CATOR, RUMA & ASSOCIATES, CO.

CONSULTING MECHANICAL/ELECTRICAL ENGINEERS
896 TABOR STREET • LAKEWOOD, COLORADO 80401
(303) 232-6200 • FAX (303) 233-3701

Construction Shop Drawings Transmittal Date **October 19, 2012**

To: **Davis Partnership Architects**

Electronic Submittal

Attn: **Brent Murphy**

Project: **EPMC – MRI CT Addition**

Cator, Ruma & Assoc. Project No.: **2011-233**

Cator, Ruma & Assoc. Tracking No: **12.2442**

NOTE: The Engineer's review of these shop drawings does not relieve the Contractor of his responsibility to comply with drawings or specifications. Any deviation from specified equipment or material must be called to the Engineer's attention in writing at the time of submission. The Contractor must secure written acceptance for said deviations.

Item & Section Number	Copies *	Manufacturer	No Exception Taken	Make Corrections Noted	Rejected	Revise And Resubmit	Submit Specified Item
233600							
Air Terminals	**1**	**Krueger**	**X**				

Remarks: **No Exception Taken to submitted items.**

* We have retained one copy of each of the above items for our records.

CATOR, RUMA & ASSOCIATES, CO.

Bob Lazzaro

P:\2011\2011-233 Estes Park Med Center MRI-CT\Sup\Docs\Submittals\2011-233 SEC 233600 TRK 12.2442 (RDL) 10.19.12.doc

DAVIS PARTNERSHIP ARCHITECTS

Davis Partnership Architects | 2301 Blake St. STE 100 Denver, CO 80208-2108 US

Electronic Submittal

Submittal Transmittal

Transmittal ID: 00092
Date Sent: 10/16/2012

Project: EPMC - MRI CT Addition
Number: 12910.00.000

To:
Kelvin Doss
Cator, Ruma & Associates
896 Tabor St.
Lakewood, CO 80401
303.232.6200 (Phone)
303.233.3701 (Fax)

Submittal Management
Cator Ruma & Associates
896 Tabor Street
Lakewood, CO 80401-4700
303-232-6200 (Phone)

From:
BRENT MURPHY
Davis Partnership Architects
2301 Blake St.
STE 100
Denver, CO 80208-2108
US
303-861-8555x2592 (Phone)
303-861-3027 (Fax)

Subject: 233600-01 - Air Terminals
Sent Via: Info Exchange
Submittal ID:
Return By: 10/23/2012
Specification Section:
Purpose: For Review
Remarks: Brent,
For your review and approval.
Rebecca

[X] See Consultant Review Action

This submittal has been reviewed by Davis Partnership, P.C., where applicable, for conformance to architectural requirements, and has been reviewed by consultant(s) to Davis Partnership, P.C. for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. Contractor is responsible for dimensions to be confirmed and correlated at the job site; for information that pertains solely to the fabrication processes or to techniques of construction; and for coordination of the work of all trades. Refer to comments noted on the Consultant(s) review stamp(s) for further action.

DAVIS PARTNERSHIP, P.C., ARCHITECTS

Date 10/22/2012 By BJM

CC:

Contents

Quantity: 1 Dated: 10/16/2012 Number:
Description:
EPMC Air terminals 233600 2.2.pdf
Action:
Remarks:

RECEIVED
Cator, Ruma Assoc.
10/17/12

Tracking #	12.2442
CRA Project #	2011-233

GH Phipps CONSTRUCTION COMPANIES

5995 Greenwood Plaza Blvd.
Suite 100
Greenwood Village, CO 80111-4710
303-571-5377
303-629-7467 (fax)

TRANSMITTAL

No. 12D1137-0061

PROJECT: EPMC-Imaging Addition MRI and CT

DATE: 10/16/2012

TO: Davis Partnership PC Arch
2301 Blake St #100
Denver CO 80205-2108

RE: Air terminals

ATTN: Brent Murphy

Ph/Fax: 303-861-8555

JOB: 12D1137

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings	☐ Approval	☐ Approved as Submitted
☐ Letter	☐ Your Use	☐ Approved as Noted
☐ Prints	☐ As Requested	☐ Returned After Loan
☐ Change Order	☐ Review and Comment	☐ Resubmit
☐ Plans		☐ Submit
☐ Samples	**SENT VIA:**	☐ Returned
☐ Specifications / Product Data	☐ Attached	☐ Returned for Corrections
☐ Other:	☐ Separate Cover Via:	☑ Due Date: 10/16/2012

NOTES:

Item	*Package*	*Code*	*Rev.*	*Copies*	*Date*	*Description*	*Status*
Submittal	15110	233600.01	1	1	10/16/2012	Air terminals	New Item

CC:

Signed: _____

Rebecca Terrazas

Submittal Stamp Sheet

Project: EPMC
Phipps' Job #: 12D1137
Submittal #: 233600 Date: 10-16-12

GH Phipps.:	Architect:
SUBMITTED ***GH Phipps*** *Construction Companies* GH Phipps has reviewed, approved, and herby submits the attached in accordance with the contract documents. Note to Subcontractor/Material Supplier: Subcontractor/Material Supplier remains responsible for the confirmation and correlation of dimensions at the jobsite; fabrication processes and construction techniques; coordination of the work with the work of other trades; and satisfactory performance of the work.	
Engineer: No Exception Taken ☒ Make Corrections Noted ☐ Rejected ☐ Revise and Resubmit ☐ Submit Specified Item ☐ CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR: DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES; AND THE SAFISFACTORY PERFORMANCE OF HIS WORK. CATOR, RUMA & ASSOCIATES, CO. Consulting Mechanical/Electrical Engineers Lakewood, Colorado 80401 (303) 232-6200 Date: 10/19/12 By: Bob Lazzaro REVIEW DOES NOT INCLUDE SIZES OR QUANTITIES	Other:

NOTES: HVAC Air Terminal

Signed: Rebecca T Terrazas
GH Phipps Representative

ADAMS COUNTY ACPH since 1965 PLUMBING & HEATING

2669 E. Hwy 224•Denver, CO 80229•303-288-4546•FAX: 303-289-5756

SUBMITTAL

DATE: August 21, 2012

JOB NO:		12-100
PROJECT:		Estes Park Medical Center MRI / CT Addition
GENERAL CONTRACTOR:		GH Phipps
ARCHITECT:		Davis Partnership Architects
MECH. ENGINEER:		Cator Ruma & Associates
SUPPLIER:		Parker Sheet Metal
SUBMITTAL NO:		03
SPECIFICATION:		233600 – Air Terminal Units
PARAGRAPH:		2.2

5001 South Zuni Street
Littleton, CO 80120
303. 742.3342 tel
303.922.0469 fax
jrbliss@long.com
www.long.com

LONG

BUILDING ENVIRONMENTS

Technology for Better Buildings

EQUIPMENT SUBMITTAL

PROJECT	**Estes Park Medical Center MRI/CT Addition**
ARCHITECT	
ENGINEER	**Cator Ruma & Associates, Inc.**
CONTRACTOR	**Parker Sheet Metal**
ITEM	**VAV's**
MANUFACTURER	**Krueger**
SUBMITTED BY	**LONG Building Environments – Jonathan Bliss**

Equipment will not be released for production until formal approval is received.

DATE: August 13, 2012

Tag: *Priced at 5,280 Feet with 30% Glycol

VAV-2-1

VAV-2-2

VAV-2-3

VAV-2-4

VAV-2-5

Single Duct Terminal Unit Schedule

		Size		CFM		Static Pressure			NC Levels		Hot Water Heat Coil									
Tag	Model	Unit	Outlet	Max	Min	Inlet	Down	Min	Rad.	Disch.	CFM	MBH	EAT	LAT	APd	GPM	EWT	LWT	WPd	Rows
VAV-2-01	LMHS	09	14x12	1,050	300	1.00	0.25	0.29	20	14	300	10.9	55	96	0.20	0.8	180.0	149.1	0.10	1
VAV-2-02	LMHS	08	12x10	800	150	1.00	0.25	0.33	21	15	150	6.8	55	106	0.24	0.5	180.0	149.1	0.20	1
VAV-2-03	LMHS	08	12x10	800	150	1.00	0.25	0.33	21	15	150	6.8	55	106	0.24	0.5	180.0	149.1	0.20	1
VAV-2-04	LMHS	14	20x17	3,000	660	1.00	0.25	0.51	22	20	660	20.3	55	90	0.37	1.0	180.0	133.8	0.10	1
VAV-2-05	LMHS	12	16x15	2,000	500	1.00	0.25	0.46	22	16	500	16.9	55	93	0.36	1.2	180.0	147.9	0.40	1

Notes:
1. Room NC level shown includes attenuation transfer functions obtained from tables in AHRI Standard 885.
2. Sound data shall be obtained from tests conducted in accordance with AHRI Standard 880.
3. Selections based upon Krueger as Manufacturer.
4. Dimensions are for base product only. Check submittal drawings for exact dimensions.
5. Size units are given in inches, flows units are cubic feet per minute, pressure units are inches of water, and temperature units are degrees fahrenheit.

Project: **Tag: VAV-2-05**

Project Location:
Altitude: 5,280.0 Feet
File: Estes Park Medical Center MRI-CT.kec
User:
Room:

Selection

Quantity	Model	Size		CFM			Static			Max NC Levels	
		Unit	Outlet	Max.	Min.	Heating	Inlet	Down	Min.	Rad.	Disch.
1	LMHS	12	16x15	2,000	500	500	1.00	0.25	0.46	22	16

Notes: 1. See below for PWL calculations used to obtain Max NC rating.
2. Outlet size is approximate and does not include coil dimensions. See submittal drawings for exact dimensions.

Hot Water Heating Coil Performance

MBH	Coil CFM	EAT / LAT	APd	GPM	EWT / LWT	WPd	Rows	Conn.	% Glycol
16.9	500	55 / 93	0.4	1.20	180.0 / 147.9	0.40	1	RH	30%

Coil Selection Method: 6-Solve for heat at desired water flow, rows (Straight Calculation)

Other Information

Maximum CFM: 2,263
Design CFM: 2,000
Safety Factor: 12%
Unit LxWxH: 40 x 16 x 15in.
Controls:

Accessories

Outlet: Attenuator
Lining: 1-1" liner
Heating Coil: Hot Water
Attenuator: Yes

Acoustic Summary

Sound Description	Radiated Sound PWL 2	3	4	5	6	7	NC	Discharge Sound PWL 2	3	4	5	6	7	NC	Standard
Primary Sound	60	53	47	42	38	30		66	59	54	44	43	42		
Total Attenuation	18	19	20	26	31	36		29	30	41	51	52	39		885-08,E
Room Sound Level	42	34	27	16	-	-	22	37	29	13	-	-	-	16	

Notes: 1. Room sound levels shown include attenuation transfer functions shown above.
2. Data were obtained from tests conducted in accordance with AHRI Standard 880.
3. Sound power levels are in decibels, re 10^-12 watts.
4. Dash (-) in space indicates sound and NC value is less than 10.

Project: **Tag: VAV-2-04**

Project Location:
Altitude: 5,280.0 Feet
File: Estes Park Medical Center MRI-CT.kec
User:
Room:

Selection

Quantity	Model	Size		CFM			Static			Max NC Levels	
		Unit	Outlet	Max.	Min.	Heating	Inlet	Down	Min.	Rad.	Disch.
1	LMHS	14	20x17.5	3,000	660	660	1.00	0.25	0.51	22	20

Notes: 1. See below for PWL calculations used to obtain Max NC rating.
2. Outlet size is approximate and does not include coil dimensions. See submittal drawings for exact dimensions.

Hot Water Heating Coil Performance

MBH	Coil CFM	EAT / LAT	APd	GPM	EWT / LWT	WPd	Rows	Conn.	% Glycol
20.3	660	55 / 90	0.4	1.00	180.0 / 133.8	0.10	1	RH	30%

Coil Selection Method: 6-Solve for heat at desired water flow, rows (Straight Calculation)

Other Information

Maximum CFM: 3,081
Design CFM: 3,000
Safety Factor: 3%
Unit LxWxH: 40 x 20 x 18in.
Controls:

Accessories

Outlet: Attenuator
Lining: 1-1" liner
Heating Coil: Hot Water
Attenuator: Yes

Acoustic Summary

Sound Description	Radiated Sound PWL 2	3	4	5	6	7	NC	Discharge Sound PWL 2	3	4	5	6	7	NC	Standard
Primary Sound	58	52	48	43	40	33		69	62	59	49	46	45		
Total Attenuation	18	19	20	26	31	36		29	30	41	51	52	39		885-08,E
Room Sound Level	40	33	28	17	-	-	22	40	32	18	-	-	-	20	

Notes: 1. Room sound levels shown include attenuation transfer functions shown above.
2. Data were obtained from tests conducted in accordance with AHRI Standard 880.
3. Sound power levels are in decibels, re 10^-12 watts.
4. Dash (-) in space indicates sound and NC value is less than 10.

Project: **Tag: VAV-2-03**

Project Location:
Altitude: 5,280.0 Feet
File: Estes Park Medical Center MRI-CT.kec
User:
Room:

Selection

Quantity	Model	Size		CFM			Static			Max NC Levels	
		Unit	Outlet	Max.	Min.	Heating	Inlet	Down	Min.	Rad.	Disch.
1	LMHS	08	12x10	800	150	150	1.00	0.25	0.33	21	15

Notes: 1. See below for PWL calculations used to obtain Max NC rating.
2. Outlet size is approximate and does not include coil dimensions. See submittal drawings for exact dimensions.

Hot Water Heating Coil Performance

MBH	Coil CFM	EAT / LAT	APd	GPM	EWT / LWT	WPd	Rows	Conn.	% Glycol
6.8	150	55 / 106	0.2	0.50	180.0 / 149.1	0.20	1	RH	30%

Coil Selection Method: 6-Solve for heat at desired water flow, rows (Straight Calculation)

Other Information

Maximum CFM: 1,006
Design CFM: 800
Safety Factor: 20%
Unit LxWxH: 40 x 12 x 10 in.
Controls:

Accessories

Outlet: Attenuator
Lining: 1-1" liner
Heating Coil: Hot Water
Attenuator: Yes

Acoustic Summary

Sound Description	Radiated Sound PWL 2	3	4	5	6	7	NC	Discharge Sound PWL 2	3	4	5	6	7	NC	Standard
Primary Sound	59	52	41	37	31	29		62	59	47	38	33	32		
Total Attenuation	18	19	20	26	31	36		29	30	41	51	52	39		885-08,E
Room Sound Level	41	33	21	11	-	-	21	33	29	-	-	-	-	15	

Notes: 1. Room sound levels shown include attenuation transfer functions shown above.
2. Data were obtained from tests conducted in accordance with AHRI Standard 880.
3. Sound power levels are in decibels, re 10^-12 watts.
4. Dash (-) in space indicates sound and NC value is less than 10.

Project: **Tag: VAV-2-02**

Project Location:
Altitude: 5,280.0 Feet
File: Estes Park Medical Center MRI-CT.kec
User:
Room:

Selection

Quantity	Model	Size		CFM			Static			Max NC Levels	
		Unit	Outlet	Max.	Min.	Heating	Inlet	Down	Min.	Rad.	Disch.
1	LMHS	08	12x10	800	150	150	1.00	0.25	0.33	21	15

Notes: 1. See below for PWL calculations used to obtain Max NC rating.
2. Outlet size is approximate and does not include coil dimensions. See submittal drawings for exact dimensions.

Hot Water Heating Coil Performance

MBH	Coil CFM	EAT / LAT	APd	GPM	EWT / LWT	WPd	Rows	Conn.	% Glycol
6.8	150	55 / 106	0.2	0.50	180.0 / 149.1	0.20	1	RH	30%

Coil Selection Method: 6-Solve for heat at desired water flow, rows (Straight Calculation)

Other Information

Maximum CFM: 1,006
Design CFM: 800
Safety Factor: 20%
Unit LxWxH: 40 x 12 x 10 in.
Controls:

Accessories

Outlet: Attenuator
Lining: 1-1" liner
Heating Coil: Hot Water
Attenuator: Yes

Acoustic Summary

Sound Description	Radiated Sound PWL 2	3	4	5	6	7	NC	Discharge Sound PWL 2	3	4	5	6	7	NC	Standard
Primary Sound	59	52	41	37	31	29		62	59	47	38	33	32		
Total Attenuation	18	19	20	26	31	36		29	30	41	51	52	39		885-08,E
Room Sound Level	41	33	21	11	-	-	21	33	29	-	-	-	-	15	

Notes: 1. Room sound levels shown include attenuation transfer functions shown above.
2. Data were obtained from tests conducted in accordance with AHRI Standard 880.
3. Sound power levels are in decibels, re 10^-12 watts.
4. Dash (-) in space indicates sound and NC value is less than 10.

Project: **Tag: VAV-2-01**

Project Location:
Altitude: 5,280.0 Feet
File: Estes Park Medical Center MRI-CT.kec
User:
Room:

Selection

Quantity	Model	Size		CFM			Static			Max NC Levels	
		Unit	Outlet	Max.	Min.	Heating	Inlet	Down	Min.	Rad.	Disch.
1	LMHS	09	14x12.5	1,050	300	300	1.00	0.25	0.29	20	14

Notes: 1. See below for PWL calculations used to obtain Max NC rating.
2. Outlet size is approximate and does not include coil dimensions. See submittal drawings for exact dimensions.

Hot Water Heating Coil Performance

MBH	Coil CFM	EAT / LAT	APd	GPM	EWT / LWT	WPd	Rows	Conn.	% Glycol
10.9	300	55 / 96	0.2	0.80	180.0 / 149.1	0.10	1	RH	30%

Coil Selection Method: 6-Solve for heat at desired water flow, rows (Straight Calculation)

Other Information

Maximum CFM: 1,273
Design CFM: 1,050
Safety Factor: 18%
Unit LxWxH: 40 x 14 x 13in.
Controls:

Accessories

Outlet: Attenuator
Lining: 1-1" liner
Heating Coil: Hot Water
Attenuator: Yes

Acoustic Summary

Sound Description	Radiated Sound PWL 2	3	4	5	6	7	NC	Discharge Sound PWL 2	3	4	5	6	7	NC	Standard
Primary Sound	56	49	46	38	34	26		62	58	50	40	36	36		
Total Attenuation	18	19	20	26	31	36		29	30	41	51	52	39		885-08,E
Room Sound Level	38	30	26	12	-	-	20	33	28	-	-	-	-	14	

Notes: 1. Room sound levels shown include attenuation transfer functions shown above.
2. Data were obtained from tests conducted in accordance with AHRI Standard 880.
3. Sound power levels are in decibels, re 10^-12 watts.
4. Dash (-) in space indicates sound and NC value is less than 10.

SUBMITTAL SHEET

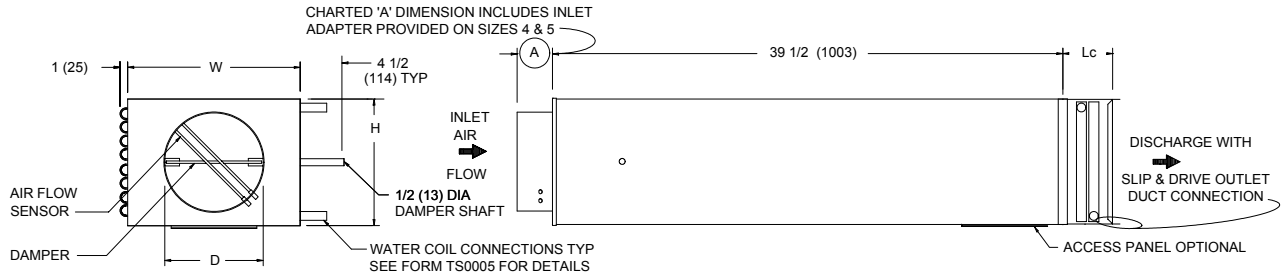
Form Number TS0021.2 Effective Date 7/04
Replaces FORM TS0021.1

JOB NAME _____
ARCHITECT _____
ENGINEER _____
CONTRACTOR _____
LOCATION _____

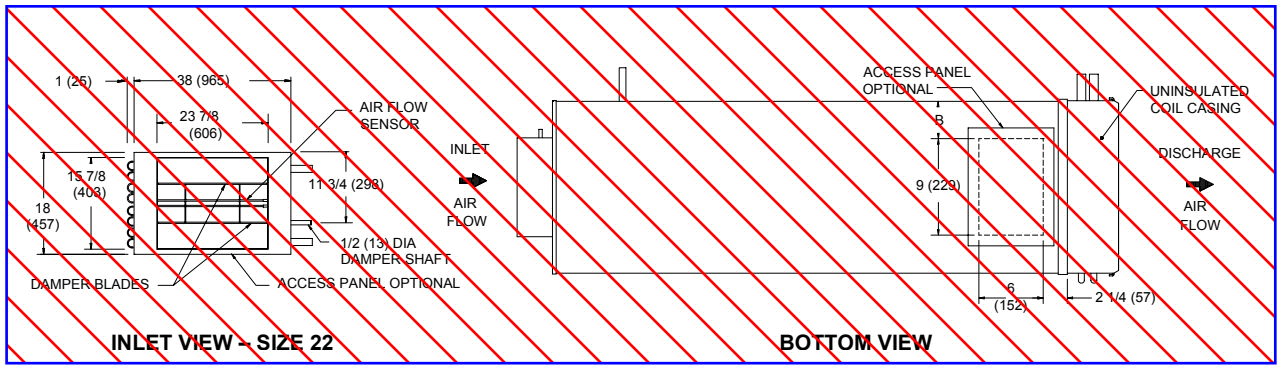
KRUEGER
Excellence in Air Distribution

LMHS

ATTENUATOR UNIT WITH HOT WATER HEAT – NO CONTROLS



INLET VIEW - SIZES 4-16 **SIDE VIEW**



INLET VIEW – SIZE 22 **BOTTOM VIEW**

STANDARD FEATURES:

- 22 Ga. Zinc coated steel construction.
- 1/2" dia shaft extending from the unit casing .
- ~~1/2" thick dual density fiberglass insulation meeting **NFPA 90A** and **UL 181** safety requirements~~.
- Linear averaging sensor.
- Hot water coils. See form TS0005 for dimensions and specifications
- ~~Field installation of controls~~

NOTE: Right hand configuration shown, left hand available.

OPTIONAL FEATURES:

- ☐ ~~20 Ga. Zinc coated steel construction~~
- ➢ Liners:
  - ☐ ~~Cellular insulation~~
  - ☐ ~~Sterilwall~~
  - ☐ ~~None~~
  - ☐ ~~Steriliner~~
  - ☐ ~~Perf double wall~~
  - ☐ 1" dual density fiberglass insulation
- ☐ ~~Four quadrant averaging cross flow sensor~~
- ☐ ~~Left hand control~~.
- ☐ ~~Right hand control.~~
- ☐ Left hand water coil connection
- ☐ Right hand water coil connection.
- ☐ ~~Bottom access panel~~
- ☐ Hanger brackets.
- ☐ ~~Cam lock bottom access panel~~

DIMENSIONS ARE GIVEN AS INCHES (MM)

LMHS ATTENUATOR UNIT WITH HOT WATER REHEAT

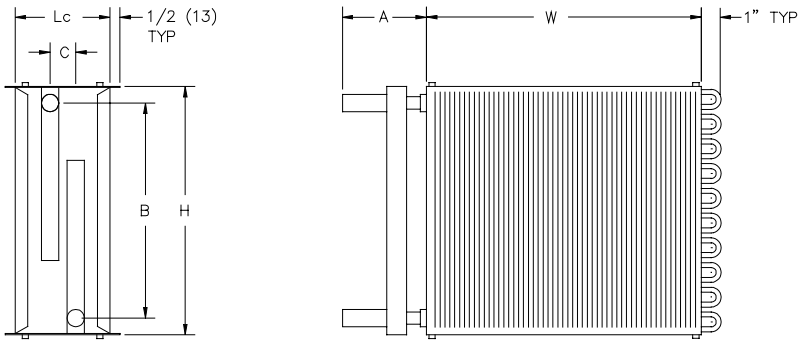
INLET SIZE	NOM MAX CFM (L/S)	W	H	A	B	D	Lc
4	230 (109)	12 (305)	8 (203)	5 3/8 (136)	1 1/2 (38)	3 7/8 (98)	SEE FORM TS0005
5	360 (170)	12 (305)	8 (203)	5 3/8 (136)	1 1/2 (38)	4 7/8 (124)	
6	520 (245)	12 (305)	8 (203)	3 3/8 (86)	1 1/2 (38)	5 7/8 (149)	
7	710 (335)	12 (305)	10 (254)	3 3/8 (86)	1 1/2 (38)	6 7/8 (175)	
8	925 (437)	12 (305)	10 (254)	3 3/8 (86)	1 1/2 (38)	7 7/8 (200)	
9	1200 (566)	14 (356)	12 1/2 (318)	3 3/8 (86)	2 1/2 (64)	8 7/8 (225)	
10	1450 (685)	14 (356)	12 1/2 (318)	3 3/8 (86)	2 1/2 (64)	9 7/8 (251)	
12	2100 (991)	16 (406)	15 (381)	3 3/8 (86)	3 1/2 (89)	11 7/8 (302)	
14	2900 (1369)	20 (508)	17 1/2 (445)	3 3/8 (86)	5 1/2 (140)	13 7/8 (352)	
16	3700 (1746)	24 (610)	18 (457)	3 3/8 (86)	7 1/2 (191)	15 7/8 (403)	
22	7100 (3351)	38 (965)	18 (457)	4 1/4 (108)	14 1/2 (368)	SEE ABOVE	

JOB NAME _____
ARCHITECT _____
ENGINEER _____
CONTRACTOR _____
LOCATION _____

SUBMITTAL SHEET
Form Number TS0005.5 Effective Date 11/03
Replaces FORM TS0005.4

KRUEGER
Excellence in Air Distribution

LMHS HOT WATER COILS
With Hot Water Reheat



LMHS coils are shipped from the factory attached to the unit discharge. Coil discharge is configured for slip and drive field ductwork installation. Coil section is uninsulated.

CONNECTION TUBING – 0.032" thick copper. Refer to connection diameter shown in table below.
COIL CASING – 20 Ga. Galvanized steel.
COIL TUBING – 1/2" diameter x 0.016" thick copper.
COIL FINS – 0.0045" thick aluminum, 10 per inch, mechanically bonded to tubing.
COIL ACCESSORIES:
- Optional air vent and water drain

LMHS SIZE		H	W	Lc	A	B	C	WATER CONNECTION
4,5,6	1 ROW	8(203)	12(304)	5(127)	3(76)	6 1/4(159)	-	1/2(13)
	2 ROW	8(203)	12(304)	5(127)	4 1/4(108)	6 7/8(175)	1 1/8(29)	7/8(22)
	3 ROW	8(203)	12(304)	7 1/4(184)	4 1/4(108)	6 7/8(175)	2 1/8(54)	7/8(22)
	4 ROW	8(203)	12(304)	7 1/4(184)	4 1/4(108)	6 7/8(175)	3 1/4(83)	7/8(22)
7,8	1 ROW	10(254)	12(304)	5(127)	3(76)	8 3/4(222)	-	1/2(13)
	2 ROW	10(254)	12(304)	5(127)	4 1/4(108)	9(229)	1 1/8(29)	7/8(22)
	3 ROW	10(254)	12(304)	7 1/4(184)	4 1/4(108)	9(229)	2 1/8(54)	7/8(22)
	4 ROW	10(254)	12(304)	7 1/4(184)	4 1/4(108)	9(229)	3 1/4(83)	7/8(22)
9,10	1 ROW	12 1/2(317)	14(356)	5(127)	4 1/4(108)	10 7/8(276)	1 1/4(32)	7/8(22)
	2 ROW	12 1/2(317)	14(356)	5(127)	4 1/4(108)	11 1/2(292)	1 1/8(29)	7/8(22)
	3 ROW	12 1/2(317)	14(356)	7 1/4(184)	4 1/4(108)	10 1/4(260)	2 1/8(54)	7/8(22)
	4 ROW	12 1/2(317)	14(356)	7 1/4(184)	4 1/4(108)	10 1/4(260)	3 1/4(83)	7/8(22)
12	1 ROW	15(381)	16(406)	5(127)	4 1/4(108)	13 3/4(349)	1 1/4(32)	7/8(22)
	2 ROW	15(381)	16(406)	5(127)	4 1/4(108)	13 3/4(349)	1 1/8(29)	7/8(22)
	3 ROW	15(381)	16(406)	7 1/4(184)	4 1/4(108)	14(356)	2 5/8(67)	7/8(22)
	4 ROW	15(381)	16(406)	7 1/4(184)	4 1/4(108)	14(356)	3 1/4(83)	7/8(22)
14	1 ROW	17 1/2(445)	20(508)	7 1/2(191)	4 1/4(108)	15 7/8(403)	1 1/4(32)	7/8(22)
	2 ROW	17 1/2(445)	20(508)	7 1/2(191)	4 1/4(108)	16 1/2(419)	1 1/8(29)	7/8(22)
	3 ROW	17 1/2(445)	20(508)	9 3/4(248)	4 1/4(108)	14(356)	2 1/8(54)	7/8(22)
	4 ROW	17 1/2(445)	20(508)	9 3/4(248)	4 1/4(108)	14(356)	3 1/4(83)	7/8(22)
16	1 ROW	18(457)	24(609)	7 1/2(191)	4 1/4(108)	15 7/8(403)	1 1/4(32)	7/8(22)
	2 ROW	18(457)	24(609)	7 1/2(191)	4 1/4(108)	16 1/2(419)	1 1/8(29)	7/8(22)
	3 ROW	18(457)	24(609)	9 3/4(248)	4 1/4(108)	14(356)	2 1/8(54)	7/8(22)
	4 ROW	18(457)	24(609)	9 3/4(248)	4 1/4(108)	14(356)	3 1/4(83)	7/8(22)
22	1 ROW	18(457)	38(965)	5(127)	3 5/8(92)	15 7/8(403)	1 5/16(33)	7/8(22)
	2 ROW	18(457)	38(965)	5(127)	3 5/8(92)	16 1/2(419)	1 3/32(27)	7/8(22)
	3 ROW	18(457)	38(965)	7 1/4(184)	3 5/8(92)	14(356)	2 5/32(54)	7/8(22)
	4 ROW	18(457)	38(965)	7 1/4(184)	3 5/8(92)	14(356)	3 1/4(82)	7/8(22)