

**COOLTRON**®



New product line  
**Heat Sinks**

- 
- **What is Heat Sink?**
  - **New Business**
  - **Factory & Process Equipments**
  - **Benefit of Thermal Solution**
  - **Application Markets**

# What is Heat Sink

In electronic systems, a heat sink is a passive heat exchanger that cools a device by dissipating heat into the surrounding medium. Heat sinks are used with high-power semiconductor devices.

- **Method:** from a higher temperature to lower temperature
- **The Fluid Medium:** air, water, refrigerants or oil

Now, heat problems are existing almost ALL electronic products.

**To Solve Problems of Overheating is ASAP!!!**



# Heat Sink Material & Property



Heat Sinks play an important role in the composition of the radiator, besides fans active cooling, assess the stand or fall of a radiator, largely depends on the heat conduction and heat dissipation ability of radiator itself.

## Passive Heat Sink:

- Lower cost, safety and economical
- For outside equipment using

## Active Heat Sink

- High cost, high risk and limited life



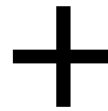
# New Heat Sink Business



## Electronics Device Design Trends

### → Electronics Cooling Solutions

- \* Quieter
- \* Flexible in size
- \* Application System Integration
- \* Worry Free
- \* Fan Failures



### COOLTRON adds

- \* Technology Innovation
- \* Quality Reliability
- \* Years' over Millions US\$



**More than 50%**

sales growth over these three recent years

# Who We are...



- Location: Dongguan, Guangdong, China
- Factory Area: 65,000 square foot
- Employee: About 200 employees for Heat Sinks manufacturing
  - Senior Engineers
  - Proficient Machines Operators
  - Skillful Assembly Workers



# Factory & Equipments



## Production Capabilities

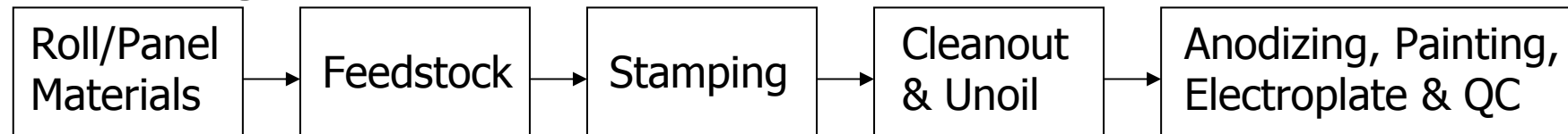
COOLTRON has leading technology capabilities to produce various designs and sizes with precision manufacturing process. We have:

- Stamping Workshop
- Extrusion Workshop
- Forging Workshop
- Skiving Workshop
- Post Processing



# Stamping Process & Equipment

## Stamping Process



## Stamping Equipment

- The biggest tonnage of stamping equipments at COOLTRON factory is 200T.
- The largest size of products is 400MM (L) X 400MM (W) X 50MM (H).

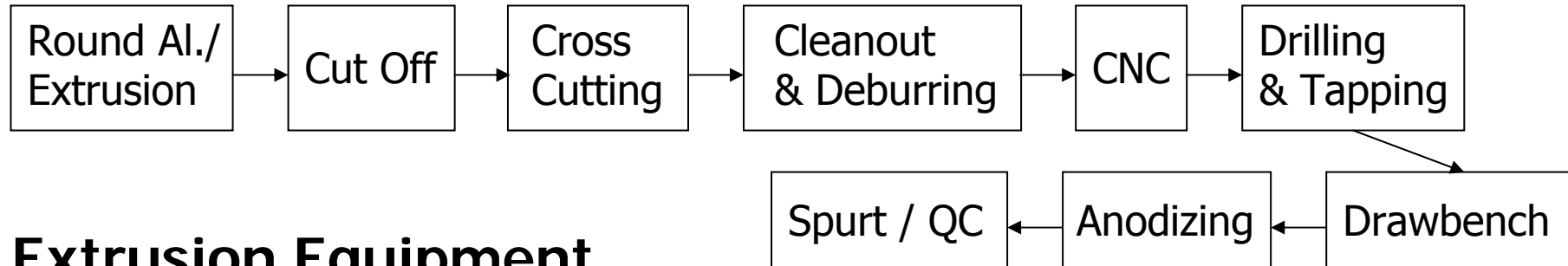




# Extrusion Process & Equipment



## Extrusion Process



## Extrusion Equipment

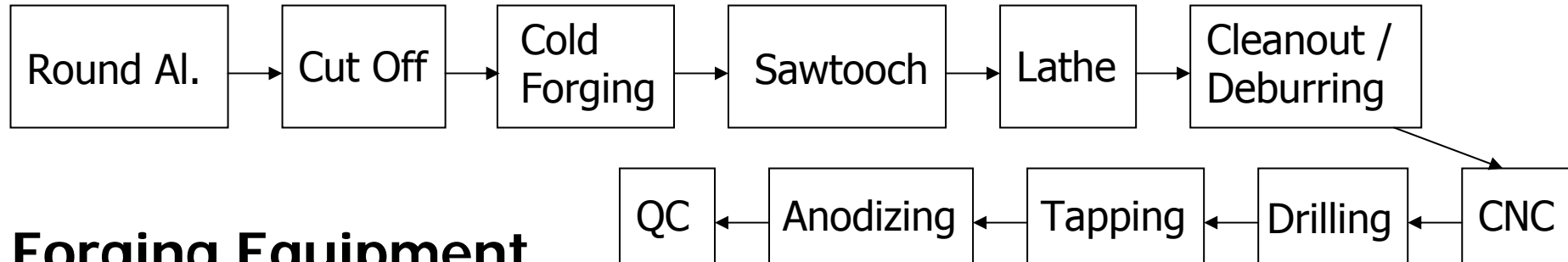
- The tonnage of extrusion equipments at COOLTRON factory are 1,600T, 3,600T and 6,500T.
- The largest size of products is 540MM (W) X 100MM (H), around 100lbs weight.



# Forging Process & Equipment

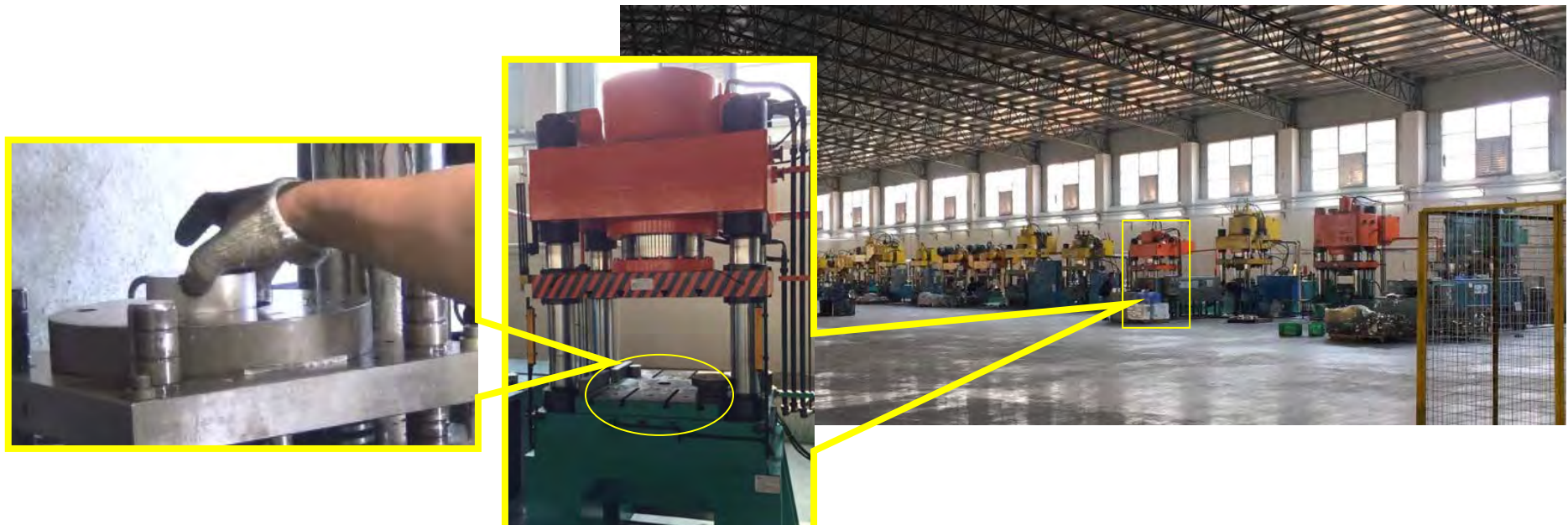


## Forging Process



## Forging Equipment

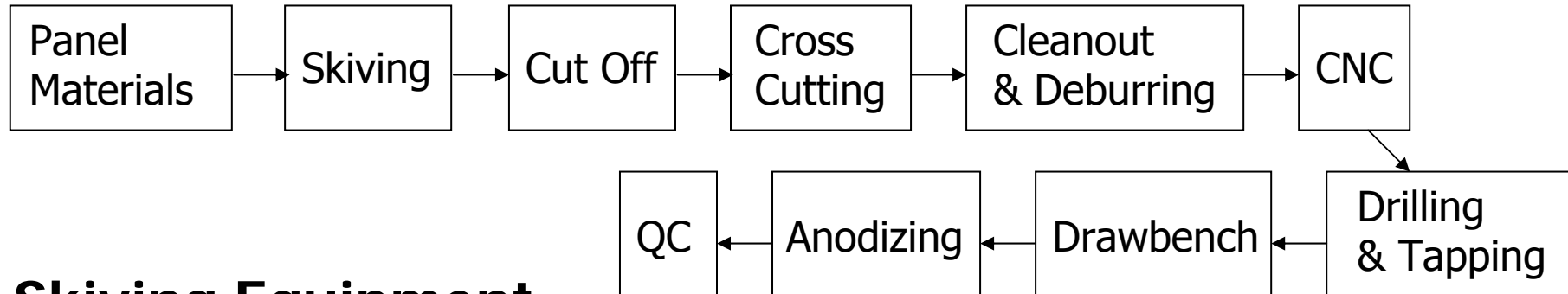
- The biggest tonnage of forging equipments at COOLTRON factory is 3,500MT.
- The largest size of products is 400MM (L) X 300MM (W) X 150MM (H).



# Skiving Process & Equipment

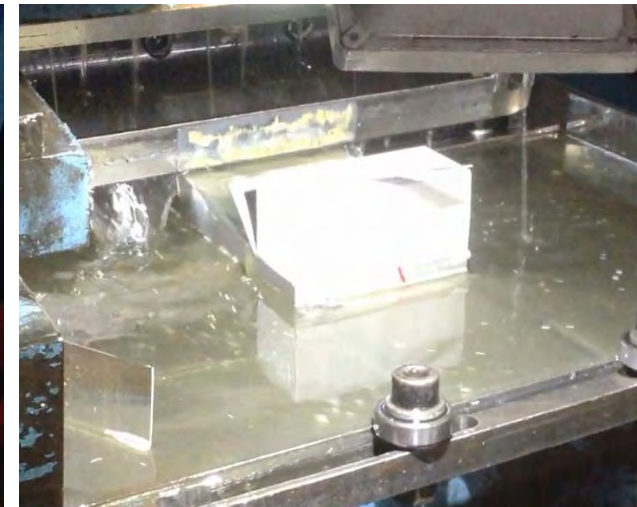


## Skiving Process



## Skiving Equipment

- The largest size of skiving equipments is 500MM (W) X 110MM (H).



# Other Process & Equipment



Stamping Machine 80T



Weld Line



Automatic Tapping & Screwing Machine



Automatic Ultrasonic Cleaning Line



Wire Cutting Machine



CNC Grinding Machine



Three Light Cutting Machine



Precision Grinding Machine

# Certifications



ISO9001 & ISO14001

Work Safety Standardization (WSS)



Invention Patents (Parts)

# Benefit of Each Thermal Solution



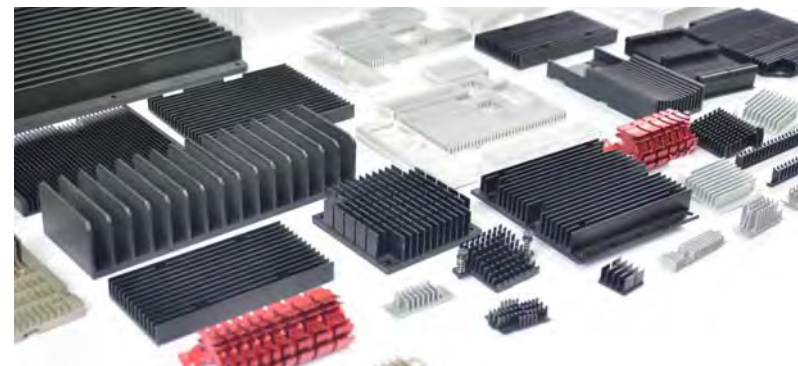
## Basic Function & Stamping Heat Sinks

- Lowest Cost Thermal Solutions
- Ideal for Printed Circuit Boards
- Simple Assembly Processing & Reduce Cost
- Easy Manufacturing Process



## Extrusion Heat Sinks

- High Efficiency
- Lower Cost
- Many Standard Shapes and Sizes
- Easily Customized

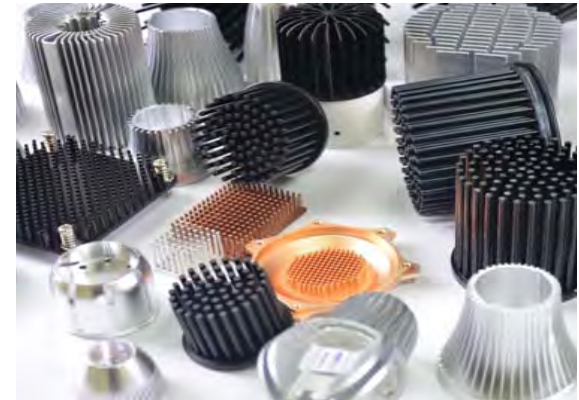


# Benefit of Each Thermal Solution



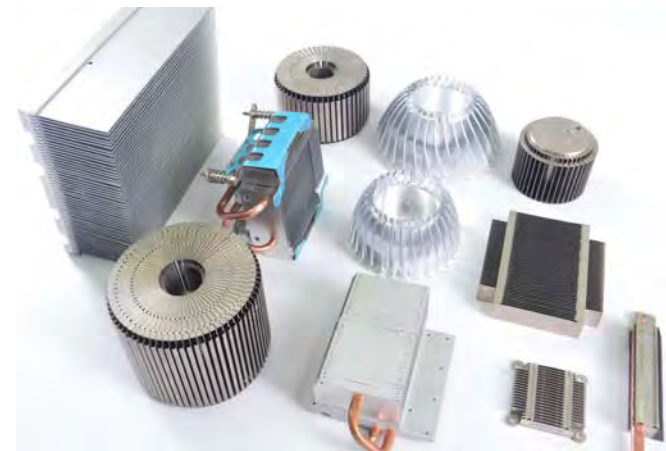
## *Forging Heat Sinks - The Leading Technology*

- Enhance the Strength of Aluminum Structure
- Increase 20% Heat Conduction Performance
- Suit for Diverse Custom Design Applications



## *Compact Fin Heat Sinks*

- High Power Heat Dispersion Demand in Space Constrained Areas
- Increase Fin Height, Reduce Thickness
- Lighter Weight
- Good Heat Dissipation Effect





# Benefit of Each Thermal Solution



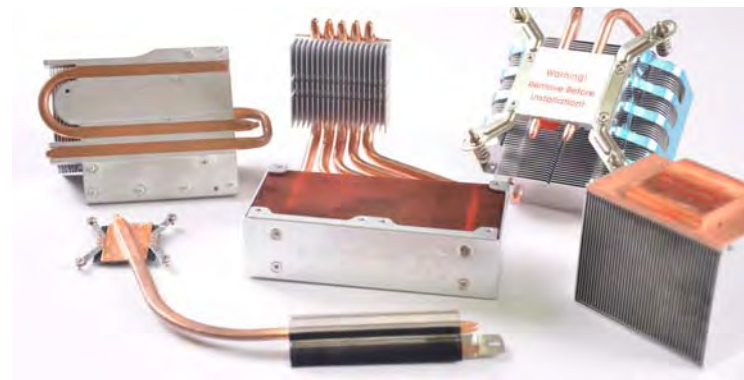
## Fan Heat Sink

- Enhanced Performance in Less Space
- Increased Life and Reliability of Critical High Power Components
- System Airflow or Space is Restricted



## Heat Pipe

- Fast Heat Conduction, Reduce Heat Transfer Time
- Satisfy the Demand of High Heat Dissipation Products
- Reduce the Size
- No Leaking Issue

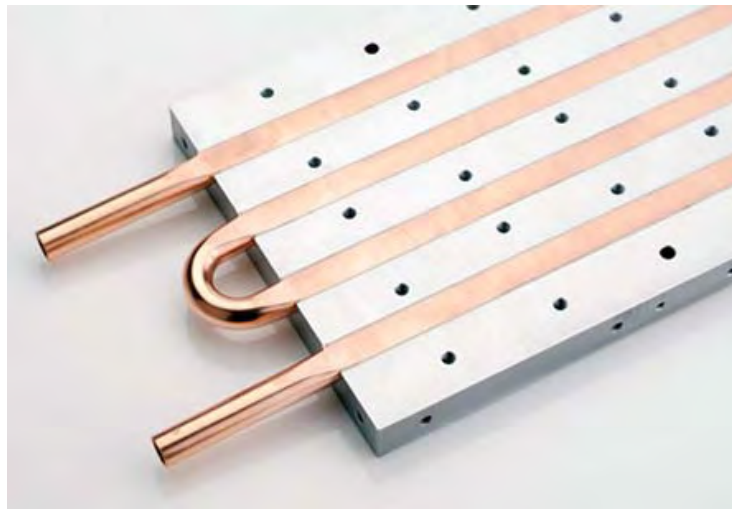


# Benefit of Each Thermal Solution



## Liquid Cold Plates

- Most Compact & Efficient Cooling Method Available
- Quiet & Reliable
- Compatible with Water, Glycol, or Other Cooling Fluids
- Standard Models and Custom Designs Available

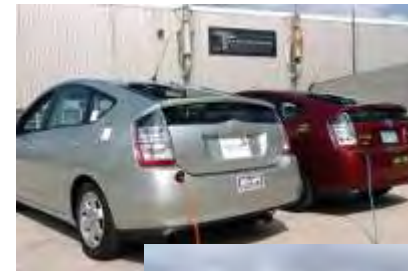


# Application Markets



Heat Sinks are applicable for a wide array of scenarios and applications, The following application examples depict common uses of Heat Sinks.

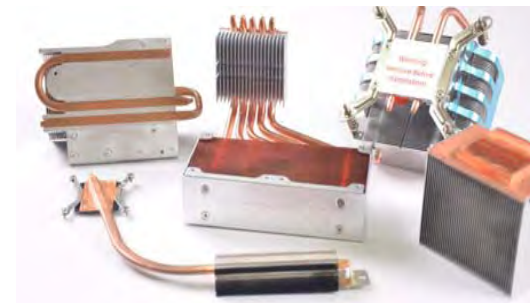
- *LED Lighting*
- *Power*
- *Consumer Electronics*
- *Transportation*
- *Telecom*
- *Computer*
- *Others*



# What We Can Do



COOLTRON offers a variety of heat sink types to meet customers' units and further categorize our heat sinks into below major types: **BGA Heat Sink**, **Extrusion/ Forging** and **Skiving Heat Sink**, as well as **Fan Heat Sink** and **Heat Pipes**, etc.



# Contact Us



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*Thank You!*