

The Unico System®

Small-Duct Central Heating & Air Conditioning

Residential and Commercial Design Services

The Unico System for your project was designed by Victor Carroll (victor@unicosystem.com) or Stewart Intagliata (stewart@unicosystem.com) based on the information that was provided to the Design Department. Any questions please call the Design Department 636-333-6351 or email us, and we will respond within a few hours to your questions or changes that would need to be made to the design.

DISCLAIMER

Sizing, layout designs, equipment lists, and all other information provided is for estimation purposes only.

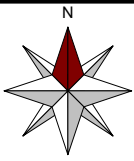
The actual size, performance or application of the system is the responsibility of the installing contractor and design engineer. Unico stands by the products it sells through its published limited warranties and

provides technical resources and bulletins at <https://tech.unicosystem.com/bulletins/>, and those published technical resources are the ONLY sources of information or advice about appropriateness, feasibility, or

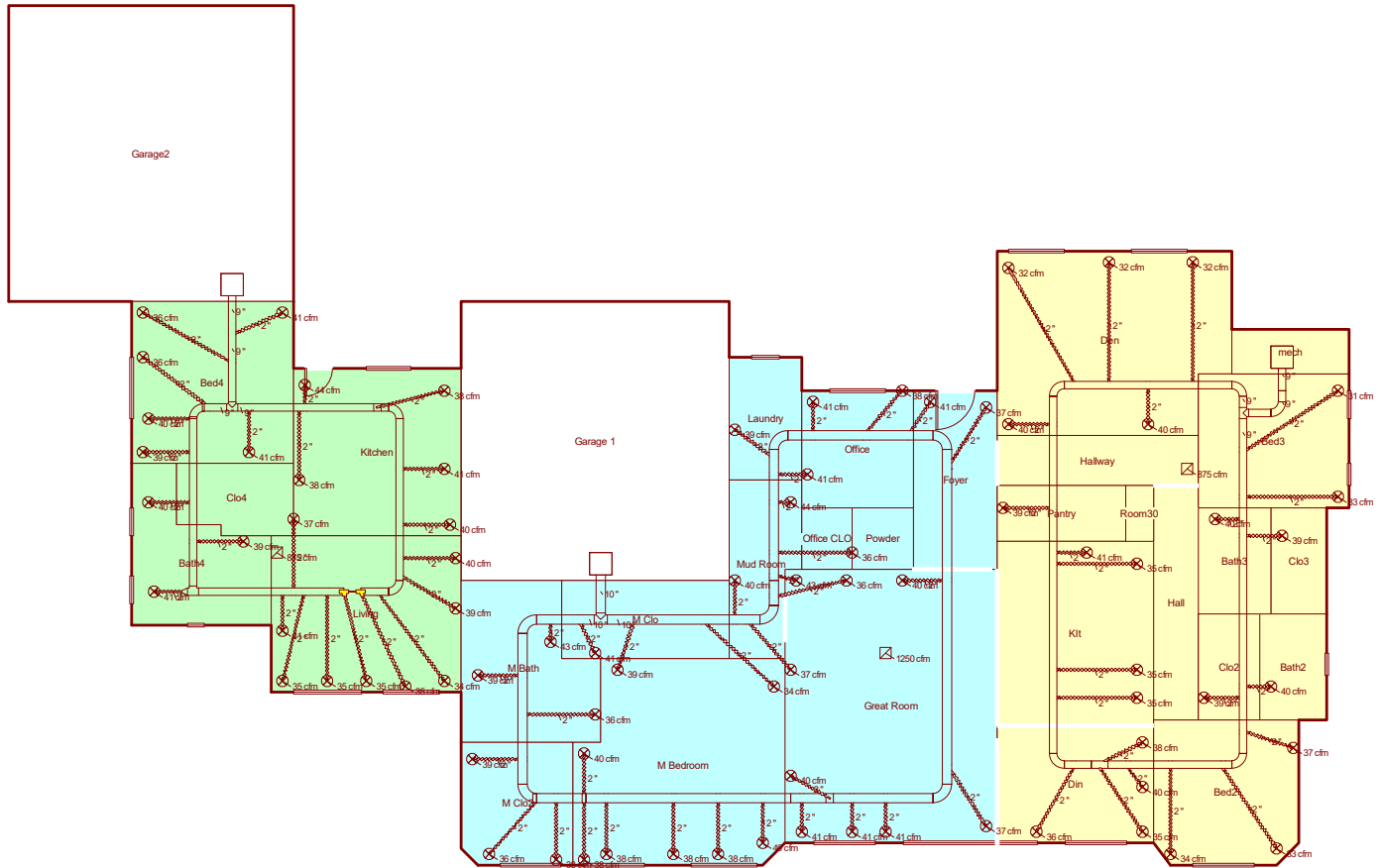
fitness for any particular use or installation of a Unico product that may be attributable to Unico, Inc. or any

subsidiary or another affiliate of Unico, Inc. Predicted equipment capacity is available in the ARI Unitary

Directory under listed test conditions when properly installed using all of the published installation instructions provided by Unico. Note: When selecting the Outdoor Condensing unit, you must check the matchup rating. You can consult The Unico Customer Service Group at (800-527-0896) for assistance.



Level 1



Job #:
Performed for:

Scale: 1 : 205
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Right-Suite® Universal 2021

FOR ESTIMATION PURPOSES ONLY!

Project Information

For:

Notes:

Design Information

Weather: Tucson Intl, AZ, US

Winter Design Conditions

Outside db	30 °F
Inside db	75 °F
Design TD	45 °F

Summer Design Conditions

Outside db	106 °F
Inside db	73 °F
Design TD	33 °F
Daily range	M
Relative humidity	50 %
Moisture difference	-14 gr/lb

Heating Summary

Structure	14806 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	64454 Btuh

Sensible Cooling Equipment Load Sizing

Structure	11750 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	1.11
Equipment sensible load	44408 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	-285 Btuh
Ducts	-44 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	460 Btuh
Equipment Total Load (Sen+Lat)	44868 Btuh
Req. total capacity at 0.70 SHR	5.3 ton

	Heating	Cooling
Area (ft ²)	1610	1610
Volume (ft ³)	14493	14493
Air changes/hour	0.27	0.14
Equip. AVF (cfm)	66	34

Heating Equipment Summary

Make	
Trade	
Model	
AHRI ref	
Efficiency	80 AFUE
Heating input	0 Btuh
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	1250 cfm
Air flow factor	0.084 cfm/Btuh
Static pressure	1.80 in H2O
Space thermostat	

Cooling Equipment Summary

Make	
Trade	
Cond	
Coil	
AHRI ref	
Efficiency	0 SEER
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	1250 cfm
Air flow factor	0.106 cfm/Btuh
Static pressure	1.80 in H2O
Load sensible heat ratio	1.00

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Information

For:

Notes:

Design Information

Weather: Tucson Intl, AZ, US

Winter Design Conditions

Outside db	30 °F
Inside db	75 °F
Design TD	45 °F

Summer Design Conditions

Outside db	106 °F
Inside db	73 °F
Design TD	33 °F
Daily range	M
Relative humidity	50 %
Moisture difference	-14 gr/lb

Heating Summary

Structure	16054 Btuh
Ducts	0 Btuh
Central vent (61 cfm)	2750 Btuh
Outside air	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	32415 Btuh

Sensible Cooling Equipment Load Sizing

Structure	13271 Btuh
Ducts	0 Btuh
Central vent (61 cfm)	2016 Btuh
Outside air	
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	1.11
Equipment sensible load	24819 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	-411 Btuh
Ducts	-17 Btuh
Central vent (61 cfm)	-515 Btuh
Outside air	
Equipment latent load	690 Btuh

	Heating	Cooling
Area (ft ²)	1532	1532
Volume (ft ³)	13787	13787
Air changes/hour	0.41	0.21
Equip. AVF (cfm)	95	49

Equipment Total Load (Sen+Lat)	25509 Btuh
Req. total capacity at 0.70 SHR	3.0 ton

Heating Equipment Summary

Make	
Trade	
Model	
AHRI ref	
Efficiency	80 AFUE
Heating input	0 Btuh
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	875 cfm
Air flow factor	0.055 cfm/Btuh
Static pressure	1.80 in H2O
Space thermostat	

Cooling Equipment Summary

Make	
Trade	
Cond	
Coil	
AHRI ref	
Efficiency	0 SEER
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	875 cfm
Air flow factor	0.066 cfm/Btuh
Static pressure	1.80 in H2O
Load sensible heat ratio	1.00

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Project Information

For:

Notes:

Design Information

Weather: Tucson Intl, AZ, US

Winter Design Conditions

Outside db	30 °F
Inside db	75 °F
Design TD	45 °F

Summer Design Conditions

Outside db	106 °F
Inside db	73 °F
Design TD	33 °F
Daily range	M
Relative humidity	50 %
Moisture difference	-14 gr/lb

Heating Summary

Structure	11589 Btuh
Ducts	0 Btuh
Central vent (41 cfm)	1851 Btuh
Outside air	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	28548 Btuh

Sensible Cooling Equipment Load Sizing

Structure	14206 Btuh
Ducts	0 Btuh
Central vent (41 cfm)	1357 Btuh
Outside air	
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	1.11
Equipment sensible load	23051 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	131 Btuh
Ducts	-14 Btuh
Central vent (41 cfm)	-346 Btuh
Outside air	
Equipment latent load	460 Btuh
Equipment Total Load (Sen+Lat)	23511 Btuh
Req. total capacity at 0.70 SHR	2.7 ton

	Heating	Cooling
Area (ft ²)	868	868
Volume (ft ³)	7808	7808
Air changes/hour	0.48	0.25
Equip. AVF (cfm)	62	32

Heating Equipment Summary

Make	
Trade	
Model	
AHRI ref	
Efficiency	80 AFUE
Heating input	0 Btuh
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	875 cfm
Air flow factor	0.076 cfm/Btuh
Static pressure	1.80 in H2O
Space thermostat	

Cooling Equipment Summary

Make	
Trade	
Cond	
Coil	
AHRI ref	
Efficiency	0 SEER
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	875 cfm
Air flow factor	0.062 cfm/Btuh
Static pressure	1.80 in H2O
Load sensible heat ratio	1.00

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Material List



BILL TO:

Attn:

Phone:

Fax:

Notes:

SHIP TO:

Attn:

Phone:

Fax:

Order date	Ordered by	Purchase order #	Date required	Ship via

Src	Part #	Description	Qty	Total pieces	Qty issued	Qty returned
InLaws						
UNC	M3642BL1-EC2	Module, Blower, S.M.A.R.T. Control, Variable Speed EC ...	1.0	1.0		
UNC	M3642CL1-E	Module, Refrigerant Coil (6 Row)* (HP)	1.0	1.0		
UNC	M3642V2	Module, Vertical Plenum (includes Spacer & Filter)	1.0	1.0		
UNC	UPC-01-3642	Return Air Box with Grille and Filter, 14" x 30"	1.0	1.0		
UNC	UPC-04R8-3642	Return Air Duct , R-8.0, 18" D x 10 ft.	1.0	1.0		
UNC	UPC-104-3642	Return Air Adapter (fits to M3642CL1-X or H, M3642V2),...	1.0	1.0		
UNC	UPC-25T-R8-4	Supply Tubing, TFS, Couplings Attached, Aluminum, 2" I...	1.0	4.0		
UNC	UPC-26TCR8-6	Sound Attenuator Tubing, TFS, Couplings Attached 2" I...	4.0	24.0		
UNC	UPC-61-3642	Adapter, Supply, Round, 9	1.0	1.0		
UNC	UPC-89TM-6	Install Kit, 2", Round Metal Plenum, TFS, (6 pk) - Include...	4.0	24.0		
AHU1						
UNC	M4860BL1-EC2	Module, Blower, S.M.A.R.T. Control, Variable Speed EC ...	1.0	1.0		
UNC	M4860CL1-E	Module, Refrigerant Coil (4 Row)* (HP)	1.0	1.0		
UNC	M4860V2	Module, Vertical Plenum (includes Filter)	1.0	1.0		
UNC	UPC-01-4860	Return Air Box with Grille and Filter, 24" x 30"	1.0	1.0		
UNC	UPC-04R8-4860	Return Air Duct, R-8.0 20" D x 10 ft	1.0	1.0		
UNC	UPC-104-4860	Return Air Adapter (fits to M4860CL1-X or H, M4860V2)...	1.0	1.0		
UNC	UPC-25T-R8-4	Supply Tubing, TFS, Couplings Attached, Aluminum, 2" I...	1.0	4.0		
UNC	UPC-26TCR8-6	Sound Attenuator Tubing, TFS, Couplings Attached 2" I...	6.0	36.0		
UNC	UPC-61-4860	Adapter, Supply, Round, 10"	1.0	1.0		
UNC	UPC-89TM-6	Install Kit, 2", Round Metal Plenum, TFS, (6 pk) - Include...	6.0	36.0		
AHU2						
UNC	M3642BL1-EC2	Module, Blower, S.M.A.R.T. Control, Variable Speed EC ...	1.0	1.0		
UNC	M3642CL1-E	Module, Refrigerant Coil (6 Row)* (HP)	1.0	1.0		
UNC	M3642V2	Module, Vertical Plenum (includes Spacer & Filter)	1.0	1.0		
UNC	UPC-01-3642	Return Air Box with Grille and Filter, 14" x 30"	1.0	1.0		
UNC	UPC-04R8-3642	Return Air Duct , R-8.0, 18" D x 10 ft.	1.0	1.0		
UNC	UPC-104-3642	Return Air Adapter (fits to M3642CL1-X or H, M3642V2),...	1.0	1.0		
UNC	UPC-25T-R8-4	Supply Tubing, TFS, Couplings Attached, Aluminum, 2" I...	1.0	4.0		
UNC	UPC-26TCR8-6	Sound Attenuator Tubing, TFS, Couplings Attached 2" I...	4.0	24.0		
UNC	UPC-61-3642	Adapter, Supply, Round, 9	1.0	1.0		
UNC	UPC-89TM-6	Install Kit, 2", Round Metal Plenum, TFS, (6 pk) - Include...	4.0	24.0		