

bigHead®

A Technical Introduction To bigHead

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Application suitability must always be determined by appropriate testing and bigHead does not accept liability for any failure arising from use of their products.

Drawings and illustrations within this document are for illustrative purposes only, are not to exact scale, and may differ from actual items.

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Welcome to bigHead...

This guide will help you through your first steps with bigHead:

Introduction to bigHead products

- When you need a bigHead solution
- The bigHead product concept

Embedding and surface bonding concepts

- What they are, and what they involve
- What they offer, and how to decide which one is “right” for you

bigHead fastening functionalities

- Available fastening functionalities
- Corresponding product types

Assembly strategy

- Assembly considerations when specifying a bigHead solution

What's in this guide?

Introduction to bigHead products

- [The bigHead product concept](#)
- [When a bigHead solution is needed](#)

Embedding and surface bonding concepts

- [bigHead fastener installation methods](#)
- [Embedding vs. surface bonding](#)

bigHead fastening functionalities

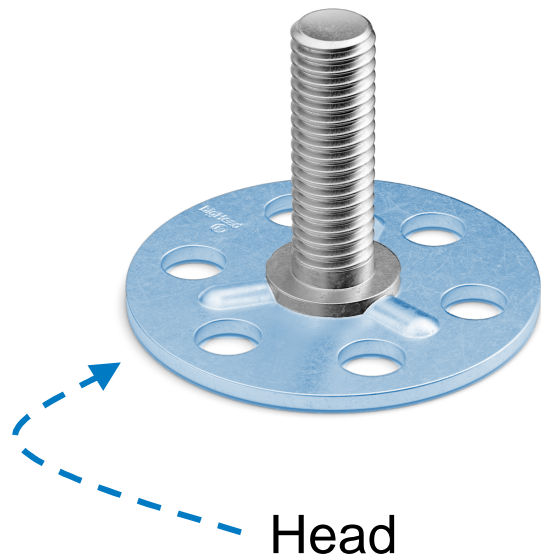
- [Fastening functionalities and fixing types](#)

Assembly strategy

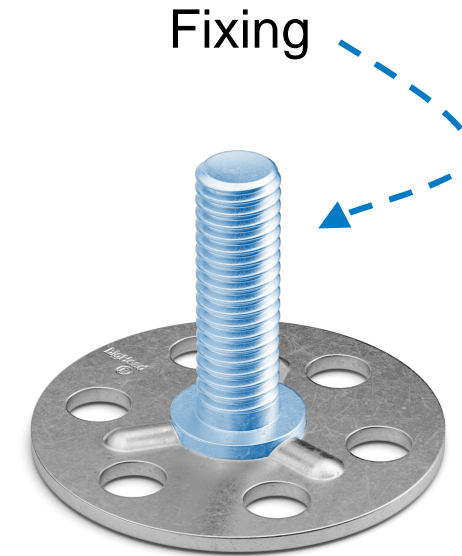
- [bigHead assembly options](#)

The bigHead product concept

All bigHead fasteners consist of
a load-distributing Head...

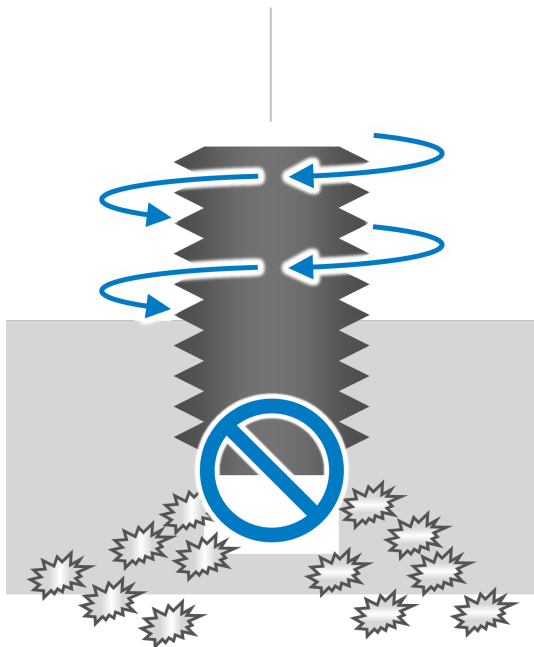


...and a functional fixing.

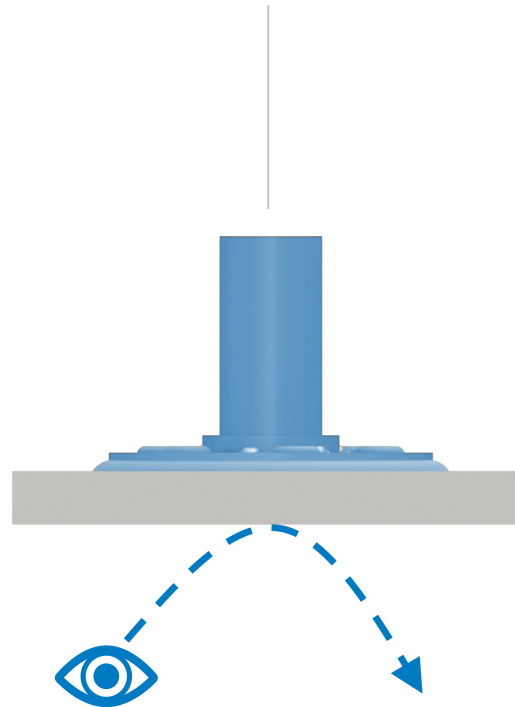


When a bigHead solution is needed

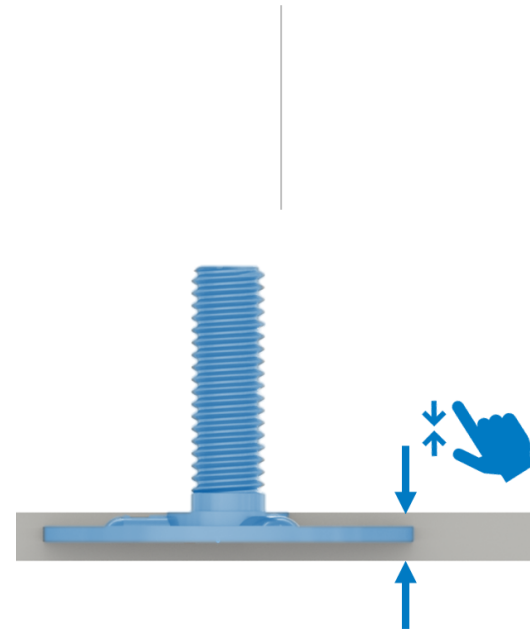
Provision of fastening points on or within materials that are unsuitable for threading or insert installation



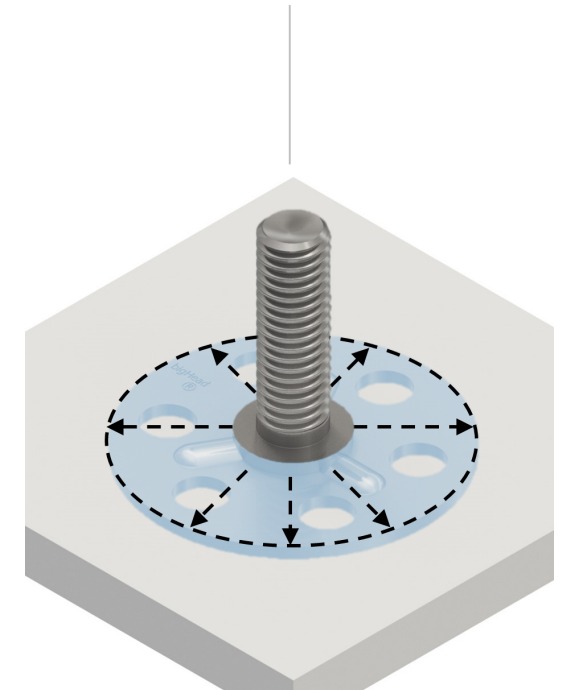
Creation of blind, non-visible fastening points



Requirement for thin localised material section



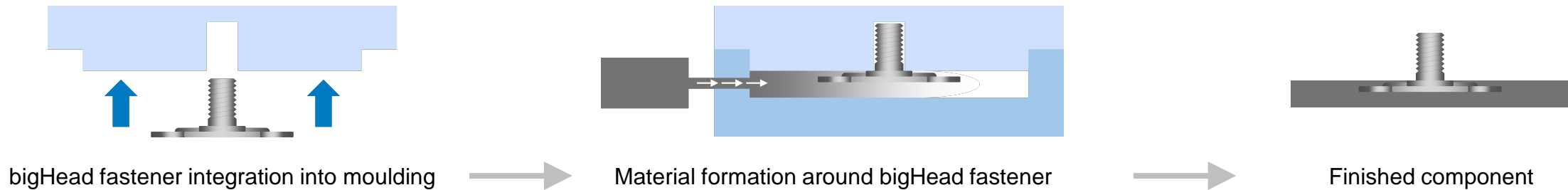
Load spreading connection into materials that have point loading sensitivity



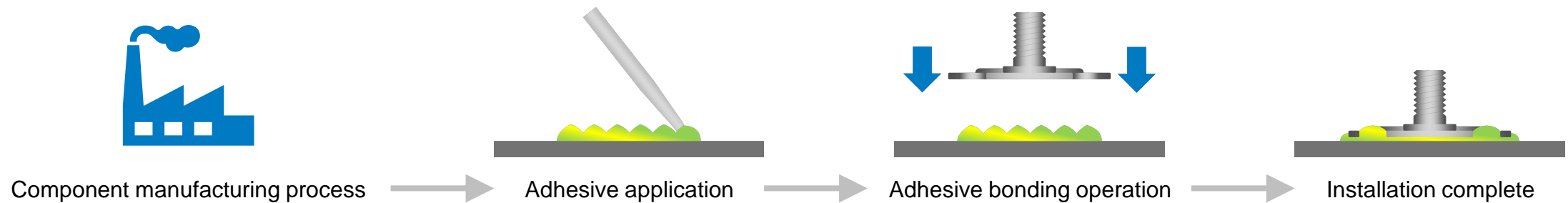
bigHead fastener installation methods

There are two main installation methods for bigHead fasteners: integrate them into the parent component manufacturing process (embedding/ co-processing) or install them after the process is complete (surface bonding/ post-processing).

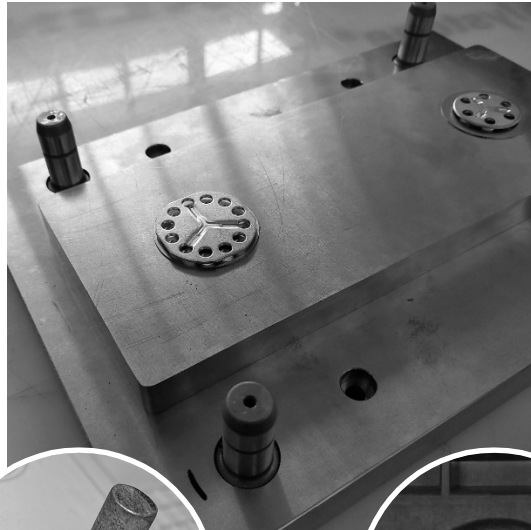
Embedding



Surface bonding



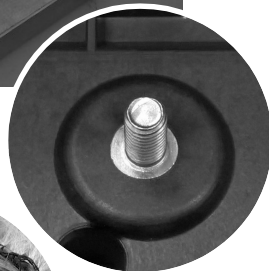
When to use embedding or surface bonding



bigHead embedding: speed and efficiency

Simplify component designs: create fastening points using simple moulding geometries

Maximise production throughput: mould components ready for final assembly, without additional installation operations



bigHead surface bonding: flexibility and versatility

Liberate component designs: create fastening points in the location and orientation you need them

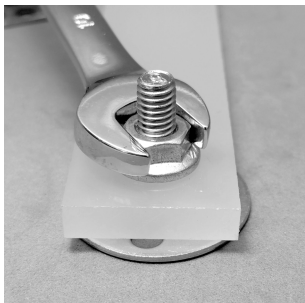
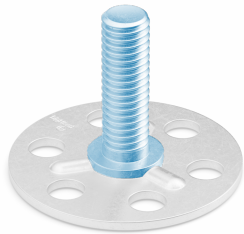
Minimise process constraints: install fasteners when most convenient in your overall manufacturing process



bigHead fastening functionalities

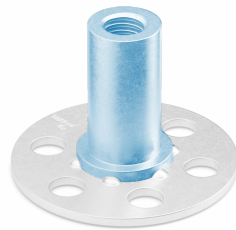
Externally threaded function

- Externally threaded products



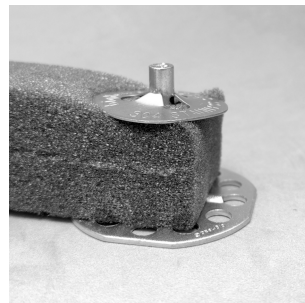
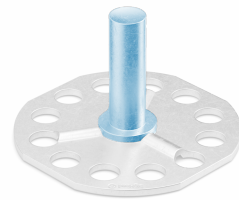
Internally threaded function

- Internally threaded products



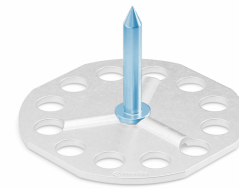
Pin function

- Unthreaded pin products



Spike function

- Nail products



Hooking point function

- Loop products



Cable and pipe harness function

- Cable tie loop products



bigHead assembly options

Preload options

The compressive loading sensitivity of materials varies. Aside from simplistic options, preload management for a bigHead installation requires holistic consideration of the assembly design.

Simplistic example: management by installation configuration	Inset stud & reverse socket: preloads material	Flush stud & through socket: preloads bigHead fastener
Holistic approach:	<ul style="list-style-type: none"> ✓ Review assembly system design ✓ Define preload pathways ✓ Define assembly parameters ✓ Check loading sensitivities ✓ Explore mitigation strategies (if needed) 	

Fastening visibility options

Non-visible fastening typically involves a “Blind” bigHead fastener. For fastening that passes through the material, a “Sighted” bigHead fastener is required.

Blind fastening	Through fastening
Blind product	Sighted product

Open and closed end options

An “open” configuration is ideal for accommodating longer thread lengths. A “closed” configuration is ideal for shielding the threaded section from the surrounding environment.

Open reverse socket	Closed reverse socket



We're here to help...

Get in touch

We're here to help. Whether you have a technical question you need answering or some products you'd like to order, we welcome your call.

We're open from 7:30am to 4:15pm UK time Monday to Thursday. On Fridays we close at 12:15pm.

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