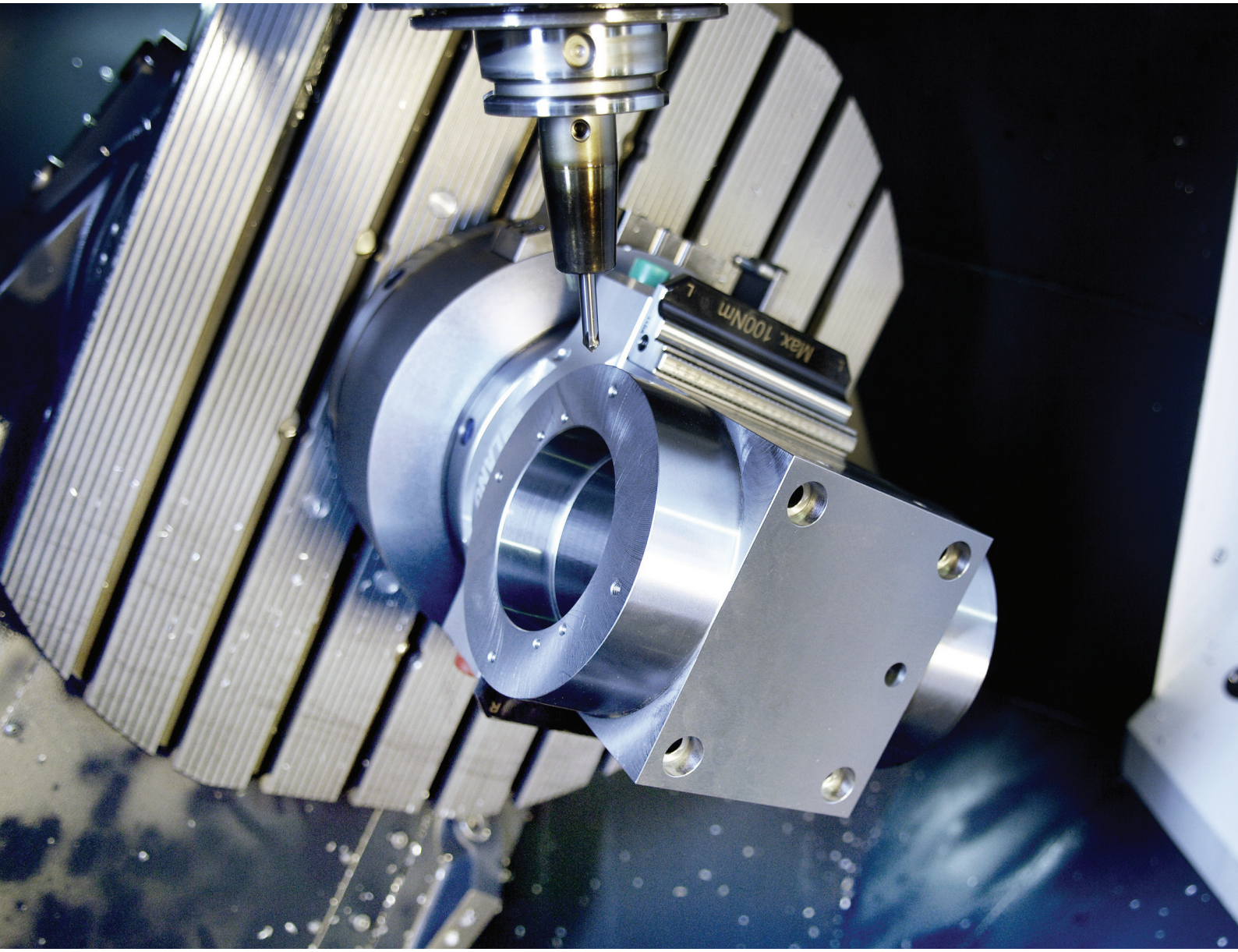
BOSSARD AERO SPACE
Proven Productivity



member of working group in norm- and standard comittee

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

Samples
You receive samples for a comprehensive quality and functional tests before release of series production on request within the first article of inspection reporting (AS/EN 9120 standard)

Drawing
Your drawing is anonymized by Bossard Aerospace for the procurement process. This way your know-how remains protected.

Testing
Bossard's own ISO/IEC 17025-accredited testing laboratories in several countries around the world support your quality assurance.

ADDED VALUE FROM ONE SOURCE

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

Your added value

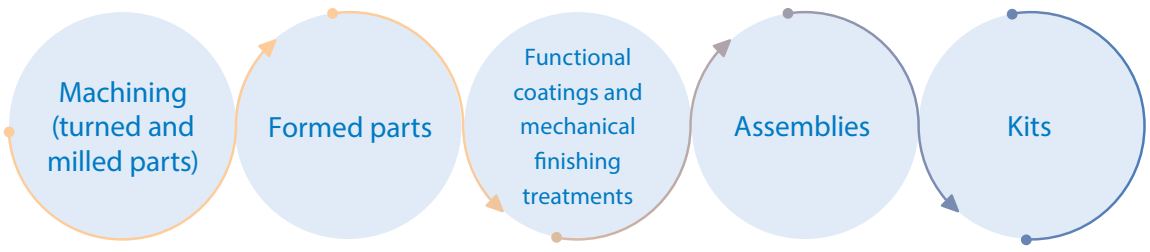
Series production
After your approval, we have the components manufactured by the most suitable partner or by our own production site – including reworking and refinement.

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

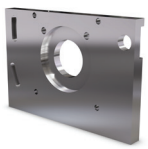
When high precision, low tolerances and complicated forms are required, then metal-cutting production involving turning, milling and drilling is often to be recommended. Bossard Aerospace supplies a wide range of turned and milled parts for all common materials, batch sizes, dimensions and surface treatments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



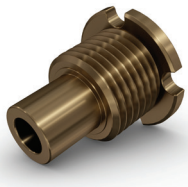
Base plate
Dimensions:
L = 100 mm / 60 mm
H = 8 mm
Material: Aluminium
Surface: Blank

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

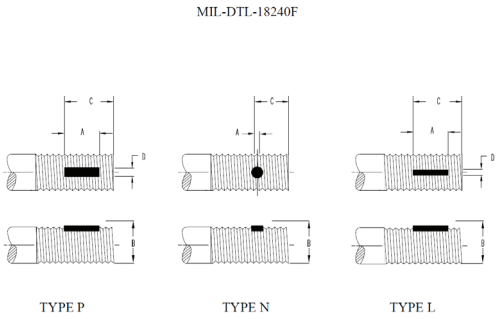
Functional coatings are system solutions for mechanically stressed fastening elements, such as screws and nuts. These coating types are applied using different application procedures.

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



PROCUREMENT EXPERTISE

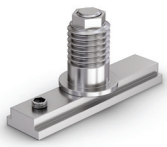
Assemblies

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

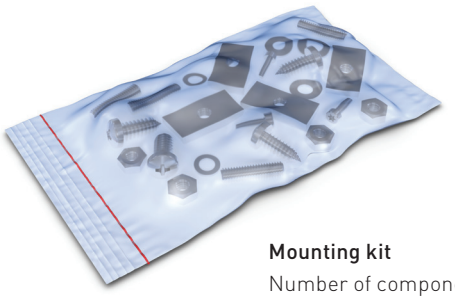
PROCUREMENT EXPERTISE

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

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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

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.

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.

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