



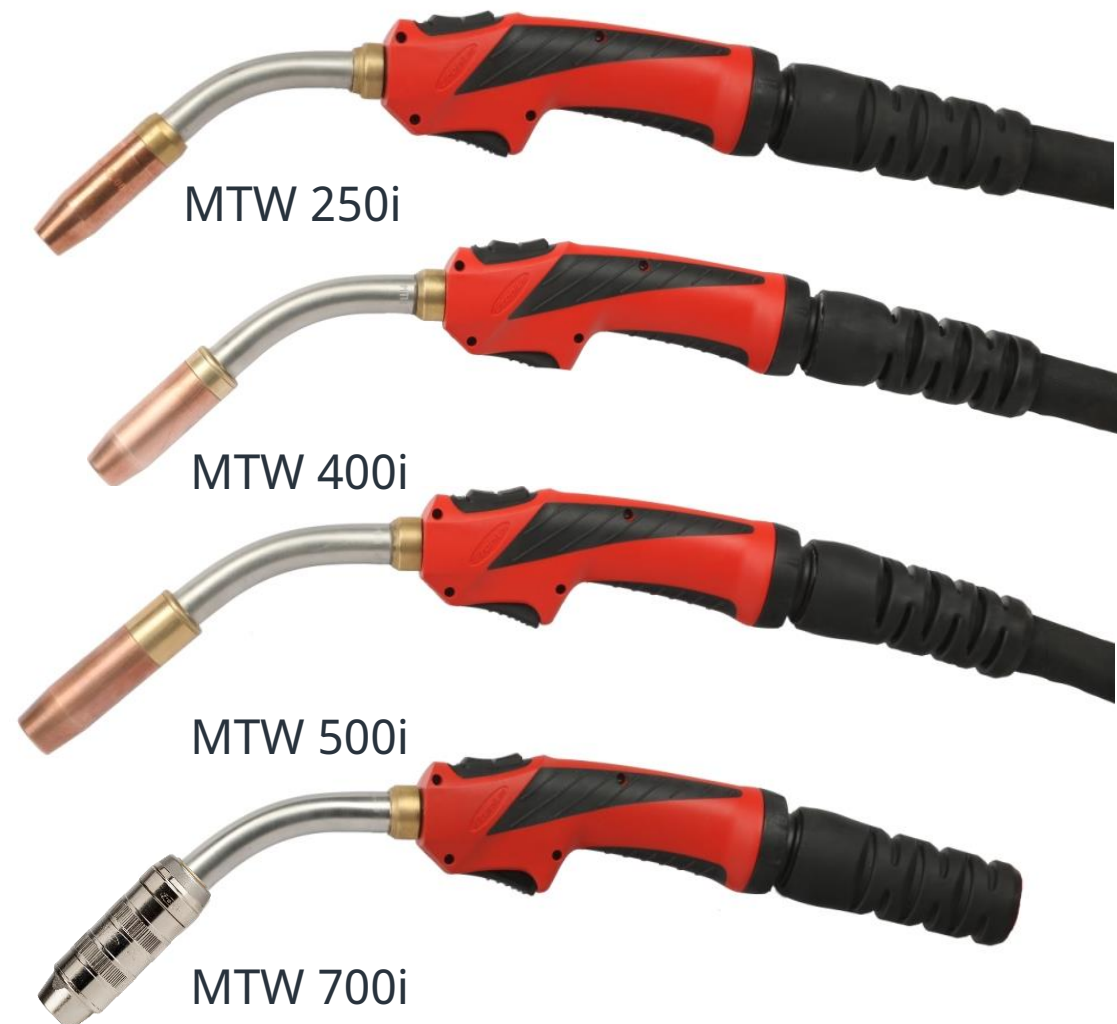
TPS/i manual welding torches

Fronius International, Aitzetmüller Christian, Information Class: Confidential



Types of welding torches & specifications

Welding torches MTG / MTW = **M**IG **T**orch **G**as / **W**ater



Versions: Standard / Standard LED / UpDown / Jobmaster

Lengths: 3,5m / 4,5m

For the first time in the history of Fronius we have especially gone into the demands for the uses of the gas- and water cooled applications, in the development of the welding torches.

...to get the very most out of both variations.

(The wear parts and the welding torches are optimally matched to the welding power.)

...to get the best possible life time for the wear parts and the welding torches.

Technical data

- **Gas cooled (MTG = MIG Torch Gascooled):**

- MTG 250i - 250A 40% ED CO₂ and mixed gas
- MTG 320i - 320A 40% ED CO₂ and mixed gas
- MTG 400i - 400A 40% ED CO₂ and mixed gas
- MTG 550i - 500A 40% ED CO₂ and mixed gas

- **Water cooled (MTW = MIG Torch Watercooled) :**

- MTW 250i - 250A 100% ED CO₂ and mixed gas
- MTW 400i - 400A 100% ED CO₂ and mixed gas
- MTW 500i - 500A 100% ED CO₂ and mixed gas
- MTW 700i - 700A 100% ED CO₂ and mixed gas

Multilock



Multilock torch bodies MTB = **M**IG **T**orch **B**ody



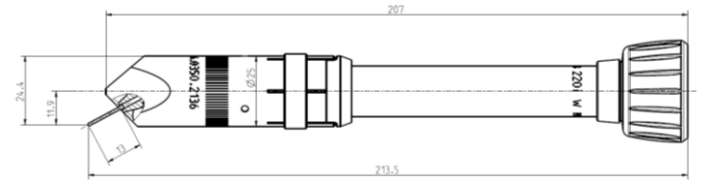
MTB 250i G



MTB 250i W



MTB 330i W



MTB 220i W
MTB 220i G



MTB 320i G



MTB 400i W



MTB 400i G



MTB 500i W



MTB 700i W

Multilock Torch Bodies MTB flex = **MIG Torch Body**



MTB 200i G ML flex



MTB 330i W ML flex



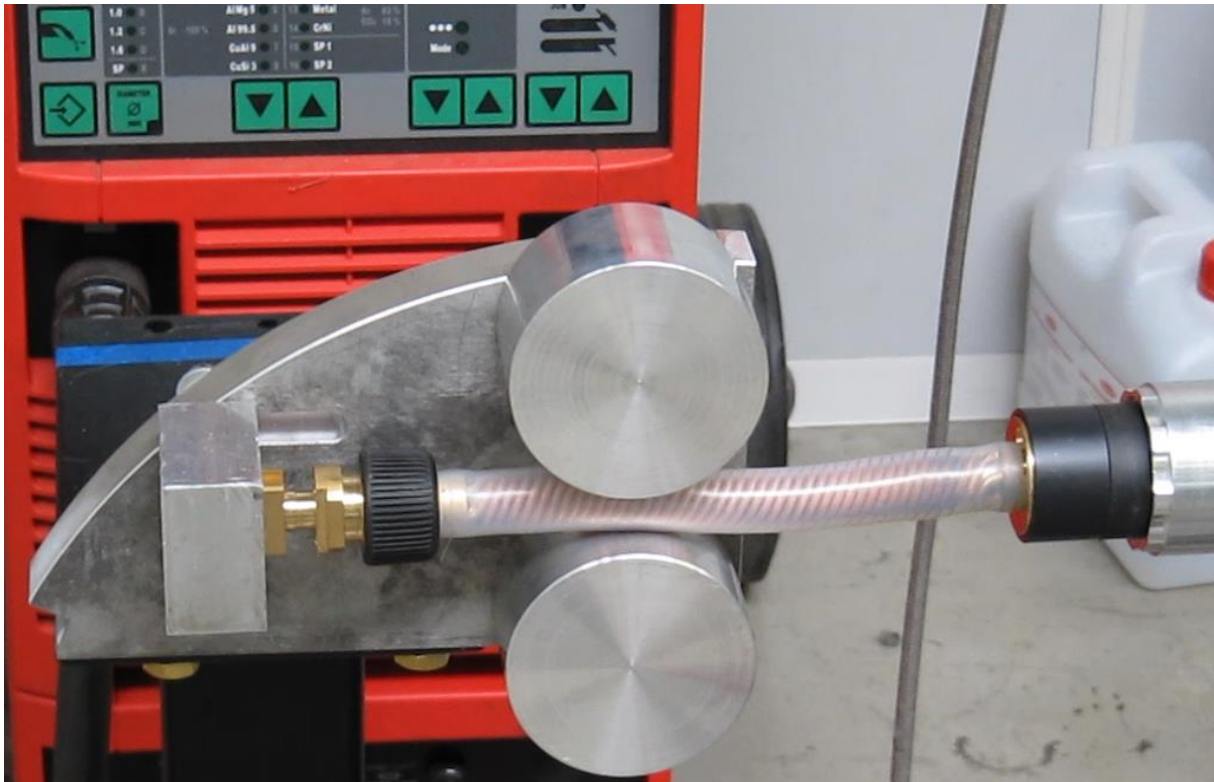
MTB 360i G ML flex



MTB 400i W ML flex

Flex Neck – bending test

- Gascooled torch bodies can be bent 1.000 times
- Watercooled torch bodies can be bent 600 times



Multilock torch body versions

All angles in all lengths

Different torch body geometries offer maximum flexibility for components that are difficult to access.



Union nut is fixed and protects the Multilock connector (important for watercooled torch bodies)



Highlight
Fixed 0° position by an anti twist guard



Torch body 360° rotatable

Technical data Multilock gas cooled

- **Hosepacks gas cooled (MHP = MIG HosePack):**

- MHP 250i G ML - 250A 40% Duty cycle CO₂ and mixed gas
- MHP 400i G ML - 400A 40% Duty cycle CO₂ and mixed gas

- **Torch bodies gas cooled (MTB = MIG TorchBody):**

- MTB 250i G ML - 250A 40% Duty cycle CO₂ and mixed gas
- MTB 320i G ML - 320A 40% Duty cycle CO₂ and mixed gas
- MTB 400i G ML - 400A 40% Duty cycle CO₂ and mixed gas
- MTB 200i G ML flex - 200A 40% Duty cycle CO₂ and mixed gas
- MTB 360i G ML flex - 360A 40% Duty cycle CO₂ and mixed gas
- MTB 220i G ML (narrow gap) – xx0A 40% Duty cycle CO₂ and mixed gas



Highlight
Gas cooled welding torches also
suitable for pulse welding

Technical data Multilock water cooled

- **Hosepacks water cooled (MHP = MIG HosePack):**

- MHP 500i W ML - 500A 100% Duty cycle CO₂ and mixed gas
- MHP 700i W ML - 700A 100% Duty cycle CO₂ and mixed gas

- **Torch bodies water cooled (MTB = MIG TorchBody):**

- MTB 250i W ML - 250A 100% Duty cycle CO₂ and mixed gas
- MTB 400i W ML - 400A 100% Duty cycle CO₂ and mixed gas
- MTB 500i W ML - 500A 100% Duty cycle CO₂ and mixed gas
- MTB 700i W ML - 700A 100% Duty cycle CO₂ and mixed gas
- MTB 330i W ML flex - 330A 100% Duty cycle CO₂ and mixed gas
- MTB 400i W ML flex - 400A 100% Duty cycle CO₂ and mixed gas
- MTB 220i W ML (narrow gap) - 220A 100% Duty cycle CO₂ and mixed gas



Multilock automatic welding torch

– Water cooled

- 4,047,802 MHP 700i W ML M /FSC/1,35m
- 4,047,803 MHP 700i W ML M /FSC/2,35m
- 4,047,804 MHP 700i W ML M /FSC/3,35m



– Gas cooled

- 4,047,781 MHP 550i G ML M /FSC/1,35m
- 4,047,782 MHP 550i G ML M /FSC/2,35m
- 4,047,783 MHP 550i G ML M /FSC/3,35m



- Different torch body geometries possible because of the Multilock system
- Machine tube diameter: 38mm
- TPS/i Multilock torch body and basic kit has to be ordered separately
- Also available as d-version with F/F++ or Euro connector

Heavy Duty Welding torch MTW 750i

- Designed for highest performance in watercooled areas
- Especially for thick wires (aluminum up to 2.0 - 2.4mm, cored wire 2.0 - 2.8mm)
- Wear parts on the torch body are identical to the MTW 700i
- Technical data: 100% duty cycle: 750A CO₂ and mixed gas

MTW 750i manual welding
torch



MTW 750i automatic welding
torch



PullMig – small, lightweight and powerful

[Link PowerPoint presentation](#)

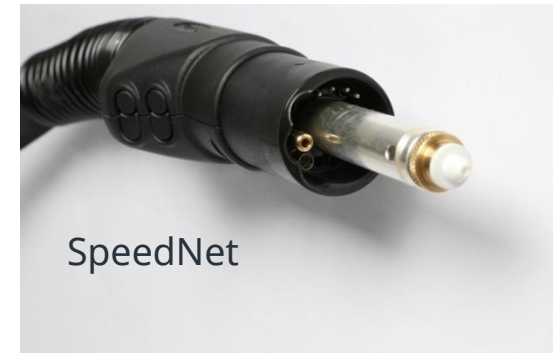
- **Hosepacks** (MHP = **MIG HosePack**):
 - MHP 280i PullMig G 280A 40% ED CO₂ and mixed gas
 - 220A 60% ED / 170A 100% ED CO₂ and mixed gas
 - MHP 320i PullMig W – 320A 100% ED CO₂ and mixed gas
- One of the smallest and lightest push-pull welding torches in the world
 - Motor size and weight about ¼ of the current PullMig
- No PPU-alignment due to torch device ID



Weight: 1600g
(only 400g heavier than
MTW 500i)

[Video](#)

Versions: Standard LED / UpDown / Jobmaster **Lengths:** 5,85m / 7,85m / 9,85m



SpeedNet

PullMig CMT

[Link PowerPoint presentation](#)

Multilock with integrated
water stop

360° rotatable, with anti
twist guard

**Slip-free handle
with soft components**

**Stainless steel outer
tube** for max. stability

Optimally cooled
Screwed gas nozzle,
Tapered contact tips
for perfect heat transfer

**Flexible, rotating rubber
anti kink feature for
better handling**

LED-illumination
For illumination of
the welding area
Control via two-stage
gun trigger

**Slip-free handle
with soft components**

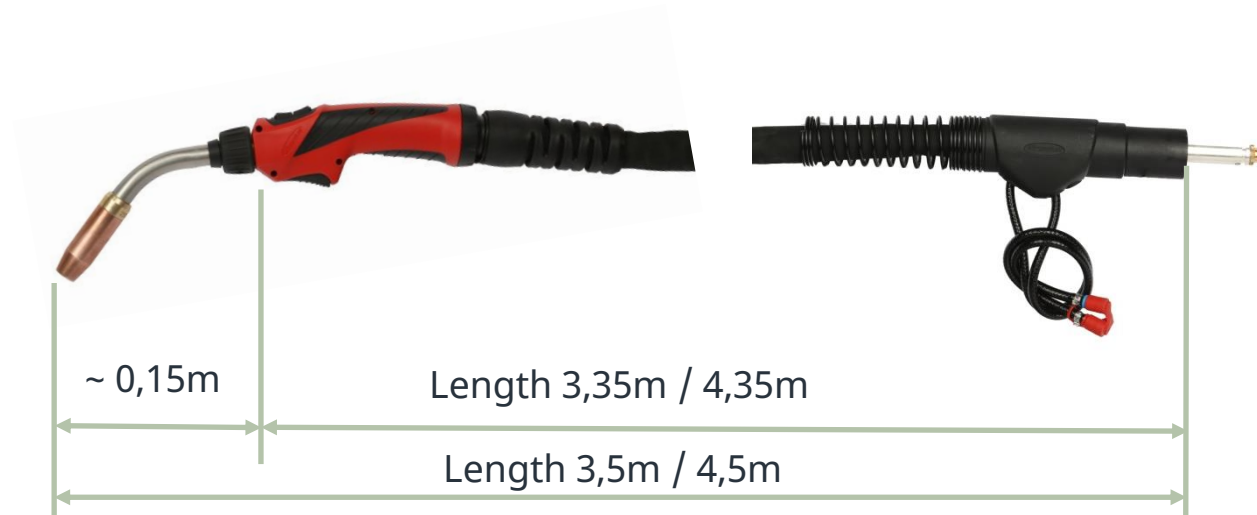


Length definition

Fixed welding torch



Multilock welding torch



Fronius System Connector (FSC)

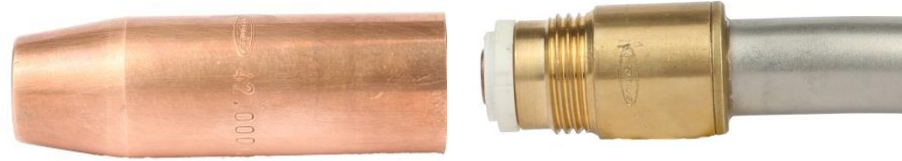
- MTG and MTW torches are equipped with the FSC connection
- Tool-free, simple and quick welding torch change without missoperation
- Process security because of defined current transfer
- No external control connectors - all control signals are integrated in the central connection
- One central connector for all applications (Manual-, Machines- and Robot systems – PAP and conventional)



Wear parts and Basic kits

Wear parts

- Screwed gas nozzle
 - Easy operation
 - Optimum heat transfer
 - no loss of gas through the slots
 - Coated gas nozzles available for aluminum welding
- All wearing parts are replaceable
 - also gas nozzle holder can be changed from repair department
- More than 70 gas nozzles: The right geometry is available for every welding application.



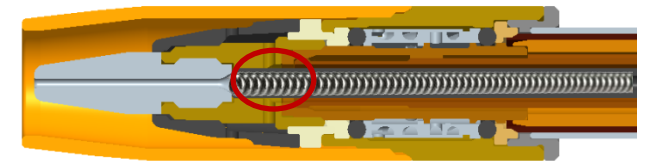
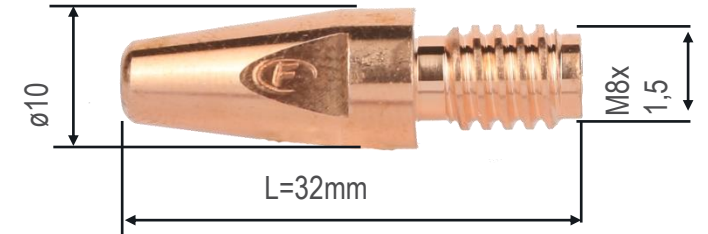
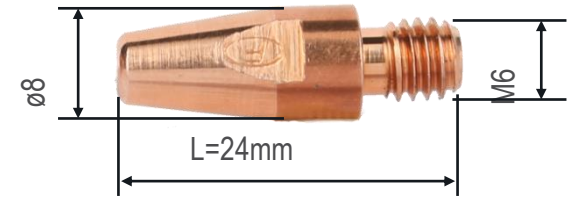
Contact tips CuCrZr

– Types:

- M6 – external diameter 8mm (MTG 250i, MTW 250i)
- M8x1,5 – external diameter 10mm (MTG 320i, MTG 400i, MTW 320i, MTW 500i, MTW 700i)

– Properties:

- Material: CuCrZr
- No central bore in the contact tip
 - Guiding of the innerliner via nozzle stock



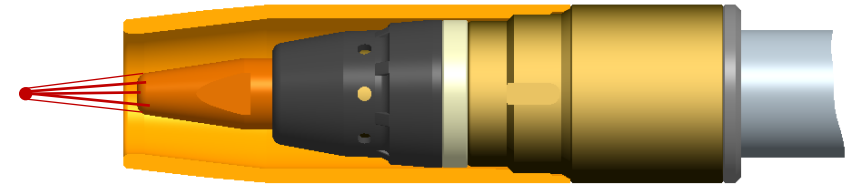
Highlight

Contact tips

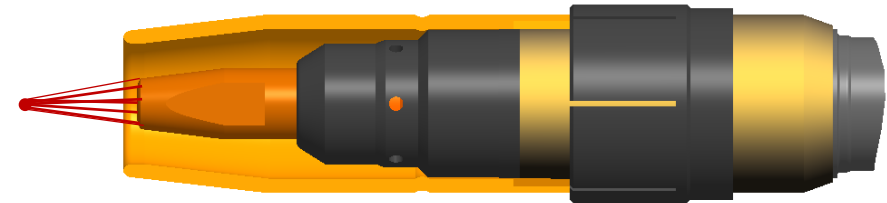
- Low absorption of radiant heat by new top-contact tip geometry
- **Up to 70 ° lower temperature on the wear parts**
- Therefore longer lifetime

Highlight

MTW 500i



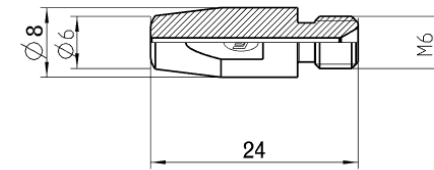
AW5000



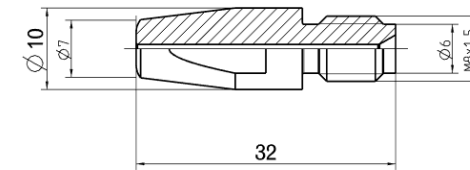
Contact tip SQ (=Standard Quality)

- Cheaper contact tip
- For price-sensitive customers who change the contact tip after a certain period, regardless of condition
- Realized using cheaper material **E-Cu** and production in China
- Attention! ronius recommends the use of the **CuCrZr** contact tip
- Reason: Faster grinding of the contact tips and therefore shorter service life.

M6 SQ



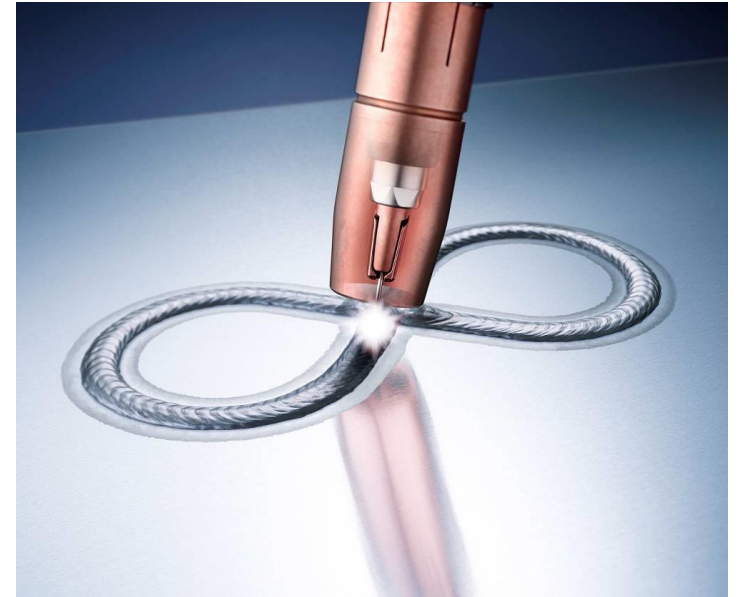
M8x1,5 SQ



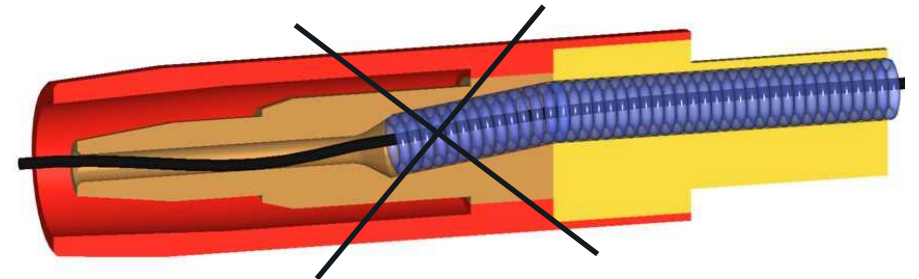
Contec

– Available for the following types of welding torches:

- MTG 320i
- MTG 400i
- MTW 320i
- MTW 500i
- MTW 700i



– Because of Contec, forced contact is no longer necessary in the torch body.



New inner liners for perfect process stability

Bare steel inner liners gas- and water cooled:

- \varnothing 0,8: external diameter 4,3mm
- \varnothing 1,0 – 1,6: external diameter **4,8mm**

CrNi-bare inner liners for CrNi gas- and water cooled:

- \varnothing 0,8: external diameter 4,3mm
- \varnothing 1,0 – 1,6: external diameter **4,8mm**

Steel inner liner coated, for all materials:

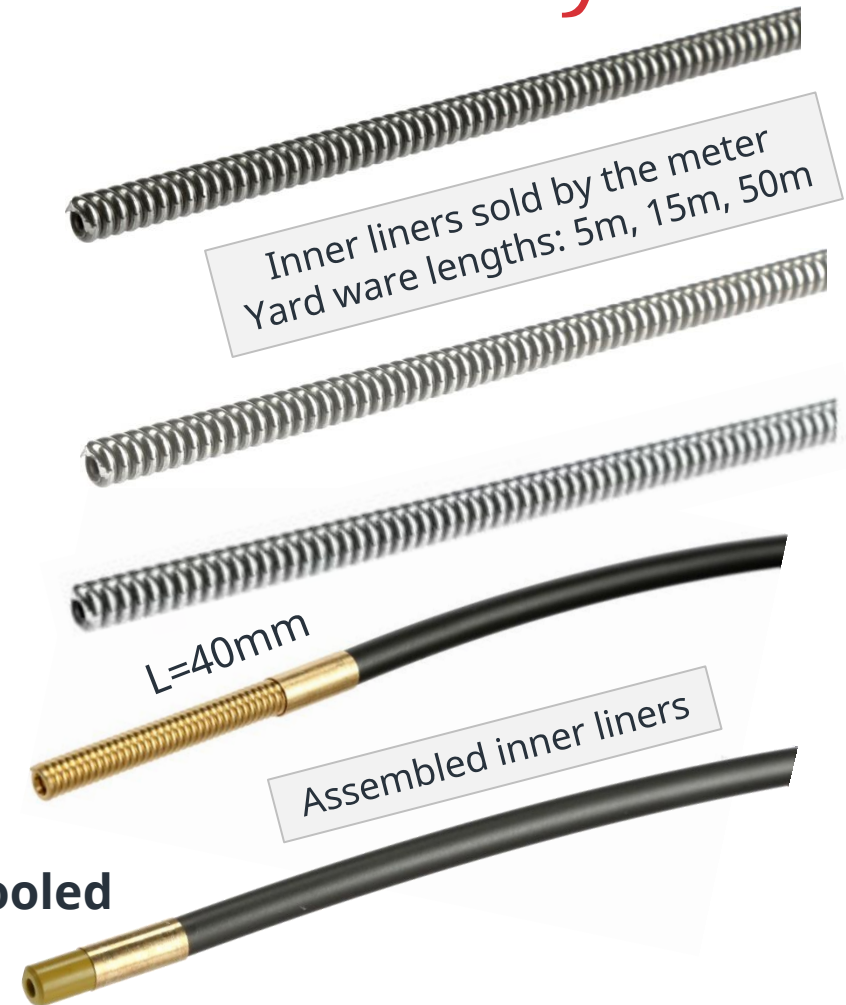
- \varnothing 0,8: Außendurchmesser 4,4mm
- \varnothing 1,0 – 1,6: Außendurchmesser 4,8mm

Combi inner liners for Al gas cooled and CuSi for gas and water cooled

- \varnothing 0,8 – 1,6: external diameter **4,8mm**

Combi inner liners for Al water cooled

- \varnothing 0,8 – 1,6: external diameter **4,8mm**



Steel- and CrNi-inner liners without isolation for gas- and water cooled configuration

- Gas sealed with specific diameter clamping piece - almost no loss of gas

Patented

Water cooled



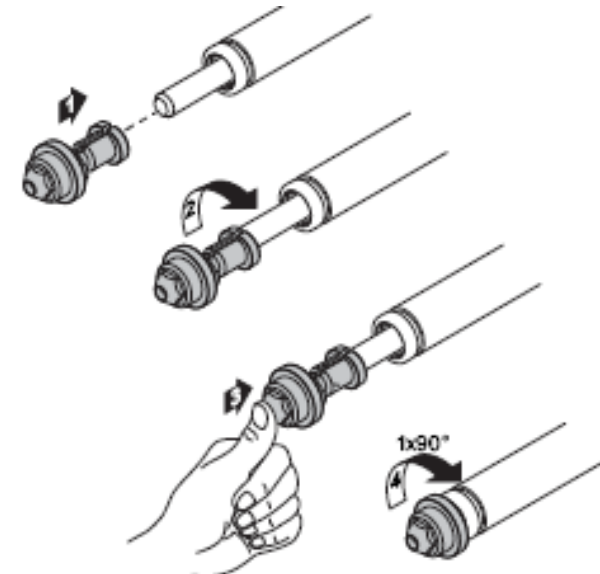
Highlight
Steel- and CrNi-inner
liners without isolation

Gas cooled



Clamping piece

- **Used for all materials and inner liners**
- **Tool free installation of the inner liner by the meter**
 - 1) Clamping nut is placed on inner liner
 - 2) Screw on rotation to the right
 - 3) Push clamping piece incl. Inner liner into the FSC
 - 4) Fixation in the FSC with a 90 ° rotation
(Correct fixing position is marked)



Clamping piece – now color coded



Gray with groove ø0,8 for
combi inner liners AD ø4,8



Gray ø0,8 for steel inner
liners with AD ø4,3



Blue
ø0,9/ø1,0



Red
ø1,2



Black
ø1,6

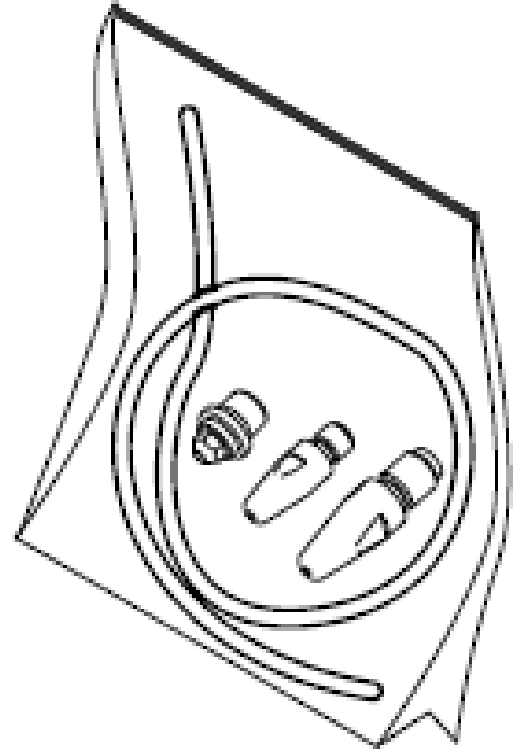


Green
ø2,0

Basic kits

– Basic kits

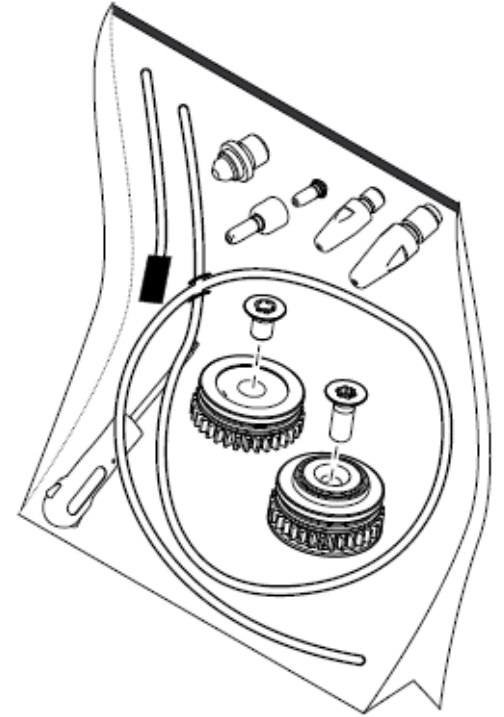
- Steel $\varnothing 0,8$ / $\varnothing 0,9$ / $\varnothing 1,0$ / $\varnothing 1,2$ / $\varnothing 1,4$ / $\varnothing 1,6$
- CrNi $\varnothing 0,8$ / $\varnothing 0,9$ / $\varnothing 1,0$ / $\varnothing 1,2$ / $\varnothing 1,4$ / $\varnothing 1,6$
- Aluminum (G) & CuSi (G&W) $\varnothing 0,8$ / $\varnothing 1,0$ / $\varnothing 1,2$ / $\varnothing 1,6$
- Aluminum(W) $\varnothing 0,8$ / $\varnothing 1,0$ / $\varnothing 1,2$ / $\varnothing 1,6$ / $\varnothing 2,0$
- Universal $\varnothing 0,8$ / $\varnothing 0,9$ / $\varnothing 1,0$ / $\varnothing 1,2$ / $\varnothing 1,4$ / $\varnothing 1,6$



Content: Inner liner L=5m, 2 pc contact tips, clamping piece

Basic kits for PullMig

- **Fe** $\varnothing 0,8$ / $\varnothing 0,9$ / $\varnothing 1,0$ / $\varnothing 1,2$ / $\varnothing 1,4$ / $\varnothing 1,6$
 - **CrNi** $\varnothing 0,8$ / $\varnothing 0,9$ / $\varnothing 1,0$ / $\varnothing 1,2$ / $\varnothing 1,4$ / $\varnothing 1,6$
 - **Universal:** $\varnothing 0,8$ / $\varnothing 0,9$ / $\varnothing 1,0$ / $\varnothing 1,2$ / $\varnothing 1,4$ / $\varnothing 1,6$
 - Content: Inner liner 15m, 2 pc. contact tips, clamping piece, Wire guide nozzle rear, Gas saving nozzle front, feed roller kit, torque key
-
- **Aluminum (G) & CuSi** $\varnothing 0,8$ / $\varnothing 1,0$ / $\varnothing 1,2$ / $\varnothing 1,6$
 - **Aluminum (W)** $\varnothing 0,8$ / $\varnothing 1,0$ / $\varnothing 1,2$ / $\varnothing 1,6$
 - Content: Graphit inner liner 10m, 2 pc. contact tips, clamping piece, Wire guide nozzle rear, Gas saving nozzle front, feed roller kit, Torch body liner, torque key



Packages & scaled prices TPS/i wear parts

Contact tips

- Package unit: 10 pc. (xx,xxxx,xxxx,**10**)
- Packages with price advantage:
 - From 10 packages á 10 pc. (= 100 pc.)
 - From 100 packages á 10 pc. (= 1.000 pc.)



– Gas nozzles, spatter guards, nozzle stocks, insulation rings, clamping pieces

- Package unit: 5 pc. (xx,xxxx,xxxx,**5**)
- Packages with price advantage:
 - From 10 packages á 5 Stk. (= 50 pc.)
 - From 40 packages á 5 Stk. (= 200 pc.)



- Article numbers and package prices please compare in the price list

Diameter specific color coding on packages

- Labels of contact tips have diameter specific color code now.
- Also inner liner will be color coded in future.



Perfectly cooled
welding torches

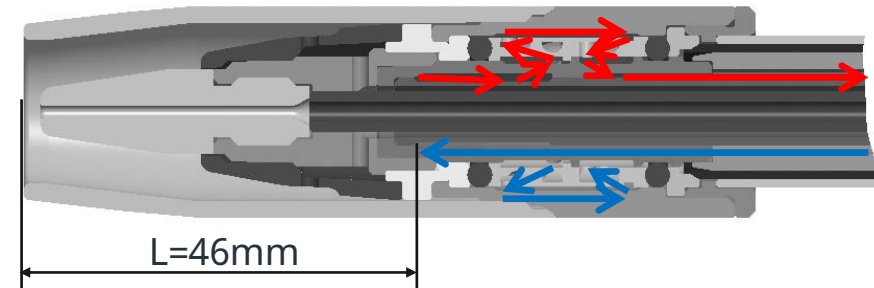
Cooling of water cooled welding torches

MTW500i

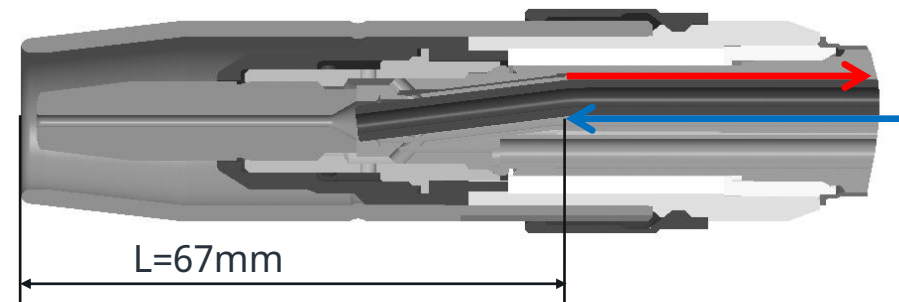
- Cooling was pulled forward as far as possible and also on the outside
- At 500A the gas nozzle can be replaced after about 1 min 30 sec by hand without gloves.

example: **MTW500i**

Highlight



For comparison: cooling of **AW5000**



Temperature comparison Gas nozzle

Welding power: **500A / DC 100%**

- **AW5000**

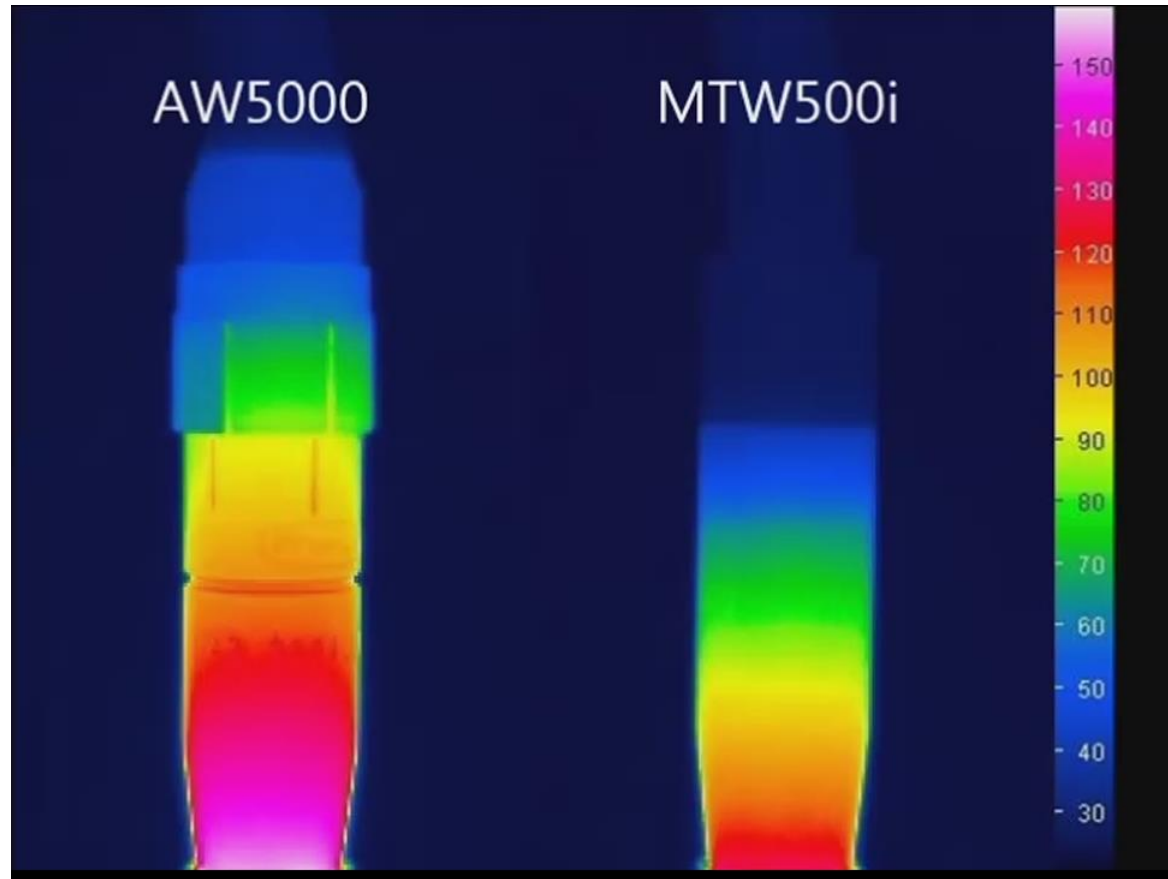
- Gas nozzle temperature 600°
- 55° after approx. 4 min.
- 50° after approx. 4 min. 45 sek.

- **MTW 500i**

- Gas nozzle temperature 400°
- 55° after approx. 1 min. 30 sek.
- 50° after approx. 1 min. 40 sek.



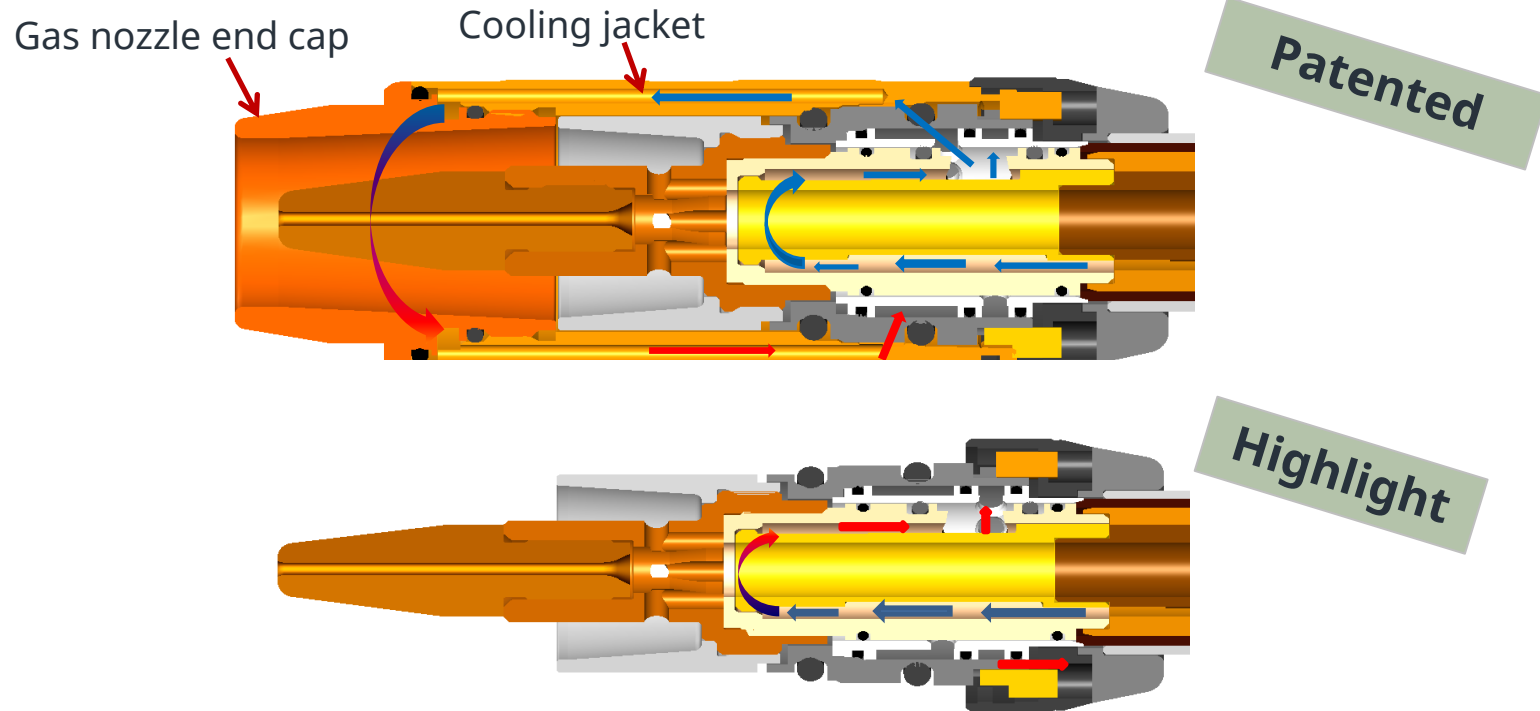
Temperature comparison AW5000 vs MTW500i



- Up to 30% temperature reduction

[Video](#)

Cooling of MTW 700i



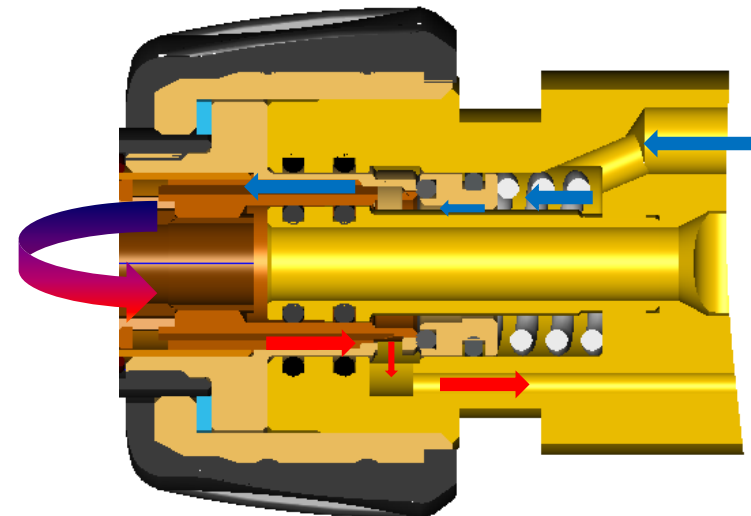
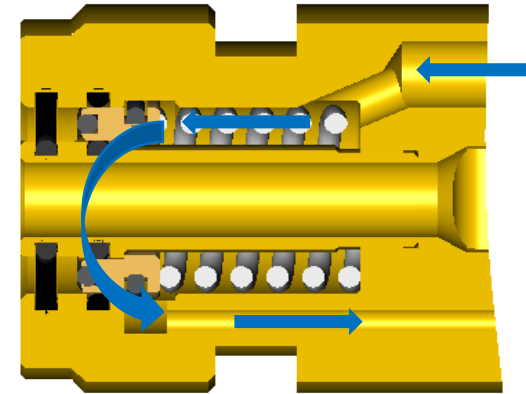
- With mounted gas nozzle, the water circulates to 100% above the gas nozzle.
- When the gas nozzle is removed, the water is still circulating through the torch body nevertheless, the integrated water stop prevents the outflow of water
- Gas nozzle is made of two parts: gas nozzle end cap (changeable) and cooling jacket
- For changing the gas nozzle end cap we recommend to use wear part tool 42,0201,3216

Cooling of Multilock welding torches

Patented

Highlight

- With integrated water stop
- Also without mounted torch body water can circulate
 - Cooler keeps running for 2 minutes after welding
 - Hosepack and coolant liquid are cooled even torch body is removed
- When the torch body is connected, the water circulates to 100% above the torch body and the wearing parts



Further characteristics

Characteristics

- Stainless steel outer tube for maximum stability
- Insulation for the torch body below the outer tube (no external insulation required)
- Effortless working due to soft, slip-free components in the handle
- Swivel mounted wire feed hose
- Flexible, rotating rubber anti kink feature for better handling



Properties

- Torch body length and angle are optimally aligned (balanced) for each type of welding torch.
- LED illumination
 - Illumination of the welding area before and after welding
 - Control via two-stage gun trigger
 - Up/Down and Jobmaster welding torches are equipped as standard with LED, as well as MTG 400i, MTW320i and MTW500i standard model



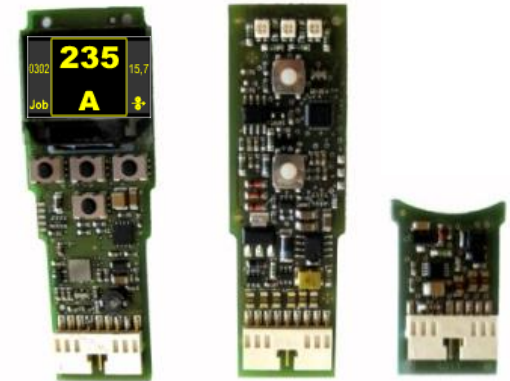
Jobmaster

- With welding torches in the JobMaster version, the user can easily see the important welding parameters such as welding power, wire speed, saved jobs and other welding parameters via a remote control with color display integrated in the handle and can set them to the desired value.
- Use the arrow keys to select the desired parameter on the power source
- The selected parameter is changed with the +/- buttons
- The display shows the current parameter and value.



Characteristics

- Same handle for Standard, Up/Down and Jobmaster
- Conversion from Standard LED to Up/Down and Jobmaster possible
- Full graphic OLED display (organic LED) on Jobmaster pc board
- Jobmaster welding torch gas cooled (with coaxial cable) now without protection hose



Power cable sizes

Gas cooled manual welding torches

MTG 250i / MHP 250i ML G	25 mm ²
MTG 320i	45 mm ²
MTG 400i / MHP 400i ML G	50 mm ²
MTG 5300S	65 mm ²

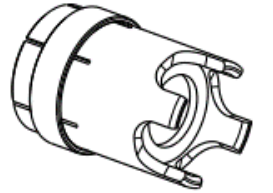
Water cooled manual welding torches

MTW 250i / MTW 400i	10 mm ²
MTW 500i / MHP 500i ML W	16 mm ²
MTW 700i / MHP 700i ML W	25 mm ²

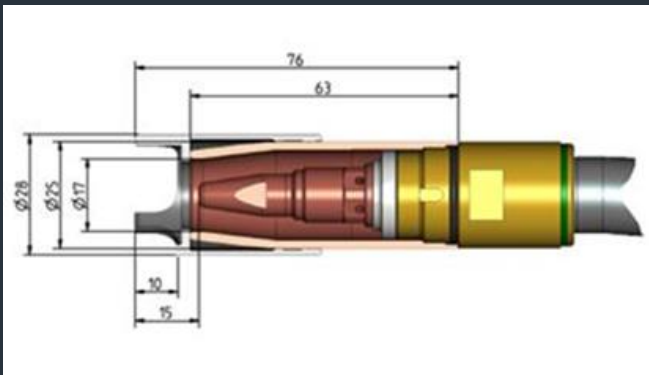
Options and accessories

Spot-Welding-Nozzle (44,0350,1876)

Example: MTW 500i



- For manual applications, suitable for welding torches with gas nozzle diameter 25mm
- Defined distance to the component ensures consistent quality of the spot welds and makes handling easier for the welder.
- The spot welding gas nozzle is simply plugged onto the existing standard gas nozzle.



Plug on gas nozzle

- **Gascooled for MTG 400i:**

- 42,0001,6776 fixing sleeve $\varnothing 25/\varnothing 27,2 \times 24$
- 42,0001,0972,5 gas nozzle $\varnothing 15$
- Fixing sleeve with thread for screwing onto the gas nozzle holder

- **Watercooled for MTW 500i (MTW 400i):**

- 44,0350,2036,5 gas nozzle $\varnothing 17/\varnothing 27 \times 85$ HD
- Gas nozzle is pushed over the gas nozzle holder
- Gas nozzle is 2mm in front of the contact tube
- Torch body and all other wear parts remain the same
- Shorter service life for wearing parts can be expected



Potentiometer for TPS/i welding torches



- Ordering as project
- Retrofit of existing hose packs possible

Option heat protection shield

- Heat resistant material
- Easy assembly and disassembly with click system
- Rotating heat protection shield for shielding the radiation heat and spatter
- Supplied as standard with MTG 400i, MTW 500i, MTW 700i, MHP 400i G, MHP 500i W, MHP 700i W



Wear part boxes

- Available for all types of torches
- Diameter specific from 0,8-1,6mm



Torch trigger on front side

- Can be ordered via project
- Is switched parallel to standard torch trigger
- Welding process can be started and stopped from both buttons



44,0350,5229 Torch trigger extension BT2

- Trigger in home position



- Trigger activated



- Long torch trigger can only be used in combination with 2-step torch trigger with 2 drillings for fixing (torch trigger with drillings is implemented since CW 13 2014).

T-handle PullMig



- Pistol handle can be retrofitted easily.
- Due to simple redirection of the trigger there is no electrical connection necessary.
- Article number: 44,0350,5243 OPT/i MHP PM T-Handle

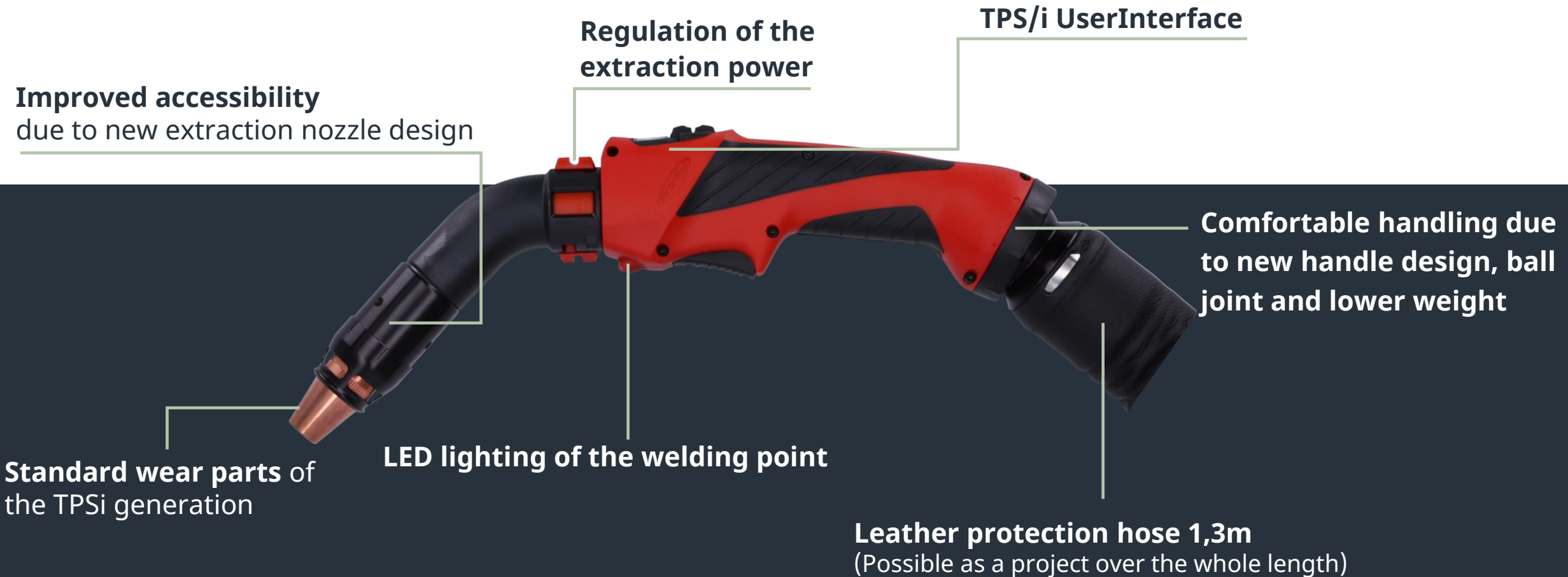
T-handle for TPS/i Push welding torches



Article number: 44,0350,5298 Opt/i T-Handle SET for W6

MTW/MTG Exento Fume Extraction Torch

[Link PowerPoint presentation](#)



FumeEx fume extraction set

[Link PowerPoint presentation](#)



- External fume extraction can be retrofitted
- Suitable for **Standard, Multilock, PullMig** and **PullMig CMT** torches with 45°
- Suitable also for TPS/d welding torches (VS/TS/TPS)
- Weight of the FumeEx set is **only approx. 395g** in 1m height
- **Optional leather protection hose** available, length = 1,1m (38,0001,0115)

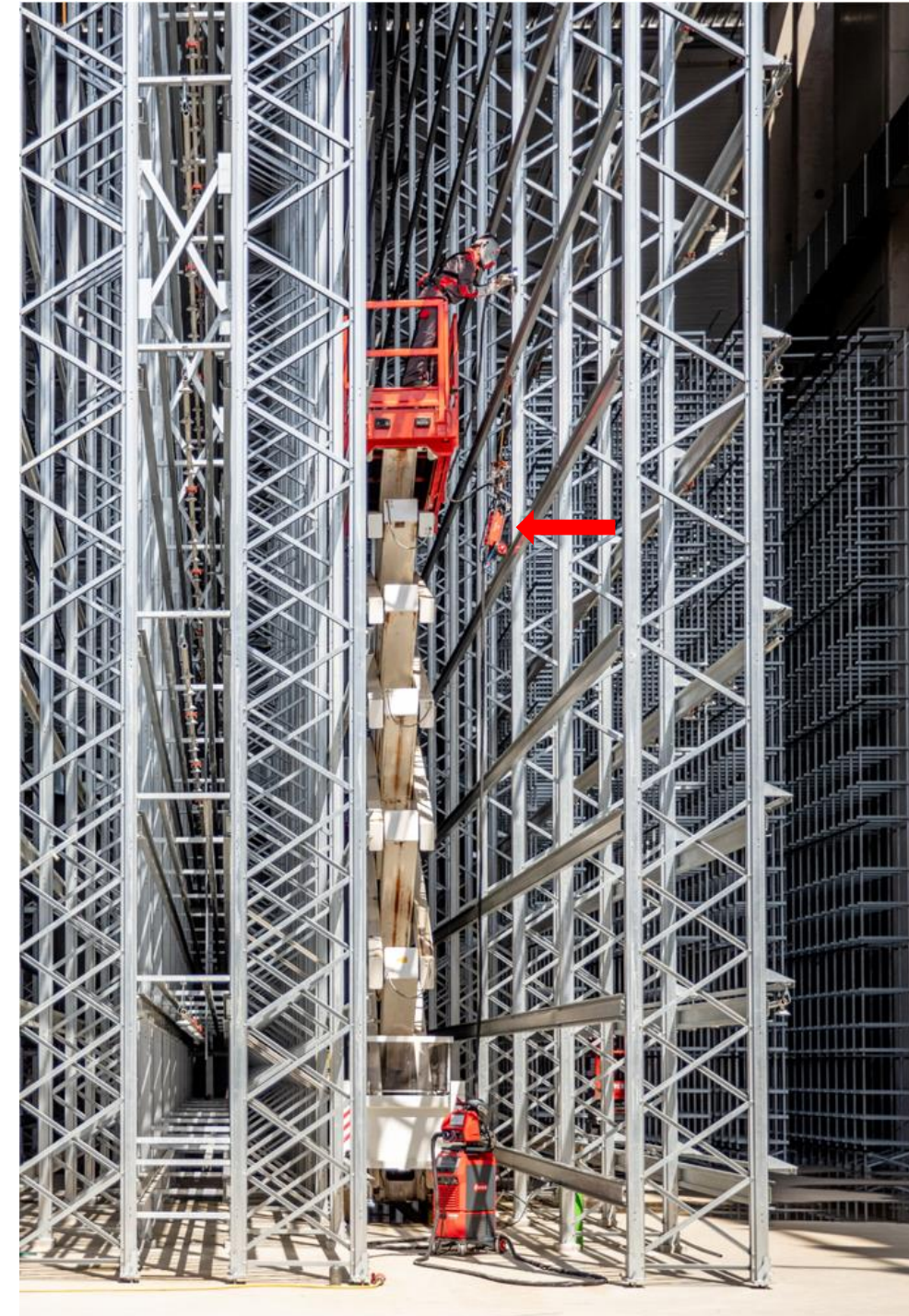
Why fume extraction welding torches?

- **Because your health is important for us!**
- Extraction of welding fume **directly at the source** (welding seam)
- Welder is protected from **toxic fumes** and **ultrafine dust particles**, which settle down in the alveolus.
- Smaller extraction volume necessary compared to hall extraction = **less energy costs**
- **Protection of the environment**

WF 25i FlexDrive

[Link PowerPoint presentation](#)

- Small and portable intermediate drive between wire feeder and welding torch
- Extended action radius: Up to 25m distance between main wire feed and welding point
- Hanging up with hooks possible
- Using of wire from drum possible
 - Reduced change cycles
 - Cheaper price per kilo



Protection hose for torch body

- Spatter protection for torch body
- Hose can be ordered as yard ware
- Simple mounting: Cut hose to the appropriate length and put it over the torch body

Article number:

- 40,0001,0556 Insulation hose 12,7x1,2



Presentation case

- 44,0350,3784 Presentation case TPS/i manual welding torches



Presentation case – contents:

– Water cooled components:

- 44,0350,3165 MTB 250i ML /W/45°/L151/H72
- 44,0350,3169 MTB 320i ML /W/45°/L168/H77
- 44,0350,3783 MTW 500i UD presentation model
- 44,0350,3177 MTB 700i ML /W/45°/L191/H85
- 44,0350,3781 MHP PullMig W JM LED presentation model
- 43,0004,4962 Control line for Jobmaster demonstration
- 42,0411,9041 Torque key TX10/0,4Nm
- 42,0405,0665 Heat protection shield

– Gas cooled components:

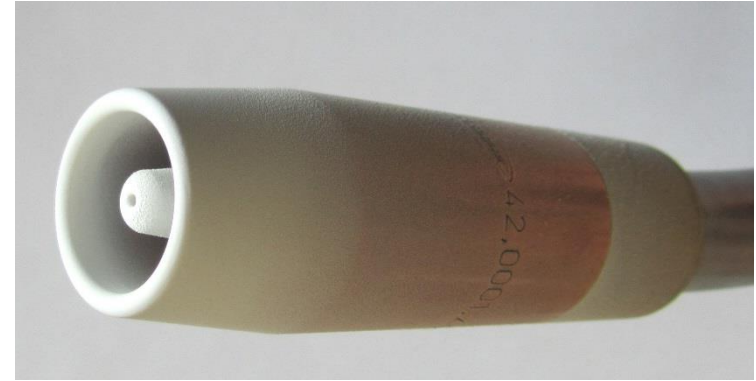
- 44,0350,3149 MTB 250i ML /G/45°/L158/H73
- 44,0350,3153 MTB 320i ML /G/45°/L165/H75
- 44,0350,3157 MTB 400i ML /G/45°/L197/H88
- 44,0350,3780 MHP ML G presentation model with long torch trigger
- 44,0350,3782 MTG 5300S presentation model with torch trigger on the top
- 44,0350,3779 FSC G presentation model
- 42,0201,3216 Wear part tool

Wear parts & other parts:

- 3 pc. Contact tips
- 2 pc. Presentation models Contec
- 7 pc. Gas nozzles
- 6 pc. Clamping pieces
- 2 pc Spatter guards
- 2 pc. Insulation rings
- 3 pc. Torch body liner
- Wear parts PullMig
- Long torch trigger
- Service tool for gas nozzle holder
- Operation elements LED, Up/Down, Jobmaster, torch trigger on the top

Ceramic spray

- Extended service life of wear parts
 - Less adhering of weld spatter
 - Application lasts up to 8 hours
 - Ceramic protection is temperature stable up to approx. 1000°
-
- 42,0510,0236 ceramic spray 400 ml (DE, FR, EN, IT, TR, ES, PL, NL, NO)
 - 42,0510,0237 ceramic spray 400 ml (CS, SK, PT, HU, HR, RU, UK, RP, ZH)



Adapter welding torches on TPS and VS power sources or competitor power sources

- **FSC welding torches water cooled to F++**

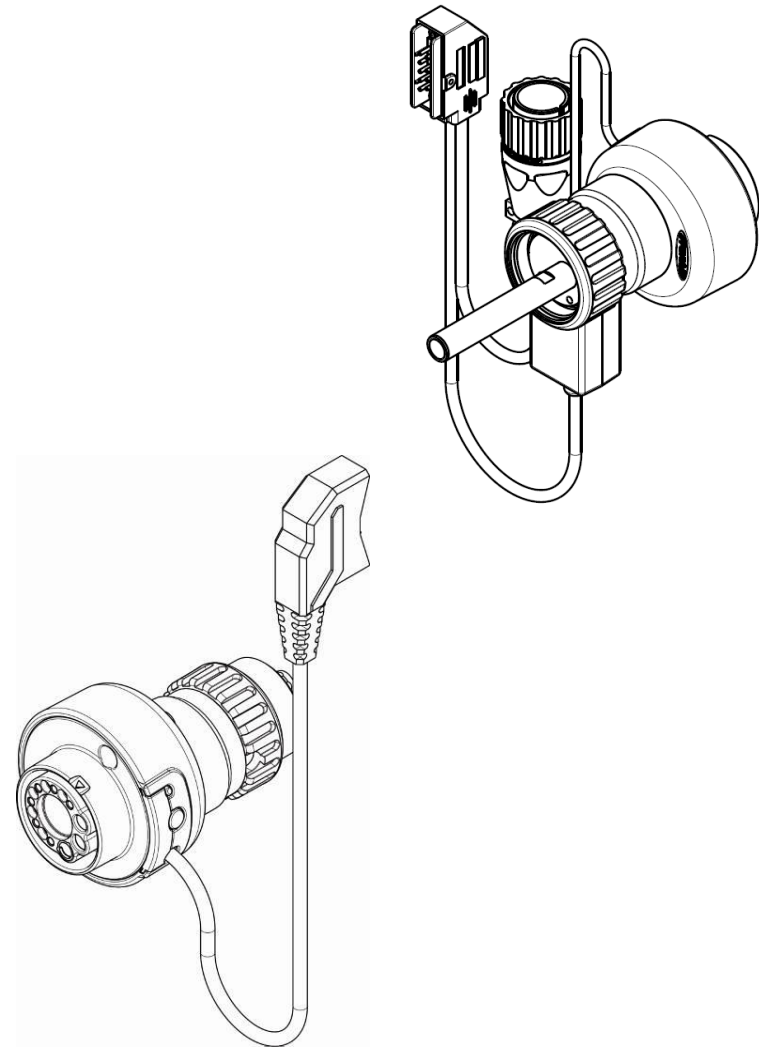
44,0350,3331 Adapter-ZA F++/FSC-S-W

44,0350,3950 Adapter-ZA F++/FSC-S-W UpDown

- **FSC welding torches to Euro-ZA**

44,0350,3329 Adapter-ZA Euro/FSC

44,0350,3948 Adapter-ZA Euro/FSC UpDown



TPS/i manual welding torches VS / TS / TPS

Power sources - F++ / F connector (Standard and Multilock)



Standard: TPS/i welding torch , W5 handle, tuchel plug



Up/Down: TPS/i welding torch, W5 handle, UserInterface „TPS“, tuchel plug



Jobmaster: TPS/i welding torch, W5 handle, UserInterface „TPS“, LocalNet plug



Ordering:

- Article number TPS/i welding torches with additional number ,000
- Naming: „d“ instead of „i“ at the end of type designation
- Example: 4,035,934,000 MTG 400d /F/UD/3,5m/45°
- LED function is not supported

TPS/i manual welding torches with VS / TS / TPS – power sources Euro connector (Standard and Multilock)



Standard: TPS/i welding torch, W5 handle



Up/Down: TPS/i welding torch, W5 handle, UserInterface „TPS“, tuchel plug



Jobmaster: TPS/i welding torch, W5 handle, UserInterface „TPS“, LocalNet plug



Ordering:

- Article number TPS/i welding torch with additional number ,001
- Naming: „d“ instead of „i“ at the end of type designation
- Example: 4,035,958,001 MTW 500d /E/UD/3,5m/45°
- LED function is not supported

Highlights

Robustness

- Steel outer pipe
- Protected isolation in the torch body
- Air cooled welding torches also for puls welding
- Perfectly matched to the torch-type wear parts
- Ceramic spatter guard thermal indestructible
- Less heat absorption because of spiky contact tips

Perfect handling

- Ergonomic handle
- Swivel mounted wire feed hose
- Flexible, rotating rubber anti kinck feature
- balanced welding torches
- 0° fixed by a anti twist protection at Multilock
- Integrated water stop at Multilock

Modularity

- Same grip plate for Standard, UpDown and Jobmaster
- Gas nozzle partially compatible between different torch bodies
- Same inner liner fixing system for all materials
- Less contact tip-models
- Steel- and CrNi inner liners without isolation for gas- and water cooled systems



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