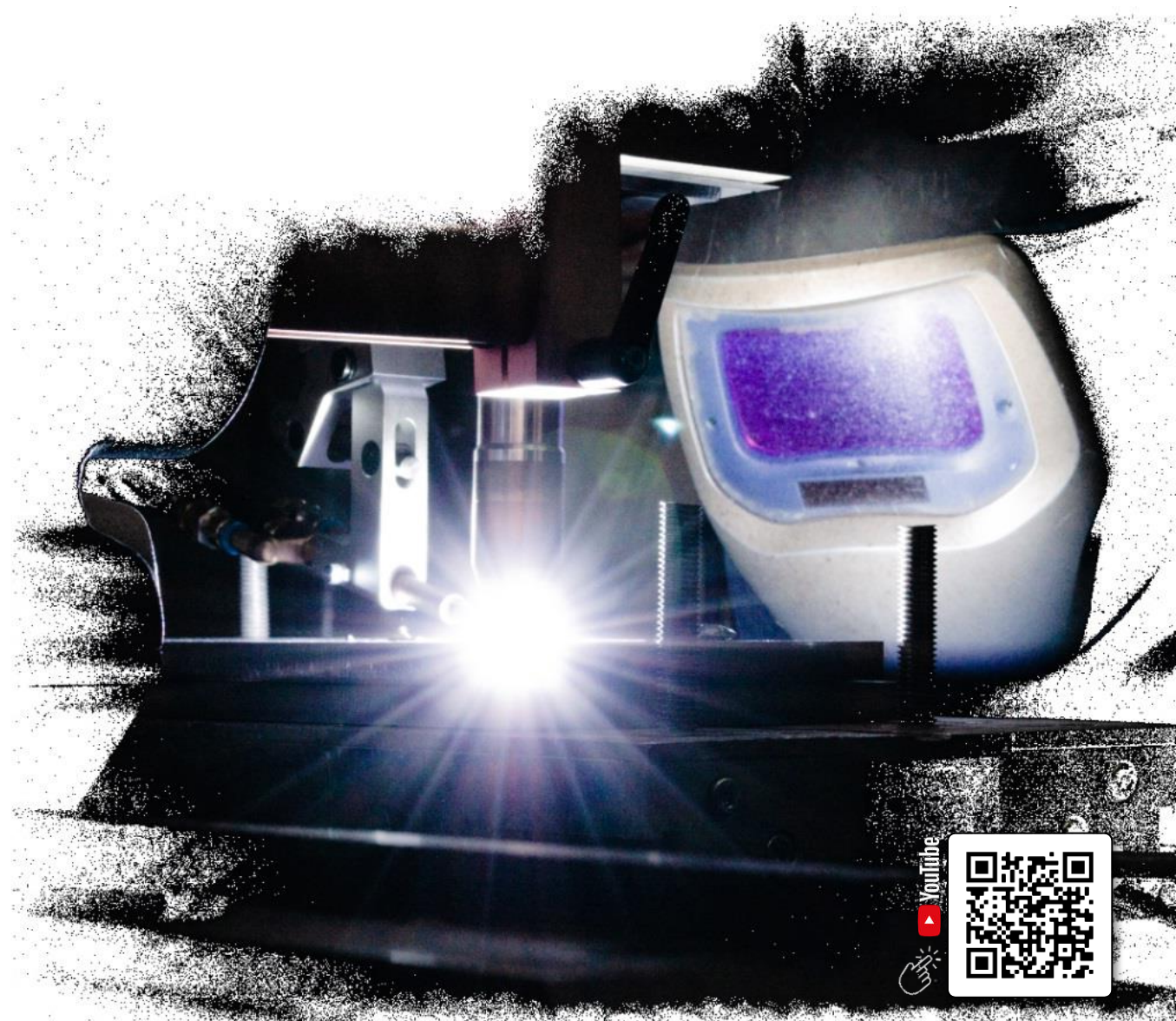


Kjellberg[®]
FINSTERWALDE

InFocus

TIG High-Performance Welding

Potentials – Applications – Components



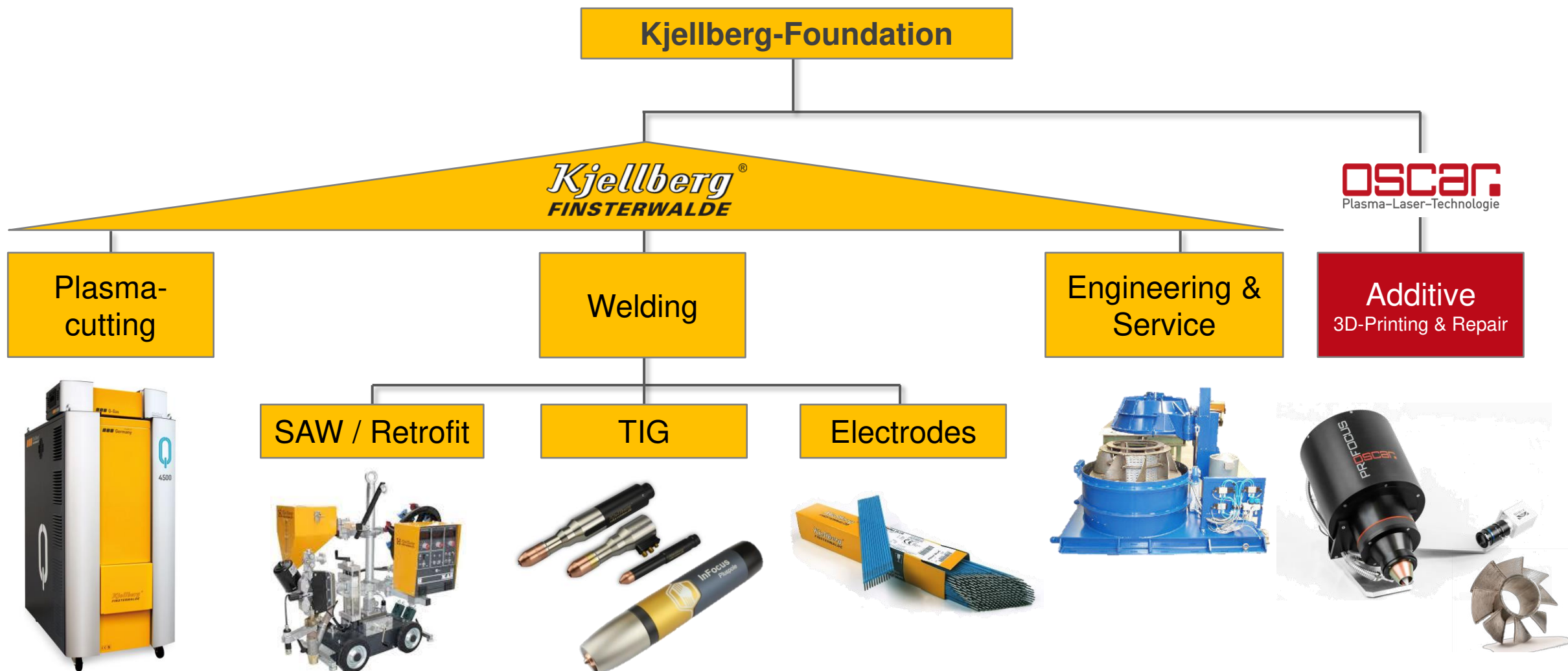
Products „Made in Germany“



- 1922** Foundation of Kjellberg (development & sales of welding technology)
- 1959** Birth of plasma cutting
- 2013** Research company OSCAR PLT (Klipphausen)
- 2019** Market launch Q 3000 Plus and Innovation Award at „Blechexpo“ show
- 2023** 450 employees, 70% export into 50 countries, 4 foreign branches



Products „Made in Germany“



Your Kjellberg team around TIG welding



Plasma und Maschinen GmbH

Development, design, manufacturing, product updating



OSCAR PLT GmbH

Product management, R&D support



Schweißtechnik und Verschleißschutz GmbH

Sales & application engineering



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k.simakova@kjellberg.de



WE are Kjellberg

Our TIG products are also competently supported by many dedicated colleagues in purchasing, sales, distribution, development and production.



Fabian Kosel

Customised trailing gas systems
+49 35204 78693-55
f.kosel@oscar-plt.de



Jens Heimbokel, IWE

Freelancer in technical sales
+49 176 816 98703
j.heimbokel@kjellberg.de

InFocus – TIG high-performance welding



1. What is InFocus and what are the potentials for you?

The answer from the perspective of process, torch design & arc characteristics



2. Your application compass

The overview of reliably mastered welding tasks, basic conditions and references



3. Which products do we offer to you?

The overview to your Kjellberg TIG component kit

What is InFocus?

The answer from the perspective of process advantages for your production

Standard TIG welding:



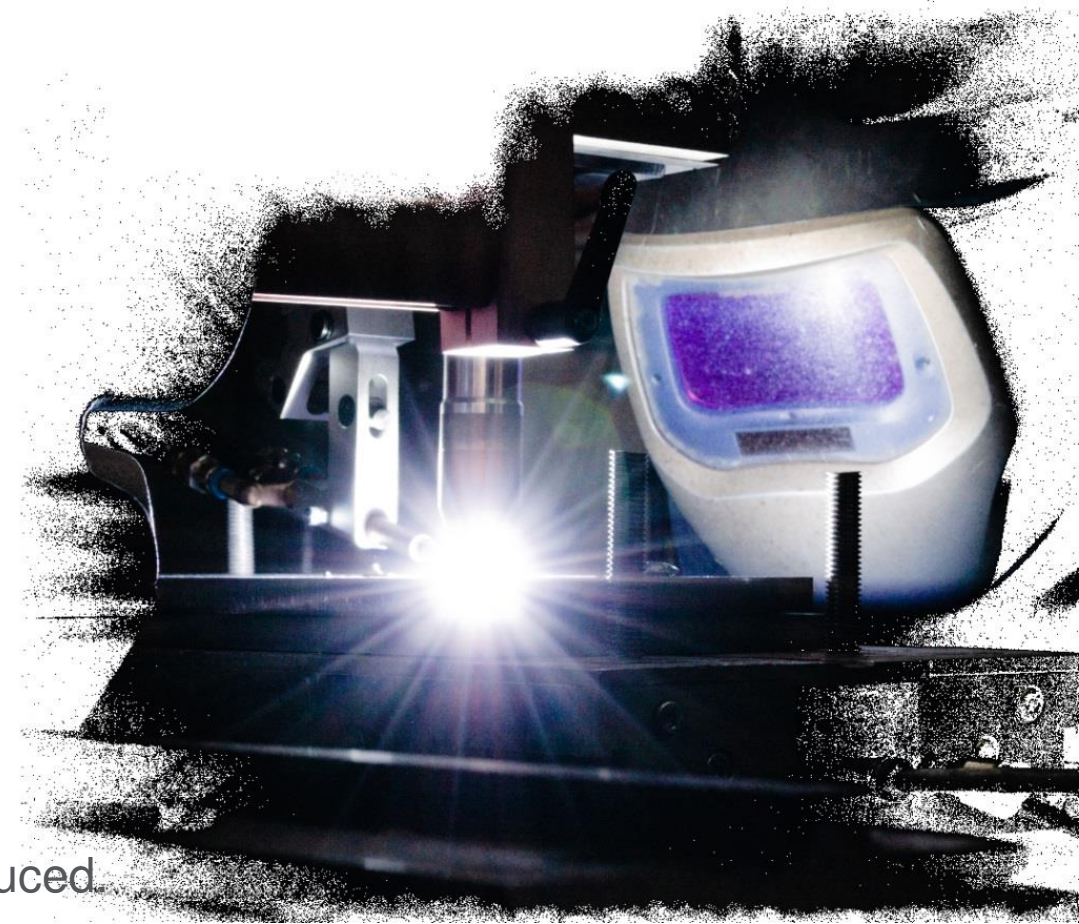
- + high strength and weld quality
- + excellent control of energy input
- + high process stability and reproducibility
- + easy application & technology / low costs



- low welding speed / deposition rate
- low penetration depth
- poor seam ratio (depth / width)
- arc blow possible

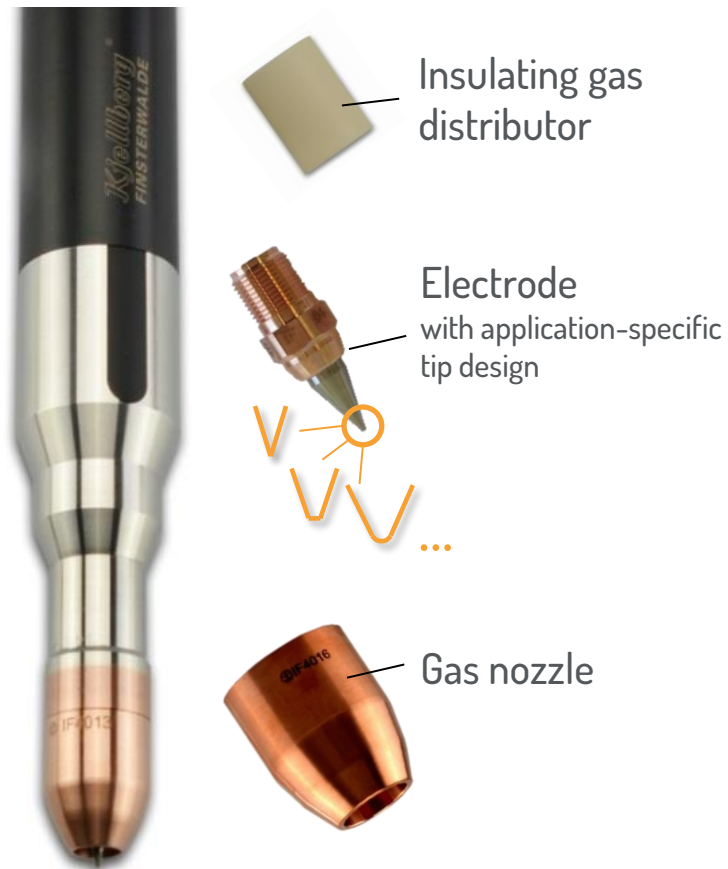
InFocus is a TIG process, in which ...

- the proven TIG advantages are retained and ...
- the disadvantages of the standard TIG technology are reduced



What is InFocus?

The answer from the perspective of the torch design and the resulting arc characteristics



InFocus is a TIG welding process, in which ...

- mechanised and automatically guided machine torches ...
- with a robust design, ...
- a high current carrying capacity of up to 1,000 A and ...
- only 3 wearing parts are used, that ...
- can be changed failure safe, quick & easy, ...
- guarantee a constant electrode position (TCP) and...
- have an application-specific tip design.

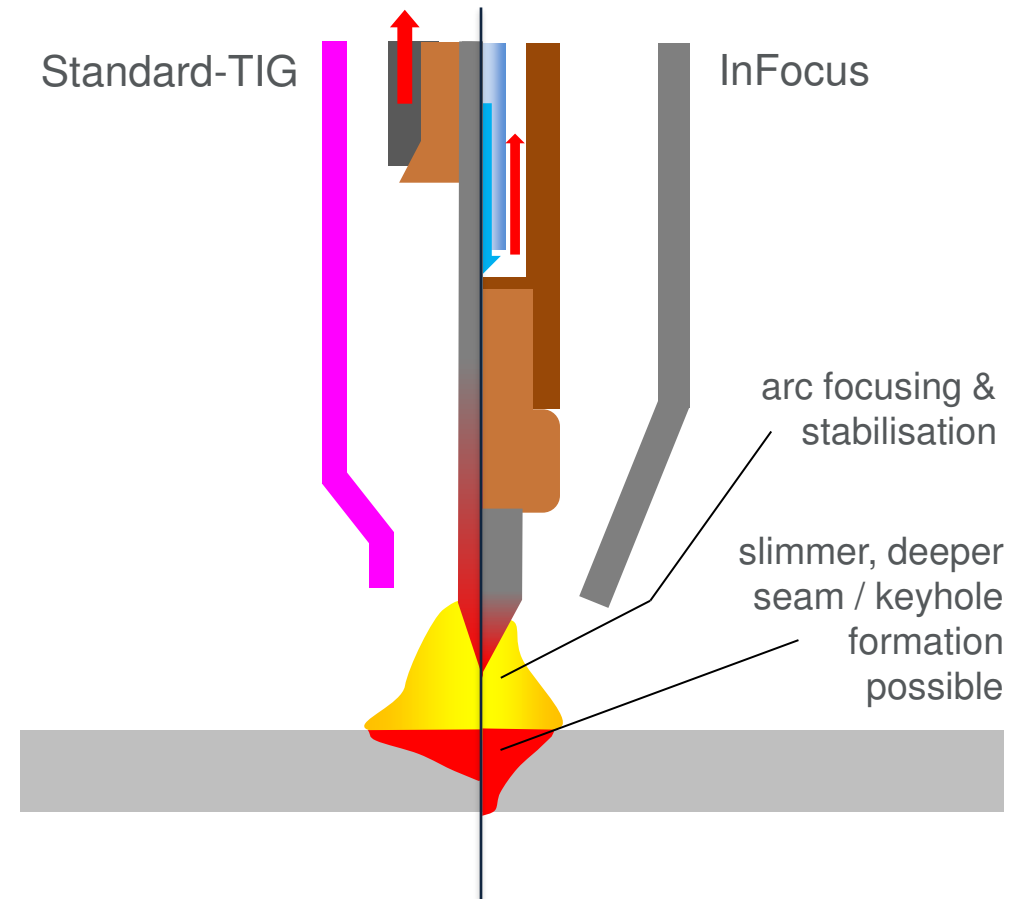
What is InFocus?

The answer from the perspective of the torch design and the resulting arc characteristics

InFocus is a TIG welding process in which ...

- the arc is generated by the electrode design and ...
- the optimised cooling ...
- is applied more strongly to the tip of the electrode ...
- and thus has concentrated arc properties ...
- for welding and brazing.

These arc properties are measurable!



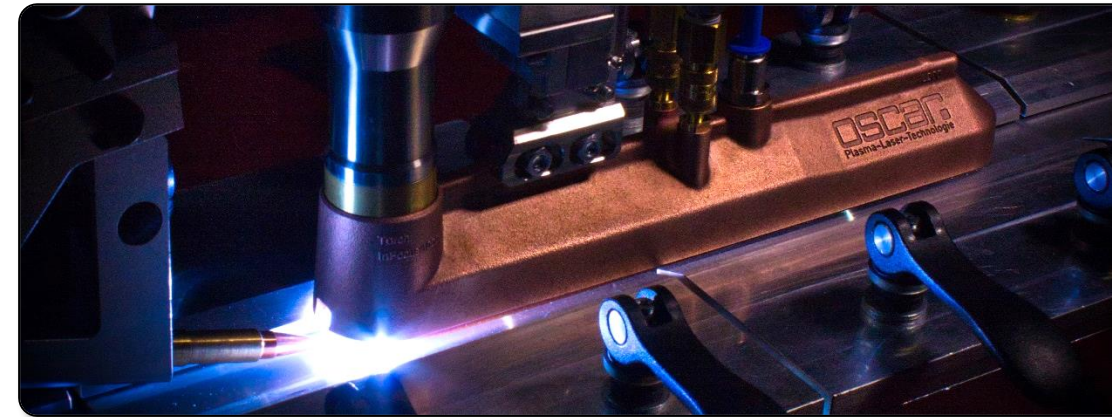
What potential does InFocus offer?

The link between arc properties and advantages for your welding production

In comparison to standard TIG

with the same electrode tip geometry:

- Increasing the energy density in the arc
 - Possibility to weld faster
- Increasing the pressure on the melt pool
 - Optimisation of the seam formation (ratio of width and welding depth)
 - Possibility of piercing (TIG keyhole welding)
- Stabilisation of the arc column through increased speed in the plasma
 - InFocus has advantages where the standard TIG arc is blown (e.g. thick-thin joints, flange and corner welding)



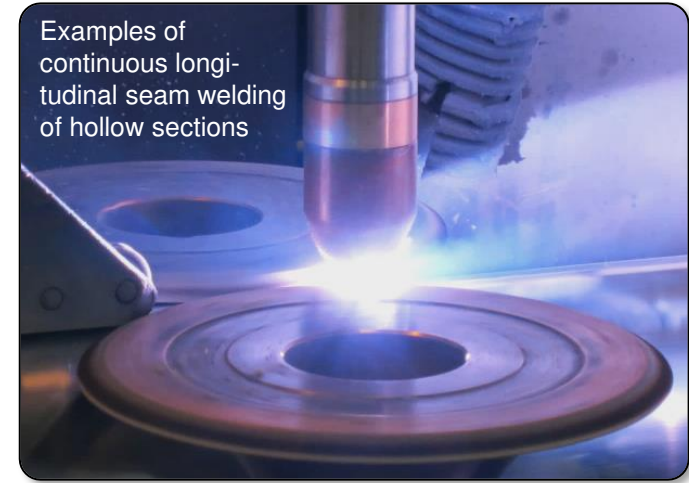
Your application compass

The overview of safely mastered welding tasks and necessary basic conditions

Process control options



- Linear welding machines and clamping benches
- Circular-seam welding systems
- Machine carriers / welding masts
- Robots
- Orbital welding heads



Examples of continuous longitudinal seam welding of hollow sections



- Welding tractors & „old axles“

→ *Welding with welding tractors is possible and must be tested for the specific task, but it depends on the design of the tractor system speed and torch position should not deviate too much.*

Your application compass

The overview of safely mastered welding tasks and necessary basic conditions

Suitable materials



- High alloyed steels, duplex
- Nickel, nickel base
- Copper
- Titanium



- Aluminium → better with [InFocus Pluspole](#)
- Mild and low-alloyed steels → process suitability very application-specific



- Structural steels for low impact energy (JR, JO) in the key hole → Melt pool control most insufficient

Your application compass

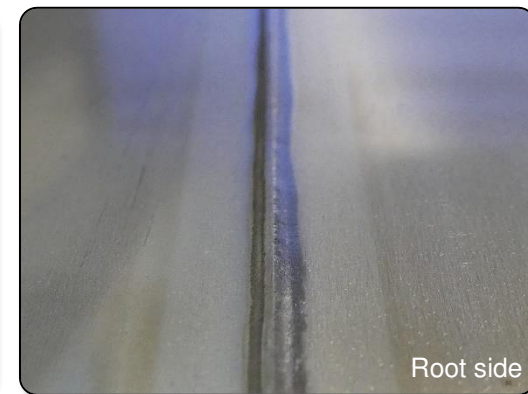
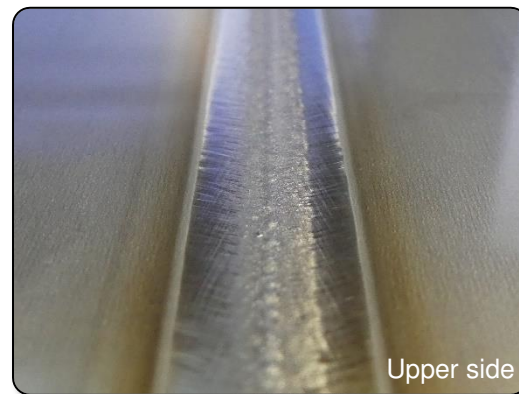
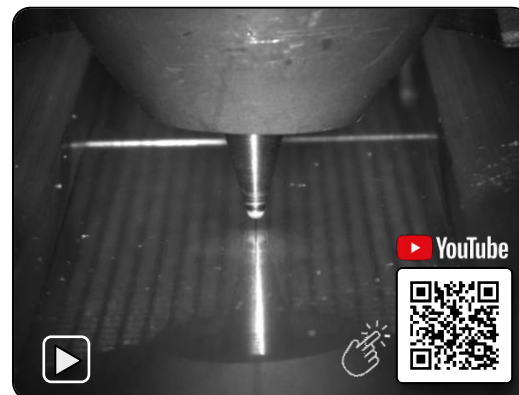
High-alloyed steels - X5CrNi18-10; EN 1.4301

Thickness [mm]	Speed [cm/min]	Gas	Electrode	Current [A]	Filler 1.2mm
0.5	400 ^{*1}	ArH2	IF03	110	-
1.0	300 ^{*1}	ArH2	IF03	220	-
1.5	100 ^{*1}	Ar	IF03	210/170	-
2.0	120 ^{*1}	ArH2	IF03/IF04	220	1.4316
3.0	40 ^{*1}	ArH2	IF03/IF04	270	(1.4316)
3.0	65 ^{*2}	ArH2	IF04	360	1.4316
3.0	120 ^{*2}	ArH2	IF04	420	1.4316
4.0	45 ^{*2}	ArH2	IF04	330	1.4316
6.0	45 ^{*2}	ArH2	IF04/IF05	450	1.4316
8.0	40 ^{*2}	ArH2	IF04/IF05	520	1.4316

Selected parameters from reference applications and feasibility studies, which can vary depending on the application as a result of the basic conditions, the process control and the requirements for the optical tracking.

*1 Heat conduction welding, partly also possible without filler wire

*2 Key hole process



Upper side

Root side

Your application compass

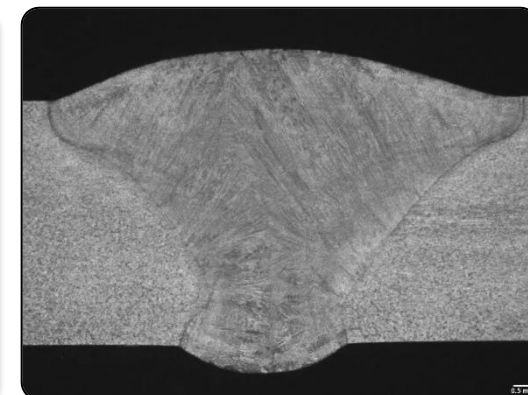
High-alloyed steels - X5CrNi18-10; EN 1.4301

Thickness [mm]	Speed [cm/min]	Gas	Electrode	Current [A]	Filler 1.2mm
0.5	400 ^{*1}	ArH2	IF03	110	-
1.0	300 ^{*1}	ArH2	IF03	220	-
1.5	100 ^{*1}	Ar	IF03	210/170	-
2.0	120 ^{*1}	ArH2	IF03/IF04	220	1.4316
3.0	40 ^{*1}	ArH2	IF03/IF04	270	(1.4316)
3.0	65 ^{*2}	ArH2	IF04	360	1.4316
3.0	120 ^{*2}	ArH2	IF04	420	1.4316
4.0	45 ^{*2}	ArH2	IF04	330	1.4316
6.0	45 ^{*2}	ArH2	IF04/IF05	450	1.4316
8.0	40 ^{*2}	ArH2	IF04/IF05	520	1.4316

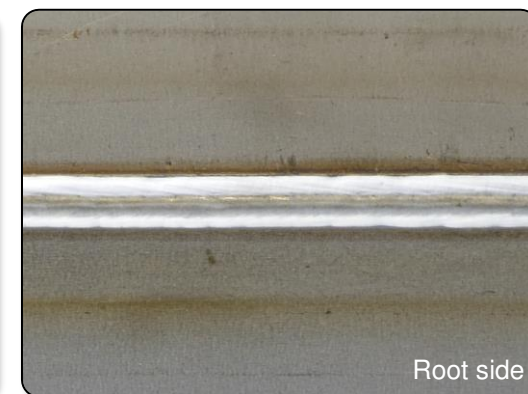
Selected parameters from reference applications and feasibility studies, which can vary depending on the application as a result of the basic conditions, the process control and the requirements for the optical tracking.

*1 Heat conduction welding, partly also possible without filler wire

*2 Key hole process



Upper side



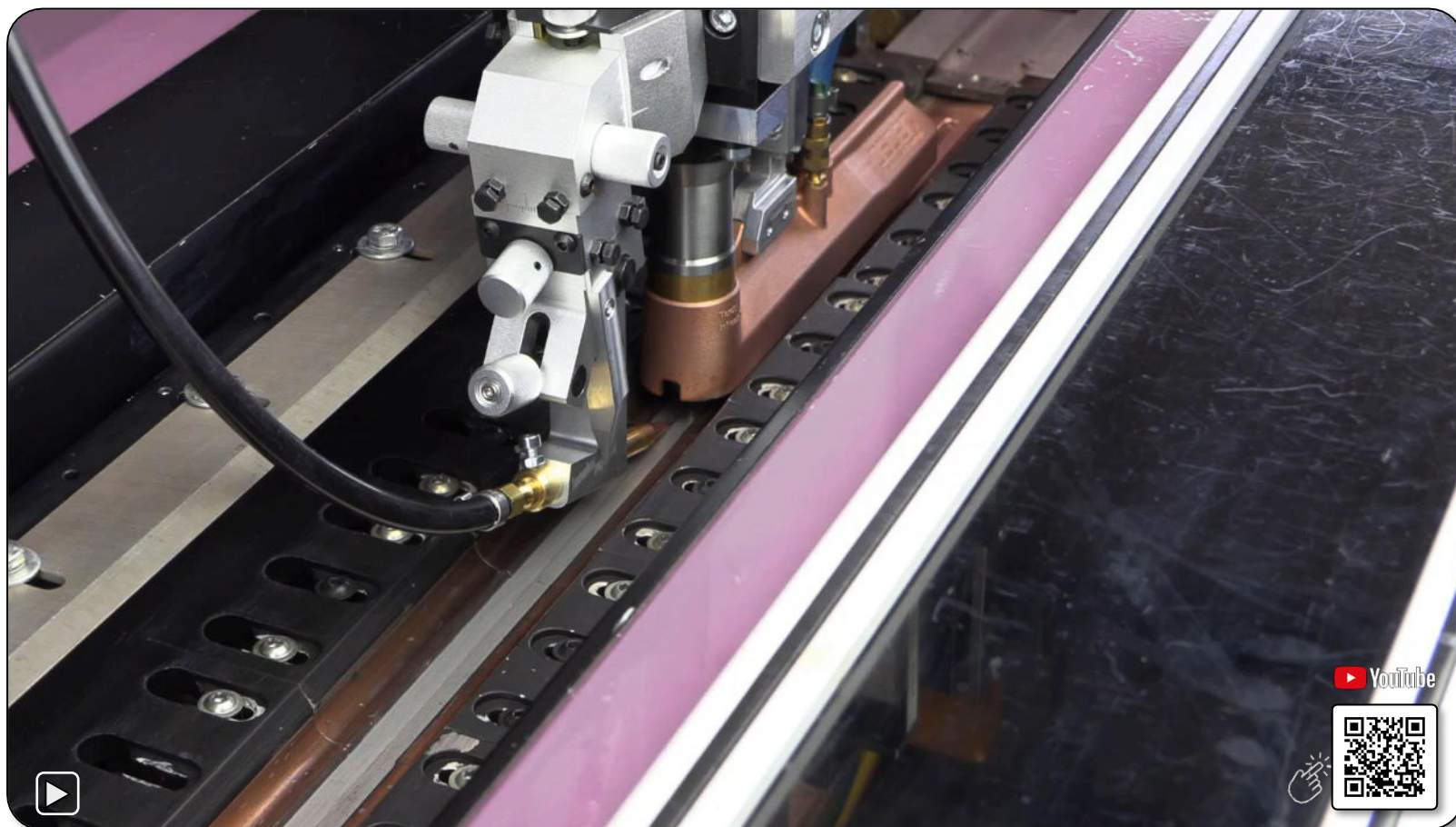
Root side

Your application compass

High-alloyed steels - X5CrNi18-10; EN 1.4301

Thickness [mm]	Speed [cm/min]	Gas
0.5	400 ^{*1}	ArH2
1.0	300 ^{*1}	ArH2
1.5	100 ^{*1}	Ar
2.0	120 ^{*1}	ArH2
3.0	40 ^{*1}	ArH2
3.0	65 ^{*2}	ArH2
3.0	120 ^{*2}	ArH2
4.0	45 ^{*2}	ArH2
6.0	45 ^{*2}	ArH2
8.0	40 ^{*2}	ArH2

Welded on the longitudinal welding machine ELENA (Schnelldorfer); tacked with InFocus at back end of the 1m sheets before welding in an automated process

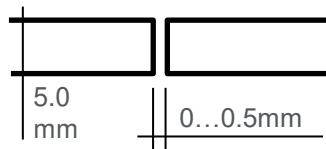


Your application compass

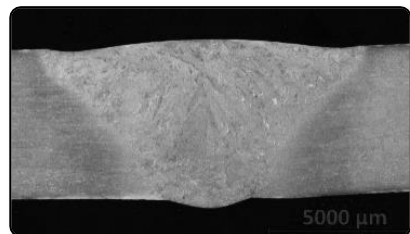
Duplex - X2CrNiMoN22-5-3; EN 1.4462

5.0 mm

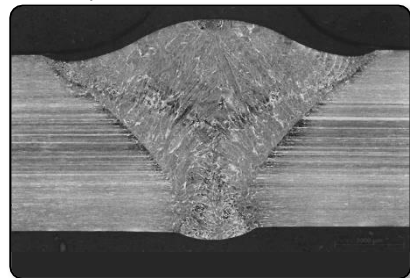
single-layer + filler 1.4462



400A, 42cm/min



520A, 60cm/min

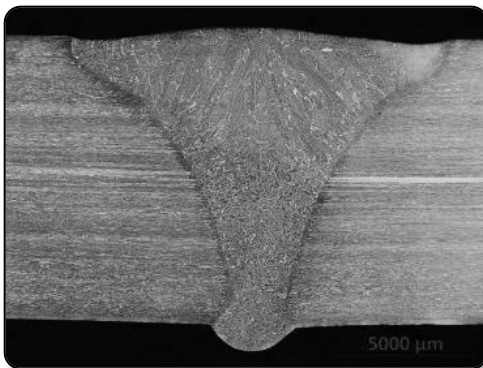


10.0 mm

single-layer + filler 1.4462/1.2mm

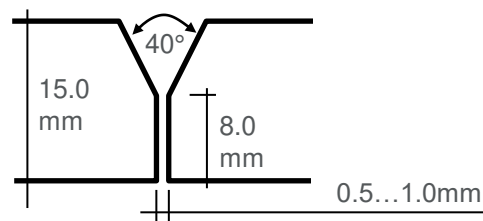


640A, 41cm/min



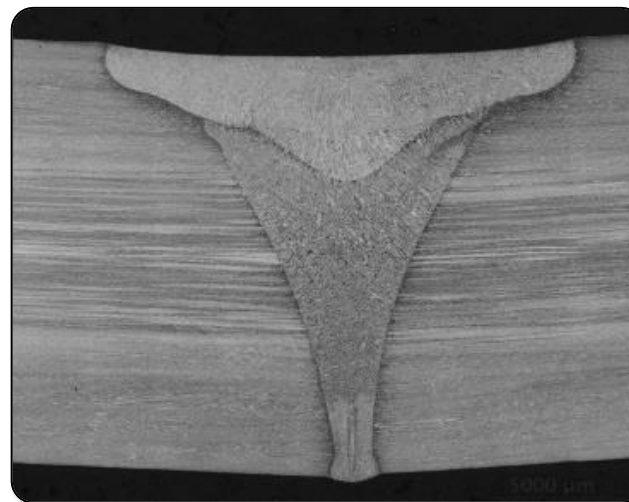
15.0 mm

Double-layer + filler 1.4462/1.2mm



top layer: 300A, 20cm/min

root pass: 640A, 41cm/min



Passed procedure qualification in each case acc. to DIN EN ISO 15614 -1

ifw Jena

Günter Köhler-Institut für Fügetechnik und Werkstoffprüfung

Günter Köhler - Institut für Fügetechnik und Werkstoffprüfung GmbH – 07745 Jena – Otto-Schott-Straße 13
Tel./Fax: (03641) 204 100 / 110
Anerkannter Stelle für die Erteilung von Herstellerqualifikationen im bauseitlichen Bereich
Werkstoffprüflabor akkreditiert nach DIN EN ISO/IEC 17025:2005; Registrier-Nr.: D-PL-17030-01-00

Prüfbericht Nr. 16107

Aufgabe: Bericht über die Qualifizierung eines Schweißverfahrens (WPQR) nach DIN EN ISO 15614-1 – Stumpfstoß –

Werkstoff: 1.4462

Zusatzwerkstoff: DIN EN ISO 14343-A: G 22 9 3 N L

Dicke des Grundwerkstoffs: 15 mm

Schweißprozess: WIG Stichloch, Y-Naht zweilagig, Position PA

Auftraggeber: Kjellberg Finsterwalde Schweißtechnik und Verschleißschutzsysteme GmbH
Oscar-Kjellberg-Straße 18
03238 Finsterwalde

Kunden-Bestell-Nr.: 505051 vom 10.03.2016

Probeneingang: 29.03.2016

Unteraufnehmer: ja (siehe Anlage...) nein

Bearbeiter: Straube / Neuhäuser / Anders

Auftragsnummer: 16107

Datum: 23.05.2016

Dieser Bericht besteht aus: 8 Seiten, 3 Anlagen

CSM
Christian Straube M. Sc.
Abteilung Qualitätssicherung
Leiter Werkstoffprüfung

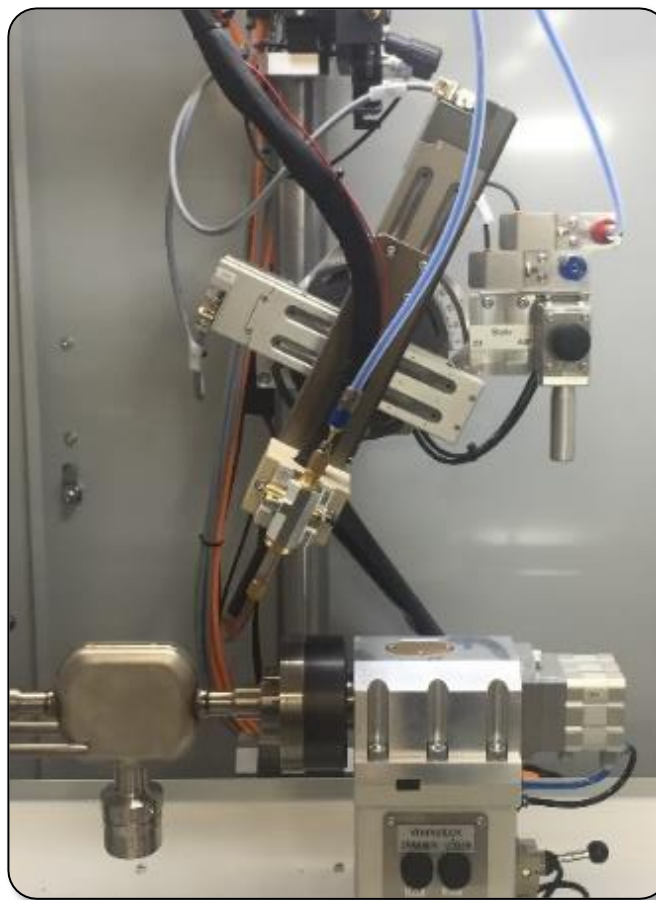
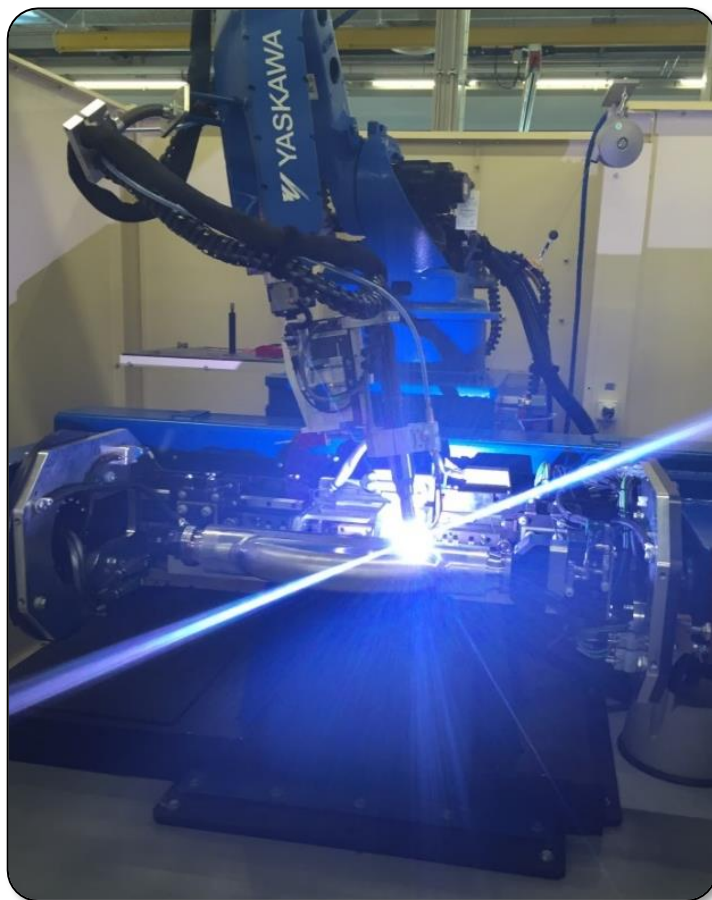


Der Prüfbericht darf nur ungekürzt und unter Nennung unserer Urheberchaft weitergegeben bzw. veröffentlicht werden. Die gekürzte oder ausgearbeitete Weitergabe bzw. Veröffentlichung bedarf der vorherigen Genehmigung des Günter-Köhler-Institutes für Fügetechnik und Werkstoffprüfung GmbH. Die Ergebnisse des Prüfberichtes beziehen sich ausschließlich auf die im Bericht genannten Prüfgegenstände.

Your application compass - References

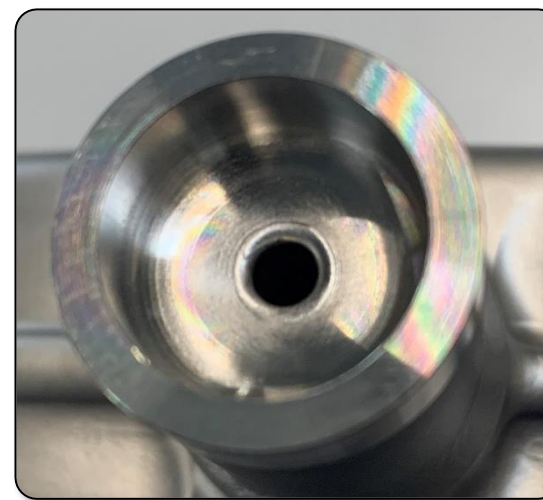
Endress+Hauser 

Flowmeters: InFocus 500 and InFocus 1000 mechanised guided and on robot



Components: Housing, measuring tube to housing flanges
Thickness: 0,1 – 4 mm
Materials: 1.4404, 1.4435, 2.4602
Start of production: since 05/2012

„Thanks to the excellent arc stability, the quality of a TIG weld can now be advanced to higher welding speeds.“

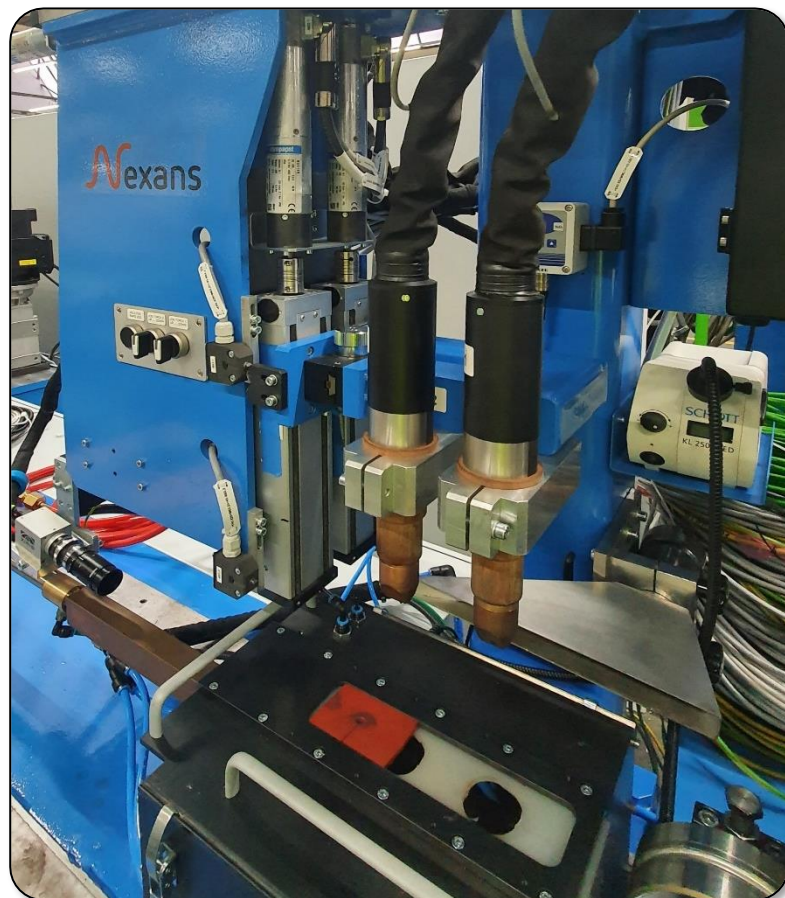


„The first real innovation in TIG welding in decades.“

Your application compass - References



Cable production of long lengths: InFocus 1000 mechanised guided



Components:	Protective sleeves of long lengths, up to 8km in one piece, partly corrugated
Thickness:	0,4 – 1,25 mm
Materials:	Carbon Steel, 1.4301, 1.4404, Inconel 625 + 825, CuNi 715
Start of production:	since 09/2018

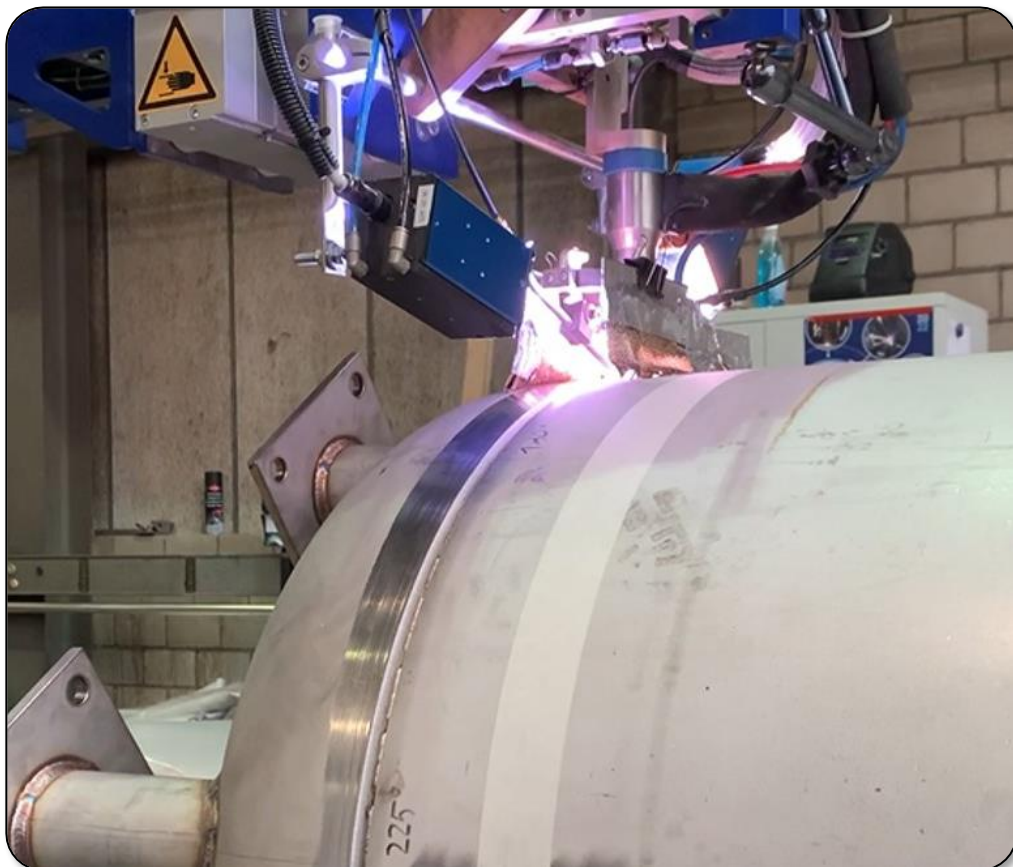


„In cooperation with Kjellberg, the welding parameters could be adapted very well to the manufacturing process.“

Your application compass - References

KASAG **HAANE**
welding systems

Tank and apparatus construction: Circular and longitudinal welding machine with InFocus 1000



Components: Container up to Ø4m, longitudinal seams up to 3m
Thickness: 3 - 30mm, up to 8mm in one layer
Materials: Stainless steels (CrNi, Duplex, NiCrFeMo)
Start of production: 03/2020



„Welds and weld seam quality are very good and very satisfactory.“

„The support from Kjellberg has been very helpful and was always very helpful at all times.“

Your application compass - References

Tank and apparatus construction: Longitudinal welding machine with InFocus 1000



Components: metal frame for containers,
Ø 450-2400mm,
length 600-2500mm,
max. 3000kg

Thickness: 5 – 15mm,
up to 8mm in one layer

Materials: Stainless steels
(1.4404, 1.4571, 1.4401)

Start of production: 10/2022

„Grinding out welding seams and the associated chromium-6 exposure for our employees are over. Today, we weld with the TIG InFocus system without reworking and thus not only healthier but also more profitable.“

Which products do we offer to you?

The overview of your Kjellberg TIG component kit

The InFocus welding torches



InFocus 1000 the Universal

- current carrying capacity up to 1,000 A (at 100%)
- crash-proof and very robust
- with axial or radial hose assembly connection

InFocus 500 for best accessibility

- current carrying capacity up to 500 A (at 100%)
- only 20mm diameter

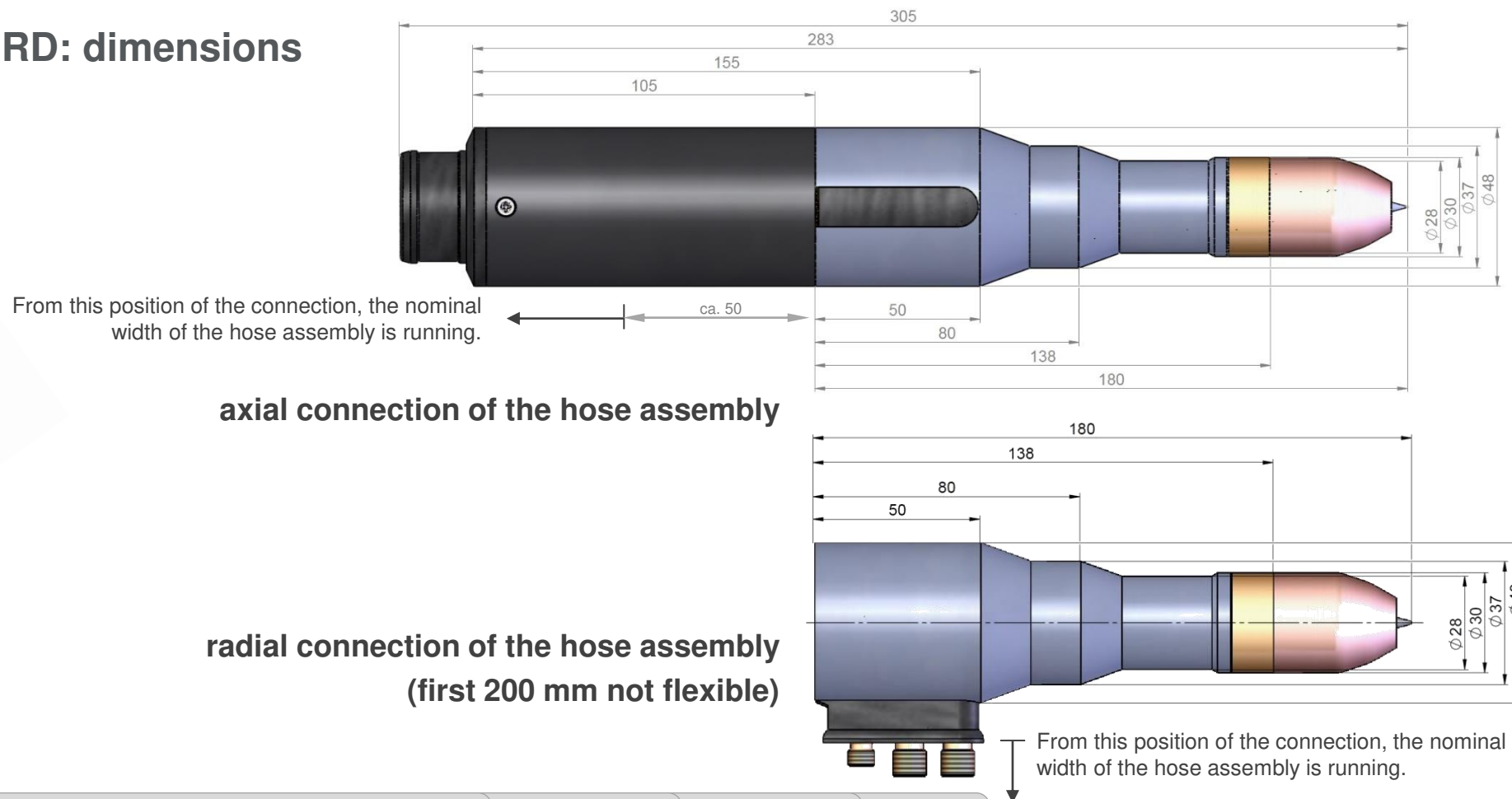
InFocus special torches

e.g. for welding inside of tubes Ø from 40mm

Which products do we offer to you?

The overview of your Kjellberg TIG component kit

InFocus 1000 AX & RD: dimensions



Which product do we offer to you?

The overview of your Kjellberg TIG component kit

InFocus 1000 AX & RD: hose package variants



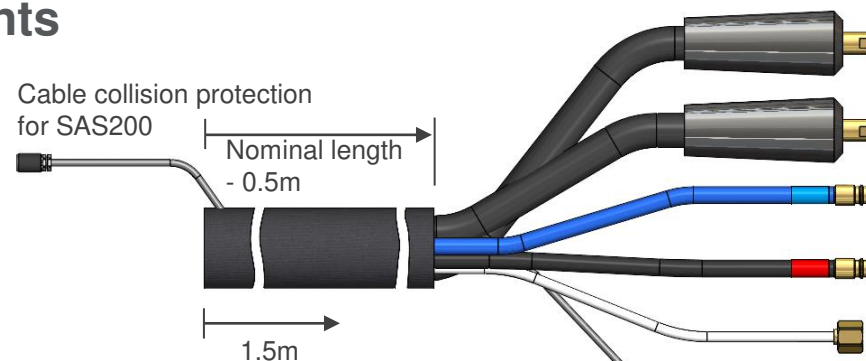
DIX connection for connector box (1000A)



AX 2m: .17.226.630.002
other lengths on request

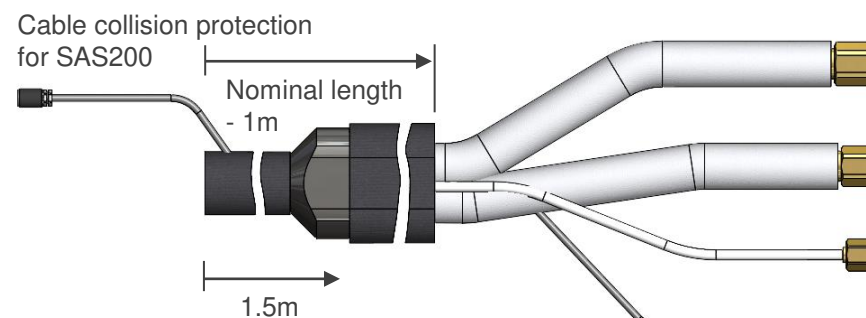
Power-water-connector for FocusTIG power sources (1000A)

AX 4m: .17.226.600.004
8m: .17.226.600.008
RD 4m: .17.215.811.004
8m: .17.215.811.008
other lengths on request



Minimum bending radius up to this point min. 125mm,
at the transition 200mm, after the transition 250mm

Welding current DIX 95,
nominal length
Welding current DIX 95,
nominal length
Coolant supply SK 7.2mm,
nominal length
Coolant return SK 7.2mm,
nominal length
Shielding gas G1/4",
nominal length
Collision protection, plug,
nominal length



Minimum bending radius up to this point min. 125mm,
at the transition 200mm, after the transition 250mm

Welding current and coolant
return, G1/2", NW 24mm,
nominal length
Welding current and coolant
supply, M18x1.5, NW 22mm,
nominal length
Shielding gas G1/4",
nominal length
Collision protection, wire end
sleeves, 2-wire, nominal length

Which product components do we offer to you?

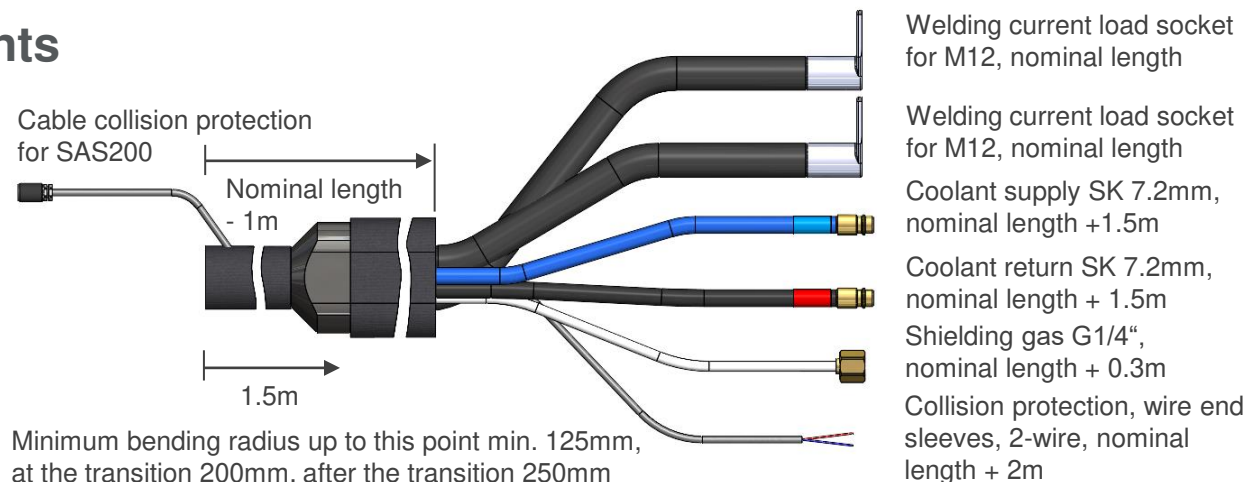
The overview of your Kjellberg TIG component kit

InFocus 1000 AX & RD: hose package variants



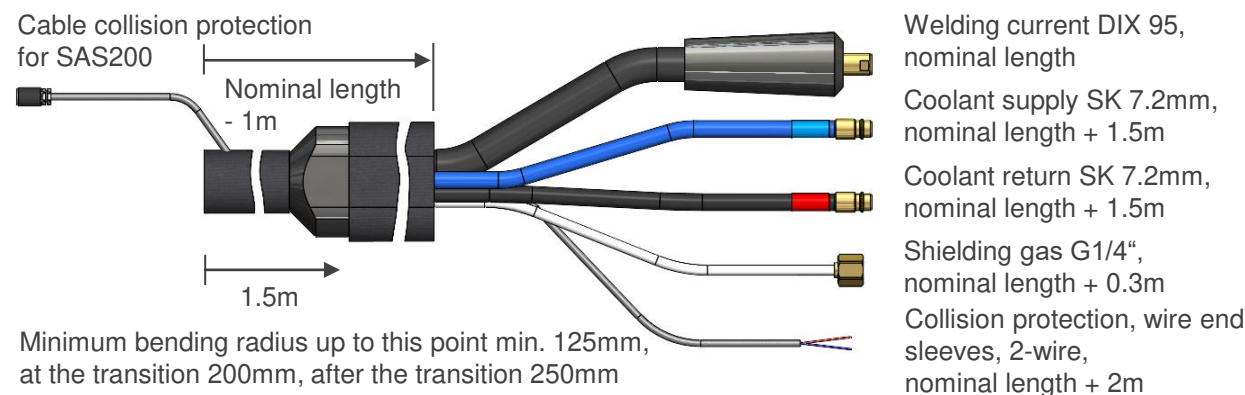
DIX connector for FocusTIG easy power sources (1000A)

AX 4m: .17.226.601.004.2
 8m: .17.226.601.008.2
 RD 4m: .17.215.812.004.2
 8m: .17.215.812.008.2
 other lengths on request



DIX connector for FocusTIG easy power sources (500A)

AX 4m: .17.226.601.004
 8m: .17.226.601.008
 RD 4m: .17.215.812.004
 8m: .17.215.812.008
 other lengths on request



Which products do we offer to you?

The overview of your Kjellberg TIG component kit

InFocus 1000 AX & RD: Wear parts and tools



Application-optimised electrodes with protective thread coating



IF01 pro
.17.215.811.510.2
30°, pointed, for maximum concentration and small to medium amperages



IF02 pro
.17.215.811.515.2
30°, radius 0.25mm, slightly rounded, for maximum attachment point with optimized wear



IF03 pro
.17.215.811.511.2
30°, radius 0.5mm, rounded, for a stable attachment point with optimised wear



IF04 pro
.17.215.811.500.2
30°, plateau 0.8mm, plateau for a stable attachment point with optimised wear



IF05 pro
.17.215.811.516.2
45°, plateau 0.8mm, plateau for a stable attachment point with optimised wear and high amperages



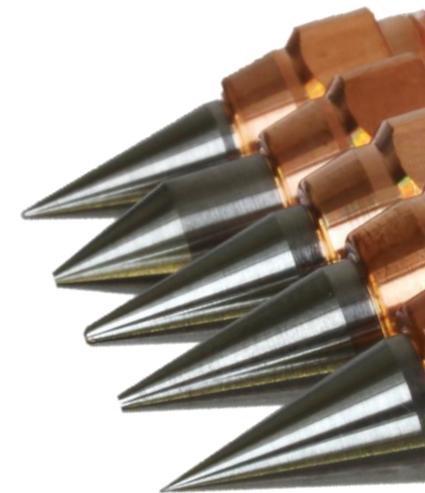
IF06 pro
.17.215.811.517.2
45°, radius 1.0mm, strongly rounded, for soft but stable arc with optimised wear and high amperages



IF07 pro
.17.215.811.518.2
45°, pointed, for maximum concentration and high amperages



IF08 pro
.17.215.811.520.2
45°, radius 0.5mm, rounded, for stable arc attachment with reduced wear and high currents



more information about pro-electrodes:



FAQ – evaluate wear correctly:



Which products do we offer to you?

The overview of your Kjellberg TIG component kit

InFocus 1000 AX & RD: Wear parts and tools



IF4005
.17.215.811.605
Inner diameter 5mm



IF4008
.17.215.811.608
Inner diameter 8mm



IF4013
.17.215.811.613
Inner diameter 13mm



IF4016
.17.215.811.616
Inner diameter 16mm



IF4049
.17.215.811.649
For V seam preparation or
fillet welds



**Ceramic insulation
sleeve**
.17.215.811.161



Socket wrench
.17.226.600.850
For the cathode change in the
torch



Striking aid
.17.215.811.085



Starter kit
.17.215.811.880

- 1x IF4013
- 1x Socket wrench
- 1x Ceramic insulation sleeve
- 2x Heat transfer paste
- 2x Cathode IF04 pro

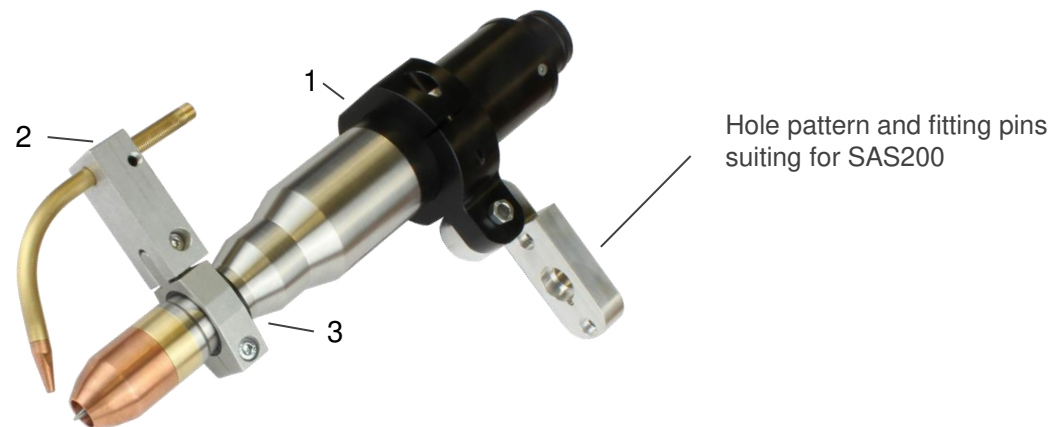
Which products do we offer to you?

The overview of your Kjellberg TIG component kit

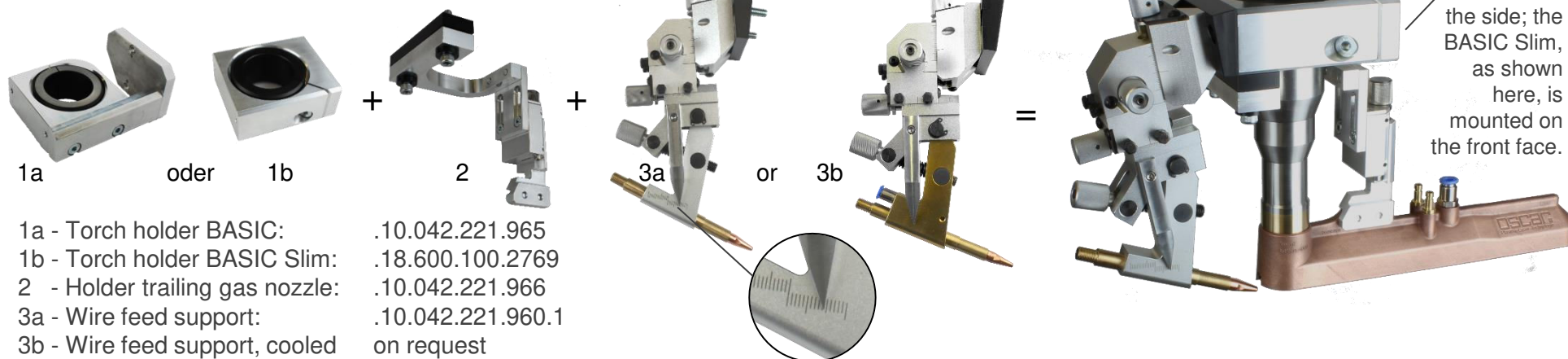
InFocus 1000 AX: Torch holders & wire feed supports

FLEX

- 1 - Torch holder: .17.040.110.220
- 2 - Wire feed support: .17.040.220.960
- 3 - Adapter: .17.040.220.957



Portal BASIC & BASIC Slim



- 1a - Torch holder BASIC: .10.042.221.965
- 1b - Torch holder BASIC Slim: .18.600.100.2769
- 2 - Holder trailing gas nozzle: .10.042.221.966
- 3a - Wire feed support: .10.042.221.960.1
- 3b - Wire feed support, cooled on request

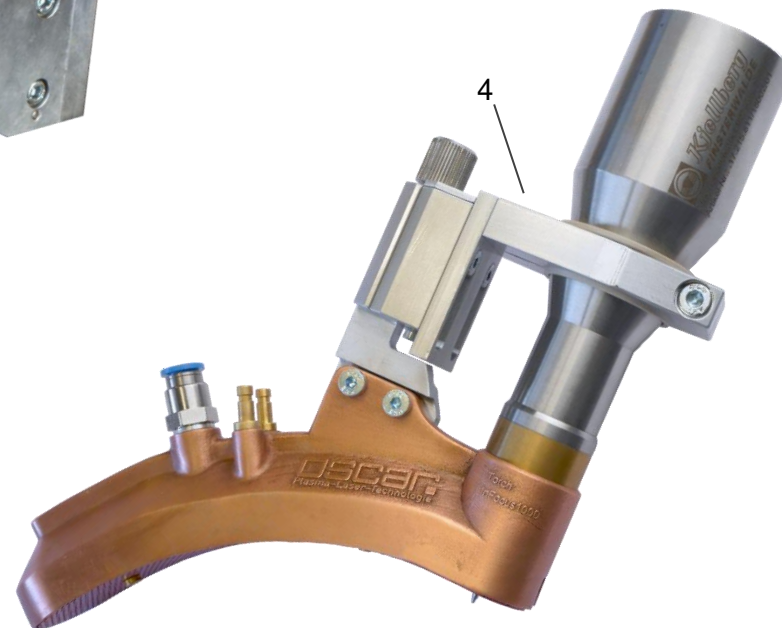
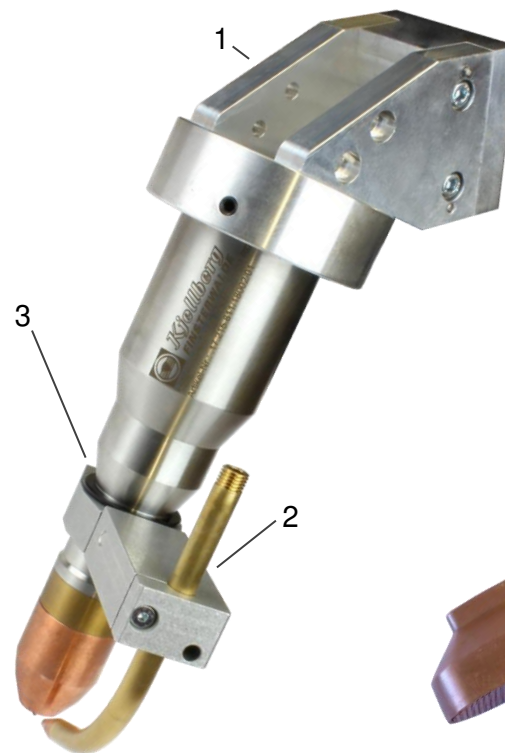
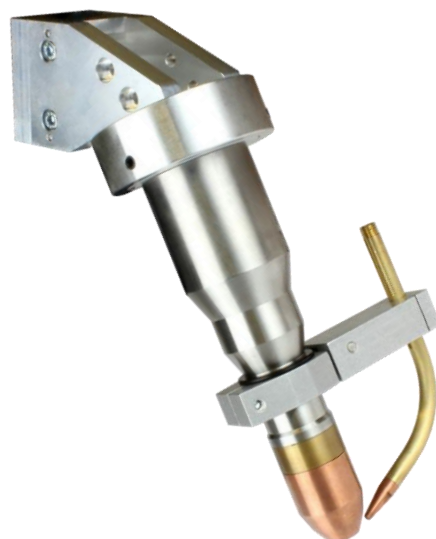
Which products do we offer to you?

The overview of your Kjellberg TIG component kit

InFocus 1000 RD: Torch holders & wire feed supports

Robot 30°

- 1 - Torch holder: .17.040.102.210
- 2 - Wire feed support: .17.040.220.960
- 3 - Adapter: .17.040.220.957
- 4 - Holder trailing nozzle .17.042.225.115

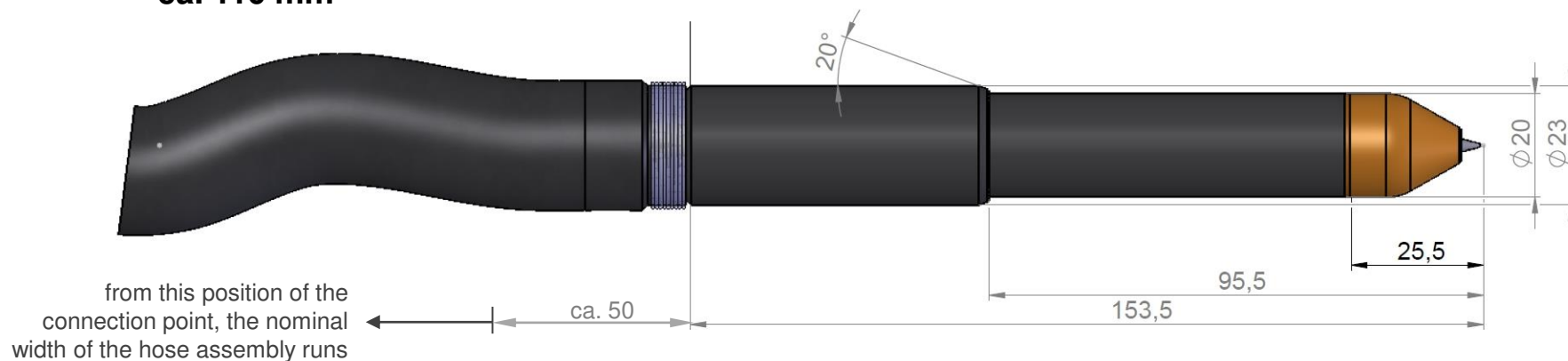


Which products do we offer to you?

The overview of your Kjellberg TIG component kit

InFocus 500 AX: Dimensions

**Inflexible part due to hose connection
ca. 110 mm**



Which products do we offer to you?

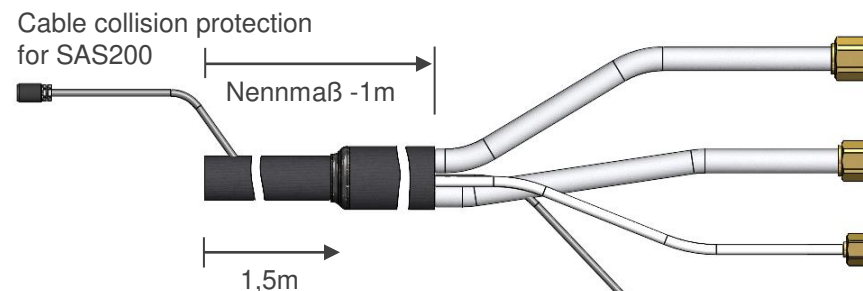
The overview of your Kjellberg TIG component kit

InFocus 500 AX: Hose assembly variants



Power-water-connection for FocusTIG power sources (500A)

4m: .17.227.200.004
8m: .17.227.200.008
Other lengths on request

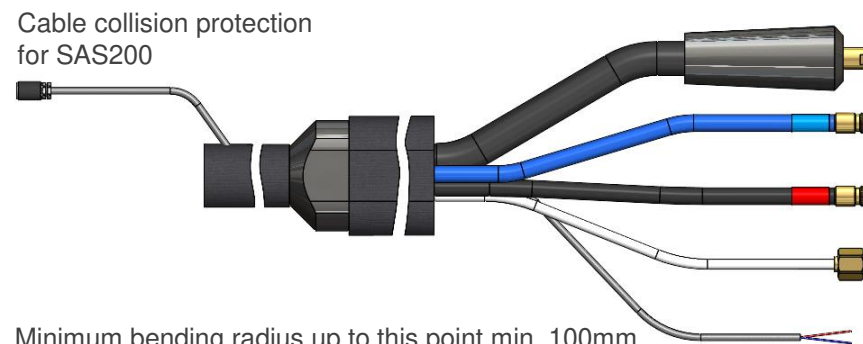


Minimum bending radius up to this point min. 100mm, at the transition 150mm, after the transition 100mm

Welding current and coolant return, G1/2", NW 24mm, nominal length
Welding current and coolant supply, M18x1.5, NW 22mm, nominal length
Shielding gas G1/4", nominal length + 0.3m
Collision protection, wire end sleeves, 2-wire, nominal length + 2m

DIX connector for FocusTIG easy power sources (500A)

4m: .17.227.201.004
8m: .17.227.201.008
Other lengths on request



Minimum bending radius up to this point min. 100mm, at the transition 150mm, after the transition 200mm

Welding current DIX 95, nominal length
Coolant supply SK 7.2mm, nominal length + 1.5m
Coolant return SK 7.2mm, nominal length + 1,5m
Shielding gas G1/4"
Collision protection, wire end sleeves, 2-wire, nominal length + 2m

Which products do we offer to you?

The overview of your Kjellberg TIG component kit

InFocus 500 AX: Wear parts and tools



IF51 pro
.17.227.200.505.2
30°, pointed, for maximum concentration



IF52 pro
.17.227.200.500.2
30°, radius 0.25mm, slightly rounded, for concentrated attachment point with optimised wear



IF4505
.17.227.200.605
Inner diameter 5mm



IF4508
.17.227.200.608
Inner diameter 8mm



IF4510
.17.227.200.610
Inner diameter 10mm



Ceramic insulation sleeve
.17.215.811.162



Polymer insulation sleeve
.17.215.811.162.2



Socket wrench
.17.227.200.850
For the cathode change in the torch



Starter kit
.17.227.200.880

- 1x IF4505
- 1x Socket wrench
- 1x Ceramic insulation sleeve
- 1x Heat transfer paste
- 2x Cathode IF52 pro

Which products do we offer to you?

The overview of your Kjellberg TIG component kit

Cooler C3

- Power:** 2,810 W (at 20°C supply temperature and 32°C ambient)
on request also C4 (4,395 W) or C5 (5,480 W) possible
- Setting range:** 13.5 – 25.0 °C
- Connectors:** quick coupling 7.2mm female, mini ball valve
- Sonstiges:** operating display,
connection cable 2m with CEE 7/4
- Optionen:** Float display with magnetic switch (potential-free on terminal),
housing interface, peripheral supply



Cooler C3 standard
.17.400.051



Cooler C3
with float display 1-6l/min, magnet switch,
potential free on terminal
.17.400.051.3



Cooler C3
with float display 1-6l/min, magnet switch,
6-pole housing interface
.17.400.051.4



Cooler C3
with float display 1-6l/min, magnet switch,
6-pole housing interface, peripheral supply
.17.400.051.6

Which products do we offer to you?

The overview of your Kjellberg TIG component kit

TIG power source FocusTIG 550 easy

Power: 550A at 60% d.c. / 420A at 100% d.c. (at 40°C)
Setting range: 5-550 A
Welding circuit: DIX (torch and workpiece)
Others: Shielding gas solenoid valve, cold wire preparation, weld data display, mains cable 5m with CEE 32A
Options: without cold wire preparation, without weld data display, pallet (.10.102.937) or trolley subframe (.10.102.938)



FocusTIG 550 easy .17.400.024

FocusTIG 550 easy, .17.400.023
without cold wire preparation



FocusTIG 550 easy, .17.400.022
without weld data display

FocusTIG 550 easy, .17.400.021
without weld data display,
without cold wire preparation

TIG power source FocusTIG 1000 easy



Power: 1,000A at 60% d.c. / 750A at 100% d.c. (at 40°C)
Setting range: 10-1,000 A
Welding circuit: 2x load sockets each (torch and workpiece)
Others: Shielding-gas solenoid valve, cold wire preparation, weld data display, pallet subframe, mains cable 5m with CEE 63A

FocusTIG 1000 easy .17.400.025

For switching off the easy power source in the case of a cooling-related malfunction when using a C3 cooler with monitoring & interface:
 Cable monitoring cooler, 2m .11.570.079.002

Which products do we offer to you?

The overview of your Kjellberg TIG component kit

TIG power source FocusTIG 550



Power:	550A at 60% d.c. / 420A at 100% d.c. (at 40°C)
Setting range:	5-550 A
Weld circuit:	Torch connection power-water, workpiece DIX
Others:	Coolant module with auxiliary circuit (monitoring flow and temperature), 2x 16A CEE 7/4 socket with RCD protection, shielding gas solenoid valve, cold wire preparation, weld data display, pallet subframe, mains cable 5m with CEE 32A
Options:	Preparation for connectorbox (interface for external ignition, torch connector DIX)

FocusTIG 550 .17.400.017

FocusTIG 550,
for connection box .17.400.020

TIG power source FocusTIG 1000



Power:	1,000A at 60% d.c. / 750A at 100% d.c. (bei 40°C)
Setting range:	10-1000 A
Weld circuit:	Torch connection power-water, workpiece 2x load socket, Coolant module with auxiliary circuit, (monitoring flow and temperature), 2x 16A CEE 7/4 sockets with RCD protection, shielding gas solenoid valve, cold wire preparation, weld data display, pallet subframe, mains cable 5m with CEE 63A
Options:	Preparation for connectorbox (interface for external ignition, torch connection 2x load socket)

FocusTIG 1000 .17.400.019

FocusTIG 1000,
for connection box .17.400.018

Which products do we offer to you?

The overview of your Kjellberg TIG component kit

Control of the FocusTIG power sources

Cables for communication between power source and control cabinet / higher-level control system (e.g. EMERGENCY STOP)

A – cable automation, 19-pole, 5m	.10.102.856
A – cable automation, 19-pole, 10m	.10.102.955
A – cable automation, 19-pole, 15m	.10.102.931

Cables for communication between power source and interface for the installation in the control cabinet :

B – control cable, 7-pole, 5m	.10.102.864
B – control cable, 7-pole 10m	.10.102.927
B – control cable, 7-pole, 15m	.10.102.932

Cables for digital and analogue communication between interface of power source (inside housing) and control cabinet / master control:

C – control cable, 23-pole, 5m	.10.102.933
C – control cable, 23-pole, 10m	.10.102.934
D – control cable, 28-pole, 5m	.10.102.935
D – control cable, 28-pole, 10m	.10.102.936

Interface for installation in control cabinet (top-hat rail)



Interface for installation at power source (inside housing)



analogue/digital	.10.102.868	.10.102.868.1
CAN-OPEN	.10.102.859	.10.102.859.1
DEVICE-NET	.10.102.860	.10.102.860.1
INTERBUS	.10.102.861	.10.102.861.1
PROFIBUS	.10.102.862	.10.102.862.1
PROFINET	.10.102.909	.10.102.909.1
PROFINET LWL	.10.102.908	.10.102.908.1
ETHERCAT	.10.102.910	.10.102.910.1
ETHERNET IP	.10.102.911	.10.102.911.1

Which products do we offer to you?

The overview of your Kjellberg TIG component kit

Wire feeder for FocusTIG (standard resolution)



Setting range:	0.2 – 10m/min step size 0.1m/min
Initial equipment:	steel 1.0/1.2mm
Cover:	left-opening
Control cable:	optional with or without protective hose (e.g. for drag chain)
Wire feeding:	optional 1.5m or 3.0m (shortenable)

Wire feeder for FocusTIG
(steel 1.0/1.2mm , 0.2-10m/min) .17.215.811.310

Cold wire feeding for FocusTIG, 1.5m shortenable .17.040.220.9515A
Cold wire feeding for FocusTIG, 3.0m shortenable .17.040.220.9530A

Components for both wire feeder versions:

Control cable wire feeder 5m, protective hose .10.102.872
Control cable wire feeder 10m, protective hose .10.102.872.3
Control cable wire feeder 15m, protective hose .10.102.872.4
Control cable wire feeder 15m, without protective hose .10.102.926
other lengths on request

Wire feeder for FocusTIG, fine (high resolution)

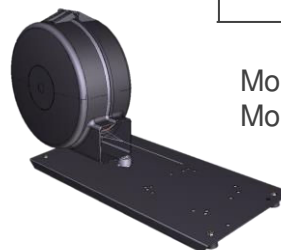


Setting range:	0.1-5m/min step size 0.01m/min
Initial equipment:	steel 1.0/1.2mm
Cover:	left-opening or right-opening

Wire feeder for FocusTIG, fine on request
(steel 1.0/1.2mm, 0.1-5m/min)

Wire feeder für FocusTIG, fine on request
(steel 1.0/1.2mm, 0.1-5m/min), right-opening

Cold wire feeding for FocusTIG fine, 1.5m shortenable .17.040.220.9515
Cold wire feeding for FocusTIG fine, 3.0m shortenable .17.040.220.9530



Mounting plate wire feeder with wire reel holder .10.102.921.1
Mounting plate wire feeder with wire reel holder,
right-opening on request

Which products do we offer to you?

The overview of your Kjellberg TIG component kit

Connectorbox for FocusTIG power source

- Power:** 1,000A at 60% d.c.
- Others:** HF ignition module incl. protection of rear welding circuit and measuring sockets
integrated ignition support (potential torch outer tube),
measuring sockets with electrode potential (e.g. for voltage-based height control),
solenoid valve for shielding gas,
solenoid valve for trailing gas,
separate water supply for cooling of trailing gas nozzle,
interface for collision shutdown

Connectorbox InFocus 1000, HF, 2xDIX socket, trailing gas nozzle connection

Lead packages for drag chain:

- | | |
|--|--------------------|
| Lead package InFocus 1000 basic version 15m, for drag chain, in single media | .17.215.851.700015 |
| Lead package TIG for external HF 15m, for drag chain, in single media | .17.215.852.700015 |
| Lead package TIG for height control type A 15m, for drag chain, in single media | .17.215.853.700015 |
| Lead package TIG for trailing gas nozzle cooled to the connection box 15m, for drag chain, in single media | .17.215.855.700015 |
| other lengths on request | |



.17.215.830.700



.17.215.851.700015
.17.215.852.700015
.17.215.853.700015
.17.215.855.700015

Which products do we offer to you?

The overview of your Kjellberg TIG component kit

Individual trailing gas systems

Manufacture: SLM-made (Metal-3D-print)
Materials: Copper-brass, aluminium, CrNi
Options: Cooled

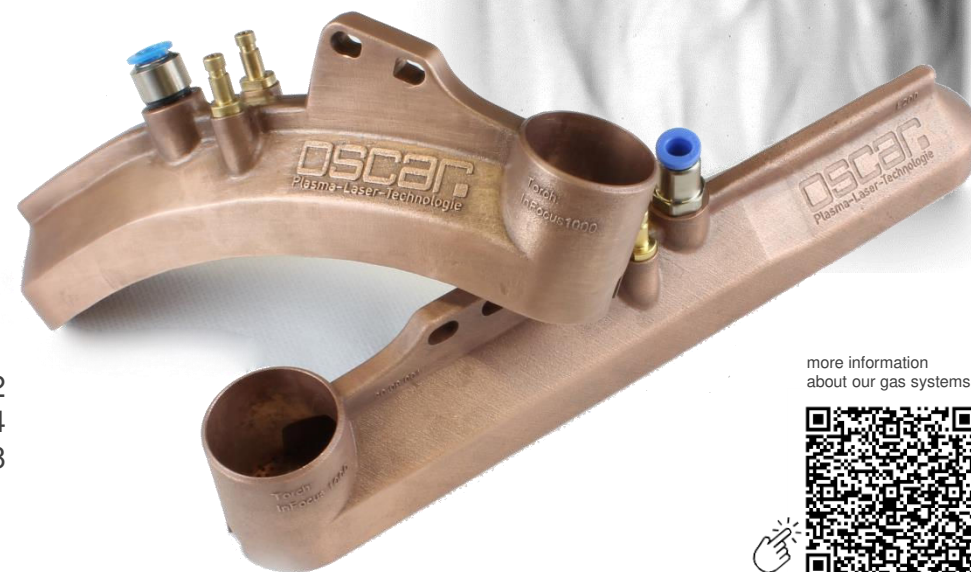
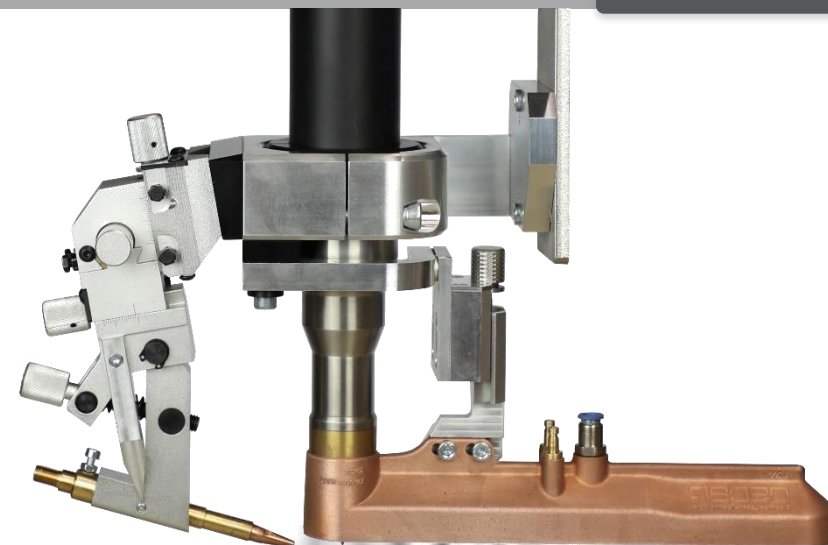
Each nozzle can be individually adapted to your welding task.

Components already properly integrated into the TIG component kit:

Trailing gas nozzle InFocus 1000, straight, L200mm, B36mm, copper, cooled .18.600.100.2735

Hose assembly extensions for the drag chain:

Lead package TIG for trailing gas nozzle cooled 2m, with protection hose .17.215.854.700102
 Lead package TIG for trailing gas nozzle cooled 4m, with protection hose .17.215.854.700104
 Lead package TIG for trailing gas nozzle cooled 8m, with protection hose .17.215.854.700108
 other lengths on request



more information
about our gas systems:



Which products do we offer to you?

The overview of your Kjellberg TIG component kit

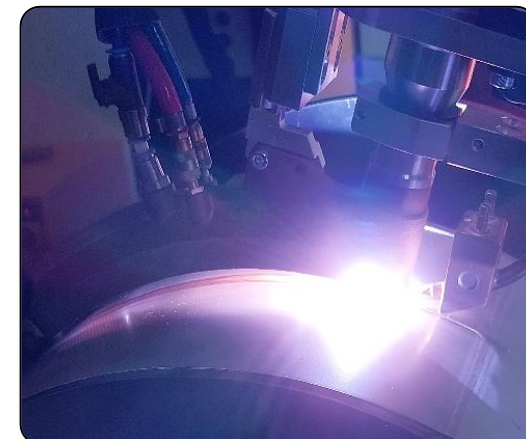
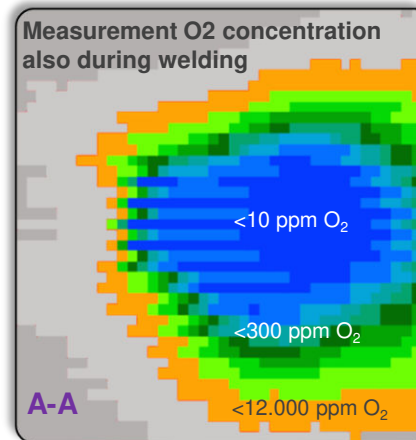
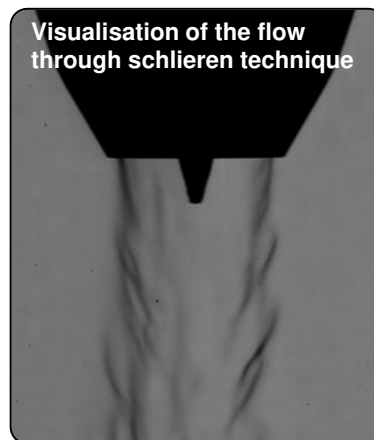
Solving gas protection tasks in your production

Our offer

- Many years of experience in providing high quality inert gas coverage, both in the process area as well as trailing or at the root
- Application of high-performance flow analysis methods
- Determining the cause of a problem
- Development of solution approaches
- Implementing the solution approaches in your production environment

Your advantage:

- Optimum gas protection for perfect weld seams



Which products do we offer to you?

The overview of your Kjellberg TIG component kit



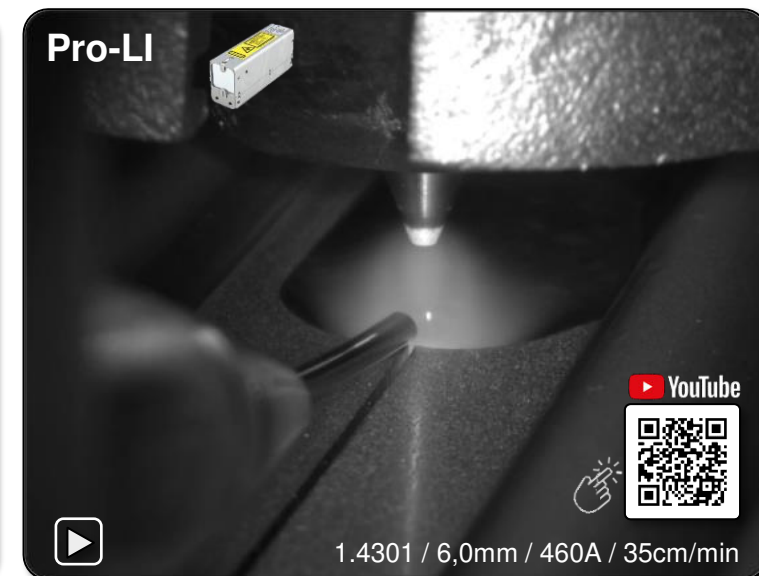
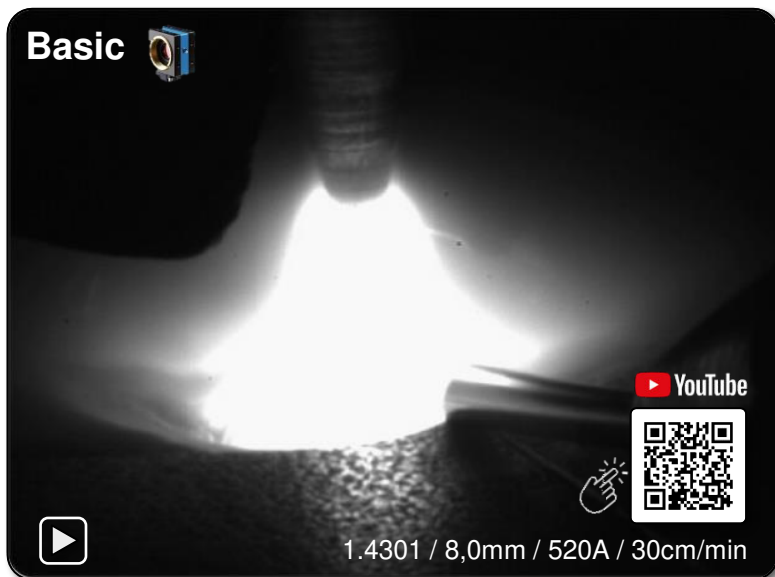
Visualisation of the welding process

Our offer

- Selection of suitable technology and consulting according to your requirements
- Integration into your production environment

Your advantage

- Simplified process handling due to visibility of electrode, arc, wire, weld pool and joint



Which products do we offer to you?

The overview of your Kjellberg TIG component kit

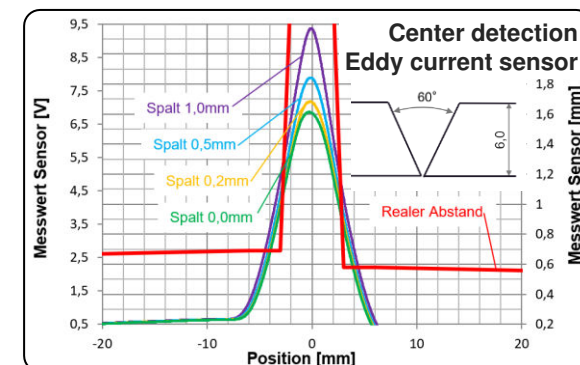
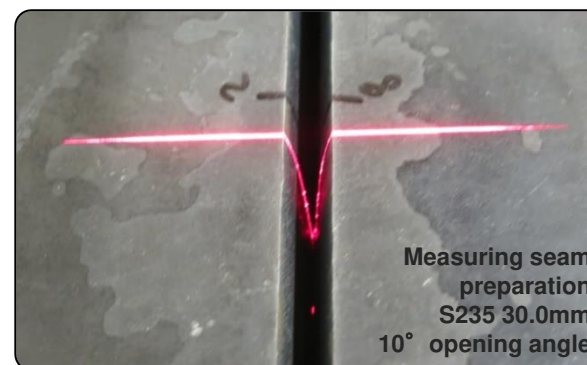
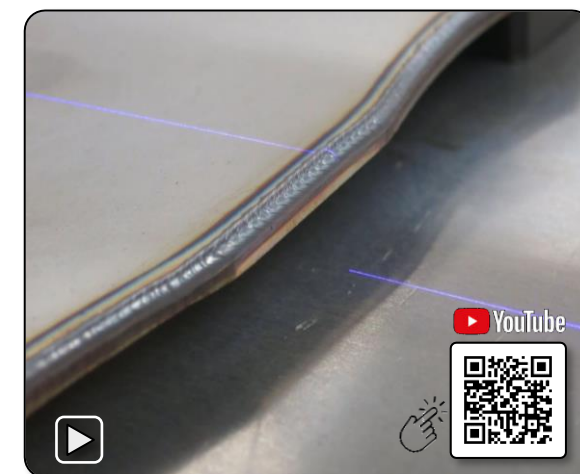
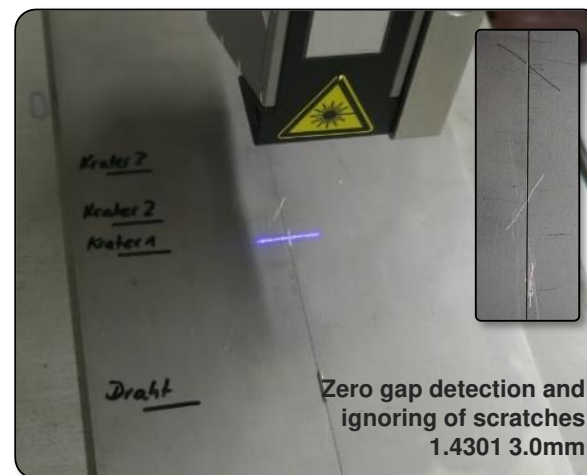
Sensors for seam detection and tracking

Our offer

- Evaluation of the component geometry and seam preparation
- Selection of a suitable sensor with regard to the control task (laser triangulation, eddy current, inductive)
- Programming of the sensor for the output of the correct process variable
- Integration of the sensor into the control circuit or transfer of the interface to your system manufacturer

Your advantage:

- Simplified plant operation due to increased degree of automation



**We would be pleased to convince you
with our products and services!**

You can find further information at
www.kjellberg.de & www.oscar-plt.de

and you are welcome to contact your advisor in person



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