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1 Foreword

Dear customer,

we thank you for the trust which you have placed in us by purchasing one of our high-quality products.

Please note the information in this original operating manual, as:

safety and accuracy also depends on you!

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2 User Information

2.1 Importance of the operating manual

This original operating manual is part of the product and contains important information on safe and correct installation, commissioning, operation, maintenance and simple troubleshooting.

The standard tombstone is constructed in accordance with the latest technical standards and is safe to operate.

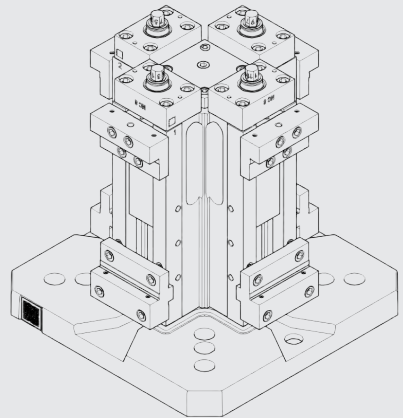
Nevertheless, the standard tombstone may represent a risk if

- this original operating manual is not observed.
- the standard tombstone is installed by operating personnel who have not been instructed.
- the standard tombstone is not used correctly or for its intended purpose.

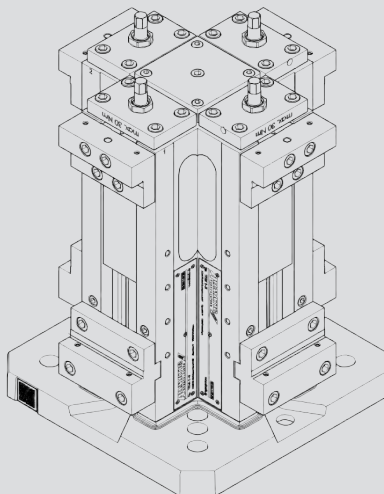
2.2 Applicable documents

Depending on the configuration of the tombstone, the following documents concerning this operating manual must be observed:

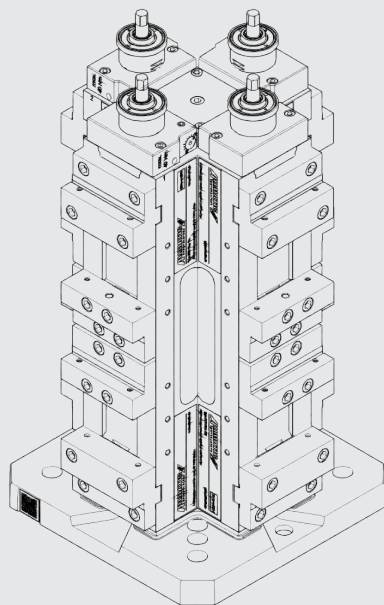
Original operating manual
for the clamping systems of the NC8 range.



Original operating manual
for the clamping systems of the TITAN 2
range.



Original operating manual
for the DUO and DUO Plus 125 clamping sys-
tems.





For all work on the standard tombstone, the operating manuals for the tombstone types of the **TITAN 2 range**, **NC8 range**, **DUO** and **DUO Plus 125 range** of ALLMATIC-Jakob Spannsysteme GmbH must be observed.

EN



Stepped jaws are not included in the scope of supply!

2.3 Signs and Symbols Used

2.3.1 Display of Safety Instructions

DANGER



A pictogram together with the word "DANGER" warns against an imminent DANGER to the life and health of persons.

Ignoring these safety instructions results in very serious or fatal injury.

- Always observe the measures described to avoid these dangers.
-

WARNING



A pictogram together with the word "WARNING" warns against a possibly hazardous situation for the life and health of persons.

Ignoring these safety instructions may result in serious or fatal injury.

- Always observe the measures described to avoid these dangers.
-

CAUTION



A pictogram together with the word "CAUTION" warns against a possibly hazardous situation for the health of persons or damage to the environment or property.

Ignoring these safety instructions may result in injury or damage to property or the environment.

- Always observe the measures described to avoid these dangers.
-

NOTICE



Indicates a potentially dangerous situation which may lead to damage to property if not prevented.

- List of all measures to be taken to prevent consequences.
-



INFO

Important information.

To mark important information, additional information and tips.

2.3.2 Display of Instructions

Observe supplementary documentation



A reference to supplementary documentation outside of this original operating manual, is marked with this symbol.

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2.3.3 Text Marking

To improve legibility and comprehensibility of the text, the following conventions were observed:

Cross-references

Text Marking [▶ 49]

Operating instructions

▷ Condition

1. Step 1

⇒ Interim result

2. Step 2

⇒ Result

Lists

a) First list point

b) Second list point

– List point

Operating elements

Operating elements are written in capital letters.

Example: EMERGENCY-STOP

Buttons are written in inverted commas.

Example: Button “Eject tool”

2.3.4 Warning and Prohibition Signs



Warning of a hazard zone!



Danger of hand injuries!



Danger of crushing!



Wear safety goggles!



Wear safety gloves!



Wear safety shoes!

2.4 Manufacturer Information

ALLMATIC-Jakob Spannsysteme GmbH	
Jägermühle 10, 87647 Unterthingau, Germany	
Phone:	+49 8377 929-0
Fax:	+49 8377 929-380
Email: info@allmatic.de	
www.allmatic.de	

EN

2.5 Warranty and Liability

All information and instructions contained in this original operating manual are provided on the basis of our experience and to the best of our knowledge. The technical information and data described in this original operating manual are valid as at 02.09.2019. Our products are subject to continual further development. We therefore reserve the right to implement changes and improvements which we consider necessary. However, this does not represent an obligation to extend these to products previously supplied. Therefore, no claims can be derived from the information and descriptions given in this original operating manual. This original operating manual must always be available in the vicinity of the standard tombstone.

2.6 Copyright

The contents published in this original operating manual are subject to German copyright law. The original operating manual is only intended for the operator and the users of the standard tombstones.

All forms of reproduction and forwarding to third parties require the prior approval of ALLMATIC-Jakob Spannsysteme GmbH.

All copyright infringements may have consequences under penal law.

3 Safety

3.1 Area of application

The standard tombstones are to be installed in enclosed spaces. The foundation for installation must be level and clean and meet the specified requirements.

Operation is permitted under the following environmental conditions:

- ambient temperature at place of installation: +10 to +40 °C.

3.2 Use as Intended

The standard tombstone may only be used to clamp workpieces together with the clamping system of ALLMATIC-Jakob Spannsysteme GmbH.

The manufacturer specifies that the following work is to be carried out on and with the standard tombstone:

- Operation of the standard tombstone;
- Monitoring of the functions of the standard tombstone by the user;
- Cleaning of the standard tombstone by the user;
- Performing regular visual inspections for damage by the user;
- Carrying out regular maintenance and service work by the service personnel;
- Troubleshooting by the service personnel.

All user functions in the area of the standard tombstone require sufficiently trained and qualified personnel. Due to potential dangers, the operator must ensure that trained personnel have also understood the risks involved in the use of the standard tombstone and can use it responsibly.

The safety and quality of the standard tombstone with clamping system are only ensured with jaws of ALLMATIC-Jakob Spannsysteme GmbH.

3.3 Reasonably foreseeable misuse

The following operating conditions are regarded as **misuse**:

- Operation without appropriate monitoring / supervision;
- Operation in the case of insufficient maintenance;
- Use of non-OEM replacement parts;

The following operating conditions are regarded as **incorrect use**:

- Operation outside of the defined operating parameters;
- Operation with modifications not authorised by the manufacturer;
- Operation with defective, deactivated or modified safety equipment.

3.4 Risks associated with use

In the event of insufficient clamping force, there is a danger due to workpieces becoming detached.

Elastic workpieces only produce low clamping force and represent a danger to persons and the environment.

3.5 Notes on personnel

Persons working on the standard tombstone must have read the original operating manual before beginning work.

All machine-specific accident prevention regulations are to be observed.

All unsafe working practices are to be avoided.

Repairs to the standard tombstone may only be carried out by experts. If replacements are required, only components authorised by the manufacturer are to be used.

3.6 Note on accessory parts

For all accessory parts, the same regulations apply as for the standard tombstones and the configured clamping systems.

4 Transport and storage

Store the standard tombstones in a dry environment only.

Ensure that your cooling medium has anti-corrosive properties.

WARNING



Falling of the standard tombstone.

Crushing of hands and feet.

- Use suitable lifting gear only.
- Wear personal protective equipment.



Wear safety gloves!



Wear safety shoes!



For the weight of the standard tombstone, see the quick start guide.

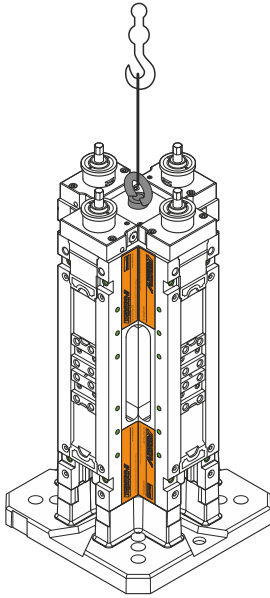


Fig. 1: Example: Standard tombstone 4x90° DUO Plus 125

5 Technical specifications and overview of standard tombstones

5.1 Scope of supply of the tombstone

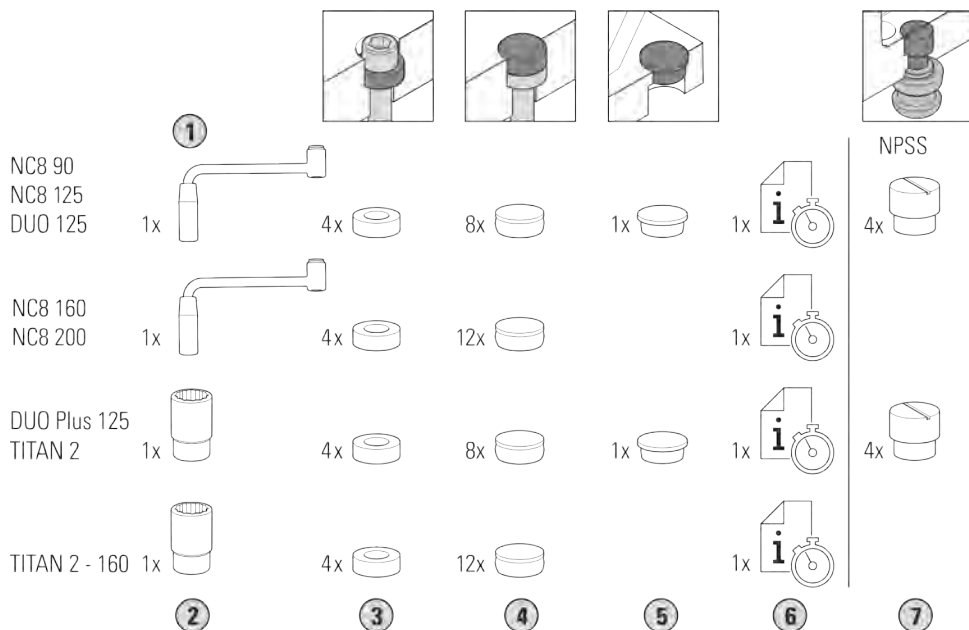


Fig. 2: Scope of supply

1	Hand crank	6921685508042
2	Wrench socket 14 – 3/8	0651114310614
3	Disc D13 (for M12 screw)	6921285601000
4	D25.5 sealing plug for fixing hole	8140281000402
5	D22.4 sealing plug for Ø20H6 index hole	8140281000406
6	Standard tombstone quick start guide	6821919710000
7	M10 use for zero point system	6921915215000

5.2 Base plate types

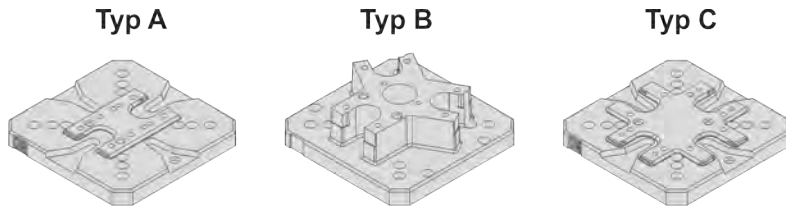


Fig. 3: Base plates

Type A	2 spindles (h = 45 mm / 110 mm) (NC8 200 Heavy Duty h= 74 mm)	Type B	3 spindles (h = 110 mm)
Type C	4 spindles (h = 45 mm / 110 mm)		

5.3 Overview of standard tombstones: NC8 range

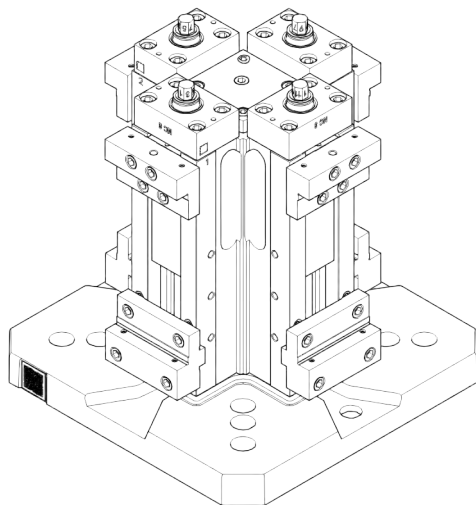


Fig. 4: NC8 clamping system

NC8	90	125	160	200 Heavy Duty
Jaw width in [mm]	90	125	160	200
Steps	11	4	4	4
Min. clamping force at max. step in [kN]	28	40	60	80



Stepped jaws are not included in the scope of supply!

5.4 Overview of standard tombstones: TITAN 2 range

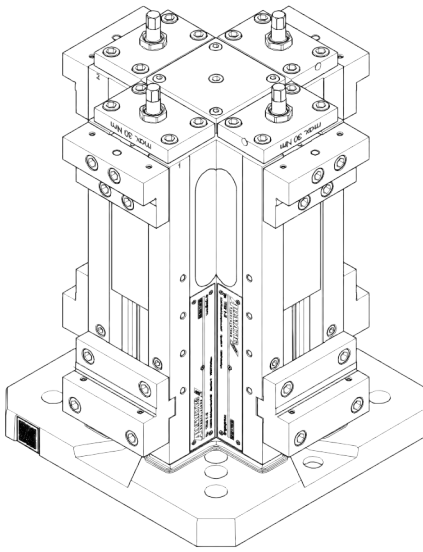


Fig. 5: Clamping system of the TITAN 2 range

TITAN 2	M	160
Jaw width in [mm]	125	160
Max. torque in [Nm]	30	
Min. clamping force at 30 Nm in [kN]	40	



Stepped jaws are not included in the scope of supply!

5.5 Overview of standard tombstones: DUO and DUO Plus 125

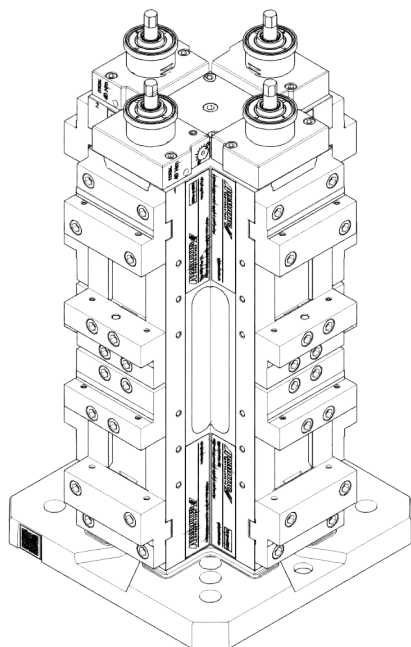


Fig. 6: DUO and DUO Plus 125 clamping system

DUO	90	125	Plus 125
Jaw width in [mm]	90	125	125
Steps	6	4	-
Max. torque in [Nm]	-	-	40
Min. clamping force at max. step in [kN]	28	40	40



Stepped jaws are not included in the scope of supply!

DUO Plus 125: Operation with torque spanner

5.6 Chuck capacities and weights



For the chuck capacities and the weight of the standard tombstone, see the quick start guide!

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or Allmatic website at www.allmatic.de

5.7 Example of standard tombstone datasheet

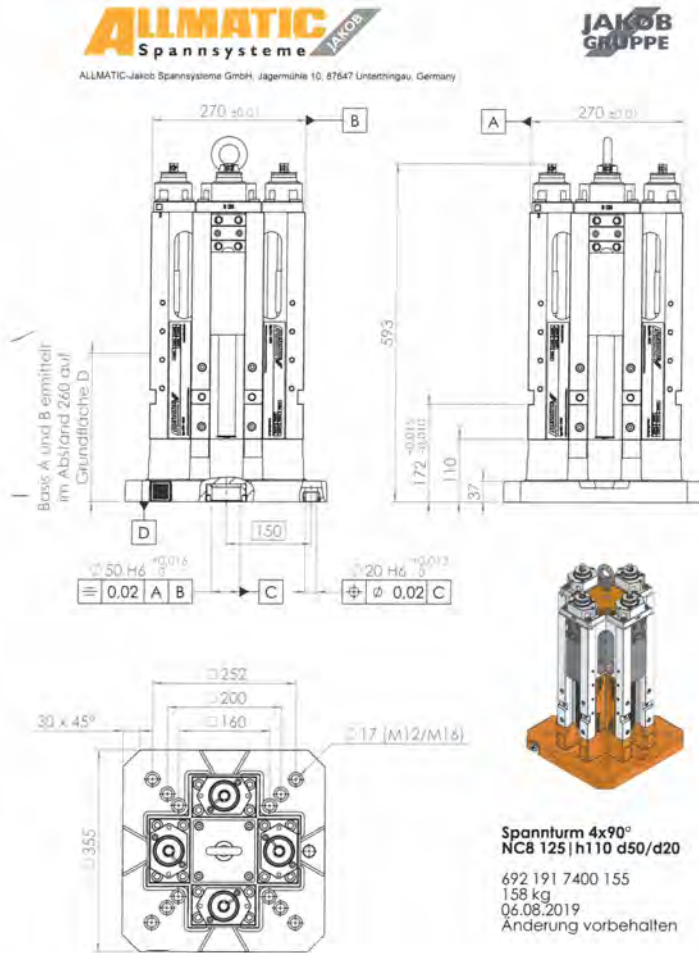


Fig. 7: Example: Standard tombstone datasheet (quick start guide)

6 Description by tombstone type

6.1 NC8 range

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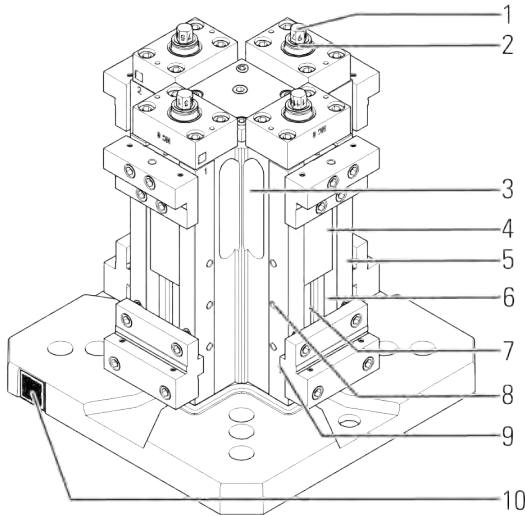
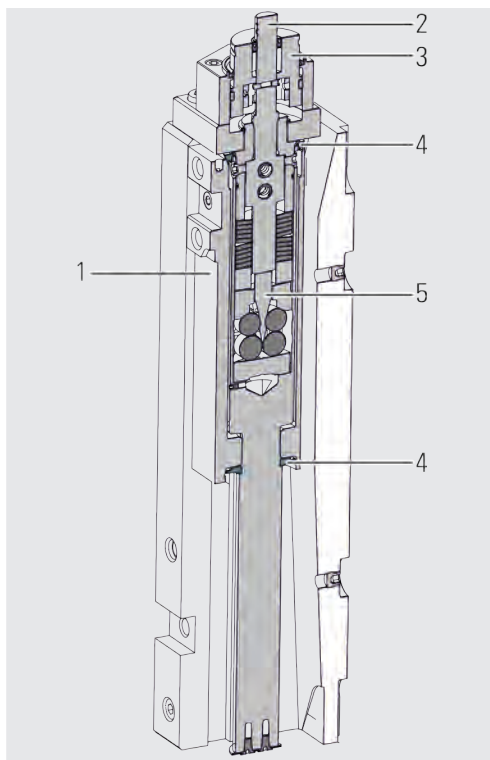


Fig. 8: Product description

1	Drive	6	Guide of the spindle nut
2	Clamping force pre-setting	7	Spindle
3	Outlet opening for coolant and swarf	8	Thread M8 for workpiece stop
4	Spindle nut	9	Precise grooves to attach the clamping jaw assortment
5	Guideway inductively hardened and ground	10	QR code

NC 8 function



By turning the drive (2) clockwise with a crank, the spindle nut (1) moves in clamping direction with the mobile jaw. The scrapers (4) prevent dirt from entering the thread of the spindle. The maximum clamping force with which the workpiece is clamped is set with the clamping force pre-setting device (3). The clamping force is built up after the mobile jaw makes contact with the workpiece. The clamping force is increased to the set value with a power assist (5).



The set clamping force is reached when the drive is turned up to the stop. Operation with hand crank.



Avoid internal tension.

Damage to the NC8.

- Only clamp workpieces from the outside.

6.2 TITAN 2 range

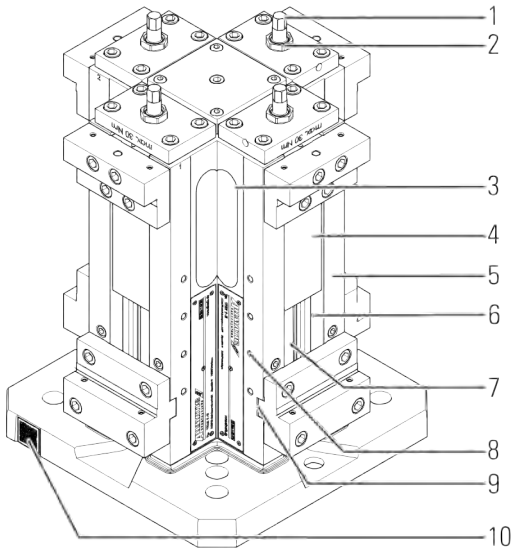
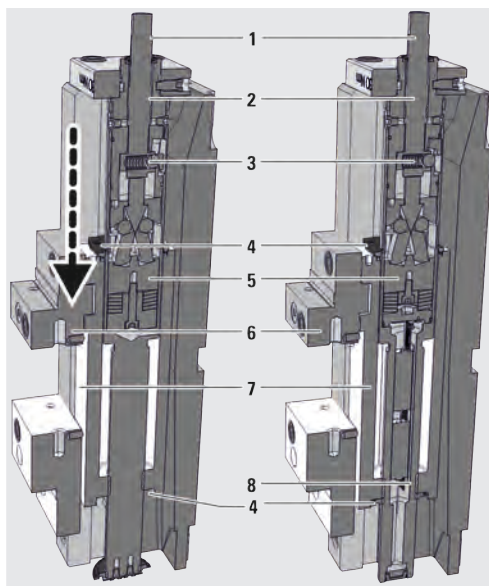


Fig. 9: Product description

1	Drive	6	Guide of the spindle nut
2	Adjusting spindle for pre-positioning of the mobile jaw in the case of heavy workpieces (WAF 22). Path separated from power assist (except with TITAN 2 K(CA))	7	Spindle
3	Outlet opening for coolant and swarf	8	Thread M8 for workpiece stop
4	Spindle nut	9	Precise grooves to attach the clamping jaw assortment
5	Guideway inductively hardened and ground	10	QR code

Function of the TITAN 2 range



By turning the drive (1) clockwise with a torque spanner, the spindle nut (3) turns in clamping direction with the mobile jaw (6). The scrapers (4) prevent dirt from entering the thread of the spindle.

After placing the mobile jaw (6) against the workpiece, the feed spindle stops to serve as a support and the ball coupling (3) is disengaged.

Turning the pressure spindle (2) further spreads the power assist (5) apart and the clamping force is built up.



The clamping force is limited by two mechanisms:

- Operation with 30 Nm torque spanner.
- End stop of the pressure spindle (7) after 3.5 revolutions.



Avoid excessive torque and internal clamping.

Damage to the ALLMATIC TITAN 2.

- Set the torque spanner used to **max. 30 Nm**.

6.3 DUO and DUO Plus 125

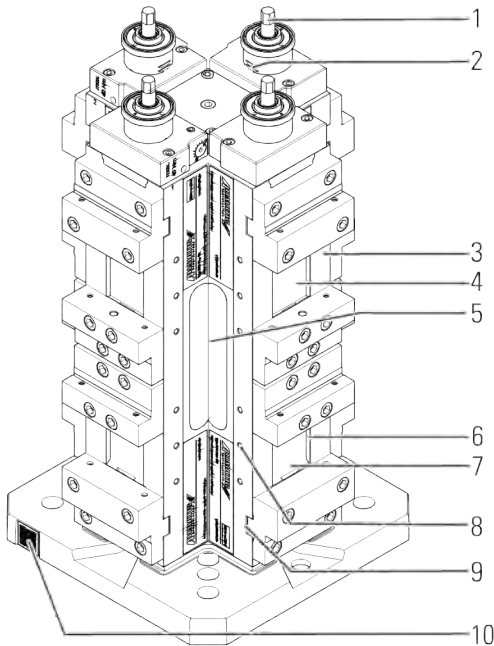
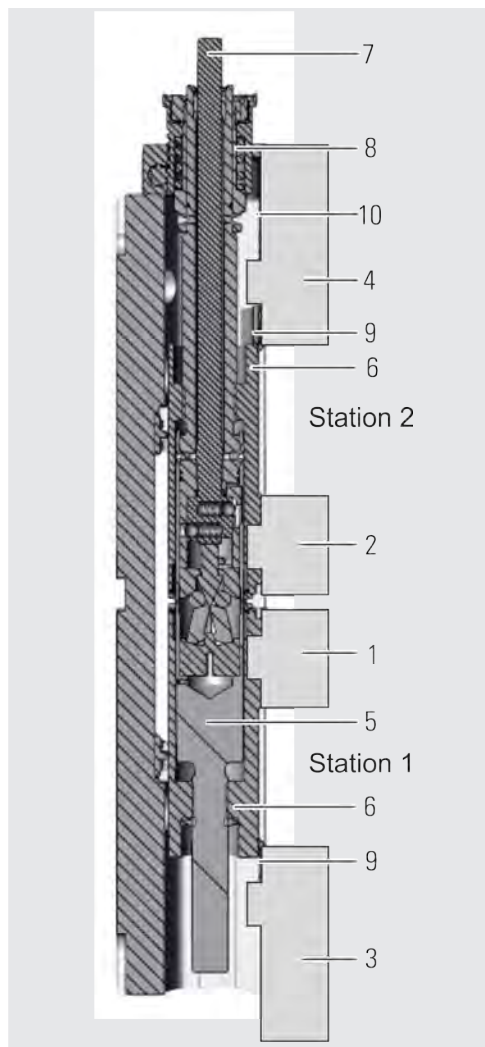


Fig. 10: Product description

1	Drive	6	Guide of the spindle nut
2	Feed spindle	7	Spindle
3	Guideway inductively hardened and ground	8	Thread M8 for workpiece stop
4	Spindle nut	9	Precise grooves to attach the clamping jaw assortment
5	Outlet opening for coolant and swarf	10	QR code

DUO Plus 125 function



By turning the drive (7) clockwise with a torque spanner, the spindle nuts (6) move in clamping direction with the jaws (1,2) against the fixed jaws (3,4). The mobile jaw (1) averted from the drive is placed against the workpiece in **station 1** and is preclamped with approx. 1000 N. By turning the drive (7) further, the compensating spring (8) is pressed in axially until the second mobile jaw (2) is placed against the workpiece in **station 2**. The feed spindles (5) stop to serve as a support and the disengaging coupling is disengaged.

By turning the drive (7) further, both stations are clamped with high pressure via an interior mechanism.



The clamping force is limited by two mechanisms:

- Operation with 40 Nm torque spanner.
- End stop of the pressure spindle (7) after 3.5 revolutions.



Avoid excessive torque and internal clamping.

Damage to the DUO Plus 125.

- Set the torque spanner used to **max. 40 Nm**.

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The torque spanner is to be set to a torque of max. 40 Nm before operation. The torque can be reduced for low clamping forces.

Tolerance compensation +/-2.5 mm.

Clamping of differently sized workpieces

The position of the feed spindles is pre-set for the clamping of similar workpieces in the initial state. This can be adjusted by up to 25 mm in unclamped condition. The max. chuck capacity of **station 1** is reduced and the max. chuck capacity of **station 2** is increased.

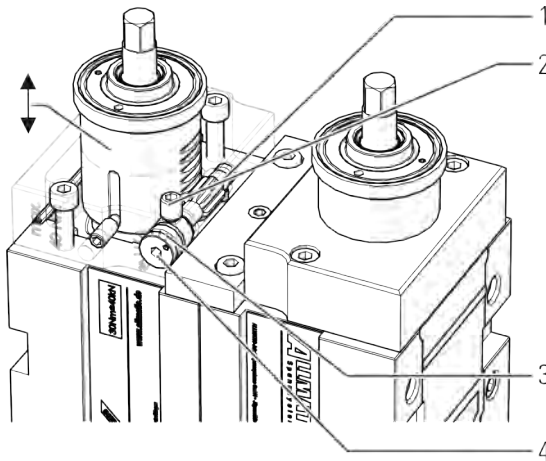


Fig. 11: Feed spindle

1	Feed spindle	3	Scale 0 to 25 mm
2	Locking screw	4	Adjusting screw

Loosen the locking screws WAF 5 (2). Move the position of the feed spindles by up to 25 mm with the adjusting screw WAF 5 (1).

In order to move the feed spindles back to the symmetrical starting position, turn the adjusting screw WAF 5 (1) clockwise up to the end stop. Tighten the locking screws WAF 5 (2).

Max. clamping width difference between station 1 and station 2 = 50 mm

7 Installation on the Machine Table

WARNING



Falling of the standard tombstone.

Crushing of hands and feet.

- Use suitable lifting gear only.
 - Wear personal protective equipment.
-
-



Wear safety gloves!



Wear safety shoes!

1. Check clamping surfaces for cleanliness and unevenness before installation and clean if necessary (oil stone, swarf, etc.).
2. For required accessories, see quick start guide or page 15.

7.1 Fix with centring bolt and M16/M12 screws

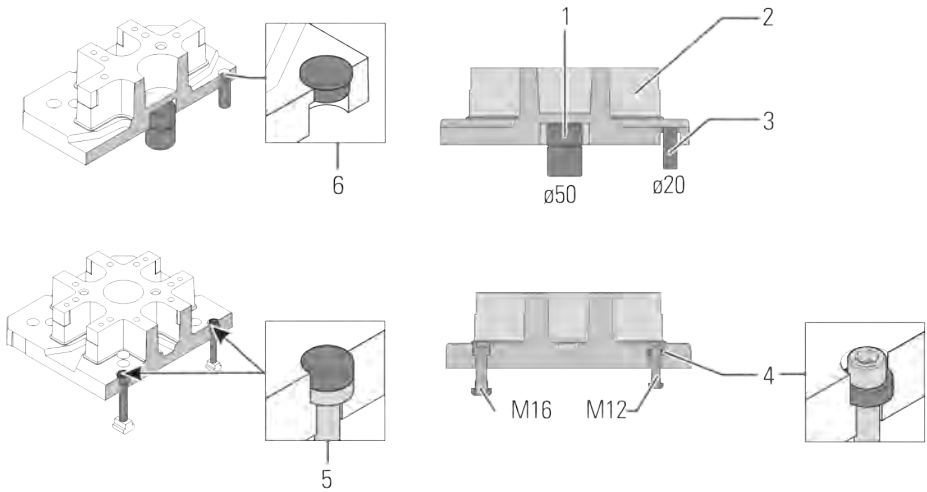


Fig. 12: Positioning and attachment

1	Ø 50 mm centring bolt	4	Disc D13 (for M12 screw)
2	Base plate	5	D25.5 sealing plug for fixing hole
3	Ø 20 mm bolt	6	D22.4 sealing plug for Ø20H6 index hole



The relevant T slot nuts and screws are not included in the scope of supply!

7.2 Fix with zero point clamping system M10/M12 clamping bolts

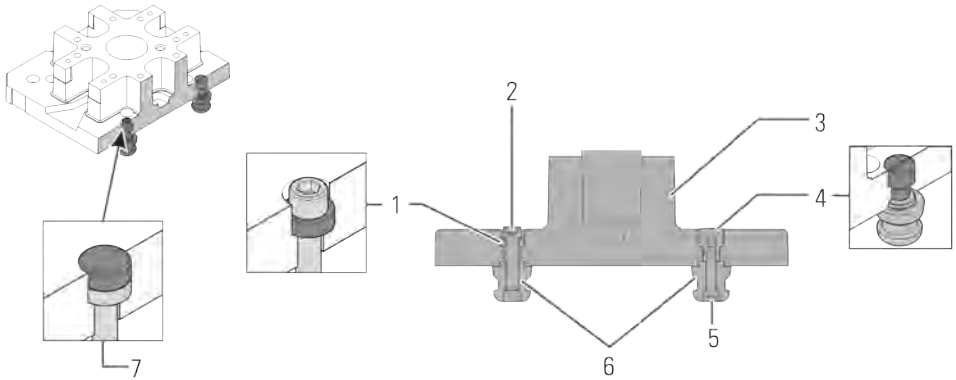


Fig. 13: Positioning and attachment

1	Disc D13 (for M12 screw)	5	M10 screw
2	M12 screw	6	Clamping bolts
3	Base plate	7	D25.5 sealing plug for fixing hole
4	M10 use for zero point system		



The relevant clamping bolts and screws are not included in the scope of supply!

8 Clamping using the example of TITAN 2

8.1 Various Clamping Types

Further information on the clamping types: www.allmatic.de under "Products".

8.1.1 Conventional Clamping of Workpieces

In the case of conventional clamping, parallel, pre-machined or level workpieces or materials are clamped. Generally, conventional clamping is used for the second clamping process or for workpieces with a surface quality of less than 0.05 mm.

8.1.2 Clamping unmachined parts with "GRIPP"

With the support jaws, width-reduced jaws as well as jaws for GRIPP inserts or the GRIPP range, unmachined, non-parallel workpieces or raw materials can be clamped.

GRIPP clamping:

- Support jaws are used to hold various GRIPP inserts (GRIPP inserts with thread or universal GRIPP set).
- GRIPP inserts can be screwed in variably on a perforated grid in order to securely clamp a wide variety of workpiece geometries.
- The additional swinging function of the mobile support jaw serves to compensate for non-parallel clamping surfaces and is required for clamping uneven workpieces.
- Three-point clamping is possible due to the rigid support jaw.
- Short set-up times due to multiple use of the jaws.

We recommend using adjusting screws at first for clamping tests. The adjusting screws allow exact adjustment of the resting height of the workpiece. For repeated installations or large batch sizes, supports are provided which must be milled accordingly.

8.1.3 Hold-Down Clamping

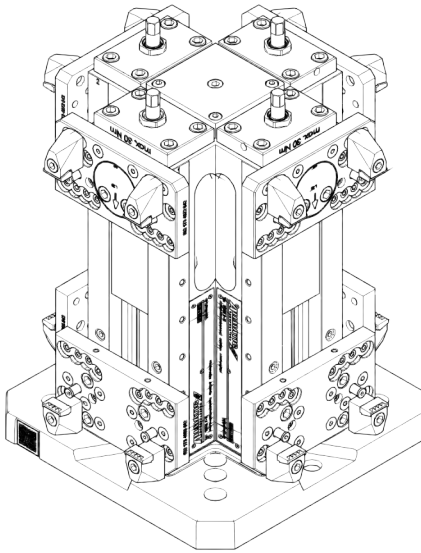


Fig. 14: Hold-down clamping

The support jaws and the hold-down system ensure precise, flexible, secure clamping of unmachined parts and high precision for pre-machined parts. The workpiece is positioned on ground headed dowels which make the connection with the guideway. This transfers the parallelism of the guideway or of the machine table to the workpiece and achieves even higher clamping accuracy as well as a reduction in vibrations due to the high rigidity.

Hold-down clamping

- Support jaws serve to hold various wedge elements and headed dowels.
- Wedge elements can be screwed in variably on a perforated grid in order to securely clamp a wide variety of workpiece geometries.
- The additional swinging function of the mobile support jaw serves to compensate for non-parallel clamping surfaces and is required for clamping uneven workpieces.
- Hold-down increases the precision due to the high rigidity.
- Clamping of the neutral axis can be optimised using the five different heights of the headed dowels.

9 Operation

EN

WARNING



Falling of the standard tombstone.

Crushing of hands and feet.

- Use suitable lifting gear only.
- Wear personal protective equipment.

WARNING



Clamping of unsuitable workpieces.

Injuries due to bending, bursting or ejection of workpieces.

- Do not clamp tempered workpieces.
- Grind flame-cut contours with hardness with an angle grinder.



Wear safety gloves!



Wear safety shoes!



Wear safety goggles!

9.1 Jaw installation



For all work on the standard tombstone, the operating manuals for the tombstone types of the **TITAN 2 range**, **NC8 range**, **DUO** and **DUO Plus 125 range** of ALLMATIC-Jakob Spannsysteme GmbH must be observed.

9.2 Clamp and release workpieces



For all work on the standard tombstone, the operating manuals for the tombstone types of the **TITAN 2 range**, **NC8 range**, **DUO** and **DUO Plus 125 range** of ALLMATIC-Jakob Spannsysteme GmbH must be observed.

10 Troubleshooting

Fault	Cause	Remedy
Spindle or spindle nut moves with difficulty.	Spindle thread or sliding surfaces contaminated with swarf or corroded.	Dismantle, clean and oil the standard tombstone.
Clamping force is not built up.	Minimum chuck capacity reached.	Use different jaws.
	Workpiece clamped laterally too far off centre.	Clamp workpiece centrally.
	GRIPP tips are twisted.	Align GRIPP tips with the workpiece surface.
	Coupling is released too early.	Check spindle and spindle nut for smooth running, remove corrosion if necessary. In the event of a worn coupling mechanism, contact ALLMATIC Service.
	Power assist defective.	Contact ALLMATIC Service.
	After releasing the clamping force, the coupling has no longer tangibly locked into position again.	Lock spindle into position again by turning counter-clockwise. Install new rubber scrapers.
Spindle can no longer be turned.	Mobile jaw fixed with too long screws.	Use screws of suitable length.
Clamping force cannot be released.	Power assist defective.	Unscrew pressure plate from lower section.
GRIPP insert is broken.	Torque of 30 Nm exceeded.	Replace GRIPP insert.
	Too high machining forces.	

EN

Fault	Cause	Remedy
GRIPP tips are pressed flat.	Workpiece clamped with more than 1000 N/mm ² , possibly flame cuts from C 45.	Replace GRIPP insert or insert carbide Gripp insert 2-point h8.6 for workpieces up to 1400 N/mm ²

11 Cleaning

EN



CAUTION

Flying swarf and cooling emulsion.

Injuries to eyes.

- Wear safety goggles when cleaning with compressed air.
-



Wear safety goggles!

Use brushes, chip extractors or chip removing hooks to clean the standard tombstone.

After long periods of use, we recommend dismantling the standard tombstone, cleaning it thoroughly and oiling it.

12 Maintenance

Only OEM parts must be used as replacement parts. Only use non-OEM parts with the permission of ALLMATIC-Jakob Spannsysteme GmbH.

Maintenance and repair may only be carried out by qualified personnel.

WARNING



Falling of the standard tombstone.

Crushing of hands and feet.

- Use suitable lifting gear only.
- Wear personal protective equipment.



Wear safety gloves!



Wear safety shoes!



Wear safety goggles!

13 Installation Instructions

EN

Declaration of incorporation for incomplete machines EC-RL 2006/42/EC

The manufacturer

ALLMATIC-Jakob Spannsysteme GmbH
 Jägermühle 10
 87647 Unterthingau
 Germany

declares that the following incomplete machine:

Product designation:	ALLMATIC-Jakob machine vice
Type designation:	VERSION standard tombstone
Year of manufacture:	2019 and following

meets the following basic requirements of the Machinery Directive (2006/42/EC):

Art. 5 II, 13.

The technical documentation was drawn up in accordance with Appendix VII B.

The manufacturer undertakes to transmit the special documentation of the incomplete machine electronically to the individual national offices on request.

The incomplete machine may only be put into operation when it has been ascertained that the machine into which the incomplete machine is to be installed meets the requirements of the Machinery Directive (2006/42/EC).

Responsible for documentation:

Bernhard Rösch
 ALLMATIC-Jakob Spannsysteme GmbH
 Jägermühle 10
 87647 Unterthingau
 Germany

Unterthingau, 02.09.2019



 Bernhard Rösch
 Managing Director

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1 Préface

Cher client,

nous vous remercions de la confiance que vous avez dans nos produits de qualité et nous vous remercions de votre achat.

Veillez observer les indications dans ce mode d'emploi original, car :

la sécurité et la précision de l'appareil en dépendent !

FR

2 Informations pour l'utilisateur

2.1 Importance du mode d'emploi original

Ce mode d'emploi original fait partie intégrante du produit et contient des informations importantes pour garantir un montage, une mise en service, un fonctionnement, un entretien fiables et réglementaire ainsi que des informations pour faciliter la recherche de défauts.

Le dispositif de serrage standard est construit selon l'état actuel de la technique et fonctionne donc de manière fiable.

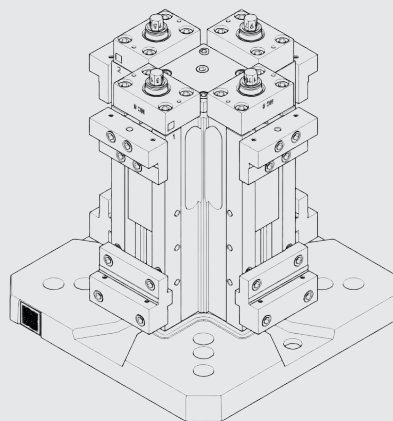
Des risques peuvent toutefois émaner du dispositif de serrage standard, si

- ce mode d'emploi original n'est pas observé ;
- le dispositif de serrage standard est installé par du personnel de conduite non instruit ;
- le dispositif de serrage standard est utilisé de manière non réglementaire ou non conforme à l'utilisation.

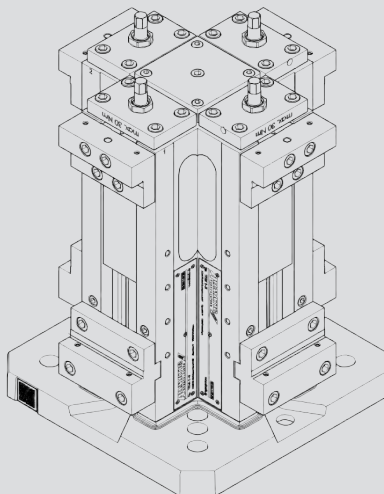
2.2 Autres documentations

Selon la configuration du dispositif de fixation, les documentations suivantes liées à ce mode d'emploi doivent être respectées:

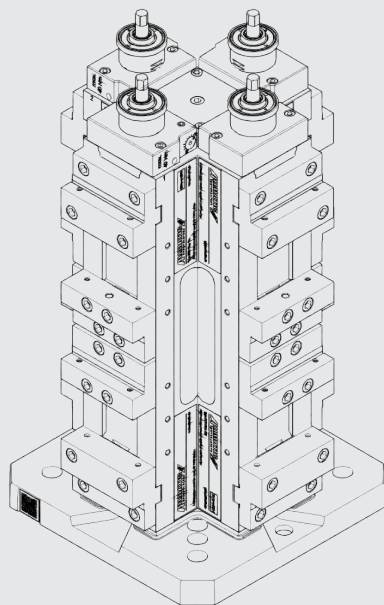
Mode d'emploi original
des systèmes de serrage de la série NC8.



Mode d'emploi original
des systèmes de serrage de la série TITAN 2.



Mode d'emploi original
des systèmes de serrage DUO et
DUO Plus 125.





Les modes d'emplois de type dispositif de serrage de **la série TITAN 2, la série NC8, DUO et DUO Plus 125** de ALLMATIC-Jakob Spannsysteme GmbH doivent être respectés lors de tous les travaux sur un dispositif de serrage standard.

FR



Les mâchoires étagées ne sont pas incluses dans la fourniture !

2.3 Signes et symboles utilisés

2.3.1 Représentation des consignes de sécurité

DANGER



Un symbole associé au terme « DANGER » prévient d'un risque immédiat mettant en danger la santé et la vie des personnes.

Le non-respect de ces consignes de sécurité entraîne des blessures très graves, voire la mort.

- Respecter impérativement les mesures décrites afin de prévenir ces dangers.
-

AVERTISSEMENT



Un pictogramme associé au terme « AVERTISSEMENT » prévient d'une éventuelle situation de danger pour la santé et la vie des personnes.

Le non-respect de ces consignes de sécurité peut entraîner des graves blessures, voire la mort.

- Respecter impérativement les mesures décrites afin de prévenir ces dangers.
-

ATTENTION



Un pictogramme associé au terme « ATTENTION » prévient d'une éventuelle situation de danger pour la santé des personnes ou le risque de dommages matériels ou de nuisances environnementales.

Le non-respect de ces consignes de sécurité peut entraîner des blessures ou des dommages matériels ou encore des nuisances environnementales.

- Respecter impérativement les mesures décrites afin de prévenir ces dangers.
-

AVIS



Attire l'attention sur une situation potentiellement dangereuse, qui peut entraîner des dégâts matériels si elle n'est pas évitée.

- Liste de toutes les mesures à prendre pour éviter les conséquences.
-



INFOS

Information importante.

Pour identifier des instructions importantes, des informations complémentaires et des conseils.

FR

2.3.2 Représentation des instructions

Observer la documentation complémentaire



Tout renvoi à une documentation complémentaire, hormis à ce mode d'emploi original, est marqué par ce symbole.

2.3.3 Marquage de textes

Pour améliorer la lisibilité et la compréhension du texte, les conventions suivantes ont été prises :

Renvois

Marquage de textes [► 89]

Instructions de manipulation

▷ Condition

1. Étape 1

⇒ Résultat intermédiaire

2. Étape 2

⇒ Résultat

Énumérations

a) Premier élément d'énumération

b) Deuxième élément d'énumération

– Élément d'énumération

Éléments de réglage

Les éléments de réglage sont écrits en majuscules.

Exemple : ARRÊT D'URGENCE

Les touches sont écrites entre guillemets.

Exemple : touche « Éjecter outil »

2.3.4 Avertissements et obligations



Attention point dangereux !



Attention ! Risques de blessures aux mains !



Attention ! Risque d'écrasement !



Porter des lunettes de protection !



Porter des gants de protection !



Porter des chaussures de protection !
