

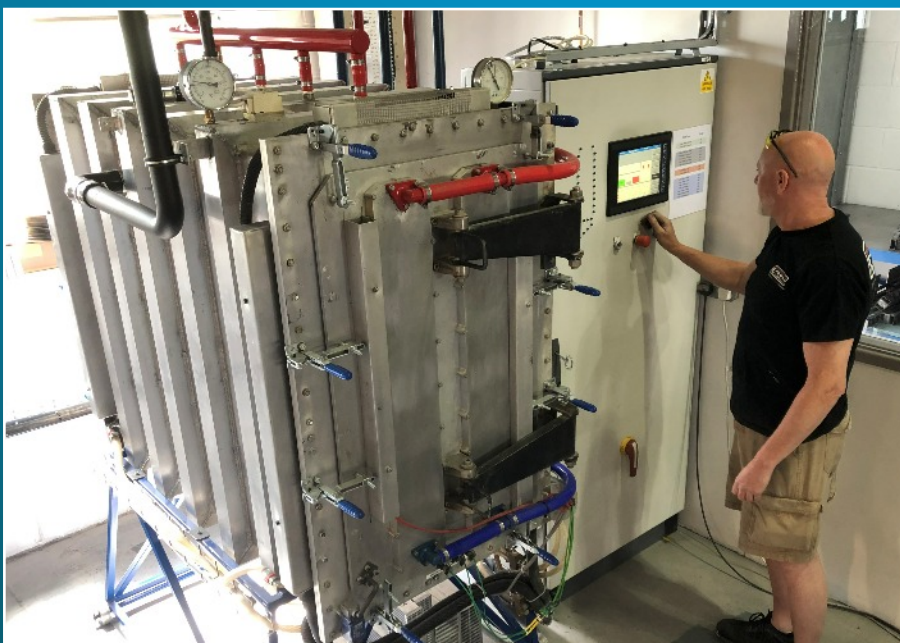
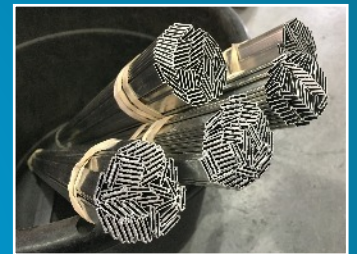


# 2019 Core Brochure



Pro Alloy Motorsport Ltd are one of the world's leading designers and manufacturers of specialist Aluminium products for the Automotive, Motor-sport, Marine, Military and Aerospace industry. Pro Alloy have built an enviable reputation as being the number one manufacturer of high quality, specialist fabricated Alloy products into a number of industry sectors, and with our commitment to providing the best service to our clients, combined with the latest manufacturing research & development has enabled us to build an industry leading company that delivers the ultimate in high-performance automotive engineering technology. The Pro Alloy Team have a long and extensive background in Aluminium Heat Exchanger core production and have been involved in the hardware and process development of Controlled Atmosphere Brazing (CAB) ovens since the late 90's. To help ensure a quick and seamless process between design, engineering, product development and production, the cooling division of Pro Alloy Motorsport are able to offer a complete start to finish in-house manufacturing facility for Radiators, Intercoolers and Oil Cooling solutions.

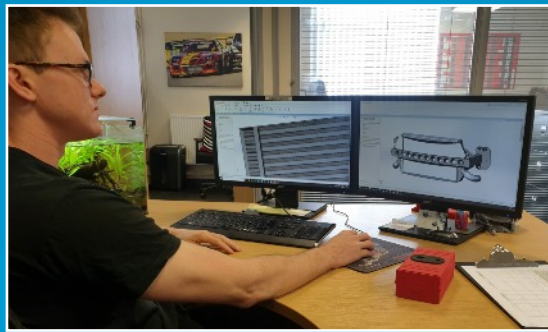
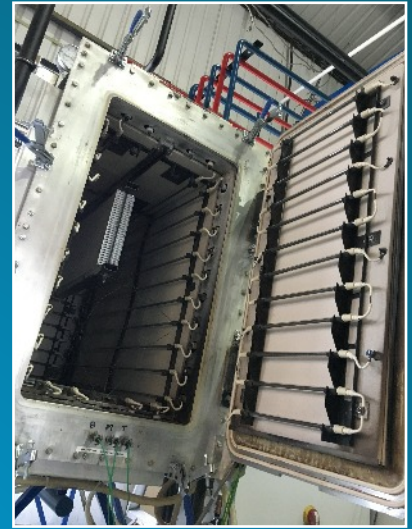
With continued investment in new technology our cooling division are able to cater for all elements of heat exchanger core production - from core only supply, to designing and building complete cooling solutions, from individual prototype and R & D work, to batch production. Utilizing our in-house core production facility we are able to produce a range of Fin types, punch and form a variety of header plate designs and fully braze in our computer controlled semi-vacuum low inertia CAB ovens enabling us to build exceptional quality cores to suit your specific requirements.





Our Aluminium brazing process not only enables us to fully braze each individual cooling tube to the header plate detail ensuring perfect leak tightness, but also to fully braze every peak of our louvered Fin to the side wall of the cooling tubes, giving excellent thermal transfer properties and greatly improving core rigidity and strength. By using this process to gain strength we are able utilize very thin wall, lightweight tubes again giving excellent thermal conductivity. All Pro Alloy cores can be manufactured to have a tube length from 75mm up to a maximum of 1000mm, and a stack height from 30mm up to a 1000mm.

All cores are built as standard with a 10mm folded flange to enable pressure testing up to 30psi for every core type before dispatch. (Higher pressure testing available for special applications) This flange also allows easier TIG welding of end tanks without disturbing tube-joint integrity. All finished cores are pressure tested at 30 PSI to ensure assembly integrity and 100% leak tightness.



## Air Cores

Our highly efficient alloy intercooler cores are used in many applications, from major race teams, supercar manufactures, OEM, Military to private car enthusiasts. We currently manufacture intercooler cores using 5 different tube types - 28mm, 40mm, 50mm, 60mm and 90mm. The 28mm, 40mm and 50mm tubes are Turbulated giving improved heat transfer and cooling characteristics over non Turbulated tubes. Our 60mm and 90mm cores are constructed from an individually designed, lightweight and thin walled extruded low pressure drop tube. All these tubes designs combine to give us a range of 7 different core thicknesses – 28mm, 40mm, 50mm, 60mm & 90mm Single Row / 65mm & 86mm 2 Row. See below for more details on our range of Air cores.





## Water Cores

Our highly efficient alloy radiator cores are suited to a number of varying applications and used by many OE Manufacturers, Motorsport teams, Military and Marine applications and Historic car builders alike. So whether it's for your restored Jaguar or Aston Martin cruising to a classic show, or a competitive race car battling in a major championship, or even a supercar manufacturer requiring cooling solutions for hybrid and battery powered vehicle applications - The Pro Alloy Motorsport team are able to cater for all your cooling requirements. All our water cores are built to a strong lightweight design and our flexibility in size allows us to manufacture to our customers exact requirements. We currently manufacture cores with 4 different tube sizes - 13.6mm, 18mm, 28mm and 40mm. These tube types are combined to make 9 different varieties of core thickness - 18mm, 28mm & 40mm Single Row / 32mm, 40mm, 65mm & 86mm 2 Row / 50mm 3 Row / 65mm 4 Row. See below for more details on our range of Water cores.

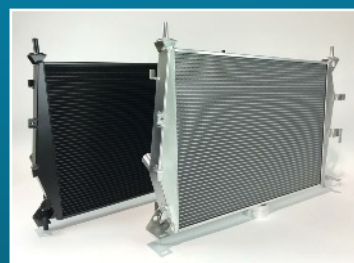


## Oil Cores

We are also able to manufacture oil cooler cores in both 27mm and 42mm tubes sizes in a wide range of stack height and tube lengths. See below for more details on our range of Oil cores.

## Curved & Tapered Water Core

We are also able to produce specialist custom built curved and tapered cores typically used for motorcycle applications. Please contact us for more information and prices.

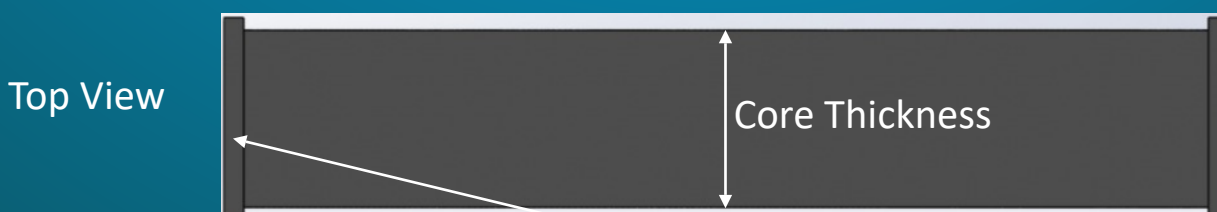
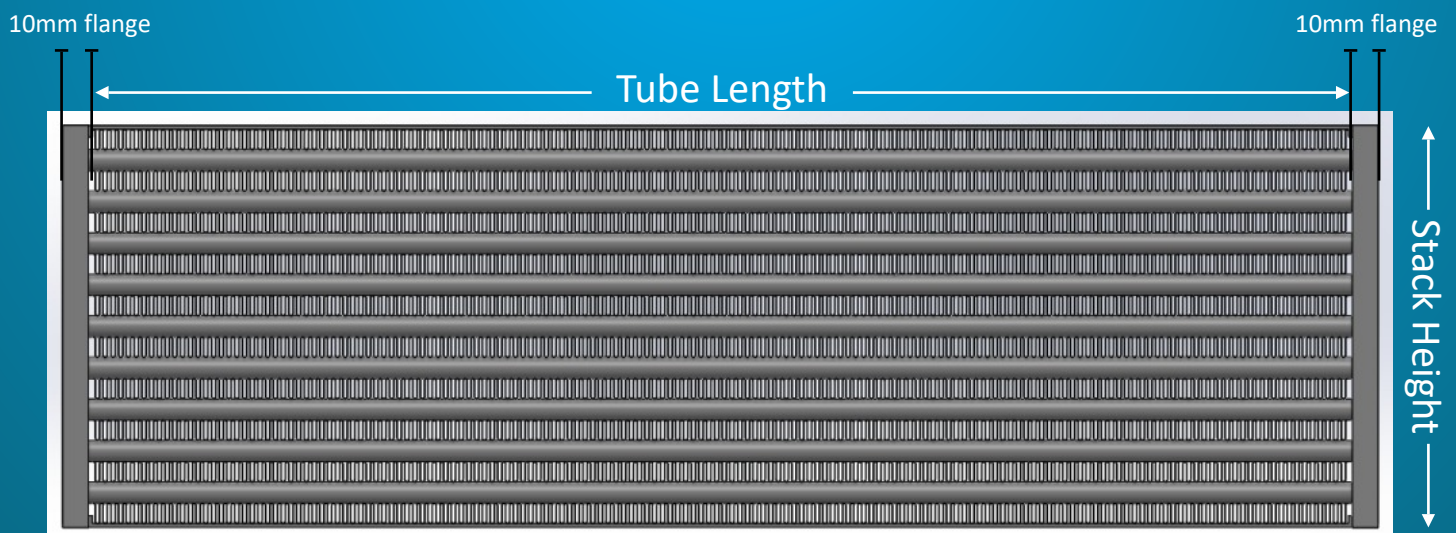
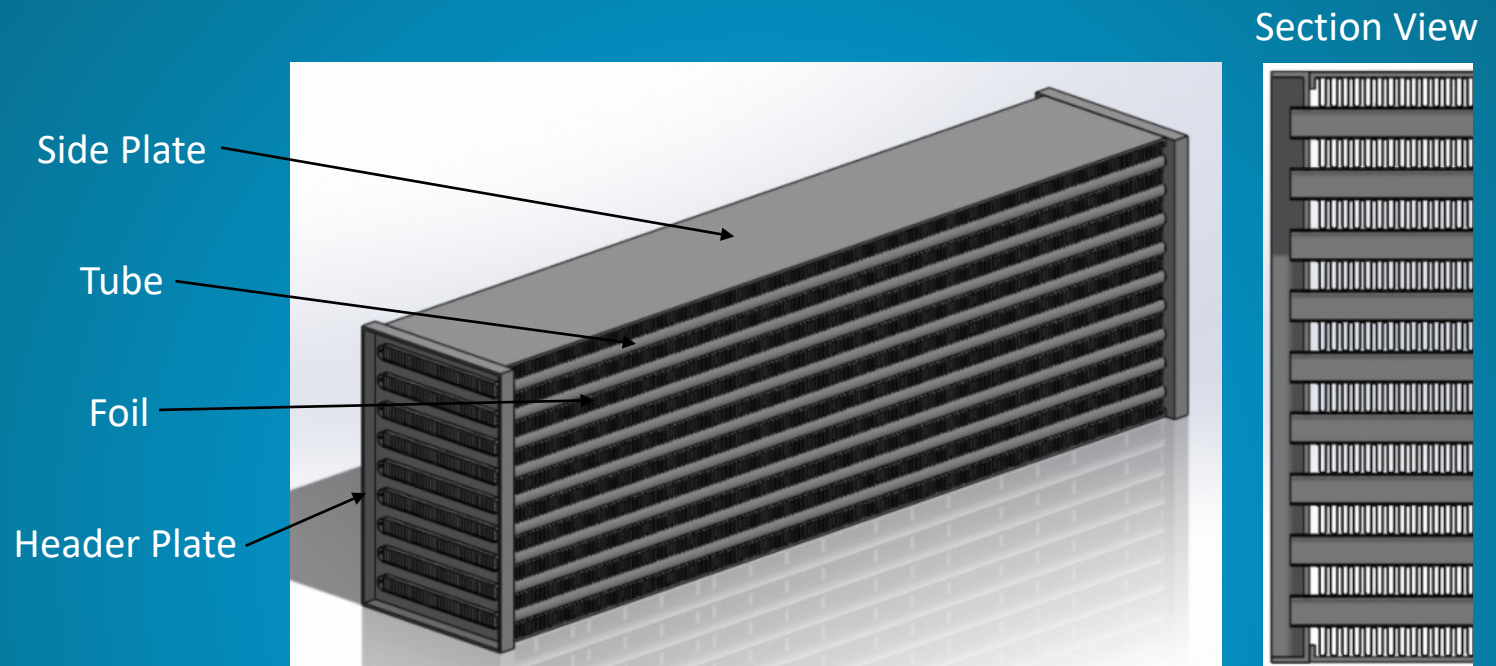




# Deciding on your core

First, confirm the tube length and the stack height of the core you require using the diagram below. (In the case of tapered cores, the tube length is the longest side and the stack height is the vertical height of the core – see curved and tapered type core sheet).

Next, using the following pages find the core thickness and tube type to best suit your application. Find the correct price sheet to suit the core thickness you have chosen. Use the tube length and stack height scales to find the price of the core. The prices in the grid are in Pound Sterling and include a core to your specific dimensions, 10mm flanges, side plate as well as pressure testing to ensure quality. The price does not include VAT or postage and packaging.

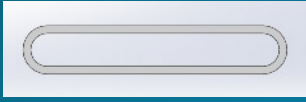


Header plate width will depend on core width, see details below

# Water Radiator Cores

## 13.6mm Water Tube

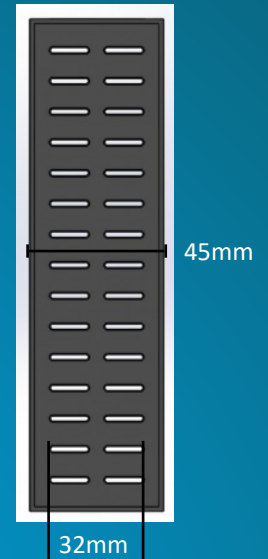
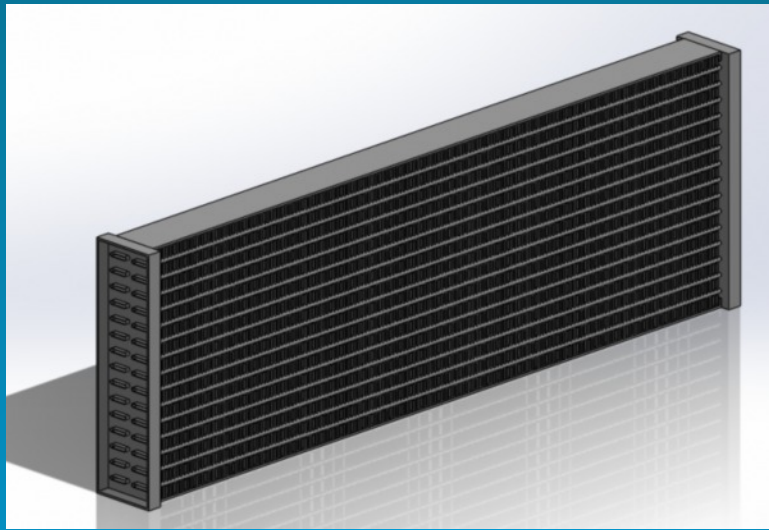
### 2 Row - 32mm Core Thickness



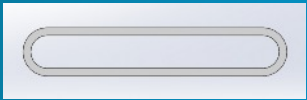
13.6mm x 2.5mm  
Tube Dimensions

7.95mm (H) x 0.127 (T)  
Louvered V Fin

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.



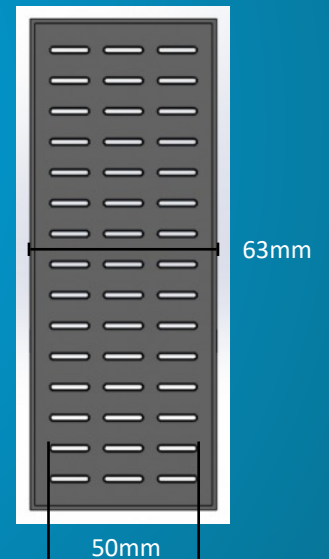
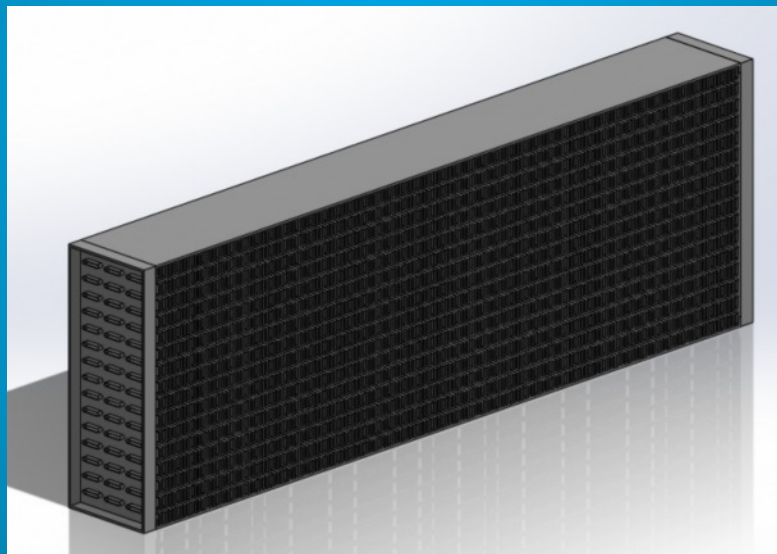
### 3 Row - 50mm Core Thickness



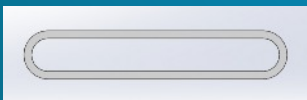
13.6mm x 2.5mm  
Tube Dimensions

7.95mm (H) x 0.127 (T)  
Louvered V Fin

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.



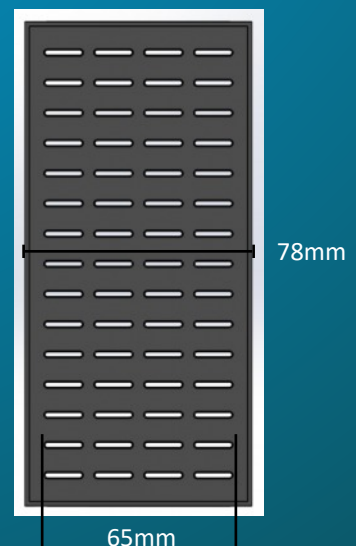
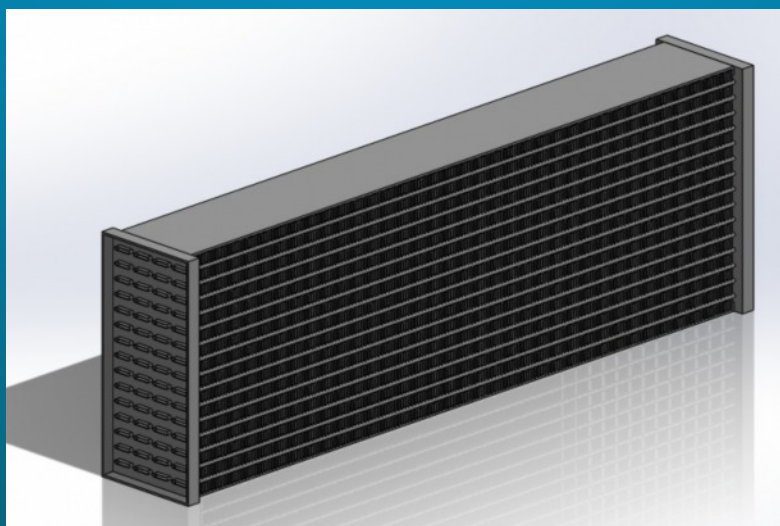
### 4 Row - 65mm Core Thickness



13.6mm x 2.5mm  
Tube Dimensions

7.95mm (H) x 0.127 (T)  
Louvered V Fin

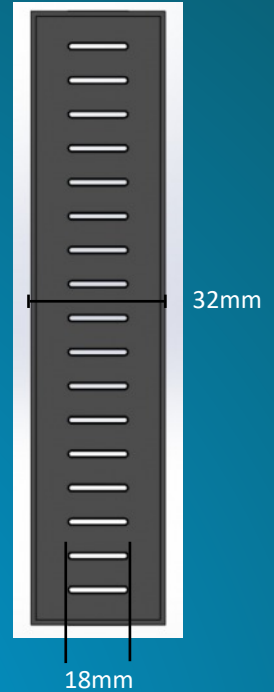
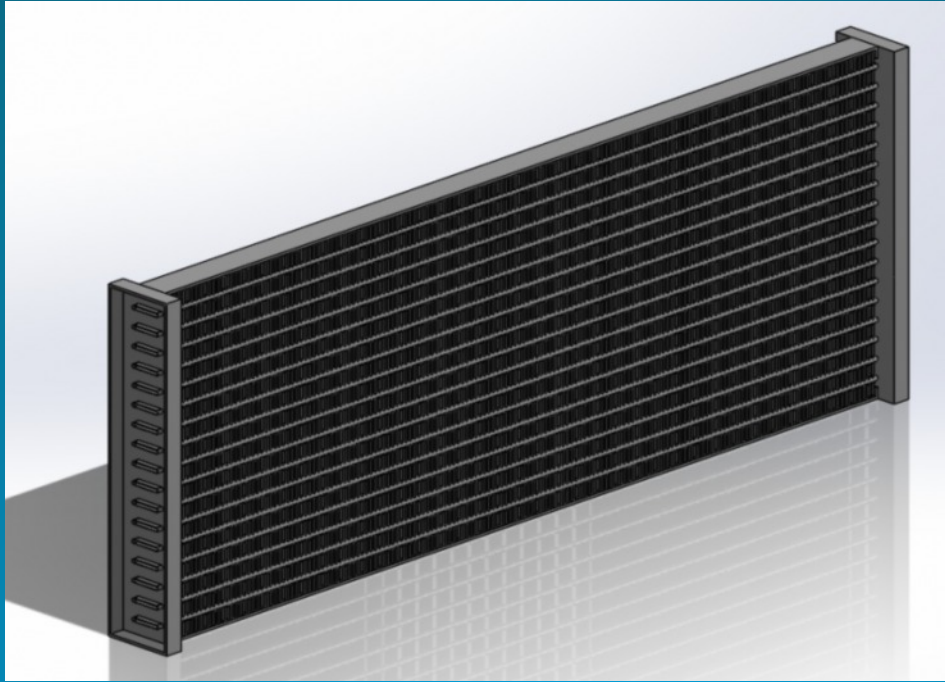
All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.



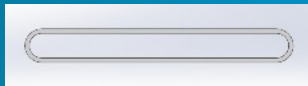


# 18mm Water Tube

## Single Row – 18mm Core Thickness



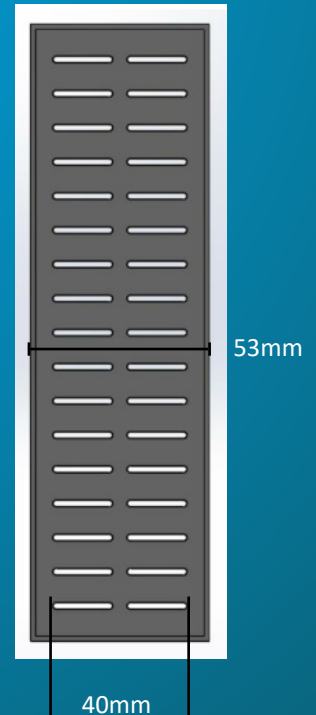
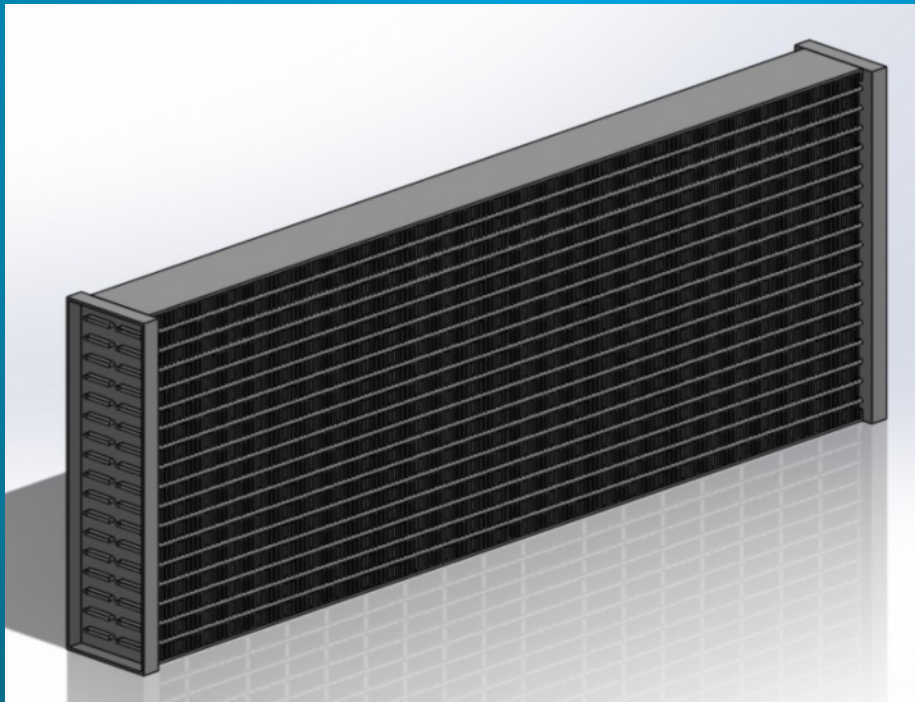
7.95mm (H) x 0.127 (T) Louvered V Fin



18mm x 2.25mm  
Tube Dimensions

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.

## 2 Row – 40mm Core Thickness



7.95mm (H) x 0.127 (T) Louvered V Fin

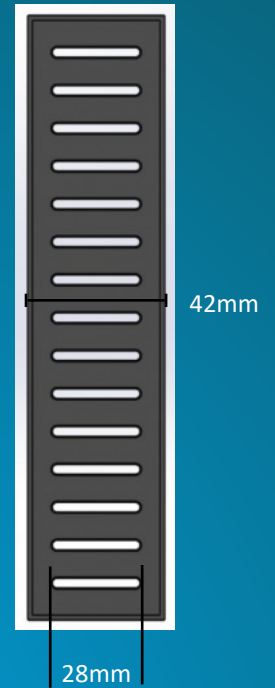
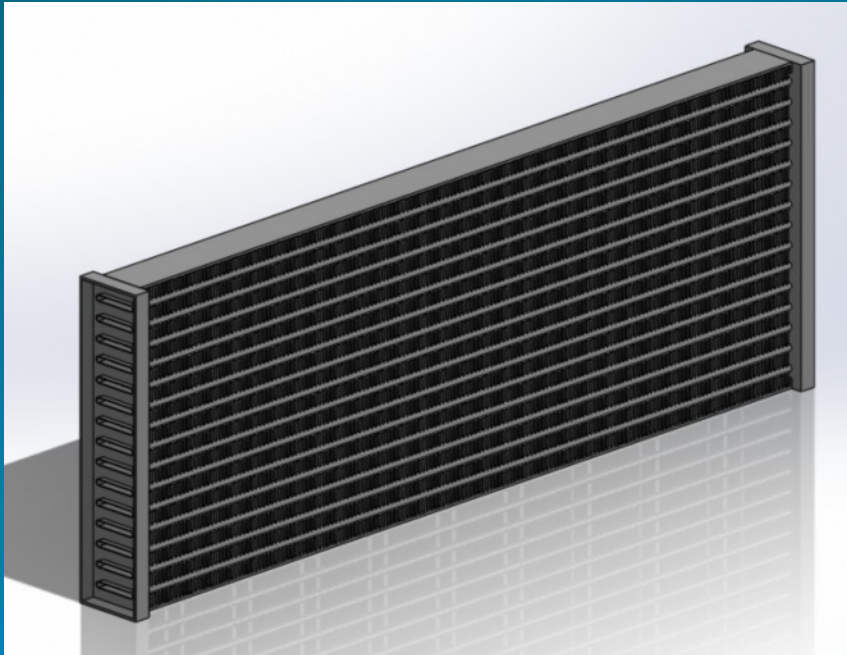


18mm x 2.25mm  
Tube Dimensions

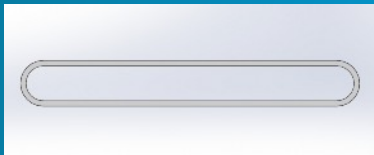
All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.

# 28mm Water Tube

## Single Row – 28mm Core Thickness



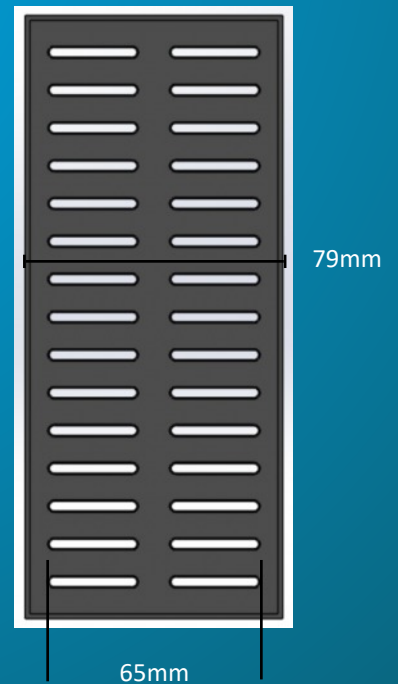
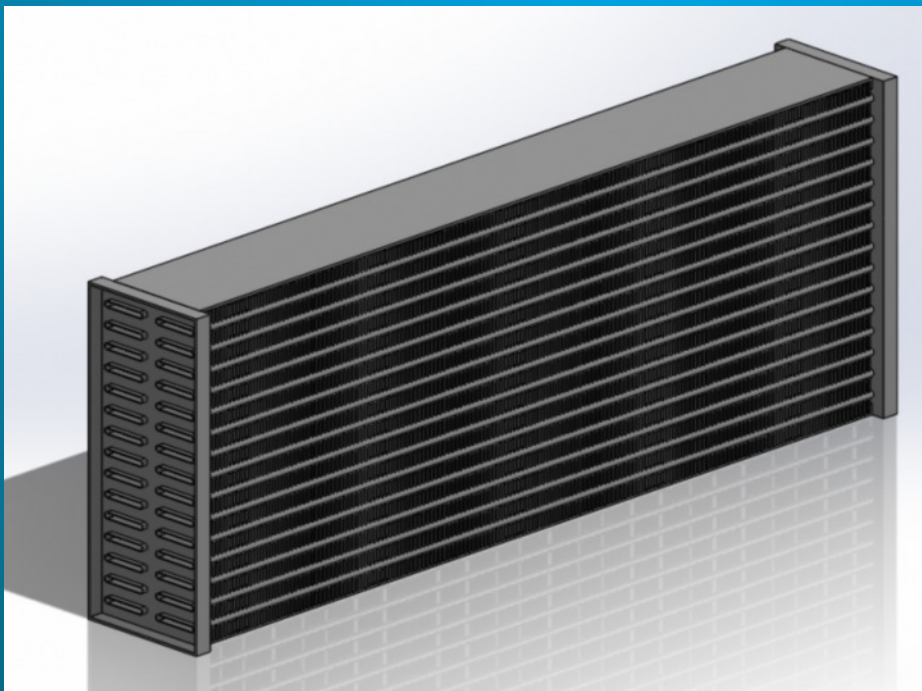
7.95mm (H) x 0.127 (T) Louvered V Fin



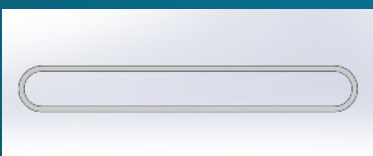
28mm x 3.75mm  
Tube Dimensions

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.

## 2 Row – 65mm Core Thickness



7.95mm (H) x 0.127 (T) Louvered V Fin



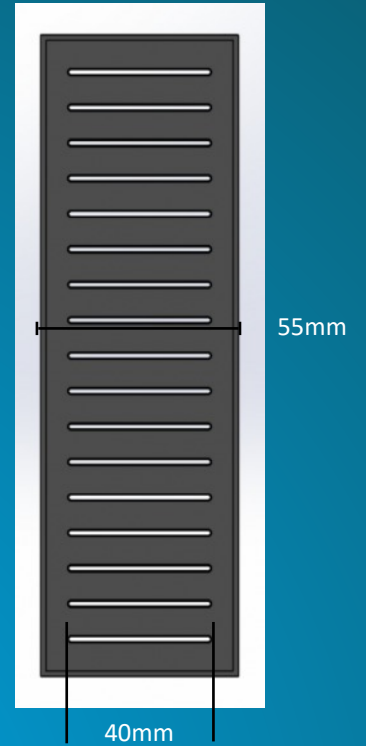
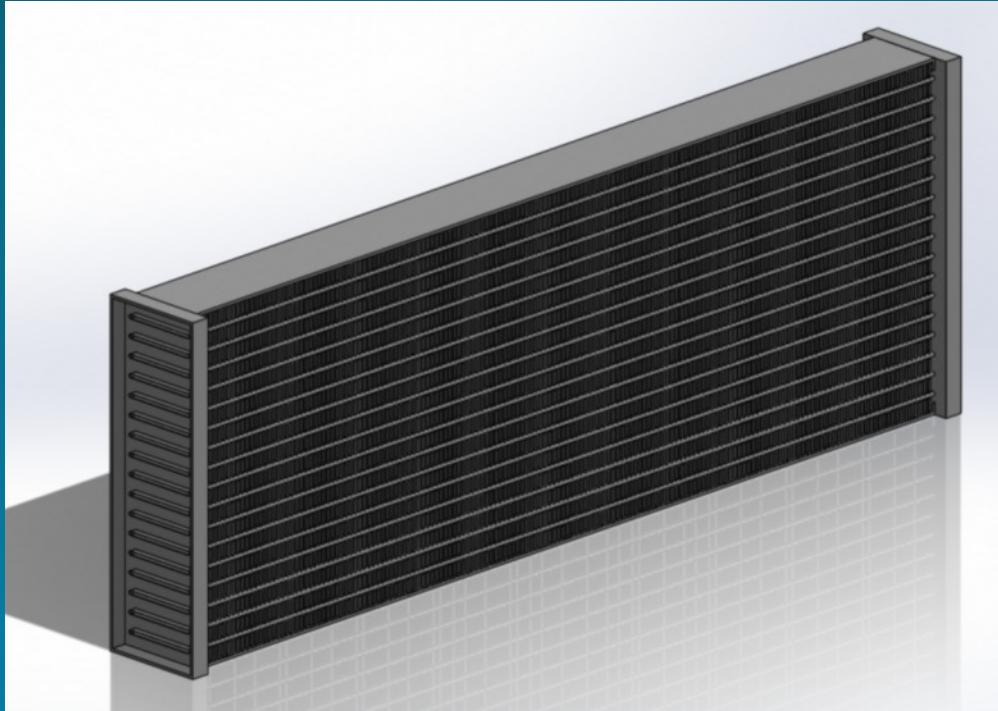
28mm x 3.75mm  
Tube Dimensions

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.

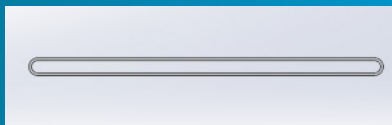


# 40mm Water Tube

## Single Row – 40mm Core Thickness



7.95mm (H) x 0.127 (T) Louvered V Fin

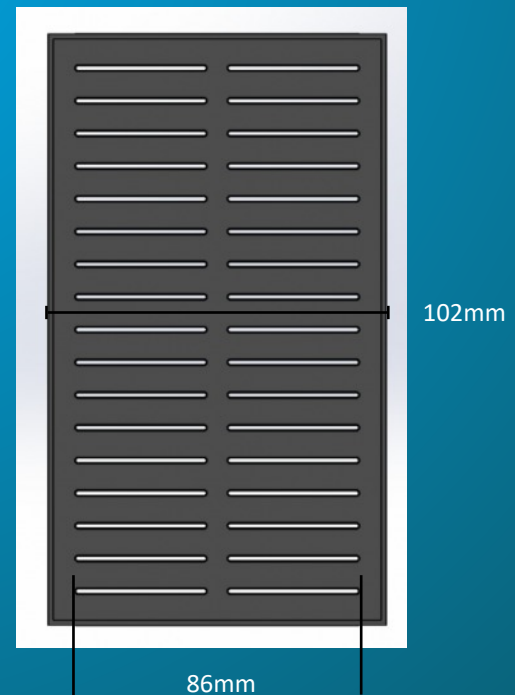
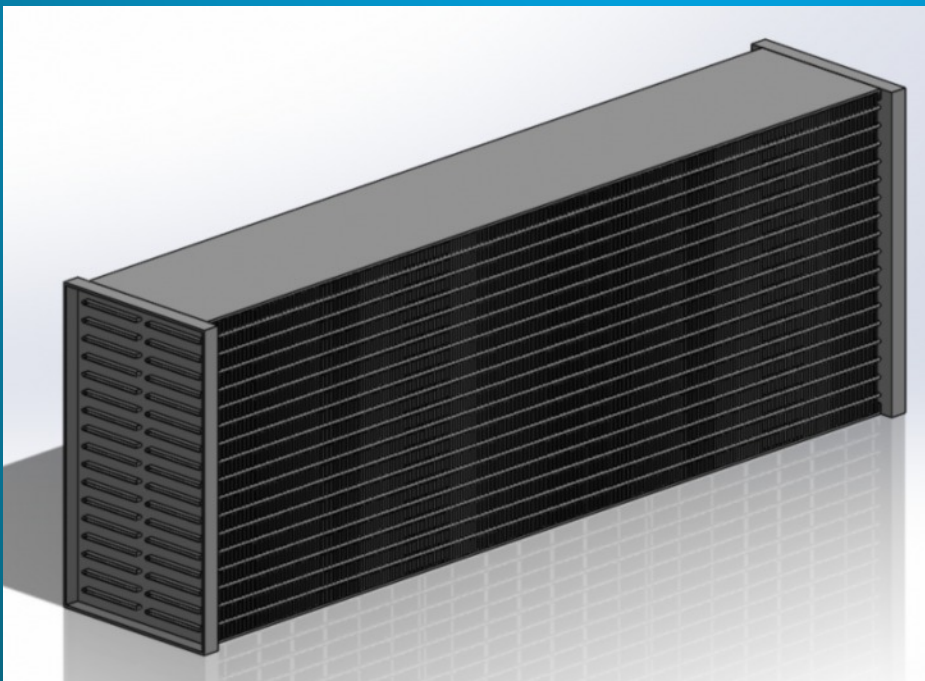


40mm x 2mm  
Tube Dimensions

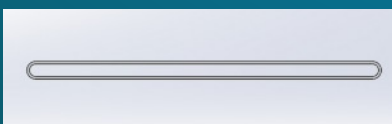
All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.

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## 2 Row – 86mm Core Thickness



7.95mm (H) x 0.127 (T) Louvered V Fin



40mm x 2mm  
Tube Dimensions

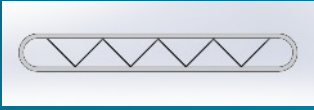
All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.



# Air Intercooler Cores

## 28mm Air Tube (Turbulated)

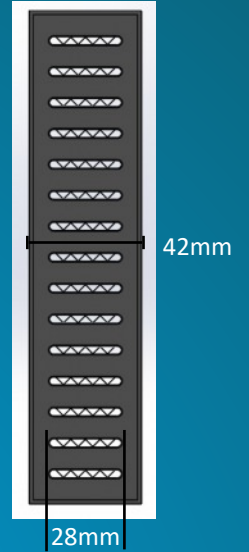
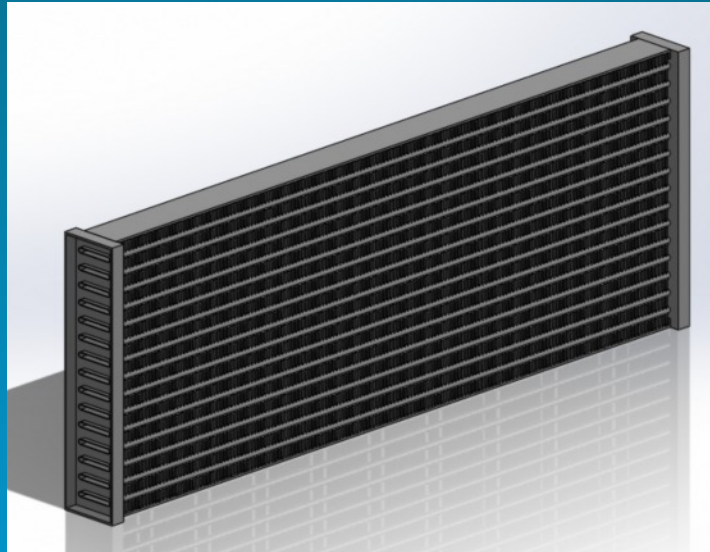
### Single Row - 28mm Core Thickness



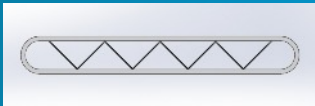
28mm x 3.75mm  
Tube Dimensions

7.95mm (H) x 0.127 (T) Louvered V Fin

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.



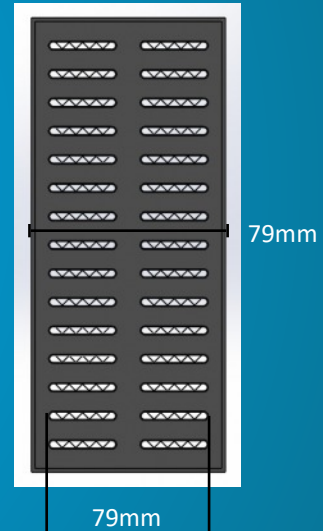
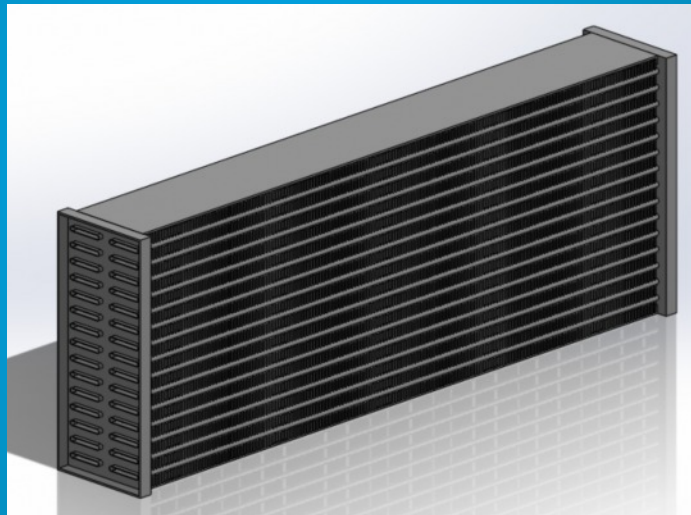
### 2 Row - 65mm Core Thickness



28mm x 3.75mm  
Tube Dimensions

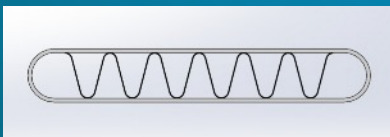
7.95mm (H) x 0.127 (T) Louvered V Fin

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.



## 40mm Air Tube (Turbulated)

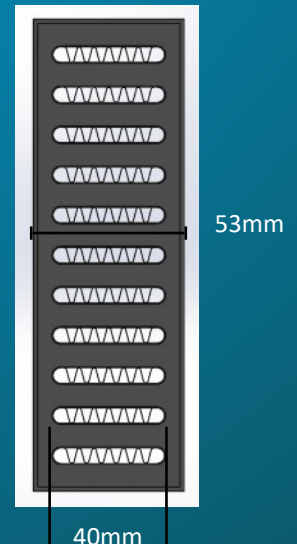
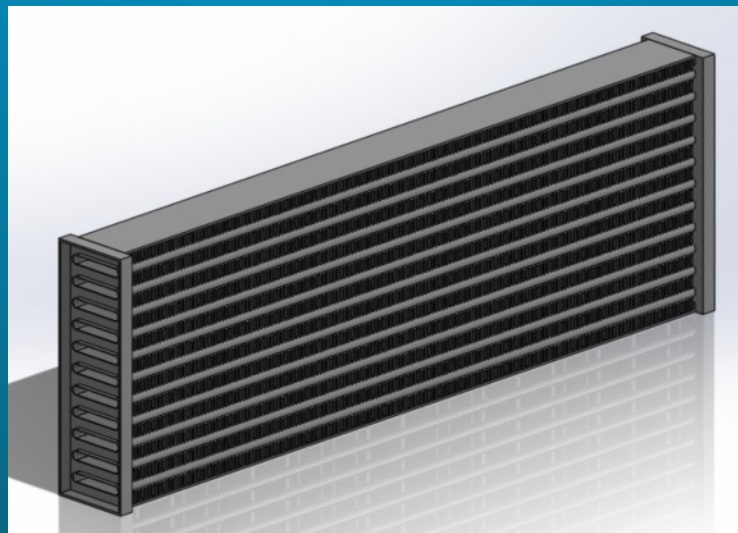
### Single Row - 40mm Core Thickness



40mm x 6.25mm  
Tube Dimensions

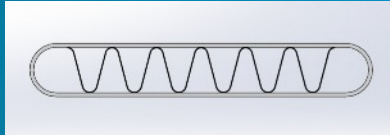
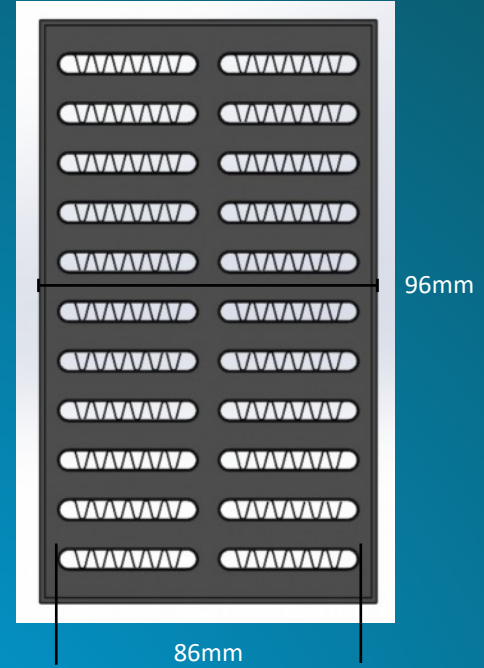
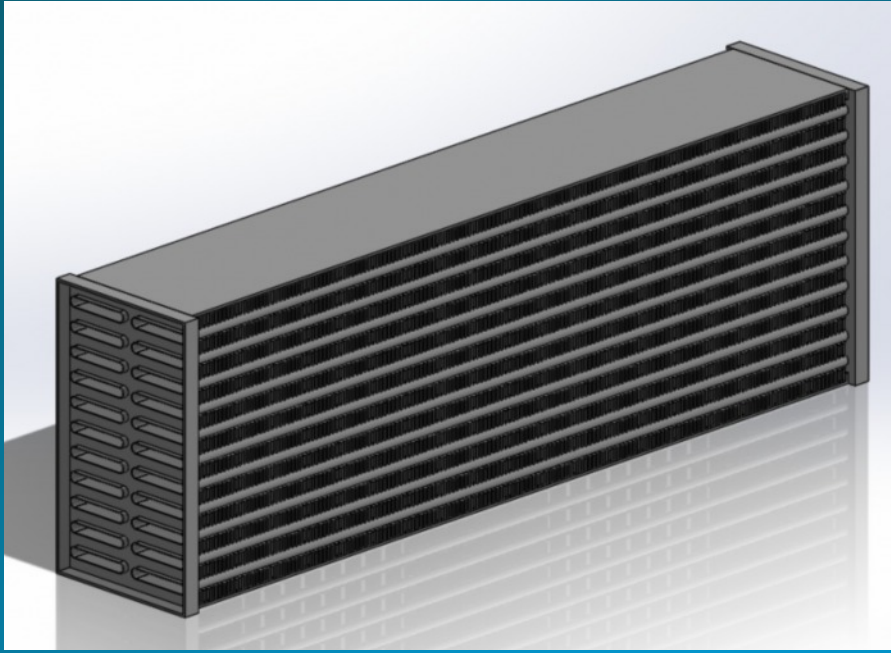
7.95mm (H) x 0.127 (T) Louvered V Fin

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.





## 2 Row - 86mm Core Thickness



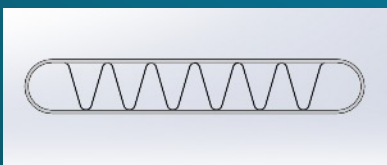
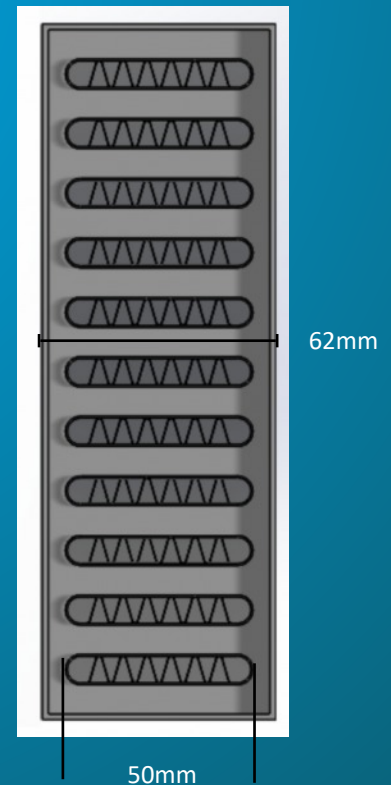
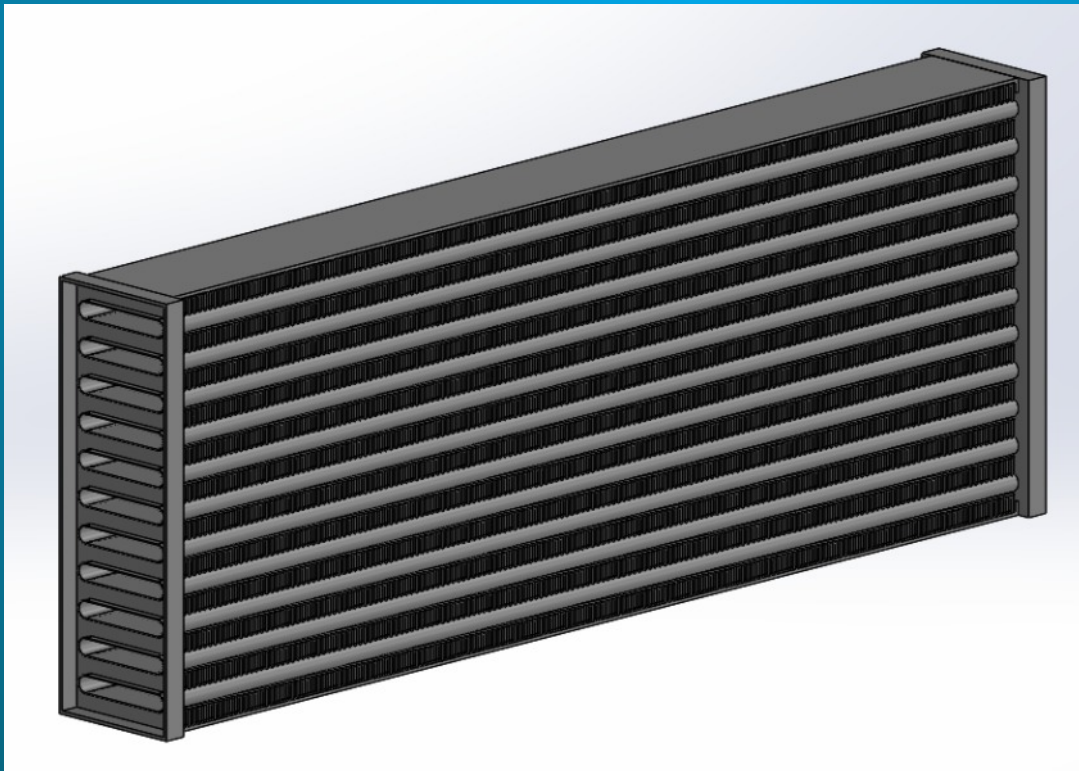
40mm x 6.25mm  
Tube Dimensions

7.95mm (H) x 0.127 (T) Louvered V Fin

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.

## 50mm Air Tube (Turbulated)

### Single Row - 50mm Core Thickness



50mm x 8mm  
Tube Dimensions

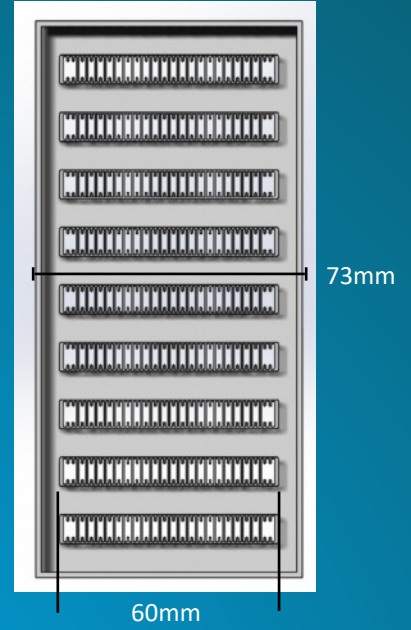
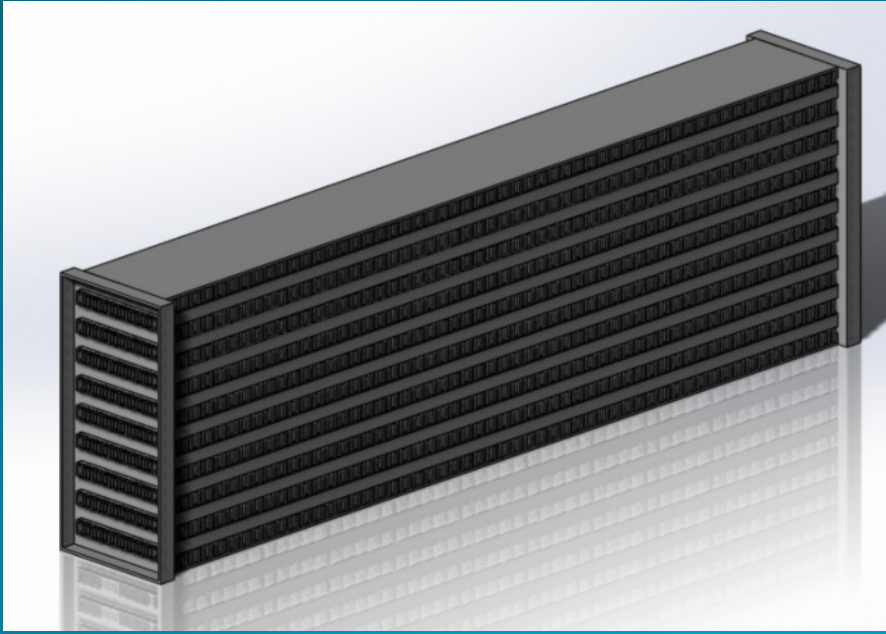
7.95mm (H) x 0.127 (T) Louvered V Fin

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.

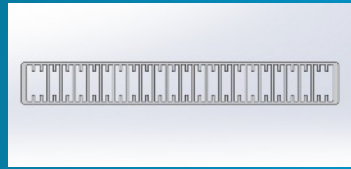


# 60mm Air Tube (Extruded)

Single Row - 60mm Core Thickness



7.95mm (H) x 0.127 (T) Louvered V Fin

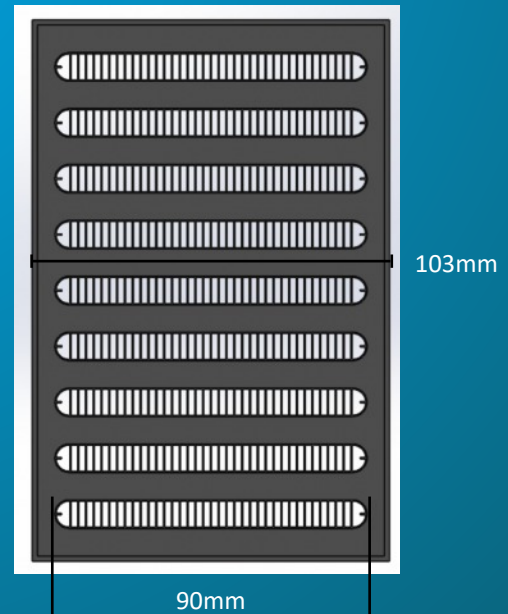
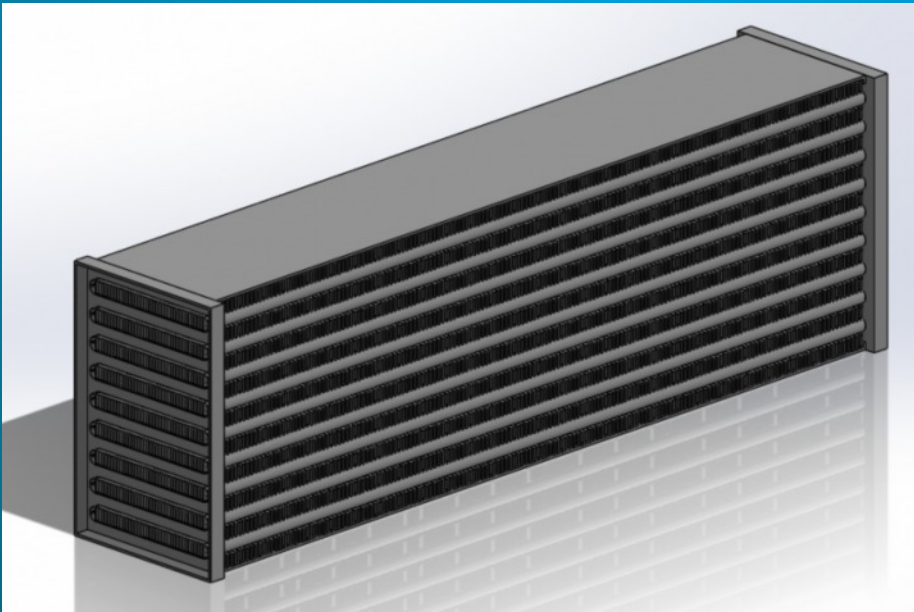


60mm x 7.9mm  
Tube Dimensions

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.

# 90mm Air Tube (Extruded)

Single Row - 90mm Core Thickness



7.95mm (H) x 0.127 (T) Louvered V Fin



90mm x 8.25mm  
Tube Dimensions

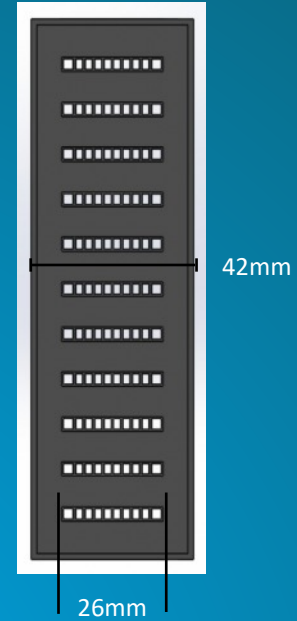
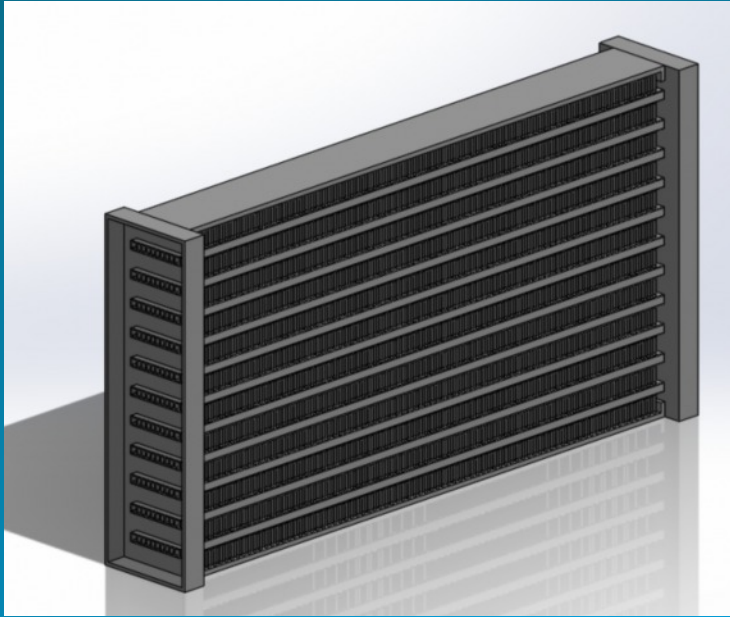
All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.



# Oil Cooler Cores

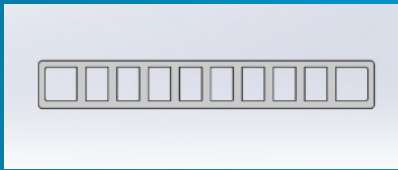
## 26mm Oil Tube (Extruded)

Single Row - 26mm Core Thickness



7.95mm (H) x 0.127 (T) Louvered V Fin

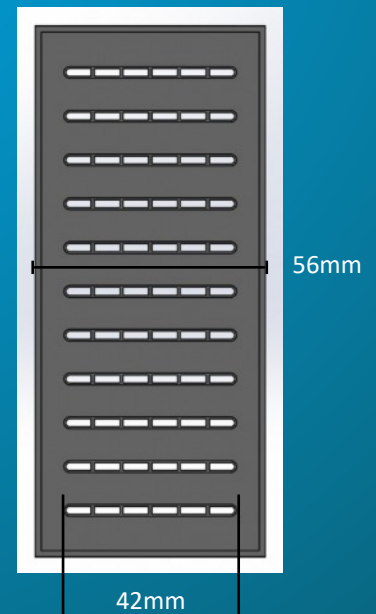
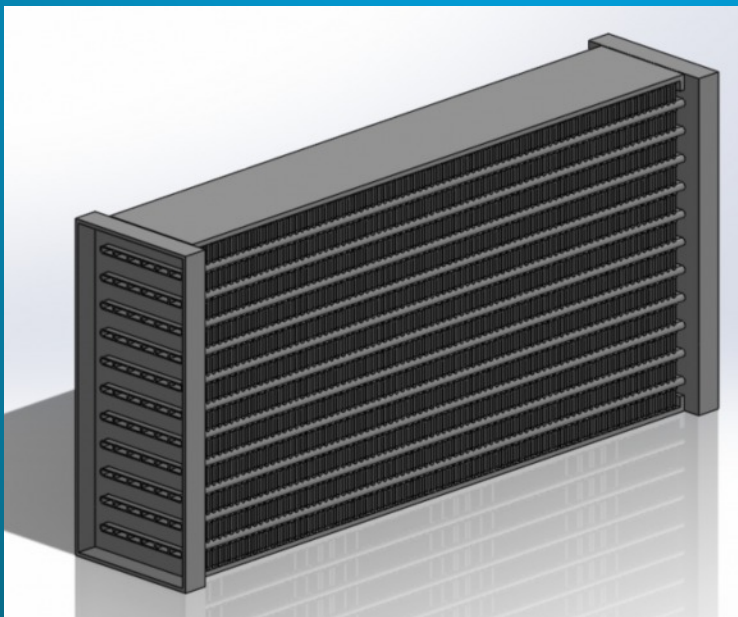
All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.



26mm x 3.75mm  
Tube Dimensions

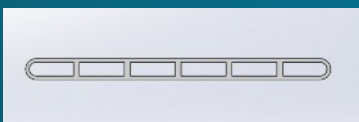
## 42mm Oil Tube (Extruded)

Single Row - 42mm Core Thickness



7.95mm (H) x 0.127 (T) Louvered V Fin

All cores will be built with a standard 16 FPI air side fin pitch unless otherwise requested. We are able to accommodate a fin pitch from 12 to 28 FPI.



42mm x 2.9mm  
Tube Dimensions



# Call: 01440 710266

Monday - Friday 9am - 5:30pm



## Email:

General Sales Enquires  
Email - [sales@proalloy.co.uk](mailto:sales@proalloy.co.uk)

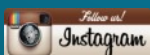
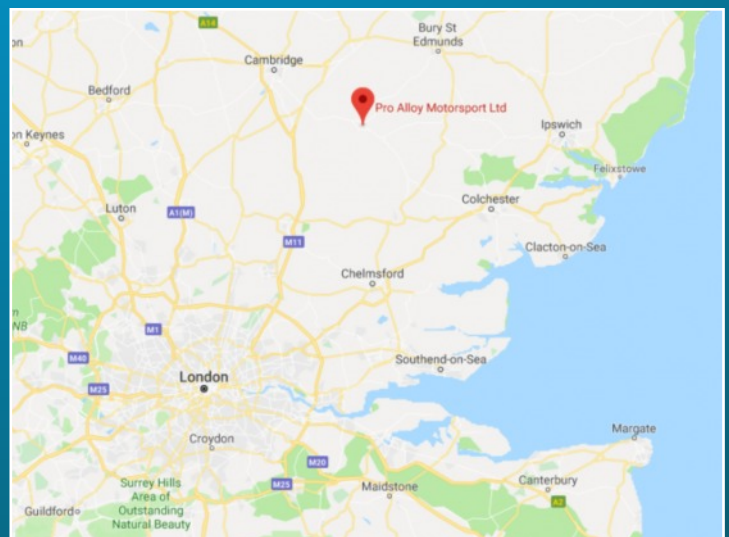
Technical Director  
Email or Call - Chris Hazell - [chris@proalloy.co.uk](mailto:chris@proalloy.co.uk)

Sales & Operations Manager  
Email or Call - Alex Oates - [alexoates@proalloy.co.uk](mailto:alexoates@proalloy.co.uk)

Contact Details



Pro Alloy Motorsport Ltd.  
15 Rookwood Way,  
Haverhill,  
Suffolk.  
CB9 8PB  
United Kingdom



[www.proalloy.co.uk](http://www.proalloy.co.uk)