

EJOT®



The EJOT® „boss“ family

Multifunctional fixings



EJOT® The Quality Connection

Imprint

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Germany

Layout and Realization:

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Industrial Fasteners Division
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Print:

Druckerei Hachenburg GmbH
D-57627 Hachenburg

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Assembly elements over and over

Today's demands on fastening techniques are as numerous as fastening elements being available. Direct assembly will be the most favourable cost saving solution, as no additional assembly elements are required. However, this method could sometimes be limited, for example when thin-walled components, that do not allow injection moulded bosses, have to be fastened.

Finding the right solution from a variety of possibilities is often time-consuming for the design engineer. Years of experience with direct assemblies into polymer materials with the EJOT DELTA PT® screw led to the development of a number of fastening nut elements, the so-called EJOT® „boss“ family. It provides standardized, tailored and purposeful solutions.

The idea is “easy”. EJOT plastic bosses can be applied on different materials with various wall thicknesses. This way, you gain the advantages of modern plastic engineering with regard to design, cost-effective injection moulded parts, and improved long term stability when used in conjunction with the DELTA PT® screw.

The EJOT® boss family provides fastening elements for each possible assembly situation. Due to the flexible design possibilities for plastic parts the model variety is manageable. The choice of a suitable element is easier compared to metal nut elements.



Our experience is your benefit:

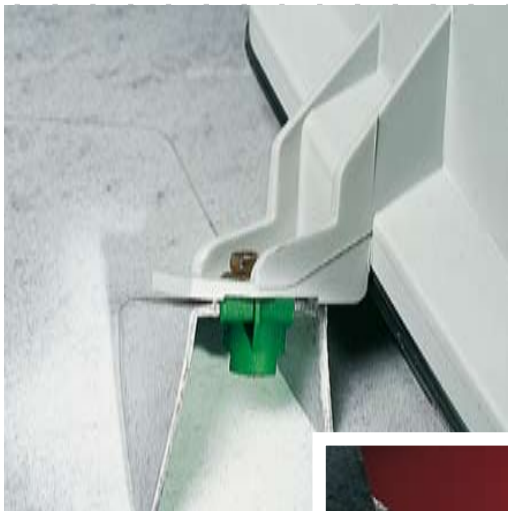
- EJOT offers standardized solutions
- EJOT has many years of experience in the injection moulding business

The EJOT® „boss“ family convinces by:

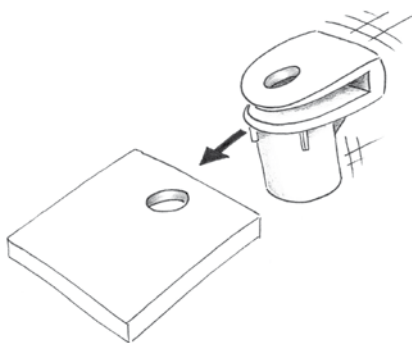
- little relaxation and thus sufficient remaining clamp load in the joint during the whole lifetime of the component
- safe assembly with the EJOT DELTA PT® screw
- no risk of injury
- corrosion and media resistance, without further surface treatment
- recyclable
- no jamming or interlocking in case of bulk packaged goods
- distinct colours guarantee process safety
- different materials possible
- weight advantage over metal parts
- multiple repeat assembly possible

EJOT EASYboss®

The standardized version



Application example



Assembly situation EASYboss®

The EJOT EASYboss® was developed as an alternative to sheet metal clips.

It is used in plastic components that do not allow direct assembly due to lack of penetration depth, injection moulded bosses or other various reasons. Further applications are thin-walled components made of different materials (sandwich) and thin sheets.

EASYboss® may be assembled by means of a snap fit to the edge or clearance cut-outs in the surface of the component. The EASYboss® will take up tolerances of the hole and its position. To accommodate varying part thicknesses and hole positions EJOT offers a range of standardized sizes.

We offer goal-oriented solutions in terms of the assembly. If required EJOT can support you in the development from basic manual snap-on tools to complete assembly stations.

Individual solutions are our specialty.

Characteristics:

- assembly by means of a snap fit to the edge
- high load capacity of the fastening spot due to big bearing surface
- easy disassembly
- materials: POM, PA (GF), PBT, PP-GF30
- optimized for DELTA PT® screws with diameter of 3,5 - 6,0 mm
- thickness of substructure: 1,0 - 6,0 mm
- insertion depth: 5,0 - 15,0 mm

Please find technical details in the data sheets on our homepage:

www.ejot.com

-> Industrial Fasteners

-> Product Range

-> EJOT® „boss“ family



EJOT EASYboss® V

The standard solution for varying snap-on thicknesses

The EJOT EASYboss® V is a novel fastening element that can be used for assembly on varying thicknesses of components. The spring supported boss allows pre-assembly on varying snap-on wall thicknesses of the substructure. At the same time the retention force for captive pre-assembly is applied.

The EASYboss® V is an enhancement based on the widely known principle of the EASYboss®. It possesses, in addition to the established characteristics, the possibility to compensate varying thicknesses. The thickness-compensation is realized through an axially movable center part, the actual boss. The boss is kept in its position by two opposed spring elements. These spring elements apply the retention force to the substructure in pre-assembly condition (when screw is not yet applied). Thus the EASYboss® V does not cause rattling noises under vibration nor will the fastening element fall off. An integrated distortion guard prevents the distortion of the inner boss to the outer holding cage during the assembly process.

The tightening torque equals the recommendation for conventional bosses. Thus compatibility is guaranteed.

The resulting field of possible applications is dashboard fixing in the automotive industry, as well as covers and cleaning or electric- and household appliances. The variable snap-on thickness of 2,5 to 5,5 mm results in a respective cost-saving potential due to the possible reduction of part variety.

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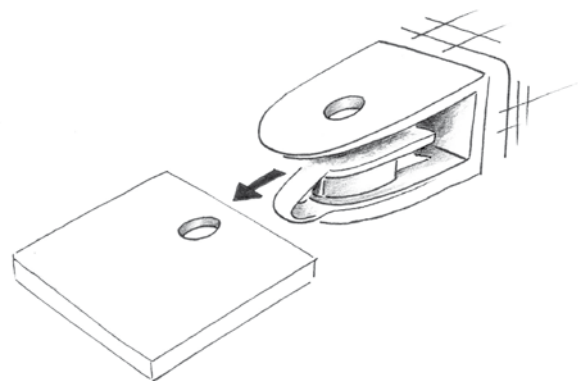
-> Product Range

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Characteristics:

- assembly by means of a snap fit to the edge
- variable snap-on thickness
- easy assembly /disassembly
- material: PA
- optimized for DELTA PT® screws



Assembly situation EASYboss® V

The standardized version for smaller installation space

The EJOT SQUAREboss is a tailor-made fastening element.

In combination with the DELTA PT® screw it allows an economic and safe joint. Assembly in the substructure takes place by manual pushing through in assembly direction.



Application example

Characteristics:

- easy assembly by manual pressing into square holes
- assembly in axial direction
- variable thickness of substructure tolerable
- automated assembly
- simple hole geometry
- component with low penetration depth
- material: PA (GF)
- optimized for DELTA PT® screws
- thickness tolerances of up to 1,0 mm can be compensated

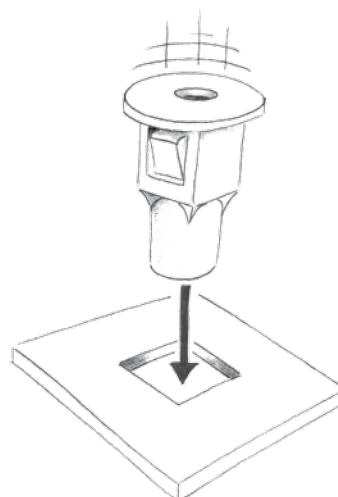


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Assembly situation SQUAREboss

EJOT VARIOboss®

Multifunctional and variable

The EJOT VARIOboss® is a multifunctional fixing system made of plastic and is available in variable designs.

The special design of the VARIOboss® allows to equalize different sheet thicknesses with the one VARIOboss® size. Manual- and semi- or fully automated assembly can be realized.

Characteristics:

- assembly in axial direction
- tolerance equalization in directions x, y and z
- variable thicknesses of substructure possible
- vibration safe fixing on substructure even without fastening
- material: PA66
- optimized for DELTA PT® screws



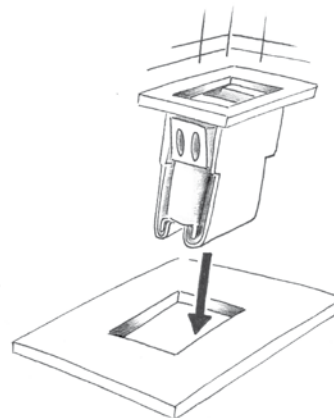
Application example

Operating mode of the VARIOboss® HP (High Performance)

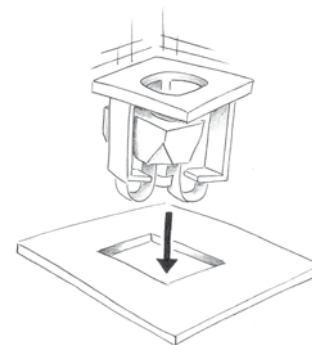
After installation the snapping hooks of the VARIOboss® HP return to their initial position. Due to the constant force of the connecting springs they will be permanently pressed against the component. Fastened with the EJOT DELTA PT® screw the snapping hooks cannot spring back resulting in a strong and reliable joint.

Operating mode of the VARIOboss® XPQ (eXtra Performance Quarter turn)

During insertion the springy part of the VARIOboss® XPQ with the appropriate hooks is turned anti-clockwise by 45°. After pushing through the springy part turns back to the initial position and two hooks hold the VARIOboss® XPQ captive onto the component. During screw fastening the springy boss with the two hooks is pulled upwards and clamps the VARIOboss® XPQ against the substructure.



Assembly situation
VARIOboss® HP



Assembly situation
VARIOboss® XPQ

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EASYboss® V



EASYboss® with distance bush



VARIOboss®



VARIOboss® XPQ



VIERKANTboss



SOFTboss



EASYboss® (big flap)



EASYboss®



EASYboss® 45°



EASYboss®



EASYboss® (spline)



VIERKANTboss with flange



POWERboss



EASYboss® with flap

Your system partner



Test rack at EJOT APPLITEC

Design Consultation

A major consideration of today's product manufacture is the basic need to be cost competitive. Significant in achieving this objective is the design process. No other part of the cost structure is influenced more than by design.

Generally speaking, the development of a product, which represents about 10% of the overall costs, determines about 70% of the costs for the final product.

Often the design of the fixing is considered to be of low importance; however, it is the fastener that holds the components together to make the finished product. With this in mind the design engineer should consider which fastening method to use during the design conception stage to avoid expensive design changes late on in the design process or even when the product goes into production.

To assist our customers in this process EJOT offers support during the design stage by comprehensive application engineering services. These services provide accurate information on product performance and result in design recommendations that can be used safely on the product line.

Consequent Application Engineering

The continuous work with our customers and their application problems greatly enhances our understanding of fastener technique and opens up possibilities for innovation. Therefore, we consequently improve our products to meet customer demands and needs.

On top of our highly qualified engineers and application engineering advisors, we offer the service of our application laboratory called EJOT APPLITEC. Here we carry out a series of test procedures on our customers' applications that enable us to thoroughly analyze the strengths and capabilities of their parts. Also, new fastening techniques are being developed in in the EJOT APPLITEC.

Our knowledge is passed on to our customers and therefore supports their efforts towards more rational fastening and assembly techniques.

Detailed test reports, technical advice on site, acknowledged seminars and technical publications show our continued commitment to impart our knowledge.



Internal Seminar



Test report

Logistic and Data Exchange

It is our aim to keep procurement and warehousing costs as low as possible by simultaneously offering product availability and quality.

With respect to simplified procuring processes, EJOT offers a variety of cost reducing procedures and services. The continued analysis of our customers' demands and advanced logistics procedures lead to high availability of our products. Skeleton contracts and delivery schedules via electronic data interchange facilitate and accelerate the processing times of our products.

Quality for Automated Assembly

The fasteners grade of purity has a significant impact on the minimization of failure and thus leads to a high availability of the assembly machine. Historically, the standard quality in commercial fastener manufacture is not sufficient for today's high quality requirements since originally it has been designed for mainly manual assembly.

EJOT introduced the EJOMAT® quality to ensure the most cost-effective usage of our customers' automated assembly machines.

The grade of purity offered by EJOMAT® quality is 10 times higher than the usual standard quality which means increased availability of assembly machines and decreased assembly down time costs.

EJOMAT®, quality that pays for itself.

EJOT Sales Organization

In addition to EJOT companies throughout Europe a growing number of licensees in North & South America and Asia ensures the global availability of products and local support. Contact details can be found on our homepage www.ejot.com.



Modern PPS-systems lead to high accuracy in supply and short through put times



EJOMAT® for fully automated assembly



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