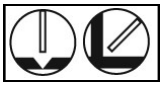
FabCOR® F6

AWS A5.18: E70C-GS
EN ISO 17632-A: T3T Z Z M M20 3, T3T Z Z M M21 3
EN ISO 17632-B: T43 Z TG 0 M20 A-G, T43 Z TG 0 M21 A-G

AWS WELDING POSITIONS

EN WELDING POSITIONS



FEATURES:

- Formulated specifically for automated and mechanized welding of galvanized steels
- Good arc characteristics
- Higher deposition rates than solid wire
- Excellent gap-bridging capabilities
- Formulated and intended for use with DCEN polarity
- Strong and ductile weld deposit

BENEFITS:

- Helps to minimize porosity while maintaining very high travel speeds
- Promotes consistent weld quality and appearance
- Increases productivity
- Suitable for automated and mechanized applications
- Minimizes risk of burn-through, improves deposition rate
- Suitable for the single-pass welding of a wide range of thin-gauge carbon and high-strength low-alloy (HSLA) steels

APPLICATIONS:

- Non-alloyed and fine-grained steels
- Single-pass welding
- Thin-gauge steels (17ga minimum)
- Galvanized and zinc coated steels
- Aluminized coated steels
- HVAC fabrication
- Automotive and transportation
- Storage vessels
- Fencing and railing

WIRE TYPE: Gas-shielded, metal-powder, metal-cored wire

SHIELDING GAS: 75-95% Argon (Ar)/Balance Carbon Dioxide (CO_2), 35-50 cfh (17-24 l/min)

TYPE OF CURRENT: Direct Current Electrode Negative (DCEN)**
FabCOR F6 is suitable for use with both constant-voltage (CV) and pulsed-waveform (pulse/GMAW-P) modes

STANDARD DIAMETERS: 0.035” (0.9 mm), 0.039” (1.0 mm), 0.045” (1.2 mm), 1/16 (1.6 mm)

RE-DRYING: Not recommended

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

TYPICAL UNDILUTED WELD METAL CHEMISTRY* (Chem Pad):

Weld Metal Analysis (%)	80% Ar/20% CO_2	90% Ar/10% CO_2	AWS Spec
Carbon (C)	0.13	0.13	Not specified
Manganese (Mn)	1.55	1.64	Not specified
Silicon (Si)	0.84	1.10	Not specified
Phosphorus (P)	0.009	0.010	Not specified
Sulphur (S)	0.016	0.012	Not specified

Note: AWS specification single values are maximums.

TYPICAL MECHANICAL PROPERTIES* (As Welded):

Mechanical Tests	80% Ar/20% CO_2	90% Ar/10% CO_2	AWS Spec
Transverse Tensile Strength	76,000 psi (524 MPa) (Base Metal Failure)	76,500 psi (527 MPa) (Base Metal Failure)	70,000 psi (480 MPa) Minimum
Longitudinal Bend Test Result	Conforms; no discontinuities	Conforms; no discontinuities	180° Bend w/ 0.75” (19mm) radius. Surface discontinuities must be <1/8” (3.2mm)

** Direct Current Electrode Positive (DCEP) polarity used for classification purposes only.
*The information contained or otherwise referenced herein is presented only as “typical” without guarantee or warranty, and Hobart Brothers LLC expressly disclaims any liability incurred from any reliance thereon. Typical data are those obtained when welded and tested in accordance with the AWS A5.18 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 LLC.

Hobart Brothers LLC • 101 Trade Square East • Troy, OH 45373
PH: (800) 424-1543 • FX: 800-541-6607 • www.hobartbrothers.com

FabCOR® F6

TYPICAL OPERATING PARAMETERS (using Miller® Continuum ™ with galvanized Accupulse™ pulse program)

Diameter Inches	(mm)	Weld Position	Average Amps	Average Volts	Wire-Feed Speed in/min	(m/min)	Deposition Rate lbs/hr	(kg/hr)	Contact Tip to Work Distance Inches	(mm)
0.035	(0.9)	Flat, Horizontal & Vertical Down	140	18.0	380	(9.7)	5.3	(2.4)	5/8	(16)
0.035	(0.9)	Flat, Horizontal & Vertical Down	160	19.0	450	(11.4)	6.4	(2.9)	5/8	(16)
0.035	(0.9)	Flat, Horizontal & Vertical Down	190	21.0	550	(14.0)	7.8	(3.5)	5/8	(16)
0.035	(0.9)	Flat, Horizontal & Vertical Down	220	23.0	700	(17.8)	10.0	(4.5)	5/8	(16)
0.039	(1.0)	Flat, Horizontal & Vertical Down	160	18.0	350	(8.9)	6.7	(3.0)	5/8	(16)
0.039	(1.0)	Flat, Horizontal & Vertical Down	200	19.0	400	(10.2)	7.7	(3.5)	5/8	(16)
0.039	(1.0)	Flat, Horizontal & Vertical Down	225	20.5	500	(12.7)	9.6	(4.4)	5/8	(16)
0.039	(1.0)	Flat, Horizontal & Vertical Down	265	23.0	675	(17.1)	13.1	(5.9)	5/8	(16)
0.045	(1.2)	Flat, Horizontal & Vertical Down	225	19.5	300	(7.6)	7.5	(3.4)	5/8	(16)
0.045	(1.2)	Flat, Horizontal & Vertical Down	250	20.5	400	(10.2)	10.2	(4.6)	5/8	(16)
0.045	(1.2)	Flat, Horizontal & Vertical Down	275	21.5	500	(12.7)	12.8	(5.8)	5/8	(16)
0.045	(1.2)	Flat, Horizontal & Vertical Down	300	23.0	600	(15.2)	15.2	(6.9)	5/8	(16)

TYPICAL OPERATING PARAMETERS [using constant-voltage (CV) mode]

Diameter Inches	(mm)	Weld Position	Average Amps	Average Volts	Wire-Feed Speed in/min	(m/min)	Deposition Rate lbs/hr	(kg/hr)	Contact Tip to Work Distance Inches	(mm)
0.035	(0.9)	Flat, Horizontal & Vertical Down	100	17.0	140	(3.6)	1.9	(0.9)	1/2	(13)
0.035	(0.9)	Flat, Horizontal & Vertical Down	150	20.0	255	(6.5)	3.5	(1.6)	1/2	(13)
0.035	(0.9)	Flat, Horizontal & Vertical Down	200	22.0	460	(11.7)	6.5	(2.9)	1/2	(13)
0.035	(0.9)	Flat, Horizontal & Vertical Down	250	24.0	655	(16.6)	9.4	(4.3)	1/2	(13)
0.039	(1.0)	Flat, Horizontal & Vertical Down	150	18.0	180	(4.6)	3.3	(1.5)	5/8	(16)
0.039	(1.0)	Flat, Horizontal & Vertical Down	200	20.0	340	(8.6)	6.5	(2.9)	5/8	(16)
0.039	(1.0)	Flat, Horizontal & Vertical Down	250	22.0	500	(12.7)	9.6	(4.4)	5/8	(16)
0.045	(1.2)	Flat, Horizontal & Vertical Down	200	19.0	185	(4.7)	2.8	(1.3)	5/8	(16)
0.045	(1.2)	Flat, Horizontal & Vertical Down	250	20.0	300	(7.6)	7.4	(3.4)	5/8	(16)
0.045	(1.2)	Flat, Horizontal & Vertical Down	300	21.0	460	(11.7)	11.7	(5.3)	3/4	(19)

- **Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**
- **Pulse waveforms are designed with nominal operating points that may result in average voltage and current values that differ from the above table. Generally, pulse processes can be expected to produce lower heat inputs than a standard CV process.**
- See Above Tables: This information was determined by welding using direct current electrode negative (DCEN) polarity, 90% Argon (Ar)/10% Carbon Dioxide (CO_2) shielding gas with a flow rate between 35-50 cfh (14-24 l/min) and 1.8 mm hot-dipped 60G galvanized material. For the higher CO_2 shielding gas mixtures within the recommended range, increase voltage by 1-2 volts. Variations in welding power supply and pulsed waveforms (if applicable) used during welding may cause discrepancies between actual and listed amperage, voltage or wire feed speeds.

AVAILABLE 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 Inches	(mm)	33-lb. (15 kg) Spool	500-lb. (227 kg) X-Pak	750-lb. (340.2 kg) X-Pak	1000-lb. (454kg) X-Pak
Net Pallet Weight		2376-lb. (1078kg)	2000-lb. (907kg)	3000-lb. (1361kg)	1000-lb. (453.6 kg)
0.035	(0.9)	S278308-029	—	S278308-075	—
0.039	(1.0)	—	—	S278310-075	—
0.045	(1.2)	S278312-029	S278312-050	—	S278312-058
1/16	(1.6)	—	—	—	S278319-058

CONFORMANCES AND APPROVALS:
- **AWS A5.18,** E70C-GS
- **AWS A5.18M,** E48C-GS
- **ASME SFA 5.18,** E70C-GS
- **EN ISO 17632-A:** T3T Z Z M M20 3, T3T Z Z M21 3
- **EN ISO 17632-B:** T43 Z TG 0 M20 A-G, T43 Z TG 0 M21 A-G
- **CE Marked** per CPR 305/2011

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

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 also be downloaded online at 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 LLC product may be obtained from Hobart Customer Service or at www.hobartbrothers.com.

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

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