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# Bossard Aerospace

Fastening Solutions for the Aerospace Industry



## From Boysen to Bossard Aerospace

# Decades of experience

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Bossard Aerospace, established in 1967 in Munich and currently with three strategic offices in Munich, Hamburg, and Texas, along with associates spanning Europe, America, and Asia, operates with over 55 years of experience and a dedicated team. This extensive network has been further strengthened by the acquisition from the Bossard Group in 2019.

As part of the Bossard Group, our aerospace division now benefits from a unique global footprint. With 82 locations, 41 logistic centers, and 15 application engineering laboratories worldwide, the Bossard Group provides unparalleled support and resources. This synergy enhances our ability to deliver exceptional solutions and services on a global scale.

With the commitment to exchange openly with the customers, we collaborate closely to identify the most suitable products and services that enhance their supply chains and reduce costs. Our extensive

product portfolio, featuring one of the world's largest selections of **metric and imperial fasteners**, caters to a diverse range of sectors.

This vast array of products has been instrumental in resolving fastening challenges for our customers, further solidifying our position as a leader in the industry since joining the Bossard family.

Our customer base includes:

- Manufacturers of fixed and rotary wing appliances and related suppliers
- Major Interiors and Landing Gear Manufacturers
- Airlines
- OEMs belonging to the Defence & Space sectors
- EVTOL and drone manufacturers
- Maintenance, Repair and Overhaul (MROs)
- Other distributors and manufacturers

## Product Solutions

# Quality is our mission

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For the highest safety standard we consider the product quality as one of the most important factors.

We take our customers requirements and specifications seriously and try to integrate them as much as possible into our work flow for daily operations. Of course always in accordance to EN 9120.

We ensure our products quality by implementing highest level of training and education for our quality inspectors. In combination with suitable

control systems within our quality management system, we make sure that nonconformists are detected and corrective actions are made before parts reach our customers. We ensure quality of our products based on over 7000 specifications and drawings archived.

All quality related tasks and results are being recorded by a tailored CAQ system in conjunction to the calibration of measurement devices.

QA Certificates  
and more



*With more than 19.000 partnumbers on stock and an additional 50.000 on shortlist, we have one of the largest fastener product portfolios in Europe.*

## Overall Norms and Standards

Bossard Aerospace is able to provide parts of all commonly used standards and Norms in the industry.

For example:  
ABS AN AS ASNA ASNE BAC CAN DAN DIN DON  
EN FON HL HLT HST JN LN MS NA NAS NFL NSA  
PAN PE TAN TL VL  
and many more



## Drawing Parts

In addition we assist in the acquisition of custom-made parts and products. Using our extensive supplier network we always find the right partners and take care of the negotiations in order to reduce the workload for our customers.



## Product Solutions

# Imperial and metric fasteners

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### Screws

- hexagon screws
- double hexagon / twelve point screws
- socket screws
- countersunk screws
- pan head screws
- raised countersunk screws



### Inserts

- helicoils (wire)
- threaded inserts
- honeycomb inserts
- tabs for honeycomb inserts



### Bearings

- ball bearings
- spherical bearings
- bushings



### Rivets

- solid rivets
- blind rivets
- tubular rivets



### Washers

- flat washers
- shaped washers
- locking / retaining washers
- tab washers
- spring washers / spring rings
- tooth washers



### Nuts

- hexagon nuts
- double hexagon / twelve point nuts
- castelled nuts
- anchor nuts
- locking nuts
- collars



### Clamps

- hose clamps
- cushioned clamps
- noncushioned clamps
- clips



### Bolts

- hexagonal head, torque-set, fully threaded
- 12-Point socket head
- shouldered
- Machine-Double HEX, ext washer head



### Securing Elements

- safety washer
- safety rings
- safety pins
- safety locks
- locking plate
- security retaining ring with slots



### Fittings

- union-Swaged, pipe end fitting
- union, standard and reducer, bulkhead, flareless
- elbow, 45°/ 90°
- sleeve, flareless
- hydraulic Tube Fittings

## Small mechanisms and assemblies



### Hinges & Latches

- hinge bands
- gooseneck hinges
- hook latches
- channel latches
- push-button latches



### Locking devices

- quarter turns
- studs
- receptacles
- quick release pins



## MultiMaterial-Welding

# Innovative interior solutions



MultiMaterial-Welding (MM-Welding® in short) is a Fastening Technology Platform that uses ultrasonic energy to partially liquify thermoplastic materials to create a functional and strong connection within lightweight materials in fractions of a second.

### Aircraft interior applications:

- Interior floor panels
- Overhead compartments
- Seating parts
- Galleys / Kitchen

The **LiteWWeight DoublePin** includes standard materials for aerospace, and is an ideal replacement for gluing, hence achieving better sustainability and massive weight savings.

### FEATURES

- Sustainable, easy to recycle
- Ultra fast processing time (<1 sec)
- Autonomous processing or integration in line
- Low energy consumption
- Incomparable installation precision

### BENEFITS

- Innovative joining technology for **lightweight** and **multi-material** assemblies
- **New design** opportunities
- **Cost efficient** process for high volume and unleashing productivity potential
- Digital monitoring and **quality control** integrated
- Eliminate fasteners by utilizing functional integration



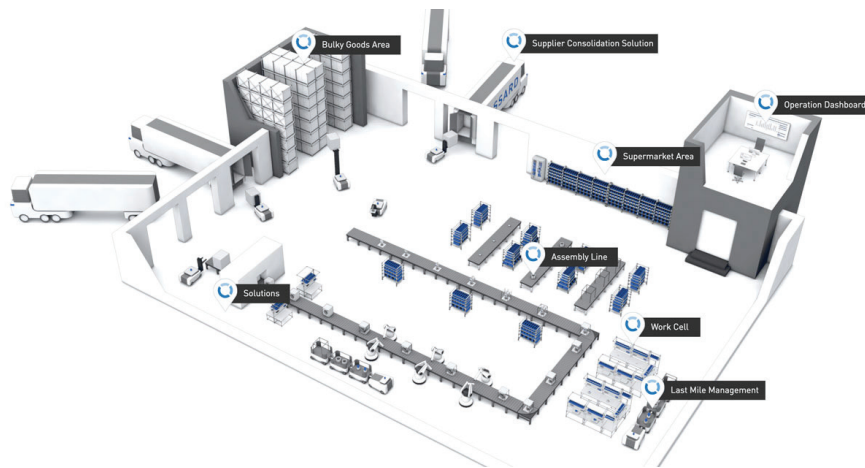
MM-Welding

Contact MM-Welding  
Lasse Behrmann  
Business Development Manager  
lasse.behrmann@bossard.com

## Industry 4.0 logistic solution for aerospace industry

# Smart Factory Logistics

Reducing your overall total cost of ownership (TCO) and boosting your productivity are key. Smart systems, such as SmartBin or SmartLabel, optimize your supply chain and take care of your B- and C-parts management.



## SmartBin & SmartLabel Cloud










SmartBin Cloud brings you to the next level. It is an all-in-one system that combines our proven SmartBin System with our latest SmartLabel System and is a pioneer for further technological enhancements.

The weight sensor is triggered by motion and therefore updates all stock and order information

instantly at every use (pick or refill) to have a transparent and monitored real-time stock level at any time.

When a reorder point is reached, the system autonomously initiates a new order. Full control and reliability is ensured, as the order status and all product information are visible at a glance on the display of each bin.

### FEATURES

	<b>FULLY AUTOMATED</b>
	<b>WEIGHT SENSOR TRIGGERED BY MOTION</b>
	<b>VISUAL PROOF</b>
	<b>INDUSTRIAL CLOUD CONNECTION (IIOT)</b>
	<b>ERROR PROOF</b> – Automated error recognition
	<b>24 / 7 OPERATION</b> – Continuous inventory update of real-time data at every use
	<b>FULL CYCLE CONTROL</b>
	<b>ARIMS</b> – Access to Operation Dashboard
	<b>LED</b> – Pick-to-light enabled



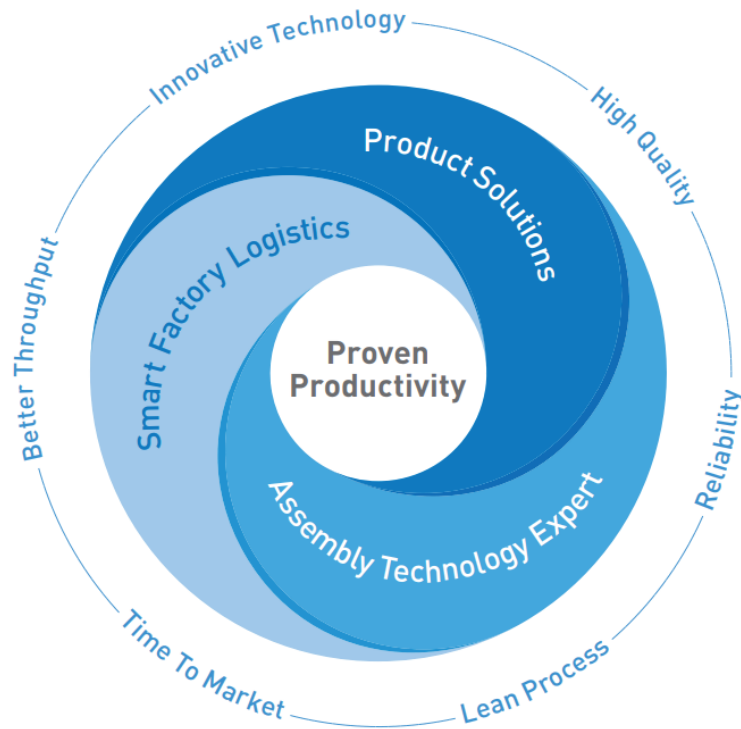
### YOUR BENEFITS

- fast, proactive reaction when demand is peaking at every use
- reliable and secure connection of real-time data
- use of existing infrastructure
- transparency and control of data at point of use
- shortened order and delivery time
- lean process without manual intervention
- maintenance-free
- lower your total cost of ownership

## PROVEN PRODUCTIVITY – A PROMISE TO OUR CUSTOMERS

# The strategy for success

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From years of cooperation with our customers we know what achieves proven and sustainable impact. We have identified what it takes to strengthen the competitiveness of our customers. Therefore we support our customers in three strategic core areas.

Firstly, when finding optimal **Product Solutions**, that is in the evaluation and use of the best fastening part for the particular function intended in our customers' products.

Second, our **Assembly Technology Expert** services deliver the smartest solutions for all possible fastening challenges. Our services cover from the moment our customers developing a new product, to

assembly process optimization as well as fastening technology education for our customers' employees.

And thirdly, optimising our clients' productions in a smart and lean way with **Smart Factory Logistics**, our methodology, with intelligent logistics systems and tailor-made solutions.

Understood as a promise to our customers, "Proven Productivity" contains two elements: Firstly, that it demonstrably works. And secondly, that it sustainably and measurably improves the productivity and competitiveness of our customers.

And this for us is a philosophy which motivates us every day to always be one step ahead.

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**Bossard Aerospace Germany GmbH**

Kapellenstraße 9  
85622 Feldkirchen

T: +49 (0) 89 427421-0  
F: +49 (0) 89 427421-40

info.aero-de@bossard.com

**Bossard Aerospace Germany GmbH**

Suederstrasse 288  
20537 Hamburg

T: +49 (0) 40 2190712-10  
F: +49 (0) 89 427421-40

info.aero-de@bossard.com

**Bossard Aerospace Switzerland AG**

Steinhauserstrasse 70  
CH-6301 Zug

T: +41 41 749 64 16

info.aero-ch@bossard.com

**Bossard Aerospace U.S Inc.**

3050 W.Story Road Irving,  
TX 75038, USA

T: +1 469629 0660  
F: +1 469606 0921

info.aero-us@bossard.com

[www.bossard-aero.com](http://www.bossard-aero.com)