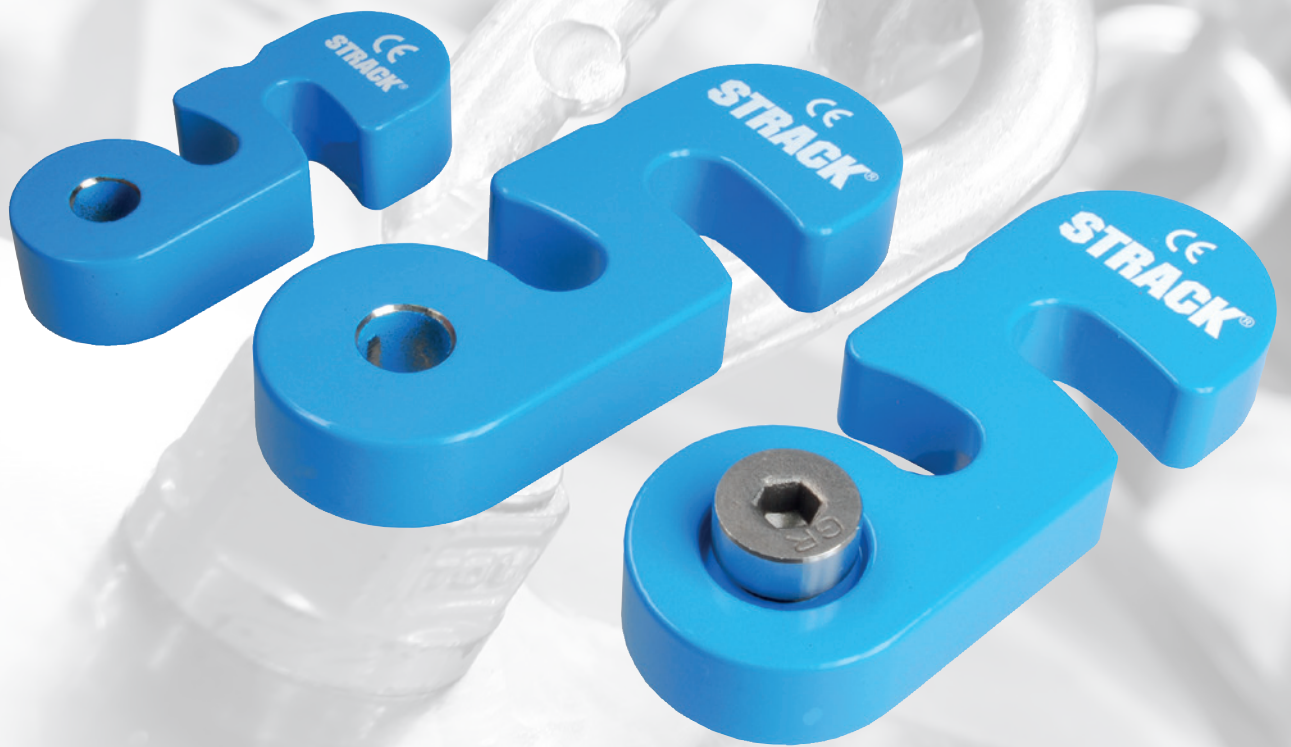


SAFETY HOOK Z6041
OPERATING INSTRUCTION



STRACK®
NORMALIEN

Operating instruction Safety hook Z6041

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1. Explanation of symbols – intended use – important notes

Explanation of symbols



Important notes for a safe use



A useful hint for the handling of the product.
It draws attention to potential difficulties.

Intended use

The safety hook “Z6041” provides for the locking of two mould halves and thus prevents an accidental opening of the injection mould during the transport or the mounting- and dismounting. The half of the mould which is held by the safety hook may not exceed 300 kg for the type 1 and 500 kg for the type 2 + 3.

Important notes

Surface finish:	Safety hooks must be burr-free!
Corrosion protection:	Painting as a protection against acids and fluids
Color of the protective coating:	RAL 5012 (STRACK blue)

1. Explanation of symbols – intended use – important notes



The machine operator has to take care that these operating instructions are always available for operating- and maintenance personnel in a comprehensible language.

About the document:

The language of the original operating instructions is German. All other languages of these instructions are a precondition for the intended use and the correct operation of the product. The operating instructions comply with the version of product and with the underlying safety regulations and standards.

A copy of the EC declaration of conformity is a part of these operating instructions. In case of a technical modification of the therein mentioned construction type which is not agreed with us or in case of disregarding the declarations for the safety of the product/personnel indicated in the operating instructions, this declaration loses its validity.

Information about the producer

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An improper or contrary application compared to the in these operating instructions described points and the additionally existing safety regulations, relieves STRACK from any responsibility in term of the safety of the herein mentioned elements.

2. General principles for the use of this safety hook

The operating instructions have to be kept together with the CE declaration of conformity. The falling down of loads by failure and/or incorrect use and handling of the safety hook causes a direct danger to life and health of persons standing in the danger area of lifting operations.

These operating instructions contain notes concerning the safe use and handling of the safety hook. Before using the safety hook, the authorized person must be instructed by a competent person in the handling and use.

Generally applies:

- The admissible load-bearing capacity of the safety hook type 1 is designed for 300 kg, of the type 2 + 3 for 500 kg.
- The safety hook is only designed for the locking of two mould halves and the transport of them up to the maximal load-bearing capacity.
- People may never stay in the danger area of suspended loads.
- The safety hook must never be modified arbitrarily (e.g. grinding, welding, bending, attachment of parts).
- The safety hook must not be exposed to an undue temperature influence (operating temperature +10 °C up to +120 °C).
- Only original spare parts must be used.
- The safety hook must be stored so that it is protected against damage and does not constitute a danger itself.
- In the event of disturbances the safety hook must immediately be removed and maintained.
- The safety hook has to be disposed properly at withdrawal from service.



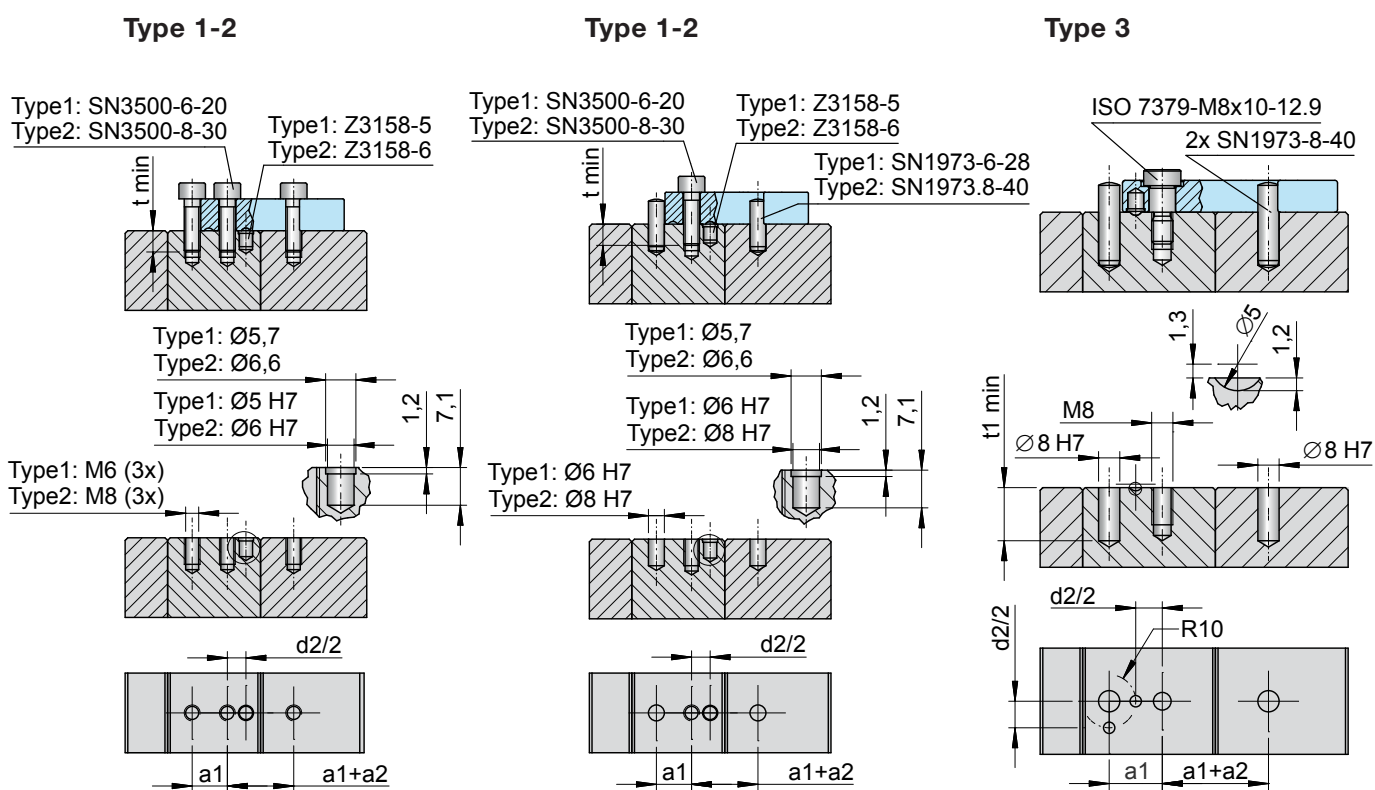
Please take care when lifting off the tool that the crane is perpendicular over the mould in order that the force application is perpendicular. Thus an uncontrolled swinging of the lifted mould should be avoided to prevent damage to persons and/or damages at the safety hook and its attachment parts!



Safety hook, cylinder head screw, shoulder fit bolt and dowel pin have to be checked in dismantled state for signs of damage. The examination should be carried out by a competent person once a year. Damaged components have to be replaced. Please only use original spare parts!

3. Mounting instructions

1. Machine the impressions for the balls and ball catches on the mould
2. Attachment of the dowel pins at the intended places
3. Attachment of the safety hook
4. Clean the threads of the screws with Z9050 or Z9072
5. Apply screw locking Z9093
6. For fastening of the safety hook turn in the cylinder head screw respectively the shoulder fit bolt at the intended place
7. Let it dry for at least 12 hours at 20 °C



When fastening the safety hook you have to consider the following:
Tighten the cylinder head screw respectively the shoulder fit bolt until flush contact to the surface.
Tightening torques are specified and have to be considered (table 1).

Type	Tightening moment	Fastening
Z6041-1	10 Nm - then turn back by a quarter turn	Has to be secured with screw locking Z9093 against loosening
Z6041-2	10 Nm - then turn back by a quarter turn	Has to be secured with screw locking Z9093 against loosening
Z6041-3	20 Nm	Can be secured with screw locking Z9093 against loosening

Table 1

3. Mounting instructions

Check correct screw size, thread size and screw-in length. For blind holes the thread depth must be at least 1.1 fold the length of the length of the thread engagement. The minimum (t_{min}) screw length is:

- in Steel $1.00 \times d$
- in cast $1.25 \times d$, for cast strengths $< 200 \text{ MPa}$ at least $1.50 \times d$
- in aluminium $2.00 \times d$
- in aluminium-magnesium alloy $2.50 \times d$
(where d = thread size, e.g. for M 24 $d = 24 \text{ mm}$)

4. Operation

After the installation of the locked mould in the machine, before opening the tool, the safety hook must be moved in inoperative position (see figure. 2).

After the operation process the mould is again locked in the machine by means of the safety hook and then is dismantled.

Before lifting the mould you have to consider that the safety hook is in the locking position (both halves of the mould are locked), that means the fulcrum point of the safety hook and the center point of the cylinder bolt must be on an axis (see figure 1).

A back swinging increases the lever arm on the load-bearing cross-section and can destroy the hook.

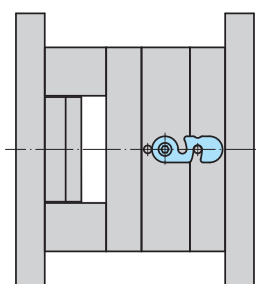


Fig. 1

Z6041 secured transport position

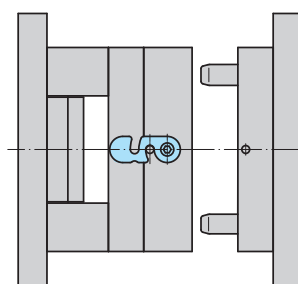
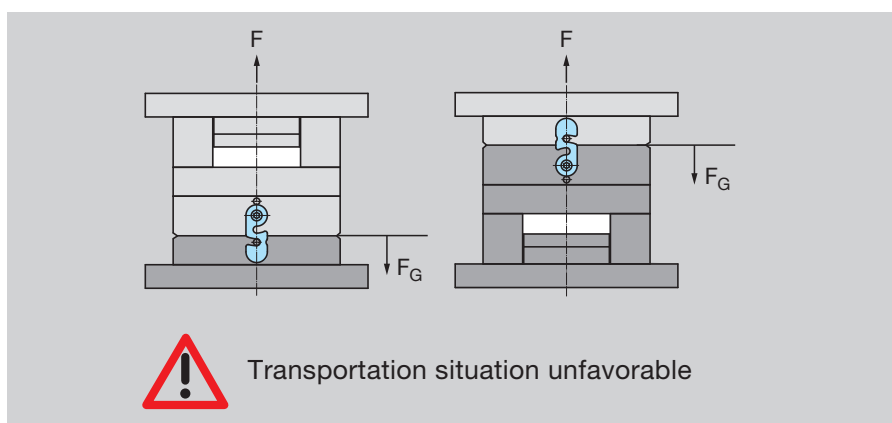
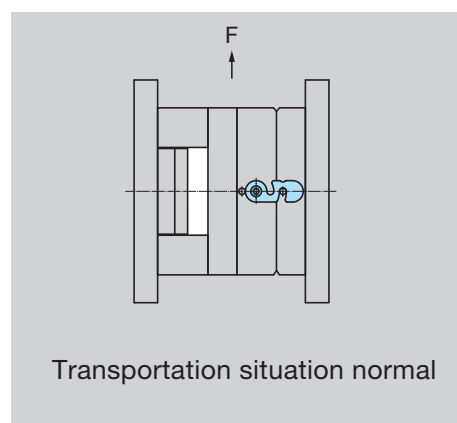


Fig. 2

Z6041 in production position



5. Dismounting

1. Loosening of the cylinder head screw respectively the shoulder fit bolt
2. Dismounting of the safety hook
3. Removing of the dowel pins

6. Safety instructions

1. Before using read the complete operating instructions
2. It must be ensured that in use the safety hook is completely locked (A back swinging must be avoided)
3. Persons may never stay in the danger area of suspended loads
4. The safety hook may never be modified arbitrarily
5. The safety hook must be stored so that it does not constitute a danger

7. Inspection and maintenance

To ensure a technical functionality of the safety hook you have to pay attention that no weather influences such as rain, snow etc. and splash water interact with the hook, because the part is made of steel and oxidized surfaces may eventually affect the function and safety.

The hook should be checked for damage or cracks before every operation. Should damages be found on the main body, the safety hook must immediately be withdrawn and properly be disposed. Then the mould must be secured before unsecured lifting.

The safety hook may only be screwed in undamaged load carrying threads of the mould which has to be attached. Damaged thread holes must not be used anymore!

If wear, malfunction at the cylinder head screw, shoulder fit bolt, dowel pin or the safety hook is determined, the hook must be maintained.

Cylinder head screw, shoulder fit bolt and dowel pin can be ordered separately as spare parts.

The **inspection** of the parts must be made **annually** by a qualified person in dismantled condition.



Safety hook, cylinder head screw, shoulder fit bolt and dowel pins have to be checked for damage in dismantled condition. The inspection should annually be made by a qualified person. Damaged components must be replaced. Please only use original spare parts!

8. Conformity declaration

EC conformity declaration

in accordance with the EC Machinery Directive 2006/42/EC and further complementary directives

The company STRACK NORMA GmbH & Co. KG based in D-58511 Lüdenscheid, Königsberger Str. 11, declares in person of its legal representative that

the safety hook

with the article designation Z6041

complies in the configuration placed on the marked by us, with the basic safety and health requirements, when used according to the instructions.

All relevant technical documents were compiled by Daniel Brockhaus working at STRACK NORMA & Co. KG. The documents are correct and complete and entitle to assign the **CE** marking. The safety hook complies with the conditions laid down in the directive 2006/42/EC from 15th May 2006.

Applied harmonized standards: EN ISO 12100-1, EN ISO 12100-2

Applied other technical standards and specifications: BGV D8, BGV D6, DIN 13155

The annex of the VIII of the Directive 2006/42/EC has been complied with.

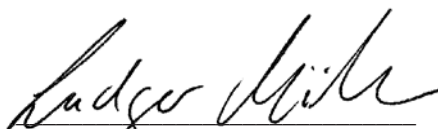
Before using the safety hook please read the operating instructions carefully.

An improper use of the safety hook assumes the non-compliance with the instructions in the operating manual and puts this EC conformity declaration out of force and relieves STRACK from any responsibility for possible risk of damage to persons or property as a result of this non-compliance.

Date: 09.07.2014



Dag Friedrich, Managing Director



i.V. Ludger Müller, Technical Manager

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