CLOOS

Weld your way.

QINEO GL/GLW

The new inverter generation for TIG welding

with Direct (DC) or Alternating Current (AC)

New!

Even more power.
Up to
500 A

qineo®

A giant leap for welding technology.

CLOOS

Weld your way.

CLOOS: Your brand for innovative welding technology!

Providing added value for our customers! This is the motivational force behind our 700 employees. We are constantly raising our bar by pushing ourselves to provide innovative welding processes and solutions that will contribute to the long-term commercial success of your company!

Our process competence is at the forefront in welding and cutting of various ferrous and non-ferrous metals. We offer our customers individual solutions which are optimized and adapted specifically to your product and production requirements.
Leadership and competence equals process automation and welding at its best. Whatever your needs are,
we **"Weld your way."**

CLOOS develops, manufactures and delivers innovative solutions in more than 40 countries worldwide. With our QINEO, the new generation of welding machines for manual and automated applications, and
QIROX, the system for automated welding and cutting, our product range covers the entire spectrum of arc welding technology. Our product portfolio includes intelligent software, sensor and safety technology solutions – all of which are customised to meet your specific needs and requirements!

CLOOS provides full service solutions – all from a single source!

QINEO®

The new generation of welding power sources for manual and automated applications.

QINEO are the high-quality welding power sources by CLOOS which have been developed specifically for commercial and industrial welding purposes. They meet every demand of manual and automated welding. Moreover, the modular QINEO system allows individual solutions which can be adapted to your specific production requirements and objectives. From capacity class to special equipment, each QINEO is customised and supplemented by a comprehensive accessories program and matching services. With highest availability, shortest delivery times and best quality QINEO welding power sources offer you considerable economical advantages.

Powerful and light

New!

Even more power with the
GL/GLW 322
GL/GLW 502

The new QINEO GL/GLW Inverters for TIG-DC (GL) or TIG-AC/DC (GLW) welding supports the users in efficient and flexible welding.

With their excellent price/performance ratio and their outstanding process functions the QINEO GL/GLW power sources are particularly suitable for a wide range of applications. The welding machine can be used on the biggest site and for the roughest assembly tasks as they are operated on mains supply cables up to a length of 100 m or directly at the generator. The high voltage fluctuation tolerance ensures a perfect welding result..
Gas-cooled TIG welding torches are the standard equipment for the QINEO TIG welding machines GL/GLW222 to GL/GLW502. As an option they can be equipped with water cooling. A trolley and a gas bottle holder are also available for a good mobility.

Advantages of QINEO GL/GLW in overview

- **Excellent price/performance ratio**
- **High welding capacity on 1- or 3-phase mains**
  200 or 220 A welding current on the 230 Volt mains
  300 - 500 A welding current on the 400 Volt mains
- **Optimum performance/weight ratio**
  The powerful but light partner - everywhere
- **Everything at a glance**
  A clear control panel for easy handling
- **Robust construction**
  High level of stability of the devices

QINEO GL - DC machines

QINEO GL 322/GL 502 *QINEO GL 302* *QINEO GL 222* *QINEO GL 202*

- **Safe arc ignition**
  Matched start parameters for perfect ignition conditions:
  Safe ignition, stable arc.
  With high-frequency ignition and Quick Start function
- **Perfectly suitable for MMA operation**
  Improved flow behaviour because of ArcForce
  More protection by VoltageReduceControl (VRD)
- **Also suitable for automated welding**
  With automation interface the GLW 322 and GL/GLW 502 can also be used at machines or robots.

Additional advantages of QINEO GLW in overview

- **AC waveforms for each requirement**
  Individual AC waveforms for demanding tasks

Sine waveform:
Very quiet welding
Triangle waveform:
Soft, fine arc
Rectangular waveform:
High power

- **Penetration function for thick plates and for thin/thick plate joining**
  Reliable joining of aluminium plates in very different thicknesses

200 Ampere
220 Ampere
300 Ampere
320 Ampere
500 Ampere

CE S

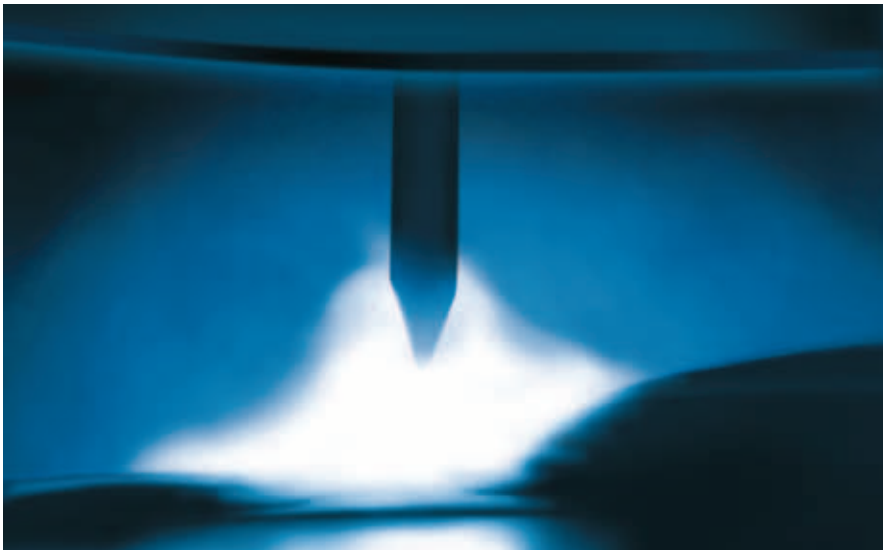
QINEO GLW - AC/DC machines

QINEO GLW 502 *QINEO GLW 322* *QINEO GLW 302* *QINEO GLW 222 (G)*

qineo®

TIG welding process

With the Cloos products for TIG welding you are always a pinpoint ahead. Our TIG power sources weld clean, precisely and reliably all over the world. But we also offer small and compact inverter technology for workshop and trade. Thin plates or pipe constructions: Cloos has the right products for all materials and forms.



The fields of application
TIG Welding is suitable for all metal processing productions with high quality requirements.
Welding with direct current is more suitable for heavy metals such as stainless steel, silver, nickel, copper and their alloys. Light metals such as aluminium, magnesium and their alloys are AC welded.

The advantages
During TIG welding there are no chemical reactions of the shielded gas or the air with the molten metal of the workpiece. Slag or spatters do not occur, the electrode does not melt. A good gap bridging is ensured in all welding positions.

TIG welding

is a joining process by using Tungsten electrodes and inert gases such as argon and helium. The arc produces heat and burns between the non-melting Tungsten electrode and the workpiece.

The weld pool is shielded by the inert shielding gas which prevents a reaction of the electrode and the workpiece with oxygen or ambient air.

The TIG arc melts the workpiece edges. They merge and solidify to a weld seam.

Weld grooves are surfaced and filled by means of filler materials which are fed either manually via weld rods or automated with spooled wire via cold wire transport.

Innovative functions for efficient solutions

New innovative TIG functions were developed for reliable solutions of the most difficult welding tasks.

New TIG functions

- **Quick Start**
  Time for tack welding is reduced to a minimum.
- **Dynamic Arc**
  Active arc control, welding with a very short arc.
- **Quick Spot**
  Perfect tacking results thanks to the clever process run.
- **Multitack**
  Reduction of the heat input to a minimum.
- **Mix TIG AC/DC**
  Combination of DC and AC welding (with GLW).

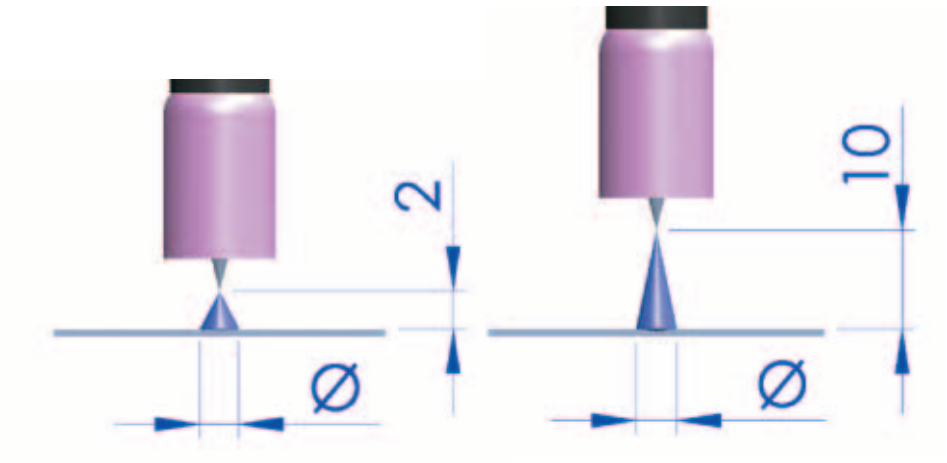
Quick Start

The Quick Start function reduces the time for tack welding to a minimum. A high-frequent pulse is switched on for a defined period. The tack weld closes earlier because of the vibration of the pulsed current. This is very useful when tacking plates with small gaps and irregular preparations.

When Quick Start is used for tacking the welds are particularly bright and without oxidation.

Dynamic Arc

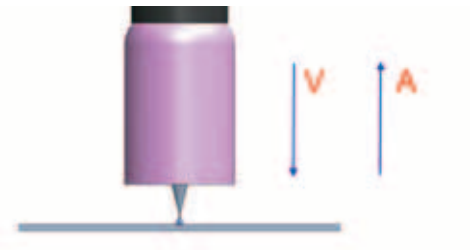
The Dynamic Arc function allows an active arc control. When the arc voltage decreases, the welding current increases and vice versa. Due to Dynamic Arc the current/voltage change can be adjusted from 1 up to 50 A per volt.



Even when changing the arc length the weld pool diameter remains the same. This means a reduced heat input, less workpiece distortion and intact material characteristics.

Advantages Dynamic Arc

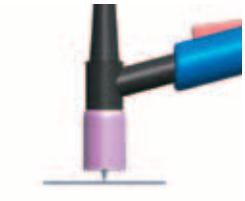
- Higher weld speed
- Reduced workpiece distortion
- Deeper penetration
- Heat input only into the weld and not to the surrounding surface



Dynamic Arc allows welding with a very short arc. When the electrode approaches the workpiece the current increase prevents the contact of the electrode with the weld pool. Thus the electrode does not stick to the workpiece and there is no Tungsten contamination.

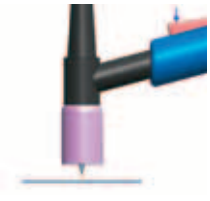
Quick Spot

The newly developed Quick Spot function considerably facilitates tack welding. It is not necessary any more to exactly position the electrode (as near as possible). The electrode is just placed at the tacking position. Thus the welder has perfect control. After removal of the electrode there is a tacking pulse for a defined period. Thus the tacking point immediately closes with the lowest heat input. The risk of contamination from electrode to workpiece reduces.



1.
Place the torch with electrode on the workpiece.

2.
Press and hold torch trigger.

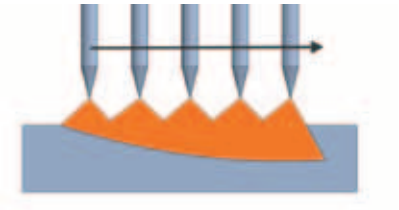


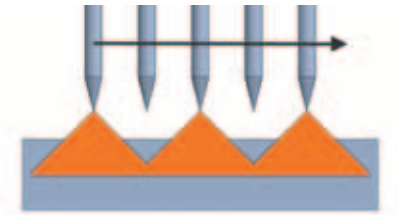
3.
Slightly lift the torch, HF ignition starts.

4.
The arc ignites for a few hundredth of a second (preselectable adjustment).

5.
The result is a bright and precise weld seam without oxidation and plate distortion.

Multitack





Multitack reduces the heat input during welding to a minimum. A series of short arc ignitions allows the material to cool down thanks to the pause between the ignitions. The result: minimum workpiece distortion.

An optimum weld penetration is achieved by adjusting the repetition rate (frequency) of the Multitack. Thus you can also control the welding speed and the heat input.

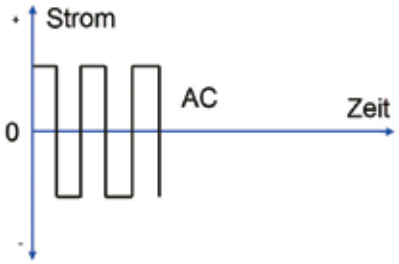
Multitack also shows excellent results when welding fillet welds. The weld remains bright and without oxidation. Rework with acids is reduced or not necessary any more.

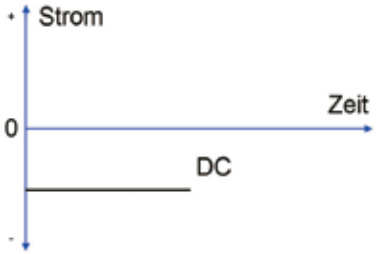
Mix TIG AC/DC

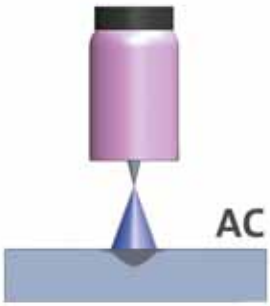
Advantages of Mix TIG AC/DC

- Thick plate welding with low currents compared to alternating currents
- High welding speed because of a higher percentage of the DC half-wave current
- Very quick formation of the weld pool
- Suitable for welding plates with different thicknesses
- Best results with a mix ratio of 50% AC // 50% DC

The Mix TIG AC/DC method (with GLW) combines the necessity for AC welding with the benefits of DC welding. The oxide skin is only partly removed and the energy input is considerably increased. This process perfectly controls the weld pool (oxide skin supports the melt) and creates a very high heat input. It is generally recommended for thick components but can be applied for all other materials, too.





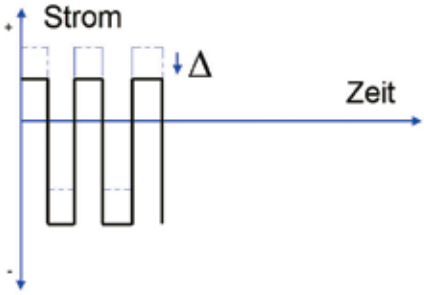


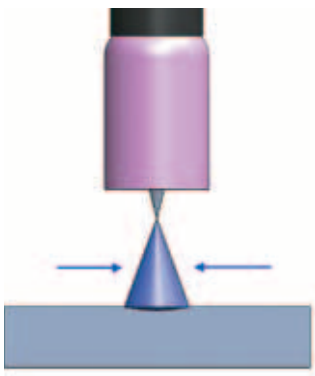
TIG AC half-wave: the oxide skin is opened and the melt is cleaned.

TIG DC half-wave: a high heat input into the workpiece is achieved.

Extra penetration

This function allows to shift the current curve to the negative phase, referred to zero. Due to the precise penetration welding of very thin plates is made possible. The preselectable values in our TIG AC/DC machines change from 0% to 80% (related to the percentage of the DC half-wave).





Only QINEO offers built-in quality

The state-of-the-art individual production of QINEO welding power sources from modules sets a new standard for the whole industry.
The matching components guarantee an economical production, very short delivery times and best quality. Every QINEO welding power source is of a piece. And every detail serves only one end: to achieve optimal welding results.

Single source supply

The custom-made accessories for the QINEO GL/GLW are of high-quality and economically tested. The connection of these long-lasting components with the TIG Inverter makes working versatile, flexible and environmentally friendly.

Example photo

Cooling unit

The QINEO GL/GLW 222, GL 302, GL/GLW 322, GL/GLW 502 TIG power sources are equipped with an external cooling module on demand. Efficiency advantage: Increase of duty cycle and welding capacity.

Example photo

Welding torch

Choose between a multitude of TIG welding torches for any possible application.

Hand remote control

The hand remote control is used to minimise time-consuming ways when welding far away from the power source.

Example photo

Carriages

With this additional tool, the QINEO GL/GLW 222 and the GL 302, GL/GLW 322, GL/GLW 502 TIG inverters can be transported easily, safely and quickly. The carriage also has an adapter for a gas bottle.

Robot and automation interface

Thus, the TIG welding machines of the capacity classes 320 and 500 A can also be used at the robot or an automated system.

Foot remote control

The foot remote control allows a regulation of the arc power during welding.

Welding machines

	QINEO GL 202	QINEO GL 222	QINEO GL 302	QINEO GL 322 New!	QINEO GL 502 New!
Welding current	5 A - 200 A DC	5 A - 220 A DC	5 A - 300 A DC	5 A - 320 A DC	5 A - 500 A DC
Welding current	200 A (30 % duty cycle*)	220 A (40 % duty cycle*)	300 A (50 % duty cycle*)	320 A (60 % duty cycle*)	500 A (50 % duty cycle*)
Welding current at 60 % duty cycle	140 A	190 A	250 A	320 A	460 A
Welding current at 100 % duty cycle	130 A	160 A	210 A	260 A	400 A
Open circuit voltage	83 V	81 V	76 V	73 V	85 V
Mains voltage	230 V + 115 V	230 V	3 x 400 V	3 x 400 V	3 x 400 V
Connection cable	3 x 2,5 mm²	3 x 2,5 mm²	4 x 2,5 mm²	4 x 2,5 mm²	4 x 6 mm²
Mains fuse slow-acting	16 A + 32 A (115 V)	25 A	20 A	25 A	32 A
Type of protection	IP 23 S	IP 23 S	IP 23 S	IP 23 S	IP 23 S
Insulation class	H	H	H	H	H
Type of cooling	AF	AF	AF	AF	AF
Dimensions L/W/H	400 x 160 x 260	460 x 230 x 325	460 x 230 x 325	690 x 290 x 450	690 x 290 x 450
Weight	9.8 kg	18 kg	19.9 kg	45 kg	54 kg

* at an ambient temperature of 40°C

Welding machines

	QINEO GLW 222	QINEO GLW 302 New!	QINEO GLW 322 New!	QINEO GLW 502 New!
Welding current	5 A - 220 A AC/DC	5 A - 300 A AC/DC	5 A - 320 A AC/DC	5 A - 500 A AC/DC
Welding current	220 A (35 % duty cycle*)	300 A (30 % duty cycle*)	320 A (45 % duty cycle*)	500 A (50 % duty cycle*)
Welding current at 60 % duty cycle	180 A	220 A	280 A	450 A
Welding current at 100 % duty cycle	160 A	180 A	240 A	400 A
Open circuit voltage	72 V	59 V	66 V	85 V
Mains voltage	230 V	3 x 400 V	3 x 400 V	3 x 400 V
Connection cable	3 x 2,5 mm²	4 x 2,5 mm²	4 x 2,5 mm²	4 x 6 mm²
Mains fuse slow-acting	25 A	20 A	25 A	32 A
Type of protection	IP 23 S	IP 23 S	IP 23 S	IP 23 S
Insulation class	H	H	H	H
Type of cooling	AF	AF	AF	AF
Dimensions L/W/H	460 x 230 x 325	460 x 230 x 325	690 x 290 x 450	690 x 290 x 450
Weight	19 kg	24,2 kg	42,6 kg	54 kg

* at an ambient temperature of 40°C

Active worldwide

There are more than 40 sales and service centres in our worldwide CLOOS organisation, which are at your disposal for sales and service. In addition, our experienced service team in Haiger can be called at any time for any problems. In this way we can ensure effective help on site if breakdowns occur.

Long service life guaranteed

With maintenance and inspection at regular intervals the technical availability of a CLOOS system is nearly 100 %. But if faults do occur, we can minimise downtime by means of a quick repair. This is ensured by well-equipped spare parts stores and a computer-controlled logistic system.

Always at your service

Our Service Hotline is free of charge and in the case of emergencies is always available for you. 24 hours service without surcharge.. Even in the case of products which have been in use for more than 20 years we have the expertise to answer all your questions.

Service Hotline
✆ +49 (0) 27 73/85-132

Additional information regarding QIROX® the system for automatic welding and cutting can be obtained at **www.qirox.de**

qirox®

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