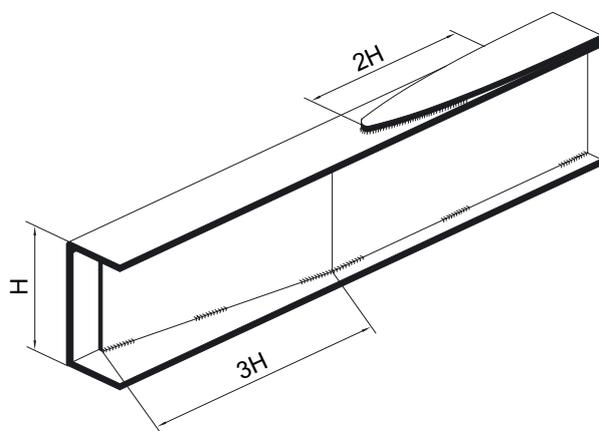


**Fig. 49:** Transition from box- to U-section ESC-043



The subframe sizes recommended by us do not free the body builder from his obligations to check again that the subframes are suitable.

The yield point, also called elongation limit or  $\sigma_{0,2}$  limit, must not be exceeded under any driving or load conditions. The safety coefficients must be taken into account.

Recommended safety coefficients:

- 2.5 when the vehicle is being driven
- 1.5 for loading while stationary.

See Table 31 for the yield points for different subframe materials.

**Table 31:** Yield points of subframe materials

Material No.	Old material designation	Old standard	$\sigma_{0,2}$ [N/mm <sup>2</sup> ]	$\sigma_{0,2}$ [N/mm <sup>2</sup> ]	New material designation	New standard	Suitability for chassisframe / subframe
1.0037	St37-2	DIN 17100	≥ 235	340-470	S235JR	DIN EN 10025	not suitable
1.0570	St52-3	DIN 17100	≥ 355	490-630	S355J2G3	DIN EN 10025	well suited
1.0971	QStE260N	SEW 092	≥ 260	370-490	S260NC	DIN EN 10149-3	only for L2000 4x2, not for point loads
1.0974	QStE340TM	SEW 092	≥ 340	420-540	(S340MC)		not for point loads
1.0978	QStE380TM	SEW 092	≥ 380	450-590	(S380MC)		well suited
1.0980	QStE420TM	SEW 092	≥ 420	480-620	S420MC	DIN EN 10149-2	well suited
1.0984	QStE500TM	SEW 092	≥ 500	550-700	S500MC	DIN EN 10149-2	well suited

Materials S235JR (St37-2) and S260NC (QStE260N) are unsuitable for subframes or are only suitable to a limited degree. They are permitted if only line loads occur. To reinforce a frame or when equipment with locally applied forces (such as tail-lifts, cranes and cable winches) are fitted, steels with a yield point  $\sigma_{0,2} \geq 350$  N/mm<sup>2</sup> are required.

Sharp edges must not act on the frame longitudinal members. Therefore deburr edges well, round them off or chamfer them.