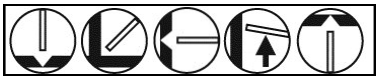
Hobart® 12

AWS E6012 (E4312*)

WELDING POSITIONS:



FEATURES:	BENEFITS:
• Stable arc	• Easy to use, good control
• Excellent bridging characteristics	• Good for poor fit-up
• Light slag	• Easy cleaning of weld bead

APPLICATIONS:

- Farm implements
- Metal furniture
- General repair
- Ornamental iron
- Machinery fabrication
- Sheet metal and tanks
- Poor fit-up work

TYPE OF CURRENT: Direct Current Electrode Negative (DCEN), or AC

RECOMMENDED WELDING TECHNIQUES:

GENERAL:	Electrode negative, work positive (DCEN) or AC
ARC LENGTH:	Average length (1/8" to 1/4")
FLAT:	Angle electrodes 10-15° from 90° with higher heat than E6010 or E6011 electrodes
VERTICAL-UP:	Reduce amperage from flat position; starting from bottom to top, use fast speed of travel staying below puddle
VERTICAL-DOWN:	Use higher amperage and faster travel
OVERHEAD:	Use slight whipping motion; multi-pass for build-up

STORAGE: 60°F to 100°F, (20° to 40°C) and below 50% relative humidity or holding oven @ 100° to 120°F (38° to 49°C)

RECONDITIONING: 250°F to 300°F (121° to 149°C) for one hour @ temperature

TYPICAL WELD METAL PROPERTIES* (Chem Pad):

Weld Metal Analysis (%)		AWS Spec (max)
Carbon (C)	0.07	Not required
Manganese (Mn)	0.25	Not required
Phosphorus (P)	0.015	Not required
Sulphur (S)	0.017	Not required
Silicon (Si)	0.15	Not required

TYPICAL MECHANICAL PROPERTIES* (As Welded):

		AWS Spec (min)
Tensile Strength	72,000 psi (499 MPa)	60,000 psi
Yield Strength	61,000 psi (421 MPa)	48,000 psi
Elongation % in 2"	22%	17%

TYPICAL CHARPY V-NOTCH IMPACT VALUES (As Welded):**
Not applicable

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Diameter Inches	mm	Type of Power	Minimum Amps	Optimum* Amps	Maximum Amps
1/8	3.2	DCEN, AC	75	120	130
5/32	4.0	DCEN, AC	120	180	200
3/16	4.8	DCEN, AC	150	200	250

*For out of position welding, reduce amperages shown by 15%.

TYPICAL DEPOSITION DATA (at optimum):

Diameter Inches	mm	Type of Power	Amps	Volts	Deposition Rate lbs/hr	Deposition Efficiency*%
1/8	3.2	DCEN	120	20-23	2.52	68.3
5/32	4.0	DCEN	180	19-22.5	3.23	56.3
3/16	4.8	DCEN	200	19.5-21	4.57	69.5

*Allowance made for 2" stub loss included.

- **Maintaining a proper welding procedure - including pre-heat and interpass temperatures - may be critical depending on the type and thickness of steel being welded.**

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 Inches	mm	Length Inches	mm	50-lb Can
1/8	3.2	14	355	S112444-031
5/32	4.0	14	355	S112451-031
3/16	4.8	14	355	S112458-031

CONFORMANCES AND APPROVALS:

- **AWS A5.1,** E6012, ASME SFA 5.1, F-2, A-1

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, 550 NW LeJune Road, Miami, FL 33126; OSHA Safety and Health Standards 29 CFR 1910 is available from the U.S. Department of Labor, Washington, D.C. 20210

Material Safety Data Sheets on any Hobart Brothers Company product may be obtained from Hobart Customer Service or at 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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HOBART FILLER METALS