# Rutilic electrodes for common steels

- Electrode with rutile coating of medium thickness.
- Type easy to use, sliding and of great aesthetic.
- Arco sweet and quiet, splashing almost 'non-existent, slag that detach themselves. Ignition and re-ignition very easy.
- The features and the kind it can be used in any general work and any construction on average solicited.
- Indicated for works of small and medium carpentry, for structural steels, and for pressure tanks.

Posizioni saldatura:

Corrente: AC/DC -

| Approvazioni e Classificazioni | Composizione chimica % | Caratteristiche meccaniche |
|---|---|---|
| CE, EN 13479<br>SFA/AWS A5.1:<br>E6013,<br>EN ISO 2560-A,<br>E38 0 R 12 | C: 0,06 – Mn: 0,4 - P: 0,02<br>S: 0,01 – Cr: <0,1 - Ni: <0,1<br>Mo: <0,1 – Nb: 0,1 – Cu:<br><0,1<br>V: 0,01 | Rs: 360 N/mmq<br>Rm: 500 N/mmq<br>KV: 40 Joule a 0°C |

| Code | Desc. | D *mm* | L *mm* |
|---|---|---|---|
| 4020000300 | 513 | 2 | 250 |
| 4020000400 | 521 | 2.5 | 260 |
| 4020000500 | 539 | 3.25 | 360 |

# Rutile coated red for common steels

- Coating electrode with rutile medium thickness with the addition of Fe2 O2 that, in addition to the particular red coloration, gives a better performance to the electrode.
- Type easy to use, sliding and of great aesthetic.
- Arco sweet and quiet, splashing at unsustainably debris that fall off by themselves. Ignition and re-ignition very easy.
- The features and the kind it can be used in any general work and any construction on average solicited.
- Indicated for works of small and medium carpentry, for structural steels, and for pressure tanks.

Posizioni saldatura:

Corrente: AC/DC -

| CLASSIFICAZIONI | COMPOSIZIONE CHIMICA VALORI TIPICI % | CARATTERISTICHE MECCANICHE DEL DEPOSITO |
|---|---|---|
| | C: 0,07<br>Si: 0,4<br>Mn: 0.5 | Rs: 360 N/mmq<br>Rm: 500 N/mmq<br>δ5: 24%<br>KV: 40 J a 0°C |

| Code | Desc. | D *mm* | L *mm* |
|---|---|---|---|
| 4020002200 | 624 | 2.5 | 300 |

# Basic electrodes for mild steel


- Ellettrodo Basic coating of medium thickness.
- Low hydrogen, of consistently high quality, with excellent mechanical properties.
- Welding of responsibility and of the greatest importance mechanical, radiographic and sealing.
- Recommended in all cases of welding of structures with high-quality steels with lower carbon contents up to 0.30% and with impurities such as sulfur and phosphorus.
- It is used for shipbuilding, railway industries, vehicles, pressure pipes, tanks and high-pressure boilers, heavy carpentry, bridges, etc..
- Approval: RINA-ISPESL.

Posizioni saldatura:

Corrente: AC/DC -

| Approvazioni e Classificazioni | Composizione chimica % | Caratteristiche meccaniche |
|---|---|---|
| ABS: 3Y H5,<br>BV: 3YH5<br>CE: EN 13479<br>DNV: 4YH5<br>GL: 4YH5<br>LR: 3YH5<br>RINA: 4YH5<br>VdTÜV: 11813<br>SFA/AWS A5.1:<br>E7018-1<br>H4R: EN ISO 2560-A<br>E 42 4 B 32 H5 | C: 0,07<br>Si: 0,51<br>Mn: 1,16<br>P: 0,016<br>S: 0,006<br>Cr: 0,03<br>Ni: 0,02<br>Mo: <0,1<br>Nb: 0,01<br>Cu: <0,1<br>V: 0,02 | Rs: 500 N/mmq<br>Rm: 570 N/mmq<br>KV: 70 Joule |

| Code | Desc. | D *mm* | L *mm* |
|---|---|---|---|
| 4020000600 | 329 | 2.5 | 350 |
| 4020000700 | 337 | 3.25 | 450 |
| 4020007900 | 1902345 | 4 | 450 |

# Basic electrodes for hardfacing


- Basic electrode with excellent weldability in all positions.
- Excellent performance both in direct current (+ pole) and alternating current.
- Suitable for welding of steels tough, high sulfur or rusty. It presents a bead of good appearance.
- Designed for all maintenance and repair.
- It is used for shipbuilding, welding of boilers, pressure vessels as well as repairs of vehicle frames, machines and pipes for heating.

Posizioni saldatura:

Corrente: AC/DC -

| Approvazioni e Classificazioni | Composizione chimica % |
|---|---|
| EN 14700<br>E Z Fe 2 | Mn: 0,4<br>Mo: 0,5<br>C: 0,46<br>Si: 0,5<br>Cr: 6,0 |

| Code | Desc. | D *mm* | L *mm* |
|---|---|---|---|
| 4020003500 | 537 | 3.25 | 350 |

# Electrodes for welding stainless steel 308


- Rutile electrode giving a deposit of austenitic stainless steel type 19/9 with very low carbon content.
- Excellent operation both in direct current and in alternating current.
- Suitable for welding of stainless steels meet the following classifications: AISI 301, 302, 304, 304L, 308, 321, 347.

Posizioni saldatura:

Corrente: AC/DC -

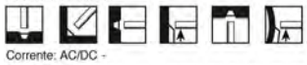
| Approvazioni e Classificazioni | Composizione chimica % | Caratteristiche meccaniche |
|---|---|---|
| EN ISO 3581-A: E 19 9 L R 12<br>SFA/AWS A5.4; E308L-17<br>CSA W48: E308L-17<br>Werkstoffnummer: 1.4316 | C: 0,03<br>Si: 0,84<br>Mn: 0,7<br>O: 0,02<br>S: 0,007<br>Cr: 19,5<br>Ni: 9,7<br>Mo: 0,04<br>Cu: 0,06<br>N: 0,08<br>FN WRC-92: 6,0 | Rs: 430 MPa<br>Rm: 580 MPa<br>KV: 70 Joul a +20°C |

| Code | Desc. | D *mm* | L *mm* |
|---|---|---|---|
| 4020000990 | 117 | 2 | 300 |
| 4020001000 | 125 | 2.5 | 300 |

# Electrodes for welding stainless steel 316


- Titanium electrode giving a deposit of austenitic stainless steel type 19/12 with a very low carbon content.
- Good operating characteristics both in direct current and in alternating current.
- Suitable for welding of stainless steels meet the following classifications: AISI 316, 316L, 202, (317).

Posizioni saldatura:



Corrente: AC/DC -

| Approvazioni e Classificazioni | Composizione chimica % | Caratteristiche meccaniche |
|---|---|---|
| EN ISO 3581-A: E 19 12 3 L R 12<br>SFA/AWS A5.4; E316L-17<br>CSA W48: E316L-17<br>Werkstoffnummer: 1.4430 | C: 0,03<br>Si: 0,73<br>Mn: 0,6<br>P: 0,021<br>S: 0,009<br>Cr: 18,8<br>Ni: 11,3<br>Mo: 2,7<br>Cu: 0,07<br>N: 0,14<br>FN WRC-92: 4 | Rs: 460 MPa<br>RS: 570 MPa<br>KV: 60 Joule a +20°C |

| Code | Desc. | D *mm* | L *mm* |
|---|---|---|---|
| 4020002400 | 216 | 2 | 300 |
| 4020002410 | 217 | 2.5 | 300 |

# Welding inverter electronic 140-160 A


- Electronic welding machines portable inverter technology for welding with coated electrodes. Suitable for welding of iron and stainless steel TIG with contact striking. Power single-phase current 220 Volts 50 Hz.
- Indicate for each type of processing, especially on construction sites thanks to their portability and light weight and low current consumption. Be powered by motor generators type stabilized adequate power.
- The version 1425M has a power supply circuit reinforced for use with motor-generators is not stabilized or in areas where there are significant power surges harmful to electronic machines Classic.
- Constructed entirely of painted steel frame, internal motherboard with forced cooling fan, frontal attacks DINSE 25 standards for the application of any type of cable of 16-25 sq mm.
- The machines are supplied in a cardboard box, without accessories. For cables is available our kit code 402 00 01350-11K or loose components for building customized. The availability of masks is large and varied models manual to automatic darkening.

| Code | Desc. | Model |
|---|---|---|
| 4020017090 | 1425 | Portable welding inverter 220 Volts 140 A |
| 4020017100 | 1625 | Portable welding inverter 220 Volts 160 A |
| 4020017110 | 1425M | Portable welding inverter 220 Volts 140 A "motor generator" |

| Caratteristiche Techiche | | |
|---|---|---|
| **Modello** | **1425 - 1425M** | **1625** |
| Alimentazione | 220 Volts – 50 Hz | 220 Volts – 50 Hz |
| Potenza | 2,5 kW | 3 kW |
| Corrente di saldatura | 10 – 140 A | 10 – 160 A |
| Fattore di servizio | 20% 60% 100%<br>130A 90A 70A | 20% 60% 100%<br>150A 105A 90A |
| Elettrodi utilizzabili | 1,6 – 3,2 mm | 1,6 – 4 mm |
| Norme di costruzione | EN60974-1 EN60974-10 | EN60974-1 EN60974-10 |
| Dimensioni | 135 X 290 X 230h mm | 135 X 290 X 230h mm |
| Peso | 4,5 Kg | 4,8 Kg |

# Cable kit for welding coated electrodes

- Cables for arc welding with coated electrodes.
- Content: clamp electrode holder with cable 3 m long, clamp with cable length of 2 m.
- Cables neoprene section of 25 mm2.

| Code | Desc. |
|---|---|
| 4020001350 | 11 K |

## Hammer for welders


- Hammer two-headed welder.
- For removing welding slag.
- Iron grip.

| Code | Desc. |
|---|---|
| 4430045642 | 602 |

## Copper cable for welders

- Unipolar wire copper coated neoprene extra flexible.
- Construction and marking according to current regulations.

| Code | Desc. | Sez. mmq | D. est. mm |
|---|---|---|---|
| 4020011950 | 12800 | 25 | 10 |
| 4020012000 | 12900 | 50 | 13 |
| 4020012100 | 13000 | 70 | 16 |

## Male connectors for welding


- Male connectors for connecting the cables to the welding.
- Available in three sizes for different cable sections.

| Code | Desc. | For sect. cables mmq | D *mm* |
|---|---|---|---|
| 4020001300 | 10-25 | 25 | 9 |
| 4020001310 | 10-50 | 50 | 13 |
| 4020001320 | 10-70 | 70 | 13 |

## Pliers electrode holder


- Pliers electrode holder completely isolated.
- Suitable for intensive use with excellent characteristics of fastening of the electrode.
- High impact resistance.
- Complies with CE EN 60974-11
- Insulation class: B.

| Code | Desc. | Weight *gr.* | For electrodes diam. Max. mm | A (35%) | Sezione max cavo mmq |
|---|---|---|---|---|---|
| 4020001050 | 300 | 315 | 4,0 | 250 | 35 |
| 4020001100 | 600 | 580 | 8,0 | 500 | 50 |

## Clamp for mass


- Clamp for mass pressed steel.
- Spring locking.
- Copper and brass contact strip of a copper connection.

| Code | Desc. |
|---|---|
| 4020001200 | 400 |

## Brass clamp for mass


- Earth clamp designed for use industrialie very intense.
- Made entirely of cast brass for maximum electrical and thermal conductivity.
- Securing the cable made by brass screws.

| Code | Desc. |
|---|---|
| 4020001250 | 400/BR |

## Tig welding torch

- Torch complete with cable and connection for the welding process "TIG" (Tungsten Inert Gas).
- Equipped with a valve for regulating the flow of the gas.
- Cable length of 4 m.
- To be used in conjunction with bottled gas "Argon" through pressure reducer type ns. art. 402 00 11,500 to 12,140.
- Supplied as standard for use with Ø1.6 electrodes, for use with electrodes ø2.4 provide pliers and calliper ns. Articles. 402 00 11750 to 12400, 11850 to 12600 00 402.

| Code | Desc. | Length *m* |
|---|---|---|
| 4020011300 | 12-TIG | 4 |

## Tungsten electrodes for TIG welding

- Tungsten electrodes for welding process "TIG".
- Models available: with 21% thorium specific for stainless and steel.
- Available in two diameters.

| Code | Desc. | Ø mm | Tipo elettrodo | Color |
|---|---|---|---|---|
| 4020011400 | 13 - 1.6/T | 1.6 | THORIATED | Red |
| 4020011410 | 13 - 2.4/T | 2.4 | THORIATED | Red |
| 4020011440 | 16 - 1.6 | 1.6 | PURE | Green |
| 4020011450 | 16 - 2.4 | 2.4 | PURE | Green |

## Ceramic gas diffuser for TIG torch


- Diffuser ceramic parts for our torch code 402 00 11300-12 / TIG.
- The hole diameter of the gas outlet 8 mm.

| Code | Desc. |
|---|---|
| 4020011650 | 12200 |

## Pliers holders for TIG torch

- Pliers holder turned brass for our torch cod. 402 00 11300-12 / TIG.
- Available for two diameters of electrode.

| Code | Desc. | Cutting capacity |
|---|---|---|
| 4020011700 | 12300 | 1.6 |
| 4020011750 | 12400 | 2.4 |

## Pliers for TIG torch

- Pliers turned brass for our torch cod. 402 00 11300-12 / TIG.
- Available for two diameters of electrode.

| Code | Desc. | Cutting capacity |
|---|---|---|
| 4020011800 | 12500 | 1.6 |
| 4020011850 | 12600 | 2.4 |

## Pens parts for TIG torches



- Pens long and short parts for TIG torch cod. 4020011300 and 4020014800.

| Code | Desc. | Length *mm* | Photo |
|---|---|---|---|
| 4020011310 | 12L | 100 | 2 |
| 4020011320 | 12C | 7 | 1 |

# Filler chopstick for TIG welding of aluminum

- Filler material in chopsticks for welding with TIG method of aluminum and its alloys.
- Available for aluminum-silicon alloys and aluminum-magnesium.

LEGHE ALLUMINIO-SILICIO

| CLASSIFICAZIONI | COMPOSIZIONE CHIMICA VALORI TIPICI % |
|---|---|
| AWS A5.10: ER 4013<br>DIN 1732<br>SG- Al Si 5<br>W n° 3.2245 | Fc 0.30<br>Si 5.00<br>Mg 0.05<br>Al 93.00 |

LEGHE ALLUMINIO-MAGNESIO

| CLASSIFICAZIONI | COMPOSIZIONE CHIMICA VALORI TIPICI % |
|---|---|
| AWS A5.10: ER 5356<br>DIN 1732<br>SG- Al Mg 5<br>W n° 3.3556 | Fc 0.30<br>Si 0.20<br>Mg 5.00<br>Al 93.00 |

| Code | Desc. | Dimensions *mm* | Alloy |
|---|---|---|---|
| 4020012200 | 13100 | 2.4x1000 | Al-Mg |
| 4020012210 | 13105 | 2.4x1000 | Al-Si |

# Filler chopstick for TIG welding of stainless steels

- Filler material in chopsticks for welding with TIG method of stainless steel AISI 308 and 316.
- Excellent resistance to chemical corrosion, low carbon content.

Acciaio AISI 308

| CLASSIFICAZIONI | COMPOSIZIONE CHIMICA VALORI TIPICI % | CARATTERISTICHE MECCANICHE DEL DEPOSITO |
|---|---|---|
| AWS A5.9: ER308L<br>DIN 8556 X2CrNi9-9 | C = 0.025<br>Si = 0.40<br>Mn = 1.80<br>Cr = 20.00<br>Ni = 10.00 | Rm = 530 N/mmq.<br>Rs = 400 N/mmq.<br>A(50) = 40%<br>KV = 130 J |

Acciaio AISI 316

| CLASSIFICAZIONI | COMPOSIZIONE CHIMICA VALORI TIPICI % | CARATTERISTICHE MECCANICHE DEL DEPOSITO |
|---|---|---|
| AWS A5.9: ER316L | C = 0.025<br>Si = 0.40<br>Mn = 1.60<br>Cr = 18.50<br>Ni = 12.50 | Rm = 530 N/mmq.<br>Rs = 390 N/mmq.<br>A(50) = 35%<br>KV = 130 J |

| Code | Desc. | Dimensione mm | AISI steel |
|---|---|---|---|
| 4020012850 | 13165 | 1,6x1000 | 308 |
| 4020012900 | 13170 | 2x1000 | 308 |
| 4020013000 | 13180 | 2x1000 | 316 |

# Filler chopstick for TIG welding of carbon steel

- Filler material into rods for TIG welding with carbon steel.
- Excellent mechanical properties and toughness.

| CLASSIFICAZIONI | COMPOSIZIONE CHIMICA VALORI TIPICI % | CARATTERISTICHE MECCANICHE DEL DEPOSITO |
|---|---|---|
| AWS A5.18 ER70S-3<br>DIN 8559WSG1 | C = 0.007<br>Si - 0.60<br>Mn = 1.20 | Rm = 520 N/mmq.<br>Rs = 420 N/mmq.<br>A(50) = 29%<br>Kv = 80J |

| Code | Desc. | Dimensions *mm* |
|---|---|---|
| 4020012800 | 13160 | 2x1000 |