



TYSWELD®



INNOVATION IS WHAT
DISTINGUISHES A LEADER
FROM A FOLLOWER

/ Steve Jobs



Why

Tysweld?

WITH PASSION AND A MISSION we manufacture welding wire using

- original
- developed in Tysweld laboratories
- innovative on a global scale
- patented

**QBA technology based
on a number of unique
technological solutions.**

**Thanks to QBA technology,
our wire is:**

- perfectly clean
- extremely stable
- perfectly straight





What does this mean for your business?



You will eliminate
the most common problems experienced by welders:

- wire yawing and unstable welding arc
- impurities in the weld - silicon and scale
- peeling of the copper from the wire and clogging of the cartridge

Thanks to which:

- you will improve the quality of the weld and reduce spatter and other aesthetic defects
- you will reduce the wear and tear of welding equipment and accessories
- you will reduce the emission of harmful fumes and smoke
- you will improve the quality of work in your plant



YOU WILL GAIN



1

**Stable manufacturing process
undisturbed by unforeseen
downtimes.**

Economic benefits:

- reducing unplanned downtime
- gaining stability in the implementation of your plan
- reducing the cost of manufacturing the product

Organizational benefits:

- reducing the risk of errors and manufacturing defects
- improving the work comfort of the welder / robotic station operator

2

**Lesser wear and tear of
manufacturing equipment
and accessories.**

Economic benefits:

- reducing the cost of manufacturing the product
- savings on service costs
- savings on ongoing maintenance and less frequent replacement of accessories

Organizational benefits:

- reducing the time needed for ongoing device operation
- gaining stability and process predictability
- improving the work comfort of the welder / robotic station operator

3

**Clean weld without defects,
inclusions and spatter.**

Economic benefits:

- shortening product manufacturing time by shortening the time needed to clean welds
- reducing the cost of product manufacturing, thanks to lower consumption of abrasive materials

Organizational benefits:

- reducing the time needed to clean welds

4

**Low emission of fumes
and smoke.**

Economic benefits:

- no need to expand costly filtration systems
- less filter wear
- less wear of personal protective equipment

Organizational benefits:

- cleaner working environment
- less harmful working conditions
- higher welders' comfort

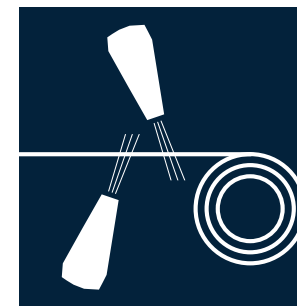
What is
QBA
Technology?





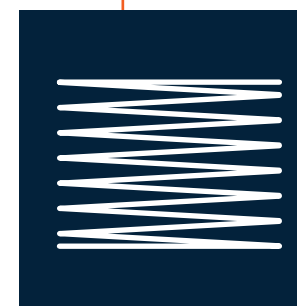
Creating a new product quality required us to go back to the basics of its manufacturing technique and find innovative solutions in a process that until now was considered final and indisputable in the industry.

To achieve this, **we have revolutionized** the most important steps in the manufacturing process:



WaterJet

an innovative method of cleaning the wire rod using a high pressure water jet. This supports traditional wire brushing to remove scale and heavy oxides - **it ensures excellent steel cleanliness** prior to pre-drawing and reduces scale by **99.9% during the process!**



NoTwist

an innovative method of winding the wire without winding it on a drum during the „NoTwist“ pre-drawing. The wire lays freely in special baskets, which reduces stress in the solid wire and twists, **this in turn ensures even and straight wire feeding** in the welding gun, **without so-called arc wandering.**



Today, after 6 years of research and testing, we can boast of **our own and unique technology** for the manufacturing of uniform welding wire, an **innovation on a global scale**.

We offer our Partners a product that significantly eliminates common process problems in welding.

This proves that it is worth looking for new solutions even when everything seems to be working properly.



Copper



Get to know the products created using the innovative QBA technology

TS2 PRO
TS3 PRO

QBA PRO

Advantages

- no undesirable effect of peeling copper from the wire
- no wire yawing
- stable welding arc
- high quality welds
- very little spatter
- high aesthetics of the weld
- few silicides in the weld
- less wear and tear of welding equipment and accessories

Classification

TS2

EN ISO 14341-A: G 38 3 C1 3Si1
EN ISO 14341-A: G 42 4 M21 3Si1
SFA/AWS A5.18: ER70S-6

TS3

EN ISO 14341-A: G 42 3 C1 4Si1
EN ISO 14341-A: G 46 4 M21 4Si1
SFA/AWS A5.18: ER 70S-6

Description and application

Copper-plated manganese-silicon electrode wire for MIG/MAG welding of structural low-carbon and fine-grained steels. It allows for the use of both high currents for a spray arc and low currents for short-circuit metal transfer. The TS2 and TS3 welding wire is available only in precision winding and is widely used in the steel construction industry, machinery and equipment manufacturing, automotive, petrochemical, power generation, shipbuilding and offshore industries.

Approvals

TUV and DB and CE mark

QBA ECO

- low emission of harmful fumes and smoke
- cleaner welds due to the elimination of the copper coating
- no wire yawing
- stable welding arc
- high quality welds
- very little spatter
- high aesthetics of the weld
- few silicides in the weld
- less wear and tear of welding equipment and accessories
- high corrosion resistance

EN ISO 14341-A: G 38 3 C1 3Si1
EN ISO 14341-A: G 42 4 M21 3Si1
SFA/AWS A5.18: ER 70S-6

TS2 ECO

EN ISO 14341-A: G 42 3 C1 4Si1
EN ISO 14341-A: G 46 4 M21 4Si1
SFA/AWS A5.18: ER 70S-6

TS3 ECO

Manganese-silicon electrode wire, non-copper

Intended for MIG/MAG welding of low-carbon and fine-grained structural steels. It allows for the use of both high currents for a spray arc and low currents for short-circuit metal transfer. The TS2 and TS3 welding wire is available only in precision winding and is widely used in the steel construction industry, machinery and equipment manufacturing, automotive, petrochemical, power generation, shipbuilding and offshore industries.

TUV and DB and CE mark

TS2 ECO
TS3 ECO

Advantages

Classification

Description and application

Approvals



Non-copper



INNOVATIVE PRODUCT CUSTOMISATION

We will manufacture the sort of wire that will conform to parameters you describe

– made of a specially rolled blank alloy, on a coil suitable for your equipment, packed in a box with your logo.

You can determine the size and volume of the pallet, the weight of the coil material, you can determine the mode of packaging, and would like other components to also be found in the package – we are able to respond to all Your needs.

You decide on the parameters that the wire for You will have.

If you need to conform to very non-standard norms, or if your product would require a very precise weld hardness – provide us with the specifications, and we will deliver precisely adapted wire. At the same time, we guarantee top quality.

Starting today, you do not have to adapt the product to available technologies – it is innovative technology that will adapt itself to Your concept.

You decide in what quantity and at what intervals the wire is delivered to your warehouse.

We manufacture our wire in southern Poland, and we obtain raw materials from European steel mills. For our partners this is a guarantee of high and repeatable quality, and constant availability of the wire, independent of geopolitical turmoil.

From now on, you have the opportunity to optimize your supply and reduce stocking expenses, while maintaining 100% certainty of delivery.

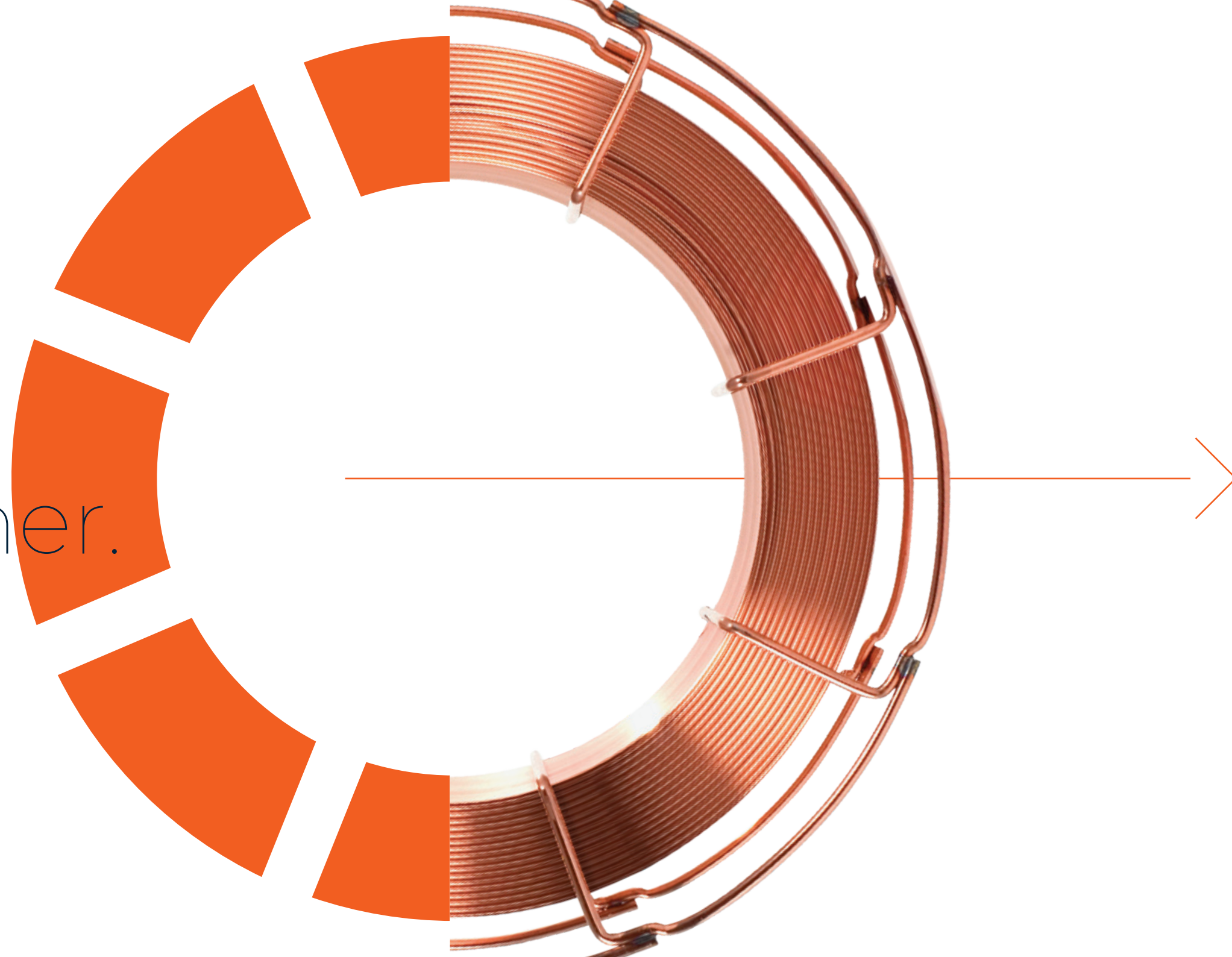
You choose your partner to cooperate with.

We put innovative technology and a modern manufacturing facility at your disposal.

From now on you have the opportunity to visit our manufacturing facilities with the option of auditing your order.

Our innovative technology is at your disposal.

We are the leader.
We remain a partner.



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We have developed and tested innovative methods for cleaning, drawing and coiling wire in our laboratory. Our solutions have been patented and today we are several steps ahead of the competition. With us, our Partners also gain a market advantage.

/ CEO TYSWELD





We have been present in the welding consumables industry for **25 years**. Today, as a Polish manufacturer of welding wire, we reach thousands of customers with a network of over **400 points of sale** in over **twenty European countries**.

Our advantage on the market is the availability of the product and its quality.

We know what the welder and robot operator expects.

We know what your company expects.





Our modern manufacturing lines currently occupy **3 000 m²**.

Taking care of the highest quality of the product, we store wire rod in a closed space of **1500 m²**.



1500 m² distribution warehouse and delivery service centre in Pilzno.

We also have our own fully equipped research laboratory.



It is worth noting that the implemented innovations not only exceed traditional methods in terms of efficiency and manufacturing quality, but they are also more environmentally friendly - they consume less energy and emit less dust, and are safer for machine operators.

The manufacturing process in our company fits perfectly into the philosophy of Sustainable Development and outperforms most competing solutions in this field.

We invite you to visit our plant in Pilzno near Tarnów - with the option of an audit. It is only 10 km from the A4 motorway exit, only 50 km from the Jasionka airport near Rzeszów and a one-hour drive from the Kraków - Balice airport.

We invite you to establish stable and developing cooperation with us.



The quality of our products is confirmed by TÜV SÜD and Deutsche Bahn certificates as well as by compliance with the PN-EN ISO 14341 and PN-EN ISO 544 standards.



Our offer of other welding consumables and accessories

Welding wire and rods

Manganese-silicon electrode wires for MIG/MAG welding of carbon and low-alloy steels and rods for TIG welding of fine-grained carbon-manganese, construction, shipbuilding and boiler steels.

- T20/SG2 EN ISO 14341-A: G3Si1, DIN 8559 SG-2, AWS A5.18 ER70S-6
- T20W EN ISO 636-A: W3Si1, DIN 8559: SG-2, AWS A5.18 ER70S-6
- T30/SG3 EN ISO 14341-A: G4Si1, DIN 8559 SG-3, AWS A5.18 ER70S-6
- T30W EN ISO 636-A: W4Si1, DIN 8559: SG-3, AWS A5.18 ER70S-6

Wire and rods for stainless steel

Specialized welding consumables for austenitic steels known as stainless, chromium-nickel and acid-resistant. They come in different types depending on where they are used.

- T07M EN ISO 14343-A: G 18 8 Mn, DIN 8556 SG-X15 CrNiMn 18 8, AWS A-5.9: ER 307LSi
- T07W EN ISO 14343-A: W 18 8 Mn, DIN 8556 SG-X15 CrNiMn 18 8, AWS A-5.9: ER 307LSi
- T08M EN ISO 14343-A: G 19 9 LSi, DIN 8556 SG-X5 CrNi 19 9, AWS A-5.9: ER 308LSi
- T08W EN ISO 14343-A: W 19 9 LSi, DIN 8556 SG-X5 CrNi 19 9, AWS A-5.9: ER 308LSi
- T09M EN ISO 14343-A: G 23 12 LSi, DIN 8556 SG-X2 CrNi 24 12, AWS A5.9: ER 309LSi
- T09W EN ISO 14343-A: W 23 12 LSi, DIN 8556 SG-X2 CrNi 24 12, AWS A5.9: ER 309LSi
- T10M EN ISO 14343-A: G 25 20, DIN 8556 SG-X2 CrNi 25 20, AWS A 5.9:ER 310 LSi
- T10W EN ISO 14343-A: W 25 20, DIN 8556 SG-X2 CrNi 25 20, AWS A 5.9:ER 310 LSi
- T16M EN ISO 14343-A: G 19 12 3 LSi, DIN 8556 SG-X2 CrNiMo 19 12, AWS A 5.9: ER 316LSi
- T16W EN ISO 14343-A: W 19 12 3 LSi, DIN 8556 SG-X2 CrNiMo 19 12, AWS A 5.9: ER 316LSi

Wire and rods for aluminium alloys

Specialized welding consumables of different types depending on where they are used. The offer includes the most universal models, to materials used in construction related to shipping, as well as those recommended for aluminium and magnesium alloys and making welds on mixed joints.

- T54M/T54W EN ISO 18273:S Al 5754, DIN 1732 SG-AlMg3, AWS A 5.70: ER 5754
- T56M/T56W EN ISO 18273:S Al 5356, DIN 1732.SG-AlMg5, AWS A 5.70: ER 5356
- T43M/T43W EN ISO 18273:S Al 4043, DIN 1732 AISi5, AWS A 5.70: ER 4043
- T83M/T83W EN ISO 18273:S Al 5783, DIN 1732 AlMg4,5Mn, AWS A5.70: ER 5783

Flux cored wire

Rutile flux cored wire for all-position welding, with universal use. Recommended for ship structures.

- T71C EN ISO 17632-A-T 42 4 R C 2 H10, AWS A5.20 E71T-1C

Electrodes

Our offer includes the following electrodes:

- rutile
E13 EN ISO 2560-A:E 38 0 R 12, DIN 1913 E43 22 R(C) 3, AWS A5.1: E 6013
- alkaline
E18 EN ISO 2560-A: E 42 4 B 32 H5, DIN 1913 E51 54 B 10, AWS A5.1: E 7018
- for stainless steel
E08 EN 1600: E 19 9 L R 11, DIN 8556 E19 9 LR 26, AWS A 5.4: E308L-16
E16 EN 1600: E 19 12 3 L R 11, DIN 8556 E19 12 LR 26, AWS A 5.4: E316L-16
- for cast iron
EFER SFA/AWS A 5.15: E Ni-CI, EN ISO 1071: E C Ni - CI 3, ENiFe SFA/AWS A 5.15: E NiFe-Cl, EN ISO 1071: E C NiFe - 1 3

Self-shielded cored wire

Self-shielded cored wire for welding thin steel elements without the use of shielding gas. It is used in construction, manufacturing of tanks, agricultural equipment, both in the manufacturing and repair of equipment.

- T71GS AWS A5.20: E71T-GS

Wire and rods for braze welding

Wires and rods intended for bonding copper alloys and braze welding galvanized sheets.

- TCU3M EN ISO 24373: S Cu 6560, DIN 1733. SG-CuSi3Mn1, AWS A 5.7: ERCuSi-A
- TCU3W EN ISO 24373: S Cu 6560, DIN 1733. SG-CuSi3Mn1, AWS A 5.7: ERCuSi-A
- TCU6M EN ISO 14640: S Cu 5180 (CuSn6P), DIN 1733. SG-CuSn6, AWS A 5.7: ERCuSn-A
- TCU6W EN ISO 14640: S Cu 5180 (CuSn6P), DIN 1733. SG-CuSn6, AWS A 5.7: ERCuSn-A

Welding chemical agents

The anti-spatter agent is an odourless anti-adhesive agent produced in aerosol form, based on mineral oils free from solvents, dichloromethane and silicone. It is used to protect the nozzle, torch, tools and surface of the welding material against the penetration of metal spatter during welding using electrical techniques. Volume 400ml.

The anti-spatter paste is a professional product designed to protect contact tips and gas nozzles of welding torches against the penetration of liquid metal spatter during the semi-automatic welding process. The paste does not contain harmful substances, its use does not have a negative impact on welding processes and does not cause welding defects in welds. Volume 300g.

Holders, accessories and spare parts

- Masks
- Shields
- Face and eye protection
- Reducers
- Clamps
- Holders and spare parts
- Spool adapters
- Fuses
- Sockets
- Plugs
- Welding hoses



Notes





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