AKG Thermal Systems, Inc

7315 Oakwood Street Extension
P.O. Box 189 • Mebane, NC 27302
Telephone (919) 563-44871 • Fax (919) 563-4917

Heat Exchanger Performance

Date: ########

AKG Part Number: CC450-3

Type of Fluid to be cooled:	Air	
Heat Rejection Required:	769 BTU/min	(11,626 kcal/hr)
Internal Flow Rate:	525 cfm	(1,070 kg/hr)
External Airflow:	1,850 cfm	(3,772 kg/hr)
Entering Temperature Difference:	100.00 Δ°F	(55.6 Δ°C)
Maximum Fluid Inlet Temperature:	200.00 °F	(93.3 °C)
Fluid Outlet Temperature:	118.51 °F	(48.1 °C)
Maximum Ambient Temperature:	100.00 °F	(37.8 °C)
Exhaust Temperature:	123.12 °F	(50.6 °C)
Preheat:	0.00 Δ°F	(0.0 Δ°C)
Internal Flow Rate:	66.07 f/s	(20.14 m/s)
External Mass Velocity:	635 fpm	(3.87 kg/m^2·s)
Internal Pressure Drop:	under 3 psi	
External Static Pressure Drop:	0.72 inches H2O	(18.3 mm H2O)
Specific Heat (Internal Fluid):	0.240	

Flow Factor: 2.039

Q/Q Ratio: 1.100

Heat Exchanger Physicals

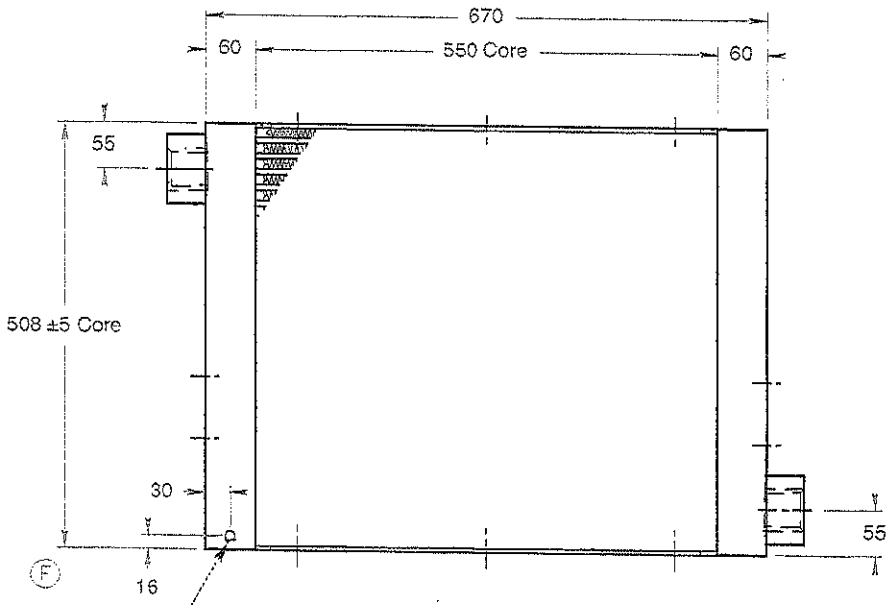
Core Height:	19.37 in.	(492 mm)
Core Length:	21.65 in.	(550 mm)
Core Depth:	3.70 in.	(94 mm)
Core Volume:	1.8 gal	0.0070 m^3

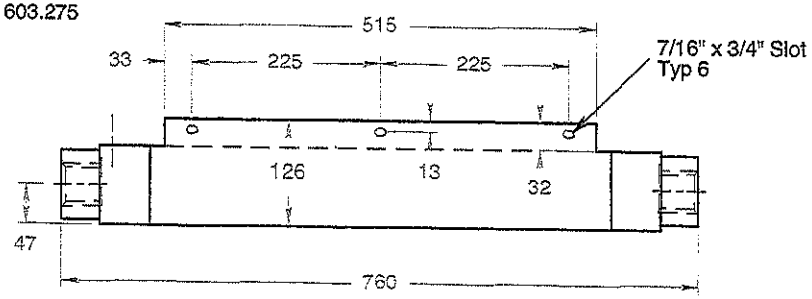
Fin System: 7318/7101

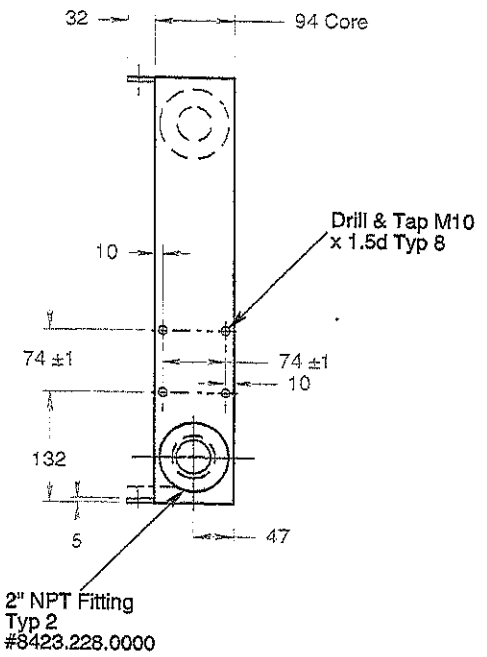
Number of Passes: 1

Number of Rows: 25

These results are based upon theoretical performance calculations. Due to unique system and environment conditions, AKG of America recommends testing this heat exchanger in your particular installation to verify the desired performance.







NOTES: Unless otherwise specified
1. Dimensions are millimeters
2. Material: See Bill of Material
3. Break sharp edges

Max Work Pressure (PSI)	250
Leak Test Pressure (PSI)	190
Max Temperature (°F)	250
Paint	BLACK
Customer Part #	
CORE SIZE	550x307.5x94
FIN SYSTEM	7318/7101
DO NOT SCALE!	mm/(in)

Rev	ECN	Description	Date	Name
F	132/01	30 was 15, 16 was 20	8/6/01	PFN
E	52/01	Removed Helicoils, 1/4" NPT Fitting	3/29/01	PFN
D	------	Flange length 515 was 535.	01/22/99	Vann
C	103/98	M10 Helicoils were 1.5d	08/10/98	Vann
B	102/98	2" NPT fitting (left side) was 63 from top.	08/02/98	Vann
A	77/98	2" NPT fitting (right side) height was 63.	06/26/98	Vann

UNLESS OTHERWISE SPECIFIED THE FOLLOWING METRIC DEVIATIONS ARE ACCEPTABLE

RATED SIZE– MM	0 50	50 300	300 1000	1000 3000
TOLERANCE	±1	±2	±3	±4

AKG THERMAL SYSTEMS
P.O. Box 189
Mebane, NC 27302
Phone(919)563-4871
FAX (919) 563-4917

DRWN BY:	Vann
DATE:	05/18/98
ENGR:	White

TITLE
CC-450-C Cooler

DWG NO. 3703.018.4000
REVISION F
PAGE: 1 OF 1

FORM # 8003.000.0008 8/10/97

AKG of America - CRN List

Drawing No.	Rev.	Cooler Type	Design Pressure [kPa]	Temperature [C]	
3703.030.4000	A	CC-100-C	1724	-29 / 121	*
3703.020.4000	A	CC-200-C	1724	-29 / 121	*
3703.018.4000	D	CC-450-C	1724	-29 / 121	*
3703.029.4000	A	CC-600-C	1724	-29 / 121	*
3703.019.4000	C	CC-1000-C	1724	-29 / 121	*
3703.031.4000	A	CC-1600-C	1724	-29 / 121	*
3703.063.4000	A**	CC-200-C - CUSTOM	1034	-29 / 121	
0477.226.1000	D**	AFTERCOOLER	1724	-29 / 121	*
3703.010.1000	A**	COOLER	1724	-29 / 121	*
3703.068.4000	A**	AC-350-C	1724	-29 / 121	*
3703.064.4000	A	CC-2500-C	1724	-29 / 121	*
3703.071.1000	A	AOC-8-C	1724	-29 / 121	*
3703.073.1000	A**	OIL COOLER	1724	-29 / 121	*
3703.068.1000	A**	OC-350-C	1724	-29 / 121	*
3703.059.1000	A	AOC-15-C	1724	-29 / 121	*
3703.058.1000	A**	AOC-30-C	1724	-29 / 121	*
3703.060.1000	A	AOC-40-C	1724	-29 / 121	*
3703.056.1000	A	AOC-75-C	1724	-29 / 121	*
3703.057.1000	A	AOC-125-C	1724	-29 / 121	*
3703.061.1000	A	AOC-250-C	1724	-29 / 121	*

NOTE

These designs are accepted based on the understanding that:

1) All coolers marked (*) will be pneumatic tested at 313 psi.

2) Amended the design temperature to show 121 C, as per your fax of October 6, 1999, on all drawings marked (**).

ALBERTA BOILERS SAFETY ASSOCIATION
PROVINCE OF ALBERTA
SAFETY CODES ACT
REGISTRATION OF FITTINGS

REGISTRATION NO. OH0909.2

DWG. NO. or CAT NO. As Per List & Notes

TYPE OF FITTINGS Coolers

OCT 06 1999 INITIALS Pedo

DESIGN SURVEY ENGINEER