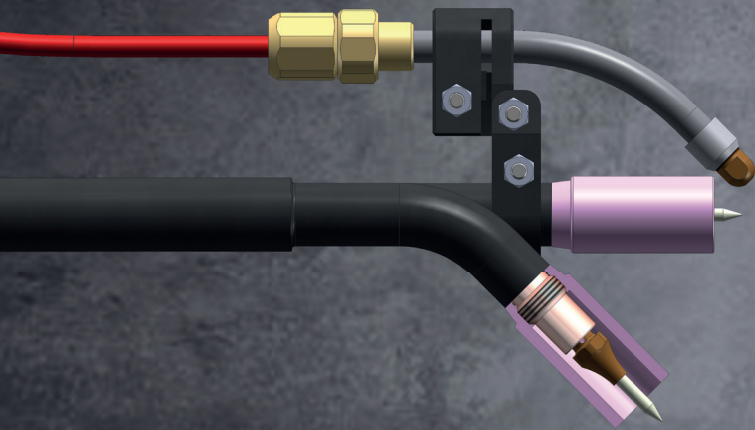




# TIG AUTOMATIC TORCHES WITH SCREWED ELECTRODE



*The revolution of TIG welding*

**No more long tungsten electrodes**

**No adjustment or grinding**

**Any geometry possible**

**Improved cooling**

**Longer service life**

**Increase of productivity**

**DIX TAZ 8000, TETZ 8000, 85xx, 75xx**



# THE TIG GENERATION FROM DINSE

LABORATORY TEST: TRADITIONAL TIG TORCH DIX TETZ 400 WITH ELECTRODE COLLET HOUSING AND CLAMPED ELECTRODE AND NEW TIG TORCH DIX TETZ 8000 WITH THREADABLE ELECTRODE

<p><b>TETZ 400</b> Traditional TIG torch</p>					<p>Cooling-down of electrode and gas nozzle immediately after extinction of the arc.</p> <p><u>Welding parameters:</u> 300 A / DC: 10:00 min. <u>Shielding gas:</u> Argon 4.6 / 8 l/min. <u>Feed rate:</u> 0.13 m/min. <u>Stick-out:</u> 5.5 mm <u>Arc length:</u> 5-6 mm</p>
<p><b>TETZ 8000</b> New TIG torch</p>					

<p><b>TETZ 400</b> Traditional TIG torch</p>		<p>The high thermal load on the electrode leads to greater abrasion and faster wear.</p>		
<p><b>TETZ 8000</b> New TIG torch</p>		<p>Due to the shorter current path and the cooling just before the tip, the electrode is heated less and wears less.</p>		

## INNOVATIVE RETAINER

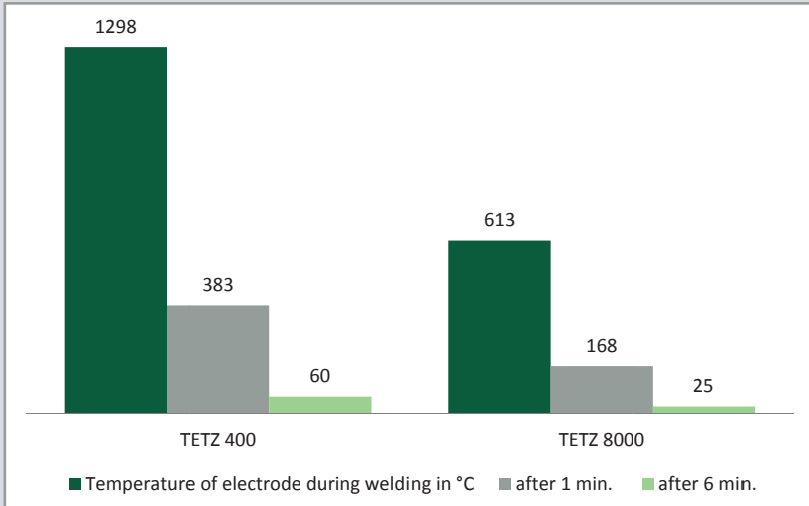
The new TIG torches are equipped with an innovative electrode unit with which the electrode can be replaced just as quickly and easily as contact tips in MIG/MAG welding.

Thanks to the electrode unit, the former electrode collet housing can be dispensed with, making the entire structure considerably smaller and more flexible. Instead of grinding the electrode and measuring it into the torch head, the used electrode unit is simply screwed out and the new one screwed in. This ensures a reproducible TCP. It is not necessary to adjust the tungsten electrode. Process reliability is guaranteed, as each electrode unit delivers a consistently precise result.

## ONE SIZE FITS ALL

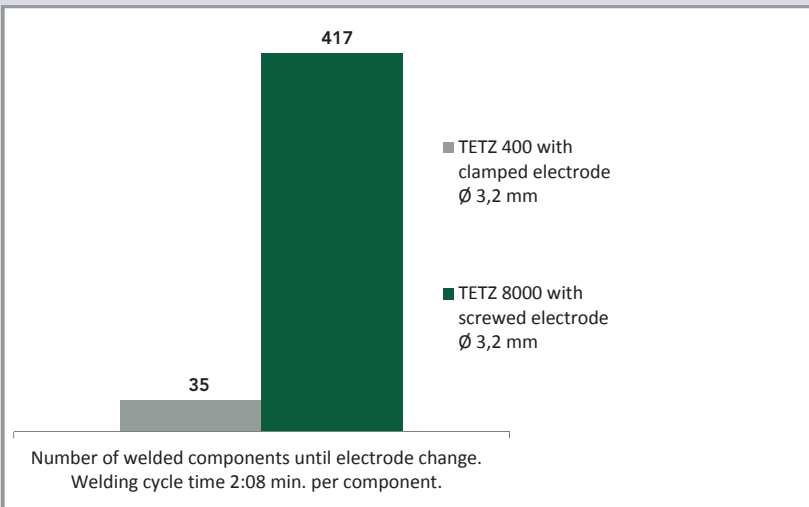
In conventional TIG systems, the electrode diameter is defined by the electrical and thermal load that the tungsten material can endure. Depending on the application, different electrode diameters are required, which results in repeated electrode replacement and frequent downtimes.

With the new electrode unit the distance the current has to travel is much shorter. The electrode diameters can thus be considerably reduced while maintaining the same performance. Even when welding with high amperage loads, it is not necessary to replace the electrode.



## LABORATORY TEST: HEATING ELECTRODE

300 A / DC: 10:00 min. / Argon 4.6 / 8 l/min.  
 Feed rate: 0.13 m/min.  
 Stick-out: 5.5 mm  
 Arc length: 5-6 mm  
 Electrode diameter: 3.2 mm  
 Maximum temperature of the needle:  
 clamped electrode: 1298°  
 screwed electrode: 613°



## FIELD TEST: DURABILITY ELECTRODE

Welding of flange fittings in robot cell with synchronized turntable.  
 140 A / DC: 2:08 min.  
 Argon 4.6 / 8 l/min.  
 Result:  
 clamped electrode: change after 35 components (73 min.)  
 screwed electrode: change after 417 components (867 min.)

## IMPROVED COOLING

With conventional TIG torches the cooling ends at the electrode collet housing and thus several centimeters in front of the electrode tip. With the new TIG generation, the cooling water is led to just before the electrode tip and flows through the rinsing chamber. In addition, the copper core of the electrode units is hollow drilled and is additionally cooled from the inside by the inflowing gas.

These factors lead to a measurably reduced wear of the electrode and the gas nozzle. In addition, gas consumption is reduced because less gas is required to cool the process. The user benefits are a longer service life and minimized work interruptions.

## PERFECT CURRENT TRANSFER

The electrode is firmly pressed into the copper core of the electrode unit and is then screwed into the torch instead of merely being clamped into an electrode collet housing.

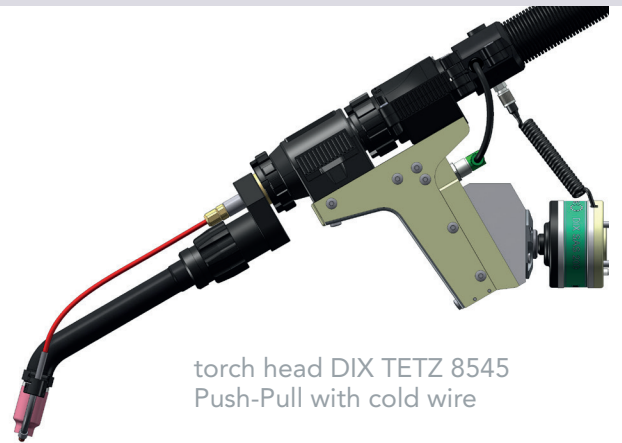
This results in a high surface pressure, which in turn enables an excellent current transfer. In addition, the copper core quickly dissipates the heat from the electrode tip.

## SYSTEM EXAMPLES

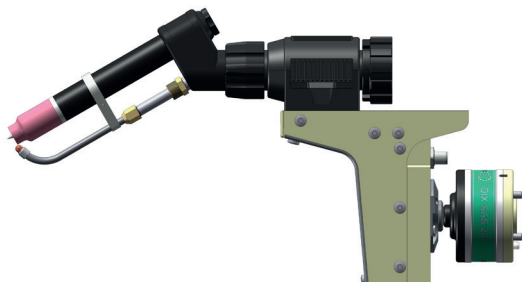
Thanks to the new design, the TIG torches are particularly flexible in terms of design and length of the torch necks.

You have the choice between two construction sizes (7000 and 8000) with matching electrode diameters. In addition, the screwable electrode units are available in different lengths depending on the process requirements, as well as in numerous alloys and grinding angles.

In short: you define your requirements - we construct your individual and needs-based TIG torch.



torch head DIX TETZ 8545  
Push-Pull with cold wire

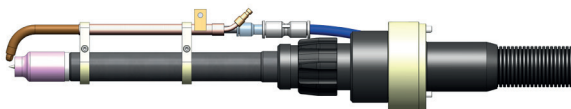


torch head DIX TETZ 8000  
Push-Pull with cold wire

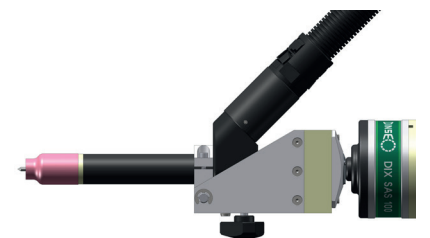
Also the already known torches are now available with the new electrode units



torch head DIX TETZ 7500



torch head DIX REWTZ 8500  
for hollow shaft robots



torch head DIX TAZ 8000

## EXAMPLES FOR TORCH HEADS



DIX TETZ 85xx



DIX TETZ 75xx



DIX TETZ 7545

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