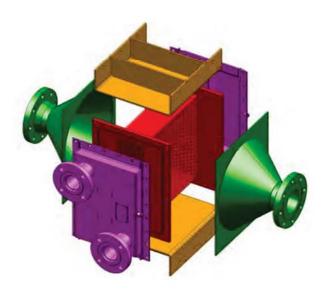


## Global Leadership in Heavy Duty Heat Transfer Components and Systems



Remote Mounted Charge Air Cooler

Young Touchstone is currently releasing a new remote "CAC" series air to water charge air coolers. Designed for use with 150 through 2500 kW remote radiator installations, the new "CAC" series, provides a complete remote cooling solution for charge air cooled engines. All designs utilize Young Touchstone's patented ABT high temperature core capable of operating temperatures up to  $550^{\circ}$ F and the field proven Mechanical Bond Core Header design for superior durability and leak proof operation.

All Young Touchstone remote "CAC" charge air coolers are sized, matched and supplied with an appropriate mating horizontal or vertical remote DS radiator to assure guaranteed jacket water and charge air cooling to engine manufacturer specifications.

## Design Features Include:

- " Durable Round Tube Copper Fin Charge Air Core
- " Durable Mechanical Bond Tube to Header Joint Construction
- " Reliable O-Ring Tank Seals eliminate tank leaks due to gasket failure.
- \*\* Heavy Gauge Structural Framework utilizes Finite Element Analysis (FEA) and Testing to guarantee structural integrity
- " Welded Air Side Manifolds supplied with Mounting Flange to mate with engine CAC connections
- Air Side Operating Designs to 45 psig, 550°F; coolant side 35 psig
- Radiator Sized to Specific Application Requirements to assure compliance to engine manufacturer's specifications
- " Two Year Warranty Standard

Young Touchstone's Remote CAC designs are available in 1.5 through 8 square foot configurations designed for mounting on the generator set sub-base in place of the normal gen-set mounted radiator.

Young Touchstone 7270 S 13th St, Ste 201 Oak Creek, WI 53154 PH: (414) 768-7420

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Catalog REMOTE CAC August 2014, Fourth Edition Supersedes July 2006 Edition



## Remote Radiator With Remote Charge Air Cooler Dual Circuit

**EXAMPLE of ATAAC Engine & RCAC Circuit @ Standard Ambient** 

Ambient Temperature=86°F

**Application**: Engine JW and AC flow through separate circuits.

ATAAC Engine AC circuit is a charge air cooled AC circuit.

Charge air circuit requires a charge air cooler due to high temperature of air out of turbo and application circumstances dictate use of remote charge air cooler (RCAC) and remote radiator.

EJW Heat Load=38,550 BTU/min (110% Load) EJW Inlet Temp = 200°F Charge Air Return Temp to Engine=122 2-Circuit Remote Radiator RCAC Tube Side Liquid Inlet Temp =119 F Charge Air Heat Load=27,337 BTU/min RCAC Tube Side Liquid Outlet Temp=156 °F Remote Charge-Air-Cooler Auxiliary Pump Flow Rate = 100 gpm (RCAC) Charge Air Turbo Out Pressure=40.3 psig Charge Air Pressure Drop = 1.0 PSI max EJW Return Temp=187°F EJW Flow Rate = 400 gpm Air-To-Air-Charge-Air-Cooled **ATAAC Engine** 

Above graphic representation displays the predicted heat transfer parameters of a cooling system configuration for the standard ambient condition of 86 F.

Target Return ChargeAir Temperatures are calculated based on compressor and engine thermodynamic values.



## Remote Radiator With Remote Charge Air Cooler Dual Circuit

**EXAMPLE of ATAAC Engine & RCAC Circuit @ High Ambient** 

Ambient Temperature=104°F

Target Return Charge Air Temperatures are calculated based on compressor and

Application: Engine JW and AC flow through separate circuits

ATAAC Engine - AC circuit is a charge air cooled AC circuit.

Charge air circuit requires a charge air cooler due to high temperature of air out of turbo and application circumstances dictate use of remote charge air cooler (RCAC) and remote radiator.

EJW Inlet Temp = 200°F EJW Heat Load=38,550 BTU/min (110% Load) Charge Air Return Temp to Engine=141 2-Circuit Remote Radiator RCAC Tube Side Liquid Inlet Temp= 138°F Charge Air Heat Load=28,826 BTU/min RCAC Tube Side Liquid Outlet Temp=177°F 4571 CFM Remote Charge-Air-Cooler Auxiliary Pump Flow Rate = 100 gpm (RCAC) Charge Air Turbo Out Pressure=40.3 psig Charge Air Pressure Drop = 1.0 PSI max EJW Return Temp=187°F EJW Flow Rate = 400 gpm Air-To-Air-Charge-Air-Cooled **ATAAC Engine** Above graphic representation displays the predicted heat transfer parameters of a cooling system configuration for the high ambient condition of 104°F.

engine thermodynamic values.