

Dual Shield 700X

Dual Shield 700X is a high deposition, deep penetration wire for joining of heavy structural steel components. Designed for flat and horizontal position welding using CO₂ shielding gas, this X Series wire provides high deposition rates, high efficiency and excellent performance. The bead contour, smooth ripple and slag chemistry allow easy slag removal even in narrow grooves.

Specifications	
Classifications	AWS A5.20 : E70T-1CH8/T-9CH8
Approvals	A.B.S.- 2SA,2YSA ASME SFA 5.20 AWS A5.20 : E70T-1CH8/T-9CH8 CERTIFIED BY C.W.B.- CSA W48 DNV III YMS L.R. - 3S,3YS
Industry	Heavy Equipment Large Components Mobile Equipment Agricultural Equipment

Approvals are based on factory location. Please contact ESAB for more information.

Typical Tensile Properties			
Condition	Yield Strength	Tensile Strength	Elongation
100% CO ₂			
As Welded	545 MPa (79 ksi)	600 MPa (87 ksi)	29 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
100% CO ₂		
As Welded	-18 °C (0 °F)	66 J (49 ft-lb)
As Welded	-29 °C (-20 °F)	45 J (33 ft-lb)

Typical Weld Metal Analysis %		
C	S	P
100% CO ₂		
0.035	0.015	0.011

Deposition Data						
Diameter	Current	Voltage	Wire Feed Speed	Deposition Efficiency (%)	TTW Dist.	Deposition Rate
100% CO ₂						
1.6 mm (1/16 in.)	205 A	25 V	406 cm/min (160 in./min)	80 %	19 mm (3/4 in.)	2.2 kg/h (4.9 lbs/h)
1.6 mm (1/16 in.)	187 A	24 V	356 cm/min (140 in./min)	80 %	19 mm (3/4 in.)	1.9 kg/h (4.2 lbs/h)
2.4 mm (3/32 in.)	350 A	28 V	508 cm/min (200 in./min)	86.3 %	25.4 mm (1 in.)	7.7 kg/h (16.9 lbs/h)
1.6 mm (1/16 in.)	149 A	23 V	254 cm/min (100 in./min)	80 %	19 mm (3/4 in.)	1.3 kg/h (2.8 lbs/h)
1.6 mm (1/16 in.)	223 A	25 V	457 cm/min (180 in./min)	80 %	19 mm (3/4 in.)	2.5 kg/h (5.6 lbs/h)
2.4 mm (3/32 in.)	290 A	27 V	381 cm/min (150 in./min)	86.9 %	25.4 mm (1 in.)	5.8 kg/h (12.7 lbs/h)
2.4 mm (3/32 in.)	475 A	32 V	762 cm/min (300 in./min)	84.8 %	25.4 mm (1 in.)	11.3 kg/h (25.0 lbs/h)

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Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Efficiency (%)	TTW Dist.	Deposition Rate
1.6 mm (1/16 in.)	289 A	26 V	660 cm/min (260 in./min)	81 %	19 mm (3/4 in.)	3.8 kg/h (8.4 lbs/h)
1.6 mm (1/16 in.)	273 A	26 V	610 cm/min (240 in./min)	81 %	19 mm (3/4 in.)	3.5 kg/h (7.7 lbs/h)
1.6 mm (1/16 in.)	240 A	25 V	508 cm/min (200 in./min)	80 %	19 mm (3/4 in.)	2.9 kg/h (6.3 lbs/h)
2.4 mm (3/32 in.)	410 A	29 V	635 cm/min (250 in./min)	86 %	25.4 mm (1 in.)	9.6 kg/h (21.1 lbs/h)
1.6 mm (1/16 in.)	257 A	26 V	559 cm/min (220 in./min)	81 %	19 mm (3/4 in.)	3.2 kg/h (7.0 lbs/h)
1.6 mm (1/16 in.)	168 A	24 V	305 cm/min (120 in./min)	80 %	19 mm (3/4 in.)	1.6 kg/h (3.5 lbs/h)

Recommended Welding Parameters

Current	Wire Diameter	TTW Dist.	Voltage	Wire Feed Speed
100% CO₂				
290-610 A	2.4 mm (3/32 in.)	25.4-38 mm (1-1.5 in.)	26-34 V	254-825.5 mm/min (100-325 in./min)
180-460 A	1.6 mm (1/16 in.)	19-25.4 mm (3/4-1 in.)	25-34 V	343-1270 mm/min (135-500 in./min)