

Union X 85

GMAW solid wire

Classifications	EN 12534	AWS A 5.28
	G 79 5 M Mn4Ni1,5CrMo	ER110S-G

Characteristics and field of use
 Medium alloy solid wire electrode for shielded arc welding of quenched and tempered fine grained structural steels. Outstandingly tough weld metal at low temperatures when deposited with gas mixture. Good deformability; outstanding mechanical properties even at higher electric heat input per unit length of weld. Good resistance to cold cracking due to high purity of the wire surface. For use in crane and vehicle manufacturing.

Materials
 S690QL and higher strength pipe grades;
 S690QL (Dillidur 690; N-A-XTRA 70; Weldox 690)

Typical analysis in %	C	Si	Mn	Cr	Mo	Ni
	0.09	0.7	1.70	0.30	0.60	1.85

Mechanical properties of the weld metal according to EN 1597-1 (min. values at RT)	Heat-treatment	Shielding gas	Yield strength 0.2% N/mm ²	Tensile strength N/mm ²	Elongation (L ₀ =5d ₀) %	Impact values in J CVN -50 °C
	AW	CO ₂	720	770	17	80 -
	AW	M21	770	880	16	90 47

Welding position

Polarity = +
Shielding gas (EN 439) M2, M3, CO₂

Approvals
 DB (Certificate No. 42.132.21)

Packaging and weights	Diam. (mm)	Spool	kg / pack
	1.0	B300	18
	1.2	B300	18

Union X 90

GMAW solid wire

Classifications	EN 12534	AWS A 5.28
	G 89 6 M Mn4Ni2CrMo	ER120S-G

Characteristics and field of use
 Medium alloy solid wire electrode for shielded arc welding of quenched and tempered fine grained structural steels. Outstandingly tough weld metal at low temperatures when deposited with gas mixture. Good resistance to cold cracking due to high purity of the wire surface. Used in crane and vehicle manufacture.

Materials
 S890QL (Dillidur 890; Weldox 890; XABO 890);
 S960QL (Dillidur 960; Weldox 960; XABO 960);
 USS-T1

Typical analysis in %	C	Si	Mn	Cr	Mo	Ni
	0.10	0.80	1.80	0.35	0.60	2.30

Mechanical properties of the weld metal according to EN 1597-1 (min. values at RT)	Heat-treatment	Shielding gas	Yield strength 0.2% N/mm ²	Tensile strength N/mm ²	Elongation (L ₀ =5d ₀) %	Impact values in J CVN -60 °C
	AW	M21	890	950	15	90 50

Welding position

Polarity = +
Shielding gas (EN 439) M2, M3

Approvals
 TÜV (Certificate No. 07675) DB (Certificate No. 42.132.12)

Packaging and weights	Diam. (mm)	Spool	kg / pack
	0.9	B300	15
	1.0	B300	18
	1.2	B300	18

Union X 96

GMAW solid wire

Classifications	EN 12534	AWS A 5.28
	G 89 5 M Mn4Ni2,5CrMo	ER120S-G

Characteristics and field of use
Medium alloy solid wire electrode for shielded arc welding of quenched and tempered fine grained structural steels in crane and vehicle manufacturing. Good deformability in spite of very high strength values. Good resistance to cold cracking due to high purity of the wire surface.

Materials
S960QL (Dillidur 960; Weldox 960; XABO 960);
S890QL (Dillidur 890; Weldox 890; XABO 890);
OX 1002

Typical analysis in %	C	Si	Mn	Cr	Mo	Ni
	0.12	0.80	1.90	0.45	0.55	2.35

Mechanical properties of the weld metal according to EN 1597-1 (min. values at RT)	Heat-treatment	Shielding gas	Yield strength 0.2% N/mm ²	Tensile strength N/mm ²	Elongation (L ₀ =5d ₀) %	Impact values in J CVN -50 °C
	AW	M21	930	980	14	80 50

Welding position



**Polarity = +
Shielding gas (EN 439) M2**

Approvals

DB (Certificate No. 42.132.26)

Packaging and weights

Diam. (mm)	Spool	kg / pack
1.0	B300	18
1.2	B300	18

Union I CrMo

GMAW solid wire

Classifications	EN 12070	AWS A 5.28	Mat. No.
	G CrMo1Si	ER80S-G	1.7339

Characteristics and field of use
Medium alloy solid wire electrode useable both with CO₂ and with gas mixture. Applications include the welding of creep resistant steels in boiler, tank, pipeline and reactor construction.

Materials
13CrMo4-5; ASTM A193 Gr. B7; A335 Gr. P11 and P12;
A217 Gr. WC6

Typical analysis in %	C	Si	Mn	Cr	Mo
	0.09	0.60	1.05	1.10	0.50

Mechanical properties of the weld metal according to EN 1597-1 (min. values at RT)	Heat-treatment	Shielding gas	Yield strength 0.2% N/mm ²	Tensile strength N/mm ²	Elongation (L ₀ =5d ₀) %	Impact values in J CVN
	SR	M21*	450	560	22	80

*) Also weldable with CO₂ in this case the mechanical properties will change.

Welding position



**Polarity = +
Shielding gas (EN 439) M1 - M3 and CO₂**

Approvals

TÜV (Certificate No. 0905)

DB (Certificate No. 42.132.19)

Packaging and weights

Diam. (mm)	Spool	kg / pack
0.8	B300	15
1.0	B300	18
1.2	B300	18