Instruction Manual

Translation of the Original Instruction Manual

alfa-clamp Tool Assembly Device

Base body 45°/90° / HSK-ABCDEF / PSC / VDI

DIN-ISO/MAS/CAT V

Example: Base body with tool holder HSK-A63

Designation: alfa-clamp

Types:
- 45° or 90° base body
- Tool holder DIN/CAT/MAS-BT/HSK-A
- Tool holder HSK-BCDEF/PSC
- Tool holder VDI

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Keep for future use!
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1 General

1.1 Introduction

These devices are used to hold and adjust tools, e.g. for CNC milling machines. Tool adjustment can be made by rotating and fixing the respective tool holder in various positions.

The Instruction Manual provided here describes the operating mode, correct installation and safety-compliant use of the devices.

The attachments to this Instruction Manual are an integrative part of this document.

This Instruction Manual is only valid for the devices specified on the cover sheet.

Safety and warning information must be read prior to using the device.

Please observe the warning symbols attached to the device. This information must be adhered to strictly! Warning symbols must be clearly legible. Damaged or missing symbols must be replaced.

The Instruction Manual must always be kept available at the location where the device is being used.

The staff commissioned to work with the device must have read and understood the Instruction Manual prior to commissioning.

“Read and understand the Instruction Manual first”
“It is too late to do this when you have already started working”

1.2 Intended use

These devices are used to hold and adjust tools, e.g. for CNC milling machines.

The devices may only be operated by instructed experts. Private persons, children, the disabled and interns may not work with these machines.

1.3 Reasonable predictable incorrect use

Use varying from the established “intended use” or any use apart from this is viewed as incorrect and is prohibited. All other use requires consultation with the manufacturer.

This also applies to the use of the device for different product dimensions.

Conversions, changes:

In the event of unauthorized conversions and changes to the device, all manufacturer liability and warranty is null and void. All changes to the system require agreement and control by alfa-sys ag.

Spare parts, wear and tear parts and auxiliary material:

The use of spare parts as well as wear and tear parts may result in risks. Only use original parts or parts approved by the manufacturer.
2 Safety information

2.1 General safety information regarding residual risks

The following general risks exist and must be observed during use.

Two pictograms on the device (warning signal and command signal) also warn against residual risks

Generally speaking:

<table>
<thead>
<tr>
<th><strong>DANGER</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>![Warning Icon]</td>
</tr>
<tr>
<td>• In order to avoid endangerment due to thoughtless use of the device by third parties, only one person at a time may ever work with it.</td>
</tr>
<tr>
<td>• This applies for all possible work with the device except for installation.</td>
</tr>
</tbody>
</table>

Depiction of safety information:

Risk to life

<table>
<thead>
<tr>
<th><strong>DANGER</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>![Warning Icon]</td>
</tr>
<tr>
<td>• Describes an imminent threat of danger.</td>
</tr>
<tr>
<td>• If the information is not heeded, death or severe personal injuries will result (invalidity).</td>
</tr>
</tbody>
</table>

Sever to lethal physical injury

<table>
<thead>
<tr>
<th><strong>WARNING</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>![Warning Icon]</td>
</tr>
<tr>
<td>• Describes a possible dangerous situation.</td>
</tr>
<tr>
<td>• If the information is not heeded, death or severe personal injuries can result (invalidity).</td>
</tr>
</tbody>
</table>
2.2 Special safety information

Placing the tools in the tool holder DIN/CAT/MAS-BT/ HSK-A

The tools are inserted into the conical holder belonging to the tool holder and secured with the locking bolt. When inserting, the locking bolt must be pulled outwards.

Following this, the locking bolt must be secured in the LOCK direction with the locking pin!

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**WARNING**

Caution – risk of foot injury!

Before rotating the tool downwards, always check whether the locking bolt is engaged and the locking pin is in the LOCK position.

Otherwise, the tool can fall down!

Severe foot injuries!

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**INSTRUCTION**

Always wear safety shoes in the vicinity of the device!

These 2 symbols are attached to the base body.

Faulty or illegible symbols must be replaced immediately!

2.3 Operator’s obligation

The requirements of the EC Directive 2009/104/EC must be adhered to.

Only correspondingly qualified staff may work with this device. They must be familiar with all the warning notices and safety information contained in this Instruction Manual. Successful and safe operation of these devices depends on their correct handling and operation.

Keep this Instruction Manual at an easily accessible location. A copy must be handed over to each operator. Acknowledgment must be confirmed in writing.

The devices may only be operated by trained and instructed staff. The legally permissible minimum age must be observed. The staff’s responsibilities for use must be stipulated clearly.

Personal protective equipment must be provided by the operator. All employees are obliged to use this protective equipment properly.
2.4 Staff’s obligation

Only correspondingly qualified staff may work with these devices.

Qualified staff is defined as being those persons who, due to their education, experience and instruction, are entitled to execute the work required. Here, you must be able to recognize and avoid possible dangers.

The staff must be familiar with all the warning notices and safety information contained in this Instruction Manual. For this:

- the Safety chapters and safety information in this Instruction Manual must be read, understood and observed.
- the basic regulations regarding work safety and accident prevention must be observed.

Also, knowledge of first-aid measures and of the local rescue facilities is required.

Always wear the following personal protective equipment:

- steel-capped shoes
- protective gloves
3 Description of the devices

3.1 Overview

The tool assembly device alfa-clamp consists of the base body a) and the various insertable tool holders b)

a) Base body:

- Base body (tool holder bracket with a rear bar for locking the tool holder)
- Bar: with 2 positions by pulling upwards:
  - for indexing pull up to limit stop 1:
    - Pull the tool holder out of the holding burls until it can be rotated, drive it back into the holding burls in the desired position and then lock it in position again by pushing the rear bar down.
  - To replace the tool holder, pull up to limit stop 2.

b) Tool holders:

b1) Tool holder DIN/CAT/MAS-BT/ HSK-A

- Locking bolt (with spring retainment of the locking position)
- Locking bolt holder to secure the tool
- Locking pin (for securing the locking bolt: move towards LOCK manually)
- Tool holder (rotatable with engaging)
- Centering pivo
- With a baffle plate at DIN-ISO/MAS-BT 30

b2) Tool holder HSK- BCDEF/PSC

- Clamp lever

b3) Tool holder VDI

- Clamp screw
4 Use of the devices

4.1 Base body 45°/90°

4.1.1 Operating principle

The bar is activated both for indexing and when replacing the tool holder.

Position 1: INDEXING 4 x 90° or 8 x 45° to the working position
Gentle lifting to the 1st limit stop

Position 2: REPLACING THE TOOL HOLDER
Pull with higher force up to the mechanical end-limit stop

4.1.2 Working positions

1. Vertically upwards: Easy tool setting
2. Horizontally to the left: Milling screw or collet nut assembly
3. Horizontally to the right: Disassembly of the tools
4. Vertically downwards: Assembly and disassembly of the pull studs

WARNING

Caution – risk of foot injury!

Before rotating the tool downwards, always check whether the locking bolt is engaged and the locking pin in LOCK position.

Otherwise, the tool can fall down!
4.1.3 Replacing the tool holder

Push the tool holder (1) into the base body (2) up to the first resistance. Pull the bar (3) up to the mechanical limit stop and push the tool holder further into the base body (2). A downwards movement of the bar then draws the tool holder in and it is indexed by the indexing bolt.

4.2 Tool holder DIN/CAT/MAS-BT or HSK

4.2.1 Tool holder assembly

1. Push the centering pivo (1) into the tool holder (2).
2. Attach the centering pivo into the tool holder using the screw (3) provided.
4.2.2 Tool holder DIN-ISO/MAS-BT 30 assembly

**WARNING**

Caution – risk of foot injury!

Before rotating the tool downwards, always check whether the locking bolt is engaged and the locking pin in **LOCK** position.

Otherwise, the tool can fall down!

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**Tool holder with steep tapers according to DIN 69871**

For steep tapers according to **DIN 69871** and **CAT V flanges**, the baffle plate (2) **must be assembled** and the height of the locking bolt holder (1) be set in accordance with separate instructions.

**Tool holder with steep tapers according to Japanese standard JIS (MAS-BT)**

For steep tapers according to **JIS (MAS-BT)**, the baffle plate (2) **must be removed** and the height of the locking bolt holder (1) be set in accordance with separate instructions.
4.2.3 Setting the height of the locking bolt holder

Depending on the taper (DIN / CAT / MAS-BT or HSK), the locking bolt holder (3) must be set for a perfect fit at the height in the tool holder (1).

1. Place the tool in the corresponding tool holder (1).
2. Loosen both screws (2) so that the locking bolt holder can be moved easily.
3. Move the locking bolt holder (3) height so that the locking bolt clamping surface (4) lies on the intended surface in the gripper groove when extended.
4. Retighten both screws (2). The locking bolt (5) serves the additional friction securing of the elastic locking bolt.

4.3 Tool holder HSK- BCDEF, PSC

4.3.1 Tool holder assembly

1. Push the centering pivo (1) into the tool holder (2).
2. Attach the centering pivo into the tool holder using the screw (3) provided.
4.3.2 Insertion and clamping of the tool

**WARNING**

Caution – risk of foot injury!
Before rotating the tool downwards, always check whether the tool is engaged by clamping. Otherwise, the tool can fall down!

1. Place the tools in the tool holder (1) in any position desired.
2. Clamp the tool with the clamp lever (2) on the collar.
3. The tool holder (1) can be swung round.

4.4 Tool holder VDI

4.4.1 Tool holder assembly

1. Push the centering pivo (1) into the tool holder (2).
2. Attach the centering pivo into the tool holder using the screw (3) provided.

**WARNING**

Caution – risk of foot injury!
Before rotating the tool downwards, always check whether the tool is engaged by clamping. Otherwise, the tool can fall down!
5 Installation

The base body should be screwed on to a work bench or a table

*Assembly example:*

- **Assembly location:** Work bench
- **Working height:** approx. 100 cm

Base body assembled flush with the table edge

6 Disposal

Unusable devices must be disposed of a recycled scrap metal.

The country-specific regulations including recycling valid at the time of disposal must be observed.
7 Attachment

7.1 Declaration of Conformity

EG/EC/CE
KONFORMITÄTSERKLÄRUNG
DECLARATION OF CONFORMITY
DÉCLARATION DE CONFORMITÉ

Wir
We
Nous
alfa-sys ag

(Name des Anbieters) (supplier’s name) (nom du fournisseur)

Industriestrasse 56 2210, FL-9491 Ruggell

(Anschrift) (address) (adresse)

erklären in alleiniger Verantwortung, dass das Produkt
declare under our sole responsibility that the product
déclarons sous notre seule responsabilité que le produit

Werkzeugmontagehilfe alfa-clamp

Typen: Grundkörper 45°/90°, Werkzeugaufnahme DIN/CAT/MAS-BT/HSK-A,
Werkzeugaufnahme HSK-B/HSK-BCDEF / PSC, Werkzeugaufnahme VDI

(Bezeichnung Typ oder Modell, Lot- oder Seriennummer, möglichst Herkunft und Stückzahl)
(name, type or model, lot, batch or serial number, possibly sources and numbers of items)

auf das sich diese Erklärung bezieht, mit der / den folgenden Norm(en) oder normativen
Dokument(en) übereinstimmt.
to which this declaration relates is in conformity with the following standard(s) or other normative
document(s)
auquel se réfère cette déclaration est conforme à la (aux) norme(s) ou autre(s) document(s)
normatif(s)

EN ISO 12100:2010

(Titel und/oder Nummer sowie Ausgabedatum der Norm(en) oder der anderen normativen Dokument(en))
title and/or number and date of issue of the standard(s) or other normative document(s)
(titre et/ou no. et date de publication de la (des) norme(s) ou autre(s) document(s) normatif(s))

Gemäß den Bestimmungen der Richtlinie(n); following the provisions of Directive(s);
conformément aux disposition de(s) Directive(s)
(fails zutreffend) (if applicable) (le cas échéant)

2006/42/EG

Ruggell, den 12. Juli 2018

Helmuth Graf

(Ort und Datum der Ausstellung) (Place and Date of issue)
(Lieu et date)

(Name und Unterschrift oder gleichwertige Kennzeichnung des Befugten)
(name and signature of equivalent marking of authorized person)
(nom et signature du signataire autorisé)