



Submittal Cover Page

Project: Ravenna Riddle Block 4th Floor
Renovation
TCC Project No: 25-001
Date: 05/12/2025

Subcontractor/Supplier

R & D HEATING & SHEET METAL CO

Submittal No: 19

Revision No: Original

To:

American Structure Point, Inc

Attn:

Josh Cribelar

Project Address:

215 South Chestnut Street
Ravenna, OH 44266

Submittal: 230000 HEATING VENTILATING & AIR CONDITIONING - 0 items



Submittal Review

✓ Reviewed	Alternates Included:
✓ No Exceptions Taken	
Checked By: Matt Prusky	Date: 05/12/2025

Item Number	Item Description	Item Status
230000-02	Product Data - EF	05 Submitted
230000-03	Product Data - Air Distribution	05 Submitted
230000-01	Product Data - Split System	05 Submitted

Notes:

High Wall Heat Pump Ductless System

Indoor Model: 45MAHAQ18XA3



Turn to the experts

Job Data:

Tag #:

Date:

Location:

Carrier#:



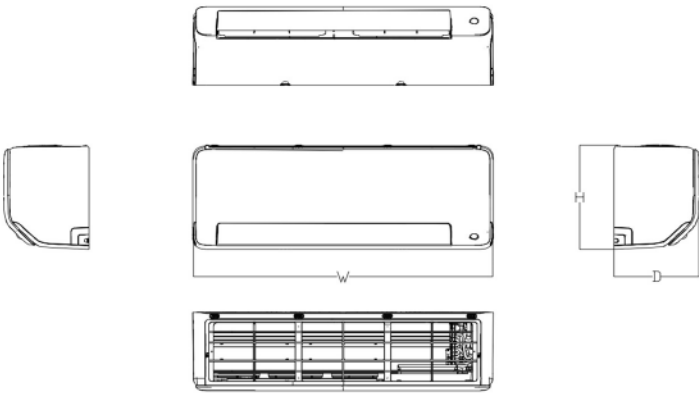
INDOOR STANDARD FEATURES

- Modes: Cool, Heat, Dry, Fan, Auto
- Four fan speeds
- Sleep Mode
- Turbo Mode
- Follow Me (senses temperature at handheld remote)
- Auto-Restart function
- Quiet indoor operation
- Anti-corrosive fin coating

RESIDENTIAL APPLICATION LIMITED WARRANTY*

- Ten (10) years if properly registered within ninety (90) days after original installation, parts are warranted to the original purchaser for a period of ten (10) years. Otherwise, parts warranty is five (5) years.

NOTE: Images for illustration purposes only. Actual models may be slightly different.



INDOOR UNIT DIMENSIONS				
Capacity	Unit	W	D	H
6K/9K/12K	mm	795	225	295
	inch	31.3	8.86	11.61
18K	mm	965	239	319
	inch	37.99	9.41	12.56
24K ~ 36K	mm	1140	275	370
	inch	44.88	10.83	14.57



45MAHAQ18XA3			
System	Indoor Model #		45MAHAQ18XA3
	Indoor Size		18000
Electrical	Voltage, Phase, Cycle	V/Ph/Hz	208/230-1-60
	Power Supply	Indoor unit powered by outdoor unit	
	MCA	A.	3
Operating Range	Cooling Indoor DB Min - Max	*F(*C)	60~90(16~32)
	Heating Indoor DB Min - Max	*F(*C)	32~86(0~30)
Indoor Coil	Face Area	Sq. Ft.	2.75
	No. Rows		2
	Fins per inch		20
	Circuits		4
Indoor Unit	Number of Fan Speeds		1190/994/896
	Airflow (highest to lowest)	CFM	635.7 / 500.3 / 359.0 / 294.3 / /
	Sound Pressure (highest to lowest)	dB(A)	49.5/45.0/38.0/31.5/19.5
	Moisture Removal	L/h	2.2
	Air Throw Data	ft(m)	26.57(8.1)
Dimensions	Height	in (mm)	12.56(319)
	Width	in (mm)	37.99(965)
	Depth	in (mm)	9.41(239)
	Net Weight	lbs (kg)	27.34(12.4)
	Shipping Height	in (mm)	12.80(325)
	Shipping Width	in (mm)	41.14(1045)
	Shipping Depth	in (mm)	15.75(400)
	Shipping Net Weight	lbs (kg)	36.6(16.6)
CONTROLS			
Standard	Wireless Remote Controller (*F/*C Convertible)		
Optional	Wired Remote Control 7 Day Programmable	KSACN1401AAA	
	Wired Remote Control with Timer Function	KSACN1201AAA	
	Wi-Fi™ Kit High Wall	KSAIF0701AAA	
	24V Mini Interface	KSAIC0601230	



Outdoor Unit Heat Pump Ductless System

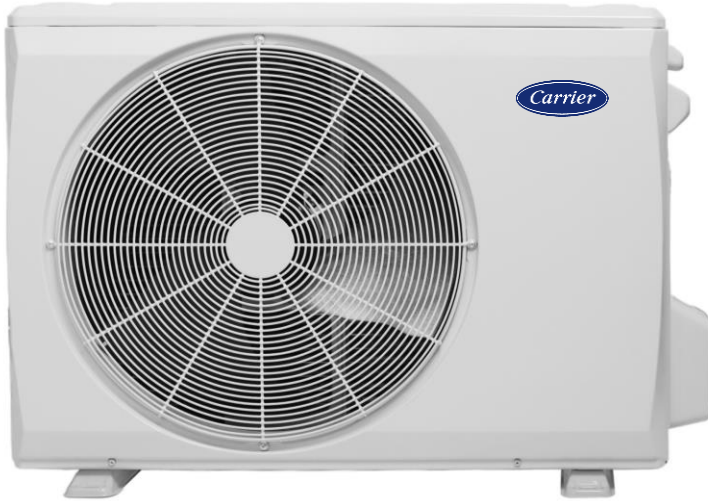
Outdoor Model: 37MAHAQ18AA3



Turn to the experts

Job Data:
Tag #:
Date:

Location:
Carrier#:



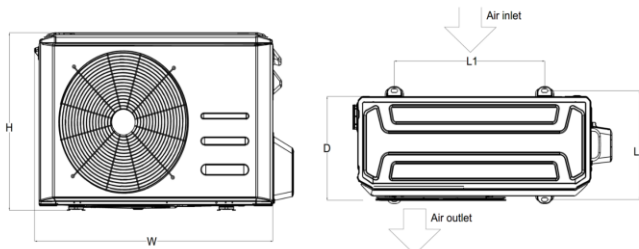
OUTDOOR STANDARD FEATURES

- Variable Speed (Inverter)
- Factory installed Base Pan Heater
- Factory installed Crankcase Heater
- Low Voltage Controls
- Auto-Restart function
- Condenser High Temp Protection
- Quiet operation
- Anti-corrosive fin coating

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OUTDOOR UNIT DIMENSIONS						
Capacity	Unit	W	D	H	L1	L2
6K	mm	765	303	555	452.4	313.82
	inch	30.12	11.93	21.85	17.81	12.36
9K/12K	mm	805	330	554	511	317.2
	inch	31.69	12.99	21.81	20.1	12.5
18K	mm	890	342	673	663	379.59
	inch	35.04	13.46	26.5	26.1	14.94
24K/33K	mm	946	410	810	672.96	402.6
	inch	37.24	16.14	31.89	26.49	15.85

Outdoor - Heat Pump			
System	Outdoor Model #		37MAHAQ18AA3
	Outdoor Size		18000
Electrical	Voltage, Phase, Cycle	V/Ph/Hz	208-230/1/60
	MCA	A.	19
	MOPA	A.	20
	SCCR	kA	5K
Operating Range	Cooling Outdoor DB Min - Max	*F(*C)	-22~122 (-30~50)
	Heating Outdoor DB Min - Max	*F(*C)	-22~75 (-30~24)
Piping	Min. Piping Length	ft (m)	9.8 (3)
	Standard Piping Length	ft. (m)	24.6 (7.5)
	Total Piping Length	ft (m)	98.42(30)
	Piping Lift*	ft (m)	65.62(20)
	Pipe Connection Size - Liquid	in (mm)	1/4in(6.35mm)
	Pipe Connection Size - Suction	in (mm)	1/2in(12.7mm)
Refrigerant	Refrigerant Type		R454B
	Charge	lbs (kg)	3.46(1.57)
	Add'l Refrigerant (between Std & Max Piping Lengths)	Oz/ft (g/m)	0.16(15)
Outdoor Coil	Face Area	Sq. Ft.	5.9
	No. Rows		2
	Fins per inch		20
	Circuits		6
Compressor	Type		ROTARY
	Model		KTM240D46UKT2
	Oil Type		ESTER OIL
	Oil Charge	Fl. Oz.	20.96719648
Airflow & Sound	Rated Current	RLA	0.73
	Airflow	CFM	1764.71
	Sound Pressure	dB(A)	59
Dimensions	Height	in (mm)	26.50(673)
	Width	in (mm)	35.04(890)
	Depth	in (mm)	13.46(342)
	Net Weight	lbs (kg)	99.87(45.3)
	Shipping Height	in (mm)	29.13(740)
	Shipping Width	in (mm)	39.17(995)
	Shipping Depth	in (mm)	15.67(398)
	Shipping Net Weight	lbs (kg)	107.80(48.9)

* Condensing unit above or below indoor unit



Puron Advance™



Submittal Data

		05/08/2025
Project Name: Riddle Block 4th Floor		
Engineer:		
Architect:		
Contractor:		
Submitted By: Decker Steel & Supply, Inc.		
Maggie Sickle		
4500 TRAIN AVE		
CLEVELAND, Ohio 44102		

SUBMITTAL PACKAGE

Roof & Wall Exhaust

DX -

ID#	Tag	Qty
DX-1	EF-1	1

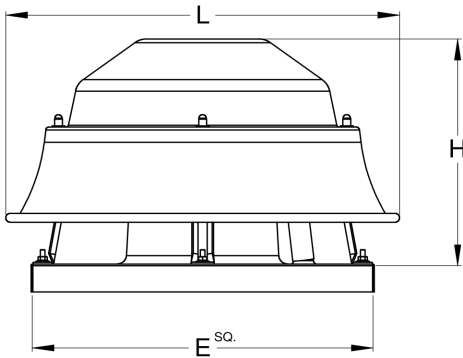
Note:

- Quantities and Sizes listed are for submittal purposes only, to be verified prior to order.
- Submittal information is deemed correct at time of printing, however in the interest of product improvement pennbarry reserves the right to make changes without notice.

DX08QGP

Quantity: 1
Special: None

Dimensions



Unit Size	E	H	L	Weight
08	18.5	17.5	21.44	34

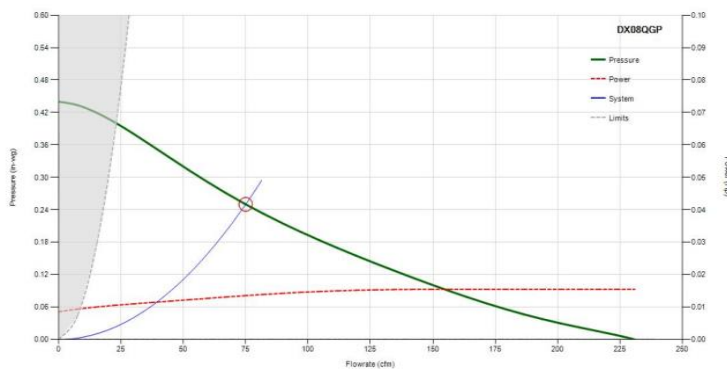
Standard Construction Feature

- Weatherproof Housing
- Heavy Gauge Spun Aluminum Construction
- Aluminum Centrifugal Fan Wheels Statically & Dynamically balanced
- Spark-resistant, Non-overloading
- Aluminum spun venturis
- Continuous Duty Motors
- AMCA Licensed Ratings Seal for Air & Sound Performance (DX)
- UL and cUL Listed

Accessories

Application: E - Exhaust
 Controllers: 3 - Multi speed ctrlr iQ-MS (ECM only)
 Drive Type: D - Direct
 Inlet and Outlet Guards/Screens: B - Bird Screen (Standard)
 Internal Wiring: 1 - NEMA 1
 Model Parent: DX08D
 Motor Efficiency: G - Green Plus ECM
 Motor Speed: S - 1725 RPM
 Service Switches: C - NEMA 1 - mounted
 Spark Resistance Construction: C - AMCA C Spark Resistance
 Temperature: 70
 Thermal Overload Protection: T - Thermal Overload Protection
 UL / ETL Listing: 1 - UL 705
 Unit Size: 08

Peformance



Operating Point

Volume (CFM)	75
Static Pressure (in. wg)	0.25
Fan RPM	1257
Horse Power (BHP)	0.01
Elevation (ft)	0
Temperature (°F)	70
Drive Loss (%)	N/A
FEI	0.1



Motor Information

Motor HP	0.167 - 1/6 HP
Volt/Ph/Hz	115V /1 /60
Enclosure	5 - ODP
NEC FLA*	4.4
Weight+ (lbs)	C/F

* NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2014. Actual motor FLA may vary depending on motor manufacturer.

+ Motor weight my vary depending on supplier

(continued)							
SOUND POWER							
OCTAVE POWER CENTER FREQUENCY (hz)							
63	125	250	500	1000	2000	4000	8000
60	56	48	43	40	34	26	22

LWA	dBA	Sones
47	35.4	1.64

LwA - Weighted sound power, based on ANSI S1.4, dBA - Weighted sound pressure, based on 11.5 dB attenuation per Octave band at 5 ft. Sones - calculated using AMCA 301 at 5 ft.

Tag: EF-1



Project: Riddle Block 4th FloorRiddle Block 4th Floor

Office: Decker Steel & Supply, Inc.Decker Steel & Supply, Inc. Maggie Sickie

Version: 1.0.00

Date: 05/08/2025

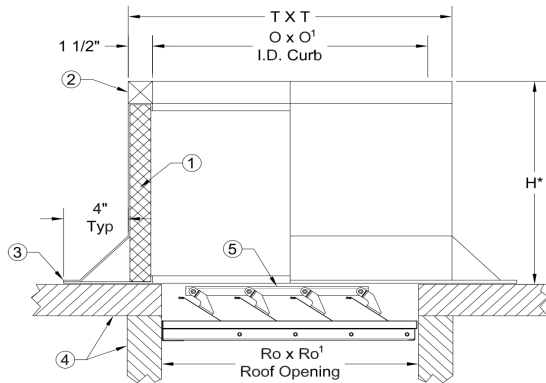
Roof Curb

Prefabricated Roof Curbs

Quantity: 1
Special: None

Product Image

Roof Curb



- Heavy-gauge steel with welded corner seams shall cover 1-1/2" thick 3 lb. density fiberglass insulation.
- A 1-1/2" wide wood nailer (Unibeam) with top surface is provided for fan installation and/or roofing paper.
- Optional vented sides available without fiberglass insulation.

Model Parent	T	T'	O	O'	H	Ro	Ro'
DX08D	17	17	14	14	14	9	9

Schedule

ID	Quantity	Tag
1	1	EF-1



Submittal Data

05/08/2025

Project Name: Riddle Block 4th Floor

Engineer:

Architect:

Contractor:

Submitted By: Decker Steel & Supply, Inc.

Maggie Sickle

4500 TRAIN AVE

CLEVELAND, Ohio 44102

SUBMITTAL PACKAGE

Architectural Square Type

PLQ - Steel, Removable Plaque Face, Square Plaque

ID#	Tag	Qty	Round Neck Size
PLQ-1	A	29	10

Return Grilles

EGC5 - AL - ½"x½"x½" Eggcrate Grid with Aluminum Frame and Aluminum Core

ID#	Tag	Qty	Width	Height
EGC5 - AL-1	J	20	20	8
EGC5 - AL-2	J	2	20	20
EGC5 - AL-3	K	1	10	10

Plaster & Mounting Frames

5HCF23 - Hard Ceiling Frame, Adapts F23 to F22, Aluminum

ID#	Tag	Qty	Dim 1 (W)	Dim 2 (H)
5HCF23-1	K	1	12	12

Note:

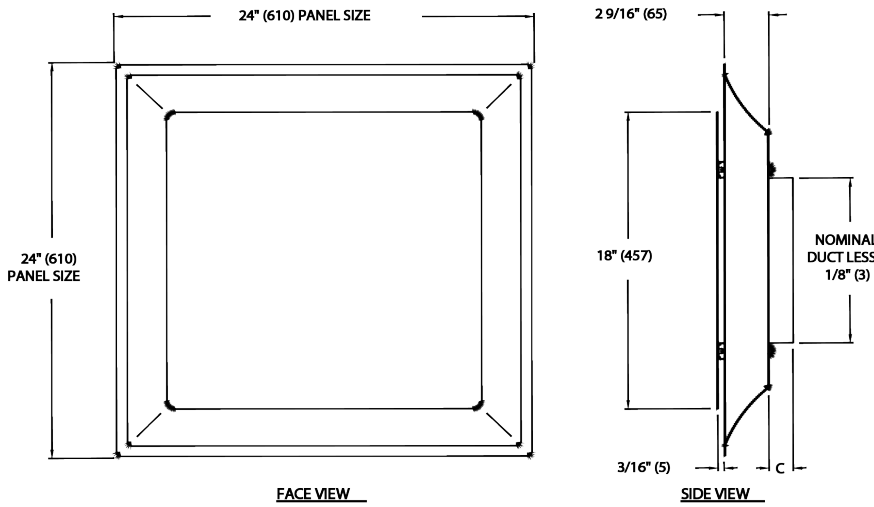
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PLQ

Steel, Removable Plaque Face, Square Plaque

Main Product

PLQ



FACE VIEW

24" (610) PANEL SIZE

24" (610) PANEL SIZE

SIDE VIEW

2 9/16" (65)

18" (457)

3/16" (5)

NOMINAL DUCT LESS 1/8" (3)

C

• Unit construction is 22 gage backpan with a 16 gage face plaque.

Feature Benefits

F23 - LAY-IN T-BAR



24" (610) GRID

23 3/4" (603)

Option Schedule

Frame F23 - LAY-IN T-BAR

Panel 24X24

Damper 00 - NONE

Accy 1 00 - NONE

Accy 2 00 - NONE

Finish 44 - BRITISH WHITE

ID	Quantity	Tag	Round Neck Size
1	29	A	10 - 10 IN ROUND

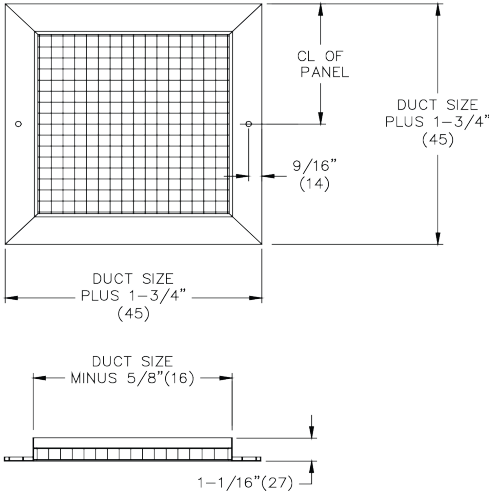
Dimension Table		
Round Neck Size	C	Neck Size
10 - 10 IN ROUND	1.375	9.875

EGC5 - AL

1/2"x1/2"x1/2" Eggcrate Grid with Aluminum Frame and Aluminum Core

Main Product

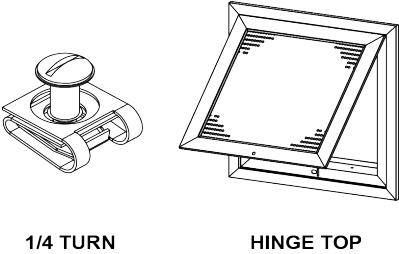
EGC5 - AL



• Construction is aluminum eggcrate core and aluminum frame.

Construction Detail

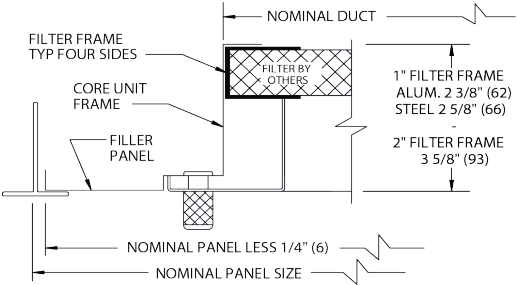
1/4 TURN, TOP HINGE DETAIL



1/4 TURN

HINGE TOP

F23 1 INCH FILTER FRAME DETAIL



• Fastener shown in filter frame detail may not represent actual fastener ordered.



Architect
Engineer
Contractor
Designation J

Project Riddle Block 4th Floor
Office Decker Steel & Supply, Inc.
Preparer Maggie Sickle
Date 05/08/2025

Version 1.0.00

Option Schedule

Frame F23 - LAY-IN T-BAR
Panel 24X12
Fastening 08 - ¼ TURN, TOP HINGE
Damper 00 - NONE
Accy 1 00 - NONE
Accy 2 00 - NONE
Accy 3 04 - 1 in ALUMINUM FILTER FRAME
Finish 44 - BRITISH WHITE

ID	Quantity	Tag	Width	Height
1	20	J	20	8

Frame F23 - LAY-IN T-BAR
Panel 24X24
Fastening 08 - ¼ TURN, TOP HINGE
Damper 00 - NONE
Accy 1 00 - NONE
Accy 2 00 - NONE
Accy 3 04 - 1 in ALUMINUM FILTER FRAME
Finish 44 - BRITISH WHITE

ID	Quantity	Tag	Width	Height
1	2	J	20	20

Dimension Table

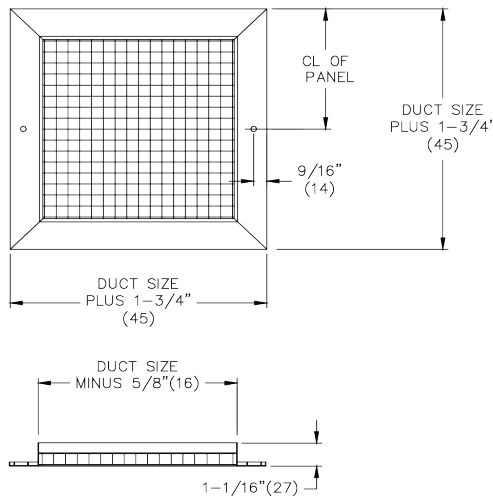
Width	Height	Frame	Panel	Face (W)	Face (H)	Stack (W)	Stack (H)
20	8	F23 - LAY-IN T-BAR	24X12	23.75	11.75	20	8
20	20	F23 - LAY-IN T-BAR	24X24	23.75	23.75	20	20

EGC5 - AL

1/2"x1/2"x1/2" Eggcrate Grid with Aluminum Frame and Aluminum Core

Main Product

EGC5 - AL



CL OF PANEL

DUCT SIZE PLUS 1-3/4" (45)

9/16" (14)

DUCT SIZE PLUS 1-3/4" (45)

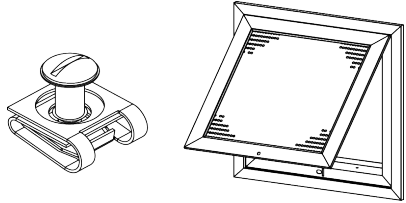
DUCT SIZE MINUS 5/8" (16)

1-1/16" (27)

- Construction is aluminum eggcrate core and aluminum frame.

Construction Detail

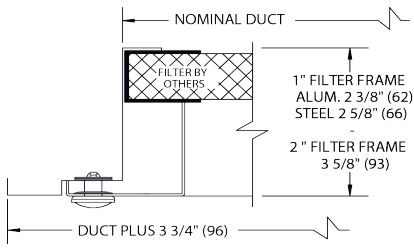
1/4 TURN, TOP HINGE DETAIL



1/4 TURN

HINGE TOP

F22 1 INCH FILTER FRAME DETAIL



NOMINAL DUCT

FILTER BY OTHERS

1" FILTER FRAME
ALUM. 2 3/8" (62)
STEEL 2 5/8" (66)

2" FILTER FRAME
3 5/8" (93)

DUCT PLUS 3 3/4" (96)

- Fastener shown in filter frame detail may not represent actual fastener ordered.



Architect
Engineer
Contractor
Designation K

Project Riddle Block 4th Floor
Office Decker Steel & Supply, Inc.
Preparer Maggie Sickle
Date 05/08/2025

Version 1.0.00

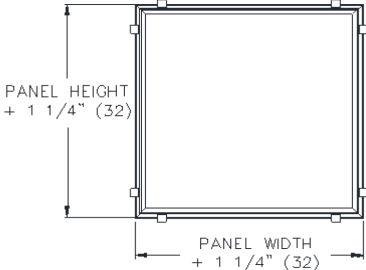
Option Schedule				
<div>Frame F22 - SURFACE MNT Panel 00 - NONE Fastening 08 - ¼ TURN, TOP HINGE Damper 00 - NONE Accy 1 00 - NONE Accy 2 00 - NONE Accy 3 04 - 1 in ALUMINUM FILTER FRAME Finish 44 - BRITISH WHITE</div>				
ID	Quantity	Tag	Width	Height
1	1	K	10	10

Dimension Table							
Width	Height	Frame	Panel	Face (W)	Face (H)	Stack (W)	Stack (H)
10	10	F22 - SURFACE MNT	00 - NONE	13.75	13.75	10	10

5HCF23

Hard Ceiling Frame, Adapts F23 to F22, Aluminum

Main Product
5HCF23

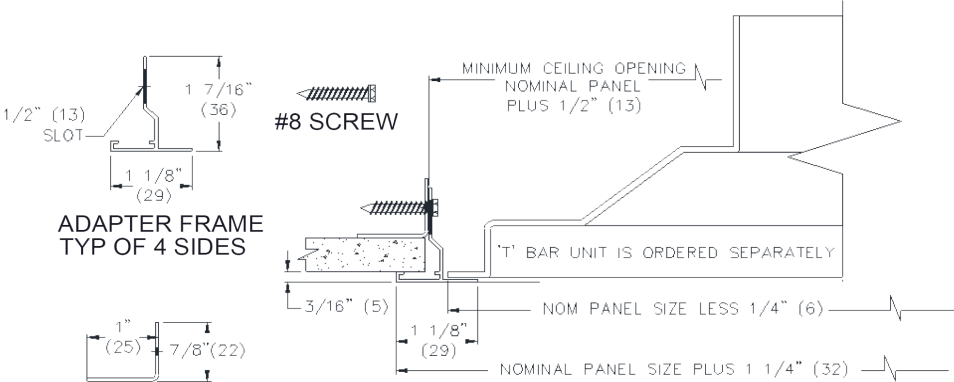


PANEL HEIGHT
+ 1 1/4" (32)

PANEL WIDTH
+ 1 1/4" (32)

- Construction is aluminum.
- Screws and security clips for mounting are shipped loose for on site installation.

Construction Detail
FRAME ASSEMBLY



1/2" (13) SLOT

1 7/16" (36)

1 1/8" (29)

ADAPTER FRAME
TYP OF 4 SIDES

1" (25)

7/8" (22)

ASSEMBLY PARTS

#8 SCREW

MINIMUM CEILING OPENING
NOMINAL PANEL
PLUS 1/2" (13)

T BAR UNIT IS ORDERED SEPARATELY

NOM PANEL SIZE LESS 1/4" (6)

NOMINAL PANEL SIZE PLUS 1 1/4" (32)

FRAME ASSEMBLY & INSTALLATION

Option Schedule				
Finish 44 - BRITISH WHITE				
ID	Quantity	Tag	Dim 1 (W)	Dim 2 (H)
1	1	K	12	12

Dimension Table					
Dim 1 (W)	Dim 2 (H)	Face (W)	Face (H)	Min Ceiling Opening (W)	Min Ceiling Opening (H)
12	12	13.25	13.25	12.5	12.5