

Heat Exchange...
ENGINEERED.



NBR 

REDEFINING ENGINE COOLING

SUPERIOR QUALITY BRAZED ALUMINUM CORES
MADE IN INDIA WITH GERMAN TECHNOLOGY



INVENTING **FUTURE** TOGETHER...

NBR is a Private Limited Company with a combined experience of more than 100 years and we set to deliver the most efficient heat exchange solution in the Industry.

With a history of consistent growth and innovation spanning over three decades and three generations we are one of the most reputed names in the industry.

Our reputation for quality is hard won and it is the legacy we thrive on. To achieve breakthrough simplicity and quality in our product range **NBR** implements new technologies and production management systems on a regular basis which make us a unique clique which has been redefining industry standards.

We combine power of innovation & commitment to quality that enables us to create high performance cooling solutions for both **O.E.M and aftermarket customers** from a vast array of sectors like **Automotive, Commercial Vehicle, off- highway, Agriculture equipment, Construction Material Handling, Locomotive, Generators sets, Windmill & Compressors** whilst being committed to deliver excellence in both products and services.

SUSTAINING VALUES...

While everything has changed in the last 30 years, the core values of hard work, consistency and integrity remain the same which propel us towards Unparalleled & dependable growth.

- ▶ **Adaptability** - We adapt quickly to changes in the market to meet the needs of our customers in all segments of the industry.
- ▶ **Continuous Improvement** - We believe that continuous improvements of our products, processes, services and skills will provide long term success and values to our customers.
- ▶ **Dedication** - We believe the success of the company starts with strong dedication and this is the reason we stand apart from our competition.
- ▶ **Dependability** - As a reliable manufacturer, we are committed to deliver quality products, services and support to ensure the success and satisfaction of our customers.
- ▶ **Entrepreneurship** - We strive to continuously develop innovative automotive and industrial products in anticipation of market needs, enabling us to exceed our customer's expectations.
- ▶ **Team Work** - Team Work encourages a work environment which promotes teamwork, leadership, and open communication, all sharing the common goal of becoming the leader within our industry.

A COMPANY INVESTED IN PEOPLE

Our client philosophy is anchored around the following core principles

Always aim to bring better cost and operational efficiencies to our clients.

Always think innovatively, deliver effectively.

Always, first understand your business needs and objectives.

Always serve with honesty, integrity and transparency.





MANUFACTURING CAPABILITY

With our new plant commissioned, we have increased our production capacity by 300%. With the production capacity of more than 1 million units we are now the leading manufacturers of Aluminum and copper cores in India.

Spread over area of 4 acre our new facility has a dedicated **30000 Sqft** shed for manufacture of Aluminum cores and a **10000 Sqft** shed for a dedicated copper and brass core production. This enables us to be the to create superior quality brazed aluminum cores made in India with German technology.

CORE MANUFACTURING CAPABILITY

- * **SECO WARWICK Continuous CAB Furnace**
- * **10 Core Builders**
- * **2 High Speed 100 mm fin machines**
- * **Automatic drying and fluxing station**

We manufacture different tube and fin combinations covering all aspects of cooling. Cores are manufactured and assembled in our factory and brazed using continuous **CAB (Controlled Atmosphere Brazing)**.

PRESS SHOP AND TOOL ROOM

We have in house press shop and all the components are made inside the factory with best quality raw material which gives us the edge over other manufacturers and also allow us to control the quality from the very first step.

We have collaborated with a tool room and now all the dies and tools are also made by us which enables us to develop new models for new markets in the shortest span possible.

And also allow us to cater the demand of new customers.

We put **QUALITY FIRST** and keep you ahead...

AT **NBR** our key aims are of Quality, Innovation and Speed to Market. With a program of continual improvement through the employment of the latest production methods, materials and quality control process guarantees our cooling range of products are of first quality.

We use the **Poka-Yoke** tools & techniques to continuously evolve and improve our quality systems. This includes a high emphasis on visual reporting and effective two way communications.

ISO 9001 accreditation gives our customer base the comfort that quality meets their expectation.

Committed to ethical and environmentally sound manufacturing alongside ongoing quality assurance, we also making sure we continuously focus on providing a safe and risk free environment.



PROVEN PRODUCTS THAT ARE TRIED & TESTED

Over the years Our quality in production is maintained due to our comprehensive testing facility is inclusive of **Water testing, Air pressure testing, Vibration testing, and Luminous testing.**

Our raw material is tested on **Tensioner machine, Salt spray test, Spectro check, Scanning electron microscope.**

Driving the Expertise... What we do today Powers you Everyday

One of NBRs strongest assets is their team of best in class and experienced engineers in mechanical, manufacturing sectors. They are dedicated to providing remarkable engineering services in design, prototyping, tool making, product validation and manufacturing set up.

Such multi-disciplinary experience handles a wide range of products which provides a competitive edge in engineering development over other manufacturers.



SOLUTIONS THAT MAKES EFFICIENCY COUNT

With Years of industry involvement and a thorough understanding of the market dynamics we have produced products based on the evolving needs of the industry.

NBR's portfolio includes wide variety of copper, aluminum radiator and cores. We have more than 15 different combinations of copper and brass designs.

These give our customers option to choose from wide variety of products, Hence they get the best suited for their requirement.

Product portfolio has an array of tubes with copper width of 34mm to 150mm. 3 tube mills can produce 4 different type of tubes from 7mm to 12mm.

We also manufacture copper brass radiators for welded brass tanks and Mechanical, welded steel tanks, Aluminum radiators and cores for plastic molded tanks and welded aluminum tanks.

INDUSTRIES WE SERVE

Machines made Flawless

TRANSFERRING POWER THROUGH PERFORMANCE

We offer OEM and Custom designed products across all industries where ever heat exchange solutions are required.

- Automotive Industry
- On-highway
- Off-highway
- Agriculture Industry
- Construction Material Handling
- Locomotive
- Generators sets
- Windmill
- Compressors





**A bespoke design tailored to
CUSTOMER'S REQUIREMENTS**

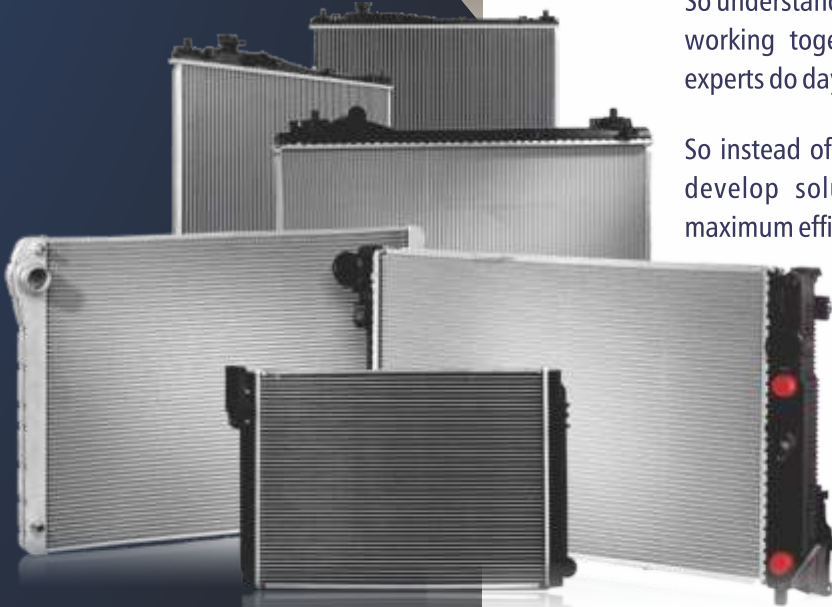
ULTRA-MODERN PRODUCTION FACILITIES FOR CUSTOM PRODUCT DEVELOPMENT

NBR is built on a strong foundation of design and engineering excellence. We aim to meet our customer's expectations to the fullest.

So understanding our customers real and practical needs, working together to co-create solutions is what our experts do day-after-day.

So instead of over emphasizing on standardization, we develop solutions that are customized to deliver maximum efficiency under practical operating conditions.

**Flexibility in the designing approach
Prototyping speed,
In-house testing competence and
Integrated manufacturing capabilities**
is what makes **NBR** a preferred development partner for our customers.





ALUMINUM RADIATORS

NBR Radiator manufactures a wide range of different types of "Aluminum Radiator Cores". We have cores with louvered fins, non-louvered fins, welded tubes, with wide range of tube sizes.

We are known for excellent performance, high-cooling capacity and durability and we are among the largest manufacturer of brazed aluminum and copper cores in India.

TUBES

Aluminum tubes are made on **German Hi Frequency Welding tube mill** using special grade alloys to give tubes extra strength.

Consistency is maintained in tube size and welding strength. Welding strength is tested using **eddy current checks**. To check the bursting strength every **1000th tube is tested** on burst pressure machine.

SIZE OFFERED

TUBE SIZE 16 X 1.8 MM THICKNESS 0.30MM

TUBE SIZE 22 X 1.8 MM THICKNESS 0.30MM





FINS

NBR produces a large variety of aluminum cores with high strength materials for long lasting product to cater various sectors. We produce high quality cores with louver and Non-louver fins. Louvered fins have applications in on-road vehicles where Non-louvered fin design is for earth moving and farming equipment to avoid clogging due to dust and husk.

Fin design are based on end use application.

OFFERED FIN WIDTH

16mm, 22mm, 36mm, 48mm, 56mm and 74mm



HEADER PLATES

The press shop uses state-of-the-art equipment like the **250-ton hydraulic press** and **110-ton cross shaft press**. **Shearing machine** used to cut sheet to make the headers and side plates.

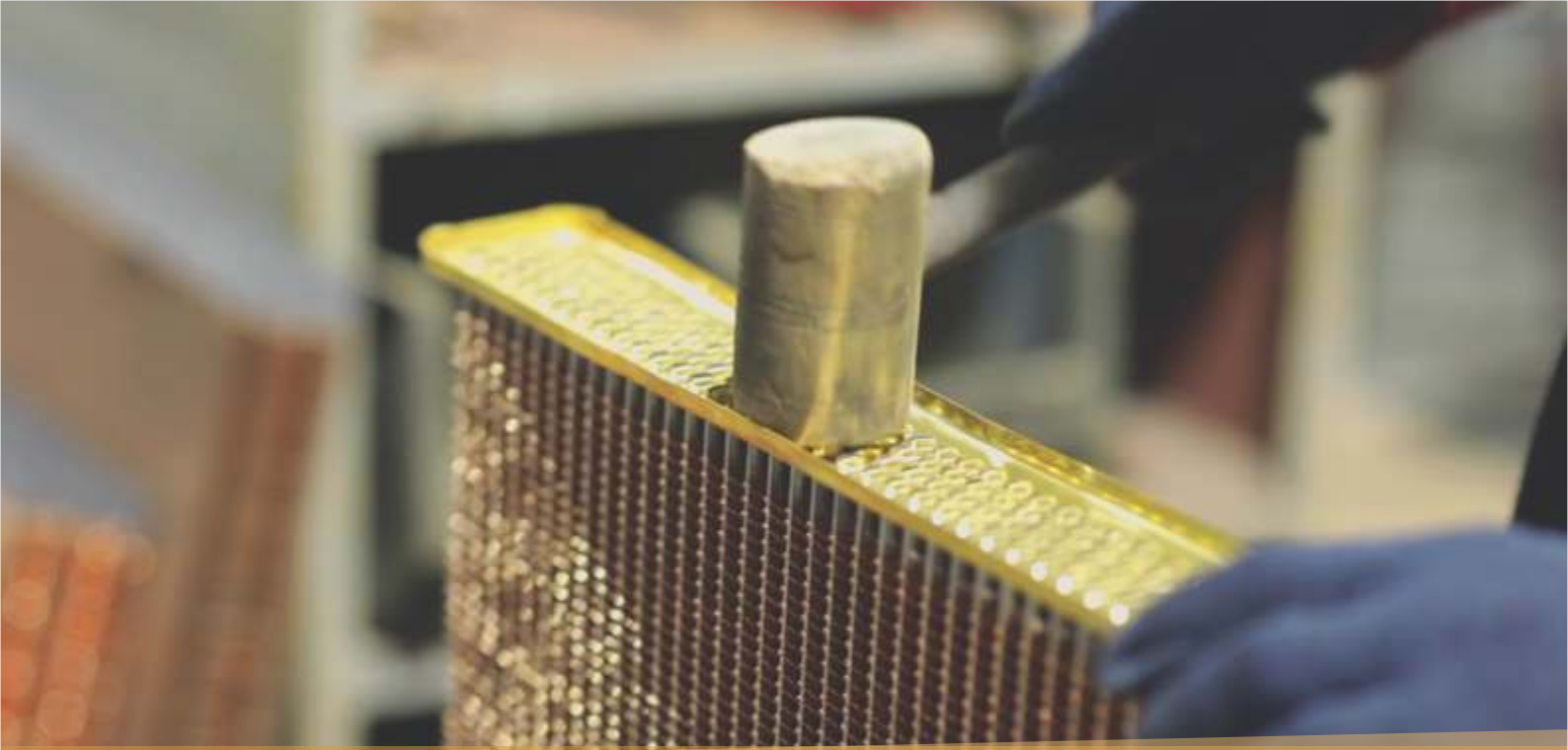
The header plate is then made from the **special grade clad aluminum sheets** using **dyes and power press**.

NBR makes all the header plates and side plates in-house, which gives them an edge over other manufacturers with a strict control over quality and cost benefits.

NBR uses the world's best Continuous CAB (Controlled Atmosphere Brazing) furnace from Seco Warwick Poland.

The brazing strength and finish is the best in the business and preferred and used by all Major OE brands in the world.





COPPER RADIATORS

Although aluminum has replaced copper radiators to a large extent but there are applications where copper is still preferred.

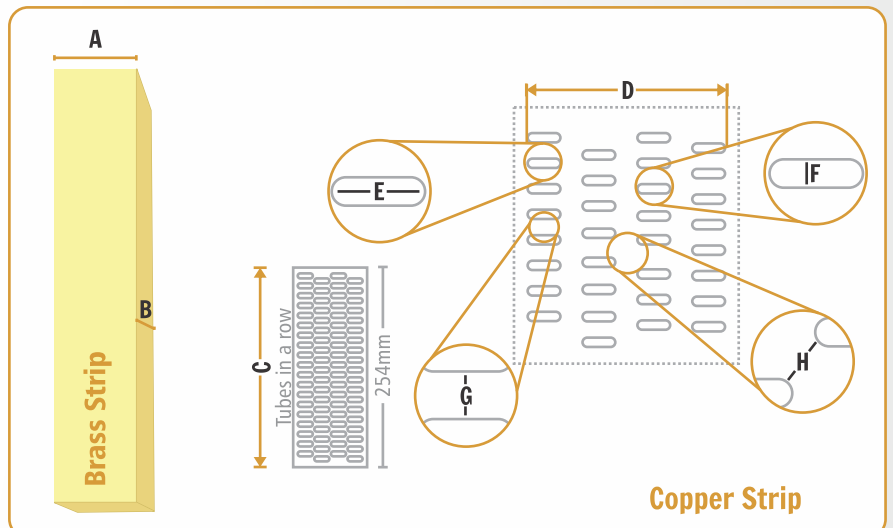
NBR has also pioneered **Cuprobraze Technology**.

We manufacture radiators and cores for more than **200 models**. A large variety of copper and brass combinations are also available like German pattern and English pattern based on customers' demand.



NBR makes German pattern which means tubes are placed close to each other for better coolant content and English pattern where tubes are placed at higher pitch to get better air cross flow.

We can use different copper and brass width as well thickness as per customers requirements. Some of our Sub brand names famous across India are - **CHAMPION, MODERN, RELIABLE, SUPREMO.**



► BRANDS FOR CAR, TRACTORS LIGHT COMMERCIAL VEHICLE

Particular	CHAMPION	MODERN	RELIABLE	GOLD	SUPREMO	HIT	SUPER
Brass							
Width(A)	24mm	26mm	29mm	29mm	32mm	24mm	29mm
Thickness(B)	0.07mm	0.08mm	0.09mm	0.09mm	0.10mm	0.05mm	0.05mm
Tubes per 10 inch (C)	25tubes	28tubes	27tubes	31tubes	25tubes	22tubes	22tubes
Copper							
Width-4row (D)	45mm	53mm	64mm	65mm	78mm	43mm	54mm
Thickness	0.04mm	0.04mm	0.04mm	0.04mm	0.04mm	0.04mm	0.04mm
Fins/Inch	6FPI	6FPI	6FPI	8FPI	6FPI	5FPI	5FPI
Tube Length (E)	7mm	8mm	9mm	9mm	10.5mm	7mm	9mm
Tube Width (F)	2.5mm	3mm	3mm	3mm	3mm	2.5mm	3mm
Distance B/t Tube (G)	7mm	5.5mm	6mm	5.5mm	7mm	8.5mm	8.5mm
Distance B/t Row (H)	2mm	3mm	4mm	4mm	6.5mm	3mm	3mm

► BRANDS AND MATERIAL USED FOR GENERATORS BORING MACHINES & HEAVY DUTY APPLICATION

Particular	ENGLISH PATTERN	Light Duty Harvester	SUPREMO	OEM PATTERN	RELIABLE
Brass					
Width(A)	29mm	29mm	32mm	32mm	29mm
Thickness(B)	0.12mm	0.12mm	0.10mm	0.14mm	0.12mm
Tubes per 10 inch (C)	16tubes	16tubes	25tubes	20tubes	28tubes
Copper					
Width-4row (D)	56mm	68mm	78mm	68mm	65mm
Thickness	0.05mm	0.04mm	0.05mm	0.05mm	0.05mm
Fins/Inch	7FPI	3FPI	7FPI	7FPI	7FPI
Tube Length (E)	9mm	9mm	10.5mm	10.5mm	9mm
Tube Width (F)	3mm	3mm	3mm	3mm	3mm
Distance B/t Tube (G)	12mm	12mm	7mm	9.5mm	6mm
Distance B/t Row (H)	5mm	14mm	6.5mm	4.5mm	4mm

*Refer to the diagram on the left.

Why Choose NBR...



**HEAVY
DUTY**



- ✓ Full Warranty on all the products
- ✓ Highest Quality Packaging to safeguard product
- ✓ Value for Money
- ✓ Prompt Service and Delivery Across India
- ✓ Customized aluminum and copper radiators under one roof
- ✓ Legacy of 3 decades based on strong Ethical values and Commitment.
- ✓ Complete Manufacturing In-house for Strict Quality Control
- ✓ Heavy Duty Material Quality for longer life

Leading
The Way on
Quality Heating
Solutions

Accelerating
the next...



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With more than 1000 dealers across the country and a distributor network in more than 25 states NBR has a PAN INDIA presence.

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