

Crown E 308LT-1 FC

Gas Shielded Flux Cored Arc Welding
(FCAW-G)

Stainless Steel

All Position



Premium Gas Shielded Flux Cored Arc Welding for Stainless Steel

Typical Applications

Crown E308LT-1 FC is an *all-position* gas-shielded flux cored stainless steel electrode for flux cored arc welding (FCAW). **Crown E308LT-1 FC** will produce high quality weldments in all positions of welding. It is used for welding types 301, 302, 304, 304L, 308 and 308L. This flux cored wire may also be used for welding types 321 and 347 if the service temperature does not exceed 500°F. Both deposition rate and efficiency are better than that of covered stainless steel electrodes. Compared to the solid GMAW (MIG) process, **Crown E308LT-1 FC** achieves all-position capability without using a pulsed power source or short circuit transfer. **Crown E308LT-1 FC** will attain a higher deposition rate and better weld quality than GMAW (MIG) welding with solid wire. The weld deposits exhibit superior radiographic quality.

Specifications

AWS A5.22/A5.22M

E 308LT1-1/T1-4

- Tensile Strength 86,000 psi (typical)
- Yield Strength 58,500 psi (typical)
- Elongation 45% (typical)

Procedure

Feed rolls of common configurations (knurled, U-grooved, or flat and V-grooved combination) can be used, but feed roll pressures should not exceed a firm finger-tight setting. A properly sized nylon or Teflon cable liner will promote optimum wire feeding. The wire must be carefully cut to insure roundness before attempting to feed it through a contact tip. The welded bead should have essentially no ripple. This smooth, unrippled appearance is characteristic of weld beads produced by the **E308LT-1 FC**. Welding must be done using a constant voltage (CV) DC machine. If used on a constant current (CC) machine, any small changes in electrical stickout (length of wire from the end of the contact tip to the workpiece) will produce large voltage fluctuations, resulting in stubbing and porosity. Weld in the DC reverse polarity position. Electrode extension or stick out should be 1/2" to 1". The optimum range is from 5/8" to 3/4". Slag inclusions are best avoided by using backhand welding technique. **The optimum shielding gas is 100% CO₂. Pure CO₂ provides more resistance to worm tracks than does an Argon-CO₂ blend. Spatter can be reduced slightly by using a 75% Argon/25% CO₂ shielding gas.**

| Shielding Gas 100% CO ₂ | .035 Wire Diameter | | | |
|------------------------------------|--------------------|------|------|------|
| Welding Current (amps) | 100 | 120 | 140 | 170 |
| Arc Voltage (volts) | 23 | 23 | 25 | 26 |
| Wire Feed Speed (ipm) | 265 | 315 | 405 | 530 |
| Deposition Rate (lbs/hr) | 2.9 | 3.4 | 4.6 | 5.7 |
| % Efficiency | 83.9 | 81.4 | 82.6 | 81.8 |

When using a 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts

| Shielding Gas 100% CO ₂ | .045 Wire Diameter | | | |
|------------------------------------|--------------------|------|------|-------|
| Welding Current (amps) | 130 | 165 | 190 | 220 |
| Arc Voltage (volts) | 25 | 26 | 28 | 30 |
| Wire Feed Speed (ipm) | 227 | 341 | 445 | 567 |
| Deposition Rate (lbs/hr) | 4.25 | 6.14 | 8.08 | 10.24 |
| % Efficiency | 84.0 | 83.0 | 84.0 | 84.0 |

When using a 75% Argon / 25% CO₂ mixture, decrease voltage by as much as 2 volts. When welding in the flat or horizontal position use 180-200 amps, 25-27 volts, 450 in/min. When welding in the vertical-up position use 150-170 amps, 24-26 volts, 325 in/min. When welding in the overhead position use 175-195 amps, 25-27 volts, 425 in/min.

Sizes and Part Numbers

| MIG Diameter | Part Numbers | | |
|--------------|------------------|------------|--------------|
| | 2 lb (4") Spools | 8" Spools | 33 lb Spools |
| .035 | SS308L1/1F | SS308L1/2F | SS308L1/3F |
| .045 | SS308L1/1G | SS308L1/2G | SS308L1/3G |

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Filler Metal Selector Guide for Stainless Steels (page 1)

| Stainless Steel or Steel Base Alloy | 442 | 430F | 430 | 501 | 416 | 403 | 321 | 317 | 316L | 316 | 314 | 310 | 309 | 304L | 303 | 201 | MILD STEEL | | | | |
|-------------------------------------|-----|--------|-----|-----|-------|-----|------|-----|------|-----|--------|------|------|------|--------|------|------------|-----|-----|------|-----|
| | 446 | 430FSE | 431 | 502 | 416SE | 405 | 348 | | | | | 310S | 309S | 304L | 303SE | 202 | | 301 | 302 | 302B | 304 |
| 201-202 | 310 | 310 | 310 | 310 | 309 | 309 | 347 | 308 | 308 | 308 | 308, | 308 | 308 | 308 | 308 | 308 | 312 | | | | |
| 301-302 | 312 | 312 | 312 | 312 | 310 | 310 | 308 | 316 | 316 | 316 | 309 | | | | | 310 | | | | | |
| 302B-304 | 309 | 309 | 309 | 309 | 312 | 312 | | 317 | | | 310 | | | | | 309 | | | | | |
| 305-308 | | | | | | | | | | | | | | | | | | | | | |
| 303 | 310 | 310 | 310 | 310 | 309 | 309 | 347 | 308 | 308 | 308 | 308, | 308 | 308 | 308 | 308-15 | 308 | 312 | | | | |
| 303SE | 309 | 309 | 309 | 309 | 310 | 310 | 308 | 316 | 316 | 316 | 309 | | | | | 310 | | | | | |
| | 312 | 312 | 312 | 312 | 312 | 312 | 317 | 317 | | | 310 | | | | | 309 | | | | | |
| 304L | 310 | 310 | 310 | 310 | 309 | 309 | 347 | 308 | 308L | 308 | 308, | 308 | 309 | 308L | 308 | 308 | 312 | | | | |
| | 309 | 309 | 309 | 309 | 310 | 310 | 308L | 316 | | 316 | 309 | | 308 | | | 310 | | | | | |
| | 312 | 312 | 312 | 312 | 312 | 312 | 317 | 317 | | 310 | 310 | | 309 | | | 309 | | | | | |
| 309 | 310 | 310 | 310 | 310 | 309 | 309 | 347 | 317 | 316 | 316 | 309 | 309 | 309 | 309 | 308 | 308 | 309 | | | | |
| 309S | 309 | 309 | 309 | 309 | 310 | 310 | 308 | 316 | 309 | 309 | 310 | 310 | 310 | 308 | | 310 | | | | | |
| | 312 | 312 | 312 | 312 | 312 | 312 | 309 | 309 | | 310 | | | | | | 312 | | | | | |
| 310 | 310 | 310 | 310 | 310 | 310 | 310 | 347 | 317 | 310 | 316 | 310 | 310 | 309 | 308 | 308 | 308 | 310 | | | | |
| 310S | 309 | 309 | 309 | 309 | 309 | 309 | 308 | 316 | 316 | 310 | | | 310 | | | 309 | | | | | |
| | 312 | 312 | 312 | 312 | 312 | 312 | 309 | 309 | 309 | 309 | | | | | | 312 | | | | | |
| 314 | 310 | 310 | 310 | 310 | 310 | 310 | 309 | 309 | 309 | 309 | 310-15 | 310 | 309 | 308, | 308, | 308, | 310 | | | | |
| | 312 | 312 | 312 | 312 | 312 | 309 | 310 | 310 | 310 | 310 | | | 310 | 309 | 309 | 309 | 309 | | | | |
| | 309 | 309 | 309 | 309 | 309 | 312 | 347 | 317 | 316 | 316 | | | | 310 | 310 | 310 | 312 | | | | |
| 316 | 310 | 310 | 310 | 310 | 309 | 309 | 347 | 316 | 316 | 316 | 309 | 316 | 316 | 308 | 308 | 308 | 309 | | | | |
| | 309 | 309 | 309 | 309 | 310 | 310 | 308 | 308 | | | 310 | 310 | 309 | 316 | 316 | 316 | 310 | | | | |
| | 312 | 312 | 312 | 312 | 312 | 312 | | | | | 316 | 309 | 310 | 316 | 316 | 316 | 312 | | | | |
| 316L | 310 | 310 | 310 | 310 | 309 | 309 | 347 | 316 | 316L | 316 | 309 | 310 | 316 | 308L | 308 | 308 | 309 | | | | |
| | 309 | 309 | 309 | 309 | 310 | 310 | 308 | 317 | | | 310 | 316 | 309 | 316 | 316 | 316 | 310 | | | | |
| | 312 | 312 | 312 | 312 | 312 | 312 | 308 | 308 | | | 316 | 309 | | | | 316 | 312 | | | | |

Bold numbers indicate first choice, light numbers indicate second and third choice. This choice can vary with specific applications and individual job requirements.

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Filler Metal Selector Guide for Stainless Steels *(page 2)*

| Stainless Steel or Steel Base Alloy | 442 | 430F 430FSE | 430 431 | 501 502 | 416 416SE | 403 405 410 420 414 | 321 348 347 | 317 | 316L | 316 | 314 | 310 310S | 309 309S | 304L | 303 303SE | 201 202 301 302 302B 304 305 308 | MILD STEEL |
|-------------------------------------|-------------------|-------------------|---------------------------|-------------------|---------------------------|---------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|---|-------------------|
| 317 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 309 310 312 | 309 310 312 | 308 347 | 317 | 316 317 308 | 316 308 | 309 310 317 | 317 316 309 | 317 316 309 | 308 316 317 | 308 316 317 | 308 316 317 | 309 310 312 |
| 321 348 347 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 309 310 312 | 309 310 312 | 347 | 308 347 | 347 308 | 347 308 | 309 310 347 | 347 308 | 347 308 | 347 308L 308 | 347 308 | 347 308 | 309 310 312 |
| 403-405 410-420 414 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 410-15* 309** 310** | 410* 309** | 309 310 312 | 309 310 312 | 309 310 312 | 309 310 312 | 310 309 312 | 310 309 312 | 309 310 312 | 309 310 312 | 309 310 312 | 309 310 312 | 309 310 312 |
| 416 416SE | 310 309 | 310 309 | 310 309 | 310 | 410-15* | 410-15* 309** 310** | 309 310 312 | 309 310 312 | 309 310 312 | 309 310 312 | 310 312 309 | 310 309 312 | 309 310 312 | 309 310 312 | 309 310 312 | 309 310 312 | 309 310 312 |
| 501 502 | 310 | 310 | 310 | 502* 310** | 310 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 312 309 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 312 309 | 310 312 309 |
| 430 431 | 310 309 | 310 309 | 430-15* 310** 309** | 310 | 310 309 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 312 309 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 312 309 | 310 309 312 |
| 430F 430FSE | 310 309 | 410-15* | 310 309 | 310 | 310 309 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 312 309 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 312 309 | 310 309 312 |
| 442 446 | 309 310 | 310 309 | 310 309 | 310 | 310 309 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 312 309 | 310 309 312 | 310 309 312 | 310 309 312 | 310 309 312 | 310 312 309 | 310 309 312 |

*Preheat **No Preheat Necessary Bold numbers indicate first choice, light numbers indicate second and third choice. This choice can vary with specific applications and individual job requirements.



!!!! WARNING !!!!



WELDING FUMES AND GASES CAN BE DANGEROUS TO YOUR HEALTH.

BEFORE USING THIS PRODUCT THE WELDER (END-USER) MUST READ AND UNDERSTAND THE COMPLETE PRODUCT WARNING LABEL AND THE NEW 16 SECTION SAFETY DATA SHEET (SDS).

THE SAFETY DATA SHEET (SDS) WHICH OUTLINES THE POTENTIAL HEALTH HAZARDS AND SAFETY INFORMATION RELATED TO THIS PRODUCT CAN BE DOWNLOADED FROM THE SDS PORTION OF THIS WEBSITE. IT IS ALSO AVAILABLE FROM YOUR EMPLOYER AND WELDING SUPPLY DISTRIBUTOR.

DO NOT PROCEED WITH USE OF THIS PRODUCT UNTIL YOU READ AND UNDERSTAND THE SAFETY DATA SHEET (SDS) AND PRODUCT WARNING STATEMENT.

BE SURE TO CONSULT THE LATEST VERSION OF THE SDS.

SEE THE PRODUCT WARNING LABEL AND SDS FOR COMPLETE WARNING INFORMATION.

