



ecosyn[®]-fix
Reliability and Efficiency



«ecosyn®-fix screws combine
several functions and are
extremely efficient»



ECOSYN®-FIX

Reliable and Efficient

ecosyn®-fix screws save assembly time, management costs and ensure reliability in the application.

Reliable fastening and cost savings

Fastened joints must be reliable and durable. Often, they must fulfil several functions in addition to being affordable. ecosyn®-fix was developed taking into account this aspect of a multi-purpose screw.

- Reliable and durable fastened joints
- Fast assembly and easy procurement
- High efficiency

These are the properties of the ecosyn®-fix screw. With that, the ecosyn®-fix can contribute significantly to the production of competitive end products.

Ease of assembly and a wide area of applications

ecosyn®-fix screws are fasteners that simplify assembly. They are mainly used

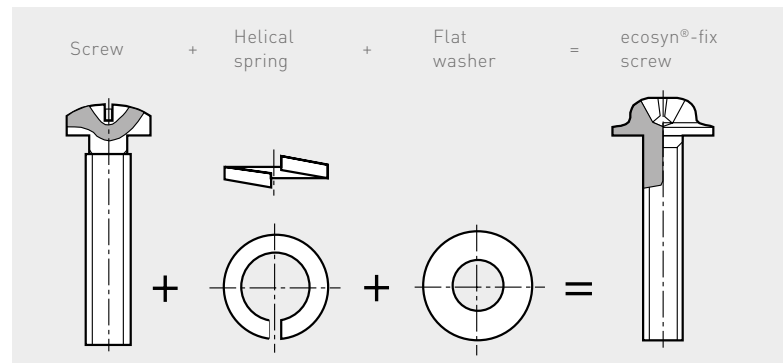
- In general apparatus engineering
- In electrical equipment and household appliances
- In applications with minor mechanical loads (e.g. fittings)
- With high vibrations

In many applications, where the assembly efficiency should be optimized.

Cost savings

Fewer single parts for faster processing times

- Cost saving opportunities in procurement and inventory management
- Shorter preparation times
- Standardized drive
- Faster assembly
- Suitable for feeding in automated assembly



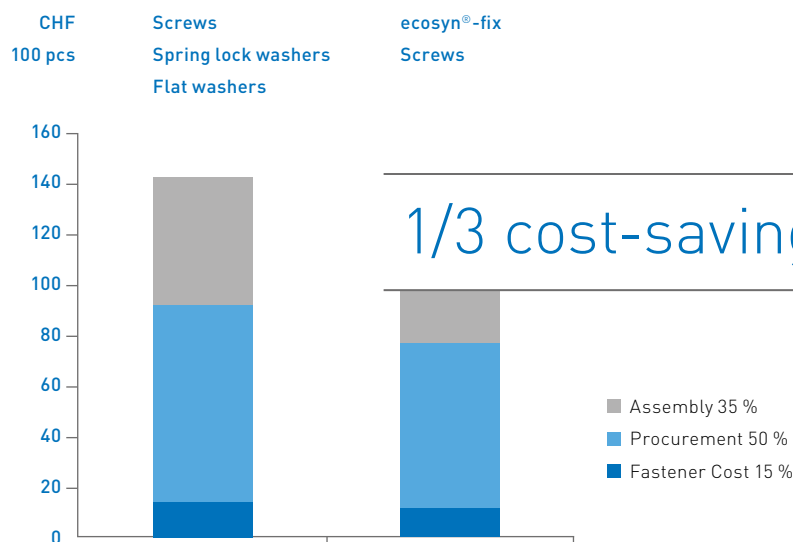
One fastener instead of several

LEAN approaches with ecosyn®-fix screws

The large cost-savings potential and the many other advantages compared to traditional fastening technology are impressive. This is the reason for the successful deployment of ecosyn®-fix worldwide.



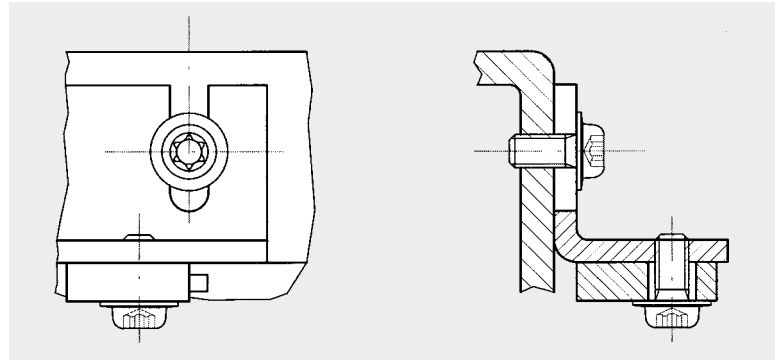
The cost-savings potential of ecosyn®-fix is enormous. This potential can exceed 30 % within the overall value-added chain of the fastened joint.



Reliability

The integrated washer has many advantages

- Shake-proof and vibration-resistant
- Joint relaxation is compensated
- Optimum bearing area to cover elongated and large through holes
- Reduced risk of crevice corrosion

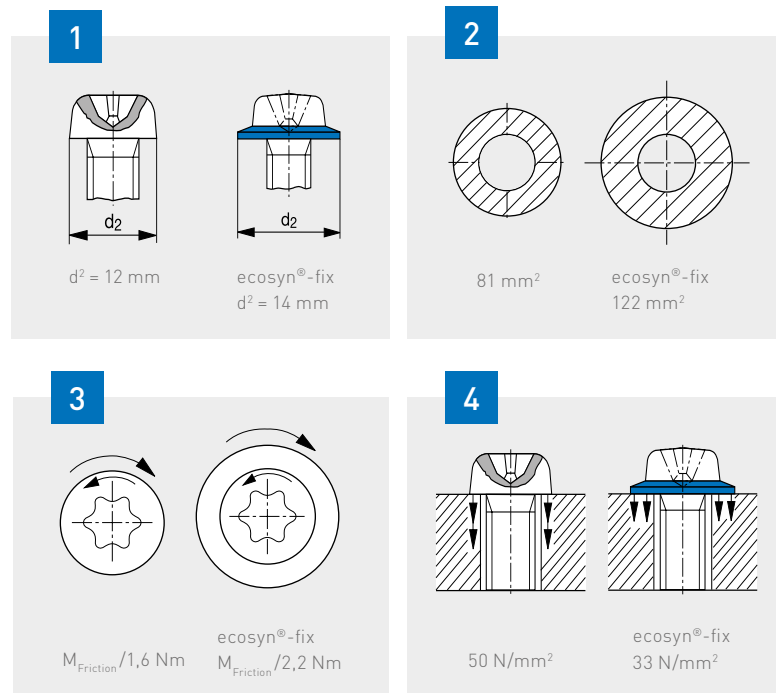


Large bearing area optimizes reliability

Functionality

This is why ecosyn®-fix can be used in multi-purpose applications.

- 1 The large diameter of the integrated washer is useful in terms of compensating for large tolerances and in covering elongated holes.
- 2 The wide, smooth bearing area reduces the risk of damage to the surfaces of components. At the same time it minimizes the potential for corrosion.
- 3 On a properly tightened screw, the friction area under the head and the large friction radius increase the break-away torque.
- 4 The washer integrated into the screw head minimizes pre-load loss.



This illustration is based on a M6 screw.

Areas of application for ecosyn®-fix

This list illustrates the wide range of potential for the multi-purpose ecosyn®-fix.

- Railway vehicles (e.g. covers, fittings)
- System and apparatus engineering
- Electronics and electronic appliances
- Household appliances
- Vehicle construction
- Body and sheet metal applications



Example fastened joints using ecosyn®-fix in a breast pump.

Stock inventory of ecosyn®-fix

Detailed dimension tables and further information can be found in the Bossard e-Shop and in the Bossard Screw Catalogue.

ecosyn®-fix Hexalobular pan washer head



Order number		Materials	Ø from/to
BN 5128	4.8	zinc plated blue	M2.5 – M6
BN 10649		Stainless steel A2	M2.5 – M6

ecosyn®-fix Phillips cross recessed pan washer head



Order number		Materials	Ø from/to
BN 4825	4.8	zinc plated blue	M2.5 – M6
BN 5952		Stainless steel A2	M2.5 – M6

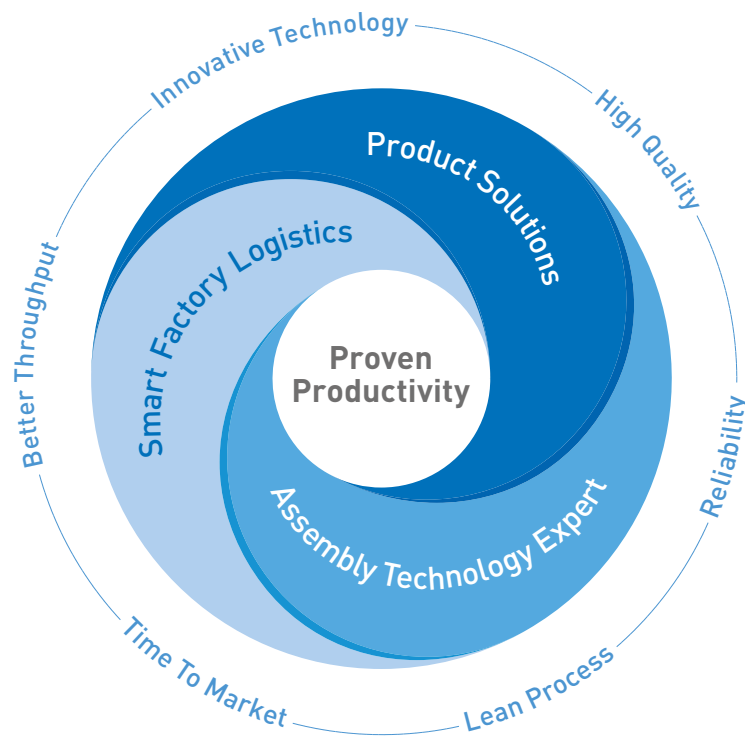
ecosyn®-fix Hex washer head



Order number		Materials	Ø from/to
BN 5950	4.8	zinc plated blue	M3 – M8
BN 5951		Stainless steel A2	M3 – M6

PROVEN PRODUCTIVITY – A PROMISE TO OUR CUSTOMERS

The strategy for success



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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