

Cost Benefits



FLOWDRILL

Cost calculation

In the previous chapters the specific advantages of the friction drilling process are identified; the next step is to understand the costs and potential cost savings per hole or fastener.

> Costs - comparison and savings

As a general calculation, it is straightforward to compare the costs per fastener with the costs of Flowdrill tools.



100.000 pcs = 10.000 EUR



Flowdrill + Flowtap =
150 EUR for 5000 threads



Flowdrill benefit:
Obvious cost reductions

0.10 EUR per pc, still not mounted

0.35 EUR per thread completed

0.035/0.1 = 65% cost reduction

This example demonstrates that a cost reduction per fastener of 65% or more is easily achievable. The following calculation is based on an automotive battery frame. The material specification is 3mm mild steel with M6 Flowdrill hole and a plane surface. The cost per hole is calculated based on a tool lifetime of 5,000 cycles.

Costs per Flowdrill tool	120,00 EUR	Per 5.000 holes
Costs per Flowtap tool	35,00 EUR	
Add on lubricants	20,00 EUR	
Total	175,00 EUR	
100 holes per frame	With DIN thread M6 (Flowdrill & Flowtap)	=0.035 EUR / hole =3.50 EUR / frame
	Flowdrill only for thread forming screw	=0.024 EUR / hole =2.40 EUR / frame

In case of an aluminium battery frame, the total costs per connection is 0.015 EUR.

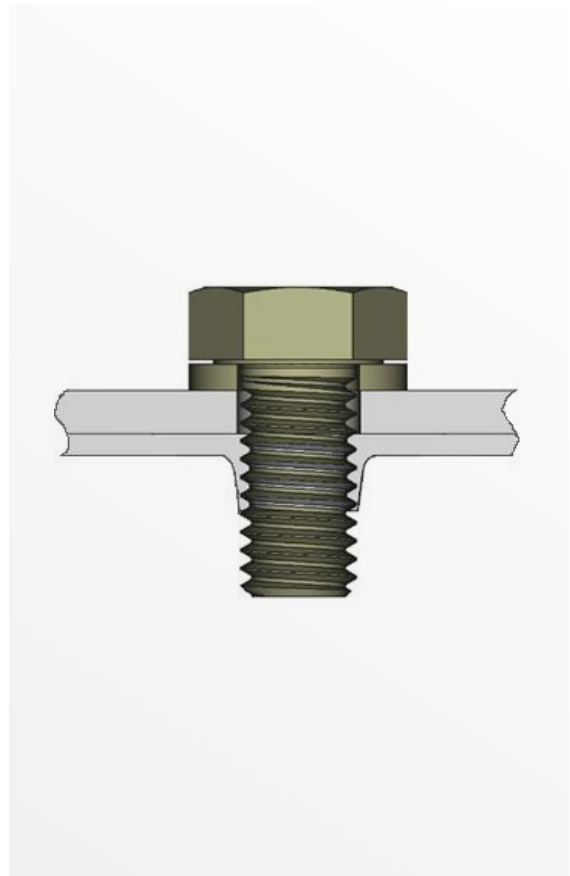
Due to the significantly longer tool lifetime up to 25,000 cycles when using our Aludrill tool series.

Summary of advantages with Flowdrill

Flowdrill offers several advantages over traditional fastening methods. Friction drilling can serve as a complete replacement, eliminating the need for conventional fasteners.

You may identify those that might be most relevant for your own design and manufacturing decision process:

- ✓ Allows for single-sided accessibility.
- ✓ Achieves weight savings per connection.
- ✓ Suitable for fasteners in high tensile material connections.
- ✓ Chipless process, with no chips inside a profile during drilling.
- ✓ Ideal for designs with specific requirements, such as tight spaces, bent surfaces, or radii, where a nut or rivet cannot easily be used.
- ✓ Cost-optimized designs with reduced internal handling and simple production implementation.
- ✓ Reduces production steps by eliminating the need to handle fasteners, resulting in faster cycle times and less handling.
- ✓ Minimizes potential sources of errors.
- ✓ Increases production capacity.
- ✓ Environmentally friendly.
- ✓ Facilitates easy recycling because there is no need to dismount fastening elements.
- ✓ Creates sealed blind hole connections in axial material racks, such as those used for battery housings.
- ✓ Replaces traditional fastening elements.



A thorough technical analysis is essential to incorporate these advantages into a complete design or redesign and manufacturing process. However, a Flowdrill connection can be used and reassembled reliably.



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