COOLTECH

Est. 1975

51+ YEARS OF COOLING TOWERS

ENGINEERED FOR INDUSTRIAL COOLING.

- Cooling tower systems
- Components
- Engineering services

51+
Years designing and building cooling towers

4,900+
Cooling towers manufactured

297
Standard models in FRP, RCC and treated wood

CTI
Member, Cooling Technology Institute · ISO 9001:2015

OUR STORY

FIVE DECADES OF COOLING TOWERS, ONE FAMILY.

FOUNDER

LATE MR. R.Y. PANDE

Cooltech Engineers Pvt. Ltd. was founded on 9 June 1975 by the late Mr. R.Y. Pande. From a single works near Mumbai, the company has gone on to manufacture more than 4,900 cooling towers in treated wood, FRP, RCC and steel.

His founding principle still runs the company: design every tower for the duty it must meet, build it in our own factory, and stand behind its performance.

Cooltech works, M-45 Additional MIDC, Murbad.

MESSAGE FROM THE MANAGING DIRECTOR

“As we commemorate 51 years of Cooltech, I’m proud to reflect on a journey defined by innovation, resilience, and meaningful relationships.”

From day one, we’ve been committed to delivering reliable, efficient, and future-ready cooling solutions built on trust and engineered with care.

Our towers are thermally designed for each client’s flow rate, temperatures and site, built to CTI standards and backed by a performance guarantee. Our teams also rebuild towers of any make, so a plant can rely on one partner for the life of its cooling system.

Thank you for being part of our story.

SANJAY RAM PANDE
MANAGING DIRECTOR

COOLTECH AT A GLANCE

We design, manufacture, install and service industrial cooling towers for process, power and HVAC plants in India, the Middle East, Southeast Asia and Africa, all built at our own works at MIDC Murbad, near Mumbai.

1975 Founded 9 June 1975	**4,900+** Cooling towers manufactured	**3,100+** Clients in India and abroad
1,500+ Towers exported	**297** Standard models in FRP, RCC and treated wood	**6,000** m^3/hr per cell, maximum in pultruded FRP

WHAT WE DO

- Design, manufacture, supply and erection of crossflow and counterflow cooling towers
- FRP, RCC and treated-wood towers, single and multi-cell
- Repair and reconstruction of towers of any make
- Spares for every part of the tower

BUILT IN OUR OWN WORKS

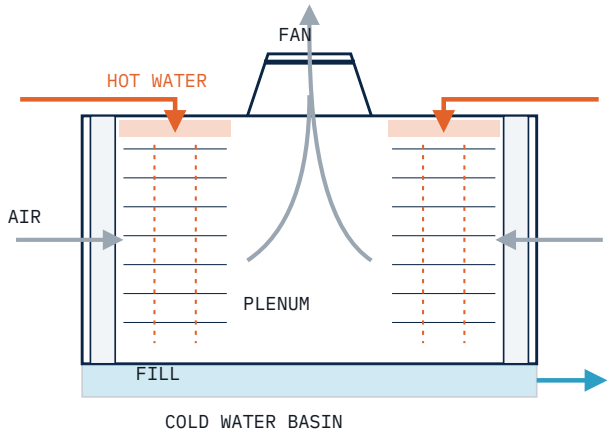
- CCA pressure treatment of timber in-house
- FRP casings, fan stacks, louvers and pultruded sections
- GRP and SS fill-support grids, distribution piping
- Erection by our own teams; JNPT port nearby for export

From left: CCA-treated timber, an FRP fan stack at the works, and installed FRP counterflow towers.

HOW OUR TOWERS WORK

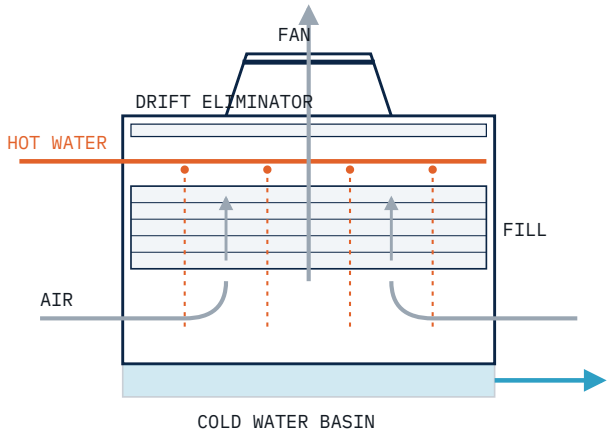
A fan at the top pulls air through the fill while hot process water falls through it. Part of the water evaporates, and the rest returns to the plant at the design cold-water temperature.

HOT WATER IN COLD WATER OUT AIR FLOW



CROSSFLOW

Air enters through the louvered sides and crosses the falling water horizontally. Hot water spreads by gravity from open basins on the deck.



COUNTERFLOW

Air rises against water sprayed down from pressurised nozzles, meeting the coldest water at the bottom of the fill. The same duty needs less plan area.

CROSSFLOW OR COUNTERFLOW

	CROSSFLOW	COUNTERFLOW
Air path	Horizontal, across the falling water	Vertical, against the falling water
Water distribution	Gravity, open hot-water basins	Pressurised header and spray nozzles
Pumping head	Lower	Higher
Plan area, same duty	Larger	Smaller
Maintenance access	Fill and nozzles visible, easy to clean	Through internal walkways

RANGE & SELECTION

Three construction families cover 297 standard models, in crossflow or counterflow. Selection starts from your duty: flow rate, hot and cold water temperatures, wet-bulb temperature and space.

FRP

98 MODELS · P.06

TREATED WOOD

107 MODELS · P.07

RCC

92 MODELS · P.08

SELECTION MATRIX

	FRP	TREATED WOOD	RCC
Structure	Fibreglass reinforced polyester	CCA pressure-treated timber	Reinforced cement concrete
Models	98	107	92
Capacity per cell	Up to 6,000 m³/hr (pultruded)	45 – 5,000 m³/hr	Sized to project
Civil work	Minimal; FRP or RCC basin	RCC basin by purchaser	Built locally from our drawings
Corrosion resistance	Excellent; chemical, coastal, seawater	Good; HDG / SS hardware	Very good; HDG / SS hardware
Best for	Light, corrosion-proof towers for process and HVAC	Large process duty, proven and economical	Large permanent plants, very long life

FRP COOLING TOWERS

Structure, casing and fan cylinder in fibreglass reinforced polyester. FRP cannot rust, so these towers last in humid, chemical and coastal plants while staying light to install.

- **Square counterflow:** compact, single or multi-cell
- **Crossflow:** gravity distribution, low pumping head
- **Pultruded field-erected:** resists seawater and hard water

98	6,000	18 × 18 m	100–2,000
Standard models	m³/hr per cell, pultruded	Maximum cell size	TR, packaged range

SPECIFICATION

Design	Induced draft counterflow and crossflow
Configuration	Single-cell and multi-cell
Classes	Class 200, 400, 800
Packaged sizes	100, 200, 250, 500, 2,000 TR
Fill	PVC film or splash
FRP piping	Above 16″ (400 mm) dia.
Structural	Operating load, 30 psf wind
Standard	Designed and built to CTI

Twin pultruded FRP counterflow towers.

TREATED WOOD COOLING TOWERS

Timber pressure-treated with copper chromate arsenic (CCA) in our own plant gives a durable, economical structure for large process duties. The wood stays wet in operation, so fire risk is very low.

- **Crossflow:** easy inspection and cleaning
- **Counterflow:** compact plan area
- **Multi-cell banks** for larger plants

107	45–5,000	8	CCA
Standard models	m³/hr per cell	Model classes	Pressure-treated timber

MODEL CLASSES

CLASS	MODELS	CLASS	MODELS
4	11	**18**	8
9	16	**400**	16
10	16	**500**	12
15	16	**600**	12

SPECIFICATION

Design	Induced draft crossflow, counterflow
Capacity	45 – 5,000 m³/hr per cell
Structural	Operating load, wind to 30 psf
Basin	RCC, to Cooltech drawings

Wooden crossflow tower with corrugated FRP casing.

RCC COOLING TOWERS

Structure, louvers and cold water basin in reinforced cement concrete. Built for high temperatures, corrosive environments, wind and seismic loads, with a very long service life.

- **Counterflow** for compact plan area
- **Crossflow** for easy inspection
- **Multi-cell** for future capacity

92	7	Local	CTI
Standard single-cell models	Model classes	Civil work built near site	Design standard

MODEL CLASSES

CLASS	MODELS	CLASS	MODELS
9R	16	400R	12
10R	16	500R	12
15R	16	900	12
18R	8		

HOW AN RCC PROJECT RUNS

1. **THERMAL DESIGN**
   Model, cells and fill for your duty.
2. **CIVIL DRAWINGS**
   Issued to your civil contractor.
3. **MECHANICAL SUPPLY**
   Fans, gearboxes, fill, eliminators.
4. **ERECTION & SUPPORT**
   Under our guidance, spares for life.

WIND & SEISMIC

A heavy concrete structure resists wind loads and seismic activity.

TOUGH DUTY

Suited to high temperatures and corrosive industrial environments.

SCALES WITH YOU

Multi-cell layouts add capacity and operating flexibility.

MATERIALS OF CONSTRUCTION

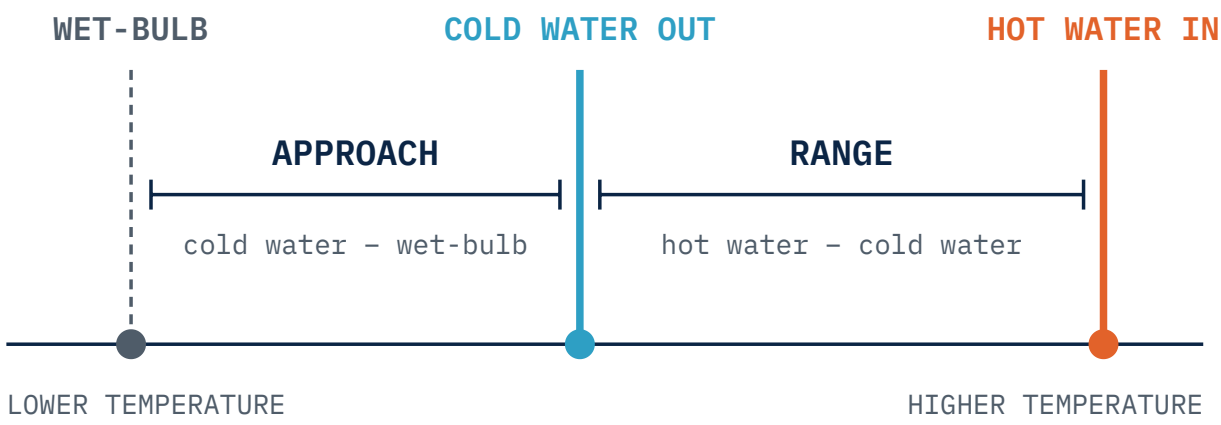
COMPONENT	FRP TOWER	TREATED WOOD TOWER	RCC TOWER
Structure	FRP / pultruded FRP	CCA-treated wood	RCC
Fill	PVC / PP / HDPE	Treated wood / PVC	PVC / Ceramic
Fill support	GI / pultruded FRP	GRP / SS grids	GRP / SS grids
Drift eliminator	PVC, cellular or blade	Treated wood 2-pass / PVC	PVC
Eliminator support	PP	Marine plywood / PP	PP
Header	PVC / FRP	HDG MS	—
Nozzle	Polypropylene	Polypropylene	Polypropylene
Hardware	HDG MS / SS	HDG MS / SS	HDG MS / SS
Nails, connectors	—	Screw-shank SS nails; FRP rings	—
Fan	Cast aluminium alloy / GRP	Cast aluminium alloy / GRP	Cast aluminium alloy / GRP
Fan cylinder	FRP	FRP	PCC / FRP
Gearbox	Spiral bevel / bevel helical	Spiral bevel / bevel helical	Spiral bevel / bevel helical
Drive shaft	Floating HDG MS / carbon composite	Floating HDG MS / carbon composite	Floating HDG MS / carbon composite
Casing, louvers	FRP	Corrugated FRP / cement sheets	RCC / PCC
Cold water basin	FRP / RCC by purchaser	RCC by purchaser	RCC
Electric motor	To suit country-specific standards		

MATCHING THE TOWER TO THE WATER

SITE CONDITION	RECOMMENDED CONSTRUCTION
Seawater or hard water	Pultruded FRP structure, SS hardware
Chemical or coastal air	FRP structure and casing, HDG MS / SS hardware
Dirty or hot water	Splash fill (PVC splash bars or treated wood)
Large, permanent plant	RCC structure, built locally to our drawings

THERMAL DESIGN DATA

Every tower is sized to your duty. These are the inputs our engineers need, and the terms used in every Cooltech datasheet.



DESIGN INPUTS WE NEED

PARAMETER	UNIT
Water circulation	m^3/hr
Hot water inlet	°C
Cold water outlet	°C
Design wet-bulb	°C
CoC	No.
No. of cells	No.
Water quality	Share datasheet if present

DESIGN BASIS

Standard	CTI design and test code; American design practice, no proprietary parts
Draft	Induced draft, crossflow or counterflow
Structural	Operating load and 30 psf wind
Design life	15–20 years

Send your duty conditions to **response@cooltechcoolingtowers.com**. We reply with the selected model and a datasheet giving dimensions, fan diameter, motor kW and weights.

COMPONENTS & SPARES

Every part a cooling tower needs, for Cooltech towers and towers of any other make. Custom parts made on request.

AXIAL FANS
Aluminium alloy or GRP

GEARBOXES
Worm, spiral bevel

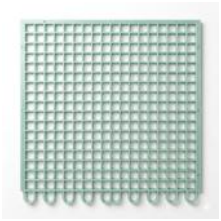
DRIVE SHAFTS
HDG MS, carbon composite

COUPLINGS
For drive lines

ELECTRIC MOTORS
Foot and flange mounted

FRP FAN STACKS
Up to 5,000 mm dia.

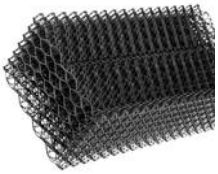
FRP CASING
UV and corrosion resistant



GRP / FRP GRIDS
Fill support

DRIFT ELIMINATORS
PVC cellular

BLADE ELIMINATORS
PVC blade type



TRICKLE FILL
Rigid PVC, low fouling

SPLASH BARS
PVC, for dirty water

SPRAY NOZZLES
PVC / PP

TARGET NOZZLES
PVC, crossflow basins

FLOW VALVES
Balance flow

TREATED PINEWOOD
CCA, for rebuilds

See every part with photos and specifications online:
cooltechcoolingtowers.com/cooling-tower-parts

VIEW ALL PARTS

SERVICES FOR THE TOWER'S LIFE

One partner from first enquiry to the last spare. We repair and rebuild towers of any make.

01 **SIZING & SELECTION**
From your flow, temperatures and wet-bulb.

02 **DESIGN & DRAWINGS**
General arrangement, civil and basin drawings.

03 **MANUFACTURE & SUPPLY**
Built and inspected at our Murbad works.

04 **ERECTION & COMMISSIONING**
By our own teams in India and abroad.

05 **SPARES**
Fans, gearboxes, fill, eliminators, nozzles.

06 **INSPECTION**
Structure, mechanicals and distribution.

07 **REPAIR & RECONSTRUCTION**
Old towers of any make, in wood, FRP or RCC.

08 **PERFORMANCE UPGRADE**
New fill, fans and distribution.

Wooden crossflow towers in service at Indian process plants.

INDUSTRIES & EXPORTS

CHEMICAL

CAPTIVE POWER

CEMENT

DISTILLERY

DEFENCE

FERTILIZER

HEAVY ENGG.

METALLURGICAL

NUCLEAR

PETROCHEMICAL

ALSO: PHARMACEUTICAL · STEEL · SUGAR · FOOD PROCESSING · HVAC

EXPORTS

1,500+

cooling towers supplied outside India, shipped through JNPT port near our Murbad works.

AFRICA
Nigeria, Ethiopia, Uganda, Kenya, Cameroon, Malawi

SOUTH ASIA
Bangladesh, Sri Lanka

MIDDLE EAST
Gulf process and power plants

SOUTHEAST ASIA
Industrial clients across the region

CLIENTS & REFERENCES

> "Cooltech Engineers have supplied, erected and commissioned a cooling tower having capacity 4,150 m³/hr circulation in our captive power plant on turnkey basis. The performance guarantee test has been conducted satisfactorily as per CTI code."
>
> OPERATION MANAGER, RASHTRIYA CHEMICALS & FERTILIZERS, 1982

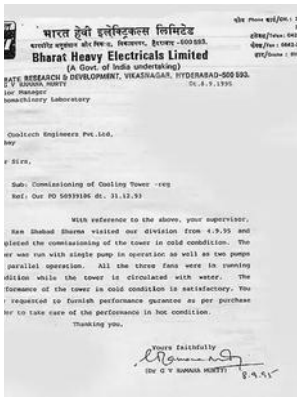
RASHTRIYA CHEMICALS & FERTILIZERS LI

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s. Cooltech Engineers P.Lt have supplied, erected and commissioned Cooling Tower having capacity 4,150 m3 / hr. circulation in our Captive Power Plant on turnkey basis. The performance Guarantee Test on the Cooling Tower has been conducted satisfactorily as per CTI Code and the Cooling Tower is in commercial use since November,1979.

20th September,1982. (J. P. JAIN) Operation Manager.

RCF


भारत हेवी इलेक्ट्रिकल्स लिमिटेड

Bharat Heavy Electricals Limited

(A Govt. of India undertaking)

RESEARCH & DEVELOPMENT, VIKASNAGAR, HYDERABAD-500 593.

Dt.4.9.1995

Cooltech Engineers Pvt.Ltd,

Sirs,

Sub: Commissioning of Cooling Tower -reg

Ref: Our PO 50539106 dt. 31.12.93

With reference to the above, your supervisor, Ram Shabad Sharma visited our division from 4.9.95 and completed the commissioning of the tower in cold condition. The tower was run with single pump in operation as well as two pumps parallel operation. All the three fans were in running condition while the tower is circulated with water. The performance of the tower in cold condition is satisfactory. You requested to furnish performance guarantee as per purchase order to take care of the performance in hot condition.

Thanking you,

Yours faithfully

8.9.95

BHEL

WELSPUN

POWER AND STEEL LIMITED

TECH ENGINEERS PVT. LTD

HA, 7 BUNGLOWS,

ERI (WEST)

AI 400061

5365755

Erection of Colling tower vide our P.O.No.: 4500023668

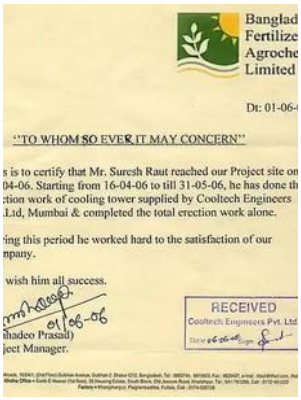
ireby confirm that the Cooling Tower supplied by you vide above P.O. has b place and duly assembled. The fan motor has been tried. On putting the sys water line we shall inform you the performance of the unit.

ing you.

ds,

h Sharma / Subramony)

Welspun Power & Steel


Banglad Fertilize Agroche Limited

Dt: 01-06-

"TO WHOM SO EVER IT MAY CONCERN"

s is to certify that Mr. Suresh Raut reached our Project site on 04-06. Starting from 16-04-06 to till 31-05-06, he has done th tion work of cooling tower supplied by Cooltech Engineers Ltd, Mumbai & completed the total erection work alone.

ing this period he worked hard to the satisfaction of our npany.

wish him all success.

RECEIVED

Cooltech Engineers Pvt. Ltd

01-06-06

hadeo Prasad)

ject Manager.

Bangladesh Fertilizers

Lloyds Metals & Engineers Limited

ROJ/2005/

2005

uh Engineering Pvt.Ltd.,

Banglows.

ling Towers

resh Raut has completed cooling tower work satisfactorily. It is working ree days. Found ok and running properly.

ou.

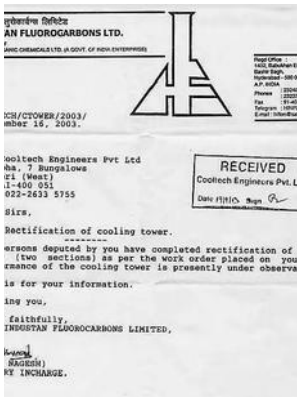
fully,

Metals & Engineers Ltd.,

WAL

L MANAGER (MAINT)

Lloyds Metals


AN FLUORocarbons LTD.

CH/CTOWER/2003/

mber 16, 2003.

ooltech Engineers Pvt Ltd

ha, 7 Bungalows

ri (West)

-400 051

022-2633 5755

RECEIVED

Cooltech Engineers Pvt.L

Sirs,

Rectification of cooling tower.

ersons deputed by you have completed rectification of (two sections) as per the work order placed on you rmance of the cooling tower is presently under observa

is for your information.

ing you,

faithfully,

INDUSTAN FLUOROCARBONS LIMITED,

NAGESH)

Y INCHARGE.

Hindustan Fluorocarbons

SRI RAMA DISTILLERIES LIMITED

Manufacturers : RECTIFIED SPIRIT

Registered Office : Door No. 6/69, CHAKALLE-533 447, W.G. Dt., [A.P.]

West Godavari Dist A.P.

To

M/s.Cool-Tech Engineers Pvt.Ltd.,

Kind Attention Mr.Anja R.Pande.

Your erection supervisor Mr.Suresh Raut has completed the erection and the Cooling Tower is kept in line on 30-1-2000 at 10-30 A.M. We have seen the performance at 6-00 P.M. and found the working is satisfactory. If at all, we face any trouble we will let you know and action can be taken accordingly.

Mr.Suresh Raut is leaving here on 30-1-2000 at 7-00 P.M.

This is for your information.

P.S:- The inlet water temperature to the cooling tower is 32°c and the out let water 27°c-28°c.

The noise is coming in the level of 16 mms.

Thanking you,

Yours faithfully,

Plant Manager.

Sri Rama Distilleries

3,100+

clients in India and abroad

QUALITY YOU CAN VERIFY

Certificate of Registration

(Quality Management System)

QFS MANAGEMENT SYSTEMS LLP

This is to Certify that the Quality Management System of

COOLTECH ENGINEERS PVT. LTD.

M - 45, ADDITIONAL MIDC, MURBAD, DIST. THANE-421401, MUMBAI, MAHARASHTRA (INDIA)

Has been found to be of the Quality Management System Standard

ISO 9001:2015

This certificate is valid for the following product or service range

DESIGN, MANUFACTURING, ERECTION AND COMMISSION OF TIMBER/WOODEN COOLING TOWER, FRP COOLING TOWER & RCC COOLING TOWER.

IAF Code: 18

Certificate Number: SCC/2407CN/2282

Initial Date of Certification: 09.07.2024

Date of Certificate: 09.07.2024

Date of Expiry: 08.07.2027

1st Surv. Due on: 08.06.2025

2nd Surv. Due on: 08.06.2026

Director:

Date: 09.07.2024

The validity of certificate is subject to regular surveillance audit on or before above mentioned dates and its only valid after successful surveillance with continuation letter issued by QFS. It is issued subject to the continued availability of access at any time and without notice to the above named organization's premises for the purpose of assessment and surveillance regarding the standard named above and QFS terms and conditions. this Certificate remains the property of QFS.

QFS MANAGEMENT SYSTEMS LLP

A-27/H, Sector-16, Noida-201301, U.P., India

www.qfscerts.com

email: admin@qfscerts.com

Accredited by Standards Council of Canada

ISO 9001:2015 certificate issued by QFS Management Systems LLP.

ISO 9001:2015

CERTIFIED QUALITY MANAGEMENT

Covers design, manufacturing, erection and commissioning of timber, FRP and RCC cooling towers.

Certificate no.	SCC/2407CN/2282
Certified since	9 July 2024
Valid until	8 July 2027
Accreditation	IAF member, SCC accredited

COOLING TECHNOLOGY INSTITUTE MEMBER

Member of the Cooling Technology Institute (CTI), USA. Towers are designed to CTI standards and performance-tested to the CTI code.

18 months

Performance guarantee: 12 months from installation or 18 from supply, whichever is earlier

15–20 yrs

Design life with routine maintenance

30 psf

Structural design for wind and operating load

COOLTECH

TELL US YOUR DUTY.
WE'LL ENGINEER THE TOWER.

WORKS & REGISTERED OFFICE

Cooltech Engineers Pvt. Ltd.
M-45, Additional MIDC, Murbad
Dist. Thane 421401
Maharashtra, India

WEB

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cooltechcoolingtowers.com

FOLLOW

LinkedIn: Cooltech Engineers
YouTube: @cooltech751

SCAN FOR WEBSITE