

Special solutions are standard!

The MIG/MAG welding torch system **ABIMIG® A T LW VARIO** redefines modularity and flexibility.

One welding torch – three advantages

- Flexible
- Light
- Cost effective



Those who work in the welding profession do some of the most physically demanding jobs in the metalworking sector.

This is particularly due to the fact that welders have to adapt their posture constantly to the accessibility of the work to be done, keeping a concentrated eye on the welding arc at the same time.

This heavy physical strain quite often results in muscle and joint problems and can lead to chronic issues.

For this reason, every welder would like to work with a sturdy welding torch that is as light but powerful as possible and equipped with a torch neck that has been optimised for the specific task.

Impossible? Not now!

The new air-cooled welding torch ABIMIG® A T LW makes these wishes come true!

The "T" interface system allows the use of torch necks whose geometry and alignment are specifically matched to the welding jobs.

Arguments that speak for themselves:

- Flexibility: Dozens of different torch neck geometries – for optimum accessibility in all welding positions
- Light weight: Up to 50% lighter than comparable standard torches and with a handle design which, combined with the rotatable torch neck, always allows the welder to work in the lowest fatigue posture
- Sturdiness, durability and cost-effectiveness that can be compared with the best
- Whether for industrial or workshop applications – the ABIMIG® A T LW will always be the ideal customised tool

The right tool for every task ...

Task



Welders are subjected to heavy physical strain every day due to working in cramped conditions or constrained positions. Almost every project is different. Constrained positions are more often the rule than the exception.

How can strain be reduced, thus reducing downtimes too?

Tool



The ideal tool – a highly flexible welding torch system that adapts to a new welding task as quick as a flash.

The newly developed and extremely light weight welding torches of the ABIMIG® A T LW series, with its ergonomic and universal two-component handle, meets these conditions. It is equipped standard with a ball joint and light BIKOX® LW cable assembly as well as exchangeable torch necks that can be turned 360°.

Proof



Investigations carried out together with scientific institutions have proven significant reduction in strain on the musculoskeletal system when the right torch neck geometry and position are chosen. Use of the extremely light BIKOX® LW cable assemblies has been proved to further reduce strain on welders by up to 43%.

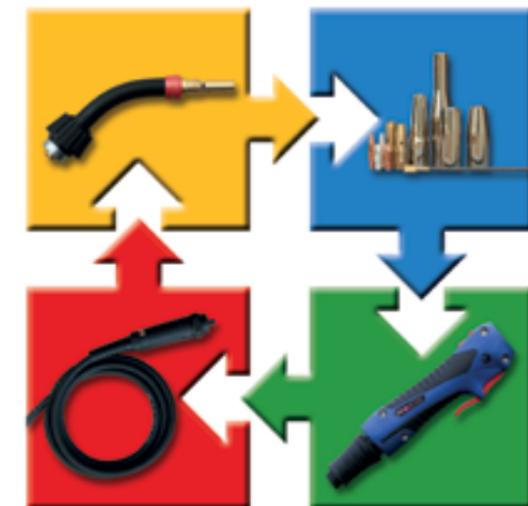
Result



The result is a higher level of working precision and efficiency. Flexible, light and cost-effective – a MIG/MAG welding torch system that leaves nothing to be desired.

Alongside the effect of employee motivation from working with a suitable tool, the level of illness related downtimes due to work related strain drops in the long term.

... versatility as a basic principle



We design your tool according to your requirements

With the ABIMIG® A T LW versatility is nothing special, it's standard! Design your very own customised torch!

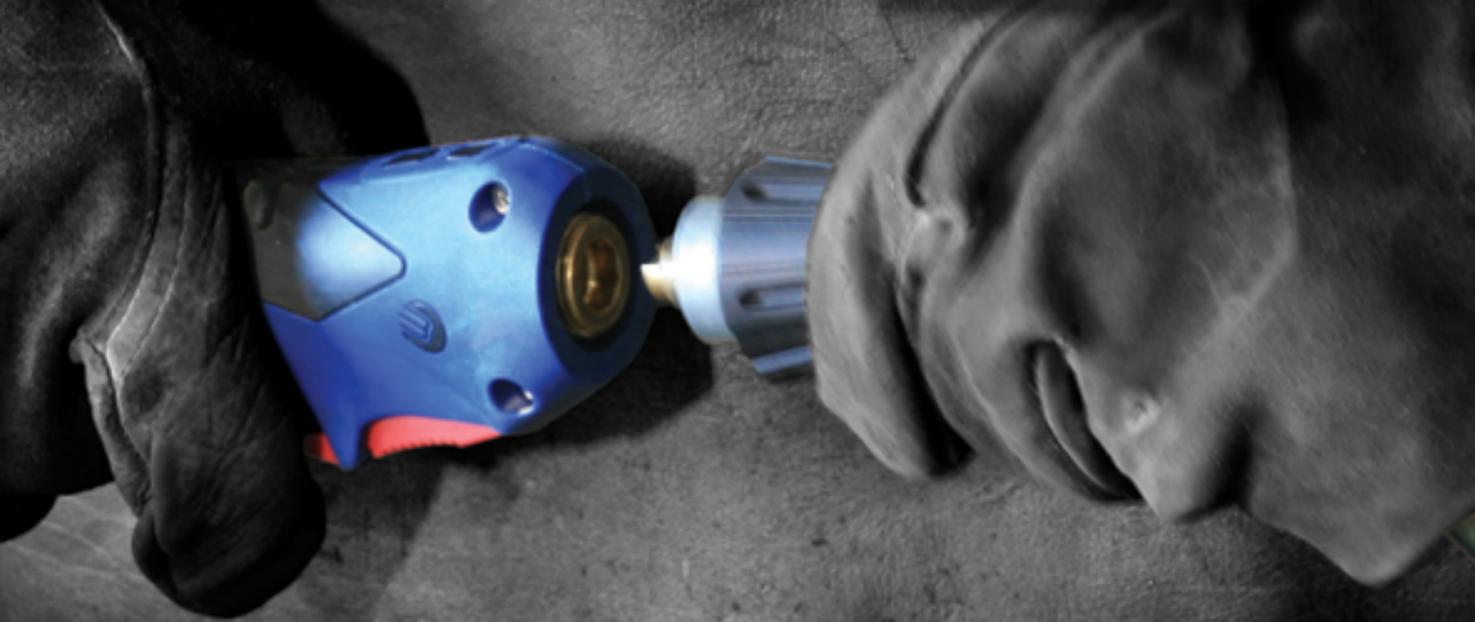
Thanks to the VARIO modular system, the versatility of the ABIMIG® A T LW is child's play to implement.

ABIMIG® VARIO system – the torch neck ...

Geometry and position of the torch neck are crucial for comfortable and low-fatigue work.

The "T" change and positioning system allows the use of torch necks adapted in terms of power, dimension and alignment to the exact welding task to be performed.

The interface has been designed to allow the replacement of the torch neck directly at the welding station within one minute and without tools.

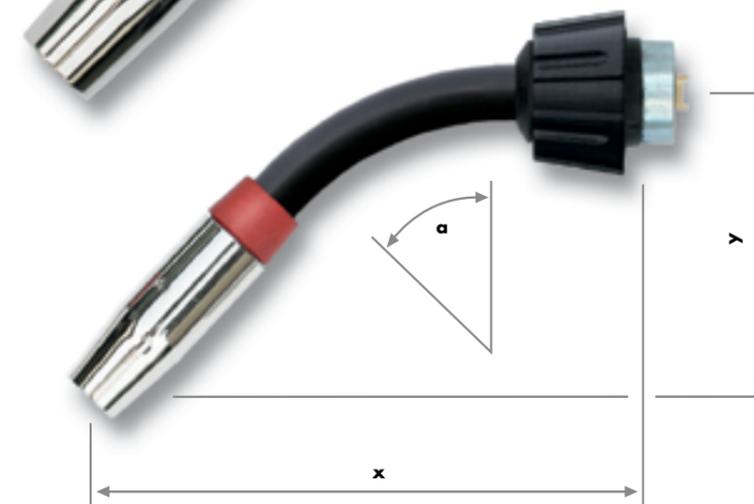


Rather than the usual dismantling of the torch to replace the neck, which may include failure and corresponding downtimes, the "T" interface permits the changeover to be done in no time.

Even smaller companies can save several thousand euros a year using this method.



... for optimum working conditions



α = 45°/60° or "Flex"
 x = from 150 to 500 mm
 y = from 70 to 110 mm

Would you like a torch neck that can adapt to frequently changing accessibilities in no time?

The ABIMIG® VARIO system offers a comprehensive range of different torch necks in varying lengths and bending angles. If this is not enough, there is always the flexible torch neck "Flex" instead.

Choose between free positioning for every possible torch neck position or the plug in version for working in eight clearly defined positions.



You also have a choice of outer pipe – either metal for greater sturdiness or plastic for lower weight.

ABIMIG® VARIO system – the wear parts ...

Weld seam quality and economy are dependent on torch equipment.

Wear parts should be able to be combined in as many variations as there are prescribed parameters and welders' requirements.

The bore diameter of the contact tips must be designed to match the welding wire, and the material must comply with the process requirements.

The correct gas nozzle geometry ensures accessibility and gas coverage.

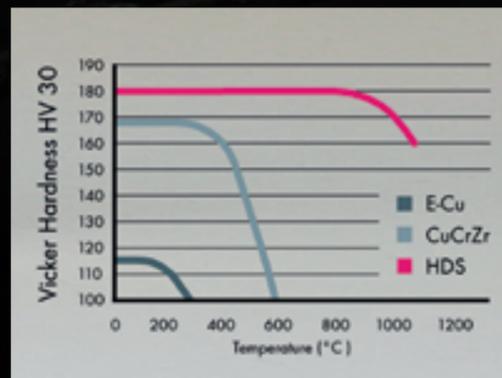


The deciding factor for the quality of the weld seam and torch performance is the temperature and wear resistance of the contact tips.

E-Cu good conductivity, favourable price, low temperature resistance

CuCrZr abrasion and temperature resistant

HDS extremely temperature resistant and highly abrasion resistant



... for a perfect process design



Would you like a stable welding process, homogeneous seam quality, uninterrupted workflow and good accessibility?

The ABIMIG® VARIO system makes the simple configuration of a wide range of different combinations possible.

The system offers a great deal of variety, not only in terms of length and rated diameter, but also in tapered, extremely tapered and cylindrical shapes for all application cases e.g. gas nozzles with extended insulation to avoid spatter bridges during overhead welding.

You have a choice between the standard screw on type gas nozzle seat and the plug in type version for faster gas nozzle replacement.

Special narrow gap gas nozzles can be ordered separately as a set in conjunction with contact tip holder and contact tip.



ABIMIG® VARIO system – the handle ...

You have a firm grip on this handle. It is the direct connection to control the process and, to a major extent, determines working posture.

The harmony between hand and handle is crucial for steady and even work.



The ABIMIG® A T LW provides triggers for different demands – prominent for a reliable actuation feeling when working with heavy duty gloves or extended for a versatile changeable torch position.



... fits in every hand



Would you like a handle that feels good, gives you control over the arc in every working position and guarantees working with minimal strain?



The ergonomically designed handle is easy to operate in any position; its non slip soft component always ensures a firm and pleasant hold.

Depending on welders preferences, communication with the power source is via a long or short trigger.

Thanks to the possibility of an integrated double switch module, the torch has the "Up/Down" option without restricting accessibility.

A short or long plastic cable strain relief as well as a steel spring are decisive for better flexibility and accessibility or support when feeding "difficult" welding wires.

ABIMIG® VARIO system – the cable assembly ...

The BIKOX® LW guarantees the safe transfer of wire, inert gas and current.

Wire guidance is crucial for smooth wire feeding and thus for a clean welding process.



The uni-plug system provides simple adaptation of the torch connection to the respective power source.

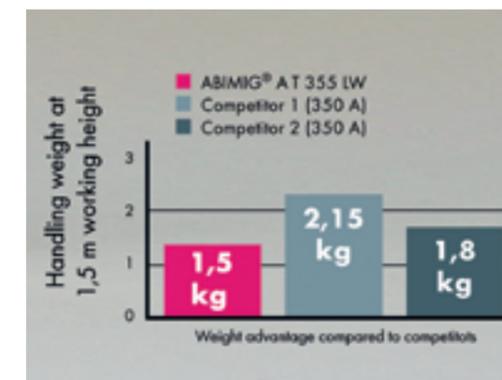


... to reduce the burden during welding



The ABIMIG® VARIO system always uses ABIMIG BIKOX® cable assemblies which means up to 50% weight saved compared with other standard torch systems.

Scientific studies show a reduction of muscle strain by up to 43%.



Would you like a cable assembly that is extremely powerful despite a very low weight, that remains flexible – both in summer heat and winter cold – and guarantees the reliable transfer of all media in any position?

In addition to its light weight, the convincing features of the BIKOX® LW cable assembly used includes its high flexibility (down to below freezing), extreme UV, temperature and welding spatter resistance and tensile strength.

Take the opportunity of choosing between insulated steel liners (e.g. for non or low alloyed wire electrodes) and different plastic cores and combi liners for aluminium and special wires.

Alongside the standard Binzel central connector, the uni plug system provides a simple universal adaptation option for numerous power sources, either by means of direct connection or using other common central connection variants.

When you require an up/down function, you complete your customised cable assembly by selecting a control cable plug.



Welding made easy... the right tool for every task

Thin-sheet welding

A master
in the workshop



ABIMIG® A T 155 LW

Technical data according to EN 60 974-7:
 Rating: 190 A CO₂
 180 A Mixed Gases M 21
 with DIN EN 439
 Duty Cycle: 60%
 Wire-Ø: 0.6-1.0 mm

Repair welding

Invaluable
for repair work



ABIMIG® A T 255 LW

Technical data according to EN 60 974-7:
 Rating: 240 A CO₂
 220 A Mixed Gases M 21
 with DIN EN 439
 Duty Cycle: 60%
 Wire-Ø: 0.8-1.2 mm

Series use

In light steel
construction

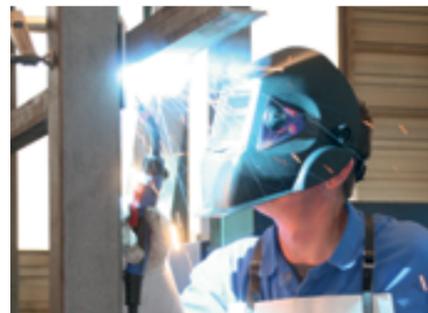


ABIMIG® A T 305 LW

Technical data according to EN 60 974-7:
 Rating: 290 A CO₂
 260 A Mixed Gases M 21
 with DIN EN 439
 Duty Cycle: 60%
 Wire-Ø: 0.8-1.4 mm

Hot stuff

In medium steel
construction



ABIMIG® A T 355 LW

Technical data according to EN 60 974-7:
 Rating: 340 A CO₂
 320 A Mixed Gases M 21
 with DIN EN 439
 Duty Cycle: 60%
 Wire-Ø: 0.8-1.6 mm

Athletic

Maximum efficiency
in heavy steel
construction



ABIMIG® A T 405 LW

Technical data according to EN 60 974-7:
 Rating: 400 A CO₂
 370 A Mixed Gases M 21
 with DIN EN 439
 Duty Cycle: 60%
 Wire-Ø: 1.0-2.4 mm

ABIMIG® VARIO system – the possibilities



Selection of torch neck

Type	Step 1 Length							Step 2 Fixing		Step 3 Outer Tube		Step 4 Gas nozzle seat	
	K 45°	M 45°	M 60°	M flex	L 45°	XL 45°	XXL 45°	360°	8-fold	Metal	Plastic	Screw-type	Plug-in
155	✓	✓		✓				✓	✓		✓	✓	
255	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓
305	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
355	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓
405	✓	✓							✓	✓		✓	✓



Selection of wearing parts

Type	Step 5 Welding wire-Ø (mm)							Step 6 Contact tip					Step 7 Torch neck liner		Step 8 Gas nozzle	
	0.6	0.8	1.0	1.2	1.6	2.0	2.4	E-Cu	E-Cu Alu	CuCrZr	CuCrZr Silver plated	HDS	Steel	Brass	Different NW	Different lengths
155	✓	✓	✓					✓	✓	✓	✓		✓	✓	✓	✓
255		✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓
305		✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓
355		✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓
405			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



Selection of handle

Step 9 Up/Down		Step 10 Triggers		Step 11 Strain Relief	
yes	✓	short	✓	short	✓
no	✓	long	✓	long	✓
				Spring	✓

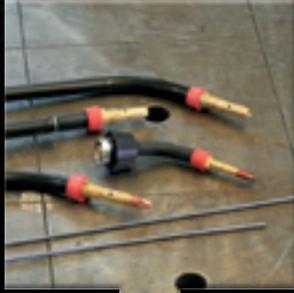


Selection of cable assembly

Step 12 Length	Step 13 Liner (mm)	Step 14 Machine connection	Step 15 Up/Down Control cable
3 m ✓	Steel liner (Ø=0.6-2.4) ✓	BINZEL®-ZA (PVC) ✓	without control cable ✓
4 m ✓	Steel liner (Ø=0.6-2.4) ✓	BINZEL®-ZA (spring) ✓	with control cable without plug ✓
4.5 m ✓	PTFE (Ø=0.6-1,4) ✓	Fronius® ✓	with Tuchel 9-pole ✓
5 m ✓	PTFE (Ø=0.6-1,4) ✓	Miller® ✓	with Burndy 19-pole ✓
6 m ✓	Carbon-PTFE (Ø=0.6-1.4) ✓	Lincoln® LN ✓	with Harting 25-pole ✓
	Combi liner (Ø=0.8-1.4) ✓	Lincoln® LN10 ✓	
		Hobart/Tweco® ✓	
		Panasonic® ✓	
		PDG 309 ✓	
		PDG 508 ✓	
		OTC® ✓	
		DINSE® ✓	
		CLOOS® ✓	

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Torch Neck



+ Wear Parts



+ Handle



+ Cable Assembly



= VARIO System

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