



FERTINGER
TUBES

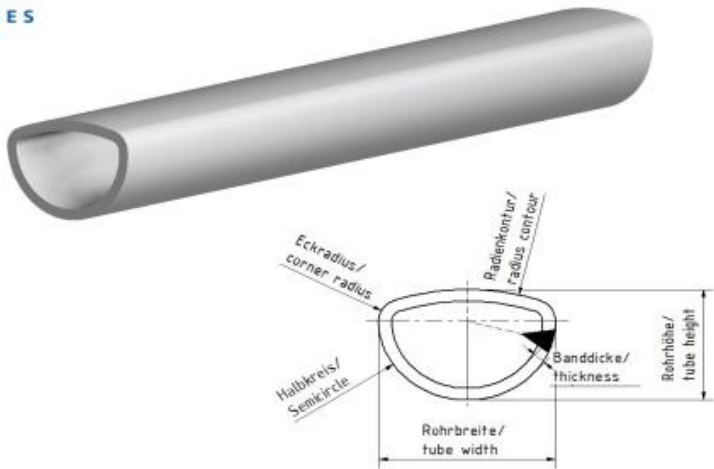
Company Information

Some examples from our product
portfolio

D-tube/ B-Type tube (DKR)

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TUBES

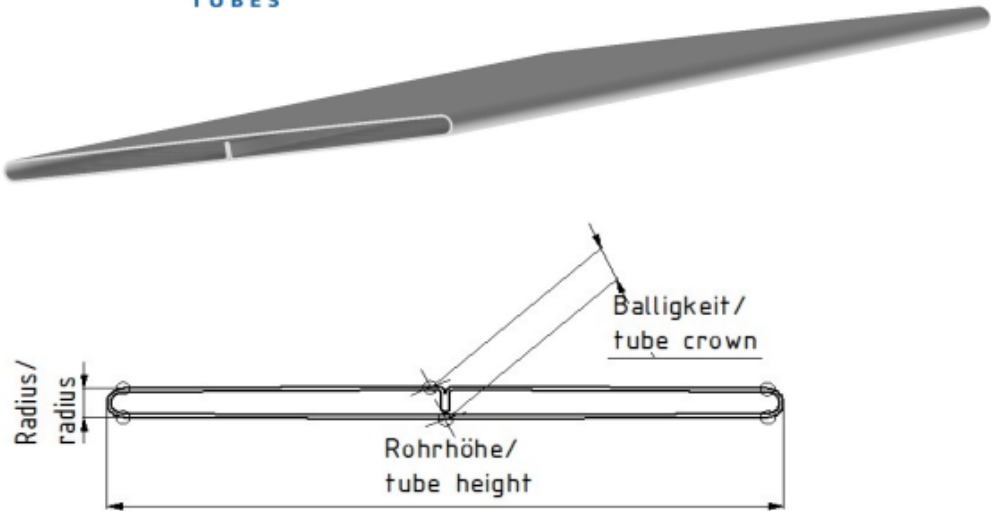
D-Rohr
D-tube



Rohrform/ tube shape	Rohrbreite/ tube width		Rohrhöhe/ tube height		Banddicke/ thickness	Materialzustand/ d/ temper
D	15,1	x	12,7	x	1,2	H14
D	15,1	x	12,7	x	1,2	H24
D	17,5	x	12,25	x	1,3	H14
D	24,5	x	22	x	1	H14

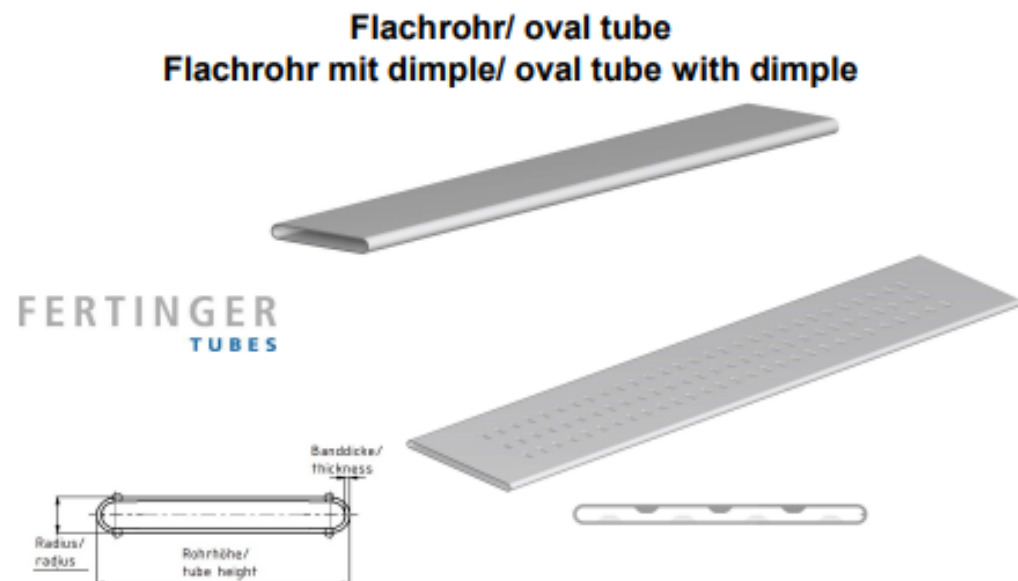
FERTINGER
TUBES

DOPPELKAMMERROHR
B-TYPE TUBE



Rohrform/ tube shape	Rohrbreite/ tube width	Rohrhöhe/ tube height		Radius / radius		Banddicke/ thickness	Materialzustand/ temper
DKR		32,00	x	1,8	x	0,3	H24
DKR		35,00	x	1,5	x	0,3	H24
DKR		35,00	x	1,5	x	0,3	H14
DKR		35,00	x	1,5	x	0,35	H24
DKR		40,00	x	2,05	x	0,35	H24
DKR		40,04	x	2,05	x	0,36	H24
DKR		36,00	x	1,4	x	0,3	H24

Oval tube



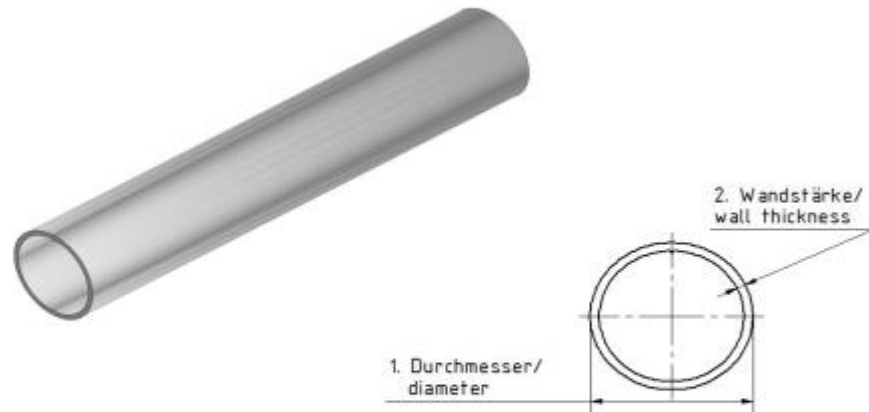
Rohrform/ tube- shape	Höhe/ tube height	.	Radius/ radius	,	Banddicke/ thickness	Materialzustand/ temper
FR	13,40	x	2,45	x	0,4	H14
FR	14,00	x	2	x	0,3	H14
FR	16,10	x	1,7	x	0,25	H24
FR	18,00	x	2,05	x	0,32	H14
FR	18,28	x	3,9	x	0,4	H14
FRL	18,77	x	3,18	x	0,4	H14
FR	20,00	x	4	x	0,5	H24
FR dimple free end	22,00	x	2	x	0,3	H14
FR	22,00	x	2,05	x	0,3	H14

Rohrform/ tube- shape	Höhe/ tube height	.	Radius/ radius	,	Banddicke/ thickness	Materialzustand/ temper
FR	22,00	x	2,05	x	0,3	H14
FR	23,48	x	2	x	0,32	H14
FR	26,00	x	2,05	x	0,3	H14
FR	26,00	x	2,05	x	0,32	H14
FR	26,00	x	2,05	x	0,4	H24
FR	27,14	x	3,87	x	0,4	H14
FR	27,25	x	4,1	x	0,485	H24
FR	27,63	x	3,82	x	0,4	H14
FRL	27,66	x	3,19	x	0,4	H14
FR	29,65	x	4,25	x	0,5	H14
FR	29,90	x	2,42	x	0,4	H14
FR	29,90	x	2,52	x	0,4	H14
FR	30,00	x	4	x	0,5	H14
FR	32,00	x	2,05	x	0,32	H14
FR	33,04	x	2,05	x	0,4	H24
FR	40,00	x	4,3	x	0,6	H16
FR	40,00	x	4,3	x	0,6	H14
FR	40,00	x	4,3	x	0,6	H24
FR	40,00	x	6	x	0,5	H14
FR	40,04	x	2,05	x	0,4	H24
FR	45,00	x	4	x	0,5	H24
FR	45,00	x	4	x	0,6	H24
FR	45,00	x	4,3	x	0,6	H16
FR	46,05	x	4	x	0,5	H14
FR	60,00	x	4	x	0,5	H24
FR	66,00	x	4	x	0,5	H14
FR	70,00	x	6	x	0,4	H24
FR	80,00	x	10	x	0,6	H24

Roundtube

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TUBES

RUNDROHR
ROUNDTUBE



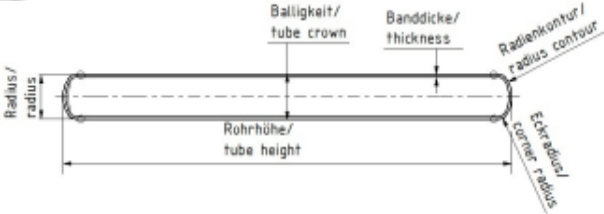
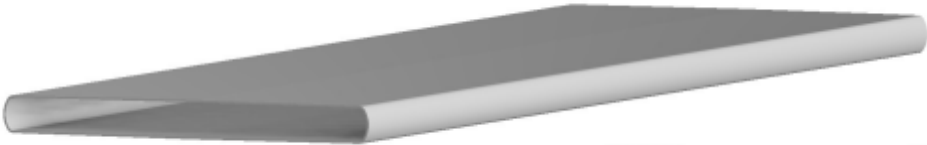
Rohrform / shape	tube	Durchmesser/ diameter	.	Wandstärke/ wall thickness	Materialzustand/ temper
RR		8,00	x	0,70	H14
RR		10,00	x	1,00	H14
RR		12,00	x	1,00	H0
RR		13,00	x	1,00	H14
RR		15,88	x	1,00	H14
RR		16,00	x	1,00	H14
RR		17,50	x	1,20	H14

Rohrform / shape	tube	Durchmesser/ diameter	.	Wandstärke/ wall thickness	Materialzustand/ temper
RR		19,00	x	1,00	H14
RR		19,00	x	1,30	H14
RR		20,00	x	1,00	H14
RR		20,00	x	1,20	H24
RR		22,20	x	1,30	H14
RR		24,00	x	1,00	H14
RR		28,00	x	1,60	H14
RR		30,16	x	1,30	H14
RR		30,16	x	1,55	H24
RR		31,75	x	1,75	H14
RR		31,75	x	1,60	H14
RR		32,00	x	1,50	H0
RR		32,00	x	1,50	H14
RR		32,00	x	1,70	H14
RR		33,40	x	1,50	H14;H24
RR		37,60	x	2,00	H14

Rectangular tube

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TUBES

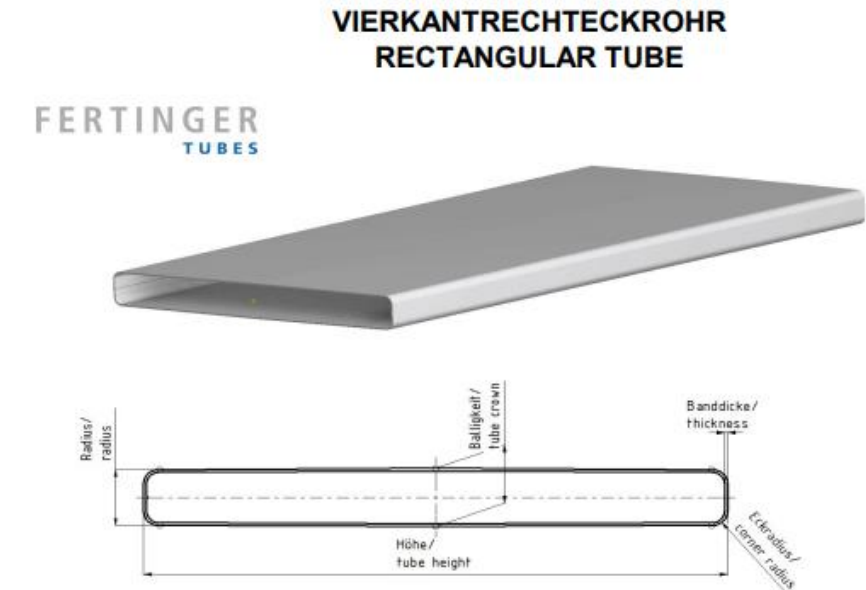
VIERKANTROHR RECTANGULAR TUBE



Rohrform / tube shape	Höhe(H)/ tube height		Radius/ radius		Banddicke(T)/ thickness	Eckradius/ corner radius	Radienkontur/ radius contour	Materialzustand/ temper
VR	22,00	x	17	x	1	2,5	25	H24
VR	23,00	x	22	x	1	2,5	25	H24
VR	25,00	x	8	x	0,38	2,1	10	H14
VR	25,00	x	7,85	x	0,35	-	-	H24
VR	27,00	x	8,05	x	0,3	2,1	10	H24
VR	30,00	x	6,4	x	0,26	0,75	9,51	H24
VR	36,48	x	9,75	x	0,5	2	10	H24
VR	40,00	x	8	x	0,5	2,1	10	H14

Rohrform / tube shape	Höhe(H)/ tube height		Radius/ radius		Banddicke(T)/ thickness	Eckradius/ corner radius	Radienkontur/ radius contour	Materialzustand/ temper
VR	50,00	x	8	x	0,4	2,1	10	H14
VR	52,00	x	8	x	0,4	2,1	10	H14
VR	62,00	x	8	x	0,4	2,1	10	H14
VR	62,00	x	8	x	0,4	2,1	10	H24
VR	62,00	x	8	x	0,5	2,1	10	H24
	62,05	x	8,05	x	0,4	2,2	10	H14
VR	69,82	x	9,96	x	0,5	2,1	10	H24
VR	70,00	x	4,55	x	0,4	1,25	-	H14
VR	70,00	x	4,55	x	0,5	1,25	-	H14
VR	70,00	x	8	x	0,4	2,1	10	H14
VR	74,00	x	8	x	0,4	2,1	10	H24
VR	74,00	x	8	x	0,5	2,1	10	H14
VR	80,00	x	8	x	0,4	2,1	10	H24
VR	80,00	x	8	x	0,5	2,5	10	H24
VR	85,00	x	8	x	0,4	2,5	10	H24
VR	96,00	x	6,4	x	0,35	1,5	7,9	H24
VR	98,00	x	9,3	x	0,59	1,75	10	H24
VR	98,10	x	8,9	x	0,59	1,75	-	H24

Square rectangular tube



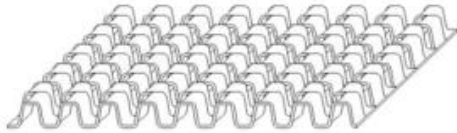
Rohrform/ tube shape	Höhe(H)/ tube height	.	Radius/ radius	,	Banddicke/ thickness	Eckradius/ corner radius	Materialzustand/ temper
VRR	26,00	x	8,3	x	0,35	0,75	H24
VRR	37,87	x	9,92	x	0,4	1,25	H24
VRR	40,00	x	8	x	0,4	1,2	H24
VRR	43,00	x	21,5	x	1,5	3,5	H14
VRR	49,87	x	9,92	x	0,4	2,5	H24
VRR	49,87	x	9,92	x	0,4	1,25	H24
VRR	50,00	x	8,02	x	0,4	1,25	H14
VRR	50,00	x	8,08	x	0,4	1,25	H24
VRR	50,00	x	8,08	x	0,5	1,35	H24
VRR	50,00	x	8,08	x	0,5	1,25	H24

Rohrform/ tube shape	Höhe(H)/ tube height	.	Radius/ radius	,	Banddicke/ thickness	Eckradius/ corner radius	Materialzustand/ temper
VRR	50,00	x	10	x	0,5	2,5	H16
VRR	50,25	x	7,85	x	0,4	1,25	H24
VRR	62,00	x	6	x	0,4	1,2	H24
VRR	61,87	x	9,92	x	0,4	1,25	H24
VRR	61,87	x	9,92	x	0,4	2,5	H24
VRR	63	x	10	x	0,5	2,5	H16
VRR	64,00	x	23	x	1,5	5,5	H14
VRR	70,00	x	6,25	x	0,4	1,3	H14
VRR	79,87	x	9,92	x	0,4	2,5	H24
VRR	80,00	x	8,02	x	0,4	1,25	H14
VRR	80,00	x	10	x	0,5	2,5	H16
VRR	85,00	x	10	x	0,5	2,5	H16
VRR	90,00	x	7,5	x	0,4	1,5	H24
VRR	90,00	x	8,08	x	0,4	1,25	H24
VRR	100,05	x	7,67	x	0,4	1,85	H24

Turbulators

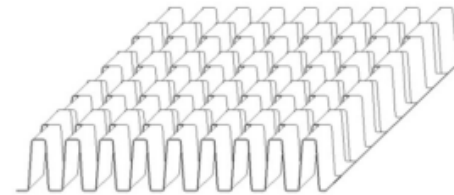
Turbulators FERTINGER TUBES

Stamped turbulators



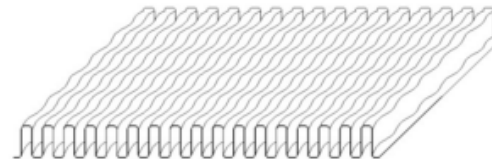
Pitch	2,7	4,27	4,8	6	6,27
Height	3,8	3,05	2,77	2,95 - 3,1	2,5 - 4,5
Strip thickness	0,13	0,3	0,3	0,3	0,3

Stamped turbulators



Pitch	3,25	3,8	4,2	5,7	6,27	
Height	7,77	6,87 - 9	3,8 - 7,23	7,23	7,2 - 9,12	
Strip thickness	0,13	0,1 - 0,13	0,13	0,13	0,13	

Stamped turbulators



Pitch	6	8	10			
Height	9,2 - 9,4	7,9 - 9,4	6 - 9,4			
Strip thickness	0,13	0,13	0,13			

FERTINGER TUBES - competence center for cladded welded tubes

FERTINGER TUBES



 Remscheid, GER

 85 employees

 13.000 m² plant

Competences

- » Tube welding
- » Sawing
- » Machining of tubes



Products

Thermal Management

- » Cladded Welded Tubes
- » Battery Cooling Tubes
- » Oil Cooler Tubes
- » Condenser Manifolds
- » Charge Air Cooler Tubes



Tube welding

 Material

Aluminum strips: 3003, 3005, 3103, 4004, 4045, 4104, 4343 Alloy

 Products

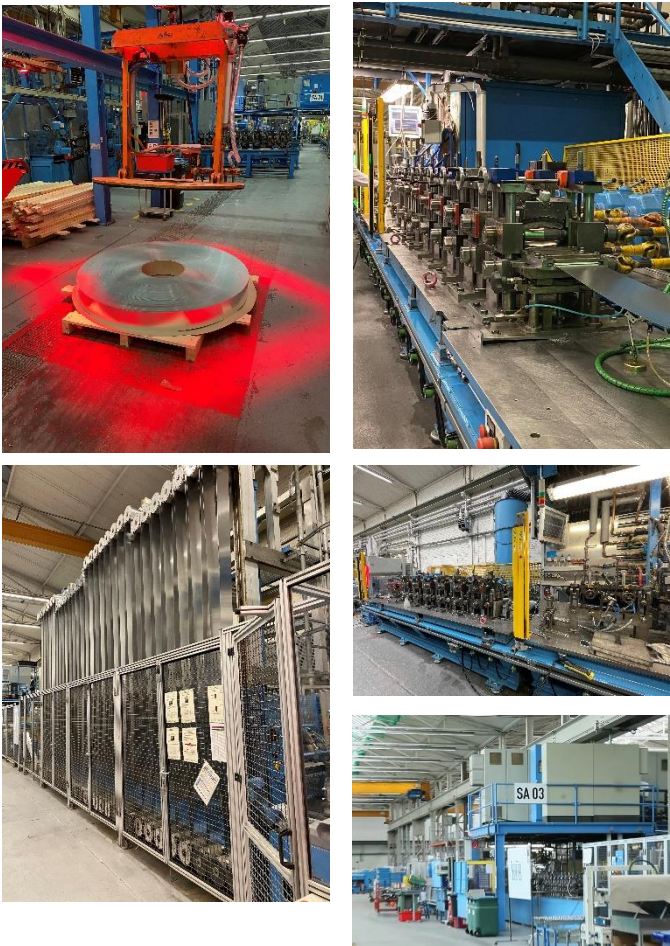
High precision cladded welded tubes

 Dimensions – Length 100-5.500mm

Round Tube		Square Tube	
Diameter	8-50mm	Height	25-105mm
Wall thickness	0.6-2.2mm	Wall thickness	0.3-0.6mm
Flat Tube		D-Shape Tube	
Diameter	12-66mm	Diameter	12-25mm
Wall thickness	0.25-0.5mm	Wall thickness	1-2mm

 Features

- Deep knowledge of aluminum forming
- Production speed up to 100m/min
- Helium tight pipes



Tube welding

Advantages of high-frequency welded tubes

Cost efficient production with **high quality** result :

- More homogenous metal structure with **consistent material properties**
- **Thinner** and more uniform **wall thickness** achievable
- Much **tighter tolerances** : dimensionally and on gauge properties
- Processing of **High Strength / long life Alloys**
- Processing of **pretreated metal strip** like :
 - Single, double or multilayer **cladded strip**
 - **Herringbone embossed strip** (for improved heat transfer ratio)



Tube Sawing



Material

Aluminum clad welded tubes



Products

Cut clad welded tubes



Dimensions

Length 100-1.400mm

Wall thickness 0.3-2mm



Features

- capable sawing processes with constant dimensional results
- high-grade experience with toolings for the sawing process
- chipless cut-surfaces ready for use



Machining



Material

Aluminum clad welded tubes



Products

Manifolds, Oil cooler tubes, Charge Air cooler tubes

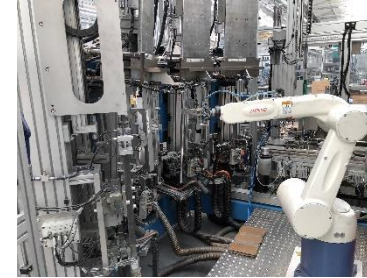


Processes

Oil cooler tubes: stamping, rolling, fluxing, inserting

Manifold tubes: stamping, embossing, inserting

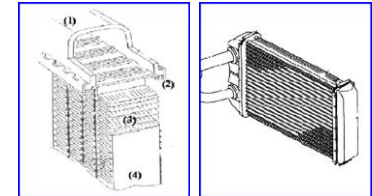
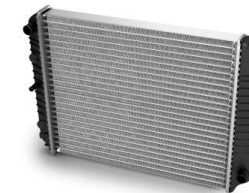
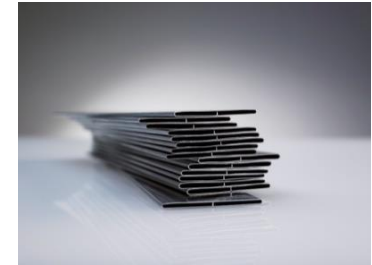
Charge Air Cooler tubes: fully automatized production of fins
(roll-forming), inserting, packaging



Solutions for Radiators / Heaters

Flat oval tube design

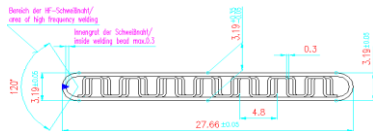
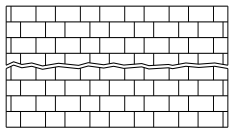
Dimension	12 – 66 mm
Wall thickness	0.25 - 0.5 mm
Length	Long length tubes i.e. 5.000 mm Online-cut tubes > 120 mm to < 1.200 mm Customer requirement
Features	Online-cut, dimple, free zone dimple ends, two chamber design with inside flux
Material	All tempers and other alloys available for a variety of applications in the heat transfer industry



Solutions for Oil Coolers

Flat oval tube design

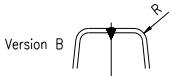
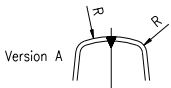
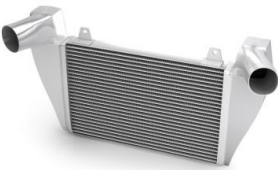
Dimension	12 – 77 mm
Wall thickness	0.4 - 0.6 mm
Length	Online-cut tubes > 120 mm to > 1.200 mm Customer requirement
Features	Online-cut inserted turbulator tube with or without flux
Material	All tempers and other alloys available for a variety of applications in the heat transfer industry



Solutions for CAC / WCAC / Inter coolers

Rectangular tube design

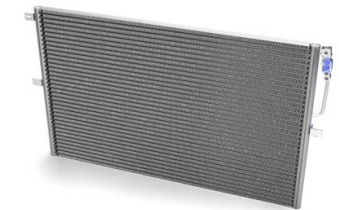
Dimension	25 – 105 mm
Wall thickness	0.3 – 0.6 mm
Length	Online-cut tubes > 120 mm to > 1.200 mm Customer requirement
Features	Tube roof with different designs Inserted turbulator tube with or without flux
Material	All tempers and other alloys available for a variety of applications in the heat transfer industry



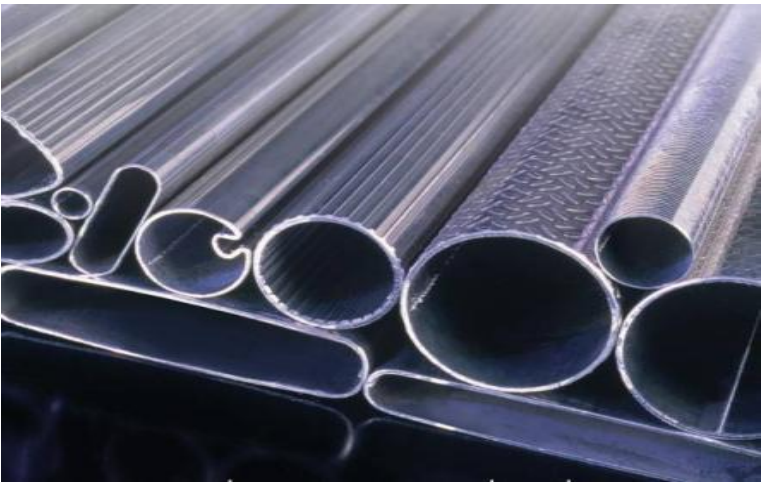
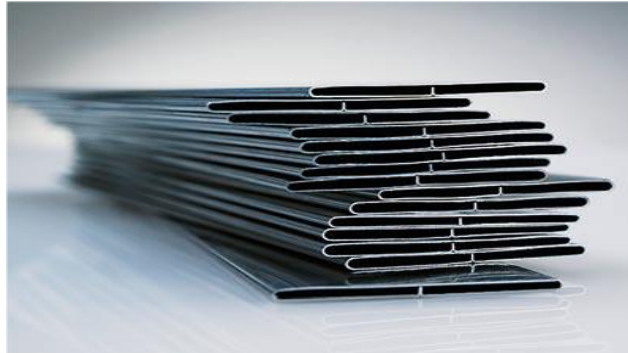
Solutions for Condensers and other applications

Round and other thick walled tube shapes

Dimension	8 – 50 mm
Wall thickness	0.6 – 2.2 mm
Length	Long tubes i.e. 5.000 mm Cut to short length Customer requirement
Features	D-/oval-shaped tubes, Box section, weld bead removed Additional value add: hole stamping, drilling, insert of baffle/cap, slot punching, block/bracket welding
Material	All tempers and other alloys available for a variety of applications in the heat transfer industry



Products



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FERTINGER TUBES is serving well-known TIER 1s and OEMs

THERMAL MANAGEMENT





FERTINGER TUBES

FERTINGER TUBES

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