

## Welder Inverter B-135E Gen

- Latest inverter technology for a light and compact construction
- A hot-start boosts the automatic initial current and ensures a safe igniting
- Arc-Force guarantees a boost on electricity up to 80 % on danger of an electric arc tear off
- Anti-stick-function shuts down the welding current after 1.5 seconds
- GEN = also suitable for generator operation

### Application Area

- Ideal for the mobile use at installation work, service work and repair work

### Scope Of Delivery

- Welding machine B 135E GEN with carrying strap
- Ground cable 2m/25mm<sup>2</sup>
- Electrode cable
- 3m/25mm<sup>2</sup>Fillet weld brush and slag sledge, welder
- Protective shield
- Transport case

### Technical Data

Rated Output	35% - 110 A / 60% - 70 A / 100% - 55 A
Cable Cross Section	25 mm <sup>2</sup>
Line Voltage	230 V
Amperage	5 - 120 A
Mains Fuse Protection	13 A
Length, Earth Cable	2 m
Length Pistol Cable	3 m
Height x Width x Depth	200 x 130 x 260 mm
Weight	3.3 kg

Title	PU Piece	Article No.
WELDER INVERTER B-135E GEN	1	201073

AGR: 08.400



Accessories Available	PU Amount	Article No.
Steel Wire Brush 4-rowed	1	069965
Filled Weld Brush 3-rowed	1	186872
WELD-PROT.PLATE WITHOUT GLASS	1	186856
Welding Gloves	1	186899
Fine Dust Mask FFP3 with valve	10	519396
STICK HOLDER+MINUSCABLE COMPL.	1	082764

## Welder Inverter B-165E Gen

- Latest inverter technology for a light and compact construction
- A hot-start boosts the automatical initial current and ensures a safe igniting
- Arc-Force guarantees a boost on electricity up to 80 % on danger of an electric arc tear off
- Anti-stick-function shuts down the welding current after 1.5 seconds
- GEN = also suitable for generator operation

### Application Area

- Ideal for the mobile use at installation work, service work and repair work

### Scope Of Delivery

- Welding Inverter B-135 E Gen with carrying strap
- Ground cable 2m/25mm<sup>2</sup>
- Electrode cable 3m/25mm<sup>2</sup>
- Hammer and wire brush
- Welding shield
- Transportation box

### Technical Data

Rated Output	35% - 145 A / 60% - 115 A / 100% - 95 A
Cable Cross Section	25 mm <sup>2</sup>
Amperage	5 - 150 A
Mains Fuse Protection	16 A
Length, Earth Cable	2 m
Length Pistol Cable	3 m
Height x Width x Depth	200 x 130 x 330 mm
Weight	4.2 kg



Title	PU Piece	Article No.
WELDER INVERTER B-165E GEN	1	201074
AGR: 08.400		
Accessories Available	PU Amount	Article No.
Steel Wire Brush 4-rowed	1	069965
Filled Weld Brush 3-rowed	1	186872
WELD-PROT.PLATE WITHOUT GLASS	1	186856
Welding Gloves	1	186899
Fine Dust Mask FFP3 with valve	10	519396
STICK HOLDER+MINUSCABLE COMPL.	1	082764

14

## Accessories for Inverter welding device B160E

### Application Area

- WIG-welding of steel, stainless steel, brass and copper

### Characteristics

- WIG-hose package: with contact ignition, screw-on valve for opening and closing of the gas supply

### Processing Information

- Required components:
  - electrode welding device B165E Gen
  - WIG-hose package
  - argon-pressure reducer
  - argon gas cylinder
  - optional WIG filler-rod

### Hints

- Not suitable for the welding of aluminium
- WIG-additional rods are located in the chapter "Welding material and soldering material!", The necessary argon gas canister should be purchased from local producers

Title	PU Piece	Article No.
WIG-Accessories for B160E	1	033218



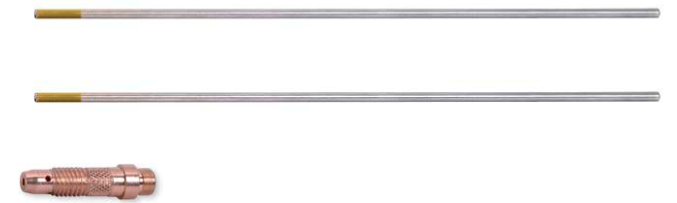
WIG-Accessories for B160E 1 033226

AGR: 08.401

## Wear parts for Inverter welding device B160E

Title	Length	Diameter Internal	PU Piece	Article No.
WIG-Wear Parts - Nozzle Ceramic No. 6	-	-	1	033223
WIG-Wear Parts - Torch Cover Long	-	-	1	033216
WIG-Wear Parts- Bracket Housing	-	2.4 mm	1	033225
WIG-Wear Parts - Bracket	-	2.4 mm	1	033224
WIG-Wear Parts	180 mm	-	1	033227

AGR: 08.401 / 08.424



## Hose Package ML 150 TWIST

### Application Area

- Applicable with type: 160, 165, 180 X, 185 X

### Scope Of Delivery

- Hose package cpl. with burner MB 13 AK, 3 meter from device number 8246 ...

Title	Length	PU Piece	Article No.
Hose Package	3000 mm	1	111619

AGR: 08.401



14

## Burner Neck

### Application Area

- Useable for model: 160, 165, 180 X, 185 X, 8000 X

### Scope Of Delivery

- Torch neck MB 13 AK, pluggable M 10, SW 14 from device number 8246 ...

Title	PU Piece	Article No.
BURNER NECK MB13AK 266.01.009	1	240478

AGR: 08.401



## Burning Throat MB 14 AK

### Application Area

- e.g. for Type 180, 185 from unit number 8245..

### Hints

- Due to our hose package STS 15  
Please always when installation , use mother of the "old" gooseneck

Title	PU Piece	Article No.
Burning Throat MB 14 AK	1	274160

AGR: 08.401



## Gas Nozzle Pluggable

### Scope Of Delivery

- Conical as nozzle for MB 13 AK, MB 14 AK, MB 15 AK, pluggable



Title	Application For Typ	External-Ø	Diameter Internal	Length	PU Piece	Article No.
Gas Nozzle Pluggable	160	18 mm	12 mm	53 mm	1	174882
	165 C					
	180					
	185					
	185 X					
	180 X					
8000 X						

AGR: 08.401

INTERNAL/Approved (2019-03-22 23:17:32)

## Pluggable Gas Nozzle II

### Characteristics

- Gas nozzle conical for MB 25 AK, pluggable for various equipment of common manufacturers



Title	Application For Typ	External-Ø	Diameter Internal	Length	PU Piece	Article No.
Pluggable Gas Nozzle II AGR: 08.401	MB 25 AK	22 mm	15 mm	57.5 mm	1	225738

## Point Gas Nozzle

### Characteristics

- Point gas nozzle for MB of 13 AK, MB 14 AK, MB 15 AK, ML 150, pluggable for various equipment of common manufacturers



Title	Application For Typ	External-Ø	Diameter Internal	Length	PU Piece	Article No.
Point Gas Nozzle AGR: 08.401	160 C 165 C 185 X 185 180 X 180 8000 X	18 mm	12 mm	61.6 mm	1	174874

## Small Fitting Spring

### Application Area

- For small gas and spot gas nozzle

Title	PU Piece	Article No.
Fitting Spring	1	243116

AGR: 08.401



## Large Fitting Spring

### Application Area

- For large gas and point nozzle

Title	PU Piece	Article No.
Fitting Spring	1	177547

AGR: 08.401



## Power Nozzles



Title	Application For Typ	Length	Thread	Wire-Ø	PU Piece	Article No.
Nozzle	ML 150 MB 15 AK MB 14 AK MB 13 AK	25 mm	M 6	0.8 mm	1	192384
Nozzle	ML 150 MB 15 AK MB 14 AK MB 13 AK	25 mm	M 6	1 mm	1	177520
Nozzle	MB 25 AK	28 mm	M 6	0.8 mm	1	224480
Nozzle	MB 25 AK	28 mm	M 6	1 mm	1	174866

AGR: 08.401

INTERNAL/Approved (2019-03-22 23:17:49)



## Mass Clamp

### Characteristics

- Stable metal

Title	PU Piece	Article No.
Mass Clamp	1	286834

AGR: 08.401



## Welding Machine EUROMIG plus 202

- Steady welding power up to 190 A
- Modern, central power electronics
- Precisely adjustable, easy to handle
- Soft and splatter-free electric arc
- Ideal for fine and medium metal sheets up to 8 mm
- MAG-procedure for steel and stainless steel
- MIG-procedure for aluminium and magnesium
- Transport on two swivel casters and two fixed castors
- Long-lasting, very robust construction

### Application Area

- Ideal for fine and medium plates
- MAG process for steel and stainless steel
- MIG process for aluminum and magnesium

### Characteristics

- Control panel, angled arrangement for a good overview
- 10 welding current switching steps
- Stepless wire feed regulator for an easy reproducibility of weld spots
- Operating mode switch:
  - Two-stroke welding mode for tack welding work
  - Four-stroke welding mode for long weld lines
  - Spot-weld mode selection
  - Intervall weld mode selection
  - Retraction of wire without gas consumption
- Temperature control lamp - in an efficient overload protection incl. automatic return, thermal sensor integrated in the transformer winding
- Powerful cooling fan (backside)



- Main switch with operating lamp
- Ground connection DINSE 16/25 mm<sup>2</sup>
- Cable assembly connection original BINZEL
- Cable assembly original BINZEL
- Wire deeder with 2 gear drives
- Tool tray with anti-slide coating

## Scope Of Delivery

- Accessory kit and wear part set MB 15/3 m
- 1 pc welding wire 0.8 mm/15 kg (1.5125/SG2)

## Technical Data

Material Thickness	0.5 - 8 mm
Aluminium-Wire	1,0 / 1,2 mm
Steel Wire	0,6 / 0,8 / 1,0mm
Diameter Coil	200 mm 300 mm
Weight Coil	5 kg 15 kg
Rated Output	100% - 85 A / 20% - 190 A
Frequency Range	50 - 60 Hz
Apparent Power	11 kVA
Line Voltage	400 V
Amperage	20 - 190 A
Mains Fuse Protection	16 A
Protection Class	IP21S
Height x Width x Depth	640 x 450 x 740 mm
Weight	62 kg

Title	PU Piece	Article No.
Welding Machine EUROMIG plus 202	1	244139

AGR: 08.400

## Soldering Gun

### Application Area

- Cutting tip for cutting polystyrene
- Slick bail for the repair and welding of thermoplastics
- Copper solder tip for soldering and desoldering, lead glazing, branding on wood and leather

### Characteristics

- With soldering area illumination, soldering aid as heat deflection and holding aid

### Scope Of Delivery

- Soldering Gun
- 1 Soldering Aid, 1 Soldering and Cutting Tip, 1 Slick Bail

### Technical Data

Performance	100 W
Voltage	220 V

Title	PU Piece	Article No.
Soldering Gun	1	299022

AGR: 08.400

Accessories Available	PU Piece	Article No.
S-320-1 Copper Soldering Tip Pair	1	302180



## Gas Soldering Piston, Solder-Multi

### Application Area

- Finest soldering works
- Hot air nozzle for solder connector and shrinking works
- Cutting tip for cutting polystyrene
- Attachable hot air deflector for works on cable trees

### Characteristics

- Rechargeable with lighter gas, with Piezo ignition, soldering without cable, adjustable soldering temperature

### Technical Data

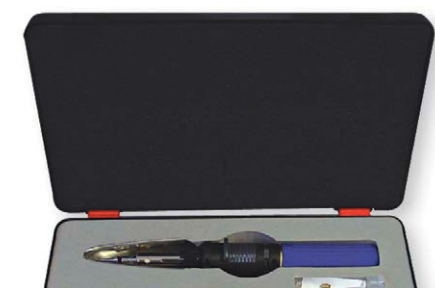
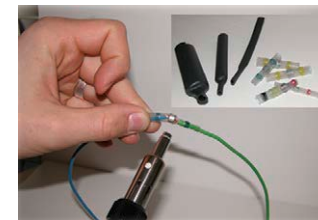
Flame Temperature, To 1300 °C

Title	PU Piece	Article No.
Soldering Gun for Electronic Equipment	1	167059

AGR: 08.400

Accessories Available	PU Piece	Article No.
Butan gas 100 ml	1/12	188942

Spare Parts	PU Amount	Article No.
CUTT. KNIFE PS-09	1	169496
Gas Nozzle PS-14	1	169498
Deflector S-30	1	169501
Soldering Tip 1.6 mm	1	169499
Soldering Tip 2.4 mm	1	169500
Hot Air Nozzle PS-10	1	169497



## Electric Soldering Piston-Set

- Plastic handle with non-slip function
- Easy to change the soldering tip

### Application Area

- For soldering on circuit boards, electronics, model building, radio and communication equipment

### Scope Of Delivery

- Soldering piston with soldering tip
- Soldering piston filing
- Soldering pump
- Side cutting pliers length approx. 110 mm
- Body lead
- Soldering flux
- Substitute soldering tip
- Spare parts for soldering pump

### Technical Data

Performance	30 W
Voltage	220 V
Temperature, Soldering Tip	400 °C
Cable Length	1.25 m
Length, soldering tip	17 mm

Title	PU Piece	Article No.
Electric Soldering Piston Set	1	093930

AGR: 08.400

## Soldering Iron HRT - Bent tip and high thermal efficiency

### Technical Data

Performance	200 W
Voltage	220 V

Title	PU Piece	Article No.
SOLDERING IRON HRT 200W	1	109563

AGR: 08.400



## Blue Fire Jet

- piezo ignition
- flame temperature 1300°C
- splash water protected ignition
- weather-proof flame
- compact, ergonomic housing made of one piece

### Application Area

- Soldering, edit shrink hoses, heating

### Hints

- lighter is empty, because delivery with charged lighter is not allowed

### Scope Of Delivery

- empty refill lighter is enclosed

### Technical Data

Flame Temperature, To		1300 °C
Title	PU Piece	Article No.
Blue Fire Jet	1/2	219290
AGR: 08.400		
Accessories Available	PU Amount	Article No.
Butan gas 100 ml	1/12	188942



## Power Burner Jet

- Air supply control for optimal performance
- Knurl for the gas supply
- Safety switch for piezo ignition
- Extra switch to stop the burner
- Big pedestal for secure and stable stand. Thereby both hands are free
- Nubby, gummed handle for secure handling

### Application Area

- soldering, edit shrink hoses, heating

### Hints

- Power Burner Jet is delivered without gas
- After filling leave the burner quietly for a few minutes in order to achieve full power



### Technical Data

Flame Temperature, To	1300 °C
Operating Time	120 min

Title	PU Piece	Article No.
Power Burner Jet	1	219291

AGR: 08.400

Accessories Available	PU Amount	Article No.
Butan gas 100 ml	1/12	188942

## Berner Jet

- Work independent gas operation and compact design
- High performance and temperature ensure rapid heating

### Application Area

- Brazing, soldering, tinning, heating, partial dissolution of screws, shrinkage, thawing, burning off old paint etc.

### Characteristics

- Gas burner with Piezo ignition, automatic switch-off at release, stable and precise flame in all positions (over-head), soot-free flame, push button can be locked, adjustable gas feed, integrated pressure regulator

### Hints

- Spare parts set consists of:
  - 2 Ignition pins
  - 4 gas nozzle
  - 7 seals
- When working overhead can escape for a short time after switching off more gas. This leads to a short-term after-burning of the flame.

### Technical Data

Gas Consumption	185 g/h
Flame Temperature, To	2000 °C
Operating Time	300 min

Title	Performance	Operating Temperature, Of	PU Piece	Article No.
Berner Jet (Burner without Cartridge)	2.4 kW	1.5 °C	1	005590

AGR: 08.400

Necessary Accessories	PU Amount	Article No.
Multi Gas Cartridge High Performance Gas 360ml	1/3/5	005373

Accessories Available	PU Piece	Article No.
Berner Jet hot air blower	1	244888
Berner Jet shrinking burner	1	244889
Berner Jet Standard burner	1	244887





## Spare Parts

	PU Piece	Article No.
Berner Jet Zyklon burner	1	244886

## ACCESSORIES BERNER JET BURNER

### Application Area

- Soldering and brazing, heating, Shrinking, color removal

Title	Performance	Gas Consumption	Pressure, Max	PU Piece	Article No.
Berner Jet Standard burner	1200 W	90 g/h	2 bar	1	244887
Berner Jet hot air blower	1700 W	130 g/h	2 bar	1	244888
Berner Jet Zyklon burner	2200 W	170 g/h	2 bar	1	244886
Berner Jet shrinking burner	3500 W	230 g/h	2 bar	1	244889

AGR: 08.400



## Multi Gas Cartridge High Performance Gas 360ml

Title	PU Can	Article No.
Multi Gas Cartridge High Performance Gas AGR: 04.612	1/3/5	005373
Necessary Accessories	PU Amount	Article No.
Berner Jet (Burner without Cartridge)	1	005590



## Welding and Cutting Torch Set

### Application Area

- Heating, welding and warming up, soldering and torch cutting
- For use with acetylene and oxygen

### Characteristics

- Torch handle with 15 mm die holder,
- handle constructed of impact resistant plastic,
- welding inserts made of brass with
- interchangeable welding nozzles made of copper

### Scope Of Delivery

- Handle
- 7 Welding attachments 0.2 – 14 mm
- Spring lever cutting torch
- 3 Cutting tips 3 – 6, 6 – 20, 20 - 75 mm
- Cutting Torch Guide Carriage
- Spanner for tips
- Ignition gun
- Jet cleaner kit 10-parts
- Hose connectors
- Protection goggles
- Plastic box

### Technical Data

Cutting area	3 - 75 mm
Welding area	0.5 - 14 mm
Connection Thread, Acetylene	R 3/8" LH
Connection Thread Oxygen	R 1/4" RH

Title	PU Piece	Article No.
Welding and Cutting Torch Set	1	049525

AGR: 08.401



## Welding and soldering equipment

Scope Of Supply	Amount	Article No.
(387727_11_1_AT01_513010Handgriff)	1	-
(387727_12_1_AT01_513030Schweieinsatz0205)	1	-
(387727_13_1_AT01_513031Schweieinsatz051m)	1	-
(387727_14_1_AT01_513032Schweieinsatz12mm)	1	-
(387727_15_1_AT01_513033Schweieinsatz24mm)	1	-
(387727_16_1_AT01_513134Schweieinsatz46mm)	1	-
(387727_17_1_AT01_513035Schweieinsatz69mm)	1	-
(387727_18_1_AT01_513036Schweieinstaz914m)	1	-
(387727_19_1_AT01_513310Federhebelschneid)	1	-
(387727_20_1_AT01_513330Schneiddse36mm)	1	-
(387727_21_1_AT01_513331Schneiddse620mm)	1	-
(387727_22_1_AT01_513332Schneiddse2075mm)	1	-
(387727_23_1_AT01_SchneidbrennerFhrungswa)	1	-
(387727_24_1_AT01_510106Brennerschlssel)	1	-
(387727_25_1_AT01_Gasanznder)	1	-
(387727_26_1_AT01_540621Schutzbrille)	1	-
(387727_27_1_AT01_510105Dsenreinigersatz1)	1	-
(387727_28_1_AT01_540221SchlauchtilleR144m)	1	-
(387727_29_1_AT01_540222SchlauchtilleR384m)	1	-
(387727_30_1_AT01_540223SchlauchtilleR386m)	1	-
(387727_31_1_AT01_540210berwurfmutterR14)	1	-
(387727_32_1_AT01_540215berwurfmutterR38)	1	-

INTERNAL/Approved (2019-03-22 23:19:33)

## Welding Burner Handle

### Characteristics

- For a 15-mm-shaft
- Grip plates out of impact-resistant thermoplastic
- Connection threads: gas R 3/8" left, oxygen R 1/4" right

### Hints

- For the old system 187968

### Technical Data

Connection Thread Gas	R 3/8" left
Connection Thread Oxygen	R 1/4" right
Shaft Ø	15 mm



14

Title	PU Piece	Article No.
WELD.BURNER HANDLE	1	187976

AGR: 08.401

## Welding Attachments for Acetylene

### Characteristics

- With 15-mm shaft, welding attachments and mixing pipes are made of brass, welding attachments mouth pieces are made of copper

### Technical Data

Material	Copper
----------	--------

Title	Shaft Ø	Size	Welding area	PU Piece	Article No.
Welding Attachment MG1 51.3031	15 mm	1	0.5 - 1 mm	1	187992
Welding Attachment MG2 51.3032	15 mm	2	1 - 2 mm	1	188000
Welding Attachment MG3 51.3033	15 mm	3	2 - 4 mm	1	188018
Welding Attachment MG4 51.3034	15 mm	4	4 - 6 mm	1	188034

AGR: 08.401



## Acetylene Bottle Pressure Reducer

### Characteristics

- Incl. safety valve,
- Bottle manometer 0 – 26 bar,
- Work manometer 0 – 1.5 bar,
- Manometer-Ø each 63 mm,
- According to DIN EN 562, type approval BAM 0301

### Processing Information

- Only for use with the non-return valve (prod. no. 173592) !

### Technical Data

Adjustment manometer	0 - 1.5 bar
Bottlemanometer	0 - 30 bar
Norms	DIN 8546
Type Approval	BAM 1181
Pre Printed Form	18 bar

Title	Connection Thread Gas	Working Pressure: P2	PU Piece	Article No.
Acetylene Bottle Pressure Reducer 51.1310	G 3/8" LH	1.5 bar	1	186775

AGR: 08.401

Accessories Available	PU Piece	Article No.
Non-Return Valve Acetylene 54.0365	1	173592



## Oxygen Bottle Pressure Reducer

### Characteristics

- Incl. safety valve
- Bottle manometer 0 – 200 bar,
- Work manometer 0 – 10 bar,
- Manometer-Ø each 63 mm,
- According to DIN EN 562

### Processing Information

- Only for use with the non-return valve (prod. no. 173584) !

### Technical Data

Adjustment manometer	0 - 1.5 bar
Contents pressure	0 - 200 bar
Manometer-Ø	63 mm
Norms	DIN 8546
Output Of The Gas Supply	G 1/4" a.
Type Approval	BAM 1181
Pre Printed Form	200 bar

Title	Connection Thread Gas	Working Pressure: P2	PU Piece	Article No.
Oxygen Bottle Pressure Reducer	G 3/4" i.	10 bar	1	186783

AGR: 08.401

Accessories Available	PU Piece	Article No.
Non-Return Valve Oxygenet up to 20 bar 54-0360	1	173584



## Inert Gas Welding Equipment Accessories

### Characteristics

- With safety valve, contents manometer 0 –200 (315) bar, work manometer 0 –10 (16) bar, amount of withdrawals, 0 –30 l/min, Output: G 1/4"RH AG

### Technical Data

Adjustment manometer	0 - 10 bar
Contents pressure	0 - 200 bar
Withdrawal quantity	0 - 30 l/min
Output Of The Gas Supply	G 1/4" a.

Title	PU Piece	Article No.
Inert Gas Welding Equipment Accessories	1	173770

AGR: 08.401





## Non-Return Flame Safety Valve

### Application Area

- "Oxygene": To safeguard oxygene hoses up to 20 bar pressure
- "Acetylene": To safeguard acetylene hoses up to 1.5 bar, hydrogen hoses up to 1.5 bar and liquid gas/ methane/ natural gas and mixture of gases up to 5 bar pressure

### Characteristics

- Safety elements: Protective filter, gas non-return valve, flame arrester, automatic rest flow barrier, explosion pressure bleeder valve

### Processing Information

- For each hose there is a non-return flame safety valve.
- To be fix between hose and bottle pressure regulator

### Hints

- When installing the installation date must be noted on the back arrestor!
- An annual audit is required by the TÜV D1 §49 (4) according to BGV!



Title	Connection Thread Gas	Wrench Width	PU Piece	Article No.
Non-Return Valve Acetylene	G 3/8" LH	19 mm	1	173592
Non-Return Valve Oxygene	G 1/4"	17 mm	1	173584

AGR: 08.401

## Autogenous Twin Hose

### Characteristics

- According to DIN 8541 and EN 559, with stabile inserts, very flexible, red for acetylene,
- blue for oxygene, fully pre-assembled, complete with sleeves and nuts

### Technical Data

Wall Thickness	5 mm
----------------	------

Title	Length	External-Ø	PU Piece	Article No.
Autogenous Twin Hose 3.5222	5000 mm	11 mm	1	048585
Autogenous Twin Hose 3.5223	10000 mm	11 mm	1	177164

AGR: 08.401

## Hose Clamp

### Application Area

- For parallel guide of autogenous twin hoses

### Characteristics

- Double hose clamp made of plastic

Title	Length x width	PU Piece	Article No.
Hose Clamp ASS 13x15	13 x 13 mm	1	124699

AGR: 08.401



## Heating torch with support feet and 5 m hose for gas

- chromed
- High-performance burner with a flame stabilizator
- Burner egde reinforced

### Application Area

- Perfectly suited for warming up, flaming, defrosting, shrinking, drying, welding
- Ideal for roof works, insulation work and asphalt work
- Also suitable for the flaming of weeds and moss elimination

### Characteristics

- Suitable for propane operation with 5-, 11- or 33-kg-cylinders

### Hints

- A low flame remains without the activation of the throttle - only by pressing the saving valve leber the entire burner flame occures, according to the adjustment on the gas valve
- A hose breakage protection has to be mounted on this tool, for reasons of safety, which locks the gas supply if damage has occured.

### Scope Of Delivery

- High-performance burner
- Combustion tube 500 mm
- Burner support
- Hose 5 m
- Pressure regulator with hose breakage protection

### Technical Data

Flame Temperature, To	2000 °C
Hose Length	5 m
System	Screw
Weight	3.3 kg

Title	Ø	Gas Consumption G/H	Performance	Burner Capacity	PU Piece	Article No.
Heating torch	60 mm	9800 g/h at 4.0 bar	110 kW	454230 kJ/h	1	052071

AGR: 08.400



## Welding device FAN 0602 Proton-B Multiworker

- High duty cycle due to fan cooling
- Modern design
- 2 years warranty on the transformer and electronic parts

### Scope Of Delivery

- FAN Quick-pulling percussion hammer with an exchangeable intake of the flat washer or needle electrode
- Retraction head electrode
- Slit head electrode
- Carbon retraction electrode
- Pistol cable
- Ground cable with a clamp incl. Flat washer and spare nails

### Technical Data

Frequency	50 Hz
Apparent Power	15 kVA
Line Voltage	230 V
Amperage	0 - 2000 A
Mains Fuse Protection	16 A
Weight	14 kg

Title	PU Piece	Article No.
FAN 0602 PROTON-B MULTIWORKER	1	149776
AGR: 08.400		
<b>Scope Of Supply</b>	<b>Piece</b>	<b>Article No.</b>
NAIL ELECTRODE 0602-1211	1	033136
CARBON-REPL. BAR F. PROTON	1	158185
(68258_13_AT01_060210Pistolenkabel)	1	-
(68258_14_AT01_060212Massekabel)	1	-
(68258_15_AT01_0602111Masseklemme)	1	-
(68258_16_AT01_0602122Ziehschlaghammerund)	1	-
(68258_17_AT01_0602121KopfmithNagelelektro)	1	-
(68258_18_AT01_0601452Einziehelektrode)	1	-
(68258_19_AT01_0601472Schlitzkopfelektrod)	1	-



INTERNAL/Approved (2019-03-22 23:20:24)

## Pull Flex Dinging Tools



14

Title	PU Piece	Article No.
FAN PULLFELX ELECTRODE 0400-09	1	162228
PULL FLEX DINGNG.TOOLS "BABY"	1	160123*

\* = The delivery time is 21 days  
 AGR: 03.419 / 08.403

## Dent Claws-Set 0805

- Through the oblong slots of the claw pulling arms the tensile force acts only on the lowest point - smooth draw
- Quick and easy removal of the shaft and welding wire

### Application Area

- Move out dents of voids and hard to reach areas (sills, columns)
- Ideal for long dents

### Characteristics

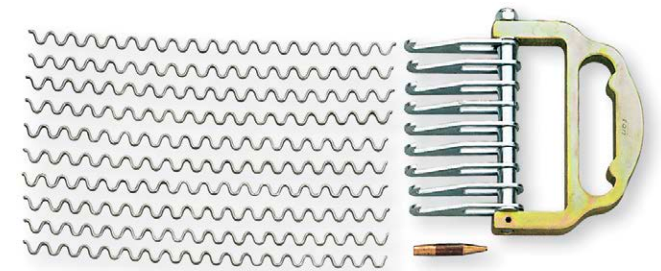
- Quick and easy removal of the shaft and welding wires

### Processing Information

- For the removal of the wire shaft this must be turned away and rotated out with a plier at the side.

### Scope Of Delivery

- 1 drawing claw
- 1 Shaft wire electrode
- 10 Shaft wires



Title	PU Piece	Article No.
Dent Claws-Set 0805	1	109390
AGR: 08.401		
Spare Parts	PU Amount	Article No.
Corrugated Welding Wire for Multi-Puller, 50 pieces / bag	1	169317
FAN 0805-02 Replacement Electrode	1	113705

INTERNAL/Approved (2019-03-22 23:20:42)

## Accessories Rospot 2000 Bolts, Nails, Washers



Title	PU Piece	Article No.
Rapid replacement tips AGR: 08.403	1	168793

## Welding Stud Rospot 2000



Title	Ø	Length	PU Piece	Article No.
Bolts	2.0 mm	50 mm	500	161152
Bolts	2.6 mm	50 mm	500	161144

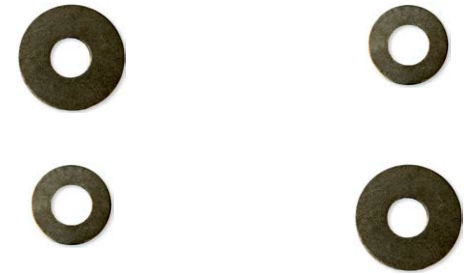
AGR: 08.403

INTERNAL/Approved (2019-03-22 23:20:48)

## FAN-washers for welding, steel plain

### Characteristics

- Bare body washer for welding and drawing



FAN-washers for welding, steel plain					
Title	Internal Ø	External Ø	Thickness material	PU Piece	Article No.
FAN-washer	8.5 mm	18 mm	1.7 mm	100	154905
FAN-washer	8.5 mm	23.5 mm	2 mm	100	154904

AGR: 08.403



## Welding Stick FOX OHV

- Rutil cellulose covers the rod electrode with a very good coverage in all positions, also vertical-down
- General-purpose electrode, especially for small transformers
- Flexible cover

### Application Area

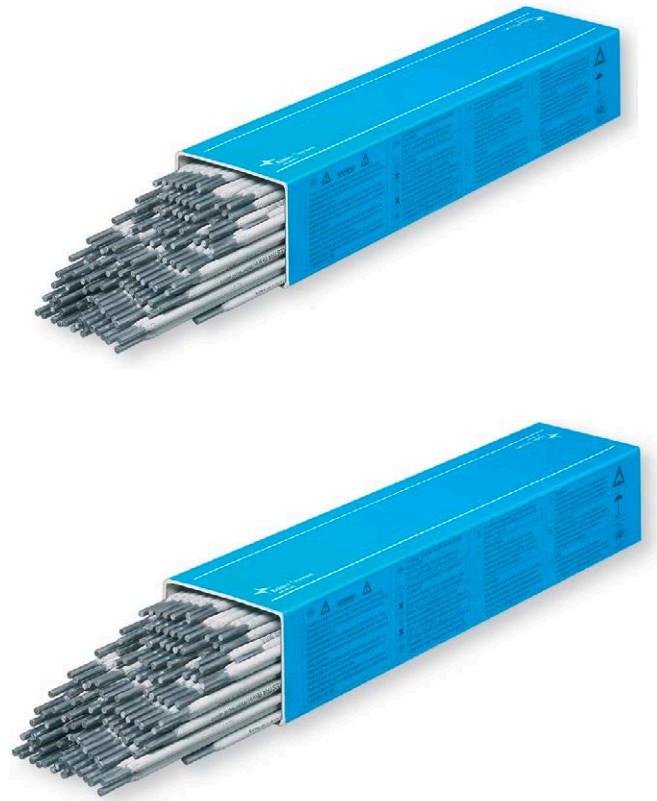
- Versatile application in the steel construction, boiler construction, tank construction, vehicle construction, shipbuilding construction, as well as for galvanized components

### Characteristics

- Rod electrode, unalloyed, rutil-cellulose covered

### Technical Data

Coating Type	rutil-cellulose, medium recovery
Container	Cardboard



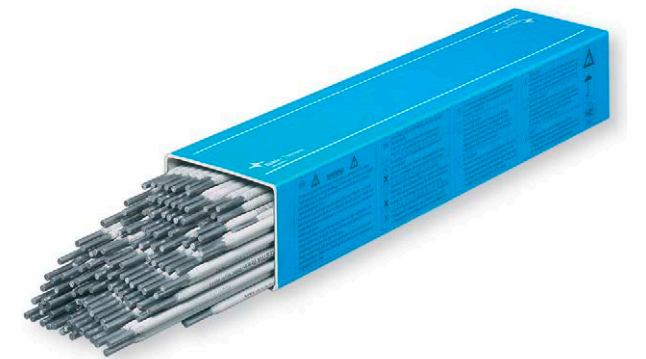
Title	Dimension	Content	Amperage	PU Package	Article No.
Welding Stick FOX OHV	2.0 x 250	500 PC	45 - 80 A	1	244136
Welding Stick FOX OHV	2.5 x 250	320 PC	60 - 100 A	1	244135
Welding Stick FOX OHV	2.5 x 350	320 PC	60 - 100 A	1	244134
Welding Stick FOX OHV	3.2 x 350	185 PC	90 - 130 A	1	244133

AGR: 08.424

## Welding rod electrode FOX EV 50 „Universal“

### Application Area

- The electrode is suitable for fusion welding in the steel construction, boiler construction, tank construction, vehicle construction, shipbuilding construction and machine construction as well as as a buffer stock during build-up welding on high-carbon steel. Also suitable for welding wok on steel with a low purity and high carbon content. Especially suitable for Offshore constructions



## Characteristics

- Basic coated bar electrode for high-quality welded joints. Excellent strength properties and tenacity properties up to -50°C. Weld metal production
- approx. 110 %. In all positions good weldability, except for the vertical seam.
- Very low hydrogen contents in the weld metal
- (under AWS-conditions HD < 4 ml/100 g).

## Processing Information

- Possible current types: direct current, positive polarity
- Increasing, horizontal, overhead

## Technical Data

Norms	ISO 2560
Coating Type	rutile-cellulose, medium recovery
Container	Cardboard

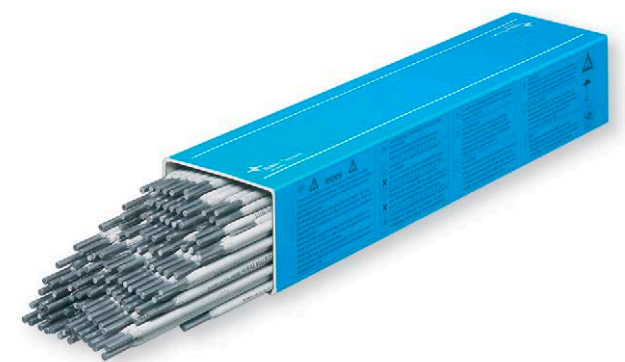
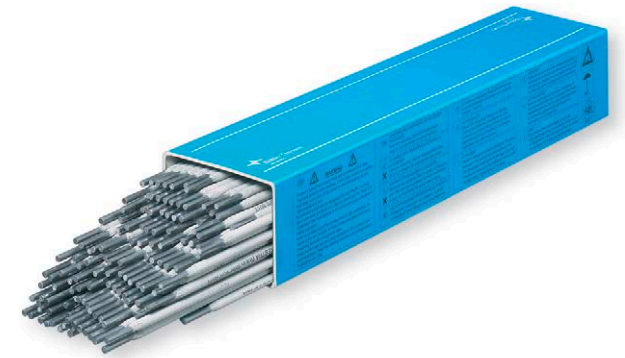
Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Welding electrode FOX EV50	2.5 x 250	190 PC	2.9 kg	80 - 110 A	1	054222
Welding electrode FOX EV50	2.5 x 350	190 PC	4.2 kg	80 - 110 A	1	054221
Welding electrode FOX EV50	3.2 x 350	120 PC	4.4 kg	100 - 140 A	1	054220

AGR: 08.424

## Covered electrode RR 12 "Flat seam"

### Application Area

- Various applications in general engineering, construction, piping, tanks, boilers and shipbuilding
- Particularly suitable for thin and medium plates due to the soft river, which makes it possible to weld thin metal sheet with thick electrodes



## Characteristics

- DIN 1913: E 51 22 RR 6, EN 499: E 42 0 RR 12, TÜV(German Association for Technical Inspection)and DeutscheBahn approval, thick coated stick electrode with rutile-bearing, coating for smooth seams and excellent slag removability, excellent ignition properties and crack resistant particularly suited to basting work due to excellent ignition properties and crack resistance, intensive, quiet burning arc, lower spray loss, with the right current strength the slag dissolves itself

## Processing Information

- Possible types of current: direct current (-pole), alternating current

## Hints

- Comparable to:
- Phoenix GREEN T
- Kestra BLUE
- Oerlikon Fincord D / S / T
- ESAB OK 43.00, OK 43.15, OK 43 32
- Castolin CP 35086, 6600, Castlin Automatic
- UTP 611
- Smitweld Universalis

## Technical Data

Norms	DIN 1913, EN 499
Coating Type	Rutile, high recovery
Direct Current	-
Alternating Current	Yes
Approval	German railways company Technical Inspection Association
Container	Cardboard

Title	Dimension	Content	Weight	Amperage	PU Carton	Article No.
Covered electrode RR 12 "Flat seam"	2 x 350	325 PC	4.2 kg	60 - 75 A	1	118517
Covered electrode RR 12 "Flat seam"	2.5 x 350	210 PC	4.66 kg	90 - 105 A	1	118515

AGR: 08.424

## Rutile Electrode

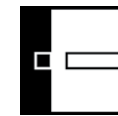
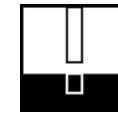
- Easy to use
  - Requires minimal operator skills
- Low spattering
  - Can be used in many fields in industry
- Highly thick electrode coating
- Moderately quick-setting type of slag
  - Good welding beads
- EN ISO 2560-A: E 42 0 RR 12 ; AWS A 5.1: E 6013

### Application Area

- Mostly used type
- For general purpose
- For all types of mild steel manufacturing
- For use in all positions besides vertical and down

### Technical Data

Norms	EN ISO 2560-A
Coating Type	Rutile, high recovery
Tensile Strength	510 - 610 N/mm <sup>2</sup>
Yield Strength	420 N/mm <sup>2</sup>
Elongation min.	22 %
Direct Current	(-)
Alternating Current	Yes



Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Rutile Electrode	2.0 x 350	475 PC	5 kg	45 - 80 A	1	366330
Rutile Electrode	2.5 x 350	245 PC	5 kg	60 - 110 A	1	366331
Rutile Electrode	3.2 x 350	155 PC	5 kg	100 - 140 A	1	366332

AGR: 08.424

## Rutile Electrode

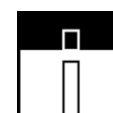
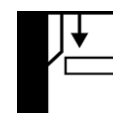
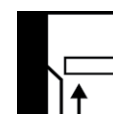
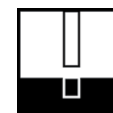
- Electrode coating of medium thickness
- Flexible electrode coating
  - ▶ Provides electrode bendability
- Low spattering
- EN ISO 2560-A: E 42 0 RC 11, AWS A5.1: E 6013

### Application Area

- Multi-purpose
- For all types of mild steel manufacturing
- For use in all positions
- For welding of difficult to reach materials

### Technical Data

Norms	EN ISO 2560-A
Coating Type	rutile-cellulose, medium recovery
Tensile Strength	510 - 610 N/mm <sup>2</sup>
Yield Strength	420 N/mm <sup>2</sup>
Elongation min.	22 %
Direct Current	(-)
Alternating Current	Yes



Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Rutile Electrode	2.0 x 350	410 PC	5 kg	50 - 70 A	1	366333
Rutile Electrode	2.5 x 350	270 PC	5 kg	60 - 110 A	1	366334
Rutile Electrode	3.2 x 350	170 PC	5 kg	90 - 140 A	1	366335
Rutile Electrode	4.0 x 350	115 PC	5 kg	130 - 180 A	1	366336

AGR: 08.424

## Hardfacing Electrode

- Weld metal resistant to abrasion
- EN 14700: E Fe8, DIN 8555: E 6-UM-60 P

### Application Area

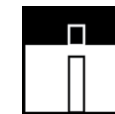
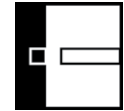
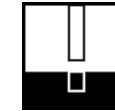
- Final pass-welding of parts in earth-moving and mining equipment with high resistance to abrasion
- For parts of hard manganese steels and frags

### Hints

- Requires re-drying process of 2 hours at a temperature of 300°C

### Technical Data

Norms	EN 14700, DIN 8555
Coating Type	basic
Direct Current	(+)
Alternating Current	No



Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Hardfacing Electrode	3.2 x 350	140 PC	5 kg	100 - 140 A	1	366343

AGR: 08.424

## Rutile Electrode

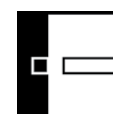
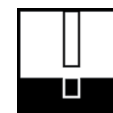
- High welding efficiency (about 160%)
  - ▶ Cost saving (especially in groove welding and in flat fillet welding)
- Resistance to high current
- EN ISO 2560-A: E 42 0 RR 53, AWS A5.1: E 7024

### Application Area

- Railroad cars
- Earth moving equipment
- Positioned welds in pressure including vessels, piping etc

### Technical Data

Norms	EN ISO 2560-A
Coating Type	Rutile, low/medium recovery
Tensile Strength	510 - 610 N/mm <sup>2</sup>
Yield Strength	420 N/mm <sup>2</sup>
Elongation min.	22 %
Direct Current	(-)
Alternating Current	Yes



14

Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Rutile Electrode	3.2 x 350	140 PC	6 kg	120 - 180 A	1	366337

AGR: 08.424

## Low Hydrogen Electrode

- Very low spattering
- Excellent strength and toughness
- Recovery of weld metals 110%
- Soft and quiet arc
- EN ISO 2560-A: E 42 5 B 42 H5, AWS A5.1: E 7018-1 H4

### Application Area

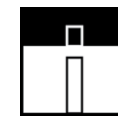
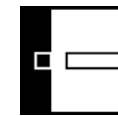
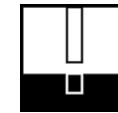
- Suitable for use in steel construction, boiler, container, machine manufacturing
- Welding of low-purity and high-carbon steel

### Hints

- Requirement of redying for minimum 2 hours at temperature from 300°C to 350°C

### Technical Data

Norms	EN ISO 2560-A
Coating Type	basic
Tensile Strength	510 - 630 N/mm <sup>2</sup>
Yield Strength	420 N/mm <sup>2</sup>
Elongation min.	24 %
Direct Current	(+)
Alternating Current	No



Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Low Hydrogen Electrode	2.5 x 350	203 PC	4.5 kg	80 - 100 A	1	366338
Low Hydrogen Electrode	3.2 x 450	128 PC	5 kg	100 - 140 A	1	366339

AGR: 08.424



## Low Alloyed High Strength Electrode

- Ductile and crack-resistant weld metal
- Recovery of weld metals 115%
- Low content of hydrogens
- EN ISO 2560-A: E 50 3 B 42 H5, AWS A5.5: E 8018-G H4

### Application Area

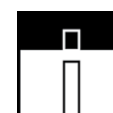
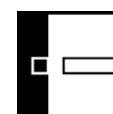
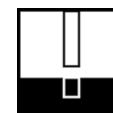
- Welding carbon and low-alloyed high-strength steels that contain up to 0.6% carbon
- Suitable for rail-joint welding
- For use in all positions except for vertical down

### Hints

- Requires re-drying process of minimum 2 hours at temperatures from 350°C to 400°C

### Technical Data

Norms	EN ISO 2560-A
Coating Type	basic
Tensile Strength	610 - 730 N/mm <sup>2</sup>
Yield Strength	500 N/mm <sup>2</sup>
Elongation min.	22 %
Direct Current	(+)
Alternating Current	No



Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
High Strength Electrode	2.5 x 350	194 PC	4.5 kg	80 - 110 A	1	366341
High Strength Electrode	3.2 x 350	140 PC	5 kg	100 - 140 A	1	366342

AGR: 08.424

## Cast Iron Electrode

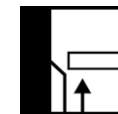
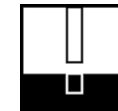
- Ni cored stick electrode
- Welding in short passes
- EN ISO 1071: E C NiCl 1, AWS A5.15: E Ni-CI

### Application Area

- Joint welding of grey cast iron, temper cast iron, nodular cast iron as well as cast joint welding of cast iron with steel, stainless steel and Monel metal

### Technical Data

Norms	EN ISO 1071
Tensile Strength	250 N/mm <sup>2</sup>
Yield Strength	200 N/mm <sup>2</sup>
Elongation min.	3 %
Hardness	170 HB
Direct Current	(-)
Alternating Current	Yes



Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Cast Iron Electrode	2.5 x 300	70 PC	2 kg	60 - 90 A	1	366344

AGR: 08.424

## Cast Iron Electrode

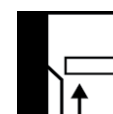
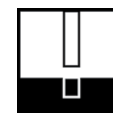
- Ni-Fe cored stick electrode
- Pour soudures courtes
- EN ISO 1071: E C NiFe CI 1, AWS A5.15: E NiFe-CI

### Application Area

- Welding of grey cast iron, temper cast iron
- Joint welding of cast iron with hard-to-weld steels or cast parts

### Technical Data

Norms	EN ISO 1071
Tensile Strength	350 N/mm <sup>2</sup>
Yield Strength	200 N/mm <sup>2</sup>
Elongation min.	6 %
Hardness	190 HB
Direct Current	(+)
Alternating Current	No



Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Cast Iron Electrode	3.2 x 300	93 PC	2.5 kg	80 - 120 A	1	366345

AGR: 08.424

## Non Ferrous Electrode

- TS 9604: EL-AISi5, AWS A5.3: E 4043

### Application Area

- Universal electrode for welding aluminum plates, sheets and castings
- Repairing cracks, build-up missing sections, cladding and reinforcing
- Also for engine blocks, gear cases, engine gear box unit, miscellaneous components in light alloys, containers, vessels, repair works on various kind of aluminum materials



### Technical Data

Norms	TS 9604
Tensile Strength	160 - 190 N/mm <sup>2</sup>
Elongation min.	10 %
Hardness	50 HB
Direct Current	(+)
Alternating Current	No

Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Non Ferrous Electrode	2.5 x 350	112 PC	2 kg	50 - 80 A	1	366346

AGR: 08.424

## Stainless Steel Electrode

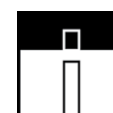
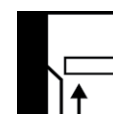
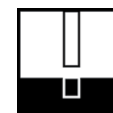
- Resistant to corrosion and cracks
  - Longlasting welds
- EN ISO 3581-A: E 19 9 LR 32, AWS A 5.4: E 308L-16

### Application Area

- Welding of similar steel types including higher carbon grades as well as ferritic 13%-Cr steels

### Technical Data

Norms	EN ISO 3581
Coating Type	Rutile
Tensile Strength	520 - 660 N/mm <sup>2</sup>
Yield Strength	355 N/mm <sup>2</sup>
Elongation min.	35 %
Direct Current	(+)
Alternating Current	Yes



Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Stainless Steel Electrode	2.0 x 250	201 PC	3 kg	50 - 80 A	1	366347
Stainless Steel Electrode	2.5 x 300	162 PC	3 kg	50 - 90 A	1	366348
Stainless Steel Electrode	3.2 x 350	126 PC	4.5 kg	80 - 120 A	1	366349

AGR: 08.424

## Stainless Steel Electrode

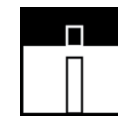
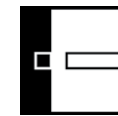
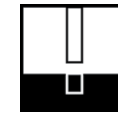
- Weld metal resistant to acid and corrosion
  - Longlasting welds
- EN ISO 3581-A: E 19 12 3 LR 32, AWS A5.4: E 316L-16

### Application Area

- Weld type 316 base metals
- Tanks, pipes and equipment made of Cr-Ni-Mo low carbon steel in food, textile and chemical industry

### Technical Data

Norms	EN ISO 3581
Tensile Strength	540 - 670 N/mm <sup>2</sup>
Yield Strength	355 N/mm <sup>2</sup>
Elongation min.	30 %
Direct Current	(+)
Alternating Current	Yes



Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Stainless Steel Electrode	2.0 x 250	192 PC	3 kg	40 - 70 A	1	366350
Stainless Steel Electrode	2.5 x 300	156 PC	3 kg	50 - 90 A	1	366351
Stainless Steel Electrode	3.2 x 350	131 PC	4.5 kg	80 - 120 A	1	366352

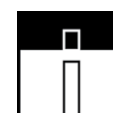
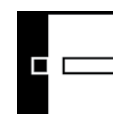
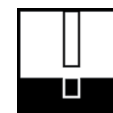
AGR: 08.424

## Steel Electrode

- Weld metal hardness increases by work hardening and cold forming
- EN ISO 3581-A: E 29 9 R 12, AWS A5.4: ~E 312-16

### Application Area

- Rebuilding gear teeth, repairing cracks in casing, buffering layers and repair on earth moving and drilling equipment and rebuilding worn shafts
- For materials of low weldability such as unalloyed high carbon steels, low and high alloyed steels, tool steels, high speed steels, manganese hardening steels, rail steels and iron based cast materials



### Technical Data

Norms	EN ISO 3581
Coating Type	Rutile
Tensile Strength	790 - 860 N/mm <sup>2</sup>
Yield Strength	450 N/mm <sup>2</sup>
Elongation min.	20 %
Hardness	250 HB
Direct Current	(+)
Alternating Current	No

Title	Dimension	Content	Weight	Amperage	PU Package	Article No.
Steel Electrode	2.5 x 300	180 PC	3 kg	40 - 70 A	1	366353
Steel Electrode	3.2 x 350	135 PC	4.5 kg	70 - 100 A	1	366354

AGR: 08.424

## WIG Additional Rods, Steel

### Technical Data

Norms	-
Gas	Argon (I1)
Material	SG2 copper plated



Title	Ø	Length	Weight	PU kg	Article No.
WIG additional rods	2.4 mm	1000 mm	1 kg	1	033231

AGR: 08.422



### Insert gas welding wire for MIG/MAG welding CO2 or mixed gas - Roll

#### Application Area

- Welding of structural steel and conventional steel plates

#### Characteristics

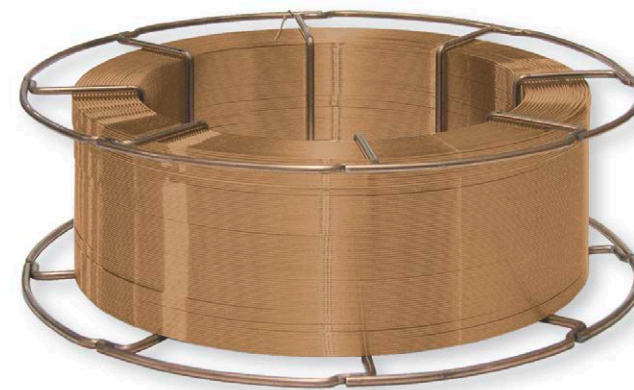
- Supplied on plastic spool, copper plated, DB-approval, in accordance with DIN 8559

#### Processing Information

- Usable gas: CO2 or Argon / CO2 (Corgon 18)

#### Technical Data

Norms	DIN 8559
Gas	CO2 or Argon/CO2 (Corgon 18)
Approval	German railways company



## Welding / soldering materials

Title	Ø	Weight	PU Roll	Article No.
PROT.GAS 1.0 ROLL 15 KG	1 mm	15 kg	1	190810
<b>AGR: 08.420</b>				
<b>Accessories Available</b>			PU Piece	Article No.
Adapter Wire Spool			1	054599

## Inert gas welding wire SG2

- Perfect smooth feedability
- For universal usage
  - Perfect welding characteristics
- No additional adapter needed
  - Delivered on BS-Spool (for 0.8, 1.0 and 1.2mm) or D-Spool (for 0.6mm)
- EN ISO 14341-A: G3 Si 1; AWS A5.18: ER 70 S-6

### Application Area

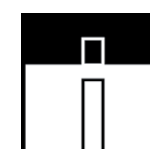
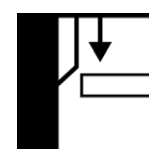
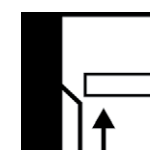
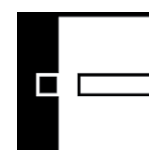
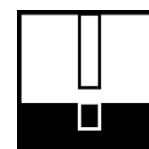
- Steel construction
- Machinery production
- Body work/ repair
- Welding of thin walled steel (in automotive industry)
- Welding of ships, boiler tanks, pipe parts

### Hints

- TIG D.C.(-)
- MAG D.C.(+)

### Technical Data

Norms	EN ISO 14341-A
Tensile Strength	500 - 640 N/mm <sup>2</sup>
Yield Strength	420 N/mm <sup>2</sup>
Elongation min.	22 %
Gas	MAG: Ar/CO <sub>2</sub> TIG: Ar (I1)



Title	Ø	Weight	PU Roll	Article No.
Inert gas welding wire SG2	0.6 mm	5 kg	1	367550
Inert gas welding wire SG2	0.8 mm	15 kg	1	367551
Inert gas welding wire SG2	1.0 mm	15 kg	1	367552
Inert gas welding wire SG2	1.2 mm	15 kg	1	367553

AGR: 08.420

## Inert gas welding wire SG3

- Neat welding work
  - Low spatter although used under CO<sub>2</sub>- atmosphere
- High resistance of weld
  - Higher strength compared to SG2
- Excellent wire feeding capability
- No additional adapter needed
  - Delivered on BS-Spool
- EN ISO 14341-A: G4 Si 1; AWS A5.18: ER 70 S-6

### Application Area

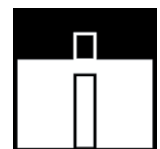
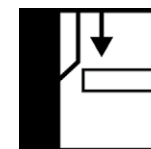
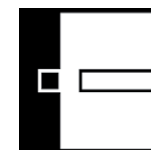
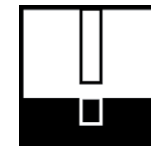
- Steel construction
- Machinery production
- Body work/ repair
- Welding of thin walled steel (in automotive industry)
- Welding of ships, boiler tanks, pipe parts

### Hints

- TIG D.C.(-)
- MAG D.C.(+)

### Technical Data

Norms	EN ISO 14341-A
Tensile Strength	540 - 680 N/mm <sup>2</sup>
Yield Strength	460 N/mm <sup>2</sup>
Elongation min.	22 %
Gas	MAG: Ar/CO <sub>2</sub> TIG: Ar (I1)



Title	Ø	Weight	PU Roll	Article No.
Inert gas welding wire SG3	0.8 mm	15 kg	1	367554
Inert gas welding wire SG3	1.0 mm	15 kg	1	367555
Inert gas welding wire SG3	1.2 mm	15 kg	1	367556

AGR: 08.420

## Gas shielded arc welding wire G2Ti

- Produces efficient welds even when the to be welded material is rusty, dirty or undercoat painted
- Broad application range
  - Surface can be coated afterwards
- No additional adapter needed
  - Delivered on BS-Spool

### Application Area

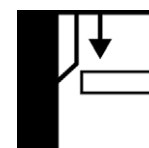
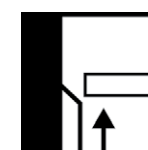
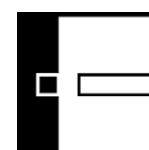
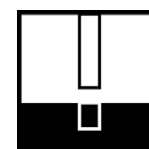
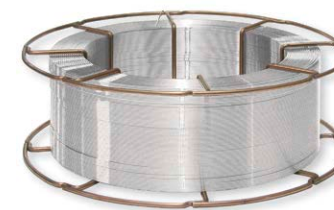
- For mild and low alloyed steels
- For thin walled materials
- For pipe welding
- For root passes in heavy vessel construction

### Hints

- TIG D.C.(-)
- MAG D.C.(+)

### Technical Data

Norms	EN ISO 14341-A
Tensile Strength	480 N/mm <sup>2</sup>
Yield Strength	400 N/mm <sup>2</sup>
Elongation min.	22 %
Gas	MAG: Ar/CO2 TIG: Ar (I1)



Title	Ø	Weight	PU Roll	Article No.
Gas shielded arc welding wire G2Ti	0.8 mm	15 kg	1	367566

AGR: 08.420

## Copper alloyed MIG welding wire CuSi3

- Good penetration characteristics
- For creating longlasting welds on galvanized steel
  - No corrosion of the weld
- No additional adapter needed
  - Delivered on D-Spool
- EN ISO 24373: S Cu 6560 (CuSi3 Mn1); AWS A5.7: ER Cu Si A

### Application Area

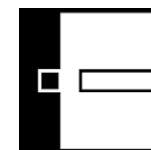
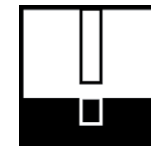
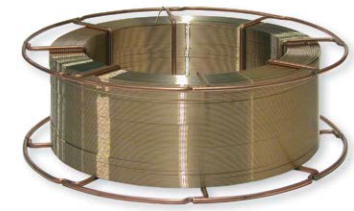
- Welding of galvanized steel
- Car body industry

### Hints

- MIG D.C.(+)

### Technical Data

Norms	EN ISO 24373
Tensile Strength	220 N/mm <sup>2</sup>
Yield Strength	130 N/mm <sup>2</sup>
Elongation min.	30 %
Hardness	55 HB
Gas	Argon (I1)



Title	∅	Weight	PU Roll	Article No.
Copper alloyed MIG welding wire CuSi3	0.8 mm	5 kg	1	367557
Copper alloyed MIG welding wire CuSi3	1.0 mm	15 kg	1	367558

AGR: 08.422

## Copper alloyed MIG welding wire CuAl8

- Suitable for repair work in car body industry
  - ▶ Can be easily modeled
- Longlasting beads
  - ▶ Resistant to corrosive liquids such as acids
- No additional adapter needed
  - ▶ Delivered on BS-Spool
- EN ISO 24373: S Cu 6100 (CuAl7); AWS-A5.7: ER CuAl-A 1

### Application Area

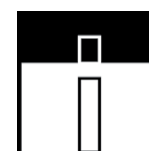
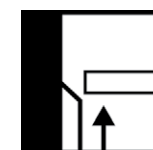
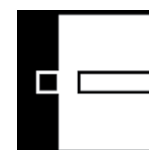
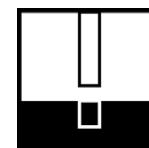
- Joining and surfacing of aluminium bronzes
- Surfacing of copper, brass, non-alloyed and low-alloyed steels
- Car body industry/ reparation

### Hints

- MIG D.C.(+)

### Technical Data

Norms	EN ISO 24373
Tensile Strength	430 N/mm <sup>2</sup>
Yield Strength	200 N/mm <sup>2</sup>
Elongation min.	40 %
Hardness	100 HB
Gas	Argon or Helium



Title	Ø	Weight	PU Roll	Article No.
Copper alloyed MIG welding wire CuAl8	0.8 mm	15 kg	1	367559
Copper alloyed MIG welding wire CuAl8	1.0 mm	15 kg	1	367560

AGR: 08.422

## Aluminium alloyed MIG welding wire AlMg5

- Resistant to sea water
- No additional adapter needed
  - Delivered on D-Spool
- EN ISO 18273: S Al 5356 (AlMgC-A); AWS A5.10: ER 5356

### Application Area

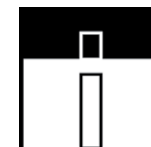
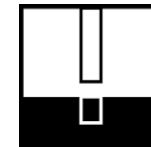
- For joining aluminium alloys including more than 3% Mg ones
- For cup, boilers, columns
- For marine applications

### Hints

- Preheating up to 150°C for plates thicker than 10 mm is required.
- MIG D.C.(+)

### Technical Data

Norms	EN ISO 18273
Tensile Strength	260 N/mm <sup>2</sup>
Yield Strength	180 N/mm <sup>2</sup>
Melting temperature	575 - 633 °C
Elongation min.	20 %
Gas	Argon or Helium



Title	Ø	Weight	PU Roll	Article No.
MIG welding wire AlMg5	1.0 mm	7 kg	1	367564

AGR: 08.420



## Stainless steel MIG welding wire

- Resistance to low temperatures varying at values down to -196°C
- No additional adapter needed
  - Delivered on BS-Spool
- EN ISO 14343-A: G Z 19 12 3 L Si; AWS A5.9: ER 316 L Si

### Application Area

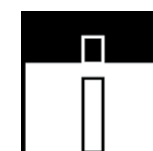
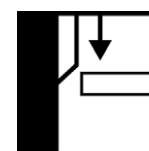
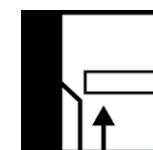
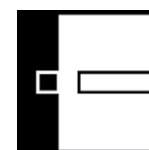
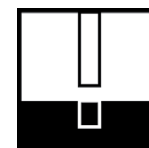
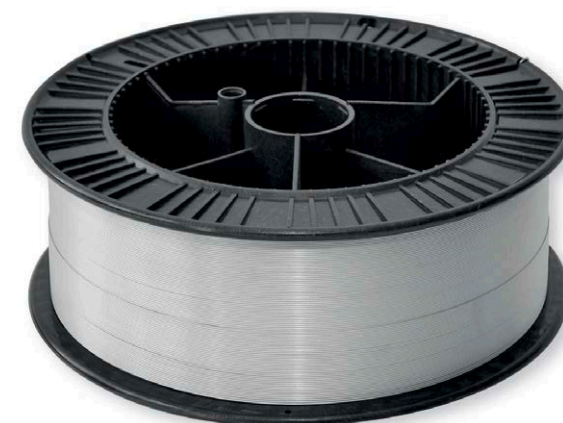
- For welding of stainless steel type 316 and low carbon steel type 316 L
- Mostly used in machinery and equipment parts of production plants for food, chemical, drug, textile and similar kind of industries
- Maintenance of resistance to intergranular corrosion at temperature values up to 400°C

### Hints

- MIG D.C.(+)

### Technical Data

Norms	EN ISO 14343-A
Tensile Strength	550 - 700 N/mm <sup>2</sup>
Yield Strength	400 N/mm <sup>2</sup>
Elongation min.	30 %
Gas	M12 (Ar + 2.5% CO <sub>2</sub> ) M13 (Ar + 2.5% O <sub>2</sub> )



Title	Ø	Weight	PU Roll	Article No.
Stainless steel MIG welding wire AGR: 08.422	1.0 mm	15 kg	1	367565

## Gas welding wire O I

- EN 12536: O I; AWS A5.2: R 45

### Application Area

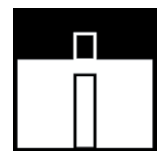
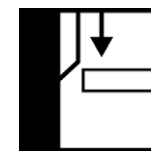
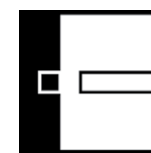
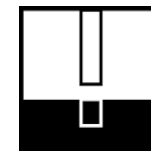
- Used for flame welding of all types of unalloyed steel machinery parts
- For body, exhaust and thin steel pipe welding

### Hints

- Neutral flame should be used

### Technical Data

Norms	EN 12536
Tensile Strength	340 - 440 N/mm <sup>2</sup>
Yield Strength	245 N/mm <sup>2</sup>
Elongation min.	14 %



Title	Ø	Length	Weight	PU Package	Article No.
Gas welding wire O I	2.0 mm	1000 mm	5 kg	1	367561
Gas welding wire O I	2.4 mm	1000 mm	5 kg	1	367562
Gas welding wire O I	3.2 mm	1000 mm	5 kg	1	367563

AGR: 08.422

## TIG Welding rod steel

- For universal usage
  - Perfect welding characteristics
- EN ISO 14341-A :G3 Si 1; AWS A5.18 :ER 70 S-6

### Application Area

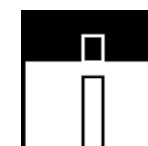
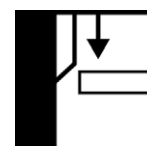
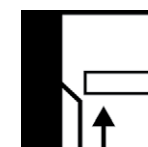
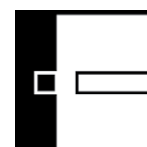
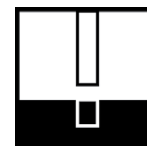
- Joint welding for low alloyed steel

### Hints

- TIG D.C.(-)

### Technical Data

Norms	EN ISO 14341-A
Tensile Strength	500 - 640 N/mm <sup>2</sup>
Yield Strength	420 N/mm <sup>2</sup>
Elongation min.	22 %
Gas	TIG: Ar (I1)



Title	Ø	Length	Weight	PU Package	Article No.
TIG Welding rod steel	2.4 mm	1000 mm	5 kg	1	367567

AGR: 08.422

## TIG Welding rod stainless steel

- Resistance to low temperatures varying at values down to -196°C
- EN ISO 14343-A: W Z 19 12 3 L; AWS A5.9: ER 316L

### Application Area

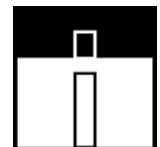
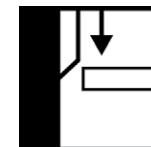
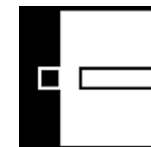
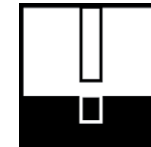
- Joint welding for stainless steel
- For TIG welding of 13% Cr ferritic stainless steel, high carbon or stabilized steels of type 316, low carbon stainless steels of type 316L, all of which is used in machinery and equipment parts at production plants for food, chemical, drug textile and similar kinds of industries

### Hints

- TIG D.C.(-)

### Technical Data

Norms	EN ISO 14343-A
Tensile Strength	570 - 700 N/mm <sup>2</sup>
Yield Strength	420 N/mm <sup>2</sup>
Elongation min.	35 %
Gas	TIG: Ar (I1)



Title	Ø	Length	Weight	PU Package	Article No.
TIG Welding rod Stainless Steel	2.4 mm	1000 mm	5 kg	1	367568

AGR: 08.422

## Soft Solder Rod Tin

### Application Area

- Tinning works in the vehicle body field and for plumber works
- Steel sheet

### Scope Of Delivery

- Bundle of 10 kg - approx 35 bars

### Technical Data

Norms DIN EN 29453



Title	Weight	Shape	Lead Ratio	Tin Ratio	Melting temperature	PU Bundle	Article No.
Soft Solder Rod Tin S-Pb74 Sn 25	10 kg	Rectangularly	74 %	25 %	183 - 220 °C	1	015784
Soft Solder Rod Tin S-Pb60 Sn 40	10 kg	Triangular	60 %	40 %	183 - 235 °C	1	136242

AGR: 08.416

## Soldering Tin – Radio Solder

- No need for separate soldering flux material

### Processing Information

- Not suitable for drinking water installations

### Technical Data

Norms DIN 1707, DIN EN 29454  
 Container Roll



Title	Ø	Weight	Lead Ratio	Tin Ratio	Melting temperature	PU Ring	Article No.
Radio Tin Solder	2 mm	250 g	60 %	40 %	183 - 235 °C	1	299030

AGR: 08.410

INTERNAL/Approved (2019-03-22 23:24:47)

## Solder Tin – Electronic Solder

- No need for separate soldering flux material

### Characteristics

- Pipe solder with flux filling

### Technical Data

Norms DIN EN 29454, DIN EN ISO 9453



Title	Ø	Weight	Lead Ratio	Tin Ratio	Melting temperature	PU Ring	Article No.
Electronic Solder Sn60Pb40	1.0 mm	250 g	40 %	60 %	183 - 190 °C	1	171435

AGR: 08.410

## Soldering wire - Sn97Ag3

### Application Area

- For cold and hot water installations, according to DVGW work-sheet GW 2 without flux control
- Soft soldering of copper pipes with copper-, red brass- and brass-fittings

### Hints

- Use with the appropriate fitting-soldering paste

### Technical Data

Norms	DIN EN 29453
Processable materials	Copper pipes



Title	Ø	Weight	Silver Ratio	Tin Ratio	Melting temperature	PU Piece	Article No.
Fitting Solder	2 mm	250 g	3 %	97 %	221 - 240 °C	1	104320
Fitting Solder	3 mm	250 g	3 %	97 %	221 - 240 °C	1	104321

AGR: 08.410

## Soldering Wire - Sn97Cu3

### Application Area

- Soft soldering of copper pipes in the cold and warm water installation according to DVGW Work-Sheet GW 2 (Solder) and GW 7 (Solder Paste)

### Characteristics

- 97% tin, 3% copper, according to DIN EN 29453, melting range 230 ° C - 250 ° C

### Technical Data

Norms	DIN EN 29453
Processable materials	Copper pipes



Title	Ø	Weight	Copper Ratio	Tin Ratio	Melting temperature	PU Piece	Article No.
Soldering Wire	2 mm	250 g	3 %	97 %	230 - 250 °C	1	104322
Soldering Wire	2.7 mm	250 g	3 %	97 %	230 - 250 °C	1	104323

AGR: 08.410



## Special Brass Hard Solder CU 306

### Application Area

- Crevice and joint soldering as well as applications in metal construction and the vehicle sector

### Characteristics

- According to EN 1044 and DIN 8513, flow agent covered according to EN 29454, type FH21

### Technical Data

Norms	EN 1044, DIN 8513
Copper Ratio	59 %
Zinc Ratio	39 %
Melting temperature	890 - 900 °C
Working Temperature	900 °C

Processable materials Cast steel, Cast iron, Nickle, Nickel alloy, Tin bronze, Aluminum bronze, Red bronze, galvanized steel, Malleable cast iron

Container Cardboard



14

Title	Ø	Shape	Length	Content	Weight	PU kg	Article No.
Special Brass Hard Solder Cu 306	2 mm	Round	500 mm	60 PC	1 kg	1	015768

AGR: 08.412

## Brazing Solder P5.9-6.5/CU

- Excellent flow properties due to a special manufacturing process
- Uniformly melting fo perfekt solder joints

### Application Area

- Ideal for capillary gap joints in the sanitary installation, heating installation and gas installation

### Characteristics

- Quality hard solder according to DIN 8513:
- Soldering of copper, red brass\*, brass\* and bronze\*
- Capillary active and sealing active



INTERNAL/Approved (2019-03-22 23:25:15)

## Hints

- Soldering of red bronze, brass and bronze just under use of brazing paste  
\*only with the help of soldering flux LP 5

## Technical Data

Norms	DIN 8513
Tin Ratio	94 %
Phosphor Ratio	6 %
Melting temperature	710 - 880 °C
Working Temperature	730 °C
Processable materials	Red bronze, Copper, Brass, Bronze

Title	Plumb height x width	Shape	Length	Weight	PU Piece	Article No.
Brazing Solder	2 x 2 mm	Square [1]	500 mm	1.025 kg	1	104327

AGR: 08.412

## Tin Fill Compound 0045 FAN

- Very light filler for the filling of big volumes

### Application Area

- For the reparation of car body parts, harmed by oxidation
- For the assembly of windscreen frames
- Processing of welding seams of the back wings, of the glazed sliding panel of the windscreen, etc.

### Characteristics

- Very hard and resistant thanks to the lamellar composition

### Processing Information

- The content of the tin has to be mixtured in a whole, in order to get at homogenous mixture
- The necessary amount of the product has to be mixed with about 2 % of a hardener
- The surfaces which need to be treated have to be clean, free from grease and other impurities



Title	PU Piece	Article No.
TIN-FILL COMPOUND 0045 FAN	1	887739

AGR: 04.690

## Fan Adhesive-Unit

- Adhesive bonding instead of welding at the outside of a body enables a stressfree, not deforming, low heat, waterproof, corrosion-free connection
- Two-component adhesive based on epoxy resin for repairment adhesion in body construction (instead of welding)

### Application Area

- For body repair according to the Fan adhesive method

### Characteristics

- Solvenfree, joint filling, not draining paste
- Suitable for steel, aluminium, GFRP
- Curing at room temperature or lightly increased temperature (140 °C)



Title	PU Piece	Article No.
0640 FAN ADH-UNIT AGR: 04.690	1	858715

## High Temperature Protective Cover - 500 - 700 °C

- High thermal capacity of 500 °C up to 700 °C

### Application Area

- For protection during welding work or grinding work
- Also usable as a heat protection curtain

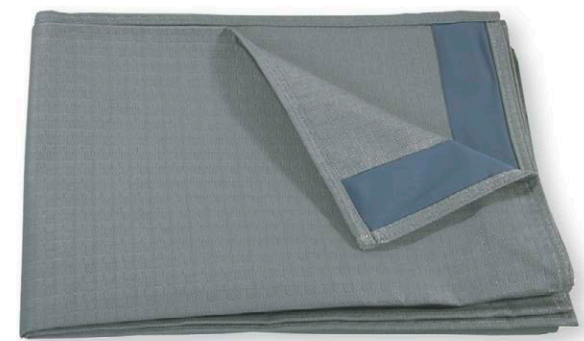
### Characteristics

- Asbestos-free, coated fibreglass fabric

### Technical Data

Material	Asbestos-free, coated fibre glass
----------	-----------------------------------

Title	Length in m x Width in m	Color	PU Piece	Article No.
SCREEN PROTECTION 2.00X1.00 M	2 x 1 m	Grey	1	929026
STANDARD PROT. 2.00X2.00 M	2 x 2 m	Grey	1	929018



## Gas Nozzle Pliers

- One plier with 3 functions

### Application Area

- Inert gas welding devices
- Fast and precise cutting of the welding wire
- Pulling off and cleaning the nozzle
- Untightening and tightening the current nozzle

### Characteristics

- With plastic grip



Title	PU Piece	Article No.
Gas Nozzle Pliers	1	258652

AGR: 08.401

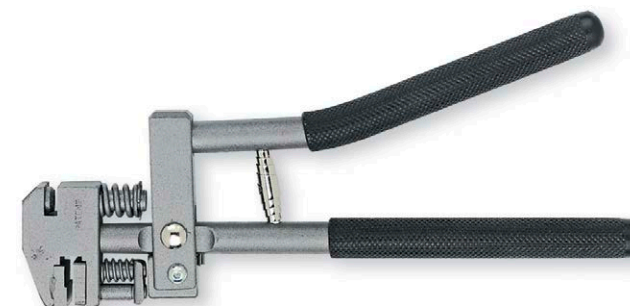
## Punch and Flange Tool

### Application Area

- For punching car body sheet, MIG/MAG-welding and bending sheet iron edges
- For iron sheets up to 1,0 mm

### Characteristics

- Rotatable tool head, for versatile usage, non-slip hand protection



Title	Ø hole	Length	Jaw Width	Casing Depth	PU Piece	Article No.
Punch and Flange Tool	5 mm	360 mm	22 mm	13 mm	1	258768

AGR: 03.209

## Safety lighter with rolling file

### Characteristics

- Strong ignition spark

### Technical Data

Weight 60 g

Title	PU Piece	Article No.
Safety Lighter AGR: 08.401	1	104318



## Fire stones set 5 pieces for safety lighter

### Characteristics

- Strong ignition spark

### Technical Data

Content 5 PC

Title	PU Piece	Article No.
Fire stones set for safety lighter AGR: 08.401	1	054984



## Soldering Torch Piezo

- With a high-performance burner
- Piezo-ignition
- Stable in wind
- Due to INTERCOLLER also for overhead operation after a short warming-up period
- Safety due to a centric cartridge clamp system for a das-tight sticking
- Impact-resistant, glas fibre reinforced housing
- Cartridge soldering system up to 1750°C

### Technical Data

Weight	750 g	
Title	PU Piece	Article No.
Soldering Torch" Piezo"	1	188068
AGR: 08.401		
Accessories Available	PU Amount	Article No.
Gas Cartridge C200 TSS	1	242872

## Gas Cartridge C200 TSS

### Characteristics

- Butan Gas tapping cartridge
- High-purity gas mixture with propane content

### Hints

- There is a new EU regulation that states that gas cartridges must be equipped with a security system, so when disconnecting from the device no gas can escape!

Title	Content	Weight	PU Piece	Article No.
Gas Cartridge C200 TSS	190 g	290 g	1	242872
AGR: 04.612				



## Replacement Mirror Steel

### Characteristics

- With flexible metal hose and ball joint
- Replacement mirror made from steel

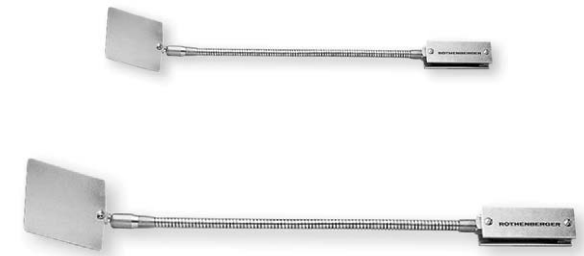
Title	Weight	PU Piece	Article No.
MAGNET-WELD.MIRROR 54.0855	450 g	1	148161
REPL.-MIRROR STEEL 54.0851	50 g	1	148160

AGR: 08.401

## Accessories soldering and welding technique

Title	PU Piece	Article No.
ELECTRODE 7MM F. PROTON E	1	887753

AGR: 08.403





## Soldering Wood Set

- Use at corners, edges, beadings and curves through differently formed soldering woods

### Application Area

- Spreading of float tin

### Characteristics

- Dried, steam threatened beech wood

### Scope Of Delivery

- 5 parts



14

Title	PU Piece	Article No.
Soldering Wood Set	1	053139

AGR: 08.401

## Tin Wood Oiled

### Characteristics

- Made from dried beech wood, broad spatulate shape

Title	PU Piece	Article No.
12173-1 TIN WOOD OILED	1	891095

AGR: 08.401



## Soldering Fluid 100 ml

### Application Area

- Fluxing agent for the soft soldering of iron, steel, brass, copper, lead and tinplate
- Suitable for joints in the Tiffany-area
- Remove flux residues!

### Technical Data

Norms DIN EN 29454, DIN 8511

Title	Content ml	PU Piece	Article No.
Soldering Fluid AGR: 04.611	100 ml	1	134319



## Fittings Soldering Paste

### Application Area

- Soft soldering of copper pipes in fresh water and central heating installations

### Characteristics

- With flux DIN EN 29454-1, 3.1.1.C, F-21 SW
- DVGW certification (GW7)

### Scope Of Delivery

- Includes plastic brush

### Technical Data

Norms	DIN EN 29453
Silver Ratio	3 %
Tin Ratio	97 %

Title	PU Piece	Article No.
Fittings Soldering Paste S-Sn97Ag3	1	104324

AGR: 04.611



## Fittings Soldering Paste

### Application Area

- Soft soldering of copper pipes in fresh water and central heating installations

### Characteristics

- With flux DIN EN 29454-1, 3.1.1.C, F-21 SW
- DVGW certification (GW7)

### Scope Of Delivery

- Includes plastic brush

### Technical Data

Norms	DIN EN 29453
Tin Ratio	97 %
Copper Ratio	3 %

Title	PU Piece	Article No.
Fittings Soldering Paste Sn97Cu3	1	104325

AGR: 04.611

## Solder Grease Can

### Application Area

- Fluxing agent for soft-soldering of general soldering operations
- Fluxing agent residues need to be removed

Title	PU Piece	Article No.
SOLDER GREASE CAN 100 LRG.	1	916509

AGR: 04.611



INTERNAL/Approved (2019-03-22 23:26:31)

## Liquid Flux Brush

### Application Area

- For applying liquid flux during tinning work

### Characteristics

- With a metal sleeve

### Hints

- Ideal for painting of soldering fluid, acids and oils



Title	Width	PU Piece	Article No.
Liquid Flux Brush	10 mm	1	245356
SOLDERING BRUSH 10MM 50PCS	10 mm	1	044537

AGR: 03.991

## Tinning Paste Lead Free

### Application Area

- Creation of a connection between the sheet and lead-free float tin
- Also be used in combination with leaded solder tin rods

### Characteristics

- Melting range 230 °C – 250 °C

### Scope Of Delivery

- With integrated brush

### Technical Data

Processable materials Sheet steel

Title	Container	Content	PU Can	Article No.
Tinning Paste Sn97Cu3	Can	1 Kg	1	033479

AGR: 04.611



## Magnet welded angle pole terminal

- Easy placing, positioning and handling during metalworking and processing
- Unique angle options with only one magnet welding angle
- Easy positioning due to a ON/OFF switch

### Application Area

- Positioning and handling in the metal working and processing

### Characteristics

- 45°/135°, 60°/120°, 75°/105°, 90° angle possible

### Technical Data

Dimension	89 x 44 x 95 mm
Weight	0.36 kg
Holding force	67 kg
Amperage	300 A

Title	PU Piece	Article No.
Magnet welded angle pole terminal	1	258736

AGR: 03.981



### Magnet welded angle switchable

- Easy placing, positioning and handling during metalworking and processing
- Unique angle options with only one magnet welding angle
- Easy positioning due to a ON/OFF switch

#### Application Area

- Positioning and handling in the metal working and processing

#### Characteristics

- 45°/135°, 90° angle possible

#### Technical Data

Dimension	150 x 35 x 130 mm
Weight	1.45 kg
Holding force	63 kg

Title	PU Piece	Article No.
Magnet welded angle switchable	1	251508

AGR: 03.981

### Magnet welded angle variable

- Easy placing, positioning and handling during metalworking and processing
- Unique angle options with only one magnet welding angle
- Easy positioning due to a ON/OFF switch
- Stepless choice of angle of 22-270°

#### Application Area

- Positioning and handling in the metal working and processing

#### Technical Data

Dimension	180 x 65 x 250 mm
Weight	1.72 kg
Holding force	90 kg

Title	PU Piece	Article No.
Magnet welded angle variable	1	258739

AGR: 03.981

