 2)
Material:	TPU (thermoplastic polyurethane)
Shore A hardness:	88 ± 4
Load capacity:	approx. 2.0 ton/4,409 lbs. / 20 x 20 cm / 7.9" x 7.9"
Fire rating:	B2
Resistant to:	acids, oils, petrol
Operating temperature:	-30° to +60° C / -22° F to 140° F
Length:	1,005 mm / 39.6"
Width:	273 mm / 10.7"
Height:	48 mm / 1.9"
Weight:	5.2 kg/11.5 lbs.
Special feature:	DEKRA-certified



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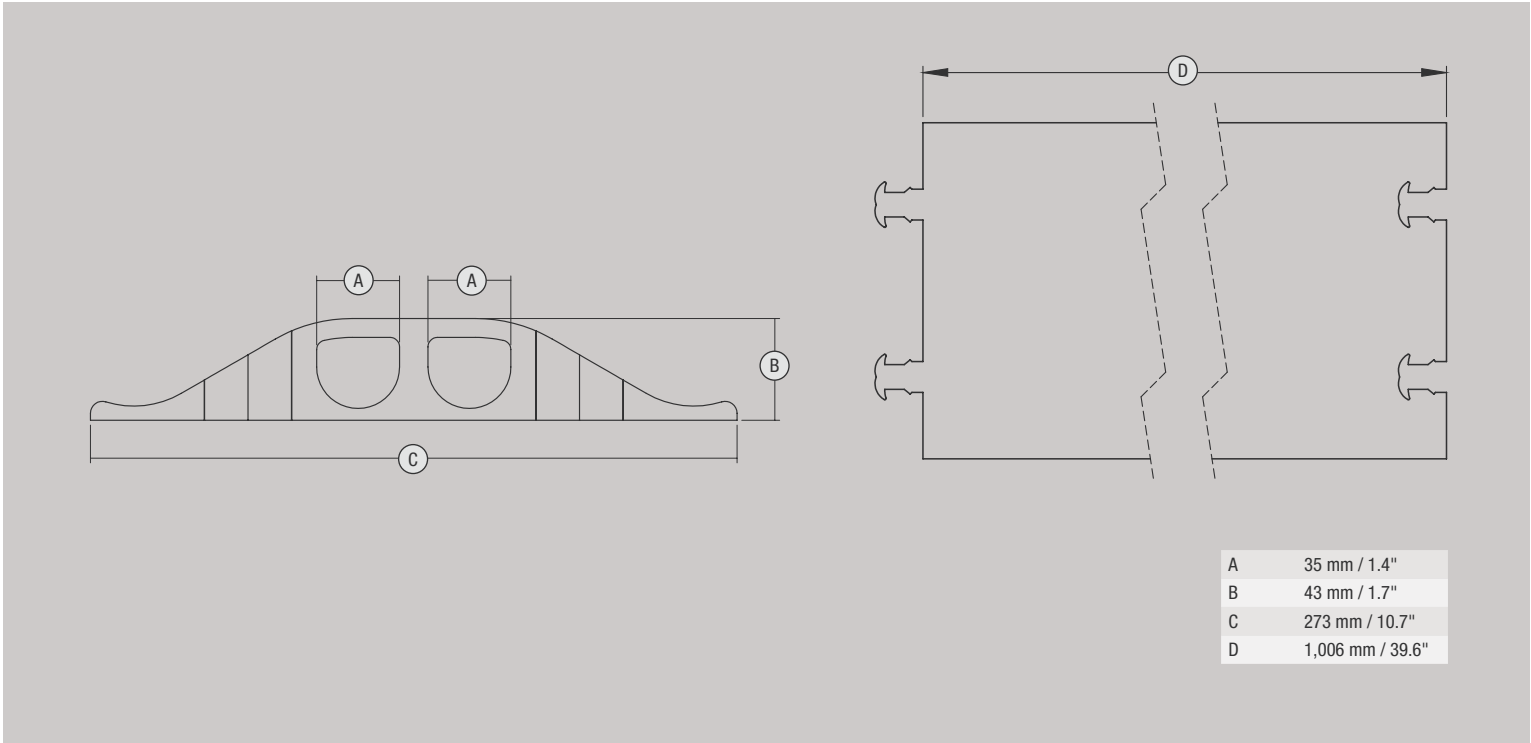
With black lid  
Art. No. **86100BLK**





**NEW!**  
**3D LASERGRIP®**  
**SURFACE**

**ALSO AVAILABLE  
 AS LUX VERSION!**  
 Art. No. 86100LUX  
 More info, page 8



A	35 mm / 1.4"
B	43 mm / 1.7"
C	273 mm / 10.7"
D	1,006 mm / 39.6"



## RANGE OF APPLICATION

Trade fairs / walkways / marketplaces / Christmas markets / workshops / warehouses / shopping centers / department stores / construction sites, streets, etc.

# DEFENDER® NANO

## SIX SLIM CHANNELS – DISCRETE OUTDOOR / INDOOR PROTECTION

Providing convenient wheelchair access, the Defender® NANO cable protection system is the ultra low profile solution for a wide range of indoor and outdoor applications. Available with black or yellow lid, Defender® NANO protectors feature six channels for clean and tidy cable arrangement, T-shaped connectors, and a 2.0 ton/4,409 lbs. per 20 x 20 cm / 7.9" x 7.9" load capacity to support lightweight vehicles, carts, and pedestrian traffic but also forklifts and pallet trucks, thanks to their low height design. Male and female end ramps are available to provide secure cable entry and exit.

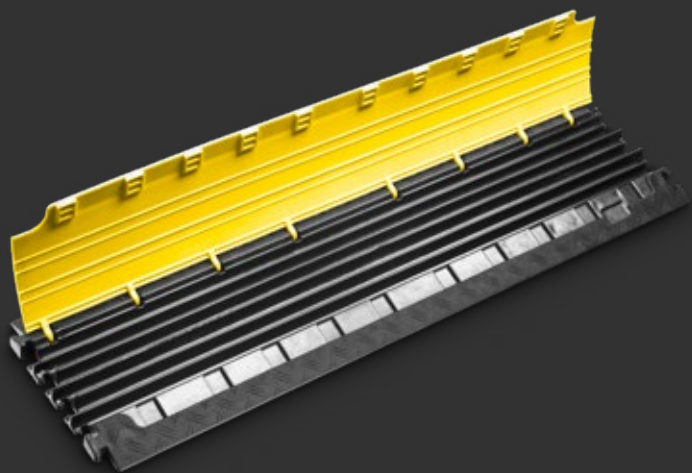
The Defender® NANO protection system is ideal for carnivals, fairs, trade shows, exhibitions, shopping malls, warehouses, stages, studios, and broadcasting. Not suitable for road traffic.

### SPECIFICATIONS:

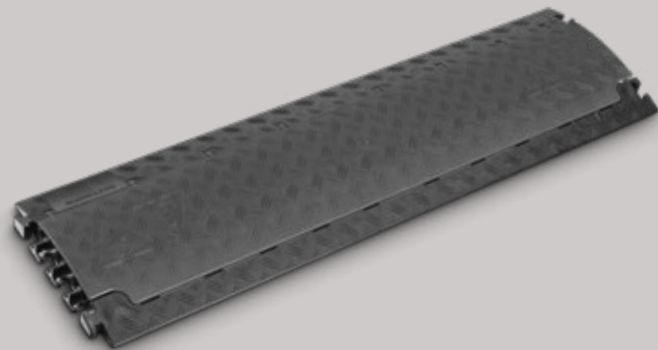
Art. No.:	85150
Product:	Six-channel cable protector
Channel W x H:	17 x 18 mm / 0.7" x 0.7" (channels 1 to 6)
Material:	TPU (thermoplastic polyurethane)
Shore A hardness:	88 ± 4
Load capacity:	approx. 2.0 ton/4,409 lbs. / 20 x 20 cm / 7.9" x 7.9" (typical tire footprint area)
Fire rating:	B2 (B1 also available)
Resistant to:	most acids, oils, gasoline
Operating temperature:	-30° to +60° C / -22° F to 140° F
Length:	1,000 mm / 39"
Width:	280 mm / 11"
Height:	32 mm / 1.3"
Weight:	4.37 kg / 9.6 lbs.

**DEFENDER® NANO End Ramp female**  
Art. No.: **85158F**

**DEFENDER® NANO End Ramp male**  
Art. No.: **85158M**



With black lid  
Art. No. **85150BLK**





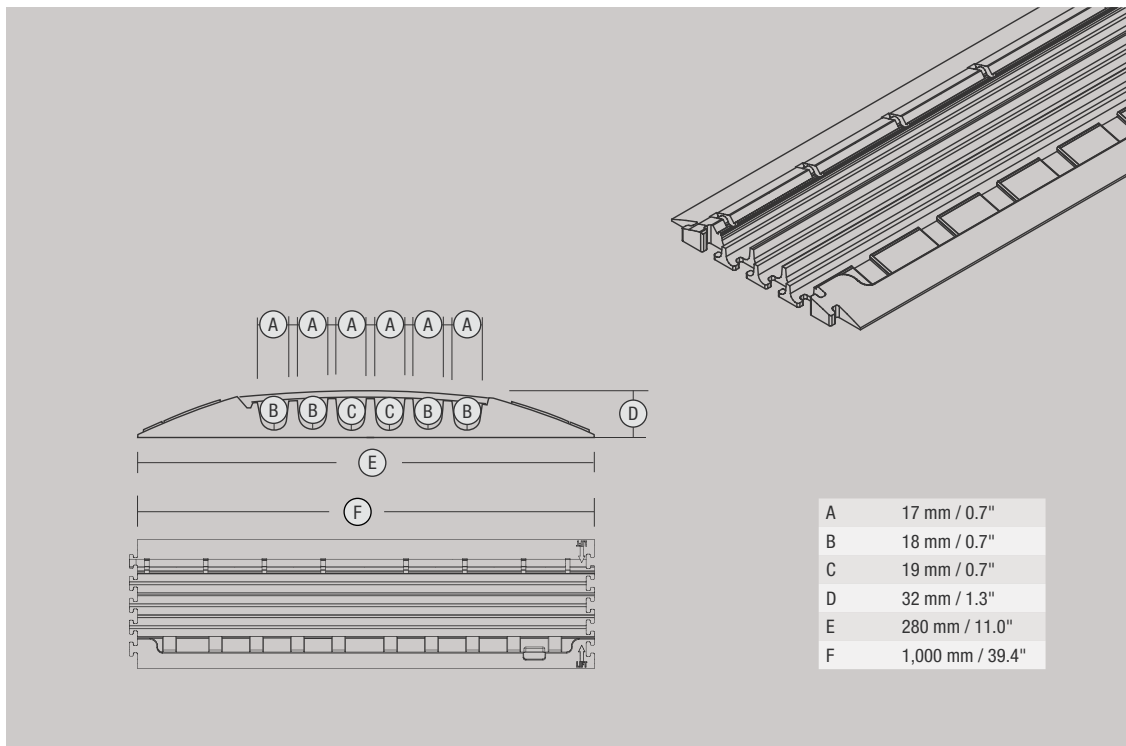
**ALSO AVAILABLE  
AS LUX VERSION!**

Art. No. 85150LUX  
More info, page 8

Art. No. **85158F**



Art. No. **85158M**



## RANGE OF APPLICATION

Mainly in halls, trade fairs, etc.

# DEFENDER<sup>®</sup> COMPACT

## SEVEN SMALL CHANNELS – THE DROP OVER SOLUTION

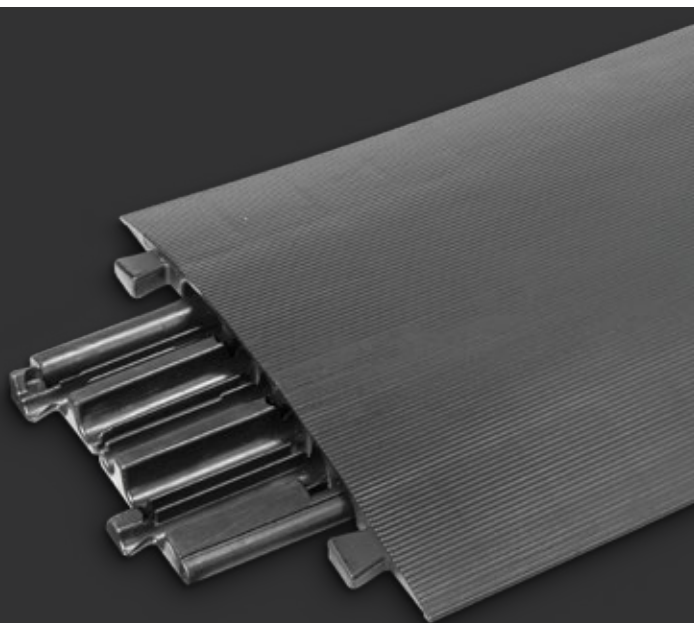
The Defender<sup>®</sup> COMPACT drop-over cable protector is a durable light-duty solution to guard cable lines and prevent tripping hazards. Featuring a ribbed surface for excellent traction and integrated dovetail connectors, Defender<sup>®</sup> COMPACT drop-over cable ramps are suitable for pedestrian traffic in offices, shopping malls, conference facilities, trade shows and markets, as well as stage and studio applications.

### DEFENDER<sup>®</sup> COMPACT WITH BASE (85100 + 85103)

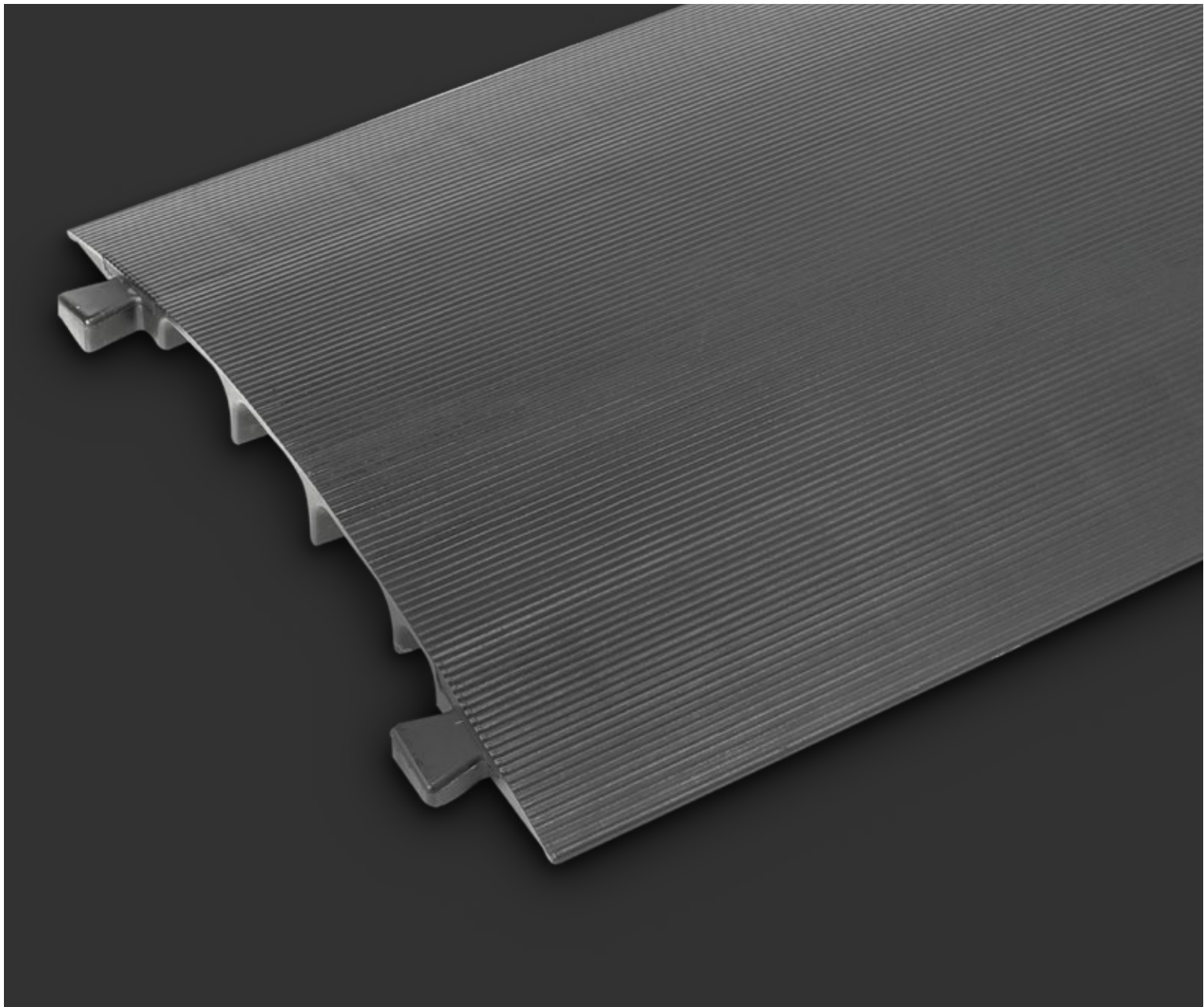
Attached to the optional five-channel base, the Defender<sup>®</sup> COMPACT drop-over cable protector transforms into a heavy-duty guard with high load capacity to support trucks, forklifts, and other vehicles. The ribbed surface provides excellent traction while integrated connectors on the base and drop-over facilitate line up to form a rigid continuous protection system. The range of applications includes construction sites, carnivals, fairs, trade shows, exhibitions, warehouses, shopping malls, and music events.

#### SPECIFICATIONS:

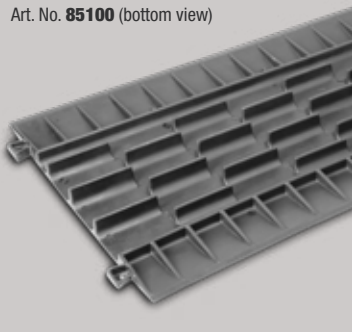
Art. No.:	85100	85103 (base), 85100 (drop-over)
Product:	Seven-channel cable protector	Five-channel cable protector
Channel W x H:	28 x 23 mm / 1.1" x 0.9" (channels 1 and 7), 28 x 27 mm / 1.1" x 1.1" (channels 2 and 6), 28 x 29 mm / 1.1" x 1.1" (channels 3 and 5), 28 x 30 mm / 1.1" x 1.1" (channel 4)	22 x 21 mm / 0.9" x 0.9" (channels 1 to 5)
Material:	TPU (thermoplastic polyurethane)	TPU (thermoplastic polyurethane)
Shore A hardness:	88 ± 4	88 ± 4
Load capacity:	see description above	see description above
Fire rating:	B2 (B1 also available)	B2 (B1 also available)
Resistant to:	most acids, oils, gasoline	most acids, oils, gasoline
Operating temperature:	-30° to +60° C / -22° F to 140° F	-30° to +60° C / -22° F to 140° F
Length:	800 mm / 31.5"	800 mm / 31.5"
Width:	430 mm / 16.9"	430 mm / 16.9"
Height:	40 mm / 1.6"	40 mm / 1.6"
Weight:	3.5 kg / 7.7 lbs	7 kg / 15.4 lbs (base with drop-over)



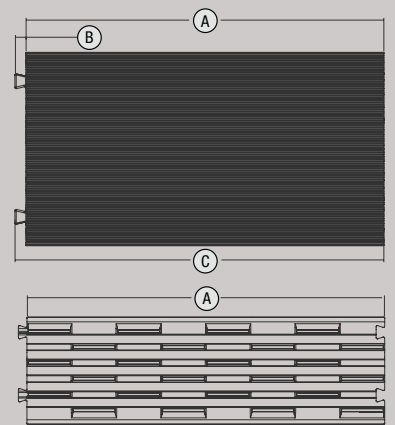
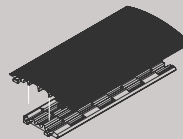
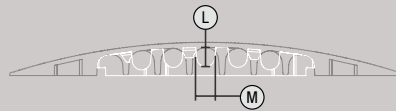
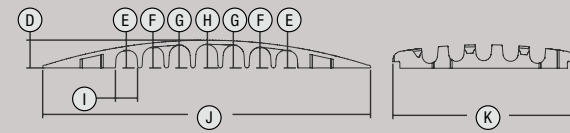
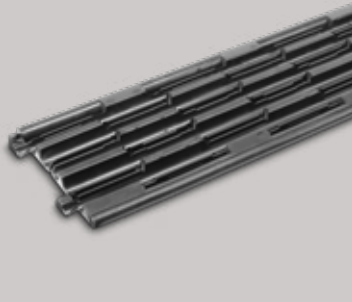




Art. No. **85100** (bottom view)



Art. No. **85103**



A	800 mm / 31.5"	H	30 mm / 1.1"
B	25 mm / 1.0"	I	28 mm / 1.1"
C	830 mm / 32.7"	J	435 mm / 17"
D	37 mm / 1.5"	K	241 mm / 9.5"
E	23 mm / 0.9"	L	21 mm / 0.9"
F	27 mm / 1.1"	M	22 mm / 0.9"
G	29 mm / 1.1"		

## RANGE OF APPLICATION

Mainly in offices, halls, trade fairs, etc.

# DEFENDER® OFFICE

## FOUR MINI CHANNELS – INDOOR & DESIGN SOLUTION

Available with a choice of black, grey, and yellow colors, the Defender® OFFICE cable protection system is the elegant solution for secure pedestrian traffic in conference facilities, exhibitions, public buildings, retail outlets, shopping malls, trade shows, and offices. Featuring straight, 90°, and end ramps with cutting guides for length adjustment, zigzag connection, and bolt holes for ground fixing the Defender® OFFICE system provides versatile cable routing while preventing tripping hazards.

### SPECIFICATIONS:

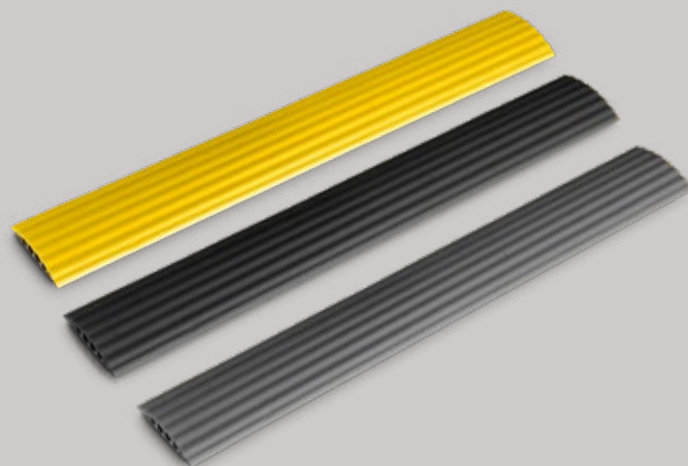
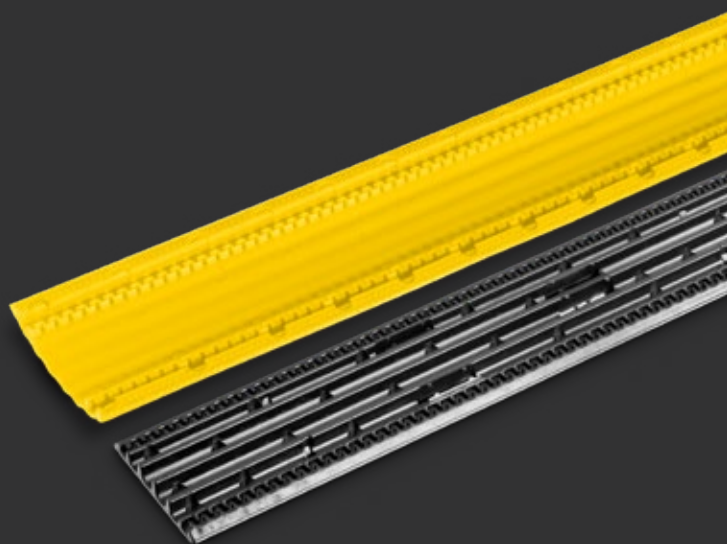
Art. No.:	85160 (Black) / 85160GREY (Grey) / 85160YEL (Yellow)
Product:	Four-channel cable protector
Channel W x H:	10 x 10 mm / 0.4" x 0.4" (channels 1 and 4), 12 x 12 mm / 0.5" x 0.5" (channels 2 and 3)
Material:	TPU (thermoplastic polyurethane)
Shore A hardness:	92 ± 4
Load capacity:	2.0 ton/4,409 lbs. / 20 x 20 cm / 7.9" x 7.9" (typical tyre footprint area)
Fire rating:	B2
Resistant to:	acids, oils, gasoline
Operating temperature:	-30° to +60° C / -22° F to 140° F
Length:	870 mm / 34.3"
Width:	120 mm / 4.7"
Height:	20 mm / 0.8"
Weight:	1.24 kg / 2.7 lbs.

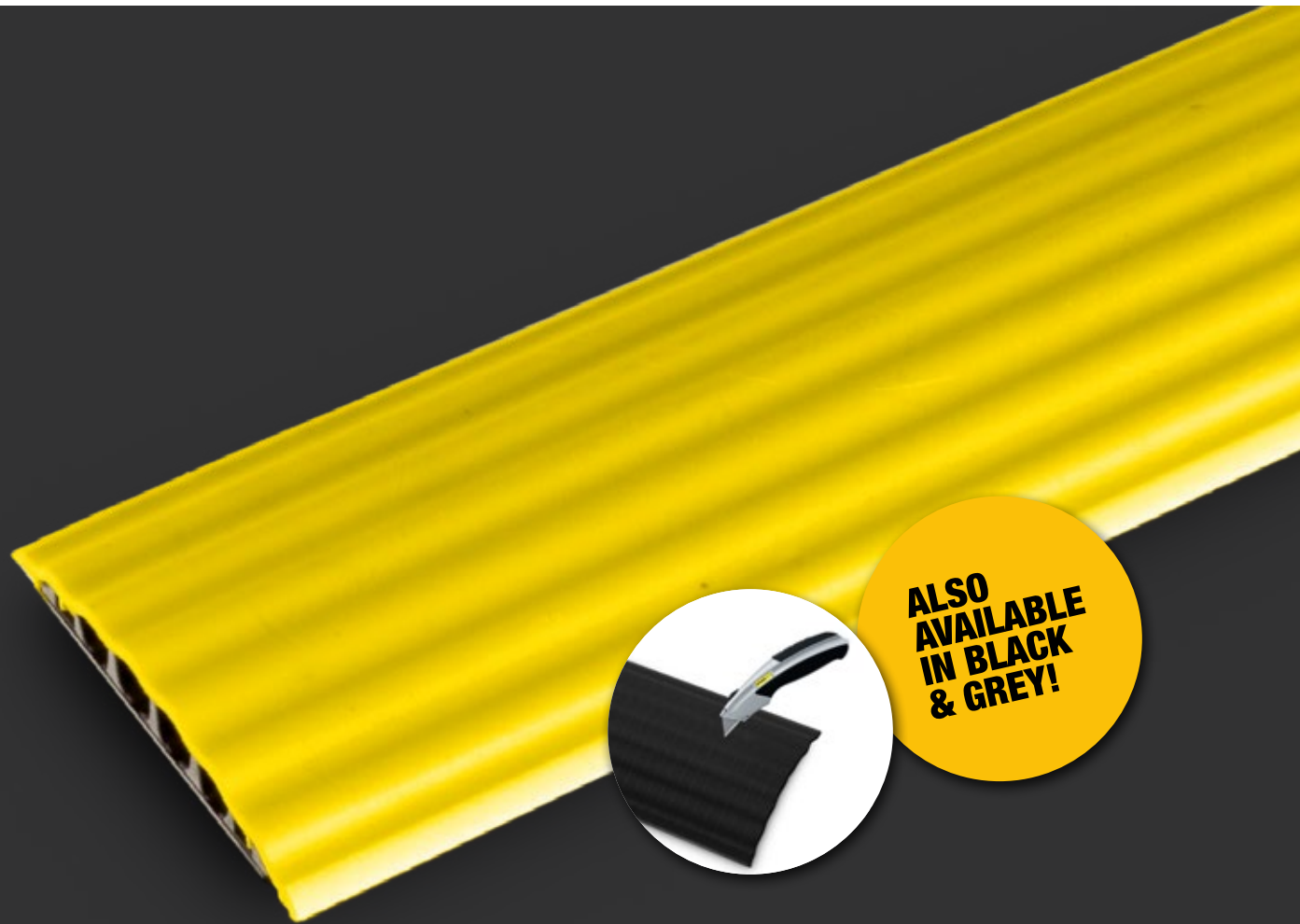
### DEFENDER® OFFICE 90° Curve

Art. No.: **85161** (black), **85161GREY**, **85161YEL**

### DEFENDER® OFFICE End Ramp

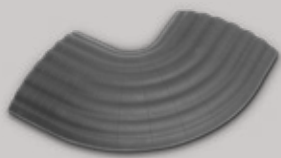
Art. No.: **85168** (black), **85168GREY**, **85168YEL**



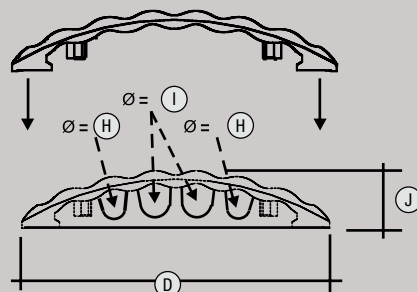
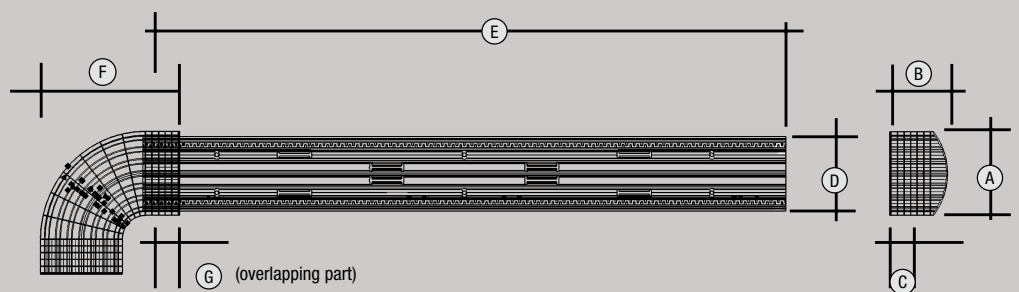
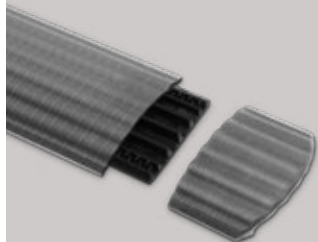


**ALSO  
AVAILABLE  
IN BLACK  
& GREY!**

Art. No. **85161GREY**  
(90° curve)



Art. No. **85168GREY**  
(End ramp)



A	125 mm / 5.0"	F	210 mm / 8.3"
B	90 mm / 3.5"	G	50 mm / 2.0"
C	50 mm / 2.0"	H	10 mm / 0.4"
D	120 mm / 4.7"	I	12 mm / 0.5"
E	870 mm / 34.3"	J	20 mm / 0.8"



# DEFENDER® WHEELCHAIR RAMP

## THE PERFECT ADD-ON FOR DEFENDER MIDI

The Defender® WHEELCHAIR RAMP has been designed for use with the Defender® MIDI cable protection system also providing easy access for walking frames, trolleys, and dollies. The set includes a Defender® MIDI cable guard with blue lid and bolt holes for the required ground fixing, six threshold ramps, and four side slants. Made from acid, oil, solvent, and gasoline-resistant TPU (thermoplastic polyurethane), the Defender® WHEELCHAIR RAMP components are also available individually for ramp width extension. Please note: the Defender® Wheelchair Ramp does not support vehicle traffic.

### DEFENDER® WHEELCHAIR RAMP Set

Art. No.: 85305SET

### DEFENDER® WHEELCHAIR RAMP Components

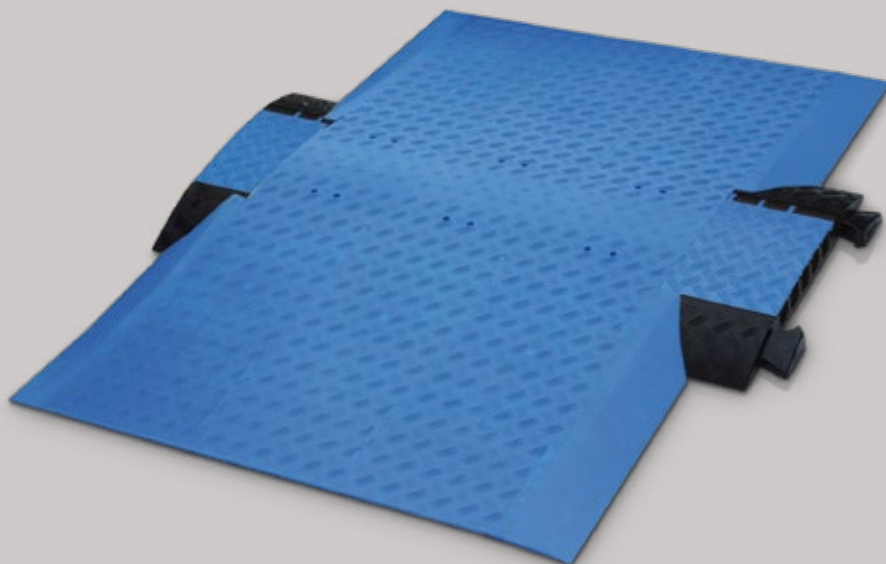
Art. No.: **85300BLUE** Defender® MIDI Cable Protector

Art. No.: **85306** Threshold Ramp

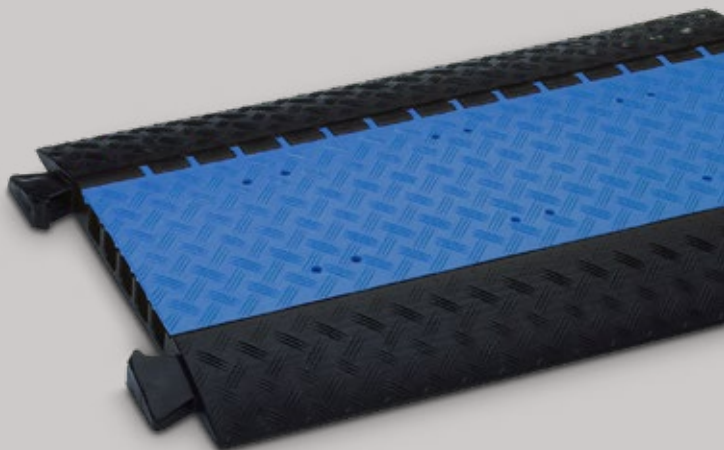
Art. No.: **85307L** Side Slant left

Art. No.: **85307R** Side Slant right

Art. No. **85305SET**  
(Wheelchair Ramp Set)



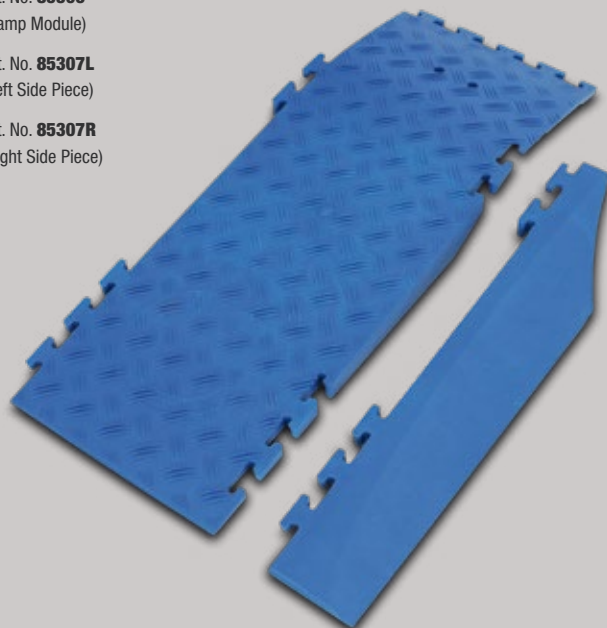
Art. No. **85300BLUE**  
(Midi Cable Protector)



Art. No. **85306**  
(Ramp Module)

Art. No. **85307L**  
(Left Side Piece)

Art. No. **85307R**  
(Right Side Piece)



# DEFENDER<sup>®</sup> BOX

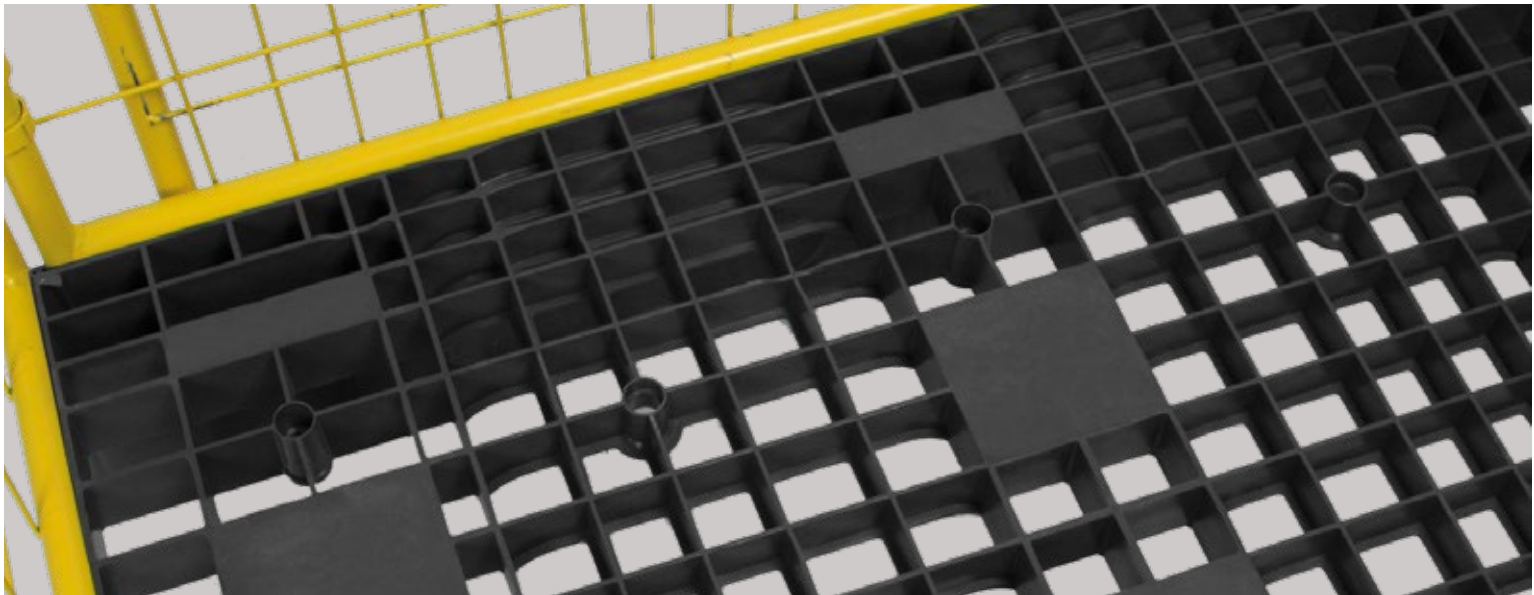
## THE SMART LOGISTIC STORAGE SOLUTION

The Defender<sup>®</sup> BOX is the ideal solution for transporting and storing Defender<sup>®</sup> cable protection systems. The sturdy design features a EUR-pallet size base made of heavy-duty plastic and hinged steel grate sides for easy loading. For additional convenience, the Defender<sup>®</sup> BOX is stackable and collapsible.

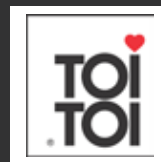
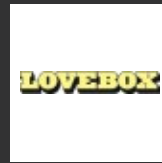
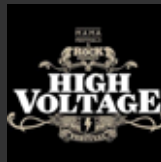
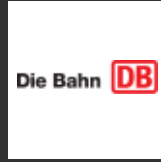
### SPECIFICATIONS:

Art. No.:	85BOX
Product:	Storage and transport box
Material:	PE and steel with lacquer coating
Load capacity:	≤ 1.0 ton/2,000 lbs.
Dimensions (W x H x D):	1,250 x 1,285 x 840 mm / 49.2" x 50.6" x 33.1"
Weight:	50.5 kg / 111.3 lbs.

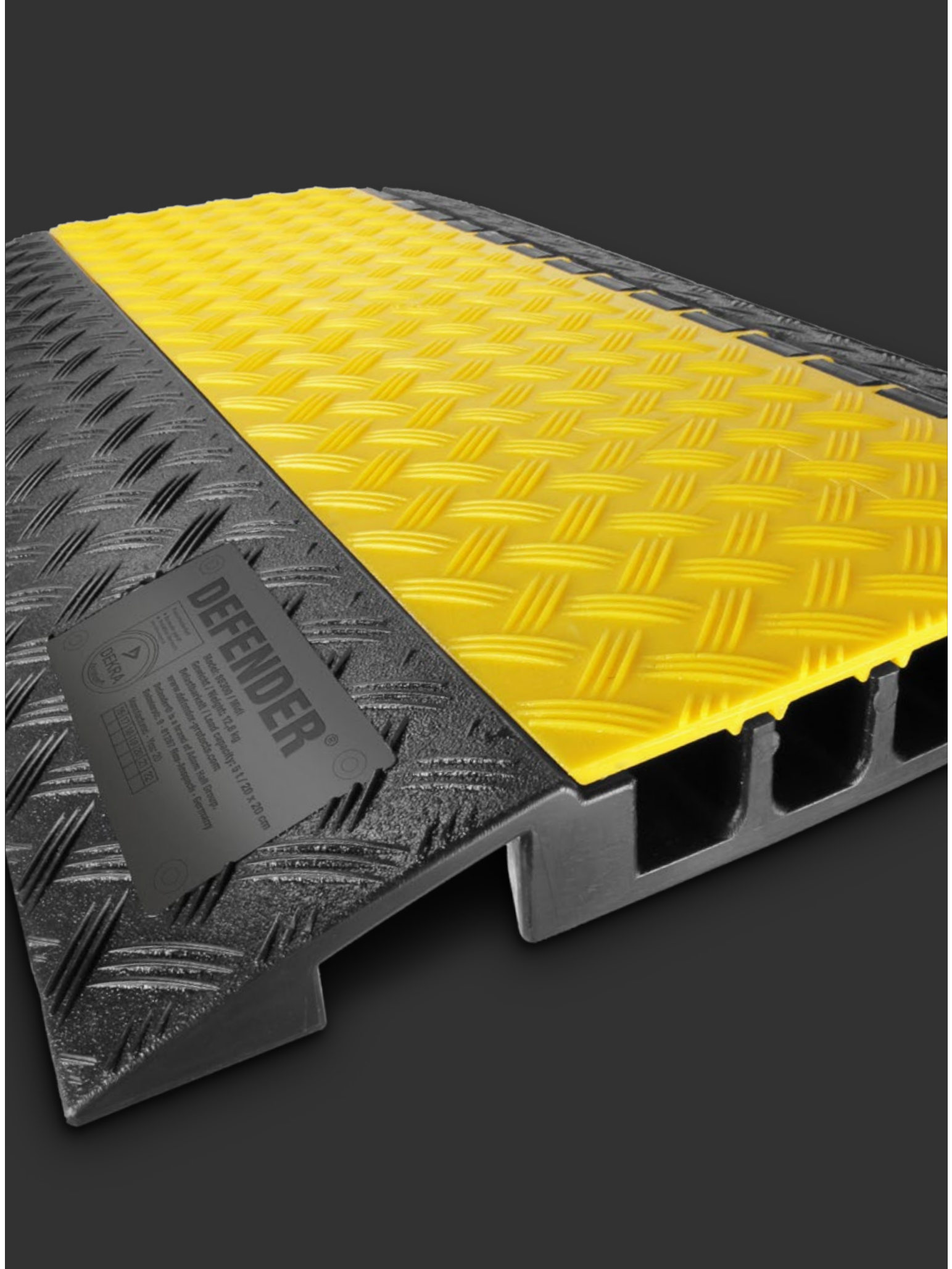
For the loading plan, see [www.adamhall.com!](http://www.adamhall.com!)



# REFERENCES







**DEFENDER**<sup>®</sup>

Model: 10000 / 1000  
Capacity: 11,000 kg  
Dimensions: 1200 x 2000 mm  
Weight: 12.5 kg  
Material: High Density Polyethylene (HDPE)  
www.defender-pallets.com

DEFENDER	10000	1000
DEFENDER	10000	1000
DEFENDER	10000	1000
DEFENDER	10000	1000

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# DEFENDER®

## CABLE PROTECTION SYSTEMS

[defender-protects.com](http://defender-protects.com)

EDITION 2020



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FOR FLIGHTCASES