



**Cleverly  
different –  
in technology  
and design ...**



# ABITIG® GRIP and ABITIG® GRIP Little. TIG welding torches – made by ABICOR BINZEL.

**For real professionals – top-class TIG welding torches ...**

TIG-welding usually involves highly complex welding tasks. Precise components require the high-precision weld seams. This requires a great deal of human skill and a tool that is suitably light, flexible and ideal to use.

With the welding torches ABITIG® GRIP and ABITIG® GRIP Little, ABICOR BINZEL is offering a torch range for high-precision work which fits the bill perfectly. Small design size, high power and ergonomic design are combined in a tool that users will no longer want to do without!

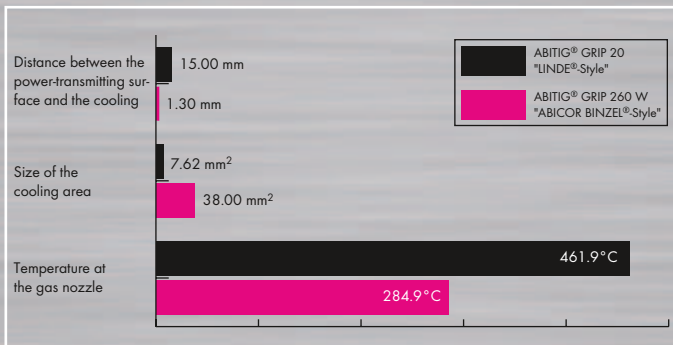
With these welding torches, which are equipped with the patented ABICOR BINZEL cooling and wearing parts concept, welders can accomplish demanding tasks with a smile ... easily and problem-free. Making welding real fun!

Read on to find out more about the best TIG welding torch in the world and its ingenious design principle.

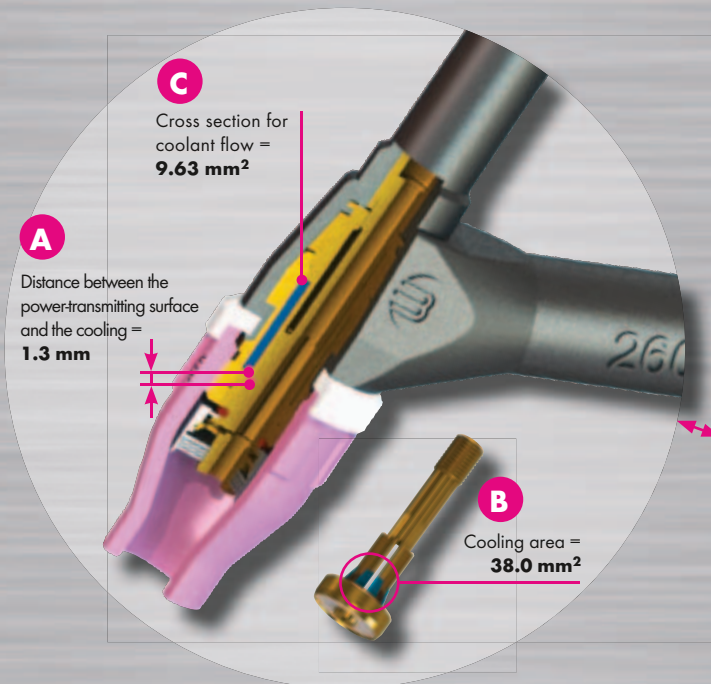




# Intelligent heat dissipation – simple but clever ...



The reduced distance between the power-transmitting surface and the cooling as well as the larger cooling surfaces of the wearing parts reduce the torch temperature in the front area of the gas nozzle of the "ABICOR BINZEL®-Style" torch by up to 180 °C.



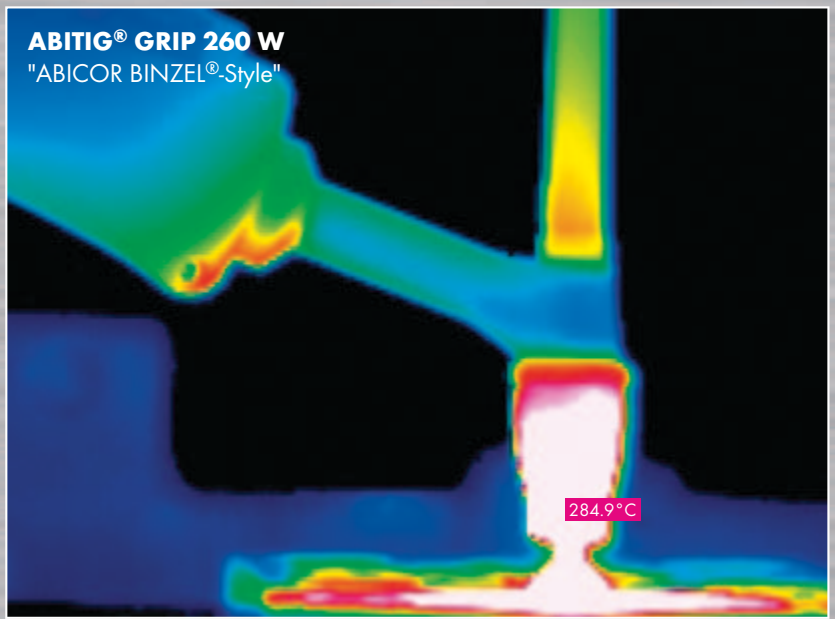
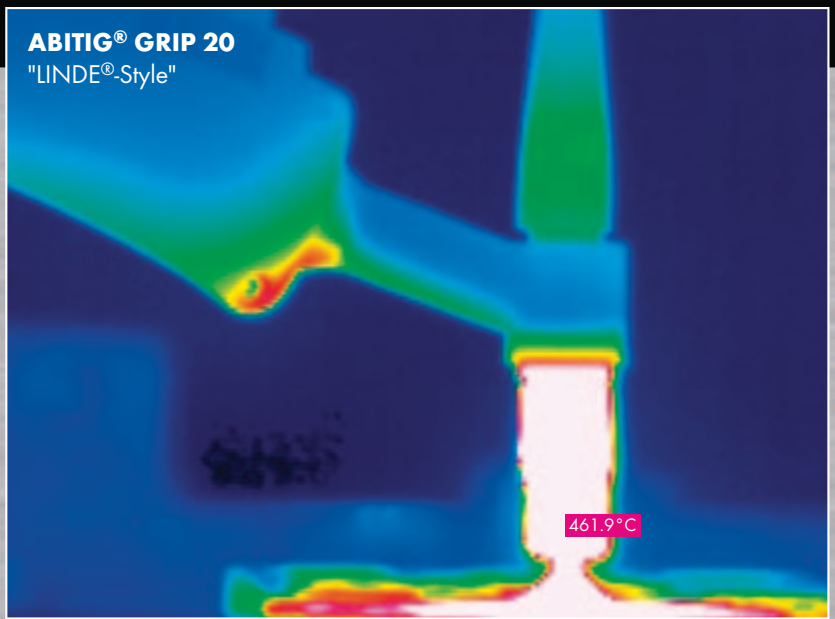
## Perfect cooling is essential for TIG-welding ...

With its patented torch design which has been ingeniously thought out right down to the last detail, ABICOR BINZEL has managed to achieve significantly more power despite reducing the overall design size of the TIG welding torches at the same time.

Both the torch body and wearing parts were optimised for this. Always with the clear objective of improvement heat dissipation and the temperature of the individual components. Because the lower the temperature the longer the service life of both the wearing parts and the welding torch.

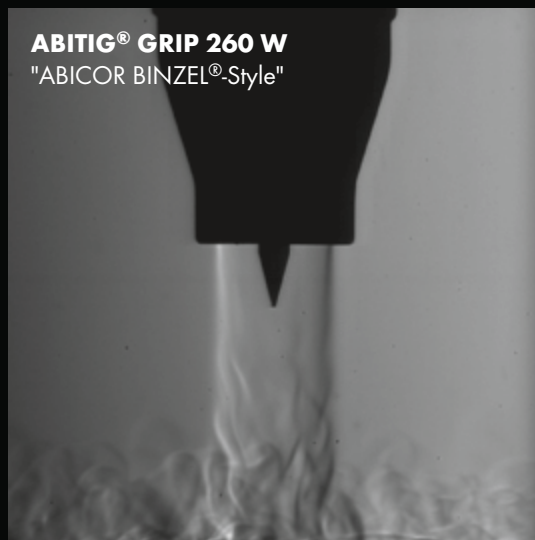
The advanced development of the ABICOR BINZEL concept is clearly demonstrated by the reduced distance of the cooling to the power-transmitting and thus hot surface (A), the much larger cooling areas (B) and the optimised coolant flow (C). These factors all contribute to extending the lifetime of the wearing parts and greatly increasing the service life of the welding torch.

Furthermore, the gas cover has been significantly improved by the lower heat supply so that there is hardly any turbulence. The arc remains extremely still, the risk of pore formation is reduced considerably and the well-cooled front-end of the torch guarantees reliable and steady ignition behaviour.



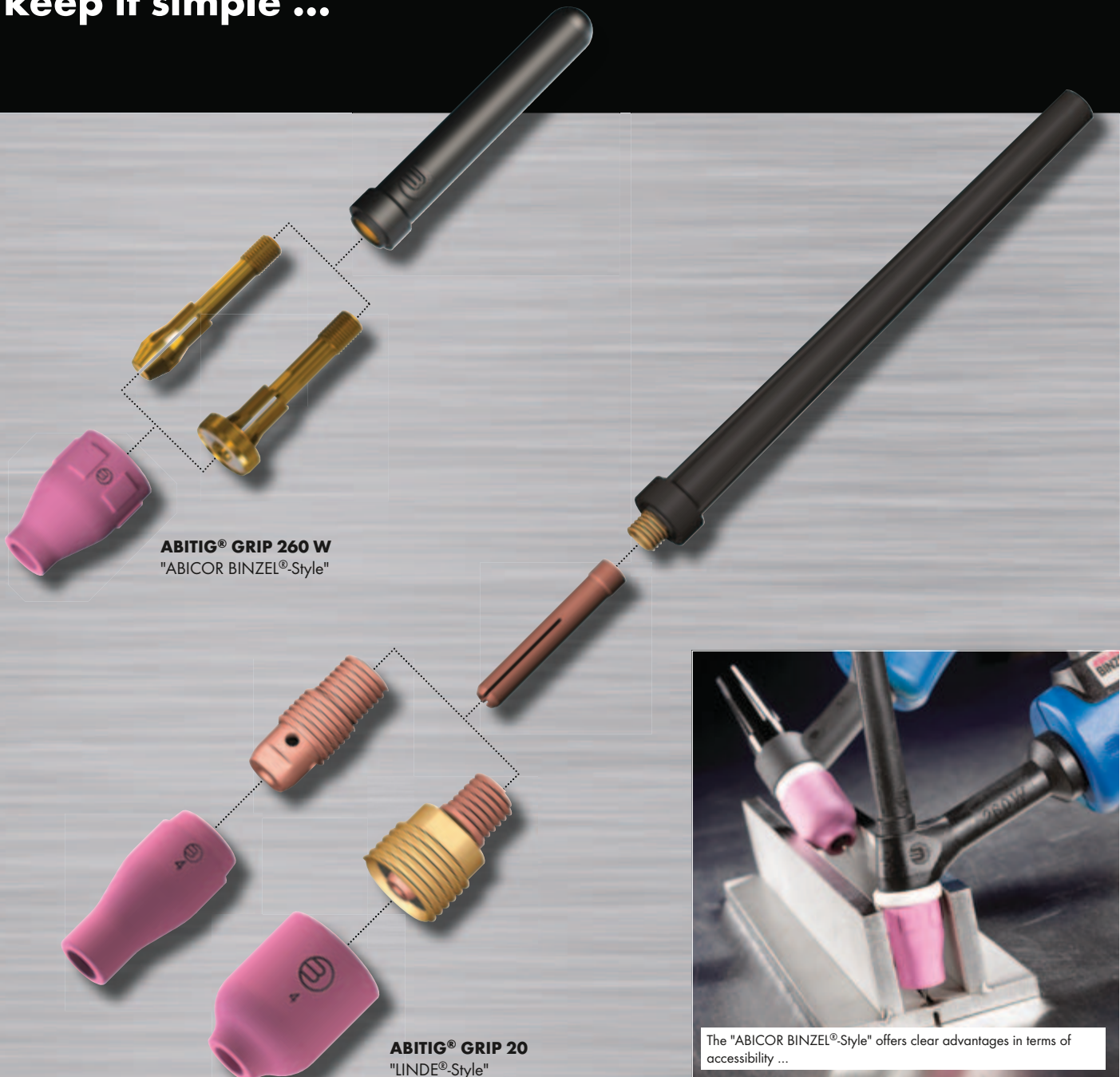
The measurable effect of the wearing part and cooling concept from ABICOR BINZEL compared with the setup of the basic development from LINDE® – the world famous "LINDE®-Style" – is clearly demonstrated by a direct comparison of the thermal images of an ABITIG® GRIP 260 W with an ABITIG® GRIP 20 welding torch.

A reduction in heat development of more than 35% with the same test setup and welding parameters in the front-end is impressive proof of the effectiveness of the innovative ABICOR BINZEL concept.



The illustrations (left) show the much more laminar gas flow with the ABITIG® GRIP 260 W torch for top gas cover and avoidance of pores compared with the "LINDE®-Style" torch ABITIG® GRIP 20.

Do more with less –  
keep it simple ...



**ABITIG® GRIP 260 W**  
"ABICOR BINZEL®-Style"

**ABITIG® GRIP 20**  
"LINDE®-Style"

The "ABICOR BINZEL®-Style" offers clear advantages in terms of accessibility ...

**Outstanding access  
meets maximum  
efficiency ...**

"ABICOR BINZEL®-Style" torches are suitable for universal application, and their compact design ensures excellent accessibility – even for unusual welding tasks. And where things get really tight and a gas lens is used, the extremely slim gas nozzle design of the torch still allows relaxed and problem-free welding when competitors' torches have long reached their limits (see illustration above).

One of the secrets of success of the ABICOR BINZEL wearing part concept is the electrode holder, which is an innovative combination of collet and collet body. This new component has an optimised cooling surface and guarantees perfect positioning of the tungsten electrode with no ifs and buts.

This is good for stocking issues too – one wearing part less!

In tough, day-to-day industrial applications the wearing part concept provides clear advantages for the user, since the innovative electrode holder always ensures the tungsten electrode is positioned in the centre for the optimum working point. The electrode positioning and minimised distance between the cooling circuit and the power-transmitting surface (which is eleven times smaller than with "LINDE®-Style" torches) guarantee outstanding heat transfer and significantly reduce the degree of wear of the tungsten electrode. As well as saving on the consumption of tungsten electrodes, it also saves valuable time otherwise required for intermediate electrode grinding.



1.1

Loosen the torch cap ...



2.1

Loosen the torch cap ...



1.2

relax the tungsten electrode by means of light "thumb pressure" ...



2.2

the torch cap often has to be removed completely since material can be "burnt on" the collet ...



1.3

pull the electrode out to the front and simply replace it by another one ...



2.3

thus resulting in the so-called "corkscrew effect" ...

**easy change**

"ABICOR BINZEL®-Style" guarantees electrode replacement in less than 30 seconds!



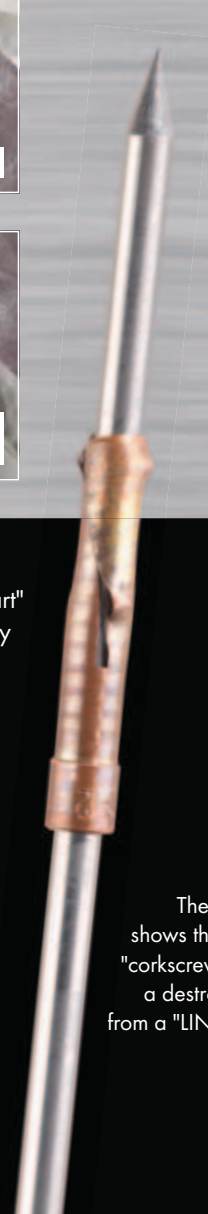
2.4

where the clamping sleeve is completely destroyed. Changing the tungsten electrode turns into a game of "patience" ...

When the electrode does need to be replaced, this can be done in just a few steps in no time. Simple loosen the torch cap and relax the electrode by exerting slight "thumb pressure" on the end of the torch cap – the electrode can then be removed and replaced effortlessly. Simple and fast – without tools! **(Fig.: 1.1–1.3)**

Due to the much greater effect of heat on the wearing parts of the "LINDE®-Style" torch, the tungsten electrode is usually not easy to replace. Quite often the high thermal load causes the tungsten electrode to bond with the collet, resulting in the so-called "corkscrew effect". This makes replacing the electrode tiresome and time-consuming, with tools often needed. **(Fig.: 2.1–2.4)**

This clearly proves that an optimally cooled torch front-end with all its components, as is "state-of-the-art" with the ABICOR BINZEL®-Style torches, plays a key role in avoiding downtimes caused by unnecessary replacement of wearing parts.



The illustration shows the so-called "corkscrew effect" of a destroyed collet from a "LINDE®-Style" torch.

# ABITIG® GRIP and ABITIG® GRIP Little.

## For real professionals – top-class TIG welding torches.

### TIG welding torches "ABITIG® GRIP Little" (air cooled)

Type	Rating (A)		Duty cycle (%)	Tungsten electrodes (Ø in mm)
	DC	AC		
ABITIG® GRIP Little 90	90	60	35	1.0-1.6
ABITIG® GRIP Little 150 / 150 F	140	100	35	1.0-2.4

### TIG welding torches "ABITIG® GRIP Little" (liquid cooled)

Type	Rating (A)		Duty cycle (%)	Tungsten electrodes (Ø in mm)
	DC	AC		
ABITIG® GRIP Little 180 W	180	130	100	1.0-3.2
ABITIG® GRIP Little 260 W	240	170	100	1.0-3.2

### TIG welding torches "ABITIG® GRIP" (air cooled)

Type	Rating (A)		Duty cycle (%)	Tungsten electrodes (Ø in mm)
	DC	AC		
ABITIG® GRIP 150 / 150 F	150	105	35	1.0-2.4
ABITIG® GRIP 200 / 200 F	200	140	35	1.6-3.2

### TIG welding torches "ABITIG® GRIP" (liquid cooled)

Type	Rating (A)		Duty cycle (%)	Tungsten electrodes (Ø in mm)
	DC	AC		
ABITIG® GRIP 260 W	260	185	100	1.0-3.2
ABITIG® GRIP 260 W SC	340	240	100	1.0-3.2
ABITIG® GRIP 450 W	400	280	100	1.6-4.8
ABITIG® GRIP 450 W SC	450	320	100	1.6-4.8
ABITIG® GRIP 500 W	500	350	100	1.6-6.4

The whole system is rounded off by the tungsten electrode E3®. Developed by ABICOR BINZEL. The E3® electrodes (doping: rare earths) guarantee top TIG-welding results without any radioactivity being involved.

#### The advantages at a glance:

- The welder is not exposed to any radioactive materials.
- Reduced environmental pollution. Residual pieces as well as grinding and filter dusts are not hazardous waste.
- No special measures are required for storage and transport.

**E3® – the right decision for humans and the environment!**



Alexander Binzel Schweisstechnik GmbH & Co. KG  
 P.O. Box 10 01 53 · D-35331 Giessen  
 Phone: +49 (0) 64 08 / 59-0  
 Fax: +49 (0) 64 08 / 59-191  
 Email: info@binzel-abicor.com

[www.binzel-abicor.com](http://www.binzel-abicor.com)

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