



## Application Guide

**POLARITY:** Electrode Positive - DCEP/Reverse

**AMPERAGE:** Tuffband 330 (300 to 380)  
Duraband 320 (300 to 365)

**VOLTS:** 30 (28 to 33)

**GAS MIX:** 98% Argon/2% Oxygen (100% Argon, 95/5)

**GAS FLOW RATE:** 35 CFH (16.5 LPM)  
(32 to 37 15-17.5 LPM)

### TORCH

**ANGLE:** 15° (10° to 17°)

**OFFSET:** 1" (25mm) (3/4 to 1-1/2" 19-38mm)

**STICKOUT:** 1" (25mm) (3/4 to 1-1/8" 19-28.5mm)

### OSCILLATION

**WIDTH:** 1" (25mm) (3/4 to 1-1/4" 19-32mm)

**SPEED:** 80 per minute (60 to 100)

**TIE-IN:** Use 10-15% Band Overlap

**PREHEAT:** See Chart on Reverse Side

**MAX INTERPASS TEMPERATURE:** 850°F (454°C)

**SLOW COOLING:** Cover immediately with Postle HB Insulator or cooling can

### RECOMMENDED ROTATIONAL SPEED:

7 seconds per inch of circumference

Connection OD x 3.14 = Circumference

Circumference x 7 seconds = Rotation Speed (seconds)

**Adjust Parameters as Needed to Achieve Best Bead Profile**

Black - Recommended

Red -Parameters

## RECOMMENDED PREHEAT TEMPERATURES

\*This is Tool Joint outside diameter - not Pipe or Tube outside diameter.

Tool Joint* OD (Inches)	Preheat Temperatures	
	°F	°C
2-3/8 to 3-1/8 Tubing Connection	225	107
3-1/8 to 4-3/4	225 to 300	107 to 149
4-3/4 to 5-1/2	300 to 400	149 to 204
5-1/2 to 6-3/8	400 to 500	204 to 260
6-3/8 to 7	500 to 600	260 to 316
7 to 7-1/2	600 to 650	316 to 343
8 to 8-1/2	650 to 700	343 to 371
8 to 8-1/2 (W 5" ID)	550 to 600	288 to 316

Preheating is even more critical when applications are being done on BHA components due to the material thickness which is typically 1" (25mm) on HWDP and up to 2" (50mm) on collars. Thicker materials require much more time and attention when preheating.

## WIRE USAGE CHART

(Lbs of Hardbanding to Order)

← Hardband Width in Inches →

Tool Joint Dia	Hardband Dia	Hardband Lbs/Inch	0.75	1	1.5	2	2.5	3	3.5	4
4.5	4.6875	0.42	0.31	0.42	0.63	0.83	1.04	1.25	1.46	1.67
4.75	4.9375	0.44	0.33	0.44	0.66	0.88	1.10	1.32	1.54	1.76
5	5.1875	0.46	0.35	0.46	0.69	0.92	1.16	1.39	1.62	1.85
5.25	5.4375	0.48	0.36	0.48	0.73	0.97	1.21	1.45	1.70	1.94
5.5	5.6875	0.51	0.38	0.51	0.76	1.02	1.27	1.52	1.78	2.03
5.75	5.9375	0.53	0.40	0.53	0.80	1.06	1.33	1.59	1.86	2.12
6	6.1875	0.55	0.41	0.55	0.83	1.11	1.38	1.66	1.94	2.21
6.125	6.3125	0.56	0.42	0.56	0.85	1.13	1.41	1.69	1.98	2.26
6.25	6.4375	0.58	0.43	0.58	0.86	1.15	1.44	1.73	2.01	2.30
6.5	6.6875	0.60	0.45	0.60	0.90	1.20	1.50	1.80	2.09	2.39
6.625	6.8125	0.61	0.46	0.61	0.91	1.22	1.52	1.83	2.13	2.44
6.75	6.9375	0.62	0.47	0.62	0.93	1.24	1.55	1.86	2.17	2.48
7	7.1875	0.64	0.48	0.64	0.97	1.29	1.61	1.93	2.25	2.57
7.25	7.4375	0.67	0.50	0.67	1.00	1.33	1.67	2.00	2.33	2.67
8	8.1875	0.73	0.55	0.73	1.10	1.47	1.84	2.20	2.57	2.94
8.25	8.4375	0.76	0.57	0.76	1.14	1.51	1.89	2.27	2.65	3.03
8.5	8.6875	0.78	0.58	0.78	1.17	1.56	1.95	2.34	2.73	3.12

Hardbanding Solutions

by Postle Industries

(216) 265-9000

sparky@postle.com

QRHB-3.19 300

[www.hardbandingsolutions.com](http://www.hardbandingsolutions.com)