

Ympress® 100 XF

More strength. Less weight.

Ympress 100 XF is a hot-rolled, high-strength low-alloy steel. This steel grade is ideal for applications where high strength is essential. These include large cranes, earthmoving equipment, telescopic booms and truck trailers.

Ympress 100 XF combines high strength with outstanding formability and consistent quality. It delivers exceptional weldability and excellent surface quality. Consistent product properties and reliable material thickness allow trouble-free, repeatable processing. The grade has

specifically been designed for thermal cutting processes, for example using laser or (micro) plasma methods.

This hot-rolled steel delivers improved load-bearing capacity without weight penalties due to its high yield strength. Its strength also enables production of lighter components for applications where weight savings are a prime consideration. Downgauging offers an additional benefit of increased yield per ton of steel.

Mechanical properties

The values shown for the mechanical properties and the bend test apply to test samples transverse to the rolling direction.

	Min. yield strength ksi	Min. tensile strength ksi	Min. elongation after fracture A %	Bend radius ¹⁾	
				t < 0.230"	t ≥ 0.230"
Ympress 100 XF	100	110	15	1t	1.5t

¹⁾ Bend test is performed with polished edges, bend line parallel to the rolling direction

Chemical composition

The following table represents the guaranteed values for Ympress 100 XF.

	C max.	Mn max.	P max.	S max.	Si max.	Al _{tot} min.	Cb max.	Ti max.
Ympress 100 XF	0.08	2.00	0.020	0.005	0.15	0.015	0.09	0.15

All values are in weight%

Weldability

Ympress 100 XF can be welded with all conventional welding processes. The weldability of the material is excellent due to the low carbon equivalent and low content of residual elements. It is advised to keep the heat input below 1.5 kJ/mm. Matching weld wire is available.

Impact strength

Direction	Thickness	Temperature	Guaranteed
Longitudinal	≤ 0.393"	-40°F	≥ 20 ft.lbs
Longitudinal	0.393" - 0.500"	-	-

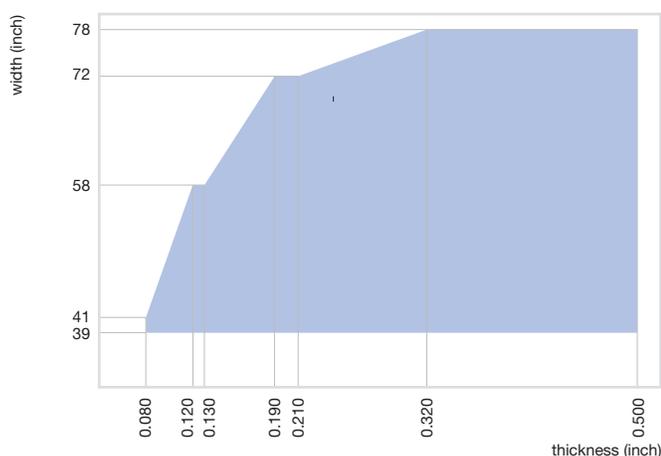
Tolerances on thickness

Tolerances for strip with ASTM A568-13a and ASTM A635-13. Tighter tolerances are available, please contact us. Tolerances provided in the table are based on minimum gauge (tolerance over, no tolerance under).

HR HSLA thickness tolerances

Width/gauge	ASTM A568-13a					ASTM A635-13		
	0.059-0.070	0.070-0.082	0.082-0.098	0.098-0.180	0.180-0.230	0.23-0.313	0.313-0.375	0.375-0.500
40-48	0.010	0.010	0.012	0.015	0.015	0.018	0.020	0.021
48-60	0.010	0.010	0.012	0.015	0.015	0.018	0.021	0.022
60-72	0.012	0.012	0.014	0.016	0.016	0.020	0.022	0.024
72-80		0.012	0.014	0.018	0.018	0.022	0.024	0.027

Available dimensions of Ympress 100 XF



Ympress 100 XF in thickness < 0.118 inch is only available after consultation.

Certification

A test certificate with chemical and mechanical test results is issued as standard.

Product support

We want you to get the best from Ympress® products. Our technical support staff and trained sales force are always happy to answer your questions on steel selection and applications. Our technical specialists are available to assist you with process and product design optimisation for improved throughput, yield and end product performance.

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