

member of working group in norm- and standard committee

Aerospace Built to Print Parts

Added value from one source

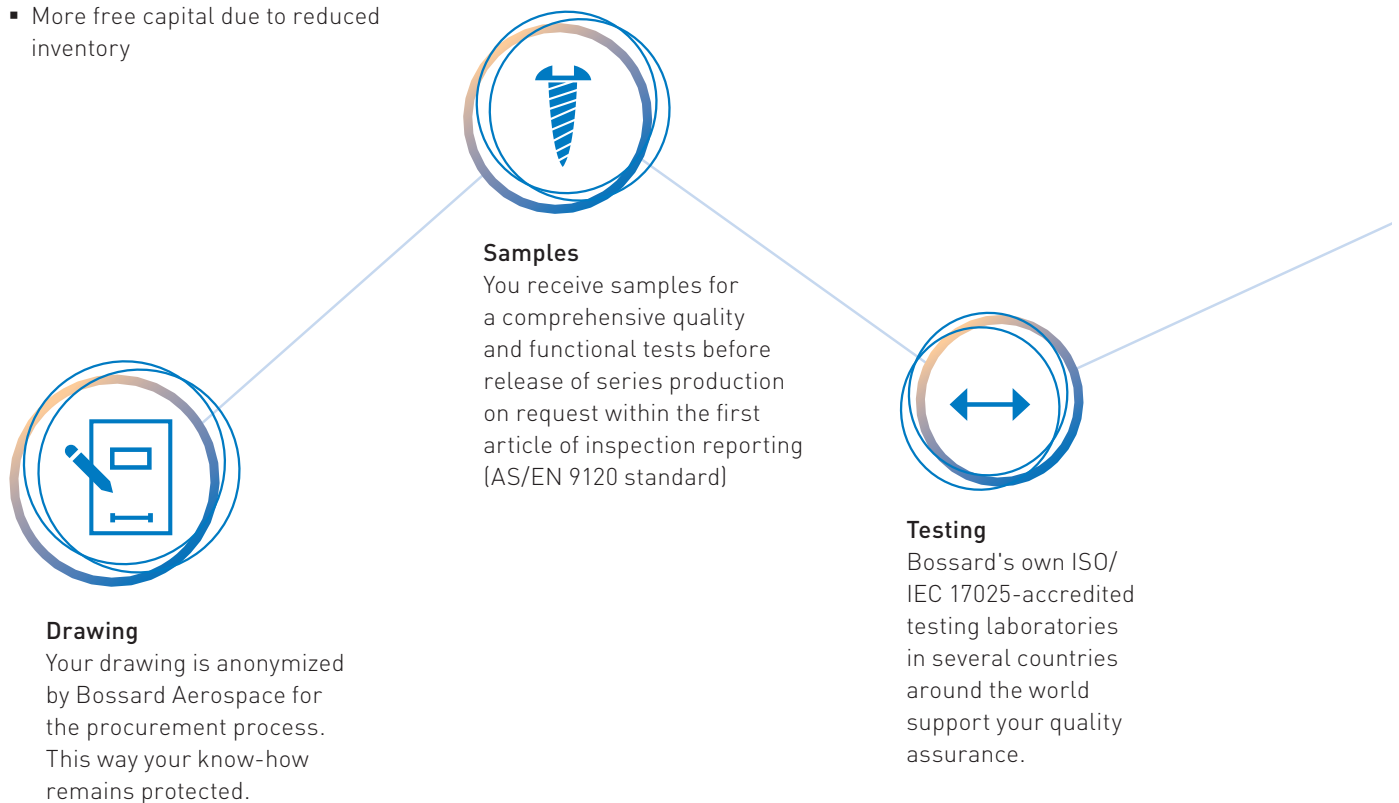
YOUR ONE-STOP SHOP

The global Bossard network

We define the manufacturing process according to your requirements and select the appropriate manufacturer for you or use our own production line.

With the procurement of built to print parts by Bossard Aerospace you get real added value:

- Fewer suppliers
- Professional consulting
- Comprehensive engineering services
- Constant quality
- Smart B- and C-part management
- Highest supply reliability thanks to automated ordering process
- Flexible release quantities
- More free capital due to reduced inventory



ADDED VALUE FROM ONE SOURCE

«Reliable and optimized supply chain from the drawing to the assembly site.»

Your added value



Series production

After your approval, we have the components manufactured by the most suitable partner or by our own production site – including reworking and refinement.



Full service around your built to print part

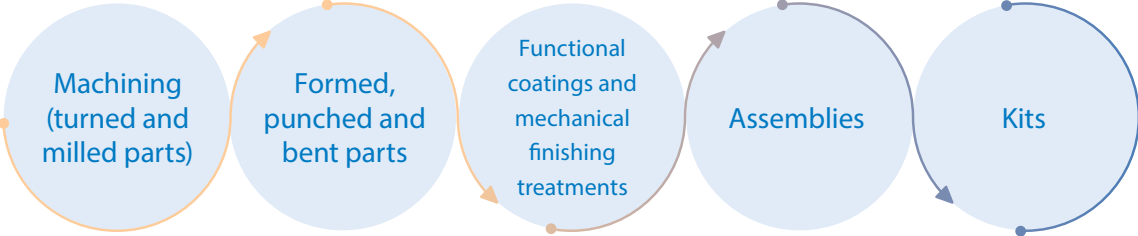


Logistics

For logistics customers we also deliver directly to the assembly site on request.

PROCUREMENT EXPERTISE

Depending on batch sizes, required delivery times, material specifications or manufacturing tolerances, we use different manufacturing processes. In consultation with you, we select the most efficient production process inhouse or outsourced. .



PROCUREMENT EXPERTISE

Machining (turned and milled parts)

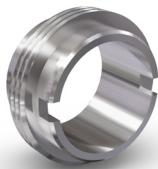
The professional solution for aviation and space

When high precision, low tolerances and complicated forms are required, then metal-cutting production involving turning, milling and drilling is often to be recommended. Bossard Aerospace supplies a wide range of turned and milled parts for all common materials, batch sizes, dimensions and surface treatments for the perfect interaction of your products.

Materials

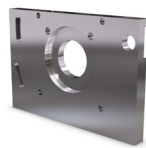
- All machinable steels
- Non-ferrous metals and plastic
- Stainless steels
- Many special-purpose steels

Examples



Cylinder guide

Dimensions:
L = 12 mm
Ø = M30 x 1
Material: Free-cutting steel
Surface: Zinc plated



Base plate

Dimensions:
L = 100 mm/60 mm
H = 8 mm
Material: Aluminium
Surface: Blank



Eccentric axis

Dimensions:
L = 50 mm
Ø = 20 mm
Material: POM



Swivel arm

Dimensions:
L = 60/31 mm
H = 12 mm
Material:
Stainless Steel 1.4301
Surface: Blank



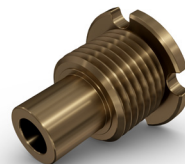
Sleeve guide

Dimensions:
L = 120 mm
Ø = 35 mm
Material:
Stainless Steel 1.4305
Surface: Blank



Lateral guidance

Dimensions:
L = 20 mm
H = 33 mm
Material: POM



Grid bolt

Dimensions:
Ø = 24 mm
L = 40 mm
Material: Brass
Surface: Blank

PROCUREMENT EXPERTISE

Formed parts

Economic processing at consistent quality

Formed parts are characterized by high material utilization, short production times and increased strength, and they are also particularly cost-effective. Material, drive style, manufacturing tolerances and other comparable requirements dictate whether a specialty item can be produced by either cold forming or hot forging.

Hot forged parts

Materials

- All established steels including stainless steels
- Special purpose materials such as e.g. nymonic on request

Cold formed parts

Materials

- All established steels including stainless steels
- Aluminum, brass
- Special-purpose steel and titanium on request

Examples



Bearing bolt

Dimensions: M8 x 36.5/12
Material: Steel
Surface: Black-oxidized



Spacer screw

Dimensions: M4 x 24
Material:
Stainless Steel A2,
with blue sliding layer



Shoulder screw

Dimensions: M6 x 22/12
Material: Steel
case-hardened
Surface: Galvanized,
with sliding layer



Sleeve nut

Dimensions: M10 x 35
Material: Steel
Surface: Zinc plated

PROCUREMENT EXPERTISE

Functional coatings and mechanical finishing treatments

The correct surface treatment increases the functionality and service life of your component.

Surface treatment

Do you want to increase process reliability and reduce the overall cost of a connection? Bossard Aerospace offers aviation related coatings and post-treatments. Corrosion protection, friction

coefficient optimization, appearance, wear resistance – the reasons and applications are many and varied. Our experts can help you choose the right solution for your product.

Examples



Cathodic Treatment

- Cadmium plating
- Chromium plating
- Electrodeposition of metallic coating



Autocatalytic Plating

- Vacuum deposition
- Methods chemical plating



Organic Coating

- Primers
- Coating systems
- Anticorrosive agents
Lubricants and anticorrosive pastes



Chemical Treatment

- Phosphating
- Chromating
- Passivating



Anodic Treatment

- DC-sulfuric acid method
- DC-chromic acid method
- Anodic oxidation

Mechanical finishing treatments

Mechanical reworking of catalog or standard elements are often the fastest and most cost-effective solution for small and medium quantities.

Examples



Shortening



Thread-cutting



Drilling of fastening and split-pin holes



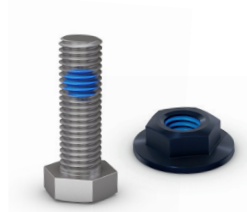
Turning of thin shanks and grooves

Functional coatings

Functional coatings are system solutions for mechanically stressed fastening elements, such as screws and nuts. These coating types are applied using different application procedures.

Depending on the coating, they can assume a locking, securing (captive) or holding/sealing function.

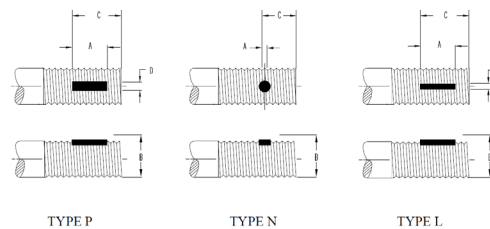
Examples



Nylok

- Thread locking patch
- Securing (captive) function
- For nearly all materials
- Can be reused several times
- Can be prepared according to the MIL-DTL-18240 and NASM 15981 specifications

MIL-DTL-18240F



PROCUREMENT EXPERTISE

Assemblies

Focus on your know-how

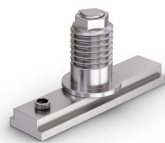
Procure ready-assembled and tested assemblies in the desired packaging. This allows you to eliminate process steps and focus on your specific know-how in final assembly.

Examples



Detection pin

Number of components: 4
Dimensions: L = 32 mm
Materials:
Stainless Steel/Plastic



Slider

Number of components: 3
Dimensions: L = 30 mm
Materials: Stainless Steel



Door ramp

Number of components: 16
Dimensions:
L/B = 850 mm/330 mm
H = 160 mm
Materials: Stainless Steel



Pull button

Number of components: 7
Dimensions: L = 150 mm
Materials:
Stainless Steel A4/Plastic/
Rubber/Brass



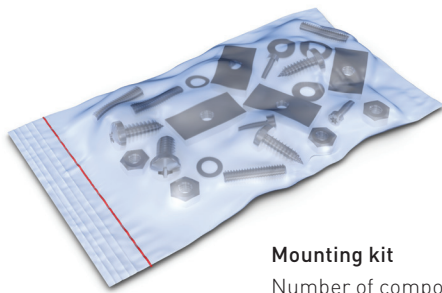
PROCUREMENT EXPERTISE

Kits

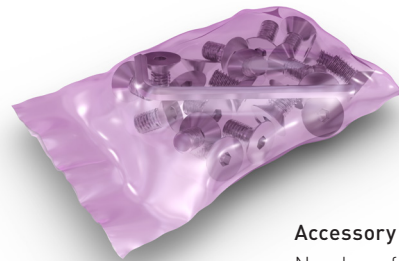
Mounting and accessory kits

In addition to assemblies we also make kits. Bossard Aerospace supplies you with kits of the most varied components, accurately counted, neatly packed, labeled, documented in accordance to BOM, or/and printed according to your specifications.

Examples



Mounting kit
Number of components: 24
Specialty: 12 variants



Accessory kit
Number of components: 20
Specialty: Welded, coloured bags
Mounting instructions included



APPLICATION ENGINEERING

Be one step ahead with our additional services

We support you in the development and production of cost-efficient individual solutions that are tailored to your needs. Our services deliver the smartest solutions for all possible fastening challenges.

Expert Test Services



- Tensile and compression strength testing
- Hardness tests/hardness profile measurements
- Friction coefficient testing/torsion testing
- Torque analysis
- Coating thickness measurement
- Spectral analysis
- Fastening optimization
- Loosening analysis
- Corrosion analysis
- Salt spray test
- Ultra-sonic preload measuring
- Failure analysis
- Joint design calculation

Drawing parts modification



In addition to providing specialized fastening solutions and tooling, we offer comprehensive consultancy services to assist you with modifications to your design drawings with MRB Board.

Special Toolings



We conduct a comprehensive evaluation of the specific requirements, collaboratively design the tooling solution with the customer, and leverage our extensive supplier network to identify the best tooling suppliers and manufacturers.

We handle all communications with the tooling supplier to ensure that the customized tools precisely fulfill the customer's requirements, ensuring a seamless and efficient implementation.

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@bossard-aerospace.ch

Aero Negoce International SAS

ZAC de Mercorent
33 rue Alphonse Beau de Rochas
34500 Béziers, France

T: +33 (0)4 67 35 33 33

contact@aeronegoce.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