# INSTRUCTION MANUAL Original instructions in Italian

<u>SWH A01</u>



## Designation: AUTOMATIC INTERNAL BAR GRINDER FOR LATHE

Model: <u>SWH A01</u>





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### 0.1 HOW TO CONSULT THE INSTRUCTION MANUAL

This instruction manual consists of:

- COVER WITH SAFETY PART IDENTIFICATION
- TABLE OF CONTENTS
- INSTRUCTIONS AND/OR NOTES ON THE SAFETY PART
- ANNEXES

Consult the COVER to find the safety part model covered in the manual and in your possession.

By consulting the TABLE OF CONTENTS, it is possible to find the CHAPTER and PARAGRAPH under which all the notes relating to a particular topic are listed.

All INSTRUCTIONS AND/OR NOTES are intended to identify the safety warnings, correct procedures and operational qualifications required for proper operation of the safety component.

Any ANNEXES at the end of this publication are an integral part of this manual.

The "ORIGINAL INSTRUCTIONS" contained in this instruction manual are written in the language of the manufacturer (Italian). All other versions translated into other languages are to be considered 'TRANSLA-TION OF THE ORIGINAL INSTRUCTIONS'.

In the event of any inconsistency between the original ITALIAN version and its translated copy, the original shall prevail.



Information preceded by the symbol must be scrupulously observed.



The information in this warning indicates a PROHIBITION and must be scrupulously observed.



The information in this warning indicates an OBLIGATION and must be scrupulously observed.



The information in this warning indicates a DANGER or RESIDUAL RISK and must be scrupulously observed.



### 0.2 HOW TO USE THE INSTRUCTION MANUAL

#### 0.2.1 PURPOSE OF THE INSTRUCTION MANUAL

This INSTRUCTION MANUAL constitutes the guide to the INSTALLATION, USE, MAINTENANCE and DE-COMMISSIONING of the safety component in question.

It is an integral part of the safety part and provides all the necessary information for:

- Knowing the limitations
- Informing all the operators about the safety issues;
- Handling, placing and installation;
- The intended use for which it was designed and built;
- Reasonably foreseeable misuse;
- Procedures for use;
- Setting and adjustment procedures;
- Maintenance procedures
- Disposal and dismantling procedures.



The instruction manual must be read by the operators who use the safety component in the production cycle of the company where it is installed and by the operators who periodically carry out maintenance operations within the company.



### 0.2.2 HOW TO STORE THE INSTRUCTION MANUAL

Use the manual so as not to damage the content. Do not remove, tear or rewrite parts of the manual for any reason. Keep the manual in a place protected from moisture and heat.



Provide the instruction manual to any other User or subsequent Owner of the safety component.



The INSTRUCTIONS MANUAL is an integral part of the safety component: keep this Manual throughout the entire service life of the safety component and ensure that any updates sent by the manufacturer are incorporated into this publication.

### 0.2.3 INSTRUCTION MANUAL UPDATE

In the event of changes to the safety component installed at the customer's premises, agreed with the Manufacturer and involving the modification of one or more chapters of the Instruction Manual, it will be the Manufacturer's responsibility, by referring to the distribution list in its archives, to send the chapters affected by the change with the new revision level, the new home page and the new table of contents, which shows the new global revision level of the Instruction Manual according to the revision level of the component chapters.

It is the responsibility of the user, following the instructions accompanying the updated documentation, to replace all copies held of the old chapters with the new ones, the cover page and the index with those of the new revision level.



### 0.3 GLOSSARY

#### • Danger

Potential source of damage.

#### Hazard zone

Any zone inside and/or near a machine in which the presence of an exposed person poses a risk to that person's health and safety.

#### • Exposed person

Any person who is wholly or partially in a hazardous zone.

#### Operator

The person(s) in charge of installing, operating, adjusting, cleaning, repairing and moving a machine and its safety component or performing maintenance thereof;

#### Risk

A combination of the likelihood and the severity of an injury or damage to health that may arise in a hazardous situation;

#### Planned use

Use the machine and the safety component in accordance with the information provided in the operating instructions.

#### Reasonably foreseeable misuse

The use of the machine and the safety component in a way other than indicated in the instructions for use, but which may result from easily foreseeable human behaviour.

#### • Man - machine interaction

Any situation in which an operator must interact with the machine. This can occur at any operating stage and at any time during the life of the machine. The same applies to the safety part.

#### • Operator qualification

The minimum skill level that the operator must possess to carry out the operation described.

#### • Number of operators

The number of operators required to carry out the described operation in the best way. This number derives from careful analysis by the "Manufacturer" and, therefore, using a different number of people may prevent you from achieving the desired result or may risk the safety of the staff involved.

#### Machine Status

The operating mode runs automatically, with maintained action command (JOG), stop, etc.;
The condition of the safety devices on the machine: guards included, guards excluded, emergency stop pressed, type of isolation of energy sources, etc.

#### • Guard

A part of the machine used in such a way as to offer protection by creating a physical barrier.



#### Interlocked guard

Guard associated to an interlocking device that guarantees that:

- The hazardous operations of the machine "affected" by the guard can not be carried out until the guard has been closed;

- If the guard is opened during hazardous machine operations, a stop command is given;

- Closing the guard permits hazardous machine operations "affected" by the guard to be carried out, but not the startup commands.

#### • Safety device

A device (other than a guard) which eliminates or reduces the risk, of its own or associated to a guard.

#### Safe stop

Machine stopped with safety measures that prevent dangerous parts from unexpectedly starting.

#### Residual risk

Risk that could not be eliminated or sufficiently reduced in the design phase and for which the guards not (or not entirely) effective against. The manual includes information about the presence of risk and gives instructions and warnings to allow you to overcome it.

#### • Safety part

A fault or poor operation in such a component jeopardises the safety and/ or health of exposed persons (e.g.: lifting equipment, a fixed, mobile, adjustable etc guard, an electrical, electronic, pneumatic optical or hydraulic device that interlocks a guard etc).

#### • Safety-related part of a control system; SRP/CS

Part of a control system that responds to safety-related input signals and generates safety-related output signals.

#### • Safety function

Function of a machine whose failure can lead to an immediate increase in risk(s).



## 0.4 SAFETY DECALS

The "SAFETY" symbols described below are used for warning the operator on the dangers that may affect its safety.

The pictograms contained in:

- A triangle indicates DANGERS.
- A BLUE circle imposes an OBLIGATION.
- A RED circle imposes a PROHIBITION.
- A square/rectangle provides INFORMATION.

(F)

The following pages contain a glossary of the different pictograms. Only those related to the relevant procedure will be included in the manual. It is the responsibility of the user to identify and apply any other pictograms on the machine in accordance with ANNEX XXV of L.D. April 9, 2008, No. 81, and depending on the working environment where the safety component is installed and used.

### 0.4.1 HAZARD PICTOGRAMS

SYM- BOLS	DESCRIPTION	SYM- BOLS	DESCRIPTION
$\wedge$	General hazard.	$\land$	Danger of shearing upper limbs.
4	Electrical hazard.		Danger of moving parts.
$\land$	Danger of crushing upper and lower limbs.	$\land$	Danger of entanglement and dragging.
	Danger of crushing upper limbs.		

### 0.4.2 PROHIBITION PICTOGRAMS

SYM- BOLS	DESCRIPTION	SYM- BOLS	DESCRIPTION
$\bigcirc$	General restriction.		Prohibition to push.
	Forbidden to remove the safety devices.	$\otimes$	Do not extinguish fire with water.
	Prohibition of intervention on moving parts.	$\otimes$	Prohibition to change the status of the switch.
	Keep hands clear.		Prohibition of placing heavy loads.
$\bigotimes$	No smoking or open flames.		



### 0.4.3 MANDATORY PICTOGRAMS

SYM- BOLS	DESCRIPTION	SYM- BOLS	DESCRIPTION
	Generic obligation.	Ð	Obligation to wear the protective shield.
6	Obligation to read the instruction man- ual.	$\bigcirc$	Obligation to wear hearing protection.
	Protective gloves must be worn.		Obligation to check the safety devices.
	Safety shoes must be worn.		Obligation to ensure grounding.
	Obligation to wear protective helmet.	$\odot$	Safety goggles must be worn.
R	Protective clothing must be worn.		



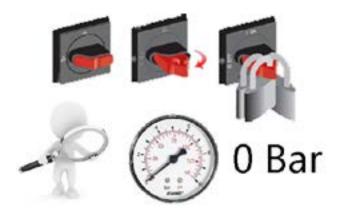
### 0.5 GENERAL SAFETY WARNINGS



#### Please read this manual carefully before commissioning, operating, maintaining or otherwise working on the safety component.

- Personnel involved in the use and maintenance of the safety component must wear clothing that is
  appropriate for the working environment and the situation in which they find themselves; in particular,
  the use of very loose clothing, chains, bracelets, rings or anything else that has a tendency to become
  entangled with moving parts must be avoided.
- Before starting work, personnel must be fully aware of the position and operation of all controls and the characteristics of the machine on which the safety component is mounted.
- It is absolutely forbidden to carry out any maintenance, adjustment or setting operations with moving parts; before carrying out any of these operations, follow the specific instructions in each paragraph.
- Use only original parts made by the Manufacturer.
- During all maintenance, repair or adjustment operations, it is always useful to affix a warning sign on the control panel on board the machine or on the general power supply switches (electric, pneumatic, etc.); this sign may state the following: ATTENTION! DO NOT TOUCH - MAINTENANCE IN PROGRESS. Any maintenance work must only be carried out with the machine switched off and disconnected, by qualified personnel and when the prerequisites for safe working on the safety component are in place. In order to isolate the machine from energy sources, disconnect voltage through the main switches and lock them.

Some of the types of switches used and the padlocking operation are shown in the figure.



- Operators are obliged to immediately report to their direct supervisors any deficiency and/or potential
  dangerous situation that may occur on the safety component; this must be done after it has been shut
  down and sectioned.
- Do not, for any reason, modify parts of the safety component (such as attachments, drillings, finishes) to fit additional devices; in the event of a malfunction due to a failure to comply with the above, the manufacturer is not liable for the consequences.
- For operation and maintenance of commercial components mounted on the safety component, please refer to the manuals enclosed or retrievable online.



### 0.6 LIMITATIONS AND LIABILITY

Any operation NOT explicitly described or NOT explicitly permitted by this manual is strictly forbidden. No liability, civil, criminal or otherwise, can be attributed to its manufacturer in the event of an accident occurring due to failure to comply with safety regulations.

Whoever purchases and/or gives or receives such equipment without acknowledging the validity of the preceding clauses shall immediately renounce the use of such equipment, otherwise the preceding clauses shall be deemed to be explicitly and irrevocably accepted by the mere switching on and use of the equipment.

### 0.7 RECIPIENTS AND STORAGE

The RECIPIENTS of this manual are:

- <u>Technician Installer</u>: the technical personnel in charge of installing and commissioning the safety component on the machine, who, in addition to being professionally trained in their task, must read the manuals paying particular attention to safety regulations;
- <u>User</u>: personnel assigned to work on the machine, who, in addition to being professionally trained in their task, must read the manuals paying particular attention to the safety regulations and the paragraphs relating to their competence.
- <u>Maintenance Technician</u>: technical personnel in charge of ordinary and extraordinary maintenance of the equipment, must read the manuals paying particular attention to the safety regulations and the paragraphs relating to their competence.

### 0.8 WARRANTY AND CORRECT USE

This Conventional Warranty offered by the manufacturer will be fully valid during the period indicated below, exclusively in accordance with the provisions:

- For the duration of 12 (twelve) months from receipt of the product, commencing on the date stated on the relevant transport document (DDT), unless otherwise defined in the sales contract with the purchasing party.
- The warranty covers only replaced parts, with the exception of labour.
- Components subject to unavoidable wear and tear due to normal service, such as plastic protection shields and the like, are not covered by the Warranty; damage to the safety component caused by: Transport and/or handling - Operator errors - Incorrect connection to the machine's electrical system -Failure to carry out the maintenance required by this manual - Faults and/or breakage of the machine on which it is installed that cannot be attributed to its malfunction.

## **1 - SAFETY PART INFORMATION**



### 1.1 MANUFACTURER'S IDENTIFICATION DATA

#### COMPANY NAME: TECNO PIÙ S.r.I.

**Registered office:** Via Tempio Malatestiano, 21 47921 Rimini (RN) – Italv

#### **Offices and factory:**

Via Pio la Torre, 5 61010 Tavullia (PU) – Italy

Ph. +39 0721 476381 E-mail info@tecnopiu.it

Website:

www.tecnopiu.it

## 1.2 DESCRIPTION OF THE SAFETY PART

The safety component: mod. SWH A01 is a tool for grinding and finishing internal and frontal surfaces of bars for conventional lathes, with automatic tool movement, designed in accordance with ISO 23125:2015 6.2.1p (prohibition of using the hand to perform machining operations), which safely replaces the same dangerous operation usually performed manually.

The device attaches to the lathe's tool turret and, thanks to the tension spring, the tool always adheres optimally to the surface. Perfect tool efficiency is ensured by an automatic sliding system (patented), which exploits the rotary movement of the workpiece.

The instrument is equipped with a 6 mm diameter tool holder collet.



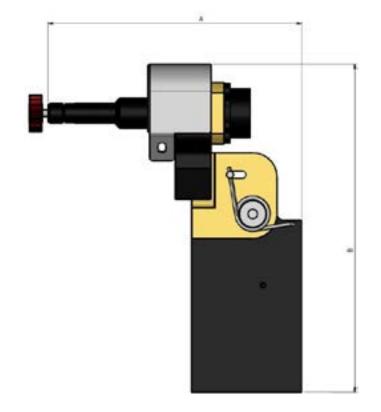
The spring should only be used with a stone backing pad and never with sandpaper. For sandpaper, secure the spring with the screw provided.



Before proceeding with the installation of the safety device, check and where necessary prepare the machine with appropriate support brackets, holes and anything else for the correct anchoring of the safety device to the machine itself. Carefully follow the measurements and centre distances of the fixing brackets supplied with the safety device.

## **1 - SAFETY PART INFORMATION**





CODE SWH A01	А	В
SWH A01	207	267



The safety component has been designed and built to work in a professional environment and by professional operators who are informed and trained for this purpose.



The safety component has been designed and built exclusively for machines with the features listed in this manual



Worn parts of the safety component must be properly checked and, if necessary, replaced with original spare parts.



For proper use of the safety component, good maintenance and cleaning of the component must be scrupulously observed.

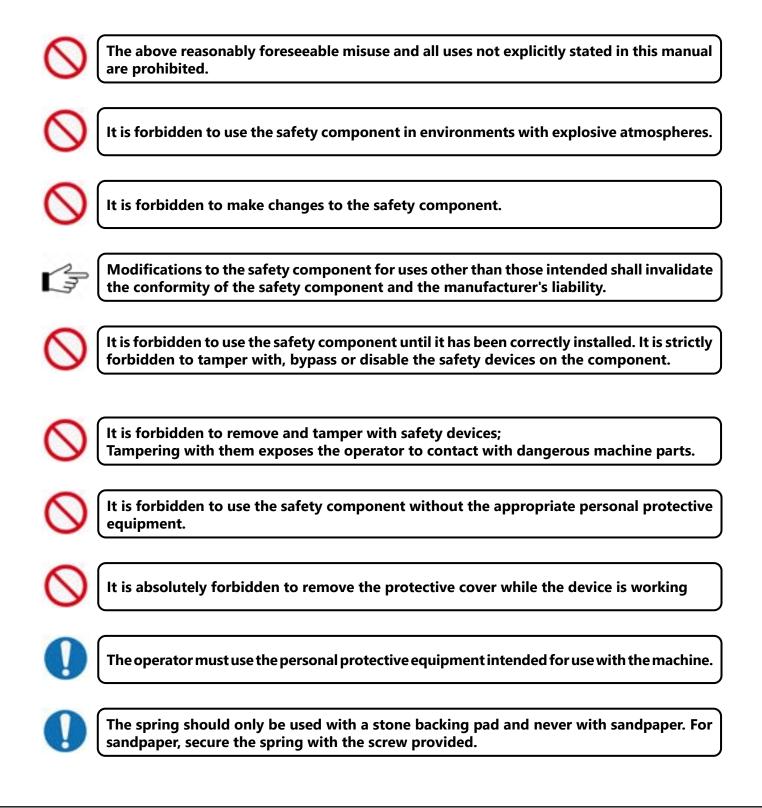
## 2 - SAFETY



## 2.1 REASONABLY FORESEEABLE IMPROPER USE

Reasonably foreseeable misuse includes all uses not explicitly mentioned in this manual, in particular:

- Use of the safety component in a non-professional environment or by non-professional personnel;
- Use of the safety component by unauthorised and untrained personnel;
- Use of the safety part in an environment other than that specified in the contract;
- Use of the safety component in conditions of use outside the limits given in this manual;
- Use of products other than those specified in the contract and possibly in this manual.
- Use of the safety component damaged or with missing parts.



## 2 - SAFETY



## 2.2 COPY OF THE DECLARATION OF CONFORMITY

Below is a copy of the Declaration of Conformity.

The original copy accompanies the safety component and is filed with the manufacturer.



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# **3 - TRANSPORT AND HANDLING**



## 3.1 SUPPLY STATUS AND PREPARATION

The costs, as well as the preparation of the safety component on the machine, are borne by the Customer and include:

- Prepared for anchoring on the machine;
- The Power Supply of the machine, in accordance with the Standards in force in the Country of use.

Installation requires a manoeuvring area around the machine appropriate to the requirements of the operations to be performed.

The general packaging is in any case, in the form of one or more sturdy cardboard boxes, where the device, the protective casing, two abrasive flaps, a sanding pad and a tool tightening spanner are appropriately placed inside, which are in turn well protected by suitable material (cardboard and expanded polystyrene plugs).

# 4 - INSTALLATION AND COMMISSIONING



## 4.1 INSTALLATION

ATTENTION! The machine must be stationary during these operations.



Place on the tool holder



Securely fasten



Correct position

## 4.2 DOUBLE-TORSION SPRING TENSION ADJUSTMENT

The device is supplied with the double-torsion spring already tensioned. If, during machining, the spring should become loose, its tension can be adjusted by turning the adjustment screw as shown in the figure below after removing the rotating shaft support.





The spring should only be used with a stone backing pad and never with sandpaper. For sandpaper, secure the spring with the screw provided.



Starting from the initial position, start the lathe and carefully bring the abrasive tool into the working position. The tool will rotate at a speed directly proportional to the pressure exerted on the workpiece. In this way, the flap or backing pad will always work optimally with absolutely even flap usage.

CAUTION: The device must work with a rotation speed of the shaft connected to the shock absorber BETWEEN 8 and 20 cycles/min. This speed can be verified by timing the time the slot on the shaft passes through the window in the protective casing.

WARNING: It is strictly forbidden by the manufacturer and regulations to use any electrical equipment to rotate the abrasive tool in any other way.

### 5.2 POSITIONING OF THE ABRASIVE TOOL

Two types of tools are applicable on the device: abrasive flap and backing pad. The abrasive flap can be used for grinding the inner surfaces of workpieces, the backing pad for frontal surfaces (see figure below). Position the tools in contact with the surfaces to be sanded with pressure suitable for the type of work to be performed, bearing in mind the speed limit of the device.



TECNOP

5 - CORRECT USE AND REPLACEMENT OF PARTS



### 5.3 m REPLACING THE ABRASIVE FLAP

ATTENTION! The machine must be stationary during these operations.



Initial position



Removing the flap



Reposition the flap

#### 5.4 REPLACEMENT OF ROTARY DAMPER



Initial position



Loosen the screws



Remove the shock absorber



## 6.1 MAINTENANCE FOR INSTALLATION TECHNICIAN

Any cleaning of the safety component must be carried out with the machine switched off and performed by personnel suitably trained in routine maintenance operations.

Cleaning of the various components can be carried out with common universal degreasers, absolutely no corrosive agents or solvents should be used.



IT IS FORBIDDEN TO USE ALCOHOL, SOLVENTS OR AGGRESSIVE DEGREASERS.

# 7 - ADDITIONAL INSTRUCTIONS



## 7.1 GENERAL WARNINGS

- The disposal and scrapping of the safety component must be carried out by qualified personnel who are familiar with the safety regulations for the type of work to be performed.
- As the safety component is disconnected from the various sources of energy, the operator must wear the personal protective equipment deemed most appropriate according to the type of residual or inherent danger when disassembling the parts.
- During disassembly, ensure that the parts of the safety component to be removed are of a weight that can be lifted individually by the operator and that there is no danger of falling during disconnection.
- In case of past use of the safety component with toxic materials for dismantling, it is recommended to use protection for the respiratory tract and exposed parts.
- The treatment to be reserved in this case must be the specific knowledge of the user, who must apply the strictest safety and disposal regulations.



Please refer to section 0.5 GENERAL SAFETY WARNINGS.

### 7.2 DECOMMISSIONING

If it is necessary to take the safety component out of service, it is also necessary to carry out all necessary operations to take the machine itself out of service, because, THE MACHINE IS NOT IN SAFE CONDITIONS.

# 7 - ADDITIONAL INSTRUCTIONS



## 7.3 WASTE DISPOSAL AND PACKAGING

If you decide to no longer use the safety component which is the subject of this manual, because it is obsolete or irretrievably defective or worn out, take it out of service using the following procedures:

- 1. Make sure the machine is stopped and disconnected from the main power supply.
- 2. Check for the absence of residual, potential and kinetic energies.
- 3. If it is useful to reduce its size and/or facilitate transport, disassemble its various parts very carefully.

Dispose of it in accordance with the regulations in force in your country of use, contacting companies specialised in scrapping, recycling and disposal of equipment.

The correct disposal of this product contributes to preventing potential negative consequences that might derive from an inadequate disposal of the product.

The equipment consists of non-biodegradable parts and substances that can pollute the environment if not properly disposed of, and parts of these materials can be recycled without polluting the environment.

It is your and our duty to contribute to human health and environmental protection.

Dispose of packaging materials by separating them according to their nature and according to the relevant legislation in the country of use.

Materials bearing this symbol are recyclable and must be stored in the appropriate spaces and/or containers.

Enquire with the competent local authority.

## 7.4 SPARE PARTS AND SERVICE

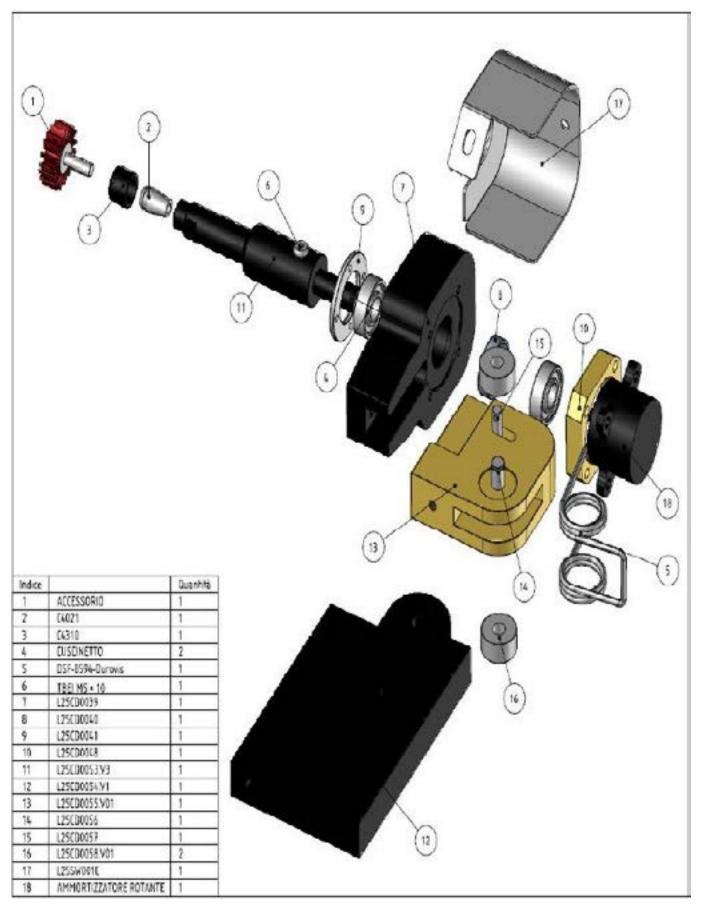
Contact your dealer or the company's Technical Customer Service directly, providing the necessary data that can be found on the nameplate on the guard:

- Type of guard;
- Serial number;
- Date of purchase;
- Moreover, supply all the information that concerns the experienced inconvenience.

# 7 - ADDITIONAL INSTRUCTIONS



### 7.5 SPARE PARTS







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