ewm®
WE ARE WELDING

WELDING TORCHES AND ACCESSORIES

CUSTOMISABLE, PROFESSIONAL AND UNIVERSAL: MIG/MAG, TIG AND PLASMA TORCHES



www.ewm-group.com

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- Standard/function welding torches



- Welding fume extraction torch



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AN OVERVIEW OF THE EWM WELDING TORCH RANGE

TECHNOLOGY WHICH REDUCES COSTS WHILE INCREASING QUALITY



MIG/MAG

Manual welding torches for perfect results

Innovating to perfection: you will achieve optimum welding results with our welding torches and innovative welding processes:

- forceArc XQ®/forceArc puls XQ®
- wiredArc XQ/wiredArc puls XQ
- rootArc XQ®/rootArc puls XQ®
- coldArc XQ® /coldArc puls XQ®
- Positionweld
- Pulse XQ/Standard XQ
- acArc puls XQ

	Manual welding torches, gas-cooled up to 450 A (CO_2) and water cooled up to 650 A (CO_2):	
1	PM series standard torch*	PM221/301G, PM301/451/551W
	C series replaceable neck*	PM221/301CG, PM301/451CW
	S series short neck*	PM451/551WS
	L series long neck*	PM451/551WL
2	PM F series welding fume extraction torch	PM301G F1, PM301W F1/PM451W F1/ PM551W F1
3	MT series standard torch*	MT221/301G, MT301/451/551W
	C series replaceable neck*	MT221/301CG, MT301/451CW
	S series short neck*	MT451/551WS
	L series long neck*	MT451/551WL
4	MT F series welding fume extraction torch	MT221G F, MT301W F
5	Push/pull with replaceable neck (PP)*	PPMT221/301CG PPMT301/451CW
6	UM series standard torch	UM 15 G/UM 24 G/UM 25 G/UM 36 G UM 240 W/UM 401 W/UM 501 W

G = gas-cooled W = water-cooled *Also available as function torch with control



MIG/MAG

Automated and robot welding torches for mechanised and automated applications

For automated production: our automated welding torches can be adjusted to each application on an individual basis. Combined with the EWM welding processes, you will be able to work not only flexibly, but also efficiently.
You can find detailed information on our robot welding torches in our automation catalogue.

	Automated welding torch, gas-cooled up to 330 A (CO_2) and water-cooled up to 650 A (CO_2):	
7	AMT automated welding torches with different welding torch neck angles from 0–45°*	AMT301G AMT451/551W

	Robot welding torch, gas-cooled and water-cooled:	
8	RMT robot welding torch with various torch neck angles from 0–45°*	RMT 301G/351W RMT 301W RMT 551W/551WL RMT 651W

*Special solutions possible on request

TIG/PLASMA

Ideal solutions for a wide range of applications

Always on the right side: from TIG standard, cold wire and hot wire welding with manual or automated systems to filigree plasma welding with EWM TIG and plasma welding torches.

	Manual welding torches, gas-cooled up to 300 A (DC-) and water-cooled up to 450 A (AC-):	
9	TIG*/TIG Little*	TIG 150/260 GD, TIG 200/450. TIG-SR 17/18/26 GD, TIG-SR 20, TIG-SR 300 HD TIG 150/260 Little GD, TIG-SR 20 Little WD
10	TIG fume extraction torch	TIG 150/260 F1 GD
11	spotArc® welding torch for spot and tack welding	spotArc® G/W
12	tigSpeed welding torch for cold and hot wire welding	TIG 200 GD CW, TIG 260 WD CW/HW, TIG 450 WD CW/HW, TIG-SR 18 WD CW/HW
13	comfyTig 18-1 for cold and hot wire welding	ComfyTig 18-1 CW/HW
14	Plasma	PHB 50, PHW 20/100

*Also available as function torch with control system

	Automated welding torch, gas-cooled and water-cooled:	
15	TIG welding torch	TIG-MT 200G, TIG-MT 300/400/500 W
16	Plasma welding torch	PMW 20/100



OVERVIEW OF EWM'S MIG/MAG WELDING TORCH PROGRAM

EWM's MIG/MAG welding torches equip you for any job, while also saving time and therefore money.

The high-quality materials used in the consumables makes them highly durable and ensures a stable welding process.

The portfolio is completed by a vast array of consumables which allow you to take on any task.



Professional welding torches from the PM series

Technical data	
maximum duty cycle, gas-cooled	450 A (35% duty cycle)
maximum duty cycle, water-cooled	650 A (100% duty cycle)
Grip	
Ergonomic	✓
Rubber inserts	✓
LED light	✓
Torch trigger protection	✓
Torch trigger extension	✓
Heat protection shield	✓
Operation	
Remote control without display	✓
Remote control with 7-segment display	×
Remote control with OLED display	✓
Xnet support	✓
Torch trigger at top	✓
Hose package	
Length	3/4/5/6.5 metres*
Torch connection	EZA
Anti-kink device	✓
Torch neck	
Consumables system	ex works M7/M9
Standard torch neck	✓
Short-neck welding torch	✓
Long-neck welding torch	✓
Replaceable neck torch	✓
Welding fume extraction torch	✓
Automated welding torch	✓
Push/pull welding torch	×

*Hose package length 6.5 m depending on welding torch type

	 MT series – ultimate versatility	 UM series – universal
	450 A (35% duty cycle)	300 A (60% duty cycle)
	650 A (100% duty cycle)	500 A (60% duty cycle)
	✓	✓
	×	✓
	×	×
	×	✓
	×	×
	✓	×
	✓	×
	✓	×
	×	×
	×	×
	✓	×
	3/4/5 metres	3/4/5 metres
	EZA	EZA
	×	✓
	ex works M7/M9	M6/M8
	✓	✓
	✓	×
	✓	×
	✓	×
	✓	×
	✓	×
	✓	×

PROFESSIONAL WELDING TORCHES FROM THE PM SERIES

HIGHLIGHTS

- Professional welding torch with flexible ball joint
- Can be ordered as a function torch with remote-control function and graphic display.
- Can be ordered with LED lighting for illuminating components.
- Full Xnet support Xnet 2.0 ready
- Wide range of options allows customisation in line with individual requirements.
- Ball joint ensures comfortable operation in frequently changing welding positions and positional welding.
- Thanks to X technology, function torches no longer require an annoying additional control cable.
- PM and MT torches ensure huge cost-saving potential with EWM consumables.
- Same consumables for all MT and PM welding torches
- Gas nozzles in conical, cylindrical and bottleneck shapes are available for narrow gap welding with PM and MT torches.

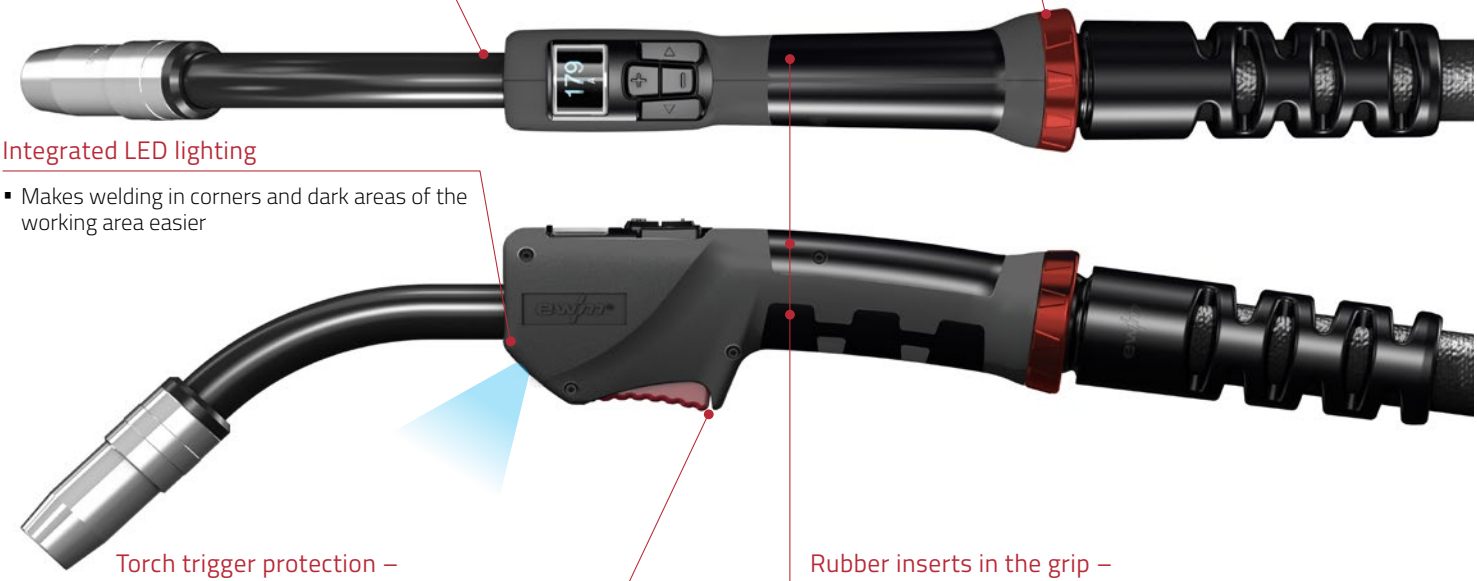
WELDING TORCH DESIGN

Compact ball joint provides optimal range of movement

- Comfortable working conditions thanks to strain relief, especially for positional welding

Torch neck rotatable through 360°

- Ultimate flexibility with replaceable torch necks



Integrated LED lighting

- Makes welding in corners and dark areas of the working area easier

Torch trigger protection – prevents misfiring

- High level of safety – no switch-on caused by unintentional operation
- Protects against damage to the workpiece

Rubber inserts in the grip – for the best hold

- High degree of welding comfort thanks to ergonomically shaped handle
- Secure hold for optimum welding torch guidance, even during positional welding

OVERVIEW



PM replaceable neck torch

- Replaceable torch necks with various bend angles
- Excellent handling even in hard-to-access areas
- Torch neck can be continuously rotated through 360° and locked in any position



PM long neck torch

- Longer torch neck for hard-to-access operating points and high duty cycles
- Available in versions PM 451 WL and PM 551 WL



PM short neck torch

- Shorter torch neck for especially tight operating points
- More practical and lightweight than standard torches
- Best suited for applications within confined spaces
- Available in versions PM 451 WS and PM 551 WS



PM welding fume extraction torch

- Combines maximum health protection with all the advantages of the PM welding torch series
- Maximum accessibility to the component, comparable to standard welding torches
- Individually adaptable thanks to a whole host of options
- Available in versions PM 301G F1, and PM 301/451/551W F1

VERSIONS AVAILABLE





1 2 3 4 5 6

	Manual welding torches	gas-cooled up to 330 A (CO_2)	water-cooled up to 650 A (CO_2)
1	**PM** standard torch	PM 221/301 G	PM 301/451/551W
2	**C series** replaceable neck	PM 221/301CG	PM 301/451CW
3	**S series** short neck	On request	PM 451/551WS
4	**L series** long neck	On request	PM 451/551WL
5	**F series** welding fume extraction torch	PM 301G F1	PM 301W F1/PM 451W F1/ PM 551W F1
6	PM Alu welding torch[1)]	-	PM 551W Alu

[1)] Prepared ex works for welding aluminium

FOUR OPERATING VARIANTS – GUARANTEEING A GOOD CHOICE.



RD3 X control

Display and setting of:

- Welding current and wire feed speed
- Voltage correction
- Program and JOB selection
- Operating mode and welding type
- Welding process switching
- Interferences and error messages

Xnet support:

- Selection of welding tasks according to welding sequence plan
- Component management



RD2 X control

Display and setting of:

- Welding current and wire feed speed
- Voltage correction
- Program and JOB selection



2U/D X control

Setting of:

- Welding current or wire feed speed
- Voltage correction
- Program and JOB selectionAlso

available with separate control cable
(this means LED lighting is not included)

-



Standard torch and standard torch with LED lighting

Option for torch trigger on top possible



*LED lighting only on MIG/MAG-XQ and EWM Multimatrix welding machines

Overview of functions of PM welding torch controls

	Standard	LED X	2U/D	2U/D X	RD2 X	RD3 X
						
Compatibility	All welding machines with Euro torch connectors	EWM XQ welding machines	All EWM welding machines come with 19-pole connection.	EWM XQ welding machines		
Components						
Remote control function	✗	✗	✓	✓	✓	✓
Graphic display	✗	✗	✗	✗	✓	✓
LED lighting	✗	✓*	✗	✓*	✓*	✓*
Option for torch trigger on top possible	✓	✓	✗	✗	✗	✗

*With EWM XQ welding machines, automatic lighting is activated when the welding torch is moved
With Multimatrix and Taurus Steel welding machines, lighting is continuous

Remote control functions	Set	Display	Set	Display	Set	Display	Set	Display	Set	Display	Set	Display
Welding current	✗		✗		✓	✗	✓	✗	✓		✓	
Wire feed speed	✗		✗		✓	✗	✓	✗	✓		✓	
Voltage correction	✗		✗		✓	✗	✓	✗	✓		✓	
Program selection	✗		✗		✓	✗	✓	✗	✓		✓	
JOB selection	✗		✗		✓	✗	✓	✗	✓		✗	
Operating mode	✗		✗		✗		✗		✗		✓	
Dynamics	✗		✗		✗		✗		✗		✓	
Process switching	✗		✗		✗		✗		✗		✓	
Interference and error messages	✗		✗		✗		✗		✗		✓	

The complete range of functions of PM function torches is only available when used in conjunction with MIG/MAG XQ welding machines, and depends on the connected machine. If the function torch is connected to EWM Multimatrix or Taurus Steel welding machines, the welding torch switches to compatibility mode and has limited functions. If the welding torch is connected to third-party machines or welding machines without MULTIMATRIX technology, welding is not possible.



Christian Gruber
Welding Supervisor at Ebner

All functions accessible in one welding torch!

> Making parameter changes directly at the welding torch prevents the need to walk back and forth and saves valuable time.

Christian Gruber, Welding Supervisor at Ebner, sees this as one of the main advantages of the PM welding torch.

PM F1 MIG/MAG WELDING FUME EXTRACTION TORCH

- Ergonomic thanks to a well-balanced grip design
- Flexible ball joint facilitates operation in frequently changing welding positions and positional welding
- Individually adaptable thanks to a whole host of options
- Secure hold thanks to rubber inserts in the grip
- The torch trigger protection prevents the arc being ignited unintentionally
- Identical consumables for PM and MT torches
- Narrow-gap consumables can be used

WELDING TORCH DESIGN

Ergonomic handle

- Perfect handling
- Minimal force required to guide the welding torch
- Optional pistol grip

Leather hose cover (optional)

- Flexible and easy to handle
- Protects the torch hose package from damage and wear

Control variants

- Available ex works in versions LED and RD3 X



Integrated LED lighting

- Makes welding in corners and dark parts of the working area easier

Extraction nozzle

- Maximum accessibility to confined components
- The large L-dimension reduces extraction of the shielding gas to almost zero
- Suction capacity according to DIN EN ISO 21904

Compact ball joint

- Optimal range of movement
- Comfortable working conditions thanks to strain relief, especially during positional welding
- Limited by the stop piece, cannot be turned too far

CUSTOMISABLE – OPTIONS FOR BETTER HANDLING



Pistol grip with magazine

- Joint-friendly working
- Storage of torch keys and contact tips
- Patented concept



Bypass slider

- For delicately controlling the extraction capacity
- Available in versions with and without return spring



Torch trigger extension

- Tools for assembly included

Setting the welding fume flow rate using an AirFlow Meter

- For alignment of the necessary flow rate of the fume extraction torch according to the type plate
- Ensures standard-compliant work
- Cost reduction through lower energy consumption during welding





WELDING FUME EXTRACTION KITS

Direct extraction of harmful substances guarantees the welder increased health protection.

- Welding fume extraction torch kit compatible with PM and MT welding torches (standard and function torches)
- Suitable for operation with high-vacuum extraction systems
- Economical retrofitting in existing workstations
- Reduction of extraction capacity by up to 45% using the bypass slider so as not to impair the shielding gas coverage under difficult conditions (e.g. transition from welding position PB to PF)
- Extractor nozzle can be rotated through 360° for outstanding accessibility
- No internal contamination of the welding torch and hose package
- Simple kit assembly/disassembly
- The LED lighting on the PM welding torch remains fully functional*
- Compatible with the PM pistol grip*

Bypass slider

- High extraction capacity vs. shielding gas sheathing
- The integrated bypass slider makes positional welding and preserving shielding gas (up to 45% reduction in extraction) even easier.



360° rotating extractor nozzle

- Outstanding accessibility

Replaceable extraction nozzles

- Maximum accessibility of confined components
- Fitted with a conical nozzle as standard
- Cylindrical welding fume extraction nozzles are available for better accessibility, particularly for confined components (upon request)







*Also when turning the extractor nozzle

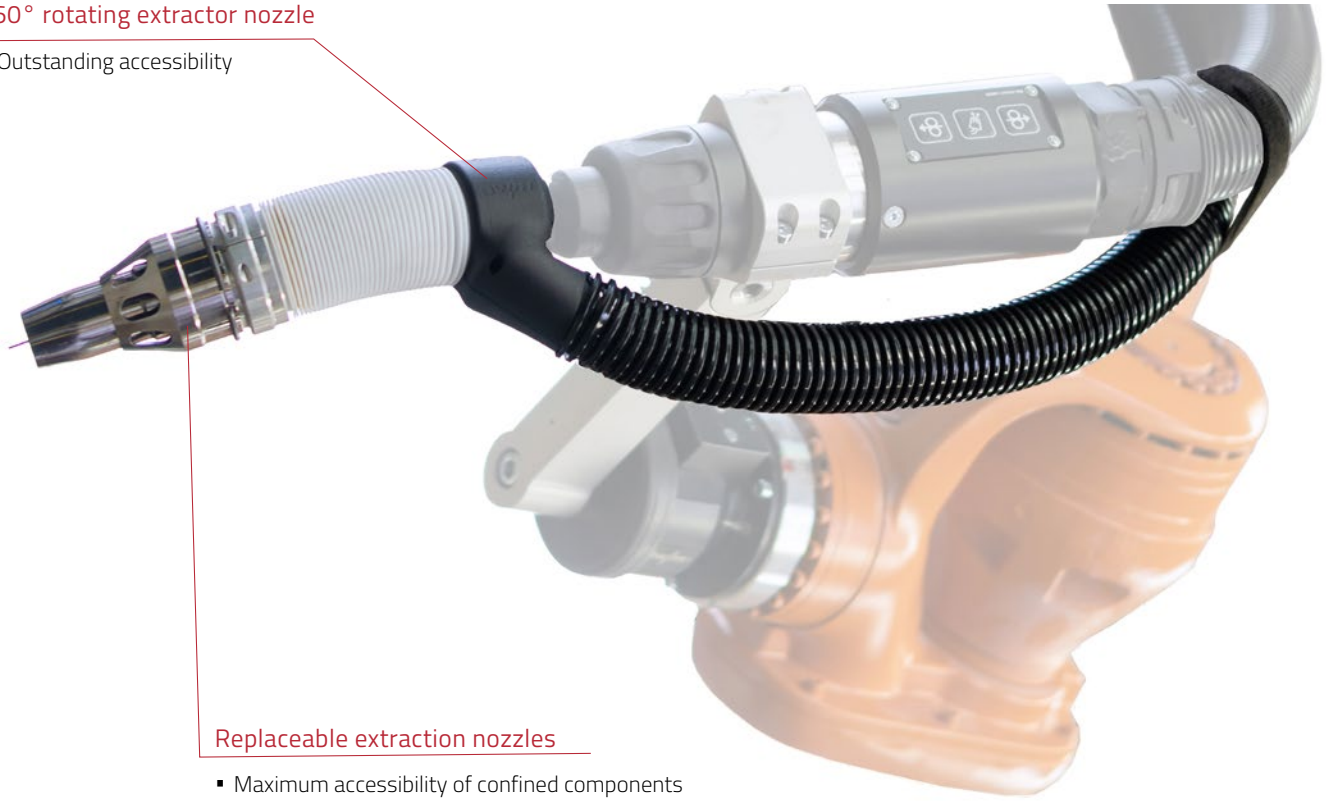
RMT WELDING FUME EXTRACTION KIT FOR ROBOT SYSTEMS

Saves expensive, time-consuming extraction of entire robot cells where there are large components and long processes

- RMT welding fume extraction kit for conventional and hollow wrist robot systems
- Suitable for operation on high-vacuum extraction systems and central hall extraction systems and for all industrial robotics solutions
- Compatible with RMT robot welding torches
- Direct extraction of harmful emissions at the point of origin means that time-consuming extraction of the entire robot cell is not necessary
- +/- 180° rotatable extractor nozzle for optimal accessibility (alternatively, the extractor nozzle can be fixed axially)
- Less contamination of the welding cell
- Maximum utilisation of the work area reduces the required extraction capacity
- Can be retrofitted into existing workstations at a low cost

360° rotating extractor nozzle

- Outstanding accessibility



Replaceable extraction nozzles

- Maximum accessibility of confined components
- Fitted with a conical nozzle as standard
- Cylindrical welding fume extraction nozzles are available for better accessibility, particularly for confined components (upon request)



PM 551 W ALU WELDING TORCH

Suitable for the acArc puls XQ process

PM 551 W Alu

- MIG/MAG welding torches



PM 551 W 2U/D X Alu

- MIG/MAG function torch, water-cooled, X technology



PM 551 W RD3 X Alu

- MIG/MAG function torch with OLED graphic display, water-cooled, X technology



IMMEDIATELY READY FOR USE IN ALUMINIUM WELDING.

PM-Alu welding torches make MIG aluminium welding even easier.

The PM 551 W Alu welding torches guarantee optimal and consistent results when welding aluminium and are perfectly matched to the acArc puls XQ process.

The welding torches are supplied fully equipped ex works, meaning there is no need for retrofitting for aluminium welding. You have three torches to choose from:

- PM 551 W Alu
- PM 551 W 2U/D X Alu
- PM 551 W RD3 X Alu



EQUIPMENT AS DELIVERED



Forced-contact tip
(Ø 1.0 mm or Ø 1.2 mm)

- Consistent contact of the wire in the contact tip
- High arc stability
- Significantly longer service life
- Spatter-free weld seams



Conical gas nozzle
(Ø 15 mm)

- Targeted gas flow
- High arc stability
- Welding results without burn marks



PA liner, including brass liner
(Ø 1.0 mm or Ø 1.2 mm, each 3 m or 4 m long)

- Even, reduced-friction wire feeding
- Prevents abrasion of welding consumables
- Guarantees consistent contact

ALUMINIUM CONVERSION SET

Sets with various diameters for complete outfitting for aluminium welding

Set comprising:

- Liner, including brass liner
- Contact tip holder
- Forced-contact tip
- Gas diffuser
- Gas nozzle
- Torch key for assembly



PM SERIES – FULL OVERVIEW

More information about our PM G-torches!





Type	PM 221 G	PM 301 G
Operating variants	Standard or function torch	
Replaceable torch neck "C"	PM 221 CG	PM 301 CG
Welding fume extraction torch "F1"	-	PM 301G F1
Cooling	gas-cooled "G"	gas-cooled "G"
Welding current CO_2	250 A at 60% DC	330 A at 60% DC
Welding current M21	220 A at 60% DC	300 A at 60% DC
Pulse welding current M21	150 A at 60% DC	210 A at 60% DC
Shielding gas	Argon, mixed gas M21 or CO_2 conforming to DIN EN ISO 14175	
Wire diameter	0.8 to 1.2 mm	0.8 to 1.6 mm
Gas flow	10 to 20 l/min	10 to 20 l/min
Hose package length	3 m/4 m/5 m	3 m/4 m/5 m
Connection	Euro torch connector	Euro torch connector
Torch data in accordance with	IEC 60974-7	IEC 60974-7







More information about our PM W-torches!

PM 301 W	PM 451 W/WS/WL	PM 551 W/WS/WL	Type
Standard or function torch			Operating variants
PM 301 CW	PM 451 CW	-	Replaceable torch neck "C"
PM 301W F1	PM 451W F1	PM 551W F1	Welding fume extraction torch "F1"
water-cooled "W"	water-cooled "W"	water-cooled "W"	Cooling
330 A at 100% DC	500 A at 100% DC	650 A at 100% DC	Welding current CO_2
290 A at 100% DC	450 A at 100% DC	550 A at 100% DC	Welding current M21
250 A at 100% DC	350 A at 100% DC	500 A at 100% DC	Pulse welding current M21
Argon, mixed gas M21 or CO_2 conforming to DIN EN ISO 14175			Shielding gas
0.8 to 1.2 mm	0.8 to 1.6 mm	0.8 to 2 mm	Wire diameter
10 to 25 l/min	10 to 25 l/min	10 to 25 l/min	Gas flow
3 m/4 m/5 m	3 m/4 m/5 m/6.5 m	3 m/4 m/5 m/6.5 m	Hose package length
Euro torch connector	Euro torch connector	Euro torch connector	Connection
IEC 60974-7	IEC 60974-7	IEC 60974-7	Torch data in accordance with

*LED lighting only on MIG/MAG XQ and EWM Multimatrix welding machines

MT SERIES – ULTIMATE VERSATILITY

HIGHLIGHTS

- Robust welding torch with compact, ergonomically shaped grip
- Can be ordered as a function torch with remote-control function and segment display.
- Most suitable for use in tough environments
- Ideal balance between complete robustness and perfect handling
- The elliptical grip reduces the effort required to guide the torch.
- Thanks to X technology, function torches no longer require an annoying additional control cable.
- But, all function torches may be ordered with an additional control cable in order to connect them to machines without X technology.
- Wide variety of products: From standard welding torches with various torch necks to replaceable neck, push/pull, fume extraction and automated welding torches
- PM and MT torches ensure huge cost-saving potential with EWM consumables.
- Gas nozzles in conical, cylindrical and bottleneck shapes are available for narrow gap welding with PM and MT torches.

WELDING TORCH DESIGN



THE MT TORCH RANGE LEAVES NOTHING TO BE DESIRED

The right welding torch for every application.



MT replaceable neck torch

- Replaceable torch necks with various bend angles
- Excellent handling even in hard-to-access areas
- Torch neck can be continuously rotated through 360°



MT push/pull welding torch

- High-quality Maxon motor
- Self-inching
- Optional pistol grip
- Colour-coded wire feed rollers
- Plug&play with ewm machines
- Several control variants
- Remote control function



MT welding fume extraction torch

- Welding torch with fume extraction
- Significantly reduces emissions in the ambient air
- Infinitely adjustable extraction nozzle
- Bypass slider to regulate the extraction rate
- Suitable for operation with high-vacuum extraction systems
- Rotating joint on hose package
- First metre has leather cover as spatter protection



AMT automated welding torch

- Welding torch for automated welding
- Highly robust with long duty cycle
- Wear parts identical to standard MT torch

VERSIONS AVAILABLE





	Welding torches	gas-cooled up to 330 A (CO_2)	water-cooled up to 650 A (CO_2)
1	MT series standard torch*	MT221/301G	MT301/451/551W
2	C series replaceable neck*	MT221/301CG	MT301/451CW
3	S series short neck*	On request	MT451/551WS
4	L series long neck*	On request	MT451/551WL
5	F series welding fume extraction torch	MT221G F	MT301W F
6	Push/pull with replaceable neck (PP)	PPMT221/301CG	PPMT301/451CW
7	AMT automated welding torch	AMT301G	AMT451W/551W

* Option for torch trigger on top possible

FOUR OPERATING VARIANTS – GUARANTEEING A GOOD CHOICE.

X-series welding torches without additional control cable*



PC 2 – Control

Display and setting of:

- Welding current or wire feed speed
- Voltage correction *1)
- Or program and JOB*2)



PC 1 – Control

Display and setting of:

- Welding current or wire feed speed*1)
- Or program*2)



2U/D - Control

Setting of:

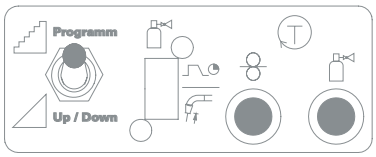
- Welding current or wire feed speed
- Voltage correction
- Or program*2)



U/D - Control

Setting of:

- Welding current or wire feed speed
- Or program*2)



*1) Display depends on the welding machine

*2) Depends on the switch setting on the wire feeder

*Also available with 19-pole control cable for connection to EWM welding machines without Multimatrix technology

OVERVIEW OF FUNCTIONS OF MT WELDING TORCH CONTROLS

	Standard	U/D X	2U/D X	PC 1 X	PC 2 X
					
Compatibility	**All welding machines with Euro torch connectors**	**Titan XQ puls and EWM Multimatrix welding machines**			
		also available with 19-pole control cable for connection to EWM welding machines without Multimatrix technology			
Components					
Remote control function	✗	✓	✓	✓	✓
Segment display	✗	✗	✗	✓	✓
Option for torch trigger on top possible	✓	✗	✗	✗	✗

Remote control functions	Set	Display	Set	Display	Set	Display	Set	Display	Set	Display
Welding current	✗		✓	✗	✓	✗	✓		✓	
Wire feed speed	✗		✓	✗	✓	✗	✓		✓	
Voltage correction	✗		✗		✓	✗	✗		✓	
Program selection	✗		✓	✗	✓	✗	✓		✓	
JOB selection	✗		✗		✓	✗	✗		✓	

MT function torch available with or without X technology

	 X Technology	 Without X technology*
Control cable assembly	No longer needs an inconvenient additional control cable	Additional 19-pole control cable and matching machine-side connection required
Compatibility	Titan XQ puls and EWM Multimatrix welding machines	All EWM machines come with a 19-pole connection socket

* Push/pull torches can only be ordered with an additional control cable

MT SERIES – FULL OVERVIEW

More information about our MT G-torches!





Type	MT221G	MT301G
Operating variants	Standard or function torch	
Replaceable torch neck "C"	MT221CG	MT301CG
"F" welding fume extraction torch	MT221G F	-
Automated welding torch "A"	-	AMT 301G
Cooling	gas-cooled "G"	gas-cooled "G"
Welding current CO_2	250 A at 60% DC	330 A at 60% DC
Welding current M21	220 A at 60% DC	300 A at 60% DC
Pulse welding current M21	150 A at 60% DC	210 A at 60% DC
Shielding gas	Argon, mixed gas M21 or CO_2 conforming to DIN EN ISO 14175	
Wire diameter	0.8 to 1.2 mm	0.8 to 1.6 mm
Gas flow	10 to 20 l/min	10 to 20 l/min
Hose package length	3 m/4 m/5 m	1.5 m*/3 m/4 m/5 m
Connection	Euro torch connector	Euro torch connector
Torch data in accordance with	IEC 60974-7	IEC 60974-7





"S" version
short torch neck



"L" version
long torch neck

More information about our MT W-torches!

MT301W	MT451W/WS/WL	MT551W/WS/WL	Type
Standard or function torch			Operating variants
MT301CW	MT451CW	-	Replaceable torch neck "C"
MT301W F	-	-	"F" welding fume extraction torch
-	AMT451W	AMT551W	Automated welding torch "A"
water-cooled "W"	water-cooled "W"	water-cooled "W"	Cooling
330 A at 100% DC	500 A at 100% DC	650 A at 100% DC	Welding current CO_2
290 A at 100% DC	450 A at 100% DC	550 A at 100% DC	Welding current M21
250 A at 100% DC	350 A at 100% DC	500 A at 100% DC	Pulse welding current M21
Argon, mixed gas M21 or CO_2 conforming to DIN EN ISO 14175			Shielding gas
0.8 to 1.2 mm	0.8 to 1.6 mm	0.8 to 2 mm	Wire diameter
10 to 25 l/min	10 to 25 l/min	10 to 25 l/min	Gas flow
3 m/4 m/5 m	1.5 m*/3 m/4 m/5 m	1.5 m*/3 m/4 m/5 m	Hose package length
Euro torch connector	Euro torch connector	Euro torch connector	Connection
IEC 60974-7	IEC 60974-7	IEC 60974-7	Torch data in accordance with

PUSH/PULL WELDING TORCH

With the push/pull drive, a wire feed motor mounted in the torch handle pulls the wire electrode, while the drive, which is located in the machine, pushes the wire into the hose package. This allows even soft and thin wires to be fed safely. The push/pull system is used particularly frequently for aluminium welding.

More information about our Push-Pull-torches!

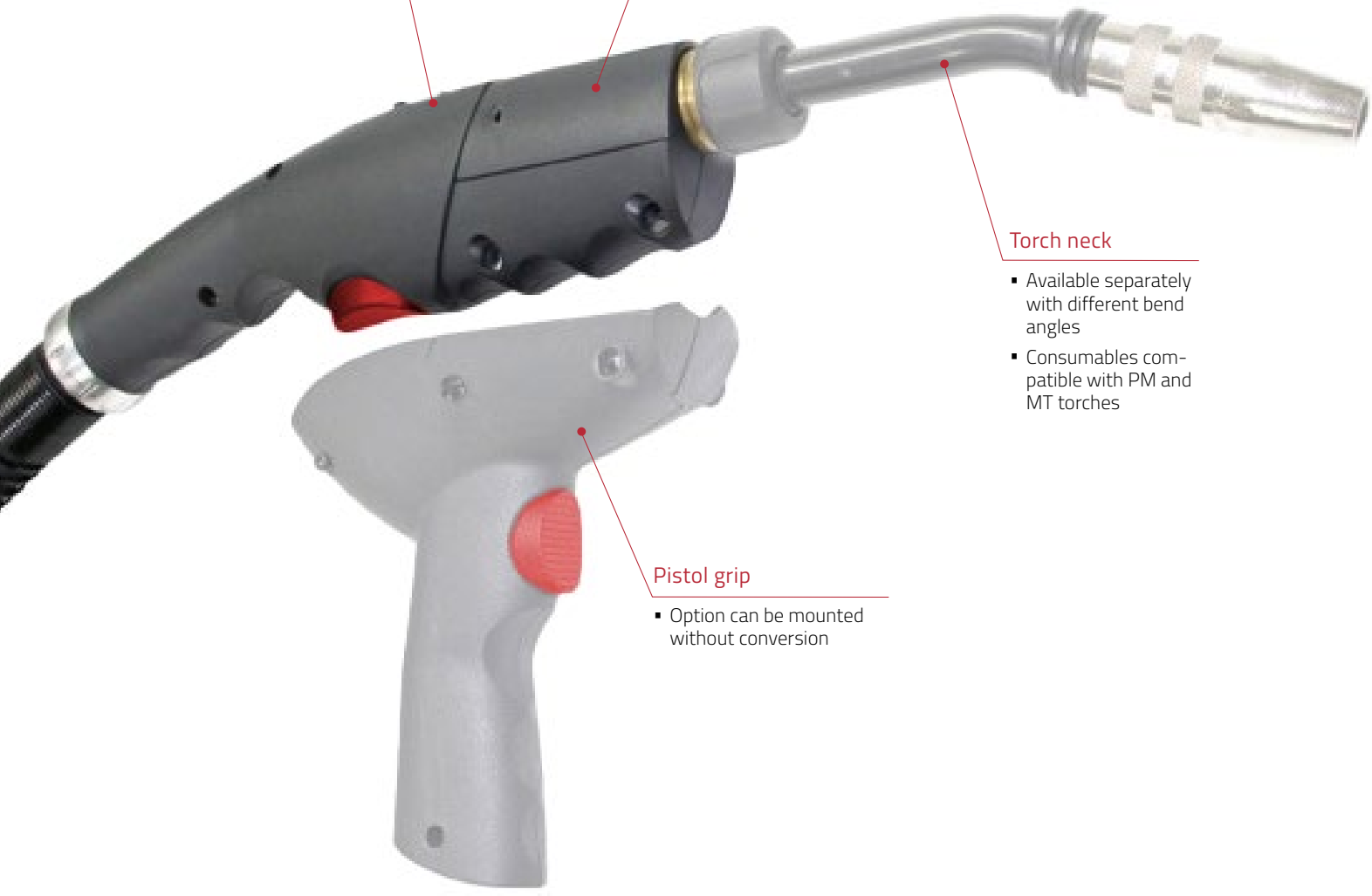
WELDING TORCH DESIGN

Control

- Various control versions available ex works

Internal drive unit

- (Initial) equipment sets available for various wires and diameters
- Internal, colour-coded drive rolls
- Self-inching



Torch neck

- Available separately with different bend angles
- Consumables compatible with PM and MT torches

Pistol grip

- Option can be mounted without conversion

OPERATING VARIANTS



PC2 - Control

Display and setting of:

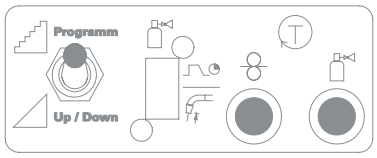
- Welding current or wire feed speed
- Voltage correction *1)
- Or program and JOB*2)



PC1 - Control

Display and setting of:

- Welding current or wire feed speed*1)
- Or program*2)



*1) Display depends on the welding machine

*2) Depends on the switch setting on the wire feeder



2U/D - Control

Setting of:

- Welding current or wire feed speed
- Voltage correction
- Or program*2)



U/D - Control

Setting of:

- Welding current or wire feed speed
- Or program*2)

COLOUR CODING OF THE WIRE FEED ROLLS



For example, UNI rolls for Ø 1 mm to 1.2 mm with V-groove (blue): for stainless steel & steel



For example, Ø 1 mm with U-groove (white) for aluminium

AUTOMATED AND ROBOT WELDING TORCHES

AMT – AUTOMATED WELDING TORCH

- Gas- or water-cooled MIG/MAG automated welding torch
- Optimal cooling thanks to profiled inner tubes
- Fabric-covered coolant tubes for even greater robustness
- 38 mm clamping range diameter
- Identical consumables for PM and MT torches



RMT – ROBOT WELDING TORCH

- Gas- or water-cooled MIG/MAG robot welding torch
- Maximum TCP accuracy
- Modular construction
- Quick-change torch neck
- Water stop for coolant (water-cooled version)
- Continuous liner for smooth wire feeding
- Push buttons for wire inching, wire return, gas test (function dependent on wire feeder)
- Suitable for M Drive 4 Rob 2, 3, 5 robot wire feeder
- For conventional and hollow wrist robots
- Identical consumables for PM and MT torches

Replaceable RMT torch neck with crown nut

- Various bend angles or swan neck
- Available in short and long versions

Hose package

- With push-button for gas test and wire inching and wire return
- Robust corrugated tube hose



Gas nozzle sensor as standard

- Tactile weld seam search using the gas nozzle's position search function

EWM RSA collision sensor

- Protects against robot damage
- High reset precision
- Flange plates for all robot manufacturers
- Various switch-off characteristics

Torch holder

- Various sizes and bend angles
- TCP exact

PM AND MT CONSUMABLES SYSTEM

CuCrZr MEETS M7/M9

- Consumables system suitable for manual welding torches (PM/MT), welding fume extraction torches (PM F/MT F), push/pull welding torches, automated welding torches (AMT) and robot welding torches (RMT)
- Reduced use of consumables thanks to high-quality materials such as CuCrZr.
- Larger threaded cross sections ensure lower resistance to temperature and flow transfer, and therefore a longer service life



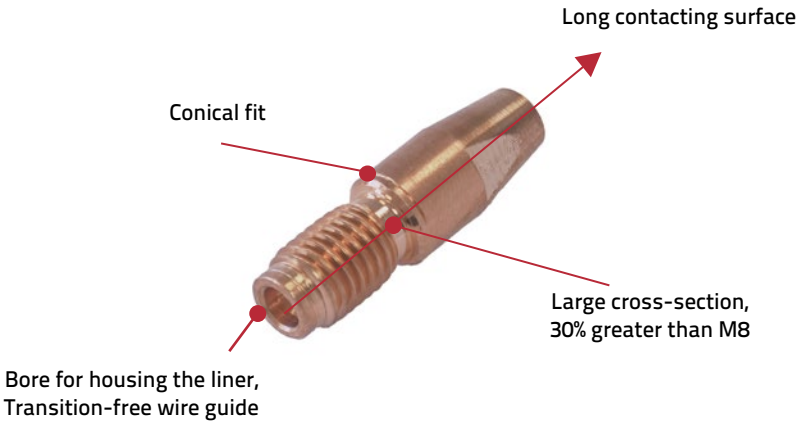
EWM gas nozzles

- Screwed gas nozzles for a secure fit
- The centred fit of the gas nozzles ensures that shielding gas coverage remains even and consistent.
- Reduced spatter adherence thanks to nickel-plated surface and improved heat dissipation
- A diverse range of options: Narrow-gap gas nozzles, highly conical gas nozzles, spot welding nozzles and special gas nozzles for flux cored wires
- Long service life
- Every PM/MT welding torch series has specially designed gas nozzles, thus preventing installation of incompatible nozzles.



EWM contact tips

- Optimum heat transfer thanks to the 30% larger material cross-section and conical fit of the contact tip in the M7/M9, compared to conventional M6/M8 thread sizes.
- Made of CuCzZr, EWM contact tips boast much greater wear resistance than standard E-Cu nozzles.
- Conical limit stop of the contact tip for a secure fit, precise centring and optimal flow and heat transfer
- The precisely centred contact tip allows for far greater precision and repeat precision, especially in mechanised applications.
- The bore means the liner sits well in the contact tip, thus ensuring transition-free wire guiding.
- Long contacting surface for better flow transfer and arc stability
- A diverse range of equipment means the torch can be perfectly customised for any application.
- M7/M9





EWM contact tip holders

- All EWM contact tip holders are manufactured using wear-resistant CuCrZr for optimal functionality – even in tough conditions.
- CuCrZr offers better heat and current conductivity than standard brass contact tip holders.
- Various versions mean you can alter the fit of the contact tip. This allows you to customise the torch perfectly for any application.
- M7/M9



EWM gas diffusers

- High stability thanks to high-tensile, temperature-resistant special plastic
- Even distribution of welding gas, thus ensuring optimal shielding gas coverage
- Every PM/MT torch series has specially designed gas diffusers, thus preventing installation of incompatible diffusers.



Stefan Limberger
Managing Director of ISW

Eight hours, 350 amperes, one EWM contact tip

“ The nozzle can probably last longer, but we prefer to err on the side of caution.



Torsten Völker
Production Manager
of Hüffermann Transportsysteme GmbH

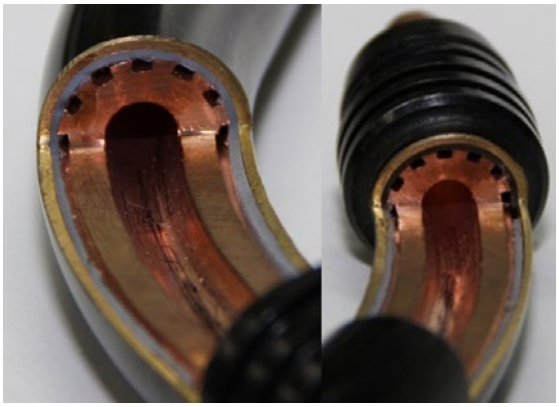
The most impressive feature of EWM’s welding torches is the longevity of consumables.

“ The most impressive feature of welding torches from EWM is the long service life of the consumables, especially the contact tip. In the past, this part had to be replaced three times a day. Nowadays, every EWM nozzle lasts around a week. With a replacement time of just five minutes, the time saved simply by using the EWM consumable amounts to 15 minutes a day, which is equivalent to five hours a month. At some workstations, the nozzles even last five to six weeks.

PM AND MT TORCH DESIGN

TORCH NECK AND COOLING SYSTEM

- Long service life thanks to profiled inner tubes for optimal cooling and greater power reserves
- Compact hose packages with coaxial cables for low weight and highest flexibility (gas-cooled torches)
- There are absolutely no fluctuations of heat or electrical conductivity, as all live components of the welding torch are made of CuCrZr.



Gas-cooled welding torch

- Internal insulation
- Patented cooling system for gas-cooled welding torches



Water-cooled welding torch

- Parallel double-coolant circuit
- 4 conduits in inside circuit
- 8 conduits in outside circuit

PM AND MT TORCH NECK DESIGN

Special features	Practical advantages
Inner tube firmly centred in the torch neck All tubes specially drawn for EWM – Made in Germany	▪ No deformation of the inner tube ▪ No tension on the gas diffuser
CuCrZr inner tube incl. torch head on gas-cooled torches	▪ High stability ▪ Less wear ▪ Improved heat dissipation ▪ Improved duty cycle of the torch
CuCrZr torch head for water-cooled torches	
Improved wire feeding thanks to larger bend radius (70 mm instead of 50 mm)	▪ Better contact ▪ Stable welding process ▪ Less spatter

EWM EURO TORCH CONNECTOR

Special features	Practical advantages
Optimised exit of water hoses and control cable from the Euro torch connector housing	▪ No circuit interruption due to hose kinking ▪ Control cable well protected
Euro torch connector housing can be opened without tools	▪ Easy servicing and mounting
Silver-plated spring pins in the control cable	▪ Better current transition in the low-current range ▪ No corrosion ▪ Pins less likely to break off or bend

NARROW GAP WELDING WITH EWM PM AND MT TORCHES

- Better accessibility for root welding and positional welding
- Reduction in the included angle when used with EWM forceArc
- Cylindrical nozzle shape:
- With replaceable gas nozzle tip (just one low-cost consumable)
- Insulated built-on gas nozzle tip
- Robust design with its centred contact tip (less build-up of spatter, less wear)
- Narrow-gap consumables also suitable for PM extraction welding torches (PM F)



For narrow gap welding, gas nozzles in conical, cylindrical and bottleneck shapes are available.



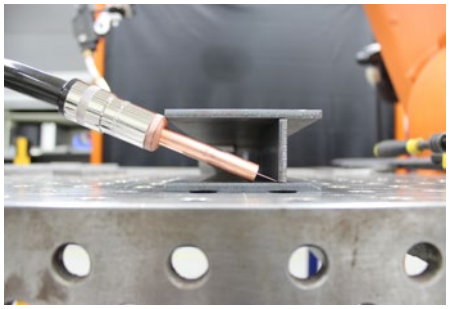
Conical nozzle shape (Pos. 1.1)



Cylindrical nozzle shape, fully assembled (Pos. 1.4; 1.5; 2.1; 5; 6)

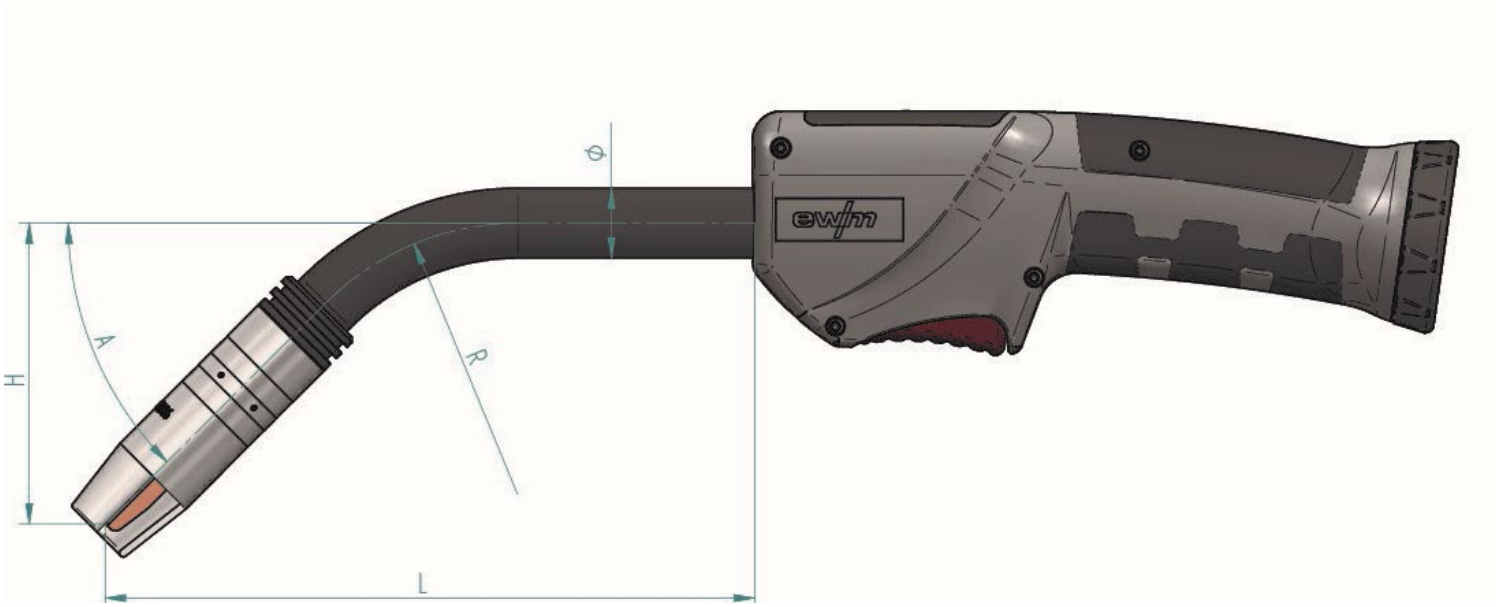


Bottle neck shaped (Pos. 1.2)





OVERVIEW OF PM WELDING TORCH MODELS



Gas cooled

Dimensions	PM 221 G			PM 301 G			
Angle A (°)	0°	36°	45°	0°	22°	36°	45°
Height H (mm)	-	59	75	-	35	61	77
Length L (mm)	179	161	151	197	190	179	167
Radius R (mm)	-	70		-	70		
Diameter Ø (mm)	16			18			

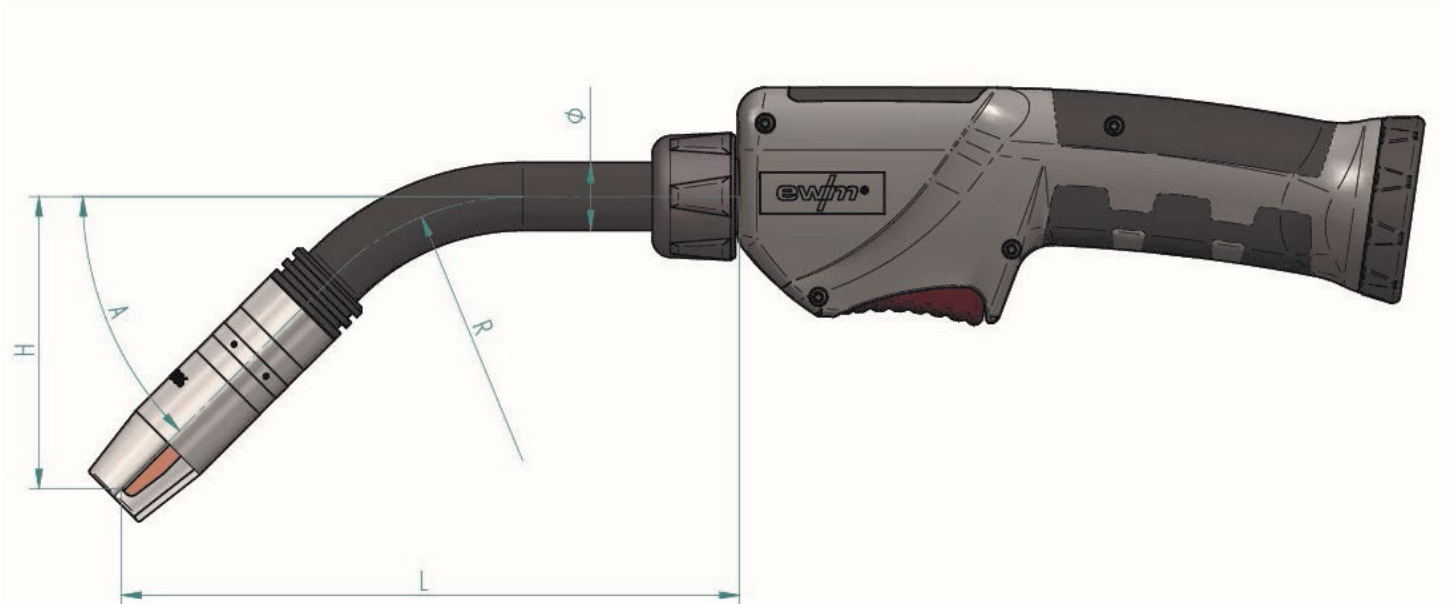
Water cooled

Dimensions	PM 301 W		PM 451 WS		PM 451 W						PM 451 WL			PM 551 WS			PM 551 W					PM 551 WL			
Angle A (°)	0°	45°	0°	45°	0°	22°	36°	45°		50°	0°	35°	45°	0°	22°	36°	0°	22°	36°	45°		0°	22°	35°	45°
Height H (mm)	-	70	-	72	-	38	62	79	92	89	-	75	109	-	130	121	-	35	60	76	85	-	44	72	102
Length L (mm)	172	146	142	115	180	173	161	150	144	143	218	196	177	136	30	51	172	166	154	144	141	210	202	189	171
Radius R (mm)	-	50	-	50	-	70			100	70	-	70	100	-	50		-	70			100	-	70		100
Diameter Ø (mm)	16		19		19						19			19			19					19			

installed as standard ex works

The other versions can be built and ordered upon request.

OVERVIEW OF PM REPLACEABLE NECK TORCH MODELS



Gas cooled

Dimensions	PM 221 CG				PM 301 CG			
Angle A (°)	0°	22°	36°	45°	0°	22°	36°	45°
Height H (mm)	-	32	55	69	-	35	61	77
Length L (mm)	179	165	154	144	193	186	145	164
Radius R (mm)	-	50			-	70		
Diameter Ø (mm)	16				18			

Water cooled

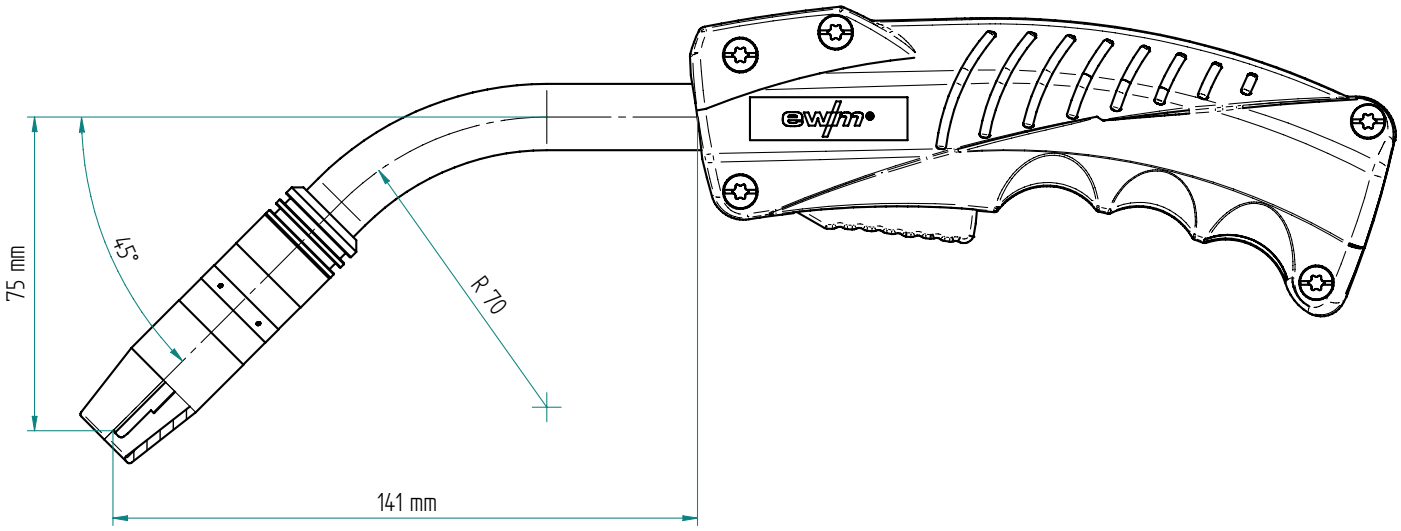
Dimensions	PM 301 CW				PM 451 CW				
Angle A (°)	0°	22°	36°	45°	0°	22°	36°	45°	
Height H (mm)	-	32	55	70	-	38	65	83	92
Length L (mm)	178	172	161	152	219	211	199	187	188
Radius R (mm)	-	50			-	70			100
Diameter Ø (mm)	16				19				

installed as standard ex works

The other versions can be built and ordered upon request.

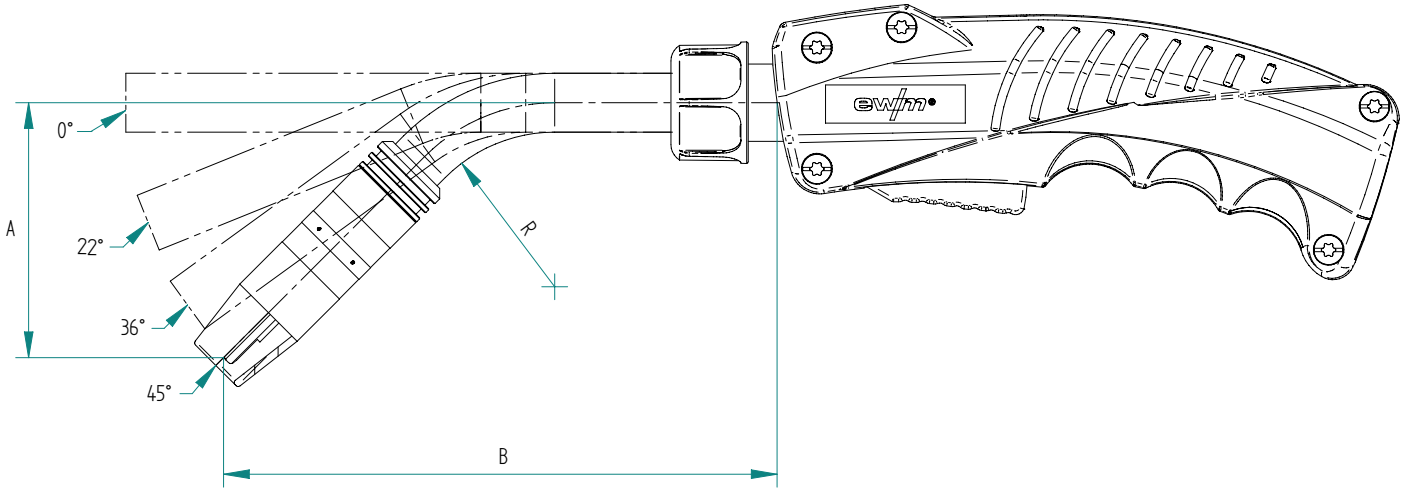
OVERVIEW OF MT TORCH MODELS

MT221G (standard)



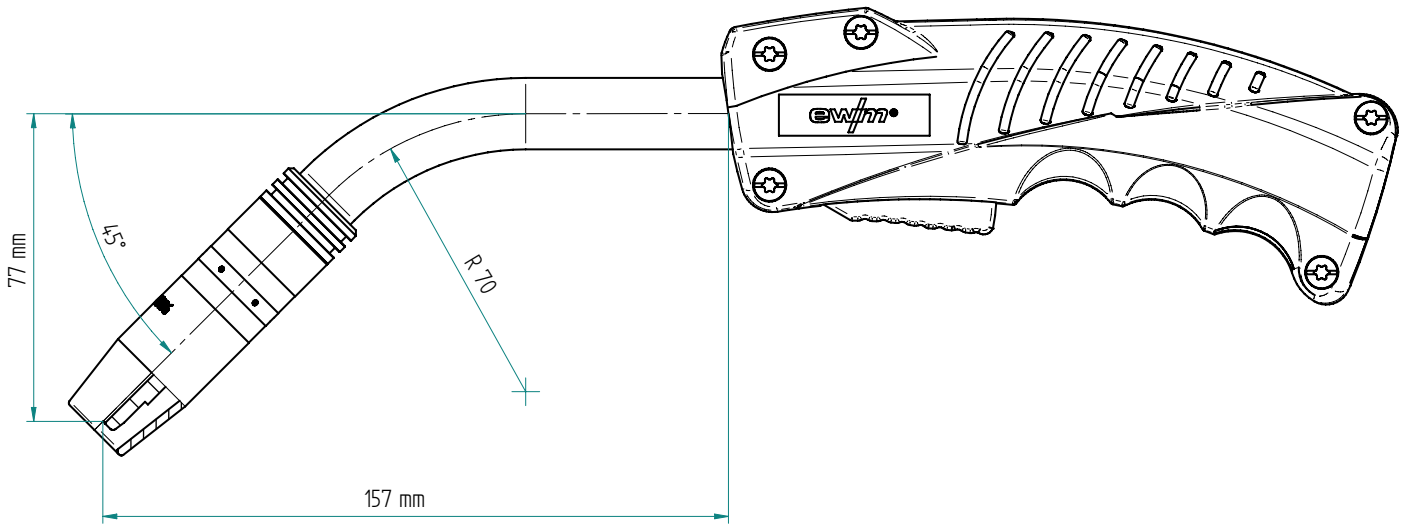
	MT221G
Torch neck length	141 mm
Torch neck bend angle	45°
Radius	70
Torch neck height	75 mm

MT221CG (replaceable neck)



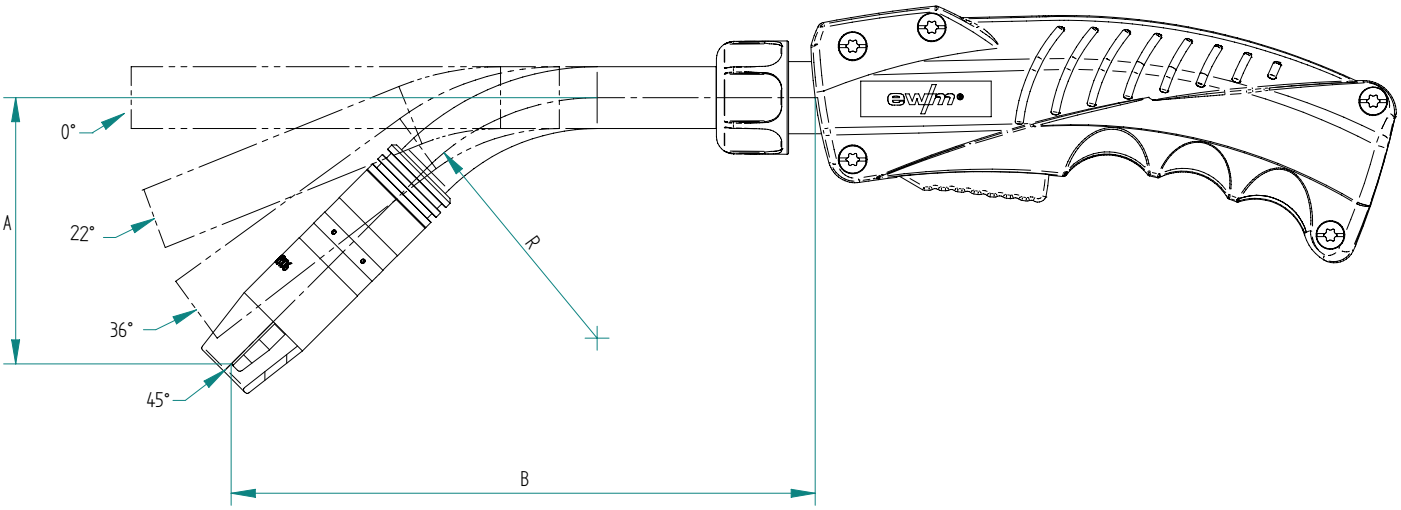
Angle	R	A	B
45°	50	69 mm	150 mm
36°	50	55 mm	160 mm
22°	50	32 mm	171 mm
0°	-	0 mm	177 mm

MT301G (standard)



	MT301G
Torch neck length	157 mm
Torch neck bend angle	45°
Radius	70
Torch neck height	77 mm

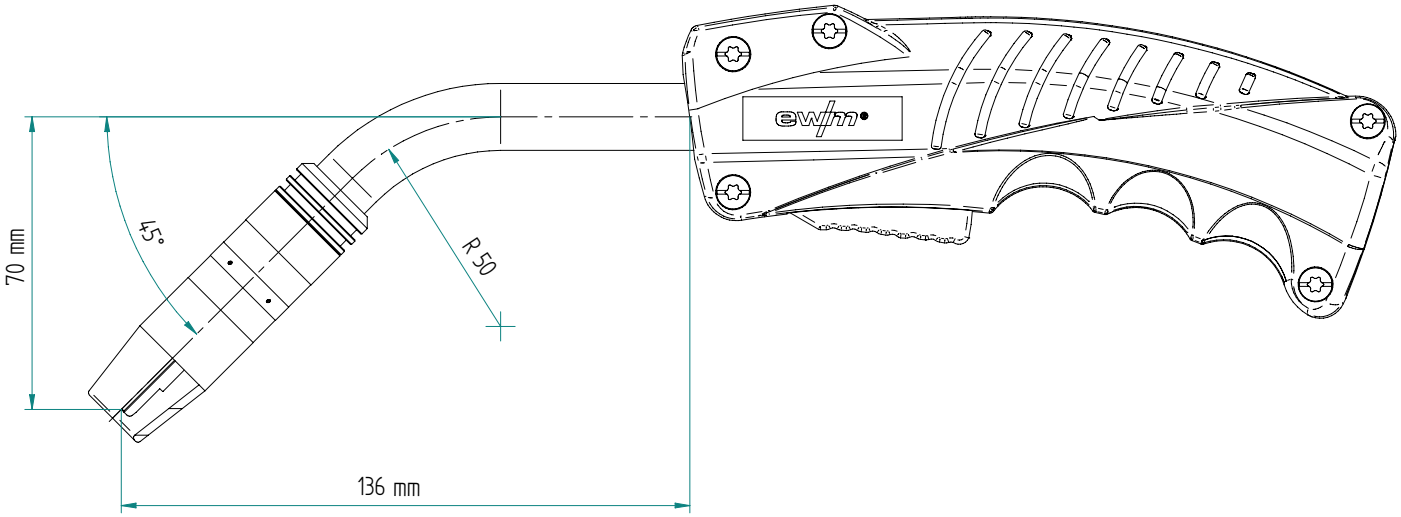
MT301CG (replaceable neck)



Angle	R	A	B
45°	70	77 mm	170 mm
36°	70	61 mm	180 mm
22°	70	35 mm	193 mm
0°	-	0 mm	199 mm

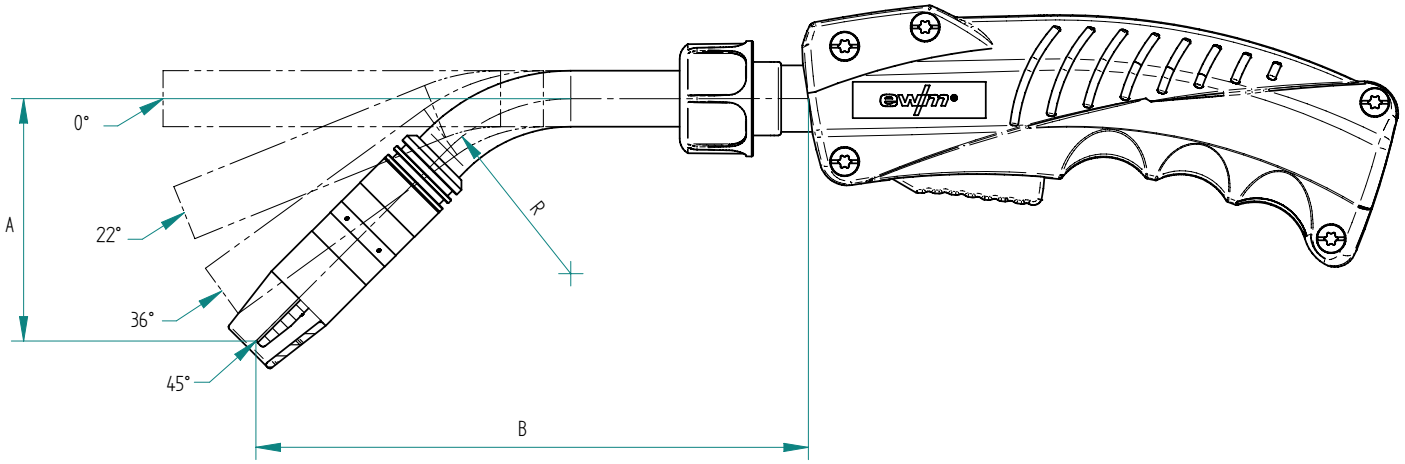
OVERVIEW OF MT TORCH MODELS

MT301W (standard)



	MT301W
Torch neck length	136 mm
Torch neck bend angle	45°
Radius	50
Torch neck height	70 mm

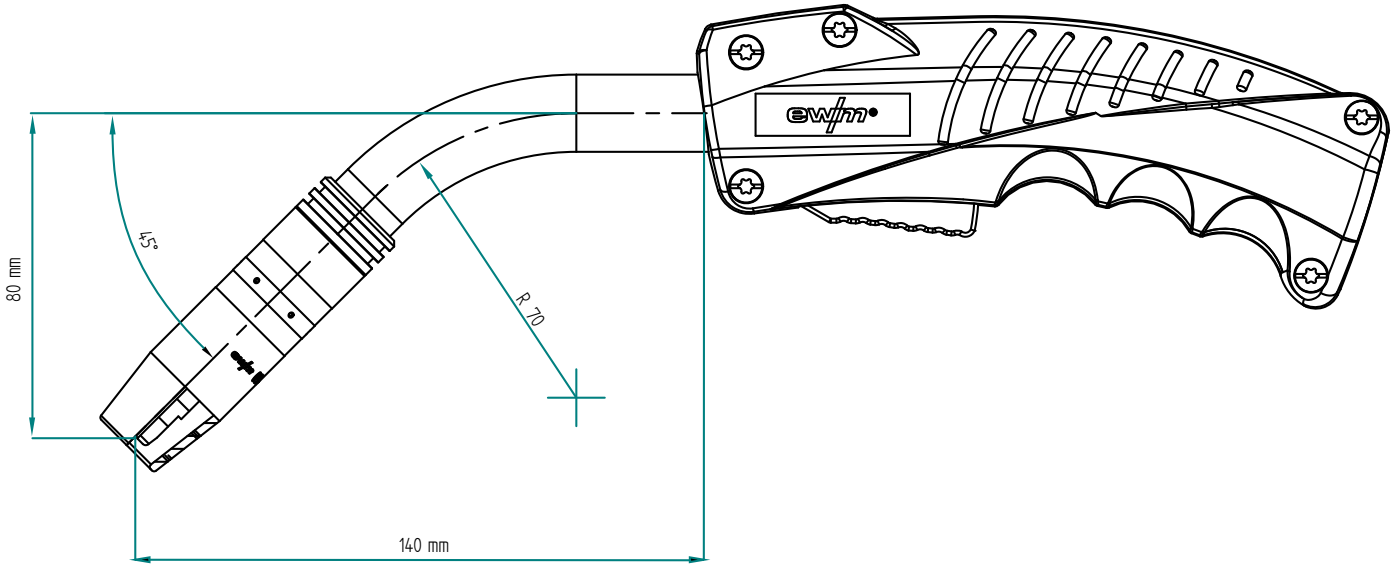
MT301CW (replaceable neck)



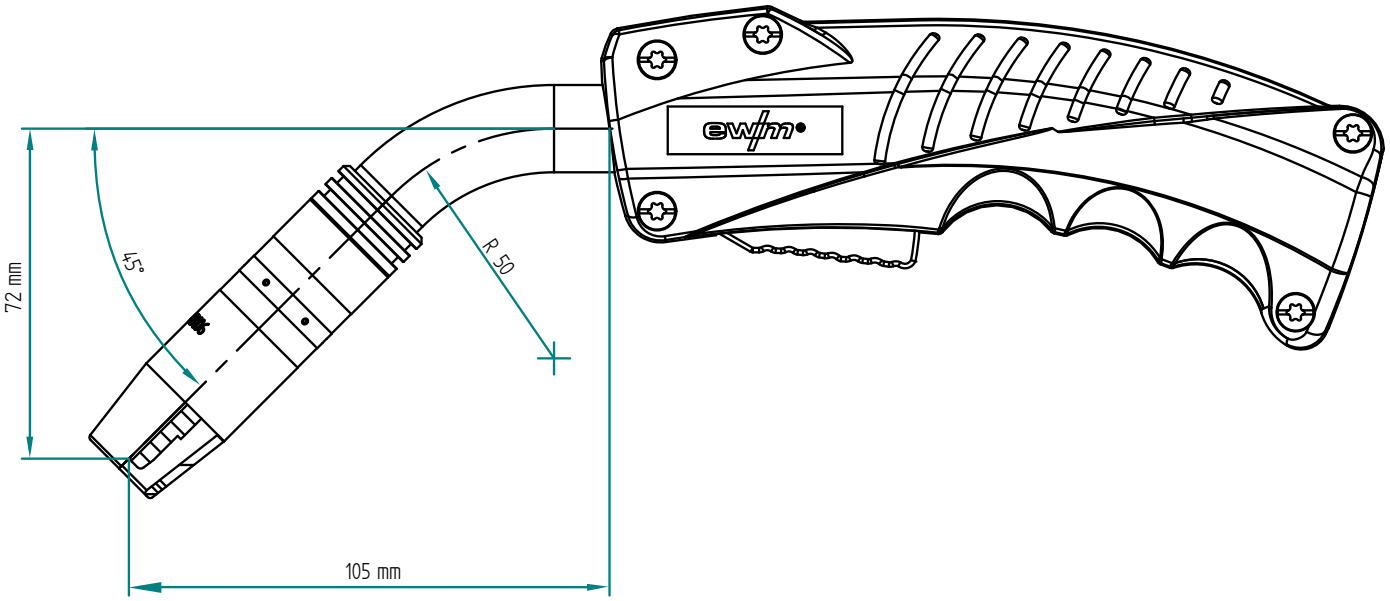
Angle	R	A	B
45°	50	70 mm	158 mm
36°	50	55 mm	168 mm
22°	50	33 mm	178 mm
0°	-	0 mm	184 mm

OVERVIEW OF MT TORCH MODELS

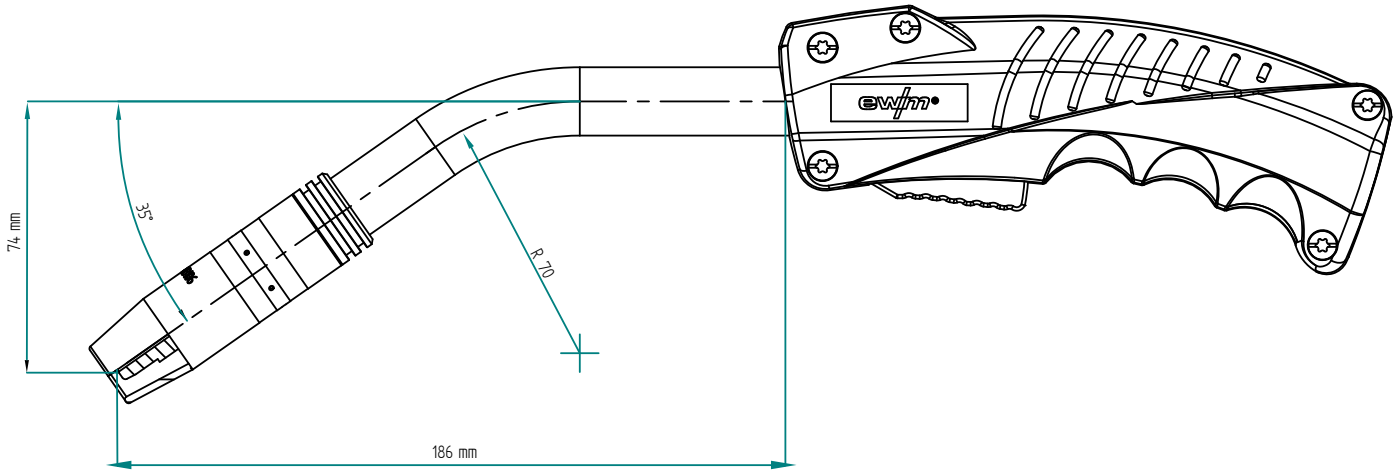
MT451W (standard)



MT451WS (short torch neck)

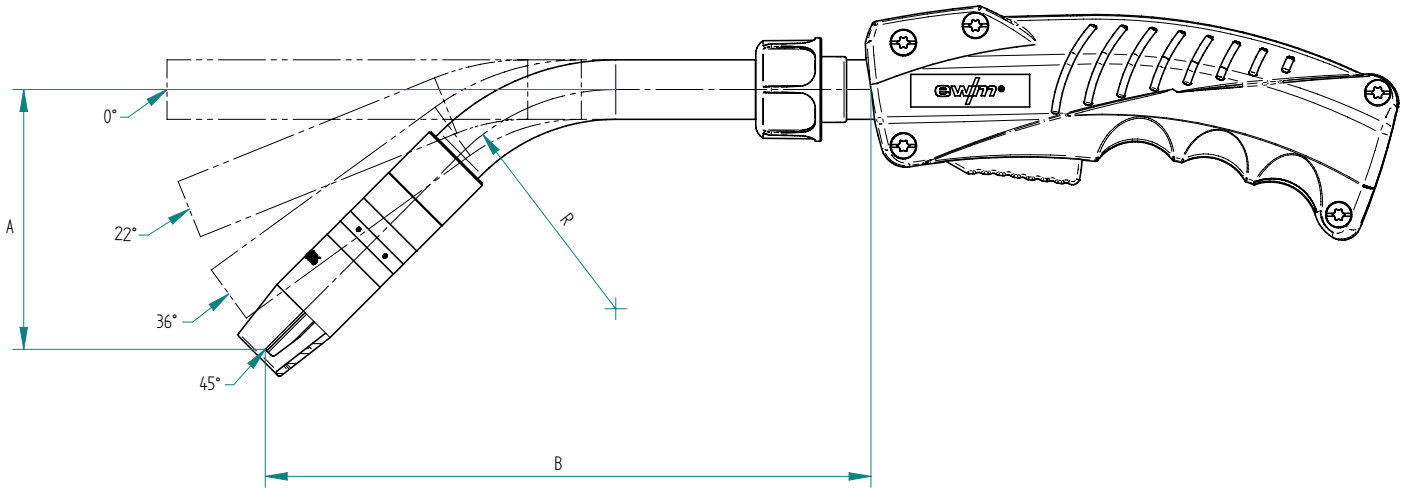


MT451WL (long torch neck)



	MT451W	MT451WS	MT451WL
Torch neck length	140 mm	105 mm	186 mm
Torch neck bend angle	45°	45°	35°
Radius	70	50	70
Torch neck height	80 mm	72 mm	74 mm

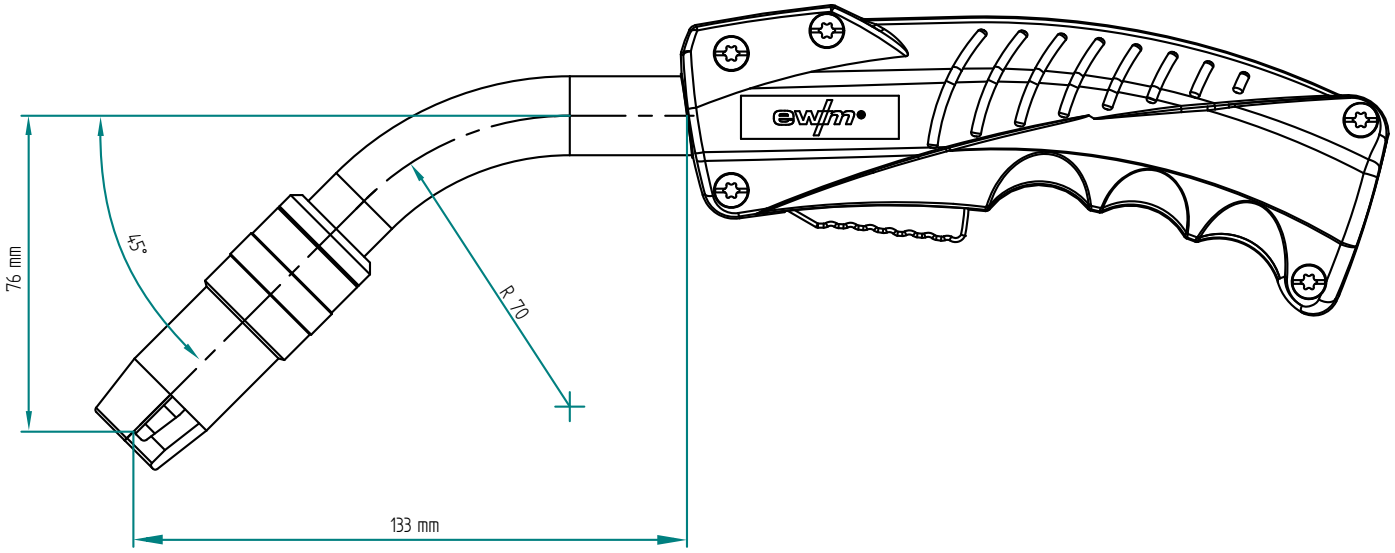
MT451CW (replaceable neck)



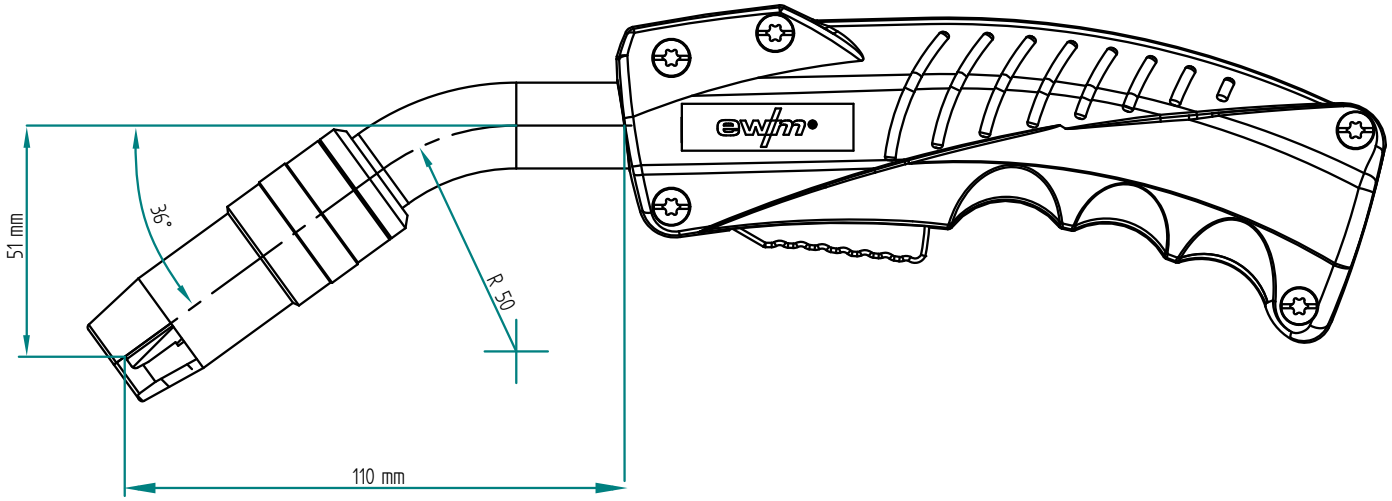
Angle	R	A	B
45°	70	83 mm	193 mm
36°	70	65 mm	205 mm
22°	70	38 mm	217 mm
0°	-	0 mm	224 mm

OVERVIEW OF MT TORCH MODELS

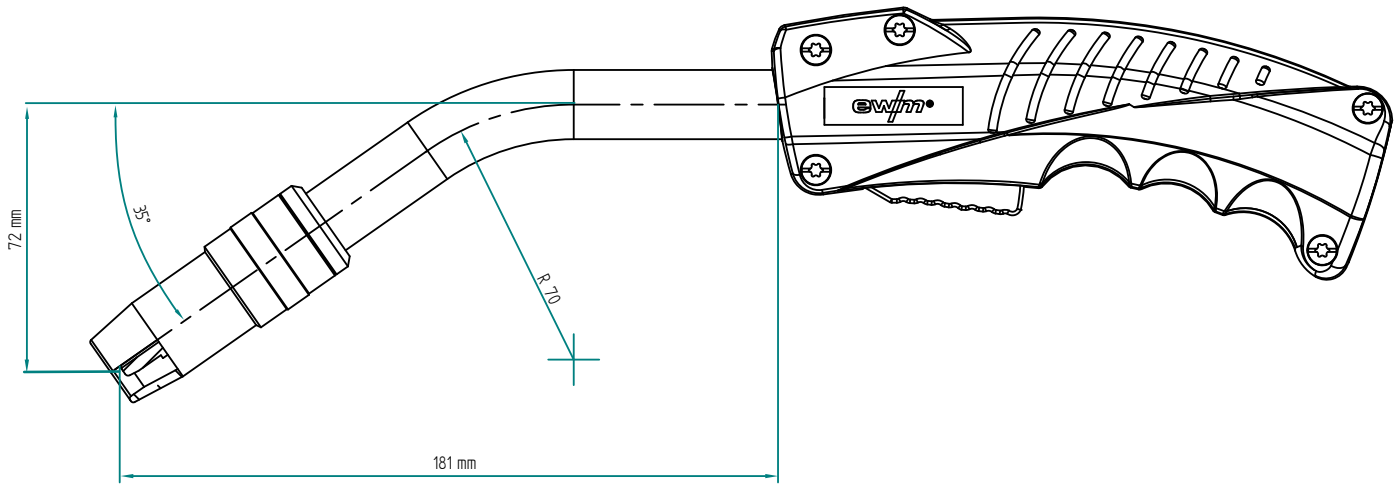
MT551W (standard)



MT551WS (short torch neck)



MT551WL (long torch neck)



Overview

	MT551W	MT551WS	MT551WL
Torch neck length	133 mm	110 mm	181 mm
Torch neck bend angle	45°	36°	35°
Radius	70	50	70
Torch neck height	76 mm	51 mm	72 mm

UM SERIES – UNIVERSAL

HIGHLIGHTS

- Impressive overall package: Solid technology and the sophisticated grip design guarantee good handling.
- High working comfort for everyday use
- Time-tested consumables concept with standard M6 and M8 threads
- Robust, ergonomic grip
- Rubber inserts and a ball joint on the grip for safe, precise operation
- Impressive price/performance ratio
- Suitable for any machine with a Euro torch connector

WELDING TORCH DESIGN



EWM UM CONSUMABLES (M6/M8)

Established consumables concept – Internationally standardised consumables and spare parts in M6 and M8

- In-house production of consumables
- Compatible with many other MIG/MAG welding torches customary on the market
- Cost savings thanks to graduated pricing
- High availability prevents long breaks in production
- Excellent price/performance ratio

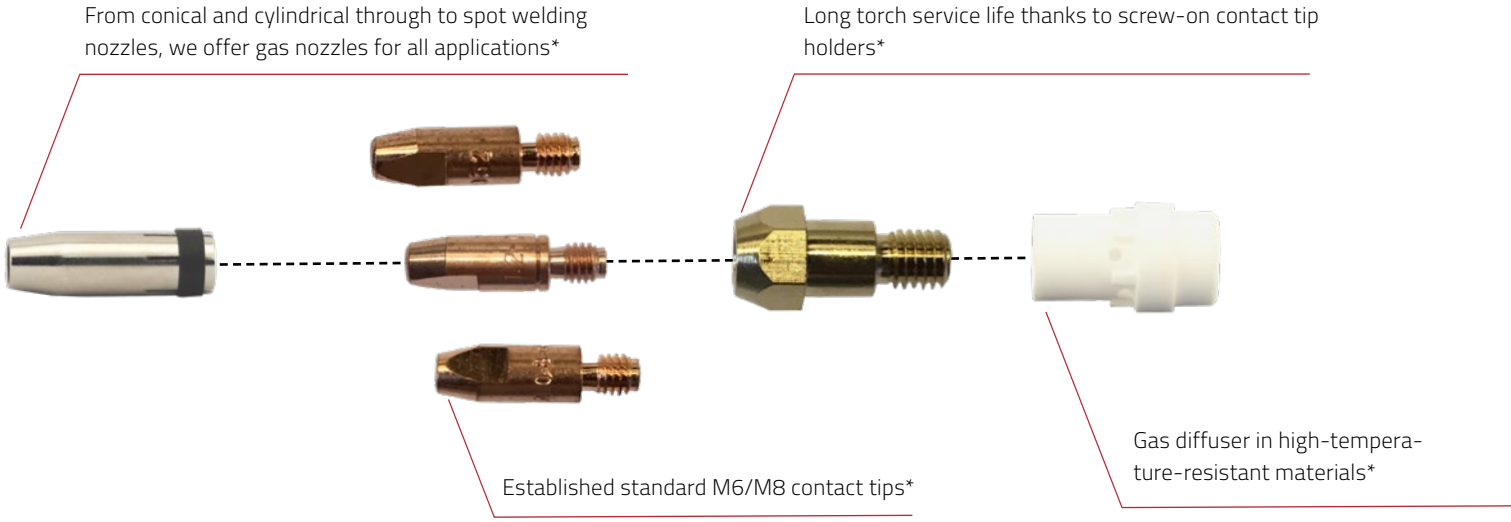


*Image based on the UM 36 G welding torch as an example. Equipment options vary depending on the model.

UM SERIES – FULL OVERVIEW

More information about our UM-torches!







Type	UM 15 G	UM 24 G	UM 25 G
Cooling	gas-cooled "G"	gas-cooled "G"	gas-cooled "G"
Welding current CO_2	180 A/60%	250 A/60%	230 A/60%
Welding current M21	150 A/60%	220 A/60%	200 A/60%
Shielding gas	Argon, mixed gas M21 or CO_2 conforming to DIN EN ISO 14175		
Wire diameter	0.6 to 1.0 mm	0.6 to 1.2 mm	0.6 to 1.2 mm
Hose package length	3 m/4 m/5 m	3 m/4 m/5 m	3 m/4 m/5 m
Connection	Euro torch connector	Euro torch connector	Euro torch connector
Torch data in accordance with	IEC 60974-7	IEC 60974-7	IEC 60974-7






UM 36 G	UM 240 W	UM 401 W	UM 501 W
gas-cooled “G”	water-cooled “W”	water-cooled “W”	water-cooled “W”
300 A/60%	300 A/100%	400 A/100%	500 A/100%
270 A/60%	270 A/100%	350 A/100%	450 A/100%
Argon, mixed gas M21 or CO_2 conforming to DIN EN ISO 14175			
0.8 to 1.4 mm	0.6 to 1.2 mm	0.8 to 1.6 mm	0.8 to 1.6 mm
3 m/4 m/5 m	3 m/4 m/5 m	3 m/4 m/5 m	3 m/4 m/5 m
Euro torch connector	Euro torch connector	Euro torch connector	Euro torch connector
IEC 60974-7	IEC 60974-7	IEC 60974-7	IEC 60974-7

SCO – SPECIAL CUSTOMER ORDER

WHETHER IT'S MIG/MAG, TIG OR PLASMA –

ORDER SPECIAL TORCH CONSTRUCTION ACCORDING TO YOUR SPECIFICATIONS

In addition to our in-house series production of welding torches, we also manufacture welding torches tailored to your specific application. This way, we guarantee you the very best component for your welding task – for both manual and automated welding.

HIGHLIGHTS

- Customised manual, automated and robot welding torches designed and tailored precisely to your application
- Wide range of products: from gas-cooled to replaceable-neck through to welding fume extraction torches
- Our own consumables guarantee a long service life and optimal integration into the welding system



Automated welding inside valve seats with an extra-long torch neck



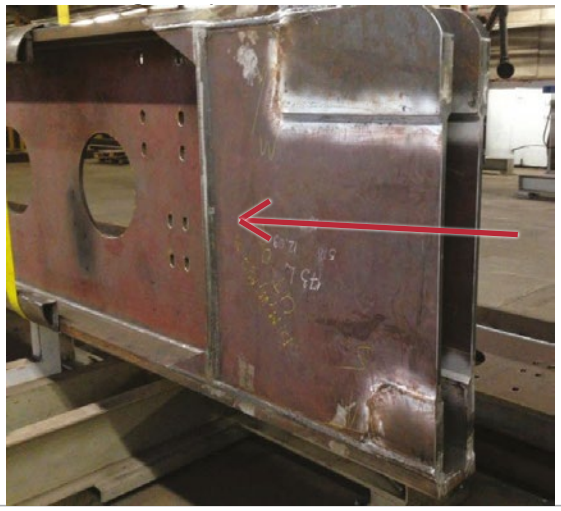
MAG hot wire welding

- Cladding with a deposition rate of up to 13.8 kg per hour



Welding inside pipes with extra long torch neck and small bend radius

APPLICATIONS





Task:

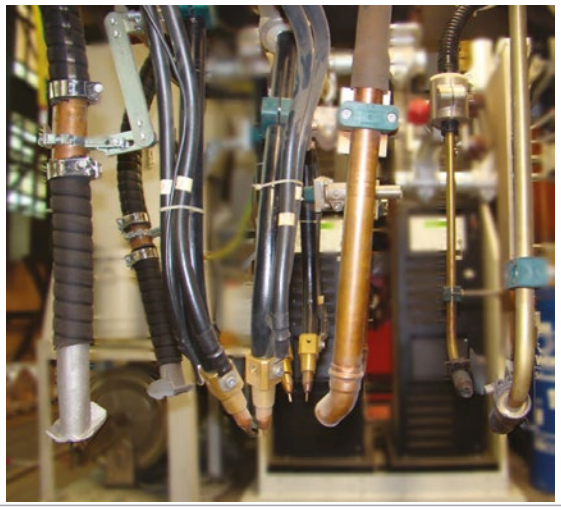
- Welding inside steel structures

EWM solution:

- Torch neck based on the MT551W with a length of 1,500 mm

Customer benefit

- Welding location easily accessible
- Improved visibility of the seam
- Reduced costs due to use of standard MT consumables





Task:

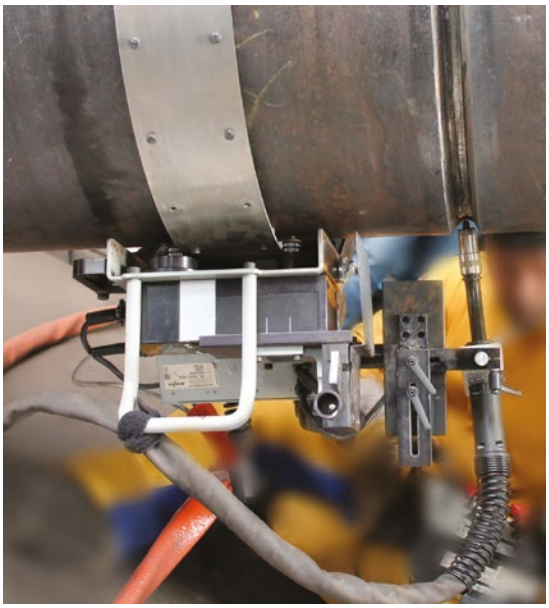
- Reduce downtimes during automated welding of steel structures

EWM solution:

- Welding torch with water-cooled gas nozzle and exchangeable gas nozzle tip

Customer benefit

- The targeted cooling of the gas nozzle enables a duty cycle of 650 A/100%
- High-cost savings thanks to separate exchange of the gas nozzle tip
- Other consumables are standard MT consumables.





Task:

- Space-saving welding torch for use on longitudinal carriages and orbital welding installations

EWM solution:

- Automated welding torch based on AMT551W with a total length of just 61 mm

Customer benefit

- More compact design of the longitudinal carriages
- Orbital welding installations require less space to go round the pipe
- Reduced costs due to use of standard MT consumables

RECOMMENDED EQUIPMENT FOR EWM MIG/MAG WELDING TORCH

USING THE EXAMPLE OF A PM 551 W RD3 X

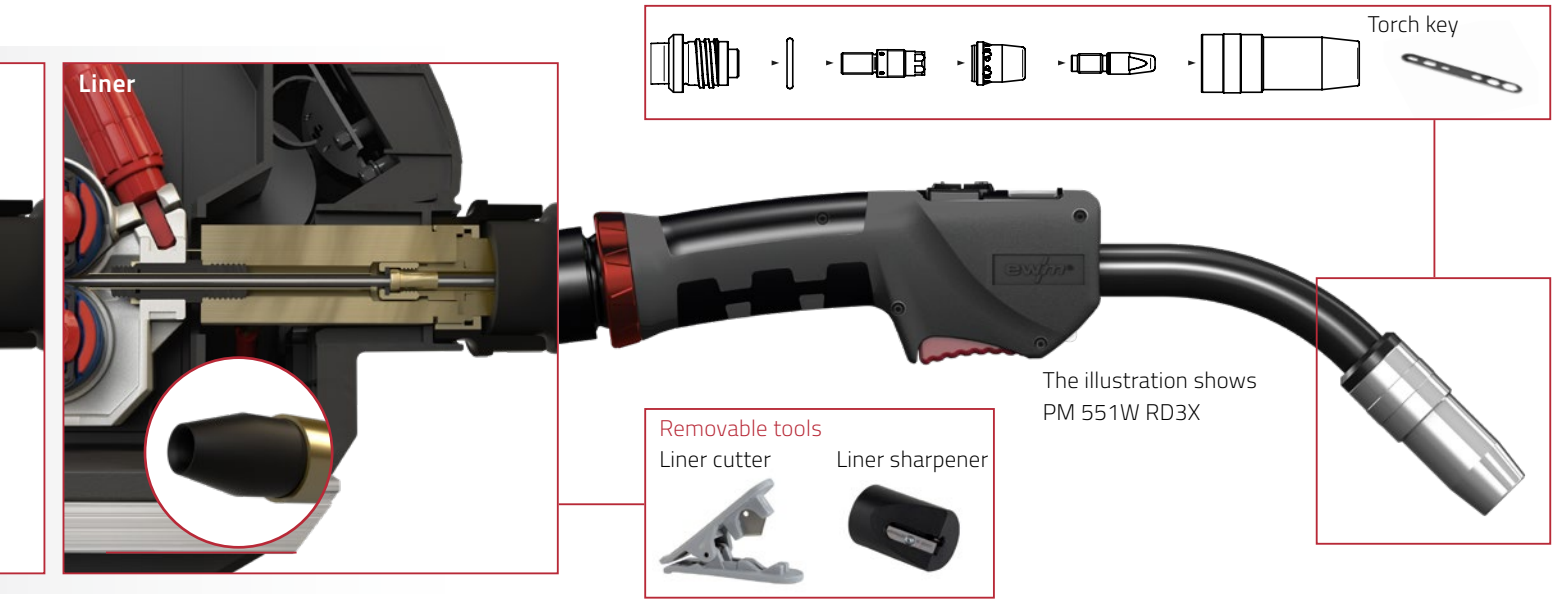
Details for the individual torch types can be found in the chapter on MIG/MAG welding torches.



Use a steel liner with a capillary tube to weld hard, unalloyed wire electrodes (steel).

	Drive rolls		Equipment
Steel CrNi		UNI roll V-groove e.g. Ø 1.0–1.2 mm blue/red	Capillary tube Guide tube
Aluminium Aluminium AC		U-groove roll e.g. Ø 0.9–1.0 mm blue/yellow	Guide tube
Flux cored wire, steel Flux cored wire CrNi		V-groove, knurled e.g. Ø 1.0 mm blue/orange	Capillary tube Guide tube

Use a liner with a guide tube to weld or braze soft or alloyed wire electrodes.



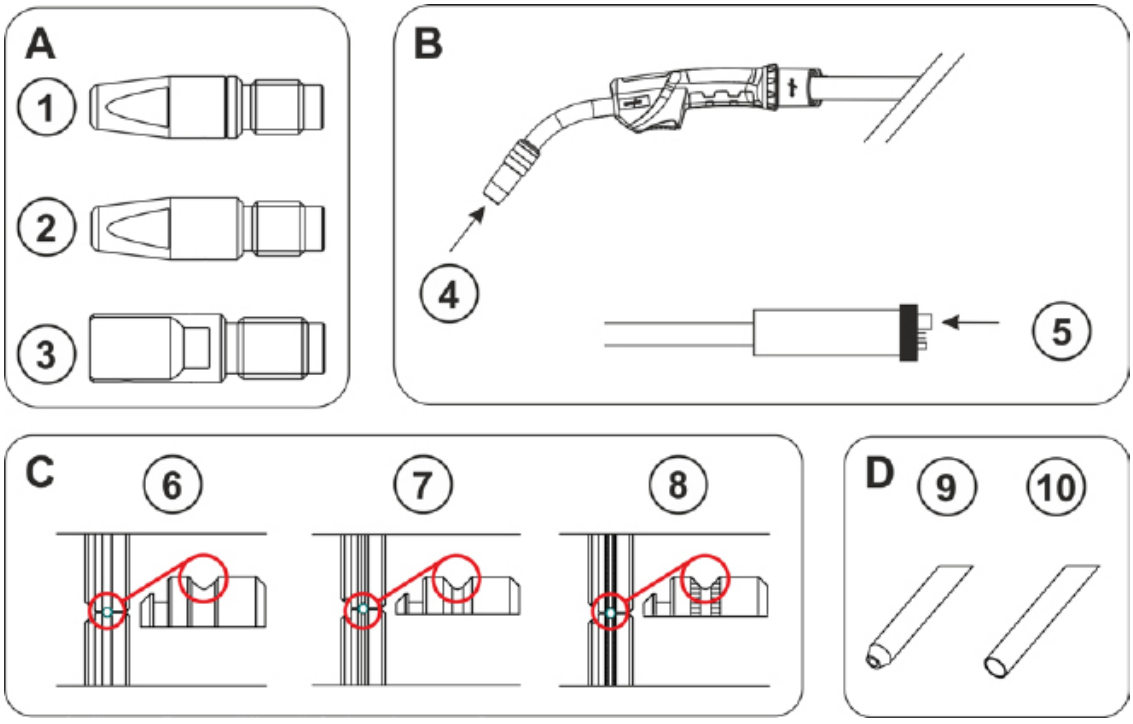
	Brass liner	Contact tip	Gas nozzle
Steel liner Liner	Length 200 mm	CuCrZr	NW17
Liner	Length 30 mm Length 100 mm Note: The brass liner must be shortened to the required length by the user.	E-Cu Forced contact	NW15
Steel liner Liner	Length 200 mm	CuCrZr	NW17

Wire feed roll support consumables set for eFeed (092-002960-E0000)



The plastic adapter of the wire feed roll support of the eFeed drive may wear out after long, intensive loads. This wear may cause problems in the wire feeding.
EWM recommends: An annual check of the wire feed roll support as part of the EN 60974-4 test and replacement of the wire feed roll support after 2,000 hours of operation.

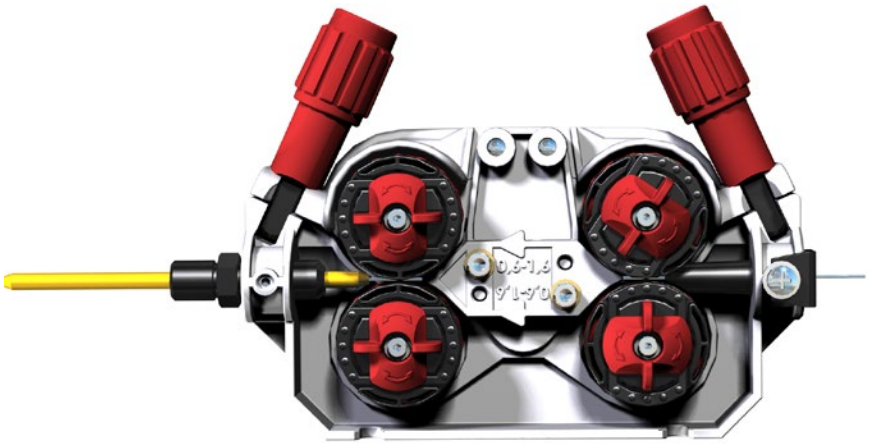
RECOMMENDED EQUIPMENT FOR EWM MIG/MAG WELDING TORCHES



	Material	Contact tip version (A)	Equipment side (B)	Wire feed rolls (C)	Capillary tube/guide tube (D)
Wire electrodes	Low-alloy	1 CT CuCrZr	5	7 V-groove	9 Capillary tube
	Medium-alloy	1 CT CuCrZr	5	7 V-groove	10 Guide tube
	Hardfacing	1 CT CuCrZr	5	7 V-groove	10 Guide tube
	High-alloy	1 CT CuCrZr	5	7 V-groove	10 Guide tube
	Aluminium	2 CTAL E-Cu	4	6 U-groove	10 Guide tube
	Aluminium (AC)	3 CT ZWK CuCrZr	4	6 U-groove	10 Guide tube
	Copper alloy	1 CT CuCrZr	5	7 V-groove	10 Guide tube
Flux cored wire electrodes	Low-alloy	1 CT CuCrZr	5	8 V-groove, knurled	9 Capillary tube
	High-alloy	1 CT CuCrZr	5	8 V-groove, knurled	10 Guide tube

	Material	Wire Ø	Wire guide Ø	Liner	Length of brass liner
Wire electrodes	Low-alloy	0.8	1.5 x 4.0	Steel liner	
		1.0	1.5 x 4.0		
		1.2	2.0 x 4.0		
		1.6	2.4 x 4.5		
	Medium-alloy	0.8	1.5 x 4.0	Combined liner	200 mm
		1.0	1.5 x 4.0		
		1.2	2.0 x 4.0		
		1.6	2.3 x 4.7		
	Hardfacing	0.8	1.5 x 4.0	Combined liner	200 mm
		1.0	1.5 x 4.0		
		1.2	2.0 x 4.0		
		1.6	2.3 x 4.7		
	High-alloy	0.8	1.5 x 4.0	Combined liner	200 mm
		1.0	1.5 x 4.0		
		1.2	2.0 x 4.0		
		1.6	2.3 x 4.7		
	Aluminium	0.8	1.5 x 4.0	Combined liner	30 mm
		1.0	1.5 x 4.0		
		1.2	2.0 x 4.0		
		1.6	2.3 x 4.7		
	AC welding of aluminium	0.8	1.5 x 4.0	Combined liner	100 mm
		1.0	1.5 x 4.0		
		1.2	2.0 x 4.0		
		1.6	2.3 x 4.7		
	Copper alloy	0.8	1.5 x 4.0	Combined liner	200 mm
		1.0	1.5 x 4.0		
		1.2	2.0 x 4.0		
		1.6	2.3 x 4.7		
Flux cored wire electrodes	Low-alloy	0.8	1.5 x 4.0	Steel liner	
		1.0	1.5 x 4.0		
		1.2	2.0 x 4.0		
		1.6	2.4 x 4.5		
	High-alloy	0.8	1.5 x 4.0	Combined liner	200 mm
		1.0	1.5 x 4.0		
		1.2	2.0 x 4.0		
		1.6	2.3 x 4.7		

CAPILLARY TUBE/GUIDE TUBE FOR EWM MACHINES AND WIRE FEEDERS



The use of capillary or guide tubes ensures optimum wire guiding from spool to weld pool.

Recommendation:

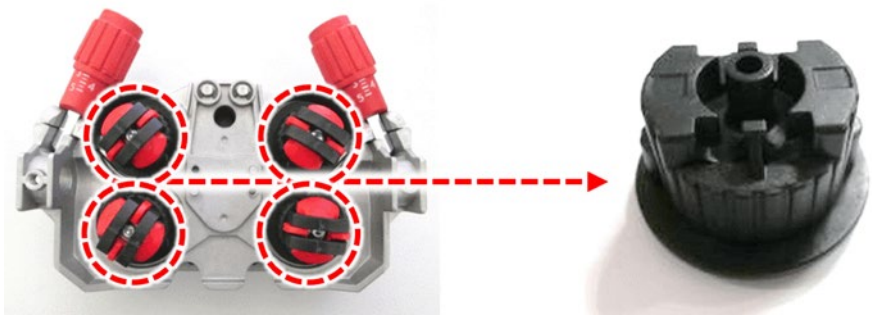
- Use a steel liner with a capillary tube to weld hard, unalloyed wire electrodes (steel).
- For welding or brazing soft or alloyed wire electrodes, use a liner with a guide tube
  The Euro welding torch connectors on our wire feeders and welding machines are equipped with a capillary tube for welding torches with steel liners (for wires ≤ 1.6 mm) ex-works. The Euro torch connector needs to be modified accordingly on the machine if a welding torch with a plastic liner is used!

If welding torches and the Euro torch connector are not equipped in line with the wire electrode used, there will be problems with wire feeding:

- Bird nest
- Jolting, irregular wire feed or the whole wire feed system may get jammed

Wire feed roll support consumables set for eFeed

The plastic adapter of the wire feed roll support of the eFeed drive may wear out after long, intensive loads. This wear may cause problems in the wire feeding.
EWM recommends: An annual check of the wire feed roll support as part of the EN 60974-4 test and replacement of the wire feed roll support after 2,000 hours of operation.



USED ON WELDING MACHINES WITH EFEED DRIVE:

Design		Capillary tube Wires ≤ 1.6 mm: 094-006634-00000 Wires ≤ 2.4 mm: 094-021470-00000 Wires ≥ 2.4 mm: On request	Guide tube Wires ≤ 1.6 mm: 094-020064-00000 Wires ≤ 2.4 mm: On request Wires ≥ 2.4 mm: On request
Wire feeder			
Drive XQ Drive 4X S			
+ Decompact welding machines		●	●
Titan XQ D Phoenix XQ D Taurus XQ D Sirion puls			
Compact welding machines			
Titan XQ C Phoenix XQ C Taurus XQ C Picomig 305		●	●
Picomig 180/220		094-014667-00000	094-018316-00000

CENTRAL CONNECTIONS ON THE WIRE FEED SIDE

Available on request

- All MT torches are equipped with a Euro torch connector as standard.
- Other connectors available ex works on request.
  Examples:

FZA G, GAS-COOLED VERSION[1)]



FZA WI, VERSION WITH INTERNAL COOLANT SUPPLY[2)]



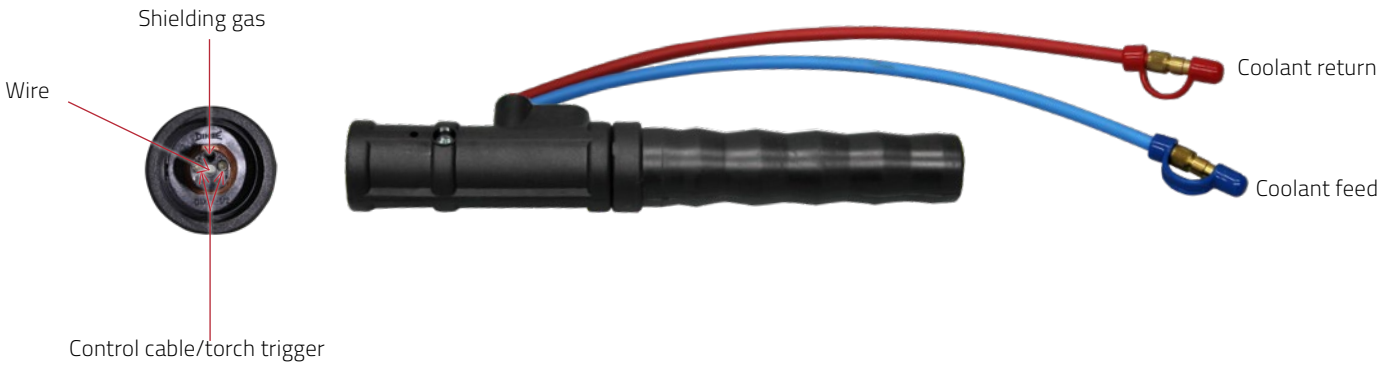
FZA WA, VERSION WITH EXTERNAL COOLANT SUPPLY[3)]



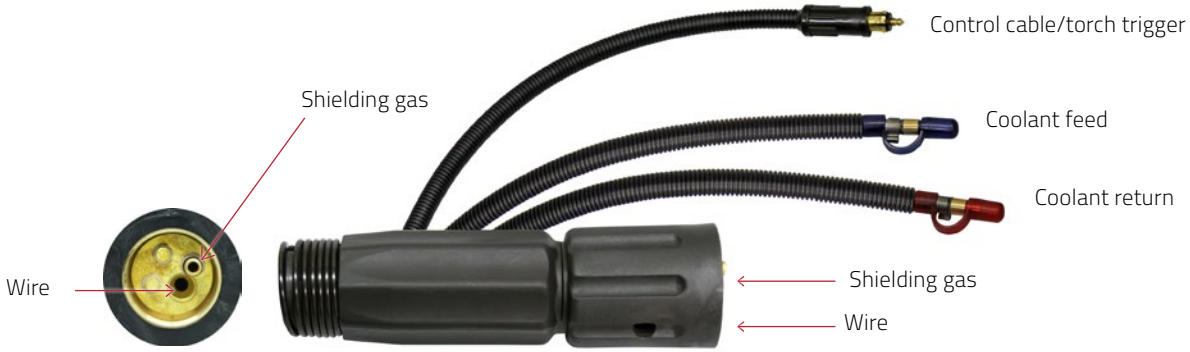
! Use all FZA connections in conjunction with the corresponding steel liners only:

Designation	Diameter	Length	Colour code	Item no.
Steel liner	Ø 1.6 x 4.6 mm	3.5 m	blue	094-020783-00000
Steel liner	Ø 1.6 x 4.6 mm	4.5 m	blue	094-020784-00000
Steel liner	Ø 1.6 x 4.6 mm	5.5 m	blue	094-020785-00000
Steel liner	Ø 2.0 x 4.6 mm	3.5 m	red	094-020786-00000
Steel liner	Ø 2.0 x 4.6 mm	4.5 m	red	094-020787-00000
Steel liner	Ø 2.0 x 4.6 mm	5.5 m	red	094-020788-00000
Collet chuck	Ø 4.0 mm	-	-	094-020782-00000

DZA WA[4)]



CZA WA, VERSION WITH EXTERNAL COOLANT SUPPLY[5)]



CZA WI, VERSION WITH INTERNAL COOLANT SUPPLY[6)]



Instructions for use

- [1)] Compatible with gas-cooled welding torches by Fronius International GmbH
- [2)] Compatible with water-cooled welding torches with internal coolant supply by Fronius International GmbH
- [3)] Compatible with water-cooled welding torches with external coolant supply by Fronius International GmbH
- [4)] Compatible with welding torches by DINSE GmbH
- [5)] Compatible with water-cooled welding torches with external coolant supply by Carl Cloos Schweißtechnik GmbH
- [6)] Compatible with water-cooled welding torches with internal coolant supply by Carl Cloos Schweißtechnik GmbH

TIG AND PLASMA WELDING TORCHES







Carsten Schröter
Operations Manager of Gebrüder Stahl GmbH

Excellent operability – Machines are well thought out and coherent in design

“ The greatest benefits are flexibility, short set-up times and position-independent welding results

EWM TIG WELDING TORCHES

HIGHLIGHTS

- A large selection that's quite impressive: Manual, automated, cold/hot wire and spot welding torches are available
- All manual welding torches from the TIG series are fitted with an ergonomic grip for extra-secure handling and an optimal feel when operating the torch.
- Two consumables systems:
  - TIG-SR for simple applications
  - TIG for power-intensive welding processes such as AC TIG or welding tasks with intense radiated heat (DC copper welding).
- EWM's TIG series is optimally matched to the strict requirements of today's industry and integrates innovative welding process like no other torch range.

WELDING TORCH DESIGN



Control

- Available as EWM Retox XQ with double push-button or up/down depending on model
- Rotary gas valve possible for TIG welding with MMA machines without gas valve

Compact ball joint provides optimal range of movement

- Comfortable working conditions thanks to strain relief, especially for positional welding

Consumables system

- TIG consumables system for professional use in industry and trade
- TIG-SR consumables system for basic uses

Rubber inserts in the grip – for the best hold

- High degree of welding comfort thanks to ergonomically shaped handle
- Secure hold for optimum welding torch guidance, even during positional welding

Various hose packages

- Available in the functional standard version
- Robust and flexible rubber hose
- High-Flex (HFL) with 1 m leather hose

OVERVIEW

To meet your individual needs and the stringent requirements of TIG welding, we offer you many other equipment options and designs.



1 TIG standard welding torch

- TIG and TIG-SR series with ergonomic GRIP for a secure grip and ergonomics in a wide variety of versions



2 TIG welding torch Little

- Especially compact GRIP, perfectly suitable for welding tasks that are difficult to access



3 Heavy-duty welding torch

- Gas-cooled TIG welding torch with particularly high duty cycle



4 TIG fume extraction torch

- Gas- or water-cooled TIG fume extraction torch for operation on high-vacuum extraction systems



5 spotArc® welding torch

- Spot welding torch, with welding nozzles for fillet welds, edge welds and flat welds incl. setting gauge



6 TIG welding torch with rotary gas valve

- For connection to welding machines without gas valve



7 TIG cold/hot torch

- Gas- or water-cooled cold/hot wire torches in various versions

VERSIONS AVAILABLE

	Manual welding torches	TIG 150/260	TIG 200/450	TIG-SR 17/18/26	TIG-SR 20	TIG-SR 300 HD
1	TIG standard torch	●	●	●	●	●
	Flexible torch neck		●*			●
	SuperCool version		●**	●**		
2	Little welding torch	●			●	
3	HD – Heavy-duty welding torch					●
4	F series TIG fume extraction torch	●				
5	spotArc® welding torch for spot and tack welding			●		
6	Rotary gas valve			●		
7	Cold/hot welding torch					

*Flex neck for TIG 200F GD

**SC only for TIG 450SC WD and TIG-SR 18SC

TIG CONSUMABLES SYSTEMS

TIG-SR SYSTEM

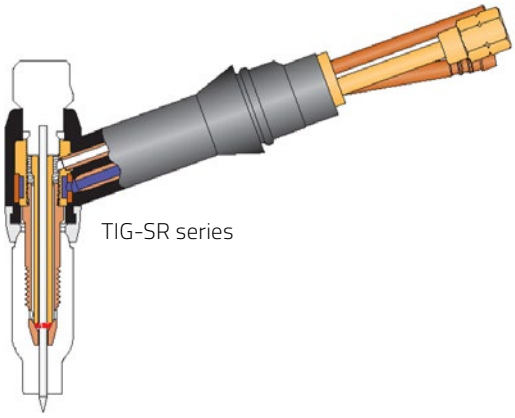
- The original TIG welding torch
- Internationally recognised standard
- Extremely simple design, low cost
- No noteworthy further development on a technical level
- Suitable for simple applications

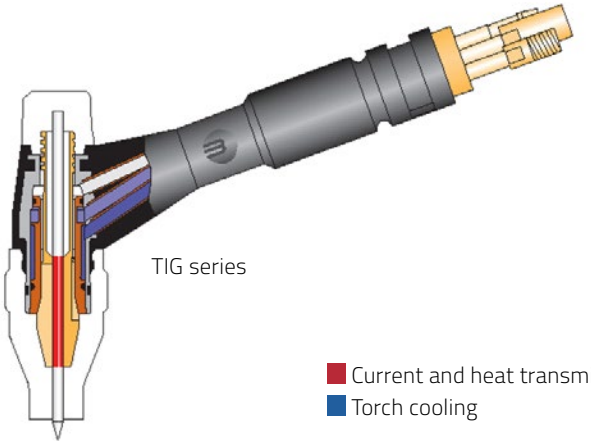
TIG SYSTEM

- Components streamlined to three consumables:
  - Back cap
  - Electrode holder or gas diffuser
  - Gas nozzle
- As a result, easily manageable warehousing and lower overall costs
- Easier adjustment of tungsten needle
- Simpler, quicker change of consumables
- No copies, so optimum quality assured
- For power-intensive welding processes such as AC TIG or welding tasks with intense radiated heat (DC copper welding)

TIG SYSTEM ADVANTAGE: 35% LESS HEAT GENERATION

The reduced distance between the power-transmitting surface and the cooling unit together with the larger cooling areas of the consumables reduce the temperature at the front of the gas nozzle on the TIG torch by up to 180 °C.

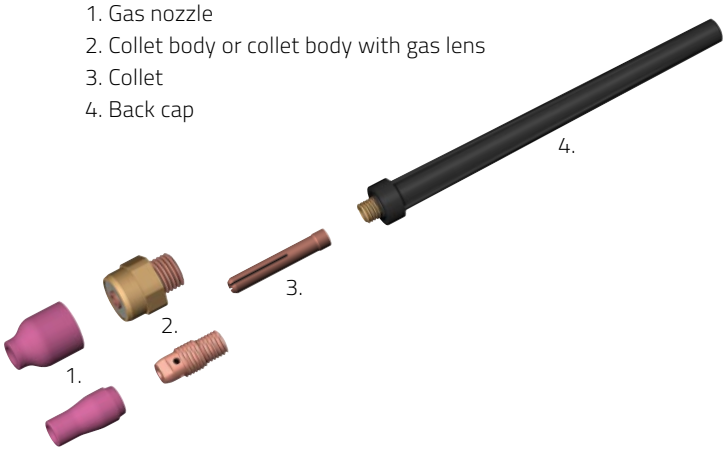




CONSUMABLES SYSTEM DESIGN

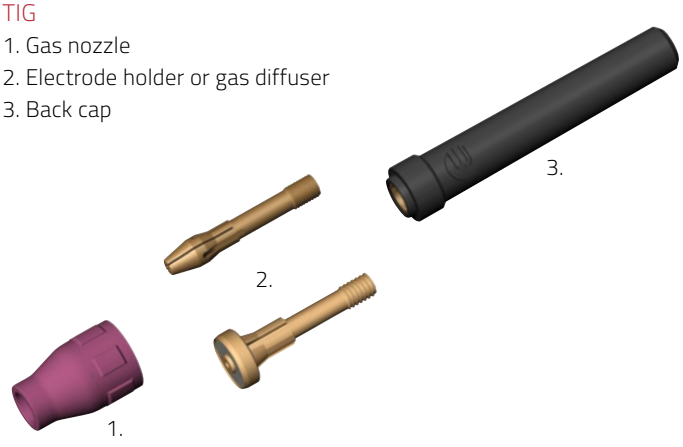
TIG-SR

1. Gas nozzle
2. Collet body or collet body with gas lens
3. Collet
4. Back cap



TIG

1. Gas nozzle
2. Electrode holder or gas diffuser
3. Back cap



OPERATING VERSIONS – GUARANTEEING A GOOD CHOICE



Retox control

Display and setting of:

- Switching the welding current on and off
- During welding, the current can be reduced to a secondary current by tapping it.
- Continuous increase of the welding current during the welding process (up function)
- Continuous decrease of the welding current during the welding process (down function)
- Access to welding tasks (JOBs) defined on the welding machine
- Indicators for:
  - Welding current
  - Or selected welding tasks (JOB numbers)



Up/down control

Setting of:

- Switching the welding current on and off
- During welding, the current can be reduced to a secondary current by tapping it.
- Continuous increase of the welding current during the welding process (up function)
- Continuous decrease of the welding current during the welding process (down function)



Up/down Little version



Non-latched control

Setting of:

- Switching the welding current on and off
- During welding, the current can be reduced to a secondary current by tapping it.



Non-latched Little version



Rotary gas valve

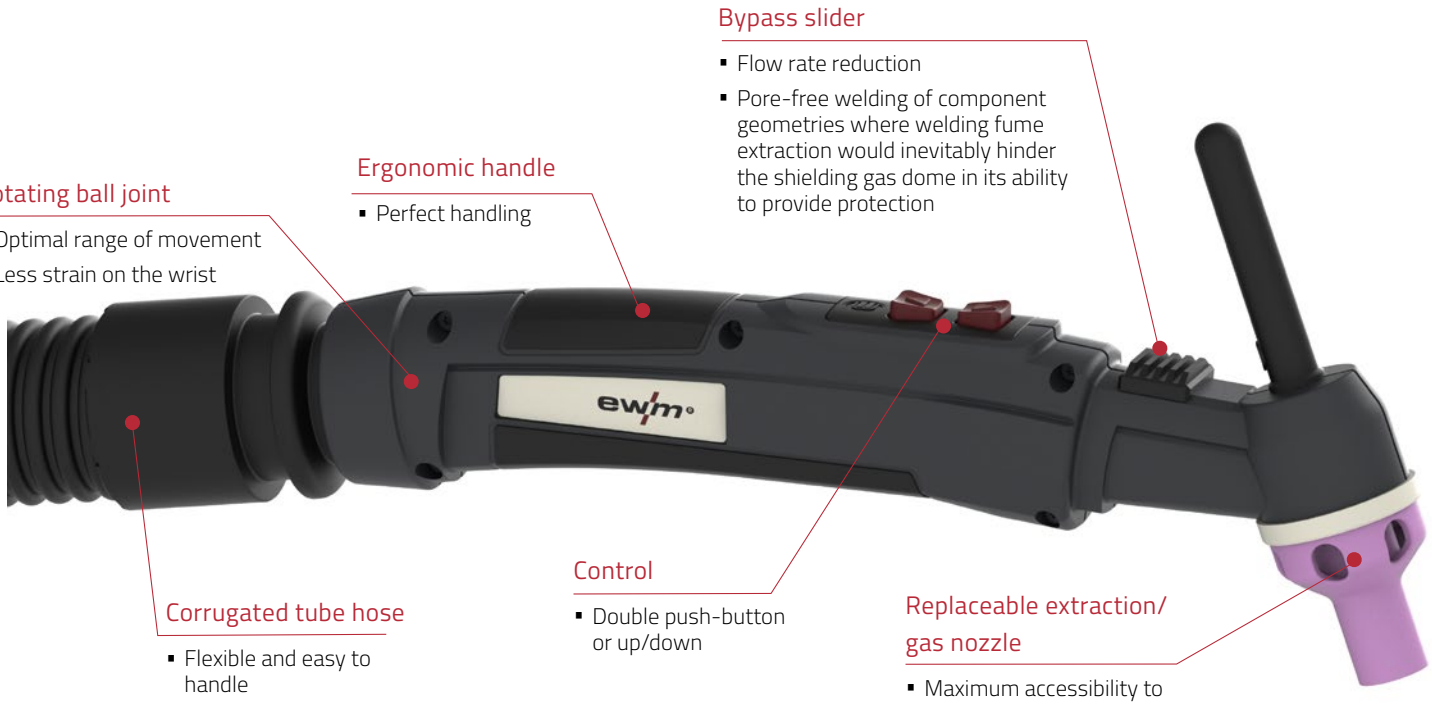
Setting of:

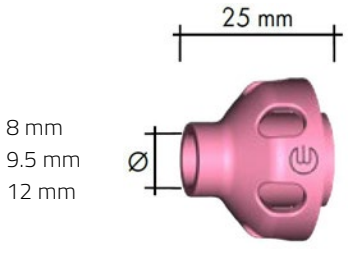
- For connection to welding machines without gas valve
- Permanent shielding gas flow from the welding torch when the rotary gas valve is open (no control via separate gas valve)
- The rotary valve must be opened before each welding procedure and closed after each welding procedure.

TIG FUME EXTRACTION TORCH

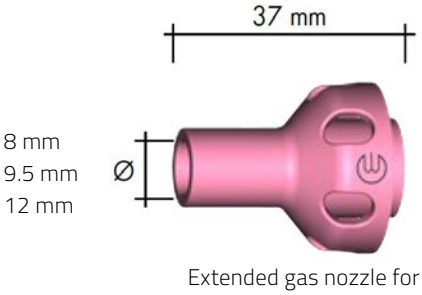
- Gas- or water-cooled TIG fume extraction torch for operation on high-vacuum extraction systems
- Improved health conditions even when TIG welding Even though TIG welding generates less smoke, it still emits more hazardous, invisible welding fumes
- Excellent shielding gas coverage
- Reduced extraction capacity thanks to bypass slider Pore-free welding of component geometries where welding fume extraction would inevitably hinder the shielding gas dome in its ability to provide protection
- Optimal range of movement and comfortable to work with thanks to the ball joint
- Special combination of gas nozzle and extraction nozzle made from ceramic
- Extended gas nozzles are available for better accessibility for more narrow components
- Suitable for extraction units of W3 filter class
- Despite the integrated welding fume extraction, the entire welding torch is lightweight and ergonomically designed for optimal handling

WELDING TORCH DESIGN





Standard gas nozzle



Extended gas nozzle for confined components

TIG-HD TORCH

- Gas-cooled TIG-SR welding torch for very high duty cycles (heavy duty)
- Compatible with SR wear part
- Also available with flexible torch neck



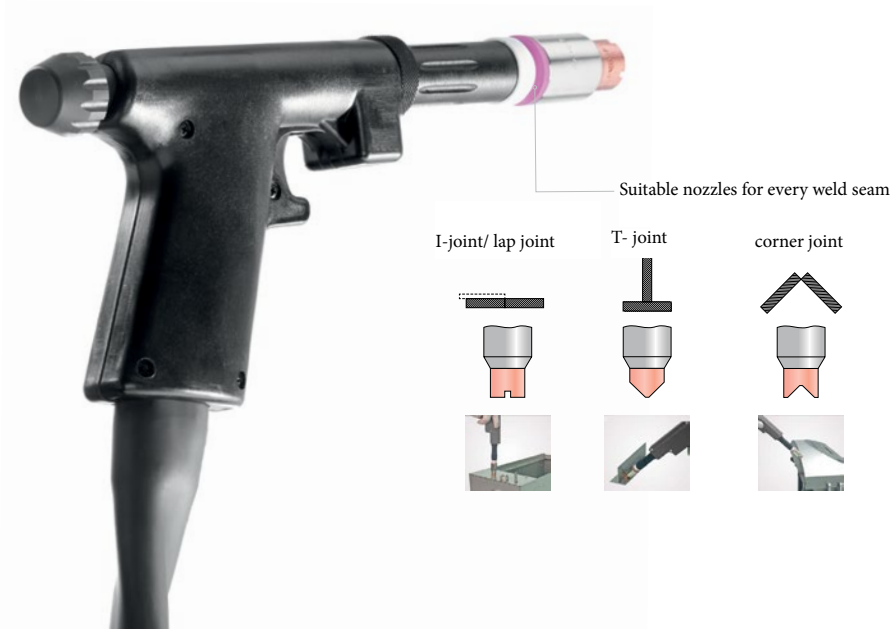
Flexible torch neck

- Optionally available with flexible or rigid torch neck



TIG SPOTARC® WELDING TORCH

- Spot welding torch, with welding nozzles for fillet welds, edge welds and flat welds incl. setting gauge
- Better surface formation in comparison to resistance welding
- Flatter spot formation in comparison to MAG spot welding
- Excellent seam quality due to minimal heat input
- Very low thermal stresses and little distortion due to short welding times
- Perfect for visible joints due to clean seam appearance
- Robust design
- Excellent HF safety



TIG WELDING TORCHES – FULL OVERVIEW

More information about our TIG torches!







Type	TIG 150 GD	TIG 200 GD	TIG-SR 17 GD	TIG-SR 26 GD	TIG-SR 300 GD HD
Operating variants	Standard and function torches				
Flexible torch neck	–	TIG 200F GD	–	–	TIG-SR 300F GD
SuperCool version	–	–	–	–	–
Little version	TIG 150 Little GD	–	–	–	–
Welding fume extraction torch “F”	TIG 150 F1 GD	–	–	–	–
Rotary gas valve	–	–	TIG 17 GDV	TIG 26 GDV	–
Cooling	gas-cooled “G”				
Duty cycle DC-	150 A/35%	200 A / 35%	140 A/35%	180 A/35%	300 A / 35%
Duty cycle AC	105 A/35%	140 A/35%	100 A/35%	130 A/35%	250 A/35%
Electrode diameter	1–2.4 mm	1.6–3.2 mm	0.5–2.4 mm	0.5–4 mm	1.6–4 mm
Hose package length	4 m/8 m – other lengths available on request				







TIG 260 WD	TIG 450 WD	TIG-SR 18 WD	TIG-SR 20 WD	spotArc® G	spotArc® W	Type
Standard and function torches				**Standard**		Operating variants
–	–	–	–	–	–	Flexible torch neck
–	TIG 450SC	TIG-SR 18SC WD	–	–	–	SuperCool version
TIG 260 Little WD	–	–	TIG-SR 20 Little WD	–	–	Little version
TIG 260 F1 GD	–	–	–	–	–	Welding fume extraction torch "F"
–	–	–	–	–	–	Rotary gas valve
water-cooled "W"				gas-cooled "G"	water-cooled "W"	Cooling
260 A / 100%	450 A / 100%	400 A/100%	240 A/100%	200 A/60%	400 A/100%	Duty cycle DC-
185 A / 100%	320 A / 100%	280 A/100%	170 A/100%	160 A / 60%	360 A/100%	Duty cycle AC
1–3.2 mm	1.6–4.8 mm	0.5–4.8 mm	0.5–3.2 mm	1.6–3.2 mm	1.6–3.2 mm	Electrode diameter
4 m/8 m – other lengths available on request						Hose package length

TIGSPEED SYSTEM

TIG COLD/HOT WIRE WELDING WITH COMPLETELY NEW POSSIBILITIES

- Dynamic TIG wire feed system with individually adjustable wire feeding
- Can be used with any TIG welding machine – DC and AC/DC, demodular or modular casing design of your choice (5-pole machine plug required/third-party devices via adapter)
- Hotwire: the hot wire power source is integrated into the hot wire version
- Areas of application: Low-, medium- and high-alloy materials; CrNi; nickel-based alloys, copper and copper alloys; aluminium and aluminium alloys; P91/P92 special alloys

SYSTEM STRUCTURE

+ TIG wire feeder



tigSpeed

+ TIG power source



TETRIX XQ demodular



Tetrix XQ modular

+ TIG welding torch



EWM cold/hot wire welding torches

Halving the welding time for the root pass

> What's particularly attractive about TIG welding with tigSpeed is the option to further automate the welding task.

Joachim Jung, Technical Managing Director at AST

FIVE WIRE FEEDING OPTIONS

TIG cold wire:

- The wire is fed mechanically.
- Up to 60% faster welding speeds compared to manual TIG welding
- Welding of steel, stainless steel, titanium, CrNi steels and aluminium

TIG hot wire:

- The wire is fed mechanically and preheated by a hot wire current in the welding torch.
- The welding speed is significantly increased again compared to cold wire welding
- Huge advantages for cladding thanks to reduced dilution in the weld pool as a result of targeted heat input
- Welding of steel, stainless steel, titanium and CrNi steels

tigSpeed continuous:

- Constant wire feeding – the wire is continuously conveyed into the weld pool at a steady rate, ensuring a highly uniform and smooth weld seam
- Smooth, uniform seam finish
- In combination with hot wire, the welding speed and deposition rate can be increased enormously
- Ideal for fully mechanised welding and TIG cladding

tigSpeed oscillation:

- Continuous wire feeding with simultaneous (oscillating) forward and backward movement of the wire at a freely adjustable frequency (1–16 Hz)
- Highly stable process: the arc remains stable when the gap between the electrode and workpiece changes
- Clean flank wetting and reduction in lack of fusion
- Fine-flaked weld surface
- Easy handling, even during positional welding

tigSpeed Superpuls:

- Exact dosing of the amount of wire fed by setting the absolute feeding parameters
- Suitable for positional welding and thin sheet processing
- Two wire feed speeds:
  - Superpuls “start/stop”: Continual switch between wire feeding and wire stop. A weld droplet is formed at the end of the wire, which is deposited each time the wire is moved forward in the weld pool.
  - Superpuls “reverse”: Continual switch between wire feeding and wire return Only the tip of the wire is dipped into the molten metal each time the wire is moved forward, ensuring that the quantity of wire can be dosed even more precisely.



TIG COLD AND HOT WIRE WELDING TORCHES

- Water-cooled cold/hot wire torches
- High process reliability, high welding speed, extremely simple handling
- You are optimally equipped for every task with our cold/hot wire torches, whether you require long weld seams, work in confined spaces or need positional welding.
- Four different welding torches for cold/hot wire welding tasks – there's a perfect one for every application: small and flexible, high performing with optimal shielding gas coverage.

- Cold/hot wire torch with internal wire feed
  - Optimum handling since there is no wire feed in the way
  - Excellent freedom of movement when welding

- Cold/hot wire torch with external wire feed
  - Ideal for welding very hard or very soft wires (aluminium, chrome/nickel)
  - No jamming of the wire in narrow feed spots

WELDING TORCH DESIGN



Hot wire feed

Internal wire feed

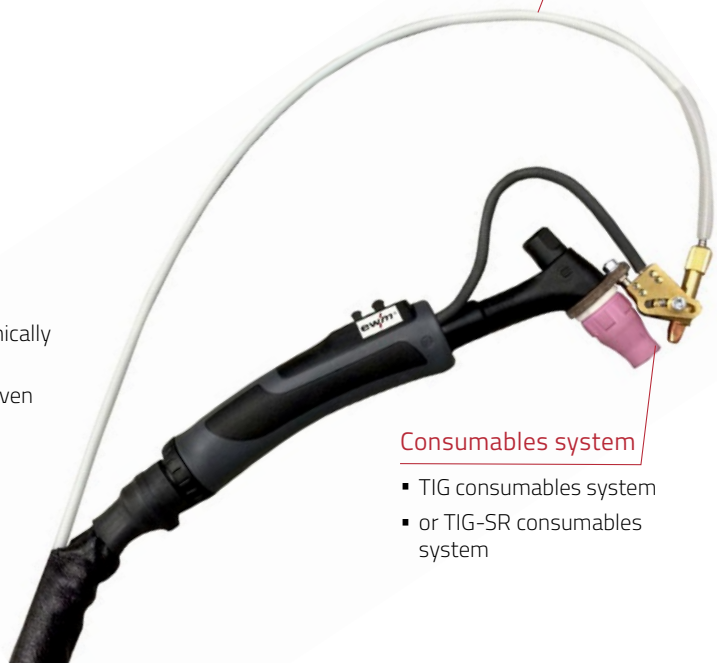
- Excellent handling and high freedom of movement when welding

Compact ball joint
provides optimal range of movement

- Comfortable working conditions thanks to strain relief, especially for positional welding

External wire feed

- For very hard or very soft wires
- No jamming of the wire when theprotective gas shield is fed at a narrow angle



Rubber inserts in the grip –
for the best hold

- High degree of welding comfort thanks to ergonomically shaped handle
- Secure hold for optimum welding torch guidance, even during positional welding

Consumables system

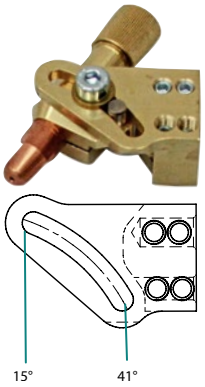
- TIG consumables system
- or TIG-SR consumables system

FLEXIBLE WIRE SUPPORT

Our welding torches are fitted with a flexible wire support as standard. A large number of other equipment options are available to you to meet all application needs*:

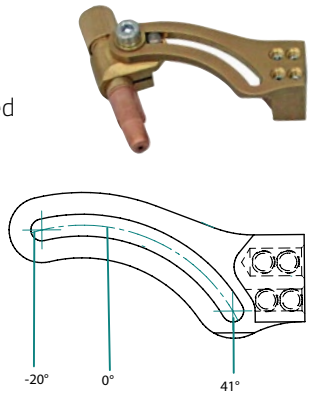
Flex bracket, short

- Standard equipment
- Can be used for most applications
- Freely adjustable between 15° and 41°



Flex bracket, long

- Specially for pipe welding
- Available in left- and right-handed design
- Freely adjustable between 20° and 41°



Fixed feed angle

- Easy adjustment
- Feed angle not adjustable
- Available with angles of 30°, 39° and 42°



Mini

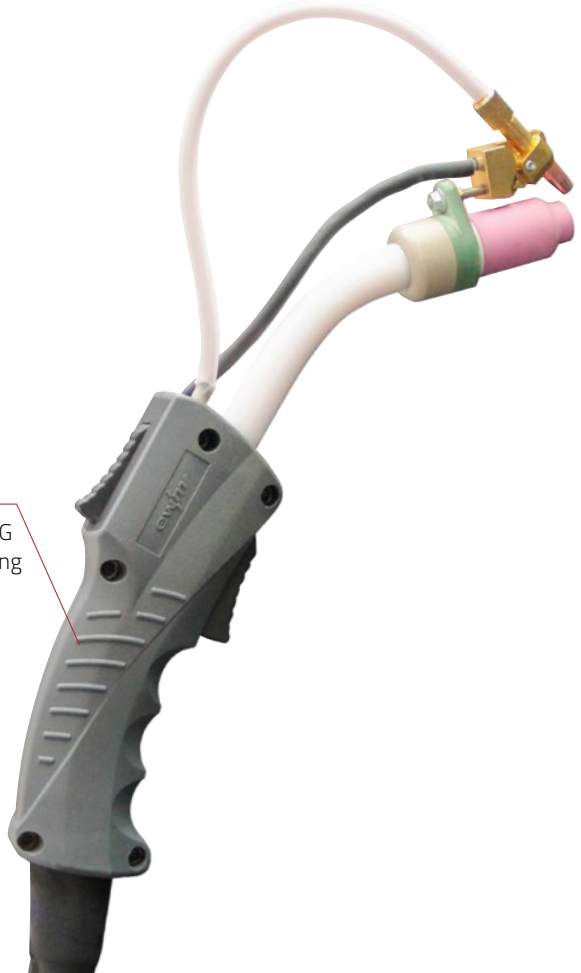
- For very narrow operating points
- Suitable for cold wire only
- Optimum view of weld pool
- 35°



*You will find a detailed list of other equipment options in our spare parts catalogue.

comfyTig CW/HW

- TIG cold/hot wire torch in MIG/MAG grip
- Easy for welder to adapt to TIG welding after MIG/MAG welding
- Consumables compatible with SR-18 SC welding torches



MIG/MAG grip

- Easy for welder to adapt to TIG welding after MIG/MAG welding

COLD/HOT WIRE WELDING TORCHES – FULL OVERVIEW





Type	TIG 260 WD	TIG 450 WD
Operating variants	Up/down control	
Separate cold wire feed "CW"	TIG 260 GRIP WD CW	TIG 450 GRIP WD CW
Separate hot wire feed "HW"	TIG 260 GRIP WD HW	TIG 450 GRIP WD HW
MIG/MAG adapted grip	–	–
Internal wire feed	Yes	Yes
External wire feed	Yes	Yes
Cooling	water-cooled "W"	water-cooled "W"
Duty cycle DC-	260 A/60%	400 A/100%
Duty cycle AC	185 A / 100%	280 A/100%
Electrode diameter	1.6–3.2 mm	1.6–4.8 mm
Filler wire diameter	0.8 to 1 mm	0.8 to 1.6 mm
Hose package length	3 m/4 m – other lengths available on request	





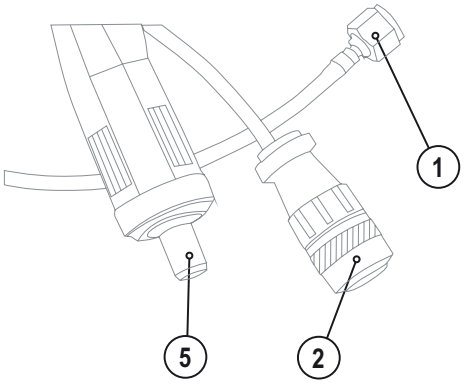
More information about our cold/hot wire torches!

TIG-SR 18 WD	ComfyTig 18-1	Type
Up/down control		Operating variants
TIG-SR 18 GRIP WD CW	comfyTig 18-1 CW	Separate cold wire feed “CW”
TIG-SR 18 GRIP WD HW	comfyTig 18-1 HW	Separate hot wire feed “HW”
–	Yes	MIG/MAG adapted grip
Yes	**Yes**	**Internal wire feed**
Yes	–	External wire feed
water-cooled “W”	water-cooled “W”	Cooling
300 A / 100%	300 A/60% ED	Duty cycle DC-
210 A/100%	210 A/100% ED	Duty cycle AC
1–4 mm	1–4 mm	Electrode diameter
0.8 to 1.6 mm	0.8 to 1.6 mm	Filler wire diameter
3 m/4 m – other lengths available on request		Hose package length

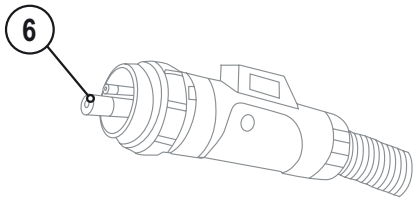
TIG WELDING TORCH CONNECTIONS

GAS-COOLED TIG WELDING TORCHES

Decentralised torch connection

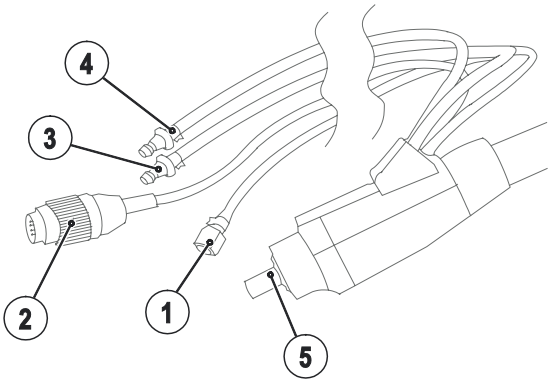


Euro torch connector

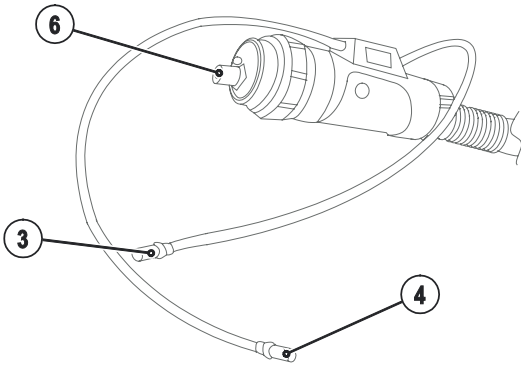


WATER-COOLED TIG WELDING TORCHES

Decentralised torch connection



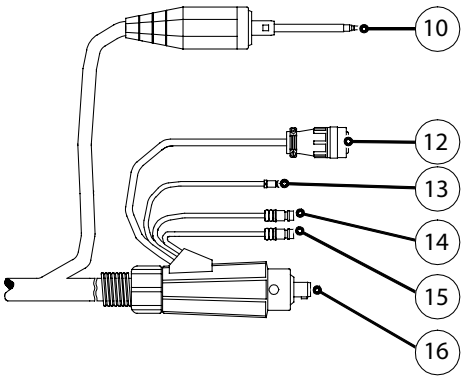
Euro torch connector



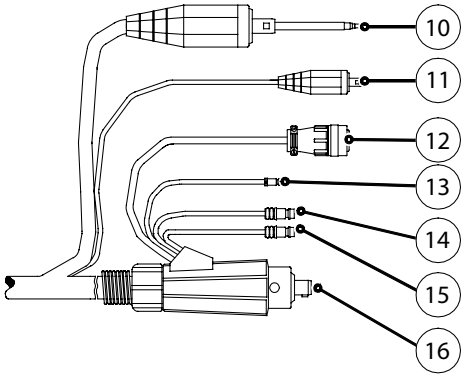
Item	Description
1	Shielding gas connection: G¼" connecting nipple
2	Control cable assembly
3	Coolant return: quick connect coupling, red
4	Coolant feed: quick connect coupling, blue
5	Welding current connection: Decentralised connection
6	Euro torch connector

COLD/HOT WIRE TORCH CONNECTORS

Cold wire – water cooled



Hot wire – water cooled



Item	Description
10	Wire guide connector plug
11	Welding current connector plug (hot wire)
12	Control cable assembly
13	Shielding gas: Quick connect coupling
14	Coolant return: quick connect coupling, red
15	Coolant feed: quick connect coupling, blue
16	Welding current connection: Decentralised connection

TIG AUTOMATED WELDING TORCH

FOR MECHANISED AND AUTOMATED APPLICATIONS

- Efficient solution for welding work on components with simple geometries
- Long service life thanks to best heat dissipation combined with smallest possible size
- A wide range of applications: Automotive engineering, two-wheeler industry, container construction and machine & steel construction

WELDING TORCH DESIGN

Robust consumables

- Three components in the TIG consumables system
- Different nozzle shapes are available for custom uses
- Components are compatible with TIG-series

Sturdy design

- The torch body has a diameter of 30 mm for secure mounting in torch holders



Design and hose package

- The hose package extending from the side ensures optimal protection of the lines
- The compact design offers great freedom of movement
- Can be mounted to a robot collision sensor
- Mounting via torch holder
- Wire feed available for automated TIG cold/hot wire applications

COLOUR CODES FOR TUNGSTEN ELECTRODES

Identification code	Weight of oxide in %	Oxide	Colour	In product range
WP	-	-	Green	Yes
WT 4	0.35–0.55	Th	Light blue	No
WT 10	0.80–1.20	Th	Yellow	No
WT 20	1.70–2.20	Th	Red	No
WT 30	2.80–3.20	Th	Purple	No
WT 40	3.80–4.20	Th	Orange	No
WZ 3	0.15–0.50	Zr	Brown	No
WZ 8	0.70–0.90	Zr	White	On request
WL 10	0.90–1.20	La	Black	On request
WL 15	1.40–1.60	La	Gold	Yes
WL 20	1.80–2.20	La	Dark blue	Yes
WC 20	1.80–2.20	Ce	Grey	Yes
WR 2*	Mixed oxides	Rare earths	Turquoise	Yes
E3®	Mixed oxides	Rare earths	Purple	Yes
Lymox Lux®	Mixed oxides	Rare earths	Pink/grey	Yes
Lymox®	Mixed oxides	Rare earths	Pink	Yes

WP electrodes

- Pure tungsten electrodes
- AC welding of aluminium alloys
- Not suitable for DC welding

WZ electrodes

- Lower risk of contamination of weld thanks to addition of zirconium
- Tungsten electrodes for AC welding of aluminium alloys
- Only limited suitability for DC welding

WC electrodes

- Very good ignition and reignition characteristics thanks to ceroxide
- Suitable for DC and AC welding
- Can be used for unalloyed and high-alloy steels and aluminium, titanium, nickel, copper and magnesium alloys in the lower and mid current range
- Good substitute for WT electrodes

E3 electrode

- Variable non-standardised composition
- Suitable for DC and AC welding
- Can be used for unalloyed and high-alloy steels and aluminium, titanium, nickel, copper and magnesium alloys in the lower and mid current range
- Long service life and very durable
- Good alternative to WT electrodes

WT electrodes

- Slightly radioactive due to addition of thorium
- Refrain from using due to increased health risks
- Improved ignition characteristics and better current-carrying capacity compared to WP electrodes

WL electrodes

- Increased ignitability thanks to lanthanum oxide
- Suitable for DC and AC welding
- Can be used for unalloyed and high-alloy steels; aluminium, titanium, nickel, copper and magnesium alloys; and for microplasma welding
- Ideal for use in low current range
- Good substitute for WT electrodes

WR electrodes

- Variable non-standardised composition
- Suitable for DC and AC welding
- Can be used for unalloyed and high-alloy steels and aluminium, titanium, nickel, copper and magnesium alloys in the lower and mid current range
- Long service life and very durable

Thoriated tungsten electrodes

- **Quote from BGI 746:**
  "Tungsten electrodes containing thorium oxide may only be used for urgent technical reasons, as stated in Section 6.2.3 of BGR 220. When using these, the guidelines of the German Radiation Protection Act must be observed at all times."
- **Thoriated tungsten electrodes have been removed from our product range.**

PLASMA WELDING TORCHES

- Water-cooled plasma welding torch
- Greater load capacity of the plasma nozzles thanks to optimised cooling system
- Reduced operating costs, long service life of the plasma nozzles thanks to large, threadless retainer cone in the torch body and additional heat dissipation by means of the gas lens on the plasma nozzle
- Compact torch design and small torch head diameter for optimal handling with the greatest possible output
- Interchangeable welding torch necks with different bend angles enable optimal handling, even in hard-to-reach places
- Also available as a machine welding torch in the PMW 20 and PMW 100 versions

WELDING TORCH DESIGN



Plasma nozzles

- Greater load capacity of the plasma nozzles thanks to optimised cooling system

Design

- Maximum miniaturisation of components: Compact torch design and small torch head diameter for optimal handling with the greatest possible output

PLASMA SYSTEM

The high-performance Microplasma generation demonstrates its strengths in every area of application – whether in continuous daily use or in mobile applications at customer premises or in partially mechanised production processes. Versatile options such as the remote control, modular cooling unit and trolley mean you're perfectly equipped for any job.

Main areas of application:

- Welding/tack welding of thin materials/components
- Repair welding of tools
- Welding of wire mesh, thermocouples, sieves and filters
- Mechanisation option
- Laboratory work
- Plasma and TIG welding current adjustable in 0.1 A increments
- Pilot arc current adjustable in 1 A increments between 5–15 A
- Operation very similar to the EWM TIG controls, so the user can switch seamlessly from one to the other without the need for familiarisation



Microplasma welding machine in the versions **Microplasma 25-2/55-2/105-2** (with precision gas metering unit if required)



Cooling unit for Microplasma **Cool 55 MPW55**



Transport cart for power source, cooling unit and one or two gas cylinders **Trolly 55-6 DF**



Water-cooled Plasma welding torches



PLASMA WELDING TORCHES – FULL OVERVIEW







Type	PHB 50	PHW 20	PHW 100
Operating variants	-	Up/down control	
Cooling	water-cooled "W"		
Duty cycle DC-	20 A/60%	20 A/100%	100 A/100%
Duty cycle AC			80 A/100%
Duty cycle DC+			35 A/100%
Nozzle diameter	0.8 mm	0.5–1.2 mm	0.5–3 mm
Hose package length	3 m – other lengths available on request		





More information about our plasma torches!

PMW 20	PMW 100	Type
Machine welding torch		Operating variants
water-cooled “W”		Cooling
20 A/100%	100 A/100%	Duty cycle DC-
	80 A/100%	Duty cycle AC
	35 A/100%	Duty cycle DC+
0.5–1.2 mm	0.5–3 mm	Nozzle diameter
3 m – other lengths available on request		Hose package length



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