Flux Cored Welding Wire

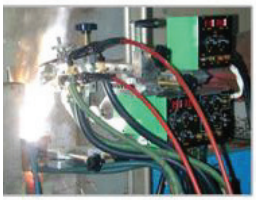
# Electro Gas Welding

EGW single & tandem

## Electro Gas Welding (EGW)

### EGW applications

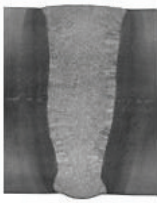
The purpose of EGW is highly efficient welding for vertical-up butt welding for heavy plate.
This process use the auto-carriage, it has excellent low temperature thoughness at high heat input (200~270KJ/cm)
Welding wire type divide by single & tandem, should be used to suitable type wire



EGW welding machine

Face part

Root part



Welding shape

## Descriptions

① It is designed for automatic V-up butt welding
② Wire provides high deposition rate with a welding wire due to high welding condition
③ It feature excellent mechanical properties, easy slag removal, low spatter generation, good bead shape

## Notes on usage and welding condition

① It should be used only DCEP polarity
② Once a wire was unpacked, the wire should be kept in an area of low humidity. If this note doesn't keep, it is possible to occur of weld defect

## Speccification

| Type | Brand name | Classification | |
|---|---|---|---|
| | | AWS | JIS |
| For Single | K-EG2 (3Y) | A5.26-1997(R2003) EG70T-2 | JIS Z 3319-1999 YFEG-22C |
| | Approvals | ABS, BV, DNV.GL, LR, KR, NK, CCS | |
| | K-EG3 (5Y) | A5.26-1997(R2003) EG82T-G | JIS Z 3319-1999 YFEG-20G |
| | Approvals | - | |
| For Tandem | K-EG3 / K-EG3R (4Y) | A5.26-1997(R2003) EG70T-G | - |
| | Approvals | ABS, BV, DNV.GL, LR, KR, NK, CCS | |
| Self-shield (Non gas type) | K-ES2 (2Y) | A5.26-1997(R2003) EG72T-1 | - |
| | Approvals | ABS | |

* Please refer to our homepage(www.kiswel.com) for further detailed information regarding approvals.

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## Typical chemical composition of all-weld metal (%)

100% $CO_2$

| Brand name | Chemical Composition of all-weld metal | | | | | | |
|---|---|---|---|---|---|---|---|
| | C | Si | Mn | P | S | Ni | Mo |
| K-EG2 (3Y, Single) | 0.04 | 0.33 | 1.65 | 0.012 | 0.011 | 0.03 | 0.24 |
| K-EG3 (5Y, Single) | 0.04 | 0.20 | 1.50 | 0.011 | 0.012 | 1.80 | 0.24 |
| Tandem K-EG3 / K-EG3R (4Y) | 0.04 | 0.20 | 1.50 | 0.014 | 0.009 | 1.50 | 0.14 |
| K-ES2 (2Y, Single) (Non gas type) | 0.08 | 0.32 | 1.39 | 0.014 | 0.006 | 0.25 | 0.15 |

## Typical mechanical properties of all-weld metal

100% $CO_2$

| Brand name | | Mechanical Properties Y.S. ($N/mm^2$) | T.S. ($N/mm^2$) | El. (%) | IV (J) | Heat Input (KJ/cm) |
|---|---|---|---|---|---|---|
| Single | K-EG2 (3Y) | 448 | 576 | 30 | -20℃: 120 | 260.0 |
| | K-EG3 (5Y) | 520 | 670 | 28 | -60℃: 80 | 246.0 |
| Tandem | K-EG3 / K-EG3R (4Y) | 430 | 550 | 25 | -20℃: 85<br>-40℃: 50 | 620.0 |
| K-ES2 (2Y, Single) (Non gas type) | | 500 | 594 | 30 | -30℃: 44 | 375.0 |

## Notes on usage and welding condition

| Brand name | | Dia.(mm) | Polarity | Welding condition (A) | Welding speed | Shielding gas |
|---|---|---|---|---|---|---|
| Single | K-EG2 / K-EG3 | 1.6 | DC+ | 340~380 (34~38) | 3~4 CPM | 100%$CO_2$, (35ℓ/min) |
| Tandem | K-EG2 / K-EG3 | 1.6 | DC+, DC- | 360~420 (36~40) | | |
| K-ES2 (single) (Non gas type) | | 2.4 | DC+ | 470~530 (37~43) | | Non gas type |

## Welding positions

## Package

| Brand name | Dia.(mm) | Weight(Kg) |
|---|---|---|
| K-EG2 / K-EG3 | 1.6 | 15, 20 |
| K-ES2 | 2.4 | 25 |