

# DR46<sup>®</sup> SYSTEM

PROTECTION FOR MOTORCYCLISTS





# INSTALLATION AND ASSEMBLY MANUAL

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## PREFACE

The DR46® Snoline S.p.A system is a tested and proven technology and is one of the most reliable systems in the field of safety systems for motorcyclists. Like any road safety system DR46® must be properly installed to ensure proper performance. The installation instructions must be fully known and understood before beginning the installation. If you need additional information, or have questions about DR46®, please call the Technical Department of Snoline S.p.A. at +39 02909961

## INTRODUCTION

The Motorcyclist protection DR46® is constituted by a hollow body, a section of the type "double wave beam" made of polyethylene for external applications. The device is modular, it has a standard length of 3320 mm, height 330 mm and thickness 215 mm, and is completed by terminals.

# DRAWINGS AND BOM

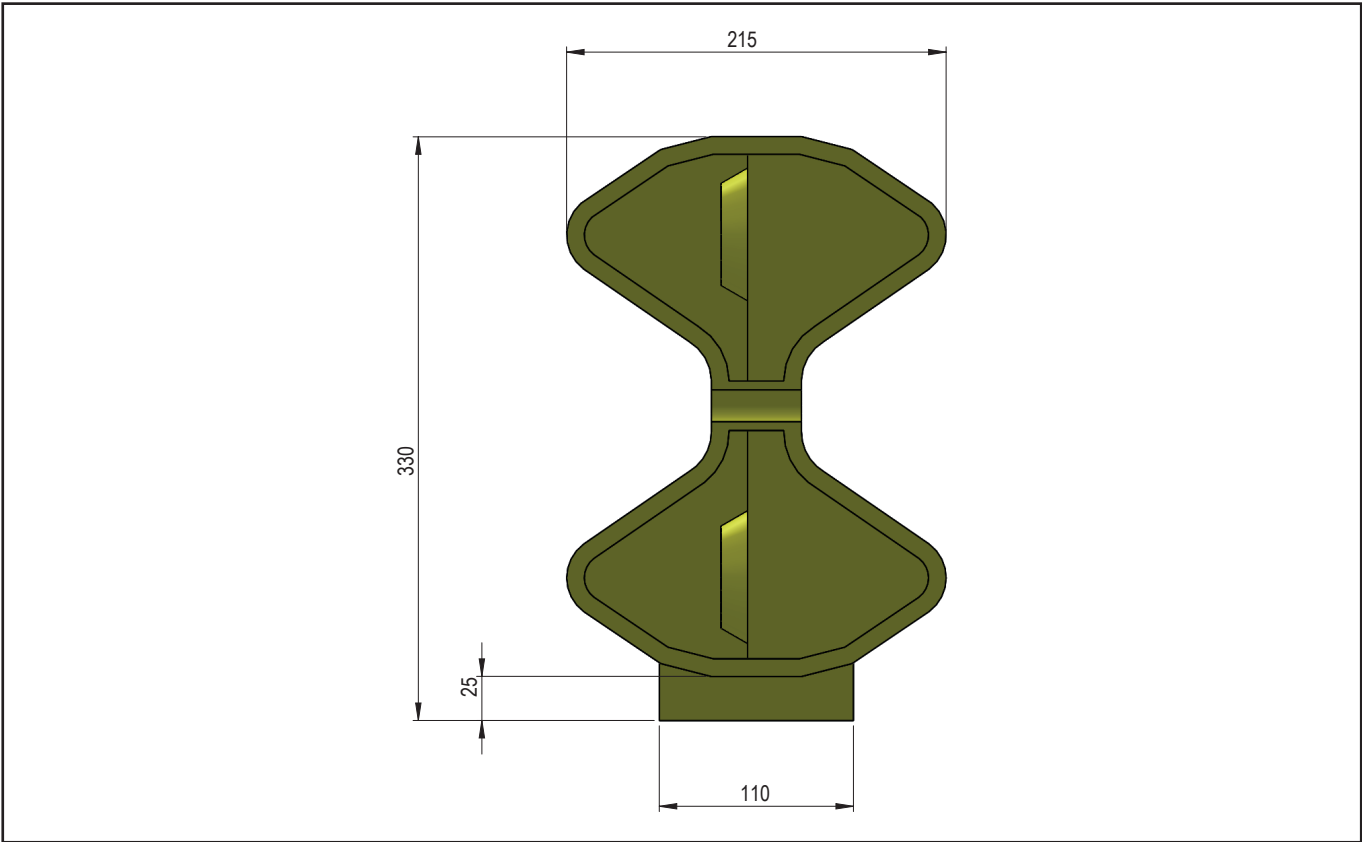


Figure 1 - Section of DR46's module

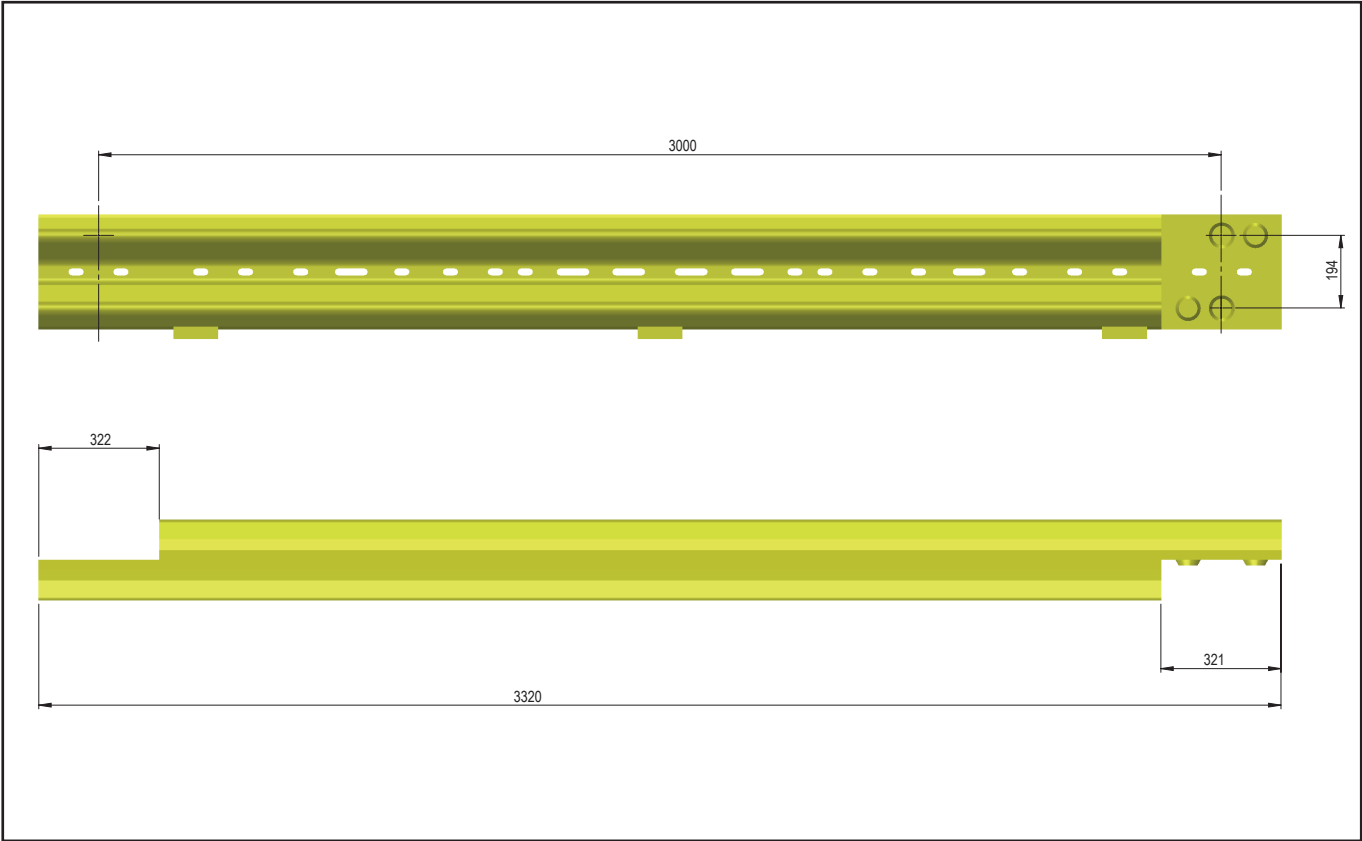


Figure 2 - Standard module

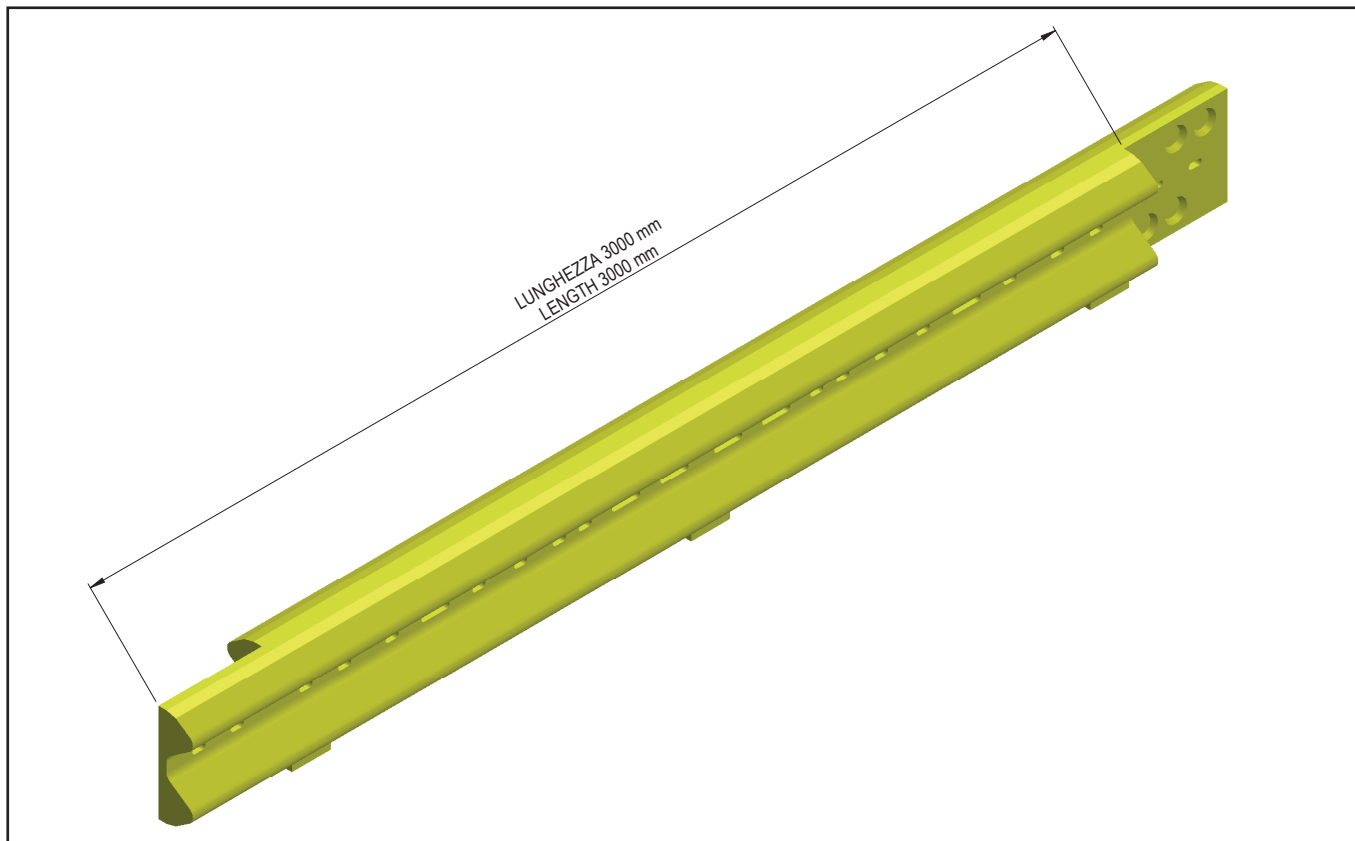


Figure 3 - 3-D view of the standard form

1 m DR46®				
DESCRIZIONE (IT)	DESCRIPTION (ENG)	kg	CODE	QTY.
Protezione motociclisti 1 m	Module biker protection 1 m	15	DR46001YE/GR	1
Vite TTL M16x80 parzialmente filettata zc	Screw BHL M16		VTTL16-80PZC	4
Dado medio M16	Nut M16		D16MAZC	4
Rondella piana M16/17x40	Washer M16		RP17-40ZC	4
Fascetta 7,9x838 mm	Wrapper		610000	1
Piastrina copri asola zc	Slot plate	0,2	SABPCAZC	4
Piastrina di collegamento	Connecting Slot plate	0,35	DR46002	1

3 m DR46®				
DESCRIZIONE (IT)	DESCRIPTION (ENG)	kg	CODE	QTY.
Protezione motociclisti 3m	Module biker protection 3 m	15	DR46003YE/GR	1
Vite TTL M16x80 parzialmente filettata zc	Screw BHL M16		VTTL16-80PZC	2
Dado M16 maggiorato zc	Nut M16		D16MAZC	2
Rondella piana M16/17x40 zc	Washer M16		RP17-40ZC	2
Fascetta 7,9x838	Wrapper		610000	3
Piastrina copri asola zc	Slot plate	0,2	SABPCAZC	2

## BEFORE ASSEMBLY

The installation of the DR46® is easy and fast, it doesn't require intervention on the existing barrier: Considering a 4 people team, it can be reached a rhythm of 100 m in 15 minutes, without the use of special equipment.

To this standard time must be added some other considerations like the length of the single continuous route and then the related material, unloading and positioning, as well as which kind of installation ( with or without spacers or post adaptor).

## CHECK LIST EQUIPMENT FOR ASSEMBLY

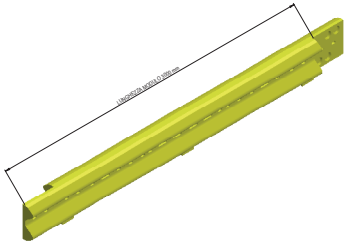
For proper installation of DR46® are required:

- Two pliers (Snoline recommends using clamp-pullers)
- Two CH24 spanners for M16 bolts.
- A ratchet wrench or automatic battery-operated or electric power tool.
- A shovel or spade (to remove ground).
- A crowbar (to keep elements in position when fixing the clamps).
- Kneepads.
- Traffic control equipment.

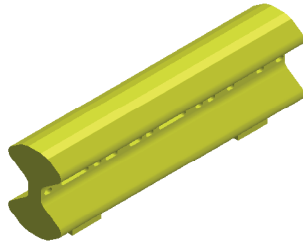
During installation the installer are obliged to apply the current safety requirements in the European community and in force in the country of installation of the device updated to the date of installation.

**Note:** this list is a general recommendation. It may depend on the specific characteristics of the installation site a real need for equipment to be used.

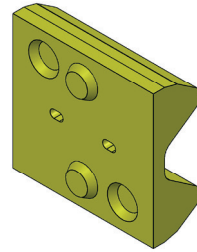
# COMPONENTS LIST



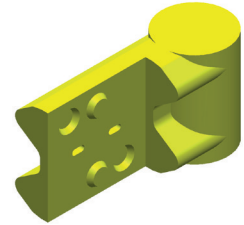
PROTECTION PROFILE  
3 m DR46003



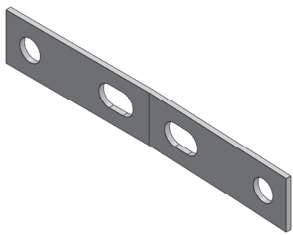
PROTECTION PROFILE  
1 m DR46001



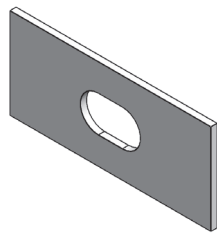
TERMINAL DR46005



ROUND TERMINAL  
DR46004



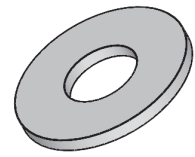
CONNECTING PLATE  
DR46002



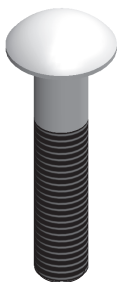
SLOTE PLATE SABPCAZC



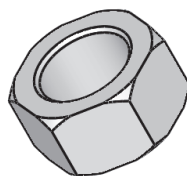
WRAPPER



WASHER M16



SCREW BHL M16



NUT M16

# ASSEMBLY

The DR46® is easy to install to the metallic safety barriers poles and it is designed to easily follow even small diameter curves (minimum radius: 25 m). It is also available in different colors (Ex. Grey, brown), thus obtaining also signaling effects of alert and/ or integrating itself in contexts of environmental or historical value.

## 1. Fixing of the modules

The standard module of the device is straight with a length of 3m; 1 m in length modules are available on request for specific applications in very tight curves. The combination of the various elements is performed by means of carriage bolts M16x80, nut, flat washer and plate. In the case of the module 1 m, used in the curve in addition to the fasteners indicated above it is also used the appropriate DR46002 connecting plate.



Figure 1 - DR46 Gray



Figure 2 - Junction of standard modules

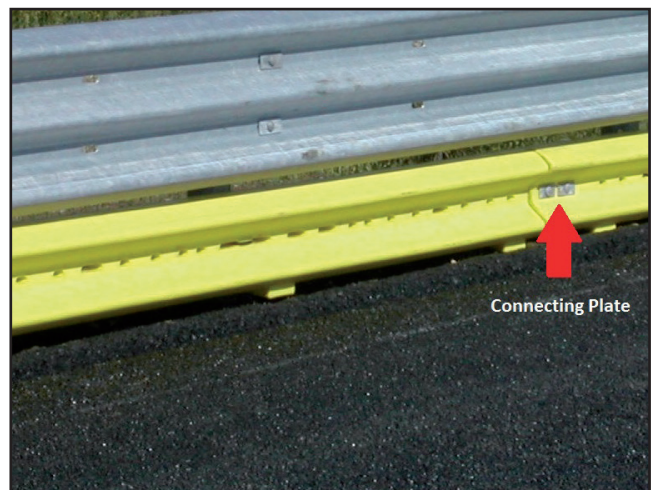


Figure 3 - Junction of standard modules



## 2. Fixing the barrier

The fastening of the elements assembled to the safety barrier takes place directly through the use of self-locking clamps in stainless steel, which are made fit inside appropriate slots.

Moving forward start plugging the device components with bolts. The bolts should be screwed in by hand so to permit the relative movement between the elements of the device. For the union of the elements shall be used two M16x80 bolts with nuts and washers.

### Installation on barrier without spacers

In case of installation on detected, it proceeds to fix elements of the device directly to the security fence poles through the clamps and pliers supplied. In this phase the clamps must be such as to maintain the device in place and allow the next alignment phase.



Figure 4 - Fixing caps using clamps



Figure 5 - Distribution of elements along the setup route



Figure 6 - Modules positioning

### Installation on barrier with spacers

In case of installation that requires the use of spacers (special applications) after the initial connection using the bolts, spacers (which are fixed to the barrier poles) are positioned through the use of metal clamps, passing them in the slot prepared; then the elements of the device must be fixed in turn to the spacers through the metal clamps, using the aforementioned slot.



Figure 7 - Examples of the terminal positioning



Figure 8 - Examples of the terminal positioning

## SOIL AND INSTALLATION

The device doesn't need a particular type of ground or changes as long as the ground is sufficiently flat, without protruding objects or elements that hinder the easy positioning under the safety barrier. After completing the wiring step of the items and fixing the poles, we proceed to the alignment to the ground, step by step, by tightening the connecting bolts (10 Nm) and the fixing clamps. The positioning may encounter some difficulties, which can be mainly attributed to the unevenness of the ground, which may have more or less pronounced differences.

Furthermore, the metal barrier, if laid by time, could be "sunk" into the ground greatly reducing the space available for the attenuator pose. However, these problems should have already been considered in the evaluation phase of the barrier (existing and resting) on which to install the DR46®.

As a precaution, it may be appropriate to be fitted with a shovel or a blade, so as to be able to remove the ground at the base which can be of size, and with a crowbar, useful to facilitate the approach of the elements the posts of the barrier, before and during the draw of the bands, where the space between the ground and the barrier is small.

It is also necessary to pay great attention when it's necessary to install the protection of a barrier in part detected and in part with or without spacers.

These differences should first be resolved, by absorbing the alignment differences of the two barriers using the spacers. Then you can install as per normal procedure.

In case of installation with spacers you can follow the same steps described above, making sure to use any special adaptation elements which may be prescribed in relation to the particular security fence and the installation situation.



Figure 9 - Leveling and final fixing of the protection



Figure 10 - Example of installation

## INSPECTION AND MAINTENANCE

DR46® elements don't require any kind of maintenance. It is suitable to foresee recurring inspections to verify and remove the debris.

## REPAIRS

In case of accident, it has to be reconfigured the system as well as positioned upon first installation of the device. In particular, if some plastic modules are damaged, it is necessary to remove and replace them. Tend, in the event of impact with vehicles, it was found that most of the damaged parts are to be ascribed to the safety barrier.

Case by case, you can evaluate (only if the plastic modules and all other elements of the device are undamaged DR46®) to reuse the components do not even damaged in correspondence of the safety barrier elements.

**Non observance of the installation instructions may result in non-conforming performances.**

No unauthorized changes to system components, if would be necessary to make changes or repairs on site call, before proceeding, the technical department of Snoline S.p.A. at +39 02909961 in order to guarantee the proper functioning of the device.

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