

## Manufacturing Range of High Frequency Welded - Solid Type

### Range for Solid Fins (for SS Fin)

Tube diameter mm	fin height (mm)		max fin density (fins/m)		Fin thickness (mm)		Tube wall (mm)	Remark
	min	max	min	max	min	max	min	
13.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
14.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
15.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
16.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
19.05	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
25.40	under upgradation							
31.75	6.5	16	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	3	2*	* tube wall to be higher than the fin thickness
38.10	6.5	19	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	3	2*	* tube wall to be higher than the fin thickness
44.45	6.5	22	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	3	2*	* tube wall to be higher than the fin thickness
50.10	6.5	25	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	3	2*	* tube wall to be higher than the fin thickness
60.30	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	3	2*	* tube wall to be higher than the fin thickness
88.90	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	3	2*	* tube wall to be higher than the fin thickness
101.60	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	3	2*	* tube wall to be higher than the fin thickness
114.30	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	3	2*	* tube wall to be higher than the fin thickness
141.3	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	3	2*	* tube wall to be higher than the fin thickness
168.30	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	3	2*	* tube wall to be higher than the fin thickness
219.10	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	3	2*	* tube wall to be higher than the fin thickness

### Range for solid fins (for CS Fin)

Tube diameter mm	fin height (mm)		max fin density (fins/m)		Fin thickness (mm)		Tube wall (mm)	
	min	max	min	max	min	max	min	max
13.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
14.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
15.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
16.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
19.05	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
25.40	under upgradation							
31.75	6.5	16	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	3	2*	* tube wall to be higher than the fin thickness
38.10	6.5	19	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	3	2*	* tube wall to be higher than the fin thickness
44.45	6.5	22	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	3	2*	* tube wall to be higher than the fin thickness
50.10	6.5	25	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	3	2*	* tube wall to be higher than the fin thickness
60.30	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	3	2*	* tube wall to be higher than the fin thickness
88.90	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	3	2*	* tube wall to be higher than the fin thickness
101.60	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	3	2*	* tube wall to be higher than the fin thickness
114.30	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	3	2*	* tube wall to be higher than the fin thickness
141.3	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	3	2*	* tube wall to be higher than the fin thickness
168.30	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	3	2*	* tube wall to be higher than the fin thickness
219.10	6.5	30	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	3	2*	* tube wall to be higher than the fin thickness

**ALL SIZES OTHER THAN ABOVE TO BE DISCUSSED FOR FEASIBILITY  
SOME SIZES MAY NOT BE COMMERCIALY VIABLE IN SMALL QUANTITIES**

## Manufacturing Range of High Frequency Welded - Serrated Type

### Range for serrated fins (for CS Fin)

Tube diameter mm	fin height (mm)		max fin density (fins/m)		Fin thickness (mm)		Tube wall (mm)	
	min	max	min	max	min	max	min	max
13.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
14.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
15.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
16.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
19.05	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
25.40	under upgradation							
31.75	6.5	21	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	2.5	2*	* tube wall to be higher than the fin thickness
38.10	6.5	25	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	2.5	2*	* tube wall to be higher than the fin thickness
44.45	6.5	29	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	2.5	2*	* tube wall to be higher than the fin thickness
50.10	6.5	33	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	2.5	2*	* tube wall to be higher than the fin thickness
60.30	6.5	38	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	2.5	2*	* tube wall to be higher than the fin thickness
88.90	6.5	38	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	2.5	2*	* tube wall to be higher than the fin thickness
101.60	6.5	38	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	2.5	2*	* tube wall to be higher than the fin thickness
114.30	6.5	38	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	2.5	2*	* tube wall to be higher than the fin thickness
141.3	6.5	38	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	2.5	2*	* tube wall to be higher than the fin thickness
168.30	6.5	38	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	2.5	2*	* tube wall to be higher than the fin thickness
219.10	6.5	38	42 with any fin thickness	315 (with max 1 mm fin thk)	0.6	2.5	2*	* tube wall to be higher than the fin thickness

### Range for serrated fins (for SS Fin)

Tube diameter mm	fin height (mm)		max fin density (fins/m)		Fin thickness (mm)		Tube wall (mm)	
	min	max	min	max	min	max	min	max
13.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
14.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
15.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
16.00	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
19.05	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible	Not feasible
25.40	under upgradation							
31.75	6.5	21	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	2.5	2*	* tube wall to be higher than the fin thickness
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50.10	6.5	33	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	2.5	2*	* tube wall to be higher than the fin thickness
60.30	6.5	38	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	2.5	2*	* tube wall to be higher than the fin thickness
88.90	6.5	38	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	2.5	2*	* tube wall to be higher than the fin thickness
101.60	6.5	38	42 with any fin thickness	315 (with max 1 mm fin thk)	0.8	2.5	2*	* tube wall to be higher than the fin thickness
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