



7270 S 13<sup>th</sup> St, Ste 201  
 Oak Creek, WI 53154  
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## DS Radiator Quotation

Date: 12/9/2013 Reference: Q13512

Customer: Trasca  
 Guadalajara, Mexico

Contact: Martin Rangel

Engine: Cat G3520C-130°F AC (DM8649-02), 1750 ekw + 10% (2705 bhp) @1800 rpm

### Model Number:

Series Type	Face Area	Sys Type	Core Split	Core Type	Circuit -1			Mtr HP	Fan Spd	Circuit-2			Tank	Frame Finish	Frame Color	Core Coat	MOC	Mtr Type	Low Spd	Strct	Cust
					FPI	Rows	Pass			FPI	Rows	Pass									
HB	50	F	6	1	2	6	1	50	H	8	3	3	X	X	X	X	X	X	X	X	

### Cooling System Requirements:

Heat Rejection (Btu/min):	<b>EJW/ACstg1-Circuit #1</b>	<b>ACstg2-Circuit #2</b>
Coolant Type:	<b>35668x1.1 + 9466x1.2 +18597x1.05 = 70121</b>	<b>7270x1.05 = 7818</b>
Coolant Flow (gpm):	<b>50% EG</b>	<b>50% EG</b>
Inlet Diam (in.), Qty, Type:	<b>552</b>	<b>117</b>
Outlet Diam (in.), Qty, Type:	<b>5.00 (1) Flange</b>	<b>3.00 (1) Flange</b>
Elevation (feet):	<b>5.00 (1) Flange</b>	<b>3.00 (1) Flange</b>
	<b>5250</b>	<b>0</b>
	External Static (in. H2O):	

### Rated Model Performance:

<b>Air Side</b>	<b>Coolant Side</b>	<b>Circuit #1</b>	<b>Circuit #2</b>
Max Air Temp @ Fan(°F): <b>90.3</b>	Inlet Temp (°F) =	<b>194.0</b>	<b>139.2</b>
	Outlet Temp (°F) =	<b>176.8</b>	<b>130.0</b>
	Total Pressure Drop (psi) =	<b>1.6</b>	<b>4.6</b>

### Fan:

Model #: 8-80-WHISPR RP18 80in dia. 8 blades 14.0° Pitch.

RPM HP ACFM dBA at 25 feet Avoid critical speed ranges of approximately 616-743 and 856-1033 rpm  
 757 50 78,138 89 Motor: 50 hp, 3-phase (TEFC), 230/460 volts, 60 Hertz

**Series Description** HB - Horizontal Core, Belt Driven Fan. See submittal-approval drawings for overall size

Volumes (gallons)	Top Tank	Bottom Tank	Core	Total	SEDD Tank
Circuit-1 ⇨	<b>33.4</b>	<b>24.9</b>	<b>24.5</b>	<b>82.8</b>	<b>41.5</b>
Circuit-2 ⇨	<b>1.8</b>	<b>2.6</b>	<b>12.2</b>	<b>16.6</b>	<b>13.8</b>

Dry Wt (lbs): **6164** Wet Wt (lbs): **6969**

**Options Included:** 14" 75/25 split SEDD Tank (Shipped Loose), Circuit-1 Custom Flange connections (2), Circuit-2 Custom Flange connections (2)

### Price, Leadtime, Warranty

1 Lot Price is: **\$35,585.00** net each  
 Leadtime: **8-10 Weeks** Comment(s): After receipt and release of purchase order. Allow 3-4 weeks for drawings.  
 Warranty: Two years from date of shipment

**Terms:** Payment is due with order via wire transfer. Young Touchstone also accepts VISA and Master Card. Standard warranty applies. Price is valid for 30 days from quote date for one shipment within 120 days of order receipt date. Price excludes Sales or Use tax.

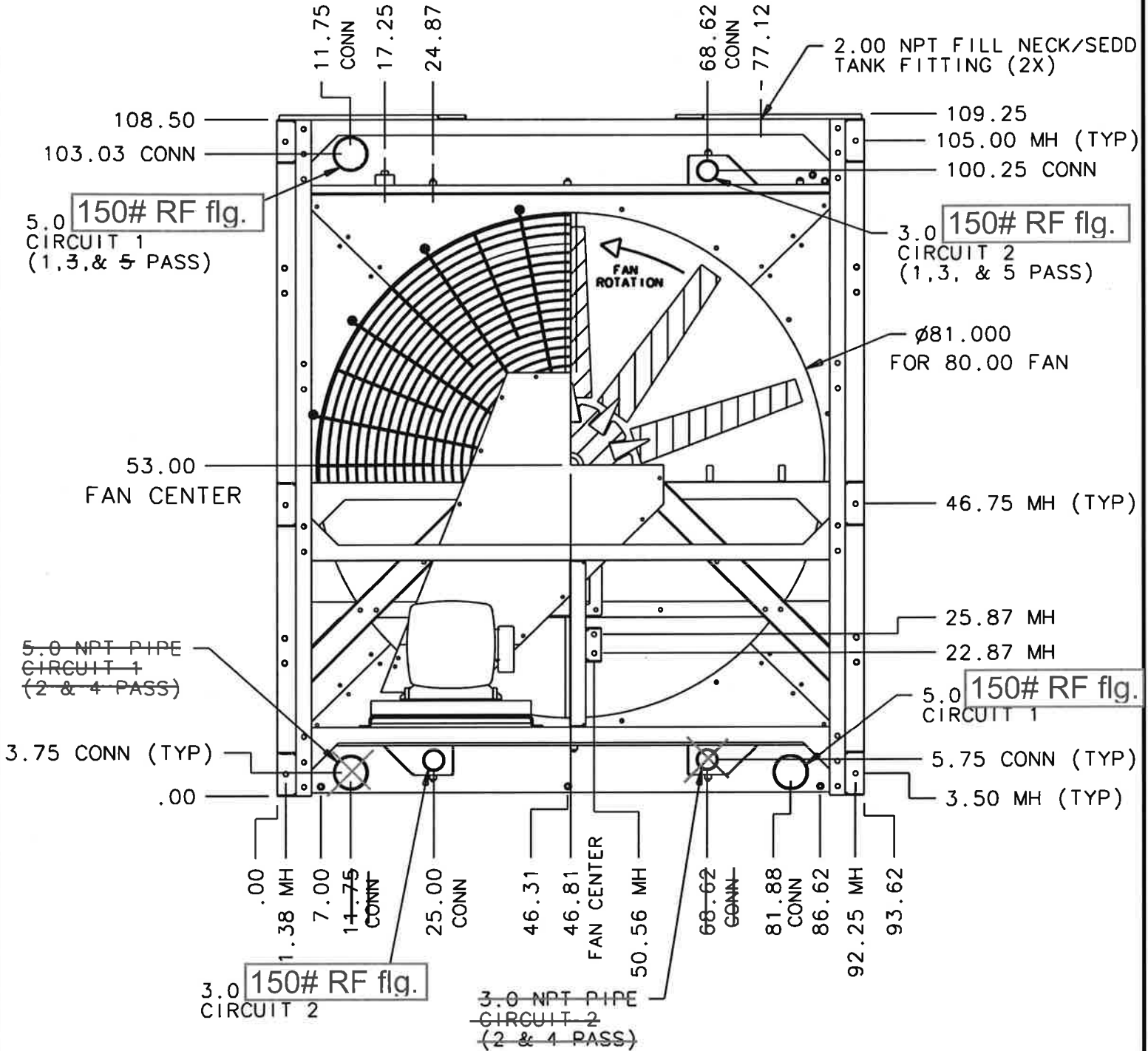
**Ex-Factory:** Lexington, TN 38351 USA. **No freight cost is included in the above pricing.**

Comments: No assurance is provided by Young Touchstone that the included SEDD tank is sufficient size and capacity for the entire engine, radiator, and piping system unless all system information and coolant volumes are provided prior to quotation.

Prepared by: Rich Rouner  
 Bentex Equipment Co,  
 Representing: **YOUNG TOUCHSTONE**

**DS**

**SUBMITTAL/APPROVAL DRAWING - PAGE 4 OF 4**



NOTE: ø0.75 MOUNTING HOLES (MH) IN 8 PLACES.

"Z" VIEW

NOTE: REFER TO DS QUOTE OR SPEC SHEET TO DETERMINE CIRCUIT 1 & CIRCUIT 2 PASS ARRANGEMENTS.

ALL DIMENSIONS ARE SUBJECT TO CHANGE.

**Young Touchstone**

DS1/DS2 Product Line

Series Type	Core Area	System Type	Core Split	Circuit #1 Core FPI	#Rows	#Pass	Motor HP	Fan Speed	Circuit #2 Core FPI	#Rows	#Pass	Custom
HB	50	F	6	2	6	1	50	H	8	3	3	Custom

**COOLING SYSTEM REQUIREMENTS FOR CORE#1**

Heat Rej. (Btu/min): 70121  
 Coolant Flow (gpm): 552  
 Max Coolant T (°F): 194 Location: Inlet Tank  
 Coolant Type: 50% EG  
 Connection Option: Custom Connections  
 Inlet Connection: Qty: 1 d (in): 5.00 Typ: Flange  
 Outlet Connection: Qty: 1 d (in): 5.00 Typ: Flange

**COOLING SYSTEM REQUIREMENTS FOR CORE#2**

Heat Rej. (Btu/min): 7818  
 Coolant Flow (gpm): 117  
 Max Coolant T (°F): 130 Location: Outlet Tank  
 Coolant Type: 50% EG  
 Inlet Connection: Qty: 1 d (in): 3.00 Typ: Flange  
 Outlet Connection: Qty: 1 d (in): 3.00 Typ: Flange

**GENERAL INFORMATION**

Application: Cat G3520C-130°F AC (DM8649-02), 1750 ekw + 10% (2705 bhp) @ 1800 rpm  
 Elevation (ft): 5250  
 Standard Guards: Yes  
 Add. Static (in H2O): 0  
 Guard Factor: 1.00

**AIR SIDE PERFORMANCE**

Max Air @ Fan Temp (°F):	Core #1	Core #2	Core #1	Core #2
90.3	160.0	160.0	194.0	139.2
Air Outlet T (°F) of Core #1:	External	External	176.8	130.0
Static Restrictions (in H2O):	Frame	Frame	0.84	0.30
	Core #1	Core #1	0.79	4.27
	Core #2	Core #2	1.63	4.56
	Total	Total		

**GENERAL PERFORMANCE INFORMATION**

Fan 8-80-WHISPR RP18 80in dia. 8 blades 14.0° Pitch. Crit.Spds: 616-743 & 856-1033 rpm  
 AirFlow (ACFM): 78,138 Actual Fan HP: 50 RPM: 757  
 Noise: 89 dBA at 25 feet 60 Hz motor  
 Limiting Core: 1  
 Variance (°F): 21.7

Series Description: HB - Horizontal Core, Belt Driven Fan

Overall Size Description: L over Tanks x W over Side Frames x H over Support Structure and Surge Tank

Overall Size: 93.61 x 107.5 x 108.5

System Type: F - Front-to-Back Arrangement

Core Size #1: 83.75 in. over fins x 86.00 in. over tubes

Core Size #2: 83.75 in. over fins x 86.00 in. over tubes