

Steel

scalur[®]+Z: economy in component manufacture guaranteed

The hot-dip galvanized flat product with very close thickness tolerances for components with highly-stringent tolerance requirements.



thyssenkrupp



With very close thickness tolerances of up to ± 0.06 mm, the hot-dip galvanized flat product scalur[®]+Z meets the most stringent requirements in respect of processing behavior, measurement tolerances, and surface finish. Hence, the scalur[®]+Z quality grades are ideal materials when it comes to manufacturing stamped parts, profiles, telescopic rails, and container floors. Or, to put it differently: wherever you look for a high level of manufacturing quality and enhanced economy, there is only one answer: scalur[®]+Z.

Only take the best product into account: scalur[®]+Z

Advantages at a glance



Extremely close thickness tolerances of up to ± 0.06 mm with regard to strip length and width



Optimum machinability while maintaining a consistently high level of manufacturing quality



Lightweight construction potential based on a reduction of the thicknesses ordered



Increase in output due to minimum input of material



Decreased set-up times and decreased manufacturing downtimes, while production is speeded up



Ideal for components that have to meet tolerance requirements of increased stringency

This is how to make more out of less: scalur[®]+Z

With its many advantages and numerous steel grades, scalur[®]+Z can be used in a wide variety of areas. Whether we are talking about the construction or logistics sector, or furniture or automotive construction. Wherever components are manufactured meeting stringent tolerance requirements and enhanced commercial viability is also sought-after, with its extensive range of applications scalur[®]+Z is the first choice.

The lower the thickness of the material to be ordered, the more meters of strip

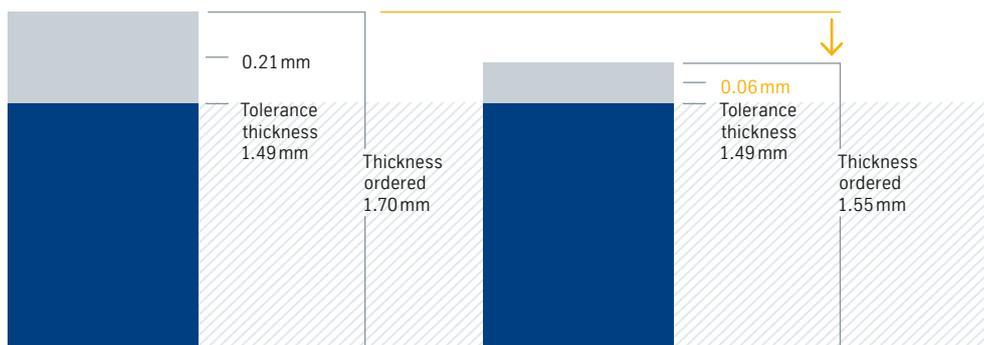
The many advantages of scalur[®]+Z are the result of its close thickness tolerances compared with the permissible deviations that are normally acceptable. These advantages permit a reduction in the material thicknesses ordered, and hence in component weight, while simultaneously increasing the quantity of meters of strip. All in all, this adds up to increased yield, lower input of material, reduced set-up times, fewer downtimes, and more efficient production.



scalur[®]+Z makes components lighter – by reducing the thickness of the material ordered¹

DIN EN 10346 – HX460LAD+Z, normal dimensional tolerances to DIN EN 10143
Thickness ordered: 1.70 mm ± 0.21 mm

scalur[®]+Z HX460LAD
Thickness ordered: 1.55 mm ± 0.06 mm **-8.8% weight**



→ 8.8% less weight due to the very close thickness tolerances associated with scalur[®]+Z

→ With scalur[®]+Z, you attain a plus of up to 110 meters of strip while the coil weight remains the same

¹ Calculation using DIN EN 10346 as an example – HX460LAD+Z measuring 1.70 × 1,550 mm.

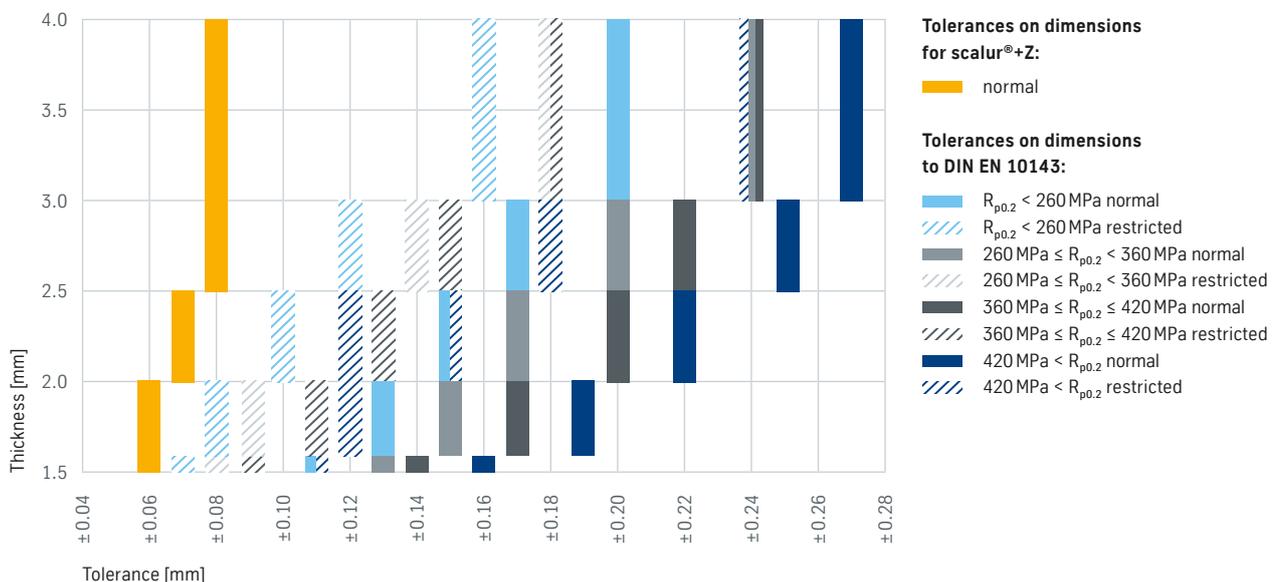
For the lightweight construction of components

A reduction in the thickness ordered automatically reduces the weight of the component without the tolerance thickness falling below the minimum level. Here, it is above all through the use of high-strength micro-alloyed steels that the maximum savings in weight are attained. Thus, by way of example, you can save roughly 20 kg material by using scalur[®]+Z for the fabrication of a container floor.

For optimum processing

The flat profile and good surface finish of scalur[®]+Z are crucial characteristics underlying its excellent processing properties and consistently high level of manufacturing quality. Hence, due to the material's high degree of straightness, i.e. low degree of longitudinal curvature, after being slit the strip is excellently amenable to being machined into profiles. And, due to its reduced longitudinal curvature, scalur[®]+Z is the first choice when it comes to using profiles to manufacture facade elements.

Thickness tolerances of hot-dip galvanized steel in comparison – normal and restricted dimensional tolerances to DIN EN 10143 and scalur[®]+Z



The great material diversity exhibited by scalur[®]+Z

scalur[®]+Z

Thickness¹
from_to in mm

Width¹
from_to in mm

A hot-dip galvanized flat product with very close thickness tolerances

DIN EN 10346

Steel family	Steel grade designation	Standard designation	Thickness ¹ from_to in mm	Width ¹ from_to in mm
Mild steel for cold forming	scalur [®] +Z DX51D	DX51D	1.5–4.0	900–1,550
	scalur [®] +Z DX52D	DX52D	1.5–4.0	900–1,550
Hot-dip coated structural steel	scalur [®] +Z S220GD	S220GD	1.5–4.0	900–1,550
	scalur [®] +Z S250GD	S250GD	1.5–4.0	900–1,550
	scalur [®] +Z S280GD	S280GD	1.5–4.0	900–1,550
	scalur [®] +Z S320GD	S320GD	1.5–4.0	900–1,550
	scalur [®] +Z S350GD	S350GD	1.5–4.0	900–1,550
	scalur [®] +Z S390GD ²	S390GD	1.5–4.0	900–1,500
	scalur [®] +Z S420GD ²	S420GD	1.5–4.0	900–1,500
	scalur [®] +Z S450GD ²	S450GD	1.5–4.0	900–1,500
Micro-alloyed steel	scalur [®] +Z HX260LAD	HX260LAD	1.5–4.0	900–1,550
	scalur [®] +Z HX300LAD	HX300LAD	1.5–4.0	900–1,550
	scalur [®] +Z HX340LAD	HX340LAD	1.5–4.0	900–1,550
	scalur [®] +Z HX380LAD	HX380LAD	1.5–4.0	900–1,550
	scalur [®] +Z HX420LAD	HX420LAD	1.5–4.0	900–1,550
	scalur [®] +Z HX460LAD	HX460LAD	1.8–3.0	900–1,500
Complex-phase steel	scalur [®] +Z HX500LAD	HX500LAD	1.8–3.0	900–1,500
	scalur [®] +Z HDT760C	HDT760C	1.8–3.0	900–1,325

¹ Not all thickness and width combinations are possible.

² The steel grades scalur[®]+Z S390GD, scalur[®]+Z S420GD and scalur[®]+Z S450GD are, in general, fully approved by the building authorities.

You have a choice between a range of thicknesses, as follows:
100, 140, 200 and 275 g/m² depending on the grade concerned.
Other thicknesses and different thicknesses depending on the face can be delivered by agreement.

thyssenkrupp – for the best and closest possible teamwork

With thyssenkrupp you opt for a partner that doesn't only understand its own business - but yours too. With technological know-how acquired over many decades, sound counselling, and innovative solutions, we do our utmost to fulfill your specific requirements. We are able to see things through your eyes, and hence develop a deep understanding of your business model. We stand for "engineering. tomorrow. together". For only the closest and best cooperation leads to successful, forward-looking solutions.



Comprehensive counselling

In order to enable your project to benefit from the optimum material solution and process optimization in the form of scalur®+Z, the experts from our technical customer support unit don't just simply stand at your side. With great dedication to their job, they offer you comprehensive assistance on an interdisciplinary level with regard to applications and processing and, of course, also in matters of cost reduction and weight optimization.

Tailor-made service

We cater for the uniqueness of your project by offering you an equally individual service in everything relating to scalur®+Z. Our R&D department develops tailor-made materials and thus provides your business with maximum flexibility. Depending on your requirements, we ensure your rapid supply of scalur®+Z products – based on a logistics system that pinpoints your needs.

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