

SPECIFICATION OF JORDAHL® (DECON®) Studrails®



The shear studs used in the fabrication of JORDAHL® (DECON®) Studrails® are of Low Carbon Steel, C1015 to C1018 in accordance with ASTM-A108. The strength and ductility requirements are:

Yield Strength:	51,000 psi (350 MPa) minimum
Tensile Strength:	65,000 psi (450 MPa) minimum
Elongation in 2 in.:	20% minimum
Reduction in Area:	50% minimum

The rails used in JORDAHL® Studrails® are Low Carbon Steel Type 44W and ASTM A36 with the following strength and ductility requirements:

Yield Strength:	44,000 psi (300 MPa) minimum
Tensile Strength:	65,000 psi (450 MPa) minimum
Elongation in 8 in.:	20% minimum

The studs are welded in accordance with the latest editions of **American Welding Society (AWS) D1.1** and **CSA Standard W59** as certified by the Canadian Welding Bureau.

The overall height of the JORDAHL® Studrail® is dependent on the slab thickness and the required concrete cover. The height is constant along each Studrail®. The area of the stud head should be 10 times the area of the stem. The base rail profile should be as shown in ASTM A1044.

DØ in.(mm)	x-sect. area in.(mm)	D _{head} in.(mm)	t _{head} in.(mm)	b _{rail} in.(mm)	t _{rail} in.(mm)	min. OAH in.(mm)
3/8(9.5)	0.110(71)	1.19(30.1)	0.21(5.3)	1(25.4)	3/16(4.8)	3-1/2(90)
1/2(12.7)	0.196(127)	1.58(40.2)	0.28(7.1)	1-1/4(31.8)	1/4(6.5)	3-1/2(90)
5/8(15.9)	0.307(199)	1.98(50.2)	0.35(8.9)	1-3/4(44.5)	5/16(7.9)	4(100)
3/4(19.1)	0.442(285)	2.37(60.2)	0.42(10.7)	2(50.8)	3/8(9.5)	4-1/2(115)

JORDAHL® Studrails® should be specified in the project documents under “Section 3200 – Concrete Reinforcement”. The engineer should use wording similar to the following:

“Shear Reinforcement at the slab-column connections as shown on the drawings and details, shall be Studrails® as manufactured by JORDAHL® and detailed in ICC ESR-2494. The complete and finished Studrail® shall be ICC ES evaluated and welding has to take place in an ICC ES approved and audited facility. Studrails® shall conform to the latest update of ASTM A1044.”

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