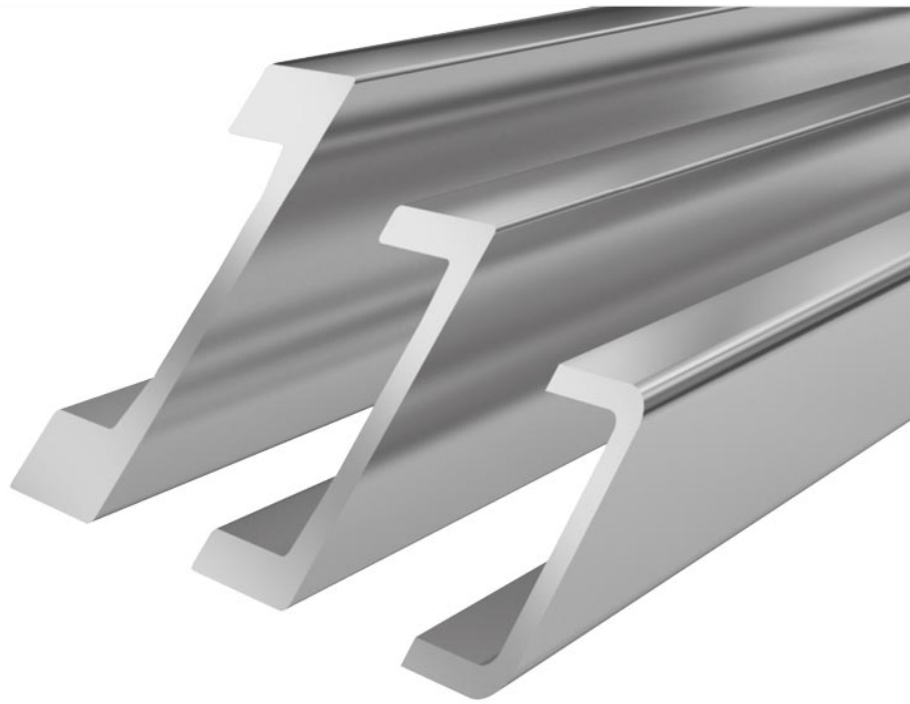
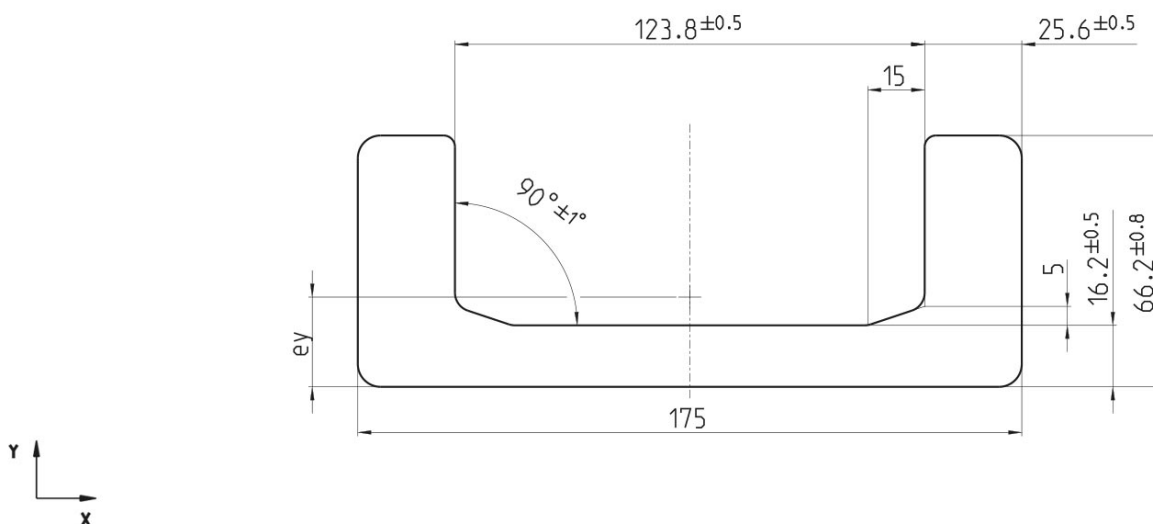




Material properties Standard U-profile **Standard 5 NbV**

- Hot rolled profile in sandblasted version.
- Profile is made from high-quality steel S450 J2 mod.
- Higher load capacity with new NbV-series
- Production-related straightness $\pm 1,0$ mm/meter.
- This profile is available as fine straightened style on request ($\pm 0,3$ mm per meter)
- $L_{\max}$ = Maximum production length 12m

Technical drawing **Standard 5 NbV**



*The straightness for **fine straightness profiles** is $\pm 0,3$ mm per meter, Standard profiles $\pm 1,0$ mm per meter.



Resistance Moments Standard 5 NbV

Article number	m kg/m	A cm ²	I _x cm ⁴	W _x cm ³	I _y cm ⁴	W _y cm ³	e _y cm	L _{max} in m
113.015.000	42.8	54.40	203.10	47.70	2.167.70	247.70	2.40	12

m = mass, A = surface, I_x = surface moment, W_x = resistance moment, I_y = surface moment, W_y = resistance moment, e_y = distance measure of the y-angle, L_{max} = Maximum production length

WINKEL U-Profiles with 30% increased load capacity

- higher load capacity at same sizes by using profiles with steelgrade S450 J2 mod.
- choice of smaller sizes (price advantage)
- higher resistance against wear out effects

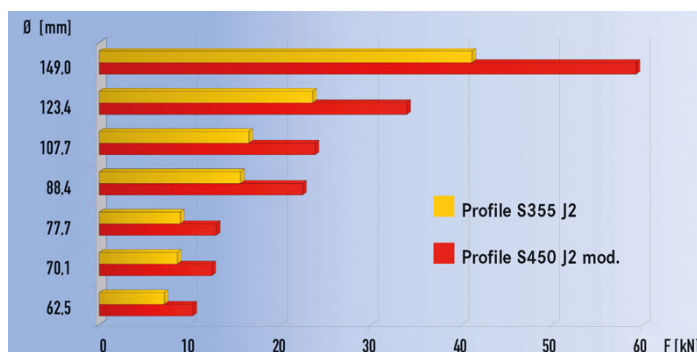
Comparison S355 J2 - S450 J2 mod.

Characteristic	S355 J2	S450 J2 mod.
Yield point 1	min 355 MPa [N/mm ²]	min 430 MPa [N/mm ²]
Yield point 2	min 345 MPa [N/mm ²]	min 420 MPa [N/mm ²]
Tensile strength	470 - 630 MPa [N/mm ²]	550 - 700 MPa [N/mm ²]
max. hertzian pressure	750 MPa [N/mm ²]	900 MPa [N/mm ²]

Notice: Yield point 1 is only valid for flange thickness < 20 mm, yield point 2 is only valid for flange thickness > 20 mm.

Because of micro alloying with Vanadium and/or Niobium the steel grade S450J2 mod. has a significantly higher tensile and yield strength and a more fine-grained structure than the customary steel grade S355 J2. In consequence of this and due to a stronger limitation of the elements P and S the steel shows a higher resistance to brittle fracture. Related to this is an increased bearing pressure which is shown by the diagram below.

Load capacity of radial bearings in comparison:





Instructional Video

Fine straightening to U profiles

