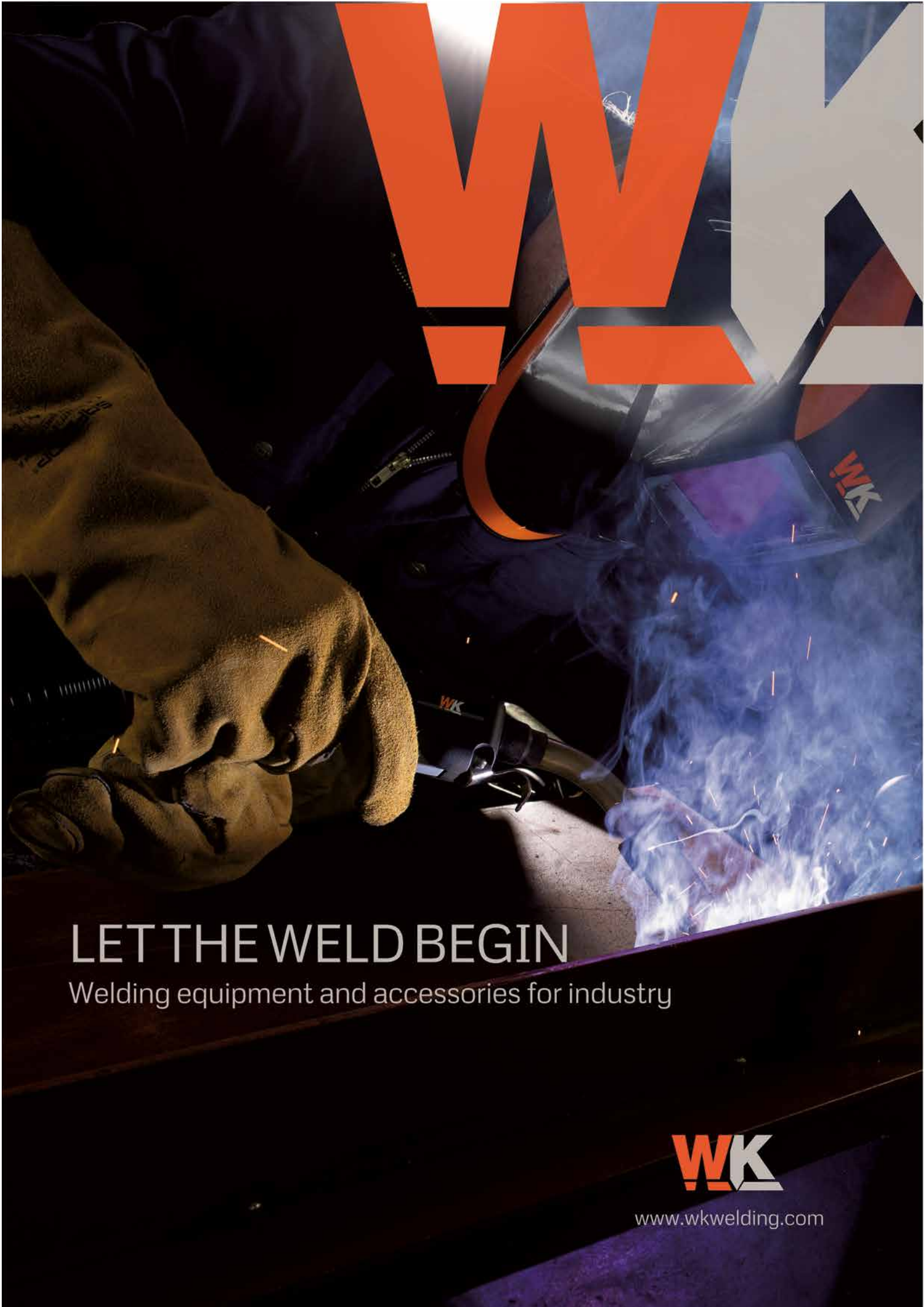



# LET THE WELD BEGIN

Welding equipment and accessories for industry

WK

www.wkwelding.com

# ÍNDEX




# About us

In constant communication with the **welding industry** and mainly with the end users of the WK has developed a full range of solutions that cover the main needs of their customers.Our goal is to listen to the industry so that we can understand the needs of welders and perfect our products **based on your experience.**

WK offers a full range of products, from **MMA welding** inverter to MIG MAG equipment with pulsed technology, as well as automated welding systems and all kinds of consumables and accessories of welding.

We want to create increasingly accurate and reliable teams based on the experience of the elderly experts in this field: **the welders.**

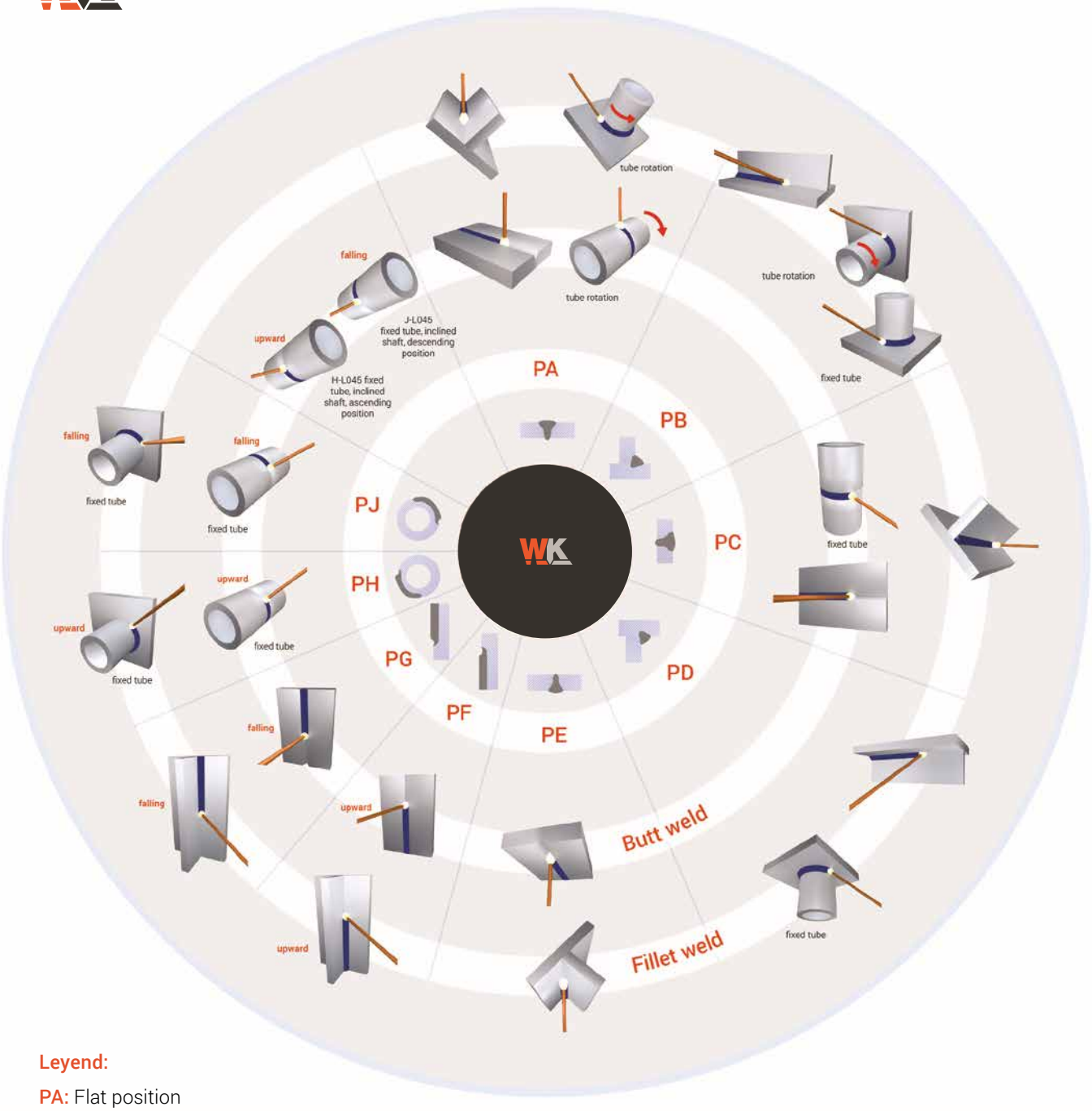
## LET THE WELD BEGIN

WK welding equipment is designed to provide easy handling to the welder while providing **excellent welding** quality thanks to its perfect regulation and arc concentration.

## DOMINATES THE STEEL

Having the right technology is the key to mastering and improving your production processes. WK puts state-of-the-art solutions to help you increase your productivity and ensure the quality of your their **welding processes.**

# WELDING POSITIONS ACCORDING TO DIN EN ISO 6947




**Leyend:**

**PA:** Flat position

**PB:** Angel position

**PC:** Transverse position

**PD:** Ledge position.

**PE:** Ceiling position / over head

**PF:** Upright vertical position.

**PG:** Vertical downward position.

**PH:** Upward welding position for tube.

**PJ:** Downward welding position for tube.

Depending on the welding task a different electrode positioning is recommende.

# ASTM CARBON STEEL TUBE

## ASME B36.10 welded and seamless pipe dimensions.

### Welded pipe / seamless

Dimensions according: ASME B36.10

Steel grades according to: ASTM A 106 Gr.B / API 5L Gr.B ISO 3183

Weight (kg/m)

| Nominal Diameter [Pulg.] | External Diameter [ mm.] | 5 | 10 | 20 | 30 | STD | 40 | 60 | XS | 80 | 100 | 120 | 140 | 160 | XXS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1/8" | 10,3 | | 1,24 | | 1,45 | 1,73 | 1,73 | | 2,41 | 2,41 | | | | | |
| | | | 0,28 | | 0,32 | 0,37 | 0,37 | | 0,47 | 0,47 | | | | | |
| 1/4" | 13,7 | | 1,65 | | 1,85 | 2,24 | 2,24 | | 3,02 | 3,02 | | | | | |
| | | | 0,49 | | 0,54 | 0,63 | 0,63 | | 0,80 | 0,80 | | | | | |
| 3/8" | 17,1 | | 1,65 | | 1,85 | 2,31 | 2,31 | | 3,20 | 3,20 | | | | | |
| | | | 0,63 | | 0,70 | 0,84 | 0,84 | | 1,10 | 1,10 | | | | | |
| 1/2" | 21,3 | 1,65 | 2,11 | | 2,41 | 2,77 | 2,77 | | 3,73 | 3,73 | | | | 4,78 | 7,47 |
| | | 0,80 | 1,00 | | 1,12 | 1,27 | 1,27 | | 1,62 | 1,62 | | | | 1,95 | 2,55 |
| 3/4" | 26,7 | 1,65 | 2,11 | | 2,41 | 2,87 | 2,87 | | 3,91 | 3,91 | | | | 5,56 | 7,82 |
| | | 1,03 | 1,28 | | 1,44 | 1,69 | 1,69 | | 2,20 | 2,20 | | | | 2,90 | 3,64 |
| 1" | 33,4 | 1,65 | 2,77 | | 2,90 | 3,38 | 3,38 | | 4,55 | 4,55 | | | | 6,35 | 9,09 |
| | | 1,29 | 2,09 | | 2,18 | 2,50 | 2,50 | | 3,24 | 3,24 | | | | 4,24 | 5,45 |
| 1 1/4" | 42,2 | 1,65 | 2,77 | | 2,97 | 3,56 | 3,56 | | 4,85 | 4,85 | | | | 6,35 | 9,70 |
| | | 1,65 | 2,69 | | 2,87 | 3,39 | 3,39 | | 4,47 | 4,47 | | | | 5,61 | 7,77 |
| 1 1/2" | 48,3 | 1,65 | 2,77 | | 3,18 | 3,68 | 3,68 | | 5,08 | 5,08 | | | | 7,14 | 10,15 |
| | | 1,90 | 3,11 | | 3,53 | 4,05 | 4,05 | | 5,41 | 5,41 | | | | 7,25 | 9,55 |
| 2" | 60,3 | 1,65 | 2,77 | | 3,18 | 3,91 | 3,91 | | 5,54 | 5,54 | | | | 8,74 | 11,07 |
| | | 2,39 | 3,93 | | 4,48 | 5,44 | 5,44 | | 7,48 | 7,48 | | | | 11,11 | 13,44 |
| 2 1/2" | 73,0 | 2,11 | 3,05 | | 4,78 | 5,16 | 5,16 | | 7,01 | 7,01 | | | | 9,53 | 14,02 |
| | | 3,69 | 5,26 | | 8,04 | 8,63 | 8,63 | | 11,41 | 11,41 | | | | 14,92 | 20,39 |
| 3" | 88,9 | 2,11 | 3,05 | | 4,78 | 5,49 | 5,49 | | 7,62 | 7,62 | | | | 11,13 | 15,24 |
| | | 4,52 | 6,46 | | 9,92 | 11,29 | 11,29 | | 15,27 | 15,27 | | | | 21,35 | 27,68 |
| 3 1/2" | 101,6 | 2,11 | 3,05 | | 4,78 | 5,74 | 5,74 | | 8,08 | 8,08 | | | | | |
| | | 5,18 | 7,41 | | 11,41 | 13,57 | 13,57 | | 18,64 | 18,64 | | | | | |
| 4" | 114,3 | 2,11 | 3,05 | | 4,78 | 6,02 | 6,02 | | 8,56 | 8,56 | | 11,13 | | 13,49 | |
| | | 5,84 | 8,37 | | 12,91 | 16,08 | 16,08 | | 22,32 | 22,32 | | 28,32 | | 33,54 | |
| 5" | 141,3 | 2,77 | 3,40 | | | 6,55 | 6,55 | | 9,53 | 9,53 | | 12,70 | | 15,88 | 19,05 |
| | | 9,46 | 11,56 | | | 21,77 | 21,77 | | 30,97 | 30,97 | | 40,28 | | 49,12 | 57,43 |
| 6" | 168,3 | 2,77 | 3,40 | | | 7,11 | 7,11 | | 10,97 | 10,97 | | 14,27 | | 18,26 | 21,95 |
| | | 11,31 | 13,83 | | | 28,26 | 28,26 | | 42,56 | 42,56 | | 54,21 | | 67,57 | 79,22 |
| 8" | 219,1 | 2,77 | 3,76 | 6,35 | 7,04 | 8,18 | 8,18 | 10,31 | 12,70 | 12,70 | 15,09 | 18,26 | 20,62 | 23,01 | 22,23 |
| | | 14,78 | 19,97 | 33,32 | 36,82 | 42,55 | 42,55 | 53,09 | 64,64 | 64,64 | 75,92 | 90,44 | 100,93 | 111,27 | 107,93 |
| 10" | 273,0 | 3,40 | 4,19 | 6,35 | 7,80 | 9,27 | 9,27 | 12,70 | 12,70 | 15,09 | 18,26 | 21,44 | 25,40 | 28,58 | 25,40 |
| | | 22,61 | 27,78 | 41,76 | 51,01 | 60,29 | 60,29 | 81,53 | 81,53 | 95,98 | 114,71 | 133,01 | 155,10 | 172,27 | 155,1 |
| 12" | 323,8 | 3,96 | 4,57 | 6,35 | 8,38 | 9,53 | 10,31 | 14,27 | 12,70 | 17,48 | 21,44 | 25,40 | 28,58 | 33,32 | 25,40 |
| | | 31,24 | 35,98 | 49,71 | 65,19 | 73,86 | 79,71 | 108,93 | 97,44 | 132,05 | 159,87 | 186,92 | 208,08 | 238,69 | 186,92 |
| 14" | 355,6 | 3,96 | 6,35 | 7,92 | 9,53 | 9,53 | 11,13 | 15,09 | 12,70 | 19,05 | 23,83 | 27,79 | 31,75 | 35,71 | |
| | | 34,34 | 54,69 | 67,91 | 81,33 | 81,33 | 94,55 | 126,72 | 107,40 | 158,11 | 194,98 | 224,66 | 253,85 | 281,72 | |
| 16" | 406,4 | 4,19 | 6,35 | 7,92 | 9,53 | 9,53 | 12,70 | 16,66 | 12,70 | 21,44 | 26,19 | 30,96 | 36,53 | 40,49 | |
| | | 41,56 | 62,65 | 77,83 | 93,27 | 93,27 | 123,31 | 160,13 | 123,31 | 203,54 | 245,57 | 286,66 | 333,21 | 365,38 | |
| 18" | 457 | 4,19 | 6,35 | 7,92 | 11,13 | 9,53 | 14,27 | 19,05 | 12,70 | 23,83 | 29,36 | 34,93 | 39,67 | 45,24 | |
| | | 46,79 | 70,57 | 87,71 | 122,38 | 105,17 | 155,81 | 205,75 | 139,16 | 254,57 | 309,64 | 363,58 | 408,28 | 459,39 | |
| 20" | 508 | 4,78 | 6,35 | 9,53 | 12,70 | 9,53 | 15,09 | 20,62 | 12,70 | 26,19 | 32,54 | 38,10 | 44,45 | 50,01 | |
| | | 59,32 | 78,56 | 117,15 | 155,13 | 117,15 | 183,43 | 247,84 | 155,13 | 311,19 | 381,55 | 441,52 | 508,15 | 564,85 | |
| 22" | 559 | 4,78 | 6,35 | 9,53 | 12,70 | 9,53 | | 22,23 | 12,70 | 28,58 | 34,93 | 41,28 | 47,63 | 53,98 | |
| | | 65,33 | 86,55 | 129,14 | 171,10 | 129,14 | | 294,27 | 171,10 | 373,85 | 451,45 | 527,05 | 600,67 | 672,30 | |
| 24" | 610 | 5,54 | 6,35 | 9,53 | 14,27 | 9,53 | 17,48 | 24,61 | 12,70 | 30,96 | 38,89 | 46,02 | 52,37 | 59,54 | |
| | | 82,58 | 94,53 | 141,12 | 209,65 | 141,12 | 255,43 | 355,28 | 187,07 | 442,11 | 547,74 | 640,07 | 720,19 | 808,27 | |
| 26" | 660 | | 7,92 | 12,70 | | 9,53 | | | 12,70 | | | | | | |
| | | | 127,36 | 202,74 | | 152,88 | | | 202,74 | | | | | | |
| 28" | 711 | | 7,92 | 12,70 | 15,88 | 9,53 | | | 12,70 | | | | | | |
| | | | 137,32 | 218,71 | 272,23 | 164,86 | | | 218,71 | | | | | | |
| 30" | 762 | 6,35 | 7,92 | 12,70 | 15,88 | 9,53 | | | 12,70 | | | | | | |
| | | 118,34 | 147,29 | 234,67 | 292,20 | 176,85 | | | 234,68 | | | | | | |
| 32" | 813 | | 7,92 | 12,70 | 15,88 | 9,53 | 17,48 | | 12,70 | | | | | | |
| | | | 157,25 | 250,65 | 312,17 | 188,83 | 342,94 | | 250,65 | | | | | | |
| 34" | 864 | | 7,92 | 12,70 | 15,88 | 9,53 | 17,48 | | 12,70 | | | | | | |
| | | | 167,21 | 266,61 | 332,14 | 200,82 | 364,92 | | 266,63 | | | | | | |
| 36" | 914 | | 7,92 | 12,70 | 15,88 | 9,53 | 19,05 | | 12,70 | | | | | | |
| | | | 176,97 | 282,29 | 351,73 | 212,57 | 420,45 | | 282,29 | | | | | | |

# STEELS FOR SHIPBUILDING

## Equivalences and norms

| | ABS | BV | DNV-GL | RINA | LR | NKK |
|---|---|---|---|---|---|---|
| Naval A | AB/A | BV-A | VL-A | Grade A | LR-A | KA |
| Naval B | AB/B | BV-B | VL-B | Grade B | LR-B | KB |
| Naval D | AB/D | BV-D | VL-D | Grade D | LR-D | KD |
| Naval E | AB/E | BV-E | VL-E | Grade E | LR-E | KE |
| AH-27 AM FCE | - | - | - | - | LR-AH27S | - |
| DH-27 AM FCE | - | - | - | - | LR-DH27S | - |
| EH-27 AM FCE | - | - | - | - | LR-EH27S | - |
| AH-32 AM FCE | AB/AH32 | BV-AH32 | VL-A32 | AH32 | LR-AH32 | KA32 |
| DH-32 AM FCE | AB/DH32 | BV-DH32 | VL-D32 | DH32 | LR-DH32 | KD32 |
| EH-32 AM FCE | AB/EH32 | BV-EH32 | VL-E32 | EH32 | LR-EH32 | KE32 |
| FH-32 AM FCE | AB/FH32 | BV-FH32 | VL-F32 | - | LR-FH32 | - |
| AH-36 AM FCE | AB/AH36 | BV-AH36 | VL-A36 | AH36 | LR-AH36 | KA36 |
| DH-36 AM FCE | AB/DH36 | BV-DH36 | VL-D36 | DH36 | LR-DH36 | KD36 |
| EH-36 AM FCE | AB/EH36 | BV-EH36 | VL-E36 | EH36 | LR-EH36 | KE36 |
| FH-36 AM FCE | AB/FH36 | BV-FH36 | VL-F36 | - | LR-FH36 | - |
| AH-40 AM FCE | AB/AH40 | BV-AH40 | VL-A40 | - | LR-AH40 | - |
| DH-40 AM FCE | AB/DH40 | BV-DH40 | VL-D40 | - | LR-DH40 | - |
| EH-40 AM FCE | AB/EH40 | BV-EH40 | VL-E40 | - | LR-EH40 | - |
| FH-40 AM FCE | AB/FH40 | BV-FH40 | VL-F40 | - | LR-FH40 | - |

# STEELS FOR SHIPBUILDING

## Mechanical characteristics

| | Sense | Thinckness (mm) | $R_e$ (MPa) | $R_m$ (MPa) | A 5,65$\sqrt{S_o}$ (%) | KV 0°C (J) | KV -20°C (J) | KV -40°C (J) | KV -60°C (J) |
|---|---|---|---|---|---|---|---|---|---|
| Naval A | T | 5 - 100 | ≥ 235 | 400 - 520 | ≥ 22 | - | - | - | - |
| Naval B | L | 5 - 50 | - | - | - | ≥ 27 | - | - | - |
| | | 50 - 70 | | | | ≥ 34 | | | |
| | | 70 - 100 | | | | ≥ 41 | | | |
| | T | 5 - 50 | ≥ 235 | 400 - 520 | ≥ 22 | ≥ 20 | - | - | - |
| | | 50 - 70 | | | | ≥ 24 | | | |
| | | 70 - 100 | | | | ≥ 27 | | | |
| Naval D | L | 5 - 50 | - | - | - | - | ≥ 27 | - | - |
| | | 50 - 70 | | | | | ≥ 34 | | |
| | | 70 - 100 | | | | | ≥ 41 | | |
| | T | 5 - 50 | ≥ 235 | 400 - 520 | ≥ 22 | - | ≥ 20 | - | - |
| | | 50 - 70 | | | | | ≥ 24 | | |
| | | 70 - 100 | | | | | ≥ 27 | | |
| Naval E | L | 5 - 50 | - | - | - | - | - | ≥ 27 | - |
| | | 50 - 70 | | | | | | ≥ 34 | |
| | | 70 - 100 | | | | | | ≥ 41 | |
| | T | 5 - 50 | ≥ 235 | 400 - 520 | ≥ 22 | - | - | ≥ 20 | - |
| | | 50 - 70 | | | | | | ≥ 24 | |
| | | 70 - 100 | | | | | | ≥ 27 | |
| AH-27 AM FCE | L | 5 - 50 | - | - | - | ≥ 27 | - | - | - |
| | | 50 - 70 | | | | ≥ 34 | | | |
| | | 70 - 100 | | | | ≥ 41 | | | |
| | T | 5 - 50 | ≥ 265 | 400 - 530 | ≥ 22 | ≥ 20 | - | - | - |
| | | 50 - 70 | | | | ≥ 24 | | | |
| | | 70 - 100 | | | | ≥ 27 | | | |
| DH-27 AM FCE | L | 5 - 50 | - | - | - | - | ≥ 27 | - | - |
| | | 50 - 70 | | | | | ≥ 34 | | |
| | | 70 - 100 | | | | | ≥ 41 | | |
| | T | 5 - 50 | ≥ 265 | 400 - 530 | ≥ 22 | - | ≥ 20 | - | - |
| | | 50 - 70 | | | | | ≥ 24 | | |
| | | 70 - 100 | | | | | ≥ 27 | | |
| DH-36 AM FCE | L | 5 - 50 | - | - | - | - | ≥ 34 | - | - |
| | | 50 - 70 | | | | | ≥ 41 | | |
| | | 70 - 100 | | | | | ≥ 50 | | |
| | T | 5 - 50 | ≥ 355 | 490 - 630 | ≥ 21 | - | ≥ 24 | - | - |
| | | 50 - 70 | | | | | ≥ 27 | | |
| | | 70 - 100 | | | | | ≥ 34 | | |

# STEELS FOR SHIPBUILDING

| | Sense | Thinckness (mm) | $R_e$ (MPa) | $R_m$ (MPa) | A 5,65√$S_o$ (%) | KV 0°C (J) | KV -20°C (J) | KV -40°C (J) | KV -60°C (J) |
|---|---|---|---|---|---|---|---|---|---|
| EH-36 AM FCE | L | 5 - 50 | - | - | - | - | - | ≥ 34 | - |
| | | 50 - 70 | | | | | | ≥ 41 | |
| | | 70 - 100 | | | | | | ≥ 50 | |
| | T | 5 - 50 | ≥ 355 | 490 - 630 | ≥ 21 | - | - | ≥ 24 | - |
| | | 50 - 70 | | | | | | ≥ 27 | |
| | | 70 - 100 | | | | | | ≥ 34 | |
| FH-36 AM FCE | L | 5 - 50 | - | - | - | - | - | - | ≥ 34 |
| | | 50 - 70 | | | | | | | ≥ 41 |
| | | 70 - 100 | | | | | | | ≥ 50 |
| | T | 5 - 50 | ≥ 355 | 490 - 630 | ≥ 21 | - | - | - | ≥ 24 |
| | | 50 - 70 | | | | | | | ≥ 27 |
| | | 70 - 100 | | | | | | | ≥ 34 |
| AH-40 AM FCE | L | 5 - 50 | - | - | - | ≥ 39 | - | - | - |
| | | 50 - 70 | | | | ≥ 46 | | | |
| | | 70 - 100 | | | | ≥ 55 | | | |
| | T | 5 - 50 | ≥ 390 | 510 - 650 | ≥ 20 | ≥ 26 | - | - | - |
| | | 50 - 70 | | | | ≥ 31 | | | |
| | | 70 - 100 | | | | ≥ 37 | | | |
| DH-40 AM FCE | L | 5 - 50 | - | - | - | - | ≥ 39 | - | - |
| | | 50 - 70 | | | | | ≥ 46 | | |
| | | 70 - 100 | | | | | ≥ 55 | | |
| | T | 5 - 50 | ≥ 390 | 510 - 650 | ≥ 20 | - | ≥ 26 | - | - |
| | | 50 - 70 | | | | | ≥ 31 | | |
| | | 70 - 100 | | | | | ≥ 37 | | |
| EH-40 AM FCE | L | 5 - 50 | - | - | - | - | - | ≥ 39 | - |
| | | 50 - 70 | | | | | | ≥ 46 | |
| | | 70 - 100 | | | | | | ≥ 55 | |
| | T | 5 - 50 | ≥ 390 | 510 - 650 | ≥ 20 | - | - | ≥ 26 | - |
| | | 50 - 70 | | | | | | ≥ 31 | |
| | | 70 - 100 | | | | | | ≥ 37 | |
| FH-40 AM FCE | L | 5 - 50 | - | - | - | - | - | - | ≥ 39 |
| | | 50 - 70 | | | | | | | ≥ 46 |
| | | 70 - 100 | | | | | | | ≥ 55 |
| | T | 5 - 50 | ≥ 390 | 510 - 650 | ≥ 20 | - | - | - | ≥ 26 |
| | | 50 - 70 | | | | | | | ≥ 31 |
| | | 70 - 100 | | | | | | | ≥ 37 |

# STEELS FOR SHIPBUILDING

| | Sense | Thinckness (mm) | $R_e$ (MPa) | $R_m$ (MPa) | A 5,65√$S_o$ (%) | KV 0°C (J) | KV -20°C (J) | KV -40°C (J) | KV -60°C (J) |
|---|---|---|---|---|---|---|---|---|---|
| EH-27 AM FCE | L | 5 - 50 | - | - | - | - | - | ≥ 27 | - |
| | | 50 - 70 | | | | | | ≥ 34 | |
| | | 70 - 100 | | | | | | ≥ 41 | |
| | T | 5 - 50 | ≥ 265 | 400 - 530 | ≥ 22 | - | - | ≥ 20 | - |
| | | 50 - 70 | | | | | | ≥ 24 | |
| | | 70 - 100 | | | | | | ≥ 27 | |
| AH-32 AM FCE | L | 5 - 50 | - | - | - | ≥ 31 | - | - | - |
| | | 50 - 70 | | | | ≥ 38 | | | |
| | | 70 - 100 | | | | ≥ 46 | | | |
| | T | 5 - 50 | ≥ 315 | 440 - 570 | ≥ 22 | ≥ 22 | - | - | - |
| | | 50 - 70 | | | | ≥ 26 | | | |
| | | 70 - 100 | | | | ≥ 31 | | | |
| DH-32 AM FCE | L | 5 - 50 | - | - | - | - | ≥ 31 | - | - |
| | | 50 - 70 | | | | | ≥ 38 | | |
| | | 70 - 100 | | | | | ≥ 46 | | |
| | T | 5 - 50 | ≥ 315 | 440 - 570 | ≥ 22 | - | ≥ 22 | - | - |
| | | 50 - 70 | | | | | ≥ 26 | | |
| | | 70 - 100 | | | | | ≥ 31 | | |
| EH-32 AM FCE | L | 5 - 50 | - | - | - | - | - | ≥ 31 | - |
| | | 50 - 70 | | | | | | ≥ 38 | |
| | | 70 - 100 | | | | | | ≥ 46 | |
| | T | 5 - 50 | ≥ 315 | 440 - 570 | ≥ 22 | - | - | ≥ 22 | - |
| | | 50 - 70 | | | | | | ≥ 26 | |
| | | 70 - 100 | | | | | | ≥ 31 | |
| FH-32 AM FCE | L | 5 - 50 | - | - | - | - | - | - | ≥ 31 |
| | | 50 - 70 | | | | | | | ≥ 38 |
| | | 70 - 100 | | | | | | | ≥ 46 |
| | T | 5 - 50 | ≥ 315 | 440 - 570 | ≥ 22 | - | - | - | ≥ 22 |
| | | 50 - 70 | | | | | | | ≥ 26 |
| | | 70 - 100 | | | | | | | ≥ 31 |
| AH-36 AM FCE | L | 5 - 50 | - | - | - | ≥ 34 | - | - | - |
| | | 50 - 70 | | | | ≥ 41 | | | |
| | | 70 - 100 | | | | ≥ 50 | | | |
| | T | 5 - 50 | ≥ 355 | 490 - 630 | ≥ 21 | ≥ 24 | - | - | - |
| | | 50 - 70 | | | | ≥ 27 | | | |
| | | 70 - 100 | | | | ≥ 34 | | | |

# STEELS FOR SHIPBUILDING

## Chemical compositions

| | C (%) | Mn (%) | P (%) | S (%) | Si (%) | Al (%) | Cu (%) | Cr (%) | Ni (%) | Mo (%) | $C_{eq}$ (%) | $N_2$ (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Naval A | ≤ 0,21 | ≥ 2,5*Cmin | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | - | ≤ 0,30 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | - | - |
| Naval B | ≤ 0,21 | ≥ 0,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,35 | - | ≤ 0,30 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | - | - |
| Naval D | ≤ 0,21 | ≥ 0,60 | ≤ 0,035 | ≤ 0,035 | 0,10 - 0,35 | ≥ 0,020 | ≤ 0,30 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | - | - |
| Naval E | ≤ 0,18 | ≥ 0,70 | ≤ 0,035 | ≤ 0,035 | 0,10 - 0,35 | ≥ 0,020 | ≤ 0,30 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | - | - |
| AH-27 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,36 | ≤ 0,012 |
| DH-27 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,36 | ≤ 0,012 |
| EH-27 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,36 | ≤ 0,012 |
| AH-32 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,36 | ≤ 0,012 |
| DH-32 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,36 | ≤ 0,012 |
| EH-32 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,36 | ≤ 0,012 |
| FH-32 AM FCE | ≤ 0,16 | 0,9 - 1,60 | ≤ 0,025 | ≤ 0,025 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,36 | ≤ 0,012 |
| AH-36 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,38 | ≤ 0,012 |
| DH-36 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,38 | ≤ 0,012 |
| EH-36 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,38 | ≤ 0,012 |
| FH-36 AM FCE | ≤ 0,16 | 0,9 - 1,60 | ≤ 0,025 | ≤ 0,025 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,38 | ≤ 0,012 |
| AH-40 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,40 | ≤ 0,012 |
| DH-40 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,40 | ≤ 0,012 |
| EH-40 AM FCE | ≤ 0,18 | 0,9 - 1,60 | ≤ 0,035 | ≤ 0,035 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,40 | ≤ 0,012 |
| FH-40 AM FCE | ≤ 0,16 | 0,9 - 1,60 | ≤ 0,025 | ≤ 0,025 | ≤ 0,50 | ≥ 0,020 | ≤ 0,35 | ≤ 0,20 | ≤ 0,40 | ≤ 0,08 | ≤ 0,40 | ≤ 0,012 |

In the case of A / B / D / E grades, the carbon + 1/6 of the manganese content must not exceed 0.40%. The steel must contain aluminum, niobium, vanadium or other elements that generate an adequate grain refinement, either individually or incombination with other elements. When used individually, the content of the grain refining element present in steel it must be the specified minimum (0.02% ≤ Nb ≤ 0.05%, 0.05% ≤ V ≤ 0.10%, Ti ≤ 0.02%). When used in combination with other elements, does not apply the minimum content specified for each element.

Nb + Ti + V ≤ 0,12%

In the case of * H quality, the Ceq requirements only apply to TM lamination conditions and to thicknesses <50 mm.

# Symbology

| | | | |
|---|---|---|---|
| Posibility of remote control on torch | Hight frecuency | AC/DC technology | IGBT technology |
| Three-phase | Use with current generator | Synergistic | Power correction factor |
| High duty cycle | Up/down | Single phase | Push-pull torch |
| Wifi remote control | MCU control system | Voltage reduction device | ⌀ 300 mm (20kg) |
| Voltage spike protection | Phase loss protection | Wifi pedal control possibility | Pulse |
| Nº Regulations | Thermostat | Preset on emote control | Measuring instruments |
| Forced cooling | "Lift Arc" activation | Generator on wheels | Mains voltage compensation |

# Welding Equipment
# MMA

# MMA 180A WELDING EQUIPMENT


## SWK 180

**Welding Equipment**
**MMA**

SWK series equipment is specially designed for electrode welding.
Lightweight and capable of contact Tig welding, they are also prepared to work with generators avoiding possible failures due to voltage peaks.
They have functions like ARC Force, Anti-Sticking and Hot Start and are equipped with voltage, current sensors and temperature for self-protection.
The SWK series offers the welder perfect regulation of welding parameters and allows you to work smoothly comfortably and safely thanks to the reduced weight of the equipment.

## Main features

Tig mode
Tig Lift mode welding capability

Additional functions
Incorporates Hot Start, Anti-sticking and Arc Force function

Protection
Equipped with temperature sensors, protection for loss of phase, voltage and current for a high self-protection of the equipment

Digital screen
Weight

Lightweight and versatile equipment
Use with current generator

Designed to absorb voltage spikes and work safely on generator power

## Technical data

| | |
|---|---|
| • Model | SWK 180 |
| • Power supply voltage (V) | 160~275 |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 6.0 |
| • Nominal input current (A) | 40 |
| • Duty cycle (40°C 10Min) 25% 180A / 60% 130A/ 100% 80A | |
| • Vacuum voltage (V) | 63 |
| • Welding voltage range (V) | 10~180 |
| • Power factor | 0.65 |

| | |
|---|---|
| • Efficiency | ≥80% |
| • Net Weight (Kg) | 3.8 |
| • Dimensions (mm) | 296x132x260 |
| • Electrode type (mm) | Φ1.6~Φ5.0 |
| • Insulation class | 6013,7018 etc. |
| • Protection class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# MMA SWK 200A WELDING EQUIPMENT

## SWK 200

**Welding equipment**
**MMA**

SWK series equipment is specially designed for electrode welding. They are teams very lightweight and capable of contact Tig welding,they are also designed to work with generators avoiding possible failures due to voltage peaks.

They have functions such as ARC Force, Anti-Sticking and Hot Start and are equipped with voltage, current andtemperature for the self-protection of the equipment.

The SWK series offers the welder perfect regulation of welding parameters and allows you to work seamlessly comfortable and safe thanks to the reduced weight of the equipment.

## Main features

Tig mode
Lift Tig welding capability .

Additional functions
Incorporates Hot Start, Anti-Sticking and Arc Force function.

Protections
Equipped with temperature sensors, phase, voltage and current loss protection for high self-protection of the equipment.

Digital screen
Control of amperage and voltage simultaneously by digital panel.

Weight
Lightweight and versatile equipment.

Use with current generator
Designed to absorb voltage spikes and work safely on generator power.

## Technical data

| | |
|---|---|
| • Model | SWK 200 |
| • Power supply voltage (V) | 160~275 |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 6.8 |
| • Rated input current (A) | 49 |
| • Work cycle (40°C 10Min) 30% 200A / 60% 145A / 100% 125A | |
| • Vaccum voltage (V) | 63 |
| • Welding current range (A) | 10~220 |
| • Efficiency | ≥ 80% |

| | |
|---|---|
| • Net weight (Kg) | 3.8 |
| • Dimensions (mm) | 296x132x260 |
| • Electrode diameter (mm) | Φ1.6~Φ5.0 |
| • Tipo de electrodo | 6013,7018 etc. |
| • Power factor | 0.65 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# MMA 200A WELDING EQUIPMENT


## SWK 200 CSO

**Welding Equipment**
**MMA**

The SWK CSO is a series of light-weight inverter equipment, conceived for electrode welding and TIG by contact. Prepared to work with generators avoiding failures derived from voltage peaks.

High vacuum tension allows them to work with cellulosic electrode and achieve a perfect priming of the electrode in any working condition.

Included functions: ARC Force, Anti-sticking and Hot Start, sensors for voltage, current and temperature for equipment self-protection.

## Main features

Mode
Welding with Tig Lift possible

Additional functions
Incorporates Hot Start, Anti-sticking and Arc Force function

Protection
Equipped with temperature sensors, protection for loss of phase, voltage and current for a high self-protection of the equipment

Digital screen

Weight
Lightweight and versatile equipment

Use with current generator
Designed to absorb voltage peaks and work safely on generator power

High vacuum voltage

## Technical data

| | |
|---|---|
| • Model | SWK 200 CSO |
| • Power supply voltage (V) | 160~275 |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 6.8 |
| • Rated input current (A) | 49 |
| • Work cycle (40°C 10Min) 30% 200A / 60% 145A / 100% 125A | |
| • Vacuum voltage (V) | 90 |
| • Welding current range (A) | 10~200 |
| • Electrode type | 6010,6011,6013,7018 |

| | |
|---|---|
| • Efficiency | ≥ 80% |
| • Net weight (Kg) | 4.5 |
| • Dimensions (mm) | 316x132x260 |
| • Electrode diameter (mm) | Φ1.6~Φ5.0 |
| • Power factor | 0.65 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# MMA SWK 250 WELDING EQUIPMENT


## SWK 250

**Welding Equipment**
**MMA**

SWK series equipment is specially designed for electrode welding.

Lightweight and with capacity for contact Tig welding, they are also designed to work with generators avoiding possible failures due to voltaje peaks.

## Main features

Tig mode
Lift Tig welding capability.

Additional functions
Incorporates Hot Start, Anti-sticking, Arc Force and VRD functions.

Protections
Equipped with temperature sensors, protection for loss of phase, voltage and current for a high self-protection of the equipment.

Digital screen
Control of amperage and voltage simultaneously by digital panel.

Weight. Lightweight and versatile equipment.

Use with current generator
Designed to absorb voltage spikes and work safely with generator power.

## Technical data

| | |
|---|---|
| • Model | SWK 250 |
| • Power supply voltage (V) | 3~380 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW)) | 8.5 |
| • Rated input current (A) | 18 |
| • Work cycle (40°C 10Min) 60% 250A - 100% 200A | |
| • Vacuum voltage (V) | 60 |
| • Welding current range | 10~250 |
| • Electrode diameter (mm) | Φ1.6~Φ5.0 |

| | |
|---|---|
| • Electrode type | 6013,7018 etc. |
| • Efficiency | ≥85% |
| • Net Weight (Kg) | 10 |
| • Dimensions (mm) | 457x189x350 |
| • Power factor | 0.7 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# MMA SWK 320 WELDING EQUIPMENT


## SWK 320

**Welding equipment**
**MMA**

SWK CSO is a series of inverter light-weight equipment and capable of electrode welding and TIG by contact. They are designed to work with generators avoiding failures derived from voltage peaks.
Their high vacuum tension allows them to work with cellulosic electrode and achieve a perfect priming of the electrode in any working condition.

They have functions like ARC Force, Anti-sticking and Hot start and are equipped with voltage, current and temperature for self-protection of the equipment.

## Main features

Tig Mode
Lift Tig mode welding capability

Additional functions
Incorporates Hot Start, Anti-sticking, adjustable Arc Force and VRD

Protection
Equipped with temperature sensors, protection for loss of phase, voltage and current for high self-protection.

Digital screen
Control of amperage and voltage simultaneously by digital panel

Weight
Versatile and light.

Use with current generator
Designed to absorb voltage peaks and work safely on generator power.

High vacuum voltage

## Technical data

| | |
|---|---|
| • Model | SWK 320 |
| • Power supply voltage (V) | 3~380 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 11.3 |
| • Rated input current (A) | 30 |
| • Work cycle (40 10Min) | 60% 320A - 100% 250A |
| • Vacuum voltage (V) | 60 |
| • Welding current range (A) | 10~320 |
| • Efficiency | ≥ 90% |

| | |
|---|---|
| • Net weight (Kg) | 17.6 |
| • Dimensions (mm) | 485x240x445 |
| • Electrode diameter (mm) | Φ1.6~Φ6.0 |
| • Electrode type | 6010,6011,6013,7018 etc.. |
| • Power factor | 0.7 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# MMA 400A WELDING EQUIPMENT


## SWK 400 CSO

**Welding equipment**
**MMA**

SWK CSO is a series of light-weight inverter equipment, for electrode and TIG welding. They are prepared to work with generators avoiding failures derived from voltage peaks.

Their high vacuum tension allows them to work with cellulosic electrode and achieve a perfect priming of the electrode in any working condition.

They have functions like ARC Force, Anti-sticking and Hot Start and are equipped with voltage, current and temperature for equipment self-protection.

## Main features

Tig Mode
Tig Lift mode welding capability.

Additional functions
Incorporates Hot Start, Anti-sticking, Arc Force and VRD functions.

Protection
Equipped with temperature sensors, protection for loss of phase, voltage and current for a high self-protection of the equipment.

Digital screen

Use with current generator
Designed to absorb voltage peaks and work safely with generator power.

High vacuum voltage.

## Technical data

| | |
|---|---|
| • Model | SWK 400 CSO |
| • Power supply voltage (V) | 3~380 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 16.0 |
| • Rated input current (A) | 30 |
| • Work cycle (40ºC 10Min) 60% 400A / 100% 325A | |
| • Vacuum voltage (V) | 90 |
| • Welding voltage range (V) | 20~400 |
| • Electrode type | 6010,6011,6013,7018 |

| | |
|---|---|
| • Electrode diameter | Φ1.6~Φ6.0 mm. |
| • Efficiency | ≥90% |
| • Net weight (Kg) | 19 |
| • Dimensions (mm) | 485x240x445 |
| • Power factor | 0.7 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# Welding equipment
# TIG

# TIG 200A WELDING EQUIPMENT


## TWK 200

**Welding Equipment**
**TIG**

The TWK series are designed for TIG welding.

They have a high frequency arc ignition and optional Up / Down mode selection button. Welding mode in 2T / 4T. Ability to weld with Electrode, TIG Lift and TIG HF. They are inverter generators with superior arc dynamics and high welding performance.

With the possibility of being connected to current generators thanks to the equipment protection sensors that avoid possible failures derived from voltage peaks.

## Main features

HF mode
HF high frequency priming

Descending ramp
Adjustable down ramp time

Post gas
Adjustable post-gas time

2T / 4T mode
2T / 4T mode selection

Protection
Equipped with temperature, voltage and current sensors for high equipment protection

Use with current generator
Designed to work with generator power

Weight
Extremely light and versatile

## Technical date

| | |
|---|---|
| • Model | TWK 200 |
| • Power supply voltage (V) | 160~275 |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 4.5(TIG)/7.0(MMA) |
| • Nominal input current (A) | 32(TIG)/46(MMA) |
| • Duty cycle (40°C 10Min) 35% 200A / 60% 125A / 100% 100A | |
| • Vacuum voltage (V) | 74 |
| • Welding current range (A) | 10~200 |
| • Descent time | 0~10 |

| | |
|---|---|
| • Net Weight (Kg) | 5.5 |
| • Dimensions (mm) | 410x146x278 |
| • Electrode diameter | Φ1.6~Φ5.0 |
| • Electrode type | 6013,7018 etc |
| • Insulation Class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# PULSE TIG 200A WELDING EQUIPMENT


## TWK 200 PULSE

**Welding Equipment**
**Pulse TIG**

The TWK Pulse series provides the welder with all the advantages of WK TIG technology including pulsed current mode that allows welding on thin materials with little or no deformation, when providing a perfect welding bead.

## Main features

Multiple welding modes
MMA / LIFT TIG / HF TIG / TIG Pulsed

Up / down ramp
Adjustable up and down ramp times

Pre / Post Gas
Adjustable pre-gas and post-gas times

Pulse
High performance of the equipment on thin surfaces. No deformation of the part

Protection
Equipped with temperature, voltage and current sensors for greater equipment self-protection

Use with current generator
Designed to work with generator power

## Technical data

| | |
|---|---|
| • Model | TWK 200 PULSE |
| • Power supply voltage (V) | 1~220/230/240 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 4.5(TIG)/7.0(MMA) |
| • Nominal input current (A) | 32(TIG)/45(MMA) |
| • Duty cycle (40°C 10Min) 35% 200A / 60% 125A / 100% 100A | |
| • Vacuum voltage (V) | 74 |
| • Welding current range (V) | 5~200 |
| • Ramp time up / down | 0~10 (S) |
| • Pre-gas / post-gas flow (S) | 0~2/0~10 |

| | |
|---|---|
| • Fre. Pulse (Hz) | 0.5~200 |
| • Pulse width range | 5~95 % |
| • Efficiency | ≥ 85% |
| • Net Weight (Kg) | 5.5 |
| • Dimensions (mm) | 410x146x278 |
| • Power factor | 0.75 |
| • Insulation Class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# PULSED TIG 250A WELDING EQUIPMENT


## TWK 250 PULSE

**Welding equipment**
**Pulsed TIG**

The TWK Pulse series gives the welder all the advantages of WK TIG technology including pulsed current that allows welding thin materials with little or no deformation while providing a perfect welding bead.

## Main features

Multiple welding modes
MMA / LIFT TIG / HF TIG / TIG Pulsed

Up / down ramp
Adjustable up and down ramp times

Pre/Post Gas
Adjustable pre-gas and post-gas times

Pulse
High performance of the equipment on thin surfaces. No deformation

Protection
Equipped with temperature, voltage and current sensors for greater equipment self-protection

Use with current generator
Designed to work with generator power

## Technical data

| | |
|---|---|
| • Model | TWK 250 PULSE |
| • Power supply voltage (V) | 1~220/230/240 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 5.9(TIG) / 8.8(MMA) |
| • Rated input current (A) | 40(TIG) / 53(MMA) |
| • Work cycle (40°C 10Min) 40% 250A / 60% 200A / 100% 180A | |
| • Vacuum voltage (V) | 66 |
| • Welding current range (V) | 5~250 |
| • Up / Down Slope Time | 0~10(S) |
| • Pre-gas / post-gas flux (S) | 0~2/0~10 |
| • Fre. Pulse (Hz) | 0.5~200 |

| | |
|---|---|
| • Pulse width range | 5~95 |
| • Efficiency | ≥ 85% |
| • Net weight (Kg) | 10 |
| • Dimensions (mm) | 447x189x350 |
| • Power factor | 0.75 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# PULSED TIG 320A WELDING EQUIPMENT


## TWK 320 PULSE

**Welding equipment**
**Pulsed TIG**

The TWK Pulse series provides the welder with all the advantages of WK TIG technology including pulsed current mode that allows welding thin materials with little or no deformation, while providing a perfect welding bead.

## Main features

Multiple welding modes
Pulsed MMA / LIFT TIG / HF TIG / TIG

Up / down ramp
Adjustable up and down ramp times.

Pre/Post Gas
Adjustable pre-gas and post-gas times.

Pulse
High performance of the equipment on thin surfaces. No deformation of the part.

Protection
Equipped with temperature, voltage and current sensors for greater equipment self-protection.

Use with current generator
Designed to work with generator power.

**Accessories**
Optional cooling unit.
Optional transport trolley.

OPTIONAL
**WIRELESS CONTROLLER**


## Technical data

| | |
|---|---|
| • Model | TWK 320 PULSE |
| • Power supply voltage (V) | 3~380 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 9.5(TIG)/11.5(MMA) |
| • Rated input current (A) | 19(TIG)/23(MMA) |
| • Work cycle (40°C 10Min) 60% 320A / 100% 250A | |
| • Vacuum voltage (V) | 68 |
| • Welding current range (A) | 5~320 |
| • Up / Down Slope Time | 0~10 (S) |
| • Pre / post flow (S) | 0~2/0~10 |

| | |
|---|---|
| • Pulse width range | 5~95 (%) |
| • Pulse Fre. (HZ) | 0.5~200 |
| • Efficiency | ≥ 85% |
| • Net weight (Kg) | 20 |
| • Dimensions (mm) | 530x240x445 |
| • Power factor | 0.75 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# PULSED AC / DC 200A TIG WELDING EQUIPMENT


## TWK 200 AC/DC PULSE

**Welding equipment**
**TIG AC/DC**

WK AC / DC TIG units offer outstanding performance in alternating current welding. The control AC balance (50 ~ 85%) monitors aluminum oxide and helps better cleaning during welding.
They are prepared for high work regimes given their high duty cycle and are equipped with sensors voltage, current and temperature for self-protection of the team.

## Main features

Mode
TIG HF/ TIG Pulse/ TIG AC/DC

AC balance control
AC balance control (50 ~ 85%) monitors rust and helps better cleaning when welding aluminum

Protection
Equipped with temperature, voltage and current sensors for greater equipment self-protection

Weight
Extremely light and versatile

## Technical data

| | |
|---|---|
| • Model | TWK 200 AC/DC PULSE |
| • Power supply voltage (V) | 1~220/230/240 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 4.3(ACTIG)<br>3.8(DCTIG)<br>5.7(MMA) |
| • Rated input current (A) | |
| 30(AC TIG)27(DC TIG)36.6(MMA) | |
| • Work cycle (40°C 10Min) | |
| 35%200A / 60%155A / 100%120A (AC TIG) | |
| 40%170A / 60%140A / 100%110A (MMA&DC TIG) | |
| • Welding current range (A) | 10~200(AC TIG)<br>10~170(MMA&DC TIG) |
| • Ramp up / down time | 0~10(S) |

| | |
|---|---|
| • Vacuum voltage (V) | 52 |
| • Pre / post flux (S) | 1/10 |
| • Pulse Fre. (HZ) | 0.5~200 |
| • Pulse width range | 5~95(%) |
| • AC Fre. (Hz) | 60 |
| • Cleaning balance (Hz) | 15~50 |
| • Efficiency | ≥ 85% |
| • Net weight (Kg) | 7.0 |
| • Dimensions (mm) | 410x146x278 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# PULSED AC / DC 320A TIG WELDING EQUIPMENT

## TWK 320 AC/DC PULSE

**Welding equipment**
**TIG AC/DC**

WK AC / DC TIG units offer outstanding performance in alternating current welding. They offer the possibility of multiple waveform selection in the output current, from a square wave format, sine wave or triangular. Balance control AC (50 ~ 85%) monitors aluminum oxide and helps to better cleaning during welding. They are prepared for demanding work regimes given its high factor gear and are equipped with voltage sensors, current and temperature for equipment self-protection.

## Main features

Mode: TIG HF/ TIG Pulsed/ TIG AC/DC

Accessories
Pedal control option.
Wireless remote control option.
Wireless pedal control option.
Up/Down torch option.
Remote control torch option.
Optional transport trolley.
Optional cooling unit.

Multiple wave output.
AC waveforms include square wave, sine wave, triangle wave.

AC Balance control
AC balance control (50 ~ 85%) monitors rust and helps better cleaning when welding aluminum.

**Protection**
Equipped with temperature, voltage and current sensors for greater self-protection of the team.

OPTIONAL
**WIRELESS CONTROLLER**


## Technical data

| | |
|---|---|
| • Model | TWK 320 AC/DCPULSE |
| • Power supply voltage (V) | 3~380 ±10% |
| • Rated input power (KW) | 9.5(TIG) / 12(MMA) |
| • Rated input current (A) | 15.5(TIG) / 24(MMA) |
| • Work cycle (40°C 10Min) | |
| 100% 250 60% 320 | |
| • Vacuum voltage (V) | 50 |
| • Welding current range (A) | 10~320 |
| • Ramp up / down time | 0-10(S) |
| • Pre-gas/post-gas flux (S) | 0-2/0-10 |
| • Fre. Pulse (HZ) | 0.5~200 |

| | |
|---|---|
| • Pulse width range | 5~95(%) |
| • AC Fre.(Hz) | 50-250 |
| • Efficiency | ≥85% |
| • Net weight (Kg) | 25.5 |
| • Dimensions (mm) | 550x240x445 |
| • Power factor | 0.75 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# PULSE AC / DC 400A TIG WELDING EQUIPMENT

## TWK 400 AC/DC PULSE

**Welding equipment**
**TIG AC/DC**

WK AC / DC TIG units offer outstanding performance in alternating current welding. They include optional multiple waveform selection in the output current, including square wave format, sine wave or triangular. AC balance control (50 ~ 85%) monitors aluminum oxide and helps better cleaning during welding. They are prepared for intensive work regimes given their high gear factor and are equipped with voltage, current and temperature sensors for equipment self-protection.

## Main features

Mode: TIG HF/ Pulse TIG/ TIG AC/DC

Accessories
Optional pedal control.
Wireless remote control optional.
Wireless footswitch control optional.
Up / Down torch possibility.
Remote control torch possible.
Optional transport trolley.
Optional cooling unit.

Multiple wave output
AC waveforms include square wave, sine wave, triangle wave.

AC balance control
AC balance control (50 ~ 85%) monitors rust and helps better cleaning during aluminum welding.

**Protection**
Equipped with temperature, voltage and current sensors for greater equipment self-protection.

OPTIONAL
**WIRELESS CONTROLLER**


## Technical data

| | |
|---|---|
| • Model | TWK 400 AC/DC PULSE |
| • Power supply voltage (V) | 3~380 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 12.1(TIG) / 18.5(MMA) |
| • Rated input current (A) | 24.5(TIG) / 33(MMA) |
| • Work cycle (40°C 10Min) 100% 400A 60% 310A | |
| • Vacuum voltage (V) | 50 |
| • Welding current range (A) | 10~400 |
| • Up / Down Slope Time | 0-10 (S) |
| • Pre-gas / post-gas Flux (S) | 0-2/0-10 |

| | |
|---|---|
| • Fre. Pulse (Hz) | 0.5~200 |
| • Pulse width range | 5~95 (%) |
| • AC Fre.(Hz) | 50-250 |
| • Efficiency | ≥85% |
| • Net weight (Kg) | 27 |
| • Dimensions (mm) | 550x240x445 |
| • Power factor | 0.75 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |


# Welding equipment
# MIG/MAG

# COMPACT MIG-MAG EQUIPMENT 200A


## GWK 200 LCD

**Welding equipment**
**MIG-MAG**

200A compact MIG-MAG equipment for coils of 5 kg thread. It has a new LCD display for a perfect display of settings of the machine. Its reduced weight makes it a highly versatile equipment for jobs that require continuous movement of welding equipment.

## Main features

LCD screen

300.000 colors

Multifunction

MIG / TIG / MMA

PFC technology

Power factor of more than 0.99. Energy saving and possibility of working with voltages 110V - 220V input

Loading capacity of 5 Kgs coils

Waveform control for increased arc stability even at low amperage

Protection

Equipped with temperature, voltage and current sensors for added self-protection

## Technical data

| | |
|---|---|
| • Model | GWK 200 LCD |
| • Power supply voltage (V) | 90~275 |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | |
| 1~110/120/130 ±10% | 3.7(MIG) 4.1(MMA) 2.8(TIG) |
| 1~220/230/240 ±10% | 6.0(MIG) 6.2(MMA) 4.2(TIG) |
| • Work cycle (40°C 10Min) | |
| 35% 200A / 60% 155A / 100% 120A | |
| • Vacuum voltage (V) | 65 |
| • Welding current range | (A) 40~200 |
| • Welding voltage range (V) | 14~24 |
| • Pre / post flow (S) | 0~2/0~10 |

| | |
|---|---|
| • Wire diameter (mm) | |
| Fe: | 0.6/0.9/1.0 |
| Ss: | 0.8/0.9/1.0 |
| Flux-Cored: | 0.6/0.8/0.9/1.0 |
| • Fre. Pulse (HZ) | 0.5~200 |
| • Pulse width range | 5~95(%) |
| • Efficiency | ≥85% |
| • Net weight (Kg) | 12 |
| • Dimensions (mm) | 511x213x400 |
| • Power factor | 0.99 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# COMPACT MIG-MAG 250A


## GWK 250

**Welding equipment**
**MIG-MAG**

The GWK series are compact MIG-MAG equipment, they can incorporate coils from 5kg to 20kgs. Shape control wave for perfect arc stability even atlow amperage.

Designed to work in adverse conditions and high work rates. Available in two versions single phase and three phase.

## Main features

Wave control for increased arc stability even at low amperage.

Equipped with temperature, voltage and current sensors for added self-protection.

20kgs coil load capacity.

4 roller drive train.

Two options available: Single Phase and Three Phase.

## Technical data

| | |
|---|---|
| • Model | GWK 250 |
| • Power supply voltage (V) | 1~230±10%<br>3~380±10% |
| • Fre. (HZ) | 50/60 - 50/60 |
| • Rated input power (KW) | 7.3 - 11 |
| • Rated input current (A) | 50 - 21 |
| • Work cycle (40°C 10Min) | 60% 250A - 100% 200A |
| • Vacuum voltage (V) | 47 - 48 |
| • Welding current range (A) | 50~250 |
| • Welding voltage range | 13.5~26.5 |

| | |
|---|---|
| • Efficiency | ≥85% |
| • Net weight (Kg) | 23 - 25 |
| • Dimensions (mm) | 618x240x445 |
| • Power factor | 0.70 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# COMPACT MIG-MAG 250A

## GWK 250 MPS

**Welding equipment**
**MIG-MAG**

The GWK MPS series are multifunction devices with the possibility of the 3 usual processes in a single computer (MMA-MIG AND TIG). It is a synergistic item that can incorporate coils from 5kg to 20 kg.

Designed for all maintenance work due to its versatility and easy handling.

## Main features

Waveform control for greater arc stability even at low amperage.

Multifunction:
MIG/TIG/MMA.

Synergistic.

Coil load capacity of 20 Kgs.

4 roller drive train.

## Technical data

| | |
|---|---|
| • Model | GWK 250 MPS |
| • Power supply voltage (V) | 1~110/120/130 +- 10%<br>1~220/230/240+-10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | MIG 8.3 - MMA 9.2 - TIG 6.4 |
| • Rated input current I (A) | MIG 37 - MMA41 - TIG 28 |
| • Duty cycle (40ºC 10Min) | |
| • Vacuum voltage (V) | 68 (MIG) 48 (MMA/TIG) |
| • Welding current range (A) | 40-250 |
| • Welding voltage range (V) | 14~26.5 |

| | TIG | MMA | TIG |
|---|---|---|---|
| 35% | 250 | 250 | 250 |
| 60% | 195 | 180 | 195 |
| 100% | 150 | 140 | 150 |

| | |
|---|---|
| • Wire diameter (mm) | |
| Fe: | 0.6/0.8/0.9/1.0 |
| Ss: | 0.8/0.9/1.0 |
| Flux-Cored: | 0.6/0.8/0.9/1.0 |
| • Efficiency | ≥80% |
| • Net Weight (Kg) | 23 |
| • Dimensions (mm) | 618x240x445 |
| • Power factor | 0.99 |
| • Insulation Class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# COMPACT PULSED MIG-MAG EQUIPMENT 250A


## GWK 250 PULSE

**Welding equipment**
**MIG-MAG Pulsed**

The GWK PULSE series is made up of synergistic equipment with Pulsed and Double Pulsed MIG-MAG Technology in compact design for easy portability.

The pulse technology allows remarkable advantages for welding, reducing deformations and thermal effects in different types of materials and thicknesses. It can house coils from 5kg to 20 kg.

## Main features

Synergistic.

Multifunction

MIG/TIG/MMA

PFC Technology

Power factor above 0,99.

Pulsed arc and double pulsed function.

Wave control for increased arc stability even at low amperage.

Digital screen.

Equipped with temperature, voltage and current sensors for added self-protection.

## Technical data

| | |
|---|---|
| • Model | GWK 250 PULSE |
| • Power supply voltage (V) | 1~220/230/240±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | |
| 1~110/120/130±10% | 4.5 (MIG) 4.2 (MMA) 3.3 (TIG) |
| 1~220/230/240±10% | 8.0 (MIG) 9.0 (MMA) 6.3 (TIG) |
| • Rated input current (A) | MIG MMA TIG<br>35 40 27 |
| • Work cycle (40°C 10Min) | 30% 250A<br>60% 180A<br>100% 140A |
| • Vacuum voltage (V) | 15 |

| | |
|---|---|
| • Welding current range (A) | 15~250 |
| • Welding voltage range (V) | 16~26.5 |
| • Wire diameter (mm) | |
| Fe: 0.6/0.9/1.0/1.2<br>Ss: 0.8/0.9/1.0/1.2<br>Flux-Cored: 0.6/0.8/0.9/1.0/1.2<br>Al: 1.0/1.2 | |
| • Pulse Fre (HZ) | 0.5-3.0HZ |
| • Pulse width range | 10-90% |
| • Efficiency | ≥80% |
| • Net Weight (Kg) | 27 |
| • Dimensions (mm) | 690x240x450 |
| • Power factor | 0.99 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |

# COMPACT PULSED MIG-MAG EQUIPMENT 250A


## GWK 250-3 PULSE

**Welding equipment**
**MIG-MAG Pulsed**

The GWK PULSE series is made up of synergistic equipment with Pulsed and Double Pulsed MIG-MAG Technology in compact design for easy portability.

Pulsed technology allows remarkable advantages of welding of different types of materials and thicknesses. It can house coils from 5kg to 20 kg. This is the three-phase version.

## Main features

Synergistic.

Multifunction

MIG/TIG/MMA

High power factor

Pulsed arc and double pulsed function.

Digital screen.

Equipped with temperature, voltage and current sensors for added self-protection.

4 roller drive train.

## Technical data

| | |
|---|---|
| • Model | GWK 250-3 PULSE |
| • Power supply voltage (V) | 3~400±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 7.2 (MIG) 8.0 (MMA) 6.4 (TIG) |
| • Rated input current (A) | MIG: 18 MMA: 20 TIG: 16 |
| • Work cycle (40°C 10Min) | 60% 250 - 100% 195 |
| • Vacuum voltage (V) | 80 (MIG) 16 (MMA) 16(TIG) |
| • Welding current range (A) | 15~250 |
| • Welding voltage range (V) | 14.8~26.5 |
| • Wire diameter (mm) | |
| Fe: | 0.6/0.9/1.0/1.2 |
| Ss: | 0.8/0.9/1.0/1.2 |
| Flux-Cored: | 0.6/0.8/0.9/1.0/1.2 |
| Al: | 1.0/1.2 |

| | |
|---|---|
| • Pulse Fre (HZ) | 0.5-3.0HZ |
| • Pulse width range | 10-90% |
| • Efficiency | ≥80% |
| • Net weight (Kg) | 26 |
| • Dimensions (mm) | 670x240x450 |
| • Power factor | 0.70 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • AF Refrigeration | AF |

# COMPACT MIG-MAG EQUIPMENT 315A


## GWK 315 COMPACT

**Welding equipment**
**MIG-MAG**

The GWK series are compact MIG-MAG devices with the possibility to incorporate coils of 5 to 20 kgs.
The generators are equipped with inverter technology with shape control waveform for perfect arc stability even at low amperage. They are designed to work in adverse conditions and high work rates.

## Main features

Waveform control for increased arc stability even at low amperage.

Equipped with temperature, voltage and current sensors for added self-protection.

Coil load capacity of 20 Kgs.

4 roller drive train.

## Technical data

| | |
|---|---|
| • Model | GWK 315 COMPACT |
| • Power supply voltage (V) | 3~380±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 11 |
| • Rated input current (A) | 23 |
| • Work cycle (40°C 10Min) 40% 315A / 60% 250A/ 100% 200A | |
| • Vacuum voltage (V) | 53 |
| • Welding current range (A) | 50~315 |
| • Welding voltage range (V) | 13.5~30 |

| | |
|---|---|
| • Wire diameter (mm) | |
| Fe: | 0.6/0.8/0.9/1.0/1.2 |
| Ss: | 0.8/0.9/1.0/1.2 |
| Flux-Cored: | 0.6/0.8/0.9/1.0/1.2 |
| • Efficiency | ≥85% |
| • Net weight (Kg) | 25 |
| • Dimensions (mm) | 618x240x445 |
| • Power factor | 0.72 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Refrigeration | AF |

# SYNERGIC MIG-MAG EQUIPMENT 500A

## WK 500

**Welding equipment**
**MIG-MAG**

The welding machines of the WK series are MIG-MAG equipment with specially designed digital technology for steel welding. Control is based on MCU technology. It is a device with the possibility of synergistic regulation and memories for recording welding parameters.

## Main features

Slow wire feed.

Easy arc starting.

Precise arc control.

Digital display for perfect regulation.

Lower projections due to advanced waveform control.

Cored and solid wire.

High power factor.

Optional transport cart and refrigerator.

## Technical data

| | |
|---|---|
| • Model | WK 500 |
| • Power supply voltage (V) | 3~380 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KVA) | 23 |
| • Rated input current (A) | 35 |
| • Work cycle (40°C 10Min) | 60% 500A |
| • Vacuum voltage (V) | 82 |
| • Welding current range (A) | 60~500 |
| • Welding voltage range (V) | 14~50 |
| • Mode | 2T/4T |

| | |
|---|---|
| • Wire diameter (mm) | 1.0/1.2/1.6 |
| • Net weight (Kg) | 50 |
| • Dimensions (mm) | 655x324x546 |
| • Insulation class | H |
| • Protection class | IP 23 |

# MIG-MAG 500A EQUIPMENT


## WK STAR 500

**Welding equipment**
**MIG-MAG**

The WK STAR series of equipment has been designed for jobs that require robust, powerful equipment. Based on rectification technology by thyristors, although electronically regulated, the WK STAR is the choice of those in need of powerful equipment that withstands the most adverse working conditions.

New generation coaxial cable can be installed, which means less weight and therefore greater maneuverability in the work area.

The WK STAR enables installing an auxiliary device drag (push-pull) that allows the welder to work comfortably and safely by adjusting the parameters without having to move the drag head.

## Main features

Robust

High power factor

Digital regulation of welding parameters

Specially designed for shipbuilding and offshore

Optional interconnection via coaxial cable

Optional use of push-pull device (AWF)

## Technical data

| | |
|---|---|
| • Model | WK STAR 500 |
| • Power supply voltage (V) | 400 |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KVA) | 31,5 |
| • Work cycle (40°C 10Min) | |
| 60% 500 / 100% 400 | |
| • Vacuum voltage (V) | 60 |
| • Welding current range (A) | 50~500 |

| | |
|---|---|
| • Wire diameter (mm) | 0.8-2.0 |
| • Net Weight (Kg) | 158 |
| • Dimensions (mm) | 890x500x860 |
| • Insulation class | H |
| • Protection class | IP 23 |

# MIG-MAG 500A EQUIPMENT

## WK 500 FR

**Welding machines**
**MIG-MAG**

The FR series is MIGMAG welding equipment with independent thread winder. The FR series yarn winder is extremely light and has reduced dimensions, a great advantage in those activities in which constant movement of the welding equipment is necessary.
It enables good regulation of the welding parameters, as well as a perfect stability and arc concentration.

## Main features

Waveform control for increased arc stability even at low amperage.

Equipped with temperature, voltage and current sensors for added self-protection.

High power factor.

Optional transport trolley and cooler.

Digital screen.

## Technical data

| | |
|---|---|
| • Model | WK 500 FR |
| • Power supply voltage (V) | 3~380 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KVA) | 26 |
| • Rated input current (A) | 41 |
| • Work cycle (40°C) | 60% 500A/100% 390A |
| • Vacuum voltage (V) | 65 |
| • Welding current range (A) | 35~500 |
| • Welding voltage range (V) | 13.5~50 |
| • Efficiency | ≥85% |
| • Power factor | 0.95 |

| | |
|---|---|
| • Wire diameter (mm) | |
| Fe: | 0.6/0.9/1.0/1.2/1.6 |
| Ss: | 0.8/0.9/1.0/1.2/1.6 |
| Flux-Cored: | 0.6/0.8/0.9/1.0/1.2/1.6 |
| • Net weight (Kg) | 30 |
| • Dimensions (mm) | 555x240x445 |
| • Insulation class | H |
| • Protection class | IP 23 |

# PULSED MIG-MAG EQUIPMENT 500A

## WK 500 PULSE

**Welding equipment**
**Pulse MIG-MAG**

The WK Pulse series is made up of synergistic machines with pulsed and double pulsed MIG-MAG technology, in 400 and 500 amp versions. Pulsed technology allows remarkable advantages in welding different types of material and thicknesses. Precision and reliability of WK WK Pulse equipment has proven itself as one of the highest performance solutions.

## Main features

Synergistic equipment.

Pulsed arc and double pulsed function.

Allows activation of synergic curves for aluminum, steel, CuSi3 and stainless steel.

High power factor.

Waveform control for increased arc stability even at low amperage.

Equipped with temperature, voltage and current sensors for added self-protection.

Digital screen.

Optional transport cart and cooler.

## Technical data

| | |
|---|---|
| • Model | WK 500 PULSE |
| • Power supply voltage (V) | 3~380 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | MIG 23 /TIG 18/MMA 23 |
| • Rated input current (A) | 35 |
| • Work cycle (40°C)<br>60% 500A / 100% 400A | |
| • Vacuum voltage (V) | 68 |
| • Welding current range (A) | 10~500 |
| • Welding voltage range (V) | 14 – 50 |

| | |
|---|---|
| • Wire diameter (mm) | 1.0,1.2,1.6 |
| • Net weight (Kg) | 32,5 |
| • Dimensions (mm) | 605x240x445 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |


# Cutting equipment
# Plasma

# PLASMA CUTTING EQUIPMENT 65A


## PW-65 CNC

**Cutting equimpment**
**Plasma**

PW plasma cutting equipment are very user-friendly and allow several types of materials to be cut (Aluminum, Carbon steel, Stainless steel and copper.

The pilot arc increases the cutting capacity and the speed as well as consumables useful life.

## Main features

Pilot bow.

High power factor.

Max cut in Carbon Steel 35mm.

Possibility of connection to a CNC table.

## Technical data

| | |
|---|---|
| • Model | PW-65 CNC |
| • Power supply voltage (V) | 3~400 |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KW) | 7.8 |
| • Rated input current (A) | 18 |
| • Work cycle (40°C 10Min) | 90% 65A - 100% 61A |
| • Vacuum voltage (V) | 450 |
| • Cut-off voltage (V) | 20~65 |
| • Cutting capacities (manufacturing): | |
| Carbon acid | 25 mm |
| Stainless | 25 mm |
| Aluminium | 20 mm |
| Copper | 14 mm |

| | |
|---|---|
| • Net weight (Kg) | 24 |
| • Dimensions (mm) | 640x240x445 |
| • Power factor | 0.72 |
| • Insulation class | H |
| • Protection class | IP 23 |
| • Cooling | AF |


# Submerged
# Arc welding equipment

# SUBMERGED ARC GENERATOR 1250A

## WK SAW 1000

**Welding equipment**
**Submerged arc**

WK SAW series are highly efficient submerged arc welding equipment with reduced weight and dimensions.
They include inverter technology and a 100% gear factor.
They offer digital control of the welding parameters both from the power source and from the module tractor. Possibility of selecting the arc function of air. Equipped with a self-diagnosis and communication system between the source and the tractor module, they include of self-protection systems due to overheating and short circuit.

## Main features

WK SAW series are highly efficient submerged arc welding equipment with reduced weight and dimensions.

They include inverter technology and a 100% gear factor.

They offer digital control of the welding parameters both from the power source and from the module tractor.

Possibility of selecting the arc function of air.

Equipped with a self-diagnosis and communication system between the source and the tractor module, they include of self-protection systems due to overheating and short circuit.

## Technical data

| | |
|---|---|
| • Model | WK SAW 1000 |
| • Power supply voltage (V) | 3~380 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KVA) | 55 |
| • Rated input current (A) | 83 |
| • Work cycle (40°C 10Min) | 100% 1000A |
| • Vacuum voltage (V) | 84 |
| • Welding current range (A) | 60~1000 |
| • Welding voltage range (V) | 20~50 |

| | |
|---|---|
| • Wire diameter (mm) | 2.0-6.0 |
| • Efficiency | ≥85% |
| • Net weight (Kg) | 95 |
| • Dimensions (mm) | 788x366x815 |
| • Insulation class | H |
| • Protection class | IP 23S |

# SUBMERGED ARC GENERATOR 1250A


## WK SAW 1250

**Welding Equipment**
**Submerged Arc**

WK SAW series are highly efficient submerged arc welding equipment with reduced weight and dimensions.
They include inverter technology and 100% gear factor.

Digital control of the welding parameters
both from the power source and from the module tractor. Possibility of selecting the air arc function.

Equipped with self-diagnosis and communication system between the source and the tractor module.
Self-protection systems due to overheating and short circuit.

## Main features

Short circuit equipment self-protection

100% duty cycle

Digital communication between power supply and tractor module

Activation of self-controlled cooling

Self-diagnosis function with on-screen error coding

Light and compact

Air arc function

High welding efficiency and reduced voltage fluctuations

## Technical data

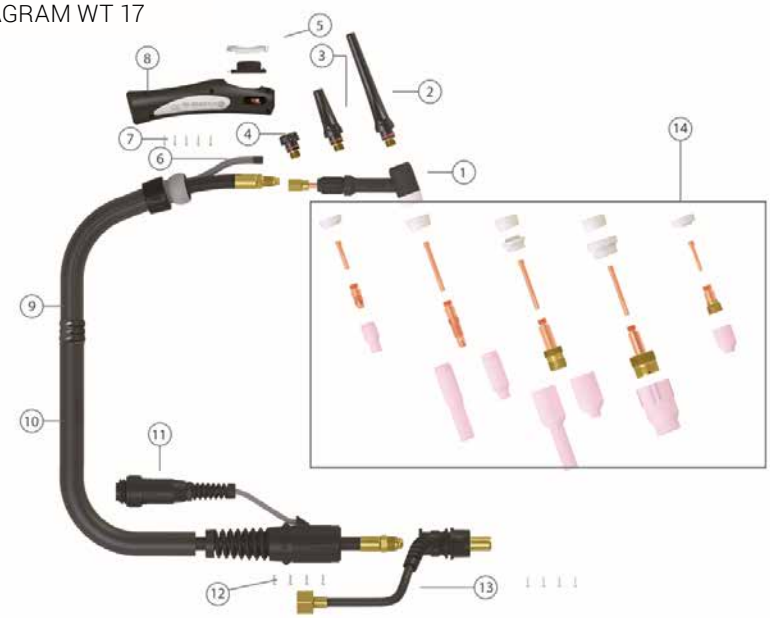
| | |
|---|---|
| • Model | WK SAW 1250 |
| • Power supply voltage (V) | 3~380 ±10% |
| • Fre. (HZ) | 50/60 |
| • Rated input power (KVA) | 75.7 |
| • Rated input current (A) | 115.0 |
| • Work cycle (40°C 10Min) | 100% 1250A |
| • Vacuum voltage (V) | 92 |
| • Welding current range (A) | 60~1250 |
| • Welding voltage range (V) | 20~50 |

| | |
|---|---|
| • Wire diameter (mm) | 2.0-6.0 |
| • Net Weight (Kg) | 100 |
| • Dimensions (mm) | 788x366x846 |
| • Insulation class | H |
| • Protection class | IP 23S |

# Torches

# TIG WT 17 TORCH

DIAGRAM WT 17




## WT 17

**Welding torches**
**Tig Torches**

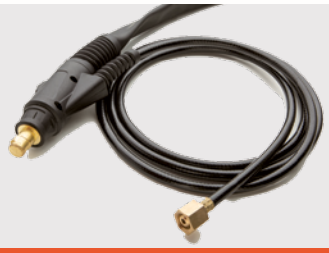
The WT series of TIG torches provide excellent welding dynamics as a result of increased cable flexibility and ergonomic grip.
There are versions with push button, valve, as well as cooled versions intended for high demand.

## Exploded

| | |
|---|---|
| 1 | Neck |
| 2 | Long cap |
| 3 | Medium cap |
| 4 | Short plug |
| 5 | Micro set |
| 6 | Control cable |
| 7 | Screws |
| 8 | Handle |
| 9 | Leather case |
| 10 | Neoprene cover |
| 11 | Connection plug |
| 12 | Screws |
| 13 | Gas pipe |
| 14 | See spare parts page. 60-62 |

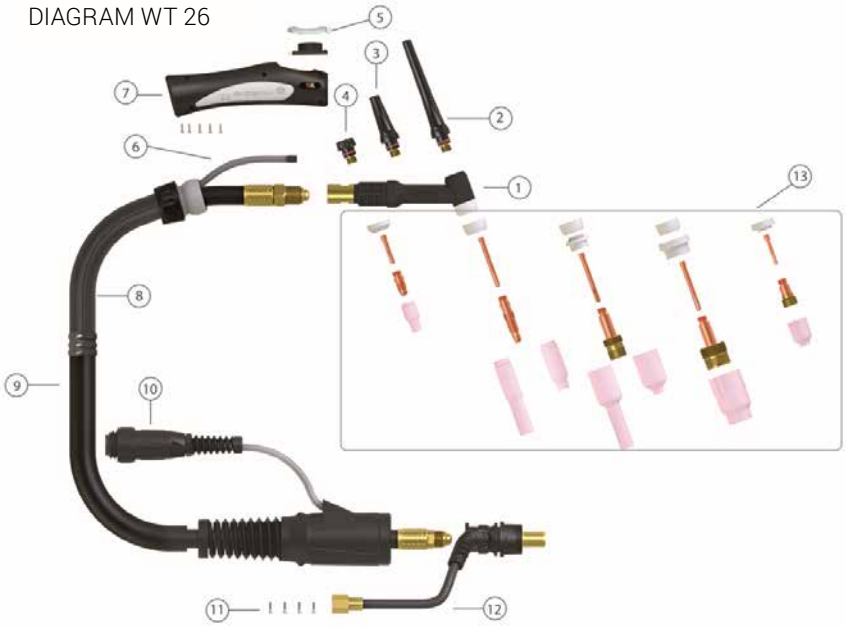
## Main features

- 150A DC
- 105A AC
- 35% Duty cycle
- Ergonomic grip
- 4m and 8m of cable
- Version with WT 17V valve



# TIG WT 26 TORCH

DIAGRAM WT 26




## WT 26

**Welding torches**
**Tig torches**

The WT series of TIG torches offer excellent welding dynamics thanks to increased cable flexibility and ergonomic grip.
There are versions with push button, valve, as well as cooled versions for highly demanding jobs.

## Exploded

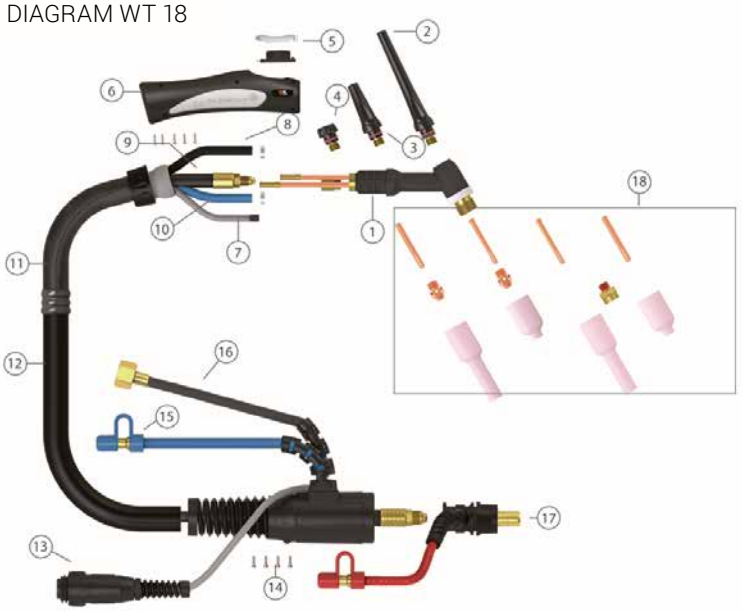
| | |
|---|---|
| 1 | Neck |
| 2 | Long cap |
| 3 | Medium cap |
| 4 | Short plug |
| 5 | Micro set |
| 6 | Control cable |
| 7 | Handle |
| 8 | Leather case |
| 9 | Neoprene cover |
| 10 | Connection plug |
| 11 | Screws |
| 12 | Gas cable |
| 13 | See spare parts page. 60-62 |

## Main features

- 180A DC
- 125A AC
- 35% Duty cycle
- Ergonomic grip
- 4m and 8m of cable
- Version with WT 26V valve

# REFRIGERATED TIG TORCH WT 18

DIAGRAM WT 18




## WT 18

**Welding torches**
**Cooled Tig torch**

The WT series of TIG torches offer excellent welding dynamics thanks to the flexibility of the cable and its ergonomic grip.

There are versions with push button, valve, as well as cooled versions for high demand.

## Exploded

| | |
|---|---|
| 1 | Neck |
| 2 | Long cap |
| 3 | Medium cap |
| 4 | Short plug |
| 5 | Micro set |
| 6 | Handle |
| 7 | Control cable |
| 8 | Gas pipe |
| 9 | Running water cable |
| 10 | Water pipe |
| 11 | Leather case |
| 12 | Neoprene cover |
| 13 | Connection plug |
| 14 | Screws |
| 15 | Water pipe |
| 16 | Gas pipe |
| 17 | Connector |
| 18 | See spare parts page. 60-62 |

## Main features

- 380A DC
- 270A AC
- 100% Duty Cycle
- Ergonomic grip
- 4m and 8m of cable

# CONSUMABLES TIG TORCH (WT)

## STANDAR COLLETS

| PART. Nº | DESCRIPTION | MOUTH |
|---|---|---|
| WT 10N22 | COLLET 10N22 - 1,0 MM | 1.0 MM |
| WT 10N23 | COLLET 10N23 - 1,6 MM | 1.6 MM |
| WT 10N23M | COLLET 10N23M - 2,0 MM | 2.0 MM |
| WT 10N24 | COLLET 10N24 - 2,4 MM | 2.4 MM |
| WT 10N25 | COLLET 10N25 - 3,2 MM | 3.2 MM |
| WT 54N20 | COLLET 54N20 - 4,0 MM | 4.0 MM |

## SHORT COLLETS

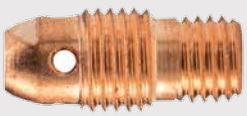
| PART. Nº | DESCRIPTION | MOUTH |
|---|---|---|
| WT 13N21 | SHORT COLLET 13N21 - 1.0MM | 1.0 MM |
| WT 13N22 | SHORT COLLET 13N22 - 1.6MM | 1.6 MM |
| WT 13N22M | SHORT COLLET 13N22M - 2.0MM | 2.0 MM |
| WT 13N23 | SHORT COLLET 13N23 - 2.4MM | 2.4 MM |
| WT 13N24 | SHORT COLLET 13N24 - 3.2MM | 3.2 MM |

## WT DIFFUSER

| PART. Nº | DESCRIPTION | MOUTH |
|---|---|---|
| WT 10N28 | DIFFUSER 10N28 - 3.2MM | 3.2 MM |
| WT 10N30 | DIFFUSER 10N30 - 1.0MM | 1.0 MM |
| WT 10N31 | DIFFUSER 10N31 - 1.6MM | 1.6 MM |
| WT 10N31M | DIFFUSER 10N31M - 2.0MM | 2.0 MM |
| WT 10N32 | DIFFUSER 10N32 - 2.4MM | 2.4 MM |
| WT 406488 | DIFFUSER 406488 - 4.0MM | 4.0 MM |

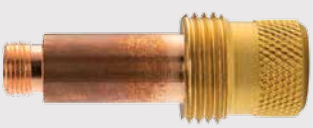
## WT DIFFUSER

| PART. Nº | DESCRIPTION | MOUTH |
|---|---|---|
| WT 13N27 | DIFFUSER WT 13N27 1,6MM | 1.6MM |
| WT13N27M | DIFFUSER 13N29 - 3.2MM | 2.0MM |
| WT 13N28 | DIFFUSER WT 13N27M 2,0MM | 2.4MM |
| WT 13N29 | DIFFUSER WT 13N28 2,4MM | 3.2 MM |



## GAS LENS WT

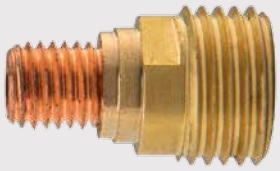
| PART. Nº | DESCRIPTION | MOUTH |
|---|---|---|
| WT 45V25 | GAS LENS DIFFUSER45V25 - 1.6MM | 1.6 MM |
| WT 45V25M | GAS LENS DIFFUSER 45V25M - 2.0MM | 2.0 MM |
| WT 45V26 | GAS LENS DIFFUSER45V26 - 2.4MM | 2.4 MM |
| WT 45V27 | GAS LENS DIFFUSER 45V27 - 3.2MM | 3.2 MM |
| WT 45V28 | GAS LENS DIFFUSER45V28 - 4.0MM | 4.0 MM |



# CONSUMABLES TIG TORCH (WT)

## SHORT GAS LENS DIFFUSER

| PART. Nº | DESCRIPTION | NUMBER |
|---|---|---|
| WT 45V43 | SHORT GAS LENS DIFFUSER 45V43 - 1.6MM | 1.6 MM |
| WT 45V43M | SHORT GAS LENS DIFFUSER 45V43M - 2.0MM | 2.0 MM |
| WT 45V44 | SHORT GAS LENS DIFFUSER 45V44 - 2.4MM | 2.4 MM |



## TOBERAS CERÁMICAS WT

| PART. Nº | DESCRIPTION | MOUTH | NUMBER |
|---|---|---|---|
| WT 10N44 | CERAMIC NOZZLE 10N44 Nº12 - 19MM | 19 MM | 12 |
| WT 10N45 | CERAMIC NOZZLE 10N45 Nº10 - 16MM | 16 MM | 10 |
| WT 10N46 | CERAMIC NOZZLE 10N46 Nº8 - 12.5MM | 12.5 MM | 8 |
| WT 10N47 | CERAMIC NOZZLE 10N47 Nº7 - 11MM | 11 MM | 7 |
| WT 10N48 | CERAMIC NOZZLE 10N48 Nº6 - 10MM | 10 MM | 6 |
| WT 10N49 | CERAMIC NOZZLE 10N49 Nº5 - 8MM | 8 MM | 5 |
| WT 10N50 | CERAMIC NOZZLE 10N50 Nº4 - 6MM | 6 MM | 4 |

## CERAMIC NOZZLE WT

| PART. Nº | DESCRIPTION | MOUTH | NUMBER |
|---|---|---|---|
| WT 13N08 | CERAMIC NOZZLE 13N08 Nº4 - 6MM | 6 MM | 4 |
| WT 13N09 | CERAMIC NOZZLE 13N09 Nº5 - 8MM | 8 MM | 5 |
| WT 13N10 | CERAMIC NOZZLE 13N10 Nº6 - 10MM | 10 MM | 6 |
| WT 13N11 | CERAMIC NOZZLE 13N11 Nº7 - 11MM | 11 MM | 7 |
| WT 13N12 | CERAMIC NOZZLE 13N12 Nº8 - 12.5MM | 12.5 MM | 8 |
| WT 13N13 | CERAMIC NOZZLE 13N13 Nº10 - 16MM | 16 MM | 10 |

## EXTRA LARGE CERAMIC NOZZLE WT

| PART. Nº | DESCRIPTION | MOUTH | NUMBER |
|---|---|---|---|
| WT 10N47L | CERAMIC NOZZLE 10N47L Nº7L - 11MM | 11 MM | 7L |
| WT 10N48L | CERAMIC NOZZLE 10N48L Nº6L - 10MM | 10 MM | 6L |
| WT 10N49L | CERAMIC NOZZLE 10N49L Nº5L - 8MM | 8 MM | 5L |

## NOZZLE GAS LENS WT

| PART. Nº | DESCRIPTION | MOUTH | NUMBER |
|---|---|---|---|
| WT 53N58 | NOZZLE GAS LENS 53N58 Nº4 - 6MM | 6 MM | 4 |
| WT 53N59 | NOZZLE GAS LENS 53N59 Nº5 - 8MM | 8 MM | 5 |
| WT 53N60 | NOZZLE GAS LENS 53N60 Nº6 - 10MM | 10 MM | 6 |
| WT 53N61 | NOZZLE GAS LENS 53N61 Nº7 - 11MM | 11 MM | 7 |
| WT 53N61S | NOZZLE GAS LENS 53N61S Nº8 - 12.5MM | 12.5 MM | 8 |

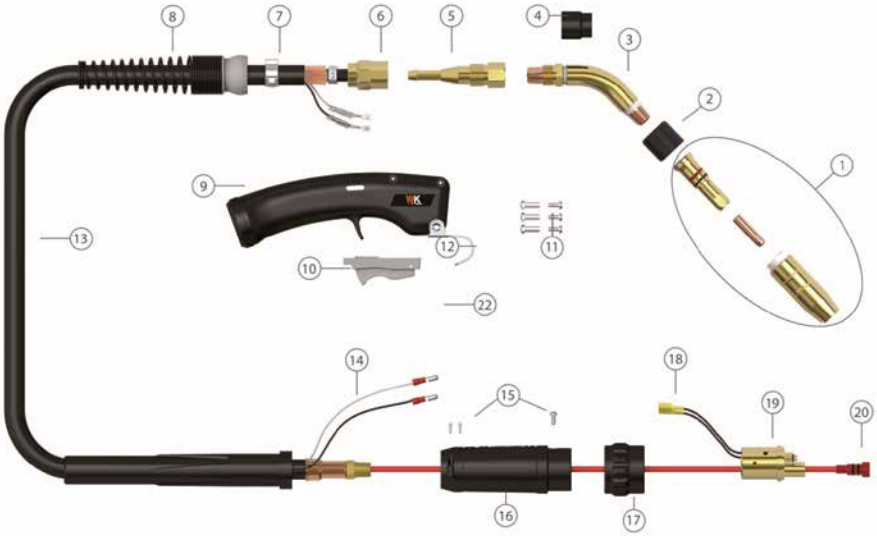
# CONSUMABLES TIG TORCH (WT)

## SHORT NOZZLE GAS LENS WT

| PART. Nº | DESCRIPTION | MOUTH | NUMBER |
|---|---|---|---|
| WT 54N14 | NOZZLE GAS LENS 54N14 Nº8 - 12,5MM | 12.5 MM | 8 |
| WT 54N15 | NOZZLE GAS LENS 54N15 Nº7 - 11MM | 11 MM | 7 |
| WT 54N16 | NOZZLE GAS LENS 54N16 Nº6 - 10MM | 10 MM | 6 |
| WT 54N17 | NOZZLE GAS LENS 54N17 Nº5 - 8MM | 8 MM | 5 |
| WT 54N18 | NOZZLE GAS LENS 54N18 Nº4 - 6MM | 6 MM | 4 |
| WT 54N19 | NOZZLE GAS LENS 54N19 Nº11 - 17MM | 17 MM | 11 |

# MIG-MAG WM 300 TORCH

DIAGRAM WM 300



## WM 300

**Welding Torches**
**Mig Torches**

The WM series of air cooled MIG MAG torches provide the welder with great versatility and ergonomics.

They are designed to withstand highly demanding work regimes. They have a point of rotation at the base of the grip for increased durability of the torch.

## Exploded

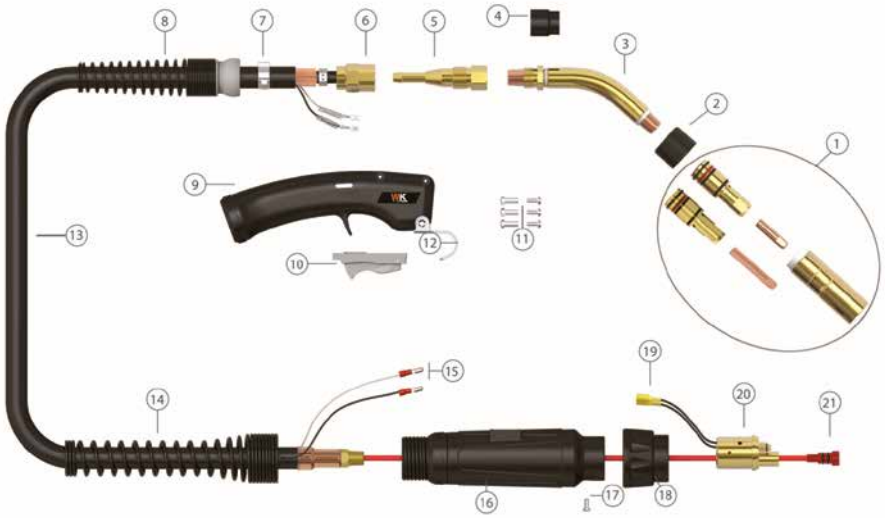
| | |
|---|---|
| 1 | See spare parts page. 65-67 |
| 2 | Nozzle insulator |
| 3 | Gooseneck |
| 4 | Neck insulator |
| 5 | Adapter nut |
| 6 | Nut |
| 7 | Clamp |
| 8 | Front spring |
| 9 | Handle |
| 10 | Trigger |
| 11 | Screws |
| 12 | Hook |
| 13 | Coaxial cable |
| 14 | Terminal male cable |
| 15 | Screws |
| 16 | Rear body |
| 17 | Lock nut |
| 18 | Terminal female cable |
| 19 | Connection cylinder |
| 20 | Towrope |

## Main features

- 300A CO2
- 200A Mixed gas
- EN60974-7
- 60% Duty Cycle
- 0.8mm - 1.2mm 500A CO2 wires

# MIG-MAG WM 400 TORCH

DIAGRAM WM 400



## WM 400

**Welding Torches**
**Mig Torches**

The WM series of MIG MAG air cooled torches provide the welder with great versatility and ergonomics.

They are designed to withstand highly demanding work regimes. They have a point of rotation at the base of the grip for increased durability of the torch.

## Exploded

| | | | |
|---|---|---|---|
| 1 | See spare parts page. 65-67 | 13 | Coaxial cable |
| 2 | Nozzle insulator | 14 | Rear spring |
| 3 | Gooseneck | 15 | Terminal male cable |
| 4 | Neck insulator | 16 | Rear body |
| 5 | Adapter nut | 17 | Screw |
| 6 | Nut | 18 | Lock nut |
| 7 | Clamp | 19 | Terminal female cable |
| 8 | Front spring | 20 | Connecting cylinder |
| 9 | Handle | 21 | Towrope |
| 10 | Trigger | | |
| 11 | Screw | | |
| 12 | Hook | | |

## Main features

- 400A CO2
- 320A Mixed gas
- EN60974-7
- 60% Duty Cycle
- Threads from 0.8mm - 1.6mm

# MIG-MAG TORCH CONSUMABLES (WM)

## WM NOZZLES

| PART. Nº | DESCRIPTION | MOUTH | THICKNESS | MATERIAL |
|---|---|---|---|---|
| WM 4492 | CONICAL NOZZLE 44492 | 14.0 | 2.95 MM | BRASS |
| WM 4491 | CYLINDRICAL NOZZLE 4491 | 19.0 | 2.95 MM | BRASS |

## WM NOZZLES

| PART. Nº | DESCRIPTION | MOUTH | THICKNESS | MATERIAL |
|---|---|---|---|---|
| WM 4295 | SUPER CONICAL NOZZLE 4295 | 9.50 | 2.85 MM | BRASS |

## WM NOZZLES

| PART. Nº | DESCRIPTION | MOUTH | THICKNESS | MATERIAL |
|---|---|---|---|---|
| WM 4391 | CYLINDRICAL NOZZLE 4391 | 16.0 | 2.85 MM | BRASS |
| WM 4392 | CONICAL NOZZLE 4392 | 12.7 | 2.85 MM | BRASS |

## WM NOZZLES

| PART. Nº | DESCRIPTION | MOUTH | THICKNESS | MATERIAL |
|---|---|---|---|---|
| WM 4592 | CONICAL NOZZLE HD 4592 | 14.0 | 2.95 MM | BRASS |

## WM NOZZLES

| PART. Nº | DESCRIPTION | MOUTH | THICKNESS | MATERIAL |
|---|---|---|---|---|
| WM 441427 | REINFORCED NOZZLE 441427 | 14.0 | 2.95 MM | BRASS |

## WM NOZZLES

| PART. Nº | DESCRIPTION | MOUTH | THICKNESS | MATERIAL |
|---|---|---|---|---|
| WM 4592EC | REINFORCED NOZZLE 4592EC | 14.0 | 2.95 MM | BRASS |

## WM NOZZLES

| PART. Nº | DESCRIPTION | MOUTH | THICKNESS | MATERIAL |
|---|---|---|---|---|
| WM 350914 | REINFORCED NOZZLE 350914 | 9.0 | 1.5 MM | BRASS |

## WM NOZZLES

| PART. Nº | DESCRIPTION | MOUTH | THICKNESS | MATERIAL |
|---|---|---|---|---|
| WM 451423 | REINFORCED NOZZLE 451423 | 14.0 | 2.95 MM | BRASS |

# MIG-MAG TORCH CONSUMABLES (WM)

## WM 300 DIFFUSERS

| PART. Nº | DESCRIPTION | MATERIAL |
|---|---|---|
| WM 4335 | GAS DIFFUSER 4335 (SHORT CONTACT TIP) | BRASS |
| WM 4235 | GAS DIFFUSER 4235 (LONG CONTACT TIP) | BRASS |

## WM 400 DIFFUSERS

| PART. Nº | DESCRIPTION | MATERIAL |
|---|---|---|
| WM 4435 | GAS DIFFUSER 4435 (SHORT CONTACT TIP) | BRASS |
| WM 4635 | GAS DIFFUSER4635 (LONG CONTACT TIP) | BRASS |

## WM 400 DIFFUSERS

| PART. Nº | DESCRIPTION | MATERIAL |
|---|---|---|
| WM 4835 | GAS DIFFUSER 4835 (LONG CONTACT TIP) | BRASS |

## WM CONTACT TUBE

| PART. Nº | DESCRIPTION | MATERIAL | WIRE DIAMETER |
|---|---|---|---|
| WM 1588 | CONTACT TUBE 0.8 MM (LARGE) - 1588 | ECU | 0.8 |
| WM 1590 | CONTACT TUBE 1.2 MM (LARGE) - 1590 | ECU | 1.2 |
| WM 1591 | CONTACT TUBE 1,6 MM (LARGE) - 1591 | ECU | 1.6 |
| WM 1596 | CONTACT TUBE 1.0 MM (LARGE) - 1596 | ECU | 1.0 |
| WM 1598 | CONTACT TUBE 1,3 MM (LARGE) - 1598 | ECU | 1.3 |

## WM CONTACT TUBE

| PART. Nº | DESCRIPTION | MATERIAL | WIRE DIAMETER |
|---|---|---|---|
| WM 4280 | CONTACT TUBE 1,6 MM - 4280 | ECU | 1.6 |
| WM 4282 | CONTACT TUBE 1,2MM - 4282 | ECU | 1.2 |
| WM 4283 | CONTACT TUBE 1,4 MM - 4283 | ECU | 1.4 |

## WM CONTACT TUBE

| PART. Nº | DESCRIPTION | MATERIAL | WIRE DIAMETER |
|---|---|---|---|
| WM 7488 | CONTACT TUBE 0,8 MM (CORTO) - 7488 | ECU | 0.8 |
| WM 7490 | CONTACT TUBE 1,2 MM (CORTO) - 7490 | ECU | 1.2 |
| WM 7491 | CONTACT TUBE 1,6 MM (CORTO) - 7491 | ECU | 1.6 |
| WM 7496 | CONTACT TUBE 1,0 MM (CORTO) - 7496 | ECU | 1.0 |
| WM 7498 | CONTACT TUBE 1,3 MM (CORTO) - 7498 | ECU | 1.3 |

# MIG-MAG TORCH CONSUMABLES (WM)

## WM LINERS

| PART. Nº | DESCRIPTION | LENGTH | WIRE DIAMETER |
|---|---|---|---|
| WM 43115 | LINER 0.8MM - 1.2MM -4,9M - 43115 | 4.9M | 0.8 - 1.2 |

## SIRGAS WM

| PART. Nº | DESCRIPTION | LENGTH | WIRE DIAMETER |
|---|---|---|---|
| WM 43215 | LINER 1.6MM - POLYAMIDE - 4.9M - 43215 | 4.9M | 1.6 |

## SIRGAS WM

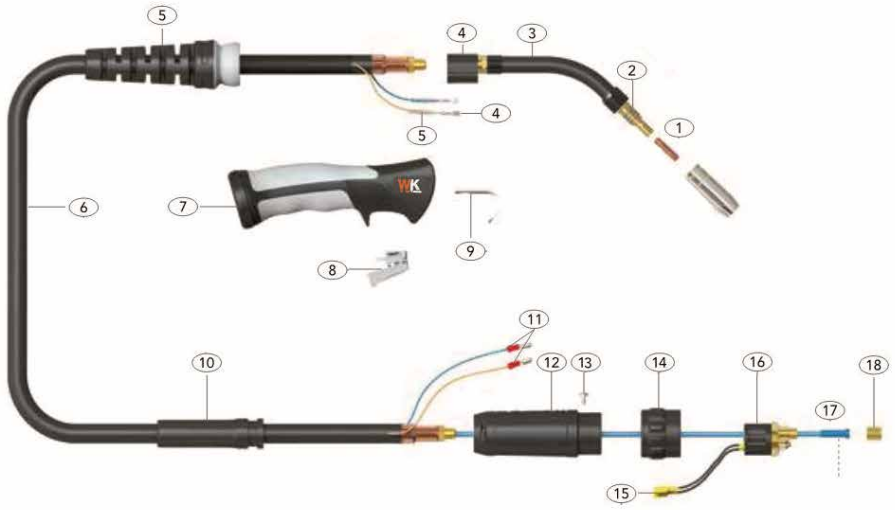
| PART. Nº | DESCRIPTION | LENGTH | WIRE DIAMETER |
|---|---|---|---|
| WM 44215 | LINER 1.2 MM - 1.6 MM - 4.9M - 44215 | 4.9M | 1.2 - 1.6 |
| WM 44225 | LINER 1.2MM - 1.6MM - 8,1M - 44225 | 8.1M | 1.2 - 1.6 |

## SIRGAS WM

| PART. Nº | DESCRIPTION | LENGTH | WIRE DIAMETER |
|---|---|---|---|
| WM 44315 | LINER 2.0 MM - 4.9M - 44315 | 4.9M | 2.0 |

# MIG-MAG WCM 150 TORCH

DIAGRAM WCM 150




## WCM 150

**Welding torches**
**Mig Torches**

The WCM series of air cooled MIG MAG torches provide the welder with great versatility and ergonomics.

They are designed to stand highly demanding work regimes. They have a rotation point at the base of the grip for increased durability of the torch.

## Exploded

| | |
|---|---|
| 1 | See spare parts on Pages 71-72 |
| 2 | Pier |
| 3 | Swan neck |
| 4 | Support sleeve |
| 5 | Articulated front cable support |
| 6 | Coaxial cable |
| 7 | Handle |
| 8 | Trigger |
| 9 | Hook |
| 10 | Rear cable support |
| 11 | Male cable terminal |
| 12 | Rear body |
| 13 | Screw |
| 14 | Lock nut |
| 15 | Terminal female cable |
| 16 | Connecting cylinder |
| 17 | Towrope |
| 18 | Towrope nut |

## Main features

- 150A CO2
- 200A Mixed gas
- EN60974-7
- 60% Duty Cycle
- Threads of 0.8mm - 1.2mm

# MIG-MAG WCM 250 TORCH

DIAGRAM WCM 250


## WCM 250

**Welding torches**
**Mig Torches**

The WCM series of MIG MAG air cooled torches provide the welder with great versatility and ergonomics.

They are designed to stand highly demanding work regimes. They have a rotation point at the base of the grip for increased durability of the torch.

## Exploded

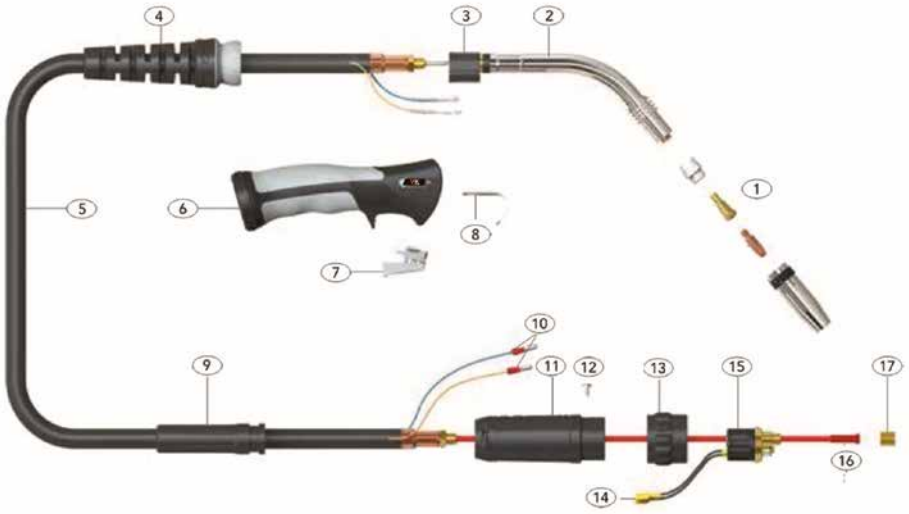
| | |
|---|---|
| 1 | (See spare parts on page Xxx) |
| 2 | Pier |
| 3 | Swan neck |
| 4 | Support sleeve |
| 5 | Articulated front cable support |
| 6 | Coaxial cable |
| 7 | Handle |
| 8 | Trigger |
| 9 | Hook |
| 10 | Rear cable support |
| 11 | Male cable terminal |
| 12 | Rear body |
| 13 | Screw |
| 14 | Lock nut |
| 15 | Terminal female cable |
| 16 | Connecting cylinder |
| 17 | Towrope |
| 18 | Towrope nut |

## Main features

- 250A CO2
- 200A Mixed gas
- EN60974-7
- 60% Duty Cycle
- Threads of 0.8mm - 1.2mm

# MIG-MAG WCM 360 TORCH

DIAGRAM WCM 360




## WCM 360

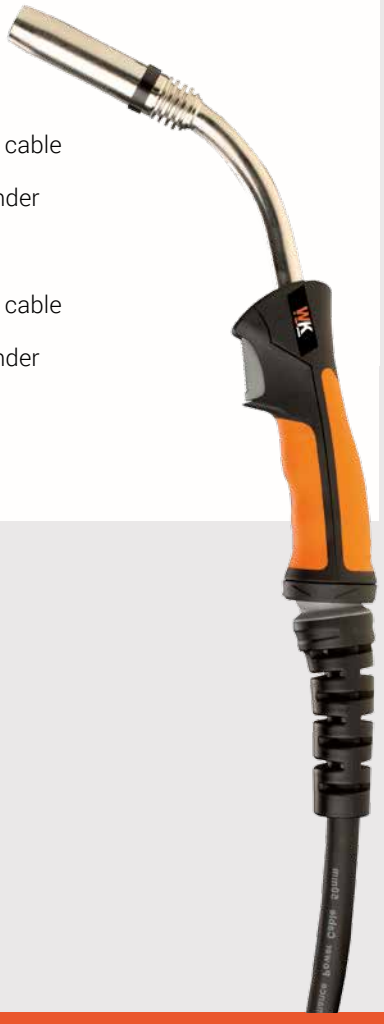
**Welding torches**
**Mig Torch**

The WCM series of air cooled MIG MAG torches provide the welder with great versatility and ergonomics.

They are designed to stand highly demanding work regimes. They are equipped with a rotation point at the base of the grip for increased durability of the torch.

## Exploded

| | |
|---|---|
| 1 | (See spare parts on page Xxx) |
| 2 | Swan neck |
| 3 | Support sleeve |
| 4 | Articulated front support |
| 5 | Coaxial cable |
| 6 | Handle |
| 7 | Trigger |
| 8 | Hook |
| 9 | Rear cable support |
| 10 | Terminal male cable |
| 11 | Rear body |
| 12 | Screw |
| 13 | Lock nut |
| 14 | Terminal female cable |
| 15 | Connection cylinder |
| 13 | Lock nut |
| 14 | Terminal female cable |
| 15 | Connection cylinder |
| 16 | Towrope |
| 17 | Towrope nut |



## Main features

- 360A CO2
- 200A Mixed gas
- EN60974-7
- 60% Duty Cycle
- Threads of 0.8mm - 1.2mm

# MIG-MAG 150-250-360 TORCH CONSUMABLES (WCM)

## NOZZLE WCM 150

| PART. Nº | DESCRIPTION | MOUTH | MATERIAL |
|---|---|---|---|
| WCM 1530 | CONICAL NOZZLE | 12 MM | COPPER |
| WCM 1531 | SUPERCONICAL NOZZLE | 10.5 MM | COPPER |

## NOZZLE WCM 250

| PART. Nº | DESCRIPTION | MOUTH | MATERIAL |
|---|---|---|---|
| WCM 2508 | CONICAL NOZZLE | 15 MM | COPPER |
| WCM 2509 | SUPERCONICAL NOZZLE | 12 MM | COPPER |

## NOZZLE WCM 360

| PART. Nº | DESCRIPTION | MOUTH | MATERIAL |
|---|---|---|---|
| WCM 3616 | CONICAL NOZZLE 3616 | 16 MM | COPPER |

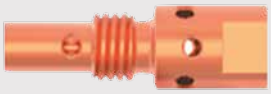
## CONTACT TIP WCM 150-250-360

| PART. Nº | DESCRIPTION | MATERIAL | WIRE DIAM. |
|---|---|---|---|
| WCM 1527-06 | CONTACT TIP M6 Ø0,6 | | 0.6 |
| WCM 1527-08 | CONTACT TIP M6 Ø0,8 | | 0.8 |
| WCM 1527-10 | CONTACT TIP M6 Ø1,0 | | 1.0 |
| WCM 1527-12 | CONTACT TIP M6 Ø1,2 | | 1.2 |
| WCM 2505-08 | CONTACT TIP M6 Ø0,8 | CuCrZr | 0.8 |
| WCM 2505-10 | CONTACT TIP M6 Ø1,0 | CuCrZr | 1.0 |
| WCM 2505-12 | CONTACT TIP M6 Ø1,2 | CuCrZr | 1.2 |
| WCM 4015-08 | CONTACT TIP M8 Ø0,8 | CuCrZr | 0.8 |
| WCM 4015-10 | CONTACT TIP M8 Ø1,0 | CuCrZr | 1.0 |
| WCM 4015-12 | CONTACT TIP M8 Ø1,2 | CuCrZr | 1.2 |
| WCM 4015-14 | CONTACT TIP M8 Ø1,4 | CuCrZr | 1.4 |
| WCM 4015-16 | CONTACT TIP M8 Ø1,6 | CuCrZr | 1.6 |
| WCM 4015-10A | CONTACT TIP M8 Ø1,0 AL | CuCrZr | 1.0 |
| WCM 4015-12A | CONTACT TIP M8 Ø1,2 AL | CuCrZr | 1.2 |
| WCM 4015-16A | CONTACT TIP M8 Ø1,6 AL | CuCrZr | 1.6 |

# MIG-MAG 150-250-360 TORCH CONSUMABLES (WCM)

## TIP ADAPTORS WCM

| PART. Nº | DESCRIPTION | MATERIAL |
|---|---|---|
| WCM 1507 L\H | TIP ADAPTOR WCM 150 M - 6 | LATON |
| WCM 2506 | TIP ADAPTOR WCM 250 M - 6 | LATON |
| WCM 2536 | TIP ADAPTOR WCM 250 M- 8 | LATON |
| WCM 3614 | TIP ADAPTOR WCM 360 M- 8 | LATON |

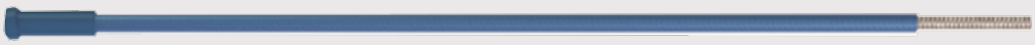


## DIFFUSERS WCM

| PART. Nº | DESCRIPTION | MATERIAL | COLOUR |
|---|---|---|---|
| WCM 3605B | BLACK DIFFUSER 360 | DMC3 | BLACK |
| WCM 3605C | CERAMIC DIFUSER WCM 360 | CERAMICO | BLACK |

## LINERS WCM

| PART. Nº | DESCRIPTION | LENGTH | WIRE DIAM. |
|---|---|---|---|
| WCM 1535-40 | STEEL LINER 0,6-0,9 | 4 M | 0.6- 0.9 |



| | | | |
|---|---|---|---|
| WCM 2524-40 | STEEL LINER 1.0-1.2 | 4 M | 1.0 - 1.2 |
| WCM 2524-50 | STEEL LINER 1.0-1.2 | 5 M | 1.0 - 1.2 |

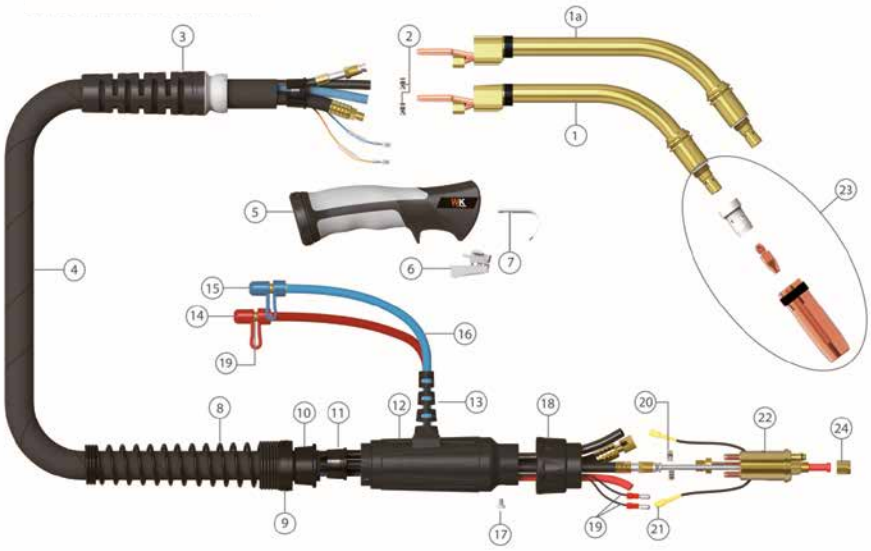
| | | | |
|---|---|---|---|
| WCM 3631-40 | STEEL LINER 1.6 | 4 M | 1.6 |

| | | | |
|---|---|---|---|
| WCM 4631-40 | STEEL LINER 2.0-2.4 | 4 M | 2.0 - 2.4 |

| | | | |
|---|---|---|---|
| WCM 1564-40 | POLYAMIDE LINER 0.6 - 0.9 | 4 M | 0.6 -0.9 |
| WCM 2564-40 | POLYAMIDE LINER 1.0-1.2 | 4 M | 1.0 - 1.2 |

# REFRIGERATED MIG-MAG TORCH WCM 501

DIAGRAM WCM 501



## WCM 501

**Welding torches**
**Cooled Mig torch**

The WCM 501 is a water-cooled torch with 30% reduced weight compared to other similar torches on the market.

Greatly functional and with an ergonomic design, it is the perfect aid for highly demanding jobs.

## Exploded

| | |
|---|---|
| 1 | Gooseneck |
| 1st | long gooseneck |
| 2 | 8.7mm water hose clamp |
| 3 | Front bracket |
| 4 | Cable set |
| 5 | Handle |
| 6 | Trigger |
| 7 | Hook |
| 8 | Rear spring |
| 9 | Spring retaining nut |
| 10 | Clamp |
| 11 | Retainer |
| 12 | Rear body assembly |
| 13 | Hose attachment |
| 14 | Red cap |
| 15 | Blue cap |
| 16 | Cooling water hose |
| 17 | Screw |
| 18 | Lock nut |
| 19 | Male cable terminal |
| 20 | Water hose clamp 9.5mm |
| 21 | Female cable terminal |
| 22 | Connection cylinder |
| 23 | See spare parts page 74 |
| 24 | Cable lock nut |

## Main features

- 500A CO2
- 450A Mixed Gas
- EN60974-7
- 100% Duty Cycle
- Threads 1.0mm - 1.6mm

# MIG-MAG 501 TORCH CONSUMABLES (WCM)

## WCM NOZZLES

| PART. Nº | DESCRIPTION | MOUTH | THICKNESS | MATERIAL |
|---|---|---|---|---|
| WCM 5027 | CYLINDRICAL NOZZLE 5027 | 19.0 | 2.5 MM | COBRE |
| WCM 5028 | CONICAL NOZZLE 5028 | 16.0 | 2.5 MM | COBRE |
| WCM 5029 | SUPERCONICAL NOZZLE 5029 | 14.0 | 2.5 MM | COBRE |

## WCM CONTACT TUBES

| PART. Nº | DESCRIPTION | MATERIAL | WIRE DIAMETER |
|---|---|---|---|
| WCM 4015-08 | CONTACT TUBE 4015-08 | CuCrZr | 0.8 |
| WCM 4015-10 | CONTACT TUBE 4015-10 | CuCrZr | 1.0 |
| WCM 4015-12 | CONTACT TUBE 4015-12 | CuCrZr | 1.2 |
| WCM 4015-14 | CONTACT TUBE 4015-14 | CuCrZr | 1.4 |
| WCM 4015-16 | CONTACT TUBE 4015-16 | CuCrZr | 1.6 |
| WCM 4015-10A | CONTACT TUBE 4015-10A | CuCrZr | 1.0 |
| WCM 4015-12A | CONTACT TUBE 4015-12A | CuCrZr | 1.2 |

## CONTACT TUBE HOLDER

| PART. Nº | DESCRIPTION | MATERIAL |
|---|---|---|
| WCM 5001 | CONTACT TUBE HOLDER 5001 | BRASS |

## WCM DIFFUSERS

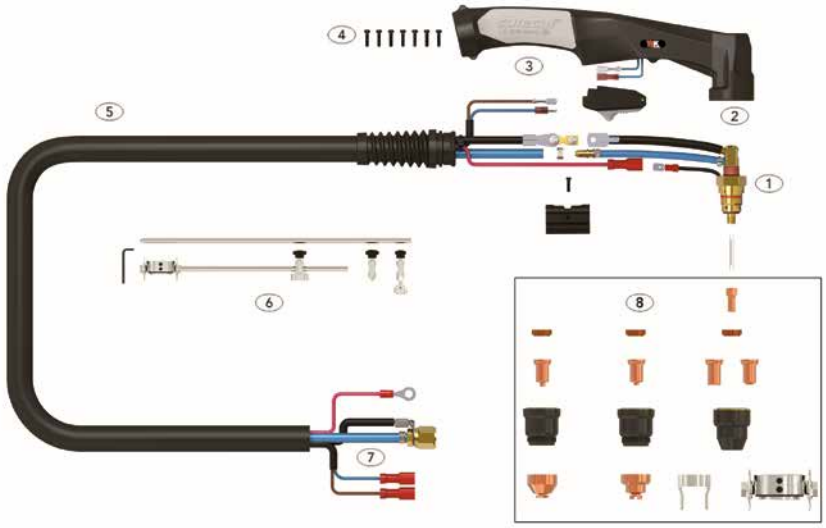
| PART. Nº | DESCRIPTION | MATERIAL | COLOUR |
|---|---|---|---|
| WCM 5005C | WCM DIFFUSER 5005C | CERAMIC | WHITE |
| WCM 5005W | WCM DIFFUSER 5005W | DMC3 | WHITE |

## WCM LINERS

| PART. Nº | DESCRIPTION | LENGHT | WIRE DIAMETER |
|---|---|---|---|
| WCM 5034-40B | LINER 1.6MM -1.6MM 5034-40B | 4.5M | 1.6 |

# PLASMA TORCH PW 80

DIAGRAM PW 80




## PW 80

**Welding torches**
**Plasma torch**

The PW series of air cooled PLASMA torches give the operator a high manageability due to its ergonomic and easy design driving. They have a patented safety button to avoid activation by mistake.

## Exploded

1 Torch head kit

2 Safety button

3 Handle

4 screws

5 Case

6 Compass carriage kit

7 Cooling tube

8 See spare parts on page 76-77

## Main features

- 80A AIR / GAS N2
- EN 60974-7
- 60% Duty Cycle
- 6m cable

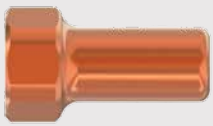
# PLASMA TORCH CONSUMABLES (PW)

## COOLING TUBE PW

| PART. Nº | DESCRIPTION |
|---|---|
| PW 0280 | GAS COOLING TUBE |

## ELECTRODE PW

| PART. Nº | DESCRIPTION |
|---|---|
| PW 0480 | PLASMA ELECTRODE |

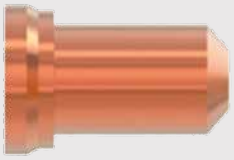


## SWIRL RINGS PW

| PART. Nº | DESCRIPTION |
|---|---|
| PW 0680 | SWIRL RING |

## CUTTING TIPS PW

| PART. Nº | DESCRIPTION | CUT-OFF AMPS |
|---|---|---|
| PW 2080-10 | CUTTING TIP PW 2080-10 1,0MM | 40-50 AMP |
| PW 2080-11 | CUTTING TIP PW 2080-11 1,1MM | 50-60 AMP |
| PW 2080-12 | CUTTING TIP PW 2080-12 1,2MM | 60-70 AMP |
| PW 2080-13 | CUTTING TIP PW 2080-13 1,3MM | 70-80 AMP |



## CONTACT CUTTING TIPS PW

| PART. Nº | DESCRIPTION | CUT-OFF AMPS |
|---|---|---|
| PW 2680-10 | CONTACT CUTTING TIP PW 2680-10 1,0MM | 40-50 AMP |
| PW 2680-11 | CONTACT CUTTING TIP PW 2680-11 1,1MM | 50-60 AMP |
| PW 2680-12 | CONTACT CUTTING TIP PW 2680-12 1,2MM | 60-70 AMP |
| PW 2680-13 | CONTACT CUTTING TIP PW 2680-13 1,3MM | 70-80 AMP |

## GOUGIN TIP PW

| PART. Nº | DESCRIPTION |
|---|---|
| PW 2880-16 | GOUGING TIP PW 2880-16 |

## RETAINING CAPS

| PART. Nº | DESCRIPTION |
|---|---|
| PW 3080 | RETAINING CAP PW 80 |

## SHIELD CAP BODY

| PART. Nº | DESCRIPTION |
|---|---|
| PW 3180 | SHIELD CAP BODY PW 80 |

# PLASMA TORCH CONSUMABLES (PW)

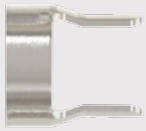
## SHIELD CAP PW

| PART. Nº | DESCRIPTION |
|---|---|
| PW 4180 | SHIELD CAP PW 80 |

| PART. Nº | DESCRIPTION |
|---|---|
| PW 4380 | SHIELD CAP GOUGIN PW 80 |

## STAFF OFF GUIDES PW

| PART. Nº | DESCRIPTION |
|---|---|
| PW4080 | SPACER PW 4080 |

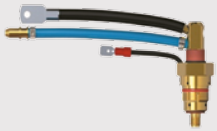


## CUTTING BUGGIES PW

| PART. Nº | DESCRIPTION |
|---|---|
| PW 5180 | CUTTING BUGGIE PW |

| | |
|---|---|
| PW 5080 | COMPAS CAR KIT PW |

| | |
|---|---|
| PW8001 | TORCH HEAD KIT PW |



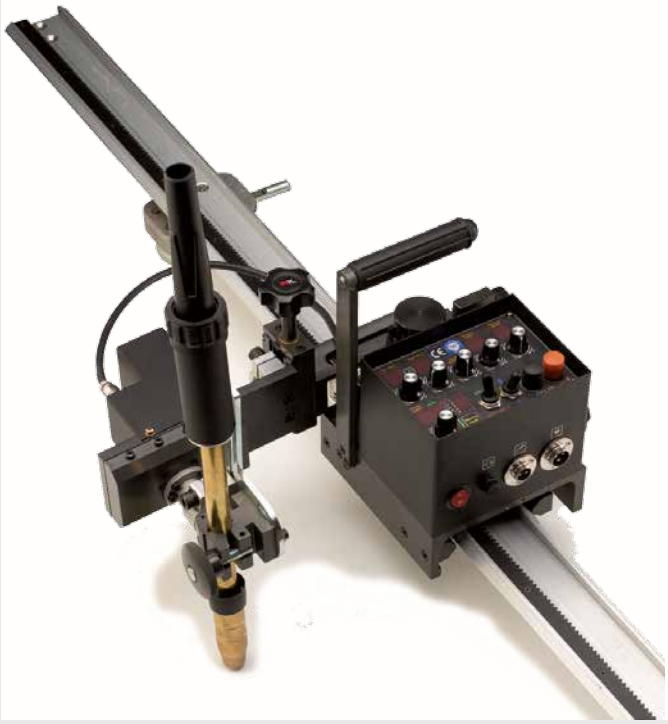
| | |
|---|---|
| PW 0280 | COOLING TUBE PW |

| | |
|---|---|
| PW 8014 | SAFETY BUTTON PW |

| | |
|---|---|
| PW 8014 | HANDLE PW |


# Automation

# AUTOMATED WELD. RIGID RAIL WITH OSCILLATOR



## WK 100 GRA

**Welding automatons**
**Guide/rail automatons**

The WK 100 GRA is a welding automaton with a rigid aluminium rail and magnet fixing ON / OFF. The automaton has a transversal oscillator with full adjustment of the oscillation parameters (amplitude, speed, type, stop time, etc).

The WK 100 GRA includes optional use of a flexible rack rail that allows adaptation to the contour of the workpiece, instead of the rigid aluminum rail.

## Main features

Butt or fillet weld for all positions. Equipped with oscillator.

Rigid aluminum rail and easy control of the equipment by local panel or remote control.

Limit switches on both sides of the automat to stop the trolley movement and welding.

Precise control of welding speed.

Rail with ON / OFF magnets for easy assembly and disassembly.
Precise oscillation control to achieve constant oscillations, ensuring welding quality.

Programmable speed in cm / min or inches / min.

## Technical data

| | |
|---|---|
| • Model | WK 100 GRA |
| • Power | WK 100 GRA |
| • Frequency | 50/60 Hz |
| • Dimensions | 340 X 209 X 241 |
| • Weight | 6.8 KG |
| • Engine | DC24V, 12W, 5000 RPM |
| • Reducer | 1000:1 |
| • Rack-pinion | Gear shift method |
| • Speed | 0-88 CM/MIN |
| • Amplitude of oscillation | 16º |

| | |
|---|---|
| • Oscillation speed | 0-5 RPM |
| • Stop time in extremes | 0.0-9.9 SEG. |
| • Distance for remote control operation | 10M |
| • Magnetic fixing of the rail Magnets | ON/OFF |
| • Rail length | 1,5M |
| • Rail weight | 5.4 KG |
| • Material | AL |

# AUTOMATED WELD. FLEXIBLE GUIDE WITH OSCILLATOR

## WK 61 GFD

**Welding automaton**
**Guide/rail automaton**

The WK 61 GFD is a digital version of the WK 7 W GFA, it has the same characteristics of the WK 7 W GFA, but is controlled by means of a digital panel which allows a reduction in the size and weight of the automaton.

It has a flexible guide that can be adapted to any contour of the workpiece.

The fixation of this guide is done by magnets with an ON / OFF device which greatly facilitate the work assembly and disassembly of the guides. The automaton has an oscillator with multiple adjustable modes .

## Main features

Butt / fillet weld for curved parts and flexible rail pull with panel and remote control.

Limit switches on both sides of the automat to stop the trolley movement and welding.

Magnetic movement: 4 wheels with flexible guide and minimum curvature of 3 meters in two dimensions and magnets with magnetic on / off release for easy assembly/ disassembly.

Equipped with a motor-reducer that provides constant and precisely adjustable speed to achieve the highest welding quality and useful life.

Precise oscillation control to achieve constant oscillations, maintaining weld quality.

Programmable speed in cm / min or inches / min.

Fully digital control panel.

## Technical data

| | |
|---|---|
| • Model | WK 61 GFD |
| • Power | AC 100V-230V |
| • Frequency | 50/60 Hz |
| • Dimensions | 334 X 224 X 273 |
| • Weight | 8.0 KG |
| • Engine | DC24V, 12W, 5000 RPM |
| • Reducer | 1000:1 |
| • 4-wheel drive method | |
| • Speed | 0-98 CM/MIN |
| • Amplitude of oscillation | 16º |

| | |
|---|---|
| • Oscillation speed | 0-5 RPM |
| • Stop time in extremes | 0.0-9.9 SEG. |
| • Distance for remote control operation | 10M |
| • Magnetic fixing of the rail Magnets | ON / OFF |
| • Rail length | 1,5M |
| • Rail weight | 3,4 KG |
| • Material | MC Nylon |

# AUTOMATED WELD. FLEXIBLE GUIDE WITH OSCILLATOR

## WK 7W GFA

**Welding robots**
**Guide / rail robots**

For each type of welded joint, WK offers an automated system, and WK 7W GFA is a good example. It is a magnetic automaton with a flexible guide that adapts to any contour of the workpiece.

The fixation of this guide is done by magnets and an ON / OFF device which greatly simplifies assembly and disassembly of the guides.
The automaton has an oscillator with multiple adjustable modes.

## Main features

Butt / fillet weld for curved parts and flexible rail pull with panel and remote control.

Limit switch sensors on both sides of the automat to stop the trolley and workpiece from moving.

Magnetic translation with 4 wheels with flexible guide with a minimum curvature of 3 meters in two dimensions and magnetic release magnets for easy assembly and disassembly.

Equipped with a motor-reducer that provides constant and precisely adjustable speed to achieve highest welding quality and long life.

Precise oscillation control to achieve constant oscillations while maintaining welding quality.

Programmable speed in cm / min or inches / min

## Technical data

| | |
|---|---|
| • Model | WK 7W GFA |
| • Power | AC 100V-230V |
| • Frequency | 50/60 Hz |
| • Dimensions | 334 X 224 X 273 |
| • Weight | 8.0 KG |
| • Engine | DC24V, 12W, 5000 rpm |
| • Reducer | 1000:1 |
| • Scroll method | 4 Traction wheels |
| • Speed | 0-98 CM/MIN |
| • Oscillation amplitude | 16º |

| | |
|---|---|
| • Oscillation speed | 0-5 RPM |
| • Stop time in extremes | 0.0-9.9 SEG. |
| • Distance for remote control operation | 10M |
| • Magnetic fixing of the rail magnets | ON/OFF |
| • Rail size | 1,5M |
| • Rail weight | 3,4 KG |
| • Material | MC Nylon |

# AUTOMATED CORNER WELD

## WK 71 R12

**Welding automaton**
**Corner automatons**

The WK 71 R12 is a magnetic welding machine for corner and flat welding. Its versatility comes from its small size and light weight.
Handling is simple and user-friendly.

## Main features

Fillet welding for both stitching and continuous welding.

Equipped with a motor-reducer that provides constant and precise adjustable speed to achieve the highest welding quality and longer useful life.

It achieves a 75º inclination and has a limit switch on both sides of the trolley.

Fills the crater at the beginning and end of the weld.

The magnet has a magnetic release device that allows for easy assembly and disassembly.

Small size and weight with strong magnets to hold the workpiece.

Stitches, continuous welding and programmable travel speed in cm / min or inches / min.

## Technical data

| | |
|---|---|
| • Model | WK 71 R12 |
| • Power | AC 110V-230V |
| • Frequency | 50/60Hz |
| • Dimensions | 198X314X281 |
| • Weight | 5,6 Kg |
| • Engine | DC24V 12W 5000RPM |
| • Reducer | 400:1 |
| • 4-wheel drive method | |
| • Speed | 100 – 950 MM/MIN |

• Functions
Selection of start stop, speed adjustment, forward direction, torch activation selector.
Selection of spot or continuous welding.

# CORNER WELD. AUTOMATON

## WK 471 R13

**Welding automatons**
**Corner automatons**

WK 471 R13 is a magnetic corner welding machine. It is compact and lightweight which also allows a total regulation range in the tilt of the torch.

This enables the operator to carry out welding in areas where the access of the torch is more limited due to the fact that virtually any angle can be obtained, as triple regulation is available.

## Main features

Multi-pass welding for greater neck where required.

Equipped with a motor-reducer that provides constant and precisely adjustable speed to achieve top welding quality and long useful life.

Ability to climb slopes of 75º. It has end-of-stroke sensors for the automatic stop of the equipment and torch deactivation.

Fills the crater at the beginning and end of the weld.

Easy activation and deactivation of the magnet.

Small size and weight with strong magnets to hold onto the workpiece.

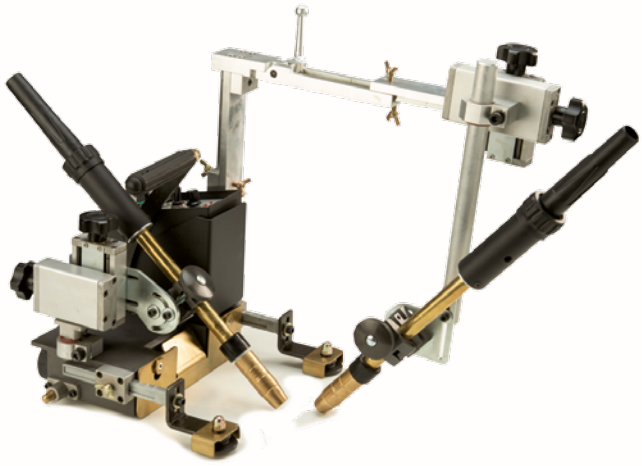
Programmable speed in cm / min or inches / min.

## Technical data

| | |
|---|---|
| • Model | WK 471 R13 |
| • Power | AC 100V-230V |
| • Frequency | 50/60 Hz |
| • Dimensions | 323 X 360-399 X 269 |
| • Weight | 6.2 KG |
| • Engine | DC24V, 12W, 5000 RPM |
| • 4-wheel drive method | |
| • Speed | 0-98 CM/MIN |

| | |
|---|---|
| • Traction power | 20 KGS |
| • Inclination angle | 0-75º |

# AUTOMATED WELD. CORNER DOUBLE TORCH



## WK 51B R22V

**Welding automatons**
**Corner automaton**

The WK 51B R22V is an automaton designed for corner welding both sides simultaneously. It incorporates a support arm of the second torch that can be adjusted in height and width which allows adaptation.
to several reinforcement measures in a simple way.

## Main features

Fillet welding on both sides simultaneously.

Spot or continuous welding.

Precise control of welding speed.

Ability to climb slopes of 50º. It has end-of-stroke sensors for the automatic stop of the equipment and torch deactivation.

Fills the crater at the beginning and end of the Weld.

Easy activation and deactivation of the magnet.

Programmable speed in cm / min or inches / min.

## Technical data

| | |
|---|---|
| • Model | WK 51B R22V |
| • Power | AC 100V-230V |
| • Frequency | 50/60 Hz |
| • Dimensions | 359 X 437-585 X 544 |
| • Weight | 10.5 KG |
| • Engine | DC24V, 12W, 5000 RPM |
| • Reducer | 1000:1 |
| • 4-wheel drive method | |
| • Speed | 0-98 CM/MIN |

| | |
|---|---|
| • Traction power | 25 KGS |
| • Inclination angle | 50º |
| • Magnet power | 30 KGS |

# AUTOMATED WELD. CORNER DOUBLE TORCH TANDEM

## WK 31 R22P

**Welding automatons**
**Corner automaton**

When cornering multi-pass is required, the WK 31 R22P is the best option since it has a double tandem torch that makes it possible to give two beads on one side of the reinforcement simultaneously.

## Main features

Indicated for welding where large necks are required when welding with two torches simultaneously in tandem mode

It has end-of-stroke sensors for the automatic stop of the equipment and torch deactivation

Adjustable distance between torches

Precise control of welding speed

Easy activation and deactivation of the magnet

Programmable speed in cm / min or inches / min

## Technical data

| | |
|---|---|
| • Model | WK 31 R22P |
| • Power | AC 100V-230V |
| • Frequency | 50/60 Hz |
| • Dimensions | 359 x 437-585 x 544 |
| • Weight | 10.5 KG |
| • Engine | DC24V, 12W, 5000 RPM |
| • Reducer | 1000:1 |
| • Drive method | 4 wheel |
| • Speed | 0-98 CM/MIN |

| | |
|---|---|
| • Traction power | 25 KGS |
| • Inclination angle | 50º |
| • Magnet power | 30KGS |

# AUTOMATED WELD CORNER WITH OSCILLATOR

## WK B71W R120B

**Welding automaton**
**Vertical automaton**

It is a magnetic automaton for welding in corner and monitoring by probes.

The WK B71W R120B It has a pendulum oscillator with multiple modes of regulation for perfect welding control. At WK B71W R120B stop times can be set in extremes, oscillation speeds, oscillation types,amplitude, etc.

The WK B71W R120B has battery power rechargeable with an autonomy of 8h which eliminates the need of power cables in the work area.

## Main features

Automaton for welding with oscillation controlled by local panel or remote control.

Oscillation controls can be adjusted for perfect weld bead quality.

It has end-of-stroke sensors for the automatic stop of the equipment and deactivation of the torch.

Easy activation and deactivation of the magnet.

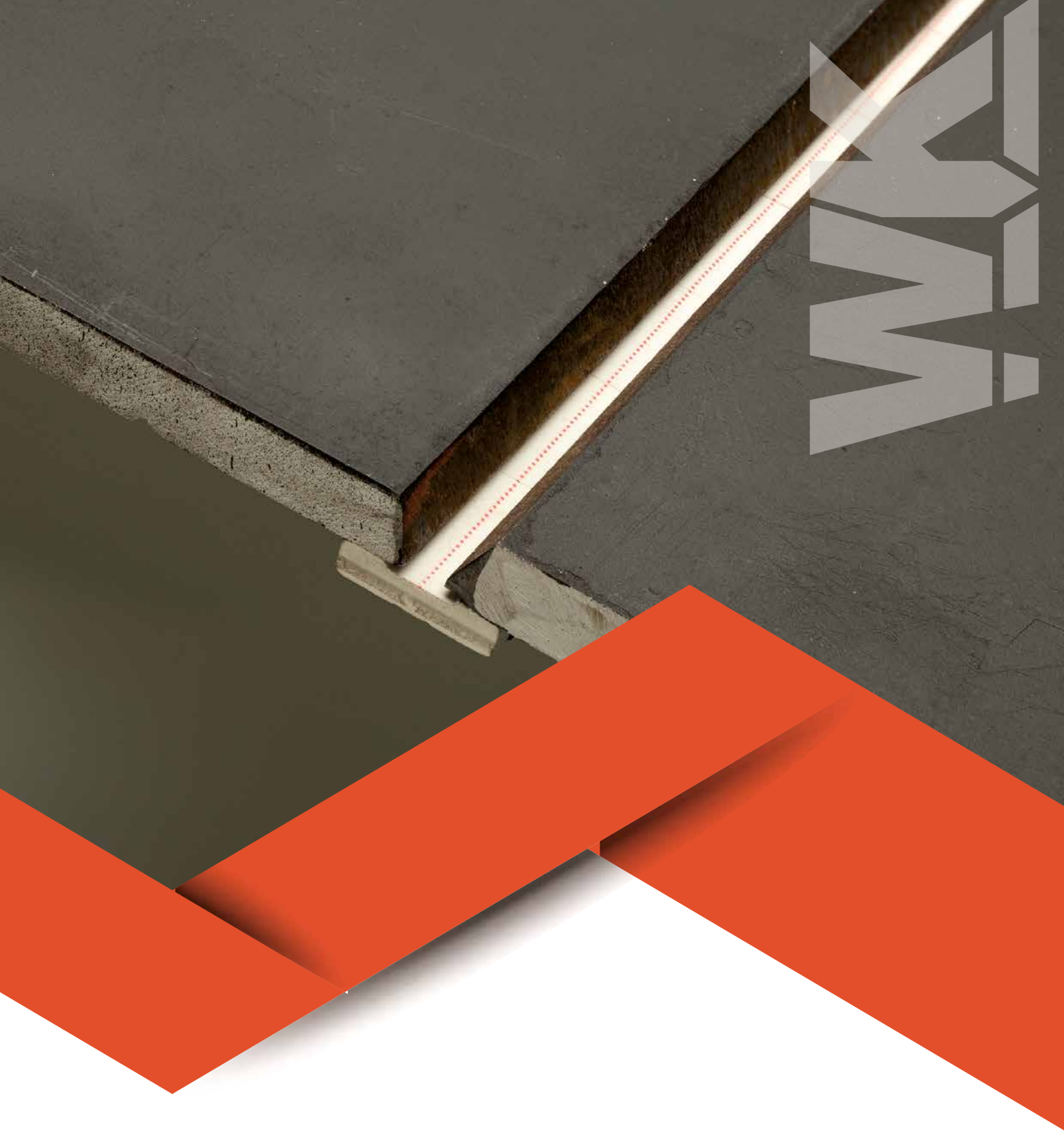
Programmable speed in cm / min or inches / min.

Accepts both straight and curved neck torch..
WK B71W R120 cable powered version available

## Technical data

| | |
|---|---|
| • Model | WK B71W R120B |
| • Power | AC 100V-230V |
| • Frequency | 50/60 Hz |
| • Dimensions | 298 X 316 X 283 |
| • Weight | 6.5 KG |
| • Engine | DC24V, 12W, 5000 RPM |
| • Reducer | 1000:1 |
| • Displacement method | 4 tractor wheels |
| • Speed | 0-88 CM/MIN |
| • Amplitude of oscillation | 16º |

| | |
|---|---|
| • Oscillation speed | 0-5 RPM |
| • Time stopped at extremes | 0.0-9.9 SEG. |
| • Distance for operation with remote control | 10M |



# Ceramic Backing

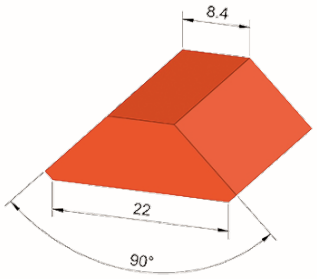
# CERAMIC BACKING

WK offers a wide range of ceramic supports for quick and easy application with self-adhesive aluminum strip. Ceramic CBW supports facilitate and secure the root pass which is a critical part of the welding process. Given their high refractory power, higher welding currents can be used and they are prepared to offer high quality welding without porosity and without alterations in the chemical composition of the bead.

## BACKING CBW 1045/45

### MAIN FEATURES

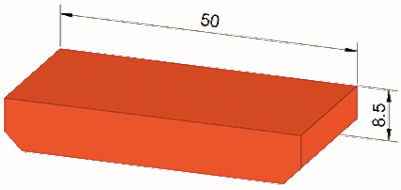
| | |
|---|---|
| Length / Piece (mm) | 600 |
| No. Pieces / Bag | 10 |
| No. Pieces / Box | 60 |
| Total length / Box (m) | 36 |
| Weight / Box (Kg) | 16 |
| Dimensions Box (mm) | 630X240X100 |




## BACKING CBW 1050/50

### MAIN FEATURES

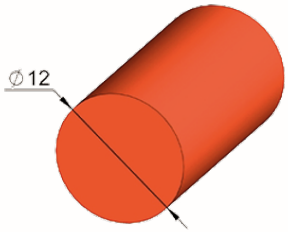
| | |
|---|---|
| Length / Piece (mm) | 600 |
| No. Pieces / Bag | 10 |
| No. Pieces / Box | 40 |
| Total length / Box (m) | 24 |
| Weight / Box (Kg) | 23.5 |
| Dimensions Box (mm) | 630X240X100 |




## BACKING CBW 1100/12

### MAIN FEATURES

| | |
|---|---|
| Length / Piece (mm) | 600 |
| No. Pieces / Bag | 20 |
| No. Pieces / Box | 100 |
| Total length / Box (m) | 60 |
| Weight / Box (Kg) | 16 |
| Dimensions Box (mm) | 630X240X11 |

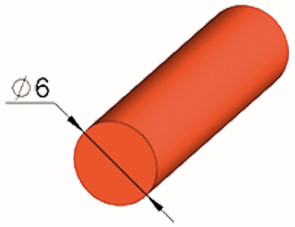


# CERAMIC BACKING

## BACKING CBW 1100/06

### MAIN FEATURES

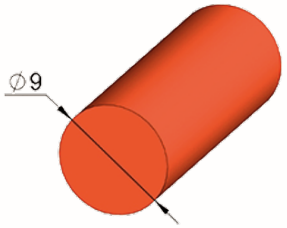
| | |
|---|---|
| Length / Piece (mm) | 600 |
| No. Pieces / Bag | 50 |
| No. Pieces / Box | 250 |
| Total length / Box (m) | 150 |
| Weight / Box (Kg) | 13 |
| Dimensions Box (mm) | 630X240X110 |




## BACKING CBW 1100/09

### MAIN FEATURES

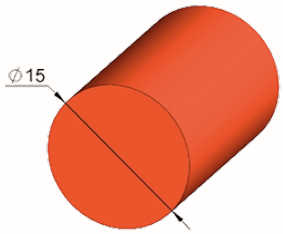
| | |
|---|---|
| Length / Piece (mm) | 600 |
| No. Pieces / Bag | 20 |
| No. Pieces / Box | 140 |
| Total length / Box (m) | 84 |
| Weight / Box (Kg) | 15 |
| Dimensions Box (mm) | 630X240X110 |




## BACKING CBW 1100/15

### MAIN FEATURES

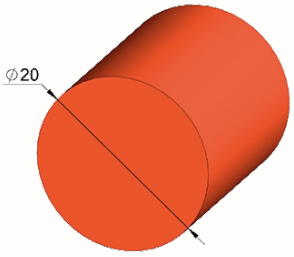
| | |
|---|---|
| Length / Piece (mm) | 600 |
| No. Pieces / Bag | 15 |
| No. Pieces / Box | 75 |
| Total length / Box (m) | 45 |
| Weight / Box (Kg) | 17 |
| Dimensions Box (mm) | 630X240X110 |




## BACKING CBW 1100/20

### MAIN FEATURES

| | |
|---|---|
| Length / Piece (mm) | 600 |
| No. Pieces / Bag | 10 |
| No. Pieces / Box | 30 |
| Total length / Box (m) | 18 |
| Weight / Box (Kg) | 12 |
| Dimensions Box (mm) | 630X180X100 |

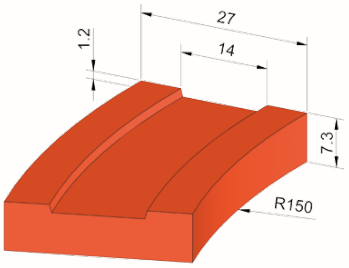


# CERAMIC BACKING

## BACKING CBW R150

### MAIN FEATURES

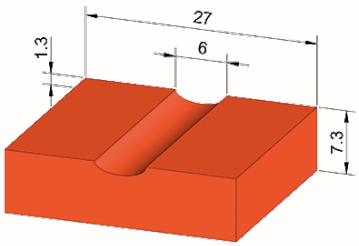
| | |
|---|---|
| No. Pieces / Bag | 4 |
| No. Bags / Box | 18 |
| No. Pieces / Box | 72 |
| Weight / Box (Kg) | 9 |
| Dimensions Box (mm) | 630X240X100 |




## BACKING CBW 1500/06

### MAIN FEATURES

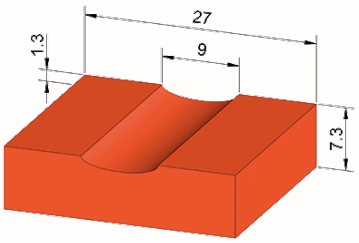
| | |
|---|---|
| Length / Piece (mm) | 600 |
| No. Pieces / Bag | 10 |
| No. Pieces / Box | 60 |
| Total length / Box (m) | 36 |
| Weight / Box (Kg) | 16 |
| Dimensions Box (mm) | 630X240X100 |




## BACKING CBW 1500/09

### MAIN FEATURES

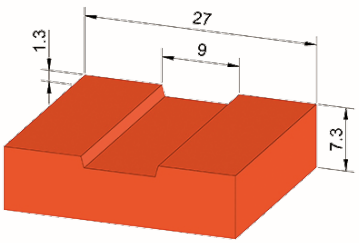
| | |
|---|---|
| Length / Piece (mm) | 600 |
| No. Pieces / Bag | 10 |
| No. Pieces / Box | 60 |
| Total length / Box (m) | 36 |
| Weight / Box (Kg) | 16 |
| Dimensions Box (mm) | 630X240X100 |




## BACKING CBW 1500/09F

### MAIN FEATURES

| | |
|---|---|
| Length / Piece (mm) | 600 |
| No. Pieces / Bag | 10 |
| No. Pieces / Box | 60 |
| Total length / Box (m) | 36 |
| Weight / Box (Kg) | 16 |
| Dimensions Box (mm) | 630X240X100 |

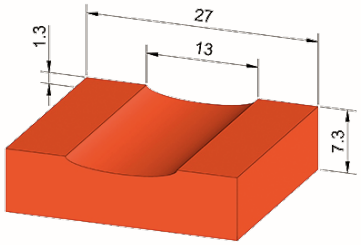


# CERAMIC BACKING

## BACKING CBW 1500/13

### MAIN FEATURES

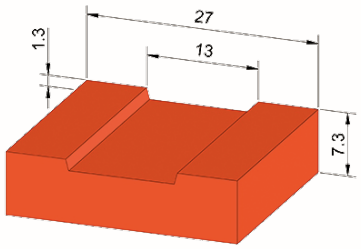
| | |
|---|---|
| Length / Piece (mm) | 600 |
| Nº Pieces / Bag | 10 |
| No. Pieces / Box | 60 |
| Total Length / Box (m) | 36 |
| Weight / Box (Kg) | 16 |
| Dimensions Box (mm) | 630X240X100 |




## BACKING CBW 1500/13F

### MAIN FEATURES

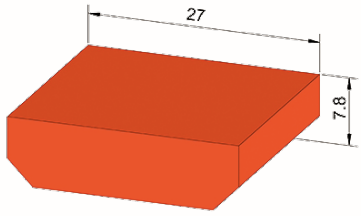
| | |
|---|---|
| Length / Piece (mm) | 600 |
| Nº Pieces / Bag | 10 |
| No. Pieces / Box | 60 |
| Total Length / Box (m) | 36 |
| Weight / Box (Kg) | 16 |
| Dimensions Box (mm) | 630X240X100 |




## BACKING CBW 1500/27

### MAIN FEATURES

| | |
|---|---|
| Length / Piece (mm) | 600 |
| Nº Pieces / Bag | 10 |
| No. Pieces / Box | 60 |
| Total Length / Box (m) | 36 |
| Weight / Box (Kg) | 16 |
| Dimensions Box (mm) | 630X240X100 |




# Protection Equipment

# VEKTOR R60 AUTOMATIC WELDING SCREEN

## VEKTOR R60

**Protection**
**Welding screen**

Vektor R60 automatic filter screen uses the latest auto-darkening filter technology (ADF). With 4 arc sensors and a 100x60 display, it provides the welder with an optimal viewing area.

## Main features

Optimal viewing area for the welder 100x60 (3.94" x 2.36")

4 independent arc sensors to provide instant detection of the welding arc

Weld / Cut / Rough mode selection function

Exceptional low amperage performance in TIG welding

Solar panel powered and replaceable lithium batteries

Two ranges of hue selection: DIN 5-8 / 9-13

EN379 1 / 1 / 1 / 2

Manufactured in accordance with CE EN175

# INFINITY V98 AUTOMATIC WELDING SCREEN

## INFINITY V98

**Protection**
**Welding screen**

The Infinity V98 automatic filter display uses the new auto-darkening filter technology (ADF 9100) True Color, which provides the welder with a visión of the actual color of the items. With 4 arc sensors and a 100x90 screen provides the welder with an optimal vision area.

## Main features

Optimal viewing area for the welder 100x90 (3.94" x 3.54")

True Color vision of elements.

4 independent arc sensors to provide instant detection of the welding arc

Weld / Cut / Rough mode selection function

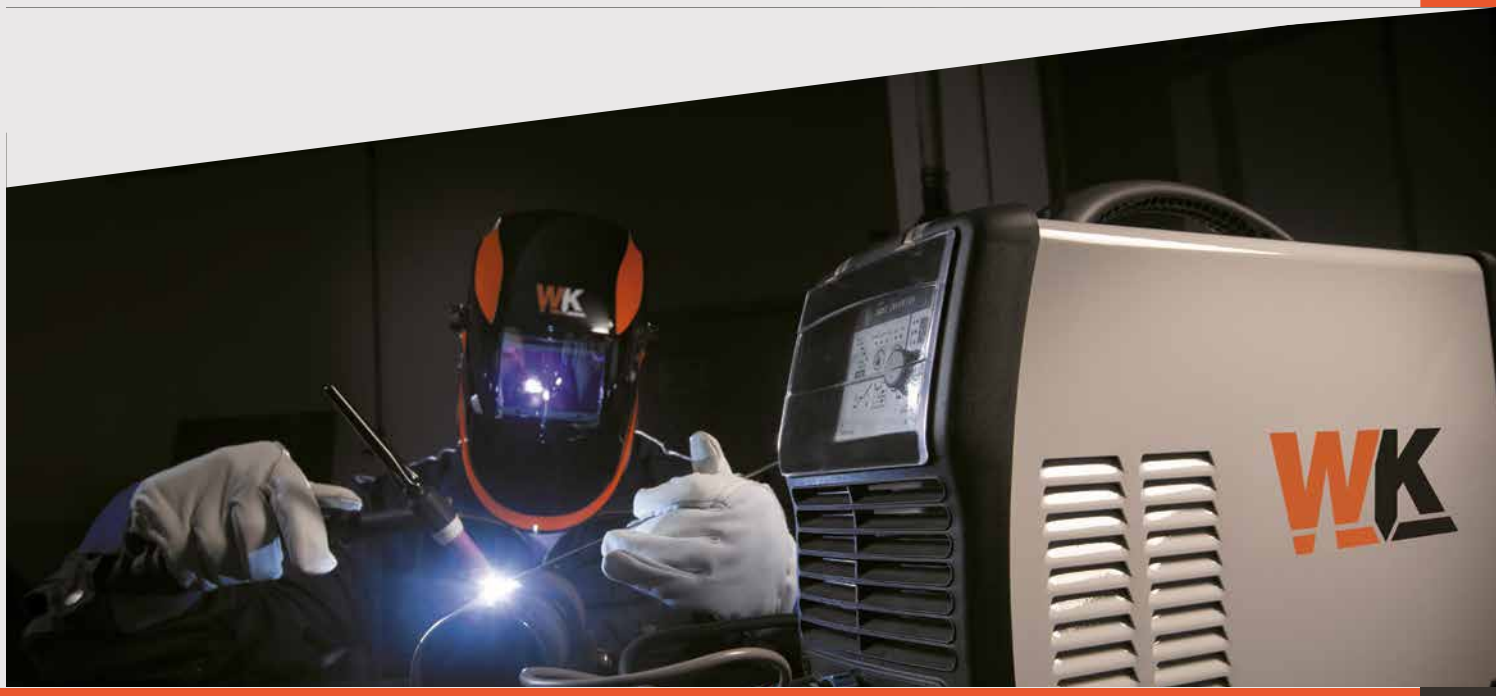
Exceptional low amperage performance in TIG welding

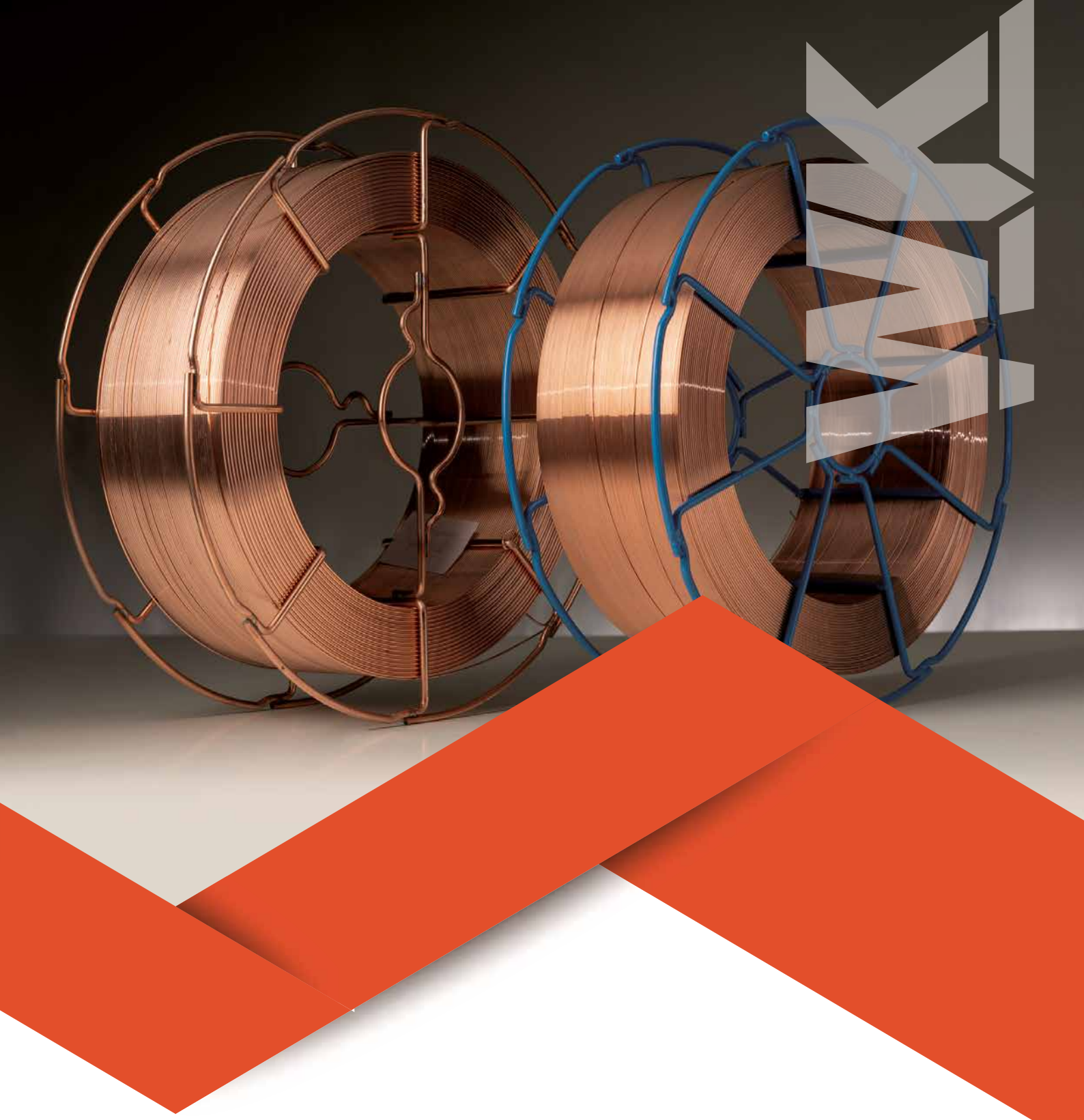
Solar panel powered and replaceable lithium batteries

Two shade selection ranges: DIN 5-8 / 9-13

EN379 1 / 1 / 1 / 2

Manufactured in accordance with CE EN175





# Welding
# Consumables

# SOLID WIRE SFA1


## SFA 1

**Welding wire**
**Solid Wire**

SFA 1 is a solid butt welding wire and fillet in shipbuilding, bridges, steel structural, structures, machinery and vehicles.

Can be used with CO2 or mixed gases Ar + CO2 and supports a wide range amperages.

Low level of projections.

## Clasification

| | |
|---|---|
| EN ISO 14341-A: 2008 | G42 2 C1 G3Si1 |
| | G42 2 M21 G3Si1 |
| AWS 5.18 | ER70S-6 |

## Polarity and Gas Protection

| | |
|---|---|
| CO2 | 100% CO2 |
| MIX | AR + 20% CO2 |
| DCEP | (DC+) |

## Weld metal chemical composition

| | |
|---|---|
| C | 0,07 |
| Mn | 1,48 |
| Si | 0,87 |
| P | 0,013 |
| S | 0,009 |

## Weld Metal Mecanical Propierties

| | |
|---|---|
| AWS 5.18 | |
| Y.P. (Mpa) | >=420 |
| T.S. (Mpa) | >=500 |
| EL (%) | >22 |
| Impact Value | >=27 |
| Impact Temperature | -30 |

## Applications

Suitable for steel construction and machinery production.
Welding of ships, boliers and pipes.

## Diameters

| | | |
|---|---|---|
| 0,8mm | 1,0mm | 1,2mm |

# SOLID WIRE SFA 100


## SFA 100

**Welding wire**
**Solid Wire**

Is a low alloy, copper clad wire for (MIG/MAG) GMAW welding of high mechanical strength steels that require tough weld metal for critical applications.

It is also suitable for welding steels that require high impact resistance at low temperatures. The SFA -100 normally uses M21-M33 mixed gas and CO2 as shielding gas.

## Clasification

| | |
|---|---|
| EN ISO 16834-A | G 69 4 M21 Mn3Ni1CrMo |
| AWS SFA 5.28 | ER100S-G |

## Polarity and Gas Protection

| | |
|---|---|
| CO2 | 100% CO2 |
| MIX | AR + 20% CO2 |
| DCEP | (DC+) |

## Weld metal chemical composition

| | |
|---|---|
| C | 0,07 |
| Mn | 1,4 |
| Si | 0,8 |
| P | <0,020 |
| S | <0,020 |
| Ni | 0,5 |
| Cr | 0,6 |
| Mo | 0,25 |

## Weld Metal Mecanical Propierties

| | |
|---|---|
| AWS SFA 5,28 | |
| Y.P. (Mpa) | >=550 |
| T.S. (Mpa) | >=700 |
| A%5d | 20 |
| KV (J) -50°C | >=50 |

## Applications

T 1, UH 90, ASA 75T, Asera 60N, StE 460, Weldox 500, Weldox 700, etc.

## Diameters

| | | |
|---|---|---|
| 1,0mm | 1,2mm | 1,6mm |

# FLUX CORED WIRE SFA T-50

## SFA T-50

**Welding Wire**
**Flux cored wire**

SFA T-50 is a cored wire designed for welding in all position in single pass and multi-pass.

Use CO2 or mixed gas 20% - 25% CO2 + Ar as shielding gases. .Excellent weldability, stable arc and low level of projections.

Good appearance of the weld. Easy slag removal. Lower levels of smoke compared to solid wire.

High level of efficiency and productivity due to the high rate of deposition.

## Clasification

| | |
|---|---|
| EN ISO 17632-A | T 46 2 P M21 1 H10 |
| | T 46 2 P C1 1 H5 |
| AWS 5.36 | E71T1-C1 [M21] A2-CS1-H8 |
| AWS 5.20 | A5.20 E71T-9C/9M |

## Polarity and Gas protection

| | |
|---|---|
| CO2 | 100% CO2 |
| MIX | AR + 20% CO2 |
| DCEP | (DC+) |

## Weld metal chemical composition

| | CO2 | MIX GAS |
|---|---|---|
| C | 0,04 | 0,05 |
| Mn | 1,2 | 1,45 |
| Si | 0,45 | 0,55 |
| P | 0,01 | 0,015 |
| S | 0,01 | 0,01 |

## Weld Metal Mecanical Propierties

| | CO2 | MIX GAS |
|---|---|---|
| Y.P. (N/mm2) | 461 | 486 |
| T.S. (N/mm2) | 544 | 567 |
| EL (%) | 30,6 | 32,9 |
| IV (J) -20ºC | 101 | 84 |
| IV (J) -30ºC | 78 | 60 |

## Applications

Suitable for fillet and butt welding on mild steel and in structural steel of high resistance of (490 mpa).Used in the shipbuilding industry, bridges, metal structure, storage tanks and industrial machinery.

## Diameters

| | | |
|---|---|---|
| 1,2mm | 1,4mm | 1,6mm |


www.wkwelding.com
info@wkwelding.com