



press office

**FieraMilano Rho Fairgrounds**

**October 12-15, 2022**

Biennial world exhibition for woodworking technology and furniture supplies

Assago, July 12, 2022  
To Xylexpo 2022 exhibitors



To the kind attention of  
SECRETARIAT OF XIA AWARDS 2022  
Eng. **Matteo Simonetta**  
Acimall Technical Office  
phone +39 02 89210239  
[tecni@acimall.com](mailto:tecni@acimall.com)

## Nomination to XIA Award 2022 By and within September 15, 2022

I, the undersigned, (name and surname) Ansgar von Garrel

in my capacity as (company role) Head of Marketing

of company (full company name) Altendorf GmbH

based in (country, city) Germany, Minden

in (street, square address) Wettinerallee number 43/45

ZIP 32429 country

submit a nomination to XIA 2022 award for the following machine / solution / plant:

model / denomination Altendorf HAND GUARD

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### PRESS OFFICE

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## **designed to (description of functionality)**

Our entry is HAND GUARD, a worldwide new safety system, based on AI and Camera detection. Only capacitive safety systems for circular saws are currently known on the market. These are based on detection of the finger on or directly in front of the saw blade. This means that only when an injury is present or unavoidable does the circular saw react. This limits the safety reaction at higher motion speed.

The Hand Guard project differs significantly in that pre-detection of the hand and also when approaching at a higher speed is possible, resulting in a controlled shutdown reaction of the machine. After a triggering, the operator can continue working by a simple confirmation; neither tool nor workpiece will be damaged.

The aim is to invent a safety system that does not have to be able to be switched off and that achieves a high level of acceptance among the operator.

After extensive analyses of the causes of accidents, it became clear that the new system had to include early detection of dangerous situations. Subsequently, the ideas were coordinated with the employers' liability insurance association and the Institute for Occupational Safety. Since there are no normative specifications for this system, extensive testing is necessary. Through various series of tests, the physically realizable limits could be found out. Based on these, the entire system was designed and programmed.

The purchase of an Altendorf sliding table saw is usually a sustainable investment, as these machines are often in use by the customer for more than 10 years. The Hand Guard commitment reinforces this by using low-maintenance components.

Hand Guard is a health-promoting invention. On average, one accident with serious, irreversible injury, occurs on a circular saw every day in Germany. After extensive analysis of various accidents, studies and statistics, it can be determined that in the future a large number of accidents can be avoided by using the Hand Guard system. Because fewer accidents can occur on the sliding table saws, the social costs for the consequences of such an accident are minimized. This affects both the company owner and the accident insurers.

During development, special emphasis was placed on ensuring that the workpiece is not damaged by a safety release in an emergency. Workpiece describes all materials that are used on the sliding table saw, such as wood, plastics and aluminum. Resource-saving work is promoted by the commitment presented here. The effectiveness of Hand Guard was proven during a trial operation with 50 customers over a period of 12 months.

### **This solution offers the following innovative features:**

Outstanding innovation comes from the Hand Guard system, as it is the first safety system that works without contact and recognizes a possible danger in advance. This is protected by several utility model applications and patents. The originality is characterized by the use of the most modern camera technology. This corresponds to the basic idea of the company Altendorf GmbH. This is based on future-oriented technologies with outstanding progress.

The technical solution is partly transferable to other machines. The detection can be done by attaching the cameras and the algorithm for hand detection could also be adopted in this way. The reaction of the machine must then be adapted to the respective source of danger.

In our view, the invention will have a particularly lasting effect in reducing the number of accidents involving circular saws. Thus, a lasting effect can be achieved in the area of accident insurers and in the pension fund.

### The Altendorf HAND GUARD is globally the ONLY safety assistance system for sliding table saws to:

- ...work with materials such as wet wood, plastics and metal
- ...have the potential for future development due to learning AI (e.g. recognition of other objects, such as arms, can be learned)
- ...have received the German Occupational Safety Award 2021
- ...be certified by the Germany health and safety organization
- ...effectively protects against injuries instead of only mitigating it due to large detection area

HAND GUARD is globally the first and only certified AI- and camera-based safety assistance system for sliding table saws

HAND GUARD is seen as the new industrial standard for safety assistance systems for sliding table saws with a similar potential like the first airbag for cars.

The award has been created to recognize innovative solutions presented at Xylexpo, therefore the jury will only consider solutions / activities launched after January 1<sup>st</sup>, 2020.

The applicant takes full responsibility for the statements contained herein and accepts that, in case of discrepancies and/or non-compliance, the nomination may be canceled and/or the prize withdrawn (if already assigned).

Put an X on the correct option:

Is this solution a "global preview"?	YES	NO
If NO, is it a new solution for the Italian market?	YES	NO
If NO, where was it presented for the first time? Holz-Handwerk Show 2022		
In which year? 2022..... Is it currently in production?	YES	NO

Signature:

*M.A. Simonetta*

Place:

*Trieste* Date: *13/9/22*

For the purpose of evaluation by the jury, the applicant encloses the following documentation:

- Brochure of HAND GUARD
- Promotional Video of HAND GUARD
- Matteo Simonetta
- Acimall Technical Office
- phone +39 02 89210239
- [tecni@acimall.com](mailto:tecni@acimall.com)
- For logistic and general information about the award:
- Luca Rossetti
- Xylexpo Press Office
- phone +39 02 89210200
- [press@xylexpo.com](mailto:press@xylexpo.com)

As required by the award call for nominations, the information herein shall be published on the following web site: [www.xylexpo.com](http://www.xylexpo.com).

For any information about application procedures, or technical questions, please contact:

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