

# FabCO<sup>®</sup> 125K4



AWS A5.29: E120T5-K4C H4

**WELDING POSITIONS:**



**FEATURES:**

- Very high tensile strength deposit
- Basic slag system
- Very high weld ductility and low-temperature toughness
- Large diameter wires with high deposition rates
- Low diffusible hydrogen weld deposit

**BENEFITS:**

- Suitable for use with many ~120 KSI (830 MPa) Quench & Tempered (Q&T) and High-Strength Low-Alloy (HSLA) Steels
- Very effective at removing impurities to produce a high-quality weld deposit
- Helps minimize the risk of cracking in critical applications and repairs
- Helps increase travel speeds and productivity
- Minimizes the risk of hydrogen-induced cracking

**APPLICATIONS:**

- Single or multi-pass welding
- Industrial machinery
- Heavy equipment
- Transportation
- Casting repair
- Q&T Steels
- HSLA Steels

**SLAG SYSTEM:** Slow-freezing, basic-type, flux-cored wire

**SHIELDING GAS:** 100% Carbon Dioxide (CO<sub>2</sub>), 35-50 cfh (17-24 l/min)

**TYPE OF CURRENT:** Direct Current Electrode Positive (DCEP)

**STANDARD DIAMETERS:** 1/16" (1.6 mm)

**RE-DRYING:** Not recommended

**STORAGE:** Product should be stored in a dry, enclosed environment, and in its original packaging

**TYPICAL WELD METAL CHEMISTRY\* (Chem Pad):**

Weld Metal Analysis (%)	100% CO <sub>2</sub>	AWS Spec
Carbon (C)	0.06	0.15
Manganese (Mn)	1.30	1.20-2.25
Silicon (Si)	0.36	0.80
Phosphorus (P)	0.011	0.03
Sulphur (S)	0.014	0.03
Nickel (Ni)	2.31	1.75-2.60
Chromium (Cr)	0.51	0.20-0.60
Molybdenum (Mo)	0.55	0.20-0.65

**Note:** AWS specification single values are maximums.

**TYPICAL DIFFUSIBLE HYDROGEN\*:**

Hydrogen Equipment	100% CO <sub>2</sub>	AWS Spec
(GAS CHROMATOGRAPHY)	1.5 ml/100g	4.0 ml/100g Maximum

**TYPICAL MECHANICAL PROPERTIES\* (As Welded):**

Mechanical Tests	100% CO <sub>2</sub>	AWS Spec
Tensile Strength	125,000 psi (862 MPa)	120,000-140,000 psi (830-970)
Yield Strength	109,000 psi (752 MPa)	108,000 psi (745 MPa) Minimum
Elongation % in 2" (50 mm)	16%	14% Minimum

**TYPICAL CHARPY V-NOTCH IMPACT VALUES\* (As Welded):**

CVN Temperatures	100% CO <sub>2</sub>	AWS Spec
Avg. at -60°F (-50°C)	45 ft•lbs (61 Joules)	20 ft•lbs (27 Joules) Minimum

\*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and Hobart Brothers Company expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with the AWS A5.29 specification. Other tests and procedures may produce different results. No data is to be construed as a recommendation for any welding condition or technique not controlled by Hobart Brothers Company.

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Diameter		Weld Position	Amps	Volts	Wire Feed Speed		Deposition Rate		Contact Tip to Work Distance	
Inches	(mm)				in/min	(m/min)	lbs/hr	(kg/hr)	Inches	(mm)
1/16	(1.6)	Flat & Horizontal	200	25	200	(5.1)	7.1	(3.2)	3/4	(19)
1/16	(1.6)	Flat & Horizontal	350	28	360	(9.1)	13.2	(6.0)	1	(25)
1/16	(1.6)	Flat & Horizontal	425	34	485	(12.3)	18.0	(8.2)	1	(25)

- **Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**
- **See Above:** This information was determined by welding using 100% CO<sub>2</sub> shielding gas with a flow rate between 35-50 cfh (17-24 l/min).

**STANDARD DIAMETERS AND PACKAGES:** For a complete list of diameters and packaging, please contact Hobart Brothers at (800) 424-1543 or (937) 332-5188 for International Customer Service.

Diameter		60-lb. (27.2kg)	600-lb. (272.2kg)
Inches	(mm)	Coil	Drum / X-Pak
1/16	(1.6)	S655519-002	S655519-056

**CONFORMANCES AND APPROVALS:**

- **AWS A5.29**, E120T5-K4C H4
- **AWS A5.29M**, E831T5-K4C H4
- **ASME SFA 5.29**, E120T5-K4C H4

**TECHNICAL QUESTIONS?** For technical support of Hobart Filler Metals products, contact the Applications Engineering department by phone toll-free at 1-800-532-2618 or by e-mail at [Applications.Engineering@hobartbrothers.com](mailto:Applications.Engineering@hobartbrothers.com)

**CAUTION:**

Consumers should be thoroughly familiar with the safety precautions on the warning label posted in each shipment and in the American National Standard Z49.1, "Safety in Welding and Cutting," published by the American Welding Society, 8669 NW 36th St., Miami, FL 33166 (can be downloaded online at [www.aws.org](http://www.aws.org)); OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service or at [www.hobartbrothers.com](http://www.hobartbrothers.com).

Because Hobart Brothers Company is constantly improving products, Hobart reserves the right to change design and/or specifications without notice.

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