

## Basic high recovery electrode

### Classification

AWS A5.1-91 : E7028 H4R  
 EN 499-94 : E 42 4 B 73 H5

### General description

Basic low hydrogen electrode  $H_{DM} < 5\text{ml}/100\text{g}$   
 245% recovery and easy slag release  
 Fillet welds and horizontal V- and X-welds  
 Reliable impact toughness  $-40^\circ\text{C}$   
 Excellent X-ray soundness  
 Deposition rate is comparable with submerged arc welding

### Welding positions



ISO/ASME PA/1G PB/2F\*

\*PB/2F position only 4 and 5 mm.

### Current type

AC / DC electr. + / -

### Approvals

ABS	BV	DNV	GL	LR	RINA	RMRS	TÜV
4Y400H5	3.3YHH	4Y40H5	4Y40H5	4Y40H5	4YH5	3-3YH5	+

### Chemical composition (w%), typical, all weld metal

C	Mn	Si	$H_{DM}$
0.08	1.3	0.45	4 ml/100 g

### Mechanical properties, all weld metal

	Condition	Yield strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J)	
					$-18^\circ\text{C}$	$-40^\circ\text{C}$
Required: AWS A5.1-91		min. 399	min. 482	min. 22	min. 27	
EN 499-94		min. 420	500-640	min. 20	min. 47	
Typical values	AW	460	550	29	80	

### Packaging, available sizes and identification

	Diameter (mm)	4.0				5.0	
		4.0	5.0	5.0	6.0	6.0	
	Length (mm)	450	450	600	450	600	
Unit: box	Pieces / unit (nominal)	42	26	26	19		
	Net weight/unit (kg)	5.9	5.8	7.8	5.8		

Identification Imprint: 7028/Conarc V250 Tip colour: red

Conarc® V250: rev. EN 15

## Materials to be welded

Steel	Code	Type
General structural steel	EN 10025	S185, S235, S275, S355
Ship plates	ASTM A131	Grade A, B, D, AH32 to EH40
Cast steel	EN 10213-2	GP240R
Pipe material	EN 10208-1	L210, L240, L290, L360
	EN 10208-2	L240, L290, L360, L415, L445
	API 5LX	X42, X46, X52
	EN 10216-1/ EN 10217-1	P235T1, P235T2, P275T1 P275T2, P355N
	EN 10028-2	P235GH, P265GH, P295GH, P355GH
Boiler & pressure vessel steel		
Fine grained steel	EN 10113-2	S275, S275, S355, S420
	EN 10113-3	S275, S355, S420

## Calculation Data

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. current - (s)*	Energy E(kJ)	Dep.rate H(kg/h)	Weight/ 1000 pcs. (kg)	Electrodes/ kg weldmetal B	kg Electrodes/ kg weldmetal 1/N
4.0 x 450	190 - 240	AC	70	621	4.8	141	10	1.40
5.0 x 450	260 - 360	AC	73	1017	7.1	217	7	1.39
6.0 x 450	300 - 470	AC	72	1324	10.1	300	4	1.37

\* stub end 35 mm

## Welding parameters, optimum fill passes

Welding position Diameter (mm)	PA/1G Current (A)	PB/2F
4.0	230	200
5.0	300	260
6.0	390	

## Application Advice

Electrodes after removal from cardboard boxes redry 2-4h 350 ± 25°C  
Transformers with OCV > 70 V recommended