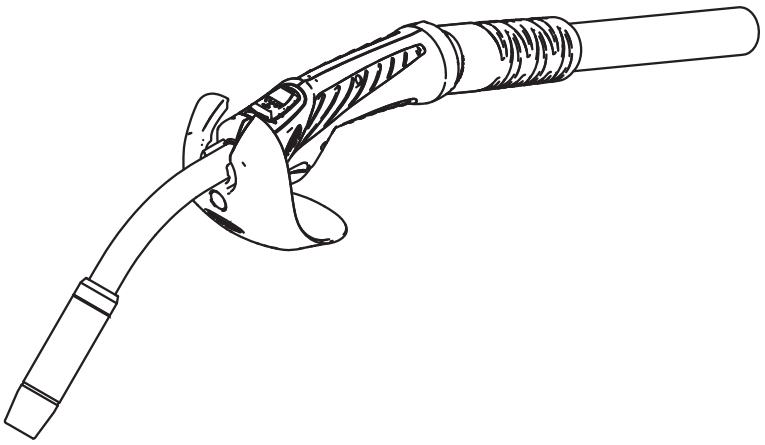
MTG 3500, 5000

MTW 3500, 5000



(D) Bedienungsanleitung
Ersatzteilliste
MIG/MAG Hand-Schweißbrenner

(GB) Operating Instructions
Spare parts list
MIG/MAG manual welding torch

(F) Instructions de service
Liste des pièces de rechange
Torches de soudage MIG/MAG manuelles

(I) Istruzioni d'impiego
Lista parti die ricambio
Torcia per saldatura manuale MIG/MAG

(E) Instrucciones de uso
Lista de repuestos
Antorcha manual MIG/MAG

(BR) Manual de instruções
Listas de pecas de reposicao
Tocha manual MIG/MAG

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Safety rules

GB

Explanation of safety symbols

DANGER! indicates immediate and real danger. If it is not avoided, death or serious injury will result.

WARNING! indicates a potentially dangerous situation. Death or serious injury may result if appropriate precautions are not taken.

CAUTION! indicates a situation where damage or injury could occur. If it is not avoided, minor injury and/or damage to property may result.

NOTE! indicates a risk of flawed results and possible damage to the equipment.

IMPORTANT! indicates tips for correct operation and other particularly useful information. It does not indicate a potentially damaging or dangerous situation.

If you see any of the symbols depicted in the "Safety rules", special care is required.

General

The device is manufactured using state-of-the-art technology and according to recognised safety standards. If used incorrectly or misused, however, it can cause

- injury or death to the operator or a third party,
- damage to the device and other material assets belonging to the operating company,
- inefficient operation of the device.

All persons involved in commissioning, operating, maintaining and servicing the device must:

- be suitably qualified,
- have sufficient knowledge of welding
- read and follow these operating instructions carefully.

The operating instructions must always be at hand wherever the device is being used. In addition to the operating instructions, attention must also be paid to any generally applicable and local regulations regarding accident prevention and environmental protection.

All safety and danger notices on the device

- must be kept in a legible state
- must not be damaged/marked
- must not be removed
- must not be covered, pasted or painted over.

For the location of the safety and danger notices on the device, refer to the section headed "General remarks" in the operating instructions for the device. Before switching on the device, remove any faults that could compromise safety.
Your personal safety is at stake!

Proper use

The device is to be used exclusively for its intended purpose.
The device is intended exclusively for the welding process described in the rating plate.Any use above and beyond this purpose is deemed improper. The manufacturer shall not be liable for any damage resulting from such improper use.

Utilisation in accordance with the "intended purpose" also includes
- reading carefully and following all operating instructions to the letter
- studying and obeying all safety and danger notices carefully
- performing all stipulated inspection and servicing work.

The device is designed for use in industry and the workshop. The manufacturer accepts no responsibility for any damage caused through use in a domestic setting.
The manufacturer likewise accepts no liability for unexpected or incorrect results.

Environmental conditions

Operation or storage of the device outside the stipulated area will be deemed as "not in accordance with the intended purpose". The manufacturer shall not be liable for any damage resulting from such improper use.

Ambient temperature:
- during operation: -10 °C to + 40 °C (14 °F to 104 °F)
- during transport and storage: -25 °C to +55 °C (-13 °F to 131 °F)

Relative humidity:
- up to 50 % at 40 °C (104 °F)
- up to 90 % at 20 °C (68 °F)

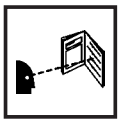
Ambient air: free from dust, acids, corrosive gases and substances, etc.
For use at altitudes above sea level: up to 2000 m (6500 ft)

Obligations of the operating company

The operating company undertakes to allow only such people to work with the device who:
- are familiar with the fundamental instructions regarding safety and accident prevention, and have been instructed how to use the device
- have read and understood the "Safety rules" section and warning notices in these operating instructions, and then signed them to confirm this
- are trained to produce the required results.

Checks must be carried out at regular intervals to ensure that operators are working in a safety-conscious manner.

Obligations of personnel



Before using the device, all persons instructed to do so undertake:

- to observe the basic instructions regarding safety at work and accident prevention
- to read the "Safety rules" section and warning notices in these operating instructions, and sign them to confirm that they have understood them and will follow them.

Before leaving the work area, ensure that people or property cannot come to any harm in your absence.

GB

Protecting yourself and others

Persons involved with welding exposes themselves to numerous risks, e.g.:

- flying sparks and hot pieces of metal
- light from the arc, which can damage eyes and skin
- hazardous electromagnetic fields, which endanger the lives of people using cardiac pacemakers
- risk of electrocution from mains current and welding current
- greater noise pollution
- harmful welding smoke and gases

Anyone working on the workpiece while welding is in progress must wear suitable protective clothing with the following properties:

- flame-resistant
- insulating and dry
- covers the whole body, is undamaged and in good condition
- Safety helmet
- trousers with no turn-ups

Protective clothing refers to a variety of different items. Operators should:

- protect eyes and face from UV rays, heat and sparks using a protective visor and regulation filter.
- behind the safety visor, wear regulation protective goggles with side protection.
- wear stout footwear that provides insulation even in wet conditions
- wear suitable gloves to protect hands (electrically insulated and providing protection against heat).
- Insulated ear protection should be worn to reduce the harmful effects of noise and to prevent injury.

Keep all persons, especially children, out of the working area while any devices are in operation or welding is in progress. If, however, there are people in the vicinity,

- make them aware of all the dangers (risk of dazzling by the arc, injury from flying sparks, inhaling welding fumes, noise, possible danger from mains or welding current, etc),
- provide suitable protective equipment or
- erect suitable safety screens/curtains.

Danger from toxic gases and vapours

The fumes produced during welding contain harmful gases and vapours.

Welding fumes contain substances that may, under certain circumstances, cause birth defects or cancer.

Keep your face away from welding fumes and gases.

Fumes and hazardous gases,
- must not be breathed in
- must be extracted from the working area using appropriate methods.

Ensure an adequate supply of fresh air.

If this cannot be provided, a protective mask with an air supply must be worn.

If there is any doubt about whether the extraction system is powerful enough, then the measured toxic emission values should be compared with the permissible limit values.

The following components are responsible, amongst other things, for the degree of toxicity of welding fumes:
- Metals used for the workpiece
- Electrodes
- Coatings
- Cleaners, degreasers, etc.

The relevant material safety data sheets and manufacturer's specifications for the listed components should therefore be studied carefully.

Flammable vapours (e.g. solvent fumes) should be kept away from the arc's radiation area.

Risks from welding current

An electric shock is life threatening and can be fatal.

Do not touch live parts either inside or outside the device.

During MIG/MAG or TIG welding, the welding wire, the wirespool, the drive rollers and all metal parts that are in contact with the welding wire are live. Always set the wire-feed unit up on a sufficiently insulated surface or use a suitable, insulated wire-feed unit mount.
Make sure that you and others are protected with an adequately insulated, dry temporary backing or cover for the earth or ground potential. This temporary backing or cover must extend over the entire area between the body and the earth or ground potential.
All cables and leads must be complete, undamaged, insulated and adequately dimensioned. Loose connections, scorched, damaged or inadequately dimensioned cables and leads must be repaired/replaced immediately.

Do not sling cables or leads around either the body or parts of the body.

The electrode (rod electrode, tungsten electrode, welding wire, etc) must
- never be immersed in liquid for cooling
- never be touched when current is flowing.

Double the open circuit voltage of a welding machine can occur between the welding electrodes of two welding machines. Touching the potentials of both electrodes at the same time may be fatal under certain circumstances.

Switch off unused devices.

Meandering welding currents

If the following instructions are ignored, meandering welding currents can develop with the following consequences:

- Fire hazard
- Overheating of parts connected to the workpiece
- Irreparable damage to PE conductors
- Damage to device and other electrical equipment

Ensure that the workpiece is held securely by the workpiece clamp.

Attach the workpiece clamp as close as possible to the area that is to be welded.

If the floor is electrically conductive, the device must be set up with sufficient insulating material to insulate it from the floor.

If distribution boards, twin-head mounts, etc., are being used, note the following: The electrode of the welding torch / electrode holder that is not used is also live. Make sure that the welding torch / electrode holder that is not used is kept sufficiently insulated.

In the case of automated MIG/MAG applications, ensure that only an insulated wire electrode is routed from the welding wire drum, large wirefeeder spool or wirespool to the wire-feed unit.

EMC device classifications

Devices with emission class A:

- are only designed for use in an industrial setting
- can cause grid-bound and emitted interference in other areas.

Devices with emission class B:

- satisfy the emissions criteria for residential and industrial areas. This also applies to residential areas in which power is supplied from the public low-voltage grid.

EMC device classification according to the rating plate or the technical data.

EMC measures

In certain cases, even though a device complies with the standard limit values for emissions, it may affect the application area for which it was designed (e.g. when there is sensitive equipment at the same location, or if the site where the device is installed is close to either radio or television receivers).
If this is the case, then the operator is obliged to take appropriate action to rectify the situation.

Check for possible problems, and check and evaluate neighbouring devices' resistance to interference according to national and international requirements:

- safety features
- power, signal and data transfer lines
- IT and telecommunications devices
- measuring and calibrating devices

Supporting measures for avoidance of EMC problems:

a) Mains supply
   - if electromagnetic interference arises despite correct mains connection, additional measures are necessary (e.g. use of a suitable line filter).

b) Welding leads
   - must be kept as short as possible
   - must run close together (to avoid EMF problems)
   - must be kept well apart from other leads

c) Equipotential bonding

d) Earthing the workpiece
   - if necessary, establish an earth connection using suitable capacitors.

e) Shielding, if necessary
   - shield off other nearby devices
   - shield off entire welding installation

EMF measures

Electromagnetic fields may pose as yet unknown risks to health:

- effects on the health of others in the vicinity, e.g. wearers of pacemakers and hearing aids
- wearers of pacemakers must seek advice from their doctor before approaching the device or any welding that is in progress
- for safety reasons, keep distances between the welding cables and the welder's head/torso as large as possible
- do not carry welding cables and hosepacks over the shoulders or wind them around any part of the body

Specific areas of risk

Do not reach into the rotating cogs of the wire drive or into rotating drive components.Covers and side panels may only be opened/removed while maintenance or repair work is being carried out.

Keep hands, hair, clothing and tools away from moving parts, for example:

- Fans
- Cogs
- Rollers
- Shafts
- Wirespools and welding wire

During operation

- ensure that all covers are closed and all side panels are fitted properly.
- keep all covers and side panels closed.

A high risk of injury exists when the welding wire emerges from the welding torch (piercing of the hand, injuries to the face and eyes, etc.). Always keep the torch well away from the body (devices with a wire-feed unit).

Never touch the workpiece during or after welding - risk of burns.

Slag can sometimes fly off workpieces as they cool down. The specified protective equipment must therefore also be worn when reworking workpieces, and steps must be taken to ensure that other people are also adequately protected. Welding torches and other parts with a high operating temperature must be allowed to cool down before handling.

Special provisions apply in areas at risk of fire or explosion - observe relevant national and international regulations.

Danger of scalding from escaping steam. Switch off cooling unit before detaching water feed or return lines.

Safety measures in normal operation

Only operate the device when all protection devices are fully functional. If the protection devices are not fully functional, there is a risk of

- injury or death to the operator or a third party,
- damage to the device and other material assets belonging to the operator,
- inefficient operation of the device.

Any safety devices that are not functioning properly must be repaired before switching on the device.

Never bypass or disable protection devices.

Before switching on the device, ensure that no one is likely to be endangered.

- Check the device at least once a week for obvious damage and proper functioning of safety devices.
- Only the manufacturer's original coolant is suitable for use with our devices due to its properties (electrical conductivity, frost protection, material compatibility, flammability, etc.)
- Only use suitable original coolant from the manufacturer.
- Do not mix the manufacturer's original coolant with other coolants.

- If damage results from using a different coolant, the manufacturer accepts no liability. In addition, no warranty claims will be entertained.
- The coolant can ignite under certain conditions. Transport the coolant only in its original, sealed containers and keep well away from any sources of ignition.
- Used coolant must be disposed of properly in accordance with the relevant national and international regulations. A safety data sheet may be obtained from your service centre or downloaded from the manufacturer's website.
- Check the coolant level before you start to weld while the system is still cool.

Maintenance and repair

It is impossible to guarantee that bought-in parts are designed and manufactured to meet the demands made on them, or that they satisfy safety requirements. Use only original replacement and wearing parts (also applies to standard parts).
Do not carry out any modifications, alterations, etc. to the device without the manufacturer's consent.
Components that are not in perfect condition must be changed immediately. When ordering, please give the exact designation and part number as shown in the spare parts list, as well as the serial number of your device.

Disposal

Do not dispose of this device with normal domestic waste! To comply with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation as national law, electrical equipment that has reached the end of its life must be collected separately and returned to an approved recycling facility. Any device that you no longer require must be returned to your dealer, or find out about the approved collection and recycling facilities in your area. Ignoring this European Directive may have potentially adverse affects on the environment and your health!

Safety symbols

Devices with the CE marking satisfy the essential requirements of the low-voltage and electromagnetic compatibility directive (e.g. relevant product norms from the EN 60 974 series).

Devices with the CSA test mark satisfy the requirements of the relevant standards in Canada and the USA.

Copyright

The text and illustrations are all technically correct at the time of printing. We reserve the right to make changes. The contents of the operating instructions shall not provide the basis for any claims whatsoever on the part of the purchaser. If you have any suggestions for improvement, or can point out any mistakes that you have found in the instructions, we will be most grateful for your comments.

D

Allgemein

Die MIG/MAG-Schweißbrenner sind besonders robust und verlässlich. Die ergonomisch geformte Griffschale, ein Kugelgelenk und eine optimale Gewichtsverteilung ermöglichen ein ermüdungsfreies Arbeiten.

Es stehen unterschiedliche Leistungsklassen und Brennergrößen in gas- und wassergekühlter Ausführung zur Verfügung. Dadurch wird ein gute Zugänglichkeit zu den Schweißnähten erreicht.

Die Schweißbrenner lassen sich an die unterschiedlichsten Aufgabenstellungen anpassen und bewähren sich bestens in der manuellen Serien- und Einzelfertigung, sowie im Werkstättenbereich.

GB

General

MIG/MAG welding torches are particularly robust and reliable, with an ergonomic grip, ball joint and perfect weight distribution for fatigue-free working.

With both gas- and water-cooled versions available in different power categories and torch sizes, no weld seam is out of reach.

The welding torches can be used in an extremely wide range of applications. They are ideal for manual batch and single-piece production as well as jobs in the workshop.

F

Généralités

La torche de soudage MIG/MAG est particulièrement robuste et fiable. La poignée coque de forme ergonomique, ainsi qu'une rotule et une répartition optimisée du poids permettent un travail sans fatigue.

Diverses classes de puissance et tailles de torches en versions refroidie par eau et refroidie au gaz sont disponibles. Il est ainsi possible d'obtenir une meilleure accessibilité aux soudures.

Ces torches de soudage conviennent pour les tâches les plus diverses et sont idéales pour la fabrication manuelle en série et sur commande, ainsi que dans les garages.

I

In generale

Le torce per saldatura MIG/MAG sono particolarmente robuste e affidabili. L'impugnatura ergonomica, un giunto sferico e una distribuzione ottimale del peso consentono di lavorare senza affaticarsi.

Sono disponibili varie classi di potenza e dimensioni, in versione raffreddata a gas e ad acqua. In questo modo si ottiene una buona accessibilità ai giunti saldati.

Le torce per saldatura possono essere adattate alle lavorazioni più svariate e si dimostrano particolarmente efficaci nella produzione in serie e nella lavorazione singola manuale, nonché nell'impiego nelle officine.

E

Generalidades

Las antorchas MIG/MAG son especialmente robustas y fiables. La carcasa del asa de formas ergonómicas, una articulación esférica y una distribución óptima de peso permiten trabajar sin cansarse.

Se encuentran disponibles diferentes clases de rendimiento y tamaños de antorcha en versión refrigerada por gas y por agua. De este modo, se consigue una buena accesibilidad a los cordones de soldadura.

Las antorchas se pueden adaptar a los más diferentes planteamientos de las tareas y muestran sus ventajas de forma óptima en la producción manual en serie e individual, así como en el ámbito de los talleres.

BR

Geral

As tochas de solda MIG/MAG são particularmente robustas e confiáveis. O cabo de formato ergonômico, a junta esférica e a distribuição ideal do peso possibilitam uma operação livre de fadiga.

Disponíveis em tipos diferenciados de potência e tamanhos de tochas, em modelos de refrigeração a gás ou a água. Isso possibilita uma boa acessibilidade para as costuras de soldagem.

As tochas de solda podem ser adaptadas às mais diferentes tarefas e dão bons resultados na produção manual em série e individual, assim como na área de oficinas.

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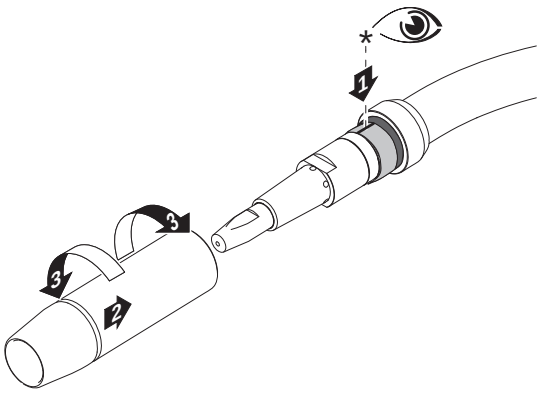

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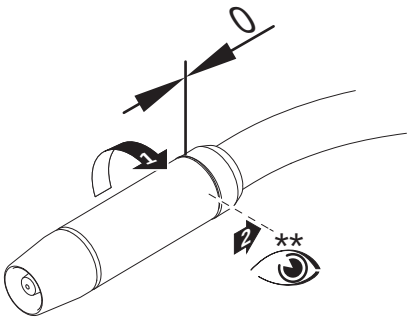

(D)

Gasdüse wechseln

* Der Schlitz des Federrings sollte oben liegen

** Gadüse bis auf Anschlag aufschieben

(GB)

Replacing the gas nozzle

* The slot on the lock washer must be on the top

** Push the gas nozzle on as far as it will go

(F)

Remplacer la buse gaz

* La fente de la rondelle élastique doit être dirigée vers le haut

** Repousser la buse gaz jusqu'à la butée

(I)

Sostituzione dell'ugello del gas

* La parte cava della rondella elastica deve essere rivolta verso l'alto.

** Far scorrere fino in fondo l'ugello del gas.

(E)

Cambiar el inyector de gas

* La ranura del anillo elástico debe estar orientada hacia arriba

** Deslizar el inyector de gas hasta el tope

(BR)

Substituir o bocal de gás

* A abertura da arruela elástica deve ficar para cima

** Empurrar o bocal de gás até o encosto

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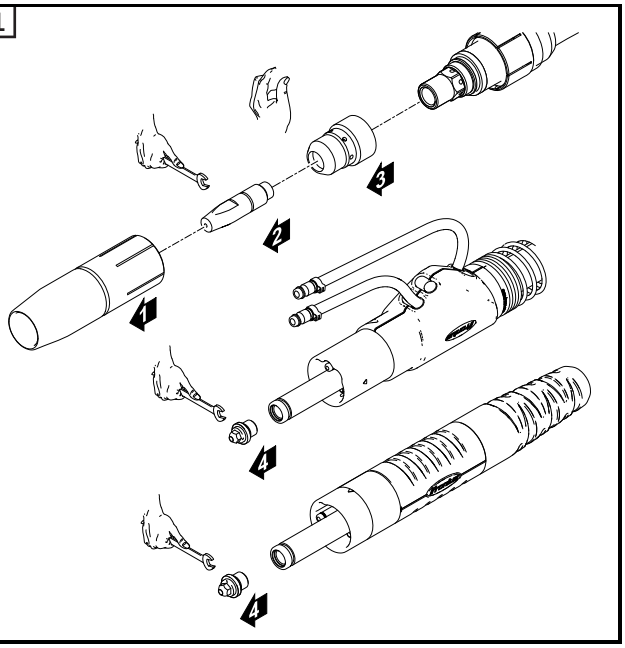

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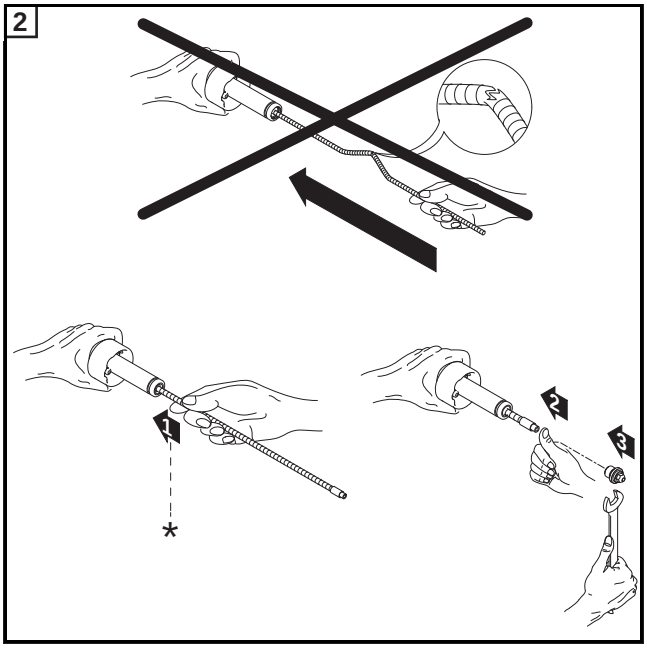

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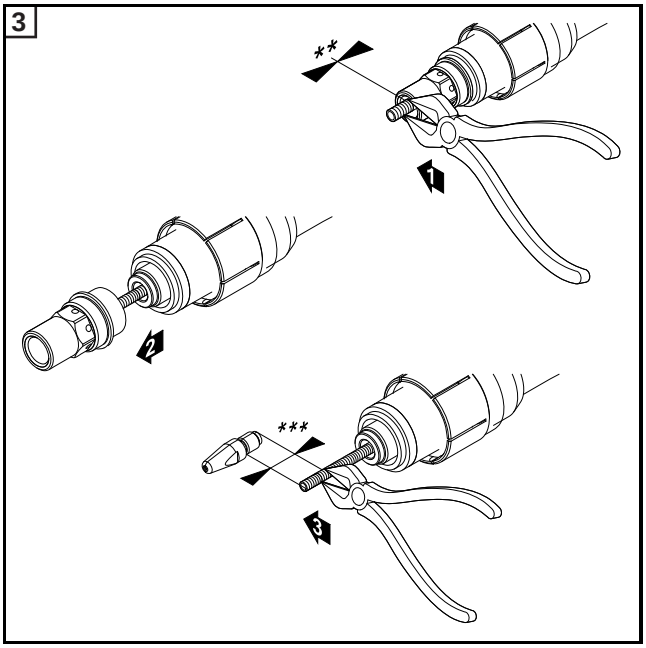

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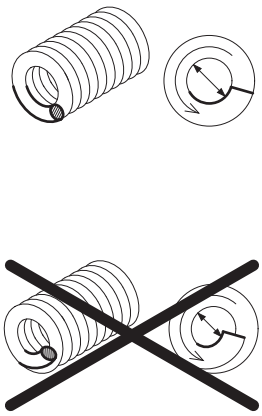

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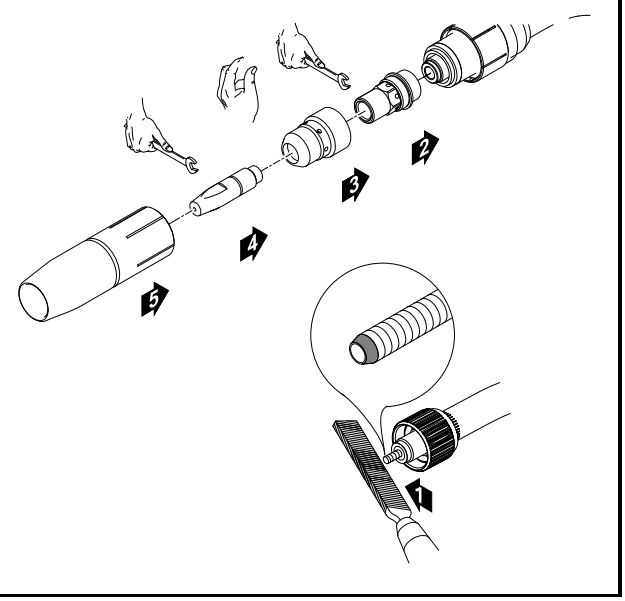


(D)

Stahlseele montieren

HINWEIS! Beim Abläng-gen der Draht-Führungs-seele darauf achten, dass

- beim Schnitt kein Grat in die Draht-Führungsseele hineinragt
- Seitenschneider leicht schräg stellen
- Grat abschleifen

* Beim Einschieben der Stahlseele kann kurz vor dem Ende ein leichter Widerstand spürbar sein. Je größer der Durchmesser der Stahlseele, desto größer der Widerstand

** Abstand bei:
MTW 3500: 5 mm (.2 in.)
MTW 5000: 5 mm (.2 in.)
MTG 3500: 9,5 mm (.4 in.)
MTG 5000: 19 mm (.7 in.)

(GB)

Fitting the steel liner

NOTE! When cutting the liner to length, make sure that

- no flash protrudes into the inner liner
- the cutting pliers are placed at a slight angle
- flash is filed down

* Shortly before the end a slight resistance may be felt when inserting the steel liner. The larger the diameter of the liner, the greater the resistance.

** Distance on:
MTW 3500: 5 mm (0.2 in.)
MTW 5000: 5 mm (0.2 in.)
MTG 3500: 9.5 mm (0.4 in.)
MTG 5000: 19 mm (0.7 in.)

(F)

Montage de l'âme guide-fil en acier

REMARQUE! Lorsque vous coupez la gaine guide-fil, assurez-vous :

- qu'aucune bavure ne pénètre à l'intérieur de la gaine guide-fil
- que la pince coupante diagonale est légèrement inclinée
- et rectifiez la gaine guide-fil pour éliminer les bavures

* Lors de l'insertion de l'âme guide-fil en acier, une légère résistance doit être sensible. Plus le diamètre de l'âme guide-fil en acier est important, plus la résistance sera forte.

** Écart sur :
MTW 3500 : 5 mm (.2 in.)
MTW 5000 : 5 mm (.2 in.)
MTG 3500 : 9,5 mm (.4 in.)
MTG 5000 : 19 mm (.7 in.)

(I)

Montaggio dell'anima d'acciaio

AVVERTENZA! Nel tagliare a misura la guaina guidafilo accertarsi

- che al momento del taglio nessuna aletta sporga nella guaina guidafilo
- di inclinare leggermente la pinza a cesoia
- di levigare l'aletta.

* Inserendo l'anima d'acciaio è possibile avvertire una lieve resistenza poco prima di arrivare alla fine. La resistenza aumenta proporzionalmente al diametro dell'anima d'acciaio.

** Distanza per:
MTW 3500: 5 mm (.2 in.)
MTW 5000: 5 mm (.2 in.)
MTG 3500: 9,5 mm (.4 in.)
MTG 5000: 19 mm (.7 in.)

(E)

Montar el alma de acero

¡OBSERVACIÓN! Al tronzar el alma de guía de hilo se debe prestar atención a que:

- Durante el corte no entre ninguna rebaba en el alma de guía de hilo
- Posicionar los alicates ligeramente inclinados
- Rectificar la rebaba

* Al introducir el alma de acero puede percibirse una ligera resistencia justo antes del final. Cuanto más grande sea el diámetro del alma de acero, tanto mayor será la resistencia.

** Distancia con:
MTW 3500: 5 mm (.2 in.)
MTW 5000: 5 mm
MTG 3500: 9,5 mm (.4 in.)
MTG 5000: 19 mm (.7 in.)

(BR)

Montar a alma do aço

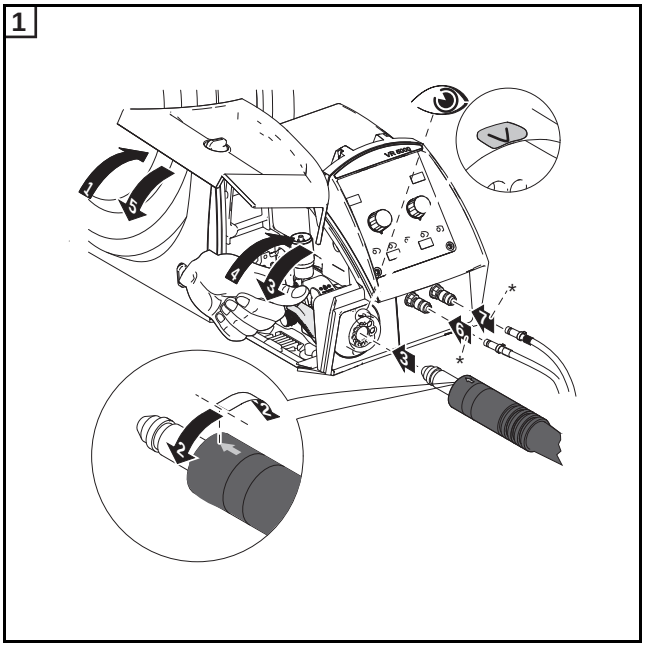
AVISO! Durante o corte da alma da guia de arame, observar se

- nenhuma rebarba da alma da guia de arame está sobreposta na área de corte
- Posicionar o alicate de corte lateral levemente inclinado
- Lixar a rebarba

* Durante a inserção da alma do aço, uma leve resistência pode ser perceptível, pouco antes da extremidade. Quanto maior for o diâmetro do núcleo do aço, maior é a resistência.

** Distância em:
MTW 3500: 5 mm (0.2 in.)
MTW 5000: 5 mm (5,08 mm.)
MTG 3500: 9,5 mm (0.4 in.)
MTG 5000: 19 mm (0.7 in.)

1



(D)

Schweißbrenner anschließen

HINWEIS! Beim Anschließen des Schweißbrenners kontrollieren ob

- sämtliche Anschlüsse fest angeschlossen sind
- sämtliche Kabel, Leitungen und Schlauchpakete unbeschädigt und korrekt isoliert sind.

* bei eingebauter Option Wasseranschluss und wassergekühltem Schweißbrenner

(GB)

Connecting the welding torch

NOTE! When connecting the welding torch, check that

- all connections are connected properly
- all cables, leads and hosepacks are undamaged and correctly insulated.

* when the optional water connection and the water-cooled welding torch are fitted

(F)

Raccordement de la torche de soudage

REMARQUE! Lors du raccordement de la torche de soudage, vérifier si

- tous les raccords soient solidement branchés
- tous les câbles, tuyaux et faisceaux de liaison sont exempts de dommages et sont correctement isolés.

* avec option raccord d'eau installée et torche de soudage refroidie par eau

(I)

Collegamento della torcia per saldatura

AVVERTENZA! Collegando la torcia per saldatura, controllare che

- tutti gli attacchi siano collegati saldamente
- tutti i cavi, i conduttori e i pacchetti tubi flessibili non presentino danni e siano correttamente isolati.

* Se è integrata l'opzione attacco per l'acqua e torcia per saldatura raffreddata ad acqua.

(E)

Conectar la antorcha

¡OBSERVACIÓN! Con motivo de la conexión de la antorcha se deben realizar las siguientes comprobaciones:

- Todas las conexiones están fijamente conectadas.
- Todos los cables, líneas y paquetes de mangueras están intactos y correctamente aislados.

* Si la opción conexión de agua y antorcha refrigerada por agua está instalada

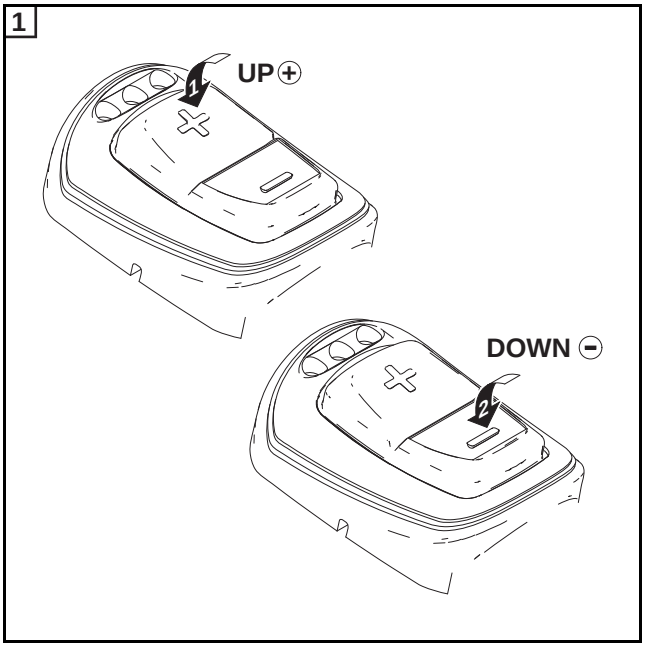
(BR)

Conectar a tocha de solda

AVISO! Durante a conexão da tocha de solda, verificar se

- todas as conexões estão firmes
- todos os cabos, condutores e pacotes de mangueira estão isentos de danos e isolados corretamente.

* na opção conexão de água e tocha refrigerada à água instaladas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UP ⊕
1
DOWN ⊖
2

(D)

Up/Down

Der Up/Down-Schweißbrenner hat folgende Funktionen:

- Im Synergic-Mode kann mit den Up/Down Tasten die Leistung verändert werden
- Error Anzeige: bei einem Systemfehler leuchten alle LEDs rot, bei einem Datenkommunikations-Fehler blinken alle LEDs rot
- Hochlauf / Startsequenz: LED laufen einmal durch (Selbstcheck)

(GB)

Up/down

The up/down welding torch has the following functions:

- The power can be changed in Synergic mode using the up/down buttons
- Error indication: all the LEDs light up red if there is a system fault; all the LEDs flash red if there is a data communication fault
- Run-up/starting sequence: LEDs light up in sequence (self-check)

(F)

Up/Down

La torche Up/Down a les fonctions suivantes :

- En mode Synergic, la touche Up/Down permet de modifier la puissance
- Affichage d'erreur : en cas d'erreur système, toutes les DEL sont allumées en rouge. En cas d'erreur de communication de données, toutes les DEL clignotent en rouge
- Démarrage / Séquence de démarrage : les DEL s'allument une fois (autocheck)

(I)

Up/Down

La torcia per saldatura Up/Down dispone delle seguenti funzioni:

- In modalità Synergic, è possibile modificare la potenza con i tasti Su/Giù.
- Indicazione di errori: se si verifica un errore di sistema tutti i LED si accendono con luce rossa, se si verifica invece un errore di comunicazione dati tutti i LED lampeggiano con luce rossa.
- Accensione / Sequenza di avvio: i LED si accendono una volta in sequenza (autodiagnosi).

(E)

Ariba/abajo

La antorcha arriba/abajo tiene las siguientes funciones:

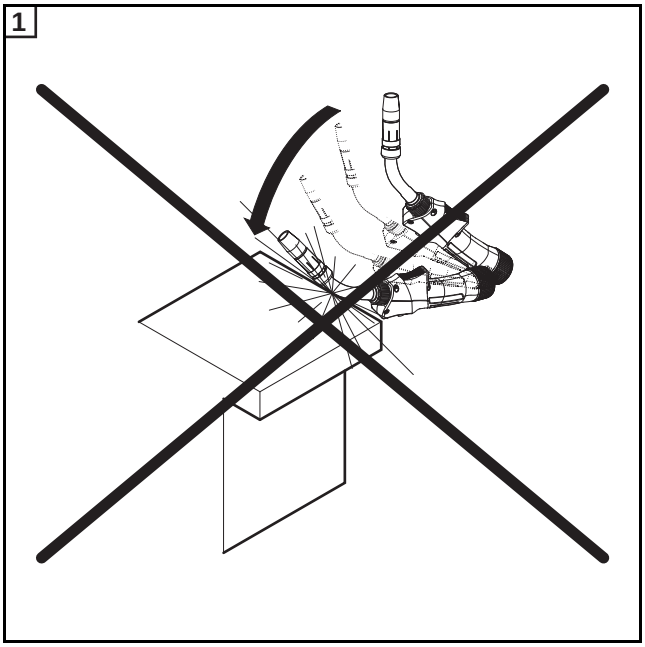
- En el modo Synergic puede modificarse la potencia con las teclas Arriba/Abajo.
- Indicación de error: en caso de un error de sistema, se iluminan todos los LEDs en rojo y en caso de un error de comunicación de datos, todos los LEDs parpadean en rojo
- Arranque/secuencia de inicio: Los LEDs van pasando una vez (autochequeo)

(BR)

Up/Down

A tocha de solda Up/Down tem as seguintes funções:

- No modo sinérgico, a potência pode ser modificada com as teclas Up/Down.
- Indicação de erros: Em um erro do sistema, todos os LEDs vermelhos se acendem, em um erro de comunicação de dados, todos os LEDs vermelhos piscam
- Aceleração / sequência inicial: Os LEDs circulam uma vez (autoverificação)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D

Pflege, Wartung

Regelmäßige und vorbeugende Wartung des Schweißbrenners sind wesentliche Faktoren für einen störungsfreien Betrieb. Der Schweißbrenner ist hohen Temperaturen und starker Verunreinigung ausgesetzt. Daher benötigt der Schweißbrenner eine häufigere Wartung als andere Komponenten des Schweißsystems.

WICHTIG! Vermeiden Sie beim Entfernen von Schweißspritzern Riefen und Kratzer. Darin könnten sich im weiteren Betrieb entstehende Schweißspritzer nachhaltig festsetzen.

Den Rohrbogen keinesfalls biegen.

GB

Care, maintenance

Regular preventive maintenance of the welding torch is essential for problem-free operation. The welding torch is subjected to high temperatures and heavy soiling. The welding torch therefore requires more frequent maintenance than other components in the welding system.

IMPORTANT! When removing welding spatter, avoid scoring or scratching the torch. Future welding spatter may become firmly lodged in score or scratch marks.

Do not bend the torch neck under any circumstances.

F

Maintenance, entretien

Un entretien régulier et préventif de la torche de soudage constitue un facteur important permettant d'en garantir le bon fonctionnement. La torche de soudage est soumise à des températures élevées et à un degré de salissure très important. Elle nécessite donc une maintenance plus fréquente que les autres composants du système de soudage.

IMPORTANT! En enlevant les projections de soudure, prendre soin d'éviter de faire des stries ou des rayures. D'autres projections de soudure pourraient par la suite rester collées dessus.

Ne jamais plier le coude.

I

Cura, manutenzione

Una manutenzione regolare e preventiva della torcia per saldatura è fondamentale per garantirne il corretto funzionamento. La torcia per saldatura è esposta a temperature elevate e accumuli di impurità. Per questo motivo richiede una manutenzione più frequente rispetto ad altri componenti del sistema di saldatura.

IMPORTANTE! Nel rimuovere gli spruzzi di saldatura evitare di provocare graffi e rigature, in cui potrebbero depositarsi stabilmente gli spruzzi di saldatura prodottisi nel corso dei successivi impieghi.

Non piegare in nessun caso il corpo torcia.

E

Cuidado, mantenimiento

Un mantenimiento periódico y preventivo de la antorcha son factores relevantes para un servicio sin perturbaciones. La antorcha está expuesta a altas temperaturas y a una intensa suciedad. Por este motivo, la antorcha requiere un mantenimiento más frecuente que los demás componentes del sistema de soldadura.

¡IMPORTANTE! Se deben evitar estrías y rasguños al quitar las salpicaduras de soldadura. Las salpicaduras de soldadura originadas durante el servicio posterior podrían adherirse en estos.

En ningún caso se debe doblar el codo de tubo.

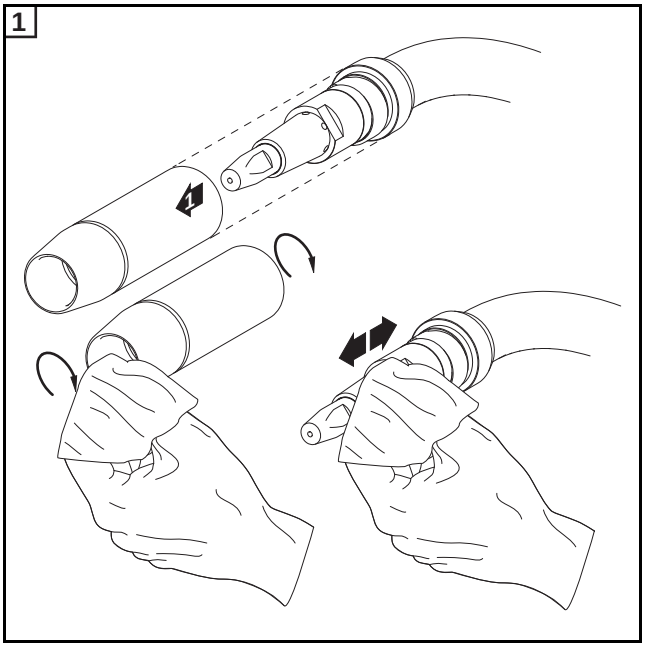
BR

Conservação, manutenção

A manutenção regular e preventiva da tocha é um fator importante para uma operação sem falhas. A tocha de solda é submetida a altas temperaturas e grande sujeira. Por isso, a tocha de solda precisa de uma manutenção mais freqüente que outros componentes do sistema de soldagem.

IMPORTANTE! Durante a retirada de respingos de soldagem, evitar ranhuras e rasgos. Em outras operações, respingos de soldagem podem se fixar de forma permanente.

Não dobre o tubo curvado.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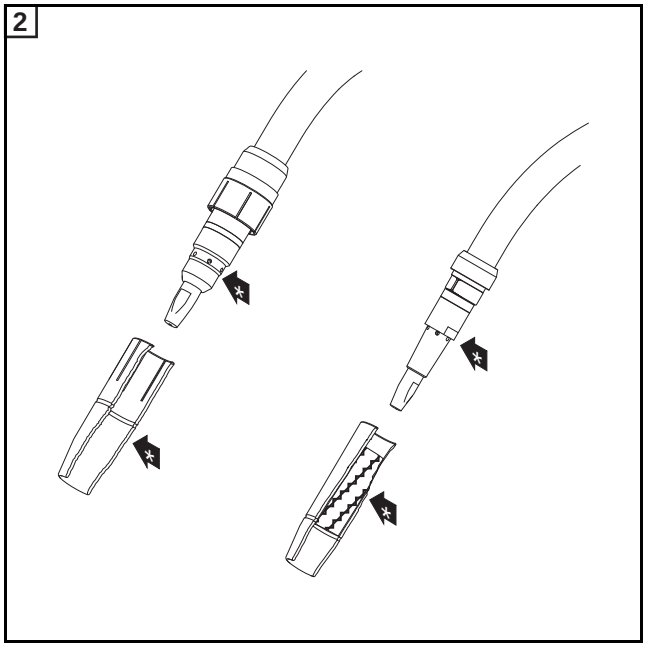
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(D)

Pflege, Wartung

Bei jeder Inbetriebnahme:
- Kontaktrohr kontrollieren
- Ausgeschliffenes Kontaktrohr austauschen
- Gasdüse von Schweißspritzern befreien
- Bei nicht entfernbaren Verunreinigungen im Steckbereich, Gasdüse austauschen
- Verunreinigungen vom Federring entfernen

* Spritzerschutz und Isolationen auf Beschädigung prüfen

Wassergekühlte Schweißbrenner:
- Wasseranschlüsse auf Dichtheit prüfen
- Wasser-Rückflussmenge im Kühlmittel-Behälter überwachen, ggf. Kühlgerät entlüften

(GB)

Care, maintenance

Every start-up:
- Check the contact tube
- Replace worn out contact tube
- Remove welding spatter from gas nozzle
- If there is dirt that cannot be removed from around the nozzle join, replace the gas nozzle
- Remove dirt from the lock washer

* Check spatter guard and insulation for damage

Water-cooled welding torch:
- Check the water connections for leaks
- Monitor the water return level in the coolant container and bleed the cooling unit if necessary

(F)

Maintenance, entretien

À chaque mise en service :
- Contrôler le tube de contact
- Changer le tube de contact lorsqu'il est usé
- Enlever les projections de soudure qui se trouvent sur la buse gaz
- Changer la buse gaz si l'emboîtement est encrassé et ne peut être nettoyé
- Retirer les dépôts et impuretés de la rondelle élastique

* Vérifier que les isolations et les protections antiprojections ne sont pas abîmées

Torches de soudage refroidies par eau :
- vérifier l'étanchéité des raccords d'eau
- Surveiller le débit de retour d'eau dans le réservoir de réfrigérant et, le cas échéant, purger le refroidisseur

(I)

Cura, manutenzione

Ad ogni messa in funzione:
- controllare il tubo di contatto
- sostituire il tubo di contatto se usurato
- asportare gli spruzzi di saldatura dall'ugello del gas
- se le impurità depositatesi sull'innesto non possono essere asportate, sostituire l'ugello del gas
- eliminare le impurità dalla rondella elastica.

* Verificare l'eventuale presenza di danni alla protezione antispruzzo e agli isolamenti.

Torcia per saldatura raffreddata ad acqua:
- verificare la tenuta degli attacchi dell'acqua
- monitorare la portata del flusso di ritorno dell'acqua nel serbatoio del refrigerante, se necessario fare sfiatare il gruppo di raffreddamento.

(E)

Cuidado, mantenimiento

Con cada puesta en servicio:
- Controlar el tubo de contacto
- Sustituir el tubo de contacto gastado
- Liberar el inyector de gas de las salpicaduras de soldadura
- En caso de impurezas en la zona de enchufe que no se puedan quitar, sustituir el inyector de gas
- Quitar las impurezas del anillo elástico

* Comprobar la protección antisalpicaduras y los aislamientos respecto a daños

Antorchas refrigeradas por agua:
- Comprobar la estanqueidad de las conexiones de agua
- Supervisar el caudal de retorno del agua en el depósito de refrigerante y, si fuera necesario, purgar el aparato refrigerador

(BR)

Conservação, manutenção

Em cada Comissionamento:
Verificar o tubo de contato, Substituir o tubo de contato desgastado, Livrar o bocal de gás de respingos da solda, Se houver impurezas que não podem ser retiradas na área de encaixe, substituir o bocal de gás, Remover as impurezas da arruela elástica

* Verificar danos à proteção contra respingos ou ao isolamento

Tochas de solda com refrigeração a água:
Verificar a vedação das conexões de água, Monitorar a quantidade de fluxo de retorno da água no tanque de produto de refrigeração, se necessário esvaziar o aparelho de refrigeração

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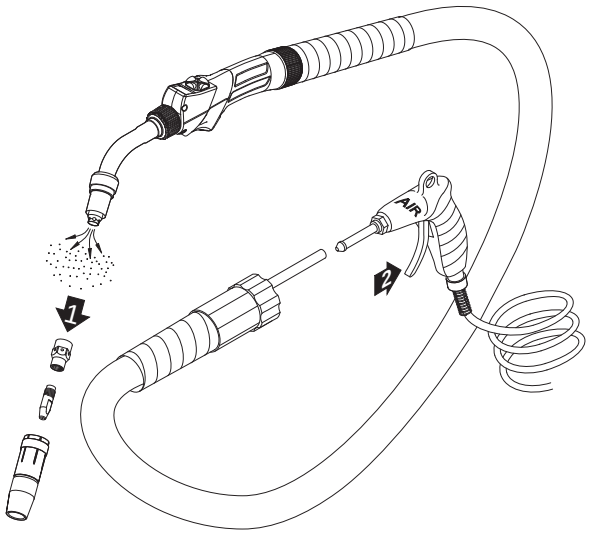

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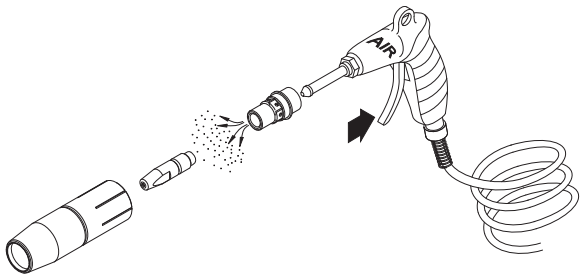

D

Pflege, Wartung und Entsorgung

Bei jedem Austausch der Drahtspule

- Empfohlen: Draht-Führungsseele austauschen
- Draht-Förderschlauch mit reduzierter Druckluft reinigen
- Verschleißteile vor dem Einbau reinigen

Entsorung:

- Die Entsorgung gemäß den gültigen nationalen und regionalen Bestimmungen durchführen

GB

Care, maintenance and disposal

Every time the wirespool is changed:

- Recommended: replace inner liner
- Clean wirefeeding hose with reduced compressed air
- Clean wearing parts before fitting

Disposal:

- Dispose of in accordance with the applicable national and local regulations

F

Maintenance, entretien et élimination

À chaque remplacement de la bobine de fil

- Recommandé : Changer l'âme de guidage du fil
- Nettoyer la gaine de dévidoir avec de l'air comprimé à débit réduit
- Nettoyer les pièces d'usure avant de les mettre en place

Élimination :

- Élimination conformément aux dispositions nationales et régionales en vigueur

I

Cura, manutenzione e smaltimento

Ad ogni sostituzione della bobina filo

- consigliato: sostituire la guaina guidafilo
- pulire il tubo di alimentazione filo con aria compressa ridotta
- pulire i pezzi soggetti a usura prima di montarli.

Smaltimento:

- lo smaltimento va effettuato nel rispetto delle disposizioni nazionali e regionali vigenti.

E

Cuidado, mantenimiento y eliminación

Con cada sustitución de la bobina de hilo:

- Recomendado: Sustituir el alma de guía de hilo
- Limpiar la manguera de transporte de hilo con aire a presión reducido
- Limpiar las piezas de desgaste antes de su montaje

Eliminación:

- Efectuar la eliminación observando las normas nacionales y regionales aplicables.

BR

Conservação, manutenção e descarte

A cada substituição da bobina de arame

- Recomendável: Substituir a alma da guia de arame
- Limpar a mangueira de transporte de arame com ar comprimido reduzido
- Limpar as peças de desgaste antes da montagem

Descarte:

- O descarte deve ser feito de acordo com as regulamentações nacionais e regionais em vigor.

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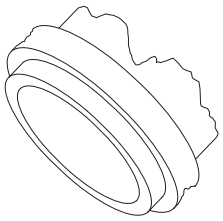

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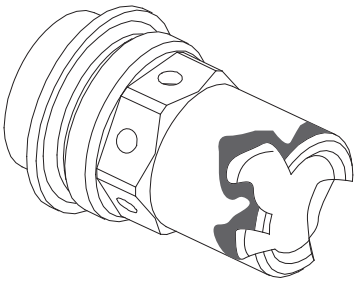

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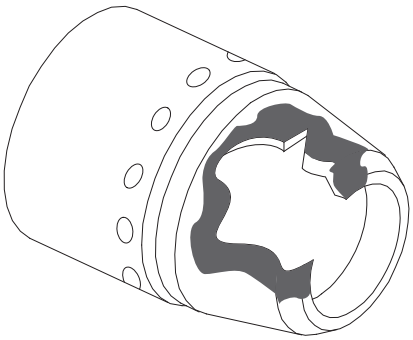

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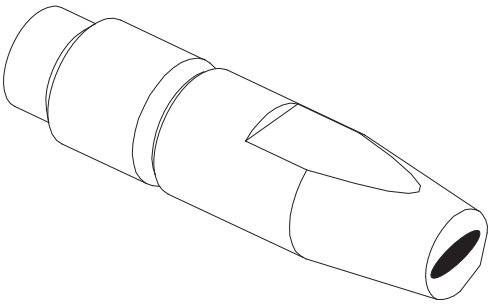


D

Erkennen von defekten Verschleißteilen

1. Isolierteile
   - Einkerbungen
   - abgebrannter oder eingerissener Mittelsteg
   - angeschmorte oder abgerissene Ansätze
2. Düsenstöcke
   - Einkerbungen und Einbrand an der Vorderkante
   - stark mit Schweißspritzern behaftet
3. Spritzerschutz
   - abgebrannte Außenkanten, Einkerbungen
4. Kontaktrohre
   - ausgeschliffene (ovale) Drahteintritts- und Drahtaustritts-Bohrungen
   - stark mit Schweißspritzern behaftet
   - Einbrand an der Kontaktrohr-Spitze

GB

Recognising faulty wearing parts

1. Insulating parts
   - Notches
   - Burned off or torn middle bar
   - Scorched or torn-off shoulders
2. Nozzle fittings
   - Notches and burns on the front edge
   - Heavily covered in welding spatter
3. Spatter guard
   - Burned-off outside edges
   - Notches
4. Contact tubes
   - Worn out (oval) wire entry and wire exit holes
   - Heavily covered in welding spatter
   - Burns on the tip of the contact tube

F

Identification des pièces d'usure défectueuses

1. Éléments d'isolation
   rainures, arête centrale brûlée ou fissurée, inserts encrassés ou fissurés
2. Porte-buses
   - rainures et brûlures sur la face avant
   - présence de projections de soudage excessives
3. Protection anti-projections
   - bords extérieurs brûlés
   - rainures
4. Tubes de contact
   - orifices d'entrée et de sortie du fil usés (ovales)
   - présence de projections de soudage excessives
   - brûlures au niveau de l'extrémité avant du tube de contact

I

Riconoscimento dei pezzi soggetti a usura difettosi

1. Elementi d'isolamento
   - intaccature
   - barretta centrale bruciata o incrinata
   - inserzioni fuse o crepate.
2. Supporti degli ugelli
   - intaccature e bruciature sullo spigolo anteriore
   - incollatura a causa degli spruzzi di saldatura.
3. Protezione antispruzzo
   - spigoli esterni bruciati
   - intaccature.
4. Tubi di contatto
   - fori di ingresso e di uscita del filo ovalizzati
   - incollatura a causa degli spruzzi di saldatura
   - punta del tubo di contatto bruciata.

E

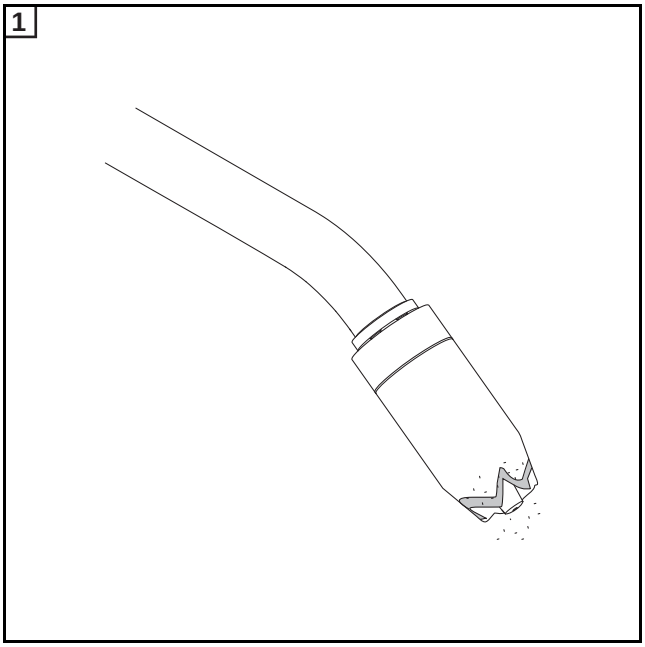
Detectar piezas de desgaste defectuosas

1. Piezas aislantes
   - Entalladuras
   - Alma central quemado o agrietado
   - Salientes chamuscados o agrietados
2. Regletas de inyectores
   - Entalladuras y penetración en el borde delantero
   - Pronunciada adhesión de salpicaduras de soldadura
3. Protección antisalpicaduras
   - Bordes exteriores quemados, Entalladuras
4. Tubos de contacto
   - Taladros de entrada y salida de hilo gastados (ovalados)
   - Pronunciada adhesión de salpicaduras de soldadura
   - Penetración en la punta del tubo de contacto

BR

Reconhecimento de peças de desgaste defeituosas

1. Peças de isolamento
   Entalhos, Nervura central queimada ou rasgada, Inícios queimados e rasgados
2. Árvores de bocais
   - Entalhes ou queimadura no canto dianteiro
   - contaminados fortemente com respingos de solda
3. Proteção contra respingos
   - Cantos externos queimados, Entaolhos
   - Entalhos
4. Tubos de contato
   - Orifícios desgatados (ovais) de entrada e saída de arame
   - contaminados fortemente com respingos de solda
   - Queimado na ponta do tubo de contato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D

Erkennen von defekten Verschleißteilen

1. Gasdüsen
   – stark mit Schweißspritzern behaftet
   – abgebrannte Außenkanten
   – Einkerbungen

GB

Recognising faulty wearing parts

1. Gas nozzles
   – Heavily covered in welding spatter
   – Burned-off outside edges
   – Notches

F

Identification des pièces d'usure défectueuses

1. Buses gaz
   – présence de projections de soudage excessives
   – bords extérieurs brûlés
   – rainures

I

Riconoscimento dei pezzi soggetti a usura difettosi

1. Ugelli del gas
   – incollatura a causa degli spruzzi di saldatura
   – spigoli esterni bruciati
   – intaccature.

E

Detectar piezas de desgaste defectuosas

1. Inyectores de gas
   – Pronunciada adhesión de salpicaduras de soldadura
   – Bordes exteriores quemados
   – Entalladuras

BR

Reconhecimento de peças de desgaste defeituosas

1. Bocais de gás
   – contaminados fortemente com respingos de solda
   – Cantos externos queimados
   – Entalhos

GB

Troubleshooting

No welding current

Mains switch is on, indicators on the power source are lit up, shielding gas available

Cause: Grounding (earthing) connection is incorrect
Remedy: Check the grounding (earthing) connection and terminal for correct polarity

Cause: Break in the current cable in the welding torch
Remedy: Change the welding torch

Nothing happens when the torch trigger is pressed

Mains switch is on, indicators on the power source are lit, protective gas shield is not available

Cause: The FSC (central connector) is not plugged in properly
Remedy: Check the FSC

Cause: Welding torch or torch control line is faulty
Remedy: Replace welding torch

Cause: The interconnecting hosepack is faulty or not connected properly
Remedy: Check interconnecting hosepack

Cause: Faulty power source
Remedy: Contact After-Sales Service

No protective gas shield

All other functions are OK

Cause: The gas cylinder is empty
Remedy: Change the gas cylinder

Cause: The gas pressure regulator is faulty
Remedy: Replace the gas pressure regulator

Cause: The gas hose is not connected, damaged or kinked
Remedy: Connect/replace the gas hose, or straighten out kinks

Cause: The welding torch is faulty
Remedy: Replace welding torch

Cause: Gas solenoid valve is faulty
Remedy: Replace gas solenoid valve

Poor weld properties

Cause:	Incorrect welding parameters
Remedy:	Check the settings
Cause:	Poor grounding (earthing) connection
Remedy:	Ensure good contact to workpiece
Cause:	Inadequate protective gas shield, or none at all
Remedy:	Check the pressure regulator, gas hose, gas solenoid valve and torch gas connection. On gas-cooled welding torches, inspect the gas seals, use a suitable inner liner.
Cause:	Welding torch is leaking
Remedy:	Replace welding torch
Cause:	Contact tube is too large or worn out
Remedy:	Replace contact tube
Cause:	Wrong wire alloy or wrong wire diameter
Remedy:	Check the wire spool that has been inserted
Cause:	Wrong wire alloy or wrong wire diameter
Remedy:	Check weldability of the base material
Cause:	The protective gas shield is not suitable for this wire alloy
Remedy:	Use the correct protective gas shield
Cause:	Unfavourable welding conditions: protective gas shield is contaminated (by moisture, air), inadequate gas shielding (weld pool "boiling", draughts), contaminants in the workpiece (rust, paint, grease)
Remedy:	Optimise the welding conditions
Cause:	Welding spatter in the gas nozzle
Remedy:	Remove the welding spatter
Cause:	Turbulence caused by too high a shielding gas flow rate
Remedy:	Reduce shielding gas flow rate, recommended: shielding gas flow rate (l/min) = wire diameter (mm) x 10 (e.g. 16 l/min for 1.6 mm wire electrode)
Cause:	Too large a distance between the welding torch and the workpiece
Remedy:	Reduce the distance between the welding torch and the workpiece (recommended: 10 to 15 mm)
Cause:	Tilt angle of the welding torch is too great
Remedy:	Reduce the tilt angle of the welding torch
Cause:	Wirefeed components have incorrect diameter
Remedy:	Use wirefeed components with correct diameter

Poor wirefeed

Cause: The braking force has been set too high
Remedy: Reduce the braking force

Cause: Hole in the contact tube is displaced
Remedy: Replace the contact tube

Cause: Faulty inner liner in welding torch
Remedy: Check the inner liner for kinks, dirt, etc.

Cause: The wirefeed rollers are not suitable for the wire electrode being used
Remedy: Use suitable wirefeed rollers

Cause: Wirefeed rollers have the wrong contact pressure
Remedy: Optimise the contact pressure

Cause: The wirefeed rollers are soiled or damaged
Remedy: Clean the wirefeed rollers or exchange them for new ones

Cause: Inner liner wrongly laid or kinked
Remedy: Replace inner liner

Cause: Inner liner or wire inlet nozzle wrongly dimensioned
Remedy: Ensure inner liner or wire inlet nozzle are correctly dimensioned

Cause: Inner liner was kinked while being inserted
Remedy: When inserting the inner liner, only handle it around the infeed tube

Cause: The inner liner has been cut too short
Remedy: Replace the inner liner and cut it to the correct length

Cause: Wire electrode worn due to excessive contact pressure at the wirefeed rollers
Remedy: Reduce contact pressure at the wirefeed rollers

Cause: Wire electrode contains impurities/corroded
Remedy: Use high-quality wire electrode with no impurities

The welding torch becomes very hot

Cause: The welding torch has been operated beyond its maximum number of amps
Remedy: Reduce welding power or use a higher capacity torch

Cause: The design dimensions of the welding torch are not sufficient for this task
Remedy: Observe the duty cycle and loading limits

Cause: Only on water-cooled machines: water flow is insufficient
Remedy: Check water level, water flow rate and cleanliness, routing of hosepack, etc.

Contact tube only has a short service life

Cause: Incorrect wirefeed rollers
Remedy: Use correct wirefeed rollers

Cause: Wire electrode worn due to excessive contact pressure at the wirefeed rollers
Remedy: Reduce contact pressure at the wirefeed rollers

Cause: Wire electrode contains impurities/corroded
Remedy: Use high-quality wire electrode with no impurities

Cause: Uncoated wire electrode
Remedy: Use wire electrode with suitable coating

Cause: Wrong dimension of contact tube
Remedy: Use a contact tube of the correct dimensions

Cause: Duty cycle of welding torch has been exceeded
Remedy: Shorten the duty cycle or use a higher capacity torch

Cause: Contact tube has overheated. No thermal dissipation as the contact tube is too loose
Remedy: Tighten the contact tube

NOTE! When using CrNi, the contact tube may be subject to a higher degree of wear due to the nature of the surface of the CrNi wire electrode.

Torch trigger malfunction

Cause: Torch trigger-to-control line-to-power source plug connections faulty
Remedy: Check plug connection/have power source or welding torch serviced

Cause: Dirt between the trigger and trigger housing
Remedy: Clean away any dirt

Cause: Torch control line is faulty
Remedy: Replace torch control line/have welding torch repaired

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Weld seam porosity

Cause: Spatter build-up in the gas nozzle causing inadequate gas-shielding of the weld seam
Remedy: Remove welding spatter

Cause: Either the protective gas shield hose has holes in it, or the hose is not connected properly
Remedy: Replace protective gas shield hose

Cause: The O-ring seals on the connection points have been cut through or are faulty
Remedy: Replace the O-ring seals

Cause: Moisture/condensation in the protective gas shield line
Remedy: Dry protective gas shield line

Cause: Protective gas shield flow is either too high or too low
Remedy: Correct the protective gas shield flow

Cause: Insufficient protective gas shield flow rate when welding starts or finishes
Remedy: Increase gas pre-flow and gas post-flow

Cause: Rusty or poor quality wire electrode
Remedy: Use high-quality wire electrode with no impurities

Cause: For gas-cooled welding torches: protective gas is escaping through a non-insulated inner liner
Remedy: Use only insulated inner liners with gas-cooled welding torches

Cause: Too much parting agent applied
Remedy: Remove excess parting agent/apply less parting agent

Lock washer is not clamping the gas nozzle

Cause: Dirty lock washer, twisted lock washer
Remedy: Clean off any dirt, turn the lock washer to tighten, push the gas nozzle down at the front while tightening

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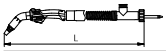
	MTG 3500	MTG 5000
I (Ampère) 10min/40°C M21 (EN 439)	40 % d.c. 280 60 % d.c. 220 100 % d.c. 180	40 % d.c. 400 60 % d.c. 320 100 % d.c. 250
I (Ampère) 10min/40°C C1 (EN 439)	40 % d.c. 350 60 % d.c. 280 100 % d.c. 210	40 % d.c. 500 60 % d.c. 400 100 % d.c. 310
 [mm (in.)]	0,8-1,2 (.032-.047)	1,0-1,6 (.039-.063)
 [m (ft.)]	3,5/4,5 (12/15)	3,5/4,5 (12/15)

(D)

Technische Daten

Symbolerklärung:

Schweißbrenner gasgekühlt

Spannungsbemessung (V-Peak):
- für handgeführte Schweißbrenner: 113 V
- für maschinell geführte Schweißbrenner: 141 V

Technische Daten Brennertaste:
- U_{max} = 50 V
- I_{max} = 10 mA

Der Betrieb der Brennertaste ist nur im Rahmen der technischen Daten erlaubt.

Das Produkt entspricht den Anforderungen laut Norm IEC 60974-7.

(GB)

Technical data

Explanation of the symbols:

Gas-cooled welding torches

Voltage rating (V-Peak):
- for manually guided torches: 113 V
- for mechanically guided torches: 141 V

Torch trigger technical data:
- U_{max} = 50 V
- I_{max} = 10 mA

The torch trigger may only be operated in accordance with the technical data.

The product complies with standard IEC 60974-7.

(F)

Caractéristiques techniques

Explication des symboles:

Torche à refroidissement par gaz

Mesure de tension (V-Peak) :
- pour les torches utilisées manuellement : 113 V
- pour les torches utilisées mécaniquement : 141 V

Caractéristiques techniques de la gâchette de la torche :
- U_{max} = 50 V
- I_{max} = 10 mA

L'utilisation de la gâchette de la torche est uniquement autorisée dans le cadre des caractéristiques techniques.

Ce produit satisfait aux exigences de la norme IEC 60974-7.

(I)

Dati tecnici

Spiegazione dei simboli:

Cannello di saldatura raffreddato a gas

Taratura della tensione (V-Peak):
- per cannelli di saldatura manuali: 113 V
- per cannelli di saldatura meccanici: 141 V

Dati tecnici tasto della torcia:
- U_{max} = 50 V
- I_{max} = 10 mA

Il funzionamento del tasto della torcia è consentito esclusivamente in conformità ai dati tecnici.

Questo prodotto è conforme allo standard IEC 60974-7.

(E)

Datos técnicos

Explicación de los símbolos:

Soplete para soldar refrigerado por gas

Dimensionado de tensión (V-Peak):
- para soplete de guiado manual: 113 V
- para soplete de guiado mecánico: 141 V

Datos técnicos tecla de la antorcha:
- $U_{máx}$ = 50 V
- $I_{máx}$ = 10 mA

El servicio de la tecla de la antorcha sólo queda permitido dentro del margen de los datos técnicos.

El producto cumple los requisitos de la norma IEC 60974-7.

(P)

Dados técnicos

Explicação dos símbolos:

Maçarico de soldar refrigerado a gás

Dimensionamento da tensão (V-Peak):
- para maçaricos de soldar de utilização manual: 113 V
- para maçaricos de soldar de utilização mecânica: 141 V

Características técnicas do botão do maçarico:
- $U_{máx}$ = 50 V
- $I_{máx}$ = 10 mA

O accionamento do botão do maçarico só é permitido nos limites das características técnicas.

Este produto está em concordância com as exigências conforme norma IEC 60974-7.

	MTW 3500	MTW 5000	MTW 5000-M
I (Ampère) 10min/40°C M21 (EN 439)	100 % d.c. 300	100 % d.c. 400	100 % d.c. 400
I (Ampère) 10min/40°C C1 (EN 439)	100 % d.c. 350	100 % d.c. 500	100 % d.c. 500
[mm (in.)]	0,8-1,2 (0.32-0.47)	1,0-1,6 (0.39-0.63)	1,0-1,6 (0.39-0.63)
[m (ft.)]	3,5 / 4,5 (12 / 15)	3,5 / 4,5 (12 / 15)	1,5 / 2,5 / 3,5 (5 / 9 / 12)
P_{min} [W]*	1000 / 1200 W	1300 / 1600 W	700 / 1000 / 1300 W
Q_{min} [l/min (gal./min)]	1 (.26)	1 (.26)	1 (.26)
p_{min} [bar (psi.)]	3 bar (43 psi.)	3 bar (43 psi.)	3 bar (43 psi.)
p_{max} [bar (psi.)]	5 bar (72 psi.)	3 bar (43 psi.)	3 bar (43 psi.)

(D)

Technische Daten

Symbolerklärung:


Schweißbrenner wassergekühlt

Spannungsbemessung (V-Peak):
- für handgeführte Schweißbrenner: 113 V
- für maschinell geführte Schweißbrenner: 141 V

Technische Daten Brennertaste:
- U_{max} = 50 V
- I_{max} = 10 mA

Der Betrieb der Brennertaste ist nur im Rahmen der technischen Daten erlaubt.

Das Produkt entspricht den Anforderungen laut Norm IEC 60974-7.

*) Geringste Kühlleistung laut Norm IEC 60974-2

(GB)

Technical data

Explanation of the symbols:


Water-cooled welding torches

Voltage rating (V-Peak):
- for manually guided torches: 113 V
- for mechanically guided torches: 141 V

Torch trigger technical data:
- U_{max} = 50 V
- I_{max} = 10 mA

The torch trigger may only be operated in accordance with the technical data.

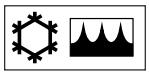
The product complies with standard IEC 60974-7.

*) Minimum cooling power in accordance with standard IEC 60974-2

(F)

Caractéristiques techniques

Explication des symboles:


Torche à refroidissement par eau

Mesure de tension (V-Peak) :
- pour les torches utilisées manuellement : 113 V
- pour les torches utilisées mécaniquement : 141 V

Caractéristiques techniques de la gâchette de la torche :
- U_{max} = 50 V
- I_{max} = 10 mA

L'utilisation de la gâchette de la torche est uniquement autorisée dans le cadre des caractéristiques techniques.

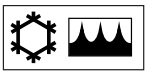
Ce produit satisfait aux exigences de la norme IEC 60974-7.

*) Puissance de refroidissement minimale conformément à la norme IEC 60974-2

(I)

Dati tecnici

Spiegazione dei simboli:


Cannello di saldatura raffreddato ad acqua

Taratura della tensione (V-Peak):
- per cannelli di saldatura manuali: 113 V
- per cannelli di saldatura meccanici: 141 V

Dati tecnici tasto della torcia:
- U_{max} = 50 V
- I_{max} = 10 mA

Il funzionamento del tasto della torcia è consentito esclusivamente in conformità ai dati tecnici.

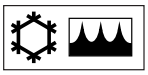
Questo prodotto è conforme allo standard IEC 60974-7.

*) Raffreddamento minimo secondo la norma IEC 60974-2

(E)

Datos técnicos

Explicación de los símbolos:


Soplete para soldar refrigerado por agua

Dimensionado de tensión (V-Peak):
- para soplete de guiado manual: 113 V
- para soplete de guiado mecánico: 141 V

Datos técnicos tecla de la antorcha:
- $U_{máx}$ = 50 V
- $I_{máx}$ = 10 mA

El servicio de la tecla de la antorcha sólo queda permitido dentro del margen de los datos técnicos.

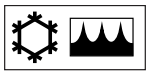
El producto cumple los requisitos de la norma IEC 60974-7.

*) Menor potencia de refrigeración según la norma IEC 60974-2

(P)

Dados técnicos

Explicação dos símbolos:


Maçarico de soldar refrigerado a água

Dimensionamento da tensão (V-Peak):
- para maçaricos de soldar de utilização manual: 113 V
- para maçaricos de soldar de utilização mecânica: 141 V

Características técnicas do botão do maçarico:
- $U_{máx}$ = 50 V
- $I_{máx}$ = 10 mA

O accionamento do botão do maçarico só é permitido nos limites das características técnicas.

Este produto está em concordância com as exigências conforme norma IEC 60974-7.

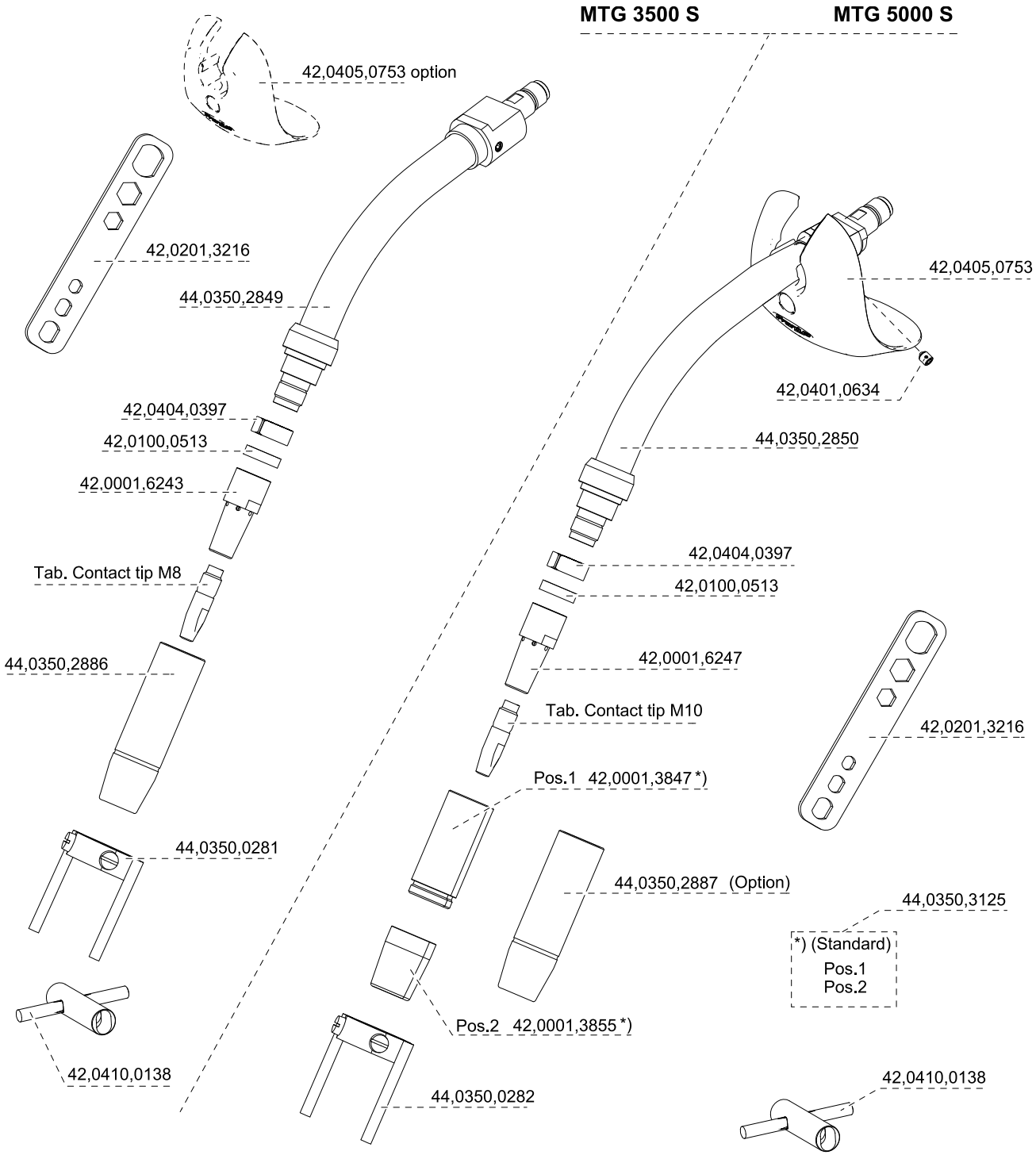
*) Menor potência de refrigeração conforme norma IEC 60974-2

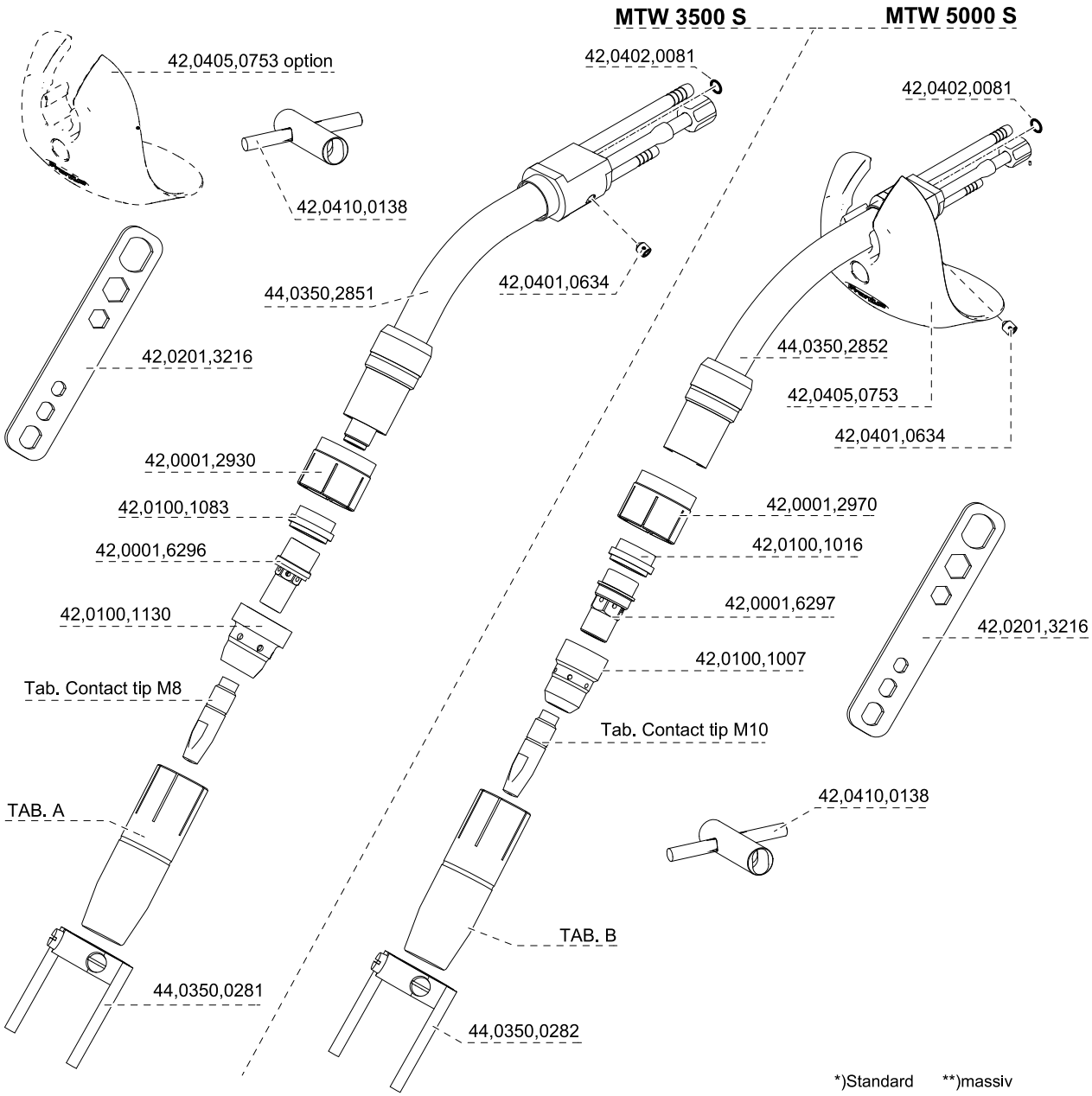
Spare parts list: MTG 3500 / 5000, MTW 3500 / 5000

4,035,885	**MTG3500 S/G/FSC/3,5m**
4,035,886	**MTG3500 S/G/FSC/UD/3,5m**
4,035,887	**MTG3500 S/G/FSC/4,5m**
4,035,888	**MTG3500 S/G/FSC/UD/4,5m**
4,035,889	**MTG5000 S/G/FSC/3,5m**
4,035,890	**MTG5000 S/G/FSC/UD/3,5m**
4,035,891	**MTG5000 S/G/FSC/4,5m**
4,035,892	**MTG5000 S/G/FSC/UD/4,5m**
4,035,893	**MTW3500 S/W/FSC/3,5m**
4,035,894	**MTW3500 S/W/FSC/UD/3,5m**
4,035,895	**MTW3500 S/W/FSC/4,5m**
4,035,896	**MTW3500 S/W/FSC/UD/4,5m**
4,035,897	**MTW5000 S/W/FSC/3,5m**
4,035,898	**MTW5000 S/W/FSC/UD/3,5m**
4,035,899	**MTW5000 S/WE/FSC/4,5m**
4,035,900	**MTW5000 S/W/FSC/UD/4,5m**
4,035,918	**MTW5000-M S/W/FSC/1,5m**
4,035,919	**MTW5000-M S/W/FSC/2,5m**
4,035,920	**MTW5000-M S/W/FSC/3,5m**

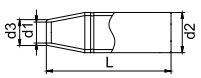
Basic Kit Artikelnr. för vattenkylda slangpaket med Fronius anslutning :

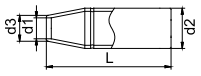
4403505054	MTW3500 0,8 / Fe passar både 3,5/4,5m
4403505056	MTW3500 1,0 / Fe passar både 3,5/4,5m
4403505057	MTW3500 1,2 / Fe passar både 3,5/4,5m
4403505058	MTW3500 1,4 / Fe passar både 3,5/4,5m
4403503073	MTW3500 0,8 Cr/Ni passar både 3,5/4,5m
4403505084	MTW3500 1,0 Cr/Ni passar både 3,5/4,5m
4403505085	MTW3500 1,2 Cr/Ni passar både 3,5/4,5m
4403505061	MTW5000 1,0 / Fe passar både 3,5/4,5m
4403505062	MTW5000 1,2 / Fe passar både 3,5/4,5m
4403505063	MTW5000 1,4 / Fe passar både 3,5/4,5m
4403505064	MTW5000 1,6 / Fe passar både 3,5/4,5m
4403505088	MTW5000 1,0 CrNi passar både 3,5/4,5m
4403505089	MTW5000 1,2 CrNi passar både 3,5/4,5m
4403505090	MTW5000 1,4 CrNi passar både 3,5/4,5m
4403505091	MTW5000 1,6 CrNi passar både 3,5/4,5m


MTG 3500 S
MTG 5000 S
42,0405,0753 option
42,0201,3216
44,0350,2849
42,0404,0397
42,0100,0513
42,0001,6243
Tab. Contact tip M8
44,0350,2886
44,0350,0281
42,0410,0138
42,0405,0753
42,0401,0634
44,0350,2850
42,0404,0397
42,0100,0513
42,0001,6247
Tab. Contact tip M10
Pos.1 42,0001,3847 *)
44,0350,2887 (Option)
Pos.2 42,0001,3855 *)
44,0350,0282
42,0201,3216
44,0350,3125
*) (Standard)
Pos.1
Pos.2
42,0410,0138



*)Standard **)massiv

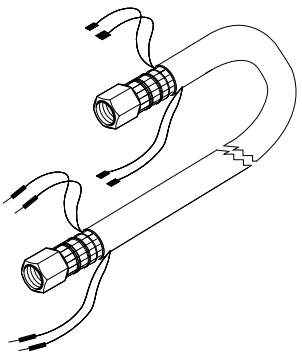
TAB. A	d1		d2		d3		L			Part No.
	mm	inch	mm	inch	mm	inch	mm	inch		
	10,0	.394	22,0	.866	14,0	.551	70,0	2.756	Fe	42,0001,3866
	13,0	.512	22,0	.866	17,0	.669	74,5	2.933	Fe	42,0001,6295*)
	15,0	.591	22,0	.866	19,0	.748	74,5	2.933	Fe	42,0001,3868
	15,0	.591	22,0	.866	19,0	.748	80,0	3.150	Fe	42,0001,3869
	18,0	.709	22,0	.866	22,0	.866	80,0	3.150	Fe	42,0001,3867

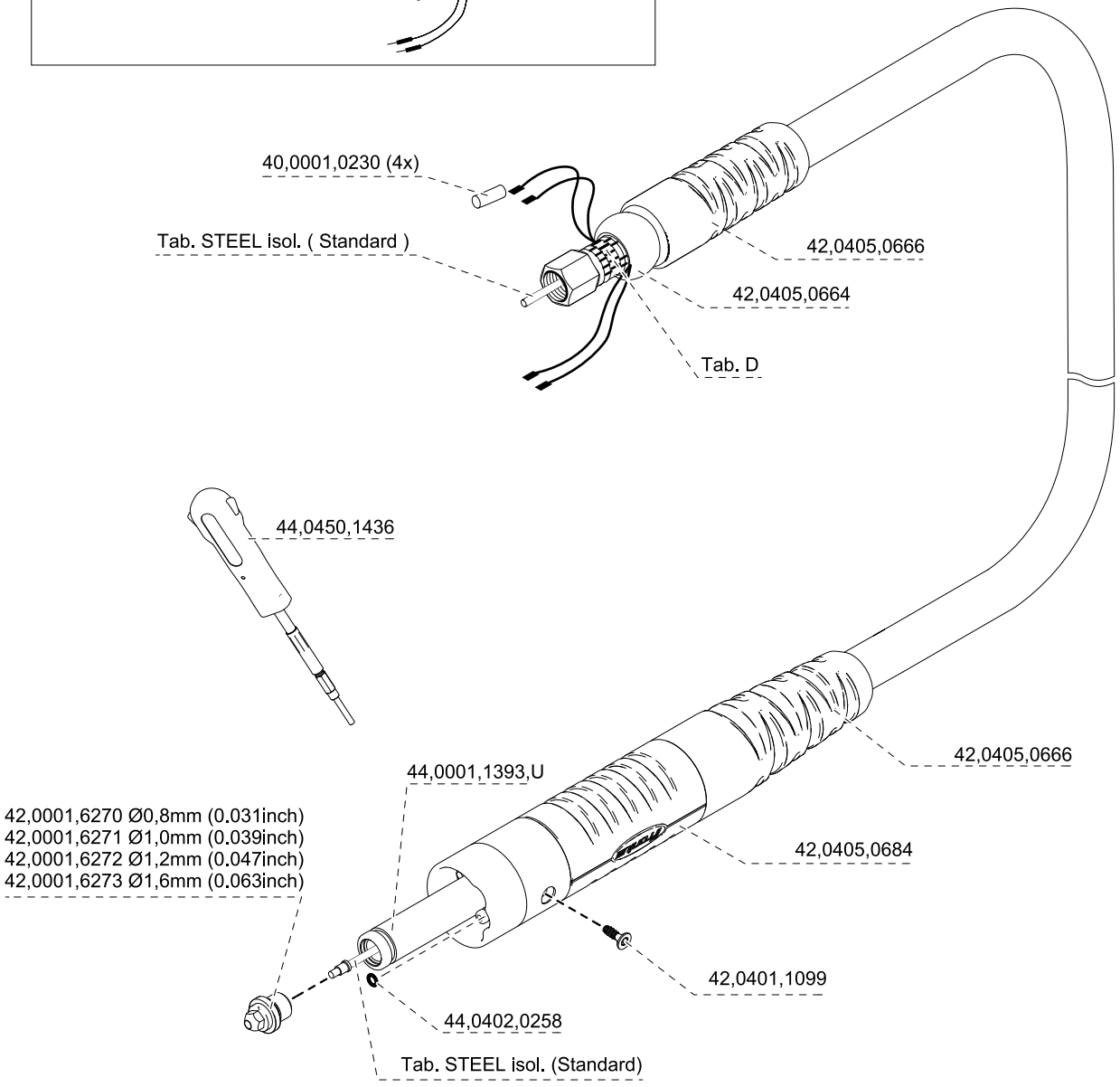
TAB. B	d1		d2		d3		L			Part No.
	mm	inch	mm	inch	mm	inch	mm	inch		
	15,0	.591	25,0	.984	19,0	.748	79,0	3.110	Fe	42,0001,5129
	17,0	.669	25,0	.984	21,0	.827	74,5	2.933	Fe	42,0001,5607
	17,0	.669	25,0	.984	21,0	.827	79,0	3.110	Fe	42,0001,5128*)
	17,0	.669	25,0	.984	22,0	.866	79,0	3.110	Fe	42,0001,5130**)
	17,0	.669	25,0	.984	22,0	.866	85,0	3.346	Fe	42,0001,5155

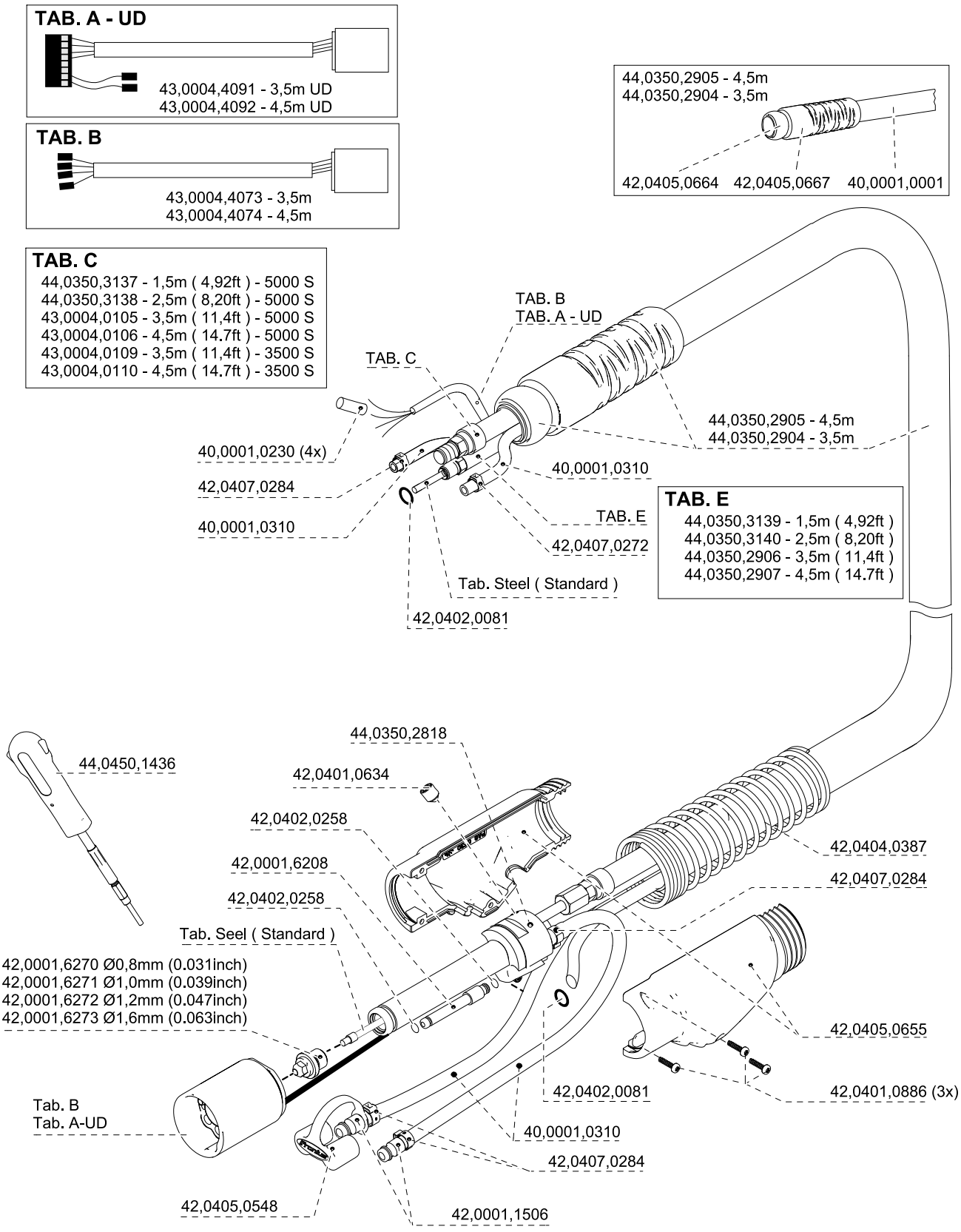
TAB. D

43,0004,5248, U 3,5m
43,0000,5247, U 4,5m
MTG 3500

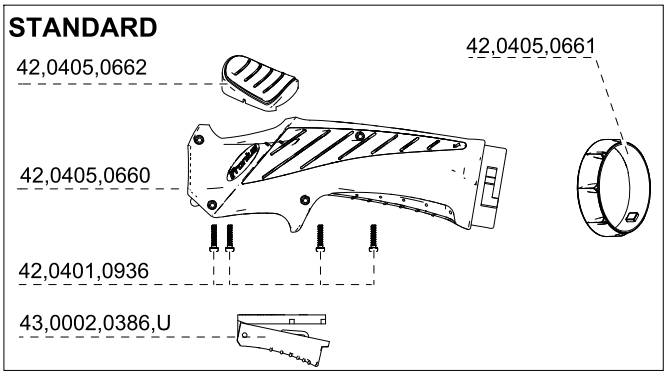
43,0004,5246, U 3,5m
43,0004,5245, U 4,5m
MTG 5000

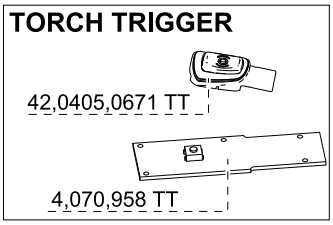


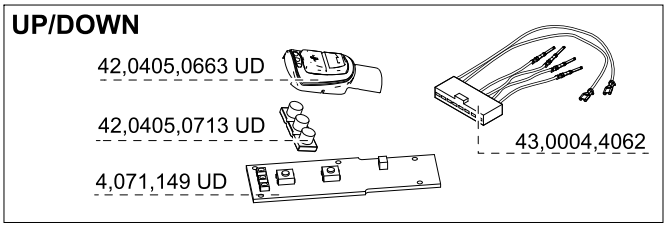


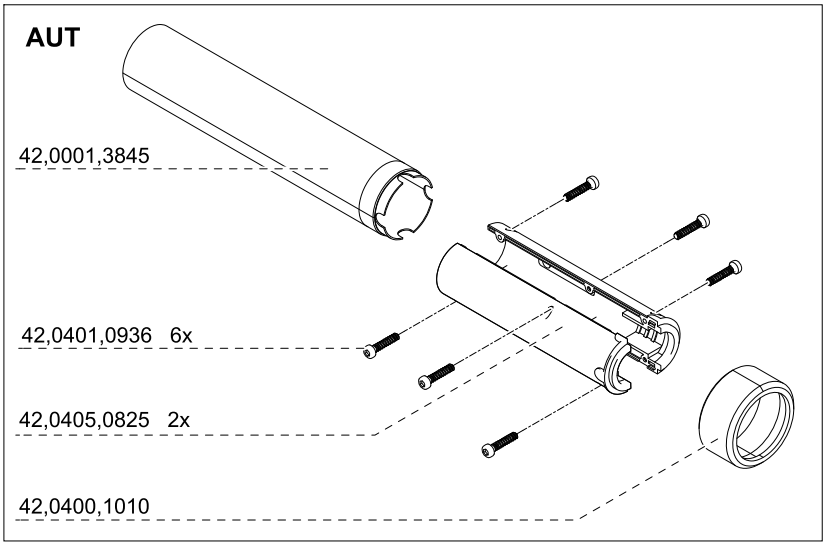

TAB. A - UD
43,0004,4091 - 3,5m UD
43,0004,4092 - 4,5m UD
TAB. B
43,0004,4073 - 3,5m
43,0004,4074 - 4,5m
TAB. C
44,0350,3137 - 1,5m (4,92ft) - 5000 S
44,0350,3138 - 2,5m (8,20ft) - 5000 S
43,0004,0105 - 3,5m (11,4ft) - 5000 S
43,0004,0106 - 4,5m (14.7ft) - 5000 S
43,0004,0109 - 3,5m (11,4ft) - 3500 S
43,0004,0110 - 4,5m (14.7ft) - 3500 S
44,0350,2905 - 4,5m
44,0350,2904 - 3,5m
42,0405,0664
42,0405,0667
40,0001,0001
TAB. B
TAB. A - UD
TAB. C
44,0350,2905 - 4,5m
44,0350,2904 - 3,5m
40,0001,0230 (4x)
42,0407,0284
40,0001,0310
40,0001,0310
TAB. E
42,0407,0272
TAB. E
44,0350,3139 - 1,5m (4,92ft)
44,0350,3140 - 2,5m (8,20ft)
44,0350,2906 - 3,5m (11,4ft)
44,0350,2907 - 4,5m (14.7ft)
Tab. Steel (Standard)
42,0402,0081
44,0450,1436
44,0350,2818
42,0401,0634
42,0402,0258
42,0001,6208
42,0402,0258
Tab. Seel (Standard)
42,0001,6270 Ø0,8mm (0.031inch)
42,0001,6271 Ø1,0mm (0.039inch)
42,0001,6272 Ø1,2mm (0.047inch)
42,0001,6273 Ø1,6mm (0.063inch)
42,0404,0387
42,0407,0284
42,0405,0655
42,0401,0886 (3x)
42,0402,0081
Tab. B
Tab. A-UD
40,0001,0310
42,0407,0284
42,0405,0548
42,0001,1506

MTW-MTG - Userinterface

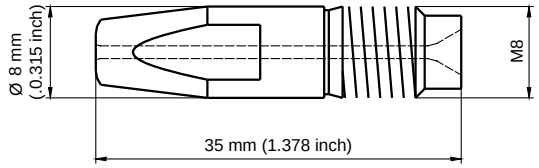




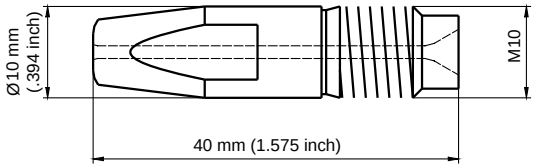




MTW 3500 S / MTG 3500 S

M8 / CuCrZr / L=35 mm (1,378 inch)		**Fe CrNi**	**Part No.** industrial	**Part No.** standard
	Ø mm	Ø inch		
	0,8	.031	42,0001,2911	42,0001,3644
	0,9	.035	42,0001,3082	42,0001,3645
	1,0	.039	42,0001,2912	42,0001,3646*
	1,2	.047	42,0001,2913	42,0001,3647

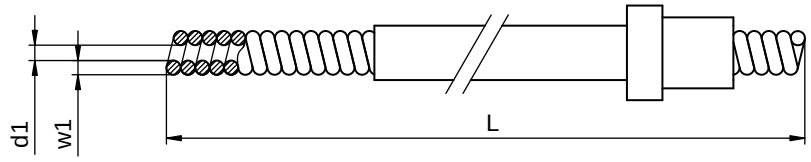
MTW 5000 S / MTG 5000 S

M10 / CuCrZr / L=35 mm (1,378 inch)		**Fe CrNi**	**Part No.** industrial	**Part No.** standard
	Ø mm	Ø inch		
	0,8	.031	42,0001,1576	42,0001,3639
	0,9	.035	42,0001,3277	42,0001,3640
	1,0	.039	42,0001,1577	42,0001,3641
	1,2	.047	42,0001,1578	42,0001,3642*
	1,4	.055	42,0001,1930	
	1,6	.063	42,0001,1579	42,0001,3643

x) Standardausrüstung
x) standard equipment
x) equipement standard
x) equipamiento estándar
x) accessori standard
x) equipamento de série

MTG 3500 S / MTG 5000 S

STEEL isol. (Standard)

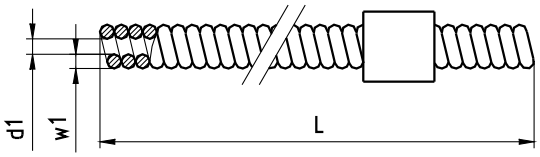


Fe		L		d1		w1		Part No.
Ø mm	Ø inch	m	feet	m	inch	m	inch	
0,8	0,031	3,5	11,5	1,3	0,051	1,2	0,047	42,0404,0270
0,8	0,031	4,5	14,8	1,3	0,051	1,2	0,047	42,0404,0271
1,0	0,039	3,5	11,5	1,6	0,063	1,1	0,043	42,0404,0273
1,0	0,039	4,5	14,8	1,6	0,063	1,1	0,043	42,0404,0274
1,2	0,047	3,5	11,5	2,0	0,078	1,0	0,039	42,0404,0275
1,2	0,047	4,5	14,8	2,0	0,078	1,0	0,039	42,0404,0276
1,6	0,063	3,5	11,5	2,5	0,098	1,05	0,041	42,0404,0278*
1,6	0,063	4,5	14,8	2,5	0,098	1,05	0,041	42,0404,0279*

* MTG 5000 S

MTW 3500 S / MTW 5000 S

STEEL (Standard)



Fe		L		d1		w1		Part No.
Ø mm	Ø inch	m	feet	mm	inch	mm	inch	
0,8	.031	3,5	11,5	1,3	.051	1,2	.047	42,0404,0188
0,8	.031	4,5	14,8	1,3	.051	1,2	.047	42,0404,0189
1,0	.039	3,5	11,5	1,5	.059	1,2	.047	42,0404,0244
1,0	.039	4,5	14,8	1,5	.059	1,2	.047	42,0404,0245
1,2	.047	3,5	11,5	1,9	.075	1,2	.047	42,0404,0174
1,2	.047	4,5	14,8	1,9	.075	1,2	.047	42,0404,0181
1,6	.047-0,063	3,5	11,5	2,3	.091	1,2	.047	42,0404,0184*
1,6	0,047-.063	4,5	14,8	2,3	.091	1,2	.047	42,0404,0185*

* MTW 5000 S

Circuit diagram: MTG 3500 / 5000, MTW 3500 / 5000